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FOR

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INDEX OF CONTENTS

TO THE

GARDENERS' CHRONICLE AND AGRICULTURAL GAZETTE,

For 1860.

A.

Abelia triflora, 646
Abies Brunoniana, much injured by frost, 362; killed by ditto, 386; Douglasii at Dropmore, 854; Pattoni, hardiness of, 386; taxifolia (of Jeffrey), ditto, 386; Kæmpferi, ditto, 74, 170, 386; grandis, ditto, 362; amabilis, ditto, 362; Nordmanniana, ditto, 362; Menziesii, ditto, 362; Finedonensis, 242; jezoensis, hardiness of, 362; killed by frost, 386
Acacia armata, killed by frost, 458; pubescens, 218; or Gum Wattle, stinking, 712, fragrant, 712
Acalles, musical, 716
Acalypha, adulterates Tea, 455
Aconite, culture of, 457; poisoning by, 1023
Acorns, sweet, 980
Acorus Calamus, a cure for ague, 834
Acroclinium roseum, 736
Actinologia Britannica, Gosse's, rev., 291
Adulteration of Cattle Cakes, 249; of Grass seeds, 293, 390, 414, 438, 443; of Tea, 455; of Coffee, 455; of Pepper, 532
Æthalium septicum, 409
Agaricus campestris Buchanani, 1038; elongatus, 1061; vaporarius, 1021; cepæstipes, 46; comatus, 73; dryinus, 832; fascicularis, 336; gambosus, 672; gloiocephalus, 933; longipes, 813; melleus, 5; muscarius, 169; radicatus, 265; retirugis, 711; rhacodes, 910; semiglobatus, 96; cepæstipes, 98; tuberosus, 456
Agriculture, American glimpses of British, 722; of Berkshire, 898, 920, 939, 983, 1006, 1027, 1047, 1067; French, 1051; South coast, 878; Irish, 199, 320, 740; Tuscan, 126; Trehonnais on English, 34; position of, 272; Quarterly Journal of, &c., 273; and Exhibition of 1862, 1065, 1110
Agricultural Botany, 699; Benevolent Institution, 514, 605; dinners, toasts for, 900; exhibitions, 698; experiments, errors of, 393; Facts, Year Book of, 130; money making, 34; progress, 9; year, the new, 9; implements; 1008; pilgrimage, 175, 247; show, French, 58, 419; foreign, 1086; statistics, 413; Irish, 274
Agrostis nigra, 536
Ague, cure for, 834
Alhagi, water Melons grown on the, 502
Allotment competition, 998
Almanack, Midland Counties, 34; Thorley's, 986
Almond tree in fruit, 874, 912, 935
Aloe, decaying, 434, 811
Alps, pasturage of Swiss, 488
America from a railway train, 920
American blight, 956, 1108; fruits, 97; Grapes, 997; short-horns, 1109
Ammonia, sulphate of, 35
Analysis of Dates, 367; of clay soil, 368; of sheep's urine, 177
Angler, recollections of an, 466
Animals, diseases of, 1010; imports of, 821; acclimatisation of, 1079; substances, uses of, 815
Aniseed, poisoned, 1044
Annuals, culture of, 146, 194; remarks on ditto, 120; for a bouquet, 268; supplement to Garden book of, 267
Ants, cure for, 652; driven away by guano, 491
Antwerp Botanic Garden, 895
Apiarian Society, 363
Apples, American, 97; spotted, 998; Mannington's Pearmain, 4, 23, 218; Reinette Platte de Champagne, 4, 23; dried, 932; diseased, 870; blossoms, monstrous, 578; grafts, early fruiting of, 978
Apricots, effects of the winter on, 336; stocks for, 853; blossoms shed by, 171
Arachis hypogæa, adulterates coffee, 455
Araucarias, grafting at Holkham, 239, 290; diseased, 754; to restore diseased, 578; variegated, 954; at Dropmore, 854; Cunninghami injured by frost, 362
Arbutus Croomi, hardiness of, 194
Archaia, by Dawson, rev., 979
Archerfield, Vines at, 815
Archetype of flowering plants, 835
Arsenic, sheep poisoning by absorption of, 203; effect upon vegetation, 216
Artichokes, Perpignan, 1037; Jerusalem, 987; cooking ditto, 290, 338; culture of, 363
Arum Italicum, 853
Asparagus, to plant, 1044
Assheton Smith, reminiscences of, 171
Asters, German China, 336; argophyllus, cut by frost, 386
Atropa belladonna, culture of, 456
Australia, horticulture of South, 624; best Vines for, 625; temperature of tropical, 791; Orange culture in, 775; fossil flora of, 195; Grasses, 154, 588; Zebra Parroquets, 50; sheep, 203, 226, 299; Wheat, 963
Australasia, gatherings in, 774
Avenues, modes of planting, 194
Aye-Aye, Madagascar, 99
Ayrshire cheese, 1048
Azalea Iveryana, 410; double white, 894

B.

Bacon, to salt, 1116
Badge plants of Scottish clans, 673, 894, 912
Bailiff and gardener, 12
Barks of the United States, 1023
Barley growing, 538; hardy variety of, 611; abortion in, 841
Beans, manure for, 106, 565; Scarlet Runner for beds, 290; Chinese, 312
Beaver, account of the, 219, 264
Bedding plants in Moss, 693
Bee, Italian Alp, 411, 734; honey of North Italy, 340; sagacity of Humble, 853, 874, 894; early swarming of, 458, 481; strange swarming of, 676; Samuelson, &c., on, 1001; feeding, 912; hives, 292; Keeper's Manual, Taylor's, rev., 507
Beech, yellow and white kinds of, 602
Beech bark, Fungi on, 8
Beech trees and lightning, 894, 912, 934, 874
Beetle, Coquilla-nut, 600
Beets tried at Chiswick, 264
Beet cultivation, French experience on, 79; English ditto, 79; distillation of, 79
Begonia grandis, culture of, 710, 713; monstrous in relation to Darwin's theory, 170
Belgium, orchard trees in, 871
Belgian Hort. Society's Garden, 895; flower and vegetable market, 895; Confederation prizes, 143
Bell on the Hand, 1107
Bentham (Mr.) Royal medal to, 96
Benthamia fragifera killed by frost, 386
Berberis, Chinese, hardiness of, 362; Darwinii, injured by frost, 362, 410; Fortuni, ditto ditto, 362; intermedia, 143; ditto, killed by frost, 362; not killed by ditto, 194; glumacea, hardiness of, 194; Fortuni, ditto, 194; Beali, ditto, 194
Berkeley's Fungology, 1019
Berkshire, farms in, 247; agriculture of, 898, 920, 939, 983, 1006, 1027, 1047, 1067
Berry Hill, gardens at, 815
Bezi Mai Pear, 120
Biota orientalis aurea, hardiness of, 74; Sieboldi, ditto, 74; Meldensis, ditto, 25, 74; glauca, ditto, 171
Birds, to keep off fruit, 481, 531
Bird trap, Knight's, 652
Blackbird, a Moor, 460
Black Currant Liqueur, 931
Black fly, 676
Blandford Agri. Society, 393
Blenheim, description of, 28, 47
Blights, 959; proposed commission respecting, 940
Blume's (Dr.) work on Orchids, rev., 7
Boar hunt, 715
Boase's Philosophy of Nature, rev., 755
Boilers, economical, 1062, 1042
Boletus luridus, 335; elegans, 529; hybridus, 599
Bondagers or Bothies, 631
Border, systematically arranged plant, 190
Botanical class, Edinburgh, 751; names, 1062, 1081, 1105, 1129; notes in Moulmein, 218; prizes at Marlborough College, 340
Botanic Gardens, 215; at Sydney, 216, 911; Antwerp, 895; Glasnevin, 339
Botany, agricultural, 699; Balfour's Manual of, rev., 507
Bothy system, farm, 985
Bo-tree, sacred of Ceylon, 649
Bottom-heat, importance of, 479
Bougainvillæa spectabilis, 431, 458, 833, 977, 980; splendens, 833, 874; Braziliensis, 833; wild state of, 530; in N. S. Wales, 954; arborescent, 1000; importance of bottom-heat for, 479; at Versailles, 834
Boys, way to treat garden, 863
Bran, as a packing material, 410
Braun on multiplication of embryos, 1001
British Association, 649, 713
British Colombia, life in, 554; facts relating to, 854
British Museum, Natural History collections of, 22, 73, 484
Broome, testimonials to, 8
Broom Rape (Orobanche), 859
Bruchi, various kinds of, 600
Buckman's experiments on the transformations of Grasses, 3
Budding with Pear seeds, 360
Buddlea Lindleyana killed by frost, 386
Bugainvillea, 977, 980
Bulbs, Cape, 505; bottom heat for, 479, 484; out door, 932; pit for tender, 933
Butter, vegetable, 189; Welsh, 921
Buttercups, 536
Butterflies, British, rev., 387; and Stothard, the artist, 508; chrysalis stage of, 652; killing justifiable, 604; instinct of female, 628; eggs, 556

C.

Cabbage, white Shanghai, 311; new sprouting, 1107
Cabbageworts, 78
Cacti, effect of frost on, 386
Caermarthenshire, wages in, 489
Cake, cotton seed, 200
Caladiums, Chantin's, 602, 751
Calico, brown, for shreds, 602
California, Hamite valley in, 7; Chinese vegetables in, 311
Cambridgeshire, Flora of, 507
Camellias, new Chinese, 169; seedling, 218; Milne & Co.'s, 267; hardiness of, 384; yellow, hardiness of, 362; out-door at Rothesay, 458
Canada, gardening in, 651; salmon fishing in 814; produce of Upper, 1049
Canadian Hort. Soc., 695
Cannes, effects of the winter at, 384
Cannock Farmers' Club, 986
Canterbury, agricultural meeting, 653
Cantharellus cibarius, 312
Canvas houses, 386
Cape bulbs, 505; bottom-heat for, 479, 484
Cardington, rainfall and temperature of, 194
Carex, Boott on genus of, 1063
Carnations, clove, 736; Cuthill's clove, 756; monstrous, 710
Carter & Co.'s catalogue, 100
Cat attacked by a finch, 602
Catalpas, cut back by frost, 362
Caterpillars, wonderful, 696; changing coat, 696
Cattle, short-horned, 697, 718, 720; pedigree of ditto, 294, 295, 878; Teeswater ditto, 881; Milcote, breed of, 269, 271; sale of, 797; Mr. Dixon's breed of, 799; Dudding's, 788; price of, 629, 635, 819; choice of a breed of, 820; Angus, 633, 682, 819, 839; Kinnaird Castle, 633; Brittany, 633; Kerry *v.* Brittany, 634; Springfield breed of, 607; Hereford ditto, 610; changes of breeds of, 1049; Turkish bath for, 539; homœopathic treatment of, 720; breeding, dairy, 843
Cattle food, 882; cheapest, 29; winter ditto in severe seasons, 32; poisonous, 154; straw as, 153; advertised, 940; new, 272, 317; scarcity of, 389, 442; concentrated, 53, 54; statistics respecting, 56; estimated value of manure from different kinds of, 56; cakes, adulteration of, 249; pulped roots for, 198, 346, 127; Thorley's, 128, 365, 922; Jupp's, 365; Dates as, 245, 365, 581, 897; cost of ditto, 582, 613; winter, 298; old fashioned ditto, 924
Cattle sales, 839, 924
Cattle shed, moveable, 29
Cattle show, Dublin spring, 344; Smithfield, 1111
Cauliflowers, Dutch, 168; antiquity of the, 242
Ceanothus dentatus, hardiness of, 362; rigidus injured by frost, 410
Cedars, transplanting large, 6; on Lebanon, 74; uprooted by wind, 218
Cedar wood, 123
Celastrus scandens, 458
Celery tried at Chiswick, 507
Cells, movements in plant, 794
Cephalotaxus, Chinese, hardiness of, 362; Fortuni, ditto, 6, 25, 578; pedunculata, ditto, 578
Cereus M'Donaldiæ, 578
Ceylon, Climbers in, 288
Chamæcyparissus thurifera killed by frost, 362
Charlock, 536
Cheese, poisonous metal in, 649; Ayrshire, 1048; making, 105; M'Adam on ditto, 1116
Cheiranthus, hybrid, 602
Chemical Wonders, Piesse's, 1063
Cherry, Cornelian, 172
Chesnuts, Chinese, 170
Chicory for grazing, 131, 250, 322, 636; culture and commerce of, 760
China, rural, 1029
Chinese, Cobbold's Pictures of, rev., 7
Chinese Yam, 194, 242; large, 168, 288; plants, 169; Peach trees, 76; Sheep, 126; Vegetables in California, 311; Vegetable seed, sale of, 387
Chloroform, &c., effect of on plants, 26
Chopwell woods, 528
Chorleywood Association, 434
Chrysanthemum, culture of the Pompone, 337; of specimen, 409; exhibitions, 1043; Temple, 1003; Bird's, 1028; Salter's, 1064; select, 1083; segetum (Moon-flower), 738

Artisan Farm, 170
Cider, nutritive value of, 153
Cinchonas, Markham's expedition in quest of, 693, 712, 731, 751, 776: Howard's work on, 755; to be tried in Trinidad, 1084
Cirencester, neighbourhood of, 681
Clans, badge plants of, 912
Clarence Peak, ascent of, 693
Clavaria rugosa, 216; abietina, 871
Clematis Sieboldi killed by frost, 386; azurea grandiflora, do., 386
Clerodendron cruentum, 456
Clianthus, killed by frost, 362, 458; Dampieri, 387, 977
Climate of Cumbrae, 74; of Graham's Town, 791; of tropical Australia, 791; of Scotland, 104; of United States compared with that of England, 170; of Worthing, 956; of Nice, 1082
Climbers in Ceylon, 288
Clover Dodder, 29, 762, 859; origin of, 102
Clover lea, to clean foul, 1011
Clover seed, adulteration of, 390; number of weeds in, 534
Clover sickness, 273; and Fungi, 10; Prof. Wilson on, 418
Clumber, trees blown down at, 266
Cobbold's Pictures of the Chinese, rev., 7
Coffee, adulteration of, 455; cultivation, 242; blight in Arabia, 815
Cold, effect of on plants, 710
College, Bot. prizes at Marlbro', 340
Compotes, to make 243
Concrete walks, 484
Cones, bisexual, 794
Conifers, hardiness in Lincolnshire, 26; to prune, 146; in Scotland, 457; at Watcombe, 935; at Luscombe, 936; at Upcott, 977
Coniferous seeds, sale of, 8, 124
Consciousness, Philosophy of, 60
Continent, love of flowers on the, 753
Cook's Voyages, 1063
Cooking Jerusalem Artichokes, 290, 338, Tomatoes, 856
Coppice, Beech, 76
Coprinus comatus, 73
Coquilla nut Beetle, 600
Cordiceps ophioglossoides, 792
Cordon training, 1083
Cordyline, species of, 791
Corfe Castle, Guide to, 795
Corn, how to dry wet, 841; averages, 1028; imports, 821; rents in Norfolk, 106
Cornelian Cherry, 172
Coronillas killed by frost, 362
Corticium Quercinum, 481
Corydalis speciosa, 336, 361
Cottage gardens, 1041
Cottagers, 78; show, Sudbury, 978
Cottages, labourers', 511, 605, 838, 1114; Dorsetshire, 611
Cotton, company, new, 872; Indian, 812, 896; eaten by cattle at Bombay, 200
Cotton seed cake, 200, 587; composition of, 588
Couch Grass, 366, 536, 1029
Cow, food of the, 103; produce of milk per, 105; Breton, 611, 699, 1048; Hereford breed of, 561; duration of pregnancy in, 764; teat disease, 781
Crassula coccinea, a poison? 673.
Cream, dental, 146
Crickets, flower, 711; trap for, 652
Crocuses, treatment of, 1064
Crops, fruit near Cirencester, 814; Warwickshire root, 31; in the United States, 861; enormous cost of green, 415; cost of converting cattle into manure, 415; rotation of, 58, 203, 682; consumption of root, 609; in Yorkshire, 612, 439; late, 737; value of loss to, sustained by rabbits, 58; appearance of the, 629; reports on the, 558, 581, 584, 757, 758, 762, 778, 800, 797, 817, 818, 957, 960
Crotalaria Cunninghamii, 694
Crowfoots, 536
Cruciblum vulgare, 893
Cryptomeria Lobbii, uninjured by frost, 458; japonica, cut by frost, 410, at Rothesay, injured by frost, 458
Crystal Palace exhibitions, 337, 505, 854
Cucumbers, Pike's Defiance, 147; bitter, 194, 266; Chinese, 312; Butler's Empress Eugenie, 553, 576; large, 673; Cuthill's mode of managing, 755; Sutton's, 836; double, 856; "Model," 935
Cultivation, deep, 177, 613, 940, 1088
Cumberland Agri. Society, 900
Cumbrae, climate of, 74
Cupressus majestica, hardiness of, 25; Cashmeriensis, ditto, 25; Benthamiana, ditto, 386; Lambertiana, injured by frost, 362; McNabbiana, hardiness of, 6, 362, cut by frost, 336; Uhdeana, ditto, 336; funebris, ditto, 336; funebris, hardiness of, 74, injured by frost, 458, hardiness of, 25, 26; Lawsoniana, ditto, 6, 25, 362; McNabbiana, ditto, 25; elegans (Knightii), ditto, 25; Knightii, killed by frost, 362; gracilis, ditto, 362; Goveniana, ditto, 362
Currants, American, 812; varieties of, 852; W. Dutch, and Champagne, 875; Gloire des Sablons, 954; Versailles, red, 255; Black, 955; common red, 955
Currant liqueur, Black, 931
Cuscuta, systematic arrangement of, 1063
Cutbush's (Messrs.) Hyacinth show, 243
Cuthill's Strawberry pamphlet, 96; garden noticed, 755
Cuttings, to strike without soil, 434; in Moss, 733
Cyanophyllum magnificum, 1061, 1081
Cypress, upright killed by frost, 362
Cypripedium spectabile, 693

D.

Dacrydium Franklinii killed by frost, 336
Daedalea quercina, 576
Dahlias, new, 834, 874; lists of, 854
Dairy feeding, Horsfall's, 35; cattle breeding, 343; Husbandry, Handbook of, 105; operations, 828; produce, 11, 921
Damascus, garden of, 75
Dancer's nursery noticed, 196
Darwin, notice of his work on Origin of Species, 45; remarks arising out of ditto, 122, 170, 192, 649, 718
Dates as cattle food, 245, 365, 367, 613, 581, 897; cost of ditto, 582; composition of, 367; analysis of, 294, 390, 416, 440
Daubeny's (Prof.) experimental researches, 630, 679; on sexuality of plants, 773
Davey *v.* Gillett, 1025
Davison's Gold Deposits, rev., 735
Dawson's (Dr.) Archaia, rev., 979
Deer, mortality among, 299
Dendrobium Falconeri, 266, 315
Dendrometer, Sang's, 408
Deodar, sudden death of a, 530
Deodoriser, M'Dougall's, 563
Desfontainea spinosa killed by frost, 386; uninjured by ditto, 386
Dew, deposit of, 123
Diagonal training, 754, 853
Dianthus Heddewigii, 736, 793
Diary of the Dairy, 34
Didmarton farm, noticed, 294
Diodon, liver of poisonous, 555
Dioscorea Batatas, 168, 194, 242
Diplomas, agricultural, 513
Dirleton Castle Gardens, 795
Disease in Aloes, 811; in Apples, 870; of men and animals, 1010
Distillation, Beet, 79
Dock, common, 537
Dockyard timber, supply of, 671
Dodder, 29, 859, 954; origin of Clover, 102
Dog, Maltese, 28; Newfoundland, 52
Dolichos sinensis, 312; (Tow-cock), 834
Domestic economy, Manual of, 219
Domestic Horticulture, 21, 49
Dorsetshire, winter in, 171; labourers' wages in, 200, 393
Dove on substitutes for guano, 101
Drainage, 681; and rainfall, 938; arterial, 721, 1046, 1066; Denton on, 246; and outlets, 202, 898, 1025, 1027, 1086, 1087; experience in, 1088
Drainage Act, need of, 841
Drainage, French on Farm, rev., 12
Draining of more importance than deep cultivation, 128
Draining Plough, Fowler's, 605
Drill, Ruston on Water, 486
Drimys Winteri, hardiness of, 171; flowering of, 624
Drishane estates, 881
Drosera, irritability of, 853
Druses, by Lord Carnarvon, 1002
Dry rot in timber, 599, 604, 645, 696
Dunn's marking ink pencil, 833
Dyeing Grasses, 696

E.

Earth, warmth of the, 24
Edgings at Versailles, 884
Edging tiles, 1062; Hogg's, 1042, 1081
Education of gardeners, 504, 527, 528, 552, 576, 601, 625, 648, 672, 694, 713, 734, 753, 754, 774, 793, 818, 831, 874, 934; of labourers, 900, 1115
Elder *v.* Rabbits, 793
Elms, age of ancient, 120; decayed, 502
Embryos, Braun on multiplication of, 1001
Engineers' Hand Book, 219
English climate compared with that of the United States, 170
Eothen, new edition of, 74
Epigynium leucobotrys, 977
Equatorial summers, 1062
Ergot in Rye, 877, 917
Errington (Mr.) death of, 815
Espalier training, 771
Eucharidiums, new, 853
Eugenia Ugni, hardiness of, 194; injured by frost, 386; apiculata, killed by frost, 336
Europe, temperature of, 316
Evergreens, effect of the winter on, 362; in flower gardens, 432; to transplant, 553, 556
Ewes, losses of breeding, 11, 33; on Mangel, 1048, 1066
Exhibition of 1862 and agriculture, 1065
Experiments, Dr. Daubeny's, 630; with manures for Grass, 393; errors of agricultural, 393
Exports and imports, 741

F.

Fagus Cunninghami, 316; effects of the winter on, 336
Farfugium grande, 170; effects of frost on, 336; hardy in Vale of Swansea, 362; killed by frost in Northamptonshire, 362
Farms, Churchill and Sarsden, 12; Woolston, near Bletchley, noticed, 58, 368; reports of, 130; Chalkpit in Berkshire, 175; Eardswick Hall in Cheshire, 177; Haines Hill, 247; at Hinton, 247; small, 226; prize offered for essay on, 797; prize Cheshire and South Lancashire, 174, 175; in Gloucestershire, 294; need of landowners improving, 318; Panton House, 738; Mr. Bowie's, 839; Mr. Horsfall's, 842, 923
Farm bothy system, 985
Farm buildings, use of iron in, 29, 102, 198, 245, 341, 982
Farm crops, Prof. Wilson on, rev., 322, 418, 564; capital, 565, 442; expenditure, schedules of, 441; profits, Mechi's, 245, 249, 271, 294, 295, 297; expenses, 415
Farm Drainage, by French, rev., 12
Farm implements, 1005, 1008
Farm labour, 173; returns, showing value of, 390, 392
Farm labourers, 57, 297, 509
Farm leases, 514
Farmers, duties of, 442; Manual, Sutton's, 298
Farming, Lois Weedon, 31; essays on by Hewitt Davis, rev., 298; improved, 343; Tullian, 632; Fletcher's, rev., 940; Irish, 985
Farnham Castle, gardens at, 240
Farrar's Science in Theology, rev., 51
Feeding Statistics, 56
Felling timber, season for, 676
Ferns, basket, 268; Hooker's work on, rev., 291; water, 339; Kennedy's Catalogue of, 411; Nature-printed, 579; Seemann's British, 603; Mrs. Lankester's, 735; new garden, 1104; variegated, 123, 1023, 1062
Fibre, vegetable, 215, 458, 816; Hollyhock, 874, 934
Finch, cat attacked by a, 602
Finnie, the late John, 34
Fires, lighting at top, 73, 123
Fire-leaves, (Plantago and Scabiosa, so called) 738
Firs, golden, 171; Coccus attacking stems of, 604
Fir Bug, silver, 626
Fishes, musical, 795
Fitz-Roya patagonica, injured by the winter, 362
Flax, perennial, 270; New Zealand, cut down by frost, 386; methods of separating fibre of, 722; growth of in 1860, 781; imports, 821
Flemish Husbandry, 296
Flora, of Tasmania, Hooker's, rev., 195; fossil of Australia, 195; of Cambridgeshire, 507; Capensis, 531; of Japan, 603
Floral Magazine, Moore's, 412, 555
Floral Hall, 553
Flore des Serres, 196, 435
Florists' Guide, Slater's Amateur, 411
Flowers in our public parks, 49; love of on the Continent, 753
Flower Crickets, 711
Flower gatherers, 853
Flower gardening of 1860, 870; evergreens for, 432
Flower market, new, 220
Food, concentrated cattle, 53, 54; statistics respecting ditto, 56; influence of on growth of wool, 54; Gorse as, 131; cow, 103; Nettle tops as, 315; new cattle, 272, 317; pulping roots for cattle, 127, 198, 346; artificial, 365; Cotton-seed cake as, 200; Rape-cake as, 512; Thorley's, 224, 128, 922; scarcity of cattle, 389, 442; increase in consumption of, 762; Dates as for cattle, 245, 365, 367, 581; cost of ditto, 582, 613; pigs, 764, 882; advertised cattle, 940; winter, 298; old fashioned ditto, 924; ditto in severe seasons, 32; cheapest cattle, 29; estimated value of manure from different kinds of, 56, 958, 963; unadulterated, 1009
Forests, effect of on rainfall, 832, 1063, 1105; receipts, &c., of Royal, 953
Forest tree pruning, 359
Fossil flora of Australia, 195
Fowls, negro, 272; Baily's treatise on, 540; Hambro's, 540; Spanish, 541; Dorking, 541; flesh for, 719
Foxes, devices of, 100
France, Olives in, 46; agricultural show in, 58, 582; agriculture in, 461; horticulture in, 168; Peach culture in, 502; the season in, 436
Franklin Expedition, Narrative of the, 51
Frere's (Mr.) appointment, 221
Frogs, green tree and spiders, 554
Frost, effects of severe in December, 7, 25, 194, 335, 362, 384, 386; at Cannes, 384; action of on Peach trees, 501, 504, 530, 554; effect of on Vegetables, 122, 171; all the year round, 122
Fruits for back walls of Orchard Houses, 6; American, 97; mode of keeping at Welbeck, 339; packing for, 386, 410; to keep birds off, 481, 531; linen covers for, 1042; prices of tropical, 532; antiquity of cross breeding, 1105; leaves for garnishing, 578
Fruit Catalogue, Rivers', 935
Fruit gatherers, 853
Fruit Manual, by Hogg, rev., 894
Fruit room, German, 999
Fruit trees, pruning of, 263; diagonal training of, 754; espalier ditto, 771; ornamental pyramidal, 776.
Fuchsia, essay on the, 385; Riccartoni, effects of the winter on, 336; monstrous, 912
Fumigating, English Tobacco unfit for, 482
Fungi and Clover sickness, 10; Wheat blight, 10; on Grass, 480; that destroy timber, 599; poisonous, 892; parasitic, 1045; expansive force of, 1105; cellar, 1125
Fungology, Berkeley's, rev., 1019
Furze, double, injured by frost, 362, 410
Fusarium heterosporium, 958
Fusisporium insidiosum, 480

G.

Galls, Oak, 72; root and Oak, 242
Game, preservation of, 634; over-preservation of, 221, 225, 248, 272, 279
Game laws, return of offences against, 174; damages for injury done, on account of, 1086
Gapes in Turkeys, 636
Garden of Damascus, 75; glass covered, 836; my kitchen, cows, and ½ acre of pasture, 579
Garden boy, how to manage a, 579, 875; engines, wearing out of iron, 76; labels, 386
Gardener and bailiff, 12
Gardeners and Society of Arts examinations, 504; suggestions to, 1106; premiums, 673; Royal Benevolent Institution, 121, 171, 194, 575, 602; anniversary, 601; education, see Education.
Gardening on housetops, 21, 49, 265; street, 774, 793; cottage, 1041
Garnishing, leaves for, 578
Garrya elliptica, effects of the winter on, 336
Gas lime, 781
Gas pipes and trees, 733
Gazania splendens, 836
Geastrum limbatum, 624
Geelong Botanical Garden, 435
Genista tinctoria (Woadwaxen), 738
Geneva Plantarum, new, 189
Geoglossum difforme, 772
Geraniums, striking variegated, 733
Gesnera cinnabarina, 315
Girls, condition of servant, 272
Gishurst Compound, 834, 874, 913, 1061
Glaciers of the Alps, 695; Ramsay on, 650
Gladiolus Brenchleyensis, 816; seed, 1084
Glasnevin Botanic Garden, 399
Glasshouses for the million, 50; how to find length of rafter, &c. of lean-to, 1082
Glazing, strength of glass for, 713
Glenny on Culture of Flowers, Fruit, and Vegetables, rev. 316
Gloucester Agri. Society, 880
Glowworms, lesser, 1044
Goat, duration of pregnancy in, 764
Gold deposits, Davison on, rev., 735
Gorilla, brain of the, 649
Gorse as food, 131; culture of, 564
Gosse's Sea-Anemones and Corals, rev., 291; Natural History, 1043
Gossip of the Garden, rev., 243
Gothic sculpture, 244
Gourd, Honolulu Nectarine, 264
Grafting, new plan of, 4; herbaceous, 239, 484; Araucarias at Holkham, 239, 290; wax for, 315, 338, 362, 386
Grafts, early fruiting of, 978
Graham's-town, climate of, 791
Grain as cattle food, 882
Grapes, reports on varieties of, 5, 835; early, 291; rust in, 388, 410, 434, 458, 481; shanking of, 709; spotted, 910; large bunch of, 854, weight of, 896; ripened in paper bags, 168; growing, 892; at Tehidy, 814; without fire heat, 934; American, 997; fertilising, 602; Black Barbarossa, 218, 266; Golden Hamburgh, 240, 1021, 291, 292, 578, 602, 913, 934, 954, 977, 1042; Muscat, 934; Bowood Muscat, 978, 1001, 1021, 1042, 1062, 1105; Muscat Hamburgh, 736, 977
Grasses, transformations of, 4, 650; for tidy banks, 131; Couch, 366; bad lawn, 226; pasture, 372, 419; for Australia, 588; artificial manures for, 389, 393; top dressing for, 250, 440, 1051, 223
Grass seeds, when to sow, 274; adulteration of, 293, 390, 438, 443; analyses of, 414, 461, 611, 614; quality of, 679; number of weeds in, 533; trade in, 801
Grasshopper warbler, 1107
Grass parasite, 480
Grass verges, round, 1084
Gravel, salt a cure for weeds on, 171
Grazing, chicory for, 322
Greenheart, 691
Greensand as manure, 417
Grisebach's Flora of West Indies, 555
Grote on Plato's Doctrine respecting rotation, 955
Guano, substitutes for, 101; as a top dressing, 223; soot compared with, 226; earthy, 557; quality of, 513; adulterated, 630; Irish ditto, 677; for Potatoes, 739; analysis of, 762; history and properties of, 803; Peruvian, 857; imports, 821
Gunboats, rotten, 527, 551, 553, 575, 599, 621, 625, 645, 671, 691, 974
Gunnera scabra, 916
Guns, instructions for using shot, 895
Gutta percha labels, 74
Gymnastic exercises, 388
Gymnogramma Wetenhalliana, 934
Gymnosporangium Juniperi, 504
Gypsum, operation of, 680

H.

Hailstorms, 123
Haines Hill farm, 247
Hamite valley in California, 7
Hampton Court Gardens, 915, 934
Hardy (Captain), on How to repel Invasion, rev., 7
Harkness (Mr.), death of, 901
Harrow, Seton's, 417
Hartwig's "Sea and its Living Wonders," 1062
Harvest prospects, 737, 839, 841, 877, 757, 758, 762, 778, 957, 960; of 1860, 859; American, 861
Harvest time in Rutland, 802; in successive years, 684
Harvey's (Dr.) Thesaurus Capensis, 28, 531, 627; Catalogue of Algæ, 794
Haymaking, 738
Heaths, effect of the winter on, 362
Heating, lighting fires at top for, 73, 123: Vine borders, 869, 935; best boiler for, 1042, 1062; importance of bottom, 479; steam for bottom, 1104
Hedera Regneriana, killed by frost, 386
Hedgerow timber, 537; weeds, 858
Hedysarum Alhagi and Water Melons, 502
Helminthosporium pyroum, 1045
Helvella crispa, 360
Hemp imports, 821
Henbane, culture of, 192
Henderson's (Messrs.) nursery, 736
Herb pudding, 1001
Herbarium, Lehmann's, 362; beetles, 403; Nuttall's, 556
Hereman's portable hothouses, 692
Heynderycx, sale of his plants, 432
Highland Clans, Badge plants of, 894
Hind, Northumberland, 83
Hinton farm noticed, 247
Hitchin, culture of medicinal plants at, 456
Hogg's (Dr.) Fruit Manual, rev., 894; edging tiles, 1042; (Dr.) Year Book, 1107
Holchus saccharatus, 32; fibre of, 314, 858; lanatus, 419, 536
Hollies, large, 338; as timber trees, 530
Hollyhocks, propagation of, 171; fibre of, 874, 934
Home, its duties, 441
Homœopathy, veterinary, 720, 721, 722
Hooker's Tasmania, rev., 195; Species Filicum, rev., 291, 835
Hop imports, 821
Horses, concretions in, 803; breed of, 843; winter keep for, 1051; homœopathic treatment of, 721
Horse-hoe, Garrett's, 464
Horticulture, state of French, 168
Hothouses for the million, 6, 772; Hereman's portable, 692; how to find length of rafter, &c, of lean-to, 1082
Hovenia dulcis, hardiness of, 336
Huddersfield Hort. Society, 794
Hunter's Mensuration, rev., 7
Husbandry, Flemish, 296
Hyacinths, Messrs. Cutbush's show of, 243; list of, 244; culture of the, 832

Hyde Park, complaints about shrubberies in 119; Elms in, 502
Hydnum gelatinosum, 1080; repandum, 121
Hydrangeas, blue, 936
Hygrophorus psittacinus, 240
Hyoscyamus niger, culture of, 192
Hypsometer, Sang's, 408

I.

Ice-houses, plans of, 833
Ice shower, 716
Ilex dipyrena, injured by frost, 386; cornuta, hardiness of, 362, killed by frost, 386; furcata, ditto, 386; ditto, uninjured by ditto, 362
Illustrated Bouquet (Henderson's), noticed, 267
Implements, farm, 1005, 1008; makers of, and Agri. Soc., 879; show of, 678; ditto at Dublin, 390; at Smithfield, 1113; trials of, 630, 634, 1026
Importations of produce in 1859, 178
Imports and exports, 741
Index Filicum, 1044
India, Tea tree in, 28
Indian Corn husk paper, 952
Indian Cotton, 896
Insects, musical, 716; destruction of, 893
Insect powder, Vicat's, 734
International Exhibition, 1110
Ipomœa, Goat's Foot, 288
Ireland, labour in, 272; root growing and sheep feeding in, 299; farming in, 199, 320, 740, 985; statistics respecting, 878; waste lands in, 80
Iris, growth of terrestrial Orchids on, 167
Iron, paint for, 436; use of in farm buildings, 29, 102, 198, 245, 341, 982
Irrigation, 681
Isle of Wight, Guide to, 715
Italian Rye-grass, irrigated, 761
Italy, Black's Map of Upper, 316

J.

Jameson's (Mrs.) Italian Painters, rev., 7
Japan, Flora of, 603, 1103, 1126
Jardin Fruitier, by Decaisne, rev., 874, 895, 913, 935, 955, 978, 1002
Jasminum nudiflorum, effects of winter on, 336, 362
Judges, complained of, 913
Julian Home, by Farrar, rev., 267
Juncus sylvaticus, 774
Juniperus sphærica, hardiness of, 362
Juniper fungus, 504
Jute imports, 821

K.

Kensington Gore, Horticultural Society's new arrangements at (see Societies)
Kestrel, habits of the, 915
Kew Gardens, Sir W. J. Hooker's report on, 289; lectures at, 436
Kite, habits of the, 855, 875
Klotzsch (Dr.), death of, 1064
Kohl Rabi, 33, 491; notes on, 12; culture of, 491; tops of, 1011
Kölreuteria paniculata, effects of the winter on, 336
Kumquat, 836
Kyanising, 645

L.

Labels, garden, 386; gutta percha, 74; improved lead, 315; zinc, 338; pencils for, Dunn's, 288, 436; ditto, improved, 833
Labour, farm, 173; returns showing value of farm, 390, 392; in Ireland, 272; price of on Tweedside, 344; in Northumberland, 562
Labourers, farm, 371, 509; treatment of, 612; Cheshire, 557; Scott Burn's lecture on the, 1109, 1114; and Friendly Societies, 77; markets for, 33, 465, 510, 632, 685
Labourers' cottages, 511, 606; Dorsetshire, 611, 838
Labrella ptarmicæ, 1045
Lactarius insulsus, 752
Lactometer, tube, 803
Lactoscope, 13
Lakes, Guide to the, 914
Lambs, worms in, 129; diarrhœa in, 178, 588
Lancashire, crops in, 762
Land, reclaiming, 723, 740
Landlord, duties of, 442; and tenant, 81, 723
Landowners, need of improving their farms, 318
Lankester on Uses of Animals, &c., 815
Lapageria rosea, 360, 736
Larch disease, M'Intosh on, rev., 451
Lathyrus tuberosus a British plant, 774, 1001
Laurus regalis, effects of frost on, 336; at Bagshot, 362
Laurustinus, effects of the winter on, 336
Law respecting adulterated seeds, 1025
Lawn mixture, 226
Lawson's Gardeners' Kalendar, 74
Lead pipes, effect of on water, 100
Leases, farm, 514
Leaves, effect of water on, 710; holes in, 412
Lebanon, old trees on, 74
Lecture on flowers, 436; at Kew, 436, 456; Masters', at Royal Institution, 482; Dr. Daubeny's, 630; to the Royal Family, 647; Dr. Anderson's, on Manures, 720, 762
Lee Chee, 876
Lee's (Messrs.) nursery, noticed, 483
Lehmann's herbarium, 362
Leptospermum obovatum cut down by frost, 386
Lettuces, report on varieties of, 49; Carter's new Cos, 673; Tom Thumb, 793
Libocedrus chilensis, hardiness of, 6, 74, 362; cut by frost in Northamptonshire, 362; Doniana, uninjured by frost, 336
Lice, cure for, 1116
Lightning and Beeches, 874, 894, 912, 934
Lilacs, forced white in darkness, 1060, 1152
Lilies, disease in Japan, 455; Water, Moreton Bay, 736
Lime tree, death of an aged at Moor Park, 100
Linaria, so-called varieties of, 734
Lincolnshire, season in, 793
Lindelofia spectabilis, 626
Linden's Hortus Lindenianus, 435; nursery, 554, 915
Lindley's Descriptive Botany, 956
Linnæus, Tupper's statue of, 190
Linseed cake, 587; adulteration of, 587; composition of, 588
Liqueur de Cassis, 931
Liquorice growing, 717
Litchi, 876
Literature, index to current, 339
Lithospermum prostratum, 1042
Lois-Weedon experience, 31; Wheat growing, 463; husbandry, 437, 438, 489, 490, 612; crops, 487; culture, 512, 718
Lomaria chilensis, 25, 626
London gardening, 21, 49; parks, flowers in the, 49; Plane trees, 46, 47
Lucerne, culture of, 515, 924, 1069
Luculia gratissima, 26
Luminosity, oceanic, 775
Lurcher, hatred towards the, 388
Lycoperdon giganteum, 289
Lycopodium denticulatum, hardiness of, 410

M.

Macaulay, Biographies by the late Lord, 316
Machine for moving plant boxes, 502
Macintosh's (Mr.) nursery, 1083
McClintock's (Capt.) Narrative of the Franklin Expedition, 51
Mackenzie on salmon, 483
Maisemore farm, 1028
Maltese Dog, 28
Manchester Exhibition, 650; Field Naturalist Society, 407
Manetti Rose stock, 75, 98
Mangel Wurzel, 632; culture of, 11, 12, 369: growth and restoring of, 128, 802; condition of stored, 57; advantage of sowing early, 56; time for sowing on Fen lands, 56; early sowing, 104; sown with water drill, 486; Ewes on, 1048, 1066
Mangel leaves, 985; to preserve, 963; disleafing, 11
Mangel pulp, 843
Mannington's Pearmain Apple, 4, 23, 218
Manse garden, rev., 363
Manures, effect of different artificial on Turnips, 55; estimated value of from different kinds of food, 56; extra required for high farming 300 acres, 57; farm yards, 80, 757; management of ditto, 535; soot compared with guano as, 226; value of liquid, 173; sewage, 296, 297, 899; Mechi on ditto, 129, 221, 222; application of ditto, 248, 249; ditto, and Mechi's profits, 249; and sheep feed, 128; for Beans, 106, 565; for Grass, 389, 393; cost of converting cattle crops into, 415; green sand as, 417; Baldwin on, 564; valuation of, 763, 780; prices of artificial, 1051; Dr. Anderson's lecture on, 720; Dr. Anderson on artificial, 762; discussion on, 859; experiments with, 102, 981; soot as, 614; Sea-weed as, 1005; adulteration of, 1050; management of cesspool, 1068
Manure tank, 987
Manure making and stock feeding, 318
Manure manufactories, Thames-side, 486
Manuring Vineyards, 915
Marasmius Oreades, 190
Mares, duration of pregnancy in, 764
Markets, feeing, 465; Belgian flower and vegetable, 895
Markham's Cinchona expedition, 693, 712, 731, 751, 776
Marking-ink pencil, Dunn's improved, 833
Marlborough College, Bot. prizes at, 340
Masters' (Mr.) lecture on abnormal forms, 482
Masters and servants, 509
Mauritius, drying up of streams in, 832
Meadows, water, 868
Meat, high price of, 607; manufacture, 882; London consumption of, 984; trade in unhealthy, 1010
Mechanics, Twisden's, 835
Mechi's (Mr.) profits, 221, 271, 294, 295, 297, 245, 249; his use of the word "avail," 249; live stock account, 243; and his opponents, 464
Medicago maculata, 987
Medicinal plants, culture of at Hitchin, 192, 456
Melons, Chinese, 312; water, Arabian mode of growing, 502; quality of, 673; Æthalium on, 436
Mespilus japonica, 532
Mice, 200; ill-effects of in gardens, 122; self-acting traps for, 242
Mignonette tree, 481
Milcote Short-horns, 269, 271, 294
Mildew, Vine, 816; cause of, 977; no novelty, 980; cure for, 874, 912, 980
Milk, produce of per cow, 105; yield of, 538; richness of, 688; taste of, 1116
Million, glass-houses for the, 50
Milne & Co.'s Camellias, 267
Minnesota Hort. Exhibition, 754
Missel-thrush, 458
Mistleto, the, 433, 458
Mitchella repens, hardiness of, 194
Mogador, Flora for, 49
Money making, agricultural, 34
Monkshood, culture of, 451
Monsters; Apple blossoms, 578
Moon-flower (Chrysanthemum segetum), 738
Morton's Dairy Husbandry, 105
Moss, cuttings in, 733; bedding plants in, 693
Mosses, structure of, 875
Moths, Stainton on, 835
Moule on National Health and Wealth, rev., 394
Moulmein, botanical notes made in, 218
Mowers, trial of, 658
Mueller's Fragmenta Phytographiæ Australiæ, 794
Musa Ensete, 1105
Museum, British, Natural History Collections of, 22, 484; Oxford, 482
Mushroom growing in Vineries, 98; poisoning, 892; Berkeley on, 1020, 1021; and charred bones, 1042; expansive force of, 1105
Mushroom parasites, 384
Mustard-cake, composition of, 588
Myrica californica, effects of the winter on, 336
Myrtles, effect of the winter on, 362; at Rothesay, injured by frost, 458
Myrtus apiculata killed by frost, 386

N.

Natural selection in reference to plants, 312, 362
Natural History Review, new, 998
Nectandra Rodiæi, 692
Nectarines, effects of the winter on, 336; pruning, 1038
Net, umbrella, 436
Nettle tops as food, 315
Nevinsia Alabamensis, 28
Newfoundland dog, 52
New York Central Park, 1003
New Zealand, Dr. Thomson on, rev., 27; vegetation in, 733
New Zealand Flax cut down by frost, 386
Nice, climate of, 1082
Night temperature in warm countries, 791
Nitre, mode of preparing, 914
Nitrogen in soil, 1050
Norfolk, corn rents in, 106
Normandy Pippins, 932
Northumberland Hind, 83
Nurseryman's assessments, 1000
Nut tree, productive, 1081

O.

Oak galls, 72, 242
Oak, supply of, 671; sap in, 673; evergreen, effects of the winter on, 362
Odontoglossum grande, 894
Oilcakes, Prof. Voelcker's lecture on, 586; imports of, 821
Oil, yellow Poppy seed, 1023
Olea ilicifolia killed by frost, 336
Olives in France, 46
Orange, spot in leaves of, 291; at Versailles, dying, 313, 336, 338; culture in Australia, 775; and orchard houses, 952
Orchard houses, 481, 834, 998, 1021, 1022; *v.* walls, 264; fruits for back walls of, 6; tiffany for, 361; crops in, 814; in Belgium, 171; Rivers', rev., 243, 875
Orchids, hybridising, 7; ditto, British, 528; Dr. Blume's work on, rev., 7; Mr. Rucker's, 75; mode of growing terrestrial, 167; terrestrial, 217; Kentish, 794
Orchid houses, Mr. Warner's, 290, 338
Ornithorhynchus or water mole, 774
Orobanche (Broom Rape), 859
Osborn (Capt.), on Franklin expedition, rev., 51
Owen's (Prof.) Palæontology, rev., 266
Oxford experimental ground, 679; Museums, 482
Oyster breeding, artificial, 1004
Ozothamnus thyrsiflorus killed by frost, 386

P.

Packing seeds for exportation, 220; fruit, 339, 386, 410
Paint for iron, 436
Palæontology, by Prof. Owen, rev., 266
Palm, Chusan, 170; hardy in Vale of Swansea, 362; injured by frost in Northamptonshire, 362
Palmettos in Dorsetshire, 171
Pampas Grass, 935, 954, 1001, 1081; as Covert, 1001; effect of the winter on, 362; killed by frost, 410
Panton House farm, 738
Paper, materials for, 215, 287, 311, 314, 316, 433, 934; Holcus saccharatus as, 362; Maize husk as, 952
Paper duty, 340, 479
Paper hangings, poisonous, 815, 1084
Paris Zoological Garden, 339
Parks, flowers in our public, 49; complaints about shrubberies in, 119
Parroquets, Australian Zebra, 50
Parsnips *v.* Potatoes, 963
Pasture land, to break up, 200; to clean foul, 1069
Paulovnia, cut back by frost, 362
Paul's nursery noticed, 715
Pavia coccinea, hardiness of, 194
Peach trees, Chinese, 76, 170; effects of the winter on, 336, 710; killed by frost, 48, 501, 504, 536, 554; thinning, 578, 973, 1038; diagonal training of, 754, 853; cordon training of, 1083; culture of, 912; Knight's mode of treating, 264; culture of in France, 502; Stirling Castle, 734; and Vines in the same house, 124; buds, fruitful, 774; leaves indicative of quality, 954; curl in, 484
Peaks, Passes and Glaciers, Ball's, rev., 507
Pearmain, Mannington's, 4, 23
Pears, spotted, 998; cracked, 956; dried, 932; for a N. wall, 196; on Mountain Ash, misstatement, 953; Bezi Mai, 120; Madame Verte, 217; Huyshe's Victoria, 834; Winter Bon Chrétien, 875; Crottée, 875; Royale d'Hiver, 875; Vermillon or Bellissime d'Automne, 875; Colmar d'Eté, 875; Donville, 875; d'Arenberg, 895; Bonne d'Ezée, 895; Léchasserie, 895; des Vétérans, 895; de Rance, 895; Beymont, 895; Colmar d'Eté, 913; Chaumontel, 913; Duchesse de Mars, 914; Gros Certeau d'Eté, 914; Naguette, 914; de Parthenay, 914; Délices d'Angers, 914; Fusée, 914; Grésilier, 914; d'Alençon, 914; Epine Rose, 914; Duval, 914; Oignonet de Provence, 914; Nain Vert, 914; Forelle, 635; Béquesne, 935; Colmar, 935; de Beurré, 935; d'Amboise, 935: St. Germain Panaché, 955; Diel, 955; Du Tilloy, 955; Henriette, 955; Muscat Lallemand, 955: De Doyenné Roux, 955; Figue, 978; Surpasse Meuris, 979; Cassante d'Hardenpont, 979; Belle de Thouars, 979; Nonpareil, 979; Belle Angevine, 979; synonyms of, 1002
Pear seedlings, American mode of treating, 814
Pear seeds, budding with, 360
Pear leaf Fungus, 956
Pear leaf miner, 754
Pear Orchard in United States, 792
Peas, Hack's, 694; monstrous, 894; late, 954
Peas pudding, 963; soup, 963
Peat charcoal, Irish, 565
Pelargoniums, select, 651
Pembroke Farmers' Club, 921
Pencil, Dunn's label, 288, 833
Pepper, adulteration of, 532
Perfumery, Rimmel on, 480, 503, 529, 553, 577, 626
Peruvian Barks, Howard's Illustrations of, 219
Pestalozzia Guepini, 1045
Phalænopsis Schilleriana, 216
Photinia serrulata, uninjured by frost, 362
Piceas, hardiness of different kinds of, 74
Pigs, 763; flesh for, 719
Pincenectitia, origin of name, 508
Pine Apples, effect of suckers on growth of, 266; classification of, 976, 999, 1040; at Eridge Castle, 1042; to destroy scale on, 871, 893
Pinks, select, 651
Pinuses at Esher, growth of, 25
Pinus lophosperma, 46; Ocampoi Devoniana, 124; tenuifolia, 502; corkscrewed, 242; Montezumæ, effects of the winter on, 336; tuberculata, ditto, 336; Llaveana, ditto, 336; Australis, ditto, 336; excelsa, ditto, 336; insignis, ditto, 336; insignis, young plants killed by frost, 362; Teocote, killed by ditto, 362; excelsa, injured by ditto, 362; Montezumæ, ditto, 362; muricata, ditto, 362; tuberculata, ditto, 362; monticola, hardiness of, 362; Jeffreyii, ditto, 362; Beardsleyii, ditto, 362; cembroides, ditto, 362; Padufia, ditto, 386; Parolinii, ditto, 386; Fremontiana, ditto, 386; Don Pedri, injured by frost, 386; Fenzleyii, ditto, 386; Jeffreyii, ditto, 386; inflexa, ditto, 386; Monte-allegri, ditto, 386; Ocampoi, ditto, 386; Endlicheriana, ditto, 386; Ehrenbergii, ditto, 386; Lindleyana, killed by frost, 578
Pinus seeds, treatment of old, 552
Pittosporum, killed by frost, 362
Plane trees, London, 46, 47
Plantago media, (fire leaves), 738
Plants, transformations of, 3; Darwin's theory respecting species of, 45, 122, 649; "Natural Selection" in reference to, 45, 312, 362; cross-bred, 26, 49; fibre-yielding, 215, 774; effect of arsenic on, 216; Masters on abnormal formation in, 482; native, 894; efforts of wetting leaves of, 710; effects of the winter on, 335, 362; spelling names of, 876; so called species of, 1080; fructification without impregnation in, 1001; sexuality of, 773; used for bedding, 795; bedding in moss, 693; used as badges, 894; cultivation, science of, 344; experiments on growth of, 650
Plant border, systematically arranged, 190
Plant box moving machine, 502
Plant case, Waltonian, 97
Plant cells, movements in, 794
Plant houses, Sir J. Paxton's, 171, 752
Pleopeltis incurvata, 1105
Pleroma elegans, 433, 530
Pleuro-pneumonia, 367, 612, 922; and hot air baths, 764
Ploughs, 581; Bedford, 55; steam, 608; trial of ditto, 657, 718; Fowler's ditto, 1045; Beard's ditto, 1046; deep, 1087; Fowler's Draining, 605; two v. four-horse, 613
Ploughing match, 659
Plums in 1860, 891; Mitchelson's, 892, 894; how to distinguish, 600; from a glazed wall, 793; Golden Drop on a north wall, 998, 1081
Podocarpus andina, killed by frost, 386; nubigena, ditto, 386
Podophyllum Emodi, 753
Poisoning by Aconite, 1023
Poisoned Aniseed, 1044
Poissy Agricultural Show, 419
Political economy, harmonies of, 75
Polyanthuses, 361
Polypodium sanctum, 1105
Polyporus hybridus, 599; squamosus, 975
Ponds, bottoming for, 530, 533
Poor, scheme for relieving, 1086
Poppy, monstrous, 647; seed cake, composition of, 588; seed oil, yellow, 1023
Potato, cultivation of, 168, 366; guano as a top-dressing for, 223, 699, 739; effect of Dec. frost on, 104; to store, 954; crop, 958; disease, 612 841; in France, 168; imports, 821; sets, cut, 315
Poultry, ailments, 318; to clear of vermin, 861; show, 803; Birmingham, 1091; Crystal Palace, 1114
Premium paying to gardeners, 673
Protection of wall fruit, 266; tiffany for, 361
Prunella vulgaris, 537
Pruning timber, 172, 218, 359; fruit trees, 263; Peaches and Nectarines, 1038
Prunus triloba, 170
Pteris tricolor, 217
Ptinus fur, 408
Puff balls, 289
Pyrus Bollwylleriana, 953

Q.

Quercus sessiliflora, 73; pannonica, 73; bambusæfolia, 170

R.

Rabbits, value of loss to crops sustained by, 58; Elder not eaten by, 793
Rainbows, mock, 712
Rainfall at Chiswick, 8, 575; in Monmouthshire, 25; in Lancashire, 25; at Stevenage, 50; near Southampton, 50; at Castle Hill, 50; in Dumfriesshire, 74; near Winchester, 74; near Cornwall, 74; in Warwickshire, 98; and allied phenomena, cause of, 123; at Stonyhurst, 122; at Witham, 122; at Cardington, 194; at Highfield, 194; at Plympton St. Mary, 218; in Nottinghamshire, 586, 601, 602; at Epping, 626; in Essex, 673; at Alresford, 649; at Holme, 685; in Yorkshire, 694; Tweeddale prize essay on, 795; and drainage, 938; September, 1860, 954; in October 1860, 1001; in November, 1106; in Carse of Gowrie, 1110; effect of forests on, 832, 1063, 1105
Rain making, 1050
Ram sales, 764
Ranunculuses, select, 579
Rape cake, as food, 512, 587; composition of, 588
Raspberry Jam Tree, 712
Rats, 490
Rat-killer, determined, 556
Reaping machines, 201, 701, 921, 959, 1008 Celtic, 719; trial of, 97, 658, 718, 837, 841' 798, 880; Holland, 197; experience of, 899;' Dray's, 802; Burgess & Key's, 760, 770, 820, 802, 1068
Renanthera, flowering of, 1001
Reinette Platte de Champagne Apple, 23
Rhododendrons, Fortuni, 170; hardiness of ditto, 336; effects of the frost on, 336; Boothii; killed by frost, 386; Hookeri ditto, 386; argenteum ditto, 386; Falconeri ditto, 386 Sikkim, 95, 336, 458; ditto killed by frost, 362; exhibition of, 555; large truss of, 580; hardy, 603
Richmond, death of Duke of, 959
Ricks, roofing of, 177
Rifles, 1108; Busk on the, 650
Rifle Match Report, 696
Rimmel on Perfumery, (see Perfumery)
River reform, 1109
Road reform in Scotland, 417
Roots, direction taken by, 791
Root galls, 242
Root crops in Warwickshire, 31; consumption of, 609; deficiency of, 841; growing in Ireland, 299; pulped, as cattle food, 198, 297, 346; to store, 962; show of agricultural, 1086; ditto at Hadleigh, 1115; U. States, 1023
Roses of 1859, 51; transplanting with dormant buds, 196; cultivation of, 243; remarks on names given to, 243; effect of the winter on, 362; Souvenir de Malmaison, 433; Tea, effect of late frost on, 194; ditto in Ireland, 554; Fortune's, 623; ditto injured by frost, 362; old double yellow, 626; sport, 672; show, national, 673; at Floral Hall, 674: showing, 934; new, 715; Isabella Gray, 734; green, 852; late blooming, 1107
Rose stock, Manetti, 75, 98, 910
Routledge's Natural History, 339
Rowell on cause of rain, &c., 123
Royal Family, Botanical lecture to, 647; Forests, receipts &c., of, 958; Agricultural College Club, 700
Rucker's (Mr.) Orchids, 75
Rye, Ergot in, 877; parasite on, 958; new ditto on, 1045
Rye-grass seed, number of weeds in, 534; irrigated Italian, 701

S.

Sainfoin, analysis of, 681
Salt for roads, 98; for walks, 123
Salmon, Mackenzie on, 483; fishing in Canada, 814
Sang's Dendrometer, 408
Sash lines, thongs of raw hides for, 530
Saxegothæa conspicua, injured by the winter, 362
Scabiosa succisa (fire-leaves), 738
Scale, to destroy, 871, 893, 1108
Scarlet Runners for beds, 290
Schimper, Icones Morphologicæ, rev., 875
Scirpus lacustris, 774
Scorer's (Mr.), garden noticed, 980
Scotland, limit of Wheat culture in, 919; climate of, 104
Scottish clans, badges of, 673
Sculpture, Gothic, 244
Seasons, the, 1081; of the Tropics, 1022; in Lincolnshire, 793; of 1860, wet, 855
Sea Anemones and Corals, Gosse on, rev., 291
Sea Cucumbers, 1084
Sea Serpent, 1043
Seaweed, 1088; as manure, 1005; Nature-Printed, 507, 627
Seeds, packing for exportation, 220; cheap, 537; vitality of, 714; germination of old, 552; to hasten germination of, 1061; law respecting adulterated, 1025
Selection, Nature's law of, 312
Selkirk (Earl of) on a more effectual system of National Defence, 28
Selkirkshire, farms in, 82
Senecio Jacobæa, 537
Sensitive plant, effect of chloroform on, 26
Sequoia sempervirens injured by frost, 362, 458, 578
Serpentine, bottoming for the, 530
Serradilla (Ornithopus), 963
Servant girls, condition of, 178
Sewage, Mr. Sidney's remarks on, 125; value of, 173; and prejudice, 175; application of, 248, 249; and Mechi's profits, 249; Mr. Mechi on, 129, 221, 222; as manure, 296, 297, 899, utilisation of, 1045
Sewer reform, Clarke on, 81
Sexuality of plants, 773
Shading, tiffany for, 361
Shamrock, the, 649, 673, 713
Sheep, poisoning of by absorption of arsenic, 203; dipping, 464; Chinese, 126; prolific, 297; Australian, 203, 226, 299; Foscote, 416; cross-breeding, 345, 416; losses of breeding ewes, 11; merits of pure bred and cross bred, 320; mortality amongst, 491; diseases of, 1046; warranty of, 443; foot-rot in, 131, 565, 981; maggots in brain of, 565; scab in, 698; feeding in Ireland, 299; ditto, experiments on, 843, 882; Hamilton on ditto, 32, 176; ditto and manure, 128; influence of food on growth of wool, 54; unadulterated food for, 1009; duration of pregnancy in, 764; imports, 821; Cheviot, 1092
Sheep fair, Inverness, 684
Shoe, Why it Pinches, 794
Shorthorns, 718, 720; pedigree of, 270, 271, 878; Teeswater, 881; sale of, 175, 197, 269, 294, 797, 839; price of, 629, 635; Springfield, 607; at Kingsfort, 697; Dudding's, 738; Mr. Dixon's, 799; at Pontefract, 819; American, 1109
Shreds, 577; brown calico for, 602
Sikkim Rhododendrons, 95
Silkworms, 388
Sixt, valley of, 834
Skimmia japonica, hardiness of, 362
Slater's Amateur Florist Guide, 411
Sleigh on Personal Wrongs and Legal Remedies, 75
Slough, R. Nursery, 651
Slugs, 802
Smithfield Club, 557, 1111
Snow in N. of Scotland, 175
Soap, Vegetable, 265
Society of Arts, 635
Societies:—
Agricultural of England, 104, 128, 200, 224, 320, 417, 438, 538, 563, 699, 719, 1008, 1089, 1110; Voelcker's chemical report, 249; general meeting, 463, 466; report to ditto, 485, 490: implement trials, 630, 634; and implement makers, 677; meeting at Canterbury, 653, 677; money collected at meetings of, 719; meeting at Warwick, 177; editorship of Journal of, 177, 489, 512, 537, 562, 818, 843, 922
Agricultural of Ireland, 370, 442, 539, 699, 841
Ballinasloe Agricultural, 985
Bath Agricultural, 535, 538; show of ditto, 559, 563
Birmingham Agricultural, 899, 986, 1085, 1089
Botanical of Edinburgh, 26, 339, 458, 794
Chemico-Agricultural of Ulster, 417, 803, 921
East Lothian Agricultural, 880
Entomological, 26, 195, 316, 411, 507, 650, 714, 793, 874, 978, 1082
Faringdon Agricultural, lecture to, 442
Highland and Agricultural, 105, 297, 684; meeting of at Dumfries, 720; Journal of, 1050
Hitcham Labourers' Horticultural, 853
Hornsey gardeners, 243
Horticultural of Canada, 695
Horticultural of London, 190, 814; election of Fellows, 50, 99, 195, 291, 363, 482, 603, 694; anniversary, 408; report to, 410; Floral Committee, 123, 243, 315, 338, 387, 482, 554, 603, 695, 674, 735, 747, 834, 874, 913, 1022; Fruit Committee, 50, 123, 218, 338, 434, 554, 649, 713, 755, 834, 913, 1022, 1106; Garden at Chiswick, 291, 627, 835; Collectorship, 998; new arrangements at Kensington Gore, 71, 288; chromolith. of new garden there, 432; new Conservatory, tenders for, 580; new garden, announced opening of, 869; progress of works in, 1022; forthcoming exhibitions in, 1079; schedule of prizes, 1103
Lancashire Agricultural, 859
Lincolnshire, 700
Linnean, 99, 171, 218, 291, 339, 434, 531, 555, 627, 1001, 1082, 1107
Manchester Agricultural, 842; Journal of, 130
Much Wenlock Agricultural Reading, 860
Northumberland Agricultural, 803
Oxford, 1068
Paris Horticultural, 216
Paris Agricultural, 465
Royal Botanic, 266, 315, 387, 506, 578, 626
Royal Irish Horticultural, 1082
Tring Agricultural, 1028
Tulip, South Metropolitan, 506
Yorkshire Agricultural, 717, 719
Farmers' Clubs:—
Blandford, 371
Central, 33, 129, 225, 273, 320, 345, 496, 513, 540, 564, 1008, 1114
East Botley, 200
—— Lothian, 200
—— Halesworth, 34
—— Hexham, 81
Inverness, 1049
Ipswich, 922
Kingscote, 200
Milborne, 80
Newcastle Agricultural, 820, 881
Oxford, 33
Penrith, 57
Suffolk, 57
Teviotdale, 1009
Soil, exhaustion of the, 10, 11; Clover sick, 273; advantage of deep culture, 370; structure and action of the, 510, 535; temperature of, 555; nitrogen in, 1050
Solanum capsicastrum, 26, 74, 1083; crispum injured by frost, 386
Soot, as manure, 614; compared with guano, 226
Sorghum, sweet, 858
Sows, duration of pregnancy in, 764
Soy beans, 580
Species, notice of Darwin's work on Origin of, 45; remarks arising out of ditto, 122, 433, 649
Species of species makers, 1080, 1150
Spergula pilifera, 194, 648, 713, 912, 934; saginoides, 934, 1000
Spiders in Greenhouses, 458; and green tree Frogs, 554
Spiræa Boursierii, 8; Lindleyana, effects of the winter on, 336; Nobleana, 751
Sportsmen, advice to, 715; Guide, rev., 895
Spring, 314
Squares of London, 532
Squash, Honolulu Nectarine, 264
Stable management, 34
Statistics respecting feeding stock, 56; agricultural, 413; Congress, international, 680; Irish agricultural, 274, 878
Stauntonia latifolia killed by frost, 362
Steam culture, 1008; and Emperor of the French, 443; cultivators, trial of, 197; in Holland, 197; cultivation, 343; Smith on, 371, 464, 608; power, 560, 564, 584, 684; advantages of, 635; economy of, 540; plough company, 607, 801; ploughs, trial of, 657, 718; engines, moveable, 1007; for bottom-heat, 1104
Sticklebacks, parasite on, 171
Stirling Castle Peach, 734
Stocks, classification of, 999; for Apricots, 853
Stock, housing, 80; feeding, statistics respecting, 56; and manure making, 318
Storms, great autumn, 1859, 121
Strathmore, vale of, 560, 610, 633, 682, 819, 839
Straw, use and abuse of, 201; proper use of, 938, 919, 922; and manure on Whitfield farm, 1048; dressings, 103
Strawberry, new kinds of, 122, 531, 578, 649; British Queen, 602; May Queen, 410, 434, 530, 625, 694; Knevett's Empress Engenie, 913, 954; old Pine, 553; Stirling Castle Pine, 979; Old Scarlet, 578; Eclipse, 554; Wizard of the North, 554, 602, 676, 1106; Cuthill's, 755, 1081; Princess Royal, 481; Black Prince, 979; Strawberry pamphlet, Cuthill's, 96; forcing, 600, 647; in towns, 531; early, 533; early and late, 816; alpine, 1022; autumnal 1042
Street gardening, 774, 793
Strelitzia Regina, 894
Streptocarpus polyanthus, 813
Sudbury Cottagers' show, 978
Sulphate of ammonia, 35
Summers, equatorial, 1062
Suns, mock, 266
Superphosphate, 762; analyses of, 198
Susquehanna root, 484
Sussex, notes on, 858
Swammerdamia killed by frost, 386
Swedes, sowing, 612; culture of, 1048
Sydney Bot. Garden, 911
Sydney Smith's Wit and Wisdom, 1107
Syringa oblata, 170

T.

Tallow, vegetable, 122
Tank, manure, 987
Tanning, barks for, 815
Tares, mule? 602
Tasmania, Hooker's, rev., 195
Tasmania aromatica, hardiness of, 171; odorata, injured by frost, 386
Taxus cuspidata, 170
Tea, culture of in India, 28, 953; countries suitable for, 504; adulteration of, 455
Teak wood, 8; sources of, 671; African, 691
Tecoma capensis, native country of, 4
Tegetmeier's Domestic Economy, 219
Temperature of Greenock and Cumbrae, 25; of Cardington, 194; of Europe, 316; of the earth, 24, 555, 710; of 1860, 781, 1060; low, July, 693; of October 12, 910; of December, 1859, 80; of Graham's Town at night, 791; of tropical Australia, 791; of Nice, 1082
Temple Gardens, 775; Chrysanthemums in, 1003
Tenant and landlord, 81
Tenant right, 717, 723, 1006
Terrestrial Orchids, mode of growing, 167
Textile materials, 215, 774, 816
Theology, Science in, by Farrar, rev., 51
Thermometers, how to state indications of, 5; careful inspection of necessary, 122
Thesaurus capensis, 28
Thistles, to destroy, 104, 536, 777, 802, 820
Thompson's Gardener's Assistant, 172
Thomson (Dr.) on New Zealand, rev., 27
Thorley's cattle food, 128, 224; Almanac, 986
Threshing machines, 224, 659
Thuja gigantea, hardiness of, 6, 26, 74, 362; Craigiana, ditto, 362
Thujopsis borealis, ditto, 6, 74, 362; dolabrata, ditto, 362, 336
Tidal banks, grass for, 131
Tiffany houses, 361, 336, 355
Tiles, edging, 1062; Hogg's ditto, 1081
Tillage, Pringle on, 442
Timber, old, from Hampton Court, 52; decomposition of, 527, 551, 575; dry rot in, 599, 604; naval, 691, 694, 974; Mathew on ditto, 604; supply of Dockyard, 671; sound and unsound, 710; preservation of, 623, 625; modes of effecting, 645, 754; to charge with fluid preservatives, 793; hedgerow, 537; pruning, 172, 218; when to fell, 676; winter and spring felled, 628
Tine Tare, 1001
Tithe Commutation, 56; averages, 104
Tobacco, English, unfit for fumigating, 482, 504
Tomato, the, 813; to cook, 856; new upright, 1038
Toothache, cure for, 774
Torreya grandis, hardiness of, 6, 170, 362
Tow-cock (Dolichos sinensis), 834
Town gardening, 265
Trade lists, 28, 51, 75, 124, 172, 220, 339, 460, 696, 815, 835, 875, 895, 915, 1003, 1044
Trade memoranda, 504
Training, espalier, 771; diagonal, 754, 793, 853; cordon, 1083
Transformations of Grasses, 3
Transplanting large Cedars, 6; evergreens, 553, 556
Trees blown down at Clumber, 266; to measure height of, 408; age of, 649; Ceylon Sacred Bo, the oldest known, 649; age of ancient Elm, 120; size of, 793; espalier training of fruit, 771; ornamental pyramidal fruit, 770; and gas pipes, 733; pruning timber, 339; forest, 359
Tremella mesenterica, 953
Trifoliums, Vilmorin's, 757; minus, said to be the Shamrock, 649; incarnatum, 802
Triticum repens, 536
Tropics, seasons of the, 1022
Trottels, what are they? 299, 346, 636
Tulips, early, 531
Tullian experience, 632
Turkeys, gapes in, 636
Turnips, condition of, 80; various artificial manures for, 102; and disease, 223; flea, 670; fly, 464; ditto and salt, 684; experiments with, 981; ditto near Inverness, 55; substitutes for, 198; sown with water drill, 486
Tuscan Agriculture, 126
Tweedside, prices of labour on, 344

U.

Umbrella net, 436
Unicorn, the, 1043, 1062
United States, climate compared with that of England, 170; Chapman's Flora of, 715; crops in, 861
Upcott, Conifers at, 977
Ure's Dictionary of Arts, &c., rev., 51, 1022
Urine, analysis of sheep's, 177

V.

Vaccinium rugosum, 884
Valuations estimated by "points," 898
Vancouver's Island, 831; facts relating to, 854
Vegetables, effect of December frost on, 171, 335, 362, 384, 386, 410; Chinese in California, 311; prices of tropical, 532
Vegetable butter, 189
Vegetable seed, sale of Chinese, 387
Vegetable soap, 265
Vegetable tallow, 122
Vegetation, effect of arsenic on, 216; in New Zealand, 733; of Japan, 1103, 1126
Veitch's (Mr.) letters from Japan, 1104
Verbenas, select, 651
Veronicas, effect of the winter on, 362; Andersonii, uninjured by frost, 458
Versailles, box edgings at, 834
Viburnum hirsutum, hardiness of, 336
Vicat's insect powder, 734
Vicia globosa, 602
Village institutions, 1067
Vilmorin, Louis, death of, 366
Violets, Neapolitan, 796
Vines and Peach trees in the same house, 1[illegible]; making roots push from stems of, 4[illegible]; systems of pruning, 1108; upright rod system of training, 266; failure of early, 3[illegible] 338, 709; pot culture of, 338; suitable for South Australia, 625; list of kinds of, 8[illegible]; wild American, 997; how strong get weak, 1039; culture of, 1080; standard, 1103
Vine borders, 836, 856, 951, 975, 978, 1021, 10[illegible]; heated, 869, 935, 1041, 1081; materials for, 1042; burnt oyster shells for, 1082
Vine mildew, 816; no novelty, 980; cures for, 912, 980
Vineries, mushroom growing in, 98; [illegible] 812, 832, 852; at Trentham, 1128
Vineyards under glass, 243; manuring, 915

W.

Wages, labourers, 200, 371, 1115; in Sussex, 272; Ireland, 273; Tweedside, 344; return showing value of labourer's, 393; in Carmarthensire, 489
Walks, salt a cure for weeds on, 123, 171; bottoming for, 315; clay foundation for, 3[illegible] concrete, 484
Wallflower, new hybrid, 602
Wall, Pears for a north, 196; inutility of garden, 772; material for pointing, 880; Golden Drop Plum on north, 998
Wall fruit, protection of, 266
Wall trees, remarks on pruning, 263
Walpers' Annales Botanices Systematicæ, 71[illegible]
Waltonian case, 97
Wasps, early appearance of, 74
Waste lands, Irish, 80
Watcombe, noticed, 935
Water, effect of lead pipes on, 100; effect of leaves, 710
Water Drill, Ruston on, 486
Water Lilies, Moreton Bay, 736
Water Meadows, 368
Water Melons, Arabian mode of growing, 9[illegible]
Water mole, 774
Water tanks, size for glasshouses, 412
Waterproofing, plan of, 25
Waterer & Godfrey's nursery, 6[illegible]
Watson, testimonial to Mr., 292
Wax, grafting, 315, 338, 362, 386
Weasel, the, 26, 50
Weather at Weybridge, 7; in 1859 and '60, 5[illegible] in 1860, 781, 937, 1060
Weather and the Crops, 817
Weather prognostics, 840, 1105
Weeds on roads, salt a cure for, 98; on walks, ditto, 123, 171; farm, 681, 883; fecundity of, 916; number of in Grass seeds, 533; lecture on, 536; hedge-row, 858
Weed Destruction Bill, 904
Weld's Tour in the Highlands, &c., 675
Wellingtonia gigantea, original trees of, hardiness of, 6, 25, 26, 74, 362; at Rothesay injured by frost, 458; cones on, 977

Weight of bunch of Tokay Grapes, 896; of live and dead stock, 882
Weston Birt farm, noticed, 294
Whales killed by prussic acid, 756
Whale fishing in the St. Lawrence, 814
Wheat, weight of, 197; rolling and hoeing, 297; limit of culture of in Scotland, 319; Lois Weedon, 437, 438; ancient prices of, 882; new variety of, 562; Giant Red, 877; Shirreff's new Red, 877; experiments with, 877; suitable for cold seasons, 841; state of crop of, 797; management of wet, 840, 841; wet to harvest, 859; Australian, 963
Wheat blight and Fungi, 10
Whitfield farm, straw and manure on, 1048
Wills on Alpine Scenery and Glaciers, 834
Winds, effect of the late high, 266; Cedars uprooted by, 218
Winter, effects of the, 335, 362, 410, 458, 578; at Cannes, 384, 386; in Dorsetshire, 171
Winter gardening, tiffany for, 361
Wireworms, transformations of, 530
Woadwaxen (Genista tinctoria), 738
Woods, Coppice, 76
Woodlice, cure for, 652, 816
Wool, influence of food on growth of, 54; weighing, 611; imports, 821
Woolston farm, 368
Woolwich Floricultural Society, 99
Worcestershire Cattle Show, 940
Wort, meaning of, 896
Worthing, climate of, 956

Y.

Yam, Chinese, 168, 194, 242, 288
Yang-Mai, 909
Yarrow, bulbiferous, 673
Yews, injured by frost at Burton on Trent, 578; Golden, 604
Yorkshire, crops in, 439
Yucca gloriosa, 853; treatment of after blooming, 894, 912

Z.

Zinnias, double, 851, 894; origin of ditto, 1038
Zoological garden, Paris, 339

LIST OF WOODCUTS IN THE PRESENT VOLUME.

A.

ÆTHALIUM septicum, 409
Agaricus melleus, 5; cepæstipes, 47; semiglobatus, 97; muscarius, 169; radicatus, 265; fascicularis, 337; tuberosus, 456; gambosus, 672; retirugis, 711; longipes, 813; dryinus, 832; rhacodes, 910; gloiocephalus, 933; campestris elongatus, 1061; vaporarius, 1021; Buchanani, 1039
Apple, Mannington's Pearmain, 24; Reinette Platte de Champagne, 24

B.

BEETLE, herbarium, 408; Coquilla Nut, 600
Bird trap, Knight's, 652
Boletus luridus, 385; elegans, 529

C.

CANTHARELLUS cibarius, 312
Cattle courts, covered, 102
Clavaria rugosa, 217; abietina, 871
Coprinus comatus, 73
Coquilla Nut Beetle, 600
Cordiceps ophioglossoides, 792
Corticium quercinum, 481
Cottages, plans of, 606. 838
Crucibulum vulgare, 893

D.

DÆDALEA quercina, 576

E.

ERGOT on Rye-grass, 918

F.

FUSISPORIUM insidiosum, 480

G.

GEASTRUM limbatum, 624
Geoglossum difforme, 773

H.

HELVELLA crispa, 360
Herbarium beetle, 408
Horticultural Society's New Garden, 432
Hydnum repandum, 121; gelatinosum, 1081
Hygrophorus psittacinus, 240

I.

ICE-HOUSES, 833
Iron, illustrations of uses of in buildings, 102, 198, 246, 342, 982
Irrigation, 1162

J.

JAPANESE Mount "Fusi Yama," 1127

L.

LACTARIUS insulsus, 752
Lois-Weedon culture, illustrations of, 439
Lycoperdon giganteum, 289

M.

MARASMIUS oreades, 190

O.

OAK galls, 72
Orchard house, 124
Orchid house, Mr. Warner's, 290

P.

PEACH pruning, 1038
Pear, Bezi Mai, 120; Madame Verte, 217
Plant-box moving machine, 503
Polyporus squamosus, 975
Poppy, monstrous, 647

R.

ROOTS, direction taken by, 791
Rose sport, 672

S.

SCHIZOPHYLLUM commune, 1151

T.

THISTLE roots, 778
Tiffany houses, 361, 935
Town garden, 22
Tremella mesenterica, 953

V.

VINE roots, 410
Vine standard, 1103
Vinery, ridge and furrow, 1128

W.

WALTONIAN case, 97
Wireworms, 520

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		MELON, Carter's Excelsior	1 pkt.
		,, Turner's Gem	1 ,,
		ONION, James's Keeping	2 oz.
		,, White Globe	2 oz.
		,, Reading	2 oz.
		,, Giant Madeira	1 oz.
		,, Deptford	2 oz.
		,, Lisbon	1 oz.
		PARSLEY, Myatt's curled	2 oz.
		PARSNIP, fine selected	2 oz.
		SPINACH, summer	1 quart
		,, winter	1 pint
		SALSAFY	1 pkt.
		SCORZONERA	1 ,,
		TURNIP, White Dutch	4 oz.
		,, Polley's Nonsuch	½ pint
		,, Yellow Maltese	2 oz.
		VEGETABLE MARROW	1 pkt.
		,, Custard	1 ,,
		HERBS in sorts	6 ,,

Collections 1 and 2 are similar to the above, with the quantities proportionately reduced.

J. C. & CO.'S 25TH ANNUAL CATALOGUE OF FLORICULTURAL, VEGETABLE, AND AGRICULTURAL SEEDS, AND GARDENERS' VADE MECUM, will be published early in January.

237 and 238, HIGH HOLBORN, LONDON, W.C.

LEE'S NEW WHITE SPROUTING BROCCOLI.

MESSRS. JOHN & CHARLES LEE

FEEL highly honoured in being the means of introducing this most important Vegetable production to the notice of the Public. The real value of this prolific Broccoli will not be ascertained till it is in the hands of every Cottager in the Kingdom; and they only regret that their present very limited stock will not enable them at once to spread it more widely.

The engraving, taken from a Photograph, which accompanied Dr. Lindley's remarks in the *Gardeners' Chronicle* of Dec. 10, and was inserted in our advertisement of December 17, shows the enormous crop of good White Broccoli to be expected from it under good cultivation. The centre head is large and fine, and the subordinate heads, all of good size, number from 30 to 50. It has remained true to its branching character for four years; it is perfectly hardy, and is in season through JANUARY, FEBRUARY, AND MARCH, a period at which it is so desirable to obtain good White Broccoli.

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Nursery and Seed Establishment, Hammersmith, London, W.

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BUTLER & McCULLOCH'S

DESCRIPTIVE AND PRICED CATALOGUE OF FLOWER, TREE, SHRUB, VEGETABLE, AND AGRICULTURAL SEEDS

(READY IN A FEW DAYS, AND FORWARDED FREE AND POST PAID ON APPLICATION),

The Notes and Descriptive Matter of which have been carefully revised and much valuable information added. The new and recent introduction of species and varieties have also been added, and as heretofore the seeds which require for their maturation a warmer climate than that of England have been saved for us in Italy by that distinguished amateur, the late Sardinian correspondent of Messrs. James Carter & Co., who has appointed us his representatives in this country.

Continued from last week's Chronicle.

ACACIA SPECTABILIS EXCELSA (rare), graceful and remarkably beautiful.
ACACIA LONGIFOLIA MAGNIFICA (rare), one of the most splendid Acacias in cultivation, with gorgeous clusters of bright yellow flowers, several inches in length (very rare).
ACACIA LONGISSIMA GLAUCA PENDULA (rare), a most elegant variety, with leaves ¼ inch broad and from 3 to 4 feet in length, drooping like a Weeping Willow.
CANTUA PYRIFOLIA, elegant plant, cream coloured, waxy flowers in bunches.
ESCALLONIA FLORIBUNDA, white. } These two are elegant
,, MACRANTHA, purplish scarlet. } shrubs, with shining green foliage.
ANONA MUCOSA (one of the finest fruits of the Tropics).
RIVINA LÆVIS, pink succeeded by bunches of red fruit highly ornamental.
PLUMBAGO ALBA (seeds rare) } Beautiful plants flowering the first season.
,, CŒRULEA (seeds rare) }
ONONIS ROTUNDIFOLIA, deep rose, flowering in bunches, beautiful.
PSIDIUM AROMATICUM, fruit, flavour of the Pine Apple.
PSORALEA SPICATA, white and blue, beautiful.
PUNICA GRANATUM NANUM (Pomegranate from the Antilles), 1 foot high, very beautiful waxy flowers, and superb fruit.
SOLANUM LUCINIATUM ELEGANS, beautiful shrub of rapid growth, producing blue flowers in abundance, succeeded by bunches of scarlet orange fruit.
SOLANUM TAXANUM, splendid new var.; height from 1 to 2 feet; fruit of a waxy scarlet appearance, with the form of a Maltese cross in the centre, and may be preserved as an ornament for some time. Foliage shaded Mulberry, very handsome; a great novelty.
PETUNIA HYBRIDA GRANDIFLORA, various, fertilised with all the newest double varieties.
CASUARINA (Casuarinaceæ), singularly picturesque trees, with weeping branches, jointed like a Bamboo, for the most part, streaked between the joints, and without leaves; very elegant, and remarkable in a winter conservatory (seeds very rare)
CASUARINA EQUISETIFOLIA.
CASUARINA INDICA.
BROWALLIA ELATA CŒRULEA GRANDIFLORA (NEW), bright blue, flowers large and handsome.
COCKSCOMB, Dwarf (NEW), rose and yellow, exquisitely beautiful.
COCKSCOMB (NEW), orange, beautiful extra.
RICINUS OBERMANNI, (NEW), red splendid.
DOLICHOS LABLAB.—Species gigantea Texana, rich purple, splendid climber.
IPOMŒA STRIATA GRANDIFLORA.—Red and white, beautiful.
,, HEDERACEA SUPERBA GRANDIFLORA ALBA.—Pure white, most beautiful.
HIBISCUS THUNBERGIA EXCELSUS, nankeen yellow, blooming freely from July to October; very handsome.
OXALIS ARBOREA ROSEA } remarkably handsome varieties of this magnificent genus.
,, FLORIBUNDA ALBA
,, ,, ROSEA
,, TROPÆLIODES, YELLOW
,, LUTEA
PHYSOSTEGIA SPECIOSA (NEW) blush, rose and white, splendid.
LOPHOSPERMUM MACULATUM (NEW), deep rose purple, striped and spotted white, most beautiful.
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PHASEOLUS CARACALLA, superb plant, producing a profusion of magnificent clusters of lilac and white flowers.

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JAMES VEITCH, JUN., respectfully announces that his CATALOGUE OF KITCHEN GARDEN AND FLOWER SEEDS for 1859, with a List of Implements and other Garden requisites, is now published, and will be forwarded post free on application.

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THE QUEEN'S SEEDSMEN AND WOOD FORESTERS,
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CARTER'S CHAMPION CUCUMBER.
CARTER'S EXCELSIOR MELON.
AUSTRALIAN OR GOLDEN CRESS.
CARTER'S GIANT LETTUCE.
VEITCH'S PERFECTION PEAS.
EARLY HANDSWORTH POTATO.
PHEASANT'S EYE POTATO.
PERPETUAL SPINACH BEET.

Vide CARTER'S SELECT LIST OF SEEDS FOR 1860, which will be sent Gratis on application to 237 and 238, High Holborn, W.C.

The Gardeners' Chronicle.

SATURDAY, JANUARY 7, 1860.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, Jan. 11—Microscopical..... 8 P.M.

Now that Mr. DARWIN has reduced the known evidence respecting the transformations of plants to a true scientific shape (see p. 1051 of our last volume), we shall probably find that evidence to be much stronger than has been supposed. And although the German tale of Oats changing into Wheat, or whatever else the story is, remains as unsupported as ever, experiments upon such subjects will certainly multiply and possibly surprise us by their results. The belief of ESPRIT FABRE that he produced Wheat from Ægilops, notwithstanding the attempts to explain away the corn he obtained, still appears to be founded upon most important facts. It is immaterial whether in his case Wheat was obtained from Ægilops by the propagation through successive generations of an accidental sport, or by mere muling; the great fact remains that a Grass extremely like Wheat

was obtained from a wild plant whose strict relationship to Wheat (we do not mean Triticum) had not been suspected.

Some experiments by Prof. BUCKMAN published in the report of the British Association for 1857 bear in a striking manner upon this question. It would be difficult to name any two Grasses more dissimilar in appearance, while naturally allied, than Glyceria fluitans and Poa aquatica. Such, indeed, is their dissimilarity that many botanists have placed them in different genera, as their names indicate. Although both live together in ditches and ponds or sluggish waters, they may be known at a glance by their habit and structure. Glyceria fluitans is a delicate narrow-leaved Grass, with a slender, somewhat pinnated inflorescence, composed of a few long cylindrical spikelets, each containing about 11 white-edged flowers. Poa aquatica, on the contrary, is a coarse broad-leaved Grass, with a wide-spreading panicled inflorescence, composed of a crowd of short, flattish spikelets, each containing about six green flowers; besides which there are other differences of structure which it is needless to detail. The two Grasses are at least as unlike each other as Rye is unlike Wheat. Prof. BUCKMAN thus describes the result of sowing two separate plots of ground, side by side, with the Grasses in question.

"Poa aquatica. Poa fluitans (Glyceria): These were sown in the autumn of 1855. During 1856 stiff and sturdy short and rigid-leaved plants were forming; these leaves were so harsh as to cut the flesh on the slightest touch. During the present year, 1857, they have flowered, and to my utter astonishment the plants of both plots are the same; the culms were as much as a yard in height, and the flowers so small and ovate as quite to justify the retaining of the generic name of Poa for the whole group. While these Grasses were flowering, I watched them from day to day with great interest, as in all their parts they differed so much from any known species; the short rigid leaves with the angular sheath, and the elegant panicle of flowers from their size and the rigidity of the whole plant removed these far from the P. pratensis, and the whole details differed so much from the forms whose seed was sown as well as from all other recognised forms, that while it showed me I could not have mistaken my seed, it also was convincing that I had obtained a new and singular variety. This indeed is not to be wondered at when we consider that both the forms, the aquatica and fluitans, absolutely grow in the water; but here I had got them to grow in an upland situation, and to manage like other upland Grasses with only water from rain. Still the change was so curious, that I was anxious to re-examine the seeds as sown; and fortunately some of the packets were saved, and I can pronounce them true as named. Here then I cannot help concluding that even such dissimilar Grasses as the typical forms of P. aquatica and P. fluitans are not specifically distinct; and though the former in its wild state bears a large and diffuse panicle of flowers, and the latter is almost as spicate as a Lolium, yet we may, I think, connect the evidence here presented to us with that obtained in the growth of the Festuca loliacea, pratensis, and elatior presently to be detailed."

The issue of the experiments with Fescue Grasses here alluded to may be thus stated. Festuca ovina, duriuscula, rubra, and tenuifolia lost in a great measure their distinctive characters. But no botanist would be surprised at that, the specific distinction between them being so slight and questionable, even in the absence of experiment, as to have led recent botanical systematists to unite them. What was more striking was the gradual blending of such different Grasses as Festuca loliacea, a plant very much like Rye-grass, with the great branched Meadow and tall Fescues. Of this Mr. BUCKMAN gives the following account:—

"These plots the first year of flowering presented appearances as under: — 1st. Festuca loliacea: Most of the plants of the true spicate type, but sparingly mixed with paniculate flowers: the herbage of which was of the rich green which characterises F. loliacea. 2d. Festuca pratensis: All true, but with a tendency to a rigidity of leafage. 3d. Festuca elatior: Scarcely distinguishable from (2). In three years great changes had been wrought as under:—1st. F. loliacea: No spicate flowers. 2d. F. pratensis: More rigid and larger, in fact none of the true meadow type. 3d. F. elatior: A little larger, but otherwise not distinguishable from (2). In the fifth year the F. elatior prevailed in all the beds. These plots are destroyed, as in 1855 the same experiments were recommenced in another part of the garden, the plots, however, being placed at a distance apart; and the present year they were plainly observed to be taking the same course as the others. Here then, I think it satisfactorily proved by experiment that these three forms are all of them referable to a single species, as the changes indicated have taken place in individuals; they, however, maintain their distinctive characters under the following circumstances."

He also succeeded in the course of 10 years in "ennobling" the wild uneatable Parsnep, just as VILMORIN succeeded with the wild Carrot. It is not a little singular, however, that Mr. BUCKMAN could make no impression whatever upon the latter. "This," he observes, "shows that we cannot always command success in experiments of this nature—some circumstance or other may be wanting, and therefore we must not pronounce a thing impossible that we have tried ourselves without success; and at the same time it shows us that there are certain laws which operate to produce the changes we have noted, so that from a repetition of experiments of this kind we may hope to become acquainted with some new facts connected with vegetable growth."

Examples of this kind confirm in the strongest possible manner our often-repeated declaration that no one can say what changes in the form of plants are possible, and offer the greatest encouragement to gardeners to persevere in their attempts, by cross-breeding, selecting, changing soil, or otherwise, to acquire new races, or to give valuable qualities to the old ones. If the agricultural world will take the same road, with sufficient skill, we can see no reason why Wheat itself should not by degrees advance in productiveness as far beyond its present state as Turnips, Beet, and Cabbage have advanced beyond their wild condition.

ALTHOUGH the GRAFTING SEASON is not precisely at hand, it is near enough to prevent any new experiments on the subject being forgotten. We therefore proceed to mention a method described in the *Revue Horticole* by M. LACHAUME, of which we know nothing in this country.

The bottle method of grafting by approach consists, as we all know, in suspending a vessel of water from the tree to be operated on, introducing into the water a long scion, then bringing the sides of scion and stock into contact, the bark of each having been previously pared away so as to form two plane surfaces, and finally binding them together with bast covered with clay or grafting wax. M. LACHAUME says that if the end of a long scion is laid into the earth at the foot of a stock the operation succeeds just as well as when the scion is kept in water. He says more; he says that while the side of the scion is uniting to the stock, the end of the scion is also rooting into the soil; that when the union between the two is complete enough to allow them to be finally adjusted by cutting off the scion *below* its union with the stock we have acquired two plants instead of one: the first a grafted plant, and the second a plant on its own roots.

But we must let him tell his own story, curtailed of unimportant particulars. Having succeeded in thus working a six-year-old double Peach with the Grosse Mignonne by the aid of water bottles, it occurred to him to try the effect of merely laying the end of his scions in earth. Accordingly in the month of February or March he procured some Pear cuttings from 20 to 24 inches long, and pushed their lower ends from 6 to 8 inches deep into common garden soil at the foot of the tree to be operated on. As soon as the latter had grown so far as to show leaves and flowers, the scions and stock were brought together and secured in the usual way, 4 or 5 eyes only being left above the insertion, and the whole screened from the sun by a sheet of paper.

M. LACHAUME had observed that when the end of the scion was in water it formed a callus, from which a few rudimentary roots had sprouted; but they died for want of proper food. The same thing having happened with the Pear cuttings just described, it occurred to M. LACHAUME that if his soil had been of good quality, instead of being the reverse, the cuttings would have rooted. A friend who lived in a much better situation, profiting by the suggestion, worked, in the manner already explained, Pears on Quinces, and Peaches on Almonds; and found the experiment so perfectly successful, that at an exhibition in the autumn of 1858, he was able to show both Pear trees and Peach trees worked the same year, the scions of which had grown at one end 54 inches long, and as thick as a finger, while at the other a fine tuft of roots was formed. Now mere cuttings of the Pear and Peach cannot be struck at all, although certain kinds of Apple root readily enough. It is further observed that the soil in which the scions rooted is an extremely rich alluvial earth.

We have no doubt that many of our readers, who are interested in propagation, will soon discover in what way to apply M. LACHAUME's process to other plants besides Pear and Peach trees.

This method, be it observed, is not very different from what DUPUY calls *fente-bouture*, a way of working Vine rods upon old stocks; but it is much more skilful, inasmuch as if the operation fails the Vine stock receives no injury. Since this fente-bouture, which might be translated cleft inarching, is quite unknown among us, we translate the Abbé's account of it. Take a Vine rod with at least from four to seven eyes; pare the bark away on two opposite sides somewhere about its middle. Then split the head of the Vine stock as if you were about to cleft-graft it, and insert the scion in the cleft in such a way that only two eyes are left above the place where the cutting is introduced. Below this place take care to leave from two to four eyes, besides which the lower end must be carefully laid into the ground. The junction of the stock and scion must be well covered with the "unguent of St. Fiacre," a mixture of two-thirds loam, and one-third cow dung, with the addition of a few wood ashes; and the whole must be well earthed up, so that the Vine rod which is covered by soil may easily take root. This sort of grafting must be practised in March, April, or May, according to the climate—we presume at the end of April in this country.

MANNINGTON'S PEARMAIN.

SYN.: Reinette Platte de Champagne.

THE primitive names and places of origin of many varieties of fruit trees are far from being known with certainty. When the descriptions have not been made from the seedling tree, and when they have not appeared in any work of acknowledged authority, doubts may always arise as to their origin. The subject of the present article affords a proof of this. In the autumn of 1849 I obtained from Messrs. Low a variety of Apple called Mannington's Pearmain. I find in Mr. Hogg's work on the Apple, at pp. 131, 132, a somewhat obscure account of the origin of this variety. I observe it also under the same name in the Supplement to the Catalogue of Fruits of the Horticultural Society. In 1856, '57, and '58 I had fruit on the tree obtained from Messrs. Low, and I found both the tree and its fruit correspond with Mr. Hogg's description and that in the Horticultural Society's Supplementary Catalogue. I also found that this variety is identical with the Reinette Platte de Champagne described in Diel's Kern-Obstsorten, vol. iii., p. 122, Frankfort, 1800. Dr. Diel states that he received this variety from Captain Brion, an amateur of Verdun, Department of Meuse and Champagne. Previous to 1800, and subsequently, I find no mention of this variety in any French work of authority which I possess. At the present time it is but little known or cultivated in France. The Reinette Grise de Champagne of Duhamel is distinct from this one. In Germany it is extensively grown under the name of Champagner Reinette, which is not the Reinette Grise de Champagne. What name should be given to it? I think that which has the priority by about half a century. In fact, Diel must have had it in his collection for seven or eight years before he could have made such a complete description of the tree and its fruit as that which he has given to us at the above reference. It is also certain that Captain Brion, of Verdun, must have had it in his possession a like number of years to have recommended it to his friend Dr. Diel, and to have sent it to him under the name of Reinette Platte de Champagne. This brings us back nearly to the period from which the origin of Mannington's Pearmain at Uckfield, in Sussex, is dated. In conclusion, it is unlikely that Turley, a blacksmith, had communication in 1770 with Verdun or other parts of France, or that he sent scions of a variety of Apple which only became generally known to some amateurs in 18—

J. De Jonghe, Brussels.

ON THE NATIVE COUNTRY OF TECOMA CAPENSIS.

IT is well known that a number of Australian, American, Asiatic, and European plants have become perfectly naturalised, and to all appearances wild at the Cape of Good Hope. Even the first steps on the soil of South Africa show us the hard struggle of the children of the native Flora with foreign intruders. Gigantic Gum trees of Australia, spiny Cactuses and Agaves of America, English Oaks and Scotch Firs, accompanied by a long train of weeds bent upon the spread of cosmopolitan principles, and a numerous list of cultivated plants, endeavour to establish themselves in every direction, and deprive the original inhabitants of their legitimate inheritance. In many cases there would be no difficulty to prove from historical and geographical records the origin of these foreign elements, but in some it is extremely difficult to decide what is foreign and what native. To the latter category belongs Tecoma capensis, Lindl. = Bignonia capensis, Thunb., a well-known garden plant. At present it is found in South Africa, Mozambique, the East and West Indies, and Brazil, and the question now

arises which of these is to be regarded its native country. Thunberg, who first introduced it into science, mentions it in his "Prodromus," but not in his "Flora Capensis." Whether in the latter work it was omitted by mistake or on purpose (perhaps because the author had become convinced that it was no Cape plant?), can, in the absence of every allusion to the fact, not now be decided. In order to find out its real native country no other means are left but to look for its nearest allies, and these do present themselves, not in Rhigozum trichotomum and R. obovatum or Catophractes Alexandri, the only three Bignoniaceæ inhabiting Southern Africa, but in two species of Tecoma, indigenous to the lower portion of South America, viz., T. fulva, G. Don (= Bignonia fulva, Cav., B. Meyeniana, Schauer), and T. rosæfolia, H. B. K. (= T. Azaleæflora, H. B. K., Bignonia tenuiflora, De Cand.). Both share with Tecoma capensis the tubular corolla, the exserted stamens and styles, and the habit, for T. capensis is not a climber, as is often stated, but an erect shrub. Now as all species of Tecoma with erect stem and digitate and impari-pinnate leaves are confined to America, we are not justified in assuming T. capensis to be an exception, and what would be calculated to strengthen this argument is the fact that the plant has been found wild in Brazil, so that, if we had first received it from there, we should in all probability never have entertained any doubt about its native country.

Some time ago when examining the herbarium of my learned friend Mr. Miers, I observed a plant from Brazil, which I took for T. capensis. Lately, when examining the genus to which it belongs more closely, I obtained a specimen for comparison, and find it perfectly identical with the Tecoma capensis.

"This plant," writes Mr. Miers, "was found by my son in travelling across the country inland from Macahè, a small port in the province of Rio de Janeiro, in lat. 22° 20 S. * * * I have also the closely allied T. rosæfolia, collected by Matthews in Chachapoyas, on the eastern slope of the Peruvian Andes, near the main tributary of the Marañon, far in the interior and at a considerable elevation, and therefore not in the least degree to be suspected of being introduced from Africa. This confirms my belief that my plant from Brazil is a truly indigenous species." The occurrence of T. capensis in the West Indies is restricted to the island of Dominica, where Imray collected a specimen, preserved in Sir William J. Hooker's Herbarium. I have seen no other West Indian specimens, and am inclined to think that Imray's plant if it should be apparently wild must be a fugitive of some garden. In the East Indies it was collected at Madras by G. Thomson, and at Mercara by Hohenacker (n. 523), but in both places it has become merely naturalised, as Tecoma stans and a few other Bignoniaceæ have become in various parts of tropical Asia. In Mozambique it was gathered by Peters, probably also naturalised, and from the Cape of Good Hope we have it from almost every collector.

At first sight it would appear that the question respecting the native country could easily be settled by assuming the species to be endemic to both Africa and America, were it not opposed to the fact that all Bignoniaceæ, notwithstanding their winged seeds, have a limited geographical distribution, and that no species, as far as we know, has been claimed as a citizen of both hemispheres. We should therefore be compelled to assume in this case an exception to that rule, and ignore all the arguments that tend in a different direction: for if we consider that the two nearest allies of Tecoma capensis are genuine members of the American Flora, that T. capensis has been found wild in portions of America inhabited by them, and that the native country of no known Bignoniaceæ is extended over both hemispheres, we can scarcely escape the conclusion that Tecoma capensis is a native of South America, and is only naturalised in South Africa and Asia. *B. Seemann.*

MYCOLOGY.—No. I.

AGARICUS MELLEUS, *Vahl.*—A few years since there was scarcely a gardener in the length and breadth of Great Britain who regarded the multitudes of Fungi which abound in the lawns, shrubberies, and conservatories under his care with any feeling save one of extreme disgust, except in the very few instances in which from common consent they had been received as articles of food. We are happy to be able to vouch for an improved tone in this respect, assured as we are that several of our superior cultivators have taken pains to become acquainted with the character and specific names of the species which fall in their way, and that many who have not the same appliances at command are anxious for information on the subject. It is, therefore, our intention from time to time to give notices, accompanied by figures, of some of the more prominent, confining ourselves as much as possible in the first instance to species which do not require the microscope for their identification. For those indeed who wish to have a thorough acquaintance with their fructifying organs, a matter of no little difficulty, a thoroughly good working instrument is indispensable.

We begin our notices with *Agaricus melleus*, one of the most generally diffused and most abundant of our Agarics. It makes its appearance generally in large clusters in September, till about the end of the following month, though the individual groups are not of very long duration. It grows on old exposed stumps, or in those cases in which it appears to spring immediately from the soil, decayed wood will always be found to which the roots are attached. The cap or pileus, which is ultimately from 3 to 5 inches across, is at first more or less scaly and of a honey yellow, from which circumstance it takes its name, though as it expands it becomes reddish brown with dark brown scales when they are persistent.

The stem is 4 inches or more high and very variable in thickness; white or yellowish at first, though at length grey or rufous, stout, and more or less woolly and scaly, and is connected with the pileus by means of a woven ring which is continuous with the outer coat of the stem and the scales of the pileus. When the ring bursts the gills make their appearance, and

AGARICUS MELLEUS.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

are at first pale, then reddish, and are firmly attached to the stem down which they run for a short distance. They are soon covered with white powder arising from the fallen spores, which are so abundant that every blade of Grass or leaf beneath them becomes dusted, a circumstance which at once indicates the species, however masked by the occasional absence of the ring and scales, or varieties in colour and other characters. The smell at first is not disagreeable, and the taste is somewhat like that of the common Mushroom, but with a decided acrid twang and sometimes a degree of acidity, which makes most persons, however devoted to the cooking of Fungi, unwilling to try experiments with such unpromising materials.

Nothing however can be more various than the reports as to its characters. According to Trattinick it is largely consumed in Austria under the name of *Hallimasch*. He says that its flavour resembles that of lamb, and that it is cooked either as an ingredient in stews or as an entrée in stock with butter, cream, and flour, seasoned with pepper, Onions, and anchovies. Enormous quantities appear at times in the markets at Vienna. Lenz also informs us that he has personal experience of its esculent qualities, while Ascherson assures us that Hertweg made four experiments with it, and could detect no bad effects, when administered in doses of three ounces. On the contrary Roques, relying apparently for his authority on Paulet, who was evidently well acquainted with the species, of which he gives a characteristic figure, states positively that when administered to animals it causes inflammation of the intestines and death. Dr. Badham does not give so bad an account, though one not sufficiently encouraging to recommend it even to the most adventurous eaters of Fungi, and there were few which he rejected himself entirely if not absolutely poisonous. This species, he says, in his pleasing work on Esculent and Poisonous Fungi, "is a nauseous, disagreeable Fungus, however cooked, and merely finds mention, as its omission in a work on the esculent Funguses of England might seem strange to those unacquainted with its demerits. It is really extraordinary how some continental writers speaking their own experience should ever have recommended it for the table." Dr. Badham in our hearing always spoke of it with unqualified disapprobation, and pointed out to us in Suffolk a ringless form, which had, like the more ordinary condition, the characteristic peculiarity of causing an unpleasant constriction in the throat when eaten, a peculiarity to which also Paulet alludes. Supposing that it is perfectly innocent, it is quite clear that it will never be used in this country except in case of absolute necessity, and in the absence of anything except occasional beauty (for it is often a coarse-growing species) to recommend it, must be regarded rather as a nuisance, from its great abundance, and the filthy mass into which it putrefies. Some curious observations have lately been published by De Bary in the Botanische Zeitung respecting the fructification of this species, so that if it has no other merit its name is likely to become classical. *M. J. B.*

REPORT ON SOME OF THE VARIETIES OF GRAPES IN THE LARGE CONSERVATORY AT CHISWICK.

THE Vines which now occupy the large conservatory are growing partly in an outside, and partly in an inside border. The largest of them, which are chiefly those in the outside border, were planted in August, 1857, so that they have had but two seasons' growth. Many of those which were planted in the inside at the same time were replaced by more suitable varieties during the autumn of 1858 and spring of 1859.

The outside border was prepared in the end of July, 1857. It is 4 feet wide and about 2 feet deep, including drainage, the latter consisting of several inches deep of brickbats and rubbish, so that the depth of prepared soil is about 18 or 20 inches; it consists of Wimbledon loam, and chopped turf, obtained from the surface of the van-ground, a little charred earth, and a small quantity of manure. These outside borders have had no water, except the rain which fell on them. The inside ones, being very shallow, required the earthen pipes placed at intervals along them to be filled two or three times a week during the hot weather; and throughout that period, and until the Grapes began to colour, the whole of the inside area was watered two or three times a day, the evaporation from which contributed to cool and moisten the air of the house.

It may be proper to mention that the conservatory at Chiswick is elevated on a terrace about 2 feet above the general level, and the outside borders are of course on this elevated surface. This arrangement, which entirely prevents the pressure and accumulation of superfluous moisture in the soil, is one to be highly recommended in the formation of Vine borders. The curvilinear span-roof and exposed position of the house, both favourable to the free admission of light, have also no doubt had an influence on the ripening of the crop. The treatment, throughout, has been that of an ordinary Vinery. During the months of July, August, and September, the range of temperature was as follows:

		deg.	deg.		deg.	deg.
July:	morning,	60 to	78	in lower part,	60 to	74 in upper part.
,,	noon,	88 to	105	,,	88 to	109 ,,
Aug.:	morning,	52 to	67	,,	50 to	68 ,,
,,	noon,	70 to	99	,,	70 to	104 ,,
Sept.:	morning,	52 to	63	,,	50 to	60 ,,
,,	noon,	70 to	85	,,	70 to	92 ,,

During the season of 1858 the Vines had an attack of mildew. In autumn they were carefully done over with flowers of sulphur and loam. Notwithstanding this the mildew again made its appearance in the present season, although 2 lbs. of sulphur were early distributed in the air of the house. On the 17th of March 8 lbs. were applied to the shoots and leaves with a sulphurator; 4 lbs. more on the 21st of May; 14 lbs. June 9th; and 7 lbs. June 12th—making in all 33 lbs. between the 17th March and 12th of June. The result was that the damage done was slight. The Vines were examined by the Fruit Committee on September 20th; and subse-

quently by a Sub-committee for the purpose of completing the report:—

Black Hamburgh.—Bunches moderate-sized, shouldered; berries roundish-oval, sometimes roundish, black with a fine bloom; skin very thin; flesh tender, melting, and very richly flavoured, both sugary and piquantly vinous. Leaves sharply serrated, the ribs of the under surface covered with cobwebbed tomentum, and having bristly pubescence in their axils. This is the true old Black Hamburgh, and though smaller both in the bunch and berry than other varieties, it is decidedly the best in quality. Warner's Hamburgh, the Hampton Court, and the Richmond Villa Hamburgh are synonymous kinds.

Dutch Hamburgh, from Messrs. Lee, of Hammersmith; the same as Wilmot's Black Hamburgh, from Mr. Wilmot, of Isleworth.—Bunches medium-sized, compact, not much shouldered; berries large roundish-oblate, indented as if hammered on the surface, and often so much so as to appear misshapen, black, covered with a thin bloom; skin thick, adhering closely to the flesh, which is coarse, firm, and hollow around the seeds. Leaves roundish in outline, the serratures of the lobes coarse and bluntish; the veins of the under surface clothed with cobwebbed tomentum, and having tufts of bristly pubescence in their axils. This differs from the Black Hamburgh in having larger berries, more decidedly round, and marked like a hammered bullet; the flesh is much firmer, but not so juicy nor so rich and sugary; the leaves are also less pubescent.

Frankenthal.—To this must be referred the Pope and Victoria Hamburghs, and the Black Tripoli of Welbeck. Bunches large, strongly shouldered; berries, roundish, frequently oblate, and rarely roundish-oval, somewhat indented or hammered-like, but less so than the Dutch Hamburgh, black covered with a thin bloom; skin thick, adhering to the flesh, which is firm and often hollow around the seeds, of which there are generally two, sometimes three. Leaves with bluntish serratures; the main ribs have only a slight covering of cobwebbed tomentum, but are covered through their whole length with bristly pubescence. It is a fine-looking Grape of vigorous growth, but less rich and highly flavoured than the true Black Hamburgh, though superior in these respects to the Dutch Hamburgh.

Mill Hill Hamburgh, from Messrs. Lee.—The same as the Dutch Hamburgh.

Pope Hamburgh, from Messrs. Lee.—The same as the Frankenthal.

Victoria Hamburgh, from Messrs. Lee.—The same as the Frankenthal.

Golden Hamburgh, from Mr. Veitch, of Chelsea.—Bunches large and well-shouldered; berries large, oval, or sometimes roundish-oval, pale yellow, or when highly ripened, pale amber; skin thin; flesh tender and melting, very juicy, rich, sugary and vinous. Leaves not deeply lobed, their serratures sharp; the upper surface smooth, the lower nearly so. This proves to be a fine-looking, free-bearing, richly flavoured Grape, in every respect of first-rate quality.

Burchardt's Amber Cluster, received as Burchardt's No. 10, from M. Burchardt, of Landsberg, on the Warta.—This Grape, which was sent to the Society without name, resembles the Muscadines in quality, but has oval berries like the Clusters. Berries middle-sized, decidedly oval, amber-coloured, or yellowish-white; skin moderately thin; flesh very sugary and rich. Leaves roundish, dying off green and pale yellow, like those of Reeves' Muscadine: in the latter, however, they are very pubescent or woolly; while in Burchardt's they are but slightly downy, with tufts of bristly pubescence in the axils of the veins. It is earlier than the Royal Muscadine, and this property, combined with its good quality, will render it a first-rate early white Grape. It appears to be well deserving of trial for early forcing purposes.

Œillade Précoce, from M. Leroy, of Angers.—Bunch small, longish, loose; berries about the size of those of Royal Muscadine, roundish, or but slightly oval, rose-coloured.

Savignon Blanc, from M. Dunal, Montpelier.—Bunches and berries about the size of those of the White Frontignan; berries oval, yellowish-white; skin thick; flesh sweet, but not so rich as that of the White Muscadine. Leaves roundish, open at the base, not deeply lobed, pubescent or bristly above and beneath. A wine Grape.

Ward's Early Muscadine, from the late G. H. Ward, Esq., Northwood Park, Cowes, Isle of Wight.—Bunch long, rather loose; berries round, about the size of those of the Royal Muscadine, and of the same colour and flavour. It differs from that sort in the bunches being longer; and the leaves also are very different, being deeply lobed, very downy on the under, and slightly so on the upper surface.

Bidwill's Seedling, from Mr. Pince, of Exeter.—Bunches and berries nearly as large as those of the Black Prince; berries small, round, bluish-black with a fine bloom; skin rather thin; flesh tender, melting, and very juicy, but somewhat acid, and having a disagreeable earthy flavour. Leaves resembling in form those of the Black Hamburgh, but with a lengthened terminal lobe, and differing from that variety and from the Black Prince in being quite smooth above and below.

Burchardt's Prince, received as Burchardt's No. 7, from M. Burchardt, Landsberg, on the Warta.—Bunches long, tapering, about 1 foot in length, larger than those of the Black Prince, which in their long, tapering, slightly shouldered form they resemble; pedicels remarkably thick and strong; berries round, scarcely so large as those of the Black Hamburgh, compared with which it is later, roundish-oval, black with a thick bloom; flesh firm, juicy, melting, rich and vinous. Leaves open at the base, not deeply-lobed, nearly smooth above and below. A good hanging variety, but requires more heat.

Fleming's Prince, from Mr. Fleming of Trentham.—Bunch large, loose, long, slightly shouldered; berries oval, larger than those of the Black Prince, to which they bear considerable resemblance; skin very thin, bluish-black, with a copious bloom; flesh tender, juicy, remarkably rich, and very sugary. An excellent Grape, but requires a little more vinous piquancy and firmness.

Morocco Prince, a seedling between the Black Prince and Black Morocco, received from Mr. Buck, of Elford, near Lichfield.—Bunches about the size and form of those of the Black Prince; berries also similar in size, oval, but with a thinner skin, which is tough and membranous, reddish-black, with a thin bloom; flesh firm, juicy and melting, rich, sugary, and vinous. Leaves very deeply-lobed, open at the base, rather sharply and deeply serrated, pubescent beneath, slightly so above. A useful late Grape and hangs well, but in this instance has apparently not had sufficient heat.

Panse Jaune, from M. Van Houtte, of Ghent.—A fine large oval or somewhat ovate berry, of a rich pale yellow colour, like a well ripened Muscat of Alexandria; flesh rather firm, sweet but not rich. Leaves deeply lobed, and sharply serrated.

Gros Rouge de Provence, from Dr. Neill.—Bunch long, tapering, loose; berries small, slightly oval, black; skin thin; flesh juicy, vinous, with a Frontignan flavour. Leaves convex, deeply lobed, slightly pubescent. This variety possesses little merit, having the bad property of setting badly.

Muscat Noir de Jura, from Messrs. Baumann, of Bolwiller.—Bunch long and tapering, slightly shouldered, larger than that of the Black Frontignan grown under the same circumstances; berries about the size of those of the Black Prince, slightly oval, black; flavour resembling that of the Violet Frontignan, being only slightly musky; leaves convex, deeply cut and serrated, nearly smooth. Later than the common Muscat Noir or Black Frontignan.

Alicante Preta, from Mr. Veitch, British Consul at Madeira.—Very like the Large Black Ferral, and not suitable for conservatory temperature.

Black Barbarossa, from John Rigden Neame, Esq., Rushett, Faversham, Kent: sent under the name of Gros Guillaume.—Bunch very large, strongly shouldered, compact; berries large roundish oval; skin black, thin and membranous, covered with a thick bloom; flesh greenish white, melting, juicy and sugary. Leaves large, open at the base, more deeply lobed than those of the Black Hamburgh, smooth above and below, without bristles on the ribs; the serratures sharp. A valuable late Grape, hanging well after ripening.

Sideritis, from J. R. Neame, Esq.—Bunches very large; berries of the largest size, roundish-oval or oval, frequently with a sutural depression, reddish-black, unequally coloured; flesh firm, but hollow around the seeds, and with a deficiency of juice and flavour. Leaves large, sharply serrated, smooth above and below; shoots, red. A very strong grower.

Black Monukka, from the late Mr. Johnson, gardener at Hampton Court.—Bunch nearly the size of that of the Black Prince; berries rather small, of a peculiar oblong-ovate shape, stoneless; skin black, thick; flesh firm, breaking, sweet, but not rich. Leaves deeply lobed. This Grape does not appear worthy of cultivation.

Blussard Noir tardif, from Messrs. Baumann, of Bolwiller, Upper Rhine.—Bunch small and rather loose; berries middle sized, slightly oval: skin black, tolerably thin; flesh juicy and sweet. Leaves deeper lobed and more sharply serrated than those of the Hamburgh, the lobes open at the base and overlapping above; veins on both sides somewhat bristly; young shoots very brittle. A very strong grower; and rather earlier than the Black Hamburgh, but a bad bearer, and not so valuable a Grape. The Blussard Noir is very similar to, if not identical with, the Black Hamburgh.

Prune de Herault, from J. R. Neame, Esq.—Bunch about the size of that of the Violet Frontignan; berries about the same size, somewhat oval, bluish-black with a fine bloom; skin adhering closely to the flesh, which is firm and richly flavoured. Leaves deeply lobed, unequally serrated, their ribs covered with bristly pubescence, and the whole under surface clothed with thick tomentum.

Rouge de Rolle, from J. R. Neame, Esq.—A small, black, sweet wine Grape, too small to be admitted into Vinery culture. *Horticultural Society's Proceedings.*

Home Correspondence.

Transplanting Large Cedars.—I beg to suggest to your correspondent "W. D." that his Cedars of 25 years' growth might be shifted without any great expense or risk. If there was room enough on his lawn for the two to grow without ever again having the chance of their touching each other he would only require shifting one away from the other, and this could be done without using a machine. All large trees that have not far to travel are best shifted on rollers and planks with a block and tackle and one or two horses, according to strength, to draw the tree on the rollers to its destination. On preparing the tree for shifting on rollers as large a ball of earth must be left as will stick together, and the roots outside of it carefully traced and tied up to the ball or stem. A tunnel must be formed quite through the centre of the ball, wide and deep enough for four strong planks, 1 foot wide and 12 or 14 feet long, according to the size of the ball, to be placed two and two side by side. Smaller side planks must likewise be placed all round, resting on the centre planks, and some litter fixed firmly between them and the ball to keep all firm when lifted. A screw-jack must then be applied below the centre planks, and short packings of wood put below to ease the jack, till the whole mass gets high enough for planks and rollers to be put below the centre planks. On rolling the tree to the hole in which it is to be planted a trench must be made in the centre of the hole deep enough for the centre planks to be easily withdrawn, when the screw-jack has lowered the ball down to its place. This trench must be made to run in the same direction as the planks lie when the tree is rolled in. Great care must be taken in packing the soil firmly in when the planks are removed, so that no vacancies remain near the roots. The Cedar, if carefully planted after the above plan, and well watered in dry weather, will become quite as good a specimen as the one not lifted after a few years' growth. When at Dropmore, in the autumn of 1858, I found the glorious specimen of Araucaria imbricata there likely to be seriously injured in a few years by the interlacing of some other Conifers near it. A group of four or five noble Deodaras were likewise beginning to meet in the branches, and will ultimately spoil each other as specimens. Had they been transplanted away from one another some few years back they would all have been enabled to arrive at their full size and beauty. A good specimen of any kind of tree is a picture to look at, and gives more satisfaction than two or three crowded together with their interlaced branches gradually dying off. *William Tillery, Welbeck.*

Old Herbal.—In the library here there is a quaint old herbal, which has lost a leaf or two at the beginning, as well as several at the end, so that its title is not to be found. I venture to trouble you with this note in order to ask whether you or your correspondents happen to recognise the book from the following short description:—Small quarto, well printed in black letter, apparently far back in the 16th century, in Latin; the plants pourtrayed in woodcuts, very rude and generally very wide of the mark, yet often full of fine vigorous lines; in short, done in the spirit of mediæval foliage, carving the names of the plants in Latin and (seemingly) Dutch. At the end of each article the authority from which it is drawn seems to be indicated by the words, or one or two of them, "Aviceña, Platearius, Serapio, Pandecta." If any one can kindly afford information as to the title of this book he will greatly oblige *H. J. Moule, Wentworth Woodhouse, Rotherham.*

Hardiness of Wellingtonia and other recently introduced Conifers.—The severe frost in December last will sufficiently try the hardiness of this magnificent addition to our new Conifers. The thermometer here was as low as 9° on the morning of the 19th, and the Wellingtonia have not been browned or in the least injured by it. Above 80 specimens from 2 to 7 feet in height are planted out here in different situations (some of them very exposed), and they are all unscathed. I fully expect to find that this will be the case everywhere in the south of England and perhaps in the midland counties. We are likely to have another fine hardy tree in the Thuja gigantea; here it is not the least injured in a cold situation near the bed of a lake. The Cupressus Lawsoniana and M'Nabbiana are likewise perfectly hardy. Thujopsis boreale is another fine hardy shrub or tree; its fine habit and deep green colour and foliage are quite enchanting in the midst of snow and the severest frost. Libocedrus chilensis has likewise proved perfectly hardy here. The Cephalotaxus Fortunii will be found the hardiest of evergreen trees, and never changes its deep green colour in the severest frost. I have a fine specimen of Torreya grandis planted out, and it has likewise proved to be perfectly hardy. Plenty of seedling Cryptomerias raised from a large specimen here have been planted out, but they all show the unsightly yellow tint of the variety in the winter. There seems to be two varieties of the Araucaria imbricata raised in nurseries, one with a very dense stiff habit, and much hardier than the other, as it never gets much browned in the severest frosts. Perhaps some other correspondents will relate to us the effects of the late frosts on newly-introduced Conifers in different parts of the country. *William Tillery, Welbeck.*

Fruits for Back Walls of Orchard Houses.—Your note of disapprobation on Pomegranate culture will save me disappointment, if I am justified in assuming it to apply equally to its culture on the back wall of a lean-to orchard-house. The fruits recommended me for trial in that position were a Fig, a Peach, a Loquat, a Pomegranate, and an Orange; Vines in the front border and trained up the rafters. Have you any doubts of the others? *J. M., Heathbank, Forfarshire.* [We fear you will not succeed with the Loquat or the Orange in your climate, unless the orchard-house is heated.]

Hothouses for the Million.—There are some hundreds amongst the million, who might be very anxious and willing to put up these perhaps on a small scale, and who would not be able to address letters with orders to Mr. Hereman, the sole agent and manufacturer of Sir Joseph Paxton's newly invented glass houses, and though perhaps very portable, their exportation to Ireland would be very expensive. I believe any person may make any matter, however strongly pro-

tected by patent, for his own use, although very justly prevented from manufacturing the same matter for sale or profit. Mr. Rivers, the inventor of orchard-houses, from which Sir Joseph Paxton's hothouses do not materially differ, has published in his book on Orchard Houses full and clear directions for their erection. If therefore similar directions were published in the *Gardeners' Chronicle* respecting "the new portable and economical hothouses," I am inclined to believe it would be most useful to "small people," and would not by any means be injurious to the inventor or the sole agent. *J. C. L., Ireland.*

Hybridising Orchids.—If Mr. Dominy, who lately introduced a new Orchid from seed, were to give to the public his mode of operation, it might, and I am sure would, induce other Orchid growers to endeavour by the same means to introduce new varieties of those curious and beautiful flowers. *J. C. L, Ireland.*

Weather at Weybridge in 1859.—

Wind.		Weather.	Departure from average of last four years. + *above.* — *below.*
Prevailing Winds.	On Days.		
N	12	Mean height of Barometer, inches 29.8651	inches .0029—
N E	57	Mean height of Thermometer:	
E	5	Highest in the Sun, 67°.7152	1°.2488+
S E	16	Highest in the Shade, 60°.7747	.6004+
S	35	Lowest, 41°.2468	.3565+
S W	104	Mean Temperature, 51°.0314	.3921+
W	12	Rain-fall in inches, &c., 27.5467	inches 3.8424+
N W	40	Number of wet days, 28 ..	days 4.25—
		Number of days on which rain &c. fell, 183	7.25+
Highest Winds		Driest month—January.	
January 23, 25		Wettest month—September	
February 18, 26, 27		Range of Barometer, inches 2.17	inches .31+
March 3, 17		Range of Thermometer,* 87°	4°.25+
August 1		Jan. 9, Barometer highest, inches 30.72	inches .0975+
September 17		Dec. 26, Barometer lowest, inches 28.55	inches .21—
October 26, 31		July 12, Thermometer highest:	
November 1, 5, 6		In the Sun, 104°.5 ..	equal
December 5		In the Shade, 96°.5 .	equal
		December 18, Thermometer lowest (in the night of), 9°.5	4°.25—

W. F. Harrison, Bartropps, Weybridge Heath, Jan. 3.

The Recent Frost.—It would tend to secure greater uniformity, and consequent accuracy, in comparing the temperature at different places were you to mention the proper position in which the thermometer should be placed, and the precautions necessary to preserve it from disturbing influences. For instance, if I keep my thermometer suspended on the side of a short plank facing due north, in a perfectly open quarter of the garden, and within 6 inches of the ground, I can account for another party registering 4° or 5° higher if his instrument be hung up on a brick wall just under a projecting eave or coping, without admitting that his climate is one whit better than mine. Again, the accuracy of the thermometers is a most essential point, and I cannot help thinking a great want of uniformity exists here, which may have something to do with the startling registers quoted in your columns. It should be known, therefore, that thermometers can be got tested at Kew (perhaps elsewhere, too, for aught I know), at a trifling expense—1*s.* 6*d.* each, I think—and with one instrument so verified a person can correct others himself. Apropos of this, I may say that one of Negretti & Zambra's self-registering thermometers is always 2° wrong by my Kew-tested instrument. The former indicates a lower temperature than actually prevails, which I account for by the frame of it being a heavy mass of cast zinc. These, like all other spirit instruments, are also liable to derangement if much handled by air-bubbles getting down the tube, in which case their performances are highly eccentric. The extremely low temperature recorded at Saffron Walden I am much inclined to attribute to something of this kind; for here, in this northern region (Forfarshire), the register was but 17° on the terrible 19th December last. It is scarcely credible that it should have been 26½° lower than that in Essex. *J. M., Heathbank, Forfarshire.*——I can authenticate Mr. Chater's weather report (see Dec. 24, p. 1038), so far as regards wind and snow, but the amount of frost registered by him not a little surprised me, more especially upon Saturday 17, and on Monday 19, when he registered on the former day 38° of frost, and I had only 27°, and on the latter day 41½°, when I had but 22°. The thermometer used was a Negretti and Zambra's self-registering minimum, and was found to correspond with our others, and now agrees exactly with them. It was fixed 3½ feet from the ground, upon a T piece of wood, and placed at the north end of an orchard-house, which stands by itself in the centre of the kitchen garden. I hear Mr. Chater's report is corroborated by the observations of a very accurate observer in the same town. I am therefore at a loss to know what could cause this great difference, and should feel obliged if any of your correspondents could help me out of my dilemma. Can being placed upon "that clay-capped hill," 2¼ miles only north from Saffron Walden, account for it? Or can Negretti and Zambra's thermometers be depended upon? I hardly think the shelter from the orchard house, in the centre of a walled garden, could influence it so much. *W. C., Little Chesterford Park Gardens.* [It is to be regretted that painstaking observers should not express themselves so as not to be misunderstood. What are 38° of frost? We suppose that 6° below zero are meant, an incredible temperature. The indications of the thermometer should always be stated in the degrees of its scale, and not otherwise. Instead of speaking of 27° of frost, the report should be 5° above zero of Fahrenheit's scale.]

* The unusually great range of the thermometer in October, as observed here, was 61°.; being 2°. less than the Chiswick range, as recorded in your columns for that month.

Foreign Correspondence.

WELLINGTONIA.—(EXTRACTS FROM A LETTER FROM LORD RICHARD GROSVENOR) *San Francisco, California, Nov.* 3, 1859.—"I have just been on a trip into the interior of this state to see the 'big trees,' and they *are* worth coming here to see. Imagine a tree 116 feet in circumference and 450 feet high! There are several groves of them, all on the western slope of the Sierra Nevada, and all about the altitude of 4000 feet above the level of the sea. I have been to see two of them, one in Calaveras county, and the other grove in Mariposa, both about 200 miles from here, and the latter in a south-westerly direction. They are beautiful trees, but I do not think the branches are large enough in proportion to the trunk; they are, in fact, very small, and hang down in a nearly perpendicular fashion, sometimes bending down in a semicircular arch so as to touch the trunk again, which makes them look rather like very tall masts. The trunk is beautifully proportioned, and tapers off to a fine point, so you do not appreciate the height till you find you have sprained your neck in trying to see the top. The bark is a pretty yellowish cinnamon colour, of a very fine texture, often 22 inches thick, but that you have seen at the Crystal Palace. The tree from which that bark was taken is still standing, with the scaffolding round it which was used on the occasion."

THE HAMITE VALLEY.—"I have also been to see a valley called the Yo Hamite, which has hardly been heard of in England, but is certainly the most wonderful piece of scenery imaginable. This valley is about 10 miles long and 1 broad, the sides perpendicular rock, 3000 to 4000 feet high, and entrance only possible at two points, by a most difficult road to travel, of course only passable to horses or mules, and very hard work for them. The sides of this chasm are white granite and the tops covered with fine trees, the whole having evidently sunk down in 'the good old times,' with the rivers running in their ancient channels, but now making magnificent waterfalls 2600 feet high, of which however I could not see much, as they were most of them dry: the time of year to see them in their glory being in June, when the snows begin to melt. It is two days' journey on horseback from any settlements, and as there is only a trail to travel by, it is but little known as yet, and rarely visited; but if ever they do make a road for carriages down to the valley, everybody from all parts of the world will go to see it. The Merced river runs through it, and makes a beautiful fall 600 feet high at the head of the valley. I left it by a different way from the one by which I had entered, and had a magnificent view all over the valley, and it certainly was a most wonderful scene—this great chasm 4000 feet below, like a great gash in the mountains, with the sides so perfectly perpendicular; on beyond, hills covered with large Firs (not the Wellingtonia gigantea, but very fine trees), and beyond again the white tops of the Sierra!" [*For the above interesting extracts we are indebted to the kindness of the Marchioness of Westminster.*]

Notices of Books.

Pictures of the Chinese, drawn by themselves. By the Rev. R. H. Cobbold. Small 8vo, Murray. Pp. 220.

This volume represents by means of engravings on wood and literary sketches the costume and habits of the Northern Chinese, with whom Archdeacon Cobbold had an opportunity of becoming acquainted during a residence of eight years at Ningpo. The figures are those of a native draughtsman, who seems to be accomplished in the barbarous art of his country. Each principal trade is made the subject of a plate and description. Among these we have diviners, street singers, wine carriers, needle makers, barbers, tailors, scavengers, and others. The letter-press is by the author, who writes in a very pleasing style, as will be seen by the account he gives of Chinese Horticulture.

"The Chinese must be a strange people, from the very varying accounts which are given of them by different observers. They are over-estimated in some things, and undervalued in others, misunderstood in most. Take the matter of flowers. We are accustomed to consider them a nation of horticulturists on a small scale. Is it not the prevalent idea in England, that the houses are surrounded with a neat piece of garden-ground, which is cultivated with great care, and shows some rare flowers as the fruit of patient, kindly toil? Let the reader honestly say whether such has not hitherto been his notion of this canny, thrifty people of the Eastern continent. Now, what are the facts? If any one were to go to China, he might search a whole province through, and not find anything round the dwelling-houses which answered even to a decent European garden. In a garden, we picture to ourselves nicely-cut and elegantly-shaped beds, filled with bright-hued flowers; raised terraces, or gravel-walks, where visitors may go and admire the productions of the season; perhaps a spreading tree, or shady arbour, offering a welcome and cool retreat during the hot days of summer. Anything like this he will seek for in vain in China; but in its place, among the poorer classes, a few pots of flowers in the open court; and amongst the gentry a small yard at the side or back of the building, where is displayed some dwarfed Fir, no bigger than a doll's Christmas-tree; some gnarled Camphor, rising no higher than a good-sized Cauliflower; and a few carefully-cultivated plants, whose flowers are forced into gigantic size by a peculiar method of cultivation and the copious application of manure. The nursery-gardens, often visited and described by foreigners, contain many such specimens; they have no more beauty than the covered stalls of Covent Garden Market, but merely contain rows of pots, filled with the plants just coming into flower, ranged for the convenience of sale. The plants which are in the ground are merely seedlings, which will be transplanted, not into the parterres of country gardens, but into small pots to occupy their place on a stand in the court-yards or rooms of houses. . . . In the large city of Ningpo, whose walls are five miles in circumference, and whose population numbers nearly half a million of inhabitants, there are only two gardens which are ever thought worthy of a visit from foreigners. They belong to the Kang and the Le families respectively. The larger and better of these consists of a piece of ground about 90 feet long by 30 wide, most ingeniously 'fitted up' with rock-work, and a tiny pool of water, to resemble mountain scenery in miniature. From between the fissures of the rock, costly plants have been made to grow; others appear (in the usual way) in pots, set upon a flower stand. This is all one of the finest second-class cities in the empire has to show of pleasure-grounds. In the island of Chusan there is a garden about twice the size of this, even more ingeniously arranged: arches are formed by the rock-work, intricate passages wind round behind it, you ascend and descend by small staircases of stone steps, openings are made here and there to afford a view of the pretty court and the quaintly-curved and ornamented roofs which adjoin; a kind of summer-house, with elegant lattice-work, invites you to a shady seat. When our troops were occupying the island of Chusan, this spot, situated within a convenient walk from the barracks, became so great an object of attraction to the officers and others, that the proprietor (a wealthy Chinaman), pestered with the daily calls of visitors, fled the place, and ever after kept an old and trusty steward to do the honours of the house in his absence. Tea is liberally supplied to all visitors, and, as in the case of show-houses at home, a gratuity is left with the servants for their trouble. . . . From what has thus been said, it will be readily understood that the Chinese do not value those flowers which group well, forming massy patches, but only those which show well in a pot. They have found fault with several of our European introductions, such as the Coreopsis and Zinnia, because of their tendency to form large and unwieldy plants. They admired the separate flowers much, but could turn them to little account. Even the Dahlia they would find difficult to reduce to the proper dimensions. The Ranunculus, the Pansy, the Geranium, the Cactus, or the Hyacinth, they exceedingly esteem and admire."

This is doubtless an accurate description of the horticulture of Che-Kiang; but photographs executed by an officer at Canton lead us to believe that the wealthy Chinese in the south possess gardens of much greater pretensions.

Captain Hardy, R.N., a gallant officer experienced in irregular war, in a pamphlet called *How to Repel Invasion* (Hardwicke) urges the importance and facility of converting the whole of the Rural Police into efficient field artillery.——The *Elements of Mensuration*, by the Rev. John Hunter (Longmans), which now forms a part of Mr. Gleig's useful School Series, will be found one of the most acceptable as well as cheap books for young people. It only costs 9*d.*

A new edition of Mrs. Jameson's *Memoirs of Early Italian Painters and of the Progress of Painting in Italy* (Murray) has just appeared in the form of a very handsome 8vo volume. It includes a notice of all the Italian school from Cimabue, born A.D. 1240, to Jacob Bassano, who died in 1592. The continually increasing number of works of these artists in the galleries of this country render Mrs. Jameson's history more interesting than ever. It is illustrated with 62 exquisite wood engravings of the portraits of the artists and examples of their work.

Collection des Orchidées les plus remarquables de l'Archipel Indien et du Japon. By C. L. De Blume. Parts 7—12, folio.

The first volume of this great work of Dr. Blume's is now completed, with 66 excellent plates, partly coloured and 190 pages of letter press. These new parts are very interesting to botanists, but relate so much to the little terrestrial Orchids in which Java abounds, as to have small attraction for cultivators, except in the case of Macodes Petola, Argyrorchis Javanica, Nephelaphyllum pulchrum and some Pogonias, all of which have gaily veined or coloured leaves. Among the letter-press are to be found some observations upon change of structure that we recommend to the notice of

Mr. Darwin, whose new work *On species* we have noticed at some length. The learned author adopts the opinion of Ad. Brongniart, that Uropedium is a form of Cypripedium caudatum, and suggests moreover that his own genus Argyrorchis is merely a Macodes with the irregularity of the labellum lost, thus adding new evidence to that named on the same subject in the *Journal* of the Linnean Society for August 1858, with which the Dutch botanist seems not to be acquainted. Dr. Blume is also of opinion that Reichenbach's Selenipedes are merely Cypripedes with connate placentæ. But surely the "merely" is what constitutes most of the differences between his own proposed new genera. In this instance, says the author, these two accidental modifications, one of a Cypripede, the other of a plant among the Neotteous Orchids, would present this peculiarity that they propagate themselves like fixed *(constantes)* forms, without any return to their original condition *(état primitif)*.

Miscellaneous.

Sale of Coniferous Seeds.—A collection of these, consisting of imported seeds, was sold the other day by Mr. Stevens, and realised the following prices:—Wellingtonia gigantea, 5*l.* per packet, each containing from ½ to ¾ of an oz.; Cupressus Lawsoniana, per packet, 3*l.* and 3*l.* 5*s.*; Abies Douglasii, 3*l.* 5*s.*; A. Mertensiana or Williamsoni, 3*l.*; A. Menziesii, 2*l.*; Pinus Sabiniana, 1*l.* 14*s.*; P. ponderosa, 2*l.* 10*s.*; P. Lambertiana, 3*l.* 10*s.* and 3*l.* 15*s.*; P. Benthamiana, 3*l.* 10*s.* and 3*l.* 15*s.*; Libocedrus decurrens, 4*l.* 10*s.* and 4*l.* 15*s.*; other lots of the above from 1*l.* 10*s.* to 2*l.* 10*s.* The total proceeds of the sale, which consisted of 169 lots, were 475*l.*

Testimonials to Mr Broome, Temple Gardens.—A few days since, Mr. Salter, nurseryman, of Hammersmith, presented Mr. Broome with a very beautiful Silver Cup, as an acknowledgment of his perseverance and intelligence in bringing the cultivation of the Chrysanthemum to its present state of popularity and perfection.—Also at the Annual Meeting of the Tower Hamlets Chrysanthemum Society Mr. Broome was presented with a very handsome Silver Snuffbox.

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—As frosty weather may now at any time be expected, a good supply of dry litter, Fern, or other materials should be in readiness for extra coverings when required. If not already done, lose no time in getting under cover a supply of the various loams, peat, &c., required for spring potting. The principal work in plant houses will consist in keeping them and their inmates scrupulously clean. Moderate fires and ventilation, with frequent washing of stove plants, will be necessary. The conservatory and show-house should now be gay with Camellias and forced plants, which will take the place of the Chrysanthemums now over. Keep up a regular succession of plants to bloom through the spring, by bringing forward the stock of forcing plants as wanted. Roses, both dwarf and standard, Honeysuckles, Scarlet Thorns, Hybrid Rhododendrons, and Azaleas, with a host of other things, will enable cultivators in addition to the usual occupants of the houses to make a brilliant show through spring. Hyacinths, Narcissus, Tulips, Lily of the Valley, and other plants of the above class must be duly forwarded as wanted. Hard-wooded plants will require a dry pure atmosphere to guard against mildew and damp.

FORCING DEPARTMENT.

The forcing of fruit trees in pots has become both useful and interesting, and where separate houses do not exist for each kind a valuable addition to the dessert in spring may be secured by growing a collection of Peaches, Nectarines, Apricots, Figs, Plums, Cherries, and Raspberries in pots; they are easily managed in this form, provided there are one or two houses at work to hold them during the later stages of their growth. All the above kinds (with the exception of Raspberries) should have been grown in pots two years at least, and be well furnished with fruit-buds. Raspberries are best obtained by taking up the strongest suckers early in September and potting them either singly or three together in rich soil, shading them for a few days to make fresh roots, and then placing them against a south wall to ripen. Where a stock of the above fruits is prepared for forcing the advantages of a deep pit with a bed of leaves will be apparent; the slight bottom heat thus afforded will be found beneficial in setting the roots in action. Cherries and Raspberries are the most impatient of heat and should be brought forward in a very low temperature, and unless they are required very early they will succeed better when started next month. The remainder should be started with a top heat ranging between 40° and 60°, with a gentle syringing daily, and air according to the state of the weather. Here they may remain till they are nearly in bloom, when a drier atmosphere being necessary, they may be removed to vacant shelves or stages in any house at work where a moderate heat is kept up. Peaches and Nectarines may even be placed on the back shelves of the Pine-houses after they have set their fruit, though a more moderate temperature would suit them better. In carrying out the subsequent treatment we may add that Figs, Peaches, &c., should occupy the warmest part of the house in which they are to fruit, and Apricots, Plums, and Cherries the coolest end. If required, Raspberries will succeed well in pits or in the partial shade of other plants. If circumstances permit of the whole being kept plunged in a gentle heat it will assist the swelling of the fruit, but with proper attention in supplying them with manure water they will do well without that assistance. Prepared plants of the most suitable kinds of the above fruits may be obtained at most of the principal nurseries, or maiden plants of each may now be potted in rich turfy loam for future operations, getting them into a bearing state by judicious stopping rather than by the use of the knife. Pursue former directions as regards the early Vinery and Peach house. Be careful not to use too much fire heat at first.

STRAWBERRIES.—Where ripe fruit is wanted early, a portion of the most promising plants should now be selected and placed in a pit where they can be afforded a gentle bottom-heat; or if this cannot be commanded, a Peach-house or Vinery which has just been closed for forcing will do. They must, however, be kept close to the glass, for they require all the light that can possibly be afforded them at this season, and a free admission of air on mild days, with a low temperature until the fruit is fairly set, and if these conditions can be combined with bottom-heat, success will be more certain than under any other circumstances, and this will be more easily done in a small pit than in a house, the temperature of which must be regulated to suit other things.

FLOWER GARDEN AND SHRUBBERIES.

Where any of the beds or borders require a dressing of fresh soil this should be provided, in order to have it in readiness to wheel on when favourable weather for such work may occur. Fresh soil is in most cases preferable as a dressing for flower beds to manure, which is apt to cause too luxuriant a growth for a first-rate display of flowers. On soils that are naturally poor however, and where neither fresh mould nor decayed leaves can be had, a moderatedressing of well rotted farm-yard manure will be useful, but this should be well mixed with the mould the full depth of the bed, and not carelessly turned in and left in lumps near the surface, for in this case a gross habit of growth would be promoted early in the season, and as the principal part of the roots would be near the surface in the manure, the plants would soon feel the effects of dry weather, whereas if the manure is well incorporated with the soil to the depth of about 18 inches, no ordinary amount of dry weather will injure the plants after they once get fairly established. Shrubberies may be thinned where this involves only the cutting out of overgrown plants or lopping deciduous trees or the hardier kinds of evergreens, but where evergreens generally require pruning, the work had better be deferred until March, except in favourable localities, for although when the winter proves mild such work may be successfully performed at any time, it is never safe to depend upon this. Avoid treading upon or working the ground when it is in a sodden state; and if the workmen cannot be profitably employed out-doors, get a good stock of Dahlia stakes, brooms, and things of that kind prepared for use when wanted.

HARDY FRUIT AND KITCHEN GARDEN.

If any transplanting of fruit trees has yet to be done this season, it should be seen to while the weather is favourable for such work; also see to getting ground intended to be planted with young trees prepared, and spare no pains or expense to have this properly done. Make sure of thorough drainage, and where the subsoil is unkind this should be removed, replacing it with some good fresh loam. When a large breadth has to be planted in one season this expensive kind of preparation cannot be always afforded, but it is better to do such work only in such quantities as will allow of every precaution being used with the view of securing success. Attend to keeping up a supply of Rhubarb, Seakale, and Asparagus by introducing quantities of the roots into heat at intervals of about a fortnight. Where there is room in the Mushroom house the two former will be found to do exceedingly well there, and a supply will be obtained with little trouble. For land that has long been cropped with vegetables a good dressing of fresh loam would in many cases be preferable to manure, and where this is wanted and can be obtained, it should be got to hand in order that advantage may be taken of frosty days for wheeling it upon the ground. Where fresh soil cannot be obtained, charred vegetable refuse, such as prunings of shrubberies, edgings of walks, and many things which turn up in course of the season may be cheaply made to form an excellent substitute.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Jan. 5, 1860, as observed at the Horticultural Gardens.

Dec. and Jan.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 30	6	29.595	29.495	55	44	49.5	43	42.0	S.W.	.09
Satur. 31	7	29.693	29.622	57	52	54.5	45½	43½	S.W.	.02
Sunday 1	8	29.661	29.473	56	43	49.5	47	45	S.W.	.08
Mon. 2	9	29.689	29.671	56	43	49.5	47	45½	S.W.	.04
Tues. 3	10	29.305	28.861	57	42	49.5	47	45	S.W.	.07
Wed. 4	11	28.902	28.872	51	29	40.0	47	45½	S.W.	.03
Thurs. 5	12	28.811	28.755	43	36	39.5	46	45	S.W.	.11
Average		29.366	29.249	53.5	41.3	47.4	46.0	44.5		.44

Dec. 30—Fine; rain; boisterous at night.
— 31—Rain; densely clouded; overcast.
Jan. 1—Cloudy; boisterous; clear and fine at night.
— 2—Fine; rather boisterous; fine.
— 3—Cloudy; drizzly; rain at night.
— 4—Fine; very fine; slightly overcast.
— 5—Clear; rain; barometer remarkably low.
Mean temperature of the week, 10 deg. above the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Jan. 14, 1860.

January	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds.
Sunday 8.	40.2	31.2	35.7	10	0.26 in.	
Mon. 9	40.4	31.2	35.8	14	0.71	
Tues. 10..	42.0	30.7	36.3	16	0.40	
Wed. 11..	41.4	31.2	36.3	18	0.83	
Thurs. 12..	42.1	30.7	36.4	15	0.76	
Friday 13..	42.6	32.1	37.4	16	0.29	
Satur. 14	42.2	29.5	35.8	16	0.80	

The highest temperature during the above period occurred on the 12th, 1852—therm. 54 deg.; and the lowest on the 14th, 1838—therm. 4 deg.

MONTHLY DEPTH OF RAIN, in inches and hundredth parts of an inch, which fell at Chiswick in the years 1841 to 1859 inclusive.

	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
January	2.60	1.06	1.33	2.25	2.07	2.85	1.31	1.16	1.73	1.43	3.07	2.72	2.14	1.92	0.10	1.76	2.09	0.41	0.01
February ..	0.76	1.32	2.35	2.27	0.93	1.47	1.34	3.12	2.52	0.65	0.90	1.06	0.59	0.78	1.35	0.62	0.31	1.48	1.31
March	1.32	1.81	0.47	2.44	1.25	1.09	0.41	3.05	0.85	0.13	3.57	0.25	1.48	0.42	1.75	0.97	0.78	0.88	0.77
April	1.58	0.15	1.62	0.33	0.95	0.93	0.92	3.06	2.21	1.79	1.65	0.52	2.58	0.30	0.26	1.07	1.77	2.13	2.01
May	2.16	1.73	5.26	0.25	2.80	1.95	1.59	0.28	3.53	1.84	0.74	1.74	1.60	4.03	1.94	4.38	0.87	2.05	1.80
June	2.45	1.58	1.62	0.97	1.56	0.80	1.31	3.20	0.31	1.40	1.33	4.69	2.54	1.53	1.48	0.88	1.91	0.78	3.10
July	3.55	1.52	1.67	2.10	2.31	1.78	0.79	2.21	2.82	2.68	3.90	2.28	4.17	2.40	6.80	1.43	1.22	2.55	2.18
August	2.69	2.81	3.28	1.84	2.79	4.50	1.50	4.70	1.60	0.97	2.03	3.71	1.87	1.77	1.45	3.50	2.80	1.46	2.49
September..	3.71	3.50	0.98	1.31	1.77	1.70	1.66	2.20	2.49	2.36	0.42	3.54	2.41	0.58	1.15	1.99	3.52	1.05	4.05
October	4.61	1.71	4.19	4.13	1.89	5.54	1.75	2.93	2.18	1.55	2.01	3.87	3.78	2.61	6.15	2.40	4.01	1.36	2.55
November ...	3.41	4.43	2.13	3.06	2.11	1.43	2.26	0.90	1.32	2.03	6.62	6.20	0.91	1.31	1.94	0.94	1.53	0.10	2.72
December ..	2.12	0.76	0.58	0.39	0.33	1.21	1.81	2.03	1.28	1.15	0.55	1.97	0.30	1.27	1.11	1.88	1.53	1.53	1.95
Annual amount }	30.97	22.27	25.48	21.84	23.33	27.71	16.65	28.34	22.84	18.28	20.79	32.55	24.87	18.92	24.38	22.72	21.06	15.78	25.54

The amount of rain in 1859 was 2.02 inches above the average of the last 33 years.

Notices to Correspondents.

FUNGI: *A R.* The production on Beech bark is Psilonia nivea, of Fries. It is not common, but generally occurs in great abundance if at all. You can probably destroy it by painting the tree where affected with a solution of corrosive sublimate. But do it cautiously. *M J B.*

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*Stourbridge.* 1, Eupatorium adenophorum; 2, no flowers. 3, not nameable; 4, looks like a bit of Pinus sinensis.—*F P.* 1, Veronica Andersonii; 2, not in flower; 3, seems to be Alonsoa incisiflora, but the specimen is far too imperfect for certain recognition.—*J S.* Alonsoa incisifolia, as far as can be judged from so bad a specimen without leaves.

NEVIUSIA ALABAMENSIS: *Clapton.* Next week.

OLD SEEDS: *Jack of all Trades.* The red seed with a black spot belongs to Abrus precatorius, sometimes called Jamaica Liquorice, but not what is known as Liquorice in Europe. The other is the seed of some Bean-bearing plant. Both are from the West Indies. They are not likely to grow. If you desire to experiment upon them soak them for 24 hours in warm water, and then sow them in a good hot-bed. As far as we can judge from your description, the other seeds are of a similar nature and must be treated in the same way. The Onion-like seed possibly belongs to Coix Lachryma.

PLANE TREES: *A W.* We do not remember whether the Plane trees in French Boulevards are oriental or occidental. Probably the former. The butter-nut of the shops is not the seed of a Plane but of a tropical South American tree called Pekea tuberculata.

SPIRÆA BOURSIERII: *L M T.* Under this name a plant has been dispersed through the trade, about which we can only say that it is a dwarf hardy Californian shrub, comparable to a diminutive Sp. ariæfolia, and like it having white flowers, but in thin erect spikes. It is said to be difficult to propagate.

TEAK WOOD: *A T.* If Teak wood is less used than formerly in ship-building, it is, we presume, because it is now too dear. The Teak forests have been so destroyed that good "logs" are now difficult to procure. As to the story about such timber harbouring bugs more than other kinds, upon that point we beg to withhold assent.

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The Agricultural Gazette.

SATURDAY, JANUARY 7, 1860.

THE New Year is by this time no longer new. And even were it so, the pens and tongues of thousands have exhausted every topic that the season suggests, or imagination can supply. To the politician every year is a new chapter of fresh incidents; for history, in one sense, never repeats itself. To the agriculturist on the other hand, as such, the recurrence of each commencing year is the reiteration of a course whose motto, like that of all Nature, is 'Uniformity dressed in Variety.' But, to a wise and active mind, Time is not the mere selfish Chronicle of personal existence, but a broad and attractive history, in whose current events it is our privilege to take a part; and the more real and energetic that part, the less the

labourer feels of those aches and pains to which the purely self-absorbed are nearly as much exposed as the idle.

All may experience this; but to no one is it more abundantly obvious than to him whom each season of the year beckons to a fresh and special task; to the Farmer, of whom it has been emphatically said that his work is never *done*. Indeed, the agriculturist of the present time has stronger claims growing up around him, and soliciting his interest, than those which the mere routine of season brought to his forefathers, and even to himself, in former days. His business is asserting itself in directions which invite a man's mind into spheres of thought, and action, which once seemed comparatively denied to the tiller of the soil. It was well remarked and reiterated the other evening, in the discussion of Mr. MORTON's paper at the Society of Arts, that the Steam-Engine is an Educator. It is more than this, for it is a School which draws its pupils from every quarter, and introduces them to each other: and few of us are sufficiently aware how one pursuit can throw light upon another, and how that process is advanced by the possession of a common basis. When agriculture has begun to calculate its 'forces,' like an Engineer, it has entered upon a field at least the counterpart of that which Chemistry laid open,—probably one very much larger: and there are abundant signs around us that the time is near when to be really an accomplished agriculturist will imply the possession of knowledge of no common order or degree. How can it be otherwise, in an art which deals with almost every element around us, in earth, air, and water; claims an interest in every new invention, though as wide of it in original design as the 'Wire-Rope,' and lays under contribution every process of Nature, however recondite it may be even to the proficients in the particular science that relates to it.

This is no new reflection: but its interest lies in the very fact that while it is so old, itself, its most startling illustrations are so purely modern as to have given, till very lately, the appearance of backwardness compared with other arts, to that one which of all that men pursue embraces the widest scope in the field of practical and applied Science.

Equally valuable and interesting as the Chemical side of agriculture (so to speak) has shown itself, there is every probability that, in this country at least, the Mechanical side of the art is destined to the accomplishment of results even more important. It may be that ere many years are past Agriculture without Steam may come to be spoken of in much the same tone as that which military writers adopt when referring to the era of 'War before Gunpowder.' Should this prove true, it seems likely to produce a curious restitution of that special nationality, of which many mourned the supposed sacrifice in the opening of our ports to the produce of the world. The economy of Steam estimated against other kinds of power suggests many questions, but none more interesting to the farmer of Great Britain than that which arises out of the simple reflection that our mines of Coal and Iron exceed those of all the rest of Europe put together; in other words, that our soil contains within its womb the elements and means of its own cultivation to an extent and at a low cost which no other part of Europe can pretend to.

But these two great branches of our agricultural development, the Chemical and the Mechanical, are trite, and in a fair way to take care of themselves compared with a third great element of success to which the public mind is by no means equally alive, namely the conditions under which agriculture itself, in its broadest sense, exists, by virtue of what may be called the Circumstances of the soil. It is earnestly to be hoped that public attention will ere long be turned more energetically than at present is the case to the consideration of this subject. By the phrase is meant those incidents which in this country affect Land in reference to the various relations of Owner, Occupier, and Labourer, besides those of Purchaser and Seller. A minute's reflection will convince any one, who may not have turned attention to it before, that, in every one of these relations, Land is the creature of Law and Custom, to an extent that affects and interpenetrates the vital action of society in some of its most important functions.

When the Corn-laws were abolished, a large portion of the public press gave vent to Pæans and rejoicings as though a fundamental and complete emancipation had been effected from the whole system of what they called the Feudal restrictions that had pressed upon the soil. It may be asserted, on the contrary, that the abolition of these restrictive laws was like the tearing off the mask and covering of fetters whose galling would have become plainly and openly insupportable, and the true shape and material of the coil have been developed in a manner highly edifying; to the legal world not at all surprising, to the agricultural community, both of owners and occupiers, very much so, especially on discovering that the concatenation was of their own forging, for their own wearing, for the sole benefit of others; a rather heavy incumbrance to themselves, a very profitable fleece to those who sheared them. *Sic vos non vobis.*

In every transaction in this country between man and man, of which Land is the subject, there is a complication, delay, and expense whose united effect is to lower its value, to arrest its improvement, and to cripple at once the energy and the resources both of its owner and occupier. This is felt by thousands who acknowledge it but cannot understand it, and by thousands who do neither one nor the other. But if they would trace the history of the soil they would see 'the reason why' the Commercial and the Feudal principle are two things as incompatible as fire and water, as light and darkness. And while the former principle applies to every *other* thing which we buy or sell, own or occupy, enjoy or bequeath, the latter is retained upon the soil alone; reminding one of that *dark ray* which chemists and astronomers tell of as intersecting the solar light in certain mysterious lines.

For amidst all the acknowledged freedom spreading itself with English institutions, customs, or habits, it is worthy of remark that no colony or dependency this country has ever had, could endure the intolerable infliction of our land laws. The attempt to establish them has furnished the secret cause of more rebellion, bloodshed and extravagance, than could be recounted except in a history devoted to the especial subject: and their continued existence has produced some of the severest reflections that ever have been uttered against the intelligence of a class, in the fact that the Landowners, powerful as a body to obtain the completest remedy for any evil that affected them, should remain individually the subjects of a system of Exaction little differing from a perpetual Tribute from the land, upon every occasion when ownership is exercised.

It may suit the purpose of a class, or of a profession, but it cannot be for the public good of any country that the ownership of the soil should become more and more impracticable to the many, by a canker-worm of expense at every transaction, which eats out every lesser holding, and aggregates land into the hands only of the largest proprietors. The opposite extreme may be justly deprecated; and has long been set up as a scare-crow to all discussion of the subject; but the danger will in this country never lie on that side. True Commercial freedom in the transfer and ownership of land contemplates neither extreme. It demands that Land, like every other form of property, should be accessible, and tenable by capitalists of all degrees, with equal facility, and commensurate profit; as the sole condition under which the greatest amount of national wealth will be invested in our own soil, and the fullest development be given to the genius for agricultural advancement which exists in equal force throughout every rank and class of the community.

AN opinion is very prevalent, founded apparently upon long bought experience, that two crops successively of the same plant on the same ground will not succeed. An Apple or Plum tree, for instance, it is said will not thrive where an Apple or Plum tree has grown and died before; Wheat will not give a good return where Wheat has been the previous year; Sugar-beet is sure to be decayed under like circumstances, or Clover is sure to be sick if grown more frequently than once in eight years.

Now, true as the facts asserted may be in general, there is probably some fallacy in the notion that the reason which is at the bottom of them all is that the soil has become tired and requires rest. The Apple and Plum tree will do well enough if care be taken that no old roots remain in the ground; Wheat has been grown with good results under spade husbandry for many years in succession; Sugar-beet it is well known is contaminated the second year from the putrescent remains of the old taproot; and it is not at all certain that Clover sickness is attributed to the right cause.

Now as Clover is usually sown with Barley after a crop of Turnips, portions of which are always buried by the plough, it is not impossible that occasionally, though not always, the plant may be impaired in constitution in an early stage of growth from this cause, though the evil is not apparent in general, or at least is not observed till the following year. We have examined the roots of sick Clover repeatedly without ever finding any unhealthy appearance about them, or the slightest trace of any Fungus spawn which might affect them. It is the part above the ground which is the seat of disease. The leaves lose their healthy green, and ultimately the base of the stem, or what is often called the crown of the root, decays, and the whole plant falls a sacrifice. Minute Fungi may exist upon the leaves, but if so they are in no respect the cause of evil. It is indeed possible that in some instances there may have been some original constitutional defect which was inherent in the seed; but such defects usually show themselves at an early stage of growth, and we are far more inclined to attribute the condition of the plant in the majority of instances to infection from decaying matter than from the cause just mentioned. The notion is at any rate worth a thought, especially as it seems quite preposterous to believe that Clover will not succeed once in a four-years' course from mere exhaustion of the soil. It may be very true that Clover will not so succeed, but the point is to discover the real cause why it will not, supposing the assumption to be grounded in fact.

Whatever may be thought of the notion just put forward as to the origin of Clover sickness, we would strongly recommend no one to attempt to sow Clover seed where a large portion of the crop has failed, for the produce is almost sure to be diseased. In the case of Oats we have proved by consecutive experiments that seed from diseased plants will produce a diseased offspring, and we do not doubt that even where the original cause of disease may not exist, it may be propagated by seed, an evil which no one can guard against till measures be taken by agriculturists to ensure a supply of seed of every kind from healthy sources. More we are convinced depends upon this than is generally imagined.

Let us however pass on to another case, which was mentioned above.

It is acknowledged almost universally that in the common system of cultivation Wheat cannot profitably succeed Wheat. The second crop is weak and patchy, and for the most part a failure. The same may be assumed, from common consent, respecting Wheat after Italian Rye-grass mixed with Clover. In this case, though the crop in parts may be good, after a time patches become blighted, and die. Now here, again, we have taken pains to ascertain the cause. We do not assert that we have satisfactorily traced this to spawn arising from decaying vegetable matter attacking the roots. We know, however, so far as our own experience goes, that if the blighted straws are split up there will very generally be found traces of fungous matter. We would suggest then that it is very possible that where Wheat succeeds Wheat the strong stubble of the Wheat crop which is ploughed in may generate spawn, perhaps so delicate as to escape notice when the evil is done, and that this, coming here and there in contact with the young roots, may induce disease. And so where Italian Rye-grass is mixed with Clover, the hard wiry remains of the base of the stem may in like manner have an evil influence upon the Wheat. We do not assert that this is the case, but we think that the suggestion is worth some observation and experiment. That the cause is capable of producing the effect is from analogy beyond doubt. It does not follow that because decaying Clover roots afford a welcome nutriment to young Wheat that the Rye-grass or old Wheat stubble may do the same, though according to theory, so far as they go, they will at least restore to the ground a part of the waste.

We are, however, quite of Mr. NESBIT's opinion that vital processes are not to be judged of entirely by chemistry. If the analysis of plants alone could tell us precisely what has been withdrawn by a given crop from the soil, and what must be restored to insure success, agriculture would become in a great measure a matter of certainty instead of being subject to a thousand accidents as it is. That the farmer may and does derive great advantage from his own chemical knowledge or that of others it would be folly to deny, but he must not suppose that all begins and ends there. There are mysteries which are far beyond the reach of the highest human knowledge: but the veil is sometimes capable of being withdrawn, yet only where people do not rest satisfied with a foregone conclusion, but are content to keep their minds open to fresh suggestions, without indolently making up their bundle of faggots, and wrapping themselves up in their own prejudices. *M. J. B.*

LOSSES IN BREEDING EWES.

As a large grazier and breeder of sheep in Romney Marsh I am very much interested in the correspondence which has lately appeared in your Paper, relating to the causes of extraordinary deaths, sudden and unaccountable, among flocks. Unfortunately I am subject at this time of year to heavy losses; and in the hope that I may throw additional light on this important question, or that some of your readers may be able to suggest a remedy, I give the following facts.

For the sake of the uninitiated I premise that breeding ewes are always kept on green land or pasture land of not very "forcing" character, at the rate of from two to two and a half per acre for the winter months, with a little hay in case of snow only; this land has been fed hard all the summer and autumn.

My losses occur only (that is, above a common average of casualty) in my breeding flock. From the time the rams are put out in November until lambing commences, I am always over anxious. Almost from the beginning of the formation of the embryo I can see a perceptible increase in mortality; on many occasions my looker, this year and the last year, has found two or even three dead ewes in one field at a time; they are always much "blown," and their bellies are very black—their wool readily pulls out. Nothing radically wrong can be discovered by a casual inspection of their intestines. I would observe, especially, that in the next fields my fatting sheep where the land is much stronger, also ewes, fat, barren, or too old for breeding, do not die. I must therefore conclude that there is some deadly quality in these poor fields at this time of year, or that the ewes being pregnant are affected by "ergot." I want to ascertain if possible whether in such an early stage of pregnancy this would be fatal, and whether it would cause the destruction I have mentioned; also if there be any remedy? Young wether sheep and rams do not die beyond a general per centage in the same class of land. My loss last year for the winter months alone was over 11 per cent. in my breeding flock.

Hoping that you will insert this for my own and the public good, *W. Farleigh, Maidstone, Dec.* 19.

LEAF STRIPPING OF MANGEL.

"MANGEL Wurzel," to use your words, "is so valuable a root that hardly anything connected with its growth can fail to be a matter of interest." Impressed as I feel with the correctness of that statement, I feel induced to submit to you the following remarks on the crop of Mangels raised on the Albert Model Farm during the past season, and which you may, perhaps, consider as possessing sufficient interest for insertion in your excellent Journal. It will be seen that some of the results of the course of management pursued here have differed very widely indeed from those recorded by you in the *Agricultural Gazette* of the 19th ult. I allude principally to the effects resulting from the removal from the plants of a portion of their leaves. As the leaves of Mangels had always been found on this farm to possess valuable feeding properties when given to the milch cows, it has been the custom for several years past to carefully and judiciously pull off the drooping leaves from the middle of August to the middle of October. An experiment was instituted last season, and carefully carried out on a pretty large scale, with the view of determining whether the roots gained or lost in weight by the stripping off, at intervals, of the falling outside leaves. The leaves, it must be borne in mind, were most carefully and rather sparingly removed at the first and second strippings, and not more than three or four taken from a plant at one time. In this way 5 tons of leaves per statute acre were taken off for feeding purposes from the 12th of August to the 15th of October. The experiment was carried out on 4 acres of the Mangel crop—12 drills, each 200 yards in length (that being the entire length of the field), were left untouched, whilst the remaining portion of the crop was treated as above detailed. It is deserving of remark that there was no apparent difference in the two lots at any period during the season, and the crop was considered by the numerous visitors to the institution and farm as a remarkably even and regular one.

The following table shows the result of the experiments, and the manures employed for the general crop, &c.:—

No. of Lot.	Variety of Mangel.	Date of Sowing.	Manures employed per Statute Acre.	Leaves taken off per Statute Acre.	Weight of Bulbs per Statute Acre.	Date of Lifting
				tns. cwt. st.	tns. cwt. st.	
1	New Oval Yellow	April 23	30 tons of farmyard, 1 cwt. of Peruv. guano, 6 cwt. of common salt ..	5 0 0	45 1 0	Oct. 27
2	Do.	Do.	Do.	None	40 8 6	Do.

The result here given was not altogether unexpected, as in former years the crop did not appear to suffer from the removal of those leaves which were believed to have ceased to perform their special functions, as indicated by their drooping appearance and somewhat altered colour, but that so considerable an addition to the weight of the crop should have arisen from taking off the leaves was not by any means anticipated.

It is true that the removal of the leaves admitted a freer current of air to the plants, and also exposed them to a greater degree of light—two agents which must exert important influences on the growth of plants—and it remains for vegetable physiologists and agricultural chemists to say whether this freer exposure to the air and light could have such an effect on the plant as to increase the size or specific gravity of the bulbs.* The experiment, as has been already remarked, was most carefully carried out, and the circumstance of so considerable an extent of crop being experimented upon, added to the fact that the entire crop of both leaves (removed) and roots having been accurately weighed, give it a reliable character.

That the free admission of light and air tends to increase the weight of the roots appears to be confirmed by the fact that the outside drill, which we have weighed separately for some years, produces at the rate of several tons per acre more than the general crop. I should also observe that the variety of Mangel experimented upon returns a greater weight of leaves (and also of roots) per acre than any other kind we grow; and it may be found that the removal of a certain quantity of leaves from this particular sort will have a different effect from that produced by taking off the same quantity from another kind whose leaves would be 20 or 30 per cent less, all other circumstances being equal. As the crop of Mangel of last season was an unusually fine one on this farm, it may not be out of place to give the following particulars as to the preparation of the land, &c.

The field, or division, of the Albert Model Farm, in which the principal crop of Mangels was raised in the season of 1859 had been thorough-drained to a depth of about 4 feet in the autumn of 1853. Potatoes were planted in 1854, which were followed by Wheat in 1855, and laid down with Italian Rye-grass, which was cut for soiling and hay in the years 1856 and 1857. A manured crop of Beans was taken in 1858, and on the removal of that crop in the latter part of August of that season the land was grubbed with Cottam and Hallen's cycloidal grubber, which has been found a very efficient implement on this farm, and after the removal of some Scutch† (the seed of which was imported with the Italian Rye-grass seed), it was subsoiled, or partially trenched, to a depth of 20 inches. This latter operation was performed thus:—The land being opened up by trenches at proper intervals a wide furrow was formed by the ordinary two-horse plough, and from the bottom of this furrow a considerable quantity of the under soil was thrown up with steel digging forks by 18 of the pupils (this number keeping the horses regularly at work), each having his portion of the work marked off; and Gray's subsoil plough drawn by a pair of bullocks completed the operation to the depth above stated. The work was done at the rate of 1 statute acre in eight hours.

In the early part of the ensuing April the land was deeply grubbed across the line of the preceding trenching, and the soils were thus thoroughly incorporated or mixed together—the subsequent use of the harrow and roller reducing all to a very fine tilth. The drills were made 27 inches wide by the double mouldboard plough, the seed sown at the rate of 6 lbs. per statute acre by hand in openings made by the hand-hoe at 14 inches apart, and two of our pupils sow a statute acre in 10 hours. We have tried the steeping of the seed, on a small scale, for some years, but have come to the conclusion that "it is at all times a hazardous practice."

By sowing the seed as above described the young plants do not get entangled by their rootlets as if put in by the dibble, and we find it very convenient when thinning out, as no mistakes can be made as to the distance apart, as is very frequently the case when the plants are in a continuous row on the drill. At the first thinning two plants are left, but not close together, and when these have got well established the best plants are easily recognised. Two hand-hoeings and two horse-hoeings completed the after culture. On the lifting and storing of this crop a good deal may be written; but as the present article has extended beyond the limits contemplated, I shall, with your permission, return to the subject on a future occasion. *Wm. Boyle.*

* The following remarks of Prof. Balfour, Professor of Botany, Edinburgh, and the late distinguished chemist, Dr. George Wilson, appear to have some bearing on this matter. "The functions of the leaves," says Prof. Balfour, "is to expose the juices of the plants to light and air, and thus to aid in forming the woody matter of the stem and the various secretions. Unless the leaves are freely exposed to air and light the wood is not properly formed. Hence the reason why the wood is deficient both as regards quantity and quality in trees grown in crowded plantations. The same observations apply to all the secretions of plants." Dr. Wilson remarked:—"It appears beyond doubt that the force generated by the sun, and conveyed by his rays in the guise of heat, light, and chemical power, to the earth, is not extinguished there, but only changes its form. It apparently disappears when it falls upon plants, which never grow without it; but we cannot doubt that it is working in a new shape in their organs and tissue."

† It is deserving of particular remark that until the Italian Rye grass seed was "home-saved," it was found impossible to keep the land free from Couch, notwithstanding that the imported seed was procured from highly respectable seedsmen both in this country and in England, who, I am aware, went to great trouble and expense to ensure, as far as they possibly could, the seed being pure and unmixed.

Home Correspondence.

Mangel Wurzel.—As I grow about 4 or 5 tons of Mangel Wurzel in the garden, like many others I was surprised by the severe frost before the crop was taken up. I let it remain till the frost was quite gone, and then had it taken up as soon as possible, keeping all that appeared injured by themselves to be used first. I stored about a ton of what were supposed to be sound in a building, the others in a pit; many of those in the building soon began to turn black in the centre where the top was cut off. I supposed those in the pit were the same, and had them examined; they were exactly in the same state; we began at one end and threw the worst by themselves—those that were gone black, on one side, and another portion that appeared unnaturally moist in the centre when scratched with the thumb nail, on the other. All that appeared quite sound were placed in the pit again as we proceeded. When we had finished the second best were also pitted by themselves, not having room for them in a building; the others were all taken in and their necks cut off in slices till the decaying portion was removed. These slices were given to the cow in the field and are all eaten up. I estimate that in my case, the portion very much injured is one-fourth, and the quantity which now appears quite sound about one-fourth, and I fear the other half will not keep longer than till March. As some farmers may be thinking their roots quite safe, if examined when stored, I have given this short account of mine for insertion in the *Agricultural Gazette*, if you think it suitable; and as I have been very successful in the cultivation of Mangel Wurzel, having grown it on the same ground for ten years consecutively and always had excellent crops, I enclose a short account of the method I pursue. The ground is deeply dug in November, in March a dressing of salt is applied, and lime also when necessary, and worked in with a fork; when the ground is dry it is dug and well manured. The last week in April or the first in May, the seed is sown in shallow drills and covered about ¼ inch thick with fine soil; the seed is soaked 24 hours in soft water, and my plan is to place three or four seeds in the drills at intervals of a foot. The result has always been an abundance of good plants, which when large enough are thinned, leaving the strongest plant in each place; they are then well flat-hoed, and three hoeings are given at intervals before the leaves are so large as to be injured by the operation. Nothing more is required till they are ready to take up. My soil is light loam over gravel. As complaints are sometimes made about Mangels scouring cattle, and giving a bad taste to butter, I may say that to prevent the latter evil, some years ago I commenced washing mine, and was so satisfied with the result that I have continued it ever since; I believe it prevents both the scouring and the bad taste in the butter. I regularly give about half a cwt. per day to a milking cow, and she is not scoured in the least, and the butter is excellent. I give it at three times, namely after each milking, and at noon in preference to giving that quantity at twice; her other food is good hay only. If you deem this suitable for insertion in the *Agricultural Gazette* perhaps some one will give it a further trial and report upon it, and I should be obliged if any correspondent would give his experience of growing the new Cattle Parsnip. *Thomas Oxley, Spondon, near Derby.*

Exhaustion of the Soil.—Finding there are many erroneous notions in my humble opinion getting abroad as to the exhaustion of soils, by not restoring to the land in another form that which is taken from it in the shape of grain, I take the liberty to point out to those who have an opinion that the fertility of the lands in England is decreasing, and that a course of cropping similar to the present will eventually rob the soil of some of its ingredients so as to end in total exhaustion of the soil, that they entirely lose sight of the difference between the agriculture of England at the present time and the prairies of former times. When corn in England was at famine price, the Americans shipped their corn to this country in consequence of its being one of the most paying commodities they could send us, and when a piece of land was taken up it had Wheat taken every year in succession, or some cereal crop; so that it extracted the whole of the saline as well as other matter from the land, and left it without the power of retaining moisture for the nourishment of the crop when coming to maturity no one doubts. But the land of England will never be exhausted while the demand for mutton and beef exists, as it is well known by the best agriculturists that their land increases in fertility every year, and that the great difficulty in supplying the wants of the maltster is owing to the increasing richness of the land, which causes the crop to lodge, to the detriment of the Barley; and as a remedy they are endeavouring to introduce into their new leases a clause which will enable them to take one more cereal crop in the rotation, introducing a five instead of a four course. Now it is well known that no such thing as a four or six-course rotation used to be carried out in those countries where the elements of fertility are exhausted, and the land said to be barren, which I for one do not believe: and I feel certain that if those lands were put under the hands of a Webb, a Davis, or a Hudson, they would under a four-course shift grow as good crops now or better than they ever did, though I well know the four course is not the best system of farming. I hope that in what I am saying I shall not be understood to depreciate the importance of applying sewage to agriculture, as the greatest wish that could be granted me would be a farm supplied with sewage in its raw state, and then I am positive the stubble Turnips would be as large as those now obtained by a summer's fallow, and the Mangels made to weigh double their present weight. *Charles Bates.*

Dairy Produce.—In the case of a farm in which butter is made, but no cheese, and in which cows of the Jersey, or Jersey and Ayrshire mixed breed are used, what amount of milk per week may be looked on as a good

yield? What per-centage of cream to milk and of butter to cream may be counted a good proportion, so as to make butter-making remunerative? Perhaps some dairy farmer has kept an account of these matters, and would give one the quantity of milk and the per-centage of cream and butter produced by his cows at different periods of the year, mentioning how they were fed during the winter months. My average yield of cream, as far as I can judge from milk kept in glass tubes, has been in the proportion of one part of cream to eight of milk up to the last week or two, the cows having nothing but Grass (mainly Clover and Rye-grass from seeds), and a little cow hay and Barley straw. One cow has averaged nearly double this, viz., two parts of cream to nine of milk. As, however, I have only just begun to measure the milk, and therefore know nothing of the total yield of milk or cream, I cannot tell the quantity of cream required to make a pound of butter. My yield of butter per week up to the last week, in which there has been a falling off, has been for the last month about 4 lbs. per cow. My yield of milk during the last week has been only 9 gallons per cow, but I imagine that I shall find a great falling off in butter at the end of it. *A Hampshire Dairy Farmer.* [Cream is generally 10 per cent. of milk, and butter 1 lb. in 21 pints of milk; an average yearly yield of milk is 550 to 600 gallons per cow.]

Notes on the Kohl Rabi.—The seed was sown on the 29th March on a piece of well-dug ground in rows about a foot apart and kept clean by hoeing and hand-weeding. In the meantime the land for planting was prepared in the same manner as for a Turnip crop, well dressed with farm-yard manure and 2 cwt. of "Proctor & Ryland's" Turnip manure per acre, and cast up into ridges 28 inches apart. In the last week in May and beginning of June the plants were taken from the seed-bed and planted like Cabbages on the ridges at intervals of 20 inches apart, but I intended they should have been 15 or 16 inches apart; the land was afterwards twice horse-hoed. A small portion of the field was drilled the same time as the Swedes (middle of May) and treated similar to the Turnip crop, but the tops were larger and the bulbs not so fine as those transplanted, probably being sown too late. I have generally given it to milch cows, and have found it improve both the quantity and quality of the milk and butter, and without imparting to the latter that disagreeable taste that Mangels and Swedes do. My ewes when lambing were last year fed on Kohl Rabi, and the only complaint was that they had too much milk. Of its feeding properties I have had but little experience, but have been told it is quite equal to the Swede. I find all the domesticated animals of the farm eat it with avidity. The Kohl Rabi is, I believe, the hardiest root cultivated, for I have found that the early frost in October this year did not in the slightest degree affect it, whilst the Swedes and Turnips were entirely checked in their growth. My Kohl Rabi have been growing up to the setting-in of the late sharp frost. It will grow on almost any description of soil and is not affected by drought. *James Innes, Thornton, Banbury.*

Gardener and Bailiff.—The *Gardeners' Chronicle and Agricultural Gazette* has presented lately on this subject the singular appearance of a house divided within itself. If profuse argument and assertions not provable would avail them, the *Gazette* has it. For instance, it endeavours to prove that gardeners who are only farmers on a smaller scale, who generally manage the land entrusted to their care in a way worthy of imitation by farmers, are no more qualified to manage the home farm than a shoemaker; but the fact that in many places the offices of gardener and bailiff are combined and successfully carried out, clearly proves that the early training of the gardener enables him soon to qualify himself for any duties he may be called on to perform. Mr. Morton, in his paper on Agricultural Forces, page 998, publishes the opinions of a gentleman in Kent, who says the farms are all taken up by bankers, brewers, butchers, chemists, jobbers, grocers, publicans, doctors, drapers, builders, &c., sufficient proof that persons may adapt themselves to any position by energy and application. There is no doubt that the office of gardener and bailiff, if filled by a properly qualified person, is an advantage to the employer, failing of course when the party is fit for neither. Many bailiffs are the fast sons of farmers. The industrious gardener is as likely to give satisfaction as one who finds it more convenient to farm for some one else than himself. *P.*

Mangel Wurzel Growing and our "Fen Reporter."—I did not intend to go out of my way to criticise your "Fen Reporter," whose report I always read with interest, neither did I approach the subject in a hostile spirit; I remarked on what I conceived to be an error in the cultivation of the Mangel, and also gave my own experience, which here at least has been successful. Like your "Fen Reporter" I may, and I hope without the charge of egotism, claim to have some knowledge on the subject. I have grown the Mangel in several different degrees of latitude and variation of soil between the banks of the Forth and the sea-wall of the Thames, and as a rule I have found early sowing in connection with complete pulverisation of the soil the best preventive of many of the ills to which the Mangel is subject. Your "Fen Reporter" has stated his reasons in defence of his practice, and in his individual case for aught I know they may be the very best which could be given, but to my mind they are neither clear nor conclusive. Indeed the principal bugbear is frost; now our land here is also very subject to spring frosts. At high water the sea is some 10 or 15 feet above the level of our seed bed, and for want of drainage the water rose to-day in a ditch, being cut to within 13 inches of the surface. As a matter of course much of this water must pass from the soil in the form of vapour in the spring, such is the nature of the land. Until the existing frost stopped us, we were preparing for next year's Mangel crop, and where we hope to get the seed in by the first week in April. May I ask your "Fen Reporter" how he manages to secure a plant on his light and dusty Fen lands when the weather is dry, which it frequently is in the end of April, and not only the beginning but the greater portion of May. This I have found to be a serious objection to late sowing. Without wishing to read your "Fen Reporter" a lesson on vegetable physiology, I venture to tell him, all other circumstances being equal, he will have a heavier and better crop from early than late sowing, and one which in the nature of things will have more endurance to resist an October frost. *P. Mitchell, Dec.* 19.

Reviews.

Farm Drainage. The Principles, Processes, and Effects of Draining Land, &c. By Henry F. French. A. O. Moore & Co., Agricultural Book Publishers, 140, Fulton Street, New York.

We have been favoured by Mr. Bailey Denton with a perusal of his presentation copy of this book—"probably the only copy in England." Our reference to what is one of the completest essays on its subject that exists in the English tongue will, we hope, create demand enough for it to induce the appearance of English editions. It might no doubt be to some extent shortened and condensed with advantage; there is a good deal of verbose and unnecessary illustration which does not improve it in the eyes of the English reader; but, that apart, there is in this octavo volume of 381 pages a completer collection of the facts which bear on the drainage of the land, and a better marshalling of the arguments which justify and explain the practice, than is to be found in any other book we know.

There are 24 chapters, introductory, historical, theoretical, and practical, on the relations of soils to heat and moisture; on the geological and chemical aspects of the subject; on methods, materials, arrangement, cost, implements; on the legislation of land drainage, with descriptions of its effects both in America and in Great Britain. We cannot give such an enumeration of contents as will justify the opinion given of the fullness of the book, but there is no difficulty in justifying by extract our opinion of the quality which characterises it. Take the following as a specimen of the way in which the Hon. Mr. French illustrates the cost to undrained land of the lower temperature which excessive evaporation from its surface entails upon it.

"1stly: The drained land comes into condition for working a week or 10 days earlier in the spring than other lands.

"2ndly: The growth of the crops is quickened all through the summer by an increase of several degrees in the temperature of the soil.

"3rdly: The injurious effects of frost are kept off several days later in the fall.

"Of the value of these conditions, the farmer, who has lost his crops for lack of a few more warm days, may make his own estimates. In Roxbury, Mr. J. P. Rand heats up a portion of his land for the purpose of raising early plants for the market, by means of hot water carried by iron pipes under the surface of the ground. In this manner he heats an area equal to 100 feet by 12 feet, by burning about one ton of coal a month. The increase of temperature which, in this case, is caused by that amount of coal, can, in the absence of direct measurement, only be estimated; but it, probably, will average about 30°, day and night, throughout the month. In an acre the area is 36 4 times as great as that heated by one ton of coal; the cost being in direct proportion to the area, 36.4 tons of coal would be required to heat an acre; which, at 6 dols. per ton, would cost 217.40 dols. To heat an acre through 10° would cost then 72.47 dols. It may be of interest to consider how much coal would be required to evaporate from an undrained field that amount of water which might be carried off by underdrains, but which, without them, is evaporated from the surface. It may be taken as an approximate estimate, that the evaporation from the surface of an undrained retentive field is equal to 2 inches vertical depth of water for each of the months of May, June, July, and August; which is equal to 54,305 gallons, or 862 hogsheads per acre for each month. If this quantity of water were evaporated by means of a coal fire, about 22¾ tons of coal would be consumed, which, at 6 dols. a ton, would cost 136 dols. The cost of evaporating the amount of water which would pass off in one day from an acre would be about 4.53 dols. It is probable that about half as much water would be evaporated from thorough-drained land, though, by some experiments, the proportion has been made greater—in which case the loss of heat resulting from an excess of moisture evaporated from undrained retentive land, over that which would be evaporated from drained land, would be equal to that gained by 11½ tons of coal, which would cost 68 dols.; and this for each acre, in each of the three months."

The whole chapters on the rainfall and evaporation, on the influence of drainage on temperature, on the processes of germination and plant nutrition, and therefore on fertility, are extremely interesting.

Mr. French publishes the following letter from Mr. Bailey Denton, one of the principal authorities on the subject here, which will be read with interest as defending a treatment of land according not to rigid rule, but to the circumstances of varying soil and varying subsoil. The following is a passage from it:—

"If you have not seen my published letter to Lord Berners, and my recent essay 'On the Advantages of a Daily Record of Rain-fall,' I should much like you to look over them, for my object in both has been to check the uniformity of treatment which too much prevails with those who are officially called upon to direct draining, and who will treat mixed soils and irregular surfaces pretty much in the same way as homogeneous clays and even surfaces, the only difference being, that the distance between the drains is increased. We have now, without doubt, arrived at that point in the practice of draining in this country, which necessitates a revision of all the principles and rules which have been called into force by the Drainage Acts, and the institution of the Drainage Commission, whose duty it is to administer those Acts, and to protect the interests of Reversioners.

"This protection is, in a great measure, performed by the intervention of 'Inspectors of Drainage,' whose subordinate duty it is to see that the improvements provisionally sanctioned are carried out according to certain implied, if not fixed, rules. This is done by measuring depth and distance, which tends to a parallel system (4 feet deep) in all soils, which was Smith of Deanston's notion, only his drains were shallower, i.e., from 2 to 3 feet deep.

"Some rules were undoubtedly necessary when the Commissioners first commenced dispensing the public money, and I do not express my objection to the absurd position to which these rules are bringing us, from any disrespect to them, nor with an idea that any better course could have been followed by the Government, in the first instance, than the adoption of the 'Parkes—Smith frequent drain system.' This system was correctly applied, and continues to be correctly applied, to absorbent and retentive soils requiring the aeration of frequent drains to counteract their retentive nature; but it is altogether misapplied when adopted in the outcropping surfaces of the free water-bearing strata, which, though equally wet, are frequently drained by a comparatively few drains, at less than half the cost.

"The only circumstance that can excuse the indiscriminate adoption of a parallel system, is the fact, that all drains do some good, and the chances of a cure being greater in proportion to the number of drains, it was not necessary to insist upon that judgment which ten years' experience should now give."

Mr. Denton adds:—

"I should have thought it would have been quite worth the while of the American Government to have had a farm of about 500 acres, drained by English hands, under an experienced engineer, as a practical sample of English work, for the study of American agriculturists, with every drain laid down on a plan, with the sizes of the pipes, and all details of soil, and prices of labour and material, set forth."

The book is copiously illustrated with wood engravings.

Farm Memoranda.

CHURCHILL AND SARSDEN LODGE FARMS, near Chipping Norton, embracing 1200 acres in extent, about 800 of which are arable, form one portion of about 2000 acres, occupied by Mr. Langston, M.P., not in the lavish amateur style, which might adopt the steam plough as a farm luxury, apart from business motives, but farmed with a view to profit, as well as the display of a high order of cultivation. And under the skilful manager, Mr. Savidge, they pay rent like the other farms on the estate, purchase their own new machinery, and answer the expectation of the proprietor. The soil is all heavy; geologically situated on the boundary between the oolite cornbrash and the Oxford clay, a few miles north of Wychwood Forest. The land was formerly a region of woods and bogs, now reclaimed by clearing and deep 4-feet drainage, which pierced down, however, to 19 feet in some cases, for cutting off springs. The fields were laid in high-backed ridges, found necessary to some extent when ploughing with horses and oxen, but are now levelled by the steam plough, or in some cases thrown down by spade. In spite of the complete under-drainage, water used to appear in the furrows after excessive downfall, but now that the steam-driven shares have severed the soil to an unwonted depth not a wet place could be seen after the late heavy rains. Thus, the experience of many other farmers is again confirmed, that, whatever need may exist for the primeval ridge with its water-shed and rain-receptacles under the horse-labour system, there is no doubt as to the safety and superiority of a flat surface when under steam husbandry. The fields are moderately spacious, bounded by neat fences; hilly to some extent, and presenting slopes too formidable for a locomotive or traction engine, though traversed without difficulty by the semi-stationary engine, with its anchor and light wire rope. Good roads compass every field on the farm, and indeed intersect the whole of this large estate—Mr. Langston constructing and repairing all, and the tenantry paying a small acreage rate. Uniform facility for farm traffic is thus secured, in addition to similarity of convenient appliances in the homesteads, in which no less than 11 fixed and portable steam-engines, with their accompanying mechanism, have been erected by the owner. The soil, we said, is heavy, so that, excepting the light summer work, three horses or four oxen are required in turning the usual furrow 4 to 5 inches deep; these animals all walking in single line along the bottom of the furrow, to avoid the poaching or detrimental effect of their stepping upon the moist and cohesive surface. Bare fallowing, however, is rarely practised, as green and root crops can be obtained.

About three-quarters of a year since Mr. Fowler's machinery with a 10-horse engine, began its career upon the farm; for three weeks it worked daily without the slightest accident or breakage, and it has been kept in regular and heavy duty, at fitting seasons, up to the present time, in the hands of ordinary labourers, without fracturing the rope or incurring damage or delay of any consequence; the area of work done amounting to more than 600 acres. Three distinct processes have been performed—common ploughing, 8 and sometimes 10 inches in depth, at the rate of 5 or 6 acres a day; crossing ploughed land with grubber-tines, taking a 6-feet breadth, accomplishing 12 acres a day; and breaking up stubble ground for fallow (by the ploughshares, with small wings added) to a depth of quite 12 to 14 inches without inverting the torn pieces of soil, doing 6 to nearly 7 acres per day. And, the engine being self-propelling, travelled of its own accord from one part of the farm to another, having only one horse to guide it, the same horse employed in laying out the rope and fetching coals and water. To show the economy of the steam over the animal draught-work we will allow even a larger force of men than is really needed to manage the apparatus, and suppose them to receive even higher wages than would be the rule in most localities; that is, the labour and the water-carriage cost 4*l.* 16*s.* a week. The coal burnt amounts to three tons, at 16*s.* per ton, which, with oil, &c., at 9*s.*, will make the weekly working expenses 7*l.* 13*s.* How much must be added for wear

and tear, or rather for maintaining the machinery in good order and efficiency? On this unctuous soil there are comparatively few stones to grind the rope, and this being made of patent steel wire, of peculiar hardness and flexibility, and therefore capable of bearing far more friction and sustaining a much greater working load than rope made of iron wire or of inferior steel, will last, with due care, over a greater extent of work; and, indeed, in ploughing some hundreds of acres, Mr. Langston's rope has suffered little detriment. However, to be safe in our estimate, we allow 120*l.* a year, which will buy a whole new rope every year, and leave 52*l.* for repairing the engine and machinery, the prime cost of which was 635*l.* The farms provide 30 weeks' work in a year; and, adding this 4*l.* a week to the field expenses, we have a total weekly outlay of 11*l.* 13*s.*, or say 40*s.* a day. A few more figures bring us to the conclusion that the ploughing has cost 7*s.* to 8*s.* an acre; the scuffling or cultivating, 3*s.* 6*d.*; and the smashing-up or deep scarifying, 6*s.* to 7*s.* per acre. But the comparison (great as it is) of 50 per cent. saving between the ploughing we saw done at 7*s.* and the same work by horse labour at fully 14*s.* per acre does not express half the gain upon this strong land. The work, costing but half price, is of far more value when done. We had the corroborative testimony of observant neighbours, that the land steam-ploughed for a seed-bed took two harrowings less to prepare it for the drill—a saving of fully 2*s.* 6*d.* per acre over half the farm. In preparing for a fallow crop the advantage is much more surprising. The ordinary tillage by horses, when the ground is tolerably free from Couch, consists of one heavy and two lighter ploughings, three scufflings, and twice rolling and harrowing, costing altogether 55*s.* per acre; by steam there is one breaking up in dry autumn weather, two scufflings, and twice rolling and harrowing by horses as before, costing 27*s.* per acre. Thus, no less than 28*s.* an acre upon, say a fifth of the farm, is gained from the superior efficacy of the first process (arising, of course, mainly from the favourable time in which steam power enables it to be performed). So that the steam plough not only works more cheaply than the horse implements, but renders less tillage altogether necessary to be done. But, still further, the horse work is only 5 to 6 inches in depth, while the steam work has riven down into the clay at least 10 inches of fair measure from the surface level; and though we might value such an operation, and bring the total gain up to some 2*l.* 10*s.* an acre over this large portion of the farm, the statement would be inadequate to represent its worth, because it is of a character that no team could possibly accomplish, and must be reckoned as a novel addition to all the other tillage processes of the farm, and demonstrate its intrinsic value in a future wealth of roots and corn. The farm has not had time to feel the benefit of its shallow clay staple being converted into a deep strong loam, but illustrations of the change are met with universally on deeply ploughed lands, in hundreds of cottage gardens and allotments, and in the instances described towards the close of this paper. Ample evidence exists as to the increase of produce upon steam-tilled land, and we hear of improved quality of Barley as well as of heavier Wheat and far more bulky root crops. The depth and perfection of steam husbandry give not only a greater but more equable grain crop, more free from those failing places which so largely substract from the total yield of a farm; the earlier ploughing provides a stale seed bed for spring corn—another sure source of increased produce; and, considering these and other more technical points of improvement and management, no one will challenge as extravagant our judgment that the increase of corn roots and artificial Grasses will yearly be equivalent to eight bushels of Wheat per acre upon half the farm; and, taking this at 40*s.* a-quarter, it will appear that Mr. Langston has probably improved the surplus income or clear profit to arise from his 800 acres arable by nearly 1500*l.* a year, or about 37*s.* per acre. *Times of Wednesday last.*

Calendar of Operations.

DECEMBER.

WESTERN ROSS: *December.*—We have already had more real winter weather than we had last year altogether, and to all appearance there is yet a good deal in store for us. The frost continues unusually intense, and to-day (19th) we have more snow. Fortunately the weather, before this frost set in, although exceedingly variable, was favourable for out-door employment, and consequently we were well prepared for its coming. The ploughing of the green crop lot has generally been completed; a large breadth of Wheat has been sown, and a beginning has been made in breaking up the leas for Oats. In November we had a rainfall of some 3½ inches, which necessitated a greater waste of straw for litter than was agreeable or convenient, and now unless the spring be wonderfully favourable we shall sadly feel its want. Straw is fetching an exorbitant price. In one case we know of 1*s.* per stone of 24 lbs. being given for it, whilst its usual price is from 3*d.* to 5*d.* Turnips are being also eaten with extraordinary celerity, and many of the hoggs now wintering upon them will have to return to their hill pasture long before their usual time. Turnips eaten with sheep this year, if let by the night, will not fetch more than half the price they ordinarily do. Many fields of Turnips are so thoroughly bad that 500 Cheviot hoggs can consume an acre per night. A large proportion of our Barley has been disposed of, and as it weighs heavy and is of first-rate quality, it fetches from 37*s.* to 40*s.* per quarter. Wheat and Barley yield about an average quantity of grain, and although the price of Wheat be somewhat low, the aggregate price of the different kinds of grain is pretty satisfactory. Oats however are turning out miserably ill, worse than we anticipated both in quantity and in quality. A good many cargoes of Regent Potatoes, of excellent quality, have been purchased at about 50*s.* per ton, and have been exported. Although not largely planted, never we believe were Potatoes a better crop than they were this year. We shall for some time be collecting all the manure we can for Potatoes and Turnips.

Notices to Correspondents.

BOOKS: *Student.* You cannot do better than procure that part of the "Encyclopædia Britannica" which contains the essays by Mr. Wilson, of Edington Mains, Berwickshire, on Agriculture, and by Dr. Anderson on Agricultural Chemistry, two of the completest studies of their respective subjects which exist in the language.

MR. HORSFALL'S DAIRY EXPERIENCE: *C Fox.* Mr. Horsfall has published his experience in the Journal of the English Agricultural Society, but not in any separate form. It is referred to among other dairy topics in a Handbook of Dairy Husbandry now in the press (Longmans). Laing on Horse-hoeing we do not know.

LACTOSCOPE: *Thirsk.* The reference is, we believe, from the *Chemical Gazette.* It is a French instrument, for graduating the transparency and therefore the poverty of milk.

LAMBS: *J C.* The details are more proper for a veterinary publication.

PROPERTY TAX: *R C L.* Our experience as a tenant tallies with your impression as a landowner. But we must confess we submitted under a sense of injustice. What the law of the matter is must be ascertained from a professional adviser.

RAPE-CAKE: *Old Subscriber.* Next week.

*** As usual, many communications have been received too late, and others are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspondents the insertion of whose contributions is still delayed.

PLANTING.

A. PAUL & SON

RESPECTFULLY invite the attention of Gentlemen improving their Estates or forming new Gardens to the following TREES, &c., which they are prepared to sell at the lowest remunerating prices for a good standard quality. It is their practice to transplant every second year, in order that little or no loss may be incurred by removal. Many things are grown in large quantities and offered on advantageous terms to the Trade. An inspection of the stock is invited.

Abies alba, 2 to 6 feet
,, ,, glauca, 1 to 2½ feet
,, Clanbrasiliana and other dwarf Firs, 9 in. to 1½ ft.
,, canadensis, 3 to 6 feet
,, Douglasii, 2 to 6 feet
,, fineuonensis, 2 to 3 feet
,, Menziesii, 1½ to 6 feet
,, monstrosa, 2 to 7 feet
,, Morinda, 2 to 10 feet
,, orientalis, 1 to 2 feet
,, rubra, 2 to 4 feet
,, 20 other sorts, 1 to 6 feet
Araucaria imbricata, 1½ to 6 ft.
Arbor-vitæ (see Thuja).
Alaternus silver & gold striped, 1½ to 4 feet
Arbutus, 6 sorts, 1 to 3 feet
Aucuba japonica, 1 to 3 feet
Box, 6 sorts, 1½ to 6 feet
Berberis Darwinii, 1 to 1½ foot
Cedrus africanus, 2 to 10 feet
,, Deodara, 1 to 12 feet
Cedar of Lebanon, 1 to 12 feet
,, Red, 2 to 5 feet
,, White, 3 to 5 feet
☞ The largest and finest stock of Cedars in the country.
Cistus, 12 sorts, 1 to 3 feet
Cryptomeria Lobbiana, 3 to 8 ft.
,, nana, 9 inches
Cupressus Corneyana, 1½ to 3 ft.
,, Knightii, 3 to 4 feet
,, Lambertiana, 3 to 7 feet
,, Lawsoniana, 9 in. to 1 foot
,, torulosa, 1½ to 3 feet
,, 12 other sorts, 1 to 4 feet
Daphne pontica, 2 to 3 feet
Furze, double, 1 to 1½ foot
Garrya elliptica, 1½ to 3 feet
Holly, green and variegated, 30 sorts, 1 to 6 feet
,, green standards, 5 ft. stems
Juniperus chinensis, 2 to 5 feet
,, communis pendula, 2 to 3 ft.
,, excelsa, 1 to 2½ feet
,, fragrans, 2 to 4 feet
,, glauca, 2 to 3½ feet
,, oblonga, 2 to 6 feet
,, ,, pendula, 2 to 3 feet
,, thurifera, 1½ to 6 feet
,, tamariscifolia
,, virginiana aurea, 1 to 2 feet
,, ,, pendula, 1½ to 3 feet
,, viridis, 1½ to 2½ feet
,, weeping, 5 feet stems
,, 20 other sorts, 1 to 6 feet
Laurel, Common, 1 to 5 feet
,, Portugal, 1½ to 4 feet
,, ,, Standards, 8 feet
Laurustinus, 1 to 2 ft. (bloom)
Ligustrum lucidum, 3 to 4 feet
,, japonicum, 1½ to 3 feet
,, ovalifolium, 5 feet
,, evergreen, 2 to 4 feet
Mahonia aquifolia, 1 to 3 feet
,, 6 other sorts, 1 to 3 feet
Phillyreas, of sorts, 1½ to 7 feet
Picea amabilis, 1 to 1½ foot
,, nobilis, 1 to 4 feet
,, Nordmanniana, 1 to 4 ft.
,, Pinsapo, 1½ to 4 feet
,, Webbiana, 2 to 3 feet
,, 6 other sorts, 1 to 6 feet
Pinus austriaca, 2 to 4 feet
,, Benthamiana, 2 to 5 feet
,, calabrica, 3 to 4 feet
,, Cembra, 1½ to 4 feet
,, excelsa, 1½ to 12 feet
,, insignis, 3 to 6 feet
,, Llaveana, 2 to 5 feet
,, Laricio, 2 to 4 feet
,, macrocarpa, 2 to 3 feet
Pinus monticolor, 2 to 3 feet
,, monspeliensis, 3 to 5 feet
,, muricata, 3 to 5 feet
,, Montezumæ, 3 years seedlings
,, nivea (Snow Pine), 1½ to 5 ft.
,, Pallasiana, 2 to 3 feet
,, pinaster, 3 to 6 feet
,, pyrenaica, 4 to 6 feet
,, Sabiniana, 4 to 5 feet
,, 40 other sorts, 1 to 6 feet
Quercus (Oak), Evergreen 3 to 5 feet
,, Fordii, 4 to 6 feet
,, latifolia, 3 to 6 feet
,, Mirbeckii, 2 feet
,, Suber (Cork Oak), 3 to 4 ft.
Ruscus hypoglossum
Santolina chamæcyparissus, 1 foot
Taxodium distichum, 3 to 6 ft.
Taxus (Yew), adpressa, 2 to 4 ft.
,, canadensis, 1½ to 3 feet
,, cheshuntensis, 1½ to 6 feet
,, elegantissima, 1½ to 4 feet
,, gold striped, 1½ to 5 feet
,, ,, standards, 5 feet
,, Jackson's Weeping, 1½ foot
,, japonica, 1 to 2 feet
,, nana, 2 to 4 feet
,, nigra, 3 feet
,, stricta, 5 feet
,, yellow-berried, 2 feet
,, common, round, and fair 2 to 7 feet
,, Irish, 2 to 7 feet
,, 12 other sorts, 1 to 4 feet
Thuja americana, 3 to 8 feet
,, aurea, 1 to 3 feet
,, Chinese, 2 to 4 feet
,, gigantea, 2 to 3 feet
,, Wareana, 1 to 5 feet
,, 12 other sorts, 1 to 3 feet
Thujopsis borealis, 2 to 3 feet
Salisburia adiantifolia, 3 feet
Wellingtonia gigantea, 1 to 3ft.

Acer negundo variegata, 2 to 6 feet
Acacia, of sorts, 4 to 10 feet
Ash ,, 6 to 10 feet
Alder ,, 6 to 10 feet
Ailanthus ,, 8 feet
Almonds ,, 6 to 8 feet
Beech, purple, best variety, 5 to 8 feet
Birch, of sorts, 6 to 10 feet
Chesnut, Horse, of sorts, 1½ to 6 feet
,, Spanish, of sorts, 2 to 8 ft.
Catalpas, 6 to 8 feet
Caragana arborescens, 6 to 8 ft.
Cerasus padus aucubæfolius, 6 to 8 feet
Cornus mas variegata, 2 feet
Elms, 12 sorts, 6 to 8 feet
Gleditschias, 1½ to 8 feet
Kolreuteria paniculata, 3 to 6 feet
Laburnums, 8 feet
Lilacs, Persian, 6 feet stems
Liquidambars, 2 to 3 feet
Limes, of sorts, 8 to 10 feet
Maple ,, 5 to 10 feet
Planes ,, 7 to 10 feet
Poplar ,, 6 to 10 feet
Oak ,, 6 to 10 feet
Robinia ,, 6 to 8 feet
Sophora japonica, 10 feet
Sycamore, 6 to 10 feet
Thorns, of sorts, 6 to 8 feet
Tulip Trees, 2 to 10 feet
Willows, American, and others
Quick, 2-year transplanted, fine

WEEPING AND LAWN TREES in very great variety.

FLOWERING TREES AND SHRUBS, in 300 species and varieties, including Althæa, Cytisus, Berberis, Daphne, Deutzia, Lilac, Purple Nut, Pyrus, Ribes, Rose Acacia, Syringa, Spiræa, Weigela, &c.

ROSES, an unrivalled collection. Standards, 12*s.* per dozen and upwards; dwarfs, 6*s.* per dozen and upwards. See separate Catalogue.

HARDY CLIMBING PLANTS, a large collection.

AMERICAN PLANTS, including Azaleas, Heaths, Kalmias, Magnolias, Rhododendrons, &c.

FRUIT TREES, consisting of all the choicest sorts, warranted true to name. The trained Peaches, Nectarines, Apricots, &c., particularly fine.

GRAPE VINES, from eyes, well ripened, short jointed canes 6 to 10 feet.

HERBACEOUS PLANTS, in 500 species and varieties.

HOLLYHOCKS, a fine stock of healthy and well established plants. See separate Catalogue.

☞ Particulars of Prices, &c., furnished on application. Carriage of all packages free to London; if a ton weight or upwards placed free on the Railway at any London Terminus. An inspection of the stock invited.

A. PAUL AND SON,
NURSERIES, CHESHUNT, HERTS,
13 miles N.E. of London, Eastern Counties Railway.

SUTTON'S BERKSHIRE HERO PEA, the largest Pea in cultivation.—This Pea is quite distinct from all others, very long in the pod, prolific, good flavoured, and a fine green colour. Price 2*s.* 6*d.* per quart. The following is the description of it recently published in the

Proceedings of the Horticultural Society:—

"SUTTON'S Berkshire Hero (SUTTON & SONS), sown, March 24; in flower, June 21; fit for use, July 11; height, 8 feet, of strong growth. Pods 12 on a stem, large, long, very slightly curved, well filled with 7 to 8 large Peas, which are greyish-olive and some yellowish white when dry. The dry seeds are large compared with most others in the same state, and compressed as well as slightly indented."

The BERKSHIRE HERO being of stronger haulm than any other, should be planted singly at least one inch apart. The stock is possessed exclusively by ourselves, and the undermentioned firms whom we have had the honour of supplying:—

Messrs. HURST & MCMULLEN, 6, Leadenhall Street, London, E.C.
Messrs. MINIER, NASH, & NASH, 60, Strand, London, W.C.
Messrs. NOBLE, COOPER, & BOLTON, 152, Fleet Street, London, E.C.
Messrs. CHARLWOOD & CUMMINS, Tavistock Row, Covent Garden, London, W.C.
Messrs. BATT, RUTLEY, & SILVERLOCK, 412, Strand, London, W.C.

Early orders will be necessary.
Royal Berkshire Seed Establishment, Reading.

FIVE THOUSAND INDIAN AZALEAS.

WILLIAM BARNES begs to invite attention to his unrivalled Collection of the above beautiful and justly admired class of plants. The sizes vary from 1 to 5 feet in height, worked upon strong healthy stocks, are in the finest possible condition, and perfectly free from thrip. The following list comprises a portion of his extensive stock:—

Conqueror
Murrayana
Carminata
Duke of Devonshire
Triumphans
Perryana
Iveryana
Alba striata
Aurora
Coronata
Variegata
Lateritia
Gledstanesi
Alba magniflora
Frostii
Delecta
Alba magna
Holfordii
Ardens
Vivicans
Rosea elegans
Juliana
Elegans superb
Beauty of Reigate
Lawrenciana
Symmetry
Vesta
Gledstanesi excelsa
Buckinghamii
Maria
Chelsonii
Fentonii
Lucens
Constantia rosea
Lateritia grandiflora
Trotteriana
Gledstanesi formosa
Glory of Sunning Hill
Extransii [ford
Countess of Stam-
Beauty of Europe
Barclayana
Stanleyana
Crispiflora
Striata formosissi-
Admiration [ma
Criterion
Delicatissima
Magnificans
Alba Melior
Mrs. Fry
Perfecta elegans
Lateritia alba supréme
Empress Eugenie
Impératrice Josephine
Eulalie Van Geert
Queen Victoria (continental)
Reine des Belges
Queen of Perfection
Adolphe
Leeana
Louis Napoleon
The Bride
Gem (Ivery's)
Madame Miellez
Princess Mary of Cambridge
Petuniæflora
Roi Leopold
Rosy Circle
Sir Charles Napier
Standard of Perfection
Grand Monarch
Marie Louise
Queen Victoria (Ivery's)
Iveryana alba cincta
Alba lutescens
Modèle
Baron de Peet
Le Géant
Belle Jeannette
Etendard de Flandres
Papilionatima
Rubens
Pelargoniflora
Gloire de Lederberg
Baron de Vrière
Gloire de Belgique
Distinction
Queen of Whites
Leopoldi
Duc de Brabant
Etoile, de Gand
Reine des Panachées
Princess Adelaide de Nassau
Flower of the Day
Souvenir de l'Exposition
Duchess Adelaide de Nassau
Iveryana Improved
Duc de Nassau
Miltonii
Variegata superba
Bouquet de Flore

CATALOGUES with Prices can be had on application.
Camden Nursery, Camberwell, S.

CONIFERÆ, &c.—The Subscribers having a good stock of the following very desirable HARDY TREES, &c. beg to offer them at the prices annexed. The plants are all healthy, vigorous, and remarkably well shaped (in fact they are such as are seldom met with), they have been frequently transplanted and have unusually good roots.

ABIES ORIENTALIS, very bushy and fine, 12 to 15 inches, 3*s.* 6*d.* each, 36*s.* per dozen.
ARAUCARIA IMBRICATA, extra fine (never been grown in pots), 12 to 15 inches, 2*s.* 6*d.* each, 30*s.* per dozen.
BIOTA GLAUCA, splendid young plants, 12 to 15 inches, 2*s.* 6*d.* each; larger, 2 to 2½ feet.
BIOTA MELDENSIS, 12 to 18 inches, 2*s.* 6*d.* each.
CEDRUS AFRICANUS, (true), one year seedlings, extra fine, in store pots, 21*s.* per 100; large fine plants, 3 to 4 feet and upwards.
CEDRUS DEODARA, 2½ to 3½ feet, 3*s.* each, 30*s.* per dozen.
,, ,, 4 to 5 feet, extra fine, 7*s.* 6*d.* to 10*s.* 6*d.* each; larger fine plants, 6 to 8 and 10 feet
CEDRUS ROBUSTA, strong grower, extra fine, 2½ feet, 5*s.* to 7*s.* 6*d.* each; larger, 3 to 4 feet.
CRYPTOMERIA JAPONICA, one-year seedlings in store pots, 15*s.* per 100, 140*s.* per 1000; large fine plants, 3 to 4 and 5 feet and upwards.
JUNIPERUS ERICOIDES, splendid plants, 12 to 15 inches, 2*s.* each, 18*s.* per dozen, 120*s.* per 100; 18 to 20 inches, perfect specimens, 2*s.* 6*d.* to 3*s.* 6*d.* each, 30*s.* to 40*s.* per dozen.
JUNIPERUS SINENSIS, extra fine, 3½ to 4 feet, 3*s.* to 5*s.* each, 30*s.* to 50*s.* per dozen; 4 to 5 feet, 7*s.* 6*d.* each, 84*s.* per dozen; 5 to 6 feet and upwards.
PINUS WEYMOUTH, very bushy and fine, adapted for specimen trees, 2½ to 3½ feet, 25*s.* to 30*s.* per 100.
TAXUS OR YEW, IRISH, extra fine, 2 to 2½ feet, 9*s.* per dozen, 63*s.* per 100; 4 to 4½ feet, 3*s.* to 3*s.* 6*d.* each; larger, 6 to 7 and 8 feet.
TAXUS OR YEW, ENGLISH, extra transplanted and fine, 3½ to 4½ feet, 50*s.* per 100, 22*l.* 10*s.* per 1000; also a fine stock of larger and smaller sizes.
THUJA OR ARBOR-VITÆ CRAIGIANA OR GLAUCA, true, extra fine, 15, to 18 and 24 inches, 5*s.* to 7*s.* 6*d.* each.
THUJA OR ARBOR-VITÆ GIGANTEA, 18 to 24 inches, 7*s.* 6*d.* to 10*s.* 6*d.* each.
THUJA OR ARBOR-VITÆ SIBERIAN OR WARREANA, extra fine, 2 to 2½ feet, 6*s.* to 9*s.* per dozen, 45*s.* to 63*s.* per 100, or by the 1000.
THUJOPSIS BOREALIS, OR CUPRESSUS NUTKAENSIS, extra fine, 12 to 15 inches, 2*s.* 6*d.* each, 24*s.* per dozen, 18 to 24 inches, 5*s.* to 7*s.* 6*d.* each, 55*s.* to 84*s.* per dozen.

With a fine collection of all the choice CONIFERÆ, both new and old. For description, prices, &c., see CATALOGUE, which will be forwarded post free on application.

Also fine stock of Fancy HOLLIES, green and variegated; Hardy EVERGREENS, ROSES, &c.

DWARF MAIDEN APRICOTS, NECTARINES, PEACHES, &c., extra fine plants, true to name, 1*s.* each, 12*s* per dozen, or 5*l.* per 100. For sorts and description see CATALOGUE, which will be forwarded gratis and post paid on application.

It is respectfully requested that all orders from unknown correspondents may be accompanied with a remittance.

RICHARD BRADLEY AND SON, Halam Nursery, near Southwell, Notts.

SUTTON'S COLLECTIONS OF GARDEN SEEDS.
SEE THE LAST PAGE OF THIS PAPER.
The General Priced CATALOGUE will be ready in a few days.

EXTRA FINE MULBERRY TREES.

WM. DENNIS, King's Road, Chelsea, S.W., has still a few very fine FRUITBEARING TREES on clean strong stems, 6 to 8 feet, and fine heads, 5 to 6 feet diameter. Price 20s. to 60s., warranted.

MARSH AND PERKINS beg to offer to the Trade their Surplus Stock of PEAS of the following sorts, from picked samples :—

BECK'S PRIZETAKER	.. .. ..	10s. per bushel
HARRISON'S GLORY	.. .. ..	10s. ,,
,, PERFECTION	.. ..	8s ,,

Samples on application to 42, Drapery, Northampton.

GLENNY'S IMPROVED BALSAMS from double flowers 3 inches over, 6 classes, 37 stamps; mixed 13. Cineraria, Dahlia, Pink, Hollyhock, from the finest show flowers, 13 each. A list of the best 60 seeds free. GLENNY'S NEW SPRING ANNUAL, with illustrations, in the press. GLENNY'S ANNUAL ADVERTISER is nearly ready, and the advertisements will appear in both.—Fulham. S W.

SEED CATALOGUE SENT POST FREE ON APPLICATION.

GARAWAY, MAYES, AND CO.'S DESCRIPTIVE LIST of all the best and newest varieties of Garden and Flower Seeds, the best new Peas, Lee's new White Sprouting Broccoli, fine new Melons, Cucumbers, &c. Collections for large or small Gardens, 15s., 20s., 30s., 40s.. 50s. to 60s.; containing all the most useful and approved kinds, the growths of which are all proved before being sent out.

G., M., & Co. also beg to call attention to their large stock of all the most approved kinds of Fruit Trees, fine trained Peaches, Nectarines, and Apricots. Extra large dwarf trained Pears, Plums, and Cherries, &c. A very large stock of Larch, Scotch Spruce, and other Forest Trees, Evergreens, and Flowering Shrubs, Coniferæ, American Plants, &c., separate CATALOGUES of which they will forward post free on application.—Durdham Down Nursery, Bristol. Jan. 7.

HORTICULTURAL GLASS
STOCK SIZES, 16 oz.
These prices only apply to the sizes stated.
Boxes are included, with but few exceptions. When Packages are charged, full price is allowed when returned.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9 14 by 9 .. / 12 ,, 10, 13 ,, 10, 14 ,, 10, 15 ,, 10 ..	14s. 6d.	12s. 6d.
13 ,, 11, 14 ,, 11, 15 ,, 11, 16 ,, 11 .. / 14 ,, 12, 15 ,, 12, 16 ,, 12, 17 ,, 12 .. / 18 ,, 12, 19 ,, 12, 20 ,, 12 .. .. / 16 ,, 13, 17 ,, 13, 18 ,, 13 .. .. / 19 ,, 13, 20 ,, 13, 21 ,, 13 .. .. / 16 ,, 14, 17 ,, 14, 18 ,, 14 .. .. / 19 ,, 14, 20 ,, 14, 21 ,, 14	16s. 6d. per 100 feet.	14s. 0d.

These prices are for Foreign Glass. English Glass, which is far superior, will be 18s. per 100 feet.

GLASS FOR ORCHARD HOUSES,
AS SUPPLIED BY US TO MR. RIVERS.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in.	Common	14s. 0d. ..	£1 1s.
20 in. by 14 in.	Superior do.	16 6 ..	1 5
20 in. by 15 in.	English Glass	18 0 ..	1 9

The above prices include the Boxes. with but few exceptions. When Packages are charged, full price is allowed when returned.

JAMES PHILLIPS AND CO.,
180, Bishopsgate St. Without, London, E.C.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2d. to 3d. per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 35, Soho Square, London, W.

See *Gardeners' Chronicle* first Saturday in each month.

HORTICULTURAL GLASS—JUNE TARIFF.

THOMAS MILLINGTON'S reduced Tariff of GLASS, &c.

6 by 4, 7 by 5, 8 by 6, 9 by 7 / 6½ by 4½, 7½ by 5½, 8½ by 6½, 9½ by 7½ } 16 oz. to the foot, 11s. 6d. per 100 feet.

In 100 boxes,—4ths quality, 12s. 6d.; 3ds do., 14s. 4d.

10 by 8, 12 by 9, 12½ by 10½, 14½ by 10½, 13 by 11
10½ by 8½, 12½ by 9½, 13 by 10, 15 by 10, 13½ by 11½
11 by 9, 13 by 9, 13½ by 10½, 12 by 11, 14 by 11
11½ by 9½, 12 by 10, 14 by 10, 12½ by 11½

	per 100 feet	16 oz.	21 oz.
20 by 12 / 20 by 13 / 20 by 14 / 20 by 15	Common ..	16s.	24s.
	Superior .	18s.	27s.

All Boxes included.
Orchard House sizes as supplied to Mr. Rivers.
Hartley's improved Rough Plate Glass from ⅛ to ⅜ in thickness.
Coloured Glass in great variety, at 9d. and 1s. per foot.
Paints, Genuine White Lead, Linseed Oil, Boiled Oil, Turpentine, Putty, Colours, Varnishes, Brushes, Lamp Glasses, &c.
87, Bishopsgate Street Without, E.C., same side as Eastern Counties Railway

GLAZIERS' DIAMONDS FOR CUTTING HORTICULTURAL and other GLASS, to be had of the Wholesale Manufacturer, JOHN EDWARDS, 20, Sharp's Alley, West Smithfield, London, E.C. Prices from 10s. to 27s. 6d.

WARNER'S IMPROVED LIQUID MANURE OR GENERAL PORTABLE PUMP.

These Pumps are fitted with WARNER'S Patent Bucket and Valve, and cannot clog in action. The barrel is made of galvanised iron, not likely to corrode, and can be raised or lowered at pleasure on the stand, the legs of which fold together, and may be carried with ease by one man to tank or pond.

	£	s.	d.
Stand and Pump, with screwed tail pipe, fitted with strong brass union for suction pipe	2	15	0
If fitted with barrel of planished copper	3	17	0
Stand and Pump, with plain tail pipe, for tying on suction pipe	2	9	0
2-inch patent rubber and canvas flexible suction pipe, on wires, either 10, 12, or 15 ft., per foot	0	2	2

May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, J. WARNER & SONS, 8, Crescent, Jewin St., London, E.C.

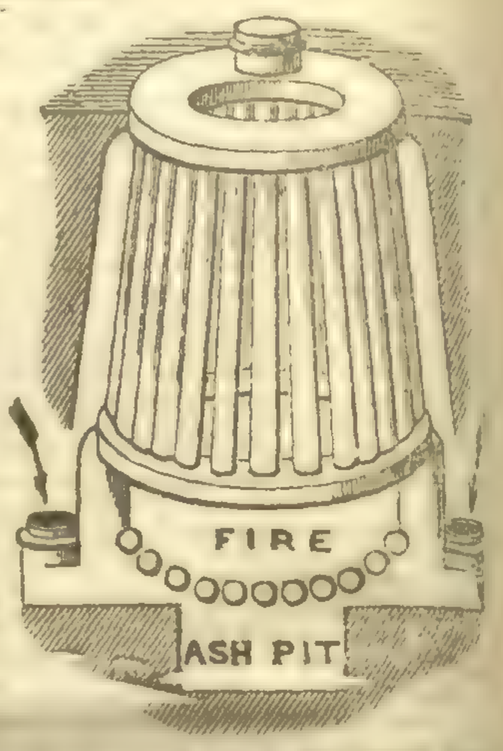
WEEKS' ONE BOILER SYSTEM.

So styled from the fact that the largest Horticultural Establishments in Europe are now effectually heated by WEEKS' ONE BOILER.

THE SEASON FOR TESTING THE EFFICIENCY OF A HOT-WATER APPARATUS having arrived, J. WEEKS & Co. are privileged by the under mentioned well-known Horticultural Firms to issue a special invitation to the nobility, clergy, and gentry to pay a visit to their immense Establishments in order to become eye-witnesses of the extraordinary power of WEEKS' ONE BOILER SYSTEM.

J. W. & Co. beg emphatically to assert that their ONE BOILER SYSTEM is in every respect superior to any other method of Heating. It is more economical and clean, requires no night attendance, effects a great saving in labour, and that it is infinitely more efficient is clearly shown by the following statistics :—

	Length of Pipe Heated on Weeks' One Boiler System.
	Feet
Messrs. E. G. Henderson & Son, Wellington Nursery, St. John's Wood	5500
Messrs. F. & A. SMITH, Dulwich Nursery	10,000
Mr. WOODROFFE, Harrow Road, Paddington	4000
Mons. LOUIS VAN HOUTTE, Ghent, Belgium	13,000



J. W. & Co. also manufacture smaller and less expensive Boilers upon the same principle as the ONE BOILER SYSTEM, ranging in size from Nos. 1 to 6, at prices from 4*l.* up to 60*l.*

J. W. & Co. also invite an inspection of their own HORTICULTURAL SHOW ESTABLISHMENT at Chelsea, which they built expressly as a place of reference for exhibiting various designs and improvements in the Construction of CONSERVATORIES, GREENHOUSES, PINE STOVES, VINERIES, ORCHARD HOUSES, CUCUMBER and other FORCING PITS together with an extensive WINTER GARDEN. the whole in full and constant operation, and now being managed for Forcing CHOICE FRUITS, displaying an unrivalled selection of HORTICULTURAL STRUCTURES suited for every required purpose.

J. WEEKS & Co. have constantly on hand an extensive variety of HORTICULTURAL BUILDINGS ready for fixing in any part of the country, and also Forcing Frames and Pit Lights in large quantities.

J. WEEKS & CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, S.W.

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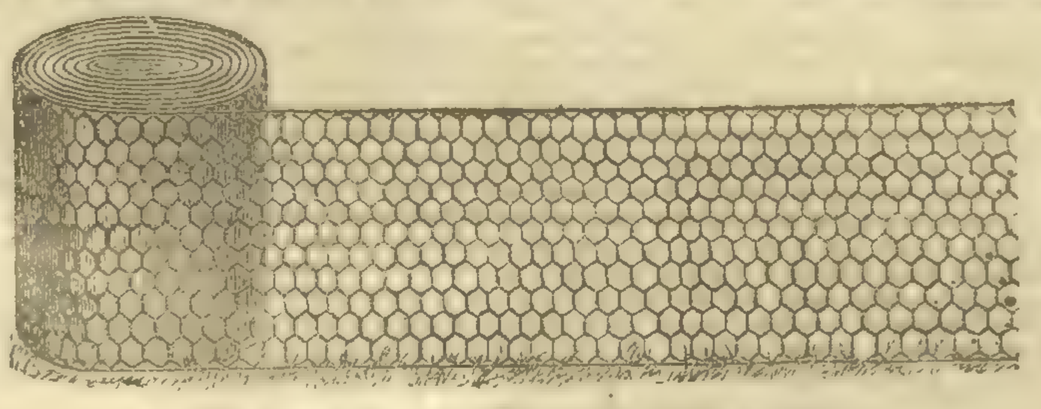
IMPROVED PREMIUM WIRE NETTING.



PRICES PER LINEAL YARD, 24 INCHES HIGH :—

Size of mesh.	Mostly used for	Light. Japanned.	Light. Galvanized.	Medium. Japanned.	Medium. Galvanized.	Strong. Japanned.	Strong. Galvanized.	Extra strong. Japanned.	Extra strong. Galvanized.
2½ inch	Hares, Dogs, Poultry	3½d.	4½d.	4¼d.	5½d.	5d.	6½d.	6d.	8d.
2 inch	Game Netting.....	4d.	5d.	4¾d.	6d.	5½d.	7d.	7½d.	9½d.
1⅝ inch	Small Rabbits, Hares, &c.	4½d.	5½d.	5¼d.	6½d.	6d.	7½d.	8d.	10d.
1½ inch	Smallest Rabbits.....	6d.	7½d.	7½d.	9d.	9d.	11d.	11d.	13d.

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free at nearly all the principal Railway Stations and Ports in England or Ireland.

Any width of Netting under 8 feet made at proportionate prices.

☞ **Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.**

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IMPROVED WROUGHT IRON HURDLES of BEST STAFFORDSHIRE IRON.

No. 1 Hurdle.—Very useful for general purposes, combining strength with good appearance. 3 feet 6 inches high, six bars round iron, top bar ⅝ inch diameter, five under bars ½ inch; two side uprights flat iron, 1¼ inch by ¼ inch, and middle upright 1½ by ¼ inch. Weight about 48 lbs. Present price delivered in London and at most of the principal Railway Stations, 2s. 5d. per yard, or about 5s. 3d. each hurdle of 6 feet 6 inches long.

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GALVANISED IRON WATER CISTERNS

for Cottage Houses, &c., to contain 50 gallons, 25s.; 80 gallons, 30s. each; and 140 gallons, 36s., and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

GALVANISED IRON PUMPS

for Liquid Manure or Domestic Use, 3 inches diameter, 30s. and 32s. 6d. each; Tail Pipe for same at from 10d. per foot.

GALVANISED IRON SWING WATER BARROWS

for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32s. 6d. each.

FRUIT TREES, POULTRY, RABBIT NETS, AND SHEEP FENCING.—Wool Netting to protect the Bloom of Peach, Nectarine and other Trees, Flower or Seed Beds from Frost, Blight, and Birds, 40 inches wide, 8d. per yard. NEW TWINE NETTING, half-inch Mesh ditto, 2 yards wide 8d. per yard. ELASTIC HEXAGON GARDEN NET and Scrim canvas, 4½d. per square yard. COCOA NUT FIBRE, or Hemp Sheepfolding Net, of superior quality, 4 feet high, 4d. to 6d. per yard. Rabbit Net, 4 feet wide, 2d., 6 feet wide, 3d., 8 feet wide, 4d. per yard. Each Edge Corded ½d. per yard extra, suitable for Poultry Fencing. Square Mesh Cricketing Net fix its full width and length, made of stout cord, 3d. to 4d. per yard. This is the best article made for fencing against fowls, cats, &c. Galvanised Wire Netting 2 feet wide, 5d. per yard. Batfolding Nets with Bamboo poles, 20 feet long, 20s. Fishing nets of all kinds in stock.—W. CULLINGFORD, 1, Edmund Terrace, Ball's Pond Road, Islington, London, N.

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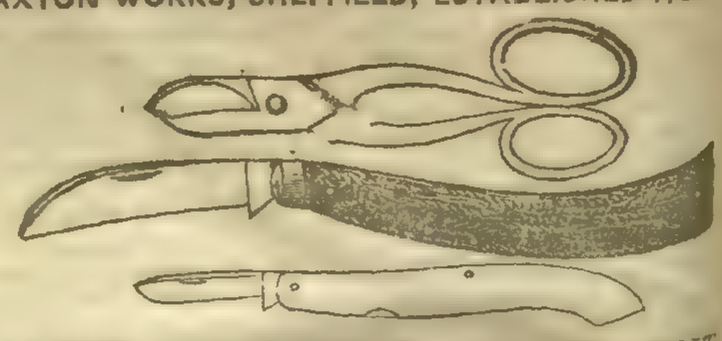
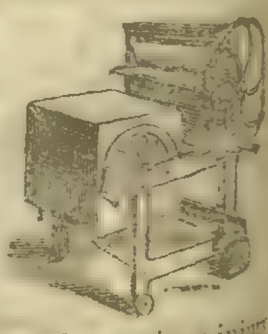


SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c. Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

BRADFORD'S PATENT WASHING MACHINE SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations."—THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

BRITTAIN'S GARDEN NET.—The serious injury done to fruit crops by frost for several past seasons has proved to every gardener the absolute necessity of protection to the trees early in the year. Many fabrics have been tried for this purpose with more or less success; and we may now say, without fear of contradiction, that we have succeeded in manufacturing the only fabric which is altogether unobjectionable. Without unduly nursing, it effectually protects the young germ, and does not impede the action of light and the due circulation of air. Some other fabrics do this, and then weaken the vitality of the tree altogether. Nettings: No. 1, 5d., 2, 6d; 3, 8d.; the Linear Yard. Pieces, 50 yards long, 72 inches wide. TIFFANY yard wide, 2½d. per yard; extra quality, 3d.—Peel Street, Manchester.

NEW AND CHOICE GARDEN SEEDS FOR 1860.

SELECTION FROM SUTTON'S AMATEUR'S GUIDE:—

BEET. Per packet.—*s. d.*
Henderson's compact topt 1 0
Sutton's Dark Red, per oz. 1 0

BRUSSELS SPROUTS.
Fresh imported, per oz. .. 1 0
Roseberry, per packet .. 1 0

BEANS.
Early Monarch, per quart 0 8

KALE.
Asparagus Kale, per oz. .. 1 6
Cottager's Kale, per packet 1 0

SAVOY CABBAGE.
Early Ulm, per oz. .. 0 6

BROCCOLI.—Per pckt. *s. d.*
Snow's Winter White .. 1 0
Early Penzance White .. 1 0
Lee's White Sprouting .. 2 6
Early Purple Sprouting .. 0 6
Frogmore Protecting .. 1 0
Reading Giant 1 0
Ward's Late White .. 1 0
Walcheren 1 0

CABBAGE.—Per oz.
Champion 0 8
Sutton's Imperial 0 8
Blenheim 0 8
Couve Tronchuda 1 0

CAULIFLOWER.
Stadtholder, per packet .. 1 0

CELERY.—Per packet.
Sutton's Superb Pink .. 1 0
Incomparable New White 1 0

CARROT.—Per oz.
French Short Horn .. 0 6
New Intermediate .. 0 4

CRESS. *s. d.*
New Australian, per pckt. 0 6
Extra fine curled, per pint 1 6

CUCUMBER.
Per packet.—*s. d.*
Berkshire Champion .. 1 0
Webb's Imperial, new .. 2 6
Kelley's Hybrid Perfection, new 2 6

ENDIVE.—Per packet.
New Double Yellow, curled 0 6

LETTUCE.
Superb White Cos, per oz. 2 6
,, Green Cos ,, 2 6
Griffin's Alma, per packet 1 0
Ne Plus Ultra, per oz. .. 1 6

LEEK.
Musselburgh, per oz. .. 0 8

MELON.
Sutton's Perfection, p. pckt. 1 0
Turner's Scarlet Gem ,, 1 0

ONION. *s. d.*
Reading .. .. per oz. 0 4
New Giant, from Madeira, do. 1 0

PEAS.—Per quart.
Sutton's Early Champion 1 0
Daniel O'Rourke 1 0
Tom Thumb 1 6
Dickson's Favourite .. 1 0
Champion of Paris 1 0
Sutton's Prizetaker .. 1 0
Champion of England .. 1 3
Veitch's Perfection .. 2 0
Sutton's Berkshire Hero .. 2 6
Oxford Tom 2 0
Champion of Scotland .. 1 6
General Windham 2 0
King of the Marrows .. 2 0

RADISH.—Per oz.
Beck's Short-top 0 4
Scarlet Olive-shaped .. 0 4
White Olive-shaped .. 0 6

SPINACH. *s. d.*
New Perpetual, per pckt. 0 6

TURNIP.
Early Strapleaf per oz. 0 6
Polly's Nonsuch ,, 0 4

VEGETABLE MARROW.
New Custard, and others, per packet 0 6

POTATOES.—Per bush.
Webb's Imperial 10 6
Soden's Ely Oxford .. 10 6
The Birmingham Prizetaker 10 6
Early Ashleaf, or Walnut-leaf Kidney } —
Dawes's Matchless .. 8 0
Handsworth Early .. 10 6
Reading Giant Asparagus, per 100, 2*s.* to 5 0
Fine Lawn Grass, per lb. 1 0
Spergula pilifera, p. pckt. 0 6
Crystal Palace Prize Aster, per packet 1 0
Assortments of German Flower Seeds, each, 1*s.* 6*d.* to 5 0
Dutch Anemones, per doz. 9 0
Italian Tuberoses 3 6
Ranunculuses, p. 100, 2*s.* 6*d.* to 5 0
Lilium lancifolium, each. 3 6
Gladiolus, p. doz., 3*s.* 6*d.* to 5 0
Appleby's Tobacco Paper, per lb. 1 6
Gishurst Compound, in boxes, 1*s.*, 3*s.*, & 10*s.* 6*d.* each.

SUTTON'S GENERAL PRICED LIST OF GARDEN AND FARM SEEDS may be had post free on application.
Also a List of the Contents of "SUTTON'S COMPLETE COLLECTIONS" OF SEEDS FOR ONE YEAR'S SUPPLY, price £3 3*s.*, £2 2*s.*, £1 1*s.*, and 10*s.* 6*d.*
PERMANENT GRASS SEEDS mixed expressly to suit the soil. Fine New Seed of MANGEL WURZEL, CARROT, and SWEDE.
Goods delivered Carriage Free. Five per cent. allowed for cash payment.

SUTTON & SONS, ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.

GENUINE GARDEN SEEDS.

JAMES CARTER & CO.

ARE NOW READY TO SUPPLY

COLLECTION of GARDEN SEEDS of 1859 HARVEST

FOR ONE YEAR'S SUPPLY,

CONTAINING ALL THE MOST APPROVED VARIETIES OF

VEGETABLE SEEDS at the following Prices:—No. 1, 20s.; No. 2, 40s.; No. 3, 60s.

The following are the quantities they recommend for Cropping a Garden of One Acre, and which they can supply for £3 (Collection No. 3):—

PEAS, Carter's Earliest .. 2 quarts
,, Early Emperor .. .. 2 ,,
,, Harrison's Glory .. 2 ,,
,, Champion of England .. 4 ,,
,, Beck's Prize-taker .. 2 ,,
,, Dwarf Green Marrow .. 2 ,,
,, Carter's Victoria .. .. 2 ,,
,, Hair's Dwarf Mammoth 4 ,,
BEANS, Early Mazagan .. 1 ,,
,, Early Long-pod .. 2 ,,
,, Green Nonpareil .. 1 ,,
,, Taylor's Windsor .. 2 ,,
,, French Fulmer's forcing 1 pint
,, ,, Negroland Pod .. 1 ,,
,, ,, Light Dun .. 1 ,,
,, ,, Newington Wonder 1 ,,
,, ,, Scarlet Runners 1 quart
BEET, small selected Blood Red 2 oz.
BORECOLE or Kail, Scotch curled 1 pkt.
,, Asparagus .. .. 1 ,,
,, Cottager's .. .. 1 ,,
,, new Cabbaging .. 1 ,,
BRUSSELS SPROUTS, imported 1 ,,
BROCCOLI, best sorts for succession .. .. 8 pkts.
CABBAGE, best sorts, including Carter's earliest .. .. .. 6 pkts.
SAVOY, green curled .. .. 1 oz.
,, new Ulm .. .. .. 1 pkt.
CAULIFLOWER, best early .. 1 ,,
,, Walcheren .. 1 ,,
CARROT, early Horn .. .. 2 oz.
,, James Scarlet .. .. 2 ,,
,, Long Surrey .. .. 4 ,,
,, selected Altringham .. 4 ,,
CELERY, incomparable dwarf white .. .. 1 pkt.
CELERY, Cole's crystal white .. 1 ,,
CRESS, plain .. .. .. 1 pint
,, Australian .. .. 1 pkt.
CUCUMBER, fine long ridge .. 1 ,,
,, Carter's Champion 1 ,,
,, Lynch's Star of the West .. .. 1 ,,
ENDIVE, new mossy green .. 1 oz.
,, winter green curled .. ½ ,,
LEEK, Musselburgh .. .. 1 ,,
LETTUCE, Berkshire Brown Cos .. .. 1 pkt.
LETTUCE, Carter's Giant Cos .. 1 pkt.
LETTUCE, Black seeded Bath Cos 1 pkt.
,, Paris Cos .. .. 1 ,,
,, Drumhead Cabbage .. 1 ,,
,, Hardy Green do. .. 1 ,,
MUSTARD .. .. .. 1 pint
MELON, Carter's Excelsior .. 1 pkt.
,, Turner's Gem .. .. 1 ,,
ONION, James's Keeping .. 2 oz.
,, White Globe .. .. 2 oz.
,, Reading .. .. .. 2 oz.
,, Giant Madeira .. .. 1 oz.
,, Deptford .. .. .. 2 oz.
,, Lisbon .. .. .. 1 oz.
PARSLEY, Myatt's curled .. 2 oz.
PARSNIP, fine selected .. .. 2 oz.
SPINACH, summer .. .. 1 quart
,, winter .. .. .. 1 pint
SALSAFY .. .. 1 pkt.
SCORZONERA .. .. .. 1 ,,
TURNIP, White Dutch .. .. 4 oz.
,, Polley's Nonsuch .. ½ pint
,, Yellow Maltese .. 2 oz.
VEGETABLE MARROW .. 1 pkt.
,, Custard .. .. 1 ,,
HERBS in sorts .. .. .. 6 ,,

Collections 1 and 2 are similar to the above, with the quantities proportionately reduced.

J. C. & CO.'S 25TH ANNUAL CATALOGUE OF FLORICULTURAL, VEGETABLE, AND AGRICULTURAL SEEDS, AND GARDENERS' VADE MECUM, will be published early in January.

237 and 238, HIGH HOLBORN, LONDON, W.C.

GOOD SEEDS CARRIAGE FREE.

SEEDS DIRECT FROM THE GROWERS the most certain means of preventing disappointment.

SEEDS grown in Berkshire and the adjoining Counties having obtained great celebrity, SUTTON & SONS have made such arrangements with the great Lines of Railway as will enable them to deliver their GOODS FREE OF CARRIAGE to most parts of the United Kingdom.

CATALOGUES gratis and post free on application, addressed

SUTTON AND SONS,
Royal Berkshire Seed Establishment,
Reading.

NEW ANNUALS.

JOHN GEORGE WAITE, SEED MERCHANT, 181, High Holborn, London, W.C., has great pleasure in offering SEEDS of the following new hardy Annuals:—

CLARKIA PULCHERRIMA,
SCHIZANTHUS GRANDIFLORUS OCULATUS,
HELIOPHILA CŒRULEA STRICTA.

Coloured Drawings and prices of which (to the Trade only) can be had on application.

Seed Establishment, 181, High Holborn, London, W.C.

CONNING'S PERFECTION BROCCOLI.
NEW WHITE SPROUTING BROCCOLI.
CARTER'S CHAMPION CUCUMBER.
CARTER'S EXCELSIOR MELON.
AUSTRALIAN OR GOLDEN CRESS.
CARTER'S GIANT LETTUCE.
VEITCH'S PERFECTION PEAS.
EARLY HANDSWORTH POTATO.
PHEASANT'S EYE POTATO.
PERPETUAL SPINACH BEET.

Vide CARTER'S SELECT LIST OF SEEDS FOR 1860, which will be sent Gratis on application to 237 and 238, High Holborn, W.C.

YORKSHIRE SEED ESTABLISHMENT.

E. P. DIXON begs to announce that his new SELECT PRICED LIST OF KITCHEN GARDEN, FLOWER, and AGRICULTURAL SEEDS for 1860 is now ready, and will be forwarded post free on application to
57, Queen Street, Hull.

KEMP'S INCOMPARABLE EARLY CABBAGE.

E. P. DIXON can supply this well-tried Cabbage, which has proved in every way equal to the description given of it last season. It can be safely recommended as the best variety for cultivation, price 1*s.* per packet, and may be had of the following Seedsmen:—

Hurst & M'Mullen, 6, Leadenhall Street, London, E.C.
Noble, Cooper, & Bolton, 152, Fleet Street, London, E.C.
J. Wrench & Sons, London Bridge, E.C.
Beck, Henderson, & Child, Adelphi Terrace, Strand, W.C.
Nutting & Sons, 69, Barbican, London, E.C.
Charlwood & Cummins, Tavistock Row, London, W.C.
Geo. Dixon, 48A, Moorgate Street, London, E.C.
Fisher, Holmes, & Co., Sheffield.
Fisher & Godwin, Sheffield; or of
E. P. DIXON, 57, Queen Street, Hull.

PETER LAWSON AND SON, THE QUEEN'S SEEDSMEN AND WOOD FORESTERS, respectfully announce that they have now issued their NURSERY CATALOGUE OF FOREST TREES, CONIFERÆ, SHRUBS, &c., which they will be happy to forward free by post on application.

27, Great George Street, Westminster, S.W.

PETER LAWSON AND SON, THE QUEEN'S SEEDSMEN AND WOOD FORESTERS, 27, Great George Street, Westminster, London, S.W., respectfully announce the issue of their GARDEN SEED CATALOGUE for 1860, which they will be happy to forward free by post on application. Every care has been bestowed on the selection and growth of the various stocks, which P. L. & SON can safely recommend as of best quality, and true to name.

DALMAHOY EARLY POTATOES.

This excellent variety of Potato now meets with a largely increased demand in England, to which it is fairly entitled. It is considerably earlier than the Regent, and of excellent quality. Messrs. P. L. & SON are now prepared to send out carefully selected Seed, for which early orders are requested; and which can either be executed now or in spring, as may best suit purchasers.

EAST RIDING OF YORKSHIRE AND LINCOLNSHIRE NURSERY AND SEED ESTABLISHMENTS.

MARTIN AND SONS, Cottingham, (A.D. 1788), Seed Establishments in Hull, Junction Street and branch Nursery, Spring Bank, near the Cemetery, Hull.

P.S. PRICED CATALOGUES of their extensive NURSERY STOCK; KITCHEN GARDEN and AGRICULTURAL SEEDS may be had on application. Carriage paid on all Seed orders value 2*l.*

The Gardeners' Chronicle.

SATURDAY, JANUARY 14, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, Jan. 17—Horticultural (Fruit Committee) St. Martin's Place ..... 3 P.M.
THURSDAY, — 19—Linnean ..... 8 P.M.
FRIDAY, — 20—Horticultural (election of Fellows) Soc. of Arts, John St., Adelphi Noon

THE advocates of introducing largely what may be called DOMESTIC HORTICULTURE into LONDON are on the increase. Till lately the *Gardeners' Chronicle* has remained almost alone in this field of reform. At intervals, for 20 years, the possibility of cultivating plants successfully in the streets and squares of our huge metropolis has been insisted on by us. Nevertheless, its open places are as dull and dirty as ever, for a fixed belief seems to have entered the city mind that soot and its accompaniments cannot be resisted, and with a few exceptions the grim vegetation that struggles onwards has no more resemblance to that of green lanes and smiling fields than the miserable sparrows to the dapper inhabitants of house tops in a country village. In saying this we must of course except particular instances. Our good friend BROOME, backed by Lord PALMERSTON, has worked what some call wonders in the once miserable Temple Gardens, and thus has furnished a conspicuous example of what may be effected by skill and industry, and many a little area garden has begun to show that some kitchens in London evince more good taste than its drawing-rooms; as we pointed out last year. Nevertheless, upon the whole London remains unchanged, and to all appearance unchangeable.

Christmas has, however, brought into the field two dreams of improvement. Mr. JACOB FÖRST, in the *Midland Florist*, is of opinion that if its old verdure were once restored to the metropolis, we should find the moral as well as physical atmosphere wholly changed.

"Then, and not till then, will the 'Cyclopolis' grow healthy; then, and not till then, will cholera desist from its ravages; then, and not till then, will black-charactered volumes of smoke cease issuing from furnace chimneys, with early death to vegetable life, and slow poison to animal,

written on their broad margins; then, and not till then, will poor men cease from drunkenness, and London children once more become healthy. God speed the time!" "She must restore her trees and her flowers to Cheapside, entice once more her bees to Holborn, her butterflies to the Fleet, and welcome her robins with the winter. Not only the poetry of City life demands it, but its very existence; otherwise, ere the 20th century shall arrive, the Cyclopolis, with her then 5,000,000 of toiling souls, will become even worse than now—a perennial pestilence, the hotbed of endemic fever, cholera, and consumption."

Unfortunately we cannot altogether adopt this Utopian view of a London future, for we do not forget how plagues and pestilence raged in our ancient city, even "when the Southernwood and Marigold, the Mignonette and Scarlet Runner, the Creeping Jenny and Convolvulus adorned the working man's window; when the song of the skylark enlivened his home, the poor bird standing upon his 2 inches of Clover, singing merrily even in his prison-house of little ease."

Nevertheless, there is truth enough in the picture to render it worthy of attention. It is probable that the climate of London would be improved by the presence of green leaves everywhere. The difficulty is to procure them. Mr. FÖRST's ideas upon this subject are at least original. He would strike an overwhelming blow at the whole

scheme of London architecture; every dwelling house should be converted into a greenhouse:—

"Let us mount St. Paul's, supposing the day be unusually clear, and look around over the waste of ground so covered with ugliness in every shape of chimney-pot and cowl, tile and slate, zinc and lead. Let us ponder over this waste, and try to realise the 'improved' properties we see—properties which would be really improved by having their chimneys closed, their roofs taken off, and covered with glass-houses for plants and flowers—roofs nearly as cheap, more useful, and much more ornamental, supposing they grew but a few bitter Oranges, and protected the common Calceolarias and Cinerarias from soot. Then those south fronts of dingy brick, so terrible to the eye in summer, yet so well placed for Grape-growing, Fig-ripening, and Cherry-blooming, not forgetting the golden-tasselled Laburnum, so lovely in spring, and so likely, if protected from bleak winds, to reblow in the autumn. And all that these require are glass fronts and a daily bath. Nor would such glass fronts be so dear as the stucco walls, everlastingly wanting paint and perpetually scaling, at the same time offering admirable arrangements for house-ventilation."

Such is Mr. FÖRST's view, which we may call the GARDENER'S DREAM, and which he promises to support by further argument on a future occasion. The other advocate who has entered the field where we now stand is Mr. W. BRIDGES ADAMS, who in *Once a Week* expresses views not unlike those of Mr. FÖRST. "If," says this gentleman, "the exhalations of animals be the food of plants, and *vice versâ*, it is quite clear that plants should be well off in cities could we only get rid of unfavourable circumstances. And, notwithstanding the unfavourable circumstances, many trees and plants do get acclimated in London. And exquisite is the sensation when, from the hot glare in summer time we unexpectedly fall in with a green tree which shades us from the sun's rays by its half transparent green curtain. On the north side of St. Paul's there are a few trees, one of which stretches out almost lovingly a long and slender branch, gracefully waving up and down over the footpath, and fascinating the eye more than all the architecture, the forms of which it enhances by contrast. It is said that scarcely a quarter of a mile of distance exists without a tree in any part of London; though for the most part they are shut in back-yards. But Lincoln's Inn, the Drapers' Gardens, the Temple, and, above all, the small Temple Garden, indicate to us what London might be, and with great advantage to health. Visible coal smoke, and coal gases not so visible, are the chief impediments to plant growth."

Having thus stated what is admitted on all hands to be true, Mr. ADAMS proceeds to show that by certain improvements in the construction of chimneys and fire-places the nuisance of soot may be wholly removed. Granted this it only remains to explain where space is to be found for the gardens that are to arise when London shall enjoy "a bright atmosphere—bright as that of any city where wood fuel is used, nay, brighter, for wood also produces smoke very unpleasant in a peculiar state of the atmosphere, as when a log of green Elm hisses and sputters at you in Paris in winter time." To most men that would seem to present a difficulty. Not so to Mr. ADAMS. Like Mr. FÖRST he finds above what the gods deny below. All houses are to be unroofed, and reroofed so as to be made flat-roofed. London is to become the Jerusalem of the West. Cock-lofts are to disappear. The house-top is to be the garden, with its arbours and parterres and shrubberies and greenhouses. "Gardens of this kind would be, as in the East, the resort of the family in fine weather, and in bad weather a warm greenhouse on the roof would be a more pleasant thing than a dark parlour. Scarcely anything could be conceived more beautiful than the enormous expanse of London roofs covered with shrubs and flowers. And it would be a perfectly practicable thing so to construct the greenhouses that they might be opened or closed at pleasure. Every housekeeper might possess his own bit of Crystal Palace, his own fountains, and his own flower baskets, watered not by hand, but by art without labour, so that the lady of the house, by a process as easy as ringing a bell, would effect this object." "Think too," cries Mr. ADAMS, "of the wine-parties, supper-parties, and open-air dinners, that might take place with the upper crust of London restored to its proprietors! Compare Pump Court, Temple, with the new gardens of Chepe looking on to St. Paul's, and Bow bells chiming; meanwhile men's brains crooning with old reliques of the merry doings of the olden time, around the crosses of Paul and Chepe." In the opinion of our enthusiastic reformer to reroof London is but a small matter. For this purpose however he does not recommend cement because it cracks, nor sheet lead because it is a nuisance to walk on, to say nothing of thieves stealing it; planking a roof like a ship's deck has more to recommend it, but upon the whole slates are to be preferred—good strong slate slabs, the joints put together with cork.

This is the ENGINEER'S DREAM, well pictured in our clever contemporary, from whom we borrow the accompanying sketch. If such visions are too unreal to claim serious attention, they have the merit of turning men's minds to a very important social question, and it is to be hoped that something practicable may be found in the air-built castles of each enthusiast.

IT is understood that the manner in which the NATURAL HISTORY COLLECTIONS OF THE BRITISH MUSEUM are to be disposed of is still undecided. It is however agreed on all hands that better room must be found for them; and the question now remaining to be answered is how and where.

We believe we have good authority for saying that three plans have been laid before the Trustees, out of which one will certainly be selected. The first is to construct another story on the walls of the present building; a second is to purchase one side of Bedford Square, for a new Museum; a third is to transfer the Natural History Collections to South Kensington, where an excellent site for the structure can be cheaply obtained.

With reference to these three plans it has been observed that the Trustees will probably be influenced in their final decision by the cost. That this is a most important element in the question all will admit; but it is not the most important. The first points to consider are public convenience and the fitness of the situation for the purpose it has to serve. On neither ground can the two first schemes be defended. Natural History Collections, we repeat, demand the purest possible atmosphere and the greatest abundance of good light that can be secured. The gentlemen who signed the well-known memorial on this subject to the CHANCELLOR of the EXCHEQUER particularly adverted to the serious injury done to the specimens "by the dust and dirt of the (present) locality, increased manyfold by the tread of the crowds who pass through the galleries on public days." To form another museum in Bedford Square would in this way be fatal to the collections, for foul as the sooty atmosphere of the place now is, it will certainly become worse as the locality becomes more and more central, which is happening year by year.

As to lifting the Natural History one story higher, we can hardly imagine that this strange proposal will find many supporters. The higher the galleries are placed the more they will catch the soot, and thus a great present evil will be much increased. Or, if we suppose that by a compulsory employment of Dr. ARNOTT's fire grates in every room in London, or by processes yet unthought of the soot nuisance were wholly removed, there remains the enormous inconvenience of having to climb into the upper regions in order to reach the Natural History galleries. To arrive at the collections there would hardly require fewer than 120 steps, or more than a third the number of the Monument, and twice as many as are found in the highest houses in London. To place the Natural History at such an elevation would practically exclude a large proportion of those for whose gratification it is intended. If this is doubted we invite the advocates of the scheme themselves to walk up 120 steps by way of experiment.

No cheapness of cost would for these reasons justify the Trustees in recommending either of the plans just considered; and we believe that the cheapest would be found enormously expensive. But although the mere cost of a new Museum is not necessarily the first subject to be considered, it overrides all others as soon as it is found to be combined with public convenience and a perfect fitness of locality.

Regarded from this point of view South Kensington becomes extremely important. It presents no inconveniences and has great advantages. Land may be had comparatively cheap in that locality, and there are no houses to buy at a high price and then to demolish; the light is good, and the atmosphere pure, as the collections already there conclusively prove. As to the supposed inconvenience of the situation on account of its distance from some undefined part of the metropolis, that objection is disposed of by the best of all arguments. It is shown by the official returns of the Department of Science and Art that above 475,365 persons visited it during the year just closed. Surely there

is no reason to suppose that visitors to the Natural History Museum would be more impeded by this distance than have been those who desired to frequent the Department of Science and Art, especially when the arrangements for forming a focus of railways, in the very heart of South Kensington, shall have been carried out, as will certainly be the case before any public building could be ready for the reception of visitors.

We most earnestly hope then that the Trustees of the Museum will pause before they sanction either of the first two plans, whatever else they may determine upon. And we venture to urge upon the CHANCELLOR of the EXCHEQUER, whose approval of any plan whatever must be obtained before the subject can be brought before Parliament, not to consent to any further expenditure in such dirty regions as those of Bloomsbury or St. Giles.

BLENHEIM.

SOON after the commencement of the last century during the early part of Queen Anne's reign, that monarch, to mark her sense of the distinguished services of John Duke of Marlborough, relinquished the crown rights in the royal manor of Woodstock in favour of that warrior and his heirs, and also by consent of Parliament ordered Sir John Vanbrugh, the Comptroller of her Works, to erect a magnificent palace in Woodstock Park for the Duke, to bear the name of Blenheim, after a village on the banks of the Danube, the scene of one of the greatest victories in which the arms of this country have ever been engaged. The old palace or Royal Lodge, as it was sometimes called, had been demolished during the Protectorate. Blenheim is about eight miles from Oxford, and within half a mile of the parliamentary borough of Woodstock, near which there is a railway station on the Oxford and Banbury line.

The park is a noble demesne of something like 14 miles in circumference, and comprises an area of 3000 acres in extent, the surface of which is beautifully undulated, the middle part assuming the character of low hills, on the crest of one of which the unrivalled palace is proudly situated, overlooking a scene of great extent and beauty.

Blenheim was originally laid out by Wise, who spent three years in its execution; he was succeeded in this employment by that great self-taught artist "Capability Brown," who was at one time kitchen gardener at Stowe and afterwards at Hampton Court, the great Vine at the latter place being planted by him —a man famous not only as the inventor of the English style of gardening, but one who rose to eminence as an architect also, and who was extensively employed by the nobility in both capacities, the inimitable scene in Woodstock Park being the creation of his genius.

The little river Glyme, whose waters like a rivulet meandered through the park in its natural course, was dammed up across a narrow part of the valley, and the finest artificial lake in the world was finished in a week. Its magnificent proportions, with its irregular and beautiful outline and shining surface, strike with wonder and delight. At a considerable distance onward, and at the extremity of the park, another cascade was formed, to which the stream in river character sweeps along, and over which its waters pour, soon after uniting with those of the Evenlode in its course to join the Isis. The aggregate of these expanded waters occupies an area of 200 acres in extent.

The park is finely wooded, and contains some noble timber in vast masses and well-disposed groups, and the foreground is well broken by many admirable specimens of fine trees. At the north-eastern side not very far from the keeper's lodge (the remains of an old castellated building famous as having been the residence of the notorious Wilmot, Earl of Rochester), there are many remarkable examples of Oaks, some of which, at 4 feet from the ground, girth 27 feet, and there are numbers of others that exceed 24 feet in circumference at the same distance from the ground. Near this spot there is also an old Elm 32 feet in circumference at 4 feet from the ground. It had been divested of all its branches some 20 years ago; it has since however formed a new head of young vigorous shoots. Near the Queen's drive, in another portion of the park, there are two Oaks of very considerable dimensions; the one girths 31 feet 9 inches at 4 feet from the ground, and covers with its spreading branches an area of 261 feet in circumference; the other, although of somewhat smaller dimensions, is also a noble tree, and girths 28 feet 6 inches at the same distance from the ground.

From here there is an admirable view of the city of Oxford, the classic domes and towers of the University producing in the distant landscape an exquisite effect.

The eastern side of the park is said to have been planted in battalion fashion, representing the living masses of some battle scene; repeated thinnings however have entirely destroyed this illusion, and the trees now apparently stand at too equal distances over the ground, lessening in a considerable degree the picturesque effect. On the northern side of the park and on the opposite hill on which the palace stands, there is a noble avenue of great length, which is broken in its course by squares and other figures formed of stately trees; near its commencement is a noble Doric column 130 feet in height surmounted by a colossal statue of John Duke of Marlborough. On three sides of the pedestal are inscribed the Acts of Parliament passed in his favour; on the other is an elegant inscription by the masterly pen of Lord Bolingbroke in honour of the hero (not only of his nation but his age), "whose glory was equal in the council and in the field," and who, in a long series of uninterrupted triumphs, "asserted and confirmed the liberties of Europe." This avenue formerly extended for 8 or 9 miles beyond the boundary of the park, and through it at one period was the principal approach to the palace, passing over the grand bridge, which connects the two hills, and under which the expanded waters of the river flow. This is a noble three-arched stone erection of magnificent architecture, the chord of the centre arch exceeding 100 feet.

The carriage roads and drives are broad and exceedingly well directed. The interior drive in the park extends to nearly 4 miles over most interesting and varied foreground, from which some exquisite views are obtained. The vast mass of masonry of the unrivalled palace embosomed in trees proudly overlooks the whole scene, its towers and minarets rising into the horizon; and when in residence the flag of his Grace the Lord-Lieutenant of the important county of Oxford floats proudly over its noble portals, producing an admirable effect. The lofty obelisk, colossal bridge, and Woodstock Tower, the church spires of Kidlington, Bladen, and Handborough, the beautiful Palladian bridge by which we cross the lower reach of the lake, are all scattered as it were broadcast over the scene, and at once confer grandeur of effect, as well as relieve from monotony the vast extent of gorgeous wood and extended lawn which we pass in review in making the circuit of the inner drive. The charms of the whole are also considerably enhanced by the brilliant surface of the magnificent lake being occasionally seen in looking towards the great centre of attraction, the palace itself.

The principal approach is that from Woodstock, from a somewhat narrow street into an open court of masonry of about 100 feet square, the left side of which is a grand triumphal entrance of the Corinthian order of architecture, the beautiful arch being surmounted by a pediment and entablature charged with an inscription in Latin and English, informing us "that the pillar in the park," as well as this spacious gateway, "were erected to the memory of the most illustrious John Duke of Marlborough, by order of Sarah, his most beloved wife, for a lasting monument of his glory and her affection to him." On passing within the park a scene of great extent and exquisite beauty presents itself to our view. At some considerable distance in the foreground are seen the beautiful lines of the parapets and pediments of the palace peering over the trees, with its towers and minarets rising into the horizon. Immediately in front of this is the colossal bridge connecting the opposite hills and spanning a narrow part of the magnificent lake in the broad valley beneath. On the high ground to the right the lofty obelisk with the crowning figure of the great Duke of Marlborough towers majestically over the noble trees by which it is surrounded, while near at hand the lawn is skilfully broken by clumps and specimens of fine trees. On the left are the Home Lodge and Woodstock Tower, all combining to form a scene of most admirable beauty. From the triumphal arch the road leads onward to some distance, and then joins at right angles a straight road about 30 feet in width, which runs through a double avenue of noble Elms, from the triumphal gate at the south end of the town of Woodstock to the eastern entrance of the palace, forming a beautiful and spacious vista of nearly half a mile in length; the other entrances are of a more simple character. The roads and drives amidst this glorious park extend to something more than 27 miles.

The entrance is through a noble archway and by huge iron gates (erected by Bramah & Co. of London at a cost of 1000*l.*) of the most exquisite workmanship and elegant design. This arch is also faced by two others of the same magnificent and beautiful Grecian character, forming a long architectural vista of 771 feet across three courts, producing a striking effect. The first court is a noble arcaded quadrangle, 206 feet across, the left hand side of which until lately was occupied by a theatre. It is now however fitted up as offices for the land steward and architect, the other portions containing other offices in connection with the palace. Passing onwards through the second archway we enter the court of honour, in front of the main body of the palace, which presents a frontage of very striking magnificence, extending to the vast length of 348 feet from wing to wing; in the centre of this is the grand entrance under a majestic portico of the Corinthian order, having the apex of the pediment surmounted by a statue of Minerva, and the tympanum sculptured with the arms of the illustrious John Churchill amidst a profusion of military weapons and standards. The divisions of the building are carried out on each side by Corinthian pilasters supporting a balustrade and entablature. Rising above the centre of the building is an attic composed of a series of piers and windows, and terminating in a second pediment surmounted by a globe or dome. At each corner of the main portion of the building there are square towers carried up to a considerable distance above the roof, and their corners are surmounted by minarets, which add materially to their effect.

From each of the towers of the grand front a projecting terrace with an arcade connects the lateral portions of the building with the centre, and this with the two wings, which are of the same magnificent architecture, forms the three sides of the court 348 feet square — the northern side being open and protected by a massive semicircular iron railing.

From the steps of the grand entrance a glorious scene discloses itself to view, worthy of the triumphal character of the vast edifice which it adorns. The magnificent lake (more than 100 feet below the eye), its surface like a mirror, brilliant by the reflection of the southern sun, stretches onward to the left, its sinuous and irregular outline melting as it were into the foliage of the distant woods by which the hills in that direction are so beautifully clothed. In front the noble lawn rises abruptly from the opposite shore, and stretches onwards to a great extent, groups of deer and cattle giving animation to the scene. At right angles and in the line of the colossal bridge which the great avenue faces on the opposite height, the lofty column crowned by the statue of the great Duke of Marlborough is seen in the centre of its long vista, and completes a scene of dignity and grandeur. On the right hand of the road, on the opposite side of the bridge, the old palace or lodge formerly stood, which was the occasional residence of a long line of monarchs; its ruins are said to have covered 6 acres of ground, and although no stone even now remains to mark its site, the genius of the immortal Scott has notwithstanding created a halo round the spot which will be perpetuated to all time. On the low ground on the opposite side of the road is the equally famed Rosamond's well, a living spring gushing from some masonry near the bottom of a precipice; its waters are received into a stone basin, and thence pass into and merge with those of the Glyme. Here too was the site of the bower and labyrinth of the fair fugitive, of which tradition has handed down so much. The third Grecian arch, which has such an excellent effect in the vista from the eastern arch, is the entrance to the third or stable court.

The south front is of the same length as the grand carriage front, and of almost the same gorgeous style of architectural finish; its noble Corinthian portico is crowned by a pedestal, bearing a Latin inscription intimating that the Liberator of Europe dedicated these honours to the genius of Britain, and surmounted by a colossal bust of Louis XIV., taken from the gates of Tournay. This front opens on a spreading lawn, which is backed by masses and groups of trees through which the pretty village of Bladon, with its neat church tower, are seen advantageously; beyond the view is terminated by the chain of Berkshire hills, the Chiltern range of which rises up in silent majesty in the distance and is lost in the horizon.

The east front presents a very beautiful façade; it has a projecting bow in the centre, carried up to the height of the second floor, contrasting finely with the square corner towers, and its lengthened front is surmounted by an open balustraded parapet. This front has been recently supplemented by a very beautiful panel garden of excellent design and proportions, admirably carried out, and when I saw it in the last days of September it was still gorgeous with beautiful flowers, well arranged as to colour and contrast. It is, however, still unfinished, vases, fountains, and other works of art being required, not only to give it classic beauty and elegance, but also to make it worthy of the splendid architectural front of the palace to which it forms so admirable an appendix.

The western front is of the same general character as the eastern side, varied, however, by having the projecting bow carried up to the balustrade, and the spaces between the upper windows enriched with sculptured figures. The lower rooms of this front open to the lawn; they are fitted up with Chinese decorations, and contain a most extensive and valuable collection of antique and curious porcelain, Delf, and Japan ware, amongst which are many interesting articles from celebrated collections, and the whole is nicely arranged on shelves.

This noble edifice, against which pretended critics have winged their shafts, and which unquestionably has trifling faults of detail, is, notwithstanding, the first residence, whether ancient or modern, in Britain, or perhaps in Europe, in respect to general grandeur. It cost the enormous sum of 650,000*l.* in its erection, and is in a most complete and perfect state of repair, 40,000*l.* having been expended during the lifetime of the late Duke of Marlborough upon its restoration. The stone of which it is built is of a warm yellow tinge, and apparently of a very durable character, altogether unlike some of the fine college buildings at Oxford, where not only the beautiful friezes, capitals, and cornices but the whole face of vast masses of noble edifices seem fast crumbling into dust; this on the contrary will remain to distant ages a noble monument of the triumphal style of Vanbrugh's architecture worthy alike of the nation who gave and the hero who received so signal a reward. *D.*

(To be continued.)

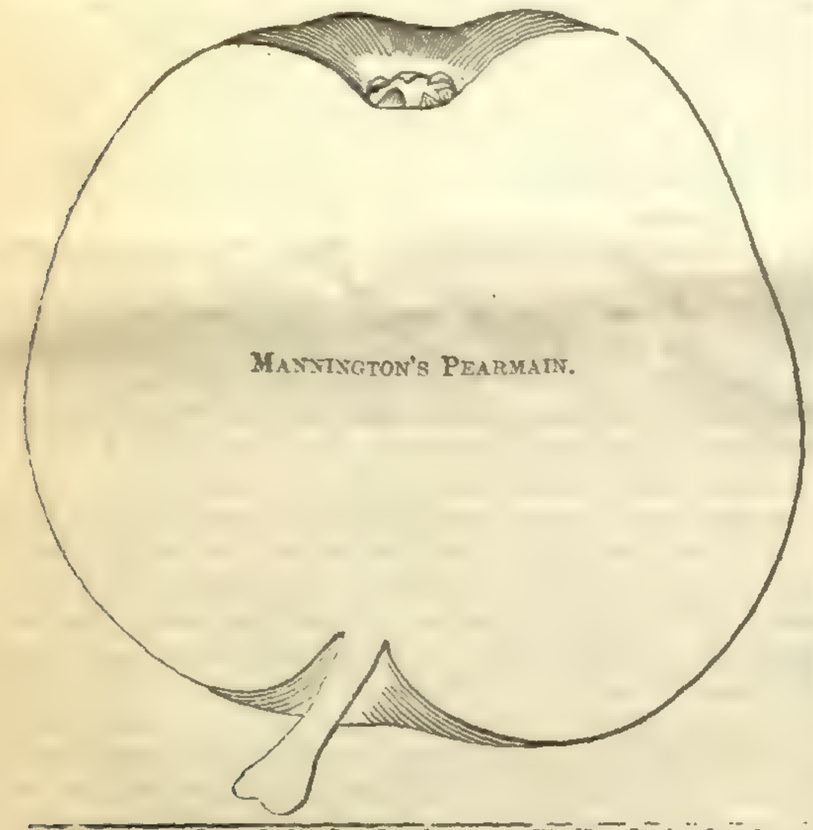
MANNINGTON'S PEARMAIN.

THE article by M. de Jonghe of Brussels on Mannington's Pearmain, in last week's *Gardeners' Chronicle*, ought not to be allowed to pass without notice, as it tends to found a great pomological fallacy.

It is a matter of no importance whether M. de Jonghe considers my book on the Apple "a work of acknowledged authority," or not, but it is of importance that the world should know that Mannington's Pearmain is not Reinette Platte de Champagne, and

that the account I have given of it is not "a somewhat obscure account of the origin of this variety." How M. de Jonghe could have been guilty of such a blunder it is difficult to conceive, for even if he had never seen the fruit of the two varieties, the published descriptions are quite sufficient to denote the distinction. I send you figures of both varieties, from which you will see that they are as distinct as it is possible for two varieties to be, and I also append descriptions; that of Mannington's Pearmain being from my book on the Apple, and that of Reinette Platte de Champagne, from Diel, whose authority M. De Jonghe quotes.

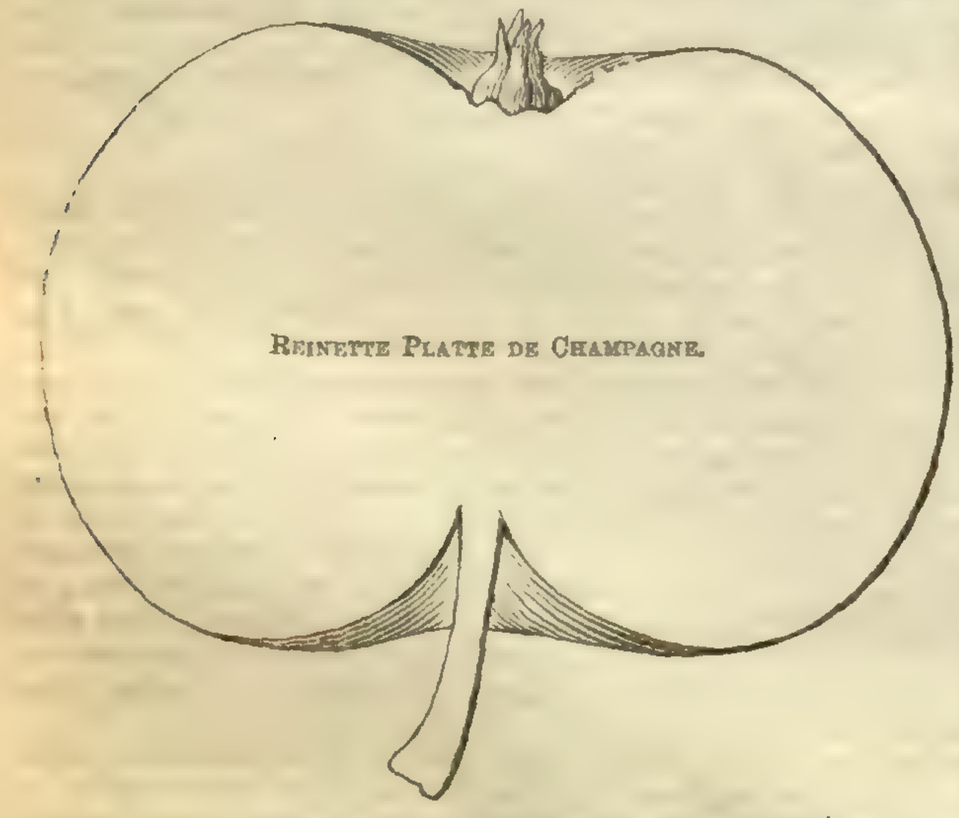
Mannington's Pearmain (from Hogg's British Pomology).—Fruit medium sized; abrupt Pearmain-shaped. Skin of a rich golden yellow colour, covered with thin brown russet on the shaded side; but covered with dull brownish red on the side next the sun. Eye partially closed, with broad flat segments, set in a



MANNINGTON'S PEARMAIN.

shallow and plaited basin. Stalk ¾ inch long, obliquely inserted in a moderately deep cavity, with generally a fleshy protuberance on one side of it. Flesh yellow, firm, crisp, juicy, and very sugary, with a brisk and particularly rich flavour.

Reinette Platte de Champagne (condensed from Diel).—Fruit very regularly shaped, and so flat that it forms one of the most beautiful models of a flat Apple. Its ordinary breadth is 3 inches, and its height 2 inches. The unusually beautiful, very long, and pointed-leaved calyx is closed and prominent, continues very long green, and is placed in a considerable saucer-like and ribbed depression. Stalk ¾ to 1¼ inch long. Skin very fine, covered with a beautiful bloom, at first of a



REINETTE PLATTE DE CHAMPAGNE.

bright straw yellow with a greenish hue, and as it ripens changing to a beautiful pale lemon yellow with a light blush of red or only red dots on the side next the sun. The flesh is a beautiful white, fine, marrow-like, juicy, with a rich sugary and fine vinous flavour, partaking of the Rose.

Now, it is quite evident that M. de Jonghe has either never seen these fruits or he does not possess the true varieties.

With regard to my "obscure account of the origin" of Mannington's Pearmain, all I have to say in justification of it is, that some 12 years ago, when I was travelling through the orchard districts obtaining information on these subjects, I called on Mr. Mannington, who is a respectable butcher at Uckfield in Sussex, when he gave me the account published in my book. Mr. Mannington is the grandson of Mr. Turley, who raised the Apple, and being a man now advanced in life perfectly recollects the original tree as it grew in the hedgerow of the garden he now occupies, and which died in the year 1820. I really do not see what better account M. de Jonghe could wish for. *Robert Hogg.*

ON THE WARMTH OF THE EARTH.

By G. A. FINTELMANN.

FOR some years past observations have been made with a view of ascertaining what amount of time the different stages of vegetation need for their complete development, and the causes of their longer or shorter duration have been sought in the temperature of the air. It has been assumed that each stage needs a fixed amount of heat, and that consequently with a varying temperature the time in which each is accomplished must likewise vary. For instance, Iberis amara needs for the production of its blossoms a warmth of from 850° to 875°, that is to say, if the mean temperatures of all the days from the sowing of this plant till its blossoming be added together, we should obtain that number of degrees. In a warmer or colder spring, the number of days will necessarily vary, fluctuating between 58 and 66. From the blossoming to the ripening of the fruit about 1000° of heat are necessary, which in the same manner can be distributed over from 52 to 62 and even more days.

For several years similar observations were recorded, and their results eliminated, both in France and Austria, and more particularly in Belgium; and the subject soon proved so interesting to botanists and physicists, as well as to unscientific persons, that every year a greater number of observations was made. But the more this was done, the more striking became the discrepancies in the results; and since natural philosophy was unable to reconcile them, the interest and zeal in these observations diminished, so that most of those were given up from which no safe results could be obtained, though a few were still carried on by scientific men.

Before deciding on the value of these observations, the question must however be answered, whether these discrepancies have not arisen from the method pursued in the observations. If we examine a little more closely, we find that the investigations were all carried on in nearly the same way, that they are founded on very false hypotheses, and further, that they are one-sided. They were commenced in the belief that, since water is the medium by which the aliment of plants is supplied, therefore the reckoning of the degrees of heat must begin with the days when the temperature of the air should be above 0° (32° Fahr.), when water namely is in a liquid state.

Putting aside the facts that in the same day it may be warm at certain hours and freeze at others, that plants will grow in the sunshine at the same time that others are checked in the shade, and that errors have arisen from overlooking these facts; yet each plant requires in addition an entirely different amount of heat to bring it to perfection. For example, our Willows and Poplars will sprout at a low temperature, while plants from foreign countries, as the Tulip tree, need many degrees of uninterrupted heat before the buds begin to unfold. The seed of our Shepherd's Purse (Capsella) sprouts under the snow, as soon as the temperature rises above the freezing point, while Wheat requires about 6, and Flax about 8 degrees of heat, before their seeds begin to swell. Were the assumption correct, that all plants sprout as soon as water begins to liquify, then the inevitable result would be that all tropical plants would stand the open air with us during those months in which it does not freeze. That is however not the case: each plant needs for the preliminary processes within its cells, in other words for its nourishment, an amount of warmth peculiar to itself.

The false foundation on which these calculations rest has been partly perceived, and they have therefore been carried on somewhat differently, though not thereby improved. Either the reckoning has been commenced from a higher daily temperature, or else from the time when certain spring plants, such as the Snowdrop, began to unfold. The error remains however the same in either case.

Although besides heat the direct light of the sun also exercises an essential influence upon vegetation, and there can be no doubt that light and heat supplement each other, yet in the foregoing observations the influence of the direct rays of the sun has been almost, entirely omitted in the calculation. For instance if grown in the sunshine, Iberis amara needs before unfolding its flowers 58 days with 827° of heat, and until the ripening of its seed 52 days with 927° of heat, thus making a total of 110 days and 1754° of heat; while if grown in the shade it requires 66 days with 950° of heat before its blossoming, and 73 days with 1265° of heat before it ripens its seed; altogether therefore 139 days and 2215° of heat. In high latitudes, Barley ripens nearly a month earlier than with us.

As too little warmth retards the growth of plants, so too much will rouse them from a state of rest. In tropical countries corn only thrives in elevated regions and in the winter season, when the mean temperature resembles that of our summer and that of the nights is lower than at other seasons. In South Germany, and still more in France, Pears become better flavoured than in Algeria, while many Apples again are better in North Germany than in the former countries; while in tropical regions they will scarcely thrive at all. In the South of France Beetroot cannot be successfully employed in the manufacture of sugar, as with us, because the warmer climate is not so favourable to the development of its saccharine qualities. The Vine again will only yield good wine in certain climates.

But even in the different stages of their growth plants need different degrees of heat. The ripening of most fruits occurs in the warmest months, June, July, and August, and yet one of the finest, the Vine requires a low temperature at night; Vintners in France say the Grapes must sweat by day and freeze by night, to be really sweet and spirituous. Again, if Iberis amara be sown at the end of April, it needs for its entire course of existence 110 days with 1754 degrees of heat; if sown at the end of May, it requires 109 days and 1821 degrees of heat; should the sowing however be deferred till the 24th of June, it needs 124 days and 1858 degrees of heat.

While Iberis amara needs but few degrees of heat at first, Flax, on the contrary, will not sprout until the temperature is considerably higher. When sown at the end of April, it required for its entire development 101 days, with 1605 degrees of heat; while when sown at the end of May and June, its existence was concluded in 75 and 71 days, with 1272 and 1757 degrees of heat.

Further, we may almost say that the warmth of the ground is of far more importance than that of the air, to the development of plants. As warm feet are necessary to health, and a chill in these extremities is often followed by injurious consequences, so we find plants similarly affected, but in a higher degree. In this case it is also far more natural, for the earth supplies to the roots of plants the place of a stomach, in which nutriment is collected. The animal body must receive this prepared (assimilated) in a certain manner, a process which is performed by the stomach, while plants collect for their sustenance such elementary materials as they need.

Every gardener knows how necessary bottom heat is for the cultivation of such plants as come from a warmer climate; and what a difference but one additional degree of warmth in the soil often makes. To cultivate tropical Aroideæ, Musæ, and even Palms in the open air, and to imitate the conditions under which they grow in their native countries, the soil is dug out to a certain depth, leaves and decomposed manure are laid in the hole, and covered with good rich earth. By the decomposition of the leaves and manure that heat is generated which is absolutely necessary for the thriving of tropical plants in our climate.

Beneath the beds of greenhouses, and especially of propagation houses, flues and pipes are often carried; thus the new large Palm-stove in the Botanic Garden at Berlin is so constructed that the entire soil in which the plants are placed can be warmed at pleasure. Our large Palms, Pandaneæ, &c., have unfortunately often died through the want of the necessary bottom-heat. Becoming too tall, they were sunk lower in order to give their tops more space; but by this they were deprived of the heat of the soil, and became sickly.

Not less necessary is bottom-heat for shrubs and trees in the open ground. Rhododendrons, Conifers, and other southern trees, thrive well in one place, while in a similar situation they fail in a few years. The cause of this is often not understood, since, as it seems, similar climatic conditions exists at both places. Further, certain trees of the same species constantly flower 14 days earlier at one place than at another immediately close by. Many causes may combine to produce this effect, but the most important certainly appears to be the different warmth of the soil at the two places.

Finally, it is a well-known fact that trees from warmer countries thrive better with us, and are not so readily touched by the frost, when they possess long penetrating tap-roots, and thus are enabled to reach a deeper and consequently warmer stratum. I am aware that the tap-roots of ornamental shrubs are now generally taken off, but with trees from warm climates this should not be done.

The heat of the earth increases in a certain proportion to its depth according to the latitude, and it has been ascertained by experimental boring that this increase is in the ratio of 1° of heat to every 100 feet of depth. But since the surface is at the same time also warmed by the sun, a certain portion of this heat is added to the original warmth of the earth, becoming less the deeper we descend. The amount of this heat however depends in its turn upon the seasons. While in summer the sun's influence is considerable, in winter its effects are scarcely appreciable, the warmth of the earth at the latter season being even greater than that of the air; at many other periods also the amount of external heat varies.

The more the layers of which the soil is composed are able to conduct heat, so much the more susceptible will they be on the one hand to the heat coming from the centre of the earth, and on the other to that coming from the sun. For example, where the sub-strata are formed of chalk and marl, the surface soil will imbibe far less of the central heat than if volcanic and plutonic rocks, as basalt, trachyte, and porphyry lie below it, since the conductibility of the latter is far more considerable than that of the former. For this reason, the mountains of oldest formations, as porphyry and the like, are on an average much warmer than those which are composed of chalk and marl, and even of clay-slate, and possess also a more luxuriant vegetation. It may also be remarked that the chasms and rents in the interior of volcanic mountains likewise assist the passage of the subterranean heat.

These reasons partly explain the comparatively luxuriant vegetation of such a situation. Every one is astonished at the fruitful, flower-bedecked valleys and meadows of Switzerland and the Tyrol. The reasons for this fertility are various; and one only is true of our northern mountains, where the sun never rests in the zenith, and the rays always fall more or less

obliquely. The more this is the case the less the heat that will be liberated; but on mountains the rays generally enter the earth perpendicularly, thus giving out a greater amount of heat; while in the cold season of the year the sun rises so little above the horizon that his rays fall so obliquely on the plains as to warm the earth very little.

The same remarks apply to our conservatories. Upright windows transmit the greatest amount of heat in winter, but obstruct its passage in summer; those, on the contrary, which slope at an angle of from 40° to 45° receive nearly the whole force of the sun's rays in summer, and thus transmit a greater amount of heat to the interior of the building; while in winter it is precisely the reverse; the sun's rays enter obliquely and the heat is less. Attention, therefore, ought to be paid to these considerations in the construction of conservatories.

The second reason for the greater warmth of mountains arises from their composition. Although few are still active volcanoes, through which the internal heat can escape, yet many have formerly been such, and these are so fissured and contorted that the subterranean heat can easily escape, and thus be serviceable to the plants living on them. Thus we see many plants above the snow level whose growth must of course be due to the heat of the earth.

It is a common but false supposition that plants of high northern latitudes resemble in their mode of growth those of Alpine regions. Nearly the same plants grow in both localities, but the similarity of the temperature of the air deceives those who hold the opinion that similar isothermals (*i.e.*, mean temperatures) limit similar plants. For if these are examined from the high north, and from the Alps, although the species are with very few exceptions the same, and they are alike in their diminutive stature, yet their mode of growth is wholly different.

In the Arctic regions the earth is always frozen to a certain depth, and only gradually thaws in summer in consequence of the sun's heat continuing nearly throughout the day. The plants there grow very upright, often springing from a tuberous rootstock or thickened and branching half-underground stem, which preserves the vital portions of the plants from the underground cold.

It is very different with plants in Alpine localities. Here the thermometer close to the ground marks 2, 3, and even more degrees of cold, and one could scarcely conceive it possible for a vegetation to exist. If, however, we examine more closely, we find that the surface soil possesses a higher temperature, which comes from the interior of the earth. The plants themselves have a hair-like mass of roots, with spreading and repeatedly branching stems. The branches and twigs are very short; and we generally find the young buds more or less protected by the old wood from the external cold. We thus find a reversed condition of things from that which obtains in high northern latitudes. The heat which rises from the earth is as much as possible prevented from escaping by the dead lower portions, the closely entangled roots and the divided stems, which all act as bad conductors. Moreover, as we have already noticed, more heat will be evolved, owing to the sun's rays penetrating more or less perpendicularly into the earth.

Other circumstances must also be considered with regard to the Alps. The light is far more intense, and apparently affects the beautiful and almost perfectly pure colour of Alpine flowers. These are further exposed to a stronger current of air, which possibly produces a quicker evaporation; and from this may arise the powerful odour exhaled by most Alpine plants.

Many things depend on the warmth of the soil, as drawn out by the sun. Obviously this heat tends to equalise itself, and especially to diffuse itself into colder regions; and here again the conductibility of rocks greatly influences the relative degrees of warmth. Mountains have further a warmer soil on the south side than on the north, where the same plants often bloom a week later. There are certain plants which only thrive on southern slopes, while others are only found on northern ones. The difference in the warmth of the soil on the two sides generally amounts to several degrees.

It is known that many plants will not thrive well under cultivation; others which formerly did not succeed, are easily cultivated now that their nature is more thoroughly known. Many of these failures certainly depend on the heat of the soil, many proofs of which might be adduced. Therefore plant collectors in foreign countries can scarcely be too strongly recommended to ascertain the warmth of the earth in the countries from which they bring plants. Unfortunately science has hitherto scarcely done anything in this respect, although a general acquaintance with the warmth of the soil in different countries is practically and theoretically so important. There is no plant, as Lindley has justly observed in an article upon this subject in the first number of the *Gardeners' Chronicle*, for which we know with certainty the necessary warmth of soil.

How important and necessary to plants the heat of the earth is, is further shown by the fact that if plants are watered in summer with cold, viz., spring water, they easily become sickly and perish. Good gardeners know this well, and have in their gardens large tubs for the reception of water, in order that it may become warm; they never use spring water. Sickly plants whose soil has become sour can often be recovered if watered with water of 40, 50, and even 60° (Reaumur) of warmth, at intervals of from four to six days. This is especially the case with the India-rubber tree (Ficus elastica), whose leaves sometimes become yellow, and then fall off.

It is greatly to be desired that gardeners, as practical men in this department, would turn their attention to this subject, and collect information upon it. Even for planting in the open air it is of great use to become so far acquainted with the warmth of the earth as to be able to make use of suitable trees. For instance, the constant evaporation of water from a moist soil renders it too cold for the successful cultivation of Pear trees; but if it is freed from the superfluous water by drainage, it becomes warmer, and thus suitable for these trees. Many other examples might be added, if our limits would allow. We will, however, merely add that the columns of this journal are open for the publication of all facts that may be collected on the subject. *Translated from the Berlin Wochenschrift für Gärtnerei.*

Home Correspondence.

Lomaria chilensis.—In your columns of last year I called attention to the beauty of this as a probably hardy evergreen Fern. It may be interesting to those who care for such things to know how it has fared in the late frost, which here amounted to 13°, the minimum being 19° Fahr. It has suffered precisely as much and no more than our own English evergreen species, Scolopendrium vulgare, the Hart's-tongue Fern, and Blechnum boreale, the Hard Fern growing in the same situation; that is to say, portions of its fronds have been injured and blackened. If it proves next spring to be uninjured in its young leaves (and I have no reason to suppose that it has suffered), it is by far the finest hardy Fern in cultivation in England. My plant was put out only last spring, but it produced several fronds, both fertile and barren, in the course of the summer; and the frost in October, which damaged many things generally deemed hardy, did it no harm at all. This last sharp frost when we had no snow has done the amount of injuries I record, *J. R. S. O.*

Rain in Monmouthshire.—The amount fallen here during the past year, and its relation to the average of the six preceding years will be seen from the following table:—

	1859.	Average of 1853—1858.
January	1.46	2.12
February	1.65	1.40
March	2.85	1.36
April	8.21	2.00
May	1.37	2.65
June	2.26	1.98
July	1.92	2.86
August	3.40	2.68
September	3.91	2.19
October	2.86	3.55
November	4.82	1.41
December	4.28	1.67
	33.58	26.25

There were 147 days on which there was an appreciable amount of rain in the gauge; the preceding six years give a corresponding average of 144 days. This house is situated upon the banks of the Wye, midway between Monmouth and Ross. *J. M. H.*

Rain in Lancashire in 1859.—

	Inches.		Inches.
January	12.2	Brought forward	38.5
February	7.7	July	2.9
March	10.3	August	8.9
April	6.1	September	11.2
May	0.1	October	4.0
June	2.1	November	8.4
		December	7.1
Carried forward	38.5	Total	81.0

The above is the largest quantity we have had since 1852; in that year we had 93 inches. Since January 1, 1860, we have had 5 inches of rain. *Robert Aitken, Gardener to J. G. Marshall, Esq., Monk Coniston Park, North Lancashire.*

Growth of Pinuses at Esher Place, Surrey.—

	1849.		1860.	
Cedrus Deodara	7 ft.	4 in.	21 ft.	0 in.
Cryptomeria japonica	2	4	24	0
Pinus Coulteri	6	2	34	3

	1854.		1860.	
Abies Menziesi	8 ft.	2 in.	20 ft.	3 in.
Araucaria imbricata	6	7	13	0
Cedrus atlantica	1	3	4	6
Pinus Devoniana	4	11	13	6
„ pyrenaica	5	8	18	6

H. W. Spicer, Jan. 10.

Temperature.—The subjoined statement comparing the island of Cumbrae, about 18 miles from this place, with Greenock, may be of interest to your readers:—

	Cumbrae.	Greenock.
Mean temperature, December, 1859	37°.3	35°.7
Mean of the highest	40	39.5
Mean of the lowest	34.6	32
Highest in the month	46	50
Lowest	24	19
Total fall of rain	2 inches.	7.75 inches.

A Constant Subscriber.

The recent Frost.—As there appears to be some doubts entertained as to the accuracy of Mr. Chater's report of the severe weather that visited Saffron Walden between the 17th to the 20th of December, I beg to offer a few remarks in confirmation of that report. I well know that Mr. Chater had four thermometers hanging out during the whole time the severe weather lasted; all of them were Negretti & Zambra's make, three of them spirit instruments, the other mercury; two of them were direct from the maker's; one had been hanging indoors for a considerable length of time, where the temperature was seldom below 40°, the other had been out of doors continually for some years past. Now, it was found that in the higher degrees they varied slightly, but as the temperature became lower they gave more uniform results, and when once below zero there was scarcely any difference whatever observable. On the 19th, the coldest here, they all stood firm at 0.90° from 12 o'clock at night until 7 o'clock next morning without the slightest variation. Now it would be an odd fact, and indeed extraordinary, that these thermometers under such various circumstances, all showing as they did precisely the same temperature, should have indicated falsely, and each of them equally at fault in the same direction to an inappreciable part of a degree. Our neighbour Mr. Little, of Chesterford Park, appears to doubt the acccuracy of Mr. Chater's observations or that of the instruments, and he founds his doubts upon the fact of his individual thermometer (and that placed under the shelter of an orchard house) only indicating 5° Fahr. I should give it as my opinion that had Mr. Little placed his thermometer quite open and unsheltered, it would have gone some few degrees lower than what he mentions, but even then I think not so low as in the particular spot in which we are situated, for on going from here but a very short distance in any direction, I find shrubs that are with us killed quite down to the ground looking perfectly healthy and green. Surely your Forfarshire correspondent must be in error when he gives 15° Fahr. as the lowest on the 19th, for if we refer to a very intelligent report that appeared in your columns from Cornwall (which is almost as far again south from Forfarshire as we are), we shall find even there a temperature reported considerably lower than what we get from Forfarshire. But as nothing is a better register of severe weather than marks left, I will endeavour hereafter to give the effects produced in this locality, and perhaps some other correspondents will tell the effects produced in other neighbourhoods, that we may gain a little information as to the amount of frost different shrubs, &c., are capable of withstanding. *E. S., Saffron Walden.*——During the late severe frost the thermometer on our premises registered on the night of the

14th inst.	15°
15th „	13
16th „	2¾

Strictly speaking the lowest temperature was at 9.15 on the morning of the 17th. The thermometer indicated 4° at sunrise, but fell 1⅓° during the following hour. In a position about a mile distant and 40 feet lower, the thermometer registered 1°. The maximum temperature on the 17th was 12°.

18th minimum	6¾
19th „	8½

Wellingtonia gigantea is entirely uninjured by this low temperature. A row of 15 to 20 plants, nearly 4 feet high, is as green now as they were two months ago. Our Araucarias are severely injured, especially the short-leaved many-branched forms. Araucarias which had been moved last autumn were comparatively speaking but slightly injured. All our plants of Pinus insignis are more or less injured, except one which was moved early last autumn, and which was more completely "dormant" in consequence. We are glad to say that hundreds of fine bushy specimens of Cupressus funebris have stood without protection and without any injury worth naming. This plant will prove, we have no doubt, perfectly hardy when thoroughly established, except when assailed by severe frost late in spring. Our plants (many rows 2 to 4 feet high) have now borne four or five winters and are very handsome. Larger specimens (5 to 7 feet) are less influenced by the frost (remain greener) than equally large specimens of C. macrocarpa. Cupressus Lawsoniana, and C. McNabbiana are uninjured, and so is Cephalotaxus Fortuni. Biota meldensis has stood well, and is highly ornamental from its rich plum colour (very different from the dingy brown of Chinese Arbor-vitæs, &c.). Cupressus elegans (Knightii ?) stands, where Pinus Edgariana, P. insignis, and many other Conifers are severely injured. C. "majestica," C. "Cashmeriensis," and Juniperus Bedfordiana seem quite hardy in a mid-winter frost. *James Backhouse & Son, York.*

Waterproofing.—Thinking that the subjoined recipe for waterproofing cloth, without in the least degree making it impervious to the air, may be of use, I venture to send it to you. I may mention that I have had both coat and trousers done with it and never found it let in the slightest wet under the most unfavourable circumstances. I should mention that it is not my own invention, but taken from an old "Mechanics' Magazine." If the manufacturers could be induced to apply the solution while the cloth is in the web, it would be much better done, and any cloth would be easily waterproofed. The following is the recipe in question:—To waterproof any sort of cloth or made garments all that is necessary is to make a very weak solution of glue or size (when cold it is weak and tremulous, about the consistency of calves' foot jelly), and while hot stir in a piece of alum till the taste of alum is distinctly perceived, when the piece is to be taken out, at the same time to add a little soap also, or rather soap suds to it, and then while it is hot to brush over the surface of the clothes with this solution. The preferable mode, however, is to waterproof the cloth while

in the web; in this state it can be dipped into the solution and afterwards wrung out, or what would be becter still, passed through a pair of squeezing rollers, and the pile of cloth afterwards laid smooth with the brush and cold water; the use of the soap is to take away the hard feel that the size when applied alone would impart to the cloth, and which would also render it more difficult for the tailor to sew. The process on the large scale is besides an exceedingly cheap one; there is little labour required to pass a web of cloth through squeezing rollers, and not only is the sizing material in itself cheap, but only a very small portion of it is essential to the waterproofing of a large surface of cloth, as the greater part of it is expressed by the squeezing rollers, only as much being left in the cloth as to cause it to feel damp. Exposure to the air in the same way as sized paper is dried, completes the process of waterproofing. *A Constant Subscriber.*

Luculia gratissima.—The beauty and fragrance of this plant at this dull season of the year induce me to call attention to it for conservatory decoration either in borders or small pots. Two very young plants were put out against the back wall of a conservatory here about nine years ago. Those plants now cover nearly 300 feet of the wall, and are making their way up seven of the rafters, on five of which they have reached the height of 10 feet. The clusters of flowers line the rafters and are very large, some of them 10 inches in diameter, and in various stages of growth. The treatment the plant receives is very simple, and can be afforded by every possessor of a cold greenhouse. The soil used consisted of two-thirds loam, the remainder leaf-soil and very sandy peat; plenty of drainage is the very life of the plant in winter. In the early summer months I treat the specimens in pots just as I do Fuchsias, giving water rather freely whenever they require it. Towards the end of summer I water very sparingly, so as to ripen the young wood before winter. After this it should be kept cool and dry until it shows signs of blooming, giving it only sufficient water to prevent flagging. While in bloom water should be given very sparingly, otherwise the young shoots push leaf-buds, and the unopen flower-buds fall off. Plants here growing in 7 inch pots with as many heads of blooms on them are extremely handsome. The Luculia is often grown in too much heat, which induces it to become leggy and unsightly. The temperature I give it is 42°, in severe weather it is often much lower. Indeed, I have seen the leaves frozen to the glass without sustaining any injury. It is quite possible that this plant is subjected to more cold in its native country than we at present know of, seeing that it is found in great abundance on the smaller hills of Nepaul. *W. Culverwell, Thorp Perrow.*

The Weasel.—When reading that interesting article in your Paper of December 3, by Mr. Waterton, it recalled to my mind a circumstance regarding the weasel which I witnessed in the spring of the last year. This animal, although small compared with other quadrupeds, is nevertheless an enemy to others that are much larger in size. By the gardener it ought to be held in more estimation than it generally is, although it is said to be one of the most intractable animals in the world; it is quite a master for rats, mice, and moles. In the spring of the year a number of rats were making sad havoc among the Carrots, which were stored in sand; even the ratcatcher with his traps and phosphoric paste did not displace them. One day when the shed door was open a weasel was playing about from one hole to another, when it ventured in among the Carrots; the rats apparently did not like the company of the new comer, for there was a struggling and a noise within which told that it was no pleasant pastime that was going on; but the sounds were soon over, and in a little while the weasel made its appearance carrying a dead rat as large as itself, which it concealed in the shrubbery; it was soon back again, and brought out another dead rat and continued doing so until four or five rats were carried out. The weasel must have despatched the rats quickly, for the whole killing and carrying out were done in a few minutes. We are told by some writers on natural history that moles skin the worms before they eat them; the mole in its turn is skinned by the weasel, and very neatly it is done. We are also informed that the weasel passes the greater part of the day in sleeping, and reserves the night for its times of exercise and eating; but the above transactions were done in daylight. *P. Mackenzie, Plean, Stirling.*

Conifers, &c., in Lincolnshire.—Living in the north-east corner of Lincolnshire, distant only six miles from the German Ocean, I think perhaps Mr. Tillery will be much surprised to find that even here I can speak as to the hardiness of some of the recently introduced Conifers. Some years ago it was thought that very few evergreens would flourish in this part of the country, and certainly in my remembrance a great change has taken place in the temperature, owing no doubt to the effectual drainage of the land, and the Grass land having come under the plough. Five years ago I commenced the formation of a garden out of a ploughed field, not the very best of soils. I drained it nearly 3 feet deep, trenched it 2 feet, and planted the evergreens. The Deodars are now 10 feet high and very beautiful; they have never suffered from frost, except in the frost of last spring, which caught them just as they were making their first growth; that gave them a check, but they very soon recovered. Cupressus Lamberiana is 9 feet, the hardiest of all trees and one of the most beautiful. The following also are perfectly uninjured:—Cupressus funebris, C. Lawsoniana, C. excelsa, Thujopsis borealis, Juniperus excelsa, Thuja gigantea, Abies Pinsapo, Pinus excelsa, P. insignis, P. Webbiana leading shoot the top killed; Taxus elegantissima, T. aurea, Forsythia viridissima. A Wellingtonia was planted a year and a half ago; last year it made a leading shoot of nearly 2 feet and twice the width, and is perfectly uninjured. The only thing which appears with me to have suffered is the Pampas Grass; one with 36 spikes of bloom on it is much burned, and some younger ones look almost killed. The Araucarias are also uninjured, and the Portugal Laurels, which are 9 and 10 feet high, have not a leaf touched. *J. Deanewaite, Manby Rectory, near Louth.*

Solanum capsicastrum.—During a visit to Berlin in August, 1858, a small plant with red berries attracted my attention on one of the flower stalls in the Gend'armes market. Its novelty and beauty induced me to bring it home, which, after many mishaps, was at length accomplished. It proved to be Solanum capsicastrum, which you have so much but not too highly extolled in a late Number. It continued in full berry until the following April, so that at least during the eight worst months of the year it is a highly ornamental plant. It has flourished with me in a cool greenhouse planted in a clayey garden soil with a mixture of leaf-mould and sand. There are many seeds in each berry, and at the end of last April I sowed some in a pot of sandy soil, in which they germinated freely without bottom-heat, and some of these seedlings are now in berry. I find it very liable to be attacked by aphides, and this autumn after the berries were full grown and coloured several fell off without any apparent cause. Can you suggest a reason? *Eliza Westwood, Henley House, near Oxford.*

Doubtful Permanence of Cross-breeds.—It is a rather curious circumstance that the Number of the *Gardeners' Chronicle* which contained the description of the new mongrel Brassica between the Cauliflower and Brussels Sprout reared by Mr. Lee, and which has proved true for four generations, should also have contained a statement that our great agriculturists are looking out for some substitute for the Swede Turnip, which they are unable to maintain in its true condition. In this latter case we have, as it seems to me, a striking instance of the want of permanence in these cross-breeds, notwithstanding all the care which a strong sense of their utility has caused to be bestowed upon them. It is an instance likewise of much importance in a physiological point of view as negativing the theory that it is, in a more especial manner, those species only both of animals and plants which are useful to man, which are subject to permanent modification by cross-breeding and careful propagation. This is not the place to enter into a lengthened discussion of the question whether all these modifications either of hybrids produced by crossing distinct species, or of mongrels by crossing varieties, would not revert to the old type of the species if left to themselves, and removed from those causes either natural or artificial under which they have flourished, and brought back to those under which the true species still flourishes. I cannot however regard the admission of reversion to an original type otherwise than as at once contradictory to the theory of progressive development, whether for the more especial benefit of the individual or of the species. Hence, I should not be astonished to find this new mongrel Brassica, although it might for a time continue to flourish in the soil and situation where it was first produced, lose its peculiar character under other treatment and in different soil. In like manner also the impossibility of keeping a breed true, unless from time to time it is crossed by individuals of another strain, seems equally in opposition to the development theory. I see, in both these cases, the efforts of Nature to get rid of monstrosities, and to revert to the true type of the species as originally created. To say that wild animals or plants which keep true to their kind—as, for instance, the Egyptian Ibis (which is still identical with the individuals found in the mummy pits)—are only enabled to do so by occasional crosses with individuals of the same species which have not sprung from the same grandfather or great grandfather is fallacious. Who can doubt that if there were by some accident only one pair of the Ibis left in Egypt, and this pair and their progeny were to continue to breed for another 4000 years, the species would not remain true at the end of that time? This theory seems also refuted by the hive bee. Here no crossing is necessary, even if but a single hive were to be kept from year to year, unless we were to fancy that the queen voluntarily flew away from her 3000 brethren to find a partner amongst the males of some other hive. Where many hives are kept of course it is not impossible that such crossing might take place; but it seems, even here, beyond the utmost stretch of probability. I have thrown out these hints in the hope of inducing a discussion on these and other questions raised by Mr. C. Darwin in his very remarkable volume lately published. *J. O. Westwood.*

Societies.

ENTOMOLOGICAL: *January* 2.—J. O. Westwood, Esq., M.A., in the chair. Mr. Samuel Stevens exhibited a box of beautiful insects of various orders collected in Siam by M. Mouhot, amongst which were some interesting novelties. Mr. Grove exhibited a specimen of Libellula pectoralis, a species of dragon-fly new to this country. Mr. Westwood exhibited a small Lepidopterous larva having eight ventral and two anal prolegs, which he had received from a correspondent who, whilst asleep, was roused by a smart bite inflicted on his instep (followed by a wheal), and who, on examination of the part affected, discovered the larva exhibited. Mr. Westwood observed, that although some Lepidopterous larvæ were known to be carnivorous, and to feed on animal matters of various kinds, and many of them on confinement would devour other larvæ, yet (taking it for granted that the larva exhibited was the real culprit in this case) this was the first instance he had heard of their attacking the living human body. The larva appeared to be that of one of the Tineidæ, but there was no appearance of a case in which it might have resided. Mr. Westwood also exhibited an elytron of a common British beetle (Broscus cephalotes) forwarded to him by Sir Charles Lyell, who had sent it as that of a fossil beetle, having been obtained from Mundesley in Norfolk, from a formation containing fish remains (determined by Agassiz to be such) of extinct species although associated with recent shells; Mr. Westwood, however, was of opinion that the elytron was a recent one, and it was not difficult to account for its being found in such a situation, as the species is common under marine rejectamenta on the coast; and it might readily be supposed that the working of worms might have carried down so small an article as the elytron of a beetle. The fact, however, possesses a certain interest in connection with that of the flint arrowheads in the drift, which is attracting so much attention at the present time. Dr. Allchin exhibited a small brass flask about 2 inches high, constructed for introducing small quantities of chloroform into pill boxes containing living Lepidoptera for the purpose of stifling them, he and other entomologists having experienced much inconvenience in using chloroform for this purpose when engaged in collecting, and the instrument exhibited was calculated to remove all difficulty, as by it a single drop could be obtained without any risk of spilling or evaporation. A new part of the Society's Transactions was announced as ready for delivery to the members, and notice was given of the alterations proposed by the Council to be made at the anniversary in the list of council and officers for the ensuing year.

BOTANICAL OF EDINBURGH. *Dec.* 8.—Prof. Balfour in the chair. Several donations were announced. The following communications were read:—

I. "*On the Anæsthetic Effects of Chloroform, Ether, and Amylene on Sensitive Plants.*" By J. S. Livingston, Esq. After explaining the method employed in performing the experiments, Mr. Livingston proceeded to detail such of them as were of a typical character, The anæsthetic influence it was found proceeded from leaf to leaf invariably in the descending order, and it very rarely happened that the leaf above the one acted on was at all disturbed. This effect was first observed by Professor Marcet, of Geneva, and communicated by him in a paper to the Société de Physique. To whatever source this singular phenomenon might ultimately be traced, whether to a susceptibility of the descending sap for transmitting narcotic effects, or to the existence of some yet undiscovered organ which had that power, the fact was, at all events, beyond dispute. To set aside any source of fallacy, and subject this fact to as severe a test as possible, the rootlets of a Mimosa (Sensitive Plant) were carefully exposed, and doses of chloroform, ether, and amylene given, in order to see whether it was not possible in this way to induce a propagation of the influence upwards. In every case in which any effect was exhibited, it invariably proceeded downwards. When ether and amylene were employed, no effect, it is true, was produced; but in the case of chloroform, instead of the narcotic influence attacking first the leaf nearest the roots, as one would expect *à priori*, it passed by four of the leaves, and appearing first at the fifth proceeded downwards till the first was reached.

De Candolle, in his "Physiologie Vegetale" (II., p. 866), mentions some experiments made by him, with sulphuric and nitric acids, on a Sensitive Plant, by which it was shown that these acids cause a folding of the leaves and a dropping of the petioles in an ascending order. These experiments had been repeated, and found substantially correct. A drop of sulphuric or nitric acid when placed on the lowermost petiole caused all the leaf stalks to fall much below a right angle. Of the three anæsthetic agents employed, amylene was found, on the whole, to act most powerfully on Sensitive Plants. With it the petioles always dropped down to more than a right angle with the stem, while with chloroform that was rarely the case. With both the petioles dropped gradually and evenly, unlike what they did with ether, in which case the petioles literally fell down to a degree beyond that with amylene and chloroform. The following difference was, however, observable:—In the two latter the falling of the leaf stalk was always accompanied by folding of the pinnæ, while with ether that was not the case, showing that with it the effect was more local. When amylene was employed, the recovery from anæsthesia was very speedy compared with what it was when chloroform or ether was used. Moreover, the pinnæ, when touched with amylene, folded from apex to base with an increasing rapidity, till they sometimes became confused. This was very unlike the regular and, if we may so call it, deliberate folding that took place with chloroform. With amylene, however, the pinnæ were

always closely appressed, while with chloroform they were rarely so. With ether the effect did not show for some seconds, the number of which constantly varied.

II. "*On the Primary Use of Ammonia in Vegetable Nutrition.*" By Major Hall. The more important points adverted to in this paper have already been given in our columns.

Miscellaneous Communications.—Dr. Balfour exhibited a stem of Astrapæa Wallichiana, yielding a large quantity of mucilage. When the stem is cut and put into alcohol the exudation of this mucilage becomes very evident.—It was also noticed that some stems of the Banana in the Botanic Garden, when allowed to dry after being cut down, showed a large quantity of white crystals on their surface. These had been analysed by Dr. Simpson in the University laboratory, and had been found to consist of chloride of potassium.—Dr. Maclagan, Berwick, sent roots of an Elder tree taken from a water-pipe, accompanied with the following note:—"The enclosed production was brought to me by the Superintendent of Works here. When moist it was much more bulky, but the radicles very brittle. It occupied and completely obstructed the main 6-inch water-pipe leading from the reservoir into the town of Berwick. The pipe is 8 feet deep, and covered over with clay puddle, through all which, and through some fissure at a joint, the small rootlet had penetrated. I asked what were the nearest plants, and found that the two elders were suspected of being the culprits, and were accordingly eradicated."—Mr. Paterson, of Restalrig Park, exhibited a specimen of Solanum capsicastrum, covered with Orange berries.

The following Office-bearers were Elected:—Prof. Allman, president; Dr. W. H. Lowe, Dr. Seller, A. Murray, and Prof. Balfour, vice-presidents; F. Anderson, J. G. Booth, jun., George S. Lawson, Dr. Cleland, A. J. Macfarlan, T. Barclay, John M. Hunter, Dr. John Sibbald, John Anderson, and W. Ivory, members of council; Dr. Greville, honorary secretary; Dr. Maclagan, foreign secretary; W. Brand, W.S., auditor; P. Neill Fraser, treasurer; Neil Stewart, artist; A. Dickson, curator; and J. Sadler, assistant-secretary and assistant curator. Several gentlemen were elected ordinary members.

Notices of Books.

The Story of New Zealand: Past and Present—Savage and Civilised. By Arthur S. Thomson, M.D. 2 vols., small 8vo. (Murray.)

A good history of New Zealand was much wanted, and Dr. Arthur Thomson has endeavoured to supply the deficiency in the two volumes now before us. Having passed 11 years in the colony and acquired a knowledge of the native language, he must be admitted to be a good authority for the general statements he has made; and his position as surgeon to the 58th Regiment will have enabled him to take a dispassionate view of those unsuccessful military proceedings, which took place some few years ago, and are still thought by most persons to reflect discredit upon the regimental officers in command.

The first part is occupied by an account of the country and its native inhabitants; comprehending among other matters a sketch of its geography and natural history, and many details regarding its climate, together with an account of the habits of the natives, their laws, superstitions, customs, husbandry, diseases, &c. The second part is entirely composed of a history of the islands from their discovery up to their first regular colonisation in 1839, when Captain Hobson was appointed Governor, and of the succeeding political events up to June, 1859. The third and last part is devoted to a consideration of the causes which are bringing about the decrease of the native population estimated by the author at 1 per cent. per annum, and to advice to emigrants. The whole is illustrated by good maps and clever sketches of scenery, &c., among which a view by Lance-Serjeant Williams, of the repulse of a storming party of English troops in an attempt to take a native stockade, is far from being the least interesting.

Dr. Thomson writes with facility, describes with clearness, condenses with skill, and must be regarded as a trustworthy authority in all matters that have come under his personal observation. His opinions concerning the acts of the early settlers, the proceedings of the New Zealand Company, and the unsuccessful military operations, all which he discusses at length, may not command universal assent, but we think there will be only one opinion as to the justice of his eulogy of Governor Sir George Grey, who most certainly was the saviour of the colony. "Sir George Grey," writes Dr. Thomson, "had ruled New Zealand for eight years, when he obtained the Secretary of State's permission to return to England. It is hardly necessary to state that his approaching departure was viewed with different feelings at the several settlements, although from most of them he received some pleasing testimonial. The aborigines looked on his departure with regret. From tribes resident near the English settlements, from tribes at a distance, from chiefs who had fought for and against the English, addresses were sent to Governor Grey, breathing a spirit of confidence and attachment. Mattikis, and other ancestral ornaments almost never parted with, were freely given to him; songs were composed, and speeches full of eloquence delivered. * * * With superstitious awe the natives pointed out to me the initials 'G. G,' which Sir George Grey cut in 1850 on a huge block of pumice-stone standing upright on the solitary path between the boiling lake of Rotomahana and Taupo; but Governor Grey requires no mural monument to keep his memory alive in New Zealand, for by the present generation of natives he will be spoken of as the capturer of Ruapekapeka and Rauparaha, and the subduer of Heke and Rangihaeata; they will also remember him for the schools and hospitals he established and endowed, for passing an ordinance which prevented them purchasing spirits and gunpowder, for friendly feelings towards them, for the Resident Magistrates' Act, and for rescuing from oblivion some of their best ancient songs and legends. By the settlers he will be remembered as the last Governor who had despotic power, for the peace and prosperity his rule brought to the country, for his cheap land regulations, for retarding self-government for five years, and for laying the foundation of a constitution more liberal than that of the United States. He was not, however, very popular with the colonists; and no man armed with despotic power ever can be so among a community of Anglo-Saxons. Irresponsible rulers have, nevertheless, this satisfaction; if they do good, they invariably become popular after they have gone, for, like death, their departure 'openeth the gate to good fame and extinguisheth envy.'"

One of the most curious parts of these volumes is the account of the cannibalism, happily now extinguished, for which the New Zealanders once were notorious. It would appear that these savages were not habitually man-eaters; they only devoured in triumph or revenge their captives or the dead who were killed in battle. The origin of their horrid practice is described by the New Zealanders themselves in different ways. One story "relates that a whale was stranded, containing the spirit of the deified man Tutunui. The animal was consequently sacred. A man named Kae ate a portion of this whale, which sacrilegious act was equivalent to eating the body of Tutunui. In revenge, the descendants of Tutunui killed and ate Kae. Kae's friends in return ate one of Tutunui's descendants, and thus commenced cannibalism, and a cause was given for its continuance. * * *

"Whether or not cannibalism commenced immediately after the advent of the New Zealanders from Hawaiki, it is nevertheless certain that one of Tasman's sailors was eaten in 1642; that Captain Cook had a boat's crew eaten in 1774; that Marion de Fresne and many other navigators met this horrible end; and that the pioneers of civilisation and successive missionaries have all borne testimony to the universal prevalence of cannibalism in New Zealand up to the year 1840. It is impossible to state how many New Zealanders were annually devoured; that the number was not small may be inferred from two facts authenticated by European witnesses. In 1822, Hongi's army ate 300 persons after the capture of Totara, on the river Thames; and in 1836, during the Rotorua war, 60 human beings were cooked and eaten in two days. The persons eaten were enemies slain in battle, and men, women, and children taken prisoners. The bodies of the last two were seldom eaten, and cannibalism was rarely practised during peace. When slaves were eaten in peaceful times by chiefs, political motives were the secret causes of this unusual occurrence. There are few New Zealanders above 40 years of age who have not partaken of human flesh, a sure proof of the former prevalence of cannibalism in the country."

The natural history of the islands is but slightly sketched in, and differs in nothing from what is already well known. We may, however, quote a short but graphic description of a New Zealand forest:—

"Indescribable is the charm of New Zealand forests for the lovers of nature. There generations of noble trees are seen decaying, and fresh generations rising up around the moss-covered trunks of fallen patriarchs. The profound silence which reigns in these regions produces a pleasing gloom on the mind, and the scene displays better than the most classic architecture the grandeur of repose. No sound is heard save the falling of trees, or the parrots' shrill screech, as birds which enliven the outskirts of forests are mute in their interior. Around the graves of past generations of trees the air is hushed into stillness, while the tops of the living generation are agitated with gales and breezes. At Christmas the Pohutukaua (Metrosideros) is covered with scarlet flowers, and is then the most gaudy of forest trees; and the Rimu (Dacrydium cupressinum) possesses a melancholy beauty and an indescribable grandeur. Few of the Pines recal to the settler's eyes the same trees in England, and singular to relate, unlike their congeners, the majority of them grow intermixed with other trees. The celebrated and beautiful Kauri (Dammara australis) is the only Pine bearing a cone, and the male and female cones are found on the same tree.

"Travellers talk of the solitude of the forests, but there is society in trees which men miss on immense plains; it is on the prairie alone that the solitary traveller has a sensation of loneliness, feels that he is in the world and does not belong to it, that he is a solitary wanderer on a vast oceanless desert without landmarks."

The great wingless elephant-footed birds called Moas, 13 feet high, whose eggs were so large that a man's hat would not have formed a sufficiently capacious egg-cup, seem to have really become extinct.

"It is whispered in the colony," says Dr. Thomson, "that gigantic moas still live in the solitudes of the Middle Island, an idle story, as no large moas have been seen alive since 1650. From all accounts, the moas were extirpated by natural causes, and the arrival of the Aborigines in the country, who slaughtered them for their flesh, bones, and feathers; the flesh and eggs were eaten, the bones were converted into fishhooks, the skulls were used for holding tattooing-powder, and the feathers were celebrated as ornaments for the hair. The natural causes which hastened the extinction of moas were the geological changes which ages had produced on the country; New Zealand was perhaps a great continent when the moas were first created, as it is difficult to conceive that such gigantic birds were ever hatched to live and die in the small portion of the globe now known by that name."

The climate of New Zealand has long enjoyed a great reputation. Dr. Thomson is of opinion that it fully deserves it.

"No season can be reckoned unhealthy in New Zealand. Even the winter months, which within the temperate zone invariably cause most deaths, pass over the settlers almost unindicated by an increased mortality. New Zealand will be found an invaluable residence for Europeans who have lost their health in India, China, or the warm districts of Australia. This is proved by the low mortality which occurs in New Zealand from fevers, liver complaints, and diseases of the stomach and bowels; maladies which drive Europeans from India and the tropics to search for health at the Cape of Good Hope, Egypt, Malta, and other countries. To 'old Indians,' who have suffered from no obvious organic disease, but whose minds and bodies are exhausted by the high temperature of the tropics, New Zealand will be found a peculiarly healthy residence. * * * It would be foreign to speculate here on the causes which produce this remarkable salubrity of the climate of New Zealand to Anglo-Saxons; but it probably arises from the evenness of the temperature at all seasons, the constant agitation the wind produces in the atmosphere, and the circumstance that, from whatever quarter the wind blows, it passes over a wide expanse of ocean; in addition to which the country contains few physical sources of disease."

But perhaps the part of these volumes which will have most interest with our readers is the last, in which the author offers a good deal of advice to emigrants. With a few extracts from this chapter we must break off:—

"There is no practical use in weighing one colony against another, as that country is the best for the true emigrant where food grows fast, the climate is healthy and pleasant, and the race does not degenerate; where good land is cheap, and the people govern themselves; where life and property are safe, fuel and water abundant, and competence follows moderate industry. It is my own conviction that all these requisites are found more developed in New Zealand than in any other English colony. There are several proofs of this now before me, but the following indirect evidence appears the most forcible. In 1853, a vessel freighted with men, women, and children, descendants of those Scotch Highlanders who settled in Nova Scotia about the beginning of the century, arrived in the harbour of Auckland. These emigrants spoke the language of the Gael, and had preserved unadulterated among them customs long since neglected in their fatherland. In 1851, they migrated from Nova Scotia and Canada to Australia, but finding the summer-heat in that continent harder to bear than the seven months of winter in North America, they left it for New Zealand, and settled in one of the beautiful inlet harbours on the eastern shores of the North Island, where they now sojourn prosperous and happy. Since that year other ships laden with emigrants have arrived at Auckland from North America, and a stream of emigration is pouring in from that country.—One of the most agreeable circumstances connected with the country is the attachment settlers acquire for it after a few years' residence, and the ease with which they come to regard it as their future island home. This attachment may be attributed to several causes, not the least prominent of which is the mountainous character of the country, as few become similarly attached to the broad and arid plains of Australia.—Men in the middle ranks of life in England, with a little capital, find themselves in the first rank in New Zealand. To hold this position, sobriety, intelligence, and industry, the only talents which stand the test of time, are indispensable; without these gentlemen's sons descend into the ranks of the working classes, with them mechanics' sons become gentlemen. Since the establishment of responsible government every post of honour, save that of governor, is in the people's hands, and men born to drag the constitution coach in England become drivers of the vehicle in New Zealand. Men ambitious of keeping gigs, genteel settlers lacking strong muscles and stout hearts, haters of manual labour, and unused or unwilling, as the expressive colonial phrase goes, to 'rough it,' were better at home if they can live at all; while married women, more deeply versed in ball-room gossip than in the arts of boiling and frying, should set their faces against emigration unless they intend to turn over a new leaf. Unmarried girls may migrate, but they must condescend to become useful as well as agreeable; many good honest settlers have been ruined by having fine ladies for wives. Hitherto New Zealand has been a favourite retreat for broken-down young gentlemen, who never prosper. While their money lasts they hang about hotels; when it is gone they disappear. Some die of the drunkard's fever, others, who have not yet

exhausted the kindness of rich relations, return home, where they abuse the land they have left as a fine colony only in books; a few wander into the interior, and lead an idle independent life, trading with the natives. Professional men, unsuccessful in England from the number of competitors for public favour, occasionally prosper, but industry and application to business are as requisite in New Zealand as in England. High authority declares that 'the poor shall never cease from the land;' but in New Zealand those only are poor who from sickness cannot, or from idleness and intemperance will not work."

The *Post Magazine Almanac and Insurance Directory* (Pateman), price 6*d*., consists of 144 closely printed pages relating entirely to Fire and Life Insurance Companies, rates of premium, directors of such bodies, companies winding up, together with the usual miscellaneous information found in other almanacs.

Thesaurus Capensis, or Illustrations of the South African Flora, by Dr. Harvey, Part III., contains excellent figures and accounts of the following rare plants:—No. 51, Tryphostemma Sandersoni, a Passion-flower-like plant with blossoms no bigger than those of Chickweed; 52, Triumetta trichocarpa; 53 and 54, Brachycorythis ovata and pubescens; 55, Habenaria arenaria; 56, Stenoglottis fimbriata, the four last small flowered terrestrial Orchids; 57, Rhamphicarpa tubulosa, a handsome herbaceous plant with large white flowers, but we fear uncultivable; 58, Nycterinia natalensis, a little gem with brilliant white flowers, crimson at the back; 59, Cycloptychis virgata, a Crucifer; 60, Cadaba natalensis, a curious Capparid; 61 and 62, Erythrina Sandersoni, a superb Leguminous plant, with close oblong heads of large dull crimson flowers; a fine thing for gardens; 63, Lotononis monophylla; 64, Crabbea angustifolia, an Acanthad; 65, Cissus lanigera, a Vine of no beauty, but considered by the Zooloos, who call it "Tambesi," a specific for the toothache; 66, Raphionacme purpurea, a tuberous Asclepiad; 67, Gomphocarpus truncatus; 68, Dicoma Zeyheri, a handsome white "Everlasting;" 69, Corymbium congestum; 70, Eumorphia Dregeana, a little Aster-like shrub; 71 and 72, Rafnia crassifolia and lancea, two Broom-like shrubs; 73, Hibiscus pusillus, an extremely pretty perennial, with great red or yellow flowers, which certainly ought to be introduced from Grahamstown, where it is common in fields; 74, Combretum holosericeum; and 75, Combretum Zeyheri.

We are glad to see that a second edition of Captain Hardy's *How to repel Invasion* has been already issued (Hardwicke). Our own opinion of the value of this pamphlet has been lately expressed (see p. 711 of last year).—*On the Necessity of a more effectual System of National Defence*, by the late Earl of Selkirk (Hatchards), is a pamphlet of 79 pages, written in the year 1808, but re-issued now by Sir John Wedderburn, as a valuable contribution to the great subject which is now occupying all men's minds. The remarks it contains on volunteers are probably applicable to the present state of that movement. We hope, however, the resources of the country will not be again applied to the formation of local militia regiments, advocated by Lord Selkirk, for we remember enough of them to know that a more worthless undisciplined force could not be got together.—*Spain and the War with Morocco* (Ridgway) is a pamphlet by Mr. Dalhousie Ross, who appeals "to that great engine of public opinion—the press of England—to watch with a more friendly feeling the aspirations of a people which, though of late years they have fallen a little behind us in wealth and commercial prosperity, is a great nation, an old ally of England, and worthy in very many respects of our admiration and esteem." As Mr. Ross is well acquainted with Spain, having resided in that country for many years, his views are entitled to attention.

TRADE LISTS RECEIVED.—JAMES LOTHIAN'S List of Garden, Flower, and Agricultural Seeds, Implements, &c., Glasgow.—A Catalogue of Selected Vegetable and Flower Seeds, sold by THOMAS KENNEDY & Co., Nurserymen and Seedsmen, Dumfries.—Catalogue of Forest, Ornamental, and Fruit Trees, Shrubs, &c., with short descriptive notices of the principal Coniferous Plants; also Descriptive Catalogue of Select Vegetable and Flower Seeds for 1860; W. DRUMMOND & SONS, Seedsmen and Nurserymen, Stirling; and 58, Dawson Street, Dublin.

Miscellaneous.

The Maltese Dog.—A very celebrated, but extremely rare, "toy" dog, is the Maltese Dog, the prettiest and most loveable of all the little pet dogs The hair of this tiny creature is very long, extremely silky, and almost unique in its glossy sheen, so beautifully fine as to resemble spun glass. In proportion to the size of the animal, the fur is so long that when it is in rapid movement, the real shape is altogether lost in the streaming mass of flossy hair. One of these animals, which barely exceeds 3 lbs in weight measures no less than 15 inches in length of hair across the shoulders. The tail of the Maltese Dog curls strongly over the back, and adds its wealth of silken fur to the already superfluous torrent of glistening tresses. It is a lively and very good-tempered little animal, endearing itself by sundry curious little ways to those with whom it is brought in contact. The "toy" spaniels are subject to several unpleasant habits, such as snoring and offensive breath, but the Maltese Dog is free from these defects, and is, therefore, a more agreeable companion than the King Charles or the Blenheim Spaniels. As the name implies, it was originally brought from Malta. It is a very scarce animal, and at one time was thought to be extinct; but there are still specimens to be obtained by those who have no objection to pay the price which is demanded for these pretty little creatures. *Routledge's Illustrated Natural History.*

The Tea Tree in India.—Mr. Henry Mann, an enterprising gentleman who left China about five years ago, has introduced the Tea tree to Southern India, having formed a plantation on the Neilgherries, which is now flourishing. The Madras Government has lately published an interesting report upon the subject. The plantation is situated about 2½ miles above Coonoor, at an elevation of 6000 feet, with an exposure to the north-east, and contains about 6000 plants. The ground occupied is about 4 acres. The plantation is on a slope. The forest land is found most suitable for the plants. It now only remains to test the leaf and to procure skilled manufacturers. This the Government were asked to do by the Conservator of Forests, but the application has been refused on the grounds of the inexpediency of Government interference with private enterprise. The importation of skilled manufacturers on speculation will not probably be ventured upon by any private individual for many years. The cultivation of Tea in the hill districts of India seems to be spreading fast, and as these are the localities recommended for European colonisation, we may yet see India rivalling China in this trade, and sturdy Anglo-Saxon pickers depicted on the Tea chests instead of almond-eyed, long-tailed men of China.—*Bengal Hurkaru.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Where the twiners for covering the roof are grown in boxes, or have but limited root room, as much of the surface soil should be removed annually as can be done without seriously injuring the roots, replacing it with some good rich, fresh material, and this cannot be done at a better season than the present. The conservatory or show-house should now or very soon be full of floral beauty. Camellias, Luculias, Epacrises, Heaths, Primulas, Mignonette, Tree Violets, Cinerarias, Daphne indica, and many other showy things, may easily be had in bloom about this time; and, with proper convenience, a few Roses and other forced plants, as Oranges, bulbs, &c., should also be coming in, and will greatly assist in maintaining the gaiety so desirable in this house.

FORCING DEPARTMENT.

PINERY.—There is often considerable difficulty experienced in getting the requisite number of plants to show fruit at this season, and where this is the case every advantage should be taken of mild weather to maintain a brisk temperature, which may be kept at from 70° to 75° by night, and 80° to 85° by day. The difficulty of getting plants to show fruit is generally the result of their growth not having been properly matured in time to allow the plants a period of comparative rest before subjecting them to forcing with the view of getting them to show fruit, and where any difficulty of this kind is experienced timely attention should be given to the preparation of the plants for another season, which is the only means of having them at command. All that can be done this season, however, with backward plants will be to take advantage of any bright weather that may occur to maintain a brisk temperature, letting it rise to 80° or 85° with sunshine, and 70° to 75° should be secured at night. Maintain a moist growing atmosphere, but do not syringe plants overhead that are showing fruit. Also see that the roots are in a properly moist state, using tepid water where any is wanted. VINERY.—In houses being started use means to get the buds to break regularly, and where necessary bend the Vines, raising the backward buds to the highest point; maintain a moist atmosphere, and sprinkle the Vines morning and afternoon. When the buds begin to break the night temperature may be increased a few degrees, but it should not exceed 55° until they are all fairly started, and 65° by day should not be exceeded except with sunshine and air. Rub off all superfluous buds, taking care to leave the stronger ones, but in cases where there is any fear about the show of fruit, it will be advisable to leave all promising buds until the bunches can be perceived. It is only in cases, however, where the Vines are in a bad state that there need be any fear about destroying all superfluous buds as soon as this can be done. Admit air on every mild day, using a sufficient amount of fire-heat to maintain the proper temperature. Look well to the border, and see that it is protected from wet or sudden changes of weather; and, where fermenting materials are used, turn them as often as necessary, adding a small quantity of fresh leaves and dung, in order to maintain a steady heat.

FLOWER GARDEN AND SHRUBBERIES.

Let the most be made of favourable weather while it lasts to push forward new work and all out-door operations. Where the turf is at all unlevel time should be spared in course of this or next month to repair this, as if lifted later than February it might require some attention to get it to take quickly. Unlevel turf is an eyesore the season round, and it makes the mowing more tedious and difficult, hence it is worth an effort to spare time to make whatever little repairs may be necessary here. Sweep lawns occasionally to clear them of fallen bits of branches, &c., and use the roller here and on gravel frequently to secure a firm smooth surface. Let the stock of plants, except those that may be wanted to furnish cuttings, be freely exposed to air whenever the weather will admit, so as to keep them hard and render them less liable to damp off in the event of their having to be kept covered up for some time. Any of the stock from which many cuttings are wanted should be removed to a light warm situation without loss of time, first washing the pots and clearing and adding a little fresh soil to the surface of the ball. Some kinds of Verbenas, &c., are very subject to mildew when placed in heat in the winter season, but this is easily kept in check by means of sulphur, only let the sulphur be applied the moment the pest makes its appearance.

HARDY FRUIT AND KITCHEN GARDEN.

If any planting of fruit trees still remains to be done this should be seen to very soon, and every available despatch used to get it completed. If it is worth while to occupy ground with fruit trees, and incur the expense, &c., of planting them, it certainly is worth consideration whether the ground is in the best possible state of preparation for being planted with fruit trees, and to incur any expense and trouble which may be requisite in order to render the ground as suitable as can be made for the kind of trees with which it is to be planted. To do this is seldom a work involving much direct outlay, for provided the ground is well drained, there is little else required except labour, materials for concreting, and a supply of good loamy soil, all of which can generally be obtained about most places. But it is useless to plant trees except there is a fair prospect of their doing well, and the necessary preparations for securing this can be more conveniently, cheaply, and efficaciously made before planting than afterwards, and the requisite preparations should be made, even if doing this should necessitate putting off planting until another season. Push forward the digging or trenching as the case may be, and get all vacant ground turned over as soon after this as circumstances will admit.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.
For the Week ending Jan. 12, 1860, as observed at the Horticultural Gardens

January	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 6	13	29.831	29.175	42	25	33.5	46	45½	N.	.06
Satur. 7	14	30.212	30.099	43	28	35.5	45	45	W.	.02
Sunday 8	○	30.294	30.244	46	24	35.0	43	44	S.W.	.02
Mon. 9	16	30.233	30.083	47	27	37.0	42½	43½	S.	.00
Tues. 10	17	30.162	30.134	42	30	36.0	42	43	N.	.00
Wed. 11	18	30.125	29.982	43	32	37.5	42½	43	E.	.00
Thurs. 12	19	30.045	30.028	45	30	37.5	43	42½	E.	
Average		30.129	29.963	44.0	28.0	36.0	43.4	43.8		.04

Jan. 6—Cloudy and fine; clear; frosty.
— 7—Fine; clear; large halo round the moon.
— 8—Lightly overcast; fine; clear; frosty.
— 9—Frosty; foggy; partially overcast; hazy.
— 10—Foggy; hazy; densely overcast at night.
— 11—Foggy throughout; hazy; overcast.
— 12—Foggy throughout.
Mean temperature of the week, equal to the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending Jan. 21, 1860.

January	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 15..	41.4	29.1	35.2	11	0.54 in.	3	4	3	3	3	8	7	3
Mon. 16	41.9	31.2	36.6	19	0.34	1	7	5	1	5	8	4	3
Tues. 17..	42.7	31.3	37.0	12	0.48	3	6	2	3	3	9	4	4
Wed. 18..	42.9	31.5	37.2	14	0.55	1	4	1	3	4	12	6	3
Thurs. 19..	43.0	30.3	36.6	14	0.88	4	2	4	2	5	9	6	2
Friday 20..	42.3	31.0	36.7	13	0.65	4	7	4	1	6	8	2	2
Satur. 21..	43.5	32.6	38.1	14	0.48	1	5	4	1	7	9	5	2

The highest temperature during the above period occurred on the 19th, 1828—therm. 60 deg.; and the lowest on the 19th, 1838—therm. 4½ deg. below zero.

Notices to Correspondents.

CUCUMBERS: *J S.* Cuthill's Black and White Spine; or if you want a large kind for purposes of exhibition, then we would recommend you to obtain Butler's Empress Eugenie.‡

HONEY: *Wrexham.* It is impossible to say whether this is adulterated without having a sample to examine. That a great deal is so is well known.

INCOME TAX: *A B.* We cannot make ourselves legal advisers. If the Commissioners will not believe you or your books, you must put yourself into the hands of your solicitor.

INSECTS: *T M.* The branches sent are bored into by the caterpillars of the Wood Leopard or Goat moths. They may be expelled by blowing tobacco-smoke into their burrows. The conspicuous moths must also be sought for and destroyed next June. *W.*

NAMES OF FRUITS: *Enquirer.* Your Grape appears to be the Black Morocco.‖

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*Thos. Roberts.* Vanda tricolor, from the East Indies, not Bahia. There are no Vandas in America.—*J S T.* The pretty little Solanum capsicastrum.—*Argyle.* We cannot undertake to say what the Hieraciums which you have sent are called in the writings of the latest describers of the genus. Differences which are not distinctions blend insensibly into identity. You may refer them all to H. sabaudum. If you desire to determine them yourself we would refer you to Mr. Backhouse's Monograph of the British Hieracia, where the supposed species are described with great care, and as much exactness as is possible where no characters can be relied upon.

NEVIUSIA ALABAMENSIS: *Clapton.* This is a shrub related to Kerria japonica, and named by Asa Gray after the Rev. R. D. Nevius. We have not seen the plant, and are not aware of its being in cultivation.

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CANTERBURY MEETING, JULY, 1860.

The PRIZE SHEETS for the above Meeting can be had on application to the SECRETARY, 12, Hanover Square, London, W.

The Agricultural Gazette.

SATURDAY, JANUARY 14, 1860.

—— THE inventor of the moveable cattle-shed, noticed in our columns a fortnight ago, was Mr. THOMAS TURNOR, of Abbots Bromley, Stafford. The same post which delivered his letter intimating that he had seen our request for his address, and conveying his thanks for the favourable description given of his contrivance, brought us the melancholy intelligence of his death. Mr. TURNOR was an active land agent in many parts of the country, and an extensive farmer in the county of Derby. He died on January 7th, after a few hours' illness, at Wallingford, in Berkshire, whither he had gone on a business engagement.

—— A correspondent inquires the cheapest food for cattle—Wheat, Barley, Oats, cake, Maize, or Beans? At present prices the first of these is as economical as any. Wheat at 1*d.* per lb. is as cheap a food as can be bought—if we except some of the cheaper but still somewhat doubtful kinds of cattle cake. It is used by almost every cattle or sheep feeder we know; and even the gamekeeper knows nothing cheaper than the best Wheat for his birds.

These uses of it must enormously increase its consumption, and the low price which it maintains in spite of this unusual demand is as remarkable a thing in its way as is the high price of mutton in the face of the enormous supply of sheep weekly poured into the metropolitan market.

DURING the course of the discussion on the "Growth of Seeds," which took place at the meeting of the London Central Farmers' Club, on November 7th, it appeared that several of those who were present were not well acquainted with that pest of Clover fields, the Dodder. As inquiry amongst intelligent cultivators, whom we know to have suffered from it, shows that farmers are not in general aware even of the existence of the pest, and those who are have very loose notions as to its exact nature, a few words on the subject will not be out of place, notwithstanding the very full account already given in a past number of this journal, and notwithstanding the excellent account of it in the Cyclopedia of Agriculture, where it is well figured.

Dodder or Scaldweed is in some districts the pest of Beans and Hops, and as such every one in Northamptonshire at least was cognisant of it as a troublesome weed at the beginning of the present century. Improved cultivation has nearly banished it from our Bean-fields since that period, and in consequence the plant is comparatively unknown. Two species only are natives of this country—the one just mentioned which occurs in ditches on Nettles, Thistles &c., and a second smaller species prevalent in the south of England on Heath, Gorse, Thyme, and other plants in exposed situations. The Clover Dodder is reported to have come originally from Affghanistan with Lucern about 1843, but it was known to that excellent botanist Mr. BORRER in Sussex many years before, though he had lost sight of it for some years, till the practice became more prevalent of importing foreign seeds, to which the introduction of one or two other weeds which are now common in our fields may almost certainly be traced. Another species attacks Flax and like the Clover Dodder has clearly been imported.

Dodder in general is propagated by seed like other flowering plants, but it has a peculiar appearance from its pinkish or yellowish fleshy stems, resembling wet catgut, which rub over and twine round everything in their neighbourhood; from the total absence of leaves or decidedly green organs in every stage of growth, and the little globular heads of wax-like flowers. The seed may easily be collected in autumn, and the intelligent farmer will find it an interesting matter to watch their growth if sowed in a common flower pot in spring. The seeds soon germinate, sending up a long straight thread without a trace of leaves. This gradually elongates, and if there is nothing present to which it can become attached it soon perishes. If however some kind of Vetch, which for the purpose should be of tolerably quick growth, be sown with the Dodder seed, or if the seed be sown in a pot already containing a well grown plant of Clover, a curious change takes place. The young threads, unable to support themselves, fall and come in contact with the Vetch or Clover; a little wart is formed on them at the point of contact, which is gradually firmly attached and then becomes incorporated with the underlying tissues to such an extent that it is able to imbibe their juices; and as soon as this connection is established, the threads die off below, all communication between them and the soil is cut off, and the Dodder, which twines from left to right about the Clover, lives like a true parasite at the expense of the plant to which it has become attached. The growth is then extremely rapid, and the plant has such powers of life that the smallest bit which is broken off, hould it fall on a plant capable of giving its nourishment, flourishes and forms a new patch.

When it is once established in the field the best way is to dig a trench round the patch, throwing the earth over the infected spot, so as to completely prevent its growth. If however the Dodder is far advanced and has formed seed, the whole patch should be carefully grubbed up and burnt, precaution being taken that fragments are not thrown on the surrounding Clover which is yet clear, or it will be sure to re-establish itself.

A previous precaution however should be taken, namely to examine the seed when bought, and if extraneous matter is mixed with it to submit it to a fine sieve, No. 17, which will allow everything smaller than the Clover seed, as is the case with Dodder seed, to pass through. When the farmer is once acquainted with the plant, a little care, except in very aggravated instances will enable him to save the greater part of his crop. *M. J. B.*

THE application of iron—cast and wrought—to building purposes, has met with a wonderful development during the last 20 or 30 years. At first and for a long time applied only to mills and factories, its use, through the influence of the railway system, was amazingly extended; till finally, from being a material almost exclusively employed by the engineer, it passed into the hands of the architect, who found in it a readily adapted and economical material applicable to all the ordinary constructions with which he is more exclusively called upon to deal. Taking the most rapid review of the works which we see carried out around us in mills, railway, and house con-

struction, enough will be learned to show its applicability to a wide range of structures, and to create some surprise that its aid has not been more extensively demanded in a branch of civil architecture of great and every day growing importance—need we say to *our* readers that we refer to *agricultural buildings*.

In its ready adaptation to any plan of arrangement, in the facility with which it enables large surfaces to be quickly covered, and the means which it places at our disposal to economise space and concentrate operations—in the strength and durability of its parts—in the comparative immunity which it affords from the ravages of fire,—and in some forms of construction the ease with which component parts of the structures formed of it can be arranged and put together, even by comparatively inexperienced hands, we see in iron—in its two forms of cast and wrought—a facile material of great value to the practical agriculturist; one which we think is destined to play a far more important part in agricultural construction than it has yet done. Those acquainted with its use in other forms of structure will readily see its adaptability to those of agriculture. For cart and cattle shedding, for outlying structures of all kinds, bridges, tramways, &c., its uses are at once obvious. For the roofing of various parts of a steading nothing can be more valuable and easily applied. "On a dairy farm," says a distinguished authority, "a large byre, capable of containing all the cows of the farm within the view of the dairymaid at one time, might be so roofed in. * * A feeding byre could be constructed on the same plan. The threshing-mill and straw barn might be contained under one such roof; affording abundance of room in its width to the water or steam power, to the cleaning of the corn in the barn, and to the straw-cutters, and to the crushing rollers in the straw barn. A roomy and airy granary could be formed under such a roof. Great accommodation could be afforded by means of such a roof to numbers of cattle all winter, and to sheep in the most stormy period of the year on pastoral farms, and such an apartment would answer for dipping sheep in summer and bathing them in winter." To these suggestions for its use another might be added, namely, the covering in wholly or partially of the straw or rick yard, so that threshing could be carried on independently of the weather. If a partial roof covering only was adopted, a system of tramways and rick trucks or carriages would be necessitated, by which one or more ricks could at once be wheeled under cover. To that kind of structure now by many very highly thought of, namely, a farm-building with all its apartments under one roof, iron is most happily adapted. But we need not further take up time by dilating upon or suggesting the uses of iron; many will at once occur to our practical readers. Enough has been suggested to create in us some degree of wonder, when we see how little has been employed in the buildings of the farm; more especially since we have in the sister department of agricultural machines and implements, and we may add in the fittings of agricultural buildings, so many and such striking evidences of what can be efficiently and economically done by its aid. How this tardiness in its employment in the department of agricultural buildings has come about it is needless now to speculate upon or conjecture. Enough for us to know that the fact exists; and dealing with it only as an incentive to advocate the extension of the use of iron to such structures, we shall in *occasional* papers venture to present our readers with a few remarks, in which we shall attempt to demonstrate practically the advantages of its employment, and the means by which this can be best and most economically carried out. For obvious reasons our papers will not treat the subject in the methodical way open to continuous articles; we shall simply, as occasion serves, take up the salient points, such as are most likely to be interesting to our readers. Having done so much by way of prelude to an important subject, we now propose in what remains of this paper to glance at the kinds and peculiarities of iron, some practical suggestions on their treatment and testing, and the comparative advantages of its two forms for building purposes, a point of considerable weight and value.

The two great divisions of iron are "cast and wrought or malleable iron." Cast iron is of two kinds, "grey" and "white;" for purposes where strength is required the grey is best; where hardness chiefly is essential, the white. Grey will therefore be most useful for agricultural dwellings. The fracture of grey iron presents a granular appearance, as if particles of lead were scattered over the surface; the colour of the fracture is denoted by the name. The test which can be most conveniently applied to iron which it is proposed to use in the casting of beams, pillars, &c., is to strike any angular part a smart blow with a hammer; if the angle is indented with the blow the quality may fairly be assumed as good; if it breaks short off and shows a fracture of a crystalline character, the quality is brittle and deficient in strength. In all cases where many beams are to be used, on the contract being made, a stipulation should be inserted for the testing of them up to a certain point. But this should be done *judiciously*. We italicise this word, on account of the importance of the suggestion it contains. We have long seen the dangers in practice attendant upon the system generally prevalent of over-testing iron beams and columns destined to sustain certain weights and to receive certain pressures; and wherever opportunity has served we have strongly pointed out the practical absurdity of this treatment. We can conceive of a beam, for instance, being weighted to within say 50 lbs. of its breaking point, and yet remain to all appearance perfectly sound. But the process, in place of establishing its capability of sustaining a weight similar in amount has, by the disturbance of the molecules of the iron, brought it into that condition in which a less weight than it is *calculated* to bear will likely break it. Over-testing can do no practical good, but is, on the contrary, almost certain to weaken the part. On this point of over-testing, the remarks of the very first authority on iron as used in construction—Mr. WM. FAIRBAIRN—are so pertinent and conclusive that we shall be doing our readers a favour by giving them:—"A competent knowledge of a few leading principles which affect the strength of materials will enable us to determine the tests which it is requisite to employ in cast-iron in order to detect flaws and defects (if any exist) in the castings. * * * As an evidence of injuries done to beams by excessive tests, let us suppose that we load a beam (supported at both ends and loaded in the middle) to within one-twentieth of the weight of rupture, say 950, and that 50 more would break it. From this it is obvious that nearly the whole of the resisting power of the beam on both sides of the natural axis are brought into play, and are suffering under some severe pressure at the very point of rupture. Supposing again that we remove the load and ascertain by actual measurement the effect of the tests to which it has been subjected, we shall then find that it has not only received considerable injury in its elastic powers, but is actually in danger of fracture from a repetition of the same load. Now what is the result of a less severe strain? The beam when loaded to one-third of the weight that was placed upon it was in possession of powers that restored itself within a fraction of its original position; whereas with the heavy load it is seriously crippled, and a few more charges even with reduced weights would, from the derangement which the molecules or particles had sustained in the first instance, and the repeated alternation of removing and reloading shortly destroy its powers of resistance and cause fracture. It is for these reasons that I have always been opposed to severe proof on cast-iron beams, or those of any other material; and I have no hesitation, in dealing with those useful constructions, in recommending a moderate test of about one-third, and that rather for the purpose of detecting flaws and imperfections in the casting than for the determining the ultimate strength of the beam. The resisting powers of beams (of whatever material they may be composed) are like the muscles of the animal frame when strained beyond their reasonable powers of resistance. They may for a time endure the load, and probably a few repetitions of it; but the result generally is either the rupture of the several parts, or the total suspension of those powers by which their elasticity and powers of restoration are maintained." *

To this nothing can be added. In testing beams then, as recommended by the great authority just quoted, it is in the first place advisable to load one, carefully noting the series of deflections—bendings in simple language—which it undergoes under every increase of weight, till the beam breaks. The breaking weight being thus ascertained, the remainder of the beams should be weighted up to a point not exceeding one-third—but more safety will be secured if one-fourth is taken—of the breaking weight. As the weight is laid on, observations of the deflections of the beam ought to be taken at corresponding points with the trial test, in order to compare the beam with that which was broken. Should this careful testing be objected to as expensive and unnecessary, the only other mode open to the agricultural architect is first to ascertain the weight of materials which it is designed to place upon the beam; then by an approved formula to calculate the dimensions of a beam which will support three times the weight which the given beam has to carry. It will be safer to make, as before stated, the beam carry one-fourth only of the permanent load, more especially where falling weights are likely to disturb the bearers, as in granary floors, &c.

Much of the strength of a cast-iron beam depends upon the mixture of iron adopted, and also upon the way in which the casting operation is conducted. On the first of these points, the mixture, Mr. FAIRBAIRN gives the following as one productive of castings of superior strength. (1) Low Moor Yorkshire, No. 3, 30 per cent.; (2) Blaina or Yorkshire No. 2; (3) Shropshire or Derbyshire No. 3; (4) and good old scrap iron. Of these three last of Nos. 2 and 3 25 per cent. are to be used, of No. 4, 20. The size of castings, as well as the way in which castings are made, materially influences their strength. Thus a large casting cools unequally, more especially if it consists of parts of irregular thicknesses. This unequal cooling brings about a different condition of the particles in different parts of the beam. A casting as uniform in dimension as possible is obviously safer than one the reverse. This unequal cooling of castings is also greatly induced by the habit which founders practise of taking the castings out of the sand in which they have been run, almost immediately after setting and while red-hot. Taking them out in this condition is bad enough, but what can be said of that practice which in addition prompts an irregular quantity of cold water to be dashed on the surface of the casting. Allowing the casting to lie in the sand till it is quite cool gives all the advantages of a valuable annealing, and is indeed the only way in which to secure good castings. Where castings can be run in the direction of their length, greater strength can be obtained; that is, if beams for instance are cast vertically, they will be found stronger than if cast while lying horizontally. The latter is certainly the more convenient of the two, and is that generally adopted; we point out which is the best way. Pipes and pillars, or columns, should be cast vertically. If the iron is fused in an air cupola the beams cast from it will be found stronger than if the iron is melted in the ordinary blast furnace.

Such at one time was the ignorance prevalent on the subject of iron, that practical men deemed it impossible to fuse a mixture of wrought and cast iron together. Mr. STIRLING, by the use of an air cupola, soon dissipated this notion; and further, he found that such a mixture gave an iron of greatly increased strength. This patented toughened cast-iron has, the patentee says, a tensile strength nearly double that of cast iron. Mr. FAIRBAIRN says, that when "judiciously managed and duly proportioned, it gives a strength about one-third greater than that found in ordinary cast iron." Our readers are aware of the two processes by which the cast or pig-iron of commerce is prepared, namely, by the "hot" and "cold" blast. Since the very general introduction of the former process a question has arisen as to the comparative constructive values of the iron produced by the two systems. Much difference of opinion exists on the point. Mr. FAIRBAIRN says, "Generally speaking I should infer that it (the hot blast) has a tendency to weaken the iron rather than otherwise." Such may be taken as a very rapid review of the peculiarities of cast iron, and of points of practical interest connected with its working and employment.

Of wrought iron when of the best quality it is divided into two kinds, "hard" and "soft." The hard is the strongest, and only gives the fibrous texture when drawn out into small rods. The "soft" is weaker, and presents the fibrous appearance in larger pieces. When a bar of good wrought iron is fractured, the ends should present surfaces granular in texture and metallic in lustre; if crystalline or laminated, that is, having the appearance of being made up of a series of thin plates, the iron is defective in quality. If the fracture has a clear grey colour and laminated texture, the defective iron which these indicate is known as "burnt iron." If the colour is white and the texture the same, and breaks while cold under the hammer, the quality is defective also, and is termed "cold short." "Hot short" breaks under the hammer while hot, giving a fracture in colour dark and lustreless.

We may now compare briefly the two qualities of iron, cast and wrought. Of the first—

* On the Application of Cast and Wrought Iron to Building Purposes. By WM. FAIRBAIRN, p. 163. London: J. WEALE. 12s. 6d

while doubtless possessing great facilities for being moulded into any desired form, and as being that material with the manipulation of which our mechanics, especially those in country districts, are best acquainted, it is nevertheless a treacherous material to deal with, often failing us when least expected, and in a way which no calculation could foresee or prudence in using it avoid. Thus cast iron will suddenly break without any apparent cause; and exposure to rain or frost are often found to produce fracture, "the rupture," to quote Mr. FAIRBAIRN, taking place "with a loud noise like the report of a pistol." This liability to snap arises from the unequal cooling and shrinkage of the material. Cast iron being crystalline in character is also necessarily more brittle than wrought iron of fibrous texture. And last but not least, it is in almost all cases impossible to detect those defects and flaws which may exist in the casting beneath the outer skin, which may possess the appearance of a complete and perfect casting. Wrought iron on the other hand possesses in much less bulk immensely greater tensile strength; from the processes of manufacture which it undergoes it is free from all internal defects, hollows, flaws, and impurities or scoriæ —a fruitful source of weakness in cast-iron beams. Cast-iron beams from the rapid increase of weight are necessarily confined to short lengths, necessitating a constant repetition of columns or bearing walls, thus cutting up interior spaces; while wrought-iron beams can be made of about one-third the weight of cast-iron beams of equal length, and as there is scarcely any practical limit to their span, large interior spaces can be observed by using them, without the intervention of supporting columns or walls. Cast iron, notwithstanding all this, will be found useful in a wide variety of ways in agricultural construction; how and in what way we intend hereafter to point out. We have still other points to notice in connection with the use of wrought and cast iron, but having cleared the way of the leading difficulties or points, these will but be incidentally treated of when discussing practical plans of construction in the occasional papers which we hope to furnish to our readers on *the use of iron in the construction of agricultural buildings*.

LOIS-WEEDON EXPERIENCE.

"WE are permitted by Mr. Smith, Lois-Weedon," writes the *Agricultural Gazette* of the 17th ult., "to reproduce here a large portion of the additions to his new edition of 'A Word in Season.' They are," it is added, "for the most part addressed to the question—Is the practice new?"

Construing this into ~~an invitation to temperate~~ and respectful comment on the extracted passages, I will now offer some remarks on the points raised therein, these being—1st. Whether the expedient of deep cultivation pursued by Mr. Smith at Lois-Weedon entitles him to claim for his experimental farming there a distinctive character different from and better than Jethro Tull's system of intercultural, successive, and unmanured corn growing, exhibited upwards of a century ago on his farm of Prosperous to the extent of more than 100 acres of a season? and 2dly. Whether Tull's scientific conceptions respecting the phenomena of vegetation, on the one hand, and the vegetative powers of the soil and air, on the other, were not fundamentally less accurate than Mr. Smith's own?

In proceeding to expatiate on the former of these points I will premise the following illustrative, although somewhat common-place, instance. About eight or nine years ago an extensive land-owner in North Devon wishing to put his home farm under improved management engaged for that purpose the services of an intelligent young man, possessing all the skill and enterprise characteristic of the locality from whence he came—viz., the well-known agricultural county of Aberdeen. On the farm so placed under the new bailiff's charge, a system of shallow tillage had previously prevailed, and at first he intended to institute a course of vigorous subsoiling and trench ploughing, in order at once to deepen the staple and bring a considerable portion of subsoil to the surface; but warned that the yellow under-clay of the district was in its normal state very unfavourable to vegetation when upraised in large quantity, he ultimately resolved to modify the process into one of gradually increased deep ploughing. The appositeness of this judicious, though nowise novel instance, will presently be seen.

Adverting next to the most important event that ever occurred in English agriculture, I would now relate that in the early part of last century, a very great genius in husbandry gave to the world a volume explaining both the abstract principles of cultural science and the manner in which he had himself with remarkable success applied these principles to the management of his own farm. The area of his operations extended to about 200 acres, and consisted over $\frac{19}{20}$ths of its extent of a compact chalk subsoil, bearing on the surface a light vegetable mould of only a few inches depth, white in colour in dry weather, and full of small flints and smaller chalk stones. The other 20th part was a wet spewy soil incumbent on clay; and here were those "rills of water," cited by Mr. Smith (for I am now speaking of Jethro Tull and his farm of Prosperous) "that ran upon the surface of the clay under the staple or upper stratum of mould," the words within inverted commas being Tull's own. Supersaturated in this manner "the earth," he adds, "becomes a sort of pap or batter; and being like a quagmire, in going over it, the feet of men and cattle sink in till they come to the clay." In a work descriptive of the actual farming of a subsoil and soil thus conditioned no precedents in deep tillage could possibly be found, and therefore it need be surprising to no one that Tull's practice, "from which he never swerved," so writes Mr. Smith, "was to keep to the staple of land and never to touch the subsoil."

But inasmuch as Mr. Smith himself, operating on 4 acres of excellent Wheat land, lying on a clay so fertile as to be safely used for top-dressing and naturally dry, has superadded deep tillage to a mode of culture in other respects minutely Tullian, he conceives himself entitled to claim for the husbandry of his little croft a higher agricultural distinction than belongs to Tull's grand achievement of tilling more than 100 acres of unmanured and successive Wheat of a season.* To most persons, however, it will perhaps seem that this adaptation of deep cultivation, were it to be deprived of the radiance which the associated Tullian husbandry throws around it, would resolve itself into what may justly be termed an instance of very sound practical judgment, but really of no higher order, whether in conception or execution or novelty, than that of the young man spoken of before, who engrafted the deep tillage of the north of Scotland on the shallower cultivation indigenous to North Devon. Why Tull did not plough deep was obviously because his soil forbade it in him, and would also forbid it in Mr. Smith were he to take it in hand; but that he was at heart an advocate for deep culture I humbly think is very apparent from the following passage in his chapter on "The differences between the Old and New Husbandry," in which he writes thus:—"We not only plough a deep furrow, but also plough to the depth of two furrows; that is, we trench plough where the land will allow it."—"And two ploughed furrows (that is, one ploughed under another) are as much more advantageous for the nourishing of a crop, as 2 bushels of Oats are better than one for nourishing a horse."—"Very little of my land will admit the plough to go the depth of two common furrows without reaching the chalk; but deep land may be easily thus trenched and ploughed with great advantage; and even where there is only the depth of a single furrow, that may sometimes be advantageously ploughed at twice."

The other point of discussion raised by Mr. Smith is purely physiological, and resolves itself into the question whether or not it was known by Tull that plants in their growth feed on the solid mineral matters which compose the soil, as well as on the impalpable ingredients of the atmosphere; and, detaching by way of quotation certain fragmentary sentences from the context of Tull's book, he presents these to his readers as proving that the mineral element of nutrition in vegetation formed no part of Tull's theory, but that on the contrary he held the belief that plants derived their entire aliment from atmospheric ingredients. Unhappily for "A Word in Season," as a reliable exposition of Tull's creed, the following passages stand out in strong relief in Tull's chapters:—"That," he says, in Ch. III. on the Food of Plants, "which nourishes and augments a plant is the true food of it. Every plant is earth, and the growth and true increase of a plant is the addition of more earth."—"When this additional earth is assimilated to the plant it becomes an absolute part of it"—"and earth is so surely the food of all plants that with the proper share of the other elements" (*i.e.* air, water, light, and heat) "which each species of plants requires, I do not find but that any common earth will nourish any plant. The only difference of soil (except the richness) seems to be the heat and moisture it has; for if those be rightly adjusted, any soil will nourish any sort of plant." In Ch. IV., Tull treats "of the Pasture of Plants," and there, after premising the doctrine that the mineral alimentary substances are eliminated on the superficies of each individual particle, and hence that these superficies might figuratively be termed the pasture ground of the radical filaments, he expresses himself thus:—"The food or pabulum of plants being proved to be earth, where and whence they take that may properly be called their pasture;" and again, "the mouths or lacteals being situate and opening on the convex superficies of roots, they take their pabulum, being fine particles of earth, from the superficies of the pores or cavities [of the soil] wherein the roots are included."—"A plant cannot separate these particles" (*i.e.*, the pabulum of which he was speaking) "from the parts [of the soil] to which they adhere, without the assistance of water, which helps to loosen them; and it is also probable that the nitre of the air may be necessary to relax this superficies to render the prolific particles capable of being disjoined; and this action of the nitre seems to be what is called impregnating the earth."

Than these, what terms of expression could more clearly infer that terrestrial, atmospheric, and aqueous constituents are all common in the radical nutrition of vegetation? Yet the author of "A Word in Season" avers that "the mineral element of fertility to the Wheat crop" "found no place in the theory of Jethro Tull." It is, indeed, true that Tull held the doctrine that that pabulum which, insumed by the roots, became by the processes of assimilation an integral constituent of their tissues, was, by the excretory functions of the plant, in part sublimed into the atmosphere through the leaves; and construing Tull's expressions on this subject by his own conceptions in the chemical philosophy of the present day, Mr. Smith in effect insists that as oft as the word "earth" occurs in Tull's work we must read "air," because the aërial food only of plants is capable of volatilisation. If, however, he will turn to the concluding pages of chapter vii. of Liebig's "Chemistry in its application to Agriculture and Physiology," he will there find facts stated and opinions expressed which not only completely invalidate this most illogical mode of interpretation, but largely add to that amazement, which every one conversant with Tull's volume must feel, at his seemingly intuitive anticipations of all the fundamental principles that belong to the science of cultivation.

Reversing the order of the two questions thus discussed, I sum up my argument thus:—1st, That Mr. Smith, although living, as he says, in a happier age, cannot be regarded as a wiser or more skilful agriculturist than his great teacher; and 2dly, with respect to his experiment at Lois-Weedon, although devoid of originality, it nevertheless can hardly be over-praised as a very admirable resuscitation of Tull's method of Wheat growing, and an invaluable example of the power of tillage to produce unflagging and continuous cereal fertility. Nay, more, in conjunction with Tull's experience it carries the mind back to that period in the history of English agriculture when unalternate corn-cropping was the only mode of arable husbandry, and very materially aids in explaining and confirming the very important fact that, antecedent to the introduction of alternate farming, the prior non-alternate system had not only not exhausted the fruitfulness of the soil or introduced degeneration in its products, but, on the contrary, for a considerable period had been gradually raising England to the condition of a great exporter in corn. Presented to the practical agriculturist in that position of isolation which Mr. Smith insists on for his experiment, it is incapable of engendering in his breast any solid convictions of its utility. Placed in connection with the once prevalent and ever prosperous method of farming procedure to which it generically belongs, Lois-Weedon experience is eminently calculated to dispel those absurd prejudices on the subject of successive corn growing so prevalent amongst all classes of agriculturists, and to break in pieces the restrictive fetters imposed on enterprising farming by the rotation clauses of the modern lease. *A. Burnett, Queensferry, Flint.*

* We must here remind the reader that the extent of the operation does not affect its character, and that Mr. Smith "claims" nothing beyond what a simple description of the facts of the case implies. ED. *Agri. Gazette.*

ROOT CROPS IN WARWICKSHIRE, 1859.

Mangels.—These are a full average, and a far larger breadth planted than usual. The best crops are those which were sown in the third week of April, after an early and deep winter furrow, with simply a preparatory scarifying, harrowing, and rolling, prior to ridging up. With early sowing a few more plants run to seed; but, independently of this, the ultimate produce is heavier. After the date named, heavy rains followed, which prevented clay soils from working kindly for the next fortnight. Where a spring ploughing was then needed a good tilth was never obtained, and the braird came off indifferently. But even in this case, with the use of thoroughly good seed, we have seen a level average crop, although the plants are long in coming. Only, the heavy roll must be freely used after sowing. As to seed, we do not like less than 5 lbs. per acre, drilled, and put in a good fair depth—greater or less according to the moisture of the soil. In our midland districts, the free use of salt is highly desirable. On a loamy soil in good condition we have a capital crop, with an application of

4 cwt. superphosphate of lime
1 ,, guano, Peruvian
4 ,, common salt.

On a clay soil, where later sown, less salt was applied; and though the field had been manured at the rate of 12 tons of good farmyard dung per acre in the previous autumn, the produce was not so heavy as in the former case. Orange Globe have done best with us; then Yellow Globe; and lastly Long Red: thus—

Orange Globe	.. ..	37 tons per acre
Yellow Globe	.. ..	34½ ,,
Long Red	.. ..	31¾ ,,

Many crops may appear larger from limited admeasurements; but the above is the result obtained by reckoning the loads carted off, and weighing a few for an average. This frequently produces an acreable return widely different from what is obtained by weighing a few perches.

Swedes.—The old-fashioned time for sowing—"never before the 20th of June"—has this year produced the best crops. And they are also the freest from mildew. Late sown fields, where cultivated in a husbandmanlike manner—ploughed immediately before sowing, pretty thickly seeded, (say 4 lbs. per acre), and drilled on the flat, with 18 or 20 inches between the rows—are yet healthy and growing. Under other circumstances the Swede crop is indifferent; and 17 tons per acre may this season be regarded as a full return.

Common Turnips.—These are also a variable crop.

Early sown fields, on a well prepared winter fallow, and sown in June, have in many instances resulted in failure. But where sown after seeds, immediately subsequent to the Warwick meeting, some good crops are to be met with. Those sown in August, after Peas, are not so good as usual. The Green Globe and Lincolnshire Red stand the winter well with us, or are equally suitable for feeding off before Christmas, according to the date of sowing. Yellow-fleshed varieties are little cared for,—experience showing them to be of less value in the midland counties than in the moister climate beyond the Tweed.

Carrots.—An increasingly large breadth is planted year after year, and there are few who regret their cultivation. When judiciously treated, you will get at least as heavy a return per acre as of Swedes; and the value, either for sale or consumption, is far greater. Besides which, they have fewer enemies to contend with; and, if good seed is used, it is in nine cases out of ten the fault of the grower if a full crop is not obtained. We have sold them here at 24*l.* per acre on the ground—the purchaser undertaking the labour of raising and carting them off. These were Red Altringham; but for general field culture we prefer the White Belgian Imported Seed. Of these we have repeatedly grown over twenty-seven tons per acre, and could sell them freely in the field at 30*s.* per ton. It is well to give plenty of seed (8lbs. per acre) and sow by the middle of April, in rows 14 inches apart, with the ground in a moist state, which is preferable to sprouting the seed. A 12-inch early winter furrow, where the soil will stand it, is an excellent preparation, and spring work will thereby be materially lessened. If well-made farmyard dung is not applied, a good crop will generally be ensured by an application of artificials similar to that quoted for Mangels. The weights per acre of the crop just lifted are:—

White Belgian (imported seed) 26½ tons per acre.
Green Top Yellow Belgian ,, 23½ tons per acre.

Parsnips, Beet-root, Kohl Rabi.—Pigs do well with the former root; raw for stores, and boiled for fatting pigs. We sow at the same time and treat in the same way as for Carrots, and have obtained some fine roots of the Guernsey variety, fully 13 tons weight per acre. The White Silesian Sugar Beet is a free grower, but stock do not care much for it. Crimson Beet, on the other hand, is large, good, and well relished. It might with advantage be more generally grown, especially if the price was lessened. Twenty shillings per acre for seed — and we should not recommend less than 8lbs. — is a heavy item. Crop 31 tons per acre. The same objection, as to cost of seeding, holds good with Kohl Rabi. Few farmers, in this district at least, have sufficient command of labour to warrant their transplanting a large breadth from a seed-bed; and if drilled the same as Swedes—coming in the room thereof—they require quite as much seed. At Walton Hall, in this county, the intelligent manager, Mr. Cobb, has been in the practice of raising capital crops by the transplanting mode, which saves three-fourths of the seed and obtains the heaviest plants. The weight of large green Kohl Rabi, sown on May 16, we find to be 26 tons per acre.

Holcus saccharatus.—This cannot be regarded as a root crop, but its excellent qualities for summer forage may excuse its being referred to here. The seed we dibbled May 20 on good loamy soil, in rows 14 inches apart and 8 inches between the plants. The braird was long in coming up, and it was nearly two months before it set off growing freely. However, with the warmth of July it flourished luxuriantly, every twenty-four hours showing a visible increase. Commenced cutting in the last week of the month, and then onwards to the end of September. All animals took it readily; but pigs appear to waste it more than either horses or cows. For horses we put it through the chaff-cutter, instead of their usual summer mixture of Vetches and straw. They did well with it; but a colt of weak digestion, which was attacked with colic, and required an injection to give relief, had a quantity of the hard woody stems in the stomach, which refused to move by other means. They were by this time getting too strong to be cut by the scythe, and the Bean hook was the better instrument. But notwithstanding the hard and woody appearance of the stems, as the season advanced the sweetness sensibly increased. It is probable that its enthusiastic admirers, such as Mr. J. W. Clarke, of Whittlesea, have over-estimated the produce. We have repeatedly weighed portions after being cut for one day, and have found it average 35½ tons per acre when fully grown. It only threw up half-a-dozen seed-stalks to the acre. As a whole, it may be regarded as a very valuable addition for summer growth, especially for late soiling purposes, after the winter Vetches and Clovers are exhausted. ***Mr. T. Bowick, in Sutton's Amateur's Guide for*** 1860.

MR. HAMILTON'S SHEEP-FEEDING.

THE subject of sheep manure, to which attention was directed a few weeks ago, is part of a question of a very comprehensive nature, and one which, like many other agricultural problems, is involved in doubt and obscurity. I am tempted to refer to this subject by the perusal of a report of more recent analyses, made at the instance of Mr. Hamilton by Dr. Cameron, of Dublin.

It will be in the recollection of the reader (see pp. 568, 658, 894, 897, of last year's volume) that Mr. Hamilton was induced to call in the aid of chemical analysis to test the relative value of the manure of sheep fed (1) on Grass, and (2) on concentrated feeding; that the results of one of those examinations were so startling that Mr. C. W. Spooner, Jun., was induced to express his belief that some mistake had been committed by Mr. Hamilton. The latter has adopted a highly commendable course; at his own personal expense the experiment and analysis have been repeated. Mr. Spooner enters (see *Agricultural Gazette*, Nov. 5) into a careful calculation to show that the total quantity of nitrogen in the dung of the wether fed on concentrated feeding exceeded the total quantity of nitrogen contained both in the Oats and food consumed by the animal. "It appears," says Mr. Spooner, "that the wether on which Mr. Hamilton experimented received daily 1½ lb of oilcake, and ½ lb. of Oats, while the ewe received nothing but Grass. Accepting, then, the analysis quoted by him, the 1½ lb. of oilcake contained 533 grains, and the ½ lb. of Oats 77 grains of ammonia."

In this comparison it is presumed that Mr. Hamilton's wether in the first experiment received nothing but 1½ lb. cake and ½ lb. Oats, whereas it was in addition grazed during the period of fattening, for which Mr. Hamilton charges in his paper at the rate of 1*l.* a year. Mr. Spooner's calculations suppose that a uniform quantity of cake and Oats was weighed daily for the sheep, whereas Mr. Hamilton distinctly states he gave as much oilcake as they could eat, and ½ lb. Oats per day.

The analysis of the Oat crop by Boussingault, quoted by Mr. Hamilton, gives the per-centage of nitrogen (and ammonia) too low. According to the copy of Boussingault's analysis of the Oat crop in the work just now at our disposal,* the grain (with husk) contains [potentially] 3.12 per cent. of ammonia, or per lb. 218 grains = 100 grains per ½ lb. Coupling with this the fact that the nitrogenised constituents of the Oat crop vary from 14 to 22 per cent., we come to the conclusion that it may be exceedingly fallacious to suppose that an analysis made by Boussingault several years ago would represent the composition of Mr. Hamilton's crop of 1859. The specimen of Mr. Hamilton's oilcake analysed by Dr. Apjohn also appears something under the average. It contained of protein compounds 26.18, while the mean of 33 analyses of oilcake from several different countries gives 29.97 per cent. of the same compounds,† but upon this we do not lay much stress, as some cakes do not contain more than 26 per cent. of protein compounds.

With all these circumstances, however, the result of the first experiment is as, Mr. Spooner's suggestions show, very high. But we should rather seek for some way of accounting for the results than insinuate inaccuracy. Mr. Hamilton assures us that he performed his part of the experiment with the greatest care, and few scientific men will question Dr. Apjohn's ability or accuracy as an analyst. Now, we submit that the facts we have stated go some distance in reconciling the experiment in question with our previous knowledge; and the two following points should also be carefully considered in coming to a conclusion on this interesting question. In the first place the oilcake and Oats were not daily weighed out to the sheep in the first experiment; but an average daily consumption was taken by dividing the entire quantity of cake and Oats consumed by the number of days which the sheep were fed; and on one day they may eat twice as much as on another; 2dly, the quality of the urine may vary very considerably according to the health of the animal and to the state of the kidneys, which is so very variable. Hence any calculations made by Mr. Spooner in order to compare the nitrogen in the average daily consumption for a given period with the excrements on a given day (not the average for the same period), cannot be relied upon as conclusive, as the bases on which he proceeded are not quite correct.

Mr. Spooner also urges that for every 10*l.* expended on this food only 2*l.* 10*s.* was returned in the excrements of Mr. Hamilton's sheep. "In Mr. Hamilton's (1) first experiment," says Mr. Spooner, "the wether received (2) 14 lbs. Oats, and 42 lbs of oilcake, which will be found to contain 17,091 grains of ammonia. If we subtract the 5 per cent. assimilated by the animal, namely, 354.5, it leaves 16,235 grains = 2 lbs. 1 oz. 6 drs. 35 grs. which (3) may pass out into the manure. Ammonia being valued at 60*l.* a ton = 6½*d.* per lb.; the value of the solid and liquid excrements of the wether in one month equals 1*s.* 1½*d.*, while the value of the food in the same is 4*s.* 6*d.* Thus for every 10*l.* expended in food only 2*l.* 10*s.* is returned in the manure. (4) Indeed how could we possibly expect any other result when we remember that it is the nitrogen alone (with the exception of a little phosphate of lime) which is valuable as manure."

This passage is open to four serious objections, which we have marked, and which require to be noticed:—

(1). The Grass consumed by the wether in the first experiment is altogether omitted.

(2). The experiment went on from 1st of May to November, so that the average number of days in each month exceeded 30. The wether, therefore, consumed per month upwards of 45 lbs. oilcake (1½ lb. per diem), and 15 lbs. Oats (½ lb. per day).

(4). It is quite new to us to be informed that it is the nitrogen alone (with the exception of a little phosphate of lime) which is valuable as manure.

In the scale of prices for valuing manures in general use, we have—

Ammonia	£60 per ton.
Phosphate of lime..	£ 7 ,,
Biphosphate	£28 ,,
Potash	£20 ,,

It is then incorrect to suppose that it is the nitrogen alone which is valuable as a manure. The value of a ton of oilcake for manure would be—

	Per cent.		Per ton.		Value of 100 tons.
Nitrogen	5	×	£60 0	=	£300.
Phosphate of lime	3.12	×	28‡ 0	=	87.36
Potash..	1.75	×	20 0	=	35.00
Silica and other mineral matters, say	2.00	×	1 10	=	3.00
Organic matters	81.00	×	0 10	=	40.50
					£456.86

Or, about 4*l.* 10*s.* per ton.

If we deduct from this the manurial value of the elements assimilated by the animal we shall find the value of the excrements produced from a ton of oilcake. This in the case of Mr. Hamilton's sheep may be eliminated thus:—

Value of Manure produced by Fatting Sheep from a ton of Oilcake.

	Per 100 tons.	£
1. Original manurial value of nitrogen ..	£300	
Stored up in the system .. 5 p. cent.		
Lost in respiration and perspiration§ .. .. .. 7 ,,		
Deduct .. .. 12 ,,	36	
		264
2. Original value of manurial matter	125.36	
Stored up in system, 3 per cent.	3.76	
		121.60
3. Original value of organic matter	40.50	
Stored up in system, 10 per cent. Quantity lost in respiration not well known; say that one half is	20.25	
		20.25
Expended altogether		£405.85

Or in other words the value of the manure produced from every ton of oilcake given to fattening sheep is about 4*l.* *B.*

Home Correspondence.

Winter Food in Severe Seasons.—The variations in our seasons, the great difference of temperature and fall of snow and rain in our winters and the uncertainty of what may be the farmer's occasion for cattle keep, should always cause farmers to make some preparation for the extremes of weather they are exposed to. I can recall the winter of 1814, when snow lay so deep from January till late in April that there was no doing anything with the land for 14 or 15 weeks, and stock had to be kept all this time on housed food; and although nothing like this winter has since occurred, still we have often had weather to greatly distress the less thoughtful farmer for his stock. I always had in mind the inconvenience and loss I sustained the first long severe winter that took me by surprise after I became a farmer, when the Swedes rotted in January, and the less hardy roots were all destroyed by the severe frosts and heavy rains which alternated through December and January. The following spring was very backward, and vegetation made little progress until late in May, so that all through March and April I had nothing to give my ewes and lambs but hay, and was daily forced to run them over my seeds and Tares, long before they afforded sufficient bite to hold them. My loss was very severe, and I resolved never again to lay myself open to such a mischance; and to prevent this I sought for a description of food that would stand severe frost and be come-at-able in deep snow, and I found it in the Drumhead Cabbage and Kohl Rabi, two descriptions of winter keep I recommend to every farmer never to be wholly without, for so useful have they proved to me that I have since always had about a fourth of my winter food land appropriated to their growth. Besides their particular usefulness in severe seasons they have much to recommend them in ordinary years in their superior nutritious qualities, and the certainty there is always of getting a crop of them. I believe there is no amount of food to be grown to the acre equal to that afforded by Cabbages, and of all descriptions it is the most suited for ewes and lambs in February and March, and Kohl Rabi has the merit of affording an increased supply of sweet rich milk from cows fed with it, and is the most desirable of succulent food for the dairy at the season when sweet milk-forcing food is most scarce. Both these as field crops are best raised from plants planted out in April and May taken from seed beds. The seed should be sown the end of February and early in March in beds, protected by bushes from the birds. *Hewitt Davis, Dec.* 28, 1859.

Holcus saccharatus.—From a recent statement in your Paper respecting the North China Sugar-cane (Holcus saccharatus) it would seem that, notwithstanding the admitted yield of about 50 tons per acre, the plant is not likely to become useful in an agricultural point of view. Horses, it is said, would not touch it, and milking cows partook of it but sparingly, whilst a two-year-old bull ate it greedily, and could scarcely be induced to eat anything else. The writer concludes that we shall have some difficulty in acclimating this denizen of a warmer and more steady temperature. There is indeed little or no probability that the seeds of the Holcus will be produced in this country; but, like

* Journal Royal Agricultural Society, Vol. XIII.
† Morton's Cyclopædia of Agriculture, art. Oilcake.

‡ Though the phosphate of lime is not a biphosphate, yet from the available state in which it exists in the excrements, and especially in the urine we value it at 25*l.* a ton.

§ Mr. Spooner omitted to take into account the large quantity of nitrogen that passed off in perspiration and respiration.

Dutch Clover and various other plants, a supply equal to the demand can easily be obtained from abroad; and from some observations and inquiries respecting a crop of the Holcus grown by some intelligent agriculturist in my neighbourhood, I am inclined to think the demand for its seeds will be ere long very considerable. The crop to which I allude was sown about the middle of May in drills, some of which were a foot apart, others more, the widest being 2 feet apart; but the closest distance was considered the most profitable. The Holcus plants were twice cut for food; first, when nearly 3 feet high, but as the plants then grew so rapidly an earlier commencement, it was thought, would have been better. Horses ate it, bullocks were very fond of it, although they had some difficulty in getting their grinders to bear upon some long thick stems that had formed before the first cutting was finished. Probably it would be advisable to cut such stems in convenient lengths, so that horned cattle could more readily turn the pieces between their grinders. The plants in some rows that were left uncut were from 6 to 9 feet high; stems 2 to 3 inches in circumference, with leaves 2 to 3 inches broad. There were abundance of flower-spikes, but no seeds. The owner intends to sow a greater breadth next season. *N.*

Mortality among Breeding Ewes.—Being myself a flock owner I can sympathise with Mr. Farleigh, whose letter appears in the *Gardeners' Chronicle*, as to his losses among the ewes. The immediate cause of those casualties seems to be something of low fever, of the nature of marsh ague; this is indicated by the wool becoming loose, but a casual inspection of intestines gives very little information. Was the liver affected or the lungs? The original cause no doubt was wet and insufficient keep, which weakened the general powers of the frame, but as it seems to be confined to the sheep on two or three fields, the remedy is obvious—viz., to remove them to the healthier and better pasture, and allow more hay for them (for surely pregnant ewes are more valuable than dry sheep and wethers). I am not unacquainted with the Romney marsh district, and Mr. F. must excuse my saying that the flocks there generally seem to be worse managed and more hardly treated than in any other part of England I know of. The old Romney breed are very good and hardy sheep, and probably no other breed would bear the hard keep and utter want of shelter that they endure. I fancy the land is much overstocked; this, and want of care, must be expected to bring many losses. But there may be yet another reason. Of late years these flocks have been much crossed with Leicester blood, the effect being a great deterioration of the wool and impaired hardiness (for Leicesters require good keep and shelter), though the symmetry and tendency to early fattening are improved by such cross. If this is the case I would recommend a return to the original old marsh breed and reduction of numbers; or, what would be perhaps better still, a cross with the merino. I know this will appear strange, as many have an erroneous opinion that the merino breed are very tender; but it is quite a mistaken notion, and I have myself tried the merino and Romney cross very successfully. Some sheep of mine thus bred were much admired at the Paris exhibition, and were eagerly bought there. For reasons of my own I have discontinued these cross-bred sheep, but I can confidently recommend them to others. The wool is excellent, and the carcase equally good to that of the larger breeds. I often have thought that in Romney Marsh it would be very advisable to break up a portion of the ground and take a corn crop occasionally. Perhaps Mr. F. had better do so with his unhealthy field. *Charles Dorrien, Ashdean, near Chichester, Jan.* 9.

Kohl Rabi.—In answer to "Colo," I beg to say that feeling uneasy about the future of Turnips, and meeting with a rather glowing account of "Kohl Rabi" in Morton's Cyclopædia, &c., I made up my mind to give them a trial. In the latter part of February last I sowed a good-sized bed with seed in the garden, that I might have a good stock of plants at hand when the season arrived for transplanting in the field. My plants were about ready in May, but owing to the extreme dry weather I deferred transplanting till June 1. I met with a very favourable season, and they grew very fast and promised large for the first two months, but during August they seemed to fail in vigour and lose their rich green colour of leaf, and since that time they have made better progress in bulbing. The land was trenched 27 inches, and manured with 12 cartloads of farmyard manure, and a rich mixture composed of 2 cwt. Peruvian guano, 2 cwt. of Lawes's superphosphate, and 4 cwt. of salt. My experimental plot (about one-fifth of an acre) was situated in the centre of 3 acres of land, all prepared as above, for Mangels, which were drilled the first week in May, and upon which I got a first-rate crop, say from 30 to 35 tons per acre. I also had, adjoining the "Kohl Rabi," Swedes, yellow and white Turnip, likewise Drumhead Cabbage, though on a much smaller scale, which all grew pretty well, and gave promise of a good crop at one time. I think I cannot do better than sum up by giving my opinion of each lot, and what I think of "Kohl Rabi," judging him by comparison with his neighbours. No. 1. Mangels, extent $2\frac{3}{4}$ acres, a first-rate crop, grew well right away up to the time they were caught in "frost." No. 2. Cabbage, about 500 plants, seemed nearly equal to the Mangel; I think they would have been as good as the Mangel if they had been planted a month earlier. They were planted the same time as the "Kohl Rabi," viz., 1st June. Shall try more of them next season. No. 3. Swede Turnips, extent 200 or 300 yards long. Sown during May. A very decent crop. Rather above the average crop, but several amongst them are now rotting. No. 4. Kohl Rabi, rather more than $\frac{1}{4}$ acre, nice showy crop, plenty of top on, but bulbs only small; seem to be too thick on the land; distance 15 inches between each plant, about the same distance as the Turnips, but the bulbs not above two-thirds the size of the Swedes. Being very hardy, will stand any amount of frost, and very tenacious of life. A capital plant for transplanting; nearly as bad to kill as docking. Not so sanguine as I was last June, but shall give them a trial next season again. Nos. 5 and 6, white and yellow Turnips, about on a par; both lots about disappeared, rotted away; yellows the worst. *A Chalk Wold Farmer.*

Farmers' Clubs.

CENTRAL: *January* 2.—The following subjects were selected for discussion at the monthly meetings during the ensuing year:—

February 6.—"The Sewerage of Towns, as it affects British Agriculture;" proposed by Mr. Alderman Mechi, Tiptree Hall, Kelvedon.

March 5.—"The Over-Preservation of Game;" by Mr. H. Corbet, New Bridge Street, Blackfriars.

April 2.—"The Merits of Pure-bred and Cross-bred Sheep;" by Mr. C. Howard, Biddenham, Bedford.

May 7.—"Wheat Growing on the Lois-Weedon System;" by Mr. J. Algernon Clarke, Long Sutton, Wisbeach.

June 4.—"To what extent is the Farmer benefited by the substitution of Steam Power for Horse and Manual Labour;" by Mr. J. Wells, Booth Ferry House, Howden.

November 5.—"The Public and Private Trials of Agricultural Implements—Can they be made more Efficient;" by Mr. W. Fisher Hobbs, Boxted Lodge, Colchester.

December 10.—"The Condition of the Labourer in England and Scotland, and his state on the Continent;" by Mr. R. Scott Burn, Stockport, Cheshire.

A letter was read from Mr. Brandreth Gibbs, the Secretary of the Smithfield Club, suggesting that, as the Smithfield Club dinner in the show week had been brought forward to the Tuesday, that of the Central Farmers' Club should now be held on the Monday; upon which the following resolution was passed, the Secretary being requested to communicate it to Mr. Gibbs:—

"The Committee of this Club much regret that the Smithfield Club should have fixed its dinner for the same day as that on which the Central Farmers' Club has for many years held its annual dinner; and the Committee trust that the Smithfield Club will reconsider the subject. As the Farmers' Club has invariably a discussion on the Monday evening of the Cattle Show, no other day during that week is so suitable for its annual dinner as the Tuesday; and the Committee consequently determine to hold the dinner on that day as heretofore."

A letter was received from the Rev. Andrew D. Stackpoole, the vicar of Writtle, Essex, announcing the death of Mr. Robert Baker, of Writtle, and upon which the following resolution was passed:—

"The Committee of the Central Farmers' Club desire to express the deep regret with which they have heard of the death of their excellent friend and member, Mr. Robert Baker, of Writtle. They feel that, by his decease, the Club has lost one of its most valuable members, and they beg sincerely to condole with Mrs. Baker and her family under their severe bereavement. The Committee feel assured that their sentiments will be shared, not only by the other members of the Club, but equally so by the whole of the agricultural community."

A recommendation from the last annual general meeting, that the salary of the Secretary be increased, was unanimously adopted.

OXFORD.—*The Labour Market.*—On this subject at the recent meeting of this club, Mr. James Walker, of Begbroke Hill Farm, said—Labour forms the most prominent feature in agriculture, and it has always been the prevailing opinion that machinery and mechanical skill would eventually supersede the work of man; such is not so, and in order to prove that, we will just refer to a few instances of the labourer's opinion. On Grass farms, just look at the introduction of the horse-churn, and the hay-making machine, causing consternation amongst them, and considered fatal to their obtaining their daily bread. Look again at the horse-threshing machine; all must remember the opinion then formed. Next began to flow the tide of railways, and steam application to agricultural pursuits (the period from whence we may date the age of modern farming), apparently destructive to manual labour; such then were the views taken. Well, then, what has been the result? Quite the contrary, and we find year by year the great mass of agricultural labour in a much better position; more independent, intelligent, and a vast improvement in their habits and manners; and I take the liberty of saying that since the formation of the Poor-law, never were so few able-bodied admitted into the workhouses during the last two years—in fact it seldom occurs. One of the greatest evils acting against the labourer is undoubtedly the village tavern, or beer-house, now so frequent; and if we listen to the judges of assize and magistrates, they are constantly appealing to their existence as the cause of so much crime; and if we look to the majority of the most heavy and serious cases, their origin can be traced to have been contemplated in those seats of vice; and I would earnestly suggest that the Oxford Farmers' Club do set the example, if possible, of paying their labourers in money instead of beer. I am sure it would be a benefit to the wives and families if not to the majority of the labourers.

Mr. Williams, of Northcourt, said he should have great pleasure in seconding Mr. Watson's resolutions, provided he would consent to a trifling addition which he thought desirable, and for which he would give his reasons. He considered that they should look on the labour market, not only as affecting the agriculturists, but the whole community, for man was so associated with his fellow-man that any attempt to uphold one class at the expense of another would be found to be bad both in principle and practice. They found that it was essential to the welfare of the farmer that the commercial and manufacturing interests should be upheld and prosper, and at no period of their history had they felt that so forcibly as at the present time, when the staple produce of the farm, Wheat, was at so low a rate, and yet, owing to the prosperity of manufactures, both wool and meat were relatively at a high price. It was always well for the agricultural when it was well with the commercial and manufacturing interests. What they wanted to see was remunerating labour for the whole community, for though they wished to secure a certain class of men, there were oftentimes some in connexion with their farms who, though very useful to them, might still be more benficially employed in manufactures. As an instance, he had a boy on his farm who showed great intelligence, and although his father wished him to continue him as a ploughboy, he thought that he was fitted for better things, and accordingly he spoke in his behalf to the principal manufacturers at Abingdon, Messrs. Hyde and Co., who employed him, giving him better wages and an increase every year. They must therefore look to the whole question of labour, and to the improvement of the whole of the industrial classes, for in whatever way they laboured to benefit the country they must take up their position. If as farmers they looked upon the question only as it affected themselves, then he considered that much might be done by the introduction of machinery and the economising of labour. He concurred in the resolutions as far as they related to the cultivation of a better feeling between the employer and the employed, the repeal of the present law of settlement, and improving the moral and physical condition of the labourers. With respect to finding remunerating employment during the winter months, that did not go far enough for him, as he wished to see it extended throughout the whole year, and that as far as possible they should adopt the plan of piece-work. They were all well aware that the expectation of remuneration was the best encouragement for labour, and the more they could introduce piece-work in every department of their farms the cheaper they would get their work done, and the better hands they would make of the men who were employed. The men threw all their energy into the work, and by the vigilance of the master it was not only well done, but with profit and satisfaction to both. He was aware that it was difficult at all times to introduce piece-work, but where it could be they found they got their work better done and more quickly, which at times was of more importance than being done cheaply, and after all it was done cheaper than by the day. The points, therefore, which he wished to have embodied in the resolutions were, the importance of finding remunerating labour during the whole year, the introduction of piece-work as far as was practicable, and the application of machinery to supply the deficiency of manual labour on their farms.

Mr. J. Hope said that good cottages would be a good investment, and pay a fair return for the capital employed. It was of no use to persuade men to forego the attractions of the public-house and beer-shop unless they were made equally comfortable at home. By inducing the landlord to build cottages on the farm, the tenant would take care to secure good labourers to occupy them, upon whom he could rely, and who would always be near to him when he required their services. It was a well-known fact that when farmers advertised for bailiffs or servants to look after the horses, sheep, or cows, the first thing the applicant inquired about was whether there was a comfortable home to which he could bring his wife and family. By providing comfortable homes for their labourers they might rest assured that in harvest or other busy times they would not leave their service for the sake of getting increased wages.

Mr. W. Wing, of Steeple Aston, said that having heard the present law of settlement condemned by various speakers, he could not refrain from saying a word in its defence. The evils complained of had not arisen from the law of settlement itself, but from the abuses which had crept into it through modern legislation. He maintained that if the law of settlement were repealed the labourer would have no place to fly to, because no inducement was held out to him in places where this system had not been introduced, as in Australia. In England in almost every parish there were institutions known as public charities, many of them founded in our own time and others before the Reformation, although they were remodelled in the time of Edward VI., whereby the labourer had an interest in certain rents in lieu of Furze cutting. In addition to this there were coal and clothing funds, and those who had acquired a settlement became entitled to the advantages of these different institutions, and therefore he thought that they would inflict a heavy blow on the labourer if the law of settlement were abolished. He wished to record that as his opinion, having had a great deal to do with the poor and with

charities, and although he was aware that many influential members of this club differed from him on this point, still he could not come to any other conclusion than that it would be inexpedient to repeal the law of settlement, and that it would be far better if it were restored to what it was before 1847.

Mr. Pritchett, of Charlbury, observed, in reference to what had fallen from Mr. Williams, relative to his obtaining employment for one of his ploughboys in a manufactory, that he (Mr. Pritchett) was the largest glove manufacturer in this country, and had been for the last 20 years, and during that time he had taken from 30 to 40 men and boys from farming pursuits, and taught them branches of his business. Since the repeal of the Corn-laws there had been a great demand for Oxfordshire gloves, but previously to that time the trade was almost in abeyance. Six times as much labour had been employed in the manufacture of gloves in Woodstock and its neighbourhood, through that cause and that alone. The result was that they had been obliged to fetch men from Woodstock and Yeovil, and as they could not get enough they had to fall back upon the agricultural labourers and teach them. Those circumstances, together with the demands of the army, navy, militia, railways, and emigration would account in a great measure for the deficiency of agricultural labour in this district. With respect to applications to the Union for relief he could say that the parish in which he lived and was an occupier of land consisted of about 1300 inhabitants and 1800 acres of land, half of which belonged to the Duke of Marlborough. Year by year their rates had increased, until their expenditure reached 880*l.* for the year. When, however, he looked round and found gentlemen, some of whom told a very different tale at the agricultural meetings last autumn, pulling down cottages and driving the poor into large towns, he was not surprised to find their rates on the increase. He regretted to say that he knew men occupying 200 acres who employed no labour beyond one carter and an under-carter. He (Mr. Pritchett) should like to know who would be willing to build cottages for a return of 5 per cent., and his belief was that they must make every parish a Union, and then the gentry would come forward and help them. The Game Laws trenched upon their local taxes more than anything else, and if they looked to their calendars and county prisons they would find that half of the cases were for poaching. There were many men who did not like to tell these unpleasant truths to the landlords, but as he wished to work well with landlords, tenants, and labourers, he desired to see these abuses abolished.

The President remarked: As regarded wages they must be content to pay the price at which it could be had, as it was a marketable article, and like everything else must be regulated by the supply and demand. It may be said they could not get it at any price, and that may be true for a time, but there must and would be a possibility of getting it by paying fairly and justly for it. Again, it may be said, what is to be done in the meantime, and would they not be ruined before they get it, and when it did come would they be able to pay for it? In answer to that all he had now time to say was, that there was a natural adjustment of such matters, but it often happened that some of the relational changes were at times too great for those exposed to their influence to bear up against them until a new state of things had become a settled fact. Such matters must in a great measure regulate themselves and depend upon others. In extreme cases there were just two ways of acting: one was to give in at once, and the other was to invent some artificial substitutes in the way of steam ploughs, threshing, reaping, and mowing machines. They could invent machinery and bring it into operation immediately, but they could not create labourers all at once. The agricultural labour market had been unsettled by at least two causes, one the falling off of the supply of labour from Ireland, and the other a more influential one, the impetus given not only to agriculture but to almost every other profession or calling. A third cause might be stated, viz., the emigration from this country and Ireland, which had thinned the ranks of labour to a considerable extent. He maintained that the agricultural labourers of this country had been degraded and steeped in ignorance, and they were repaying them with a retribution which however much to be deplored was not to be wondered at. If they, the agriculturists, meant to be whole they must remove this plague spot; if they meant to succeed they must set to work and raise that fallen race the labours of England. It had just flashed across his mind what two great monarchs expressed a wish might be the lot of every one of their subjects—the French monarch expressed a wish that every one might have a fowl for his dinner, but it was the wish of no less a venerable and patriotic monarch than George the 3d, that all his subjects should be able to read the Bible. In his, the President's opinion, the schoolmaster was the instrument to bring the wishes of the two monarchs into effect by teaching men on the one hand to strive for their physical comforts, and on the other impressing their minds with divine and human knowledge. Mr. Watson having consented to embody in his resolutions the suggestions made by Mr. Williams, they were then agreed to unanimously. *Abridged from Jackson's Oxford Journal.*

HALESWORTH: *December. Agricultural Money Making.*—Mr. R. Bond read an able paper on this subject. He estimates the increase in the grain production of the country, since the commencement of the century, at 70 or 80, while the meat production, he thinks, has increased 100 per cent. The price of Wheat has been, on the whole, tending downwards, having been 81*s.* 10*d.* in 1805, 97*s.* 6*d.* in 1815, 78*s.* 8*d.* in 1825, 56*s.* 7*d.* in 1835, 57*s.* 11*d.* in 1845, and 53*s.* 10*d.* in 1855. The rental value of land in England, in 1815, was 32,500,000*l.*, and at present Mr. Bond estimates it at 41,000,000*l.* The landed proprietors have, therefore, he argues, in the face of the diminished prices of grain, derived the greatest benefits from the increased produce which has resulted from vast and progressive improvements; and he believes that such will be the advancement from improved mechanical appliances, deeper culture, extended stock, farming, &c., that land purchased now to pay 3½ per cent. will 50 years hence almost double its rental returns. With a gradual diminution of 33 per cent. in the value of Wheat, and a rise of 28 per cent. in the rental value of land, with no considerable increase in the amount of cultivated land, but with a considerably increased demand for farms, the tenant has been in no easy position; he must have improved his holding in accordance with the advancement of the age, or he would have lost not only his per centage return, but his capital also. Farmers, Mr. Bond expressed his belief, now suffered considerably as regards the competition for farms from amateurs who farm for amusement, without reference to profit; and the competition experienced in commercial pursuits was less than in agricultural, while the per centage of profit was infinitely greater. Many a farmer now making a good profit had to thank his landlord for a large portion of it simply because his farm was let at a moderate rental, and not thrown into the market to make the highest price it would fetch. Still, Mr. Bond said, he did not fear competition; competition for farms with long leases and liberal covenants would give the triumph to capital, and capital agriculture still required. Tenants with small means would be eventually beaten out of the market; they had gradually been falling away for years past, and their places would in future be filled by men with capital derived from other sources. The tenant's share of agricultural money making in the future would not, he, thought, be greater than it has hitherto been; competition for farms would keep down the percentage returns, and profits exceeding a low average would only be made where farms were not offered for fierce competition in the market, or where very unusual skill was displayed by the tenants. Referring to the agricultural labourer, Mr. Bond remarked that his gain in the increased agricultural returns of the present day was small, and his pecuniary position was but slightly improved; still he stood infinitely better in the social scale as a free and independant man, and if he used his improved position aright, he believed that he would in future be able to command a better home, a better education, and more of the physical and intellectual comforts of existence. As regards remedial measures calculated to improve the condition of the agricultural interest, Mr. Bond advocated a consideration of the currency laws, a free transfer of land, the repeal of the malt-tax, and a better adjustment of the relationship between landlord and tenant.

Reviews.

Revue Agricole de l'Angleterre. Par M. F. Robiou de la Tréhonnais. Barthès and Lowel, Great Marlborough Street, London.

The first volume of this well conducted serial has now appeared. It is a portly octavo of 480 pages, capitally illustrated with portraits of Jonas Webb, Fisher Hobbs, and J. J. Mechi, all of them most recognisable; illustrated also with diagrams and drawings of machinery and animals. The letterpress includes articles on the Smithfield Club, on Reaping Machines, on Lois-Weedon Culture, on Steam Ploughing, on Italian Rye-Grass Culture, on Cross-breeding, on Milk, on Special Manures, and on many other subjects of immediate agricultural interest. The work is an admirable illustration of Mons. Tréhonnais' well-known literary ability and agricultural knowledge.

Diary for the Dairy, Piggery, Poultry Yard, and Apiary. By an Essex Amateur. Ridgway.

The edition for 1860 is as useful as its predecessors, containing blank forms for all manner of records desirable under the several divisions mentioned in its title, and information for the guidance of its readers in the ordinary and extraordinary circumstances of their experience.

The Midland Counties Almanack and Rural Hand-book.

An octavo volume of about 240 pages for 6*d.* More than one-half is occupied with advertisements; but the remainder is well packed with useful information. What a pity that amid really valuable instruction on almost every topic in which the countryman is interested, there should be such a piece of sham and falsity as the page of "Weather predictions for 1860" necessarily is! Put that out however, and there is still a wonderful number of useful pages for the price.

Miscellaneous.

The late John Finnie, Swanston.—John Finnie, farmer, Swanston, a name familiar to most agriculturists, died on the 24th December, aged 52 years. The family have occupied the farm of Swanston for about four centuries. Mr. Finnie became the responsible tenant about 25 or 26 years ago, his father being then alive, who died at the advanced age of 90 years. As a practical farmer Mr. Finnie had few equals. His general management was superior, and was the subject of frequent remark. The farm was often visited by distinguished strangers from all parts of the world. Mr. Finnie frequently undertook the conducting of experiments with manures and the different varieties of the cultivated plants. In the feeding of cattle he also experimented extensively. The experiments were noted by him at the time with the minutest attention to accuracy of detail. Mr. Finnie was much employed by various landed proprietors in the valuation of farms. In connection with the Highland Society Mr. Finnie took prominent place, both as director and member. It was owing to his suggestion, and mainly to his endeavours, that the Agricultural Chemical Association of Scotland was formed, which association secured the services of the late Professor Johnston. After a useful existence of five years, this association ultimately merged into the Highland Society. A few contributions from Mr. Finnie's pen have appeared in the Transactions of the Society, and can always be referred to for the information they contain. Mr. Finnie took an active part in the improvement of rural cottages, and in the education of the rural population. He was one of the earliest and most active members of the Agricultural Labourers' Dwellings Association. Betwixt Mr. Finnie and those in his employment the relation was one of mutual confidence and respect. Most of his farm servants remained long in his service, and those at present on the farm have been remembered by him in his deed of settlement. The farm steward receives as a legacy the sum of 200*l.*, and the ploughmen and other servants in proportion to their position and period of service.

Stable Management.—"The proper means to be adopted for the purification of the stable, will be to have a mode of ingress for the pure air, about 2 yards distant in the walls of the stable, near the foundation, and a similar channel for egress at the opposite wall, above the horses' heads, as high as possible. The holes at the heads may be 9 inches square, and those on a level with the ground at the opposite wall not more than 4 inches. The working of such machinery can be easily discovered, by placing a feather or lighted candle in the openings near the ground, when either will be blown inwards, proving an inward current of atmosphere or pure air; while a similar trial at the holes near the ceiling will show an outward stream of the lighter poisonous gases. The man must be either very obtuse in intellect, or very reckless of his own interest and his servants' comfort, that after consideration of these facts will neglect the remedy within reach of the poorest or most niggardly. Ignorant grooms frequently stop the ventilators with hay, more particularly in winter, either not knowing, or not caring that ventilation is as requisite at one season as another, and that if accustomed to a healthful current of air the most tender horse will never take injury from it. In building stables, I should never have them loft, preferring straw and hay houses on the ground floor attached. I would also recommend level floors, with the barest incline in stalls that will suffice for cleanliness, as sloping stalls are to the poor animals places of purgatorial torment, temporarily alleviated by their absence at work or elsewhere. A horse resting in the natural state, when standing, will face down an incline; and many in the plenitude of their wisdom expect to give repose by tying him in a contrary direction to that which nature dictates. Pipes sunk for conducting the urine to the liquid manure receptacle will be found to materially enhance the dryness, cleanliness, and comfort of stalls, and to save for the farmer a valuable addition for agricultural purposes. I object *in toto* to tying horses' heads in stalls; the animals are thereby deprived of volition, and must place themselves, in what shape their hours of ease, not as they wish, but as the master or custom ordains. Dung or litter should never be allowed to accumulate for a moment, but should be removed to the dung heap, which should never be within *smelling* distance of a stable. Any one desirous of seeing proper stable system carried out, had better pay a visit to Mr. Murray's, Broughton Mews, Manchester, and if not improved and enlightened I am much mistaken. The more room a horse has, the less will he be to diseased legs and stable accidents. Loose stalls may indifferently accommodate moderate horses, but I should say boxes were indispensable for valuable ones. I recommend crushed Oats in preference to the *naturel*; but for hard work it should not be given without Beans. A thermometer should always be a stable adjunct, and the temperature regulated accordingly. The system of bedding down horses in the day time is wrong. The mechanism of the foot is perfect for delicacy of structure; surrounded by a horny sheath in a horny case, whose efficiency is occasioned upon its flexibility, or power of assimilating itself to the delicate parts it was formed to shield and protect, whose with, by elasticity relieving pressure: when in a natural state, and in constant contact with the damped by rain or moistened by dew, everything calculated to promote flexibility. In the stable the contrary is the case; constantly buried in straw it cannot throw off that which is at all times being generated in them. They dry, harden, lose flexibility, so far from performing the part nature intended, press upon the delicate and sensitive parts beneath, generating 'grogginess.' This evil is easy of remedy: let the horse stand on the bare floor of the

during the day-time, with his feet stuffed with cow-dung. The litter should be placed anywhere rather than in his stable, for the generation of ammonia from the urine with which the litter may be impregnated is productive of serious mischief to the eyes. A judicious amount of warmth is very desirable in a stable, and which is quite consistent with thorough ventilation; but over clothing is a very ignorant and injurious custom. So far from inducing health, vigour, and development of muscle, the practice has an opposite tendency, rendering the animal more sensible of any transition of temperature in this variable climate. Let less clothes, and more 'elbow grease,' be the rule of your stable." *The Horse and his Master.*

Calendar of Operations.

JANUARY.

CHESHIRE, *Jan.* 4.—The sudden changes and great variety of weather within the last few weeks have to a considerable extent disarranged the general order of farming operations; Mangel Wurzel was left in the ground long after the usual time of its being stored, in consequence of the October frosts, and Wheat sowing was retarded from the same cause, and in some localities it is now scarcely completed. Swede Turnips too have, in many instances, been left growing much beyond the usual period of drawing, consequently they sustained great injury from the severity of the frost about the middle of December, so that we fear the crop will be reduced to one-half its quantity of keeping Turnips. Within the last nine days an extraordinary change of temperature has taken place, and the year 1859 closed with weather as mild as is generally experienced in the month of April, and almost amidst heavy thunder showers and vivid flashes of lightning, which we had in abundance on the 30th. The floods in the meadows have been very high, and the land is now thoroughly saturated so that the plough is laid aside for the present, excepting upon the very driest sandy or gravelly soils. Early Potatoes, which have of late years become an important article of farm produce, are, we understand, very much injured by being stored in farm buildings without due protection from the frost. Great losses have again befallen many dairy farmers; the "pleuro-pneumonia" in its most virulent character has revisited farms where 10 or 12 years ago it carried off from two-thirds to three-fourths of the dairy cattle. In one farm where about 50 cows were kept, upwards of 30 have fallen a sacrifice to the disease within eight months. In another in an adjoining parish, 25 out of 40 have been taken in rather less time, and in another in the same parish 26 head of dairy stock, besides two valuable colts, have been carried off in less than two months, and the disease is still going on. Almost everything that could be thought of has been tried to arrest this fearful malady (but all in vain), from homœopathy to Major's infallible specific. We have however witnessed a treatment quite new in this county, under which some cattle have apparently recovered, but we cannot yet speak so positively as we could wish; but if the results prove favourable, it will soon be made known. *W. P*

Notices to Correspondents.

BLACK BARLEY: *T Ingle.* You should apply to any of our leading seedsmen.

MR. HORSFALL'S DAIRY FEEDING: *An Old Subscriber.* The following is the report to the English Agricultural Society of his management:—He had for four years given his dairy cows Rape-cake, of the kind termed "green" cake, which imparted to the butter a finer flavour than any other kind of cake; and in order to induce them to eat it, he blended it with one-quarter the quantity of malt-dust, one quarter bran, and twice the quantity of a mixture in equal proportions of Bean-straw, Oat-straw, and Oat-shells; all well mixed up together, moistened, and steamed for one hour. This steamed food had a very fragrant odour, and was much relished by the cattle: it was given warm three times a day, at the rate of about 7 lbs. to each cow (or 21 lbs. daily). Bean-meal was also scattered dry over the steamed food, cows in full milk getting 2 lbs. per day, the others but little. He had found this substance to be an unfailing means of keeping up the condition of cows while giving milk. When the animals had eaten up this steamed food and Bean-meal, they were each supplied daily with 28 to 35 lbs. of Cabbages from October to December, of Kohl Rabi till February, and of Mangels till Grass time; each cow having given to her, after each of the three feedings, 4 lbs. of meadow hay (or 12 lbs. daily). The roots were not cut, but given whole. The animals were twice a day allowed to drink as much water as they desired. Since the date of this report Mr. Horsfall has discontinued the use of Bean-meal owing to its comparative price, and has given in its place along with about 5 lbs. of Rape-cake an additional allowance of malt, Carrots, and 2 or 3 lbs. of Indian Corn meal. On this food, in instances actually observed, his cows have given 14 quarts of milk a day and gained flesh at the rate of about ½ cwt. per month. As regards the summer feeding of these cattle Mr. Horsfall says:—"During May, my cows are turned out on a rich pasture near the homestead; towards evening they are again housed for the night, when they are supplied with a mess of the steamed mixture and a little hay each morning and evening. During June, when the Grasses are better grown, mown Grass is given to them instead of hay, and they are also allowed two feeds of steamed mixture. This treatment is continued till October, when they are again wholly housed. In January, 1854, I commenced weighing my milch cows; and I have continued this practice once a month almost without omission. I find that cows in full milk yielding 12 to 16 quarts each per day vary but little, some losing, others gaining, slightly. It is common for a cow to continue a yield from six to eight months before she gives below 12 quarts per day, at which time she has usually, if not invariably, gained weight. The cows giving less than 12 quarts, and down to 8 quarts per day, are found when free from ailment to gain without exception. This gain, with an average yield of nearly 8 quarts per day, is at the rate of 7 to 8 lbs. per week each." This of course is only in the case of cows not in calf or intended to be dried and sold fat.

Peas for Marl. Your land promises to bear a good sward without further manuring. We would take a thin crop of Peas, say 1 bushel of seed per acre with the Grass seeds.

SULPHATE OF AMMONIA: *A Correspondent* says: "Agriculturists are not sufficiently acquainted with sulphate of ammonia. Hitherto the comparatively little attention devoted to its valuable properties and effects as applied to land has been owing most probably to its scarcity and high price. Now, however, its manufacture is much extended and greatly on the increase; its price as a consequence has become quite moderate, while the result which attends every fair trial of it as a manure fully sustains its superiority. [You will find reports of experiments with it in Professor Johnston's "Experimental Agriculture."]

*** As usual, many communications have been received too late for answers are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspond whose contributions is still delayed.

SUTTON'S BERKSHIRE HERO PEA
THE LARGEST PEA IN CULTIVATION.

This PEA is quite distinct from all others, very long in the pod, prolific, good flavoured, and a fine green colour. Price 2*s.* 6*d.* per quart. The following is the description of it recently published in the

Proceedings of the Horticultural Society:—

"SUTTON'S Berkshire Hero (SUTTON & SONS), sown, March 24; in flower, June 21; fit for use, July 11; height, 8 feet, of strong growth. Pods 12 on a stem, large, long, very slightly curved, well filled with 7 to 8 large Peas, which are greyish-olive and some yellowish white when dry. The dry seeds are large compared with most others in the same state, and compressed as well as slightly indented."

The BERKSHIRE HERO PEA being larger than any other, should be planted singly at least one inch apart. The stock is possessed exclusively by ourselves, and the undermentioned firms whom we have had the honour of supplying:—

Messrs. HURST & MCMULLEN, 6, Leadenhall Street, London, E.C.

Messrs. MINIER, NASH, & NASH, 60, Strand, London, W.C.

Messrs. NOBLE, COOPER, & BOLTON, 152, Fleet Street, London, E.C.

Messrs. CHARLWOOD & CUMMINS, Tavistock Row, Covent Garden, London, W.C.

Messrs. BATT, RUTLEY, & SILVERLOCK, 412, Strand, London, W.C.

Early orders will be necessary.
Royal Berkshire Seed Establishment, Reading.

POTATOES.—SURPLUS STOCK.

J. H. ROBINSON, SEED GROWER, Abbey Farm, Hinckley, has a few Tons of the EARLY FORTY-FOLD SEED POTATOES to dispose of at 5*s.* per cwt.; less by the ton.

THE TWO BEST POTATOES.

BIRMINGHAM PRIZETAKER KIDNEY.—Very early, great cropper, and short top.

DALMAHOY.—Round, second early, and unquestionably the best variety for general crop; fine flavour.

CHARLES TURNER has a fine Stock of healthy sets of the above, which are warranted as very superior.
The Royal Nurseries, Slough.

IMPORTANT TO PLANTERS.

ROBERT PAIN respectfully calls the attention of intending planters to an inspection of his very superior stock of PORTUGAL and COMMON LAURELS and YEWS, from 4 to 7 feet high, and as much through, fine specimens, and in the best possible condition for removal, being grown expressly for immediate effect. Standard Apples for orchards, strong and well grown tall stems, so that cattle may not reach them. Peaches, Nectarines, and Apricots, Rider, half-standard, and dwarf-trained with extra large sized heads. Drooping Limes, Elms, Ash, and Willows in variety on tall stems.

Scarlet, Double White, and Pink Hawthorn, of large size; Scotch Spruce, Weymouth Larch, and other Firs, from 4 to 10 feet in height; Chesnut, Birch, Poplars, Elm, Mountain Ash, Laburnum, Walnut, fine specimens, 9 to 12 feet high.

There is every facility for conveyance, as the Nursery is convenient to the Great Western Railway Uxbridge Station.
Uxbridge Nursery, Middlesex.

CONIFERÆ.—TO PLANTERS.

J. SCOTT, Merriott and Yeovil Nurseries, Somerset, begs to offer as sample, from his extensive Stock, the following, viz.: Cedrus Deodara, 1½ to 10 feet, 2*s.* 6*d.* to 30*s.* each; Cedrus Libani, 3 to 9 feet, 3*s.* 6*d.* to 20*s.* each; Pinus insignis, 1½ to 4 feet, 2*s.* 6*d.* to 5*s.* each; Pinus excelsa, 1½ to 8 feet, 1*s.* 6*d.* to 10*s.* 6*d.* each; Cupressus marcocarpa, 1½ to 5 feet, 1*s.* 6*d.* to 7*s.* 6*d.* each; Cupressus torulosa, 2 to 8 feet, 2*s.* 6*d.* to 10*s.* 6*d.* each; Cryptomeria, 2 to 10 feet, 1*s.* 6*d.* to 10*s.* 6*d.* each; Thuja aurea, fine plants, 2*s.* 6*d.* to 5*s.* each; Wellingtonia gigantea, 1 to 2½ feet, 5*s.* to 15*s.* each. With a great variety and stock of all the choicest and best kinds in cultivation. Also FRUIT and FOREST TREES, SHRUBS, &c., in great numbers, above 30 acres being dedicated to their growth.

CATALOGUES of J. SCOTT'S extensive Stock on application.
Railway communication to all parts of the kingdom.

CONIFERÆ, &c.—The Subscribers having a good stock of the following very desirable HARDY TREES, &c. beg to offer them at the prices annexed. The plants are all healthy, vigorous, and remarkably well shaped (in fact they are such as are seldom met with), they have been frequently transplanted and have unusually good roots.

ABIES ORIENTALIS, very bushy and fine, 12 to 15 inches, 3*s.* 6*d.* each, 30*s.* per dozen.

ARAUCARIA IMBRICATA, extra fine (never been grown in pots), 12 to 15 inches, 2*s.* 6*d.* each, 30*s.* per dozen.

BIOTA GLAUCA, splendid young plants, 12 to 15 inches, 2*s.* 6*d.* each; larger, 2 to 2½ feet.

BIOTA MELDENSIS, 12 to 18 inches, 2*s.* 6*d.* each.

CEDRUS AFRICANUS, (true), one year seedlings, extra fine, in store pots, 21*s.* per 100; large fine plants, 3 to 4 feet and upwards.

CEDRUS DEODARA, 2½ to 3½ feet, 3*s.* each, 30*s.* per dozen.
" " 4 to 5 feet, extra fine, 7*s.* 6*d.* to 10*s.* 6*d.* eac
larger fine plants, 6 to 8 and 10 feet

CEDRUS ROBUSTA, strong grower, extra fine, 2½ fee 5*s.* to 7*s.* 6*d.* each; larger, 3 to 4 feet.

CRYPTOMERIA JAPONICA, one-year seedlings in store pots, 15*s.* per 100, 140*s.* per 1000; large fine plants, 3 to 4 and 5 feet and upwards.

JUNIPERUS ERICOIDES, splendid plants, 12 to 15 inches 2*s.* each, 18*s.* per dozen, 120*s.* per 100; 18 to 20 inches, perfect specimens, 2*s.* 6*d.* to 3*s.* 6*d.* each, 30*s.* to 40*s.* per doz.

JUNIPERUS SINENSIS, extra fine, 3½ to 4 feet, 3*s.* to 5*s.* each, 30*s.* to 50*s.* per dozen; 4 to 5 feet, 7*s.* 6*d.* each, 84*s.* per dozen; 5 to 6 feet and upwards.

PINUS WEYMOUTH, very bushy and fine, adapted for specimen trees, 2½ to 3½ feet, 25*s.* to 30*s.* per 100.

TAXUS OR YEW, IRISH, extra fine, 2 to 2½ feet, 9*s.* per dozen, 63*s.* per 100; 4 to 4½ feet, 8*s.* to 8*s.* 6*d.* each; larger, 6 to 7 and 8 feet.

TAXUS OR YEW, ENGLISH, extra transplanted and fine, 3½ to 4½ feet, 50*s.* per 100, 22*l.* 10*s.* per 1000; also a fine stock of larger and smaller sizes.

THUJA OR ARBOR-VITÆ CRAIGIANA OR GLAUCA, true, extra fine, 15, to 18 and 24 inches, 5*s.* to 7*s.* 6*d.* each.

THUJA OR ARBOR-VITÆ GIGANTEA, 18 to 24 inches, 7*s.* 6*d.* to 10*s.* 6*d.* each.

THUJA OR ARBOR-VITÆ SIBERIAN OR WARREANA, extra fine, 2 to 2½ feet, 6*s.* to 9*s.* per dozen, 45*s.* to 63*s.* per 100, or by the 1000.

THUJOPSIS BOREALIS, OR CUPRESSUS NUTKAENSIS, extra fine, 12 to 15 inches, 2*s.* 6*d.* each, 24*s.* per dozen, 18 to 24 inches, 5*s.* to 7*s.* 6*d.* each, 55*s.* to 84*s.* per dozen.

With a fine collection of all the choice CONIFERÆ, both new and old. For description, prices, &c, see CATALOGUE, which will be forwarded post free on application.

Also fine stock of Fancy HOLLIES, green and variegated; Hardy EVERGREENS, ROSES, &c.

DWARF MAIDEN APRICOTS, NECTARINES, PEACHES, &c., extra fine plants, true to name, 1*s.* each, 12*s* per dozen, or 5*l.* per 100. For sorts and description see CATALOGUE, which will be forwarded gratis and post paid on application.

It is respectfully requested that all orders from unknown correspondents may be accompanied with a remittance.

RICHARD BRADLEY AND SON, Halam Nursery near Southwell, Notts.

NEW SEEDS OF 1859.
EXCELLENCE OF STOCK, QUALITY OF GROWTH, AND LOW CHARGES COMBINED.

STEPHEN BROWN (late Bass & Brown), SEED-GROWER, &c., Sudbury, Suffolk, is now able to supply New Seeds of the present year's crop.

The following are offered, which include many new Vegetables of first-rate excellence. The Collections furnished from this establishment have met with the highest approval, and will be found on trial such as will not be surpassed.

ASSORTED COLLECTIONS OF VEGETABLE SEEDS.

			£	*s.*	*d.*
No. 1.	Collection for a large Garden for one year's supply, containing 20 quarts of the best sorts of Peas for succession of crops:—Broccoli, 10 sorts; Lettuce, eight sorts, and all other Vegetable Seeds in proportionate quantities for a full supply		3	0	0
No. 2.	A collection in smaller proportions		2	0	0
No. 3.	Ditto	ditto	1	5	0
No. 4.	Ditto	ditto	0	15	0
No. 5.	Ditto	ditto	0	10	6

The New SEED CATALOGUE of 1860 (29th Annual Edition), will be ready early in January, and will be sent free on application.

Goods (not under 20*s.*) Carriage Free to all the London Termini; also free to Chelmsford, Colchester, Ipswich, Bury St. Edmunds, Norwich, and all intermediate Stations on the same line of Railway.

TO THE NURSERY TRADE.—Strong Transplanted Ash, Alder, Mountain Ash, Beech, Spanish Chesnut, Horse Chesnut, Elms, Wych and English Gratted, Hornbeam, Hazel, Limes, Laburnum, Poplars of sorts, Sycamore, &c., 3, 4, 5, to 6 feet. Also Green Holly, 2 to 3 feet, and Laurels, 2, 3, and 4 feet. Prices (extremely low) on application.—JAMES DICKSON & SONS, the "Newton" Nurseries, Chester.

HENRY'S PRIZE HYBRID LEEK.

DOWNIE AND LAIRD, NURSERYMEN and SEEDSMEN, 17, South Frederick Street, Edinburgh, having purchased the whole stock of the above from Mr. Henry, are now sending it out in packets at 1*s.* postage free. This variety has gained upwards of 30 first prizes within the last two years, and obtained the first and second prizes at the Edinburgh Horticultural Society's Winter Show on Dec. 6, 1859, the Leeks then shown being described as extraordinary samples of culinary produce, measuring 7 inches in circumference and blanched fully 12 inches.

GLENNY'S IMPROVED BALSAMS from double flowers 3 inches over, 6 classes, 37 stamps; mixed 13. Cineraria, Dahlia, Pink, Hollyhock, from the finest show flowers, 13 each. A list of the best 60 seeds free. GLENNY'S NEW SPRING ANNUAL, with illustrations, in the press. GLENNY'S ANNUAL ADVERTISER is nearly ready, and the advertisements will appear in both.—Fulham, S W.

GENUINE FLOWER SEEDS AT MODERATE PRICES.

W. THOMPSON, Tavern Street, Ipswich, respectfully annonnces the publication of his DESCRIPTIVE PRICED CATALOGUE of FLOWER SEEDS for the present season, arranged on the natural system, to which he invites the particular attention of amateurs. The collection includes all the most deserving novelties, with a fine selection of rare and choice seeds of all classes, which are faithfully described from personal observation, W. T.'s great aim being, next to the supply of a genuine article, to avoid the inflated descriptions and indiscriminate style of eulogium now too commonly adopted. W. T. respectfully solicits a comparison of his seeds with those of other firms, feeling confident that both for germinating qualities and correctness of name they will be found unsurpassed if not unrivalled, whilst for equal quantities their prices are fully one-third lower than usual, as the Catalogue will show. It will be sent post free on prepaid application.

ROBERT NEAL, NURSERYMAN, Wandsworth Common, S.W., begs to call the attention of buyers to his large and well-selected stock of EVERGREENS and FLOWERING SHRUBS, ORNAMENTAL TREES, AMERICAN PLANTS, FRUIT AND FOREST TREES, STANDARD AND DWARF ROSES of every description. A large stock of BOX-LEAF EVERGREEN PRIVET, from 1 to 6 feet for hedges; GREEN HOLLY, 1 to 6 ft.; RICH BOG and LOAM for American Beds; LEAF MOULD. The Nursery is 10 minutes' walk from Clapham Common, and New Wandsworth Station, Crystal Palace Line.

FOREST TREES, QUICKS, ETC.

H. AND R. STIRZAKER have to offer a very large quantity of good quality and well-rooted. Parties intending to plant extensively will be more liberally dealt with. Prices to the Trade on application.

Ash, 2 to 3 feet, 12*s.* 6*d.*; 3 to 4 feet, 17*s.* 6*d.*; 4 to 6 feet, 30*s.* per 1000.
Beech, 2 to 3 feet, 22*s.* 6*d.*; 3 to 4 feet, 35*s.* per 1000.
Birch, 1½ to 2 feet, 20*s.*; 2 to 2½ feet, 30*s.* per 1000.
Chesnut, Horse, 2 to 3 feet, 25*s.*; 3 to 4 feet, 35*s.* per 1000.
Chesnut, Spanish, 2 to 3 feet, 25*s.* per 1000.
Elm, grafted, 3 to 4 feet, 25*s.* per 100; Wych, 3 to 5 feet, 25*s.* per 1000.
Silver Fir, 12 to 15 inches, 30*s.*; 15 to 18 inches, 40*s.* per 1000.
Larch, 1½ to 2 feet, 12*s.* 6*d.*; 2 to 2½ feet, 15*s.*; 2½ to 3 feet, 17*s.* 6*d.*; 3 to 4 feet, 25*s.* per 1000.
Oak, English, 1½ to 2 feet, 15*s.*; 2 to 2½ feet, 20*s.*; 2½ to 3 feet, 25*s.* per 1000.
Sycamore, 1½ to 2 ft., 14*s.*; 2 to 3 ft., 16*s.*; 3 to 5 ft., 25*s.* per 1000.
Thorns, 2 years, 10*s.* 6*d.*; 3 years, 14*s.*; 4 years, 20*s.* per 1000.
Pinus austriaca, 9 to 12 inches, three times transplanted, 35*s.* per 1000.
Berberis Aquifolium, 1½ to 2 feet, 85*s.* per 1000.
Laurel, Common, 1½ to 2 feet, 6*s.*; 2 to 2½ feet, 10*s.*; 2½ to 3 feet, 15*s.* per 100.
Yew, English, 1½ to 2 feet, 17*s.* 6*d.*; 2 to 2½ feet, 25*s.*; 2½ to 3 feet, 30*s.*; 3 to 4 feet, 45*s.* per 100.
Solanum Capicastrum, 1 year old, good plants, 9*d.* each.
The Nurseries, Lancaster.

REIGATE SILVER SAND.—Best quality for Florists, 16*s.* per ton; less quantities 1*s.* 6*d.* per bushel, delivered to any London Wharf or Railway. Sacks for Sand, 1*s.* 6*d.* each; or on hire, 6*d.* each (five hold a ton); KENTISH and HAMPSHIRE PEATS, LOAM, and LEAF MOULD, in large or small quantities.—JOHN KENNARD, Purveyor to her Majesty, Swan Place, Old Kent Road, London, S.E.

HORTICULTURAL AGENT AND VALUER.

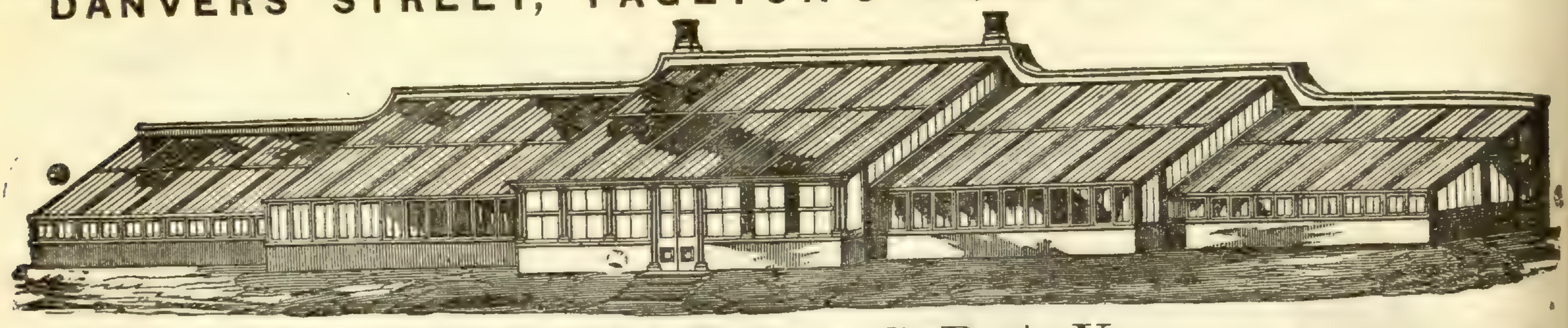
MR ALFRED CHANDLER, (of the late firm of CHANDLER & SONS,) 28, Priory Road, Wandsworth Road, S.

GARDEN LABEL.—Neat, durable, and well-executed LABELS, painted and lettered in oil paint, and varnished, equal to enamel. A specimen sent on the receipt of 3 Postage stamps.—Address F. H. LYDBURY, North Shropshire.

DESIGNS FOR FLOWER BEDS AND GARDENS.—In consequence of numerous applications J. MARSHALL, 2, Goldsmith Street, Nottingham, has been induced to prepare another set of Designs. They comprise upwards of 80, diversified in style, and will be forwarded to any address on receipt of 24 postage stamps.

HORTICULTURAL WORKS,

DANVERS STREET, PAULTON'S SQUARE, CHELSEA, S.W.



JAMES GRAY

RESPECTFULLY BEGS TO INFORM THE NOBILITY, GENTRY, NURSERYMEN, GARDENERS, AND OTHERS, THAT HE CONTINUES TO CARRY ON THE BUSINESS IN ALL ITS BRANCHES AT THE ABOVE OLD ESTABLISHED PREMISES.

CONSERVATORIES, GREENHOUSES, FORCING HOUSES, VINERIES, PITS, &c.,

OF EVERY DESCRIPTION, ERECTED ON THE MOST APPROVED PRINCIPLES.

HEATING BY HOT WATER.

J. G. having specially devoted his attention for many years to this part of the business, is now fully prepared to Heat every description of public and private buildings, viz. :—Churches, Mansions, Warehouses, &c., as well as all structures connected with Horticulture, in the most efficient manner. His system is the most simple that can be adopted—which he has found from long experience to be the best—can be constructed at less cost, and is more easily managed than those of a complicated nature which have attracted the notice of the public.

J. G. begs to call attention to his CAST-IRON CORRUGATED ARCH BOILER, which from its simplicity of construction has not the liability to fracture to which those of a more complex design are always subject. They have been extensively used for many years, and have given the greatest satisfaction.

All business is conducted at this establishment on the principle of lowest remunerative profits consistent with best materials and workmanship.

PLANS AND ESTIMATES FURNISHED ON THE SHORTEST NOTICE.

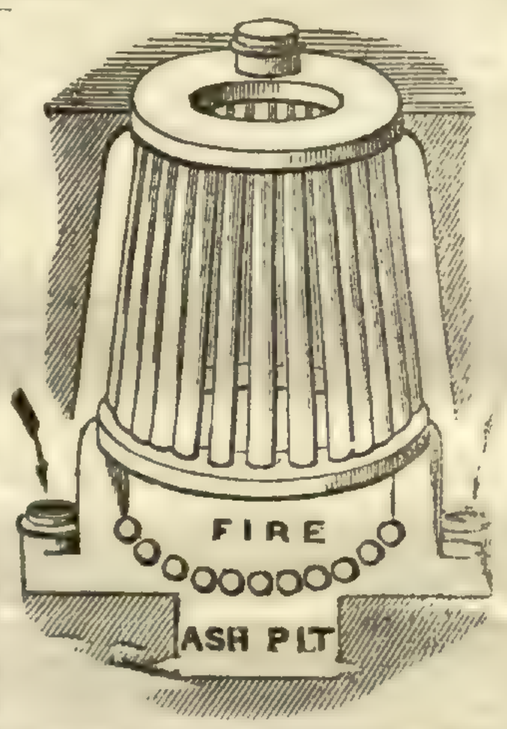
WEEKS' ONE BOILER SYSTEM.

So styled from the fact that the largest Horticultural Establishments in Europe are now effectually heated by WEEKS' ONE BOILER.

THE SEASON FOR TESTING THE EFFICIENCY OF A HOT-WATER APPARATUS having arrived, J. WEEKS & Co. are privileged by the under-mentioned well-known Horticultural Firms to issue a special invitation to the nobility, clergy, and gentry to pay a visit to their immense Establishments in order to become eye-witnesses of the extraordinary power of WEEKS' ONE BOILER SYSTEM.

J. W. & Co. beg emphatically to assert that their ONE BOILER SYSTEM is in every respect superior to any other method of Heating. It is more economical and clean, requires no night attendance, effects a great saving in labour, and that it is infinitely more efficient is clearly shown by the following statistics :—

	Length of Pipe Heated on Weeks' One Boiler System.
	Feet
Messrs. E. G. Henderson & Son, Wellington Nursery, St. John's Wood	5500
Messrs. F. & A. SMITH, Dulwich Nursery	10,000
Mr. WOODROFFE, Harrow Road, Paddington	4000
Mons. LOUIS VAN HOUTTE, Ghent, Belgium	13,000



J. W. & Co. also manufacture smaller and less expensive Boilers upon the same principle as the ONE BOILER SYSTEM, ranging in size from Nos. 1 to 6, at prices from 4*l.* up to 60*l.*

J. W. & Co. also invite an inspection of their own HORTICULTURAL SHOW ESTABLISHMENT at Chelsea, which they built expressly as a place of reference for exhibiting various designs and improvements in the Construction of CONSERVATORIES, GREENHOUSES, PINE STOVES, VINERIES, ORCHARD-HOUSES, CUCUMBER and other FORCING PITS, together with an extensive WINTER GARDEN, the whole in full and constant operation, and now being managed for Forcing CHOICE FRUITS, displaying an unrivalled selection of HORTICULTURAL STRUCTURES suited for every required purpose.

J. WEEKS & Co. have constantly on hand an extensive variety of HORTICULTURAL BUILDINGS ready for fixing in any part of the country, and also Forcing Frames and Pit Lights in large quantities.

J. WEEKS & CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, S.W.

PLANS, ESTIMATES, AND ILLUSTRATED CATALOGUES FREE ON APPLICATION.

ST. PANCRAS IRON WORKS,

OLD ST. PANCRAS ROAD, N.W.

IRON HURDLES, FENCING, AND GATES.

THE PROPRIETORS OF THE ST. PANCRAS IRON WORKS, OLD ST. PANCRAS ROAD, LONDON, WERE AWARDED THE

SILVER MEDAL of the Royal Agricultural Society for their IRON HURDLES & GATES

which, by their peculiar construction, are more than twice as strong and durable as those in ordinary use.

Lists per post on application. Gates from 30*s.* to 500*l.*

The Hurdles can be seen in process of Manufacture at the Works.

GAME WIRE NETTING.

Professor Varnell's Enamelled and Wrought-iron Stable Fittings.

These Patent Mangers and Stable Fittings obtained the Commendation and the Silver Medal of the Royal Agricultural Society of England and the Royal Agricultural Society of Ireland, are adopted by the Royal Veterinary College, and Professor Spooner of that Institution states that they should be used by all who value the health and comfort of their horses. They can be had plain, galvanised, or enamelled.

A Show Room is devoted entirely to every description of Stable Furniture, and full-sized stalls and loose boxes are erected for inspection at St. Pancras Iron Works.

ADDRESS—THE MANAGERS,

ST. PANCRAS IRON WORKS, OLD ST. PANCRAS ROAD, LONDON, N.W.,

OPPOSITE OLD ST. PANCRAS CHURCH.

HOT-WATER PIPES at wholesale prices, with Elbows, Syphons, Tee Pipes, and every other connection. Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, and Elliptic, from 24*s.* each. Boilers and Iron Stands to use without brickwork. Valves from 12*s.* each. Coil Boxes, Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S.

J. WATTS AND CO., HOTHOUSE BUILDERS AND HOT-WATER APPARATUS MANUFACTURERS,

Near the Green Man, Old Kent Road, London, S.E.

200 Cucumber and Melon Boxes and Lights, and from 3 to 400 Lights for Pits of all sizes kept in stock, glazed and painted complete, ready for immediate use, packed and sent to all parts of the Kingdom.

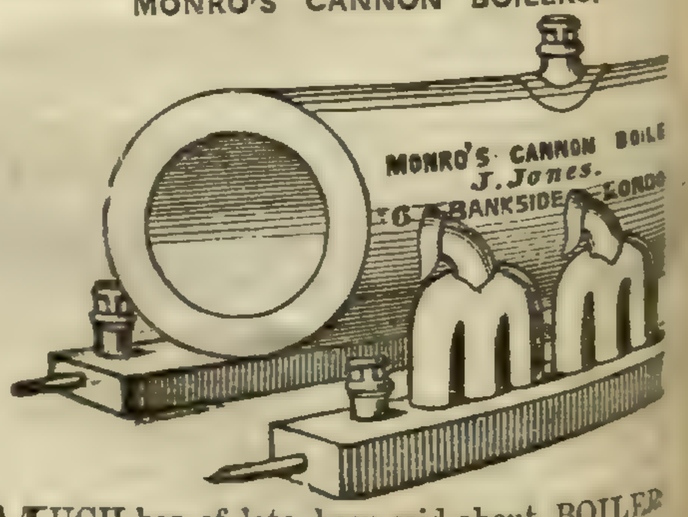
References to the Nobility, Gentry, and Trade in most of the counties in England.

VOKINS AND HUR
Jubilee Place, King's Road, Chelsea, S.W.

HORTICULTURAL BUILDERS and HOT-WATER APPARATUS MANUFACTURERS. Estimates forwarded on the shortest notice.

BOILERS of all sizes on sale; also small CONSERVATORIES and GREENHOUSES, Heated by GAS; HOTWATER APPARATUS, from a single burner, upon quite a different plan to the Common Gas Stove, which is so injurious to plants. For prices &c. apply as above.

MONRO'S CANNON BOILERS.



MUCH has of late been said about BOILER HEATING BY HOT WATER, but these Boilers have now proved themselves to be the best at present in use. They are adapted for Heating every description of Building, and are made of various sizes. The price of the

24-inch Cast Iron is	£5 10*s.* 0
24-inch Wrought Iron is	6 10
36-inch Wrought Iron is	8 10
48-inch Wrought Iron is	12 0

References to Gentlemen and Nurserymen where these Boilers are now at work. The Cannon Boilers are now kept in stock, and are to be had only of J. JONES, 6, Bankside, S.E. Also every description of Saddle and Cylinder Boilers. Hot-water Pipes and Connections at prices lower than those of any other House in London. Estimates for Hot-water Apparatus erected complete in any part of the country, and an Illustrated Catalogue on application to J. JONES, 6, Bankside, Southwark, London.

BUSBY'S STOCKWOOD GOLDEN HAMBURGH GRAPE.

THE very beautiful specimens of this really SPLENDID GRAPE (some of the bunches weighing upwards of 3 lbs.) which have been exhibited during the past season, combined with the numerous unsolicited testimonials as to its superiority and general excellence which JAMES VEITCH, JUN., has received from the most eminent practical Gardeners, warrant him in again calling attention to its great merit.

J. V., JUN., can with confidence recommend it as being without doubt *the best light Grape of its class* in cultivation. It will be found a most valuable acquisition, succeeding well under the same treatment as the Black Hamburgh, and *certainly no Vinery should be without it.* It has also proved to be a most excellent variety for fruiting in pots. That so fine a fruit may be universally planted and enjoyed, J. V., JUN., now offers good established plants at the following prices:—

Nice young Canes ... ... 5s. 0d. each | Good well ripened Canes ... 7s. 6d. each
Fine well-ripened Canes ... ... 10s. 6d. each

ROYAL EXOTIC NURSERY, CHELSEA, S.W.—January 21.

COVENT GARDEN MARKET, LONDON, W.C.

BUTLER & McCULLOCH'S

DESCRIPTIVE AND PRICED CATALOGUE OF FLOWER, TREE, SHRUB, VEGETABLE, AND AGRICULTURAL SEEDS

(READY IN A FEW DAYS, AND FORWARDED FREE AND POST PAID ON APPLICATION),

The Notes and Descriptive Matter of which have been carefully revised and much valuable information added. The new and recent introduction of species and varieties have also been added, and as heretofore the seeds which require for their maturation a warmer climate than that of England have been saved for us in Italy by that distinguished amateur, the late Sardinian correspondent of Messrs. James Carter & Co., who has appointed us his representatives in this country.

Continued from last week's Chronicle.

SEALED PACKETS OF CARNATION AND PICOTEE SEEDS

FROM ONE OF THE CHOICEST COLLECTIONS IN EUROPE.

YELLOW CARNATIONS.

F.

Packets containing 12 superb varieties of YELLOW BIZARRE AND SELF CARNATIONS, YELLOW GROUND COLOUR, WITH STRIPES OF TWO COLOURS, viz.,

Yellow rose and lavender bizarre	Salmon scarlet and purple bizarre
Yellow flesh and rose bizarre	Yellow carmine and purple bizarre
Salmon red and lavender bizarre	Buff self
Orange purple and rose bizarre	Yellow self
Orange scarlet and maroon bizarre	Lemon self
Yellow purple and slate bizarre	Orange self

Ten seeds of each variety, 6s. 6d. Five seeds of each variety, 3s. 6d. per packet.

G.

Packets containing 12 superb varieties of YELLOW FLAKE CARNATIONS, YELLOW GROUND WITH COLOURED STRIPES, viz.

Yellow gr. scarlet flake	Yellow gr. pink flake
Yellow gr. crimson flake	Yellow gr. red flake
Orange gr. maroon flake	Yellow gr. maroon flake
Buff gr. scarlet flake	Orange gr. carmine flake
Salmon gr. purple flake	Yellow gr. rose flake
Orange gr. scarlet flake	Salmon gr. rose flake

Ten seeds of each variety, 7s. 6d. Five seeds of each variety, 4s. per packet.

H.

Packets containing 12 superb varieties of YELLOW FANCY CARNATIONS, viz.

Yellow shaded pink	Salmon spotted scarlet
Yellow spotted scarlet	Yellow mottled rose
Salmon purple and carmine	Yellow and flame
Yellow shaded scarlet	Yellow and lavender
Yellow pink and slate	Yellow mottled rose and purple
Yellow shaded crimson	Orange mottled scarlet

Ten seeds of each variety, 6s. 6d. Five seeds of each variety, 3s. 6d. per packet.

YELLOW PICOTEES.

I.

Packets containing 12 superb varieties of YELLOW PICOTEES, MARGINED WITH THE FOLLOWING COLOURS, viz.

Yellow gr. crimson edge	Yellow gr. carmine edge
Yellow gr. lavender edge	Yellow gr. broad scarlet edge
Yellow gr. broad maroon edge	Yellow gr. red edge
Yellow gr. scarlet edge	Yellow gr. maroon edge
Yellow gr. rose edge	Yellow gr. pink edge
Yellow gr. purple edge	Orange gr. scarlet edge

Ten seeds of each variety, 7s. 6d. Five seeds of each variety, 4s. per packet.

PERPETUAL CARNATIONS.

From the newest and best varieties extant.

J.

Packets containing 12 varieties of choicest PERPETUAL SELF OR ONE-COLOURED CARNATIONS, viz.

Scarlet	Deep crimson	Cerise	Rosy bronze
Carmine	Purple	Light scarlet	Flesh
Maroon	Rose	Pink	Deep rose

Ten seeds of each variety, 6s. Five seeds of each variety, 3s. 6d. per packet.

K.

Packets containing 12 varieties of choicest PERPETUAL FLAKE OR SCARLET GROUND CARNATIONS, WITH STRIPES, viz.,

Flesh gr. maroon flake	Blush gr. scarlet flake
Pink gr. crimson flake	Light scarlet flake
Rose gr. purple flake	Strawberry gr. crimson flake
Pink flake	Light purple flake
Scarlet gr. maroon flake	Pink gr. lilac flake
Rose flake	Rose gr. crimson flake

Ten seeds of each variety, 6s. Five seeds of each variety, 3s. 6d. per packet.

VEGETABLE SEEDS.

		s.	d.
No. 1.—Complete Collection of 20 quarts of PEAS, and all other Seeds in proportion, for one year's supply	(see first column)	3	0
No. 2.—12 quarts of PEAS, ditto, in smaller quantities	(see second column)	2	0
No. 3.— 6 ditto ditto, ditto	(see third column)	1	1
No. 4.— 5 ditto ditto, ditto	(see fourth column)	0	15

"CAUTION."—Under this somewhat significant title has appeared in this Paper, and other publications, the following by no means courteous paragraph:—

"*James Carter & Co. wish to caution their customers against the published statement of a Covent Garden House, in reference to themselves in conjunction with a supposed Agency (which never existed), as such statements are totally devoid of truth.*"

It is impossible not to understand that we are the House alluded to in the paragraph just quoted, and which has evidently been put forth with the view of damaging our commercial integrity. The kind of reliance to be placed on the above statement will perhaps be best judged from the following extract from Messrs. James Carter and Co.'s own Seed Catalogue of 1857, at page 31:—

"CARNATION AND PICOTEE SEEDS.

"JAMES CARTER AND CO. *have again the pleasure to submit to public notice the following splendid Collection received from their Sardinian Correspondent* (an Amateur of first-rate ability). *All the Seeds produce, upon an average, from 70 to 75 per cent. of fine double flowers.*"

Again, Messrs. J. C. & Co., have the following in an advertisement See *Gardeners' Chronicle*, Feb. 26, 1859, page 167:—

"*Having observed their name mentioned in an advertisement in connection with a late correspondent, feel it their duty to state that preferring to have their Seeds from the Continental growers direct, one of the Firm have travelled during the past autumn with that object, and purposes doing so every season; the services of the correspondent alluded to are therefore dispensed with.*"

Surely further evidence is unnecessary to prove the intimate connexion which existed between Messrs. James Carter & Co. and our Sardinian Correspondent who for many years supplied that firm with choice Seeds of Italian growth, and we feel certain that the high eulogium passed upon that gentleman, (viz. an Amateur of first-rate ability), is perhaps the best guarantee (if other than our own were necessary) that we can possibly offer to the public respecting the value of the Seeds we receive from that source.

For further particulars and other choice Novelties see Catalogue.

Having completed our extensive alterations, we have commenced executing our Vegetable Seed Orders.

SURPLUS STOCK OF BULBS.

The following for 21s., or the half for 10s. 6d.:—30 HYACINTHS, 30 POLYANTHUS NARCISSUS, 100 DOUBLE TULIPS, 100 SINGLE TULIPS, 300 CROCUS, 50 BORDER NARCISSUS, 10 DOUBLE JONQUILS, 25 large SINGLE JONQUILS.

BUTLER and McCULLOCH, Seedsmen, Covent Garden Market, London, W.C.

THE PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY LIMITED are sending out their Collection of SEEDS, which have hitherto given satisfaction:—

No. 1. Complete Collection of Seeds for a large Garden for one year's supply	£3	0s.	0d.
No. 2. Complete Collection for a moderate-sized Garden	2	0	0
No. 3. Complete Collection for do. (small quantities)	1	5	0
No. 4. Complete Collection for a small Garden ..	0	15	0

No. 1. Carriage free to most Stations and Ports in the Kingdom.
No. 2. Carriage free to Broad Gauge Stations and Steam Ports.
No. 3. Carriage free to Stations between Plymouth and Paddington.

Address: Plymouth Seed Company, Plymouth.

TRITOMA UVARIA.

JAMES MARCHAM, of Earl's Court Road, Old Brompton, S.W., having saved SEEDS of this splendid hardy perennial plant, offers packets containing 50 Seeds for 1s., 200 for 2s. 6d., 500 for 5s., ¼ oz. for 20s. All orders to be prepaid. Seeds sown between now and the 1st of March will flower in the autumn of the present year.

RHODODENDRON CAMPANULATUM (TRUE), 1½ to 2 feet, large bushy plants, 6l. per 100. This peculiarly handsome Rhododendron may now be planted even where Game abounds; here, although the winter has been very severe, not a leaf has been eaten.

CEDAR OF LEBANON, 3 to 5 feet, 5l. per 100.

The best STANDARD ROSES, 3l. per 100.

WM. JACKSON & Co., Bedale, Yorkshire.

CATALOGUE.

YOUELL AND CO.'S GENERAL AND DESCRIPTIVE PRICED CATALOGUE for this season is now ready, and will be sent free on application.

It contains detailed Lists of Greenhouse Plants, Conifers, Shrubs, as well as all the newest introductions in Soft-wooded Plants.—Royal Nursery, Great Yarmouth, Norfolk.

TO PLANTERS OF CONIFERS.

YOUELL AND CO. can supply 50 species of RARE AND HARDY CONIFERS in good plants for 5l., package included, and carriage paid to Manchester, Newcastle-on-Tyne, Hull, London, Peterborough, or to any Railway Station within 150 miles of the Nursery. A LIST of the above can be had on application.—Royal Nursery, Great Yarmouth, Norfolk.

LAING'S MAMMOTH RED CELERY.—The largest and best flavoured Celery known, and will not run to seed until the second year. (See former advertisement.) Packets, 1s. each; large trade do., 8s. 6d.

New Australian Cress, 6d. per packet } per post pre-paid.
Cottager's Kale, true, 6d. per packet } Postage stamps received in payment.—Royal Nursery, Great Yarmouth.

TO THE TRADE.—SPERGULA PILIFERA SEED, the IMPROVED CUSTARD MARROW. Prices of the above, also for other seeds offered to the Trade, may be had on application.

STEPHEN BROWN, Seed Grower, Sudbury, Suffolk.

LAWNS WITHOUT MOWING—SPERGULA PILIFERA.

J. A. SUMMERS supplies the above in plants enough to cover the ground next summer at 1s. per square yard, or at 1s., 2s., and 4s. per doz. plants. A specimen post free, 1s.
Howard Park Nursery, Perry Hill, Sydenham, S.E.

PANSIES.

HENDON PARK NURSERIES, HENDON, N.W.

EDWARD SHENTON is now offering a large and varied stock of all the best Show varieties of PANSIES, in 60-pots. Prices for single plants, as per var.; per doz., 6s.

HARDY CALIFORNIAN CONIFERS, PICEA (ABIES) AMABILIS, PICEA (ABIES) GRANDIS.—Healthy seedling Plants of the above named most beautiful hardy Trees can be supplied by the undersigned by the dozen, hundred, or thousand, as also many other choice Conifers, PRICED CATALOGUES of which will be sent on application.
HUGH LOW & Co., Clapton Nursery, London, N.E.

CEDRUS DEODARA.

MAULE AND SONS still hold the largest supplies of the above tree in the country, and invite the attention of gentlemen planting, and the Trade generally. Magnificent specimens, 5, 6, 7, 8, 9, and 10 feet, at 5s., 6s., 7s., 8s., 9s., and 10s. each.—Stapleton Road and Stoke Nurseries, Bristol.

ROYAL EXOTIC NURSERY, CHELSEA, S.W.

JAMES VEITCH, JUN., respectfully announces that his CATALOGUE OF KITCHEN GARDEN AND FLOWER SEEDS for 1859, with a List of Implements and other Garden requisites, is now published, and will be forwarded post free on application.

J. V., Jun., devoting his personal attention to this department of his business, can warrant his SEEDS TRUE TO NAME, and of the MOST GENUINE description.—January 21.

The Gardeners' Chronicle.
SATURDAY, JANUARY 21, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY, Jan. 23—Entomological ..... 8 P.M.

IN our preliminary notice of Mr. DARWIN'S work we assumed that a considerable number of our readers, including a large portion of those who may profit most by its perusal, are more or less unfamiliar with the somewhat perplexing terms of its title-page; yet it is only by fully comprehending these, and by keeping them prominently before the mind, that the reader can hope to master even the general argument of the work. These terms are "Natural Selection," and "Struggle for Life;" to the explanation of both of which we may well devote a short space, confining the present article to the first.

It is very well known (and to none better than to gardeners), that the animal and vegetable kingdoms are more or less directly subservient to the uses of man, that animals and plants vary

more or less, and that man takes advantage of this fact by selecting such varieties as accident or experience show will be most useful to himself. Moreover man has experimentally proved that by attending to their conditions of life these varieties may be retained as such for an indefinite period, or rendered permanent, as far as his experience enables him to judge of what is permanent or transient; and as a corollary from these two facts, it follows that man can (so to speak), create or cause to originate still other varieties by selecting from those he has established such individuals as depart in any particular from them; and these latter will necessarily be wider departures from the original stock with which he commenced his operations.

This method of proceeding is very familiar to most persons; but not the rationale of it. In common parlance the gardener is said to "have made his plants vary;" and this looseness of expression betrays the inexactness of the prevalent ideas on the subject. The gardener does not necessarily nor even ordinarily make the plant vary; very few useful varieties have owed their origin to design; the appearance of the variety is, in most cases at any rate, accidental, and its obvious utility has directed man's attention to it. Suppose that it be desired to raise what in common parlance is called a new kind of Wheat, better suited to a particular soil or climate than that in ordinary cultivation: the surest plan is to select from the kind that already grows best in that locality the strongest and most prolific individuals, and to propagate from these. Man here works no change; he only takes advantage of the differences which are displayed by the plants in the field, and which have been induced without his intervention, and he knows not how. To follow out the process, the field eventually becomes covered with a crop of Wheat, which was formerly represented by a few ears only, but in effecting this rapid change man has only powerfully aided Nature; for it is quite clear that the quality which man has thus so prominently brought out is one which (other conditions remaining the same) must ultimately have asserted its superiority in a similar manner. Thus if it owed its superiority to hardihood, a greater proportion of its seeds would have annually ripened and a smaller proportion been annually killed in the ensuing winter; if to its fecundity, the result would be the same, and so on. We may even go further, and assert, that in the case of an annual crop like Wheat, Nature would have played into man's hands whether he knew it or not; for if one variety depart from its neighbours in the circumstance of producing seed better suited than all these do to the climate, the seed of that kind must, for the reasons above given, have been harvested in annually increasing proportions and hence finally dominate over the rest, except active means are taken to suppress it. The crop may fall off, owing to bad cultivation, bad seasons, bad harvesting, or bad housing of the grain; but unprolific as the field may become, there will to the last be better and worse plants in it and the best will be the last to die; there will in short remain, as material for Nature to work upon by natural selection, a slight preponderance of the seed of that variety which at that time and place was best suited to survive prejudicial influences, and to increase most rapidly when these should be removed. Under the simple conditions assumed for illustration it matters not in the long run whether Nature or man sows and garners.

Now it is this obvious power and facility which animals and plants have to select for themselves, so to speak, that is the foundation of Mr. DARWIN's term, "natural selection," and the reader must keep the value and full significance of its real meaning clearly before him: it does not mean that the unintellectual individual plant or animal goes to work *with the same intention* as the grazier or gardener, but that it does so with the same means, in the same manner, and to the same certain end; that good qualities will prevail over bad to the improvement of the condition of the race, in the physical as well as in the moral world.

This principle has a wide beneficial application, a far wider one to the agriculturist than at first sight appears; though we believe that generations may pass away before it is so acted upon as to yield its full fruits. From Australia, India, and all our foreign possessions, we have the demand for plants and animals suited to the climate and conditions of those parts of the world; and these we can supply, and to a certain extent successfully, by sending plants and animals of proved utility to man, which our experience of their power to increase and multiply under various conditions assures us will live and thrive in those climates. But from the mother country there issues a louder demand, that namely for the return of a special product of the plants or animals sent out; and to this a very unsatisfactory answer is returned. Thus, for example, we send to our colonies and to India, living specimens of the finest kinds of Cotton, Sugar-cane, Nicotiana, Cochineal, sheep, &c.; and we demand in return the finest known produce of these in the shape of Cotton, Sugar, Tobacco, Carmine, and wool; but too often in vain. If we inquire the cause, we are told that the plants grow admirably, and propagate abundantly, but that the climate is not suited to produce therefrom the kind of crop demanded and considered the finest; and we either remain discontented with the result, or send out more so-called finest kinds, to lead to as certain failure. But we here forget two principles that Nature teaches; first, that there are *no known limits to variation*; and secondly, that there are no such things known as *finest kinds*. Why should we assume that the varieties sent out to the colonies are those best worth producing, or the only ones worth trying to select from? Why, for instance, do we assume that the best known Tobacco is the best that ever will be known? All we do know or think about it is, that it was known under certain conditions to yield the finest known produce, and that this produce yields the quickest, surest, and largest money return in the present state of the market, of taste, of machinery, and means of transit. We have spent tens of thousands of pounds in growing the Sea-island Cotton in India, where Cotton grows and thrives admirably. Who knows but that a tithe of the time, money, science, skill, and energy expended on the abortive attempts to force a valuable kind on an ungrateful soil, climate, or people, might have enabled an intelligent cultivator of native Indian Cotton to develope, by imitating the process of *natural selection*, an equal or superior long-staple to that of the Sea-island? We owe to the accomplished and energetic Director of the Ceylon Botanic Garden the suggestion that it would be better to attempt the improvement of the already fruitful Ceylon Cottons, than to seek to establish the American long-staple, and herein that truly scientific officer has shown himself to be a practical naturalist. In the present state of science, we cannot doubt the wisdom of his proposal whatever its results may be; it is an application of the principle which Mr. DARWIN believes Nature to have followed in producing species of plants profitable to man and the lower animals, and which a perusal of his work assures us is, in the existing infant condition of experimental agriculture, capable of indefinite application and undreamt-of results.

IN another column it will be seen that Mr. RIVERS has revived the discussion about PLANE TREES, which excited so much interest in 1856. (See *Gardeners' Chronicle* of that year *passim*.) The history of one of our most ornamental trees is indeed by no means an unimportant subject, and by way of adding something to what has as yet been said, we take the present opportunity of ourselves offering a few remarks.

It is usual in this country to suppose that only two kinds of Plane tree are cultivated. One of these is the Oriental (*P. orientalis*) familiar to travellers in the East, and to scholars who remember how LICINIUS MUCIANUS, when Roman Consul in Lycia, dined in its hollow trunk along with 18 persons of his retinue. The other, generally called the Western (*P. occidentalis*), is the common Plane tree of the London Parks. About the origin and distinctive marks of the first there is no uncertainty. Its deeply lobed leaves, with in most cases a conspicuous extension of the green blade along the footstalks in the form of a wedge, are of themselves enough to separate it from the others, although its foliage varies a good deal as well as its manner of growth. It is of the so-called Occidental sort, which, for the sake of avoiding confusion, we will for the moment call the Park Plane, that the history is uncertain. Whence comes it? Is it American or European? Is it distinct from the Oriental?

The origin of our Park Plane is enveloped in mystery. That it is the same as what MILLER called the Occidental Plane (or *Platanus virginiensis*) is we think indisputable. Every word which he uses applies to the Park Plane and to nothing else; and hence doubtless the general belief that that sort was American. The real American or Occidental Plane MILLER also cultivated, having raised it under its common name of Button Tree, from seeds brought from Carolina. Hence we infer that MILLER did not himself know where the tree he called the Occidental came from, but supposed it to be American in consequence of his having also supposed it to be the Western or Virginian Plane tree of JOHN PARKINSON, who mentioned the latter in his Theatre of Plants published in 1640. Certainly this Park Plane is not American; at least it does not occur in any collections of dried plants formed in the United States, and therefore has no title to be called Occidental.

But what then is it? Mr. RIVERS supposes it to be MILLER'S Maple-leaved Plane tree, which that writer raised at Chelsea, from seeds of the Oriental Plane. But MILLER says that his sort is more tender than the latter, and grows faster, neither of which statements correspond with our modern experience; and he did not know whether it would strike from cuttings or not, though he thought it would.

But whether it is the Maple-leaved Plane tree of MILLER or not, there is no reason to doubt that it is the kind which bears that name on the continent. It is, moreover, certainly identical with what TENORE in his dissertation on Plane trees has so figured (*Ricerche sulla classificazione de Platani*, figs. 4 and 5); and we agree with Mr. RIVERS that it should now be called *Platanus acerifolia*.

That it is of Eastern origin we can scarcely doubt. The late Prof. LINK himself pointed out the trees in the Horticultural Garden and Hyde Park as what he regarded as the Platanus orientalis which he had so often seen in Greece. We also possess an imperfect dried specimen collected in Cashmere by ROYLE, which we are unable to distinguish from the tree of our Parks. At least it exhibits one of the most certain marks by which the leaves of P. acerifolia may be known from those of P. orientalis, viz., the great proportional distance from the top of the leaf-stalk to the base of the middle lobe of the leaf itself. It must, however, be owned that so much difficulty exists in distinguishing single leaves of the two trees, that were it not for the curious constitutional differences between them, pointed out by Mr. RIVERS, and well known to gardeners, they would certainly be referred to one common species.

Such now appearing to be the true history of the Park Planes, the statements respecting their tenderness in our climate must be withdrawn; for such real Occidental Planes as once existed there, if they ever became trees, seem to have long since perished from inability to ripen their wood sufficiently to bear our winters.

THE OLIVES IN FRANCE. The weather of December, 1859, has been disastrous for the Olives in the south of France. A correspondent of the *Times* states that in the neighbourhood of Grasse both Olive and Orange trees were completely frozen. This will be the more severely felt, inasmuch as in October the Olive crop had been much reduced by the worm, and by a south-east wind, which caused a considerable quantity of the fruit to fall off the trees. In fact, the damage caused to the Olive crop by the frost of December is so serious that it cannot yet be estimated.

New Plants.

233. PINUS LOPHOSPERMA.

P. foliis quinis rigidis apice triquetris pungentibus tactu scabriusculis, vaginis junioribus longissimis, strobilis globoso-ovatis obtusis apophysi ancipiti crassissimo umbone obsoleto subrecurvo, seminibus nuciformibus alâ brevi obliquâ in cristam magnam carnosam separabilem insertâ.

This acquisition has been obtained by Messrs. Low & Co., of Clapton, through Mr. William Lobb, who found it in Lower California, and speaks of it as a new species which, for beauty of foliage, is unsurpassed by any other kind he had yet seen. The leaves are from 8 to 10 inches long. It is indeed a fine thing, and perfectly distinct from all the species hitherto described. Its young wood is very strong, and covered with the glaucous bloom of a raisin. The leaves are stout, stiff, and not unlike those of a Pinaster; but its most remarkable characters are to be found in the cones and seeds. The cones resemble in form those of a Stone Pine, but are larger, and the apophyses (ends of the scales) are more erect and distinctly two-edged. The seeds are large like those of P. Lambertiana, &c., but they are furnished with a thick rounded comb or crest, of a blackish colour, from which proceeds a very narrow wing. Both crest and wing come away together in the form of a horse-collar. The species is therefore intermediate as it were between Endlicher's sections Pinaster and Pinea.

MYCOLOGY.—No. II.

—AGARICUS CEPÆSTIPES, *Sowerby*.—As the reproductive organs of Fungi are in general at the same time very minute and very abundant, and can therefore be wafted to and fro by every wind that blows, and moreover inasmuch as they are capable of enduring in many cases great changes of temperature, it is surprising that more exotic species do not make their appearance occasionally amongst us. A great many of them however do not

arrive at perfection the first year from the spores, and the tender spawn before it can bear fruit is subjected to conditions which it would not meet with in its native country, and is therefore liable to destruction.

In our stoves indeed conditions may and do exist which are less fatal to the perfect development of exotic Fungi, and accordingly a few species occasionally make their appearance. The beautiful *Marasmius hæmatocephalus*, for instance, with its bright tawny-red pileus, rigid, thread-like stem and broad distinct red gills, which is at home in the West Indies and the warmer parts of either America, appeared last summer at Kew in a pot containing a species of Carludovica; the curious Aseröe from New Holland has come up from imported mould in the same establishment; and we have gathered there in great abundance a tropical *Stilbum*. Several other instances might be adduced from other gardens, but in the cases just mentioned and many others the appearance of these plants has been merely occasional and a new crop has not appeared the second year. Similar examples might be brought forward of the appearance of exotic Fungi on imported wood in situations entirely unprotected and exposed to every change of weather, as *Schizophyllum commune* and *Lenzites sepiaria*, the latter of which is sometimes found in extreme beauty and luxuriance on scaffold poles and railway platforms. But neither the one nor the other becomes permanently established, and it is doubtful whether either can in any case be regarded as more than a mere stray species.

The Agaric however which we have chosen for our present illustration, though certainly of exotic origin, seems permanently established amongst us, like the little Helix, which for nearly half a century has flourished in Pine stoves at Bristol.

Agaricus cepæstipes, which derives its name from the stem being swollen in the middle, like that of an Onion, has been long an inhabitant of our stoves wherever spent tan is made use of to produce heat. It is sometimes of a uniform but delicate sulphur yellow, but sometimes of an almost pure white, as in the variety represented after Greville in our woodcut. The cap or pileus is at first bell-shaped and very obtuse, so as even to look truncate, but as it expands it becomes nearly plane, and is either powdered with a kind of meal or sprinkled with little scattered fibrous scales. The stem is firm and filled at first with delicate silky threads, but at length hollow and furnished with a distinct erect ring; the gills are moderately broad, and quite free so as to leave a disc round the top of the stem. The spores both in the yellow and white variety are white. It has never been found in this country except in stoves, but we have received it from South America, where it occasionally occurs amongst leaves in woods. According to Vittadini it is found in the open air in Italy; but as we shall see presently his plant is not certainly the same. There is no difficulty in recognising the species in its truest form, whether it be white or of a more or less decided yellow, as the characters are the same in either case.

A white and yellow Agaric, however, frequently occurs in stoves which has been confounded with it, which is either a form of *A. clypeolarius* or a distinct species. This is figured in the Flora Danica, and deserves a closer study than it has yet received.

The Onion-stemmed Agaric must be regarded rather as an object of curiosity than in any other light. It is too small and thin, even supposing it safe, to make it an object of much consideration. Vittadini, however, who has more especially in his eye the plant of Bulliard, which differs from ours in having a hemispherical pileus when young, speaks of it as resembling *Agaricus procerus* in quality, which is one of the best of our Fungi, and like that may be used for the table when young. As, however, it is not certain that Bulliard's plant is really the same, the Onion-stemmed Agaric if used at all should be used with caution. The Italian plant grows on mould arising from the decomposition of animal and vegetable substances, and is found in the open air, though Bulliard's plant, like the one we have figured, is in France confined to stoves. Vittadini, indeed, quotes the figures of Bolton and Sowerby; but it is clear from his description that he has never seen precisely what they represent. *M. J. B.*

AGARICUS CEPÆSTIPES.
Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora)

THE LONDON PLANE TREES.

WHEN I visit London in summer I always feel much interested in the luxuriant and happy state the Plane trees seem to be in as compared with other London trees. It seems but of little consequence where they grow, for fine trees may be seen in the confined back yards and courts of the City as well as at the West End. It is however, in the gardens of the squares of the latter district that the finest trees may be found. These are, as far as I have seen, of two kinds only:—the Oriental Plane with leaves deeply palmated or cut, and with a fine dark green glossy upper surface to them, which always gives the trees a charming country look; and another kind with larger leaves not so deeply palmated. It is to this kind of Plane I wish to call attention, for I think it is generally called the Occidental Plane by the public as well as by nurserymen. As far as my experience has gone, I believe this name to be entirely erroneous, and that not a single tree of the Occidental or American Plane (Platanus occidentalis) exists in the London squares or gardens. Pray allow me to say why I disbelieve in the existence of this kind of Plane; other perhaps some of your correspondents will correct me if I think erroneously.

Some 40 years since there were in my nursery two rows of what nurserymen call "stools" of Planes, planted by my grandfather about the year 1780. One of these rows consisted of stools of the "Occidental Plane," the other of the "Oriental Plane"—at least those were the names given to them. When a youth my attention was strongly drawn to the peculiar growth of the Occidental Plane; its leaves were enormous, but very slightly lobed and almost circular, and the shoots of the preceding year generally died down three-fourths of their growth in spring. I remember endeavouring to form into standards the young trees raised by layers from the stools, as their foliage was so grand, but never could succeed. If two or three hot summers followed each other I had hopes, but immediately a wet, cold season or two came on, the trees became stumps from all their young shoots dying down. About 20 or perhaps 30 years ago, I used frequently to receive from Mr. Charlwood seeds of Platanus occidentalis, imported from the United States; these always gave plants with the characters of my grandfather's Occidental Plane, and Sir William Hooker, in a recent communication, says—"We often raise young plants of P. occidentalis from American seed, but the annual shoots are killed down every winter."

I believe that this Plane never has existed in England, so as to form large trees, and that those mentioned by some authors as being large trees 50 years ago at Kew and elsewhere, and those mentioned by Miller in his Dictionary (fol. 1759) were not the true Platanus occidentalis.

The row of Planes I have alluded to above, growing near the P. occidentalis stools, and called "Oriental Planes," I found to be most vigorous growers, often making shoots in one season from 10 to 12 feet in length. I soon found out that this was not the true Oriental Plane, for its leaves were larger and not so deeply palmated. While in doubt what this kind of Plane could be, I received from France a Plane named "Platanus acerifolia" (or Maple-leaved). This sort I found to be the same as my vigorous growing Plane, and the kind grown in the nurseries, parks, and squares of London under the name of the Occidental Plane.

It is entirely distinct from the Oriental and Occidental Planes, and is thought by some good authorities to be a European species or variety, probably identical with the Platanus hispanica of Miller and Loudon. Miller, who seems to have been well up in Plane trees, says:—"That which is called the Maple-leaved Plane is certainly a seminal variety of the Eastern Plane, for the seeds which scattered from a large tree of this kind in the Chelsea Garden have produced plants of that sort several times." He then goes on to say—"The Spanish Plane has larger leaves than either of the other sorts, which are more divided than those of the Occidental Plane, but not so much as the Eastern."

I have received both these varieties from France, one under the name of P. acerifolia, the other as P. acerifolia macrophylla; they agree with Miller's description most accurately. Loudon makes P. acerifolia and P. hispanica *alias* macrophylla varieties of P. orientalis. Whatever the origin of the P. acerifolia, whether of France or Spain, or one of "natural selection," according to Darwin, or a hybrid, it forms the type of a vigorous race, having a most remarkable characteristic, viz., a readiness to strike from cuttings which goes through all the group, whereas the Occidental Plane and the Oriental Plane, with its two varieties P. cuneata and P. nepalensis, will *not* strike from cuttings. I have had cuttings of these three latter kinds prepared with care and planted at the same time and in the same soil with those of P. acerifolia and its varieties, yet scarcely one in a hundred would grow, while of the others scarcely any fail. There are many fine trees of the Oriental Plane in London; I think I have remarked some in Berkeley Square Gardens, and in other squares at the West End. In Surrey at Weston House, in the village of Albury, are some remarkably fine trees. Of the Maple-leaved or falsely-called Occidental Plane there are many large trees in London, even in the city; I think I remember seeing a large tree at the back of Bucklersbury, one at the end of Paternoster Row, and in several other places in the heart of the city. At Audley End, near Saffron Walden, are some very large trees of this kind, and in many other parks and places. The trees may always be distinguished from the Oriental Plane by their broad leaves, but slightly lobed and heavy in appearance when compared with it.

There are several seedling varieties of the Maple-leaved Plane, mostly of French origin; they are all vigorous, hardy, and likely to prove most useful for suburban planting. The type and its varieties are as under:—

PLATANUS ACERIFOLIA, commonly called the — Occidental Plane.

1. P. acerifolia palmata, much palmated with leaves more pubescent than those of P. orientalis, growth more erect.
2. P. acerifolia palmata superba, with much larger leaves than No. 2, very deeply palmated growth, more spreading, very vigorous.
3. P. acerifolia pyramidata; leaves nearly entire; habit erect, compact, and very hardy and vigorous, likely to form a noble tree.
4. P. acerifolia grandifolia; leaves slightly lobed like the type, but of much larger growth; erect and vigorous.

It does not seem probable that the Maple-leaved Plane can be a hybrid between the Oriental and Occidental Planes, because the latter has never made any progress in this country towards a seed-bearing state. Loudon gives Willdenow as his authority for its name of acerifolia, and an eminent botanist has suggested that it may be a species or variety peculiar to the south of Europe, perhaps Spain, as the name of P. hispanica given to a variety almost identical with it would seem to justify. I have recently received from France a Plane under the name of Platanus macrophylla. This appears to me to be the variety of P. acerifolia called by Miller and Loudon P. hispanica, as its leaves are slightly larger than P. acerifolia, and perhaps more deeply lobed, but to a very trifling extent; in short, it agrees with Miller's description of the Spanish Plane tree. *Thos. Rivers.*

BLENHEIM.

(*Concluded from p. 23*).

BY the special favour of the Duke of Marlborough we had the opportunity afforded us of seeing the interior of the palace, and we were glad to observe that his grace is doing a very great deal for its improvement, more especially for the comfort of the domestics. The whole of the arcades of the main building and the inner courts are about to be inclosed and filled in with glass, and the lower corridors are to be warmed with water circulating in pipes; gas lighting has also been everywhere introduced except in places where its effects might prove prejudicial to the treasures of art.

The state rooms occupy almost entirely the principal floor of the mansion. Ten of these are of a cabinet size, elaborately finished and gorgeously furnished, and the walls of several of the drawing-rooms are hung with Gobelin tapestry in the best state of preservation—representing some of the chief scenes in the battles of Blenheim, Oudenarde, Bouchain, and many others, the uninterrupted victories of 10 eventful campaigns, and the whole is resplendent with a vast profusion of priceless efforts of the sculptor's and painter's arts. On one of the tables of the large drawing-room, in an inclosed Morocco case, is contained the famous pencil despatch, (written on horseback, resting on the

top of a kettle-drum,) by John Duke of Marlborough after the battle of Blenheim, announcing the flight of the enemy and his determination to follow him up. Resting on one of the windows of this room there is a pattern of the flag, which according to the terms of the Act of Parliament is "to be presented at Windsor on the anniversary of the battle of Blenheim, the second day of August in every year for ever," as an acquittance "for all manner of rents, suits, and services due to the crown." The entrance hall, saloon, and library are vast apartments, occupying the whole width of the building, and are 67 feet in height. The former of these is arcaded on either side, and has galleries of the same character above. Above the marble-cased door is a bust of John Duke of Marlborough, with a Latin inscription underneath. The ceiling is finished with an allegorical painting by Sir James Thornhill, representing the goddess of Victory crowning the hero as she points to a plan of the battle of Blenheim. The latter apartment occupies the whole of the western front of the building, is 183 feet long and 31 feet 9 inches wide in the centre; it contains in beautifully latticed-fronted cases 17,000 volumes in various languages, collected by the Earl of Sunderland, and valued at the sum of 60,000*l*. This noble room also abounds in many valuable paintings and other works of art; at the upper end stands a highly-finished white marble statue of Queen Anne in her coronation robes and jewels by Rysbrach; on the pedestal is this inscription—

TO THE MEMORY OF QUEEN ANNE!
UNDER WHOSE AUSPICES
JOHN DUKE OF MARLBOROUGH
CONQUERED,
AND TO WHOSE MUNIFICENCE
HE AND HIS POSTERITY
WITH GRATITUDE
OWE THE POSSESSION OF BLENHEIM.
A.D. MDCCXXXI.

The whole of these princely apartments are furnished with double doors of the most beautiful Mahogany, splendidly finished, and when thrown open they form a vista of the grandest description, extending to more than 380 feet, the whole length of the building. Leaving the library by the door at the northern end, we pass along a piazza over the arcades to the chapel, which is situated near the centre of the western wing of the palace; it has recently been restored in a very chaste and beautiful style. In a vault beneath its white marble floor the remains of the immortal John Duke of Marlborough are deposited, having been first interred in Westminster Abbey, and from whence not long afterwards, they were removed to this their final resting place. Although however this vast palace will remain to distant ages a lasting monument of Marlborough's glory and the nation's gratitude, the ties and affection of domestic life have, notwithstanding, suggested a memorial of a far different kind, and on the northern wall of this exquisite building a stately monument in various marbles, by Rysbrach, was erected at a cost of 40,000*l*.; it comprises colossal statues of the first duke and duchess—they are represented with their two sons who died young—supported by Fame and History; the pen of the latter seems to have traced the inscription on a tablet which she holds in the other hand—

TO THE MEMORY
OF JOHN DUKE OF MARLBOROUGH AND
HIS TWO SONS
HIS DUCHESS HAS ERECTED
THIS MONUMENT
IN THE YEAR OF CHRIST MDCCXXXIII.

On the base is a basso-relievo, representing the capture of Marshal Tallard at the battle of Blenheim.

The pleasure grounds extend on either side and beyond the lawn on the south of the palace, and comprise an area of 150 acres in extent, which is intersected by 16 miles of gravel walks; the right-hand side is bounded by the great lake as far as the cascade, where a light bridge is thrown across the narrow part of the river immediately above the waterfall to the rockery, from whence the dressed ground extends to a considerable distance by the side of the lower reach of the river-like lake. Crossing to an island and then to its opposite shore by two rustic bridges, the walk continues onward across the open lawn to the eastern side, which is divided from the park by a sunken fence. Let us proceed in our route in the examination of these extended grounds from the China rooms in the western end of the palace, the lower portion of whose walls and a conservative wall beyond are covered with the great flowering Magnolia, Wallich's Jasmine, Banksian and other Roses, Wistaria, &c.; at the end of the wall there is a small hexagon greenhouse gay with flowering plants. The grounds from here rapidly descend towards the lake, on the grassy banks of which parallel walks extend as far as the cascade. Near the palace amongst many beautiful trees there are several nice specimens of Cratægus, a weeping Oak, and some remarkable Cedars of Lebanon, some of which cover with their noble branches, which at this period of the season are teeming with new-born cones, an area of 300 feet in circumference. Near the palace some beds of simple forms gaily filled with flowering plants are scattered about promiscuously amongst these beautiful trees, and they have a very good effect; a little further onwards Sequoia sempervirens presents a noble appearance, it is 34 feet in height, and girths 3 feet 4 inches; Cupressus Lambertiana is 25 feet in height, and covers with its densely clothed deep green branches an area of 33 feet in circumference. A noble line of Magnolia acuminata is continued along the side of these shelving banks to a considerable distance; these trees are 44 feet in height, and at 3 feet from the ground girth 3 feet 9 inches—presenting a magnificent appearance. Interspersed amongst these along the turf are fine plants of Irish Yew, variegated Hollies, weeping Oak, red Cedar, variegated Box, a good Araucaria imbricata, of which magnificent bushes of Erica australis, mediterranea, stricta, and others enhance the effect. Ailantus glandulosa, of which there are many fine trees 56 feet in height and 6 feet 4 inches in girth, has an admirable look in its autumnal uniform, the Rhus-like scarlet-tinted foliage and key-like seed producing a dazzling contrast with the foliage of the hosts of fine trees with which these grounds are everywhere so prodigally adorned. A rustic summer-house here relieves the vast monotony of foliage; it is neatly constructed, and is partially covered with Irish Ivy. A good specimen of Pinus Montezumæ and a handsome form of Picea Pinsapo are objects of interest here; the latter is 18 feet high, and covers with its beautiful branches and inimitable foliage an area of 33 feet in circumference. The Eucalyptus longifolia is an object of interest; upright Cypress and Juniper have also a exceedingly good effect, and contrast finely with the large masses and clumps of Rhododendron, Azalea, and St. John's-wort, &c. Cedrus Deodara with its beautiful pale-green weeping foliage presents a charming appearance; it is 40 feet in height, and is a noble specimen.

Proceeding onwards we reach the Temple of Diana, an elegant building with Corinthian capitals, having a medallion and Latin inscription. From here there are some exquisite views across the silvery surface of the vast lake to its opposite shores, the hanging woods and glades of turf by which its outline is broken being admirably set off by groups of noble Poplars, which tower up majestically over all. One of the lower walks is covered in its course for some distance by arches of Ivy intermixed with Clematis and Aristolochia Sipho, producing a striking effect and affording shelter from the rays of the summer's sun. A Golden Yew is here also an object of great interest, it covers an area of 102 feet in circumference; a deciduous Cypress is 55 feet in height—a noble specimen of much beauty and attraction. The tinted foliage and fine form of Sugar Maples produce a good effect by contrast, and many specimens of them are scattered about. A singular form of gnarled Oak here intervenes, the hoary character of the swellings and rifts of its deeply furrowed rind presenting an appearance analogous to that of the Cork tree. Thuja plicata, Buxus balearica Pinus pyrenaica, with yellow-leaved Hollies, are thinly scattered about. There are also good specimens of Norway Spruce, American and Turkey Oaks intervening, which have a magnificent appearance; Abies Morinda is 28 feet in height and 2 feet 11 inches in girth, and is a noble example. Pinus excelsa is 30 feet in height and 3 feet 11 inches in girth, a very unique and beautiful specimen. Taxodium fastigiatum and many other plants possess an equal interest. A solitary Oak girths 24 feet, and covers with its branches a circumference of 297 feet.

We now approach the Rosery, which contains an excellent well grown collection. They are arranged in beds between circular walks. The centre bed is raised, while several of these beds and the outer ring are arched with iron rods, on which some of the best climbing Roses are twined very effectively. In the shade of some trees near them there are noble specimens of Dicksonia squarrosa, Cyathea dealbata, and many other fine Ferns in excellent condition. Passing onwards a fine Maiden Hair tree, a Gleditschia, and a Hop Hornbeam, are objects of interest. A noble Tulip tree is 85 feet in height, and girths 7 feet 7 inches at 4 feet from the ground. A specimen of Oak girths 24 feet, and covers with its spreading branches an area of 280 feet. Virgilia lutea and Cryptomeria japonica are beautiful objects. Many fine Catalpas are scattered about, and they flower every season. A temple and seats here intervene and aid in relieving the monotony of wood and water; scattered about are nice plants of Æsculus macrostachya, Cork trees, Mespilus nigricans, Evergreen Oaks, and nice specimens of Abies morinda; these latter of a pensile, graceful character, and very beautiful. At no great distance from here there is a striking form of Copper Beech, 72 feet high and 7 feet 8 inches in girth; it contrasts admirably with the other examples of beautiful trees by which it is surrounded. Here often seats are placed, and the view is more expanded, the ground falling more abruptly as we proceed. Nice specimens of the recurved Juniper, Fern-leaved Beech, double-flowering Cherry, Abies Menziesii, the Stone Pine, Thuja pendula, Pinus insignis, radiata, and Cembra, are scattered on either side; the latter is a fine specimen, 32 feet in height and 3 feet 4 inches in girth. Gymnocladus canadensis is 40 feet in height and 3 feet 1 in girth, and is a remarkable tree; Taxodium distichum is 70 feet in height and girths 7 feet 5 inches; Sugar Maples, Judas trees, Weeping Ash, Scarlet Chesnuts, and Elms in fine specimens clothe the scene. A noble specimen of Horse Chesnut is here an object of very great beauty; it is 80 feet in height and 16 feet in girth, covering with its spreading branches an area of 213 feet in circumference. Platanus occidentalis (?) is 90 feet in height, and girths 13 feet. There is a fine form of Portugal Laurel, the branches of which cover an area of 320 feet in circumference. Fine specimens of Deodars, standard Magnolia, upright Cypress, and white-flowering Ash, interspersed with vast masses of evergreen shrubs, complete the scene in this direction. Many of the specimens in this grand assemblage of beautiful trees are growing in too close proximity to each other, either for full development or advantageous display, and ought to be relieved from common kinds wherever an opportunity offers, and this would in some measure remedy the original defect of the whole having been distributed too equally over every part of the ground. It also struck us that the walks, especially the grand leading walk, are somewhat too narrow for the greatness of the scene through which they pass. At some little distance to the left a white marble fountain relieves the monotony of a vast breadth of American shrubs; it is said to be the last work on which the genius of Bernini was engaged, and is a tolerable copy of the original executed by him, and erected in the Piazza Navona at Rome.

Passing onwards we cross the narrow part of the lake immediately above the cascade, by a light bridge, to the rockery, which extends over nearly an acre of surface, and is intended to represent rocky seams on the face of a steep bank; it is composed of large blocks of limestone (full of organic remains), which is abundant in the neighbourhood; it is partially covered with rock and alpine plants, amongst which were nice specimens of Osmunda regalis, Lastræa Filix-mas and fœmina. This is an interesting spot. Looking onwards to the sweeping course of the beautiful river, the fine balustraded bridge by Sir William Chambers in the distance has an excellent effect, and it is proposed to extend the pleasure ground to this point and onwards beyond the river towards the kitchen garden, to the extent of 100 acres. It was here that Nature's great artist stemmed the course of the current and forced the waters back into the valley, forming a lake at once of the most graceful outline and noble proportions, over the rusticated head of which its accumulated waters once rushed in snowy whiteness to the bed of the river many feet beneath; but the voice of its waters is now hushed, and instead of falling over the cascade as it at first used to do, it now finds its way underground and rises up like springs in the bed of the river below; and the surface of the great lake is now in consequence several feet lower than it ought to be. Means, however, equally simple as those by which it was first formed will ere long we trust be adopted to restore this unrivalled sheet of water and cascade to their pristine grandeur. The upper portion of the lake, as well as that which assumes a river character between the cascades, requires to be cleaned; but such is the magnitude of the undertaking that a sum of more than 10,000*l*. would be required to restore the upper portion alone.

From here through a vista of stately trees, the foliage of which was bronzed by the autumnal tint, there is a striking view of the palace on the high ground; in the middle distance a noble herd of cattle was grazing—a lovely scene, on which the golden rays of the setting sun were just then shedding an indescribable lustre.

At the termination of the rock garden there is a barrier of large blocks of stone set on edge; one of these moves on a pivot, and on the slightest pressure of the hand it opens like a turnstile. There is another bridge immediately in front of the cascade, and there are also two other fountains in the low grounds. The ground in this direction is laid out in formal clumps, and is chiefly planted with American shrubs. Passing onwards some little distance by the side of the river, we found some nice specimens of weeping deciduous Cypress, Nettle tree, and Weeping Willow. Clumps of Indian Azaleas seem to thrive exceedingly well. The river in some places was thickly covered with Villarsia.

Crossing to the opposite shore by two substantial rustic bridges—one end of each resting on an island in the centre of the stream—we move for some distance amongst nice specimens of beautiful trees, amongst which we noted a Virgilia lutea, covering with its wide spreading branches an area of 144 feet in circumference. A fine example of Sugar Maple is 30 feet high, its red autumnal clothing contrasting finely with the more sombre tints of the other trees. Here also was a tolerable specimen of Hemlock Spruce. The walk sweeps around across the open space in front of the palace to the eastern side, where there are some beautiful green drives backed by large trees and carpeted with Laurels, Berberis, Hypericum, &c., amongst which upright Junipers have an exceedingly good effect; in this direction many specimens of Pinus, Araucaria, Cedrus, &c., have recently been planted. An aviary is also an object of some attraction; it is of considerable size, of semicircular form, and contains gold and silver pheasants and other birds of fine plumage. A large Spruce Fir is a tree of great interest in this part of the ground—its branches weeping to the turf have rooted into the ground, and have formed themselves into distinct trees with strong upright leaders; near here there is also an Oak of great size, and also a chalybeate spring, the waters of which are retained in a basin of large proportions, and are ornamented with hardy flowering aquatic plants. A little further onwards is the entrance to the kitchen garden.

The Grass is kept short by the aid of machinery worked by horse-power wherever such can be advantageously employed; the whole of this vast scene of interest and magnificence was in excellent condition, whether as regards keeping or management, and exceedingly creditable to the vigilant superintendence and practical skill of Mr. Johnson. The beautiful panel garden, too, is a favourable example of his art, whether we regard the mere design or the admirable way in which its elaborate details have been executed.

The kitchen garden comprises an area of more than

10 acres of excellent well drained land, admirably adapted alike for the cultivation of fruit and vegetables. It is irregular in form, a lengthened parallelogram extending from west to east; its angles are indented, and on each of the lengthened sides there are two obtruding equi-distant semicircles of 50 feet radius, and each is at right angles with its opposite figure, the whole being surrounded with lofty brick walls, which enclose an area of a little over 7 acres. The south and eastern sides of these walls are faced with upwards of 3 more acres, which are also inclosed by an outer wall; but neither of these external walls are available for any gardening operations, in consequence of being open to the park on one hand and the pleasure ground on the other. The surface of the ground is uneven, falling considerably towards the middle, alike from the eastern and western ends, and the middle portion also inclines somewhat from the north to the southern side. A straight walk of good width is carried round the whole of the interior, at a suitable distance from the walls. A noble walk some 13 or 14 feet in width divides the garden into two equal portions during its entire length. In the centre of this walk there is a circle of turf 60 feet in diameter. On the same line of walk there are two ponds, each 40 feet in diameter, and each is situated 250 feet from the centre of the Grass circle in the middle. These ponds are supplied from the drainings of the garden, deep cuttings having been formed not only under every walk but also round the whole of the garden walls. These ponds are belted with turf to the same diameter as the central circle. The garden is intersected by three cross walks, these three circles forming their centres; the walks, which are centered by the ponds, being terminated at either end by the semicircles which jut out beyond the straight line of the garden walls. The centre cross walk extends through the whole length of the slip on the south side a distance of 440 feet. There is also another pond at the southern side, which receives all the drainage from below the other ponds. The whole of these cross walks and the grand middle walk are belted with turf on either side to a width of some 10 or more feet, on which beds of simple form, and in opposite pairs, are inserted at close intervals during the entire length; and the same style is applied to the margin of the ponds and centre circle. The whole is backed on either hand by a mixed row of Hollyhocks, Dahlias, and Roses, which in some measure secures the vegetable crops from observation. For the supply of these beds 20,000 plants of the choicest and best kinds are annually required, and they were skilfully arranged both in regard to colour and contrast. When first seen from the palladian entrance on the western side, the vista of the centre walk, extending to more than 1100 feet, and broken by the central circles in the lower part, charms us by not only its vast extent, but also by the unrivalled and gorgeous character of its floral beauty. The walk through the lower slope is laid out with letters executed in Box, and they too were gay with flowering plants.

The forcing structures are on the south side of the northern walk, and are faced by the eastern pond in the grand centre walk. They consist of two Melon pits, each 36 feet long by 7 feet wide; two Cucumber pits, each 40 feet long by 8 feet wide; two Pine pits, each 40 feet long by 12 feet wide; two early Vineries, each 34 feet long by 12 feet wide; two late Vineries, each 30 feet long by 12 feet wide; a Peach house, 60 feet long by 12 feet wide; a Mushroom house, 26 feet long by 9 feet wide. There is also on the eastern aspect of the western wall a Fig house 72 feet long by 14 feet wide; and the whole of these structures are efficiently heated by hot water circulating in pipes. And at the period of our visit they still contained some excellent fruit, amongst which might be particularised very good examples of scarlet-fleshed Melon, also Figs and a considerable quantity of late Grapes still ungathered. These latter were planted inside, and over the beds of the house a thick covering of dry leaves was placed; there were also some excellent Pines in various stages of growth. The walls were well covered with nicely trained fruit trees, and Cherries, Apricots, and Pears seemed to be entirely free alike from gum and canker. The lower side of the southern quarters on the outside slip is planted with standard Apple trees in capital condition, and they usually produce heavy crops of fine fruit. The quarters of the garden were well cropped and producing vegetables of no ordinary character, the whole reflecting much credit on Mr. Turnbull, whose horticultural merits have long been fully established. *D.*

REPORT ON THE VARIETIES OF LETTUCE.

THE Lettuces may be divided into two classes; those which are upright, oblong, or obovate in growth, and those which are spreading, round, or flat-headed. The former are known as Cos Lettuces, the latter as Cabbage Lettuces. Of these, the following sorts were grown in the Society's Garden in the summer of 1859.

Class I.—COS LETTUCES.

White Paris Cos, Glendinning. — Syn.: Carter's Giant White Cos, Carter & Co.; Superb White Cos, Sutton & Sons; Improved White Paris Cos, Minier & Co. Very large; leaves light green, obovate, hooded at the top, so that it naturally closes and blanches without tying, becoming white, tender, crisp, and excellent. Seeds white. It attains a larger size than the common White Cos sown at the same time, and in consequence will grow for a longer period before it commences ruuning to seed. Plants raised from seeds saved in this country should be watched in order to see that the leaves are rounded and concave at the top; for when they become pointed and not inclined to hood or turn inwards, they must be considered as having degenerated from the true character of this excellent sort. This is generally esteemed the best of all summer Cos Lettuces.

New Imperial White Cos, May (Hammersmith).—This very much resembles the White Paris Cos in appearance and quality; but it differs from the latter in having much longer seeds.

Crystal Cos, Josling.—This very much resembles the White Paris Cos, except that it runs earlier to seed.

Paris Green Cos, Vilmorin.—Syn.: Superb Green Cos, Sutton & Sons; Improved Paris Green Cos, Minier & Co.; Paris Cos, Lee. This very much resembles the White Paris Cos, except that the leaves are of a darker green. It it also somewhat hardier, and therefore better adapted for sowing early in spring and in autumn. Some indeed prefer it to the White Paris Cos in summer.

New Golden Cos, Flanagan & Son.—This proved to be not so large as the Green Paris Cos, to which in other respects it is similar.

Snow's Compact Cos, Lee.—Syn.: Snow's Matchless Cos, Snow's Champion Cos, E. G. Henderson. Of very upright growth, with narrow, pointed, deep green leaves, forming very little heart for blanching; it was found to be, on the whole, so very inferior to the Green Paris Cos, that it was considered not worthy of cultivation.

Acme of Perfection, Kernan. — Habit spreading. Leaves large, broadly obovate, rather light green, of flabby texture; requires tying in order to blanch the heart leaves, which are then good, but want crispness. It has, however, the property of not running to seed so soon as most other sorts. Seeds white. It appears to be very similar to the White-seeded Alphange Cos, but the differences, if any, can only be determined on further trial, grown side by side.

White-seeded Bath Cos, Cutbush (Highgate).—This proved to be the same as the well-known White-seeded Brown Cos, the hardiest of this class of Lettuces, and well adapted for standing the winter. The outside leaves are brown, but the heart blanches white, with the exception of a slight pink tinge on the bases of the mid-ribs. It is crisp and excellent.

Black-seeded Bath Cos, Cutbush (Highgate); Josling.—The same as the preceding, except in the colour of the seeds.

Griffin's Alma, E. G. Henderson.—This was stated to be an improvement on the Bath Cos, to which it bears much resemblance. Seeds white. It appears to be a variety of that well-known kind, with a somewhat stronger habit of growth.

Class II.—CABBAGE LETTUCES.

Neapolitan Cabbage, Lee, Veitch, Frazer, Richardson & Goad.—Dwarf habit. Leaves curled and serrated on the edges; head large, firm, blanching white, very crisp, and of excellent quality. Seeds white. It soon begins to form a heart, and does not run to seed readily. By many persons this is considered the best of the Summer Cabbage Lettuces.

Marseilles Cabbage, Minier & Co.—Dwarf. Leaves large, curled, and serrated, slightly tinged with brown, forming a loose, irregular head, tolerably crisp, but not by any means so good as the preceding. It is, however, longer in running to seed.

Ne Plus Ultra, Sutton & Sons.—Rather small, forming a flattish, round compact head. Leaves roundish, entire on the margins, slightly tinged with brown, of soft texture. Heart white, soft and tender. Seeds white. A good early Lettuce.

Victoria Cabbage, Minier & Co.; Lee.—About the size of the Hardy Hammersmith, and of very dwarf habit. Leaves light green, soon forming a heart, which is compact, white and tender. A very early sort. Seeds white.

Drumhead, Lee.—Leaves roundish, slightly curled, forming a large flattish head, not so compact as the Neapolitan, but white, tender, and very good. Seeds white. *Horticultural Society's Proceedings.*

Home Correspondence.

Cross-bred Plants.—I hope that some of your readers will respond to Mr. Westwood's wish, and give any information which they may possess on the permanence of cross-bred plants and animals. Will Mr. Westwood be so good as to give a reference to any account of the variability of the Swedish Turnip? I did not even know that it was reputed to be a cross-bred production. I am aware that this is supposed to be the case with some Turnips; but I have searched in vain for any authentic history of their origin. No one, I believe, doubts that cross-bred productions tend to revert in various degrees to either parent for many generations; some say for a dozen, others for a score or even more generations. But cannot breeders adduce some cases of crossed breeds of sheep and pigs (such as the Shropshire or Oxford sheep, or Lord Harborough's pigs) which are now true? With respect to the Cottagers' Kale, I was so much surprised at the accounts of its trueness that I procured seed from the raisers; but in my soil the plants were far from presenting a uniform appearance. In addition to the tendency to reversion to either parent form, it is almost universally asserted that cross-bred productions are highly variable, and often display characters not observed in either parent. I do not wish to dispute this common belief, but I suspect it would puzzle any one to adduce satisfactory cases; and certainly Gärtner has advanced a mass of evidence on the opposite side. I am not at all surprised at Mr. Westwood demurring to the belief that occasionally crossing the strain is advantageous or necessary with productions in a state of nature. The subject is only just alluded to in my volume on the "Origin of Species." I do not pretend that I can prove the truth of the doctrine; but I feel sure that many important facts and arguments can be adduced in its favour. The ill effects of close inter-breeding between the nearest relations, especially if exposed to the same conditions of life, would be, I believe, the same under Nature as under domestication,—namely, some degree of sterility and weakness of constitution. Variability arises from quite independent causes, and is to a certain extent counteracted in its early stages by the free crossing of the individuals of the same species. Mr. Westwood misunderstands me if he supposes that it is my opinion that the Ibis, for instance, keeps true to its kind "by occasional crosses with individuals of the same species which have not sprung from the same grandfather or great-grandfather." I only believe that if individuals of the Ibis did vary, such crosses would tend to keep the species true; and further, if the young from a single pair increased so slowly that they all continued to inhabit the same small district, and if brothers and sisters often united during successive generations, then that the Ibis would rapidly deteriorate in fertility and constitution. Mr. Westwood advances the hive-bee, as probably a case of constant intercrossing. Andrew Knight, however, who specially attended to this point, has published his belief (whether founded on sufficient evidence I will not pretend to say) that the queen-bee commonly unites with a drone from another community. *Charles Darwin, Down, Bromley, Kent.*

Housetop Horticulture in London.—Why not? I have seen such as you speak of elsewhere. What has been may be again. What now exists may be added to and improved. I remember once visiting a friend and expressing admiration of a bouquet of flowers that stood on the table. The lady of the house told me that she had picked them that morning from her garden, and asked me to take a walk in it. I expressed myself tired, and promised to come another day, as I knew, or thought I knew by the situation of the house, which was closely packed amongst neighbours, that the garden must be at least half a mile distant; she laughed, and asked me to follow her. We reached the staircase window, she stopped, drew up the blind, pushed open the window and asked me to enter. It was no dream. There, on the roof of the tenement, was the garden prettily arranged, and by trellis-work made quite private. The plants, creepers, &c., were in boxes, the lead roof covered with sand; two sides of it were shut in by the walls of the house. It looked pretty, even luxuriant; there was no glass, as that article was then rather expensive. The second time I saw anything of the sort was on the top of a house in a town in Devonshire; there were no houses to shelter or screen the sun from it, but it was roofed or arched over by a trellis-work of wood painted green. I have often admired the Ivy growing over it, and thought I should like to have such a house myself. *Voyageur.*

Flowers in our Public Parks.—Although I do not think that every housetop in London can be easily converted into a garden, yet I am sure that many of the working classes have a wish to cultivate flowers, and would do so, were they taught in what manner they should raise those kinds suitable to the climate of this town. When we bewail the depravity of the lower classes, we forget how few are the enjoyments within their reach. It is not only worthy of the philanthropist but of the statesman to open to them new and innocent pleasures, which, while they lead them to forego pernicious luxuries, will make them better citizens. After a day of monotonous toil the working man feels keenly the relief that a change of pursuit gives. The body gains rest when the mind is amused. The back yard, where a few favourites bloom, would soon prove an antidote to the gaudy gin-palace with the unhealthy associations it conveys. In some of our parks a few common flowers have been introduced among the shrubs which decorate the beds planted by Sir B. Hall, and in the Regent's Park by Lord J. Manners. The experiment succeeded, and proves that were more care bestowed on their cultivation and better skill on their arrangement, not only would the taste for flowers be promoted, but a source of constant attraction provided for those who leave the crowded alley or the sultry workshop to breathe a purer air in what might be both a public park and a people's garden. To effect this, however, the estimates allowed for the maintenance of the parks must be increased. Superintendents must be employed at proper salaries, who have studied not only the peculiar effect of the climate of London on plants and shrubs, but have taste and knowledge in their arrangement; while working gardeners must be substituted for some of those Crimean heroes, who astonish nurserymaids by their beards. I do not pretend that it would be necessary to emulate some of the public gardens abroad, where the Orange tree and Pomegranate lend their sweetness to the evening air; I merely advocate a judicious disposition of common

things. Fond though I be of the vegetable kingdom I had rather see the parks ornamented alone by branching trees than witness the stunted form and puny proportions that a few years' neglect will cause any plant to assume. But as it is understood the representatives of the forest are to admit into their company others of a humbler growth, and that flowers rudely scattered have been already introduced, the administration may well turn its attention to this subject. No effort ought to be neglected which by cultivating healthy tastes aims at the moral advancement of a people, who demand, day by day, a larger share in the government of their country. *M.*

The Weasel.— Gardeners, as Mr. Peter Mackenzie says, ought to encourage this little animal. Rats, mice, and moles are his ordinary prey. But he does not stop here. To the gamekeeper he is a great enemy, therefore stands a poor chance of long existence; for sporting gentlemen think almost as much of taking one of these little animals as Lord Clyde would of taking Nana Sahib. The weasel is very courageous, and resents insults with vigour even at the risk of his head. He also exercises a wonderful influence over his prey, which seems apparently powerless in his presence. I once saw a weasel run into a rabbit's burrow; the rabbit ran out, and instead of making clear off it screamed most piteously, foreknowing as it were its doom; it kept running round and round till at last the weasel caught it by the neck an easy prey. *N. Cole, Gardener to Mrs. Silver, St. John's Wood.*

Rainfall at Stevenage, Herts.—

	1858.	1859.
January	0.76	0.67
February	1.40	1.48
March	0.16	1.18
April	2.61	2.05
May	2.26	2.06
June	0.45	2.15
July	4.13	4.76
August	1.48	3.26
September ..	1.89	2.38
October	1.06	2.08
November ..	0.66	2.13
December ..	2.19	2.60
	18.05	27.70

It will be observed that the quantity of rain which fell in the "replenishing" months of October, November, and December in 1859 was double that which fell in the same period in 1858. We may now look forward therefore with some confidence to a fair supply of water in our wells next summer. *J. Bailey Denton.*

Rainfall at Eling, near Southampton, in 1859.—

	Inches.		Inches.
January	2.06	Brought forward ..	11.96
February	2.31	July	2.32
March	1.50	August	1.94
April	2.73	September	3.79
May	1.89	October	3.82
June	1.47	November	3.32
		December	4.55
Carried forward	11.96	Total	31.70

During the previous year at Southampton, 17.18 inches. *W. C. S.*

Rainfall at Castle Hill in 1859.—

		Highest Temperature.	Lowest Temperature.
January	3.60	56	28
February	2.06	55	25
March	4.27	62	23
April	4.00	72	*22
May	2.24	80	31
June	2.24	84	36
July	1.99	92	43
August	5.24	86	42
September	7.07	75	38
October	5.75	72	25
November	5.10	55	22
December	2.95	54	5
	46.51		

On the 17th of December the thermometer was down to 5°, on the 18th to 7°, on the 19th and 20th to 9°. Thujopsis dolabrata is not in the least injured. It is, therefore, perfectly hardy. *A. Saul.*

Australian Zebra Parroquets breeding in England.— I have had a pair of these for nearly four years, and until this season they have never bred with me. On the 28th, 29th, and 30th Dec. last the hen laid at the bottom of the cage, there being no nest-box or even material to build a nest with; and after 19 days' assiduous sitting, two out of the three eggs have hatched fine healthy young birds. A few days after she had done laying she moved the eggs from one corner of the cage to another, and then back again. Surmising the want of a nest might be the incentive, and fearing the eggs might be broken by being conveyed as they were over the sand, I as quietly as possible put in a small quantity of sawdust. I have hitherto fed them with Canary seed; but perhaps some of your correspondents would say how I should manage my young brood and give any other information they possess on the subject. It would be a valuable addition to our knowledge to be informed upon what they rear their young in the wild state, and in what month they breed in their natural "bush" in Australia, for it seems odd to find birds brought from the southern hemisphere, where midsummer occurs at the time of our mid-winter, breeding here during storms of snow and frost. I am informed that they will eat Oats and a crust of bread, but not hard boiled eggs, and I have also been told that the young reared in confinement in this country are not robust. Can this be from the inappropriateness of the food they are fed upon? If so, and as the parents refuse to eat egg, &c., would it not be advisable to rear them by means of a Canary? Then again I have a relative who when in India reared many of the Indian parrots and parroquets from the nest, and his opinion is that the horizontal way in which the young place their mouths when opened to receive food would be an impediment to the Canary feeding them. He also states that some brought up from the nest became so fondling and attached that they were most unhappy when their master was absent, and most joyously lively and delighted when they had his company. If these pretty Australian parroquets and their progeny bred here will become thoroughly domesticated, it will be interesting to watch the influence of food and breeding in confinement on varieties which may be hereafter obtained. *Henta. Wooler.*

Glass Houses for the Million.—The question raised by your correspondent, "J. C. L." (Ireland), is one of considerable interest to those who desire to see Grapes, Peaches, &c., brought within the purchasing and growing means of the humbler classes. Allow me to ask—In what does the patent consist? Does it refer to the shape of the house? Or only to the moveable lights? Or to both combined? Whatever may be the answers to the above four questions, let me assure "J.C.L." that moveable lights are a delusion and a snare, if saving of expense be the object. In the first place the cost is more than double that of fixed rafters. Secondly, the breakage of glass in conveying moveable lights a few miles is more than taking the glass from what are called fixed rafters and reglazing. Lastly, an orchard or hothouse properly built on the fixed rafter principle is one of the easiest things to take to pieces and move that can well be imagined. The mode of giving air by means of moveable lights may be good, but to propose thus to build hothouses for the million is simply a mistake. *Robert Warner, Broomfield.*

* 1st of the month.

Societies.

HORTICULTURAL: *Jan.* 20.—At a meeting held at the rooms of the Society of Arts, the Rev. L. Vernon Harcourt, V.P., in the chair, the following elections took place of Fellows desirous of supporting the New Garden at Kensington Gore:—C. G. Addison, Esq.; W. F. Ainsworth, Esq., F.S.A.; Sir W. J. Alexander, Bart.; Major-General J. Alves, J. S. Ancona, Esq.; Viscount Anson, R. J. Ashton, Esq.; H. Austin, Esq.; E. H. Baldock, Esq.; Mrs. M. Banting, Miss Eliza Banting, Miss Emily Banting, Mrs. H. Richards, Mrs. M. A. Westbrook, Mrs. C. E. Gilbertson, Miss E. Gilbertson, Mrs. S. L. Marshall, Hon. Mrs. F. Baring, the Hon. Miss Baring, Mrs. G. Barnet, H. L. Bartlett, Esq.; Lord Bateman, T. Bazley, Esq., M.P.; H. Bazley, Esq.; C. Bazley, Esq.; T. S. Bazley, Esq.; J. F. Bazley, Esq.; J. A. Beaumont, Esq.; J. Bebb, Esq.; W. H. Belli, Esq.; Lady Belper, Miss A. Strutt, R. Benson, Esq.; R. C. L. Bevan, Esq.; Mrs. R. Bevan, E. Bilke, Esq.; J. Bilke, Esq.; Stephen Bird, Esq.; J. Blackstone, Esq.; H. W. Blake, Esq.; Henry Blanshard, Esq.; Mrs. H. Blanshard, Mrs. B. Botfield, Viscountess Boyle, J. Bramley-Moore, Esq.; J. W. Brett, Esq.; T. Broadwood, Esq., Mrs. Broadwood, W. Brodie, Esq.; E. A. Bowring, Esq.; Duchess of Buccleuch, J. W. Burmester, Esq.; D. H. D. Burr, Esq.; Mrs. D. H. Burr, H. Burr, Esq.; Miss E. Burrage, D. Burton, Esq.; W. S. Burton, Esq.; Hon. C. L. Butler, C. G. Campbell, Esq.; the Very Rev. Dean of Canterbury, Mrs. L. Cape, Mrs. Challoner, Marquis of Chandos, Lady Chantrey, T. Chapman, Esq.; C. Chatfield, Esq.; C. Claridge, Esq.; C. Clement, Esq.; Mrs. Clement, Miss Clement. Sir G. R. Clerk, R. G. Clutton, Esq.; Mrs. J. Clutton, Miss E. M. Clutton, W. H. Cole, Esq.; J. C. Collins, Esq.; D. E. Colombine, Esq.; C. B. Courtney, Esq.; Mrs. C. B. Courtney, H. R. B. Cresswell, Esq.; T. Critchley, Esq.; R. Cunliffe, Esq.; F. J. Dalgety, Esq.; Mrs. F. J. Dalgety, F. M. Hall Dare, Esq.; Earl of Dartmouth, W. Davies, Esq.; J. H. Davies, Esq.; J. E. Davies, Esq.; G. B. Davy, Esq.; Miss C. Davy, C. L. Davy, Esq; Miss L. J. Davy, Miss L. B. Deacon, Mrs. De la Motte, J. Dent, Esq.; Earl of Derby, K.G.; Lady E. Stanley, Judge Des Barres, E. Docker, Esq.; W. Denham, Esq.; C. Z. Dresden, Esq.; W. T. Dyer, Esq.; Lord Eliot, Capt. C. R. Egerton, R.N.; J. Elger, Esq.; G. G. Elger, Esq.; Mrs. Elias, Viscount Falmouth, Viscountess Falmouth (Baroness Le Despencer), O. W. Farrer, Esq.; J. Field, Esq.; W. M. Fladgate, Esq.; Mrs. W. Fladgate, Lady Foley, Lady A. Manners, Mrs. E. Forbes, A. Forbes, Esq.; Mrs. Forsyth, T. W. J. Forty, Esq.; A. Fowler, Esq.; Mrs. D. Fullerton; Capt. D. Galton, R.E.; F. Galton, Esq.; J. Gaskill, Esq.; Capt. J. German, G. A. Gibbs, Esq.; Mrs. G. A. Gibbs, C. Goding, Esq.; Miss M. Goding, Miss S. Goding, W. Goding, Esq.; General Sir W. Gomm, G.C.B.; Lady Gomm, T. G. Gosling, Esq.; A. W. Grant, Esq.; Mrs. J. Gunter, G. Gutteres, Esq.; R. Hanbury, Esq., M.P.; Rev. W. Harness, Miss Harness, Mrs. R. Hannah, G. Hardy, Esq., M.P.; C. R. Harford, jun., Esq.; T. R. Harman, jun., Esq.; Mrs. Harrington, R. M'Leod Hawkins, Esq.; W. Hawkins, Esq.; Rev. J. M. Heath, W. Heathcote, Esq.; J. Heather, Esq.; G. H. Tod Heatly, Esq.; G. Henderson, Esq.; Mrs. G. Henderson, W. Henderson, Esq.; C. Heneage, Esq.; J. Herapath, Esq.; G. Herring, Esq.; C. G. Herring, Esq.; Miss C. E. Herring, W. T. Hibbert, Esq.; C. Hilhouse, Esq.; C. Hill, Esq., F.S.A; W. Hine, Esq.; J. E. Hobson, Esq.; G. Hodgkinson, Esq.; Sir H. B. Hoghton, Bart.; Mrs. R. S. Holford, J. G. B. Hudson, Esq.; Lieut.-Col. H. Hume, C.B.; H. A. Hunt, Esq.; Miss E. B. Hunt, Col. Hyde, Saul Isaac, Esq.; Samuel Isaac, Esq.; W. Jackson, Esq., M.P.; H. M. Jacob, Esq.; Mrs. A. W. Jaffray, Capt. R. Jefferson, J. Joel, Esq., Montevidean Vice-Consul; A. W. Johnston, Esq.; Mrs. I. Jones, Dr. B. Jones, F.R.S.; Miss Keeling, Miss E. Keeling, Lady Keating, Marquis of Kildare, Marchioness of Kildare, Lord G. Fitzgerald, Lord O. A. Fitzgerald, G. W. Repton, Esq., M.P.; Lady J. Repton, J. Kelk, Esq.; Mrs. Kelk; J. W. Kelk, Esq.; G. E. Kelk, Esq.; W. T. Kinnersly, Esq.; C. A. King, Esq.; Mrs. King. Sir J. Kirkland, Mrs. S. Laing, Lady Lamb, H. T. Lambert, Esq.; W. H. G. Langton, Esq., M.P.; C. T. Leach, Esq.; J. G. Leach, Esq.; Sir G. P. Lee, Rt. Hon. Sir G. C. Lewis, Bart., M.P.; Sir C. Locock, Bart.; Mrs. Lodwick, W. Longman, Esq.; R. Lowther, Esq.; R. W. S. Lutwidge, Esq.; Lady L. Lygon, Major W. Lyon, Mrs. J. Maberly, Duke of Manchester, Duchess of Manchester, T. H. Massey, Esq.; Major-General Matheson, G. May, Esq.; T. Meynell, Esq.; Lieut.-Col. Meyrick, Lieut.-Col. Minchin, Rev. M. Mitchell, Miss E. C. Moore, Mrs. Morley, Mrs. F. B. Morley, C. Morrison, Esq.; J. Murray, Esq.; J. M. Neale, Esq.; Lady C. Neeld, B. Norden, Esq.; C. A. Novelli, Esq.; Lady Overstone, Col. W. K. Loyd, Miss E. Loyd, Lieut.-Col. Lindsay, Hon. Mrs. L. Lindsay, E. H. Palmer, Esq.; Col. A. Park, R. W. Peacock, Esq.; Lady Peto, W. A. Pope, Esq.; T. Pope, Esq.; Lord W. Powlett, T. H. A. Poynder, Esq.; Mrs. Poynder, H. Ransford, Esq.; Major-General Rawdon, J. Reeves, Esq.; T. J. Reeves, Esq.; Miss A. S. Reeves, Miss S. M. Reeves, Miss E. Reeves, R. Reid, Esq.; Mrs. Remnant, G. Rennie, Esq.; G. B. Rennie, Esq.; J. Rigge, Esq.; Miss S. A. Robertson, J. F. Robinson, Esq.; J. Rogers, Esq.; W. G. Romaine, Esq., C.B.; J. F. Rotton, Esq.; W. Salt, Esq.; Miss M. Salt, Viscount Sandon, M.P.; F. Sang, Esq.; T. B. Saunders, Esq.; J. Scott, Esq.; W. A. Shaw, Esq.; H. L. Sharp, Esq.; G. Schenk, Esq.; Mrs. G. Schenk, J. Silver, Esq.; J. Da Silva, Esq.; W. H. Skynner, Esq.; R. A. Slaney, Esq., M.P.; Miss A. L. Snook, Lady J. Somerset, E. M. Smith, Esq.; Dr. P. Smith, Mrs. K. Smith, Mrs. F. S. Solly, Earl Stanhope, Viscount Sydney, J. Tuber, Esq.; T. Taylor, Esq.; W. Terry, jun., Esq.; Lord Taunton, Lady Taunton, Hon. Miss Labouchere, Hon. Miss M. Labouchere, Hon. Miss E. Labouchere, Viscount Templeton, T. Thistlethwayte, Esq.; F. Thompson, Esq.; W. Throckmorton, Esq.; Lady L. Thynne, Dr. G. Timms, Mrs. Timms, R. J. Todd, Esq.; W. Tottie, Esq. (Swedish and Norwegian Consul-General); Mrs. G. S. Trower, H. B. Turnbull, Esq.; T. Usborne, Esq.; Mr. H. J. Veitch, Lady H. Vernon, J. Wade, Esq.; Mrs. Walcot, Capt. E. Walter, Capt. H. Ward, O. C. Waterfield, Esq.; W. B. Waterlow, Esq.; Mrs. W. B. Waterlow, H. Wellesley, Esq.; W. Wells, Esq.; Marquis of Westminster, E. Weston, Esq.; G. Whiting, Esq.; W. Whitmore, Esq.; Mrs. C. S. Whitmore, F. Wigan, Esq.; H. R. Williams, Esq.; F. M. Wilson, Esq.; A. Willis, Esq.; J. W. Windley, Esq.; T. W. Windley, Esq.; J. Wright, Esq.; F. B. Wright, Esq.; W. C. Wryght, Esq.; Major-General W. Wylde, C.B.; in all 335: viz., 217 Life Members and 118 Annual Subscribers.

The Chairman announced that on the 31st of Jan., at 2 P.M., a further large election would take place, on which occasion he had received the gracious commands of her Majesty, the Patron of the Society, to bring forward the names of all the members of the Royal family not already Fellows of the Society.

Jan. 17. FRUIT COMMITTEE. — Rev. L. Vernon Harcourt in the chair. Of Ne Plus Meuris Pear, one of the kinds for which prizes were offered on this occasion, there were four or five good dishes. The best came from Mr. Ingram, gr. to J. J. Blandy, Esq., of High Grove, Reading. It consisted of clean, nice-looking fruit, of excellent flavour. Of Josephine de Malines, another variety of Pear for which prizes were offered, Mr. Parsons, of Welwyn, Herts, sent a capital dish of evenly-sized fruit, the flavour of which fully maintained the high character which this comparatively new Pear has received. Among other sorts of dessert Pears which were exhibited, a dish of Winter Nelis from J. Mowman, Esq., proved by far the best. Mr. Ralph, Moat Felix, Walton-on-Thames, also furnished excellent fruit of this in most seasons excellent table Pear. For Easter Beurré an extra prize was awarded to Mr. Hall, Roehampton, on account of their fine growth and flavour. Of Apples examples of old Nonpareil and Golden Harvey were contributed, but they were not first class; Cockle Pippin, from Mr. Webb of Calcot, proved good, as did also Mickleham Pearmain from Messrs. Ivery of Dorking. Kitchen Apples were exhibited, but they were ordered to be baked and reproduced at next meeting. From Mr. Hill, gr. to R. Sneyd, Esq., came examples of Barbarossa and Lady Downe's Seedling Grape, with the view of showing their late-keeping properties; there were also some fine-looking Lemons, Oranges, and other Citrons from Mr. Miller, of Eardiston. Messrs. Ivery sent a singular looking specimen of Chinese Yam, from near the middle of which issued a cluster of small tubers, each measuring from 6 to 8 inches or more in length.

Notices of Books.

Science in Theology, by A. S. Farrar, M.A., Michel Fellow of Queen's College, Oxford. 8vo. Murray, pp. 288.

This is a volume of sermons preached before the University of Oxford, in which the author designs to bring some of the discoveries and methods of the physical and moral sciences to bear upon theoretic questions of theology. It is well known that the philosophers of the Continent, and especially in Germany, have long treated theology as a science; but their writings have been generally regarded with distrust in England, where men's minds appear to be more capable of appreciating the practical in religion than the philosophical, and the general public know more, by hearsay, about the blasphemous speculations of rationalistic writers than they care to know of the sound and excellent treatises of divines, who with true German painstaking diligence have laboured to refute systematically the mischievous errors of their opponents. It is beginning to be felt in England that rationalistic views ought not to be met by mere invective but by sound argument, and for that purpose the systematic writers on theology in Germany have already prepared vast storehouses of arms for all who are called upon to contend for the faith.

University sermons are not usually attractive to the general reader, but in the present volume the style is peculiarly easy for a subject of such depth, the arguments are forcibly put, and the class of persons for whose use the sermons are intended is well borne in mind, and this usually makes a book interesting. The first sermon affords perhaps the most favourable specimen that could be taken. There the classical student will read with pleasure how the giant intellects among the Greeks were feeling after God if haply they might find him, but after all the immense efforts of their reasoning powers only found that there must be a "great first cause," a sort of order or law ruling in nature, and ever working for good, but they never discovered that the result they had arrived at was itself merely an effect, the *modus operandi* of a Supreme Being. Theirs was an impersonal abstraction, not a personal, self-existing, all-wise, and benevolent Being. The author candidly tells us in a note that he has in his sermon rather overstated the case of the heathen, but the enthusiastic scholar will easily forgive him for finding more of God in his favourite philosophers than perhaps they really intended. The biblical student will trace with interest the clearer and brighter development of the Divine character, as it is successively displayed to Moses, David, and Isaiah, and at length in all the effulgence of its glory under the Christian dispensation; though he must not forget that remarkable revelation of the attributes of God which was vouchsafed to the earnest prayer of the great lawgiver: "The Lord, the Lord God, merciful and gracious, long-suffering, and abundant in goodness and truth," &c. Ex. xxxiv., 6. The student of science will be rejoiced to find his special and wondrous branch of study introduced not as an opponent, which it never ought to be, but as it is in reality, the handmaid of religion—not impugning but corroborating the testimony of scripture, each science after its own manner. Thus astronomy, aided by the telescope, reveals to man an idea of the infinite in space, such as prophets of old had no conception of. The microscope, on the other hand, makes known to us that which otherwise we could never have realised, God's care for the minutest creatures he has made, and exemplifies in a vivid manner the truth that His mercies are over all His works. None could ever have dreamt of an infinity of time past, such as geology has declared and exhibited to the sons of men, while the science of mathematics lays open to our view the infinite wisdom which has provided for the future, inasmuch as it demonstrates the permanency of those elements of the planetary system which are essential to the perpetuity of the system, and shows at the same time that the irregularities which are introduced into that system by the mutual disturbances of the bodies which compose it are subject to a periodicity which timely reverses the effects which were apparently verging to some catastrophe, and by an exquisite system of compensation ensures the permanency of the whole.

In this way Mr. Farrar endeavours to show that science may be regarded as a revelation, differing only from the divine one in being communicated without supernatural inspiration, but through the agency of human genius.

True religion has nothing to fear from the discoveries of modern science, provided only that they are investigated with the candour and modesty which ever distinguish the real philosopher. Science in religion is being forced upon us by the progress of human thought, especially in Germany, where errors are refuted as systematically as they are propounded. At the same time there are revealed truths which must be received by simple faith or not at all, inasmuch as being utterly beyond and above our present faculties, the reasoning powers are incapable and never were intended to take cognizance of them; and it would be just as unreasonable to test such questions by the ordinary rules of reason or of science, as it would be to attempt to judge of distance by the organs of taste—or for the chemist to deny the existence of animal life because he has been unable by his chemical analysis to separate the life from the mortal case in which it had been enclosed, and exhibit it to his class carefully tied down in a stoppered bottle.

A Narrative of the Discovery of the Fate of Sir John Franklin and his Companions. By Captain M'Clintock, R.N. 8vo. Murray. Pp. 403.

The Career, Last Voyage, and Fate of Captain Sir John Franklin. By Captain Sherard Osborn, C.B. 12mo. Bradbury & Evans. Pp. 111.

When two gallant officers, writing independently, unite in describing events like those which befel one of the bravest and most amiable men that ever adorned their own noble service, it is impossible that their works should remain unappreciated by every class of readers. In this land of seamen all hearts thrill at the records of naval daring; that high spirit which leads men to encounter perils far beyond any known in the land service is the boast of our country, and well may it be so. But for the most part attention is fixed upon the glories of naval warfare, upon the desperate courage which carries men into the wild tumult of a battle at sea; and that quiet resolution which enables others calmly to confront the silent perils of the deep and vanquish them is far less thought upon. Yet it is doubtful whether the latter is not the more markworthy of the two; and certainly there is nothing in the lives of a Blake or a Nelson that can be placed above the unflinching resolution which carried Franklin to his tomb, or impelled M'Clintock and his companions to rescue him if still alive. Think only of a yacht of 170 tons, a mere boat, facing fields of floating ice which even forced her back 1200 miles, then returning to the charge, daring the perils of a hyperborean winter, struggling through "packs" the very sight of which on paper makes the landsman's heart tremble, and finally accomplishing her aim, returning in safety with hardly the loss of a man. Surely deeds like these win men immortality.

It would be needless, even had we space at command, to tell the reader the history of M'Clintock's great enterprise, or of that earlier one the mystery of which it succeeded in dispelling. The daily papers have already exhausted that subject; and those who desire more will necessarily have recourse to the volume itself, the maps and sketches in which are indispensable to the right understanding of the story.

It is otherwise with Captain Sherard Osborne's little sketch, a part of which appeared in *Once a Week*. We here find the career of Franklin from his boyhood to his death, painted by the hand of one whom the eloquent President of the Geographical Society describes as a distinguished seaman possessing a thorough acquaintance with the Arctic regions; and whom the public also knows, not only for his brilliant conduct in the Crimean war, but as a spirited and graceful writer. One anecdote shows the stuff of which Sherard Osborn's pen is made. Franklin had been wrecked in a tub called the Porpoise, commanded by Capt. Flinders, when a large part of Brown's New Holland collections were lost. After being rescued, he proceeded to China, and obtained a passage home in one of the merchantmen belonging to the East India Company.

"On the last day of January, 1804, a magnificent fleet of 15 East Indiamen are putting to sea, from the Canton River. Franklin has obtained a passage in the Earl Camden, commanded by stout-hearted Nathaniel Dance, the commodore of this fleet, which is laden with millions' worth of Chinese products. Most of the ships are painted as if they were line-of-battle ships, and though not fitted as men-of-war, the good traders of Leadenhall had provided guns and men sufficient to prevent their argosies falling without resistance into the hands of privateering Frenchmen. The 14th February finds them nearing Pulo Auor, one of the last islands seen before shaping a course for the Straits of Malacca; the China fleet is well in hand. Strange sails are seen, and soon ascertained to be the then notorious Marengo, 74, Admiral Linois, and his three satellite frigates. The Gallic chief knows it to be the long-sought prize, the China fleet, and hastens towards it, but is surprised to find 15 ships in order of battle, some of them more warlike than others, but all ready to fight. He heaves to, in the hope that during the night the merchantmen of England will flee, but daylight on the 15th finds them all as they had passed the night, at their quarters, guns shotted, and more prepared to do battle for the red flag which waved defiantly from their mizen peaks, than on the previous day. Linois, more than ever puzzled, does not attack, until the English bear away under easy sail; he then essays to cut off the rearmost ships. He counts without his host; the gallant Dance throws out the signal, 'Tack! bear down, and engage the enemy!' A shout of joy went through that noble fleet of merchant sailors, and to the astonishment of the Frenchman, he had the whole swarm about his ears. He made all sail away; Dance, in the Earl Camden, directed a general chase, and then was seen a sight, of which every Englishman should cherish the recollection — of a French squadron of men-of-war, perfectly equipped, led by one of their most distinguished officers, retreating before a fleet of armed merchant ships; and well might Franklin be proud in after years of having thus shared, as a middy, in the honours of Dance's victory. Before another year had passed over his head, he was signal midshipman on board the Bellerophon, 74, and on the memorable 21st October, 1805, he fought again with Nelson, at Trafalgar. We see the Lincolnshire boy pass through all the phases from childhood to manhood, from the sky-larking middy to the steady trustworthy lieutenant—tempered in a school of patient perseverance, and not spoilt by constant success; he saw the failure at Flushing; he marked how the underestimating of a foe brought down upon his profession the mischance of the American war; and in the disastrous attempt to capture New Orleans he was for the first time wounded."

As for the narrative of Franklin's death, we shall only say that it is one of the most touching stories we remember to have read.

Ure's Dictionary of Arts, Manufactures, and Mines, (Part III., Longman) has reached the word Calomel. It includes important articles on Bread, Bricks, and Calico printing.

TRADE LISTS RECEIVED.—Descriptive Catalogue of a choice collection of Annual, Biennial, and Perennial Flower Seeds, selected from the Stocks of the first Continental and English Growers, arranged according to the Natural System. By WM. THOMPSON, Tavern Street, Ipswich.—JOHN KEYNES'S (Salisbury) Catalogue of Show and Fancy Dahlias, Roses, Carnations, Picotees, Fuchsias, and Verbenas.—A Catalogue of Select Vegetable, Flower, and Agricultural Seeds, sold by WM. CUTBUSH & SON, Highgate.—Seeds for the Kitchen, the Flower Garden, and the Farm; also Culinary Roots and Implements, sold by CHARLES TURNER, Royal Nursery, Slough.—Catalogue (No. L), Descriptive of a Select Collection of Kitchen Garden Seeds, Roots, and Plants, sold by JOHN CATTELL, Nurseryman, Westerham, Kent.—GEORGE CHIVAS (of Chester) Catalogue of Seeds for the Vegetable and Flower Garden.—Descriptive Catalogue of Choice Vegetable and Flower Seeds, offered for sale by JAMES DICKSON, SONS, & Co., 23, Market Place, Manchester.—WM. BARNES, of Camden Nursery, Southampton Street, Camberwell, abridged (sheet) Catalogue of Vegetable, Agricultural, and Flower Seeds.—A Priced Catalogue of Garden and Flower Seeds and Garden Implements, sold by WILLIAM TAYLOR, of Cupar, Fife.—MILNE & Co.'s (successors to Messrs. Chandler, Wandsworth Road) Catalogue of Kitchen, Flower Garden, and Agricultural Seeds.

Miscellaneous.

The Roses of 1859.—How times are changed! One used to say, some years ago, to a brother Rose lover, "Have you heard if Laffay has brought out a good Rose this year, or Desprez?" and then perhaps the reply would be "Oh yes! you must get that wonderfully fine Rose of Laffay's, Dr. Marx, and Baronne Prevost of Desprez;" and so it went on from year to year—a few very fine and distinct Roses now and then making their appearance, their advent only known to the "upper ten." The contrast is so great at the present day that it seems scarcely credible. In the autumn of 1858, the French Rose growers sent out for the first time about 70 varieties, all with new names but not all with new features. In this list of "threescore-and-ten" we have 40 kinds of Hybrid Perpetuals, 4 of Damask Perpetuals, 12 of Bourbons, 10 of Tea-scented, 2 of Noisettes, 1 China, and 2 summer Moss Roses. In this list are doubtless many really fine Roses, although not differing to the extent one would wish from the varieties we already possess. Judgment must, however, be suspended to a certain extent till next season, for our poor new Rose is dreadfully tortured before she shines in England in her full beauty. Let us look at the "modus operandi." She (*i.e.* a Rose tree of a new kind) is sent over to England about the middle of November. If her master to whom she is consigned is merciful, she is planted in a favourable border, and suffered to bloom there the following season, as well as her torn roots and long exposure on her journey will allow her, and she will perhaps give flowers approaching in beauty to their real character. But if her master is a new man, anxious about propagation, woe be to her; she is crammed into a pot, placed in a forcing-house; all her shoots are cut, or rather shaved off closely, and she is forced unnaturally into putting forth leaves and shoots at Christmas. The shoots cut off are immediately cut up into single buds, and at once grafted on that "bubble," the Manetti Rose stock. The young shoots in February from the original trees are also grafted on the "bubble;" even the tops of the young grafts are in the spring transferred to the "bubble;" so that a large number of young plants are produced, but the character of the Rose is not brought out. This must be waited for; so that, in reality, the Roses introduced in the autumn of 1858 and propagated in 1859, will not show themselves to perfection till 1860. I regret that I cannot usher in the description of any new Rose with such a pleasant grandiloquent platitude as is now under my eye, applying to Rose catalogues, and which begins—"One by one the autumn catalogues come dropping in; some in a summer's dress, through which the mysterious type peers dimly, emblematic"—I should say of £ s. d. I must not, however, ramble in this way, but return to our "brood," to borrow a term of the new Roses that bloomed in England for the first time in 1859. The "Géant" seems to have been in France a very good kind to breed from, for nearly all the dark crimson Roses recently raised are of his race. It is strange that although pecks of seed from the Géant and General

Jacqueminot have been sown in England, not a single Hybrid Perpetual Rose has yet been raised worthy of a name. There seems a want of "vital force" in the seed, for those grand hips that Jules Margottin gave in 1856, '57, and '58—full of perfect seed—ought to have produced some fine Roses. Among the deep crimson Roses are Comte de Beaufort, which has not yet shown well, and four from M. Trouillard of Angers, viz., Dr. Brettonneau, Francis I., Franҫois Arago, and Eugene Appert. The three first are dwarf growing kinds, with flowers of the deepest crimson shaded with purple, all very double but not large; the latter has a more vigorous habit, and, if judged after the figure of it given by Mr. Andrews in the "Florist" for August last, is of the most wonderfully brilliant scarlet. I do not mean to assert that it is not after nature, but it is just one of those blooms that nature rarely gives, for although a very pretty Rose, its scarlet petals are mixed with dark crimson, or at least generally so. There are several other dark crimson Roses, nearly all really nice varieties, such as Emperor of Morocco (Empereur de Maroc)—we must, I think, now try to make into English all that we can of the French names given to Roses—Altesse Imperiale, Mount Vesuvius (Le Mont Vesuve), Lord Elgin, Ambroise Verschaffelt, and Ardoissée de Lyon or the Slaty Rose, the ugliest of all colours in a Rose. The first of these is a truly magnificent variety, of deep blackish crimson, very rich, its flowers are also of a good size, very full, and finely shaped; the second variety is also a Rose of great beauty, with smaller flowers very regularly formed, and of a rich crimson; Lord Elgin is also a very pretty dwarf dark crimson Rose—quite worthy of a place in our gardens if only for its well chosen name. Anna Alexieff and Armide are said to be rose coloured tinted with salmon—the latter colour has not yet been very apparent. Two nice and very bright rose coloured Roses are Anna de Diesbach, raised by M. Lacharme of Lyons, and Cecile de Chabrillan—Comtesse Cecile de Chabrillan, according to its raiser, M. Marest, and Cecile de Chebriana according to some catalogues. This is really a most beautiful bright pink Rose, not too full, and with an elegant cup. Oriflamme de St. Louis and Mignard are two seedlings said to have been raised from that beautiful Rose General Jacqueminot; the former is a most robust grower, and it will doubtless form a vigorous growing pillar Rose—it has not, however, yet bloomed in anything like perfection—its colour has not been "éblouissant" as described, but of a dullish red; the latter, of a bright rose colour, has not yet shown any remarkable quality. There are some pale or flesh-coloured Roses, not likely to eclipse Madame Vidot and Madame Rivers, but still interesting to the amateur who likes to possess everything in Roses. Among these the best are Impératrice Eugenie, making no less than four Roses bearing the name (viz., one Tea-scented, a poor Rose; one Bourbon, and one perpetual Moss), Madame Bruny, Madame Jenny Varin, and Mathilde de Mandeville. There are some 10 to 15 Roses described by the French growers as "rose vif" (bright rose), some of which may be worthy of a trial, but they have not yet shown any remarkable qualities. There are two Mademoiselles (how shall we English that name? Miss will not do, it is so near mess), Betsy Haiman, "ponceau vif," which has not yet shown its Poppy colour, and Marie Boyer, in the same not-shown category. One of the most distinct Roses of this season is Virginal, which really is of a pure white, but with rather jagged petals and want of fulness. No white autumnal Rose has yet approached in beauty the Bourbon Rose, Acidalie, when blooming in a warm autumn. Good new Roses, among the Tea-scented, are excessively rare; there were 10 varieties introduced in the autumn of 1858. Among these, Homer deserves the first place; it is apparently a seedling from my favourite Acidalie, with much the same habit, and with large, very double, and finely cupped flowers of nearly pure white, very slightly tinted with pale rose; its perfume is very grateful. Madame Damaizin, Madame Falcot, and Madame Halphin, are three pretty Roses, tinted with salmon and fawn colour; they are perhaps lacking in fulness and shape, but another season may tell a different tale. The new rose-coloured Roses of this family are not worth naming. A Tea-scented Rose to surpass Adam and Souvenir d'un Ami must be something very extraordinary. There were 12 new Bourbon Roses ushered into the Rose world last autumn, among which Dr. Berthot, crimson; Comtesse de Borbontane, Octavie Fontaine, and Madame Marechal, all pale flesh-coloured Roses, may be worthy of culture, but there is nothing new in any of them. Alas! that the day is past; "once upon a time" how we hailed a new crimson Bourbon Rose. They are still beautiful, and often most beautiful in autumn; but their equals in colour and superiors in perfume, the Hybrid Perpetuals, have placed them in the rear ranks of the Rose garden. Noisette Roses have received no additions from France worth naming, but from America we have two—Jane Hardy, which will be found very hard in the bud, and "America," said to be a new yellow vigorous growing Rose, quite surpassing any yellow Rose yet seen (Cloth of Gold clearly forgotten by our cousins), and to be most free in blooming, most hardy, and most wonderful; all which we shall believe "when we see what we shall see." *Prince Noir.—From the Florist.*

Good Nature of the Newfoundland Dog.—As is the case with most of the large dogs, the Newfoundland permits the lesser dogs to take all kinds of liberties without showing the least resentment; and if it is worried or pestered by some forward puppy, looks down with calm contempt, and passes on its way. Sometimes the little conceited animal presumes upon the dignified composure of the Newfoundland dog, and, in that case, is sure to receive some quaint punishment for its insolence. The story of the big dog, that dropped the little dog into the water, and then rescued it from drowning, is so well known that it needs but a passing reference. But I know of a dog, belonging to one of my friends, which behaved in a very similar manner. Being provoked beyond all endurance by the continued annoyance, it took the little tormentor in its mouth, swam well out to sea, dropped it in the water, and swam back again. Another of these animals, belonging to a workman, was attacked by a small and pugnacious bull-dog, which sprang upon the unoffending canine giant, and after the manner of bull-dogs, "pinned" him by the nose, and there hung, in spite of all endeavours to shake it off. However, the big dog happened to be a clever one, and spying a pailful of boiling tar, he bolted towards it, and deliberately lowered his foe into the hot and viscous material. The bull-dog had never calculated on such a reception, and made its escape as fast as it could run, bearing with it a scalding memento of the occasion. *Routledge's Illustrated Natural History.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Forcing-houses and pits should now be kept in full activity to furnish plants in bloom, which at this season are more or less in demand in most establishments. Care should be taken before plants are removed to sitting-rooms to gradually harden them for a day or two, either by placing them in the conservatory or intermediate house. In addition to keeping the conservatory gay with blooming plants, let the arrangement of the house be occasionally changed, by grouping the plants somewhat differently, and adding a few striking ones, as some of the hardiest Palms, &c., for effect. Pay attention to plants intended for successive blooming. Narcissi, Hyacinths, &c., should be protected by a frame; as they now begin to grow remove the plunging material down to the surface of the pots to prevent them rooting upwards. Mignonette will require abundance of light and air to keep it from damping. As with the exception of forced plants most other things are now in an inactive state, the temperature of plant houses should fall to its minimum point consistent with the safety of their various inmates; as has often been insisted on, nothing can well be worse for the development of a healthy vigorous habit in plants than subjecting them to a high temperature at the present season when light, so important to the healthy action of vegetable life, cannot accompany it. Where Achimenes and Gloxinias are required to bloom early a few pots may now be started in bottom-heat.

FORCING DEPARTMENT.

EARLY VINERY.—As soon as the bunches can be discerned on the young shoots the extra buds should be removed, excepting such as may be required for producing bearing wood next season. In leaving these latter select such as are formed nearest the main stem to avoid the awkward appearance of long spurs at a stage further in their growth. Such shoots as have more than one bunch should have them reduced to that number, selecting the one likeliest to form the handsomest bunch. Tying in the young wood should be managed carefully, bringing the shoots to their proper position by degrees, to avoid the danger of their breaking. After the buds are started a few inches the syringe may be gradually withheld; as too much humidity at this season will sometimes retard both the foliage and bunches, and a sufficient degree of moisture can easily be kept by sprinkling the floors and heating apparatus several times daily. Regulate the admission of air so as to have a gentle current at all times through the house; increase, of course, by day agreeably with the state of the weather. Gradually advance the night temperature to 60° and then to 65° by the time the flowers are ready to open, keeping the thermometer from 10° to 15° higher by day according to the amount of light you can command. Keep up the heat in the outside border by additions when necessary, bearing in mind the injurious effects any sudden check to the roots now in action will produce on the coming crop. Bring succession Vineries into work as wanted. Late Vineries in which Grapes are still hanging will require fires daily and air sufficient to keep the house and fruit dry; remove decayed berries and dead leaves, and well protect the roots from frost. For a late Grape Lady Downe's Seedling possesses valuable properties. PEACH HOUSES.—Peaches and Nectarines which have been forced for several years oftentimes produce a large excess of fruit-buds, and this more especially on weakly trees; a natural consequence of allowing these to remain are weak flowers and inferior fruit and wood. When, therefore, such is the case the trees will be greatly benefited by well thinning the bloom-buds, leaving the largest and those most favourably placed; of course a considerable number will be still left to allow for casualties. Syringe twice or oftener daily till the bloom is ready to expand, when it must be discontinued. The night temperature may advance to 45°, with an increase by day accompanied with a proportionate admission of air. FIG HOUSE.—Damp the trees over frequently, and if wanted early increase the heat a degree or two weekly. PINERY.—Pines are often deficient in flavour at this season, which is improved by exposing the ripening fruit to all the light you can command, and giving but little water. A good supply of air is likewise essential at all times for high flavoured fruit, and more than ever necessary at this time. Continue an increase of heat to Pines now wanted to start, employing it principally by day. Attend to linings for Pines grown in dung pits and keep the atmosphere in which they grow dry. Strawberries in bottom heat for forcing will require air daily to prevent drawing in those earliest started; when they show the truss of flower they should be removed to shelves in the Vineries and Peach houses to bloom, but the principal crop should as yet be advancing slowly.

FLOWER GARDEN AND SHRUBBERIES.

Except in the driest localities nothing more can be done in this department than paying attention to order and neatness. The bedding plants, however, must have attention, for in all likelihood many things are suffering from damp, and such plants as appear to suffer most should be removed to other quarters where a drier temperature is kept. Keep the stock in pits and frames well ventilated and the surface soil of the pots frequently stirred. Dust with sulphur Verbenas and similar plants attacked with mildew. Be particular in keeping the interior of pits containing plants of the above description as dry as circumstances will permit.

HARDY FRUIT AND KITCHEN GARDEN.

The pruning of orchard trees is a matter which is too frequently neglected, and the result is that the heads of the trees get so crowded with wood as to render a crop of fruit, except upon the extremities of the outer branches, not to be expected, and the thicket of worse than useless spray which the trees have to support is injurious both to the size and quality of the fruit, and also to the general health of the tree. When this state of things has been allowed to prevail, advantage should be taken of the first opportunity to give the trees a careful pruning, thinning out the inner branches severely. In the case of large branches being cut off, the surface of the wound should be neatly trimmed off with a sharp chisel and covered with a coat of paint to prevent the wet soaking into and rotting the wood. See to the protection of Lettuces, Cauliflowers, &c., under glass, by guarding them from frost; but take every opportunity of exposing such things to light and air. Introduce roots of Asparagus, Seakale, and Rhubarb into heat at regular intervals, so as to make sure of a constant supply. Rhubarb and Seakale do well on a shelf or the floor of a Mushroom house, where they are probably less troublesome than elsewhere.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Jan. 19, 1860, as observed at the Horticultural Gardens

January	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep	Of the Earth 2 feet deep.	Wind	Rain.
Friday 13	20	30.129	30.071	42	34	38.0	43	42½	S.E.	.00
Satur. 14	21	30.032	29.899	45	32	38.5	43½	42	E.	.00
Sunday 15	22	29.874	29.716	51	31	41.0	44	42	S.	.24
Mon. 16	23	30.164	30.138	48	26	37.0	44½	43	S.W.	.00
Tues. 17	24	30.170	29 973	46	23	34.5	44	43	S.W.	.00
Wed. 18	25	29.801	29.602	39	34	36 5	43	43	S.E.	.09
Thurs. 19	26	29.679	29 569	47	30	38.5	42½	42½	S.W.	.11
Average		29.978	29.852	45.4	30.0	37.7	43.5	42.6		.44

Jan. 13—Foggy; hazy; densely overcast.
— 14—Overcast; fine; overcast.
— 15—Densely overcast; boisterous with rain.
— 16—Clear; very fine; clear; frosty.
— 17—Foggy; very fine; hazy at night; frosty.
— 18—Cloudy; hazy and cold; rain at night.
— 19—Densely overcast; fine; overcast; rain.

Mean temperature of the week, 1 deg. above the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Jan. 23, 1860.

January	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 22..	43.5	32.9	38.2	14	0.57 in.	3	5	1	5	3	13	3	1
Mon. 23	44.5	32.8	38.7	14	0.27	2	3	2	3	6	10	4	4
Tues. 24..	43.6	32.3	37.9	15	0.51	3	4	2	1	4	14	4	4
Wed. 25..	43.2	32.8	38.0	17	0.90	1	4	3	1	5	11	5	4
Thurs. 26..	44.5	31.8	38.2	14	0.34	1	5	3	4	1	13	4	3
Friday 27..	43.7	31 1	37.4	16	0.43	2	5	4	1	4	12	5	1
Satur. 28..	44 6	30.5	37.5	17	0.17	2	5	2	—	1	13	8	3

The highest temperature during the above period occurred on the 22d, 1834—therm. 58 deg.; and the lowest on the 25th, 1827, and 27th, 1855—therm. 15 deg.

Notices to Correspondents.

HARICOT BEANS: *J B.* The larger Bean is the Haricot de Soissons, the smaller is the Haricot Riz. Both, and indeed all white Kidney Beans, are used by the French under the name of Haricots.

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*A Devonian.* A bit of Grevillea anethifolia.

SEEDSMEN: *Amateur* will we trust excuse us from naming one firm more than another. A glance at our advertising columns will satisfy his curiosity. Moreover all the great houses deal in such seeds more or less. It is, or should be, an invariable rule with newspapers not to recommend one tradesman more than another.

TIMBER: *H C P.* The piece of wood 300 years old is English Oak of the sessile-fruited species. It is not in the least like Sweet Chesnut.

MISC. *X Y Z*, and a few other correspondents, shall be fully answered next week.

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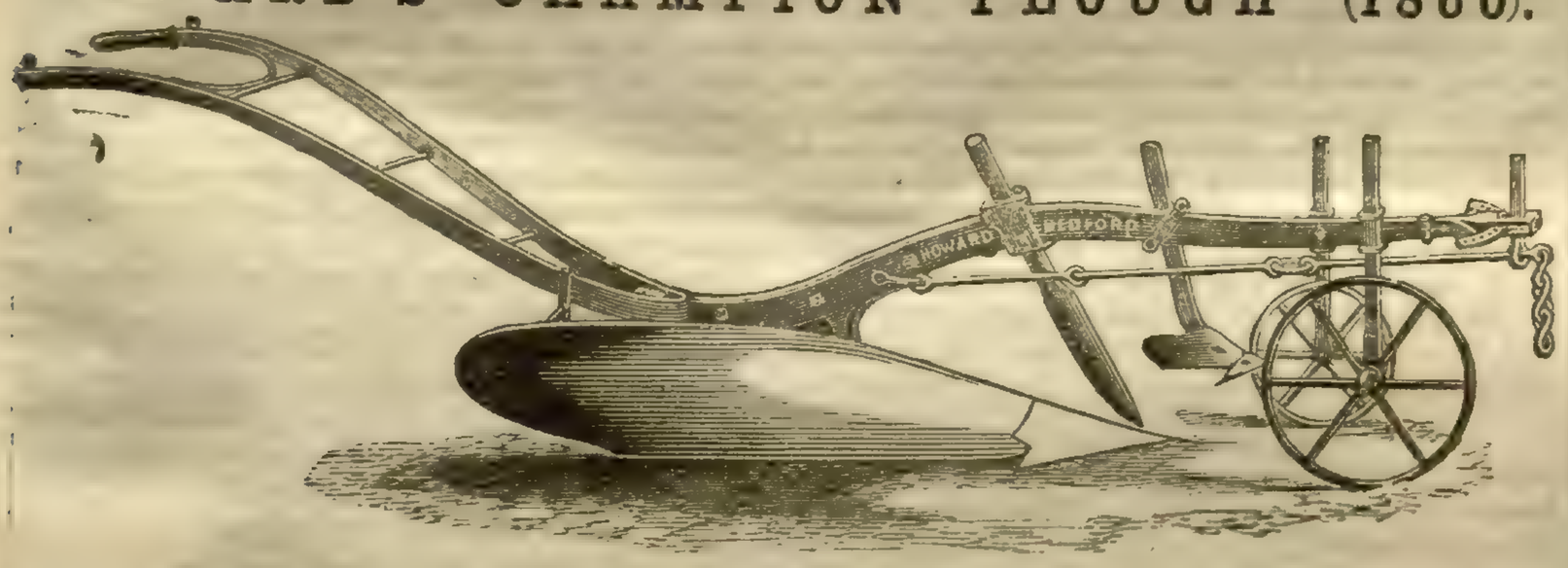

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The Agricultural Gazette.
SATURDAY, JANUARY 21, 1860.

SEVERAL papers of considerable interest on the food of animals will be found in our columns this week. Mr. LAWES, than whom no one in this country more perfectly unites the experience of the field and the feeding house with that of the laboratory, speaks of the undoubted fact that, inherited disease apart, the health of cattle can be maintained on our ordinary agricultural foods given along with pure water and pure air; and that, health being thus maintained, nutrition and increase of growth are in proportion to the quantity of known ingredients in the food consumed. And our correspondent "*G. T. B.*" gives the veterinarian's account of the so-called concentrated foods, whose value depends almost entirely on their medicinal properties, and whose influence, where they have been found beneficial, must therefore hinge on the accidental correspondence of those properties with any derangement of health of which the feeding animal happened at the time to be the subject. If he admits, as he appears to do, the ultimate advantage of constant stimulants given to feeding animals, as regards either the wholesomeness or the quantity of the meat produced during their use, we must entirely differ from this writer. But take even his somewhat favourable account of the so-

called "condiments," and that of Mr. LAWES, together, and compare them with what has been lately published in the pamphlet form and distributed to every member of the Royal Agricultural Society—the contrast they present is that of a judgment from the bench with the declamation of a quack. In the former case we have the results of experience and of law appealed to; in the latter if we except "Dr. BROWN's cow," the only appeal, but that a frequent one, appears to be to "Echo."

A wilder or more outrageous harangue on the state of our plants, our animals, and our fellow-countrymen was never written. Let no one think that Mr. BURNESS, Mr. THORLEY, or any other person has the secret of prosperous feeding or perpetual health wrapped up in a 3*d.* pill, or a daily dose of condiment at 6*d.* per lb. That depends on wholesome ordinary food being administered along with clean water and clean air in comfortable circumstances.

Our "rotten Mangels," and the miserable cake we have gotten "since the Crimean war," our "ergotted pastures," and the myriad Turnip fly, black jack, and grub which now consume our roots, the poisoning with which our artificial fertilisers now destroy our crops, our diseased plants, and our unhealthy animals,—of all of which Mr. BURNESS makes so much in a pamphlet upon Cattle Cookery!—are no more likely to be rectified and cured by Mr. THORLEY's condiment than they are by Mr. MORRISON's pills or Mr. HOLLOWAY's ointment.

THE months of winter are distinguished not only by a decreased temperature, but also by torpidity of action throughout the vegetable kingdom. This absence of the energetic action which is observable through other portions of the year is not confined to vegetation, for it affects animal life, but in a less marked degree. It may in some degree be traced to the influence of cold, which is known to cause a languid circulation in plants, and in some cases to check it entirely. In the animal system the action of cold is for various reasons calculated to cause a decrease rather than an increase of weight in the body. It may be a matter of doubt with some whether or not this is entirely to be traced to the action of cold. We know that the demands upon the system for the maintenance of its warmth are productive of a loss of weight unless the food supplied is sufficient to meet the demand. This usually occurs at a period of the year when the consumption of food is in the least degree productive of beneficial results. In consequence of this additional claim upon the food the adoption of a liberal system of winter feeding has in some degree been discountenanced.

This has often involved serious losses by the stock getting into a low condition; but whilst we are prepared to admit that it is a time of the year when all stock-masters have to work at a disadvantage, still we cannot in the least degree justify the results too often observable from want of a proper and sufficient supply of food of good quality. To sacrifice the condition of the stock is in the highest degree impolitic, and the cost of regaining it is much greater than the expense of preventing its loss.

It involves a very wide range of subject if we trace the influence of this upon the stock or even upon the economy of the farm. We propose on the present occasion glancing at the influence which food exerts upon the growth of wool, for although this is a marketable commodity of considerable value, and one upon which much of the profits of the sheep farmer depend, still the connection is not as generally thought of as is desirable. Much attention has been given to the influence of food and shelter upon the production of meat, and it has become a tangible reality which comes under our calculation as a matter of course, but it is far too common for the important product of wool to be entirely omitted from our calculations. An examination into the subject will show that the closest relationship exists between the two and that they stand in the position of cause and effect.

The composition of wool shows it to be a highly nitrogenised body containing a large proportion of sulphur and phosphorus. It were impossible to select more valuable ingredients than these, and consequently in getting the necessary supplies for the formation of the wool the system is drawn upon for the most valuable nutritive elements of food. In the case of ill-fed stock the food cannot answer to the demand, for the addition it makes to the blood of the animal is deficient in the elements required for the wool; and hence the growth of the wool is carried on at the sacrifice of the less important portions of the body; and thus we have an additional drain upon the system of the low-conditioned and ill-fed sheep. This coat of wool, which is Nature's provision for protecting the body during the winter, has very powerful claims upon the animal economy, and takes precedence of many others; but stock which are in this low condition have not only less power to produce wool, but they have greater demands for it than others in higher condition, and thus labour under a double disadvantage.

To favour the production of wool, we must in the first place take care that we have present in the system of the animal the materials necessary for its formation. We may take wool as representing in a condensed form the constituents of the entire body. It contains phosphates, sulphates, and chlorides—salts forming the skeleton of the body, and thus the wool upon analysis presents a great similarity in composition to that of bone. We have also in the wool, partly in a state of chemical combination, and partly in a condition of mechanical mixture, fatty bodies which correspond with other animal fats. Besides this we have in wool, after it has been divested of the former bodies, substances showing a composition almost identical with flesh or muscular matter. These are curious facts, but they have a value attached to them far beyond this, for they show in the most decisive manner what is necessary for the formation of wool; so that in their absence we cannot have it properly formed, or in other words we cannot have good wool produced.

The growth of wool necessitates the presence of the various kinds of matter required for the general growth of the body. It requires a rich food to favour the production of wool, and when we consider the analogous composition already referred to, we shall be justified in stating that a liberal system of feeding which is calculated to produce a growth of the body is sure to be favourable to the production of wool. The nutritious ingredients of food are taken up into the blood, and when there the use to which they are applied must be regulated by the requirements of the system. Thus, at one time of the year the same matter which is capable of being converted into wool may be formed into the flesh, fat, and bone of the body, and cause an increase of growth, whilst at another time the energies of the system being chiefly directed to the formation of wool, this nutritive matter in the blood would be turned to this use in preference to the general development of the animal frame. The influence of cold upon the general growth of animals is rather unfavourable than otherwise, but this agency gives a tendency towards the formation of wool as a natural protection against the severity of the winter. It is true the natural disposition for the formation of wool is very much under our control by the kind of management adopted and the system of breeding followed out, but it does not submit to our rule without indications of the natural periods of growth which we cannot over-rule with safety to the health of the animal.

It is a very old opinion held by shepherds that when the dead time of the year is past a new life seems to animate the flock, and it is by no means without good reason that this has been held, for we are all aware of the energy which is infused by the return of spring when vigour and animation of body succeed to the torpor of the early winter months. It is believed by many that the first indication of this return of vigorous growth is given by the wool, and that for some weeks before we notice any marked disposition for an increased rapidity of general growth, the wool is peculiarly disposed to make progress. It is by no means unlikely that the energy of the body is at first directed to meet the influence of cold with which the new year commences. The old proverb—

As the day lengthens
So the cold strengthens,

is certainly accompanied and in some measure confirmed by the natural disposition of sheep to produce wool rapidly at this time. This disposition for the growth of wool should on no account be checked, but by every means be encouraged, for the experience of sheep masters is very clear upon this point that the wool never regains the influence of inferior feeding in January and February, whilst liberal feeding is productive of a very marked improvement in the fleece. Whenever the functions of the animal body have a special disposition for the formation of any product which we may require, we may always rely upon it being done then far more economically and satisfactorily than at any other time. This disposition we observe to be far more powerful during these months than at any other time, and the effects of neglect are as equally productive of bad results as attention and good management are sure to be followed by a remunerative growth. Liberal feeding will at all times encourage the growth of wool, but never in so great a degree as during the early months of the year.

The condition of wool may always be taken as an indication of the general condition of the animal, for disease and loss of flesh are as plainly observable by an examination of the wool as of the body. The softness of wool, which is always a sign of a thriving sheep, is mainly to be attributed to the presence of the yolk, which is an oily matter that has a powerful influence upon its growth, as well as upon its softness. Wool grown when the yolk is deficient is always more or less harsh and crisp in its nature, and difficult of growth. For this reason it becomes essential for encouraging the growth of wool that the yolk should be present in abundance. Even after wool has made its growth, if by any means the supply of yolk be checked, it at once loses quality, and as we see in some diseases when the cause cannot be speedily removed so that the yolk shall again return, the wool falls off from that portion of the body. The yolk may be looked upon as the nourishment of the wool, without which it cannot grow, and soon becomes easily separated from the skin. This is the cause of the wool being so easily pulled from sheep which are either ill or in poor condition.

We therefore see that the encouragement of the growth of wool must be effected by keeping up the supply of yolk. This, as we have stated, is an oily matter, and it is found to exude through the vessels which convey the blood to the surface of the body. If the blood is rich from the presence of fatty matter the healthy action of these vessels will keep up the supply required by the wool; but it is clear that its presence is primarily dependent upon the quality of the blood, and this can only gain its richness from the food the animal consumes. The connection is very close indeed between the food of the animal and the wool produced. In those cases in which the food may be inferior to that which the animal may have been previously accustomed to, the effect is equally indicated, and the consequence is an irregularity in the size of the wool which produces an unsoundness of staple which is highly objectionable, and which detracts from its market value, because it is apt to break at these weaker portions. This shows the importance of the food not only being good in quality but regular in its supply of nourishment. This is a very common fault in much of our wool, and although shortness of keep will under the best management sometimes unavoidably arise, still knowing as we do the effect upon the wool, this should be met by the addition of some other food to make up the deficiency. Its influence upon the body irrespective of the wool we do not now notice, but the production of a good sample of wool is of itself sufficient cause for avoiding the deficiency in the supply of nourishment.

Nor are these the only conditions which have to be remembered. for we find the influence of cold and heat almost as great. When the skin becomes cold there is a natural tendency for its pores to close, and this produces a lessened nourishment for the wool and consequently a smaller-sized fibre is produced of less strength. Then, again, in the hot weather of summer the pores are more open, and this causes a larger growth, but as sheep have a thicker coating of wool this effect is subdued. These considerations show us the importance of preserving sheep from the extremes of heat and cold, and hence the importance of moderating their action by means of shelter. The quality of wool as determined by the evenness of the sample makes a great difference in its value. We have the influence of these extremes very much under our control, and they are perfectly distinct from any such modification of the wool-producing character of sheep as may be established by variations of breeding.

CONCENTRATED FOODS.

"WHAT'S in a name?" The answer now-a-days is obvious—"everything" How very alluring for example the words "concentrated food," how satisfactory the idea of giving our animals nutriment in small parcels, avoiding all waste, and economising the digestive forces. Change the title into "patent indigestible food," and how very different the feeling with which we scan it. There is something in us which begets a faith in the impossible; we are led somehow to hope that where everything is promised, something may at least be done. If Morrison's pills do not raise the dead, they may perchance remove a liver complaint. If Holloway's ointment fails in cancer, a "bad leg" may heal under its influence. If the various concentrated

* "What does all this mean? Health for man and beast? Echo, alas, answers No! — What is being done to prevent contagion from the poison of diseased animal matter? Nothing! Nothing!! Echo answers Nothing!!!" *Cattle Cookery.* By W. BURNESS.

foods promising fabulous increase of bulk do not fatten an ox in a month, they may very much assist the process; so without thinking or caring about the composition, or the action, we try them, and we fancy that we find considerable advantage from their use.

Allowing much for imagination, it may still be urged extensive experience must sufficiently have tested the matter to make it easy to decide whether any good follows the employment of these feeding materials. The inquiry then follows: on what does their value depend? Everybody knowing anything of cattle is to some extent cognisant of the feeding value of different articles, as ascertained by analysis or by experiment. He is aware that certain parts of the food are appropriated to the formation of fat, and others to the construction of flesh; and that dependant upon the preponderance of the one or other constituent, the flesh forming or the fat-forming, will be the character of the food. Chemistry can precisely fix the relative proportion of the principles contained in any given specimen, and can assert its capabilities or can show its worthlessness. But chemistry cannot ascertain the force of the animal's digestive power, nor the extent of its assimilative functions. On the contrary, it admits that an article containing a large proportion of flesh-forming materials may be comparatively useless in the animal economy, and that an agent consisting exclusively of fatty elements may be utterly powerless to induce a disposition to fatten. Straw, by way of illustration, is chemically of high feeding value, but experiment shows how inefficient it is to the support of the system when given as the sole provender. Various oils, although rich in the requisite principles, fail to cause any deposition of fat, and even induce an opposite condition.

Some kinds of food yield their nutrient properties to the digestive process of one class of animal, and deny it to another. In the case of straw as a feeding article, it was found, during some experiments on oxen and horses, that the former animals obtained by digestion more than double the amount of nutriment obtained by the latter, but that by neither was much more than half the really nutritive matter appropriated by the system. These points are familiar enough to all of us, but somehow we lose sight of them very often when talking about "feeding"; we are too apt to judge by the absolute amount of nutritious matter known to be present, forgetting how much of that actual quantity may be completely waste.

A perfect system of feeding involves two considerations—1st, the quantity of available matter in a given food; 2d, the existence of it in a digestible form or otherwise. It cannot be too constantly impressed upon feeders that it is the quantity digested and not the quantity consumed that determines the rapid increase of bulk. The value therefore of a food is in direct proportion to its digestibility, and not in proportion to the absolute amount of the nutrient principle. Returning to the expression "concentrated food," we may ask: Is it possible to concentrate, so as to convey to the system the exact materials required for its support, and exclude all matters that are not indispensable? Such concentration we know to be quite possible, but attended with such an expense, from the necessary complications of the process, as to render it unpractical; besides that the active principle of the nutriment is found to be medicinal and even powerfully so in its action, so that the term and the idea attached to it may be fairly abandoned in our further reasoning. Let us see if the composition of the "food" will assist us.

Without attempting to decide upon the particular kind of "meal" that forms the basis of the various "cattle foods," whether ground Lentils or Beans or anything of the kind, we feel tolerably secure in asserting that they all contain some form of spice carminative or condiment, or whatever else we may choose to call it. Such condiment we believe to consist usually of turmeric, although we see no reason to restrict ourselves to this agent. In the presence of this condiment lies, we conceive, the secret of the whole matter. By its flavour it provokes appetite, and is consequently found useful to hard-worked horses, tempting them to eat when from sheer exhaustion they would scarcely be inclined to do so without something to entice them. It thus supplies the place of the "cordial ball" which the groom would give with the same object in view. By its contact with the membrane of the stomach it excites secretion, tending to soften the mass and facilitate digestion. The benefits of this action would be more apparent in the case of the ox than the horse, from the extent and low sensibility of the membrane in the first three stomachs of the former. There seems to be no difficulty in explaining the effects of the "foods" on this principle. If it be urged that the natural digestive power in a healthy animal ought to be sufficient without the interference of stimulants to excite the secretive functions, the answer is at hand: The natural digestive power in a healthy subject is quite adequate to supply the wants of the system; but it is not by necessity equal to the task of fattening a beast for a Christmas show in a remarkably short space of time; it is not equal to the assimilation of unnecessary nutriment, nor is it equal to the digestion of ordinary food when the body is exhausted by exposure or exertion. The functions cannot be said to be acting naturally or healthy under such circumstances, and most consistent with the laws of the organisation is the use of a seasoned diet then. So far from concentrated nutriment being necessary we can imagine the so-called concentrated food to be equally or more valuable, without one particle of nutritious matter entering into its composition. Given, as it always is, in association with the ordinary provender, its effects are to be sought in the condiments it contains and in them alone. *G. T. B.*

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No. of lot.	Kind of manure supplied.	Manufacturers of or agents for the manure supplied.	Weight of manure applied to each lot = 2*l.* 10*s.* p. a.	Price per cwt. in this district.	Number of Turnips in 40 yds. of a drill	Weight of crop per imperial acre, Nov. 21, 1859.	Cost of Turnips per ton.
				s. *d.*		t. cwts. qrs. lbs.	*s.* *d.*
1	Seagrave's Phospho-Peruv. Guano	Mr. Gordon, Inverness	234 lbs.	12 0	166	14 2 1 7	3 6½
2	Odams's Blood Manure	Ditto	400 ,,	7 0	169	13 11 1 10	3 8
3	Odams's Superphosphate	Ditto	464 ,,	6 0	171	13 11 1 10	3 8
4	Blaydon's Chemical Manure	Mr. Kaye, Inverness	386 ,,	7 3	171	14 2 1 7	3 6½
5	Robertson & Co.'s Manure	Mr. Macleod, Inverness.	374 ,,	7 6	164	12 17 0 12	3 10½
6	Langdale's Challenge Manure	Mr. Mackintosh, Auchnacloich	295 ,,	9 6	155	15 2 1 26	3 3½
7	Lang's Phospho-Peruvian Guano	Messrs. Lang & Co., Glasgow	295 ,,	9 6	167	13 17 1 3	3 7½
8	Townsend's Manure	Messrs. Kay, Earnside, & Leitch, Forres	302 ,,	9 3	183	14 7 1 12	3 5¾
9	Miller & Co.'s Superphosphate	Sandiland's Works, Aberdeen	350 ,,	8 0	164	13 7 0 22	3 8¾
0	Mackay's Permanent Manure	Messrs. G. Mackay & Co., Inverness	215 ,,	11 0	164	13 11 1 10	3 8
11	Cant & Co.'s Turnip Manure	Mr. J. Fraser, Inverness	267 ,,	10 6	164	14 17 1 21	3 4½
12	Hill & Co.'s Manure	Mr. L. Macbean, Inverness	386 ,,	7 3	177	11 8 2 5	4 4½
13	Kooria Mooria Guano	Mr. Hindson, Liverpool	509 ,,	5 6	163	11 6 3 12	4 4¾
14	Peruvian Guano	Mr. Gregory, Inverness	202 ,,	13 6	179	13 2 0 17	3 9¾
15	Bones—mixed drill and dust	Mr. Gordon, Inverness	8 bush.	3 3p.b.	175	8 11 1 17	5 10
16	Concentrated manure for roots	Mr. Russell, Inverness	220 lbs.	10 6	175	13 7 0 22	3 11
17	Patagonian Guano	Ditto	450 ,,	6 6	161	17 2 3 7	3 2¼
18	Mixture of manures	..	2 cwt.	..	171	15 12 2 7	0 6
19	Farm-yard manure	Supplied from farm	6 loads	2 p. ld.	203	11 16 3 22	4 2½

The farm of Balnafettack is situated about one mile to the west of Inverness, on a gradual slope, with a southern exposure. The soil is a sharp free loam on mountain clay, and is good land for a Turnip crop. The field on which the above experiment was conducted was in Oats in 1858 after a one-year old lea, was ploughed in the beginning of winter, and cleaned and dressed in the ordinary way in spring. The drills were opened, closed, and sown in the same day, and the manures, from Lot 1 to Lot 15 inclusive, weighed under the inspection of the committee. The manures for Lots 16 and 17 were not forwarded in time, and were, with Lots 18 and 19, put down by the Manager at Balnafettack, who laid them on thicker than the money value intended, viz., the rate of 2*l.* 10*s.* per acre. The cost of bringing Lots 7 and 13 from Glasgow and Liverpool is added by the committee, these not being on sale in the district. The weather at sowing time was dry, and continued so during the season, and the seed did not braird quickly or very regularly. Altogether, the season has been very unfavourable for the Turnip crop, and this field is considerably above the average weight this season in the district. The drills were made 27 inches wide. The variety of Turnips sown was Green Top Yellow, and every care was taken to secure correctness. The mixture used on Lot 18 was made up of remainders of other manures after weighing the requisite quantities, and consisted of portions of Lots 4, 5, 6, 7, 8, 9, 11, 12, and 13—the largest portion being of Lot 13. The analyses given are those furnished with the manures, but the committee have kept samples of the different manures used, for the purpose of analysing at any future period. The analyses of Peruvian Guano and bones given do not refer particularly to the samples used. The manures were all laid down in the order in which they were entered with the Secretary, and were selected by neutral parties from large stocks, so as to avoid any chance of their being specially prepared for the experiment. The committee took frequent opportunities of inspecting the field during the season, but could observe no marked difference in the Lots at any time, except Lots 14, 15, and 19, which grew very stiffly until late in the season, when they came on rapidly, and if the season continues open, they will still improve greatly. *Hugh Fraser, Secretary, Inverness Farmers Society, Balloch of Culloden, Dec.* 9

THE BEDFORD PLOUGH.

[From a very interesting biographical account of the Howards of Bedford, in the *Farmers' Magazine.*]

THE ploughs, termed by the Royal Agricultural Society of England "General Purpose Ploughs," are the only kind that are tested on both light and heavy land. Those of course found to work best at different depths on both soils, with due regard to lightness of draught, are considered the most generally useful. This point is put with some significance, as such ploughs are awarded a prize of a larger amount than for those of any other description; and consequently the prize for the best plough for general purposes is considered the chief prize of the year. The one here shown is an improved form of Messrs. Howard's original and well-known prize plough. The main feature is the perfect and elegant form of the share and mould-board, which are constructed upon geometrical principles, with a view to lightness of draught, turning the work in the best manner, and working clean on sticky soils. It was proved at Warwick that this form was equally well adapted for heavy as for light land. There is just at present some diversity of opinion as to the degree of convexity which should be adopted in mould-boards. The Messrs. Howards maintain that, taking all seasons of the year into account, a slightly convex form is best. Another feature in this plough is the simple and admirable manner in which the share is attached. The neck upon which the share fits is a plain bar of wrought-iron, tightened by means of a nut at the end. This when screwed up brings the lever neck into a state of tension, and the frame to which it is fastened into a state of compression—thus giving increased strength to both these portions of the plough. When more or less inclination or pitch is required for the share, the end nut is simply loosened, and the lever moved into the higher or lower grooves. The frame or body to which the lever neck is fixed is formed so as to stand the roughest usage, and the neck is so completely boxed in that it is protected from wear by being kept from contact with the ground. This portion of the plough has hitherto been subject to breakage; but owing to these improvements, it appears that, although upwards of two thousand have been sold since the Warwick meeting, not a single fracture has occurred. The socket of the share is made perfectly flat and smooth on the under side. This not only prevents the share bursting, but causes the plough to run evenly on its sole. The best form of iron for plough beams has for many years been another debated point with ploughmakers. After many forms have been tried nearly all the English makers have come back to beams made of ordinary flat bar iron. Such, however, although cheap and simple, have this defect, that in hard work they spring, and frequently get twisted. To remedy this the Messrs. Howard form their beams at the hinder part—where of course there is the greatest strain, both laterally and vertically—of bar iron, made with a double flange or rib on the upper edge. This range or rib is tapered off at its opposite ends, so that the utmost strength is obtained with the least possible weight. The handles and beam are made throughout in a piece from the solid iron, excepting when required to be packed for exportation. This plan effectually prevents their shaking loose, and by thus raising both handles to the same height as the beam, the accumulation of soil at the hinder part of the plough in dirty weather is avoided. The wheels are fixed to the beam in a most secure and durable manner. The slides being tightened endwise, or in the direction of the length of the beam, all chance of their becoming loose through wear is removed. Either wheel can be altered as to depth or width independently of the other. The coulter is fastened by a simple wrought-iron clip, with strong loop screws, and being made to slide on the beam, the angle of the coulter can be altered as required. Indeed, any adjustment can be made almost instantaneously. One great aim has been to free every portion of the plough from complication, and to fit each part in such a simple manner that an ordinary ploughman may be able to replace anything subject to wear or breakage when in the field, without difficulty. In a word, the success of the Champion Plough has been achieved by the continual observance of these three great principles—practical perfection of design, excellence of material and workmanship, and simplicity of construction.

The first iron wheel-plough, somewhat after this fashioning, was exhibited by Mr. Howard at the Cambridge Meeting of the Royal Agricultural Society in 1840. But it was years before other makers could be induced to take to the iron work, and the Bedford plough had to contend against an amount of prejudice by this time pretty well worn out. A plough is now made at the Britannia manufactory at the rate of one in every 10 minutes, and more than 50,000 have been sold since the Great Exhibition in '51. The Prize Lists of the West of England Society tell to where some of these have been addressed. The Royal Agricultural Improvement Society of Ireland has given others of them a welcome; while the Journal of the Highland Society narrates how at Berwick in '54, and again in Edinburgh at the remarkable meeting of last summer, even Scotch clanship and prejudice had to bow before the English "Champion." In fact there is scarcely now a district in England, Scotland, Ireland, or Wales but into which the Bedford plough has literally penetrated. And there is scarcely a surer sign of the advance of civilisation than that bit of light blue shadowed, as an artist would say, under a hedge-row, or travelling merrily down the furrow at the tails of two smart-stepping easy-going horses. Then the far-distant colonies of Australia and New Zealand take up the echo of its usefulness, and get more and more clamorous in their calls for it. The Cape farmers have it in every-

day comparison with its American rivals, while the whole continent of Europe scarcely knows any English invention better than the Bedford plough. France, Russia, and Austria have long had it in work. A gold medal of honour from the Paris Agricultural Exhibition in 1855 found a home in Bedfordshire, and another gold medal from the same famous capital in 1856. A third gold medal was claimed at Vienna in 1857, and the Grand Diploma awarded during the same year on the occasion of the Great Hungarian meeting at Pesth. To attempt anything like an enumeration of the prizes taken by the Howards' plough in this country would involve an almost endless iteration that is fortunately not necessary.

FEEDING STATISTICS.

AGRICULTURISTS have been called upon to believe that great discoveries have recently been made in the science and practice of the feeding of animals. To use the words of one of the most notorious of the new lights on this subject:—"The manufacture of an alimentary and condimental compound for the seasoning of the food of live stock is one of the most important advances in applied science which the pen of the agriculturist has to record."

Being largely interested in the feeding of stock for profit, and having devoted a great deal of time and money in inquiries to obtain fixed data relating to the feeding of animals, the conclusion to which I have arrived is, that no proof has yet been given that these new foods have any practical value whatever in an economical point of view. Nor does a knowledge of the composition of these foods add anything to what was previously known on the subject of feeding.

To enable those who are practically engaged in feeding stock to judge for themselves what profit they are likely to derive from the use of food costing from 40*l.* to 50*l.* per ton, I propose to call attention to a few facts connected with the subject of feeding which have been established by the results of my own experiments.

The first question to consider is, what is the probable amount of saleable increase, or meat, that may be calculated upon as the produce of a given amount of ordinary good fattening food? The second is, what is the probable value of the manure? In offering a very few brief observations on these two points, I shall not attempt here to give any exact estimates of the comparative feeding properties of different foods, but merely state the average quantity of ordinary mixed foods of recognised good quality, required to produce a given amount of gross increase or of carcass weight. I shall, however, give estimates of the comparative value of the residue remaining for manure, from a given weight of a number of the most important of our stock-foods.

If feeding experiments are conducted over a sufficiently long period of time—if they include a sufficiently large number of animals to neutralise the influence of individual peculiarities, and if they are in all other respects performed with sufficient care, results will be obtained from which there would be but little deviation whenever the experiment was repeated. Results so obtained may be expressed in a few figures, which, for all the practical purposes of general estimates, may be safely taken to represent the average result of well-managed stock feeding.

My own experiments show that oxen and sheep fed liberally upon good fattening food, composed of a moderate proportion of cake or corn, a little hay or straw chaff, together with roots or other succulent food, will yield over a considerable period of time one part of increase in live weight for from eight to ten parts of dry substance supplied in such mixed food. The quantity of dry substance of food required will vary between these limits according to the exact character of the food and other circumstances; but nine parts of dry substance of food for one of increase in live weight may be taken as a very fair average result for oxen and sheep with good food and good management. The dry substance of the fattening food of pigs contains much less indigestible woody fibre, and a larger proportion of assimilable constituents than that of oxen and sheep, and in their case one part of increase in live weight should be obtained from the consumption of four to five parts of dry substance in their fattening food. By the "dry substance" of food is meant that portion which would remain after driving off, by a suitable heat, all the water which in their natural state they contain. For practical purposes it may be assumed that oil-cakes and foreign corn will, on the average, contain rather less than one-seventh, and home-grown corn, hay, &c., rather more than one seventh of their weight of water; the remainder being the so-called "dry substance" of the food. In the same sense the commoner sorts of Turnips will on the average contain more than nine-tenths, and Swedes, Mangels, &c., less than nine-tenths of their weight of water, the remainder being dry substance. Potatoes consist of about one-fourth dry substance and three-fourths water. From these data the farmer will be able to judge for himself, whether or not he gets a proper increase in weight of live stock for the food consumed; and from comparative experiments he can decide whether or not he gets an adequately greater rate of increase by mixing with his other food some of the mixtures offered to him at 40*l.* or 50*l.* per ton. To aid him still further in his calculations on this point, it may be stated that owing to the fact that during the fattening process the saleable carcass increases very much more rapidly than the internal and other offal parts, it may be reckoned that nearly 70 per cent. of the gross increase of oxen and sheep fattening over a considerable period of time will be saleable carcass. Calculations of a similar kind in regard to pigs show, that of their increase in weight whilst fattening, little less than 90 per cent. may be reckoned as saleable carcass.

So much for the means of estimating the value of the increase in live weight of fattening stock. I now turn to the question of the probable average value of the manure obtained from the consumption of different descriptions of food.

The valuation of the manure resulting from the consumption of different foods is founded upon estimates of their composition, and upon a knowledge experimentally acquired of the probable average amount of those constituents of the food valuable for manure, which will be obtained in the solid and liquid excrements of the animals. In the estimates of the value of the manure from different foods given in the following Table, I have based my calculations upon what I consider the average composition of several articles when of good quality.

TABLE,

Showing the Estimated Value of the Manure obtained from the Consumption of 1 *Ton of different articles of Food; each supposed to be of good quality of its kind.*

Description of Food.	Estimated money value of the Manure from 1 ton of each Food. £	s.	d.	
1. Decorticated Cotton-seed cake	6	10	0	
2. Rape-cake	4	18	0	
3. Linseed-cake	4	12	0	
4. Malt-dust	4	5	0	
5. Lentils	3	17	0	
6. Linseed	3	13	0	
7. Tares	3	13	6	
8. Beans	3	13	6	
9. Peas	3	2	6	
10. Locust Beans	1	2	6	(?)
11. Oats	1	14	6	
12. Wheat	1	13	0	
13. Indian Corn	1	11	6	
14. Malt	1	11	6	
15. Barley	1	9	6	
16. Clover hay	2	5	0	
17. Meadow hay	1	10	0	
18. Oat straw	0	13	6	
19. Wheat straw	0	12	6	
20. Barley straw	0	10	6	
21. Potatoes	0	7	0	
22. Mangels	0	5	0	
23. Swedish Turnips	0	4	3	
24. Common Turnips	0	4	0	
24. Carrots	0	4	0	

It will be seen how enormously the value of the manure from 1 ton of different food varies according to the composition of the food itself. Now, from the actual analyses that have been made of several of the expensive "condimental" compound foods, as well from a knowledge of the chief articles used in their manufacture, it may be safely asserted that a ton of few, if any of them, would yield a manure of anything like the value of either of the first nine articles in the above list. In the case of the majority of these new foods, the value of the manure from a ton of the food would certainly be much less than that from a ton of any one of those nine articles.

To conclude: No experimental evidence upon indubitably trustworthy authority has yet been brought forward to prove that the use of the foods, costing from 40*l.* to 50*l.* per ton, will so improve the rate of increase of fattening stock upon a given weight of dry substance of food, as to compensate for the heavy cost of these condimental additions. Any intelligent farmer can, however, by the aid of the information which has been given above, satisfy himself on the point, if he will rigidly rely upon scales and weights instead of upon merely casual observation. And with regard to the value of the manure, the figures in the above table and the observations we have made upon them will show him how much of his 40*l.* or 50*l.* he may expect to recover in the form of manure. *J. B. Lawes, Rothamsted.*

Home Correspondence.

The Advantage of Early Sowing Mangel Wurzel and Swedes.—The experience of the last year will have taught many the advantage of deep winter tillage and early sowing of Mangel Wurzel and Swedes. Colonel North's extraordinary crop of 64 tons to the acre was sown about the middle of April, and the best Swedes exhibited at the Agricultural Show at Birmingham were sown about the same time, and I recall that the finest Swedes I ever grew were sown in April, some few of them having attained the weight of 27 lbs. and 28 lbs. each. But while advocating such very early sowing I must not omit to state that in each of these instances the land had been prepared by trench ploughing, and the plants had been set out proportionately wide, for to expect to grow large healthy roots without so doing will only disappoint and turn out mischievous. Earlier sowing must be accompanied with deeper tillage and greater space, having in view the greater size each root will want to attain, and the evil that must arise should they attain an occupation of the ground before the fall of temperature has put an end to their vegetating powers. To the want of space to spread their increasing leaves, and to the exhaustion of subsoil from want of sufficient depth of tillage I long traced the growth of mildew and disease. The rootlets form the leaves, and leaves the bulbs. Large full leaves cannot be created or fed by cramped rootlets; nor can large bulbs be the produce of small diseased leaves; nor can vegetation continue healthy when it ceases to have space and food; it will not remain stationary. In a growing temperature it must continue to increase or it will fall off. *Hewitt Davis, Jan.* 17.

Tithe Commutation—Septennial Averages.—As many of your readers may feel anxious to know the result of the corn average for the seven years to Christmas 1859, published by authority in the *London Gazette* of this evening, viz:—

	s.	d.			
Wheat	7	4½	..	.	per Imperial Bushel.
Barley	4	6½	..	..	,, ,,
Oats	3	1¼	..	..	,, ,,

I beg to state for their information that each 100*l.* of tithe rent-charge will, for the year 1860, amount to 110*l.* 17*s.* 8½*d.*, which is nearly 2 per cent. above the last year's value, which was itself the highest of the 23 preceding years. The value for 1855 was only 89*l.* 15*s.* 8¾*d.*, or 21 per cent. below the value for the current year. The following statement from my "Annual Tithe Commutation Tables," will show the worth of 100*l.* of tithe rent-charge for each year since the passing of the Tithe Commutation Act, viz:—

	£	s.	d.
For the year 1837	98	13	9¾
,, 1838	97	7	11
,, 1839	95	7	9
,, 1840	98	15	9½
,, 1841	102	12	5½
,, 1842	105	8	2¾
,, 1843	105	12	2¾
,, 1844	104	3	5½
,, 1845	103	17	11½
,, 1846	102	17	8¾
,, 1847	99	18	10½
,, 1848	102	1	0
,, 1849	100	3	7¾
,, 1850	98	16	10
,, 1851	96	11	4¾
,, 1852	93	16	11¼
,, 1853	91	13	5¾
,, 1854	90	19	5
,, 1855	89	15	8¾
,, 1856	93	18	1¼
,, 1857	99	13	7¼
,, 1858	105	16	3½
,, 1859	108	19	6¼
,, 1860	110	17	8¼
24)	2397	19	9
General Average for 24 years	99	18	3¾

Charles M. Willich, Actuary University Life Assurance Society, 25, Suffolk Street, Pall Mall East, S.W.

Our Fen Reporter and Mr. Mitchell.—Mr. Mitchell intimates that the reasons adduced in my reply of the 6th December, in defence of the practice pursued in the Fens with reference to the time of sowing Mangels, are to his mind "neither clear nor conclusive." I regret this, as I conceived they would be both, and still think they were sufficient to satisfy any unprejudiced inquirer. I informed Mr. Mitchell that I had sown Mangels on our Fen soils in every week from the 1st April to the middle of May, and that these experiments had taught me that the last week in April and the first in May were the best. I gave some reasons why this was the case, the principal of which were, that spring frosts, fly and wireworm, almost invariably either partially or wholly destroyed the plant where sown early. These are facts, not theories, and ought consequently to carry conviction with them. Early sowing is not a thing unknown and untried in the Fens, but a few years ago was practised largely and was only abandoned when experience taught that later sowing uniformly secured a heavier crop. All this is indicated in the extract from my report of the 30th April, which Mr. Mitchell in his former criticism quotes, viz., "Mangel sowing has already commenced, but most of our farmers have found it advantageous to sow this crop later than they did some few years since, and many decline sowing until May is in." The legitimate inference from this is that early sowing had formerly been pursued, but had failed, else why should Fen farmers find it advantageous to sow the crop later? It clearly states that they had changed their practice, and why? Not from fancy, not from caprice, not from any pre-conceived whim, not from prejudice, but simply because they found it advantageous to do so, which being interpreted, signifies that later sowing produced the better crop. And this has been the case. It was only yesterday when referring to this controversy, that one of my most intelligent neighbours who farms largely in the Fens, reminded me that in nearly every instance where parties ventured to sow early last spring, they were unsuccessful, lost their plant, and were compelled late in the season to re-sow. These are very awkward facts for Mr. Mitchell to deal with. He may have grown Mangels near the Forth or near the Thames, and may by early seeding have been very successful, as he undoubtedly has been. His land near the Thames may be low, and great evaporation may produce great cold and frost in the spring, but this really proves nothing as it regards the Fens. It is the peculiar texture of our Fen soil which renders it so susceptible of injury from spring frosts. One night's frost on these in the spring will destroy our plants, whereas on our strong soils, which we technically denominate high lands, it will not even injure them. Here I conceive lies the difference between our Fen lands and Mr. Mitchell's low lands. And I gather this from his reference to pulverisation as one of the essentials to the securing a good crop of Mangels. His land must be a stronger soil than ours, or this allusion would be unnecessary. Consolidation, not pulverisation, is our great

difficulty. We are always dusty and fine enough but frequently are too light, and find it difficult to get the soil sufficiently compressed; hence our extreme liability to injury from frost. Mr. Mitchell in his concluding remark says. "Without wishing to read your 'Fen Reporter' a lesson on vegetable physiology I venture to tell him, all other circumstances being equal, he will have a heavier and better crop from early than late sowing." This is very positive language, but rather too dogmatic. "I . . . tell him . . . he will." This places me in a dilemma. If I receive Mr. Mitchell's dictum, I must inevitably deny and pronounce as fictions all the facts which have been patent to my vision and to my senses for several years. Results acquired by actual experiment must be disregarded, crops continually failing from early seeding and requiring to be re-sown must be estimated as superior to those sown later, and producing an abundance. A bad plant must be considered as more profitable than a good one. The unvarying testimony of friends and neighbours must be regarded as deceptive or fallacious. The prevailing uniformity of practice prompted by experience must be denounced as "a grand mistake." The judgment, common sense, and general intelligence of Fen farmers must be ignored; and, in a word, all one has conceived or known to be right must be pronounced as wrong. But I am not quite prepared for this yet. I am not above learning, but this is too hard a lesson. Mr. Mitchell must therefore forgive me if I still manifest a desire to follow the teaching of experience, rather than his. "Seeing is believing" is an old trite saying, and in this particular instance an appropriate one, I feel therefore disposed rather to believe what I see than what Mr. Mitchell not very moderately asserts. When Mr. Mitchell writes in a more kind and friendly spirit, I shall be very happy to tell him how I secure a plant on our light Fen lands by late sowing when the weather is dry. In the meantime suffice it to say the water drill is a very important agent in the accomplishment of this desirable object; and also to state the fact that the object sought is attained. I would conclude by observing that all the statements I have made with reference to Mangel culture apply solely to the Fen lands in the Isle of Ely. I am emphatically your Fen Reporter, and offer no observations upon systems which may be adopted elsewhere, having long ago learned that a uniform course of action, regardless of local and other influential circumstances, would be a uniform act of folly. *Your Fen Reporter, January* 11.

The Fate of the Mangel Wurzel.—Now that the frost is subsided, and incessant rains have followed, soaking as usual into the clamps of Mangel Wurzels, whether wholly or partially earthed up, and whether they had been stored before they were frozen or not, an alarm for their safety has been created almost unprecedented, and our expectations and announcements of the probable results and consequences are now being fully realised; in short, their fate is doomed. We regret that our remonstrances to erect permanent coverings to store them under have been so much disregarded, but trust, however, that at another season they will command more notice. If our proposed *circular* permanent shed is considered ridiculous on account of the expense of building it with sound cut timber, &c. (let those laugh that will), we further suggest, then, to erect *square* permanent root sheds and pulping houses, skeleton-fashioned, to be blocked only during intense frosts; or, in default of either, a large clamp abutting the cattle yard, with the straw, to be used for fodder and cut chaff, stacked over it, to be used only as fast as the Mangels; but even in this case, be it remembered, a great mistake may be committed if the said clamp is not covered and well secured by a slight thatch, or what is better a tarpaulin, as this can be removed occasionally on dry and airy days, as the case may require, and this precaution is necessary at least a month before they are finally entombed within the said straw stack, unless they had been sufficiently inured and their wounds calloused in temporary clamps in the field before they were carted, or unsuccess and disappointment may yet follow, as experience has taught us, and no doubt other people, in the present season. Some of our own thus treated without this due precaution we fear will share the fate of many others from this confined evaporation; but be it remembered by ourselves, and by all to whom we impart this communication, that all those we have stored carefully within covered sheds and outhouses, without any close covering whatever, notwithstanding that they were frozen before being carted, and also subjected to the late severe frost within doors, are in excellent condition now that they are strawed, fermented, and well aired during dry days, with their skeleton sides, doors, and windows open. To repair the loss already sustained by the remissness above alluded to, we can offer but one alternative, *i. e.*: On the first dry and windy days to examine all decaying clamps, and to store those that are good in the way we have before described, and to eke out their use as economically as circumstances will admit with dry cut chaff, hay and straw mixed together, after they have been pulped with Bentall's patent pulping machine (highly recommended), which perhaps will answer the purpose better for the health and for fattening the animals than an immoderate excess of such mucilaginous and laxative food as the Mangel is. In short, what we insist upon for the prevention of their rotting at all times and in all seasons is to keep them wholly from rain, snow, and confined evaporation; also from frosts as much as may be, but only whilst its severity lasts. *Abraham Hardy & Son, Maldon.*

Farmers' Clubs.

PENRITH: *Registry for Farm Servants.*—In obedience to a resolution passed at a meeting of the Penrith Farmers' Club, held on the 8th day of August, 1859, requesting that a report should be made after the Martinmas hirings, upon the working of the Registry for hiring Farm Servants, the Committee beg to state that in April, 1859, a Registry Office was opened at Mr. Sweeten's, in Penrith, and branch offices at Eden-hall, Kirkoswald, Hesket, Skelton, Greystoke, Kirkby-thore, Watermilloch, Shap, Morland, and Crosby Ravensworth. At Penrith, as well as the branch offices, books have been provided, in which masters in want of servants, and servants in want of places, may enter their names free of charge. Since the opening of the Registry office in April, 1859, 19 masters and 50 servants have entered their names in the books, the great majority of whom have used the Registry at Penrith. Of the servants 11 were males, and 39 females. During the same period 30 servants in want of places, who did not enter their names, have made inquiries at the Registry in Penrith, and the branch offices. The Committee observe that many of the females who have entered their names on the registers have been anxious to obtain situations as house servants. This anxiety the Committee think ought not to be discouraged; but as it is most desirable to make the Registry self-supporting, they would recommend that servants seeking situations as house servants, as well as masters needing such servants, should pay a small fee when they enter their names in the registers. The Committee do not think that any other of the rules agreed upon by the Club for working the Registry need alteration. They would have rejoiced to have seen a greater number of masters, as well as servants, availing themselves of the advantages of the Registry. They do not think, however, that there is any cause for discouragement; there is every reason to hope that, as the institution becomes better known, and its usefulness more appreciated, it will be much more extensively used both by masters and servants, and that during the ensuing year, the entries of names in the registers will be much more numerous. The expenses incurred by the Committee in providing books and forms for the several Registry offices, and in advertising, amount to 5*l.* 2*s.* 6*d.*

SUFFOLK.—From the annual report of the *Suffolk Agricultural Society*, just prepared by the secretary, Mr. R. Bond, it appears that in 1859, 1530*l.* 17*s.* 1*d.* was placed to the credit of the Association, against 1348*l.* 19*s.* 1*d.* in 1858. Last year the Society paid away 577*l.* in premiums and prizes, against 485*l.* in 1858. The balance in hand at the end of 1859 was 584*l.*, as compared with 541*l.* at the end of 1858. The entries of stock at the exhibition of 1859 exceeded the entries of any previous year, while the attendance increased from 3866 in 1858 to 4624 in 1859. Making a comparison between the position of the society in 1858 and 1859, and its strength in 1856 and 1857, it appears that there has been an increase in the number for members of 47 per cent., an increase of 78 per cent. in the receipts, an increase of 29 per cent. in the premium and prizes awarded, an increase of 70 per cent. in the attendance at the exhibitions, and an increase of 16 per cent. in the stock exhibited. Sir E. C. Kerrison, M.P., has offered a premium of 10*l.* to be distributed among the best tile-drainers; Lord Henniker, M.P., has given 10*l.* for the best essay on the improvement of the pasture-farming of Suffolk; Major Parker, M.P., has presented 6*l.* to be awarded to the best drivers of agricultural steam-engines; Mr. E. Greene has promised a cup for the best gelding, not exceeding six years old, or under 16 hands high, for van purposes; and the Rev. J. D. Money 5*l.* for the best Suffolk cheeses. Mr. J. Pierson, of Framlingham, has placed a field, with a crop of Rye upon a part of it, at the disposal of the commitee for the trial of steam cultivators and reaping-machines at the next annual exhibition, which will take place at that town on Wednesday, July 4.

Reviews.

The Journal of Agriculture and the Transactions of the Highland Society of Scotland. Blackwoods.

The current number of this quarterly periodical contains a long account of Irish Agriculture, another on Maritime Pisciculture, a short account of the discussion before the London Farmers' Club on Grass seeds—a paper on Belgian Agriculture—and a description of the December agricultural meetings; the Farmers' Notebook, which generally contains a collection of interesting paragraphs, refers to Page's geology, and the agricultural summary of the quarter refers to weather, crops, prices, farmers' clubs and agricultural meetings, law decisions, &c.

In the Highland Society's Transactions, a separately paged section of the book, we have a valuable report from Mr. Simpson, of Teawig, near Inverness, on Farm Management—a report on Finger-and-Toe—a discussion of Substitutes for Guano—and an address by Dr. Anderson on Oilcakes. Of these Mr. Simpson's contribution will probably be read with the greatest interest.

We extract from it that portion which answers the question:—How much extra manure is required to maintain in high condition a farm of 300 acres cultivated on a four-course shift, when Potatoes, forming one half of the green crop, and Grass made into hay are both sold off the farm?

"Before giving a reply to the question thus put, I would observe that the course of cropping pointed out—namely, a four-course shift—is by no means the best that could be adopted for the development of high or even good farming. It gives but one cleaning in four years to the land, one manuring also. It likewise brings the Grass crops into such close proximity to each other that the Red Clover, the successful growth of which is, if not indispensable, at any rate highly conducive to the fruitfulness of the soil during the rotation, has but small chance of succeeding. Moreover, the two cereals, Wheat and Oats, will not, manure and cultivate as we may, give their full produce when revolving in such a close and narrow round. The course of cropping pointed out would appear as if intended to meet the case of close proximity to a town or city, where town manure can readily be obtained by purchase, and a high price got for early Potatoes and for cutting Grass and hay; but I believe that this is precisely the situation in which the cultivation of green crops should preponderate. They are, in such a situation, considerably more money producing than grain crops; and though these are also necessary, I conceive that in such districts corn crops should be grown to facilitate the growth of green ones; as in more distant districts green crops are grown preparatory to grain ones. The rotation I would consider most appropriate for such a situation is a five-course shift of this nature:—1. Turnips, Swedes and Yellows, and Mangel. 2. Potatoes. 3. Wheat. 4. Clover-grass. 5. Oats. Or, viewing the facilities in such a district for the disposal of dairy produce and of early lambs, I would be inclined to make it into a six-course shift by continuing the Grass as a pasturing crop for a second year, in which case there would be sown, along with Italian Rye-grass and Red and Alsike Clovers for the first year's cutting, a mixture of seeds for second year's pasturing. The only objection is the distance of time between the cleaning crops, which, leaving an interval of three unfallowed years, might tend to make the land foul; but, as the two green crops follow in succession, an opportunity is afforded of thoroughly destroying every root-weed; and if surface or annual weeds are feared, they can be kept down by drilling the corn and hoeing it either by hand or machine. I think that even an improvement would be made on this course by taking Barley after the Wheat preparatory to laying down with Grass. It would then stand a seven-course shift; thus—1. Turnips and Mangel. 2. Potatoes. 3. Wheat. 4. Barley. 5. Clover-grass for cutting. 6. Pasture. 7. Oats.

"Following out, however, the instructions before me, I take the case of a farm of 300 acres on a four-course shift; say—75 acres Grass cut for hay; 75 acres of Oats; 38 acres of Potatoes; 37 acres of Turnips, Mangels, Cabbage, and Carrots; 75 acres of Wheat. I would apply to the Grass in March 2 cwt. Peruvian guano per acre; and in April or early May, when showers are falling, 1 cwt. nitrate of soda. An early and a heavy cut of Grass for home consumption by horses and soiling cattle, and for making into hay, would thus be obtained. Thus treated, I would calculate on a good aftermath, to be either sold or used in the yards, followed by a rich sward for sheep up to Christmas. It would then plough down for Oats, with the prospect of a heavy crop, without any further addition of manure.

"I would manure the Potato and Turnip breaks well, so as to have a full produce from them, and the land ready, without further manuring, for the autumn Wheat crop; storing the Turnips, &c., early in November. I believe that if a moderate portion of oilcake or other feeding stuffs is used along with the Turnip and Mangel, &c. produced in feeding cattle, the Oat-straw may be consumed, and the Wheat straw trodden into manure; that thus sufficient "muck" (the farmer's surest friend after all) will have been produced at home to give 20 loads per acre to all the green crop break.

"I would give the Potatoes at planting 2 cwt. superphosphate and 1 cwt. Peruvian guano per acre, and top-dress them with 2 cwt. Peruvian guano at the first hand-hoeing. This practice I have found by experiment to give the largest produce. To the Turnips, &c. I would give 2 cwt. superphosphate and 3 cwt. Peruvian guano per acre at sowing, adding to the Mangel 5 cwt. of common salt.

"Thus treated—of course presuming careful culture in other respects—I have no doubt that even under a four-course shift 'the land would be maintained in high condition,' though I question, for the reasons already explained, whether the produce would be so high of any crop as it would be under a more extended rotation.

"We would, adopting the practice thus suggested, have a total use of purchased manure to the extent of

			£	s.	d.
375	cwt.	Peruvian guano, at 12*s.*	£225	0	0
75	,,	nitrate of soda, at 18*s.*	67	10	0
150	,,	superphosphate, at 7*s.*	52	10	0
80	,,	salt (6 acres Mangel) at 1*s.*	1	10	0
			£346	10	0

Or a little more than 23*s.* per acre. This, though it may appear a high, would, under the circumstances suggested, be, I believe, a wise, safe, and profitable rate of expenditure."

Farm Memoranda.

WOOLSTON, NEAR BLETCHLEY.—Steam cultivation is not limited to large holdings. Years ago, among those who pondered to good purpose over the splendid results of deep tillage, as manifested in the Marquis of Tweeddale's experience, and more especially in the long-continued succession of exuberant cropping at Lois Weedon, excavated by the trenching tool out of unpromising clay without an ounce of manurial applications, was Mr. William Smith, of Woolston, near Bletchley—a *bonâ fide* British yeoman, farming his own patrimony, and now developing the inherent merits of an obdurate soil with the same vigorous energy that once distinguished him in the Buckinghamshire chase, though his new system of culture gives no favour to the sportsman's birds, and provides a staple too soft for the foxhunter. Woolston is a corollary from Weedon, and, without following the Tullian method there pursued, successfully obtains on a wider scale and with the aid of steam power the grand advantages there found to accrue from opening down into a soil with the spade. The locality is between the Dunstable chalk range and the Brickhill and Leighton Buzzard sand hills, the farm (the first whole farm ever cultivated by steam power) resting partly on a stiff calcareous clay, a mixture of lime and mud, containing chalk nodules and veins of sand, and partly also upon a drift of gravelly clay. The arable portion thus consists of two sorts of soil, about 40 acres of heavy, and about 70 acres distinguished as "light" although Turnips never grew well on it for want of thorough tilth, and four horses were used in turning a 5-inch furrow. A good under drainage has long been completed; but dead-fallowing every fourth year, still the system of the neighbourhood, was obliged to be practised. Mr. Smith has succeeded, however, in producing a grubbing implement, which rives and breaks up the soil without under-cutting the whole breadth of its work, thus operating much more economically of power than the plough (which carries such a weight of earth upon its frictional mouldboard), escaping the damaging pressure of the plough-sole upon the subsoil; and much more effectually providing for the extirpation of weeds—by exposing their roots upon the surface, provoking them to germinate for their own destruction, and never burying their seeds and shoots. A double-mouldboard plough is employed for throwing up the ground in drills or ridges of a yard width, exposing a *maximum* of surface to the atmosphere, while the raw clay, bared at the bottom of the intervening trenches, is broken into and crumbled with an admirable subsoiling implement. Indeed, the deep "smashing-up" of land for cleansing, and the growth of Pulse crops as well as roots upon the trench-ridges, form the peculiarity of the husbandry, the implements being actuated by steam-power with windlass and wire ropes. A six-course rotation is adopted, the tillage being as follows:—The Wheat stubble being little pestered with Couch, and so requiring no previous cleansing, receives a covering of 10 tons of farmyard manure immediately after harvest, the manure having been long before carted from the homestead and stacked near the field. The steam trench-plough then throws the land into yard-wide ridges, covering in the manure in the interior of the ridges, and baring the subsoil at a depth of 9 inches from the original surface. After lying six weeks to mellow, a double mouldboard plough, drawn by four horses, deepens the trenches to a further depth of 4 to 6 inches, and heightens the crests of the ridges, and the fallow lies in this form until spring. Thus we viewed the extraordinary spectacle of the land for next year's root crop, lying for winter weathering, corrugated with ridges of sharp triangular section, which divide the entire area of the field into parallel trenches 3 feet wide, and no less than 2 feet deep down the sloping sides, with a torn and crumbled bottom of 4 to 6 inches more. A superficial area, equal to at least a third more than the dimensions of the field would allow on the flat, is thus left in open contact with the air, which is at the same time permitted the freest possible access into the ridges and down into the subsoil; and before sowing-time in April and May the frost and other agencies will have changed several inches' thickness of the hard unkindly clay into a powdery mould. The only further process required is cutting the annual weeds from the tops of the ridges with the hand-hoe, and then drilling the Mangel or Turnip seed, which from the absence of all spring tillage possesses, instead of a dried-up seed-bed, a mould replete with the moisture requisite to force its young germs past the reach of the fly, added to a depth which secures the maturity of a weighty crop. Such is the difference between a fine mould wrought down by slow natural weathering and a tilth obtained by the mechanical abrasion and disintegration of scuffling and clod-crushing, that while the latter quickly closes again into a homogeneous mass under a flooding rain and hardening drought, the former (if spared the consolidating pressure of spring cultivation) continues for a long season in its beautiful pulverulent state. Having relieved his land of the heavier horse-power operations, Mr. Smith is not only enabled to grow the finest crops of roots on his fallow, but also to feed off the Turnips with sheep carefully folded (with daily shiftings) upon the land; and then by breaking up the soil with the steam trench-plough, and afterwards working a horse-grubber across the ridges in spring, the ground is in good order for drilling Barley without further preparation. The next year's crop is Clover, which is ploughed by horses for the following Wheat. The Wheat stubbles are manured and tilled in the same manner as for roots; and each ridge is dibbled in spring with two rows of Beans, which are preserved from weeds during the summer by horse and hand-hoeing. The Bean stubbles are prepared for the Wheat (forming the final crop of the course) by one smashing up with the steam cultivator, and one (or rarely two) cross grubbings by horses, and after this crop again comes the fallowing for roots as before. Now, according to Mr. Smith's carefully kept accounts, the whole outlay for preparatory tillage from first to last throughout the six years' rotation amounts to only 3*l.* per acre; while under the ordinary system of management only a single year's fallowing (without any crop) costs fully as much. Of course, this enormous saving of expenditure would not be possible if the land were in a foul condition; but, in spite of the first two years of innumerable weeds which annoyed and threatened Mr. Smith at the outset of his non-inversion husbandry, his farm is now as clean as a garden, and his workmen have ample opportunity for looking over the winter trenches as well as the summer crops from time to time to destroy such intruding enemies. Until the land becomes clean (which the experience just related shows it will do under this culture) the expenses are somewhat greater, owing to a few more grubbings, splitting the ridges, hand-picking the Couch, &c., being rendered necessary. The economy being found so prodigious in the long run, we need not stop to detail the performances of Mr. Smith's eight-horse engine, beyond saying that the labour of 1859 has been 74 acres of various operations in 14 days of working, or on an average of about 5¼ acres per day; and, seeing that by horse labour no effective tillage could have been accomplished at all, it is of no moment to ascertain whether or not the engine could compete with a strong team in the amount of hauling power put forth during a day. The condition of the farm, after seven years' commencement of "cultivation," instead of ploughing, and four years of actuating the implements by steam power, is such that a stranger would pronounce the soil to be plethoric with high manuring; whereas mechanical tillage alone is the secret of the present abundant productiveness. Mr. Smith uses no artificial manure, save for purposes of experiment; purchases little oilcake, except to keep his sheep healthy; consumes corn for only a moderate quantity of live stock, and the three horses and pony, which are all the team force needed, and sells off his Clover hay. And so far from there being any signs of impoverishment, the most magnificent yields of Wheat, Beans, and Barley are obtained every year, as well as very heavy root crops of most superior quality, the increased produce of corn being considered by Mr. Smith to have been no less than 12 bushels an acre—that is, say, 2*l.* to 3*l.* per acre annually over half the farm. And the practical agriculturist will readily understand that this augmentation of yield, added to the power of keeping live stock created by the new growth of roots and better Clovers, must have raised the value of the fee simple at least 15*l.* per acre, so that the steam plough is clearly one of the "landlord's questions," no less than a tenant's boon. The Woolston farm is certainly an example of the change in texture and physical constitution which intercommunion with the atmosphere can induce in strong soil; the land once so compact and dense is now perceptibly elastic beneath the feet, lighter and more friable, and drying sooner after rain; and this because the husbandman determines to promote absorption and exudation, being as careful in his management of each field in all stages of the weather as a hydropathic patient in the treatment of his skin. Let the soil breathe, and at the same time give it lungs, by making it porous and spongy with air cells and passages, so that the gases of the atmosphere may freely enter, imparting organic plant food and preparing the mineral elements which lie dormant; and whatever manurial restoratives may be demanded on light lands, our English clays will not need the assistance of Baron Liebig and Mr. Mechi. *Times.*

Notices to Correspondents.

FRENCH AGRICULTURAL SHOW. *X.*: It will be held in Paris from the 17th to the 26rd of June next, when animals, implements, and agricultural products from all France will be admitted. The stock is divided into 27 classes, with 398 prizes of the value of 6257*l.*; sheep into 8 classes, with 124 prizes, amounting to 1100*l.* Of pigs there are 3 classes, with 38 prizes, in all 266*l.* Goats and rabbits into 2 classes, with 9 prizes, amounting to 17*l.* Lastly, there are 25 classes of poultry, with 85 prizes, amounting to 152*l.* Each prize will be accompanied, as usual, by a gold, silver, or bronze medal. There are also prizes to the amount of 120*l.* for farm servants who have tended the prize animals. Farm implements, machines, and produce will be rewarded by gold, silver, and bronze medals.

RABBITS: *R.* It is impossible to estimate accurately the loss sustained. Take the case of Smith *v.* Ilderton, recently reported in the *Berwick Warder*, when Mr. Forster, for Mr. Smith, claimed 732*l.* as damages sustained from November, 1857 to November, 1859, on Ilderton Dod, in the parish of Ilderton, a valuable stock farm on the Cheviots; and 90*l.* was awarded by the arbitrators.

ROTATION OF CROPS: *Agricola.* If only Oats, Barley, Turnips, and Vetches are needed you might grow them in a four-course rotation as for 100 acres, thus:—1. 25 acres of Barley. 2. 5 acres of Winter Vetches sown on the manured Barley stubble in autumn; 5 acres Spring Vetches sown in March, 5 acres Vetches sown in end of April. Of course if more Vetches are wanted you can divide the whole 25 acres of Barley stubble in three parts, so as to have a succession of green food, but if 15 acres suffice the remaining 10 may be planted with Potatoes or Mangel Wurzel for sale. 3. 25 acres Oats. 4. 25 acres in Turnips and Swedes to be fed off previous to the Barley crop.

SCOTLAND.

W. DRUMMOND AND SONS, SEEDSMEN, Stirling, N.B., beg to intimate that their "short and sensible" DESCRIPTIVE CATALOGUE OF VEGETABLE AND FLOWER SEEDS is now ready, and may be had post free on application.

N.B. All parcels of Seeds, with certain limitations, are delivered carriage free to the principal Shipping Ports and Railway Stations throughout the United Kingdom.—Seed Warehouses, Stirling, N.B., and 58, Dawson Street, Dublin.

JOHN GRIGOR AND CO., NURSERIES, Forres, Scotland, have for sale several millions strong 1-year Seedling LARCHES, 1 and 2-year Seedling true native Highland Scotch PINE, DEODARS, &c.

J. G. & Co. have received the numerous premiums awarded by the Highland and Agricultural Society of Scotland for the cultivation of the true native Highland Scotch Fir, and their present stock is raised from seed collected in the celebrated native forests of Strathspey. PRICED LISTS on application; and the Trade supplied at the wholesale rates.

ROBERT NEAL, NURSERYMAN, Wandsworth Common, S.W., begs to call the attention of buyers to his large and well-selected stock of EVERGREENS and FLOWERING SHRUBS, ORNAMENTAL TREES, AMERICAN PLANTS, FRUIT AND FOREST TREES, STANDARD AND DWARF ROSES of every description. A large stock of BOX-LEAF EVERGREEN PRIVET, from 1 to 6 feet for hedges; GREEN HOLLY, 1 to 6 ft.; RICH BOG and LOAM for American Beds; LEAF MOULD. The Nursery is 10 minutes' walk from Clapham Common, and New Wandsworth Station, Crystal Palace Line.

TO LANDSCAPE GARDENERS AND OTHERS.

BOROUGH OF HALIFAX.—The Corporation of Halifax, being the Burial Board, are desirous of receiving Designs and Estimates for Laying out, Draining, and Ornamenting the Land which they have purchased as a CEMETERY for the Borough. The Designs must embrace:—

1. A Ground Plan, showing the Carriage Roads and Walks; the proposed general division of the Cemetery into two parts, and the sub-division of each into Grave spaces, differing in size and value; the positions of the Chapels, Lodges, and other requisite structures, and the land to be set apart for Ornamental Planting.

2. Sections showing the earthworks required for the rearrangement of the surface, and the sizes, depths, and rates of inclination of the Drains.

The area of the proposed Cemetery is within 20 acres.

A premium of Twenty Guineas will be given for the design which, in the opinion of the Corporation, is the highest in merit, and a premium of Ten Guineas for the one which they consider second best, and both the premiated Designs are to become the absolute property of the Corporation.

The Plans, Estimates, and description (if any) must be distinguished by a motto or device, and be accompanied by a sealed envelope containing the name and address of the competitor, bearing a corresponding motto or device to that on the Plans, &c. Each competitor is requested to state the terms on which he will superintend to their completion the execution of the works, and if employed the premium is to be merged in the sum paid for superintendence.

Lithographed Plans of the Site, with the Levels shown in contours of 5 feet altitudes may be obtained by application to the Town Clerk on and after January 18; and the Competing Designs must be delivered at my Office, in the Town Hall, Halifax, on or before Monday, February 13.—By Order of the Burial Board. EDMD. MINSON WAVELL, Town Clerk.

Town Hall, Halifax.—January 21.

HORTICULTURAL AGENT AND VALUER.

MR ALFRED CHANDLER, (of the late firm of CHANDLER & SONS,) 28, Priory Road, Wandsworth Road, S.

HORTICULTURAL GLASS

STOCK SIZES, 16 oz.

These prices only apply to the sizes stated.

Boxes are included, with but few exceptions. When Packages are charged, full price is allowed when returned.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 „ 10, 13 „ 10, 14 „ 10, 15 „ 10 ..	14*s.* 6*d.*	12*s.* 6*d.*
13 „ 11, 14 „ 11, 15 „ 11, 16 „ 11 .. / 14 „ 12, 15 „ 12, 16 „ 12, 17 „ 12 .. / 18 „ 12, 19 „ 12, 20 „ 12 .. .. / 16 „ 13, 17 „ 13, 18 „ 13 .. .. / 19 „ 13, 20 „ 13, 21 „ 13 .. .. / 16 „ 14, 17 „ 14, 18 „ 14 .. .. / 19 „ 14, 20 „ 14, 21 „ 14	16*s.* 6*d.* per 100 feet.	14*s.* 6*d.* per 100 feet.

These prices are for Foreign Glass. English Glass, which is far superior, will be 18*s.* per 100 feet.

GLASS FOR ORCHARD HOUSES,

AS SUPPLIED BY US TO MR. RIVERS.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in. / 20 in. by 14 in. / 20 in. by 15 in.	Common	14*s.* 0*d.* ..	£1 1*s.*
	Superior do.	16 6 ..	1 5
	English Glass	18 0 ..	1 9

The above prices include the Boxes, with but few exceptions. When Packages are charged, full price is allowed when returned.

JAMES PHILLIPS AND CO.,

180, Bishopsgate St. Without. London. E.C.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2*d.* to 3*d.* per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 35, Soho Square, London, W.

See *Gardeners' Chronicle* of January 14.

HORTICULTURAL GLASS—JUNE TARIFF.

THOMAS MILLINGTON'S reduced Tariff of GLASS, &c.

6 by 4, 7 by 5, 8 by 6, 9 by 7 / 6½ by 4½, 7½ by 5½, 8½ by 6½, 9½ by 7½	16 oz. to the foot, 11*s.* 6*d.* per 100 feet.

In 100 boxes,—4ths quality, 12*s.* 6*d.*; 3ds do., 14*s.* 4*d.*

10 by 8, 12 by 9, 12½ by 10½, 14½ by 10½, 13 by 11
10½ by 8½, 12½ by 9½, 13 by 10, 15 by 10, 13½ by 11½
11 by 9, 13 by 9, 13½ by 10½, 12 by 11, 14 by 11
11½ by 9½, 12 by 10, 14 by 10, 12½ by 11½

	per 100 feet	16 oz.	21 oz.
20 by 12 / 20 by 13 / 20 by 14 / 20 by 15	Common ..	16*s.* ..	24*s.*
	Superior .	18*s.* ..	27*s.*

All Boxes included.

Orchard House sizes as supplied to Mr. Rivers.

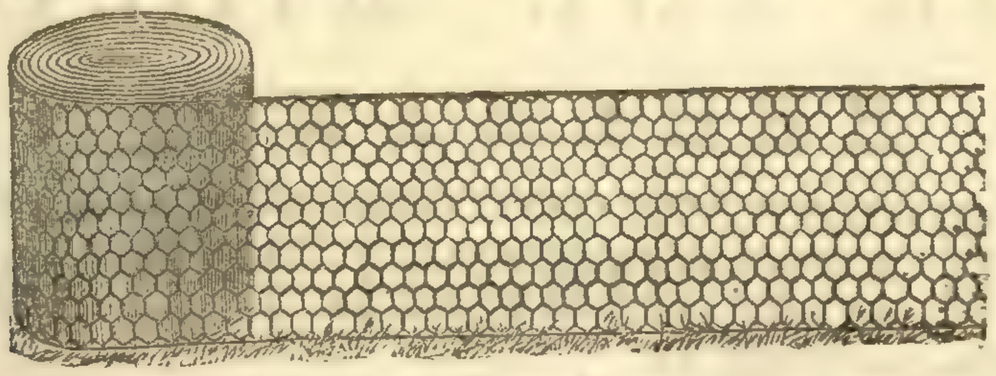
Hartley's improved Rough Plate Glass from ⅛ to ¾ in thickness.

Coloured Glass in great variety, at 9*d.* and 1*s.* per foot.

Paints, Genuine White Lead, Linseed Oil, Boiled Oil, Turpentine, Putty, Colours, Varnishes, Brushes, Lamp Glasses, &c.

87, Bishopsgate Street Without, E.C., same side as Eastern Counties Railway.

IMPROVED PREMIUM WIRE NETTING.



PRICES PER LINEAL YARD, 24 INCHES HIGH:—

Size of mesh.	Mostly used for	Light.		Medium.		Strong.		Extra strong.	
		Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.
2½ inch	Hares, Dogs, Poultry	3½d.	4½d.	4¼d.	5½d.	5d.	6½d.	6d.	8d.
2 inch	Game Netting	4d.	5d.	4¾d.	6d.	5½d.	7d.	7½d.	9½d.
1⅝ inch	Small Rabbits, Hares, &c.	4½d.	5½d.	5¼d.	6¾d.	6d.	7½d.	8d.	10d.
1½ inch	Smallest Rabbits	6d.	7½d.	7½d.	9d.	9d.	11d.	11d.	13d.

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland or Ireland.

Any width of Netting under 8 feet made at proportionate prices.

☞ **Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.**

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

MESSRS. J. B. BROWN & CO.'S
IMPROVED WROUGHT IRON HURDLES
OF
BEST STAFFORDSHIRE IRON.

No. 1 Hurdle.—Very useful for general purposes, combining strength with good appearance. 3 feet 6 inches high, six bars round iron, top bar ⅝ inch diameter, five under bars ½ inch; two side uprights flat iron, 1¼ inch by ¼ inch, and middle upright 1½ by ¼ inch. Weight about 48 lbs. Present price delivered in London and at most of the principal Railway Stations, 2*s.* 5*d.* per yard, or about 5*s.* 3*d.* each hurdle of 6 feet 6 inches long.

Specifications and prices of others in Illustrated Catalogue of Iron and Wire Fencing, Hurdles, Gates, Wire Netting, Garden Rollers and Engines, Ornamental Vases, &c., on application.

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

COTTAM & COMPY., Engineers, Founders, &c.,
2, WINSLEY STREET, LONDON, W.

☞ **A SHOW ROOM DEVOTED ENTIRELY TO ARTICLES OF HORTICULTURE.**
THE NEW ILLUSTRATED CATALOGUE UPON APPLICATION.

COTTAM AND COMPY. having had upwards of 40 years' experience in the arrangement and construction of every description HORTICULTURAL BUILDINGS AND HEATING BY THE CIRCULATION OF HOT WATER, are well qualified to guarantee the perfect execution of any works entrusted to them in the erection of

Conservatories	Summer Temples	Orchid Houses	Apricot and Peach Houses
Conservatory or Glass Walls for the protection of plants or ripening wall fruit	Arbours, &c.	Conservatories for Window or Balcony Gardening	Tropical Fruit Houses
	Greenhouses	Vineries	Forcing Pits and Frames
	Orangeries		Cucumber and Melon Houses

☞ *Drawing and Estimates free upon application.*

ORCHARD HOUSES, combining cheapness of construction with suitability of purpose—portable or otherwise.

EXHIBITION PRIZE MEDAL GATES AND STABLE FITTINGS.

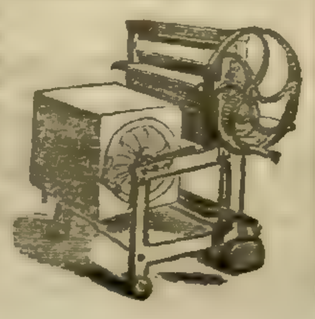
Iron Hurdles, Strained Wire Fencing, Game Netting, &c.

Every description of Plain, Ornamental, Cast and Wrought Iron, and Wire Work.

SEE SEPARATE LISTS UPON APPLICATION.

COTTAM & COMPY., Iron Works, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon.)

BRADFORD'S PATENT WASHING MACHINE.
SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations."—THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office, 64, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

FOR SALE, a PATENT, the proprietor being so much engaged as not to have time to work it; being a perfect **HOT-WATER APPARATUS Heated by Gas, suitable for any situation, either inside or out, and for common fuel. —For particulars apply to E. DENCH, Patent Hothouse Works, King's Road, Chelsea, S.W.**

FOR SALE, a new SPAN-ROOF GREENHOUSE or HOTHOUSE of the very best materials. 20 feet wide. 40 feet 6 inches long, 6 feet 6 inches high at sides, made to order. Will be sold a great bargain.—Can be seen now standing at E. DENCH'S Patent Hothouse Works, King's Road, Chelsea S.W.

DESIGNS FOR FLOWER BEDS AND GARDENS.—In consequence of numerous applications J. MARSHALL, 2, Goldsmith Street, Nottingham, has been induced to prepare another set of Designs. They comprise upwards of 80, diversified in style, and will be forwarded to any address on receipt of 24 postage stamps.

C. STEPHENSON, late STEPHENSON AND SONS, 61, Gracechurch St., London, E.C., Manufacturer of Iron, Hurdles, Fencing, &c., Improved Iron and Copper Conical Boilers and Apparatus for Warming Buildings of every description by Hot Water.

Prices and Estimates furnished upon application.

HOTHOUSES FOR THE MILLION.
MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

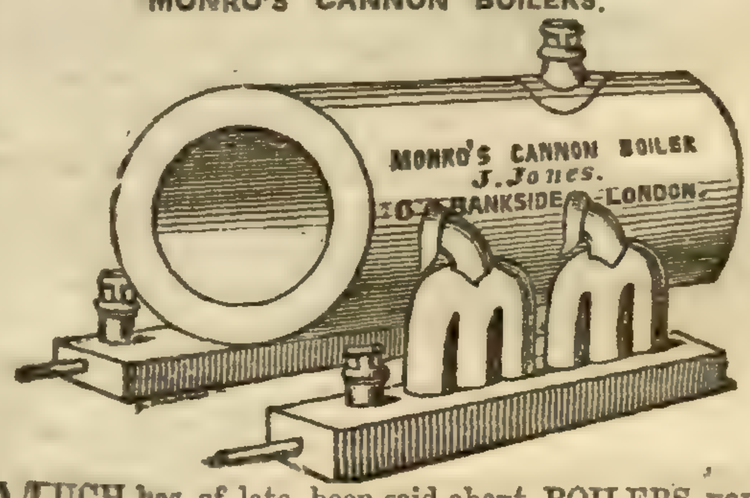
					£
A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete					30
Do.	do.	40 ft. by 20 ft.	do.	do.	50
Do.	do.	60 ft. by 24 ft.	do.	do.	90

LIST OF PRICES of any size forwarded on application to J. LEWIS.

HORTICULTURAL BUILDINGS AND HEATING BY HOT WATER.

JOHN R. PEILL, 17, New Park St., Southwark, S.E., Manufacturer of every description of Buildings for Horticultural purposes, and Inventor of the Improved Conical Boiler for heating the same, is prepared to undertake works of any magnitude, and refers among others to the celebrated range of FORCING HOUSES at HER MAJESTY'S GARDENS, FROGMORE, and at SIR ROBERT PEEL'S, DRAYTON MANOR, constructed under the superintendence of his Manager, Mr. JOHN JONES; and also to his BOILERS fixed at the CRYSTAL PALACE, the ROYAL BOTANIC GARDENS, REGENT'S PARK, and KEW, and at several hundreds of the Nobility's seats, Public Establishments, and Manufactories in London and the provinces. J. R. P. also manufactures every description of Iron Roofs, Iron Houses, and Iron Fencing, plain and ornamental. Strong Iron Hurdles for Sheep (6 ft. long, 3 ft. high, with 5 bars), 4*s.* 3*d.* each; ditto for cattle, 4*s.* 9*d.* each. Prices and other particulars forwarded on receipt of one postage stamp.

MONRO'S CANNON BOILERS.



MUCH has of late been said about BOILERS FOR HEATING BY HOT WATER, but these Boilers have now proved themselves to be the best at present invented. They are adapted for Heating every description of Building, and are made of various sizes. The price of the

24-inch Cast Iron is	£5	10*s.*	each.
24-inch Wrought Iron is	6	10	,,
36-inch Wrought Iron is	8	10	,,
48-inch Wrought Iron is	12	0	,,

References to Gentlemen and Nurserymen where these Boilers are now at work. The Cannon Boilers are now kept in stock, and are to be had only of J. JONES, 6, Bankside, S.E. Also, every description of Saddle and Cylinder Boilers. Hot-water Pipes and Connections at prices lower than those of any other house in London. Estimates for Hot-water Apparatus erected complete in any part of the country, and an Illustrated Catalogue on application to J. JONES, 6, Bankside, Southwark, London, S.E.

PARKES' STEEL DIGGING FORKS.

BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

HENRY J. MORTON AND CO.,
2, Basinghall Buildings, Leeds.

GALVANISED IRON WATER CISTERNS

for Cottage Houses, &c., to contain 50 gallons, 25*s.*; 80 gallons, 30*s.* each; and 140 gallons, 36*s.*, and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

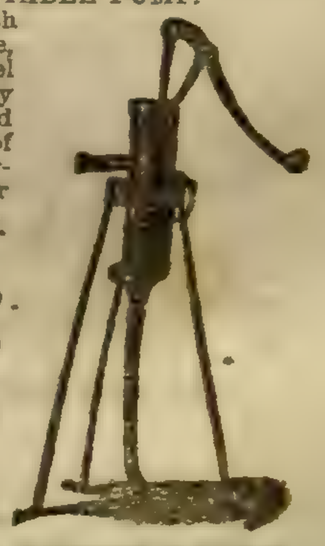
GALVANISED IRON PUMPS

for Liquid Manure or Domestic Use, 3 inches diameter, 30*s.* and 32*s.* 6*d.* each; Tail Pipe for same at from 10*d.* per foot.

GALVANISED IRON SWING WATER BARROWS

for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32*s.* 6*d.* each.

WARNER'S IMPROVED LIQUID MANURE OR GENERAL PORTABLE PUMP.



These Pumps are fitted with WARNER'S Patent Bucket and Valve, and cannot clog in action. The barrel is made of galvanised iron, not likely to corrode, and can be raised or lowered at pleasure on the stand, the legs of which fold together, and may be carried with ease by one man to tank or pond.

	£	*s.*	*d.*
Stand and Pump, with screwed tail pipe, fitted with strong brass union for suction pipe	2	15	0
If fitted with barrel of planished copper	3	17	0
Stand and Pump, with plain tail pipe, for tying on suction pipe	2	9	0
2-inch patent rubber and canvas flexible suction pipe, on wires, either 10, 12, or 15 ft., per foot	0	2	2

May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, J. WARNER & SONS, 8, Crescent, Jewin St., London, E.C.

HOTHOUSES FOR THE MILLION.

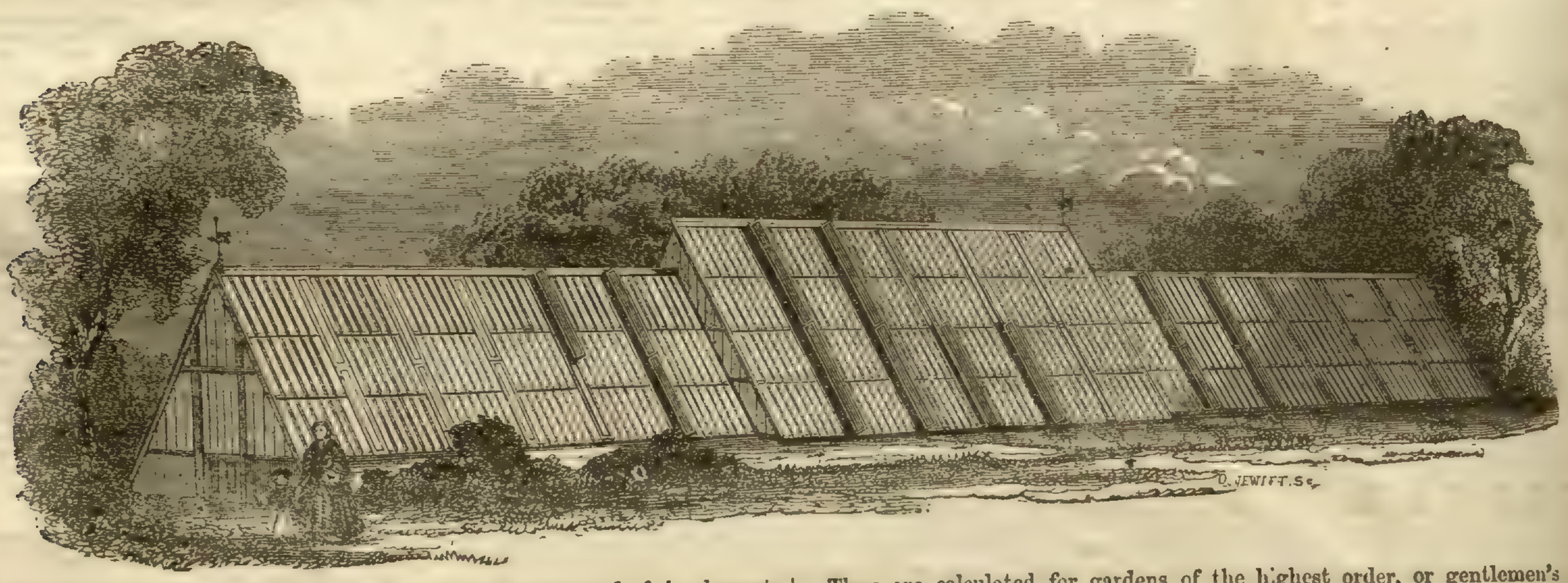
SAMUEL HEREMAN

BEGS TO INFORM THE PUBLIC THAT HE HAS BEEN APPOINTED SOLE AGENT FOR THE MANUFACTURE AND SALE OF

THE NEW PORTABLE AND ECONOMICAL HOTHOUSES,

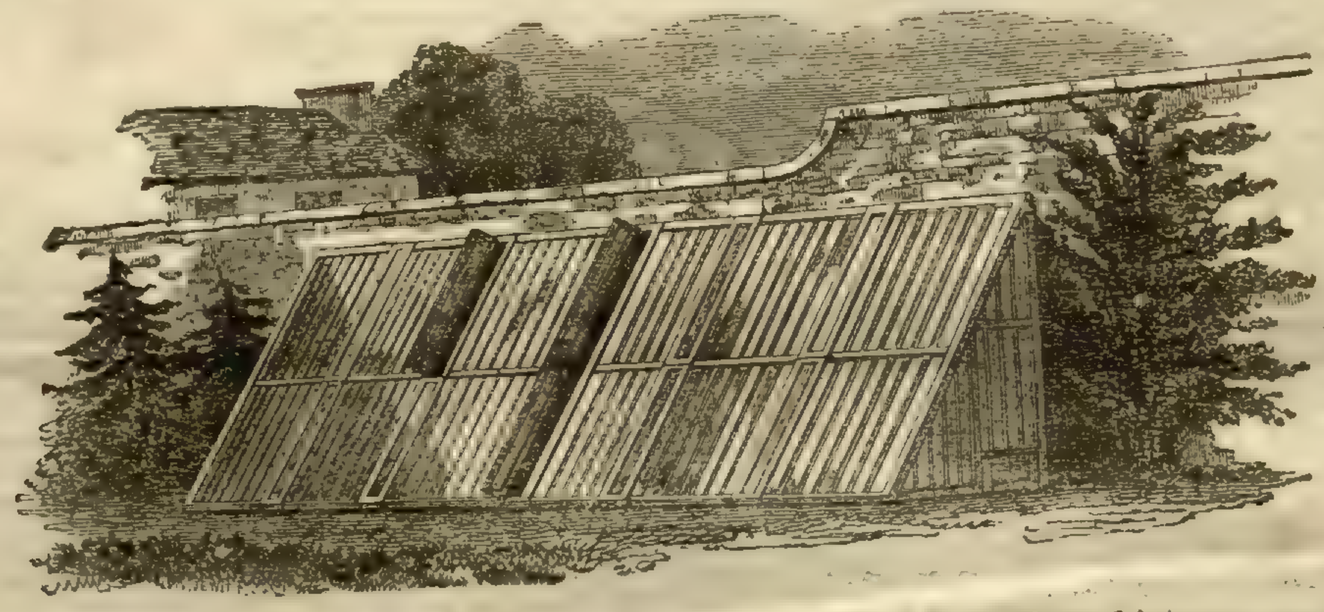
INVENTED AND PATENTED BY

SIR JOSEPH PAXTON, M.P.



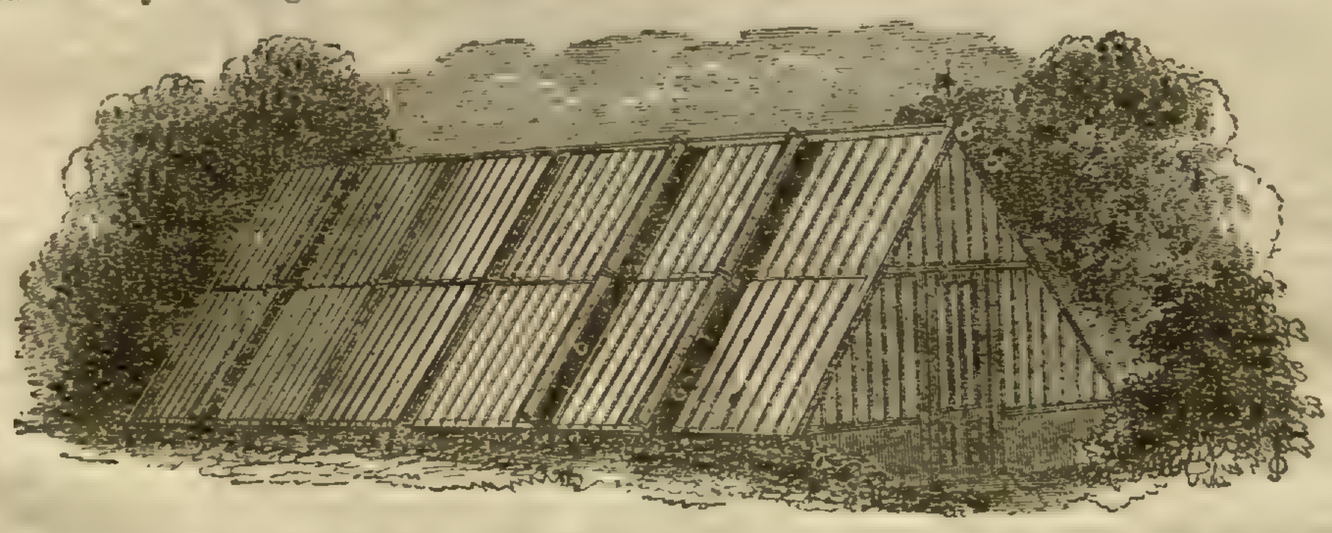
These Buildings are of unparalleled cheapness, and being composed of simple parts can be enlarged, removed, or adapted to any Horticultural purpose by ordinary labourers.

They are calculated for gardens of the highest order, or gentlemen's gardens generally, for market gardens where they may be made to cover any extent of surface, and also for suburban, villa, and cottage gardens.



The moderate cost of these houses not only places within the reach of persons of limited means a luxury hitherto confined to the wealthy, but offers immense advantages to all who have garden walls already standing—as from their peculiar construction they can be formed into ranges of lean-to houses with a facility and at a cost hitherto unheard of.

Whilst they are adapted for permanent structures they are also particularly



suited for persons having temporary or limited tenures, as they can with ease be packed up and removed at the expiration of the tenancy.

The above engravings show some of the uses to which this invention can be adapted, and the forms it can be made to assume. It will be seen that no houses, however costly, can be turned to more useful purposes or more effectually fulfill all the requirements of Horticultural operations. Although the chief aim of the inventor was to reduce the cost of such structures, and to place them within the reach of all classes, yet by varying the arrangements and dimensions of the several parts, ornamented buildings can easily be formed. The prices of these houses with water troughs, doors and ends complete, are as follows :—

	8 Feet Lights.		10 Feet Lights.		12 Feet Lights.
30 feet in length	£33 0	...	£42 5	...	£53 0
40 feet in length	41 16	...	53 17	...	66 15
50 feet in length	51 5	...	65 10	...	80 10
60 feet in length	60 12	...	77 0	...	94 5
70 feet in length	69 5	...	87 10	...	106 5
80 feet in length	78 12	...	99 3	...	120 10
90 feet in length	87 18	...	111 0	...	139 0
00 feet in length	90 15	...	121 5	...	147 0

The above lengths are given in round numbers, but from the nature of their construction the houses will practically in all cases exceed these measurements

HEATING APPARATUS of the best description can be supplied and adapted if required.

It is intended to supply purchasers according to the rotation in which their orders are received, the sale having commenced on Monday, January 9, 1860.

Letters prepaid addressed to S. HEREMAN, 7, Pall Mall East, S.W., will receive immediate attention.

THE GARDENERS' CHRONICLE AND AGRICULTURAL GAZETTE.

A Stamped Newspaper of Rural Economy and General News.—The Horticultural Part Edited by Professor Lindley.

No. 4.—1860.] SATURDAY, JANUARY 28. {**Price Fivepence.** STAMPED EDITION, 6*d*.

INDEX.

Beet, culture of	79 *a*	Labourers and cottagers	78 *c*
Books noticed	74 *c*	Labourers' friend societies	77 *b*
British Museum	73 *a*	Lands, Irish waste	80 *a*
Cabbageworts	78 *a*	Lebanon, Cedars of	74 *c*
Cedars of Lebanon	74 *c*	Mangel, culture of	79 *c*
Conifers, hardiness of	74 *a*	Manure, farm-yard	80 *b*
Coppice wood	76 *c*	Museum, British	73 *a*
Coprinus comatus	73 *a*	Mycology	73 *a*
Cottagers and labourers	78 *c*	Oak galls	72 *a*
Cumbria, climate of	74 *b*	Political economy	75 *a*
Damascus, garden of	75 *a*	Quercus sessiliflora	73 *b*
Dog, bull	76 *a*	Rainfall	74 *b*
Economy, Harmonies of Political	75 *a*	Rose Manetti	75 *c*
Farms in Selkirkshire	82 *b*	Rucker's (Mr.) Orchids	75 *b*
Farmers' Club, Milborne	80 *b*	Seedsmen	74 *a*
— Hexham	81 *a*	Sewer reform	81 *c*
Fires, to light at top	73 *c*	Solanum capsicastrum	74 *b*
Garden of Damascus	75 *a*	Stock, housing	80 *b*
Garden engines, iron	76 *c*	Temperature of December	80 *a*
Hind, Northumberland	83 *a*	Tenant right	81 *a*
Horticultural Society	71 *c*	Trade lists	75 *b*
Labels, Gutta Percha	74 *c*	Turnips, condition of	80 *a*
		Wasps, early	74 *c*

HORTICULTURAL SOCIETY OF LONDON.
8, ST. MARTIN'S PLACE, W.C.

Notice is hereby given that a SPECIAL GENERAL MEETING of this Society will be held at the house of the Society of Arts, John Street, Adelphi, on TUESDAY, Jan. 31, at 2 o'clock, for the Election of Members of the Royal Family, and Ballot for Election of other Candidates who have been proposed as Fellows. No other business will be transacted.

January 28. W. B. BOOTH, Assistant Secretary.

HORTICULTURAL SOCIETY OF LONDON.—The next Meeting of the FRUIT COMMITTEE will be held at 8, ST. MARTIN'S PLACE, TRAFALGAR SQUARE, W.C., on TUESDAY February 7, at 3 P.M. On this occasion Prizes of 20*s*. for the best, and 10*s*. for the second best dish of each of the following kinds of fruit:—

CLASS A. ANY VARIETY OF DESSERT PEAR.
CLASS B. ANY VARIETY OF DESSERT APPLE.
CLASS C. ANY VARIETY OF KITCHEN APPLE.

BRITISH POMOLOGICAL SOCIETY.—The next MEETING of this Society will be held at Hanover Square Rooms, Regent Street, W., on THURSDAY, Feb. 2, when the following Prizes are offered:—

TWO GUINEAS and ONE GUINEA for the best and second best collections of six varieties of DESSERT PEARS in season; three fruits of each.

Such other fruits are also requested as are in season, and calculated to elicit interesting information or discussion. Copies of Rules, &c., may be obtained of Mr. W. DAVIDSON, 2, Randolph Road, Maida Hill, London, W. Secretary.

BRIGHTON AND SUSSEX FLORICULTURAL AND HORTICULTURAL SOCIETY'S EXHIBITIONS for 1860 are fixed to be held on the following days:—Summer Show, WEDNESDAY and THURSDAY, June 27 and 28; Autumn, WEDNESDAY and THURSDAY, Sept. 12 and 13, on the same grand scale as in former years. Schedules will shortly be published, to be obtained of the Secretary, 96, St. James Street; or of E. SPARY, Queen's Graperies, Superintendent of Exhibitions.

Brighton, Jan. 28. EDWD. CARPENTER, Sec.

NEW ROSES FOR 1860.

J. AND J. FRASER, of the Lea Bridge Road Nurseries, N.E., have a good stock of strong plants of the above. A DESCRIPTIVE LIST of 20 of the best sorts may be had on application.

ROSES, ROSES, ROSES.—All the leading and best kinds. Standards and Half Standards, at 50*s*. per hundred.
J. DIVERS, Nurseryman, Ashford, Kent

NEW ROSES FOR 1860.

HUGH LOW AND CO. are now prepared to receive orders for the new ROSES of the present season, raised from seed by MM. Verdier, Fontaine, Margottin, Oger, Guillot, Ducher, and others. The plants will be ready for delivery at an unusually early date. Price 5*s*. each. Usual allowance to the Trade.—Clapton Nursery, London, N.E.

ROSES.

A. PAUL AND SON have still to offer a very superior stock of STANDARD and DWARF ROSES, full Standards, 12*s*. per dozen and upwards; Dwarfs, 6*s*. per dozen and upwards. Also all the choicest and newest kinds, for prices of which see DESCRIPTIVE CATALOGUE, forwarded on application free by post.—Nurseries, Cheshunt, Herts.

CINERARIAS, CALCEOLARIAS, FUCHSIAS, AND VERBENAS.

JAMES DICKSON AND SONS beg to offer fine strong plants of the above, including all the newest and best varieties, at very moderate prices, which they will be happy to furnish upon application.—"Newton" Nurseries, Chester.

MESSRS. ROEZL AND BESSERER, of Mexico, will execute orders for MEXICAN SEEDS and PLANTS in their Catalogue for 1858-9, through their agents B. A. GRATTONY & Co., which may be had on application, and also LISTS of newly arrived Seeds.
4, Lime Street Square, London, E.C.

PANSIES.
HENDON PARK NURSERIES, HENDON, N.W.

EDWARD SHENTON is now offering a large and varied stock of all the best Show varieties of PANSIES, in 60-pots. Prices for single plants, as per var.; per doz., 6*s*.

AZALEA INDICA.

J. IVERY AND SON'S New DESCRIPTIVE CATALOGUE of the above contains all the newest and best varieties. Will be forwarded post free upon application.
Dorking Nursery.—Jan. 28.

COBNUTS.—What crop will produce most sovereigns to the acre? KENTISH COB FILBERTS.—Application for trees to be made to GEO. MACE, at the Gardens, Calcot, Reading.

J. CARTER AND CO. are now in a position to execute all Orders WITHOUT ANY UNNECESSARY DELAY, having enlarged their premises and increased their staff of assistants.—J. CARTER & Co., 237 and 238, High Holborn, W.C.

CARTER'S SELECT LIST OF SEEDS FOR 1860 will be sent post free upon application to JAMES CARTER & Co., 237 and 238, High Holborn, W.C.

SUTTON'S SEED LIST IS NOW READY,
and will be sent gratis and post free to any address.
Royal Berkshire Seed Establishment, Reading.

J. G. WAITE'S WHOLESALE CATALOGUE is now ready and can be had on application.
Seed Establishment, 181, Holborn, London, W.C.

SEED CATALOGUE.

CHARLES TURNER'S DESCRIPTIVE LIST of a Selection of the best varieties only is now ready.
The Royal Nurseries, Slough.

SEED CATALOGUE.

WM. CUTBUSH AND SON'S DESCRIPTIVE PRICED CATALOGUE, which contains every thing necessary, can be obtained free per post on application.
Highgate Nurseries, London, N.

NEW DAHLIAS FOR 1860.

JOHN KEYNES'S LIST of the new DAHLIAS for 1860 is now ready, and will be forwarded on application.
Salisbury, January 28.

A PRICED AND DESCRIPTIVE CATALOGUE OF NEW AND SELECT GARDEN SEEDS FOR 1860 is Now Ready, and will be sent post free upon application.
MILNE & Co., Successors to Chandler & Sons, Nurserymen and Seedsmen, Wandsworth Road, S.

GARDEN SEEDS.

P. J. PERRY AND CO.'S PRICED CATALOGUE of the above is now ready, and may be had post free on application.—The Nurseries, Banbury, Jan. 28.

FERN CATALOGUE.

ROBERT SIM'S NEW DESCRIPTIVE AND PRICED CATALOGUE, No. 6 (62 pages) of his COLLECTION of BRITISH AND EXOTIC FERNS, can be had, post free, for 8 stamps. Gratis to all previous purchasers of Ferns.
Nursery, Foot's Cray, Kent, S.E.

KITCHEN GARDEN SEEDS.

JOHN CATTELL'S CATALOGUE of the above may be had free by post. It contains selections of the most approved VEGETABLES in cultivation, and nearly the whole of them have been saved under J. C.'s own personal superintendence.—Nursery and Seed Establishment, Westerham.

TRADE CATALOGUE.

THOS. CRIPPS, Tunbridge Wells, Kent, respectfully informs the Trade that his WHOLESALE CATALOGUE OF AMERICAN PLANTS, ROSES, AND GENERAL NURSERY STOCK is now ready and may be had post free.

NEW LIST OF SEEDS FOR 1860.

J. DOBSON AND SONS' LIST forwarded free to any address upon application. The Seeds warranted new and true.
Woodlands Nursery, Isleworth, W., & High St., Hounslow, W.

PELARGONIUMS.

JOHN DOBSON AND SONS beg to invite the attention of intending purchasers of the above, who will be liberally dealt with. A choice selection sent at a moderate price. Catalogues free on application.
Woodlands Nursery, Isleworth, W.

WHEELER'S IMPERIAL LETTUCE,
1*s*. per packet.
For description and testimonials see "WHEELER'S *Little Book*."
J. C. WHEELER & SON, Gloucester.

WHEELER'S TOM THUMB LETTUCE,
1*s*. per packet.
For description and testimonials see "WHEELER'S *Little Book*."
J. C. WHEELER & SON, Gloucester.

ASPARAGUS AND SEAKALE ROOTS, very strong for Forcing.—For price, &c., apply to HENRY PAGE, Gardener, St. John's, Fulham, S.W.

GENUINE NEW HOME-GROWN SEEDS.—Package and carriage free. See PRICED LIST of this Paper January 28; or post free on application.
W. STEWARD & Co., Seed Growers, Plymouth, Devon.

COLLECTIONS OF VEGETABLE SEEDS FOR ONE YEAR'S SUPPLY.

No. 1 .. 20*s*. | No. 2 .. 40*s*. | No. 3 . 60*s*.

ALL SEEDS MAY BE DEPENDED ON AS BEING OF THE BEST QUALITY AND FREE FROM ADULTERATION.
JAMES CARTER & Co., 237 and 238, High Holborn, W.C.

MONRO'S PROLIFIC CUCUMBER.—The best for winter cultivation, 2*s*. 6*d*. per packet. First-prize Certificates have been awarded it, both by the Horticultural Society and Crystal Palace Company, at the grand exhibitions of last season. The usual allowance to the Trade.
G. MONRO, Colney Street, St. Albans, Herts.

NEW FLORIST FLOWER CATALOGUE.

DOWNIE AND LAIRD, NURSERYMEN, SEEDSMEN, and FLORISTS, 17, South Frederick Street, Edinburgh, beg to intimate that their CATALOGUE of FLORIST FLOWERS. New VEGETABLE and FLOWER SEEDS is now ready, and may be had free on application.

TO THE TRADE.

DOWNIE AND LAIRD offer PANSY, HOLLYHOCK, PETUNIA, from the finest-named varieties; SWEET WILLIAM and QUILLED GLOBE ASTER, finest mixed, their own saving, all of first-rate quality. Prices on application.—17, South Frederick Street, Edinburgh.

GOOD SEEDS. CARRIAGE FREE.

SUTTON AND SONS,
SEED GROWERS AND MERCHANTS,
ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.

GEORGE GIBBS AND CO.,
SEEDSMEN,
26, DOWN STREET, PICCADILLY,
LONDON, W.

RED LODGE NURSERY AND AMERICAN GROUNDS, SOUTHAMPTON.

W. H. ROGERS solicits attention to the large, fine, and varied Stock, growing on the above extensive Grounds.

THE PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY LIMITED supply every requisite for the Farm and the Garden.
Registered Offices: Union Road, Plymouth.

PLANTING.

A. PAUL AND SON invite attention to their large and superior Stock of CONIFERÆ and other ornamental TREES and SHRUBS, FRUIT TREES, &c. For further particulars see advertisement in *Gardeners' Chronicle* of last week.—Nurseries, Cheshunt, Herts.

FRUIT TREES.

A. PAUL AND SON invite attention to their large and superior stock of FRUIT TREES. The Dwarf-trained Peaches, Nectarines, Apricots, Cherries, Plums, &c., are particularly fine. PRICED CATALOGUES free by post on application.—Nurseries, Cheshunt, Herts.

HOLLAND AND BAYLEY beg to offer strong 3 and 4 years old Plants of the largest and finest flavoured LANCASHIRE SHOW GOOSEBERRIES, at 6*s*. per dozen.—Bradshaw Gardens, Chadderton, near Manchester.

GOOSEBERRIES.—For SALE, 2000 two-year old MERRY MONARCH GOOSEBERRY BUSHES.
A. DAWS, Turnham Green, W.

RASPBERRIES VICTORIA, FILLBASKET FASTOLF and AUTUMN-FRUITED, 10*s*.; WHITE, 8*s*. CURRANTS, 10*s*. to 15*s*.; ASPARAGUS, 2*s*.; STRAWBERRIES, 2*s*. to 2*s*. 6*d*. per 100; or 15*s*. per 1000. Large LAURUSTINUS, &c.—GEORGE CORNWELL, Barnet, N.

GREAT SCARCITY OF FRUIT.

STRONG ROOTS OF THE LINNÆUS RHUBARB, from division, can be supplied in any quantity at 12*s*. per 100, or 5*l*. per 1000, by WALTER PENNINGTON, Nurseryman, South Retford, Nottinghamshire.

DWARF MAIDEN FRUIT TREES.

HUGH LOW AND CO. have to offer of fine quality, PEACHES, NECTARINES, APRICOTS, PLUMS, CHERRIES, APPLES, PEARS, on Quince Stocks. Prices will be furnished on application.
The Wholesale CATALOGUE is ready for distribution.
Clapton Nursery, London, N.E.

THREE MILLIONS OF TRANSPLANTED QUICKS.

GEORGE CHIVAS, Chester, offers the above, which are admitted to be unequalled in point of quality in Great Britain. A sample bale, containing 100 each of five sizes, forwarded on receipt of 15*s*., and orders for 10,000 delivered free at any railway station.—Chester, Jan. 28.

HARDY HEATHS.—A Collection of 20 sorts, by name, of the above favourite autumnal flowers, in good plants, at 30*s*. per 100, or 12*l*. 10*s*. per 1000.
JOHN WATERER, The American Nursery, Bagshot, Surrey.

LARGE SHRUBS for SALE.—Several splendid BAY, HOLLY and ARBOR-VITÆ, 10 feet high, AUCUBAS, &c.—Apply to R. ABBOTT, Nurseryman, Garden Road, St. John's Wood, N.W.

TO NURSERYMEN AND FORESTERS.

WANTED 4000 stiff, stout, well-rooted BIRCH, 4 to 5 feet high.—Apply stating price to FRANCIS & ARTHUR DICKSON & SONS, Upton Nurseries, Chester.

KITCHEN GARDEN SEEDS free from any admixture of old valueless Seeds, and therefore warranted to grow well, are offered by CHAS. SOUTHBY (late Fairbairn), Clapham, S. A PRICED LIST free by post.

POTATOES.—SURPLUS STOCK.

J. H. ROBINSON, SEED GROWER, Abbey Farm, Hinckley, has a few Tons of the EARLY FORTY-FOLD SEED POTATOES to dispose of at 5*s*. per cwt.; less by the ton.

SELECTED SEED POTATOES.—Early Flour Balls, true, and Early Goldfinder, mixed, not yet sprouted, grown without manure, free from disease and frost, at 4*s*. per bushel, sack, and carriage free to London. Early applications, with Post-office Order, will meet with prompt attention.
ABRAHAM HARDY & SON, Seed Growers, Maldon, Essex.

GIANT POLYANTHUS AND GIANT COWSLIP.—A few pounds of these gigantic and beautiful Spring Flowers to be disposed of, and many of them almost equal to the Auricula.—Apply to G. MACE, at the Garden, Calcot, near Reading.

SEEDLING POTATO.—WEBB'S IMPERIAL KIDNEY.—This Potato is without exception the best for every purpose. Its yield is extraordinary, and its quality first-rate. For Seed, 10*s*. 6*d*. per bushel.—Application to be made to GEORGE MACE, Gardener, Calcot, near Reading

SEED ESTABLISHMENT, SUDBURY, SUFFOLK.

VEITCH'S PERFECTION PEAS, procured direct from VEITCH & SON in 1858, and may be had true, having grown the stock two seasons, per quart, 2*s*.
SUTTON'S BERKSHIRE HERO PEA, per quart, 2*s*. 6*d*.
LEE'S NEW WHITE SPROUTING BROCCOLI, in sealed packets each 2*s*. 6*d*.
STEPHEN BROWN, Seedgrower, &c., Sudbury, Suffolk.

"BAD SEEDS ARE DEAR AT ANY PRICE."

THE CHEAPEST, EASIEST, AND BEST WAY TO OBTAIN A YEAR'S SUPPLY OF GARDEN SEEDS IS TO ORDER ONE OF

MESSRS. WHEELER AND SON'S COLLECTIONS.

These Collections consist of really choice Seeds—the best varieties—all correctly named, and arranged in proper quantities. Year by year they get more and more in demand.

No. 1—A Complete Collection of PEAS, BEANS, and GARDEN SEEDS of every sort £3 0 0
No. 2— Ditto Ditto Ditto (smaller quantities) 1 10 0
No. 3— Ditto Ditto Ditto (for a small garden) 0 15 0

Carriage free by Rail except No. 3.

The following TESTIMONIALS will give some idea of the high character our Seeds have obtained.

From Sir JOHN OWEN, Bart., M.P., *Lord Lieutenant of Pembrokeshire.*

"Taynton House, Dec. 1, 1859.

"Having dealt with you for several years I have great pleasure in bearing my testimony to the good quality of the Seeds with which you have supplied me, and I have recommended you to my son, who has succeeded me in the occupation of this farm."

From General DRUMMOND.

"The Boyce Court, Dec. 11, 1859.

"I shall shortly send you an order for Seeds as usual. I have been hitherto extremely well satisfied with the Plants and Seeds with which you have supplied me for the last 20 years; I am especially pleased with the Wheeler's Imperial Lettuce, and also with the Flower Seeds."

From the Rev. ALAN G. CORNWALL.

"Ashcroft House, Dec. 10, 1859.

"I have very sincere pleasure in informing you that the Grass, Clover, Cabbage, and Mangel Wurzel Seeds have proved of excellent quality. I could not desire better; and I trust that your honest dealings will be duly appreciated by the public."

Ladies and Gentlemen who have hitherto found difficulty in obtaining really first-class Seeds will do well to communicate with us, and we will forward our "Little Book," which will give full particulars of the above collections, and also prices of our Farm Seeds, Flower Seeds, &c.

J. C. WHEELER and SON, Seed Growers, Gloucester.

TO THE TRADE.—SPERGULA PILIFERA SEED, the IMPROVED CUSTARD MARROW. Prices of the above, also for other seeds offered to the Trade, may be had on application.
STEPHEN BROWN, Seed Grower, Sudbury, Suffolk.

LAWNS WITHOUT MOWING—SPERGULA PILIFERA.

J. A. SUMMERS supplies the above in plants enough to cover the ground next summer at 1*s.* per square yard, or at 1*s.*, 2*s*,, and 4*s.* per doz. plants. A specimen post free, 1*s*,
Howard Park Nursery, Perry Hill. Sydenham, S.E.

HENDON PARK NURSERIES, HENDON, N.W.

NEW DAHLIA—"THE CHANCELLOR."—First Class Certificate of National Floricultural Society; First Class, Brighton; First Class, Saffron Walden; First Class, Stoke Newington, &c.; First Prize as best Seedling Dahlia, Stoke Newington, 1859.

Plants of this magnificent new variety will be sent out on May 1 next. Early orders are requested. Delivered carriage free in London. EDWARD SHENTON.

SEEDS.

J. H. ROBINSON, SEED GROWER and DEALER, Wholesale and Retail, begs to call the attention of all those interested in the cultivation of Flowers and Vegetables to his RETAIL CATALOGUE of a selection of his best varieties of SEEDS, second to none in the kingdom. Post free on application. Carriage paid on orders of 20*s.* and upwards.—Abbey Farm, Hinckley.

CHRYSANTHEMUMS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington, begs to inform his friends and the public that he has the finest Collection and the largest Stock of Chrysanthemums and Pompones in the world, and can supply them by the 100, 1000, or 10,000.

25 Pair of Best POMPONES, 10*s.*
20 Pair of Best Large Varieties, 10*s.*
25 Pair of Best POMPONE CUTTINGS, 5*s.*
20 Pair of Best Large Varieties, Do., 5*s.*

CATALOGUES for one stamp. To save trouble all orders to be pre-paid.

NEW ANNUALS.

JOHN GEORGE WAITE, SEED MERCHANT, 181, High Holborn, London, W.C., has great pleasure in offering SEEDS of the following new hardy Annuals:—

CLARKIA PULCHERRIMA,
SCHIZANTHUS GRANDIFLORUS OCULATUS,
HELIOPHILA CŒRULEA STRICTA.

Coloured Drawings and prices of which (to the Trade only) can be had on application.
Seed Establishment, 181, High Holborn, London, W.C.

WELLINGTONIA GIGANTEA.

JOHN WATERER has thousands of the above Plants to offer, varying in height from 1 to 4 feet. The whole are exceedingly handsome and well rooted. Price on application.—The American Nursery, Bagshot, Surrey.

2,000,000 SEEDLING THORN QUICKS, one-year old, in bed, from 3 inches to 12 inches high, strong plants, free from mildew.

500,000 LARCH from 18 inches high to 3 feet.

Samples and prices sent to any person requiring same. Carriage paid to Liverpool.
GEORGE R. DAVIDSON, Newry Nursery.

HARDY CALIFORNIAN CONIFERS, PICEA (ABIES) AMABILIS, PICEA (ABIES) GRANDIS—Healthy seedling Plants of the above named most beautiful hardy Trees can be supplied by the undersigned by the dozen, hundred, or thousand, as also many other choice Conifers, PRICED CATALOGUES of which will be sent on application.
HUGH LOW & Co., Clapton Nursery, London, N.E.

SEED CORN FROM THE CHALK.—All the best varieties of SEED WHEAT, BARLEY, OATS, &c., may be had as usual of Messrs. RAYNBIRD & Co., of Basingstoke and 89, Seed Market, Mark Lane, London, E.C.
Samples and prices on application.

VEGETABLE AND AGRICULTURAL SEEDS, &c.

MESSRS PARKER AND WILLIAMS beg to inform their friends and patrons that they are now prepared to execute, with NEW AND GENUINE SEEDS, all orders they may be favoured with. Their PRICED and DESCRIPTIVE CATALOGUE, containing all new VEGETABLES PROVED TO BE GOOD, and all the best of the older varieties, &c., will be forwarded post free on application.

The following are particularly recommended as valuable additions to the most Select Collections:—Beet, Compact topped (Short's); Broccolis, new sprouting (Lee's); Penzance White, Mitchenson's and Winter White, (Snow's); Improved Brussels Sprouts (Perkin's); Colewort, Rosette Cauliflowers; Early Dwarf, Erfurt and New Early Mammoth Celery Nonsuch, (Ivery's); Lettuce Alma (Griffin's) and Moorpark.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

CONNING'S PERFECTION BROCCOLI.
NEW WHITE SPROUTING BROCCOLI.
CARTER'S CHAMPION CUCUMBER.
CARTER'S EXCELSIOR MELON.
AUSTRALIAN OR GOLDEN CRESS.
CARTER'S GIANT LETTUCE.
VEITCH'S PERFECTION PEAS.
EARLY HANDSWORTH POTATO.
PHEASANT'S EYE POTATO.
PERPETUAL SPINACH BEET.

Vide CARTER'S SELECT LIST OF SEEDS FOR 1860, which will be sent Gratis on application to 237 and 238, High Holborn, W.C.

GOOD SEEDS CARRIAGE FREE.

SEEDS DIRECT FROM THE GROWERS the most certain means of preventing disappointment.

SEEDS grown in Berkshire and the adjoining Counties having obtained great celebrity, SUTTON & SONS have made such arrangements with the great Lines of Railway as will enable them to deliver their GOODS FREE OF CARRIAGE to most parts of the United Kingdom.

CATALOGUES gratis and post free on application, addressed
SUTTON AND SONS,
Royal Berkshire Seed Establishment,
Reading.

PETER LAWSON AND SON
THE QUEEN'S SEEDSMEN AND WOOD FORESTERS,
respectfully announce that they have now issued their
NURSERY CATALOGUE OF FOREST TREES, CONIFERÆ, SHRUBS, &c.,
which they will be happy to forward free by post on application.
27, Great George Street, Westminster, S.W.

PETER LAWSON AND SON, THE QUEEN'S SEEDSMEN AND WOOD FORESTERS, 27, Great George Street, Westminster, London, S.W., respectfully announce the issue of their GARDEN SEED CATALOGUE for 1860, which they will be happy to forward free by post on application. Every care has been bestowed on the selection and growth of the various stocks, which P. L. & SON can safely recommend as of best quality, and true to name.

DALMAHOY EARLY POTATOES.

This excellent variety of Potato now meets with a largely increased demand in England, to which it is fairly entitled. It is considerably earlier than the Regent, and of excellent quality. Messrs. P. L. & SON are now prepared to send out carefully selected Seed, for which early orders are requested; and which can either be executed now or in spring, as may best suit purchasers.

GENUINE GARDEN SEEDS.

TIMOTHY BRIGDEN, SEEDSMAN and FLORIST, begs most respectfully to inform his friends and purchasers of SEEDS generally, that his unrivalled Collection of GENUINE AGRICULTURAL VEGETABLE and FLOWER SEEDS, is now ready, of which a PRICED CATALOGUE may be had upon application.

T. B. further guarantees that every article is GROWN and SELECTED with the greatest care under his own personal attention. Orders from unknown correspondents must be accompanied with Postage Stamps or P. O. O.
Seed Establishment, 10, Railway Arcade, London Bridge, S.E.

THE TWO BEST POTATOES.

BIRMINGHAM PRIZETAKER KIDNEY.—Very early, great cropper, and short top.

DALMAHOY.—Round, second early, and unquestionably the best variety for general crop; fine flavour.

CHARLES TURNER has a fine Stock of healthy sets of the above, which are warranted as very superior.
The Royal Nurseries, Slough.

NEW PEAS.

BUCKLEY'S GENERAL WYNDHAM | THORNE'S ROYAL BRITAIN.

HURST AND M'MULLEN having grown a considerable quantity of the above fine tall late varieties of PEAS this season, beg to offer them to the Trade only. They have been proved to be superior to any of their class, both in flavour and size for the last two years, and they can confidently recommend them.

Also "Dillistone's First Early Pea," quite seven days earlier than any other variety, and a great bearer. Prices on application.—Address, 6, Leadenhall Street, London, E.C.

THE PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY LIMITED are sending out their Collection of SEEDS, which have hitherto given satisfaction:—

No. 1. Complete Collection of Seeds for a large Garden for one year's supply .. .. £3 0*s.* 0*d.*
No. 2. Complete Collection for a moderate-sized Garden 2 0 0
No. 3. Complete Collection for do. (small quantities) 1 5 0
No. 4. Complete Collection for a small Garden .. 0 15 0

No. 1. Carriage free to most Stations and Ports in the Kingdom.
No. 2. Carriage free to Broad Gauge Stations and Steam Ports.
No. 3. Carriage free to Stations between Plymouth and Paddington.

Address: Plymouth Seed Company, Plymouth.

WILLIAM BARNES'S CATALOGUE FOR 1860 OF KITCHEN GARDEN, FLOWER, AND AGRICULTURAL SEEDS of the finest quality is Now Ready, and can be had post paid on application, the selection in each particular class having been carefully made, and nothing but the very best varieties introduced. All Seeds warranted genuine and true to their names.—Camden Nursery, Camberwell, S.

TRITOMA UVARIA.

JAMES MARCHAM, of Earl's Court Road, Old Brompton, S.W., having saved SEEDS of this splendid hardy perennial plant, offers packets containing 50 Seeds for 1*s.*, 200 for 2*s.* 6*d.*, 500 for 5*s.*, ¼ oz. for 20*s.* All orders to be prepaid. Seeds sown between now and the 1st of March will flower in the autumn of the present year.

MARSH AND PERKINS beg to offer to the Trade their Surplus Stock of PEAS of the following sorts, from picked samples:—

BECK'S PRIZETAKER .. .. .. 10*s.* per bushel
HARRISON'S GLORY .. .. .. 10*s.* ,,
,, PERFECTION .. .. 8*s.* ,,

Samples on application to 42, Drapery, Northampton.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SONS' PRICED and DESCRIPTIVE CATALOGUE for 1859, & SPRING 1860: comprising Fruit Trees of all the leading kinds; New and Selected Roses; fine varieties of American Plants; Choice and Rare Conifers; Evergreen and Deciduous Trees and Shrubs; and a fine stock of transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

STANDARD RHODODENDRONS.—Hundreds of handsome specimens of all the choicest varieties, varying in colour from deepest crimson to rose and pure white, with symmetrical heads and straight stems, from 2 to 5 feet in height, can be supplied by
JOHN WATERER, American Nursery, Bagshot, Surrey.

CHOICE RHODODENDRONS, AZALEAS, AND CONIFEROUS PLANTS.—A CATALOGUE of GEORGE BAKER'S unrivalled Stock of the above may be had on application.—The American Nursery, Bagshot, Surrey.

TO THE TRADE

3,500,000 RHODODENDRONS, 2, 3, and 4 year old Seedlings, to be Sold very cheap. Also an over stock of 4000 or 5000 Double Gorse or Whins. Price sent free on application to JAMES SMITH, Darley Dale Nurseries, near Matlock.

SUPERB SPECIMEN SCARLET AND OTHER RHODODENDRONS, from 3 to 5 feet in height, and 3 to 4 feet in diameter, some of which are well furnished with bloom buds, from 3*s.* 6*d.* to 10*s.* 6*d.* each, large and very bushy, well adapted for immediate effect.—WM. WOOD & SON, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

HARDY RHODODENDRONS.

MESSRS. WATERER AND GODFREY invite attention to their Seedling RHODODENDRONS, which they are selling without names, and which they strongly recommend as being very superior in point of HABIT, FOLIAGE, COLOUR, and GENERAL HARDINESS. They are from 1½ to 2½ feet high, and as much through, and no plants can possibly be in finer health. They will be sold at very liberal prices, and purchasers can select from a stock of many thousands.
Knap Hill Nursery, near Woking, Surrey

RHODODENDRONS.

JOHN WATERER'S CATALOGUE OF HARDY SCARLET, and other choice RHODODENDRONS, annually exhibited at the Royal Botanic Gardens, Regent's Park, is now published and will be forwarded on application. Faithful descriptions of all the esteemed varieties will be found detailed, with a list of the popular kinds of AZALEAS and other AMERICAN PLANTS, as well as a selection of CONIFEROUS TREES, with height and prices.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

Just out,

WHEELER'S LITTLE BOOK
FOR 1860.

POST FREE FOR THREE STAMPS. GRATIS TO CUSTOMERS.

It gives a full description, and the price of the best sorts of Seed in cultivation, and moreover states in detail the quantitie and sorts of GARDEN SEEDS, comprised in our CELEBRATED COLLECTIONS, which we deliver CARRIAGE FREE to all parts of the Kingdom.

No. 1, £3. | **No. 2. 30s.**

J. C. WHEELER & SON, SEED GROWERS, GLOUCESTER.

SEED BUSINESS ESTABLISHED UPWARDS of 100 YEARS.
COVENT GARDEN MARKET, LONDON, W.C.

NOW READY AND FORWARDED FREE AND POST PAID ON APPLICATION,

BUTLER & McCULLOCH'S
ANNUAL SPRING CATALOGUE
OF
FLOWER, TREE, SHRUB, AND VEGETABLE SEEDS,

Occupying 96 8vo pages, and arranged on a new and original plan, giving the Natural Order of each Genus, together with a short note indicating its character or adaptation. To each species and variety are given the colour, duration, height, and native country, and to sorts of recent introduction or of more than ordinary value are attached useful descriptive notes.

Amongst the numerous species and varieties will be found novelties of the highest merit not quoted in any other Seed List.

To the amateur and professional gardener, therefore, we doubt not the Catalogue will be found one of the most useful guides of the sort ever published, furnishing as it does the kind of information we have felt from long experience to be necessary in a work of this description.

The following quotation may be taken as an example of the plan of arrangement pursued, omitting of necessity for the sake of brevity the columnar matter exhibiting duration, height, and native country :—

Acacia (Leguminosæ).—These graceful, elegant, and highly ornamental plants, after rendering the greenhouse and conservatory gay in spring with their charming blossoms, might be usefully employed in the decoration of the out-door garden, where their fine foliage and habits could not fail to attract attention. When the time comes for placing them out of doors, let them be dotted in suitable situations about the lawn and shrubbery borders, plunging the pots to keep the soil about the roots moist, and in order that they might not suffer from drought, they should be watered occasionally. Dealbata flowers magnificently on the wall in spring, where a well-drained border is afforded it; under such circumstances it stands the winter without protection, and will live and blossom every season for years.

Dried specimens from many of the following varieties may be seen at our Establishment.

		s.	d.
13.	Acacia aculeaticarpa, pale red, singularly graceful	0	9
14.	,, acutissima, yellow, leaves delicately slender and graceful	1	6
15.	,, albicans, white, silvery foliage, most beautiful	0	4
16.	,, asparagoides, yellow, graceful Asparagus-like foliage	1	0
17.	,, Bartheriana, yellow, a magnificent species	1	0
18.	,, bispinosa, yellow, handsome (rare)	1	0
19.	,, calamifolia, yellow, Reed-leaved (rare)	2	6
20.	,, celastrifolia, bright yellow, foliage silvery, striking	0	6
21.	,, coccinea	2	6
22.	,, cordifolia, yellow	0	6
23.	,, cultriformis, yellow, fol. silvery, very remarkable	0	4
24.	,, dealbata, bright canary yellow, flowers and foliage graceful	0	9
25.	,, deltoidea, sulphur, leaves triangular, appearance unique	0	6
26.	,, dentifera, yellow, charming habit, magnificent species	0	6
27.	,, dodoniæfolia, yellow, habit slender and graceful	0	4
28.	,, Douglasi, yellow, habit distinct and graceful	0	6
29.	,, eburnea, pale yellow, ivory-like thorns, fine foliage	0	4
30.	,, excelsa, yellow, slender and graceful	2	6
31.	,, floribunda, yellow, flowers and foliage abundant and beautiful	0	6
32.	,, floribunda pendula, yellow, graceful beyond description	0	9
33.	,, glandulosa, white	0	3
34.	,, glaucescens, yellow, foliage silvery white	0	9
35.	,, glomerata, yellow, very pretty and graceful	0	4
36.	,, grandis (true), one of the most beautiful of the A. pulchella section, producing deep golden balls	1	0
37.	,, graveolens, yellow, Willow-leaved foliage	1	0
38.	,, heteroclita, yellow, style of growth very handsome	0	9
39.	,, Hügeli, yellow, foliage silvery white, unusually handsome	0	9
40.	,, impressa, yellow, a distinct and splendid species (rare)	1	0
41.	,, ixiophylla, golden balls, graceful growing species	0	9
42.	,, juniperina, free flowering, straw-coloured flowers	1	6
43.	,, latifolia, yellow, very fine	0	4
44.	,, leptophylla, yellow	0	3
45.	,, leucocephala, yellow, a charming species	0	4
46.	,, linifolia, yellow, combining gracefulness and elegance	0	9
47.	,, longifolia, yellow, long slender leaves, handsome	0	4
48.	,, ,, magnifica, one of the most splendid Acacias in cultivation, with gorgeous clusters of bright yellow flowers, several inches in length (very rare)	1	6
49.	,, longissima glauca pendula, a most elegant variety, with long and graceful leaves ⅛th of an inch broad, and the branches from 3 to 4 feet in length, drooping gracefully like a Weeping Willow	1	6
50.	,, lophantha, pale straw, with handsome foliage	0	3
51.	,, ,, Newmani, yellow, handsome foliage	0	9
52.	,, ,, speciosa, yellow	0	6
53.	,, macrophylla, sulphur, leaves broad, a noble plant	2	0
54.	,, meisneri, yellow (fine new variety)	1	0
55.	,, nigricans, yellow (rare), habit and foliage exquisite	2	0
56.	,, ovata, yellow, flowers and foliage singularly handsome	2	6
57.	,, oxycedrus, yellow, fine distinct variety, with long spikes of flowers, remarkable habit (rare)	2	0
58.	,, paradoxa, deep yellow, free flowering, habit unique	0	6
59.	,, prostrata (diffusa), pale yellow, free flowering, dwarf variety	2	6
60.	,, quadrangularis, bright yellow, dwarf, free-flowering, and beautiful	2	0
61.	,, rotundifolia, yellow, curious and graceful	0	9
62.	,, sinuata, sulphur, distinct and remarkable (very rare)	0	9
63.	,, Sophora, yellow, splendid	0	6
64.	,, spectabilis excelsa, yellow, exquisite species (rare)	1	0
65.	,, strombulifera, yellow, leaves minute and beautiful	0	6
66.	,, trinervata, yellow, magnificent and free flowering	0	6
67.	,, verticillata, yellow, elegant	2	0

It will be observed that the preceding list embraces one of the most extensive and magnificent collections ever offered to the Public.

N.B. All packets of Flower Seeds sent post paid.

"CAUTION."—Under this somewhat significant title has appeared in the *Gardeners' Chronicle*, and other Gardening publications, the following by no means courteous paragraph :—

"*James Carter & Co. wish to caution their customers against the published statement of a Covent Garden House, in reference to themselves in conjunction with a supposed Agency (which never existed), as such statements are totally devoid of truth.*"

It is impossible not to understand that we are the House alluded to in the paragraph just quoted, and which has evidently been put forth with the view of damaging our commercial integrity. The kind of reliance to be placed on the above statement will perhaps be best judged from the following extract from Messrs. James Carter and Co.'s own Seed Catalogue of 1857, at page 31. (See also Wholesale Catalogue, Autumn, 1858) :—

"CARNATION AND PICOTEE SEEDS.

"JAMES CARTER AND CO. *have again the pleasure to submit to public notice the following splendid Collection received from their Sardinian Correspondent* (an Amateur of first-rate ability). *All the Seeds produce, upon an average, from 70 to 75 per cent. of fine double flowers.*"

Again, Messrs. J. C. & Co. have the following in an advertisement See *Gardeners' Chronicle*, Feb. 26, 1859, page 167 :—

"*Having observed their name mentioned in an advertisement in connection with a late correspondent.* [J. C. & Co.] *feel it their duty to state that preferring to have their Seeds from the Continental growers direct, one of the Firm have travelled during the past autumn with that object, and purposes doing so every season ; the services of the correspondent just alluded to are therefore dispensed with*"

Surely further evidence is unnecessary to prove the intimate connexion which existed between Messrs. James Carter & Co. and our Sardinian Correspondent who for many years supplied that firm with choice Seeds of Italian growth, and we feel certain that the high eulogium passed upon that gentleman, (viz. an Amateur of first-rate ability), is perhaps the best guarantee (if other than our own were required) that we can possibly offer to the public respecting the value of the Seeds we receive from that source.

In addition to the above the following has appeared in last week's *Gardeners' Chronicle* :—

"J. C. *& Co. have no doubt that the public will fully understand the object of a House that has recently gone into the Seed Trade making use of* JAMES CARTER *& Co.'s name.*"

In answer to this statement the heading of our Advertisement will be sufficient.

DWARF-TRAINED MORELLO CHERRIES,
AND
DWARF-TRAINED APPLES.

WM. WOOD AND SON invite especial attention to their large stock of the above, but more particularly to the Cherries, which they feel certain are quite unsurpassed; many of the Trees have from 7 to 12 branches, most regularly and beautifully trained, and measuring 7 feet across.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

SPLENDID PLANTS OF
STANDARD AND PYRAMIDAL PORTUGAL LAURELS.

WM. WOOD AND SON beg leave particularly to recommend the above to parties planting who may be desirous of producing an immediate effect in their gardens and pleasure grounds.

The Standards vary from 3 to 6 feet in height, and the diameter of the heads from 2 to 4 feet.

The Pyramidal Plants are perfect specimens, ranging from 4 to 8 feet in height. Prices will be given on application.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

TEA-SCENTED ROSES.

WM. WOOD AND SON invite attention to their very extensive and superior stock of the above, which they feel certain are unsurpassed in the Trade.

Dwarfs, from 48 pots .. .. .. per dozen 9s. to 12s.
,, in 6-inch or 24-pots .. .. ,, 24s. to 30s.
Specimen Plants, in 8-inch pots, for exhibition, each, 3s. 6d. to 5s.
DESCRIPTIVE CATALOGUES on application.
Woodlands Nursery, Maresfield, near Uckfield, Sussex.

NEW ROSES FOR 1860.

WOODLANDS NURSERY, MARESFIELD, NEAR UCKFIELD, SUSSEX.

WM. WOOD AND SON will be prepared to furnish early in April good strong Dwarf Plants in pots of the undernamed new Roses at 5s. each, retail, and 36s. per dozen to the trade.

HYBRID PERPETUALS.
Alexandrine de Belfroy
Admiral Nelson
Belle de Bourg-la-Reine
Duchesse de Magenta
Eugène Appert
Gloire de Lantenay
Louis Quatorze
Madame Boll
Madame Eugène Verdier
Madame Charles Crapelet
Madame Louise Carique
Madlle. Eugène Verdier
Mdlle. Bonnaire
Montebello
Princesse Clothilde
Princesse Impériale
Sénateur Vaisse
Souvenir de Montceaux
Triomphe de Lyon
Triomphe de Bagatelle
Vainqueur de Solferino
Victoire de Magenta
Victor Verdier

TEA-SCENTED.
Duc de Magenta
Madame de Sertot
Madame Blachet

WILD'S ORION MELON ... per packet 1s. 0d.
WILD'S PRIMULAS .. .. ,, 2 6
WILD'S CUCUMBER .. .. .. ,, 1 0
WILD'S (GILSON'S GLORY) PEA .. ,, 0 6

Agent for Robertson's Wizard Strawberry; Fisher, Holmes, & Co.'s Early Potato; Griffin's Alma Lettuce; Page & Toogood's Blight Composition.

THOS. WILD, The Primulary, Ipswich.

ARAUCARIA IMBRICATA, very fine plants, from 1 to 2 feet.
CEDRUS DEODARA, 2 to 3 feet.
CEDRUS DEODARA ROBUSTA, a very fine variety, 1½ to 3 ft.
CUPRESSUS FASTIGIATA, 2 to 3 feet.
,, LAMBERTIANA, 3 feet.
,, MACROCARPA, 3 feet.
THUJA AUREA, the golden Arbor-vitæ, extra fine plants, from 12 to 15 inches.

WM. WOOD & SON will be happy to furnish prices of the above on application.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

CATALOGUE.

YOUELL AND CO.'S GENERAL AND DESCRIPTIVE PRICED CATALOGUE for this season is now ready, and will be sent free on application.

It contains detailed Lists of Greenhouse Plants, Conifers, Shrubs, as well as all the newest introductions in Soft-wooded Plants.—Royal Nursery, Great Yarmouth, Norfolk.

TO THE MANAGERS OF PUBLIC SQUARES AND PARKS.—The Subscribers have 300 to 400 large bushy PURPLE LILACS, 6 to 7 feet in height, well adapted for immediate effect, which they can offer at a low price, also a quantity of bushy Evergreen PRIVETS.—J. WOOD & SONS, Old Kent Road, S.E.

SELECT NURSERY STOCK AT REDUCED PRICES.

WILLIAM JACKSON AND CO., Bedale, Yorkshire, beg to offer the following at the very low prices annexed, having a soil peculiarly suitable for the growth of all kinds of Trees and Shrubs. They are generally well rooted, and possess a stamina of hardy constitution seldom equalled in Nurseries.

12 scarlet and white Cydonia japonica	£0	9	0
12 scarlet new Persian Lilacs, very fine	0	12	0
12 scarlet new Persian Lilacs, standards	0	18	0
12 great flowered Lilacs, splendid variety, do. do.	0	12	0
12 Berberis Darwinii, very handsome 9s. to	0	12	0
12 best hardy Ghent Azaleas, 2 feet, with flower buds	1	0	0
12 Kalmia latifolia, new scarlet, very handsome, flowers freely in the north, from layers	2	2	0
12 splendid Rhododendrons, by name, 1 to 2 feet, neat growers, mostly with flower buds, scarlet, deep crimson, blush, and shaded salmon, bushy strong plants (per 100, 5l.)	1	0	0
12 best Tree Pæonia, of sorts, flowering plants	1	10	0
12 best Pæonia albiflora, in fine varieties, rich rose scented	0	12	0
12 Standard Roses, best varieties (per 100, 3l.) 9s. to	0	12	0
12 Dwarf Roses, budded, best varieties (per 100, 2l.)	0	8	0
12 Cedar of Lebanon, 3 to 5 feet (per 100, 5l.)	1	0	0
100 Roses, good strong plants, on own roots	1	5	0
100 do. do. Williams, double yellow ditto	2	2	0
100 evergreen and flowering Shrubs, 2 of a sort	2	0	0
100 Arbor-vitæ, 4 to 5 feet, fine plants, grown singly	3	0	0
100 Yews, 4 to 5 feet, perfect trees, very strong	4	0	0
100 Tree Box, of sorts, 3 to 4 feet, strong plants	3	0	0
100 Rhododendron campanulatum, 1½ to 2 feet, on own roots, very bushy, strong plants	6	0	0

TRANSPLANTED FOREST TREES, per 1000.
Tyrolese Larch, 2 to 2½ feet, 12s. 6d.; 2 to 3 feet, 15s.; 3 to 4 feet, 20s.
Norway Spruce Fir, 1 to 2 feet, 25s. per 1000.
True Memel Pine Fir, 1½ to 2 feet, 15s. per 1000.

FRUIT TREES, per dozen.

Apricots, trained, best Moorpark, strong plants	2	2	0
Apples, standard (per 100, 40s. to 50s.), and at 9s. to	0	12	0
Cherries, Pears, and Plums, standards 12s. to	0	18	0
Cherries, Mayduke and Morella, trained, strong	0	18	0
Asparagus, Giant, transplanted into lines, 3 years old, strong plants (3s. per 100), per 1000	1	5	0
Seakale, 3 years old, 3s.; 4 years old, per 100	0	4	0

A large quantity of ORNAMENTAL TREES and CONIFERS will be sold cheap.

The Trade supplied on reasonable terms. All goods are delivered free on the Railway. Large quantities of our Nursery Stock sent annually into the Southern Counties, and references to customers are kindly permitted.

FOREST TREES.

JOHN WATERER has to offer upwards of a Hundred Thousand of each of the following, from 2 to 4½ feet high, and all good rooted:—

CHESNUT	LARCH	BIRCH
HAZEL	ASH	ALDER
SCOTCH	LAURELS	WITHY, &c.

Samples with prices sent on application. Planting done by contract.—The American Nursery, Bagshot, Surrey.

FOREST TREES, &c.

H. AND R. STIRZAKER have to offer a very large quantity of the above good quality and well-rooted. Prices to the Trade on application.

Ash, 2 to 3 feet, 12*s.* 6*d.*; 3 to 4 feet, 17*s.* 6*d.*; 4 to 6 feet, 30*s.* per 1000.

Birch, 1½ to 2 feet, 20*s.*; 2 to 2½ feet, 30*s.* per 1000.

Chesnut, Horse, 2 to 3 feet, 25*s.*; 3 to 4 feet, 35*s.* per 1000.

Larch, 2 to 2½ feet, 15*s.*; 2½ to 3 feet, 17*s.* 6*d.*; 3 to 4 feet, 25*s.* per 1000.

Sycamore, 1½ to 2 ft., 14*s.*; 2 to 3 ft., 16*s.*; 3 to 4 ft., 20*s.* per 1000.

Solanum capsicastrum, 1 year old, good plants, 9*d.* each, or 8*s.* per dozen.—The Nurseries, Lancaster.

MAIDEN AND TRAINED FRUIT TREES.

JOHN ADAMS AND CO., NURSERYMEN, Brentford, beg to call the attention of the trade and the public generally to a fine stock of MAIDEN PEACHES AND NECTARINES, DWARF AND STANDARD TRAINED PEACHES, NECTARINES, AND APRICOTS, STANDARD AND DWARF TRAINED MAYDUKE AND MORELLO CHERRIES, AND GREENGAGE PLUMS; all of which are strong, full-trained trees, and cannot fail to give universal satisfaction. Prices to be had on application.—Brentford, Middlesex, Jan. 28.

JOHN GRIGOR AND CO., NURSERIES, Forres, Scotland, have for sale several millions strong 1-year Seedling LARCHES, 1 and 2-year Seedling true native Highland Scotch PINE, DEODARS, &c.

J. G. & Co. have received the numerous premiums awarded by the Highland and Agricultural Society of Scotland for the cultivation of the true native Highland Scotch Fir, and their present stock is raised from seed collected in the celebrated native forests of Strathspey. PRICED LISTS on application; and the Trade supplied at the wholesale rates.

SURPLUS STOCK.

JOHN CRANSTON offers the following TREES, which are well grown, and have been repeatedly transplanted:—

SILVER FIRS.—3 to 4, 4 to 5, 5 to 6, 6 to 8, 8 to 10, 10 to 12, 12 to 14 feet. The larger sizes take up with balls of earth, and are really fine specimens.

WEYMOUTH PINES, 6 to 8 and 8 to 10 feet. Very fine and well furnished.

TURKEY OAK, 8 to 10, 10 to 12, 12 to 14 feet.

CHICHESTER ELMS, WYCH ELMS, SYCAMORE, BLACK ITALIAN POPLAR, WEEPING BIRCH, from 8 to 14 feet in height.

The whole of the above are to be cleared this season, and will therefore be offered at low prices by the 100 or doz. as required. Prices given upon application.

Nurseries, King's Acre, near Hereford.

FOREST AND ORNAMENTAL TREES, &c.

THOMAS IMRIE AND SONS, NURSERYMEN, Ayr, beg to inform their customers and the Trade generally, that they have on hand the following well-grown plants, viz.:—

TRANSPLANTED FOREST TREES.

30,000 Alder, 2 to 4 ft.	300,000 Larch, 2-yr., 2-yr., 2½ to 3½ ft.
100,000 Beech, 1½ to 3½ ft.	20,000 do., 2-yr., 3-yr., 4 to 5 ft.
20,000 Oak, 2½ to 3½ ft.	400,000 Scotch Fir, 1-yr., 2-yr.
100,000 Oak, 1½ to 2½ ft.	200,000 do. 2-yr., 2-yr.
20,000 Ash, 2 to 3½ ft.	400,000 Spruce Fir, 2-yr., 2-yr., 12 to 18 inches.
10,000 Elm, 3 to 4 ft.	500,000 Thorns, 2 and 3-yr., strong.
20,000 Plane, 2 to 3 ft.	
20,000 Privet, 2½ to 3 ft.	
400,000 Larch, 2-yr., 1-yr., 12 to 20 inches.	

SEEDLINGS.

10,000 Ash, 2-yr.	20,000 Oak, 1-yr., drilled
500,000 Beech, 2 and 3-yr., drilled	20,000 Portugal Laurel, 1 ft.
1,000,000 Norway Spruce, 2-yr.	10,000 do. do., 2½ to 4 ft.
	20,000 Common Bays, 1 to 3 ft.

50,000 Rhododendrons, 6 inches to 4 feet.
and other Evergreens in great variety.

DWARF-TRAINED APPLES, PEARS, PEACHES, NECTARINES, AND APRICOTS, RIDER-TRAINED PEACHES, NECTARINES AND APRICOTS.

20,000 GOOSEBERRIES. | 5000 SEAKALE.
50,000 ASPARAGUS, 1, 2, and 3-years.
Prices on application.

SEED CATALOGUE SENT POST FREE ON APPLICATION.

GARAWAY, MAYES, AND CO.'S DESCRIPTIVE LIST of all the best and newest varieties of Garden and Flower Seeds, the best new Peas, Lee's new White Sprouting Broccoli, fine new Melons, Cucumbers, &c. Collections for large or small Gardens, 15*s.*, 20*s.*, 30*s.*, 40*s.*, 50*s.* to 60*s.*; containing all the most useful and approved kinds, the growths of which are all proved before being sent out.

G., M., & Co. also beg to call attention to their large stock of all the most approved kinds of Fruit Trees, fine trained Peaches, Nectarines, and Apricots. Extra large dwarf trained Pears, Plums, and Cherries, &c. A very large stock of Larch, Scotch Spruce, and other Forest Trees, Evergreens, and Flowering Shrubs, Coniferæ, American Plants, &c., separate CATALOGUES of which they will forward post free on application.—Durdham Down Nursery, Bristol, Jan. 28.

MESSRS. WATERER AND GODFREY respectfully refer planters to the following LIST of well-known good hardy Plants:—

ARAUCARIA IMBRICATA, 1 foot, stout, healthy, 5*l.* per 100; larger, up to 8 feet.

CEDRUS DEODARA, 2½ to 3 feet, very handsome, 10*l.* per 100; larger, in any quantity, up to 10 and 15 feet.

PICEA NOBILIS, Seedlings, in quantity, 1 foot, stout.

Ditto larger and in every way perfect plants, up to 4 feet.

NORDMANNIANA, from seed, 2, 3, 4, and 6 feet.

PINSAPO, 2½ to 3½ feet, and as much through.

Ditto magnificent plants, 8 and 10 feet high.

CUPRESSUS LAWSONIANA, fine bushy seedling plants, 2½ feet high.

JUNIPERUS, CHINESE, 3 feet up to 8 and 10 feet.

" IRISH, 5, 6, and 7 feet.

YEWS, IRISH, 5, 6, 7, and 8 feet.

" GOLDEN, from 2 to 7 and 8 feet.

" COMMON ENGLISH, in large quantities, 4 to 6, 7, and 8 feet.

THUJA AUREA.—Several hundred magnificent specimens, 3, 4, and 5 feet high, and measuring 10 to 15 feet in circumference.

THUJOPSIS CÆREOLIS, 2½ to 3 feet.

WELLINGTONIA GIGANTEA, all from seed, 1½ to 3 feet, and as wide.

HOLLY, GREEN, in quantities, 5, 6, and 8 ft.; VARIEGATED, especially the best gold striped, of all sizes, up to 6 feet.

All the plants referred to in this advertisement were removed in April last, and they are in a condition to travel any distance with perfect safety.—Knap Hill Nursery, near Woking, Surrey.

SUTTON'S BERKSHIRE HERO PEA.—

Wholesale Seedsmen from whom this celebrated Pea can be obtained:—

Nutting & Sons, 60, Barbican, E.C.
Batt, Rutley, & Co., 412, Strand, W.C.
Charlwood & Cummins, Covent Garden, W.C.
Noble, Cooper, & Bolton, 152, Fleet Street, E.C.
Minier, Nash, & Nash, 60, Strand, W.C.
Hurst & McMullen, 6, Leadenhall Street, E.C.

SUTTON & SONS, the originators of this new large Pea, retain in their own possession a stock for retailing. The price is 2*s.* 6*d.* per quart. Early orders will be necessary.

Royal Berkshire Seed Establishment, Reading.

NEW PEA.

NUTTING AND SONS having purchased the Stock of a NEW DWARF WRINKLED MARROW PEA, raised by Dr. Maclean, offer it for distribution in pint packets at 2*s.* each. NUTTING & SONS will grow it this season for next year's supply.

This Pea is remarkable for its earliness as a wrinkled Marrow, dwarf habit (2 feet), fine flavour, and great productiveness.

Seed Warehouses, 60, Barbican, London, E.C.

THE BEST LETTUCE IN ENGLAND.

COTTRELL'S NEW BATH COS, 1*s.* per packet. If not good the money will be returned. Also may be had True COTTRELL'S Champion Cabbage, 6*d.* per ounce. COTTRELL'S Sebastopol and COTTRELL'S Wonder Peas, 9*d.* per quart.

Before ordering your Seeds, get COTTRELL'S PRICE SHEET and LIST (for one stamp).—Wholesale and Retail Seed Warehouse, 15, Bull Ring, Birmingham.

ASPARAGUS.

YOUELL AND CO. having a large Stock of the above growing on the Sea Coast, of the finest quality, beg to offer it at the following prices:—

ASPARAGUS, GIANT, two years .. .. 2*s.* 6*d.* per 100.
" " three years .. .. 3*s.* 6*d.* "
" " four years, for forcing 5*s.* 0*d.* "

RHUBARB.—Myatt's Victoria, Myatt's Linnæus, Mitchell's Royal Albert, strong roots, 8*s.* per dozen.

Hawke's Champagne Rhubarb, 9*s.* per dozen.

Salt's Crimson Perfection do., 18*s.* per dozen.

Scarlet Nonpareil do., 18*s.* per dozen.

Artichokes, Globe and Pine-apple shaped, 6*s.* per dozen.

Dioscorea Batatas (Chinese Potato), 6*s.* per dozen.

All orders of 2*l.* and upwards are delivered Carriage Free to London, Manchester, Newcastle, and Hull, as well as to any Railway Station within 150 miles of the Nursery.

Royal Nursery, Great Yarmouth, Norfolk.

NEW AND RARE VEGETABLES, ETC.

CHARLES TURNER begs to direct attention to the following very desirable varieties, the majority of which he had the honour of introducing to the public:—

PEAS.

MACLEAN'S ADVANCER.—Early Wrinkled Marrow. The most useful Pea yet raised. 2 feet.

MACLEAN'S ESSEX RIVAL.—Second Early Wrinkled Marrow; 26 inches.

MACLEAN'S MIGNON.—Early Dwarf Marrow; 18 inches.

MACLEAN'S PROLIFIC.—Second Early Wrinkled Marrow, fine; 26 inches.

VEITCH'S PERFECTION.—Late Wrinkled Marrow; 3 feet.

ECLIPSE RUNNER BEAN.—Very prolific, and fine flavour. Highly recommended.

THE FROGMORE FORCING CAULIFLOWER, OR EARLY MAMMOTH.—Early, large, close, and fine. Much the best Cauliflower.

MELVILLE'S INCOMPARABLE BROCCOLI.—A fine white, will produce close heads 30 inches in circumference.

LEE'S NEW WHITE SPROUTING BROCCOLI.—Highly recommended.

THE FROGMORE PROTECTING BROCCOLI.—An excellent hardy late kind. Dwarf, and great size.

IMPROVED PURPLE CAPE BROCCOLI.—Hardy and firm, September to April, if sown in successions.

THE ROSEBERRY BRUSSELS SPROUTS.—A fine variety.

TURNER'S ECLIPSE CABBAGE.—Large, dwarf, and early.

GIANT OR AYTON CASTLE LEEK.—Very large, and mild.

STANSTEAD WINTER CABBAGE LETTUCE.—The best for autumn and winter supply.

TURNER'S COTTAGERS' KALE.—Well known; seed from the original stock.

TURNER'S SCARLET GEM MELON.—The best of its class, and the most easily grown.

DESCRIPTIVE CATALOGUE on application.

The Royal Nurseries, Slough.

NEW CUCUMBER "RIFLEMAN," a fine long hybrid Cucumber, fit for exhibition purposes. This is one of the finest varieties ever yet offered to the public, a splendid Black Spine, length 26 to 29 inches, a very free setter, and an abundant bearer, carrying its bloom well, and will be sure to give every satisfaction to all purchasers. Price 2*s.* 6*d.* per pckt.

DR. LIVINGSTONE CUCUMBER, sent out for the first time last season, a first-rate variety. 1*s.* 6*d.* per packet.

Also the following fine CUCUMBERS can be supplied at 1*s.* per packet:—Gen. Outram, Perfection, Sir C. Campbell, Gen. Canrobert, Phenomena, Ipswich Standard, Lord Kenyon, Essex Hero, Victory of Bath, Gordon's White Spine, Sunderland Wick, Hunter's Prolific, Mills's Jewess, Cheltenham Surprise, Manchester Prize, Sion House, Cuthill's Black Spine, Conqueror of the West, and Lynch's Star of the West.

NEW MELON "EMPRESS," a superb new hybrid variety crossed between the Bromham Hall and Golden Perfection. It is a green flesh, very handsome shape, beautifully netted, thin skin, flesh very solid, and of a most delicious flavour—weight of fruit 2½ to 3½ lbs.; the advantage it has is if planted at the same time as its parents, it will ripen its fruit a fortnight earlier. Seed, 2*s.* 6*d.* per packet.

QUEEN OF THE WEST MELON, sent out for the first tim last season, 1*s* 6*d.* per packet.

Also the following fine varieties of MELONS at 1*s.* per packet:—M'Ewen's Arundel Hybrid Scarlet-Flesh Gen. Havelock, M'Ewen's Arundel Hybrid Green-Flesh Monro's Crystal Palace, Hero, Monro's Golden Gage, The Queen, Orion, Golden Drop, Greengage, Bromham Hall, Incomparable, Golden Ball, Bowood, Victory of Bath, Cashmere, Cunerton Court, Beechwood, Windsor Prize, Emperor, Fleming's Hybrid, Persian, Blackall's Green Flesh, Bailey's ditto, Snow's Hybrid, Golden Perfection, and Scarlet King.

A packet of any var. of CUCUMBER marked at 1*s.*, sent with a pkt. of Rifleman for 3*s.*

A pkt. of any var. of MELON marked at a 1*s.*, sent with a pkt. of Empress for 3*s.*

A pkt. of Cucumber Rifleman and a pkt. of Empress Melon for 4*s.*

Extra fine mixed HOLLYHOCK seed, saved from all named vars.. 1*s* per pkt.

EARLY EMPRESS CELERY, the finest ever yet sent out, 1*s.* per pkt.

Tiley's SOLID WHITE CELERY, 6*d.* per pkt.

DELPHINIUM FORMOSUM, 6*d.* per pkt.

DIGITALIS, or FOXGLOVE, 20 vars.. 6*d.* per pkt.

A remittance must accompany all orders in cash or penny postage stamps.

EDWARD TILEY, Nurseryman, Seedsman, and Florist, 14, Abbey Church Yard, Bath.

NEW CUCUMBER—"CLAPHAM DEFIANCE."

CHARLES SOUTHBY in sending out the above begs to remark that it was raised by Mr. Barton, Gardener to Mrs. Wild, Clapham Common, and exhibited by him last season at the Surrey Amateur Floricultural Society's Show, where it obtained a Certificate of Merit and would have received First Prize, but the rules of the Society forbid such—the exhibitor not being a subscriber. Mr. C. Jessup, the Secretary, writes:—"This Cucumber shown by Mr. Barton is the finest specimen out this season, admired by all at the Show." It is an hybrid between Himalaya and Alliance, but a great improvement on either of the above, being much more hardy, greater cropper, and stands winter forcing well; in flavour it is unsurpassed; length 24 to 30 inches; 1*s.* 6*d.* per packet; double packets, 2*s.* 6*d.*—CHARLES SOUTHBY, Clapham, S.

HENRY'S PRIZE HYBRID LEEK.

DOWNIE AND LAIRD, NURSERYMEN and SEEDSMEN, 17, South Frederick Street, Edinburgh, having secured the whole stock of the above from Mr. Henry, are now sending it out in packets at 1*s.* postage free. This variety has gained upwards of 30 first prizes within the last two years, and obtained the first and second prizes at the Edinburgh Horticultural Society's Winter Show on Dec. 6, 1859, the Leeks then shown being described as extraordinary samples of culinary produce, measuring 7 inches in circumference and blanched fully 12 inches.

LAING'S MAMMOTH RED CELERY.—The largest and best flavoured Celery known, and will not run to seed until the second year. (See former advertisement.) Packets, 1*s.* each; large trade do., 3*s.* 6*d.*

New Australian Cress, 6*d.* per packet } per post pre-paid.
Cottager's Kale, true, 6*d.* per packet } Postage stamps received in payment.—Royal Nursery, Great Yarmouth.

WM. IVERY has great pleasure in offering his NONSUCH CELERY, being far superior in flavour to any other variety in cultivation, 1*s.* per packet; price per lb. to the Trade upon application. Many testimonials have been received, too numerous for insertion. The two following are among the number, which W. I. thinks will be a sufficient guarantee to those unacquainted with this superior variety:—

"Park Hill, Streatham, Feb. 8, 1858.

"Dear Sir,—If the Celery under the name of Nonsuch which I see you are advertising is the same you gave me plants of last season, I shall be greatly obliged if you would send me a large packet of it, as I am so pleased with it that I do not think I shall grow any other if I can obtain that.—Yours truly,

"THOS. PAGE, Gr. to W. Leaf, Esq."

"Casina Cottage, Dulwich Hill, Dec. 20, 1859.

"Mr. Ivery, Sir,—Please send me a large packet of your Nonsuch Celery, as I intend growing no other variety, having tried many different sorts, but find yours much superior to them all, inasmuch as it keeps longer and is of better flavour.—Yours truly, GEORGE YOUNG, Gr. to W. H. Stone, Esq."

Also IVERY'S NONSUCH LETTUCE, 1*s.* 6*d.* per packet, the best summer variety in cultivation.

Hanover Nursery, Peckham, near London, S.E.

FOX COVERT.

J. MORRISON AND SON, NURSERYMEN, &c., Montcoffer, Banff, N.B., can supply noblemen and gentlemen planting coverts with fine 2-year old GORSE or FURZE PLANTS at 7*s.* 6*d.* per 1000.

Also fine plants of MAHONIA AQUIFOLIUM and LETCESTERIA FORMOSA, the best plants for pheasant food.

NEW STRAWBERRY, WIZARD OF THE NORTH.

DANIEL ROBERTSON, LINSIDE NURSERY, Paisley, continues to supply the above named superb variety at 63*s.* per 100, or 9*s.* per dozen, the usual discount to the trade. Having a large stock of the Wizard, Nurserymen and Market Gardeners ordering in quantity will be dealt with on favourable terms. As much imposition is being practised in the name of the Wizard, purchasers are warned that they ought to see the drawing of it in the hands of any one from whom they buy plants, as all parties selling the genuine variety will be furnished with a drawing. For description, &c., see former advertisements.

D. R. cannot supply any more plants of Nonsuch this season.

DANIEL ROBERTSON, Linside Nursery, Paisley, N.B.—Jan. 28.

A. SCOTT, of Leigh Park Gardens, Havant, begs respectfully to acquaint the nobility, clergy, and gentry of the neighbourhood of Chichester, and all patrons of Horticulture that he has taken the undermentioned old established Nursery, conducted so many years by (the proprietor) Mr. Silverlock, and lately by Mr. Graham, and trusts by fidelity and prompt attention to all orders to merit a continuance of that patronage so liberally bestowed on his predecessor.

North Gate Nursery, Chichester.—Jan. 28.

TO THE TRADE.

FINE HEALTHY HOLLYHOCKS, READY FOR IMMEDIATE DELIVERY.

BOWLER AND WARD have a large stock of hardy plants, consisting of the finest varieties in cultivation, and will be glad to supply the Trade in quantities at much below the usual trade discount. (Price on application.) They wish to acquaint their friends and the Trade generally that their stock has never been subject to disease, and every plant is guaranteed perfectly healthy.

Ipswich Rosery, Foxhall Road, Ipswich.

MESSRS. J. & H. BROWN offer the following selection of choice PLANTS, which they will forward to any part:—

		s.	d.
	Andromeda floribunda, winter flowering, per doz ..	15	0
25	Azaleas, new hardy Belgian varieties, one of a sort, on their own roots, by name, well set for bloom, fine for beds or pot culture for forcing	20	0
25	Azaleas, hardy American varieties, do. do. ..	15	0
12	hardy Rhododendrons, including red, white, and rose colour	12	0
	Fine hardy Scarlet Rhododendrons, 2 feet, for beds, per dozen..	10	0
	New Yellow Rhododendrons, each, 3*s.* 6*d.* to.. ..	5	0
	Roses, best sorts, Standards and Half-standards, per dozen, 12*s.* to	15	0
	Climbing Roses of best sorts, rapid growers, per doz.	6	0
6	fine hardy Magnolias, one of a sort	12	0
	Greenhouse Azaleas, fine varieties, per doz., 10*s* to..	12	0
	Camellias, best double varieties, well set with buds, per dozen	25	0
24	Epacris and Ericas, one of a sort, in small pots ..	18	0
	Hyacinths and other Dutch Bulbs of all kinds, cheap.		

FRUIT TREES.

	Fine Standard and Dwarf-trained Peaches, Nectarines, Apricots, Cherries, Plums, and Pears, each, 2*s.* 6*d.*; or per dozen	24	0
	Dwarf plants of all the above kinds, grown especially for pot culture in orchard-houses, &c., per dozen	18	0
	Best sorts of Gooseberries, Currants, and Raspberries, per dozen	3	0
	Mulberries, Medlars, Quince, and Walnuts, each ..	2	0
	Filberts, Red and Thin-shell, per dozen	2	0
	Choice Grape Vines from eyes and layers, strong.		
	Evergreen Shrubs and ornamental Trees of all kinds, cheap.		

Albion Nursery, Stoke Newington, London, N.

JOHN KERNAN, 4, Great Russell Street, Covent Garden, W.C., respectfully announces that his present Stock embraces the choicest of VEGETABLE and FLOWER SEEDS, including every recent introduction worthy of cultivation. His Stocks and Asters, which for so many years have given such general satisfaction, will be found owing to the late brilliant summer very superior in quality. All seeds sold at his Establishment are warranted genuine, and require no puffing, as saved expressly for him by a Sardinian Correspondent in Italy, as he makes it his rule to purchase each sort of seed only from its best growers in climes most congenial to the bringing it to perfection. J. K. does not advise Collections of Vegetables so generally advertised and recommended by Amateur Guides, as he has invariably found that more than half the articles supplied must turn out useless, and in lieu strongly recommends parties to make their own selections, or to consult their gardeners, to whom as professional men such advertisements are gratuitous insults. J. K. having received many letters respecting the destruction of the Turnip crops by the late frost, takes this opportunity of offering his services in procuring genuine Linseed cake from the best manufacturers. Locust Beans (beneficial for sheep), Lentils, Indian Corn, Tares, Vetches, finest seed Chevalier Barley, Grasses of every description separate or mixed, Trefoil, Lucerne, Holcus saccharatus (with Treatise on the Culture of this new Sugar Grass), &c., on most reasonable terms. CATALOGUES on application.

CHOICE FLOWER SEEDS.—Six packets of the following select ANNUALS will be forwarded, post free, on receipt of 36 postage stamps, viz. :—Eucnida cartoniöides, Phlox Drummondii (new crimson), Portulacca (4 vars.), Lobelia speciosa, Acroclinium roseum, and Zinnia elegans.

In answer to inquiries, J. B. intends sending out his CALCEOLARIA "YELLOW DEFIANCE" the first week in March.—JOHN BUXTON, Florist, Wandsworth Road, S.W.

DESCRIPTIVE CATALOGUES OF FRUIT TREES, FOREST TREES AND SHRUBS, GARDEN AND OTHER AGRICULTURAL SEEDS, are now ready and will be sent to all applications by J. SCOTT, Merriott Nurseries, Crewkerne, Somerset.

N.B. Fine specimen Irish YEWS, DEODARS and other CEDARS, WELLINGTONIAS, ARAUCARIAS, CRYPTOMERIAS, and other choice Coniferæ. Prices very moderate.

SCOTLAND.

W. DRUMMOND AND SONS, SEEDSMEN, Stirling, N.B., beg to intimate that their "short and sensible" DESCRIPTIVE CATALOGUE OF VEGETABLE AND FLOWER SEEDS is now ready, and may be had post free on application.

N.B. All parcels of Seeds, with certain limitations, are delivered carriage free to the principal Shipping Ports and Railway Stations throughout the United Kingdom.—Seed Warehouses. Stirling, N.B., and 58, Dawson Street, Dublin.

NEW SEED CATALOGUE.

MESSRS. JOHN AND CHARLES LEE beg to inform their friends and the public that their NEW DESCRIPTIVE SEED CATALOGUE FOR 1860 may now be had post free on application.

Mr. JOHN LEE continues to devote himself especially to this important branch of their business, for which their house has been so long celebrated in the selection of SEEDS from the most genuine stocks at home and abroad.

Nursery and Seed Establishment, Hammersmith, London, W. EXPERIENCED GARDENERS RECOMMENDED.

GARDEN SEEDS.

THOMAS KENNEDY AND CO., NURSERYMEN and SEEDSMEN, Dumfries, are now prepared to execute orders for VEGETABLE AND FLOWER SEEDS, and will be glad to forward their NEW DESCRIPTIVE CATALOGUE postage free to any address.

FREE DELIVERY.—All parcels of Seeds above 30*s.* value will be delivered free of carriage to the chief Railway stations in England and Scotland and principal steam ports in Ireland.

NOTICE.

WILLIAM CHATER informs his friends that in consequence of the late severe frost (which has killed the greatest part of the plants), he must decline sending out the undernamed superb named Double HOLLYHOCKS, viz : Leonora, Competitor, Satirist, Hon. Katherine Neville, Imperial, Margaret, Field Marshal, and optima.

All orders W. C. has received will be carefully booked and reserved till he is enabled to execute the same.

N.B.—W. C. possesses a large stock of the older varieties and other finest new varieties in his Catalogue, which he trusts to be able to supply in the spring.

Grove Nurseries, Saffron Walden, Essex.

GENERAL SEED ESTABLISHENT, SUDBURY, SUFFOLK.

Seeds of the new crop supplied of the choicest in cultivation and at the lowest prices for first quality.

CATALOGUES SENT FREE, which contain the best new Vegetables and Flower Seeds, with much valuable information for culture.

COLLECTIONS OF VEGETABLE SEEDS.

Those of which the Collections consist are stated in the Catalogue, comprising many new and valuable sorts. The collections will be found the cheapest offered—

No. 1, 60*s.* ; No. 2, 40*s.* ; No. 3, 25*s.* ; No. 4, 15*s.* ; No. 5, 10*s.* 6*d.*

Lee's New White Sprouting Broccoli, 2*s.* 6*d.* per packet.

New Champion of England Broccoli, very large and last of the summer Broccolis, 1*s.* per packet.

Large Giant Madeira Onion, 8*d.* per oz ; New Australian Cress, 3*d.* per oz. ; Large Rouen Leek, largest grown, 1*s.* per oz.

Improved large White Cos Lettuce, very superior in size and quality, splendid, 3*s.* per oz.

New Champion of Scotland, Thorne's Royal Britain, and Veitch's Perfection Peas.

SPERGULA PILIFERA SEED, packets 6*d.*, 1*s.*, 2*s.* 6*d.*, and 5*s* ; also a large stock of the plants supplied in any quantity, with instructions.

COLLECTIONS OF CHOICE FLOWER SEEDS.
(Post free with instructions.)

These Collections contain the novelties of the season, and each collection is stated in the Catalogue.

HARDY ANNUALS, containing novelties, 100 varieties, 10*s* ; 50 varieties, 8*s.* 6*d.* ; 30 varieties, 5*s.* 6*d.* ; 20 varieties, 4*s.*

HALF-HARDY ANNUALS, containing novelties, 100 varieties, 20*s* ; 50 varieties, 12*s.* 6*d.* ; 30 varieties, 8*s.* 6*d.* ; 20 varieties, 6*s*

GREENHOUSE ANNUALS, containing novelties, 20 varieties, 7*s.* 6*d* ; 12 varieties, 5*s.*

The 250 Varieties of Hardy, Half-hardy, and Greenhouse Annuals, 42*s*

The 125 Varieties of Hardy, Half-hardy, and Greenhouse Annuals, 21*s*

BULBS FOR SPRING PLANTING.—A large and superior collection at very reduced prices. See Seed Catalogue.

FRUIT TREES OF ALL THE CHOICE POPULAR SORTS, with a large number of the best of recent introduction, also General Nursery Stock at very low prices.

Goods (20*s.* and upwards) CARRIAGE FREE, as see Catalogue.

STEPHEN BROWN, SEEDSMAN and SEEDGROWER, Sudbury, Suffolk.

SUPERB DOUBLE BALSAMS.

F. AND A. SMITH are now sending out SEED of their superb BALSAMS, which are unrivalled for size, form, brilliancy of colour, doubleness of flower, and habit of plant.

In collections of nine separate colours	2*s.* 6*d.*
,, ,, mixed ,, ...	2 0
,, ,, ,, ,, half quantity..	1 0

☞ The above are genuine only in our sealed packets, and may be had of most respectable Nurserymen and Seedsmen in the United Kingdom.—Dulwich, Surrey, S.

ROBERT NEAL, NURSERYMAN, Wandsworth Common, S.W., begs to call the attention of buyers to his large and well-selected stock of EVERGREENS and FLOWERING SHRUBS, ORNAMENTAL TREES, AMERICAN PLANTS. FRUIT AND FOREST TREES, STANDARD AND DWARF ROSES of every description. A large stock of BOX-LEAF EVERGREEN PRIVET, from 1 to 6 feet for hedges ; GREEN HOLLY, 1 to 6 ft. ; RICH BOG and LOAM for American Beds ; LEAF MOULD. The Nursery is 10 minutes' walk from Clapham Common, and New Wandsworth Station, Crystal Palace Line.

CHOICE SEEDS.

Asters (Betteridge's), fine quilled, in 12 distinct varieties, with hints for their culture, 2*s.* 6*d.*
Celosia aurea pyramidalis, 2*s.* 6*d.*
,, crimson variety, 2*s.* 6*d.*
Cineraria, from finest named kinds, 2*s.* 6*d.*
Dianthus sinensis Heddewigi, 2*s.* 6*d.*
,, ,, laciniatus, 2*s.* 6*d.*
Hollyhock, mixed, from finest named sorts, 1*s.* 6*d.*
Pink, from choice show flowers, 1*s.* 6*d.*
Primula sinensis fimbriata, mixed, 2*s.* 6*d.*
Pelargonium, large, French and fancy, 2*s.* 6*d.* each.
Rhododendron Edgworthi, 5*s.*
,, ciliatum, 2*s.* 6*d.*
Solanum capsicastrum, 2*s.* 6*d.*

CHARLES TURNER, Royal Nurseries, Slough.

HORTICULTURAL AGENT AND VALUER.

MR ALFRED CHANDLER, (of the late firm of CHANDLER & SONS,) 28, Priory Road, Wandsworth Road, S.

CHEAP PLANTS.

F. GODWIN, previous to removing to his new Nurseries, offers as under in good plants :—

	Each—*s.* *d.*
Allamanda paraguayensis	1 6
Asplenium fœniculacea ..	1 0
Begonia grandis	1 6
,, Madame Wagner ..	1 0
,, picturata	2 6
,, Prince Troubetzkoy	1 0
,, Rex	0 6
,, splendida	1 0
,, ,, argentea ..	1 0
,, semperflorens Ingrami ..	1 0
Caladium bicolor	1 0
,, pictum	1 6
Cattleya Forbesi 2*s.* 6*d.*,	5 0
Croton variegata	1 0
Cycas revoluta	3 6
Cypripedium barbatum ..	7 6
,, insigne	3 6
Dendrobium nobile ..	3 6
,, strong..	7 6
Dracæna terminalis 1*s.*,	1 6
Drynaria morbilosa ..	3 6
Franciscea confertifolia ..	1 6
Gardenia radicans.. ..	1 0
Gesneria cinnabarina ..	1 0
,, Donckelaari.. ..	3 6
,, densiflora	2 6
,, Merki..	1 6
Hoya carnosa	1 0
,, ,, variegata ..	1 6
Hexacentris lutea.. ..	1 0
,, mysorensis	1 0
Locheria magnifica ..	1 0
Meyenia erecta	1 0
Nephrolepis pectinata ..	1 0
,, phillites	1 0
Oncidium Papilio	5 0
Thunbergia grandiflora ..	1 0
Thyrsacanthus rutilans ..	1 0
Abelia floribunda	1 0
,, uniflora	1 0
Acacia cultriformis ..	1 6
,, grandis	1 0
,, lineata	1 0
,, Riceana .. 6*d.*,	1 0
Aphelexis macrantha purpurea	1 0

	Each— *s.* *d.*
Aphelexis rupestris .. ,, ,, gr ,, sesamoides .. ,, ,, nova.. .. ,, spectabilis ..	1 0
Bossiæa Hendersoni ..	1 6
Bouvardia longiflora ..	0 6
Brachysema acuminata ..	1 0
Chorozema flava ,, cordata splendens ,, ,, elegans ,, Laurenciana ,, varia Chandleri	0 9
Cerapetalum gummiferum	1 0
Coronilla glauca variegata	1 0
Daviesia latifolia	1 6
Dracophyllum gracile ..	1 6
Desfontainea spinosa ..	1 0
Epacris, fine strong plants	1 0
Eugenia Ugni, small, 3*s.* per doz., or 20*s.* per 100.	
Farfugium grande.. ..	1 0
Gnidia lævigata	1 0
Hydrangea japonica variegata	0 6
Hydrangea japonica aurea superb	1 0
Isolepis gracilis	1 0
Kennedya monophylla variegata	1 0
Kennedya rubicunda ..	1 0
Leschenaultia Baxteri ..	1 0
Oxylobium Pulteneæ ..	1 6
,, Osborni	1 0
Phænicoma prolifera ..	1 6
Rhododendron jasminiflorum	2 6
Stylidium bellidifolium ..	1 0
Tremandra ericoides ..	1 0
,, verticillata	0 9
Tristania nerifolia.. ..	1 0
Tropæolum tricolorum, strong bulbs .. 1*s.*,	1 6
Vaccinium erythrina ..	1 6
Weinmannia trichosperma	1 6
Zichya microphylla ..	1 0

ACHIMENES—Ambroise Verschaffelt, Bouché, Carl Wolferth, Dentonia, Dr. Buenzod, Dr. Hopf, Edmond Bossier, Parsonsi, rosea elegans, rosea magnifica, Sir Treherne Thomas, violacea semi-pleno. TYDEAS.—Dr. Picouline, Eckhautei, gigantea, Ortgiesi. NÆGELIA.—Amabilis, at 1*s.* per pot, 10*s* per doz ; the collection 12*s.*

GLOXINIAS, strong bulbs.—Charles Dickens, Corinne, Garland, Heliodorus, Murillo, Orion, Perugino, Parmegiana, Premier, Prima Donna, Raphael, Rosy Circle, Salamander, Thalia, 1*s.* each, 10*s* per doz.

GLOXINIAS ERECTA, strong bulbs.—Auricula, Castilloni rosea, Comte de Neipperg, Duchesse de Brabant, Eclipse, Donna Colonna, Etoile du Bower, fulgens, Guido Reni, Kermesina, Lady Gerard, Lady C. G. Lennox, Lady E. Stanley, Lady K. Hamilton, Lady S. Murray, Lady V. Noel, Minerva, nigricans, pavonia, Souvenir d'Aylesford, 1*s.* each, 10*s.* per doz. ; or the collection of 34 varieties, 25*s.*

AZALEAS INDICA—Amœna, amœna lateritia, Adelaide de Nassau, Barclayana, Chelsoni, Duc de Nassau, Duke of Wellington, Eulalie van Geert, Gledstanesi formosa, Holfordiana, illustris nova, Juliana, lateritia elegans, Mdlle. Victorine Vatel, Mrs. Fry, perfecta elegans, Princesse Frederike von Dessau, Princess Mary of Cambridge, Roi Leopold, speciosissima, Symmetry, teutonica, The Bride, 1*s.* each ; the collection, 17*s.* 6*d.*

FUCHSIAS of 1859, 6*s.* per dozen.

GERANIUMS.—Messrs. Turner and Rollisons', 1859, 24*s.* per dozen.

GERANIUMS.—Aulis, Candidate, Constantine, Countess of Orkney, Etna, Fairest of the Fair, Fancy, Julia, Minnie. FRENCH OR SPOTTED VARIETIES.—Alphonse Leroy, Boule d'Hortensia, Comte de Morny, conspicuum, Dame de la Halle, Diamond, Eugène Duval, Frederick Mouner, Géant des Batailles, Grand Duchesse Stephanie, Guillaume Severeyns, Impératrice Eugenie, L'Avenir, Madame Domage, Madame Rendatler, Mazeppa, Monsieur de la Gulliserie, Minerva, Paul et Virginie, Prince Jerome, Prince Napoleon, Princesse Mathilde, Reine Hortense, Stuart Low, Virgine, Miellez, William Bull, 1*s.* each ; 10*s.* per doz.

GERANIUMS, fine, other varieties, 7*s.* per doz. ; 50*s.* p. 100.
,, fancy, fine, of sorts, 4*s.*
,, variegated, Flower of the Day, 3*s.* per doz.

PHLOXES, fine, of sorts, 4*s.* per doz. ; 25*s* per 100.

CARNATIONS AND PICOTEES, fine assortment, 1*s.* per pair ; 75*s.* per 100 pairs.—Broadfield Nurseries, Sheffield.

HOLLYHOCK SEED.

A. PAUL AND SON beg to offer collections of their HOLLYHOCK SEED in sealed packets, free by post.

FIRST QUALITY, 5*s.* per packet of about 500 Seeds, containing 12 good and distinct named sorts in 12 separate papers, with names and colours.

SECOND QUALITY good mixed Seed ; 1*s.* to 2*s.* 6*d.* per packet.

A liberal discount to the Trade.

N.B. A list of SELECT Seeds free by post.

Nurseries, Cheshunt, Herts.

SURPLUS STOCK OF BULBS.—The following for 21*s.* or half for 10*s.* 6*d.* :—30 Hyacinths, 30 Polyanthus Narcissus, 100 Double Tulips, 100 Single Tulips, 300 Crocus, 50 Border Narcissus, 10 Double Jonquils, 25 Large Single Jonquils.—BUTLER & MCCULLOCH, Covent Garden Market, W.C.

FLOWERING PLANTS.

F. AND A. SMITH have now in Bloom Azalea indica, Cinerarias, Cyclamen, Cytisus, Deutzia gracilis, Dielytra spectabilis, Erica Willmorea, Leschenaultia formosa, Primula, Tulips in variety, &c., at reasonable prices ; as the season advances other varieties will be quoted.—Dulwich, Surrey, S.

NOTICE.

MR. R. A. ARNOTT, late of the firm of Messrs. Milne, Arnott, & Co., of Vauxhall, begs to inform his friends that he has been elected to an appointment in the establishment of Messrs. PETER LAWSON & SON, and will feel obliged by all communications intended for him being addressed to him at 1, George IV. Bridge, Edinburgh.

TO THE SEED TRADE.

EARLY MAZAGAN BEANS.—DICKSON'S FAVOURITE (EARLY) PEA.

Price on application.—W. MINCHIN & SON, Hook Norton. Oxon.

GRIMSTONE'S EGYPTIAN PEA is sold only in packets, signed, sealed with his arms on outside, with vignette of this delicious Pea of the time of the Pharoahs. Every packet contains the letters of Sir Gardiner Wilkinson, F.R.S., the Egyptian traveller who presented the vase to the British Museum. This Prolific Vegetable should invariably be planted thus . . . . one in each hole, as directed within every packet of 1*s.*, 2*s.* 6*d.*, 5*s.*, 10*s.* each.

*** Remember none are sold loose.—WILLIAM GRIMSTONE, Herbalist ; Depôt, 52, High Street, Bloomsbury, London, W.C

SOLANUM CAPSICASTRUM.—Seeds of this extremely ornamental plant from the free fruiting specimen exhibited at the Horticultural Society's Rooms, and specially noticed by Dr. Lindley in a Leading Article (see *Gardeners' Chronicle*, Dec. 17, 1859, page 1016), can be had as follows :—Packets containing 30 seeds sent, Post-paid, on receipt of 12 Postage stamps.—GEORGE MACINTOSH, High Road, Hammersmith, W.

AMERICAN PLANTS, &c.

MESSRS. WATERER AND GODFREY'S CATALOGUE for the present season is now ready, and may be had on application. It describes fully all Rhododendrons worth growing, and contains a List of Azaleas, Hardy Heaths, and other American Plants, as well as a summary of the general stock of the most extensive Nurseries in England.

The Catalogue may also be had at Messrs. MAY'S & Co., 1, Wellington Street, Strand, W.C.

Knap Hill Nursery, near Woking, Surrey.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their PRICED AND DESCRIPTIVE CATALOGUES of Exotic Orchids, Stove, Greenhouse, and Hardy Ferns, Miscellaneous Stove, Greenhouse, and Hardy Plants, Variegated and Ornamental Foliaged Plants, Conifers, Roses, Rhododendrons, Indian Azaleas, Gloxinias, Fuchsias, Geraniums, Herbaceous Plants, Fruit Trees, &c., are now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

FERNS AND LYCOPODS.—250 sorts of Ferns and 30 sorts of Lycopods, at 6*s.*, 9*s.*, to 12*s.* per dozen sorts.

Also 50 sorts of the most ornamental-foliaged BEGONIAS, at 6*s* , 9*s.*, and 12*s.* per dozen sorts.

40 sorts best GLOXINIAS, upright flowering and others, 6*s.* to 9*s.* per dozen sorts, selection being left to

J. SCOTT, Merriott Nurseries, Crewkerne, Somerset.

PLANT THIS MONTH.

CAREY TYSO, FLORIST, &c., Wallingford, Berks, offers from his unrivalled Collection healthy FLOWERING ROOTS as under, by post :—

	£ *s.* *d.*
RANUNCULUSES—100 splendid named sorts, 40*s.* to	4 0 0
,, 100 fine mixed, 5*s.*, 8*s.*, 15*s.*, and	1 0 0
,, 25 Tyso's choice Seedlings, 25*s.* to	1 15 0
DOUBLE ANEMONES—50 fine varieties, 10*s.* 6*d.* and	0 13 0

New Treatise on RANUNCULUS, post free, for seven labels.

Do. ANEMONES for four labels.

Imported German Seeds, choice named Asters, Balsams, Stocks, Larkspurs, Wallflowers, Zinnias, &c., in 1*s.* and 2*s.* 6*d.* assortments.

ROOT and SEED CATALOGUES free for one label.

NEW AND CHOICE PLANTS.

JOHN STANDISH, in offering the following Plants, can assure his customers that they are now in fine condition for sending out :—

MYOSOTIDIUM NOBILE, or Antarctic Forget-Me-Not, each 31*s.* 6*d.*—This plant, from the Chatham Islands, is one of the most remarkable that has been introduced for some years, being totally distinct from all others. It has large thick leaves, 8 or 9 inches across, of a dark glossy green, and sends up magnificent trusses of bloom of the most beautiful blue and white, similar to a Forget me not, but of a giant form. A Drawing of it is published in Curtis's "Botanical Magazine" for September. A description taken from the above is also published in the *Gardeners' Chronicle* of Sept. 17, 1859, wherein Dr. Lindley says :—"This is the handsome perennial provisionally named Cynoglossum nobile by Dr. Hooker in our last year's Volume, page 240. It is quite deserving all the encomiums that have been passed upon it."

GLADIOLI, named varieties, from the choicest and largest collection in England, 6*d.* to 5*s.* each. Also a fine lot of bulbs raised from seeds saved from the best flowers, all of which will flower in the summer of 1860. 7*s.* 6*d.* per dozen, or 50*s.* per 100. These are strongly recommended.

RHODODENDRON LIMBATUM.—Pale blush, bordered with bright crimson. This has received several medals at the exhibitions for Rhododendrons, being very distinct and one of the most free flowering. 21*s.* each.

RHODODENDRON MINNIE.—White, very large blotch of chocolate-coloured spots, a fine flower, and remains a very long time in bloom. This is one of the most curiously marked Rhododendrons amongst all the white ; it bears a noble truss of blooms, which cannot fail to be admired. 21*s.* and 31*s.* 6*d.* each. Selections can be made from one of the finest collections in Europe.

PHLOX MRS STANDISH.—The purest white, with a large red eye, 5*s* each. Also a large collection of the finest kinds which J. S. has shown during the last season and in every case received the First Prize. Plants from 1*s.* to 2*s.* 6*d.* each

A CATALOGUE containing a full description of the best Hardy Plants in cultivation will be forwarded on application to

The Royal Nursery, Bagshot.

MESSRS. E. G. HENDERSON & SON

RESPECTFULLY ANNOUNCE THEIR

SEED CATALOGUE FOR 1860.

INCLUDING comprehensive and Select LISTS OF FLOWER AND VEGETABLE SEEDS, in sections of Hardy, Half Hardy, and Tender Annuals and Biennials, with Perennial, Herbaceous, Alpine, and Tree species, comprising numerous accurate and practically descriptive Notes of the most novel and beautiful varieties for the season, also additional papers of recent valuable evidence in favour of

SPERGULA PILIFERA

as an efficient substitute for Grass (without mowing) on Lawns, Terraces, &c., together with an able defence of Alpine Vegetation in its most essential conditions for surface-growth in garden embellishment.

Seed packets, 6d., 1s., 2s. 6d., and 5s. each. Established tufts or plants, 8s. and 16s. per 100.

Florist Flowers of First-class Quality.

The continued advance and improvement which has taken place in Horticulture amongst that class of Florist Flowers, which contribute to the decoration of the Greenhouse and Conservatory, demands that the selection of seeds for their reproduction should be proportionately careful with regard to their respective forms, substance, colours and doubleness, without which, seminal varieties are not worth the trouble imposed in their growth, and involve the sacrifice of time, money, and interest.

The following kinds are saved from first class selections, including the finest foreign and home raised varieties, and are offered as genuine productions obtained from the most ornamental and effective species and varieties in each section or tribe:—

GERANIUM.—The seed here offered has been saved from our own collection, and as it contains only the best in cultivation, the amateur cultivator is sure to obtain flowers equal to the novelties sent out up to the present day. See "Seed Catalogue" for lists of English, French spotted, and fancy flowers.)

PRIMULA SINENSIS FIMBRIATA.—This is one of the most popular, and, when finely fringed, one of the most beautiful of all winter and spring flowering cool greenhouse plants in cultivation, but much depends on having the true fringed variety, and otherwise of good quality; the ordinary fringed flowers are very inferior compared with those large flowers that much resemble a semi-double one, and with crimson-coloured petals of such depth and substance, that one can scarcely reconcile one's ideas that this is only obtained by high culture, and for successive years selecting the finest of each season to breed from. White and crimson, separate or mixed, each 2s. 6d.

AURICULA	1s. 6d.
CALCEOLARIA, Herbaceous or large-flowered	2 6
,, Shrubby or bedding	2 6
CARNATIONS, Mixed, comprising all colours	2 6
,, Yellow grounds	2 6
,, Picotees	2 6
,, Tree or Perpetual-flowering	2 6
CINERARIA	2 6
CYCLAMEN, saved from our private collection	2 6
GERANIUM—Show Flowers	2 6
,, French, five petals spotted	2 6
,, Fancy flowers	2 6
HOLLYHOCKS	1s. and 1 6
MIMULUS VARIEGATUS	1 0
PANSY or HEARTSEASE, Show flowers	1 0
,, ,, new varieties	2 0
,, ,, Fancy ,,	1 0
,, ,, French, blotched and striped	2 0
PETUNIA, new, mottled, blotched, and striped	1 6
,, choice mixed	1 0
PINKS, from named flowers	1 6
POLYANTHUS	1 6
VERBENA	1s. and 1 6

New Flowers of Special Interest for 1860.

In offering seeds of the following beautiful and rare plants for the ensuing year, Messrs. E. G. HENDERSON & SON have selected the following species and varieties as the most desirable from continental and home sources.

The most valuable novelties of the season, and attached to which the greatest amount of interest and ornament will be derived, are fully described as follows:—

LINUM CANDIDISSIMUM, snowy white-flowered Flax.—The entire stock of this elegant species of Flax was purchased from A. Henderson & Co., of the Pine-apple Place Nursery. A very handsome, dwarf, bushy, hardy, annual plant, from the settlement of Canterbury, in New Zealand; it is distinguished by its compact branching habit of growth, 12 inches in height, with a profusion of flowers similar in outline but larger than the fine Linum grandiflorum rubrum, and of a pure transparent snow white colour, a succession of which are produced throughout the summer. It is admirably adapted as a beautiful and effective white-flowering bedding plant, by its exceedingly neat and graceful outline and rich green foliage, not thin as in L. rubrum, but densely clothed, so much so that plants at 18 inches apart will hide the soil on which they grow. For groups also, and small masses, it will be found a valuable addition to its section or colour. 1s., 1s. 6d., 2s. 6d.

MELVILLE'S SUPERB CRIMSON-BELTED AND AURICULA-FLOWERED SWEET WILLIAM.—These beautiful kinds are a decided improvement upon Hunt's varieties, showing the most brilliant tints, with broader flower-lobes and smooth, even, rose-petalled margins, including pure white ground colours, with rich violet crimson and violet purple inner belts or coloured circles: others are finely marked with bright cerise or cherry coloured belts on snow white grounds. The Auricula-flowered Varieties blended with the above show bright carmine and violet crimson grounds with white margins and picturesque white centres, varying in others to cerise, or violet-purple and maroon crimson, in striking contrast with starry white inner belts. Mixed packets, 2s. 6d.

DIANTHUS LACINIATUS.—The finest importation of 1859, as Dianthus Heddewegi was the finest for 1859. Messrs. E. G. HENDERSON & SON have much pleasure in offering for sale Seeds of this very remarkable and splendid pink, introduced from Japan with the beautiful D Heddewigi. It forms a taller plant, nearly 2 feet in height, with magnificent, large, terminal blossoms, from 3 to 4 inches in width, elegantly divided on the margin into laciniated lobes nearly 1 inch in depth and double, producing colossal-sized single rose-petalled flowers as in D. Heddewigi, and in others as dark as a florist Carnation, alike equally fringed and evenly expanded, spreading their richly-coloured petals-tints to the light and sun in all weathers, varying from pure white, pink, and rose, to brilliant carmine, and carmine-red, up to the richest shades of violet-crimson and maroon; and these ground colours are in many of the seminal varieties greatly enhanced in beauty by the light ones being picturesquely stained with rose and violet crimson, whilst the dark ones are finely effective with mottled veins and streaks of white. It is well adapted for pot culture for Conservatory decoration during the early summer months, and forms a fine effect in flower gardens for groups or beds throughout summer and autumn, thriving in ordinary good garden soil, maintaining a free vigorous growth throughout the season. Seed packets, 1s., 2s. 6d., and 5s. each.

DIANTHUS HEDDEWIGI.—This brilliantly-flowered variety is of a neat, dwarf, compact habit, from 9 to 12 inches in height, with numerous large even-margined blossoms nearly 3 inches in diameter, of an equally rich colour as the foregoing species, varying in violet, rose, and carmine-crimson, with maroon shades, in self and parti-coloured varieties, the latter being finely marked with marbled white stains. This highly ornamental-flowered plant is also admirably adapted for pot-culture in greenhouse and conservatory decoration during the early summer months, and by spring sowing in pit-frames, &c., for open ground planting, it makes a grand effect as groups or beds in flower-garden arrangements from June until October. Seed packets, 6d., 1s., and 2s. 6d. each. An assortment of 12 varieties, 5s.

DIANTHUS HEDDEWIGI GIGANTEA.—This variety, received from Mr. Heddewig by the above name, is expected to be selected from the largest flowered varieties of its extremely beautiful prototype (D. Heddewigi), and will produce all the similarly brilliant colours and shades as characterised in the last-named reputed species, and will constitute one of the most magnificent groups of flowers yet introduced, altogether unequalled by their colossal proportions and regal beauty, in the section of which it forms so distinguished a feature, and now offered as a valuable addition to all flower-gardens. 6d., 1s., and 2s. 6d.

BOUVARDIA GHIESBRECHTII.—A white-flowered plant with half-shrubby habit, having blossoms 3 inches in length, yielding a very powerful scent. It is considered to have the longest flower-tubes of any species in the genus. Per packet, 2s. 6d.

BOUVARDIA MULTIFLORA.—A neat, small, dwarf, densely-branched plant, having small Rosemary-like leaves, and numerous white flowers, with violet tubes, each 2 inches in length. Per packet, 2s. 6d.

BOUVARDIA LONGIFLORA.—This is a distinct plant from the foregoing white-blossomed species; its beautiful fragrant flowers are now well known to gardens, seeds of which are now offered, with the above species and novelties. Per packet, 2s. 6d.

RUDBECKIA GRANDIFLORA.—A very distinct and splendid species of perennial growth, with red terminal flowers larger than any other known species of Rudbeckia. Per packet, 2s. 6d.

CUPHEA ZIMAPANI.—Described as one of the most beautiful of Cuphea species for bedding effect, unequalled by its combination of brilliant-coloured flower tubes. P. packet, 2s. 6d.

SPRAGUEA UMBELLATA.—A highly interesting and beautiful dwarf hardy biennial plant of Calendrina-like habit, with rosulate stemless crowns of spathulate shaped fleshy leaves, from within the centre of which rise rich red-crimson flower stems, 6 to 9 or 12 inches in height, terminating in umbellate clusters of rounded ball-like flower heads of densely crowded small rich violet-purple blossoms, each of which is surrounded at the base with a remarkable translucent silvery-tinted, circular, calyx-like fringe or collar, which, in consequence of the great number of these florets in each head or cluster, are pressed upon each other into a globular outline, and appear collectively like silvery-hued flower-balls, tinted with violet. It forms a very novel and attractive appearance in bloom, well adapted for edgings to flower borders or parterres, and for ornamenting rock-work around fountains or basins, also producing a pretty effect upon the summits of small elevated mounds of artistic stone work, with a darkened ground-colour.

IPOMŒA LIMBATA ELEGANTISSIMA.—A very beautiful hybrid between Ipomœa hederacea and I. limbata, partaking of the more robust and hardier constitution of the former, and combining the prolific style of bloom and picturesque effect of the latter, forming a free vigorous Greenhouse or Conservatory climber for pot-culture. Its rich green foliage is highly ornamented with a succession throughout the season of large Convolvulus-like blossoms, 3 to 4 inches in diameter, of a rich mazarine blue, elegantly marked with a conspicuous well-defined pure white belt or margin. In favourable warm summers it is expected to form a handsome object planted against a south or south-west wall in the open air, but for small, medium, or large pot-culture, it forms one of the most picturesque objects yet introduced. Its long continued succession of bloom, glowing contrast in colours, and luxuriant style of growth, will place it amongst the most singularly elegant of all plants for decorative objects on portable trellis-work, or in Conservatory designs. No. 677. 1s.

MICHAUXIA CAMPANULATA.—A rather tall summer-flowering biennal plant for the open-air flower borders, 4 to 6 feet in height, forming an erect single stemmed sub-pyramidal growth (resembling a good specimen of Campanula pyramidalis), by its side branches graduating from the middle of the stem to the extremity. The stem is round with a hispid rough surface, and marked with reddish-brown spaces. The leaves are runcinate or Dandelion-like, 8 or 9 inches in length, the flowers are borne on the lateral axillary side shoots, and are pure white, formed of 4 or 5 distant lanceolate snow white petals, 2 to 3 inches in diameter, and are elegantly turbinate or recurved like the sepals of a Turk's-cap Lily. It forms a remarkably distinct-featured plant, and is worthy of a place in every select collection of herbaceous plants. 2s. 6d.

PYRETHRUM HYBRIDS.—Single and double-flowered, see Catalogue These are saved from the beautiful rose and crimson-rayed species and varieties which now rank amongst the prettiest of hardy early summer-flowering perennials, with large and elegant Chrysanthemum-like blossoms, and rich verdurous green delicately winged leaves, a group of which is figured in the forthcoming Part VIII. of the "Illustrated Bouquet." Mixed packets, 2s. 6d.; separate, 6d. and 1s.

Further descriptive notes of the following may be seen on referring to their respective numbers in the Catalogue.

Acroclinium atroroseum	1s. 6d.
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Arctotis grandiflora	6d. and 1 0
Ageratum, new dwarf, 6 inches	6d. and 1 0
Candytuft, new blush-coloured	6d. and 1 0
Celosia aurea pyramidalis	1 6
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Clarkia pulchella integripetala	6d. and 1 0
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Clematis lanuginosa	
Cosmidium Burridge atropurpureum	1 0
Cuphea eminens	0 6
Datura carthaginiensis	0 6
,, clorantha flore pleno	6d. and 1 0
Delphinium Madame de Priunes	1 0
Dianthus chinensis giganteus (monstrosus)	6d., 1s., and 2 6
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,, ,, laciniatus	1s, 2s. 6d. and 5 0
Erianthus Ravenna	1 6
Erica triumphans	1 6
Eutoca viscida alba	1 0
,, ,, alba striata	1 0
Gaillardia Boesselaeri	1 0
Grammanthes gentianoides cinnabarina	1 0
,, ,, lilacina	1 0
Habrothamnus Lutto del Comte de Rossi	1 0
,, Zephirine	1 0
Helipterum anthemoides	1 0
Imantophyllum cyrtanthiflorum	3 6
Kennedya Makoyana	5 0
Lobelia gracilis rosea	0 6
,, trigonicaulis	1 6
Lupinus mutabilis versicolor	6d. and 1 0
Lychnis Haageana	1s. 6d. and 2 6
Myrtus apiculata	1 0
Nasturtium Tom Thumb Beauty	1 0
,, Tom Thumb Yellow	1 0
Passiflora Comtessa Clara Gigliucci	1 0
Penstemon speciosum	1 0
Platycodon grandiflorum album	1 0
Portulacca aurea striata	6d. and 1 0
Rhododendron Blumei	3 6
,, Edgeworthi	3 6
,, jasminiflorum	3 6
,, ,, hybridised with R. Blumei	3 6
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,, javanicum	1s. and 2 6
,, ,, hybridised with R. Edgeworthi	3 6
,, ,, ,, with other species and hybrids	3 6
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A. 1. RIDGE CUCUMBER.—This remarkable variety is offered and proved by personal inspection as the best and only example of a perfect ridge or open air Cucumber yet known, having the most essential features of such in its hardiness of constitution, robust growth, freedom from disease, most abundant and continuous fruit bearer, excellent flavour, absence from all bitterness, and the requisite proof of its true ridge character in its uniform average length of 10 to 15 inches. Its wonderful vigour of growth from single plants at 10 to 12 feet apart, under the most simple treatment, extends from 12 to 15 feet from the root stock, requires no pruning whatever, and retains its bearing character until autumn. (See the Catalogue for full description.) 1s. and 1s. 6d.

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THE HUBBARD SQUASH (THE BEST TABLE SQUASH KNOWN).—For full description, see Catalogue.

NEW FRUITS.—For description see Catalogue.

The DORCHESTER BLACKBERRY, 3s. 6d.; BRINCKLE'S ORANGE RASPBERRY, 1s. 6d.; the LAWTON BLACKBERRY, 2s. 6d.; this one produces the true fruit from seed, 6d. and 1s.

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JAMES CARTER & CO.

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A most superb tree, growing from 60 to 70 feet in height, with a pyramidal, thickly branched head and fine silvery appearance. Native of British Columbia.

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A fine graceful tree, 100 feet in height, described by Mr. Murray, the celebrated Collector and Botanist, as the handsomest tree seen by him during his expedition (in California); the habit of the tree being most graceful, with the branches at first curved upwards and towards the ends, hanging down like an ostrich's feather, with the leading shoots when young drooping like those of the Cedrus Deodara. Native of North California.

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Four sorts, ½ pint each	1	0

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The Gardeners' Chronicle.

SATURDAY, JANUARY 28, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, Jan. 31 { Horticultural (election of Fellows) / Soc. of Arts, John St., Adelphi 2 P.M.
THURSDAY, Feb. 2—Linnean ..... 8 P.M.

THE spring session of the HORTICULTURAL SOCIETY has commenced in earnest, as will have been seen in our last impression. During the autumn a very large number of applications to become Members of the Society had been made, for the purpose of supporting the new Garden at Kensington Gore. These amounted the other day to 517, and every day is producing a further accession. On Friday the 20th inst., the first batch of elections, a formality required by the Charter, took place, when 335 Fellows were balloted for and admitted into the Society. On Tuesday next the Members of the Royal Family not already Fellows will be added by special command of Her MAJESTY, and immediately afterwards above a hundred and twenty other elections will take place. A third ballot will also take place in about a fortnight.

At the same time very great changes have been made by the Council in the working organisation of the Society. We have already announced that Mr. GEORGE EYLES has been appointed superintendent of the gardens both at Chiswick and Kensington Gore; and he is now actively engaged in making preparations for the distribution of seeds and plants during the ensuing season, for carrying

tnward pruning and cropping operations, and for he removal of trees to Kensington Gore.

The Fruit and Vegetable Committee has been provided with a permanent Secretary, by whose advice and assistance its future action will be regulated, and by whom measures will be immediately taken to extend its utility in every possible manner. The office of Secretary has been accepted by Mr. HOGG, whose knowledge of fruits is recognised by all who are interested in Pomological progress.

In like manner the Floral Committee has been strengthened by the engagement of Mr. THOMAS MOORE as permanent Secretary, with a view to render it a court of judgment upon all subjects coming within its scope.

An Implement Committee and an Arboricultural Committee will also be formed as soon as the Society shall possess a place of business of sufficient capacity. For the conduct of the manifold operations now contemplated the small office in St. Martin's Place is quite unsuited. One of the first measures taken at Kensington Gore will therefore be to provide a large public entrance with spacious exhibition and meeting rooms, having ample offices attached; and as soon as this can be effected the meetings of the Floral and Fruit and Vegetable Committees, which will become open to the Fellows, may be expected to acquire the very greatest interest and importance.

While this work is proceeding the plans for the garden itself will be matured, and the architectural colonnades to be constructed by the Royal Commissioners will be rising all around.

One of the objects of the Council will be to introduce into the grounds first-class specimens of decoration suited to architectural gardening, such as vases, statuary, and similar objects, for which at the present moment no place is to be found in London. That this attempt will be effectually seconded by all lovers of art is already apparent from the following significant occurrence. At the close of the Great Exhibition of 1851 a considerable sum of money was subscribed for the purpose of erecting a monument to commemorate that great event. A sub-committee was formed to select a design for the work, and it was eventually determined to take one of two plans. But where to place it? The Committee naturally looked to Hyde Park, the scene of the mighty gathering, but every successive Chief Commissioner of Woods and Forests raised difficulties as to its admission. Wearied of making vain attempts to find a suitable position for the memorial, it appeared as if the money would have to be returned to the subscribers; till at last the new Garden at Kensington Gore was announced. We now learn from the *Athenæum* that the sub-committee decided upon advising an application to be at once made to her Majesty's Commissioners and the Horticultural Society for a space in the new Garden on which to erect it; and at a special meeting held a few days since at the Mansion House, Alderman CHALLIS in the chair, the general committee adopted this recommendation. Here, then, is a fine group for the new gardens in case it should be accepted, which we do not doubt; and we anticipate many another offer of the same kind.

While active measures of this kind are in progress, it is understood that the Council are about to consider the possibility of once more despatching an intelligent naturalist to some good collecting country whence supplies of new plants and seeds may be copiously drawn for distribution among the Fellows of the Society. Should there be no insuperable financial difficulty in the way of this operation, we may safely assert that it will be one of the most useful as well as popular measures which the Council could at present take—provided the country to be explored is one certain to yield hardy or half hardy plants rather than mere tropical productions.

FOR some years past a silent unsuspected enemy has been invading the Oak forests of England. In all the south-western counties GALLS, like those which we get from the Levant for the purpose of dyeing black, have been making their appearance, and annually increasing in quite a geometrical ratio. On several occasions the subject has been adverted to in our columns, especially in the year 1855, when Mr. WESTWOOD published a figure of the gall, and a few months later by a correspondent at Worcester. Since that time the mischief thus caused has increased so alarmingly that, unless some effectual stop can be put to the evil the landowners of Devon, Cornwall, Dorset, Somerset, and even Gloucestershire, will have to abandon all hope of raising Oak timber. The trees have ceased to grow, acorns no longer appear, but in their stead the branches are loaded with hard dry balls, such as are represented in the accompanying cut.

These galls are caused by an insect known to naturalists under the name of Cynips Quercus-petioli. SYLVANUS, writing in 1855 from near Worcester, so well described their then appearance that we repeat his words:—They are "very different from the innocuous soft galls upon the leaves, seldom very numerous, and dropping off with the foliage in the autumn. But these Gall-nuts of C. Quercus-petioli are mostly persistent upon the tree, and continue there for a long time hard as bullets. They seize upon the young shoots of the year, often the leading shoot in young trees, and cluster at its termination, thus stopping the expansion of the buds by taking up their nutriment, and keeping the trees in a dwarf state. I have now before me young shoots that are terminated by eight or nine of these hard brown galls clustered together; I recently noticed in the Oak plantations on Worle Hill, near Weston-super-Mare, that many young Oaks had been quite ruined by their leading shoots being thus loaded, and some were absolutely dead. Now I have

reason to believe that this attack upon the Oaks, at least in this plantation, is of recent origin. Four years ago I first observed a few on two or three trees, and looked upon them as a curiosity; last year I was surprised to observe many more, and the present autumn in walking through one portion of the plantations only, and without going out of the path I counted 91 trees that were more or less subjected to this scourge—for thus it has become. Some, it is true, had only about a score of galls or so upon them, but many had hundreds clustered upon their branches thick as Grapes, and the smaller trees were evidently drooping and checked in their growth by the absorbing villainous galls. Some of the trees were actually withered and dead, and others had their leading shoots killed, with the evident cause burdened upon them. It is clear to me that fresh trees are attacked every year by the increasing insect that produces the galls, and what can be done to stay their assaults? Though I only counted 91 trees in the Worle Hill plantations, I dare say I could have doubled this number by going deeper within the coppice; but say that only these 91 Oaks had 50 gall-nuts on a tree—although many had hundreds of them—that only would give more than 4500 of the Cynips to commence the next season with, so that next year instead of only 91 trees attacked I may expect to find thousands, on every tree perhaps throughout the plantations. The mischief is that the Oaks are certainly rendered barren by these hard gall-nuts, and wherever they occurred on the larger trees there were no acorns at all produced."

The anticipations of SYLVANUS that the evil would extend with great rapidity have unfortunately been fully realised. To such a length indeed has it spread, that it has become indispensable to arrest its further progress if that be possible. For we do not imagine that the landowners of the West will willingly accept a crop of unsaleable ink-galls as an equivalent for their coppice wood or navy timber.

In considering the manner in which this danger is to be met, we must first inquire how the galls are produced and by what. Dr. ASA FITCH, the distinguished American Entomologist, speaks thus * of what is observed in the United States.

"On cutting into these galls the small limb on which they grow is found to have its wood thickened or swollen, and over it, forming the chief bulk of the tumour, is a corky substance of a yellowish brown or snuff colour, between which and the wood are several small hard grains resembling seeds, each having a cavity in its centre, in which, doubled together, lies a soft white footless worm or maggot. This, on completing its growth, changes to a pupa in the same cell, and subsequently to a fly like its parent above described; whereupon, to escape from its confinement, it gnaws out of this hard seed-like envelope and onward through the corky substance and the external bark, thus producing those small perforations like pin-holes, which are always seen in these tumours after the insects have made their exit therefrom."

This description, although only applicable in strictness to a gall fly unknown here, is sufficiently exact to convey an accurate idea of the general nature of the tumours under consideration. In every case, whether that of the Oak apple, the Oak bladder, the Oak spangle, or the Oak gall, the swelling called a gall arises from the irritation produced by a grub, which is hatched among the soft young cellular matter of the part attacked. This grub comes from an egg deposited by some four-winged fly of the genus Cynips, or of the little group named after it. Under the irritation thus produced the cellular matter increases more or less rapidly in size, the natural structure of the part attacked is destroyed, and protuberances of the most varied aspect are the result. In the midst of the cellular matter in which it is hatched, the grub feeds, grows, and finally passes through the changes natural to it, in the same way as the grub of a hive bee changes in its cell. At last it acquires its perfect condition of a four-winged fly, when, by the assistance of its hard horny jaws, it gnaws a hole through the side of the gall and escapes into the open air. When liberated it in course of time discovers places like that from which it came, and there deposits its eggs as its mother did before; then the insect dies. The eggs thus laid in the autumn hatch in the spring when warm weather returns; by degrees new galls are the produce of their action, and our trees are again loaded with galls. Hence it will be seen that when the young galls are forming the perfect insects are dead, and our enemies are safely inclosed in prisons of their own formation.† Hence the advice of Dr. ASA FITCH as to the way of destroying them.

"Where any of these insects attack a valued tree which it is desired to preserve from their depredations, the remedy is obvious and simple. Before the galls which they produce are so far matured that the inclosed insects have perforated and escaped from them, they should be cut from the tree and burned. Fortunately, it is only small young trees that gall-flies are liable to destroy or greatly injure by their attacks. And their parasitic and other enemies restrain them from multiplying, so that it is seldom they will require any interference from man."

Unfortunately our English experience does not correspond with the last sentences of the learned American naturalist; but his first advice certainly is sound. Destroy, *by fire*, the galls, before the dangerous insects escape. Nothing less than fire will do it. But then the question remains, "How are they to be destroyed when a whole county is attacked?" To handpick them is impossible. The entire population would be insufficient for such a purpose. Our own opinion is, that very extensive and severe pruning must be had recourse to. If labour can be found from June to harvest time, the twigs on which the young galls are appearing might be cut off by boys sent among the branches armed with the common long-handled nippers sold by implement makers; and the prunings might be collected by girls and women into heaps, when they could be burnt or converted into soft charcoal. Or in many cases all the branches of a tree might be shortened back and destroyed; or, when the lower branches alone are attacked, then those lower branches only need be removed. It might indeed be a question whether, in places where the trees have been very extensively invaded, the branches would not be better cut off before the leaves appear; and if it is true, as is supposed, that the eggs of the Cynips are all deposited before the commencement of spring, this last plan would be much the best, because the Oaks would then have the whole summer before them during which to make new wood.

To take advice like this may be regarded as impracticable, and to follow it is doubtless attended

* Fifth Report on Noxious Insects, to the State Agricultural Society of New York, par. 309.

† These statements are we believe entirely confirmed by the very careful observations of Mr. NESFIELD, whose attention has been drawn to the subject by the mischief produced on property where he has been professionally engaged.

with difficulty of no ordinary character. But Oak timber is too important a part of all estates to be sacrificed without an effort to save it, and we do not see what possibility there is of its resisting the ravages of the Cynips unless some such plan as is now suggested is adopted. Perhaps, however, some correspondent in the infested districts may have discovered a better method; in which case he will render the public a very important service by explaining how he has proceeded.

WE understand that at a late Meeting of the Trustees of the British Museum, it was decided by 8 votes to 7 that the Natural History Collections be removed to Kensington Gore.

MYCOLOGY.—No. III.

COPRINUS COMATUS, *Fr.*—Fungi are proverbially creatures of quick growth, and as hasty decay. This applies however only to a portion of the plants included under the general name, for many attain considerable firmness, and even resemble cork or wood in texture, while their duration is as variable as their density. The Mushroom tribe is however amongst those Fungi which justify the proverbial application, and amongst the plants which belong to it, there is a peculiar group consisting of two genera, *Coprinus* and *Bolbitius*, which is characterised by the exceeding rapidity with which its species melt away into an almost fluid mass. They are not indeed quite so evanescent as the Medusas, which when cast upon the sand scarcely leave a film behind them as they dissolve, insomuch that some farmers who had on one occasion collected some loads in the hope that they would make a useful manure, found that their dunghill was soon reduced, after the fashion of the Welshman's coat, to something almost as small as a button. Still the quantity of cellular matter which enters into their composition is extremely small and soon yields to the action of outward agents, the most persistent part being the black spores which render the fluid into which they dissolve a tolerable substitute for ink. For this purpose it must be boiled and strained, and some substance added which will prevent its getting mouldy, such as spices, or a small quantity of corrosive sublimate.

Amongst these, decidedly the most beautiful is our present subject, which occurs on roadsides under walls or upon the Grass, or in rich pastures, attracting notice by its unusual form and elegant appearance. The pileus is at first nearly cylindrical but very obtuse, then bell-shaped but narrow, and its surface finely silky, and in parts broken up into distinct more or less reflected scales, with the margin delicately streaked on account of the thin substance which separates it from the gills. The general colour is a beautiful white, with tints of pink or rufous especially at the top, and occasionally a dash of grey on the sides. The stem is tall and distinctly attenuated upwards, of an unsullied white, finely silky, and furnished either above or at the very base with a narrow ring, which is in the former case moveable, in the latter fixed; within it is hollow, but stuffed with the most delicate cottony threads, which often adhere together and form a delicate string, occupying the centre of the cavity. The gills are narrow, ascending, and free, very close together and adhering to each other more or less by the means of delicate transparent processes, and according to their state of growth white, pinkish, purple, brown, or black. These beautiful productions are however but the creatures of a few hours. When taken home, and placed on a plate or confined in the collecting box they sink into a black fluid, and ultimately acquire a very disagreable smell.

Occasionally these Fungi are extremely abundant, so that it becomes a question whether they can be put to any useful purposes. If gathered young, before they have passed that stage in which the gills show the first shade of pink, they may be dressed like Mushrooms and eaten with safety, but, as may readily be supposed, they do not afford a very substantial dish; if older but before putrescence commences they may be used for the preparation of ketchup, but except in colour, the condiment which they yield is a very inferior article. They are often however mixed by dealers with the true Mushroom, especially in years when that species is scarce, and in such circumstances, if the result is not quite so good, there is at least no fear of any dangerous consequences. The extent to which black-spored species, even the deadly *Agaricus semi-globatus*, is mixed with more approved kinds is almost beyond conception. Indeed many a bottle of fluid is sold for ketchup which has scarcely a particle of true Mushroom in its composition, and in which all the flavour depends upon the salt and spice with which it is preserved, or the incipient decomposition of the kinds which are used. As ketchup is sometimes consumed in great quantities, it is strange that no cases of poisoning from its use are ever recorded, but the probability is that accidents do sometimes happen, but are referred to some imaginary influence of the brass or copper vessel in which the viands have been boiled with which the condiment is mixed.

Authorities with one consent, whether at home or abroad, unite in the qualified praise of innocence as belonging to this species. And unless both consent, no species should ever be regarded as positively safe, since climate makes an immense difference in point of quality. Puccinelli speaks of this species as being in great request about Via Reggio and Lucca, but Vittadini does not even name it, nor do we find any notice of it in the article on Fungi, in the Dizionario Classico di Medicina published at Venice in 1834.

This species must be distinguished carefully from *Coprinus picaceus*, which feeds at times on the most disgusting food and betrays its bad habits by its abominable smell. A little care however will prevent mistakes. There is no ring; the stem is hollow, not stuffed with a delicate web; the gills are broader, and the ovate or bell-shaped cap is marked with broad white patches arising from the cracking of the outer coat from whence it takes its name of magpie. The Fungus moreover has none of the delicate colouring of *C. comatus*. *M. J. B.*

COPRINUS COMATUS.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

QUERCUS SESSILIFLORA.

I WAS not aware till recently of the vast numbers of this variety of Oak growing in the Forest of Dean. I happened to be visiting a friend living in Monmouth last October, and in taking a drive to view the scenery of the forest, we went through a considerable portion of it where the Oaks grow, in our way to Coleford. I was at once struck with the hills and valleys as far as the eye could reach being covered with round-headed Oak trees, none of them very large, but all standing at regular distances as if they had been thinned out to grow into timber, which has been the case. Their compact round heads and dark foliage at once reminded me of the sessile-stalked Oaks in the Forest of Fontainebleau, and I immediately commenced a search for Acorns. I found most of the trees had some few left on them, and all that I examined were the short-stalked variety or Q. sessiliflora. My friend, an inhabitant of Monmouth, said that the portion of the forest devoted to Oak culture for the navy, and which looked rather like a plantation of Oaks than a forest, extended over 11,000 acres. The trees seemed to me to range from 30 to 80 or 100 years in age, and all with clear boles and round heads, the characteristics of the Sessile Oak. I was the more struck with their appearance from living in the eastern counties, where a tree of this variety is seldom or never found, and where even comparatively young trees of Quercus pedunculata (the long-stalked Oak) very soon commence to throw out at nearly right angles from the trunk their long, crooked, picturesque branches. In the neighbourhood of Monmouth in the hedgerows I found the majority of the Oaks short-stalked, mixed, however, with some of the long-stalked; and near Raglan Castle I found several hybrids, having branches more diffuse than the true short-stalked, yet not so much so as the long-stalked; the Acorns were growing on stalks slightly lengthened, leading me to think they were hybrids.

It is generally known that nearly half the Forest of Dean is under Oak culture for the supply of the navy; but I do not remember ever to have read that the Oaks were of the same comparatively rare variety, Q. sessiliflora. In the large Oak woods of Kent and Sussex it is not to be found, and I remember when rambling in the large woods near Ryde, Isle of Wight, some few years ago, I could never find a tree of this very favourite Oak. I presume however that it is found in the New Forest as "Durmast Oaks," and offered for sale by the nurserymen at Lymington.

The Oak woods in Saxony are thickly peopled with this kind, and grand trees they are. I saw a large number in a timber merchant's yard at Leipsic in 1857, with boles 30 to 40 feet long, 4 and 5 feet in diameter at base, and straight as a Poplar. The colour of the timber was like pale Mahogany, and not so close and compact in grain as our long-stalked Oak timber.

The most interesting variety of this white Oak is the Quercus pannonica, which makes stout annual shoots nearly as thick as one's finger, and has remarkably large and deeply indented leaves which remain on the young trees all the winter. It grafts readily on the common Oak, and bids fair to prove one of the most ornamental of all the deciduous Oaks. I enclose a shoot and two or three leaves. *T. R.* [This name Q. pannonica is not known to us. We do not find it in any of the systematic works to which we have access. But it appears undistinguishable from an Oak gathered by Mr. Bentham in the forest of Belgrade near Constantinople, which itself appears to be the same as an Armenian Oak formerly published by us under the name of Quercus mannifera. The young shoot sent us by Mr. Rivers is of very extraordinary magnitude.]

Home Correspondence.

Lighting Fires at the top instead of the bottom.—I have just read your article on London Domestic Horticulture. Will you permit me to promote the movement by reverting to the admirable plan for materially reducing smoke, by the lighting of house fires on the top instead of at the bottom of the grate? This practice, I believe, was not unknown many years since, in sick chambers, where a fire that would burn all night without attention was desired; but it was first advocated for every day practice by the *Builder* newspaper. Subsequently, the usual amount of correspondence was admitted into the *Times*, till the question was fairly before the public; and it is not too much to say that the advocates for the Practice made out quite as good a case as those who decried it. I recollect one of the former who said he had 10 out of 11 fires in his house so treated, and who advised an opponent to "try again" in spite of a stubborn grate or an unskilful attempt. Why not, indeed, persevere? There is nothing to be urged against the reversal of the present custom but the same obstinate adherence to immemorial usage which allows the goodness of our farmyards to drain away over roads and into the nearest ditch, or the blindness that will probably still allow the refuse of our dwellings to become a source of serious diseases, although it has been lately shown in your columns that the admixture of this refuse with dry earth at once deodorises it, and makes it of untold value. Allow me to relate my own experience. Some

four years ago, I called in my blacksmith and altered a grate, so as to lift up fresh coal from a reservoir below, as recommended by Dr. Arnott. Afterwards came forth the article in the *Builder*, and we lighted the fire in the morning at top, the result was (the grate being pretty deep) that we had no occasion to lift the contents of the reservoir. The home-made lever having got out of order, it is now quite disused, and the well is filled up with solid bricks. I have thus a grate with no vacant place below it, even for ashes. This fire is wanted by the family from 8 A.M. till 2 o'clock, being occasionally, but rarely, stirred: it then gets no attention till about 5, when the room is quite warm, though the fire appears extinct; a good disturbance, however, now revives it, and in a quarter of an hour it becomes a mass of glowing coal with small flickering flames, filling quite half the grate; to my mind no ordinary fire can equal it. At 7 o'clock we take out a good quantity of the contents, which are laid aside to cool and to be put above the wood on the next morning. Of course this remainder varies with the weather; but as a rule we never have to add coal in the course of the day. In another room the fire is lighted at 1 P.M.; this is a drawing-room grate, with no preparation beyond a piece of stout sheet-iron covering the bottom. There is a first-rate fire all the afternoon; on the room being left at 6 o'clock for a short time, the servant may perhaps put on about a hatful of lumps of coal, and the fire is sufficient till bed-time with occasional disturbance, and frequently till midnight with the addition of a log or two of wood. A third room—my study—is never cold; and whether I leave it for an hour or four or five hours, I am sure of a speedy and busy little fire on disturbing it, though this grate is very small; it has also the loose plate at bottom. If I admit that you do not regularly have (though you ought to have), a hot, well-burnt-up fire to begin the day with, when you come down first to breakfast, I think I hit the right nail on the head in seeking for the cause of the objection of the public to its adoption. Are we then such creatures of habit that in leaving a fireless bedroom nothing short of kitchen-fire-power must greet us at the breakfast room? Were it a necessity to bear with half a fire till 10 o'clock, one would think that a saving of 50 per cent. in coals, and the obtaining a continuously well-warmed room for the rest of the day, with a bright glowing fire at pleasure, would repay us for patience. It is however not of necessity that the fire should be black at breakfast time. It is true that as coals differ, as grates and chimneys vary, and as the wind or weather changes, a little alteration in the management is called for, but not to a greater degree than with the old system, under which many an early man grumbles from time to time, as every one knows. To be brief—the fire may be kindled a little sooner or with a rather more liberal allowance of wood; or, it may be lighted lower down (say in the middle), or, laid hollow instead of being packed. Finally, the bottom plate may be omitted without losing in the first instance the benefit of the coals burning gradually downwards: it would not be difficult to insert the plate after the fire is well burnt up, and thus check the escape of heat up the chimney. To conclude, I advisedly declare that no modern innovation has given me so much pleasure and comfort as this easy alteration, and I am sure that if it be generally adopted in London, two-thirds of the smoke of the town will no longer exist, and coals will radiate heat into the rooms instead of being driven up the chimneys. There is so little dirt caused, so little refuse to carry away, and so little daily use of the coal-scuttle, that my housemaid says "she should be sorry to have to light a fire in any other way, now, than the new one." She only begs her master will not forget to take out cinders, and the loose clay fire-balls which we use (and much recommend), as otherwise the grate would be too hot to handle the next morning. *F. G. H.*

Hardiness of recently introduced Conifers.—It may not be uninteresting to know that Abies Kæmpferi, Biota orientalis aurea, B. Sieboldi, B. Meldensis, Cupressus funebris, C. Lawsoniana, Libocedrus chilensis, Picea cephalonica, P. nobilis, P. Nordmanniana, P. Pinsapo, P. Pindrow, Retinispora ericoides, Thuja gigantea, Wellingtonia gigantea, and Thujopsis borealis all withstood the late severe frost without the slightest appearance of being affected by it, although very much exposed, and only 200 or 300 yards to the north of Windermere Lake. Sequoia sempervirens, Cryptomeria japonica, and its variety Lobbi, appear to be almost killed, especially a lot of fine young seedling plants. Picea Webbiana, on account of its starting early into growth, suffers from late spring frosts. *James Richardson, Mr. Grier's, Waterhead Nursery, Ambleside.*

Seedsmen.—My views, as must those of every impartial person, fully coincide with your reply to "Amateur" (see p. 52) upon the impropriety of newspaper editors recommending one respectable house in preference to another; and I attach great importance to the trials of vegetables which the Horticultural Society is publishing; really a check to the egotism and deception practised by some has become necessary. The report of Lettuces forcibly reminds me that in 1858 I was strongly recommended to try Mr. So & So's Superb Cos at 2*s.* 6*d.* per oz., which eventually proved to be Paris Green Cos, a sort I have grown for years, and which could be procured of any good house at 1*s.* per oz. I might multiply instances of this kind. "Cattle food" has been considered the most successful operation recently conceived, but I much question if it would bear comparison with the practice of rechristening adopted by some in the seed trade, which may do among "amateurs," but puts them below zero in the estimation of a *Practical Gardener*.

Climate of Cumbrae.—Allow me to state that the thermometer at Cumbrae is Negretti & Zambra's patent. It will be seen (p. 25) that the lowest temperature there is 24°; the unusual warmth is accounted for by the influence of the Gulf Stream. There are now Primroses in full flower in some sheltered places of both the larger and lesser Cumbraes. *A Constant Subscriber, Greenock.*

Rainfall in Eskdale, Dumfriesshire, in 1859.—

	Above Sea Level.	Jany.	Feby.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
		In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
Canonbie School	140	3.70	2.50	3.50	2.70	0.40	1.80	3.00	3.20	5.50	4.10	3.80	6.20	40.40
Langholm School	270	6.90	2.80	3.50	2.00	0.20	3.20	1.30	5.00	7.50	4.50	6.40	6.50	49.80
Ewes	407	7.20	5.40	5.60	3.80	0.10	1.90	1.90	4.20	6.90	4.80	4.50	6.50	52.80
Carlesgill ..	370	8.50	6.20	6.20	4.20	0.20	2.25	2.50	4.20	7.30	4.60	5.20	7.00	58.35
Do. Hill-top	1164	9.00	6.25	6.75	4.25	0.25	2.30	2.50	5.00	7.60	3.50	5.00	7.20	59.70
Westerkirk School	420	9.50	5.70	6.30	4.10	0.20	2.10	2.60	4.50	6.90	4.80	4.80	6.90	58.40
Eskdalemuir Do.	612	10.00	6.00	7.40	5.70	0.05	2.10	2.80	3.60	7.40	4.50	4.40	6.70	60.25
Eskdale Pen Top ..	2268	10.00	4.62	12.25	6.50	0.65	2.50	4.90	5.50	5.40	6.00	5.10	6.80	70.22
Whithaugh Liddisdale	400	8.00	4.00	7.00	3.25	0.50	2.50	2.75	3.70	7.00	5.50	5.00	7.10	56.30

Average fall of rain at Carlesgill for 17 years, 55.58. In 1859 rain or snow fell on 188 days. Average for 9 years, 194 days. The fall upon the Pen and Carlesgill hill-top in April, October, and December, must have been considerably greater than shown above, the snow on several days drifted *over* rather than fell into the gauge. 29th Jan., 1 inch fell in five hours; 1st April, 2 inches in 12 hours—highest flood in the Esk for very many years. Thermometer on the Grass 31st March, 18°; 19th and 23d April, 14°; 2d May, 18°, 17th 27°, 26th 20°; 28°; 4th and 5th Sept., 30°; 21st Oct., 14°, 22d 11°, 25th 9½°, 31st 10°; 17th Dec., 6°, 18th and 23d, 4°. These were the indications of "Casella's Self-Registering Thermometer," and correspond closely with observations in Dec., made near London and Nottingham. The indications on the Grass are about 4½° lower than 4 feet above the surface. It will be observed how much rainfall increases with altitude above the sea.

J. Little, Carlesgill.

Rainfall, &c., at Itchen Abbas, near Winchester.—

	Rain.	Rainy days.	Days of snow.	Days of hail	Days of thunder and lightning.
	inches				
January	2.04	16	1	1	..
February .. .	2.89	16	..	1	..
March	0 90	15	2	1	..
April	3.08	19	3	5	..
May	1.03	12	..	..	1
June	2.58	15	..	..	8
July .. .	2 09	11	..	..	13
August	2.71	14	..	..	2
September ..	3 78	23	..	..	2
October .. .	3.33	20	1	..	1
November	3.43	13	1	..	1
December .. .	5.02	17	7	1	2
Total .. .	32.88	191	15	9	33
Above the average of the last nine years ..	4.58	22	5	3	21

W. W. Spicer.

Rainfall in Cornwall in 1859.—The following is the amount which fell in Tehidy Gardens during the past year:—

	Inches		Inches.
January	3.95	Brought forward ..	15.75
February	2.27	July	1.35
March	2.96	August	2.90
April	3.25	September	4.05
May	1.82	October	5.00
June	1.50	November	3.74
		December	5.40
Carried forward	15.75	Total	38.19

Henry Beddard.

Solanum capsicastrum.—On the 20th of August last I purchased in the Boulogne Market a beautiful specimen of this plant. It had about 300 berries upon it, and it was larger and much darker in foliage than any of the specimens which I have seen, either in botanic gardens or elsewhere. I brought it to England on the 6th of September, from which time it retained its beauty until about a fortnight since. The berries are now however rapidly falling, and the leaves are becoming lighter, which I attribute to its having been nearly the whole time in a drawing-room lighted by gas. Only once has it been in the greenhouse, thus supporting in some degree a statement made to me by the person of whom I bought it that "it is so hardy it will live and become a beautiful shrub in the garden during the winter, and that its berries are simply 'Tomatoes;' therefore no danger can happen if they are gathered or eaten by children." The reason of my intruding upon your space is, that as the spring is approaching the statement made to me may induce some of our present scientific growers to bestow a little of their fostering care upon the "stranger," and enable it to rival, if not surpass, the Holly in brilliancy and mass of colour. *Mary A. Redgrave, Eagle Lodge, Old Brompton.*

Early Appearance of Wasps.—If those who do unwonted feats of daring are styled heroes, please to insert me in your list. I killed a wasp on January 16, active, and in good condition. *Woglog, Dorset.*

Gutta Percha Labels.—I take the liberty to forward for your inspection three specimens of Gutta Percha labels which we make and use here for fruit trees on walls, standard trees, Roses, &c. The one perforated at the ends is employed for wall trees, and is nailed on the wall; the other two, which differ but slightly, are used for standards. *Wm. Baxter, Gardener, Riccarton, Hermiston, near Edinburgh.* [These are very good legible labels, easily made; but we doubt their remaining so flat and neat as they now are when they are exposed to hot suns and cold nights, and so light that the loops which suspend them will hardly wear through as wire does. It would be an improvement to rub the face with white lead and oil, as that would render the lettering more conspicuous.]

Notices of Books.

Lawson's Gardeners' Kalendar for 1860 has appeared in its usual form of a broadside to hang up against a wall. Much useful information is contained in it, and it is illustrated with a coloured view of a "Domical Conservatory" of considerable apparent magnitude.

Walpers' Annales Botanices Systematicæ. Vol. V., fasc. 4. This Part commences with Styracaceæ, and terminates at the beginning of Acanthaceæ.

A new and very pretty edition of *Eothen* has been issued by Mr. Murray. In this charming narrative of travels in Eastern lands, which has fascinated even critics, there are few passages which interest mere horticultural readers. Nevertheless we may select two, the first of which, the history of the old trees which now stand alone on Lebanon as a monument of ancient forest glory, is probably new to most:—

"The pass by which I crossed the Lebanon is like, I think, in its features to that of the Foorca in the Bernese Oberland. For a great part of the way, I toiled rather painfully through the dazzling snow, but the labour of ascending added to the excitement with which I looked for the summit of the pass. The time came. There was a minute, and I saw nothing but the steep, white shoulder of the mountain; there was another minute, and that the next, which showed me a nether heaven of fleecy clouds—clouds floating along far down in the air beneath me, and showed me beyond, the breadth of all Syria west of the Lebanon. But chiefly I clung with my eyes to the dim steadfast line of the sea which closed my utmost view. I had grown well used of late to the people and the scenes of forlorn Asia—well used to tombs and ruins, to silent cities and deserted plains, to tranquil men, and women sadly veiled; and now that I saw the even plain of the sea, I leapt with an easy leap to its yonder shores, and saw all the kingdoms of the West in that fair path that could lead me from out of this silent land straight on into shrill Marseilles, or round by the pillars of Hercules, to the crash and roar of London. My place upon this dividing barrier was as a man's puzzling station in eternity, between the birthless Past and the Future that has no end. Behind me I left an old and decrepid World — Religions dead and dying — calm tyrannies expiring in silence—women hushed, and swathed, and turned into waxen dolls—Love flown, and in its stead mere Royal, and 'Paradise,' pleasures.—Before me there waited glad bustle and strife—Love itself, an emulous game—Religion a Cause and a Controversy, well smitten and well defended—men governed by reasons and suasion of speech—wheels going—steam buzzing—a mortal race, and a slashing pace, and the Devil taking the hindmost—taking *me*, by Jove (for that was my inner care), if I lingered too long, upon the difficult Pass that leads from Thought to Action.

"I descended, and went towards the West.

"The group of Cedars, remaining on this part of the Lebanon, is held sacred by the Greek Church, on account of a prevailing notion that the trees were standing at the time when the Temple of Jerusalem was built. They occupy 3 or 4 acres on the mountain's side, and many of them are gnarled in a way that implies great age, but except these signs I saw nothing in their appearance or conduct that tended to prove them contemporaries of the Cedars employed in Solomon's Temple. The final cause to which these aged survivors owed their preservation was explained to me in the evening by a glorious old fellow (a Christian Chief), who made me welcome in the valley of Eden. In ancient times the whole range of the Lebanon had been covered with Cedars, and as the fertile plains beneath became more and more infested by Government officers and tyrants of high and low estate, the people by degrees abandoned them, and flocked to the rugged mountains for protection, well knowing that the trouble of a walk up hill would seriously obstruct their weak and lazy oppressors. The Cedar forests gradually

shrank under the axe of the encroaching multitudes, and seemed at last to be on the point of disappearing entirely, when an aged chief who ruled in this district, and who had witnessed the great change effected even in his own life-time, chose to say that some sign or memorial should be left of the vast woods with which the mountains had formerly been clad, and commanded accordingly that this group of trees (a group probably situated at the highest point to which the forest had reached) should remain untouched. The Chief it seems was not moved by the notion I have mentioned as prevailing in the Greek Church, but rather by some sentiment of veneration for a great natural feature—a sentiment akin, perhaps, to that old and earthborn Religion which made men bow down to creation, before they had yet learned to know and worship the Creator."

Let another be the author's description of the garden of Damascus, where our Damask Rose was born, as they say, and where it certainly grows "to an immense height and size."

"But its gardens are the delight—the delight and the pride of Damascus; they are not the formal parterres which you might expect from the Oriental taste; rather, they bring back to your mind the memory of some dark old shrubbery in our northern isle that has been charmingly *un*-'kept up,' for many and many a day. When you see a rich wilderness of wood in decent England, it is like enough that you see it with some soft regrets. The puzzled old woman at the lodge can give small account of 'the family.' She thinks it is 'Italy' that has made the whole circle of her world so gloomy and sad. You avoid the house in lively dread of a lone housekeeper, but you make your way on by the stables; you remember that gable with all its neatly nailed trophies of fitches, and hawks, and owls, now slowly falling to pieces—you remember that stable, and that, but the doors are all fastened that used to be standing ajar—the paint of things painted is blistered and cracked—Grass grows in the yard—just there, in October mornings, the keeper would wait with the dogs and the guns—no keeper now; you hurry away, and gain the small wicket that used to open to the touch of a lightsome hand—it is fastened with a padlock—(the only new looking thing)—and is stained with thick, green damp—you climb it, and bury yourself in the deep shade, and strive but lazily with the tangling briars, and stop for long minutes to judge and determine whether you will creep beneath the long boughs, and make them your archway, or whether perhaps you will lift your heel, and tread them down under foot. Long doubt, and scarcely to be ended, till you wake from the memory of those days when the path was clear, and chase that phantom of a muslin sleeve that once weighed warm upon your arm.

"Wild as that, the nighest woodland of a deserted home in England, but without its sweet sadness, is the sumptuous garden of Damascus. Forest trees, tall and stately enough, if you could see their lofty crests, yet lead a tussling life of it below, with their branches struggling against strong numbers of bushes and wilful shrubs. The shade upon the earth is black as night. High, high above your head, and on every side all down to the ground, the thicket is hemmed in, and choked up by the interlacing boughs that droop with the weight of Roses, and load the slow air with their damask breath. There are no other flowers. Here and there, there are patches of ground made clear from the cover, and these are either carelessly planted with some common and useful vegetable, or else are left free to the wayward ways of Nature, and bear rank weeds, moist-looking, and cool to your eyes, and freshening the sense with their earthy and bitter fragrance. There is a lane opened through the thicket, so broad in some places, that you can pass along side by side—in some so narrow (the shrubs are for ever encroaching) that you ought, if you can, to go on the first, and hold back the bough of the Rose tree. And through the sweet wilderness a loud rushing stream flows tumbling along, till it is halted at last in the lowest corner of the garden, and there tossed up in a fountain by the side of the simple alcove. This is all.

"Never for an instant will the people of Damascus attempt to separate the idea of bliss from these wild gardens and rushing waters."

Harmonies of Political Economy. By Frédéric Bastiat. Translated from the French by Patrick James Stirling, F.R.S.E. Murray. 8vo. Pp. 298.

The writings of the great French free trader, Bastiat, cannot be too well known, for they form the most original and important contributions to political economy which it has received since the days of Smith. The extraordinary energy and skill with which Bastiat exposed the fallacies of those of his countrymen who a few years ago endeavoured to set class against class, and to carry into practice the odious principle, *la propriété c'est le vol;* the admirable manner in which he advocated the principles of free trade, and demonstrated the truth of those principles; the fearlessness with which he insisted in France on the great doctrine that where the exercise of force is unjustifiable there the state ought not to interfere with its subjects; and last, though not least, the ability with which he detected and refuted the errors of celebrated political economists, have justly won for him a celebrity which few men are destined to enjoy. His greatest work is that of which the title is given above, and Mr. Stirling has done good service in translating it. Its object may best be gathered from the following passage of the translator's notice of Bastiat's life and writings:—

"Bastiat undertakes to demonstrate the harmony of the economic laws, that is to say, their tendency towards a common design, which is the progressive improvement of the human race. He proves convincingly that individual interests taken in the aggregate, far from being antagonistic, aid each other mutually; and that so far is it from being true that the gain of one is necessarily the loss of another, each individual, each family, each country has an interest in the prosperity of all others. He shows that between agriculturist and manufacturer, capitalist and labourer, producer and consumer, native and foreigner, there is in reality no antagonism, but, on the contrary, a community of interest; and that, in order that the natural economic laws should act constantly so as to produce this result, one thing alone is necessary, namely, respect for liberty and property. His design is best explained in his own words:—'I undertake in this work,' he says, 'to demonstrate the harmony of those laws of Providence which govern human society. What makes the laws harmonious and not discordant is, that all principles, all motives, all springs of action, all interests, co-operate towards a grand final result, which humanity will never reach by reason of its native imperfection, but to which it will always approximate more and more by reason of its unlimited capability of improvement. And that result is, the indefinite approximation of all classes towards a level, which is always rising; in other words, the equalisation of individuals in the general amelioration.'"

These views are developed in a series of chapters on Natural and Artificial Organisation, Wants, Efforts, Satisfactions, Wants of Man, Exchange, Value, Wealth, Capital, Property, Community, Landed Property, and Competition. Without going so far as to say that Bastiat's reasoning is always unanswerable, there can be very little doubt that his design is as skilfully worked out as it was happily conceived. Mr. Stirling has evidently taken great pains to render Bastiat's meaning clearly and accurately, and he has succeeded in doing so; it is, however, to be regretted that he did not think the work worthy of an index.

Personal Wrongs and Legal Remedies. By W. Campbell Sleigh, Barrister-at-Law. Longmans. Fcp. 8vo. Pp. 185.

The success of Lord St. Leonard's "Handy Book" has induced a host of lawyers to imitate his lordship by publishing popular works on different branches of English Law. Most of the legal handy-books that we have seen are trash. They are not of the slightest use to the lawyer, and they are only calculated to mislead the public. Mr. Sleigh's "Handy-book on Criminal Law" and his work now before us have at least the merit of being readable, and sufficiently accurate for general purposes. In the present volume he treats of slander, libel, malicious prosecution, false imprisonment, assaults, negligence, nuisances, breach of promise of marriage, seduction, adultery, bigamy, &c., as to which many people may desire information in a popular and intelligible form.

TRADE LISTS RECEIVED.—*The 29th Annual Edition of Vegetable and Flower Seeds, including also Bulbs and Roots for Spring Planting.* By STEPHEN BROWN (late Bass & Brown, Sudbury, Suffolk).—PLATZ & SON'S (of Erfurt) *Catalogue of Flower, Vegetable, and Tree Seeds.* London Agent, W. Lorberg, 34, St. Mary-at-Hill, E.C.—*Catalogue of Kitchen Garden, Agricultural, and Flower Seeds sold by* Garaway, Mayes, & Co., Durdham Down Nurseries, Bristol.

Garden Memoranda.

S. RUCKER'S, ESQ., WEST HILL, WANDSWORTH.—The valuable collection of Orchids for which this place has long been justly celebrated exhibits even now considerable beauty. The bright green of their foliage and the immense size of many of the specimens bear ample testimony to the judicious treatment they receive. Among kinds that bloom at this season are Galeandra Devoniana, a pretty species, with greenish brown petals, and a large pink streaked funnel-shaped lip; the charming ever-flowering Phalænopsis grandiflora; a large and pretty specimen of Phaius Wallichii; the finely formed Dendrobium aggregatum, with short pendent spikes of rich yellow flowers; and Calanthe veratrifolia and Burlingtonia venusta, both with delicate white blossoms. The New Holland Pitcher Plant (Cephalotus follicularis) we have also seen growing here in great perfection: it was in a 6-inch pot in a mixture of loam and peat. This singular little plant is generally grown under a bell-glass; but in this instance it had never been covered; Nepenthes distillatoria was growing here most robustly, and was covered with pitchers; N. ampullacea was also well furnished with pitchers, as well as several other rare and fine kinds. Close to these was a thriving plant of Stag's-horn Fern (Platycerium grande). This may be grown on a thin board about a foot square, suspended from the roof by one of its sides. A house close to that in which the Orchids are growing was some years ago fitted up for stove plants, for which it proved well adapted, presenting as it does an extremely clean and light appearance. Old smoke flues were pulled down, and it was heated by hot water in 4-inch iron pipes, which entering at the end of the house close to the back wall, pass round to the front, where they are made to traverse a brick and cement tank, 45 feet in length, and 3 feet in width, or the length and breadth of the front shelf. This tank has 6 inches in depth of water in it, which covers the pipes, and it is closed in with slate covers, not cemented together, but laid loosely so as to allow moisture to ascend between them. On these covers are laid about 4 inches in depth of sand on which the plants are placed, and through which the heat and moisture pass, affording a moist bottom-heat to the plants. Moreover means of supplying moisture to the atmosphere is provided in the shape of small openings in the side of the tank or front shelf; these are fitted with little slate slides, which can be opened or closed as it is desired that vapour should escape or be withheld. The centre bed is not heated, and it may be mentioned that the flow pipe which heats the atmosphere immediately after entering the house, branches off into another pipe of the same size, which passing along above the first pipe unites with it again where the latter enters the tank or front shelf. On this top pipe little troughs are cast to hold water for supplying moisture. Under these arrangements Orchids have been found to grow with unusual vigour, and soon make fine specimens. Those that flower now, in addition to what have been mentioned, are Dendrobium Cambridgeanum, producing fine spikes of richly blotched Orange blossoms; the curious little Leptotes bicolor, with from three to seven flowers on a spike; Eria densiflora, with spikes of cream-coloured blossoms; several fine plants of Dendrobium nobile and Wallichii, and an enormous mass of Oncidium altissimum throwing up pretty blossom spikes; together with the showy Lycaste Skinneri, which has been in bloom for these three months, and which still promises to produce its pretty blossoms for some time to come. In the greenhouses, which are gay with different kinds of forced flowers, was a pretty standard Azalea with a fine head of variously coloured blossoms, strikingly contrasting with one another, and rendering the plant very attractive. This has been effected by inarching two kinds together on a straight clean stem about 3 feet in height of the old A. phœnicea, which forms an excellent stock for the purpose. Other "unions" of an equally interesting character have also been effected. The small conservatory attached to the mansion is at present exceedingly gay for this time of year with Pelargoniums and other forced flowers, especially Azaleas, among which were some fine plants, whose bright coloured blossoms contrasted well with other flowers of paler hues. These were all placed closely together, and formed a dense bank of flowers of various shades and colours, producing an interesting effect to which Hyacinths and other forced bulbs greatly contributed. The flowering plants were also intermixed here and there with Ferns and other plants remarkable for the beauty of their foliage, which served to vary and set the whole off to increased advantage.

Miscellaneous.

The Manetti Rose Stock.—I always feel interested in this stock. Whether it is that, being an old amateur, and remembering well its introduction, or only because it has been abused by some few growers, and praised by others, I cannot say. Friend Donald Beaton has now and then given it a severe prog with his "Cottage Gardener's" dagger; he has now, however, turned round, and in the "Cottage Gardener" of December 20, 1859, has given a flattering opinion of its value; but then Donald is young, and may turn round again. Mr. W. Paul has always been its bitter and most unrelenting enemy. It seems that the strong tenacious clay of the Cheshunt nursery did not suit it. It killed the Roses budded on it by its excessive vigour. Instead, however of looking out for a plot of light soil, on which it would have flourished, Mr. W. P. denounced it, and has suffered his near neighbour and rival, Mr. E. P. Francis, of Hertford, to make a fortune by its cultivation.

"Strange that such difference should be
'Twixt E. P. F. and W. P."

Now the soil at Hertford, in which Mr. F. cultivates his Roses on this stock, is the most heart breaking, stony, barbarous soil that was ever formed into a Rose garden. Just imagine a few acres of a stratum of gravel laid bare, with stones in it innumerable as big as your foot; stir the surface, pick out the very large stones, add some manure, and you have the soil on which our friend E. P. F. grows his Roses on the Manetti Rose stock, or, as Mr. W. Paul calls it, in his "Rose Annual," page 85, line 20 (I like to be particular) the "Manettii bubble." Why the two ii's? And why the prejudice? Does the latter owe its origin to the stock having been introduced by our "King of Roses," Mr. Rivers, who has written the only good and selling book on Roses ever published in England? No, it cannot be; but there certainly must be some cause for this continued denunciation of a Rose stock most valuable, for it seems to flourish as well in the sands of Yorkshire and Durham as it does in those on the south coast from Folkestone to Beechy Head, and has become an article of commerce; for so well does it suit the climate of the United States, that some hundreds of thousands have been and are annually exported. I am inclined to distrust what is said in the "Cottage Gardener," p. 172, about grafts on this stock putting forth roots. In heavy soils they will not always do so, and some varieties are also very chary of putting out roots, even in very light soils, but then such soils suit the stock so

well that the graft has no need of its own roots. In rich deep Rose clays, by which I mean all clayey soils with a deep staple, the Dog Rose stock is on the whole the best of all. It is very durable, may be removed at almost any period of its life, and generally induces the kind of Rose budded on it to throw out flowers of the largest size. But for poor sandy soils or gravelly hills like those break-heart, break-neck hills round Hertford, no Rose stock can excel the Manetti. I should, however, prefer budded Roses to those that are grafted, and plant them so as to cover the junction of the bud with the stock. I have reason to believe that Mr. Lane, of Berkhampstead, has not succeeded well with the Manetti stock. He, I think, tried it on his light but low-lying black soil, and on a very shallow soil resting on chalk, but in neither situation did it so well, so he has discontinued, so far as I know, its cultivation to any great extent. Mr. L. has not however, like his friend Mr. W. P., denounced it because he could not grow it. No, he is much too 'cute for that. I fully believe that it would have done well on those chalk hills near Berkhampstead, only the labourers did not like it, and so often gave it a sly kick; besides this, the Dog Rose stock has generally done so well with Mr. L. that he did not want it. With Mr. Francis it has been quite different. I fully believe that he never could have grown any decent dwarf Roses on his stony hills without the Manetti Rose stock. Like all things newly introduced either into commerce, agriculture, or horticulture, our Manetti stock has had, and still has its opponents. Some of them should always bear in mind part of the old song:—

"Remember when the judgment's weak the prejudice is strong."

And they will plant it only in soils adapted to it, and, above all, take pains in its culture. *Rosa spinosa*. From *the Florist*.

A Bull-Dog Thoroughly Served Out.—"Neptune, the ram's antagonist, had a warm friendship for a very pretty retriever, Charger by name, who, in addition to very warm affections, possessed a very hot temper. In short, he was a decidedly quarrelsome dog; but Neptune overlooked his friend's faults, and bore his ill-temper with the most dignified gravity, turning away his head, and not seeming to hear his snarls, or even to feel his snaps. But all dogs were not equally charitable, and Charger had a long-standing quarrel with a huge bull-dog, I believe it was, for it was ugly and ferocious enough to have been a bull-dog, belonging to a butcher—the only butcher within a circle of five miles—who lived at Carrick, and was called the Lad of Carrick. He was very nearly as authoritative as his bull-dog. It so chanced that Charger and the bull-dog met somewhere, and the result was, that our beautiful retriever was brought home so fearfully mangled that it was a question whether it should not be shot at once, everything like recovery seeming impossible. But I really think Neptune saved his life. The trusty friend applied himself so carefully to licking his wounds, hanging over him with such tenderness, and gazing at his master with such mute entreaty, that it was decided to leave the dogs together for that night. The devotion of the great dog knew no change; he suffered any of the people to dress his friend's wounds, or feed him, but he growled if they attempted to remove him. Although, after the lapse of 10 or 12 days, he could limp to the sunny spots of the lawn—always attended by Neptune—it was quite three months before Charger was himself again, and his recovery was entirely attributable to Neptune, who ever after was called Doctor Neptune—a distinction which he received with his usual gravity. Now here I must say that Neptune was never quarrelsome. He was a very large liver-coloured dog, with huge, firm jaws, and those small cunning eyes which I always think detract from the nobility of the head of the Newfoundland; his paws were pillows, and his chest broad and firm. He was a dignified, gentlemanly dog who looked down upon the general run of quarrels as quite beneath him. If grievously insulted, he would lift up the aggressor in his jaws, shake him, and let him go—if he could go—that was all. But in his heart of hearts, he resented the treatment his friend had received. So, when Charger was fully recovered, the two dogs set off together to the Hill of Carrick, a distance of more than a mile from their home, and then and there set upon the bull-dog. While we were at breakfast, the butler came in with the information that something had gone wrong, for both Neptune and Charger had come home covered with blood and wounds, and were licking each other in the little stable. This was quickly followed by a visit from the bristly Lad of Carrick, crying like a child—the great rough-looking bear of a man—because our dogs had gone up the hill, and killed his pup, 'Blue-nose.' 'The two fell on him,' he said, 'together, and now you could hardly tell his head from his tail.' It was a fearful retribution; but even his master confessed that 'Blue-nose' deserved his fate, and every cur in the country rejoiced that he was dead." *Routledge's Illustrated Natural History, by the Rev. J. G. Wood.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

DURING weather like the present a number of operations might be proceeded with which are generally deferred till spring. Any part of the grounds or garden requiring draining should now have attention, bearing in mind that on ground cropped with fruit trees or vegetables the drains should not be less than 4 feet deep; the width apart must be regulated by the nature of the soil. The preparation of ground intended to be planted in spring, either with fruit or ornamental trees, may now be forwarded, as may the levelling and re-turfing such parts of the lawn as have become unsightly. As in most gardens tree leaves are in great request for many purposes, steps should also be taken to procure a sufficient stock for the season's supply; two or three stacks may be made in the most unfrequented places, thatched, and a temporary fence placed round them to keep them together. Where new gravel walks are about to be made, material for that purpose should be got in readiness. As regards things under glass, when such plants as Aphelandras, Justicias, Poinsettias, and other winter-flowering stove plants have done blooming, they should be removed to a drier house and water gradually withheld to effect the proper ripening of their wood. Use as little moisture in the stove at this season as possible, and do not aim at high temperature; the colour and durability of flowers will show how injurious both are in excess at this period. Where Orchids have had a long rest some will now be commencing growth and should be set to work; well soak them in tepid water, and after removing all the loose and decayed material from the roots let them be repacked in fresh baskets or pots. Those growing on logs of wood will require more care in preserving their roots from injury. As a general rule it is too early to begin with the principal stock. Examine frequently all plants which suffer from damp at this season. Shift all greenhouse plants frequently (to prevent their growing one-sided) and see that no decayed leaves are allowed to remain on them. The conservatory should not be allowed to fall below 40°. Keep up a succession of blooming plants from the reserve houses.

FORCING DEPARTMENT.

PINERIES.—Cold changeable weather like that we are now experiencing will necessitate the use of a considerable amount of fire-heat, particularly where a high temperature is being maintained with the view of inducing the plants to show fruit, and in the case of swelling fruit see that a proportionate amount of atmospheric moisture is secured, for accommodating as the Pine must be admitted to be, it is by no means benefited by a warm parched state of the atmosphere; see that none of the stock is allowed to suffer for want of water at the root. For succession plants a temperature of from 50° to 55° by means of fire-heat will be sufficiently high, but it should not be allowed to fall below 50°. VINERIES.—The early house will now require careful attention, and as the Vines in some places will probably be in bloom, the night temperature must not be allowed to fall below 60°, and 70° should be secured during the day. Maintain a healthy growing atmosphere by sprinkling the floors, &c., as may be necessary, and admit fresh air whenever this can be safely done. Also attend carefully to the border, and if fermenting material is used do not allow the heat to decline, and where this is not used see that whatever covering is employed is efficient. PEACH HOUSE.—Discontinue syringing where the blossoms are beginning to open, but secure a moist, healthy state of the atmosphere by sprinkling the passages, &c., as may be necessary, avoiding, however, anything like dampness while the trees are in bloom. Maintain a steady night temperature of 50° or 55°. Take every possible opportunity of admitting fresh air, and where the external air can be made to pass over the heating apparatus, so as to get warmed before coming in contact with the plants, a gentle circulation should be constantly kept up until the fruit is fairly set. Avoid the admission of currents of dry cold air, however, which would be most injurious to the trees.

FLOWER GARDEN AND SHRUBBERIES.

Wherever there is a large extent of mixed shrubbery some care is necessary to prevent the stronger growing bushes from over growing the weaker ones; and it will be found better every few years to lift and replant the former than to prune them severely. Nevertheless a certain amount of pruning is often necessary to keep all in their proper places. Take care, however, to have all margins of bare earth betwixt the Grass and the plants covered with low growing plants as Periwinkles and things of a similar habit, and the plants over the remaining space should be made to cover as much of the border as possible. The pruning of the more common kinds of Roses might now be done; should, however, a part of the Provins, Moss, and others of the summer-flowering kinds be required to bloom late, reserve a portion till April for that purpose.

HARDY FRUIT AND KITCHEN GARDEN.

The thinning and pruning of orchard trees should be proceeded with, and liberal dressings of manure given to exhausted soils. Prune and remove the suckers from Filberts, which rarely (except in Kent) get the management they require. Young planted orchard trees should be securely staked, using a little hay or Moss at the tie to preserve the bark. The making of fruit-tree borders, particularly for the finer kinds against walls, requires the use of good fresh turfy loam; let that therefore be in readiness. The only addition should be road scrapings or something similar, where the loam is heavy, for the Peach and Apricot; use loam itself for Cherries and Plums, and a small quantity of rotten cow-dung for Pears, but not if the loam is rich. Dust over on damp mornings with soot and lime Gooseberry bushes, &c., which are attacked by birds. Two or three dressings will be sufficient to preserve the buds. Raspberries may have the old wood removed and the new shoots thinned; leave the shortening of them till another time. Let the fruit room be looked over and everything showing decay removed. Slight fires must occasionally be used. Ground should on all opportunities have the necessary turnings to bring it to a friable state by the time the spring crops will require planting. Not much in that way should be attempted at present, but make a sowing of some early Pea, as the Prince Albert or Emperor, in pots to turn out, should those sown in the open garden fail. A crop of the Mazagan Bean may be treated in the same manner. Cauliflowers, Lettuce, and all kinds of early vegetables wintering in frames must have abundance of air daily, and be kept free from damp. The spare frames will be filled with Endive, Sorrel, Parsley, and other things required for daily use, should severe weather occur. So likewise Broccoli now turning in should be placed under some sort of protection for the same purpose. A few years back it was difficult to get a supply of Broccoli through the winter; but Snow's invaluable Broccoli enables it to be done now with ease. Take every opportunity on dry days to hoe and stir the soil between growing crops. Fresh supplies of Rhubarb, Seakale, and Asparagus must be forwarded as wanted. Make a sowing in 3-inch pots of the Fulmer's or Mohawk French Bean as the days lengthen; this, which is the best forced vegetable we have, will thrive in the Pine stove or early Vinery near the glass. Fresh plantations of Horseradish and Jerusalem Artichokes may now be made.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Jan. 26, 1860, as observed at the Horticultural Gardens

January	Month's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep	2 feet deep.	Wind	Rain.
Friday 20	27	29.384	29.225	48	27	37.5	42½	42½	S.W.	.32
Satur. 21	28	29.237	28.782	49	34	41.5	43	43	S.W.	.16
Sunday 22	●	29.225	29.193	47	30	38.5	43	43	W.	.00
Mon. 23	1	29.373	28.876	48	34	41.0	43	42½	S.W.	.08
Tues. 24	2	28.718	28.688	47	30	38.5	43	42½	S.W.	.12
Wed. 25	3	29.626	29.028	40	20	30.0	43	42½	N.W.	.04
Thurs. 26	4	29.810	29.226	50	40	45.0	43	42½	S.	.14
Average		29.337	28.981	47.0	30.7	38.8	42.9	42.6		.86

Jan. 20—Rain; clear at night; frosty.
— 21—Densely and uniformly overcast; rain, boisterous.
— 22—Boisterous; clear; slight frost.
— 23—Clear; fine; overcast; boisterous with rain.
— 24—Clear, cloudy; clear at night.
— 25—Rain, cold and windy; clear, sharp frost.
— 26—Frosty; overcast; rain

Mean temperature of the week, 1 deg. above the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Feb. 4, 1860.

January and Feb.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 29	45.0	31.5	38.2	14	0.32 in.	5	4	—	1	2	11	5	6
Mon. 30	43.9	31.5	37.7	15	0.38	2	3	3	4	3	8	8	3
Tues. 31	43.7	30.3	37.0	15	0.28	4	5	1	2	9	8	3	2
Wed. 1	42.6	30.7	36.6	12	0.52	5	6	1	2	3	8	4	5
Thurs. 2	43.2	30.4	36.8	12	0.75	2	6	5	3	2	8	6	2
Friday 3	43.9	30.8	37.3	15	0.35	3	4	4	3	2	13	3	2
Satur. 4	44.3	32.1	38.3	17	0.31	3	4	4	1	9	7	4	2

The highest temperature during the above period occurred on the 3d, 1850—therm. 57 deg.; and the lowest on the 31st, 1857—therm. 8 deg.

Notices to Correspondents.

CHINESE PEACH TREES: *Derwent*. We are not aware that the Peach trees imported from China by Mr. Fortune, (and designated at the recent sale by auction as Rose-flowered, Camellia, and Carnation flowered) are capable of bearing fruit of any value; but they are not necessarily sterile from the structure of their flowers. You will find a short description of these Peach trees at p. 244 of our volume for 1856; at No. 165 of NEW PLANTS.

COPPICE WOODS: *X Y Z*. We are unacquainted with the management of Beech Coppice; nor do we find it spoken of by writers on Forestry. As to Ash and Oak, the age at which they are cut depends on the goodness of the soil. The rule is not to cut them till they are 5 inches in diameter at the ground level; a size which in your case they must have gained, we imagine, in 16 or 17 years. If your object is afterwards to cover the ground with timber, you should not make provision for more than 120 permanent trees per acre.

DAPHNE LAUREOLA: *E S W*. You may transplant this either in February or in September. It thrives best in shade, among bushes.

GARDEN ENGINES: *A Constant Reader* says, "I have an iron water engine for wall trees, the bottom of which is worn out at the screw holes with rust." He will therefore feel obliged by any of our correspondents informing him of any material better than iron for the inner bottom which would not be likely to rust, and which consequently would be more durable.

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*Jas. Chisholm*. 1 is the common Portugal Laurel; 2 is the common broad-leaved Laurel. We cannot answer inquiries privately.

GAS-TAR: *F S*. Water that has stood in a cask gas tarred inside will do no harm, unless the tar has been recently applied. In that case pour out the water, and continue to do so till shining scum ceases to appear on the surface.

STRAWBERRIES: *Saffron Walden* had better consult Mr. Cuthill's new pamphlet on the cultivation of this plant. We shall endeavour to find room next week for a notice of it.

*** As usual, many communications have been received too late, and others are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspondents the insertion of whose contributions is still delayed.

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The Agricultural Gazette.

SATRRDAY, JANUARY 28, 1860.

WE are informed that the objection to prizes offered for good conduct to grown men and women by our LABOURERS' FRIEND SOCIETIES rests on "effete" argument and baseless prejudice. Let us once more state the argument as it really stands, leaving our readers to characterise it as they please. We do not suppose that by any mere statement of the case, however convincing it might be, any association of the kind would at once remodel its prize list and cancel those offers which have been hitherto made to men who have reared the largest families in wedlock, to those who have been longest in the same service, to those who have for the greatest number of years avoided parish relief; but the continued discussion of the subject must ultimately result in attention being more exclusively directed to the encouragement of skill in the operations of agriculture, it must at length effect a gradual withdrawal of the rewards for mere good conduct.

Lord PALMERSTON did indeed the other day refer to the award of a money premium by the local society to the labourer as being of the same nature with that of a medal or a bit of riband by the QUEEN for the good service of any of her subjects; urging that it is in both cases a token and a record of good conduct, and not a remuneration or reward.

There is however a very essential distinction between the two: the one is for public services in which all are interested, and which therefore all, and the QUEEN as their representative, have a right to praise; while the other relates to personal virtue which can never claim reward, and shrinks from it indeed just in proportion to the genuineness of its quality.

We submit, too, that these distinctions are *received* as having in them the nature of remuneration; and certainly a money reward or material advantage of any kind offered as an incitement to moral improvement is of extremely doubtful policy. Of course the morality of any conduct depends altogether upon its motive, and if you say that it has been with the view of gaining this 3*l*., 2*l*., or 1*l*. reward, that such a man has supported his impotent father, or punctually attended his parish church, or abstained from crime, or even retained his place upon the farm, or struggled on without parish relief—then, we must say, that compared with another who has done none of these, he is not necessarily the better man of the two. If you say this money is not offered as a prize for competition, but as a mere acknowledgment of services rendered, then we must reply, 1st, it is in effect a prize—for candidates appear, and a few only are successful; and 2d, unless it be a prize, *i. e.*, unless it acts as a stimulant to good conduct in others, it is utterly useless; for this is the professed object of the Society—the promotion of industrious and moral habits among the labouring population.

Will any one defend the offer of such a prize as used annually to be published—possibly still is—by an agricultural association in Lord PALMERSTON'S own county—the North-east Hants Agricultural Association?—and yet if it be indefensible the whole system, as it seems to us, must fall. The following is the advertisement:—

"The clergymen's prize of 3*l*. 3*s*. will be given to the agricultural labourer, or the now disabled cottager, who was an agricultural labourer, who, living within the circle of the North-east Hants Association, shall obtain from his parochial minister, and one churchwarden, the highest character for honesty, industry, sobriety, attention to his children's education, and his own religious duties; the certificate must particularly state if he and his family are regular in their attendance on divine worship, at his own parish church.

"The clergymen's prize of two guineas, in like manner, to some single woman, widow, or spinster, above the age of 55 years, &c."

There surely needs no argument to prove that money offers for morality or religion are absurd—that a money reward for honesty is an absurdity—that a money reward for industry should be given in the form of wages—and that a money reward for attention to religious duties is apt to be a premium upon hypocrisy. It is evidence of a low moral standing in the class addressed when such offers are not seen to be glaringly uncouth and shameful, both by those who make them and by those to whom they are made. And yet over all the South and East of England and as far north as Lancashire we have prizes offered to the labourer who has brought up "the largest number of children born in wedlock without parish relief;" to him who has "placed out the greatest number in respectable service;" prizes for "long servitude in the same family;" for widows who have maintained families without parish relief; for the oldest men who can prove that they have not been convicted of crime, and for those who have supported impotent relations.

It is evidence however of improvement in the style and character of the agricultural labourer that competition for these prizes is certainly diminishing—that the number reported as competing for them is so small—and that societies have to publish in their reports requests to members to bestir themselves to urge cottagers and labourers to come forward for the purpose.

Leaving, however, the question of rewards for moral conduct, what is to be thought of the policy of giving rewards for long servitude? Here are agricultural employers complaining in one county of the inordinate and extravagant amount of wages, and in another of so unmanageable and redundant a population that wages cannot be otherwise than low. And yet they band together to grant prizes for long servitude!

If there be one thing plainer than another on the review of our present agricultural labour market, it is this—that every artificial interference with the natural interest of the labouring man in such a case is mischievous. If it was not for a law of settlement, under which labourers grow up under the impression that their normal condition is that of pauperism, and their natural relationship, that of property in, and permanent attachment to, a particular parish; and let us add, for what influence it may have, if it were not for a system of rewards indicating that there is, in general estimation, a merit in long servitude apart from good masterhood or good servanthood—if it were not for these artificial interferences with the natural play of a man's own energies and interests, we should have what is greatly to be desired—a gradual supply of scantily populated districts from the surplus of those where the labouring population appears to be redundant.

It is just possible that it may often be a good thing to encourage labourers to remain for a length of time in one place, but that is not to be done by a county association; it is to be done by the master himself when he has got a good servant, and by the servant himself when he has got a good master. The thing is as merely private and mutual an arrangement as can be conceived, and it is placing it in a wrong position to bring it before a public society. It is as much a thing for the benefit of the master as it is for the benefit of the servant; and it is as much a thing to the credit of the master as it is to the credit of the servant. If any reward *must* be given, the master deserves it as much as the labourer, and we were glad to see this acknowledged by the Devon Agricultural Society, in whose report of several years ago we read:—

"To the Rev. W. H. ARUNDELL, of Cheriton-Fitzpaine, with whom JOHN COCKRAM has lived during a a servitude of 43 years, a Silver Medal.

"To JOHN COCKRAM, aged 82, who has lived with the Rev. W. H. ARUNDELL, as above, and has always been strictly honest, industrious, and sober, 1*l.* 10*s.*"

If, however, Mr. ARUNDELL and JOHN COCKRAM were mutually satisfied with their position no reward was necessary; if not, then any merit belonging to either must have been that of patience under dissatisfaction. That may have been a proper subject for reward or it may not!

It seems plain to us that it is in the encouragement of self-reliance and true independence, of efforts after self-improvement in intelligence and skill—that our Labourers' Friend Societies will find scope for their most useful efforts. Let every such association endeavour to encourage education within its limits; let it encourage the operation of benefit societies and of savings' banks, and especially of that best of all savings' banks for the employment of scraps of time—the allotment system; let it avoid everything having a pauperising or dependence-producing tendency, keeping in view the maxim which involves a most important truth in material things, as well as in others, that "to him that *hath* shall be given;" on this ground let it devise means for encouraging the payment of wages by the piece; let it direct its chief attention to the offer of rewards for evidence of skill, whether in agricultural, horticultural, or mere domestic operations; and abstain from all attempts to influence, by money rewards, such matters as attention to religious duty, benevolence, or personal morality, where higher motives alone ought to have an influence.

That there is abundant scope for their exertions apart from this last section of the field in which they have hitherto been working, their own prize lists amply prove. For here we read of prizes offered no doubt with the best effect to ploughmen, drainers, diggers, shepherds, hedgers, thatchers, hoers, barnsmen, hop-driers, dairy-maids, chaff-cutters, shoeing smiths, allotment tenants, and cottagers (for bread, for domestic economy, neatness, &c.); being awarded for that *skill* in these operations and proceedings which it is their purpose to improve.

CABBAGE WORTS.

THE cultivation of Cabbage as an agricultural crop appears to have decreased very much since the growth of Mangel came more into fashion. Upwards of 30 years ago I can recollect my father, who managed a large estate in Derbyshire, used to grow Drumhead Cabbage extensively for both dairy cows and fattening bullocks; and I can recollect perfectly if perchance the cows stole a few Turnips from the cart as it passed through the field or yard, the cook, housekeeper, and dairymaid used to kick up a terrible hubbub about the cream and butter and even milk being spoiled by the Turnipy taste. None of our dairy cows had Turnips; and even though we dug them out of the snow, "Drumheads" must be had for the cows which supplied the milk, &c., for the use of the proprietor. Since I left the midland counties, now more than 20 years ago, I think I can say that in all my perambulations, except in South Wales, I have not in the whole time seen 10 acres of Drumhead or cattle Cabbage. I recollect how well our dairy cows (a herd of choice short-horns) used to do on this Cabbage and good hay, and that the best Highland stots or bullocks used to make excellent beef with two feeds of Cabbage daily and plenty of hay and straw chopped together, then steamed and mixed with Bean and Barleymeal and consumed while it was warm. Our fatting stock in the winter was kept warm and dark in those days; so that there is not so much novelty in modern practices, though we may now know their why and wherefore better than we did at that time. I can look back to that old farm-yard with its spacious fatting stalls, open sheds and yards for young stock, and large Dutch barns for hay, as the site of many a youthful frolic, and can only wish that in this miserably "steaded" county I could see farm homesteads half as good as that was 40 years ago. But to my Cabbage, for I fear a great deal of our modern self-laudation will not bear the serious glance of retrospection; indeed, in that branch of cultivation with which I have been more immediately connected, I am quite sure there are many things not so well done generally now as they were in my boyhood's days.

At page 32 Mr. Hewitt Davies has wisely directed attention to the Cabbage crop, and recommended sowing the end of February. Spring sowing may be all very well for a late crop; but if a really fine crop, Cabbages of 25 lbs. to 50 lbs. each, is required, I should prefer plants from autumn-raised plants. These are sown the first week in August, bedded-out in poor soil when large enough where they stand through the winter, and are planted out as soon as the land can be got ready in the spring, not later than from the middle of April to the first week in May. Plants so managed on properly prepared soil produce an enormous crop, and plants put out in rows 2½ to 3 feet apart, and about 18 inches apart in the row, will produce a much heavier crop than those planted in the ordinary way at 2 feet apart. About 1830 I recollect walking some 15 miles to near Ashbourn, to see a piece of Cow Cabbage grown by a brick-maker in the refuse clay of his brick-yard "without muck," the modest "brickey" having discovered a secret, and wanted 100 subscribers at one guinea each before divulging it. The Cabbages were remarkably fine, some of them nearly 60 lbs. each, and few less than 40 lbs.; but secrets were ill to sell in those days, and before the subscription list filled, it oozed out that the cesspool of the house of convenience in the corner of the garden yielded the liquid which produced the unmucked Cabbages; muck in those days, and I fear too frequently at the present time, being considered the body, "the solid stuff," and not the essential "spirit" which passeth away unobserved. However, some of the gentlemen subscribers paid their guineas, and through the brickmaker many a farmer learnt the value of "necessary stuff."

The object however of the present article is not so much to direct attention to the cultivation of Cow Cabbage, though that is an important subject, as to induce agriculturists to inquire whether there are not other Cabbageworts worthy of their cultivation. Seven years back I recommended the Buda or Asparagus Kale as a plant likely to produce a large amount of forage for lambs, as it will bear cutting twice before the end of April, and the third time will yield a good bite for sheep. This plant, like all the Brassicas, requires deeply cultivated and rich ground, but under proper management it would yield in March and April at the least 50 tons per acre, something worth notice with a large flock of sheep, Swedes getting over, Mangels scarce, and the sheep doing more harm than good upon the seeds, Tares, or Grass. At present the seed from the want of demand is dear, 8*d.* to 1*s.* per ounce, but only create a demand for it, and it would be down to the price of Turnip seed in a very short time, as it is equally free at seeding, and would yield as great a weight per acre. For a spring crop it should be sown the first week in April, and put out not later than the end of July. It may be planted out in rows 18 inches apart, and 1 foot apart in the row; and on the April following a plot so planted will present a solid mass of vegetation. This Kale is perfectly hardy, no winter in my recollection having injured it; and as a vegetable for domestic use second to nothing in cultivation.

We frequently hear of the failure of late of stubble Turnips, at a season when none of the ordinary farm crops are available to make good the loss; yet the London market gardeners think nothing of getting a crop of 30 tons per acre between the 1st of September and Christmas. This is done by what are technically or I might say locally called Coleworts; that is, a variety of Cabbage which produced a large amount of Greens without forming a hard Cabbage, which in frost like that of October last would be destroyed. Now these Coleworts are sown early in June, and at the time of planting out are very strong plants, and would be found excellent feed for sheep which may either be folded upon them, or they may be drawn and taken to the field or shed. After corn, on land intended for roots in the following season this might be a stolen but profitable crop. Of course the land would require to be well manured and in good heart.

In Wiltshire some of the Down farmers are getting into the habit of planting Cabbage for spring lambs, and Mr. Wheeler, the nurseryman of Warminster, annually disposes of hundreds of thousands of plants for that purpose. The sort used is Wheeler's Imperial, a small close compact Cabbage, which may be planted 1 foot to 15 inches apart all ways with advantage. But most persons, gardeners as well as farmers and cottagers, fall into sad blunders in planting Cabbage for spring use, generally giving them much more room than is necessary. I plant out at 1 foot apart, thinning out every alternate row for Greens during the winter and spring, and I have then a splendid lot of Cabbage left. Of course this plan requires an increased quantity of plants, but seed is cheap if purchased by the pound, and the expense of planting not very great. For spring lambs or even for feeding stock or milking cows this forms an excellent crop at a time when Mangel if not done is getting scarce, and the Grass possibly not over good. Where game is not a nuisance this is a crop which may be planted even agriculturally with great profit, but where rabbits abound it is useless to attempt it, as they will eat the heart out of every plant. The best time to sow for the spring crop is the end of July, plant out the end of September, and if possible give two or three deep hoeings between the plants before the wet weather sets in. Should rabbits prove troublesome an occasional dusting of soot will check their ravages and at the same time form an excellent manure. The best kind for this purpose is Wheeler's Imperial, at least, so the west country people say, but I have no doubt Early Barnes, Venack, Enfield Market, or Matchless would be found equally good.

Mr. Davies, I perceive, says Kohl Rabi is an excellent milk-producing feed for cows in the spring. I had the impression it was open to the same objection as Turnips through imparting a had taste to the milk and butter. I have not tried it for some years past, and shall be glad to find that I am wrong. For quality of milk in the winter there is nothing equal to Carrots and a handful or two of bruised Oats and oilcake, with chopped hay twice a day. *W. P. Ayres, Orchardleigh Park, Frome.*

LABOURERS AND COTTAGERS.

FARM servants and labourers have, in some senses of the term, been a neglected and down-trodden class of people, but their condition and how to ameliorate it is a topic now frequently selected for discussion through the medium of the press, and on the platform before the most influential meetings for the promotion of social and agricultural science. But few practical agriculturists, either employers or employees, enter so minutely into details as to enable those who are not practically conversant with agriculture to form an opinion respecting who are in fault, and what are the principal causes of the most glaring irregular practices in rural districts.

And the statements of a great many men of high standing, who are apparently unbiassed by prejudice or local influence, forcibly illustrate how difficult it is for any man, let his position in society be what it may, to meddle with or dictate respecting things with which he is not intimately acquainted, either by practice or observation, without exposing his statements to criticism by those intimately acquainted with the prevailing systems of farm management connected with a mixed rotation of cropping on extensive arable farms.

There are a good many different systems of farm management in England and Scotland, which, to some extent, are caused by the difference in the climate, the natural sterility or fertility of the soil, cultivation clauses in farm leases respecting the rotation of cropping, and mere blind routine; and there are a good many different modes of lodging and paying farm servants within very narrow limits; but the three prevailing forms of lodging married farm servants—the prevailing system in England, the bondage system in the north-east of England and the border counties of Scotland, and the bothy system in the north of Scotland—each have faults peculiar to itself, which, I have no hesitation in stating, nothing but the country being so thinned by the voluntary emigration of the working classes that an employer will value an able-bodied experienced labourer of unimpeachable character as much as a hunter values a first-class saddle horse and pointer, and retriever dog, will effect a cure or remedy for the present condition of operatives in purely agricultural districts.

A great many men who are accomplished scholars and acute observers take a one-sided view of matters of importance which affect both employers and employed of every grade in town and country. The cultivation of the soil is the inherent propelling force in a purely agricultural district. If a greater number of operatives choose to fetter themselves by early improvident marriages and improvident intemperate habits to a locality than the inherent propelling forces in the locality require, are the landowners responsible for the evils which are the legitimate results of an overcrowded working population?

The statements of men moving in the different walks of life present a strange contrast when placed in juxtaposition with each other. Of course that is the result of people meddling with things they know comparatively little about. As expressive of what I mean, allow me to quote part of your own editorial remarks:—"Of the various schemes of social progress brought forward during the last 20 years none has met with more attention than that of Sanitary Reform. But much as has been done in furthering sanitary science, yet practically very little has been done to apply the principles which it promulgates. Those whose interests are centred in the 'progress of agriculture' eagerly discuss the best methods of housing cattle, so as to insure at once their health and their comfort, but with a fatality deplorable in its social results pay little attention to the condition of the labourers who tend them. If there is one point which experience has made clearer than another it is this, that 'as the houses so the people.' If the houses are damp, ill ventilated, ill drained, and ill arranged, amongst their inhabitants diseases are rife, and deaths frequently occur. * * * We whose lines are cast in pleasant places talk serenely of self-control; but we have had little experience to test our self-control if we think that we could, under circumstances in which too many of our poor are placed, act differently, and show amidst scenes of filth and lessons of daily depravity the beauties of the Christian life." See pages 221 and 222, *Agricultural Gazette*, 1858.

"S. G. O." stated last autumn through the medium of the *Times* that "Emulation in farming has made

the farm and its details open to criticism; shame has compelled some, good feeling others, to build better cottages. I now scarce go anywhere but I see new cottages built with all desirable regard for the comfort and decency of the labourers who inhabit them. There is room yet for much more cottage building even in fortunate districts; there are yet alas! many districts in which all the old evils are in full force, but I very seldom meet with a landholder who does not regard the question in its true light." See page 850, *Agricultural Gazette*, 1858.

I have resided a twelvemonth in each of two different English counties 100 miles apart, but I have not yet seen any appearance of landowners regarding it as a duty to build farm steadings, which will enable intelligent farmers, who are possessed of the requisite money qualifications, to keep pace with the rapid strides of agricultural progress both in a theoretical and practical point of view. If my memory serves me right, I read that the Duke of Argyle stated before the meeting held to inaugurate the opening of the Dundee Corn Exchange, that speculative science is much in advance of practical skill. Now, Mr. Editor, you and the conductors of the agricultural papers are quite at ease in discussing the feeding properties of home-grown and artificial foods; but what can you do for a tenant farmer whose feeding sheds are constructed on the most primitive old-fashioned style? Such sheds, which protect the cattle from the inclemency of the weather provided the wind is blowing only from one given point, do very well in mild open weather; but any one who has had experience in the feeding of cattle knows that cattle in open yards remain in a stationary condition during boisterous weather.

Again, it is well known that a labouring man's wife can prepare a palatable meal, which is eaten in her own house, at a less cost than she can do by having to cook her husband's breakfast and dinner in the evening for the following day, both of which the majority of English ploughmen have to eat in the open field.

Potatoes and vegetables go a long way in assisting a woman, who is practically conversant with domestic economy, to spin out 12*s.* per week; but owing to the majority of English ploughmen having to reside in villages, the Sabbath day is the only day an English labourer can be said to enjoy domestic comfort.

If you have had occasion to commence a journey early in the morning, you may have observed men emerging from the cottages, which are thickly studded round the extensive tracts of unenclosed land susceptible of being reclaimed for cultivation.

The farmer's residence and the farm steading, the walls of which consist of wooden boards nailed to upright posts which are fixed in a brick wall about 2 feet high, are the only structures that a great many English landowners have erected on highly cultivated farms.

A great many English labourers have to walk two miles, morning and evening, to and from the farms upon which they are employed, which is not only fatiguing to the labourer, but it unfits him for mental recreation in the evening.

You state, after quoting "a vivid description of the type of country cottages," "'and yet if any man,' says the same author, 'is entitled to a comfortable resting-place to recruit his strength, it is the agricultural labourer, by far, according to Dr. Adam Smith, the most productive of all labourers. And on the question of thews and sinews only, if there be any truth in the principles and findings of animal chemistry on which you now house and bed, curry, and feed your cattle, such refreshing places would pay you the best of any. Damp, nasty, and unwholesome habitations depress the spirits and enfeeble the exertions not only of man but of brute animals. Yet such we venture to assert are the habitations of nine-tenths of the ploughmen of Scotland.'"—*Agricultural Gazette*, p. 222, 1858.

To return to my subject, I beg to state that the majority of English landowners have not yet commenced to do what Scotch landowners have imperfectly done—the building of the requisite number of cottages adjacent to each farm steading, or at least say one house for every 50 acres of the majority of each arable farm. I think that competent architects could give an approximate estimate of the cost of erecting such a number of houses. The statements of Mr. Manger, a tenant farmer at Dumpton, near Ramsgate, show what need there is in his district for labourers' cottages, which is applicable to too many parts of the United Kingdom. *W.*

BEET-ROOT CULTIVATION.

M. TRÉHONNAIS gives a full account of French experience on this subject in the Journal of the English Agricultural Society. He first describes the process of distillation known as Champonnois,—"The apparatus necessary for the distillery is neither expensive nor intricate. It simply consists of two or three tubs for soaking the slices, four tubs for fermenting, and an ordinary still. The roots are first cleaned and washed, then sliced in the usual way into longitudinal pieces. These are placed in the soaking-tubs with hot water, to macerate. The object of that process is to dissolve the saccharine matter, and separate it from the cellular tissue of the root. This operation lasts about an hour. The hot slices are then removed, and carted away as pulp for cattle. The pulp loses by maceration from 20 to 25 per cent. of its weight; which represents the amount of saccharine juice obtained. This juice is run into the fermentation-tubs, where it remains 24 hours, and is then passed through the still in the usual manner. There are in the Champonnois process several points which greatly recommend its adoption, from their simplicity and economy. For instance, the hot water necessary to the maceration of the slices is supplied after the first day from the residue of the still, that is, the juice itself minus its alcohol. This juice when removed from the still has a sufficiently high temperature to macerate the roots, and thus effect a great economy of fuel. By this plan, whatever nutritive substance may remain suspended in the juice after the alcohol has been removed is not wasted, but is again absorbed by the pulp; so that in reality the root has lost nothing of its constituents except the alcohol producing sugar. Another important feature of this system is what is called the continuous fermentation. Formerly to produce the necessary fermentation in each tub it was necessary to add each time a certain quantity of beer ferment or yeast. This not only occasioned a certain expenditure, but also great irregularity in the fermentation. The system of continuous fermentation consists in running, without any interruption, fresh juice from the macerating into the fermenting tubs, already filled with juice in a fermented state; so that the decomposition of the saccharine matter and its consequent transformation into alcohol is continuous, and by the time it reaches the fourth tub the fermentation is complete, and the juice is ready for the still." As to the ordinary yield of spirit it was found on a comparison of 18 distillations "that it takes 2 tons 6 cwts. 3 qrs. of roots to produce an hectolitre of absolute alcohol (*i. e.* of the strength of 100 degrees), equal to about 22 imperial gallons. The expenses attending the management of the Champonnois process of distilling amounts to 6*s.* 5½*d.* per ton of roots, divided as follows:—

Fuel	1*s.*	3*d.*
Labour and various expenses.	3	6½
Interest and repairs	1	8
Total	6	5½

"So that the cost of producing an hectolitre or 22 gallons of spirits rectified to 100 degrees amounts to about 15*s.* 6*d.*, or about 8½*d.* per gallon. But to this cost must be added the difference between the value, of the Beet root before and after maceration, that is between the raw Mangel and the pulp. This is the turning point where continental agriculturists begin to differ, and the question is sufficiently difficult to demand extreme caution and prudent reserve in its handling. To come to a right estimate we must begin by ascertaining the money value of a ton of roots. We know what value in alcohol it will yield by distillation; we know the cost of the process, because these items can be easily and accurately determined; but not so with the cost of a ton of Mangels, because the circumstances by which its production is attended are so varied and so much mixed up with other accounts, that it is next to impossible to ascertain its cost with anything like certainty. There are two ways of making the calculation; one by ascertaining the cost of production, which, as I have just stated, is next to impossible—the other by taking as a basis the selling price of the roots. Of the two the former would of course be the most satisfactory, for the selling price of any goods is by no means a criterion of their intrinsic value; but I will take the latter as the only one available. It may be assumed that the average market value of Beet-root in France, taking the range of the last six years, is about 11*s.* per ton. The cost of manipulation being, as we have seen, 6*s.* 5½*d.*, it follows that the quantity of alcohol extracted from 1 ton of Mangels costs 20*s.* 5*d.* But from this amount must be deducted the value of the pulp; and here is another difficulty which has become the theme of very angry discussions in French agricultural papers—What is the proportionate value of the pulp as compared with the root? A great many experiments have been made by the partisans of distilleries; and if we were to accept the conclusions they have drawn it would appear that the pulp is equal in nutritive qualities to the roots themselves, weight for weight. I shall presently refer to some of the experiments that have been made, in order to give an idea of the manner in which they were conducted. Nearly all the distillers visited by the French Committee from the Imperial Society stated that from their experience the pulp was equal to the roots. Thus, out of 18 distillers examined, five were of opinion that the pulp is superior to the root; five gave no other opinion but that pulp is an excellent food for cattle; two thought the pulp equal to the root; two considered the pulp inferior to the root by at least 25 per cent.; one other declared pulp superior to many other kinds of fodder, without specifying which; another said he preferred pulp at 9*s.* 6*d.* a ton to Beet-roots at 16*s.*; others gave no reply. The average value of these answers would lead us to the conclusion that a pound of pulp is equal to one of root in nutritive quality, a fact which requires confirmation by further experiments, and which, at all events, cannot be established by the mere assertion of the distillers. But, whatever the difference may be, it is certain that pulp is a valuable food for cattle, and that, if it has lost some of its nutritive elements by the process of maceration, that lost cannot be considerable. It is further proved that pulp is exceedingly palatable to cattle, who eat it with avidity. It is also easy of digestion, and when mixed up with chaff, oil-cake, or any farinaceous food, it forms an energetic element of fattening. M. Baudement, in his very clever report, gives a value of 7*s.* 3*d.* to the quantity of pulp produced by a ton of roots after maceration, which being deducted from 20*s.* 5*d.*, there remains, as the net cost of the alcohol extracted from one ton of roots, the sum of 13*s.* 2*d.*; and, consequently, the cost of one gallon of alcohol would stand at about 1*s.* 7*d.* This figure, however, does not represent the actual cost of a gallon of spirit fit for the market. When it comes out of the still it contains a certain quantity of essential oils, and about 50 per cent. of its bulk of water. This mixture is known under the name of *Flegme*, and must either be rectified or sold in the market as it is. The process of rectification up to 94°, the usual strength of alcohol in the market, adds about 9*d.* to the cost of a gallon of spirit distilled from Beet-root, which gives us a total of 2*s.* 4*d.* per gallon. So it may be assumed, that whenever the price of spirits will allow a profit upon that cost, there is an advantage in distilling; when otherwise, there is a loss."

Of English experience on this subject we have particulars, as an appendix to the paper of M. Tréhonnais, from Mr. Henry Hibberd, of Braydon House, Minety. "The main facts are, that during the winter of 1857-8, 7000 gallons of proof spirit were distilled from rather more than 700 tons of Mangel Wurzel, averaging, therefore, nearly 10 gallons per ton, and that during some weeks the produce exceeded 13 gallons per ton; that the slices, after fermentation and distillation, amounted to 60 per cent. of the original roots, and were saleable at 10*s.* per ton for feeding purposes; that the spirit was not worth more than 1*s.* per gallon, owing to the impossibility of separating from it an acrid essential oil which made it unfit for drinking purposes; and that, owing to this difficulty, and the impossibility of reaching the market price of good neutral spirit, then worth 1*s.* 10*d.* to 2*s.* per gallon, the experiment entailed a loss. The method adopted was that of Leplay, in which the fermentation is carried on in the sliced root, and the spirit is separated by superheated steam passed through the mass in closed vessels. The "cossets" or residual material, removed from these vessels after the process of distillation is completed, are thrown together in a heap, and remain unaltered and fit for food after the lapse of months. In this respect Leplay's method is believed to be superior to that of Champonnois; the residual matter, after his process, being extremely liable to further fermention ending in putrefaction, and therefore needing to be immediately consumed. Mr. Hibberd states that, during the winter of 1857-8, he fed 29 milch cows on hay and pulp from the distillery, and that the whole did uncommonly well. On one or two occasions he ordered some of the cows to be fed on hay only, and they at once showed a considerable falling off from their ordinary yield of milk; so much so that the cowmen, who were at first much prejudiced against the use of pulp, ultimately declared their preference of it to roots of any kind. The cows not only milked well, but kept their condition better than usual; and the pulp was cheap at the 10*s.* per ton charged for it. It is the ordinary experience of cattle-feeders, and of Mr. Hibberd among others, that Mangel Wurzels are unsuitable as food till late in winter, owing to the laxative effect which they produce upon animals fed on them early in the season. This effect was not produced by the pulp remaining after distillation, at whatever season it was given; the cows, while feeding on it, continuing all the time in excellent health. It would seem, therefore, that the root, in losing its sugar, had not lost its value as food for cattle. Mr. Hibberd's experience was derived from the distillation of large roots, the crops having exceeded 25 tons per acre; so that in fact, he does not estimate the cost of growing them at more than 7*s.* per ton. It is from these large roots that he declares his produce to have been 10 gallons of spirit and 12 cwt. of food, of equal quality to the original root, per ton. His failure was due to the unsaleable quality of the spirit, not to any deficiency in quantity or strength. When, as he confidently anticipates, some method shall have been discovered of separating the mischievous essential oil, to which the inferior quality of the spirit is owing, there will be no hindrance, in his opinion, to the profitable prosecution of Beet-root distillation in England. In order, however, to the success of any new enterprise of this kind, liberty of experiment at every step of the process must be allowed. At present the Beet-root distiller is tied down by the Excise rules, which may be well adapted for distillation from malt, but which are not necessarily fit for so different a process as distillation from fermented Beet-root pulp. It may be stated, as a reason for caution in this matter, that no instance is known in which this manufacture has proved profitable in the long run on English ground; but it may also be stated, as an encouragement to the further prosecution of the enterprise, that the reasons given by Mr. Hibberd for this failure seem quite sufficient to account for it, and yet are of such a nature as to hold out a strong probability of their removal. The yield of 10 gallons per ton of roots has been, in Mr. Hibberd's case, obtained over a sufficient quantity of the crop, and from a crop of a sufficiently bulky character, to justify considerable confidence in it as a probable future average result. When experiments shall have discovered some method of purifying the produce, so that it shall fetch the ordinary market price of neutral spirit, there will, apparently, be a sufficiently return from the manufacture to make it profitable; and English

agriculture will certainly derive a great advantage from any plan by which the whisky and the gin at present obtained from Barley shall thus be derived from a fallow crop."

Home Correspondence.

Waste Lands of Ireland.—A gentleman has suggested a method of improving the waste lands of Ireland. I give his offer from the *General Advertiser* of last week, viz.:—"County Mayo, several thousand acres of land to be let in moderate-sized farms on leases of 41 years; rent 2*s.* 6*d.* per statute acre, to be increased in five years to 5*s.*, and in 10 years to 10*s.* per statute acre." There is no information whether improvements have or are to be made by the proprietor on the moors and bogs, but it seems as if the tenant were to be charged in five years an extra rent for his own industry and work, of 50 per cent., and in 10 years of 150 per cent. This surely is not the right way to induce farmers to settle on them, nor would it be just to make them pay for their own improvements. In Canada and the United States they can buy lands in the unsettled parts, prairie or forest, at 5*s.* per acre, fee simple. Is it likely, then, they would expend their bone and sinew on the waste lands of Mayo, working for others and not for themselves? But let Mr. —— give 99 years leases at the Poor-law or Griffith's valuation; then he would find them to be eagerly taken up and soon changed from wastes and moors to meadows and corn fields, as the American forests have been by the industry of our people, when sure of their reward, but not by charging 50 per cent. in five, and 150 in 10 years, on their own improvements. What is the value of the waste lands? This we find from Thom's Almanack for two unions in Mayo, viz.:—

	Acres.	Poor-law val. 1841.
Bellmullet	177,932	.. .. £7299
Newport	159,482	 8288
	337,414	£15,587

or less than 1*s.* per acre; but deducting the towns of Newport, Belmullet, and others, with the lands in cultivation, the wastes cannot be over 6*d.* per acre. Now, in 1851 the Poor-law valuation increased to 23,522, or 50 per cent., no doubt by the industry of the people working for others, not themselves, but I should hope they have not been charged 150 per cent. on their improvements. Supposing 5000 acres bought under the Landed Estates Courts at 5000*l.*, the interest at 5 per cent. being 250*l*, at Mr. ——— lettings there would be a large profit out of the bone and sinew of the workmen:—

First five years, at 2*s.* 6*d.* per acre, the income would be .. .. or double the interest.	£500	0	0
Next five years, 5*s.* .. .. or four times the interest.	1,000	0	0
In 10 years, 10*s*, ... or eight times the interest.	2,000	0	0

This would be the pound of flesh! Let the waste lands be fairly let on 99 year leases. The Attorney-General, in his new Landlord and Tenant's Bill, should enable proprietors, tied up by entails of these as well as of water-powers, factory sites, building lands, to grant 99 year leases. The late government did so with glebe and church lands for building sites. A good example has been set in Scotland by a noble lady, the heiress of an ancient line, the Marchioness of Stafford; when it was proposed to remove the small farmers to make way for large, who would increase the value of the property, she replied, "They were my father's tenants, they shall be mine." What joy these words must have caused over the vast estates of the Duke of Sutherland, numbered by millions, not thousands of acres, and what a change for the happiness of the people. "They were my father's tenants, they shall be mine," will become household words among the small farmers, which I recommend to those who have thoughts of clearing the land of men and replacing them with bullocks and sheep. *Idler.*

Memoranda: Condition of Turnips.—It has been the practice with some farmers in this neighbourhood not merely to let their Swedes remain in the ground until January, but when pecked and heaped to put no kind of covering upon them. For such persons we think this season will be a lesson, not that Swede Turnips have kept well anywhere, for even when well earthed down with every precaution to prevent heating and to promote ventilation, there has been loss by some of them being rotten; but where not properly protected, or as we even now see them left untouched in the field as they were grown, the loss has been far greater, amounting in some cases to nearly half the crop. As Turnips are peculiarly liable to decay after being fully matured, it does seem strange that less attention should be bestowed on them than on Mangels, which of the two will certainly keep sound a longer time if tolerably well harvested. Therefore, whilst so many insist upon raising Mangels in October, why is it not equally necessary to peck up Swedes in November; and not merely to get them up, but after letting them remain a few days in a heap or heaps, spread a light coat of stubble or straw upon them, and finally protect them with a good layer of earth, leaving a few small openings at the top to prevent their heating?

Temperature of December 19, 1859.—Extreme cold is not without its inconveniences affecting the farm, though not so generally apparent as among gardens; one of the chief is, amid the novel abundance of ice and snow, a frozen pump. Thermometer 4° Fahr., three miles from a town! Farming man in a stew, had to fetch water for the horses from a neighbouring "drain," water for the house ditto; not quite so palatable as the pure crystal spring from a bed of gravel. So they were as anxious to make the pump go as I was; it had been wrapped up with a double coating of straw, spout and all; but if another such a frost should come, they began to think the pump would never flow again. However, by two or three successive applications of hot water from all their available cooking vessels we overcame the iron king, and men and cattle rejoiced in an ample stream. This event will make the 4° Fahr. memorable. I learn that it was 2° Fahr. at Thorney Abbey, seven miles east of Peterborough; and Mr. Warwicker, of Milton Abbey, 3 miles south-west of Peterborough, also records 4° Fahr. The great variation of temperature observed in various parts of the kingdom is not without a parallel in former years, as Mr. White of Selborne narrates a variation in temperature during a severe frost, 1784, in a distance of about 2 miles, that might reconcile any reasonable person to the facts observed at Saffron Walden last December. He says, "In the morning of the 10th, the quicksilver of Dollond's glass was down to half a degree below zero, and in the evening to 1° below zero! This strange severity of the weather made me very desirous to know what degree of cold there might be in such an exalted and near situation as Newton. We had therefore on the morning of the 10th written to Mr. ——, and entreated him to hang out his thermometer made by Adams, and to pay some attention to it morning and evening, expecting wonderful phenomena in so elevated a region—at 200 feet or more above my house. But behold! on the 10th, at 11 at night it was down only to 17°, and the next morning at 22° when mine was at 10°. We were so disturbed at this unexpected reverse of comparative local cold, that we sent one of my glasses up, thinking that of Mr. —— must somehow be wrongly constructed. But when the instruments came to be confronted they went exactly together, so that for one night at least the cold at Newton was 18° less than at Selborne, and through the whole frost 10° or 12°." The unusual severity of the frost seized Turnips and Mangels that were in the least exposed, so as to be a matter of difficulty to cut them up, and when divided, the sheep could scarcely eat them, they became so hard in the troughs. No out-of-door work in cultivation could be done; manure carting and cutting hedges were our chief occupations; under the hedges even, no implement could penetrate an inch; straw with the smallest amount of moisture became an unmanageable lump. And in houses, bread and meat and every liquid not underground or near a fire was frozen; and lastly at the Board of Guardians several applications for relief were made on account of frozen hands or feet from imprudent exposure to the weather.

On Housing Stock.—Last autumn I tied up four bullocks under a hovel, three in three separate boxes, and kept loose seven in two yards (four in one yard and three in another), each yard having an open hovel for them to run under if they pleased. The 14 beasts were all nearly of an age, and they were treated alike: 8 lbs. of Linseed-cake per day each, ¾ bushel of cut Mangels, and hay or Oat straw equally distributed amongst them. Those shut up and those tied up were all ready for market first, and the others replaced them as they were sold off; but they, when marketed in their turn, were not ready on an average so soon by a month each as those that were first tied and shut up. *J. W., Peterborough.*

Farmers' Clubs.

MILBORNE: *Farm-yard Manure.*—At a recent meeting of this club, as reported in the *Dorset County Chronicle*, Mr. Summers spoke on this subject. He said:—The farm-yard is the receptacle for the manure from the corn-fed animals that fill the houses around them, and ought to be thrown into a form that will not admit of the least waste of liquid that may escape from the manure. To attain this object I would shape it like the old-fashioned round earthen milkpans, and let the bottom of the pan be a tank into which all the drainings would flow, and which would be required to be pumped over the mass of dung during the summer months, when we do not get a fall of moisture sufficient for economical fermentation. I say economical fermentation, because that rapid fermentation which manure heaps sometimes undergo, and which causes the manure to become "firefanged," is followed by a great loss of carbonate of ammonia. A shower of liquid manure from the tank would keep fermentation within proper bounds, and when thus regulated a manure of greater value would be obtained, and the most soluble part, or the essence of the manure, would be saved. Dung becomes more soluble as it becomes more decayed, but some of the constituents of fresh dung are in a soluble form and are quickly lost if the liquid flowing from it is not preserved in some receptacle, and as these are by far the most valuable parts of the manure, they ought to receive our special care. Here we ought to look for a helping hand from our landlords, who ought to pay for all necessary permanent improvements when we are tenants at will. They ought to pay for the shaping of yards and the building of tanks for economising the produce of the soil. There is very little free ammonia in fresh dung, the nitrogenous substances being found in it in an insoluble form; but it contains much phosphate of lime that is soluble and easily washed out. This latter salt is much more soluble than was at one time supposed, and adds another argument in favour of the care we ought to bestow on liquid drainings from dung heaps. The liquid from dung heaps is much more valuable than the urine from animals, as the latter does not contain any appreciable quantity of phosphate of lime. I can speak from experience and observation as to the value attached to liquid manure. I know that it is generally of little value, through being so much diluted by water that has fallen on the buildings and roads around the yards flowing through it. This ought not to be allowed; no water but that which falls direct on the manure should be permitted to come in contact with it. When circumstances will admit of it, we cannot do better than cart the dung to the field, and spread it in a fresh state. Professor Way has proved the impossibility of the escape of any of the soluble ingredients through the vegetable mould of most of our cultivated fields, and Dr. Voelcker has told us that the loss of ammonia from our manures in the field is not through its becoming volatile when the manure is spread, but through being left in heaps to be washed by heavy rains. If it is spread evenly over the surface, immediately after carting, there is no fear of loss of any of the valuable volatile substances whilst the dung is undergoing slow decomposition, whether in the field or in the manure heap. Most soils contain a greater or less proportion of clay, and as soils containing clay possess in a remarkable degree the property of absorbing and retaining the essence of any manuring matters that may be applied to them, we cannot do better than entrust it to their keeping. When fresh dung is carted direct from the stalls and spread evenly over the surface water becomes the vehicle by which the soluble parts are conveyed to the different matters, with which it enters into chemical union, and it is there locked up until the hair-like fibres of the plants seek it and appropriate it as nutriment for the plants. This shows us the economy of the sheepfold. We may also learn a lesson from observing the powerful action of the droppings of the horses which are dropped when the animal is working on the soil. If the soil is a highly manured one we cannot fail even then to notice the over-luxuriant plants grow on the spots. Fresh dung acts beneficially on most soils for some crops, through its mechanical effect, and it is probable that the carbonic acid gas which is generated during decomposition may help to liberate matters that would otherwise remain inert. It is a common practice to cart the manure to the field at a time of the year when few other operations can be carried on. It is then put in heaps, on which the carts are driven. These heaps, in my opinion, if some material is laid at the bottom that will absorb any liquid that would be otherwise wasted, are the best and most economical places in which fermentation can be carried on. The consolidation caused by the carts being driven on the heaps prevents rapid decomposition. This is a highly desirable result, as the carbonate of ammonia which is formed is fixed by the organic acids which are formed at the top of the heap. When we cart these heaps on the land for Wheat in the autumn, we always find a blackened mass or layer of decomposed dung on the top which may be compared to black butter. This layer contains an abundance of humic, ulmic, and other organic acids, that seize on any ammonia which is formed in the interior of the heap, and which is escaping upwards. This shows us how useless it is to cover the heaps with earth, as was advised by all authors previous to the researches of Dr. Voelcker. As I have said before, if the fermentation of dung is properly regulated, and certain precautions taken to prevent loss through the escape of the liquid that is continually percolating through it, it will be attended with little loss of saline matters or of nitrogen. Gypsum is also formed during fermentation, which is another agent that helps to fix the ammonia. These heaps cannot be turned without a great loss of ammonia resulting from it. It is generated in the middle of the heaps, and when the heaps are turned the ammonia is given off. We ought for this reason to avoid turning them unless it is absolutely necessary to do so to hasten the decomposition of the manure. If we were to plough farmyard manure in an unfermented state into soil in preparation for Wheat, we should do away with that solidity so genial to the Wheat plant. Fermentation must therefore be hastened by turning the heaps, should there not be time for the preparation of the manure by the slow but economical process which I have recommended. Could the dung be laid on the land in a fresh state, and allowed to decompose there with advantage to the crops that precede our crops of Wheat, we may expect the latter to be improved both in quantity and quality, provided that our present system of cropping was adhered to. The land derives much benefit during the decomposition of matter in it, independent of the waste of that matter being less. Now it is my belief that we have all a great deal to learn about the action of decomposing matter on the soil. Take the well-known action of carbonic acid gas. If the carbonic acid of the atmosphere acts powerfully in liberating those substances required for the growth of our crops, how much more powerfully must that carbonic acid act which is generated in close proximity to those substances, and in such abundance. Again, ammonia has a solvent property. Kuhlman says—"In order fully to appreciate the effect of ammoniacal salts, it is necessary to point out that they promote the entrance of mineral salts into the plant. Phosphate of lime, phosphate of

magnesia, and silica, can, by the aid of carbonate of ammonia, become somewhat soluble and absorbable." Liebig has also directed attention to the greater solubility of phosphate of lime when ammoniacal salts are present, in his work on "Agricultural Chemistry." Like sulphuric acid on bones, these agents require time to exert a powerful influence on the inactive constituents of the soil. When the manures are added to the soil, they may be termed crude, and ought to have more time than we can give them to undergo that process of change which would enable the plants to perform their proper functions. We never get such healthy good yielding crops from over-worked and highly manured soils as from those soils that have had time for those chemical changes. This is what farmers term rest, and which is given to light soils by the adoption of the five-field system. It is a rest from the growth of corn, and the Clover plant being a great collector of ammonia, gives the better preparation for the following crop of Wheat. If we can keep the land clean there can be no better preparation for Wheat than the old-fashioned five-field system will admit of. Under this system we can carry on the farmyard manure in a raw state, or we can lay on straw and fold on it. In each case the manure would be acted on powerfully by the atmosphere some time previous to ploughing in, and the nitrogenous and saline matters would be distributed evenly through the soil. We also get that solidity of the soil so desirable for Wheat.

HEXHAM: *Duties of Landlord and Tenant.*—Mr. John Grey, of Dilston, said:—"I have been of late more than usually occupied in public affairs, and also somewhat occupied in domestic cares. Therefore, I would beg, in the first place, to tell you that I am not prepared, as many gentlemen are, who come before you with their thoughts well matured and well arranged, and written out in good language; but I come before you taking my chance, just to talk in a quiet homely way upon certain subjects which interest us all. It would be only a trite remark if I were to remind you of what you all know, that the area of our cultivation in this country is very limited. We are limited, first of all, by the sea which encircles our shores. We cannot fall back as the inhabitants of more recently discovered countries can. When the wave of population rises too high in one district, they can go back, they can fell forests, or they can commence peopling districts which still remain unclaimed; but here, we are circumscribed by our insular situation, and we are also circumscribed in the area of cultivation by a climate which does not permit cultivation, as you know, to embrace the great heights of which our country is greatly composed. What remains, then, is to follow the advice which has been given to you by your worthy secretary, in saying that it is necessary by the application of greater skill and intelligence, and the industry and energy which is already known to be distinctive of the British nation to make the area we do possess more productive for the feeding of a constantly increasing population. This application of skill and intelligence is one of the objects and the learning of all such societies as this. We are met here for a time to instruct each other; not that I would presume to come before you with a view to instruct you so much as, by a few suggestions, to draw from you an expression of your opinion, which by your experience you are well enabled to give. It is by a collision of sentiments that we are to instruct and to improve each other, and to make these suggestions which are likely to draw forth the exercise of the thought in the improved cultivation of the land. The subject of our present discussion is the relation of landlord and tenant, and the reciprocal duties which belong to them.

"There are various modes of letting land in this country. One very general mode, through many of the southern counties at least, and it prevails to some extent in this, is by annual tenure. Another, which I have always thought most conducive to agricultural improvement, and the spirited exercise of agriculture and the outlay of capital, is to allow a tenant to have a lease which he is able to calculate upon, so that he knows—when he lays out his money—for how long a time he is to have the land. Very much has been said and written of late, in recommendation of letting land with free open covenants, leaving without restriction the tenant to do and act as he chooses. There is some foundation for such an opinion, because, if everybody believes, as I do, that the highest state of cultivation, that the most improved mode of farming, is most productive to the tenant, then, you see, in leaving a tenant at liberty to farm as he lives, if he knows that the higher the farming the better for himself, he is sure to farm in that way, and that must be also conducive to the good of the landlord. But I need not tell you that in farming, as in other branches, there are men who fail to do that which is most conducive to their own interests—men who fail,—sometimes from ignorance and from want of judgment—some, unluckily, from want of sufficient capital—many because they are by nature and in their hearts penny wise and pound foolish, and will not extend, with that liberality with which they ought to do, the benefits of their cultivation, which might make them a good return. Those opinions, which would lead farmers to do as they pleased, are much more fitted for the system of letting by annual tenure than by lease. If a landlord has a tenant occupying annually, and if he sees that he has got a tenant who is inclined to take an undue advantage of his land by cultivating in such a manner as is not likely to return to the landlord his property in equally good condition as when he let it, and if he sees the man would be inclined to break up a fine rich old Grass pasture because he would have the benefit of a few years' cropping with very little expense—or if the man be inclined to follow a system of cropping on the best portion of his land, and leaving the inferior because it would require more cultivation to keep it up to the mark, so that it may be difficult to reclaim—on this the landlord can draw the check cord, and give his tenant notice to quit. It is not so with the landlord who agrees upon a term of 19 or 20 years. He may make the very best selection possible of a tenant; he may find a man in whom he has the greatest confidence both for judgment and integrity, but who can tell where this excellent tenant may be at the end of this year and who may succeed him? Many a respectable man has a profligate son, and leases, you know, are heritable property; and at the death of the tenant the farms may go into the hands of those who know nothing at all about their management Is it, therefore, reasonable—and every one who hears me will agree with me in saying that to be permanent and useful every agreement should be founded on justice and reason—is it reasonable in such a case that the landlord's property should go into the hands of a person who is not capable of managing it, and that he should have no means of restricting such a person in mismanaging and spoiling his property; and these restrictions are more essentially necessary when the term comes near to an end. In such cases, whatever liberty may be given—and I quite agree with the principle that it would be great presumption in any man to prescribe a course of management to be strictly adhered to during the whole course of the lease; yet I contend that it is the right of the landlord, and that he has a right to claim and receive such power over the management as shall, in some measure at least, restore to him his land in an equally good condition as when he let it. There ought to be also very plain and intelligible agreements between landlord and tenant in all cases. I mean—not these long documents which are so much loaded with legal verbiage—those unintelligible things which plain men would rather go 50 miles than sit down and read—but a document drawn out upon those principles, and such as every one can understand—as free from unnecessary and vexatious obstructions as possible, and so worded as that the landlord may have it in his power, in some measure, to restrict the mismanagement and spoliation of his property.

"It is the duty of the landlord to let his farm on such terms as will give encouragement to his tenant to make the most he can of it; but at the same time he is entitled to reserve to himself, in some measure, the right of its protection. Another very important duty of the landlord is to meet the tenant fairly in the application of capital which is necessary for the due occupation of the land. I mean that the great permanent outlay of capital should belong to the landlord only; and I allude more especially to the buildings with which the farm ought to be furnished. Buildings, and roads and fences ought to be prepared and put in the tenant's way, so that he may have his capital to occupy in what is really his own business in making the most he can of his land.

"I need not tell you who are so well acquainted with the subject—you who have your 200 and 300 volumes of Liebig and Johnson—where is the difference—in the maintenance and keeping of stock—between well-sheltered accommodation for them and otherwise. You all know perfectly well already that when animals are put to fatten, the great part of the consumption, first of all, is required in keeping up their vital heat, before anything is left to go to the extension of the tissues; and if you put one lot of animals in a cold field without shelter, and another in a snug fold, which has sheds, dry and comfortable, you will find that those who are exposed to the cold will consume double the quantity of food which the others do, but they will not make one-half the progress in laying on flesh. It is now considered much more necessary than it was formerly that the farm offices should be of such a kind as to afford every means of producing the flesh of the animals which are to feed in them with the least outlay of food.

"This is one object in having very good farm offices. Another and very material object is this: The quality of the manure depends very much on its being kept together in a compact form, and not being exposed too much to the elements—the wind and the wet; and as exposure to these elements detracts much from the power of the manure, you may rest assured that we shall find the greatest difficulty to supply the manure.

"We have had of late years large supplies of guano from distant parts of the world; these supplies will necessarily fall off; and if you have read the last publication of Professor Liebig on this subject, you will find that he expects, at no very distant date, a very great want of that manure which is necessary to maintain the fertility of the soil; and he has a very strong opinion on the subject—which does not belong so much to the healthy people who, like myself, live in the country, as to those that are congregated in the towns that the waste which is allowed to go on in these towns without being returned to the country will be felt to a very great extent. I quite agree with him that now the consumption of agricultural produce in the towns is very much greater than it used to be, and if that produce is to go away to the towns without being returned in sewage, we may look for a great deficiency some day or other: whenever the supplies of guano fail us, we must look for a falling off in the fertility of the land. I think the subject is well deserving, not only our individual, but the national consideration. It is difficult to arrange—where old buildings are to be sacrificed—such a systematic building as would please the eye of one who wishes to see things perfect; but the economy of labour ought to go strictly into the account; because with a well arranged set of offices, a certain number of cattle will be as well kept by one man as it would be by two in buildings which are squandered about without any system."

"But there are other occupants of the farm which are still more deeply interesting to us than the stock—however important that is: I mean the labourers who are connected with it and who are employed on it. I hope this reproach on our country is so far gone that my rev. friend (Mr. Bird), who has given us so many lectures on the subject, will begin to find that his occupation is nearly gone.

"Greater attention has been paid of late years to the improved condition and accommodation of the labourers. I myself have had occasion within the last 20 years to build some hundreds of cottages; and it has been with me a great consideration that there should be the means of dividing the family, and that there should be the accommodation suitable to the health and comfort of that family. In speaking on the situation for farm cottages, I should strongly recommend that first of all, distance from the place must be considered in all cases; and after that a dry, healthful, cheerful aspect should be given to them. It makes a wonderful difference between offices being built on this principle and built in certain hollows which are not occupied or filled up; and I should strongly recommend that a dry, bright, airy situation should be chosen. It is not only conducive to health, but is also conducive to the enjoyment of their existence.

"There is another subject connected with the occupation of land in this country which I am sorry to say has led, and will continually lead, I fear, to very great dissatisfaction and disagreement. If it is essential that a farmer when he has good offices should select the very best description of cattle—if it is essential for his profits that he should have that description of cattle which comes very early to maturity, and which will return a fair amount of profit for the food it has consumed, it surely must be contrary to every principle of justice that any part of his produce should be destroyed by animals over which he has no control.

"Don't misunderstand me, and believe that I speak as an enemy of game under all circumstances. On the contrary, I believe that it is conducive, not only to the welfare of the country, and to the good understanding and feeling which it is so desirable should exist between the landlord and tenant, that there should be the means of gentlemen sporting if they sport in a legitimate way. That description of sporting which is connected with a considerable amount of healthful exercise, and where men and dogs have room to show themselves—I speak of that in contra-distinction to the great game preserves which encourage poachers, and which lead to a great many disgraceful scenes of crime and misery. I have had, as you all know, considerable experience in the character and conduct of the tenant farmers; and I don't believe that I ever knew a tenant that would not most willingly see a moderate head of game on his land. I have known a tenant say, in answer to a remark that he encouraged hares, 'Oh, we have a few hares and some partridges. Our squire likes to come here and get a day's shooting; and he would not like to come here and go back without a day's sport; and therefore we take as good care of the partridges as we can, and he does not trouble us with gamekeepers, to come and vex us with their insolence. He leaves the matter in our own hand, and he never comes but what he is well satisfied.' This is all legitimate, and as it ought to be; but there is another system which prevails in some districts. There are some parts of the country where game is preserved to a most injurious extent. It always appears to me, in such cases, that great injustice is done to the cultivator of the soil, and it is connected with great impolicy as regards the political economy which it is the intention of the Government to maintain. If we rear produce for the purpose of feeding animals which are to go to market for the good of man, surely that produce should not be subjected to the unlimited destruction which wild animals bring upon it. I suppose everybody knows what the kind of destruction is; it is a thing, however, which is incalculable. If you see a general rabbit warren adjoining one of your fields—which is one of the greatest evils you can suffer—and you see a few acres trodden down and destroyed, you may in some measure reckon on the mischief; but in other respects I would defy the best judge possible to say what is the injury a farmer has sustained; and I have never yet, where valuation and arbitration were resorted to, seen the farmer get one-half of what I consider he was entitled to. Look at the progress of a single hare. You see a hare enter a Wheat field—you see him pick out a stem here and there in his course over the field; he will nibble an inch or two from this stem, and he does not stop till he has cut off a great many. It is not that inch he has consumed has any appreciable value whatever; but the ear of corn would have been matured which the hare has prevented by cutting the stem off; and if you consider the damage which is done by one individual hare in a Wheat field in one night, you will find that the damage done by these animals night after night comes to a considerable extent—it may amount to bushels an acre. And no one will say that is a profitable way of keeping up a property, whether that hare goes into the pocket of the landlord, the keeper, or the poacher. The poacher, by the way, I consider to be an unmitigated villain; he is a man who exercises his calling under the shade of night; and he has served an apprenticeship to all kinds of crime and dishonesty. When a farmer wants his field of Turnips consumed, he takes care to put sheep on one portion, and fix them there until everything is consumed. Not so with the game. They are free to do what they like; they take a morsel out of this, and a morsel out of that; and what is left, is left to the frosts and the inclement season to be destroyed. I have known situations where there has been so much game kept that the farmers have been obliged to take up the whole of their crops and stow them away before they were matured. These are extremely provoking circumstances, and they are, I think, what it is right the country should set their faces against. I have often wondered that tenants seemed to make very little of situations of that kind; but surely if a landlord claims to himself the right of eating the produce by game that landlord has no right to expect that he will get a full rent from his property. In that respect the farmers have it in their own power. Far be it from me to say that a man in this country, the laws of which are considered to be the best in the world, is not to do as he will with his own; but then let him keep to his own. If a man wishes to have an amount of game which would make what is called a *battue*, let him enclose a portion of his own land—let him have a park with a good wall round it, and let him give food to these animals at various seasons. It is quite right he should be able to go into it, and shoot down a cart-load or two of these animals when his murderous propensities come over him; but it is not right, nor just, nor honest that he should do this at the expense of his neighbour, who raises the food upon which these animals are fed, who gets up early and goes to bed late; who eats the bread of carefulness—that man who, by his land, endeavours that he may maintain his family in respectability—that man who is anxious to pay his rent, and to owe no man anything—is it right that the produce of that land should be sacrificed to give the indulgence to any landlord of what is called a *battue?* You will agree with me it is not, and that there should be some laws to protect that system, and to protect game to such an extent that he who feeds it, feeds it by spoliation of his neighbour's property, is, in my opinion, a remnant of feudal barbarism." After briefly reviewing the ground he had gone over, Mr. Grey said, "I shall conclude by reminding you that it is our duty, it is our privilege, our own self-interest, and the interest of the country, to combine our efforts to make the land which we occupy produce as much as possible to meet the wants of the increasing population of the country, and that the population shall be fed from the produce of the country."

In the course of the proceedings, Mr. Grey referred to a portion of his evidence before the Greenwich Hospital Commissioners, the effect of which was that when he assumed his present office the tenants of the estates in the North were 6000*l.* to 7000*l.* in arrears with their rent. At the last rent audit, they were only about 30*l.* in arrear—a fact attributable to the improvements in farming, and to their increased intelligence and skill.

Reviews.

The Reform of the Sewers. By G. R. Clarke, Esq., M.A., Barrister-at-Law. Ridgway, Piccadilly.

This is a pamphlet taking the agricultural as compared with what has hitherto been thought the sanitary side of this question; but contending that the cesspool and consequent preservation of so-called sewage is, when rightly managed, as consistent with health as is

the watercloset and sewer by which all that is fertilising in our waste is lost.

Mr. Clarke quotes all the recent authorities on the subject—Liebig, Mechi, Parkin, Way, and others—cites all the recent experience at Manchester, Glasgow, Rugby, Leicester, Cheltenham, &c.—and gives a good deal of information on the healthfulness [!] of the occupation of the so-called nightman. He has long had his attention directed to this subject, witness a letter written in 1858 to the Royal Agricultural Society, which we quote as containing several useful suggestions:

"Chesterton Lodge, Bicester, Oxon, Dec 21, 1858.

"Sir,—I wish to bring the following observations, on the subject of sewage, under the consideration of the Council of the Royal Agricultural Society. The subject has already attracted their attention; but, considering that the modern plan of conducting all sewage into brooks and rivers is causing an enormous loss of manure, and is, at the same time, polluting the waters of all parts of the kingdom at a rapidly increasing rate, it appears to me that the time has come when the subject should be made a more distinct and prominent branch of the Society's operations. The collecting and applying of sewage, suitable for manure, and the preservation of the purity of the water in brooks, rivers, wells, and ponds may be advantageously treated of in essays, accompanied by experiments and followed by prizes; and in the following order:—

"1st. The amount and value of the manure which is lost to the agriculturist through the ill-construction of cesspools, and the difficulty of emptying them.

"2dly. The amount and value of the manure which is lost to the agriculturist by the modern plan of conduct ing the sewage into streams and rivers.

"3dly. The effect of different kinds of water on the health, growth, fattening, and length of life of cattle.

"4thly. The effect of sewage, when introduced into water, on the health, growth, fattening, and length of life of cattle.

"The following, amongst other prizes, might be offered:—

"1st. For essays treating of the above subjects generally.

"2ndly. For the best mode of constructing cesspools, both for privies, and as receptables for sewage from drains, farmyards, &c., whether of separate houses or of villages; and for intercepting the sewage passing through existing sewers.

"3dly. For the best contrivances for emptying cesspools and ponds, as regards both liquid and solid matter, with a view to its use for agricultural purposes.

"4thly. For the best method of disposing of the materials when emptied out, whether in combination with other solid substances, or with water or otherwise.

"5thly. For the best plan of collecting the sewage of villages and towns, and of delivering the same to the agriculturist on equitable terms, keeping in view the health, convenience, and advantage of all parties; and their mutual co-operation, and their fair rateable contribution towards the labours and expense of the operation. "I have, &c., "G. ROCHFORT CLARKE."

The following are his notes on the possibility of saving the manure of towns:—

"*Cesspool* v. *Sewers*.—It is as if a doctor, visiting a patient, and seeing a barrowful of dung standing at the door, instead of saying immediately, 'Wheel that away, and dig it into the garden, or plough it into the land,' should say, in a frenzy, 'Throw that barrowful of muck into the well.' Which would be best, to throw such dung, or such doctors, into the Arno? *** The water-closet should never have been permitted to be more than an auxiliary; and those that thought fit to indulge in the luxury should have been compelled to find out the way to dispose of the contents without intruding on the common sewer; as the owner of the privy was required to do. Had such a policy been pursued, men of understanding and independence would have sought out the best contrivances, and their wealth would have amply rewarded the inventors—the produce might have found its way long before this to their farms and gardens, and returned its rent into their own pockets. They would have seen that it was a great mistake to allow the waste water-pipe from the cistern, or the rain water-pipe from the roof of the house or yard, to pass into or through the cesspool, thereby filling the cesspool with an unmanageable quantity of water, and diluting the contents to an extent almost past recovery. They would have directed their attention to find out the way to keep a closet sweet with the least amount of water. The subject would not have been first left in the hands of the poor and despised without capital, power, or intelligence, to be suddenly transferred into the hands of engineers, plumbers, water companies, and contractors and their inspectors. Then the simple and useful, which might have been done, and which in most cases may now be done, for thousands, would not have been to-day superseded by the destructive, at the cost of millions. I see no reason why some experiment should not be at once tried in the midst of the next building speculation, or even in some of the present districts. Several moderate-sized and well-constructed ces-pools, from which all useless waste of water is excluded, are far more manageable and less expensive than those gigantic sewers, in which, by the quantity of useless water which is introduced, we first create a difficulty, which afterwards we can only partially overcome by great labour and cost."

Even, however, though all the waste of London be put into one big sewer, and sent on its journey to the sea "the neck of that sewer might be broken in the marsh lands, before ever it can reach the Thames. There London, whose sole affair this is, might be required to purchase, if need be, thousands of acres, and there deal with the contents of this London hobby-horse; but not be allowed to create any nuisance. There let them make their pits, their reservoirs, their drying grounds, their filter beds, their sluices, their dams, their floodgates, their engines, their pumps: all the contrivances, good or bad, that inventive genius can suggest. Let London pay for the inventions, the experiments, the failures, and the success. What are a few thousands, or hundreds of thousands, well spent, compared with many millions wasted? But until success is certain and well established, do not go on poisoning the Thames more and more every day, lest we all become sick whilst the contractors are working their way. Withdraw from the Thames without delay all the filth that can be withdrawn, whether in London or in the country: carry it off to the land, and promptly plough or dig it in. By that means we shall at once diminish the evil at this end of the sewer, and the mischief, labour, and expense at the other, and give a more wholesome and practical turn to the public mind. But no place should be allowed to turn into the river a mere filtered stream; that highest point to which an enthusiastic deodoriser has hitherto attained, when he talks of 'the pellucid and innocuous residuum of a deodorised cesspool.' No. Let that pellucid stream itself pass not through a mere filter-bed, that stops the solid matter, but leaves all the soluble in suspension; but let it pass through the ground of the field, on which the green herb is grown, and which is more than such a filter-bed, and takes even the soluble matter into combination with its own parts."

Mr, Clarke invokes the aid of the women of England in his agitation against the wasteful sewage system, and his heroine becomes poetical on the subject:—

"I thought the poets had not sung
Of such a useful thing as dung;
But better days are now,—
Since damsels 'midst their fruits and flowers,
To charm the dulness of the hours,
To mix the soils know how.

"My ground is sweet, though many things,
A maiden's hand, if skilful, brings,
That some might fancy nought;
But when the sky has lent its shower,
Such buds will burst within my bower—
No better could be bought."

Farm Memoranda.

FARMS IN SELKIRKSHIRE.—Several proprietors have shown praiseworthy examples, in improving their home farms. On the home farm of Philiphaugh an extraordinary change has been effected. Only some six years ago, the farm consisted of a barren Heath-clad hill—skirted by several highly cultivated haughs around its southern base. The hill which rises abruptly to an altitude of nearly 400 feet from its base, was, previous to being reclaimed, of the poorest description, and excepting when autumn unfolded the rich blossoms of its stinted produce, it presented the most miserable appearance. It is now almost all cultivated and subdivided into large enclosures—which yield abundant produce of grain and green crops. From several fields having been sown down with Grasses alone (without a white crop), their verdure is extremely rich and luxuriant, which contrast widely with the barren natural pastures, which some of them skirt. Numerous belts of plantations have been laid out, and will soon shelter as well as adorn the farm. In harmony with these improvements, a most commodious although somewhat fanciful onstead has been erected.

On the home farm of Yair similar improvements have recently been made—nearly 400 acres having been reclaimed. From the nature of the land on this farm, operations were necessarily very expensive, as the large stones it contained not only impeded drainage, but were on some spots so plentiful that the expensive operation of hand trenching was expedient. But I pass over these improvements as well as those which have lately been effected on the home farm of Ashiesteil, &c., to state what has been done by tenant farmers, and extensive and arduous as have been the improvements effected by some of the landlords of the county, these have in several instances been equalled if not surpassed by several tenants.

As some farmers may have objections to publicity, I do not here give the names of the farms whose improvements I refer to, but as a guarantee of good faith, enclose these for your private perusal.

No. 1 is a farm which, 18 years ago, was partly in the possession of the proprietor, and partly in the occupation of a non-resident tenant. The part in possession of the landlord contained 300 acres, which had been previously cultivated, but at that time lying in pasture, and was divided into fields varying from 10 to 30 acres. These fields for a considerable period had undergone a severe system of cropping; and having been sown out in a wet and poor condition, yielded very inferior pastures. They were annually let for summer grazings, and realised low rents, compared with those generally obtained for Grass parks. The portion of the farm under lease was a pastoral hill, containing upwards of 700 acres, with no enclosures, and lying in close contiguity with the Grass parks. On the expiry of the lease, 17 years since, both divisions—Grass parks and hill—were let to an enterprising tenant, who, in the beginning of his occupancy, commenced ploughing, draining, and liming the sterile parks, which in a few years were waving with every description of luxuriant grain. Simultaneous with these improvements, extensive operations were being executed on the hill—ploughing up the rugged natural lea, removing stones from the surface, draining and erecting substantial stone dykes, which formed enclosures, from 20 to 60 acres, so that the recently pastoral hill was in a few years a large farm wholly cultivated, with the exception of about 100 acres on its rocky summit. The results obtained from these improvements will be apparent if we glance at the change which the stock and produce of the farm has undergone. Formerly it kept a regular stock of 500 Cheviot sheep, besides what the 300 acres of summer grazings maintained, the correct number of which we have no means of ascertaining. Now the combined farms keep a regular stock of 600, and the hardy but small-boned Cheviots have been supplanted by the larger framed and more easily fattened Leicesters. Before the occupancy of the present tenant, the whole produce of the farm was about 20 acres of corn and 2 or 3 acres of Turnips and Potatoes—now it annually produces upwards of 200 acres of grain, raises Turnips which fatten between 50 and 60 cattle, upwards of 300 sheep, and supplies eight weeks' food in spring for the regular stock the farm maintains. Formerly only eight individuals were engaged on and supported by the farm—now it employs and supports upwards of seventy resident persons.

Farm No. 2 was five years ago wholly a pastoral farm of 600 acres, and leased by a non-resident tenant. On the expiry of the lease at that time the farm was offered for public competition, and let for 19 years' lease to the present occupant. From part of it having at a remote period been cultivated, traces of serpentine ridges were still visible, and bore testimony to the bad farming of bygone days. The practice towards the end of last century, of ploughing isolated patches, and leaving these when exhausted to Nature to cover with wild embryo plants, was to those who adopted it the most ruinous imaginable, and entailed on coming generations the most adverse consequences. Barren pastures and an impoverished soil are some of its fruits. This farm had undergone the system referred to, and bears ample witness of its attendant evils. The whole farm previous to its cultivation presented a very barren aspect—stagnant morasses, in its valleys generative noxious vapours, and covered with the luxuriant but harsh foliage of the common Reed, Grasses, seared and stunted pastures, a few isolated Whinbushes, and gnarled Hawthorn trees, remains of old fences, were some of its prominent features. The farm is already nearly all cultivated, and divided into large enclosures, which yield abundant crops. Formerly it only grazed about 450 sheep, and their shepherd was its only inhabitant. It now maintains a more numerous and better flock, fattens 30 head of cattle, and 5 yoke of oxen may be seen scaling its steep and undulating surface. A new onstead has been erected by the proprietor, and the dense volumes of smoke that may be seen issuing from one of its chimneys indicate the important change which has been effected on the farm.

Farm No. 3 was let to its present occupant in 1849. At that time it was, with the exception of a few small fields, all pastoral, and continued upwards of 1000 acres of mixed Heaths and Grasses. During the occupancy of the present tenant nearly 400 acres have been reclaimed and enclosed. The greater proportion of the land on this farm was wet and strong, therefore a large expenditure was incurred in improving it. The soil is chiefly of a moorish description, and previous to cultivation yielded only indifferent pastures. One part of this farm is especially worthy of notice. It was, before being reclaimed, a plain moor, covered with coarse Grasses, and as a run for sheep was comparatively valueless. When turned up by the plough the soil was seen to consist of a thin layer of sand, interposing a moorish retentive subsoil, and an ebb surface of a mossy character. These varieties of soils, when mixed and limed, produce excellent crops of Oats and Turnips. The largest crop of Oats I witnessed this season was in a field on this moor. The yield would not be less than 66 bush. per imperial acre. The increase of the produce, stock, and population of this farm is equal, if not greater, than that of the farms already noticed. The altitude of the cultivated land on the farm varies from 600 to 950 feet.

No. 4 is the highest lying cultivated farm in the county, the altitude of its cultivated land varying from 700 to 1100 feet. Notwithstanding this high elevation, it produces luxuriant Oats, while its Turnip and Grass crops equal, if not surpass, those in more highly favoured situations. Nearly 300 acres have been recently reclaimed—ploughed, trenched, drained, limed, and enclosed. Excellent roads have been made to its several fields, and although its slopes are steep and stony, yet the whole management of the farm is so excellent that it has quite the appearance of a low-lying farm.

I might go on to farm No. 12 in the same strain, but as the extent of land reclaimed and the results obtained are similar on other 8 farms to those I have noticed, it would be merely a repetition of words to do so; let it suffice to say that on 12 contiguous farms 3200 acres have been recently reclaimed. The average altitude of the cultivated area of these farms is nearly 700 feet. They all rest on the Greywacke formation, and their soils are partly clay, resting on a retentive subsoil, and

partly light and porous, resting on a rocky stratum. The greater proportion of land before being reclaimed was what farmers term "white land"—deficient in food plants, essential in spring to preserve the condition of sheep.

The expense, as I have already said, of reclaiming land in this country is very great. On several fields 200 cartloads of stones per acre have been picked up with the first furrow. On some farms the tenants are assisted by their landlords in executing drains and fences; in others, all improvements are effected by tenants. The benefits resulting are everywhere apparent—verdant fields are to be seen on the mountains as well as in the valleys, and the footprints of industry are visible on hill and dale.—*Correspondent of North British Agriculturist.*

Calendar of Operations.

JANUARY.

ISLE OF ELY: *Jan.* 17.—The new year has opened upon us without any decided improvement either in our circumstances or immediate prospects. The bad crop of Wheat of last year, and the continued low prices, will be more and more felt as the season advances. The stackyards are already getting very much thinned, and long ere another harvest is here, supplies will be exhausted, and money will be scarce we fear. The prospect, as it regards the growing crop, we rejoice to say is more cheering, and although there may be no relief before that crop is secured, yet we trust it will prove sufficiently plentiful and abundant, as in some measure when ingathered, to restore us to a position of posterity, although the heavy losses of this year can scarcely be expected to be recovered in any one season, however propitious. Since the intense frost of December, when the thermometer reached zero, the weather has not been very severe, but has been characterised by great variableness. Slight frosts, strong gales of wind, pelting storms of rain, and once or twice, for the season of the year, a high temperature, have in succession prevailed. The increased amount of rainfall has been one of the distinguishing peculiarities of the present winter, and it is one which more than any other inspires hope in the breast of the Fen farmer. For two or three years we have suffered considerably—at least we think so—for want of moisture, causing our dusty soils to become so thoroughly disintegrated and pulverised that we have been unable to get them sufficiently compressed and consolidated, and to this circumstance we conceive our failure in the Wheat crop last harvest was greatly attributable. Our Fen lands have now had a good soaking; the rains have been frequent and tolerably copious, and the growing Wheats are looking strong and healthy. The later sown, which a month ago we reported as not out of the ground, have now made their appearance, and present a vigorous and promising aspect, and we do not remember to have seen a case of failure in this immediate locality. The work upon the farm just now is not very interesting. The deep cultivation to which we referred in our last report has not ceased to invite attention. Our only further remark upon it this month is that we are in this respect continuing to do with horses what might be more perfectly and economically effected by steam; and we trust the day is not far distant—and we believe it is not—when the steam engine will be largely employed in the cultivation of our Fen soils. We await the return of good crops and remunerative prices, that we may be enabled to meet the necessary outlay conveniently, and the adoption of the principle will not then be long deferred. Ploughing for Oats, Beans, Peas, and other early spring crops is being proceeded with and is hastening to completion. Horse work upon the farm is generally very forward, and with suitable weather some of our farmers will ere long begin to deposit the seed for their spring crops. The December frost completely destroyed the Coleseeds which were so severely injured by the sudden and intense frosts of October. For the last month the sheep have lost rather than gained hand, and are being sent away to market in much worse condition than was intended. Some fields of Coleseed have not been worth stocking at all, and have been ploughed in. The loss of sheep food throughout this entire district has been enormous, and with a severe and backward spring sheep keeping will be very scarce indeed, and sheep themselves, *i. e.*, fat sheep, will be still more scarce. Mangels are keeping quite as well as could be expected, and are becoming an invaluable root to us, and every year are increasingly cultivated. The frost has done them far less injury than our fears at one time led us to expect. The corn trade continues heavy and depressed. The weather has been extremely unfavourable for threshing, and the condition of the grain is consequently seriously affected, which makes it sell badly. We cannot avoid the impression that some advance must yet take place in the price of Wheat. The deficiency of crop in this country, combined with the fact that in the Wheat-exporting countries the crop is not excessive, indicate to us the probability of a higher range of prices ere another harvest arrives. Meat continues to sell well, and even points to higher prices. Store sheep are high, and are increasing in value every week. *Your Fen Reporter.*

Notices to Correspondents.

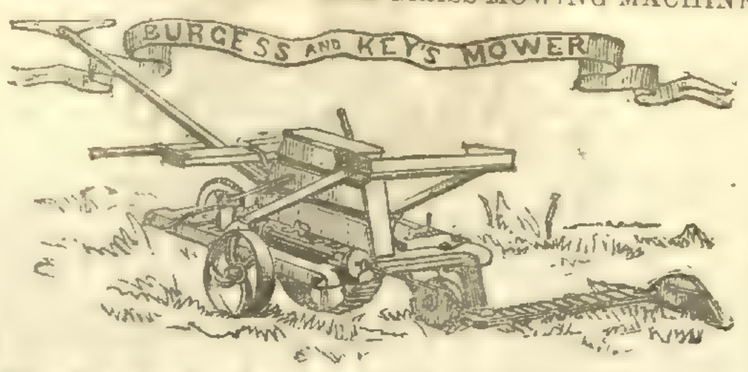
ERRATA: at page 57 *a*, Jan. 21, On the Fate of the Mangel, at line 15, for sound rean *round*, and at line 43, for strawed read *thawed*.

THE CASE OF THE NORTHUMBERLAND HIND: *W.* The following has been sent us as his balance sheet:—

WHAT THE HIND RECEIVES.	£	s.	d.	£	d.	s.
213 days at 2s. 6d. per day	39	2	6			
8 stones of Potatoes at 5l. per ton ..	2	10	0			
4 bushels of Wheat at 5s. 5¼d. per bushel..	0	10	10½			
2 bushels of Barley at 4s. 2½d.	0	8	4½			
24 days in harvest at 1s. 6d. per day ..	1	16	0			
211 days at 1s. per day	10	11	0			
78 days at 10d. per day	3	5	0			
Gross total paid to Hind	58	3	8½	58	3	8½
WHAT THE BONDAGER COSTS THE HIND.						
4d. per week for board, lodgings, and washing	£	s.	d.			
Bondager's wages for a twelvemonth ..	15	12	0			
	12	0	0			
	27	12	0	27	12	0
Mr. Gray's wages to each Hind for a twelvemonth are				30	11	8½
And a house free and cartage of coals. This is equal to 11s. 7½d. a week through out the year.						

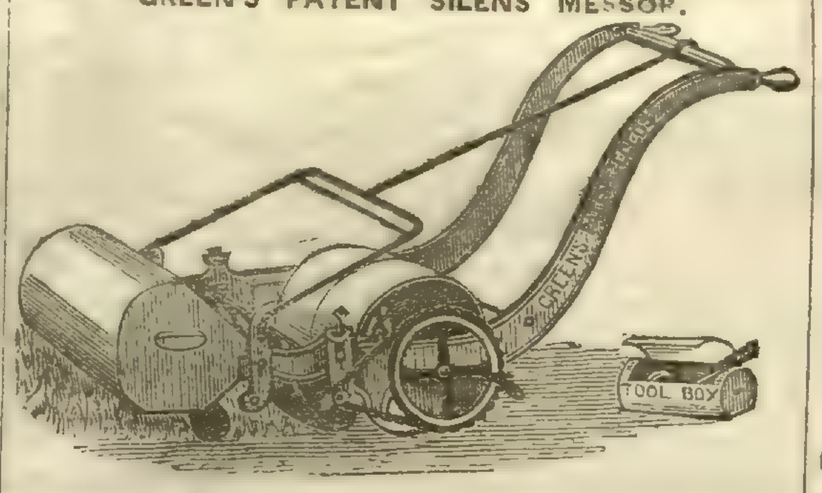
Is not the cost of the "bondager," as compared with what is received for her wages, put here too hardly for the hind?

BURGESS AND KEY'S ROYAL AGRICULTURAL SOCIETY'S FIRST PRIZE GRASS MOWING MACHINE.



This Machine has been introduced with the greatest success into this country during the last season, and a large number of them have been worked in a most satisfactory manner. A Silver Medal was awarded to it at the Royal Agricultural Society's Meeting at Warwick. It was also exhibited before the Emperor of the French at Fouilleuse, on which occasion it performed its work to the admiration of every one. Two of these Machines were purchased by the Emperor on this occasion, and an order for two more has since been received for the season of 1860. It was also exhibited in Scotland and Ireland with the same success. It also received the First Prize of the Norfolk Society at Swaffham, in competition with Wood's and others, besides many other Prizes. Price £30 at the Works. Extras are charged for.—Full particulars may be obtained of BURGESS & KEY, 95, Newgate Street, London, E.C. Early orders are solicited to insure delivery in time for hay harvest.

GREEN'S PATENT SILENS MESSOR.



GREEN'S PATENT SILENS MESSOR, OR NOISELESS LAWN MOWING, COLLECTING, AND ROLLING MACHINES, patent dated December 6th, 1859. THOMAS GREEN in respectfully returning thanks to the Nobility, Gentry, and the Public generally, for the very liberal support he has received for some years past, informs them that (although he has for the last three years, at all the prinicpal AGRICULTURAL AND HORTICULTURAL SHOWS in the kingdom proved the superiority of his Machines over an others, carrying off every prize that has been given, and highly commended by the Judges,) he has taken out this season all entirely NEW PATENT, which he with confidence submits for competition, as it excels all his previous efforts, and overcomes all difficulties.

HAND MACHINES.

The SILENS MESSOR is worked with a Patent Pinion Chain, and the motive power obtained by a direct movement, having simply a light Wheel and Pinion, obtaining the same speed, and thereby doing away with the original Wheels, Pinions, Top-shaft, Bearers, &c.; it reduces the frame of the Machine 2 inches in width; for instance, a 16-inch Cylinder or Cutters will work in a 14-inch frame, thus doing away with all the gearing before mentioned, and making the weight and friction 25 per cent. less; it is also much stronger, easier to work, and less liable to get out of repair.

HORSE, PONY, AND DONKEY MACHINES.

The SILENS MESSOR has an extraordinary advantage over all others of this class; it is worked with a patent pinion chain on each side, and although much lighter possesses greater strength. The noise has hitherto been the greatest obstacle in the working of these machines; for instance, when the Grass-box becomes full and the driver desired to stop for the purpose of relieving it, the noise is so great that he cannot hear, consequently the box overflows, the wheels and cutters become clogged, and when the machine is again started the resistance is so great that something of necessity must give way, the machine is broken, and for the time rendered useless.

It is not an uncommon occurrence for horses and ponies to take fright at the shaking and rattling noise, running away and doing inconceivable damage.

The Silens Messor can be worked with any draught or carriage horse, however spirited, doing its work silently and effectually.

LIST OF PRICES.

HAND MACHINES.
Including Box of Requisites.

To cut 14 ins.	£6	10	0	To cut 20 ins.	£8	0	0
,, 16 ins.	7	0	0	,, 22 ins.	8	10	0
,, 18 ins.	7	10	0	,, 24 ins.	9	0	0

DONKEY AND PONY MACHINES.
Including Box of Requisites and Traces.

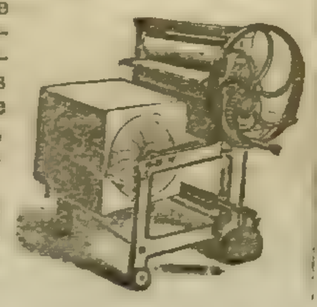
To cut 24 ins... ...	£11	10	0	Leather Boots for Donkey, per set .	£0	16	0
,, 26 ins... ..	12	10	0	Do. for Pony, do. ..	1	0	0
,, 30 ins... ..	16	14	0				

HORSE MACHINES.
Including Box of Requisites and Traces.

To cut 30 ins... ..	£20	0	0	To cut 48 ins... ..	£29	0	0
,, 36 ins... ..	23	0	0	Leather Boots for Horse, per set ..	1	4	0
,, 42 ins... ..	26	0	0				

Smithfield Iron Works, Leeds; and 2, Victoria Street, Holborn Hill, London, W.C.

BRADFORD'S PATENT WASHING MACHINE. SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations."—THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

GLASS FOR ORCHARD HOUSES
As Supplied by us to MR. RIVERS.

20 in. by 12 in. / 20 in. by 13 in.	Common	16 oz. 14s. 0d.	21 oz. £1 1s.
20 in. by 14 in. / 30 in. by 15 in.	Superior do.	16 6	1 5
	English Glass	18 0	1 9

The above prices include the Boxes, with but few exceptions. When Packages are charged, full price is allowed when returned.

SMALL SHEET SQUARES, in 100 feet boxes.

				s.	d.
6 by 4	6½ by 4½	7 by 5	7½ by 5½ / 9½ ,, 7½	11	6
8 ,, 6	8½ ,, 6½	9 ,, 7			
10 ,, 8	10½ ,, 8½ ..	.. ..	.. ..	12	6

Boxes 2s. each, returnable at full price.

JAMES PHILLIPS AND CO.,
130, Bishopsgate St. Without, London, E.C.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2d. to 3d. per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 35, Soho Square, London, W.

See *Gardener's Chronicle* of January 14.

HORTICULTURAL GLASS—JUNE TARIFF.

THOMAS MILLINGTON'S reduced Tariff of GLASS, &c.

6 by 4, 7 by 5, 8 by 6, 9 by 7 / 6½ by 4½, 7½ by 5½, 8½ by 6½, 9½ by 7½ } 16 oz. to the foot, 11s. 6d. per 100 feet.

In 100 boxes,—4ths quality, 12s. 6d.; 3ds do., 14s. 4d.

10 by 8, 12 by 9, 12½ by 10½, 14½ by 10½, 13 by 11
10½ by 8½, 12½ by 9½, 13 by 10, 15 by 10, 13½ by 11½
11 by 9, 13 by 9, 13½ by 10½, 12 by 11, 14 by 11
11½ by 9½, 12 by 10, 14 by 10, 12½ by 11½

	16 oz.	21 oz.
20 by 12 / 20 by 13 / 20 by 14 / 20 by 15 — per 100 feet		
Common ..	16s.	24s.
Superior .	18s.	27s.

All Boxes included.

Orchard House sizes as supplied to Mr. Rivers.
Hartley's improved Rough Plate Glass from ⅛ to ¾ in thickness.
Coloured Glass in great variety, at 9d. and 1s. per foot.
Paints, Genuine White Lead, Linseed Oil, Boiled Oil, Turpentine, Putty, Colours, Varnishes, Brushes, Lamp Glasses, &c.
87, Bishopsgate Street Without, E.C., same side as Eastern Counties Railway.

FOOD FOR WINTER STOCK.

SAMUELSON'S celebrated TURNIP CUTTERS, PULPERS, CHAFF-CUTTERS, OIL-CAKE BREAKERS, CORN and MALT-CRUSHING MILLS, all with the latest patented improvements, may be obtained through any Ironmonger or Implement Dealer in the kingdom, or (carriage paid to the nearest station to the purchaser) direct from the manufactory.—Britannia Works, Banbury, Oxon; or London Warehouse, 76, Cannon Street West, City, E.C.

Catalogues sent free on application.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1½d.; 2 yards, 3d.; 3 yards, 4½d.; and 4 yards, 6d. per yard, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

An allowance to Nurserymen.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, His Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and —Collier, Esq., of Dartford.

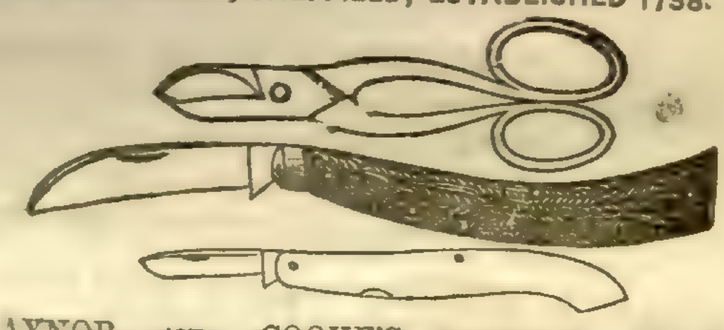
PROTECTION FROM THE MORNING AND EVENING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and, floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide, 1s. 6d. per yard run.
Four, 3s. per yard; also,
An improved make three yards wide, 2s. 6d. per yard run.

ELISHA THOMAS ARCHER, whole and sole manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.



SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"420, Strand, London.

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles.

"Your obedient servant, G. GLENNY."

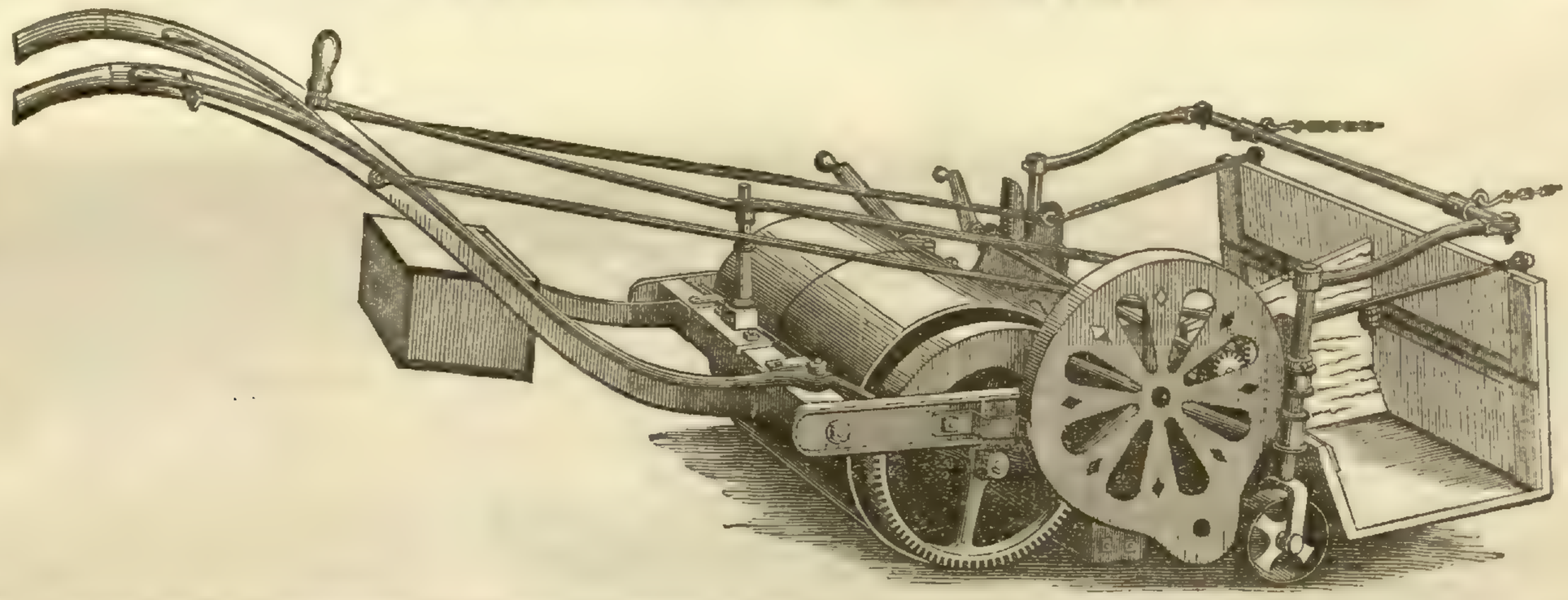
Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Talbotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or Country.—The Gutta Percha Company, Patentees, 18, Wharf Road, City Road, E.C., London.

BY ROYAL LETTERS PATENT.

SHANKS' NEW PATENT MOWING, ROLLING, COLLECTING, AND DELIVERING MACHINE.

IMPORTANT IMPROVEMENTS for 1860 peculiar to SHANKS' PATENT LAWN MOWER.

HORSE-POWER MACHINE.



Among the valuable improvements for this season in their now celebrated and well-established Lawn Mowing Machines may be mentioned—

1st. The Shafts or Handles of all the different sizes of Machines are made of Malleable instead of Cast Iron, and are much neater, not nearly so liable to break, and a great deal lighter than the usual Cast Iron ones.

2d. The Reduction of Weight by the substitution of Malleable for Cast Iron to as great an extent as possible on the whole Machine, makes it stronger and more fit for the rough usage it may at times receive in working from the labourer or gardener not skilled in Machinery.

3d. The Draught is greatly lessened by the reduced weight and less friction on the journals. The Machine is at least one-half more easily worked than formerly.

4th. The Cutter, by a simple contrivance, is prevented from breaking, although it may come into contact with a stone or other hard substance in Mowing.

5th. The annoyance which is often given by the bearings of the Cutter getting loose, and the latter wearing down on the Plate, causing much stiffness and friction in working, is also completely obviated.

6th. The Wheels are also secured from injury in precisely the same manner as the Cutter.

7th. The Patent Delivering Apparatus is attached to all the Horse, Pony, or Donkey Machines, and effects a saving in the work executed over all other Lawn Mowers of 35 per cent, and a saving in trouble to the man in working the Machine of 75 per cent.

This Apparatus may also be attached to the Hand Machines if required.

8th. Everything in the shape of novelty not improvement is carefully excluded from the Machine, which is now as nearly perfect as is possible for any Lawn Mower to be for practical use. The simplicity and strength of construction, the ease with which the Machine can now be worked, and its advantage over all other Lawn Mowers in the additional operation of Delivering the Grass without stopping the Machine, make it peculiarly fit for all the purposes of Mowing, whether for Verges, the Flower Garden, or the open Lawn. The style in which the work is executed cannot be surpassed; and it is *quite immaterial whether the Lawn be level or otherwise, or whether the Grass be wet or dry.*

PRICES:—

SHANKS' NEW PATENT HORSE MACHINE for MOWING, ROLLING, COLLECTING, and DELIVERING.

Including Box of Tools for Sharpening, &c., and directions.

Width of Cutter.		Width of Cutter.	
No. 1.—48-inch Machine ..	£28 0 0	No. 3.—36-inch Machine ..	£22 0 0
No. 2.—42-inch Machine ..	£26 0 0	No. 4.—30-inch Machine ..	£19 0 0

SHANKS' NEW PATENT PONY AND DONKEY MACHINE, for MOWING, ROLLING, COLLECTING, & DELIVERING,

Including Box of Tools for Sharpening, &c., and directions.

No. 5.—30-inch Machine .. £15 15 0 | No. 6.—28-inch Machine .. £14 10 0

No. 7.—25-inch Machine £12 10 0

SHANKS' NEW PATENT HAND MACHINE, for Pushing or Drawing, separately or together.

Including Box of Tools for Sharpening, &c., and directions.

Width of Cutter.		Width of Cutter.	
No. 8.—24-inch Machine ..	£8 17 6	No. 10.—19-inch Machine ..	£7 12 6
No. 9.—22-inch Machine ..	£8 7 6	No. 11.—16-inch Machine ..	£6 17 6

No. 12.—18-inch Machine .. £6 2 6

The Patent Delivering Apparatus may be attached to the Hand Machines at 20s. extra.

SHANKS' NEW PATENT HAND MACHINE, for Drawing only.

Including Box of Tools for Sharpening, &c., and directions.

No. 13.—22-inch Machine .. £7 5 0 | No. 14.—19-inch Machine .. £6 15 0

No. 15.—16-inch Machine .. £6 5 0

☞ *The Machines are delivered Free of Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom, and are warranted to give ample satisfaction, and if not approved of they may be at once returned.*

TESTIMONIAL from Mr. GEORGE EYLES, late Chief Superintendent of the Grounds and entire Horticultural Department of the Crystal Palace, Sydenham, and now appointed to the Superintendence of the Horticultural Society's New Gardens, Kensington Gore, and the Gardens, Chiswick, in favour of Shanks' Patent Lawn Mowers—(the 30-inch Horse-power Machine used on the Lawns of the Crystal Palace):—

"Crystal Palace, Dec. 20, 1859.

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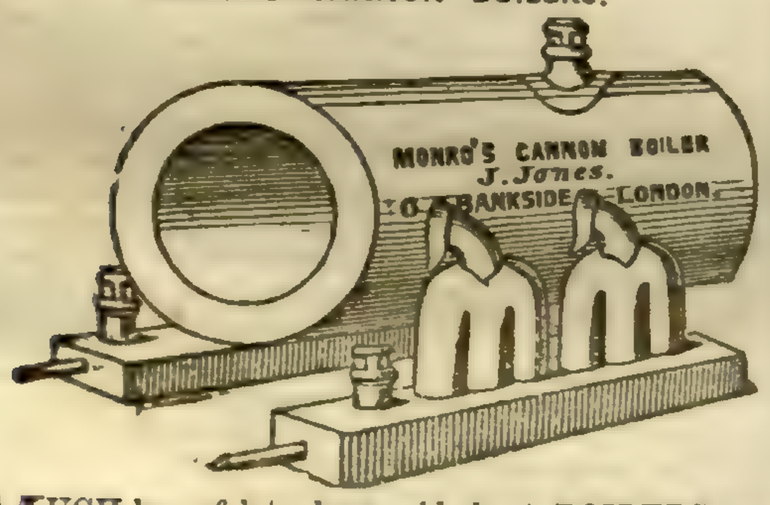

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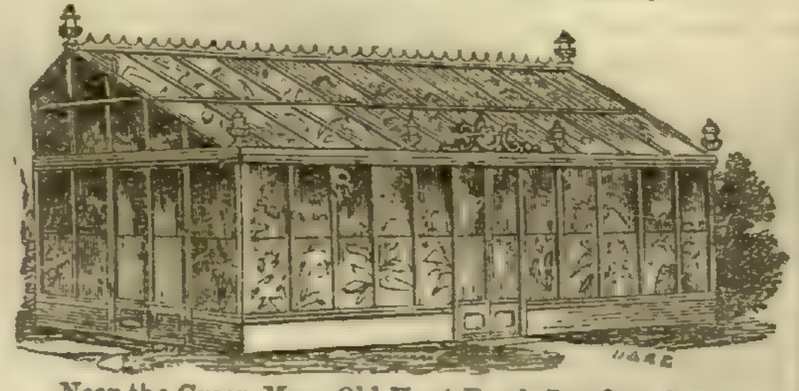

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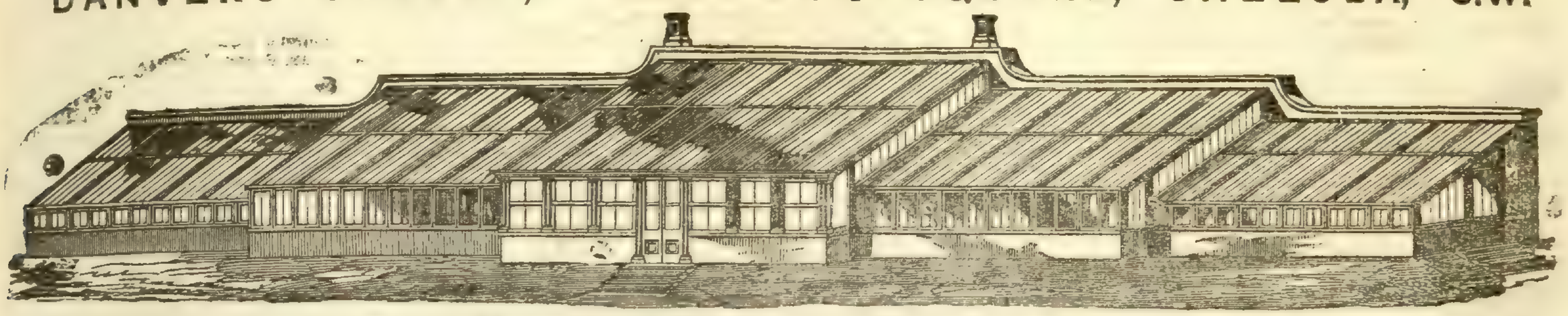

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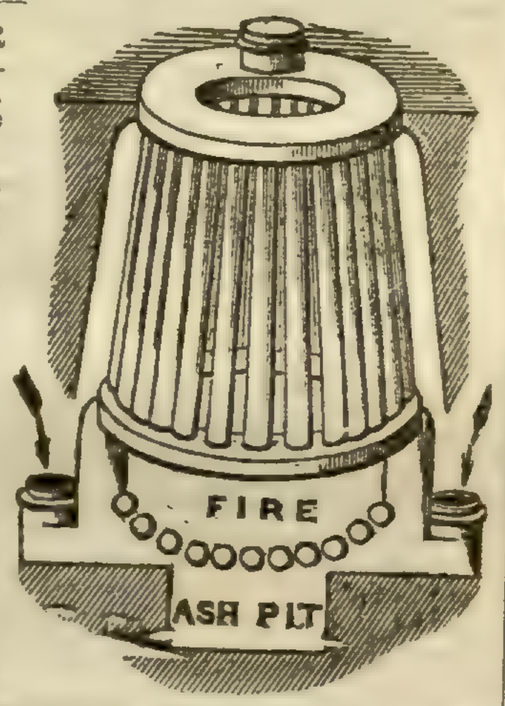

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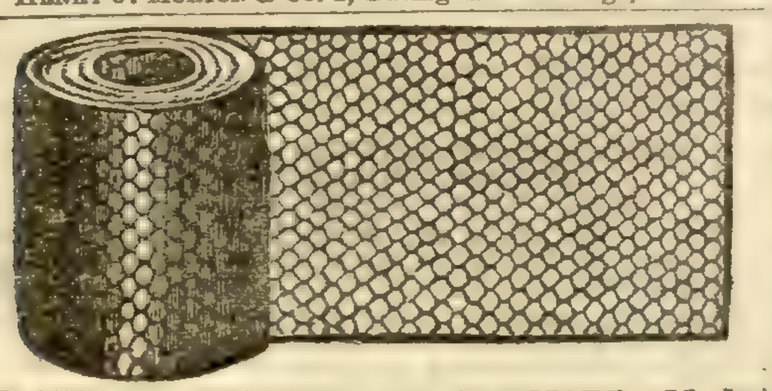

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Sales by Auction.

CLEARING SALE AT BROADFIELD NURSERIES, SHEFFIELD, PREVIOUS TO REMOVAL, OF TREES, SHRUBS, PLANTS, ETC.

MR. ROWLAND WARD is instructed by Mr. F. Godwin to offer for public competition, on TUESDAY and WEDNESDAY, February 7 and 8, each day at 10.30 a.m., the remainder of his extensive and choice NURSERY STOCK, embracing Deciduous, Flowering, and Evergreen Shrubs; Fruit, Forest, and Ornamental Trees; American Plants, Roses, and Coniferæ. Also, a fine and healthy assortment of Stove and Greenhouse Plants, consisting of Azaleas, Camellias, Ericas, Epacrises, Fuchsias, Geraniums of all Classes, &c.—Catalogues may be had of the Owner, at the above Address; or of the Auctioneer, Handsworth Woodhouse, near Sheffield.

NORTHUMBERLAND.—FREEHOLD ESTATE, &c.

MR. SAMUEL DONKIN will Sell by Auction, at the Central Station Hotel, Newcastle upon-Tyne, on TUESDAY, February 21, at 2 for 3 o'Clock in the afternoon precisely.

LOT 1.—The ESTATE of CHRISTON BANK and RED HOUSES, otherwise CLAXTON'S MOOR HOUSE, in the parish of Embleton, in the county of Northumberland containing:—

	A.	R.	P.
Arable Land	230	1	5
Pasture Land	264	0	37
Plantations	10	2	5
Homestead and Roads	11	1	22
	516	1	29

The Estate was recently for several years in the occupation of the proprietor, when the buildings were completely repaired and much enlarged, a large part of the Estate drained, and the whole greatly improved. The Pastures are well known as some of the most valuable Feeding Land in Northumberland. The whole of this Lot is Let to Mr. W. Morrison on a Lease for 15 years from the 13th day of May, 1856. Great facility of communication both to the North and South is afforded by the trunk line of the North Eastern Railway, which intersects and has a Station upon the property. There is Coal and abundance of excellent Limestone upon the property, with Kilns for Burning the latter, for which almost unlimited demand exists in Tweedside and the South of Scotland. These Minerals are Let on Lease to substantial Tenants. The Tithes are commuted for Rentcharges amounting to 100*l.* 16*s.* 2*l.* 18*s.* 6*d.* for Castle Guard and Quit Rents is payable out of this Lot to the Earl of Tankerville.

LOT 2.—1. BLINK BONNY HOTEL, with a Four-stalled Stable, Out-houses, and 2A. 2R. 35P. of Land, in the Occupation of Mr. George Cockburn. 2. A DWELLING HOUSE and SHOP, adjoining the above, in the Occupation of Mr. James Thompson. 3. THREE COTTAGES, also adjoining the above. These premises have been lately built, and are well situated for business, from their situation immediately adjoining the Railway Station, and to the road which is the great thoroughfare from the railway to the East and West.—The Property may be seen on application to the Tenants and Particulars may be had of the Auctioneer, at the Place of Sale, and at the Offices of Messrs. WILLIAM & BENJAMIN WOODMAN, Solicitors, Morpeth.—January 21.

CAMELLIAS, AZALEAS, ROSES, BULBS, &c., FROM GHENT.

MR. J. C. STEVENS will Sell by Auction, at his Great Room, 38, King Street, Covent Garden, W.C., on FRIDAY, February 3, at half-past 12 precisely, a consignment of PLANTS FROM GHENT, consisting of 300 Camellias, with flower-buds, from 1 to 3 feet high; 200 Indian Azaleas with flower-buds, 200 Standard Perpetual Roses, 200 strong bulbs of Lilium lancifolium rubrum, 100 mixed Chinese Pæonies, 100 Erythrina Crista-galli, strong flowering roots, &c. —May be viewed on the Morning of Sale and Catalogues had; if for the country, by inclosing two stamps.

TO POULTRY AND PIGEON FANCIERS.

PERIODICAL SALES BY AUCTION.

MR. J. C. STEVENS begs to announce that he will hold SALES BY AUCTION of FANCY POULTRY and PIGEONS, on the First and Third TUESDAY in every Month, during the Season, at his Great Room, 38, King Street, Covent Garden, W.C.; parties desiring to have Birds included in the Catalogue are requested to make their entries at least a Fortnight prior to each Sale.

DAYS OF SALE.

TUESDAY, February	7th.	TUESDAY, April	3d.
,, ,,	14th.	,, ,,	17th.
,, ,,	21st.	,, May	1st.
,, March	6th.	,, ,,	15th.
,, ,,	20th.	,, June	5th.

TUESDAY, June 19th.

NOTE.—Catalogues will be forwarded on receipt of Two Stamps. Marked Catalogues with Post-office Orders sent on the Saturday after the Sale.

38, King Street, Covent Garden, London, W.C.

POULTRY AND PIGEON SALE.

MR. J. C. STEVENS will Sell by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on TUESDAY, February 7, at 12 o'Clock precisely, about 240 lots of POULTRY and PIGEONS, consisting of Spanish from Mrs. Stow of Tewkesbury; Cochins from the Rev. G. Gilbert of Claxton; T. Bridges, Esq., of Croydon, and W. B. Warwick, Esq., of Southwell; Silver Polands from Mr. P. Jones of Fulham; Dorkings from Miss Milward of Bath, Rev. J. E. Carter of Essex, and other varieties from celebrated breeders. Also a good lot of Pigeons from Messrs. Jones, Esquilant, Brooke, and other well-known fanciers.—May be viewed on the Morning of Sale, and Catalogues had; if for the country, by enclosing two stamps.

SPECIAL EXTRA POULTRY AND PIGEON SALE

ON THE WEEK OF THE CRYSTAL PALACE POULTRY SHOW.

MR. J. C. STEVENS will Sell by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on TUESDAY, February 14, at 12 o'Clock precisely, FIRST CLASS POULTRY AND PIGEONS, consisting of the whole of Mr. Botham's stock of Spanish, which will include the Liverpool Cup birds, &c., &c.; about 40 Lots of First Class Poultry from Mr. Boothby of Bristol; White and Buff Cochins, from F. Manning, Esq., of Suffolk; Black, Gold. and Silver Polands from G. S. Fox, Esq., of Somerset; about 15 Lots of Poultry from Mrs. Pattison, and other varieties from celebrated breeders. The PIGEONS are remarkably choice, and include the surplus stocks of POUTERS from S. Bult, Esq., and CARRIERS from W. W. Hayne, Esq., and D. S. Oliver, Esq.—May be viewed on the Morning of Sale, and Catalogues had; if for the country, by inclosing two stamps.

HIGHLY IMPORTANT SALE OF CONIFEROUS SEEDS.

MR. J. C. STEVENS will Sell by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on WEDNESDAY, February 8, at half-past 12 o'Clock precisely, PINES, CONES, and SEEDS, including Wellingtonia gigantea, Mammoth tree 300 feet high, 25 feet diameter, from the Calaveras Grove, California. Libocedrus decurrens or Thuja gigantea, 150 feet high, from 4 to 6 feet in diameter, from Sierra Nevada, California. Cupressus Lawsoniana, 100 to 150 feet high, 1 to 2 feet in diameter, a most elegant tree, California. Cupressus macrocarpa, resembles the Cedar of Lebanon in its form when old. Abies Menziesi, from the banks of Frazer's River, 100 to 150 feet high, 2 to 3 feet in diameter. Abies Mertensiana: a most graceful Pine, 100 to 200 feet high, from British Columbia and Vancouver's Island. Abies Douglasi, 200 to 250 feet high, 2 to 4 feet in diameter, British Columbia and California. Pinus Lambertiana, 300 feet high, 4 to 8 feet in diameter; this Pine surpasses in size every other species in California, and the timber is also more valued for house purposes. Pinus Jeffreyi, a noble species of Pine from the Sierra Nevada, California, grows from 100 to 200 feet high, 2 to 4 feet in diameter, hardy, elevation above the sea 4000 to 6000 feet. Pinus Sabiniana, 50 to 100 feet high; California. Pinus Benthamiana from California. Pinus ponderosa, Douglas. This species deserves general cultivation for its size, beauty, and timber, 100 to 200 feet high, 4 to 6 feet in diameter; from Sierra Nevada, California. Pinus insignis: this Pine will grow near the sea and in the poorest soil. Arctostaphylos glauca: a very interesting shrub, deserves general cultivation from its pretty rose-coloured flowers and singular foliage; grows 6 to 10 feet high; California. Cornus Nuttalii: a fine shrub, 10 to 20 feet high, flowers white, 4 inches in diameter, hardy, grows 4000 to 6000 feet elevation in the Sierra Nevada. Ceanothus sp., flowers white, spikes from 4 to 6 inches long; a most charming shrub when in flower; hardy, Sierra Nevada, 4000 to 6000 feet elevation above the sea. Quercus Hindsii, a tree from 60 to 80 feet high and 4 feet diameter, from the valleys in California. Quercus sp., a tree from 40 to 60 feet high, from the base of the Sierra Nevada. Also a small importation from Mexico of Pinus ocampii Devoniana.—May be viewed on the Morning of Sale, and Catalogues had; if for the country, by inclosing two stamps.

SEEDS FROM MEXICO FOR SALE.

MR. J. C. STEVENS begs to announce that he will include in his Sale on WEDNESDAY, February 8, 1 lb. of clean seeds of PINUS OCAMPII DEVONIANA, which Messrs. Roezl & Co. are sure will succeed in England. They are collected from an immense tree which they had to cut down for the purpose, in the department of Michoroan, at an elevation of at least 10,000 feet above the level of the sea, where not even Barley can grow, it is so cold, and only a very few vegetables of the commonest kinds. Frosts are not only frequent, but to be relied on at all times in the year, in summer as well as in winter, so that there is no doubt that the tree grown from these seeds will be perfectly hardy in England. This seed will be divided into 20 Lots.—May be viewed on the morning of Sale, and Catalogues had; if for the country, by inclosing two stamps.

1000 ROSES, FLOWER AND VEGETABLE SEEDS FROM HOLLAND; 1000 GLADIOLUS BRENCHLEYENSIS (TRUE); 2000 STRONG FASTOLF RASPBERRIES, 500 HANDSOME BUSHY PLANTS OF UPRIGHT CYPRESS, 36 HANDSOME-TRAINED TREES OF THE NEW PLUM "ANGELINA BURDETT," 500 WIZARD OF THE NORTH STRAWBERRIES, 500 STRONG ROOTS OF DELPHINIUM FORMOSUM, &c.

MR. J. C. STEVENS begs to announce that he will Sell the above by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on FRIDAY, Feb. 10, at half-past 12 o'Clock precisely.—May be viewed on the Morning of Sale, and Catalogues had; if for the country, by inclosing two stamps

FANCY POULTRY AND PIGEONS.

MR. J. C. STEVENS will sell by Auction at his Great Room, 38, King Street, Covent Garden, on TUESDAY, February 21, at 12 o'Clock precisely, about 250 Lots of POULTRY and PIGEONS, consisting of Cochins, Dorkings, Spanish, Bramahs, Polands, Hamburghs, Bantams, Game, &c., from Mrs. Stow, Miss Milward, Messrs. Leno, Stainton, and other well-known breeders; also a good lot of Pigeons from several well-known fanciers.—May be viewed on the Morning of Sale, and Catalogues had about a week before.

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SAMUEL HEREMAN

BEGS TO INFORM THE PUBLIC THAT HE HAS BEEN APPOINTED SOLE AGENT FOR THE MANUFACTURE AND SALE OF

THE NEW PORTABLE AND ECONOMICAL HOTHOUSES,

INVENTED AND PATENTED BY

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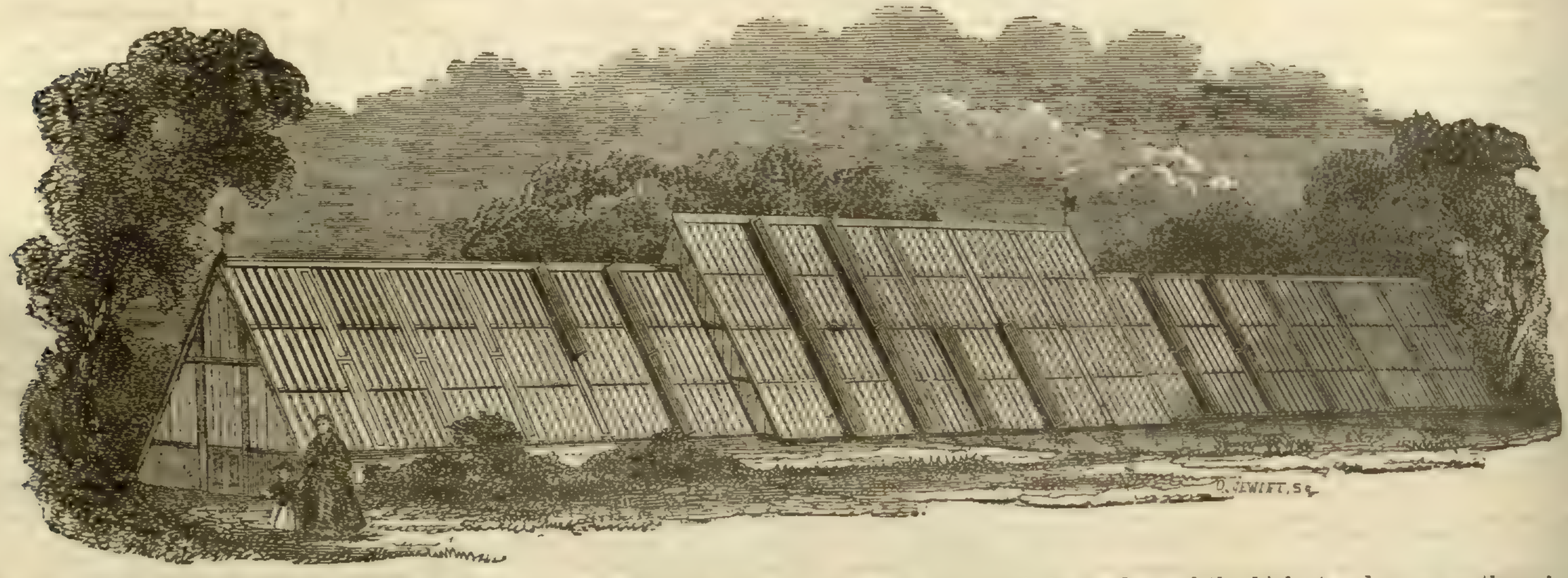
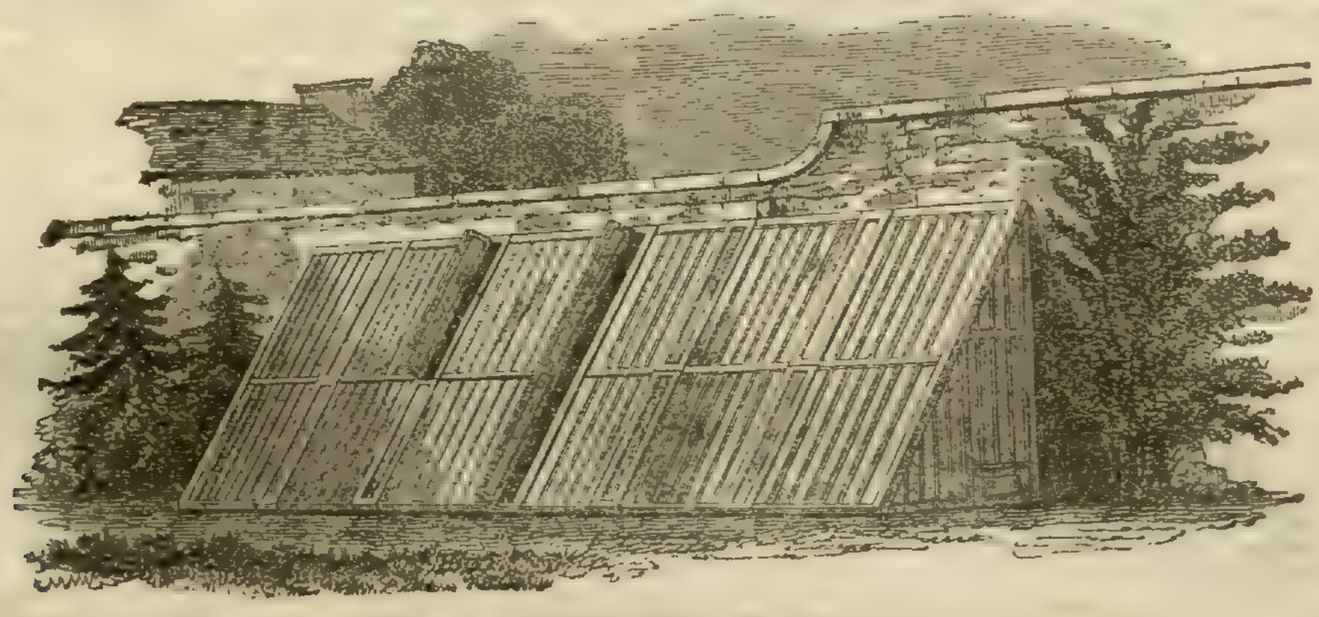


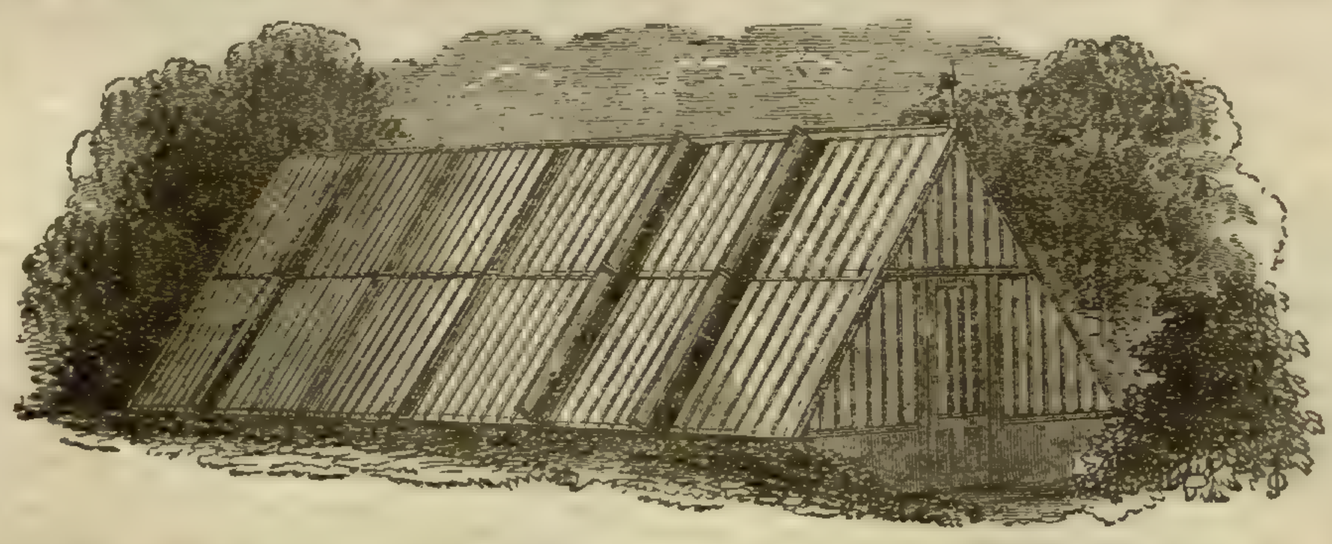
These Buildings are of unparalleled cheapness, and being composed of simple parts can be enlarged, removed, or adapted to any Horticultural purpose by ordinary labourers.

They are calculated for gardens of the highest order, or gentlemen's gardens generally, for market gardens where they may be made to cover any extent of surface, and also for suburban, villa, and cottage gardens.



The moderate cost of these houses not only places within the reach of persons of limited means a luxury hitherto confined to the wealthy, but offers immense advantages to all who have garden walls already standing—as from their peculiar construction they can be formed into ranges of lean-to houses with a facility and at a cost hitherto unheard of.

Whilst they are adapted for permanent structures they are also particularly



suited for persons having temporary or limited tenures, as they can with ease be packed up and removed at the expiration of the tenancy.

The above engravings show some of the uses to which this invention can be adapted, and the forms it can be made to assume. It will be seen that no houses, however costly, can be turned to more useful purposes or more effectually fulfill all the requirements of Horticultural operations. Although the chief aim of the inventor was to reduce the cost of such structures, and to place them within the reach of all classes, yet by varying the arrangements and dimensions of the several parts, ornamented buildings can easily be formed. The prices of these houses with water troughs, doors and ends complete, are as follows:—

	8 Feet Lights.		10 Feet Lights.		12 Feet Lights.
30 feet in length	£33 0	...	£42 5	...	£53 0
40 feet in length	41 16	...	53 17	...	66 15
50 feet in length	51 5	...	65 10	...	80 10
60 feet in length	60 12	...	77 0	...	94 5
70 feet in length	69 5	...	87 10	...	106 5
80 feet in length	78 12	...	99 3	...	120 10
90 feet in length	87 18	...	111 0	...	139 0
100 feet in length	90 15	...	121 5	...	147 0

The above lengths are given in round numbers, but from the nature of their construction the houses will practically in all cases exceed these measurements.

HEATING APPARATUS of the best description can be supplied and adapted if required.

It is intended to supply purchasers according to the rotation in which their orders are received, the sale having commenced on Monday, January 9, 1860.

Letters prepaid addressed to S. HEREMAN, 7, Pall Mall East, S.W., will receive immediate attention.

Printed by WILLIAM RANSBURY, of 13, Upper Woburn Place, and FREDERICK MULLETT EVANS, of No. 20, Queen's Road, West, both in the Parish of St. Pancras, in the Co. of Middlesex, Printers, at their Office, Leonard St., Precinct of Whitefriars, City of London, and published by them at the Office, No. 5, Upper Wellington St., Parish of St. Paul's, Covent Garden, in the said Co.—SATURDAY, January 28, 1860.

THE GARDENERS' CHRONICLE AND AGRICULTURAL GAZETTE.

A Stamped Newspaper of Rural Economy and General News.—The Horticultural Part Edited by Professor Lindley.

No. 5.—1860.] SATURDAY, FEBRUARY 4. {Price Fivepence. STAMPED EDITION, 6d.

INDEX.

Agaricus cepæstipes	98 b	Highland and Agri. Society	105 a
Agri. Society of England	104 c	Horticultural Society	99 c
American fruits	97 c	Iron in buildings	102 b
Apples, American	97 c	Lime tree, death of an aged	100 a
Aye Aye, Madagascar	99 c	Linnean Society	99 a
Bentham, medal to Mr.	96 c	— — Proceedings of, rev.	99 c
Books noticed	100 a	Manetti stock	98 c
Buildings, iron in	102 b	Mangel sowing	104 c
Carter & Co.'s Catalogue	100 a	Mushroom growing	98 b
Cheese making	105 c	Mycology	96 c
Climate of Scotland	104 b	Potatoes and frost	104 a
Clover Dodder	102 b	Rainfall	98 b
Corn rents	106 a	Rhododendrons, Sikkim	95 c
Cow food	103 b	Roads, to salt	98 c
Dairy Husbandry, Hand-Book of	105 b	Rose Manetti	98 c
Dodder, Clover	102 b	Salting roads	98 c
Dove's (Mr.) experiments with guano	101 b	Scotland, climate of	104 b
Food, cow	103 b	Straw dressing	103 a
Foxes, devices of	100 a	Strawberry culture, Cuthill's	96 b
Fruits, American	97 c	Thistles	104 b
Guano, substitutes for	101 b	Tithe averages	104 b
		Waltonian case	97 a
		Woolwich Flori. Society	99 b

HORTICULTURAL SOCIETY OF LONDON.—The next Meeting of the FRUIT COMMITTEE will be held at 8, ST. MARTIN'S PLACE, TRAFALGAR SQUARE, W.C., on TUESDAY, February 7, at 3 P.M. On this occasion Prizes are offered of 20s. for the best, and 10s. for the second best dish of each of the following kinds of fruit:—

CLASS A. ANY VARIETY OF DESSERT PEAR.
CLASS B. ANY VARIETY OF DESSERT APPLE.
CLASS C. ANY VARIETY OF KITCHEN APPLE.

HORTICULTURAL SOCIETY OF LONDON.—The FLORAL COMMITTEE will meet on THURSDAY, February 9, at 8, St. Martin's Place, Trafalgar Square, W.C., for the purpose of examining such NEW PLANTS AND FLOWERS as may be submitted to its judgment. All persons are invited to exhibit. The subjects for examination must be at the Society's rooms as above by 1 P.M. Copies of the Regulations may be had on application.
THOMAS MOORE, Secretary to the Committee.

BRIGHTON AND SUSSEX FLORICULTURAL AND HORTICULTURAL SOCIETY'S EXHIBITIONS for 1860 are fixed to be held on the following days:—Summer Show, WEDNESDAY and THURSDAY, June 27 and 28; Autumn, WEDNESDAY and THURSDAY, Sept. 12 and 13, on the same grand scale as in former years. Schedules will shortly be published, to be obtained of the Secretary, 96, St. James Street; or of E. SPARY, Queen's Graperies, Superintendent of Exhibitions.
Brighton, Feb. 4. EDWD. CARPENTER, Sec.

NEW ROSES FOR 1860.
J. AND J. FRASER, of the Lea Bridge Road Nurseries, N.E., have a good stock of strong plants of the above. A DESCRIPTIVE LIST of 20 of the best sorts may be had on application.

NEW ROSES FOR 1860.—Plants in Pots are now ready for distribution, price 5s. each. Usual discount to the Trade.—HUGH LOW & Co., Clapton Nursery, N.E.

ROSES.—Splendid well-rooted plants of all the leading sorts can be supplied at very moderate prices by BENJAMIN R. CANT, St. John's Street Nursery, Colchester.
CATALOGUES forwarded on application.

NEW LIST OF SEEDS FOR 1860.
J. DOBSON AND SONS' LIST forwarded free to any address upon application. The Seeds warranted new and true.
Woodlands Nursery, Isleworth, W., & High St., Hounslow, W.

PELARGONIUMS.
JOHN DOBSON AND SONS beg to invite the attention of intending purchasers of the above, who will be liberally dealt with. A choice selection sent at a moderate price. Catalogues free on application.
Woodlands Nursery, Isleworth, W.

PELARGONIUM—THE BRIDE.
JOHN DOBSON AND SONS will be happy to forward a very strong plant in a 48-sized pot of this the finest white variety yet raised, 5s. each. No collection should be without it.—Woodlands Nursery, Isleworth.

STANDARD SCARLET RHODODENDRONS.—Magnificent specimens, on their own roots, covered with blooming buds.—Price on application to W. H. ROGERS, Red Lodge Nursery, Southampton.

CEDRUS DEODARA.
MAULE AND SONS still hold the largest supplies of the above tree in the country, and invite the attention of gentlemen planting, and the Trade generally. Magnificent specimens, 5, 6, 7, 8, 9, and 10 feet, at 5s., 6s., 7s., 8s., 9s., and 10s. each.—Stapleton Road and Stoke Nurseries, Bristol.

FOX COVERT.
MAULE AND SONS can supply Noblemen and Gentlemen thickening or planting their coverts with fine two-year-old GORSE or FURZE PLANTS, at 10s. per Thousand.—Stapleton Road and Stoke Nurseries, Bristol.

ORION AND TRENTHAM Hybrid MELONS, (true)—Packets containing 18 seeds, postage free, 1s. each. Every description of VEGETABLE SEEDS of the finest quality.
W. H. ROGERS, 130, High Street, Southampton.

TO THE SEED TRADE.
100 Sacks of CHAMPION of ENGLAND PEAS, picked sample, at 10s. per bushel.
BENJAMIN R. CANT, St. John's Street Nursery, Colchester.

SEED CORN FROM THE CHALK.—All the best varieties of SEED WHEAT, BARLEY, OATS, &c., may be had as usual of Messrs. RAYNBIRD & Co., of Basingstoke and 89, Seed Market, Mark Lane, London, E.C.
Samples and prices on application.

SUTTON'S SEED LIST IS NOW READY,
and will be sent gratis and post free to any address.
Royal Berkshire Seed Establishment, Reading.

PETER LAWSON AND SON, THE QUEEN'S SEEDSMEN AND WOOD FORESTERS, respectfully announce that they have now issued their NURSERY CATALOGUE OF FOREST TREES, CONIFERÆ, SHRUBS, &c., which they will be happy to forward free by post on application.
27, Great George Street, Westminster, S.W.

J. G. WAITE'S WHOLESALE CATALOGUE is now ready and can be had on application.
Seed Establishment, 181, Holborn, London, W.C.

SEED CATALOGUE.
CHARLES TURNER'S DESCRIPTIVE LIST of a Selection of the best varieties only is now ready.
The Royal Nurseries, Slough.

SEED CATALOGUE.
WM. CUTBUSH AND SON'S DESCRIPTIVE PRICED CATALOGUE, which contains every thing necessary, can be obtained free per post on application.
Highgate Nurseries, London, N.

NEW DAHLIAS FOR 1860.
JOHN KEYNES'S LIST of the new DAHLIAS for 1860 is now ready, and will be forwarded on application.
Salisbury, February 4.

FERN CATALOGUE.
ROBERT SIM'S NEW DESCRIPTIVE AND PRICED CATALOGUE, No. 6 (62 pages) of his COLLECTION of BRITISH AND EXOTIC FERNS, can be had, post free, for 8 stamps. Gratis to all previous purchasers of Ferns.
Nursery, Foot's Cray, Kent, S.E.

NEW CHRYSANTHEMUMS, DAHLIAS, FUCHSIAS, VERBENAS, PETUNIAS, ETC.
WILLIAM HOLMES'S CATALOGUE of the above for 1860, free for one stamp.
Frampton Park Nursery.

AZALEA INDICA.
J. IVERY AND SON'S New DESCRIPTIVE CATALOGUE of the above contains all the newest and best varieties. Will be forwarded post free upon application.
Dorking Nursery.—Feb. 4.

KITCHEN GARDEN SEEDS.
JOHN CATTELL'S CATALOGUE of the above may be had free by post. It contains selections of the most approved VEGETABLES in cultivation, and nearly the whole of them have been saved under J. C.'s own personal superintendence.—Nursery and Seed Establishment, Westerham.

TO THE SEED TRADE.
JAMES FAIRHEAD AND SON, SEED GROWERS and MERCHANTS, Lewisham, Kent, and 7, Borough Market, London, S.E., beg to acquaint their friends and the Trade generally that their WHOLESALE CATALOGUES are now ready, and will be forwarded post free on application.

NEW FLORIST FLOWER CATALOGUE.
DOWNIE AND LAIRD, NURSERYMEN, SEEDSMEN, and FLORISTS, 17, South Frederick Street, Edinburgh, beg to intimate that their CATALOGUE of FLORIST FLOWERS. New VEGETABLE and FLOWER SEEDS is now ready, and may be had free on application.

SURPLUS STOCK OF BULBS.—The following for 21s. or half for 10s. 6d.:—30 Hyacinths, 30 Polyanthus Narcissus, 100 Double Tulips, 100 Single Tulips, 300 Crocus, 50 Border Narcissus, 10 Double Jonquils, 25 Large Single Jonquils.—BUTLER & MCCULLOCH, Covent Garden Market, W.C.

GREAT SCARCITY OF FRUIT.
STRONG ROOTS OF THE LINNÆUS RHUBARB, from division, can be supplied in any quantity at 12s. per 100, or 5l. per 1000, by WALTER PENNINGTON, Nurseryman, South Retford, Nottinghamshire.

DWARF MAIDEN FRUIT TREES.
HUGH LOW AND CO. have to offer of fine quality, PEACHES, NECTARINES, APRICOTS, PLUMS, CHERRIES, APPLES, PEARS, on Quince Stocks. Prices will be furnished on application.
The Wholesale CATALOGUE is ready for distribution.
Clapton Nursery, London, N.E.

RASPBERRY CANES.—Strong well-root PROLIFIC, the best bearers known, 3s.; FASTOLF, per 100, warranted.—Apply to HENRY WARNER, Cranford Bridge, near Hounslow, W.

FLOWERING PLANTS.
F. AND A. SMITH have now in Bloom Azalea indica, Cinerarias, Cyclamen, Cytisus, Deutzia gracilis, Dielytra spectabilis, Erica Willmorea, Leschenaultia formosa, Primula, Tulips in variety, &c., at reasonable prices; as the season advances other varieties will be quoted.—Dulwich, Surrey, S.

GIANT POLYANTHUS AND GIANT COWSLIP.—A few pounds of these gigantic and beautiful Spring Flowers to be disposed of, and many of them almost equal to the Auricula.—Apply to G. MACE, at the Garden, Calcot, near Reading.

TO THE TRADE.
DOWNIE AND LAIRD offer PANSY, HOLLYHOCK, PETUNIA, from the finest-named varieties; SWEET WILLIAM and QUILLED GLOBE ASTER, finest mixed, their own saving, all of first-rate quality. Prices on application.—17, South Frederick Street, Edinburgh.

CINERARIAS, CALCEOLARIAS, FUCHSIAS, AND VERBENAS.
JAMES DICKSON AND SONS beg to offer fine strong plants of the above, including all the newest and best varieties, at very moderate prices, which they will be happy to furnish upon application.—"Newton" Nurseries, Chester.

GEORGE GIBBS AND CO., SEEDSMEN,
26, DOWN STREET, PICCADILLY, LONDON, W.

GOOD SEEDS. CARRIAGE FREE.
SUTTON AND SONS, SEED GROWERS AND MERCHANTS,
ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.

SELECT NURSERY STOCK AT REDUCED PRICES.
WILLIAM JACKSON AND CO., Bedale, Yorkshire, beg to refer purchasers to their advertisement in the *Gardeners' Chronicle* of January 28, page 67.

RED LODGE NURSERY AND AMERICAN GROUNDS, SOUTHAMPTON.
W. H. ROGERS solicits attention to the large, fine, and varied Stock, growing on the above extensive Grounds.

THE PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY LIMITED supply every requisite for the Farm and the Garden.
Registered Offices: Union Road, Plymouth.

WELLINGTONIA GIGANTEA.
JOHN WATERER has thousands of the above Plants to offer, varying in height from 1 to 4 feet. The whole are exceedingly handsome and well rooted. Price on application.—The American Nursery, Bagshot, Surrey.

TO THE TRADE.—SPERGULA PILIFERA SEED, the IMPROVED CUSTARD MARROW. Prices of the above, also for other seeds offered to the Trade, may be had on application.
STEPHEN BROWN, Seed Grower, Sudbury, Suffolk.

LAWNS WITHOUT MOWING—SPERGULA PILIFERA.
J. A. SUMMERS supplies strong plants for immediate planting, taken from the original stock, at 1s., 2s., and 4s. per doz. A specimen post free, 1s.
Howard Park Nursery, Perry Hill, Sydenham, S.E.

SPERGULA PILIFERA—PLANTS AND SEEDS.
SUTTON AND SONS can supply any quantity at a moderate cost. Free by rail or post.
For particulars apply to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

HOLLAND AND BAYLEY beg to offer strong 3 and 4 years old Plants of the largest and finest flavoured LANCASHIRE SHOW GOOSEBERRIES, at 6s. per dozen.—Bradshaw Gardens, Chadderton, near Manchester.

TO THE TRADE.
FOR SALE, very fine SEED of the True hardy SCOTCH LEEK.—Price on application to Messrs. DRUMMOND & SONS, Stirling, N.B.

WHEELER'S IMPERIAL LETTUCE, 1s. per packet.
For description and testimonials see "WHEELER'S *Little Book.*"
J. C. WHEELER & SON, Gloucester.

WHEELER'S TOM THUMB LETTUCE. 1s. per packet.
For description and testimonials see "WHEELER'S *Little Book.*"
J. C. WHEELER & SON, Gloucester.

IVERY'S NONSUCH CELERY, 1s. per packet, IVERY'S NONSUCH LETTUCE, 1s. 6d. per packet.
For description and testimonials, see *Gardeners' Chronicle*, January 28.—WM. IVERY, Hanover Nursery, Peckham, S.E.

KITCHEN GARDEN SEEDS free from any admixture of old valueless Seeds, and therefore warranted to grow well, are offered by CHAS. SOUTHBY (late Fairbairn), Clapham, S. A PRICED LIST free by post.

NEW HOME-GROWN SEEDS.—Package (in addition to) Carriage Free. COLLECTIONS, 10s., 20s., 30s., and 40s. each. See PRICED LIST of this Paper January 28, page 71; or free on application.
NEW CITRON GOURD, 6d.; NEW ACORN STRIPED GOURD, 6d.; NEW MONSTROUS PROLIFIC CUCUMBER, 6d.; or given on all orders above 20s.
W. STEWARD & Co., Seed Growers, Plymouth, Devon.

WANTED, JACKSON'S KIDNEY POTATOES, TRUE.—Price and quantity to FISHER, HOLMES, & Co., Handsworth, Sheffield.

EARLY POTATOES—"LEMON KIDNEYS."—The earliest and best variety (see Article in "Royal Agricultural Journal," Vol. XVIII.), may be had from Author's Bailiff, JOHN HELM, Morecombe, near Lancaster, at 2s. 6d. per stone. Also copy of Article, 3d Edition, enlarged, 1s.

POTATOES.—SURPLUS STOCK.
J. H. ROBINSON, SEED GROWER, Abbey Farm, Hinckley, has a few Tons of the EARLY FORTY-FOLD SEED POTATOES to dispose of at 5s. per cwt.; less by the ton.

SEED POTATOES from the North of Scotland.
FLUKES | DALMAHOYS | PROTESTANTS.
Price 14s. per sack of 2 cwt. free to London or Newcastle.
Orders and remittances to be addressed to A. SIMPSON, Teawig, Inverness-shire.

SEEDLING POTATO.—WEBB'S IMPERIAL KIDNEY.—This Potato is without exception the best for every purpose. Its yield is extraordinary, and its quality first-rate. For Seed, 10s. 6d. per bushel.—Application to be made to GEORGE MACE, Gardener, Calcot, near Reading.

SOLANUM CAPSICASTRUM.—Seeds of this extremely ornamental plant from the free fruiting specimen exhibited at the Horticultural Society's Rooms, and specially noticed by Dr. Lindley in a Leading Article (see *Gardeners' Chronicle*, Dec. 17, 1859, p. 1016), can be had as follows:—Packets containing 30 seeds sent, post paid, on receipt of 12 postage stamps.—GEORGE MACINTOSH, High Road, Hammersmith.

"BAD SEEDS ARE DEAR AT ANY PRICE."

THE CHEAPEST, EASIEST, AND BEST WAY TO OBTAIN A YEAR'S SUPPLY OF GARDEN SEEDS IS TO ORDER ONE OF

MESSRS. WHEELER AND SON'S COLLECTIONS.

These Collections consist of really choice Seeds—the best varieties—all correctly named, and arranged in proper quantities. Year by year they get more and more in demand.

No. 1—A Complete Collection of PEAS, BEANS, and GARDEN SEEDS of every sort £3 0 0
No. 2— Ditto Ditto Ditto (smaller quantities) 1 10 0
No. 3— Ditto Ditto Ditto (for a small garden) 0 15 0

Carriage free by Rail except No. 3.

The following TESTIMONIALS will give some idea of the high character our Seeds have obtained.

From Sir JOHN OWEN, Bart., M.P., *Lord Lieutenant of Pembrokeshire.*

"Taynton House, Dec. 1, 1859.

"Having dealt with you for several years I have great pleasure in bearing my testimony to the good quality of the Seeds with which you have supplied me, and I have recommended you to my son, who has succeeded me in the occupation of this farm."

From General DRUMMOND.

"The Boyce Court, Dec. 11, 1859.

"I shall shortly send you an order for Seeds as usual. I have been hitherto extremely well satisfied with the Plants and Seeds with which you have supplied me for the last 20 years; I am especially pleased with the Wheeler's Imperial Lettuce, and also with the Flower Seeds."

From the Rev. ALAN G. CORNWALL.

"Ashcroft House, Dec. 10, 1859.

"I have very sincere pleasure in informing you that the Grass, Clover, Cabbage, and Mangel Wurzel Seeds have proved of excellent quality. I could not desire better; and I trust that your honest dealings will be duly appreciated by the public."

Ladies and Gentlemen who have hitherto found difficulty in obtaining really first-class Seeds will do well to communicate with us, and we will forward our "Little Book," which will give full particulars of the above collections, and also prices of our Farm Seeds, Flower Seeds, &c.

J. C. WHEELER and SON, Seed Growers, Gloucester.

THE BEST LETTUCE IN ENGLAND.

COTTRELL'S NEW BATH COS, 1*s.* per packet. If not good the money will be returned. Also may be had True COTTRELL'S Champion Cabbage, 6*d.* per ounce. COTTRELL'S Sebastopol and COTTRELL'S Wonder Peas, 9*d.* per quart.

Before ordering your Seeds, get COTTRELL'S PRICE SHEET and LIST (for one stamp).—Wholesale and Retail Seed Warehouse, 15, Bull Ring, Birmingham.

SEED ESTABLISHMENT, SUDBURY, SUFFOLK.

VEITCH'S PERFECTION PEAS, procured direct from VEITCH & SON in 1858, and may be had true, having grown the stock two seasons, per quart, 2*s.*

SUTTON'S BERKSHIRE HERO PEA, per quart, 2*s.* 6*d.*

LEE'S NEW WHITE SPROUTING BROCCOLI, in sealed packets, each 2*s.* 6*d.*

STEPHEN BROWN, Seedgrower, &c., Sudbury, Suffolk.

NEW PEAS.

BUCKLEY'S GENERAL WYNDHAM | THORNE'S ROYAL BRITAIN.

HURST AND M'MULLEN having grown a considerable quantity of the above fine tall late varieties of PEAS this season, beg to offer them to the Trade only. They have been proved to be superior to any of their class, both in flavour and size for the last two years, and they can confidently recommend them.

Also "Dillistone's First Early Pea," quite seven days earlier than any other variety, and a great bearer. Prices on application.—Address, 6, Leadenhall Street, London, E.C.

NEW CUCUMBER—"CLAPHAM DEFIANCE."

CHARLES SOUTHBY in sending out the above begs to remark that it was raised by Mr. Barton, Gardener to Mrs. Wild, Clapham Common, and exhibited by him last season at the Surrey Amateur Floricultural Society's Show, where it obtained a Certificate of Merit and would have received First Prize, but the rules of the Society forbid such—the exhibitor not being a subscriber. Mr. C. Jessup, the Secretary, writes:—"This Cucumber shown by Mr. Barton is the finest specimen out this season, admired by all at the Show." It is an hybrid between Himalaya and Alliance, but a great improvement on either of the above, being much more hardy, greater cropper, and stands winter forcing well; in flavour it is unsurpassed; length 24 to 30 inches; 1*s.* 6*d.* per packet; double packets, 2*s.* 6*d.*—CHARLES SOUTHBY, Clapham, S.

TRITOMA UVARIA.

JAMES MARCHAM, of Earl's Court Road, Old Brompton, S.W., having saved SEEDS of this splendid hardy perennial plant, offers packets containing 50 Seeds for 1*s.*, 200 for 2*s.* 6*d.*, 500 for 5*s.*, ¼ oz. for 20*s.* All orders to be prepaid. Seeds sown between now and the 1st of March will flower in the autumn of the present year.

GARDEN SEEDS.

THOMAS KENNEDY AND CO., NURSERYMEN and SEEDSMEN, Dumfries, are now prepared to execute orders for VEGETABLE AND FLOWER SEEDS, and will be glad to forward their NEW DESCRIPTIVE CATALOGUE postage free to any address.

FREE DELIVERY.—All parcels of Seeds above 30*s.* value will be delivered free of carriage to the chief Railway stations in England and Scotland and principal steam ports in Ireland.

CHOICE SEEDS.

MESSRS PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:—

	P. packet—*s.*	*d.*
BROCCOLI, New Sprouting (Lee's)	2	6
,, Penzance White (Mitchinson's)	1	6
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation	1	6
CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
,, Moor Park, extra fine	1	0
MELONS, all the best varieties	1	0
TOMATO, Early Red (Powell's)	1	6
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed	2	6
CINERARIA, from finest named varieties	2	6
,, maritima	0	6
CELOSIA aurea pyramidalis	1	6
,, crimson-feathered variety	1	6
COCKSCOMB, dwarf, extra fine	1	0
DIANTHUS Heddewiggi	1	0
LOBELIA erinus speciosa (true)	1	0
PANSY, from named varieties	1	0
PERILLA Nankinensis	0	6
PRIMULA sinensis fimbriata	2	6
SOLANUM capsicastrum	1	0
,, pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

An inspection and comparison with the prices of several Firms advertising Seeds carriage free is respectfully solicited.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

Just out,

WHEELER'S LITTLE BOOK FOR 1860.

POST FREE FOR THREE STAMPS. GRATIS TO CUSTOMERS.

It gives a full description, and the price of the best sorts of Seed in cultivation, and moreover states in detail the quantities and sorts of GARDEN SEEDS, comprised in our CELEBRATED COLLECTIONS, which we deliver CARRIAGE FREE to all parts of the Kingdom.

No. 1, £3. | No. 2. 30s.

J. C. WHEELER & SON, SEED GROWERS, GLOUCESTER.

SEED ESTABLISHMENT, SUDBURY, SUFFOLK.

NEW SEEDS OF THE FINEST SORTS GROWN, AND AT THE LOWEST PRICES FOR GENUINE AND FIRST QUALITY.

COLLECTIONS OF VEGETABLE SEEDS.

THE COLLECTIONS furnished from this Establishment have met with the highest approval, and will be found on trial not to be surpassed. The following comprises many excellent new and improved sorts:—

Column No. 1.—COLLECTION for a Large Garden for One Year's Supply... £3 0 0
,, No. 2.—COLLECTION in smaller proportion 2 0 0
,, No. 3.—COLLECTION ditto 1 5 0
COLLECTION of Choice kinds for a Small Garden ... No. 4, 15s. No. 5 0 10 6

If any sorts are not wished for, enlarged quantities of others are sent for instead.

No.	1	2	3
PEAS.			
Sangster's No. 1	2qt.	1qt.	1qt.
Beck's Gem	1qt.	1pt.	1pt.
Early Emperor	2qt.	1qt.	1pt.
Burbridge's Eclipse	1qt.	1qt.	1pt.
Fairbeard's Nonpareil	1qt.	1pt.	
,, Champion of England	2qt.	1qt.	1pt.
Paradise, large	2qt.	1qt.	1pt.
Dickson's Favorite	1qt.	1qt.	1qt.
Flack's Victory	1qt.	1pt.	
Prizetaker	1qt.	1qt.	1pt.
Scimetar	2qt.	1qt.	1qt.
Ne Plus Ultra	1qt.	1qt.	1pt.
Champion of Scotland	1qt.	1pt.	1pt.
Lord Raglan	1qt.	1pt.	
Epps's Monarch	1qt.	1pt.	1pt.
BEANS.			
Monarch Long Pod	4qt.	2qt.	1qt.
Early Dwarf Fan	1qt.	1qt.	1qt.
Green Long Pod	2qt.	1qt.	1qt.
Taylor's large Windsor	4qt.	2qt.	1qt.
BEANS, KIDNEY.			
Scarlet Runners	1qt.	1pt.	½pt.
Dwarf in sorts	3qt.	1qt.	1pt.
BEET.			
Perkins's Black	1oz.	½oz.	¼oz.
Melford Hall (Atking's)	1oz.	½oz.	
BROCCOLI.			
Early Walcheren	pkt	pkt	pkt
Early Purple Cape	pkt		
Mitchinson's New Penzance	pkt	pkt	
Adams's Early White	pkt		
Purple Sprouting	pkt	pkt	pkt
Giant Late White	pkt	pkt	pkt
Dilcock's Bride	pkt	pkt	
Imperial Winter White	pkt		
Dwarf Purple Danish	pkt	pkt	pkt
Ward's Superb Late White	pkt		
BRUSSELS SPROUTS.			
Imported	1oz.	½oz.	¼oz.

No.	1	2	3
CABBAGE.			
Shilling's Queen	1oz.	½oz.	¼oz.
St. John's Day	½oz.	½oz.	¼oz.
Furnell's Early Edwardstone	½oz.	½oz.	¼oz.
Mitchell's Early dwarf York	½oz.	½oz.	
Couve Tronchuda	½oz.	½oz.	
Dutch Red Pickling	½oz.	½oz.	pkt
CALE or Borecole, dwarf	1oz.	½oz.	½oz.
CARROT.			
Early French Horn	2oz.	2oz.	1oz.
Long Red Surrey	6oz.	4oz.	3oz.
CAULIFLOWER.			
Early	½oz.	pkt	pkt
Large Asiatic	½oz.	pkt	pkt
CELERY.			
Cole's Superb Red	½oz.	½oz.	pkt
Incomparable White	½oz.	pkt	pkt
CRESS.			
Extra triple curled	1pt.	1pt.	½pt.
New Australian	1oz.	1oz.	
American or Winter	2oz.	1oz.	1oz.
CUCUMBERS.			
Stockwood	pkt	pkt	pkt
Victory of Bath	pkt	pkt	pkt
Roman Emperor	pkt	pkt	
ENDIVE.			
Rouen, very large	1oz.	½oz.	½oz.
LEEK.			
Summer Flag	2oz.	1oz.	pkt
LETTUCE.			
Bath (hardiest) Cos	½oz.	pkt	pkt
Paris Green Cos	½oz.	pkt	
Improved Large White Cos	½oz.	pkt	
Tennis Ball	½oz.	pkt	pkt
Drumhead Cabbage	½oz.	pkt	
White Silesian Cabbage	½oz.	pkt	
Hammersmith (hardiest) Cabbage	½oz.	pkt	
Grand Admiral Cabbage	½oz.	pkt	pkt

No.	1	2	3
MELON.			
Bromham Hall	pkt	pkt	pkt
Egyptian Green Flesh	pkt		
MUSTARD.			
White	1qt.	1pt.	½pt.
ONION.			
Deptford	2oz.	1oz.	½oz.
Large White Spanish	2oz.	1oz.	½oz.
White Globe	2oz.	1oz.	½oz.
James's Long Keeping	2oz.	1oz.	½oz.
Extra early Silver Skin Pickling	1oz.	½oz.	½oz.
Lisbon for Autumn sowing	2oz.	1oz.	1oz.
PARSLEY.			
Extra triple curled	4oz.	2oz.	1oz.
PARSNIP.			
Hollow Crowned	2oz.	1oz.	1oz.
RADISH.			
Scarlet Short Top	1pt.	½pt.	¼pt.
Wood's Early Frame	1pt.	½pt.	¼pt.
Scarlet Olive shaped	1pt.	½pt.	¼pt.
Turnip Rooted	1pt.	½pt.	¼pt.
SAVOY.			
Large Drumhead	1oz.	½oz.	¼oz.
SALSAFY	2oz.	1oz.	½oz.
SCORZONERA	1oz.	½oz.	½oz.
SPINACH.			
Round Summer	1qt.	1pt.	½pt.
Prickly Winter	1pt.	1pt.	½pt.
TURNIPS.			
Early Snowball	4oz.	2oz.	1oz.
Early Mousetail	2oz.	2oz.	1oz.
Yellow Stone	2oz.	1oz.	1oz.
Early Dutch	2oz.	2oz.	1oz.
VEGETABLE MARROWS.			
Sweet Basil, Marjoram, Savory, Thyme,	pkt	pkt	pkt
Corn Sallad	pkt		
Tomato	pkt		
Capsicum	pkt		

CATALOGUES with descriptions and much useful information supplied free on application.

BULBS AND ROOTS FOR SPRING PLANTING. A superb collection at reduced prices.—See SEED CATALOGUE.

FLOWER SEEDS comprising a large number of the newest introduction, Continental and English.

IMPORTED GERMAN FLOWER SEEDS. The collections of Stocks, Asters, Wallflowers, &c., are magnificent, and have been universally admired. These are all imported direct from the same German Establishment as in past years, and are strongly recommended.

FRUIT TREES of all the choice popular sorts, with a large number of the best of recent introduction, also general Nursery Stock, at very low prices.

CARRIAGE FREE, *as see Catalogue for goods, 20s. and upwards. Flower Seeds Post Free.*

STEPHEN BROWN (late BASS & BROWN),
Seedsman, Seed Grower, &c., Sudbury, Suffolk.

BUSBY'S STOCKWOOD GOLDEN HAMBURGH GRAPE.

THE very beautiful specimens of this really SPLENDID GRAPE (some of the bunches weighing upwards of 3 lbs.) which have been exhibited during the past season, combined with the numerous unsolicited testimonials as to its superiority and general excellence which JAMES VEITCH, JUN., has received from the most eminent practical Gardeners, warrant him in again calling attention to its great merit.

J. V., JUN., can with confidence recommend it as being without doubt *the best light Grape of its class* in cultivation. It will be found a most valuable acquisition, succeeding well under the same treatment as the Black Hamburgh, and *certainly no Vinery should be without it.* It has also proved to be a most excellent variety for fruiting in pots. That so fine a fruit may be universally planted and enjoyed, J. V., JUN., now offers good established plants at the following prices :—

Nice young Canes ... ... 5s. 0d. each | Good well ripened Canes ... 7s. 6d. each
Fine well-ripened Canes ... ... 10s. 6d. each

ROYAL EXOTIC NURSERY, CHELSEA, S.W.—February 4.

GENUINE FLOWER SEEDS AT MODERATE PRICES.

W. THOMPSON, TAVERN STREET, IPSWICH,

RESPECTFULLY ANNOUNCES THE PUBLICATION OF HIS

DESCRIPTIVE PRICED CATALOGUE OF FLOWER SEEDS FOR THE PRESENT SEASON,

ARRANGED ON THE NATURAL SYSTEM, TO WHICH HE INVITES THE PARTICULAR ATTENTION OF AMATEURS.

THE COLLECTION includes all the most deserving novelties, with a fine selection of rare and Choice Seeds of all classes, which are faithfully described from personal observation. W. T.'s great aim being, next to the supply of a genuine article, to avoid the inflated descriptions and indiscriminate style of eulogium now too commonly adopted.

W. T. respectfully solicits a comparison of his Seeds with those of other Firms, feeling confident that both for germinating qualities and correctness of name they will be found unsurpassed if not unrivalled, whilst for equal quantities their prices are fully one-third lower than usual, as the following quotations will show :—

NEW ANNUALS AND PERENNIALS.	s.	d.
Acroclinium album ..	0	4
,, atro-roseum ..	0	4
Ageratum Mexicanum nanum	0	6
Anagallis grandiflora Eugenie	1	0
Arctotis speciosa sulphurea	0	6
,, grandiflora ..	0	6
Callirrhoë pedata, erroneously offered for C. digitata	0	6
Clarkia integripetala ..	1	0
,, pulcherrima ..	0	6
Cosmidium atro-purpureum	0	6
*Datura chlorantha fl. pl...	0	6
Dianthus sinensis Heddewigii	0	6
Dianthus laciniatus ..	1	0
,, hybridus variegatus	0	4
Fenzlia dianthoides ..	1	0
Leptosiphon hybridus, fine, colour varying from yellow to rose	0	6
Linum corymbiferum, pretty novelty, buff-yellow flower	0	6
Lobelia trigonicaulis, blue	0	6
Lupinus mutabilis varicolor	0	6
*Lychnis Haageana, fine hybrid, vermilion flowers	1	0
*Michauxia campanuloides	0	6
Nasturtium, Yellow, Tom Thumb	1	0
Nemophila marmorata ..	0	6
Nierembergia filicaulis alba	1	0
Portulacca aurea striata, sulphur-col., deep yellow stripes	0	6
Ricinus sanguineus, fine .	0	3
Schizanthus oculatus ..	0	6
*Solanum capsicastrum ..	0	4
*Spraguea umbellata ..	1	0
Sweet Pea, new hybrid ..	0	6

Those of the above marked are Perennial.*

CHOICE AND RARE PERENNIALS.	s.	d.
Aquilegia Whittmannii	0	4
Arenaria montana ..	0	4
Asclepias tuberosa ..	0	4
Calendrinia umbellata ..	0	3
Cowslip, new Giant ..	0	6
*Datura meteloides ..	0	4
Delphinium formosum ..	0	3
Echinacea intermedia ..	0	4
Engelmannia pinnatifida	0	6
Eremostachys laciniata	0	6
*Gazania rigens	0	6
Geranium Endresii ..	0	3
Glossocoma clematidea ..	0	4
Gynerium argenteum ..	0	6
Lychnis fulgens	0	3
Lupinus arboreus ..	0	3
Mimulus card. atro-sanguineus	0	4
Morina longifolia ..	0	4
*Nierembergia filicaulis	0	6
*Œnothera taraxicifolia ..	0	3
,, Missouriensis	0	4
Oxalis floribunda ..	0	4
*Pentstemon Murrayanum	0	6
* ,, Wrightii ..	0	6
*Phlomis leonurus ..	0	6
Phlox decussata	0	6
Phormium tenax ..	0	6
Phygelius capensis ..	0	6
Platycodon grandiflorum	0	3
Polyanthus (new Giant)	0	6
Pyrethrum Delhayii, fine dark var. of roseum ..	0	6
Salvia bicolor (Desfontaine's)	0	4
Saponaria ocymoides ..	0	4
Scabiosa caucasica ..	0	3
Scutellaria macrantha ..	0	6
Tritoma Uvaria	0	6

Those of foregoing marked are Half-hardy only.*

CHOICE ANNUALS, &c.	s.	d.
Acroclinium roseum ..	0	3
Balsam, splendid Camellia	0	6
Chrysanthemum Burridgeanum.. ..	0	3
,, venustum	0	3
Cobæa scandens	0	3
Covolvulus tricolor splendens	0	3
Dianthus Garnierianus ..	0	3
Ipomopsis elegans.. ..	0	3
Linum grandiflorum ..	0	4
Lobelia erinus speciosa ..	0	6
,, ,, ramosoides..	0	4
,, ramosa .. .	0	3
Lophospermum scandens .	0	3
Lupinus Menziesii ..	0	3
,, subcarnosus	0	3
,, hybridus insignis ..	0	3
Maurandya Barclayana ..	0	3
Microsperma Bartonoides	0	4
Nycterinia capensis ..	0	3
Oxalis rosea	0	3
Perilla Nankinensis ..	0	2
Petunia, very fine mixture	0	3
Pharbitis limbata	0	4
,, hederacea superba .	0	4
Phlox Drummondi, splendid mixed varieties	0	4
Rhodanthe Manglesii ..	0	3
Sabbatia campestris, a beautiful pot annual ..	0	6
Salpiglossis sinuata, new large-flowered, fine	0	3
,, atro-coccinea ..	0	4
Salvia porphyrantha ..	0	4
Schizanthus retusus ..	0	3
Statice Bonduelli, yellow	0	3
Thunbergias, all sorts ..	0	3
Whitlavia grandiflora ..	0	3
Zinnias, finest mixed ..	0	3

The older hardy annuals at 2*d.* per packet.

GermanSeeds as imported from the first Erfurt Growers.

Ten-week Stock	12	cols.	2	3
,, ,,	24	,,	4	0
,, large-fld.	12	,,	2	3
,, autumn	12	,,	2	3
Emperor Stock	12	,,	2	6
Brompton Stock	12	,,	2	6
Aster, Quilled	12	,,	1	9
,, Globe	12	,,	1	9
,, Ranunculus	6	,,	1	6
,, Cocardeau	4	,,	1	6
,, Truffaut's	12	,,	2	0
Phlox Drummondi	12	,,	2	0
Wallflowers, double	12	,,	3	0

MIXED SEED of the above may be had, as follows :—

Asters, German Quilled ..	0	3	
,, ,, Globe ..	0	3	
,, English Prize ditto	0	6	
,, French, Truffaut's ..	0	4	
,, New Perfection ..	0	6	
,, ,, Cocardeau ..	0	6	
,, ,, Ranunculus ..	0	4	
,, Chrysanthemum fld.	0	4	
,, Imbricated Pompone	0	6	
Stocks, Ten-week	0	4	
,, large-flowered ..	0	4	
,, autumn-flowering ..	0	4	
,, Wallflower-leaved	0	4	
,, Brompton	0	4	
,, Emperor	0	4	
,, ,, large-fld. ..	0	4	
Wallflower, Rocket ..	0	6	
,, Branching ..	0	6	

[All the above are warranted to be imported Seeds of first-rate quality.]

The entire Collection comprises nearly 1300 species and varieties, including limited quantities of some very Rare Seeds.

All Seeds sent post free, except when only two or three cheap bulky packets are ordered.

The CATALOGUE will be sent post free on prepaid application.

PANSIES.

HENDON PARK NURSERIES, HENDON, N.W.

EDWARD SHENTON is now offering a large and varied stock of all the best Show varieties of PANSIES, in 60-pots. Prices for single plants, as per var. ; per doz., 6*s.*

WILD'S ORION MELON ... per packet 1*s.* 0*d.*
WILD'S PRIMULAS .. .. ,, 2 6
WILD'S CUCUMBER .. .. ,, 1 0
WILD'S (GILSON'S GLORY) PEA .. ,, 0 6

Agent for Robertson's Wizard Strawberry ; Fisher, Holmes, & Co.'s Early Potato ; Griffin's Alma Lettuce ; Page & Toogood's Blight Composition.

THOS. WILD, The Primulary, Ipswich.

SEEDS.—SPRING, 1860.

SYME, SIMONS, AND SMITH, Glasgow, N.B., will have much pleasure in forwarding their LIST OF VEGETABLE, FLOWER, AND FARM SEEDS FREE. It contains all varieties in cultivation, and the prices for GENUINE SEEDS are very moderate, with free delivery.

GLADIOLI.—Separate list of all the finest sorts may also be had free.

TO THE TRADE.

FINE WEALTHY HOLLYHOCKS, READY FOR IMMEDIATE DELIVERY.

BOWLER AND WARD have a large stock of hardy plants, consisting of the finest varieties in cultivation, and will be glad to supply the Trade in quantities at much below the usual trade discount. (Price on application.) They wish to acquaint their friends and the Trade generally that their stock has never been subject to disease, and every plant is guaranteed perfectly healthy.

Ipswich Rosery, Foxhall Road, Ipswich.

FOX COVERT.

J. MORRISON AND SON, NURSERYMEN, &c., Montcoffer, Banff, N.B., can supply noblemen and gentlemen planting coverts with fine 2-year old GORSE or FURZE PLANTS at 7*s.* 6*d.* per 1000.

Also fine plants of MAHONIA AQUIFOLIUM and LEYCESTERIA FORMOSA, the best plants for pheasant food.

NEW SORTS OF SEED POTATOES, CARRIAGE FREE. SOUND AND TRUE.

SUTTON AND SONS, SEED GROWERS, Reading, can confidently recommend the undermentioned sorts of POTATOES as the best in cultivation.

CHEAPER, IN LARGE QUANTITIES.

P. peck or stone of 14 lbs.	s.	d.	P. peck or stone of 14 lbs.	s.	d.
Webb's Imperial Kidney	3	0	Soden's Early Oxford ..	3	0
Birmingham Prizetaker .	3	0	Dawes' Matchless ..	2	6

Early Orders will be necessary.

The importance of a change of Seed applies perhaps more to Potatoes than to any other culinary plant. The above kinds ripen early before the disease generally appears on the Potato crops.

Royal Berkshire Seed Establishment, Reading.

THE TWO BEST POTATOES.

BIRMINGHAM PRIZETAKER KIDNEY.—Very early, great cropper, and short top.

DALMAHOY.—Round, second early, and unquestionably the best variety for general crop ; fine flavour.

CHARLES TURNER has a fine Stock of healthy sets of the above, which are warranted as very superior.

The Royal Nurseries, Slough.

MAJOR'S HALF-SHRUBBY CALCEOLARIA SEED.

MR. HENRY MAJOR, Knosthorpe, near Leeds, Yorkshire, is now prepared to send out CALCEOLARIA SEED, saved from unrivalled Seedlings of his own raising, in packets at 2*s.* 6*d.* each, or three for 5*s.*, post free. Plants from seed sown during the months of February and March will bloom the same year.

The following opinion from the Editor of the *Cottage Gardener* will give some idea of the merits of H. MAJOR'S flowers :—

"SEEDLING CALCEOLARIAS (H. MAJOR).—The specimen flowers you have sent are among the most richly coloured and most beautifully marked that we have ever seen. They are also well formed flowers."

Penny postage stamps may be sent in payment.

ROYAL SOUTH HANTS SEED ESTABLISHMENT.

Under the patronage of H. R. H. the PRINCE CONSORT, the Horticultural and Agricultural Society of India, the principal Nobility, Gentry, and Agriculturists of the United Kingdom.

PAGE AND TOOGOOD will forward their PRICES CURRENT upon application. It should be referred to by purchasers of Garden and Farm Seeds.

Collections of VEGETABLE SEEDS, 55*s.*, 35*s.*, 20*s.*, 10*s.* The Quantities in the above selections will be found more liberal, and the prices 10 per cent. less than any house in the Kingdom.—Seed Establishment, Southampton.

COLLECTIONS OF VEGETABLE SEEDS.

FOR ONE YEAR'S SUPPLY.

No. 1. .. .. 20*s.*
No. 2. .. .. 40*s.*
No. 3. .. .. 60*s.*

All Seeds may be depended on as being of the best quality and free from adulteration.

JAMES CARTER & CO.,
237 and 238, High Holborn, London, W.C.

JAMES CARTER AND CO. are now in a position to execute all Orders without any unnecessary delay, having enlarged their Premises and increased their staff of assistants.

JAMES CARTER AND CO.,
237 and 238, High Holborn, London, W.C.

CONNING'S PERFECTION BROCCOLI.

NEW WHITE SPROUTING BROCCOLI.
CARTER'S CHAMPION CUCUMBER.
CARTER'S EXCELSIOR MELON.
AUSTRALIAN OR GOLDEN CRESS.
CARTER'S GIANT LETTUCE.
VEITCH'S PERFECTION PEAS.
EARLY HANDSWORTH POTATO.
PHEASANT'S EYE POTATO.
PERPETUAL SPINACH BEET.

Vide CARTER'S SELECT LIST OF SEEDS FOR 1860, which will be sent Gratis on application to 237 and 238, High Holborn, W.C.

KITCHEN-GARDEN SEEDS.

FLOWER SEEDS.

GRASS SEEDS.

AGRICULTURAL SEEDS.

THOS. GIBBS & CO. Corner of HALF-MOON St. PICCADILLY, London. ROYAL AGRICULTURAL SOCIETY OF ENGLAND. APPOINTED APL 3. 1844. THE SEEDSMEN

DETAIL CATALOGUES sent free by post on application.

PETER LAWSON AND SON,

THE QUEEN'S SEEDSMEN AND WOOD FORESTERS, 27, Great George Street, Westminster, London, S.W., respectfully announce the issue of their GARDEN SEED CATALOGUE for 1860, which they will be happy to forward free by post on application. Every care has been bestowed on the selection and growth of the various stocks, which P. L. & SON can safely recommend as of best quality, and true to name.

DALMAHOY EARLY POTATOES.

This excellent variety of Potato now meets with a largely increased demand in England, to which it is fairly entitled. It is considerably earlier than the Regent, and of excellent quality. Messrs. P. L. & SON are now prepared to send out carefully selected Seed, for which early orders are requested ; and which can either be executed now or in spring, as may best suit purchasers.

MANGEL WURZEL AND TURNIP SEEDS.

THE CROP OF 1859 BEING SHORT, and the early frosts having been very destructive, prices will rise. Messrs. SUTTON & SONS therefore beg to intimate that their quotations for Mangel and Turnip Seeds in their PRICED LIST, issued in January will not apply to orders received after February 28.—Royal Berkshire Seed Establishment, Reading.

PERMANENT GRASS SEEDS FOR ALL SOILS.

SUTTON AND SONS have one of the largest and most complete Stocks of Natural Grasses and Clovers in Europe, from which they prepare mixtures expressly to suit the soils for which they are required.

Seeds sent Carriage free to all parts of the Kingdom. Export orders delivered free to the ship's side, in any English Port. PRICED LIST gratis and Post free on application, addressed to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

SCOTLAND.

W. DRUMMOND AND SONS, SEEDSMEN, Stirling, N.B., beg to intimate that their "short and sensible" DESCRIPTIVE CATALOGUE OF VEGETABLE AND FLOWER SEEDS is now ready, and may be had post free on application.

N.B. All parcels of Seeds, with certain limitations, are delivered carriage free to the principal Shipping Ports and Railway Stations throughout the United Kingdom.—Seed Warehouses, Stirling, N.B., and 58, Dawson Street, Dublin.

PINE APPLES, GRAPES, &c.

PINE PLANTS, Fruiting and Succession.
GRAPE VINES, from Eyes, for Fruiting in Pots or Planting.

JOHN WEEKS AND CO. can now supply any quantity of very fine strong healthy Pine Plants, either Fruiting or Succession; also remarkably fine strong Grape Vines from Eyes, all the best sorts.

JOHN WEEKS & Co.'s Horticultural Show Establishment is now entirely devoted to the Growing and Forcing of Fruits in great variety, thereby showing the most improved plans of construction, and the most superior system of Hot-water Apparatus.

JOHN WEEKS & Co., Horticultural Builders and Hot-water Apparatus Manufacturers, King's Road, Chelsea, London, S.W.

FRUIT TREES FOR ORCHARD HOUSES.

LUCOMBE, PINCE, AND CO. invite attention to their very superior Stock of

PEACHES AND NECTARINES IN POTS,

Of the choicest sorts, which are thoroughly established in their pots, and full of well ripened wood, covered with blossom buds; they are admirably adapted for Orchard House culture, and capable of bearing abundantly this season.

Prices, which are very moderate, can be had on application to them.—Exeter Nursery, Exeter.

TRAINED FRUIT TREES OF LARGE SIZE.

THOMAS JACKSON AND SON growing Fruit Trees in great numbers, have a few extra large trained Standard Trees full of bearing wood, having been trained five and six years. They consist of the following kinds, and are offered at 10*s.* 6*d.* and 15*s.* each:—

PLUMS.—Blue Imperatrice, Drap d'Or, Coe's Golden Drop, Early Orleans, Green Gage, Old Orleans, Denyer's Victoria, Prince Albert, Royale, St. Catharine's, Washington.

PEARS.—Beurré d'Aremberg, Beurré Rance, Chaumontel, Duchesse d'Angoulême, Louise Bonne de Jersey.

NECTARINES: Stanwick.—Nursery, Kingston, S.W.

FOREST TREES.

JOHN WATERER has to offer upwards of a Hundred Thousand of each of the following, from 2 to 4½ feet high, and all good rooted:—

CHESNUT	LARCH	BIRCH
HAZEL	ASH	ALDER
SCOTCH	LAURELS	WITHY, &c.

Samples with prices sent on application. Planting done by contract.—The American Nursery, Bagshot, Surrey.

TO THE TRADE.

L. T. DAVIS has still to offer—

500,000 1-year Seedling THORN QUICKS.
200,000 2-year do. do. do.
200,000 2 and 3-year Seedling ASH.
100,000 3-year do. BEECH.

Prices, which are very moderate, will be forwarded on application. (Carriage free to Belfast.)

Ogle's Grove Nursery, Hillsborough, Co. Down.

FOREST TREES, &c.

H. AND R. STIRZAKER have to offer a very large quantity of the above good quality and well-rooted. Prices to the Trade on application.

Ash, 2 to 3 feet, 12*s.* 6*d.*; 3 to 4 feet, 17*s.* 6*d.*; 4 to 6 feet, 30*s.* per 1000.
Birch, 1½ to 2 feet, 20*s.*; 2 to 2½ feet, 30*s.* per 1000.
Chesnut, Horse, 2 to 3 feet, 25*s.*; 3 to 4 feet, 35*s.* per 1000.
Larch, 2 to 2½ feet, 15*s.*; 2½ to 3 feet, 17*s.* 6*d.*; 3 to 4 feet, 25*s.* per 1000.
Sycamore, 1½ to 2 ft., 14*s.*; 2 to 3 ft., 16*s.*; 3 to 4 ft., 20*s.* per 1000.
Solanum capsicastrum, 1 year old, good plants, 9*d.* each, or 8*s.* per dozen.—The Nurseries, Lancaster.

ROBERT NEAL, NURSERYMAN, Wandsworth Common, S.W., begs to call the attention of buyers to his large and well-selected stock of EVERGREENS and FLOWERING SHRUBS, ORNAMENTAL TREES, AMERICAN PLANTS, FRUIT AND FOREST TREES, STANDARD AND DWARF ROSES of every description. A large stock of BOX-LEAF EVERGREEN PRIVET, from 1 to 6 feet for hedges; GREEN HOLLY, 1 to 6 ft.; RICH BOG and LOAM for American Beds; LEAF MOULD. The Nursery is 10 minutes' walk from Clapham Common, and New Wandsworth Station, Crystal Palace Line.

2,000,000 SEEDLING THORN QUICKS, one-year old, in bed, from 3 inches to 12 inches high, strong plants, free from mildew.

500,000 LARCH from 18 inches high to 3 feet.

Samples and prices sent to any person requiring same. Carriage paid to Liverpool.

GEORGE R. DAVIDSON, Newry Nursery.

THREE MILLIONS OF TRANSPLANTED QUICKS.

GEORGE CHIVAS, Chester, offers the above, which are admitted to be unequalled in point of quality in Great Britain. A sample bale, containing 100 each of five sizes, forwarded on receipt of 15*s.*, and orders for 10,000 delivered free at any railway station.—Chester, Feb. 4.

HARDY HEATHS.—A Collection of 20 sorts, by name, of the above favourite autumnal flowers, in good plants, at 30*s.* per 100, or 12*l.* 10*s.* per 1000.

JOHN WATERER, The American Nursery, Bagshot, Surrey.

COB NUTS.—What crop will produce most sovereigns to the acre? KENTISH COB FILBERTS.—Application for trees to be made to GEO. MACE, at the Gardens, Calcot, Reading.

SURPLUS STOCK.

JOHN CRANSTON offers the following TREES, which are well grown, and have been repeatedly transplanted:—

SILVER FIRS.—3 to 4, 4 to 5, 5 to 6, 6 to 8, 8 to 10, 10 to 12, 12 to 14 feet. The larger sizes take up with balls of earth, and are really fine specimens.

WEYMOUTH PINES, 6 to 8 and 8 to 10 feet. Very fine and well furnished.

TURKEY OAK, 8 to 10, 10 to 12, 12 to 14 feet.

CHICHESTER ELMS, WYCH ELMS, SYCAMORE, BLACK ITALIAN POPLAR, WEEPING BIRCH, from 8 to 14 feet in height.

The whole of the above are to be cleared this season, and will therefore be offered at low prices by the 100 or doz. as required. Prices given upon application.

Nurseries, King's Acre, near Hereford.

VEGETABLE SEEDS GROWTH OF 1859.

FOR PRESENT AND SPRING SOWING MAY BE OBTAINED GENUINE AT

THOMAS CHARMES, SEEDSMAN, 195, High Street, Exeter (opposite Broadgate), viz:—

Early CARROTS (sorts), 3*d.* per oz. | Early RADISH, 2*d.* per oz.

PEAS.—Early Emperor, Sangster's No. 1.	per quart	0	9*d.*
Daniel O'Rourke, Dickson's Favourite,	,,		
Early Green Marrow, each	,,		
Hair's Dwarf Mammoth, Champion of England, per quart		1	0
Veitch's Perfection (true), per quart		1	8
General Wyndham, finest Pea known for general crop, per quart		1	6
BEANS.—Early Longpod, Early Mazagan		0	6

New Large RUSSIAN MATS, 11*s.* per dozen.

General PRICE LIST free on application.

PLANTING.

A. PAUL & SON

RESPECTFULLY invite the attention of Gentlemen improving their Estates or forming new Gardens to the following TREES, &c., which they are prepared to sell at the lowest remunerating prices for a good standard quality. It is their practice to transplant every second year, in order that little or no loss may be incurred by removal. Many things are grown in large quantities and offered on advantageous terms to the Trade. An inspection of the stock is invited.

Abies alba, 2 to 4 feet
,, ,, glauca, 1 to 2½ feet
,, Clanbrasiliana and other dwarf Firs, 9 in. to 1½ ft.
,, canadensis, 3 feet
,, Douglasii, 2 to 6 feet
,, finedonensis, 2 to 3 feet
,, Menziesii, 1½ to 6 feet
,, monstrosa, 2 to 7 feet
,, Morinda, 2 to 10 feet
,, orientalis, 1 to 2 feet
,, rubra, 2 to 4 feet
,, 20 other sorts, 1 to 6 feet
Araucaria imbricata, 1½ to 6 ft.
Arbor-vitæ (see Thuja).
Alaternus silver & gold striped, 1½ to 4 feet
Arbutus, 6 sorts, 1 to 3 feet
Aucuba japonica, 1 to 2½ feet
Box, 6 sorts, 1½ to 6 feet
Berberis Darwinii, 1 to 1½ foot
Cedrus africanus, 2 to 10 feet
,, Deodara, 1 to 12 feet
Cedar of Lebanon, 1 to 12 feet
,, Red, 2 to 5 feet
,, White, 3 to 5 feet
☞ The largest and finest stock of Cedars in the country.
Cistus, 12 sorts, 1 to 3 feet
Cryptomeria Lobbiana, 3 to 8 ft.
,, nana, 9 inches
Cupressus Corneyana, 1½ to 3 ft.
,, Knightii, 3 to 4 feet
,, Lambertiana, 3 to 7 feet
,, Lawsoniana, 9 in. to 1 foot
,, torulosa, 1½ to 3 feet
,, 12 other sorts, 1 to 4 feet
Daphne pontica, 2 to 3 feet
Furze, double, 1 to 1½ foot
Garrya elliptica, 1½ to 3 feet
Holly, green and variegated, 30 sorts, 1 to 6 feet
,, green standards, 5 ft. stems
Juniperus chinensis, 2 to 5 feet
,, communis pendula, 2 to 3 ft.
,, excelsa, 1 to 2½ feet
,, fragrans, 2 to 4 feet
,, glauca, 2 to 3½ feet
,, oblonga, 2 to 6 feet
,, ,, pendula, 2 to 3 feet
,, thurifera, 1½ to 6 feet
,, tamariscifolia
,, virginiana aurea, 1 to 2 feet
,, ,, pendula, 1½ to 3 feet
,, viridis, 1½ to 2½ feet
,, weeping, 5 feet stems
,, 20 other sorts, 1 to 6 feet
Laurel, Common, 1 to 5 feet
,, Portugal, 1½ to 4 feet
,, ,, Standards, 8 feet
Laurustinus, 1 to 2 feet
Ligustrum lucidum, 3 to 4 feet
,, japonicum, 1½ to 3 feet
,, ovalifolium, 5 feet
,, evergreen, 2 to 4 feet
Mahonia aquifolia, 1 to 3 feet
,, 6 other sorts, 1 to 3 feet
Phillyreas, of sorts, 1½ to 4 feet
Picea amabilis, 1 to 1½ foot
,, nobilis, 1 to 4 feet
,, Nordmanniana, 1 to 4 ft.
,, Pinsapo, 1½ to 4 feet
,, Webbiana, 2 to 3 feet
,, 6 other sorts, 1 to 6 feet
Pinus austriaca, 2 to 4 feet
,, Benthamiana, 2 to 5 feet
,, calabrica, 3 to 4 feet
,, Cembra, 1½ to 4 feet
,, excelsa, 1½ to 12 feet
,, insignis, 3 to 6 feet
,, Llaveana, 2 to 5 feet
,, Laricio, 2 to 4 feet
,, macrocarpa, 2 to 3 feet
Pinus monticolor, 2 to 3 feet
,, monspeliensis, 3 to 5 feet
,, muricata, 3 to 5 feet
,, Montezumæ, 3 years seedlings
,, nivea (Snow Pine), 1½ to 5 ft.
,, Pallasiana, 2 to 3 feet
,, pinaster, 3 to 6 feet
,, pyrenaica, 4 to 6 feet
,, Sabiniana, 4 to 5 feet
,, 40 other sorts, 1 to 6 feet
Quercus (Oak), Evergreen 3 to 5 feet
,, Fordii, 4 to 6 feet
,, latifolia, 3 to 6 feet
,, Mirbeckii, 2 feet
,, Suber (Cork Oak), 3 to 4 ft.
Ruscus hypoglossum
Santolina chamæcyparissus, 1 foot
Taxodium distichum, 3 to 6 ft.
Taxus (Yew), adpressa, 2 to 4 ft.
,, canadensis, 1½ to 3 feet
,, cheshuntensis, 1½ to 6 feet
,, elegantissima, 1½ to 4 feet
,, gold striped, 1½ to 5 feet
,, ,, standards, 5 feet
,, Jackson's Weeping, 1½ foot
,, japonica, 1 to 2 feet
,, nana, 2 to 4 feet
,, nigra, 3 feet
,, stricta, 5 feet
,, yellow-berried, 2 feet
,, common, round, and fan, 2 to 7 feet
,, Irish, 2 to 7 feet
,, 12 other sorts, 1 to 4 feet
Thuja americana, 3 to 8 feet
,, aurea, 1 to 3 feet
,, Chinese, 2 to 4 feet
,, gigantea, 2 to 3 feet
,, Wareana, 1 to 5 feet
,, 12 other sorts, 1 to 3 feet
Thujopsis borealis, 2 to 3 feet
Salisburia adiantifolia, 3 feet
Wellingtonia gigantea, 1 to 2½ ft.

Acer negundo variegata, 2 to 6 feet
Acacia, of sorts, 4 to 10 feet
Ash ,, 6 to 10 feet
Alder ,, 6 to 10 feet
Ailanthus ,, 8 feet
Almonds ,, 6 to 8 feet
Beech, purple, best variety, 5 to 8 feet
Birch, of sorts, 6 to 10 feet
Chesnut, Horse, of sorts, 1½ to 6 feet
,, Spanish, of sorts, 2 to 8 ft.
Catalpas, 6 to 8 feet
Caragana arborescens, 6 to 8 ft.
Cerasus padus aucubæfolius, 6 to 8 feet
Cornus mas variegata, 2 feet
Elms, 12 sorts, 6 to 8 feet
Gleditschias, 1½ to 8 feet
Kolreuteria paniculata, 3 to 6 feet
Laburnums, 8 feet
Lilacs, Persian, 6 feet stems
Liquidambars, 2 to 3 feet
Limes, of sorts, 8 to 10 feet
Maple ,, 5 to 10 feet
Planes ,, 7 to 10 feet
Poplar ,, 6 to 10 feet
Oak ,, 6 to 10 feet
Robinia ,, 6 to 8 feet
Sophora japonica, 10 feet
Sycamore, 6 to 10 feet
Thorns, of sorts, 6 to 8 feet
Tulip Trees, 2 to 10 feet
Willows, American, and others
Quick, 2-year transplanted, fine

WEEPING AND LAWN TREES in very great variety.

FLOWERING TREES AND SHRUBS, in 300 species and varieties, including Althæa, Cytisus, Berberis, Daphne, Deutzia, Lilac, Purple Nut, Pyrus, Ribes, Rose Acacia, Syringa, Spiræa, Weigela, &c.

ROSES, an unrivalled collection. Standards, 12*s.* per dozen and upwards; dwarfs, 6*s.* per dozen and upwards. See separate Catalogue.

HARDY CLIMBING PLANTS, a large collection.

AMERICAN PLANTS, including Azaleas, Heaths, Kalmias, Magnolias, Rhododendrons, &c.

FRUIT TREES, consisting of all the choicest sorts, warranted true to name. The trained Peaches, Nectarines, Apricots, &c., particularly fine.

GRAPE VINES, from eyes, well ripened, short jointed canes 6 to 10 feet.

HERBACEOUS PLANTS, in 500 species and varieties.

HOLLYHOCKS, a fine stock of healthy and well established plants. See separate Catalogue.

☞ Particulars of Prices, &c., furnished on application. Carriage of all packages free to London; if a ton weight or upwards placed free on the Railway at any London Terminus. An inspection of the stock invited.

A. PAUL AND SON,
NURSERIES, CHESHUNT, HERTS,
13 miles N.E. of London, Eastern Counties Railway.

NEW AND RARE VEGETABLES, ETC.

CHARLES TURNER begs to direct attention to the following very desirable varieties, the majority of which he had the honour of introducing to the public:—

PEAS.

MACLEAN'S ADVANCER.—Early Wrinkled Marrow. The most useful Pea yet raised. 2 feet.
MACLEAN'S ESSEX RIVAL.—Second Early Wrinkled Marrow; 26 inches.
MACLEAN'S MIGNON.—Early Dwarf Marrow; 18 inches.
MACLEAN'S PROLIFIC.—Second Early Wrinkled Marrow, fine; 26 inches.
VEITCH'S PERFECTION.—Late Wrinkled Marrow; 3 feet.

ECLIPSE RUNNER BEAN.—Very prolific, and fine flavour. Highly recommended.
THE FROGMORE FORCING CAULIFLOWER, OR EARLY MAMMOTH.—Early, large, close, and fine. Much the best Cauliflower.
MELVILLE'S INCOMPARABLE BROCCOLI.—A fine white, will produce close heads 30 inches in circumference.
LEE'S NEW WHITE SPROUTING BROCCOLI.—Highly recommended.
THE FROGMORE PROTECTING BROCCOLI.—An excellent hardy late kind. Dwarf, and great size.
IMPROVED PURPLE CAPE BROCCOLI.—Hardy and firm, September to April, if sown in successions.
THE ROSEBERRY BRUSSELS SPROUTS.—A fine variety.
TURNER'S ECLIPSE CABBAGE.—Large, dwarf, and early.
GIANT OR AYTON CASTLE LEEK.—Very large, and mild.
STANSTEAD WINTER CABBAGE LETTUCE.—The best for autumn and winter supply.
TURNER'S COTTAGERS' KALE.—Well known; seed from the original stock.
TURNER'S SCARLET GEM MELON.—The best of its class, and the most easily grown.
DESCRIPTIVE CATALOGUE on application.

The Royal Nurseries, Slough.

MESSRS. WATERER AND GODFREY respectfully refer planters to the following LIST of well-known good hardy Plants:—

ARAUCARIA IMBRICATA, 1 foot, stout, healthy, 5*l.* per 100; larger, up to 8 feet.
CEDRUS DEODARA, 2½ to 3 feet, very handsome, 10*l.* per 100; larger, in any quantity, up to 10 and 15 feet.
PICEA NOBILIS, Seedlings, in quantity, 1 foot, stout.
Ditto larger and in every way perfect plants, up to 4 feet.
NORDMANNIANA, from seed, 2, 3, 4, and 6 feet.
PINSAPO, 2½ to 3½ feet, and as much through.
Ditto magnificent plants, 8 and 10 feet high.
CUPRESSUS LAWSONIANA, fine bushy seedling plants, 2½ feet high.
JUNIPERUS, CHINESE, 3 feet up to 8 and 10 feet.
,, IRISH, 5, 6, and 7 feet.
YEWS, IRISH, 5, 6, 7, and 8 feet.
,, GOLDEN, from 2 to 7 and 8 feet.
,, COMMON ENGLISH, in large quantities, 4 to 6, 7, and 8 feet.
THUJA AUREA.—Several hundred magnificent specimens, 3, 4, and 5 feet high, and measuring 10 to 15 feet in circumference.
THUJOPSIS CÆREOLIS, 2½ to 3 feet.
WELLINGTONIA GIGANTEA, all from seed, 1½ to 3 feet, and as wide.
HOLLY, GREEN, in quantities, 5, 6, and 8 ft.; VARIEGATED, especially the best gold striped, of all sizes, up to 6 feet.

All the plants referred to in this advertisement were removed in April last, and they are in a condition to travel any distance with perfect safety.—Knap Hill Nursery, near Woking, Surrey.

TO THE TRADE.

THOMAS CRIPPS, NURSERYMAN, Tunbridge Wells, Kent, respectfully offers the following in fine strong well-rooted Plants:—

Standard Roses, 2 feet to 3½ and 4 feet stems, really good kinds, 50*s.* per 100; superior ditto, 2½ ft. to 4 ft. stems, 60*s.* per 100.
Dwarf Gallica Roses, &c., on own roots, by name, 20*s.* per 100.
Dwarf-worked Perpetual Roses, by name, 40*s.* per 100.
Dwf. Blush Pink China Roses, 15*s.* p. 100; or 500 for 63*s.* } very
Dwf. Crimson do. do. 25*s.* p. 100; or 500 for 100*s.* } strong.
Rhododendron ponticum, fine healthy stuff, the greater portion showing from 1 to 6 or 7 flower-heads, and from 9 in. to 2 feet in height, 25*s.* to 50*s.* per 100.
Rhododendron maximum album, fine large bushy stuff, 18 to 30 inches high, many well set with bloom buds, 9*s.* per doz. or 60*s.* per 100.
Rhododendrons, fine healthy seedling hybrid varieties, unnamed, 12*s.*, 18*s.*, 24*s.*, and 30*s.* per dozen.
Rhododendrons, choicest named varieties, per dozen, 100, or 1000.
Wellingtonia gigantea, from 7 inches to 2½ feet in height, per dozen or 100; all from Seed.
Cupressus Lawsonii, from 6 inches to 18 inches in height, seedling plants, per dozen, 100, or 1000.
Hardy Heaths.—A fine collection, and beautiful large healthy plants, 20*s.* per 100.
Double Yellow Primroses, 20*s.* per 100; or 60*s.* for 400.
Manetti Stocks.—Fine strong, 40*s.* per 1000; or 70*s.* for 2000.
Spanish Chesnut, 4 feet to 6 feet, fine, 40*s.* per 1000.
,, ,, 5 feet to 8 feet, ,, 50*s.* ,,

For prices see T. C.'s TRADE CATALOGUE.

From unknown correspondents either a remittance or respectable London reference must accompany the order. Five per cent. on cash accounts. When less than half-quantities herein quoted are ordered at once, an advance in price will be charged.

SEEDLING FOREST TREES, &c. TO THE TRADE.

Per 1000.	*s.*	*d.*
600,000 1-yr. Thornquick	2	0
1,000,000 do. Aloes ..	1	0
100,000 do. Birch ..	2	0
200,000 do. Sycamore ..	2	0
300,000 do. Ash	1	6
100,000 do. Oak ..	3	0
50,000 2-yr. do. extra fine	8	0
100,000 1-year Beech ..	2	6
500,000 do. Silver Fir ..	3	0
100,000 do. Balm of Gilead Fir	5	0
50,000 do. Laburnum ..	3	0
200,000 do. Pinus austriaca	4	0
100,000 do. Laricio ..	10	0
10,000 do Pinus pinea	20	0
50,000 do. Chinese Arbor-vitæ	10	0
50,000 do. American do.	10	0
100,000 do. Cupressus, upright & horizontalis	10	0

Per 1000.	*s.*	*d.*
100,000 2-year seedling Scotch Fir	1	
600,000 1-year bedded Scotch Fir	2	
1,000,000 2-year seedling Spruce Fir	1	
500,000 do. super. bedded do.	2	
10,000 1-year Horse Chesnut	6	
10,000 1-year Laurel, for cuttings	2	
200,000 2-year Pinus maritima	3	
100,000 1-yr. bedded do.	3	
10,000 2-year bedded Alder	1	
Irish Yews, 3 ft. high, each	0	
Do. do. 4 ft. do. ,,	1	

The Subscriber begs to call the attention of the Trade and Public in general to the above List, and will be happy to execute orders for the same throughout February. They are generally very healthy and well grown, and will be despatched in the best possible condition. A reference or remittance is earnestly requested from unknown correspondents. All orders delivered free at Dublin, and plants put in to compensate for carriage.—MICHAEL BURKE, Drumlargan Nurseries, near Summer Hill, County Meath, 16 miles from Dublin, Ireland.

GENUINE GARDEN SEEDS.

TIMOTHY BRIGDEN, SEEDSMAN and FLORIST, begs most respectfully to inform his friends and purchasers of SEEDS generally, that his unrivalled Collection of GENUINE AGRICULTURAL VEGETABLE and FLOWER SEEDS, is now ready, of which a PRICED CATALOGUE may be had upon application.

T. B. further guarantees that every article is GROWN and SELECTED with the greatest care under his own personal attention. Orders from unknown correspondents must be accompanied with Postage Stamps or P. O. O.

Seed Establishment, 10, Railway Arcade, London Bridge, S.E.

MANGEL WURZEL SEED.

JAMES FAIRHEAD AND SON, Lewisham, Kent, and 7, Borough Market, S.E., beg to inform their customers that on account of failure of plants, and bad prospect for Seed crop ensuing season, their quotations for orders after this date will be advanced. Prices on application.—Feb. 4.

NEW PEA.

NUTTING AND SONS having purchased the Stock of a NEW DWARF WRINKLED MARROW PEA, raised by Dr. Maclean, offer it for distribution in pint packets at 2*s.* each. NUTTING & SONS will grow it this season for next year's supply.

This Pea is remarkable for its earliness as a wrinkled Marrow, dwarf habit (2 feet), fine flavour, and great productiveness.

Seed Warehouses, 60, Barbican, London, E.C.

LAING'S MAMMOTH RED CELERY. — The largest and best flavoured Celery known, and will not run to seed until the second year. (See former advertisement.) Packets, 1*s.* each; large trade do., 3*s.* 6*d.*

New Australian Cress, 6*d.* per packet } per post pre-paid.
Cottager's Kale, true, 6*d.* per packet } Postage stamps received in payment.

YOUELL & Co., Royal Nursery, Great Yarmouth.

MARSH AND PERKINS beg to offer to the Trade their Surplus Stock of PEAS of the following sorts, from picked samples:—

BECK'S PRIZETAKER	.. .. ..	10*s.* per bushel
HARRISON'S GLORY	.. .. ..	10*s.* ,,
,, PERFECTION	.. ..	8*s.* ,,

Samples on application to 42, Drapery, Northampton.

NEW CUCUMBER "RIFLEMAN," a fine long hybrid Cucumber, fit for exhibition purposes. This is one of the finest varieties ever yet offered to the public, a splendid Black Spine, length 26 to 29 inches, a very free setter, and an abundant bearer, carrying its bloom well, and will be sure to give every satisfaction to all purchasers, as all other varieties that has been sent out by E. T. Price 2*s.* 6*d.* per packet.

TILEY'S PROLIFIC RIDGE CUCUMBER.—This is the hardiest and most productive variety ever yet offered to the public. Seeds 1*s.* per packet.

DR. LIVINGSTONE CUCUMBER, sent out for the first time last season, a first-rate variety. 1*s.* 6*d.* per packet.

NEW MELON "EMPRESS," a superb new hybrid variety crossed between the Bromham Hall and Golden Perfection. It is a green flesh, very handsome shape, beautifully netted, thin skin, flesh very solid, and of a most delicious flavour—weight of fruit 2½ to 3½ lbs.; the advantage it has is if planted at the same time as its parents, it will ripen its fruit a fortnight earlier. Seed, 2*s.* 6*d.* per packet.

QUEEN OF THE WEST MELON, sent out for the first time last season, 1*s.* 6*d.* per packet.

For further list of Cucumbers and Melons see this Paper of January 28, 1860.

A packet of any var. of CUCUMBER marked at 1*s.*, sent with a packet of Rifleman Cucumber for 3*s.*

A packet of any var. of MELON marked at 1*s.*, sent with aa packet of Empress Melon for 3*s.*

A packet of Rifleman Cucumber and a packet of Empress Melon for 4*s.*

Griffin's ALMA LETTUCE, 6*d.* per packet.

BATH COS LETTUCE, 6*d.* per packet.

Extra fine mixed HOLLYHOCK seed, saved from all named varieties, 1*s.* per packet.

Seed of the CUSTARD MARROW, true, 1*s.* per packet.

EARLY EMPRESS CELERY, the finest ever yet sent out, 1*s.* per packet.

TILEY'S SOLID WHITE CELERY, 6*d.* per packet.

DELPHINIUM FORMOSUM, 6*d.* per packet.

DIGITALIS or FOXGLOVE Seed, 20 vars., 6*d.* per packet.

A remittance must accompany all orders in cash or penny postage stamps.

EDWARD TILEY, Nurseryman, Seedsman, and Florist, 14, Abbey Church Yard, Bath.

SUPERB SEEDLING FUCHSIAS.

GEORGE SMITH in offering the following Six superb SEEDLING FUCHSIAS, begs to remark that Great Eastern is a most noble flower, and by far the largest Fuchsia ever offered. Elegantissima is, without doubt, the most elegant Fuchsia in cultivation; while Criterion for shape and substance, combining smoothness and brilliancy of colour, will prove a gem. Butterfly is also a splendid white corolla'd variety flower, as large as any of its class, of fine form, and very remarkable, it having white tips on the ends of the sepals. Solferino and Senator are also of fine quality, and must be admired when grown.

GENERAL DESCRIPTIVE CHARACTER.

BUTTERFLY.—Tube short and stout; sepals broad and well reflexed; colour bright crimson, tipped with white; corolla pure white, of good size and form. This will prove to be a very handsome kind.

CRITERION.—Tube and sepals of great substance; colour coral red; corolla violet purple, stout, and well expanded.

ELEGANTISSIMA.—Tube and sepals rich scarlet crimson; sepals broad and elegant, reflexing most gracefully; corolla violet purple, quite circular and expanded, measuring 1½ inch across, very free and fine habit.

GREAT EASTERN.—Tube and sepals bright crimson, the latter very broad and well reflexed; the corolla extra large, dark purple. A free grower and bloomer.

SENATOR.—Tube and sepals bright waxy crimson, the latter broad and well reflexed; corolla large and well expanded, rich violet. Received a First Class Certificate at the Royal Botanic Gardens, Regent's Park.

SOLFERINO.—Tube and sepals very bright; corolla rich purple, very large and extra fine. Recommended by the Horticultural Society,

*** The above are good healthy kinds to grow, to be sent out about the 20th April, 1860, in good plants, at 10*s.* 6*d.* each. A liberal discount to the Trade. All Orders from unknown Correspondents must be accompanied with Money Orders.

*** Coloured Illustrations of the above by Mr. ANDREWS, in exchange for 12 Postage Stamps.

NEW SCARLET GERANIUM VIVID.—This will be found the most brilliant deep crimson scarlet, with fine round pips, small white eye, and of fine substance; a large truss, and very conspicuous. Fine habit for exhibition or bedding. Obtained a First Class Certificate at the Royal Botanic Gardens, Regent's Park, for its superior qualities. Plants 5*s.* each.

NEW CALCEOLARIA LILLIO.—Large and intense bright yellow, good form, and habit shrubby. This is a very hardy variety, and fine either for exhibition or bedding purposes. Plants 5*s.* each.

Tollington Nursery, Hornsey Road, Islington, London, N.

DWARF-TRAINED MORELLO CHERRIES, AND DWARF-TRAINED APPLES.

WM. WOOD AND SON invite especial attention to their large stock of the above, but more particularly to the Cherries, which they feel certain are quite unsurpassed; many of the Trees have from 7 to 12 branches, most regularly and beautifully trained, and measuring 7 feet across.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

SPLENDID PLANTS OF STANDARD AND PYRAMIDAL PORTUGAL LAURELS.

WM. WOOD AND SON beg leave particularly to recommend the above to parties planting who may be desirous of producing an immediate effect in their gardens and pleasure grounds.

The Standards vary from 3 to 6 feet in height, and the diameter of the heads from 2 to 4 feet.

The Pyramidal Plants are perfect specimens, ranging from 4 to 8 feet in height. Prices will be given on application.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

ARAUCARIA IMBRICATA, very fine plants, from 1 to 2 feet.
CEDRUS DEODARA, 2 to 3 feet.
CEDRUS DEODARA ROBUSTA, a very fine variety, 1½ to 3 ft.
CUPRESSUS FASTIGIATA, 2 to 3 feet.
,, LAMBERTIANA, 3 feet.
,, MACROCARPA, 3 feet.
THUJA AUREA, the golden Arbor-vitæ, extra fine plants, from 12 to 15 inches.

WM. WOOD & SON will be happy to furnish prices of the above on application.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

TEA-SCENTED ROSES.

WM. WOOD AND SON invite attention to their very extensive and superior stock of the above, which they feel certain are unsurpassed in the Trade.

Dwarfs, from 48 pots	.. .. ..	per dozen 9*s.* to 12*s.*
,, in 6-inch or 24-pots	.. ..	,, 24*s.* to 30*s.*

Specimen Plants, in 8-inch pots, for exhibition, each, 3*s.* 6*d.* to 5*s.*

DESCRIPTIVE CATALOGUES on application.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

THE BEST NEW ROSES FOR 1860.

BENJAMIN R. CANT will be prepared to send out early in April strong healthy plants, with shoots 18 inches to 2 feet long, of the following New ROSES, at 5*s.* each. A liberal reduction will be made when 12 or more are taken. The Trade supplied at 36*s.* per dozen.

TEA.

Duc de Magenta
Madame Blachet
Rubens

BOURBON.

Victor Emmanuel

HYBRID PERPETUAL.

Adolphe Bossange
Alexander Breton
Alexandrine de Belfroy
Admiral Nelson
Belle de Bourg-la-Reine
Boccace
Buffon
Comtesse Desroys
Duchesse de Magenta
Eugène Appert
General Forey
Gloire de Santenay
Le Royal Epoux
Louis XIV.
Madame Boll
Madame Charles Crapelet
Madame Céline Touvais
Madame Eugène Verdier
Madame Louise Carique
Mademoiselle Bonnaire
Montebello
Princesse Impériale Clotilde
Triomphe de Lyon
Vainqueur de Solferino
Victoire de Magenta
Victor Verdier

A DESCRIPTIVE CATALOGUE of the above may be had on application.—St. John's Street Nursery, Colchester.

CHRYSANTHEMUMS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington, begs to inform his friends and the public that he has the finest Collection and the largest Stock of Chrysanthemums and Pompones in the world, and can supply them by the 100, 1000, or 10,000.

25 Pair of Best POMPONES, 10*s.*
20 Pair of Best Large Varieties, 10*s.*
25 Pair of Best POMPONE CUTTINGS, 5*s.*
20 Pair of Best Large Varieties, Do., 5*s.*

CATALOGUES for one stamp. To save trouble all orders to be pre-paid.

HOOPER AND CO.'S New DESCRIPTIVE PRICED CATALOGUE OF SEEDS FOR 1860, with useful cultural hints, sent free to any part of the world on application. In addition to the established favourites, it includes all the novelties of the season that are worthy of notice.

Amongst other new things H. & Co. beg to refer Amateurs and Cultivators to the PELARGONIUM SEEDS mentioned in the above, the produce of which during the past few seasons has been superb beyond description. Dried specimens of some of the flowers raised last year may be seen at their premises, which will amply testify to their great merits.

HOOPER & Co., Seedsmen, Centre Avenue, Covent Garden Market, London, W.C.

STRAWBERRY,—WIZARD OF THE NORTH (ROBERTSON'S).

DANIEL ROBERTSON continues to supply strong Plants of the above fine variety at 63*s.* per 100 or 9*s.* per dozen. For description, &c., see former advertisements. It can also be supplied genuine by the following parties in the Trade in and around London:—

Brigden, Mr. Timothy, 10, Railway Arcade, London Bridge, S.E.
Boshell, Mr. Frederick, 86, High Street, Borough, S.E.
Carter, Mr. James, & Co., 237 and 238, High Holborn, W.C.
Charlwood & Cummins, Messrs., Tavistock Row, Covent Garden, W.C.
Chartres, Mr. James, 74, King William Street, City, E.C.
Cornwell, Mr. George, Barnet, Herts.
Cuthill, Mr. James, Camberwell, S.
Dancer, Mr. Alexander, Fulham, S.W.
Denyer, Mr. William, 82, Gracechurch Street, E.C.
Dodds, Mr. G. S., Epsom Nursery, Epsom, Surrey.
Francis, Mr. E. P., Hertford.
Fraser, Messrs. J. & G., Lea Bridge Road Nurseries, N.E.
Fraser, Richardson, & Goad, 82, Bishopsgate Street, E.C.
Gibbs, G., & Co., 26, Down Street, Piccadilly, W.
Gibbs, T., & Co, 47, Half Moon Street, Piccadilly, W.
Glendinning, Mr. R., Turnham Green, W.
Henderson, Messrs., Pine-apple Place, Edgeware Road, W.
Hurst & McMullen, Messrs., 6, Leadenhall Street, E.C.
Jackson, Messrs. T., & Son, Kingston, Surrey.
Jones, Mr. Edward, Hart Street, Henley-on-Thames.
Kernan, Mr. J., 4, Great Russell Street, Covent Garden, W.C.
Kinghorn. Mr. F. R., Sheen Road, Richmond, S.W.
Lawson, Messrs. P., & Son, Great George St., Westminster, W.
Lea, Messrs. J. & C., Hammersmith, W.
Low, Messrs. Hugh, & Co., Upper Clapton, N.E.
May, Mr. Joseph, & Co., 1, Wellington Street, Strand, W.C.
McIntosh, Mr. George, Hammersmith, W.
Osborn & Sons, Messrs., Fulham, S.W.
Pamplin & Son, Lea Bridge Nursery, N.E.
Paul, Messrs. A., & Sons, Cheshunt, Herts.
Rollisson, Messrs., & Sons, Tooting, S.
Smith, Mr. J., Romford Essex.
Turner, Mr. Charles, Royal Nursery, Slough.
Veitch, Mr. James, Jun., Exotic Nursery, King's Road, Chelsea, S.W.
Watt, Mr. Alexander, Edgeware Road, W.

STANDARD RHODODENDRONS.—Hundreds of handsome specimens of all the choicest varieties, varying in colour from deepest crimson to rose and pure white, with symmetrical heads and straight stems, from 2 to 5 feet in height, can be supplied by

JOHN WATERER, American Nursery, Bagshot, Surrey.

CHOICE RHODODENDRONS, AZALEAS, AND CONIFEROUS PLANTS.—A CATALOGUE of GEORGE BAKER'S unrivalled Stock of the above may be had on application.—The American Nursery, Bagshot, Surrey.

TO THE TRADE

3,500,000 RHODODENDRONS, 2, 3, and 4 year old Seedlings, to be Sold very cheap. Also an over stock of 4000 or 5000 Double Gorse or Whins. Price sent free on application to JAMES SMITH, Darley Dale Nurseries, near Matlock.

SUPERB SPECIMEN SCARLET AND OTHER RHODODENDRONS, from 3 to 5 feet in height, and 3 to 4 feet in diameter, some of which are well furnished with bloom buds, from 3*s.* 6*d.* to 10*s.* 6*d.* each, large and very bushy, well adapted for immediate effect.—WM. WOOD & SON, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

HARDY RHODODENDRONS.

MESSRS. WATERER AND GODFREY invite attention to their Seedling RHODODENDRONS, which they are selling without names, and which they strongly recommend as being very superior in point of HABIT, FOLIAGE, COLOUR, and GENERAL HARDINESS. They are from 1½ to 2½ feet high, and as much through, and no plants can possibly be in finer health. They will be sold at very liberal prices, and purchasers can select from a stock of many thousands.

Knap Hill Nursery, near Woking, Surrey.

RHODODENDRONS.

JOHN WATERER'S CATALOGUE OF HARDY, SCARLET, and other choice RHODODENDRONS, as annually exhibited at the Royal Botanic Gardens, Regent's Park, is now published and will be forwarded on application. Faithful descriptions of all the esteemed varieties will be found detailed, with a list of the popular kinds of AZALEAS and other AMERICAN PLANTS, as well as a selection of CONIFEROUS TREES, with height and prices.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

AMERICAN PLANTS, &c.

MESSRS. WATERER AND GODFREY'S CATALOGUE for the present season is now ready, and may be had on application. It describes fully all Rhododendrons worth growing, and contains a List of Azaleas, Hardy Heaths, and other American Plants, as well as a summary of the general stock of the most extensive Nurseries in England.

The Catalogue may also be had at Messrs. MAY'S & Co., 1, Wellington Street, Strand, W.C.

Knap Hill Nursery, near Woking, Surrey.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their PRICED AND DESCRIPTIVE CATALOGUES of Exotic Orchids, Stove, Greenhouse, and Hardy Ferns, Miscellaneous Stove, Greenhouse, and Hardy Plants, Variegated and Ornamental Foliaged Plants, Conifers, Roses, Rhododendrons, Indian Azaleas, Gloxinias, Fuchsias, Geraniums, Herbaceous Plants, Fruit Trees, &c., are now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

SUPERB DOUBLE BALSAMS.

F. AND A. SMITH are now sending out SEED of their superb BALSAMS, which are unrivalled for size, form, brilliancy of colour, doubleness of flower, and habit of plant.

In collections of nine separate colours	.. .. ..	2*s.* 6*d.*
,, ,, mixed ,,	.. .. ..	2 0
,, ,, ,, ,,	half quantity..	1 0

☞ The above are genuine only in our sealed packets, and may be had of most respectable Nurserymen and Seedsmen in the United Kingdom.—Dulwich, Surrey, S.

NEW SEED CATALOGUE.

MESSRS. JOHN AND CHARLES LEE beg to inform their friends and the public that their NEW DESCRIPTIVE SEED CATALOGUE FOR 1860 may now be had post free on application.

Mr. JOHN LEE continues to devote himself especially to this important branch of their business, for which their house has been so long celebrated in the selection of SEEDS from the most genuine stocks at home and abroad.

Nursery and Seed Establishment, Hammersmith, London, W.

EXPERIENCED GARDENERS RECOMMENDED.

HENDON PARK NURSERIES, HENDON, N.W.

NEW DAHLIA—"THE CHANCELLOR."—First Class Certificate of National Floricultural Society; First Class, Brighton; First Class, Saffron Walden; First Class, Stoke Newington, &c.; First Prize as best Seedling Dahlia, Stoke Newington, 1859.

Plants of this magnificent new variety will be sent out on May 1 next. Early orders are requested. Delivered carriage free in London.

EDWARD SHENTON.

WILLIAM BARNES'S CATALOGUE FOR 1860 OF KITCHEN GARDEN, FLOWER, AND AGRICULTURAL SEEDS of the finest quality is Now Ready, and can be had post paid on application, the selection in each particular class having been carefully made, and nothing but the very best varieties introduced. All Seeds warranted genuine and true to their names.—Camden Nursery, Camberwell, S.

SUPERB DOUBLE BALSAM SEED.—In collections of 12 varieties, separate, per collection, 2*s.* 6*d.*; the same mixed, 2*s.* and 1*s.* per packet; Select HOLLYHOCK SEED, 1*s.* do.; Choice PANSY SEED, 2*s.* 6*d.* do.; 50 packets of the best FLOWER SEEDS for borders, 7*s.* 6*d.*

CATALOGUES and Seed on application to CHARLES SCHOFIELD, Nurseryman, &c., Knowsthorpe, near Leeds.

NEW ANNUALS.

JOHN GEORGE WAITE, SEED MERCHANT, 181, High Holborn, London, W.C., has great pleasure in offering SEEDS of the following new hardy Annuals:—

CLARKIA PULCHERRIMA,
SCHIZANTHUS GRANDIFLORUS OCULATUS,
HELIOPHILA CŒRULEA STRICTA.

Coloured Drawings and prices of which (to the Trade only) can be had on application.

Seed Establishment, 181, High Holborn, London, W.C.

HENRY'S PRIZE HYBRID LEEK.

DOWNIE AND LAIRD, NURSERYMEN and SEEDSMEN, 17, South Frederick Street, Edinburgh, having secured the whole stock of the above from Mr. Henry, are now sending it out in packets at 1*s.* postage free. This variety has gained upwards of 30 first prizes within the last two years, and obtained the first and second prizes at the Edinburgh Horticultural Society's Winter Show on Dec. 6, 1859, the Leeks then shown being described as extraordinary samples of culinary produce measuring 7 inches in circumference and 12 inches.

MESSRS. E. G. HENDERSON AND SON respectfully announce their SEED CATALOGUE for 1860, including comprehensive and select lists of FLOWER and VEGETABLE SEEDS, in sections of Half-hardy and Tender Annuals and Biennials, with Perennial, Herbaceous, Alpine, and Tree species, comprising numerous accurate and practically descriptive notes of the most novel and beautiful varieties for the season. Also additional papers of recent valuable evidence in favour of SPERGULA PILIFERA as an efficient substitute for Grass (without mowing), on Lawns, Terraces, &c., together with an able defence of Alpine Vegetation in its most essential conditions for surface-growth in Garden embellishment. Seed Packets, 6*d*., 1*s*., 2*s*. 6*d*., 5*s*. each. Established Tufts or Plants, 8*s*. and 16*s*. per 100.

Amongst the most valuable novelties of the season, and attached to which the greatest amount of interest and ornament will be derived, are the following (for further description see the CATALOGUE, and *Gardeners' Chronicle*, Jan. 28):—

CAMELLIA JAPONICA (FIRST QUALITY).

This importation of Camellia Seed is just received from Florence, and saved from fine varieties of double flowers, the produce of one of the best private Italian collections. They may, therefore, be expected to produce as fine varieties, and the amateur will possess an opportunity to raise superior kinds in the various colours. Plants from Seed form healthy, free, and vigorous growth, and remarkably luxuriant roots. Seedling plants surpass all others for grafting new varieties upon, and as the seed suffers injury if kept dry through the season, and the stock is not large, early application should be made.
Seed Packets, 2*s*. 6*d*.

LINUM CANDIDISSIMUM.
Seed Packets, 1*s*., 1*s*. 6*d*., 2*s*. 6*d*.

DIANTHUS LACINIATUS.
Seed Packets, 1*s*., 1*s*. 6*d*., 2*s*. 6*d*.

DIANTHUS HEDDEWIGI.
Seed Packets, 6*d*., 1*s*., 2*s*. 6*d*.

DIANTHUS HEDDEWIGI GIGANTEA (MONSTROSA).
Seed Packets, 6*d*., 1*s*., 2*s*. 6*d*.

MELVILLE'S SUPERB CRIMSON-BELTED AND AURICULA FLOWERED SWEET WILLIAM.
Seed Packets mixed, 1*s*., 1*s*. 6*d*., 2*s*. 6*d*.

CLARKIA PULCHELLA INTEGRIPETALA, AND PULCHERRIMA.
Seed Packets, 6*d*., 1*s*.

MIMULUS ROSEA PALLIDA.
Seed Packets, 1*s*.

IPOMŒA LIMBATA ELEGANTISSIMA.
Seed Packets, 1*s*.

ANAGALLIS EUGENIE AND NAPOLEON III.
Seed Packets, 1*s*.

ACROCLINUM ATROROSEUM.
Seed Packets, 1*s*.

HELIPTERUM ANTHEMOIDES.
Seed Packets, 1*s*.

NASTURTIUM TOM THUMB (YELLOW) AND "BEAUTY" (SPOTTED).
Seed Packets, 1*s*.

PORTULACCA AUREA STRIATA AND BLENSONI.
Seed Packets, 6*d*., 1*s*.

SCHIZANTHUS GRANDIFLORUS OCULATUS.
Seed Packets, 6*d*.

SPRAGUEA UMBELLATA.
Seed Packets, 1*s*.

NEW GIANT, OR LEVIATHAN SUNFLOWER.
Seed Packets, 1*s*.

NEW HYBRID SWEET PEA.
Seed Packets, 6*d*., 1*s*.

TRITOMA UVARIA.
Seed Packets, 1*s*., 2*s*. 6*d*.

AGROSTIS NEBULOSA (ELEGANT GRASS).
Seed Packets, 6*d*.

CELOSIA AUREA PYRAMIDALIS.
Seed Packets, 1*s*. 6*d*.

BOUVARDIA LONGIFLORA.
Seed Packets, 2*s*. 6*d*.

CLEMATIS LANUGINOSA.
Seed Packets, 1*s*. 6*d*., 2*s*. 6*d*.

DOUBLE YELLOW DATURA (BRUGMANSIA).
Seed Packets, 6*d*., 1*s*.

LYCHNIS HAAGEANA.
Seed Packets, 1*s*. 6*d*., 2*s*. 6*d*.

MICHAUXIA CAMPANULATA.
Seed Packets, 6*d*., 1*s*.

PENTSTEMON SPECIOSUM (TRUE).
(Sky-Blue) Seed Packets, 1*s*.

PLATYCODON GRANDIFLORUM ALBUM.
(Beautiful) Seed Packets, 1*s*.

RHODODENDRON JASMINIFLORUM EDGWORTHI.
Seed Packets, 3*s*. 6*d*.

TACSONIA MANICATA AND IGNEA.
Seed Packets, 6*d*., 1*s*., 2*s*. 6*d*.

CITRON GOURD.
(For Preserves) Seed Packets, 1*s*.

THE HUBBARD SQUASH.
Seed Packets, 1*s*.

TROPÆOLUM ELEGANS.
Seed Packets, 1*s*.
TROPÆOLUM ELEGANS VAR. STAMFORDIANUM (FINE VARIETY).
Seed Packets, 1*s*.
} Best Bedders.

SEEDS FOR GIVING A TROPICAL AND SINGULAR APPEARANCE TO THE GARDEN IN SUMMER.

THE UNDERMENTIONED IS AN EXTRACT FROM

CARTER'S GARDENERS' VADE MECUM,

AND WILL BE FOUND SUITABLE FOR THE ABOVE PURPOSE.

No.	Per packet—*s*. *d*.	
67	Abutilon esculentum 1 0	Sow in hot-bed, grow in peat and loam; when established, prune back to a few buds every year: very handsome Greenhouse Shrubs, and succeed well out of doors if planted against a south wall in summer.
68	,, floribundum .. 0 6	
69	,, pulchellum .. 1 0	
70	,, venosum-striatum 0 6	
71	,, var. Beranger .. 1 0	
72	,, var. Duc de Malakoff 1 0	
264	Bambusa sp. himalayensis 1 0	Hill Bamboo; sow in hot-bed.
392	Canna bicolor Maranta .. 0 4	This tribe is remarkable for its large, handsome foliage, and we are inclined to think has hitherto scarcely met with the amount of consideration it deserves. To large gardens in a warm situation the various species of Canna will be found invaluable adjuncts. Soak the seeds in water at 125° for about 12 hours; sow in sandy loam and peat, and place in a brisk hotbed; when well up, thin, and pot separately and keep under glass. If plants be turned out the second year in the middle of June, in a rich soil and a sheltered situation, they will combine with other plants in giving the garden a luxuriant tropical appearance; and the roots might be lifted before frost, kept in a cool stove, and planted out again the ensuing summer.
393	,, coccinea vera .. 0 3	
394	,, compacta elegantissima.. 0 6	
395	,, edulis 0 6	
396	,, Fintelmanni .. 1 0	
397	,, floribunda .. 0 3	
398	,, gigantea .. 1 0	
399	,, indica rubra .. 0 4	
400	,, ,, superba 0 6	
401	,, Kartateiniana.. 0 3	
402	,, lagunensis .. 0 6	
403	,, leptophylla .. 0 4	
404	,, limbata .. 0 5	
405	,, lutea picta .. 0 3	
406	,, mutabilis .. 0 3	
407	,, speciosa .. 0 3	
408	,, spectabilis .. 0 3	
409	,, subrualta rubra 0 6	
410	,, variabilis .. 0 3	
411	,, Sellowi .. 0 3	
412	,, Warszewiczii .. 0 3	
434	Ceanothus americanus 0 6	Sow in sandy peat in a greenhouse or cold pit in April, then prick off and pot in sandy peat and loam, and when a year or two old transfer to a wall: when well established, prune the flowering shoots back to a bud or two every spring. In the southern counties C. azureus does well thus treated, and is very beautiful.
435	,, azureus .. 0 6	
436	,, ,, grandiflorus 0 6	
437	,, dentatus .. 0 6	
438	,, Fontaineseanus 0 6	
439	,, grandiflorus roseus .. 0 6	
440	,, Hartwegi .. 0 6	
441	,, microphyllus 0 6	
442	,, ovata 0 6	
594	Cucumis acutangulus** .. 0 3	A most interesting tribe of plants, remarkable for luxuriance and rapidity of growth, which if the soil be rich is truly marvellous. Treat the same as the Cucumber, and train against a wall or trellis, or in any way that may be desired. C. flexuosus, commonly known as Snake Cucumber, is singularly interesting in its fruit.
595	,, Anguria** .. 0 3	
596	,, dipsacus** .. 0 3	
597	,, flexosus** .. 0 3	
598	,, glossulariifolius** .. 0 6	
599	,, meduliferus** 0 3	
600	,, Melo-chito** .. 0 6	
601	,, ,, fructo-rubrus** .. 0 6	
602	,, ,, maximus** 0 3	
603	,, odoratissimus** 0 3	
604	,, perennis** .. 0 3	
605	Cucurbita, grosse pelerine** 0 3	The tribe of Gourds is well-known as producing some of the most curiously-shaped of all fruits, and being like the Cucumis of extremely rapid growth, are very desirable for covering the trellis-work of arbours, &c., the varied and fantastic forms of the fruit adding a peculiar charm to the luxuriance of the foliage.
606	,, leucantha depressa** .. 0 3	
607	,, ,, longissima** 0 3	
608	,, massue** .. 0 3	
609	,, maliformis** .. 0 3	
610	,, Melo-pepo variegata** .. 0 3	
611	,, ,, maxima** .. 0 3	
612	,, platre de Corse** 0 3	
613	,, Poire à poudre** 0 3	
614	,, Siphon** .. 0 3	
631	Cyclanthera pedata 0 6	Curious bird-shaped Gourd.
806	Erythrina caffra .. 1 0	Sow in sandy peat in hot-bed. E. Crista-galli has magnificent bunches of flowers, and south of London will succeed in borders in summer.
807	,, Crista-galli .. 1 0	
808	,, laurifolia .. 1 0	
990	Holcus saccharatus . 0 3	Chinese Sugar Grass (see p. 55).

No.	Per packet—*s*. *d*.	
	Holcus continued—	African Sugar Cane or Sweet Reed; the varieties of this are very elegant and graceful in their growth, with brightly tinted and changeable foliage during the different periods of growth; they also emit a powerful and agreeable perfume. Sow about the end of April in good garden soil; or to obtain strong plants early, sow under glass and transplant.
991	,, Imphœ de Kaffir 0 3	
992	,, ,, Boom-vwa-na 0 3	
992	,, ,, E'engha .. 0 3	
993	,, ,, E-both-la .. 0 3	
995	,, ,, E-thlo-sa .. 0 3	
996	,, ,, Nee-a-za-na . 0 3	
995	,, ,, Orm-see-a-na 0 3	
998	,, ,, ,, nana .. 0 3	
999	,, ,, See-en-gla .. 0 3	
1316	Momordica Balsamina** .. 0 4	Very curious trailing plants: for culture see Cucurbita. M. elaterium is used in medicine.
1317	,, Charantia** .. 0 4	
1311	,, elaterium** .. 0 3	
1611	Ricinus africanus .. 0 4	These highly ornamental Plants have not hitherto met with the amount of consideration they deserve; for backgrounds in large gardens and centres of beds on lawns they are extremely useful. R. Obermanni and sanguineus bear bunches of fine scarlet fruit.
1612	,, africanus albus 0 4	
1613	,, lividus .. 0 4	
1614	,, Obermanni .. 0 6	
1615	,, purpureus m. 0 6	
1616	,, sanguineus .. 0 4	
1617	,, viridis .. 0 4	
1731	Solanum auriculatum 0 6	These plants may be considered as half-hardy, and are particularly ornamental in their fruit, which varies in size from a Spanish Nut to a Tomato. S. texanum has a remarkably fine fruit, as large as a Tomato. S. jasminoides is a very elegant Climber for greenhouse decoration. S. capsicastrum is also a very interesting ornamental plant for greenhouse or conservatory decoration, resembling a small Orange tree. Sow in sandy loam and peat in hotbed, and grow afterwards in good garden soil wherever it may be desirable.
1732	,, Balbisi .. 0 6	
1733	,, capsicastrum 0 6	
1734	,, citrullifolium 0 6	
1735	,, coccineum .. 0 6	
1736	,, heterotrichum 0 6	
1737	,, indicum .. 0 6	
1738	,, Jacquini .. 0 6	
1739	,, jasminoides .. 0 6	
1740	,, macranthum 0 6	
1741	,, Pseudo-capsicum.. .. 0 6	
1742	,, pyracanthum 0 6	
1743	,, sodomeum .. 0 6	
1744	,, texanum .. 0 3	
1882	Trichosanthes colubrina 0 6	True Serpent Cucumber: for culture see Cucumis.

NEW CONTINENTAL VARIETIES OF

TROPÆOLUM LOBBIANUM.

The undermentioned varieties are unsurpassed by any Collection of Tropæolums ever offered, and are handsome Ornaments for Greenhouse or Conservatory decoration, and in favoured situations in the open air; for edging, covering trellis-work, or handles of rustic baskets, or trailing from vases, their elegance of form and brilliancy of colour render them peculiarly valuable.

No.		Per packet—*s*. *d*.
2423	Chaixianum, carmine shaded	2 0
2424	Duc de Vicenza, sulphur and vermilion	1 0
2425	Duc de Luynes, yellow spotted	2 0
2426	Flammula grandiflora, carmine, streaked	1 0
2427	Florence Nightingale, scarlet and gold, mottled ..	1 0
2428	Géant des Batailles, rich carmine	1 0
2429	Glabrum variegatum, orange scarlet	1 0
2430	Gracile, sulphur and carmine	1 0
2431	Le General, orange and vermilion	1 0
2432	Garibaldi, brilliant scarlet	1 0
2433	Massillense, deep carmine	0 6
2434	Mons. Colmet, canary and dark carmine	1 0
2435	Mons. Turrel, orange and vermilion	1 0
2436	Napoleon III., vermilion, striped	1 0
2437	Perraguanum, scarlet and black	2 0
2438	,, pictum, carmine, shaded	1 0
2439	Queen Victoria, striped scarlet	1 0
2440	Roi des Noirs, nearly black	1 0
2441	Tricolor grandiflorum, carmine, spotted	1 0
2442	Tricolor superbum, carmine and purple	1 0
2443	Triomphe de Gand, fine scarlet	0 6
2444	,, de Nice, rich scarlet and gold	2 0
2445	,, du Prado, yellow, scarlet-flamed	1 0
2446	Versicolor, striped orange	1 0
2447	Victor Emanuel, brilliant carmine and gold	1 0

CHAMÆROPS HUMILIS, Dwarf Fan Palm.

Sow in heat in March in pot, and harden off for greenhouses; in the southern counties out of doors without protection; will do well out of doors anywhere if protected from frost, and will impart to the garden a tropical appearance. Price per packet, 6*d*.

SUBSTITUTES FOR THE YELLOW CALCEOLARIA as a Bedding Plant.

The following is an extract from CARTER'S GARDENERS' VADE MECUM, and will be found suitable for the purpose.

NEW DWARF BEDDING TROPÆOLUMS.

TOM THUMB, YELLOW.—A new variety in colour, particularly adapted for bedding, and also for growing in pots and ornamental vases; the flowers are well thrown up above the foliage; very dwarf and compact in habit; colour, pure yellow without any marking. The Floral Committee of the Horticultural Society speak of it as follows:—"The habit of this plant, shown by the entire plants exhibited, was quite dwarf and compact, and the flowers were of a golden yellow." It was "commended" as likely to be a useful flower-garden and bedding plant. 1*s*. per packet.

TOM THUMB, BEAUTY.—An elegant variety with Lobbanium-shaped flowers, raised by Mr. Melville, gardener to the Earl of Roseberry, Dalmeny Park, near Edinburgh; the flower is yellow, flamed and blotched with bright crimson. A plant was sent to the Editors of "The Cottage Gardener" in October, 1858, who speak of it as follows:—"A dwarf yellow, tinged with crimson; would be a good bedding plant." 1*s*. per packet.

MARIGOLD, MINIATURE DOUBLE YELLOW.—Seed saved from selected plants. 6*d*. per packet.

For further particulars see CARTER'S GARDENERS' VADE MECUM, which will be sent free on application.

JAMES CARTER & CO., 237 and 238, High Holborn, W.C.

SEED BUSINESS ESTABLISHED UPWARDS OF ONE HUNDRED YEARS.

COVENT GARDEN MARKET, LONDON, W.C.

NOW READY, AND FORWARDED FREE AND POST PAID ON APPLICATION,

BUTLER AND McCULLOCH'S

ANNUAL SPRING CATALOGUE

OF

FLOWER, TREE, SHRUB, AND VEGETABLE SEEDS,

OCCUPYING 96 8vo pages, and arranged on a new and original plan giving the Natural Order of each Genus, together with a short note indicating its character or adaptation. To each species and variety are given the colour, duration, height, and native country, and to sorts of recent introduction or of more than ordinary value are attached useful descriptive notes.

Amongst the numerous species and varieties will be found novelties of the highest merit not quoted in any other Seed List.

To the amateur and professional gardener, therefore, we doubt not this Catalogue will be found one of the most useful guides of the sort ever published, furnishing as it does the kind of information we have felt from long experience to be necessary in a work of this description.

Such Seeds as require for their maturation a warmer climate than that of England have been saved for us in Italy by that distinguished Amateur (whose Carnations, Picotees, Ipomœas, Tropæolums, Tacsonias, Acacias, and other choice Flower Seeds, have for many years given such universal satisfaction), *the* LATE *Sardinian Correspondent of Messrs. James Carter & Co.*, who has appointed us his representatives in this country. The following we quote from our SPRING CATALOGUE:—

PELARGONIUMS.

The favour with which this splendid class of plants is now being regarded by all lovers of flowers, and the great desire manifested by amateurs for raising new and improved varieties, have induced our Sardinian Correspondent to turn his attention specially to this matter. The following have, therefore, been saved by him, with the greatest care, from the sorts indicated in the following list; and as it will be seen that they consist of the very best varieties only, in each class at present in favour, new and rare kinds of the very highest merit may reasonably be expected from them.

☞ To enable our patrons to judge of the merits of the flowers they may expect to raise from the seed we offer, our Sardinian Correspondent has dried numerous specimens of Seedling Pelargoniums raised by him during the past season, and which may be seen at our establishment.

O.

Packets containing 12 superb varieties of English large-flowered Pelargoniums, viz.,

Etna	(Turner)	Lord Raglan	(Hoyle)
Empress Eugenie	(Storey)	Viola	,,
Festus	(Hoyle)	Belle of the Season	,,
Carlos	,,	Richard Benyon	,,
Governor-General	,,	Mazeppa	(Turner)]
Sanspareil	,,	Admirable	,,

Ten seeds of each variety, 7*s.* 6*d.* per packet.

P.

Packets containing 12 superb varieties of English large-flowered Pelargoniums, viz.,

Magnum	(Turner)	Minnie	(Foster)
Mr. Beck	,,	Miss Mutrie	,,
Prince of Prussia	,,	Petruchio	,,
Queen of Beauties	,,	Sprightliness	,,
Rose Celestial	,,	Pet of the Flock	(Hoyle)
Lucifer	(Fellowes)	Queen of Scarlets	,,

Ten seeds of each variety, 7*s.* 6*d.* per packet.

Q.

Packets containing 12 superb varieties of English large-flowered Pelargoniums, viz.,

Rosy Gem	(Turner)	Aulis	(Hoyle)
Imperatrice	,,	Candidate	,,
Mr. Hoyle	,,	Cynthia	,,
Phaeton	(Foster)	Topsy	,,
Etty	,,	Faunus	,,
Wonderful	(Hoyle)	Countess	,,

Ten seeds of each variety, 7*s.* 6*d.* per packet.

R.

Packets containing 12 superb varieties of French large-flowered Pelargoniums, viz.,

Octavie Demay	(Miellez)	Salamon	(Malet)
Guillaume Severegns	,,	Leon Leguay	(J. Odier)
Van Houttei	,,	Ne Plus Ultra	,,
Le Titien	,,	Comtesse de Girardin	,,
Triomphe d'Esquermes	,,	Mr. Fevrier	(Leseble)
Franklin	(Malet)	Luther	(Malet)

Ten seeds of each variety, 7*s.* 6*d.* per packet.

S.

Packets containing 12 superb varieties of French large-flowered Pelargoniums, viz.

Prince Jerome	(Doval)	Seneque	(Malet)
Le Criméen	,,	Virgilie	,,
Reine Hortense	,,	Pescatore superbum	(Miellez)
Imperatrice Eugenie	,,	Napoleon III.	,,
Beauté de Rochefort	(Leseble)	Madame Furtado	,,
Pline	(Malet)	Eugène Legereau	,,

Ten seeds of each variety, 7*s.* 6*d.* per packet.

T.

Packets containing 12 superb varieties of Fancy Pelargoniums, viz.,

Delicatum	(Ambrose)	Madame Sontag	(Ambrose)
Princess Royal	(Turner)	Cassandra	(Ayres)
Madame Rougier	,,	Clara Novello	(Turner)
Richard Cobden	(Ambrose)	Madame Ristori	(Henderson)
Conspicuum	(Ayres)	Cloth of Silver	,,
General Pelissier	(Turner)	Mrs. Turner	(Turner)

Ten seeds of each variety, 7*s.* 6*d.* per packet.

U.

Packets containing 12 superb varieties of Fancy Pelargoniums, viz.,

Evening Star	(Henderson)	Decision	(Turner)
Lady Hume Campbell	,,	King	,,
Criterion	,,	Candidum	(Malet)
Adonis	(Turner)	Evelina	,,
Beauty of Slough	,,	Jewess	(Fuller)
Crimson King	,,	Celestial	(Ayres)

Ten seeds of each variety, 7*s.* 6*d.* per packet.

X.

Packets containing 12 superb varieties of Fancy Pelargoniums, viz.,

Crimson Pet	(Turner)	Roi des Fantaisies	(Miellez)
Rosabella	,,	Roi des Pourpres	,,
Purity	,,	Sir J. Paxton	(Ayres)
Bridesmaid	,,	Sweet Lucy	(Henderson)
Acme	,,	Beauty	(Ambrose)
Jenny Ney	,,	Columbine	,,

Ten seeds of each variety, 7*s.* 6*d.* per packet.

Pelargoniums saved from the choicest-named sorts:—

	Per packet—*s.*	*d.*
Large-flowering varieties, mixed	2	6
Fancy ditto ditto	2	6
J. Odier's 4 spotted ditto ditto	2	6

N.B. All packet of Flower Seeds post paid.

SELECTIONS OF VEGETABLE SEEDS.

Containing only the most Approved and Choice sorts; proportioned to suit large or small gardens. Either of the first Three Collections sent carriage paid to any principal Railway Station in England, Scotland or Wales; also to Dublin, Cork, Limerick, Belfast, Newry, Londonderry, or any other town on the Irish Coast where there is direct Steam Communication between London, Liverpool or Bristol.

No. 1.—Complete Collection, including 20 quarts of First Early, Second Early, Medium and Late Peas of the finest sorts only, and all other seeds in proportion for one year's supply.																	63*s*	
No. 2.—Complete Collection, including 12 quarts Peas, and ditto, ditto																	42*s.*	0*d.*
No. 3	,,	,,	,,	6 quarts	,,	,,	,,										21	0
No. 4	,,	,,	,,	5 quarts	,,	,,	,,										15	6
No. 5	,,	,,	,,	7 pints	,,	,,	,,										10	6

"CAUTION."—Under this somewhat significant title has appeared in the *Gardeners' Chronicle*, and other Gardening publications, the following by no means courteous paragraph:—

"*James Carter & Co. wish to caution their customers against the published statement of a Covent Garden House, in reference to themselves in conjunction with a supposed Agency (which never existed), as such statements are totally devoid of truth.*"

It is impossible not to understand that we are the House alluded to in the paragraph just quoted, and which has evidently been put forth with the view of damaging our commercial integrity. The kind of reliance to be placed on the above statement will perhaps be best judged from the following extract from Messrs. James Carter and Co.'s own Seed Catalogue of 1857, at page 31. (See also Wholesale Catalogue, Autumn, 1858):—

"CARNATION AND PICOTEE SEEDS.

"*James Carter & Co. have again the pleasure to submit to public notice the following splendid Collection received from their Sardinian Correspondent* (an Amateur of first-rate ability). *All the Seeds produce, upon an average, from 70 to 75 per cent. of fine double flowers.*"

Again, *Messrs. J. C. & Co.* have the following in an advertisement See *Gardeners' Chronicle*, Feb. 26, 1859, page 167:—"*Having observed their name mentioned in an advertisement in connection with a late correspondent*, [J. C. & Co.] *feel it their duty to state that preferring to have their Seeds from the Continental growers direct, one of the Firm have travelled during the past autumn with that object, and purposes doing so every season: the services of the correspondent just alluded to are therefore dispensed with.*"

Surely further evidence is unnecessary to prove the intimate connexion which existed between Messrs. James Carter & Co. and our Sardinian Correspondent who for many years supplied that firm with choice Seeds of Italian growth, and we feel certain that the high eulogium passed upon that gentleman, (viz. an Amateur of first-rate ability), is perhaps the best guarantee (if other than our own were required) that we can possibly offer to the public respecting the value of the Seeds we receive from that source.

In addition to the above the following has appeared in last week's *Gardeners' Chronicle*:—

"J. C. & Co. *have no doubt that the public will fully understand the object of a House that has recently gone into the Seed Trade making use of* JAMES CARTER & CO.'s *name.*"

In answer to this statement the heading of our Advertisement will be sufficient, viz., *established upwards of* 100 *years.*

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SONS' PRICED and DESCRIPTIVE CATALOGUE for 1859, & SPRING 1860: comprising Fruit Trees of all the leading kinds; New and Selected Roses; fine varieties of American Plants; Choice and Rare Conifers; Evergreen and Deciduous Trees and Shrubs; and a fine stock of transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

CHOICE FLOWER SEEDS.—Six packets of the following select ANNUALS will be forwarded, post free, on receipt of 36 postage stamps, viz.:—Eucnide Bartoniöides, Phlox Drummondii (new crimson), Portulacca (4 vars.), Lobelia speciosa, Acroclinium roseum, and Zinnia elegans.

In answer to inquiries. J. B. intends sending out his CALCEOLARIA "YELLOW DEFIANCE" the first week in March.—JOHN BUXTON, Florist, Wandsworth Road, S.W.

NEW FUCHSIAS.

STEWART AND NEILSON, Liscard, Cheshire, will be ready to send out on the first week in April good Plants of the following:—

REV. J. TOBIN.—Tube and sepals light crimson, corolla pure, funnel shaped, well reflexed; good habit, and free bloomer. 7*s.* 6*d.*

MRS. JOYNSON.—Tube and sepals fine waxy white, corolla lilac edged with crimson, reflexed, large flower; good habit, and free bloomer. 7*s.* 6*d.*

MISS C. JONES.—Tube and sepals white, corolla rosy scarlet, large flower, well reflexed; good habit, and free bloomer. 5*s.*

T. LOCKHART, FLORIST, Fulham, London, S.W., begs to offer his finest collections of Scotch RANUNCULUS in 25, 50, or 100 sorts, at 20*s.* per 100. The best mixed at 7*s.* 6*d.* per 100.

Also LOCKHART'S Improved White Cos Lettuce, 1*s.* per packet.
Truffaut's Pyramidal Asters, 12 sorts, 3*s.* 6*d.* and 5*s.*
German Stocks, 12 sorts, 3*s.* | German Balsams, 12 sorts, 3*s.*
All or each free by post on receipt of a Post-office order payable at Fulham.

SEEDS.

J. H. ROBINSON, SEED GROWER and DEALER, Wholesale and Retail, begs to call the attention of all those interested in the cultivation of Flowers and Vegetables to his RETAIL CATALOGUE of a selection of his best varieties of SEEDS, second to none in the kingdom. Post free on application. Carriage paid on orders of 20*s.* and upwards.—Abbey Farm, Hinckley.

PLANT THIS MONTH.

CAREY TYSO, FLORIST, &c., Wallingford, Berks, offers from his unrivalled Collection healthy FLOWERING ROOTS as under, by post:—

		£	*s.*	*d.*
RANUNCULUSES—100 splendid named sorts, 40*s.* to		4	0	0
,,	100 fine mixed, 5*s.*, 8*s.*, 15*s.*, and	1	0	0
,,	25 Tyso's choice Seedlings, 25*s.* to	1	15	0
DOUBLE ANEMONES—50 fine varieties, 10*s.* 6*d.* and		0	13	0

New Treatise on RANUNCULUS, post free, for seven labels.
Do. ANEMONES for four labels.
Imported German Seeds choice named Asters, Balsams, Stocks, Larkspurs, Wallflowers, Zinnias, &c., in 1*s.* and 2*s.* 6*d.* assortments.
ROOT and SEED CATALOGUES free for one label.

GRAPE VINES FROM EYES IN POTS.

LUCOMBE, PINCE, AND CO. have now a very fine healthy stock of strong VINES of all the choicest sorts, with well ripened canes 6 to 8 feet high, propagated from eyes taken from their own experimental Vinery.

LISTS of sorts and prices may be had on application to them.
Exeter Nursery, Exeter.

The Gardeners' Chronicle.

SATURDAY, FEBRUARY 4, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY.	Feb. 6	Entomological	8 P.M.
TUESDAY,	— 7	Horticultural (Fruit Committee) St. Martin's Place	8 P.M.
WEDNESDAY,	— 8	Microscopical (Anniversary)	8 P.M.
THURSDAY,	— 9	Horticultural (Floral Committee at St. Martin's Place)	2 P.M.

IT is now about 12 years since the Horticultural world was startled by the announcement that in Sikkim, a north-eastern province of our East Indian empire, there existed new kinds of vegetation of unheard-of beauty and fragrance; that Rhododendrons of the most varied forms and magnificent proportions literally swarmed, some perched on trees and others springing up from the

soil; that Magnolias and Orchids were mingled with large flowered crimson Vacciniums, Loniceras, Viburnums, Berberries, and an endless profusion of other glorious plants both herbaceous and shrubby. The appearance of the first part of Dr. HOOKER'S superb work on Himalayan Rhododendrons, in the year 1849, dispelled all doubts as to the truth of these reports; and when in 1852 the same illustrious traveller communicated to the Horticultural Society his two elaborate papers on the "Vegetation and Climate of Sikkim," an universal eagerness was felt to procure some of these treasures for our gardens. The public wish was gratified. Thousands of young plants which had been reared at Kew from Dr. HOOKER'S seeds were dispersed, and now the Rhododendrons of Sikkim are in every Nurseryman's Catalogue of importance.

It was, however, soon discovered that our horticultural skill was at fault with the noble strangers. Some of them, indeed, produced their flowers pretty well; but nowhere was to be found the vigour displayed by other Rhododendrons for which a congenial climate had long been provided. The treatment adapted to the older Indian species did not suit those from Sikkim, of which none could be said to be really hardy, not even Rhod. ciliatum itself. We believe, indeed, that a large number of those who expected to hold Rhod. Dalhousiæ and Edgworthi as much under command as a Chinese Azalea, have abandoned the attempt in despair. And yet there has been no good reason for abandoning hope; although there was every reason for changing the method of cultivation.

The climate of that part of Sikkim which produces the finest vegetation has been carefully and minutely described by Dr. HOOKER in the papers above alluded to.* The two greatest peculiarities of it consist in its excess of dampness and monthly temperature. In the months of May, June, July, August, and September the air is always in a state of moisture approaching saturation — 122 inches of rain fall in the 12 months. In January when the thermometer falls to 16° Fahr. there is an inch and three-quarters of rain. In May the rains commence and the air begins to be still more loaded with moisture. In August, when the thermometer rises to 133° in the sun, the rainfall is nearly 29½ inches. At that time the country must be like a vapour bath. In September the sun heat advances higher (142°), but still there is nearly 16 inches of rain. And even in November, when the rains become European in quantity, the country is still so soaked that the hygrometer indicates 90° of saturation. The problem then to solve is how this sort of climate can be imitated. If we are to keep the atmosphere of an ordinary greenhouse like Sikkim from May to November, we must shut it up close; for to admit the natural air is to destroy humidity. If we exclude air the plants become drawn and weak, and are pretty sure to mildew and rot. There is the difficulty, but we think we can say that it is now removed.

In the beginning of last year a very eminent and scientific amateur in one of our more northern counties, finding it hopeless to expect success with Sikkim plants in the open air resolved to build a house expressly for their reception. Upon consulting a gentleman supposed to be well acquainted with the principles to be observed in constructing such an edifice he received advice to the following effect:—"The form of your house is immaterial, so are all the internal arrangements. The grand desideratum is to secure the freest admission of external air day and night, and at the same time to gain a power of saturating the internal air whenever you please. This can easily be effected by piercing the walls of the building with an abundance of what may be called portholes, heating those portholes whenever necessary, and at the same time so supplying them with water that the external air, in rushing over them to enter the house, shall be compelled to load itself with moisture. A contrivance called ORMSON'S ventilators, exhibited in the Garden of the Horticultural Society in the year 1858, and described in the *Gardeners' Chronicle* at the time (see p. 508 of that year) will probably answer the purpose. Do this and you must succeed. Neglect such a precaution, and you will fare no better than your neighbours."

We are now informed that the advice was acted upon, so far as principle went, although the method suggested was departed from in its details, and that the success of the experiment has exceeded all expectation, the vegetation of these children of the mist having already acquired the vigour displayed on their native slopes.

Many houses will doubtless be constructed in the course of the coming summer, and we most strongly counsel those who may propose to erect them to bear in mind the foregoing remarks. It may not be necessary to provide a Sikkim atmosphere, but this can be avoided by drawing off water from the portholes, and there will still remain the constant indraught of external air, the most precious of all the supports of vegetable life.

* *Journal of the Horticultural Society*, vol. vii.

WHEN a practical gardener describes the manner in which he treats a crop of which he is known to be a highly successful cultivator, his account always deserves attention, even though he shall tell the world nothing new. Novelty, indeed, is too often a treacherous guide. But old practices confirmed by new experience are always at least safe and trustworthy. We remember a man who wrote a book to show how some quite new methods of grafting and budding should be performed, and the results were spoken of with all the enthusiasm of a discoverer; but he said little or nothing of the old and vulgar plan of whip-grafting. Time, however, extinguished the reputation of his ingenious novelties, and proved the old plan to be upon the whole the best of all in operations to which it is applicable. In the case alluded to a skilful treatise on whip-grafting would have been far more valuable.

These remarks have been suggested by a little pamphlet on Strawberry Growing,* from the pen of our ingenious friend CUTHILL, of Camberwell celebrity. It is well known that he makes money by the method he practises, and that in doing so he is rather apt to beat his neighbours. That being so we have only to do as he does, and a like effect should follow provided he tells his tale truly and fairly. In these cases it is not only the whole truth that is wanted, but nothing but the truth. We are of opinion that Mr. CUTHILL has really acted with candour; and that his little pamphlet is a perfectly safe guide. We cannot in fairness to the author give at any length the directions he has published; but we may touch upon one or two points.

In the first place he trenches very deep. Three or four spades deep are not too much. How many amateurs do this? There is indeed a noble lord, hardly more eminent as a statesman than as a gardener and farmer, who long ago knew this. The British Queens, exhibited from the garden at * * *, were years ago the admiration of amateurs and the surprise of practical men. Nothing so fine had then been seen; nothing finer has since appeared. It was suggested that enormous quantities of strong manure must have been employed; but then, as somebody said, the plants ought to have run to leaf. Others satisfied themselves that guano was at the bottom of the secret. But we happen to know that the only special cause was very deep trenching.

Another recommendation by Mr. CUTHILL is to tread down the land very firmly after it has been trenched; and to tread the runners again after planting. Now it must be carefully observed that this, however useful in certain cases, would be fatal in others. Of this the author does not fail to warn his readers:—

"It must be borne in mind," he says, "that my ground is very light, and, therefore, the more compact it is made the better the Strawberry thrives; still, it is necessary to dig in, after trenching, a fair proportion of stable manure, for the young plants to root into; but after they are established, the manuring on the surface is best for many reasons, not only for the Strawberry, but for other crops also. This is the reason that in any light chalky, or light sandy soils, why they do not bear, if the soil before planting is not trodden down very hard, also trodden round the plants after they are planted. Let it be remembered, I am not speaking of a strong clayey soil, for in that case the less treading the better. Rain and watering will make this soil firm enough."

Of course we do not commend the logical sequence of this paragraph. It is enough that it is practically right.

Another statement, and the last we shall advert to, is the following:—

"In dressing the runners for planting out, I have discovered that in pruning the plant attached to the runner, the end nearest to the mother, or old plant, ought not to be too closely pruned. I have generally cut it off one inch from the plant. Such close pruning as this causes disease, should the weather continue wet; for the runners so closely pruned cannot perform their wonted functions: neither can they if too much water be given to them. In either case, the end, if cut off close, is, of course, inserted in the soil; the moisture gradually, but not immediately, finds its way up the vessels of the runner, or the now independent plant; for it must be borne in mind that the runner still forms the nucleus of a new plant, and if the damp or disease still goes onward till it arrives at the core of the plant, then death must follow. And to prove this, let a sickly plant be taken up—say a month or more after planting—it will be observed in all cases that this part, where the runner was cut off, forms a hollow tube, and if the centre of the plant be cut through, the cause of disease will at once be apparent. To avoid this the runners ought to be cut long enough, so that the cut end should be out of the soil when planted."

This we think requires some explanation. Surely Mr. CUTHILL does not mean to say that if a runner is wholly removed, *and nothing else is removed*, a young Strawberry plant will rot. Neither the runner, nor any part of it can protect the roots by remaining, or injure them by being removed. A runner, indeed, is nothing more than one long slender joint of the Strawberry stem lying flat on the ground because it is not stiff enough to stand upright. It would be as correct to say that in pruning a Currant bush a piece of the wood, an inch long, must be left above a bud; and that if a gardener does not do that his Currant bud will rot. What Mr. CUTHILL must mean is, that while to leave a piece of a runner does no harm, a gardener is apt when cutting it close off to cut away something more—in fact, to carry his knife into the very heart of the young plant. Of course if this is done the young plant is very likely to rot. This we venture to believe is the real meaning of the passage we have quoted. At all events it is the true explanation of the bad consequences of cutting runners close back.

Upon the whole, as we have already said, Mr. CUTHILL'S practical advice is sound, and no gardener can well fail in Strawberry growing if he follows his counsels.

* Culture of the Strawberry, as practised by the author; showing how to obtain early and large crops, off a small piece of ground. By JAMES CUTHILL. Florist Office, 30, Southampton Street, Strand, W.C. Price 1*s*.

PRESENTATION OF A ROYAL MEDAL TO MR. BENTHAM.

[The following is an extract from the address of the President at the last anniversary of the Royal Society.]

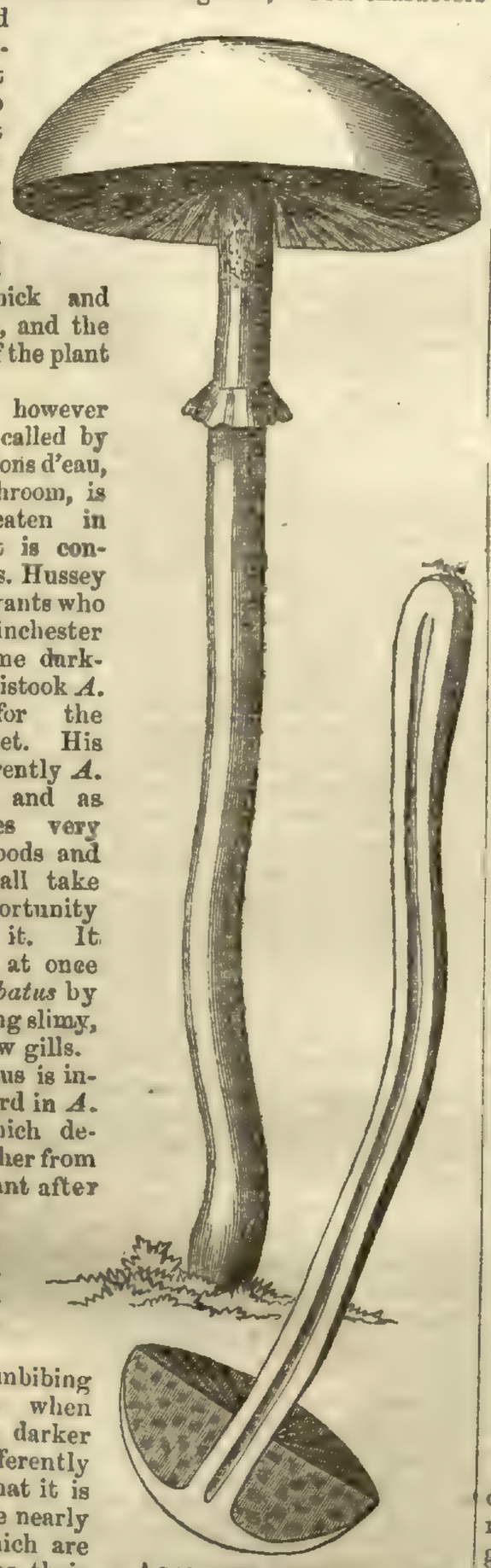
"The remarkable accurary which distinguishes all Mr. Bentham's scientific researches, the logical precision that characterises his writings, and the sound generalisations which his systematic works exhibit may be in a great measure traced to the influence of his uncle, the late celebrated legal theorist Jeremy Bentham, who directed much of his early studies, and under whose auspices he published one of his earliest works 'Outlines of a New System of Logic.' His mind was further imbued in youth with a love of Natural History, and especially Botany: and this taste was cultivated and nourished by a study of the works of the elder De Candolle. Fortunately for the cause of botany in England, Mr. Bentham has devoted himself almost exclusively to that science; and to his excellent powers of observation, close reasoning, concise writing, and indefatigable perseverance our country owes the distinction of ranking amongst its naturalists one so pre-eminent for his valuable labours in systematic botany. Amongst Mr. Bentham's numerous writings, those hold the first rank which are devoted to the three great natural orders, Leguminosæ, Labiatæ, and Scrophulariaceæ. These orders demanded a vast amount of analytic study; for they are amongst the largest and most widely distributed of the vegetable kingdom, and had been thrown into great confusion by earlier writers. They have been the subject of many treatises by Mr. Bentham, and especially of two extensive works, the contents of which have lately been embodied in the 'Systema Vegetabilium' of the De Candolles. On their first appearance these works secured for their author a European reputation, and will always rank high as models of skilful classification. It would occupy too much time to specify the very numerous monographs and papers which Mr. Bentham has communicated to various scientific societies and periodicals in this country and on the Continent, and especially to the Linnean Transactions and Journal. That 'On the Principles of Generic Nomenclature' may be noted as an example of his power of treating an apparently simple, but really abstract and difficult subject in a manner at once philosophical and practical. Mr. Bentham's most recent work, that on British Plants, is the first on the indigenous Flora of our Islands in which every species has been carefuly analysed and described from specimens procured from all parts of the globe; it is distinguished for its scientific accuracy, advanced general views, and extreme simplicity—a combination of qualities which can result only from an extensive series of exact observations, judiciously arranged and logically expressed. The President then addressed Mr. Bentham as follows:—The early volumes of the 'Philosophical Transactions' contain numerous papers relating to botany and the other sciences which are usually comprehended under the general designation of Natural History. As these sciences, but especially botany, became more and more extended, it was thought desirable that another Institution should be called into existence, which might share with the Royal Society the privilege of promoting the cultivation of them, and of communicating to the world from time to time the progress which has been made in this department of knowledge: and such was the origin of the Linnean Society in the year 1788. The Royal Society, however, does not on that account feel the less interested in this class of scientific investigations. It is accordingly with great satisfaction that the Council have awarded to you one of the Royal Medals, and that in the name of the Society I now place it in your hands, in testimony of their high appreciation of your researches, and of the respect which they have for you as a fellow-labourer in the field of science." *Proceedings of the Royal Society.*

MYCOLOGY, No. IV.

AGARICUS SEMIGLOBATUS, *Batsch.*—This is reckoned one of the most poisonous of the Mushroom tribe, but however strong suspicion may be against it, there is no positive evidence to bring it in guilty of death. The truth is that several other species were confounded with

t by Sowerby, and those which were especially indicated as injurious or fatal were clearly not the true plant. *A callosus* is the only species amongst them which can be satisfactorily pointed out as certainly deleterious, the peculiar kind to which Sowerby gave the name of *Agaricus virosus* or the poisonous Mushroom, being doubtful from the incompleteness of his figure, and the want of references to connect the gills which he figures with their proper species.

It is however probable that it deserves its bad character and certainly should be avoided, together with most of the small dark-seeded Agarics, till its characters are ascertained by positive experiment. It is difficult to conceive how it can ever be confounded with the true Champignon, as the gills in that species are thick and cream-coloured, and the whole aspect of the plant different.



AGARICUS SEMIGLOBATUS.
Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

It appears however that a species called by Paulet Mousserons d'eau, or Water Mushroom, is occasionally eaten in France, and it is conjectured by Mrs. Hussey that some emigrants who died near Winchester from eating some dark-gilled Agaric, mistook *A. semiglobatus* for the plant of Paulet. His species is apparently *A. appendiculatus*, and as it is sometimes very abundant in woods and gardens, we shall take some future opportunity of illustrating it. It may be known at once from *A. semiglobatus* by the head not being slimy, and by its narrow gills.

Paulet's Fungus is included by Bulliard in *A. hydrophilus*, which derives its name either from its being abundant after long continued rains, or from the faculty which it has, in common however with many other species, of imbibing water, so that when moist it is of a darker hue, and differently coloured from what it is when dry. Some nearly allied species which are brown at first, as their moisture evaporates become nearly white, so as to be almost incapable of recognition, were it not for their dark gills.

A. semiglobatus is extremely common on horsedung in rich pastures. The cap is about 1½ inch across, nearly hemispherical, of a dull brownish yellow, and clothed in moist weather with a slimy coat. The stem is straight, slimy like the pileus, but generally paler, with a slender tubular cavity in the centre, and furnished with a narrow distinct ring, above which it is white, though often soiled with the black spores. The gills are very broad, attached to the stem with their edge nearly horizontal, and mottled on their surface with black spots.

Several other species grow on horsedung, but the only one which can be easily confounded with this is *A. stercorarius*, which is readily distinguished by the stem containing a distinct solid pith.

A. semiglobatus as peculiarly addicted to horsedung is one of those species which occasionally make their appearance in the Mushroom bed. There is however no chance of its being gathered for the common Mushroom, as its appearance is so totally different. *M. J. B.*

THE WALTONIAN CASE.

AT the request of certain readers of the *Gardeners' Chronicle* I gave a description of the Waltonian case in these columns on the 23d of April last. The request for information on the subject arose out of a note which I sent on the successful application of the heat of a candle in plant propagation, the candle being merely a cleanly substitute for the oil-lamp which had previously been used. As the propagating season was then very far advanced, perhaps the communication was not so generally useful as it would have been had it appeared earlier. My experiments with candles during several weeks were continued, and the loss of the season in regard to the publication of the result was unavoidable.

I have just received from the maker a case made on the new pattern to carry out my plan of heating, and it seems only fair that I should submit sketches of it to your readers. To avoid repetition I refer to the *Gardeners' Chronicle*, 1859, page 360, where the case is described at length, and its several measurements given in detail. Fig. 1 is a view of the apparatus as it appears when in use. Its dimensions are as follows:—From end to end inside 34 inches; from front to back

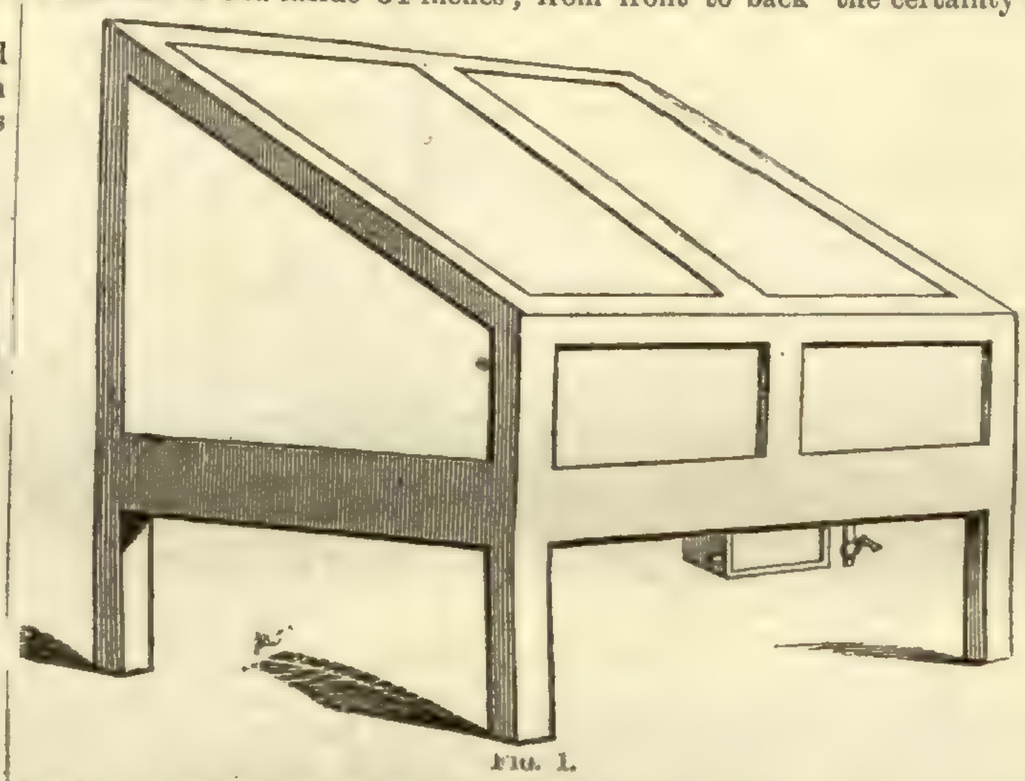


FIG. 1.

inside 17 inches; superficial area 568 square inches. Height inside at front, 10 inches; at back, 13½ inches. The bottom of the frame externally is 7 inches from the ground, and its appearance is particularly neat and compact. As originally made there was a tin box suspended in the front for an oil lamp. That is now superseded by a box with a bottom of perforated zinc, and a sliding glass in front. In this box is placed for heating purposes a candle made in the fashion of a Child's night light, but with more substance for continuous burning and supply of heat. The perforated zinc admits air to keep the candle burning, the glass enables the cultivator to see if the candle is burning properly. To set the case to work the top lights are lifted up, an inch depth of silver sand is laid down and wetted; the boiler is filled by pouring water into it through a tube in the centre, and the candle is lighted. Pots of cuttings, seeds, &c., may then be crammed together on the bed of sand to enjoy a moist bottom-heat, and the amount of air to be given is regulated by the top lights.

Let us now take the case to pieces. When the lights are removed, and of course the pots also, the tray on which sand is spread may be lifted out by means of a

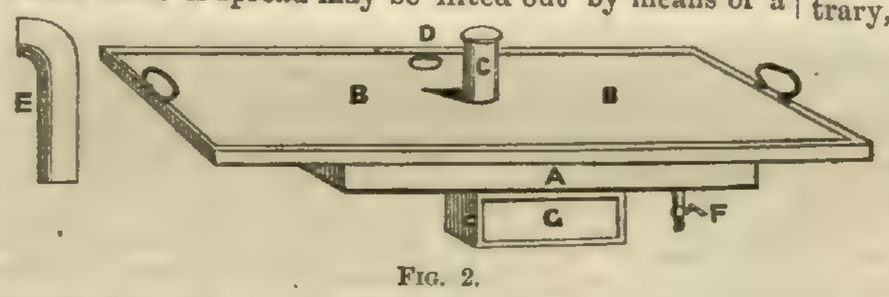


FIG. 2.

couple of handles for the purpose, and its appearance is represented in Fig. 2, in which A is the boiler which gives heat to the tray B B on which the pots stand; C is the tube by which the boiler is filled. The tube has a stopper which can be removed so as to fill the case with steam, if the cultivator chooses to give the cuttings a vapour bath. If the sand is kept regularly wetted there is no occasion for its removal, except to fill up the boiler, which holds about 2 quarts. The boiler is heated by the passage of the hot air from the lamp passing through it, and the hot air escapes (not very hot by the bye) at D, to which, when at work, a small pipe flue E is fixed, so as to carry the products of combustion out of the case. It makes so little smoke (even with the lamp) that a piece of new board which I placed against the end of the pipe flue was but barely coloured after having received the smoke upon its clean surface for three months continuously. The boiler is emptied by means of a stop-cock, F, which is an improvement for which I believe we are indebted to the maker, Mr. West. There is no occasion to use this stop-cock unless from neglect in changing the candle the heat has declined, when the cold water can be drawn off and a fresh supply of hot water takes its place, and of course

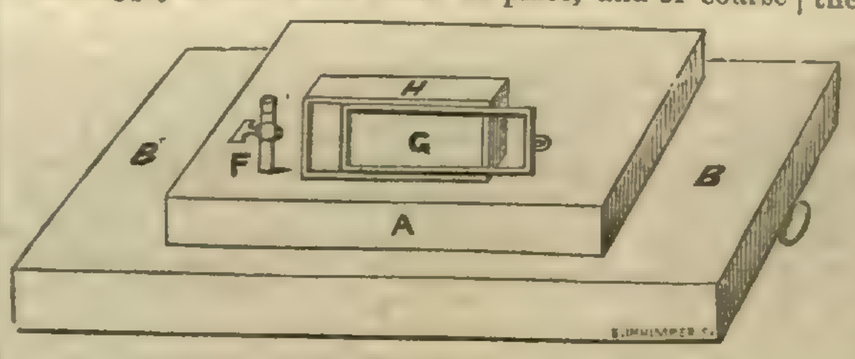


FIG. 3.

the tap is useful when the case is put away when its work for the season is over. The box, G, is that already described as the receptacle of the candle, and thus the circle of appliances is completed.

Those who have never seen a Waltonian case will perhaps be still further assisted to form a correct conception of its construction and use if we turn the tray upside down, as in Fig. 3. Here, as before, A is the boiler, B B the under side of the tray in which the pots stand, F the stop-cock, G the glass front, and H perforated bottom of the candle-box.

I must repeat what I said in the paper already referred to. If I go into the question of the value of this invention for propagating limited quantities of stove and greenhouse plants, its value is increased by the certainty and cleanliness of the source of heat, for it required much experience to trim the lamp, so as to burn 12 or 24 hours (as it will do), and besides the grease and the blacks together made it most unfit for a lady's fingers. Now the need of experience in lamp trimming is at an end, and if the possessor of the case is away from home the most obtuse servant may be trusted to insert a fresh candle at a given hour. One word more to certain folks who have lately made inquiries about this case. It will start seeds and cuttings of every kind of stove and greenhouse plant in common cultivation, but it is neither a Melon pit nor a Fern stove, nor will it, as many seem to imagine, serve as a house in which to grow plants on after they are rooted, and, *ceteris paribus*, they cannot be bloomed or fruited in it. It is a propagating case and nothing more, and in that sense the best contrivance ever devised for those who manage their own gardens and who want only a few hundred plants for summer decoration, and to whom the chief delight is to raise stock for themselves. *Shirley Hibberd, Stoke Newington.*

AMERICAN APPLES AND OTHER FRUITS.

THERE is perhaps no quarter of the world where the Apple is cultivated that produces such fine and perfect fruit as a portion of the United States. It is strange that such a very old inhabitant of the Old World should have been so perfectly acclimatised in the New, and to have such a tendency to "make itself good;" for from our European sorts, many doubtless of inferior quality when introduced about 200 years ago, have sprung numbers of the finest sorts of Apples in the known world. The great peculiarity in American Apples is their tender, juicy, delicate, half-melting flesh, rich, sugary, and most agreeable, without, however, any decided aroma, at least as far as I have tasted, like our Ribston Pippin when grown in Kent or Sussex, and some other English varieties. These have perhaps more piquancy, but their flesh is hard and breaking, requiring, like the Cornish Gilliflower, iron teeth and a stomach of leather. American Apples are, on the contrary, "old men's fruit," and a large New Town Pippin can be eaten with as much comfort as a melting Pear. I can imagine no Apple more agreeable than the Mother, the Northern Spy, the Melon, and the Reinette du Canada. The American kitchen Apples are remarkable for their crisp, juicy flesh, neither too sweet nor too acid, but of the exact quality for pies and puddings. The Rhode Island Greening and the Baldwin are two excellent examples of this class of Apple.

There is also a class of Apples quite peculiar to the States, viz., Sweet Apples or Pig-feeding Apples. These have scarcely any trace of acid even when grown in England, but are of a luscious, rather dull, sugary flavour. Pigs thrive upon them, and they are grown largely by the farmers for autumn feeding. The Jersey Sweeting, Tolman's Sweeting, Ramsdell's Sweeting, and hundreds of seedling sweet Apples are planted to "please the pigs." But few of the American Apples can be grown to advantage in England. Cobbett, when he imported his American Locust and Apple trees, used to obtain some specimens to sell his trees by from trees trained to a south-west wall at Kensington, and most magnificent Apples they were, quite enough to make his admirers American Apple-tree mad as they then were. This, however, is sufficient to remind us that American Apples should be cultivated in a warm English climate like the neighbourhood of London, and be grown either trained to walls or in some very warm situation. The peculiarity of the American climate in bringing Apples to such high perfection is very remarkable. The neighbourhood of Rochester in the western part of the State of New York is a great fruit-growing district. It is also a great tree manufacturing place, for it is said that there are 10,000 acres under nursery culture just around Rochester. Well, Rochester is just about in the latitude of Toulouse in France, the most favourable fruit-growing district in Europe, but how inferior are the Apples of France to those of America; and yet the summer heat of most seasons at Toulouse would not exceed that of Rochester. But we can go further north in Europe, and take Belgium and Holland—the latter, one would think, approaches to the American shores of Lake Ontario in a moist and warm summer temperature. How dry and poor are nearly all their Apples. America must therefore take rank as a first-rate Apple country, which, by the way, is the only fruit that grows to perfection, except the Peach when properly cultivated. Pears are cultivated very largely in the United States, but the cultivation is always in a state of deadly warfare with a host of enemies; "frost blight," "insect blight,"

"frozen sap blight," "fire blight" (*vide* Downing), would so alarm English gardeners that they would cease to cultivate the trees. Some good Pears are undoubtedly grown in America, but they do not generally approach in size and quality to the same kinds grown in Europe. We have received one very high flavoured Pear from the States, the Seckel; its flavour, however, in the opinion of many is too musky, and it is too small. There are between 100 and 200 "American" Pears, *i. e.*, sorts that have been raised from seed in America now offered for sale by the American nurserymen. Some of them may be better adapted to the climate than European sorts, and so be gradually improved. A few new kinds offered last autumn at Boston are highly eulogised; these have been raised from seed by a Mr. Dana—one is called "America," and another "Hovey;" their price would lead one to think they are dear if not good, as they are 5 dollars or 21*s.* each.

It is most remarkable to find how ill-suited an English climate is to American Pears (except the Seckel). I have eaten of the following kinds, all of which have a good character in their own country, and have found all inferior, and, in some instances, what little boys call "nasty:"—Buffum, Oswego Beurré, Oswego Incomparable, Thingsessing, Howell, Sheldon, Bloodgood, Dearborn's Seedling, Brandywine, Swan's Orange, Osbund's Summer Lawrence and Andrews. It is remarkable that although the English climate is not nearly so bright as that of America and France, it should produce the finest and richest Pears known. In the latter country some specimens are occasionally grown larger than the same kinds in England, yet they are never so rich in flavour. There are three kinds of Pears peculiar to Great Britain which I fully believe are unmatched in Europe or in America, viz., Gansel's Bergamot, grown against a wall in the North of England; the Chaumontel grown in Jersey; and Knight's Monarch cultivated as a wall Pear.

The Americans might excel in Peach culture if more attention were given to the trees, which are too often neglected, and orchards planted with trees raised from Peach stones in "pits," as they call them, which give fruit only fit for the pigs. Some fine varieties of early and late Peaches have been raised in America, among which the Early York, Early Tillotson, and the late Peaches, such as Crawford's Late and Ward's Late are worthy of culture. Our mid-season Peaches, such as Grosse Mignonne, Noblesse, Galande, and Royal George are not excelled, perhaps scarcely equalled, by the American sorts, yet there are upwards of 100 varieties of Peaches of American origin. The Peach cultivator has some difficulties to contend with unknown in Europe. The "borer," as with his Apple trees, perforates the bark of the stem just below the surface of the earth, girdles it, and kills the tree. The disease called the "yellows" also destroys annually thousands of trees. With this disease the leaves turn yellow, the young shoots become feeble, and the tree dies in a year or two. This fatal disease is brought on by budding the cultivated sorts on seedling Peach trees. It has shown itself in this country on Peach trees budded on seedlings, not only in trees from America but also in trees from France. When the Peach is budded or grafted on the Plum stock it is never attacked with this terrible and killing malady, for which there seems no cure. The severe winters of America, when the thermometer goes down to 20° below zero, often destroy the blossom buds of Peach trees (this occurred last winter, 1858-9), and the spring frosts the blossoms as in Europe, so that America is not a Paradise for the Peach tree, as some people imagine.

The Plum cannot be cultivated in the United States with any great success, owing to the "knots or black gum," a killing disease, and the "curculio or Plum weevil;" this perforates the fruit when it is very young, and the grub eats its way to the stone. Towards the month of July, when the Plums are nearly full grown, they all drop from the trees and the crop is lost. Apricots and Nectarines suffer in the same way from this pest, for which no cure has yet been found that can be employed to any extent. European Grapes cannot be cultivated in the States out of doors, as they are liable to the mildew, which attacks the fruit in a very young state and destroys it. Vineries are now, however, general, and fine Grapes are grown in them. The Americans have a very large number of varieties of their native Grape, the Fox Grape (Vitis labrusca). In a catalogue recently issued by an American nurseryman well known in Europe upwards of 100 varieties are described, with wonderful qualities attributed to some of them. These American Grapes are generally distasteful to Europeans from their peculiar foxy smell and hard pulp in the centre of the berry.

Strawberries are grown to an enormous extent in the "States," and some of the American sorts ("their name is legion") are highly praised. The best and the most popular variety is perhaps Hovey's Seedling. In England, however, it is not to be compared with the British Queen; it is without that fine aroma so peculiar to that queen of Strawberries, which I have reason to think is never eaten in perfection out of England. To one American Strawberry (the Peabody) is attached a rather amusing anecdote. Mr. Peabody raised this from seed a few years ago, and attached so much importance to it, or rather made such a great fuss about it, that the Government made a grant of 6000 dollars to "assist in its distribution." It was proved both here and in America to be a variety of the old Scarlet Strawberry, not large, with a very long neck, and a most unfruitful habit—in short, worthless.

The Americans are fond of Blackberries, and have two or three kinds that are very popular. The Lawton or New Rochelle seem to be the favourite; this succeeds pretty well in England, and produces fruit of the same size, but rather more conical than our hedge Blackberry; it ripens a month earlier, but has no peculiarity in flavour, which is sweet and dull, quite calculated to please children, who in this country are our principal Blackberry eaters.

It will, I think, be seen from this slight sketch of American fruit growing, that, although we grumble about our spring frosts and cloudy summers, we are able to grow the finest fruit in the world with fewer drawbacks on our fruit culture than our cousins over the water meet with, who are apt to boast of their country, their climate, and their productions. What would our gardeners say if they were prevented by the defects of the climate from cultivating with success such charming fruits as the Nectarine, the Apricot, and the Plum? Still with all the hindrances to Plum culture which the American fruit growers experience, they have sent us some really good varieties, among which the Jefferson takes the first rank.

There cannot perhaps be found in any other part of the world so trying a climate for the gardener and nurseryman as the United States, with the exception of the South. The severe winters, often commencing in November and continuing till the end of March, the thermometer descending to 20° below zero, and freezing the earth so deeply as to heave up and destroy trees not well established, with the scorching heat and drought of summer, are enough to put the nurserymen and gardeners to their wits' end, and ought to make us "Britishers" well contented with our comparatively slow climate, *Pyrus*.

Home Correspondence.

Agaricus cepæstipes.—With reference to the article in your columns of the 21st Jan., I beg to say that this Agaric has twice appeared on a bed of leaves, under glass, and frequently watered with warm water. As it is not found in England in the open air, and as no foreign mould could possibly have fallen on the leaves, I considered the fact worthy of being recorded, and communicated it to your Paper at the time. From its affinity to A. procerus, I inferred that this Fungus was edible, and made the trial on a small scale. It proved well tasted, and produced no bad effects. *G. S.*

Rainfall at Stoneleigh Abbey, Warwickshire, 1859.—

	Days.	Inches.
January	9	0.70
February	14	1.55
March	13	1.95
April	17	2.12
May	8	2.13
June	11	2.45
July	8	2.95
August	9	2.15
September	16	3.00
October	12	2.51
November	10	2.26
December	10	1.74
	137	25.51

T. B.

Mushroom Growing.—The artificial cultivation of Mushrooms is now so well understood and practised that perhaps little more can be advanced on the subject. In my own case I merely state a mode of growing them in the spring and summer months, which I have found to answer better than any way I have yet tried. In a large Vinery here used for the growth of the Black Damascus Grape, there is a long pit or bed in the middle of the inside of the house. This bed is about 3 feet in depth, by the same in width, and is filled with well prepared horse droppings in February or beginning of March to heat the roots of the Vines, and to make a moist ammoniacal atmosphere for the buds breaking. About the beginning of April when the bed is no longer wanted for this purpose, I add a little more fresh droppings to the surface of the bed and spawn it in the usual way. Some good fresh turfy soil of a loamy nature is then put on the surface, and the whole beaten as hard as possible with a wooden mallet. Wooden shutters or boards are then put over the bed, the surface of which is at least 6 inches below the boards. The young Mushrooms usually appear in the beginning of May, and the beds continue in full bearing all through that month and June and July. The Mushrooms from this bed are not like the half-starved buttons grown in regular Mushroom houses, but large dark brown fellows from 3 to 4 inches in diameter, and as full of juice as field Mushrooms. At one of the horticultural shows at Chiswick, I remember having seen a fine large dish of forced Mushrooms sent by Mr. Ingram from Frogmore, which were of the same colour and substance. They were stuck into Moss in a shallow basket, which showed them off better than the usual modes tried at exhibitions. I attribute the large size and succulence of the Mushrooms grown in this way to the deepness and quantity of the fermenting materials in the bed, and the additional moisture in the air of a large Vinery; for the boards are frequently taken off the bed when the Vines are syringed or watered at the roots. When there is room in the inside of Vineries or Peachhouses for a bed for using fermenting materials, no better plan can be devised for making Vines and Peaches break strongly, and the beds can afterwards be used for growing Mushrooms. The only precaution is when the fruit begins to ripen to clear all the beds of the fermenting materials, and cover them up closely with the shutters or boards to prevent dampness. In August or September I usually clear the bed here clean out, and the Black Damascus Grapes keep without damping or shrivelling till the end of November. *William Tillery, Welbeck.*

The Manetti Rose Stock.—I observe an article in your columns on this stock. The writer, who says he always feels interested in it, tells us a good deal of what others have done and have not done with it; but he relates nothing of his own experience in the matter. Now I have grown it from the first; and, on my land, which is a good deep alluvial soil on the banks of the Thames (not clay), I have found it perfectly worthless. With regard to Teas I do not think they could even be made to live on it above a year or two. To give you a case. Last year I had a lot of new Roses of one of our English nurserymen, all on the Manetti; and I also had some from France on the Dog Rose. From the latter I procured a goodly number of buds for working, while from the former I got none at all. The Manetti stocks were planted under favourable circumstances, as they were turned out of pots and had good balls to them, while the Dog Roses had nothing but naked roots. This refers to those planted in the open ground only, for from two or three plants that I potted up and grew in a pit I did get some buds fit for working, and I find this latter is the only mode in which Manetti can be grown here with any chance of success. Let me record another instance. A gentleman who has a garden situated on the top of a hill, consisting of good strong land resting on chalk, last season wished to form a Rosarium, and the land having been prepared in a manner recommended by a celebrated Rose "dealer"—who also supplied the plants—namely, by trenching 3 feet deep and well mixing with stable manure and burnt earth, it was planted partly with standards on the Dog Rose and partly with dwarfs. The standards grew and flowered finely, the dwarfs also grew but did not flower at all. "There," said my friend the gardener, "look how well the dwarfs have done, and although they have not flowered, they have made so much wood that they must necessarily do so next year." Observing that they looked much alike in growth I examined them, and found they were worked on the Manetti, which had in every instance pushed forth from two to five strong shoots which had quite starved the "gentle scion" that had, as the poet says, been married to this "wildest stock," so that I don't think a dozen good buds could have been procured from the whole lot of them. In a few words, the results in this case were thus: a certain number of Roses worked on the Dog Rose proved successful; a like number on the Manetti ended in disappointment. With respect to the article above alluded to, the writer's remarks may be summed up in a few words, namely, that the Manetti is a good stock for "break-heart, break-neck hills," with soil consisting of "a stratum of gravel laid bare, with stones in it innumerable as big as your foot;" while on "rich Rose clays with a deep staple the Dog Rose is the best of all." Of the former position I can say nothing. in the latter statement I think all will agree. As to whether Mr. W. Paul and the Manetti are enemies I know nothing; but I think the writer's arguments on this head are very illogical; inasmuch as Mr. Rivers has long ago abandoned his first position with respect to the matter in hand, by saying that it, *i.e.* the Manetti, should be double worked, and that to ensure successful cultivation it requires to be inserted in the soil above the junction of the bud with the stock. And also because Mr. W. Paul is not its opponent—in a practical sense at least, as he very likely sells as many plants worked on it as Mr. Francis does; at any rate to my knowledge he sells a good many: I should think the cause of his "continued denunciation" is derived from the same source as mine, viz., experience, and that our opinions on the matter are the same. *R. L., Taplow.*

Salt for Roads.—A useful hint was dropped by your correspondent "D," when describing Clumber Park, &c., in April last. I have to thank him for the same, and also to acknowledge the courtesy of the forester, Mr. Spary, in giving fuller particulars by letter. I refer to the use of salt for the eradication of weeds on roads, walks, or drives. Having applied it pretty freely last summer, over some half dozen miles, upon which we used to bestow most labour in hand weeding, I would add my testimony to its efficacy. It is alike simple in application, and thorough in effect. And in a pitched stableyard, we have also had equally beneficial results. Let me quote Mr. Spary's own words as to its application:—"I prefer applying the salt (clean, dry, agricultural salt, costing here 18*s.* per ton), by the hand. So the stronger the weeds, the stronger the application. I choose a hot day, in preference to wet or stormy weather. By going over the roads twice a year, say in May or September, the weeds never get very strong; and after much experience I find no plan to equal it. By this way of cleaning roads, you do not disturb a single stone; and the harder your roads the fewer your weeds—and of course so much better travelling." I hope to use it more extensively next spring and summer; and have found Reeves's dry manure distributor a most efficient implement in its application. *T. B., Stoneleigh Abbey.*

Societies.

HORTICULTURAL: *Jan.* 31.—A Special General Meeting of this Society was held this day, at the house of the Society of Arts, John Street, Adelphi, the Rev. L. Vernon Harcourt, V.P., in the chair.

The Chairman having announced that her Majesty, the Patron of the Society, had been graciously pleased to command the following members of the Royal family to be elected for life, viz., H.R.H. the Prince of Wales, the Princess Frederic William of Prussia, H.R.H. the Princess Alice, H.R.H. the Prince Alfred, H.R H. the Princess Helena, H.R.H the Princess Louisa, H.R.H the Prince Arthur, H.R.H. the Prince Leopold, H.R.H. the Princess Beatrice; and also that their Royal Highnesses the Duchess of Kent, the Duchess of Cambridge, the Princess Mary had authorised the Society to elect them as life members—these Royal personages were immediately elected by acclamation, the ordinary method of ballot being dispensed with.

The Council were then instructed to convey to her Majesty the "humble thanks of the Society for the munificent support which the Queen has once more deigned to grant in furtherance of the formation of a new Horticultural Garden at Kensington Gore."

The following Fellows were balloted for and duly elected, viz.:—The Marquis of Ailesbury, the Marchioness of Ailesbury, Mrs. J. Aldridge, J. Alexander, Esq.; H. B. Alexander, Esq.; Mrs. Alexander, Lieut.-Col. Andrews, E. L. Ames, Esq.; Dr. Anstie, T. Ashton, Esq.; Col. H. Baillie, T. P. Ball, Esq.; Mrs. H. Barnett, Mrs. W. Barnet, J. Bell, Esq.; A. Birch, Esq.; Mrs. Brough, R. K. Bowley, Esq.; Rev. Dr. J. Bonus, R. W. Buckley, Esq; E. H. Bunbury, Esq.; E. R. Butler, Esq.; the Rev. F. C. Cass, M.A.; Lord Cochrane, Lady Cochrane, G. E. Cochrane, Esq.; J. Cockle, Esq., M.D.; W. Coulson, Esq., Q.C.; Mrs. Crockford, Sir W. Cubitt, Lady Cubitt, F. W. Dolman, Esq.; Miss S. Scott Douglas, Mrs. N. Elias, the Earl of Ellesmere, the Countess of Ellesmere, Lord C. Fitzroy, Admiral R. Fitzroy, R. Frankum, Esq.; T. F. Gibson, Esq.; G. Godwin, Esq., F.R.S.; J. Gott, Esq.; W. Gott, Esq.; W. E. Gott, Esq.; W. W. Maitland, Esq.; T. J. Kinnear, Esq.; R. Nairne, Esq., M.D.; the Earl Granville, K.G., Lord President of the Council; the Countess Granville, G. Granville Leveson Gower, Esq.; G. A. Stewart, Esq.; Sir J. Dalberg Acton, Bart.; Mrs. Grey, Miss C. Graham, Miss C. Hammersley, Mrs. J. P. Harrison, Mrs. B. Harvey, B. C. Harvey, Esq.; Capt. J. K. Smith, J. Nichols, Esq.; Baron Hochschild, Mrs. J. Hook, J. Hornblower, Esq.; J. Irving, Esq.; G. W. Johnson, Esq.; R. Kell, Esq.; Mrs. R. Kell, the Hon. A. Kinnaird, M.P.; Miss L. Lance, H. Windham, Esq.; Dr. R. M. Lawrence, W. Leaf, Esq., Jun.; C. J. Leaf, Esq.; Mrs. Lewis, Right Hon. R. Lowe, M.P.; Mrs. J. Lumsden, H. MacChlery, Esq.; W. H. McQueen, Esq.; S. E. Magan, Esq.; the Hon. F. Maude, G. Moffatt, Esq.; J. T. Mould, Esq.; Sir R. I. Murchison, his Grace the Duke of Newcastle, J. N. Ouvry-North, Esq.; J. E. Norton, Esq.; J. G. Nutting, Esq.; Miss S. Phelps, Mrs. B. S. Phillips, W. Potts, Esq.; E. Potts, Esq.; T. W. Ramsey, Esq.; T. Salt, Esq., M.P.; Mrs. Salt, W. H. Salt, Esq.; T. G. Sambrooke, Esq.; Mrs. M. Sladen, E. Stuart, Esq.; Vice-Chancellor S. J. Stuart, Mrs. W. Stuart, Major W. Stuart, M.P.; C. P. Stuart, Esq.; C. E. Stuart, Esq.; Mrs. A. Taylor, J. Thomson, Esq.; Lady U. Thynne, Sir T. Troubridge, Bart.; Rev. J. Walker, H. Walker, Esq.; Lieut.-General W. L. Walton, Miss Walton, Miss R. Walton, General W. Watkins, Prof. Westmacott, R.A.; J. H. Wilson, Esq.; J. H. Winch, Esq.; W. R. Winch, Esq.; G. Wood, Esq.; Mrs. Wood, Miss Wood, and M. Wood.

The Chairman announced that the next meeting for the election of Fellows would take place on Tuesday, Feb. 28, at 1 P.M.

LINNEAN: *Jan.* 19.—Prof. Bell, President, in the chair. C. R. Bree, Esq., M.D.; G. McLeay, Esq.; H. Parfitt, Esq., M.D.; S. Neville Ward, Esq.; and Tuffen West, Esq., were elected Fellows. The following papers were read:—1. "Catalogue of the Dipterous Insects collected in Amboyna, by Mr. A. R. Wallace, with descriptions of the new species," by Francis Walker, Esq.—2. "A list of plants observed or collected at Mogador and its environs," by the Rev. R. T. Lowe, M.A. The notes which formed the substance of this paper were made during a short visit of about a week in April, 1859. The author first pointed out that besides the interest belonging to a place so little visited, and since the time of Broussonet so wholly unexplored by any naturalist, a peculiar importance attached to a correct appreciation of the vegetable conditions of this part of the great African continent. Its intermediate position between the well searched shores of Algeria in a northerly, and of Sierra Leone in the opposite direction, no less than its proximity in a nearly easterly direction to Madeira, and in a northeasterly to the two easternmost islands of the Canarian group, marked it as a spot possessing special claims on the attention of naturalists. The first impression made on the eye of the traveller, arriving fresh from the Canaries or Madeira, Mr. Lowe stated to be something quite peculiar. The aspect of the vegetation is completely European, *i.e.*, Spanish-European. There is not a Palm, a Banana, or a Cactus to be seen in the immediate vicinity of the sea. The shrubby Canarian Euphorbiaceæ are equally wanting with the Madeiran shrubby Compositæ, Labiatæ, and Cruciferæ, or the Porto-Santan Salsolaceæ. The Arabian Peganum Harmala supersedes them all on the sea shore; and the general aspect is as remote from the luxuriant tropical richness of the neighbourhood of Funchal, and indeed of the sea-cliffs generally in Madeira, as it is from the rugged stern dull gray and black Euphorbia-clad rocks and cliffs of Canarian coast scenery. The entire absence of trees near the coast is a feature common to Mogador and all the Canary Islands. The low sandy hills of uniform height which at the distance of a mile or two skirt the flat belt of lower land bordering the sea and stretching parallel therewith north and south, far as the eye can reach, are clothed, at first sparingly or partially, then more closely, with low thickets of Broom (Retama monosperma) and Lentisk (Pistacia Lentiscus), intermixed with a few dwarfed trees of Argania, or shrubs of Rhamnus, Vitex, Ephedra, Clematis, &c. In the bed of the river the most abundant and characteristic plants are the Oleander and Vitex; and in the stream itself Potamogeton, Watercresses, Helosciadium, &c., occur. The weeds are all of the commonest European aspect. In the town an ordinary looking white flowered Chamomile (Anacyclus clavatus) covers every neglected flat house-top or wall; and the streets, roads, and gardens offer nothing but the ordinary weeds of cultivated ground in England, Madeira, or the Canaries. The only striking plant to an European botanist is a bed of Peganum Harmala, covering a flat space of 2 or 3 acres at the back of the beach, on passing out of the south gate of the town. The Retama and Lentisk thickets of the low coast hills alone offer any resemblance to any parts of the Canarian Flora; and this only to certain regions at an elevation of 12,000 feet in Grand Canary and the island of Palma. The Lauriferous or Ericaceous Madeiran and Canarian regions are entirely unrepresented. The general character of the Mogadorian Flora was described to be decidedly Algerian. The author concluded with a list of the plants observed, 177 in number, with some notes on particular species.—3. "Notes on Tomopteris onisciformis," by Drs. Carpenter and Claparède.—4. "On the Distribution of the Tracheæ in Insects," by John Lubbock, Esq.

WOOLWICH FLORICULTURAL: *Jan.* 30.—A large and well attended meeting of the inhabitants of Woolwich was held in the Town Hall on Monday evening last, for the purpose of forming a Society to promote floriculture, both amongst amateurs and gardeners. Notwithstanding the unfavourable state of the weather, the enthusiasm of its propagators gave ample evidence of success. The chair was occupied by Mr. Bishop, who, in opening the proceedings begged to introduce Mr. Broome, of the Temple Gardens, as one of the most successful as well as benevolent aids in the formation of societies for the benefit of the operative classes. Mr. Broome said it gave him great pleasure to meet such a company in Woolwich, knowing as he did also that the gentlemen residing in the neighbourhood would endeavour to forward any object tending not only to promote but improve the social welfare of all concerned. He stated that there were already societies around London, numbering no fewer than 20, and that they consisted nearly all of the working classes who had only small gardens, which previous to this inducement had been barren and all but desolate places. But what a transformation! They had now been converted into interesting plots of ground successfully planned and planted out, cultivated, and produced some of the best flowers to be seen at our summer and autumn shows, at which not a few gained some good prizes. Another inducement was that it occupied the mind of the labourer, severing him from dissipated associates, and retaining home affections, inculcating a love of flowers, and instilling into the minds of his children a desire for their protection and a reluctance to pluck them. Another great benefit arising from these clubs was, that it enabled the working man to see a flower show within a very short distance of his home, instead of losing his time, his money, his work in visiting those at a longer distance. The workman could not afford to go to the Crystal Palace and other well-known suburban Shows, but was contented to see the productions of those who kindly entered the "All England Class." This, Mr. Broome argued, increased his desire to try and do the same, and if he failed all honour was due to him, although a failure. One thing certain, it was a means of making the artisan remain more at home, and less in the public-house—it taught his children to love Nature, and produced industrious habits in them as they grew up to manhood. The town of Woolwich, he reminded the meeting, had at one time been celebrated for its cultivation of Pinks, Carnations, and Picotees, and there was no reason why it should not command a floricultural society, as did many other towns of far less significance. The only rules he would wish to impress upon the meeting were that they should procure as many members as possible, secure the gentlemen of the neighbourhood, reduce the subscription to so low an amount as to secure all comers (namely 1*d.* per week), which should include free admission to all shows, and a few tickets to spare, and that they should hold meetings such as the present to impart knowledge one to the other, as regarded practice.

Mr. Wiggins, of Isleworth, was also present, and promised on a future evening to read a paper on the cultivation of the Pompone Chrysanthemum.

Notices of Books.

Journal of Proceedings of the Linnean Society, Nos. 13, 14, 15.—*Transactions of the Linnean Society*, Vol. 22. Part IV. (Longmans.) These important works show that Natural History is so far from languishing in England that we doubt whether any foreign Society of the kind ever published in the same space of time so many communications, for the most part of sterling value, as are contained in the parts before us. In the section of Zoology we have contributions from Professor Huxley on the dermal armour and generic and specific characters of recent crocodiles; on the moulting of the lobster and shore crab, by Mr. Salter; and on various other subjects, among which is an elaborate systematical account of the Dipterous insects of Celebes, by Mr. Francis Walker. Of the curious and little known habits of the Madagascar Aye-Aye, the monkey-like animal figured in Ellis's Madagascar, there is the following account by Dr. Sandwith, Colonial Secretary of the Mauritius:—

"He is a most interesting little animal; and from close observation I have learnt his habits very correctly. On receiving him from Madagascar, I was told that he ate Bananas; so of course I fed him on them, but tried him with other fruit. I found he liked Dates—which was a grand discovery, supposing he be sent alive to England. Still I thought that those strong rodent teeth, as large as those of a young Beaver, must have been intended for some other purpose than that of trying to eat his way out of a cage—the only use he seemed to make of them, besides masticating soft fruits. Moreover, he had other peculiarities,—*e. g.*, singularly large, naked ears directed forward, as if for offensive rather than defensive purposes; then, again, the second finger of the hands is unlike anything but a monster supernumerary member, it being slender and long, half the thickness of the other fingers, and resembling a piece of bent wire. Excepting the head and this finger, he closely resembles a Lemur. Now as he attacked, every night, the woodwork of his cage, which I was gradually lining with tin, I bethought myself of tying some sticks over the woodwork, so that he might gnaw these instead. I had previously put in some large branches for him to climb upon; but the others were straight sticks to cover over the woodwork of his cage, which alone he attacked. It so happened that the thick sticks I now put into his cage were bored in all directions by a large and destructive grub called here the Moutouk. Just at sunset the Aye-Aye crept from under his blanket, yawned, stretched, and betook himself to his tree, where his movements are lively and graceful, though by no means so quick as those of a squirrel. Presently he came to one of the worm-eaten branches, which he began to examine most attentively; and bending forward his ears and applying his nose close to the bark, he rapidly tapped the surface with the curious second digit, as a woodpecker taps a tree, though with much less noise, from time to time inserting the end of the slender finger into the worm-holes, as a surgeon would a probe. At length he came to a part of the branch which evidently gave out an interesting sound, for he began to tear it with his strong teeth. He rapidly stripped off the bark, cut into the wood, and exposed the nest of a grub, which he daintily picked out of its bed with the slender tapping finger, and conveyed the luscious morsel to his mouth. I watched these proceedings with intense interest, and was much struck with the marvellous adaptation of the creature to its habits, shown by his acute hearing, which enables him aptly to distinguish the different tones emitted from the wood by his gentle tapping; his evidently acute sense of smell, aiding him in his search; his secure footsteps on the slender branches, to which he firmly clung by his quadrumanous members; his strong rodent teeth, enabling him to tear through the wood; and lastly by the curious slender finger, unlike that of any other animal, and which he used alternately as a pleximeter, a probe, and a scoop. But I was yet to learn another peculiarity. I gave him water to drink in a saucer, on which he stretched out a hand, dipped a finger into it, and drew it obliquely through his open mouth; and this he repeated so rapidly, that the water seem to flow into his mouth. After a while he lapped like a cat; but his first mode of drinking appeared to me to be his way of reaching water in the deep clefts of trees. I am told that the Aye-Aye is an object of veneration at Madagascar, and that if any native touches one, he is sure to die within the year; hence the difficulty of obtaining a specimen. I overcame this scruple by a reward of 10*l.*" In the "Transactions" we have careful figures illustrating a paper by Dr. Carpenter on the singular annelid called Tomopteris; accounts of various new forms of Entozoa by Dr. Cobbold, of Ascidians by Mr. Macdonald, and on the organs of the Antennæ of Insects by Dr. Hicks, which the author seems to have proved to be provided for hearing.

The botanical papers are numerous and important. Mons. Bourgeau and Mr. Sullivan give valuable papers on the temperature of the soil and trees in the neighbourhood of the Saskatchewan River in Canada West. There are letters from Barter concerning the vegetation of Western tropical Africa. East Indian Willows are described by Mr. Andersson. Mr. Spruce gives an account of the Palm tree that produces the Piassaba fibre. Indian Balsams are reviewed and arranged by Drs. Hooker and Thompson, and there are other minor systematical papers. In the Transactions occur some

important memoirs. Mr. Oliver has good observations upon the anatomy of the stems of Caryophyls and Leadworts. A remarkable posthumous paper on Gnetum by Griffith appears from the hand of the lamented Henfrey; it was from this that were derived the views of Griffith promulgated in Lindley's Vegetable Kingdom. Mr. Bentham describes in detail the superb Brazilian genus Henriquezia, one of the noblest of known plants, as Mr. Fitch's drawings show. From Mr. Benj. Currey comes a continuation of his minute observations on Sphæria. Dr. Seemann elaborates the genera Camellia and Thea, which he retains apart; he regards what has been called the Camellia japonica of Hong Kong as a distinct species; Fortune's Double Yellow Camellia is referred to C. sasanqua, as has already been stated in our columns (1859, p. 807); C. reticulata is shown to be wild in Hong Kong, where its flowers are white. Mr. Benjamin Clarke has some minute observations on the embryos of Endogens and their germination; he is of opinion that what is now called the cotyledon of Grasses is really a great radicle, as L. C. Richard first asserted. The same author gives some notes on Batis and other genera with a view to settling some doubtful points of relationship. As to Batis, he says, that the affinities which have been suggested for it are "impracticable." What an impracticable affinity may be we do not know; but the author's suggestion that the genus Batis is near Verbenaceæ, while Callitriche is allied to Elatine, seems to us contrary to every principle acted upon by systematical botanists. The part concludes with some most interesting observations by Dr. Hooker on new species of Nepenthes and Balanophorads, illustrated by admirable drawings from the pencil of Mr. Fitch; the author shows that the pitcher of Nepenthes is a modification of a gland situated at the apex of the midrib of the leaf.

James Carter & Co.'s Gardeners Vade Mecum (Carter & Co., 237, Holborn). Although a trade seed catalogue this is at the same time a very complete guide to the cultivation of everything that the catalogue contains, and on that account we place it among books. There is nothing in horticultural literature exactly like it; certainly nothing equal to it for fullness of information. It contains moreover a translation of a German paper on the cultivation of German Asters and similar things; and to the whole is appended a good monthly Calendar of garden work. Amateurs (and gardeners too) will doubtless appreciate the importance of so safe and useful an instructor.

Miscellaneous.

Death of an Aged Lime Tree.—We are sorry to say the heavy gale of wind which took place in the night of the 21st Jan. totally destroyed the magnificent and unrivalled Lime tree in Moor Park, the seat of Lord Ebury, which will be remembered by many on account of its having been the seat of numbers of visitors, who have encamped under its spreading and pending branches, which formed their seats, and extended themselves to the diameter of 140 feet, and 95 feet in height. *J. S., Moor Park.—Times.*

Devices of the Fox in excaping from his Pursuers.—"One of them, on whose track the hounds had been often laid, used always to baffle them at one particular point, the crest of a rather steep hill. Up to this spot the scent was perfectly good; but at that particular spot the scent vanished, and so the fox was lost. One of the disappointed hunters was so indignant at his repeated failures that he determined to lay aside the chase for a day, and to devote himself to the discovery of the means by which the creature could so invariably escape from the hounds and men. He, therefore, concealed himself near the charmed spot, and watched with much interest the proceedings of the hunted animal. The fox, after being driven from his cover, led the hounds a long chase through woods, ponds, and thickets, and at last came at full speed towards the crest of the hill. As soon as he had reached the spot, he laid himself down, and pressed himself as closely as possible to the ground. Presently the hounds came along in full cry, and with a blazing scent, darting over the hill in hot pursuit, and never stopping until they reached the bottom of the hill. As soon as the last hound had passed, the fox resumed his legs, crept quietly over the brow of the hill, and returned to his covert at leisure. Another of these creatures made use of a very cunning device for the same purpose. In this instance he always led his pursuers to the edge of a cliff that rose perpendicularly for several hundred feet, and then disappeared. The hunters had often examined the spot, and unsuccessfully, for it seemed that no wingless animal could venture to take such a fearful leap. The secret was, however, at last discovered by a concealed spy. The crafty fox was seen coming quite at his leisure to the edge of the cliff, and then to look down. Some 10 feet below the edge there was a kind of break in the strata of stone, forming a kind of step about a foot in width. By means of his claws the fox let himself down upon this step, and then disappeared in a hollow, which was invisible from above. A man was lowered by ropes to the spot, and found that there was a wide fissure in the rock, to which the stony step formed an entrance. On searching the cavern it was found to have another and an easy outlet upon the level ground above. The fox, however, never used this entrance when the hounds were on his trail, but cut off the scent by scrambling over the cliff, and then emerged at the other outlet without danger of discovery." *Routledge's Illustrated Natural History, by the Rev. J. G. Wood.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—During the present changeable weather the principal object, as we stated last week, should be to keep in check damp and mildew, which the weather we are now experiencing is likely to induce. Nothing keeps the two evils just mentioned so much in check as a dry healthy atmosphere. To assist in promoting a free circulation of air through plant houses, some of the inferior duplicates might now be removed to spare Vineries or other quarters; for anything approaching a crowded state among delicate plants will be sure to cause at least a partial loss of foliage. Let all descriptions of hard-wooded plants that have made sufficient growth be kept rather dry at the root, in order to check their growth and induce a tendency to form bloom, but do not let the balls become so dry as to endanger the foliage. Look sharply after insects here, especially mealy bug, and endeavour to get the whole collection clear of this destructive pest, for if neglected now it will not fail to demand attention in spring and summer, when time with the plant grower will doubtless be fully as precious as now. Be sparing in the use of fire-heat, except in the case of things being forced into flower or growth, and it is in every sense good policy to have a separate house or compartment for these, as it saves fuel, avoids over-driving the whole collection for the sake of a small portion, and ensures a more satisfactory result than can be obtained where there is but one house for the whole collection of what is generally termed stove plants. Let specimens in bloom be placed in the most favourable positions for prolonging their beauty, and be careful to keep the flowers from damp.

FORCING DEPARTMENT

The forcing of fruit trees in pots is easily managed, provided there are one or two houses at work to hold them during the later stages of their growth. Most kinds, as stated last week, should have been grown in pots two years at least, and be well furnished with fruit buds. Where a stock is prepared for forcing the advantages of a deep pit with a bed of leaves will be apparent; the slight bottom-heat thus afforded will be found beneficial in setting the roots in action. Cherries and Raspberries are the most impatient of heat and should be brought forward in a low temperature, and unless they are required very early they will succeed better when started next month. The remainder should be started with a top-heat ranging between 40° and 60°, with a gentle syringing daily, and air according to the state of the weather. Here they may remain till they are nearly in bloom, when a drier atmosphere being necessary they may be removed to vacant shelves or stages in any house at work where a moderate heat is kept up. Peaches and Nectarines may even be placed on the back shelves of the Pine-houses after they have set their fruit, though a more moderate temperature would suit them better. In carrying out the subsequent treatment we may add that Figs, Peaches, &c., should occupy the warmest part of the house in which they are to fruit, and Apricots, Plums, and Cherries the coldest end. If required Raspberries will succeed well in pits or in the partial shade of other plants. If circumstances permit of the whole being kept plunged in a gentle heat, it will assist the swelling of the fruit, but with proper attention in supplying them with manure water they will do well without that assistance. Prepared plants of the most suitable kinds of the above fruits may be obtained at most of the principal nurseries, or maiden plants of each may now be potted in rich turfy loam for future operations, getting them into a bearing state by judicious stopping rather than by the use of the knife. Pursue former directions as regards the early Vinery and Peach house. As regards Pines, changeable weather like that we are now experiencing will necessitate the use of a considerable amount of fire-heat, particularly where a high temperature is being maintained with the view of inducing the plants to show fruit, and in the case of swelling fruit see that a proportionate amount of atmospheric moisture is secured, for, as has been stated in former Calendars, accommodating as the Pine must be admitted to be, it is by no means benefited by a warm parched state of the atmosphere; see that none of the stock is allowed to suffer for want of water at the root. For succession plants a temperature from 50° to 55° by means of fire-heat will be sufficiently high, but it should not be allowed to fall below 50°.

FLOWER GARDEN AND SHRUBBERIES.

In open weather dig borders, sweep and roll lawns and gravel walks, prepare composts, lay turf, and see that plants that are at all tender are well guarded from severe frost. Protect also autumn-planted bulbs, and prune the hardier sorts of Roses and shrubs. Push forward all alterations as much as possible, so as not to interfere with the ordinary routine operations. All Pink and Parsy beds should be examined, and all plants that are at all loose carefully fastened. The same remark applies to seedling Auriculas and Polyanthuses. With respect to Ranunculuses lose no time in making what purchases may be necessary, and take care during this rather variable weather that the roots do not contract mouldiness.

ORCHARD AND KITCHEN GARDEN.

All unoccupied ground should now be rough dug, trenched, or ridged, regulating these operations according to the nature of the soil and the kind of crops to be planted on it. Keep forward Lettuces from being injured by frost, and look sharply after Cauliflower plants under hand-lights, as well as Lettuces, Endive, and Radishes in cold frames, protecting them with straw or Reed covers or Spruce branches. Broccoli, where any exists, should be placed under some sort of protection. In most places, however, the frosts of December last have not left a head fit for use. Not only have Broccolis suffered but Parsley, Celery, Savoys, and even the tops of Leeks are more or less injured. The only green vegetable in some places, we learn, except Spinach and Brussels Sprouts is Cottager's Kale. If not already done, embrace the first opportunity of mild weather to sow the first crop of Peas and Beans, choosing for the purpose established early varieties, as Sangster's No. 1 Pea and the Mazagan Bean. As regards orchard work, proceed with pruning, and protect newly planted trees by mulching their roots. Let all ground intended to be planted in spring be well prepared for the reception of the trees which are to occupy it. Above all, let it be properly drained.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Feb. 2, 1860, as observed at the Horticultural Gardens

January and Feb.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep	2 feet deep.	Wind	Rain.
Friday 27	4	29.750	29.154	50	23	36.5	43½	43	S.W.	.00
Satur. 28	5	30.062	29.659	51	34	42.5	42	42½	S.W.	.09
Sunday 29	6	29.596	29.493	47	26	36.5	42	42	S.W.	.03
Mon 30	7	29.250	28.896	45	36	40.5	42	42	S.W.	.39
Tues. 31	8	29.610	29.421	42	20	31.0	42	42	N.	.00
Wed. 1	9	29.770	29.714	40	29	34.5	41	42	N.W.	.00
Thurs. 2	10	30.020	29.916	39	30	34.5	42	40	N.	.00
Average		29.782	29.464	44.8	28.3	36.5	42.1	41.9		.51

Jan. 27—Partially overcast; cloudy; frosty.
— 28—Clear and frosty; fine; rain at night.
— 29—Clear; overcast; clear at night.
— 30—Rain; b isterous with heavy showers; rain at night.
— 31—Rain; fine; clear at night; frosty.
Feb. 1—Sharp frost; fine; clear; overcast.
— 2—Slight frost; cold north wind; snow at night.
Mean temperature of the week, 1 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Feb. 11, 1860.

February.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 5..	45.2	33.2	39.2	15	0.39 in.	2	3	2	2	3	13	4	5
Mon. 6..	45.9	32.9	39.4	18	0.25	2	3	4	3	4	8	7	3
Tues. 7..	46.5	33.2	39.8	17	0.29	2	2	4	0	5	12	6	3
Wed. 8..	45.5	33.2	39.3	18	0.67	1	3	4	1	5	13	4	3
Thurs. 9..	45.5	32.0	38.8	14	0.40	—	5	3	2	2	14	5	3
Friday 10..	44.7	30.3	37.5	14	0.52	5	6	3	2	5	9	3	1
Satur. 11..	44.4	30.4	37.4	15	0.34	8	5	2	—	4	9	2	4

The highest temperature during the above period occurred on the 9th, 1856—therm. 60 deg.; and the lowest on the 11th, 1845—therm. 3 deg. below zero.

Notices to Correspondents.

BOOKS: *Clericus.* Rivers on Orchard Houses, Moore on the Cucumber and Melon, and Neill's Fruit, Flower, and Kitchen Garden.

GRAPES: *T.* Of the varieties you name, West's St. Peter's and Lady Downe's Seedling are late kinds, and should be planted at the coolest end of your house; the Muscats should occupy the warmest end, and the Trentham Black and Hamburghs the middle. Thus placed all may be made to succeed in one large Vinery.‡

GUTTA PERCHA: *H G.* We hear no complaints about this substance being unsuitable for pump pipes; for merely conducting water it is largely employed. For prices we must beg to refer you to the advertisements. Water passing through lead is not injurious unless it, the water, is pure. Hard waters exercise no appreciable action on that metal.

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*W J L.* Of the two Pines, that with strong stiff leaves is some variety of Pinaster. The other is either Pinus Brutia or halepensis; no doubt the former if it is *perfectly* hardy. Without cones we are unable to give a more precise reply.—*R.* Serradilla is no new importation. It was in Mark Lane from Portugal as early as 1818 or 1819. On light bad land, such as that about Thetford, it produces heavy crops of green food, quite like Vetches, to which it is nearly related. Its botanical name is Ornithopus sativus.—*J C & Co.* You shall know next week what the Peas are.—*J S.* It is impracticable to name plants unless they are in fair condition. Your impression of a leaf does not look like a Birch, but seems to belong to the common cut-leaved Alder. A leaf itself would have settled that point.—*E Donohue.* The botanical specimens received from New York are the seeds of some Asclepias, and are not used in any manufacture.—*Mary.* Your Fern does not appear to be at all different from Pteris aquilina, of which it is probably a seedling plant, remaining sterile in consequence of too much confinement. It is quite likely to be hardy; but it *may* be a seedling of some tropical form of the species, and we have no experience whether or not they are equally hardy with the native form. The Fern "root" eaten by the New Zealanders belongs to a plant closely allied to this.—*Lord M.* Young plants of Polystichum aculeatum, var. lobatum.

PEAS: *J W.* Either you have not fully explained the mode of dressing these or they require to be treated differently. Your directions were exactly followed, but the Peas lost their colour and were not tender. They seem to be only fit for making green Pea soup.

STRAWBERRIES: *H W.* We really cannot recommend tradesmen.

*** As usual, many communications have been received too late, and others are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspondents the insertion of whose contributions is still delayed.

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Operations under the Company's Act are divided into two principal branches; one where the Landowner designs and executes the improvements by his own Agent and merely requires a loan from the Company to charge the Estate,—the other where the Company undertake the entire responsibility of the Improvement and obtain repayment by way of Rent Charge. In the first case the plans, specifications, and estimates prepared by the Landowner's Agent are forwarded to the Company to be submitted for approval to the Inclosure Commissioners. As soon as the sanction has been given the Landowner proceeds to execute the works, and the Company having conducted the business through all the official forms, complete the charge on the estate when the works have been passed by the Commissioners, and repay the Landowner the amount agreed upon.
In no part of the business is there any control upon a Landowner except by the Inclosure Commissioners. The Company never interfere, except at the special request of the Landowner or his Agent, and only to such extent as may further the objects he has in view.
In the other case, where the Company are required to execute the works, a report and estimate of the Improvement are sent to the Landowner, and having been approved, the plans are then prepared and the works—either submitted to public competition or entrusted to their own staff—are carried on to completion, and the amount of the actual expenditure only, approved by the Inclosure Commissioners with the Company's agreed commission and the Commissioners' expenses, finally charged on the Estate for the term fixed by the Landowner.
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Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London. S.W.

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The Agricultural Gazette.
SATURDAY, FEBRUARY 4, 1860.

MEETINGS FOR THE FOLLOWING WEEK.
MONDAY, Feb. 6 { Central Farmers' Club ..... 6 P.M. (Mr. Mechi on Sewage.)

A VALUABLE paper by Mr. JAMES DOVE, of Eccles-Newton, near Kelso, on SUBSTITUTES FOR GUANO which has been published in the current Number of the Highland Society's Transactions revives just at the proper season a subject of great agricultural importance, and one the discussion of which has undoubtedly had beneficial effects. The high price at which guano has been maintained has created a new and enormous manufacture in this country, and *its* prosperity has, on the other hand, hindered the Peruvian Government from demanding higher prices than they do for guano. How great is the quantity of artificial manures provided in the market now may be judged of by the fact that in single instances the sale of it is influenced by the weather to the extent of thousands of tons.

A wet spring, when such manures are known to be most influential, by the thorough distribution through the soil which they can thus obtain, will create a large demand, while dry weather in April, May, and June will check it, and the difference to the manufacturer is something enormous.

Mr. DOVE's experiments related to guano (bought at 12*l.* 10*s.* per ton), nitrate of soda and sulphate of ammonia (both at 18*l.* 10*s.* per ton), superphosphate (an exceedingly rich sample, 8*l.* 10*s.* per ton), and Rape-cake (6*l.* 5*s.* per ton).

They were applied in various quantities (so as to be of nearly equal cost) on half-acre plots, and the whole produce was in every instance weighed. The manure was applied (1) to Oats when sown, on the 13th of April, and there was a large gain from nitrate of soda and from guano. They were applied to Barley (2) when sown, on the 25th of April, and the guano paid its expense, while all the others resulted in loss. To Red-strawed Wheat (3) they were applied on the 1st of May; the nitrate of soda and sulphate of ammonia resulted in a small gain, all the others were a loss. To Beans they were applied (4) on the 30th of May, and the land was scuffled and hoed the same day; the guano and the superphosphate were a gain, all the others were a loss.

The following are the author's remarks:—

(1.) "Here it will be observed that guano is the most profitable application; this agrees with my previous experience. I have never found any other manure so certain in its effects upon Oats, and I have rarely ever applied it without a profitable result; but it will also be observed that nitrate of soda, when applied as a top-dressing, is not much behind it. Nitrate of soda is too soluble to be applied at the time the seed is sown; as it acts so quickly, it is better to apply it when the plant is growing."

"Rape-cake and superphosphate are both comparative failures here. The conclusion I draw from this experiment is, that nitrate of soda, if judiciously applied, will prove as economical a manure for Oats as guano, at the relative price of the two this season."

(2.) "Here it will again be observed that guano leaves decidedly the best result; but it was a mistake applying the nitrate and sulphate so early."

(3.) "Here it will be observed that sulphate of ammonia is very much superior to any of the other manures used. This is in accordance with all my previous experience; in every trial I have made it has been the most profitable application. It has not the same tendency to cause the Wheat to lodge as guano and nitrate of soda have, and the produce is invariably more weight per bushel. In this experiment none of the lots were laid—all stood well up till cut; but in previous ones I have noticed that if any of the lots were laid, the guano and nitrate of soda ones were always first down."

(4.) "Throughout the season I never could observe any difference in the appearance of the different lots of Beans; and when they were cut, I thought none of the manures had had much effect, but both the guano and superphosphate show a very good result."

Another set of trials related to the influence of these manures on Grass; and, applied at the rate of about 37*s.* worth per acre, they are nearly all profitable. The following are Mr. DOVE's remarks on the relative influence of nitrate of soda and guano in these cases:—

"There is a loss by applying guano at three different times: it is not sufficiently quick in its action for the last application to have had time to do much good, though it got a sufficient quanity of rain to wash it well in. This is in accordance with nearly all my previous experience. This was a peculiarly favourable season for top-dressing Grass: for several weeks in the end of May and beginning of June we had occasional wet days, without any great fall of rain to wash away the manures; and in a favourable season I have generally found 3 cwt. of guano equal to 2 cwt. nitrate of soda; but when a dry season occurs, nitrate of soda has the decided advantage. Even if guano is applied on a wet day, and apparently well washed in—if it should immediately after set in some weeks of dry weather—I have always observed that it has not nearly the same effect as it has when the weather continues damp for some time after; while nitrate of soda, if once washed in, never loses its effect. Taking this into consideration, along with the fact that it requires less rain to wash it in, I consider nitrate of soda decidedly preferable to guano as a manure for Grass, and at the relative prices this year more economical. Guano should only be used when the weather is favourable for getting it applied in April; when this can be done, it answers very well to apply a moderate quantity of it, and then apply a little nitrate of soda some time in May. It is the general opinion that the effects of nitrate of soda are more completely exhausted by the first crop than those of guano; but I have not found this to be the case. I have only twice followed out the results of an experiment upon the crop succeeding the one to which it was applied, and in both the lots dressed with

nitrate of soda and sulphate of ammonia had the advantage over those done with guano; and whenever I have applied 2 cwt. nitrate of soda per acre to Grass, the effect of it on the succeeding crop of Oats could always be distinctly observed by the eye."

A third set of experiments had Potatoes for their subject. The gain was pretty general in one case; sulphate of potash and superphosphate with nitrate of soda alone being a loss; it was very rare in another case, being obtained only in the instance of guano, Rape-cake, and superphosphate with sulphate of ammonia.

Four sets of experiments on Turnips are next described, and the following table states their average results:—

AVERAGE RESULT OF THE FOUR EXPERIMENTS ON TURNIPS.

No.		Tons	cwt.	qrs.
9	Guano.	18	6	8
10		15	0	0
11		15	3	0
12		17	3	0
13		14	1	1
14		15	2	2
15	Superphosphate.	13	15	2
16		16	0	3
17		19	2	2
18		12	1	1
19		11	1	1
20		20	10	0
21	Superphosphate and Sulphate of Ammonia, mixed 5 to 1.	15	9	3
22		15	6	3
23		19	17	2
24		12	18	3
25		13	10	0
26		61	16	0
27	Superphosphate and Sulphate of Ammonia, mixed 10 to 1.	15	3	3
28		24	7	2
29		13	0	1
30		66	18	1
31	Superphosphate and Nitrate of Soda, mixed 5 to 1.	14	1	1
32		18	15	0
33		12	7	2
34		61	1	3
35	Superphosphate and Nitrate of Soda, mixed 10 to 1.	13	10	0
36		21	0	0
37		11	3	0
38		61	8	0

Mr. DOVE remarks:—"This is the first time that I have tried superphosphate mixed with sulphate of ammonia on Turnips. I have often made experiments with it mixed with guano, and have always found that I could grow a greater weight with the two combined than with either of them singly: but as this year the trials were undertaken with the view of finding a substitute for guano, I could not use it in that manner; so I had recourse to sulphate of ammonia and nitrate of soda as the only other means at command for supplying the amount of ammonia that previously I had found necessary for raising a full crop of Turnip on clay soils. I have always found that though on light soils I could sometimes grow as good a crop with bones alone or other manures composed chiefly of phosphates, as with guano; on clay soils I could not. A supply of ammonia seems absolutely necessary for the free growth of the Turnip on them; and the majority of my experiments this year were made on clay soils. I did not know very well in what proportions to mix them, so I tried them both at 1 of the ammoniacal salt to 5 of the other, and 1 to 10; the latter proportion answers best, though it will be seen that all the mixed lots yield a larger increase than the superphosphate alone."

The cost of the manures was kept nearly equal in each set of these experiments, varying from 1*l.* 18*s.* per acre in one set to about 2*l.* 10*s.* in another. And it must be borne in mind that the Turnip crop was in that year around Kelso, "one of the worst that has been grown for many years past." The conclusion, on the whole, to which Mr. DOVE is led will be satisfactory to most of our readers. He says:—

"The conclusion to be drawn from the preceding experiments appears to me to be this, that we need not now consider that a supply of guano is absolutely necessary for keeping up the fertility of the soil, as there are other substances at command, by which it can be done equally well, and that it is only a question of relative cost. On Turnips—the crop to which by far the largest quantity of the artificial manure used in this district is at present applied—superphosphate and sulphate of ammonia are quite equal to it; on Wheat, sulphate of ammonia is greatly superior to it; on Oats, there is not much difference between it and nitrate of soda; and on Grass nitrate of soda is better."

"I believe that if it were possible to get a larger importation of nitrate of soda, and at a cheaper rate, it would be one of the greatest boons that could be rendered to agriculture. The supply of it is said to be unlimited, and the cost to consist chiefly in the labour of preparing and transporting it to the sea-coast. Now could the means of doing these be improved, and the expense lessened, a reduction in the price of guano must soon follow, else the demand for it would quickly fall off. As it is, I believe that there will be much less of it used in proportion to other manures in the ensuing year than there used to be formerly. For my own part, for some years back, nearly half of the artificial manures I bought every year consisted of guano, but this year about four-fifths of them consisted of other manures, and only one-fifth of guano."

WE have received a note from Mr. C. C. BABINGTON respecting our late article on Dodder, intimating that we are in error in supposing that the Clover Dodder is of Asiatic origin. It is very possible that he may be right in this respect, though it is not certain that his Devonshire plant on Bokhara Clover, which he calls *Cuscuta approximata*, is the same with the Northumberland plant on Khelat Trefoil or Lucerne, which Dr. LINDLEY had in view in *Gardeners' Chronicle*, 1843, p. 771, and in the Cyclopedia of Agriculture under CUSCUTA, and which he considered the same with the European Clover Dodder. Mr. BABINGTON, however, has ascertained that *Cuscuta Trifolii* was published by DICKSON in 1800, and that it is common in several parts of the Continent, and this, added to the fact that Mr. BOWER has been long familiar with the species, is quite enough to account for its presence amongst us, though not indigenous, without having recourse to any more remote origin The question as to the identity of Dr. LINDLEY's and Mr. BABINGTON's plants may therefore, so far as the agricultural interest attached to the species is concerned, be set on one side, and the farmer may expect to have Clover seed of Dutch or French origin deteriorated by Dodder, and should therefore take care to examine it accurately, and sift it before it comes into use. Mr. BABINGTON says rightly enough that it is proper that he should be apprised of this necessity, as if he were led to believe that Indian seed alone was affected, he would take no pains about seed of European growth.* *M. J. B.*

IN a recent article on the "use of iron in the construction of agricultural buildings" we took a rapid review of the leading peculiarities of its two forms, cast and wrought iron, and presented a few suggestions as to the best method of using and testing them. We now proceed to give practical examples of construction, taking occasion wherever opportunity occurs to give remarks on such points of sound construction based on correct theory as we have not yet touched upon.

As enabling us to exemplify the points of construction connected with the employment of columns and beams in inclosing spaces, we take for illustration the following part of a farm steading or building.

In Fig. 1 we give plan of covered cattle courts and cow byre or shippon, *a a* Turnip court, *b b* feeding passage, *c c c c* feeding sheds with Turnip troughs, *d d d d* courts, *e e e e* gates, *f f* cow byre with loose boxes, *g g g g*. The retaining walls are *h h h h* are of brick or stone; the internal supports for roof being obtained by beams resting upon the pillars *i i i i i i*. The division *k k* between byre *f f* and courts *d d* may be made of brick on edge, or boarding, or galvanised iron; dunging door may be made at *m m*. The drinking troughs are shown at *l l*. The scale to which the drawing is made is attached. The dimensions of pillars where the building is only one storey in height, as in Figs. 1, 2, 3, & 4, to be as follows: height over all 10 feet, diameter at lower part 5 inches, at upper part 4 inches. The pillars to be hollow throughout, the internal core to be uniform from top to bottom and 3 inches in diameter.

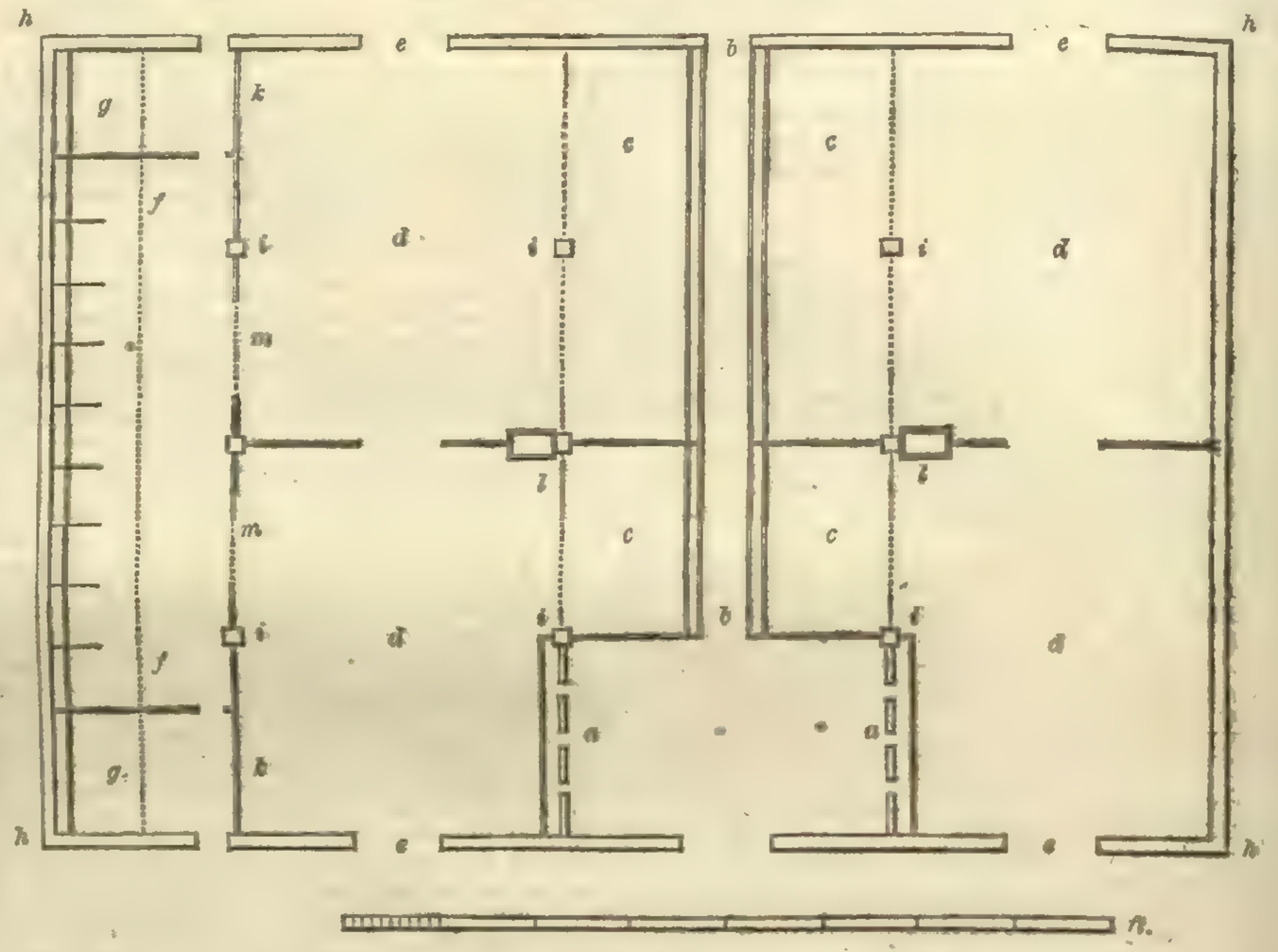

FIG. 1.

In setting the columns it is of the utmost importance to have a good base on which to rest them, not only that they may stand perfectly vertical or "plumb," but that a steady foundation may also be given to them, so as to resist all shocks or blows, as of carts coming up against them, as in cart-sheds, &c., carts backing up to Turnip sheds, dung court, &c. In Fig. 2 we give a drawing showing one method of forming the foundation for a cast-iron column. The part *a a* is of brick or stone, a solid block of the latter will be best; if the former is employed it should be carefully set in cement. The base-plate *b b* is bolted securely to the foundation *a a*; or it may be let into a hollow space cut out on the upper surface of the stone. The base-plate *b b* is provided with a projecting snag or cross, *c*, which fits into the hollow part of the column *d d*. It adds much to the stability of the column if its base extends considerably beyond the line of column, as *e e* beyond the lines *d d*. The end or lower surface of the base should be faced in the lathe, and also the upper surface of base-plate *b b*. This is necessary in order to secure perfect bearing between the base of column and base-plate on which it rests.

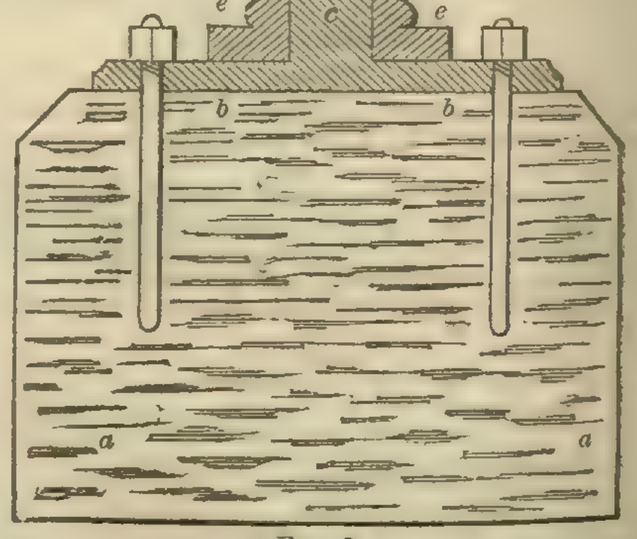

FIG. 2.

FIG. 3.

The importance of having the bearing surfaces perfectly flat may be gathered from a brief *resumé* of Mr. Hodgkinson's experiments. A pillar with its ends perfectly flat and fixed immovably was found to be three times as strong as one with its ends rounded and moveable on a joint, as in some forms of cranes. Supposing three long pillars of equal diameter and length, one to have its ends round, the second one end flat and the other round, and the third both ends perfectly flat; their strength would be as 1, 2, and 3, that is number 2 would be twice and number 3 three times as strong as number 1. This is exemplified in the diagram in Fig. 3, the figures representing the relative strengths. Again the importance of having the pillar perfectly plumb, this depending upon the finish of the base, may be gathered from another deduction from Mr. Hodgkinson's experiments; thus, if the pressure is applied to

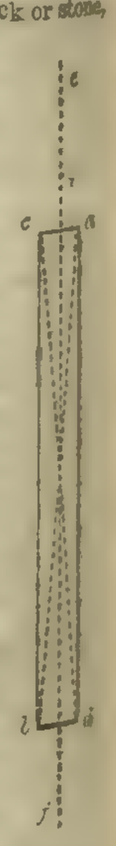

FIG. 4.

* A figure of *Cuscuta Trifolii* will be found in English Botany, tab. 2898, and of *C. approximata* in Annals of Natural History. Ser. 1, vol. 16, tab. 1.

he direction of a diagonal, as from one end of the upper to the opposite end of the lower diameter, as from *a* to *b* or *c* to *d*, Fig 4, the strength is reduced actually to the extent of one-third;

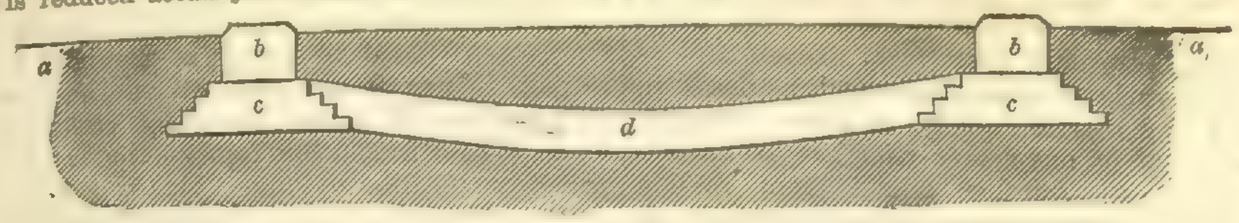

FIG. 5.

any deviation from the true plumb-line *e f* will therefore inevitably weaken the column.

To return to the bearings of pillars. If the ground in which the foundations are made is comparatively firm, the form of bearing in Fig. 2 will be sufficient; where, however, it is yielding and uncertain in character it will be safer to turn inverted arches between the foundations of the pillars as *d*, Fig. 5, between *c c*. The stones *b b* in this case rest upon bases of brickwork, *c c*; *a a* is the ground line. Where the foundation of the building is solid rock a simpler base may be adopted, as in Fig. 6, where an aperture, *a*, is cut in the rock, *b b*, the pillar, *c*, having a projecting part, *d*, which fits into the aperture, *a*.

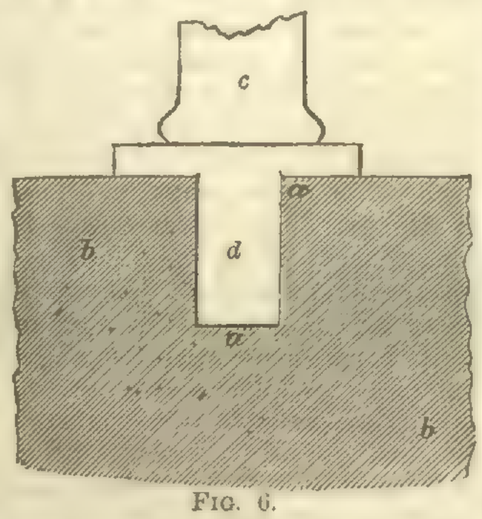

FIG. 6.

Figures 2 and 6 are drawn on a scale of 1 inch to the foot.

A DRESSING WITH STRAW.

COVERING old lea with the straw that is useless as fodder, and folding sheep over it, is a very old-fashioned but most economical way of making a good manure for the Wheat crop. We cannot call it farmyard manure, but it is the nearest approach to it, and may be spoken of under the same head. This covering of straw is usually laid on during the winter or early spring, when other operations cannot be carried on. It is during the summer months that the greatest advantages are derived from it; not in its causing the more rapid growth of Grass only, but through its causing the formation of nitrates in the soil, and through its adding to the better mechanical state of the soil. There are few farmers that have not noticed the luxuriant vegetation that grows on land that has been occupied by a hay or corn rick the preceding year. Now we naturally inquire the cause of such vigorous growth. It cannot be rest only, as the land that was not cultivated through its close proximity to the rick does not grow such rank vegetation. Then it must be the covering, which so alters both the mechanical and chemical state of the soil, and prepares it for, and causes the benefit derived by, the plants. This fertility become more apparent where the rick has stood during the summer months. Now, the covering of the old lea with straw has the same chemical and mechanical effect, only in a less degree, as was produced by the hay rick. It has also the same effect as what has been termed "Gurneyism." This term was used a few years ago to signify a covering of straw or other matter, on Grass land, which was used by Mr. Gurney, and which was noticed by that gentleman to have a fertilising effect. It was merely the covering which gave the good result in question, as was proved by the experiments of this gentleman. Mr. Gurney says:—"A piece of Grass land has been covered during the day, from six o'clock in the morning to six at night, and left uncovered during the night, for six weeks. Another piece lying adjoining had been covered by night and uncovered by day during the same period. The first piece—namely that uncovered by night and covered by day—soon changed colour, put on a deep green and rapidly increased in length; but the piece of Grass covered by night and uncovered by day soon changed to a yellowish colour, and looked sickly and apparently dying The effect produced by the covering of this straw has been described as resulting from the formation of nitrate of lime in the soil. If so, it is our cheapest means of increasing one of the most costly substances which we purchase in the manure market—nitrogen. There is about 75 per cent. of nitrogen in the air we breath, and Liebig has told us that there is enough in our soils for many rotations of crops. This being so, we ought to hail with delight any means by which we can cause it to become available for our crops. If a thick covering of straw, which prevents the penetrating rays of the sun from acting on the soil, does contribute to the formation of nitrate of lime in the soil, it points out to us again the march that practice has got on science. I have laid on coverings of straw on various descriptions of land, and have invariably found that land that does not contain lime, and that would not effervesce with an acid, does receive little benefit from the application, but if laid on a soil that contains abundance of lime, vegetation springs up with that deep green which we see after the application of nitrates to our Grass or corn crops. Nitrate of lime cannot be formed where no lime exists, and this might therefore be taken as a shadowy proof of what has been advanced. Straw as a covering only causes a powerful chemical action on the fertilising substances of the soil. whether it is through the formation of nitrate of lime in the soil, or from any other cause. It is possible that it might also cause the decomposition of the vegetable matter in the soil and the excrementitious matter which is supposed to be thrown off by plants. Lime, I believe, performs this latter office. Plants (Sainfoin for instance) probably secrete organic acids, and partially organised matter that require to be neutralised or decomposed before the same description of plant can grow healthily on the same soil. Sainfoin does not require more lime than many other plants, yet it cannot be depended on on soils that do not contain an abundance of lime. I think that this cause may be found in the action of lime on the secretions of the plant. This matter, which is thrown out by the plant during its continuous growth, might be of benefit to other plants but destructive to the plants that throw it off. I now come to the manuring of meadows. It is my practice to give my meadows a covering of straw annually. This is done immediately after the removal of the hay, or after the after-Grass has been fed. I prefer the former time, as it prevents the parching effect of the sun, and adds much to the bulk of the crop, whilst the following crops are not diminished by this early application. Now I have one meadow that requires chalking. The earth does not effervesce with an acid, which it surely would if it contained any lime in its composition. On this soil a covering of straw has not the slightest effect, except what is caused by enabling it better to retain moisture, and the effect produced in this way is scarcely apparent. This is the want of lime in the soil. But on the other meadows that contain an abundance of lime, the covering has the effect of causing a rapid and vigorous growth. The barren soils are thus made comparatively fertile. I cut double the weight of hay I should without the application. It is my conviction that I should cut little more were I to lay on the richest farmyard manure. I do not think that this effect could be produced without the action of nitrogen on the plants. If so, this covering must be a means of rendering the inactive nitrogen available. But I fear that there is one little drawback to this treatment of our meadows. I allude to the herbage. It appears to me that this treatment causes the coarser varieties of Grass to overpower and destroy some of the finer herbage. I do not state this as being a fact; I merely speak from observation without strict examination. I hope that it is not so, but that the starved plants which appeared to be finer varieties are only become stout fellows through being better fed and better cared for. Another use to which waste straw can be applied with considerable benefit is to the Turnip land. If laid on the stubbles and ploughed in in the autumn it causes a beautiful tilth during the following spring and summer, and probably the gases that are generated during its decomposition act on and liberate many substances that would otherwise remain inactive. *Mr. Summers at the Milbourne Farmer's Club.*

THE FOOD OF THE COW.

IN the common practice of our dairy districts it is (1) pasturage in summer, and hay and straw with, in some cases, a few Turnips and Mangel Wurzel in winter. She will consume in depasturing probably 1½ cwt. of Grass daily, varying of course according to age and size, or during seven months of grazing as much as 16 tons of green food. Pastures which would by July have growth enough on them to make from 20 to 40 cwt. of hay, and which will when that is cut grow probably ⅗ths as much Grass after July 1 as they had grown before, will, if their growth be eaten down from week to week throughout the season, have produced from 7 to 14 tons of green food per acre. From 1¼ acre of the best Grass lands to as much as 2½ of the poorer class will thus be wanted for the summer maintenance of the cow. One acre of whole Grass and the aftermath of another acre mown for winter hay will in the former case be sufficient for a cow; and double that extent will be needed in the latter case. The cow will thus receive fully ¼ of a cwt. of hay daily during the five winter months. In Gloucestershire this is generally given it in the field; the cattle being foddered morning and evening unsheltered; and 2½ tons of hay a head are considered an ample winter's allowance.

(2.) In Cheshire the dairy cows are generally received into yards and stalls during winter: 2½ or 3 acres of Grass land per cow are the general allowance in order to supply sufficient summer pasturage and winter provender; but the dairy farms in that county generally have a larger proportion of arable land attached to them, and it is common to give the cows Turnips, Mangel Wurzel, and straw, as well as hay. The Tarporley Farmer's Club in that county resolved, regarding the winter feeding of their cows after cheese-making had ceased, "That straw and Turnips are the best and cheapest for the early part of the winter; and as the season progresses, half the quantity of Turnips with hay and a little corn; and in a season of scarcity, or after a bad harvest, ordinary fodder (hay and straw), with steaming and cutting is recommended." Mr. Palin of Tarvin, near Chester, states that his cows being gradually brought into yards towards winter, as the yield of milk ceases, are fed in stalls, first on Mangel Wurzel leaves, then on Turnip-tops, and then successively on Turnips, Swedes, and Mangel Wurzel, along with cut straw and hay chaff.

(3.) Mr. M'Adam of Silverdale, Staffordshire, gives his cows "as much pasture as they can eat in summer, and as many roots as will maintain them in good condition during winter." If there is ample supply of good Wheat straw for fodder, 60 lbs. of Turnips daily apiece, given morning and afternoon, will suffice, but if the supply of fodder is bare, 84 lbs. are given daily to each cow. (4.) The feeding of dairy cows in Wigtonshire, from which county Mr. M'Adam comes, includes 1¼ acres of pasture during summer, 4 tons of Turnips during winter, and 2 bushels of Beans given as Bean-meal at spring time of the year. (5.) In Fifeshire, Mr. Haxton, a farmer of that county, puts the annual feeding of the dairy cow at 2½ acres of Grass, 9½ tons of Turnips, and 30 cwt. of Oat straw as fodder, together with 1 ton of Wheat straw as litter.

(6.) Mr. Young, who keeps a large dairy in that county, feeds his cows in Clover fields (2 acres per cow) during summer, giving them in addition a little dreg (spent liquor of the distillery), in tubs in the field. In hot weather they are fed on cut Clover and Vetches in yards, about one-sixth of an acre being required for this purpose to each cow. In autumn they receive one-third of a bushel of grains apiece daily in addition. During winter they have four meals daily each, followed by Oat straw; the first at 8 A.M., consisting of a boiled mess of 30 lbs. of Swedes, 1¼ lbs. of Linseed meal, and 2 lbs. of Bean-meal mixed with a quantity of chaff and light grain; the second at 10 A.M., 60 lbs. of Yellow Turnips; the third at 2 P.M., one-sixth of a bushel of grains apiece, and the last at 5 P.M., 60 lbs. of Yellow Turnips as before. That house feeding of cows, of which this is a very liberal example, is well adapted for the production of milk alone, the experience of London dairies testifies, and when it is combined with daily exercise for two or three hours in a pasture-field, it is admirable for all purposes. But an exclusive house feeding of dairy stock is not generally found to produce good butter or cheese. A correspondent of the *Agricultural Gazette* writing from Waterhouse, near Bath, says.—"Dr. Playfair in his lecture (*Agricultural Society's Journal*, vol. iv.) states that, to the effectual forming of caseine in milk, exercise is necessary to the cow. My experience has shown me the same results, having had at one time, and for several years, as many as 20 cows house-fed, or soiled, as it is termed. And it amounts to this:—That if cows are properly managed, *i.e.* kept clean in an airy house, curry-combed and brushed often, with good fresh water at their command, plenty of food cut green and fresh as long as available, and hay and Carrots, Parsnips, and Mangel Wurzel, &c. at other periods, with salt strewed over it; they can be kept all through the year quite as well as if they were in a meadow, and that for milk only this system is superior to any other. But for butter or cheese I cannot recommend it; the former, although as good as much which is sold in cities, seldom had as fine a flavour as that from a cow grazing in a meadow. It was winter butter at all seasons. And as to cheese, it resembled the Dutch in flavour—in fact was always of an inferior kind, and sold accordingly."

(7.) When, however, the object is to obtain the largest supply of milk, as in the town dairies, house feeding is the best system. Here, the great reliance is placed on grains, of which a bushel a day per cow or even more is given, together with 10 or 12 lbs. of hay, and 1½ cwt. of roots, chiefly Mangel Wurzel, or in place of the two last, abundance of cut green food, Clover, Vetches, &c. during summer. This with ample supply of water forms the daily food of the large Yorkshire cows to be found in London dairies. (8.) Where this rich house feeding is combined with daily exercise, though on very poor pasture, successful dairies both of milk and butter have been established. Mr. Smith, of Chipstead in Surrey, has established a dairy of thirty cows with remarkable success* upon a poor dry chalk hill-farm of 210 acres, with only 5 acres of permanent pasture, maintained in Grass for the convenience of possessing a turn out, and not for any merit as Grass land. Here the cows for eight months in the year are fed upon cut straw, bran, Turnips, and Mangel Wurzel, having no other assistance than the food they pick up in fine weather; the other four months they are principally dependent on cut Tares and other artificially raised green food; and yet upon this keep the butter produced is of the finest quality, and readily finds purchasers all the year from neighbouring occupiers and owners of farms, at prices of 14*d.* and 16*d.* per lb., according to the time of year; and so successful is the result, in a pecuniary view, that Mr. Smith is increasing the extent of his dairy as fast as the increasing fertility of the land gives him the means to keep more cows. (9.) This is indeed the system which was adopted by Mr. Cramp, in the feeding of his extraordinary cow already quoted. She consumed 8 bushels of grains, and 4 bushels of bran weekly during winter, together with ½-cwt. of hay, and a few Carrots; and in summer she consumed 3½ bushels of grains, and 1½ bushel of bran weekly, together with the green food grown on 54 perches of Clover and Rye-Grass, 12½ perches of Lucerne, and 2½ perches of Carrots. She had 18 perches of land on which to walk.

(10.) A more common method however is to pasture the cows in summer, giving them cut green food towards autumn and in early summer in addition,

* Mr. Hewitt Davis, in the *Agricultural Gazette.*

and feeding in stalls or yards on roots, grains, and hay, and steamed messes during winter. And of this one or two additional instances may be given. Mr. Pigott, of Stoke, Norfolk, speaks in the *Agricultural Gazette* of his small dairy of cows, pastured wholly during five months of summer, and receiving during winter 1 bushel of grains, 1½ bushel of cut Turnips, and 1 bushel of Mangel Wurzel, together with 2 bushels of cut hay and straw chaff, mixed and steamed, besides which they go out to a Grass field for an hour or two during mid-day. (11.) Another correspondent of the same paper, speaking of the winter feeding of his two cows, says:—"I have a boiler containing about 40 gallons, and into it I put about 50 lbs. of Turnips, a considerable quantity of water, and about 12 lbs. of straw cut into chaff, and this is boiled for about two hours, when it becomes a dark nasty looking mess; one-half of this is taken out into two tubs, and whilst warm 1½ lb. of Bean or Pea-meal is stirred into each, and then given to each cow at about 110° of heat. That which is left in the boiler remains till morning, and if well covered up is still warm enough for use; it is then mixed with the Pea or Beanmeal, as before, and given to the cows at break of day; this, with hay *quantum suff.*, constitutes their daily diet; and I get about 6¼ lbs. of butter weekly from each cow. The butter produced in this way has no taste of Turnips, and the avidity with which the cows eat this boiled mess is a good criterion of its value. When given to the cows it should be thin and sloppy." (12.) For small Ayrshire cows, the following has been found a sufficient winter dietary on which to keep them in full milk;—30 to 40 lbs. of boiled Turnips, with 6 lbs. of cut straw, and 3 lbs. of Beanmeal mashed up in them; straw *ad lib.* being supplied in addition.

(13.) Mr. Horsfall's winter feeding is remarkably liberal, but he receives his return in the fattening of his cows at the time they are giving milk. The following is the report to the English Agricultural Society of his management:—He had for four years given his dairy cows Rape-cake, of the kind termed "green" cake, which imparted to the butter a finer flavour than any other kind of cake; and in order to induce them to eat it, he blended it with one quarter the quantity of malt-dust, one quarter bran, and twice the quantity of a mixture in equal proportions of Bean-straw, Oat-straw, and Oat-shells; all well mixed up together, moistened, and steamed for one hour. This steamed food had a very fragrant odour, and was much relished by the cattle: it was given warm three times a day, at the rate of about 7 lbs. to each cow (or 21 lbs. daily.) Bean-meal was also scattered dry over the steamed food, cows in full milk getting 2 lbs. per day, the others but little. He had found this substance to be an unfailing means of keeping up the condition of cows while giving milk. When the animals had eaten up this steamed food and Bean-meal, they were each supplied daily with 28 to 35 lbs. of Cabbages from October to December, of Kohl-Rabi till February, or of Mangels till Grass time; each cow having given to her, after each of the three feedings, 4 lbs. of meadow hay (or 12 lbs. daily). The roots were not cut, but given whole. The animals were twice a day allowed to drink as much water as they desired. Since the date of this report, Mr. Horsfall has discontinued the use of Bean-meal owing to its comparative price, and has given in its place, along with about 5 lbs. of Rape-cake, an additional allowance of malt combes, and 2 or 3 lbs. of Indian Corn-meal per cow. On this food, in instances actually observed, his cows have given 14 quarts of milk a day, and gained flesh at the rate of about ¼ cwt. per month.

As regards the summer feeding of these cattle, Mr. Horsfall says:—"During May, my cows are turned out on a rich pasture near the homestead; towards evening they are again housed for the night, when they are supplied with a mess of the steamed mixture and a little hay each morning and evening. During June, when the Grasses are better grown, mown Grass is given to them instead of hay, and they are also allowed two feeds of steamed mixture. This treatment is continued till October, when they are again wholly housed. In January, 1854, I commenced weighing my milch cows; and I have continued this practice once a month almost without omission. I find that cows in full milk yielding 12 to 16 quarts each per day vary but little in weight, some losing, others gaining, slightly. It is common for a cow to continue from six to eight months before she gives below 12 quarts per day, at which time she has usually, if not invariably, gained weight. The cows giving less than 12 quarts, and down to 5 quarts per day, are found when free from ailment to gain without exception. This gain, with an average yield of nearly 8 quarts per day, is at the rate of 7 to 8 lbs. per week each." This, of course, is only in the case of cows not in calf, and intended to be dried and sold fat. *Morton's Handbook of Dairy Husbandry.*

Home Correspondence.

Potatoes.—In an agricultural report in the "Farmer's Magazine" it has been noticed—"Although large supplies of Potatoes have come to hand in fair condition, unfavourable accounts have continued to reach us from various quarters in reference to the progress of disease; some correspondents affirm that fully one-half of the crop is diseased. If this statement be correct prices which now range from 70*s.* to 140*s.* per ton must rule higher, and we shall have enhanced quotations for Wheat, since that grain will be in active request." No remarks are made of the sad loss of Potatoes arising from the late frosts, which we now truthfully affirm is ten times greater in Essex and Suffolk than from disease, and as this visitation of early frost was universal, no doubt in other localities the loss is equally as great. In our own town we know of one dealer who has 70 bushels frozen in one clamp. Another friend from Suffolk informs us that a farmer there had 500 bushels all destroyed by frost. If the failure from disease tells on the high price of that article and on corn, as is anticipated from disease, what must be the result from the effects of frost, that being universal, and the disease only very partial? *Abraham Hardy & Son, Maldon, Essex.*

Thistles.—The simplest and best method of destroying these in my opinion is after they have made their growth, and just before they show flower. Immediately after heavy rain set a labourer to work with a pair of strong harvest gloves and pull them up. Of course it requires a little care or art to get them up, with as much root as possible, that is to say a slow steady pull straight up. If in a field of corn let the labourer begin on the outside land; as he pulls up the Thistles with his right hand place them under his left arm until he has got as many as he can well carry to either end of the field; if laid in heaps they will very soon rot, or they might be laid in the furrows in small quantities. If this is done with care little damage need occur to the standing corn. By deep ploughing for root crops and careful cleaning Thistles cannot live. *C. A.*

Climate of Scotland.—Let me call the attention of your readers to the returns of meteorological observations in different parts of Scotland, as collected by the Scottish Meteorological Association, and published at their recent meeting. The following are the remarks of Mr. Milne Home on the subject:—In connection with Mr. Arbuthnot's suggestion in regard to contrasting the rainfall of different parts of the country, he might advert to the diagrams prepared and sent in by a number of their observers in various parts of the country, and which exhibited the results of their observations. Mr. Milne Home proceeded to explain the diagrams (about 30 in number), which were arranged on the wall according to the latitude of the stations to which they referred—Elgin, the most northerly, being at the top, with Gadgirth, in Ayrshire, and Wanlochhead, in Dumfriesshire, at the bottom. He pointed out the remarkable harmony of their markings and fluctuations, indicative of the range of the barometer and thermometer, the pressure of the wind, and the fall of rain at the different stations, as showing the care with which the observations had been made, and the dependence which might be placed upon them. It was noticeable that the mean temperature was highest in those stations which were near the sea. Mr. Burgess had completed the tables begun by his predecessor, Mr. Everett, showing the mean temperature of all their different stations for the last three years; and, as the council thought that it would be still more important to exhibit the range or extremes of temperature at the various stations, Mr. Burgess had during the last quarter compiled tables showing the mean daily range of temperature at all the stations at which observations had been made for three years. Mr. Milne Home exhibited two tabular forms, drawn up from those compiled by Mr. Burgess, the first of which showed the average daily range of temperature over all Scotland for each month in the year, as follows:—

	Deg.		Deg.
January	9.	July	16.7
February	10.8	August	15.4
March	11.3	September	13.7
April	13.8	October	11.8
May	14.	November	9.4
June	16.	December	8.6

The extremes, it would be seen, were greatest in summer. The next table, which was of some interest in an agricultural and botanical point of view, showed the parts of the country where the range of temperature was greatest and least during the year. He had put down five stations in each list, selected from different parts of the country:—

Greatest.	Deg.	Least.	Deg.
Stobo (Peebles)	16.7	Sandwick (Orkney) ..	8.6
Drumlanrig	16.	Stornoway (Lewis) ..	8.5
Mungoswalls	14.5	Baillieston	8.4
Thirlstane	13.7	Greenock	8.1
Yester	13.7	Edinburgh	6.9

Edinburgh was the place, of all Scotland, so far as their observations had yet gone, where the range of temperature was smallest. Its proximity to the sea was not so close or so peculiar as to account for this remarkable equality of temperature, and he was disposed to refer it to the vast mass of buildings in which fires were constantly kept in a large town, by which the heat was collected and retained. This had led some members of the Society to object to their observatories being placed in large towns (the Glasgow station was two miles from the city), on the ground that they did not give the true temperature of that part of the country. He thought, however, that it was very important to ascertain the effect of large aggregations of houses in a sanitary point of view, and it seemed to be established that large towns were the best places, especially in winter, for invalids requiring equality of temperature.

Tithe Averages.—A glance at the tithe averages for the last seven years, and at the amount of rent-charge to be paid this year on the septennial period up to December 31, 1859, will illustrate a defect in the law which ought to be remedied. The rent-charge to be paid this year is nearly 11 per cent. above the amount at which tithes were commuted, and that, too, at a time when Wheat is selling at from 5*s.* to 5*s.* 6*d.* per bushel, it was 9 per cent. above last year, and will continue at a high rate for three or four years longer, while Wheat is at a low figure—that is, supposing low prices to continue so long. This is not an exceptional case. Let anybody look through the tables giving the annual average price of Wheat, &c., since the commutation of tithes, and they will see that the rent-charge has a tendency to rise when prices are low, and to become low when prices are high, the result of the averages being struck upon so long a period as a septennial one. Experience shows that high and low prices of corn are apt to alternate in cycles of three, four, or five years; consequently after the high prices cease it takes some years to bring the rent-charge down to the existing prices, and when this is about to take place the high prices recommence, and produce the contrary state of things. This often causes the farmer to pay his rent-charge grudgingly. I never spoke to a tenant-farmer on the subject without hearing a complaint and being told that he would much rather pay a high rate of rent-charge when agricultural produce was selling well, and *vice versâ*. The attainment of this *desideratum* could approximated to by shortening the septennial into a triennial period, inasmuch as the period being so much shortened each year's prices would materially affect the averages. It may be said that the rent-charge is a charge on land, and does not concern the occupier; but the tenant really pays this with other charges in very many cases, and at any rate I feel quite sure landowner, tenant, and clergyman would be glad of a change, which could work no injury to anybody, and would create more content among agriculturists. *R. C. L., Jan.* 27.

Early Sowing Mangel Wurzel.—I should not have troubled you again on the subject in question were I not anxious to assure your "Fen Reporter" that no one is more impressed with the importance of a courteous tone in discussion than I am. Every one who has studied the cultivation of the soil will admit that both mind and matter must move on. What with the steam plough and many other innovations, the agricultural world is on the eve of a revolution. I grant, seeing is believing, but the eye must be sharpened and the vision extended; indeed, we must look with the eye of faith if we intend to keep near to the mark; the advance of science of late has far outstripped the teaching of experience. Entertaining these views, as I do, your "Fen Reporter" will not be surprised when I fancied that a natural law which operated in other places might have had some influence in the Isle of Ely. The only credit I take in growing Mangel is in deep and autumn cultivation, early sowing, and thick seeding; for this year's crop we have about 30 acres ready to sow; one portion intended for Mangel is a light gravelly soil, after Barley, which received the following treatment:—Soon after harvest the field was well scarified with Colman's cultivator, harrowed, all refuse collected and burned; about the beginning of December last 45 tons per acre of good London dung was put on and immediately ploughed in with a double furrow, the first effectually turning in the dung, the second throwing a deep furrow over. Thus it will remain until seed-time, when I intend to sow a quantity of salt before the harrow, which is the only implement used before the drill, and the roller the only one after. From this your "Fen Reporter" will perceive that I have consolidation in the only proper sense of the term, as no implement can equal Nature in performing that operation. On dusty soils I still have a strong impression that Mangel seeds in a dry and hot May day, with their hard and thirsty coats, are very ungrateful for a wee-drop of water. On our marsh lands here I have learned from the teaching of experience that two and three months, with the aid of several sprinklings, have neither been too long or too much to rouse them into action. Your "Fen Reporter," when in the humour, may tell me something to my advantage; he need not be afraid of offending: a hard lesson will not hurt me. *P. Mitchell.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

A MONTHLY COUNCIL was held on Wednesday Feb. 1, Lord Walsingham, President, in the chair.

FINANCES.—The Hon. Colonel Nelson Wood presented the report of the Finance Committee, from which it appeared that the current cash balance in the hands of the bankers on Jan. 31, 1860, was 3634*l.* 15*s.* The Chairman further reported that the authorities at Canterbury had transmitted to the Society towards the expenses of the ensuing country meeting, to be held at that city in the week commencing Monday, July 9, next, a subscription of 1500*l.*, which was included in that general balance.

CANTERBURY MEETING.—Lord Leigh, Vice-Chairman of the General Canterbury Committee, reported their recommendation of the plan of the Show-yard submitted to them by the Hon. Director of the Show and the Society's Contractor of Works. His Lordship also submitted a list of Prizes which had been offered by the Local Committee at Canterbury, and which was accepted with thanks and ordered to be appended to the Prize Sheets of the Society.

STANDING COMMITTEES.—The Standing Committees for the year were appointed.

On the motion of Mr. Torr, seconded by Sir John Shelley, the consideration of the best manner of conveying the thanks of the Council to Mr. Brandreth Gibbs for his services as Honorary Secretary of the Society during a period of seven months, was referred to a Committee who should report to the next Monthly Council.

The Annual Report of the Royal Veterinary College was received, and directed to be read at the next Weekly Council.

The Council then adjourned to its Weekly Meeting on the 8th inst.

HIGHLAND AND AGRICULTURAL.—At the late general meeting 153 new members were elected. The office-bearers for the year were nominated. Mr. Russell, late of Kilwhiss, has been appointed Editor of the Society's Transactions, an office hitherto held by Mr. Henry Stephens. Mr. G. Hope, of Fenton Barns, was elected on the Education Committee, in the room of the late John Finnie, of Swanston, to the usefulness of whose life, and the great loss the Society has sustained by his death, the highest testimony was borne.

Finance.—Sir W. Gibson Craig, as hon. treasurer, then laid on the table the accounts of the Society, of which an abstract was circulated at the meeting. The abstract showed balance at 30th November, 1858, 1333*l.*; interest, &c., on capital, 1480*l.*; annual subscriptions, 890*l.*; life subscriptions, 953*l.*; Aberdeen show, 2609*l.*; making the charge along with other items of revenue, 7884*l.* On the discharge side the leading entries were—establishment expenses (including secretary's salary, 500*l.*), 920*l.*; chemical department, 405*l.*; veterinary department, 37*l.* 10*s.*; museum, 327*l.*; premiums, 2073*l.*; Aberdeen show, general expenses, 1558*l.*; balance on bank account, 1412*l.*; making with other items the discharge equal to the charge, 7884*l.* Considerable discussion then ensued turning chiefly on the cost of the management as compared with the annual income derived from subscriptions of members. The report was nevertheless carried.

The Edinburgh Show and the nature of certain protests relating to awards in the live stock classes were then referred to, and on one of them the secretary gave the following explanation:—The secretary read a memorandum which had been drawn up in reference to the case. It stated that Mr. Tod entered a Short-horn cow in section four, and according to the usual practice, without stating whether she had calved or was in calf. The animal was exhibited with a calf at her foot, but there was no evidence that the calf was represented to have been hers. After the termination of the show, the secretary received a letter from a member of the Society complaining of the award in respect that the calf was not the cow's produce, and that she had not had a calf. Mr. Tod, on being called upon to explain the matter, stated that the calf was not the produce of the cow, that it had never been represented to be so, and it had been put to her to retain milk which he had found upon her. He had entered the cow at the time in the belief that she was in calf, but having found it not to be so, he withdrew her on November 29. The whole matter was referred to a committee, who reported to the Directors that there was not sufficient evidence to establish deception and to warrant expulsion. To this the Directors adhered for the following reasons:—1. The original entry contained no mis-statement. 2. There was no averment that Mr. Tod had represented the calf to be the produce of the cow. 3. It was impossible to disprove Mr. Tod's statement that he believed the cow qualified for exhibition as being in calf at the time. The Directors had, however, resolved so to amend the regulations with reference to cows as in future to prevent animals which have never had calves being exhibited under the pretext of being in calf.

The forthcoming Shows are to be held in 1860 at Dumfries, in 1861 at Perth, and probably in 1862 at Kelso; and for the two first satisfactory arrangements are in progress.

Appointment of Stewards.—A discussion then took place on the proposal to assimilate the management of the Society's shows to that of the English Agricultural Society's meetings, Mr. Wemyss, M.P., moving, and Professor Wilson seconding, the appointment of stewards, and the Duke of Buccleugh and Mr. Gulland speaking respectively against and for the proposed alteration in the following terms:—

The Duke of Buccleugh said: If this meeting were now considering for the first time what would be the best mode of carrying on their shows, this proposal of Mr. Wemyss might be considered a good suggestion. They were, however, dealing with a system in existence, and he thought that any gentleman who wished to upset that system was bound to show in what respect it had failed. It was 32 years since he first attended a show of this Society, and during the whole of that period the system now pursued had been pursued with success, and their shows were never more popular in the districts of Scotland than they were at this moment. He might instance in proof of this the eagerness with which the districts applied to the Society for shows to be held there, and the cordiality with which they received the rules and regulations with which those shows were conducted, and the confidence that was shown in this system of appointing local committees to manage the show in conjunction with the Society. He thought these committees were the best stewards they could obtain. And besides these local committees, there was a very important committee of the Directors which had been mostly ably presided over for many years by Mr. Horne, who, in fact, did the duty which Mr. Wemyss would devolve upon these stewards. They had the very arduous and laborious duty of conducting all the preliminary business, and the management of the show-yard was confided to certain persons, who were selected for the office, and who had the confidence of those who were the chief exhibitors in the district. He need only go back to the Edinburgh show—one of the most successful shows the Society had ever held—as proof of the efficiency of the system which had been pursued.

Mr. Gulland said that he thought the noble Duke (Buccleuch) was hardly sound when he said that before a system was altered it ought first to be proved a failure, and he also thought the noble Duke, after a moment's reflection, would admit it to be so. Because if that was true, very few systems would ever be altered, and things to a great extent would still be as they were 50 years ago; and, if so, the French Emperor had taken in hand a most hopeless task. It was certainly most unfortunate that so many members seemed to fancy that the motion was, as it were, fighting against the Directors. Nothing could be further from the truth, as we were only anxious to put the management of the show-yard on a better footing, and we might talk a month about the matter; but he thought it impossible for any one to deny that six men would better manage the show-yard than 100; in the same way as he thought the noble Earl (Rosslyn), on the left of the chair, would admit that one man would better command a regiment.

The following are the awards for essays and reports in 1859:—1. The Gold Medal to James Duncan, Old Manse, Denholm, Hawick, for report on the natural history of the Turnip fly. 2. The Gold Medal to James Fulton, Temple, Maryhill, Glasgow, for a report on the cultivation of Italian Rye-grass. 3. The Gold Medal to Jas. Porter, Monymusk, Aberdeenshire, for a report on top-dressing pasture. 4. The Gold Medal to Robert Scot Skirving, Camptoun, East Lothian, for a report on the cultivation of Mangel Wurzel. 5. The Medium Gold Medal to Patrick Shirreff, Haddington, for a report on a new variety of Wheat.

Notices of Books.

Hand-Book of Dairy Husbandry. By John Chalmers Morton. Longmans.

"This is the first of a series of cheap hand-books of the several sections of farm practice in preparation by Mr. Morton—each hand-book complete in itself, and the series to form a handy library of reference for the farmer, the bailiff, and the working man." So runs the advertisement; and it will be permitted us on the issue of this, the first of the series, just to state the plan on which it has been executed, and to enumerate the topics which have been discussed in its pages.

The book—128 small octavo pages—consists of eight chapters: in the 1st the statistics of the subject are given; the 2d discusses the food of the cow; the 3d, the choice and treatment of the animal; the 4th, 5th, and 6th refer to milk, butter, and cheese; the 7th includes questions of capital, profits, and general management; and the 8th is a calendar of dairy operations, written by an accomplished Gloucestershire dairy woman—the substance of which appeared in short monthly articles three years ago in the columns of the *Agricultural Gazette.*

In illustration of the close packing which has been adopted, and the detail which has been followed under the several headings, let us further specify the contents of one or two of them. Under *Dairy Statistics* eight paragraphs are given—the 1st, 2d, and 3d referring to the ordinary and chemical composition of milk; the 4th detailing the experience of nine dairies as to the yield of milk per cow; the 5th giving the experience of 21 dairies on the yield of butter per milk and per cow; the 6th giving eight histories of the yield of cheese; the 7th discussing the quantity of dairy stock and dairy produce to the acre; and the 8th referring to such facts and estimates as indicate the dairy stock and dairy produce of the country.

Under the second chapter again, on the food of the cow, we have four sections. In the 1st 13 histories are given of varying practice in summer and winter feeding—the actual daily ration being described in detail; in the 2d the relations of food to dairy produce are considered, *i. e.*, the influence of various foods on the quantity and quality of the milk, and five separate series of experiments and researches are described; in the 3d the crops of food fit for dairy stock are enumerated and so far described as that the quantity per acre of the produce and the season of their use is given—26 items are here specified; in the last paragraph of this chapter the cropping of land for a dairy farm is described, and three schemes of cultivation are given in detail.

The third chapter, on the choice and treatment of the cow, refers first to the dairy breeds of cattle, Short-horns, Suffolk, Channel Islands, Ayrshire, Kerry, and long-horned. These are described, and the places where they are sold and the prices at which they are to be had are stated; the age and individual character of the cow, including such particulars as age, form, and temperament—also M. Guénon's theory on the subject, are related. The treatment of the cow is then described; her food, lodging, health, milking, &c., all come under review. Under the head of health the subjects of gestation, parturition, abortion, &c., are considered. The last paragraph in this chapter refers to the treatment of the calf.

The next division of the book is on milk. The indications of its composition afforded by lactometer, lactoscope, and chemical analysis are referred to. The composition of the milk of different animals and of different cows—its preservation in the dairy—peculiarities in the taste of milk, and adulterations of milk are considered.

The fifth chapter refers to the composition in three instances of butter—to the proportion in nine instances of the cream of milk—to the influence of different sorts of milk pan, and the apparatus of the dairy generally—to churning of whole milk, of common cream, and of Devonshire cream—to churns, kinds and prices—to butter making, recipes, &c., and the implements of the dairy.

In the chapter on cheese we have Professor Johnston's tables of composition—the theory of curd formation, the practical details of ordinary and exceptional practice in Gloucestershire, Somersetshire, Cheshire, Ayrshire, Leicestershire, &c. The utensils of the cheese dairy, the insects affecting cheese, and foreign cheeses, are described.

Lastly, under the heading of general management, we have the question of Dairying *v.* Grazing, of the most profitable use of milk, of the cropping of a dairy farm, and of farm profit and capital considered. And the following is added as a postscript:—

"The selection and maintenance of the herd—gentle, regular, and punctual treatment of the animals throughout the year; provision of sufficient wholesome food for them, and abundant water, with frequent change of pasturage when at milk—*these* are the special maxims of successful dairying. If on the one side of these we have the proper cultivation and management of the land, and on the other, cleanly, careful, and skilful management in the dairy, then a maximum of dairy produce may be expected. But this depends essentially on the health, and therefore on the treatment, of the animals which yield it."

Then follows the diary, for the most part extracted from the articles in the *Agricultural Gazette.*

We quote here a passage from the Appendix, communicated by Mr. J. T. Harrison, of Frocester Court, Stonehouse, Gloucestershire:—

"*On the Waste of Curd in Cheese-making.*—The quantity of bacon given as fatted from the whey, shows that there must be an immense quantity of valuable food left in it. But even allowing the whey to be worth 2*l.* per cow, this is not half of what its contents would be worth could they be extracted and prepared in the form of cheese and butter for human food. There is here a broad margin for experimental inquiry and improvement. On this point I have worked out the following from the records of our dairy for the last five years:—

Year.	Yield of milk.	Containing by analysis. Casein.	Butter.	Dairy produce. Cheese	Butter	Containing by analysis. Casein.	Butter.
	Gallons.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1857	31,700	12,480	11,556	25,424	3,466	9,661	5,593
	lbs.					104	2,773
	321,000						
leaving 2,715 lbs. of casein, or 22 per cent., and 3,190 lbs. of butter, or 27.6 per cent., unaccounted for.					Total	9,765	8,366
1858	28,247	9,415	8,474	20,160	7,660	7,660	4,435
				2,031	61	61	1,625
	235,376						
leaving 1,694 lbs. of casein, or 13 per cent., and 2,414 lbs. of butter, or 28.5 per cent., unaccounted for.						7,721	6,060
1859	28,600	11,583	10,424	21,952	8,342	8,342	4,830
				2,425	73	73	1,940
	289,575						
leaving 3,168 lbs. of casein, or 27 per cent., and 3,654 lbs. of butter, or 35 per cent., unaccounted for.						8,415	6,770

The composition of the butter is taken at 3 per cent. casein, and 80 per cent. butter.
The composition of the cheese is taken at about 38 per cent. casein, and 22 per cent. butter (the same as double Gloucester).

These calculations of course are only approximate. For instance, instead of taking the double Gloucester analysis for the cheese of 1859, it would have been more correct to take the Cheddar analysis, as we endeavoured to make the cheese much richer than in the former years. This would reduce considerably the large apparent loss of butter. The chief point is to see clearly that there is an enormous quantity of casein and butter which we do not extract from the milk. Can no means be devised for extracting them more thoroughly? I have no doubt the application of heat on the Cheddar system will do much, but a maker of this cheese was astonished to see the quantity of curd that resulted from boiling a small quantity of his clear looking whey. I believe that the loss results from the system of minutely dividing the curd after it is set, and that it comprises some of the richest of the casein and butter. It is well known how much a successful result depends upon the gentleness with which this operation is performed. The chief object aimed at in using the drying machine was to obviate this, and the result of many trials is that one-half at least of the ordinary loss of casein, and nearly all the butter, is saved; that is, they are not to be found in the whey, so far as I can find out.

"*Produce of Milk per Cow.*—The following are the results of my experience in dairying the last few years.

In 1857, having plenty of water, we made all the cheese with the machine, and it proved the most profitable year. I milked 55 cows; the quantity of milk made into cheese was 31,728 gallons, or 577 gallons per cow, besides the milk expended in weaning 43 calves:—

		£	s.	d.
The actual return for cheese was		615	0	0
,, ,, butter was		182	6	10
,, ,, milk sold and used was ..		6	0	0
,, ,, whey: 220 hogsheads at, say 6s.		66	0	0
,, ,, rearing 43 calves was ..		43	0	0
		£912	6	10

or about 16*l.* 10*s.* per cow.

The following are the returns of other years, including the same particulars:—

		Dairy cows.	Per cow. £	s.	Cheese per cow.	Butter per cow.
	For				cwt.	lbs.
	1855 ..	30	15	0	3.23	62
	1856 ..	45	16	0	3.78	64
Machine-made	1857 ..	55	16	10	4.1	62
	1858 ..	52	12	5	3.46	38
	1859 ..	60	13	5	3.27	39

In 1858 and 1859 we could use the machine only about two months for want of water. The diminished yield in these two years I attribute in a great measure to the excessive dryness of the seasons; other circumstances affecting the cows likewise contributed to the result. In 1858 the price of cheese was not so good and the quality was inferior, especially that made during the autumn.

"*Produce of Cheese.*—The following are particulars of the produce of cheese and butter from fixed quantities of milk. for certain periods in 1857, 1858, and 1859:—

(Beginning in May.) Machine made.

Milk, galls.		Shillings.		Shillings per gal.
1857 (10 weeks).				
10,957 yielded 8870 lbs. cheese at 6*d.*	4435	5402	gives	.493
967 lbs. butter at 1*s.*	967	10,957		
1858 (9 weeks).				
6093 5302	2651	3074	,,	.504
423	423	6093		
1859 (10 weeks).				
6683 (A.M.) 5504	2752	3017	,,	.45
265	265	6683		
Hand made.				
3626 (P.M.) 3064	1532	1754	,,	.483
70	70			
183 at 10*d.*	152	3626		

(Beginning in August.)—Machine made.

				Per gal.
1857 (10 weeks).				
8541 yielded 6970 lbs. cheese at 6*d.*	8485	4197	,,	.491
712 lbs. butter at 1*s.*	712	8541		
Hand made.*				
1858 (10 weeks).				
7222 5782	2891	3479	,,	.482
460	460			
158 at 10*d.*	128	7222		
1859 (10 weeks).				
7601 7825	3412	3861	,,	.508
207	207			
291 at 10*d.*	242	7601		

Now although the above results, as affecting the question of making the cheese by the drying machine, are by no means unsatisfactory, still, knowing that there is actually much more casein and butter extracted from the whey (of course to the detriment of the pigs), they should have been very decidedly favourable. How is this accounted for? Without an analysis of the milk and the cheese made from it, it is impossible to give a satisfactory explanation. The quantity of water in the cheese analysed by Professor Johnston varied as much as 10 per cent., whilst the relative proportion of casein and butter differed immensely. The presence of a certain quantity of water seems to improve the apparent quality of the cheese, assisting in giving it the waxy texture; whereas the machine-made cheese is better described, though not exactly, by its crumbling, which is mentioned in the same place as the undesirable texture. I am by no means clear that the drying machine may not prove a very useful auxiliary in cheese making. It certainly saves the dairymaid very much of the hard labour of finely dividing the curd and pressing out the whey; and I may say that an intelligent person could make good cheese with it after a few lessons; whereas to make such in the ordinary manner requires a great deal more skill in the manipulation."

The drying machine referred to here is the patent centrifugal machine which Mr. Harrison has used to separate the whey from the curd after it has set.

It is right to add, with reference to the alleged loss of curd in cheese-making that the proof here given depends for its force on the quoted analyses being applicable, on which the composition both of the milk and cheese is here assumed. The actual composition of the milk and of the cheese may not have been as in the cases analysed, though it is hardly possible that the difference could have been very great.

If the analyses are to be taken as true of Mr. Harrison's milk and cheese respectively, then his case is amply proved, and there is undoubtedly an enormous loss of casein in the processes of the dairy as hitherto conducted.

* Cheese, however, inferior, and sold at least ½*d.* per lb. less than the rest.

Miscellaneous.

Corn Rents in Norfolk.—Corn rents are not common in Norfolk, but under all the new leases on the Holkham estate the rent is paid as follows: one-third in money, one-third in Wheat, and one-third in Barley; of course the money never varies, but the Wheat rises from 18*s.* to 28*s.* per coomb of 4 bushels, and the Barley from 12*s.* to 16*s.* The fixed rent supposes the price of Wheat to be 5*s.* and Barley 3*s.* per bushel. Perhaps the working of this corn rent would be better understood by the following illustrations. Let the amount of rent be fixed at 900*l.*, it would vary thus:—

Starting Point.	£	Lowest.	£	Highest Rent.	£
1-3d Money ..	300	1-3d Money ..	300	1-3d Money ..	300
1-3d Wheat, 1200 bsh. at 5*s.*	300	1-3d Wheat, 1200 bsh. 4*s.* 6*d.*	270	1-3d Wheat, 1200 bsh. at 8*s.*	480
1-3d Barley, 2000 bsh. at 3*s.*	300	1-3d Barley, 2000 bsh. at 3*s.*	300	1-3d Barley, 1200 bsh. at 4*s.*	400
	900		870		1180

The price of corn is taken from the average of the last 3 years. It will be observed that these rents rise a good deal, but fall very little; they are fixed at the lowest point at which it is considered corn can range, but it would simplify the matter to start from the very lowest point and so have no drop at all, and to take the average price of the last year instead of the last three; of course it all depends on how the start is effected, and it must be said that on the Holkham estate the start is made fairly and liberally. *Journal of the Royal Agricultural Society of England.*

Calendar of Operations.

JANUARY.

TYNESIDE FARM NEAR HEXHAM.—A favourable opportunity was afforded us during the late storm of getting a good quantity of manure conveyed to the more distant fields, and of applying composts to the Grass lands, as well as collecting materials of all kinds for new heaps. Ploughing in preparation for Oats however is not now sufficiently forward, and where much attention was given to Wheat sowing after the consumption or removal of the Turnip crop, has made little progress. A continuance of the present open weather is very desirable in order that this department may be pushed forward, and also to give us an opportunity of storing or consuming the roots left on the ground: as another night's severe frost would render the white Turnips totally useless, in most cases from a half to three fourths being already quite rotten. A large percentage of Swedes on the lighter and more exposed soils, perhaps greater where grown with artificial manures alone, has succumbed to the effects of the severe weather, and the attacks of game and other vermin. Thus our root crops, miserable looking at the best, have, where good management had not previously secured them from the weather, turned out a more serious loss than could have been imagined. Where this was attended to however cattle and sheep have fed well, though the former have been restricted to a smaller quantity of roots than usual—from 70 to 90 lbs., according to the capacity of the animal, with 3 lbs. of Rapecake or Bean and Barley-meal uncooked, and Oatstraw *ad libitum*, resulting in a high average production of beef. Winter Beans and Tares and the earlier sown Wheats on the warmer soils, though not forward, have again assumed a greener and healthier hue; the later autumn sowings of Wheat have not yet appeared above ground. Prices of well-fed cattle keep high, with short supplies and a great proportion of very inferior quality; but as the Turnip stores begin to assume alarmingly diminished proportions, ere long we may look for more liberal supplies of better quality. *W. C. T.*

WEST SUSSEX: *January* 31.—We are now in a fair way to have the deficiency of rain for the past two years made good; we have had the weather very variable all this month; three or four frosts, and as many storms of rain every week, so that upon our heavy lands work is nearly suspended, and they will require some time to enable us to get upon them. And we are not likely to have so early a spring for work as we have lately been accustomed to. But there is every prospect of the Turnip fields being cleared off in good time, as the wet weather causes many of the roots to be trod in the mud; and worse than this, a very great proportion of them are rotting. In some cases half or more of the Swedes are rotten, and early sown Turnips that have been left to this time are rarely fit for use at all. Swedes that were early and good, as most of the early ones were, are going off fast, but the later sown and lighter crops are standing better, and what appears to be good at one time turns out bad at another. Our only satisfactory crop was that which has done us least good and what we despaired of will be almost our sole stay. Mangels have kept better than might have been expected, and do not appear to have got any worse since they were stored. We found many of the long sorts were hurt at taking up, and to prevent the affected from injuring the sound, we stored them in thin lines on the ground where they grew, covering them with the plough, and the plan has answered very well, only that we find it heavy work to get them out at present, and perhaps it rather injures the land carting upon it when so wet. But when they can be stored off the field in the autumn with safety it is best for the sake of the land to do so. Some have the past year or two stored them in the field in the above manner for sheep, and speak highly of the plan; but whether the very sharp frosts that we have had this winter have been too much for some of them with their too slight covering the next two months will show. As may be expected, sheep stock in the fields are not doing so well as sometimes; but still we have not heard of anything very untoward among them. Forward Down ewes have nearly all lambed; and the luck has generally been good. Fatting cattle have not done quite so well as usual, and our market is but poorly supplied with beef, and the quality still inferior. The growing Wheat does not look very well, but has done better lately; it has had everything against it, late sowing, early frosts, and then sudden changes with more than the usual fall of rain. *G. S.*

Notices to Correspondents.

MANURE FOR BEANS: *W. C.* The most recent experience on this subject is given in Mr. Dove's paper on Substitutes for Guano, published in the Highland Society's Transactions, and referred to in another column. He found guano to exceed all other fertilisers in its effect; 2 cwt. per acre applied towards the end of May, and scuffled in the same day, increased the produce about 7 bushels per acre—worth 8*s.* more than the manure that was used; 3 cwts. of superphosphate applied at the same time and at the same cost increased the produce 6 bushels per acre—worth about 5*s.* more than the manure. None of the other manures, sulphates of soda and potash, Rape-cake, and sulphate of ammonia, raised the crop enough to repay their cost. If you were to mix guano and superphosphate half and half, and apply broadcast about 4 cwt. per acre after the Beans are up, say early in April, and horse-hoe them in, you would probably find it answer; but it depends of course on the condition in which your land already is.

OILCAKES: *J Smith.* Read Dr. Anderson's Paper on the subject in the Transactions of the Highland Society. We will shortly give a *resumé* of it.

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That great satisfaction has been given by these Collections in former seasons is testified by the recommendations given by our customers to their friends; as also by the numerous letters we receive, from which we present the following:—

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"I lose no opportunity of recommending your Seeds, which are most excellent; and I think you are doing us (the clergy especially), a great kindness in making up your garden selections."

From the Rev. JOHN KIRWAN, *Withycombe Rectory, Taunton.*

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"I never had (previous to yours last year) a lot of seeds which have all turned out so satisfactory."

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and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

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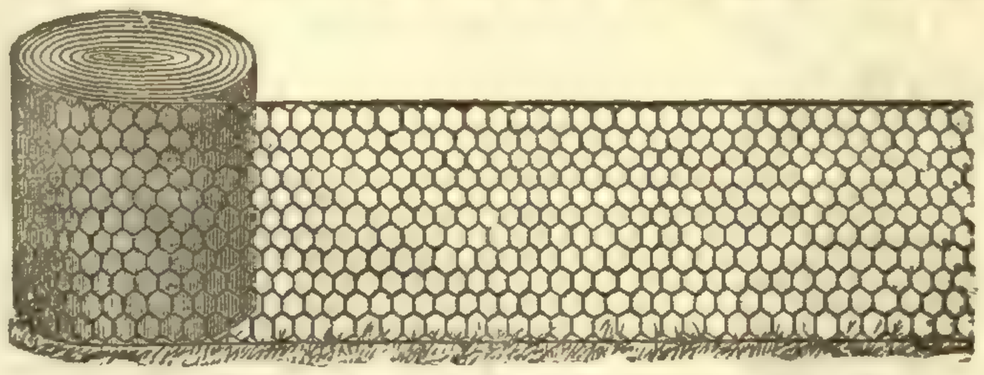
PROTECTION FROM THE MORNING AND EVENING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and, floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide, 1*s.* 6*d.* per yard run.
Four, 3*s.* per yard; also,
An improved make three yards wide, 2*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, whole and sole manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

IMPROVED PREMIUM WIRE NETTING.



PRICES PER LINEAL YARD, 24 INCHES HIGH:—

Size of mesh.	Mostly used for	Light.		Medium.		Strong.		Extra strong.	
		Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.
2½ inch	Hares, Dogs, Poultry	3½*d.*	4½*d.*	4½*d.*	5½*d.*	5*d.*	6½*d.*	6*d.*	8*d.*
2 inch	Game Netting	4*d.*	5*d.*	4¾*d.*	6*d.*	5½*d.*	7*d.*	7½*d.*	9½*d.*
1⅝ inch	Small Rabbits, Hares, &c.	4½*d.*	5½*d.*	5½*d.*	6½*d.*	6*d.*	7½*d.*	8*d.*	10*d.*
1½ inch	Smallest Rabbits	6*d.*	7½*d.*	7½*d.*	9*d.*	9*d.*	11*d.*	11*d.*	13*d.*

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland or Ireland.
Any width of Netting under 8 feet made at proportionate prices.

☞ **Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.**

Illustrated Catalogue of Iron and Wire and Ornamental Fencing, Hurdles, Gates, Wire Netting, Garden Rollers and Engines, Fountains, Vases, &c., on application.

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

RANSOMES & SIMS, IPSWICH,

CONTINUE to give their best attention to the manufacture of the most Modern and Improved Agricultural Machinery, including

PATENT AND OTHER PLOUGHS, SUITABLE FOR EVERY SOIL AND PURPOSE.
HARROWS, CULTIVATORS, ROLLERS, AND OTHER FIELD IMPLEMENTS.
HORSE RAKES AND HAYMAKERS.
CHAFF CUTTERS, ROOT CUTTERS, BRUISING AND CRUSHING MILLS FOR CORN, OILCAKE, &c.
STEAM ENGINES, BOTH PORTABLE AND FIXED, WITH PATENT OR OTHER BOILERS.
STEAM THRESHING MACHINES, BOTH PORTABLE AND FIXED, AND SINGLE OR DOUBLE BLAST.
HORSE POWER THRESHING MACHINERY, DRESSING MACHINES, CORN MILLS, HORSE GEARS, &c.

RANSOMES AND SIMS have long been celebrated for combining in their Agricultural Machinery the utmost simplicity, durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture.

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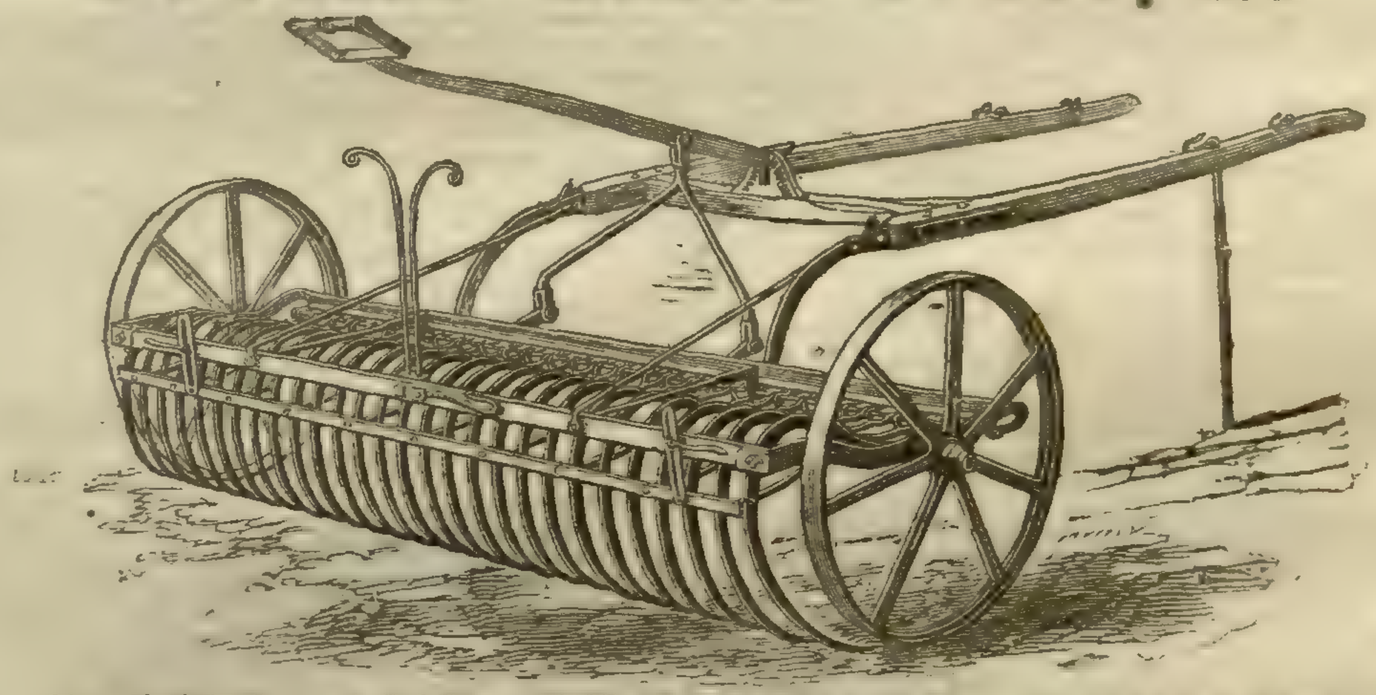
Orwell Works; or to their London Agent, SHEPPARD RANSOME, 31, Essex St. Strand, W.C

HOWARDS' HORSE RAKES.—1860.



JAMES AND FREDERICK HOWARD,

BRITANNIA IRON WORKS, BEDFORD,

HAVING made upwards of 6000 of their PATENT HORSE RAKES, and availed themselves of every improvement which so extended an experience has suggested, have the utmost confidence in bringing them before the Public, as not only the cheapest, but the best Horse Rakes yet produced.

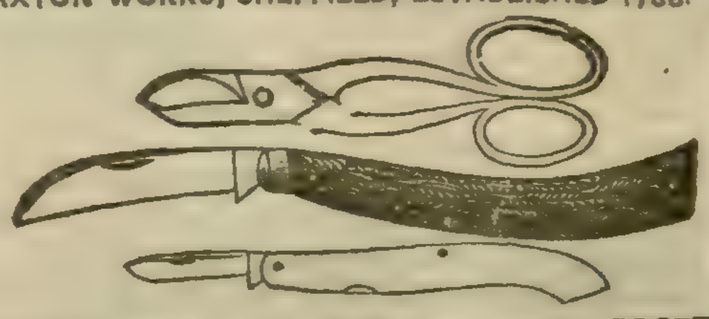
J. & F. HOWARD'S NEW PATENT HORSE RAKES, brought out this season, are not only stronger, simpler, and more durable than their former patterns, but are made so that they collect less rubbish with the corn.

Small size, 7½ feet wide, marked H,	with 24 iron teeth	.. ..	£7	10	0
Small size, 7½ feet wide, marked H,	with 24 steel teeth	.. ..	8	0	0
Large size, 8½ feet wide, marked H H,	with 28 iron teeth	.. ..	8	0	0
Large size, 8½ feet wide, marked H H,	with 28 steel teeth	.. ..	8	10	0
Extra size, 8½ feet wide, marked H H H,	with 24 steel teeth	.. ..	10	10	0

Free Delivery to Basingstoke, Birmingham, Bristol, Cardiff, Colchester, Derby, Gloucester, Hull, Leeds, Lincoln, Liverpool London, Manchester, Norwich, Nottingham, Retford, Salisbury, Shrewsbury, Southampton, Swansea, Wisbeach, Worcester, and York; or to Dublin, Edinburgh, Glasgow, and other parts, at fixed rates.

CATALOGUES, with prices and particulars of all J. & F. HOWARDS' Implements, including description of and Reports from persons working SMITH'S STEAM CULTIVATOR, sent post free on application.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1788.



SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

HENRY J. MORTON AND CO.,
2, Basinghall Buildings, Leeds.

CALVANISED IRON WATER CISTERNS

for Cottage Houses, &c., to contain 50 gallons, 25*s.*; 80 gallons, 30*s.* each; and 140 gallons, 36*s.*, and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

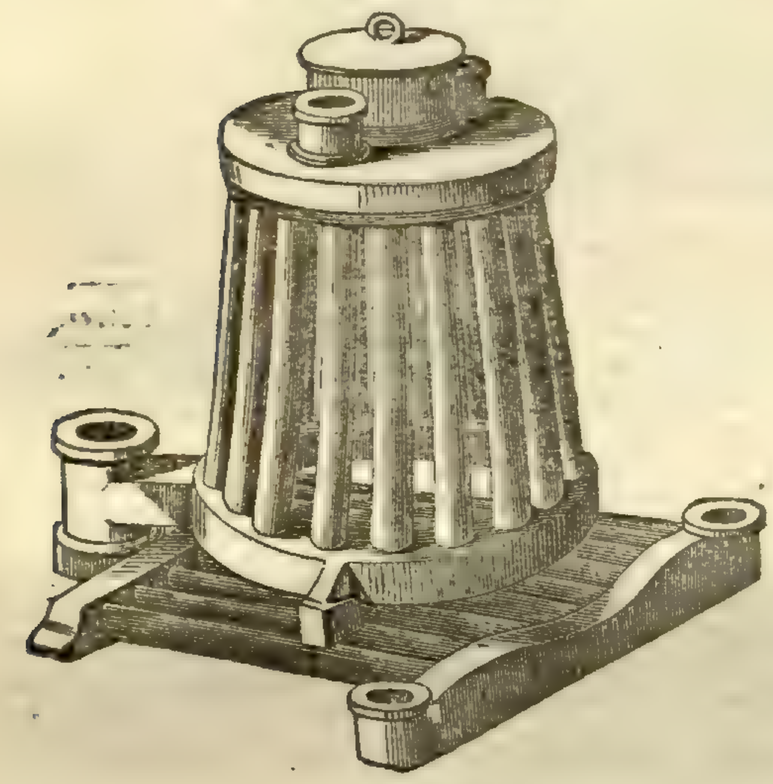
CALVANISED IRON PUMPS

for Liquid Manure or Domestic Use, 3 inches diameter, 30*s.* and 32*s.* 6*d.* each; Tail Pipe for same at from 10*d.* per foot.

CALVANISED IRON SWING WATER BARROWS

for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32*s.* 6*d.* each.

By Her Majesty's Royal Letters Patent.



ORMSON'S

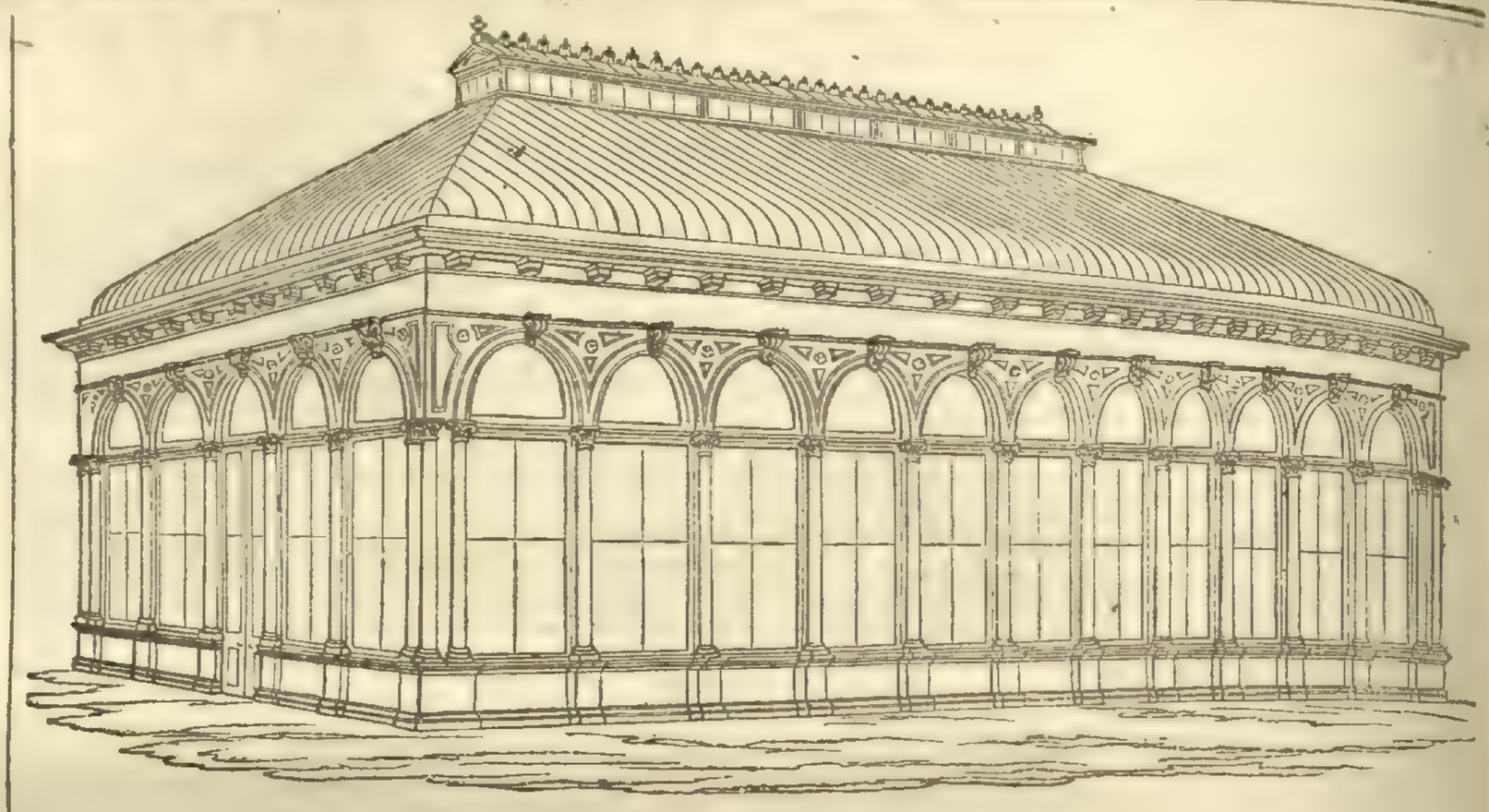
PATENT JOINTLESS TUBULAR BOILER,

HAS NOW GAINED the highest standing reputation for Power, Efficiency, Safety, and Economy of Fuel. There is not a single joint exposed to the action of the fire, which renders these Boilers far more safe than any other Tubular Boiler ever invented.

May be seen in successful operation at Mr. VEITCH's, Royal Exotic Nursery, King's Road, Chelsea, and in the Gardens of many of the Nobility and Gentry in England, Ireland, and Scotland.

They are made of various sizes. Prices on application.

HENRY ORMSON,
Stanley Bridge, King's Road, Chelsea, S.W.



HORTICULTURAL BUILDINGS

MANUFACTURED BY STEAM POWER MACHINERY.

LOWEST PRICES AND BEST MATERIALS.

DESIGNING, BUILDING, HEATING, AND VENTILATING ON THE MOST APPROVED AND SCIENTIFIC PRINCIPLES.

PLANS, SPECIFICATIONS, AND ESTIMATES FREE ON APPLICATION.

HENRY ORMSON, Horticultural Builder, and Hot-water Apparatus Manufacturer, Stanley Bridge, King's Road, Chelsea, London, S.W.

HOTHOUSES FOR THE MILLION.

UNDER the above Heading conspicuous Advertisements appear in our Horticultural publications, using every exertion in endeavouring to persuade the public of the unparalleled cheapness of their so termed improved Hothouses, but which we consider rather a retrograde than an improvement, inasmuch as they appear very incomplete, having no front sashes, rafters, nor other framing or useful fittings, and by no means any ornament to the Garden. We beg respectfully to state that we shall be happy to supply a superior article of improved construction and ornament at full 10 per cent. cheaper.

J. WEEKS & CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, S.W.

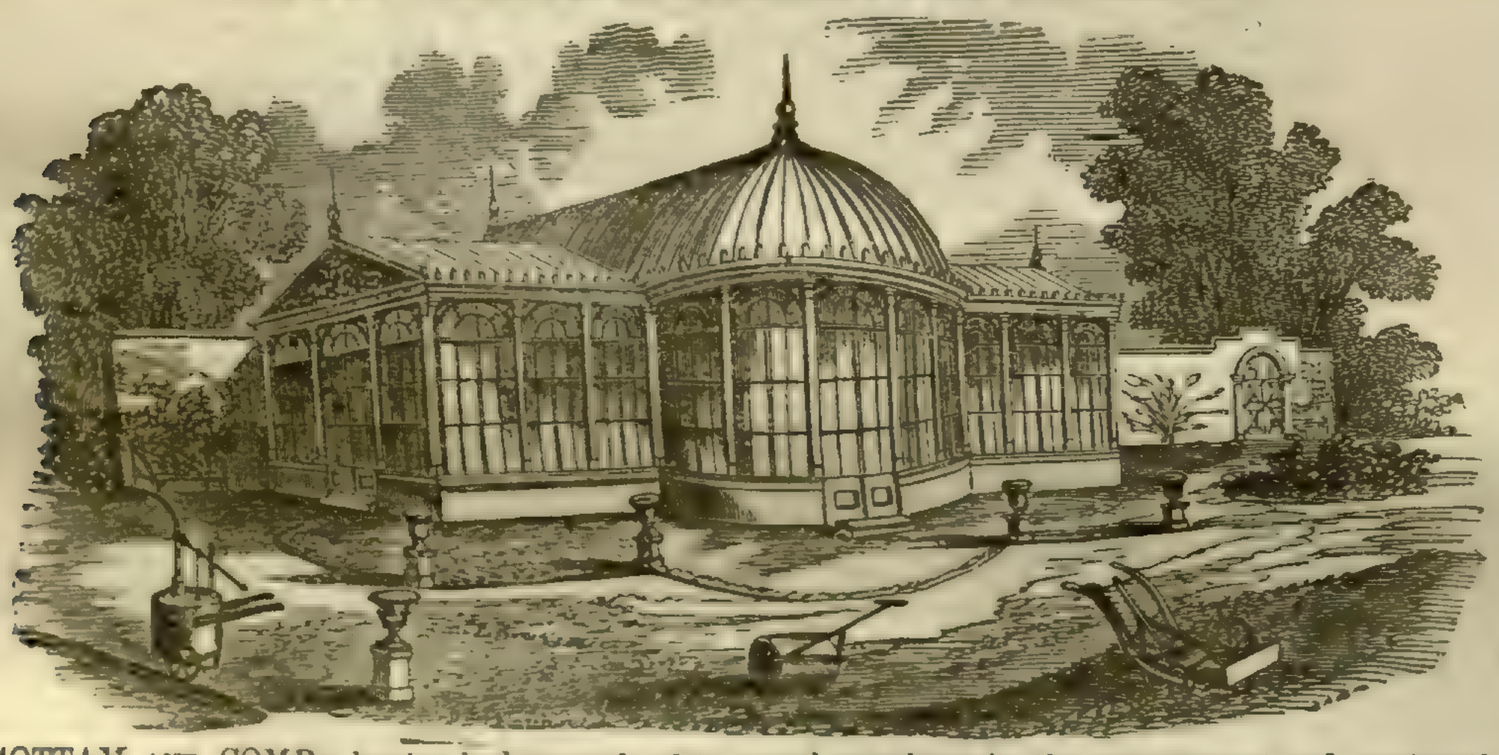
PLANS, ESTIMATES, AND ILLUSTRATED CATALOGUES FREE ON APPLICATION.

COTTAM & COMPY., Engineers, Founders, &c.,

2, WINSLEY STREET, LONDON, W.

☞ **A SHOW ROOM DEVOTED ENTIRELY TO ARTICLES OF HORTICULTURE.**

THE NEW ILLUSTRATED CATALOGUE UPON APPLICATION.



COTTAM AND COMPY. having had upwards of 40 years' experience in the arrangement and construction of every description HORTICULTURAL BUILDINGS AND HEATING BY THE CIRCULATION OF HOT WATER, and well qualified to guarantee the perfect execution of any works ntrusted to them in the erection of

Conservatories	Summer Temples	Orchid Houses	Apricot and Peach Houses
Conservatory or Glass Walls for the protection of plants or ripening wall fruit	Arbours, &c.	Conservatories for Window or Balcony Gardening	Tropical Fruit Houses
	Greenhouses	Vineries	Forcing Pits and Frames
	Orangeries		Cucumber and Melon Houses

☞ *Drawing and Estimates free upon application.*

ORCHARD HOUSES, combining cheapness of construction with suitability of purpose—portable or otherwise.

EXHIBITION PRIZE MEDAL GATES AND STABLE FITTINGS.

Iron Hurdles, Strained Wire Fencing, Game Netting, &c.

Every description of Plain, Ornamental, Cast and Wrought Iron, and Wire Work.

SEE SEPARATE LISTS UPON APPLICATION.

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WEST OF ENGLAND,

BRIDEWELL STREET, BRISTOL.

V. SKINNER (late Partner with J. Weeks & Co.), erects GREENHOUSES, HOT-HOUSES, and HOT-WATER APPARATUS.

UPRIGHT PIPE BOILERS.

Heating on the ONE-BOILER SYSTEM.

C. STEPHENSON, late STEPHENSON AND SONS, 61, Gracechurch St., London, E.C., Manufacturer of Iron Hurdles, Fencing, &c., Improved Iron and Copper Conical Boilers and Apparatus for Warming Buildings of every description by Hot Water.

Prices and Estimates furnished upon application.

WILLIAM HEALY
(Late Burbridge & Healy),
118, Dorset Street, Fleet Street, London, E.C.
HOT-WATER APPARATUS MANUFACTURER

HOTHOUSES FOR THE MILLION.

MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete					£
Do.	do.	40 ft. by 20 ft.	do.	do.	
Do.	do.	44ft. by 24 ft.	do.	do.	

LIST OF PRICES of any size forwarded on application to J. LEWIS.

HOT-WATER APPARATUS.

J. JONES begs to offer a complete HOT-WATER APPARATUS FOR GREENHOUSES, at the following prices, delivered free to any Railway Station in England:—

Size of House.	With Cylinder Boiler.	With Saddle Boiler
20 feet by 10 feet	£8 10 0	£9 0 0
25 ,, by 12 ,,	10 0 0	10 10 0
30 ,, by 12 ,,	11 10 0	12 0 0
30 ,, by 15 ,,	13 10 0	14 10 0
40 ,, by 15 ,,	16 10 0	17 10 0
50 ,, by 15 ,,	18 10 0	20 0 0

The above prices include Boiler, strong Furnace Doors, Bars, Soot Doors, Cistern, Damper, Hot-water Pipes and Connections, Air Pipes, &c., all ready for fixing, and of the best quality. Further particulars will be sent on application. Parties ordering must send plans, showing doorways, position of boiler, &c.—J. JONES, Hot-water Apparatus Manufacturer, 6, Bankside, Southwark, London, S.E.

HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.

KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they Erect all kinds of Conservatories, Vineries, Greenhouses, &c., combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & SON have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

SMITH'S PATENT HOT-WATER APPARATUS for Warming Green and Hothouses, Churches, Schools, &c. One with 30 feet of 3-inch pipe, 6*l.*; 60 feet, 9*l*; 100 feet, 15*l*. 200 feet, 23*l*. A GREENHOUSE for Sale, cheap, 21 feet long, 11 feet wide, price 30*l*.—Address SMITH, Greenhouse Builder, &c., 233, Pentonville Road, King's Cross, London, N.

HOT-WATER PIPES at wholesale prices, with Elbows, Syphons, Tee Pipes, and every other connection, Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, and Elliptic, from 24*s.* each. Boilers and Iron Stands to use without brickwork. Valves from 12*s.* each. Coil Boxes, Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S.

GLAZED WARDIAN PLANT CASES.

HUGH LOW AND CO. have for sale a considerable number of WARDIAN CASES of various sizes, in good and sound condition, well adapted for the safe transmission of plants to distant countries. Prices on application.
Clapton Nursery, N.E.

TREES COMING INTO BLOOM will be protected from Frosts, Hail, &c., by using HAYTHORN'S HEXAGON and CHISWICK GARDEN NETS, now used and recommended by all the Principal Gardeners; the Nets will also Preserve the Fruit from Wasps, Flies, Birds, &c.—For Patterns, Prices, and Testimonials, direct to Mr. HAYTHORN, Clumber Street, Nottingham.

BLOSSOM OF WALL FRUIT TREES.—Worsted Net, an effectual and approved Protection. Will last four years.—R. RICHARDSON, 99, Euston Road, London, N.W. N.B. New Twine Garden Net, 1½*d.* per yard; Tanned Nets, 6*s.* 3*d.* per 100 yards. Samples and plan of fixing Worsted net sent.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.
An allowance to Nurserymen.

WIRE GAME NETTING, One Halfpenny per foot; Sheep Netting, Poultry Hurdles, Flower-stands, Trainers, Garden Arches, Dahlia Rods, Crystal Palace Ornamental Flower Baskets, Fire Guards, Breeding Cages, Wirework of every description, and Window Blinds, at Fox's Metropolitan and East Central Wire Works, 105, Holborn Hill, E.C., from 44, Skinner Street.

BROWN'S FLORAL SHADING.—The cheapest material for protecting the Bloom of Fruit Trees from Frost.—Sold by all Nurserymen and Seedsmen, in pieces—No. 1, 20 yards long, 38 inches wide, 4*s.*; No. 2, 20 yards long, 38 inches wide, 4*s.* 3*d.*; No. 3 (extra stout), 18 yards long, 39 inches wide, 7*s.*

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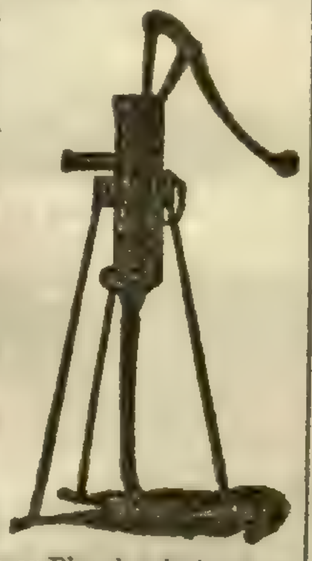
JAMES PULHAM, 204A, Marylebone Road, N.W., and Broxbourne, Herts, was awarded the PRIZE MEDAL of 1851. Cements and Artificial Stone to Buildings executed in any part of the country. Guaranteed for durability and imitation of light-colour stone, and to match with Terra Cotta. References to numerous Works executed during 30 years.

WARNER'S IMPROVED LIQUID MANURE OR GENERAL PORTABLE PUMP.

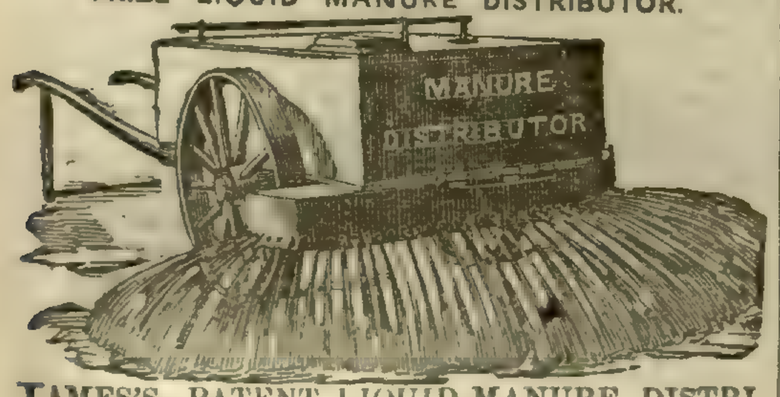
These Pumps are fitted with WARNER'S Patent Bucket and Valve, and cannot clog in action. The barrel is made of galvanised iron, not likely to corrode, and can be raised or lowered at pleasure on the stand, the legs of which fold together, and may be carried with ease by one man to tank or pond.



	£	*s.*	*d.*
Stand and Pump, with screwed tail pipe, fitted with strong brass union for suction pipe	2	15	0
If fitted with barrel of planished copper	3	17	0
Stand and Pump, with plain tail pipe, for tying on suction pipe	2	0	0
2-inch patent rubber and canvas flexible suction pipe, on wires, either 10, 12, or 15 ft., per foot	0	2	2

May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, J. WARNER & SONS, 8, Crescent, Jewin St., London, E.C.
Every description of Machinery for raising Water, by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. Engravings sent on application.

PRIZE LIQUID MANURE DISTRIBUTOR.



JAMES'S PATENT LIQUID MANURE DISTRIBUTOR OR WATER-CART, warranted not to choke up or otherwise get out of order. It is thoroughly adapted for Drill Crops, or Pasture Land, or for Watering Streets; has been awarded NINE FIRST PRIZES.
Full Particulars and Testimonials may be obtained of the Patentee, ISAAC JAMES, Tivoli Waggon Works, Cheltenham.
N.B.—Improved LIQUID MANURE PUMPS, either fixed or portable.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—
"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles.
"Your obedient servant, G. GLENNY."
Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Talbotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.—The Gutta Percha Company Patentees, 18, Wharf Road, City Road, E.C., London.

HORTICULTURAL GLASS.
STOCK SIZES, 16 oz.
These prices only apply to the sizes stated.
Boxes are included, with but few exceptions. When Packages are charged, full price is allowed when returned.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 ,, 10, 13 ,, 10, 14 ,, 10, 15 ,, 10 ..	14*s.* 6*d.*	12*s.* 6*d.*
13 ,, 11, 14 ,, 11, 15 ,, 11, 16 ,, 11 .. / 14 ,, 12, 15 ,, 12, 16 ,, 12, 17 ,, 12 .. / 18 ,, 12, 19 ,, 12, 20 ,, 12 .. .. / 16 ,, 13, 17 ,, 13, 18 ,, 13 .. .. / 19 ,, 13, 20 ,, 13, 21 ,, 13 .. .. / 16 ,, 14, 17 ,, 14, 18 ,, 14 .. .. / 19 ,, 14, 20 ,, 14, 21 ,, 14	16*s.* 6*d.* per 100 feet.	14*s.* 0*d.*

These prices are for Foreign Glass. English Glass, which is far superior, will be 18*s.* per 100 feet.

GLASS FOR ORCHARD HOUSES,
AS SUPPLIED BY US TO MR. RIVERS.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in. / 20 in. by 14 in. / 20 in. by 15 in.	Common	14*s.* 0*d.*	£1 1*s.*
	Superior do. ..	16 6	1 5
	English Glass ..	18 0	1 9

The above prices include the Boxes, with but few exceptions. When Packages are charged, full price is allowed when returned.

JAMES PHILLIPS AND CO.,
180, Bishopsgate St. Without, London, E.C.

HORTICULTURAL GLASS—JUNE TARIFF.

THOMAS MILLINGTON'S reduced Tariff of GLASS, &c.

6 by 4, 7 by 5, 8 by 6, 9 by 7 / 6½ by 4½, 7½ by 5½, 8½ by 6½, 9½ by 7½ } 16 oz. to the foot, 11*s.* 6*d* per 100 feet.

In 100 boxes,—4ths quality, 12*s.* 6*d.*; 3ds do., 14*s.* 4*d.*
10 by 8, 12 by 9, 12½ by 10½, 14½ by 10½, 13 by 11
10½ by 8½, 12½ by 9½, 13 by 10, 15 by 10, 13½ by 11½
11 by 9, 13 by 9, 13½ by 10½, 12 by 11, 14 by 11
11½ by 9½, 12 by 10, 14 by 10, 12½ by 11½

per 100 feet	16 oz.	21 oz.
20 by 12 / 20 by 13 / 20 by 14 / 20 by 15	Common ..	16*s.* .. 24*s.*
	Superior .	18*s.* .. 27*s.*

All Boxes included.
Orchard House sizes as supplied to Mr. Rivers.
Hartley's improved Rough Plate Glass from ⅛ to ¼ in thickness.
Coloured Glass in great variety, at 9*d.* and 1*s.* per foot.
Paints, Genuine White Lead, Linseed Oil, Boiled Oil, Turpentine, Putty, Colours, Varnishes, Brushes, Lamp Glasses, &c.
87, Bishopsgate Street Without, E.C., same side as Eastern Counties Railway.

GLASS FOR CONSERVATORIES, GREENHOUSES, PIT FRAMES, ETC.

HETLEY AND CO. are supplying 16-oz. Sheet Glass of British Manufacture, packed in boxes, containing 100 square feet each, at the following REDUCED PRICES for cash. A reduction made on 1000 feet.

Sizes.—Inches	Inches.	Per foot.	Per 10 feet.
	Under 6 by 4	at 1½*d.* is	£0 12 6
From 6 by 4	,, 7 ,, 5	,, 2*d.* ,,	0 16 8
,, 7 ,, 5	,, 8 ,, 6	,, 2½*d.* ,,	0 18 9
,, 8 ,, 6	,, 10 ,, 8	,, 2½*d.* ,,	1 0 10
,, 10 ,, 8	,, 12 ,, 9	,, 2¾*d.* ,,	1 2 11

Larger sizes, not exceeding 40 inches long.
16 oz. from 3*d.* to 3½*d.* per square foot, according to size.
21 oz. ,, 3½*d.* to 5*d.* ,, ,, ,,
26 oz. ,, 3½*d.* to 7½*d.* ,, ,, ,,
PATENT ROUGH PLATE, THICK CROWN GLASS, and PATENT PLATE GLASS, for Horticultural purposes, at reduced prices, by the 100 square feet.
GLASS TILES AND SLATES made to any size or pattern, either in Sheet or Rough Plate Glass.
Propagating Glasses, Beehive Glasses, Cucumber Tubes, Glass Milk Pans, Glass Water Pipes, and various other articles not hitherto manufactured in Glass.
PATENT PLATE GLASS.—The present extremely moderate price of this superior article should cause it to supersede all other inferior window glass in a gentleman's residence. No alteration connected with the sash is required.
GLASS SHADES, as ornamental to, and for the preservation of every description of goods susceptible of injury by exposure. Prices, since the removal of the excise duty, reduced one-half.
List of Prices and Estimates forwarded on application to
JAMES HETLEY & Co., 35, Soho Square, London, W.

THE AGRICULTURAL ENGINEERS' COMPANY (LIMITED), Swan Lane, Upper Thames Street, London, E.C., hold in stock the following Goods suited to the Season:—Steam Engines, Horse Powers, Chaff Cutters, Crushing Mills, Oilcake Brusers, Root Cutters and Pulpers, Pumps, &c.
Price Lists can be had post free upon application.

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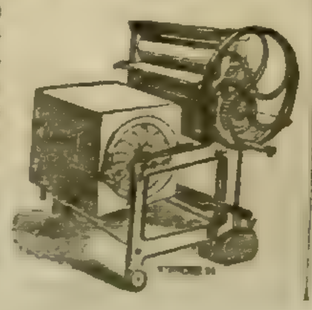

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JOHN MURRAY, Albemarle Street, W.

NOTICE.—In consequence of Messrs. LAWES and MORTON having just commenced 1860 with opposition similar to that which they previously advanced, and wishing to do those gentlemen every justice, Mr. THORLEY is induced to ENLARGE his coming PAMPHLET, making it 64 pages instead of 32—showing beyond doubt that their observations on the so-called "Concentrated Cattle Food," and so-called "feeding statistics," are without foundation; that the Rothamsted experiment was not made with his Food, and consequently that this complete failure must either be through mismanagement or from buying the Condiment at the wrong shop.

The first impression of One Hundred Thousand Copies will be ready about the first day of March, and may be had post-free on receipt of Three Stamps, on application to JOSEPH THORLEY, the Inventor and sole Proprietor of "Thorley's Food for Cattle," 77, Newgate Street, London, E.C.; 21, Broadway, New York, United States; Mr. J. W. THORLEY, Melbourne, Victoria; Mr. ALFRED BURT, Sydney, New South Wales; and of all his agents throughout the United Kingdom.—Feb. 4.

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD, POULTRY AND GAME.—RICE SWEEPINGS, 7*s.* 6*d.* per cwt., in 1¼ cwt. bags; SCREENED RICE, 10*s.* per cwt., in 1¼ cwt. bags; DOG BISCUITS, 14*s.* per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6*s.* and 8*s.* per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

FIFTY PURE BRED DORKING PULLETS FOR SALE, of the large Grey and Speckled varieties.—For prices and particulars apply to JOHN COATES, Escrick, York.

THE BIRMINGHAM CATTLE AND POULTRY SHOW.—SECRETARY WANTED.—The Council require the services of a SECRETARY, to enter upon his duties in March next. He must be competent to conduct the whole of the Correspondence, to keep the Accounts, and generally to manage the business of the Society. The Salary for the first year will be 200*l.*, to be increased to 250*l.* for the second and subsequent years, if the duties are performed to the satisfaction of the Council. Preference will be given to a Candidate having some knowledge of Agriculture, if equally well qualified in other respects.—Applications, with full particulars as to present and former engagements, with copies of testimonials, to be addressed to Mr. T. B. WRIGHT, *Midland Counties Herald Office*, Birmingham, on or before SATURDAY, the 18th inst., endorsed "Cattle Show."

THE LANDS IMPROVEMENT COMPANY.—Incorporated by Special Act of Parliament in 1853.—2, Old Palace Yard, Westminster, S.W. To Landowners, the Clergy, Estate Agents, Surveyors, &c., in England and Wales and in Scotland.

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W.

AN APPEAL TO FARMERS AND FARM LABOURERS.—The rents of the Lands you cultivate have already reached the highest rates possible, and leave you no hope of improving your condition. Generations succeed each other on the same Farms, without your being able to become the Proprietors of them. In France it is far otherwise, and every individual by toiling as you do may become the owner of the Land. The cheapness of Land, the beauty of the climate of the Central Departments, and the fertility of the soil, which produces all kinds of fruit and vegetables, at this moment attracts a vast number of husbandmen from neighbouring countries, who prefer settling there to cultivate the land themselves and improve their condition by tilling it on their own account to labouring in their own country on the lands of others. The advantages offered are without any exception. Estates and Farms with dwelling houses and outhouses, &c., all ready built and containing from 50 to 1000 hectares (the hectare is about 2½ acres) all in one holding may be had at the rate of 400, 600, to 1000 francs the hectare (25 francs is about 1*l.* sterling), comprising the country seats, dwellings, outhouses, homesteads, meadow lands, woods, right of fishing and shooting, live stock, &c., in the purchase, and are offered on credit with every facility for payment. Those who are accustomed to husbandry, and who labour themselves, may produce an income equivalent to the most advantageous industrial enterprise, of which they may be convinced on visiting the spot, and inspecting the mode of culture at present pursued with so little intelligence in these countries, and which notwithstanding produces most excellent results, as may be seen by visiting the standing crops. This is the best guarantee that can be desired. But still what an advantageous result might be obtained by introducing on these excellent lands the style of English culture with its superior methods of Farming! They would improve ten-fold and in a very short time the value of the produce as well as the property itself.—For further and more ample particulars apply to Mr. GUIMARD, No. 9, Rue St. Roch, Paris. A list of the different Estates and Properties for Sale, with full particulars, may be seen on application to Messrs. W. H. SMITH & Son, 186, Strand, London, W.C.

NURSERY GROUND.

TO BE LET, WHITTINGTON NURSERY, Upper Holloway, N., to be entered upon immediately.—For particulars apply to J. F. MARSON, Esq., Small Pox Hospital, or to Mr. BUNNEY, Nurseryman, Stratford, Essex, E.

HUCCLECOTE GARDENS, 2½ MILES FROM GLOUCESTER.

TO BE LET, with immediate possession, the above capital walled-in GARDENS, containing about 4 acres with House, Farm-yards, Buildings, Orchard, and Land adjoining, containing in the whole about 16 acres, with Greenhouses, Propagating houses, Vineries, Pits, &c. Extent of glass 5770 feet.—For particulars apply to W. KNOWLES, Auctioneer, St. Mary's Square, Gloucester.

TO BE LET, the GARDENS at Hornby Castle, Catterick, Yorkshire, with the Pineries, Vineries, Pits, &c., all of which are in first-rate working order, and most efficiently and economically heated by hot water as arranged and recently put up by the Messrs. Weeks, of King's Road, Chelsea, London, S.W.—To view, apply to Mr. RICHARDSON, the Gardener upon the spot, and for particulars to Mr. WILEY, at the Office, Hornby Castle, Catterick.

TO BE LET, a first-class FRUITERER'S and GREENGROCER'S BUSINESS, with a good Trade in SEEDS and GARDENING. Rent all let off.—For particulars apply (with stamped address) Mr. SMITH, Gardener, 16, Drummond Crescent, Euston Square, London, N.W.

FARM IN THE COUNTY OF NORTHUMBERLAND.

TO BE LET, the valuable FARM of HOUNDALEE, situated about a mile and a half from the Widdrington Station of the Newcastle and Berwick Railway, lying in the Chapelry of Widdrington and County of Northumberland. The Farm consists of 682 acres, or thereby: the land is of the best description, and contains a fair proportion of Turnip and Barley soil and excellent old Pasture. Drainage operations are now being actively carried on, and the whole of the drainage will be completed in about two years. The House and Buildings are large and commodious and of modern construction, and will be put into complete repair. To a tenant of capital and skill every encouragement will be given. This Farm will be let with entry to the Houses, Fallows, and Grass, at Whitsunday, 1860, and to the Arable land on the removal of the away-going crop, for such numbers of years as may be agreed upon. Offers will be received till March 1, by Geo. Wm. Hay, Esq., Sudbury, Derby, who will furnish all further particulars, and the boundaries will be shown to the intending Offerers by Andrew Calder, the Forester at Widdrington.

FARMS TO LET in Yorkshire, from the 25th March, Tithe free, by the Year or on Lease. One consists of 303A., 3R., 25P., two-thirds of which is strong land; one of 226 acres or thereabouts, principally strong; and one of 232 acres, containing a good portion of Turnip and Potato soil, with upwards of 80 acres of rough Grass. The Land upon all the Farms is excellent for Wheat. The Farms are now being drained at 8 yards apart. A liberal return of Rent will be made for the improvement of the first Farm. High Farming and a capital of 8*l.* to 10*l.* per acre will be expected, as the agreements are very liberal. The first two Farms (which will be let together if desired) are within two miles of a first class station within six hours of London, Bristol, or Liverpool. The fields are perfectly adapted to steam cultivation, which will be found in use upon the estate. The markets are amongst the best in England. The houses are good.—Apply to H. V. SEKWELL, Bury, Biggleswade, Beds.

Sales by Auction.

TO NOBLEMEN, NURSERYMEN, FLORISTS AND OTHERS.

MESSRS. PROTHEROE AND MORRIS are instructed by Mr. Hally to Sell by Auction, at the Mart, on TUESDAY, February 16, at 12 o'Clock, about 300 choice DOUBLE CAMELLIAS, from 1 to 7 feet, consisting of all the most approved kinds, beautifully furnished with bloom buds; fine AZALEA INDICA in flower; a choice assortment of about 300 very handsome Standard and Dwarf ROSES; a fine collection of AMERICAN PLANTS, Lilium lancifolium sorts; a few EUGENIA UGNI and OTAHEITE ORANGES; choice DAHLIAS in dry roots; PÆONIAS, FUCHSIAS, VERBENAS, &c.—On view the morning of Sale; Catalogues had at the Mart, and of the Auctioneers, American Nursery, Leytonstone, Essex, N.E.

NORTHUMBERLAND.—FREEHOLD ESTATE, &c.

MR. SAMUEL DONKIN will Sell by Auction, at the Central Station Hotel, Newcastle-upon-Tyne, on TUESDAY, February 21, at 2 for 3 o'Clock in the afternoon precisely.

LOT 1.—The ESTATE of CHRISTON BANK and RED HOUSES, otherwise CLAXTON'S MOOR HOUSE, in the parish of Embleton, in the county of Northumberland containing:—

	A.	R.	P.
Arable Land	230	1	5
Pasture Land	264	0	37
Plantations	10	2	5
Homestead and Roads	11	1	22
	516	1	29

The Estate was recently for several years in the occupation of the proprietor, when the buildings were completely repaired and much enlarged, a large part of the Estate drained, and the whole greatly improved. The Pastures are well known as some of the most valuable Feeding Land in Northumberland. The whole of this Lot is Let to Mr. W. Morrison on a Lease for 15 years from the 13th day of May, 1856. Great facility of communication both to the North and South is afforded by the trunk line of the North Eastern Railway, which intersects and has a Station upon the property. There is Coal and abundance of excellent Limestone upon the property, with Kilns for Burning the latter, for which almost unlimited demand exists in Tweedside and the South of Scotland. These Minerals are Let on Lease to substantial Tenants. The Tithes are commuted for Rentcharges amounting to 106*l.* 16*s.* 2*d.* 18*s.* 6*d.* for Castle Guard and Quit Rents is payable out of this Lot to the Earl of Tankerville.

LOT 2.—1. BLINK BONNY HOTEL, with a Four-stalled Stable, Out-houses, and 2A. 2R. 35P. of Land, in the Occupation of Mr. George Cockburn. 2. A DWELLING HOUSE and SHOP, adjoining the above, in the Occupation of Mr. James Thompson. 3. THREE COTTAGES, also adjoining the above. These premises have been lately built, and are well situated for business, from their situation immediately adjoining the Railway Station, and to the road which is the great thoroughfare from the railway to the East and West.—The Property may be seen on application to the Tenants, and Particulars may be had of the Auctioneer, at the Place of Sale, and at the Offices of Messrs. WILLIAM & BENJAMIN WOODMAN, Solicitors, Morpeth.—February 4.

TO POULTRY AND PIGEON FANCIERS.

PERIODICAL SALES BY AUCTION.

MR. J. C. STEVENS begs to announce that he will hold SALES BY AUCTION of FANCY POULTRY and PIGEONS, on the First and Third TUESDAY in every Month, during the Season, at his Great Room, 38, King Street, Covent Garden, W.C.; parties desiring to have Birds included in the Catalogue are requested to make their entries at least a Fortnight prior to each Sale.

DAYS OF SALE.

TUESDAY, February	7th.		TUESDAY, April	3d.
,, ,,	14th.		,, ,,	17th.
,, ,,	21st.		,, May	1st.
,, March	6th.		,, ,,	15th.
,, ,,	20th.		,, June	5th.

TUESDAY, June 19th.

NOTE.—Catalogues will be forwarded on receipt of Two Stamps. Marked Catalogues with Post-office Orders sent on the Saturday after the Sale.

38, King Street, Covent Garden, London, W.C.

POULTRY AND PIGEON SALE.

MR. J. C. STEVENS will Sell by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on TUESDAY, Februry 7, at 12 o'Clock precisely, about 240 lots of POULTRY and PIGEONS, consisting of Spanish from Mrs. Stow of Tewkesbury; Cochins from the Rev. G. Gilbert of Claxton; T. Bridges, Esq., of Croydon, and W. B. Warwick, Esq, of Southwell; Silver Polands from Mr. P. Jones of Fulham; Dorkings from Miss Milward of Bath, Rev. J. E. Carter of Essex, and other varieties from celebrated breeders. Also a good lot of Pigeons from Messrs. Jones, Esquilant, Brooke, and other well-known fanciers.—May be viewed on the Morning of Sale, and Catalogues had; if for the country, by enclosing two stamps.

SPECIAL EXTRA POULTRY AND PIGEON SALE

ON THE WEEK OF THE CRYSTAL PALACE POULTRY SHOW.

MR. J. C. STEVENS will Sell by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on TUESDAY, February 14, at 12 o'Clock precisely, FIRST CLASS POULTRY AND PIGEONS, consisting of the whole of Mr. Botham's stock of Spanish, which will include the Liverpool Cup birds, &c., &c.; about 40 Lots of First Class Poultry from Mr. Boothby of Bristol; White and Buff Cochins, from F. Manning, Esq., of Suffolk; Black, Gold, and Silver Polands from G. S. Fox, Esq., of Somerset; about 15 Lots of Poultry from Mrs. Pattison, and other varieties from celebrated breeders. The PIGEONS are remarkably choice, and include the surplus stocks of POUTERS from S. Bult, Esq., and CARRIERS from W. W. Hayne, Esq., and D. S. Oliver, Esq.—May be viewed on the Morning of Sale, and Catalogues had; if for the country, by inclosing two stamps.

HIGHLY IMPORTANT SALE OF CONIFEROUS SEEDS.

MR. J. C. STEVENS will Sell by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on WEDNESDAY, February 8, at half-past 12 o'Clock precisely, PINES, CONES, and SEEDS, including Wellingtonia gigantea, Mammoth tree 300 feet high, 25 feet diameter, from the Calaveras Grove, California. Libocedrus decurrens or Thuja gigantea, 150 feet high, from 4 to 6 feet in diameter, from Sierra Nevada, California. Cupressus Lawsoniana, 100 to 150 feet high, 1 to 2 feet in diameter, a most elegant tree, California. Cupressus macrocarpa, resembles the Cedar of Lebanon in its form when old. Abies Menziesi, from the banks of Frazer's River, 100 to 150 feet high, 2 to 3 feet in diameter. Abies Mertensiana: a most graceful Pine, 100 to 200 feet high, from British Columbia and Vancouver's Island. Abies Douglasi, 200 to 250 feet high, 2 to 4 feet in diameter, British Columbia and California. Pinus Lambertiana, 300 feet high, 4 to 8 feet in diameter; this Pine surpasses in size every other species in California, and the timber is also more valued for house purposes. Pinus Jeffreyi, a noble species of Pine from the Sierra Nevada, California, grows from 100 to 200 feet high, 2 to 4 feet in diameter, hardy, elevation above the sea 4000 to 6000 feet. Pinus Sabiniana, 50 to 100 feet high; California. Pinus Benthamiana from California. Pinus ponderosa, Douglas. This species deserves general cultivation for its size, beauty, and timber, 100 to 200 feet high, 4 to 6 feet in diameter; from Sierra Nevada, California. Pinus insignis: this Pine will grow near the sea and in the poorest soil. Arctostaphylos glauca: a very interesting shrub, deserves general cultivation from its pretty rose-coloured flowers and singular foliage; grows 6 to 10 feet high; California. Cornus Nuttalii: a fine shrub, 10 to 20 feet high, flowers white, 4 inches in diameter, hardy, grows 4000 to 6000 feet elevation in the Sierra Nevada. Ceanothus sp., flowers white, spikes, from 4 to 6 inches long; a most charming shrub when in flower; hardy, Sierra Nevada, 4000 to 6000 feet elevation above the sea. Quercus Hindsii, a tree from 60 to 80 feet high and 4 feet diameter, from the valleys in California. Quercus sp., a tree from 40 to 60 feet high, from the base of the Sierra Nevada. Also a small importation from Mexico of Pinus ocampii Devoniana.—May be viewed on the Morning of Sale, and Catalogues had; if for the country, by inclosing two stamps.

SEEDS FROM MEXICO FOR SALE.

MR. J. C. STEVENS begs to announce that he will include in his Sale on WEDNESDAY, February 8, 1 lb. of clean seeds of PINUS OCAMPII DEVONIANA, which Messrs. Roezl & Co. are sure will succeed in England. They are collected from an immense tree which they had to cut down for the purpose, in the department of Michoroan, at an elevation of at least 10,000 feet above the level of the sea, where not even Barley can grow, it is so cold, and only a very few vegetebles of the commonest kinds. Frosts are not only frequent, but to be relied on at all times in the year, in summer as well as in winter, so that there is no doubt that the tree grown from these seeds will be perfectly hardy in England. This seed will be divided into 20 Lots.—May be viewed on the morning of Sale, and Catalogues had; if for the country, by inclosing two stamps.

1000 ROSES, FLOWER AND VEGETABLE SEEDS FROM HOLLAND; 1000 GLADIOLUS BRENCHLEYENSIS (TRUE); 2000 STRONG FASTOLF RASPBERRIES, 500 HANDSOME BUSHY PLANTS OF UPRIGHT CYPRESS, 36 HANDSOME-TRAINED TREES OF THE NEW PLUM "ANGELINA BURDETT," 500 WIZARD OF THE NORTH STRAWBERRIES, 500 STRONG ROOTS OF DELPHINIUM FORMOSUM, &c.

MR. J. C. STEVENS begs to announce that he will Sell the above by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on FRIDAY, Feb. 10, at half-past 12 o'Clock precisely.—May be viewed on the Morning of Sale, and Catalogues had; if for the country, by inclosing two stamps

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CLEARING SALE AT BROADFIELD NURSERIES, SHEFFIELD, PREVIOUS TO REMOVAL, OF TREES, SHRUBS, PLANTS, ETC.

MR. ROWLAND WARD is instructed by Mr. F. Godwin to offer for public competition, on TUESDAY and WEDNESDAY, February 7 and 8, each day at 10 30 a.m., the remainder of his extensive and choice NURSERY STOCK, embracing Deciduous, Flowering, and Evergreen Shrubs; Fruit, Forest, and Ornamental Trees; American Plants, Roses, and Coniferæ. Also, a fine and healthy assortment of Stove and Greenhouse Plants, consisting of Azaleas, Camellias, Ericas, Epacrises, Fuchsias, Geraniums of all Classes, &c.—Catalogues may be had of the Owner, at the above Address; or of the Auctioneer, Handsworth Woodhouse, near Sheffield.

HOTHOUSES FOR THE MILLION.

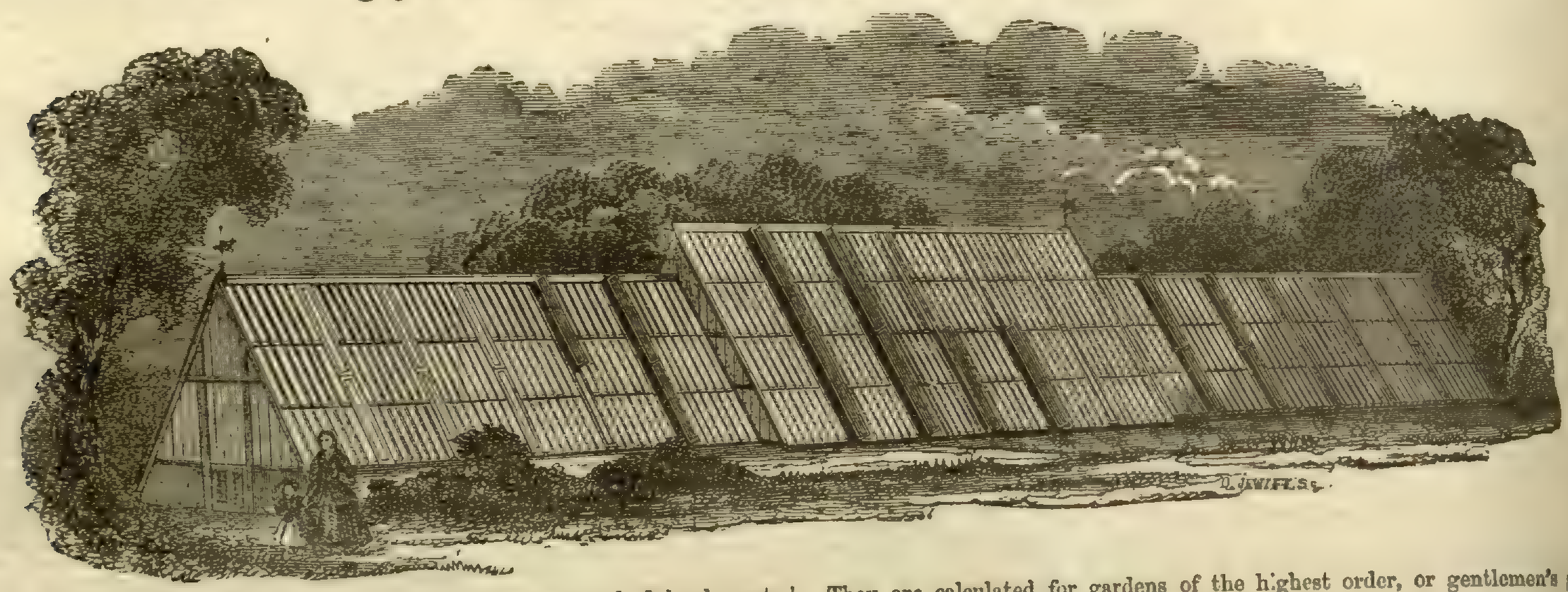
SAMUEL HEREMAN

BEGS TO INFORM THE PUBLIC THAT HE HAS BEEN APPOINTED SOLE AGENT FOR THE MANUFACTURE AND SALE OF

THE NEW PORTABLE AND ECONOMICAL HOTHOUSES,

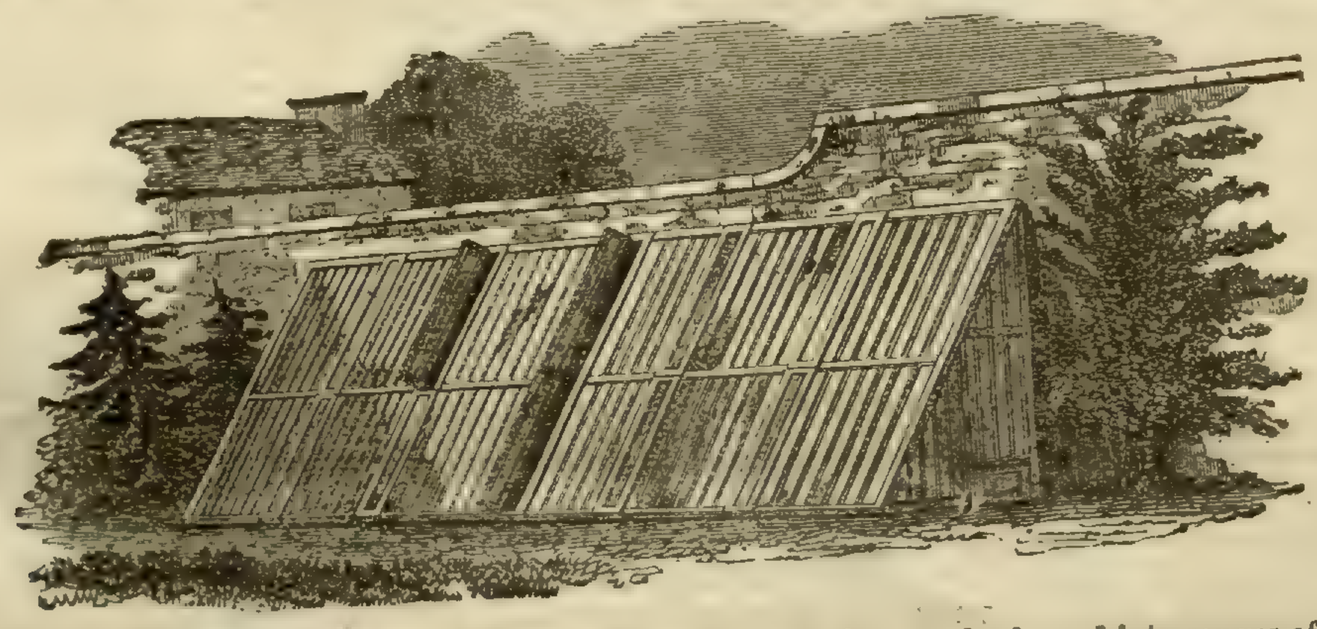
INVENTED AND PATENTED BY

SIR JOSEPH PAXTON, M.P.



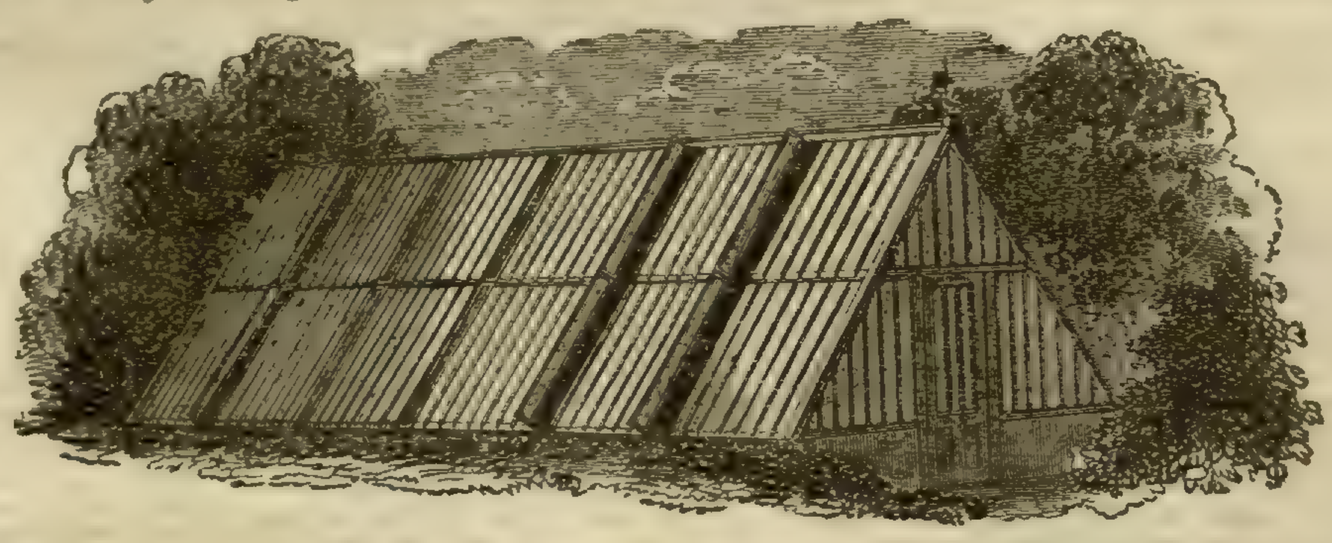
These Buildings are of unparalleled cheapness, and being composed of simple parts can be enlarged, removed, or adapted to any Horticultural purpose by ordinary labourers.

They are calculated for gardens of the highest order, or gentlemen's gardens generally, for market gardens where they may be made to cover any extent of surface, and also for suburban, villa, and cottage gardens.



The moderate cost of these houses not only places within the reach of persons of limited means a luxury hitherto confined to the wealthy, but offers immense advantages to all who have garden walls already standing—as from their peculiar construction they can be formed into ranges of lean-to houses with a facility and at a cost hitherto unheard of.

Whilst they are adapted for permanent structures they are also particularly



suited for persons having temporary or limited tenures, as they can with ease be packed up and removed at the expiration of the tenancy.

The above engravings show some of the uses to which this invention can be adapted, and the forms it can be made to assume. It will be seen that no houses, however costly, can be turned to more useful purposes or more effectually fulfill all the requirements of Horticultural operations. Although the chief aim of the inventor was to reduce the cost of such structures, and to place them within the reach of all classes, yet by varying the arrangements and dimensions of the several parts, ornamented buildings can easily be formed. The prices of these houses with water troughs, doors and ends complete, are as follows:—

	8 Feet Lights.		10 Feet Lights.		12 Feet Lights.
30 feet in length	£33 0	...	£42 5	...	£53 0
40 feet in length	41 16	...	53 17	...	66 15
50 feet in length	51 5	...	65 10	...	80 10
60 feet in length	60 12	...	77 0	...	94 5
70 feet in length	69 5	...	87 10	...	106 5
80 feet in length	78 12	...	99 3	...	120 10
90 feet in length	87 18	...	111 0	...	139 0
100 feet in length	90 15	...	121 5	...	147 0

The above lengths are given in round numbers, but from the nature of their construction the houses will practically in all cases exceed these measurements

HEATING APPARATUS of the best description can be supplied and adapted if required.

It is intended to supply purchasers according to the rotation in which their orders are received, the sale having commenced on Monday, January 9, 1860.

Letters prepaid addressed to S. HEREMAN, 7, Pall Mall East, S.W., will receive immediate attention.

Printed by WILLIAM BRADBURY, of 13, Upper Woburn Place, and FREDERICK MULLETT EVANS, of No. 20, Queen's Road, West, both in the Parish of St. Pancras, in the Co. of Middlesex, Printers, at their Office, Lombard St., Precinct of Whitefriars, City of London, and published by them at the Office, No. 5, Upper Wellington St., Parish of St. Paul's, Covent Garden, in the said Co.—SATURDAY, February 4, 1860.

SUPERB SEEDLINC FUCHSIAS.

GEORGE SMITH in offering the following Six superb SEEDLING FUCHSIAS, begs to remark that Great Eastern is a most noble flower, and by far the largest Fuchsia ever offered. Elegantissima is, without doubt, the most elegant Fuchsia in cultivation; while Criterion for shape and substance, combining smoothness and brilliancy of colour, will prove a gem. Butterfly is also a splendid white corolla'd variety flower, as large as any of its class, of fine form, and very remarkable, it having white tips on the ends of the sepals. Solferino and Senator are also of fine quality, and must be admired when grown.

GENERAL DESCRIPTIVE CHARACTER.

BUTTERFLY.—Tube short and stout; sepals broad and well reflexed; colour bright crimson, tipped with white; corolla pure white, of good size and form. This will prove to be a very handsome kind.

CRITERION.—Tube and sepals of great substance; colour coral red; corolla violet purple, stout, and well expanded.

ELEGANTISSIMA.—Tube and sepals rich scarlet crimson; sepals broad and elegant, reflexing most gracefully; corolla violet purple, quite circular and expanded, measuring 1½ inch across, very free and fine habit.

GREAT EASTERN.—Tube and sepals bright crimson, the latter very broad and well reflexed; the corolla extra large, dark purple. A free grower and bloomer.

SENATOR.—Tube and sepals bright waxy crimson, the latter broad and well reflexed; corolla large and well expanded, rich violet. Received a First Class Certificate at the Royal Botanic Gardens, Regent's Park.

SOLFERINO.—Tube and sepals very bright; corolla rich purple, very large and extra fine. Recommended by the Horticultural Society,

*** The above are good healthy kinds to grow, to be sent out about the 20th April, 1860, in good plants, at 10*s.* 6*d.* each. A liberal discount to the Trade. All Orders from unknown Correspondents must be accompanied with Money Orders.

*** Coloured Illustrations of the above by Mr. ANDREWS, in exchange for 12 Postage Stamps.

NEW SCARLET GERANIUM VIVID.—This will be found the most brilliant deep crimson scarlet, with fine round pips, small white eye, and of fine substance; a large truss, and very conspicuous. Fine habit for exhibition or bedding. Obtained a First Class Certificate at the Royal Botanic Gardens, Regent's Park, for its superior qualities. Plants 5*s.* each.

NEW CALCEOLARIA LILLIO.—Large and intense bright yellow, good form, and habit shrubby. This is a very hardy variety, and fine either for exhibition or bedding purposes. Plants 5*s.* each.

Tollington Nursery, Hornsey Road, Islington, London, N.

HORTICULTURAL AGENT AND VALUER.

MR ALFRED CHANDLER, (of the late firm of CHANDLER & SONS,) 28, Priory Road, Wandsworth Road, S.

PAGE'S COMPOSITION FOR THE DESTRUCTION OF BLIGHT upon Roses, Wall-fruit Trees, Cucumbers, Melons, Vines, Stove and Greenhouse Plants, has stood the test of eight years' public trial, and its great success has led to numerous imitations. Dr. Lindley, in his leading article of October 25, 1856, reported 182 cases in its favour—sufficient to convince the most sceptical.

4*s.* per gallon, (sufficient to make four fit for use).
10 gallons and upwards, Carriage paid to London.

LONDON AGENTS:—
Henderson & Co., Pine-apple Place, W.
Hooper & Co., Covent Garden, W.C.
Mr. Veitch, King's Road, Chelsea, S.W.
Mr. Clark, Streatham Place, Brixton Hill, S.
Mr. Barnes, Camden Nursery, Camberwell, S.
Mr. Hopgood, Shepherd's Bush, W.
Cutbush & Sons, Highgate Nursery, N.

and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

GISHURST COMPOUND
PATENTED,
FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN
AMERICAN BLIGHT	ANTS	FLY

BED BUGS, &c.,
And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1*s.* for first trials and small uses, such as destroying bed bugs; 3*s.* for not large gardens; 10*s.* 6*d.* for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

FOOD FOR WINTER STOCK.

SAMUELSON'S celebrated TURNIP CUTTERS, PULPERS, CHAFF-CUTTERS, OIL-CAKE BREAKERS, CORN and MALT-CRUSHING MILLS, all with the latest patented improvements, may be obtained through any Ironmonger or Implement Dealer in the kingdom, or (carriage paid to the nearest station to the purchaser) direct from the manufactory.—Britannia Works, Banbury, Oxon; or London Warehouse, 76, Cannon Street West, City, E.C.
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"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, His Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and —Collier, Esq., of Dartford.

PROTECTION FROM THE MORNING AND EVENING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and, floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide, 1*s.* 6*d.* per yard run.
Four, 3*s.* per yard; also,
An improved make three yards wide, 2*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, whole and sole manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

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AS SUPPLIED BY US TO MR. RIVERS.

20 in. by 12 in.		16 oz.	21 oz.
20 in. by 13 in.	Common	14*s.* 0*d.* ..	£1 1*s.*
20 in. by 14 in.	Superior do. ..	16 6 ..	1 5
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The above prices include the Boxes, with but few exceptions. When Packages are charged, full price is allowed when returned.

SMALL SHEET SQUARES, in 100 feet boxes.				*s.*	*d.*
6 by 4	6½ by 4½	7 by 5	7½ by 5½	11	6
8 „ 6	8½ „ 6½	9 „ 7	9½ „ 7½		
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Boxes 2*s.* each, returnable at full price.

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HORTICULTURAL GLASS—JUNE TARIFF.

THOMAS MILLINGTON'S reduced Tariff of GLASS, &c.

6 by 4, 7 by 5, 8 by 6, 9 by 7 } 16 oz. to the foot, 11*s.* 6*d*
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In 100 boxes,—4ths quality, 12*s.* 6*d.*; 3ds do., 14*s.* 4*d.*

10 by 8, 12 by 9, 12½ by 10½, 14½ by 10½, 13 by 11
10½ by 8½, 12½ by 9½, 13 by 10, 15 by 10, 13½ by 11½
11 by 9, 13 by 9, 13½ by 10½, 12 by 11, 14 by 11
11½ by 9½, 12 by 10, 14 by 10, 12½ by 11½

	per 100 feet	16 oz.	21 oz.
20 by 12	Common ..	16*s.* ..	24*s.*
20 by 13			
20 by 14	Superior .	18*s.* ..	27*s.*
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All Boxes included.

Orchard House sizes as supplied to Mr. Rivers.
Hartley's improved Rough Plate Glass from ⅛ to ⅝ in thickness.
Coloured Glass in great variety, at 9*d.* and 1*s.* per foot.

Paints, Genuine White Lead, Linseed Oil, Boiled Oil, Turpentine, Putty, Colours, Varnishes, Brushes, Lamp Glasses, &c.

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HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2*d.* to 3*d.* per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

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See *Gardeners' Chronicle* of February 4.

GLAZED WARDIAN PLANT CASES.

HUGH LOW AND CO. have for sale a considerable number of WARDIAN CASES of various sizes, in good and sound condition, well adapted for the safe transmission of plants to distant countries. Prices on application.
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ROSHER AND CO. beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.

Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.

N.B. Outline sketches of the patterns will be forwarded by post on application.

BRITTAIN'S GARDEN NETS are admitted to be the best and cheapest protection to Fruit Trees, and the most durable Hothouse Shading for summer. 55 inches wide, No. 1, 5*d.*; 2, 6*d.*; 3, 8*d.* a yard. TIFFANY, 2½*d.* and 3*d.*

Sold by all Nurserymen.—BRITTAIN & Co., Manchester.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1¼*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

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BROWN'S FLORAL SHADING.—The cheapest material for protecting the Bloom of Fruit Trees from Frost.—Sold by all Nurserymen and Seedsmen, in pieces—No. 1, 20 yards long, 38 inches wide, 4*s.*; No. 2, 20 yards long, 38 inches wide, 4*s.* 3*d.*; No. 3 (extra stout), 18 yards long, 39 inches wide, 7*s.*

ARCHANGEL MATS, &c.—A lot of these new tar-stained, to be sold low; also 15,000 good colour, and a quantity of Dunnage or small Mats.—Prices, &c., on application to JOHN MORISON, 25, Norton Folgate, N.E.

WHY NOT PRESERVE YOUR FRUIT?—NETTING, BUNTING, and SCRIMS for Fruit trees and tender Plants; the best protection against Frost, Hail, and Wind. Outside Shades for Greenhouses, Rick Cloths (new and second-hand), with Poles, Pullies, and Lines. At BENJAMIN EDGINGTON'S Marquee, Tent, and Flag Manufactory, 2, Duke Street, Southwark, S.E.; West-End Establishment, 32, Charing Cross, S.W.

TREES COMING INTO BLOOM will be protected from Frosts, Hail, &c., by using HAYTHORN'S HEXAGON and CHISWICK GARDEN NETS, now used and recommended by all the Principal Gardeners; the Nets will also Preserve the Fruit from Wasps, Flies, Birds, &c.—For Patterns, Prices, and Testimonials, direct to Mr. HAYTHORN, Clumber Street, Nottingham.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"420, Strand, London.

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles.

"Your obedient servant, G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Talbotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or Country.—The Gutta Percha Company Patentees, 18, Wharf Road, City Road, E.C., London.

THE AGRICULTURAL ENGINEERS' COMPANY (LIMITED), Swan Lane, Upper Thames Street, London, E.C., hold in stock the following Goods suited to the Season:—Steam Engines, Horse Powers, Chaff Cutters, Crushing Mills, Oilcake Brusers, Root Cutters and Pulpers, Pumps, &c.

Price Lists can be had post free upon application.

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CONTINUE to give their best attention to the manufacture of the most Modern and Improved Agricultural Machinery, including

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HARROWS, CULTIVATORS, ROLLERS, AND OTHER FIELD IMPLEMENTS.
HORSE RAKES AND HAYMAKERS.
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RANSOMES AND SIMS have long been celebrated for combining in their Agricultural Machinery the utmost simplicity, durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture.

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WERE AWARDED THE

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Professor Varnell's Enamelled and Wrought-iron Stable Fittings.

These Patent Mangers and Stable Fittings obtained the Commendation and the Silver Medal of the Royal Agricultural Society of England and the Royal Agricultural Society of Ireland, are adopted by the Royal Veterinary College, and Professor Spooner of that Institution states that they should be used by all who value the health and comfort of their horses. They can be had plain, galvanised, or enamelled.

A Show Room is devoted entirely to every description of Stable Furniture, and full-sized stalls and loose boxes are erected for inspection at St. Pancras Iron Works.

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ST. PANCRAS IRON WORKS, OLD ST. PANCRAS ROAD, LONDON, N.W.,
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AGRICULTURAL SEEDS, 1860.

PETER LAWSON AND SON,

THE QUEEN'S SEEDSMEN,

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RESPECTFULLY announce the publication of their PRICED LIST OF AGRICULTURAL SEEDS, including in addition to TURNIPS, MANGELS, and other FIELD ROOTS, quotations of CLOVERS, RYE-GRASS, PASTURE GRASSES, AND HERBAGE AND FORAGE PLANTS.

P. L. AND SON pay especial attention to their stocks of TURNIPS, MANGELS, CARROTS, &c. which are raised under their immediate personal superintendence, in accordance with the most approved practice; they also continue to give their most particular attention to Natural Grasses, which they supply assorted of the most approved kinds for various purposes, soils, and situations, as detailed in a series of tables recently published, and which may be had on application.

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THE CHEAPEST, EASIEST, AND BEST WAY TO OBTAIN A YEAR'S SUPPLY OF GARDEN SEEDS IS TO ORDER ONE OF

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Carriage free by Rail except No. 3.

The following TESTIMONIALS will give some idea of the high character our Seeds have obtained.

From Sir JOHN OWEN, Bart., M.P., *Lord Lieutenant of Pembrokeshire.*

"Taynton House, Dec. 1, 1859.

"Having dealt with you for several years I have great pleasure in bearing my testimony to the good quality of the Seeds with which you have supplied me, and I have recommended you to my son, who has succeeded me in the occupation of this farm."

From General DRUMMOND.

"The Boyce Court, Dec. 11, 1859.

"I shall shortly send you an order for Seeds as usual. I have been hitherto extremely well satisfied with the Plants and Seeds with which you have supplied me for the last 20 years; I am especially pleased with the Wheeler's Imperial Lettuce, and also with the Flower Seeds."

From the Rev. ALAN G. CORNWALL.

"Ashcroft House, Dec. 10, 1859.

"I have very sincere pleasure in informing you that the Grass, Clover, Cabbage, and Mangel Wurzel Seeds have proved of excellent quality. I could not desire better; and I trust that your honest dealings will be duly appreciated by the public."

Ladies and Gentlemen who have hitherto found difficulty in obtaining really first-class Seeds will do well to communicate with us, and we will forward our "Little Book," which will give full particulars of the above collections, and also prices of our Farm Seeds, Flower Seeds, &c.

J. C. WHEELER and SON, Seed Growers, Gloucester.

STRAWBERRY,—WIZARD OF THE NORTH (ROBERTSON'S).

DANIEL ROBERTSON continues to supply strong Plants of the above fine variety at 63*s.* per 100 or 9*s.* per dozen. For description, &c., see former advertisements. It can also be supplied genuine by the following parties in the Trade in and around London:—

Brigden, Mr. Timothy, 10, Railway Arcade, London Bridge, S.E.
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Carter, Mr. James, & Co., 237 and 238, High Holborn, W.C.
Charlwood & Cummins, Messrs., Tavistock Row, Covent Garden, W.C.
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Cornwell, Mr. George, Barnet, Herts.
Cuthill, Mr. James, Camberwell, S.
Dancer, Mr. Alexander, Fulham, S.W.
Denyer, Mr. William, 82, Gracechurch Street, E.C.
Dodds, Mr. G. S., Epsom Nursery, Epsom, Surrey.
Francis, Mr. E. P., Hertford.
Fraser, Messrs. J. & G., Lea Bridge Road Nurseries, N.E.
Fraser, Richardson, & Goad, 82, Bishopsgate Street, E.C.
Gibbs, G., & Co., 26, Down Street, Piccadilly, W.
Gibbs, T., & Co., 47, Half Moon Street, Piccadilly, W.
Glendinning, Mr. R., Turnham Green, W.
Henderson, Messrs., Pine-apple Place, Edgeware Road, W.
Hurst & McMullen, Messrs., 6, Leadenhall Street, E.C.
Jackson, Messrs. T., & Son, Kingston, Surrey.
Jones, Mr. Edward, Hart Street, Henley-on-Thames.
Kernan, Mr. J., 4, Great Russell Street, Covent Garden, W.C.
Kinghorn, Mr. F. R., Sheen Road, Richmond, S.W.
Lawson, Messrs. P., & Son, Great George St., Westminster, W.
Lea, Messrs. J. & C., Hammersmith, W.
Low, Messrs. Hugh, & Co., Upper Clapton, N.E.
May, Mr. Joseph, & Co., 1, Wellington Street, Strand, W.C.
McIntosh, Mr. George, Hammersmith, W.
Osborn & Sons, Messrs., Fulham, S.W.
Pamplin & Son, Lea Bridge Nursery, N.E.
Paul, Messrs. A., & Sons, Cheshunt, Herts.
Rollisson, Messrs., & Sons, Tooting, S.
Smith, Mr. J., Romford Essex.
Turner, Mr Charles, Royal Nursery, Slough.
Veitch, Mr. James, Jun., Exotic Nursery, King's Road, Chelsea, S.W.
Watt, Mr. Alexander, Edgeware Road, W.

STRAWBERRY PLANTS.—Great numbers of varieties can now be supplied (good plants) by the grower, W. J. N. For a full description and remarks on the same by Dr. Lindley, see *Gardeners' Chronicle*, August 20, 1859.
WILLIAM J. NICHOLSON, Egglescliffe, Yarm, Yorkshire.

NEW STRAWBERRY.
"PRINCESS FREDERICK WILLIAM."

NIVEN, of the GARDEN FARM, Drumcondra, Dublin, is now prepared to execute orders for the supply of the above first rate Seedling Strawberry, named by him, which for two seasons past gave ripe fruit out of doors on the 29th May; colour a bright scarlet, of a rich Pine Apple perfume and flavour; berries averaging from 3 to 5 inches round; calyx leafy; foliage deeply serrate; distinct and very hardy. Price 40*s.* for 100; 20*s.* for 50; 10*s.* for 25; 6*s.* for 12; or established in thumb pots, 1*s.* each.

N. N.'s agent in England is W. J. Nicholson, Egglescliffe, Yarm, Yorkshire, who has (along with Mons. Gloede, a celebrated grower in France) tested the merits of this earliest of known sorts—*Vide* description in W. J. N.'s recent Catalogue. His final testimony of 8th October runs thus—"It is almost impossible to estimate too highly the merits of your splendid early Strawberry. As a forcer, it stands with me at the head, and as an extra early cropper in the open ground, unsurpassed. It will soon be grown by every one, &c." Mons. Gloede's testimony is to the following effect—"I was surprised to see how quickly the plants threw up their flower stems, and how quick they set their fruit and how fast the latter ripened. The colour is admirable and the flavour exquisite. There is no doubt it will become a general favourite as a first early, both for forcing and out-of-door culture, and great credit is due to you for such an invaluable introduction. (Signed) Ferdinand Gloede, Aux Sablons, near Moret-sur-Loing, France."

N. B.—Orders by the Trade (for not less than 100), one-third off above price. Postage Stamps or Post-office Orders must accompany all unknown orders.

MANGEL WURZEL SEED.

JAMES FAIRHEAD AND SON, Lewisham, Kent, and 7, Borough Market, S.E., beg to inform their customers that on account of failure of plants, and bad prospect for Seed crop ensuing season, their quotations for orders after this date will be advanced. Prices on application.—Feb. 11.

NEW LIST OF SEEDS FOR 1860.

J. DOBSON AND SONS' LIST forwarded free to any address upon application. The Seeds warranted new and true, and carriage free.
Woodlands Nursery, Isleworth, W., & High St., Hounslow, W.

PANSIES.

HENDON PARK NURSERIES, HENDON, N.W.

EDWARD SHENTON is now offering a large and varied stock of all the best Show varieties of PANSIES, in 60-pots. Prices for single plants, as per var.; per doz., 6*s.*

CATALOGUE.

YOUELL AND CO.'S GENERAL AND DESCRIPTIVE PRICED CATALOGUE for this season is now ready, and will be sent free on application.

It contains detailed Lists of Greenhouse Plants, Conifers, Shrubs, as well as all the newest introductions in Soft-wooded Plants.—Royal Nursery, Great Yarmouth, Norfolk.

TRITOMA UVARIA.

JAMES MARCHAM, of Earl's Court Road, Old Brompton, S.W., having saved SEEDS of this splendid hardy perennial plant, offers packets containing 50 Seeds for 1*s.*, 200 for 2*s.* 6*d.*, 500 for 5*s.*, ½ oz. for 20*s.* All orders to be prepaid. Seeds sown between now and the 1st of March will flower in the autumn of the present year.

SEEDS.

J. H. ROBINSON, SEED GROWER and DEALER, Wholesale and Retail, begs to call the attention of all those interested in the cultivation of Flowers and Vegetables to his RETAIL CATALOGUE of a selection of his best varieties of SEEDS, second to none in the kingdom. Post free on application. Carriage paid on orders of 20*s.* and upwards.—Abbey Farm, Hinckley.

HARDY CALIFORNIAN CONIFERS, PICEA (ABIES) AMABILIS, PICEA (ABIES) GRANDIS.—Healthy seedling Plants of the above named most beautiful hardy Trees can be supplied by the undersigned by the dozen, hundred, or thousand, as also many other choice Conifers, PRICED CATALOGUES of which will be sent on application.
HUGH LOW & CO., Clapton Nursery, London, N.E.

LIST OF NEW AND CHOICE FLOWER SEEDS.

EXTRACTED FROM

CARTER'S GARDENERS' VADE MECUM.

Clarkia pulchella, var. integripetala.

This is the first of what might almost be called an entirely new class of Clarkias; the flowers are nearly double the size, colour more brilliant, and the petals whole instead of being three-lobed like the old pulchella varieties; it is very beautiful, and is "commended in the Reports of the Floral Committee of the Horticultural Society. Price per packet, 1*s*. (Plate No. 8.)

Callirhoe digitata.

A most elegant plant, somewhat resembling the scarlet Linum; colour rich violet purple with white eye; height from 2 to 3 feet; commences to bloom when about 6 inches high, and presents a mass of blossom during the entire summer; good bedding plant. Price per packet, 6*d*. (Plate No. 8.)

Fenzlia dianthiflora.

This lovely Annual is of a beautiful rosy lilac colour, having five dark blood-coloured spots, surrounding an orange-coloured eye in the centre of each flower; it is of a very dwarf and compact habit, producing blossoms in profusion, is of long duration in bloom, and has a fine effect in small beds, also grown in pots or boxes for greenhouse decoration. Price per packet, 1*s*. (Plate No. 5.)

Spraguea umbellata.

A distinct and beautiful new hardy Annual, and well-suited either for pot or border culture; the habit is dwarf and spreading, resembling the Calandrinia grandiflora; the flowers, resembling an Amaranthus, are beautifully shaded pink with purple stamens. Price per packet, 1*s*. (Plate No. 9.)

Nigella hispanica alba and atropurpurea.

Two new varieties of great merit, of erect and compact habit; the one a clear rich purple, the other a pure white; can be recommended as being decidedly the best of their class; recommended by the Horticultural Society. Each, per packet, 1*s*. (Plate No. 8.)

Œnothera biennis, var. hirsutissima.

A new variety of the Evening Primrose, from California, very distinct from the common biennis; height 2 feet, colour crimson orange. Price per packet, 1*s*. (Plate No. 9.)

Larkspur tricolor elegans.

The intense richness of colour and delicacy of marking of this handsome Larkspur is scarcely conceivable; it should be an inhabitant of every garden. Price per packet, 6*d*. (Plate No. 9.)

Phormium tenax.

This is better known under the name of New Zealand Flax, and is one of the handsomest evergreen winter ornaments in cultivation for greenhouse or winter garden decoration; the habit is bold and striking, and the colour of the foliage a rich dark green. Price per packet, 1*s*.

Nemophila discoidalis marmorata.

A handsome new variety from discoidalis, which, in addition to the white border of the old variety, is prettily marbled with white on the black ground of each petal. Price per packet, 6*d*.

Lobelia gracilis rosea.

A very graceful little plant, of a good rose colour, specially adapted for edging. Price per packet, 1*s*. (Plate No. 8.)

Cuphea eminens.

A beautiful species of the well-known tribe of Cuphea, with long tubular flowers of scarlet and yellow; it has a graceful branching habit, each branch clustering with blossoms. Price per packet, 1*s*.

Dianthus chinensis Heddewigi.

Of this splendid annual Dianthus, we have purchased part of the stock of the seed from the raiser. The plants are scarcely 1 foot high, very bushy, and covered with a profusion of flowers which measure nearly 3 inches in diameter; the colours are various, consisting of different shades of rose, crimson, violet, &c. Some are delicately marbled, others self colour. This plant has received the highest awards from the Horticultural Society, and Botanic Society, Regent's Park. Is suitable either for greenhouse or out-door cultivation. Per packet, 6*d*. and 1*s*. (Plate No. 8.)

Anagallis grandiflora, var. Eugenie.
Anagallis grandiflora, var. Napoleon III.

These are two beautiful new varieties of the well-known Anagallis grandiflora, but the flowers are much larger. They will be found extremely ornamental as half-hardy bedding plants; also for greenhouse or conservatory decoration, as they present a most graceful appearance when cultivated in pots or vases; the colours contrast well, and they continue in bloom for a long period. Eugenie, light blue shading from the centre to pure white at the border. Napoleon III., rich maroon crimson. Each variety, per packet, 1*s*.

Ipomœa limbata elegantissima.

This marvellously beautiful Ipomœa is the finest of all; its flowers are similarly shaped to those of the generality of Ipomœas, but each blossom has a five-pointed star of an intense violet blue, the intermediate spaces being of a pure white; the blossoms are most profuse. We can recommend this with the greatest confidence. Price per packet, 1*s*. (Plate No. 9.)

Agrostis nebulosa.

The several varieties of Agrostis are all beautiful; but A. nebulosa is the most elegant of all, and cannot be too highly praised. Price per packet, 6*d*.

Erianthus Raventhæ.

This is a bold-looking Grass, after the character of the Pampas Grass. Price per packet, 6*d*.

Lupinus mutabilis variecolor.

This most peculiar and handsome variety of Lupine is distinct in seed from all other sorts; and the same seed produces plants of various colours, such as pure white, dark purple, white red and yellow var., yellow and purple, &c. We can recommend it with confidence. Price per packet, 6*d*.

Datura chlorantha fl. pl.

A splendid half-hardy Perennial, very free blooming, with large, trumpet-shaped, golden yellow, sweet-scented, double flowers; very beautiful. Price per packet, 6*d*. (Plate No. 8.)

Lychnis Haageana.

A handsome hybrid between Lychnis fulgens and Sieboldi; colour most brilliant; well adapted for general culture in the open air. Price per packet, 1*s*. (Plate No. 9.)

Silene barbata.

A new variety of these free-blooming plants, with fine heads of brilliant-coloured blossoms; should be extensively grown. Price per packet, 6*d*.

Solanum capsicastrum.

A handsome plant for greenhouse or conservatory, being covered during winter with a profusion of small scarlet fruit. Price per packet, 6*d*.

Leviathan Sunflower.

This gigantic plant is a valuable addition to Shrubberies, growing from 10 to 12 feet in height. The flowers are 12 inches in diameter, and showy in the extreme. Price per packet, 6*d*

Thunbergia americana.

This is a fine new variety from Thunbergia alata, being of a rich buff colour without an eye; contrasts well with all the other varieties. Price per packet, 6*d*.

Thunbergia Harrisi.

One of the most superb Climbers in existence; requires cultivating in a stove; colour a rich blue with orange centre. Price per packet, 1*s*.

Thunbergia coccinea.

This is also a magnificent stove Climber; colour scarlet and dark brown. Price per packet, 1*s*.

Dianthus hybridus corymbosus.

A magnificent hybrid from D. atropurpureus, fl. pl., with fine bunches of double flowers similarly arranged to those of the Sweet William. Price per packet, 6*d*.

Dianthus chinensis laciniatus fl. pl.

This is described by the raiser, Mr. Heddewig, as being imported from Japan with the Dianthus chinensis Heddewigi. The following is a description of the flowers and habit of the plant:—Grows 2 feet high, very hardy; flowers about 4 inches in diameter; each petal consisting of a long delicate fringe, some double, others single; blooms from the end of May until the beginning of frost. The colours are pure white, flesh, rose, various shades of red, carmine, violet, purple, and rich maroon—some being selfs, others striped and spotted; is suitable either for greenhouse or out-door cultivation. Price per packet, 1*s*. and 2*s*. 6*d*. (Plate No. 8.)

Chamærops humilis, Dwarf Fan Palm.

Sow in heat in March in pot, and harden off for greenhouse; in the southern counties out of doors without protection; will do well out of doors anywhere if protected from frost, and will impart to the garden a tropical appearance. Price per pkt., 6*d*.

Sabbatia campestris.

Most beautiful. Sow in mild heat in April, and transplant in May in moist place. Per packet, 1*s*.

Victoria Regia, Gigantic Water Lily.

Sow in moist peat and loam, and then place in tub of heated water. Per packet, 2*s*. 6*d*.

NEW DWARF BEDDING TROPÆOLUMS.

TOM THUMB, YELLOW.—A new variety in colour, particularly adapted for bedding, and also for growing in pots and ornamental vases; the flowers are well thrown up above the foliage; very dwarf and compact in habit; colour, pure yellow without any marking. The Floral Committee of the Horticultural Society speak of it as follows:—"The habit of this plant, shown by the entire plants exhibited, was quite dwarf and compact, and the flowers were of a golden yellow." It was "commended" as likely to be a useful flower-garden and bedding plant. 1*s*. per packet.

TOM THUMB, BEAUTY.—An elegant variety with Lobbanium-shaped flowers, raised by Mr. Melville, gardener to the Earl of Roseberry, Dalmeny Park, near Edinburgh; the flower is yellow, flamed and blotched with bright crimson. A plant was sent to the Editors of "The Cottage Gardener" in October, 1858, who speak of it as follows:—"A dwarf yellow, tinged with crimson; would be a good bedding plant." 1*s*. per packet.

TOM THUMB, SCARLET.—This was sent out by us for the first time last year, and has given universal satisfaction; brilliant scarlet flowers well thrown up above the foliage; very dwarf and compact in habit. 6*d*. per packet.

For further particulars see CARTER'S GARDENERS' VADE MECUM, which will be sent free on application.

JAMES CARTER & CO., 237 and 238, High Holborn, W.C.

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JOHN WEEKS & Co., Horticultural Builders and Hot-water Apparatus Manufacturers, King's Road, Chelsea, London, S.W.

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MESSRS. WATERER AND GODFREY'S CATALOGUE for the present season is now ready, and may be had on application. It describes fully all Rhododendrons worth growing, and contains a List of Azaleas, Hardy Heaths, and other American Plants, as well as a summary of the general stock of the most extensive Nurseries in England.

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Knap Hill Nursery, near Woking, Surrey.

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Truffaut's Pyramidal Asters, 12 sorts, 3*s*. 6*d*. and 5*s*.

German Stocks, 12 sorts, 3*s*. | German Balsams, 12 sorts, 3*s*.

All or each free by post on receipt of a Post-office order payable at Fulham.

GRAPE VINES FROM EYES IN POTS.

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LISTS of sorts and prices may be had on application to them.

Exeter Nursery, Exeter.

The Gardeners' Chronicle.

SATURDAY, FEBRUARY 11, 1860.

MEETINGS FOR THE ENSUING WEEK.

THURSDAY, Feb. 16—Linnean ..... 8 P.M.

FOR some time past the London press has been occupied by complaints that some shrubberies which had been formed in Hyde Park on the north had been pulled up in order that the ground might again be restored to its former ugly emptiness. We are so accustomed to idle allegations respecting the London parks that we have ceased to pay them any attention; one gentleman sees an old rotten Elm grubbed up, and writes forthwith to the newspapers respecting what he terms a desecration of public places of recreation; another finds some shrubs planted on a gentle rise of ground, and he, too, expresses his indignation that somebody's prospect should be impeded; a First Commissioner proposes to throw a very ornamental foot bridge across the water in St. James's Park, when up rise gentlemen in the House and out of it protesting against such a barbarian act, because it will ruin the beauty of the scene; and yet they shortly afterwards acquiesce in the construction of an extremely ugly footway in the very same place. Such are too often the frivolous charges brought against Government officers with regard to the parks, and the consequence is they seldom obtain any notice.

The other night, however, Mr. EDWIN JAMES brought the recent complaint about Hyde Park under the notice of the House of Commons, when a reply was given by Lord PALMERSTON. After observing that the arrangement made by Lord LLANOVER had greatly contributed to the beauty of the place and the recreation and health of the persons who frequent the park, the noble viscount assured the House that it had never been intended to alter that arrangement. "It was found that the ground not having been prepared in as elaborate a manner as in the spot between Stanhope Street Gate and Hyde Park Corner, the shrubs did not thrive. It had been the intention of the late First Commissioner to remove these shrubs, and to replace them by others, and instead of flowers, which did not appear altogether to succeed, to provide an ample supply of other flowers, to be placed there as soon as the season was fit for the operation. He was not surprised, when people saw the place look like a fallow field, that they became apprehensive such was to be the permanent condition of the ground; but it was no more to be the

permanent condition of the ground than a fallow field is the permanent condition in which a farmer keeps his land. It was thought that the ground being cleared it would receive during the winter those beneficial influences which the atmosphere communicates to the soil, meanwhile preparations were made to improve the soil by manure, and, as soon as the season arrived, to put into it—according to a plan which he had seen prepared under the direction of Mr. FITZROY—rows of shrubs, some evergreens, some flowering, and rows of flowers between them and the walks. And when that arrangement was completed, the public would be amply satisfied with a more agreeable and gratifying sight than before existed."

Now this reply, whilst it showed the outcry that had been raised not to be wholly without reason, was a perfectly satisfactory explanation of the intentions of Government. But we agree with Sir JOHN SHELLEY in thinking that it conveyed a very serious charge against the Superintendent of the Park. It appears that—1, a shrubbery between the Marble Arch and Kensington Gardens had been planted by order of Government; 2, that it did not thrive *because the ground was not properly prepared;* 3, that it had been pulled up in order that the ground might be rendered fit for planting; and 4, that it is now about to be replanted, after having been brought into a proper condition. These statements, proceeding as they did from the First Minister of the Crown, are of course beyond denial. And that being so we trust some member of the House of Commons will inquire further who was intrusted with this mismanaged operation, what it cost, and whether the person who ruined the shrubbery in the first instance is to be again allowed to squander money and annoy the public. Most assuredly nothing could have prevented a shrubbery being formed on the north of Hyde Park except want of skill in the Superintendent. If it failed because worthless trees were planted, or because the ground was ill-prepared, or because, as Sir JOHN SHELLEY said, the trees were not attended to during the late hot summer, then the Superintendent ought to be called upon to explain his conduct. Although, as we have already observed, we have never thought such complaints as have before been made about the management of the London Parks worth notice, yet we admit that the present case calls for strict examination. As matters stand we seem to have once more an example of either glaring incompetence, or indefensible negligence on the part of some inferior officer; and if such a proceeding is allowed to sink quietly into oblivion we may expect to see our London Parks arrive at the same deplorable condition as once prevailed in the miserable forest of Delamere.

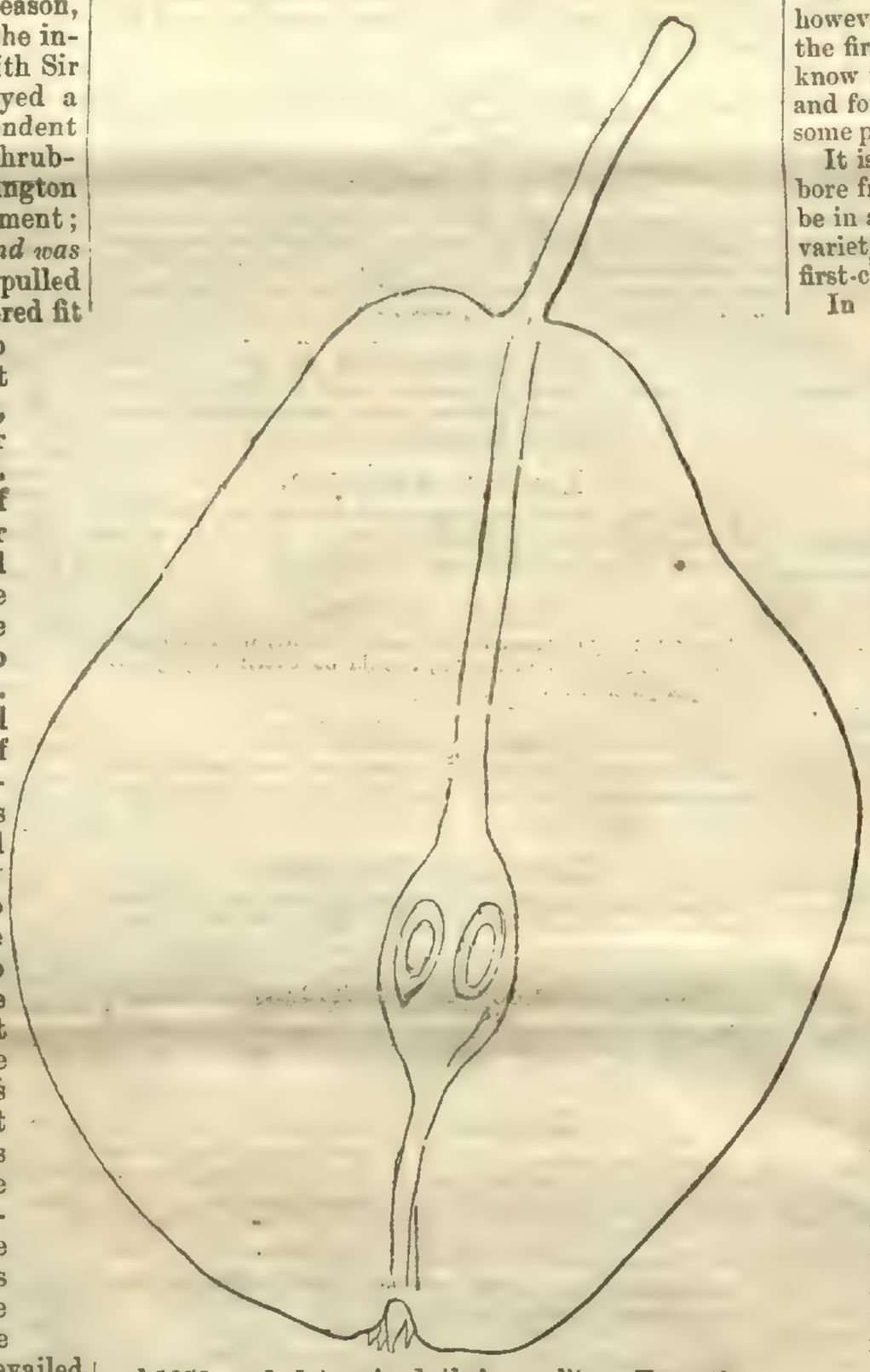
IT is so seldom that any precise evidence can be obtained concerning the age of ancient trees that every instance which occurs deserves to be generally made known. Oaks, Limes, and Spanish Chesnuts have received more attention than any others; the Elm perhaps less than any; it is generally, indeed, looked upon as short-lived. The following striking example shows, however, that under favourable circumstances Elms possess as much vitality as Oaks.

In the supplementary notes on the Flora of the Department of the Dordogne just published by M. CHARLES DESMOULINS, President of the Linnean Society of Bordeaux,* there are some notes on the dimensions of some remarkable trees in that department. Amongst them two Elms (Ulmus campestris) appear to afford authentic evidence of a greater age than that which trees of that species are usually supposed to attain. They are situated on the "Place publique" (square or village green), of Pellevési in the commune of St. Geniés, between Montignac and Sarlat. Not only does common tradition assert that it was under these very trees that Louis IX. gave audience to a deputation from the Monastery of Sarlat, when on his way to the Abbey of Cadouin, before undertaking his second crusade, but it is known that these are the same trees which in a deed of 1363 still in the possession of the Comte de MONTMÈGE, owner of the château of Pellevési, are referred to in the words "sub ulmis veteribus." These trees were formerly four in number; the two survivors, which were thus "old Elms" 500 years ago, have now stems of from 13 to 14 mètres (between 14 and 15 yards) in circumference, surrounded for some height above the ground by an enormous mass of excrescences and scars; their upper branches rise to a height of more than 100 feet, and some of the lower ones, as thick as hogsheads, extend to a distance of above 20 mètres (near 22 yards) from the centre, one of them supported by several props to prevent its breaking with its own weight.

* "Catalogue raisonné des Phanerogames de la Dordogne; supplement final." Par M. Charles Desmoulins. Bordeaux, 1859, 1 vol. 8vo. (pp. 230).

THE BEZI MAI PEAR.

THIS is one of my seedlings. In 1856, when it first bore fruit, it was 11 years old. The fruit, 17 in number in 1857, were of the Chaumontel form. In 1858 the fruit remaining on the tree after the hurricane of July 25th and at the time of gathering were only 30. I carefully tasted the fruits of 1856, 1857,



and 1858, and determined their quality. From three seasons' experience the ordinary time of ripening is in May, hence the name which is added to that designating its form. At the time of gathering its skin is of a dull green, marked with brown dots. The eye is small with short stiff open segments; the stalk is brown, woody, of the length represented in the figure. Towards the ripening period the skin becomes of a lighter and more uniform green with a yellowish tinge, and softening near the stalk. The flesh is as buttery as that of the Easter Beurré, as close as that of the Glou Morceau, and free from grit; the juice is abundant, sugary, and high flavoured; the filaments forming the axis of the fruit are very slender and scarcely apparent; the seeds, 4—6, are large, oval, of a coffee-brown colour. The fruit is hard and heavy. It is to be remarked that the fruits gathered from the 23d of September to the 20th of October all ripened equally in May. Those gathered latest were however the largest, and proved of best quality. Another point worthy of notice is that the fruit blown down by the wind in the end of September and beginning of October in 1857 and 1858 have not suffered from their fall.

After having enumerated the qualities of the fruit, we shall proceed to the tree, and the treatment which it requires in the nursery. At 3 feet from the ground it is 4 inches in diameter; at 7 feet, to which height the stem is clear, the branches are allowed to proceed to form the head, the extremity of which is 20 feet high. The branches are firmly attached to the stem, and extend in a somewhat horizontal direction, the extremities of the shoots being slightly curved. All along the branches will be found long slender spurs which form fruit buds in the second year of their growth. The shoots which form latent eyes, which become developed at the base where a shoot has been removed, also bear fruit. This peculiarity is also found to exist in trees in the nursery, grafted for experiment on the Pear as well as the Quince stock. In general the wood of the variety is not thick, but it is solid and hard. The bark of the stem and lateral branches is of a brownish green tinged with grey. The colour of the shoots is a shining, brownish, olive green, more or less dark, and sprinkled with linear grey specks. The wood-buds are prominent, thick at the base, and pointed; the fruit-buds are large, ovate, pointed, of a coffee-brown colour with grey pubescence. The leaves are more or less lanceolate, of a shining green colour on the upper side, somewhat channelled, the margin finely toothed. The flowers are large, forming a cluster of seven or eight. The fruits, like those of all hardy varieties, set well. In the end of May, 1857, '58, '59, I observed clusters of three, four, and five fruits; and in the end of July or in August of a strong wind like that of the 25th July, 1857, the large fruits which were not supported by leaning against the branches did not hold on. This is a drawback to the culture of this variety as a high standard. It would there be necessary to cultivate it as a dwarf, either on an espalier or against a wall, where it would attain a large size. Very fortunately however the variety forms fine dwarf pyramids even in the first year, on either the Pear or Quince stock. I know few varieties which unite better with the Quince, and form on it as well as on the Pear stock such handsome pyramids.

It is now scarcely four years since the seedling first bore fruit. After two more years' observation I shall be in a position to complete the description of this new variety of Pear, which in my opinion will occupy a first-class position.

In the above article there is yet an important point which I have omitted to mention. I stated that the fruit at the time of gathering was hard and not liable to be injured by falling on the ground. The wood of the tree is likewise hard, and exhibits no trace of weakness either in the bark or in the buds. This hardiness is seen not only in the original seedling; but also when the variety is grafted. The trees scattered over my nursery and planted in different kinds of soil exhibit the signs of a good constitution. This circumstance is so much the more important as there are several varieties still held in esteem on account of the qualities of the fruit, when it succeeds, which have too soft a bark, and is, therefore, liable to be perforated by an insect which is called, I believe, Scolytus Pyri, a white grub about ¼ inch in length, with a brown head. There is one which perforates the alburnum beneath the bark, either ascending, descending, or obliquely. There is another which acts like the Scolytus typographus mentioned in Dr. Ratzeburg's work, which he calls Bostrichus typographus. Whatever be the name given to it by entomologists, it is certain the varieties attacked by this insect suffer severely from it, and those that are not liable possess, in my opinion, another point of excellence in respect to the head of the tree. The Poire Prince Albert and Commissaire Delmot likewise resist the attacks of this insect.

In conclusion, the Bezi Mai is recommended for the good appearance of the tree, its hardiness, productiveness, the beauty of its fruit, its late and prolonged period of ripening, its good quality, sound keeping, and adaptation for bearing carriage. *J. De Jonghe, Brussels.*

ANNUALS.

WE are pleased to find that the better class of Annuals is on the eve of a much wider application to ornamental gardening than has been allotted to them of late. This advance in public favour is doubtless owing to two causes; the principal one points to the extreme want of variety, which for years past has been a noticeable defect, even in the very first-class gardens. The passion for strong masses of colour has led to the too frequent use of Geraniums, Calceolarias, and Verbenas, varied occasionally by Salvias or Petunias. This arrangement no doubt produced masses of brilliant and effective colours, so far as they went, but failed to impart to flower gardens the still greater charm of variety and gracefulness, without which the mere repetition of groups, confined to three or four variations of colour, produced an unsatisfactory effect to the eye of taste, and failed even to please minds less tutored to comprehend how necessary different shades and gradations of colour are to complete the *ensemble* of the parterre or flower garden, and to sober down the glare produced by the repetition of the blue, red, and yellow colours of which we complain.

We have always been of opinion that the fashion in this respect would undergo a change, and that ere long plants would be selected for massing and mixing, less showy perhaps than those named above, but equally interesting to the lover of flowers, and adding the great desideratum of variety, both in form and colour, to our gardens. Of this class, Annuals undoubtedly form the largest proportion.

A second reason why Annuals are becoming more generally grown is the ease with which they are raised and the very small amount of trouble their cultivation entails, compared with the other section. The yearly propagation required with Geraniums, Verbenas, &c.; the potting and planting, the relifting and wintering, involve expense, care, and appliances not within every one's means. It will therefore create no surprise, now that the love for flowers is become universal, to find that those who have not the means to grow plants requiring a winter's care and glass erections

all back on Annuals to make their gardens attractive and gay through the summer, which they can do with little trouble and small cost. An ordinary garden soil, well dug and loosened, and a few shillings' worth of seeds, are a trifling matter, compared to the cultivation of ordinary bedding plants. Nor should we omit to notice another reason bearing on our subject, which carries with it a strong motive for the increasing interest now felt for this class. Annuals, like other popular flowers, have been greatly improved by careful cultivation and judicious hybridising. The horticulturist soon perceives when a class of plants is susceptible of improvement through this agency, and advantage is quickly taken of the fact; to this result the many splendid varieties of Annuals which year by year are brought into notice are owing. Both in this country and on the Continent great attention has of late years been paid to the object of obtaining improved varieties from seed, as may be seen by comparing the advance in Asters, Phloxes, Zinnias, Stocks, Tropæolums, Lobelias, and many other genera of Annuals; and looking at the magnificent Dianthus now figured, having been obtained by the efforts of Japanese gardeners from the well-known Chinese Pink, we may refer our readers to both the plates of Annuals given in our present Number as conclusive evidence of the improvement which has taken place in the families they represent.

But to grow Annuals as they should be grown, and to develope their habit and beauty, the ground for them should be both deep and rich (as is necessary for all rapid growing plants), and the plants should be treated as individuals requiring generous treatment. We remember the time when a ring formed with the finger round a 32-sized flower pot in the loose soil of the border was the common way of committing the seed of Annuals to the ground. Here they remained to grow, and after an ineffectual struggle for more room, spindled upwards into bloom, when the first fortnight's dry weather closed their career. What figure, let us ask, would Mons. Truffaut's grand Asters cut with such treatment as this? Or what the splendid Zinnias, Tropæolums, and Larkspurs which form such striking objects when grown singly in good soil, if they had been left to starve, at the rate of 50 plants per square foot of ground? No; Annuals, to do justice to them, must be treated individually as we treat a specimen plant, and then you get a freedom of growth combined with a profusion of bloom; and what is more, the deeper and richer the soil, the longer they will continue in perfection. *Editorial Notice in the Florist for February.*

MYCOLOGY.—No. V.

HYDNUM REPANDUM, *Linn.*—The Mushroom tribe is at once distinguishable amongst the vast mass of Fungi by the gill-like plates which cover the under side of the pileus, running from its border towards the stem, and either ending abruptly before they reach it, or becoming to a greater or less degree attached to it. There are, however, other Fungi which resemble these in habit, but whose fruit-bearing surface is constructed after a totally different fashion. Amongst these are the Hydna, which are remarkable for having the hymenium broken up into distinct teeth, which in the more typical species are cylindrical at the base, from which they are gradually attenuated upwards so as to exhibit the form of extremely elongated acute cones.

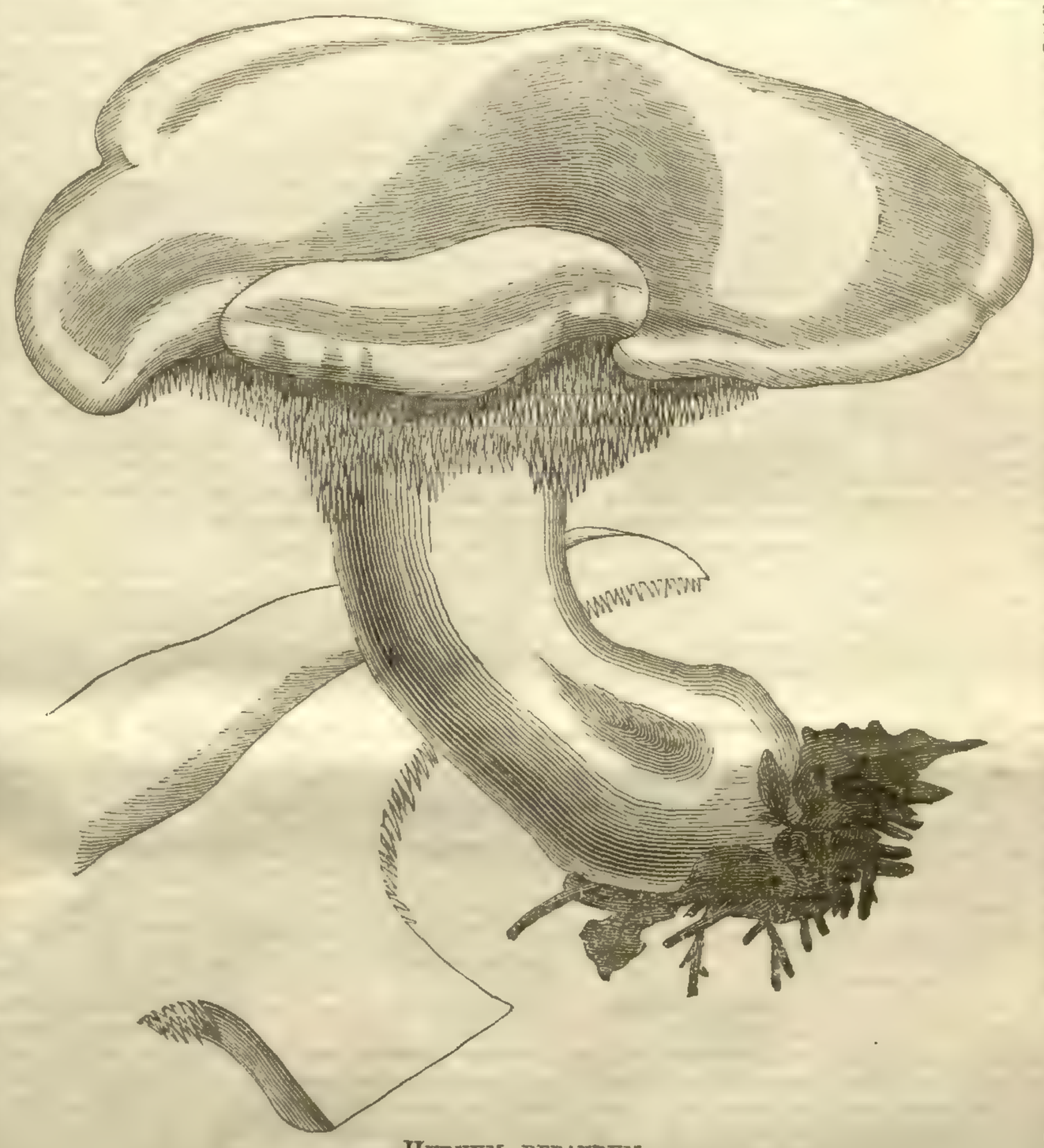
Hydnum repandum, the subject of our present illustration, has either teeth of this description, or occasionally more or less compressed and flexuous, and sometimes divided at their tips, and when once ascertained is generally an object of admiration to the frequenters of our woods, in which it occurs in autumn pretty generally, though seldom in any great abundance.

The pileus is 3 or 4 inches broad, at first convex but generally somewhat flattened, and ultimately depressed in the centre with arched borders and a flexuous margin, and like the rest of the plant is of a rich cream colour, with an occasional reddish tint. The surface is very minutely downy, the down, however, being matted and depressed, so as not to be conspicuous except under a lens. The teeth are very brittle, and often give way when the plant is gathered, and in this case sometimes look like tubes; the top of the stem, which is often paler than the pileus, is generally glandular, with abortive teeth. The whole plant when dry or cut and bruised assumes at times a foxy tinge, which is communicated to the fingers if the moist surface is much handled.

There is no British species with which it can be confounded, and therefore in this case at least there can be no danger of mistakes.

Few Fungi are more delicate than this is when well cooked, the texture and flavour reminding one strongly of a British Truffle, and as it retains its colour, it has a very tempting appearance, which does not prove deceptive on trial. The best way perhaps of preparing it is to stew it slowly, after immersion in warm water, in a small quantity of veal stock, adding a little salt and cayenne, with a blade of Mace. When the Fungus is tender a small quantity of finely minced Parsley and Chervil, with a minute portion of Garlic, should be added, together with some good cream, and the whole served hot with sippets of fried bread. Paulet recommends for such Fungi a sauce composed of blanched Almonds beaten in a mortar with a little water, to which is added Garlic, Black Pepper, Olive-oil and Lemon-juice till the whole is of the consistence of common Mustard, so as to form a sort of Mayonnoise, in the composition of which the point of great importance is the perfect purity of the oil, without which essential the preparation must be a complete failure.

Though the Fungus has a slightly acrid taste when raw, it is one which may be used with perfect safety, on which character every authority whether British or foreign is in perfect accord. It is constantly sold in continental markets, and if it were more common than it is in England it might be safely recommended for more general consumption. It however, seldom occurs in sufficient quantities to make it of the importance it might otherwise assume. As it is deficient in juice it is unfit for ketchup, and cannot be advantageously employed for simple broiling like the common Mushroom.



HYDNUM REPANDUM.
Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

The word *Hydnum* is derived from the Greek name for a sort of white Truffle, from which it has been transferred without sufficient reason to the teeth-bearing Fungi. The species have no vernacular name in English, but on the continent they are variously known as Chevrotines, Steccherino, and other names which refer more or less clearly to the toothed Hymenium. It is scarcely necessary to say that the tubular appearance sometimes assumed by the teeth shows no immediate alliance with the spore-bearing Fungi, the spores in the one case being on the outside of the teeth, in the other in the inner surface of the tubes. The specific name repandum does not refer as Mrs. Hussey supposes to the wide diffusion of the plant, but to the irregular form which the pileus often assumes. *M. J. B.*

THE GREAT STORMS OF LAST AUTUMN.

BY REAR-ADMIRAL FITZROY.

"As many of our Society must doubtless be interested in the nature and character of that storm in which the 'Royal Charter' went to pieces on Anglesea Island, and as abundant information has been obtained from lighthouses, observatories, and numerous private observers, I would take this earliest opportunity of stating that the combined results of observations prove the storm of October 25th and 26th to have been a complete horizontal cyclone. Travelling bodily northward, the area of its sweep being scarcely 300 miles in diameter, its influence affected only the breadth of our own Islands, (exclusive of the west of Ireland) and the coast of France. While the central portion was advancing northward, not uniformly but at an average rate of about 20 miles an hour, the actual velocity of the wind—circling (as against watch-hands) around a small central 'lull'—was from 40 to nearly 80 miles an hour. At places north-westward of its centre, the wind appeared to 'back' or 'retrogade,' shifting from east through north-east and north to north-west; while at places eastward of its central passage, the apparent change, or veering, was from east, through south-east, south, south-west, and west. Our Channel squadron, not far from the Eddystone, experienced a rapid, indeed almost a sudden shift of the wind from south-east to south-west, being at the time in, or near, the central lull; while, so near as at Guernsey, the wind veered round by south, regularly, without any lull. This sudden shift off the Eddystone occurred at about 3 (or soon after), and at nearly half-past 5 it took place near Reigate, westward of which the central lull passed From this south-eastern part of England, the central portion of the storm moved northward and eastward. Places on the east and north coasts of Scotland had strong easterly or northerly gales a day nearly later than the middle of England. When the 'Royal Charter' was wrecked, Aberdeen and Banffshire were not disturbed by wind; but when it blew hardest, from east to north, on that exposed coast, the storm had abated or almost ceased in the Channel and on the south coast of Ireland. Further details would be ill-timed now, but they will be given in a paper to the Royal Society, as soon as additional observations from the Continent, and from ships at sea, have been collected and duly combined with other records. The storm of the 31st, and 1st of November, was similar in character; but its central part passed just to the west of Ireland's south-west coast, and thence north-eastward. Of both these gales the barometer and thermometer, besides other things, gave ample warning; and telegraphic notice might have been given in sufficient time from the southern ports to those of the eastern and northern coasts of our Islands. As it is the north-west half of the cyclone (from north-east to south-west, true) which is influenced chiefly by the cold, dry, heavy, and positively electrified polar atmospheric current, and the south-west half that shows effects of equatorial streams of air—warm, moist, light, and negatively electrified;—places over which one part of a cyclone passes are affected differently from others which are traversed by another part of the very same meteor, or atmospheric eddy, the eddy itself being caused by the meeting of very extensive bodies of air, moving in nearly, but not exactly opposite directions, one of which gradually overpowers, or combines with the other, after the rotation. On the polar half of the cyclone, continually supplied from that side, the visible effect is a drying up and clearing of the air, with a rising barometer and falling thermometer; while on the equatorial side, overpowering quantities of warm moist air—rushing from comparatively inexhaustible tropical supplies—push towards the north-east as long as their impetus lasts (however originated), and are successively chilled, dried, and intermingled with the always resisting, though at first recoiling, polar current. After such struggles these two currents unite in a varying intermediate state and direction, one or other prevailing gradually. Very plain and practical conclusions are deducible from these considerations:—One, and the most important, is that in a gale which seems likely to be near the central part of a storm, that should be (of course) avoided by a ship which has sea room: a seaman, facing the wind, knows that the centre is on his right hand in the northern hemisphere, on his left in the southern; he therefore is informed how to steer. Another valuable result is that telegraphic communication can give notice of a storm's approach to places then some hundred miles distant, and not otherwise forewarned." *Proceedings of the Royal Society.*

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE following is the report of the Committee for 1859, read at the late general meeting, which took place in the Horticultural Society's Rooms, St. Martin's Place, Trafalgar Sqnare.

"The Committee beg to present the report of their proceedings during the year 1859, and it is a source of pleasure to them to congratulate the subscribers on the continued prospects of the Society.

"During the past year only one pensioner has died, viz., Jas. Stedman, at the advanced age of 91; in the same time eight have been added, two without an election in conformity with Rule 9, and six by election from among the subscribers.

"The anniversary dinner took place at the Crystal Palace, Sydenham, under the presidency of Mr. Justice Haliburton, and the Committee beg to tender him their warmest thanks for his exertions on behalf of the charity; also to the gentlemen who acted as stewards for their liberality and that of their friends upon the occasion. The Committee in consequence have been enabled to increase the funded stock of the Society to 4900*l*. It affords them much pleasure to announce that the Earl of Carnarvon has kindly consented to take the chair at the ensuing anniversary, and they feel sure success will attend his lordship's co-operation.

"The Committee have to express their acknowledgments to many friends who contributed fruit, flowers, and plants, upon occasion of the late dinner; to the Council of the Horticultural Society for the use of their rooms in St. Martin's Place for the meetings of the Committee; and to the Council of the Society of Arts, who, with their usual liberality, granted the institution the gratuitous use of their rooms upon occasion of general meetings.

"Your Committee wish particularly to draw the attention of subscribers to the very kind manner in which all the journals connected with horticulture have published their proceedings and advocated the cause of the Society, but especially so to the *Gardeners' Chronicle*, which not only inserted several times the

whole list of subscribers to the institution perfectly gratuitously, but also contributed an additional donation of 10*l.* 10*s.* to the funds.

"The system of advertising at the end of the books continues to find favour, and it is the means of reducing the expense of printing into very narrow limits. A sum of 51*l.* has been realised from this source during the past year.

"The state of the pension list is as follows :—

17 women at	£12	£204
22 men	16	312
		£716

Statement of the Receipts and Payments of the Gardeners' Royal Benevolent Institution for the Year 1859.

DEBTOR.	£	*d.*	*s.*	£	*s.*	*d.*
To Balance 1858				1412	3	2
To Annual Subscriptions	613	4	0			
To Donations received at, and in consequence of Anniversary Dinner	341	15	0			
To Dividends on Stock	136	11	11			
To Advertisements	51	13	6			
To Income tax returned	6	4	1			
				1149	8	6
				1561	11	8
Stock in 3 per Cent. Consols in the names of the Trustees				£4900		

CREDITOR.	£	*s.*	*d.*
By Pensions	676	0	0
By Stock purchased, 300*l.*	287	17	6
By Secretary's Salary	60	0	0
By Printing	84	7	0
By Stationery	6	15	6
By Advertising	3	9	6
By Solicitor	5	8	0
By Expense of Annual Dinner	3	14	6
By Expense of Postage and Sundries ..	35	16	7
	1163	8	7
Balance at Bankers	398	3	1
	1561	11	8

Audited January 6, 1860. JNO. LEE. WILLIAM FORSYTH.

Home Correspondence.

Mr. Darwin's Theory of Development.—The observation relative to the Swedish Turnip to which I alluded in my note on this subject occurs in page 997 of last year's *Gardeners' Chronicle*, and is to the effect that the discussion at the Central Farmers' Club, on Monday, 5th December, turned upon the need of finding a substitute for that vegetable, which was rapidly deteriorating in the hands of the farmer in spite of the best efforts both of agriculturists and scientific men. With reference to Mr. Darwin's note on this subject (*ante*, p. 49), I apprehend, in the absence of details, that this is not a question as to the permanence of a cross-bred production but one of reversion, in which it is found impossible to maintain the status of a species which has been ennobled (to use a term which has lately been adopted for these modified, high-bred specimens, and which we may expect to see applied with equal propriety to the fat pigs exhibited at Christmas which can neither see nor walk). These latter, like the Swedish Turnips, have been brought by man out of their natural condition; they are, in fact, monsters, and Nature will get rid of them and revert to the old true type of the species. Of varieties of distinct species produced in a state of Nature, even when carried beyond individual variations (which have been termed sub-species or geographical varieties), I believe also that Nature constantly endeavours to get rid of them in the same manner, although a persistence of the predisposing causes may, even for a long time, render the variety apparently permanent. I cited the case of the Ibis as an instance showing that a species has remained permanent during the whole historic period, and I think that we are thereby authorised in supposing that if that bird were reduced to the condition of a single pair (as its first creation), the progeny of that pair would in 3000 more years be as true to the character of the species as the present individuals are. As to the hive-bee, I intended to allude more especially to the case where a single hive might become the founder of an extensive apiary far removed from any other, the different hives being of course tenanted by the progeny of the first stock. Extensive bee-keepers do not find it necessary to import hives from a distance to keep up their establishments, and thus the species would keep true, immaterial whether the queens paired with their own subjects or with those of adjacent hives; all having descended from the same single stock-hive. The Egyptian records furnish us with another instance which we find to be in complete opposition to Mr. Darwin's theory. We there see the African ostrich, one of the most extreme types of the class of birds, faithfully represented. According to Mr. Darwin's theory it is mainly for the welfare both of the species and individual that modifications take place and new forms are developed. Now, there can be no doubt that it would have been beneficial to this bird, both specifically and individually, if its coveted plumes could have been shortened and its wings lengthened, so as the better to escape from its pursuers. Moreover, as every one who saw the tame ostriches in the circus at Kensington during the Great Exhibition of 1851 will recollect, when driven to their fullest speed they stretch out their short stumps of wings in order to assist in their attempts to escape. But all their efforts to acquire by such means the additional power of flight have been unavailing, and the type of the species remains as it was in this respect 3000 years ago. Whilst in the case of other analogous species of birds, such as the Dinornis and the Dodo, we know that the actual destruction of the species has taken place, whilst that of the Kivi of New Zealand is equally certain in a very short time. I purposely avoid referring to geological evidences, believing that—1st, if the permanence of a species can be proved for such a length of time as 3000 years; 2d, if it be admitted that varieties exhibit a tendency to revert to the original type; and 3dly, if cases can be shown in which modifications beneficial to a species have not taken place in wild animals, even when the creature has made efforts in that direction, we are in each of these cases furnished with an answer to Mr. Darwin's theory. As regards the second of these points, it seems inevitable that a theory which supposes the principle of development to be inherent in the works of the creation cannot be maintained if it be admitted that the antagonist principle of reversion be also inherent in individuals. Mr. Darwin mainly builds his theory that species are only intensified varieties, and that generic groups are only intensified species, on the modifications which man has effected in domestic animals. For his theory, however, to work, it is necessary to suppose that the modified individuals possess such powers of discrimination as well as of exclusiveness as not to allow of their intermingling with their less favoured brethren, whereby they would keep their improvements to themselves. Thus, supposing the large and small common white Cabbage butterflies to be modifications of one species, we must allow to them (as they never pair together, although frequenting the same garden and feeding on the same Cabbage) a power of selection for breeding purposes which the improved breeds of domestic animals do not possess. The terrier and spaniel or the pouter and tumbler pigeons will under similar circumstances breed together, although they apparently differ much more from each other than these two species of butterflies. It will at once be seen that the idea of such a power of selection, the nearer we ascend to the supposed origin of the modification, becomes more and more untenable. *J. O. Westwood.*

Rainfall at Stonyhurst in 1859 :—

	Inches.		Inches.
January	4.0	Brought forward ..	22.0
February	3.0	July	1.9
March	6.5	August	6.8
April	4.2	September	7.7
May	0.3	October	[illegible]
June	3.1	November	3.0
		December	3.7
Carried forward	22.0	Total	48.1

Rainfall at Dorwards Hall, Witham, Essex, 1859 :—

	Ins.		Ins.
January	0.64	Brought forward ..	8.28
February	0.52	July	3.56
March	1.41	August	1.30
April	2.10	September	3.45
May	0.92	October	3.29
June	2.68	November	2.12
		December	2.14
Carried forward ..	8.23	Total	24.13

Henry Dixon.

Effect of the late frosts on Vegetables.—Reports describing the severity of the weather have constantly appeared in your columns, but I do not remember that its singularly destructive effect on vegetation has been particularly commented on; although a greater degree of cold has been registered in this neighbourhood so much injury has never before been inflicted by frost on the vegetables peculiar to the kitchen garden in my recollection. White Turnips on well-manured land are nearly all destroyed, and even the hardier Swede has suffered severely. Although cultivating the various Broccolis denominated "Hardy," "Protecting," "Siberian," the frost has led me to doubt the verity of their descriptive titles, for it has killed nearly all. Also young Cabbage, a new Green called the Scotch Cabbaging Green, and possibly half the crop of Celery; Laing's Mammoth and the old Lancashire Hero have suffered less than other varieties. Globe Artichokes though protected appear to be killed, and Parsley has greatly suffered. Amongst Greens that have borne up against the weather may be mentioned the Brussels Sprouts, Scotch Kale, and Turner's Cottager's Kale, the value of which this season has established. As the destructive action of the weather has undoubtedly been great in many parts of the country, instances of its effects in different localities will be instructive; and examples of immunity whether due to particular management, or to especial advantages of situation, or to the singular hardihood of constitution of particular varieties of vegetables, cannot but be interesting, and I hope some of your correspondents will furnish a record of their experience of this very singular season. I am strongly of opinion that the frost which came upon us with excessive and unexpected severity in October inflicted so much injury on plants that they were unable to withstand the severe frost which followed in December. *W. J., Belvoir Castle.*

Vegetable Tallow.—In the *New Orleans Picayune* of 25th December last I find the following paragraph :—"The Agricultural Bureau of the Patent Office acknowledges the receipt of specimens of what is known in Central and South America as Vegetable Tallow. It comes from a nut about the size of a Nutmeg, full of meat, which, being melted, becomes a yellowish tallow, excellent for candles. The plant naturally attains a height of 10 or 12 feet; it carries herbaceous coloured flowers from July till September, and it makes so profuse a secretion of oily matter that this may be readily obtained from it in the form of fat by immersing it in boiling water. B. L. Clark, Esq., U. S. Minister at Guatemala, writes that he has no doubt that this article might be collected and exported at considerable profit. It grows in immense quantities in the southern departments and in Vera Paz. It is susceptible of such high purification as to resemble the finest sperm, is solid, and quite as transparent. A sample of this production, in the nut and in the tallow, is now among the numerous collections of the Patent Office. The cultivation of it from the seed will be tried at the Horticultural Garden." Can you or any of your readers inform me what plant it is that produces the substance in question? *E. J. A., Edinburgh.*

Frost all the year round.—In the front of my potting shed, which is in a north aspect and a position almost as bleak as Mr. Chater's hill, hangs a minimum thermometer, which is one of a set made for me by Mr. Cox of Barbican, under this condition, "if not true, to be returned." It had a very cold berth in which to perform its duties, but I was suddenly surprised at a certain time to find that as the year lengthened the cold strengthened, and positively started to find that it registered below freezing point all the summer long. I looked at it with a very scrutinising eye; it seemed all right, and I knew it was all right when compared with a good standard instrument before being put to use. During June, July, and August, it froze hard every night; on the hottest afternoons as soon as the sun left the roof of the shed, down it went to 45° and as soon as dew began to condense to 35°, and next morning the pin was at 32° as usual. I didn't believe it, yet could not forget how carefully it had been tested, and how faithfully it had behaved itself for months together. When October came, down it went to zero, then below zero, and was most unwilling to go up again. I began to think an Arctic climate could not be so much of a trial after all, but it suddenly came into my head to say, "Anything ever happen to this thermometer, Brignell?" "Yes, sir, knocked it down in the spring, when I tarred the roof of the shed." How the readings, carefully tabulated, would have made a subject for discussion, had the sequel never have been disclosed! Given a correct instrument, and the record shows frost every night throughout the year. A little of the spirit forced by the shock to the wrong end of the tube, where it was quite invisible to ordinary observation, made Spitzbergen of a place that is very bearable even when the wind is N.E. Moral—when the weather is so very strange, ask if anybody has kicked the thermometer? *Shirley Hibberd, Stoke Newington.*

Mice.—I should feel much obliged if some of your readers would inform me in what way I could destroy some mice that infest this garden. There are two varieties of them; one a sooty brown coloured kind about the size of a half-grown house mouse; the other much larger, with a long body, short tail, and chubby head, sandy brown back and light belly. Both evidently live on herbs, as I have baited traps and laid poison in all sorts of flesh and meal, and they will not touch it. Last spring my Verbenas were in a sod pit in the framing ground; they commenced on them, and would soon have cleared them off had I not removed them to another part of the garden. This winter they were standing in the front of a cold Vinery; the pests just completed it came through the front lights, nipped the plants off level with the pot, and ran off with them. The worst, however is, they have commenced on the Vine roots; the front flue of the Pine stove runs close to the wall, the Vine border is on the outside, and to prevent the soil from getting burnt rubble stones were laid next to the front wall, and in them and the drainage the rascals lay in the winter and feed on the roots. They have gnawed the bark off the stems where they are covered with litter. I have poured gas-tar amongst the drainage several times, and it drove them away while the bad smell lasted, but as it wore off they returned, and I find it impossible to destroy them or keep them away for any length of time. Can any one assist me? *T. L.*

Strawberries.—As the season for purchasing and planting Strawberries is now at hand, it may not be unprofitable to buyers generally and the trade in particular, to examine what are the pretensions demanded for the new varieties now advertised. First, as regards the "Wizard of the North:" Mr. Robertson seems to have exhibited the fruit at Paisley in 1857, where he states he obtained a Certificate of Merit for it; thus he has had an opportunity for three seasons of submitting the produce to wider and more authoritative censors than local judges. Why should raisers of good fruit shrink from submitting them to an ordeal out of their locality? The two excellent "Metropolitan Societies," now established (that in connection with the Horticultural Society and the Pomological), hold their meetings at continuous short intervals, thereby enabling parties to submit to their judgments fruit however transient, and it is just as easy to send a box of Strawberries from Paisley to London as from Nottingham or Slough; allowance would always be made for their having to be gathered a few hours longer. Mr. Robertson gives his opinion and description of his "Wizard" in the *Gardeners' Chronicle*, October 1st, 1859. On the 5th of

November Mr. R. states that any persons being in possession of his "Wizard" before the 16th of August last have obtained them surreptitiously, except Messrs. Dickson & Co. of Edinburgh, and Mr. R. Pollock of Kilmarnock. In the autumn of 1858 I purchased from one of the first nurserymen in the south of England (whose name I am prepared to give) plants of a "Wizard of the North" described to me as a favourite Scotch Strawberry; I fruited it, and as far as I could judge from such plants considered it worthless; nevertheless I have now a considerable quantity of the same, and shall be able to test it fairly this season. I submit that parties raising new fruit owe it to themselves to separate and vindicate their characters by the fullest investigation from such miserable impositions as once emanated from Aberdeen. I have been (up to the present time) a purchaser of every new kind, being in a measure compelled to keep for or with the trade; but I have discarded most of them, not that they do not bear fruit (all Strawberries are fruitful if cultivated according to their sorts), but when fruited being inferior in quality. The next I shall notice is advertised on December 2, 1859, from Dublin, and in this case the raiser does not appear to have obtained a certificate, although he has fruited it for two seasons. He produces the testimony of two growers, from which the public can form their own judgment. Mr. Niven seems to place great value upon fruit ready for gathering by May 29. I beg to say that all Strawberries may be accelerated in ripening at least three weeks, according to the situation or luxuriance of the plants; Keens' Seedling, Grove End Scarlet, and other early kinds will ripen by that time. I intended to have noticed a few others, especially where old varieties have been palmed upon unwary purchasers as new ones, and at enormous prices,* but I have perhaps already trespassed too far upon your space. I will only add that in consequence of Mr. Turner submitting "Oscar" to a competent tribunal I have been a considerable purchaser, and feel confident I shall (when the plants are strong enough to fruit) not be disappointed. *Rich. S. Yates, Sale, Cheshire.*

Salt for Walks, &c.—Allow me to add my testimony to the efficiency of salt for cleaning the surface of gravel, whether on roads, walks, or anywhere else. At the suggestion of my employer we began using it here rather extensively, four or five years ago, and with the best possible results. Hand-weeding and the still more barbarous system of hoeing are not only tiresome and expensive, but very injurious, always leaving a rough and uncomfortable surface. The salt we use is generally waste from the bacon-curers, which contains a considerable amount of saltpetre. This is much more efficacious than the waste from the warehouses. We apply it any time. Whenever a few weeds appear on the walks a man strews it by hand from a wheelbarrow, taking care not to let it come in contact with the edging. On the roads a couple of handy men sow it with their shovels from a cart, afterwards running a light Birch broom over it. But generally the hand will be found the best distributor; for if a machine is used all the surface will be served alike, which in our case would be great waste, for we only strew it where it is wanted, as weeds don't spring up now everywhere as they did formerly. Salt is not only useful for cleaning the surface, but also for consolidating the walks; it greatly improves their appearance and renders them far more comfortable for walking. It ought to lie for a few days before it dissolves. One fine day last summer we put a load on a portion of the carriage road; at night we had a thunderstorm, next day the salt was gone without doing any good whatever. Such a case will sometimes happen, but in a general way it may be used with great advantage and great economy. *A. Dawson, Rood Ashton.*

Lighting Fires at the Top.—Four years' experience of this form of grate enables me to confirm nearly every point urged in its favour by your correspondent "F. G. H." I will only add that my grates have a very artful and simple contrivance for raising the coal, which acts on the principle of Mahomet going to the mountain, in preference to the latter travelling to the Prophet. I may not mention names, your standing orders wisely forbidding that; but perhaps I shall not be sailing too near the wind if I say that my ingenious manufacturer's name must be known to most persons visiting the British Museum. *W. F. H., Weybridge.*

Societies.

HORTICULTURAL: *Feb. 7. Fruit Committee.*—Mr. Edmonds in the chair. Of Pears, Mr. Smith, gardener to S. Ricardo, Esq., sent a dish of Josephine de Malines, in excellent condition from a Standard and extremely well flavoured. Other specimens of the same variety from a south wall, larger but not near so fine in flavour, came from Mr. Spivey, gardener to J. A. Houblon, Esq., of Hallingbury Place, Essex. Old Colmar and Easter Beurré came from J. Moorman, Esq. Of these the former proved the best in point of flavour. Easter Beurré gathered on Oct. 19, large and fine, came from Mr. Ingram, gardener to J. J. Blandy, Esq., of Reading. Beurré Bretonneau, from Mr. Whiting, of the Deepdene, was better flavoured than is usual for that variety, which is seldom melting or good. This was ascribed to the very favourable summer which we experienced last season. From the same exhibitor also came specimens of Vauquelin Pear. Some late Pears from Welbeck, sent without a name, were pronounced to be Winter Nelis. Of Apples, Mr. Gadd, Dorking, produced Court of Wick (misnamed Golden Harvey), which was found to be the best flavoured variety exhibited. The next best was Mickleham Pearmain from the same grower. This was stated to be a local variety, to which Traveller's Pearmain and other names were sometimes given. Among other Apples were Court Pendu Plat, from Mr. Spivey; Wheeler's Russet, from Messrs. Ivery, of Dorking; Sweeney Nonpareil and Ribston Pippin, from Mr. Whiting; Lamb Abbey Pearmain, from Mr. Smith; and Onion Apple, a late-keeping local variety, from Mr. Stewart, gr. to Sir T. Winnington, Bart., M.P., Stamford Court, near Worcester. Among kitchen Apples shown at last meeting, and since then baked, the best proved to be Smith's Pippin, exhibited by Mr. Hodge, St. Austell; and the second best, Lemon Pippin, from Mr. Reid, gr. to J. Hunt, Esq., of Sydenham Hill. Other varieties shown in competition with the above were Dumelow's Seedling, Norfolk Beaufin, and Loan's Pearmain. From Mr. Crawshay, Cyfarthfa Castle, Glamorganshire, South Wales, came bunches of Muscat, Barbarossa, and another Black Grape, all of which had been kept cool and otherwise subjected to the same kind of treatment. The two first, though in fair condition, were considerably shrivelled, but the last was as plump and fresh both in berry and stalk as if it had been the month of August. This was thought by Mr. Crawshay's gardener to be Black Prince; but the Committee were of opinion that that variety could not be had so late in the season; steps have therefore been taken to obtain eyes or cuttings of it for trial in the Society's Garden.

Feb. 9 Floral Committee.—The Rev. J. Dix in the chair. Among some fine plants which were exhibited on this occasion by Mr. Linden, of Brussels, was an extremely handsome variegated Fern called Pteris tricolor, to which a prize was awarded. Its leaves, which resemble those of P. aspericaulis, when young are of a beautiful red colour, and when fully developed rich deep green, with attractive silvery markings along the sides of the midribs, which are red. To the at present small class of Variegated Ferns this must be regarded as a very valuable addition. Along with it came a small bit of Nephelaphyllum pulchrum, bearing one or two pale yellow flowers, and the charmingly variegated-leaved Begonia Duchesse de Brabant. Messrs. Veitch produced a pretty, apparently new, Adiantum, to which a prize was awarded, and a brilliant deep crimson or scarlet Epacris named Mount Vesuvius. From R. Warner, Esq., came the pretty little Lælia præstans and L. spectabilis, both with charming purple flowers, the former the smaller of the two, and among other points differing from the latter in having a deep yellow throat. A cut spike of a small-flowered Oncidium was also shown by the last named exhibitor.

Notices of Books.

On the Cause of Rain and its Allied Phenomena. By G. A. Rowell, Oxford. 8vo, pp. 166. 5*s.*

The author of this volume is of opinion that all existing theories which attempt to explain the cause of rain are insufficient; and he proposes the following as one which will meet all cases:—

"The theory is, that the atoms of water being so minute are, when completely enveloped in their natural coatings of electricity, rendered so buoyant as to be liable, even when in their most condensed state, to be carried off by slight currents of air; but if expanded by heat, their capacity for electricity being increased by their increase of surface, they are then rendered buoyant at all times, and are buoyed up into the air by their coatings of electricity; when, if condensed, they become positively electrified, but are still buoyed up by the electricity, till, on the escape of the surcharge, the particles fall as rain."

The arguments adduced in support of this view are given at length, and for them we refer the reader to Mr. Rowell's pages.

The deposit of dew, while the soundness of Dr. Wells's views is admitted, is also referred to electrical action:—"There can be no doubt that the deposit of dew is caused, as shown by Dr. Wells, by the condensation of vapour from the lower stratum of air, owing to the coldness resulting from the radiation of heat from terrestrial objects; still we have the experiments of Beccaria, which show that electricity is developed during its deposit. Trees often drip with water at a time when there is no rain, or apparently any other precipitation of vapour; and this to a degree which seems more in accordance with the effects of attraction than of mere condensation: while the forms in which rime is deposited on the points and edges of leaves, &c., seem to be inexplicable except from the agency of electricity. The points and most prominent parts of objects are often fringed with rime, while the flat parts are quite free from it; this is particularly the case with iron bars and the like, and several interesting examples of such deposits of rime are shown in the plates on meteorology in the 'Encyclopædia Metropolitana.' During the late autumn I saw some beautiful and interesting illustrations of this subject, in the form in which rime was deposited on the leaves and trees near the new University Museum. The ivy leaves being very smooth were completely margined with a fringe of rime on all their edges, while the middle of the leaves was quite free from it; at the same time the dead leaves of the Hornbeam, although intermingled with Ivy, being crumpled and rough, were completely covered with the rime, even on surfaces which were so inclined that the frozen particles could not have fallen on them. The beautiful and delicate spicular form of snow crystals seems to favour the idea of electrical action in the arrangement of the minute particles of which they are composed."

The same opinion is held by the author as to the cause of hailstorms, concerning which he has gleaned some curious facts, of which the following are perhaps the most remarkable:—

"Such storms are often dreadfully destructive; the most pre-eminent in this respect, of all European storms on record, being that which desolated so large a portion of France in July, 1788; traversing nearly the whole length of the country, and destroying property of the estimated value of more than a million sterling. This tremendous storm was ushered in by a dreadful and almost total darkness, which suddenly overspread the whole country. In a single hour the whole face of Nature was so entirely changed, that no person who had slept during the tempest could have believed himself in the same part of the world when he awoke. Instead of the smiling bloom of summer, and the rich prospects of forward autumn, which were just before spread over the face of that fertile and beautiful country, it now presented the dreary aspect of universal winter, in the most sterile and gloomy of the arctic regions. The soil was changed into a morass, the standing corn beaten into a quagmire, the Vines were broken to pieces, and their branches bruised in the same manner; the fruit trees of every kind were demolished, and the hail lay unmelted in heaps, like rocks of solid ice. Even the robust forest trees were incapable of withstanding the fury of the tempest; and a large wood of Chesnut trees in particular was so much damaged, that it presented, after the storm, little more than bare and naked trunks. The Vines were so miserably hacked and battered, that four years were estimated as the shortest period in which they would become again in any degree productive. Of the 66 parishes included in the district of Pontoise, 43 were entirely desolated; while of the remaining 23, some lost two-thirds, and others above half their harvest. M. Arago has lately remarked, that the damage done to 1039 parishes on this occasion amounted to 24,962,000 francs. The storm which occurred with such violence at Chipping Norton and its vicinity on August 9, 1843, must be painfully remembered by many. However I need not enumerate more such cases, but will give Halley's description of a storm he witnessed, as generally characteristic of these destructive storms as they occur in Europe. The only peculiarity in this case being, that it took place much earlier in the year than is usual for such storms, which generally occur in the hottest months."

But this is nothing to hailstorms in tropical regions:—"April 10, 1822, at Bangalore, a hailstorm killed many cattle, the hailstones being represented by the natives as being as large as pumpkins. The gentleman who gives the account says, *Three days after the storm* I went to the spot, and found the carcases of twenty-seven bullocks, lacerated by hailstones; also dead birds. In a tank 300 yards in circumference, half the surface was covered with floating masses of hailstones, which had been carried down the ravines two days before; some of the masses were five and a half inches in thickness; the hailstones were angular and oval, and some measured three inches in diameter. This was the third day after the fall, in the scorching month of April. There are four occasions on which remarkable masses of ice, of several hundred pounds in weight, are believed to have fallen in India. One near Seringapatam in the last century, said to have been the size of an elephant. It took three days to melt. We have no further particulars about it, but there is no reason for doubting the fact. In 1826 a mass of ice, nearly a cubic yard in size, fell in Khandeish. In April, 1838, a mass of hailstones, 20 feet in its larger diameter, fell at Dharwar. On the 22d of May, after a violent hailstorm, 80 miles south of Bangalore, an immense block of ice, consisting of hailstones cemented together, was found in a dry well. These masses of ice, like many of those considered hailstones of the largest size, have in all probability been formed by violent whirlwinds or eddies, and seem to have reached the monstrous dimensions in which we find them, either on their approach to or their impingement on the ground; and the same thing will apply to those of much more moderate bulk, and which are commonly considered hailstones, though when examined they turn out to be a number of these aggregated together."

To the theory of Cyclones Mr. Rowell objects for reasons which he explains at length. But for this and other matters the reader will consult the volume itself, which will no doubt receive from Meteorologists the attention to which it may be entitled.

The fourth part of the new edition of *Ure's Dictionary of Arts, Manufactures, &c.*, contains valuable articles on Candles, Caoutchouc, Cement, Chimneys, Coal, and Coal gas. There is also an account of Cedar wood, which seems to have escaped the observation of Mr. Hunt, if we are to judge by the slovenly inaccurate manner in which it is written, *e. g.*—1. The Cedar of

* It is a curious fact, though true, that such prodigies are always fixed at a high price; thus a certain "Beehive" was sent out at 5*l.* per 100, and strong plants in pots (from which a peck of fruit could be gathered) were charged 2*s.* 6*d.* each.

Lebanon is said to be called botanically Pinus Cedrus, an obsolete name, afterwards corrected to Cedrus Libanus, instead of Libani; 2. Juniperus virginiana, which furnishes common red Cedar, is spoken of in two different places, in pretty nearly the same words; 3. the same may be said of Juniperus Bermudiana; 4. New South Wales Cedar is said to come from Cedrela trona, meaning Toona, a tree that does not grow in Australia; 5. In like manner Guazuma erlimfolia is printed for ulmifolia, and Arzedarach for Azedarach. In short the whole article is a jumble discreditable to the author, and to the very important work in which it has been permitted to appear.

TRADE LISTS RECEIVED.—E. G. HENDERSON & SONS (Wellington Road, St. John's Wood) Catalogue of Flower, Agricultural, and Vegetable Seeds, pp. 96.—BUTLER & MCCULLOCH'S (Covent Garden) Spring Catalogue of Flower, Shrub, Tree, and Vegetable Seeds, pp. 97.—HOOPER & Co.'s (Covent Garden) Spring Catalogue of Flower, Shrub, Tree, and Vegetable Seeds, pp. 71.—Descriptive Catalogue of Florist Flowers, sold by DOWNIE & LAIRD, 17, South Frederick Street, Edinburgh.—Catalogue of Vegetable and Flower Seeds, sold by Messrs. F. & A. DICKSON & SONS, 106, Eastgate Street, Chester.—W. DEAN'S (Jedburgh) General Catalogue of Garden, Flower, and Agricultural Seeds.—J. H. COTTRELL'S (15, Bull Ring, Birmingham) Catalogue of Vegetable, Flower, and Agricultural Seeds.—Descriptive Catalogue of Kitchen Garden, Farm, and Flower Seeds, Culinary Roots, &c., sold by ALEX. CAMPBELL & SONS, Churchill, Glasnevin, Dublin.—B. REID & Co.'s (Aberdeen) Nursery, Rose, Vegetable, and Flower Seed List.—WITTY & SON'S (Cottingham, near Hull) Descriptive Catalogue of Hollyhocks, Roses, Conifers, and Shrubs.—Catalogue of Vegetable and Flower Seeds, Garden Implements, &c., sold by J. EDMONDSTON & Co., 61, Dame Street, Dublin.

Miscellaneous.

Sale of Coniferous Seeds.—A small collection of these was sold the other day by Mr. Stevens. About 1¼ oz. of Libocedrus decurrens fetched 2*l.*; about ¾ of an ounce of Cupressus Lawsoniana, 2*l.* 8*s.*; similar quantities of the same from 5*l.* 10*s.* to 9*l.*; Douglas Fir, 1 oz., 2*l.* 4*s.*; Abies Menziesi, ½ oz., 2*l.*; Pinus Lambertiana, 9 oz., 2*l.* 12*s.* 6*d.*; P. Benthamiana, 1 oz., 2*l.* 6*s.*; Wellingtonia gigantea, clean seed, 1 oz., 5*l.* The Mexican Pinus Ocampoi Devoniana: seeds collected from an immense tree, cut down for the purpose, in the department of Mechoacan, at an elevation of at least 10,000 feet above the level of the sea, where not even Barley can grow, and only a few vegetables of the commonest kinds; where frosts are not only frequent but to be expected at all times in the year, in summer as well as in winter. So, say Messrs. Roezl & Co., there is no doubt that the tree will be perfectly hardy in England—packet of seed, about ¾ oz., 1*l.* 14*s.* Pinus Jeffreyii, 1¼ oz., 2*l.* 12*s.* 6*d.* The whole sale, which consisted of 275 lots, realised upwards of 460*l.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—This should now be kept as gay as possible. Any Camellias, therefore, done blooming should be removed forthwith to some of the houses at work; a moist atmosphere, a temperature averaging 65°, and a slight shade in bright weather are the requisites in order to cause them to produce wood freely and large healthy leaves. Lose no time in repairing the drainage of any specimens which require such attention, and endeavour to secure a healthy vigorous root action, which is of great importance, especially in the case of hard-wooded plants. Shift and tie out Pelargoniums as may be required, and allow them plenty of space after this time, with all the light possible, and a free circulation of air whenever the weather will permit; but avoid cold north-easterly winds, which are very injurious to plants in active growth. Do not allow Calceolarias to suffer for want of pot room, as any check at the present season might throw them prematurely into flower. Cinerarias and other plants in pits and frames will now require frequent shifting and placing at greater distances from each other, in order that air may be permitted to circulate freely among them. Fumigate occasionally to destroy greenfly. Continue to propagate half-hardy plants for autumn flowering in the open ground. Sow tender annuals. STOVE.—Some little increase of temperature may take place here, and that chiefly in the afternoon, by shutting up early, at the same time using a sufficiency of moisture. Look over the fastenings of Orchids on blocks or in baskets, and renew the wires where necessary. Examine and shift all plants that require such attention, and cut back kinds which it may be desirable to increase after flowering, in order to get a supply of cuttings.

FORCING DEPARTMENT

PINERIES.—Do not allow young stock in pots to become too much pot-bound before shifting, and see that the balls are in a moist state at the time of potting. Aim at keeping these growing slowly, afford them a thoroughly moist atmosphere, and keep them near the glass in order to secure compact strong plants. Let the temperature range from 60° to 70° with fire heat, allowing it to rise some 10° with the assistance of sunshine, and a gentle circulation of air. Plants swelling their fruit must be afforded a moist temperature of 70° at night. VINERIES.—Very careful management will be necessary in the present state of the weather, where the Vines are in an advanced state or fairly started, and care must be taken to counteract the drying effects of so much fire-heat by means of the evaporating pans, and sprinkling the floors, &c. See that inside borders are not allowed to become too dry, and give a good soaking of tepid manure water in a weak state where it is found necessary. FIGS.—Stop the young shoots regularly before the fourth or fifth leaf, and keep them regular and sufficiently thin to admit light and air, so as to get the wood matured, and secure a second crop. Where the trees incline to grow too luxuriantly, keep them rather sparingly supplied with water at the root, giving no more than may be absolutely necessary for the present crop, for unless short-jointed firm wood can be obtained, there will be little chance of obtaining an abundant second crop. CUCUMBERS.—There is no doing any good with these without the command of a brisk, moist temperature which should average 70° at night, and 75° to 85° by day, according to the state of the weather. Sprinkle the foliage frequently with the syringe, and keep the soil in a nice healthy state as to moisture, giving clear weak tepid manure water, also keep the shoots thin and regular, and trained near the glass, so as to expose every part to all the light possible. Take every opportunity of admitting fresh air, but do this very cautiously, for cold draughts would ruin the foliage. STRAWBERRIES.—These are somewhat liable to the attacks of green-fly when the weather necessitates keeping them rather close, and they should be very carefully looked over, and lightly fumigated once or twice if found to be at all infested with this pest.

FLOWER GARDEN AND SHRUBBERIES.

Give lawns a good rolling after wet, and, as was stated last week, if it be necessary to take up any of the turf for the purpose of levelling the ground, this should be done as soon as possible. Proceed with edging the walks, and keep these clean, and roll frequently to make them firm for walking upon, and also to prevent the growth of weeds. Where it may be necessary to increase the stock of any of the varieties of Dahlias, these should be placed in heat at once in order to secure cuttings. Look to Crocus bulbs, &c., planted in beds, and protect them from the depredations of mice.

HARDY FRUIT AND KITCHEN GARDEN.

Pruning of all kinds should soon be brought to a close except Figs, which may yet remain. When Filberts are closely pruned a deficiency of male blossoms sometimes occurs, in which case stick some of the common Hazel having a crop of catkins on about the bushes to fertilise the female flowers. Before Peaches are tied to the walls they should be dressed with a composition consisting of soap water, tobacco water, and sulphur, to which add quick lime to give it consistence. Whenever any appearance of scale is found on other wall fruits, they should be dressed during winter with the above composition. To provide against failures in vegetable crops already sown, or where the climate is too cold to trust to seeds for the present to the open ground, we advise sowing Peas, Beans, Spinach, &c., in addition to kinds formerly named; good early varieties of the first should be selected. They may either be sown in small pots for the more easy transferring to the open ground, or when the quantity is considerable cut fresh pieces of turf 12 inches long and 4 or 5 inches wide; turn the Grassy side downwards and form a channel along the centre of the now upper part, in which sow the crop as you would in the open ground. Managed in this way the Peas will sustain but little check, and will root through the turf into the soil and grow away freely. See to keeping up a supply of French Beans, and give those bearing in pots a liberal supply of manure-water

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.
For the Week ending Feb. 9, 1860, as observed at the Horticultural Gardens

February.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 3	11	30.257	30.186	40	23	31.5	41½	41	N.	.06
Satur. 4	12	30.235	30.160	45	35	40.0	40	40	S.	.00
Sunday 5	13	30.017	29.747	50	32	41.0	41½	41	W.	.26
Mon. 6	14	30.012	29.778	48	26	37.0	42½	41½	N.W.	.00
Tues. 7	○	30.180	29.874	48	30	39.0	42	41½	W.	.02
Wed. 8	16	29.712	29.523	52	31	41.5	42	41½	S.W.	.06
Thurs. 9	17	29.844	29.642	40	18	29.0	42½	42	N.	.00
Average		30.036	29.844	46.1	27.8	37.0	41.7	41.2		.40

Feb. 3—Overcast; fine; large lunar halo; rain.
— 4—Densely and uniformly overcast throughout.
— 5—Partially overcast; fine; very fine; rain.
— 6—Fine; clear and cold; frosty.
— 7—Slight frost; densely overcast and cold; showers.
— 8—Cloudy; overcast: rain at night; snow.
— 9—Clear and cold; dusky-white clouds; snow showers; frosty.
Mean temperature of the week, 2 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending Feb. 18, 1860.

February.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 12..	41.8	30.3	37.6	15	0.26 in.	3	6	1	0	4	11	7	2
Mon. 13 .	44.4	30.1	37.2	13	0.37	2	3	5	1	6	9	6	2
Tues. 14..	45.5	31.3	38.4	13	0.50	1	3	3	2	3	12	8	2
Wed. 15..	46.5	31.2	38.8	11	0.25	3	4	3	—	4	10	7	3
Thurs. 16..	46.4	30.7	38.6	5	0.23	6	5	2	3	1	8	6	3
Friday 17..	46.2	31.1	38.7	12	0.32	3	4	3	3	3	7	9	2
Satur. 18 .	44.3	30.7	37.5	13	0.30	4	3	3	1	4	8	7	4

The highest temperature during the above period occurred on the 12th, 1831, and 16th, 1859—therm. 58 deg.; and the lowest on the 13th, 1855—therm. at zero.

Notices to Correspondents.

BOOKS: *W B.* Thompson's Gardener's Assistant will perhaps answer your purpose best.—*J M S.* Lindley's Guide to the Orchard and Kitchen Garden.

CHINESE PEAS: *J C & Co.* These are the Pois oléagineux of the French; and are produced by Soja hispida. They yield Soy when properly fermented. You will find some account of them in the *Gardeners' Chronicle* of last year, p. 425. The plants are too tender for this climate.

DRYING FRUITS: *A Victoria Settler* will feel obliged by any of our correspondents furnishing him with instructions as to the drying of Figs and Grapes of different kinds—all of which he grows successfully on his property near Melbourne.

ERRATA.—Under the head of American Apples, page 98, a misprint has occurred which entirely alters the meaning of the sentence. Instead of reading "Peach stones *in* pits," it should be "or pits." The Americans call the stones of all fruits pits. The word sounds strangely to us, and comes we believe from the Dutch. In the same page, after Gansel's Bergamot, read "South" of England instead of "North."

GARDEN LABELS: *N Cole.* The mode of cutting which you send is perfectly well known. It was described 30 years ago in the gardening books of the day, and has been largely used ever since.

GRAPES: *T.* The Golden Hamburgh will succeed under the treatment usually given the Black Hamburgh. The Grizzly Frontignan and Cannon Hall Muscat may do on the back wall of a Muscat house, but they would certainly succeed better trained up the roof. ‡

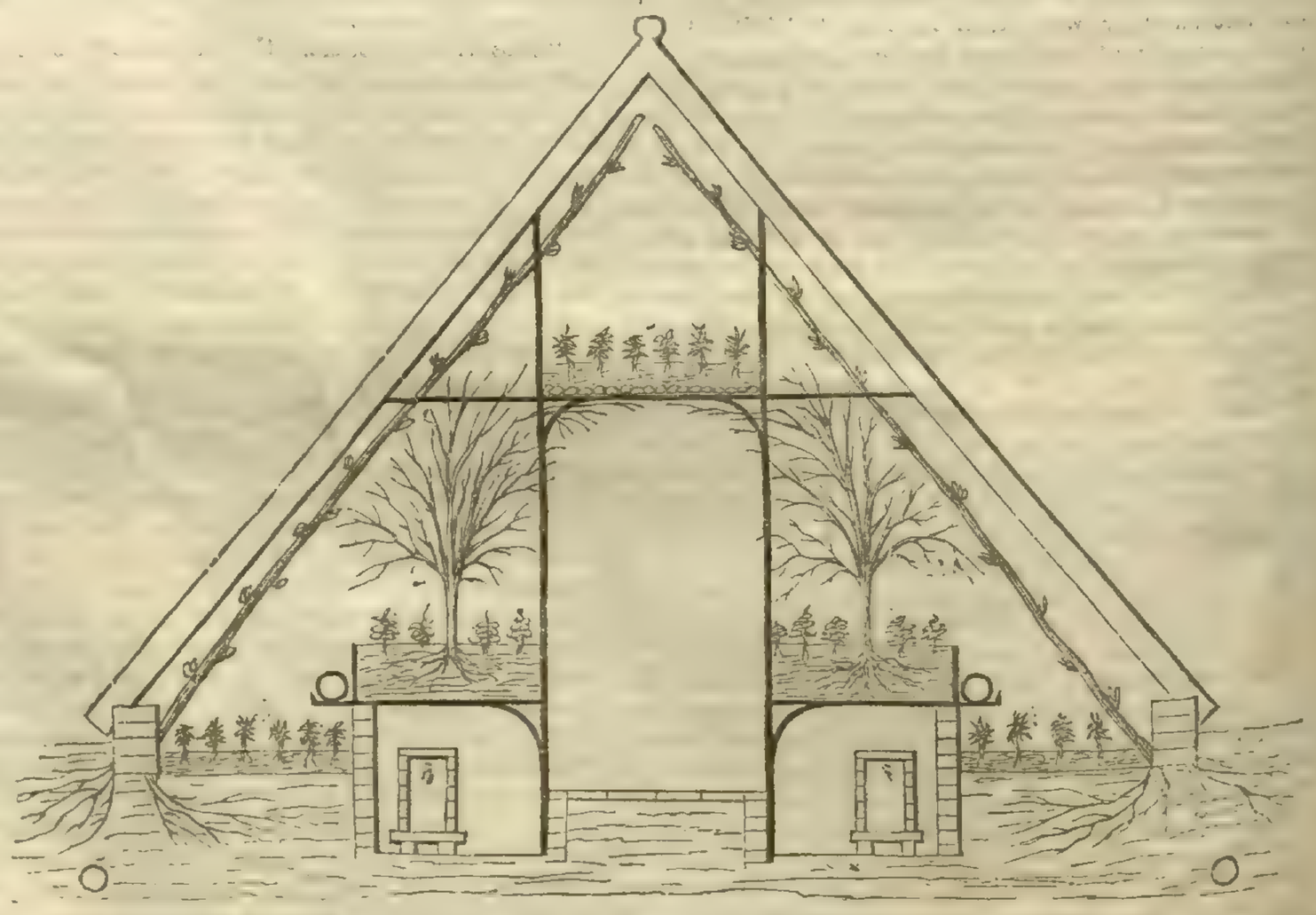
GREEN PEAS: *J W.* We regret to say we find very little improvement. It still appears to us that they are only fit for Green Pea soup—for which they would do very well.

INSECTS: *E B.* The cylindrical grubs found in such numbers in the Geranium mould are the larvæ of St. Mark's fly (Bibio Marci). They feed on decomposing vegetable matter, and we do not understand that they are injurious to living plants. *W.*

NAMES OF FRUITS: *C Parsons.* Dumelow's Seedling.—*A O N.* French Russet.—*James Spicer.* The Blenheim Pippin.—*W C.* The Old Pomeroy. ‖

OMNIUM GATHERUM. *G H P.* The distance at which parallel K. garden walls facing the south can be advantageously built depends upon their height. Ascertain the length of the shadow thrown at noon any time in December, and make the space 6 feet wider than the shadow. You may have Apricots, Plums, and Pears on a west wall, and Pears or American Apples on an east wall. An east wall forms a screen from our worst wind; it is convenient to have it higher than any other. The sort of house you describe had better be span-roofed; but for details, which would be unintelligible without plans, we must refer you to builders; perhaps such a one as the following, proposed by Mr. Fergusson, of Stowe, but never described, would do as well as any. As to mowing machines there is not very much difference in their working qualities. That which you mention is the favourite.

VINERY: *A Subscriber.* We should suppose that you might get bearing for your galvanised wire by screwing iron wire loops into your heavy rafters: if merely driven into the wood we fear the loops would scarcely hold. Or you might drill holes through the rafters, and pass the wires horizontally through the holes.



ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
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Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
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They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

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116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

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MESSRS. PROCTOR are now prepared to take orders for their special MANURES for 1860, which they unhesitatingly state are of a superior quality and charged at the lowest possible price, viz.:—

TURNIP MANURE	CLOVER MANURE	OAT MANURE
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PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.

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American decorticated Cotton-seed Cake of best quality supplied at the market price.

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BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

PERUVIAN GUANO.—
The present Price of this valuable Manure is—
12*l.* per ton for 30 tons and upwards } at the Depôts in London,
13*l.* 5*s.* per ton for 1 ton up to 30 tons } Liverpool, and Bristol.

And, in order to protect themselves against the purchase of Adulterated Mixtures, and of inferior Guanos, purporting to produce results equal to Peruvian, consumers are recommended to apply either to ourselves; to our AGENTS, Messrs. GIBBS, BRIGHT, & Co., of Liverpool and Bristol; or to Dealers of established character throughout the Country, in whose honesty and fair dealing they can place implicit confidence.—ANTHONY GIBBS & Sons, 15, Bishopsgate Street Within, London, E.C.

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MANUFACTURED BY
THE PATENT.

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The Directors recommend these Manures with every confidence to the attention of their brother Farmers, and the fact that they and the Shareholders farm upwards of 30,000 acres of land cannot fail to afford a guarantee and protection to consumers. The high per centage of Soluble Phosphate, and large amount of Animal Matter yielding Ammonia they contain, not only render them the cheapest, but also the most Natural Manures, and the best calculated to produce a healthy, sound, and heavy crop.

ODAMS'S SUPERPHOSPHATE OF LIME.—This manure contains an unusually large per centage of Soluble Phosphate of Lime, and is therefore a highly valuable Manure for all root crops. As security to the purchaser every bag contains 2 cwt., is marked "Odams's Patent Blood Manure," and sold only by the authorised Agents of the Company.

JUPP'S NEW CATTLE FOOD.

W. AND R. JUPP AND CO. having, from long experience in their business, satisfied themselves of the advantages resulting from the use of a preparation or condiment to be used with Cattle Food, beg to inform their friends and the public, that after considerable labour and experience they have succeeded in producing an article which, though differing from any in present use, possesses all the nutritive and other qualities so necessary in a preparation of this description, AND AT A CONSIDERABLY REDUCED COST. They beg to append the following analysis from Dr. Letheby, whose name they presume will be a sufficient guarantee for its genuineness.

The material will be sent out in bags, with plain directions for use, at the following prices for cash only, viz., 35*s.* per cwt.; 19*s.* per ½ cwt.; and 10*s.* per ¼ cwt.

W. R. JUPP & Co., 6, Cross Lane, Eastcheap, E.C. Money Orders to be made payable at the Tower Street Post Office, E.C.

COPY OF ANALYSIS.

"To Messrs. W. & R. Jupp. "Laboratory, Feb. 3, 1860.

"Gentlemen,—In accordance with your request I have analysed the sample of your new Cattle Food, and find that it contains 12.1 per cent. of nitrogenous or flesh-forming matter, and 68.1 of carboniferous or fattening—2.6 of which are fat. It also contains 4 per cent. of saline matter, chiefly phosphate. The nutritive value of the food is therefore good, for it amounts to 80.2 per cent. I may also remark that the mixture, which consists chiefly of Cereals and Leguminosæ, is well comminuted, and therefore fit for digestion without loss from imperfect mastication. I remain, gentlemen, yours truly,

"HY. LETHEBY, M.B. Ph. D., &c.

"Professor of Chemistry in the College of the London Hospital and Medical Officer of Health for the City of London."

ESSEX AGRICULTURAL ASSOCIATION.—
The Right Hon. Lord BRAYBROOKE, *President.*

The Annual Exhibition of this Association will be held at Saffron Walden, on TUESDAY, June 12.

The sum of 600*l.* has been voted for distribution in Prizes for the present year, of which the following are Special, and Open to all England:—

SPECIAL PRIZES.

For the best entire Horse for Agricultural purposes, the proprietor being a Member, or paying an Entrance Fee of One Guinea £25

For the best thorough-bred entire Horse, the proprietor being a Member, or paying an Entrance Fee of One Guinea £25

(The Horses obtaining the above Prizes must either have travelled regularly in the County the preceding season; or the owners must sign an undertaking that such Horses shall do so the following season; and the Prize will be withheld till the completion of the contract.)

For the best Bull of any age of a pure breed, the proprietor being a Member, or paying an Entrance Fee of One Guinea £15

For the best Ram of any age of a pure breed, the proprietor being a Member, or paying an Entrance Fee of One Guinea £10

N.B.—The following Bye-law was passed Jan. 20, 1860:—"No animal having obtained a First Prize in the class in which it is exhibited shall be eligible to compete in the same class at any future exhibition of the Society. This Bye-law shall also apply to animals that have obtained any Special Prizes offered by the Society."

All Sheep to be barely and fairly shorn, and any animal shorn previously to March 31 to be disqualified from exhibition.

Any person requiring the Book of the Rules of the Association and the List of Prizes for the ensuing Meeting, which will soon be ready for distribution, may obtain the same on sending six penny stamps to the Secretary.

By order of the Committee.
ROBERT EMSON, Secretary, Slough House, Halsted.

The Agricultural Gazette.

SATURDAY, FEBRUARY 11, 1860.

ON Monday last, before a crowded meeting of the London Farmers' Club, Mr. Alderman MECHI read a paper ON TOWN SEWAGE, the greater part of which will be found in another page. And Mr. SIDNEY followed him with a laboured and sarcastic harangue in proof of the assertion that the so-called sewage question is the great humbug of the day. It was plain, as Mr. MECHI had said, that great difference of opinion existed on the subject. And it was plain, as everybody in the room could see, that the audience sided not with Mr. MECHI but with his opponent in his estimate of the subject.

Mr. WILLIAMS, of Baydon, the owner and occupier of some of the highest land in Berks and Wilts, who has to lift well water 300 feet, did indeed lament his inability to share with the tenants of Thames-side meadows the advantages of London sewage, and illustrated his sense of its value if only as an irrigating agent by saying that he had overcome natural obstacles so far as to establish in spite of them a catch meadow on his farm. Mr. CUTHBERT JOHNSON too urged the Clipstone water meadows below Mansfield and the Craigentinney meadows, near Edinburgh, as unquestionable illustrations of the value of town sewage. And Mr. MECHI in his reply alleged that the experience of Lord ESSEX at Watford has been satisfactory on all crops, proving that he gets in increased fertility more than the 50*l.* a year which Watford sewage costs him. And, on the objection to such enormous floodings of the land as alone in sewage will convey a sufficient dressing of fertilising matter, he very pertinently said—you cannot avoid 2000, 3000, or even 4000 tons of water annually per acre for washing in your manures in the natural way whatever they may be, according as your annual fall of rain is 20, 30, or 40 inches. Unquestionably on undrained clay soils such an abundant natural manuring in the liquid way is often more than one wants; but on light permeable soils, supplied with ample outfall and efficient drainage, it might be doubled for many kinds of crop without harm or with positive advantage. And in such circumstances the enormous sewage dressings therefore, of which Mr. LAWES, for instance, speaks, ought not to startle, or be taken as reducing to absurdity the whole affair.

On the other hand, however, we had gentlemen from Rugby who assured us that those most intimately connected with the agricultural use of sewage there would indeed *accept* it for application on such land as would receive it by natural drainage, but they would pay nothing for it, nor would they employ machinery to raise it to land which it could not naturally reach.

Of the attempt at Leicester to extract the useful part of sewage in the solid form, we learnt that the agricultural verdict in that neighbourhood condemns the resultant substance as agriculturally valueless or not worth its carriage. At Mansfield it was shown that the waters charged with sewage, which were used so beneficially on the Clipstone meadows, were equally beneficial lower down after they had deposited the filth which they carried from the town. At Aldershot where the refuse is in a less diluted form, scarlet fever and pleuro-pneumonia, which have followed its application, have more than wiped out its agricultural value. The Chairman could speak from experience of both, and of the latter so severely that of his herd of 56 but 18 head remained. And Mr. THOMAS, of Lidlington, expressed, what was probably the average feeling of the meeting, that, if the filthy water of our sewers could by natural current reach meadow land, farmers, who often go to great expense in laying out their pastures for the reception and distribution of the pure water of a country brook, would not be "such fools" as to neglect the opportunity, *if they had it*, of similarly using water which carries with it the refuse of the London population.

Mr. SIDNEY'S harangue was, however, the evening's entertainment. Sufficiently spiced with personality to be amusing, and sufficiently addressed to the known prejudices of his audience—their known pre-judgment of the question—to be agreeable, it could not fail of obtaining a hearing. We do not think the larger audience which the press will give it, unexcited by the cheers and laughter of last Monday's meeting, will be quite so acquiescent or so gratified.

Baron LIEBIG has made public what everybody feels to be an extravagant estimate of the effects of wasting sewage; but Baron LIEBIG had once (1845) condemned the practice of land drainage as wasteful of the manures applied to the soil; everybody knows that his judgment then was wrong, and for all time coming, therefore, he is an untrustworthy agricultural authority. — Mr. MECHI is a kind-hearted, genial, hospitable man, but however he may be estimated elsewhere, "here he is not considered an agricultural authority."—Mr. CHADWICK is evidently an untrustworthy authority, and the reports and calculations of his subordinates are erroneous and untrue.—Mr. MORTON in preparing his account of Mr. TELFER'S farm was "deceived and taken in." These Ayrshire farms are no longer used as liquid manure farms, and Canning Park and Myre Mill have changed their tenants.—Mr. JOHNSON, our longest-trusted and best known authority on fertilisers, is complimented on his faith in disparagement of his judgment; and Mr. CAIRD is held responsible for all the alleged outcry against the obtuseness and stupidity of the English farmer consequent on Mr. TELFER'S account of his produce at one of Mr. MECHI'S meetings.

These are the chief points of the address. Mr. SIDNEY alone has never erred; he was indeed "in doubt" some years ago, but, strange in so confident a nature as his, this had not resulted in any utterance or assertion which could now be quoted against him. It could hardly be said that he alone had been always right, for Mr. GISBORNE of the *Quarterly Review* was cited on English as superior to Roman agriculture; Mons. BARRAL too was quoted upon the failure of the so-called sewage farms; and the British farmer "without science" was lauded with perhaps suspicious warmth.

It was unfortunate for Mr. SIDNEY'S case that these so-called sewage farms are not sewage farms at all. We may especially refer to them, in the midst of all this personality, from which the reader will easily winnow for himself that which was obviously urged by personal ill-will, because it is not at all likely that Mr. SIDNEY is here anything more than the impartial historian, how-

ever liable he may be like other historians to mistakes.

Whether or not, however, these farms could, in order, be referred to in a discussion on town sewage, it is plain that their history as given by Mr. SIDNEY himself is fatal to the argument which he founded on their alleged failure.

The "tenant" of Myre Mill was, it appears, while there, merely the agent of another, and he has it is alleged succeeded since no better in ordinary farm management. It is obvious then that his experience is no test of the system which Mr. SIDNEY thinks that it condemns. Mr. TELFER too, a merchant as well as a farmer, has lost his property on his farm. According to Mr. SIDNEY bank failures and trade losses were at hand to explain disaster, but these are both ignored, and the only explanation possible is the wasteful expenditure on sewage operations!

There is no reason whatever to doubt the statements, whether of Italian Rye-grass produce or of dairy produce, which were published of this farm. Mr. TELFER'S statement of enormous dressings of guano and gas-waste, washed in by hundreds of tons of water, is willingly accepted, and used to ridicule Mr. MECHI'S ideas of the value of poor London sewage, but statements on the very same authority of the produce consequent on these dressings are laughed to scorn. Mr. MORTON had the live stock on the farm, the stores of food piled and harvested on the premises, and the statements of neighbours in confirmation of the statements which he made, and whoever may be now the tenant of Canning Park, we entirely believe its produce when in the hands of Mr. TELFER, as related in the paper to which Mr. SIDNEY alluded, rightly to claim a place upon the list of trustworthy agricultural maxima.

To return, however, from the consideration of personalities to the subject matter of last Monday's discussion, it will we think be generally admitted that Baron LIEBIG'S fears have been justly ridiculed, and that the English farmer has been unjustly condemned in connection with town sewage, which he has hardly ever yet had the chance of using. That the waste of a large population, however, is valueless as manure is incredible. And with our water meadows as compared with ordinary pasturage on the one hand, and with the proved advantages of our water drills as compared with ordinary drills for applying manure on arable land on the other before our eyes, we shall not readily believe the assertion that the fertilising matter of our town-waste loses its fertilising nature by dilution with a rainfall however great, and with a water supply however liberal.

TUSCAN AGRICULTURE.

A VERY clever and interesting work, of which the third edition is now announced, was published in 1848 by Mr. Whiteside, the late Attorney-General for Ireland in Lord Derby's Ministry. The learned gentleman, being in delicate health, sojourned in Italy during two years, the former of which was the concluding term of Pope Gregory's life, and the latter the commencement of the Pontificate of Pius IX. During this important period of Italian history Mr. Whiteside occupied much of his time in the investigation of matters relating to the laws affecting the tenure of land and the relative conditions of landlord and tenant, besides a variety of subjects affecting the political, social, and moral aspects of the Italians.

With these latter points, and the classical literature introduced, I am not about to meddle. I am just enough of a Latin scholar—whether my smattering of Latinity has been acquired at the Marischal College of Aberdeen or elsewhere matters not—to adopt as my watchword "Nihil agriculturâ melius," as Mr. Whiteside has taken this classical aphorism for the motto of the chapter which lies before me.

Our author begins with these questions. "To what is owing the great agricultural prosperity of this beautiful district (Tuscany) of Italy?—a question more interesting than any connected with the fine arts. Is it to the energy of the farmer, or the habits of skilful cultivation long prevalent in the country and transmitted from father to son in a succession of ages? Or, is it owing to the richness of the soil or the excellence of the government? Or, lastly, to the tenure by which the land is held, or to its division amongst the people who till with unrivalled industry its surface?" He finds materials for answering these questions in the history of the country by Sismondi, who has described the condition of agriculture in Lombardy and Tuscany as very good even in the middle ages, owing, it would appear, to the wise and liberal policy of the "proprietors inhabitants of towns who advanced their capital, shared the harvests, and alone paid the land tax. They undertook the immense labour which has given so much fertility to the Italian soils, that of making dykes to preserve the plains from the inundations of the rivers, and of deriving from these rivers innumerable canals of irrigation. The Naviglio Grande of Milan, which spreads the clear waters of the Ticino over the finest part of Lombardy, was begun in 1179, resumed in 1257, and terminated a few years afterwards. Men who meditated and who applied to the arts the fruits of their study practised already that scientific agriculture of Lombardy and Tuscany which became a model to other nations; and at this day, after five centuries, the districts formerly free, and always cultivated with intelligence, are easily distinguished from those half-wild districts which had remained subject to the feudal lords."

While other countries were suffering from feudal oppressions, and the caprices of semi-barbarous landowners and a besotted, poor, and grossly ignorant peasantry, the cultivators of the plains in the north of Italy were a civilised and prosperous people. How far the long established system termed *mezzadria*, by which the tenant shares the produce with the proprietor has tended to the welfare of the former is a very disputable point. In favour of this long established system it has been urged that the principle is most equitable to both parties concerned. If the proprietor gains largely in very productive harvests "he likewise shares in the risk of bad seasons and bad crops, as well as the farmer; he divides the loss and the gain, the landlord and tenant are thus equally interested in improving the farm." Von Raumer is a great advocate of this system, which at first view appears plausible, but like its fellow *Metairie* system in France is proved to be in practice vexatious and tormenting—as it obviously must be when it descends to the dividing of even pigs and poultry. Von Raumer admits, indeed, that though the division in kind invariably secures against extreme poverty, it prevents improvement and keeps persons in the same state of mediocrity; and he concludes some hypothetical difficulties thus:—"Whoever is acquainted with the Irish principle of letting for money must admit that the abolition of the *mezzadria* and the adoption of the money letting system would be a retrograde step for Tuscany, and the adoption of the joint crop system a great advance for Ireland." Strange that a man of his understanding should advocate the continuance of this system and exclaim against the substitution of written contracts and fixed rents. I think it important to notice the following opinions of Mr. Whiteside, who is very likely to bear, in his professional and legislatorial characters, a part in settling legal points affecting the tenure of land in Ireland. "It might be a useful inquiry whether something like the Tuscan system of letting land could not to some extent be introduced into Ireland with advantage. Upon what ground in reason or justice, for example, should a landlord receive, where he has not granted a lease, one farthing of rent when the whole crop is destroyed by unforeseen calamities? What in Ireland would be miscalled charity in Tuscany is the law, and but naked justice. The Tuscan system may have its evils, but it unites the farmer and the proprietor in a common interest, and saves the laborious producer from ruin. Rent should be considered as the setting apart a reasonable part for the owner of the land; it follows that when there is no crop, not owing to any default in the farmer, there ought to be no rent. The owner is entitled to the whole produce of the land, *minus* the hire of the time, labour, and skill which give that produce. In this view, if nothing could be or had been produced without default in the tenant, the owner would be and should be the sufferer. If owing to the character of the people the division of crop could not in our country be adopted, the long term and fixed moderate rent, which seems now generally preferred abroad, might." When this was written the landlords of Ireland were generally too poor to supply capital to their numerous small tenants on the *mezzadria* system, even if its principle had been approved of, and the evils under which Ireland groaned, owing to defects in the mode of tenure and manner of cultivation, have been to a great extent removed or mitigated through the working of the Encumbered Estates' Court.

Long terms, written contracts, and fixed rents were even 20 years ago advocated by many economists in Tuscany, where it was proved that tenants with paid leases were prosperous, while the largest class of cultivators—that under the *mezzadria* system—holding innumerable patches of land were miserably poor. These Tuscan occupiers are described by Mr. Whiteside almost in the words in which the miserable peasantry of Ireland have been represented, "badly fed, badly housed, ill-educated, and yet multiplying with alarming rapidity; the land is the great and almost only means of procuring subsistence. So every man grasps at a patch of land on which he may exist."

The class of small farmers who are proprietors are represented as very comfortable, and so they easily may be, especially those in the rich vale of the Arno, yielding two harvests in the year, besides the produce of Vines and Olive trees interspersed. The land is under garden culture, and exhibits the perfection of neatness and skill. Of this beauteous tract Mr. Laing has written the following description:—"Scotland or England can produce no one tract of land to be compared to this strath of the Arno, not to say for productiveness, because that depends upon soil and climate, which we have not of similar quality to compare, but for industry and intelligence applied to husbandry, for perfect drainage, for irrigation, for garden-like culture, for clean state of crops, for absence of all waste of land, labour, or manure, for good cultivation, in short, and the good condition of the labouring cultivator."

It is pleasing to learn that the Florentine nobility and gentry act as honourably towards their country tenants as some of the great English landowners, who seldom grant leases, and yet never dispossess faithful tenants. "Few of the landlords," says Mr. Whiteside, "around Florence will grant leases, yet so binding is the force of prescription, so mutual the interest of landlord and tenant, and so close the intertexture of their property, that removals are very rare, and many now occupy the farms which their forefathers tilled during the Florentine Republic."

It is unquestionably beneficial to the general interests of agriculture that tenants should have leases—not short ones—in every agricultural country. It is well to have Mr. Whiteside booked for such sentiments as these. Landlords ought to be encouraged by every inducement to grant permanent leases; many cannot for a longer period than 21 years, too short as to waste lands, induce extensive reclamations. Tenants for life and entail might be granted a leasing power by statute over all waste lands for a period of 99 years. The like might be granted to the Court of Chancery to affect the estates of minors, lunatics, and all others over whom it has control—the lease to be made under this statute could be declared good against the world. The Government ought to particular districts to show how the reclamation could be effected, in the hope of bringing into contact waste labour and waste land, from which improvement must, and prosperity may, result. If the tenant, unlike the farmer in any country in Europe, will neither pay a reasonable rent, nor till the ground according to improved system, he must be compelled to yield the possession to those who will. Until some change, by which I mean improvement, and on a large scale, be effected in the letting, reclaiming, and cultivating of land, Ireland must continue, in respect of the agriculture of a large portion of her soil and the condition of the bulk of her people, behind almost every country of Europe—a dishonour to the Government and Legislature of England, and a disgrace to the civilisation of the age. *M. D.*

CHINESE SHEEP.

[The following is extracted from a paper read at the Society of Arts last Wednesday.]

SHEEP have indeed been aptly designated "the sheet anchor of British agriculture," so indispensable are they to the scientific farmer of the present day. But in improving the carcass of these valuable animals great care has also been bestowed upon their wool-producing capabilities, in order to preserve and increase as much as possible the quantity and quality of this important article. The wools of this country are, therefore, abundant in quantity, and of good, strong, and very useful qualities; although not of that fine description as the Saxony, Spanish, and other merino. Other countries of Europe likewise produce very large quantities of wool, which are, however, chiefly used up by themselves, for their own consumption and trade. I will, therefore, only refer to them in so far as they export to this country, and this will be best seen in the following statistical Report of the Board of Trade, of the quantities of wool imported into the United Kingdom from each country in the year 1858:—

WOOL—SHEEP AND LAMBS'.

	Lbs.
Russia	6,647,420
Denmark and Iceland	2,795,379
Prussia	413,852
Hanover	311,530
Bremen	268,756
Hamburgh	10,014,896
Holland	3,131,218
Belgium	2,600,551
France	279,300
Portugal	1,113,211
Spain	110,510
Turkey Proper	268,106
Egypt	1,227,861
Morocco	146,806
United States	951,938
Uruguay	457,673
Buenos Ayres	4,776,965
Chili	205,399
Peru	1,959,720
British Possessions in South Africa	16,597,504
St. Helena	175,528
British East Indies	17,333,507
Australia	51,104,509
Other parts	1,158,222
TOTAL LBS.	124,050,599

Of this quantity, about 86,000,000 lbs. (or more than two-thirds of the whole) came from our own colonies. Bearing this fact in mind, I shall more especially direct attention to our own possessions, although I shall also make a few observations respecting the capabilities of certain other countries in Africa and the Americas.

BRITISH WOOL PRODUCING COLONIES AND POSSESSIONS.

In 1857, Australia and Tasmania produced of wool as follows:—Victoria, 17,176,920 lbs.; New South Wales, 17,044,201 lbs.; South Australia, 10,105,699 lbs.; Western Australia, 478,486 lbs.; and Tasmania, 5,251,886 lbs.—or a total of 50,057,192 lbs. From a variety of causes, Australia has not within the last few years increased its exports of wool so largely as might have been anticipated.

The four colonies of Australia Proper, viz., New South Wales, Victoria, South Australia, and Western Australia, produce altogether about 44,500,000*l.*, to 45,000,000*l.*, and for some years this has remained nearly stationary, whilst Tasmania has gone on steadily increasing. . .

Careful and observant colonial writers have estimated the rate of increase in the Australian flocks as being only 75 per cent. per annum, whereas others, more sanguine, state it to be as high as 90 per cent. Taking the average increase of the four colonies, I am myself inclined to accept the former calculation, viz., 75 per cent., as being nearer the truth; but even at this rate the flocks of Australia would increase with much greater rapidity than they do were they not continually thinned by disease, drought, wild dogs, and "black fellows!" In New Zealand there are none of these great drawbacks; that is, drought, dingoes, and "black fellows" (in the Australian sense) are not known; and disease, although sometimes brought over by the Australian sheep imported, speedily disappears, and can now be said scarcely to exist in those healthful islands. Hence we find that, in less than five years, New Zealand has doubled her exports of wool, notwithstanding the tens of thousands of sheep which have been annually slaughtered to feed her rapidly increasing population. The increase of breeding amongst the sheep of this fine colony is variously estimated as being from 95 up to 110 per cent., which is the highest rate of any of our wool-producing possessions.

The Cape colony now furnishes upwards of 18,000,000 lbs. of wool per annum, notwithstanding that its sheep farmers have to contend with wild animals, drought, and depredations by Kaffirs and bushmen. Disease, as prevalent in the Australian colonies, is entirely unknown. . . . . Few persons are in the habit of regarding India as a great wool-producing country, and people, even of good general information, will be thoroughly surprised to learn that in 1858 the three Presidencies of India exported 18,635,396 lbs. of wool, of which upwards of 17,000,000 lbs. was brought into Great Britain. . . . . Let me now call your attention to the position occupied by the United States as a wool-producing country. From the official reports we find that there were in the Union in 1840, 19,311,374 sheep; 21,723,220 in 1850; 23,000,000 in 1853; and about 30,000,000 in 1859: these 30,000,000 being roughly valued at 12,500,000*l*. Taking the average of the whole, I think we cannot err very greatly in estimating the wool at 2½ lbs. from each sheep, or a total of 75,000,000 lbs. in 1859. . . . The French colony of Algeria deserves, I think, a few words as to its capability of producing wool. There can be no doubt that the climate and herbage of Algeria are remarkably favourable for the growth and perfect development of the sheep, indeed many learned men are strongly of opinion that it was from this part of Northern Africa that the renowned race of merino sheep originally came. Avoiding, however, this disputed point, we still know as a fact that it still possesses on its numerous elevated table-lands breeds of sheep little inferior to the merino when they receive the care and attention of intelligent Europeans. . . . .

Means of Largely Increasing our Flocks of Sheep and Wool.

I start on the plain ground that the rate at which our flocks of sheep increase and multiply in our colonial possessions at present is quite inadequate to keep pace with our manufacturing demands. Have we a remedy for this? I answer we have—a sure and certain remedy, as I will show. Whilst in the United States in 1857, I fell in with the following letter in the Transactions of the American Institute:—

"New York, June 2, 1856.

"Dear Sir,—It is now about nineteen months since I came into possession of three Nankin sheep (all ewes). I took them from aboard the clipper ship Jacob Bell, just then arrived from Canton, and sent them to my farm, Norwalk Island, Connecticut. These were all the sheep I had of any kind, and no buck with these, though they were all with lamb, and I relied upon raising a buck, as the sequel will show. They brought forth shortly afterwards each with three lambs, the ewes being poor, but they soon fattened and the lambs grew finely. The next time, for they have lambs twice in the year, they had three, four, and five lambs at a birth, and raised them. One of these sheep has had 12 lambs in 15 months; and the increase of the three original sheep, up to 18 months, has been 74. . . . . I should add that they are large and handsome, and the mutton of superior delicacy. Wool coarse.

"Yours, &c., Theodore Smith,
"Capt. U. States Light Horse Service, &c.

"To Henry Meigs, Esq.,
"Sec. American Institute, New York."

On reading this remarkable letter I hastened to make inquiries as to its truth, and I found that Capt. Smith had stated nothing but a plain matter of fact, Mr. Pell, the President of the American Institute, having purchased these sheep, and witnessed their astonishing fecundity, for they had increased largely in his hands. This gentleman told me that he had sheared as much as 9 lbs. of wool each from some of these animals, and so great was the public appreciation of them that he was selling them at 500 dollars each to various friends. Mr. Pell gave me this small sample of their wool. When I returned to England, I found that the same description of sheep had been received in England in 1855, from China, under the following circumstances.

Mr. Rutherford Alcock, then H.M. Vice-Consul at Shanghai, having noticed the breed of sheep in China, saw at once their extreme importance to England, and wishing to place them in the best possible hands, shipped, in 1854, several of them as a present to H.R.H. Prince Albert, who, in April, 1855, presented them to the Zoological Society of London. Here they were seen and abundantly ridiculed by numbers of our intelligent and enlightened gentlemen-farmers and noblemen, who could not for the life of them see any merit in these poor "Celestials." Such coarse-woolled monsters (with ears) that were always bringing forth lambs at the rate of four or five at a time. Why, no really respectable English farmer would have them at any price. Such men as the lamented Earl Ducie thought otherwise, and, accordingly, some of this foreign importation found comfortable quarters at that nobleman's estate. Lord Ducie died, and his Chinese sheep died also. In the meantime, the others at the Zoological Gardens were becoming a prodigious nuisance; first one ewe had five bouncing lambs, then another had four equally lively, nice young Chinese in one day; two days after a third had four, making 13 lambs from three ewes. Such increasing multitudes would soon have filled the Zoological Gardens and Regent's Park also; but as this could not be allowed, the (then) secretary hit upon an effectual means of stopping such an inconvenient fecundity, viz., by using the unhappy little strangers as fresh meat for the lions, tigers, and wolves. Now, it can well be imagined, that not even the ever-producing Celestial sheep could stand such treatment long, and no one will be surprised to learn that at this moment, to the best of my belief, not a single individual of this truly valuable breed of sheep remains alive in England. I am sure many would ask, "Was there not one clear-sighted and intelligent man to raise his voice in favour of the preservation of this invaluable present of Mr. Alcock?" Yes, most certainly there was, and any one who will take the trouble to examine the Zoological Society's Journal, will find that a paper was read on the 26th May, 1857, by Mr. A. D. Bartlett, the superintendent of the Society's Gardens, from which I will give one short extract:—"My attention was first called to these sheep from the fact of their great reproductive power; I find that they breed twice in the year, and produce four and sometimes five at a birth, the three ewes now in the Society's Gardens having this spring produced 13 lambs. These lambs are very easily reared by hand and are perfectly hardy. . . . Having submitted specimens of the wool of this animal to my friend Dr. Price, who kindly forwarded the same to Mr. Darlington, the Secretary to the Chamber of Commerce at Bradford, for the purpose of having it examined by the most competent judges, the following report from these gentlemen was received. They say, 'that the sample of sheep's wool from China inclosed in Dr. Price's letter is a class of wool which would be extensively used by the manufacturers of this district for goods of low quality; that it appears to be a wool for combing purposes, and would now command about 1*s.* per lb.'" Mr. Bartlett then strongly advises this breed of sheep to be employed for crossing with other races, but he pleaded in vain; and the objects of his solicitude are now no more. If I had not known cases very nearly akin to this of the Chinese sheep, I should not perhaps have said so much about this unfortunate business; as it is, let our blunder in this instance warn us against similar blunders in future. We have lost the breed and must recover it. I do not look at the Shanghai sheep for the quality of its wool (although that might be improved, and in any case must not be despised), but for its great fecundity, and the ready means that it affords of getting up a flock of sheep. Let any one who understands arithmetic just calculate what a progeny ten such ewes and one buck might have in five years, then extend the calculation to ten years, and he will begin to have some idea of the value of such a breed on our boundless plains and hills in Africa, Australia, New Zealand, and British India. Employ this prolific sheep in establishing your flock (always remembering that its wool is worth 1*s.* per lb at Bradford), and when you have some thousands in number, then cross them with Merinos, or any other description of sheep you may deem best suited to the locality you occupy. In this manner the quantity of sheep produced, and of wool furnished by them, would be limited only by the capabilities of the soil to afford them food. For England a most valuable cross might be made between the Chinese and the Polder Holstein breed, which also frequently produce five at a birth, and which is a long-woolled sheep, yielding from 10 to 20 lbs. of wool each. This cross again crossed with the Merino, or Southdown, would produce a breed of exceeding excellence in every point. In proceeding to the other branch of my subject, I again say that if we have indeed lost the Shanghai breed in England, we must send either to the United States or to China for it once more, for on the aid of this despised and rejected race, the full extension of our woollen manufactures will very greatly depend.

PULPING ROOTS FOR FEEDING CATTLE.

Having had some experience in the use of the pulper in feeding animals these last three years, I am enabled to state that by the aid of this very clever contrivance I average eight beasts fed upon this system over the previous average fed by use of the old-fashioned Turnip-slicer, besides the great economy of using straw chaff instead of hay, which was my practice for years previous to the general introduction of this new instrument. By allowing a fermentation of 12 hours for the juices of the pulped bulbs perfectly to commix with the chaff, my animals feed well upon the mixture. I allow each beast when stalled a feed of 3 lbs. of meal at night; this simple feeding brings them fit for sale from 12 to 16 weeks. The meal is an equal mixture of Wheat, Barley, Beans, and Linseed, with some aromatic compound to regulate the bowels—a well bedded house, warm and ventilated, the use of the dandy-brush freely with perfect cleanliness, is a certain satisfaction.

N.B. The proportion of straw chaff is 1 to 2 bshls. of pulp when stalled three times a day, and at night well bedded with clean sweet straw; for store 2 bshls. of straw chaff to one of pulp twice a day, with the gathering of the waste or blown over food in the stall fed; always plenty to spare. Two men to pulp, cut chaff with horse, and feed and attend upon pigs; wages 10*s.* a man a week, thus charging 1*s.* per head each beast for attendance.

I find that of the Mangel that was in the field during the severe frost in October, those suffered most that had been partially stripped of their leaves, while those that had not been through this ordeal were greatly saved. Many of my neighbours clumped their roots in the field, covering them only with mould; on opening the clumps they find the Mangel completely decomposed; if a little straw, or Fern, or Furze, had been used as a covering previous to the mould being added they might have been partially saved. *Berkshire Amicus.*

To this we append some of the very instructive reports from their customers, which Messrs. Bentall, of Maldon, and Mr. Woods, of Stowmarket, have received and published.

From Mr. F. R. Herbert, Egypt Farm, Trinity, Jersey.—In this island where the average rental of land is something like 7*l.* per acre (English), it is manifestly a matter of the last importance that the farmer's produce should be economised as much as possible, and I believe I state a generally acknowledged fact in saying that the introduction of pulping machines for roots has done more to aid this grand desideratum than anything else. You ask me, as a purchaser of one of your Phillips's pulpers (by the bye, a very first-rate implement, with careful feeding), to state my opinion of the pulping of roots, and I have much pleasure in responding because I am satisfied of the immense utility of this method of employing every kind of root, whether the Parsnip or Carrot, the Mangel or the Turnip. In the first place three years' use of the pulper has taught me that I can provision my winter stock on about one-half the quantity of roots in combination with chaff I formerly could when given whole or cut up by any of the old methods; and secondly, I believe the health and condition of the animals themselves are very much better than when they were suffered to gorge themselves to repletion with whole roots *ad libitum*. The highly feeding property of the Parsnip, the grand staple of the Jersey farmer, is only thoroughly known to those who have had extensive experience of its use. The Jersey people can boast of the finest flavoured pork in the world, and this is produced almost entirely by the use of the raw Parsnip. It has been my habit to rear and feed a large number of pigs, and following in the wake of my neighbours I adopted their system of feeding, which was to throw a quantity of whole roots either into the trough or stye to the loss of nearly half by the animal treading them under foot in his endeavours to reduce them, and so rendering them distasteful to his palate. I now pass them through the pulper, with the double advantage of a vast saving in the quantity consumed or to render them in a fit state for mixing with either meal or milk. My horses I keep on pulped roots mixed with chaff from early in September till Grass time in spring, succeeding the Parsnip or Carrot with the Swede and Mangel, to the almost total extinction of corn, save in the form of "the farmers' cattle food," of which I give a daily ration to each working animal at a cost of 2*s.* 4*d.* per head per week. The horses so fed keep themselves in high health and first-rate condition, though generally very hardly worked; but for the pulper this system of feeding would not be pursued with anything like the same success, and I find in it the greatest economy, for at a liberal calculation I do not consider a horse of full size will cost more than 1*s.* a day. My milking cows and young stock are all fed in a way similar to the horses, with the difference that for the cattle I mixed the pulped roots the day before that on which they are used, while the horses I find will not eat the mixture nearly so well if not cut and mixed fresh and fresh. I say then with little fear of contradiction that all roots are better adapted to all animals in a pulped state, and I recommend as the result of my individual experience that to horses pulped roots with an admixture of chaff should be given fresh and before fermentation has commenced. To neat cattle give in the first stage of fermentation, and to pigs in the sour stage. To conclude my remarks I may add that although I have always been an advocate for the use of chaff, I certainly never proved its great advantages till I practised the use of the root pulper; I now think no farmer great or small should be without both a chaff-cutter and root-pulper. *Dec.* 1859.

Mr. Wm. Jellies, Cranfield, Newport Pagnell.—I have tried the pulping system, and am well satisfied with the result. I prefer using the food in a fresh state. I mix 1 bushel of pulp directly it comes from the machine with three of hay or straw chaff. I give it to cattle of all ages, beginning at the weaning calves as soon as they will eat it, also to colts in the yard, to my working horses, milking cows, and to my pigs. I find no unpleasant taste in the butter I make, the cows having pulped food twice a day. *September* 23, 1859.

Mr. T. Parrish, Luton.—My experience in the use

of pulped roots does not extend beyond the present winter, but as far as I have tried the system, I am well satisfied with the result. I prefer using them in a fresh state, as my cattle clear up their cribs better than they do after they have fermented. I mix 1 bushel of pulp, directly it comes from the machine, with 2 bushels of straw chaff, turning it over twice that it may be intimately mixed; it is then thrown into a heap on the floor, and a sufficient quantity prepared every afternoon for the next day's consumption. I give it to cattle of all ages, beginning with weaning calves, as soon as they will eat it; also to colts in the yard, and to working horses. My man who looks after the working horses speaks favourably of the mixture. He says, they relish a feed of it, and will immediately afterwards resume eating their corn, whereas, when he gives them cut Turnips, they refuse dry food, and are looking about for more Turnips. I give oil-cake, corn, or hay as a separate food, using only cut straw and barn cavings to mix with the pulped roots, as I conceive the chief value of the plan consists in inducing the cattle to eat a fair proportion of straw with the roots. I have for some years given Swede Turnips to milking cows during the winter, and have always been obliged to use saltpetre to take the flavour of the Turnips off the butter, but this winter I have discovered no flavour of Turnips, nor have I had any complaint from the shop where the surplus butter is sold. *March* 27, 1857.

Mr. John Coleing, Sugworth Farm, Abingdon.—Your pulper and the pulping system do certainly rank among the greatest and most beneficial improvements in the management of live stock. I have adopted the system for two years, and should as soon think of throwing the plough in the hedge as the pulper in the pond, finding, as I do, that a much larger number of animals can thereby be kept, both winter and summer. Having entirely abolished the use of hay with all my young and store cattle, I have consequently a considerable number of acres more for feeding purposes during the summer, and I am quite sure they are wintered much better with straw chaff and pulped roots than ever they were in former years with hay. My machinery consists of Corne's largest chaff-cutter, to which is attached by a strap Bentall's largest pulper, both working together by horse-power. I mix the food and use it fresh every day. I have for upwards of 20 years without intermission lost a number of young animals by murrain; but having adopted the pulping system I have not had the complaint among my cattle since. *Sept.* 15, 1859.

Mr. A. S. Ruston, Wenny Road, Chatteris.—I am daily using six pulping machines, and the system I pursue is as follows:—My cattle are principally young steers, from calves to two and a half years old. I feed but few, in consequence of the natural food produced upon my farms possessing so little fattening property. Take the two and a half year old steers. I cut them chaff about five-sixths straw and one-sixth hay, and sometimes nothing but straw; with this, I give them about 2 pecks of pulped Mangels (my land not growing Turnips) each per day during the early part of the winter; and, as spring approaches, increase the quantity, until they get up to 4 pecks per day. I mix the pulped roots with the chaff upon the floor of the chaff-house, and use the food thus mixed before it ferments. The oil-cake and other artificial food I give separately. I never mix it with the chaff and roots. I am now giving 1 pint of whole Beans at noon and 3 lbs. of cake at night to each bullock per day. The advantages I find accruing from the use of this mixed food are:—1. The bullock, with his food thus inseparably mixed, will consume a much larger quantity of inferior food than he would do were this given to him without the mixture of the Mangels; and 2. The straw and Mangel being thus mixed and taken into the stomach in this state very considerably diminishes the tendency to scour, and the bullock is generally much more healthy and thrives considerably better upon the same quantity and quality of food when mixed than he would do were it given to him in a separate form. I am fully of opinion that where the roots are of a feeding quality hay may be altogether dispensed with. *Feb.* 23, 1857.

(To be continued.)

Home Correspondence.

Mangel Wurzel.—The following is from Mr. Browick's Warwickshire Agricultural Report:—As to the general loss from frost, it ranges, in favourable cases, from 3 to 4 tons per acre. But it varies considerably according to the mode which had been adopted in storing. Where straw, or stubble, only, were used, to however great a thickness, or however carefully laid on, the loss is still considerable. Where inefficiently performed the injury has been proportionably greater, amounting in some cases to almost total loss. On the other hand, where a light coating of straw or stubble was used, and then covered with 6 inches of fine soil, little damage has, comparatively speaking, been received. In future, we would not be disposed to trust to thatching only. The more porous the covering material, the greater has been the loss. Thus, an occasional heap covered with offal hay has suffered less than where covered with Barley straw; while this, again, is better than the stubble-covered lots. The chief injury has been sustained from the frost striking from the frozen soil upwards; and a pretty shrewd friend of ours, acting on the belief of this, adopted the precaution of placing a layer of stable manure round the base of the heap, on the setting in of the frost. He thus escaped without loss. And as regards the varieties of the Mangels, all have not suffered equally where stored under the like circumstances. Heavy crops of Long Red are, we believe, most destroyed; then Yellow Globe; while Orange Globe—especially where not grown too large and coarse—has stood the winter best. Swedes have, in some cases, gone off very badly. Where timeously stored in good condition, before the December frosts, they yet turn out well. But from the wet weather, flocks which have been folded upon them, have made less than their usual progress. *R.*

Thorley's Food.—The following letter has appeared in the columns of your contemporary *Bell's Messenger*, and as corroborating the opinion you have frequently expressed ought to appear in your columns. *M. S.* "I was glad to see the letter of Mr. Lawes, which was inserted in your journal of last week, on feeding animals with the newly invented condimental compounds, as the result of his experience fully confirms my own in that respect. I think his experiments, as recorded in the Journal of the Royal Agricultural Society and elsewhere, have been conducted and carried out in a more fair and intelligible manner than any others that I have met with. Having seen the great display which Mr. Thorley has made respecting the superior quality of his food for stock, I was induced to try it, not that I had the least idea that it would be profitable to use in a general way, but thought it might be useful as a condiment to season the other kinds of food which I was using, to a few sheep intended for public exhibition; therefore I ordered a quantity of the article direct from Mr. Thorley's manufactory, so that he cannot accuse me, as he has done Mr. Lawes and Mr. Morton, of going to the wrong shop. During the last winter I selected 24 ram hoggs, and divided them into lots of eight hoggs each; to one was given Beans, another Cotton-cake, and the other Thorley's food. They were all fed alike with roots, and consumed about 21 lb. each sheep per day, or 5 cwt. per month, which at 4*d.* per cwt. (the price I think roots ought to be charged at, when consumed upon the land) comes to 20*d.* for each hogg per month. Those fed on Beans (in addition to the roots) had ½ lb. each given them daily, and cost, at 6*s.* per bushel. 1*s.* 4*d.* each per month. Those on Cotton-cake had also ½ lb. each sheep allowed them daily, and cost, at 7*l.* per ton, 10*d.* each per month. The lamb hoggs to which Thorley's food was given were served according to the directions received, viz., four feeds per day for eight sheep, which also cost, per month, 1*s.* 6*d.* I have made a great number of experiments with sheep, and always weighed them every month, and I found on the average weighings of the sheep comprising the experiment I am relating, that each lot gained in weight per four weeks as follows:—

	Live wt.	Mutton.	Cost of keep per 4 weeks.	Cost of mutton per lb.
	lb.	lb.		
Beans ..	14¼ ..	10 ..	3*s.* 0*d.* ..	3½*d.*
Cotton-cake	16½ ..	11 ..	2*s.* 6*d.* ..	2⅝*d.*
Thorley's food	13¼ ..	9 ..	3*s.* 2*d.* ..	4¼*d.*

This experiment, which was conducted as fairly as could be, shows that the mutton produced from Thorley's food cost 1½*d.* per lb. more money than that from Cotton-cake, and fully corroborates Mr. Lawes's experiments as to the utter uselessness of condimental compounds as food for sheep. There is, however, another fact, which I cannot help stating. When my ram hoggs were shown, on seven out of the eight fed on Thorley's food several large ulcers were found, and not one ulcer was to be seen on either of those lamb hoggs fed on Beans and Cotton-cake, nor on any other sheep on my farm. *T. E. Pawlett, Beeston, Sandy, Beds, Feb.* 1. P.S. I do not mean to say that mutton can be produced in a general way at the cheap rates I have stated; there are casualties and many expenses besides the feed attending it, that would materially advance those prices, which are nominal, and given merely to show the comparative value of the different kinds of food. *T. E. P.*

Sheep Feed and Manure.—In reference to "B.'s" last letter on this subject it will be unnecessary for me to repeat my reasons for concluding that some mistake has been committed in Mr. Hamilton's first experiment, and will therefore briefly reply to the letter. In the first place, it is stated that Mr. Hamilton has taken the trouble to have the experiment repeated, but we are not informed of the result of the second trial. Secondly, it is distinctly stated in Mr. Hamilton's paper that the wether on which he experimented was fed upon Grass previous to the experiment, but was then confined on bare boards, and fed on concentrated food. It is likewise stated that it received 1½ lb. of oilcake and ½ lb. of Oats per day, and it does not say that this is merely the average amount of food extended over a number of days. But supposing the wether did receive Grass in addition to the concentrated food, as your correspondent asserts, and that it might have eaten rather more on this particular day than on another, and supposing also that the analysis of the Oats and the oilcake is somewhat under the average, these little facts would go but a very small way to account for the great value assigned to the urine. For if these facts hold good in the first experiment of Mr. Hamilton, we presume we may infer that they likewise hold good in the second experiment; why then should the urine of the wether of the first experiment contain three times the amount of ammonia as the urine of the second experiment? Your correspondent likewise says that the quality of the urine depends much on the state of the kidneys. This we readily admit, but if the animal was in a diseased state the experiment at once falls to the ground, and cannot be the groundwork on which Mr. Hamilton based his after calculations. I also beg leave to say that I never for one moment entertained the idea that ammonia and phosphate of lime are the only constituents valuable as manure, but merely spoke comparatively, and in order to shorten the subject allowed the manure the benefit of the ammonia lost in perspiration, &c. (which your correspondent says I omitted to mention), to compensate for the mineral constituents. Your correspondent has much overvalued the phosphate of lime, which will be ejected principally in the solid excrements, and will therefore be in an insoluble form, and ought not to be valued higher than about 10*l.* per ton. *W. Spooner, jun., Eling.*

Is Draining the Land not of more importance than Deep Cultivation?—We believe, though it be contrary to general opinion, that if deep cultivation were more universally established and practised, in very many cases thorough draining would prove unserviceable if not detrimental. Under present circumstances, shallow cultivation, with the repeated treading of horses on the subsoil in wet weather, in order to obtain necessary though imperfect cultivation of the soil above, is in our belief the sole cause of the necessity of so much draining. Even the incessant rains as we have had them during this winter, flooding the surface of our fields to a degree almost unprecedented, nevertheless do not justify that drainage is absolutely necessary except on lands which are under the present winterly mode of shallow culture and kneading of the subsoil. In truth, if the contrary deep culture as similar to that in garden management were persevered in, but very few drains would be absolutely required or called for any more than in noblemen's and cottagers' gardens, which require no artificial drainage [?]. Let but the superior deep culture of such garden be reversed and submitted to the treatment of the surrounding fields, viz., every trench formed and trodden by two or three horses in wet weather, by the repetition of one or two operations, and we venture to affirm that in a winter like the present, or in the event of storms in summer three-fourths of such gardens, now highly productive from the due share of moisture allotted to them by Nature, would often stand many inches covered with water, and in some walled compartments, with deep foundations, would be literally filled, being deprived of their former self-drainage, and would, consequently, be less productive than the adjoining fields where this apparent superfluity of water is obliged to be carried off by furrows and artificial drainage. We can refer to many patches of land thoroughly cultivated by the spade by deep trenching 40 years ago, where all supplies of manure or vegetable food, both natural and artificial, are retained and preserved, and there is never too much wet, nor has there been any necessity for draining ever since, though the adjoining strips side by side always have been in a dropsical state, and much more unproductive than the trenched parts. In short, we believe, that were all land deeply cultivated without horses, very few soils would require artificial drainage except in cases of natural springs. *Abraham Hardy and Son, Maldon.* [We entirely dissent.]

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

A WEEKLY Council was held on the 8th inst., Lord Walsingham, President, in the chair. Present:—Sir J. V. Shelley, Bart., M.P.; Sir J. V. B. Johnstone, Bart., M.P.; Mr. Dyke Acland, Mr. C. Barnett, Mr. George von Bunsen, Mr. Henry Corbet, Mr. B. T. Brandreth Gibbs, the Rev. L. Vernon Harcourt, Mr. Thos. Scott, Professor Simonds, Mr. Thompson, M.P., Mr. B. Western.

The names of candidates for election were read.

ANNUAL VETERINARY REPORT.—The annual Report from the Governors of the Royal Veterinary College was then read, of which the following are the principal points:—

The Governors, after stating the gratification felt at the harmony which has so long existed between the two Institutions, express a wish to learn of the Council whether by a modification of its rules, relating to the professional visits of the veterinary inspector, an arrangement could not be effected whereby more numerous applications for his services would come from the members of the Society. The Governors conceive that inquiries on the spot should be made into sudden or extensive outbreaks of disease of an unusual character among animals; but that an equally searching investigation should take place into the causes of the more common forms of disease with which cattle, sheep, and pigs are affected; as these, if unchecked or wrongly dealt with, will not unfrequently produce untoward results of almost equal importance. They would wish to urge on the members of the Society not only the necessity of a continuance of the practice of referring numerous specimens of disease, accompanied by a history of the cases in which they occurred, to the College, but even its still greater extension. The Lectures have been regularly attended by the entire class of pupils, which exceeds in number the average of former years, and it is gratifying to the Governors to be enabled to state that the examinations show the proficiency of pupils in the subjects of the extended curriculum, which was originally required by the Council. The epizoötic maladies known familiarly as the "lung disease," and the "mouth and foot affection," have been as rife during the first as in almost any preceding year, and consequently have produced great losses among agricultural stock. The nature of the changes which take place in the lungs, by the former of these maladies, is such that under all varieties of treatment and management it must ever remain a most destructive disease; and in consequence also of its contagious nature it is difficult to see how, without special legislative enactments, its effects or extension can be controlled. Besides these diseases, several others have been prevalent during the year,

especially among sheep, some of which were found to depend on the existence of entozoa within the true digestive stomach of the animal and others on the presence of similar worms within the windpipe and air tubes of the lungs. Numerous letters seeking advice under these circumstances have been received, and the directions for the treatment and general management of the animals given in reply have almost without an exception been acknowledged to have produced the desired effect.

Lord Walsingham inquired of Professor Simonds as to the entozoa existing in the stomachs of lambs.

Professor Simonds stated in reply to several questions from members that the entozoa met with in the true digestive organs of lambs were the cause of the death of many of these animals. These worms often existed in large quantities, thickly besetting the mucous coat and having their heads firmly embedded in it. Their expulsion or detachment was prevented by a barbed state of the skin near the head of the worm, but which the creature could depress when moving from spot to pot. The large quantity of nutriment partaken of by those entozoa ultimately anæmiated the animal. They were met with early in life, and while the lambs had every appearance of health, consequently they could not be viewed as an effect of a diseased state of the organism but as its cause. Professor Simonds also stated that many entozoa underwent transformation, and gave as an illustration the hydatid in the brain of sheep, the cause of the disease as being one stage of the development of the tapeworm of the dog in particular. He also stated that the measly condition of the flesh of pigs depended on the presence of hydatids, which in the digestive organs of other animals would develope into tapeworms; but that either the salting or cooking of pork would destroy the hydatids. Such food could be eaten with impunity, although it wanted nutritive properties. Oil of turpentine with Linseed oil was among the most useful vermifuges. Sulphate of iron mixed in the food of lambs had been found very beneficial in the expulsion of the barbed worms from their stomachs.

Communications were received from

1. Mr. W. Melton, of Bathurst St Mary's, River Gambia, transmitting a specimen of haulm of the Arrachide or Ground-nut.
2. Mr. Cadogan Williams, of Bridgend, Glamorganshire, on the means of securing corn in wet harvests.
3. Messrs. Hardy & Son, Seed Growers, Maldon, Essex, inclosing diagram of a clamp or shed for preserving roots in winter.
4. Mr. Bernard Boyle, 7, Tokenhouse Yard, submitting a plan for disposal of metropolitan sewage.
5. Mr. T. Hampton Corbett, of Whittington, Towcester, on the Potato disease.
6. Mr. G. H. Bolton, of Warrington, on a method of determining the sex of future animals.
7. Mr. Thomas Turnor, Pool Park, Ruthin, North Wales, with a plan of a moveable cattle-shed.
8. Mr. James S. Randell, Rudloe Lodge, Chippenham, on the utilisation of sewage; and
9. Mons. le Pontois, 11, Rue des Colonies, L'Orient, France, forwarding specifications and designs of two new seed-leps of his invention.

Farmers' Clubs.

LONDON: *Feb. 6.—On the Sewerage of Towns as it affects British Agriculture.*—Mr. Alderman Mechi read a Paper on this subject, from which we make the following extracts:—The question "How to Manure our Lands abundantly and cheaply" is well deserving consideration in a country like ours, where 9-10ths of a rapidly increasing population are non-producers in agriculture, and where the great competition for land, and its consequently increasing rental, necessitate a much higher rate of production. The publication of Baron Liebig's important warning to the British people, on the ruinous waste of the manurial elements which should produce their food, has attracted much attention, and caused a considerable discussion of the sewage question. In the editorial remarks, and various criticisms that have followed upon the Baron's letter, it has been very generally, but erroneously assumed, that the waste of our excreta, by discharging them through sewers, is an old practice; that our soil has not in consequence become exhausted; that, therefore, the warnings of Baron Liebig betray exaggerated fears; and that we may go on in our present course without injury to British agriculture. My object in reading this Paper is to refute these mistaken assumptions by showing that excretal sewers are of very recent formation, and that, until lately, nearly all the refuse of our towns and cities found its way back, most properly, to the land, thus maintaining its fertility, and preventing exhaustion. In former times, the oldest of us may well remember the night-carts emptying cesspools after midnight. The contents of these, mixed with ashes and other refuse, found their way, by canal or coaster, a hundred miles into the country. Even now, many cargoes of London manure are brought down to the coast, 100 to 150 miles, and paid for by the farmers at about 7*s.* per ton. A large farmer friend of mine, 10 miles from Reading in Berkshire, used to send his carts four or five times a week to that town for night soil. Now, owing to the new sewer and sanitary arrangement, he only send his carts once a week, and is thus deprived of four-fifths of his manurial resources. Multiply his case by many thousands, and you may then estimate the losses caused to agriculture by the new system. In 1700 Liverpool was a place of mark, containing 4240 inhabitants. Now its population is near 300,000. Manchester had 12,000 souls in 1700, and 400,000 in 1851. The same remark applies to our other hives of industry. At that period the population of London was mainly within its old City walls, probably 150,000, now it approaches three millions. Under our old cesspool system increased population brought an increased amount of manure and of food, now it has an opposite effect.

The Real Difficulty of the Question does not consist in the conveyance of the sewage to the farmer's fields, but in conveying to his mind, and to that of his landlord, the conviction that it will be necessary and profitable to him to avail of it. Farmers, as a body, have no faith in liquid manure, and are not, probably, aware, that 12 parts out of 13 of their own manure, and that of all their animals, are deposited as urine. The sheep-folding, deprived of its liquid, would be almost worthless. It appears to me that the only way to remove, or overcome, this difficulty, will be for any company that may undertake the scheme to show the effects of the town sewage on small plots of ground, in various parts of the country through which their pipes may pass, or otherwise offer such inducements for trials as may tend, by their results, gradually to remove this unprofitable prejudice. On sloping grounds below the reservoirs it might flow over the surface as in ordinary irrigated meadows, thus saving the farmer the expense of subterranean iron pipes. No one can reasonably doubt that the great want of British agriculture is more manure. Assuming that the 15,000,000 of population who inhabit our towns and cities, produce excrement, and other elements of manure, equal to those of 20,000,000 of sheep; what would farmers or their landlords say, if farmers, having fed 20,000,000 of sheep and lambs day by day, their manure was to be daily thrown into the river, instead of being deposited on the fields? What would be the loss to agriculture of the folding of 20,000,000 of sheep daily? Would it not bring poverty and ruin to British agriculture? Every farmer of the plainest capacity can understand this; but can he not understand that the loss from 20,000,000 of human beings is nearly equal to that from 20,000,000 of sheep? Can he not imagine what would be the result to British agriculture of this additional daily folding of 20,000,000 more sheep, or human beings, on the fields of England? Is human excrement less valuable than that of animals? In looking over the balance-sheet of the London General Omnibus Company, I saw that they had received between 2000*l.* and 3000*l.* for the manure from their stables for one year. Is this no indication of the agricultural loss? Baron Liebig writes to Mr. Ellerman of London. "The contents of the reservoirs of the fortress of Rastadt, in the Grand Duchy of Baden, which received the deposits of a garrison of 8000 men, were sold in 1858 for 8155 florins. The commune of Oligheim, near Rastadt, consumed the greater proportion of this sewerage, and in the course of a few years they converted the most sandy unproductive soil into flourishing corn-fields." I foresee that the time will come when the towns will derive a large revenue from their sewage; but that can only be when agriculturists have tested its value. In order to induce them to do this, every temptation and encouragement must be offered to them, and to those companies who propose to supply them.

Influence of Sewage Manure on my Farm profits.—I am much indebted to the sewage system on my farm in this respect—for the last six years my gain as landlord and tenant on my little farm of 170 acres has been nearly 700*l.* per annum. Even this last year, with Wheat at 42*s.* per quarter, I have gained 600*l.* after paying every expense. Of course much of this benefit has arisen from steam-power, drainage, deep cultivation, and other improvements, but the liquified manure system has greatly contributed to this result.

How this Sewage is to be got upon the Land.—The engineering difficulties are, I have reason to know, not considerable. There is nothing better known than the cost of delivering water or sewage at certain heights and distances. Our great Cornish pumping engines have their performances most accurately registered. A score of them would make child's play of our London sewage. Some of these engines raise a column of water 1200 feet high. Besides, we know accurately the amount of steam-power used to supply these 80,000,000 gallons of water daily to the metropolis. How erroneous is the supposition that our town sewage cannot be availed of in its present form. It is already in operation at Watford, Rugby, and other places. Wherever disappointment has arisen, it has been for want of carrying out the machinery and piping in accordance with hydraulic science. The Serpentine, in Hyde Park, would just hold one day's London sewage without rain-fall. Two tons of coals in a Cornish engine would suffice to empty this Serpentine. One inch depth of water will be 101 tons 5 cwt. 2 qrs. 21 lbs. per imperial acre. Sewage weighs heavier than water, according to its saturation. The sewage of London taken at 60,000,000 gallons per day would fill a canal 10 feet wide, 4 feet deep, and 45 miles 500 yards in length every 24 hours. I would commend to your notice a very able pamphlet, by Mr. Shepherd, C.E., published by Effingham Wilson, Royal Exchange, on this question of applying sewage. He is trying to establish a company for this purpose. Mr. Shepherd's plan is to have reservoirs on the highest districts always charged, like our water companies, and main supply pipes under the common roads. The farmer would then only have to connect his hose and turn on the tap, and he might at any time, apply the fertilising stream to his fields; he would require no tank or steam-engine for this purpose, the pressure being always sufficient to give him an ample jet; or he might diffuse it without pipes over his sloping grounds, like common irrigation.

The Extraction in a Dry Condition of the Valuable Elements from the Sewage has not yet been satisfactorily accomplished, farmers declining to purchase the residuum at a remunerative price. Recent experiments with per-chloride of iron have been reported upon by Dr. Hoffmann to the Metropolitan Board of Works, as being more successful than former experiments with other substances; but if Dr. Letheby's table of deodorising cost is correct, we must give up all hope of getting London excreta in a solid form. My own opinion is decidedly in favour of its application as sewage, as a matter of economy and profit.

How much Dry Solid Matter is there in the Daily Excreta of 2,500,000 *People? (the population of London).*—As very exaggerated and erroneous notions prevail, even amongst engineers on this subject, I must refer to Professor Way's statistics, Royal Agricultura Society's Journal, Vol. 15, p. 135. By those you wil see that

The fæcal discharge of a quarter of a pound per day for each individual is	277 tons.
Deduct moisture, 75 per cent.	208 ,,
Dry solid matter from the solid manure of 2,500,000 people	69 tons.

The urine of 2,500,000 people, at 3 pints or 3 lbs. per day each, will be 3348 tons of fluid daily; but as this urine contains 3 per cent. of dry solid matter, you will no doubt be surprised when I tell you that this liquid excreta contains 104 tons of dry solid matter, or 50 per cent. more than is contained in the so-called solid fæcal excreta. These excretal matters are mixed in the closets and sewers with about 214,000 tons of water, the remains (after evaporation, &c.) of the daily supply of 80,000,000 gallons to the population. The rainfall would be a large addition to this. The qnantity deposited by the 60,000 horses and other animals in London cannot be so accurately ascertained, but enough has been stated to show how suitable is the fluid condition to its transmission to any distant point, and to its subsequent entrance into the soil and subsoil as food for plants. Mr. Lawes, in a very able and voluminous paper on sewage, read before the Society of Arts, March 7, 1855, suggests that not less than 20,000 acres of Grass land should receive the whole sewage of London, and that 10,000 tons per acre might be applied with advantage. This would be equal to a rain-fall of 4 years, or 100 inches. He also anticipates a rental for such land of 20*l.* or 30*l.* per acre. His paper is well worth reading. At Edinburgh, as much as 6000 tons per Scotch acre are applied; and I believe it is less diluted than the London sewage. In such extensive dressings there must be much waste and nuisance; besides, it is highly desirable that over an extensive area, irrigated land should be occasionally broken up, and thus afford ample and frequent cereal crops. I consider, however, that Mr. Lawes has much undervalued town sewage, and that the area of distribution should be far greater than he recommends. He appears to have placed no value on the water alone, as a fertilising element.

Would it pay a Company to Deliver the Sewage at 1*d. per Ton?*—In order to arrive at sound approximate data on this point, I have minutely investigated the blue books containing the detailed workings of our nine metropolitan water companies, and find that in 1849 their consumption of coal for pumping was, for the year, about 10,000*l.*, and the quantity of water delivered, nearly 18,000 millions of gallons. This year the probable supply of water will be double that quantity, say 36,500 millions of gallons, or 100 millions of gallons per day; and the cost of coal for the year about 18,000*l.* Now if the Sewage Company are to delive this water supply (minus one-fifth for evaporation, &c.), and, in addition, a considerable portion of rain-fall, equar in total quantity to 500,000 tons a day, their coals for pumping would cost them 100*l.* per day (36,500*l.* per annum), or 1-20th part of 1*d.* per ton, leaving 19-20ths of 1*d.* per ton for other expenses, and profit on investment. I have allowed for a liberal supply of coals, seeing that the company would have to employ greater force to convey the sewage to the distant districts.

Assuming that they supplied 500,000 tons of sewage daily at 1*d.* per ton, it would amount annually to	£760,416
Deduct coals for pumping	36,500
Leaving	£723,916

o pay working expenses, and interest on investment. From my knowledge of piping and pumping, I can safely say that it would leave an ample profit on the necessary investment, if judiciously and economically managed.

Will the Sewage be a Nuisance after it has passed through the Soil.—An unfounded fear exists that we shall poison our brooks, springs, and rivers by the application of town sewage to the land. Now that depends mainly upon the extent of area to which you apply it. What becomes now of the manure from the farmers' 30,000,000 of sheep, and proportionate number of bullocks and horses, equal in manurial results to double our population? Is there no smell in farm-yard manure? And are we to forbid its application to the soil? There are 50,000,000 of acres under cultivation—of these one-fourth are manured annually with 15 tons of farm-yard manure per acre, making a total of 187,000,000 of tons! What was the state of our rivers and brooks when all the night-soil of our towns was applied to the soil? Where are the washings of the 200,000 tons of concentrated birds'-dung (guano) which

enter our warehouses, and are then spread broadcast over the land? Where the tens of thousands of tons of blood, bones, artificial manures, and other abominations, so extensively used by farmers, and so necessary for the production of our food? In certain districts, within 10 to 20 miles from the coast, the fields, at certain seasons, are manured with sprats, star-fish, mussels, and other garbage, in a state of decomposition, which you may smell for miles, and in August last, when visiting the north of Ireland, the fields were covered with Flax, spread out or grassed after steeping, giving off the most disagreeable effluvia. We may be more nice than wise, and, in consequence, go without our dinners.

Why was there always corn in Egypt?—Because there is irrigation from the overflowing of the Nile. I am told it never rains in the interior of Egypt. It is a singular contrast that whilst we as a food-desiring people, place no value on the water, much less the excrements of our great cities, the Egyptians are importing British coal at 40*s.* per ton, and costly steam and pumping machinery of British manufacture, for the purpose of raising water to irrigate those lands over which the Nile does not flow, and thus produce plenty of corn for the British market. Although we have not the amount of sunshine to force two cereal crops annually, we can always vie with Eastern countries in meat-making Grasses and succulent roots. This water of the Nile contains no sewage, but it brings down from the snow-clad tops of the distant mountains the inorganic debris of the soil, crumbled and disintegrated by atmospheric vicissitudes. What a clear and simple proof is this of the great Liebig's mineral theory! for where those frosts and snows prevail, neither animals nor vegetation can exist.

To what Crops can Sewage be most profitably Applied.—Cereal crops can rarely be forced beyond a well-known full average, say Wheat 6 quarters, Barley 8 to 9 quarters, Beans 8 quarters, Oats 11 to 13 quarters per acre, and even to obtain these crops on very richly manured land, a very small quantity of seed must be sown, or the crop would fall early and perish, as much as done this luxuriant year; but Italian Rye-grass, Tares, ordinary pasture, Cabbage, Mangel Wurzel, Turnips, &c., will bear an immense supply of food, (particularly Italian Rye-grass,) and it is especially to these crops that abundant supplies of sewage should be given. We know that the sewage of Edinburgh flows, or is pumped, in even wasteful quantities, over the meadows—I have heard of 6000 tons per acre, or equal to an additional rain-fall of 60 inches. We know that the results are enormous. The *annual average* letting rental per acre of these (once barren) Grass fields is about 20*l.* per acre, some of the older ones letting much above that price. The growth is so rapid during summer that the Grass is cut and carried off each fortnight or three weeks. Of course sandy lands would bear very much more fluid than the stiff clays, although the latter are more able to extract and retain the most valuable elements of the sewage. With respect to the London sewage I should recommend my brother farmers to have a portion of their farms laid out or piped for irrigation. By very large applications of sewage to this small portion, an enormous quantity of green food would be produced, to be carefully cut and carted to the homestead, and fed out with proper admixtures. We should then no longer hear complaints of the farmer's "sore place." I mean that, on an average of farms, 5 acres are required to keep each farm horse. One acre as highly fertilised as the Edinburgh meadows would suffice for each horse or bullock, or a proportionate number of sheep. We should then save four seedings, ploughings, labour, rates, taxes, and rents—merely adding the interest for the outlay of piping and payment for the sewage supply. The produce of this portion, when consumed, would furnish manure for other portions of the farm. Irrigation gives us very early and late feed. I have found sewage valuable directly or indirectly for all crops, and this is not surprising, seeing that it contains the elements of every crop. Of course it would be most available for Grass land, but everybody knows that after land has produced fine abundant Grasses for a few years, it may be cropped year after year with other and various exhausting crops, without manure. There is, probably, no point of more importance in agriculture than that of increasing in quantity and improving in quality, the produce of our poor Grass and other meat-making soils. In this we are safe from foreign competition, and our rapidly increasing population outstrips our meat-making powers. The constantly increasing price of meat proves this. In what way then can we arrive at this result? Experience has profitably taught me that sewage irrigation is by far the most available and effectual improver of our pastures.

French Use of Sewage.—The sewage question has not escaped the vigilance of our able friends on the other side of the Channel. So anxious is the Government that it should succeed that it has granted an annual subsidy of 160*l.* to the Vaujours undertaking. By favour of Monsieur Tréhonnais I have received a long and able report of the system of sewage manuring practised on the farm of Vaujours, about 12 miles from Paris, once forming part of the Forest of Bondy. The extent of the farm is about 220 acres, managed by a Joint Stock Company for the express purpose of manuring with the sewage from Paris. The urine or night-soil is brought in a barge and distributed by portable steam engine, subterranean pipes (made of iron bituminised), and jet, at the following cost per cubic metre (about 178 gallons):—

	s.	d.
Purchase from the authorities of Paris, of a cubic yard of sewage, solid or liquid	0	10½
Carriage by canal boat	0	2½
Taking it from the barge, and distributing it on the land by portable steam-engine of 6-horse power ..	0	6
	1	7

The contract with the city of Paris was for 11,000 cubic yards of sewage per annum; but experience has shown that this is an over-dose, and that the land cannot bear above half the quantity, or 25 cubic yards per acre. They appear to want our steam-plough, which would give deeper cultivation, and mix the manure with the poor subsoil. The report justly states that steam-power and subterranean pipe distribution were infinitely cheaper than the old plan, which they first used, of manual pumping and water-cart distribution. This I can confirm by my own practice, as I could distribute the above quantity of 178 gallons on any part of my farm for 1*d.* They appear to get their sewage, undiluted, from tanks or cesspools in Paris, and find that its application in dry weather in that state is injurious—that it requires diluting with water, which the Canal Company will not permit them to abstract from the canal. Applied in wet weather it answers admirably. If a cubic yard of urine and excreta is worth 10½*d.* in Paris—what should our London sewage produce? I value it at 1,000,000*l.* annually. It must not be forgotten that in Flanders and Switzerland human excreta is applied, diluted, to the soil by the clumsy and costly process of manual labour. Surely, if, even on these conditions, it answers the purpose where produce is cheap, it cannot fail to pay us here, where mighty steam would reduce the cost of its application to one-fifth or less. Messrs. Mille & Moll had visited our sewage works and irrigated farms in various parts of this kingdom, their remarks on which are embodied in the report. Their report of the Vaujours farm may be summed up as follows:—That the tenants' capital invested is about 6500*l.*, of which 1800*l.* is for the sewage operation, the remainder for drainage, live stock, implements, buildings, &c. Its returns show a loss of 370*l.*, besides interest on capital. That this loss arose from a number of unforeseen circumstances, and from the difficulty of organising a new system for which there was no exact precedent. One principal cause of loss was the over luxuriance of some portions of this once poor soil—the manure having been too abundantly applied. Another was the want of sufficient water for dilution. Another the want of experience as to the best rotation of crops, and the most suitable mode of consuming them, or otherwise turning them to account. There were also many engineering difficulties and experiments. The absence of good roads, and the use, in the first instance, of the water-cart and manual labour instead of steam. The rabbits from the adjoining forest did much damage; the labourers were dear and ineffective. In comparison with my own farm, the distributing apparatus has been far more costly. In my own case, engine, tanks, conduits, or iron-pipes, tubing, jet, pumps, &c., complete for working, only cost on 170 acres about 700*l.*, or 4*l.* 5*s.* per acre. On the Vaujours farm the cost is set down at 1800*l.* on 220 acres, or more than 8*l.* per acre. The purchase of a manure barge and the construction of wharfing has added considerably to the cost of the operation. Not having the map of the farm of Vaujours, I cannot know its particular form, but the length of tube, per acre, appears to be the same as mine. On my farm I have 15 yards of iron subterranean pipe for each acre, the total quantity used on 170 acres being 55 tons, at a cost per ton of 4*l.* 18*s.*, including cartage and freight. My iron-piping is 3 inches in diameter, and I am told is much stronger than that at Vaujours, which is only of sheet iron dipped in bitumen, and will, I fear, soon be destroyed by pressure, or the action of the manure. The French subterranean tubing cost 3*l.* 5*s.* per acre, mine only cost 1*l.* 13*s.* per acre.

Conclusion.—For many years I have laboured to impress upon the public mind the importance of this great question. Three years ago I had the honour to read to you a paper on this subject, I have now again endeavoured to awaken agriculture from its lethargy and disbelief. I want to convince you that there are cheaper and more available sources of manure than those you now resort to. You are keen enough at a bargain—and rigid economists—but this important subject you have evidently not investigated. You don't know, because you have not sought for, the engineering and chemical statistics that would enable you to come to a right conclusion on this subject. Others have done so for you. Avail, therefore, of the opportunity which they have presented to you—discuss the question—sift it thoroughly—but do not let it rest until you have come to a satisfactory conclusion. British invention, enterprise, and capital have done great things for this happy country. Science has opened to us the flood-gates of progress, wealth, and population—welcome her in agriculture—seek her aid—tempt her to your assistance—believe in her powers—and so raise and dignify your calling, that it shall fructify in intelligence and profit, for your own welfare, and for the good and honour of this great nation.

Notices of Books.

Year-Book of Agricultural Facts for 1859. Edited by Robert Scott Burn, one of the authors of the "Book of Farm Implements and Machines." Blackwood & Son.

This is a volume of about 400 pages full of passages, extracted from every kind of agricultural publication during the past year, which indicated whatever of progress, enlightenment, profit, and instruction the past year has witnessed in the agricultural world. Its "facts" are marshalled in 11 divisions, viz., the Field, Live-stock, the Dairy, Poultry, Implements, Building Contrivances, Customs and Leases and Legal Decisions, Statistics and Prices, Patents, Publications.

The editor thus describes the task he had proposed to himself. Speaking of our agricultural periodicals and publications, he says:—"So numerous indeed are these publications, that it would be utterly out of the power of the majority of parties connected with agriculture—even of the most enthusiastic of its followers—to peruse them all. To secure for the most useful of the 'Facts' scattered through the pages of these publications a permanent and easily accessible record is the object of the present work. It embraces, moreover, the most striking of the 'Facts' promulgated at the meetings of Farmers' Clubs, Agricultural Societies, &c.; and which, when made public through the agricultural journals, are apt to be lost sight of, or cannot be conveniently and readily referred to, among the mass of other matter which these journals comprise. Still further, it includes a series of facts which have been originally prepared for its pages."

He adds:—"In preparing the work for press, the importance has not been overlooked of having a plan of arrangement calculated to facilitate as much as possible a ready reference to all its contents. With the arrangement adopted, aided by a complete table of contents, it is hoped that no difficulty will be met with in finding the place of a fact in any of the departments."

With the exception of the means thus provided for the student in search of any fact, the work is well edited and full of useful and instructive matter. In addition to a table of contents, an index arranged alphabetically should have been appended; and will, we hope, in future issues be provided.

Journal of the Manchester and Liverpool Agricultural Society. J. Mawdsley & Son, Castle Street, Liverpool.

We are always glad to recommend local reports for general perusal when we can. They are nearer to actual experience than more general statements can be referring to local practice and individual progress and success. The pamphlet now before us contains, in the first place, the detail of prizes offered for the ensuing year, including stock, crops, and implements, farms and farm servants—the last series including such particulars as long servitude, large families, general skill, and skill in rick making and hedging. The greater number of its pages are, however, filled with reports under all the heads of the past year's doings; the awards for stock, implements, servants, &c., and the reports of farms by the Society's inspectors.

The most interesting portion of the report relates to the farm reports, and we extract the following specimen:—

"To Mr. Robert Birch, of Stand Farm, Netherton, near Altree, as tenant and occupier principally dependant upon farming, for the best cultivated farm of not less than 150 acres, 12*l.*

"*Inspectors' Report.*—Claimant's Certificate.—Farm contains 240 acres:—In pasture, 12 a.; in Clover and seeds mown, 46 a.; meadow irrigated, 40 a.; Wheat after Potatoes, Swedes, and Mangel, 44 a.; Oats, 19 a.; Barley, 16 a.; Beans, 7 a.; Clover and Vetches for stall feeding, 2 a.; Potatoes, 38 a.; Swedes, 5 a.; Mangel, 5 a.; orchard and garden, 1 a.; homesteads, roads, and plantation, 3 a.

"*Rotation.*—1st, root crops; 2d, Wheat; 3d, Barley or Oats; 4th, Clover and seeds, to lie three or four years.

"*Live Stock* consists of 10 horses, 4 colts, 8 dairy cows, 1 bull, 14 stirks or heifers, 10 pigs, and 13 rearing calves. Total, 60. Cows kept in summer on pasture, or green Clover and Vetches. In winter on hay, Turnips, and Mangel, with some cake. The horses on green food, with corn in summer, and in winter on hay and steamed roots, to which crushed corn is added.

"Makes annually from 350 to 400 tons of manure on the farm, which is applied to root crops. Purchase annually about 500 tons of cow and horse dung, mostly used for root crops. Also 500 tons of night soil for top-dressing seeds and Grass. Have been tenant on the farm 18 years, during which time I have drained the whole farm, eradicated all the old fences, and planted new ones. Made a new road through the centre of the farm. Filled up several pits and all the ditches, and thus gaining many acres of cultivable land. Made a large new tank, the landlord finding materials. Paved 600 yards at my own expense. (Signed) ROBERT BIRCH.

"July 11, 1859.

"*Inspectors' Remarks.*—Mr. Birch's farm lies in a fine climate, at no great elevation above the sea, and at no great distance from it. The surface has a gentle inclination to the N. and S. The homestead is in the highest part, and nearly central. There are capital occupation roads from which each field can be approached. A canal runs through the farm and a railroad very near it, and the homestead is about six miles from Liverpool. The soil is mostly of a light sandy and peaty loam, on a subsoil of sand and gravel. A small portion on clay subsoil. The whole is evidently well drained and has watercourses and outfalls all right. Fences thick, healthy, clean, and from 5 to 6 feet high. Strong stone gate posts to very good substantial gates to every field. The root crops exceedingly vigorous without a blank or a weed. The whole covering the ground when inspected. The headridges well cleaned and manured, and then in planting with Swedes and Mangels. According to an estimate, 40 cart loads of manure is applied per acre to the root crops, and 15 per acre to the Swedes, for mowing. The quantity of manure made on the farm will be about 7 tons per head of [illegible] supposing four pigs and calves equal to one cow or horse. The crops of Wheat, Barley, and Oats were all thick and mostly standing, healthy, with promise of great yield. The Oats some of the strongest and tallest we have seen this season. The young seeds plentiful and healthy. Barley. Beans drilled at 14 inches, strong, thick, and Corn all drilled. Clover of first year had been [illegible] crop; second crop coming forward well, thick, and Clover. One of the inspectors had an opportunity [illegible]

...first crop cut, in the middle of June, by a mowing ...chine. Second and third years' seeds full average crops of ...d herbage. Pastures very bare on account of the dry ...ther. Clover and Vetches in cutting a second time for ...lling and for market. Orchard, garden, and homesteads all ...neat and proper order. Live stock useful and mostly ...Also a good assortment of implements.—*Inspected*, ... 14, 1859."

Calendar of Operations.

FEBRUARY.

SOUTH LANCASHIRE.—The latter part of the last year was characterised by an unusually early and severe frost, which occurred in November, and reached its greatest intensity about the 3d December. This was followed by a sudden thaw, and ultimately heavy rain; and when Christmas Day arrived we had ...ary winter weather, such as one then likes to see, seemed to have passed away; for that happy morn dawned in a mizzling rain, which continued throughout the day, and brought it to a close in fog. Rain, more or less, continued to the end of the year. Latterly, however, we have had one or two windy days which have improved the atmosphere; and as to the weather, agriculturists have entered upon the new year with a fair start. This is fortunate, for the early frost and wet weather alluded to stopped to a considerable extent ...ming operations; so much so, that I apprehend there are ...upon heavy and especially wet soils considerable areas intended ...which have not yet been sown. But where the seed was got in in due time, and particularly on dry land, it seems to have germinated and progressed satisfactorily, though it remained a long time underground. This is no new experience ...regards heavy and wet soils, and the wonder is that there should yet remain in this good country of ours so much undrained, and so far, unameliorated and unimproved land. The untimely and severe frost has this season taught farmers the desirableness of getting root crops intended for stall food out of the ground and stored away as soon as possible. The frost has this year damaged such crops to a great extent, as is now beginning to be much felt. From frost-bite or other cause Swedes and Mangels are now decaying fast, and the market is glutted, though the price, be it said, keeps up to 18*s.* or 20*s.* per ton. This failure will of course be the more felt by-and-bye as produce generally becomes scarcer, and it is not unlikely that Turnips will be very dear towards spring. Happily Potatoes—a most important and valuable crop in this quarter—are keeping somewhat better than was anticipated in autumn last. Those grown on peaty or sandy soils—of which there are large tracts within 20 miles north of Liverpool and Manchester—are, as usual, keeping well, and especially "pink-eye Kemp's," "flukes," and "seedlings." The selling price of these is just now from 3*s.* 6*d.* to 4*s.* per bushel of 90 lbs. Hay and straw are selling very well; Wheat is tolerable, and of the prices of produce generally farmers seem not to complain much at the present time. Their only fears are the everlasting apprehensions of a non-continuance of remunerative prices. For our own part, we think it probable that produce will maintain its present price for some time to come, at least. On this point it may be worth while observing, with reference to the past year, that prices of corn (Wheat, Barley, and Oats) seem to have been well maintained, if we may judge by the returns just published in accordance with the provisions of the Tithe Commutation Act. By these it is somewhat surprising to find that the rent-charge for 1860 will again be more by ... per cent. than last year; and, as those were higher than any before, and the calculation being based upon a seven years' average cost of equal proportions of Wheat, Barley, and Oats, the inference is that of late years prices of grain have been higher upon the whole than for 20 years or so past, or, in other words since the Tithe Commutation Act came into operation. *J. B. Ryder, Liverpool.*

Notices to Correspondents.

AUSTRALIAN GRASSES: *J K Arthur.* Will any of our readers help a correspondent with the statement of any experience of English Grasses in the Australian colony? Read Lawson's "Agrostographia" for all that is known by English farmers on the subject.

CHICORY FOR GRAZING: *Agric.* Prepare the soil by thorough ...ing early in spring, applying a good coat of rotten dung. ...4 lbs. of seed per acre in March in rows 9 inches apart. ...gle them out when 5 inches high to 6 inches apart. The ... will continue luxuriant under good management for ... years. Let it get of full growth and then cut it down ...fore flowering and carry it to stock in the house. It may ... also depastured with sheep, but the other is the more ...ductive use of it.

...: *M W.* Pare away all the dirt and excrescent growth ...touch the place with some caustic, as muriate of anti... which may be applied with a feather; or if a stimulant ... be more proper, melt 8 oz. of tar and 4 oz. of lard ...ther, and add ½ oz. each of oil of turpentine and sulphuric ..., and apply the mixture after paring the foot.

... *M H B.* Certainly it is a useful food; and last year's ...ts crushed or smashed on a block and cut up with straw ... improve it greatly as fodder. Barrett & Exall, of ..., and Richmond, of Salford, both make Gorse ...ers.

... FOR TIDAL BANKS: *F S* says:—"On a large farm on the ... of the Medway, 4 miles above Rochester, we have been ...making an alteration of the river wall (which protects the ...) from an abrupt to a much longer slope. The ...erial of which the addition has been made is mud—either ...en from the foreland beyond the wall or actually out of ...e river itself. We fear that in the summer when the water ... covers the outer side of the wall, the mud will dry and ... and will consequently either crumble away of itself, or ... getting into the deep cracks will undermine ... of the work and take them away. Can you tell us ... or other plant which we can sow on the face of ..., which by rooting into it, may both check the action ... sun, and by forming a tangled mass of roots may ... bind the surface of the soil together? Ordinary ... of course will not grow. Our contractor for the ... work advises Twitch or Couch Grass, but I doubt if ... though only too ready to flourish where it is not ... will grow well in soil which is only river mud. ... an object but merely a mechanical bond for ... There is about three-quarters of a mile of it. But ... the first season we could keep the wall repaired by ... while the crop is being raised upon it." [*Psamma* ..., Sea-mat Grass; *Elymus arenarius*, Sea-lyme Grass; ..., Creeping Dog-tooth Grass, are among the ... Grasses for binding together the surface of ...

MANURE: *A R G.* There is a considerable demand for ... different sections of farm practice which ought ... supplied. The strength of liquid manure is to ... ascertained by an analysis for ammonia which it contains. ... "Sayings and Doings" have been published by ...

... *J A* wants an experience in poisoning rabbits! We ... help him. Let him ferret, trap, and shoot—or, if he ..., let him bring an action for damages against those ... maintain the vermin at his expense.

IRELAND.

JOSEPH BERRY AND SONS, SEED MERCHANTS, Importers of PERUVIAN GUANO and Agents for the Western Counties, SUPERPHOSPHATE OF LIME, and other Manures.—8, Arran Quay, Dublin.

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Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

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Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

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The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

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3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

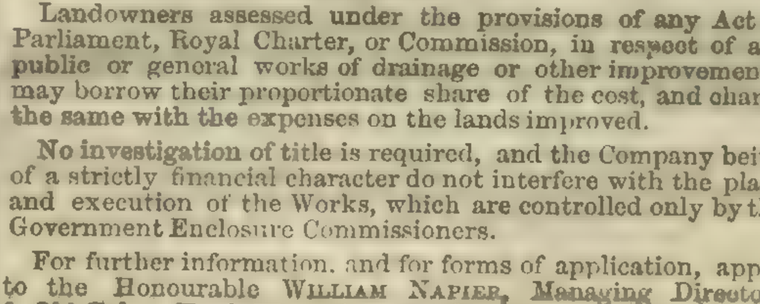
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W.

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD, POULTRY AND GAME.—RICE SWEEPINGS, 7*s.* 6*d.* per cwt., in 1½ cwt. bags; SCREENED RICE, 10*s.* per cwt., in 1½ cwt. bags; DOG BISCUITS, 11*s.* per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6*s.* and 8*s.* per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

SHEEP.—FOOT-ROT OINTMENT, an original preparation, by JOHN OLDHAM, of Mansfield, a certain and safe remedy, having invariably cured when other remedies have failed. It is equally efficacious in Foul in Cows, Grease, Cracked Heels, and Thrush in Horses. Numerous parties at a distance being inconvenienced in procuring it, the proprietor has appointed Messrs. SUTTON & Co., 10, Bow Churchyard, E.C., his London Agents, and it can now be procured through any respectable Chemist or Patent Medicine Dealer.

BURGESS AND KEY'S ROYAL AGRICULTURAL SOCIETY'S FIRST PRIZE GRASS MOWING MACHINE.



This Machine has been introduced with the greatest success into this country during the last season, and a large number of them have been worked in a most satisfactory manner. A Silver Medal was awarded to it at the Royal Agricultural Society's Meeting at Warwick. It was also exhibited before the Emperor of the French at Fouilleuse, on which occasion it performed its work to the admiration of every one. Two of these Machines were purchased by the Emperor on this occasion, and an order for two more has since been received for the season of 1860. It was also exhibited in Scotland and Ireland with the same success. It also received the First Prize of the Norfolk Society at Swaffham, in competition with Wood's and others, besides many other Prizes. Price £30 at the Works. Extras are charged for.—Full particulars may be obtained of BURGESS & KEY, 95, Newgate Street, London, E.C. Early orders are solicited to insure delivery in time for hay harvest.

WARNER'S PATENT VIBRATING STANDARD PUMPS.

PATENT CAST-IRON PUMPS fitted with J. W. & SON'S Patent Buckets and Suckers, which cannot clog in action, for Farms, Cottages, and Wells not exceeding 25 feet.

Diameter of Barrel.	Height.		£.	s.	d.
2½ in.	short	1 ft. 7 in.	1	1	0
2½ ,,	long	3 ,, 3 ,,	1	10	0
3 ,,	ditto	3 ,, 6 ,,	2	4	0
3½ ,,	ditto	3 ,, 6 ,,	2	9	0
4 ,,	ditto	3 ,, 6 ,,	2	18	0

Fitted for lead, gutta percha or cast iron flanged pipe as required.

2½ ,, short, with 15 feet of Lead Pipe attached, ready for fixing 2 0 0

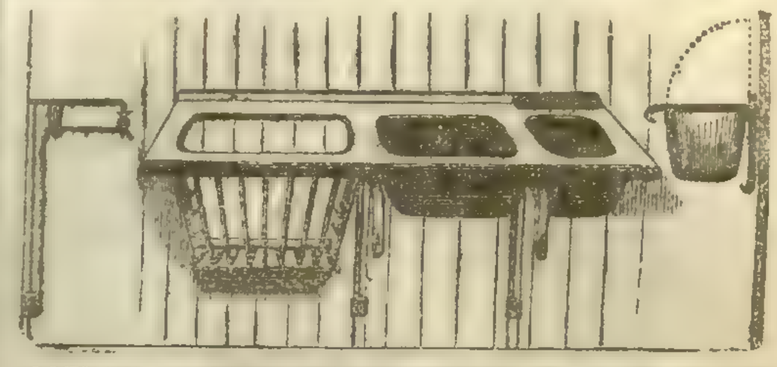
2½ in. long ditto ditto ditto 2 14 0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

May be obtained of any Ironmonger or Plumber in Town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER & SONS, 8, Crescent, Jewin Street, London, E.C.

Every description of Machinery for Raising Water by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. &c.—Engravings sent on application.

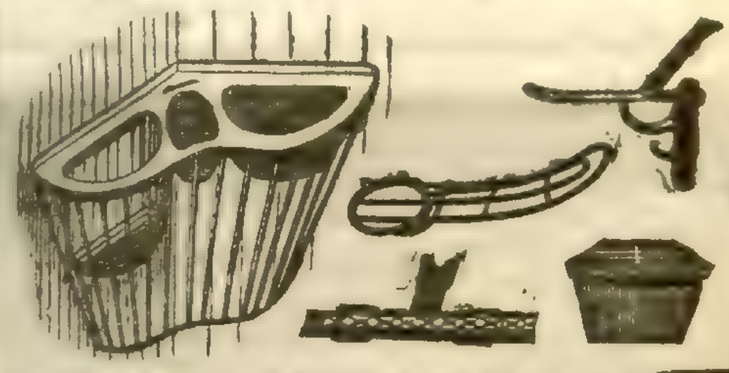
COTTAM'S PATENT INVENTIONS FOR STABLE REQUISITES, awarded a Prize at the Paris Exhibition, patronised by the English and French Governments, as well as by the principal Nobility, Gentry, and Hunting Establishments in the kingdom. In use at her Majesty's Stables, Aldershott and Balmoral.



COTTAM AND COMPANY, Winsley Street, W., are the original inventors of the PATENT ENAMELLED MANGER, Water Trough, and Wrought Iron Rack, united to an iron top-plate, and forming one complete and useful fixture, having COTTAM'S patent noiseless halter guide and collar rein attached, which is taken to the back of the manger, and works with ease and freedom up or down the guide bar.

COTTAM'S NEW PATENT SEED-BOX, an important addition to the above fittings, being simple in construction, light, and durable, promotes cleanliness, and is economical in its results.

COTTAM'S PATENT PERMANENT ATTACHED DROP COVER, for the above, is a most essential addition to their fittings; it is never in the way; can be placed and replaced in an instant; while its cheapness, simplicity, and utility in keeping the contents of the troughs clean, and regulating the quantity to be taken, is quite sufficient to insure its use.



COTTAM'S PATENT SADDLE and HARNESS BRACKET combined, can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

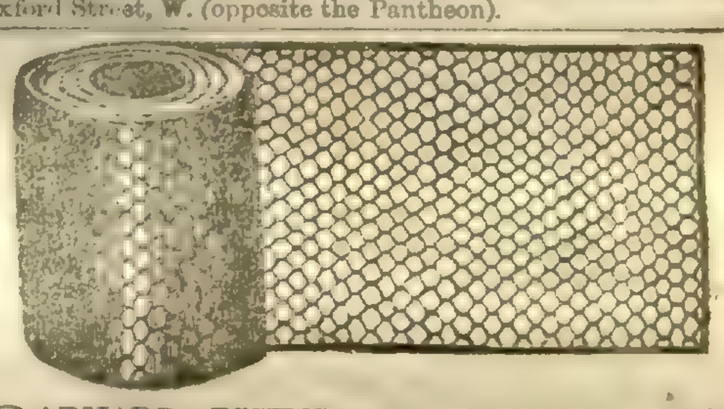
COTTAM'S IMPROVED WROUGHT IRON VENTILATING BRACKET preserves the shape and allows a free admission of air to the under parts of the saddle.

COTTAM'S IMPROVED SURFACE CUTTER, with perforated moveable cover, the use of which prevents accidents, and can be easily cleaned out.

COTTAM'S CAST-IRON SANITARY TRAP, from its improved construction, gives a full water passage, and does not allow any smell to ascend from the drain.

PATENT LOOSE-BOX FITTINGS, and every article for the harness-room and stable, kept in stock, plain, galvanised, and enamelled. Iron gates, fencing, hurdles, &c.

The New Illustrated Catalogue and Estimates, gratis, upon application to COTTAM and COMPANY, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon).



BARNARD, BISHOP, AND BARNARD, Market Place, Norwich, in consequence of improvements in their machinery for the manufacture of the above article, have been enabled to make a great reduction in the prices.

			Galvanised.	Japanned Iron.
2-inch mesh,	24 inches wide		5*d.* per yd.	4*d.* per yd.
2-inch ,,	strong do.		6 ,,	4½ ,,
2-inch ,,	intermediate, do. ..		7 ,,	5½ ,,
2-inch ,,	extra strong, do. ..		9½ ,,	7½ ,,
1⅝-inch ,,	24 inches wide		5½ ,,	4½ ,,
1⅝-inch ,,	strong, do.		6½ ,,	5½ ,,
1⅝-inch ,,	intermediate, do. ..		7½ ,,	6 ,,
1⅝-inch ,,	extra strong, do. ..	10	,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 8½*d.* per yard, 3 feet wide Galvanised Sparrow-proof Netting for Pheasantries, 2½*d.* per square foot. Delivered free of expense in London, Peterborough, Hull, or Newcastle. Manufacturers of Improved Strained Wire Cattle and Deer Fencing, Iron Hurdles, &c.

Illustrated Catalogues and Patterns forwarded by post.

HOTHOUSES FOR THE MILLION.

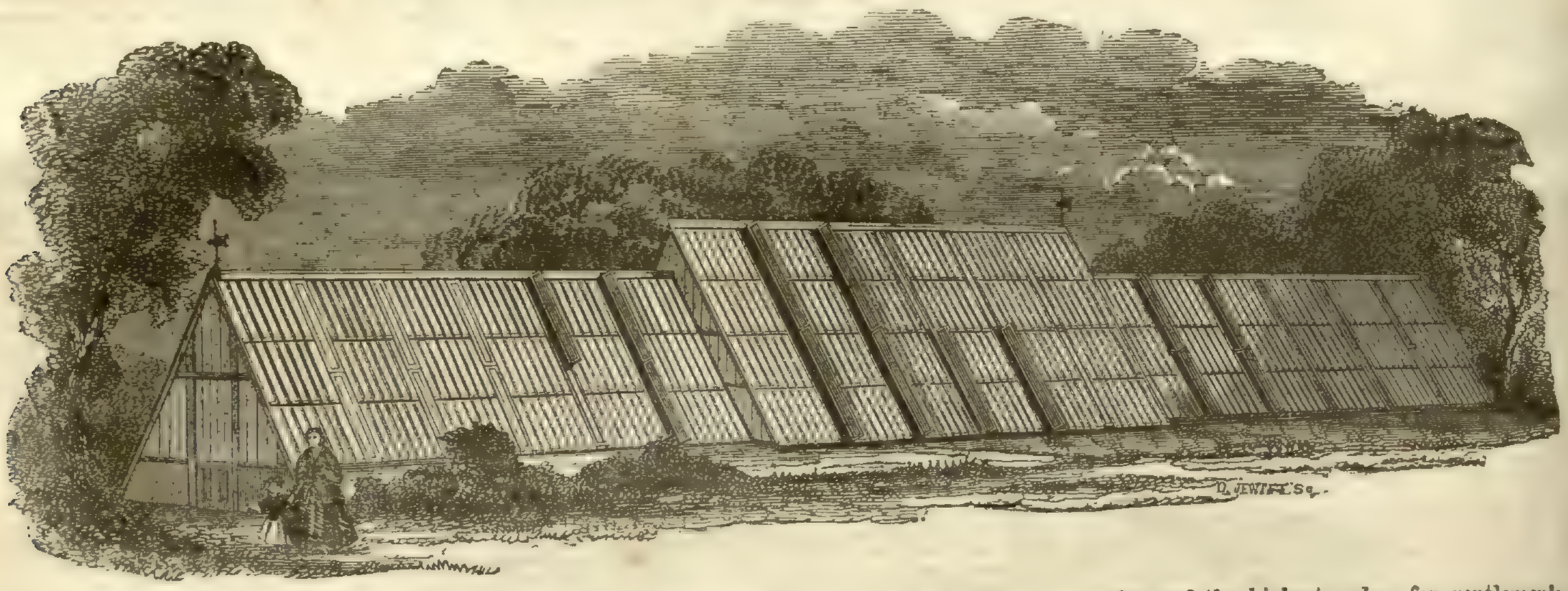
SAMUEL HEREMAN

BEGS TO INFORM THE PUBLIC THAT HE HAS BEEN APPOINTED SOLE AGENT FOR THE MANUFACTURE AND SALE OF

THE NEW PORTABLE AND ECONOMICAL HOTHOUSES,

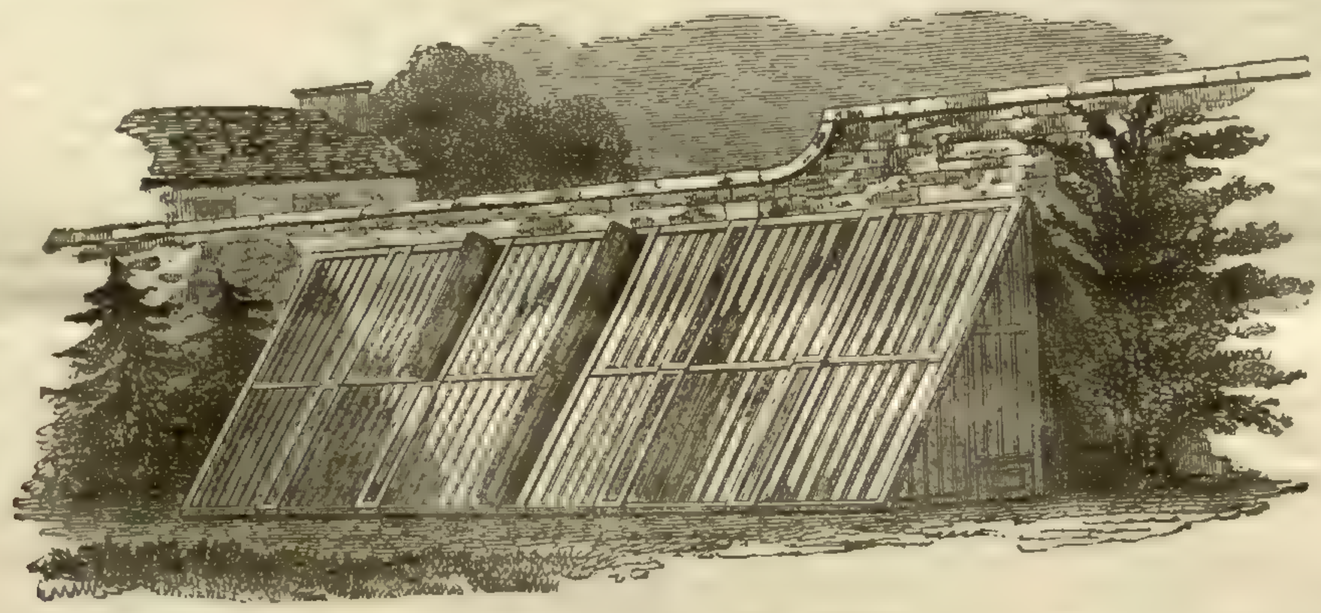
INVENTED AND PATENTED BY

SIR JOSEPH PAXTON, M.P.

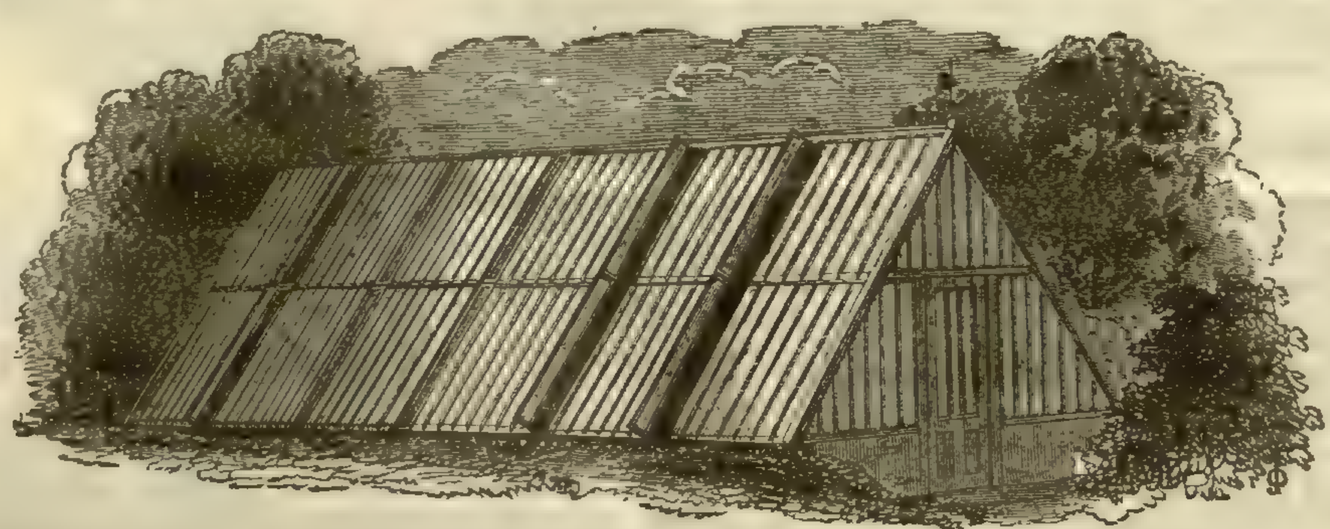


These Buildings are of unparalleled cheapness, and being composed of simple parts can be enlarged, removed, or adapted to any Horticultural purpose by ordinary labourers.

They are calculated for gardens of the highest order, for gentlemen's gardens generally, for market gardens where they may be made to cover any extent of surface, and also for suburban, villa, and cottage gardens.



The moderate cost of these houses not only places within the reach of persons of limited means a luxury hitherto confined to the wealthy, but offers immense



advantages to all who have garden walls already standing—as from their peculiar construction they can be formed into ranges of lean-to houses with a facility and at a cost hitherto unheard of.

Whilst they are adapted for permanent structures they are also particularly suited for persons having temporary or limited tenures, as they can with ease be packed up and removed at the expiration of the tenancy.

The prices of the Span-roofed Houses, with Water-troughs, Doors, and ends complete, are as follows:—

	8 Feet Lights.	10 Feet Lights.	12 Feet Lights.
20 feet in length	£24 0 0	£32 0 0	£42 0 0
30 feet in length	33 0 0	42 5 0	53 0 0
40 feet in length	41 16 0	53 17 0	66 15 0
50 feet in length	51 5 0	65 10 0	80 10 0
60 feet in length	60 12 0	77 0 0	94 5 0
70 feet in length	69 5 0	87 10 0	106 15 0
80 feet in length	78 12 0	99 3 0	120 10 0
90 feet in length	87 18 0	111 0 0	139 5 0
100 feet in length	90 15 0	121 5 0	147 0 0

The prices of Lean-to Houses complete are as follows:—

	8 Feet Lights.	10 Feet Lights.	12 Feet Lights.
20 feet in length	£12 0 0	£16 0 0	£21 0 0
30 feet in length	16 10 0	21 2 6	26 10 0
40 feet in length	20 18 0	26 18 6	33 7 6
50 feet in length	25 12 6	32 15 0	40 5 0
60 feet in length	30 6 0	38 10 0	47 2 6
70 feet in length	34 12 6	43 15 0	53 7 6
80 feet in length	39 6 0	49 11 6	60 5 0
90 feet in length	43 19 0	55 10 0	66 12 6
100 feet in length	45 7 6	60 12 6	73 10 0

The above lengths are given in round numbers, but from the nature of their construction the houses will practically in all cases exceed these measurements.

Letters prepaid addressed to S. HEREMAN, 7, Pall Mall East, S.W., will receive immediate attention.

THE GARDENERS' CHRONICLE

AND

AGRICULTURAL GAZETTE.

A Stamped Newspaper of Rural Economy and General News.—The Horticultural Part Edited by Professor Lindley.

No. 7.—1860.] SATURDAY, FEBRUARY 18. {Price Fivepence. STAMPED EDITION, 6d.

INDEX.

Annuals, culture of	146 a	Holly tree, singular	146 a
Australian Grasses	154 a	Hungerford Agri. Soc.	153 b
Belgian Hort. Confederation prizes	143 c	Labourers' wages	149 b—154 a
Berberis intermedia	143 c	Manchester Hort. Show	144 a
Books noticed	147 c—153 c	Mangel	153 a
Bot. Soc. of Edinburgh	146 c	Manure, Dr. Daubeny on sewage	150 b
Cattle food, poisonous	154 a	Manures, loss of weight in	154 a
— — straw as	153 a	Mice, to kill	146 c
Cider, nutritive value of	153 c	Mycology	145 a
Conifers, to prune	146 c	Orchids	148 a
Cream, dental	147 a	Peach, new late	144 a
Cucumber, Pike's Defiance	144 a	Pear, Beurré de Fevrier	144 a
Darwin on Origin of Species	145 b	Potato, Blanchard	144 a
Daubeny (Dr.) on sewage	150 b	— Dalmahoy	146 b
Drainage and deep tillage	153 a	Poultry show	153 c
Farm servants' wages	149 b	Saponaria calabrica	143 c
Fir, Golden Spruce	143 c	Seeds, how to raise	141 b
Food, straw as	153 a	Sewage, Dr. Daubeny on	150 b
— poisonous	154 a	Species, Darwin on	145 b
Foxes, devices of	145 b	Steam cultivation	153 b
Golden Spruce Fir	143 c	Straw as food	153 a
Grape, Barbarossa	146 a	Wages, labourers'	149 b
Grasses, Australian	154 a	Weather at Helston	146 b

HORTICULTURAL SOCIETY OF LONDON,
8, ST. MARTIN'S PLACE, W.C.

Notice is hereby given that a SPECIAL GENERAL MEETING of this Society will be held at the House of the Society of Arts, John Street, Adelphi, on TUESDAY, February 28, at 1 o'clock, for the Election of various Candidates who have been proposed as Fellows. No other business will be transacted.

WM. B. BOOTH,
February 18. Assistant Secretary.

HORTICULTURAL SOCIETY OF LONDON.—A Meeting of the FRUIT and VEGETABLE COMMITTEE will be held at 8, St. Martin's Place, Trafalgar Square, W.C., on TUESDAY, March 6, at 3 o'clock, P.M. Communications to be addressed to

ROBERT HOGG,
Secretary to the Committee.

HORTICULTURAL SOCIETY OF LONDON.—The FLORAL COMMITTEE, at a meeting held on Feb. 9, made the following awards:—

FIRST CLASS CERTIFICATE.

Pteris tricolor, from M. Linden, of Brussels.
Adiantum patens, from Messrs. Veitch & Son, of Chelsea.

The next meeting will take place on March 8.

ROYAL BOTANIC SOCIETY, REGENT'S PARK.—The EXHIBITIONS OF PLANTS, FLOWERS, AND FRUIT this season will take place on WEDNESDAYS—May 30, June 20, and July 4. Tickets of admission are now being issued, and can be obtained at the Gardens only by orders from Fellows or Members of the Society. Price on or before Saturday, May 19, 4s.; after that day, 5s.; or on the days of Exhibition, 7s. 6d. each.

The EXHIBITIONS OF SPRING FLOWERS will take place on WEDNESDAYS—March 21, April 4 and April 25. The Fellows and Members of the Society and their friends only are admitted to these Exhibitions. No admission by purchased Tickets.

BRITISH POMOLOGICAL SOCIETY.—The next meeting will be held on THURSDAY, March 1, at Hanover Square Rooms, Regent Street, W., when Fruit Growers are invited to send samples of all interesting kinds in season. The following premiums are offered for special subjects:—

A. Two Guineas and One Guinea for the best and second best collection of well-kept Dessert Pears; three fruits of each variety, accompanied by careful descriptions of the manner in which they have been kept.
B. One Guinea, and Half-a-Guinea, for the like of Dessert Apples.
C. One Guinea, and Half-a-Guinea, for the like of Culinary Apples; six fruits of each variety.
D. Two Guineas and One Guinea, for the best and second best collection of Late Grapes; one bunch of each kind: the object of these prizes is to ascertain what Grapes are best for late keeping, and it is not therefore necessary that they be all grown by the exhibitor.

Forms, Copies of Rules, &c., obtained on application to
WILLIAM DAVIDSON, Secretary.
2, Randolph Road, Maida Hill, W.

UNIVERSITY COLLEGE, LONDON.—ELEMENTARY COURSE OF BOTANY.

Professor LINDLEY wil commence a Course of LECTURES in BOTANY to a Junior Class, for the express purpose of teaching Botany in an elementary manner, especially in its relation to common things, on TUESDAY, March 13, at 4 o'clock P.M. The Lectures are confined to such an account of vegetable structure as enables the student to understand it as regards the Flora of Europe, and will be delivered (with the exception of 12 days for the Easter vacation) daily, except Saturday, from 4 to 5 o'clock P.M., until April 30.

Fee for the Class, 2l.; College Fee, 5s.

The Course to the Senior Class will commence on the 1st May.

A. W. WILLIAMSON, F.R.S., Dean of the Faculty of Medicine.
FRANCIS W. NEWMAN, Dean of the Faculty of Arts and Laws.
CHAS. C ATKINSON, Secretary to the Council.

PELARGONIUMS.

JOHN DOBSON AND SONS beg to invite the attention of intending purchasers of the above, who will be thereby dealt with. A choice selection sent at a moderate price. Catalogues free on application.

Woodlands Nursery, Isleworth, W.

PELARGONIUM—THE BRIDE.

JOHN DOBSON AND SONS will be happy to forward a very strong plant in a 48-sized pot of this the finest white variety yet raised, 5s. each. No collection should be without it.—Woodlands Nursery, Isleworth.

CINERARIAS.—Fine healthy plants, showing well for bloom, of all the best and newest kinds, very cheap. This is a good time to purchase them.

JOHN DOBSON & SONS, Woodlands Nursery, Isleworth, W.

NEW ROSES FOR 1860.

J. AND J. FRASER, of the Lea Bridge Road Nurseries, N.E., have a good stock of strong plants of the above. A DESCRIPTIVE LIST of 20 of the best sorts may be had on application

NEW ROSES FOR 1860.—Plants are now ready at 5s. each. Trade price 36s. per dozen. A DESCRIPTIVE LIST may be had on application to BENJAMIN R. CANT, St. John Street Nursery, Colchester.

NEW LIST OF SEEDS FOR 1860.

G. S. DODS is now prepared to execute orders for the Kitchen and Flower Garden SEEDS of the finest quality. CATALOGUE free by post on application.

Epsom Nursery, Epsom, Surrey.

J. G. WAITE'S WHOLESALE CATALOGUE is now ready and can be had on application.

Seed Establishment, 181, Holborn, London, W.C.

SEED CATALOGUE.

CHARLES TURNER'S DESCRIPTIVE LIST of a Selection of the best varieties only is now ready.

The Royal Nurseries, Slough.

SEED CATALOGUE.

WM. CUTBUSH AND SON'S DESCRIPTIVE PRICED CATALOGUE, which contains every thing necessary, can be obtained free per post on application.

Highgate Nurseries, London, N.

NEW CHRYSANTHEMUMS, DAHLIAS, FUCHSIAS, VERBENAS, PETUNIAS, ETC.

WILLIAM HOLMES'S CATALOGUE of the above for 1860, free for one stamp.

Frampton Park Nursery, Hackney, N.E.

NEW DAHLIAS FOR 1860.

JOHN KEYNES'S LIST of the new DAHLIAS for 1860 is now ready, and will be forwarded on application.

Salisbury.—February 18.

TO THE TRADE.

MESSRS. C. PLATZ AND SON'S TRADE LIST of GENUINE FLOWER SEEDS may still be had on application.—WILLIAM LORBERG, 34, St. Mary-at-Hill, E.C.

FERN CATALOGUE.

ROBERT SIM'S NEW DESCRIPTIVE AND PRICED CATALOGUE, No. 6 (62 pages) of his COLLECTION of BRITISH AND EXOTIC FERNS, can be had, post free, for 8 stamps. Gratis to all previous purchasers of Ferns.

Nursery, Foot's Cray, Kent, S.E.

NEW FLORIST FLOWER CATALOGUE.

DOWNIE AND LAIRD, NURSERYMEN, SEEDSMEN, and FLORISTS, 17, South Frederick Street, Edinburgh, beg to intimate that their CATALOGUE of FLORIST FLOWERS. New VEGETABLE and FLOWER SEEDS is now ready, and may be had free on application.

TO THE TRADE.

DOWNIE AND LAIRD offer PANSY, HOLLYHOCK, PETUNIA, from the finest-named varieties; SWEET WILLIAM and QUILLED GLOBE ASTER, finest mixed, their own saving, all of first-rate quality. Prices on application.—17, South Frederick Street, Edinburgh.

AZALEA INDICA.

J. IVERY AND SON'S New DESCRIPTIVE CATALOGUE of the above contains all the newest and best varieties. Will be forwarded post free upon application.

Dorking Nursery.—Feb. 18.

TO THE SEED TRADE.

JAMES FAIRHEAD AND SON, SEED GROWERS and MERCHANTS, Lewisham, Kent, and 7, Borough Market, London, S.E., beg to acquaint their friends and the Trade generally that their WHOLESALE CATALOGUES are now ready, and will be forwarded post free on application.

WILD'S ORION MELON for beauty, weight, and flavour, stands unrivalled, and must be in the hands of every grower, whether for Market, Table, or Exhibition, 1s. per packet.—THOMAS WILD, The Primulary, Ipswich.

GREAT SCARCITY OF FRUIT.

STRONG ROOTS OF THE LINNÆUS RHUBARB, from division, can be supplied in any quantity at 12s. per 100, or 5l. per 1000, by WALTER PENNINGTON, Nurseryman, South Retford, Nottinghamshire.

DWARF MAIDEN FRUIT TREES.

HUGH LOW AND CO. have to offer of fine quality, PEACHES, NECTARINES, CHERRIES, APPLES, PEARS, on Quince Stocks. Prices will be furnished on application.

The Wholesale CATALOGUE is ready for distribution.

Clapton Nursery, London, N.E.

HOLLAND AND BAYLEY beg to offer strong 3 and 4 years old Plants of the largest and finest flavoured LANCASHIRE SHOW GOOSEBERRIES, at 6s. per dozen.—Bradshaw Gardens, Chadderton, near Manchester.

WELLINGTONIA GIGANTEA.

JOHN WATERER has thousands of the above Plants to offer, varying in height from 1 to 4 feet. The whole are exceedingly handsome and well rooted. Price on application.—The American Nursery, Bagshot, Surrey.

TO THE TRADE.—SPERGULA PILIFERA SEED, the IMPROVED CUSTARD MARROW. Prices of the above, also for other seeds offered to the Trade, may be had on application.

STEPHEN BROWN, Seed Grower, Sudbury, Suffolk.

LAWNS WITHOUT MOWING—SPERGULA PILIFERA.

J. A. SUMMERS supplies strong plants for immediate planting, taken from the original stock, at 1s., 2s., and 4s. per doz. A specimen post free, 1s.

Howard Park Nursery, Perry Hill, Sydenham, S.E.

PRESENT PRICES OF FARM SEEDS.—SEE SUTTON'S PRICED LIST, which will be sent free to any address.

SUTTON & SONS, Seed Growers, Reading.

BROCCOLI ALL THE YEAR ROUND.—SEE SUTTON'S SEED LIST, which will be sent post free on application.

SUTTON & SONS, Seed Growers, Reading.

GEORGE GIBBS AND CO., SEEDSMEN,
26, DOWN STREET, PICCADILLY,
LONDON, W.

SELECT NURSERY STOCK AT REDUCED PRICES.

WILLIAM JACKSON AND CO., Bedale, Yorkshire, beg to refer purchasers to their advertisement in the *Gardeners' Chronicle* of January 28, page 67.

RED LODGE NURSERY AND AMERICAN GROUNDS, SOUTHAMPTON.

W. H. ROGERS solicits attention to the large, fine, and varied Stock, growing on the above extensive Grounds.

THE PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY LIMITED supply every requisite for the Farm and the Garden.

Registered Offices: Union Road, Plymouth.

SPRING PLANTING.

RED CEDARS, 1 to 1½ foot, stout, healthy, furnished to the ground, and well rooted, 50s. per 1000; if 10,000 are taken, 40s. per 1000. A sample can be had by applying to GEORGE JACKMAN & SON, Woking Nursery, Surrey.

SPRING PLANTING.

LARCH FIR, 2 to 3 feet, twice Transplanted, fine, healthy, stout stuff, can be supplied in quantities at a cheap price, by applying to

GEORGE JACKMAN & SON, Woking Nursery, Surrey.

CEDRUS DEODARA.

MAULE AND SONS still hold the largest supplies of the above tree in the country, and invite the attention of gentlemen planting, and the Trade generally. Magnificent specimens, 5, 6, 7, 8, 9, and 10 feet, at 5s., 6s., 7s., 8s., 9s., and 10s. each.—Stapleton Road and Stoke Nurseries, Bristol.

FOX COVERT.

MAULE AND SONS can supply Noblemen and Gentlemen thickening or planting their coverts with fine two-year-old GORSE or FURZE PLANTS, at 10s. per Thousand.—Stapleton Road and Stoke Nurseries, Bristol.

FOX COVERT.

J. MORRISON AND SON, NURSERYMEN, &c., Montcoffer, Banff, N.B., can supply noblemen and gentlemen planting coverts with fine 2-year old GORSE or FURZE PLANTS at 7s. 6d. per 1000.

Also fine plants of MAHONIA AQUIFOLIUM and LEYCESTERIA FORMOSA, the best plants for pheasant food.

PARADISE STOCKS WANTED.—Any one having PARADISE STOCKS to offer will oblige by addressing a line to J. & C. LEE, stating quantity, Nursery, Hammersmith, W.

WHEELER'S IMPERIAL LETTUCE, 1s. per packet.

For description and testimonials see "WHEELER'S *Little Book.*"

J. C. WHEELER & SON, Gloucester.

WHEELER'S TOM THUMB LETTUCE. 1s. per packet.

For description and testimonials see "WHEELER'S *Little Book.*"

J. C. WHEELER & SON, Gloucester.

IVERY'S NONSUCH CELERY, 1s. per packet, IVERY'S NONSUCH LETTUCE, 1s. 6d. per packet.

For description and testimonials, see *Gardeners' Chronicle*, January 28.—WM IVERY, Hanover Nursery, Peckham, S.E.

TO THE SEED TRADE.

100 Sacks of CHAMPION of ENGLAND PEAS, picked sample, at 10s. per bushel.

BENJAMIN R. CANT, St. John's Street Nursery, Colchester.

POTATOES.—SURPLUS STOCK.

J. H. ROBINSON, SEED GROWER, Abbey Farm, Hinckley, has a few Tons of the EARLY FORTY-FOLD SEED POTATOES to dispose of at 5s. per cwt; less by the ton.

THE BEST POTATO FOR GENERAL CROP IS THE DALMAHOY, ROUND, EARLY, GREAT CROPPER, AND FINE FLAVOUR.

CHARLES TURNER has a fine Stock of the above. Price very moderate.

The Royal Nurseries, Slough.

SEEDLING POTATO.—WEBB'S IMPERIAL KIDNEY.—This Potato is without exception the best for every purpose. Its yield is extraordinary, and its quality first-rate. For Seed, 10s. 6d. per bushel.—Application to be made to GEORGE MACE, Gardener, Calcot, near Reading.

SEED POTATOES from the North of Scotland.
FLUKES | DALMAHOYS | PROTESTANTS.

Price 14s. per sack of 2 cwt. free to London or Newcastle.

Orders and remittances to be addressed to [illegible], Teawig, Inverness-shire.

SEED POTATOES.—For Sale, a quantity of EARLY SHAWS, MANLEY'S, WHITE KIDNEY, and REGENTS, suitable for planting.—Apply to Mr. [illegible], Borough Market, S.E., where samples from the ground [illegible].

EARLY POTATOES—"LEMON KIDNEYS."—The earliest and best variety (see Article in "Royal Agricultural Journal," Vol. XVIII.), may be had from Anthony Bailiff, JOHN HELM, Morecombe, near Lancaster, at 2s. 6d. per stone. Also copy of Article, 3d Edition, enlarged, 1s.

NEWSPAPER

HOOPER AND CO.'S New DESCRIPTIVE PRICED CATALOGUE OF SEEDS FOR 1860, with useful cultural hints, sent free to any part of the world on application. In addition to the established favourites, it includes all the novelties of the season that are worthy of notice.

Amongst other new things H. & Co. beg to refer Amateurs and Cultivators to the PELARGONIUM SEEDS mentioned in the above, the produce of which during the past few seasons has been superb beyond description. Dried specimens of some of the flowers raised last year may be seen at their premises, which will amply testify to their great merits.

HOOPER & Co., Seedsmen, Centre Avenue, Covent Garden Market, London, W.C.

GENUINE GARDEN SEEDS.

TIMOTHY BRIGDEN, SEEDSMAN and FLORIST, begs most respectfully to inform his friends and purchasers of SEEDS generally, that his unrivalled Collection of GENUINE AGRICULTURAL VEGETABLE and FLOWER SEEDS, is now ready, of which a PRICED CATALOGUE may be had upon application.

T. B. further guarantees that every article is GROWN and SELECTED with the greatest care under his own personal attention. Orders from unknown correspondents must be accompanied with Postage Stamps or P. O. O.

Seed Establishment, 10, Railway Arcade, London Bridge, S.E.

NEW HOME-GROWN SEEDS.—Package (in addition to) Carriage Free. COLLECTIONS, 10*s*., 20*s*., 30*s*., and 40*s*. each. See PRICED LIST of this Paper January 28, page 71; or free on application.

NEW CITRON GOURD, 6*d*.; NEW ACORN STRIPED GOURD, 6*d*.; NEW MONSTROUS PROLIFIC CUCUMBER, 6*d*.; or given on all orders above 20*s*.

W. STEWARD & Co., Seed Growers, Plymouth, Devon.

LAING'S MAMMOTH RED CELERY.—The largest and best flavoured Celery known, and will not run to seed until the second year. (See former advertisement.) Packets, 1*s*. each; large trade do., 3*s*. 6*d*.

This has proved one of the hardiest kinds.—Vide *Gardeners' Chronicle*, February 11, 1860, page 122.

New Australian Cress, 6*d*. per packet } per post pre-paid.
Cottager's Kale, true, 6*d*. per packet } Postage stamps received in payment.

YOUELL & Co., Royal Nursery, Great Yarmouth.

ASPARAGUS.

YOUELL AND CO. having a large Stock of the above growing on the Sea Coast, of the finest quality, beg to offer it at the following prices:—

ASPARAGUS, GIANT, two years .. .. 2*s*. 6*d*. per 100.
" " three years .. .. 3*s*. 6*d*. "
" " four years, for forcing 5*s*. 0*d*. "

Royal Nursery, Great Yarmouth.

NEW WHITE SPINE CUCUMBER.—NORMAN'S "STETCHWORTH PARK HERO," a hybrid between Norman's Old Favourite and Cuthill's Black Spine. Four brace of this Cucumber cut from one pit were exhibited, and took prizes at Cambridge in the spring of 1859, measuring in length upwards of 200 inches; its qualities are unsurpassed for symmetry, hardihood, prolificness, and flavour.

Messrs. DILLISTONE & Co., of the Nurseries, Sturmer, and Sible Hedingham, having purchased the stock of the above, offer it in packets containing 6 seeds for 1*s*. 6*d*.; 12 seeds, 2*s*. 6*d*., in stamps. Can be had at either nurseries.

W. DILLISTONE, Nurseries, Sible Hedingham, Halstead, Essex.

NEW CUCUMBER, "KIRKLUS HALL DEFIANCE."—A handsome glazed white-spine variety, from 21 to 24 inches long, smooth, very thin skin, and of exquisite flavour. An extremely free-bearing kind, with a very short heel. This variety is well known in the neighbourhood of Leeds, Bradford, and Huddersfield, where it was exhibited last summer, and numerous first prizes were awarded to it. It is invaluable either for frame culture or for a winter supply. Mr. Ramsden commenced cutting this variety in November, and has had a large supply during the winter from a small house. In sealed packets of 5 seeds, 2*s*. 6*d*. No discount, as the stock is very small. It can be obtained from JOHN RAMSDEN, The Gardens, Kirklus Hall, Mirfield; or from WILLIAM DEAN, Bradford Nursery, Shipley, Yorkshire.

NEW CUCUMBER—"CLAPHAM DEFIANCE."

CHARLES SOUTHBY in sending out the above begs to remark that it was raised by Mr. Barton, Gardener to Mrs. Wild, Clapham Common, and exhibited by him last season at the Surrey Amateur Floricultural Society's Show, where it obtained a Certificate of Merit and would have received First Prize, but the rules of the Society forbid such—the exhibitor not being a subscriber. Mr. C. Jessup, the Secretary, writes:—"This Cucumber shown by Mr. Barton is the finest specimen out this season, admired by all at the Show." It is an hybrid between Himalaya and Alliance, but a great improvement on either of the above, being much more hardy, greater cropper, and stands winter forcing well; in flavour it is unsurpassed; length 24 to 30 inches; 1*s*. 6*d*. per packet; double packets, 2*s*. 6*d*.—CHARLES SOUTHBY, Clapham, S.

NEW CUCUMBER "RIFLEMAN," a fine long hybrid Cucumber, fit for exhibition purposes. This is one of the finest varieties ever yet offered to the public, a splendid Black Spine, length 26 to 29 inches, a very free setter, and an abundant bearer, carrying its bloom well, and will be sure to give every satisfaction to all purchasers, as all other varieties that has been sent out by E. T. Price 2*s*. 6*d*. per packet.

TILEY'S PROLIFIC RIDGE CUCUMBER.—This is the hardiest and most productive variety ever yet offered to the public. Seeds 1*s*. per packet.

DR. LIVINGSTONE CUCUMBER, sent out for the first time last season, a first-rate variety. 1*s*. 6*d*. per packet.

NEW MELON "EMPRESS," a superb new hybrid variety crossed between the Bromham Hall and Golden Perfection. It is a green flesh, very handsome shape, beautifully netted, thin skin, flesh very solid, and of a most delicious flavour—weight of fruit 2½ to 3½ lbs.; the advantage it has is if planted at the same time as its parents, it will ripen its fruit a fortnight earlier. Seed, 2*s*. 6*d*. per packet.

QUEEN OF THE WEST MELON, sent out for the first time last season, 1*s* 6*d*. per packet.

For further list of Cucumbers and Melons see this Paper of January 28, 1860.

A packet of any var. of CUCUMBER marked at 1*s*., sent with a packet of Rifleman Cucumber for 3*s*.

A packet of any var. of MELON marked at 1*s*., sent with aa packet of Empress Melon for 3*s*.

A packet of Rifleman Cucumber and a packet of Empress Melon for 4*s*.

Griffin's ALMA LETTUCE, 6*d*. per packet.
BATH COS LETTUCE, 6*d*. per packet.
Extra-fine mixed HOLLYHOCK seed, saved from all named varieties. 1*s* per packet.
Seed of the CUSTARD MARROW, true, 1*s*. per packet.
EARLY EMPRESS CELERY, the finest ever yet sent out, 1*s*. per packet.
TILEY'S SOLID WHITE CELERY, 6*d*. per packet.
DELPHINIUM FORMOSUM, 6*d*. per packet.
DIGITALIS or FOXGLOVE Seed, 20 vars., 6*d*. per packet.

A remittance must accompany all orders in cash or penny postage stamps.

EDWARD TILEY, Nurseryman, Seedsman, and Florist, 14, Abbey Church Yard, Bath.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:—

	P. packet—*s*.	*d*.
BROCCOLI, New Sprouting (Lee's) ..	2	6
Penzance White (Mitchinson's) ..	1	6
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation..	1	6
CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
Moor Park, extra fine..	1	0
MELONS, all the best varieties	1	0
TOMATO, Early Red (Powell's)	1	6
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed ..	2	6
CINERARIA, from finest named varieties ..	2	6
" maritima	0	6
CELOSIA aurea pyramidalis	1	6
" crimson-feathered variety	1	6
COCKSCOMB, dwarf, extra fine	1	0
DIANTHUS Heddewiggi	1	0
LOBELIA erinus speciosa (true)	1	0
PANSY, from named varieties	0	6
PERILLA Nankinensis	1	6
PRIMULA sinensis fimbriata	1	0
SOLANUM capsicastrum		
" pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

An inspection and comparison with the prices of several Firms advertising Seeds carriage free is respectfully solicited.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

CHOICE SEEDS.

WM. CUTBUSH AND SON beg to draw attention to the following, selected from their new CATALOGUE, which contains full description of the best seeds.

	Per pkt.—*s*.	*d*.
FRENCH BEANS, Giant (half pint)	1	0
BROCCOLI, Lee's New Sprouting	2	6
" Snow's Winter (true). This is quite distinct from the sort usually sold under this name, and is the best variety for winter	2	6
BROCCOLI, Walcheren, true, very choice .. per oz.	2	0
BRUSSELS SPROUTS (Judd's) .. .. .. "	1	0
LETTUCE, Bath Cos White, seed excellent .. "	1	6
MELON, Oak Hill, a first-rate late variety—see British Pomological Society's Report, Oct. 27 .. per pkt.	2	6
STOCK INTERMEDIATE, Scarlet, very choice "	1	0
" INTERMEDIATE, White, true and very beautiful .. .. per pkt., 1*s*. and	2	6
PRIMULA SINENSIS FIMBRIATA, finest strain, p. pkt.	2	6
COCKSCOMB, Lambert's, extra large, per pkt. 1*s*. and	2	6

Highgate Nurseries, London, N.

NEW AND RARE VEGETABLES, ETC.

CHARLES TURNER begs to direct attention to the following very desirable varieties, the majority of which he had the honour of introducing to the public:—

PEAS.

MACLEAN'S ADVANCER.—Early Wrinkled Marrow. The most useful Pea yet raised. 2 feet.

MACLEAN'S ESSEX RIVAL.—Second Early Wrinkled Marrow; 26 inches.

MACLEAN'S MIGNON.—Early Dwarf Marrow; 18 inches.

MACLEAN'S PROLIFIC.—Second Early Wrinkled Marrow, fine; 26 inches.

VEITCH'S PERFECTION.—Late Wrinkled Marrow; 3 feet.

ECLIPSE RUNNER BEAN.—Very prolific, and fine flavour. Highly recommended.

THE FROGMORE FORCING CAULIFLOWER, OR EARLY MAMMOTH.—Early, large, close, and fine. Much the best Cauliflower.

MELVILLE'S INCOMPARABLE BROCCOLI.—A fine white, will produce close heads 30 inches in circumference.

THE FROGMORE PROTECTING BROCCOLI.—An excellent hardy late kind. Dwarf, and great size.

IMPROVED PURPLE CAPE BROCCOLI.—Hardy and firm, September to April, if sown in successions.

THE ROSEBERRY BRUSSELS SPROUTS.—A fine variety.

TURNER'S ECLIPSE CABBAGE.—Large, dwarf, and early.

GIANT OR AYTON CASTLE LEEK.—Very large, and mild.

STANSTEAD WINTER CABBAGE LETTUCE.—The best for autumn and winter supply.

TURNER'S COTTAGERS' KALE.—Well known; seed from the original stock.

TURNER'S SCARLET GEM MELON.—The best of its class, and the most easily grown.

DESCRIPTIVE CATALOGUE on application.

The Royal Nurseries, Slough.

AYTON CASTLE GIANT LEEK.

CHARLES ALEXANDER, 30, West Register Street, Edinburgh, can supply a limited quantity of this unrivalled Scotch LEEK at 5*s*. per oz. and 1*s*. per packet in exchange for postage stamps.

"These Leeks were blanched upwards of 12 inches, and one of them measured 7 inches in circumference. The four together weighed 7¼ lbs."—*Gardeners' Chronicle, December* 17, 1859.

HENRY'S HYBRID SCOTCH LEEK.

CHARLES ALEXANDER, 30, West Register Street, Edinburgh, offers Seeds of the above Prize LEEK saved by Mr. Henry, and direct from himself, at 6*s*. per oz., 2*s*. 6*d*, and 1*s*. per packet, in exchange for postage stamps.

"I have obtained a variety of good quality, capable of being grown to the weight of 4 lbs. 15 oz. the single Leek repeatedly, blanched to the length of 20 inches, and in one instance measuring in circumference 12¼ inches."—WM. HENRY, *in Scottish Gardener, Feb.*, 1860.

HENRY'S PRIZE HYBRID LEEK.

DOWNIE AND LAIRD, NURSERYMEN and SEEDSMEN, 17, South Frederick Street, Edinburgh, having secured the whole stock of the above from Mr. Henry, are now sending it out in packets at 1*s*. postage free. This variety has gained upwards of 30 first prizes within the last two years, and obtained the first and second prizes at the Edinburgh Horticultural Society's Winter Show on Dec. 6, 1859, the Leeks then shown being described as extraordinary samples of culinary produce, measuring 7 inches in circumference and blanched fully 12 inches.

PINK-EYED FLUKE POTATO,
AT 8*s*. PER BUSHEL OF 80 LBS., LARGE SIZE.

WM. GROSVENOR, Prospect and Heath House Nurseries, Cheddleton, near Leek, begs to offer to the Public the above POTATO for Seed, having grown it three successive years on strong soil where the common Fluke and several other sorts have proved two parts out of three diseased; the Pink-eyed Fluke has always been free, and a good crop, and equal if not superior to any of the late Potatoes for the table from October to July. Delivered free at Cheddleton, Leek, or Stoke Railway Stations, North Stafford. Remittance or reference from unknown correspondents. Post-office Orders payable at Leek.

SEED ESTABLISHMENT, SUDBURY, SUFFOLK.

VEITCH'S PERFECTION PEAS, procured direct from VEITCH & SON in 1858, and may be had true, having grown the stock two seasons, per quart, 2*s*.

SUTTON'S BERKSHIRE HERO PEA, per quart, 2*s*. 6*d*.

LEE'S NEW WHITE SPROUTING BROCCOLI, in sealed packets, each 2*s*. 6*d*.

STEPHEN BROWN, Seedgrower, &c., Sudbury, Suffolk.

NEW PEA.

NUTTING AND SONS having purchased the Stock of a NEW DWARF WRINKLED MARROW PEA, raised by Dr. Maclean, offer it for distribution in pint packets at 2*s*. each. NUTTING & SONS will grow it this season for next year's supply.

This Pea is remarkable for its earliness as a wrinkled Marrow, dwarf habit (2 feet), fine flavour, and great productiveness.

Seed Warehouses, 60, Barbican, London, E.C.

STRATHMORE HERO PEA.

W. P. LAIRD AND SINCLAIR, NURSERYMEN and SEEDSMEN, Dundee, have pleasure in sending out the above first-class New Wrinkled Pea.

It was raised in the Vale of Strathmore, Scotland, and grows from 4 to 5 feet in height, yields a most abundant crop which may be judged of by its having produced at the rate of 52 bushels per acre this last season. Pods large and well-filled. Flavour excellent, and is well suited for general and late crops; for the latter especially it will be found invaluable, being little liable to injury from mildew. Price per quart, 2*s*. 6*d*.

To be had also of the following Seedsmen:—

Messrs. Peter Lawson & Son, Edinburgh
" James Dickson & Sons, Edinburgh
" Downie & Laird, Edinburgh
" W. Drummond & Sons, Stirling
" Benj. Reid & Co., Aberdeen
" Fisher, Holmes, & Co., Sheffield
Messrs. Sutton & Sons, Reading, Berks
" Hurst & M'Mullen, 6, Leadenhall St., London, E.C.
" Nutting & Sons, 60, Barbican, London, E.C.
" Hugh Low & Co., Clapton Nursery, London, N.E.
" J. Carter & Co, 238, High Holborn, London, W.C.

N.B. LAIRD & SINCLAIR send out collections of Vegetable Seeds of best quality, at 5*s*. and upwards. A List of what is supplied for any given sum sent on application.

RANUNCULUS ROOTS.

J. WOODS AND SON are entrusted by a celebrated amateur (who has no longer an opportunity of growing them) with his stock of RANUNCULUS ROOTS for disposal; which they offer in a splendid mixture, comprising upwards of 50 of the finest varieties, at 6*s*. per 100—less than one-third their real value. Will be forwarded post free on receipt of Post-office Order or postage stamps for the amount.

J. W. & SON also beg to offer seed of their unrivalled collection of PRIMULAS, including every shade of colour, from white to crimson, and of finest fimbriated form, in packets, 1*s*., 1*s*. 6*d*., and 2*s*. 6*d*. each.—Nurseries, Woodbridge, Suffolk.

THE BEST LETTUCE IN ENGLAND.

COTTRELL'S NEW BATH COS, 1*s*. per packet. If not good the money will be returned. Also may be had True COTTRELL'S Champion Cabbage, 6*d*. per ounce. COTTRELL'S Sebastopol and COTTRELL'S Wonder Peas, 9*d*. per quart.

Before ordering your Seeds, get COTTRELL'S PRICE SHEET and LIST (for one stamp).—Wholesale and Retail Seed Warehouse, 15, Bull Ring, Birmingham.

IF YOU WANT TO STOCK YOUR GARDEN WITH GOOD SEEDS, PLANTS, &C., GO TO

R. GREEN, 154, Kingsland Road, 55 doors from Shoreditch Church, where you can get Seed of the best quality at following prices, viz., Peas and Beans, 6*d*. per quart; French Beans, Scarlet Runners, Mustard, Cress, and Spinach, 9*d*. per quart; Radish of sorts, 2*s*. per quart; Onions of sorts, 3*d*. per oz., or 9*d*. per ¼ lb.; Cabbage, Broccoli, and Lettuce of sorts, 6*d*. per oz.; White Stone Turnip, 1*s*. per lb; Mangel Wurzel, 6*d*. per lb.; the true Dark-green Collard, warranted not to be equalled in the trade, 2*s*. 6*d*. per lb.; Ashleaf Kidney Potatoes, 2*s*. per peck, 7*s*. per bushel; Sweet Peas, 2*s*. per quart; Mignonette, Virginian Stock, and Candytuft, 2*s*. 6*d*. per lb., or 3*d*. per oz.; and every other sort of seed at similar prices. Considerably cheaper in larger quantities.

DIOSCOREAS, 3 feet long.—The specimens exhibited by Messrs. SUTTON on their Stand at the Cattle Show in December last, very nearly 3 feet long, were grown in the usual manner as recommended by them, from small sets in one summer. Strong roots, about 9 inches in length, which may be subdivided for planting, are now selling at 3*s*. 6*d*. per dozen, or 25*s*. per 100. With Instructions on Cultivation. This proves to be a delicious and productive vegetable.

Royal Berkshire Seed Establishment, Reading.

GENERAL SEED ESTABLISHMENT, SUDBURY, SUFFOLK.

Seeds of the new crop supplied of the choicest in cultivation and at the lowest prices for first quality.

CATALOGUES SENT FREE, which contain the best new Vegetables and Flower Seeds, with much valuable information for culture.

COLLECTIONS OF VEGETABLE SEEDS.

Those of which the Collections consist are stated in the Catalogue, comprising many new and valuable sorts. The collections will be found the cheapest offered—

No. 1, 60*s*.; No. 2, 40*s*.; No. 3, 25*s*.; No. 4, 15*s*.; No. 5, 10*s*. 6*d*.

Lee's New White Sprouting Broccoli, 2*s*. 6*d*. per packet.

New Champion of England Broccoli, very large and last of the summer Broccolis, 1*s*. per packet.

Large Giant Madeira Onion, 8*d*. per oz.; New Australian Cress, 8*d*. per oz.; Large Rouen Leek, largest grown, 1*s*. per ½.

Improved large White Cos Lettuce, very superior in size and quality, splendid, 3*s*. per oz.

New Champion of Scotland, Thorne's Royal Britain, and Veitch's Perfection Peas.

SPERGULA PILIFERA SEED, packets 6*d*., 1*s*., 2*s*. 6*d*. and 5*s*.; also a large stock of the plants supplied in any quantity, with instructions.

COLLECTIONS OF CHOICE FLOWER SEEDS.
(Post free with instructions.)

These Collections contain the noveities of the season, as each collection is stated in the Catalogue.

HARDY ANNUALS, containing novelties, 100 varieties, 15*s*.; 50 varieties, 8*s*. 6*d*.; 30 varieties, 5*s*. 6*d*.; 20 varieties, 4*s*.

HALF-HARDY ANNUALS, containing novelties, 50 varieties, 20*s*.; 50 varieties, 12*s*. 6*d*.; 30 varieties, 8*s*. 6*d*.; 20 varieties, 6*s*.

GREENHOUSE ANNUALS, containing novelties, 20 varieties, 7*s*. 6*d*.; 12 varieties, 5*s*.

The 220 Varieties of Hardy, Half-hardy, and Greenhouse Annuals, 40*s*.

The 122 Varieties of Hardy, Half-hardy, and Greenhouse Annuals, 25*s*.

BULBS FOR SPRING PLANTING.—A large and cheap collection at very reduced prices. See Seed Catalogue

FRUIT TREES OF ALL THE CHOICE POPULAR SORTS, with a large number of the best of recent introduction. General Nursery Stock at very low prices.

Goods (20*s*. and upwards) CARRIAGE FREE, as per Catalogue.

STEPHEN BROWN, SEEDSMAN and SEEDGROWER,
Sudbury, Suffolk.

MESSRS. E. G. HENDERSON & SON

RESPECTFULLY ANNOUNCE THEIR

SEED CATALOGUE FOR 1860.

INCLUDING comprehensive and Select LISTS OF FLOWER AND VEGETABLE SEEDS, in sections of Hardy, Half Hardy, and Tender Annuals and Biennials, with Perennial, Herbaceous, Alpine, and Tree species, comprising numerous accurate and practically descriptive Notes of the most novel and beautiful

NEW FLOWERS OF SPECIAL INTEREST FOR 1860.

Further Notes of the following may be seen in the Catalogue and in the *Gardeners' Chronicle*, of the 28th of January.

LINUM CANDIDISSIMUM.
A very handsome pure white bedding plant.
Seed packets, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.*

Auricula-flowered and Crimson-belted SWEET WILLIAM.
Beautiful and brilliant coloured flowers; an improvement far in advance of any previously introduced.
Seed packets, mixed, 1*s.* and 2*s.* 6*d.*

CUPHEA ZIMAPANI.
Most beautiful, quite new.
Seed packets, 2*s.* 6*d.*

BOUVARDIA GHIESBRECHTII.
White flowers, 3 inches long, new species.
Seed packets, 2*s.* 6*d.*

BOUVARDIA MULTIFLORA.
White flowers, violet tubes, new species.
Seed packets, 2*s.* 6*d.*

BOUVARDIA LONGIFLORA.
Pure white, fine.
Seed packets, 2*s.* 6*d.*

RUDBECKIA GRANDIFLORA.
Very large red flowers, new species.
Seed packets, 2*s.* 6*d.*

DIANTHUS LACINIATUS.
Most beautiful, never yet flowered in England.
Seed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

DIANTHUS HEDDEWIGI.
Rich splendid large flowers.
Seed packets, 6*d.*, 1*s.*, and 2*s.* 6*d.*

DIANTHUS HEDDEWIGI GIGANTEA.
Seed packets, 6*d.*, 1*s.*, and 2*s.* 6*d.*

IPOMŒA LIMBATA ELEGANTISSIMA.
The most beautiful of all.
Seed packets, 1*s.*

CAMELLIA JAPONICA. (First Quality.)
This importation of Camellia Seed is just received from Florence, and saved from fine varieties of double flowers, the produce of one of the best private Italian collections. They may, therefore, be expected to produce as fine varieties, and the amateur will possess an opportunity to raise superior kinds in the various colours. Plants from Seed form healthy, free, and vigorous growth, and remarkably luxuriant roots. Seedling plants surpass all others for grafting new varieties upon, and as the seed suffers injury if kept dry through the season, and the stock is not large, early application should be made. Seed packets, 2*s.* 6*d.*

HENDERSON'S A 1 RIDGE CUCUMBER.
This remarkable variety is offered and proved by personal inspection as the best and only example of a perfect ridge or open air Cucumber yet known, having the most essential features of such in its hardiness of constitution, robust growth, freedom from disease, most abundant and continuous fruit bearer, excellent flavour, absence from all bitterness, and the requisite proof of its true ridge character in its uniform average length of 10 to 15 inches, and its wonderful vigour of growth from single plants at 10 to 12 feet apart under the most simple treatment. See Catalogue for the notes on the Cultivation of the Ridge Cucumber.

CLIANTHUS DAMPIERI.
New Seed just arrived overland from Australia. One of the most gorgeous and attractive cool greenhouse plants yet introduced, with neatly-winged silvery-gray villose leaves, and numerous drooping racemes, of vivid orange-scarlet blossoms with black blotch. Introduced from Australia. The most suitable culture and treatment is given in the sixth part of the "Illustrated Bouquet;" also the special soil and precautionary modes of watering, at particular periods; all of which points are considered appropriate to the physiological structure and character of the plant, and upon a due attention to which the maturity of growth and bloom of this magnificent flowering plant, less or more, essentially depend. 2*s.* 6*d.* and 5*s.*

CITRON GOURD.
For Preserves, very delicious. See Catalogue for preparing, &c.
Seed packets, 1*s.*

HUBBARD TABLE SQUASH.
The best, see notes in Catalogue.
Seed packets, 1*s.*

AUTUMNAL MARROW and MAMMOTH PUMPKIN.
Seed packets.

APPLE PIE MELON and ICE CREAM GOURDS.
Seed packets, 1*s.* each.
A descriptive notice of 80 beautiful varieties of Ornamental Gourds. See pages 87, 88, and 89 of Seed Catalogue.

NEW FRUITS.
LAWTON BLACKBERRY, each plant, 2*s.* 6*d.*
" " seed, 6*d.* and 1*s.*
DORCHESTER BLACKBERRY, each plant, 3*s.* 6*d.*
BRINKLER'S ORANGE RASPBERRY, each plant, 1*s.* 6*d.*

SPERGULA PILIFERA.
Seed packets, 6*d.*, 1*s.*, 2*s.* 6*d.*, and 5*s.* Tufts or plants, 8*s.* and 16*s.* the 100.

Further descriptive notes of the following may be seen on referring to their respective numbers in the Catalogue.

Michauxia campanulata, 6*d.* &	1	0	
Solanum capsicastrum, 6*d.* &	1	0	
Acroclinium atroroseum	1	0	
Amphicome Emodi	2	6	
Anagallis Eugenie	1	0	
" Napoleon III.	1	0	
Arctotis grandiflora, 6*d.* &	1	0	
Ageratum, new dwarf, 6 inches 6*d.* &	1	0	
Celosia aurea pyramidalis	1	6	
" argentea, garden annual	0	6	
Clarkia pulchella integripetala 6*d.* &	1	0	
" pulcherrima 6*d.* &	1	0	
Clematis lanuginosa 1*s.* 6*d.* &	2	6	
Cosmidium Burridge atropurpureum	1	0	
Cuphea eminens	0	6	
Datura clorantha flore pleno, double yel., 6*d.* &	1	0	
Delphinium Madame de Priunes	1	0	
Erianthus Ravenna	1	6	
Eutoca viscida alba	1	0	
" " alba striata	1	0	
Grammanthes gentianoides cinnabarina	1	0	
Do. do. lilacina	1	0	
Helipterum anthemoides	1	0	
Habrothamnus Lutto del Comte de Rossi	1	0	
" Zephirine	1	0	

	s.	d.
Imantophyllum cyrtanthiflorum	3	6
Kennedya Makoyana	2	0
Lobelia gracilis rosea	0	6
" trigonicaulis	1	6
Lupinus mutabilis versicolor 6*d.* &	1	0
Lychnis Haageana, 1*s.* 6*d.* &	2	6
Nasturtium Tom Thumb Beauty	1	0
" Tom Thumb Yellow	1	0
Passiflora Comtessa Clara Gigliucci	1	0
Pentstemon speciosum	1	0
Platycodon grandiflorum album	1	0
Portulacca aurea striata, 6*d.* &	1	0
Rhododendron Blumei	3	6
" Edgeworthi	3	6
" jasminiflorum	3	6
" javanicum 1*s.* &	2	6
" tubiflorum	3	6
Spraguea umbellata	1	0
Tacsonia manicata and ignea, each 1*s.* &	2	6
Tropæolum elegans (Crystal Palace Bedding)	1	0
" Stamfordianum, improved ditto	1	6
Tritoma uvaria, unique, grand, and beautiful, 1*s.* &	2	6

WELLINGTON NURSERY, ST. JOHN'S WOOD, N.W.

CHRYSANTHEMUMS.
J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington, begs to inform his friends and the public that he has the finest Collection and the largest Stock of Chrysanthemums and Pompones in the world, and can supply them by the 100, 1000, or 10,000.

25 Pair of Best POMPONES, 10*s.*
20 Pair of Best Large Varieties, 10*s.*
25 Pair of Best POMPONE CUTTINGS, 5*s.*
20 Pair of Best Large Varieties, Do., 5*s.*

CATALOGUES for one stamp. To save trouble all orders to be pre-paid.

PETER LAWSON AND SON, THE QUEEN'S SEEDSMEN AND WOOD FORESTERS, respectfully announce that they have now issued their NURSERY CATALOGUE OF FOREST TREES, CONIFERÆ, SHRUBS, &c., which they will be happy to forward free by post on application.
27, Great George Street, Westminster, S.W.

TO THE TRADE.—CONTINENTAL FLOWER SEEDS.
GEORGE MACKINTOSH, Agent for Mr. F. W. WENDEL'S CONTINENTAL FLOWER SEEDS, begs to announce that he still receives orders, which will be promptly executed and delivered carriage paid to London. CATALOGUES free by post on application.
Nursery, High Road, Hammersmith, W.

SUPERB DOUBLE BALSAMS.
F. AND A. SMITH are now sending out SEED of their superb BALSAMS, which are unrivalled for size, form, brilliancy of colour, doubleness of flower, and habit of plant.

In collections of nine separate colours	2*s.*	6*d.*	
" " mixed "	2	0	
" " " half quantity	1	0	

☞ The above are genuine only in our sealed packets, and may be had of most respectable Nurserymen and Seedsmen in the United Kingdom.—Dulwich, Surrey, S.

SUPERB DOUBLE BALSAM SEED.—In collections of 12 varieties, separate, per collection, 2*s.* 6*d.*; the same mixed, 2*s.* and 1*s.* per packet; Select HOLLYHOCK SEED, 1*s.* do.; Choice PANSY SEED, 2*s.* 6*d.* do.; 50 packets of the best FLOWER SEEDS for borders, 7*s.* 6*d.*
CATALOGUES and Seed on application to CHARLES SCHOFIELD, Nurseryman, &c., Knowsthorpe, near Leeds.

WARRANTED GOOD SEEDS.
GEORGE DAVISON'S PRICED SEED LIST is now ready, and will be forwarded post free upon application. It contains selections of all the most approved Vegetable and Agricultural Seeds in cultivation. No 1, Complete Collection for a large garden, 3*l.*; No 2, 2*l.*; No 3, 1*l.*; and No. 4, 10*s.* 6*d.*
Especial attention is paid to Grass Seed Mixtures.
Permanent Pasture Grass Seed mixed to suit every description of land, at from 27*s.* 6*d.* to 32*s.* per acre. Renovating Mixture, 9*d.* per lb. Fine New Red Clover, 52*s.* per cwt., cash. Samples supplied.—Hereford Seed Establishment.

ROYAL SOUTH HANTS SEED ESTABLISHMENT.
Under the patronage of H. R. H. the PRINCE CONSORT, the Horticultural and Agricultural Society of India, the principal Nobility, Gentry, and Agriculturists of the United Kingdom.
PAGE AND TOOGOOD will forward their PRICES CURRENT upon application. It should be referred to by purchasers of Garden and Farm Seeds.
Collections of VEGETABLE SEEDS, 55*s.*, 35*s.*, 20*s.*, 10*s.* The Quantities in the above selections will be found more liberal, and the prices 10 per cent. less than any house in the Kingdom.—Seed Establishment, Southampton.

SIX SUPERB NEW FUCHSIAS.
GEORGE SMITH begs to announce that Illustrations of the above, beautifully coloured by Mr. ANDREWS, will be sent in exchange for 12 postage stamps. For description see *Gardeners' Chronicle*, February 4 and 11.
G. SMITH'S CATALOGUE is now ready, descriptive of the above; also a first-class collection of GERANIUMS, DAHLIAS, VERBENAS, PETUNIAS, &c., in exchange for one stamp.
Tollington Nursery, Hornsey Road, Islington, London, N.

FLOWERING PLANTS.
F. AND A. SMITH have now in Bloom Azalea indica, Cinerarias, Cyclamen, Cytisus, Deutzia gracilis, Dielytra spectabilis, Erica Willmorea, Leschenaultia formosa, Primula, Tulips in variety, &c., at reasonable prices: as the season advances other varieties will be quoted.—Dulwich, Surrey, S.

NEW ANNUALS.
JOHN GEORGE WAITE, SEED MERCHANT, 181, High Holborn, London, W.C., has great pleasure in offering SEEDS of the following new hardy Annuals:—

CLARKIA PULCHERRIMA,
SCHIZANTHUS GRANDIFLORUS OCULATUS,
HELIOPHILA CŒRULEA STRICTA.

Coloured Drawings and prices of which (to the Trade only) can be had on application.
Seed Establishment, 181, High Holborn, London, W.C.

PLANT THIS MONTH.
CAREY TYSO, FLORIST, &c., Wallingford, Berks, offers from his unrivalled Collection healthy FLOWERING ROOTS as under, by post:—

	£	s.	d.
RANUNCULUSES—100 splendid named sorts, 40*s.* to	4	0	0
" 100 fine mixed, 5*s.*, 8*s.*, 15*s.*, and	1	0	0
" 25 Tyso's choice Seedlings, 25*s.* to	1	15	0
DOUBLE ANEMONES—50 fine varieties, 10*s.* 6*d.* and	0	13	0

New Treatise on RANUNCULUS, post free, for seven labels.
Do. ANEMONES for four labels.
Imported German Seeds choice named Asters, Balsams, Stocks, Larkspurs, Wallflowers, Zinnias, &c., in 1*s.* and 2*s.* 6*d.* assortments.
ROOT and SEED CATALOGUES free for one label.

DWARF-TRAINED MORELLO CHERRIES, AND DWARF-TRAINED APPLES.
WM. WOOD AND SON invite especial attention to their large stock of the above, but more particularly to the Cherries, which they feel certain are quite unsurpassed; many of the Trees have from 7 to 12 branches, most regularly and beautifully trained, and measuring 7 feet across.
Woodlands Nursery, Maresfield, near Uckfield, Sussex.

SPLENDID PLANTS OF STANDARD AND PYRAMIDAL PORTUGAL LAURELS.
WM. WOOD AND SON beg leave particularly to recommend the above to parties planting who may be desirous of producing an immediate effect in their gardens and pleasure grounds.
The Standards vary from 3 to 6 feet in height, and the diameter of the heads from 2 to 4 feet.
The Pyramidal Plants are perfect specimens, ranging from 4 to 8 feet in height. Prices will be given on application.
Woodlands Nursery, Maresfield, near Uckfield, Sussex.

ARAUCARIA IMBRICATA, very fine plants, from 1 to 2 feet.
CEDRUS DEODARA, 2 to 3 feet.
CEDRUS DEODARA ROBUSTA, a very fine variety, 1½ to 3 ft.
CUPRESSUS FASTIGIATA, 2 to 3 feet.
" LAMBERTIANA, 3 feet.
" MACROCARPA, 3 feet.
THUJA AUREA, the golden Arbor-vitæ, extra fine plants, from 12 to 15 inches.
WM. WOOD & SON will be happy to furnish prices of the above on application.
Woodlands Nursery, Maresfield, near Uckfield, Sussex.

TEA-SCENTED ROSES.
WM. WOOD AND SON invite attention to their very extensive and superior stock of the above, which they feel certain are unsurpassed in the Trade.

Dwarfs, from 48 pots	per dozen	9*s.* to 12*s.*
" in 6-inch or 24-pots	"	24*s.* to 30*s.*

Specimen Plants, in 8-inch pots, for exhibition, each, 3*s.* 6*d.* to 5*s.*
DESCRIPTIVE CATALOGUES on application.
Woodlands Nursery, Maresfield, near Uckfield, Sussex.

COB NUTS.—What crop will produce most sovereigns to the acre? KENTISH COB FILBERTS.—Application for trees to be made to GEO. MAGE, at the Gardens, Calcot, Reading.

ROBERT NEAL, NURSERYMAN, Wandsworth Common, S.W., begs to call the attention of buyers to his large and well selected stock of EVERGREENS and FLOWERING SHRUBS, ORNAMENTAL TREES, AMERICAN PLANTS, FRUIT AND FOREST TREES, STANDARD AND DWARF ROSES of every description. A large stock of BOX-LEAF EVERGREEN PRIVET, from 1 to 6 feet for hedges; GREEN HOLLY, 1 to 6 ft.; RICH BOG and LOAM for American Beds; LEAF MOULD. The Nursery is 10 minutes' walk from Clapham Common, and New Wandsworth Station, Crystal Palace Line.

THE PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY LIMITED are sending out their COLLECTION OF SEEDS, which have hitherto given satisfaction:—

	£	s.
No. 1. Complete Collection of Seeds for a large Garden for one year's supply	3	0
No. 2. Complete Collection for a moderate-sized Garden	2	0
No. 3. Complete Collection for do. (small quantities) ..	1	5
No. 4. Complete Collection for a small Garden	0	15

No. 1 Carriage Free to most Stations and Ports in the kingdom.
No. 2 Carriage Free to Broad Gauge Stations and Steam Ports.
No. 3 Carriage Free to Stations between Plymouth and Paddington.

Address: Plymouth Seed Company, Plymouth.

SEEDS FOR THE FARM—SPRING, 1860.

THE PLYMOUTH SEED, AGRICULTURAL IMPLEMENT AND MANURE COMPANY—LIMITED, announce that their FARM SEED CATALOGUE being an APPENDIX to the GENERAL PRICE CURRENT, published by them in December last, is now ready and may be had per return of Post by application to the Secretary of the Company.

The whole of the Company's stock of FARM SEEDS has been received from the growers in the finest condition, and in price they will be found as reasonable as other respectable houses in the trade.

The Company request particular attention to

THE PLYMOUTH IMPROVED AND GRANT'S PINE-APPLE SWEDES,

two varieties of high character, in confirmation of which they add an extract from the *Irish Farmers' Gazette* (leading article), of October 16, 1858:—

"We observed several experimental plots of Swedes, &c., amongst which we noticed a new purple-topped variety, called the 'Plymouth Swede,' and also a very beautiful green-topped Turnip (Grant's Pine-Apple Swede) the name of which we did not learn. These were sown on the 16th of June, and their shapes were the finest we have seen for a long time. The varieties were new to us, but certainly the specimens grown at Rockview left a very favourable impression on our mind, regarding both their beauty and probable value."

They also again introduce to the notice of agriculturists

THE CORNISH HOLDFAST AND GREY STONE TURNIP,

both of which sorts are held in high esteem, and justly so in Devon, Cornwall, and the surrounding counties.

The Company would also call attention to

FISHER HOBBS ORANGE GLOBE MANGEL,

a sort which cannot be too highly prized, and one that is evidently a very great improvement on the old Yellow Globe.

The Seed sent out from their establishment during the last season has given the most perfect satisfaction; and in all instances where it has been sown, the crops have been extremely fine, the bulbs produced most shapely and handsome in appearance, and far outstripping in every quality all other varieties tested in comparison with it. References are permitted to many leading agriculturists who have sown this sort, and who all agree in awarding to it the highest possible praise.

The stock of Seed has been grown by and received direct from W. FISHER HOBBS, Esq., who has appointed the company his agents for the sale of his Mangel seed.

The Company hold an excellent supply of

MORTON'S YELLOW GLOBE MANGEL,

the stock of which most valuable variety was originally procured from J. C. MORTON, Esq., the Editor of the Agricultural department of this *Gazette*, and the seed has continued to be carefully saved from Bulbs selected with the greatest care.

They also offer a new introduction—

HAMLING'S DEAN PRIOR LONG RED MANGEL,

a variety of fine quality, exquisite shape, and a decided improvement upon the common Red.

The stocks of GRASSES, CLOVERS, &c., have been warehoused in the finest possible condition, and the growth has been subjected to the usual test. The

MIXED GRASSES FOR PERMANENT PASTURE

are selected according to the best tables, as also are the other mixtures supplied by this Company.

For prices and further information, as also for every particular in connection with the business, the reader is referred to the GENERAL PRICE CURRENT, which will be forwarded free by post on application to the Secretary at

THE COMPANY'S OFFICES, UNION ROAD, PLYMOUTH.

NEW AND CHOICE PLANTS.

JOHN STANDISH, in offering the following Plants, can assure his customers that they are now in fine condition for sending out:—

MYOSOTIDIUM NOBILE, or Antarctic Forget-Me-Not, each 31*s.* 6*d.*—This plant, from the Chatham Islands, is one of the most remarkable that has been introduced for some years, being totally distinct from all others. It has large thick leaves, 8 or 9 inches across, of a dark glossy green, and sends up magnificent trusses of bloom of the most beautiful blue and white, similar to a Forget-me-not, but of a giant form. A Drawing of it is published in Curtis's "Botanical Magazine" for September. A description taken from the above is also published in the *Gardeners' Chronicle* of Sept. 17, 1859, wherein Dr. Lindley says:—"This is the handsome perennial provisionally named Cynoglossum nobile by Dr. Hooker in our last year's Volume, page 240. It is quite deserving all the encomiums that have been passed upon it."

GLADIOLI, named varieties, from the choicest and largest collection in England, 6*d.* to 5*s.* each. Also a fine lot of bulbs raised from seeds saved from the best flowers, all of which will flower in the summer of 1860. 7*s.* 6*d.* per dozen, or 50*s.* per 100. These are strongly recommended.

RHODODENDRON LIMBATUM.—Pale blush, bordered with bright crimson. This has received several medals at the exhibitions for Rhododendrons, being very distinct and one of the most free flowering. 21*s.* each.

RHODODENDRON MINNIE.—White, very large blotch of chocolate-coloured spots, a fine flower, and remains a very long time in bloom. This is one of the most curiously marked Rhododendrons amongst all the white; it bears a noble truss of blooms, which cannot fail to be admired. 21*s.* and 31*s.* 6*d.* each. Selections can be made from one of the finest collections in Europe.

PHLOX MRS. STANDISH.—The purest white, with a large red eye, 5*s.* each. Also a large collection of the finest kinds which J. S. has shown during the last summer and in every case received the First Prize. Plants from 1*s.* to 2*s.* 6*d.* each.

A CATALOGUE containing a full description of the best Hardy Plants in cultivation will be forwarded on application to

The Royal Nursery, Bagshot.

GRASS SEEDS FOR AUSTRALIA.

SUTTON AND SONS having exported large quantities of Grass Seeds to Australia, New Zealand, and other Colonies, and having received very gratifying communications respecting the success of the kinds supplied for Permanent Pasture and other purposes, are competent to advise as to sorts most suitable.

SUTTON & SONS have a very complete stock of all the most useful kinds of Grass Seeds, of which they are now daily executing home and export orders. PRICED LISTS free by post.

Royal Berks Seed Establishment, Reading.

SPERGULA PILIFERA, FOR GARDEN LAWNS AND VERGES; SEEDS AND PLANTS.

SUTTON AND SONS having obtained a large Stock of Spergula pilifera Seed and Plants from the original lawn at Sydenham, through Messrs. Henderson, are enabled to supply the same at very low rates, viz.:—

SPERGULA PILIFERA SEED; POST FREE WITH INSTRUCTIONS.—Large packets, 5*s.* and 10*s.* each. Small packets, 6*d.* and 1*s.* each.

SPERGULA PILIFERA PLANTS.—Strong plants for division, 4*s.* per doz., 30*s.* per 100. Smaller, 1*s.* 9*d.* per doz., 12*s.* per 100.—Royal Berkshire Seed Establishment, Reading.

GYNERIUM ARGENTEUM OR PAMPAS GRASS.—A packet of Seed with Instructions on Cultivation free by post on receipt of 12 penny stamps. Plants 1*s.* 6*d.* to 3*s.* 6*d.* each.

SUTTON & SONS, Royal Berks Seed Establishment, Reading.

GOOD CLOVER SEED.

GENUINE NEW CLOVER SEED may be obtained of the undersigned. Prices (according to market and quantity required) will be forwarded on application.

SUTTON & SONS, Seed Growers, Reading, Berks.

THE ALSIKE HYBRID CLOVER.—PERENNIAL RED CLOVER.—TRUE PERENNIAL WHITE CLOVER.

THE ABOVE KINDS OF CLOVERS will take well on land which has proved Clover-sick when sown with the common kinds of Clover. They are all included in Messrs. SUTTON'S Mixture of Grass Seeds for Permanent Pasture, and they may be purchased separately.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading

MANGEL WURZEL SEED.

JAMES FAIRHEAD AND SON, Lewisham, Kent, and 7, Borough Market, S.E., beg to inform their customers that on account of failure of plants, and bad prospect for Seed crop ensuing season, their quotations for orders after this date will be advanced. Prices on application.—Feb. 18.

TRAINED FRUIT TREES OF LARGE SIZE.

THOMAS JACKSON AND SON growing Fruit Trees in great numbers, have a few extra large trained Standard Trees full of bearing wood, having been trained five and six years. They consist of the following kinds, and are offered at 10*s.* 6*d.* and 15*s.* each:—

PLUMS.—Blue Imperatrice, Drap d'Or, Coe's Golden Drop, Early Orleans, Green Gage, Old Orleans, Denyer's Victoria, Prince Albert, Royale, St. Catharine's, Washington.

PEARS.—Beurré d'Aremberg, Beurré Rance, Chaumontel, Duchesse d'Angoulême, Louise Bonne de Jersey.

NECTARINES: Stanwick.—Nursery, Kingston, S.W.

FRUIT TREES IN POTS.

H. LANE AND SON have to offer the following FRUIT TREES in Pots, well set with bloom buds for bearing this season, viz.:—

Apricots, 5*s.*, 7*s.* 6*d.*, to 21*s.*
Nectarines, 5*s.*, 7*s.* 6*d.*, to 21*s.*
Peaches, 5*s.*, 7*s.* 6*d.*, to 21*s.*
} Extra large specimens.

	s.	d.		s.	d.
Pears	3*s.* 6*d.* to	5	0		
Apples	2*s.* 6*d.* to	3	6		
Plums	3*s.* 6*d.* to	5	0		
Cherries	3*s.* 6*d.* to	5	0		

Also Vines in Pots.

Also Dwarf-trained Peaches, Nectarines, Apples, Cherries, &c.

Standard and Dwarf Roses in large quantities.

	s.	d.		s.	d.
Indian Azaleas, per dozen	12*s.* to	15	0		
,, ,, good blooming plants, per doz., 18*s.*,	24*s.*, to	30	0		
Camellias, per dozen	18*s.* to	24	0		
,, well set with bloom buds, per dozen ..	24*s.* to	36	0		
Mandevilla suaveolens, each	1*s.* to	1	6		
Achimenes and Tydeas in great variety, each ..	1*s.* to	1	6		

Also a fine collection of Ferns and Mosses.

CATALOGUES of which, together with the one of Trees and Shrubs, may be had upon application to

The Nurseries, Great Berkhampstead. Herts.

SURPLUS STOCK.

JOHN CRANSTON offers the following TREES, which are well grown, and have been repeatedly transplanted:—

SILVER FIRS.—3 to 4, 4 to 5, 5 to 6, 6 to 8, 8 to 10, 10 to 12, 12 to 14 feet. The larger sizes take up with balls of earth, and are really fine specimens.

WEYMOUTH PINES, 6 to 8 and 8 to 10 feet. Very fine and well furnished.

TURKEY OAK, 8 to 10, 10 to 12, 12 to 14 feet.

CHICHESTER ELMS, WYCH ELMS, SYCAMORE, BLACK ITALIAN POPLAR WEEPING BIRCH, from 8 to 14 feet in height.

The whole of the above are to be cleared this season, and will therefore be offered at low prices by the 100 or doz. as required. Prices given upon application.

Nurseries, King's Acre, near Hereford.

MESSRS. WATERER AND GODFREY respectfully refer planters to the following LIST of well-known good hardy Plants:—

ARAUCARIA IMBRICATA, 1 foot, stout, healthy, 5*l.* per 100 larger, up to 8 feet.
CEDRUS DEODARA, 2½ to 3 feet, very handsome, 10*l.* per 100; larger, in any quantity, up to 10 and 15 feet.
PICEA NOBILIS, Seedlings, in quantity, 1 foot, stout.
Ditto larger and in every way perfect plants, up to 4 feet.
NORDMANNIANA, from seed, 2, 3, 4, and 6 feet.
PINSAPO, 2½ to 3½ feet, and as much through.
Ditto magnificent plants, 8 and 10 feet high.
CUPRESSUS LAWSONIANA, fine bushy seedling plants, 2½ feet high.
JUNIPERUS, CHINESE, 3 feet up to 8 and 10 feet.
,, IRISH, 5, 6, and 7 feet.
YEWS, IRISH, 5, 6, 7, and 8 feet.
,, GOLDEN, from 2 to 7 and 8 feet.
,, COMMON ENGLISH, in large quantities, 4 to 6, 7, and 8 feet.
THUJA AUREA.—Several hundred magnificent specimens, 3, 4, and 5 feet high, and measuring 10 to 15 feet in circumference.
THUJOPSIS CÆREOLIS, 2½ to 3 feet.
WELLINGTONIA GIGANTEA, all from seed, 1½ to 3 feet, and as wide.
HOLLY, GREEN, in quantities, 5, 6, and 8 ft.; VARIEGATED, especially the best gold striped, of all sizes, up to 6 feet.

All the plants referred to in this advertisement were removed in April last, and they are in a condition to travel any distance with perfect safety.—Knap Hill Nursery, near Woking, Surrey.

STANDARD RHODODENDRONS.—Hundreds of handsome specimens of all the choicest varieties, varying in colour from deepest crimson to rose and pure white, with symmetrical heads and straight stems, from 2 to 5 feet in height, can be supplied by

JOHN WATERER, American Nursery, Bagshot, Surrey.

CHOICE RHODODENDRONS, AZALEAS, AND CONIFEROUS PLANTS.—A CATALOGUE of GEORGE BAKER'S unrivalled Stock of the above may be had on application.—The American Nursery, Bagshot, Surrey.

TO THE TRADE

3,500,000 RHODODENDRONS, 2, 3, and 4-year old Seedlings, to be Sold very cheap. Also an over stock of 4000 or 5000 Double Gorse or Whins. Price sent free on application to JAMES SMITH, Darley Dale Nurseries, near Matlock.

SUPERB SPECIMEN SCARLET AND OTHER RHODODENDRONS, from 3 to 5 feet in height, and 3 to 4 feet in diameter, some of which are well furnished with bloom buds, from 3*s.* 6*d.* to 10*s.* 6*d.* each, large and very bushy, well adapted for immediate effect.—WM. WOOD & SON, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

HARDY RHODODENDRONS.

MESSRS. WATERER AND GODFREY invite attention to their Seedling RHODODENDRONS, which they are selling without names, and which they strongly recommend as being very superior in point of HABIT, FOLIAGE, COLOUR, and GENERAL HARDINESS. They are from 1½ to 2½ feet high, and as much through, and no plants can possibly be in finer health. They will be sold at very liberal prices, and purchasers can select from a stock of many thousands.

Knap Hill Nursery, near Woking, Surrey.

RHODODENDRONS.

JOHN WATERER'S CATALOGUE OF HARDY, SCARLET, and other choice RHODODENDRONS, as annually exhibited at the Royal Botanic Gardens, Regent's Park, is now published and will be forwarded on application. Faithful descriptions of all the esteemed varieties will be found detailed, with a list of the popular kinds of AZALEAS and other AMERICAN PLANTS, as well as a selection of CONIFEROUS TREES, with height and prices.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

HENDON PARK NURSERIES, HENDON, N.W.

NEW DAHLIA—"THE CHANCELLOR."—First Class Certificate of National Floricultural Society; First Class, Brighton; First Class, Saffron Walden; First Class, Stoke Newington, &c.; First Prize as best Seedling Dahlia, Stoke Newington, 1859.

Plants of this magnificent new variety will be sent out on May 1 next. Early orders are requested. Delivered carriage free in London.—EDWARD SHENTON.

STRAWBERRY PLANTS.—Great numbers of varieties can now be supplied (good plants) by the grower, W. J. N. For a full description and remarks on the same by Dr. Lindley, see *Gardeners' Chronicle*, August 20, 1859.

WILLIAM J. NICHOLSON, Egglescliffe, Yarm, Yorkshire.

NEW STRAWBERRY.

"PRINCESS FREDERICK WILLIAM."

N. NIVEN, of the GARDEN FARM, Drumcondra, Dublin, is now prepared to execute orders for the supply of the above first rate Seedling Strawberry, named by him, which for two seasons past gave ripe fruit out of doors on the 29th May; colour a bright scarlet, of a rich Pine Apple perfume and flavour; berries averaging from 3 to 5 inches round; calyx leafy; foliage deeply serrate; distinct and very hardy. Price 40*s.* for 100; 20*s.* for 50; 10*s.* for 25; 6*s.* for 12; or established in thumb pots, 1*s.* each.

N. N.'s agent in England is W. J. Nicholson, Egglescliffe, Yarm, Yorkshire, who has (along with Mons. Gloede, a celebrated grower in France) tested the merits of this earliest of known sorts—*Vide* description in W. J. N.'s recent Catalogue. His final testimony of 8th October runs thus—"It is almost impossible to estimate too highly the merits of your splendid early Strawberry. As a forcer, it stands with me at the head, and as an extra early cropper in the open ground, unsurpassed. It will soon be grown by every one, &c." Mons. Gloede's testimony is to the following effect—"I was surprised to see how quickly the plants threw up their flower stems, and how quick they set their fruit and how fast the latter ripened. The colour is admirable and the flavour exquisite. There is no doubt it will become a general favourite as a first early, both for forcing and out-of-door culture, and great credit is due to you for such an invaluable introduction. (Signed) Ferdinand Gloede, Aux Sablons, near Moret-sur-Loing, France."

N. B.—Orders by the Trade (for not less than 100), one-third off above price. Postage Stamps or Post-office Orders must accompany all unknown orders.

STRAWBERRY,—WIZARD OF THE NORTH (ROBERTSON'S).

DANIEL ROBERTSON continues to supply strong Plants of the above fine variety at 63*s.* per 100 or 9*s.* per dozen. For description, &c., see former advertisements. It can also be supplied genuine by the following parties in the Trade in and around London:—

Brigden, Mr. Timothy, 10, Railway Arcade, London Bridge, S.E.
Boshell, Mr. Frederick, 86, High Street, Borough, S.E.
Carter, Mr. James, & Co., 237 and 238, High Holborn, W.C.
Charlwood & Cummins, Messrs., Tavistock Row, Covent Garden, W.C.
Chartres, Mr. James, 74, King William Street, City, E.C.
Cornwell, Mr. George, Barnet, Herts.
Cuthill, Mr. James, Camberwell, S.
Dancer, Mr. Alexander, Fulham, S.W.
Denyer, Mr. William, 82, Gracechurch Street, E.C.
Dodds, Mr. G. S., Epsom Nursery, Epsom, Surrey.
Francis, Mr. R. P., Hertford.
Fraser, Messrs. J. & G., Lea Bridge Road Nurseries, N.E.
Fraser, Richardson, & Goad, 32, Bishopsgate Street, E.C.
Gibbs, G., & Co., 26, Down Street, Piccadilly, W.
Gibbs, T., & Co., 47, Half Moon Street, Piccadilly, W.
Glendinning, Mr. R., Turnham Green, W.
Henderson, Messrs., Pine-apple Place, Edgeware Road, W.
Hurst & McMullen, Messrs., 6, Leadenhall Street, E.C.
Jackson, Messrs. T., & Son, Kingston, Surrey.
Jones, Mr. Edward, Hart Street, Henley-on-Thames.
Kernan, Mr. J., 4, Great Russell Street, Covent Garden, W.C.
Kinghorn, Mr. F. R., Sheen Road, Richmond, S.W.
Lawson, Messrs. P., & Son, Great George St., Westminster, W.
Lea, Messrs. J. & C., Hammersmith, W.
Low, Messrs. Hugh, & Co., Upper Clapton, N.E.
May, Mr. Joseph, & Co., 1, Wellington Street, Strand, W.C.
McIntosh, Mr. George, Hammersmith, W.
Osborn & Sons, Messrs., Fulham, S.W.
Pamplin & Son, Lea Bridge Nursery, N.E.
Paul, Messrs. A., & Sons, Cheshunt, Herts.
Rollisson, Messrs., & Sons, Tooting, S.
Smith, Mr. J., Romford Essex.
Turner, Mr. Charles, Royal Nursery, Slough.
Veitch, Mr. James, Jun., Exotic Nursery, King's Road, Chelsea, S.W.
Watt, Mr. Alexander, Edgeware Road, W.

PINE APPLES, GRAPES, &c.

PINE PLANTS, Fruiting and Succession.
GRAPE VINES, from Eyes, for Fruiting in Pots or Planting.

JOHN WEEKS AND CO. can now supply any quantity of very fine strong healthy Pine Plants, either Fruiting or Succession; also remarkably fine strong Grape Vines from Eyes, all the best sorts.

JOHN WEEKS & Co.'s Horticultural Show Establishment is now entirely devoted to the Growing and Forcing of Fruits in great variety, thereby showing the most improved plans of construction, and the most superior system of Hot-water Apparatus.

JOHN WEEKS & Co., Horticultural Builders and Hot-water Apparatus Manufacturers, King's Road, Chelsea, London, S.W.

AMERICAN PLANTS, &c.

MESSRS. WATERER AND GODFREY'S CATALOGUE for the present season is now ready, and may be had on application. It describes fully all Rhododendrons worth growing, and contains a List of Azaleas, Hardy Heaths, and other American Plants, as well as a summary of the general stock of the most extensive Nurseries in England.

The Catalogue may also be had at Messrs. MAY'S & Co., 1, Wellington Street, Strand, W.C.

Knap Hill Nursery, near Woking, Surrey.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their PRICED AND DESCRIPTIVE CATALOGUES of Exotic Orchids, Stove, Greenhouse, and Hardy Ferns, Miscellaneous Stove, Greenhouse, and Hardy Plants, Variegated and Ornamental Foliaged Plants, Conifers, Roses, Rhododendrons, Indian Azaleas, Gloxinias, Fuchsias, Geraniums, Herbaceous Plants, Fruit Trees, &c., are now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

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NEW DESCRIPTIVE SEED CATALOGUE FOR 1860

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Mr. JOHN LEE continues to devote himself especially to this important branch of their business, for which their house has been so long celebrated in the selection of SEEDS from the most genuine stocks at home and abroad.

Nursery and Seed Establishment, Hammersmith, London, W.

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WILLIAM BARNES'S CATALOGUE FOR 1860 OF KITCHEN GARDEN, FLOWER, AND AGRICULTURAL SEEDS of the finest quality is Now Ready, and can be had post paid on application, the selection in each particular class having been carefully made, and nothing but the very best varieties introduced. All Seeds warranted genuine and true to their names.—Camden Nursery, Camberwell, S.

WHOLESALE CATALOGUE.

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GIANT POLYANTHUS AND GIANT COWSLIP.—A few pounds of these gigantic and beautiful Spring Flowers to be disposed of, and many of them almost equal to the Auricula.—Apply to G. MACE, at the Garden, Calcot, near Reading.

SPECIMEN GREENHOUSE PLANTS.—The entire lot of Specimen Greenhouse Plants which have last year gained several Prizes at the local shows, including Azaleas, Ericas, Aphelexis, Pimeleas, Boronias, &c.—For further particulars apply to Mr. JOHN H. HEDGE, North Lodge, Ipswich.

THREE MILLIONS OF TRANSPLANTED QUICKS.

GEORGE CHIVAS, Chester, offers the above, which are admitted to be unequalled in point of quality in Great Britain. A sample bale, containing 100 each of five sizes, forwarded on receipt of 15*s.*, and orders for 10,000 delivered free at any railway station.—Chester, Feb. 18.

LARGE LIMES, ELMS, HORSE CHESNUTS, AND BEECH.

Limes, 7 to 9 ft. high, 30*s.* p. 100
English Elms, 9 to 10 ft. high, 25*s.* per 100
English Elms, 6 to 7 feet high, 20*s.* per 100
Horse Chesnuts, 6 to 8 ft. high, 20*s.* per 100
Beech, 4 to 5 ft. high, 10*s.* p. 100
,, 6 to 7 feet high, 12*s.* per 100

BENJAMIN R. CANT, St. John's Street Nursery, Colchester.

LARGE PLANTS OF ORCHIDS.

TO BE SOLD IMMEDIATELY, for want of room, 7 Epidendrums, 6 Dendrobiums, 3 Brassias, 2 Gongoras, 8 Oncidiums, Cattleya Forbesii, Goodyera discolor, a splendid plant of Renanthera coccinea, Ærides odorata, and two or three others, all blooming and some very fine plants; also 10 choice Ferns, including Blechnum corcovadense, Lygodium volubile and secundens, very fine plants; and a few other stove plants, all in the most perfect health, and will be sold for 10*l.*—A. B., 42, St. Paul's Churchyard, London, E.C.

TO THE TRADE.

THOMAS CRIPPS, NURSERYMAN, Tunbridge Wells, Kent, respectfully offers the following in fine strong well-rooted Plants:—

Standard Roses, 2 feet to 3½ and 4 feet stems, really good kinds, 50*s.* per 100; superior ditto, 2½ ft. to 4 ft. stems, 60*s.* per 100.
Dwarf Gallica Roses, &c., on own roots, by name, 20*s.* per 100.
Dwarf-worked Perpetual Roses, by name, 40*s.* per 100.
Dwf. Blush Pink China Roses, 15*s.* p. 100; or 500 for 63*s.* } very
Dwf. Crimson do. do. 25*s.* p. 100; or 500 for 100*s.* } strong.
Rhododendron ponticum, fine healthy stuff, the greater portion showing from 1 to 6 or 7 flower-heads, and from 9 in. to 2 feet in height, 25*s.* to 50*s.* per 100.
Rhododendron maximum album, fine large bushy stuff, 18 to 30 inches high, many well set with bloom buds, 9*s.* per doz. or 60*s.* per 100.
Rhododendrons, fine healthy seedling hybrid varieties, unnamed, 12*s.*, 18*s.*, 24*s.*, and 30*s.* per dozen.
Rhododendrons, choicest named varieties, per dozen, 100, or 1000.
Wellingtonia gigantea, from 7 inches to 2½ feet in height, per dozen or 100; all from Seed.
Cupressus Lawsonii, from 6 inches to 18 inches in height, seedling plants, per dozen, 100, or 1000.
Hardy Heaths.—A fine collection, and beautiful large healthy plants, 20*s.* per 100.
Double Yellow Primroses, 20*s.* per 100; or 60*s.* for 400.
Manetti Stocks.—Fine strong, 40*s.* per 1000; or 70*s.* for 2000.
Spanish Chesnut, 4 feet to 6 feet, fine, 40*s.* per 1000.
,, ,, 5 feet to 8 feet, ,, 50*s.* ,,

For prices see T. C.'s TRADE CATALOGUE.

From unknown correspondents either a remittance or respectable London reference must accompany the order. Five per cent. on cash accounts. When less than half-quantities herein quoted are ordered at once, an advance in price will be charged.

PLANTING.

A. PAUL & SON

RESPECTFULLY invite the attention of Gentlemen improving their Estates or forming new Gardens to the following TREES, &c., which they are prepared to sell at the lowest remunerating prices for a good standard quality. It is their practice to transplant every second year, in order that little or no loss may be incurred by removal. Many things are grown in large quantities and offered on advantageous terms to the Trade. An inspection of the stock is invited.

Abies alba, 2 to 4 feet
,, ,, glauca, 1 to 2½ feet
,, Clanbrasiliana and other dwarf Firs, 9 in. to 1½ ft.
,, canadensis, 3 feet
,, Douglasii, 2 to 6 feet
,, fine.onensis, 2 to 3 feet
,, Menziesii, 1½ to 6 feet
,, monstrosa, 2 to 7 feet
,, Morinda, 2 to 10 feet
,, orientalis, 1 to 2 feet
,, rubra, 2 to 4 feet
,, 20 other sorts, 1 to 6 feet
Araucaria imbricata, 1½ to 6 ft.
Arbor-vitæ (see Thuja).
Alaternus silver & gold striped, 1½ to 4 feet
Arbutus, 6 sorts, 1 to 3 feet
Aucuba japonica, 1 to 2½ feet
Box, 6 sorts, 1½ to 6 feet
Berberis Darwinii, 1 to 1½ foot
Cedrus africanus, 2 to 10 feet
,, Deodara, 1 to 12 feet
Cedar of Lebanon, 1 to 12 feet
,, Red, 2 to 5 feet
,, White, 3 to 5 feet
☞ The largest and finest stock of Cedars in the country.
Cistus, 12 sorts, 1 to 3 feet
Cryptomeria Lobbiana, 3 to 8 ft.
,, nana, 9 inches
Cupressus Corneyana, 1½ to 3 ft.
,, Knightii, 3 to 4 feet
,, Lambertiana, 3 to 7 feet
,, Lawsoniana, 9 in. to 1 foot
,, torulosa, 1½ to 3 feet
,, 12 other sorts, 1 to 4 feet
Daphne pontica, 2 to 3 feet
Furze, double, 1 to 1½ foot
Garrya elliptica, 1½ to 3 feet
Holly, green and variegated, 30 sorts, 1 to 6 feet
,, green standards, 5 ft. stems
Juniperus chinensis, 2 to 5 feet
,, communis pendula, 2 to 3 ft.
,, excelsa, 1 to 2½ feet
,, fragrans, 2 to 4 feet
,, glauca, 2 to 3½ feet
,, oblonga, 2 to 6 feet
,, ,, pendula, 2 to 3 feet
,, thurifera, 1½ to 6 feet
,, tamariscifolia
,, virginiana aurea, 1 to 2 feet
,, ,, pendula, 1½ to 3 feet
,, viridis, 1½ to 2½ feet
,, weeping, 5 feet stems
,, 20 other sorts, 1 to 6 feet
Laurel, Common, 1 to 5 feet
,, Portugal, 1½ to 4 feet
,, ,, Standards, 8 feet
Laurustinus, 1 to 2 feet
Ligustrum lucidum, 3 to 4 feet
,, japonicum, 1½ to 3 feet
,, ovalifolium, 5 feet
,, evergreen, 2 to 4 feet
Mahonia aquifolia, 1 to 3 feet
,, 6 other sorts, 1 to 3 feet
Phillyreas, of sorts, 1½ to 4 feet
Picea amabilis, 1 to 1½ foot
,, nobilis, 1 to 4 feet
,, Nordmanniana, 1 to 4 ft.
,, Pinsapo, 1½ to 4 feet
,, Webbiana, 2 to 3 feet
,, 6 other sorts, 1 to 6 feet
Pinus austriaca, 2 to 4 feet
,, Benthamiana, 2 to 5 feet
,, calabrica, 3 to 4 feet
,, Cembra, 1½ to 4 feet
,, excelsa, 1½ to 12 feet
,, insignis, 3 to 6 feet
,, Llaveana, 2 to 5 feet
,, Laricio, 2 to 4 feet
,, macrocarpa, 2 to 3 feet
Pinus monticolor, 2 to 3 feet
,, monspeliensis, 3 to 5 feet
,, muricata, 3 to 5 feet
,, Montezumæ, 3 years seedlings
,, nivea (Snow Pine), 1½ to 5 ft.
,, Pallasiana, 2 to 3 feet
,, pinaster, 3 to 6 feet
,, pyrenaica, 4 to 6 feet
,, Sabiniana, 4 to 5 feet
,, 40 other sorts, 1 to 6 feet
Quercus (Oak), Evergreen 3 to 5 feet
,, Fordii, 4 to 6 feet
,, latifolia, 3 to 6 feet
,, Mirbeckii, 2 feet
,, Suber (Cork Oak), 3 to 4 ft.
Ruscus hypoglossum
Santolina chamæcyparissus, 1 foot
Taxodium distichum, 3 to 6 ft.
Taxus (Yew), adpressa, 2 to 4 ft.
,, canadensis, 1½ to 3 feet
,, cheshuntensis, 1½ to 6 feet
,, elegantissima, 1½ to 4 feet
,, gold striped, 1½ to 5 feet
,, ,, standards, 5 feet
,, Jackson's Weeping, 1½ foot
,, japonica, 1 to 2 feet
,, nana, 2 to 4 feet
,, nigra, 3 feet
,, stricta, 5 feet
,, yellow-berried, 2 feet
,, common, round, and fan, 2 to 7 feet
,, Irish, 2 to 7 feet
,, 12 other sorts, 1 to 4 feet
Thuja americana, 3 to 8 feet
,, aurea, 1 to 3 feet
,, Chinese, 2 to 4 feet
,, gigantea, 2 to 3 feet
,, Wareana, 1 to 5 feet
,, 12 other sorts, 1 to 3 feet
Thujopsis borealis, 2 to 3 feet
Salisburia adiantifolia, 3 feet
Wellingtonia gigantea, 1 to 2½ ft.

Acer negundo variegata, 2 to 6 feet
Acacia, of sorts, 4 to 10 feet
Ash ,, 6 to 10 feet
Alder ,, 6 to 10 feet
Ailanthus ,, 8 feet
Almonds ,, 6 to 8 feet
Beech, purple, best variety, 5 to 8 feet
Birch, of sorts, 6 to 10 feet
Chesnut, Horse, of sorts, 1½ to 6 feet
,, Spanish, of sorts, 2 to 8 ft.
Catalpas, 6 to 8 feet
Caragana arborescens, 6 to 8 ft.
Cerasus padus aucubæfolius, 6 to 8 feet
Cornus mas variegata, 2 feet
Elms, 12 sorts, 6 to 8 feet
Gleditschias, 1½ to 8 feet
Kolreuteria paniculata, 3 to 6 feet
Laburnums, 8 feet
Lilacs, Persian, 6 feet stems
Liquidambars, 2 to 3 feet
Limes, of sorts, 8 to 10 feet
Maple ,, 5 to 10 feet
Planes ,, 7 to 10 feet
Poplar ,, 6 to 10 feet
Oak ,, 6 to 10 feet
Robinia ,, 6 to 8 feet
Sophora japonica, 10 feet
Sycamore, 6 to 10 feet
Thorns, of sorts, 6 to 8 feet
Tulip Trees, 2 to 10 feet
Willows, American, and others
Quick, 2-year transplanted, fine

WEEPING AND LAWN TREES in very great variety.

FLOWERING TREES AND SHRUBS, in 300 species and varieties, including Althæa, Cytisus, Berberis, Daphne, Deutzia, Lilac, Purple Nut, Pyrus, Ribes, Rose Acacia, Syringa, Spiræa, Weigela, &c.

ROSES, an unrivalled collection. Standards, 12*s.* per dozen and upwards; dwarfs, 6*s.* per dozen and upwards. See separate Catalogue.

HARDY CLIMBING PLANTS, a large collection.

AMERICAN PLANTS, including Azaleas, Heaths, Kalmias, Magnolias, Rhododendrons, &c.

FRUIT TREES, consisting of all the choicest sorts, warranted true to name. The trained Peaches, Nectarines, Apricots, &c., particularly fine.

GRAPE VINES, from eyes, well ripened, short jointed canes 6 to 10 feet.

HERBACEOUS PLANTS, in 500 species and varieties.

HOLLYHOCKS, a fine stock of healthy and well established plants. See separate Catalogue.

☞ Particulars of Prices, &c., furnished on application. Carriage of all packages free to London; if a ton weight or upwards placed free on the Railway at any London Terminus. An inspection of the stock invited.

A. PAUL AND SON,
NURSERIES, CHESHUNT, HERTS,
13 miles N.E. of London, Eastern Counties Railway.

KITCHEN GARDEN SEEDS free from any admixture of old valueless Seeds, and therefore warranted to grow well, are offered by CHAS. SOUTHBY (late Fairbairn), Clapham, S. A PRICED LIST free by post.

SEEDS.—SPRING, 1860.

SYME, SIMONS, AND SMITH, Glasgow, N.B., will have much pleasure in forwarding their LIST OF VEGETABLE, FLOWER, AND FARM SEEDS FREE. It contains all varieties in cultivation, and the prices for GENUINE SEEDS are very moderate, with free delivery.

GLADIOLI.—Separate list of all the finest sorts may also be had free.

TO THE SEED TRADE.—

EARLY MAZAGAN BEANS ..	6*s.* 0*d.*	Per bush.
HANGDOWN LONG POD BEANS	7 0	,,
DICKSON'S FAVOURITE (Early Pea)	10 0	,,

W. MINCHIN & SON, Hook Norton, Oxon.

SEED CORN FROM THE CHALK.—All the best varieties of SEED WHEAT, BARLEY, OATS, &c., may be had as usual of Messrs. RAYNBIRD & Co., of Basingstoke and 89, Seed Market, Mark Lane, London, E.C.

Samples and prices on application.

GENUINE FLOWER SEEDS AT MODERATE PRICES.

W. THOMPSON, Tavern Street, Ipswich, respectfully announces the publication of his DESCRIPTIVE PRICED CATALOGUE OF FLOWER SEEDS for the present season, arranged on the natural system, to which he invites the particular attention of amateurs. The collection includes all the most deserving novelties, with a fine selection of rare and choice seeds of all classes, which are faithfully described from personal observation, W. T.'s great aim being, next to the supply of a genuine article, to avoid the inflated descriptions and indiscriminate style of eulogium now too commonly adopted. W. T. respectfully solicits a comparison of his seeds with those of other firms, feeling confident that both for germinating qualities and correctness of name they will be found unsurpassed if not unrivalled, whilst for equal quantities their prices are fully one-third lower than usual, as the Catalogue will show. It will be sent post free on prepaid application.

GENUINE ROLL TOBACCO CLOTH.

WARRANTED EQUAL IN STRENGTH TO TOBACCO.

JOSEPH BAKER, 10, Gough Square, Fleet St., E.C., having dealt upwards of 20 years in the above, can recommend it as the best article for destroying the Fly. 1*s.* 4*d.* per lb., over 10 lbs., 1*s.* Post-office Orders payable Strand Office

FUMIGATING AND SYRINGING.

TO GARDENERS, HORTICULTURISTS, FLORISTS, AND OTHERS.

GRIFFITHS AND AVISS, TOBACCONISTS, &c., High Street, Coventry, beg to call attention to their TOBACCO PAPER FOR FUMIGATING. There is nothing in its preparation injurious to vegetation, although it deals death and destruction to all insects ("except the red spider") that infest the greenhouse. G. & A. warrant their Tobacco Paper to keep good and retain its killing properties for six months. Price 12*s.* 6*d.* per dozen lbs., sent to any part of the kingdom on receipt of Post-office Order. N.B.—Tear the Tobacco Paper into pieces about the size of a florin, and ignite it with a piece of red-hot iron large enough for the purpose.

Very strong Tobacco Water for Syringing, 1*s.* 6*d.* per gallon.

PAGE'S COMPOSITION FOR THE DESTRUCTION OF BLIGHT upon Roses, Wall-fruit Trees, Cucumbers, Melons, Vines, Stove and Greenhouse Plants, has stood the test of eight years' public trial, and its great success has led to numerous imitations. Dr. Lindley, in his leading article of October 25, 1856, reported 182 cases in its favour—sufficient to convince the most sceptical.

4*s.* per gallon, (sufficient to make four fit for use).
10 gallons and upwards, Carriage paid to London.

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Mr. Clark, Streatham Place, Brixton Hill, S.
Mr. Barnes, Camden Nursery, Camberwell, S.
Mr. Hopgood, Shepherd's Bush, W.
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and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

GISHURST COMPOUND

PATENTED,
FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN FLY
AMERICAN BLIGHT	ANTS	

BED BUGS, &c.,

And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1*s.* for first trials and small uses, such as destroying bed bugs; 3*s.* for not large gardens; 10*s.* 6*d.* for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, His Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs Lawrence of Ealing Park, and —Collier, Esq., of Dartford.

PROTECTION FROM THE MORNING AND EVENING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and, floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide, 1*s.* 6*d.* per yard run.
Four, 3*s.* per yard; also,
An improved make three yards wide, 2*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, whole and sole manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

SEED BUSINESS ESTABLISHED UPWARDS OF ONE HUNDRED YEARS.

COVENT GARDEN MARKET, LONDON, W.C.

NOW READY, AND FORWARDED FREE AND POST PAID ON APPLICATION,

BUTLER AND McCULLOCH'S

ANNUAL SPRING CATALOGUE

OF

FLOWER, TREE, SHRUB, AND VEGETABLE SEEDS,

OCCUPYING 96 8vo pages, and arranged on a new and original plan, giving the Natural Order of each Genus, together with a short note indicating its character or adaptation. To each species and variety are given the colour, duration, height, and native country, and to sorts of recent introduction or of more than ordinary value are attached useful descriptive notes.

Amongst the numerous species and varieties will be found novelties of the highest merit not quoted in any other Seed List.

To the amateur and professional gardener, therefore, we doubt not this Catalogue will be found one of the most useful guides of the sort ever published, furnishing as it does the kind of information we have felt from long experience to be necessary in a work of this description.

Such Seeds as require for their maturation a warmer climate than that of England have been saved for us in Italy by that distinguished Amateur (whose Carnations, Picotees, Ipomœas, Tropæolums, Tacsonias, Acacias, and other choice Flower Seeds, have for many years given such universal satisfaction), *the* LATE *Sardinian Correspondent of Messrs. James Carter & Co.*, who has appointed us his representatives in this country. The following we quote from our SPRING CATALOGUE:—

PELARGONIUMS.

The favour with which this splendid class of plants is now being regarded by all lovers of flowers, and the great desire manifested by amateurs for raising new and improved varieties, have induced our Sardinian Correspondent to turn his attention specially to this matter. The list published in *Gardeners' Chronicle* of Feb. 4, and to which we again invite attention, comprises varieties which have been saved by him with the greatest care; and as it will be seen that they consist of the very best sorts only, in each class at present in favour, new and rare kinds of the very highest merit may reasonably be expected from them.

☞ To enable our patrons to judge of the merits of the flowers they may expect to raise from the seed we offer, our Sardinian Correspondent has dried numerous specimens of Seedling Pelargoniums raised by him during the past season, and which may be seen at our establishment.

THE FOLLOWING WE EXTRACT FROM OUR CATALOGUE:—

IPOMŒA HEDERACEA SUPERBA GRANDIFLORA ATRO-VIOLACEA.

(Illustrated in the "Florist" of February under the name I. limbata elegantissima), rich deep velvety purple, broadly margined with clear white, (see our Spring Catalogue for 1859 and '60) For useful remarks on the adaptation of this splendid class, see the "Florist" of February. 9*d.* per packet.

IPOMŒA SPLENDIDISSIMA.

Rich blue edged with the purest white, exquisitely beautiful.

TACSONIA IGNEA.

(For description, see our Catalogue, page 68.) 1*s.* per packet.

TACSONIA MANICATA.

Another charming var. of this beautiful class of flowers; in colour it somewhat resembles T. ignea, but is a few shades deeper, giving quite another and distinct effect. They are both very hardy and of quick growth, producing a succession of blossoms throughout the entire year. 1*s.* 6*d.* per packet.

*** We find the following description in the *Gardeners' Chronicle* June 25th, 1859:—"Tacsonia manicata.—This plant was distributed a few years ago by the Horticultural Society. It is by far the most splendid in colour of the superb genus Passiflora, and moreover a hardy greenhouse climber: neither Passiflora princeps (racemosa), the Brazilian stove species, nor P. Le Michauxii, nor P. kermesina (all stove plants though they be), equal in colour Tacsonia manicata. Its colour is intense orange scarlet—so identical with the average Scarlet Geranium, that petal being laid upon petal, you can hardly distinguish a shade between them, whilst the rays, which are nearly black, enhance this colour, and give the effect of a scarlet Anemone; and it is so hardy that its wood survives even when run through the iron bars of the lights, within an inch of the glass, in a cool greenhouse."

CAMELLIA JAPONICA.

From the finest double selfs, per packet 1*s.* striped 1*s.* These have been saved by our Sardinian Correspondent, who has one of the finest Continental collections. A fine opportunity is thus afforded of raising something new.

PRIMULA SINENSIS FIMBRIATA RUBRA.

Flowers very large, violet rose striped, and shaded carmine eye yellow. A new variety, surpassing in beauty all others of its class. 2*s.* 6*d.* per packet.

SOLANUM TEXANUM (New).

Splendid variety; height from 1 to 2 feet; fruit waxy scarlet, rich and beautiful, having the form of a Maltese cross in the centre; may be preserved as an ornament for some time; foliage mulberry shaded, very handsome, great novelty. 6*d.* per packet.

AUBERGINE TOMATE (New).

Remarkable for its brilliant carmine fruit, form and size of a large egg; a very handsome and ornamental plant. 4*d.* per packet.

CUPHEA EMINENS.

Long tubed flowers, bright red and yellow, free flowering, and exceedingly handsome, forming a bush from 3 to 4 feet in height, and with branches rising one above the other in a horizontal manner, like those of the Norfolk Island Pine. 1*s.* 6*d.* per packet.

ARCTOTIS GRANDIFLORA (New).

Beautiful pale sulphur yellow, centre dark crimson, extremely large and exquisitely beautiful. 1*s.* per packet.

THUNBERGIA COCCINEA.

Scarlet, flowering in clusters; very elegant, new, and handsome. 1*s.* 9*d.* per packet.

AUBERGINE TOMATE (New).

Remarkable for its brilliant carmine fruit, form and size of a large egg; a very handsome and ornamental plant, 4*d.* per packet.

AGROSTIS NEBULOSA.

An exceedingly ornamental species, and certainly one of the most graceful of Grasses. A dried specimen may be seen at our establishment. 6*d.* per packet.

ERIANTHUS RAVENNÆ.

Extremely elegant and more graceful than the Pampas Grass, which it resembles in appearance and habit of growth; its noble plumes of silvery inflorescence are pure white, and most delicately beautiful; a dried specimen can be seen at our establishment. 1*s.* per packet.

CANTUA PYRIFOLIA.

A handsome shrub, with bunches of waxy, cream-coloured, trumpet-shaped flowers (rare). 2*s.* 6*d.* per packet.

SALVIA BICOLOR.

Sky blue and white, a magnificent variety. Flowers the first year. 6*d.* per packet.

AMARANTHUS PENDULUS NOVUS ALBUS.

Clear white, early flowering and one of the most graceful of the useful class to which it belongs. 6*d.* per packet.

CYCLAMEN PERSICUM STRIATUM MAGNIFICUM (New).

Brilliant carmine striped with white. One of the most elegant and novel varieties ever raised. 3*s.* 6*d.* per packet.

SELECTIONS OF VEGETABLE SEEDS.

Containing only the most Approved and Choice sorts; proportioned to suit large or small gardens. Either of the first Three Collections sent carriage paid to any principal Railway Station in England, Scotland or Wales; also to Dublin, Cork, Limerick, Belfast, Newry, Londonderry, or any other town on the Irish Coast where there is direct Steam Communication between London, Liverpool or Bristol.

No. 1.—Complete Collection, including 20 quarts of First Early, Second Early, Medium and Late Peas of the finest sorts only, and all other seeds in proportion for one year's supply. &c.																		42*s.*	0*d.*
No. 2.—Complete Collection, including 12 quarts Peas, and ditto, ditto																		21	0
No. 3	,,	,,	,,	6 quarts	,,	,,	,,											15	6
No. 4	,,	,,	,,	5 quarts	,,	,,	,,											10	6
No. 5	,,	,,	,,	7 pints	,,	,,	,,											10	6

"CAUTION."—Under this somewhat significant title has appeared in the *Gardeners' Chronicle*, and other Gardening publications, the following by no means courteous paragraph:—

"*James Carter & Co. wish to caution their customers against the published statement of a Covent Garden House, in reference to themselves in conjunction with a supposed Agency (which never existed), as such statements are totally devoid of truth.*"

It is impossible not to understand that we are the House alluded to in the paragraph just quoted, and which has evidently been put forth with the view of damaging our commercial integrity. The kind of reliance to be placed on the above statement will perhaps be best judged from the following extract from Messrs. James Carter and Co.'s own Seed Catalogue of 1857, at page 31. (See also Wholesale Catalogue, Autumn, 1858):—

"CARNATION AND PICOTEE SEEDS.

"*James Carter & Co. have again the pleasure to submit to public notice the following splendid Collection received from their Sardinian Correspondent* (an Amateur of first-rate ability). *All the Seeds produce, upon an average, from 70 to 75 per cent. of fine double flowers.*"

Again, *Messrs. J. C. & Co.* have the following in an advertisement See *Gardeners' Chronicle*, Feb. 26, 1859, page 167:—"*Having observed their name mentioned in an advertisement in connection with a late correspondent,* [J. C. & Co.] *feel it their duty to state that preferring to have their Seeds from the Continental growers direct, one of the Firm have travelled during the past autumn with that object, and purposes doing so every season; the services of the correspondent just alluded to are therefore dispensed with.*"

Surely further evidence is unnecessary to prove the intimate connexion which existed between Messrs. James Carter & Co. and our Sardinian Correspondent who for many years supplied that Firm with choice Seeds of Italian growth, and we feel certain that the high eulogium passed upon that gentleman, (viz. an Amateur of first-rate ability), is perhaps the best guarantee (if other than our own were required) that we can possibly offer to the public respecting the value of the Seeds we receive from that source.

In addition to the above, the following has appeared in the *Gardeners' Chronicle*:—

"J. C. & Co. *have no doubt that the public will fully understand the object of a House that has recently gone into the Seed Trade, making use of* JAMES CARTER & Co.'s *name.*"

In answer to this statement the heading of our Advertisement will be sufficient, viz., *established upwards of* 100 *years.*

BUSBY'S STOCKWOOD GOLDEN HAMBURGH GRAPE.

THE very beautiful specimens of this really SPLENDID GRAPE (some of the bunches weighing upwards of 3 lbs.) which have been exhibited during the past season, combined with the numerous unsolicited testimonials as to its superiority and general excellence which JAMES VEITCH, JUN., has received from the most eminent practical Gardeners, warrant him in again calling attention to its great merit.

J. V., JUN., can with confidence recommend it as being without doubt *the best light Grape of its class* in cultivation. It will be found a most valuable acquisition, succeeding well under the same treatment as the Black Hamburgh, and *certainly no Vinery should be without it.* It has also proved to be a most excellent variety for fruiting in pots. That so fine a fruit may be universally planted and enjoyed, J. V., JUN., now offers good established plants at the following prices :—

Nice young Canes ... ... 5s. 0d. each | Good well ripened Canes ... 7s. 6d. each
Fine well-ripened Canes ... ... 10s. 6d. each

ROYAL EXOTIC NURSERY, CHELSEA, S.W.—February 18.

Just out,

WHEELER'S LITTLE BOOK
FOR 1860.

POST FREE FOR SIX STAMPS. GRATIS TO CUSTOMERS.

It gives a full description, and the price of the best sorts of Seed in cultivation, and moreover states in detail the quantities and sorts of GARDEN SEEDS, comprised in our CELEBRATED COLLECTIONS, which we deliver CARRIAGE FREE to all parts of the Kingdom.

No. 1, £3. | No. 2. 30s.

J. C. WHEELER & SON, SEED GROWERS, GLOUCESTER.

FRESH SEED OF CHOICE HARDY CONIFERS.

WELLINGTONIA GIGANTEA	PINUS JEFFERYI	PINUS WILLIAMSONI
PINUS LAMBERTIANA	,, SABINIANA	ABIES MENZIESII
ABIES DOUGLASII	,, PONDEROSA	THUJA CRAIGANA
CUPRESSUS LAWSONIANA	,, BENTHAMIANA	Each of the above, 2s.6d. per pkt.

SPERGULA PILIFERA,
A Substitute for Grass on Lawns, requiring no Mowing.

This small dwarf hardy Perennial is from half an inch to an inch in height, with close compact Grass-like stems of a bright clear green colour, and by continual rolling will form an unbroken sheet of verdure, uninjured either by long-continued drought or severe frost. It maintains its beauty throughout the winter months, and will succeed in any soil; when once fully established it is almost impossible to eradicate it, from the fact of its long tap-roots penetrating to a depth of 2 feet in favourable situations. Its chief qualification is, however, the extreme beauty of its growth, there being no inequality of surface discoverable in several seasons; it is also very effective for covering slopes, terraces, banks, edgings, &c.; and when in bloom, during June or July, its pretty white flowers are extremely attractive and pleasing.

In mild weather the seed may be sown from the first week in April forwards, on beds of east or north aspect. Sow uniformly, thin as possible, to admit of the seedlings being easily thinned out—the ground kept nearly uniform in moisture. In case of extreme changes in the weather, hoop the beds over, which protect by night with garden mats or other material; and with the same, shade by day from chilling winds, and during the germination of the seed. Transplant by thinning out as soon as practicable upon store beds, with a firm ground surface. Price 6d., 1s., and 2s. 6d. per packet.

CARTER'S FLORAL ILLUSTRATIONS.

JAMES CARTER AND CO. beg leave respectfully to announce that under the above designation they commenced issuing in the Spring of 1857 a Series of Coloured Drawings (by Andrews), which will be continued with each annual publication of their Catalogues. It is their intention that each Plate shall contain the most desirable novelties of the season, together with any remarkable improvement in the varieties already in cultivation. One of the chief reasons for the publication of these Illustrations is, that they may serve as a guide to Amateurs and others in the selection of good new Flowers from among the great number sent out annually, many of which are often inferior to the older varieties.

PLATE No. 8, just published, price 1s. 6d., contains: Dianthus chinensis Heddewigi—Dianthus chinensis laciniatus—New hybrid blue-edged Sweet Pea—Lobelia gracilis rosea—Callirhoe digitata, Nigella hispanica alba—Nigella hispanica atropurpurea—Clarkia pulchella var. integripetala.

PLATE No. 9, price 1s. 6d., which will be ready next week, contains: Aster La Superbe—Œnothera biennis var. hirsutissima—Datura chlorantha fl. pl.—New scarlet Scabious—Larkspur tricolor elegans—Lychnis Haageana—Spraguea umbellata—Ipomœa limbata elegantissima.

☞ *For further particulars of the above see* CARTER'S GARDENERS' VADE MECUM, *which contains all the novelties of the day, and will be forwarded free on application to*

JAMES CARTER & CO., 237 and 238, High Holborn, W.C.

AGRICULTURAL SEEDS, 1860.

PETER LAWSON & SON,
THE QUEEN'S SEEDSMEN.
EDINBURGH,
AND
27, GREAT GEORGE ST, WESTMINSTER, LONDON. S.W.,

RESPECTFULLY announce the Publication of their PRICED LIST OF AGRICULTURAL SEEDS, including—in addition to Turnips, Mangels, and other Field Roots—Quotations of Clovers, Rye-grass, Pasture Grasses, and Herbage and Forage Plants.

P. L. AND SON pay especial attention to their Stocks of TURNIPS, MANGELS, CARROTS, &c., which are raised under their immediate personal superintendence, in accordance with the most approved practice; they also continue to give their most particular attention to NATURAL GRASSES, which they supply assorted. of the most approved kinds, for various purposes, soils and situations, as detailed in a series of tables recently published, and which may be had on application. PRICED LISTS FORWARDED FREE.

PETER LAWSON AND SON, THE QUEEN'S SEEDSMEN AND WOOD FORESTERS, 27, Great George Street, Westminster, London, S.W., respectfully announce the issue of their GARDEN SEED CATALOGUE for 1860, which they will be happy to forward free by post on application. Every care has been bestowed on the selection and growth of the various stocks, which P. L. & SON can safely recommend as of best quality, and true to name.

DALMAHOY EARLY POTATOES.—This excellent variety of Potato now meets with a largely increased demand in England, to which it is fairly entitled. It is considerably earlier than the Regent, and of excellent quality. Messrs. P. L. & SON are now prepared to send out carefully selected Seed, for which early orders are requested; and which can either be executed now or in spring, as may best suit purchasers.

MANGEL WURZEL
AND
TURNIP SEEDS.

MESSRS. SUTTON AND SONS beg to intimate that their quotations for Mangel and Turnip Seeds in their PRICED LIST issued in January *will not apply to orders received after February* 28.

Royal Berkshire Seed Establishment,
Reading.

HORTICULTURAL AGENT AND VALUER.

MR ALFRED CHANDLER, (of the late firm of CHANDLER & SONS,) 28, Priory Road, Wandsworth Road, S.

VEGETABLE SEEDS,
TRUE TO NAME, UNADULTERATED, AND AT MODERATE PRICES.—See
CARTER'S GARDENERS' VADE MECUM,
which will be forwarded free on application to
JAMES CARTER & Co.,
237 and 238, High Holborn, W.C.

AGRICULTURAL SEEDS,
TRUE TO NAME, UNADULTERATED, AND AT MODERATE PRICES.—See
CARTER'S GARDENERS' VADE MECUM,
which will be forwarded free on application to
JAMES CARTER & Co.,
237 and 238, High Holborn, W.C.

NEW CHINESE SUGAR GRASS
(SORGHUM SACCHARATUM).
The result of several trials of the above as a green crop is given in
CARTER'S GARDENERS' VADE MECUM,
which will be forwarded free on application to
JAMES CARTER & Co.,
237 and 238, High Holborn, W.C.

The Gardeners' Chronicle.
SATURDAY, FEBRUARY 18, 1860.

THE late French Horticultural Journals furnish some scraps of information, the more interesting of which we proceed to extract.

—— *Saponaria calabrica*, a very pretty herbaceous plant, is becoming a great favourite with the Parisians. It forms a spreading patch a foot or more in diameter, covered from May to September with charming rose-coloured flowers. Among its peculiar merits is that of not showing its seed-vessels, but hiding them incessantly beneath new flowers and eversprouting stems, in consequence of which the plant is never shabby. Moreover it bears any amount of dryness, the closely packed trailing stems preventing evaporation. It forms good durable edging, which is easily kept in order; but it looks best in masses or round the stems of Standard Roses, or other plants which give little shade. Nothing can be easier than its cultivation. If sown in April or May where it is to stand it begins to blossom in July; but Dr. BAILLY finds it better to sow it in September if there is any means of protecting the seedlings, which should be pricked out under hand-glasses or in frames during winter, transplanted into a warm aspect in March, and finally turned out in April. The advantage of this, he says, is that it blossoms a month earlier, and forms larger patches with finer and more brilliant flowers. *Rev. Hort.*

—— M. MOREL, of Barguy (Oise), has raised a Golden Spruce Fir with the same peculiarity of foliage as the Golden Yew Arbor Vitæ, and similar evergreens.

—— A supposed new pinnated Berberry is figured in the *Revue Horticole*, under the name of *Mahonia intermedia*. It looks very like *Berberis fascicularis*, but would appear from the account given of it by M. DUPUIS to be more hardy.

—— The Belgian Horticultural Confederation offers prizes of from 100 to 500 francs for the best treatises on the following subjects: 1, A scientific and practical account of the phænomena of hybridising and of natural or artificial crossing among plants; how to manage such operations, and the principal result that has been obtained from them, especially in a horticultural point of view; 2, a treatise on Garden Entomology, that is to say, a work showing the relation to cultivated plants of common insects, whether useful or injurious, so far as facts have been ascertained, irrespective of speculation; and more especially showing how the

gardener is to know the insects that injure his plants or fruits from such as deserve to be protected for the sake of the good they do. Five other subjects are proposed, but these two are the most interesting to us. Papers for competition may be sent in from any country before Sept. 1, 1860, addressed, post paid, to M. A. ROYER, President of the Belgian Horticultural Confederation at Namur. The writers must mark their communications with a motto, which must also be written upon a sealed envelope, within which the writer's name is enclosed.

—— M. LOUIS VILMORIN speaks highly of the Blanchard Potato, a yellow round sort, with the eyes lightly tinted with rose, in comparison with the Marjolin, the favourite early Potato of Paris. Although planted late it proved far better and more productive, as the following statement shows. Both being planted April 13, six of each were lifted on the 14th June.

The produce of 6 Blanchards weighed 3.730 kilos.
" 6 Marjolins " 1.210 kilos.

In order to judge of their comparative ripeness and quality, three Potatoes of each kind were sliced thin and dried in a stove. When taken out

The dry matter of the Blanchard weighed 18.47 gr.
" Marjolin " 17.11 gr.

and consequently the whole 6 bunches of Blanchards produced 688.40 gr., against 207.10 gr. of the Marjolin, thus demonstrating the great superiority of the Blanchard. M. VILMORIN says that the Marjolin was in the state in which it is usually sold in the Paris market; but the Blanchard would have been quite as ripe as it if lifted a fortnight earlier. This seems to be well worth the attention of gardeners. See *Bon. Jard.* 1860.

—— Under the name of the *Petit-Pavie d'Ounous*, a Peach is thus described in the *Revue Horticole:*—It forms a little shrub, the principal merit being its lateness. The fruit (apparently about the size of the Rosanna) is nearly spherical, and marked on one side, or sometimes on both, with a broad shallow furrow; at its end is a small rather inconspicuous nipple. The fruit-stalk is short and deeply sunk. The skin, which is yellowish white, is very finely dotted with rose purple, so closely indeed round the hollow for the stalk, and sometimes on the sunny side, as to produce the colour of BISHOP'S Purple. The flesh is firm, and occasionally a little stringy, clings firmly to the stone, white, streaked and washed with rose near the stone. The juice is copious, sapid, and subacid. In the valley of the Ariége it is in perfection in the month of October, and is then much esteemed. Although it is not likely that a late Peach from hot valleys in the Eastern Pyrenees will ripen out of doors in this country, it may be worth trying this little variety in the orchard houses of the curious.

—— *Pike's Defiance Cucumber*, a variety of the Smyrna breed, seems to have become a great favourite in Paris, if we are to judge from the account given of it by Mons. BAILLY in the *Revue Horticole*, where it occupies two wood engravings. The French seem to prefer it to both the Gladiator and the Man of Kent for its earliness, quick growth, and productiveness.

—— A Pear called the *Beurré de Fevrier*, a February Beurré of Rouen origin, is highly spoken of by Mons. DUPUIS. The fruit is about the size of a large Swan's Egg, green changing to yellowish when ripe. The flesh is described as greenish white, very delicate, melting, and buttery; the juice abundant, sugary, subacid, slightly perfumed, and very agreeable. It is as good as a Beurré d'Aremberg, ripens in February, but requires gentle handling in consequence of the tenderness of the flesh. The tree is a great bearer, and particularly well suited to Pyramid training.

THE MANCHESTER BOTANICAL AND HORTICULTURAL SOCIETY have given notice that they will hold exhibitions on Wednesday and Thursday, the 27th and 28th June next. The following regulations are to be observed:—

1. Productions may be exhibited from any part of the kingdom, and by any person, either for sale or competition. 2. Every exhibitor must give the Secretary three clear days' notice of the classes in which he intends to compete, in order that space may be reserved for the staging of the same. 3. All plants must be at the gardens by 9 o'clock. The Council reserve to themselves the right of receiving plants after that time. The staging will be under the direction of the Council. 4. Every article must be legibly labelled with its correct name, and the number of the class for which it is competing. It must also have been in the possession of the exhibitor two calendar months, or he will forfeit all claim to a prize. 5. No person will be allowed to win two prizes in the same class. 6. Any exhibitor remaining in the house after the judges have commenced their duty will subject himself to the forfeiture of any prizes that may be awarded to him. 7. The judges will have the power of awarding extra prizes to plants not specified in the schedule, and of withholding prizes when the specimens are not worthy. 8. No exhibitor will be allowed to remove his plants or his prize tickets until the close of the exhibition on the second day. 9. Exhibitors, not members, will receive tickets to admit them to the Gardens at 2 o'clock each day. 10. Gardeners of all exhibitors will receive tickets to admit them to the Gardens at 4 o'clock each day. 11. Gardeners of members will be admitted at 4 o'clock, on presenting an order from their employers. 12. The exhibition will close at 7 o'clock each day, after which no one will be allowed to remain in the exhibition house, except by permission of the Council. 13. Exhibitors will be admitted on the second day of the exhibition from 9 to 11 A.M., to do anything that may be required to their plants."

All inquiries are to be addressed to HENRY WHITWORTH, Esq., Secretary, 13, Corporation Street.

HOW TO RAISE SEEDS.

[We translate from the Journal de la Société Impériale d'Horticulture the following notice of a memoir on this subject, published in German by M. Charles Appelius, an extensive and very experienced seedsman at Erfurt.]

THE German author tells us that the first and most essential condition required to ensure the success of all seedlings is to use seeds capable of germinating. Now the goodness of a sample can only be proved by the number of seeds which, out of a given quantity, grow and become plants. Yet too often its value is determined by the specific weight or the density of the seeds. This method is no doubt good, but not infallible; besides the weight of the same kind of seed may vary from year to year, according to the manner in which it is grown; it may even vary upon the same plant; it does so particularly in an ear of Maize, the grains situated in the centre of the ear of that plant having a greater specific gravity than those above or below. Now the latest experiments of Dr. Hellriegel go to prove, first that, in accordance with the general opinion of cultivators the best formed seeds have the greatest specific gravity; and, in the second place, that the heaviest seeds produce the strongest plants.

Every one knows that in order to ascertain the specific gravity of seeds quickly and easily, it is the custom to throw them into water, and to collect as the best those which from their greater weight fall to the bottom, whilst those which float are rejected as bad. However too much confidence must not be placed in this method of proving seed by water. It may frequently mislead, particularly in the case of seeds, in which the specific gravity differs little from that of the fluid. For example, those of Cucurbitaceous plants which are produced during cold seasons float upon water, and nevertheless germinate very well. It is known too, says M. Appelius, that the seeds of these plants which have been kept a few years produce plants bearing more female flowers than younger plants; that is to say, the plants are more prolific than those raised from seeds gathered in a cold season and planted shortly after they have ripened. Good seeds of the Melon and Gourd lose weight as they grow old; at first they will sink in water, and by the 6th year half of them will float, without having become bad. We conclude therefore, in this case as in many others, that trial by water is not a sure test.

In general the heaviest seeds are those which contain the most starch, such as those of Cereals and Leguminous plants, &c. The specific gravity of oily seed is often nearly the same as that of water, although in some cases they are heavier; as for example, those of Cabbages. The lightest seeds are those of Umbelliferous plants, such as Carrots, Parsnips, Chervil, Anise-seed, &c., and of Composites, such as Lettuces, Scorzoneras, &c. In the first of these families the lightness of the seeds arises from the presence of an oil in the case which encloses the seed, and of air in the last. With a few exceptions all shining seeds are heavier than water.

Many cultivators, before buying seeds, test them by making them germinate upon damp blotting paper, at a temperature of 59° to 72°. This process is convenient and tolerably sure for the kinds which are quickly raised, such as Clover, Peas, and Cereals, but does not answer for those which require a long time to germinate. For these the best practical plan is to grow a sample in a pot. But even this test will not always give a strictly correct indication of the germinating power of seeds, since the result depends, all other circumstances being equal, upon the care taken in sowing, the temperature of the air, the depth at which seed is sown, and the time of year, &c. Thus the pips of Apples and Pears almost always germinate badly and in very small quantities when trials are made of them in pots soon after they are ripe, whilst they answer perfectly if they are sown at the end of October or in March in beds in the open air. For this reason it often happens that a sample is pronounced bad, when in reality it is excellent.

This is the case with the generality of woody plants, the seeds of which come up the first year, Conifers excepted.

The soil which is used to cover the trial seedlings also considerably affects the result. If, for example, Rye-grass seed (Lolium perenne) is sown in soil which retains moisture with average tenacity, and is buried 1 inch below the surface, seven-eighths of it grow in 12 days; if 2 inches seven-eighths also grow, but in 18 days; if 3 inches, six-eighths in 20 days; if 4 inches, four-eighths germinate in 21 days; at 5 inches, three-eighths in 22 days; and at 6 inches, the proportion of the seeds which germinate is reduced to one-eighth in 23 days. On the other hand, when Rye-grass is sown and simply harrowed in, it germinates, almost without exception, in five days.

M. Appelius's pamphlet contains, in the form of a table, the length of time necessary to germinate the seeds of many plants at a temperature of 52° to 54° in the sun, and of 54° to 64° in the open air.

We copy this useful information, though not in a tabular form:—

Germinates in 2 days: Garden Cress.
Germinate in 3 days: Spinach, Orache.
Germinate in 4 days: Cabbages, Field Turnip, Rape-seed, Lettuce, Buckwheat.
Germinate in 5 days: Cameline, Peas, Endive, Millet, Flax, Poppy, Melons and Gourds, Turnip, Rape, Rye-grass, Mustard.
Germinate in 6 days: Lupine, Lentil, Spurrey, Horse-radish, Radish, Onions (often also in 15 days), Leeks.
Germinate in 7 days: Rye, Barley, Oats, Maize, Sorgho, Cat's-tail Grass, Phalaris arundinacea, Broccoli, Anethum graveolens, Carthamus, Beans, Beet, Milfoil, Rocket.
Germinate in 8 days: Wheat, Festuca pratensis, Festuca rubra, Cummin, Marjoram, Thyme, Princess Kidney Beans, Cattle Cabbage, Chicory.
Germinate in 9 days: Marrow-fat Peas.
Germinate in 10 days: Cynosurus cristatus, Agrostis, Serradilla, Vetch, Sabre and some other Kidney Beans, Sugar Beet, Giant Hemp, Tobacco, Chervil.
Germinate in 12 days: Tall Oat Grass (Avena elatior), Meadow Brome Grass, Carrots (frequently in 20 days), Tomatoes, Seakale, Scorzonera, Common Celery and Turnip-rooted Celery (the latter frequently in 20 days), Savory (Satureia hortensis), Basil, Stocks.
Germinate in 13 days: Anise, Fennel, Meadow-grass (Poa.)
Germinate in 14 days: Burnet, Sun-flower (Helianthus annuus), Artichoke.
Germinate in 15 days: Clover (red and white), Balm (Melissa officinalis).
Germinate in 16 days: Foxtail Grass, Holcus lanatus, Lavender, Purslane, Sorrel.
Germinates in 17 days: Aira cæspitosa (?)
Germinate in 18 days: Festuca duriuscula, Teazel.
Germinates in 19 days: Aira flexuosa.
Germinate in 20 days: Avena flavescens, Molinia cœrulea, Bromus mollis, Madeira Onions, Mulberry, Common Sage, Capsicum.
Germinate in 21 days: Sweet Vernal Grass, Parsnip, Cow-Parsnip, Parsley, Woad, Asparagus.
Germinate in 27 days: Potatoes.

This table shows plainly, says the German author, that those seeds which are lighter than water require a longer time to germinate than those which are heavier.

A tolerably large number of seeds come up slowly and even with difficulty; they are generally those which have a thick, tough skin. In this case it is a good plan to soak the sample in hot water from 167° to 185° for four-and-twenty hours, and not to sow it until after it has been prepared in this manner. Their germination may be assisted by notching or removing the skin round the hilum, but that is a more delicate operation than the first, because care must be taken not to injure the embryo. Unless one or the other of these methods is adopted, it will generally be one or two years before such seeds come up. The seeds of Palm trees usually grow very well, placed on damp sawdust, the germinating end downwards, and kept in a damp warm atmosphere.

The spores of Ferns and the seeds of Orchids, which are very minute, come up readily, if they are scattered on pieces of Peat placed in a pan with water.

For hardy plants M. Appelius recommends as by far the best plan to sow them in lines. In his opinion, the reason of the frequent failure of seeds in gardens is, that they are sown in earth too dry, and buried too deep. Besides, if care is not taken to press the earth lightly together before sowing the seed, heavy rain falling directly after will force some of the seed deeper in, and so occasion greater inequality in germination.

For perfectly hardy annuals, the best plan is to sow them late in the autumn, or at least very early in the spring; if the seeds are not in the ground before April you run the risk of seeing them flower very late and very badly.

Seedlings which are obliged to be raised in hot beds or under frames cause much disappointment, and consequently complaint of the quality of the samples. M. Appelius does not hesitate to say, in that case, the want of success arises more often from bad management than from the badness of the seeds. In his opinion it is a mistake to sow many kinds of flowers in high bottom-heat, such as Stocks, Asters, Phlox, Heartseases, Petunias, &c., which do far better in a very gentle hot-bed, and produce stronger plants less likely to die off. On the other hand it must not be forgotten that the dung with which a hot-bed is made, after it has given off its first heat, absorbs the moisture from the earth with which it is covered; that the surface of this earth under the frame generally slopes toward

the south, and the greater part of the shower from the watering runs down this incline, the end of which is that the earth in which the seeds are embedded is often too dry, or at least it is so with that next the back of the hotbed. In this case, says M. Appelius, if you sow those seeds which germinate slowly and require constant damp such as Phlox and Heartsease, at the bottom or in the front of the bed, and those which grow more readily at the top or back, the result will be good; but it will be quite the contrary, if the reverse is done. Finally, the success of seedlings raised under frames depends principally upon the regulation of moisture. Another precaution and one of the utmost importance in this case, is not to sow thick; a plant raised among a lot of crowded seedlings is very apt to die before it has made its fourth leaf. This seldom happens, if on the contrary seeds are sown thin, and a little powdered charcoal mixed with the earth.

MYCOLOGY.—No. VI.*

AGARICUS NEBULARIS, *Batsch.*—The Horatian precept respecting Fungi,* that those are little to be trusted which do not grow in meadows, is strongly contradicted by a variety of excellent woodland species, amongst which one of the best, if not the most conspicuous, is the subject of our present notice.

No sooner is the attention called to the various Fungi which adorn our woods, than the eye is caught by one which often grows in considerable abundance amongst dead leaves, to which it is attached by white down, either in little patches, or in large rings, and is conspicuous from its pale broad mouse-grey or ash-coloured pileus, and stout stem. The surface of the pileus which is 4 inches or more across, at first depresso-convex, then expanded, with frequently a broad boss or umbo in the centre and the extreme edge rolled in, appears as if it was smoked or sprinkled with a coarse irregular bloom. The stem is 3 inches or more high, of the same colour as the pileus and slightly streaked, stout and often swollen below, attenuated above, and feeling spongy when compressed between the fingers, while the gills, which are crowded, of a watery dirty white, moderately broad but slightly attenuated behind, run down the stem for a little distance, but not so far as in many other species. The flesh of the pileus is thick and white, resembling somewhat new cheese. The odour is strong but not disagreeable.

This is one of the best of our Agarics, extremely delicate and easy of digestion, and not likely to be confounded with any woodland species if its characters are properly verified. The only caution necessary is to take care that it is not confounded with such species as have rose-coloured spores. This, on the contrary, has snow white spores, and often so abundant that any stray blades of Grass which may chance to be beneath the pileus are powdered with them. In the rose-spored species, moreover, the colour of the spores is so conspicuous that a mere inspection of the gills shows them lying in little red streams upon their surface.

There are one or two species which grow in pastures, as for example *A. grammopodius*, which may easily be confounded, but this is a matter of little consequence, as they are perfectly safe. The true *A. nebularis* probably very rarely occurs in pastures, except in such as may be called woodland.

Greville, whose figure we have borrowed, did not identify his species with *A. nebularis*, and Fries at first was inclined to take the same view; it is, however, quite certain that his plant and that of Batsch are the same. In a few instances the gills are scarcely decurrent, and then a moment's hesitation is excusable in referring the species to its proper place in the system.

It is either rare on the continent or little known, but those authorities which speak of it are uniform in its praise. It may be prepared in the same way as the common Mushroom, but as its flavour is delicate it requires a little more judgment in its preparation. Dr. Badham, who is confessedly high authority on such points, says—"A. nebularis requires but little cooking; a few minutes broiling (*à la Maintenon* is the best) with butter, pepper, and salt is sufficient. It may also be delicately fried with bread crumbs or stewed in white sauce. The flesh of this Mushroom is perhaps lighter of digestion than any other." The greatest care must be taken to select sound specimens, for it is one of those species which in age are apt to become offensive. When young, it is well adapted for making a *purée*, for which the following recipe is taken from Roque's excellent book. The Fungi, which must be young, are to be peeled, washed in cold water, and dried. They are then to be minced as fine as possible and pressed in a cloth. They are then to be placed with a small quantity of butter and pepper in a stew-pan, and shaken over a brisk fire till the butter is melted, when some Lemon juice and rich stock or *consommé* is to be added, and the whole reduced to the consistence of a *purée*, whose heat is to be kept up in a water bath. This may be served with white meat, game, fish, eggs, vegetables, &c., and if properly prepared makes an elegant sauce. *M. J. B.*

AGARICUS NEBULARIS.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

* ——— pratensibus optima fungis
Natura est, aliis male creditur.

Best flavoured Mushrooms pasture land supplies,
In other kinds a dangerous poison lies.
Francis's Translation.

DEVICES OF THE FOX FOR ESCAPING FROM HIS PURSUERS.—(See Feb. 4, 1860.)

I HAD determined to venture a remark or two on the last of these devices, when the arrival of three large birds in the flesh from Canada gave me other occupation. On dissecting them I found their interior parts as uncorrupt as though the birds had been killed on their reaching Liverpool.

But to the fox escaping from his pursuers. The account informs us that some 10 feet below the edge of the cliff there was a kind of break in the strata of stone a foot in width. Now, by means of his claws, the fox let himself down upon this break.

No animal as large as a fox, saving men and monkeys, could let itself down by means of its claws. Certainly men and monkeys can occasionally lower their bodies down a cliff. But no fox could ever perform such a feat. His claws would avail him nothing—literally nothing. In the present instance our fox would have been obliged to go over the cliff head-foremost, and there would have been fearful odds against his effecting a safe landing on a break 10 feet below him, and only "a foot in width." Had this most impossible device of a modern fox taken place in ancient days it might have succeeded by means of a metamorphosis; that is, by transforming the fox into a monkey.

Ovid distinctly states that Actæon, the famous hunter, was changed into a stag and got worried by his own hounds. "Dilacerant falsi, dominum sub imagine cervi." And Hecuba, once Queen of Troy, became a female of the dog tribe towards the end of her days, and sadly annoyed the neighbourhood with her incessant howlings. "Latratu terruit auras." Unless this fox had got into the body of an ape and made use of its hands, I cannot believe in the "device," but must consider it the production of some inventive wag unskilled in zoological anatomy. Adieu, Renard of modern times. Thou hast added another fable to the many which thy cunning family has invented for nurseries during the long and dreary nights of winter. *Charles Waterton, Walton Hall, Feb.* 12.

Home Correspondence.

Darwin on the Origin of Species.—In a recent number of the *Gardeners' Chronicle* you figure a monstrous, many-headed Cauliflower, and, in making some editorial remarks upon it, you suggest that it possibly throws some light upon the way in which species, according to Mr. Darwin's theory, originate in Nature. I am not quite sure that, as respects this particular Cauliflower, Mr. Darwin would agree with you, for it hardly comes within his principle, which denies to natural selection any power to act, unless the variation acted on be "favourable to the variety" in battling with its neighbours in "the struggle for life." Now though the many heads may be very advantageous to the cook or the market gardener, it is doubtful whether, in a crowded society, they would help a plant that had them in pushing itself forward toward the light. For, in a struggle, the lateral heads would become etiolated and abortive by the close contact of neighbouring plants, and the terminal head would alone have a chance of pushing forward and forming seed. Meantime, the new variety would be spending its strength (like a Protectionist) in favouring a non-paying "manufactory." Clearly, therefore, the old, one-headed Cauliflowers, unburdened with unprofitable speculations and concentrating all their energies on one result, would stand the better chance of turning their "crown into a pound." But, be this as it may, I wish now to call the attention of your readers to another monster, which, by a curious coincidence, appeared at Kew about the same time that Mr. Darwin's book appeared in Albemarle Street, and which, if I interpret it aright, speaks much more forcibly against the truth of Mr. Darwin's hypothesis than your Cauliflower, on the most favourable interpretation, says in its favour. I allude to a monstrosity in Begonia frigida, figured in "Botanical Magazine," t. 5160, Fig. 4, and thus described by Sir William Hooker:—"Our artist, Mr. Fitch, while making the drawing, detected a curious morphological structure in the fact of one of the flowers having an *inferior* perianth of four very unequal sepals (such as are indicative of a male flower); and above their point of insertion are four stamens (apparently perfect), alternating with four *superior*, free, ovate ovaries, each with a short style, and two downy linear stigmas. It is to be regretted that no section was made of these ovaries, which from situation and in form so little resemble the three-celled, inferior fruit of Begonia." To this account I may add that Dr. Hooker assures me that the ovules appeared to be normal, such as might have been fertilised. Let us suppose that they were perfect, and had been allowed to seed; every gardener would anticipate, I presume, that some of the progeny at least, if not all, would have borne similar flowers. Now, had this occurred in a state of nature, and had a botanist collected a plant with such flowers he would not only have placed it in a distinct genus from Begonia, but would probably have considered it as the type of a new natural order. Can it be possible, then, that genera and even natural orders, spring up like Mushrooms in this sudden manner? According to Mr. Darwin's hypothesis, the thing is impossible; for it would have required hundreds, perhaps thousands of successive generations to have enabled "natural selection" to convert an inferior ovary and unisexual flowers into a superior ovary and bisexual flowers. If there be one thing more frequently iterated than another in Mr. Darwin's book, it is this; that "it is fatal to my theory" if changes be not slowly progressive; by the accumulation of small increments from generation to generation; increments which, at first, may be only obvious to a breeder, but which, "bred up to" continuously, are sufficient, through "natural selection" alone (as we are told, p. 186) to change the eye-speck of a medusa into the human eye (if not to transform a slave-making ant into a southern states-man). If time be only long enough, and generations and divarications of form many enough, according to the theory, not only such things may be done, but they have been done! But a sudden change, like that hinted at by our Begonia, was not contemplated by Mr. Darwin's hypothesis; and if such should ever be established, if seeds should ever be raised from such a flower, and should breed true, then the theory would receive a serious damage, and a few such cases would overthrow it altogether. For, says Mr. Darwin, at page 206:—"On the theory of natural selection we can clearly understand the full meaning of that old canon in natural history, 'Natura non facit saltum.' This canon, if we look only to the present inhabitants of the world, is not strictly correct, but if we include all those of past times, it must by my theory be strictly true." It might be easily shown by quoting other passages that the theory, strictly taken, denies not only a "saltus" but a "gradus," and proceeds by a sliding-scale. But let us confine ourselves to the saltus. Is it not a saltus for a plant, at one bound, to change an inferior ovary and unisexual flowers to a superior ovary and bisexual? Would not such a fact, if fairly established in the vegetable world, be almost as wonderful as if a Rhinoceros were born of an elephant? And are we quite sure that such a fact has not occurred in Nature? I merely throw out as a hint—not as asserting a truth or even a probability, but merely as a hint, hypothetically put—that there are two natural orders of plants which have so many indications of common affinity that they were placed near together by Mr. Brown; but which differ from each other nearly by the very same characters as those

by which our monstrous Begonia differs from its normal parent. The orders I allude to are Aristolochiaceæ and Nepenthaceæ. Aristolochiaceæ, like Begonia, has an inferior ovary of 3—6 carpels; Nepenthaceæ, like our monster, a superior ovary of 4 carpels. On theoretic principles, it is probable that Nepenthaceæ is the newest type; for it is not (as yet) generically diversified, its flowers are 4-merous, its embryo more fully organised, and its geographical range more limited; and, as we are supposing, we may further guess that if Nepenthes were born "per saltum" from an Aristolochioid, it was some such genus as Trichopodium or Asiphonia that performed the part of cuckoo-parent. I use the term "cuckoo-parent" advisedly, for I should consider such an origin to be as true and as miraculous a creation (not "manufacture") of a new type as if it had pleased the Divine Creator to call up, without seed, from the dust of the ground, a new organism, by the power of his omnipotent word. *W. H. Harvey, Trinity College, Dublin, Feb.* 10.

Singular Holly Tree.—There is a Holly here (Wentworth Woodhouse, Rotherham), the condition of which is curious; so much so that I am induced to send you a short description of it, more especially as Mr. Henderson, the head gardener, thinks the state of the tree a remarkable one. At 18 inches or more from the ground the stem has thrown out two branches, the ends of which have taken root and have shot up into good-sized trees, one of them larger than its parent. Now, what seems remarkable is the circumstance that the part of the stem below the said branches is dead and decayed, so that the whole nourishment of the parent tree must be supplied by those two rooted branches. The sap in them must therefore run in a direction contrary to that which it originally followed. In a Willow or any similar tree such a state of things would not be surprising, perhaps; but in an evergreen it is uncommon, is it not? The original tree, though not flourishing, is perfectly alive, and has grown a good deal since the death of the base of its stem, for the dead part is considerably thinner than the upper portion. This latter is about 4 inches in diameter just above the insertion of the two rooted branches. *H. J. Moule.* [This seems analogous to the case of Spruce Firs on the Swiss Alps, stumps of which remain alive for a very great number of years, in consequence of having accidentally grafted their roots to those of neighbouring Spruces, and thus maintaining existence by sap laterally transmitted.]

Barbarossa Grape.—In your volume for 1857 I expressed an opinion that this Grape required more heat than is usually given to Hamburghs and other late sorts. Since that time I have given it a fair trial, and I am quite convinced of the truth of what I then advanced. I bought a Vine when it was first sent out, and planted it in a late house with Hamburghs and West's St. Peter's, where it still remains. In the following year I planted two of the same Grape in a Muscat house, and one in an early Vinery. Although the fruit in the latter house was very fine and sugary, it was not equal to that of other sorts then in use, and it was considered necessary to substitute another variety for the one in question. In April last I grafted the Golden Hamburgh on it, and it grew to the top of the house by June, and was a remarkably strong cane, the stock being a very strong one; at pruning time more than two-thirds the length of the rod were left, and is now in a very promising condition. So well pleased am I with this stock for grafting the weaker growing Vines on, that this spring I intend putting Lady Downe's Seedling on the old Vine in the Hamburgh house, as it makes roots freely and in great quantities in almost any soil. What I wish to impress on those who have failed to produce this very fine Grape to their own satisfaction is, to give it the treatment usually given to Muscats. I started my Muscat house about the middle of March, consequently the Grapes were ripe early in September, and up to this time the Barbarossa bunches are hanging in beautiful condition. I agree with Mr. Butcher that this Grape might be kept until April or May. I am not in a position to keep them later than March in the present year, which only leaves me the months of April and May without Grapes, but having added a fourth Vinery in 1858, I shall be able to fully test the keeping qualities of this Grape next season. The Grapes grown with the Muscats are very superior in every way to those grown in the late house; in the former they are juicy, full of sugar, and very rich, while in the latter the bunch is large, the berry considerably smaller and containing very little sugar. *Wm. Culverwell, Thorp Perrow.*

Annuals.—The excellent article from the "Florist" inserted at p. 120 bids fair to predict that these will once more become generally cultivated for decorative purposes, both as in and out-door plants. Nothing in the way of plants can surpass their gay and interesting appearance, when their various shades of colour and heights are properly arranged. Perhaps one drawback which belongs to them may be attributed to the vacant spots and untidy aspect they give the grounds when their flowering season is past, and to this, happening at a time when the garden is most frequented, may be assigned the cause for the almost universal encouragement afforded to the bedding of Verbenas, Scarlet Geraniums, &c. I think the culture of annuals may be so managed as to go hand in hand with that of Verbenas, &c., so as to have continuous successions of bloom early and late. Where there are good borders they may be sown very early and at such a distance that Geraniums, &c., might be planted betwixt them, so as not to overcrowd each other, and thus when the flowering season of the annuals is on the decline they may be removed, and the other plants would quickly occupy their place. Another system of culture I used to adopt with success is this, viz.: during the month of September to sow thinly in pots or pans some of the following varieties—Candytufts, Clarkia pulchella, Kaulfussia amelloides, Nemophila insignis, Collinsia bicolor, Schizanthus pinnatus, Viscaria oculata, &c. These were kept in a frame from which frost was excluded, or in a cold part of the greenhouse, and as early in the spring as weather permitted, they were planted singly in rows in the flower beds, preserving the necessary width for planting Verbenas, &c., betwixt them. By adopting this treatment one almost fails to recognise the same plants, so great is their beauty compared with the thickly sown patches we are in the habit of witnessing. *John F. M'Elroy, Gr. to W. J. Lancaster, Esq., Stamford Hill.*

Weather at Helston, in Lat. 50° 7′ *N., Long.* 5° 18′ *W., for the year* 1859, *from Registers kept by M. P. Moyle, Esq.*:—

TABLE I.

1859. Month.	DRY AND WET BULB THERMOMETERS. 3 p.m. Dry.	Wet.	REGISTERING THERMOMETERS. Mean of all the maxima.	Mean of all the minima.	True mean temperature.	Maximum observed.	Minimum observed.
	deg.	deg.	deg.	deg.	deg.	deg.	deg.
January ..	48.9	46.4	51.3	41.6	46.2	55.0	31.0
February ..	50.6	47.6	53.5	41.5	47.2	58.0	32.0
March ..	51.7	48 5	54.7	44.2	48.4	61.0	32.0
April	54 3	50.3	57.4	43.9	49.1	73.0	32 0
May	60.7	55 6	63.5	49.8	55.1	72.0	39.0
June	67.1	60 2	71.5	56.4	62.1	79.0	48 0
July	73.9	66.3	80.6	59.5	68.1	90 0	52.0
August ..	69.4	64.5	74.4	58.0	64.5	87.0	51.0
September ..	63.4	58 5	66.5	53.2	58 5	72.0	44 0
October ..	58.9	55.7	62.0	48.8	54.4	73.0	32.0
November ..	52.9	50.1	55.9	45.4	50.2	62.0	34.0
December ..	45.7	43.7	49 2	38.9	44.0	57.0	22.0
Months ..	58.1	53.9	61.7	48.4	53 9	69.9	37.4

TABLE II.

1859. Month.	WEATHER. No. of dry days.	No. of wet days.	No. of days observed.	Amount of rain in cubic inches.	Mean degree of humidity saturation = 1.000.	REMARKS.
				Inches.	Inches.	
Jan. ..	12	19	31	3.51	0.879	Fog, 1; hail, 19, 26, and 30; lightg., 30.
Feb. ..	14	14	28	2.56	.864	Honeysuckle in leaf, 8; Lilac, 15; Peach in bloom, 12; Hazel do., 12.
March. .	15	16	31	3.22	.893	Fog, 4; hail and snow, 30; thunder and lightning, 30; Elm in leaf, 1; Lomb. Poplar; Hawthorn, 15; Horse Chesnut, 23; rooks build, 22; lunar halo, 16.
April ..	13	17	30	3.67	.872	Apple in bloom, 5; Lilac, 10; cuckoo, 11; hail, 15, 16; first swallows, 18; aurora borealis, 21
May ..	20	11	31	1.48	.736	Lightning, 20; fog, 28; thunder, 21; Laburnum in bloom, 14
June ..	20	10	30	.92	.784	Honeysuckle in bloom, 3; fog, 7; lightning, 8; Wheat in ear, 9; in bloom, 13; thund. storm, 25; Barley and Oats in ear, 25.
July ..	23	8	31	1.06	.767	Oats cut, 22; Barley do., 23; Wheat do., 24
Aug. ..	19	12	31	3.29	.821	Thunder, 3; Peaches, 7; Jargonelle Pear, 8
Sept. ..	12	18	30	4.37	.828	Lunar halo, 14; fog, 24; meteors, 25, 28
Oct. ..	9	22	31	4.70	.859	Fog, 1, 9; teal, 8; woodcock, 11; last swallow, 19; aurora borealis, 12; hail, 21, 23; thunder, 21, 25, 31; lightning, 23, 24, 31; Hawthorn leafless, 22; shock earthquake, 25
Nov. ..	16	14	30	3.89	.778	Thunder storm, 1; fog, 22; first fieldfare, 24
Dc . ..	9	22	31	4.75	.859	Hail, 1, 28; snow, 14, 15, 16, 17, 19; thun., 27; lightning, 27, 28
Means..	182	183	365	37.42	.833	

Dalmahoy Early Potato.—This Potato in my opinion is the best second early at present in cultivation, being of first-rate quality and a large cropper. It is extensively grown in Scotland, and I am glad to perceive by some of the English nurserymen's catalogues that its merits are now being appreciated in England. The following is its history as related to me by the late Mr. Smeal, gardener at Dalmahoy. Properly speaking this Potato is not of Scotch origin, as its name would imply. It was raised in Cumberland, and sent from that county some 20 or more years ago to the late Earl of Morton, Dalmahoy, near Edinburgh, as the "Cumberland Early" (it is not the Cumberland Early of the present d.. , and having been so much praised by visitors at Dalmahoy, it was through his lordship liberally distributed among his friends, who, as a compliment perhaps, named it "Dalmahoy Early," which is perhaps as good a name as its original; at any rate it is to Lord Morton that we are indebted for its preservation and distribution throughout the country. I have no interest in puffing this very excellent Potato, but having grown it for a dozen years at least I can most highly recommend it to farmers, gardeners, amateurs, and, above all, to cottagers, who will find it a very profitable variety to grow; and I shall be happy to learn, through your columns, how it succeeds with our friends in the south. *Wm. Baxter, Riccarton.*

Mice.—Your correspondent might destroy the mice of which he complains by mixing a little arsenic, sugar, and lard together, and putting a little of it on the top of a stick or label, sticking the latter into the ground; they will eat it freely. If he cannot use poison, bait figure-of-four traps with Crocuses, or what is better Filberts, with the shell taken off—mice are ravenous after Nuts at this season. *Wm. Culverwell, Thorp Perrow.*

Pruning Conifers.—I have some Austrian Pines which have outgrown their fences. I intend to remove all the lateral branches to the height of 4 or 5 feet off the trunks, and then to cover these trunks with an iron wire to preserve them from the injury of cattle. It would be the most convenient time to me to remove these branches now. These Pines have been planted 20 years, and are of considerable size and vigour. May I do this? *A. B.* [Certainly. There is no better time.]

Societies.

BOTANICAL OF EDINBURGH: *Jan.* 12.—Professor Allman, President, in the chair. The following communications were read:—I. "Sketches of Caithness and its Botany, with a list of the Phanerogamous Plants and Ferns," by R. Brown, Esq. This paper was the narrative of a botanical tour made in the autumn of 1859 to a county whose Flora is by no means well known. The author, after giving an outline of the physical geography of the county and sketches of its scenery, proceeded to notice its vegetation. The indigenous trees were stated to be the Aspen, Birch, Hazel, and Mountain Ash. The county, however, appears at one time to have been covered with luxuriant forests, judging by the trunks of trees found in the bogs. Trees, when planted in the county, require to be protected from the sea breeze. The common field crops are Clover, Grass, Turnips, (introduced within the last 40 years), Barley, Bere or Bg (Hordeum hexastichon), and Potatoes (introduced about 100 years ago). Before the introduction of the Potato it appears that Cabbages were extensively cultivated. Common culinary vegetables grow well, but fruit trees require the protection of high walls and a southern exposure. On Dunnet Links the drifting of the sand is prevented by the Bent (Ammophila arundinacea), which grows abundantly. The native flowering plants and Ferns enumerated amounted to about 420, for many of which the author was indebted to a zealous Caithness botanist, Mr. Robert Dick, as well as to Mr. Peach, known for his natural history researches. Several of the plants, it was stated, were not mentioned in Mr. Watson's Cybelè Britannica as occurring in his North Highland Province, while others had never been previously recorded as natives of the county. Among the more interesting plants recorded were the following:—Draba incana, Pyrus Aria, Saxifraga stellaris, S. tridactylites, Ribes alpinum, Valeriana dioica, Hieracium boreale, H. prenanthoides, Arctostaphylos alpina, on Ben Shurraii, Anchusa sempervirens, Veronica polita, Pinguicula lusitanica, Ajuga pyramidalis, Primula Scotica, Rumex sanguineus, Habenaria bifolia, Listera cordata, Juncus balticus, Carex limosa, Hierochloe borealis, Sesleria cærulea, Equisetum umbrosum, Osmunda regalis, Isoetes lacustris, Lycopodium annotinum.—II. "Notice of a Physiological Peculiarity in a specimen of Tropæolum majus," by C. Dresser, Esq. communicated by A. Dickson, Esq.—III. "Notes on Californian Trees." Part II. By A. Murray, Esq. F.R.S.E. The first part of Mr. Murray's paper was occupied chiefly with a critical discussion of the synonymy of various Californian trees. *Pinus insignis* and *Pinus radiata* he showed to be the same species by exhibiting a branch bearing the distinguishing cones of both clustered together. *Pinus Murrayana* he considered perfectly distinct from *Pinus muricata*. Of *Pinus Jeffreyi* he said:—"This Pine was discovered and named after Mr. Jeffrey, who in 1850 was sent out to collect seeds in North-West America, by an association of gentlemen which originated in this city, and was principally composed of Scotchmen, although it also numbered in its body many noble and eminent subscribers from the sister kingdom, chief of whom I should mention his Royal Highness Prince Albert. That association still lives in its embers, and I trust that an effort now making to revive it may be successful, and that it may yet make as many discoveries in Japan as it did through Jeffrey in Oregon and Cal-

fornia. Some subscribers to the association, remembering only that the third and last year of Jeffrey's engagement terminated unsuccessfully, and that they had just reason to be dissatisfied with his conduct during that year, sometimes speak of his expedition as a failure. But it is unjust so to term it; and if they would only remember the quantities of novelties which were discovered and introduced through his means, they would rather treat it as a great success, which only assumes the aspect of a partial failure from the knowledge that, great as it was, it ought to have been, and might have been, greater still. No one could have worked more conscientiously and more perseveringly than Jeffrey did during the first two years of his employment, and, bearing in mind the fact that Menzies and Douglas went to a virgin country, his collections do him no discredit, even as compared with theirs."

But the chief part of Mr. Murray's paper was occupied with an account of the Mammoth Tree (*Wellingtonia gigantea*), and of an expedition sent to procure seeds of it by his brother, Mr. William Murray of San Francisco. The first place where it was found was at a spot called the Calaveros Grove (more recently the Mammoth Tree Grove), near the head-waters of the Stanislaus and San Antonio rivers, in long. 120° 10′ W., at. 38° N., and about 4590 feet above the sea level. There the number of trees still standing amounts to 92. Two other localities are now known, one in Mariposa and the other in Fresno county. The Mariposa grove contains about 400 trees, and the Fresno grove about 600. The tree is undoubtedly the largest and most magnificent known on the face of the earth. Its ally, the *Sequoia sempervirens*, is not far short of it in size, but still stands a little in the background. The average dimensions of both trees when full grown are about 300 feet in height and 90 in circumference. We have great difficulty in realising this immense height, and to assist us we must have recourse to other objects of comparison. To an Edinburgh man we have a very good one. The Gas Company's great chimney, although built in a hollow deep below Nelson's Monument, yet has its top 7 feet higher. Now it is only 329 feet high in all, including its pedestal, which is 65 feet in height; while one of these Mammoth trees was actually 450 feet high, or nearly a third higher than that chimney. And Lord Richard Grosvenor, in a letter quoted in a recent number of the *Gardeners' Chronicle*, speaks of having seen one 116 feet in circumference and 450 in height It is taller than St. Peter's, and little short of the height of the Pyramids. Another way of bringing home to our sensations an idea of the enormous size of these trees is that used by Messrs. Sang, Nurserymen, Kirkcaldy, in a neat and comprehensive little account they have given of the tree. They calculate the quantity of wood in a tree, and its value at 1*d*. a foot. The result is 6250*l*. for a big one. What a nice little provision an acre of Wellingtonia would make for a younger son or daughter of the proprietor of an entailed estate! The trees seem all to rise like solid pillars without a branch for nearly two-thirds of their height, often with furrowed bark, so as to look like fluted columns. Mr. Murray exhibited several photographs of the trees from Mariposa Grove—one of which was 94 feet in circumference. He then went on to say:—"The smallest tree that could be found was 24 feet in circumference, and the next about 21 feet, and I shall tell you how I know. My brother last autumn desired to obtain some seed of the Wellingtonia to send home. Now, this is not an easy thing. In the first place, the trees are greatly too high to allow of getting up them by any contrivance. I suggested flying a kite over them, and by that means getting a rope up the one side and down the other. Let any one fancy such an experiment being made over the Gas Company's chimney (the trees are as bare as it of branches nearly to its top), and let him also fancy that after the rope was across, he was the person to go up. I rather imagine he will not think it necessary for me to take any further trouble in proving the inapplicability of my plan, unless, indeed, on the principle of hiring and sending out Steeple Jack (and he, poor man, I believe, is dead, and has left no successor to his business). To cut down a tree was not impossible. It had been done already by speculators more than once to get a section for exhibition. I remember that in 1854 (shortly after the discovery of the tree), my brother was himself applied to to get a slice of it (not less than 30 feet in diameter) for exhibition in the Crystal Palace, and between 300*l*. and 400*l*. were placed at his disposal for this purpose. He found, however, that such a slice could not be got for the money—more particularly one of the Wellingtonia, because it was far inland (200 miles from San Francisco), and the expense of getting it down to the coast would have been tremendous." Still if one chose to be at the requisite labour and expense of cutting down a tree bearing cones, seeds could be thus obtained; but an obstacle to this mode of procuring them exists in the care that is now most properly taken to protect the trees and prevent their being exterminated. One would think that the difficulty of felling them would in itself have been a sufficient protection; but it was not thought so, and has not proved so. Dr. Seeman says—"It was at one time feared that many years would not elapse before the last vestige of the Mammoth Trees would be destroyed. It was the *New York Herald* which first pleaded for their protection. In Europe the danger in which the trees were placed was viewed with equal apprehension, inducing a correspondent of the *Gardeners' Chronicle* to suggest that a petition of the scientific men might be sent to the American Government, praying for the protection of this eighth wonder of the world. Fortunately, the authorities were fully alive to their duty, by prohibiting the removal of any tree under any circumstances whatever, and thus, by throwing the sanctity of the law around the hallowed grove, preserved to North America an object quite equal in grandeur to the famed Falls of Niagara, the Mammoth Cave of Kentucky, or the Natural Bridge of Virginia." The result of this is, that the only way of procuring seeds is to shoot down the cones with rifle bullets, or, so to speak, to saw off small branches with them; and my brother succeeded in getting Mr. Patrick Black, a young Irish gentleman admirably fitted for such work, to undertake the task of procuring some seeds for him. A first-rate shot, a keen sportsman, full of energy, whom nothing delighted more than the exhilarating life of a hunter camping out for weeks in the open air, Mr. Black was quite the right man in the right place. Well supplied with ammunition, he took his departure for the Mariposa Grove, which is a long way in the outer world—not that it is without its own inhabitants, its own hotel (kept by an old hunter), nay, even its own authorities, as Mr. Black had like to find to his cost. He took up his quarters with the old hunter, who may rather be said to have kept open house than a hotel, as the sky was the only roof he had—a roof apparently not yet being considered essential to the comforts of a hotel in these parts, although one might have thought it would, seeing that the forest is 6000 feet above the level of the sea, and there was frost every night while Mr. Black was there. He visited the grove daily, shooting down a cone or two to see that they were ripe before beginning to make his collection. When he began to make it, however, he soon found that it would take a battery of ammunition and an army of sharpshooters to make even a moderate collection of seeds. The seed is exceedingly small and thin—a mere scale—and the cone is also small (not larger than the cone of an ordinary Scotch Fir, and containing still fewer seeds), so that the product of a whole week's shooting might be held in one's waistcoat pocket. Mr. Black soon tired of this, and, seeing one or two trees of less size than the others, and being apparently a man of a logical turn of mind, came to the conclusion, first, that it would be easier to fill his wallet by cutting down a tree than shooting down the cones; second, that it could be done; and lastly, that as it could be done, it should be done; and being apparently also a man of a practical as well as of a logical turn of mind, he boldly putting behind him the fear of the anathemas of the *New York Courier* and of the *Gardeners' Chronicle*, as well as the nearer terror of the local authorities, at once, with the assistance of his host and two Frenchmen (that the three most civilised nations in the world might all be represented in the perpetration of the sacrilegious deed) proceeded to put his intent into execution. They first selected the smallest tree which they could find in the grove; it was 24 feet in circumference, and took Black and the hunter three days' hard work to level with the ground, one cutting on each side of the tree. Increase of appetite growing by what it fed on, another and another shared the same fate, until they had actually cut down four of these magnificent trees, the last and largest being 42 feet in circumference, which took a week to cut, and fell before the two Frenchmen; not, however, before the echoes of their axes reached the ears of Judge Lynch, who soon stopped the fun, and in simple but unmistakeable language gave him to understand that it would be "dangerous" to try it again. In plain English, the authorities interfered; and, although they did not lynch Pat (which would not have set up the trees again), they told him that they would, if he cut any more. The wood is extremely soft, very light, and easily worked, and not unlike the Cedar wood used for pencils; when freshly cut it is white, but speedily acquires the Cedar hue. It is so brittle, that one of the trees in falling snapped in three places before it reached the ground, carrying away whole forests of Silver Firs and Pine before it; and we see from the figures of the trees which we already possess, as well as from the photograph of the group now shown, that a great proportion of them have been broken off near the top, so that, if they had continued growing in the same proportion, they must have been nearly a third higher. But if the wood is brittle, the bark is not. Our friends found it a great deal worse to cut through than the wood. It is tough and stringy, like coir or the husk of a Coco-nut, and is from 1 to 1½ foot in thickness. We have here one of those beautiful adaptations of structure to purpose which the mind delights to trace. It is obvious that if the Wellingtonia, being so fragile, were coated with bark of only a common thickness and ordinary consistence, it could never live to be a tree; it would be snapped across by the first wind that blew, so soon as it reached a sufficient height to give the wind a hold upon its branches; but, with a coating of bark so thick, so tough, so stringy, so spongy, and so elastic, it is kept in its place, and protected from its own fragility. It is the same principle which is adopted by ourselves in packing and supporting anything that is fragile; and, as has been pointed out to me by my intelligent friend Mr. Bryson, this support is given in the way which modern science has ascertained to furnish the greatest amount of strength with the least waste of substance. The bark is constructed on a different plan from that of most other trees—it is on the plan of the corrugated roof; the corrugated layers surround the tree longitudinally, and the interstices between these harder portions are packed with the elastic spongy substance. The quantity of seed obtained, however, was by no means correspondent to the sacrifice made to obtain it. The cones on the trees would appear to have been comparatively few; and, as I believe in the case with other Cypresses, the amount of light seed vastly preponderates. The whole quantity, good and bad, only amounted to between 6 and 8 lbs.; but, as there are 50,000 seeds in a pound, the expedition has probably done more good than harm after all. The portion of wood sent home by my brother gives me the opportunity of testing the calculations which have been made as to the age and rate of growth of the tree, and I find it corresponds with the data on which Dr. Torrey came to his conclusion, which was, that the tree was about 1200 years old, instead of 3000, as was at first mistakenly assumed, from reckoning only the outward rings, and taking it for granted that all the rings were of the same breadth. The tree is perfectly hardy in Britain, grows very rapidly, and, although only introduced in 1853, has already reached the height of 9½ feet, and 19 inches in circumference at base, at Castle Martyr, near Cork, and not much short of this both in England and Scotland, and has borne ripe fruit at Thetford in England. We may therefore reasonably hope that we shall ere long be independant of the sacred giants of the West for a sufficient supply of good seed. In the meantime we have the satisfaction of knowing that we can make plants by cuttings with the greatest facility; and, what is most important, in the great majority of cases they grow erect and readily from leaders.

Notices of Books.

Routledge's Illustrated Natural History, Part XI., is more full than ever of interesting matter. The Tasmanian Devil and Wolf, the Wombat, and Bandicoot, the whole race of Opossums, Seals, and Whales are here represented with singular felicity. We select an account of the first of these, called by Zoologists Diabolus ursinus; the skull and bones of which are so strong as to render it extremely difficult to kill by mere beating.

"Few animals have deserved their popular titles better than the creature to whom the first colonists of Van Diemen's Land unanimously gave the name of Native Devil. The innate and apparently ineradicable ferocity of the creature can hardly be conceived except by those who have had personal experience of its demeanour. Even in captivity its sullen and purposeless anger is continually excited, and the animal appears to be more obtuse to kindness than any other creature of whom we have practical knowledge. Generally, a caged animal soon learns to recognise its keeper, and to welcome the hand that supplies it with food; but the Tasmanian Devil seems to be diabolically devoid of gratitude, and attacks indiscriminately every being that approaches it. I have frequently had opportunities of testing the character of this curious animal, and have always found it to be equally savage and intractable. Without the least cause it would fly at the bars of its cage, and endeavour by dint of teeth and claws to wreak its vengeance on me, while it gave vent to its passionate feelings in short, hoarse screams of rage. There was no reason for these outbursts of anger, for the animal behaved in precisely the same manner whenever any visitor happened to pause in front of its domicile. It is a very conspicuous animal, and not easily to be mistaken for any other species. The coat of the Tasmanian Devil is very appropriately black, dashed here and there with spots, patches, or stripes of a pure white, which afford a bold and singular contrast to each other. In different individuals there is considerable variety in the distribution of these two colours, but the character of the markings is similar in all. The general hue of the fur is a deep dead black, the fur being devoid of that rich silky glossiness which gives to the coats of many black animals so pleasing an effect. Across the breast there is nearly always a very conspicuous white mark, which in some individuals takes the form of a semilunar band, and in others is contracted to a mere spot. Generally, another white mark is found to extend saddlewise across the end of the spine, just before the insertion of the tail. This mark is also susceptible of great variation, being of considerable dimensions in some specimens, and extremely small in others. Now and then a white streak or patch is seen upon the shoulders, but in many individuals the shoulders are of equal blackness with the remainder of the body. Behind the eyes is a tuft of very long hairs, and another similar tuft is placed immediately above them. As might be presumed from the heavy make of its body, and the thickset shortness of its limbs, the animal is not at all brisk or lively in its movements, and seldom displays much energy except when under the influence of the easily-excited irascibility for which it is so widely renowned. The head is short and thickly made, the muzzle very blunt, and the mouth wide. The gait of the animal is plantigrade, and its movements are in general dull and sluggish. The length of this animal is about 21 inches, exclusive of the tail, which measures about 7 inches in length, and is moderately well covered with fur. Despite of its comparatively small size, this creature is hardly less destructive than the Tasmanian wolf, and in the earlier days of the colonists wrought sad havoc among the

sheep and poultry, especially among the latter. In those days it swarmed in great numbers, but it is now nearly extirpated out of some districts, and is so persecuted by the righteous vengeance of the farmers, that a solitary specimen can scarcely now be seen in the locality where its nightly visits used to be of continual occurrence. Many of these depredators were shot, caught in traps, or otherwise destroyed, and suffered a poetical justice in furnishing a meal for those at whose expense they had often feasted. The flesh of this rather ungainly animal is said to be far from unpleasant, and to have some resemblance to veal. The traps in which these nocturnal robbers are caught are baited with flesh of some kind, generally with butcher's offal, for the animal is a very voracious one, and is always sensitive to such attractions. Like the Tasmanian wolf—to which animal it is closely allied—it is in the habit of prowling along the sea-shore in search of the ordinary coast-loving molluscs and crustaceans, or in hopes of making a more generous feast on the dead carcases which the tides will sometimes leave upon the beach. In captivity it will eat almost any kind of food, and is found to thrive well upon bread and milk, with an occasional addition of meat. When it is indulged in the latter delicacy it speedily tears in pieces the meat with which it is furnished, and is in nowise baffled by the presence of moderately sized bones, which it can crack with wonderful ease by means of its strong teeth and powerful jaws. The great power of its jaws, backed by its unreasoning ferocity, which seems to be literally incapable of comprehending the feeling of fear, renders it extremely formidable when attacked. Indeed, there are hardly any dogs, however strong and well-trained they may be, which can boast of a victory gained over a Tasmanian Devil in single fight. It is rather a productive animal, the number of its family being from four to five at a birth. The habitations of this species is ascertained to be made in the depths of the forest, concealed as far as possible from the light of day, which grievously affects the eyes of this, as of all other strictly nocturnal animals. The pain which is caused to the creature by the unwelcome brilliancy of ordinary daylight is constantly indicated by the ceaseless movements of the nictitating membrane over the eyeball, even when the animal is shrouded in the comparative dimness of a straw-filled den, and shades itself from the glare by crouching in the darkest corner of its cage. Aided by the strong fossorial claws of the fore-feet, the Tasmanian Devil digs for itself a deep burrow in the ground, or, taking advantage of some natural hollow or crevice, shapes the interior to suit its own purposes. The hinder feet are made in a manner similar to those of the bear, and, like that animal, the Tasmanian Devil is able to sit erect upon its hinder quarters, and to convey food to its mouth by means of its fore-paws, which it uses in a very adroit manner."

Would it not be well if the Editor were to look at Mr. Waterton's clever comments on Natural History Anecdotes, with which our columns are occasionally enriched?

The 12th and last number of Vol. I. of the *Pescatorea* has appeared with title-page and index. It contains figures of Arpophyllum Cardinalis, Odontoglossum triumphans and coronarium, and Cypripedium villosum, the last a well-known species, the three others both rare and beautiful. Amateurs will be glad to hear that Mr. Linden announces his intention of continuing this attractive work notwithstanding the death of M. Pescatore; and he expects that his collectors in tropical Asia and America will supply its pages with novelties in abundance.

Mr. Lovell Reeve has announced as preparing for publication, in monthly parts, imperial octavo, each part to contain four coloured plates, with descriptive letter-press, price 2*s.* 6*d.*, a new periodical entitled *The Floral Magazine:* comprising figures and descriptions of popular garden flowers, by Mr. Thomas Moore, F.L.S.; the drawings by Mr. Fitch, F.L.S. We are informed that the chief aim of the work will be to furnish faithful representations of choice flowers, so as to become a portfolio of the most important floral novelties submitted for the approval of the public in each successive season. The letter-press is to consist of one leaf to each plate, containing popular descriptions and historical notices, with the mode of culture of the plants figured, and notes of such additional novelties as the space may accommodate.

Miscellaneous.

Dental Cream.—Under this title, M. Gautier, *Médecin-Dentiste* of Paris, describes a composition which he says is of very great utility in facilitating cutting the teeth. It consists of gum, sugar, and honey, equal parts of each, with *q. s.* of lime-water. This is to be rubbed for several minutes three or four times a day, into the portion of the gum about to be penetrated. The gum becomes softened and thinned, and the tooth is much more easily cut. *Pharmaceutical Journal.*

A few Words about Orchids.—Although the greatest curiosities in the whole range of the vegetable kingdom, and described in terms of glowing rapture by some of the early writers on the floral productions of India and the Western world, Orchids were until recently little known, and less appreciated, in England. These flowers had "adorned the brow of royal Indian maidens; flourished in the palaces and perfumed the luxurious air of Peruvian courts; they were the love messengers of noble Mexican youths; they lay a mournful tribute of affection on the grave of a departed friend; and hung their fantastic garlands along the gold-glowing walls of Mexican temples." Yet till within the present century they scarcely found a place among the collections of Europe. But no sooner were the lovers of flowers in England made acquainted, chiefly through the labours of Dr. Lindley, with their transcendant claims, than they were sought with energy and determination. Collectors were sent to all the rich and prolific tropical regions: one ship, at least, came to England freighted entirely with Orchids; and it is supposed that in England alone, at the present time, not fewer than 2000 species are under cultivation. *Once a Week.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Orange trees in tubs or pots should be carefully examined in order to ascertain whether or not their roots are in a healthy state, and those requiring more room should be shifted at once. In many instances however it may not be possible to afford large specimens a shift. In that case remove as much of the surface soil as can be done without injuring the roots, and replace it with a mixture of good loamy turf, broken bones, decayed cow dung, and sand, and see that the balls of the plants are in a moist healthy condition. Manure water is of great service to Orange trees, and may be applied freely at all seasons, particularly when they are starting into growth. It is quite impossible to use the syringe to advantage in many conservatories, and under such circumstances when the weather is favourable the flowering plants should be removed to one end of the house, and the twiners, &c., given a liberal washing with the engine, which will also greatly assist in keeping the glass, &c., clean. This should be done before the twiners start into growth, as there will be no danger of injuring the tender foliage while the plants are in a dormant state. Be satisfied with a rather low temperature for the present, and give air freely on fine days, endeavouring to avoid cold drying currents as much as possible. Attend to keeping up a supply of Roses, Azaleas, Daphnes, and other things requiring to be brought forward in a gentle heat, and persevere in the destruction of insects.

FORCING DEPARTMENT.

PINERY.—Succession plants should not be allowed to get too dry at the root, as this would probably throw them prematurely into fruit. In re-potting these, if a plant is found too dry it should be set aside and well watered, so as to get the soil in a moist healthy state before shifting. Where the plants are growing in the open bed the soil should be carefully examined to a sufficient depth, and if it is found to be over dry, water as often as necessary with tepid water to thoroughly moisten the mass, allowing two or three days between each application. Maintain a moist atmosphere, and shut up early in the afternoon, allowing the glass to rise to 80°; but do not exceed 60° at night. VINERIES.—Proceed with thinning the berries whenever the crop is sufficiently advanced to allow of this being done. Stop laterals, tie in young shoots, &c., and keep everything neat and orderly. Maintain a steady night temperature as near 65° as possible; give air freely on fine days, taking care to open all the ventilators a little, and endeavour to avoid cold currents. See that the buds in the late house are not excited; on the contrary, keep the house cool. Watch narrowly for red spider in the early Vinery and in the forcing houses generally, and should it be detected anywhere lose no time in washing the infested leaves and those around them, using a soft sponge and clean water with a little soap. This may appear a tedious process, but if the enemy is taken in time it will be more easily eradicated by these means than any other. FIGS.—Keep the shoots thin so as to expose the foliage to light and air, and persevere in the use of the syringe to prevent red spider. Give air freely on bright days, shutting early in the afternoon after syringinging the house. PEACHES.—Proceed gradually with the disbudding of the early house, and where the fruit is very thick a portion should be removed as soon as fairly set; but the Peach is liable to drop until after stoning, and this must be borne in mind, and plenty left to allow for a few falling. Maintain a steady heat to Cucumbers of 65° or 70° at night, and allow it to rise 10° or 15° with sun heat. Give air on every favourable opportunity.

FLOWER GARDEN AND SHRUBBERIES.

Bourbon, Tea, and other tender Roses must not be disturbed for the present, but as soon as the weather has become more favourable let them be pruned and the beds manured and lightly forked. Roses do not, however, dislike a rather firm soil, and care should be taken not to injure their roots by forking or digging too much. The best manure for them is well rotted cow dung, which should be applied after carefully loosening the soil, and an inch or two of fresh mould sprinkled over it will obviate any unpleasant appearance it might otherwise present if kept near the surface. Get walks edged, gravel rolled, &c., and everything put in the neatest order. Seeds of tender annuals may be sown soon on a gentle hotbed; it had better, however, be delayed for the present till the weather gets milder.

HARDY FRUIT AND KITCHEN GARDEN.

Proceed with pruning and nailing when not too cold for these operations. If any planting still remains to be done, let it be performed as soon as the ground is in a fit state for that purpose. Do not, as is sometimes done, over-manure; it is a great mistake to induce the production of gross long-jointed wood in any stage of the existence of a fruit tree; wood of this description never gets thoroughly ripened, and in the case of stone fruits, gum, canker, and premature death are sometimes the result, and in the case of Pears anything deserving the name of a crop is never obtained till the gross habit induced by planting in over-rich soils is overcome. Ground intended for fruit trees should first be drained, which should be done efficiently, and then trenched to the depth of 2 feet; and if the natural soil is found to be too poor for the health and growth of the trees a sufficient quantity of fresh turfy loam should be added, but rich stimulating manures should not be used, for they are soon exhausted, and the trees are left to depend upon the natural soil for their support, and when treated in this way never give satisfaction. Take advantage of the first fine day with the ground in working order to get in the main crop of Onions. The old practice of sowing broadcast must be given up as being too expensive to clean and thin the crop. Select a piece of deep land in good condition, and if the surface is not naturally firm render it so before sowing by treading or rolling.

COTTAGERS' GARDEN.

As soon as the weather has become favourable the main crop of Potatoes should be got in. By planting early and only early kinds, and this on light and not over-rich soil, there will be a good chance of escaping disease. See that a bed is prepared for Onions, which should be sown as mentioned above, and also that every spare bit of ground is manured and turned over.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Feb. 16, 1860, as observed at the Horticultural Gardens

February.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep	2 feet deep	Wind	Rain.
Friday 10	18	30.045	29.980	37	15	26.0	41	41½	N.	.00
Satur. 11	19	29.916	29.728	38	14	26.0	40	41	S.	.00
Sunday 12	20	30.333	30.178	38	22	30.0	39	41	N.E.	.00
Mon. 13	21	30.508	30.455	34	20	27.0	39	40	N.E.	.00
Tues. 14	22	30.526	30.457	37	22	29.5	38	39½	N.E.	.00
Wed. 15	23	30.477	30.225	41	33	37.0	38	39	N.	.30
Thurs. 16	24	30.184	30.020	42	32	37.0	38	39	N.E.	.01
Average		30.284	30.174	38.1	22.3	30.2	39.0	40.1		.31

Feb. 10—Clear and frosty; sharp frost at night.
— 11—Uniformly overcast; snowing; densely overcast; frosty.
— 12—Frosty; very clear and cold; frosty.
— 13—Clear and frosty; snow shower; clear; frosty.
— 14—Frosty; cold and dry; clear and frosty; snow.
— 15—Frosty; overcast; clear; overcast; snow.
— 16—Cold and drizzly; bright sun; cloudy and cold; overcast.
Mean temperature of the week, 6¾ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Feb. 25, 1860.

February.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 19..	41.5	31.1	37.8	12	0.64 in.	5	2	4	5	1	9	4	4
Mon. 20	45.2	30.5	37.8	18	0.51	2	4	3	5	1	9	7	3
Tues. 21..	46.4	32.0	39.2	16	0.20	2	7	4	3	—	9	6	1
Wed. 22..	45.9	32.3	39.1	15	0.29	3	4	8	—	3	9	5	1
Thurs. 23..	47.0	31.5	39.2	12	0.44	4	3	5	2	1	10	6	3
Friday 24..	47.1	33.2	40.1	16	0.60	—	2	6	2	7	6	4	7
Satur. 25..	47.7	32.6	40.2	17	0.92	2	4	6	—	5	9	5	3

The highest temperature during the above period occurred on the 24th, 1846, and 25th, 1830—therm. 59 deg.; and the lowest on the 20th, 1855—therm. 8 deg.

Notices to Correspondents.

ANTS: *J C.* Strew guano in their runs and nests.

BOG EARTH: *A Subscriber.* Good bog earth is to be procured only in dry heathy places. It should have a great deal of fine silver sand naturally mixed with it. "Bog earth," strictly so called, is always inferior, and sometimes worse. Wimbledon Common continues to yield peat earth, but it is getting scarce.

BOOKS: *W Sheffield.* You must ascertain the price of books through booksellers. The Gardeners' Magazine of Botany is discontinued. The Illustrated Bouquet is coloured. Verschaffelt's work is in French. The Florist is the only cheap monthly work with coloured plates likely to be of use to you.—*A Practical Botanist* will find nothing like what he wants except the Phytologist.—*Gorman.* Dupuy's Greffe des arbres fruitiers.

CORROSIVE SUBLIMATE: *W C B.*—The quantity is immaterial; water will not take up more than a certain quantity. Put the sublimate into a vessel of water; stir it up well, and leave it for an hour or so. Then pour off the clear solution, and add more water to the sublimate remaining at the bottom of the vessel, and so go on until all the sublimate is dissolved.

GREEN PEAS: *J W.* We never take any part in money transactions connected with the sale of seeds or plants.

INSECTS: *Anon.* The Pea-beetle is Bruchus Pisi. Its economy will be alluded to in a forthcoming article. *W.*

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*M A.* Some evergreen variety of the Turkey Oak; probably what is called "the Fulham." The Lucombe Oak is another variety.—*P. B.* Senecio mikaniæformis, not worth growing out of doors even at Midsummer, but a charming winter fragrant flower.—*J S.* It is some state of Betula urticifolia.

PEACH TREES: *An Amateur.* We have never heard of such a disease as you mention. Your statement is too loose for publication; but if you will describe the symptoms fully, clearly, and correctly, we will print your letter.

PLANES AND SYCAMORES: *W G.* No such discovery, as obtaining "a valuable dye" from these trees, has been made that we know of. There is probably some misconception of the effect of Boucherie's method, which is to communicate dyes to such wood, not to extract dyes from them.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

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Operations under the Company's Act are divided into two principal branches; one where the Landowner designs and executes the improvements by his own Agent and merely requires a loan from the Company to charge the Estate,—the other where the Company undertake the entire responsibility of the Improvement and obtain repayment by way of Rent Charge. In the first case the plans, specifications, and estimates prepared by the Landowner's Agent are forwarded to the Company to be submitted for approval to the Inclosure Commissioners. As soon as the sanction has been given the Landowner proceeds to execute the works, and the Company having conducted the business through all the official forms, complete the charge on the estate when the works have been passed by the Commissioners, and repay the Landowner the amount agreed upon.

In no part of the business is there any control upon a Landowner except by the Inclosure Commissioners. The Company never interfere, except at the special request of the Landowner or his Agent, and only to such extent as may further the objects he has in view.

In the other case, where the Company are required to execute the works, a report and estimate of the Improvement are sent to the Landowner, and having been approved, the plans are then prepared and the works—either submitted to public competition or entrusted to their own staff—are carried on to completion, and the amount of the actual expenditure only, approved by the Inclosure Commissioners with the Company's agreed commission and the Commissioners' expenses, finally charged on the Estate for the term fixed by the Landowner.

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YORKSHIRE AGRICULTURAL SOCIETY.—The next ANNUAL MEETING will be held at PONTEFRACT, August 1 and 2. JOHN HANNAM, Secretary.
Kirk Deighton, Wetherby, Feb. 18.

The Agricultural Gazette.

SATURDAY, FEBRUARY 18, 1860.

IT is alleged by the employers of farm labour that on the average their servants in the country are better off than labourers in towns—cottages and gardens, and perquisites, much more than compensating for the smaller money payments given on the one hand; and house-rent, inconvenience, dirt, doctoring, and marketing for everything, more than swallowing up the greater wages given on the other. There are districts undoubtedly in the country, and instances in towns, of which this contrast or comparison is true enough—where the countryman is better paid and better circumstanced. But there are also country districts, of which the assertion certainly cannot be defended; where the agreement, whether for money only and therefore definite and unavoidable, or partly in kind as well as money, and therefore capable of various interpretation according to the honesty and good will of the employer—where this agreement does not grant for services a reward anything like that which they can in other lines of life command. Dorsetshire has generally had the character of being agriculturally an ill-paid county; parts of Wiltshire, according to our information, are much worse. In neither case can there on this score be any blame laid at the door of the employer. The wages arise out of circumstances of which he has not the control, and for which he is not responsible. Nevertheless he has it in his power to adopt a mode of payment by which his men can be benefited, while he himself is not injured. And, having established such a system of payment in "kind," at wholesale prices for the food and other perquisites agreed upon as wages, he has it also in his power, while still observing the letter of the agreement, to palm inferior goods upon his servant and take the profit to himself which the other thought to gain. And instances of both kinds in abundance may be quoted.

Taking into consideration that the hopes of thickly populated and of thinly populated agricultural districts both depend in great measure on the self-respect and intelligence and vigorous manhood of the labouring class, by which alone the more even distribution of their numbers will be effected; and considering too that the retention of the young and energetic men by the employer is for the benefit of the latter, we are on the whole disposed to prefer a simple money payment for wages, allowing them as much as possible to be earned by the piece, to any other plan. And without desiring in any way to excite an angry controversy, which indeed has no business to arise out of the facts we are about to publish, we proceed to describe the system of payment by perquisite as well as wage, as it exists in a certain Dorsetshire parish, and as it is actually carried out by a benevolent Dorsetshire employer.

The latter case we give as received directly from that employer and quoted by Mr. MORTON in his Paper on the forces used in agriculture, read before the Society of Arts.

"In answer to your inquiry respecting the wages of the labourers of this part, I will give you an account of what I pay my agricultural labourers of different callings. They all live on the farm near their work, where it is convenient for most of them to go in to dinner every day. I have 18 cottages for which I never receive any rent, as my men all live rent free, and most of them have good gardens besides other Potato lands free. It is a very great accommodation to labourers to reside near their work, quite equal to 1*s.* per week to a man not to have to travel a mile to his work morning and evening, and all have their regular pay wet or dry weather, no loss of time except they are working by piece work, which most of them get in their turn during the year, when they generally earn from 10*s* to 15*s.* per week, according to circumstances, besides their yearly privileges, which I will state below, and which many of my labourers have said to me at different times, 'is nearly half our living,' referring to a cottage and garden, Potato land, and the privilege of having grist over that of buying bread of a baker, as I regulate the grist by allowing a peck a head to the family of workers in a house. I think our system is nearly equal to other counties, where they give nearly double the wages, and no house nor other privileges, nor pay for wet days. In this county we agree for a family at a certain sum from the 6th of April to the 6th of April in the following year; some of my men have continued on my farm with me for more than 30 years without change, where they are good labourers. This I believe is about the general run of our county as an average. I will now state how, and in what way I pay my horse men, as you term them:—

I.—THE CARTER.

	£	*s.*	*d.*
House, good garden, worth to let, 4*l.* per year ..	4	0	
Weekly wages 8*s*, and 30 perch of Potato land ploughed in with their Potatoes, often growing 15 sacks, now worth 10*s.* per sack, and allow the seed out, would be 5*l.*	25	16	0
200 Furze faggots, carried home free to the cottage	1	0	0
28 cwt. of best coals, carried home at 1*s.* per cwt. and cost to fetch from ship	1	14	0
Extra for harvesting, cash 1*l.*, and 1 gallon of ale per day	2	0	0
Every journey with team, 1*s.*, average one per week	2	12	0
3 quarts of ale per day at haymaking, for eight weeks, at 9*d.* per gallon	1	7	0
1 bushel of Wheat per week, if a family of small children, none to go to work, at 5*s*, not much advantage now, say 6*d.* per week, but when dear, 3*s.*	1	5	0
	£39	14	0

The whole of horse-man's wages is thus about 15*s.* per week

II.—THE SHEPHERD.

My shepherd has the same as the horse-man, except he earns about 3*l.* extra for sheep which he shears when no pay is taken up from him, and he has 1*s.* per score for all lambs bred, which at about 600 is 1*l.* 10*s.*; and also 6*d.* for every ram let or sold, generally 2*l* 10*s.* in all	7	0	0
Take from this the difference of carter's journey money, which is	2	12	0
Leaving in favour of shepherd	4	8	0
Wages and perquisites as carter's account	39	14	0
	£44	2	0

Shepherd's wages weekly, 17*s.*, all but 2*s.* in the year.

III.—THE LABOURER.

Labourer, 7*s.* per week, house as above, garden, Potato land in many cases, 200 of Furze, 15 cwt. of coals; grist, as I have before stated, at 1 peck per week for every one who works, great and small, some at 5*s.* per bushel, and some at 6*s.* per bushel, and most of my labourers have piece-work at different times of the year when convenient. I consider, on an average, a good labourer's place with me is full 12*s.* per week."

"This," says Mr. MORTON, "is a very elaborate scheme of payment and a very liberal one; but I do not value the items so highly as is done above by about 6*l.* a year, making the yearly wage of the ploughman about 33*l.* 14*s.*, or as nearly as possible 13*s.* a week."

We now contrast with the above the same system as carried out in another parish; and as estimated by one who is not an employer of agricultural labourers but merely one of their neighbours and interested in their condition.

The following are the actual wages received in four instances, the cases being selected as illustrative of the condition of the shepherd, carter, ordinary labourer with sheep-shearing as his job work, ordinary labourer with mowing as his job work, and ordinary labourer without job work respectively:—

1.—WAGES OF THE SHEPHERD.

Man and wife, three children; oldest, 13 years; youngest, 8 years. Man (shepherd), 7*s.* per week. Harvest money, 1*l.* (10*s.* in cash, 10*s.* in coals as by agreement). Had 15 perch of Potato ground, which grew about 4½ sacks as dug; worth 1*l.* 11*s.* 6*d.* Garden grew 3 sacks; garden very small. Received 2*l.* 5*s.* on account of rams let out; also 16*s.* for lambs shorn, at 6*d.* per score. Has tailing grist as much as required at 5*s.* per bushel, and very bad it is, but it is as agreed for. Shears sheep, over his working hours and at meal times, at 9*s.* per 100; and earned last year about 2*l.* House and garden free. Fuel, 12 bushel coals and 200 Furze, besides the above 10*s.* worth of coals. No ale at harvest and hay-making.

The following then is his account:—

	Per annum. £	s.	d.
Shepherd, 7*s.* per week	18	4	0
Harvest money, cash	0	10	0
4½ sacks Potatoes, as dug on Potato ground at 7*s.* per sack, allowing out 1½ sack for seed	1	1	0
Rams let out	2	5	0
6*d.* per score for lambs bred	0	16	0
Sheep shearing	2	10	0
House and garden	4	0	0
15 cwt. of coals besides the 10*s.* worth, making 25 cwt.	1	5	0
200 Furze	1	0	0
	£31	11	0

N.B. There is not charged to the labourer's credit the back carriage of coals: also 1*l.* for 200 Furze is a high figure. Grist at 5*s.* per bushel is a loss.

2.—WAGES OF THE CARTER.

Man and wife, four children—oldest, five years; youngest, five months. Man (carter), 8*s.* per week. Harvest money, 1*l.* (10*s.* in cash, 10*s.* in coals, as per agreement). Had 20 perch of Potato ground, producing 7 sacks, as dug. Garden about 17 perch, and grew about 3 sacks. Three quarts ale per day at harvest; two at haymaking. From April 6, 1859, to Jan. 1st, 1860, earned 12*s.* 6*d.* by journeys (1*s.* is given when carter goes to a town, 6*d.* when to the station); agreed for tailing grist, at 5*s.* per bush., very dark and gritty. Cottage and garden free. Fuel, 12 bush. coals and 200 Furze; besides the above 10*s.* worth of coals. The following represents his case:—

	£	s.	d.
Man, carter, at 8*s.* per week	£20	16	0
Harvest money, 1*l.* (10*s.* cash, 10*s.* coals)	0	10	0
7 sacks of Potatoes on about 20 perch of Potato ground, at 7*s.* per sack, as dug, allowing two out for seed	1	15	0
Three quarts ale per day at harvest, at 9*d.* per gal.	0	13	6
Two quarts do at haymaking	0	18	0
Cottage and garden	4	0	0
By journeys (1*s.* to town and 6*d.* to station)	0	16	1½
15 cwt. coals, with above 10*s.* worth	1	5	0
200 Furze	1	0	0
	£31	13	7½

Has tailing grist at 5*s.* per bushel—a loss.

3.—WAGES OF LABOURER (MOWER).

Man and wife, six children—eldest, 14; youngest, 2 years. Man (ordinary labourer), 7*s.* per week; boy (14 years old), 3*s.* per week; boy (7 years old), 1*s.* 6*d.* per week. Man (a mower) earned last year about 3*l.* 3*s.* (*i.e.*, 21*s.* over 7*s.* per week) in six weeks. Had about 5 perch Potato ground, producing about 1½ sack Potatoes, as dug. Has 2¾ bushels of malt with Hops for hay mowing, and 2 bushels of malt with Hops for harvest. Agreed for best grist at 6*s.* per bushel, and has a fair grist, but not the best (this at present price is a loss); has 4 bushels per month, besides seven 4-lb. loaves. No harvest money. House and garden, 4*l.* 15 cwt. of coals and 200 Furze, 1*l.* 15*s.*

The following is his statement:—

	£	s.	d.
Man (ordinary labourer), mower, at 7*s.* per week	18	4	0
Boy " 3*s.* per week	7	16	0
Boy " 1*s.* 6*d.* per week	3	18	0
1½ sacks of Potatoes on about 5 perch of Potato ground at 7*s.* per sack as dug, allowing ½ sack out for seed	0	7	0
Earned at mowing, with a little Turnip hoeing, 5*l.* 13*s.* in 7 weeks 4½ days, not reckoning the time occupied in Turnip hoeing—deduct for the above time, at 9*s.* per week, leaves	2	18	9
Carried forward	£33	3	9
Brought forward	33	3	9
4¾ bushels of malt with Hops for haymaking and harvest	2	5	9
House and garden	4	0	0
15 cwt. coal and 200 Furze	1	15	0
	41	4	6
Deduct two boys wages	11	14	0
Leaves for the ordinary labourer with mowing as his job work	29	10	6

Has best grist at 6*s.* per bushel—a loss.

I give the mowing scale:—Now a days, from the use of machine in the fair standing corn and the employment of strangers to reap, the farm labourer, who ought to make something by it, does very poorly by mowing:—

	s.	d.	
Dry meads and Clover	1	9	per acre.
Water meadows	2	0	"
Wheat	8	0	"
Barley	1	6	"

4. WAGES OF LABOURER (SHEEP-SHEARER).

Man and wife, three children—oldest 10; youngest 3. Man (ordinary), labourer, 7*s.* per week; boy for about six months per annum, 1*s.* 6*d.* per week. Man earned sheep shearing 2*l.* 16*s.* 4*d.* in five weeks; deducting for do. at 7*s.* per week, leaves 1*l.* 1*s.* 4*d.* Wife earned at Wheat harvest, 8*s.* Garden grew about seven sacks of Potatoes as dug, and worth 7*s.* per sack. No harvest money because he earns extra at sheep shearing. No Potato ground. Agreed for tailing grist at 5*s.* per bushel, which is a dead loss of 1*s.* or more per bushel, being very bad. They use 2 bushels of grist per month, besides 1 bushel best Wheat, and six 4-lb. loaves. Cottage and garden free, with 12 bushels of coals, and 200 Furze. Three quarts of ale per day at harvest; 2 do., haymaking. The following gives his case:—

	£	s.	d.
Man (ordinary labourer), sheep shearer, at 7*s.* per week	£18	4	0
Boy for about six months per annum at 1*s.* 6*d.* per week	1	19	0
By job work at sheep shearing, at 9*s.* per 100, in five weeks, 3*l.* 2*s.*; deduct 1*l.* 15*s.* at 7*s.* per week, leaves	1	7	0
Wife earned at harvest	0	8	0
Cottage and garden	4	0	0
15 cwt. coals	0	15	0
200 Furze	1	0	0
3 quarts ale per day at harvest, at 9*d.* per gallon	0	13	6
2 quarts per day at haymaking "	0	18	0
	£29	4	6
Deduct wife and boy's wages	2	7	0
Leaves for ordinary labourer	£26	17	6

Has tailing grist at 5*s.* per bushel—a loss.

5.—WAGES OF ORDINARY LABOURER.

Lastly we have the case of the ordinary labourer without job work:—

	£	s.	d.
Ordinary labourer at 7*s.* per week	18	4	0
Harvest money	0	10	0
House and garden	4	0	0
15 cwt. coals	0	15	0
200 Furze	1	0	0
Three quarts ale per day at harvest at 9*d.* per gallon	0	13	6
Two quarts ale per day at haymaking	0	18	0
	£26	0	6

Has tailing grist at 5*s.* per bushel—a loss.

Of these five cases the average weekly wage is as follows:—

	Per week. s.	d.	Per annum. £.	s.	d.
Shepherd	12	0	31	11	0
Carter	12	0	31	13	0
Labourer (mower)	11	4	29	10	0
Labourer (shearer)	10	3	26	11	0
Labourer	10	0	26	0	0

These are cases of well-to-do cottagers, and it will probably be generally considered that on the whole they are fairly paid. Let it be remembered that there are no perquisites in addition to what is here put down—those are all valued in the figures here given. And some of the perquisites here stated in history of the actual cases described are not general. Thus of 13 families in the parish of our correspondent, seven have no Potato ground, three have about 20 perch, two about five perch, and one about 15 perch. We give these instances as exactly descriptive of the labourers of a Dorsetshire parish, and shall be glad to give equal publicity to the circumstances of labourers in other districts if our correspondents will enable us to do so.

A LECTURE ON SEWERAGE.

WITH PARTICULAR REFERENCE TO BARON LIEBIG'S REMARKS RELATIVE TO THE SYSTEM OF DISPOSING OF IT ADOPTED IN THE PRINCIPAL CITIES OF THIS COUNTRY.

Delivered on February 3, 1860,
in Oxford, by CHARLES DAUBENY, M.D., F.R.S., Professor of Rural Economy in that University.

WHEN a man of Baron Liebig's extended European reputation lifts up his warning voice to the British nation on a subject on which he has a right to speak with authority, and stakes, as it were, his character as a man of science by foretelling the ruinous consequences of a system in which the inhabitants of our large cities are embarked, it seems to be the duty of all who think they can either directly or indirectly influence public opinion, to secure, if possible, a calm and impartial hearing to the arguments advanced.

To pass them over unnoticed would, even if the question at issue were of trivial moment, imply a want of due respect for the opinions of an individual who has done so much for the advancement of practical as well as theoretical science; but when the matter under discussion is one on the true determination of which millions of sterling are involved, nay, as is contended, on which the very future of the British people, as a thriving and prosperous community, depends, it would indeed indicate on our parts either an overweening self-conceit on the one hand, or a phlegmatic indifference to the public interests on the other, if we were to refuse to consider it.

Nor indeed can we shelter ourselves under the excuse that these suggestions are based upon theory merely, backed as they are by the sanction and authority of some of our ablest practical agriculturists, one of whom in particular, Mr. Sheriff Mechi, has on more than one occasion directed attention to the danger with which British agriculture, and through it the nation in general, is threatened, from the gradual but sure exhaustion of the soil by our new sanatory arrangements "which permit," he says, "the excrements of 15 millions of people, who inhabit our towns and villages, to flow wastefully into our rivers."

Notwithstanding therefore the full attention which I bestowed upon the subject of sewerage with reference both to its sanatory and its economical aspects in lectures here delivered so late as January, 1858, I shall not scruple to bring the same question again before you on the present occasion, in order more fully to make known the opinions entertained on it by many persons well entitled to our respect, and especially by the great German chemist already alluded to, both in his Letters on Modern Agriculture, and in a more popular form, in his late Correspondence with Mr. Mechi, communicated to the *Times* newspaper, a short time ago.

But before entering upon the substance of Baron Liebig's letter, it may be well for me to bring before you the conclusions relative to the same subject, which were submitted in my former lecture as the result of such inquiries as I had at that time been enabled to institute.

In these lectures, after entering into some calculations, from which it appeared to result, that the annual value of the sewerage of London alone probably exceeded considerably a million sterling, I proceeded to point out three several methods, by which it had been attempted to render the sewerage of large cities available for the purposes of agriculture.

The first of these methods was, to detain the excrementitious matter in its passage towards its outfall, for a sufficient time to allow the solid matter suspended in it to deposit itself, and then to collect this portion as a manure.

The second method aimed at the same object by a different expedient, namely, by bringing about a separation of the solid matter from the water, which is its vehicle, through the instrumentality of certain chemical re-agents introduced into the compound.

The third was to convey the whole in a liquid state to the very spot where it could be usefully applied, by the aid of pipes and other mechanical contrivances, calculated to supersede the necessity for employing cartage, and vessels capacious enough to contain so bulky a material.

The first of these is the system adopted at Cheltenham, and as the sewage is there conveyed at a comparatively small expense to a spot distant about half a mile from the town, where it undergoes a process of deodorisation by admixture with milk of lime, the result of the process is regarded by the inhabitants as satisfactory. But although in a sanatory point of view this may be the case, the system cannot be commended in an economical one, since the liquid portion of the manure, which contains by far the largest amount of phosphoric acid and of ammonia, finds its way into the river, and only the solid constituents, which possess so much less value, are rendered available. The same objection applies to those more elaborate contrivances which belong to the second head, namely, where it is proposed to separate the fertilising material from the water in which it is suspended, by means of some re-agent capable at once of deodorising and of precipitating it.

Such is the principle adopted at Leicester, where the sewerage, when I visited the spot in 1857, was separated into its solid and liquid portions by a very ingenious apparatus invented by Mr. Wicksteed, the latter being carried into the river, whilst the former in conjunction with the lime by which it had been deodorised was moulded into the form of bricks, dried, and in that condition sold as manure.

Here the sanatory object appears to have been completely attained, the river water, even at the point where it receives the liquid sewerage, remaining sweet and wholesome, and the solid matter precipitated being destitute of all smell and tendency to putrescence.

But here also the most valuable portion of the material is lost to the community, as may be inferred from the fact, that the Leicester bricks, owing to the small relative amount of fertilising matter, as compared to that of the lime with which it is mixed contained in them, have proved nearly unsaleable, and offer no kind of compensation for the expense of the process by which they are obtained.

The third method alluded to, viz., that of employing sewage matter directly for agricultural purposes, seems to be carried on successfully at Rugby, where the lands in the neighbourhood of the town are irrigated by the application to it of the liquid portion of the sewerage, collected in a tank, and pumped by aid of machinery over the adjacent fields.

Whatever may turn out ultimately to be the ad-

vantage of the plan, considered merely as a question of profit and expense, it certainly appears, that whilst the sanatory end is answered by the perfect deodorisation of the sewerage, the economical is also in a degree attained by the fertility imparted to the fields which are irrigated with this material. Wherever, indeed, the land is adapted for permanent pasture, and so situated as to be capable of receiving the sewerage without the expense of calling in the aid of mechanical power, no doubt need be entertained of the advantage of so applying it.

The practice pursued in the Milanese terrtory, where the sewage of 150,000 persons has been rendered available for agricultural purposes, by conducting the entire filth of the city into the canal called the Villabia, which is allowed to flow over the contiguous meadows; the case of Edinburgh, where about 320 English acres are kept watered by the stream of the Foul Burn, a canal into which about half the drains of the city discharge themselves; and the more recent trials made at Paris on land adjacent to the fortifications of the city, all concur in recommending this mode of treatment as applicable to Grass land.

It is said that the quality of the herbage suffers, although its quantity may be increased, and that the Grass obtained is rank and coarse, and therefore ill adapted for the fattening of cattle; but be that as it may, the high rent cheerfully paid for land so circumstanced is the best evidence that can be afforded of the advantage derivable from liquid manure when freely applied.

Grass land, however, is necessarily limited in quantity, and it is by no means so certain that corn crops derive an equal benefit, at least according to the present method of applying liquid manure; a difference probably admitting of explanation, if we recollect that whilst the supply of the material in question is constant and unintermitting, its application to land of the latter description can only take place at certain seasons of the year.

It may also be reasonably doubted whether the sanatory object in view would be always attained, if the sewerage of a large city were allowed to spread itself without limitation over the adjacent neighbourhood.

It would appear, then, from the foregoing statements, that, except in a few small places like Rugby, which scarcely hold out an example which great cities could safely imitate, no successful method has as yet been devised for combining the sanatory with the economical object sought, and accordingly in London the public appear to have acquiesced in a plan, which at a vast expense is intended to carry off the filth of the city to a distance, and disregards altogether the agricultural value of the material itself.

It is against this procedure that Baron Liebig enters his protest, and with an earnestness inspired by a deep feeling of the ruinous consequences flowing from a perseverance in it, points out its entire inconsistency with the great principles upon which the cultivation of the soil has been shown to depend.

He begins by reminding us, that although diligent tillage, favourable seasons, and the expenditure of capital, are conditions favourable to good harvests, yet that all these combined will be of no avail, unless the mineral ingredients which enter into the constitution of the crop are present in the soil in a condition in which they can be absorbed by the growing plant. If any one of these be deficient, the amount of produce is necessarily reduced in the same proportion, whatever may be the abundance of the other constituents present. Supposing, for instance, an acre of ground to contain only as much phosphoric acid as is required by one bushel of Wheat, it follows, that no more than that quantity can be raised in the space, however great the quantity may be of alkali, soluble silica, lime, or nitrogenised ingredients present.

If, therefore, for a series of years those mineral ingredients of a soil which exist in it in limited quantities are carried off by a course of cropping, without being replaced by manure, the ground must necessarily become unproductive, just as a well, however deep it may be, which receives no supply of water, must in the end become empty, if its water be continually pumped out.

These principles appear so self-evident that they merely require to be tested by an appeal to experience.

In newly settled countries indeed the loss for some time may continue unfelt, because of the large accumulation of soluble mineral principles stored up in the course of preceding ages, owing to the decay of organic matters in the soil.

Even there, however, the supply is shown not to be inexhaustible by the experience of the United States, where not only the Tobacco fields of Virginia, Carolina, and Maryland have from repeated culture, become absolutely unproductive, but where a less exhausting kind of crop, such as Wheat or Potatoes is had recourse to, a gradual falling off of produce has been observed even within so short an interval as 10 years.

Thus, in 1840, the number of bushels of Wheat grown in six northern States of America is stated on official authority at 2,014,111; whereas in 1850 it had sunk to 1,063,192 bushels, and of Potatoes, whilst in 1840 35,207,500 bushels had been grown, in 1850 not more than 19,118,100 were obtained from the same tract.

The dairy farms of Cheshire supply us with a still more striking instance of the same principle nearer home, for there it is notorious, that permanent pasture land, which had been wholly set apart for cows fed for the sake of the cheese and butter they produced, had, in the course of time, become exhausted, until manured by a dressing of bones, by which their pristine fertility was at once restored.

Here the cause of the exhaustion and its remedy seem both equally palpable, the one being the phosphoric acid carried off in the cheese, &c., annually exported from the farms; the other the restoration of this same principle by the bones subsequently spread over the land. In purely agricultural communities, indeed, without commerce and without manufactures, the evil is remedied by the mere application of the dung of cattle maintained upon the property, or by the aid of what is called stable manure; for if the whole of what is extracted from the soil be not thus replaced, the small deficiency is made good by the soil itself, which in the course of husbandry unlocks, as it were, more and more of its latent treasures.

Where, indeed, the whole produce is consumed upon the estate, the only loss ultimately sustained in mineral ingredients will be that appropriated by the human population in respect to their bones, a very small and scarcely appreciable per centage of the entire amount. But the case is altogether reversed, when the population of a country begins to congregate in towns, and as is often the case in our times, where the inhabitants of the latter begin to outstrip in numbers the purely agricultural portion of the community, to whose comforts and luxuries they contribute, without adding to the amount of food which the latter are employed in producing.

In this case, it is obvious that a constant drain upon the land must be taking place in direct proportion to the quantity of food consumed, unless due care be taken to restore the whole of the fœcal matters which are carried off through sewers and cesspools.

And here, too, as Baron Liebig shows, experience amply confirms what reason and calculation would have led us to anticipate.

In ancient times the enormous population of Rome was fed from the produce of Sicily, Sardinia, and Northern Africa.

These gradually became exhausted, and even at the present day, owing, as Liebig thinks, to this over-cropping, yield an amount of corn by no means commensurate to their former fertility.

In modern times the same process has been going on in England, where many millions of people, subsisting upon trades and manufactures, or ministering to the luxuries of the rest of the community, are as much dependent upon the industry of the agricultural portion for their support, as the Roman people, in the time of Augustus, were upon the labour of the provinces.

Until lately no one thought of restoring to the land any part of what had been removed from it, and even now, after all the discussion on the subject which has been going on for years past, the only measure determined on has in view simply the transference of the sewerage to a spot, where, as it is hoped, it will not entail disease, but is entirely lost to the public. The evil consequences of this system of robbery would have been felt earlier, had it not been for the employment, first of the bones of cattle slaughtered for that very purpose, and subsequently of guano, by either of which methods the yield is wonderfully increased, chiefly by restoring to the ground the elements which had been gradually withdrawn during many centuries of cultivation.

With respect to the latter indeed experiments instituted with especial reference to this question in six different parts of the kingdom of Saxony showed, as Liebig informs us, that each cwt. of guano put upon a field produced 150 lbs. of Wheat, 400 lbs. of Potatoes, and 200 lbs. of Clover more than the same sized piece of ground without guano; so that when we learn that no less than 100,000 tons, or 2000 times the above quantity, are annually imported into Europe, the increase of the corn and flesh production from this cause alone may be readily estimated.

But how long is this importation likely to continue? The practical farmer, who regards the supply as inexhaustible, ought to be reminded in the first place, that the deposits of guano from which we derive our supply have been accumulated by sea-fowl, during a long succession of past ages, in islands where the extreme rarity of rain prevents their exuviæ from being washed into the sea, and consequently that the area of their extent is necessarily limited exclusively to certain latitudes.

Secondly, that the quantity deposited in a year, or even within any moderate interval of time, is so insignificant, as to constitute no sort of compensation for the quantity which is carried off, now that its utility has become appreciated.

Thirdly, that it would appear from the best data collected upon the subject, that at the present rate of consumption there will not remain in South America in 20 or 25 years sufficient guano to freight a ship.

And with regard to bones, the other artificial method of restoring fertility to our exhausted land, neighbouring nations are becoming too sensible of their importance to allow of their exportation, as was the case formerly, to supply the wants of Great Britain.

Germany, for instance, in former days sent over to this country many hundred thousand tons of bones; at present her farmers, more enlightened as to their true interests, feel the necessity, not only of preserving all they possess, but also of importing in addition a large amount of guano.

"Now what," says Professor Liebig, "will be the condition of England when the supply of guano and of bones is exhausted?"

"If the present sewage system pursued in our great cities be persevered in, then the imported manures, guano, and bones, will make their way into the sewers of the cities, which, like a bottomless pit, have for centuries swallowed up the guano-elements of the English fields, so that after a series of years the land will find itself precisely in the condition it was in, before the importation of bones and of guano commenced."

"But in that case what is to become of the population which has been called into existence by the increased production of corn and meat brought about by the importation of these fertilising principles from abroad, and which will still require the same amount of food as before for its subsistence?"

"If," continues the professor, "men do not deem it desirable that the balance between population and the supply of food be restored by means of exterminatory wars and revolutions (in which the want of food has always played a certain part), or else by means of wasting plagues, pestilences, and famine, they should reflect that the time is come for getting a clear view respecting the causes of existence and the increase of the population."

"A very little reflection will convince us, that the relations of population are governed by a great and comprehensive natural law, according to which the return, duration, increase, or diminution of a natural phenomenon depends upon the return, duration, increase, or diminution of its conditions."

"This law governs the return of the harvests upon our fields, the maintenance and increase of our population, and it is easy to see, that a violation of this natural law must exert upon all these relations pernicious influences, which can be set aside in no other way than by the removal of its causes."

"If then it is known that certain existing circumstances work deleteriously upon the fields; if it can be foreseen that their continuance must bring about the ruin of agriculture; if there be but one single one of all the means which have hitherto resisted this deleterious influence and made it less sensibly felt, which can be safely relied upon to secure a constant fertility to our lands, and this one obtainable by a simple change and improvement of our present ruinous system—then it becomes us to think, whether in such a case a nation ought not to summon up all her intellectual and material resources in order to preserve the fundamental conditions of her welfare."

"I know," concludes the professor, "that the prophets of future evil have at all times been derided by their own generation, but if history and natural laws can furnish any groundwork for a just conclusion, then there is none which stands on a firmer basis than this, viz., that if the British people do not take pains to secure the natural conditions for the permanent fertility of their land—if they allow these conditions, as hitherto, to be squandered, their fields and meadows will at no distant time cease to yield their return of corn and meat."

"Whether, after this state of things shall have arisen, the might, strength, and independence of the nation will be preserved, is a question which it belongs not to the province of natural science to discuss."

Having now laid before you the grounds upon which Baron Liebig conceives, that the nation is pursuing a ruinous career in the late arrangements entered upon for the disposal of the sewerage of the metropolis, let me next place myself in the position of one of the promoters of the scheme in question, and consider in what way he might attempt to defend the system which has been lately adopted.

In the first place he might, as a practical man, content himself with alleging, that the valuable constituents of the manure were equally sacrificed under the old regime, as they will be when the new arrangements are brought into complete operation; that although cesspools might exist, their contents were rarely made available for the purposes of agriculture;* and that no more use was made of the manure when poured into the Thames in the immediate proximity to the City, than will be the case in future when it is to be conveyed to a distance of many miles. Thus, the sanatory object, at least, is provided for, whilst the economical question stands upon the same footing as before.

And with respect to the latter, he might appeal to the authority of chemists of great eminence consulted on the subject, who reported, as the result of their investigations, that in their opinion no profitable application of the sewerage of London to useful purposes, that could be adopted on the large scale, has, up to the present time, been suggested. Nor has experience shown, he might add, that to a commercial nation like our own there has ever been any lack of substitutes for the excrementitious matters now wasted, first recourse being had to the bones of animals, then to guano, and lastly to beds of mineral phosphate, of which the county of Suffolk in our own country, and Spain, Norway, and the United States, in other parts of the world, afford us examples.

These and similar reasons, however, although they may serve by way of apology for embarking in the present system in lieu of a better, and for adopting a temporary expedient to remove a pressing evil, leave for the most part untouched the main arguments advanced by Baron Liebig, and cannot justify us in a

* This however is only partially true. In former days the contents of cesspools, though not systematically, were to a certain extent applied to the purposes of manure.

blind acquiescence in the system pursued as one intrinsically good. Indeed even on sanatory grounds the method can hardly be justified, except with reference to certain exceptional cases, setting, as it does, a bad example to other places, which will be sure to follow in the wake of the metropolis, and tending to fix in the mind of the public the erroneous impression, that the rivers of a country are the proper repositories for its sewerage.

Against this, as objectionable on grounds of health by contaminating the great water-courses, and as wasting the valuable materials contained in the excrements of man and other animals, my colleague, Dr. Acland, strongly protested, in a pamphlet published in 1857, and I have on the table other publications of a more recent date, in which the injury done to the salubrity of the valley of the Thames, in which our own city is situated, by this practice, may be seen clearly pointed out.

In Oxford indeed we have contrived to appropriate all the objectionable parts of the system without any of its advantages, wasting as completely as in London the contents of our sewerage, and emptying them into a river, which during the hottest part of the year is almost destitute of water, at a point not merely contiguous to dwelling houses, but directly underneath the most public thoroughfare of the city.

Let us now see whether the theoretical chemist could advance anything capable of overthrowing the validity of the conclusions arrived at by Baron Liebig. It is true, I might imagine him to say, that a vast amount of fertilising material is carried off unprofitably by our great cities; but what after all are these materials, and whence are they derived?

Essentially they consist of phosphoric acid in one or other of its combinations, of alkaline salts, especially of potass, of soluble silicates, and of other more abundantly diffused ingredients; and as to their origin, whether derived from guano, from bones, or from stable manure, they may in all cases be traced back to the rocks composing the crust of the globe.

It must be evident indeed, not only that every rock upon which a blade of Grass can grow contains these ingredients, as without them vegetation would be impossible, but also that every formation which is charged with organic remains is impregnated with one at least of these ingredients, namely with phosphoric acid, since the latter appears to be present in all forms of vegetable or of animal life.

Now as whatever exists in the soil must have been derived from the decomposition of the upper surface of the rock upon which it rests, it follows, that the presence of the ingredient in question in the soil implies its existence throughout the entire extent of the deposit, so that if the latter be 300 feet thick, and the quantity of phosphate in the soil be supposed to represent the proportion yielded by the three uppermost feet of the rock, then 100 times that quantity will be diffused through the whole body of the formation.

Hence even of phosphoric acid, which is of all the ordinary constituents of our crops the one which Nature seems to have dealt out with the most sparing hand, an inexhaustible supply must exist in the interior of the earth.

No fears therefore need be entertained as to exhausting the fertility of a soil, since we have it always in our power, by a diligent use of the means at our disposal, to restore the balance, by evolving and rendering available any conceivable amount of the mineral ingredients which our crops may require.

And indeed this anticipation seems borne out by such experiments as those carried on for many years past at Lois-Weedon in Northamptonshire, where, without the application of any manure at all, a succession of most abundant Wheat crops have been obtained from the same piece of land every alternate year, by diligently turning up the soil, and freely exposing its constituents to the action of wind and weather.

Now if I have fairly expressed the views of those persons of either class, who would uphold our present system of sewerage, it will, I think, appear, that representing, as they do, opposite modes of thinking, they both deviate from the true line, the one party in their undue distrust for science, the other in their too great reliance upon its speculations.

The language of the practical man, for whom I have first taken upon myself to become the spokesman, may serve as an exemplification of that distaste for theory, which so often leads our countrymen to put up with much which is manifestly faulty in the established routine, rather than attempt to build upon a new foundation.

When an evil is pressing and immediate, we put our shoulders to the wheel manfully to overcome it, but often neglect to consider, whether the remedy is one which strikes at the root of the offending cause, or only removes from us those effects which most sensibly remind us of its presence.

The transport of the sewage matter to a distance from the metropolis has indeed become, with the present arrangements, a matter of paramount necessity; but the accomplishment of that end ought by no means to stifle the inquiry, as to whether some means might not be devised for rendering the same material available for useful purposes.

If the citizens of London were as fully impressed as they ought to be with the importance of this subject, if they could realise the enormous pecuniary loss they are at present sustaining by the system pursued, they would not quietly acquiesce in the report of those chemists who have expressed doubts as to the practicability of employing their sewerage for agricultural purposes, but would persevere in putting both science and capital into requisition until the difficulties had been at length surmounted.

Nor would it be consistent with ordinary prudence to depend upon a foreign, precarious, and probably exhaustible source, for the supply of that material which nature has placed within the reach of every individual in the excreta which he himself furnishes. On the other hand, the other class of reasoners who rely upon the subsoil for restoring at any time and to any extent the loss occasioned by the transfer of the constituents of our crops to our great cities, lean more upon theory than it would be safe to do in matters of such momentous importance.

It may be demonstrable indeed, that the crust of the globe, take it all in all, contains an inexhaustible supply of the phosphates, and it may be also true, that certain land has been made, by diligent tillage alone, to yield up to the crop a sufficiency of this ingredient, for a period of time, which, although nothing compared to the duration of the community in which the trial was made, seems to our limited views as something considerable. But experiments are yet wanting to show, what amount of labour, what description of treatment, what period of time, what concurrence of atmospheric conditions, would be required under ordinary circumstances to effect the desired end; and indeed the investigations made elsewhere might lead us to infer, that the means employed at Lois-Weedon, even if they could be adopted on a sufficiently large scale elsewhere, would in the majority of cases be insufficient to enable us to dispense with manure. Although the supply, theoretically speaking, may be inexhaustible, it is certain that the labour and difficulty of obtaining it must increase in a very rapid ratio with its distance from the surface, so that whatever lies below the reach of the subsoil plough may be regarded for practical purposes unavailable.

No doubt the mineral constituents which render a virgin soil so productive were derived from the decomposition of the subsoil underneath, but we know not how many centuries may have been required to bring about this result, and might therefore as well calculate upon making good the consumption of our coal fields, the accumulation of countless ages of vigorous vegetation, by the decay of the timber or herbage now growing upon the surface, as to reckon upon bringing back an exhausted soil to the fertile condition in which it had been handed over to us by nature, through the medium of any transient application to it of mere human industry.

The experiments hitherto made upon subsoiling scarcely warrant our anticipating any sudden restitution of its pristine fertility to the soil, by bringing up portions of the subjacent rock to the surface, for where that has been done incautiously, or on too large a scale, the very opposite result is said to have ensued.

And this is explained by the condition in which the phosphates, as well as the alkaline ingredients, exist in the rock, before they have been made accessible to the influences of atmospheric agents.

In a memoir on the Rotation of Crops, read before the Royal Society, which was honoured by being made the subject of their Bakerian Lecture for 1845, I communicated the results of 10 years successive experiments upon various crops planted under my own direction within the precincts of the Botanic Garden, which led me to at least one important conclusion, namely that a soil may continue to retain a large amount of all the necessary constituents of a plant, and yet be unable to impart them to it in sufficient quantities, owing to the condition in which they were retained in combination.

Thus after 10 years' cropping, at which time the soil for many sorts of plants appeared to have approached exhaustion, I found by analysis that 6 lbs. of phosphate of lime, equal to about 3 of phosphoric acid, existed in every 100 square feet of soil taken to the depth of 3 feet from the surface, a quantity which would have sufficed for at least 13 more crops of Barley, as abundant on the average as those which had been already obtained from the same plot.

And in like manner I found, that there was magnesia enough for 34 crops, and of potass for 15.

But the greater part of these ingredients, although they were separable from the rest of the soil by digestion in muriatic acid, was not acted upon by water containing carbonic acid, the latter only extracting $\frac{3}{10}$ths of a grain of earthy phosphate from 5 lbs. of the soil, an amount equal to $\frac{1}{12500}$ th part; so that whilst the real quantity as determined by muriatic acid was $\frac{1}{4100}$ th part of the soil, that separated by water and carbonic acid amounted only to $\frac{1}{30}$ the part of the latter quantity.

These and similar investigations led me to what I consider the most valuable conclusion suggested in the memoir, namely, that the constituents of the soil may be divided into those latent or dormant, and those active or available, it being reasonable to conclude, that a substance which cannot be extracted by water containing carbonic acid, the method which Nature adopts, but only by muriatic acid, ought not to be regarded as immediately applicable to the uses of the plant.

Before therefore we can predict with any certainty, what amount of time it will take to bring an exhausted soil into a fertile condition, we must know, not only what amount of phosphoric acid and of alkalies it contains, but also what means will avail for converting its dormant constituents into active ones.

On this point I conceive experiments are much wanted; but as they require, like many others relating to agriculture, a considerable lapse of time to complete, as well as a large expenditure of labour, they lie beyond the reach of a person arrived at my time of life, and unprovided with a suitable staff of assistants for carrying on the necessary investigations.

They may serve, however, to afford an example of the class of researches which I trust my successors in the chair of Rural Economy may be enabled to undertake, seeing that they will be provided in future with what in my younger days I was not so fortunate as to possess, viz., a plot of ground, within an easy distance of Oxford, where they could conveniently be carried on.

It was with this view that I prevailed upon the Society of Magdalen College to sell to me 2 acres of ground in the parish of Iffley, which I have now made over to the University, to be held in trust for the Professor of Rural Economy for the time being, with the view of enabling him to carry on experiments connected with scientific agriculture.

Being, however, precluded, by the reasons stated from engaging in so elaborate a train of researches myself, all I can do is to recommend it to those gentlemen, who, like Mr. Lawes, devote a large portion of their time and attention to agricultural experiments, and who possess the ability and the inclination to carry out the necessary inquiries, on the scale, and with the precision, with which they deserve to be entered upon.

Whatever indeed might be the conclusions to which they were conducted by such experiments, they could not fail to be of the highest practical importance to the public. Should it, for instance, turn out, that in the case of ordinary rocks the time and labour requisite for bringing into an available form the constituents of our ordinary crops is so great, that, although theoretically possible, it would in a practical sense be hopeless, in the event of the supply of guano and mineral phosphates falling off, to attempt restoring fertility to a thoroughly exhausted field by such methods as we could put into operation, then, indeed, the future of British agriculture presents a gloomy prospect, unless an entire change in the system of disposing of our town sewerage be speedily resolved upon.

Nothing less than a return to the old method of cesspools, still in use in most continental cities, will [in that case] suffice, to prevent those parts of the country which feed our vast metropolis from sinking gradually into a condition of irremediable sterility.

A country like Great Britain, teeming with population, and already occupying every nook and corner of the land, which Nature has not consigned to barrenness by unfavourable conditions of temperature, elevation, or physical structure, cannot revert to the same expedient which was adopted by our brethren in the New World, who, when they had exhausted the resources of one plot of ground, moved on immediately to the next.

But to take a more hopeful view of the case. Supposing it to be proved, that in most instances a calculable amount of labour and capital expended upon an exhausted soil will in the course of time elicit the latent treasures of the subjacent subsoil, and bring it into that condition in which it has been, and may be, maintained, so long as guano and superphosphates continue to be supplied.

Still we must recollect, that the difficulty of restoring to the land its pristine fertility will go on in an increasing ratio on each succeeding occasion; 1st, because we shall have every time to bring the materials from a greater depth than heretofore, and therefore with a greater amount of labour; and 2dly, because the constituents brought into an available or active condition will, on each repetition of the process, be diffused over a larger amount of inert matter.

It must be borne in mind, that the fertility of a soil depends, not upon the absolute quantity of phosphates, soluble silicates, and the like, present in each acre of ground, but upon the proportion in quantity they bear to the material through which they are diffused.

Supposing therefore, a soil 3 feet deep to be thoroughly exhausted of its fertilising materials, we cannot expect to restore it to its pristine state by converting another 3 feet of the subsoil into the same condition, into which it had been brought in the first instance by natural agencies, because the phosphates, &c., present in the latter will have to be diffused over twice the quantity of earth as before.

And after all should we not, even at the best, be acting like the proprietor, who, because he had reasonable hopes that his estate contained within itself a vein of precious metal which required only capital and labour to bring to the surface, were to throw into the sea as superfluous his bags of gold, already coined into money, and made available for all the purposes of life; or like the possessor of a colliery of unknown extent, who squandered away in the metropolis the wealth he had derived from his mine, without laying up any provision for the day at which the source of all his revenue might be worked out.

It is enough for us to know that, from the disposal of the sewerage of London alone we are incurring a national loss of more than a million sterling; that the principal source from which the lands of this country are maintained in their present state of productiveness is likely in a few years to be dried up; that we are at

present in great measure in the dark as to the means by which this loss could be supplied; and therefore that it is of vital importance for the nation at large, to use every effort in its power to find some useful application for its excrementitious matters, as well as to determine what other means could be resorted to, for providing against the day, when agriculture may have to fall back upon its own unassisted resources through the failure of all supplies from without.

At any rate it must be admitted, that whatever improvements have been effected, or are in contemplation, with regard to the disposal of our sewerage, bear reference rather to the sanatory than to the economical phase of the question; for it will be seen from the statements given in the preceding part of my lecture, that except in a few isolated cases, such as Rugby, the only portion of the excrementitious matters, which it is attempted to preserve, is the solid, which stands far the lowest in the scale of agricultural value. No doubt it is essential to the health of our cities, that the latter should either be deodorised or removed to a distance from the population; and it may be important that neither the one nor the other of these proceedings should be neglected. Still, we can never expect to recover any considerable portion of the value of our sewerage, so long as the liquid portion is suffered to run to waste.

Nor is it as yet clearly made out, how, consistently with the present arrangements, so universal in our large cities, we can procure the latter in a form sufficiently concentrated for general agricultural purposes. All we can hope to do at present is to apply it as a means of irrigation, thus obtaining from the luxuriant meadows which its application to the herbage would create, the fittest material for the maintenance of those herds of sheep and cattle, which are consumed by the population of our great cities, and therefore the best compensation for the loss sustained by the provinces which supply them with food.

If, therefore, there be any truth in the views, which Baron Liebig has propounded, and of which I have undertaken in this lecture to become the humble expositor, the time is drawing on, when the people of this country, if no improvements in our modes of concentrating our sewerage be discovered, will have to revert to the practice of communities, whom, in the pride of their self-conceit, they consider less advanced in civilisation than themselves, and even to admit, that after all our boasted progress in the arts, the oldest and least improvable nation on the face of the globe presents the nearest approach to a correct system in the disposal of its excrementitious matters; or else they must find, within a certain area of the metropolis, a sufficient tract of meadow land to receive the diluted contents of the sewers, and to absorb all the valuable materials which they carry with them.

I am fully aware of the difficulties which attend either scheme, but I cannot but think, that if the nation were alive to the importance of the subject, and were conscious, that in a few years the necessity of grappling with it must force itself upon its consideration, it would not be content in the mean time to derive its information on a matter of such importance from individuals only, and those often foreigners, but would regard the question at issue as one, not less deserving the attention of government, than any of those other subjects which come within the cognisance of parliamentary committees.

Home Correspondence.

Drainage.—I don't think Messrs. Hardy & Son are far wrong after all; of course we ought to drain all land not naturally filtrative, but those who double trench, or cultivate by other means to the depth of 18 or 20 inches, will very rarely find their drains discharge, except, perhaps, after very continued rains; so I found it in my own. The fact is, lands so deeply disturbed and aërated have enormous evaporative and capillary powers, and bear no comparison in this respect with the miserable 4 and 5-inch cultivation of our ordinary farming. I have no doubt the Rev. Mr. Smith, of Lois-Weedon, would say that filtration to the drains on his deeply cultivated soil is of a very occasional nature. Wherever the land is deeply disturbed over a land drain, it looks dry and light-coloured, long after the drains have ceased to run; whilst other portions between the drains look dark and damp. The evaporation is more active by deep cultivation. *J. J. Mechi, Tiptree Hall, Feb.* 13.

Mangel Wurzel.—I have had a sale and my Mangels sell well on account of their being sound, all other Mangels in the neighbourhood being spoiled. My Mangels were pulled up just after the frost which you remember we had last October. My neighbour has 9 acres of Mangels, which he was obliged to stack in the usual manner. Since I only have a little patch of about 7 or 8 tons, I have mine stored up with straw in a sort of large chaff barn where I keep my chaff and cow hay. They were pulled up after that hard frost, when my neighbour's gardener informed me that there were 12° of frost, and that the frost seemed to have got into them but it "sweated out" again, and my neighbour's Mangels are spoiled and mine are sound because they were kept dry. *H. H.*

Straw as Food.—Straw is now admitted to have fattening properties. My uproarious friends of the London Farmers' Club (I mean those who shouted with laughter when I asked them to believe that straw contained much fattening element) seem to be rapidly changing their minds. Root pulping, judging from Bentall's published reports, has taught my aforesaid friends that when put into the right condition by maceration and fermentation straw is really largely acceptable to the animal and profitable to the farmer. I hope that they will make the *amende honorable;* and I have a strong impression that they are on the way to believing sundry other of my so-called vagaries, such as the value of town sewage, which I shall some day prove to them is less diluted than the manure which they now apply to their land. *J. J. Mechi, Tiptree Hall, Feb.* 13.

Societies.

HUNGERFORD: *Steam Cultivation.*—Last week Mr. Williams, of Baydon, read an address on "Steam Cultivation." Mr. Williams divided the subject into three parts—the past, the present, and the future. As regards the present, he said:—"We have in our own neighbourhood four sets of Mr. Fowler's tackle, and one of Mr. Smith's, whilst the number of farmers in Great Britain using steam cultivators cannot be far short of 100; and allowing each to cultivate 400 acres, it will amount to 40,000 acres per annum already cultivated by steam. Still this is slow work, as we ought to number our customers by thousands instead of hundreds, and my belief is we should soon do this if it were not for the hesitation of some of our best men who have made up their minds to go into it, but are waiting to see what may still come uppermost. It would be occupying too much time to quote the opinions of the many farmers that are now using steam-power; suffice it to say, they one and all approve of the several plans they have adopted, and it is satisfactory to know that where one or two sets of tackle are planted in a neighbourhood, it is not long before some of the neighbours are so satisfied that they order some for themselves. Let me now ask, why should there be any further hesitation on the subject? If you look to Mr. Smith's tackle, you will find very little alteration in the mode since he began; the machinery is well made by Messrs. Howard of Bedford, and Mr. Smith's grubber makes good work. If you look to Mr. Fowler, he has so simplified his plan that there is nothing that can be dispensed with, the whole apparatus attached to the engine weighing considerably less than a ton, and every engine made to take herself and tackle from field to field, and from one locality to another. Those who might prefer the windlass of Chandler and Oliver attached to the hind axle of the engine, and working on the round-about system, may rest assured that with good cultivating implements they may work with the same advantage as Mr. Smith does. What, then, can there be to wait for? The longer the farmers of Great Britain wait the longer will they deprive themselves of the benefit which will accrue to them and the public at large from its good effects. Some of these it may be as well to mention here, viz., autumn cultivation, the admirable manner in which the soil is prepared for root crops, and the advantage those who have steam-power will have over their brother farmers whenever we have a wet summer. I shall be very much deceived if, with one wet summer, orders by the hundred do not come in for steam ploughs. The experience of the past and the present should point out the most practical and economical method for future observation and guidance, and I think the position which Mr. Fowler has attained, having won every prize that he has contended for, and working on the principle of the endless rope, together with the small amount required in proportion to the work, and the whole of the power rightly applied by keeping opposite to it, places him very far ahead of his competitors. One word as to the economy of the round-about system. To those who approve of this method, I think I have shown them that the triangular system given up by Mr. Fowler in 1856 is far preferable to the square mode of Mr. Smith. If not, I will take a field of 6½ acres square, the furrow will be 8½ chains in length. and the rope required by Mr. Smith will be 907 yards, and likewise running four pulleys or sheaves. The triangular system, with horizontal drums, will require 771 yards, 136 yards less than Mr. Smith's, and running only two pulleys, whilst Mr. Fowler's long-range will do the same work with only 370 yards; 530 less than Mr. Smith's, and running only one sheaf, and that his large anchor. This is of great importance when we consider the large amount of power lost by running these pulleys, to say nothing of the wear of the rope. In conclusion, I will make a few observations on the benefit the country will, in all probability, derive from steam culture. The Royal Agricultural Society has now been in existence for 20 years, and it is really wonderful to look back over this short space and see what has been done for agriculture in the implement department of the trade of this nation. But what eye shall be prophetic enough to look 20 years into the future and say what shall be doing in agriculture at that period—but it is possible that by that time the bulk of the soil of our country will be cultivated by steam power, and should this be the case, the horses employed in agriculture, which number in amount considerably above 1,500,000, will be reduced to an enormous extent, far above a third, and the food that they would have consumed turned to a profitable account by feeding bullocks and sheep, to the benefit of both the occupier and the consumer, and likewise to meet the wants of our increasing population. But there is a class of men deeply interested in the cultivation of the soil, which this great change will effect, either for the better or the worse. The agricultural labourers—how will it fare with them? I have no hesitation in asserting that the more steam-engines and machinery are introduced into the agricultural districts, the better it will be for the labouring classes, and if this should meet their eye through the newspapers, I hope they will take a warning word from me, and prepare themselves by greater application to their present duties and, letting their mind accompany their work, to fill those higher places which undoubtedly, at no distant day, they will be called upon to undertake. For the superior work they will be required to give they will have superior pay, and like the artisans, they will become more frequent customers of the butcher, but I hope, in contradistinction to them, their extra earnings may go to the savings' bank instead of the beer-house, to form a nest egg for a rainy day. Thus will the skilled agricultural labourer rank higher in the scale of society; the community at large will have cause to rejoice at an increased supply of the necessaries of life; the farmer will have considerably more to sell of that which turns to profit; he will have a good market from the increased means of the agricultural classes; and all will have to be thankful that the steam-engine was placed on four wheels to come to our aid."

CRYSTAL PALACE POULTRY SHOW, *Feb.* 11-16.—The gathering of specimens of all classes of Farm-yard Birds is as large here as in the best of the Birmingham shows—1200 cages, containing probably nearly three times as many birds, compete for the large number of prizes offered. It is the best collection which has yet been exhibited at Sydenham. Among the prizetakers are some comparatively new names, showing the continually widening range of the interest taken in this useful branch of farm live stock. Captain Hornby is, as heretofore, first in Dorkings—Messrs. Garlick and Dawson are first in the Spanish classes—Messrs. Stretche and Tomlinson & Copple carry off the first prizes for Cochin Chinas. The prizes for the best of the very fine classes of game birds went to the Rev. G. S. Cruwys and the Hon. W. W. Vernon—Messrs. Dyson, Wilkinson, & Lane, and Teebay take the first prizes for Hamburgh fowl. These are the chief classes shown. There is a good show of geese and turkeys, some of them of great weight, and a large collection of pigeons.

Reviews.

Journal of the Bath and West of England Society for the encouragement of Agriculture, &c. J. Ridgway.

Part I. of the volume for 1860 appears with the opening year. It contains the reports of the Barnstaple show, and original essays on the connection between the West of England and South Wales; on the Agriculture of North Devon; on the Feeding and Management of Pigs; on Autumn Cultivation; on the Culture of the Potato, and on the Cider System. There is also a republication from the English Agricultural Journal of Mr. Ruegg's paper on Dorsetshire Farming; and a "Note-book" containing the address to the British Association at Aberdeen by H.R.H. the Prince Consort, Notes from Old Books by Mr. Blencowe, a paper on Apple Cultivation, by R. Thompson, extracted from the Earl of Ducie's annual allotment report; and Messrs. Ransome's account of the Management of Portable Steam-engines.

Of these the most generally interesting paper probably is that on what is termed the Cider System, by Messrs. Spender and Isaac, which gives a great deal of useful information on the influence of the payment of wages in liquor on the wellbeing of the labourer and his family. In illustration of the nutritive force of the cider consumed, an analysis is given by Dr. Voelcker, and it is said:—

"The nutritive value of articles of food depends chiefly, 1st, on the amount of flesh-forming matters they contain; 2d, on the amount of heat-producing constituents. The former is usually measured by the proportion of nitrogen contained in the food; the latter by the quantity of carbon. From the above analysis it appears that—

	Carbon grains.	Nitrogen grains.
One imperial gallon of cider contains	.. 240	.. 3
One pound of good wheaten bread contains	2030	.. 91

"Hence, according to the analysis and conclusions of Professor Voelcker—

"'A person would require to drink very nearly 8½ gallons of cider in order to take into his system the same amount of carbon which is contained in 1 lb. of bread; and in order to obtain the same amount of nitrogen, he would have to swallow no less than 33 gallons of cider of the quality analysed. Whilst cider is thus far too expensive to save the labourer with respiratory food, it is, practically speaking, totally unfit to restore the waste of muscle to which the reaper is peculiarly subject.

"'Quite apart from the injurious effects of the alcohol in the cider, it is a liquor which the poor man cannot afford to buy; and it appears quite plain that no labourer would take any part of his wages in cider if he knew how to protect his own interests.'"

And again—"For all purposes of nutrition cider falls below bread, and far below meat. Its use, therefore, must be deemed as that of a luxury. The labourer should be fully informed of this fact. He should under-

stand that, from half to one-eighth of his earnings is spent in that which can do him no good, but which, at best, is only a costly indulgence."

On the influence of the liquor upon the health, Mr. Hansard, surgeon, of Montacute, says:—

"The failure of the Apple crop has had the same favourable effects on the general health of the labourer as the good drainage of a parish has on the health of the inhabitants generally."

The essay is full of testimony from employers, and it is proposed:—

"1st. That the employers should universally abstain from paying any portion of their labourers' wages in cider.

"2dly. That if the labourer were dissatified with this arrangement, even then the increased wages received by him would enable him to purchase meat, or he might be allowed to purchase voluntarily of his master, rather than be compelled to accept the cider in part payment and in lieu of money."

The only other paper in the Journal to which we propose now to advert is that entitled Notes on Old Books, by Mr. Blencowe, in which he calls attention to the writings of Andrew Yarranton of 1663, which are remarkable for containing the earliest suggestion of measures which are only now acquiring the importance which he then foresaw:—

"Many of his suggestions are valuable and curious; and amongst them is that very important question which has now forced itself upon the attention of the Legislature, and which ought to be taken up far more decidedly by the people at large than has yet as been the case—that of a General Registration of Titles—the advantages of which he discussed so fully and ably as completely to exhaust the subject.

"'All Scotland,' he says, 'is under a register, and worth 24 years' purchase, and on the other side in the North of Ireland, although but three hours' sail, it is worth but eight years' purchase; and in England, on this side Tweed, it is worth but 16 years' purchase. The register is the cause. The manour of Taunton Dean, in Somersetshire, is under a register, and there the land is worth 23 years' purchase, although but a copyhold manour; and at any time he that hath 100*l.* a year in the manour of Taunton, may go to the castle, and take up 2000*l.* upon his lands, and buy his stuffs, and go to London and sell them, and return down his money, paying but five in the hundred, and discharge his lands. This is the cause of the great trade and riches in and about Taunton Dean. Oh! happy Taunton Dean!'"

Notices to Correspondents.

AUSTRALIAN GRASSES: *H S Y.* says, for the information of Mr. J. K. Archer, that during six years' experience in Australia he always found Rye-grass seed mixed with White Dutch Clover the very best for pasture. This is almost universally used throughout the whole of the colonies. The yield is about 20 bushels (20 lbs. per bushel) per acre, for a fair crop, but of course much depends upon securing it safely, as the hot scorching sun often renders it difficult to secure. The price usually ranges from 8*s.* to 12*s.* Last April our informant received 15*s.* for some very good Colonial growth. English imported seed is often bad.

LOSS OF WEIGHT IN MANURES BY LAPSE OF TIME: *J. L.* The question is answered by a recent paragraph in our contemporary, the *North British Agriculturists*, where we are informed that a question was lately tried before the Lord Justice Clerk in reference to a sale of a cargo of bones, on which the deficiency of weight, asserted to be by inleakage, was about 20 per cent. A considerable amount of evidence was led on both sides. By the decision of the judge—the case being tried without a jury—something like half the amount of damages claimed for non-delivery was awarded. It may be inferred from the decision that the presiding judge considers that during the voyage 10 per cent. was the limit of inleakage by evaporation and other causes. This is beyond the amount usually met with in cargoes arriving in London. We learn from one extensively engaged in the manure trade that in an extreme case a cargo may be 5 per cent. short; but, he remarks, an allowance of 2 or 3 per cent. for sweating is sufficient. The amount of water in bones has not been very correctly ascertained. Professor Johnstone estimates that from 10 to 20 per cent. of moisture and fat is the average in bones delivered to farmers. This estimate is high. Perhaps 10 to 15 per cent. of moisture and fat may be regarded as an average. Purchasers of bones—dealers and farmers—may safely assume that when full weight is given on delivery, there will be little or no deficiency of weight, although the bones are not re-weighed for several months. Farmers therefore can with all safety purchase bones or bone manure at any season for forward application without any anxiety as to loss of weight by keeping—it being understood that the bones are kept under cover, or in such a manner as to protect them from water or dampness.

POISONOUS CATTLE FOOD: *R.* Dr. Voelcker reported lately on a case in which sheep and cattle had died after eating of the sweepings of a warehouse, that very little is known respecting the properties of and chemical tests for most organic poisonous substances. Unless, therefore, distinct symptoms, that characterise certain organic poisons, such as strychnia or opium, point in a definite direction, the labours of chemists to identify vegetable poisons are unavailing. The meal in question he says probably contained some strong, poisonous oily Bean. The Cureus Bean is used by oil-crushers, and the cake sold as manure. It is an exceedingly poisonous seed. Possibly the sweepings contain this or a similar oily seed. Amongst other oily seeds, he found in the sweepings Linseed, Rape seed, black and yellow Mustard in considerable quantity (Mustard is decidedly injurious to animals), Hemp seed, Niger seed (the seed of Guizotia), Earth-nut (the seed of Arachis hypogœa), and Cotton seed. And besides these seeds the following matters: Indian Corn, Irish Moss, Locust Beans (Siliquæ dulcis), common Beans, Peas, Vetches, Dari grains, Rice, Wheat, Barley, Oats, starch, Clover seed, Italian Rye-grass, and a great variety of Grass seeds, and the excrement of rats. He adds: "I am surprised that any dealer should venture to sell such a material for feeding purposes, for it is a well-known fact that poisonous oily seeds are pressed out by oil-crushers for the sake of the oil which they contain. The great variety of oily seeds in the warehouse sweepings shows that the party who sold the sweepings dealt not merely in feeding stuffs, but likewise in oily and other seeds."

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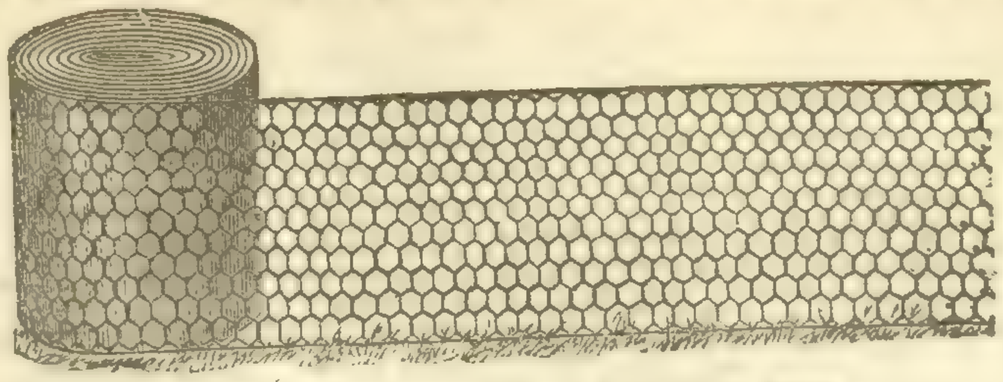

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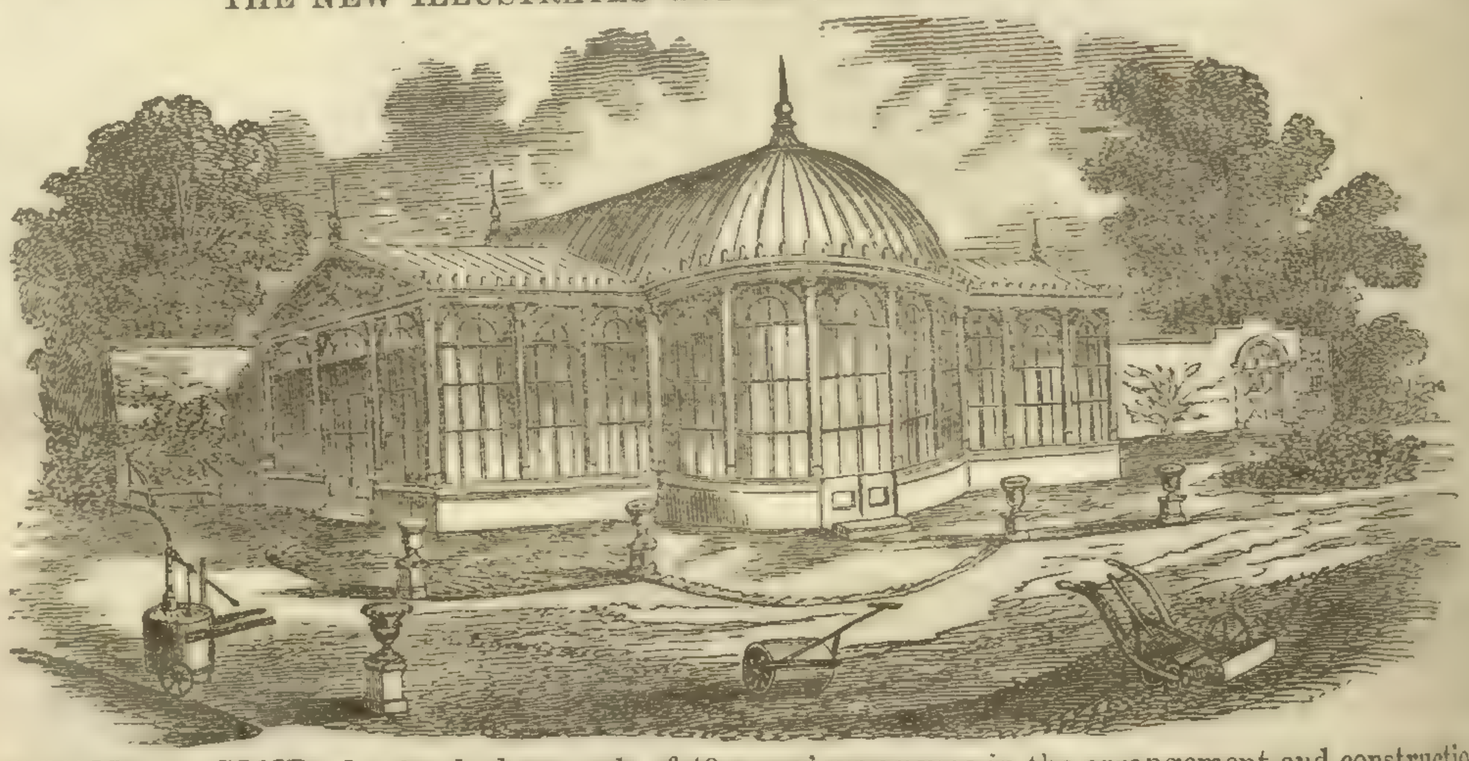

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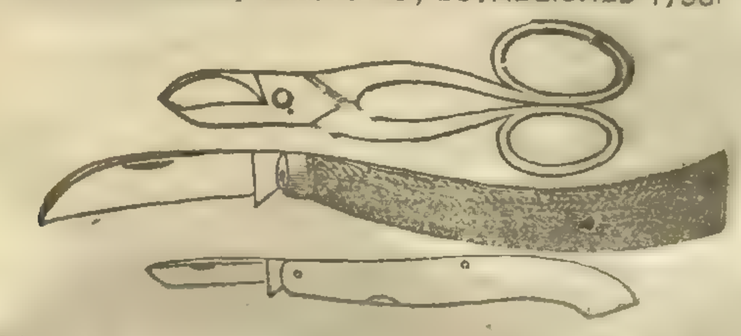

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PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"420, Strand, London.

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles.

"Your obedient servant, G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Talbotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.—The Gutta Percha Company Patentees, 18, Wharf Road, City Road, E.C., London.

RANSOMES & SIMS, IPSWICH,

CONTINUE to give their best attention to the manufacture of the most Modern and Improved Agricultural Machinery, including

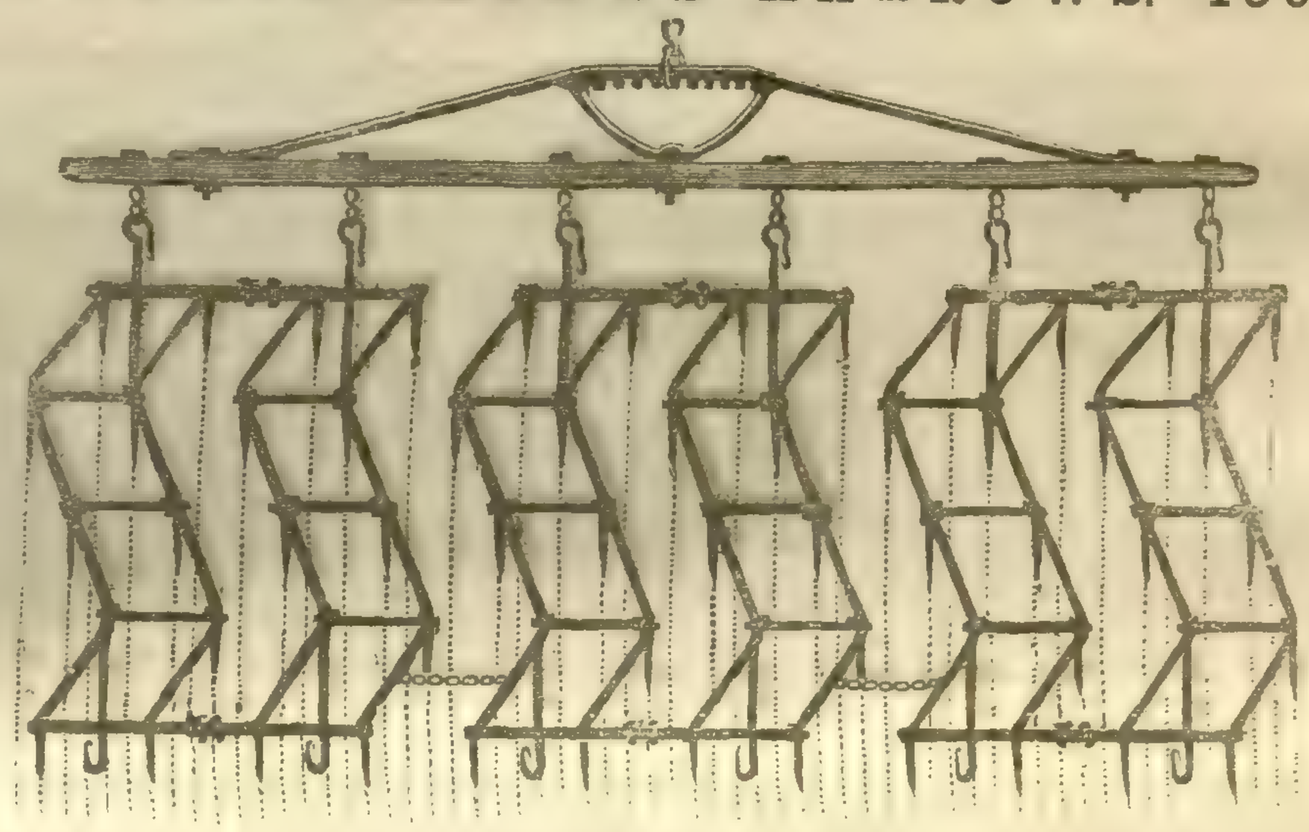
PATENT AND OTHER PLOUGHS, SUITABLE FOR EVERY SOIL AND PURPOSE.
HARROWS, CULTIVATORS, ROLLERS, AND OTHER FIELD IMPLEMENTS.
HORSE RAKES AND HAYMAKERS.
CHAFF CUTTERS, ROOT CUTTERS, BRUISING AND CRUSHING MILLS FOR CORN, OILCAKE, &c.
STEAM ENGINES, BOTH PORTABLE AND FIXED, WITH PATENT OR OTHER BOILERS.
STEAM THRESHING MACHINES, BOTH PORTABLE AND FIXED, AND SINGLE OR DOUBLE BLAST.
HORSE POWER THRESHING MACHINERY, DRESSING MACHINES, CORN MILLS, HORSE GEARS, &c.

RANSOMES AND SIMS have long been celebrated for combining in their Agricultural Machinery the utmost simplicity, durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture.

ILLUSTRATED CATALOGUES, Post free, on application to the

Orwell Works; or to their London Agent, SHEPPARD RANSOME, 31, Essex St. Strand, W.C.

HOWARDS' PATENT HARROWS.—1860.



JAMES & FREDK. HOWARD,

BRITANNIA IRON WORKS, BEDFORD,

From their long experience in the manufacture of HARROWS, having made about 20,000 sets, have the utmost confidence in bringing them before the Public as not only the *cheapest*, but the *best* and *most durable* Harrows yet produced. The teeth are now fitted into the frames in so secure a manner that it is impossible for them to work loose.

A Set of three 4-beam Harrows with Whippletree, recommended as general Seed Harrows, 9½ feet wide, marked *No.* 12	£3	10	0
A Set of Three 4-beam Harrows with Whippletree, adapted for three horses, 10 feet wide, marked No. 11 ..	4	0	0

If with Patent Joints, as above, 6s. per set extra.

Free Delivery to Basingstoke, Birmingham, Bristol, Cardiff, Colchester, Derby, Gloucester, Hull, Leeds Lincoln, Liverpool, London, Manchester, Norwich, Nottingham, Retford, Salisbury, Shrewsbury, Southampton Swansea, Wisbeach, Worcester, and York; or to Dublin, Edinburgh, Glasgow, and other parts, at fixed rates.

CATALOGUES, with prices and particulars of all J. & F. HOWARDS' Implements, including description of an Reports from persons working SMITH'S STEAM CULTIVATOR, sent post free on application.

HOTHOUSES FOR THE MILLION.

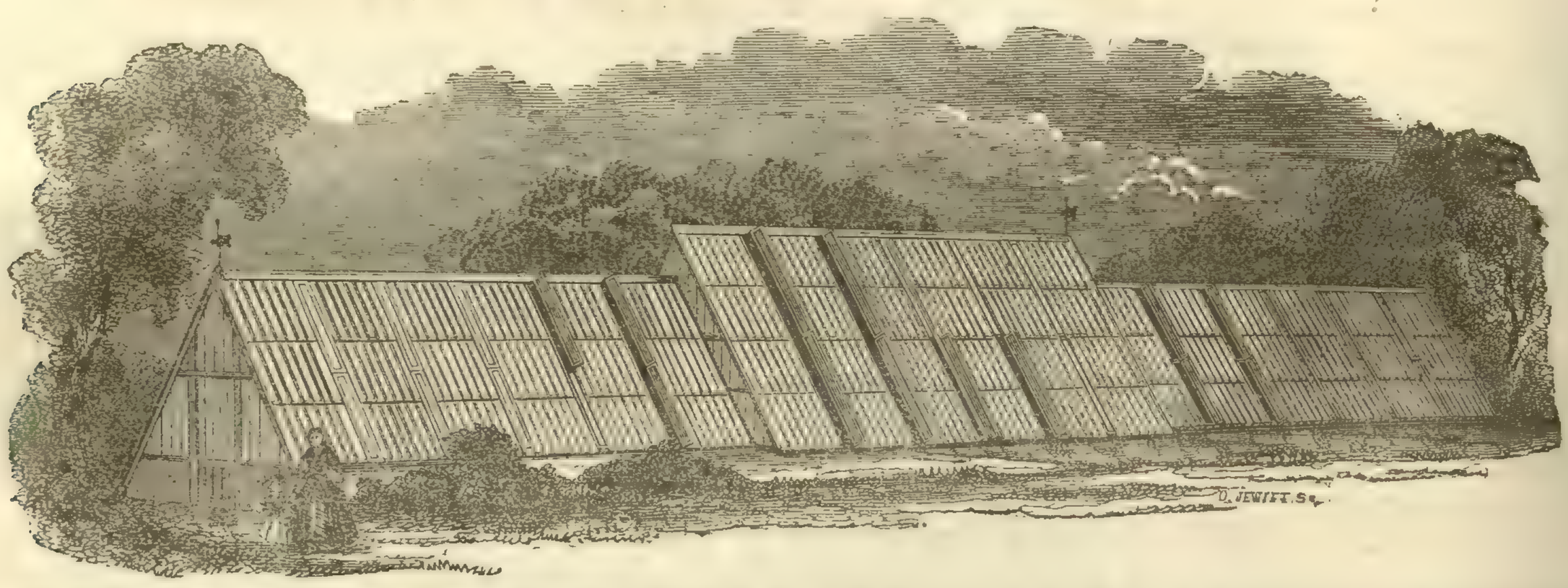
SAMUEL HEREMAN

BEGS TO INFORM THE PUBLIC THAT HE HAS BEEN APPOINTED SOLE AGENT FOR THE MANUFACTURE AND SALE OF

THE NEW PORTABLE AND ECONOMICAL HOTHOUSES,

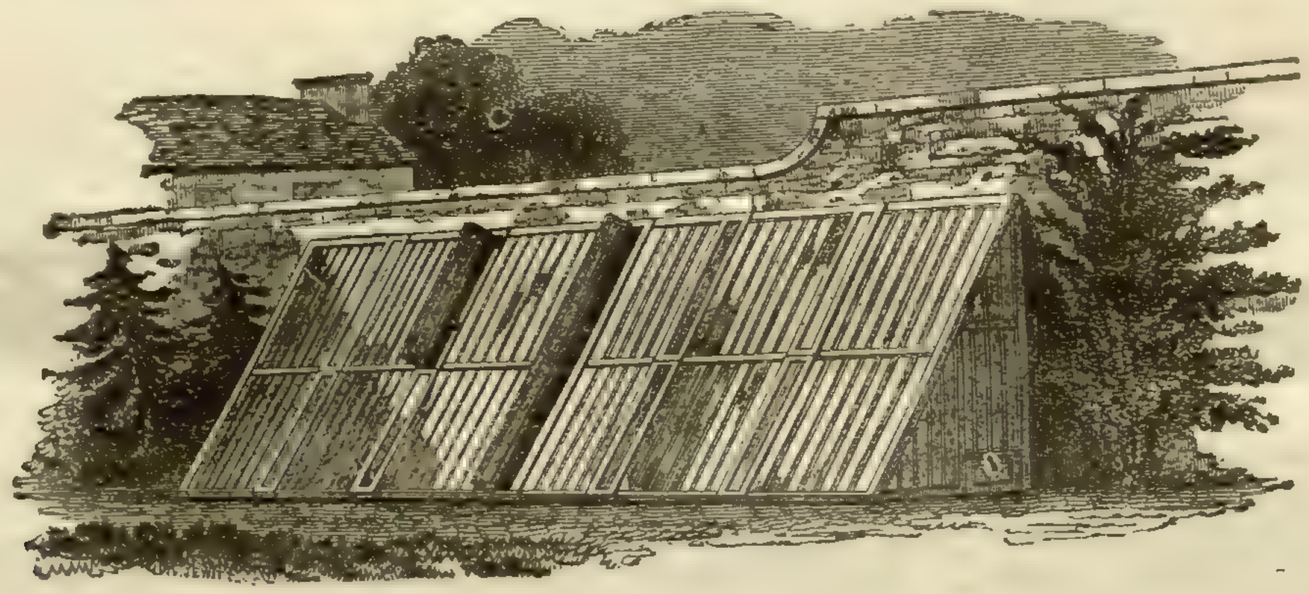
INVENTED AND PATENTED BY

SIR JOSEPH PAXTON, M.P.

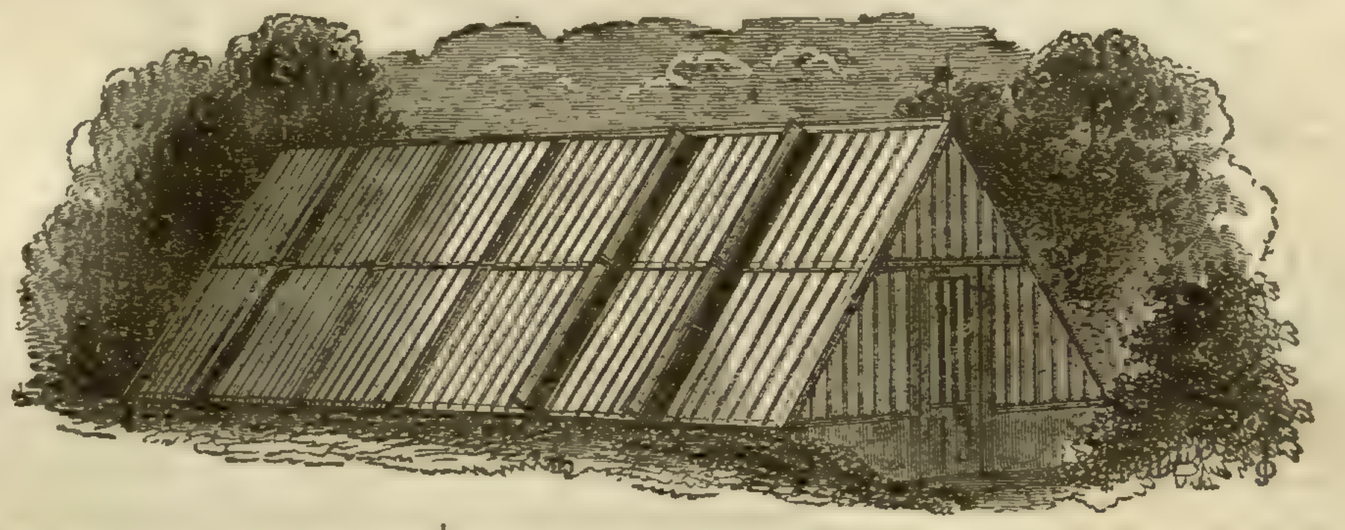


☞ These Buildings are of unparalleled cheapness, and being composed of simple parts can be enlarged, removed, or adapted to any Horticultural purpose by ordinary labourers.

They are calculated for gardens of the highest order, for gentlemen's gardens generally, for market gardens where they may be made to cover any extent of surface, and also for suburban, villa, and cottage gardens.



The moderate cost of these houses not only places within the reach of persons of limited means a luxury hitherto confined to the wealthy, but offers immense advantages to all who have garden walls already standing—as from their peculiar construction they can be formed into ranges of lean-to houses with a facility and at a cost hitherto unheard of.



Whilst they are adapted for permanent structures they are also particularly suited for persons having temporary or limited tenures, as they can with ease be packed up and removed at the expiration of the tenancy.

The prices of the Span-roofed Houses, with Water-troughs, Doors, and ends complete, are as follows :—

	8 Feet Lights.	10 Feet Lights.	12 Feet Lights.
20 feet in length	£24 0 0 ...	£32 0 0 ...	£42 0 0
30 feet in length	33 0 0 ...	42 5 0 ...	53 0 0
40 feet in length	41 16 0 ...	53 17 0 ...	66 15 0
50 feet in length	51 5 0 ...	65 10 0 ...	80 10 0
60 feet in length	60 12 0 ...	77 0 0 ...	94 5 0
70 feet in length	69 5 0 ...	87 10 0 ...	106 15 0
80 feet in length	78 12 0 ...	99 3 0 ...	120 10 0
90 feet in length	87 18 0 ...	111 0 0 ...	139 5 0
100 feet in length	90 15 0 ...	121 5 0 ...	147 0 0

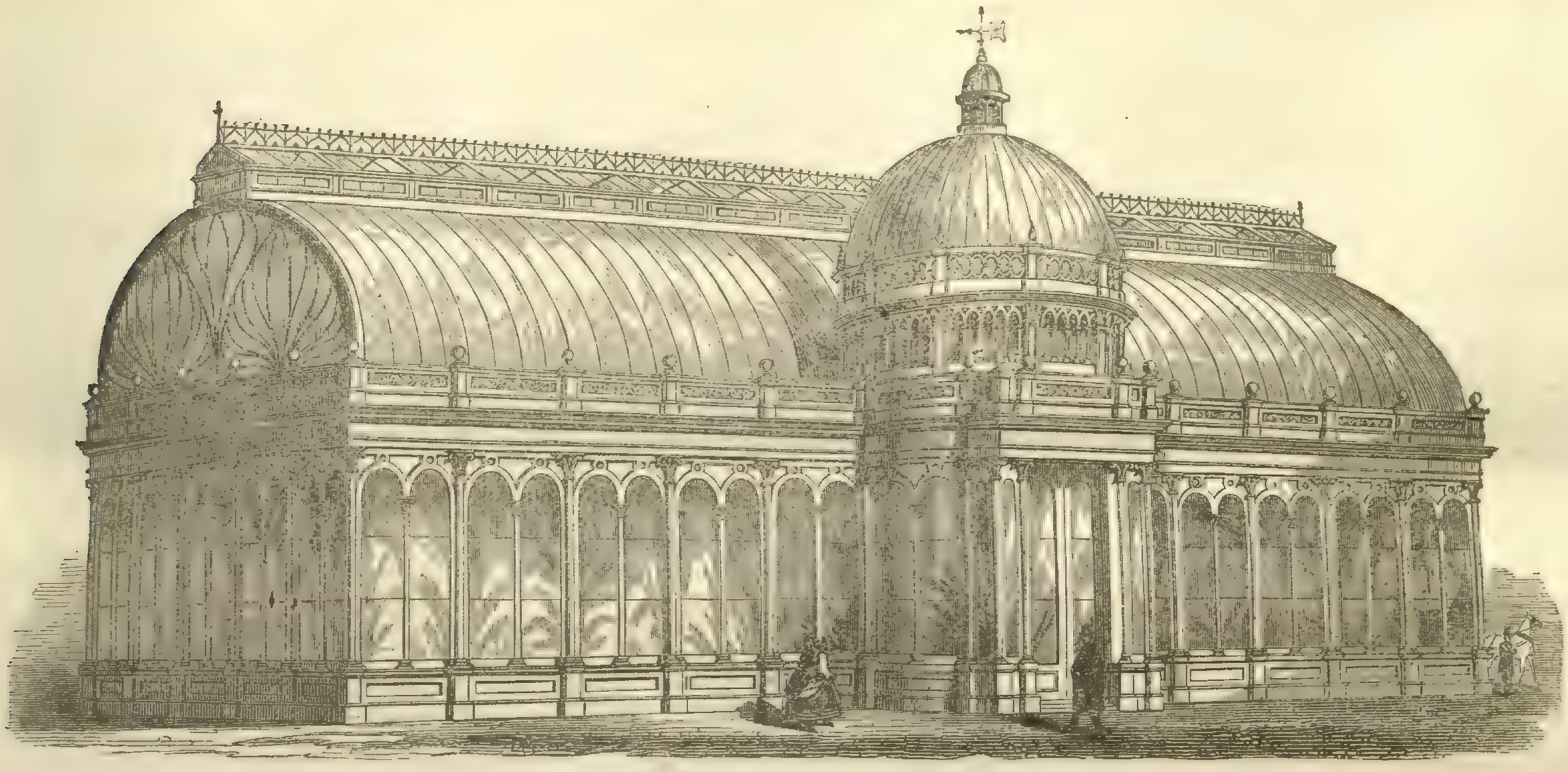
The prices of Lean-to Houses complete are as follows :—

	8 Feet Lights.	10 Feet Lights.	12 Feet Lights.
20 feet in length	£12 0 0 ...	£16 0 0 ...	£21 0 0
30 feet in length	16 10 0 ...	21 2 6 ...	26 10 0
40 feet in length	20 18 0 ...	26 18 6 ...	33 7 6
50 feet in length	25 12 6 ...	32 15 0 ...	40 5 0
60 feet in length	30 6 0 ...	38 10 0 ...	47 2 6
70 feet in length	34 12 6 ...	43 15 0 ...	53 7 6
80 feet in length	39 6 0 ...	49 11 6 ...	60 5 0
90 feet in length	43 19 0 ...	55 10 0 ...	69 12 6
100 feet in length	45 7 6 ...	60 12 6 ...	73 10 0

The above lengths are given in round numbers, but from the nature of their construction the houses will practically in all cases exceed these measurements.

Letters prepaid addressed to S. HEREMAN, 7, Pall Mall East, S.W., will receive immediate attention.

ELEVATION OF CONSERVATORY
NOW BEING CONSTRUCTED FOR A NOBLEMAN,



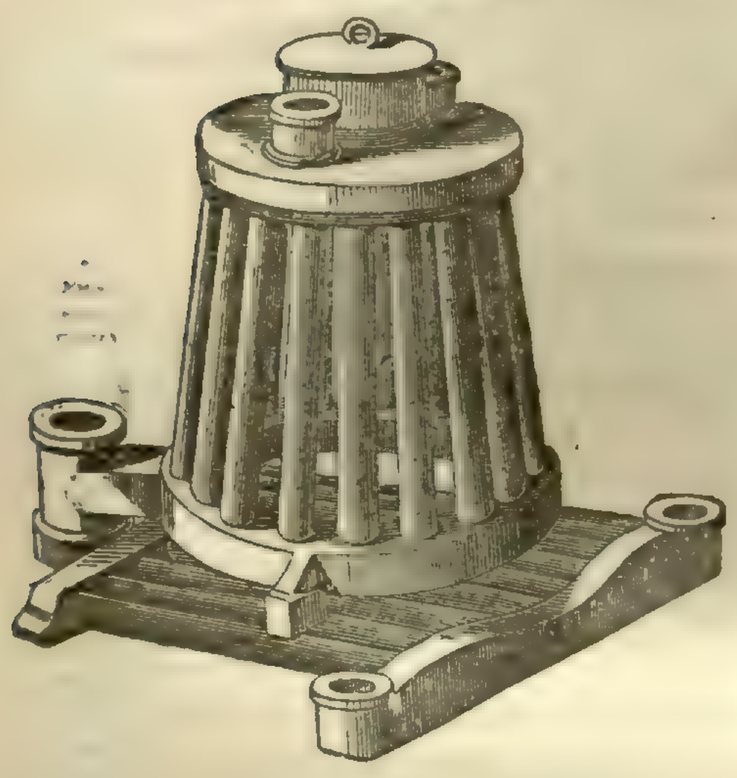
BY

JOHN WEEKS & COMPANY,

HORTICULTURAL BUILDERS AND HOT-WATER APPARATUS MANUFACTURERS, ENGINEERS, AND IRON FOUNDERS,

KING'S ROAD, CHELSEA, S.W.

By Her Majesty's Royal Letters Patent.



ORMSON'S

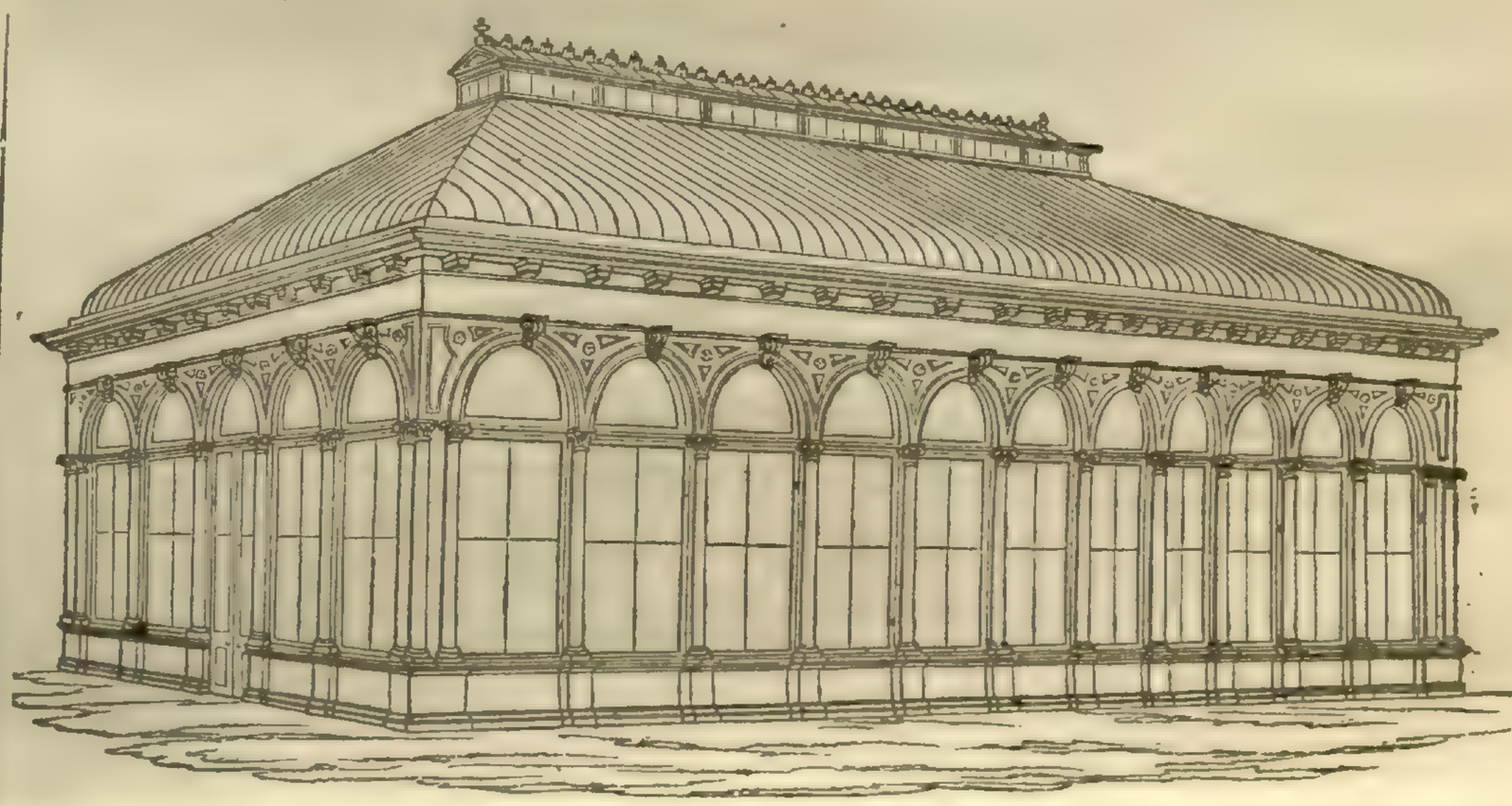
PATENT JOINTLESS TUBULAR BOILER,

HAS NOW GAINED the highest standing reputation for Power, Efficiency, Safety, and Economy of Fuel. There is not a single joint exposed to the action of the fire, which renders these Boilers far more safe than any other Tubular Boiler ever invented.

May be seen in successful operation at Mr. VEITCH'S, Royal Exotic Nursery, King's Road, Chelsea, and in the Gardens of many of the Nobility and Gentry in England, Ireland, and Scotland.

They are made of various sizes. Prices on application.

HENRY ORMSON,
Stanley Bridge, King's Road, Chelsea, S.W.



HORTICULTURAL BUILDINGS

MANUFACTURED BY STEAM POWER MACHINERY.

LOWEST PRICES AND BEST MATERIALS.

DESIGNING, BUILDING, HEATING, AND VENTILATING ON THE MOST APPROVED AND SCIENTIFIC PRINCIPLES.

PLANS, SPECIFICATIONS, AND ESTIMATES FREE ON APPLICATION.

HENRY ORMSON, Horticultural Builder, and Hot-water Apparatus Manufacturer, Stanley Bridge, King's Road, Chelsea, London, S.W.

HOTHOUSES FOR THE MILLION.

MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete					£ 50
Do.	do.	40 ft	by 20 ft.	do.	do. 50
Do.	do.	0 ft.	by 24 ft.	do.	do. 9

LIST OF PRICES of any size forwarded on application to J. LEWIS.

HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.

KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they Erect all kinds of Conservatories, Vineries, Greenhouses, &c., combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & SON have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

GLAZED WARDIAN PLANT CASES.

HUGH LOW AND CO. have for sale a considerable number of WARDIAN CASES of various sizes, in good and sound condition, well adapted for the safe transmission of plants to distant countries. Prices on application.

Clapton Nursery, N.E.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1½d.; 2 yards, 3d.; 3 yards, 4½d.; and 4 yards, 6d. per yard, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

An allowance to Nurserymen.

BRITTAIN'S GARDEN NETS are admitted to be the best and cheapest protection to Fruit Trees, and the most durable Hothouse Shading for summer. 55 inches wide, No. 1, 5d.; 2, 6d.; 3, 8d a yard. TIFFANY, 2½d. and 3d.

Sold by all Nurserymen.—BRITTAIN & Co., Manchester

WHY NOT PRESERVE YOUR FRUIT?—NETTING, BUNTING, and SCRIMS for Fruit trees and tender Plants; the best protection against Frost, Hail, and Wind. Outside Shades for Greenhouses, Rick Cloths (new and second-hand), with Poles, Pulleys, and Lines. At BENJAMIN EDGINGTON'S Marquee, Tent, and Flag Manufactory, 2, Duke Street, Southwark, S.E.; West-End Establishment, 32, Charing Cross, S.W.

BLOSSOM OF WALL FRUIT TREES.—Worsted Net, an effectual and approved Protection. Will last four years. New Twine Garden Net, 1½d. per yard; Tanned Nets, 6s. 3d. per 100 yards. Samples and plan of fixing Worsted Net sent.—R. RICHARDSON, 99, Euston Road, London, N.W.

TREES COMING INTO BLOOM will be protected from Frosts, Hail, &c., by using HAYTHORN'S HEXAGON and CHISWICK GARDEN NETS, now used and recommended by all the Principal Gardeners; the Nets will also Preserve the Fruit from Wasps, Flies, Birds, &c.—For Patterns, Prices, and Testimonials, direct to Mr. HAYTHORN, Clumber Street, Nottingham.

HENRY J. MORTON AND CO.,

2, Basinghall Buildings, Leeds.

GALVANISED IRON WATER CISTERNS

for Cottage Houses, &c., to contain 50 gallons, 25s.; 80 gallons, 30s. each; and 140 gallons, 36s., and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

GALVANISED IRON PUMPS

for Liquid Manure or Domestic Use, 3 inches diameter, 30s and 32s. 6d. each; Tail Pipe for same at from 10d. per foot.

GALVANISED IRON SWING WATER BARROWS

for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32s. 6d. each.

PARKES' STEEL DIGGING FORKS.

BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

GARDEN BORDER EDGING TILES.

ROSHER AND CO beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c, take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.

Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.

N.B. Outline sketches of the patterns will be forwarded by post on application.

MICROSCOPES.

J. AMADIO'S BOTANICAL MICROSCOPES, packed in mahogany case, with three powers, condenser, pincers, and two slides, will show the animalculæ in water. Price 18s. 6d.—Address JOSEPH AMADIO, 7, Throgmorton St. E.C.

"It is marvellously cheap, and will do everything which the lover of nature can wish it to accomplish either at home or in the open air."—*The Field*, June 6, 1857.

Second-hand Microscope with a cabinet slides for sale. Great Eastern Microscopic Photograph of the great ship sent post free for 32 stamps.

SIXTY YEARS OF SUCCESS

HAVE PROVED BEYOND QUESTION THAT

ROWLANDS' MACASSAR OIL possesses extraordinary properties for promoting the growth and improving and beautifying the human hair. It prevents hair from falling off or turning grey, strengthens weak hair, cleanses it from scurf and dandriff, and makes it beautifully soft, pliable, and glossy. In the growth of the beard, whiskers, and moustachios, it is unfailing in its stimulative operation. For children it is especially recommended as forming the basis of a beautiful head of hair, while its introduction into the Nursery of Royalty, and the numerous testimonials constantly received of its efficacy, afford the best and surest proofs of its merits—Price 3s. 6d. and 7s. Family bottles (equal to four small), 10s. 6d.; and double that size, 21s.—CAUTION. On the wrapper of each bottle are the words, "ROWLANDS' MACASSAR OIL," &c., in white letters, and their signature, "A. ROWLAND & SONS," in red ink.—Sold at 20, Hatton Garden, London, E.C., and by Chemists and Perfumers.

HORTICULTURAL GLASS.

STOCK SIZES, 16 oz.

These prices only apply to the sizes stated.

Boxes are included, with but few exceptions. When Packages are charged, full price is allowed when returned.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 ,, 10, 13 ,, 10, 14 ,, 10, 15 ,, 10 ..	14s. 6d.	12s. 6d.
13 ,, 11, 14 ,, 11, 15 ,, 11, 16 ,, 11 .. / 14 ,, 12, 15 ,, 12, 16 ,, 12, 17 ,, 12 .. / 18 ,, 12, 19 ,, 12, 20 ,, 12 .. .. / 16 ,, 13, 17 ,, 13, 18 ,, 13 .. .. / 19 ,, 13, 20 ,, 13, 21 ,, 13 .. .. / 16 ,, 14, 17 ,, 14, 18 ,, 14 .. .. / 19 ,, 14, 20 ,, 14, 21 ,, 14	16s. 6d. per 100 feet.	14s. 0d. per 100 feet.

These prices are for Foreign Glass. English Glass, which is far superior, will be 18s. per 100 feet.

GLASS FOR ORCHARD HOUSES,

AS SUPPLIED BY US TO MR. RIVERS.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in. / 20 in. by 14 in. / 20 in. by 15 in.	Common	14s. 0d. ..	£1 1s.
	Superior do. ..	16 6 ..	1 5
	English Glass ..	18 0 ..	1 9

The above prices include the Boxes, with but few exceptions. When Packages are charged, full price is allowed when returned.

JAMES PHILLIPS AND CO.,

180, Bishopsgate St. Without, London, E.C.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2d. to 3d. per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 35, Soho Square, London, W.

See *Gardeners' Chronicle* of February 4.

HORTICULTURAL GLASS—JUNE TARIFF.

THOMAS MILLINGTON'S reduced Tariff of GLASS, &c.

6 by 4, 7 by 5, 8 by 6, 9 by 7 / 6½ by 4½, 7½ by 5½, 8½ by 6½, 9½ by 7½ } 16 oz. to the foot, 11s. 6d. per 100 feet.

In 100 boxes,—4ths quality, 12s. 6d.; 3ds do., 14s. 4d.

10 by 8, 12 by 9, 12½ by 10½, 14½ by 10½, 13 by 11
10½ by 8½, 12½ by 9½, 13 by 10, 15 by 10, 13½ by 11½
11 by 9, 13 by 9, 13½ by 10½, 12 by 11, 14 by 11
11½ by 9½, 12 by 10, 14 by 10, 12½ by 11½

	per 100 feet	16 oz.	21 oz.
20 by 12 / 20 by 13 / 20 by 14 / 20 by 15	Common ..	16s. ..	24s.
	Superior .	18s. ..	27s.

All Boxes included.

Orchard House sizes as supplied to Mr. Rivers.

Hartley's improved Rough Plate Glass from ½ to ¾ in thickness.

Coloured Glass in great variety, at 9d. and 1s. per foot.

Paints, Genuine White Lead, Linseed Oil, Boiled Oil, Turpentine, Putty, Colours, Varnishes, Brushes, Lamp Glasses, &c.

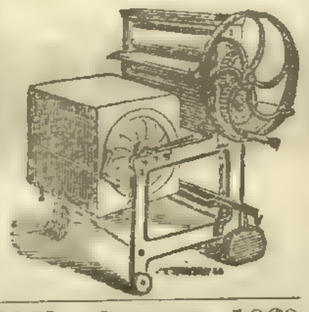
87, Bishopsgate Street Without, E.C., same side as Eastern Counties Railway.

BRADFORD'S PATENT WASHING MACHINE

SIMPLICITY AND WONDERFUL EFFICIENCY.

"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations."—THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.



MAPPIN'S TABLE CUTLERY.—SEASON 1860.

	Ordinary quality. £ s. d.	Medium quality. £ s. d.	Best quality. £ s. d.
Two dozen full-size Table Knives, ivory handles	2 4 0	3 6 0	4 12 0
One-and-a-half dozen full-size Cheese ditto	1 4 0	1 14 0	2 11 0
One pair regular Meat Carvers ..	0 7 6	0 11 0	0 15 0
One pair extra size ditto	0 8 6	0 12 0	0 16 6
One pair Poultry Carvers	0 7 6	0 11 0	0 15 6
One Steel for sharpening	0 3 0	0 4 0	0 6 0
Complete Service ..	£4 14 6	£6 18 6	£9 16 6

Messrs. MAPPIN'S Table Knives still maintain their unrivalled superiority; all their blades being their own Sheffield manufacture, are of the very first quality, with secure ivory handles, which do not come loose in hot water; and the difference in price is occasioned solely by the superior quality and thickness of the ivory handles.

MAPPIN, BROTHERS, 67 & 68, King William Street, City, E.C.; Manufactory, Queen's Cutlery Works, Sheffield.

Table Cutlery, Razors, Pocket Cutlery, and Scissors, of their own manufacture, in stock for exportation, at Sheffield prices.

FENDERS, STOVES, FIRE-IRONS, AND CHIMNEY PIECES.—Buyers of the above are requested, before finally deciding, to visit WILLIAM S. BURTON'S SHOW ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, CHIMNEY PIECES, FIRE-IRONS, and GENERAL IRONMONGERY as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright Stoves, with ormolu ornaments and two sets of bars, 3l. 15s. to 33l. 10s.; Bronzed Fenders, with standards, 7s. to 5l. 12s.; Steel Fenders, 2l. 15s. to 11l.; ditto, with rich ormolu ornaments, 2l. 15s. to 18l.; Chimney Pieces, from 1l. 8s. to 80l.; Fire-Irons, from 2s. 3d. the set to 4l. 4s. The BURTON and all other PATENT STOVES, with radiating hearth-plates.

PAPIER-MACHE AND IRON TEA-TRAYS.—An assortment of Tea-Trays and Waiters wholly unprecedented, whether as to extent, variety, or novelty, is on show at WILLIAM S. BURTON'S.

New oval Papier-Mâché Trays, per set of 3, from 20s. 0d. to 10 gs
Ditto, iron ditto .. .. ,, 8s. 6d. to 4 gs.
Convex shape, ditto .. .. ,, 7s. 6d.
Round and Gothic Waiters, Cake and Bread Baskets, equally low.

WILLIAM S. BURTON'S GENERAL FURNISHING IRONMONGERY CATALOGUE may be had gratis, and free by post. It contains upwards of 400 Illustrations of his illimited Stock of Electro and Sheffield Plate, Nickel Silver and Britannia Metal goods, Dish Covers and Hot-water Dishes, Stoves, Fenders, Marble Chimney-pieces, Kitchen Ranges, Lamps, Gaseliers, Tea Urns and Kettles, Tea Trays, Clocks, Table Cutlery, Baths and Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bedroom Furniture, &c., with Lists of Prices and Plans of the 16 large Show Rooms at 39, Oxford Street, W.; 1, 1A, 2, and 3, Newman Street, W.; and 4, 5, and 6, Perry's Place, W., London.—Established 1820.

HANDSOME BRASS AND IRON BEDSTEADS.—HEAL & SON'S Show-rooms contain a large assortment of brass bedsteads, suitable both for home use and for tropical climates; handsome iron bedsteads with brass mountings and elegantly japanned; plain iron bedsteads for servants; every description of wood bedstead, that is manufactured, in mahogany, birch, walnut-tree wood, polished deal and japanned, all fitted with bedding and furniture complete, as well as every description of bedroom furniture.

HEAL AND SON'S ILLUSTRATED CATALOGUE containing designs and prices of 100 bedsteads, as well as of 150 different articles of bedroom furniture, sent free by post.—HEAL & SON, Bedstead, Bedding, and Bedroom Furniture Manufacturers, 196, Tottenham Court Road, W.

PRIZE MEDAL, PARIS EXHIBITION 1855.

METCALFE, BINGLEY, AND CO.'S New Pattern and Penetrating Tooth Brushes, Penetrating unbleached Hair Brushes, Improved Flesh and Clothes Brushes, and genuine Smyrna Sponges; and every description of Brush, Comb, and Perfumery for the Toilet. The Tooth Brushes search thoroughly between the divisions of the Teeth and clean them most effectually—the hairs never come loose. M., B., and Co. are sole makers of the Oatmeal and Camphor and Orris Root Soaps—sold in Tablets (bearing their names and address) at 6d. each; of METCALFE'S celebrated Alkaline Tooth Powder, 2s. per box; and of the New Bouquets.—Sole Establishment, 130B and 131, Oxford St. 2d and 3d doors west from Holles St., London, W.

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NORTHUMBERLAND.—FREEHOLD ESTATE, &c.

MR. SAMUEL DONKIN will Sell by Auction, at the Central Station Hotel, Newcastle-upon-Tyne, on **TUESDAY, February 21, at 2 for 3 o'Clock in the afternoon precisely.**

LOT 1.—The ESTATE of CHRISTON BANK and RED HOUSES, otherwise CLAXTON'S MOOR HOUSE, in the parish of Embleton, in the county of Northumberland containing:—

	A.	R.	P.
Arable Land	230	1	5
Pasture Land	264	0	37
Plantations	10	2	5
Homestead and Roads	11	1	22
	516	1	29

The Estate was recently for several years in the occupation of the proprietor, when the buildings were completely repaired and much enlarged, a large part of the Estate drained, and the whole greatly improved. The Pastures are well known as some of the most valuable Feeding Land in Northumberland. The whole of this Lot is Let to Mr. W. Morrison on a Lease for 15 years from the 13th day of May, 1856. Great facility of communication both to the North and South is afforded by the trunk line of the North Eastern Railway, which intersects and has a Station upon the property. There is Coal and abundance of excellent Limestone upon the property, with Kilns for Burning the latter, for which almost unlimited demand exists in Tweedside and the South of Scotland. These Minerals are Let on Lease to substantial Tenants. The Tithes are commuted for Rentcharges amounting to 100*l.* 16*s.* 2*l.* 18*s.* 6*d* for Castle Guard and Quit Rents is payable out of this Lot to the Earl of Tankerville.

LOT 2.—1. BLINK BONNY HOTEL, with a Four-stalled Stable, Out-houses, and 2A. 2R. 35P. of Land, in the Occupation of Mr. George Cockburn. 2. A DWELLING HOUSE and SHOP, adjoining the above, in the Occupation of Mr James Thompson. 3. THREE COTTAGES, also adjoining the above. These premises have been lately built, and are well situated for business, from their situation immediately adjoining the Railway Station, and to the road which is the great thoroughfare from the railway to the East and West. The Property may be seen on application to the Tenants; and Particulars may be had of the Auctioneer, at the Place of Sale, and at the Offices of Messrs. WILLIAM & BENJAMIN WOODMAN, Solicitors, Morpeth.—February 18.

FANCY POULTRY AND PIGEONS.

MR. J. C. STEVENS will Sell by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on TUESDAY, February 21, at 12 o'Clock precisely, about 250 lots of POULTRY and PIGEONS, consisting of Cochins, Dorkings, Spanish, Bramahs, Polands, Hamburghs, Bantams, Game, &c., from Mrs. Stow, Miss Milward, Messrs. Leno, Stainton, and other well-known breeders; also a good lot of Pigeons from several well-known fanciers.—May be viewed on the Morning of Sale, and Catalogues had; if for the country, by inclosing two stamps.

16,000 CONIFEROUS PLANTS FOR SALE.

MR. J. C. STEVENS will Sell by Auction, at his Great Room, 38, King Street, Covent Garden, W.C., on TUESDAY, February 28, at Half-past 12 o'Clock precisely, the surplus stock of SEEDLINGS, the property of a gentleman, including—

1000	Pinus Laricio	36	Pinus religiosa
600	,, Taurica	6	,, subangeana
6	,, Russelliana	48	,, Nesselrodiana
5	,, nitida	24	,, Ocote
29	,, Lowi	24	,, Thibaudiana
32	,, robusta	2200	Cupressus Lawsoniana
6	,, Llaveana	24	Abies hirtella
3580	,, excelsa	1000	,, Pindrow
70	,, Don Pedri	5500	,, Menziesi
6	,, angulata	600	,, Douglasi
12	,, Passaleni	100	Picea Pinsapo, &c.

And 30 strong Plants of Wellingtonia gigantea, 2 feet high.

May be viewed on the Morning of Sale, and Catal ogues had; if for the country, by inclosing two stamps.

HIGHLY IMPORTANT SALE OF CONIFEROUS SEEDS, BULBS, FLOWER SEEDS, ETC., FROM MEXICO, CALIFORNIA, ETC.

MR. J. C. STEVENS will Sell by Auction at his Great Room, 38, King Street, Covent Garden, W.C., on WEDNESDAY, Feb. 29, at half-past 12 precisely, a very choice and valuable Consignment of MEXICAN SEEDS, including

Pinus Don Pedri	Pinus Ceiophylla	Pinus Wilsonii
,, Endlicheriana	,, Dolleriana	,, Veitchii
,, Planchoni	,, Richardiana	,, Lowii
Bonapartia gracilis	Littæa histrix	Yucca filesfera
Agave Bessereriana	,, Xafapaensis	Agave coccinea

Yucca Parmentieri, Cratægus mexicana, Dahlia ziniapance, &c.; also about 20 lots of Californian Seeds and Cones, and a small importation of Picea Pinsapo.—On view the Morning of Sale, and Catalogues had; if for the country, by inclosing two stamps.

SALE OF NURSERY STOCK.

MESSRS. PROTHEROE AND MORRIS have received instructions from the executors of the late **Mr. Robert McPherson, Nurseryman, of Plaistow, Essex, deceased, to offer to public competition, early in March next,** the whole of the NURSERY STOCK, which includes some well Trained Fruit Trees, Greenhouse Plants, Greenhouses, Hot-water Apparatus, Pits, Frames, and all the etceteras of a Nurseryman's Business. Further particulars will be given in future advertisements.—American Nursery, Leytonstone, N.E.

IMPORTANT SALE OF STANDARD ROSES, FRUIT TREES, LILIUMS, ETC.

MESSRS. PROTHEROE AND MORRIS will Sell by Auction at the Mart, Bartholomew Lane, E.C., on WEDNESDAY, February 22, at 12 o'Clock, about 1000 very fine Standard, Half-Standard, and Dwarf Roses, including the finest Hybrids, Perpetuals, Noisettes, Bourbons, &c.; also, handsome Standard and Dwarf-trained Peaches, Nectarines, Apricots, Apples, Pears, Plums, Cherries, &c., selected ornamental Trees; American Plants, comprising Ghent and other Azaleas, Hybrid Rhododendrons, Kalmias, Magnolias, Andromeda floribunda, &c.; Lilium lancifolium rubrum, punctatum, excelsum, album, a portion of the late Mr. GROOM'S celebrated Stock from Clapham Rise Nursery; together with choice Fuchsias, Verbenas, Epacrises, Ericas, Pæonias, Dahlias in dry roots, &c.—On view the morning of Sale; Catalogues had at the Mart, and of the Auctioneers, American Nursery, Leytonstone, Essex, N.E.

ANNUAL SALE OF CAMELLIAS, ROSES, ETC.
To GENTLEMEN, FLORISTS, AND OTHERS.

MESSRS. PROTHEROE AND MORRIS will Sell by Auction at the Mart, Bartholomew Lane, E.C., on FRIDAY, Feb. 24, at 12 o'Clock, about 200 Choice Double Camellias, from 18 inches to 6 feet, consisting of all the most approved kinds, beautifully furnished with bloom buds; Azalea indica in bloom; a choice assortment of about 500 very handsome Standard and Dwarf Roses; a fine collection of American Plants, Lilium lancifolium rubrum, Epacris, Ericas, choice Dahlias in dry roots, Pæonias, Fuchsias, Verbenas, &c.—On view the morning of Sale; Catalogues may be had at the Mart, and of the Auctioneers, American Nursery, Leytonstone, Essex, N.E.

IMPORTANT SALE OF NURSERY STOCK.

MESSRS. PROTHEROE AND MORRIS have received instructions of Mr. Epps, Bower Nurseries, Maidstone, to Sell by Auction on MONDAY and TUESDAY, the 27th and 28th February, commencing at 11 o'Clock on each day, all the valuable NURSERY STOCK remaining on the land recently sold for building, situated on the Tonbridge Road, adjoining the Bower Nurseries, consisting of some noble specimens of Cedrus Deodara africana, Pinus excelsa, macrocarpa, Araucarias, ornamental Shrubs and Trees of great variety for immediate effect; 2000 Standard Roses, and large quantity of Laurels, Portugal do., Mahonia Aquifolium, Rhododendrons, Laurustinus, Yews, Privet, deciduous and flowering Shrubs, Poplars, Limes, Scotch and Spruce Fir, Larch and Chesnut; Currant Trees, Standard Apples, Pears, and Plums, handsome trained Peaches, Nectarines, Cherries, &c.; hardy Climbers and Ivy in pots. The whole of the above Plants and Trees have been recently removed.—Catalogues to be had of the Auctioneers, Leytonstone, Essex, N.E, and the principal Seedsmen in London.

WANDSWORTH.

To GENTLEMEN, BUILDERS, CONTRACTORS, AND OTHERS.

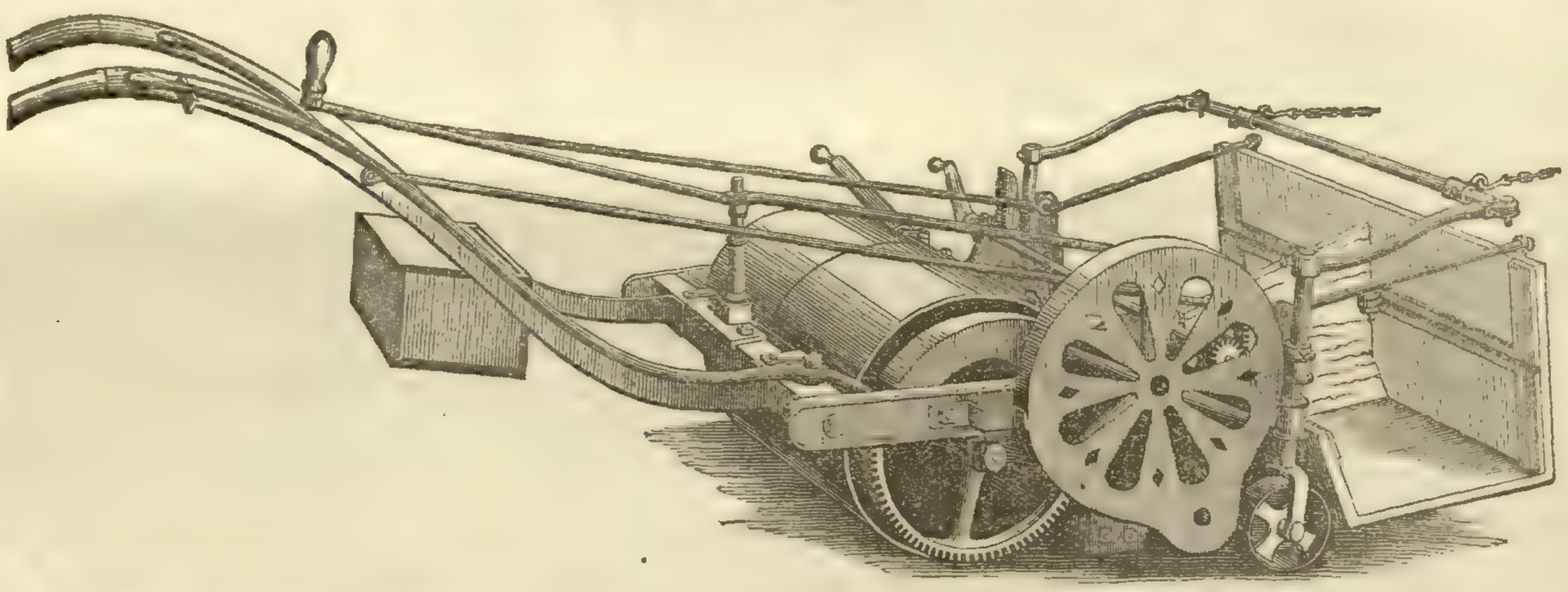
MR. J. WILLMER beg to announce that he will submit to Public Auction on the premises, the Nursery, Wandsworth Common, S.W., on MONDAY, Feb. 27, and four following days, at 12 o'Clock each day, by order of Mr. R. Neal, in consequence of a portion of the ground being required for building purposes, the extensive and well selected NURSERY STOCK, which comprises Laurels, Portugal Laurels, Hollies, Araucaria imbricata, Cedrus Deodara, Cedar of Lebanon, Berberries, Daphnes, Rhododendron, Kalmia latifolia, Standard Rhododendrons, Standard and dwarf Roses, Laurustinus, Abies canadensis, Yucca filimentosa, Yews of sorts, Lilac, Evergreen Privet, Silver Fir, Spruce Fir, 10 to 14 feet; Brooms, Honeysuckles, Sweetbriar; Evergreen Oak, Standard Dwarf and Trained Plums, Pears, Apples, Peaches, Apricots, Nectarines, Gooseberries, Currants, &c. &c.—May be viewed the Friday and Saturday previous to the Sale, and Catalogues had on the Premises; or by enclosing a postage stamp to Mr. J. WILLMER, Auctioneer, Surveyor, and Valuer, Springfield Nursery, Sunbury, Middlesex, S.W.

BY ROYAL LETTERS PATENT.

SHANKS' NEW PATENT MOWING, ROLLING, COLLECTING, AND DELIVERING MACHINE.

IMPORTANT IMPROVEMENTS for 1860 peculiar to **SHANKS' PATENT LAWN MOWER.**

HORSE-POWER MACHINE.



Among the valuable improvements for this season in these now celebrated and well-established Lawn Mowing Machines may be mentioned—

1st. The Shafts or Handles of all the different sizes of Machines are made of Malleable instead of Cast Iron, and are much neater, not nearly so liable to break, and a great deal lighter than the usual Cast Iron ones.

2d. The Reduction of Weight by the substitution of Malleable for Cast Iron to as great an extent as possible on the whole Machine, makes it stronger and more fit for the rough usage it may at times receive in working from the labourer or gardener not skilled in machinery.

3d. The Draught is greatly lessened by the reduced weight and less friction on the journals. The Machine is at least one-half more easily worked than formerly.

4th. The Cutter, by a simple contrivance, is prevented from breaking, although it may come into contact with a stone or other hard substance in Mowing.

5th. The annoyance which is often given by the bearings of the Cutter getting loose, and the latter wearing down on the Plate, causing much stiffness and friction in working, is also completely obviated.

6th. The Wheels are also secured from injury in precisely the same manner as the Cutter.

7th. The Patent Delivering Apparatus is attached to all the Horse, Pony, or Donkey Machines, and effects a saving in the work executed over all other Lawn Mowers of 35 per cent., and a saving in troub'e to the man in working the Machine of 75 per cent.

This Apparatus may also be attached to the Hand Machines if required.

8th. *Everything in the shape of novelty, not improvement,* is carefully excluded from the Machine, which is now as nearly perfect as is possible for any Lawn Mower to be for practical use. The simplicity and strength of construction, the ease with which the Machine can now be worked, and its advantage over all other Lawn Mowers in the additional operation of Delivering the Grass without stopping the Machine, make it peculiarly fit for all the purposes of Mowing, whether for Verges, the Flower Garden, or the open Lawn. The style in which the work is executed cannot be surpassed; and *it is quite immaterial whether the Lawn be level or otherwise, or whether the Grass be wet or dry.*

PRICES:—

SHANKS' NEW PATENT HORSE MACHINE for MOWING, ROLLING, COLLECTING, and DELIVERING.

Including Box of Tools for Sharpening, &c., and directions.

Width of Cutter.				Width of Cutter.			
No. 1.—48-inch Machine	£28	0	0	No. 3.—36-inch Machine	£22	0	0
No. 2.—42-inch Machine	£26	0	0	No. 4.—30-inch Machine	£19	0	0

SHANKS' NEW PATENT PONY AND DONKEY MACHINE, for MOWING, ROLLING, COLLECTING, & DELIVERING.

Including Box of Tools for Sharpening, &c., and directions.

No. 5.—30-inch Machine .. £15 15 0 | No. 6.—28-inch Machine .. £14 10 0
No. 7.—25-inch Machine £12 10 0

SHANKS' NEW PATENT HAND MACHINE, for Pushing or Drawing, separately or together.

Including Box of Tools for Sharpening, &c., and directions.

Width of Cutter.				Width of Cutter.			
No. 8.—24-inch Machine	£8	17	6	No. 10.—19-inch Machine	£7	12	6
No. 9.—22-inch Machine	£8	7	6	No. 11.—16-inch Machine	£6	17	6

No. 12.—13-inch Machine .. £6 2 6

The Patent Delivering Apparatus may be attached to the Hand Machines at 20s. extra.

SHANKS' NEW PATENT HAND MACHINE, for Drawing only.

Including Box of Tools for Sharpening, &c., and directions.

No. 13.—22-inch Machine .. £7 5 0 | No. 14.—19-inch Machine .. £5 15 0
No. 15.—16-inch Machine .. £6 5 0

☞ *The Machines are delivered Free of Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom, and are warranted to give ample satisfaction, and if not approved of they may be at once returned.*

TESTIMONIALS.

From Mr. GEORGE EYLES, *late Chief Superintendent of the Grounds and entire Horticultural Department of the Crystal Palace, Sydenham, and now appointed to the Superintendence of the Horticultural Society's New Gardens, Kensington Gore, and the Gardens, Chiswick, in favour of* SHANKS' *Patent Lawn Mowers—(the 30-inch Horse-power Machine used on the Lawns of the Crystal Palace):—*

"Crystal Palace, December 20, 1859.

"I have much pleasure in bearing testimony to the excellence of the 30-inch Shanks' Patent Lawn Mowing Machine you sent us. We have had it in use almost daily up to the end of the mowing season, and it has always performed its work in the most satisfactory manner, *and has never been once out of repair.* The contrivance for emptying the Grass Box is *a great acquisition, and effects a considerable saving of time.*"

From Mr. HARLEY, *Gardener to* THOMAS CHAMBERLYNE, Esq., *Cranberry Park, near Winchester.*

"The Gardens, Cranberry Park, July 5, 1859.

"I am happy to be able to add my testimony to the high merits of the Shanks' 30-inch New Horse Lawn Mowing Machine which you sent me. I have put it to work, in its trials, on rough and uneven ground, which had only been once mown this year with a scythe. It surpassed all my expectations, as it likewise did my employer and other gentlemen who witnessed its working. When taken on the lawn, where it had a better chance of showing its power, nothing could possibly excel it; after cutting, and the Grass being removed, the lawn never before looked half so well as it did then. I am quite sure that I shall be able to pay the expense of the Machine this year, in the labour saved from the use of the scythe, and not only that, but it leaves the turf in such fine condition. My opinion is that no one should be without Shanks' Machine, as I believe it to be, without exception, the best I ever saw worked. *The self-acting apparatus for delivering the Grass is the most complete thing brought out in any Mowing Machine inventions.*"

From Mr. ALEX. SHEARER, *Gardener to* THE MARQUIS OF TWEEDDALE.

"Yester Gardens, May 13, 1859.

"Your improved Grass-cutting Machine which we got the other day (especially the delivering part) is a mechanical triumph. It acts far beyond my expectation, and performs all you say in your prospectus. The men are quite in love with it—a good proof of its utility."

From Mr. JAMES MACKIE, *Gardener to* HIS GRACE THE DUKE OF ATHOLL.

"The Gardens, Dunkeld, May 18, 1859.

"I have much pleasure in saying that I now consider your Machines complete. We can now do as much work in six hours as we used to do in ten hours with the old plan of stopping to empty the Grass Box, and with far greater ease both to man and horse."

SOLE AGENTS FOR LONDON.

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

Printed by WILLIAM BRADBURY, of 13, Upper Woburn Place, and FREDERICK MULLETT EVANS, of No. 20, Queen's Road, West, both in the Parish of St. Pancras, in the Co. of Middlesex, Printers, at their Office, Lombard St., Precinct of Whitefriars, City of London, and published by them at the Office, No 5, Upper Wellington St., Parish of St. Paul's, Covent Garden, in the said Co.—SATURDAY, February 18, 1860.

AGRICULTURAL SEEDS, 1860.

PETER LAWSON & SON,

THE QUEEN'S SEEDSMEN.

EDINBURGH,

AND

27, GREAT GEORGE ST, WESTMINSTER, LONDON. S.W.,

RESPECTFULLY announce the Publication of their PRICED LIST OF AGRICULTURAL SEEDS, including—in addition to Turnips, Mangels, and other Field Roots—Quotations of Clovers, Rye-grass, Pasture Grasses, and Herbage and Forage Plants.

P. L. AND SON pay especial attention to their Stocks of TURNIPS, MANGELS, CARROTS, &c., which are raised under their immediate personal superintendence, in accordance with the most approved practice; they also continue to give their most particular attention to NATURAL GRASSES, which they supply assorted, of the most approved kinds, for various purposes, soils and situations, as detailed in a series of tables recently published, and which may be had on application. PRICED LISTS FORWARDED FREE.

AGRICULTURAL SEEDS.

JAMES CARTER & CO.,

237 & 238, HIGH HOLBORN, W.C.,

BEG leave respectfully to inform their Customers that in consequence of the late severe frosts their quotations for MANGEL WURZEL and TURNIP SEEDS will be *advanced* on and after the 1st of March next.

LIST OF NEW AND CHOICE FLOWER SEEDS,

EXTRACTED FROM

CARTER'S GARDENERS' VADE MECUM.

which will be forwarded free on application.

	Per packet—s.	d.
CLARKIA PULCHELLA INTEGRIPETALA	1	0
CALLIRHOE DIGITATA	0	6
FENZLIA DIANTHIFLORA	1	0
SPRAGUEA UMBELLATA	1	0
NIGELLA HISPANICA ALBA	1	0
NIGELLA ATROPURPUREA	1	0
ŒNOTHERA BIENNIS HIRSUTISSIMA	1	0
LARKSPUR TRICOLOR ELEGANS	0	6
PHORMIUM TENAX	1	0
NEMOPHILA DISCOIDALIS MARMORATA	0	6
LOBELIA GRACILIS ROSEA	1	0
DIANTHUS LACINIATUS, fl. pl.	1	0
ANAGALLIS NAPOLEON III.	1	0
CHRYSOBACTRYON HOOKERI	2	6
CYCLAMEN PERSICUM, fine hybrids	1	0
DATURA CARTHAGINENSIS	0	3
GYNERIUM ARGENTEUM	1	0
PELARGONIUM, finest English	1	0
IPOMŒA LIMBATA ELEGANTISTIMA (true)	1	0
AGROSTIS NEBULOSA	0	6
ERIANTHUS RAVENNÆ	1	0
LUPINUS MUTABILIS VARIECOLOR	0	6
DATURA CHLORANTHA, fl. pl.	0	6
LYCHNIS HAAGEANA	1	0
SILENE BARBATA	0	6
SOLANUM CAPSICASTRUM	0	6
LEVIATHAN SUNFLOWER	0	6
THUNBERGIA AMERICANA	0	6
DIANTHUS HEDDEWIGI	0	6
ANAGALLIS EUGENIE	1	0
ABUTILON DUC DE MALAKOFF	1	0
CAMELLIA JAPONICA	1	0
GLADIOLUS GANDAVENSIS, fine hybrids	1	0
GLORIOSA PLANTI	1	0
PLEROMA ELEGANS	2	6
PELARGONIUM, finest French	1	0

NEW DWARF BEDDING TROPÆOLUMS.

TOM THUMB (Yellow).—A new variety in colour, particularly adapted for bedding, and also for growing in pots and ornamental vases; the flowers are well thrown up above the foliage; very dwarf and compact in habit; colour, pure yellow without any marking. The Floral Committee of the Horticultural Society speak of it as follows:—"The habit of this plant, *shown by the entire plants exhibited*, was quite dwarf and *compact*, and the flowers were of a golden yellow." It was "commended" as likely to be a useful Flower-garden and Bedding plant. 1*s.* per packet.

TOM THUMB, BEAUTY.—An elegant variety with Lobbianum-shaped flowers, raised by Mr. Melville, Gardener to the Earl of Roseberry, Dalmeny Park, near Edinburgh; the flower is yellow, flamed and blotched with bright crimson. A plant was sent to the Editors of the *Cottage Gardener* in October, 1858, who speak of it as follows:—"A dwarf yellow, tinged with crimson; would be a good bedding plant." 1*s.* per packet.

TOM THUMB (Scarlet).—This was sent out by us for the first time last year, and has given universal satisfaction; brilliant scarlet flowers well thrown up above the foliage: very dwarf and compact in habit. 6*d.* per packet.

FRESH SEED OF CHOICE HARDY CONIFERS.

WELLINGTONIA GIGANTEA	PINUS JEFFREYI	PINUS WILLIAMSONI
PINUS LAMBERTIANA	,, SABINIANA	ABIES MENZIESII
ABIES DOUGLASII	,, PONDEROSA	THUJA CRAIGIANA
CUPRESSUS LAWSONIANA	,, BENTHAMIANA	

Each of the above, 2*s.* 6*d.* per packet.

SPERGULA PILIFERA,

A Substitute for Grass on Lawns, requiring no Mowing.

This small dwarf hardy Perennial is from half an inch to an inch in height, with close compact Grass-like stems of a bright clear green colour, and by continual rolling will form an unbroken sheet of verdure, uninjured either by long-continued drought or severe frost. It maintains its beauty throughout the winter months, and will succeed in any soil; when once fully established it is almost impossible to eradicate it, from the fact of its long tap-roots penetrating to a depth of 2 feet in favourable situations. Its chief qualification is, however, the extreme beauty of its growth, there being no inequality of surface discoverable in several seasons; it is also very effective for covering slopes, terraces, banks, edgings, &c.; and when in bloom, during June or July, its pretty white flowers are extremely attractive and pleasing.

In mild weather the seed may be sown from the first week in April forwards, on beds of east or north aspect. Sow uniformly, as thin as possible, to admit of the seedlings being easily thinned out—the ground kept nearly uniform in moisture. In case of extreme changes in the weather, hoop the beds over, which protect by night with garden mats or other material; and with the same, shade by day from chilling winds, and during the germination of the seed. Transplant by thinning out as soon as practicable upon store beds, with a firm ground surface. Price 6*d.*, 1*s.*, and 2*s.* 6*d.* per packet.

CARTER'S FLORAL ILLUSTRATIONS.

JAMES CARTER AND CO. beg leave respectfully to announce that under the above designation they commenced issuing in the Spring of 1857 a Series of Coloured Drawings (by Andrews), which will be continued with each annual publication of their Catalogues. It is their intention that each Plate shall contain the most desirable novelties of the season, together with any desirable improvement in the varieties already in cultivation. One of the chief reasons for the publication of these Illustrations is, that they may serve as a guide to Amateurs and others in the selection of good new Flowers from among the great number sent out annually, many of which are often inferior to the older varieties.

PLATE No. 8, price 1*s.* 6*d.*, contains: Dianthus chinensis Heddewigi—Dianthus chinensis laciniatus—New hybrid blue-flowered Sweet Pea—Lobelia gracilis rosea—Callirrhoe digitata, Nigella hispanica alba—Nigella hispanica atropurpurea—Clarkia pulchella var. integripetala.

PLATE No. 9, price 1*s.* 6*d.*, contains: Aster La Superbe—Œnothera biennis var. hirsutissima—Datura chlorantha fl.-pl.—New Perennial Scabious—Larkspur tricolor elegans—Lychnis Haageana—Spraguea umbellata—Ipomœa limbata elegantissima.

☞ *For further particulars of the above see* CARTER'S GARDENERS' VADE MECUM, *which contains all the novelties of the day, and will be forwarded free on application to*

JAMES CARTER & CO., 237 and 238, High Holborn, W.C.

GOOD CLOVER SEED.

GENUINE NEW CLOVER SEED may be obtained of the undersigned. Prices (according to market and quantity required) will be forwarded on application.
SUTTON & SONS, Seed Growers, Reading, Berks.

SORGHUM OR HOLCUS SACCHARATUS SEED.

SUTTON AND SONS, IMPORTERS, can supply genuine new Seed at 1*s.* 6*d.* per lb., or 6*d.* per packet; with Instructions on Cultivation.
Royal Berkshire Seed Establishment, Reading.

GYNERIUM ARGENTEUM OR PAMPAS GRASS.—A packet of Seed with Instructions on Cultivation free by post on receipt of 12 penny stamps. Plants 1*s.* 6*d.* to 3*s.* 6*d.* each.
SUTTON & SONS, Royal Berks Seed Establishment, Reading.

LAWNS WITHOUT MOWING—SPERGULA PILIFERA.

J. A. SUMMERS supplies strong plants for immediate planting, taken from the original stock, at 1*s.*, 2*s.*, and 4*s.* per doz. A specimen post free, 1*s.*
Howard Park Nursery, Perry Hill, Sydenham, S.E.

MANGEL WURZEL SEED.

JAMES FAIRHEAD AND SON, Lewisham, Kent, and 7, Borough Market, S.E., beg to inform their customers that on account of failure of plants, and bad prospect for Seed crop ensuing season, their quotations for orders after this date will be advanced. Prices on application.—Feb. 25.

SEED CORN FROM THE CHALK.—All the best varieties of SEED WHEAT, BARLEY, OATS, &c., may be had as usual of Messrs. RAYNBIRD & Co., of Basingstoke and 89, Seed Market, Mark Lane, London, E.C.
Samples and prices on application.

GIANT POLYANTHUS AND GIANT COWSLIP.—A few pounds of these gigantic and beautiful Spring Flowers to be disposed of, and many of them almost equal to the Auricula.—Apply to G. MACE, at the Garden, Calcot, near Reading.

COB NUTS.—What crop will produce most sovereigns to the acre? KENTISH COB FILBERTS.—Application for trees to be made to GEO. MACE, at the Gardens, Calcot, Reading.

WELLINGTONIA GIGANTEA.

JOHN WATERER has thousands of the above Plants to offer, varying in height from 1 to 4 feet. The whole are exceedingly handsome and well rooted. Price on application.—The American Nursery, Bagshot, Surrey.

CEDRUS DEODARA.

MAULE AND SONS still hold the largest supplies of the above tree in the country, and invite the attention of gentlemen planting, and the Trade generally. Magnificent specimens, 5, 6, 7, 8, 9, and 10 feet, at 5*s.*, 6*s.*, 7*s.*, 8*s.*, 9*s.*, and 10*s.* each.—Stapleton Road and Stoke Nurseries, Bristol.

FOX COVERT.

MAULE AND SONS can supply Noblemen and Gentlemen thickening or planting their coverts with fine two-year-old GORSE or FURZE PLANTS, at 10*s.* per Thousand.—Stapleton Road and Stoke Nurseries, Bristol.

CHARLES NOBLE has a fine selected stock of Hardy Evergreens, Coniferæ, &c., carefully removed last spring. A CATALOGUE forwarded on application. All losses from removal made good on conditions named in Catalogue.
The Nursery, Bagshot.

The Gardeners' Chronicle.

SATURDAY, FEBRUARY 25, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, Feb. 28 { Horticultural (election of Fellows) / Soc. of Arts, John St, Adelphi 1 P.M.
THURSDAY, March 1—Linnean ..... 8 P.M.

THE *Revue Horticole* makes the following statement with reference to the difficulty of growing our wild TERRESTRIAL ORCHIDS. After adverting to the want of success that generally attends this operation, we are informed that M. RIVIÈRE, the chief gardener at the Luxembourg, had accidentally discovered the secret of their management. He had been trying to grow them in the same way as they grow naturally, that is to say, mixed with Grass and other herbage; and, like other people who had made a similar attempt, he found that his Orchids were quickly destroyed by the excessive growth of their neighbours' roots. Thus far he moved in the same groove as his predecessors.

He happened, however, to espy one day a little Orchid germinating upon a lump of *Iris florentina* which had been thrown away; having separated this part of the lump and carefully potted it, he saw to his great surprise a strong plant of Ladies' Traces (*Spiranthes autumnalis*) push up. By some lucky accident a few seeds of the plant had been scattered among the Iris. Now this Spiranth was just one of those which had the most obstinately refused to be managed; but here it had overcome its caprice and found an acceptable companion. At a later period he substituted *Iris nana* for *I. florentina*, the smaller size of the former rendering it more suitable for Orchids; and from this time forward the Spiranth grew stronger and stronger till it became finer than in its wild haunts.

This occurred eight years ago, and not only does the Spiranth continue to flourish, but M. RIVIÈRE states that he has since added to the *Iris nana* several other "rebellious species," and with complete success.

We own ourselves at a loss to understand the reason why this conjuncture of Orchids and Iris proved so favourable. It is hard to believe that the one had any direct influence over the other. The only suggestion that occurs to us is that any

other plant with the same manner of growth would have done as well. Have these fleshy plants the power of keeping the earth that lies between their crawling stems in precisely the state of dampness which Orchids require; or do the joints of such stems preserve the Orchid roots from injury, at the same time allowing them to ripen thoroughly? Or is there any other solution of the problem? We should like to hear the opinion of such men as DOMINY or WILLIAM BARNES upon the subject. We should like still better to find that the French statement is tested by experiment; for it certainly is not to the credit of gardeners that while they infuse into Exotic plants a vigour unknown to them in a wild state, they are unable even to keep alive those which grow at their own doors.

THE excellence of the CHINESE YAM, in the hands of a cook who will follow her instructions, is at length admitted, as well as the facility with which ample crops may be had. It is therefore worth while, now that the planting season is at hand, to call attention to the results that have lately been obtained in this country and in France.

It appears, from the Proceedings of the Paris Horticultural Society, that our English gardeners have already carried off the palm. Mention is made in Paris of roots weighing 3½ lbs. or thereabouts, and 38 inches long, the produce of a single season, but of nothing heavier; while Messrs. IVERY exhibited lately to the Horticultural Society of London roots weighing 6 lbs. 6 oz., although only 36 inches long. It is true that M. BOURGEOIS produced in Paris a root weighing nearly 15½ lbs.; but in the first place it was two years old, and secondly it was excessively forked, having divided into 2 main arms and about 30 fingers. It had been grown on a bed of leaves, and apart from everything else; and was evidently an exceptional case. Another French grower laid before the Society roots three years old, obtained by filling holes made in clay with vegetable mould. Nothing more is said of these three-year-old roots, except that one of them was more than a yard long, and that they were extremely troublesome to raise.

We learn, however, that this Yam has already begun to change its form. Small specimens have been raised in Paris by M. PISSOT, of a nearly globular form, with a narrow, thread-like neck, about 4 inches long; the stock of these had been sent from China by M. de MONTIGNY. Another gentleman stated that he had raised a crop of seedlings from seeds ripened in Algeria, and that among them were some whose roots were nearly round; time alone, however, could decide whether this new form would be permanent. Should it be so the change would be important, because, although men of intelligence find no difficulty in raising the long roots, it must be admitted that others, less fortunately constituted by nature, are still unable to do so without breaking them.

Let us add that the following plan, adopted by Mr. INGRAM in the Royal Gardens at Frogmore in 1859, has proved very satisfactory. In making and preparing the bed a piece of light ground was marked out about 100 feet long and 7 wide, and trenched 3½ feet deep, well mixing a little good rotten manure as the work proceeded. When all was trenched the soil on each side, to the width of 18 inches and a foot deep, was thrown on the top to raise the bed and allow a sufficient depth for the roots to grow down. After levelling and raking a board was used for the workman to stand on and cut out a trench with a spade 6 inches deep. The sets were then planted about a foot apart, from centre to centre, which admitted six sets across the bed, the board turned over, and a similar trench made 1 foot from the other, and so on until the bed was finished. The sets were cut from 5 to 6 inches long, and no difference was found in the produce from sets cut from the top, the middle, or the bottom of the roots. A considerable quantity were propagated from cuttings the previous year, the small tubers of which were preserved in sand during the winter and planted on a portion of the bed; the produce of these were much smaller than the others, not weighing on an average more than 12 oz. each, the others 2 lbs., some 3½ lbs. This form of the bed admits of the most ready way of taking up the tubers; a trench 4 feet wide and 4 deep is dug at one end, and a careful man can take them all out without the least damage. The bed was made early in April.

A FEW scraps from foreign journals still remain:

—— The climate of France seems to have been last year as exceptional as our own. The summer was "torrid." At Lille in the North the thermometer nearly reached 94°; at Blois, 97°; at Tours, 99°; at Nismes it varied nearly for a month between 92° and 104°; at Montpellier it rose to 108°. This heat was accompanied by extraordinary dryness. In the south most of the little water-courses were dried up, and great rivers, the Loire and the Allier among them, were almost reduced to mere rivulets. This combination of heat and dryness produced serious consequences; hay and field crops of vegetables were in some places reduced to nothing; at Montpellier and elsewhere the Grapes shrivelled on the Vines, and other fruits became ripe prematurely. On the other hand Figs, Oranges, and Pomegranates ripened where they had not ripened before; and near Cherbourg Camellias, Mandevilla, Edwardsias, New Holland Acacias, Araujia albens, and even Myrsine africana ripened their fruits in the open air. "In surveying the gardens of Europe," adds M. LEPELLETIER, from whom we borrow the above statement, "it is impossible not to see that England is the country where Horticulture has reached its climax, and that a taste for fine plants falls off as we become more distant from its shores. Observe Holland, Belgium, Flanders, Normandy, you find there a distinct reflection of England; the climate is nearly the same, there is the same horticultural riches and the same taste for gardens, parks, trees, evergreen shrubs, and flowers. But advance to the south, whether by the east or by the west or by the centre, all these ornaments of a country gradually disappear, and you arrive at regions where gardening, confined to objects of first necessity, such as esculent vegetables, and fruit trees, is in a miserable state even as regards those things. Doubtless it is a little better in the neighbourhood of the rich cities of the south, where climate does almost everything; but there, as in Central France, the population has no gardening fondness, and horticulture is only preserved by a few honourable exceptions. This is a sad state of affairs, it must be confessed; but it is better to describe it as it is than to paint it in false colours for the sake of satisfying our national self-love. Our countrymen should be made to understand clearly that they do not hold the palm in gardening; that they still have much to do before they can rise to the level of several neighbouring countries; but that at the same time, if they will but set seriously to work, French horticulture, assisted by a climate infinitely better than theirs, will become in a few years the finest, the most flourishing, and the most productive in Europe."

——We extract from a German newspaper, the *Landwirthschaftliches Centralblatt*, says the *Revue Horticole*, the following description of the method used by the Dutch to obtain their Cauliflowers, so famous for their size and delicacy. In the autumn they dig deep some ground that has not been manured; at the beginning of May they sow the large English Cauliflower upon a bed of manure, and cover it with straw mats at night. When the young plants are 3 or 4 inches high, they harrow the ground that had been prepared the autumn before, and with a wooden dibble, 18 inches long, they make holes about 10 inches deep, at proper distances apart, and enlarge them by working the dibble round till the hole at the top is about 3 inches in diameter. They immediately fill these holes with water, and repeat this three times the same day. In the evening they fill them with sheep's dung, leaving only room enough for the young plant, which they very carefully remove from the bed of manure and place in the hole with a little earth. Directly afterwards they give them a good watering and as soon as the sun begins to dry them, water them again. Furthermore, as the plants grow, they dig round them and earth them up in rows. When the head is forming, they pinch off some of the lower leaves of the plant, and use them to cover the young head.

—— The POTATO DISEASE was lately the subject of discussion at a meeting of the Imperial Horticultural Society of Paris. M. LACHESNAYE reported that on the 16th of April he had planted some sets (? *rondelles*). On the 1st of August the plants were in good condition, but were afterwards neglected, and when he returned from a tour he found the haulm all withered. Round Potatoes and Dutch had been planted for comparison. Upon taking them up he found that the first was destroyed by disease, but the others, side by side, were perfectly sound. It was, however, added that the sets of the first had begun to grow when set, while the second were still dormant.—Another gentleman said that he had found nothing the matter with his round Potatoes, but that he considered it important that the sets should not be allowed to push before planting.—M. DESEINE had planted 5 acres, and half his crop was destroyed by disease; but the latter was so capriciously distributed that he found sound and rotten plants standing side by side. He was of opinion that no Potatoes should be planted after the first fortnight in April.—Another speaker repeated the well-known fact that in low ground where fogs rest Potatoes are much more diseased than on high ground.

—— At the same meeting M. PIGEAUX produced a bunch of CHASSELAS GRAPES, which, he said, had ripened perfectly without having ever been exposed to the solar rays, the bunch having been constantly kept in a paper bag open only at the bottom. He stated that Grapes ripened in this manner keep perfectly well all through the winter, which is by no means the case with such as have been exposed to the sun, after having been either covered with dew or moistened in any other way. He regarded the disease from which they then suffer as a sort of erysipelas.

CULTIVATION OF THE POTATO.

MESSRS. HARDY & SON (see p. 104) have offered a few remarks respecting the Potato disease, frost, &c. I believe that their statement is but too true. In many localities crops have suffered very much from disease, and I fear we shall hear of sad havoc having been occasioned by frost. Many acres of Potatoes were not dug until after the severe frosts in October; and of these some were more or less injured, but the worst is not yet told, nor shall we know the result until such time as the clamps are opened. For several years I have been as successful in the growth of the Potato as most people, and probably I have taken more pains in the selection of varieties than any one person at the present day, and I have certainly paid for my hobby, for wherever I could hear of a new kind of Potato, let the distance be what it might, the expense of carriage was no obstacle in the way of procuring it. During my Potato mania I procured 123 varieties—what did I say, varieties? Alas! varieties of names—some of the sorts having no fewer than six different ones. For several years past I have urged your readers to adopt the principles laid down by me for Potato cultivation, but in many instances I am afraid that my persuasions have been in vain. Allow me therefore to recapitulate briefly the most essential points on which success almost entirely depends.

Choice of Ground.—The best soils for the Potato are light, dry, and friable loams. In general new or recently broken up land will produce better Potatoes than worked ground. Uplands and the lighter kinds of soils are better than rich strong ground. Sandy land produces scab, which will prevent the Potato from realising a high market price; besides, in dry seasons, the tubers are frequently very small, while strong tenacious soils, if constantly in a state of moisture, produce immature tubers which are sodden, waxy, and of bad quality; but in ground which to all appearance is loose and sandy, if there is humidity enough, Potatoes will thrive and be of excellent quality.

Preparation of the Ground.—All soils intended to be planted with Potatoes should be got up in as rough a state as possible by the end of November, in order that it may receive the benefit of frosty weather. The ridges should not be nearer than from 2 feet 6 inches to 3 feet apart. This should entirely depend on the nature of the ground and the varieties intended to be planted; some sorts produce double as much haulm as others. Potatoes should always be planted at such distances as that they may receive the full benefit of sun and air. Manure should always be applied in autumn in a thoroughly decomposed state, fresh green manure is certainly detrimental to the plant and encourages disease.

Selection of Tubers for Seed.—Unless your land varies in quality it is always much better to exchange or purchase the seed for planting. If you would escape disease never plant the same variety on the same land two years in succession. I prefer a change of sorts and seed every season. I would here remark this is one of the points necessary in order to avoid disease; whole sets are decidedly the best and although they may cost a trifle more per acre, yet a greater crop is obtained from them, and they have far more power to resist mischievous influences and to escape disease. Middle-sized sets should in all cases be preferred. Green tubers as they are termed are those which are full of vegetative sap; such as have never ripened to dryness are decidedly the best, and are found to inherit vigour and health; the best way to procure them is to dig up part of a crop before it is sufficiently ripe and expose the produce to sun and air. There is another advantage in procuring seed from land of a different quality from that you intend to plant, beside the one alluded to above: I have always found my crops at least one-third heavier when planted with fresh sorts and seed than when planted with my own selected seed from the same quality of land. I have remarked more than once, even when the tubers have been particularly small, that of those not of home growth the produce was much larger than that of full-sized sets that have been selected from the same kind of ground. In fact the largest crop of Potatoes I ever saw was from sets (many of them not larger than a Cob-nut) of the

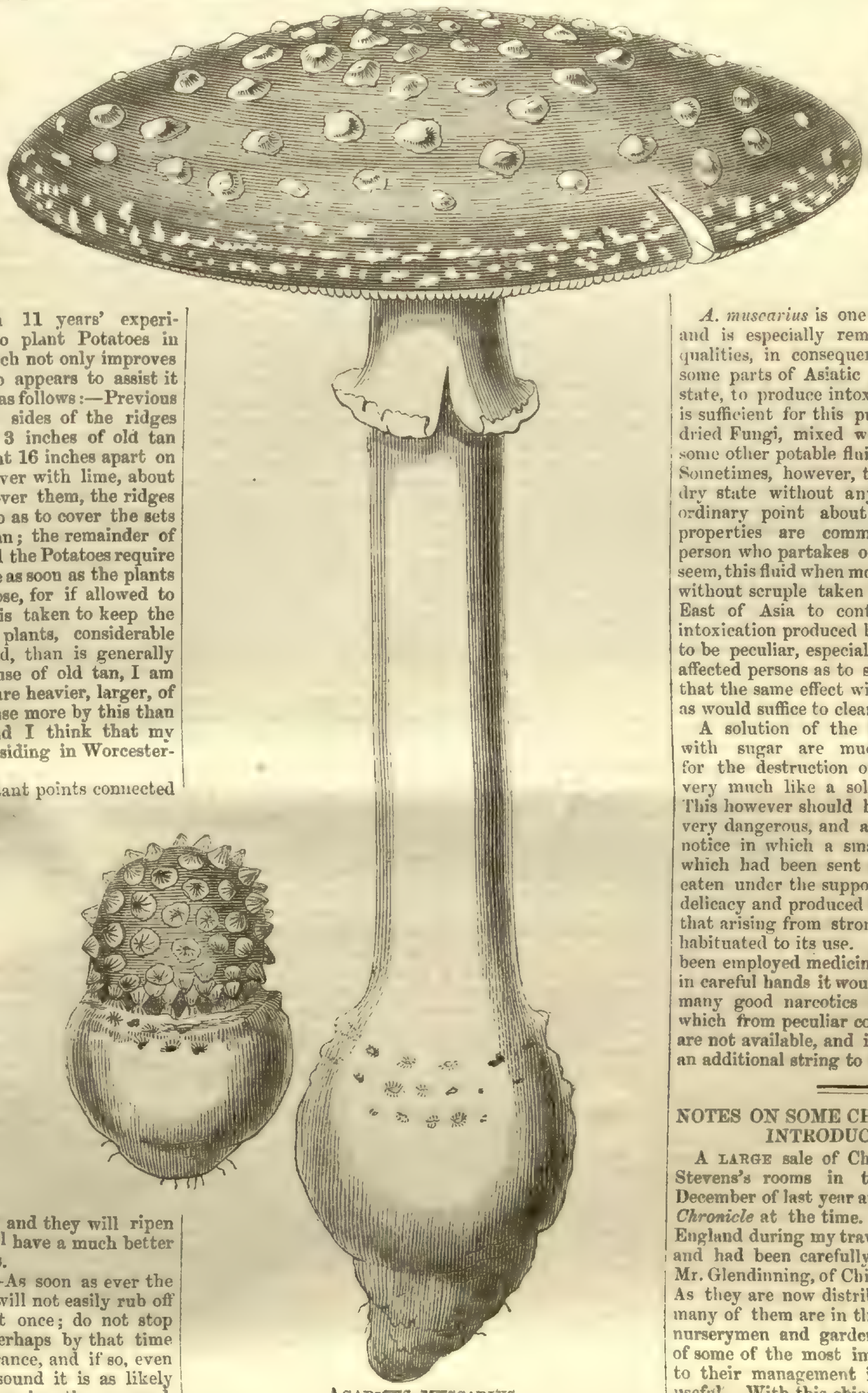
Lapstone Kidney; these were brought to Worcester by my late employer, Sir Offley Wakeman, Bart., from Scarborough. This convinced me at once that it was requisite to change the seed and kinds more frequently than I had hitherto done, a practice that cannot be too highly recommended.

Time and method of Planting.—The best time for planting is as early in spring as the weather and state of the ground will admit. I prefer the last week in February, for Potatoes under a low temperature without covering of mould begin to germinate spontaneously in March and April, which clearly indicates that it is time they were in the ground. I always think it detrimental to the crop if it is kept out of the ground later than the second week in March. A great point since the appearance of the disease is found to be having the Potato crop sufficiently forward to escape the risk of vicissitudes of weather at the stage of forming its tubers, and the damaging effects of wet and cold at ripening time. This cannot be attained by any expedient short of the earliest planting: yet situation, climate, soil, and the variety are powerfully controlling circumstances, and may render later planting necessary. I have found from 11 years' experience that it is the best mode to plant Potatoes in old tan with a portion of lime, which not only improves the quality of the Potato but also appears to assist it in resisting disease. My method is as follows:—Previous to planting the sets I have the sides of the ridges chopped slightly down and about 3 inches of old tan placed between them. I then plant 16 inches apart on the tan, then dust the sets and cover with lime, about 4 inches more of tan is then put over them, the ridges are again slightly chopped down so as to cover the sets with about 8 inches of soil and tan; the remainder of the ridge is allowed to remain until the Potatoes require moulding up, which should be done as soon as the plants are sufficiently high for that purpose, for if allowed to remain too long, unless great care is taken to keep the hoe a good distance from the plants, considerable mischief is done; far more, indeed, than is generally suspected. With respect to the use of old tan, I am fully convinced that Potato crops are heavier, larger, of better quality, and escape the disease more by this than by any other plan adopted; and I think that my Potatoes during the time I was residing in Worcestershire spoke for themselves.

Pruning.—There are two important points connected with Potato culture which do not receive enough of notice, and to these I would beg now to direct attention, viz., thinning out the weak haulm and cutting away the blossom. It is my practice as soon as ever my Potatoes are earthed up to pull and thin out the weak haulm; in fact, I never allow more than six stems to one set, let them be ever so strong. By this method I get but very few small Potatoes indeed; I am positive that the weight per acre is very considerably above that of those grown with such an abundance of haulm. What use is the weak haulm but to induce the production of small Potatoes? Pull this all up and you will find your Potatoes large, and they will ripen much earlier; the sun and air will have a much better chance of passing through the rows.

Lifting and Storing the Crop.—As soon as ever the skin of the Potato is set so that it will not easily rub off with the thumb and finger, lift at once; do not stop until the haulm dies down, or perhaps by that time disease will have made its appearance, and if so, even if the crop appears to the eye sound it is as likely to go bad in the clamps as in the ground, but if got up before any disease makes its appearance, the tubers are not so liable to be affected. It is an excellent plan when got up early to place them in small heaps of about a cartload each, then to cover with a coating of mould, inserting an open tile to let out the steam. I should here mention that it is requisite to dust the tubers with quicklime before covering them up; this absorbs the moisture, sets the skins more firmly, and makes the Potatoes cook more mealy. Potatoes should always be dug in fine weather; when dug in wet weather the tubers must be dried and the rough clods broken off before being stored. Perhaps the best way of storing is in the old earth pits, putting a good coating of straw next the Potatoes, and 6 or 8 inches of mould firmly and uniformly over the straw, finishing with a "thatch" all over. This is decidedly the best way of preserving the quality, and they do not get kicked and tossed about as they are liable to when stored in an outhouse or cellar. When the Potatoes are all collected and brought to the principal clamp, which should be done after remaining a month or five weeks in small heaps, there should be placed in the centre of the clamp a large basket of hard lumps of lime (or if the clamp is large two or three may be necessary), as this will absorb moisture and in a great measure tend to keep the Potatoes dry.

One word on cooking: not one person in 20 manages to cook a Potato as it should be done. They are generally too careless; it is true they put them into the pot, and then they are thought of no more until they are broken to pieces or spoiled; then, of course, the cook cannot be wrong, the fault is in the Potato. There is one thing quite certain, the more waxy the Potato the more salt is required in the water to boil them in, but if cooks will throw a large handful of salt in the water to boil a good York Regent Potato, they must not wonder at the tuber breaking to pieces in the water. I may give a list of a few good varieties on another occasion. *Edward Bennett, Gr. to G. S. Foljambe, Esq., Osberton Hall, Worksop, Notts.*



AGARICUS MUSCARIUS.
Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

MYCOLOGY.—NO. VII.

AGARICUS MUSCARIUS, *L.*—Few objects in nature are more beautiful than a large fresh group of this magnificent Fungus, as seen under a canopy of Birch twigs with a bright ray of light shining full upon it. The contrast between the bright gaudy pileus with its warty surface and the pure white stem is very striking, and at once attracts the attention of all who have any taste for natural beauty.

A. muscarius is one of those species which has been most frequently illustrated, partly from its intrinsic beauty and partly from some curious matters which are connected with its history. The pileus, which is some inches across, is for the most part regularly convex though widely expanded. The colour is generally some bright tinge of scarlet or vermillion, though occasionally subdued by an admixture of brown, interrupted by large thick white or yellowish warts, except in a few rare instances where the remains of the volva are wholly obliterated. The flesh is white except immediately beneath the cuticle, where it is yellow. The stem is several inches high, attenuated upwards and bulbous below, with a deflexed broad ring, and scattered warty relics of the volva at the base, but never we believe forming a regular rim as is intimated by some of the figures. The gills are broad, of a pure white, moderately distant, and slightly attached behind. There is no species with which it can readily be confounded except possibly *A. cæsareus*, an Agaric, which at present has not rewarded the researches of the mycologist in Great Britain or Ireland. In that species however, which is lauded by all continental writers as the prince of edible Fungi, and was in consequence used in ancient Rome and even in more modern times as the most enticing vehicle for the concealment of poison, the gills are of a decided yellow, and the volva instead of crumbling away, or forming warts on the pileus, is woven into a regular sac, which in its rupture liberates the pileus.

A. muscarius is one of the most poisonous of Fungi, and is especially remarkable for its strong narcotic qualities, in consequence of which it is employed in some parts of Asiatic Russia, either in a fresh or dry state, to produce intoxication. A very small quantity is sufficient for this purpose, and two or three of the dried Fungi, mixed with a solution of Cranberries or some other potable fluid, is sufficient for a large party. Sometimes, however, the Fungi are swallowed in the dry state without any admixture. The most extraordinary point about them is that the narcotic properties are communicated to the urine of the person who partakes of them, and, incredible as it may seem, this fluid when more Fungi are not ready at hand, is without scruple taken by the inhabitants of the North East of Asia to continue their horrid orgies. The intoxication produced by it is in some particulars said to be peculiar, especially in that the judgment of the affected persons as to size and distance is so perverted, that the same effect will be taken to surmount a straw as would suffice to clear a five-barred gate.*

A solution of the Fungus or slices of it powdered with sugar are much more profitably employed for the destruction of flies and bugs, which it affects very much like a solution of Quassia or Strychnine. This however should be employed with caution as it is very dangerous, and an instance has fallen within our notice in which a small portion of the fresh Fungus, which had been sent as a fly poison, was accidentally eaten under the supposition that it was forwarded as a delicacy and produced the same sort of intoxication as that arising from strong Tobacco on those who are not habituated to its use. We have not heard that it has been employed medicinally, but it is very probable that in careful hands it would form a useful drug, for though many good narcotics are known, there are cases in which from peculiar constitution or other causes they are not available, and it may be well therefore to have an additional string to the medical bow. *M. J. B.*

* For a more full account of its narcotic proprietie see Lindley's Vegetable Kingdom, as translated from Langsdorf.

NOTES ON SOME CHINESE PLANTS RECENTLY INTRODUCED TO ENGLAND.

A LARGE sale of Chinese plants took place at Mr. Stevens's rooms in the months of November and December of last year and was noticed in the *Gardeners' Chronicle* at the time. The plants were introduced to England during my travels in China from 1854 to 1856, and had been carefully cultivated and propagated by Mr. Glendinning, of Chiswick Nursery, Turnham Green. As they are now distributed over the country, and as many of them are in the hands of amateurs as well as nurserymen and gardeners, a few notes on the habits of some of the most important, together with hints as to their management in Europe and America, may be useful. With this object in view I shall take them in the following order.

1. CAMELLIAS, "Princess Frederick William" and "Cup of Beauty."—These beautiful varieties were found cultivated in the gardens of Ningpo and Shanghae, where they are highly esteemed by all lovers of flowers. They are striped kinds; their flowers are very double, most perfect in form, and when the plants are a few years old both striped and self-coloured blossoms are produced upon the same specimen, giving it a striking and handsome appearance. This freak of nature is not unusual in the genus, but I am not aware that it exists in any known variety having flowers so perfect in form as either "Princess Frederick William" or "Cup of Beauty." Amongst many hundred kinds, both wild and cultivated, which came under my observation during my travels in China, these two, with the fine double variety of *C. reticulata* now in Mr. Standish's nursery at Bagshot, were the only ones which I considered worthy of introducing to English gardens. The "Yellow Camellia" introduced by me some years ago is not attractive enough in its present state for our Eng-

lish taste what it may become in the hands of our cultivators remains to be seen. The subjects of this notice require the same treatment as other varieties of the genus. The first-named is a very free bloomer, and on this account will be particularly valuable.

2. DOUBLE-FLOWERING PEACHES, the "Camellia-flowered" and "Carnation-flowered."—These are very remarkable trees, and as they have proved perfectly hardy in England, they will one day produce a striking effect in our parks and pleasure grounds. They are common in the gardens of Northern China, where they attain to the size of our English Almond. Nothing can be more beautiful than these when in full bloom. In the spring they are literally loaded with flowers as large as our Scotch Roses. The "Carnation-flowered" has striped blooms resembling the Carnation, hence its name, and like the Camellias already noticed, sports in a remarkable way, producing striped and self-coloured flowers upon the same tree. Fancy a tree as large as the Almond covered with flowers like the Carnation on some branches, while on others the flowers are self-coloured (pink), and an idea may be formed of its striking beauty. These double Peaches seem to be particularly well adapted for forcing, as they form their flower-buds fully in autumn, and are ready to burst into bloom with the first warm days of spring. As spring flowers they are highly prized by the Chinese. Itinerant gardeners carry them about the streets for sale in the northern Chinese towns. The flower-buds are then just beginning to expand; the buyer puts his purchase in a pot, gives it a little water, and then places it in his window or sitting room. In a day or two the buds burst and the little tree is one mass of bloom. They are propagated by budding and grafting, and will grow well in any common garden soil. I ought to add that small plants produce blossoms freely as well as large full-grown trees.

3. PRUNUS TRILOBA.—This is a very fine bush or dwarf tree, said to come from the province of Shantung, in the north-east of China. It produces a profusion of semi-double rose-coloured flowers early in spring, and is quite a gem in its class. No doubt it is perfectly hardy in our climate. It will grow in any common garden soil, and is readily increased by budding or grafting. Like the double Peaches it can be easily forced into bloom for decorative purposes in spring.

4. FARFUGIUM GRANDE.—In these days, when plants with variegated foliage are so much in request, this is peculiarly valuable. It was found by me in the city of Ningpo, and said to have been brought from Pekin. As it has been exhibited at most of our horticultural shows during the last three years, it is now well known in this country. I may remark, however, that the Chinese understand its treatment much better than we do, and consequently they have its leaves and variegation in greater perfection. They do not gorge it with rich food or grow it so rapidly. With them the footstalks of the leaves are shorter, the leaves smaller, but more firm and glossy, and the yellow spots more distinct and beautiful. It is hardy in England, but for decorative purposes is best when treated as a greenhouse or pit plant in winter and spring. During my travels in China last year I met with the plain-leaved variety (the original species) growing in damp woods under the shade of trees, and this accounts for the Chinese practice of growing Farfugium grande in shady situations during the hot months of the year. In China moderately rich loamy soil is considered the most suitable for its cultivation.

5. CHUSAN PALM.—This plant is common in the central and northern provinces of the Chinese Empire, where it is cultivated on account of the large quantity of strong and useful fibre formed on its stem at the base of the leafstalks. Its tropical looking appearance has a curious effect in a landscape, not unlike our own, in so far as the vegetation is concerned. It has been in England since 1849, and is perfectly hardy in our climate, but grows slowly about London and to the northwards, which is partly owing to the want of that amount of summer heat experienced in its native country. Those who wish an effect to be produced in their gardens by its tropical-looking form ought to grow it for a few years in a greenhouse, and when of sufficient size it may then be planted out in the open air. Some of the first importations are in the gardens at Kew, and there is a fine plant, perhaps the finest in Europe, in the Royal Gardens at Osborne, which was sent from China by me in 1849 to his Royal Highness the Prince Consort. Mr. Toward informs me that "it is about 10 feet high, the stem 2 feet 11 inches in circumference, perfect and uniform in its general outline, and allowed by all who have seen it to be the finest specimen in Europe."

6. SYRINGA OBLATA.—This is the Lilac of northern China. It grows to about the same height as our common English species, but is more tree-like in its form. As in England, so in China, there is a white variety of this species. Both are handsome ornamental trees—as handsome as our English Lilac and equally hardy.

7. QUERCUS BAMBUSÆFOLIA.—The fine evergreen Oak sold under this name was found wild on the mountains of the Chekiang province. Full-sized trees are from 30 to 50 feet in height, and are very ornamental. It may interest entomologists to know that the beautiful and rare Dicranocephalus Wallichii was generally found on this species. This Oak is supposed to be hardy in England, and if so it will be a valuable introduction. It is probably distinct from the Hong Kong species, which has been published under this name.

8. CHESNUTS.—Two species of Chesnut were included in the sale at Stevens's, both forming trees of considerable size. One produces small fruit about the size and form of the Hazel Nut; the fruit of the other is larger, and by Europeans in the East considered of a finer quality than the Spanish Chesnut. Both kinds are cultivated extensively on the hillsides in the central and eastern provinces of China, and are quite suitable for the climate of this country.

9. RHODODENDRON FORTUNI.—Very little is known about this plant, further than it was found amongst the mountains of the Chekiang province. It is probable, however, that it is a fine species and quite distinct from any known in our gardens.

10. TAXUS CUSPIDATA.—This species was brought from Japan to Shanghae and presented to me by the late Mr. Beale. I believe it is distinct from anything formerly introduced, and is, no doubt, perfectly hardy in our climate.

11. ABIES KÆMPFERI.—This fine tree, discovered amongst the mountains of Chekiang, has proved hardy in England, and is a very important introduction. A full description of it has already been given in the *Gardeners' Chronicle*. Its long, green, silky leaves when first unfolded in spring are singularly beautiful, and so they are again in the autumn, when they change with the ripening cones into a golden yellow colour; hence the name of "Golden Pine" which it is known by amongst the Chinese. It will be very rare in Europe for many years to come, owing to the difficulty of getting seeds to germinate after the long voyage. Knowing the importance of a tree of this kind, and that it was almost impossible to propagate it in this country, I used every means in my power to introduce its seeds in large quantities and in good condition. They were sent by the overland mail—some in letters through the Post Office, and others in small packages—for several years in succession, and were often sown in England in less than two months from the time they were gathered from the trees in China. Out of all sent home only one despatch vegetated freely, all the others were complete failures. All the plants of any size now in England were dug up in the woods of China and sent home in Ward's cases. In cultivation this species, like many of its race, prefers a loamy soil, and a hilly or undulating situation. I would advise the possessors of very small plants to keep them in shady places during the hot summer months. In nature the young plants are all reared under the shade of trees. Nothing can be worse for small plants of this kind, in small pots, to be alternately baked in the sun and deluged with water.

12. TORREYA GRANDIS.—This fine evergreen tree was discovered accidentally when on an expedition for seeds and plants of Abies Kæmpferi. Full-grown specimens met with were from 60 to 80 feet in height. It is perfectly hardy in England, and will grow in any common garden soil. In a young state it is not unlike the two species of Cephalotaxus formerly introduced from the same country and now greatly admired in English gardens, but it is much more handsome than they are and attains a greater size. Its timber is valuable, and is used in the construction of gun-carriages; its seeds are used in medicine. It strikes readily from cuttings, but seedlings make the finest trees. Torreya grandis and Abies Kæmpferi are perhaps the most important of these introductions. *R. Fortune.*

THE SEASON OF 1859 IN THE UNITED STATES AND IN ENGLAND.

THE following extracts from "Hovey's Magazine of Horticulture," published at Boston, U.S., and from my journal, kept in Hertfordshire, may be of interest to your English as well as American readers. Hovey calls the season of 1859 "rather unfavourable." If such a miserable season had been witnessed in England by him he would I think have called it *very* unfavourable.

UNITED STATES, 1859.	ENGLAND, 1859.
January, rather cold; snow on the 4th, 10 inches in depth. On the 10th thermometer 4° below zero at noon, and 6° below at midnight. On the 11th 14° below zero. On the 14th mild with rain.	*January* mild throughout. On the 12th quite spring like; ditches and brooks all dry; birds singing, and the buds of trees swelling rapidly.
February.—This month was milder than the last, with but little snow. On the 11th the mercury fell to 7°, then mild again. The remainder of the month wet.	*February*.—Mild, dry, and bright weather throughout. On the 22d Crocuses in full bloom.
March opened wet, warm rain on the 4th; continued mild weather to the end with warm rains.	*March*.—Mild and sunny; on the 4th the thermometer at 64°. This mild and sunny weather more like the end of April than March; continued till the end.
April.—This month was wet. The first week the mercury was below freezing every morning. Cold rains and snow on the 15th, and frost up to the 20th. Remainder of month variable, with frost on the 29th.	*April*, 1st severe frost, thermometer at 20°; on the 6th the weather became warm; on the 7th the thermometer at 76°, continued warm weather till the 16th. On the 18th severe frost, thermometer 22°, cold and frosty to the end. All the fruit destroyed.
May commenced favourably. On the 2d the temperature was 75°, and on the 8th 90°; on the 10th cool with chilly rains; and on the 16th a white frost so thick as to appear like snow.	*May*, till the 24th, cold with north-east winds; then till the end warm and agreeable.
June was scarcely more favourable than May, with an average temperature at sunrise of less than 50°. The 29th, the only really warm day, thermometer 98°. Abundance of rain all the month.	*June*.—The whole of this month was fine, warm, and agreeable, with occasional showers. A perfect English summer month. Day temperature, 66° to 76°.
July was exceedingly variable, with great alternations of heat and cold and without rain. The 8th was warm, 96°, and to the 17th the only warm weather of the summer, 90° to 94°.	*July*.—A warm and dry month; day temperature, 68° to 93°.
August to the 14th warm and without rain, temperature 90°, then a change; on the 17th the thermometer fell to 44°. On the 25th heavy rain, the first to thoroughly wet the ground since June 20th; remainder of month wet with showers.	*August*.—The first fortnight constantly showery; 20th warm and dry, which continued to the end. Day temperature of the month, 68° to 89°.
September continued wet. On the 7th the temperature fell to 39°; on the 16th to 32°, with a white frost which injured all tender vegetation.	*September*.—Fine, warm, and dry throughout. Day temperature from 60° to 71°.
October.—After so much wet weather a warm and pleasant month was anticipated. The 4th was, however, the only warm day. On the 11th there was a heavy frost, and the remainder of month was wet, frosty and unseasonable.	*October* commenced with hot weather. On the 4th the thermometer was at 80°. The fine warm weather lasted till the 20th. On the 22d frost universal; on the 24th the thermometer was at 22°.
November was the only month of the year of more than average warmth. A light snow on the 21st, and mild and pleasant to the end.	*November* was on the whole cold, with frequent but not sharp frosts; weather mostly dry and agreeable.
December.—Cold weather set in on the 4th with a snow storm. On the 7th the thermometer was at 60°, on the 9th at 8°, on the 16th at 8°, so that winter seems fairly set in, the ground being well protected with snow.	*December*.—The beginning mild. On the 14th frost commenced; on the 19th thermometer at 6°; on the 21st thaw, and mild to the end.

T. R., Herts.

Home Correspondence.

The Monstrous Begonia frigida at Kew, in relation to Mr. Darwin's theory of Natural Selection.—Your ingenious correspondent, Dr. Harvey, of Dublin, has noticed this remarkable plant in your last Number, and described the singular modifications of the floral organs as presenting a most decided *saltus*. He proceeds to speculate on the importance of this case as affecting Mr. Darwin's theory, and by what appears to me to be reasoning *per saltum*, he arrives at the conclusion that "a few such cases would overthrow Mr. Darwin's hypothesis altogether!" Now I venture, on the contrary, to think that the *saltus* of this Begonia frigida has not the importance which Dr. Harvey imagines; and that supposing (as he conceives possible) the seeds of the most aberrant flower to produce plants with similar flowers, the case would not even then militate against Mr. Darwin's theory, but the contrary. In the first place, let us attentively study this Begonia itself; its flowers are like those of its congeners, normally unisexual, and produced in great abundance both males and females in the same fascicles all over the plant. The female flowers are perfectly constant in all their characters, except that they vary in having 3—4 cells and stigmas to the ovary and as many wings (which is not without precedent in the genus). The males have usually 6—15 stamens in the very centre of the flower with no trace of stigmas or ovary; and not 10 per cent. present any deviation from this condition. Of those that do deviate, most have 3—5 deformed stamens or rudimentary ovaries in the axis of the flower, and proportionally fewer perfect stamens; and between the normal male flower and the very rare instances of a regular flower with four superior carpels (more or less united in the axis) and as many hypogynous stamens opposite the sepals, we find flowers with every conceivable modification in number, regularity, and perfection of stamens and carpels. Lastly the abnormal carpels always bear very few ovules indeed, as compared with the normal ones. Now it is very startling to be asked "is it not a *saltus* for a plant at one bound to change an inferior ovary and unisexual flowers into a superior ovary and bisexual flowers?" but there is another way of putting the question, which is more accurate, however flat it may fall on the ear: viz., "is it a *saltus*, that a Begonia should produce male flowers, in a very few of which the central stamens are deformed, and in others are converted into more or less rudimentary or even perfect free or connate pistils?" So much for the plant. My friend proceeds to say that "according to Darwin's hypothesis it would have required hundreds, perhaps thousands of successive generations to have enabled natural selection to convert an inferior ovary and unisexual flowers into a superior ovary and bisexual flowers." Mr. Darwin will, I think, demur to this; and still more to the rash assumption that, supposing any seeds of the hermaphrodite flowers of the Begonia should produce plants bearing none but hermaphrodite flowers, the latter would constitute even a new species amongst botanists, who would infallibly detect the true nature of the sport in this (as they have in similar cases), as soon as the normal state of the plant were known. In the first place we do not know how many generations have elapsed since Begonia frigida commenced to bear any hermaphrodite flowers; nor how many generations may elapse before all traces of unisexual flowers will be obliterated in the progeny of a plant now bearing only about five per cent. of bisexual flowers; and it is to be borne in mind not

only that these ovaries are incomparably the least prolific, but further, that from being hermaphrodite, they are likely to be self-fertilised, and, according to Mr. Darwin's well-established observations, will hence give birth to a less numerous and less vigorous progeny. Nor must it be forgotten that this may be the lingering type of a bye-gone phase of Begoniaceæ when all had superior ovaries; for that it may be the last of an old race is as conceivable as that it is the first of a new one. An attentive study of the Begonia and a careful perusal of Darwin's book will, I am sure, convince your readers that this variation is a fact after that author's own heart. The fact of a metamorphosis so simple and common, as that of stamens into carpels, suggesting to a first-rate botanist a new view of the affinity of the plant in which it occurs, is a very frequent one; and shows the imperfection of our knowledge and systems, not the magnitude or importance in the abstract of the changes that affect them. Instead of this being a case which (according to Dr. Harvey) "was not contemplated by Mr. Darwin's hypothesis," it is one of a class which he had specially in view; it is a beautiful illustration of the truth and wisdom of his chapter on classification; in which he shows how false are often the standards by which we estimate the value of characters; how loaded by preconceived ideas is the balance in which we weigh them; how prone, in short, we are to assume that a change is in itself fundamental, because it shakes our systems to the foundation. The differences between the extreme forms of the Begonia flowers are in no way comparable to those between "an elephant and a rhinoceros;" nor do they lead us to imagine that the latter could ever be the progeny of the former. According to Darwin's hypothesis the change from species to species must be slow, and is effected by the accumulation of small differences; this Begonia, assuming it to be the herald of a new type of Begoniaceæ, is a good instance of how slow and partial such a change is at the commencement; for it is confined to one set of organs in a very few flowers of one sex only; is conducted with the least possible disturbance of the functions of the plant, and there are prodigious odds against its ultimate success. We cannot indeed conceive the new form replacing the old till after the lapse of many generations, and a long course of that operation of natural selection which my friend thinks his forthcoming new type of Begoniaceæ has already dispensed with. Lastly, Dr. Harvey makes a most ingenious use of the abnormal flowers of the Begonia in seeking the affinity of the curious order to which it belongs; and assumes that it tends to place Begoniaceæ in the same alliance with Aristolochieæ and others, because it too includes genera with a superior and an inferior fruit; but amongst the many orders that share this peculiarity of the Begonia there is one much nearer to the position assigned to it (by Lindley first and by common consent since), and that is the alliance of Saxifrages; in these, and often in the same genus we have superior and inferior ovaries,* free and connate carpels, with several modifications of placentation, Epigynous, perigynous, and hypogynous stamens; the peculiar ovules of Begonia, its remarkable seeds, and its reticulated testa. Finally, to the same group also belongs Sempervivum, which offers another most curious instance of the conversion of stamens into carpels. *Jos. D. Hooker.*

Shedding of Blossoms in Apricot trees.—I would be glad to know whether there is any mode of culture which will assist fruit trees in setting their fruit? I have an Apricot tree which produces year after year a most abundant bloom, which is almost wholly barren, so that I have the disappointment of finding all my pains and trouble in vain, as the blossom falls off, and there are scarcely ever half a dozen Apricots on the tree. I may add that I am very successful in growing excellent fruit on the same wall in the garden, both Peaches and Apricots. It is a sheltered spot on the slope of a hill facing the south. The soil is light on a stone brash. *G. G., Somerset, Feb.* 22.

Golden Spruce Firs.—In your Number of last week it is announced that M. Morel, of Barguy, has raised a Golden Spruce Fir with the same peculiarity of foliage as the Golden Yew and Arbor-vitæ. It is not, I believe, generally known that there are already two varieties of Golden Spruce Fir under cultivation in English gardens. They are both seedling varieties of the common Spruce (A. excelsa). The one known as A. excelsa variegata is common enough and of little merit as an ornamental tree. The other, A. excelsa Finedonensis, is one of the most beautiful trees with which I am acquainted, and at present but little known. I first met with the latter some few years ago in the beautiful garden of Mr. Macworth Dolben, at Finedon Hall, Northamptonshire; and if I remember rightly it was said to have originated there. It is not one of those bronzy, murky-looking trees which in the present desire for effect we sometimes see worked up in ornamental planting, leaving the imagination to supply the vacuum between the expressed and the actual; it is a rich looking, lively, handsome, and effective tree. *William Paul, Cheshunt Nurseries, Waltham Cross, N.*

Hollyhocks.—Every one is aware that for these last six or seven years disease has swept off immense numbers of plants of this favourite flower season after season. I have grown and propagated the Hollyhock extensively for the last eight years, and have never been troubled with disease; my escape from it I attribute entirely to never having used other means than the natural one of propagating plants in open borders, in summer and early autumn, without the aid of artificial heat in a confined atmosphere. Such treatment naturally destroys the constitution of so hardy a plant as the Hollyhock, thereby predisposing it to disease; and when once induced infection is carried so quickly that in many instances the stock of some of our largest growers has been nearly annihilated. As a strong proof of the great hardiness even of very small plants when taken from a healthy stock, I will just mention that in the latter end of September last I put in a batch of cuttings, single eyes from laterals, in an open bed without even the protection of a fence. They rooted quickly, and have stood all this variable and severe weather without the slightest protection until last week. I took up and potted more than 100 plants, which are perfectly healthy, and I feel confident from their strong constitution will never be liable to disease. This I look upon as a remarkable fact in favour of treating Hollyhocks in every stage of their existence as hardy plants, and as an evidence that nursing them up in strong heat and a confined atmosphere will certainly kill them. *Henry Bowler, Foxhall Load, Ipswich.*

Effects of the late Frost upon Vegetables.—I quite agree with "W. J." (see p. 122) that a greater amount of cold has been registered than occurred last December, without such a destructive effect upon vegetables. Here we have suffered dreadfully, a circumstance which I attribute more to the amount and continuance of rainfall and sudden and repeated transitions from rain to frost than the actual amount of cold experienced. The glass with us never indicated more than 23° of frost, which, had the ground not been so over-charged with rain, would not have acted so injuriously. With the Broccolis, both late and early, old established and newly introduced have suffered alike; out of more than 2000 plants not more than 40 miserable looking things are left. Young Cabbages have also suffered much; in fact, all that class of vegetables, Celery, Parsley, and Globe Artichokes, though protected, are even all but destroyed. I understand moreover that the market gardeners round Dublin are sufferers to a great extent. Happily we have had no rain these last four days, and the glass has been stationary at "set fair." *D. James, Gardener to his Grace the Duke of Leinster, Carton, Maynooth.*

Salt for Walks.—I can add my testimony to the perfect destruction of Weeds and Moss on carriage drives and walks by means of application of salt. It should be applied early in March so that it may be thoroughly washed in before the sun has too much power, otherwise a kind of white crystallisation will be left on the gravel, giving the latter a dull and unpleasant appearance. I have tried boiling water and salt mixed together and poured on the gravel under a burning sun; but found that it did not prove nearly so efficacious as dry salt when used at the time stated above. *J. F. Mould, Hartsbourne Manor, Bushey, Herts.*

Rainfall at the Knowle, Kingsbridge, for 1859, *measured by Howard's Rain-gauge:—*

	Inches.	Days.
January	2.99	19
February	3.20	19
March	2.76	20
April	3.64	20
May	1.26	10
June	0.63	3
July	1.46	7
August	3.93	10
September	4.64	21
October	5.59	16
November	4.59	19
December	5.43	22
Total	40.12	166

Account kept by Lætitia A. P. Harris.

Gardeners' Royal Benevolent Institution.—In your Number of the 11th of February (see pp. 121 and 122), is a statement of receipts and payments of this Institution for 1859, and if you will look at the debtor account I think you will find a mistake of 1000*l.* in the balance of 1858, which, according to the creditor account, has apparently been overlooked. If I am right therefore, it might perhaps be well to direct the attention of the Secretary to the matter. *A Young Practical.* [We printed the report as we received it. It is evidently however a clerical error of no importance.]

Plant Houses.—As a country subscriber, and "one of the million," will some metropolitan amateur do me the favour of explaining what there is in Hereman's new patented hothouses to recommend them? In what the improvement consists? I have carefully examined the published drawings, and I do not see anything so novel as to need a patent. Of my own experience I can say that they seem to combine a good many fanciful methods, which I regret to say that I have paid the usual penalty of inventing and of afterwards abandoning. To show tall bushy plants growing under Vines trained very close to the rafter or the glass, and Pine Apples rooted in a border which is obliged to curtail one side of the growth for want of upright space, is to show that these are pictures of imaginary hothouses. I really ask for information, because although I have very carefully looked into the published figures week after week I am unable to "understand" their merits. After a reply I shall be very happy to give my experience of somewhat similar inventions, if the subject be considered worth discussing in your columns. I would beg it to be distinctly understood that I desire to see the subject of cheap planthouses discussed in a friendly manner, and should any acerbity be shown I should decline proceeding any further on the subject; if however the subject could be considered broadly and practically I think a great deal of good might arise to many country subscribers, as well as to *Belerium.*

Winter in Dorsetshire.—I have not seen so much frost here for several years as we have had this season, and I fear some damage has been done. I see Biota glauca is more tender than I anticipated, and one or two Eucalypti, small trees, have suffered; not one of the Palmettos I had some years ago, from Bahama, I think, nor the Aloes. A tree which promises to be an ornament, Drimys Winteri, seems very hardy, as also Tasmania aromatica. Bating the frosts in October, December, and the last three days, the winter has been mild. We have had plenty of white Hyacinths, always the earliest, and Narcissus of various sorts, ever since the middle of January, and other spring flowers, among which nothing is prettier than Saxifraga ciliata, Lonicera fragrantissima, and Chimonanthus luteus, together with Lithospermum, Convolv. Cneorum and Aubrietia, and even Aponogeton. I think Pinus tenuifolia is preparing to form flower this spring, though I hardly expect cones to follow the first year. Pinus del Doctor has formed catkins or little cones these two years, but they drop off young. *I. Dorset, Feb.* 15.

Societies.

LINNEAN: *February* 2.—Professor Bell, President, in the chair. Joseph W. Dunning, Esq., and G. C. Wallich, Esq., M.D., were elected Fellows. A paper was read, "On the mode of Branching of Amazon Trees," by R. Spruce, Esq.

February 16.—G. Bentham, Esq., Vice-President, in the chair. J. H. Belfrage, Esq., W. Coulson, Esq., and Herr Gatke were elected Fellows. The following papers were read:—1. "On the Verrucaiæ of New Zealand," by C. Knight, Esq.—2. "On a new species of Hawk found in New Zealand," by W. L. Buller, Esq.—3. "On the Homologies of the so-called Univalve Shell and its Operculum," by J. D. M'Donald, Esq., R.N.—4. "Notice of the occurrence on Sticklebacks in the Hampstead Ponds of Gyrodactylus elegans, Nordmann," by C. L. Bradley, Esq. Some sticklebacks obtained during the present month (February) from the ponds at Hampstead, were found infested with numerous minute parasitic worms; these were stated to have been most numerous on the fins, but also scattered over the general surface of the skin; they were attached by one end to the fish, while the other end floated freely. This parasite has the external characters of a suctorial annelid. When fully stretched out it measures about $\frac{1}{25}$ of an inch in length, and about $\frac{1}{250}$ in breadth, tapering from the middle towards both ends. In the germ sac the young ones closely resembling the parent, oftentimes two together, may be seen, and these have been observed to free themselves by tearing through the parental envelope, and to contain within themselves the progeny of a third generation. It has been already described by Nordmann and by Siebold, the latter being the first to notice that it represents a "nursing form of animal," and is only a transitional asexual form of a Trematode, such as Polystomum or Octobothrium. It was originally found by Nordmann on the gills of the carp, but Siebold has mentioned its occurrence on the fins of two species of sticklebacks.—5. "Further observations on the metamorphosis of Gasteropoda, &c.," by J. D. M'Donald, Esq., R.N.

Notices of Books.

Reminiscences of the late Thomas Assheton Smith, Esq., or the Pursuits of an English Country Gentleman. By Sir John E. Eardley-Wilmot, Bart. 8vo, Murray, pp. 301.

It was a strange freak of a great political newspaper to fall foul of the memory of a great country gentleman, because he did not spend his time in London, or pester the House of Commons with dreary harangues. The writer of the attack to which we allude appeared to think that no man commanding 20,000*l.* a year was justified in passing his life in the humble occupation of promoting the happiness of his country neighbours. The army, the navy, the bar, the church, the senate, were the fields in which alone his power should have been exercised. The *Times* had no sympathy with a wealthy fox-hunter, even although he was, as the author of the interesting volume now before us most truly says of Mr. Assheton Smith, "a most useful country gentleman, a good classical scholar, an excellent man of business, warmly devoted to science, and a generous distributor of his wealth, turning to a good and useful account those mental, physical, and worldly advantages wherewith Providence had liberally endowed him."

Very few persons can have adopted this crotchet of our great contemporary; but most would have set it down as one of those hallucinations to which the most gifted minds are sometimes subject. Certain it is that all who really know anything of the people of this country

* I need hardly remind the botanical reader that the conversion of staminiferous into pistilliferous flowers in unisexual trees is not uncommon; and that free superior carpels occur in species whose ovaries are normally inferior.

must agree with Sir Eardley-Wilmot in the view he takes of one of the most national of British sports:—

"The manly amusement of fox-hunting is entirely, and in its perfection exclusively, British. Its pursuit gives hardihood, and nerve, and intrepidity to our youth, while it confirms and prolongs the strength and vigour of our manhood; it is the best corrective to those habits of luxury and those concomitants of wealth which would otherwise render our aristocracy effeminate and degenerate; it serves to retain the moral influence of the higher over the lower classes of society, and is one of the strongest preservatives of that national spirit by which we are led to cherish, above all things, a life of active energy, independence, and freedom. It might be added that, in a political point of view, its beneficial effects are not small as regards the employment of labour, the market of home-grown produce, and the maintenance of our superior breed of horses, most valuable for the purposes either of war or peace."

It is to vindicate the reputation of a deceased friend that the present volume has been written, and it is only just to its author to say that he has executed his task in a manner befitting the subject—joyously, gracefully, earnestly, thoroughly. We are presented with a most graphic account of Mr. Smith's education and manner of life by one who possesses the same feelings as himself; and the result is a volume that will stand foremost on the shelves of every sportsman's library. We can find no room for many extracts, nor are they needed, to show the justice of these remarks. The few words that relate to the famous winter garden, of which so much was said at the time of its construction, may, however, be quoted—

"In 1845 the state of Mrs. Smith's health causing him great anxiety, he was apprehensive of being obliged to take her to a foreign climate for the winter. Both were, however, unwilling to leave a spot where each had so many objects of interest and enjoyment—he his favourite sport, and she her schools, her poor, and the management of the house and grounds, the details of which at Tedworth Mr. Smith entrusted entirely to her. The squire, therefore, determined to bring Madeira to England, rather than be obliged to repair to the former in quest of health; with this view he erected a magnificent conservatory, 315 feet in length, and 40 feet in width, where, with a temperature always raised to a certain heat, Mrs. Smith might take walking exercise during the winter months. A Wiltshire farmer, on first seeing this building, observed, he supposed the squire had it made in order to hunt there when a frost stopped him in the field. Along the whole length of this Crystal Palace in miniature is a broad walk laid with the finest gravel, and ranged on each side are thousands of the most beautiful plants, even at Christmas time of the richest hues and fragrance. The conservatory is approached from an ante-room of the house by a corridor glazed on one side and 965 feet in length, forming with the conservatory nearly a quarter of a mile of glass, and warmed throughout with double pipes containing hot water. It was a melancholy spectacle to see the squire the winter before his death, when he could no longer join his hounds, mount one of his favourites—Euxine, Paul Potter, or Blemish—with the assistance of a chair, and take his exercise for an hour at a foot's pace up and down his conservatory, often with some friend at his side to cheer him up, and while away the time until he re-entered the house, for he was not allowed at that period to go out of doors. Even in this feeble condition, '*quantùm mutatus ab illo Hectore*,' once on horseback he appeared to revive; and the dexterity and ease with which he managed, like a plaything, the spirited animal under him, which had scarcely left its stable for months, was most surprising."

The Gardener's Assistant: Practical and Scientific. By Robert Thompson. Royal 8vo, pp. 774. (Blackie & Son.)

The conclusion of this work at last enables us to form a decided opinion upon its merits, and we are glad to be now justified in saying that it is a thoroughly good gardener's assistant. It embraces all the subjects with which fruit and vegetable growers have to deal; it gives them trustworthy advice as to their practice, with plain reasons for what they do; and it abounds in valuable instruction concerning the merits of the many sorts found in trade catalogues. In subjects requiring a sound knowledge of our climate it is probably unrivalled in horticultural literature, and as a record as far as it goes of the 40 years' personal experience of an intelligent observer it must be regarded as of great practical importance. On the whole, notwithstanding a few rather strange omissions, it forms a worthy companion to Morton's Cyclopædia of Agriculture.

TRADE LISTS RECEIVED.—WHEELER & SONS (Gloucester) Little Book or Select Seed List for 1860.—Descriptive Catalogue of English and Foreign Novelties, comprising Dahlias, Pæonies, Phloxes, Fuchsias, Chrysanthemums, Iris, Daisies, Heliotropes, Antirrhinums, &c., cultivated for sale by J. SALTER, Versailles Nursery, Hammersmith.—Descriptive Catalogue of Select Vegetable and Flower Seeds, sold by J. C. SHIELLS, 32, St. Enoch Square, Glasgow.—ADOLPHE PELÉ FILS (Horticulteur, 151, Rue de Lourcine, près de l'Observatoire, Paris). Plantes vivaces, arbustes, nouveautés, plantes de Serre.

Miscellaneous.

The Cornelian Cherry: Cornus mas.—The *Cornus mascula* grows plentifully in the gardens of Greece, where it is also indigenous. Its fruit, called *Krania*, is greatly prized by the Turks on account of its very agreeable acid flavour. They use the juices of it in different ices and sweetmeats, also to prepare their sherbets or bosas, which are very refreshing and very wholesome acidulated but sweet drinks. The fruit is also considered very styptic; and hence during the prevalence of cholera it is the only fruit allowed to be sold in the streets and bazaars. The syrup of *Krania* is employed in Greece as that of the Raspberry or Barberry is in Central Europe. Before the fruit ripens it is put into vinegar to preserve it all the year round, and in this state it is eaten like Olives, mad-Apples, and Tomatos. This plant was well known to the ancients. Homer tells how the famous poisoner Circe gave its fruits to the companions of Ulysses to put them to sleep. Pliny relates that the fruit of this tree is useful against diarrhœa. In the East they make use of the flowers also in cases of diarrhœa and hæmorrhages, and the poor collect the kernels to make ornaments. *Dublin Hospital Gazette.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—At this season watering should be conducted with considerable care, more especially in the case of recently potted plants, which must not be overdosed. Keep them close, and when the weather is favourable syringe frequently, so as to maintain a rather moist atmosphere; but until the growth of the plants shall have indicated that they have taken to the fresh soil apply water very sparingly at the root. Luculias in pots should be encouraged to make free growth, in order to get the wood well ripened and the plants in flower before those planted in the conservatory border, for it is desirable to prolong the blooming season. STOVE.—See that material for the purpose of shading is ready for use, but do without it as long as possible, and with a little care in removing plants likely to be injured to shady positions, it will not be necessary for a week or two yet. An increase of night temperature may now be allowed, more especially if the weather should prove favourable. Maintain a moist atmosphere, and give no quarter to insects of any kind. Auriculas in pits or frames will soon be showing their buds; give them air during the day. Pot Tuberoses and expose freely when fine. Mignonette and Stocks, Neapolitan Violets in frames may be forwarded by being closed early in the afternoon and in pots by keeping them in a temperature of 55°. Examine buds of forced Roses for caterpillars, and fumigate occasionally for green-fly.

FORCING DEPARTMENT.

PINERIES.—Young plants growing in open beds that have been some time planted will be benefited by having the soil loosened up as deeply as can be done without injuring the roots, giving it a liberal soaking of tepid water if it be found to be too dry. The water should be applied by means of a rosed pot, and not so fast as to flood the surface, for if this is done the soil will be rendered almost as close as before forking up; indeed, careless watering is the great cause of the surface of the soil becoming close and hard, and should be carefully avoided. Endeavour to afford these a nice regular bottom-heat, with a thoroughly moist atmosphere, and keep them growing as freely as may be consistent with keeping them dwarf and stocky. Have a constant eye to maintaining a succession of fruit, or securing a supply at the season when it may be most wanted, and let the treatment of the plants be regulated in time by your circumstances; for this is a matter which demands considerable forethought, and which can be successfully managed only by careful observation and attention. VINERIES.—Take advantage of favourable opportunities to admit fresh air as freely as can be done with safety, and be satisfied with as low a temperature from fire-heat as may be considered safe under the state of the Vines, but shut up early, allowing the glass to rise considerably. This will to some extent economise fuel, and will be much more congenial to the Vines than much fire-heat. Except where the Vines are in flower keep the atmosphere moist, but the foliage should always be allowed to become perfectly dry in the course of the day. PEACHES.—Where the trees are in bloom admit air freely whenever the weather is mild, and keep the atmosphere rather dry, maintaining a steady night temperature of about 50°. Trees on which the fruit is fairly set should be afforded a moist temperature, syringing them liberally in the afternoon to prevent red spider, and keeping the border in a healthy state as to moisture, &c., to secure a vigorous root action. CUCUMBERS.—These may now be kept at from 55° to 60° by night, and 70° to 75° by day, with a steady bottom-heat of about 80°, which, combined with a thoroughly moist atmosphere, will induce free growth. Keep the shoots thin near the glass, and attend to stopping, &c., as may be necessary. Attend carefully to the early Melon plants, and regulate the temperature according to the state of the plants, taking care not to get the Vines weak and long-jointed through a high close temperature, for a fair crop of fruit need hardly be expected unless the Vines are kept strong and short-jointed. Do not omit putting in seeds of the favourite summer kinds.

FLOWER GARDEN AND SHRUBBERIES.

Get all alterations or planting finished. Planting done after this time will require much attention to watering, and that at the very busiest season of the year, especially if large plants are moved, and it is too common a practice to put off such work to the last. Look over beds planted with bulbs, and where necessary stir the surface, so as to keep the soil open and friable, and also to give it a fresh appearance. See to the propagation of Dahlias and Hollyhocks; the latter when planted skilfully produce an excellent effect, and therefore especial attention should be paid to having a good supply of them. Cuttings slipped off the old plants with a heel, planted in very sandy soil, and afforded a *very* gentle bottom-heat, keeping the leaves as cool as possible, will be found to root perhaps more freely at this than at any other season.

HARDY FRUIT AND KITCHEN GARDEN.

Push forward all operations requiring attention here with the least possible delay. See to keeping up a succession of Peas and Beans, likewise of Radishes and other small salads. Manure and dress Asparagus beds. Get Cauliflower plants raised under glass hardened off, and pay every attention to those under hand-glasses in order to forward them as much as possible. Spinach, Early Horn Carrots, and Stone Turnips should be sown soon on a warm rich border; also Leeks, Brussels Sprouts, Savoys, German Greens, Snow's and Early Sprouting Broccoli, and the main crop of Potatoes should now or soon be planted.

COTTAGERS' GARDEN.

Bush fruit, such as Gooseberries and Currants, should now be pruned; also get the ground amongst them manured and lightly dug, but in doing that take care not to injure the roots. See that early Peas, such as Sangster's No. 1, are not injured by mice or birds. Where they are above ground draw the soil to their stems, raising it on the windy side sufficiently to make a kind of shelter for the plants. Plant Fairbeard's Champion of England for succession, and if a few of Fairbeard's Surprise are planted at the same time, they will come in about a week earlier than the Champion.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.
For the Week ending Feb. 23, 1860, as observed at the Horticultural Gardens

February.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep	2 feet deep	Wind	Rain.
Friday 17	25	30.370	30.225	44	34	39.0	39	39	N.E.	.01
Satur. 18	26	30.312	30.122	45	32	38.5	40	39½	N.	.10
Sunday 19	27	29.807	29.531	47	25	36.0	40½	40	N.	.04
Mon. 20	28	29.498	29.414	42	30	36.0	40	40	N.W.	.10
Tues. 21	●	29.778	29.657	42	30	36.0	40	40	N.	.00
Wed. 22	1	30.051	29.918	44	20	32 0	40	40	N.	.00
Thurs. 23	2	30.163	30.117	45	20	32.5	40	40	E.	.00
Average		29.997	29.859	44.3	27.1	35.7	39.9	39.8		.05

Feb. 17—Overcast; fine; drizzly; overcast.
— 18—Cloudy; very densely clouded; overcast.
— 19—Fine, but cold; heavy snow shower, 6 P.M.; clear, frosty.
— 20—Clear and cold; uniformly overcast; boisterous; clear.
— 21—Partially overcast; fine; clear.
— 22—Frosty; fine; overcast at night.
— 23—Frosty; fine; clear and frosty at night.
Mean temperature of the week, 3½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending March 3, 1860.

February and March.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 26..	47.2	33.3	40.3	19	0.48 in.	3	5	5	1	4	5	8	3
Mon. 27	47.7	33.8	40.8	16	0.40	3	5	4	2	6	7	4	3
Tues. 28..	48.9	33.6	41.3	13	0.84	1	7	5	—	2	8	3	8
Wed. 29..	46.3	33.5	39.9	3	0.23	1	2	1	—	1	1	—	2
Thurs. 1..	47.4	34.2	40.8	13	0.62	—	7	2	1	5	9	7	3
Friday 2..	48.8	36.1	42.5	12	0.45	2	7	4	—	3	10	5	3
Satur. 3	49.2	33.1	41.2	14	0.28	3	7	5	1	3	8	6	1

The highest temperature during the above period occurred on the 28th, 1846—therm. 64 deg.; and the lowest on the 1st, 2d, and 3d, 1854—therm. 18 deg.

Notices to Correspondents.

BOOKS: *C P.* There is no translation of Michaux's Arbres forestiers. In a country where all educated persons read French such translations will not pay. Mr. Murray's papers are published in the Edinburgh New Philosophical Journal. Magnolia macrophylla is hardy near London.

FUNGI: *J D.* Your Fungus is *Rhizomorpha subcorticalis.* It is not a true species, but a state of some perfect Fungus. *Rhizomorphæ* have been traced to *Sphæria Hypoxylon*, and some common *Polypori.* The peculiar characters depend on the pressure to which the plants are subjected, and the total absence of light. *M J B.*

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*S S.* Arctotis adpressa.—*J Dickson & Sons.* It is impossible to name young seedlings of Coniferous plants.

SHODDY: *C Pitchfork.* This substance is under trial as a general manure. The value will be reported in the course of the summer. It would hardly be used in Hop gardens unless its importance, at least for such crops, had been ascertained.

STERCUS: *An Old Sub* will feel obliged by any of our readers informing him whether the article advertised under this name has been tried by them as bottom-heat, and with what success; also if it be true that this kind of manure is liable to spontaneous combustion when laid in bulk, what means are used to lower the temperature so as to make it available for Cucumbers, Melons, &c.

TIMBER PRUNING: *A Subscriber.* When healthy branches are cut from a tree, it is best not to cut them at first close to the stem so as to allow the bark to close over the place, unless the branches are not more than 3 or 4 inches in diameter, when they may be cut away at once. In the case of a dead branch it is best to cut it close at once.

MISC: Full price will be given for a clean copy of the *Gardeners' Chronicle*, Oct. 22, 1859. Apply at the Office.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

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The present Price of this valuable Manure is—
12*l.* per ton for 30 tons and upwards } at the Depôts in London,
13*l.* 5*s* per ton for 1 ton up to 30 tons } Liverpool, and Bristol.

And, in order to protect themselves against the purchase of Adulterated Mixtures, and of inferior Guanos, purporting to produce results equal to Peruvian, consumers are recommended to apply either to ourselves; to our AGENTS, Messrs, GIBBS, BRIGHT, & Co., of Liverpool and Bristol; or to Dealers of established character throughout the Country, in whose honesty and fair dealing they can place implicit confidence.—ANTHONY GIBBS & Sons, 15, Bishopsgate Street Within, London, E.C.

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The Directors recommend these Manures with every confidence to the attention of their brother Farmers, and the fact that they and the Shareholders farm upwards of 30,000 acres of land cannot fail to afford a guarantee and protection to consumers. The high per centage of Soluble Phosphate, and large amount of Animal Matter yielding Ammonia they contain, not only render them the cheapest, but also the most Natural Manures, and the best calculated to produce a healthy, sound, and heavy crop.

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WHEAT ditto	POTATO ditto	BEAN ditto
GRASS ditto	BARLEY ditto	Also

PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.

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ACRICULTURAL EDUCATION.

HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

The BOARD of EXAMINERS, nominated in terms of the Society's Charter, will meet in the MUSEUM HALL, GEORGE IV. BRIDGE, Edinburgh, on MARCH 28 and 29, between the Hours of Eleven and Four, to EXAMINE CANDIDATES for the Society's AGRICULTURAL DIPLOMA.

The Subjects of Examination will be:—
SCIENCE AND PRACTICE OF AGRICULTURE.
MECHANICS AND ARCHITECTURE OF THE FARM.
BOTANY.
CHEMISTRY.
NATURAL HISTORY.
VETERINARY SURGERY.
FIELD ENGINEERING AND SURVEYING.
BOOK-KEEPING AND ACCOUNTS.

Candidates must intimate their names to the Secretary not later than March 20.

Edinburgh, February 25. JNO. HALL MAXWELL, Sec.

HIGHLAND AND AGRICULTURAL SOCIETY.
DUMFRIES SHOW.

£1500 will be offered in Money Premiums and Medals for STOCK, IMPLEMENTS, DAIRY, PRODUCE, and POULTRY.

The YARD will be open for IMPLEMENTS on July 27 and 28; for STOCK on July 31; and to the PUBLIC on August 1, 2, and 3.

No Entry will be received after June 13.

Certificates of Entry, Premium Lists, and Regulations to be had on application to the Secretary, 6, Albyn Place, Edinburgh.

YORKSHIRE AGRICULTURAL SOCIETY.—The next ANNUAL MEETING will be held at PONTEFRACT, August 1 and 2. JOHN HANNAM, Secretary.
Kirk Deighton, Wetherby, Feb. 25.

The Agricultural Gazette.

SATURDAY, FEBRUARY 25, 1860.

WE must not let the wave of public opinion under which the agricultural value of sewerage and of liquid manures in general seems now to be submerged, hide from us that enormous waste which is every day permitted of the very essence of fertility, not only in the management of what may be called the manure heap of the town, but in the carelessness exhibited in dealing with the dung-heap of the farm. Liquid manures, both the urine of our cattle and the washings of our yards, have a considerable value. Those who think that all practical men agree in faith in dung and disbelief in tank water will do well to examine the lists of the prize farms given elsewhere of the Cheshire and South Lancashire district, where they will find that of 76 farms no fewer than 31 are provided with tanks and other means of saving and of using the liquid waste of yards and feeding houses.

It is asserted that the failures upon certain farms in Ayrshire prove that the method of manuring there adopted is unprofitable; and because a merchant and a bailiff have lost money this particular item of their proceedings bears all the blame. Though certain names have been gazetted which were formerly connected with the "Ayrshire Liquid Manure System," we are nevertheless assured by a tenant farmer in that county, who himself adopts that system, that nothing has yet occurred in that county to justify any one in a wholesale condemnation of what is termed the "Ayrshire Liquid Manure System."

Hear Mr. RALSTON, of Lagg by Ayr, upon this subject: "The fertilising effects of liquid manure cannot now be a matter of controversy, and its profitable application rather than waste is undoubtedly a subject well worth the consideration of every practical farmer. Like everything else, it has a relative or commercial value, and where that is not exceeded in creating a supply, or in facilitating its application, it must be profitable.

"Wherever its application involves expensive works and the erection of machinery, it should be gone about with caution, as, to maintain this in a state of efficiency and return as high a rate of interest as ought to be charged on all works of such a perishable nature, trenches deeply on the profits. My own experience in the application of liquid manure, which I shall briefly describe, has been quite satisfactory. For 18 years previous to 1852, I irrigated several acres of meadow land (sown with Timothy Grass) by open drains, on what is called the 'catch-meadow system.' From this I had large returns; but in consequence of not having a perfect control over the quantity and application of the fluid, the Grass, at times, became so coarse and rank as injuriously to affect the health and condition of the cattle. This led me to entertain a favourable opinion of the system of irrigation just then propounded in this county as a means of obviating this evil, and I accordingly built tanks to contain about 40,000 gallons of liquid, and to lay pipes for the irrigation of 50 acres of land. For the last eight years this portion of my farm has been cultivated in a four-shift course, one-fourth in rotation being in Italian Rye-grass, two-fourths in white crop, and one in drilled green crop. Nearly a mile in length of cast-iron pipes conveys the liquid from the tanks to the land under irrigation, where, by a head pressure of about 60 feet, and by means of Gutta Percha hose, it is distributed at pleasure—and I have thus a complete control over the quantity and time of application.

"The whole of the liquid produced on the farm is applied to the Italian Rye-grass, which, when ready, is used in a green state for feeding cattle—and in this way I find it to yield a direct profit after paying all expenses, besides indirectly enriching the remainder of the farm by greatly increasing the quantity of farm-yard manure. As the cutting and carting of the Italian Rye-grass is carried on day by day for the use of the cattle, I have never been able exactly to ascertain the acreable produce by weight or measurement, but on an average of years I may safely say it has maintained at the rate of from three to four cattle per acre for a period of five and a half months, and as far as I am able to judge, its fattening qualities are at least equal to common Turnips.

"In situations where liquid manure can be applied by gravitation the cost is not so great as many would imagine. This will, however, be in some degree regulated by the natural advantages arising from the supply of pure water, and the position of the land to the farm steading. Here, where the advantages are rather favourable, the acreable expense has been about as follows:—

Tankage	£1	5	0
Metal pipes, including laying, &c.	3	0	0
Cutting drains to receive the pipes	0	2	0
Hydrants	0	7	0
Gutta Percha hose and fittings	0	13	0
	£5	7	0

As before stated, the extent under irrigation is 50 acres, which, at the above-mentioned sum of 5*l.* 7*s.* per acre, amounts to 267*l.* 10*s.*, but as there is only one-fourth, or about 12 acres of this extent annually under irrigation, that portion alone must be charged with the whole expense of the works, viz., 267*l.* 10*s.*, and assuming that 10 per cent. would be a fair return for this outlay it would entail a rentcharge of 10*s.* 8*d.* per acre per annum. My return I calculate on being at least eight times that amount, but, as before noticed, the land has natural advantages that considerably lessened the cost of the irrigation works; and having to look forward to a return of capital and interest during the currency of a not very long lease, I used every economy in the construction and execution of the works consistent with efficiency and durability."

THE economy of Farm Labour hinges on the right solution, not merely of such large questions as affect the social condition of the labourer but of others of a more immediate, local, and particular nature affecting the cheap and efficient

performance of this, that, and the other individual operation of the farm. Within the last few years the threshing floor and flail have almost disappeared, and in their place a locomotive steam-engine and a threshing machine goes from farm to farm, and with the aid of the regular hands, and others hired for the occasion, threshes out the grain. The farmer pays thus perhaps 2*d.* a bushel for his grain placed in sacks almost ready for the market; or 1*s.* 6*d.* a quarter, if in addition to the grain being threshed and nearly winnowed, the straw is also lifted by HAYES'S elevator so as to be easily manageable. For this price he gets the use of steam-engine and machine, and probably three men who travel with them, viz., a feeder, a stoker, and a general foreman who oils the bearings and attends to the removal of the grain. It thus becomes an important question to the farmer how many additional hands he will have to pay for in order to the uniform supply of the machine and the removal of the straw, as upon this will depend whether the cost of threshing by flail and by machine does after all differ so very much, and whether the only difference is one of speed and promptitude.

This question has indeed been put to us by a correspondent who uses a fixed engine, but to whom economical management on threshing days is of course as important as it is to the man who hires a moveable threshing machine and engine when he wants either straw for his yards or grain for sale.

The following are the terms in which he has put his case, and he asks for the experience of our readers on the subject, as it is one on which he and they can perhaps benefit each other by comparing notes. He writes as follows:—

"I am in frequent conflict with my bailiff as to the number of hands necessary to thresh out and dispose of the straw of a rick of Wheat. He asserts that there is no farm within 20 miles at which this operation is performed with so few hands and at so small a cost as on mine. I have my own opinion on that point, and that it is an interesting question for farmers of an easy nature, and who look upon the use of steam power as a mysterious affair, to prevent their being humbugged.

"The following is my case:—The rick-yard adjoins the barn; the sheaves are cast from the rick to a harvest cart, whereon they are placed; the cart is led to an opening in the wall of the barn on a level with the threshing-machine. The sheaves are handed from the cart into this opening and passed across the floor, to be untied and handed to the tray from which the man serves the machine. The straw falls below, where it is collected into a heap sufficient to be carried on a pitch-fork three or four yards to the end of the barn, where it is deposited and placed by another hand. The grain having been taken up by the elevators falls through a separator into the sacks, and I consider the man in charge of the engine can easily and simultaneously look to the sacks and replace them as they are filled, the tying and weighing being a subsequent operation. Question: With a staff of men and women accustomed to the work, and first appointing the women to such of the work as their powers admit of, which is assumed to be the passing and untying and delivering the sheaves from the man who pitches them on to the barn floor to the man serving the machines, and collecting the straw as it falls from the machine into a heap for the pitcher to the placer of the straw—what number of men and women are required, in addition to a boy to lead the carts? The women while at this work are allowed 1*s.* a day."

Before answering this, let us first state our own experience of a somewhat similar case.

Our steam-engine worked elevators, threshing drum, shaker, and two winnowing machines. The corn was delivered in the sheaf on the ground floor, carried up by the elevators, and placed on the feeding board; the corn was delivered into sacks, and the straw from the sheaves was tied in bundles and built in the yard. One man and a woman "unbuilt" the rick and brought the sheaves in on a truck upon a railroad. One woman fed the elevator, one woman untied the sheaves, one man fed the machine, two women and a boy tied the straw roughly in bundles, and one lad built it in the yard into which it was thrown from a floor 15 feet high. One man managed the engine and removed the sacks. The engine and boiler cost 250*l.*, and the machinery probably 150*l.* more: 7 cwt. of coals were burned in one day, and we threshed about 40 days in the year. And in that time we threshed out probably 800 quarters of grain or 40 sacks a day. This is a very small quantity compared with what is now done. The engine was of 5 horse-power. The hands employed, as we have stated, were three men, six women, and two boys, costing about 13*s.* a day. The coals and oil, &c., would be about 7*s.* more: so that for 1*l.* we generally threshed 20 qrs.; but 10*l.* per cent., which should be added for interest and repairs of machinery, amounts to another 1*l.* a day, making the whole cost 40*s.* for 40 sacks, or 3*d.* per bushel. This is no doubt dearer than is now done by many locomotive engines of greater power, but this depends not only on the employment of powerful machinery but on adopting an economical arrangement of labourers.

It is plain that in considering the question put by our correspondent we have to assume a certain power in his machinery. If able to thresh 4 quarters an hour of ordinarily productive Wheat, there will probably have to be passed through the machine 30 to 35 cwt. of straw per hour. And the following hands will probably be needed: one man and two lads to cart the grain and the straw from the rick, two women to carry and one to untie the sheaves on the threshing floor, one man to feed the machine, two women to shift the loose straw to the pitcher, who stows it away and who will need another man and yet another to help him as it grows in height. Besides these the engine man will attend to the reception of the grain, and the stowing it away as the sacks are filled. According to our estimate two single horse carts, one man and a lad at the rick and cart (the lad on whichever is lowest), one lad to unload at the barn, five women with the sheaves and the straw, one man to feed, and at the least one man to stow away the straw will be needed by our correspondent. We should be glad to know how far this corresponds to his actual experience, and what quantity of work is done by the men and hands employed. And we shall be glad if our correspondents will discuss in other instances and in the circumstances of locomotive machinery what the labour employed should be.

THERE has been recently published in a return to the House of Commons, moved for in the last session of Parliament by Mr. CAIRD, a statement of the number of persons committed for offences against the Game Laws to each person in the United Kingdom during the year ending 1859. The total numbers are 2341 in England, or one of about every 8000 of the English people; 235 in Scotland, or one of about every 12,000 of the Scottish people; and only 32 in Ireland, or one of every 200,000 of the Irish people. The differences thus brought to light seem too great to be attributed to mere variations in the administration of the law, and yet there are extraordinary contrasts in the returns from separate counties of England only, which point that way, and indicate the propriety of placing offences against the Game Laws under the jurisdiction either of the County Courts or of a paid magistracy which should administer the law with greater uniformity.

The following figures indicate some of the most remarkable of the contrasts and anomalies thus brought to light:—

	Number of Persons committed to prison for Offences against the Game Laws in 1858-9.	Proportion to whole Population, one in about
England	2341	8,000
Scotland	235	12,000
Ireland	32	200,000
Bucks	69	2,300
Berks	34	5,000
Cornwall	5	71,000
Cumberland	7	28,000
Derby	79	3,700
Devon	19	28,000
Dorset	42	4,500
Essex	111	3,400
Hereford	17	7,000
Hertford	138	1,200
Kent	70	9,000
Lancashire	77	28,000
Leicester	55	4,200
Monmouth	14	12,000
Norfolk	106	4,200
Northumberland ..	11	6,800
Nottingham	72	3,800
Oxford	49	3,600
Rutland	17	1,800
Somerset	89	18,700
Suffolk	126	2,700
Sussex	48	7,000
Westmoreland	3	20,000
York	211	9,000

It must be remembered, of course, while thinking of these figures, that there are other punishments under the Game Laws besides imprisonment.

THE figures in another page give the particulars of 76 prize farms of the Manchester and Liverpool Agricultural Association during the past ten years. The main points are as follows:—(1.) That of about 10,700 acres, 2600 acres are in pasture, 3400 acres are in meadow and Clover, 3100 acres are in grain crop, 720 acres are in green crop, 880 acres are in Potatoes. (2.) That the stock upon this land includes 483 horses, 144 colts, 62 bulls, 1366 cows, 561 heifers, 413 calves, 2850 sheep and lambs, and 1290 pigs, equal in ability to consume to probably 25,000 sheep. (3.) That the quantity of manure made upon these farms is between 22,000 and 23,000 tons, and the quantity of manure purchased for the 10,000 acres exceeds 8000*l.* The liquid manure is preserved in tanks and used on 31 of the 76 farms.

There is a great deal of matter for study, both in the details of several of the farms here specified, and also in the totals which they present. The district is evidently highly farmed, especially for the growth of Potatoes for the Liverpool and Manchester markets; 8 per cent. of the land is under Potatoes, and for this large quantities of dung and guano are purchased. A manure bill of 8000*l.* on 10,000 acres of land is equal to the most enterprising instances of Scotch and English agriculture. On the other hand the per-centage of green crop—not 7 per cent. of the whole extent, nor 14 per cent. of the arable portion—is exceedingly small, and helps to explain the large expenditure in bought manures.

Again, as to the quantity of horse labour:—One of the farms referred to twice upon this list is attached to a veterinary establishment; deducting 80 horses on this account, we have the enormous number of 400 horses for the management of 4500 acres of arable land (nearly three-quarters of this being under grain crop), and 6000 acres of Grass. No doubt a large number of draught animals are needed for the carriage of manures and of produce to and from town; but this enormous number appears to us to be a defect in the management of these the first-class farms of South Lancashire and Cheshire. Mr. Alderman MECHI when next in search of illustrations of the economy of steam power may well take his stand between Manchester and Liverpool, and pointing to the triumphs and economy of steam on either side of him, contrast them with the hole in agricultural produce made by so ill organised and wasteful an arrangement as employs one horse costing 20*l.* a year in food alone to manage every 11 acres of arable land and 15 of Grass.

The quantity of stock is small. We have before us the statistics of 14 Gloucestershire farms, including 4658 acres, 2372 being pasture and 2286 being arable. These are therefore pretty much in the same proportion of arable and pasture as the 76 Cheshire farms here detailed. Now these Gloucestershire farms carry 4600 sheep, only 131 horses, 315 store and fatting cows and oxen, 218 2-year-old cattle, and 198 yearlings. The pigs kept are not enumerated, but we calculate the above as equal in their consuming power to about 11,000 sheep, or about 250 sheep per 100 acres. The Cheshire stock does not amount to 220 sheep for the same extent; and as most of these Gloucestershire farms are on the higher land of the county, where the soil is inferior to that of the prize farms of Cheshire and Lancashire, the difference is the greater.

The system adopted on the latter then it seems to us might well be improved by a diminished force of horses and an increased stock of manure-producing animals. The immense expenditure on manures does not necessarily imply increasing fertility where the stock are for the most part milch cows, and the cropping—grain and Potatoes.

—— On Thursday next Mr. STRAFFORD will sell by auction the Short-horn herd of Mr. J. S. CRAWLEY, of Stockwood Park, near Luton, Beds, containing about 60 head of well bred stock, indebted for their quality to bulls hired from Warlaby, and to descent from the Kirkleavington herd. There are also lots purchased at first-class Short-horn sales, among the heifers Ayah, bought a calf at Cobham for 110 guineas. Farley farm, where the sale takes place, is one mile from the Luton station, 10 miles from Hitchin, and 10 miles from St. Alban's.

—— The North of Scotland has been wrapped up 1 foot deep in snow. The *Inverness Courier*, speaking of last week, says:—"Snow fully 12 inches deep has fallen, and so universal is it that neither hill nor dale north of Aberdeen seems to have escaped. Out-door feeding for cattle and sheep is almost unattainable, and is letting at fabulous prices. Turnip fields that in other seasons would not be looked at are rented readily at 8*l.* to 10*l.* an acre. Sheep farmers are suffering severely. For some months the hills lying inland have been partially covered with snow, thus limiting the pasture for sheep. Then came storms that made further restrictions, and the land had been step by step yielded up to the snow, driving the sheep lower and lower, until at last their owners are obliged to swarm to the low country to look out for feeding wherever it is to be found. But this last storm has left us nearly as destitute as the uplands."

SOUTH LANCASHIRE AND CHESHIRE FARMING.

BEING AN ACCOUNT OF THE EXTENT, MANURING, CROPPING, AND STOCKING OF THOSE FARMS WHICH HAVE RECEIVED THE PRIZES OF THE MANCHESTER AND LIVERPOOL AGRICULTURAL SOCIETY DURING THE PAST TEN YEARS.

N B. Yard manure purchased is estimated at 4*s.*, street manure at 1*s.* 6*d.*, bones at 6*l.*, straw at 30*s.*, guano at 12*l.* per ton where the price has not been stated. The column headed "Cows" includes fattening beasts as well as dairy cows. *a* means that the farm is in the hands of its owner; *b* that the tenant is principally dependent on farming; *c* that the tenant is not principally dependent on farming. The total extent differs from the sum of the details by the quantity in roads and homestead. Orcharding and garden is included in green crops. * intimates that the liquid manure of the farm is preserved and used; *x* intimates that straw and other provender is purchased.

No.	Soil.	Extent.	Manures bought.	Manures made.	CROPPING. Pasture	Meadow	Clover.	Grain crops.	Grain crops.	Potatoes.	LIVE STOCK. Horses.	Colts.	Bulls.	Cows.	Heifers.	Calves.	Sheep.	Lambs.	Pigs.
1850		Acres	£	Ton	Acres	Acres	Acres	Acres	Acres	Acr	No.	No	No.	No.	No.	No.	No.	No.	No.
1*a*	Light	98½	96*	(?)	20¾	55	26½ / 54	24½	23	3½	7	..	5	12	13	12	63		31
2*b*	Ditto	250	210*	375	12		97	88	11	27	16	..	1	12	16	8	..	..	12
3*b*	?	200	158	220	18¼		38	61¾	11¾	10½	8	2	2	11	3	2	..	..	8
4*b*	Loam	121	157*	350	12½	10	6¼	34½	14	22	7	2	1	11	8	7	..	..	7
5*b*	Light	102	44	200	50	42	..	8½	12	4	2	2	1	26	16	5	94	70	10
6*b*	Clay	70	*x*	300	27		27	..	..	..	4	..	1	38	..	..	..	..	15
7*c*	Loam	75	40*	50	4		28	7½	11½	3	8	1	..	2	..	1	..	..	11
1851																			
8*a*	Loam	392	60*	1500	171		48	128	42	8	10	15(?)	5	84	79	57	177	82	45
9*b*	Clay	200	135	250	18¼		100½	60½	6	13½	8	2	1	11	3	2	..	..	10
10*b*	Various	163	115*	300	20¼		66	56¼	8	13	7	2	1	16	10	6	..	..	12
11*b*	Ditto	111	167*	200	5¾	..	33	48½	7	16	7	..	..	13	3	1	..	..	20
12*b*	Light	94½	90*	180	10¼		50½	24½	7	14	4	2	..	7	4	4	..	..	9
13*b*	Light	81½	90*	150	7		30½	25½	8	10	4	2	1	4	4	4	..	..	8
14*c*	Heavy	67	32*x*	340	33	33	..	..	..	..	4	..	3	30	..	1	..	..	6
15*b*	Various	152½	—*	350	63¾		63	35	15	9	4	..	1	30	10	6	175		30
16*b*	Ditto	250	190*(?)	560	116		49	45	28	12	8	6	2	32	23	12	77	32	45
17*b*	Light	102	62*	200	51		18	15	11	5	3	2	2	32	9	8	134	52	9
1852																			
18*a*	Light	242	104	450	86	52	..	71	19	13	10	3	..	15	13	4	360	150	30
19*b*	Various	140	—*	700	52	26	..	42	18	..	6	5	1	13	20	..	60	..	32
20*b*	Ditto	163	125*	300	20¾	2	65½	53½	8½	12½	7	4	1	16	8	4	..	..	21
21*b*	Light	127	110*	480	16		52	35	8	16	5	4	2	20	6	7	..	..	40
22*b*	Ditto	81½	105*	150	5	23	7	28	6	11	4	2	1	4	4	5	..	..	4
23*c*	Loam	128	25	200	14		64	19	10	19	4	1	..	8	2	1	..	..	23
24*b*(?)	Various	250	30*	370	117	34	19	56	18	9	8	4	2	56	16	18	37	40	30
1853																			
25*b*	Light	163	135	300	10		88	39½	10	14	4	2	1	12	7	5	..	..	17
26*b*	Clay	104	160	200	26	..	21	38	6	12½	4	1	2	16	7	5	..	..	7
27*b*	Light	94½	70	155	3¾	40	..	34	3	10½	5	1	..	8	5	3	..	..	9
28*b*	Heavy	263	55	750	194	..	..	39	25	3	4	4	..	70	12	17	190		52
29*b*	Loam	138	90	600	63	8	21	31	10	5	5	1	1	38	12	7	60		30
1854																			
30*b*	Light	158	145*	180	3	49	28¾	52	6	19	6	..	..	6	2	2	..	..	6
31*b*	Heavy	110	110*	200	5		42	43	7	12	5	6	..	8	5	5	..	..	10
32*b*	Loam	90½	(?)	400	13	42	6	20	3	6½	3	2	1	28	..	..	..	..	2
33*b*	Light	99	80	165	9½		39	34	3½	12	4	2	8	3	..	3	..	..	9
34*c*	Heavy	134	80	350	6		80	30	11½	6	5	1	..	4	4	5	..	..	3
35*b*	Light	108	35	400	35	..	17½	35	7	12	4	2	1	13	11	9	30	25	
1855																			
36*a*	Light	121	96	150	12	60½	..	29	5	14	5	1	..	6	3	..	..	..	2
37*b*	Loam	189	170	260	20½		85½	56	8	18	8	..	..	8	4	5	..	..	16
38*b*	Light	99	120	165	7½		44½	30	2½	13½	4	1	..	8	4	2	..	..	7
39*c*	Clay	249	130	650	26		134	63	12	10	8	1	1	16	..	..	72	..	54
40*c*	Ditto	128	130	250	13½		40	46	10	19	7	2	..	12	3	1	330		27
41*c*	Ditto	137	(?)	400	20½	..	56½	30	18	4½	46	5	..	2	..	1	..	..	20
42*b*	Loam	257	60	400	115	69	..	45	11⅓	5½	6	..	..	60	5	2	6	60	40
43*b*	Strong	121½	37	300	40		30	39	22	10	3	1	1	18	4	7	..	..	19
1856																			
44*a*	Clay	206	90	360	60	48	29	49	9	5	4	..	..	16	6	5	..	..	2
45*b*	Loam	206	280	220	16		93	52	14	30	8	2	..	20	14	10	..	..	8
46*b*	Various	104	90	200	6		51	30	6	10	5	..	..	6	3	4	..	..	6
47*b*	Clay	70	10*(?)	360	27	34	..	6	2	2	4	1	..	87	..	2	3	..	
48*c*	?	161	70	400	70	8½	9	50	8	4	8	2	..	5	35	..	170	..	20
49*c*	Strong	134	170	880	28½	25	..	50	12	7½	47	3	..	2	1	..	..	..	30
50*c*	Loam	60	20	150	33	6	..	16	1	4	2	3	..	24	1	..	27	38	25
51*b*	Clay	150	30	300	80	18	10	24	1	7	4	2	2	42	7	12	..	..	50
52*b*	Ditto	124	75	300	48	6	24	25	12	20	2	1	2	31	8	10	..	..	16
1857																			
53*b*	Loam	153	200	300	22		59	45	6	20	6	1	..	15	11	6	..	..	8
54*b*	Clay	109	80	200	10		47	37	6	8	6	..	..	12	4	4	..	..	10
55*b*	Strong	88	80	100	4		41	25	3	14	5	2	..	5	2	3	..	..	10
56*b*	Light	70	100	12	5½		28	15½	6	14	4	3	..	4	3	1	..	..	3
57*b*	Various	120	50*	(?)	13	18	..	54	34	3	4	2	..	28	..	..	100	..	10
58*c*	Ditto	69½	50*	250	8¾		25	20¼	7	8	3	..	1	13	6	4	..	..	5
59*b*	Light	48	80	20	..	4	17	18	1½	7	2	..	..	..	..	..	..	..	2
60*b*	Clay	130	35*	200	49	7	21	35	4	12	3	2	..	26	..	7	..	..	26
1858																			
61*a*	?	135	80*	(?)	30		38	41	19	7	6	..	2	18	4	8	..	..	20
62*b*	Light	197	180*	500	10	62	30	58	8	28	11	3	1	11	10	8	..	..	15
63*b*	Ditto	69½	70	150	4	..	11½	33	6	11	3	..	..	4	4	..	..	..	4
64*c*	Ditto	151½	100*	150	2		63	52	2	30	5	..	..	3	1	..	..	..	15
65*c*	Clay	110	85*	300	4½		28	56½	12	12	6	2	..	2	4	..	6	..	99
66*c*	Various	66¼	62	100	5½		25	18½	6	8¼	4	..	..	3	3	2	..	..	3
67*b*	Light	59½	52	160	3		11	32	1	12¾	4	..	..	2	2	12	..	..	5
68*b*	Various	177	68	250	76	30	9	37	8	14	5	3	..	38	17	8	90	..	15
1859																			
69*b*	Light	240	230	375	12	40	48	86	13	38	10	4	1	8	14	13	..	..	10
70*b*	Loam	102	114	220	12	10	22	39	4	13	6	2	..	12	1	2	..	..	4
71*b*	Ditto	70	100	120	3	32	..	10	3	12	4	2	..	3	5	3	..	..	10
72*c*	Ditto	64	53	200	8½		12½	26	6	7½	4	2	..	7	2	3	..	..	3
73*b*	Ditto	49½	100*	50	..	10	10	14	1	11	3	..	..	3	..	1	..	..	3
74*b*	Clay	207	100*	400	100	43	..	44	12	5	4	2	2	55	10	7	..	..	37
75*b*(?)	Loam	205	240	250	35		70	54	17	26	8	..	..	27	20	9	..	..	10
76*b*(?)	Clay	135	110	150	12		60	42½	13	6	6	6	1	5	9	5	..	..	11

SEWERAGE AND PREJUDICE.

IT is some time since I troubled you with one of my agricultural effusions; but I have not been inattentive to what has been going on in the agricultural world. I think we are making a little, though very slow, progress in farming improvements. My esteemed Herculean, undaunted, persevering, and never-flagging friend, Mr. Alderman **Mechi**, I perceive has been at the City of London Farmers' Club, and, as the leader, putting forth gigantic strength to drag a very obstinate and unwilling team after him into the sewers of the great metropolis, or the great Babylon, as Cobbett used to call it. Now, no man who has a mind to think with, can for a moment deny but the principle for which the worthy and indefatigable alderman was contending is a sound and valuable one; but he was hooked to a waggon loaded up to the clouds with that heaviest of all known substances called **prejudice, and his cattle, though sleek and well fed and in fine condition, were all more or less "jibs," and so there the superponderable load remained imbedded to the axletrees in mud, and there it is likely to remain, until some machinery more powerful than anything now known shall be able to set it going. We read of the weight of the metals, gold and platinum for example, but half a score of Barclay & Perkin's drayhorses would fly along with a waggon loaded of these and make nothing of it; but substitute the gold and platinum for the article known by the term prejudice, and all the horses and machinery in the universe would not be able to set it moving. Vain and hopeless therefore were the labours of the worthy alderman at the City of London Farmers' Club; even Stephenson and Brunel together would have been but as a pair of gossamers against such a load!**

But is not sewage required? **and which is the legitimate place for it, the land or the sea? But if it be wanted for the land, why do the farmers of England send to the Antipodes for guano when Alderman Mechi shows them that they may obtain in London and in inexhaustible abundance equally as good an article for the mere trouble of fetching it away? But, if sewerage is not wanted, why is there so much poor land in England which requires nothing but this sewerage and cultivation to make it rich? But guano is so convenient, it can be carried in the waistcoat pocket or in a snuff-box,** and a dash or two of it—as the cookery books speak of condiments—is all that is wanted to convert cold and sour land into warm and sweet land, and to produce luxuriant crops. But again, the reports state that the members of the City of London Farmers' Club do not like irrigation; but have not civilised man in all civilised countries and ages irrigated their lands, and with the most astonishing beneficial effects? We need not go back to the time of Noah, or travel round the world for beneficial examples of the practice of it, for they are patent to and are acknowledged by men of all ages and countries of the world. **At a union workhouse I know the master tried the effects of irrigation** on a bed of common culinary Cabbages, and the effect was such that I myself saw some of those Cabbages cut and weighed, and their weights near 40 lbs. each, whereas without the irrigation they would not probably have reached 3 lb. each. I myself also have astonished all who saw them with the size of my Broccoli by using the same means; so large did they become, and do they become, that we cut them **at three or four times, cutting off a piece as they grow on one day and a piece on another,** until the whole is cut; and if any one doubts this I advise him when he plants the next crop to have the ground dug 2 or 3 feet deep, but 2 at the least, and then let him apply plenty of liquid manure, and he will find his Broccolis many times larger than **he has been accustomed to grow them.**

I have so much to say about the late meeting of the City of London Farmers' Club that not to trouble you **further on the present occasion I will draw this letter to a conclusion by briefly showing you and your readers what I myself have done by the plan I have practised now for nearly or full forty years, and in 1817 and 1818 I published a series of letters in a provincial paper explaining and recommending the same plan. First came draining, but I here confess that I had not the knowledge on this that I have since obtained, but in everything else, as I wrote at the above dates, I write now, namely, I strenuously advocated deep and thorough** cultivation, thin seeding, horse-hoeing, and the keeping the land in generous working heart. Since then I have like a good teacher myself practised what I taught, and **now to the results, and with these I close this letter.**

Having deeply and thoroughly drained, and as deeply and thoroughly cultivated as I could, I drill in my seed with a drill I made myself, which drops the seeds in rows 12 inches apart, and the seeds drop seed after seed singly into the furrows made by the drill-coulters. The drill is drawn by one or two horses, as the land may be very heavy or light, but on light land a pony can draw it easily. Six rows at 12 inches apart are drilled at one sweep. But in this way I put in of Wheat 2 pecks an acre, and of Barley and Oats a little more, but never exceed 3 pecks an acre of either. And now to the result, and I give it for one year. My yield of Wheat that year was 1 bushel under 14 coombs an acre, and the Barley crop was 1 bushel below 16 coombs an acre. The Wheat was threshed and measured in the field where it grew, before as many people as I could collect together. The Barley was threshed after Christmas by hand, and a sceptical neighbouring farmer who had a wager upon the quantity was satisfied with the measure. Let me also state that the Wheat sold at the highest price in the market, and that the maltster who bought the Barley for malting found it to be so good that he kept it for seed. I observe also and I wish this particularly to be read with care, that for four years afterwards, year after year, the same field was with Wheat, and the result was 44 bushels on an average per acre, and the land kept improving all the time; after that the field had on it a fine crop of Barley, and then the largest crop of Clover I ever saw, and then I was obliged to remove from the premises I then occupied to those I now inhabit, and so I know nothing of the extent of the crops now at them. I give you this account as a small example of what may be done with land by proper draining, good cultivation, rational seeding, and horse-hoeing, where the rows are not much less than 12 inches apart; but where they are much less a more destructive implement than a modern horse-hoe could not be invented or used. *George Wilkins.*

AN AGRICULTURAL PILGRIMAGE.

I. CHALKPIT FARM, ENGLEFIELD, BERKSHIRE.—The home farm of Richard Benyon, Esq., of Englefield House, may be referred to as an example of energetic and successful agriculture, uninjured as to its influence on the cultivation and management of neighbouring farms by the excessive cost or refinement of its machinery or processes. Neither the steam plough nor the reaping machine has yet been used upon it, though on stiffer land elsewhere in Mr. Benyon's occupation

Smith's cultivator worked by the ordinary farm locomotive engine has been used with advantage.

Here the land is comparatively light and gravelly, either on chalk or on flinty gravel over chalk. Where deepest and most adhesive it forms an extremely valuable arable soil; where thinnest and lightest it easily burns in dry weather, and is incapable of producing any thing like a bulky crop of grain. The arable land is laid out in five parcels of 60 acres each, or thereabouts, which are respectively in Clover, Wheat, roots, Beans, and Barley. There are besides this some 250 acres of Grass land lying on the flat beside the Bradfield river, a stream which overflows its banks in floods, and lies through such level land on either side that advantage has been taken of its water for irrigating some of the meadows.

The rotation adopted on the plough land is indicated roughly by what has been already said. Of the 60 acres of Wheat stubble nearly 30 are ploughed up, and most of them are sown with winter Vetches which are succeeded by Turnips; a portion is sown with Trifolium, and another with Rye, and the remaining 30 acres are ploughed deeply before winter for Mangel Wurzel and Swedes. They are cross-ploughed and harrowed in spring, ribbed up to receive the manure 15 yards per acre, and 2½ cwt. of superphosphate and 4 cwt. of salt per acre, in rows at 26 inches or thereabouts apart. The manure is covered by splitting these ribs. The Mangels are dibbled 7 inches apart, and every other bunch is singled out when thinning the plants. The Swedes are sown in June and thinned in the ordinary way. The Mangels have averaged upwards of 30 tons per acre and the Swedes nearly 20 tons per acre. On a portion of the land every alternate row in the Mangel field is sown with the white Belgian Carrots. That the cultivation is successful is plain from the large stores in the field (nearly 200 yards long), which still remain both of Mangels and of Carrots, and which, opened anywhere for inspection, exhibited roots dry, sound, and wonderfully large, running from 10 to 15 lbs. apiece for Mangel Wurzel and 3 to 6 lbs. for Carrots.

The character of this success is further shown by Mr. Horsburgh, the steward of the estate, having carried off 11 first prizes for roots at the Crystal Palace Show last December; three first and two second prizes at Reading, two first and one second at Birmingham; besides the prizes offered by the Reading Farmers' Club for the best 4 acres of Mangels and of Swedes on farms of two classes of size within its district. In all 54*l.* was received for root prizes at these meetings last year.

The roots, Swedes, and Mangel Wurzel are pitted early before winter, and as an illustration at once of the vigour of the management and of the advantage of having the labourers of the estate as well as those merely of the farm at command, it may be mentioned that early taking the alarm last October at the prospect of severe weather, Mr. Horsburgh set 45 men and 10 single horse carts to work, and in a single day stripped, pulled, carted, and covered up 10 acres of a heavy crop of Mangel Wurzel. The Turnips after Vetches are put in on a single furrow, well harrowed down and drilled on the flat, ashes and superphosphate being sown broadcast over all, and harrowed in. This portion of the Turnip crop is fed off with sheep. The Beans after the 60 acres of roots are sown by hand in drills opened by the plough in spring, and afterwards covered by splitting the intervening ribs—the new ribs being partially levelled by the harrow just before the Beans come through. The intervals (2 feet) between the rows are horse-hoed, and just before the last hoeing, 3 lbs. of Rape and 1 lb. of Turnip seed per acre are sown broadcast, and thus covered in.

A considerable plant of young Turnips thinned by the harrow after the Beans are harvested is thus provided, affording a capital spring feed on which sheep are now being folded. The Bean stubbles thus fed off in spring are ploughed up for Barley, which is sown down with Clover seed—the young Clover is being now heavily manured with 25 loads (probably 18 tons) of box manure taken fresh from the cattle houses, which is now being spread by a lot of men at 2*s.* an acre. The Clover is ploughed up for Wheat, and this completes the circuit of five years. All the manure of the farm and the purchased manure is thus applied either to the Clover which is cut twice for hay and forage, or to the roots; neither Beans, nor Barley, nor Wheat getting any directly, though the first has the advantage of land left in rich condition by the roots, the second has the advantage of a less straw-producing condition of the soil, notwithstanding that Turnip food is consumed by sheep on the land before it—and the Wheat benefits by a capital Clover root.

The crops are reported as satisfactory. Wheat 4½ to 5 quarters; Barley, 6 quarters; Oats (a portion sown in the Barley break), 10 quarters per acre.

The cultivation of the land is effected by about 5½ pairs of horses; 20 horses are kept on the farm, but a large number have been needed during the building and other improvements which Mr. Benyon is carrying on at Englefield. The horses work from 7 till 11, and from 1 till twilight now, till 6 in spring, till dark at harvest time. The horses receive per week 2 bushels of Oats, formerly uncrushed and weighing 40 lbs. per bushel, now crushed and equally effective as food, though weighing only 28 lbs. per bushel; also half a bushel of crushed Beans and a truss of hay (½ cwt.), and 8 bushels of cut hay chaff, weighing 13 lbs. a bushel. On the whole this is equal to 8 lbs. of Oats, 4 lbs. of Beans, 8 lbs. of hay, and 14 lbs. of hay chaff a day.

Besides 5 ploughmen and 10 women pretty constantly employed, other labour, equal to 1170*l.* a year in all, or nearly 2*l.* per acre per annum, notwithstanding that nearly one-half the land is pasture, are employed.

The live stock of the farm consists first of about 600 Hampshire and cross-bred tegs, purchased in autumn at prices varying from 30*s.* upwards, and fed on Turnips and chaff with Beans, ½ a pint apiece in the fields, some 200 being kept on till the following autumn; next of a dozen milch cows, by which about three dozen calves are reared, and kept first on the pastures, then, during the first winter, in yards on roots and chaff and straw, and 2 lbs. of Cotton-seed cake daily each towards spring; during the next summer on the pastures again; the steers being put up on good food in boxes, and parted with at two years old ready for the butcher, and the heifers being put to the bull and sold with their calves in the following spring. Lastly, there are 10 or 12 breeding sows of good Berkshire breed, from which litters are reared and sold, some of them at long prices, both sows and boars for breeding purposes, and others fat, as pork.

The buildings are centrally placed. They consist first of a block, some 50 feet by 100 feet, covered in by a double span roof, under which are 42 boxes—six single rows of seven each—the rows being separated alternately by narrow gangways (3) for feeding, and wider gangways (2) for carts entering to remove the dung. Each box has a manger for roots and hay and a trough for water. They are separated by rough paling, and the cattle are hindered from dirtying these troughs by a loose pole which they have to lift before they can get at their manger. The food the two-year-old steers and some heifers are receiving now is 2 bushels of mixed cut Swedes and Mangels (the cattle at any time of the winter will pick out the Mangels and leave the Swedes, if any), 4 lbs. of mixed Linseed and Cotton-seed cake crushed and given along with 21 lbs. of chaff. Pulping is not adopted. The cattle averaged last year, when turned out ready for the butcher, at about 2 years old, 25*l.* 10*s.* apiece. These boxes have just been cleaned out and had been cleaned out in the November previously. They are thus cleaned out about three times in the year, being empty during summer and autumn. The price paid to the men (three) engaged in filling the carts was 1*s.* the box, or 1*d.* per piled cartload. The boxes are 3 feet 6 inches deep.

Another block of buildings of the same length includes threshing machines, granary, root-house, chaff-house, steam-house, and steam power (a fixed 10-horse engine consuming 8 cwt. a day of coals, and worked now about three days in the week). Between the two the space is roofed over and occupied as a straw house. The steam power is conveyed by strap to a longitudinal shaft upstairs, from which straps on pulleys carry it to threshing-machine, Turnip-cutter, two pairs of mill stones, two chaff-cutters, cake-crusher, and corn-bruiser. And as an illustration of the labour used in threshing, about which a correspondent inquires in this week's *Agricultural Gazette*, I may mention that this 10-horse power engine will thresh 80 to 84 quarters of Wheat in a day of 10 hours, needing 1 engineer, 1 man to attend to shifting the sacks when filled, 1 man to lift them and place them in the granary, 2 men on the rick to unbuild, 2 men each with their cart and reins to carry the sheaves to the threshing floor, 2 men to take it from them and cut the bands of the sheaves, and 1 man to feed, 3 men to pitch out and carry away the straw from the shaker, and one to build it in the straw house—14 men in all; costing at least 30*s.* a day, which, with coals at 8*s.*, and interest on machinery at 10 per cent., probably 16*s.*, comes to 54*s.* a day, or 1d. per bushel of the Wheat threshed.

The steam power is used to cut the roots for two days' supply by means of Samuelson's largest Banbury cutter, and to cut hay chaff at the rate of 5 tons in a day, two men feeding the chaff-cutter, and to crush Oats and crack Beans by Turner's capital machine for the purpose—all at one and the same time.

On the south side of this block of cattle boxes is a shed for implements. On the west side is a range of stables, lofty and airy, with no particular nicety, but great convenience of internal arrangement, and on the other side as a lean-to is shedding and yards for the calves, of which 50 or 60—a capital lot of good useful Short-horns—are kept in three divisions, provided with racks for straw and mangers for the roots, and chaff, and cake. North of the threshing machinery and barns are six long rows of open roofing for storing away the corn. The implement shed, barns, straw house, granaries, and corn sheds thus succeed one another as you go northwards. East of this range is a cow byre, nag stalls, slaughter-houses, poultry-house, &c., on two sides of a square, thus sheltering a yard for cows and calves from the north and east and lying alongside of the cattle boxes, and another square of pigsties and yards lying alongside of the granaries and threshing machinery. The corresponding space eastward of the rows of corn sheds remains to be occupied by sheds and yards for cows, if it should be resolved to establish a herd of Short-horns. The threshing machinery was erected by Clayton & Shuttleworth, of Lincoln. The buildings were planned by Mr. Benyon and his steward, and erected by the workmen of the estate at a cost of about 3000*l.*

Besides the stock named there are about 30 heifers to calve in April and May (fetching then about 17*l.* 10*s.* apiece) out on the low-lying pastures by the Bradfield river. There they are liberally foddered through the winter. The soil is a black, light, half-peaty deposit, and is easily poached and had suffered in that way exceedingly. But a heavy stock of cattle well-foddered does benefit, not injury, in spite of poaching, to such light soil as this, and I was not surprised to learn that under this management this poor coarse Grass was being rapidly improved. Being bush-harrowed and rolled it puts up a strong growth of sweet Grass during summer.

The cows, 11 in number, large-framed, good ordinary Short-horns, were in the drier pastures of the farm. In the park, besides a large herd of deer, there were 50 little Shetland steers which cost 5*l.* apiece delivered here in the autumn, many of them being 5 years old. Severe as it had been they probably never had had a better winter than the last, and having access to the troughs from which the deer are fed, as well as abundance of rough Grass in the park, they will no doubt become fat after their fashion, yielding probably 3½ cwt. apiece of the best beef in the world.

A word has yet to be said on the pig stock. Mr. Benyon is an exhibitor of pigs at Birmingham and elsewhere. A pen of his—3 pigs of one litter under 15 months old—was shown at Birmingham in December 1858, and disqualified by the veterinary referee on the ground that they were not all of one litter—one of them being much older than the others. This of course amounted to a charge of dishonesty against the exhibitor or his subordinates. That such a charge is absurd any person knowing the persons implicated knows perfectly. It is undoubtedly a hard duty to perform, this call to disqualify in disregard and disbelief of the affirmation of respectable men—and a few more such instances as the one before us will hinder any respectable man from undertaking it, as it will show that the largest past experience in the department is no guarantee of the justice of the verdict which it can give.

I saw the head of the delinquent boar; his precocious dentition as compared with that of his fellows in the pen may have arisen from his having been kept a boar until five months old. Be that as it may, there was enough that was unusual in it to have deceived the veterinarian referee, and enough one would think to justify greater caution hereafter. The following is the veterinarian's report:—

"*Upper Jaw.*—Central incisors, permanent and well developed. Middle incisors, permanent, recently cut. The temporary tooth on the left side is still retained and placed between the central and middle permanent incisor. Corner incisor, permanent. Tushes, large, slightly flattened on their anterior surface by attrition against the lower tusks. Molars six, all permanent. The four anterior molars had been preceded by temporary teeth, one of which is still attached to the gum on the left side. Usually but three temporary molars exist; the last molar, ordinarily the sixth in situation, is uncut, but is on the eve of coming through the gum.

"*Lower Jaw.*—Central incisors, permanent and slightly worn. Middle incisors, permanent, well developed, falling nearly on a level with the central pair. Corner incisors, permanent and well up. Tushes long and curved. The points of these teeth have been broken off, probably by accident; the right tush is the most broken. Premolars well up. Molars four only; these all permanent. The anterior pair of molars wanting; a state of things very unusual. The last molar in situation corresponding to the sixth in ordinary cases, is embedded in the jaw, but like the corresponding tooth in the upper jaw is in a condition fitted for early cutting; the bone being absorbed above it more particularly on the right side."

There is enough that is unusual in the dentition here described entirely to exonerate the exhibitor from the charge which the disqualification of the animal implied by taking it out of the ordinary rule which obtains in the dentition of the pig, and also enough, one would think, to make decisions by a veterinarian referee held in less confident belief than hitherto.

Among other noteworthy points which may be named in praise of this farm is the character of the cottages built at intervals along the approaches to it.

They are erected in couples and provided with large gardens. Each cottage has a large living room, a back kitchen, closet, and pantry; and upstairs three bedrooms, one of which has a fire-place. Behind each pair there is a long building, including an oven common to both, a wash-house and privies; and there are pigsties at the farther end of the garden. The rent asked is 3*l.* a year, less than 2½ per cent. on the cost, but ultimately no doubt to return a profit in the useful influence which they will exert on the character of the labouring population. *J. C. M.*

Home Correspondence.

Mr. Hamilton's Experiments on Sheep Feeding.—I see that Mr. Spooner has again returned to my experiments on sheep feeding, and without making any exertion to add information upon this important subject, he still harps upon his vague imaginings that there must have been some mistake in the mode of recording the experiment. I have no doubt as to the mode in which the quantity was collected, and am sure that no one will be rash enough to dispute the accuracy of Dr. Apjohn's analysis, but I hope that your readers will remember that I prefaced my statement with these words: "I am now going to tread upon more delicate ground, though I fully feel how dangerous it is to draw conclusions from isolated experiments; but as the value of artificial food is a matter of such vital importance to the farmer I think it may be useful to throw out the following observations in order to lead others who have more

opportunity to multiply and reason upon them more extensively." *Agric. Rev.*, vol. 2, n. 1. There have been so many references to these isolated experiments in your Journal that I shall not refer to the subject further than, as Mr. Spooner seems to think that the second analysis ought to have been published, I send it to you, at the same time explaining that the reason I did not publish it before was that I was not quite satisfied as to the exact relative quantities having been given, and also because a change of food had been made contrary to my direction. I therefore threw this experiment aside and hope to repeat it. What I think most to be regretted is that so much discussion should have followed the publication of an isolated experiment, thrown out as a provocative to inquiry, without its having excited others better qualified to pursue the investigation further, and I do hope that others will, instead of carping upon guess-work, try the experiment upon a larger scale. To avoid the danger of the temporary state of the animals' health affecting the result, it would be well to have lots of six sheep each fed on different food. and their excretion then analysed. It is an experiment that ought to be considered one of real national importance, and undertaken on a scale much greater than it could be by an individual observer. *Charles W. Hamilton, Hamwood, Dunboyne, Feb.* 13. [The following is the analysis referred to]:—

Results of the analyses of two specimens of the urine of the sheep received from Charles W. Hamilton, Esqr., Hamwood, Co. Meath.

I.—Specimen labelled "No. 1," (high fed). Quantity supplied, 43 fluid ounces.

Specific gravity	1045
100 parts contain :—	
Water	87.16
Urea and undetermined organic matters	9.38
Yielding by combustion with soda-lime, ammonia ..	(3.20)
Inorganic matters, chiefly alkaline salts	3.46
	100.00

Valuing ammonia at 60*l.* per ton, and the inorganic matters found in the urine of the herbivora at 1*l.* 10*s.* per ton, the value of one ton of sheep's urine having the composition above stated would be 2*l.* 1*s.* 6*d.*

II.—Specimen labelled "No. 2," (low fed). Quantity supplied, 64 fluid ounces.

Specific gravity	1014
100 parts contain :—	
Water	95 88
Urea and undetermined organic matters	2 95
Yielding by combustion with soda-lime, ammonia ..	(0.85)
Inorganic matters, chiefly alkaline salts	1.17
	10.000

Value of one ton of urine having the above stated composition, 10*s. Charles A. Cameron.*

Deep Cultivation.—One of our successful experiments of deep cultivation (1859) on common ploughed land was on 3 acres of one description of Wheat stubble, all alike prepared and formed into ridges by the plough about 4 feet apart, and planted with Yellow Globe Mangel Wurzels at the end of April. The plants were set out singly and regularly about 18 inches apart, and kept clean from weeds by two deep hoeings. The interstices were followed by three complete shallow ploughings during summer in lieu of manure. The result was not an extraordinary crop, weight about 30 tons per acre; but they were remarkable for their equality in size and soundness, and not one running to seed, also for their timely maturing at the end of October. The sixth rows however on each side of the plot were experimented upon, by merely subsoiling or doubly ploughing the bottom of the ridge, only with two furrows or one bout before planting, at an additional expense of about 3*s.* per acre. The result of each two rows were an equal number of bulbs, but exceeding 25 lbs. in weight every lineal rod, or 1200 lbs. each more than the rest of the rows, viz., 10 tons 14 cwt. 1 qr. 4 lbs. per acre in excess of the entire crop not subsoiled under the plants. This augurs well for the utility and necessity of subsoiling the land at least for root crops. We hail the speedy introduction of the steam plough to effect the desired object of preparing the subsoil for roots, in a still cheaper, more efficient, and effectual manner, even than the common plough possibly can be made to do it, with the aid of horse-power. *Abraham Hardy and Son, Maldon, Esser.*

Roofing of Ricks.—It has occurred to me more than once lately to inquire through your valuable journal whether a substitute both efficient and eventually economical might not be found for the valuable Reed or straw now so largely used in thatching ricks, &c. What appears to me to suggest itself is the corrugated galvanised iron plates. The firm of Morewood and Co. I observe offer this at the rate of about 50*s.* for 100 superficial feet (surface covered). Might not this be used in sheets of 6 feet by 2 to advantage in covering ricks? The labour saved and time gained, to say nothing of the durability of the material if carefully put away when done with, appear to me to offer great inducements. Small chains or hooks at the ridge would be enough to keep them in their places, and as they overlap like tiles, the lower plates would simply require a few hooks to attach them to the upper row. As the rick gradually diminishes by use, might not the roofing plates that are no longer wanted be used as stoppers at the end of the rick instead of the present rather clumsy method of straw stoppers? As straw is so useful both for food and manure, I think a great deal might be saved by the plan here suggested, and as Wheat, &c., is likely at present prices to be an unremunerative crop, and yet straw is wanted for farm use, might not the saving thus suggested be the means of leaving the farmer more at liberty to dispense with unprofitable crops, and to give his land more to what will repay him? I merely ask these questions to obtain the opinions of those of more experience in such matters. Those farmers to whom I have mentioned the plan casually in conversation seem to think it feasible. *Tyro.*

Reviews.

The Journal of the Royal Agricultural Society of England. Vol. XX., Part 2.

This Part, which belongs to the past year's volume, has just appeared, and we are able this week only to enumerate its contents. There is a report by Mr. Denton of the Hinxworth Drainage—an interesting historical and suggestive paper by Mr. Spooner on Cross-breeding—a meagre report by Mr. Barnett on the Exhibition and Trial of Implements at the Warwick Meeting—one of Mr. Smith's most instructive and capital reports of Live Stock, this time in reference expressly to the Warwick meeting—a detailed and one would think conclusive statement by Mr. Ruston of his experience with the Water-drill—statements by Dr. Voelcker of the composition of Sorghum saccharatum and of experiments with Top-dressings on Wheat. Messrs. Lawes and Gilbert continue their account of experiments with different Manures on Meadow Land. Mr. J. Chalmers Morton enumerates cases of Agricultural Maxima. Mr. Lawrence, of Cirencester, and others, state experience almost unanimous in favour of Pulping Roots for Cattle. Mr. Bennet gives his experience of Kohl Rabi—Mr. Herbert continues his statistics of Metropolitan Meat Consumption—Mr. Russell continues his report on the Influence of Climate; and Messrs. Lawson & Son give a full history and account of Kohl Rabi.

In the instances of Kohl Rabi and Sorghum, and Water-drill, and Top-dressings of Wheat and Grass lands, we have information given at a time when it may immediately be turned to account. As regards Hinxworth Drainage, Cross-breeding, Warwick Reports, Influence of Climate, &c., we have information which may be more leisurely utilised. There is less of abstract science in the number than usual; but as to current and immediate utility, as well as interest, it appears to us to be quite up to the usual standard. And Mr. H. S. Thompson, who retires from a most laborious office, the duties of which undertaken on public grounds alone he has for several years most efficiently discharged, may be congratulated on this his latest gift to English agriculturists.

Farm Memoranda.

EARDSWICK HALL, NEAR MINSHULL VERNON, CHESHIRE.—To this farm, occupied by Mr. S. Davies, the Manchester and Liverpool Society's prize of 10*l.* was last year awarded. The following is a copy of the tenant's certificate:—"The farm contains 207 acres. There are 100 acres in pasture, 23 acres meadow not covered with dung water, 21 acres covered with dung water, 11 acres of Wheat after Beans, 17 acres Wheat after roots. Total: 28 acres of Wheat, 16 acres of Oats, 1 of Vetches for stall feeding, 5 Potatoes, 7 Swedes, 4 Mangel, 1 orchard and garden, and 1 homestead and occupation road.

"*General Rotation*—Wheat, roots, Barley or Oats, Clover. Sometimes deviate a little from this.

"*The Live Stock* consists of 3 farm horses, 1 harness horse, 1 pony, 1 colt, 55 dairy cows, 10 heifers, 2 bulls, 7 rearing calves, and 57 pigs. Total 137. Stock kept in winter, for 5 months, on hay and straw, chopped by steam power, with Swedes or Mangel, and with Oat or Barley-meal, and oilcake. In summer on pasture. Make annually about 400 tons of manure on the farm, which is applied to root crops and meadows. Purchased annually in the last years, of bones and other artificial manure, to the amount of 43*l.* But the average of the last 10 years spent on purchased manures exceeds 100*l.* a year. The whole of the farm has been drained within the last six years principally by the Cheshire Draining Company, from 3 to 4 feet deep, and from 8 to 10 yards apart. Laid with pipes varying from 1½ to 9 inches in diameter as required. Have filled up 15 pits. Have eradicated 5320 yards of old fences, at an average cost of 2*s.* per rood, of 8 yards. There has been 3600 yards of new fences planted. I have marled 74 acres. Subsoiled 43 acres. Carted tiles for the drains, and bones for the pastures. Also carted bricks, timber, lime, &c., for the erection of new farmhouse and outbuildings. Within the last 10 years 2000*l.* has been spent on draining and boning, between the landlord and tenant, the tenant paying interest on what the landlord spent. I have planted, at my own expense, a new orchard. The farm formerly was in 32 fields, and is now in 16, of sizes more suitable for grazing and ploughing. The farm is held on lease for 11 years, commencing January 1st, 1851.

"August 4th, 1859. (Signed) SAMUEL DAVIES."

And the following is the report of the Society's Inspectors:—"This farm lies on the banks of the Weaver, and nearly in the heart of Cheshire, consequently in a good climate. The homestead perhaps a little above 150 feet above sea level. With the exception of a few fields, its surface is but slightly undulated. That portion lying to the river has a steep inclination down to it, and which has a southern aspect. A canal runs through the farm, also a good road, and a railway within two miles. The soil is a strong clay loam; about half the farm a very stiff soil. Subsoil clay, and in some portions very stiff and tenacious. The draining appears to be well executed, the depth and distance regulated by circumstances. The land has been in high crowned ridges, not very straight or very regular in breadth, but from 6 to 8 yards wide. On the arable part of the farm these ridges are levelled down, but, on the old Grass fields, remain the same. On this the drains are made in the furrows, and appear to answer very well, the herbage being equally good in the furrows as on the ridge; neither Rushes, Pink Grass, nor any other coarse plants. All the outfalls of drains are well secured and kept clear and open, as well as the open watercourses. The fences are good, both the old and new ones, except those very lately planted, which are well protected and kept clean. Those grown up are annually brushed up; but, according to our fancy, too broad at top. There is one old crooked fence yet which spoils the shape of two fields. A considerable portion of waste land has lately been taken in from the high road which runs through the farm. This is now in cultivation. A field of 18 acres is in green crops. The Mangel very fine, but a small portion short of plants. Swedes late sown, but very healthy and thriving, promising for a heavy crop of sound bulbs. Potatoes vigorous and without blanks Vetches sown on a fallow on June 28, a beautiful thick crop 15 inches high. The whole of the crops on this field, as well as the head-ridges around it very clean and under correct management. The Wheat after root crops, a thick, strong, clean crop, of good colour, and ready for cutting. That after Beans not so heavy, and had a few annual weeds in it. This was cut. The Oats were off leas, and one of the best and cleanest crops within the district of this society. These were cut but not carted. Mr. Davies had the broad-shares at work between the stooks, in preparation for root crops next year. All the corn crops had been sown with the drill. The old meadow land appeared very productive of good herbage, except one meadow of about 12 acres, a steep sloping bank to the river of rather inferior land. A 19-acre pasture field on a very stiff clay, and lately laid down to Grass, did not appear to have the best herbage on some portions of it. Other five fields of old Grass, and containing 78 acres altogether, produced excellent Grass, both in quality and quantity. Full of Grass when inspected. All been boned. Each field on the farm has a good gate, and posts painted white. Mr. Davies says his landlord pays for the paint and painting and he keeps them in repair, and pays his landlord 10*s.* for any new gates. The farm-house, out-buildings, and homestead are all new, roomy, and very substantially built. The house very convenient both in the living and dairying department, fitted up with proper and useful appliances for carrying on the dairy system in the best manner. The cellars are arched. There is a back kitchen with rain-water tank under it and pump. A large covered kitchen yard open on two sides, with a pump in it for spring water. The out-buildings occupy three sides of the farm-yard, which is open to the east. In these there is plenty of room, and are very substantially built, but they might have been better arranged. There are two shippons, each holding 30 cows, with gangway or feeding passage between of 9 feet wide, so that a cart can go through it. The calf houses are at one end of the shippons. There are lofts for hay, straw, or corn over the shippons, stables, and implement shed. There is a steam-engine for threshing and other work, a provender-house and cooking room fitted up with all necessary apparatus for cutting hay, straw, roots, and steaming. In the farm-yard there are three large pig cotes with a large outer yard, under which there is a rain tank to hold 7000 gallons, with all necessary drains, grids, and cess-pools, in conveying the rain and wash into the tank. The liquid manure can be drawn off at a little distance into a water cart, which can be filled in a few minutes. Mr. Davies has a well selected stock of farm implements, all in working order. The live stock are all of the right sort for use and profit. The farm is a complete dairy farm, and both in-door and out-door management of first class."—*Inspected Aug.* 13, 1859.

Miscellaneous.

The Royal Agricultural Society's Meeting at Warwick.—A final meeting of the Committee who conducted the great meeting at Warwick last year was held on the 14th inst. under the presidency of the Earl of Warwick. There were present, among others, the Hon. C. L. Butler, Sir T. G. Skipwith, Bart., J. T. Whittington, Esq., Mayor of Warwick, and Owen Pell, W. B. Shaw, E. B. King, C. M. Caldecott, R. Greaves, T. Cotton, H. J. Wise, and J. T. Arkwright, Esqrs. The Report detailed the operations of the Committee from the commencement, and concluded by stating that there was a balance in hand, after paying expenses, of 1125*l.* 12*s.* 11*d.* The Committee recommended that the sum of 50*l.* each should be presented to Messrs. J. Moore and J. Margetts, the Hon. Secretaries, in acknowledgment of their services; the sum of 50*l.* to the Local Board of Health, to meet the extra expense of the wear and tear of the roads; and that the residue of the fund be presented to the Warwickshire Agricultural Society.—The recommendation as to the gratuities was confirmed without opposition, but as regards the proposed presentation of the balance to the County Society considerable difference of opinion prevailed.—Mr. T. B. Wright proposed, as an amendment, that

the balance should be invested in public securities, in the names of the three trustees, as the foundation for a future local fund, it being the opinion of the meeting that the Council of the Royal Agricultural Society would in a few years determine again to hold their country meeting in Warwickshire. He thought the money should be devoted to no other purpose than that for which it was originally subscribed. A general impression was entertained that the Council of the Royal Society would re-consider all their plans with regard to country meetings, and that the result would in all probability be the selection of six or seven localities, of which Warwickshire would no doubt be one. The Royal Society would not fail to recognise the necessity of affording the greatest possible accommodation to the largest number of agriculturists, so that the experiment of moving about the country might realise the fullest success of which it was capable. He had no objection to the Warwickshire Society, but he thought it better, if possible, to apply the fund for the general improvement of agriculture. Were the plan proposed by the Committee to be adopted, some gentlemen might be disposed to put in a claim for the Birmingham Society. He for one did not wish to raise a question of that kind, but he did think that, if the arrangement he suggested were adopted, this county would in a few years again enjoy the advantage arising from a visit of the Royal Society.—Mr. John Lowe seconded the amendment, but after considerable discussion it was negatived, and the original proposition was agreed to.—Thanks were then voted to Lord Leigh, the Mayors of Birmingham, Coventry, and Stratford, and the Chairmen of the Local Boards of Health at Leamington and Rugby, the Hon. Secretaries, and the Committees.—A statement of the general financial results of the Exhibition of 1859, which, we believe, will be satisfactory to the Council, may be expected in the forthcoming number of the Society's Journal. It is highly creditable to the public spirit of the inhabitants of this county that so large an amount was placed at the disposal of the local Committee; in fact, as was explained to the meeting on Tuesday, additional subscriptions could have been obtained had they been required. *Birmingham Gazette.*

The Condition of Servant Girls.—Mr. Samuel Warren, Recorder of Hull, in a recent charge to the grand jury said, "I must in sober sadness ask you, as men of the world, of social standing and experience—as heads of families—whether you can possibly regard as satisfactory the condition of female domestic servants of the present day? I know what is said on the subject by masters and mistresses, in London and elsewhere, of all ranks of society, that it is almost impossible, speaking in a general way, to get or to retain a respectable, modest, and trustworthy female servant. Why? Some, nay very many, will tell you bitterly, and with two much truth, that young women in that class of life are monstrously over educated for their stations and callings; that is to say, that passing away from or neglecting homely and useful acquirements, their minds are distempered and inflated by a smattering of knowledge and accomplishments totally unfit for them, disturbing all their notions of dutiful, respectful, and happy subordination, and giving them a disgust for the plain paths of duty. I ask you whether any observant person can walk the streets of our cities or towns on Sundays, when shoals of servant girls are abroad, without feelings of pity and disgust? Slipping out of front doors, and sneaking out of areas may be seen kitchen and scullery maids, aping the absurdities of their superiors in station, with lace or make-believe lace petticoats, crinolines, kid gloves, parasols, and preposterous headdresses. What must be passing through their minds as they strut along thus dismally bedizened, inviting imputations on their character? Whence come the funds to supply this paltry finery? They easily fall a prey to the profligate, and disable themselves from resisting the opportunity of robbing their mistresses and masters. But you will say, what is the remedy for it? Why, I will tell you. First of all, let their betters cease to set them an example of a preposterous and paltry love of finery, which they themselves are often as little able to afford as their inferiors, at all events without shamefully and cruelly wasting the means of husbands and fathers. Let mistresses steadily and resolutely set their faces against finely dressed servants. A general combination, with this view, in even a month or two, would be of incalculable importance. Do not let quickly-cast-off fashionable clothing be given to servants, but be otherwise and charitably disposed of. Let lords and ladies—let gentle and simple—in their respective spheres of influence, inaugurate a more rational and wholesome state of things, with reference to education, and then we may have a chance of again seeing that charming feature of an English domestic establishment—a worthy, trustworthy female servant. It is from the class of silly, light-headed, misled, mis-educated young women of whom I have been speaking, that the ranks of vice are incessantly and largely recruited, of which, from my judicial experience, I could give you heartrending instances and illustrations; but I forbear to do so."

Calendar of Operations.

FEBRUARY.

ISLE OF ELY: *Feb.* 15.—Our report this month must necessarily be short. There is very little upon the farm just now that is calculated to interest one. Work is very much suspended by the severe frosts we are experiencing. For a week the land has been too hard to plough, and previously to that was too wet for spring seeding. Our high land farmers are beginning to manifest symptoms of anxiety; their horses are idle or nearly so, and the time has arrived when Peas and Beans on these soils should be sown. To-day there has been a slight thaw, but during the last week the thermometer has been very low, the minimum ranging from 20° to 25°, and the maximum very little above freezing point. We have also had a slight cover of snow, which has to some extent protected the young and tender Wheats. Up to this period the work upon the farm may be pronounced forward. Nearly all the lands designed for spring corn crops are ploughed, and those intended for green crops are many of them far advanced in their preparation, especially on the high lands. We have ourselves ridged up one of 7 acres for Mangels on these soils; we did this as long ago as the 22d and few following days of November; it has therefore had all the advantages of the frosts and thaws to pulverise and prepare it for the seed. A few days of fine drying weather would enable our farmers to commence field work again, which would furnish ample employment for both men and horses. But should this wintery and unfavourable weather continue a few weeks longer, it will seriously interfere with the business of the farm, make all the seeding late, and all the early spring work "in heaps." Great complaints are made in most districts about the shortness of Turnips and other keeping, arising very much from the severity of the winter occasioning all exposed roots to decay considerably. Our Coleseeds, as we have previously reported, were entirely destroyed, and sheep keeping now is very scarce indeed. We have nothing but our Mangels to fall back upon, and fortunately these keep much better than was expected. Fat sheep are getting dearer, and are nearly all gone to market. The corn trade improves slightly, but more perceptibly in good qualities. Inferior sorts remain about stationary. *Your Fen Reporter.*

Notices to Correspondents.

DIARRHŒA IN LAMBS: *Cambridgeshire Farm.* Diarrhœa or scouring in young lambs often arises from coagulation of the milk in the stomach, and is then called the white skit; the treatment for which consists in giving an alkali, such as magnesia, twice a day in gruel, followed by 2 to 4 drachms of Epsom salts and ginger. If it is from simple relaxation of the bowels produced by fresh Grass, a dose of the following cordial will be useful:—Prepared chalk, 1 oz.; powdered ginger, 2 drachms; powdered opium, ½ drachm; peppermint water, ½ pint. Dose—one or two table-spoonfuls twice a day. Soft American Linseed-cake may be given as food.

GRASSES: *To Correspondents.* We have frequently advised our correspondents to consult *Agrostographia*, or the *Agriculturist's Manual*, by Messrs. Lawson, of Edinburgh, for instructions as to the laying down of pastures and the proper seeding of various kinds of soil with Grass seeds, and as we know no better book upon the subject we shall continue to do so. If particularly careful of our own interest or reputation in the matter we should probably have discovered information, both scientific and practical, of equal value, and equally worthy of study by our readers, in some of Dr. Lindley's writings, or in "Morton's Cyclopædia of Agriculture," the article on Grasses in which, by Mr. Gorrie, is full of detailed instructions. It appears however that this reference made in all simplicity to Messrs Lawson as an authority on the subject is held by some of our correspondents to be hardly fair towards other equally good names in the seed trade, who are weekly intimating their readiness to give sound advice and supply good seeds. Let it therefore be once for all understood that if on any future occasion we shall consider it our duty to recommend Lawson's *Agrostographia* to our readers, they must not take this recommendation to mean that good seed cannot be bought of Messrs. Carter, Chivas, Dickson, Drummond, Rendle, Sutton, Wheeler, and many others whose names will be found in our advertising columns as well as of Messrs. Lawson

GRASS LAND: *Constant Reader.* You had better top-dress your land first, and after by rain it has been washed in and the land has taken hold of it, brush-harrow it twice, sowing the seeds between the harrowings.

IMPORTATION OF PRODUCE, 1859: *K.* The returns for the year have just been published. They include the following items:—

		1858.	1859.
Cattle	No.	62,018	63,294
Calves	,,	26,983	22,383
Sheep and lambs	,,	184,482	250,580
Swine	,,	11,565	11,084
Bones	tons	85,293	84,848
Wheat	qrs.	4,241,719	4,000,922
Barley	,,	1,661,392	1,727,835
Oats	,,	1,856,281	1,677,585
Peas	,,	157,975	136,026
Beans	,,	412,031	344,476
Maize	,,	1,750,825	1,314,303
Flour	cwt.	3,856,127	3,328,324
Indian Corn meal	,,	4,637	2,446
Flax	,,	1,283,905	1,432,037
Guano	tons.	363,541	84,122
Hemp	cwts.	882,110	1,088,249
Oil cake	tons.	80,629	95,208
Potatoes	cwts.	1,721,953	588,910
Bacon	,,	196,685	107,251
Beef (salt)	,,	168,496	219,540
Pork (salt)	,,	89,741	163,322
Butter	,,	387,566	425,663
Cheese	,,	364,087	406,547
Eggs	No.	134,685,000	148,631,000
Saltpetre	cwts.	334,218	445,237
Cubic nitre	,,	484,988	519,722
Clover seed	,,	150,377	138,100
Flax seed	qrs.	1,017,844	1,270,911
Rape seed	,,	216,927	412,174
Wool (sheep)	lbs.	124,050,590	130,873,000
Wool (alpaca)	,,	2,688,133	2,501,634
Yeast	cwts.	82,425	78,6000

MANGEL SEED: *W.* For seed, plant now selected Mangels and Carrots in rows 30 inches apart, and 30 inches and 18 inches respectively from each other in those rows. The land should be in good order; but not too rich.

ROOFING FOR RICKS: *Tyro.* Your letter was unfortunately overlooked and its publication has thus been delayed.

SMALL FARM: *Bath.* We must beg you to excuse a week's delay.

THRESHING MACHINES: *Messrs Watkens.* We are unable to advise you of districts needing locomotive threshing machines—this is properly the subject of advertisement; and some of our readers may perhaps be induced to apply to you.

WHEAT: *L S.* At Reading, last Saturday, Wheat was sold at 7*s.* a bushel warranted to weigh 15 score 6 lbs. per sack, or 66¼ lbs. per bushel. That is a great weight. On the other hand at the Kelso Agricultural Meeting the other day, Wheat at 65, Barley at 58, and Oats at 40 lbs per bushel were shown.

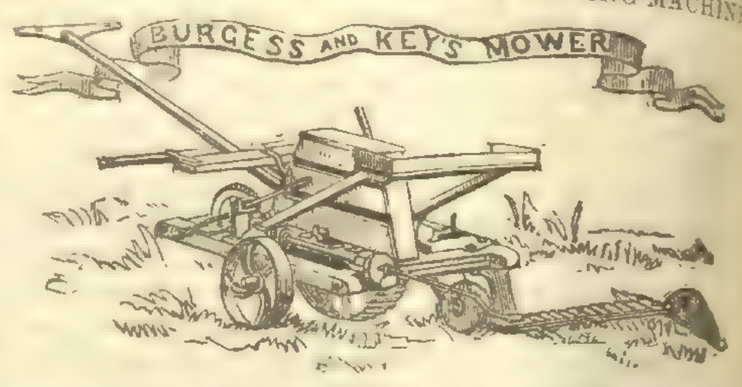
ERRATA: In the paragraph in this section of the Paper on Poisonous Cattle Food last week, for the Cursus Bean read Curcas Bean; for Earth Nut, the seed of Arachis hypogea, read Arachis hypogæa, and for Silique read Siliqua.

*** As usual, many communications have been received too late, and others are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspondents the insertion of whose contributions is still delayed.

THE AGRICULTURAL ENGINEERS' COMPANY (LIMITED), Swan Lane, Upper Thames Street, London, E.C., hold in stock the following Goods suited to the Season:—Steam Engines, Horse Powers, Chaff Cutters, Crushing Mills, Oilcake Bruisers, Root Cutters and Pulpers, Pumps, &c.

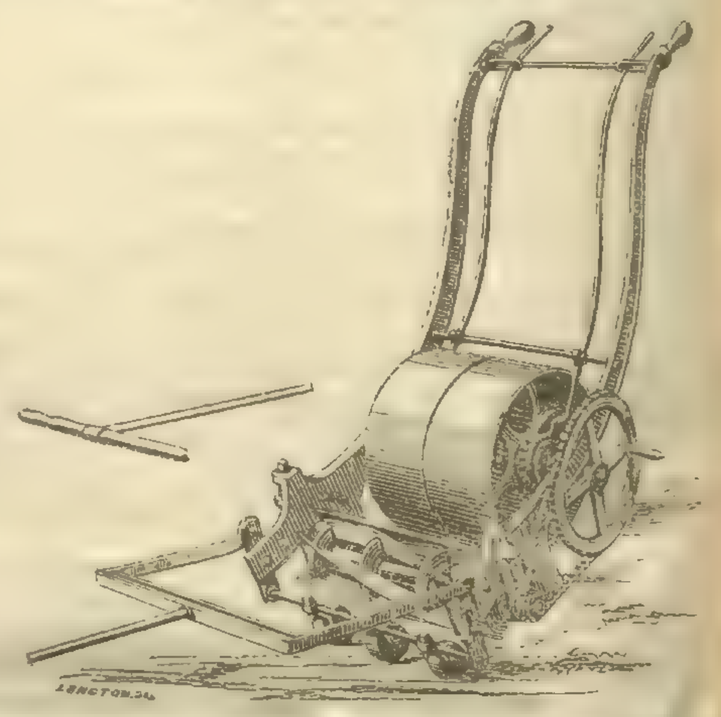
Price Lists can be had post free upon application.

BURGESS AND KEY'S ROYAL AGRICULTURAL SOCIETY'S FIRST PRIZE GRASS MOWING MACHINE.



This Machine has been introduced with the greatest success into this country during the last season, and a large number of them have been worked in a most satisfactory manner. A Silver Medal was awarded to it at the Royal Agricultural Society's Meeting at Warwick. It was also exhibited before the Emperor of the French at Fouilleuse, on which occasion it performed its work to the admiration of every one. Two of these Machines were purchased by the Emperor on this occasion, and an order for two more has since been received for the season of 1860. It was also exhibited in Scotland and Ireland with the same success. It also received the First Prize of the Norfolk Society at Swaffham, in competition with Wood's and others, besides many other Prizes. Price £30 at the Works. Extras are charged for.—Full particulars may be obtained of BURGESS & KEY, 95, Newgate Street, London, E.C. Early orders are solicited to insure delivery in time for hay harvest.

GREEN'S PATENT SILENS MESSOR.



GREEN'S PATENT SILENS MESSOR, or NOISELESS LAWN MOWING, COLLECTING, AND ROLLING MACHINES, patent dated June 6th, 1859.

THOMAS GREEN in respectfully returning thanks to the Nobility, Gentry, and the Public generally, for the very liberal support he has received for some years past, informs them that (although he has for the last three years, at all the principal AGRICULTURAL AND HORTICULTURAL SHOWS in the kingdom, proved the superiority of his Machines over all others, carrying off every prize that has been given, and highly commended by the Judges,) he has taken out this season an entirely NEW PATENT, which he with confidence submits for competition, as it excels all his previous efforts, and overcomes all difficulties.

HAND MACHINES.

The SILENS MESSOR is worked with a Patent Pitch Chain, and the motive power obtained by a direct movement having simply a light Wheel and Pinion, obtaining the same speed, and thereby doing away with the original Wheels, Pinions, Top-shaft, Bearers, &c.; it reduces the frame of the Machine 2 inches in width; for instance, a 16-inch Cylinder Cutters will work in a 14-inch frame, thus doing away with all the gearing before mentioned, and making the weight and friction 25 per cent. less; it is also much stronger, easier in work, and less liable to get out of repair.

HORSE, PONY, AND DONKEY MACHINES.

The SILENS MESSOR has an extraordinary advantage over all others of this class; it is worked with a patent pitch chain on each side, and although much lighter possesses great strength. The noise has hitherto been a great obstacle in the working of these Machines; Horses and Ponies were continually taking fright at the shaking and rattling noise, running away and doing inconceivable damage.

The Silens Messor can be worked with any draught or carriage horse, however spirited, doing its work silently and effectually.

GREEN'S New Patent Double Self-Acting GRASS DELIVERING BOX can be attached to any of these Machines; it is the only perfect Self-Acting Delivering Box out; the Grass is not spread over the ground, but deposited in heaps.

LIST OF PRICES.

HAND MACHINES.

Including Box of Requisites.							
To cut 14 ins.	£6	10	0	To cut 20 ins.	£8	0	0
,, 16 ins.	7	0	0	,, 22 ins.	8	10	0
,, 18 ins.	7	10	0	,, 24 ins.	9	0	0

DONKEY AND PONY MACHINES.

Including Box of Requisites and Traces.							
To cut 24 ins.	£11	10	0	Leather Boots for Donkey, per set	0	12	0
,, 26 ins.	12	10	0	Do. for Pony, do	0	14	0
,, 30 ins.	16	14	0				

HORSE MACHINES.

Including Box of Requisites and Traces.							
To cut 30 ins.	£20	0	0	To cut 48 ins.	£30	0	0
,, 36 ins.	23	0	0	Leather Boots for Horse, per set	1	4	0
,, 42 ins.	26	0	0				

Smithfield Iron Works, Leeds; and 2, Victoria Street, Holborn Hill, London, W.C.

MESSRS. E. G. HENDERSON & SON,

WELLINGTON NURSERY, ST. JOHN'S WOOD, N.W.,

RESPECTFULLY call attention to the following rare, new, and beautiful plants, descriptive notices of which are given in the

GARDENERS' YEAR BOOK and ALMANACK for 1860.

And, with the exception of those marked with an asterisk, can be obtained immediately; the remainder as new plants (the entire stock being in E. G. HENDERSON AND SON'S hands), will be publicly noticed when offered for sale in spring.

Acer polymorphum palmatum atropurpureum
Allamanda violacea
Alstrœmeria argentea vittata
Amygdalus persica rosæflora
Aralia leptophylla
Arachnothrix rosea
*Aucuba himalaïca
Antirrhinum majus v. Wonder
Begonia amabilis
,, argentea
,, Charles Wagner
,, Leopoldii
,, Marshalli
,, picturata
,, Reginæ
,, Victoria
,, Xanthina Lazuli
,, ,, Dictifolia
Berberis Hookeri
,, Jamesonii
Beloperone violacea
Bohmeria argentea
Bossiæa paucifolia
Caladium argyrites
,, argyrospilum
,, Brongniartii
,, Chantini
,, Houlletti
,, Neumanni
,, Verschaffelti
Callicarpa purpurea
Callirhöe digitata
Campylóbotris argyroneura
Centradenia grandifolia
Chamæbatia foliolosa
Chrysanthemum carinatum pictum
Clarkia pulchella integripetala
Clematis verticelli venosa
Cochliostema odoratissimum
Datura chlorantha
,, meteloides
Daviesia umbellata
Dianthus sinensis Heddewigi
,, ,, laciniatus
* ,, Verschaffelti
Dipteracanthus affinis
Dyssochroma albidum flavum
Exochorda grandiflora
Gastrolobium spectabile
Gazania splendens
Grevillea Drummondi
,, elegans
,, persiscifolia
Hoya Cumingiana
Imantophyllum cyrtanthiflorum
Lindenia rivalis
Lomatia Bidwilli
,, elegantissima
Lychnis Haageana
Maranta fasciata
,, porteana
,, pulchella
Meyenia erecta alba
Monezia edulis
Myostidium nobile
Olea ilicifolia
Pothos argyrea
Prunus triloba
Rhododendron Fortunei
,, ,, Kendrickii
Rhopala glaucophylla
,, australis
Spathodea campanulata
Spraguea umbellata
Stephanophysum Baikiei
Statice Brassicæfolia
Syringa oblata
Tradescantia odoratissima
Tritoma uvaria glaucescens
,, ,, serotina
,, ,, grandiflora
Tropæolum majus nanum luteum
Achimenes longiflora flore pleno
,, gigantea ignea
,, Lady Digby
* ,, ignescens
* ,, elegantissima
Azalea Flower of Day
,, Bouquet de Flore
,, Miltoni
*Calceolaria Unique
*Camellia tricolor imbricata plena
,, Valtevaredo
Chrysanthemums various
Cinerarias various
*Geranium Cloth of Gold
* ,, Carmine Nosegay
* ,, The Fairy
* ,, Golden Vase
* ,, Oriana
,, picturatum
* ,, TheQueen'sFavorite
* ,, Nosegay stella
* ,, VariegatedNosegay
*Gloxinia cærulea striata
* ,, striata maculata
Belgian Pansies various
*Verbena Angelique(Edmonds)
* ,, Gustavus and Belvidere (Edmonds)
* ,, Fanny Tracey (Ives)
* ,, Earl of Shaftesbury (Banks)
*Verbena Duc de Gramont (Breeze)
* ,, AuroraandConcordia (Breeze)
* ,, Diana and Fascination (Breeze)
* ,, Garibaldi & Ida (do.)
* ,, Invincible and Morning Star (Breeze)
* ,, Ocean Pearl and Saladin (Breeze)
* ,, Undine and Merrie Monarch (Breeze)

PINE APPLES, GRAPES, &c.

PINE PLANTS, Fruiting and Succession.
GRAPE VINES, from Eyes, for Fruiting in Pots or Planting.

JOHN WEEKS AND CO. can now supply any quantity of very fine strong healthy Pine Plants, either Fruiting or Succession; also remarkably fine strong Grape Vines from Eyes, all the best sorts.

JOHN WEEKS & Co.'s Horticultural Show Establishment is now entirely devoted to the Growing and Forcing of Fruits in great variety, thereby showing the most improved plans of construction, and the most superior system of Hot-water Apparatus.

JOHN WEEKS & Co., Horticultural Builders and Hot-water Apparatus Manufacturers, King's Road, Chelsea, London, S.W.

WELLINGTONIA GIGANTEA.

JOHN WATERER has thousands of the above Plants to offer, varying in height from 1 to 4 feet. The whole are exceedingly handsome and well rooted. Price on application.—The American Nursery, Bagshot, Surrey.

TO PLANTERS.

J. SCHOLEY begs to offer the following, viz.:—LARCH, 1½ to 3 feet; SPRUCE FIRS, 1 to 2 feet; SCOTCH FIRS, 1 to 3 feet; BEECH, 1½ to 4 feet; Common HOLLIES, 1 to 2 feet, with all other kinds of Nursery Stock. Samples and price on application.—Pontefract Nurseries.

SURPLUS STOCK OF FOREST TREES.

WOOD AND INGRAM have to offer the following very fine plants:—SPANISH CHESNUTS, 3 to 4 feet, 40s.; 4 to 5 feet, 50s.; SCOTCH FIR, 2 to 3 feet, 30s.; LARCH, 2 to 3 feet, 25s.; ASH, 3 to 5 feet, 30s.; and OAKS, 4 to 5 feet, 50s. per 1000.

Also a very fine stock of Dwarf-trained PEACHES, Standard and Dwarf-trained CHERRIES, &c.—Huntingdon Nurseries.

DWARF-TRAINED PEACHES ETC.—TO THE TRADE.

WOOD AND INGRAM have a large quantity of Dwarf-trained and one year cut down Peaches and Cherries, which they will offer in quantity on advantageous terms; or they would be happy to exchange for Evergreens. To save time any persons wishing to exchange may as well state price, size, and kinds of Evergreens they may have to offer.—Huntingdon Nurseries.

PELARGONIUMS.

CHARLES TURNER'S Plants of all three classes of the above, Large, French, and Fancy varieties, are strong, healthy, and in great variety, 18s. to 42s. per dozen. The present is a most excellent time to procure plants.
The Royal Nurseries, Slough.

HENDON PARK NURSERIES, HENDON, N.W.

NEW DAHLIA—"THE CHANCELLOR."—First Class Certificate of National Floricultural Society; First Class, Brighton; First Class, Saffron Walden; First Class, Stoke Newington, &c.; First Prize as best Seedling Dahlia, Stoke Newington, 1859.

Plants of this magnificent new variety will be sent out on May 1 next. Early orders are requested. Delivered carriage free in London.—EDWARD SHENTON.

FLOWERING PLANTS.

F. AND A. SMITH have now in Bloom Azalea indica, Cinerarias, Cyclamen, Cytisus, Deutzia gracilis, Dielytra spectabilis, Erica Willmorea, Leschenaultia formosa, Primula, Tulips in variety, &c., at reasonable prices; as the season advances other varieties will be quoted.—Dulwich, Surrey, S.

SUPERB DOUBLE BALSAMS.

F. AND A. SMITH are now sending out SEED of their superb BALSAMS, which are unrivalled for size, form, brilliancy of colour, doubleness of flower, and habit of plant.

In collections of nine separate colours	..	..	2s. 6d.
,, ,, mixed	,,	.. ..	2 0
,, ,, ,,	,,	half quantity..	1 0

☞ The above are genuine only in our sealed packets, and may be had of most respectable Nurserymen and Seedsmen in the United Kingdom.—Dulwich, Surrey, S.

SUPERB DOUBLE BALSAM SEED.—In collections of 12 varieties, separate, per collection, 2s. 6d.; the same mixed, 2s. and 1s. per packet; Select HOLLYHOCK SEED, 1s. do.; Choice PANSY SEED, 2s. 6d. do.; 50 packets of the best FLOWER SEEDS for borders, 7s. 6d.

CATALOGUES and Seed on application to CHARLES SCHOFIELD, Nurseryman, &c., Knowsthorpe, near Leeds.

CHRYSANTHEMUMS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington, begs to inform his friends and the public that he has the finest Collection and the largest Stock of Chrysanthemums and Pompones in the world, and can supply them by the 100, 1000, or 10,000.

25 Pair of Best POMPONES, 10s.
20 Pair of Best Large Varieties, 10s.
25 Pair of Best POMPONE CUTTINGS, 5s.
20 Pair of Best Large Varieties, Do., 5s.

CATALOGUES for one stamp. To save trouble all orders to be pre-paid.

NEW CHRYSANTHEMUMS, DAHLIAS, AND HARDY VARIEGATED PLANTS.

JOHN SALTER'S DESCRIPTIVE CATALOGUE of the NEW CHRYSANTHEMUMS for 1860 is now published, and will be sent free upon receipt of one stamp.
Versailles Nursery, William Street, near Hammersmith Turnpike, S.W.

NEW HOME-GROWN SEEDS.—Package (in addition to) Carriage Free. COLLECTIONS, 10s., 20s., 30s., and 40s. each. See PRICED LIST of this Paper January 28, page 71; or free on application.

NEW CITRON GOURD, 6d.; NEW ACORN STRIPED GOURD, 6d.; NEW MONSTROUS PROLIFIC CUCUMBER, 6d.; or given on all orders above 20s.

W. STEWARD & Co., Seed Growers, Plymouth, Devon.

SEEDS.—SPRING, 1860.

SYME, SIMONS, AND SMITH, Glasgow, N.B., will have much pleasure in forwarding their LIST OF VEGETABLE, FLOWER, AND FARM SEEDS FREE. It contains all varieties in cultivation, and the prices for GENUINE SEEDS are very moderate, with free delivery.

GLADIOLI.—Separate list of all the finest sorts may also be had free.

WARRANTED GOOD SEEDS.

GEORGE DAVISON'S PRICED SEED LIST is now ready, and will be forwarded post free upon application. It contains selections of all the most approved Vegetable and Agricultural Seeds in cultivation. No. 1, Complete Collection for a large garden, 3l.; No. 2, 2l.; No. 3, 1l.; and No. 4, 10s. 6d.

Especial attention is paid to Grass Seed Mixtures.

Permanent Pasture Grass Seed mixed to suit every description of land, at from 27s. 6d. to 32s. per acre. Renovating Mixture, 9d. per lb. Fine New Red Clover, 52s. per cwt., cash. Samples supplied.—Hereford Seed Establishment.

AMERICAN PLANTS, &c.

MESSRS. WATERER AND GODFREY'S CATALOGUE for the present season is now ready, and may be had on application. It describes fully all Rhododendrons worth growing, and contains a List of Azaleas, Hardy Heaths, and other American Plants, as well as a summary of the general stock of the most extensive Nurseries in England.

The Catalogue may also be had at Messrs. MAY'S & Co., 1, Wellington Street, Strand, W.C.
Knap Hill Nursery, near Woking, Surrey.

NEW SOFT-WOODED PLANT CATALOGUE.

CHARLES TURNER'S ANNUAL SPRING LIST is now ready, containing Selections from the well-known Collections grown at Slough, namely:—

Achimenes, Azaleas, Auriculas, Cinerarias, Calceolarias, Chrysanthemums, Chrysanthemum Pompones, Carnations, Dahlias fancy and bedding; Fuchsias, Gloxinias, Geraniums, variegated, Geraniums, Scarlet, Hybrid, and Sweet Scented; Herbaceous Plants, Miscellaneous Plants, Miscellaneous Bedding Plants, Pelargoniums, Fancy and French; Pentstemons, Petunias, Phlox, Pinks, Picotees, Verbenas.—Royal Nurseries, Slough.

GENUINE GARDEN SEEDS.

TIMOTHY BRIGDEN, SEEDSMAN and FLORIST, begs most respectfully to inform his friends and purchasers of SEEDS generally, that his unrivalled Collection of GENUINE AGRICULTURAL VEGETABLE and FLOWER SEEDS, is now ready, of which a PRICED CATALOGUE may be had upon application.

T. B. further guarantees that every article is GROWN and SELECTED with the greatest care under his own personal attention. Orders from unknown correspondents must be accompanied with Postage Stamps or P. O. O.

Seed Establishment, 10, Railway Arcade, London Bridge, S.E.

NEW PLANT CATALOGUE.

MESSRS. WILLIAM ROLLISSON AND SONS respectfully announce to the Nobility, Gentry, and the Trade, that their GENERAL CATALOGUE OF PLANTS is now ready for distribution, and can be had on application by enclosing one stamp. The CATALOGUE contains names, description, and prices of upwards of

ONE HUNDRED NEW PLANTS

in species and varieties, besides descriptive Lists of the General Nursery Stock.—The Nurseries, Tooting, London, S.

ROYAL SOUTH HANTS SEED ESTABLISHMENT

Under the patronage of H. R. H. the PRINCE CONSORT, the Horticultural and Agricultural Society of India, the principal Nobility, Gentry, and Agriculturists of the United Kingdom.

PAGE AND TOOGOOD will forward their PRICES CURRENT upon application. It should be referred to by purchasers of Garden and Farm Seeds.

Collections of VEGETABLE SEEDS, 55s., 35s., 20s., 10s. The Quantities in the above selections will be found more liberal, and the prices 10 per cent. less than any house in the Kingdom.—Seed Establishment, Southampton.

SIX SUPERB NEW FUCHSIAS.

GEORGE SMITH begs to announce that Illustrations of the above, beautifully coloured by Mr. Andrews, will be sent in exchange for 12 postage stamps. For description see *Gardeners' Chronicle*, February 4 and 11.

G. SMITH'S CATALOGUE is now ready, descriptive of the above; also a first-class collection of GERANIUMS, DAHLIAS, VERBENAS, PETUNIAS, &c., in exchange for one stamp.
Tollington Nursery, Hornsey Road, Islington, London, N.

FOR PRIVATE AND IMMEDIATE SALE.

THE LATE SIR JOHN HAY WILLIAMS'S Collection of ORCHIDS, including a fine specimen of Dendrobium nobile, Brugmansia grandiflora, Brownea grandiceps, and other valuable plants for which large prices have been refused—For particulars write to Mr. THOMAS, Bodelwyddan, St. Asaph

MESSRS. ROEZL AND BESSERER, of Mexico, will execute orders for MEXICAN SEEDS and PLANTS in their Catalogue for 1858-9, through their agents B. A. GRAUTOFF & Co., which may be had on application, and also LISTS of newly arrived Seeds. 4, Lime Street Square, E.C.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SONS' PRICED and DESCRIPTIVE CATALOGUE for 1859, & SPRING 1860; comprising Fruit Trees of all the leading kinds; New and Selected Roses; fine varieties of American Plants; Choice and Rare Conifers; Evergreen and Deciduous Trees and Shrubs; and a fine stock of transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

The Gardeners' Chronicle.

SATURDAY, MARCH 3, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	March	5	Entomological	8 P.M.
TUESDAY,	—	6	Horticultural (Fruit Committee) St. Martin's Place	3 P.M.
THURSDAY,	—	8	Horticultural (Floral Committee) at St. Martin's Place	2 P.M.

WE are able to announce the early appearance of a new GENERA PLANTARUM, the joint production of Dr. HOOKER and Mr. BENTHAM, than whom no more able botanists exist at the present day. It will be written in Latin, so as to be readable in all countries, and will contain the essential characters of every known genus of plants, together with their synonyms. The arrangement will be that of the natural system. Under each natural order there will be, firstly, an analysis of the genera it contains, and afterwards succinct descriptions of them. No work in natural history is more needed. We may add, indeed, that it has become a matter of first necessity, for what with spurious genera formed upon insufficient information, or from erroneous observation, or from mere ignorance, or from an eagerness to seize upon differences which are not distinctions, systematic botany is becoming a chaos. *Ruit mole suâ.*

The last Number of the Proceedings of the Linnean Society affords two striking examples of the way in which botany is encumbered with technical rubbish. Mr. BENJAMIN, a German botanist, publishes under the new name of AKENTRA a plant which he distinguishes from Utricularia by the supposed absence of a spur to the corolla. But Mr. OLIVER has shown that the species has a remarkably large spur! and so Akentra goes to the dogs. Prof. BERTOLONI receives from S. E. Africa specimens of a tree producing vegetable butter, and not knowing what it was, but fancying it must be the Butter Tree, which MUNGO PARK called Shea, he names it SHEADENDRON, and gravely intimates that it must be the type of a new natural order of plants, which the worthy Professor designated Sheæ!! CARUEL, however, a young Florentine botanist, has shown, 1, that Sheadendron is only a Combretum, and consequently a member of one of the best known natural orders; and 2, that it has no more relation to MUNGO PARK'S Shea than an ape to a rhinoceros. Such is the stuff which HOOKER and BENTHAM have undertaken to clear away.

Useful as was the volume of ENDLICHER on the same subject, it was a mere compilation from

books, instead of being the result of personal observation; and, from the complexity of its descriptions, could hardly be used except by experienced naturalists. The work now commenced will be exactly the reverse; that is to say, it will be entirely the result of the personal examination of enormous authentic materials, and from the simplicity of its plan will be intelligible to everybody who is master of botanical rudiments. We venture to predict that if no unforeseen accident shall prevent completion its appearance will be the commencement of a new æra in systematical botany.

AT the Hogarth Club, in Waterloo Place, there is now on private view an extremely interesting STATUE OF LINNÆUS, cast from the original executed for the University of Oxford, by Mr. J. L. TUPPER, of South Lambeth. It represents LINNÆUS when as a young man upon his Lapland Tour, he had escaped from some accident, and had dressed in the costume of the country: that is to say, in a close-fitting tunic of wool, called Lappmudd, which he himself states in the Lachesis Lapponica, that he borrowed of his guide. He is making his way against a head wind, with a specimen of Calla palustris in his hand. The countenance is marked by a sweet intelligence, as is the figure by the grace and activity which the great naturalist is said to have possessed in a striking degree.

We understand that the authorities which have guided Mr. TUPPER in his conception of young LINNÆUS are these. From the Lachesis Lapponica it appears that so many accidents befel LINNÆUS whilst on his tour in Lapland, that there is much probability of his having had to leave his own dress at some Lapland hut, to get dry after a drenching in the hill torrents; and of his having been far too fertile in expedients to rest idle in the meanwhile. It may also be supposed that, in such difficulties, when LINNÆUS occasionally lost some of his own proper botanical apparatus, he would have availed himself of some of that quaint garniture which habitually hangs at the Laplander's belt, and of which the make-shift vasculum in the statue is one, and the Lapland knife another. In "Flora Lapponica" he speaks of having lost a specimen, Arundo calamagrostis, and other natural productions, by being cast away as he was descending one of the great rivers of Lapland.

It is with reference to such incidents that the sculptor has sought to indicate the indomitable energy and physical activity which characterised the young LINNÆUS, almost as much as the vivid mental perceptivity that enabled him to detect in the teeth of a jawbone he happened to stumble over by the wayside, the important constituent of a future classification; and this explains why a jaw bone is represented on the pedestal. The principal authority for the dress, however, is derived, we understand, from the fact of there being a portrait, by HOFFMAN, representing LINNÆUS in the dress of a Laplander, of which Mr. T. was fortunate enough to obtain an engraving—a wretched performance, indeed, and correct in nothing (says one of the biographers) with the exception of the wart upon the right cheek. As to the authorities that were consulted for the face, the beautiful painting and the bust at the Linnean Society, the Wedgewood medallion, a bust in the possession of the Rev. T. W. HOPE, and two prints of LINNÆUS when young, were the principal. The busts, however, have been consulted rather than followed, since there is no written evidence of their having been contemporaneous. Moreover, it was discovered by Mr. TUPPER that one of the medallions had been copied from an engraving, which, having been inverted in the printing, exhibited the well-known wart upon the left instead of upon the right cheek—an error which the medallion perpetuates to its discomfiture.

In the execution of his task the artist has shown a boldness and originality such as is seldom seen in modern statuary. Instead of slavishly adhering to absurd precedents, and of representing his hero like a Greek or a Roman he has shown him as he was, in the picturesque dress of his day; and in doing so he has proved that graceful outlines and harmonious proportions are not inconsistent with adherence to even modern costume.

We think it will be admitted that Mr. TUPPER's statue is one of the most successful efforts as it is one of the most original conceptions of recent sculpture.

To the announcements we have already made as to the progress of the works in the NEW GARDEN OF THE HORTICULTURAL SOCIETY at Kensington Gore, we can now add that a general design by Mr. NESFIELD has been accepted, and only remains to have the details filled in. Plans of a main entrance on the south-east, and offices for the transaction of business have been approved of, and the work will be contracted for in a few days. The arrangements of the great conservatory are under consideration, its cost it is hoped not exceeding 15,000*l*. Mr. EYLES has been examining some fine young Lime trees in the West of England with a view to their removal to Kensington.

It will be seen, in another column, that a third meeting for the election of Fellows took place on Tuesday last, when fifty-three gentlemen and ladies joined the Society. This makes five hundred and eighteen new elections in the months of January and February.

The following correspondence has taken place between the Society and the proprietors of the *Gardeners' Chronicle*:—

Extract from Minutes of Finance Committee of the Horticultural Society, Jan. 27, 1860:—

"The account from the Proprietors of the *Gardeners' Chronicle* for extra advertising, &c., amounting to 123*l*. 16*s*., was laid before the Committee, with a letter from Mr. MATTHEWS, the publisher, stating that the Proprietors did not require payment of the above, but desired to make a present of it to the Society.

"Resolved—That the special thanks of the Committee be conveyed to the Proprietors of the *Gardeners' Chronicle* for their very handsome and liberal present."

"Sir,—I have to apologise to you for the delay that has occurred in acknowledging the receipt of your letter of the 25th January last, and of the statement of account against the Horticultural Society for extra advertising, &c., amounting to 123*l*. 16*s*., but of this sum you say the proprietors of the *Gardeners' Chronicle* do not intend to make any charge.

"I now beg to acquaint you that your letter and the statement which accompanied it have been submitted to the Finance Committee, who directed that a proper record of the generous act of the proprietors of the *Gardeners' Chronicle* towards the Horticultural Society should be entered on their minutes, and that a copy of the same be transmitted to the proprietors in acknowledgment of their kindness. I shall therefore be much obliged if you will lay the enclosed before the proprietors when they next meet.—I am, sir, your very obedient servant,

"Mr. J. MATTHEWS." "WM. B. BOOTH."

MYCOLOGY.—NO. VIII.

MARASMIUS OREADES, *Fr.*—Since the enormous genus *Agaricus*, as formerly defined, comprised at least 1500 species, it became almost a matter of necessity to separate into distinct groups such as had any well-defined characters. Amongst them it was observed that there were numerous species, approaching more or less nearly to each other in general habit, which agreed in being of a far tougher consistence than others, insomuch that instead of melting away in decay into a loathsome putrescent mass, they were inclined to dry up; and if they ever attained a softer condition it was only after they had been corroded by worms and repeatedly washed by heavy or frequent rains. The portion of the Fungus which bears the gills was moreover found to be distinct from the stem, and not of the same nature with it. These Fungi besides, unlike the generality of Agarics, were easily prepared for the herbarium in consequence of their less juicy nature. Such considerations therefore induced Fries, the great reformer of the arrangement of Fungi, after Persoon, amongst other consequences of a 20 years' study, to propose the name of Marasmius* for this especial group, which now contains at least a hundred species, either indigenous or exotic.

Amongst these one of the most important, from its peculiar habits and superior qualities, is the subject of our present illustration, *Marasmius Oreades*. The name *Oreades*† is derived from its habit of growing in regular rings which in popular belief were formerly supposed to be caused by the midnight dances of the fairies. Long after this notion was rejected their origin remained obscure, though many an insufficient theory was adduced. It is now however ascertained with certainty that they are due to the peculiar habit of this in common with many other Fungi, whose spawn fructifies only in a centrifugal direction, in consequence of which after a time distinct fertile circles are formed, while the enclosed area is barren. If any cause prevents the growth of the spawn at an early stage in a part of the circle, an arc only is formed, which increases in size year after year exactly as if the whole ring had been completed. Mrs. Hussey records a particular instance in which the increase of the ring was very visible. A crop had been produced upon a lawn early in the year, but a drought of some months had succeeded, so that not a single additional individual appeared till September. The spawn had meanwhile spread beneath the surface, and in consequence the crop of September, when the ground was once more saturated with moisture, came up some inches beyond that of the spring, so as to show the visible increase of the diameter of the ring in a single season.

MARASMIUS OREADES.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

Marasmius Oreades, or as it is commonly called in England, the Champignon, a name applied collectively to Fungi in France, or, if specifically, indicating more especially the common Mushroom, is an early species, seldom produced in any quantity late in the season. The whole plant is of a rich cream colour, except in wet weather, when the pileus is of a reddish buff, or when young. The pileus, which is from 1 to 3 inches across, is convex and nearly smooth, with a tolerably thick flesh growing paler as it loses its moisture; the stem is stringy within, and more or less clothed externally with little matted fibres or scaly down, but in this respect very variable, though always downy at the base; the gills are few in number, broad, and free. The spores are white, and often very abundant, forming a thin wash upon the leaves of Grass or other herbs amongst which the plant grows. The smell is strong but agreeable, and the taste delicately aromatic. When of a good size and quickly grown it is perhaps the best of all Fungi for the table whether carefully fried or stewed, with an admixture of finely minced herbs and a minute portion of Garlic. It is at the same time tender and easy of digestion, and when once its use is known and its characters ascertained no species may be used with less fear. It is so common in some districts that bushels may be gathered in a day, and the only species with which it can be confounded, with common attention, *Marasmius urens*, which sometimes grows in its company, may at once be known by its narrow brownish gills, without having recourse to closer examination, when it is found to have a hot acrid taste. Dangerous or doubtful species with black or snuff-coloured gills can be substituted for it only from gross ignorance or want of observation.

The Champignon is however not only useful like common Mushrooms for immediate use, but it is readily dried by stringing the pilei together on a thread and hanging them up in a dry kitchen. When thoroughly dry they should be kept in a close tin, and are far preferable as a condiment to Morells. They may also be preserved in the form of powder, in which shape they are excellent and put to shame the chalky composition, which is sometimes sold under the name of Mushroom powder, indicative rather of the apothecary's drawer than the housekeeper's room.

Champignons, though dry, yield by themselves an excellent but powerful ketchup, or mixed with Mushrooms improve the extract. They may also be prepared by steeping in equal quantities of white wine and water, which should be boiled and strained for use. In any case, however, as the aroma is fugitive long boiling should be avoided.

A reference to our figure, with the recollection that the Champignon, except when young or saturated with moisture, when it has often a rufous tint, is of a rich cream colour, and that its gills are *broad, distant, cream-coloured*, and *free*, will be sure to prevent the possibility of mistakes, and we can answer for it that every one who becomes acquainted with its merits will despise Toadstools far less than he has been in the habit of doing, from deeply rooted prejudice. *M. J. B.*

ON A SYSTEMATICALLY ARRANGED BORDER FOR PLANTS.

THE success which attended the efforts of my respected friend Mr. Ward, to extend the instruction and pleasure derived from the study and love of plants,

* From μαραινω, I dry up or become flaccid.

† A peculiar tribe of nymphs in the Grecian mythology.

suggested to me the advantage of having in gardens of public resort flower borders so arranged as to illustrate simply and agreeably the succession of orders and families in the natural system.

Botanic gardens are confined to a few of the principal towns in the kingdom. The expenses attending their formation and maintenance are so considerable that wealthy communities alone are able to possess them; and it seems probable that their number in England will never be greatly increased.

On the other hand few populous towns are without gardens of public resort attached to bath-rooms, pump-rooms, or charitable institutions; and at the present time numbers even of small towns are being provided, under the Cemetery Act, with spaces of ground in which the public has an interest, and to which free access is granted.

From these considerations it became my object to show that with very moderate space, with little outlay, and requiring the care only of a single cultivator, it was possible to exhibit to the public, and maintain in efficient order, an intelligible and an attractive grammar of botany.

For this purpose I selected in my own garden a plot of ground 108 feet in length, by 12 feet in breadth, divided by walks 18 inches wide into 20 beds, each 3½ feet in width. The beds, walks, and forty lines of stone edging about 2 inches in thickness, occupied the whole length of the border. A single bed, being 12 feet long by 3½ feet wide, allowed a space 14 inches square to be given to each of 30 plants disposed in cross rows of three, ten such rows reaching from back to front.

It was determined to confine the series to flowering plants, to exclude trees, shrubs, plants exceeding five feet in height, and water plants, and to admit species requiring protection in winter, annuals, and plants of little interest or beauty, only very sparingly.

The next step was to fix upon a system of arrangement. Dr. Lindley's "Alliances" of flowering plants, 50 in number, 40 of which are capable of being suitably illustrated in an open border, offered a tempting correspondence with the 20 beds to be occupied; but the plan of the "Vegetable Kingdom" appeared to be scarcely adapted for a popular grammar of botany.

Mr. Bentham's "Handbook of the British Flora" presented many advantages; but to have confined the series to British plants would have interfered very materially with the attractive aspect of the border; this however was not requisite, even while following Mr. Bentham's plan, so with the assistance of De Candolle's Prodromus for exotic genera and species, and for the few suitable exotic orders, it was decided to arrange the border as nearly as possible in correspondence with the Handbook of the British Flora.

General Arrangement of the Border.

Bed No. 1.	Ranunculaceæ. Berberideæ.
2.	Papaveraceæ. Cruciferæ, &c.
3.	Caryophyllaceæ. Linaceæ.
4.	Malvaceæ. Geraniaceæ, &c.
5.	Leguminosæ.
6.	Rosaceæ.
7.	Onagraceæ. Saxifragaceæ, &c.
8.	Umbelliferæ, &c. | Rubiaceæ, &c.
9.	Compositæ.
10.	Compositæ.
11.	Campanulaceæ.
12.	Ericaceæ. Gentianaceæ, &c.
13.	Borragineæ. Solanaceæ.
14.	Scrophulariaceæ.
15.	Labiatæ.
16.	Plumbagineæ, &c. | Polygonaceæ, &c.
17.	Iridiæ. Amaryllideæ. Hypoxidæ.
18.	Hemerocallideæ. Asphodeleæ. Convallarieæ.
19.	Liliaceæ.
20.	Gramineæ. Cyperaceæ.

For the sake of keeping the arrangement distinct and obvious, entire beds were given to each of five of the principal orders, and two to the Compositæ. With none of these was there any difficulty; 30 plants, carefully selected from half or two-thirds as many genera, were found to illustrate fairly the hardy herbaceous perennials even in a large order. It was however necessary to make the internal arrangement of the bed correspond with the subdivisions of the order. Thus in the Labiatæ to Salvia and Monarda was assigned a place at the head of the bed, below them came Mentha and Nepeta and other genera down to Teucrium and Ajuga at the foot of the bed.

In some instances several natural orders had to be represented in a single bed. The transverse rows of three answered very well for this purpose, two or three such rows were given to orders of moderate extent as Violaceæ and Hypericineæ; one to Linaceæ, Cornaceæ, &c., whilst single spaces sufficed for Frankeniaceæ and some others. The eighth and sixteenth beds were divided in the middle by a transverse walk, the upper portion of the eighth containing the concluding orders of the Calyciflores, the lower portion, the orders of monopetalous plants preceding the Compositæ. The upper portion of the sixteenth bed terminating the monopetalous plants, the lower portion constituting the whole of the room that could be spared for the Monochlamydeæ.

These two transverse walks, though occupying valuable space, were found useful in inviting attention to the important groups at the termination of which they were made. For the same purpose it would be well to have a broader walk between the fourth and fifth beds, dividing the Thalamiflores from the Calyciflores, and between the sixteenth and seventeenth, a walk of some material of a different colour, to denote the change from Dicotyledonous to Monocotyledonous plants.

Experience seems to point out in all arrangements of natural objects for public exhibition the expediency of having a classification not only accurate but obvious and even conspicuous. In a lengthened series, to distinguish the commencement of a family or a genus by a label may be sufficient for the guidance of a student, but for the public it is better to mark the change in such a way as to invite attention and even to provoke inquiry.

It is hardly necessary to refer to the importance of selecting for the border such plants as are striking in their appearance, or remarkable for beauty. Yet an enthusiastic botanist might probably conclude that the order and accuracy of his series would ensure attention. No chance however should be thrown away: a beautiful flower illustrates a genus as well as one less ornamental, and with far better chance of being observed. Persoon was won to the study of Mycology by the beauty of Peziza coccinea. If then the border be made attractive in appearance as well as scientific in its arrangement, the former quality may often lead to the appreciation of the latter.

Too great a proportion of very familiar plants should be avoided. A set of British Grasses, though equally beautiful, would not be noticed once in an hundred times in comparison with a series of foreign kinds such as may readily be procured and constitute, even to an ordinary observer, one of the most attractive and interesting beds in the whole border.

In order to look well the taller plants must be placed in the middle row of the bed, and as far as may be compatible with the arrangement, the plants should decrease in height from the back to the front.

Each plant should be set exactly in the centre of the space allotted to it; for this purpose it was found useful to employ a frame of wood 14 inches square, inside measurement, and 4 inches deep: with the aid of a rod marked so as to divide it into 10 14-inch lengths, it was easy to set the frame upon the exact spot to be occupied, and the soil for the whole of the space within the frame was then prepared to the required depth for the reception of the plant.

For plants with rapidly spreading roots it was found convenient to use slates, not quite 14 inches long by 6 broad; these were pressed into the ground until their upper edges were nearly on a level with the soil, forming a quadrilateral, surrounding and very effectually confining the plant. The bed for Grasses was divided in this way throughout.

The names of the natural orders were exhibited on pieces of plate glass 1 foot long by 3 inches broad. These were obtained from the waste edges cut off in squaring large plates of glass, and may be purchased at about 6*d.* per square foot. The glass is ground on both sides, and is a highly ornamental and beautiful material. The slips of glass were made more opaque by being painted white at the back; the letters were put on in front with black paint mixed with varnish or turpentine instead of oil: a year's exposure has not injured their appearance. These labels when used were supported horizontally in a leaning position by two slight props of wood, iron being found to stain the glass.

A very useful implement, which may be termed a sun-board, is formed by two pieces of wood each a foot square, placed and joined like two sides of a box. Set upon its edge with the rectangle turned towards the south it forms a sheltered corner in which slips or cuttings may be protected from the sun and wind, whilst left open to the air and rain; and they are thus neither drawn up nor weakened as when under a hand-glass. Set with the rectangle uppermost, the sun-board forms a kind of penthouse under which the stocks of plants may be sheltered from the rough weather in winter.

An obvious consequence of so limited a space as 14 inches square being given to each plant, is the necessity of affording to most of the taller flowers the means of support. Garden sticks tapering upward appear much lighter, and are stiffer in the ground than the ordinary kind. Iron rods as thick as a Cedar pencil with one end fixed in a short stout wooden pin are also useful.

In commencing the formation of a systematically arranged border, the first question will naturally relate to the space it is desirable to occupy. If the series is to be confined to the hardy perennials, it seems probable that accommodation for 600 plants will be sufficient: these however in double rows, with walks between them, will require a larger space than 108 feet by 12. If triple rows are adopted, and more than 14 inches square be given to each plant, the central row in each bed will be found inconvenient to manage without disturbing the side rows.

A sufficient number of plants may readily be obtained. I rarely had to purchase, yet within the first year my border was furnished with 590 species, illustrating most of the principal and many of the smaller genera of hardy perennials. For the greater part of them I am indebted to the kindness and liberality of the Curators of the Liverpool, Edinburgh, Dublin, and York Botanic gardens. The late Mr. Nuttall, of Rainhill, Mr. Leeds, of Manchester, Mr. Skirving, of Liverpool, Mr. Stubbs, of Frodsham, Mr. Holcroft, of Upholland, and Mr. Williams, of Ormskirk,* also kindly contributed many valuable plants.

In conclusion I may refer to some of the advantages likely to be derived from systematically arranged borders of plants in gardens of public resort.

The study of Botany may be promoted.—In many schools receiving assistance from the Committee of Council on Education, and in nearly all the higher class of schools, more or less of botany is taught. But from books alone even the theory of botany is seldom learned to any purpose, much less can the love of plants be encouraged. It is not indeed contended that the border can be a substitute for the fields and lanes and woods and hills: but in how few schools can time be spared for rambling beyond the barren pavement or the dusty road. Moreover even a ramble amongst the wild flowers leaves something to be done in a visit to the border. It is better a child should love a Primrose than know the names of all the natural orders; but why may not something of both be attained! Now 100 natural orders in the pages of a book with their hard names and harder descriptions are a formidable difficulty; but let the natural arrangement be seen displayed from beginning to end in a border of living plants, and the difficulty vanishes. The vexatious distinctions of stamens hypogynous, epigynous, perigynous or isomerous are found after all to mean only what may be seen in this bed, or in that, or in the other, and thus a great step is gained in the removal of difficulties attending the commencement of the study.

Indeed, for purposes of instruction, the border may have some advantage over even the botanic garden; for in a large collection of plants it is rare to find the whole series so arranged as to make the succession of the natural orders distinctly visible throughout. Linear succession does not it is true obtain in Nature, but it is inevitable in lessons and in books; and so wondrous an assistance is the eye to the memory, that after a few visits to the border, the position of a plant in the vegetable system is almost as readily remembered as the place of a letter in the alphabet: it is in fact hard to forget the position of a family with its alliances when it is once observed in living illustration on a systematically arranged border.

Private gardens may be improved.—It is quite possible the number and variety of beautiful plants seen in the border may suggest to many who have gardens of their own a far better and more delightful use of them than is commonly made at present. Everywhere the same flowers are now cultivated without even the slightest regard to the size or situation of the garden. The noble contrasts of colour presented to the eye in the gardens of the Crystal Palace are supposed to be suitable for imitation in a plot of ground a few feet square. I confess when I have seen a gardener doing a bit of Chevreuil in Petunias and Eschscholtzias where he had barely room to turn his wheelbarrow, I have longed to see in his place, the lady of the cottage cherishing a good old Cabbage Rose, or caressing some modest Alpine on her bit of rockwork.

The present aim, it seems to me, is too much at effect, a term which implies that flowers are desired to decorate a garden, instead of a garden being delightful as the home of sweet flowers; hence the favourites are now of few species but of very rich and showy colours, yet who ever really loved a Petunia or an Eschscholtzia? It is admitted that many more species of flowers were to be found in private gardens 20 or 30 years ago; but rare plants were then valued, just as prize Pansies or Picotees are now, in proportion to the exclusiveness with which they were possessed by their cultivators. But it is our own fault if we have no higher kind of value for floral treasures now; in fact, at no former period has it been possible to enjoy a garden with anything like that intelligent acquaintance with the natural history of plants which is now easily attainable. The literature of botany has made us familiar with particulars historical, poetical, geographical, economical, meteorological, physiological, some of which distinguish every flower, and add to its beauty an interest, a little corresponding with the charm investing a yet higher order of loveliness when combined with an intellectual education. It must increase the pleasure to be derived from the cultivation of an Androsace to know something of the scenery and varying altitude of the snow line. Camassia loses nothing of its great beauty seen in the character of the staff of life to thousands; and the pale pure glories of Œnothera taraxacifolia beam in the twilight best appreciated by the beholder whose imagination has wandered in the valleys of Peru, and dwelt upon scenes depicted by the historian of the Incas. To exchange such plants as these for Mr. A.'s Defiance, Mr. B.'s Delight, and Lady C.'s Incomparable is a very questionable advantage.

Too little is known in this country of the capabilities of an open garden. Flower shows have made almost every one familiar with magnificent Heaths and Azaleas and Pelargoniums, &c. &c., plants which cannot be grown in perfection except by the professional cultivator or by the wealthy; whilst there are hundreds of species of perennials, beautiful and perfectly hardy, needing only to be seen to be desired; and, there can be no doubt, if

* Lists of plants at very moderate prices are published by Mr. Skirving, of Liverpool, Mr. Holcroft, of Upholland, Wigan, E. G. Henderson & Son, Wellington Road, St. John's Wood, London, &c,

a demand should arise for them, they would soon be generally cultivated for a supply.

A systematically arranged border may afford much encouragement to botanical amateurs.—The border in fact may in comparison with the botanic garden be what a popular manual is to a scientific treatise; and let not this be thought an unworthy object, for after all it may be quite as effectually to promote the highest and most worthy aims of science, to afford to greater numbers the means of an intelligent acquaintance with the elements of botany, as to decide some knotty long-disputed point in botanical physiology. It seems certain that in any science popular knowledge will advance *pari passu* with the progress of the science itself; always of course at a respectful distance from the van, but never left entirely behind. This is as it ought to be. The explorations of the foremost men are not to be emulated by the multitude; but a more humble class of labourers soon follow and prepare at least a portion of the new territory for all who choose to settle in it. No doubt the discoverers have the best title to do the honours of their acquisitions, but few discovers will thus far condescend; few very learned men will write popular works; yet, happily, a communicative spirit is greatly on the increase; philosophers are no longer a sect; men who devote themselves to the investigation of scientific truth, giving their labours and their lives to profound researches, can no longer be said to be *absorbed* in their pursuit; together with a more just appreciation of nature has arisen a far more practical recognition of a truth, which may be expressed in words not wholly unlike those of the great Instructor himself, and as I think, in full accordance with his mind, that science was made for man, and not man for science.

The following table is copied from a page in the quarto catalogue of the border in my own garden: it would, however, be far more convenient to have the catalogue made in oblong folio:—

Bed No. 1.—ROSACEÆ.

	N. America.		Britain.
1.	Spiræa lobata. Mur.	Spiræa Kamtschatica. Pal.	Spiræa filipendula. L. sp.
	Britain.	Alpine Europe.	Bithynia.
2.	Dryas octopetala. L. sp.	Sieversia montana. Spr.	Geum coccineum. Smith.
	N. America.	Louisiana.	Hungary.
3.	Gillenia trifoliata. Mœnc.	Sieversia triflora. R. Br.	Waldestenia geoides. Wil.
	N. America.	N. America.	Nipaul.
4.	Dalibarda fragarioides. Mi.	Potentilla floribunda. Poi.	Fragaria indica. H. K.
	Britain.	Britain.	Europe.
5.	Potentilla argentea. L.	Potentilla rupestris. L.	Potentilla alba. L.
	Calabria.	Piedmont.	Hybrid.
6.	Potentilla calabra. Ten.	Potentilla pedata. Poir.	Potentilla Russelliana.
	Var. Maxima. Britain.	S. Europe.	Canada.
7.	Sibbaldia procumbens. L.	Potentilla recta. L.	Potentilla tridentata. Sol.
	Hybrid.	Nipaul.	From Edin. Botanic Garden.
8.	Potentilla Tongii.	Potentilla insignis. Royle.	Potentilla dubia.
		New Zealand.	Europe.
9.	Agrimonia. Species.	Acæna sanguisorbæ. Vahl.	Potentilla opaca. L.
	Britain.	Britain.	Caucasus.
10.	Rosa pimpinellifolia. L.	Alchemilla alpina. L.	Alchemilla sericea. Wil.

—*From a paper read before the Historic Society of Lancashire and Cheshire, by the Rev. Henry H. Higgins, of Rainhill, Prescott, Lancashire.*

CULTIVATION OF MEDICINAL PLANTS AT HITCHIN, HERTS.

IT is now well known that there are in common cultivation two varieties of Henbane (Hyoscyamus niger, Linn.), one of which is biennial (Hyoscyamus niger, var. α. biennis), and the other annual (Hyoscyamus niger, var. β. annua, or Hyoscyamus agrestis of some authors). The biennial variety only is cultivated by Mr. Ransom at Hitchin, and for it, on an average of some years, he reserves from 3 to 4 acres of land. This variety is commonly distinguished under the name of biennial Black Henbane. The two varieties have been already fully described in this Journal by Dr. Pereira, Messrs. Houlton, Squire, and others, and need not, therefore, be further alluded to here.

The biennial Black Henbane is that which is commonly regarded (and, as we believe, correctly so) as the more active variety, and it is there directed to be employed in the London Pharmacopœia. The wild plant is also usually stated to be more powerful in its action than that which is cultivated, but we have no very satisfactory evidence which is demonstrative of its superiority; indeed, Dr. Christison states, that "from experiments made some years ago at the Royal Infirmary in Edinburgh, the inferiority of cultivated plants, if it exists at all, seems not appreciable in practice." There is probably, therefore, but very little difference in the medicinal activity of the cultivated and wild Henbane. It is satisfactory to find that such is the fact, as Henbane is now employed far too extensively for our supplies to be derived solely from wild plants; indigenous Henbane being now by no means abundant, and becoming less so every year, such a source of supply would soon be exhausted. Hence, nearly all the Henbane used in this country is derived from plants cultivated in different districts; more especially at Mitcham, Hitchin, and in certain parts of Bedfordshire and Cambridgeshire. In some districts, the annual variety is much cultivated, and one of the reasons for this is said to be its greener and more pleasing colour.

At Hitchin the biennial Black Henbane is raised from seed. This is, we believe, the only way in which it can be successfully reared. Before sowing, the ground is well trenched and manured. About the middle or end of March, or early in April, according as the season is favourable or otherwise, the seeds are sown in rows, which are placed at about 18 inches or 2 feet apart. The young plants generally begin to show above ground about the end of May or in the first or second week of June, although if the spring be very cold or otherwise unfavourable to the process of germination, they do not make their appearance till even a later period. Indeed, we are informed that it not unfrequently happens, that after all the labour and care which has been bestowed by the herb grower in his selection of his seed, and in preparing the ground for its reception, &c., the plants fail to spring up altogether. We believe that of all medicinal plants cultivated by the herb grower, Henbane is the most uncertain one he has to deal with, for besides the frequent failure, as just noticed, in the germination of the seeds, the plants, should they make their appearance above ground, are very liable to be destroyed at an early age by insects, &c., and even should they escape their ravages, and vegetation actively commence, if the weather should then become very dry, the yet young and tender shoots become soon checked in their growth, and the plants sometimes entirely dried up, and the crop consequently lost, and more particularly so as from the very slow progress which the plants under such adverse circumstances make, they are more subject to injury from the ravages of insects and snails, the latter of which especially devour the young leaves with great eagerness and with perfect impunity.

If the season be favourable to the growth of the plants, as soon as they get well established they progress rapidly, and about the beginning of August especially, the leaves, which are then becoming large, make such progress that they sometimes measure ultimately 2 feet or more in length. The leaves thus produced in the first year's growth are all stalked, and proceed from the stem underground; hence, they are termed radical. No aërial stem is produced during the first year. About the middle of August the leaves are cut, and immediately placed in the drying-room, and dried gradually by the aid of steam-heat. According to Mr. Ransom, these first leaves form the staple of what is commonly sold as "folia hyoscyami." After the removal of the leaves, nothing further is done to the Henbane crop during the first year except that the ground in which it is raised is frequently hoed, in order to prevent the growth of weeds, &c. about the plants, and to loosen the earth about their roots, &c. The plants continue to grow vigorously throughout August and in the early part of September, by which new leaves are soon produced to replace those cut away. After the beginning of September, vegetation begins to decline, but they remain growing slowly until October, and then the first frost which comes causes them to wither away, and, in November, all trace of them above ground is lost. The root, however, being biennial, survives during the winter, but remains comparatively dormant till about the following May, when it begins to develop an aërial stem with leaves on its surface. Should the newly developing parts be then exposed to favourable weather, and succeed in escaping the ravages of snails, &c., they grow very rapidly, so that towards the end of May, or beginning of June, the plants sometimes reach the height of 4 or 5 feet, but their more usual height is about 3 feet. The flowering takes place, generally, early in June, and continues throughout the month, as also in July. As soon as the fruit is matured, and the seeds ripened, the plants die.

When the Henbane plants are fully in flower the gathering of the crop commences, and continues throughout June and the early part of July. It is usual to reserve some of the plants for the leaves, &c., the remainder being employed in the preparation of extract. Thus, the former have their mature leaves stripped from the plant while growing in the field; these are brought home to the laboratory as speedily as possible, and dried by steam-heat in a room adapted for the purpose; these form the true biennial "folia hyoscyami." Mr. Ransom thinks that they alone should be used in medicine, as they possess much more medicinal activity than those obtained from the same plants in the first year of their growth. He also states that the leaves when gathered at this stage of the life of the plant have a very powerful odour, which differs from and is less unpleasant than that given off by them at any other period of their existence. Some of the flowers are also generally plucked and dried with the leaves. We believe this to be a mistake, for we have no doubt but that they are much inferior in activity to them; indeed, this would appear to be the opinion of Mr. Ransom also, as he states that he does not consider it desirable to mix many flowers with the leaves. From the same plants several gatherings of leaves take place during the season, and when their collection has terminated, the plants from which they have been obtained are left standing in the field, and from them the seed is derived which is reserved for sale and for sowing the next year. The remaining plants are employed for the preparation of the extract of Henbane, and for this purpose it is considered very desirable to use the herb as soon as possible after it has been cut, for if it be allowed to remain in heaps for even a short time, it heats, and then the after product is always more or less injured. We regard this plan of operation as very important, and especial attention should be always paid to it, and more particularly so from the circumstance of Henbane being thus employed in the preparation of extract, &c., at commonly a very hot season of the year. Mr. Ransom informs us that the whole time occupied from the growing of the plants in the field to their conversion into extract is only, as a rule, from 12 to 16 hours. The produce of Henbane per acre varies much according to the season, for while the quantity in some years is not more than a ton, in others it is as much as 5 tons, or even in rare cases still greater. The produce of extract per cwt. also is very variable; according to Mr. Ransom's experience at Hitchin, it is from 4 lbs. to 7½ lbs. *Pharmaceutical Journal.*

DARWIN ON THE ORIGIN OF SPECIES.

[We borrow from the *Times* the following brilliant notice of the work which is now attracting so much attention.]

THERE is a growing immensity in the speculations of science to which no human thing or thought at this day is comparable. Apart from the results which science brings us home and securely harvests, there is an expansive force and latitude in its tentative efforts, which lifts us out of ourselves and transfigures our mortality. We may have a preference for moral themes, like the Homeric sage, who had seen and known much:—

"Cities of men
And manners, climates, councils, governments;"

yet we must end by confessing that

"The windy ways of men
Are but dust which rises up
And is lightly laid again,"

in comparison with the work of nature, to which science testifies, but which has no boundaries in time or space to which science can approximate.

There is something altogether out of the reach of science, and yet the compass of science is practically illimitable. Hence it is that from time to time we are startled and perplexed by theories which have no parallel in the contracted moral world; for the generalisations of science sweep on in ever widening circles, and more aspiring flights, through a limitless creation. While astronomy, with its telescope, ranges beyond the known stars, and physiology, with its microscope, is subdividing infinite minutiæ, we may expect that our historic centuries will be treated as inadequate counters in the history of the planet on which we are placed. We must expect new conceptions of the nature and relations of its denizens, as science acquires the materials for fresh generalisations; nor have we occasion for alarm if a highly advanced knowledge, like that of the eminent Naturalist before us, confronts us with an hypothesis as vast as it is novel. This hypothesis may or may not be sustainable hereafter; it may give way to something else, and higher science may reverse what science has here built up with so much skill and patience, but its sufficiency must be tried by the tests of science alone, if we are to maintain our position as the heirs of Bacon and the acquitters of Galileo. We must weigh this hypothesis strictly in the controversy which is coming, by the only tests which are appropriate, and by no others whatsoever.

The hypothesis to which we point, and of which the present work of Mr. Darwin is but the preliminary outline, may be stated in his own language as follows:—"Species originated by means of natural selection, or through the preservation of the favoured races in the struggle for life." To render this thesis intelligible, it is necessary to interpret its terms. In the first place, what is a species? The question is a simple one, but the right answer to it is hard to find, even if we appeal to those who should know most about it. It is all those animals or plants which have descended from a single pair of parents; it is the smallest distinctly definable group of living organisms; it is an eternal and immutable entity; it is a mere abstraction of the human intellect having no existence in nature. Such are a few of the significations attached to this simple word which may be culled from authoritative sources; and if, leaving terms and theoretical subtleties aside, we turn to facts and endeavour to gather a meaning for ourselves, by studying the things to which, in practice, the name of species is applied, it profits us little. For practice varies as much as theory. Let the botanist or the zoologist examine and describe the productions of a country, and one will pretty certainly disagree with the other as to the number, limits, and definitions of the species into which he groups the very same things. In these islands we are in the habit of regarding mankind as of one species, but a fortnight's steam will land us in a country where divines and savans, for once in agreement, vie with one another in loudness of assertion, if not in cogency of proof, that men are of different species; and, more particularly, that the species negro is so distinct from our own that the Ten Commandments have actually no reference to him. Even in the calm region of entomology, where, if anywhere in this sinful world, passion and prejudice should fail to stir the mind, one learned coleopterist will fill ten attractive volumes with descriptions of species of beetles, nine-tenths of which are immediately declared by his brother beetle-mongers to be no species at all.

The truth is that the number of distinguishable living creatures almost surpasses imagination. At least 100,000 such kinds of insects alone have been described and may be identified in collections, and the number of separable kinds of living things is under-estimated at half a million. Seeing that most of these obvious kinds have their accidental varieties, and that they often shade into others by imperceptible degrees, it may well be imagined that the task of distinguishing between what is permanent and what fleeting, what is a species and what a mere variety, is sufficiently formidable.

But is it not possible to apply a test whereby a true species may be known from a mere variety? Is there no criterion of species? Great authorities affirm that there is—that the unions of members of the same species are always fertile, while those of distinct species are either sterile, or their offspring, called hybrids, are so. It is affirmed not only that this is an experimental fact, but that it is a provision for the preservation of the purity of species. Such a criterion as this would be invaluable; but, unfortunately, not only is it not obvious how to apply it in the great majority of cases in which its aid is needed, but its general validity is stoutly denied. The Hon and Rev. Mr. Herbert, a most trustworthy authority, not only asserts as the result of his own observations and experiments that many hybrids are quite as fertile as the parent species, but he goes so far as to assert that the particular plant Crinum capense is much more fertile when crossed by a distinct species then when fertilised by its proper pollen! On the other hand the famous Gaertner, though he took the greatest pains to cross the Primrose and the Cowslip, succeeded only once or twice in several years; and yet it is a well-established fact that the Primrose and the Cowslip are only varieties of the same kind of plant. Again, such cases as the following are well established. The female of species A if crossed with the male of species B is fertile, but if the female of B is crossed with the

male of A, she remains barren. Facts of this kind destroy the value of the supposed criterion.

If, weary of the endless difficulties involved in the determination of species, the investigator, contenting himself with the rough practical distinction of separable kinds, endeavours to study them as they occur in nature—to ascertain their relations to the conditions which surround them, their mutual harmonies and discordancies of structure, the bond of union of their parts and their past history, he finds himself, according to the received notions, in a mighty maze, and with, at most, the dimmest adumbration of a plan. If he starts with any one clear conviction, it is that every part of a living creature is cunningly adapted to some special use in its life. Has not his Paley told him that that seemingly useless organ, the spleen, is beautifully adjusted as so much packing between the other organs? And yet, at the outset of his studies, he finds that no adaptive reason whatsoever can be given for one half of the peculiarities of vegetable structure; he also discovers rudimentary teeth, which are never used, in the gums of the young calf and in those of the fœtal whale; insects which never bite have rudimental jaws, and others which never fly have rudimental wings; naturally blind creatures have rudimental eyes; and the halt have rudimentary limbs. So, again, no animal or plant puts on its perfect form at once, but all have to start from the same point, however various the course which each has to pursue. Not only men and horses, and cats and dogs, lobsters and beetles, periwinkles and mussels, but even the very sponges and animalcules commence their existence under forms which are essentially undistinguishable; and this is true of all the infinite variety of plants. Nay, more, all living beings march side by side along the high road of development, and separate the later the more like they are; like people leaving church, who all go down the aisle, but having reached the door some turn into the parsonage, others go down the village, and others part only in the next parish. A man in his development runs for a little while parallel with, though never passing through, the form of the meanest worm, then travels for a space beside the fish, then journeys along with the bird and the reptile for his fellow travellers; and only at last, after a brief companionship with the highest of the four-footed and four-handed world, rises into the dignity of pure manhood. No competent thinker of the present day dreams of explaining these indubitable facts by the notion of the existence of unknown and undiscoverable adaptations to purpose. And we would remind those who, ignorant of the facts, must be moved by authority, that no one has asserted the incompetence of the doctrine of final causes, in its application to physiology and anatomy, more strongly than our own eminent anatomist, Professor Owen, who, speaking of such cases, says ("On the Nature of Limbs," pp. 39, 40)—"I think it will be obvious that the principle of final adaptations fails to satisfy all the conditions of the problem."

But, if the doctrine of final causes will not help us to comprehend the anomalies of living structure, the principle of adaptation must surely lead us to understand why certain living beings are found in certain regions of the world and not in others. The Palm, as we know, will not grow in our climate, nor the Oak in Greenland. The white bear cannot live where the tiger thrives, nor *vice versâ*, and the more the natural habits of animal and vegetable species are examined, the more do they seem, on the whole, limited to particular provinces. But when we look into the facts established by the study of the geographical distribution of animals and plants it seems utterly hopeless to attempt to understand the strange and apparently capricious relations which they exhibit. One would be inclined to suppose *à priori* that every country must be naturally peopled by those animals that are fittest to live and thrive in it. And yet how, on this hypothesis, are we to account for the absence of cattle in the Pampas of South America when those parts of the New World were discovered? It is not that they were unfit for cattle, for millions of cattle now run wild there; and the like holds good of Australia and New Zealand. It is a curious circumstance, in fact, that the animals and plants of the Northern Hemisphere are not only as well adapted to live in the Southern Hemisphere as its own autochthones, but are in many cases absolutely better adapted, and so overrun and extirpate the aborigines. Clearly, therefore, the species which naturally inhabit a country are not necessarily the best adapted to its climate and other conditions. The inhabitants of islands are often distinct from any other known species of animal or plants (witness our recent examples from the work of Sir Emerson Tennent, on Ceylon), and yet they have almost always a sort of general family resemblance to the animals and plants of the nearest mainland. On the other hand, there is hardly a species of fish, shell, or crab common to the opposite sides of the narrow isthmus of Panama. Wherever we look, then, living nature offers us riddles of difficult solution, if we suppose that what we see is all that can be known of it.

But our knowledge of life is not confined to the existing world. Whatever their minor differences, geologists are agreed as to the vast thickness of the accumulated strata which compose the visible part of our earth, and the inconceivable immensity of the time of whose lapse they are the imperfect but the only accessible witnesses. Now, throughout the greater part of this long series of stratified rocks are scattered, sometimes very abundantly, multitudes of organic remains, the fossilised exuviæ of animals and plants which lived and died while the mud of which the rocks are formed was yet soft ooze, and could receive and bury them. It would be a great error to suppose that these organic remains were fragmentary relics. Our museums exhibit fossil shells of immeasurable antiquity, as perfect as the day they were formed, whole skeletons without a limb disturbed—nay, the changed flesh, the developing embryos, and even the very footsteps of primæval organisms. Thus the naturalist finds in the bowels of the earth species as well defined, and in some groups of animals more numerous than, those which breathe the upper air. But, singularly enough, the majority of these entombed species are wholly distinct from those that now live. Nor is this unlikeness without its rule and order. As a broad fact, the further we go back in time the less the buried species are like existing forms; and the further apart the sets of extinct creatures are the less they are like one another. In other words, there has been a regular succession of living beings, each younger set being in a very broad and general sense somewhat more like those which now live.

It was once supposed that this succession had been the result of vast successive catastrophes, destructions, and re-creations *en masse*; but catastrophes are now almost eliminated from geological, or at least palæontological speculation; and it is admitted on all hands that the seeming breaks in the chain of being are not absolute, but only relative to our imperfect knowledge; that species have replaced species, not in assemblages, but one by one; and that, if it were possible to have all the phenomena of the past presented to us, the convenient epochs and formations of the geologist, though having a certain distinctness, would fade into one another with limits as undefinable as those of the distinct and yet separable colours of the solar spectrum.

Such is a brief summary of the main truths which have been established concerning species. Are these truths ultimate and irresolvable facts, or are their complexities and perplexities the mere expressions of a higher law?

A large number of persons practically assume the former position to be correct. They believe that the writer of the Pentateuch was empowered and commissioned to teach us scientific as well as other truth, that the account we find there of the creation of living things is simply and literally correct, and that anything which seems to contradict it is, by the nature of the case, false. All the phenomena which have been detailed are, on this view, the immediate product of a creative fiat, and consequently are out of the domain of science altogether.

Whether this view prove ultimately to be true or false, it is, at any rate, not at present supported by what is commonly regarded as logical proof, even if it be capable of discussion by reason; and hence we consider ourselves at liberty to pass it by, and to turn to those views which profess to rest on a scientific basis only, and therefore admit of being argued to their consequences. And we do this with the less hesitation as it so happens that those persons who are practically conversant with the facts of the case (plainly a considerable advantage) have always thought fit to range themselves under the latter category.

The majority of these competent persons have up to the present time maintained two positions—the first, that every species is, within certain defined limits, fixed and incapable of modification; the second, that every species was originally produced by a distinct creative act. The second position is obviously incapable of proof or disproof, the direct operations of the Creator not being subjects of science; and it must therefore be regarded as a corollary from the first, the truth or falsehood of which is a matter of evidence. Most persons imagine that the arguments in favour of it are overwhelming; but to some few minds, and these, it must be confessed, intellects of no small power and grasp of knowledge, they have not brought conviction. Among these minds, that of the famous naturalist Lamarck, who possessed a greater acquaintance with the lower forms of life than any man of his day, Cuvier not excepted, and was a good botanist to boot, occupies a prominent place.

Two facts appear to have strongly affected the course of thought of this remarkable man—the one, that finer or stronger links of affinity connect all living beings with one another, and that thus the highest creature grades by multitudinous steps into the lowest; the other, that an organ may be developed in particular directions by exerting itself in particular ways, and that modifications once induced may be transmitted and become hereditary. Putting these facts together, Lamarck endeavoured to account for the first by the operation of the second. Place an animal in new circumstances, says he, and its needs will be altered; the new needs will create new desires, and the attempt to gratify such desires will result in an appropriate modification of the organs exerted. Make a man a blacksmith, and his brachial muscles will develope in accordance with the demands made upon them, and in like manner, says Lamarck, "the efforts of some short-necked bird to catch fish without wetting himself have, with time and perseverance, given rise to all our herons and long-necked waders."

The Lamarckian hypothesis has long since been justly condemned, and it is the established practice for every tyro to raise his heel against the carcass of the dead lion. But it is rarely either wise or instructive to treat even the errors of a really great man with mere ridicule, and in the present case the logical form of the doctrine stands on a very different footing from its substance.

If species have really arisen by the operation of natural conditions, we ought to be able to find those conditions now at work; we ought to be able to discover in nature some power adequate to modify any given kind of animal or plant in such a manner as to give rise to another kind, which would be admitted by naturalists as a distinct species. Lamarck imagined that he had discovered this *vera causa* in the admitted facts that some organs may be modified by exercise; and that modifications, once produced, are capable of hereditary transmission. It does not seem to have occurred to him to inquire whether there is any reason to believe that there are any limits to the amount of modification producible, or to ask how long an animal is likely to endeavour to gratify an impossible desire. The bird, in our example, would surely have renounced fish dinners long before it had produced the least effect on leg or neck.

Since Lamarck's time almost all competent naturalists have left speculations on the origin of species to such dreamers as the author of the "Vestiges," by whose well-intentioned efforts the Lamarckian theory received its final condemnation in the minds of all sound thinkers. Notwithstanding this silence, however, the transmutation theory, as it has been called, has been a "skeleton in the closet" to many an honest zoologist and botanist who had a soul above the mere naming of dried plants and skins. Surely, has such an one thought, nature is a mighty and consistent whole, and the providential order established in the world of life must, if we could only see it rightly, be consistent with that dominant over the multiform shapes of brute matter. But what is the history of astronomy, of all the branches of physics, of chemistry, of medicine, but a narration of the steps by which the human mind has been compelled, often sorely against its will, to recognise the operation of secondary causes in events where ignorance beheld an immediate intervention of a higher power? And when we know that living things are formed of the same elements as the inorganic world, that they act and react upon it, bound by a thousand ties of natural piety, is it probable, nay is it possible, that they, and they alone, should have no order in their seeming disorder, no unity in their seeming multiplicity, should suffer no explanation by the discovery of some central and sublime law of mutual connection?

Questions of this kind have assuredly often arisen, but it might have been long before they received such expression as would have commanded the respect and attention of the scientific world, had it not been for the publication of the work which prompted this article. Its author, Mr. Darwin, inheritor of a once celebrated name, won his spurs in science when most of those now distinguished were young men, and has for the last 20 years held a place in the front ranks of British philosophers. After a circumnavigatory voyage, undertaken solely for the love of his science, Mr. Darwin published a series of researches which at once arrested the attention of naturalists and geologists; his generalisations have since received ample confirmation, and now command universal assent, nor is it questionable that they have had the most important influence on the progress of science. More recently Mr. Darwin, with a versatility which is among the rarest of gifts, turned his attention to a most difficult question of zoology and minute anatomy; and no living naturalist and anatomist has published a better monograph than that which resulted from his labours. Such a man, at all events, has not entered the sanctuary with unwashed hands, and when he lays before us the results of 20 years' investigation and reflection we must listen even though we be disposed to strike. But, in reading his work, it must be confessed that the attention which might at first be dutifully, soon becomes willingly, given, so clear is the author's thought, so outspoken his conviction, so honest and fair the candid expression of his doubts. Those who would judge the book must read it; we shall endeavour only to make its line of argument and its philosophical position intelligible to the general reader in our own way.

The Baker Street Bazaar has just been exhibiting its familiar annual spectacle. Straight-backed, small-headed, big-barrelled oxen, as dissimilar from any wild species as can well be imagined, contended for attention and praise with sheep of half-a-dozen different breeds and styes of bloated preposterous pigs, no more like a wild boar or sow than a city alderman is like an ourang-outang. The cattle show has been, and perhaps may again be, succeeded by a poultry show, of whose crowing and clucking prodigies it can only be certainly predicated that they will be very unlike the aboriginal Phasianus Gallus. If the seeker after animal anomalies is not satisfied, a turn or two in Seven Dials will convince him that the breeds of pigeons are quite as extraordinary and unlike one another and their parent stock, while the Horticultural Society will provide him with any number of corresponding vegetable aberrations from nature's types. He will learn with no little surprise, too, in the course of his travels, that the proprietors and producers of these animal and vegetable anomalies regard them as distinct species, with a firm belief, the strength of which is exactly proportioned to their ignorance of scientific biology, and which is the more remarkable as they are all proud of their skill in originating such "species."

On careful inquiry it is found that all these, and the many other artificial breeds or races of animals and plants, have been produced by one method. The breeder—and a skilful one must be a person of much sagacity and natural or acquired perceptive faculty—notes some slight difference, arising he knows not how, in some individuals of his stock. If he wish to perpetuate this difference, to form a breed with the peculiarity in question strongly marked, he selects such male and female individuals as exhibit the desired character, and breeds from them. Their offspring are then carefully examined, and those which exhibit the peculiarity the most distinctly are selected for breeding, and this operation is repeated until the desired amount of divergence from the primitive stock is reached. It is then found that by continuing the process of selection—always breeding, that is, from well marked forms, and allowing no impure crosses to interfere—a race may be formed, the tendency of which to reproduce itself is exceedingly strong; nor is the limit to the amount of divergence which may be thus produced known, but one thing is certain, that, if certain breeds of dogs, or of pigeons, or of horses, were known only in a fossil state, no naturalist would hesitate in regarding them as distinct species.

But in all these cases we have human interference. Without the breeder there would be no selection, and without the selection no race. Before admitting the possibility of natural species having originated in any similar way, it must be proved that there is in nature some power which takes the place of man, and performs a selection *sud sponte*. It is the claim of Mr. Darwin that he professes to have discovered the existence and the *modus operandi* of this natural selection, as he terms it; and, if he be right, the process is perfectly simple and comprehensible, and irresistibly deducible from very familiar but well nigh forgotten facts.

Who, for instance, has duly reflected upon all the consequences of the marvellous struggle for existence which is daily and hourly going on among living beings? Not only does every animal live at the expense of some other animal or plant, but the very plants are at war. The ground is full of seeds that cannot rise into seedlings; the seedlings rob one another of air, light, and water, the strongest robber winning the day, and extinguishing his competitors. Year after year the wild animals with which man never interferes are, on the average, neither more nor less numerous than they were; and yet we know that the annual produce of every pair is from one to perhaps a million young; so that it is mathematically certain that, on the average, as many are killed by natural causes as are born every year, and those only escape which happen to be a little better fitted to resist destruction than those which die The individuals of a species are like the crew of a foundered ship, and none but good swimmers have a chance of reaching the land.

Such being unquestionably the necessary conditions under which living creatures exist, Mr. Darwin discovers in them the instrument of natural selection. Suppose that in the midst of this incessant competition some individuals of a species (A) present accidental variations which happen to fit them a little better than their fellows for the struggle in which they are engaged, then the chances are in favour, not only of these individuals being better nourished than the others, but of their predominating over their fellows in other ways, and of having a better chance of leaving offspring, which will of course tend to reproduce the peculiarities of their parents. Their offspring will, by a parity of reasoning, tend to predominate over their contemporaries, and there being (suppose) no room for more than one species such as A, the weaker variety will eventually be destroyed by the new destructive influence which is thrown into the scale, and the stronger will take its place. Surrounding conditions remaining unchanged, the new variety (which we may call B)—supposed, for argument's sake, to be the best adapted for these conditions which can be got out of the original stock—will remain unchanged, all accidental deviations from the type becoming at once extinguished, as less fit for their post than B itself. The tendency of B to persist will grow with its persistence through successive generations, and it will acquire all the characters of a new species.

But, on the other hand, if the conditions of life change in any degree, however slight, B may no longer be that form which is best adapted to withstand their destructive, and profit by their sustaining, influence; in which case if it should give rise to a more competent variety (C), this will take its place and become a new species: and thus, by natural selection, the species B and C will be successively derived from A.

That this most ingenious hypothesis enables us to give a reason for many apparent anomalies in the distribution of living beings in time and space, and that it is not contradicted by the main phenomena of life and organisation appear to us to be unquestionable, and so far it must be admitted to have an immense advantage over any of its predecessors. But it is quite another matter to affirm absolutely either the truth or falsehood of Mr. Darwin's views at the present stage of the inquiry. Goethe has an excellent aphorism defining that state of mind which he calls "Thätige Skepsis"—active doubt. It is doubt which so loves truth that it neither dares rest in doubting, nor extinguish itself by unjustified belief; and we commend this state of mind to students of species, with respect to Mr. Darwin's or any other hypothesis, as to their origin. The combined investigations of another 20 years may, perhaps, enable naturalists to say whether the modifying causes and the selective power, which Mr. Darwin has satisfactorily shown to exist in nature, are competent to produce all the effects he ascribes to them, or whether, on the other hand, he has been led to over estimate the value of the principle of natural selection, as greatly as Lamarck over-estimated his *vera causa* of modification by exercise.

But there is, at all events, one advantage possessed by the more recent writer over his predecessor. Mr. Darwin abhors mere speculation as nature abhors a vacuum. He is as greedy of cases and precedents as any constitutional lawyer, and all the principles he lays down are capable of being brought to the test of observation and experiment. The path he bids us follow professes to be not a mere airy track, fabricated of ideal cobwebs, but a solid and broad bridge of facts. If it be so, it will carry us safely over many a chasm in our knowledge, and lead us to a region free from the snares of those fascinating but barren Virgins, the Final Causes, against whom a high authority has so justly warned us. "My sons, dig in the Vineyard," were the last works of the old man in the fable: and, though the sons found no treasure, they made their fortunes by the Grapes.

Home Correspondence.

Annuals.—Owing to the severity of the winter which I hope is on the eve of leaving us, the usual stock of half-hardy plants for bedding will be much diminished. Last season cold frames were amply sufficient to preserve them from injury; but I fear there will be great mortality amongst such plants this season, especially where means of applying artificial heat are not available. The result will be that annuals will be greatly in demand, especially with amateurs who have no propagating pits, cold frames, and other appliances for securing a good quantity of bedding-"stuff." It may be well therefore to know that with a single-light box and a few barrow-loads of dung and leaves just sufficient to raise a gentle heat, any one may succeed in raising the principal portion of our best half-hardy annuals, some of which are equal in beauty to bedding-plants. Hardy annuals in every stage require less attention to bring them to perfection; but even these are frequently sadly mismanaged. Thick sowing is a great evil, if judicious thinning at the proper time is not resorted to. The result of thick sowing is, drawn, weakly plants, which bloom prematurely and are very short-lived; whereas by proper management in their earlier stages you may secure a strong, robust growth, enabling the plant to withstand both wind and rain with impunity, and rendering it as luxuriant and hardy as a Phlox. A certain class of annuals may be sown in autumn and wintered in a cold house or frame near the glass; frost if possible must be excluded. Ten-week Stocks make a beautiful early bed when thus treated, and are generally nearly over in time for replanting the bed with half-hardy plants. Saponaria makes a fine early spring bed, and is easily wintered in a sheltered corner out of doors. Except annuals are required for very early spring flowering, I prefer the usual time of sowing, March and April; they generally bloom more profusely and last longer. I have an impression that if the cultivation of annuals was more generally understood they would soon occupy a more prominent position in our flower gardens, and be more appreciated than they are at present. *J. Edlington, Winch House, Seacombe, Cheshire.*

Effects of the late Frost.—Two plants of Eugenia Ugni have weathered the storm at the foot of a greenhouse wall exposed to a draught from the north two winters without hurt. The frost of October last which caught them in their third winter well established cut them off to the ground, and they are as dead as Pea sticks. Arbutus Croomi was in splendid bloom when that frost came, and it was killed back to six inches from the top of every shoot. Tea Roses that have not required protection, or at least did not suffer during the severe weather in the spring of 1859, are now gone almost to the briar, and it appears to be a chance if any of the flower buds will break. Among those which have suffered most are Gloire de Dijon, Le Pactole, Leveson Gower, Madame Lafitte, Madame Willermorz, and Niphetos. Contrary to my expectations, Tea Roses do well here if kindly treated; but in such an exposure they ought to be taken up and laid in for shelter. Previous to the late fall of snow I had a look over the borders and can report that then Weigela rosea was in prime condition, swelling its buds. The following, which may still be considered as of questionable hardiness, most of which are in exposed positions, were also apparently unhurt:—Pavia coccinea, Magnolia purpurea, Garrya elliptica, Berberis glumacea, Fortuni, intermedia, and Beali; Polygala chamæbuxus, Gaultheria Shallon, Empetrum, Menziesia polifolia and polifolia alba, Mitchella repens. Of course we must wait to know the extent to which trees and shrubs have been injured, though a moment's glance is enough to determine its work in the kitchen garden. My circle of Spergula pilifera has looked very miserable ever since November last, the colour having changed to a dirty yellow green, by no means equal to the colour of the Grass turf adjoining it. Of its hardiness there can be no doubt, for last autumn's seedlings are still hearty, and the whole of the plant shows a readiness to make new growth at the first blush of spring weather. *Shirley Hibberd, Stoke Newington.*

Bitter Cucumbers.—Can any of your correspondents give a reason for Cucumbers being bitter at this season of the year? I have a half span-roofed house here planted with five different varieties, and strange to say, some fruit are perfectly well flavoured, while others taken from the self-same plant are quite bitter. This I find to be the case with all the varieties, which are Sion House, Harrow's Alliance, Black Spine, and two others of my own. The house is heated by means of hot water in pipes, which do their work admirably. I may just state that the Cucumbers were planted about the middle of October, in a composition of fibry maiden loam, leaf mould, and a little cow-dung, all being placed on the turves that cover the brick-bats, or drainage. I should like to know if it is common for Cucumbers to be bitter at this season. *G. Hoskins, Gardener, Daylesford House, Chipping Norton, Oxon.*

Rainfall at Cardington.—The following Table shows the amount of rain fallen at Cardington in every month for the last 14 years. The greatest quantity was in 1848, 30,860 inches, and the smallest quantity in 1854, 16,245 inches, being 5845 inches below the average of the 14 years. The greatest monthly average fall is in October, August, and July; the least in February, March, and December; and the year ending December 31, 1859, is 0.390 above the average:—

Month.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	Average.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
January ..	2.920	1.170	0.750	1.710	0.870	2.115	3.280	1.905	2.500	0.360	2.100	2.830	0.460	0.530	1.671
February ..	1.000	0.730	2.560	0.782	1.270	0.450	0.920	1.925	0.740	1.520	0.950	0.165	1.200	1.415	1.073
March ..	1.800	0.790	3.150	0.701	0.120	2.705	0.560	0.81	0.400	1.080	0.630	1.100	0.690	1.215	1.125
April ..	3.670	1.100	3.250	2.525	1.550	1.730	0.400	2.340	0.550	0.450	1.355	1.755	2.800	1.800	1.805
May ..	1.040	3.400	0.030	2.246	2.730	1.210	2.500	1.180	2.560	1.500	2.345	1.630	2.190	1.710	1.877
June ..	1.340	2.890	4.160	0.250	0.860	1.000	3.500	2.820	1.200	2.720	1.840	1.880	0.270	2.150	1.920
July ..	2.080	1.180	1.890	3.063	4.350	2.740	2.710	2.615	2.080	3.200	1.140	2.085	1.800	2.910	2.422
August ..	3.200	1.620	3.700	2.068	0.800	1.410	4.870	2.000	1.890	1.200	3.425	3.735	2.640	2.785	2.490
September ..	0.980	1.070	4.300	3.040	1.390	0 410	2.180	1.600	0.630	1.160	2.180	3.140	1.215	1.005	1.839
October ..	5.130	2.560	4.330	2.472	1.300	2.310	2.535	2.165	1.650	3.860	2.000	5.240	1.870	2.000	2.850
November ..	0.800	1.490	1.030	0.892	1.670	1.230	5.150	1.700	1.185	1.980	1.275	1.450	0.570	1.760	1.584
December ..	1.110	2.210	1.710	2.575	1.540	0.670	2.100	0.720	1.860	0.860	1.480	0.110	1.700	1.700	1.417
Total Amount ..	25.070	20.810	30.860	22.924	18.450	17.980	30.705	21.185	16.245	19.890	20.680	25.120	17.465	22.480	22.090

The following Table shows the highest and the lowest readings of the thermometer in the shade in the same month; also the highest readings in the sun and the lowest readings on Grass in the same month during the last 14 years:—

Years.	Maximum in Shade.	Minimum in Shade.	Maximum in Sun.	Minimum on Grass.
	Deg. m.	Deg. m.	Deg. m.	Deg. m.
1846	89 0 on July 31	50 0 on July 14	133 0 on June 29	27 4 on June 16
1847	83 0 on July 19	50 0 on July 10	129 0 on June 30	30 5 on June 18
1848	85 0 on July 6	39 0 on July 1	119 0 on July 9	45 0 on July 4
1849	83 4 on July 8	37 8 on July 1	115 5 on June 13	31 4 on June 4
1850	83 5 on July 16	41 2 on July 10	117 5 on Sept. 11	28 0 on Sept. 10
1851	78 0 on June 27	41 0 on July 1	118 5 on July 8	36 0 on July 4
1852	91 0 on July 5	48 5 on July 4	121 0 on Aug. 2	30 0 on Aug. 23
1853	81 5 on June 11	36 4 on July 1	125 0 on June 28	27 0 on June 14
1854	86 0 on July 25	35 6 on July 1	132 4 on Aug. 12	32 4 on Aug. 9
1855	84 5 on May 26	24 5 on May 3	131 4 on July 17	27 6 on July 25
1856	91 4 on Aug. 2	40 6 on Aug. 22		
1857	88 6 on June 28	38 4 on June 14		
1858	95 0 on June 16	43 0 on July 10		
1859	92 0 on July 12	44 8 on July 25		

—*J. B. McLaren, Observatory, Cardington, Dec.* 31.

Avenues.—I would be obliged by some advice as to the more effective of the two following modes of planting an "avenue," three-quarters of a mile long, on level ground, with a slight sweep or curve in it:—1st mode: front rows, C. Deodara; back rows A. Douglasii and P. nobilis, alternately. 2d mode: front rows, C. Deodara; back rows, A. Douglasii and Wellingtonia alternately. In both cases the trees to be from 14 to 15 yards apart every way, and backed by mixed plantations of hardwood and Firs, &c. *Scotus.*

[We doubt the propriety of planting Deodars in the front row, because they will *eventually* assume the heavy appearance of Cedars of Lebanon and mask the others. We should prefer front row A. Douglasii and Wellingtonia, with Deodars in the rear; or rather three rows, alternating, 1, A. Douglasii; 2, Wellingtonia; 3, Deodar.]

Rainfall at Highfield near Shrewsbury in 1859:—

	Ins.		Ins.
January	0.80	Brought forward ..	9.61
February	0.98	July	5.27
March	2.00	August	2.81
April	2.83	September	2.26
May	0.86	October	3.46
June	2.14	November	2.80
		December	1.88
Carried forward ..	9.61	Total	28.09
		Rainfall in 1858	22.87
		Excess in 1859	5.22

Maximum temperature, 1859, July 10, 87½°. Minimum do., December 19, 10°. *J. H.*

Gardeners' Royal Benevolent Institution.—In your remarks upon the letter of a "Young Practical" in your Paper of last week, respecting the mistake of 1000*l.* in the Balance Sheet of this Charity, you state that you printed the report as you received it. I beg to say that the mistake occurred through your printer taking the tick of the auditor for a figure. I inclose the report for your inspection. *Edward R. Cutler.*

[We suppose the printer did mistake a tick for the numeral 1.]

The Chinese Yam.—Our experience in the culture of this Yam is as follows:—About the middle of February, 1859, in our home nursery, which is deep light soil, we had a piece of ground 42 feet long by 5 feet wide, trenched to the depth of 3 feet, and a good coat of hotbed manure worked into it at that time; the last week in March we had the ground ridged up in two rows, 2½ feet apart, the ridges being about 9 inches above the ground level, and on these were planted 72 sets 1½ to 2 inches in length, and 12 whole roots, weighing from 1 to 1½ lbs. each, in all 84 or 1 foot apart in the rows. When they had grown about 6 inches we had them staked with the largest Pea sticks we could get; the strongest plants soon reached the top of these, after which the points of the shoots began to droop over, and they soon commenced to bloom; this stopped the rapid growth which the plants were previously making, and lasts from six to eight weeks; the bloom though small, of a French white colour, is very fragrant, and the foliage is ornamental. We had the tubers taken out of the ground the beginning of November (this requires care, as a cut from the spade at this season of the year often causes them to rot); the best plan is to open a trench 3 feet deep, at the beginning of the rows, and to keep following them to the end; the produce from the 12 large roots was 74 lbs. and the largest tuber weighed 7 lbs. 4 oz. (the remaining portion of the row in which these grew has been left for another season's experiment). Now we come to the other row, wherein the small sets were planted, and these 42 sets yielded upon the average 2 lbs. each (the largest weighing 4 lbs.); so taking the remaining 30 sets at the last average it will be a very heavy crop; indeed a much heavier crop than we could grow of Potatoes, even if they were all sound. We also grew a large piece of Yams in our poor light sandy ground; this was only trenched 2 feet deep, with a moderate coat of farm-yard manure. Many of these were very small sets indeed, and not planted until the last week in April, 1 foot apart between the rows, and about 9 inches in the row; these were left to take their natural course without any sticks to climb upon. When taken up the largest weighed nearly 1 lb., and the average yield was about 3 bushels per rod. We are pleased to find numbers of our customers just beginning to appreciate this useful esculent. *James Ivery, Dorking.*

Spergula pilifera.—It is now time for some of those who were last season induced to give this plant a trial as a substitute for Grass to report progress, and to say whether it promises to become so valuable a boon as it was represented to be; or whether, on the other hand, it is destined only to occupy small detached spots, where some one may be pleased to patronise it for the sake of novelty. Not having many opportunities of witnessing it on any other than a small scale, I cannot say much either one way or the other; certainly I had a few plants last summer, which I divided about the end of September and planted in a cold pit, and for a time they grew and promised to look well, but cold weather setting in, they soon became brown and withered looking, and at the present time it requires very close inspection to find out that any have been there; it is possible, certainly, that some of the plants may be yet alive, but I confess my acquaintance with it so far is anything but satisfactory, the bulk of the plants being completely killed, although there are Lobelias, Verbenas, and Calceolarias alive, and the latter doing well in the same pit. I am, however, far from condemning this new lawn plant from the little

trial I have had of it; but let others speak out, in order that its merits and failings may be fairly discussed and its proper position assigned to it. *L. M. N.*

Societies.

Horticultural: *Feb.* 28.—A Special General Meeting of this Society was held on Tuesday, February 28, at the house of the Society of Arts, John Street, Adelphi, for the purpose of electing various Candidates who had been proposed for the Fellowship. The Earl of Ducie, V.P., occupied the chair, and the following Ladies and Gentlemen were balloted for and duly elected, viz.:—Mrs. T. P. Ball, T. Baring, Esq., M.P.; Miss E. Barnard, Sir C. Barry, R.A.; Sir J. Bayley, Bart.; Lady Bayley, A. Bird, Esq.; J. Booth, Esq.; Mrs. B. Brett, Mrs. S. Cave, R. Cocks, Esq.; Right Hon. W. F. Cowper, M.P.; Mrs. D. M. Davidson, Right Hon. B. Disraeli, M.P.; Lady Eastlake, M. Edwards, Esq.; J. Fergus, Esq.; J. Fisher, Esq.; T. Forster, Esq.; Mrs. Gabrielli, S. Garrard, Esq.; A. Gibbs, Esq.; Mrs. W. Gibbs, W. Greig, Esq.; J. A. F. Hawkins, Esq.; J. Hesketh, Esq.; Lieut.-Col. Higgins, Mrs. Housely, the Hon. C. E. Irby, H. Johnson, Esq.; T. E. Johnston, Esq.; W. Jollands. Esq.; G. M. Jull, Esq.; Lord Kingsdown, H. Lewis, Esq.; J. B. Lloyd, Esq.; Sir C. Lyell, F. Mackenzie, Esq.; C. Manby, Esq.; the Hon. Lady Middleton, Mrs. Murray, Mrs. E. Nairne, J. C. Powell, Esq.; W. G. Prescott, Esq.; W. R. Sandbach, Esq.; A. W. Saunders, Esq.; M. W. Savage, Esq.; W. Shepherd, Esq.; Major-General A. Upton; M. Uzielli, Esq.; J. Vaughan, Esq.; J. Wilson, Esq., and G. Withers, Esq.

The Chairman announced that the next Meeting for the election of Fellows would be held on Tuesday, March 27.

Entomological: *Jan.* 23.—H. T. Stainton, Esq. V.P., in the chair. At this, the anniversary meeting, the council and officers for the ensuing year were appointed, J. W. Douglas, Esq., having been elected President in the place of Dr. Tracy, whose period of tenure of the office has expired, it being part of the constitution of this Society that no person shall retain the Presidentship for more than two years successively. The chairman delivered an address on the progress of Entomology and the state of the Society, dwelling at considerable length on the great losses which it has experienced in the deaths of Mr. Spence (the coadjutor of Mr. Kirby) and Dr. Horsfield. Mr. Spence was born in 1783, and in the early part of his life resided at Hull. When about 10 years old he imbibed a taste for botany, and subsequently in 1805 for entomology; and we have the authority of Mr. Kirby that within a very short time after he had commenced the investigation of the British Coleoptera to which he was especially attached, "so far from falling into the errors usual with beginners, he determined his species with the judgment and precision of the most experienced naturalist." After an acquaintance of three or four years these two kindred spirits resolved on the publication of an Introduction to Entomology to be written in a popular style, which was subsequently carried out with such excellent results as have rarely been obtained by scientific publications; the amount of labour in collecting and arranging its materials may be judged from the fact that it was not till 1815, seven years after the plan of the book had been settled, that its first volume appeared. Three other volumes were subsequently published. In 1847 Mr. Spence was elected President of the Entomological Society. He died at the age of 77. Dr. Horsfield, the distinguished zoologist and late keeper of the collections of the East India Company, was from 1809 to 1816 actively engaged in investigating the natural history, and especially the entomology of the island of Java, where he succeeded in tracing the transformation of many species of butterflies and moths, portion of which were published in the years 1828 and 1829, but which was succeeded in the year 1857 by the first volume of the "Catalogue of the Papiliones and Sphinges of the East India Company's Museum," a second volume being now ready for publication. Dr. Horsfield died at the age of 82. The account given by Mr. Stainton of the progress of the science and the state of the Society was very satisfactory, showing a considerable balance in the hands of the treasurer.

Notices of Books.

The Flora of Tasmania. By J. Dalton Hooker, M.D. F.R.S. Parts 10 and 11. 4to. Reeve.

The completion of works of such undying value as this forms an epoch in Colonial history, and shows that an appreciation of science is spreading fast as wealth increases, and is closing upon the heels of civilisation. No better proof is needed than the untiring labours of Dr. Hooker in illustrating the antipodean Flora. First, we had the Flora of the Antarctic Islands, in two vols., 4to, with 200 plates; to this succeeded two other vols, 4to, with 130 plates, on the vegetation of New Zealand; and now we have in a third set of 4to volumes, with 200 more plates, a complete account of Tasmania; in all six 4to volumes and 530 plates, costing about 40*l.*, in the brief space of 16 years. It is no small honour to our colonies that they help to defray the cost of publications like these.

The parts before us contain plates exclusively of Cryptogamic plants, that is to say of Fungi, Sea Weeds, and Lichens, ending at plate 200, which terminates the figures.

The letter-press concludes the systematical portion of the work, with a few pages of additions and corrections, index, tables of genera, &c. In addition to which there is what may perhaps be described, without exaggeration, as the most important contribution to Botanical Geography which science has yet produced. Under the modest title of "Introductory Essay" we have 128 quarto pages devoted to a consideration of the General phænomena of variation in the Vegetable Kingdom, of distribution in area, and of distribution in time. From this the author proceeds to general remarks on the Flora of Australia, on its classes and orders, their numbers, distribution, and affinity; on its genera, on the Flora of its tropical and extra tropical regions, of the countries round Spencer's Gulf, and of Tasmania. He then directs attention to the New Zealand and Polynesian features of Australian vegetation, its antarctic plants, its South African and European features, its fossil Flora and geology in relation to the existing Flora, its naturalised plants, its esculent plants, and finally concludes with a masterly narrative of the progress of botanical discovery in this fifth continent.

The mere announcement of the appearance of such a treatise on such a subject by so eminent a naturalist is sufficient to induce scientific readers to examine its pages for themselves,* and renders any particular account of it in this place unnecessary. We shall therefore confine our extracts principally to the author's views respecting the Fossil Flora of Australia, and the geological age and origin of its present vegetable inhabitants:—

"The fossiliferous rocks of Australia do not throw much light upon the antiquity of its existing Flora, because of the hiatus which geologists seem to consider exists between the palæozoic and tertiary strata of that country. Mr. Jukes has called attention to the curious fact that this deficient series in Australia is largely developed in Europe, and there presents such Australian forms of life as marsupiate quadrupeds, Trigonia and other fossil shells, together with Cycadeous plants. To the latter no importance can be attached, as this order is far more characteristic of tropical America, of India, and even of south-east Africa, than of Australia; but on the other hand the Araucaria of the English oolite, and other fossils alluded to at p. xxi., would seem to tend to confirm Mr. Jukes's observation.

"Many of the tertiary fossil plants of Australia would seem to be very closely allied to existing ones; these include the Casuarina cones of Flinders Island, the Banksia and Araucaria wood of Tasmania, the Banksia cones of Victoria (which seem identical with those of B. ericifolia, though buried under many feet of trap). The leaves of the calcareous tuffs on the banks of the Derwent, etc., appear however to belong to a different and warmer period.

"From the above it would appear that the extinct Flora of Australia was not entirely different from that now existing, and, following Mr. Jukes's line of argument, that Australia continued as dry land during the European Oolitic and Cretaceous periods. At this epoch Mr. Jukes assumes that the peculiar Flora of Australia was introduced, and that the continent was again submerged during the Tertiary epoch, when it presented the appearance of two long islands, or chains of islands, one, the larger, representing the elevated land of eastern Australia and Tasmania, the other that of south-eastern Australia, together with subsidiary groups in the western and northern parts of the continent.

"In our complete ignorance as to the condition of all the continents during the Palæozoic epoch, it is impossible to speculate on the earlier condition of the Australian Flora. That previous to some tertiary submersion of a great part of the continent, it was not altogether specifically different from what it now is, would appear from a fact insisted on by Mr. Jukes, that it was during such a submersion that those volcanos were active, the lavas of which now cover large tracts of southern Australia, and which we know to have buried a plant apparently identical with Banksia ericifolia, which is still one of the commonest trees in that part of the country; but the question of where the Banksias and their allies were created, and, if in other lands than Australia, how they migrated thither, we have no means of answering. If the identifications of Banksia and other Proteaceous leaves in the Cretaceous and Miocene formations of Europe are worthy of any confidence, it is possible that the Australian from the northern to the southern hemisphere, as, according to Darwin's types may have migrated speculations, the existing European plants in Australia have.

"When I take a comprehensive view of the vegetation of the Old World, I am struck with the appearance it presents of there being a continuous current of vegetation (if I may so fancifully express myself) from Scandinavia to Tasmania; along, in short, the whole extent of that arc of the terrestrial sphere which presents the greatest continuity of land. In the first place, Scandinavian genera, and even species, reappear everywhere from Lapland and Iceland to the tops of the Tasmanian alps, in rapidly diminishing numbers it is true, but in vigorous development throughout. They abound on the Alps and Pyrenees, pass on to the Caucasus and Himalaya, thence they extend along the Khasia mountains and those of the peninsulas of India to those of Ceylon and the Malayan archipelago (Java and Borneo), and after a hiatus of 30°, they appear on the alps of New South Wales, Victoria and Tasmania, and beyond these again on those of New Zealand and the Antarctic Islands, many of the species remaining unchanged throughout! It matters not what the vegetation of the bases and flanks of these mountains may be; the northern species may be associated with alpine forms of Germanic, Siberian, Oriental, Chinese, American, Malayan, and family Australian and Antarctic types; but whereas these are all, more or less, local assemblages, the Scandinavian asserts his prerogative of ubiquity from Britain to beyond its antipodes.

"These considerations quite preclude my entertaining the idea that the southern and northern Floras have had common origin with comparatively modern geological epochs; on the contrary, the European and Australian Floras seem to me to be essentially distinct, and not united by those of intervening countries, though fragments of the former are associated with the latter in the southern hemisphere. For instance, I regard the Indian plants in Australia to be as foreign to it, botanically, as the Scandinavian, and more so than the Antarctic; and that to whatever lengths the theory of variation may be carried, we cannot by it speculate on the southern Flora being directly a derivative one from the existing northern. On the contrary, the many bonds of affinity between the three southern Floras, the Antarctic, Australian, and South African, indicate that these may all have been members of one great vegetation, which may once have covered as large a southern area as the European now does a northern. It is true that at some anterior time these two Floras may have had a common origin, but the period of their divergence antedates the creation of the principal existing generic forms of each. To what portion of the globe the maximum development of this southern Flora is to be assigned, it is vain at present to speculate; but the geographical changes that have resulted in its dismemberment into isolated groups scattered over the Southern Ocean, must have been great indeed. Circumscribed as these Floras are, and encroached upon everywhere by northern forms, their ultimate destiny must depend on that power of appropriation in the strife for place which we see in the force with which an intrusive foreign weed establishes itself in our already fully peopled fields and meadows, and of the real nature of which power no conception has been formed by naturalists, and which has not even a name in the language of biology. Everywhere, however, we see the more widely distributed, and therefore least peculiar forms of plants, spreading, and the most peculiar dying out in small areas, and the progress of civilisation has introduced in man a new enemy to the scarce old forms, and a strong ally of those already common: nor can it be doubted but that many of the small local genera of Australia, New Zealand, and South Africa, will ultimately disappear, owing to the usurping tendencies of the emigrant plants of the northern hemisphere, energetically supported as they are by the artificial aids that the northern races of man afford them."

The gradual inroads of stranger plants among the Australian Flora are known to be assuming a serious aspect. Barbarea præcox, Trifolium repens, and Gnaphalium luteo-album have become troublesome weeds. Thistles (*Cnicus lanceolatus* and *arvensis*, *Carduus marianus*) are becoming very serious nuisances, and a Gorteria, or what is said to be one, from the Cape of Good Hope, is destroying the other vegetation near Melbourne. Upon this important subject Dr. Hooker makes the following remarks, with which we must bring our extracts to a close:—

"There are many interesting subjects of inquiry connected with this replacement of one vegetable by another, such as determining the relations between the facility with which the new plants of certain countries or genera are introduced and establish themselves, and the countries such plants come from, or Floras of which they form a part. Much of course depends on the new comer finding a suitable climate and soil for its future increase, but there may be more in the physique or constitution of the new comer that enables it to displace other plants which are apparently equally well (if not better) adapted to the circumstances it finds itself environed with. The nature of the past intercourse between Europe and Australia should lead us to anticipate that a far greater number of English plants are naturalised in Australia than of Australian in England; but the fact of importation does not explain naturalisation, nor how it is that no Australian plant has become naturalised in England. This total want of reciprocity in migration is no doubt mainly attributable to climate, but then we have the apparent double anomaly, that Australia is better suited to some English plants than England is, and that some English plants are better suited to Australia than those Australian plants were which have given way before English intruders. For my own part, I am disposed to consider that the three elements of (1) abundant exportation of seed from Europe into Australia for agricultural and horticultural purposes, and scanty export of Australian seed produce to England; (2) better adapta-

* We are glad to see it advertised to be sold separately.

tion of Australia than England to support numerous forms of vegetable life; and (3) abundance of unoccupied ground in Australia as compared with England; are, combined, all but sufficient to account for the predominance of so many European naturalised plants in Australia, and for the converse state of things in England. But I think it may still remain to be seen whether the altered circumstances which seem to be temporarily favourable will prove to be so permanently: perhaps they over-stimulate, and will, by gradually effecting a change in the constitution of the naturalised plants, either render them eventually distinct forms, or bring on degeneracy and consequent extinction.

"In all these discussions it must be borne in mind that no wild species is stationary in number of individuals. None will survive all time; each must reach a period of maximum development, and decline from it to extinction; and as we do not know that man can add to or take from the sum of vegetable matter on the globe, it may very well be the case, that in every instance where his operations tend to an inordinate development of a species in individuals, he is shortening the period of time otherwise allotted for the duration of that species. Man, as I have observed before (p. viii. in note), may hasten or retard the operations of Nature, but cannot reverse them."

Of Mr. Van Houtte's *Flore des Serres* we have lately received the part for April, 1858 (published in February of the present year). It contains original figures of Begonia rex Leopardinus, a mule between B. rex and B. Reichenheimii, and remarkable for the singular beauty of its blotched leaves; a semi-double variegated Peach, bearing white, red, and striped flowers, apparently very handsome; Cosmidium Burridgeanum atropurpureum, with deep morone-coloured flowers; a Camellia called Contessa Lavinia Maggi, a large-flowered striped variety, apparently of Italian origin; and a large, pale, brick-coloured semi-double Azalea indica called Comte de Hainaut, with three others copied from English works.

Garden Memoranda.

MR. DANCER'S, FULHAM.—Some account of a visit to this nursery, even at the present dull season of the year, may perhaps not be without interest. In a little Camellia-house some of the plants were coming beautifully into bloom. Among them were La Reine, a fine large-flowered kind, with well-formed petals, pale blush in colour, occasionally blotched with rosy pink; Mathotiana, a charming variety with deep crimson flowers, beautifully imbricated, and sometimes measuring as much as 5 inches in diameter; Landrethi, rose, with reflexed petals, which look as if they were fringed, surrounding a full and finely formed centre; and Countess of Orkney, a handsome variety with variously shaded red flowers nicely imbricated, and often measuring 4 inches in diameter.

In another house were quantities of Ficus elastica, a plant much in demand for the decoration of London sitting rooms. Its large handsome leathery leaves withstand the atmosphere of such places better than those of most other plants. For the ornamentation of indoor Aquaria few plants are more graceful or pretty than Isolepis gracilis; this is also grown here largely and is frequently inquired for for that purpose. Acacia lophantha is likewise a favourite for indoor decoration; it is prized for the beauty of its finely divided Mimosa-like foliage.

An ample span-roofed house has lately been erected here for the growth of Conifers in pots, and is at present well stocked with all the newer kinds of that fine class of plants. Among others we observed quantities of Cupressus Lawsoniana, which here as elsewhere has been proved to be perfectly hardy; C. Corneyana, another pretty and hardy kind with long drooping slender branchlets; and many other equally fine kinds. Among Junipers, J. religiosa, a hardy glaucous sort, and a compact growing variety of recurva called densa, were remarkable for their beauty and clean healthy appearance. The same remark also applies to Libocedrus chilensis, and a variety of it called viridis, the handsome Fern-like but unfortunately somewhat tender L. Doniana, and Wellingtonia gigantea. The latter consisting of fine plants from 1 to 3 feet in height, has been found to stand the late severe frosts here with impunity. Of Thujas we remarked fine plants of aurea, whose equal in point of beauty and compactness it would be difficult to obtain; and along with it was a little bush called T. dumosa, which seldom or never exceeds 1 foot or so in height. Of T. Menziesi and gigantea we observed some fine plants, varying from 1 to 3 feet in height. These have both been found to be perfectly hardy, as have also T. pendula and the handsome Cephalotaxus Fortuni and drupacea.

Although this nursery was at one time a market garden and highly manured, it seems to suit the growth of Conifers perfectly; for in the open ground were some thriving plantations of such kinds as Abies amabilis, grandis, nobilis, Nordmanniana, Pinsapo, and also of Pinus Jeffreyi, Benthamiana, Bungeana, Fremontiana, and other distinct and beautiful kinds. Thujopsis borealis and dolabrata promise to be sufficiently hardy to stand the London climate, as does also Podocarpus "Undine."

Under glass Daphnes, Berberis, such as the large Ash-leaved kinds Bealii, japonica, trifurca, nepalensis, intermedia, and others, are grown in quantity, as are also the different kinds of Sikkim and Bootan Rhododendrons, and out of doors is a fine collection of the finer and more brilliantly coloured hybrids of the last-named showy race of plants.

Roses in the shape of standards are grown here as follows, and with uniform success. The stocks after being budded are removed in the autumn or winter of the same year in which that operation takes place, and are replanted elsewhere. The advantages of this plan are that only the plants on which the buds have taken are retained, while those on which they have died are rejected; a considerable saving of ground is thus effected, and the moving, it is said, has the tendency of inducing the plants to throw out an increased amount of fibres or rootlets. Where ground is cheap this system of transplanting with dormant buds may not be deemed of much importance; but where, as is the case near London, as much as 10*l.* an acre are paid for rent, the value of the plan will be at once perceived.

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Young plants of Allamandas, Clerodendrons, Torenias, &c., and many other things, if encouraged with a brisk bottom heat and other favourable circumstances, will form nice sized specimens in a few months, and large masses of Statices, than which few plants are more useful, will, under kind treatment, be obtained in a short time. The showy Impatiens Jerdoniæ should also be encouraged by every possible means to make wood and let it be propagated as quickly and freely as possible, for it is just the plant that is wanted for autumn decoration. The pretty dwarf Heliotropium Voltaireanum, although too delicate for the flower garden, will be found useful for blooming under glass where sweet-scented flowers are in request. In fact, where the stock in hand is deficient not a day should be lost in making every possible effort to provide considerably more than is likely to be wanted, so as to be prepared against any accident or extra demand, should such occur. Push on Camellias that have fairly started their buds with a warm moist atmosphere and plenty of weak manure water. Also get a portion of the Epacrises into a gentle heat as soon as they have sufficiently recruited their energies after flowering. By starting them into growth about this time, and getting their wood ripened early, they will be in full blossom in November, at which season their flowers retain their beauty much longer than after the sun becomes powerful in spring. Proceed as diligently as possible with the repotting of such of the hard-wooded greenhouse plants as require it, so as to afford them every chance to make a vigorous growth. Be careful, however, before potting to have the ball in a nice moist state, and avoid giving large shifts to weakly growers.

FORCING DEPARTMENT.

PINERIES.—Attend carefully to the bottom-heat, particularly where this is produced by fermenting materials, as tan, &c., and see that it is not allowed to rise too high, which it is exceedingly apt to do after fresh materials have been added, either during bright weather, or where there are pipes under the bed. Where much fire-heat is used it requires some practice and attention to be able to keep the soil in a proper state as regards moisture, but this must be effected at any expense of attention if success is to be insured. Maintain a thoroughly moist atmosphere, but do not push young stock too fast until we may be favoured with more sunshine, when if all is right at the roots there will be no danger of drawing the plants, as might be the case in the present state of the weather. Avoid allowing water to lodge in the hearts of plants showing fruit, and do not wet the flowers of those in bloom with the syringe. Pot off or plant out suckers as they can be obtained sufficiently strong, and attend to keeping up a regular succession of plants, which is the surest way of providing for a succession of fruit. VINERIES.—See that the houses in which the Vines have not yet started are properly cleaned, the Vines painted with the usual composition of soft soap, sulphur, &c., and everything put into proper working order; also get the rods bent in time to induce the buds to push regularly. Attend to disbudding and stopping, &c., as may be necessary in the succession houses, and see that the inside borders are kept properly moist, giving tepid manure-water as may be necessary to effect this, and do not be afraid of giving too much of this to Vines in pots.

FLOWER GARDEN AND SHRUBBERIES.

Look over all recently transplanted shrubs and trees for the purpose of ascertaining whether they are securely staked, for if allowed to roll about with the wind the tender roots are often broken off. Also get walks edged and otherwise put into proper repair. Attend carefully to the stock of bedding plants, and get rooted cuttings potted off as soon as they are fit, and encourage them with a gentle bottom-heat and careful management to make quick growth, for after this season there is no time to be lost with young stock. Calceolarias, if well established, may soon be planted out in a turf pit on poor sandy soil where they can be protected from frost or cold winds, but they must be prepared for this by previously inuring them to full exposure to sun and air, &c., whenever the weather will permit. Their place under glass can be profitably occupied with recently potted-off stuff, and with ordinary care they will do better planted out than stunted in small pots.

HARDY FRUIT AND KITCHEN GARDEN.

Protect Peach, Apricot, and other choice fruit trees from spring frosts; orchard houses and glass cases should have air daily during sunshine, but close early if there is any appearance of frost. Finish pruning and nailing as soon as possible. Cauliflowers and Lettuces that have been wintered under glass may soon be planted out, selecting a sheltered deep rich piece of ground. It is a very good practice in planting out things that are at all tender at this uncertain season to throw up the ground in good strong ridges running east and west, planting on the south side of the ridge. The plants are thus sheltered from the north winds, and fully exposed to the sun. Peas, &c., that have been raised under glass if properly inured to the weather should soon be planted out, giving them the most favourable situation at command, and it is a very good practice to shelter them for some time after planting out, by placing some branches of Spruce Fir or any other suitable evergreen along the rows, so as to break the wind, &c. Take advantage of dry days to stir the surface of the ground among growing crops, and to prevent weeds from making their appearance.

COTTAGERS' GARDEN.

Sow a little Celery on a warm slope; throw small sifted ashes over the surface to prevent the depredations of slugs, and cover up with litter. Carrots and Onions may also be sown. Potato planting should be proceeded with, both early and late kinds. A few hardy annuals may now be sown, and Carnation layers, if any, planted out. Keep everything about the Cottage and Garden neat and trim.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending March 1, 1860, as observed at the Horticultural Gardens.

February and March.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind.	Rain.
Friday 24	2	30.150	30.085	44	18	31.0	40	40	S.E.	.00
Satur. 25	3	30.104	29.801	45	30	37.5	39½	40	S.	.01
Sunday 26	4	29.558	29.150	53	35	44.0	38¾	40	S.W.	.40
Mon. 27	5	29.611	29.106	58	30	44.0	41½	40	W.	.07
Tues. 28	6	29.679	29.258	51	27	39.0	41½	40	W.	.01
Wed. 29	7	30.016	29.928	52	21	36.5	41	40½	W.	.00
Thurs. 1	8	30.040	29.968	49	30	39.5	41	41	S.W.	.00
Average...		29.879	29.613	50.3	27.3	38.8	40.5	40.2		.49

Feb. 24—Frosty; fine; clear and frosty.
— 25—Foggy; fine; hazy at night.
— 26—Uniformly overcast; showery; boisterous; rain.
— 27—Rain; boisterous; clear at night.
— 28—Rain; extraordinary heavy gale; boisterous; clear; slight frost.
— 29—Clear; very fine; clear; frosty.
March 1—Sharp frost, very fine; overcast at night; large lunar halo.
Mean temperature of the week, 1¾ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending March 10, 1860.

March.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 4..	49.2	31.1	40.5	10	0.48 in.	3	10	1	3	3	8	5	1
Mon. 5	48.3	31.6	40.0	9	0.40	2	8	3	2	4	7	6	2
Tues. 6..	48.2	32.0	40.1	11	0.26	2	9	3	1	2	5	6	6
Wed. 7..	49.3	32.2	40.8	12	0.11	3	2	4	—	4	11	7	3
Thurs. 8..	49.4	31.9	40.7	12	0.17	1	4	2	2	4	13	5	3
Friday 9..	50.0	31.7	40.9	9	0.47	2	4	3	2	1	13	6	3
Satur. 10	50.0	31.3	40.6	12	0.69	4	5	2	3	5	9	3	3

The highest temperature during the above period occurred on the 10th, 1841—therm. 63 deg.; and the lowest on the 10th, 1847—therm. 7 deg.

Notices to Correspondents.

AGARICUS MUSCARIUS: *M D.* You can only obtain it by searching for it at the proper season in the places indicated by *M J B.* The species is so distinct that no collector would be likely to mistake it.

BLANCHARD POTATOES: *Enquirer.* Any seedsman in correspondence with Paris can obtain them, we imagine, of Messrs. Vilmorin & Co.

BOOKS: *Amateur.* Thompson's Gardeners' Assistant is probably most likely to save you from disappointment, but we cannot advise you to place Flora and Pomona in charge of a raw lad of 17.—*E A D.* We fear that books will be of little use in your case. Try Thompson's Gardeners' Assistant.—*E M M.* Pescatorea may be obtained through any foreign bookseller. It is published at Brussels.‡

CORROSIVE SUBLIMATE: *W C E.* We are at a loss what you wish to know. If you steep Coniferous Cones in any solution of it you will kill the seeds. You did not mention Cones in your previous inquiry.

FRUIT TREES: *E S.* Late Pears are not the best adapted for a nearly north wall; but the following may be tried: Glou Morceau, Knight's Monarch, Winter Nelis, Ne plus Meuris; and as a stewing Pear the Verulam will succeed very well.‖

LENTILS: *E S.* These are to be managed exactly like Vetches. They will succeed just as well. But it is not considered desirable to make them a very frequent article of diet.

MONSTROUS YEW: *Handbarrow.* Whenever the ends or middle of the buds of the Yew are injured the little twig loses the usual power of lengthening and its leaves grow close together in the shape of a cone. Such instances are sometimes very common.

PAMPAS GRASS: *C M F.* You may transplant your specimen of this Grass from a midland to a southern county now with safety.‡

PEACH TREES: *Tiffany.* You may keep this on day and night, but it must not hang close upon the trees. It should slope against the wall like the sashes on a lean-to vinery, only at a very high angle, and the ends should be open. Suppose your wall is 12 feet high, then let the Tiffany be nailed close at top, and be a yard from the bottom of the wall.

PINE APPLES: *M B* will feel obliged by some experienced Pine grower informing him whether three or four large suckers being allowed to remain on a plant during the time of the fruit swelling are any hindrance to the proper development of the fruit or not

WELLINGTONIA: *F B.* This tree is one of the Coniferous order, and nearly related to Cupressus.

MISC: Full price will be given for No. 4, 1853, of the *Gardeners' Chronicle.*

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

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In all cases the whole cost of the improvements, with the attendant expenses, may be charged on the Estate, the term for Building Works being limited to 31 years, but for all other improvements being capable of extension to 50 years.
No investigation of title being required, and the charge not qeing affected by Incumbrances, no legal expenses are incurred.
Operations under the Company's Act are divided into two principal branches; one where the Landowner designs and executes the improvements by his own Agent and merely requires a loan from the Company to charge the Estate,—the other where the Company undertake the entire responsibility of the Improvement and obtain repayment by way of Rent Charge. In the first case the plans, specifications, and estimates prepared by the Landowner's Agent are forwarded to the Company to be submitted for approval to the Inclosure Commissioners. As soon as the sanction has been given the Landowner proceeds to execute the works, and the Company having conducted the business through all the official forms, complete the charge on the estate when the works have been passed by the Commissioners, and repay the Landowner the amount agreed upon.
In no part of the business is there any control upon a Landowner except by the Inclosure Commissioners. The Company never interfere, except at the special request of the Landowner or his Agent, and only to such extent as may further the objects he has in view.
In the other case, where the Company are required to execute the works, a report and estimate of the Improvement are sent to the Landowner, and having been approved, the plans are then prepared and the works—either submitted to public competition or entrusted to their own staff—are carried on to completion, and the amount of the actual expenditure only, approved by the Inclosure Commissioners with the Company's agreed commission and the Commissioners' expenses, finally charged on the Estate for the term fixed by the Landowner.
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COLLEGE OF AGRICULTURE AND CHEMISTRY AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.
The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

APPOINTMENT OF SECRETARY.—The Council of the Royal Agricultural Benevolent College are prepared to receive applications for the office of Secretary in connection therewith. The Council are desirous if possible of securing the services of a gentleman who is well versed in the routine of the Secretarial duties of a large Charitable Institution and is well acquainted with Agriculturists and the Landed and Farming interests generally. The Council are not prepared to pay a high rate of remuneration until the College is in fair working condition. Age must not exceed 45 years; security will be required. The person appointed must devote his whole time to the purposes of the College and reside in or near London.—Written applications addressed to Mr. C. BAZIN, 112, Regent Street, W., London, furnishing full particulars, accompanied by testimonials dating to the present time will be received up to Friday, March 9.

YORKSHIRE AGRICULTURAL SOCIETY.—The next ANNUAL MEETING will be held at PONTEFRACT, August 1 and 2. JOHN HANNAM, Secretary.
Kirk Deighton, Wetherby, March 3.

The Agricultural Gazette.
SATURDAY, MARCH 3, 1860.

MEETINGS FOR THE FOLLOWING WEEK.
MONDAY, March 5—Central Farmers' Club ..... 6 P.M.

—— THE Royal Agricultural Society of Holland propose to have an exhibition and trial of steam cultivators and reaping machines in August next, offering first and second prizes of about 30*l.* and 15*l.* in each class. These sums of course are not likely to tempt competition; but the probability of custom is. The level lands of Holland are particularly well adapted for both these machines. The same difficulty of obtaining hands is felt there which is experienced here. New tracts (Polders) enclosed from the sea, and a more vigorous cultivation of the old lands are continually making inroads on the limited stock of power of both hands and horses, and the assistance of steam-power seems as necessary there as here for efficient agriculture.

Under these circumstances our agricultural machine makers have, we think, every encouragement to enter the lists at Wilhelminadorp, near Goes, where the competition is to be held during the 6th to 11th of August. This will be the week after the Dumfries meeting of the Highland Society, which is this year the latest of our national shows. Though the full details of the proposed arrangements are not yet settled, we may at once give the letter of our correspondent:—

"As to reaping machines the same reasons which have caused increased demand in England exist here, for here also there are not hands enough at harvest time. We should not have been able to gather the last crop in due time, if we had not been favoured by extraordinarily good weather. Land taken in regular cultivation here, by embankments of new Polders (as they are called), is much increasing, so that continually more hands are needed. For these new Polders steam culture would be quite in its place, and the conviction of this can only be obtained by seeing the implements at work.

"As to the expenses of conveyance I paid some years ago for a portable eight-horse engine and threshing machine from HORNSBY:—

Expenses from Grantham to Hull	£11	0	3
Freight from Hull to Rotterdam	10	8	0
Custom on entry (for a value of 383*l.* 11*s.*) ..	5	8	0
Expenses to here..	9	16	0
	£36	12	3

"For this last item of 9*l.* 16*s.* I could however have had more implements brought from Rotterdam.

"The cost of the transmission of reaping machines of course would be much less. I paid for a two-row drilling machine from HORNSBY 3*l.* 14*s.* 7*d.* from Grantham (of which 1*l.* 12*s.* 1*d.* were to Hull), besides 18*s.* 3*d.* for custom on entry; the value of the machine and extras being 36*l.* 12*s.*

"These may be somewhat a measure as to the expense of conveyance. I would recommend intending competitors to consign their machines to Messrs. RINGROSE & Co., at Hull. As soon as the date of competition is fixed these gentlemen will be informed about it; and it is not improbable that they may cheapen the freight.

"There cannot be a better opportunity for setting the implements to work than here. We have six farms, each divided into 21 fields of 20 to 25 acres; the greatest part of regular form, parallellograms, and 1250 acres of the whole are drained. There are no stones: it is quite flat, and a deep soil. There won't be any need of horses or men, or hearty support to bring the machines to work. I should only wish the makers to send a trusty man with their implements—one who is thoroughly acquainted with the use of the machine."

—— Wheat weighing 13 score 6 lbs. per quarter was, we understand, lately sold at Reading market. The kind is known as Red Nursery Wheat. It fetched 7*s.* a bushel. This is 66¼ lbs. per bushel; and it is probably as great a weight as has been quoted. We see at the Union Agricultural Society's meeting at Kelso a fortnight ago the highest weight exhibited was 65 lbs. 11 oz.—the sort being "DUCIE Wheat," probably the red-strawed white Wheat originated by Mr. MORTON at the Whitfield Farm. Seed (Chevalier) Barley was shown weighing 58 lbs. 10 oz. Seed (Polish) Oats weighing 48 lbs. per bushel was exhibited. Perennial Rye-grass seed was also shown of the extraordinary weight of 35 lbs. 13 oz. per bushel.

ON Thursday last Mr. STRAFFORD disposed by auction of 60 head of cattle—the Short-horn herd of J. S. CRAWLEY, Esq., of Stockwood Park, near Luton.

The weather and the company were all that the auctioneer could wish. All the leading breeders of Short-horns were present, and many of them became purchasers. Sir W. MILES, Bart., was among the largest buyers on Mr. STRAFFORD's list.

The stock was in good condition, and yet probably hardly came up to the expectation of the majority of those who had to come to see it.

The sum realised by the sale of 59 head of cattle was 2555 guineas, or upwards of 45*l.* each. Of this 267 guineas were realised by 10 heifer-calves at 28*l.* each; 295 guineas by 10 bull-calves at 31*l.* each; and 1993 guineas by 39 cows and heifers over 1 year old, being 53*l.* 13*s.* each.

Among the leading prices were 70 guineas for Stella, a 5-year-old cow, bought by Mr. SHELDON;

80 guineas for Imogene, a 4-year-old roan cow, bought by Mr. HALES; 72 guineas for Lady Carlotta, bought by Mr. SURTEES; 80 guineas for Orange Blossom, a 3-year-old cow, bought by Mr. OLIVER; 100 guineas for Barmaid, a 3-year-old heifer, bought by Mr. CARR; 81 guineas for Jewess, a 3-year-old heifer, bought by Mr. BEASLEY; 92 guineas for Honeymoon, 2½ years old, bought by Mr. SNEWING; 81 guineas for Ayah, a 20-months'-old heifer, sold last year at Cobham for 110 guineas, and now bought by Mr. LONG (she had received an injury to her sight); 74 guineas for Mistletoe, a yearling heifer, bought by Mr. MITCHELL, and, as was stated, for Mr. JOHN BOOTH. The highest prices given for bull-calves were 72 and 62 guineas for Ortolan and Hotspur, bought by Mr. COTTON and Mr. PARKINSON respectively.

—— An angry quarrel between landowner and outgoing tenant, viz., Mrs. ROSIER, of Marlow, and Mr. OVERMAN her tenant, of Flamsteadbury Farm, as to the liability of the latter for alleged dilapidation of premises, gates and fences, has, after tedious and costly litigation, at length been decided by the arbitration of Mr. H. TRETHEWY, of Silsoe, who has found no cause of quarrel to have existed—that the defendant has, in fact, done his whole duty as a tenant—that the costs of the litigation are to be borne equally by defendant and plaintiff, and that the costs of the award are to be borne by the plaintiff!

—— DR. MACADAM publishes in the *North British Agriculturist* his experience in the analysis of recent superphosphates. They vary enormously in composition and consequent value. Here for instance are two, Nos. 24 and 28 upon his list:—The former contains 29 per cent. of "bone phosphate rendered soluble," and the latter only one-half that quantity—the former contains no less than 4.3 per cent. of ammonia, the latter only 0.72 per cent. Of their actual contents of "soluble biphosphate of lime," equal in quantity to two-thirds or thereabouts of "bone phosphate rendered soluble," the manures analysed contained from 9 per cent. up to 25 per cent.—the "insoluble phosphates" in these, the extreme cases, being respectively 4 and 46 per cent.! Instances of this kind prove the need of purchasing manures upon analysis as a security not merely against fraud on the part of the salesman but against unskilfulness on the part of the manufacturers.

—— The condition of the Turnip plant is one of the most pressing questions of English agriculture. The loss of the crop this winter is no doubt due in great measure to the severity of the season. Having within the last week been over a considerable extent of the Cotteswold district and seen the destruction of the standing crop and the safety of the harvested and pitted crop over successive fields, it was plain that the loss this year has not been owing to degenerate constitution or a dry season, to bad seed or insect attacks, but simply to careless management. Where the roots were properly pitted before the frost they are still safe; and if this precaution was not taken the loss of the crop is plainly due simply to want of foresight and to misjudgment on the part of the farmer.

The experience, however, not of this year alone but of many successive years proves that there is increasing difficulty of success in Turnip cultivation. And it is a pity that none of the many essays on the subject written for the Agricultural Society should have been published. One would like to have known the experience and opinions of practical men on the influence of recent dry seasons; on the practice of taking stolen crops, Vetches, Rye, &c., before the Turnips; on the influence of autumn cultivation, of artificial manures, of marling and liming land; on the mischief done by bad seed, by selecting inferior roots for the growth of seed, by thick seeding, by caterpillars, fly, and mildew; on the influence of various soils, of imperfect tillage, of land drainage; and on the effects of too frequent a recurrence of the crop.

These all of them, more or less, must be named during a full discussion of the subject, and there can be little doubt that from the essays, all of them rejected, which competed for the Society's prize, there might have been gathered the material of a most useful paper.

The solution of the difficulty appears now most generally sought for in the substitution of Mangel Wurzel and Kohl Rabi for the Turnip. And there can be little doubt that either of these in liberally managed land will yield a larger crop of better food. But under the ordinary cultivation of the land, when you are dependant on ashes and superphosphate for your green crops, it will be a hard necessity alone which will justify the abandonment of the Turnip.

WE continue from page 102 our remarks on iron in farm structures, and give further illustrations of its employment in columns and beams used for carrying floors and roofs.

We have now to describe the upper parts of columns; this varies according to circumstances. Where there is no floor supported by the columns, but a beam is carried from one to the other in order to carry the roof, the top of column may be made as in Fig. 7; the upper plate *a* being bounded at its outer edges by snags or projecting parts, *b b*; between these the lower flange of beam is passed as in the part *c* in the plan of top plate *a a*. The upper part is sometimes provided with a collar *a a* Fig. 8, which is embraced by the ends of the beams. Where an upper series of columns are used for a second storey one method of connecting the base of the upper with the cap of the lower column is shown in Fig. 9; where the upper part of lower column is continued upwards, as at *a a*, forming a hollow tube, *b b*, into which collar *c* of the upper column *d* is passed. Another form is shown in Fig. 10, when the cap of column, *a*, is continued upwards as at *b*; the upper part of which is extended, as at *c c*; affording a seat and collar for *d* of lower part of upper column, *e*. The part, *a a* in Fig. 9, and *b b* in Fig. 10, are embraced by the beams which rest upon the flange, *e e*, in Fig. 9, and *f f* in Fig. 10.

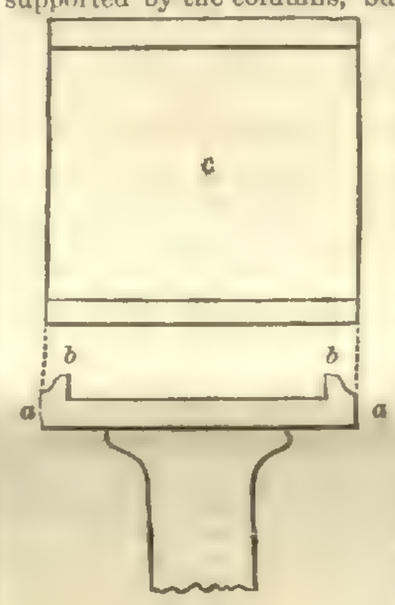

FIG. 7.

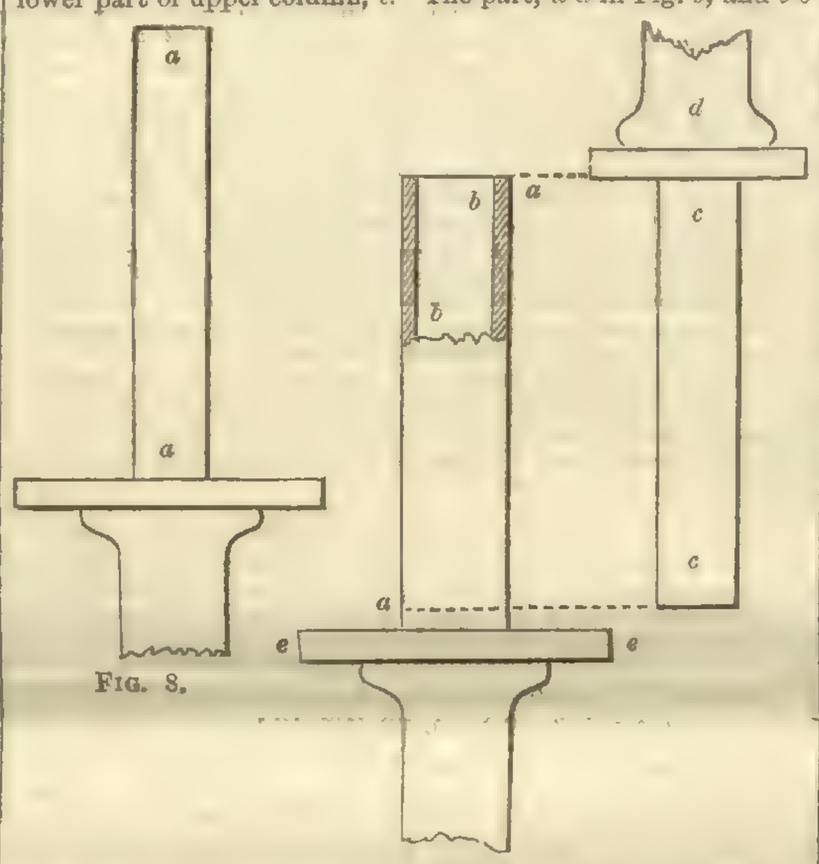

FIG. 8.

FIG. 9.

The following matter—as to dimensions of cast-iron columns to carry different weights—is deduced from tables given in Weale's Engineers' Pocket Book, 3*s*. This work should form an essential part of every practical man's library, as it contains a vast mass of calculations ready to hand on almost every point of construction—calculations which could only be elaborated at the expense of much time and labour. The diameter of columns is equal throughout, the height being taken at 10 feet; the weight supported being given, as also the extent of flooring in superficial feet which the pillars will support, giving to each foot a load of 2½ cwt. *e. g.* — Diameter of column, 5 inches; thickness of metal, ½ inch; weight supported, 6 tons 10 cwt.; extent of flooring, 65 feet. With the metal ¾ inch in thickness, the weight supported is 9 tons 15 cwts.; extent of flooring, 97 feet. With the thickness of metal 1 inch, the weight supported will be 13 tons, and extent of flooring, 130 feet. Where the diameter of pillar is 6 inches, thickness of metal ½, ¾, and 1 inch, the weight supported and extent of flooring will be respectively, 8½ tons, 85 feet; 13 tons, 130 feet; 17½ tons, 175 feet. Where the diameter is 7 inches, and thickness ½, ¾, and 1 inch, the weight supported and extent of floor obtained will be respectively, 10½ tons, 102 feet; 16 tons, 160 feet; 21½ tons, 215 feet. Diameter of column 8 inches; thickness of metal ½, ¾, and 1 inch, weight supported, 18½ tons, 23 tons 15 cwt. 27½ tons; extent of floor, 185, 237, and 275 feet. Diameter of column, 9 inches; thickness, ½, ¾, and 1 inch; weights, 22½ tons, 26½ tons, and 35 tons; extent of flooring, 225, 265, 359 feet. In same table will be found the diameter of column from 3 inches up to 18, and extent of flooring calculated for 1½, 2½, and 3 cwt. to the superficial foot.

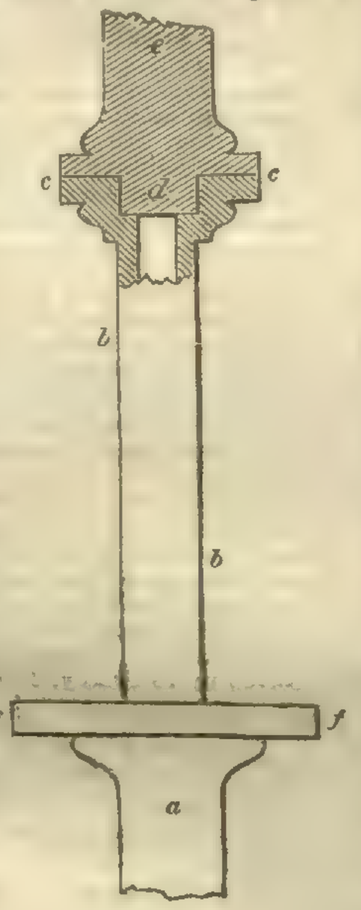

FIG. 10.

The weight of a 10 feet pillar 5 inches in diameter and ½ inch thick may be set down at 220 lbs., not including the base and cap, which may be reckoned equal to 40 to 80 lbs. extra, according to degree of ornamentation. The same pillar ¾ inch thick will weigh about 310 lbs., cap and base from 2 to 4 times the weight of a lineal foot, namely 31 lbs. The weight of a pillar 5 inches diameter and 1 inch thick may be set down at 390 lbs., the cap and base from 2 to 4 times the weight of a lineal foot, say 39 lbs. The weight per lineal foot of a column 6 inches diameter, having thicknesses of ½, ¾, and 1 inch, will be 27, 38, and 49 lbs. Of a column 7 and 8 inches diameter, with thicknesses of ½, ¾, and 1 inch (31, 46, and 58), and (36, 53, and 68), and for 9 inches diameter of the above thicknesses 41 lbs., 60 lbs., and 78 lbs. The scale to which Figs. 6, 7, 8, and 9 is 1 inch to the foot. The subject of *beams* will on a future occasion occupy our attention.

PULPING ROOTS FOR FEEDING CATTLE.

(*Concluded from p.* 128.)

Mr. Robert Heath, Hefferston Grange, Northwich.—I used a pulper of your manufacture all last winter, by horse power, and am perfectly satisfied with its work. I used the pulp fresh, making enough every morning to last 24 hours. As it fell from the machine it was taken to two large mixing troughs or boxes standing in the middle passage of the cow-house. In one it was mixed with cut hay, and in the other with cut straw. Cows giving milk had the former; dry cows the latter. The orders to the cowman are to feed every animal according to its appetite, that is, to give it as much as it will eat up clean, five times in the 24 hours, when they are housed night and day; also to proportion the pulp and the cut stuff (hay and straw) according to the state of the dung of each beast; by attention to this latter order, I find it quite easy to prevent either scouring or the opposite. Milking and fatting beasts had two dry feeds out of the five, consisting of cut hay and meal only. I deem it much preferable to give beasts a little and often, rather than very large feeds at a time, except when left for the night, when they get as much as their troughs will hold. I have no racks for uncut fodder for the cows. On this system all the stock was kept in fine health and condition, suitable to stores, milkers, or feeders, with, as near as I can judge, an economy of hay and roots, but particularly of the former, of about one-third as compared with the old system of sliced roots and long hay, besides avoiding all risk of choking. My young stock are fed the same as the cows in milk, there being no danger of making them too fresh, as might be the case with cows about to calve. In this county, dairy stocks are kept housed night and day from about 1st November to 1st of May. The quantity and quality of milk they give on being turned out to their pastures at the latter date depends entirely upon their condition, and I have no hesitation in saying that no stock could possibly have been in better order than mine was last May, very far exceeding that of the majority of my neighbours as evidenced by the quantity of curd to each cow, viz., 4 lbs. per 24 hours, on a yield of 18 quarts of milk per cow. *September* 19, 1859.

Mr. Joseph Noden, Bridgmere, Nantwich.—I have used one of your pulpers for the last 12 months, and am glad to inform you, that for my milking cows, young stock, colts, and pigs, it far exceeds my expectations; nay, if it had not been for the use of the pulper, I should have been obliged to have given up growing Mangel altogether, for I could not get my cows to eat a sufficient quantity of straw to keep them from scouring. Now I use the roots pulped, I give them 1 bushel of pulped Mangel with 2 of cut straw, and find it to answer well. I have 42 dairy cows besides young stock and colts, which I fed last spring on pulped Turnips and Mangels, with chaff or chopped straw, with a few kibbled Oats, and I never had so good a lot of fat calves, nor any cows in better trim for cheese-making before. I give them very little hay, which I consider the most expensive crop we grow, having before last spring consumed 40 to 50 tons annually, but now I consider that 10 tons will serve me for all purposes. My store pigs, before last winter, I have kept on Mangels and a little corn, but I find that one-half of Mangels mixed with a little meal, when pulped, will do far better. For my cows, young stock, and colts, I pulp and mix, and use it the next day, but for pigs I like it three days old. *September* 19, 1859.

Mr. William Smith, Cop House Farm, near Chester.—I beg to inform you that for the last three years it has been my practice to pulp all root food given to my stock, and I have found a great saving in food to result therefrom. When I commenced the system of pulping, I used to allow the chaff and pulped roots to remain for two and sometimes three days before it was given to the cattle; but I found that on the third day the animals did not eat it so readily as when it was given to them fresh; I therefore altered my course, and now give them the chaff and roots as soon as pulped—a plan which, from the experience gained by numerous head of stock, I believe to be the best. Of the advantages resulting from the general use of pulped root food, I cannot speak too highly, for in addition to the individual benefit derived by the beast, I believe that with proper management one-third more stock can be kept on the same quantity of food than by other systems. The stock on my farm comprises generally 120 fattening beasts, 10 pairs of plough-horses, besides colts, young stock, pigs, &c., to all of which I give pulped food. Your pulper has been used on all occasions when required during the past 18 months, and its operations have so satisfied me that I shall be happy to order another of them. *September* 15, 1859.

Mr. E. Bowley, Siddington, near Cirencester.—I have one farm of 50 acres on which I never make any hay, but have always kept my beasts there in the winter on straw and roots. In former days they used to have the latter almost *ad libitum*, and the straw was given them to pick over, and it aided, I believe, in their eating very little. Some of the old cows, my man tells me, would

eat 4 bushel-baskets of roots in a day. My cattle are pure Short-horns, and I fat very few, therefore I cannot give you much information on that point. Nor do I milk on the farm; the stock I keep there are in-calf cows after they have done milking, and young stock; the former are having 1 bushel-basket of pulped Swedes and 2 bushels of straw chaff daily; they do quite as well as when they had so many roots and little straw. To 2-year-old growing heifers I give 1 bushel roots and 1 bushel straw; to the yearlings I give a little meal in addition. To one cow I am fatting, I give 1 peck of meal in addition to those kept in a store state. I consider by this new system I can keep more than double the number of animals on the same quantity of roots as formerly. I should be very glad to give you more information if I could do so, but I have not had the quantity weighed, and the only criterion I have to go by is the bushel basket. I consider the pulping system one of the greatest advances in agriculture of late times. Mix the roots with the chaff on the floor immediately after they are pulped. Pray ask me more questions if you like.

Mr. John Searby, Frith Bank, Boston.—The favourable testimony given to the value of the system of pulping so entirely agrees with my observations that I can with confidence recommend it. The pulper is all that can be desired for its purpose; the gain in the increased production of beef, &c., by giving less costly food, is more than the difference in labour, besides having your cattle much better attended. The advantages of pulping for stall-fed beasts consist in a saving of oil-cake—of being enabled to commence giving roots when you house your cattle at the latter end of the year instead of towards the spring—a more liberal supply of roots without causing blowing or choking. Last year my beasts, with 5 lbs. of oil-cake per head per diem, gave equally satisfactory results as to thrift as was given previously to using the pulpers with 10 lbs. of cake per head; the same allowance of meal, Mangel, hay, and chaff in each case. Stall-fed cattle seldom pay for consuming large quantities of cake, say 10 to 14 lbs. of cake per diem; hence the necessity for converting beneficially any cheaper substitute to (in part) supply its place, which I think is done by pulping. The cake thus saved may, in my opinion, be given more profitably elsewhere. Store-stock, under the old plan, when fed with roots alone, would frequently starve and scour; such is not the case with minced roots. The pulp being mixed with chaff, &c., is eaten with avidity, and the beasts thrive well. *September* 22, 1859.

Mr. Edmund Wright, Holston Hall, Oswestry.—I have given pulped Mangel to 20 cows—16 of those being Hereford cows, kept exclusively for breeding, the other four being dairy cows. I also use the pulper for some 8 to 10 months old calves, fed in an open yard; these have Swedish Turnips pulped. I give about equal portions in bulk of the roots and cut straw. We find it answers admirably, both for the cows and calves. We mix the roots and cut straw immediately after the roots are pulped, and give the mixture to the cattle before fermentation takes place. This is our practice now, but in the first instance we allowed the mixture to ferment, when some of the cows refused it, though most of them took to it with evident relish in this state. I think, however, that since we have given the mixture before fermentation takes place, all the cattle like it better, and those which refused the fermented mixture greedily eat it when fresh. When we allowed the mixture to ferment, we used cisterns for the purpose: we now mix upon the floor only. We consider the pulping machine economises both the roots and straw, for every particle of the straw is eaten when blended with the pulped roots, instead of being trampled under the feet as before. But perhaps the greatest saving consists in the using up all the chaff after a day's use of the threshing machine; this, in my case, amounts to a fortnight or three weeks' supply of chaff all ready for mixing with the pulped roots, the whole of which was thrown upon the manure heap before we used the pulping machine. The straw being mixed with the pulped roots is certainly a great means of preventing scouring; for choking, of course the mixture is an absolute preventative, and we have had no animals blown since we used it. We give Mangels to our cows, and as these never affect the taste of the butter as Turnips do, I can scarcely say what advantage we gain in the quality of our butter by using pulped food instead of sliced. I may say generally, however, that our milking cows are getting pulped roots this winter, and that our butter is singularly good, without any disagreeable flavour whatever. Upon the whole, I think the pulping machine a very valuable implement; by it you certainly make the Turnip more easy of digestion, and with young animals especially whose mouths are tender and digestive organs comparatively weak this is an immense gain.

Mr. M. Wyvill, Fingall.—We tied up about 200 head of cattle last winter. The feeding cattle we did not give pulped Turnips. We are giving yearlings:—18 lbs. of pulped Turnips, fresh pulped; 14 lbs. of chopped straw, 1 lb. of Linseed cake, and 1 feed of hay per day. Two-year-olds we are giving:—21 lbs. of Turnips, 3 lbs. of cake, 20 lbs. of chopped straw. To cows:—14 lbs. of Turnips, with chopped straw; 3 lbs. of cake, and 2 feeds of hay per day. I consider the pulper a most valuable implement where economy of Turnips is required. We do not use it where a full feed of Turnips is given to feeding cattle. *August* 30, 1859.

IRISH AGRICULTURE.

Some weeks ago a communication appeared in the columns of this Journal giving a sad account of the position and hopes of Irish agriculture. After a general indictment against all the agencies that have been in operation in Ireland for improving the *status* of the agricultural classes, the writer invents one that must have appeared to his mind as the most tangible and efficacious means of raising the Irish farmer from the slough of supposed misery.

The panacea proposed by our friend is "to establish through the length and breadth of the land such simply conducted example farms as shall speak at once to the minds of the masses, through the most sensitive of their organs and the most sensitive of their concerns, their pockets." We have no objection to example farms; on the contrary, we regard them with extreme favour, after having had ample experience of their beneficial working. But if the Irish farmers of the present day "pique themselves upon their cunning, wit, and sarcasm, have little respect for the opinions of writers and for works on farming," we fear the new light from the example farmers would not dissipate all that is bad in the Irish system of farm management. It is proposed to have "one at least of these farms in each parish, the size to be regulated by that of the average extent of farms in the neighbourhood, to be placed under the management of the most enlightened of the local farmers." We apprehend "G." has hastily offered this piece of advice, which may seem feasible on first reflection, but in reality it sounds with an air of impracticability on the ears of those who have thoroughly examined the real causes that have impeded the growth and development of Irish agriculture. If there live in every parish (of which there are 2532) in Ireland farmers enlightened enough to conduct example farms, there must exist some deep-seated cause of her backwardness.

Those supposed thousands of enlightened agriculturists will silently and slowly influence the state of agriculture in their respective parishes. And their advice will be sure to command more respect and be more implicitly followed when regarded as simple members of the agricultural community than by being associated with the landocracy of the country, as suggested by "G." when he says, "the great reliable machinery for carrying out the plan must be provided by the landed proprietors under the supervision and assistance of their agents and stewards."

In nearly all the schemes proposed for the amelioration of the condition of the Irish farmer, the landlords have had too large a share in their administration. We do not mention the fact in any disparaging or fault-finding spirit, but as a simple matter of fact. There is the Agricultural Improvement Society of Ireland without a solitary tenant farmer honoured with a place in its Council of fifty. We believe that the members of that Council are exceedingly estimable; many of them are agriculturists of the advanced school, and all are certainly men of the highest social standing. Nevertheless it is not a symptom of healthy action to find that none of the intelligent and affluent tenant farmers of the country have a voice in its direction and management. The Councils of the Agricultural Societies of England and Scotland have the popular element fairly, though perhaps not adequately represented. The *bonâ fide* farmers of Ireland are placed in a false position, which induces many of them to view with apathy and often with distrust the Central Agricultural Society and its various offshoots.

And we augur that the example farms of which our friend writes so enthusiastically would prove equally obnoxious and abortive. In justice to the agricultural societies of Ireland, as well as of the high motives which actuate their founders and promoters, we feel called upon to say that the farmers of Ireland have in too many instances formed erroneous ideas of their objects and advantages. Nor do we agree with "G." in the assertion that the establishment of these societies has been attended with "little if any good." Such a statement could in our opinion emanate only from a man imperfectly acquainted with the history of Irish agriculture for the last 10 years, as well as with the highly creditable cattle shows recently held in that country. Ireland of to-day possesses numerous herds of Short-horns, and numerous flocks of Leicester, Southdown, and other improved breeds of sheep, quite on a par with those of England and Scotland. It is true that they are generally in the hands of the landlords of the country; but it is equally true that first-class sires are hired out to the tenants at a moderate charge, and that the character of the live stock of Ireland has undergone a wonderful improvement since the establishment of the Royal Agricultural Improvement Society. Nor are prize Short-horns unknown among the tenant farmers of Ireland who are excluded from all administrative power in the Council of the Agricultural Society. Mr. Barnes, of Moynalty, has a herd of the true Booth stamp; Mr. Christy, of Fort Union, Adare; Mr. Ellison, of Lough Glynn, and others having a standing among stock breeders which is alike creditable to themselves and the country. The Agricultural Society and the Royal Dublin Society are justly entitled to our commendation for having stimulated the production of improved stock in Ireland. It is impossible to measure the increased wealth of the country through the fostering encouragement of these societies. Taking the two chief items we find:—

	Cattle.		Sheep.
1841	1,863,116	..	2,106,189
1859	3,810,136	..	3,588,356
Increase	1,947,020	..	1,482,167

Now it is not too much to suppose that the stock of Ireland has since the establishment of the Agricultural Society improved by the infusion of better blood on an average of 5 per cent., which would add to the national wealth of the country about a million sterling annually. Let no man, therefore, while advocating a project that may work well when confined to his own imagination, but would vanish as a morning fog does before a bright sun, condemn institutions which have been productive of so much good to Ireland.

{"The field of glory is a field for all,"

and men like "G." would do well to weigh well their words and arguments. We pass now over his allusion to the practical instructors who brought agricultural intelligence to the door of many an Irish farmer. We cannot notice his allusion to the model farms of Ireland which serve precisely the same purpose as the example farms which he has proposed, as no mind but his could reason itself into the conclusion that the agricultural education of the 2088 boarders who underwent an apprenticeship on those farms, not to speak at all of the 50,000 young lads who have been intructed in those schools in the elementary principles of agriculture, has been attended with "but little if any effect." Our object in this communication has been to show that the meagre references he makes to the agency of agricultural societies in Ireland is no exponent of the real facts of the case.

We take this opportunity, too, of urging upon the Legislature that to crown with success these societies the Irish land question must be settled. And in making this remark we disclaim all connection with those who have made political capital out of this question. The "relation of landlord and tenant in Ireland" is, to use the words of her late Attorney-General, "perfectly indefinable." There is little foundation for the mistrust with which the Irish farmer regards the agricultural societies; yet, until that question under which the country groans is settled by a moderate and well-considered measure, the Irish farmer will never place confidence in an institution supported and directed by the lord of the soil. But given such a measure—and we speak of a measure which would promote alike the interests of landlord and tenant—and many a farm now slothfully managed would become an example farm far more worthy of the name than those proposed by "G." in the *Agricultural Gazette* of the 8th October.

In a subsequent communication the same writer uses the agriculture statistics of the country to support his gloomy view of the progress of Irish agriculture. "We find," he says, "a progressive decrease in the breadth of land under Turnips and Mangel Wurzel from 1853 to 1859. This is surely no indication that tillage is improving, nor is it so in the return of the breadth of land under cereals, which has diminished in 10 years from 3,174,424 acres in 1849 to 2,652,296 in 1859; and these returns also show a marked falling off in Wheat a crop which notoriously requires finer tillage than Oats which in both years is nearly the same."

Now it is seems strange that the writer should not maintain uniformity of dates in his comparison. Why did he not select the same date for cereals and Turnips? Had he done so he would have found that the area under Wheat has increased from 326,896 acres in 1853 to 465,497 acres in 1859. If the aphorism enunciated by Mr. Morton in his paper on the "Forces used in Agriculture" be correct, viz., that "self-interest in the long run is intelligent," then we deduce from the Irish agricultural statistics very different results from those of "G.;" at all events, as regards the Wheat crop, If the state of the corn trade indicated an upward tendency, if a gigantic war like the Crimean should produce a rise in the price of Wheat, the Irish farmer would not be true to self-interest if he did not extend the area under crop. That under the circumstances he has evinced that self-interest is evidenced by the following table:—

	Area under Wheat in Ireland.	Average price per barrel of 280 lbs. for Years ended 1st of November.
	Acres.	s. d.
1853	326,896	29 9
1854	411,284	40 4
1855	415,775	41 8½
1856	529,050	40 4
1857	559,646	33 3
1858	551,386	25 10
1859	465,497	not necessary

As regards the diminution in the breadth of land under Turnips and Mangel Wurzel, it has no doubt decreased from 1853 to 1859. But that does not appear to us to indicate a retrogression in the study of that self-interest which constitutes intelligence. The breadth under Turnips and Mangels suddenly fell off in 1854; but that falling off is readily accounted for by the sudden rise in the price of Wheat. In 1855 the breadth under Turnips and Mangel was again extended. In these three years we have the following fluctuations:—

	Turnips.	Mangels.
1853	399,377	33,283
1854	329,170	21,351
1855	366,953	22,339

In 1859 the area under Mangel has been 27,108; but

the extent of Turnips has diminished very considerably. It is worthy of being borne in mind that, as in England and Scotland, while a knowledge of the proper cultivation of the Turnip is extending the root itself has degenerated. The average acreable yield in 1853 was 16.4 tons; in 1856, it was 12.9 tons; in 1857, 12.5 tons. It is also a significant fact that with a diminishing area of green crops the numbers of cattle and sheep have increased very considerably in Ireland.

	Cattle.	Sheep.
In 1849 we had	2,771,139	1,777,111
,, 1859 we have	3,810,136	3,583,256

Without wishing in any way to undervalue green crop culture, we must be permitted to say that so long as Ireland continues to increase her cattle and sheep at this rate, we require more cogent and conclusive proof than the hastily considered ideas of "G." to convince us that the Irish farmer is not steadily advancing in his knowledge of self-interest and partaking of the advancing progress of the age. *B.*

AGRICULTURE IN WURTEMBERG, 1859.

WHILE unbroken drought throughout many districts of the United Kingdom, during the last summer, occasioned many deficiencies in some of our crops, alternations of much moisture and aridity during the same period occasioned many corresponding results in the south of Germany.

The quantity of rain which fell in Wurtemberg from April to September was as follows:—

April	..	3.87 cubic inches per square foot.
May	..	6.31 ,, ,,
June	..	6.47 ,, ,,
July	..	2.31 ,, ,,
August	..	2.65 ,, ,,
Sept.	..	4.46 ,, ,,

The highest degree of temperature was on the 4th July—90° in the shade, and what are called summer days, viz., those on which the thermometer is at or above 78° in the shade, were

5 in June	18 in August
24 in July	4 in September

In March the air had been generally mild, and in April the temperature rose so much that the spring corn was quickly sown. May was unusually cool, with frequent and violent thunderstorms and much rain. June much the same. July commenced with tropical heat; much aridity followed, which continued through August. Frequent light showers during the night, followed by excessive heat, gave the year 1859 much of the character of 1811, and excited the hopes of the Vine dressers. The aridity continued during September, the quantity of rain, though great, being insufficient to saturate the soil. The temperature fell, so that there was hoar frost in the valleys. Now for the produce. Although experience has proved that only one year in ten is a good wine-making year, 1859 was nearly as favourable as the two preceding ones, which were very good, and the people in their gratitude put up portraits of their patron Saint Urban, under protecting glasses with gilt frames. Owing to early frost however the produce was not equal to expectation, but the quality being good the high prices compensated for the deficiency in quantity. There has been a failure in the fruit generally. Frost in April had destroyed the Cherries, so that their value fell from what has been frequently 1000*l.* to less than 50*l.* Pears, however, for making perry were rather productive and sold for from 10*s.* to 15*s.* per sack. In Wurtemberg the highways are bordered by rows of Apple, Pear, and wild Plum trees; generally they are laden with fruit but last year they were barren. As to ordinary agricultural produce, the winter corn was deficient in quantity and quality; the grain had ripened too quickly; the straw however was long and abundant. Spring corn was also deficient. The heavy rains of May and June, succeeded by great drought in July, caused the Barley and Oats to be short and weak. Generally all grain was small and light; the prices may be quoted thus:—Wheat, from 24*s.* to 25*s.* per bushel; Rye, from 17*s.* 6*d.* to 20*s.* ditto; Barley, from 17*s.* to 19*s.* ditto; Oats, from 9*s.* to 10*s.* ditto. All corn is sold by measure, not by weight; and the bushel weighs from 240 to 250 lbs. Beans, Vetches, and Peas have also yielded indifferently. Maize succeeded well. Potatoes in wet soil were in many instances destroyed; they had been injudiciously moulded while the earth was cloggy and therefore unmanageable. On light soils they did well, and yielded from 30 to 40 sacks per acre, worth from 3*s.* 4*d.* to 4*s.* 2*d.* per sack. Cabbages, which were poor and unpromising, began to thrive in autumn, and have turned out well; price 6*s.* 8*d.* to 10*s.* per 100 heads. The cooler weather in October favourably affected Turnips and Beet-root, both of which are excellent. The White Beet is extensively cultivated throughout Germany for sugar manufacture; the duty being high sugar costs 6*d.* per lb. in Wurtemberg, but in Bremen and Hamburgh, where colonial sugar is admitted under moderate duty, the best sugar is sold at 4*d.* per lb. It is now hoped that the recent changes in the commercial treaties of France and England will cause corresponding changes in the tariff of Germany and other countries. At present the duty upon all sugar entering the Zollverein is 1*l.* 0*s.* 5*d.* per cwt. Rape seed has given but half its usual yield; early sown Flax succeeded, but late sown failed from want of moisture; Hemp indifferent. Hops have proved to be a very beneficial crop; at the beginning of the season the price was from 5*l.* to 5*l.* 10*s.* per cwt., and it has advanced to 7*l.* for finer samples—nay, for peculiar qualities of Hops 15*l.* per cwt. is given at Chiswick. Every one knows that the Bavarian beer is the best in Europe, and if it were not, the beer drinkers, of whom some can swallow 20 bottles daily, would be objects of compassion. The Tobacco crop is good; and though the Germans are notoriously great smokers and snuff-takers, the supply is greater than the demand is likely to be.

Assurance companies against damage by hail have had a beneficial year, as hailstorms have been less destructive than in former years. On an average agricultural produce is annually destroyed by hail in Wurtemberg alone to the amount of 65,000*l.*; but strange to add, such a sum is never paid, the companies being unable to pay more than 5 or 10 per cent. of any sum insured. And there is no law to compel them to pay more than their current income will allow; they only pay as far as they may have received from the party assuring from the commencement of the engagements, deducting, too, the necessary expenses. The companies, therefore, in Wurtemberg are in such discredit, that persons now insuring frequently effect their insurance in the north of Germany, where the companies are bound by law to pay the full amount of loss on the property insured. Unlike our present circumstances in England and Ireland, hay and all sorts of fodder are abundant this year in Wurtemberg, and the cattle are accordingly in high condition and advanced in price. Beef, veal, and pork have risen from 2½*d.* and 3*d.* to 5*d.* and 6*d.* The mutton is very bad in the entire south of Germany. Foreigners can hardly eat it. The other meats, though greatly inferior to what is seen in the London markets, are yet tolerably good. Poultry is much inferior to that in England. Fat oxen are often sent to France, and store cattle to Switzerland. To do the present King of Wurtemberg justice, he has done much for the improvement of live stock generally. English horses, sheep, and swine—these latter particularly from Berkshire—have been imported to cross the native breeds, and with good results. *Martin Doyle.*

Home Correspondence.

Wages of the Dorsetshire Labourer.—I give the following rate of wages as being the regular payment for labour done on this farm:—

Three carters each, weekly wages, 10*s.* per week ..	£26	0	0
House and garden free	4	0	0
200 of wood faggots carriage free	2	0	0
Cutting and carting of Furze free; as much as they like to burn	5	0	0
30 rods of Potato land; land worked and Potatoes ploughed in	2	10	0
Extra for harvesting 1*l.* and one gallon of ale per day	2	0	0
Journey with teams 1*s.* and 1*s.* 6*d.*, according to distance	1	10	0
Ale at haymaking, about	0	10	0
	£43	10	0

My carters' wages are thus more than 17*s.* per week, and the wages of my shepherds are still higher. My common labourers receive 9*s.* per week, which is—

	£23	8	0
20 rods of Potatoes, at 1*s.* per rod	1	0	0
As much Furze as they require, cutting and cartage to be paid for	1	10	0
Extra wages on Turnip hoeing, 5*s.* per week for five weeks	1	5	0
Extra during harvest 1*l.*, and 1*l.* for ale	2	0	0
	£29	3	0

Or nearly 11*s.* 6*d.* per week. It being my usual practice to let them task work when possible, I have no doubt but that their wages amount to more than 12*s.* per week. I offer this to the public as a simple statement of wages by a Dorsetshire farmer, and to show that my friend Mr. Saunders is not the only employer who gives the labourer good wages. I doubt if there is a farmer in Dorsetshire who gives his carters less than 15*s.* per week. *George Summers, Houghton Farm, Blandford.*

Mice.—Your correspondent will I fear have some difficulty in getting rid of the mice, which eat his Vine roots; he may trap them, but I doubt if they will eat anything he can mix with poison. His black friend I do not know; the sandy coloured one must be the short tailed field mouse. My boys have had one for six months, it was taken from the nest when half grown, and was easily tamed. It is a great pet, and will take as much tawing as a kitten, running over clothes, into your pockets, or up your sleeve; sit on your hand, trim his whiskers (which a Rifle Ensign would envy), catch a flea, or eat a grain of Oats, with the greatest unconcern. Whilst frisking about the tea table, helping himself to a crumb of oat cake, a few grains of sugar, or a drop of cream or standing suddenly still, he looks you steadily in the face, you would doubt if he is the

"Wee, sleekit, cow'rin, tim'rous beastie,"

immortalised by Burns. Sometimes he jumps bodily into the sugar basin, to the horrification of mamma, and the delight of the boys, who raise a shout whenever this feat is performed. He sit up like the squirrel, and uses his delicate fore feet in eating. He carefully eschews butter, cheese, honey, ham, and all animal food, so eagerly sought after by his long-tailed cousin in the kitchen. His digestive powers appearing something of the best, he was weighed on a spring letter balance, and an equal weight, ¾ of an ounce of Carrot, was put into his box at 10 P.M.; at 11 next morning, in namely, 13 hours, he had consumed the whole! *J. L.*

Cotton-seed Cake.—Last year about this time there appeared in the *Gazette* an analysis by Professor Voelcker of some Cotton-seed cake which had proved hurtful or fatal, (I quote from memory) to some cattle. The husk he considered to be the principal cause of the mischief. But, adds the Professor, "there was also a quantity of fibre, which I rather think may have been hurtful." In the January number of the Transactions of the Highland Society, Professor Anderson in an able and elaborate paper on the composition of different kinds of oilcake—treating of Cotton cake—recommends that made from seed of the Sea Island plant. "In all other varieties," he proceeds, "a quantity of Cotton sticks to the seed, and when that is made into cake without being decorticated, the Cotton soon produces inflammatory symptoms in the animal which has fed upon it, and death is the result." Now, though I pretend to no acquaintance with the veterinary art, I demur to the opinions (for you will observe it is nothing more certain), of these learned gentlemen, and "I will tell you the reason why." For some dozen years it was my fate to reside in Bombay; and almost every day of that time, business or pleasure took me past the Apollo Bunder, where much of the Cotton from both northern and southern ports is landed, the bales covering in the dry weather a couple of acres to the depth of 8, 10, and 12 feet. About these bales are constantly prowling a number of cows picking up loose bits of Cotton, as eagerly as in this country they would a Cabbage leaf or a Turnip, seizing the opportunity of the absence or inattention of the coolies slyly to attack the bales, where they soon make a hole if they do not find one, and it is quite wonderful how soon they can eat themselves up to the eyes in a fat Guzerat Cotton bale! The coolies in charge find quite as much ado in keeping off the cattle, as the pilfering boys which infest the busy haunts of commerce in all countries. Had the dire effects feared by the Professors followed the eating of a handful of Cotton fibre, the owners of the cattle frequenting the esplanade of Bombay would doubtless have looked better after them. To such an extent is Cotton eaten by the draught cattle and pack bullocks, that it is specially stated by a Mr. Berkeley, in a lecture at Bombay upon the advantages afforded by railway over the present modes of conveying Cotton from the interior: "The brinjarries * and cartmen steal the Cotton, and the cattle eat it; while a good deal is made away with by the boatmen, who convey it across the harbour." *Bombay Times*, March 1859. Is it not much more likely that all the mischief was caused by the hard, indigestible, woody husk acting mechanically upon the intestines of the cattle, than that any part of it should be attributed to the soft fibre, which is applied externally with so much benefit to burns, wounds, bruises, and putrifying sores? *J. L.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

At a Weekly Council, held Wednesday, February 29, Sir E. Kerrison, Bart., M.P., in the chair, the names of candidates for election were read.

A letter from Mr. R. Wainwright, advocating the use of gas lime and salt as a manure for light land, was read, as also the answer of Professor Voelcker, to whom it had been referred, in which he recommended the use of gas lime and salt only on light soils deficient in lime—and where lime and salt are found beneficial.

A communication was received from the Central Society of Agriculture in Belgium, requesting information on Pleuro-pneumonia and the means adopted to combat the disease, having particular regard to the effects of inoculation. A reply was ordered to be made that inoculation was not found in this country to rest on any scientific basis, and as such it has not received the sanction or support of this Society. In this country no statistics of the number of cases of pleuro-pneumonia have been kept, and consequently little is known of the number of those of inoculation.

The Council then adjourned to its Monthly Meeting on the 7th March.

Farmers' Clubs.

KINGSCOTE: *Feb.* 7.—*On Breaking-up Pasture Land.*—Mr. David Holborow related what had come under his observation on an adjoining farm, stating how fully the results had answered his neighbour's expectations; no farmer maintaining his flock in better condition, whilst at the same time he believed he kept an increased number of cattle, and grew a much larger quantity of corn. He then gave his opinion as to what description of pasture land ought to be broken up, and what ought not. Some would argue that deep open friable loam would produce the best crops, and realise the greatest profits; he granted this, but did not consider any man justified in breaking up good pasture, as he believed it produced meat at a cheaper rate than could be the case by any artificial system. He next adverted to pastures of a wet, cold nature, which in some cases yielded a coarse sour herbage, in others bearing hardly any Grass whatever, yet with a fair depth of soil, such when properly drained and broken up made very good arable, producing excellent crops;

* Brinjarries are owners of pack bullocks, who bring Cotton and grain to the coast, and carry back salt and merchandise.

consequently he strongly recommended them to be brought into cultivation. He had witnessed the best results in a case of this kind of a friend of his who entered on a farm a few years since, 40 acres of which happened to be of this description, and he was fortunate enough to convince his landlord that it would be of the greatest importance to him to be allowed to break it up. The landlord also assisted him in draining it with tiles from 7 to 9 yards apart. There was another sort of pasture quite different to the last named, and one not likely to be attended with so great advantages. It is land of a poor, hungry, sandy nature, with a hollow rock subsoil. Still he would again say, try the experiment of breaking up, as comparatively speaking it is good for nothing in Grass, whilst under the plough, with sheep husbandry, and a liberal application of artificial manures, it may become somewhat profitable to the occupier, and serviceable to the country. As regards the best means of breaking-up pasture land, he believed there was no better method than the old one of paring the surface to a moderate thickness with the breast-plough, the latter end of February, and burning the turf as early as the weather would permit; then spread the ashes evenly over the land, lightly rafter (or baulk-plough) one way, repeating the operation across a little deeper, and lastly clean plough rather deeper still in that direction judgment and reason dictated. His object was to get a fine tilth, at the same time to well mix the ashes with the soil. The first crops should be roots, which under this treatment seldom failed to be a good one, the feeding off of which with sheep (if the soil was suited for it) would in a great measure be a preventive to the ravages of wireworms, and which were so apt to be troublesome in newly broken up land. Mr. Holborow said there was another system adopted by some, that of giving the pasture one clean plough, and planting it to corn. This was a plan, however, he could not agree to, and he cited a case in point that had come under his notice, of a piece of land treated in this way, the first three and four crops proving almost failures. He knew different opinions prevailed on this question, and he gave his decidedly and candidly.

Mr. Burnett thought the policy of breaking Grass-lands depended entirely on circumstances; it would be bad policy to break up good pasture on the hills, where much the largest portion of the farms was arable, but in the vale, where pasture predominated, it would be of great benefit to have a portion of it broken up, where the farmer could grow roots for his cattle, sheep, and pigs for the winter, and straw to litter them with, which would enable him to keep all in a much more comfortable condition than is possible for him at present to do.—Mr. Harrison (Frocester Court) stated that according to Mr. Morton, in 1854, the return from 30 Gloucestershire Dairy Farms, consisting almost entirely of Grass land, does not amount to 4*l.* per acre, and this he believed to be substantially correct. The question then was—Are these farms capable of making a greater return by breaking up a large portion of the Grass land? He believed they were. It is now requisite to mow half of the Grass land to provide for the keep of the stock during the winter, and this is no more than sufficient. Mr. Morton has further shown that by breaking up four-fifths of this pasture land, and farming it well, the same amount of stock may be kept and the land be made to return nearly double per acre. Without going that length he expressed his belief that by breaking up a large portion of the Grass land in the dairy districts, the farmer might keep the same stock, doing them better during the winter, that he might employ a much larger amount of labour and machinery profitably, and increasing the return per acre would be enabled to improve his condition at the same time that he would greatly benefit the country. It would be necessary, however, for his landlord to drain his land and erect convenient buildings, for which he could afford to pay a sufficient per centage on the capital expended.

Resolved:—"That in the arable districts good pastures should not be broken up, but that the middle and inferior Grass land would be better brought under the plough; that on the other hand, in the purely pasture or dairy districts, it is highly desirable that a considerable portion of the pasture should be broken up, and that the breaking up a large portion of every dairy farm would be a great benefit to the tenant and the country. That in breaking up pasture land the best system is to pare and burn the surface, rafter (or baulk-plough), lightly cross-plough, and take a root crop."

East Lothian: *Feb.* 3.—*Reaping Machines.*—Mr. Sydserff, of Ruchlaw, said—His first machine was one of Hussey's. He had at present one of Burgess & Key's; and he must say that if its weight and draught were not taken into account it was one of the best machines that had yet come out. It was next to impossible to choke it; and he had never yet seen this proven to it, or that it was stopped in cutting the strongest crop; and even when its front was completely filled with Grass and undergrowth, it would start away at once with the horses and commence cutting without stopping. It was but right to mention, however, that wherever the land was very steep he found the machine inconveniently heavy. He almost always worked it with three horses, and even with that number they had pretty hard work with it. Mr. Scot Skirving, Campton, gave the experience of two gentlemen in the county, who, he believed, had cut more with the reaper than any other two. The first was Mr. Hunter, of Thurston, who had one of the largest arable farms in the county cut entirely with Bell's reaper. The statement he (Mr. S.) had been favoured with was, that in 1858 Mr. Hunter cut 203 acres, and in 1859 326 acres with Bell's reaper, the expense, as ascertained by careful calculation, amounting to 5*s.* per acre, no charge being made for the use of the horses. The horses worked eight hours each day, without change, and they were found quite able for the work. The breakages on his machines cost no more than 40*s.*, while it was also found that the machine could work in weather so windy that hand-reapers were not able to cut with advantage. Besides all this, some of the fields were on hills so steep that it was with difficulty one could walk up; and nothing astonished him (Mr. Skirving) so much as that Bell's reaper should have worked with effect on such a hill. Of all who had employed reaping machines, Mr. Hunter appeared to have been most fortunate with Bell's machine. The other gentleman to whom he had alluded as having had extensive experience in reaping machines was Mr. Hope, Fenton Barns. He wrote:—"In regard to reaping machines, I may mention that I have cut three-fourths of my crop with them in 1857, and hope to be able to cut the whole crop of 1860. I found at the end of the season that Gardner & Lindsay's machine cut about the same extent as Bell's, though some days Bell's cut a considerably larger quantity; but Bell's met with breakages, and I was frequently disappointed at the quantity of grain cut with it. On the other hand, I knew in the morning exactly how much Gardner & Lindsay's would cut." This was all that Mr. Hope said in his note; but in conversation with him at the beginning of harvest, he (Mr. Skirving) found him strongly in favour of Bell's reaper, as the best machine that had come out. It would appear, however, that since getting Gardner & Lindsay's machine, Mr. Hope had modified his opinion, and, as the result of further experience, now considered this machine as on the whole the best. Taking all things into consideration, he thought that for a low country farm of say 500 acres, three reaping machines might be used with advantage; and he would suggest that they should take two of Gardner & Lindsay's, and perhaps one of them Burgess & Key's.—Mr. Durie, Standingstane, said he had used a Bell's reaper for the last four years, and he had never seen work made like it. He cut 100 acres of Wheat and corn with it one year, and scarcely as much stubble was left as would have covered the table at which they were sitting. Every year he had cut less or more with it. Last season he changed this reaper for another of Bell's, which he worked in a field alongside of Gardner & Lindsay's, Bell's machine cutting both ways, and the other cutting one way. The same pair of horses went regularly eight hours a day, and never seemed distressed. He would admit, however, that though it never refused to cut with the lie of the grain, it occasionally made high stubble. On this account he preferred cutting one way. What was said about the weight of the machine was a mere bugbear. Any ordinary pair of farm horses could work it with perfect ease when the land was dry. No machine could work like it, and he had seen all machines. They might rely on it that for strong grain nothing could come up to Bell's, though on light grain he believed that Gardner & Lindsay's might make good work. Possibly it might be advantageous to have them both—one for strong, and the other for light grain.—Mr. S. Skirving had forgotten to make one remark. He had never yet had the pleasure of visiting Mr. Durie's farm; but this he could say, that he had been offered by one farmer a Bell's reaper which had been in use, for half-price, and more than that, he had been offered Mr. Douglas's machine, which was as good as new, at the same money.—Mr. Gray, Brownrigg, said he could get at 5*l.* each as many Bell's machines as he chose. One cause why there was so much difference in the results obtained from the same reaper was just this, that some farmers handled their machines better than others. Referring to Gardner & Lindsay's machine he proceeded to remark that it possessed one important qualification, in so far as it was a Grass cutter as well as a reaping machine, and could cut hay crops better than the scythe. By this means the farmer could cut his hay whenever he pleased. The machine had merely to be taken into the field, and it would cut its 5 acres a day in such a superior style that at the end of 24 hours it might be put up in 25 stone cocks. In illustrating the saving which it effected in the cutting of grain crops, Mr. Gray mentioned that he had cut down with it 80 Scotch acres in 13 days, one hour and a half, with no breakages, though the cutting was against the lie of the grain. The average day's work was 6 Scotch acres. It required to work it about two people to the acre, and the machineman besides. Now, in cutting it in the ordinary way he had no fewer than five or six men and women to the Scotch acre, while the work was never half so well done. About 5*s.* an acre covered the cost of everything, not including meat. It was resolved "that the great advantage of reaping machines is now an established fact, and that the Club strongly recommend increased attention to this implement."

Botley.—At the December meeting of this Club, Mr. Blundell gave a lecture on "the Use and Abuse of Straw." He said:—

I propose to divide my subject into two parts; first, the use of straw, and, secondly, its abuse. Before we proceed to the use of straw let us consider of what it consists, and before we speak of it practically ascertain, by analysis, its chemical contents; and having been furnished with an analysis of three different kinds of straw by the kindness of our secretary, I beg to offer it to your notice in the tabulated form in which it has been presented to me.

Composition of Straw.

	Wheat Straw.	Barley Straw.	Oat Straw.
Water	14.23	14.30	12 06
Flesh-forming matter	1.79	1.65	1 63
Respiratory and fatty matter ..	31.06	39.98	37.86
Woody fibre	45.45	39 80	43 60
Mineral matters (ash)	7.47	4.24	4 85
	100.00	100.00	100.00

On consulting this analysis it is somewhat interesting to observe the comparative value with hay, the analysis of which we had given us in our last lecture delivered by Mr. Spooner, jun. It shows that the average of field and meadow hay gives 63 parts feeding value, whilst straw gives on the average of the three kinds, Wheat, Barley, and Oats, 40 parts feeding value; and I contend that this gives a more favourable view of the value of straw than the ordinary use of it would lead us to suppose, viz.:—

Cost of feeding an Ox per week, with straw, &c.

	s.	*d.*
4 lbs. of oilcake per day, or 28 lbs. per week, at 10*l.* per ton	2	6
64 lbs. of roots ditto, or 4 cwt. ditto, at 13*s.* 4*d.* ditto ..	2	8
20 lbs. of straw feeding, or 1¼ cwt. ditto, at 30*s.* ditto ..	1	10½
20 lbs. of straw litter, or 1¼ cwt. ditto, at 15*s.* ditto ..	0	11
Attendance, &c., per week	0	1
	8	0½
Deduct value of manure per week	1	3½
	6	9

	s.	*d.*	
Increased value of ox per week	10	0	
Deduct cost of feeding	6	9	
			3

The reason why straw has been considered hitherto of so little value is because it has not been used and treated in the manner best calculated to obtain its full value, hence the low price which it generally sells at in the market, being very often delivered many miles at less than 40*s.* per ton; and with regard to the price of Barley and Oat straw, as usually charged for feeding value between outgoing and incoming tenants, it stands very often not more than 12*s.* per acre, sometimes less. It has been matter of complaint by me for many years that straw should be sold at so low a price, and I do hope and trust that the subject will be so treated by the members of this Club that it will for the future establish a higher relative value, as compared with hay, than it has maintained heretofore. Firstly straw must be more valuable as a feeding material than when used for the purpose of manure making and littering the pens of animals, but to make it so it must be consumed with roots, oilcake, meal, and other feeding materials. I find dairy cows in the winter months, if fed on large quantities of roots, particularly Mangels and Carrots, will refuse to eat straw almost entirely, and become very lean, but they will always eat a full portion of sweet well-harvested straw when they get a small and moderate allowance of roots, say, for an ordinary-sized cow, 15 lbs. of Mangel three times per day, the roots being given whole just in the state they come from the store heap. Again, calves and yearlings being fed with roots in the same way will eat a large quantity of straw, and when they have been kept under cover I have had them in first-rate condition for many years past. Also in fatting beasts when they get a fair allowance of roots, say 65 to 70 lbs. per day, with from 3 to 4 lbs. of cake or meal in admixture, they will eat straw with great avidity, and do well upon it, and make a profit. It is however often the case that bullocks receive 100 lbs. or upwards of roots per day, with a large quantity of cake or meal, often 10 or 12 lbs. each per day, they will not then look at straw, and are obliged to be fed with hay; the cost price of these quantities and kinds of food stands so high that the animals do not yield a profit, for although they may make meat a little faster yet the proportionate increase is nothing compared to the increased cost of the feeding materials used. I shall probably be met with the argument that the straw should be cut into chaff and mixed with roots, cake, &c., in the pulped state; my experience however shows me that the animals will eat straw in the ordinary state, and as I have just shown a profit, why, I ask, should the expense of cutting into chaff, pulping, and mixing with roots be incurred without a corresponding advantage, it being well known that all ruminating animals do not require their food given in a finely divided state? It is however usual in this district to feed the farm horses with Barley or Oat straw during the winter months, and I consider horses an exception to the foregoing observations, inasmuch that I find horses will do much better with straw chaff, and corn mixed with pulped roots, either Mangel or Carrots, and that some farmers whom I know make it a rule to feed in this manner, either by displacing all the Oats or a part of them; and I have seen horses kept in this way in the best condition. The advantages in this method of horse feeding are, that they are made to eat straw which they would refuse unless mixed with roots, and these roots consumed by displacing a portion of the corn usually given is a profitable transaction. The feeding value of an acre of roots is equivalent to 3 acres of corn produce, viz., 8 cwt. of Carrots or Mangel being equal to 1 bushel of Oats, taking a crop of Oats at 6 qrs. per acre, and a crop of Carrots or Mangel at 21 tons per acre. There is no doubt some little difference in the feeding value of straw when grown upon different soils, but I reckon that it would be difficult to estimate it. There is, however, a difference in favour of a moderate crop over a very bulky one, and that 25 cwt. of straw per acre is usually worth more per cwt. than a crop of 35 cwt. per acre.

The next branch of our subject refers to the use of straw as litter for cattle and making manure.

Straw is most useful in affording cleanliness and health to our animals, and also in forming the basis of manure for the farm. Straw can be best economised in the stable when the floor of the stable is absorbent; hence the earth bottom to the stalls requires far less straw to keep the animals clean and healthy than the ordinary brick or stone floor; but the best of all methods, both as regards economy of straw, the health and comfort of the horse, and the value of the manure, is the loose box where the manure is allowed to accumulate under the animal, by which plan the greatest advantages are to be obtained. The preservation of straw, whether for litter or fodder, is most important, and may be much facilitated by making the ricks of corn at harvest time as near as possible to the farmstead where it will be required for use, and at the time of threshing should be ricked and thatched with care, in order that it may be quite dry and sweet when required for use, and should be cut and taken from the rick like hay when required for consumption. There is, perhaps, not much difference in the advantages of threshing by steam or by the flail as regards the straw; both methods have their advocates and circumstances must decide which is best. Straw is most economically converted into manure in those homesteads where box-feeding is the rule, and where all the animals have the manure accumulating under them, the litter will be all quite saturated with manure and no straw or haulm need

be wasted, as the partially rotten straw, &c., is all used in the pens, being placed next to the earth, which should form the bottom. Upon many large outlying farms on the chalk hills of this and the adjoining counties it is most difficult to properly convert all the straw into good manure, but much may be done by working some ox teams instead of all horses and by rearing some young cattle instead of keeping all sheep, the oxen being fed in boxes with the green produce of the farm when not at work in the fields, and the young cattle being kept in the barns under cover, and fed also in succession upon Trifolium, Clover, Tares, Turnips, Mangels, &c. Upon well-tiled farms large flocks of sheep may still be maintained. Large quantities of straw also would be left for use after the above plan had been carried out, and which may be advantageously applied to the soil under the old system of "muckle fold;" that is, the straw being spread evenly over the land and the sheep made to lay upon it regularly It is also very much the practice upon some farms to fatten large numbers of pigs upon Barley-meal only, and parties are satisfied if they do not lose money by it. I am quite convinced that the practice does not yield a profit; indeed the advocates admit that it is entirely in consideration of the manure the system is adopted. It should be, however, a matter of calculation how far this method of fattening pigs can be improved, and I would here observe that I have fatted pigs profitably for years, and have known others do the same, by the use of Mangel Wurzel either pulped and mixed with meal, or cut with Gardner's cutter and given separately between the times of feeding with meal; in either way I reckon that pork is made 20 per cent. cheaper than by giving meal only. I would further observe and recommend to you my own practice in the matter of straw intended for manure. I never allow any straw to go to the yard or manure heap, whether it is dry and fresh or whether it is damp and partly decayed, without first having been under the cattle, either for the purpose of affording cleanliness to the animals or else for the absorption of manure in the boxes. I also contend that straw to be profitably consumed, whether in the ordinary state or in chaff mixed with roots as previously alluded to, should be considered as the substitute for hay, for whether we view hay as a crop in our farming rotation either for sale or consumption, it is the least advantageous crop which we can grow, being peculiarly liable to damage in making, and on account of its bulk in increasing the cost of transmission, although I do not by these remarks object entirely to the Grass crop. I argue that it should to a greater extent be used in the green state, without the risk of converting it into hay, or that the crop should be partially displaced by the growth of Beans, Peas, &c., or other sale crops, according to the nature of the soil; and this leads me on to consider the value of Bean and Pea straw or haulm, and I cannot dismiss the subject without alluding to them. Pea haulm, although I have no analysis to show you, has always been considered, when well got up, nearly equal to hay for the feeding of horses. With regard to Bean haulm, I am decidedly of opinion, in the absence of analysis, it is comparatively worthless; for although I have noticed some farmers who advocate it as of feeding value, I recommend it to be cut into chaff and mixed with other materials, I do not think they are repaid for the attendant expenses.

The third part of our subject refers to the abuse of straw, and in treating it I hope to show in contrast with the first part of our subject the enormous loss which often occurs by mismanagement.

I call it abuse when straw-ricks are allowed to remain rotting in the fields, from having been carelessly put together, and often standing a long distance from the farm buildings, and the only reason that I can see why ricks should be made in the harvest field is in some cases upon outlying farms, and then only is it advisable when the straw is required for folding purposes in adjoining fields. I call it abuse when straw is carried into an extensive farm-yard, as I have often noticed in large quantities, and strewed over without reference to the number of animals required to convert it into manure. It is a common thing to see 20 or 30 tons of straw thus treated, with perhaps only two or three cows and 10 or 12 pigs in the yard to tread it down, and it is quite needless for me to observe that what is called manure made in this way cannot be worth carriage to the field. Straw is abused when sold at a unremunerative price; how often do we see huge loads of straw drawn a distance of six or eight miles and sold, including all attendant expenses, at 35*s.* or 36*s.* per ton? I contend that it does not pay to sell straw at such a price, and that it would be far better to keep extra cattle and convert it at home into good manure upon the plans before alluded to. Using straw for the purpose of thatching farm buildings is a practice which cannot be too much deprecated, and I would here call the attention of landed proprietors and agents to this matter, and I am prepared to say that it is a great depreciation of the value of land, where large quantities of the tenant's straw produce is required to thatch the buildings, besides the actual cost of the repairs. I have seen many farms where there must have been little short of an acre of thatched roofing; just for a moment consider the immense quantity of straw annually required to maintain these buildings in tenantable repair, and all abstracted from the productive powers of the soil. The substitutes for roofing buildings are several, and it would, of course, depend much upon the locality, whether the roofs should be composed of slate, stone, or tiles, and the advantages are so self-evident that it scarcely requires to be mentioned by reason of its durability and trifling cost in repairs. I estimate the cost of thatched roofing at rather over half that of slate, including the first cost of all the materials. It is also an abuse of straw when given to animals without some auxiliary, for you will observe in the analysis which I have furnished that there is only enough of nutriment in the straw to keep cattle alive, and that the manure arising from straw feeding alone must be worthless in proportion; therefore I contend that to prevent this abuse roots of some sort should always be given, otherwise Rape-cake or artificial food of some kind to make feeding profitable, and to prevent actual waste. Allow me to say that, before my ideas upon these matters can be entirely entertained, you must think with me, that the farm-yard should be kept only for the purpose of a manure store; that the barn should be maintained as a place to accommodate cattle and make manure in; that rick-yards should be spacious and used as a store place for corn ricks to be threshed by steam power, instead of the corn being placed in the barns to be damaged by vermin.

Mr. Spooner, jun., said:—Straw contained nearly as much heat and fat producing constituents as hay, although it was inferior in nitrogenous constituents. The value of straw in heat-producing properties depended much upon when it was cut—it should not be cut when too ripe, since it was found that not only the starch, gum, and sugar, but the albumen also decreased steadily with the degree of maturity in the seed. In one analysis made by Voelcker of Oat straw he found no less than 4.3 per cent. of albumen, whilst it contained also 40 per cent. of water, showing that it was cut in a green state; it became, therefore, a question whether it would not be more advantageous to cut the Oat crop before it is thoroughly ripe. If we valued the nutritive properties of straw at the same rate as they exist in the more concentrated food we should find that it would be worth about 3*l.* 10*s.* per ton, but it must be remembered that being so surrounded with woody fibre, it required a much larger amount of muscular exertion on the part of the animal to digest it, and therefore its value was to a certain extent lessened.

Mr. W. Warner desired to corroborate Mr. Blundell in respect to feeding bullocks with Mangel Wurzel and giving them straw instead of hay. He had tried the experiment, and it had succeeded very well. He now had 15 bullocks shut up in two farms, and he gave them daily 75 lbs. of Mangel, 3 lbs. meal and straw; and he believed that this course would produce more meat than if the bullocks were fed with hay—that a certain value of straw and cake would produce more beef than the same value in hay alone.

Mr. W. C. Spooner observed that the only objection there was against straw was that it was harder of digestion than hay. This was, however, a subject which was well worthy of being fully debated. One of the worst uses of straw that could be adopted was to use it as food in the straw-yard, unaided by roots or other articles. While straw was within 5 per cent. in starch, gum, and sugar, compared with hay, it was lamentably deficient in albuminous matter—it contained only one-seventh as compared with hay; and to use it in the straw-yard in this way would therefore deprive it of its nitrogen, which was applicable as a manure; and by treading the straw without feeding the animals with it the farmer lost the 35 per cent. of feeding properties which it contained, viz., the starch, gum, and sugar, which were useless as manure. He had found by calculation that 100 lbs. of straw and 25 lbs. of Rape-cake would supply within a fraction of the same amount of albuminous matter, and rather more gum, sugar, and starch than the very best meadow hay; and the proportion was as 2*s.* 7*d.* against 4*s* 2*d.* in the advantage gained by using straw and Rape-cake instead of hay. By adopting Mr. Blundell's plan they improved the meat-producing capabilities of the country; although corn might be low in price it was reasonable to expect that meat would remain high; and if manufactures and commerce flourished they would develope the power and the means to consume meat among the people. Straw as a manure was more valuable on the light chalky soils than it was upon the loams and clay. He believed there was more straw wasted on the upland than on the low lying farms. He had received a communication from Dorsetshire in which a friend of his said straw should be cut a little before it is quite ripe, because the chance of having a few green Oats was counterbalanced by the advantage of a better quality of straw when cut early rather than when too ripe. Mr. Spooner then entered into a series of calculations and in continuation said, if it could be proved that the agriculturists could consume a large proportion of straw which, if it were merely trodden under the animal, was worth as manure only 5*s.* or 6*s.* a ton, by using it as cattle food they could make it worth 25*s.* or 30*s.* a ton, the subject was worthy of their deepest reflection.

The subjoined propositions, moved by Mr. Blundell and seconded by Mr. W. C. Spooner, were carried:—

"1. That it is the opinion of this meeting that straw may be employed in the fatting of animals to a far greater extent than has hitherto been the case.

"2. That the frequent practice of keeping straw in large heaps, strewing it wastefully over open yards, or keeping store cattle in it alone, are all strongly to be condemned.

"3. That Rape-cake, with or without a moderate quantity of roots, will supply most economically the elements in which straw is most deficient; and that Linseed-cake or meal, at a somewhat greater cost, will with roots and straw supply everything required for the food of fatting animals."

Reviews.

On Arterial Drainage and Outlets. By Mr. R. B. Grantham, M. Inst. C.E.

This is an unpublished paper, read last November before the Institution of Civil Engineers, of which a resumé was given in the weekly report to the members of the institution. The subject relates rather to the market value of estates than to their annual rental and cultivation. It is not the soil and subsoil of a field which is the subject of drainage here described, but the surface of a whole country side. It is a defect in a single main outfall that often hinders what may be called the agricultural drainage of 30 or 40 estates. And it is to a history of great works affecting such large tracts of country that the author of this paper devotes himself. He says that "owing to the extensive system of subterranean, or pipe drainage, and to the field drains and ditches being better cleared out than formerly, there had been a large increase in the water flowing down rivers, brooks, and minor streams. The effect of this was, that the water was discharged in a shorter time, causing more frequent floods, as the brooks and streams were of inadequate size."

This may have been the effect of cleared ditches and water-courses, but it is not the effect of ordinary land drainage. The systematic drainage of land provides rather an immense sponge as reservoir in which rain collects, and from which it gradually weeps out. Its tendency is upon the whole to check floods rather than to create them.

We give the following extract from the paper as descriptive of the largest works of arterial drainage which exist in this country, and possibly in the world.

"*The largest drainage work in the world*, in reclaiming an extensive area of country from the effects of stagnant water and floods by arterial drainage, was that in the Fen districts, commonly called the Bedford Level, to which attention was next directed. This enormous tract of land was originally a fresh-water estuary of the Wash—for many years the sole characteristic of the Fens—into which the rivers Witham, Welland, Glen, Nene, and Ouse were discharged. Having given the general character of the Fens, and of the rivers discharging into them, the author then described what had been their state, and the means which had been adopted to reclaim and raise them to their present valuable and flourishing condition.

"The Bedford Level was divided into three parts, called respectively the South, the Middle, and the North Levels. Commencing with the South Level, the effect of the first Denver sluice, which was carried away in 1713, in damming up the waters of the Bedford river, was referred to. This sluice was rebuilt by Labelye, in 1750. The Eau Brink Cut was executed under an Act passed in 1795; but it was not until after the lapse of 21 years that the works were commenced, and it was only in 1821 that they were opened. By means of this cut, the general drainage of the country was benefitted, the low water was depressed 7 feet at its upper end, and the navigation was improved up to and in the harbour of Lynn. The cills of the Denver sluice were thus enabled to be lowered 6 feet, which made a manifest change in the whole of this level. The cost of these works amounted to 600,000*l.*, which was rated upon the lands drained by the rivers having their outlet into the Ouse. The number of acres so rated was 250,000, including a portion of the Middle Level.

"For a great number of years the North Level was suffered to drain by the crooked course of the old Nene river. The first attempt at improving the outfall was proposed by Kinderley, in 1721; but it was not until 1770 that a cut was made, and then only to the extent of one-half of what had been suggested. Sandbanks continued to increase in the Wisbech river, until the navigation was totally destroyed for large shipping. At last the Corporation of the Bedford Level instructed Mr. Rennie 'to report his opinion on the Wisbech Outfall, and the drainage of the extensive Washes lying between the two branches of the Nene; as also the North Level,' &c. This report, which was made in 1814, recommended that the river Nene should be deepened and widened, and that a new channel should be made from Kinderley's Cut to the level of low water in the bay at Crabhole, so as to improve the outfall. Owing, however, to the distressed condition of the agricultural interest at that time and in the following years, nothing was done. Subsequently, it was suggested that a bridge should be built, and an embankment be made at Sutton Wash, so as to establish a direct communication between the counties of Lincoln and Norfolk. All these works were afterwards carried out, under an Act obtained in 1827, through the perseverance of the North Level Commissioners. The water waa turned through the new passage in June, 1830, and the result was most successful. The cost of the cut, or new channel of the Nene, from Kinderley's Cut to Crabhole, was 200,716*l.* As soon as this work was accomplished, the internal drains were adapted to the new state of things. A sluice was constructed to discharge the waters of the level into the Nene, the cill being laid 5 feet lower than would formerly have been possible. The main drain up to Clough's Cross was formed 8 feet deeper than the old shire drain, and six times its capacity; and from Clough's Cross two new drains diverged, called the New South Eau and the New Wryde. These works were opened in 1834, when their efficacy was fully proved. The total sum expended upon them was 100,000*l.*; this had fallen upon the land, the area drained being 200,000 acres. That the money had been well spent was proved by the fact, that land which in 1828 was only worth 5*l.* per acre, 20 years later brought from 60*l.* to 70*l.* per acre.

"The Middle Level presented the most complicated system of drainage in the whole of the Fens. The principal artery of this area was the old river Nene. This had been allowed to become useless as a navigation, and was little better as an arterial drain. The remedies applied in 1795 were merely temporary expedients. In 1800, when matters were at their worst, Mr. Rennie was consulted. He reported again in 1808, and advised that the Eau Brink Cut should be made, as a preliminary necessity, and that then the whole fen should be surrounded with catch-water drains, carried along the foot of the high grounds, so as to intercept all the waters, that would otherwise spread themselves over the Fens. The two Bedford rivers were to be converted into one—a new cut was proposed from Whittlesea Mere, and a drain was to be carried to Grunty Fen. The estimated cost, one million sterling, so alarmed the landowners, that, though damage to that amount had been done in the spring of 1807, owing to the want of some such works, this design was never carried out. In 1836, Sir John Rennie was consulted, and was instructed to report on the defects of the drainage and navigation, and to advise as to the best method for removing them. Several other engineers also surveyed and reported upon plans for improving the drainage of the Middle Level, but still nothing was done. It seemed that there were two different plans for providing an outfall for the southern part of the Middle Level. Sir John Rennie advocated that at Sutton Bridge, whilst others were for draining into the Ouse. The proprietors next consulted Mr. James Walker, who reported in 1842. He proposed that the drainage should be separated from the navigation, and that the present rivers and drains should be carried over the main drains, which he suggested should be made straight through the Middle Level. It was determined, in 1847, to make a main drain, now called Walker's Cut, to commence at the upper end of the Eau Brink Cut, above the marsh-land sluice to Caldecote Farm, on the west side of Whittlesea Mere. At first the bottom was made 50 feet wide at the lower end, 40 feet at its junction with Well Creek, and 30 feet above Well Creek; the level of the bottom being 5 feet below low water in the Ouse at the outlet. In 1848 it was decided to deepen nearly all the main drains and rivers of the Middle Level, from 4 feet to 7 feet, and to increase the bottom widths from 12 feet to 30 feet. These works were completed in 1852; and they have enabled the water in the rivers and drains to be lowered 6 feet. The cost amounted to 410,000*l.* In 1857 it was determined to deepen Walker's Cut by 4 feet. Each step that had been taken in the improvement of the drainage, since 1842, had been attended with the

most satisfactory results. The best proof of this was, that the money, which was raised by taxation, was collected without difficulty."

Miscellaneous.

Poisoning of Sheep by the Absorption of Arsenic.—In your number of the 30th ult., in an article headed "Effects of Poisonous Dips," you therein state: "As to internal injury—that is, any poisonous ingredient contained in the bath and taken into the system, it is a question which is yet in obscurity. It would appear that the skin does not convey into the system arsenic. We refer to the published experiments of Professor Gamgee, Dr. Macadam, and Finlay Dun." With the experiments of such men one could consider himself safe with arsenical dips, but my own experiments with such dips may perhaps be of some value to your inquiring correspondent of the above date or others of your readers. Having a flock of sheep that was a little affected with scab, I determined, instead of dipping, to run the whole sheep, and as this required a lengthened time (a lot of about 600, and only two men being employed), the men after some days had to stop work in consequence of their hands and arms getting into such a state of inflammation, and I have not the smallest doubt in my own mind, if they had continued, the consequences would have been serious, as they had to poultice before the inflamation was reduced. With regard to the sheep —having applied the bath pretty hot, the first that were done, two of them were dead in about four hours, we then reduced the strength and did not apply it so hot In about three weeks thereafter, I dressed 30 of them over again, when to my astonishment before the last were finished, the first that had been done turned ill and 20 of them were dead before two hours; the remaining 10 seemed very ill all day, wandering about not knowing what they were about; they, however, recovered, which I attributed to the dip being colder by the time it was used; they did not thrive well for a long time after. The strength of dip I used was about 1½ lbs. of arsenic, 3 lbs. of soap, and 2 lbs. of sulphur to 24 gallons of water. The second dressing would be 1½ lb. of arsenic to the same quantity of water; my own opinion is, that the arsenic can be absorbed by the skin, if put on at all warm, more especially when rubbed into the skin as was done in the above case, or soon after dipping, if the sheep are put thick together to cause heat. I could give other cases, but as I have encroached so much on you space let the above suffice in the meantime. *J., in North British Agriculturist.*

Calendar of Operations.

FEBRUARY.

WESTER ROSS: *Feb.* 20.—A winter so severe and so protracted has not been seen in the north for well nigh a quarter of a century. It is not so much one continuous covering of snow, with intense frost, we have had to speak, as a series of storms rapidly succeeding each other. No sooner does one snowfall disappear than another takes its place. Last week a heavy fall of snow gradually disappeared, and on Saturday on well exposed farms the ploughs were once again at work. We went to bed that night gladdened with the thought that the season's storms were all behind us, but on arising we found that there had been no such morning all the winter, the snow was falling fast, and was driven with a terrific wind, and to-day the ploughs that were at work on Saturday are buried amongst the snow. The likelihood however is, the season being now far advanced, and the ground beneath quite soft, that the storm may be of short duration. So intense was the frost that the thermometer stood for some time at 22° below the freezing point. If frost and snow be good preparatives for a crop, surely our coming crop will be no ordinary one. In the meantime, however, to many classes the effects are disastrous. The farmer has suffered severely. Three months of idleness have sufficed to exhaust many a little stock carefully laid past, and in many cases a debt has been incurred to clear off which will take a long period of hard labour. And not a few betook themselves to poaching, and some of these have consequently found their way to prison, a place in which they never expected to have been dwellers. The sheep farmer has also greatly suffered, and his losses are not yet all told. Besides a large additional outlay for hay and Turnips, the loss by death has been serious, and the spring has yet to be got over. The arable farmer was ill-prepared for such a winter at the outset. His crops of Turnips and straw were miserably stinted. To give some idea of the general scarcity, we may say that straw which used to sell at 4*d.* per stone of 24 lbs., now sells at 1*s.*; hay which used to fetch from 6*d.* to 9*d.* per stone, now fetches 1*s.* 3*d.*; and the few Turnips that have been lately sold fetched fully twice their wonted value. With a fine early spring, and abundant employment, we would all bye and bye forget our present calamities.

Notices to Correspondents.

AUSTRALIAN SHEEP: *A R* will thank any of our colonial or other readers to give him their opinion as to what would be the best breed of rams to import for improving the present breed of sheep in Australia, so as to combine quality and quantity of fleece, and quality and size of carcase, and where they can be obtained. [No English breed is likely to benefit a flock dependant for the annual return so entirely on their fleece.] He would also feel obliged if they would inform him if any deer have been imported to any of those colonies, and what kind they would recommend as the best able to stand the passage, and the food most suitable for them while on board, and what would be the best age to select?

MARTIN'S AMERICAN HORSE-POWERS: *J K* may no doubt see one of these machines at the Horse Repository, Guildford Street, Russell Square, W.C.

ROTATION OF CROPS: *Kempton.* If only Oats, Barley, Turnips, and Vetches are needed you might grow them in a four-course rotation as for 100 acres, thus:—1. 25 acres of Barley. 2. 25 acres of Winter Vetches sown on the manured Barley stubble in autumn; 3. 25 acres Spring Vetches sown in March. 4. 25 acres Vetches sown in end of April. Of course if more Vetches are wanted you can divide the whole 25 acres of Barley stubble in three parts, so as to have a succession of green food, but if 15 acres suffice the remaining 10 may be planted with Potatoes or Mangel Wurzel for sale 3. 25 acres Oats. 4. 25 acres in Turnips and Swedes to be fed off previous to the Barley crop.

THE PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY LIMITED are sending out their COLLECTION OF SEEDS, which have hitherto given satisfaction:—

	£	s.
No. 1. Complete Collection of Seeds for a large Garden for one year's supply	3	0
No. 2. Complete Collection for a moderate-sized Garden	2	0
No. 3. Complete Collection for do. (small quantities)	1	5
No. 4. Complete Collection for a small Garden	0	15

No. 1 Carriage Free to most Stations and Ports in the kingdom.
No. 2 Carriage Free to Broad Gauge Stations and Steam Ports.
No. 3 Carriage Free to Stations between Plymouth and Paddington.

Address: Plymouth Seed Company, Plymouth.

SEEDS FOR THE FARM.
SPRING, 1860.

THE PLYMOUTH SEED, AGRICULTURAL IMPLEMENT AND MANURE COMPANY—LIMITED, announce that their FARM SEED CATALOGUE being an APPENDIX to the GENERAL PRICE CURRENT, published by them in December last, is now ready and may be had per return of Post by application to the Secretary of the Company.

The whole of the Company's stock of FARM SEEDS has been received from the growers in the finest condition, and in price they will be found as reasonable as other respectable houses in the trade.

The Company request particular attention to
THE PLYMOUTH IMPROVED AND GRANT'S PINE-APPLE SWEDES,
two varieties of high character, in confirmation of which they add an extract from the *Irish Farmers' Gazette* (leading article), of October 16, 1858:—

"We observed several experimental plots of Swedes, &c., amongst which we noticed a new purple-topped variety, called the 'Plymouth Swede,' and also a very beautiful green-topped Turnip (Grant's Pine-Apple Swede) the name of which we did not learn. These were sown on the 16th of June, and their shapes were the finest we have seen for a long time. The varieties were new to us, but certainly the specimens grown at Rockview left a very favourable impression on our mind, regarding both their beauty and probable value."

They also again introduce to the notice of agriculturists
THE CORNISH HOLDFAST AND GREY STONE TURNIP,
both of which sorts are held in high esteem, and justly so in Devon, Cornwall, and the surrounding counties.

The Company would also call attention to
FISHER HOBBS ORANGE GLOBE MANGEL,
a sort which cannot be too highly prized, and one that is evidently a very great improvement on the old Yellow Globe.

The Seed sent out from their establishment during the last season has given the most perfect satisfaction; and in all instances where it has been sown, the crops have been extremely fine, the bulbs produced most shapely and handsome in appearance, and far outstripping in every quality all other varieties tested in comparison with it. References are permitted to many leading agriculturists who have sown this sort, and who all agree in awarding to it the highest possible praise.

The stock of Seed has been grown by and received direct from W. FISHER HOBBS, Esq., who has appointed the company his agents for the sale of his Mangel seed.

The Company hold an excellent supply of
MORTON'S YELLOW GLOBE MANGEL,
the stock of which most valuable variety was originally procured from J. C. MORTON, Esq., the Editor of the Agricultural department of this *Gazette*, and the seed has continued to be carefully saved from Bulbs selected with the greatest care.

They also offer a new introduction—
HAMLING'S DEAN PRIOR LONG RED MANGEL,
a variety of fine quality, exquisite shape, and a decided improvement upon the common Reds.

The stocks of GRASSES, CLOVERS, &c., have been warehoused in the finest possible condition, and the growth has been subjected to the usual test. The
MIXED GRASSES FOR PERMANENT PASTURE
are selected according to the best tables, as also are the other mixtures supplied by this Company.

For prices and further information, as also for every particular in connection with the business, the reader is referred to the GENERAL PRICE CURRENT, which will be forwarded free by post on application to the Secretary at
THE COMPANY'S OFFICES, UNION ROAD, PLYMOUTH.

SURPLUS NURSERY STOCK.

F. GODWIN being about to give up part of his present Nursery Grounds this season, offers, as under, to effect a clearance:—

	Per 1000—s. d.
Acacias, 1 year	3 0
Ailantus glandulosa, 1 yr., per 100	1 6
Chesnut, Horse, 1 year	4 0
Morus nigra, 1 yr. per 100	2 0
Oaks, 1 year	2 0
Pinus Laricio, 2 yr. p. 100	2 6
,, maritima, 1 year	2 6
Spruce, 2 year	1 6
,, 3 year	2 0
Firs, Scotch, 1 yr. bedded	2 6
Firs, Silver, 1 yr. bedded, per 100	2 0
,, Spruce, 1 yr. bedded	4 0
,, Balm of Gilead, 1 yr. bedded p. 100	1 0
Pinus austriaca, 1 year, bedded	8 0
,, calabrica, 1 year, bedded per 100	4 0
,, pinaster, 1 year bedded	6 0

Apricots, 2 and 3 years trained ..per doz. 30*s.* 0*d.*
Asparagus plants, 3 years ..per 1000 10 0
Currants, Red Dutch Victoria, Long-bunched Red, Black Grape, Black Naples ..per 100 6 0
Mulberries, a few very fine bushy trees, 8 feet, each 10 6
Peaches and Nectarines, 2 and 3 years' trained, per doz. 30 0
Seakale, 2 years ..per 100 6 0

	Per 100—s.
Andromeda polifolia	16
Araucaria imbricata, 9 to 12 inches p. doz.	20
Arborvitæ, American, 8 to 15 inches	5
,, Chinese, 8 to 15 inches	8
Azalea, Belgian, fine mixt.	40
,, ,, finest sorts per name	50
Berberis dulcis, 2 to 3 feet, bushy	16
Deutzias, Spiræas, Syringas, Viburnums, &c., of sorts	16
Erica carnea	16
,, 12 sorts, fine	25
Honeysuckles, Red Dutch	8
Junipers, 2 to 3 feet	16
Laurels, common, 1½ to 2½ ft	10
,, Portugal, 9 to 12 ins.	7
Pinus primula, 9 to 12 ins.	8
,, montana, 9 to 12 ins.	8
Ribes sanguinea	16
Roses, Madame Hardy	20
,, Gallica, fine of sorts	20
,, Hybrid Bourbon and China, fine of sorts	20
Roses, Harrisoni per doz.	4
Yews, extra transplanted, 1½ to 2 feet	18
,, ,, 2 to 2½ feet	24
,, ,, 2½ to 3 feet	30
,, ,, 3 to 3½ feet	40
,, Irish, 1 to 2 feet	30
Ash, Weeping per doz.	12
,, flowering, Standards per doz.	6
Crabs, ornamental, of sorts per doz.	8
Limes, cut-leaved, Standards per doz.	9
,, Weeping do.	15
Poplars, Black Italian, 7 to 8 feet	7
Poplars, Lombardy	7
,, Ontario	7

Broadfield Nurseries, Sheffield.

PLANTING.

A. PAUL & SON

RESPECTFULLY invite the attention of Gentlemen improving their Estates or forming new Gardens to the following TREES, &c., which they are prepared to sell at the lowest remunerating prices for a good standard quality. It is their practice to transplant every second year, in order that little or no loss may be incurred by removal. Many things are grown in large quantities and offered on advantageous terms to the Trade. An inspection of the stock is invited.

Abies alba, 2 to 4 feet
,, ,, glauca, 1 to 2½ feet
,, Clanbrasiliana and other dwarf Firs, 9 in. to 1½ ft.
,, canadensis, 3 feet
,, Douglasii, 2 to 6 feet
,, fine-conensis, 2 to 3 feet
,, Menziesii, 1½ to 6 feet
,, monstrosa, 2 to 7 feet
,, Morinda, 2 to 10 feet
,, orientalis, 1 to 2 feet
,, rubra, 2 to 4 feet
,, 20 other sorts, 1 to 6 feet
Araucaria imbricata, 1½ to 6 ft.
Arbor vitæ (see Thuja).
Alaternus silver & gold striped, 1½ to 4 feet
Arbutus, 6 sorts, 1 to 3 feet
Aucuba japonica, 1 to 2½ feet
Box, 6 sorts, 1½ to 6 feet
Berberis Darwinii, 1 to 1½ foot
Cedrus africanus, 2 to 10 feet
,, Deodara, 1 to 12 feet
Cedar of Lebanon, 1 to 12 feet
,, Red, 2 to 5 feet
,, White, 3 to 5 feet
☞ The largest and finest stock of Cedars in the country.
Cistus, 12 sorts, 1 to 3 feet
Cryptomeria Lobbiana, 3 to 8 ft.
,, nana, 9 inches
Cupressus Corneyana, 1½ to 3 ft.
,, Knightii, 3 to 4 feet
,, Lambertiana, 3 to 7 feet
,, Lawsoniana, 9 in. to 1 foot
,, torulosa, 1½ to 3 feet
,, 12 other sorts, 1 to 4 feet
Daphne pontica, 2 to 3 feet
Furze, double, 1 to 1½ foot
Garrya elliptica, 1½ to 3 feet
Holly, green and variegated, 30 sorts, 1 to 6 feet
,, green standards, 5 ft. stems
Juniperus chinensis, 2 to 5 feet
,, communis pendula, 2 to 3 ft.
,, excelsa, 1 to 2½ feet
,, fragrans, 2 to 4 feet
,, glauca, 2 to 3½ feet
,, oblonga, 2 to 6 feet
,, ,, pendula, 2 to 3 feet
,, thurifera, 1½ to 6 feet
,, tamariscifolia
,, virginiana aurea, 1 to 2 feet
,, ,, pendula, 1½ to 3 feet
,, viridis, 1½ to 2½ feet
,, weeping, 5 feet stems
,, 20 other sorts, 1 to 6 feet
Laurel, Common, 1 to 5 feet
,, Portugal, 1½ to 4 feet
,, ,, Standards, 8 feet
Laurustinus, 1 to 2 feet
Ligustrum lucidum, 3 to 4 feet
,, japonicum, 1½ to 3 feet
,, ovalifolium, 5 feet
,, evergreen, 2 to 4 feet
Mahonia Aquifolium, 1 to 3 ft.
,, 6 other sorts, 1 to 3 feet
Phillyreas, of sorts, 1½ to 4 feet
Picea amabilis, 1 to 1½ foot
,, nobilis, 1 to 4 feet
,, Nordmanniana, 1 to 4 ft.
,, Pinsapo, 1½ to 4 feet
,, Webbiana, 2 to 3 feet
,, 6 other sorts, 1 to 6 feet
Pinus austriaca, 2 to 4 feet
,, Benthamiana, 2 to 5 feet
,, calabrica, 3 to 4 feet
,, Cembra, 1½ to 4 feet
,, excelsa, 1½ to 12 feet
,, insignis, 3 to 6 feet
,, Llaveana, 2 to 5 feet
,, Laricio, 2 to 4 feet
,, macrocarpa, 2 to 3 feet
Pinus monticola, 2 to 3 feet
,, monspeliensis, 3 to 5 feet
,, muricata, 3 to 5 feet
,, Montezumæ, 3 years seedlings
,, nivea (Snow Pine), 1½ to 5 ft.
,, Pallasiana, 2 to 3 feet
,, pinaster, 3 to 6 feet
,, pyrenaica, 4 to 6 feet
,, Sabiniana, 4 to 5 feet
,, 40 other sorts, 1 to 6 feet
Quercus (Oak), Evergreen 3 to 5 feet
,, Fordii, 4 to 6 feet
,, latifolia, 3 to 6 feet
,, Mirbeckii, 2 feet
,, Suber (Cork Oak), 3 to 4 ft.
Ruscus hypoglossum
Santolina chamæcyparissus, 1 foot
Taxodium distichum, 3 to 6 ft
Taxus (Yew), adpressa, 2 to 4 ft
,, canadensis, 1½ to 3 feet
,, cheshuntensis, 1½ to 6 feet
,, elegantissima, 1½ to 4 feet
,, gold striped, 1½ to 5 feet
,, ,, standards, 5 feet
,, Jackson's Weeping, 1½ foot
,, japonica, 1 to 2 feet
,, nana, 2 to 4 feet
,, nigra, 3 feet
,, stricta, 5 feet
,, yellow-berried, 2 feet
,, common, round, and fan, 2 to 7 feet
,, Irish, 2 to 7 feet
,, 12 other sorts, 1 to 4 feet
Thuja americana, 3 to 8 feet
,, aurea, 1 to 3 feet
,, Chinese, 2 to 4 feet
,, gigantea, 2 to 3 feet
,, Wareana, 1 to 5 feet
,, 12 other sorts, 1 to 3 feet
Thujopsis borealis, 2 to 3 feet
Salisburia adiantifolia, 3 feet
Wellingtonia gigantea, 1 to 2½ ft.

Acer negundo variegata, 2 to 6 feet
Acacia, of sorts, 4 to 10 feet
Ash ,, 6 to 10 feet
Alder ,, 6 to 10 feet
Ailanthus ,, 8 feet
Almonds ,, 6 to 8 feet
Beech, purple, best variety, 5 to 8 feet
Birch, of sorts, 6 to 10 feet
Chesnut, Horse, of sorts, 1½ to 6 feet
,, Spanish, of sorts, 2 to 8 ft.
Catalpas, 6 to 8 feet
Caragana arborescens, 6 to 8 ft.
Cerasus padus aucubæfolius, 6 to 8 feet
Cornus mas variegata, 2 feet
Elms, 12 sorts, 6 to 8 feet
Gleditschias, 1½ to 8 feet
Kolreuteria paniculata, 3 to 6 feet
Laburnums, 8 feet
Lilacs, Persian, 6 feet stems
Liquidambars, 2 to 3 feet
Limes, of sorts, 8 to 10 feet
Maple ,, 5 to 10 feet
Planes ,, 7 to 10 feet
Poplar ,, 6 to 10 feet
Oak ,, 6 to 10 feet
Robinia ,, 6 to 8 feet
Sophora japonica, 10 feet
Sycamore, 6 to 10 feet
Thorns, of sorts, 6 to 8 feet
Tulip Trees, 2 to 10 feet
Willows, American, and others
Quick, 2-year transplanted, fine

WEEPING AND LAWN TREES in very great variety.

FLOWERING TREES AND SHRUBS, in 300 species and varieties, including Althæa, Cytisus, Berberis, Daphne, Deutzia, Lilac, Purple Nut, Pyrus, Ribes, Rose Acacia, Syringa, Spiræa, Weigela, &c.

ROSES, an unrivalled collection. Standards, 12*s.* per dozen and upwards; dwarfs, 6*s.* per dozen and upwards. See separate Catalogue.

HARDY CLIMBING PLANTS, a large collection.

AMERICAN PLANTS, including Azaleas, Heaths, Kalmias, Magnolias, Rhododendrons, &c.

FRUIT TREES, consisting of all the choicest sorts, warranted true to name. The trained Peaches, Nectarines, Apricots, &c., particularly fine.

GRAPE VINES, from eyes, well ripened, short jointed canes 6 to 10 feet.

HERBACEOUS PLANTS, in 500 species and varieties.

HOLLYHOCKS, a fine stock of healthy and well established plants. See separate Catalogue.

☞ Particulars of Prices, &c., furnished on application. Carriage of all packages free to London; if a ton weight or upwards placed free on the Railway at any London Terminus. An inspection of the stock invited.

A. PAUL AND SON,
NURSERIES, CHESHUNT, HERTS,
13 miles N.E. of London, Eastern Counties Railway.

DAHLIAS.

JOHN KEYNES, NURSERYMAN, SEEDSMAN, and FLORIST, Castle Street, Salisbury, has great pleasure in offering the under-mentioned DAHLIAS for the season of 1860, and in doing so states that in no previous year has there been such a marked difference and improvement.

The new DAHLIAS shown by J. KEYNES have met with the most unqualified approbation from all parties. He has succeeded in having awarded for them Seventy Certificates at the principal Exhibitions in the kingdom, and they have nearly all stood the severe test of the Floricultural Committee of the Horticultural Society of London. Full particulars given in CATALOGUES, with all the leading Flowers in cultivation on application.

The following will comprise the List. (In addition to the Certificates, two Silver Cups, value Five Guineas each, have been awarded. Those marked with an asterisk were shown each time.)

**NEVILLE (KEYNES).—Yellow ground, tipped purple. The finest flower by far in its class. Nine First Class Certificates. One of six twice for the Silver Cups. 10s. 6d.

*MRS. P. BALLHACHE.—The finest peach. Five First Class Certificates. One of six for the Cup at Reading. 10s. 6d.

**MRS WELLESLEY PIGOTT.—The finest white in the world. Nine First Class Certificates. One of six twice for the Silver Cup. 10s. 6d.

**WILLIAM DODDS.—The finest yellow in cultivation. Nine First Class Certificates. One of six twice for the Silver Cups. 10s. 6d.

**LADY DOUGLAS PENNANT.—The finest primrose. Eight First Class Certificates. One of six twice for Cups. 10s. 6d.

JENNY AUSTIN.—Light edged purple. Keynes. Three Certificates. One of six twice for the Cups. 10s. 6d.

The produce of 30,000 seedlings, and the six finest flowers ever yet offered by any man.

SIR GEORGE DOUGLAS (DODDS).—The most remarkable flower of the year. Yellow ground, deeply edged red. Seven First Class Certificates. 10s. 6d.

DUKE OF ROXBURGH (DODDS).—Two First Class Certificates. 10s. 6d.

LORD CLYDE (DODDS' Crimson).—Certificate. 10s. 6d.

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These four flowers of Mr. Dodds are perfect gems, and will give every satisfaction.

MISS SARAH BOYCE (RAWLINGS).—Light, deeply-edged crimson. The finest flower in its class by far. Many Certificates. 10s. 6d.

MR. BOSHELL (RAWLINGS).—A great improvement on King. Two First Class Certificates. 10s. 6d.

BLACK KNIGHT (RAWLINGS).—The darkest flower out; fine form. 10s. 6d.

COMPACTA (RAWLINGS).—Light edged or tipped lilac; very fine flower. 10s. 6d.

The set complete will be charged to the Trade 4l. 4s.

In addition to the above, J. KEYNES will send out Six First Class Fancy Flowers.

REV. JOSHUA DIX (KEYNES).—The finest form yet offered. Five First Class Certificates.

LEOPARD—(KEYNES).
SALAMANDER—(KEYNES).
ZEBRA—(KEYNES).
PRETTY POLLY—(KEYNES).
CONFIDENCE—(RAWLINGS).

The Set of Six will be 30s. to the Trade.

The Six finest and most constant in cultivation.

BEDDING DAHLIA LILIACIA VARIEGATA (DODDS, the raiser of alba floribunda).—This is the greatest novelty yet introduced, growing 2½ feet high, every leaf beautifully variegated with green and gold. It has been the admiration of all beholders. Price 2l. 2s. per dozen.

Fine collections of Roses, Carnations, Picotees, Pinks, and every description of Nursery Stock.—Salisbury, March 3.

REIGATE SILVER SAND.—Best quality for Florists, 16s. per ton; less quantities 1s. 6d. per bushel, delivered to any London Wharf or Railway. Sacks for Sand, 1s. 6d. each; or on hire, 6d. each (five hold a ton); KENTISH and HAMPSHIRE PEATS, LOAM, and LEAF MOULD, in large or small quantities.—JOHN KENNARD, Purveyor to her Majesty, Swan Place, Old Kent Road, London, S.E.

HORTICULTURAL AGENT AND VALUER.

MR ALFRED CHANDLER, (of the late firm of CHANDLER & SONS,) 28, Priory Road, Wandsworth Road, S.

DESIGNS FOR FLOWER BEDS AND GARDENS.—In consequence of numerous applications J. MARSHALL, 2, Goldsmith Street, Nottingham, has been induced to prepare another set of Designs. They comprise upwards of 80, diversified in style, and will be forwarded to any address on receipt of 24 postage stamps.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, His Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and —Collier, Esq., of Dartford.

PROTECTION FROM THE MORNING AND EVENING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and, floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide, 1s. 6d. per yard run.
Four, 3s. per yard; also,
An improved make three yards wide, 2s. 6d. per yard run.

ELISHA THOMAS ARCHER, whole and sole manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"420, Strand, London.

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles.

"Your obedient servant, G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.—The Gutta Percha Company Patentees, 18, Wharf Road, City Road, E.C., London.

GENUINE ROLL TOBACCO CLOTH.

WARRANTED EQUAL IN STRENGTH TO TOBACCO.

JOSEPH BAKER, 10, Gough Square, Fleet St., E.C., having dealt upwards of 20 years in the above, can recommend it as the best article for destroying the Fly. 1s. 4d. per lb., over 10 lbs., 1s. Post-office Orders payable Strand Office

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NURSERYMEN supplied with the best genuine TOBACCO PAPER at 4l. per cwt.; 2l. per half cwt.; any quantity less than half a cwt., 10d. per lb. The above article is warranted genuine.—Address TOM BRYANT, Messrs. Jackson and Sons, Tobacco Manufacturers, Lady Lane, Leeds.

GENUINE TOBACCO PAPER FOR FUMIGATING.

H. APPLEBY (Foreman to Messrs. Ivery & Son, Surrey), takes this opportunity of informing his patrons and the public that he is now offering the above at a very considerably reduced price. It is now sold in packets of 4 lbs. each at 1s. 3d. per lb. A liberal discount allowed to the Trade. For testimonials that will guarantee its quality, see *Gardeners' Chronicle*, February 25, page 165.

SHEET IRON POTS FOR FUMIGATING, 3s. 6d. each.

N.B. All orders to be accompanied with a Post-office Order, payable to HENRY APPLEBY, Dorking, Surrey.

FUMIGATING AND SYRINGING.

To GARDENERS, HORTICULTURISTS, FLORISTS, AND OTHERS.

GRIFFITHS AND AVISS, TOBACCONISTS, &c., High Street, Coventry, beg to call attention to their TOBACCO PAPER FOR FUMIGATING. There is nothing in its preparation injurious to vegetation, although it deals death and destruction to all insects ("except the red spider") that infest the greenhouse. G. & A. warrant their Tobacco Paper to keep good and retain its killing properties for six months. Price 12s. 6d. per dozen lbs., sent to any part of the kingdom on receipt of Post-office Order. N.B.—Tear the Tobacco Paper into pieces about the size of a florin, and ignite it with a piece of red-hot iron large enough for the purpose.

Very strong Tobacco Water for Syringing, 1s. 6d. per gallon.

PAGE'S COMPOSITION FOR THE DESTRUCTION OF BLIGHT upon Roses, Wall-fruit Trees, Cucumbers, Melons, Vines, Stove and Greenhouse Plants, has stood the test of eight years' public trial, and its great success has led to numerous imitations. Dr. Lindley, in his leading article of October 25, 1856, reported 182 cases in its favour—sufficient to convince the most sceptical.

4s. per gallon, (sufficient to make four fit for use).
10 gallons and upwards, Carriage paid to London.

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and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

GISHURST COMPOUND, PATENTED,

FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN FLY
AMERICAN BLIGHT	ANTS	

BED BUGS, &c.,

And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

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Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1s. for first trials and small uses, such as destroying bed bugs; 3s. for not large gardens; 10s. 6d. for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

KEATING'S PERSIAN INSECT-DESTROYING POWDER.—Poultry, Dogs, and Plants are freed from Fleas and all other Vermin by the above Powder, which is quite harmless to animal life. Bugs, Cockroaches, Beetles, Moths in Furs, and every Insect are also instantly destroyed. —In packets, post free, for 14, or treble size for 36 stamps, by T. KEATING, Chemist, 79, St. Paul's, London, E.C.

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JUPP'S RICE FOOD, POULTRY AND GAME.—RICE SWEEPINGS, 7s. 6d. per cwt., in 1½ cwt. bags; SCREENED RICE, 10s. per cwt., in 1¾ cwt. bags; DOG BISCUITS, 14s. per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6s. and 8s. per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

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W. & R. JUPP & CO. having, from long experience in their business, satisfied themselves of the advantages resulting from the use of a preparation or condiment to be used with Cattle Food, beg to inform their friends and the public, that after considerable labour and expense they have succeeded in producing an article which, though differing from any in present use, possesses all the nutritive and other qualities so necessary in a preparation of this description, AND AT A CONSIDERABLY REDUCED COST. A copy of Dr. Letheby's Analysis appeared in this Paper of the 11th inst., and will be sent post free on application.

The material will be sent out in bags, with plain directions for use, at the following prices for cash only, which must be remitted with orders to ensure delivery, viz., 35s. per cwt.; 19s. per ½ cwt.; and 10s. per ¼ cwt.

W. R. JUPP & Co., 6, Cross Lane, Eastcheap, E.C. Money Orders to be made payable at the Tower Street Post Office, E.C.

SHEEP.—FOOT-ROT OINTMENT, an original preparation, by JOHN OLDHAM, of Mansfield, a certain and safe remedy, having invariably cured when other remedies have failed. It is equally efficacious in Foul in Cows, Grease, Cracked Heels, and Thrush in Horses. Numerous parties at a distance being inconvenienced in procuring it, the proprietor has appointed Messrs. SUTTON & Co., 10, Bow Churchyard, E.C., his London Agents, and it can now be procured through any respectable Chemist or Patent Medicine Dealer.

THE AGRICULTURAL ENGINEERS' COMPANY (LIMITED), Swan Lane, Upper Thames Street, London, E.C., hold in stock the following Goods suited to the Season:—Steam Engines, Horse Powers, Chaff Cutters, Crushing Mills, Oilcake Brusers, Root Cutters and Pulpers, Pumps, &c.

Price Lists can be had post free upon application.

HENRY J. MORTON AND CO.,
2, Basinghall Buildings, Leeds.

GALVANISED IRON WATER CISTERNS

for Cottage Houses, &c., to contain 50 gallons, 25s.; 80 gallons, 30s. each; and 140 gallons, 36s., and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

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for Liquid Manure or Domestic Use, 3 inches diameter, 30s. and 32s. 6d. each; Tail Pipe for same at from 10d. per foot.

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for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32s. 6d. each.

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BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

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ROSHER AND CO. beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises, Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.

N.B. Outline sketches of the patterns will be forwarded by post on application.

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200 CUCUMBER AND MELON BOXES, AND LIGHTS, AND 500 LIGHTS of all Sizes kept in Stock, Glazed and Painted complete, ready for immediate use.

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(Late Burbridge & Healy),
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Prices and Estimates furnished upon application.

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J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete				£ 90
Do.	do.	40 ft. by 20 ft.	do.	do. 140
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Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

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Size of House.	With Cylinder Boiler.	With Saddle Boiler.
20 feet by 10 feet ..	£8 10 0 ..	£9 0 0
25 ,, by 12 ,, ..	10 0 0 ..	10 10 0
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30 ,, by 15 ,, ..	13 10 0 ..	14 10 0
40 ,, by 15 ,, ..	16 10 0 ..	17 10 0
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The above prices include Boiler, strong Furnace Doors, Bars, Soot Doors, Cistern, Damper, Hot-water Pipes and Connections, Air Pipes, &c., all ready for fixing, and of the best quality. Further particulars will be sent on application. Parties ordering must send plans, showing doorways, position of boiler, &c.—J. JONES, Hot-water Apparatus Manufacturer, 6, Bankside, Southwark, London, S.E.

GENUINE GARDEN SEEDS.

JAMES CARTER & CO.

ARE NOW READY TO SUPPLY

Collection of GARDEN SEEDS of 1859 Harvest

FOR ONE YEAR'S SUPPLY,

Containing all the most approved varieties of VEGETABLE SEEDS at the following prices:—

No. 1, 20s.; No. 2, 40s.; No. 3, 60s.

The following are the quantities they recommend for Cropping a Garden of One Acre, and which they can supply for £3 (Collection No. 3):—

PEAS, Carter's Earliest	2 quarts	CABBAGE, best sorts, including Carter's earliest	6 pkts.	LETTUCE, Black-seeded Bath Cos	1 pkt.
,, Early Emperor	2 ,,	SAVOY, green curled	1 oz.	,, Paris Cos	1 ,,
,, Harrison's Glory	2 ,,	,, new Ulm	1 pkt.	,, Drumhead Cabbage	1 ,,
,, Champion of England	4 ,,	CAULIFLOWER, best early	1 ,,	,, Hardy Green do.	1 ,,
,, Beck's Prize-taker	2 ,,	,, Walcheren	1 ,,	MUSTARD	1 pint
,, Dwarf Green Marrow	2 ,,	CARROT, early Horn	2 oz.	MELON, Carter's Excelsior	1 pkt.
,, Carter's Victoria	2 ,,	,, James Scarlet	2 ,,	,, Turner's Gem	1 ,,
,, Hair's Dwarf Mammoth	4 ,,	,, Long Surrey	4 ,,	ONION, James's Keeping	2 oz.
,,	1 ,,	,, selected Altringham	4 ,,	,, White Globe	2 ,,
BEANS, Early Mazagan	2 ,,	CELERY, incomparable dwarf, white	1 pkt.	,, Reading	2 ,,
,, Early Long-pod	1 ,,	CELERY, Cole's crystal white	1 ,,	,, Giant Madeira	1 ,,
,, Green Nonpareil	2 ,,	CRESS, plain	1 pint	,, Deptford	2 ,,
,, Taylor's Windsor	1 pint	,, Australian	1 pkt.	,, Lisbon	1 ,,
,, French Fulmer's forcing	1 ,,	CUCUMBER, fine long ridge	1 ,,	PARSLEY, Myatt's curled	2 ,,
,, Negroland Pod	1 ,,	,, Carter's Champion	1 ,,	PARSNIP, fine selected	1 quart
,, ,, Light Dun	1 ,,	,, Lynch's Star of the West	1 ,,	,, winter	1 pint
,, ,, Newington Wonder	1 ,,	ENDIVE, new mossy green	1 oz.	SALSAFY	1 pkt.
,, ,, Scarlet Runners	1 quart	,, winter green curled	½ ,,	SCORZONERA	1 ,,
BEET, small selected Blood Red	2 oz.	LEEK, Musselburgh	1 ,,	TURNIP, White Dutch	4 oz.
BORECOLE or Kail, Scotch curled	1 pkt.	LETTUCE, Berkshire Brown Cos	1 pkt.	,, Polley's Nonsuch	½ pint
,, Asparagus	1 ,,	LETTUCE, Carter's Giant Cos	1 pkt.	,, Yellow Maltese	2 oz.
,, Cottager's	1 ,,			VEGETABLE MARROW	1 pkt.
,, new Cabbaging	1 ,,			,, Custard	1 ,,
BRUSSELS SPROUTS, imported	1 ,,			HERBS in sorts	6 ,,
BROCCOLI, best sorts for succession	8 pkts.				

Collections 1 and 2 are similar to the above, with the quantities proportionately reduced.

J. C. AND CO.'S 25TH ANNUAL CATALOGUE OF FLORICULTURAL, VEGETABLE, AND AGRICULTURAL SEEDS, AND GARDENERS' VADE MECUM, was published early in January.

237 & 238, HIGH HOLBORN, LONDON, W.C.

THE NEW DWARF BEDDING TROPÆOLUMS.

TOM THUMB, YELLOW.

A new variety in colour, particularly adapted for bedding, and also for growing in pots and ornamental vases; the flowers are well thrown up above the foliage; very dwarf and compact in habit; colour, pure yellow without any marking. The Floral Committee of the Horticultural Society speak of it as follows:—"The habit of this plant, *shown by the entire plants exhibited*, was quite dwarf and *compact*, and the flowers were of a golden yellow." It was "commended" as likely to be a useful Flower-garden and Bedding plant. 1*s.* per packet.

TOM THUMB, BEAUTY.

An elegant variety with Lobbianum-shaped flowers, raised by Mr. Melville, Gardener to the Earl of Roseberry, Dalmeny Park, near Edinburgh. The flower is yellow, flamed and blotched with bright crimson. A plant was sent to the Editors of the *Cottage Gardener* in October, 1858, who speak of it as follows:—"A dwarf yellow, tinged with crimson; would be a good bedding plant." 1*s.* per packet.

TOM THUMB, SCARLET.

This was sent out by us for the first time last year, and has given universal satisfaction when had direct from our establishment; brilliant scarlet flowers well thrown up above the foliage: very dwarf and compact in habit. 6*d.* per packet.

☞ *For further particulars see* CARTER'S GARDENERS' VADE MECUM, *the best Guide ever published for General Gardening Operations, post free for four stamps.*

JAMES CARTER & CO, 237 and 238, High Holborn, W.C.

MESSRS. E. G. HENDERSON & SON,

WELLINGTON NURSERY, ST. JOHN'S WOOD, N.W.,

RESPECTFULLY announce the following NEW FUCHSIAS AND TYDÆAS (ACHIMENES SECTION), to be sent out early in MAY, due notice of which will be given.

NEW SUMMER, AUTUMN, AND WINTER-FLOWERING TYDÆAS.

The following varieties are most desirable additions to one of the most superb sections of medium and late-flowering plants (allied to the Achimenes tribe, with half shrubby stems) for Hothouse and warm Conservatory decoration. Their brilliant scarlet and orange flower tubes expanding to beautiful rosy-violet and crimson ground-tints, overlaid with bands and spots of the most intense velvet-like hue, render them invaluable for portable Flower Vases and Bouquets:—

T. IGNESCENS.—A very beautiful variety, of free growth, with a profusion of brilliant scarlet funnel shaped flower tubes expanding to a bright vermilion-tinted orange-scarlet border or limb, from 1½ to 2 inches in diameter, which is elegantly marked with dark velvet-like crimson bands and spots. A fine object for decoration.

T. ELEGANTISSIMA.—A dwarfer variety, with light scarlet-flower tubes, and rich salmon-tinted rose-coloured border, which is picturesquely traced with rosy-carmine lines, and showing a bright, rosy carmine-tinted margin.

T. COUNTESS OF ILCHESTER.—A superb flowered plant, allied in its habit of growth to the still beautiful T. Lady Digby, T. Pearl des Tydæa, and T. gigantea, less robust than the latter, but superior to all in the exceedingly rich cramoise-crimson coloured blossoms nearly 2 inches in diameter, upon ventricose crimson scarlet flower tubes, and intense violet border, which is very finely traced and scored with dark crimson lines and spots.

T. VOLUNTEER, ELLIOT.—A neat and attractive dwarf branching variety, with dark red stems and ovately-cordate leaves, prominently marked by crimson veins. Flower tubes crimson scarlet, throat or inner tube creamy white with carmine red lines, the upper border bright reddish crimson, picturesquely banded and spotted with dark velvet-like colour, lower border lobes of a bright flame tint.

T. LURLINE, ELPHINSTONE.—A distinct and effective variety with orange-scarlet flower tubes, and lower front border of an ochraceous white ground, tint richly banded and spotted with brilliant cerise crimson, whilst the upper border shows a bright carmine ground scored with intensely dark lines.

FUCHSIAS FOR 1860.

COUNT CAVOUR.—Large open lilac lavender or mauve-coloured corolla, with well reflexed sepals, close jointed growth, and fine habit, forming a distinct exhibition plant.

DR. LIVINGSTONE.—Tube clear delicate blush-white, with well recurved white inner surfaced petals. Corolla blush, shading into a bright violet rose margin; habit of Silver Swan, free; requires pinching from the young growth at stated periods.

GARIBALDI.—A beautiful coloured flower, with light scarlet recurved sepals, and dark violet-tinted black corolla; free growth, and constant in character.

LONGFELLOW.—Rich deep scarlet sepals, well recurved, in contrast with an intense violet corolla; good habit, and distinct.

LORD MACAULAY.—A very effective and beautiful variety for competition, having large broad sepals of great length and elegant curve; corolla deep violet. A fitting name.

PRINCESS ALICE.—Style of Maid of Kent; free branching habit and rich green foliage; sepals pure white, and well reflexed; corolla rosy purple, tinted with maroon. A profuse and continual blooming variety for the season.

PRINCE ALFRED.—Tube and outer face of sepals blush, with rose stripes, the inner recurved sepal fronts pure white; corolla deep plum or mulberry, with a pure white picturesque base extending one-third of the depth; sepals wide and finely recurved; growth free, robust, and short-jointed, with dense flower clusters.

PRINCE IMPERIAL.—Sepals fine scarlet, broad and recurved; corolla violet, remarkably large, and of great width; habit compact and close jointed. An excellent trade plant.

PRINCE OF ORANGE.—A first-class exhibition variety, having wide scarlet sepals well curved, and of firm leathery-like substance; habit of growth free, graceful, drooping. Unequalled in its section.

CAMELLIA EXHIBITION.

MESSRS. MILNE AND CO. beg to invite all admirers of this beautiful plant to their unrivalled collection of 6000 plants now in full bloom. Open daily to visitors.—Late Chandler's Nursery, Wandsworth Road, S.

ROYAL SOUTH HANTS SEED ESTABLISHMENT

Under the patronage of H. R. H. the PRINCE CONSORT, the Horticultural and Agricultural Society of India, the principal Nobility, Gentry, and Agriculturists of the United Kingdom.

PAGE AND TOOGOOD will forward their PRICES CURRENT upon application. It should be referred to by purchasers of Garden and Farm Seeds.

Collections of VEGETABLE SEEDS, 55*s.*, 35*s.*, 20*s.*, 10*s.* The Quantities in the above selections will be found more liberal, and the prices 10 per cent. less than any house in the Kingdom.—Seed Establishment, Southampton.

NEW PLANT CATALOGUE.

MESSRS. WILLIAM ROLLISSON AND SONS respectfully announce to the Nobility, Gentry, and the Trade, that their GENERAL CATALOGUE OF PLANTS is now ready for distribution, and can be had on application by enclosing one stamp. The CATALOGUE contains names, description, and prices of upwards of

ONE HUNDRED NEW PLANTS

in species and varieties, besides descriptive Lists of the General Nursery Stock.—The Nurseries, Tooting, London, S.

NEW FARM SEEDS, GROWTH OF 1859.

ROYAL BERKSHIRE SEED ESTABLISHMENT.

SUTTON'S FARM SEED LIST IS NOW READY,

and will be sent post free to any address.

SUTTON & SONS, Seed Growers, Reading.

The Gardeners' Chronicle.

SATURDAY, MARCH 10, 1860.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, March 14—Microscopical..... 8 P.M.
THURSDAY, " — 15—Linnean..... 8 P.M.

NOTHING can be more interesting to those who seek to introduce new plants than to see how steadily our Colonial Botanic Gardens are advancing in real utility. They are no longer comfortable beds of down on which broken-down gardeners may doze away the remainder of their lives, nor kitchen gardens maintained at public expense for supplying the households of Governors who would otherwise be the first to recommend their suppression. On the contrary they are becoming centres of export and import for the mutual improvement on the one hand of the colonies to which they belong, and on the other of the mother country; and it is through their agency that merchants will best become acquainted with the objects produced by the vegetable kingdom which promise to have commercial value. We now seem to be on the eve of a total change in every department of the paper manufacture, should the CHANCELLOR of the EXCHEQUER's far-seeing resolutions be carried; and in a few years we may expect Great Britain to become the emporium of the paper trade, for which the skill of her artificers, the patience of her workmen, the capital of her manufacturers, and her prodigious colonial resources give her facilities beyond all other nations. Nothing, indeed, astonishes us so much as to hear men who claim to possess more intelligence than their neighbours asserting that the supply of materials for paper-making must soon be exhausted in the presence of an increased demand. To say that because paper is made of rags, and the supply of rags is limited, therefore the manufacture of paper must be limited also, is an argument which no one would use who possesses the least acquaintance with plants and their constituent parts.

The materials limited to rags! Why, they surround us on every side even in England, in the shape of vegetable refuse. Wood shavings, the fragments of the basket-maker, the worthless thinnings of Coppice woods, weeds, the valueless pulp of Beet sugar works, old mats, damaged hay, worn-out gunny bags, Furze and Broom, all sorts of coarse Grasses, and a thousand other articles, to say nothing of straw, are lying at our doors, and only await the fiat of skill to appear on our tables as paper. We are aware that some manufacturers doubt the possibility of converting such substances into paper; the proprietors of the Taverham Mills, near Norwich, have indeed asserted, in a letter to the *Times*, that after having expended a considerable sum, and after two years of costly experiments, they have

arrived at the conclusion that, although paper can be made of other materials than rags, the cost is either too great or the material unfit for first-class printing paper. Not knowing what the "costly experiments" were, or what the materials operated on, it is impossible to offer any direct reply to this statement. But we may be permitted to say of the Taverham manufacturers who cannot work up materials to which they are unaccustomed what was observed the other day of Lord MELVILLE, the Commander-in-Chief in Scotland. When the gallant general declared that he should not know what to do with a force of volunteer riflemen, some one remarked that if his lordship had not skill enough other officers had. For ourselves we believe that Gorse alone could be found to supply a large part of the fibre required for first-class printing paper. Nor is it to be forgotten that when inferior materials for inferior purposes take the place of rags, the latter will be set at liberty for first-class papers.

But it is most especially to our colonies and to hotter countries than our own, where a rank vegetation is characteristic of the climate, that the manufacturer will have to look; and whom can he consult so well as the intelligent men now at the head of Colonial Botanic Gardens? They know perfectly well what fibrous plants are abundant enough to be had cheap, and to them importers will have to address themselves. It may be that a colony does not yield the article sought for: in such a case the cost of a fruitless search is avoided. Or it may be that materials abound, and then the merchant learns from the Botanic Garden whither to direct his inquiries.

Suppose a question concerns the West Indies, the Botanic Garden in Jamaica or Trinidad should afford a prompt reply. Is Northern India the field of examination? There is the Botanic Garden at Calcutta with Dr. THOMSON, one of the most eminent botanists of the day, at its head. Or should Southern India be investigated we have Mr. THWAITES, another most able man, in Ceylon, and Mr. M'IVOR, a first-rate cultivator perfectly well acquainted with plants, at Ootacamund in the Nilgherries. Nor is Australia deficient in resources of a similar kind; Mr. CHAS. MOORE has charge of a great Botanic Garden at Sydney, Dr. MUELLER of one at Melbourne, and Mr. FRANCIS of a third at Adelaide; each of whom is full of practical as well as scientific knowledge of his respective localities.*

The Catalogues of some of these gardens rival those of Europe, and speak unmistakeably of the energy with which they are conducted. That of Sydney in 1857 consists of about 30 closely printed pages in double columns, and enumerates about 3600 species. In the garden at Adelaide Mr. FRANCIS cultivated last year above 3000 species. Whether similar lists for other gardens exist we have no means of ascertaining, but there is no doubt that they all are at least as rich as the demands of commercial men can require.

SOME time ago (see *Gardeners' Chronicle*. 1859, p. 739) we drew attention to a very extraordinary statement made by Prof. DAVY, of Dublin, concerning the EFFECT OF ARSENIC UPON VEGETATION. The learned chemist reported—1, that even saturated solutions of arsenic would not kill plants; 2, that the arsenic when absorbed remained in the tissues of plants; 3, that when such plants were eaten traces of arsenic were discoverable in the bodies of animals fed upon them. All this had been ascertained experimentally as we were assured. Nay, more. Prof. DAVY further reported that arsenic exists in certain kinds of commercial superphosphate of lime, and is thence conveyed into the system of animals fed with Turnips manured with such superphosphate.

This was a startling announcement; which, had it been confirmed by other observers, would have rendered it impossible to convict a prisoner of murder committed with arsenic; because the prosecution could have no hope of showing that the traces of such a poison, when found in the body, were not derived from Potatoes, Turnips, Cabbages, or some other common vegetable food. Dr. DAVY's conclusions were, however, so entirely opposed to all other experiments with arsenic upon plants that we could not do otherwise than point out the necessity of further inquiry. The last Number of the Pharmaceutical Journal contains a complete contradiction of the assumed facts. Mr. E. H. OGSTON, an agricultural and analytical chemist, once a pupil of Prof. GRAHAM, undertook to reinvestigate the matter, and the result is contained in the following extracts from a letter addressed to Mr. SCHOLEFIELD:—

"The two facts which struck me most forcibly as the result of Dr. DAVY's experiments were, first, that a saturated solution of arsenious acid could be applied to the roots of plants without injury to their growth; and secondly, that when manured with ordinary superphosphate of lime the quantity of the poison assimilated was sufficiently large to allow of its detection in a portion of a Turnip that could be conveniently operated upon in the laboratory.

"In order to satisfy myself with regard to the first question, I watered the ground about the roots of some strong Cabbage plants, of some months' growth, with a saturated solution of arsenious acid, and in several trials, after two doses, at intervals of three days, the plants drooped and died within the week. The same experiment repeated with Scotch Kale—the only other plant I could conveniently get at—was attended with the same result. These plants, after the lapse of a few days, were removed from the ground, and various portions of their stem and leaves examined by MARSH's test for arsenic. It was found only in the portion of the stem close to the roots, and which were darkened in colour in the interior; in no case was the poison found in the leaves, or in the stem at more than 5 inches from the ground. In some other cases the solution of arsenious acid was variously diluted before application to similar plants, growing under precisely the same circumstances of soil and aspect; and when the dilution was sufficiently great as to produce no bad effect on the appearance of the plants, no arsenic could be detected in *any portion* above the ground. The roots themselves were not examined, as being likely to retain mechanically some portion of the mineral upon their surfaces.

"I do not give you these experiments in any detail, as a more favourable time of year and the opportunity of submitting a greater variety of plants to the ordeal would be desirable; but so far as they go they incline me to believe that arsenic, when absorbed in sufficient quantity to be detected by our very delicate tests, is also in sufficient quantity to destroy the vitality of the plants.

"With reference to the second question, viz., How much arsenic an agricultural crop (say Turnips) can obtain from an ordinary dressing of arsenical superphosphate? a little calculation will show how extremely difficult any estimation of its weight would be.

"Take a very bad sample of pyrites to contain .30 per cent. of arsenic, and consider—as is the case—that in the manufacture of oil of vitriol one-half of this is stopped by condensation in the flues; .15 per cent. will remain in relation to the pyrites, or about .10 in relation to the manufactured oil of vitriol. Now, suppose the superphosphate made from this acid to contain 20 per cent. of it as a constituent, and that 3 cwt. are used as a dressing per acre, then will be added to this acre .07 of a pound of arsenic, and this is to be distributed over from 20 to 25 tons of roots, giving a per centage infinitely small, and, in my opinion, relieving us from the necessity of the smallest anxiety on the subject. If, however, even this quantity is objectionable, the use of the Belgian pyrites, in which I have never found a trace of arsenic, would obviate all difficulty."

Hence it appears that the public has been needlessly alarmed; and that vegetable physiologists did not dream when they declared that arsenic poisons plants. Mr. OGSTON shows that plants die when poisoned; that when dead, even if a saturated solution is used, they contain no trace of the poisonous mineral except near the ground; that when weak solutions are employed no trace whatever can be discovered in a plant; and consequently that medical men need not be embarrassed should some cross-examining counsel endeavour to browbeat them by referring to the alleged discoveries of the learned Dublin professor.

THE IMPERIAL PARIS HORTICULTURAL SOCIETY has announced its intention of holding a general EXHIBITION of every description of garden produce, from the 12th to the 28th May next, open to all the world. The subjects of exhibition must be in the Palace of Industry in the Champs-Elysées at the latest by 8 o'clock in the morning of the 12th, as the judges will proceed to their examination at 10. As to Conifers, trees, and large shrubs not in flower, they must be delivered between the 1st and 6th May. Objects of art and industry will not be received later than the 9th May.

Short notices of exhibition must be sent before the 7th May to M. ROUILLARD, Secretary, 28, Rue de Longchamp, Paris, in addition to detailed lists, in duplicate, of everything to be placed on the tables, which must be delivered to the Exhibition Committee by 10 A.M. on the 11th May, failing which they will be excluded from the catalogue.

Prizes of various value are offered for novelties, seedlings, fine specimens, hot-house plants, greenhouse plants, hardy plants, kitchen-garden stuff, forced fruits, specimens of fine cultivation, bouquets, artificial flowers (*coiffures de bal ou garnitures de table*), and preserved fruits. We do not see any mention of garden implements.

New Plants.

234. PHALÆNOPSIS SCHILLERIANA. *Rchb. fil.*

P. Schilleriana; foliis argenteo-variegatis subtus discoloribus, sepalo dorsali obovato obtuso lateralibus ovatis acutioribus, petalis subrotundis oblatis majoribus, labelli lobis lateralibus oblongis ascendentibus intermedio ovali apice dilatato bilobo: lobis recurvis brevibus falcatis, cristâ didymâ bicorni

The same post brought us an account of this beautiful species from Prof. Reichenbach, and a flower from Mr. Consul Schiller, in whose grand collection at Hamburgh it blossomed the other day. The Consul informs us that it was obtained by himself from Manilla two years ago, and that out of 30 plants he only succeeded in saving one. The leaves, he states, are of the form of P. amabilis (not long as in P. grandiflora), and variegated with silver irregular spots. Prof. Reichenbach compares them to those of a Sonerila (such we presume as margaritacea), and describes them as being nearly a foot long, blackish green, with broken silver bands above, and purple beneath. The flower stem is branched and the flowers flesh colour.

MYCOLOGY.—NO. IX.

CLAVARIA RUGOSA, *Bull.*—In the most perfect forms which as far as we know Fungi are capable of attaining, the hymenium or fructifying surface is turned away from the light. Even in the highest genera however, as *Agaricus* and *Polyporus*, species occur which contradict this rule, but if so, they are uniformly those which are the least perfectly organised. It sometimes happens from accidental circumstances, as for example in the common Mushroom, that the upper surface of the cap produces an hymenium as well as the lower; but in this case the distinctive characters are altogether deranged, and instead of regular gills we have a mass of intricate folds, which at first sight indicate a totally distinct genus.

In the same great family which contains the more typical Fungi, three distinct orders exist in which one of the distinctive characters consists in the complete exposure of the hymenium; but even amongst these, in proportion as the species are more noble, the hymenium becomes inferior; and in some cases as in *Clavaria pistillaris*, one of the highest of the group, the hymenium ceases to be inferior rather from the total obliteration of the pileus than from essential structure, as appears on comparison with *Craterellus pistillaris*, which is scarcely distinguishable except by its retaining traces of a distinct pileus.

These remarks are intended to show the connection of the subject of our present notice with the Agarics and other Fungi which we have previously illustrated. The pileus it will be observed is entirely obliterated, and the whole surface of the Fungus whether simple or branched, whether exhibiting a truly club-like or tree-like form, with the exception of the very base is covered with the fruit-bearing cells which constitute the hymenium.

The genus *Clavaria*, which abounds in species, very rarely assumes its noblest forms in this country. With a few exceptions they grow amongst Grass in exposed lawns or pastures, or amongst different decayed substances in woods. A few species moreover occur on decaying trunks of trees or dead wood. They assume a vast variety of colours, which are sometimes very beautiful, and are either so small as to be quite insignificant in an economical point of view, or of a sufficient size to make it worth while to ascertain their value as articles of food. Some of them are essentially simple, but some, like *Clavaria rugosa*, may be either simple or branched, while others, except in their very earliest con-

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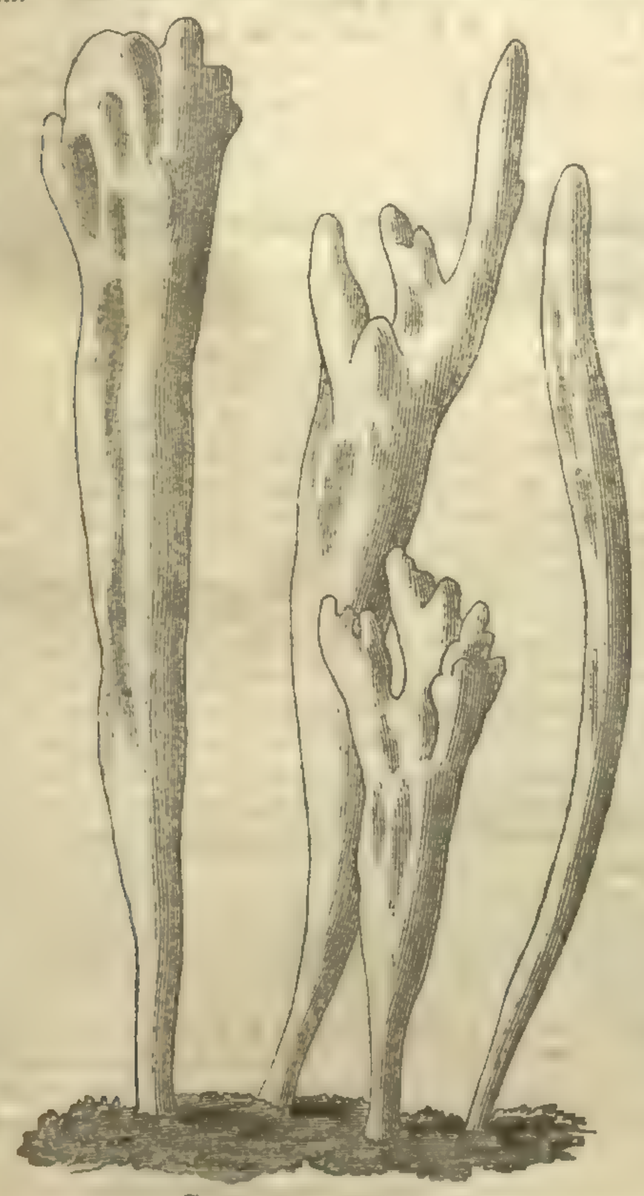
* The following history of the Garden at Sydney is given by Dr. HOOKER in his Flora of Tasmania:—"The first Colonial Botanist of whom I have any information was Mr. CHARLES FRAZER, who, as I am informed, was a soldier in the 73d Regiment, then commanded by Lieut.-Col. MCQUARIE. He was an indefatigable collector and explorer, and enriched the gardens of England by numberless plants. His collection of dried plants are, I believe, in the British Museum, and many are in the Hookerian herbarium. He visited the Swan River in 1826-7, and Moreton Bay in 1828, and wrote excellent accounts of the vegetation of those districts (see Hook. Bot. Misc., vol. i., pp. 221 and 237). Mr. FRAZER also visited Tasmania, and established the Botanic Garden in Sydney. He died at the close of 1831 or beginning of 1832. On FRAZER's death, Mr. JOHN MCLEAN became Acting Superintendent, and held that post till the arrival of R. CUNNINGHAM.

"Mr. RICHARD CUNNINGHAM was appointed in 1833, and was murdered in 1835 by the blacks, when accompanying Major MITCHELL's second journey (see p. cxx.), when Mr. MCLEAN again became Acting Superintendent, and continued so till the arrival of ALLAN CUNNINGHAM in 1836, as mentioned in the notice of his life (p. cxvi.). A. CUNNINGHAM soon after resigned, when he was succeeded by Mr. JOHN ANDERSON, the botanical collector of Captain KING's voyage to South America and survey of the Straits of Magelhaens, etc. It was on KING's homeward voyage that ANDERSON was left at Sydney, where he made considerable collections, and held the appointment of Superintendent of the Garden till his death, when he was succeeded, in 1847, by Mr. CHARLES MOORE, the present active Superintendent, who has made extensive investigations, especially on the economic value of the vegetable products of New South Wales."

dition, are more simple. The species are often very difficult to distinguish from the inconstancy of the characters on which systematists depend, and unless the colour of the spores is attended to, which is quite as important here as amongst the Agarics, mistakes will constantly be made. Far the greater part are excellent articles of food, and even some of the smaller species, as for instance *C. vermicularis*, which is so common on lawns, resembling groups of little white candles, when sufficiently abundant are by no means to be despised. A few species are tough or bitter, and most of the yellow kinds must be regarded with suspicion. The more delicate species should be cooked



CLAVARIA RUGOSA.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

with white sauce, while the larger may be treated after the fashion of the Champignon. Dr. Badham, Persoon, and others give especial directions for dressing *Clavariæ*, which are, however, applicable to many other Fungi. The larger species require stewing for at least an hour, and are the better for an admixture of fine herbs and ham, to which the addition of Chives or a small portion of Garlic is indispensable. We have seen *C. vermicularis* formed into an elegant dish; but as the little Fungi must be tied up in bundles like Asparagus, care must be taken to remove the threads, or the most delicate of Fungi may be condemned as tough and impracticable, as once happened in our presence to the great mortification of Dr. Badham, who was looking out for unqualified praise of his new esculent.

Clavaria rugosa is a common inhabitant of our woods, though seldom occurring in quantities sufficient to make it worth gathering. In its most normal form it is of a delicate ivory white, thickening gradually upwards from the base, so as to form a regular club, the tip of which is often more or less lobed. Its surface is longitudinally wrinkled, from whence it takes its name, and if laid on a sheet of black paper, the white spores which it deposits soon become distinctly visible. It is, however, far from retaining always its regular simple form. It frequently is branched to a greater or less extent, in which case the branches are often cylindrical, though they retain their wrinkled appearance. A little attention will enable any one readily to distinguish this from other white branched species. Our figure represents the more normal condition, in which, though there is a tendency to division, decided branches are not developed.

Sometimes this *Clavaria* loses entirely its pure white, assuming a dingy cinereous hue, and in this condition it is very subject to be attacked by parasites which add materially to its unpleasant aspect. We have chosen this species to illustrate the genus as one most likely to fall every year under the notice of our readers, but there are others which occur in England of some importance as esculents, which we shall hope to have some future opportunity of noticing. Mrs. Hussey however considers this as the best British example, though *Clavaria coralloides* is far more abundant in the southern counties. *M. J. B.*

MADAME VERTE PEAR.

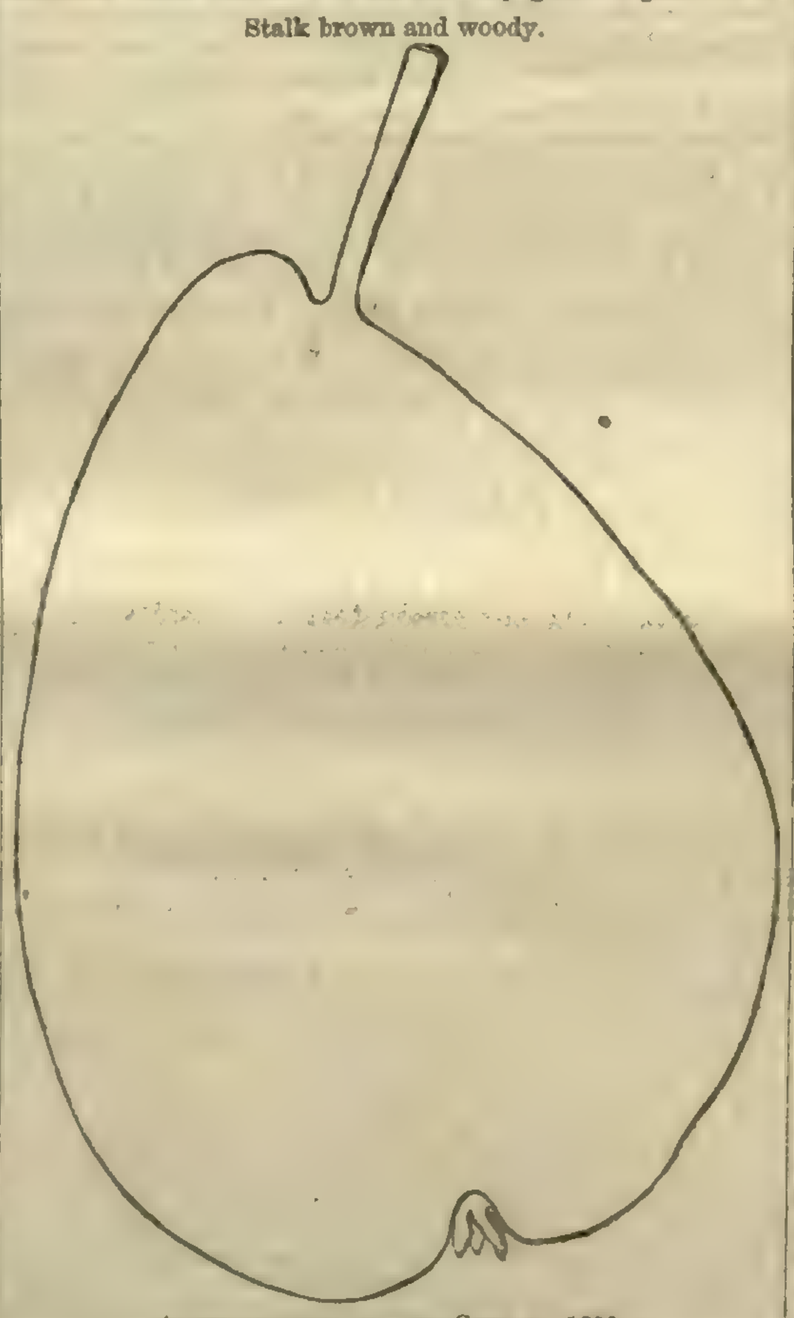
— (ORIGIN UNCERTAIN.)

THE name of this Pear, of which the accompanying is an outline, appears to be that of a lady called Verte. The name occurs in the catalogue of Van Mons, published at Louvain in 1823, p. 26, No. 206, supplement to the first series, but is not to be found in Diel, in the Fruit Catalogue of the Horticultural Society of London, nor in Downing's work of 1857. Dettrichs Handbuch der Obstkunde, Jena 1837, Vol. I., p. 544, contains the name, but the brief description given leaves it doubtful whether it has reference to the variety of which we are writing or not.

Some amateurs who were contemporaries of Van Mons assure me that the variety was raised by one Gevers, formerly a nurseryman at St. Josse-ten-Nooden, near Brussels, and was called after his sister, Madame Verté.

It is now 18 years since I first saw a variety of Pear, called Madame Verte, growing in the garden of an amateur residing at Brussels, and he informed me that he received it from Van Mons, who considered it a good sort.

The fine growth of the tree, which was from 15 to 20 years old, together with the form and colour of the fruit attracted my attention. A shoot from this tree was grafted on a strong wilding, and grew freely. The tree was trained as a half-standard pyramid, and bore for the first time in 1850. In the first, second, and third year of bearing, the fruit did not appear large enough for the variety to merit propagation, but in 1854 it became finer, and went on improving from year to year; and as the fruit became larger as well as more handsome, so also did the period of ripening become later. In 1852, according to my notes, the fruit was fit for use in the end of October and in November; but in 1855 it kept a month later; the crop of 1858 ripened in the end of December and in January; and that of 1859 commenced to ripen in the end of January. The strong tree belonging to the amateur from whom I obtained my graft is planted in



AVERAGE FORM OF THE CROP OF 1859.

richer soil than mine, and bears every season an abundance of fruit about an inch longer. These fruits are generally of the same shape and colour as that represented in the accompanying figure. The fruit at the time of gathering is nearly of the same colour as when ripe, only the hue is darker and the skin is rougher.

With regard to the tree, it is generally of moderately vigorous growth; the stem is strong and the shoots spreading, but rather ascending than inclined in a horizontal direction. The bark of the young wood is nut brown, speckled with olive grey; these specks disappear from the two-year-old wood, which is of a darker brown colour. The young shoots are stout, long, and flattened at the base; the buds are small and round, with yellow scales, and this is a striking characteristic of the variety. The leaves are rather small, inclining more to be narrow and lanceolate than heart-shaped, serrated, of a soft green, shining on the upper side. The stipules are short and filiform. The tree has not a wild appearance; yet it is hardy and a good bearer, the fruit being distinct from that of any other variety with which I am acquainted. The variety succeeds well on the Quince, and the fruit acquires a greater degree of perfection on that stock than on the Pear.

From the preceding article it appears that there are some varieties (to some of which we shall refer on a future occasion) which, though in existence for about half a century, are still almost unknown, and have not been sufficiently tested; and that to ascertain the merit and obtain a complete description of these they ought to be grown on the Pear stock during a period of 15 or 20 years, and not to be judged in the first few years of their bearing.

In the opinion of several who possess strong trees of the variety called Madame Verte, or Verté, about the same age as mine, there are few sorts to be preferred to it for pyramids in the open ground in respect to the beauty and productiveness of the tree and the quality of the fruit. This opinion I think too absolute, for we must wait much longer for perfect fruits, of this variety at least, from trees on the Pear stock; and at present the general wish is to obtain fruit as quickly as possible, which is only reasonable. I would therefore recommend all who intend growing this variety to give the preference to trees on the Quince stocks. *J. De Jonghe, Brussels, Feb.* 12.

[Fruit of this were tasted this day, February 27, and found in excellent condition, sweet and rich; but not so buttery as Glou Morceau. It is evidently an excellent late variety; though by no means equal to Josephine de Malines, now ripe, March 10.—*Note by* EDITOR.]

NEW GARDEN FERNS.

39. PTERIS TRICOLOR, *Linden.*

Fronds pedately pinnate-pinnatifid, *i. e* pinnate with the lower pinnæ posteriorly branched, and the pinnæ pinnatifid (as in *P. aspericaulis*); base of the segments greyish-white, forming a broad silvery stripe on each side of the purplish-red rachis, the rest green.

It is not too much to say that this is one of the most interesting of known Ferns, for being of moderate size, of elegant form, and of graceful habit, it has the additional recommendation of being beautifully variegated with three colours. The upper and larger portion of its blunt linear purple-ribbed segments is of a dark green, while their basal portion is of a silvery grey, as in Pteris argyræa (*Gard. Chron.* 1859, p. 671), and the rachis or rib to which they are joined, is of a bright purplish red. Thus each of the elongated pinnæ is marked with a broad silvery stripe down the centre, and in the centre of this again is a conspicuous red line. The young partially developed fronds are entirely of a purplish red. There is no doubt whatever that this charming plant, which has been introduced from Malacca by M. Linden and will soon be offered for sale, is a coloured variety of Pteris aspericaulis, for which the name of tricolor, given to it by Mr. Linden, may be well employed in gardens. It has exactly the same habit of growth as P. aspericaulis, and produces the greyish marbled primordial fronds peculiar to that plant. Whether or not P. aspericaulis itself is botanically a mere form of P. quadriaurita, which is the view Sir W. J. Hooker adopts in his "Species Filicum," is a question that may be left till there is some test discovered for the limitation of species. For the cultivator they are abundantly different, and this new Pteris tricolor will rank in gardens as a three-coloured variety of P. aspericaulis. Young plants of the tricolor Pteris were exhibited by M. Linden, at a recent meeting of the Floral Committee of the Horticultural Society, and were awarded a First-class Certificate. *T. M.*

TERRESTRIAL ORCHIDS.

YOUR extract from the Revue Horticole induces me to believe that our neighbours in France realise even less success in the culture of terrestrial Orchids than has attended similar attempts on this side of the Channel. At this I am not surprised, if (as appears to be the case) they have endeavoured to imitate the conditions in which Orchids are found naturally, amongst Grass and other herbage, as by doing so the reverse of what might be expected would be the result; the Grass and other weeds would be benefitted more by the assistance they would receive in the way of cultivation than the Orchids, and the latter would suffer in consequence of the overluxuriance of the former. This is not what occurs in their wild state, for though our native Orchids are usually found in close association with herbage of some kind or other, it will be observed that with the exception of a few kinds their period of flowering does not commence till the hot dry weather of summer has in a great measure modified the rankness of the plants around them, especially in upland districts where the greater number of our Orchids are found. The Orchids themselves do not suffer readily, as they have always a store of nourishment in their tuberous roots, which enables them to escape comparatively scathless, even during our hottest summers.

We are however told that the right plan of management has been found at last, from the fact of M. Rivière having found Spiranthes autumnalis growing amongst some rejected roots of Iris florentina, though in what way the one could be benefited by the other beyond the protection afforded I am at a loss to guess. The same plant might have been found thriving under a Hazel or Bramble bush, yet it does not follow that the presence of these is necessary to the successful cultivation of Orchids. However, if our friends on the other side of the Channel have found the genus Iris suitable dry nurses for terrestrial Orchids, we shall not quarrel with them for using it for that purpose, though I can assure them that no such aids are necessary in cultivating many (perhaps I might say all) of this interesting tribe of plants.

Perhaps your readers may remember that some dis-

cussions took place on this subject in your columns some eight or nine years ago, when it was boldly asserted by some that our native Orchids were uncultivable—"It couldn't be done." I and others however gave the results of our experience, and from that time to the present I have had no reason to alter in any way the opinion I then expressed. At that time I was living in the south of England, in a locality abounding with terrestrial Orchids, numbering altogether some 14 species, and I had therefore ample opportunities of observing their habits. Being then, as now, much interested in wild plants generally, but more particularly Orchids, I took the following as being the most showy and promising under my especial care in a flower border, viz., Orchis mascula, maculata, morio, pyramidalis, and latifolia; Gymnadenia conopsea, Habenaria bifolia, Listera ovata, Ophrys apifera and muscifera, and Epipactis latifolia. I found that these could not only be kept alive, but that most of them became much improved by cultivation. Whether any difficulty would have attended a trial of Spiranthes autumnalis I cannot say, as I did not consider it showy enough for flower-border purposes.

The system I adopted with regard to them was very simple—those which I could easily distinguish by their leaves I lifted in the spring before they began to throw up their flower spikes; the others were taken up when in flower, and all of them without any of the soil in which they were growing adhering to their roots. They were planted in groups of about 12 together; holes about a foot deep were dug in the border and filled up with a light loam well decomposed, unmixed with peat, rotten leaves, sand, or manure of any kind, and in this they flourished, with no more care than is usually given to border Narcissi. I must admit, however, that those with tuberous roots succeeded better than those with fibrous roots, possibly from their not having had the necessary amount of shade which they enjoy in their native copses. I would now mention one more in addition to those named above, viz., Listera nidus-avis, which in all probability will prove an awkward subject, from the peculiarity of its habits, growing as it does amongst rotten sticks, leaves, and tree roots; its Fungus-like roots differ much from those of all others with which I am acquainted. With me it was a complete failure, living no longer than one season, and I did not think it worthy of a second trial.

The neighbourhood in which I now reside is not famous for Orchids; I have as yet met with only five species—three of which I have had in cultivation three years, and they are coming up again as vigorously as ever, and seem quite as much at home here in the midland counties as if they had been on the Southdowns, where both soil and climate are very different. This induces me to believe that terrestrial Orchids may be cultivated successfully in any part of England.

I am not aware whether or not it has ever been tried to raise hardy Orchids from seed; but a circumstance once came under my notice, which makes me think it would not be difficult to do so. I had at one time occasion to plant the corner of a field with a mixture of forest trees. This field had been under cultivation for ages, and had been ploughed and manured in the ordinary way for farm crops. The trees prospered, and in a few years began to crowd each other. In walking through this plantation one day I was much surprised to find a number of fine patches of Epipactis latifolia just coming into flower, and hundreds of smaller plants scattered about in different parts of the plantation wherever they could find headroom, as the Spruce Firs were beginning to occupy rather more than a fair share of the ground. Now, these could only have sprung up from seed when the ground was left undisturbed by the plough and harrow; the seeds in all probability having been wafted by the wind from an old plantation adjoining, where a few solitary specimens of the Epipactis were growing. This looks at least as if ground that had been cultivated a few years before does not disagree with Orchids, as these plants were much more luxuriant than those in the old plantation.

I have now, I trust, said enough to hold out some hope of success to those who have opportunities and are desirous of trying their hand with this very deserving portion of our native Flora. And in the meantime I would ask my professional brethren who have tried the cultivation of native Orchids to state what amount of success has attended their experience, in order that we as a class may not any longer lie under the reproach of not being able to manage such a very interesting section of our native plants. *A. D., Sudbury Hall, Derby.*

Home Correspondence.

The late Stormy Weather.—Amongst the many valuable trees that were uprooted by the gale on the 27th and 28th of last month at Osberton may be mentioned a very fine Red Cedar; it measured 60 feet in height, and the circumference of the tree at 20 feet from the ground exceeded 54 feet; in shape it was a regular pyramid. This Cedar formed a good associate to the magnificent Cembra Pine, noticed by me a short time since. It has been raised and placed in its former position, and with some hopes of success. The wind also committed great havoc among an avenue of Silver Firs, which for height and size are unequalled perhaps in England. It would be interesting to have some record of the damage and quantity of trees uprooted by the late gales on some of the large wooded estates in different counties. I would be happy to contribute to this undertaking. *Edward Bennett, Osberton Hall, Worksop, Notts.*——The wind on the 27th and 28th ult. uprooted many trees, and among others some large Elms and Firs in the village. The road was in consequence quite stopped up for some time; a fine Cedar of Lebanon on our lawn was uprooted, carrying with it several tons of earth. It was upwards of 60 feet high, with a splendid stem, very straight, and containing from 100 to 200 feet of timber, exclusive of branches. Another fine old tree close by, but not on this estate, is also very much disfigured; these trees are upwards of 100 years old. Some of the Conifers at this place I expect are much shaken and loosened. *George Plumbly, Gardener to C. J. Dimsdale, Esq., Essenden Place, Hatfield, Herts.*

Black Barbarossa Grape.—My experience with regard to the cultivation of this Grape fully coincides with that of Mr. Culverwell (see p. 146). I have long entertained an opinion that to do justice to the Barbarossa it should be treated like a Muscat in every stage of its growth. If this system were practised I am confident that there would be fewer complaints respecting its non-bearing properties. I have frequently seen late-started Vines of this variety, very strong and healthy, show only indifferently. Early forcing would obviate this, and check that gross wood-producing tendency to which this Vine is more or less subject. Except some more successful mode of treatment is found out with respect to this Grape, I fear that like the Cannon Hall it will soon go out of general cultivation. As a stock for more tender Grapes it answers admirably, but I hope that we shall not see such a valuable variety devoted exclusively to that purpose. *J. Edlington.*

Acacias.—Will you be so good as to tell me the name of the Acacia of which I send a specimen? It was given to me as Acacia pubescens, but I have never met with that name in any of the nurserymen's catalogues. It is a most beautiful thing, and grows up to the top of the greenhouse supported by wires from rafter to rafter, and is planted in the soil; it never bears any seed, and I have never been able to strike any cuttings. I shall therefore be thankful for instructions on this point as well as its right name. *A. C.* [It is Acacia pubescens, by no means an uncommon plant. You must persuade it to seed.]

The Mannington Pearmain.—Is this the true Mannington Pearmain?—if so a better Apple never grew in British soil. We have a large orchard, and more than 100 dwarf and espalier trained trees, yet this was the only tree that gave us anything like a crop this season. It did not come into flower till the end of May; we have it in general use from January till the end of June, some of the best are larger than this and truly handsome; this season they are more russetted than usual, and they do not keep quite so plump and crisp as last year; I believe I have kept them a little too dry. The tree is about 30 years old, and annually produces from 12 to 20 bushels, but this season only 9 of good fruit. Some seasons they hang on the tree till the end of October, and perhaps we did not gather them quite soon enough, which might be the reason they appear unusually russety. *W. P.* [Would you favour us with a score of good strong grafts? The root galls next week.]

Camellias.—Some years ago I was accustomed to raise Camellias from seeds, and I perceive some of the varieties introduced by me 30 years since yet linger in the foreign Horticultural Catalogues. It is said that our life is a circle, we return to the point we started from; and certainly in rearing Camellias from seed, there appears some truth in the adage. The world is said to be progressing, arts and sciences and everything partaking of its onward speed. Now it seems to me that the Camellias form no exception; for they seem to produce flowers now in half the time they formerly did. I have now in blossom a plant only 3 years old, 10 inches high, with only 9 leaves, that has now two blossoms upon it 4½ inches in diameter. The shape of the flower is what we used to call Hollyhock-formed, where there are 2 to 3 rows of broad petals, and a small cluster in the centre, evidently formed from the transmutation of stamens. A few perfect stamens are protruded above this central cluster, and add much to its beauty. This plant I believe to be one of those from the imported seeds from Florence, which were presented to the Fellows of the Horticultural Society. I am curious to know if other cultivators have similar instances of precocity; and whether the climate in which the seeds were ripened has modified its development. *William Masters, F.H.S., Exotic Nursery, Canterbury.*

Rainfall at Saltram Gardens, Plympton St. Mary 1859, *as measured by Howard's Rain Gauge:*—

	Inches.		Inches.
January	4.06	Brought forward ..	16.59
February	3.19	July	1.12
March	3.26	August	3.80
April	3.75	September	7.76
May	1.37	October	6.23
June	0.96	November	2.70
		December	4.40
Carried forward	16.59	Total	42.60

John Snow.

Timber Pruning.—In your Number for February 25 it is stated that "when healthy branches are cut from a tree, it is best not to cut them at first close to the stem so as to allow the bark to close over the place, unless the branches are not more than 3 or 4 inches in diameter, when they may be cut away at once. In the case of a dead branch it is best to cut it close at once." The great point in pruning trees is to preserve the timber as much as possible from flaws, specks, and other unsoundness. Your advice therefore with regard to the removal of healthy branches, by which you evidently intend large limbs, is correct; but why should not the same treatment be extended to branches of 3 or 4 inches in diameter, and to dead branches which you recommend should be cut close at once? By cutting these off close, you in the first instance leave a surface of 3 or 4 inches in diameter, to be exposed to the influence of the weather and to acquire a certain state of discolouration and decay till it is closed over by the bark; and in the second instance to the covering over of the remains of an already decayed branch. In both cases these become a mass of unsoundness, to the depreciation of the value of the timber. The practice that is followed in the royal forests under the present surveyor is to allow the trees to a certain extent to prune themselves, Nature doing its own work; but in cases where it is necessary to aid Nature in this operation all branches, however small, are never cut close to the stem; whenever it is desirable to remove a branch it is cut off long, leaving a stump of 6 or 8 inches in length. This stump gradually decays; the bark of the trunk presses closely round its base, forming, as it were, a constriction, and in process of time the stumps become so wasted, and the bark of the trunk presses so firmly, that the rotten stump is literally voided out, its place healed over, and no discoloured or decayed surface is enclosed by the bark. Excellent examples of this mode of natural pruning may be seen in any of the young plantations of the royal forests, and those in the neighbourhood of London who are curious in these matters may have an opportunity of seeing the process in the plantation of handsome and vigorous young Oaks in Richmond Park which has been planted within the last 16 years. There the trees are allowed to prune themselves. The lower branches, deprived of the full influence of light, gradually languish and decay, the bark of the trunk presses closely round their base, and as they are pushed out the bark closes up the place they formerly filled. To those who are interested in the production of timber this is a subject that demands their greatest attention, as there can be no doubt it is the best course to be pursued to secure sound and valuable timber; and I know no place where the subject can be so well and profitably studied as by an inspection of the young plantations in the royal forests. *Arborist.*

Societies.

Horticultural: *March* 6.—*Fruit Committee.*—Donations of various seeds and fruit trees, presented to the Society for trial in the Garden at Chiswick, were announced. Among fruits produced at this meeting were Gloria Mundi Apples, large and fine, from C. W. Strickland, Esq., of Hildenley, through whom was also sent Lincoln Pippin, an Apple little known about London, but said to be a good kind, and very handsome in appearance on the tree. The same gentleman likewise furnished Dumelow's seedling Apple still in good condition, though at one time frozen quite hard on the shelves of the store room in which they were kept. Blenheim Orange, Golden Pearmain, and Lewes's Incomparable Apples were furnished from Woodstock Park, Kilkenny by Mr. M'Donald. Loquats ripened in a greenhouse were also exhibited by R. Gunter, Esq.; and from Mr. Nweton, of Enfield Chase, came a kind of Rhubarb raised by Mr. Baldry, of Enfield, which was spoken of by the exhibitor as being very fine and unusually free from stringiness or fibre. Of the three kitchen Apples, Norfolk Beaufin, Bedfordshire Foundling, and Dutch Mignonne, sent to the last meeting, and now reproduced in a baked state, the best were found to be the two first, which were awarded first and second prizes in the order in which the names stand.

Linnean: *March* 1.—Professor Bell, President, in the chair. H. G. Bohn, Esq., was elected a Fellow. The following papers were read:—1. "Botanical Notes made during a month's tour to the Three Pagodas in Moulmein, and in the Shan States in February, 1859," by the Rev. C. Parish. In ascending the Attaran the plant that appears most abundant is Paritium tiliaceum, which grows along the water line for several miles forming a perfect tangle with its twisted stems. About the villages the following wild fruit trees are commonly found:—Mangifera oppositifolia, of which there are two varieties, one with sweet, the other with acid fruit; Heritiera attenuata, and Elæagnus confertus. Sandoricum indicum is a frequent tree, the fruit being eaten; so is Eriodendron pentandrum, cultivated for its silky cotton, used to stuff beds and pillows. The site of the Burmese villages is almost invariably marked by Cocoa-nut and Palmyra trees; the latter planted wherever there is a pagoda or monastery. The Phoongees also show their taste by cultivating near their monasteries Amherstia nobilis, Mesua ferrea, and Calophyllum inophyllum. The Fern of the river banks is Drynaria quercifolia, which clothes the trunks of all the old trees from top to bottom. In such places are found three beautiful creepers, Echites macrophylla,

E. rhynchosperma, and E. paniculata; the first of these yielding a considerable quantity of caoutchouc. Twenty or thirty miles up the river, where the banks are not so muddy as below, Paritium tiliaceum ceases, and a species of Salix takes its place, and continues until at about the point where the flood-tide fails; it is in turn succeeded by a Willow-like Euphorbiaceous plant in front, the Salix assuming the proportions of a tree and overhanging it. Bamboo is here abundant; long rafts of it are floated down to Moulmein for building and other uses. Calamus Draco, C. verus, and C. Rotang are frequent, the two last ascending to the tops of the highest trees, and forming an impenetrable tangle below; nothing can be more elegant than the shining glossy foliage of these slender Canes as they wave to and fro in the wind. The boats were left at Thaliya, 80 miles or so from Moulmein, by the tortuous river course, and the journey to Thoonzoo, or the Three Pagodas, which are nothing more than three heaps of stones raised to mark our boundary, was thence continued by land. During the whole journey from the Attaran, till the Houdran was struck (13 days), the same geological formation prevailed, viz., mountain limestone. In the low ground it was rare to see more than a hundred yards in advance; indeed so dense was the jungle that only an occasional sight was obtained of the tops of magnificent perpendicular rocks close at hand; and among the mountains the case was much the same, an occasional glimpse of some distant feature in the landscape being all that could be obtained. From Thaliya to Thoonzoo there is a gradual rise through undulating country till at the latter place a height of about 700 feet has been gained; and here the rocks were denuded of soil and nearly bare. In swamps and dark hollows, along this course, the vegetation was peculiarly tropical, various Palms occur, and Ferns flourish; on the ground Goniopteris lineata, Angiopteris crassipes, Dictyopteris macrodonta, Sagenia hippocrepis, Pteris longipinnula, and others; while Lomaria scandens and Leptochilus axillaris, the former especially, climb to the tops of the trees and add much to the denseness and gloominess of such spots. Of Orchids collected on the journey, there were: Vanda gigantea, only once met with, but there was more in the one bunch of it than could be conveniently packed on an elephant; it was indeed a most wonderful aerial growth; various Dendrobia, Saccolabium guttatum, Aërides cornutum and a few species allied to A. affine; Limatodes, a very handsome species; two species of Cypripedium, one with very large flowers; besides many small kinds. The most frequent creepers or climbers were Butea superba, Congea velutina, and Thunbergia Harrisii, which may be said to be ubiquitous. It is extremely remarkable that the last-named should have remained so long undescribed, as several botanists have visited these jungles, and it is almost impossible to walk two or three miles in any part of the province without meeting with it, besides which it is in flower nearly all the year round. The Ferns noticed were:—Drynaria quercifolia, which was never seen in the hilly districts of the Siamese Shan States, its place being there supplied by D. coronans, which in like manner was entirely absent from the plains; Alsophila gigantea, said to grow 50 feet high, and to occur in the Tenasserim mountains, but not one was seen with a true caudex, or that could be called a true Fern, though hundreds of the plant were met with, generally with fronds 5 to 6 feet high. Mr. Parish was much struck with the wonderful luxuriance of the hilly district of Kiouk-Koung in the Siamese territory. The jungle was impenetrable from the abundance of various species of Bambusa, Calamus, Zalacca, Licuala, Corypha, Caryota, &c. The trunks of the large trees were clothed to the top with Aroideæ and Ferns; and the ground was in many parts knee-deep in beautiful Selaginellas. A very graceful Æschynanthus seen here appeared to be new; it had small ovate-lanceolate leaves and pretty pinkish flowers, which hung down from the stems to the length of 3 or 4 feet. Another beautiful tree about 40 feet high in full flower resembled a Horse Chesnut, and proved on examination to be an Æsculus; the flowers are white, beautifully tinged with red and yellow. Near the village of Loon-the-Koung, was a small extent of country clear of jungle, and here Pteris aquilina was seen. At this place with an elevation of about 2000 feet above the sea-level, were seen an Æsculus, a Salix, and Pteris aquilina, growing in company with Borassus, Dillenia, Dipterocarpus, Pandanus, and other tropical forms. The Pteris was seen growing 1000 feet below this. At about the same level Adiantum Capillus-Veneris was gathered on rocks in the Megatha river. The Karens who inhabit the wild district are few, and their villages many miles from each other; they live entirely on vegetables, and have no domestic animal but the dog. Though these jungles abound with wild fowl, they keep no poultry, so that the purchase of eggs or milk, or of anything indeed but Rice, is hopeless. Their cultivation is of the rudest kind, a fresh clearing being made every year for the Rice crop, which is their chief food. Besides rice, they grow, however, Tobacco, Sesamum, Cotton, Sugar-cane, and Chillies.—2. "On the Value of Hairs as a Character in determining the Limits of subordinate Groups of Species, considered in connection with the genera Eurybia (Cass.) and Olearia (Mönch) of Compositæ." By William Archer, Esq. "My attention," Mr. Archer observed, "was first directed to the question of the value of hairs in determining the differences between closely allied species, by a passage in one of Dr. Lindley's admirable botanical works, and I have constantly made use of this character, often finding it of practical application. For example, the distinction between Cassinia aculeata and Ozothamnus rosmarinifolius cannot otherwise be ascertained without an examination of the receptacles of the specimens, but they may be quickly separated by means of the hairs, those on the stem of the former being tomentose, while those on the stem of the latter are arachnoid." Mr. Archer, after briefly noticing the application of these tests to the discrimination of the plants referred to the above-named genera, concluded with a conspectus of the species in which the primary groups were founded on characters derived from the nature of the hairs, which were described as T-formed, or divaricate-furcate, stellate, lanate, viscose-glandular, or septate.—3. "Mosses of the Amazon and Andes," by R. Spruce, Esq. In this memoir Mr. Spruce commenced a description of the more remarkable genera and species of Mosses he had collected on the Amazon and its tributaries, and in the Andes of Maques and Quita. The description related to a new species of Andræa, one of Acrochisma, and three of Tayloria.—4. "On Sphærocoma, a new genus of Caryophyllaceæ, from Aden, in Arabia Felix," by T. Anderson, Esq., M.D. This new genus was stated to occur in the Hookerian Herbarium, among specimens collected by Drs. Hooker and Thomson in 1847 and 1851. It belongs to the tribe Alsineæ; its nearest ally being Forskahl's Gymnospermum, which it very much resembles in habit, but is distinguished from that by its two ovules and bifid stigma.

Notices of Books.

A Manual of Domestic Œconomy, with Hints on Domestic Medicine and Surgery. By W. B. Tegetmeier. 24mo. pp. 176. (Groombridge.)

This little volume, "prepared at the request of the Committee of the Home and Colonial Society," has already passed though four editions into a fifth. Its object is to give the female students of training establishments some instruction in domestic œconomy, by far the most important secular subject to which they can be directed. We give its Contents, as the best possible evidence of the class of subjects which the intelligent author has written upon:—

"The House; situation, dryness and drainage, ventilation, water, rent. Furniture. Cleaning; sweeping, dusting, scrubbing, to clean floor-cloth, white and lime washing. Grates and Fuel; the open fire, heating stoves, cooking ranges, cooking stoves, ovens, gas stoves, fuel. Food; purposes accomplished by food, warmth-giving food, flesh-forming food, fatty substances, bone-producing materials. Animal Food; flesh, processes of cooking, bones, fish, eggs, milk and its products. Vegetable Food; corn plants, Wheat and its preparations—bread, &c.; Oats, Barley, Rice, Indian Corn, starch and its varieties, Leguminous seeds—Peas, Beans, &c.; fresh vegetables—Potatoes, Cabbage, &c. Condiments and Economical Cookery; condiments—salt, vinegar, spices, &c.; economical cookery—principles of; economical cookery—recipes for. Beverages; water, tea, coffee, cocoa and chocolate, ginger beer, beer. Clothing and Washing; clothing, washing. Management of Domestic Animals; cow-keeping, pig-keeping, poultry-keeping, bee-keeping. Domestic Expenditure. General Management of the Sick Room. Fever. Eruptive Fevers; measles, scarlet fever, small pox, disinfecting. Contagious Skin Diseases; itch, ring-worms, scald head. Croup—Cold, or Catarrh—Hooping-Cough—Diarrhœa; croup, cold or catarrh, hooping cough, diarrhœa and cholera. Domestic Surgery; scalds and burns, chilblains, chapped hands, whitlows, sprains, wounds, bruises, drowning and suspended animation. Domestic Remedies; blisters, poultices and water dressing, liniments, lotions, application of leeches. Internal Remedies; aperients, emetics, narcotics. Poisons; vegetable poisons, animal poisons, mineral poisons."

A Lady perfectly conversant with all such subjects—and who but Ladies are?—reports to us that the instructions are clear, judicious, sufficient; therefore valuable to those who know something, and invaluable to those who know nothing. Her only objection is that it is too scientific—but then, as she says, "you may skip the science."

A third part of Mr. Howard's elaborate *Illustrations of Peruvian Barks* (Reeve) has lately been issued; and a fourth is announced. The subjects of that which has just appeared are *C. succirubra*, which yields "Red-bark," the most valuable of all the kinds; *C. ovata*, supposed erroneously to yield "Ash" bark, but apparently unknown in commerce; and *C. crispa* (the *C. Condaminea* of Humboldt and Bonpland), the source of the "fine Loxa" bark of modern commerce.

The *Engineer's Handbook*. By C. S. Lowndes (Longmans), forms a duodecimo volume of 120 pages, illustrated with diagrams. The writer's object is stated to be "to lay before the young engineer the principles which should guide him in the construction of machinery, and to put together in a concise and intelligible form the necessary rules and tables for his assistance." This task has been well performed by the author, who is himself an experienced engineer. How to determine the strength and weight of materials, the form and working power of boilers, the economy of expansion, the speed of engines, the pressure of steam are among the great questions treated of. The whole concludes with extensive tables for facilitating the engineer's calculations.

The fifth part of the new edition of *Ure's Dictionary of Arts, Manufactures, and Mines*, completing the first volume, is rich in important articles—Coal-gas, Coffee, Colza, and Cotton manufactures are fully discussed. We are, however, again obliged to criticise the botanical parts of the articles supplied to the editor. It is too bad to say that Cork is the bark of Quercus liber, meaning Suber, to spell Diospyros Dyospyros, and Coffea Coffæa.

Routledge's Illustrated Natural History, Part XII., concludes the Cetaceous animals, and commences Rodents, or gnawers, among which rats, mice, beavers, porcupines, &c., are now disposed of. We give at length the account of the beaver:—

"The best account of this animal is to be found in Audubon and Bachman's valuable work on the quadrupeds of North America, to which work I am indebted for the following particulars.

"The beaver lives in societies, varying considerably in number, and united together in the formation of works which may fairly be considered as belonging to the profession of the engineer. They prefer to make their habitations by small clear rivers and creeks, or close to large springs, although they sometimes take up their abode on the banks of lakes.

"Lest they should not have a sufficient depth of water in all weathers and at all seasons, the beavers are in the habit of building veritable dams, for the purpose of raising the water to the required level. These dams are composed of tree-branches, mud, and stones, and in order effectually to resist the action of the water, are about 10 or 12 feet in thickness at the bottom, although they are only 2 feet or so wide at the summit. When the different parts of the stream run with varying velocity, the formation of the dam is really a triumph of engineering skill, for wherever the stream is gentle, the dam is built straight across it; but wherever the current runs smartly, the dam is curved so as to present a convex surface to its force. It often happens that when a dam has been made for some years, its dimensions become very large, in consequence of the trees and branches that are intercepted by it, and in process of time it sprouts thickly with vegetation, and even nurtures trees of some dimensions.

"In forming the dam, the beaver does not thrust the ends of the stakes into the bed of the river, as is often supposed, but lays them down horizontally, and keeps them in their place by heaping stones and mud upon them. The logs of which the dam is composed are about 3 feet in length, and vary extremely in thickness. Generally, they are about 6 or 7 inches in diameter, but they have been known to measure no less than 18 inches in diameter. An almost incredible number of these logs are required for the completion of one dam, as may be supposed from the fact that a single dam will sometimes be 300 yards in length, 10 or 12 feet thick at the bottom, and of a height varying according to the depth of water.

"Before employing the logs in this structure, the beavers take care to separate the bark, which they carry away, and lay up for a winter store of food.

"Near the dams are built the beaver-houses, or 'lodges,' as they are termed; edifices as remarkable in their way as that which has just been mentioned. They are chiefly composed of branches, Moss, and mud, and will accommodate five or six beavers together. The form of an ordinarily sized beaver's lodge is circular, and its cavity is about 7 feet in diameter by 3 feet in height. The walls of this structure are extremely thick, so that the external measurement of the same lodges will be 15 or 20 feet in diameter, and 7 or 8 feet in height. The roofs are all finished off with a thick layer of mud, laid on with marvellous smoothness, and carefully renewed every year. As this compost of mud, Moss, and branches is congealed into a solid mass by the severe frosts of a North American winter, it forms a very sufficient defence against the attacks of the beaver's great enemy the wolverene, and cannot readily be broken through, even with the help of iron tools. The precise manner in which the beavers perform their various tasks is not easy to discern, as the animals work only in the dark.

"Around the lodges the beavers excavate a rather large ditch, too deep to be entirely frozen, and into this ditch the various lodges open, so that the inhabitants can pass in or out without hindrance. This precaution is the more necessary, as they are poor pedestrians, and never travel by land as long as they can swim by water. Each lodge is inhabited by a small number of beavers, whose beds are arranged against the wall, each bed being separate, and the centre of the chamber being left unoccupied.

"In order to secure a store of winter food, the beavers take a vast number of small logs, and carefully fasten them under water in the close vicinity of their lodges. When a beaver feels hungry, he dives to the store heap, drags out a suitable log, carries it to a sheltered and dry spot, nibbles the bark away, and then

either permits the stripped log to float down the stream, or applies it to the dam.

"Their teeth are wonderfully powerful and sharp, and their jaws are possessed of singular strength.

"So sharp are their teeth, and with such address does the animal use them, that a tame beaver has repeatedly been seen to take a Potato or an Apple in his fore-paws, to sit up on his hind feet, and by merely pressing the Apple against his lower incisors, and manipulating it dexterously, to peel it as really as if the operation had been performed by human hands with the aid of a knife.

"Not all the beavers employ themselves in these united labours, for there are some which, like drones, refuse to take any part in the proceedings, and are technically called 'Les paresseux," or the idlers, by the beaver-hunters. These animals make no dam and build no house, but content themselves with excavating long tunnels and taking up their abode therein. Several of these idlers inhabit the same burrow, and as they are always males, it is supposed that they must have been conquered in the contests which take place between most male animals while they are seeking their mates, and that they must have retired into comparative solitude until they have gained sufficient strength and courage to renew the fight. These idlers are gladly welcomed by the hunters, for they are easily caught, and a skilful trapper thinks himself ill-used if he does not capture every idler that he may meet.

"In spite of their store of provisions, the beavers become very thin during the winter months, so that they are in bad case when spring comes in. However, the succulent diet which they then find has a rapid and beneficial effect upon them, and by the beginning of autumn they are quite fat. By study of the beaver's habits, the trappers are enabled to prognostigate the kind of weather which is likely to happen. For example, as it is well known that the beavers always cut their winter's store of wood in good season, the fact of their early commencement of this labour shows that winter will be earlier than usual.

"The colour of the long shining hairs which cover the back of the beaver is a light chesnut, and the fine wool that lies next to the skin is a soft greyish-brown. The total length of the animal is about 3½ feet; the flat, paddle-shaped, scale-covered tail being about 1 foot in length. The flesh of the beaver is eaten by the trappers, who compare it to flabby pork. The tail is something like beef marrow, when properly cooked, but it is too rich and oily to suit the taste of most persons. The female beaver produces about three or four young at a litter, and the little creatures are born with open eyes."

TRADE LISTS RECEIVED.—LOUIS VAN HOUTTE (Ghent), Prix courant des plantes de serres et de plein air, suivi d'un table alphabétique générale de tous les genres y mentionnés.—PARKER & WILLIAMS (Holloway), a select Catalogue of Flower, Vegetable, and Agricultural Seeds offered for sale in the spring of 1860.

Miscellaneous.

THE NEW FLOWER MARKET, COVENT GARDEN.—A great central metropolitan market for flowers has been erected in the shape of a pretty glass and iron building just completed on the south side of the new Opera-house. Its ground-plan and shape may be best described as resembling the letter L, the largest and principal entrance being by the side of the Italian Opera, at the end of the longer arm of the letter, while the other entrance opens upon Covent Garden Market. In a direct line from these two entrances, run the main arcades, and over the point formed by their junction at right angles rises a lofty dome. The extreme length from the Bow Street entrance to the west wall is 228 feet, and the short arm from Covent Garden Market to the theatre wall 100 feet. The width of each of the main arcades is 75 feet, of which the light semicircular arched roof occupies 50 feet, with two side aisles between the main columns and the walls, each nearly 13 feet wide. The springing of the arches for the roof is 29 feet from the ground, and on to the top of the arched roof is 57 feet; the roof is thus almost a perfect semicircle. The dome is also nearly a complete hemisphere, 50 feet in diameter at the base and 25 feet high, making the total height to the circular lantern it supports a little over 90 feet in all. The principle of light and elegant design for which the entire structure is remarkable is fully carried out in the interior. The cast-iron columns supporting the roof, instead of being, as is usually the case, mere iron cylinders, rough and unadorned, are all cast of a handsome pattern, with ornamental bases and rich capitals, the latter perforated to ventilate the basement story beneath the market, with which the hollow columns communicate. The aisles are, as has been stated, nearly 13 feet wide and 30 high, the theatre wall forming the wall of the north aisle, and the wall of the Arcade the south. The latter is pierced with recessed windows to correspond in appearance with that of the theatre. The arches which carry the roof of the nave are trellised, and of very light construction. The basement floor under the market has the same area as the building above it, and is 16 feet high; 48 10-inch cast-iron columns carry the floor of the Arcade above on wrought-iron girders, the spaces between which are filled in with tiled arches, so as to make the whole place fireproof. Through all parts of the building hot-water pipes pass for keeping up the temperature during winter, and gas is laid on to every part, so that in case of night *fêtes*, as with the Volunteer Ball, which was held last Wednesday night, the whole structure can be illuminated in the most brilliant manner. In this new flower market it is hoped to bring together under one roof the immense trade in plants and flowers, which is now so much divided. The flowers are to be arranged in raised banks in the centre nave, with smaller ones in the aisles. Seeds, cuttings, tools, and ornamental garden furniture of all kinds will be sold only in the aisles. Neither fruit nor vegetables will be sold there. We understand that stalls are now being let to such nurserymen and florists as may apply for them, but that as yet a very small number only have been taken.

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Push on Camellias that have fairly started their buds with a warm moist atmosphere, and plenty of weak manure-water. Also get a portion of the Epacrises into a gentle heat as soon as they have sufficiently recruited their energies after flowering. These are exceedingly useful plants for winter, and by starting them into growth about this time, and getting their wood ripened early, they will be in full blossom in November. Proceed as diligently as possible with the repotting of such of the hard-wooded greenhouse plants as require it, so as to afford them every chance to make a vigorous growth. Be careful, however, before potting to have the ball in a nice, moist state, and avoid giving large shifts to weakly growers. Endeavour to keep newly-potted specimens together as much as possible, keeping the house rather closer, and the atmosphere moister than usual. See that soft-wooded plants, as Pelargoniums, Cinerarias, &c., are allowed plenty of space, and that they are properly supplied with clear, weak, manure-water, and kept perfectly clear of insects. Give air freely to these on every favourable opportunity, but do not allow cold winds to blow over them, and disfigure their foliage.

FORCING DEPARTMENT.

PINERIES.—Maintain a thoroughly moist atmosphere, but do not push young plants too rapidly until the days get warmer and longer, when there will be no danger of inducing weakly growth. Avoid allowing water to lodge in the hearts of plants showing fruit; also spare the flowers of those in bloom with the syringe. VINERIES.—See that the houses in which the Vines are not yet started are properly cleaned—the Vines painted with the usual composition of soft soap, sulphur, &c., and everything put into good working order; also get the rods bent in time, so as to cause them to push their buds regularly. Attend to disbudding and stopping, &c., as may be necessary in the succession houses, and see that the inside borders are in a properly moist state, giving tepid manure water when necessary, and do not be afraid of giving too much of this to Vines fruiting in pots. Be careful of coal, and shut up early in the afternoon; for, depend upon it, there is no heat so congenial to vegetation as that derived from the sun's rays. Where plants are grown under Vines keep a sharp eye upon them for black thrips, and use every means to keep them clear of this pest, which if once allowed to get upon the Vines, will spread with amazing rapidity, and will soon ruin the foliage. This is not only the most destructive, but the most difficult of insects to extirpate, and should therefore be kept under by every possible means. Azaleas are exceedingly subject to it, and young plants of these can hardly be obtained from the nurseries clear of it, and should never be grown in Vineries. FIGS.—Attend to preserving a proper degree of moisture in the borders or pots, and guard against red spider by maintaining a moist healthy atmosphere and a liberal use of the syringe. It is not very usual to thin the crop of this fruit, but, in cases where the crop is very heavy, timely thinning may prevent this being done by natural means at a later period, and to too great an extent, and will also be of much service to the general health of the trees, and towards securing a good second crop. CHERRIES.—In the treatment of these aim at imitating nature during a very favourable spring as nearly as possible, until the fruit is stoned, when they may be pushed on by a warm moist atmosphere. Here, as elsewhere, insects will have to be contended with, and must be eradicated immediately they are perceived. STRAWBERRIES.—Bring on succession plants very gradually, and afford those in bloom a rather dry atmosphere, with a free circulation of air, as they set their fruit badly in a moist close atmosphere. Plants swelling their fruit must be liberally supplied with clear, rather strong, manure-water, and if fine large fruit is expected thinning must be resorted to immediately the fruit is fairly set.

FLOWER GARDEN AND SHRUBBERIES.

Sweep and thoroughly clean lawns, and give them a double rolling with a heavy roller, to render the turf smooth and solid. If any alterations or planting still remain unfinished every available hand should be concentrated on this work, so as to get it completed as soon as possible. Look over beds planted with bulbs, and where necessary stir the surface soil, so as to keep it open and friable, and also to give it a clean, neat, fresh appearance. If the stock of bedding-out plants is still deficient, get in cuttings in the most favourable position without loss of time. See to the propagation of Dahlias and Hollyhocks; the latter are now so greatly improved by the efforts of seedling raisers that they are almost superior to the Dahlia in their effect, and ought to be extensively planted in every garden. Cuttings slipped off the old plants with a heel, planted in very sandy soil, and afforded a gentle bottom-heat, keeping the leaves as cool as possible, will be found to root. Carnations and Picotees have suffered much this winter; those that escaped should be potted forthwith. We know of nothing better to grow them in than two parts sound virgin loam, one part of rotten horse manure, and one part sharp river sand; in this, with occasional doses of weak liquid manure during the growing season, we have seen them grown in first-rate style. Seedling Pansies in beds should be gone over carefully, the surface soil stirred, and a dressing of manure put on. Place sticks to Pinks, and if not previously top-dressed do so now. Ranunculuses have not yet made their appearance; they must be watched, as they are apt to displace the soil about the crown of the plant, which is prejudicial.

HARDY FRUIT AND KITCHEN GARDEN.

Plant out Cauliflowers as soon as the weather shall have become favourable. Where the ground will admit, it will be found a very good practice in transplanting these at this uncertain season to throw out shallow trenches, placing the soil removed on the north side, and putting the plants in the trenches, which will be thus sheltered from the north winds. Stir the soil among growing crops, as Lettuce, Spinach, &c., and prevent weeds from making their appearance anywhere. Forward Celery plants for a very early supply, by pricking out on a slight hotbed, and sow on the same for succession crops. Where it is intended to head down old trees for grafting, this should be done at once, and young stock should be grafted as speedily as circumstances will admit. Attend to providing for a regular and plentiful succession of Peas, Beans, &c., by sowing quantities proportionate to the demand at short intervals. See that those in the ground are not injured.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.
For the Week ending March 8, 1860, as observed at the Horticultural Gardens.

March.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep	Of the Earth 2 feet deep.	Wind	Rain.
Friday 2	9	30.028	29.908	55	33	44.0	41	41	S.W.	.08
Satur. 3	10	30.063	29.925	51	23	37.0	40	40½	S.W.	.14
Sunday 4	11	29.826	29.721	51	32	41.5	43	42	W.	.30
Mon. 5	12	30.341	30.121	52	23	37.5	42½	42	N.W.	.00
Tues. 6	13	30.490	30.128	51	32	41.5	42½	42	N.W.	.14
Wed. 7	○	30.255	30.024	38	30	34.0	43	42	N.E.	.02
Thurs. 8	15	30.239	30.156	39	27	33.0	42	42	N.	.02
Average...		30.177	29.997	48.1	28.5	38.3	42.0	41.6		.70

March 2—Overcast; rain; cloudy; clear and fine.
— 3—Cloudy; showery; overcast.
— 4—Rain; very clear at night.
— 5—Clear and frosty; low clouds; fine; frosty.
— 6—Frosty; cloudy; showery; overcast.
— 7—Cloudy and cold; slight showers of hail, snow and rain.
— 8—Cloudy, with cold north wind; occasional showers of snow and hail.

Mean temperature of the week, 2½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending March 17, 1860.

March.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 11..	49.5	32.1	40.8	12	0.33 in.	1	5	3	5	3	12	3	2
Mon. 12	50.7	32.5	41.6	15	0.24	3	4	—	—	6	12	7	2
Tues. 13.	50.7	32.0	41.3	13	0.36	2	2	4	1	6	12	5	2
Wed. 14...	51.3	35.3	43.3	16	0.70	—	5	4	—	5	14	4	2
Thurs. 15..	51.0	34.6	42.8	16	0.37	4	5	1	4	4	7	5	4
Friday 16..	51.7	34.8	43.2	12	0.68	—	8	5	—	4	10	5	2
Satur. 17	50.1	33.3	41.7	15	0.36	4	6	4	—	4	7	6	3

The highest temperature during the above period occurred on the 15th, 1828, and 12th, 1841—therm. 67 deg.; and the lowest on the 13th, 1845—therm. 13 deg.

Notices to Correspondents.

ANAGALLIS INDICA: *C J.* This name is here spelt correctly.

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*G T M.* 1, Acacia salicina; 2, A. armata. The Orchid is a new species of Hexadesmia.—*Vanda.* Vanda insignis.—*E R C* Inga Harrisii.

SEEDS FOR EXPORTATION: *J B.* If you wish to send in safety 4 bushels of Radish seed to Australia, so as to preserve it through the long and damp voyage, you must transmit in canvas bags, about half full, and placed in some well ventilated part of the vessel. On the top of the other cargo just below the deck of a clipper will do very well.

SHODDY: *Knockmaroon* says: "I have collected a quantity of *shoddy*, or in other words the waste from a woollen mill, with the view of making it part of a compost for a Vine border which I am about to prepare. It is full of Logwood and I dare say copperas too, but before doing so I beg leave to ask your opinion." In our opinion the presence of Logwood and copperas, both or either, will be extremely injurious, if not fatal to the Vines.

THE HORTICULTURAL SOCIETY: *Old Sub., P V.* Apply to the Secretary, 8, St. Martin's Place, London, W.C.

WHITE CELOSIA: *W A.* Celosia argentea is probably what you inquire about. You will find it in some of the London seedmen's Catalogues under the name of "Celosia nova species."

*** As usual, many communications have been received too late, and others are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspondents the insertion of whose contributions is still delayed.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
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Are now prepared to send out the following MANUFACTURED MANURES:—

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They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

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WHEAT ditto	POTATO ditto	BEAN ditto
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PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.
Apply to H. & T. PROCTOR, Cathay, Bristol; or
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LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
,, SUPERPHOSPHATE OF LIME	6	6
,, MINERAL	5	5
LAWES'S BARLEY MANURE	8	0
,, MANGEL MANURE	8	0
,, GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analyses are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
American Cakes supplied at market prices.
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BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

ODAMS'S BLOOD MANURES,
MANUFACTURED BY
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NITRO-PHOSPHATE OR BLOOD MANURE COMPANY (LIMITED), consisting of TENANT FARMERS, occupying upwards of 30,000 acres of Land.

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The Directors recommend these Manures with every confidence to the attention of their brother Farmers, and the fact that they and the Shareholders farm upwards of 30,000 acres of land cannot fail to afford a guarantee and protection to Farmers. The high per centage of Soluble Phosphate, and large amount of Animal Matter yielding Ammonia they contain, not only render them the cheapest, but also the most Natural Manures, and the best calculated to produce a healthy, sound, and heavy crop.

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12*l.* per ton for 30 tons and upwards } at the Depôts in London,
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And, in order to protect themselves against the purchase of Adulterated Mixtures, and of inferior Guanos, purporting to produce results equal to Peruvian, consumers are recommended to apply either to ourselves; to our AGENTS, Messrs, GIBBS, BRIGHT, & Co., of Liverpool and Bristol; or to Dealers of established character throughout the Country, in whose honesty and fair dealing they can place implicit confidence.—ANTHONY GIBBS & SONS, 15, Bishopsgate Street Within, London, E.C.

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JOSEPH BERRY AND SONS, SEED MERCHANTS, Importers of PERUVIAN GUANO and Agents for the Western Counties, SUPERPHOSPHATE OF LIME, and other Manures.—8, Arran Quay, Dublin.

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W. & R. JUPP & CO. having, from long experience in their business, satisfied themselves of the advantages resulting from the use of a preparation or condiment to be used with Cattle Food, beg to inform their friends and the public, that after considerable labour and expense they have succeeded in producing an article which, though differing from any in present use, possesses all the nutritive and other qualities so necessary in a preparation of this description, AND AT A CONSIDERABLY REDUCED COST. A copy of Dr. Letheby's Analysis appeared in this Paper of the 11th inst., and will be sent post free on application.

The material will be sent out in bags, with plain directions for use, at the following prices for cash only, which must be remitted with orders to ensure delivery, viz., 35*s.* per cwt.; 19*s.* per ½ cwt.; and 10*s.* per ¼ cwt.

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STALLION FOR SALE.—That splendid pure-bred Suffolk CART STALLION "DUKE," the property of T. Beale Browne, Esq.; is rising five years old, is a beautiful bright chesnut, stands over 17 hands high, is possessed of remarkably fine temper and excellent constitution, is a capital steady worker, and has very grand action. He was foaled in Suffolk, and was got by "Champion," a well-known horse of his day. Price 80 guineas.—May be seen on application to Mr. Crowe, Hampen, Andoversford, Gloucestershire.

THE AGRICULTURAL ENGINEERS' COMPANY (LIMITED), Swan Lane, Upper Thames Street, London, E.C., hold in stock the following Goods suited to the Season:—Steam Engines, Horse Powers, Chaff Cutters, Crushing Mills, Oilcake Bruisers, Root Cutters and Pulpers, Pumps, &c.
Price Lists can be had post free upon application.

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WORKS OF DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.

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The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

YORKSHIRE AGRICULTURAL SOCIETY.—The next ANNUAL MEETING will be held at PONTEFRACT, August 1 and 2. JOHN HANNAM, Secretary.
Kirk Deighton, Wetherby, March 10.

The Agricultural Gazette.

SATURDAY, MARCH 10, 1860.

MEETINGS FOR THE FOLLOWING WEEK.
WEDNESDAY, March 14—Agri. Society of England .... Noon.

ON Wednesday last Mr. FREERE, who has we believe been Bursar of Downing College, Cambridge, was appointed to the Editorship of the Journal of the Royal Agricultural Society of England. And thus a man hitherto unknown to English agriculturists leaps at once into the leadership of English agricultural literature. He was, we believe, almost the only one of the 25 competing for the appointment who had had the advantage of an English university education. This, added to a certain acquaintance with the practice of farming, derived from the superintendance of college property and the management of a family estate, has, in the judgment of the committee to whom the selection was remitted, outweighed the undoubted merits, of a different order perhaps, possessed by others his competitors.

It is for obvious personal reasons, less within the power of the *Agricultural Gazette* than of almost any other agricultural paper, to comment upon the propriety of this appointment, and we can, therefore, make but one remark on it.—The committee, on whom the responsibility of it rests, seem to have assumed that it is the business of an agricultural editor to teach the farmers who may read his journal; and an acquaintance with the agricultural literature of other countries and of other ages has thus been held indispensable. Mr. FREERE, however, we venture to say, will succeed in the discharge of his duties in proportion, not as he brings the maxims of French, of German, of Italian, or of Roman agriculture to bear upon his readers,—not as he uses any influence from without to modify the practice of the English farmer, but just as he shall succeed in inducing and enabling English agriculturists to teach each other. Whether a man hitherto so entirely unknown to the body over whom an influence of *this* kind ought to be exerted in the Journal, be the best fitted successfully to wield it, may be doubted.

MR. CORBET'S capital Paper on the Over-Preservation of Game will be read with particular interest. It deals with a difficult subject in just the spirit which will commend it to both the classes to whom it is addressed; and no wonder that in an assembly which more than any other in the country represents both these classes it was most flatteringly received. The Central Farmers' Club is an association of farmers, land owners, and agents, and is therefore just fitted to make an influential proclamation on the subject which was last Monday so ably brought before it. It has, however, long given up the practice of passing resolutions on the topics which it discusses, and the tone of the meeting has therefore to be gathered from the speeches. We hope next week to give the discussion following Mr. CORBET'S address. The Paper itself will be found somewhat abridged in another page.

MR. MECHI returns to the rescue of the sewage question, which seemed overwhelmed by evidence of agriculturists, engineers, and chemists, as to the small value of the manure, the difficulty of conveying it, and the impossibility of extracting for use what may be useful from it. His very interesting paper on the subject read last Wednesday before the Society of Arts will be found in another page.

The extreme dilution of sewage manure, it is said, is one of the difficulties of applying it, and Mr. MECHI answers this objection by pointing out that the manure of a couple of sheep per acre, which is all the land on an average receives, is diluted by 3000 tons of rain-water annually on the soil, whereas a similar quantity of manure obtainable in towns is diluted by a very much smaller quantity of rain and waste water as it reappears in sewage. There is, however, this mistake in Mr. MECHI'S comparison of the two, that the sewage which it is proposed to apply to the land is not in the predicament of the diluted but of the undiluted sheep manure, and with *it* the sewage water should have been compared; for the latter is subject after application to all that flood of rain-water in addition to its own dilution, which Mr. MECHI points out as washing the solid manures which are in ordinary practice applied to the land.

It is however the personal explanations offered in this paper which will be most eagerly read. People will anxiously look for information how to obtain 700*l.* a year "landlord and tenant's profit" off 170 acres of land. It appears that—

The rent of Tiptree Farm per acre is	£2	7*s.*	0*d.*
Its taxes amount to	0	2	8
The labourer's bill is	2	0	0
Steam power costs	0	5	0
Seed costs	0	8	6
Artificial manures were	0	10	0
Food for stock is no less than	3	0	0
Wear and tear of stock of all kinds and sundry petty expenses amount to	0	18	6
Total expense per acre	£9	11	8

But besides this each of his six horses consumes 2½ acres of farm produce, so that while this cost of 9*l.* 11*s.* 8*d.* per acre applies over the whole of the 170 acres, the produce which Mr. MECHI estimates at 11*l.* 15*s.* per acre can be counted off only 155 acres. The comparison of the two is easily made:—

155 acres, at 11*l.* 15*s.*	£1821	5	0
170 acres, at 9*l.* 11*s.* 8*d.*	1629	3	8
Tenant's profit	£192	1	9

We are bound to say that on this showing Mr. MECHI'S profits are not equal to "15 or 18 per cent. of the farming capital" he employs. This is stated by him to be 14*l.* per acre. The tenant's profit added on to the rental here assumed amounts to rather

less than 600*l.*, instead of the 700*l.* which Mr. MECHI had named. It seems plain that he has taken credit for the sale of the produce of 15 acres which had been consumed by his horses, and which, at 11*l.* 15*s.* per acre, amounting to 175*l.*, would have raised the whole balance in his favour above the sum at which he had declared it.

Of the actual sales declared in Mr. MECHI's "catechism" we can only say that it is difficult to avoid the conclusion that they are to some extent estimates because of the perpetual reference in them to the whole 170 acres of the farm; 15 of which are, nevertheless, stated to be used up by the horses. Thus the "meat" actually made upon the farm is declared to be 200 lbs. per acre, and this is multiplied by 170, in order to ascertain the whole farm produce. Whereas the proper guide in such a case undoubtedly must be the actual sales recorded in the farm books. The amounts stated as sold are sufficient at recent prices to produce the sum at which the produce is declared per acre; but so much doubt is cast upon the accuracy of the calculation through which Mr. MECHI arrives at his result, first by his omission of horse keep from the expenses on the ground that it is farm produce, and then by his taking credit for the produce of the whole 170 acres, notwithstanding this omission, that we are bound to join in the belief that a blunder has been committed.

The only thing in the paper read last Wednesday which throws anything like a fresh light on the sewage question is the idea that a thorough soaking with the sewage water once in a rotation may be all that land will need of fertilising matter, and that therefore the distributing apparatus may very well be portable and taken from farm to farm along with a hired steam pump. This, however, is a mere assumption and needs experience to ascertain its value; before which it is in fact valueless as the foundation for any proceedings towards turning London sewage to actual use.

TOWN SEWAGE.

By Mr. Alderman Mechi.

[The following paper on the Application of Town Sewage to a large Agricultural Area, comparing its Strength and Dilution with the ordinary Farm Manurial Resources; with Considerations of its Effects on Farm Profit, was read at the Society of Arts, last Wednesday, by Mr. Alderman Mechi. We are obliged to give it in a somewhat abridged form.]

It is objected that sewage is too much diluted to be beneficial to agriculture, except in enormous quantities. Let us test this objection by comparative facts.

The farmer's principal source of manure is from his live stock. The total area of land farmed in the United Kingdom (pasture and arable) may be taken at 50,000,000 acres, half in pasture. I omit poor mountains, &c. These 50 millions of acres may be taken as equal in natural quality to my own. The following statistics—

LATEST AGRICULTURAL STATISTICS.

	England. Estimated by Poor Law Commissioners.	Scotland. Collected by Highland Society.	Ireland. Collected by Constabulary.	Total.
	1854.	1857.	1859.	
Horses ..	1,309,010	185,409	625,916	2,223,335
Cattle ..	3,422,165	974,437	3,810,136	8,206,738
Pigs ..	2,363,724	146,168	1,262,873	3,772,957
Sheep ..	18,691,688	5,683,168	3,588,356	27,962,612

show that, reducing all the animals to sheep, the farmer has, on an average, something less than the manure of two sheep or lambs per acre as a source of animal manure. Two sheep (young and old) per acre would be equal, in weight and manurial results, to two inhabitants of a town—weight for weight; indeed, less than this, if you take into account the animal ordure and various other manurial elements that accompany the excretion of two individuals into the sewers. Now let us see whether this manure of two sheep per acre gets more or less dilution than the excrements of two human beings residing in towns. The manure of the two sheep—which is nearly all fluid (the dry matter being only 1-13th)—is spread over 1 acre of land. Taking the average of the kingdoms the rainfall on this acre will be about 26 inches per annum, or 2626 tons. Thus the manure of each sheep is diluted with 1363 tons of water; but the excrement of each resident in towns only receives as follows:—

Annually, as water supply	30 tons
Annually, as rainfall (taking the area of the metropolis, its rainfall and population) ..	50 ,,
	80 ,,

Thus proving, unmistakeably, that the much abused town sewage is, in reality, 16 times less diluted, and consequently 16 times stronger than that on which the farmers of England depend for the production of their crops. So that, in fact, an annual application of 160 tons of town sewage per acre would equal the annual manuring which the farms of England now receive. [See leading article.]

I have no doubt that this statement will create some astonishment, but I have taken particular pains to obtain from various sources correct approximate statistics, and I have reason to believe that I have allowed more than the farmer really has on an average, I mean animals equal to two sheep to the acre. 'Tis true he adds guano and artificial manures, but the quantity, when spread over 50 millions of acres, is insignificant, and affects but slightly the comparative dilution. He also adds, as a vegetable manure, the unconsumed straw.

THE APPLICATION OF SEWAGE.

Well, then, having disposed of the question of dilution, we may come to a safe conclusion as to the effects of a given quantity of town sewage to a certain agricultural area.

I am a good deal amused when I compare various opinions on this point. Our excellent chairman, Mr. Lawes, told us, when the question was last discussed here, that we must apply 10,000 tons per acre of town sewage, or, in other words, that we must apply to the soil, annually, from 40*l.* to 50*l.* worth of manure. Mr. Halkett values London sewage at 2*d.* per ton, which I think a fair estimate; if so, 10,000 tons would be 83*l.* per acre. Now, if I recommend farmers to feed more stock per acre, or put on an extra 20*s.* worth of manure, to pay 6*s.* an acre to their landlords for efficient drainage, and another 7*s.* an acre for superior covered yards, and another 7*s.* for irrigation, and, in fact, when I tell them generally that it would be much more profitable for them to pay a double rental, provided the increase represented a fair interest for necessary improvements, I am asked where the money is to come from, am called a visionary enthusiast, and am told that I want to open the landlords' eyes. What will they say then to Mr. Lawes and the 40*l.* per acre manure alone?

The London sewage, 240,000,000 of tons, would be worth, at 2*d.* per ton, 2,000,000*l.*

Farmers and the public generally have no idea of the power which clay soils have to lay up in reserve a stock of manure for the present and future use of plants.

At all events we may safely come to one conclusion, that as the land only abstracts 50 per cent. of the treasures contained in the sewage or manure, that which escapes through the soil or drains should be used over and over again on other less fertile lands, in order to extract from it as much as possible of its valuable elements. What would be said of millers who did not avail themselves, over and over again, of the power which water affords by means of the sloping inclination and differing levels?

We should thus have the satisfaction of sending the water to our rivers pure and deprived of those elements which are only noxious when out of their proper place.

I now proceed to consider how we may best fertilise our soil with town sewage. It may be done as on my farm, with common iron water pipe; but it appears to me that as a single heavy dressing with sewage will fertilise a field sufficiently to carry it through a four or six course rotation of crops, it might be desirable, in many cases, not to have subterranean pipes but moveable conduits, that could be carried from field to field, or from farm to farm. We should then, probably have travelling irrigators, who would do all that was needful at a moderate but remunerative charge, much as is now done by those who purchase and let out steam threshing machines.

It might probably answer best to have a few acres for Italian Rye-grass laid down with subterranean paper pipes, so much of the rest as required it being irrigated by the moveable pipes.

On my own farm the fixed iron pipes are only used in alternate years, as the rotation varies, which locks up capital uselessly.

Assuming that we shall some day see lines of main pipes charged with sewage intersecting our country, how easy would it be, where levels were suitable, to avail of the services of these itinerant migratory irrigators, who, carrying with them these paper pipes, would fertilise field after field, by connecting them with the main sewer pipes always charged.

Probably agriculturists, in particular districts, will combine their means, and thus effect the object in the most economical and effective manner, much as the great fen drainages have been carried out.

A Cornish engine, or Mr. Appold's pump, would raise 43,000 tons, or more than 15 years' rain fall, 1 foot high, with 1 cwt. of coals, or a cost of 1*s.* worth of coal, to which must be added interest for wear and tear and other expenses.

I have to thank Mr. Laurance for the following communication with reference to this pump at Whittlesea Mere:—

"Elton, Oundle, April 19, 1859.

"SIR,—I beg to acknowledge the receipt of your letter of the 15th.

"The Appold pump, at Whittlesea Mere, drains upwards of 5000 acres of low land, exclusive of the watershed from the high lands, which will include 400 or 500 acres.

"The engine, pump, and buildings, including extensive piling for foundations, cost 2500*l.* (The drains and ditches are not included in this sum.)

"The cost of the first three years' working and repairs—1851 to 1854—averaged 1*s.* per acre. In 1852, the newly-formed banks broke, and 1000 acres of land were inundated. This had to be pumped out, and the average of the cost was raised by this circumstance.

1855	6*d.* per acre.
1856	8 ,,
1857	10 ,,
1858	8 ,,

This includes coals, repairs of engine, engine-man's wages, oil, &c.

"The quantity of water raised 6 feet high is 16,000 gallons per minute. The lowest lift is 4 feet 6 inches, the highest 10 feet. The engine works now about three days a week, and runs four or five hours per diem, not consecutively, but at intervals, the supply of water not being sufficiently rapid for the discharge by the centrifugal pump.

"There is no publication containing these facts. You are welcome to them.—I am, Sir, your obedient servant,

"JOHN LAURANCE."

Probably there is no surer source of profitless farming than poor Grass land on undrained heavy clays. There are many millions of acres of such land.

The following letter will give a tolerable idea of the position of the holders of such rough Grass farms:—

"DEAR SIR,—From a lecture on sewage recently delivered by you the following extract is most extensively circulated:—'For the last six years my gain, as landlord and tenant, on my little farm of 170 acres has been nearly 700*l.* per annum. Even this year, with Wheat 42*s.*, I have gained 600*l.*, after paying every expense. Of course, much of this benefit has arisen from steam-power, drainage, and deep cultivation, and other improvements, but the liquified manure system has greatly contributed to this result.'

"This declaration has been variously received, but most generally amongst the strong land farmers of the West Riding of Yorkshire, as rather apocryphal. There is no disposition to call in question your veracity, thinking the rather that a grave error in some of the items of profit may have occurred. Should this not really be the case, certain inference must follow:—That a great extent of land is at present badly cultivated, and the difficult and embarrassed circumstances of many occupants ought not and need not continue. You have, by your spirited attention to farming, set a most praiseworthy example to landed proprietors; and taking the results to be as you have given, tenant capitalists—being practical men—may find a good investment for their money.

"Numerous advantages would follow if the internal facts of your success were generally known. The result, as given in one concentrated amount, is very pleasing. Would you take the trouble to give the process in detail, or, in other words, the accounts in full? Such a request may be considered by you (and not improperly so) as intrenching on your kindness and valuable time. My only apology is, from an earnest desire to follow your practices and adopt your plans, as far as a tenant farmer can do so. I hope, therefore, that if you decline a grant to my request, you will pardon the liberty I have now taken.

"I farm 165 acres of principally strong clay land, under ————. Two-thirds of the farm is in pasture Grass—the sward overrun with rough Grasses. The land is in a ring fence, it is mostly drained, but not deep, but the homestead is three-fourths of a mile from the land, and no land joins the same homestead. I proposed to build a homestead in the middle of this 165, with some little allowance, and 30 years lease, which was refused. The total receipts on this farm, during the very highest period of the last nine years, are 834*l.* 19*s.*, and the payment 885*l.* 13*s.* 11½*d.* I have not charged the farm with interest of capital invested in it, neither with my own time as skill employed, and yet I am minus above 50*l.*, so that you will readily grant that something is directly necessary as a remedy for such a state of things. I have lost 52*l.* per annum for the last nine years. Such have been the profits in grazing on the present system. "I am, &c.,

"Feb. 16, 1860.

"Any information as to the cost of a new homestead, where brick can be made on the spot,—and deep drainage per statute acre,—and how much you keep in Grass,—and how you fence your land, and apply your liquified manure, will be thankfully received."

Now, if this tenant were permitted to deeply cultivate and carbonise this soil, not exhausting it by consecutive corn corps, but applying to it the best system of alternate husbandry, he would be in a more hopeful condition, but there is also another way of improving poor Grass lands without breaking them. This is most successfully practised by a money-making farming friend of mine, who takes poor parks and other poor Grass lands, and very quickly improves them. Sheep are folded upon them during the autumn and winter, having an unlimited supply of cut hay, with 2 Turnips, and ½ lb. oilcake or Rape-cake per day, or in lieu of that, ½ pint of Beans or Peas per diem each.

Thus, the sheep are placed upon the Grass, not for the purpose of feeding on it, but to manure and improve it, by restoring those elements of fertility which exhaustive farming had previously abstracted. The results are obvious and unmistakable. The Grass field thus becomes a fold yard. The next hay crop gives unmistakable evidence of the prosperity of this system.

No one would recommend spring or summer grazing with sheep; but there is a much cheaper and quicker way than either of those I have mentioned of making poor Grass lands pay—I mean by the application of town sewage, or simple water. If the contents of our town sewers were poured over those millions of poor and profitless pastures which occupy more than one-half the area of this kingdom, they would, as it were, spontaneously clothe themselves with rich and nutritious herbage. Of course, the undrained clays must be previously drained, or the sewage or water would not filtrate through them. On the whole, I am decidedly of opinion that the occasional breaking up of poor Grass lands is a decided gain individually and nationally. I know an instance (see Mr. Woodward's statement in the Royal Agricultural Society's Journal, Vol. IX., page 54), where Grass land rented at 25*s.* per acre was drained and deeply dug and levelled at a cost of 15*l.* per acre. The very first Wheat crop produced 15*l.* 15*s.*, and it produced successively several such crops. The late Mr. Woodward, who did this, realised a large fortune by farming, and, having had the pleasure of his acquaintance, I know that his system

was to invest much capital to produce a more profitable result. I can confirm his practice by my own.

HOW I MAKE MY FARM PAY.

I HAVE received many letters from practical farmers desiring to know how I can pay myself a high rent, and make, besides, a satisfactory tenant's profit, at the present low prices of corn? I find, on inquiry, that many of those farmers are placed in an unfavourable and profitless condition, as compared with myself, for want of those improvements and advantages which I possess, and for which my increased rental is charged. In order that farmers may compare their own position with mine, I have propounded the following questions, which I have answered, and which each farmer can reply to, and thus compare his practice and position with mine. I will call it

Alderman Mechi's Agricultural Catechism, especially addressed to Heavy Land Farmers.

Q. How much do you suppose the landlord's investment is per acre in the purchase and improvement of the land which you occupy?—*A.* About 60*l.* per acre.

Q. What rent do you pay per acre?—*A.* 42*s.*

Q. How much is your working capital per acre?—*A.* 14*l.*

Q. How much is your gross produce per acre? I mean the total amount received for produce sold without any deduction of expenses.—*A.* 11*l.* 15*s.*

Q. What are your total expenses per acre, including purchased food and manures, but irrespective of horse-keep, which I assume is furnished by the farm?—*A.* 9*l.* 11*s.* 8*d.*

GROSS EXPENSES PER ACRE ON THE WHOLE FARM.

	£	s.	d.
Rent .. .. 36*s.*	2	2	0
Irrigation .. .. 6*s.*			0
Tithes (great and small)	0	5	2
Church-rate	0	0	3
Road-rate	0	0	
Poor rate, including police and county rate	0	2	3
Manual labour, including engine-driver and bailiff ..	2	0	0
Horse labour (fed from the farm), 20*s.*			
Seed	0	8	6
Depreciation, or wear and tear of implements	0	2	0
Steam-power	0	5	0
Blacksmith, wheelwright, cooper, founder, saddler, basket-maker, bricklayer, carpenter, and veterinary	0	5	6
Thatcher	0	1	0
Depreciation of horses	0	2	0
Artificial manures (guano)	0	10	0
Wear, tear, and loss of sacks	0	0	3
Bean tiers	0	0	3
Loss of stock and casualties	0	1	0
Loss of land by roads, buildings, fences, and waste ..	0	2	0
Road mending, ditch cleaning, fence trimming, &c. ..	0	1	0
Miscellaneous petty expenses	0	1	6
Malt and Hops used in brewing beer for men	0	2	0
Purchased food for stock	3	0	0
	£9	11	8

[We add the answers to the further questions:—]

I have 4 per cent. of my land as permanent Grass. My landlord has drained the land. He has put up good and central farm buildings, a good farmer's residence, and there are good roads. No portion is irrigated by water and gravitation. The whole farm is laid down with subterraneous iron pipes for irrigation with water and with farm sewage. There is a fixed engine. It works a threshing and dressing machine, chaff-cutter, oil-cake breaker, a pair of mill stones, irrigating pumps, sack-raising tackle, and a root-pulper. The buildings are troughed. No liquid manure is allowed to run away. The corn is drilled. Garrett's horse-hoe is used for our corn and root crops. Of seed, I sow Wheat, 4 to 5 pecks; Barley, 6 pecks; Oats, 6 to 8 pecks; Beans, 10 to 12 pecks. I subsoil and trench plough my land, cultivating it 12 inches, but ought to be deeper. I use a reaping machine. My annual loss in horses and live stock per acre (in money value) the last seven years, has been 1*s.* per acre per annum. My horses consume annually 2½ acres (landlord's measure) of the produce. I keep six for 170 acres. My labour per acre per annum, including bailiff (if any) and engine driver, is 40*s.* I use 10*s.* worth of purchased manure, per annum over the whole farm and 3*l.* worth purchased food per acre over the whole farm. I make 200 lbs of meat per acre, or 34,000 lbs. on 170 acres. I sell of Wheat, 280 quarters; Beans, 100 quarters; Oats and Barley, two quarters from 170 acres, or 24 bushels per acre, 100*l.* worth of Clover and grass hay and 70*l.* worth dairy produce; 70*l.* worth Clover seed or other seeds; and 30*l.* worth of any other produce. My fences are closely trimmed, and I have no trees. Much of my labour is done as piece work. I make from 15 to 18 per cent profit on farming capital. I apply house sewage to the soil. I grind corn for my neighbours, and it pays well at 3*s.* per quarter. My stock are comfortably housed during the winter. My green and root crops are passed through the chaff-cutters for animals. My animals are not permitted to walk, lie down, and dung upon their food. I farm my own land, except a portion held on a 21 years lease. I use carts. My corn stacks are on iron rick frames. I feed much of my straw.

I think it right to state that I consider the items of 3*l.* per acre for purchased food, and 10*s.* per acre for guano, have a most important influence on my profit. Without these items, I should expect a very different balance-sheet. I also derive much benefit from applying the manure mixed with large quantities of water. In fact, every one of the questions I have propounded have, in a greater or less degree, an influence on the profits of farming, and it would be easy to come to a conclusion as to the success or failure of a farmer, from the manner in which these questions would be answered.

What margin for improvement is there in British agriculture? I have tested this by comparative results, and find that if all the land of this kingdom, 50,000,000 acres, which is equal in quality with my own, produced as much as mine does per acre, our agricultural produce would be increased by the enormous amount of 421,000,000*l.* annually, the present produce, according to my calculation, being only 3*l.* 7*s.* per acre, or 169 millions. According to my annual produce of 11*l.* 10*s.* per acre, it would be 587 millions.

I have taken great pains, in the absence of agricultural statistics, to test the correctness of my opinions by an infallible check. I mean the annual average consumption of agricultural produce by each individual of the population, which, taking all classes, sexes, and ages, amounts to about 2*s.* 5*d.* per head per week, or 6*l.* 7*s.* per annum, as explained in the following tables.

I have not taken any account of the keep of farm horses, as they are kept on the farm's produce. The gross acreable produce of 3*l.* 7*s.* per acre, is of course, without any deduction for rent, labour, and other farm expenses. My return of 11*l.* 15*s.* per acre is estimated in the same way.

There are 50 millions of acres in the United Kingdom paying probably from 45 to 50 millions of rental annually, and on an average of equal quality with mine.

If my return of rent and produce be correct, the gross return only represents 3½ rents; my return is equal to 5¼ rents.

Small as our produce is, M. Lavergne estimates the gross acreable return of French agriculture at only one-half the amount of ours, although their soil and climate are quite equal to ours. Still, this is poor consolation for our own deficiencies and shortcomings.

Our population, 27,000,000, consume annually of agricultural produce—bread, meat, vegetables, eggs, poultry, and beer, 6*l.* 5*s.* 8*d.*, or 2*s.* 5*d.* per head per week (taking all classes, ages, and sexes)	£169,000,000
Deduct: Foreign food imports, and carriage, profit, &c., between the producer and consumer of English produce	39,000,000
	£130,000,000
Add: Wool, tallow, hides, flax, &c., and horses not used in farming, and hay, corn, &c., for these horses	36,000,000
	£166,000,000
Or, 3*l.* 7*s.*, per acre, on 50,000,000 of acres, which I think I have valued too high by 2*s.* per acre—the farmer's capital employed per acre I estimate at 4*l.* My rate of produce per acre (11*l.* 15*s.*), on 50,000,000 would produce ..	£587,000,000
Or, an increase produce equal to	£421,000,000

The results of improved farming are cheering, and convince me that we can safely compete with the whole world in the production of corn, but that can only be done by a concurrent large production of meat and manure, the latter not purchased but produced by the feeding of stock. My crop of Wheat this year is immense. I threshed this week a seven-acre field of Wheat, which produced a large crop of Wheat in 1857, a great crop of Beans in 1858, and now, in 1859, the crop of Wheat is nearly seven quarters per acre. This field was manured for Beans in 1858, but had no manure of any kind for the Wheat crop of 1859.

Those who have not experienced the advantage of drainage, very deep cultivation, and abundant manuring, have yet a great lesson to learn. I have good reason to believe that my 56 acres of Wheat will produce more than 308 quarters, or 5½ quarters per acre, although 20 acres were taken without manure after a heavy crop of Beans; 12 acres after Mangel; 6 acres after Wheat; 12 acres after Italian Rye-grass; 6 after Clover.

My crops were seen, as usual, during their growth by many agriculturists from various parts of Britain, and from foreign countries.

If this statement does not overwhelm British agriculture with shame at its shortcomings, I shall indeed be much surprised. My consolation is that there is a grand future in store for our multiplying millions; that there will be a doubled or tripled rental for our landlords, if they will but deserve it by an improved investment; and that our multiplied artisans, mechanics, and manufacturers may receive from the future tillers of an improved soil cheap and ample food in return for their own handiwork. My heart warms with delight at such a prospect.

The perspective of an intelligent availment of science by a future race of landlords and tenants cheers my spirits, and encourage me to go on in the rugged paths of agricultural stimulation. If stagnation and retrogression weaken and humiliate a nation, it is but a logical conclusion that advancement and improvement shall bless it with peace, plenty, and dignity. That my efforts may tend to this happy result I most sincerely pray.

A review of agricultural amelioration judiciously conducted is full of the most pleasing deductions and considerations. My case has proved that it may double rental, triple the farmers' capital, multiply employment, greatly increase and cheapen food, and enlarge the demand for it, with increased profit. Improvement, by creating a new demand for labour and material, enhances their value, encourages population, and thus establishes an additional and improved market for that very food which it has more abundantly produced, whilst it enables us to compete successfully with the most favoured corn and meat producing countries.

I conclude in the eloquent words of Mr. James Caird, at page 528 of his admirable book on English Agriculture: "I rise from my task conscious of its imperfect execution, but with a firm persuasion that, though there are many exceptions, the great body of the landlords and tenants of England have, by mutual co-operation, energy, and capacity, sufficient to meet, and by degrees to adapt themselves to a change which, in its extraordinary effect on the welfare of all other classes of the community, will sooner or later bear good fruits also to them."

Home Correspondence.

Guano as a Top-dressing for Grass.—The soil of the field on which the experiment was made, the result of which I now report, is a black mould, inclining to peat, on a weeping subsoil—being embanked land lying below high water mark. The field was under a Turnip crop in 1857, manured with a heavy dose of home-dissolved bones—the Turnips eaten off by sheep, and Wheat sown on the 31st December, 1857. The crop of Wheat, 1858, was very full, but not lodged; with it was sown in April, 1858, the following mixture of Grass seeds per acre:—

½ bushel annual Rye-grass.
¼ ,, Italian do.
2 lbs. Alsike Clover.
2 ,, Yellow ,,
8 ,, Red ,,

The stool of Grass in spring, 1859, was a close and healthy one. The field was top-dressed (one ridge being reserved undressed) on March 12 to 14, with 2 cwt. Peruvian guano per acre—heavy rains during the latter part of the month washed the guano well into the soil. In April it was stocked with a flock of ewes and lambs, which were kept upon it till the 25th May. It gave them very fine feeding, except the ridge undressed, on it Grass grew slowly; partly owing to that cause, but I believe principally owing to the greater sweetness of the top-dressed ridges, we never could discover a sheep or lamb grazing upon it, while the ridges on each side were crowded. Thus, at the date of clearing of stock, it was the roughest of the field. In the first four weeks of June not a drop of rain fell, so the growth of the hay crop was slow; and it was not ready for the scythe until the 30th July. When cut and gathered there was evidently less weight of hay on the bare ridge, and on weighing it when fully cured in September, the following was the result obtained—

	Tons.	cwt.	lbs.
On guanoed ridge, per imperial acre ..	1	16	85
On bare ridge ,, ,, ..	1	9	80
Difference	0	7	5

At the ordinary price of hay in the district, 3*l.* 15*s.* per ton, the value of the above increase is 1*l.* 6*s.* 5*d.*, being almost exactly the price of the 2 cwt. guano used; but this year the price of hay, from its unusual scarcity, is 7*l.* 10*s.* per ton; thus there is a gain in hay alone of 1*l.* 6*s.* 10*d.* beyond the guano used, and this is besides the pasturage for April and May, on which there was a difference of at least 10*s.* per acre, making in all 1*l.* 16*s.* 10*d.* return beyond expenditure from the Grass crop alone. I did not observe any marked difference in the aftermath, which was pastured by cattle and sheep. I shall try the comparative returns from the ridges under a cereal crop in 1860. *S., Inverness-shire.*

Guano as a Top-dressing for Potatoes.—In a trial made in 1858, the result of which appeared in these columns, I found that top-dressing Potatoes with guano when the plants were just appearing in the drills was a more profitable mode of using guano than sowing it with the Potato sets in the drill, though that also was profitable. The returns then chronicled were, from application in the drill, 24½ cwt. of Potatoes; from top-dressing 27¾ cwt. Potatoes—this the result of an application of artificial manures to the value of 24*s.* per acre. In making my arrangements for 1859, I purposed top-dressing my Potato crop; but when the proper season for this arrived, the drought was so extreme—not a drop of moisture having fallen from April 20 to June 28—that I hesitated about committing guano as a top-dressing to soil hot and moistureless as ashes. A trial however was made. Peruvian guano at the rate of 2½ cwt. per imperial acre was applied on July 2 to a limited portion of the field, and the result makes me regret that it was not used over the whole—

Top-dressed portion gave 9 tons 15 cwt. per imperial acre.
Bare portion .. .. 8 10 ditto.

Thus 25 cwt. Potatoes, worth at 80*s.* per ton 5*l.*, were obtained from the expenditure of 32*s.* 6*d.* in guano. The field had been subsoiled (which I strongly recommend being done to all land intended for Potatoes) in autumn 1858, and received in the drills 12 tons per acre of well-made farm manure. Soil a good mould lying on gravel. The Potatoes were of the Dalmahoy variety, and were raised free from disease. *S., Inverness-shire.*

The Turnip and its Diseases.—I was pleased to observe in your Paper of the 3d inst. some remarks by you on the subject of the Turnip plant, the diseases and other casualties to which it is liable. I must confess that for some time I have looked for some remarks on the subject, and have often wondered that the Yorkshire Agricultural Society did not offer a prize for an Essay on the subject. I send you by this post some local papers, in which you will perceive that the subject is one of some interest in this neighbourhood. I do not send them because I suppose that they embrace the subject in that comprehensive manner in which it must be considered, but because every mite if in the right direction is of value, and must be regarded as such. If the Royal Agricultural Society offer a Prize for an Essay I should be glad to know the time when the same have to be sent in; this is a great Turnip growing district, and a good one for collecting information. *An Attentive Reader.* [The Society offered a prize last year, but none of the Essays which were sent in were directed to the point on which infor-

mation was asked, viz., the impossibility of keeping the crop after you have got it—its tendency to rot on the ground.]

Thorley's Food.—Mr. Paulett refers again to his experience with this food in the following terms in *Bell's Weekly Messenger*: — "Mr. Thorley has demanded, through the medium of your journal, 'a more faithful report of my experiment (with his Food against old Beans and Cotton-seed cake) than I have yet given,' and states that I have not 'told your readers how I gave it.' He has also accused me of making contradictory statements, the truth of which they will judge after I have made the following observations. I do not, however, intend to reply to his invectives, as they are too contemptible to notice. I stated in my last letter that I had not any of Mr. Thorley's papers to refer to (not thinking them worth preserving). I have since seen one of 'Thorley's Mugs,' on which is burned the following directions:—'For horses, sprinkle one peck of chopped hay, straw, or chaff, with water, and mix it well together with a measureful of the Food; it may be given two or three times a day. For sheep, one measureful to every four, as mentioned for horses, cows, &c.' As this is to be given twice a day, it follows that two sheep were to have a mugful daily; or, as I stated in my report, 'four feeds per day were given to eight sheep.' I repeat that all the sheep comprising the experiment were fed the same with roots (viz., Kohl Rabi night and morning, and Mangels at noon) having as much as they would eat. They had also allowed them half the quantity of Clover chaff as prescribed on 'Thorley's Mug.'* I did not mention in my report the use of the chaff, as it was needless to do so, all the sheep having it alike, my object alone being to test the relative value of each kind of artificial food for a few animals intended for public exhibition. In addition to the roots and chaff one lot of eight lambhoggs were supplied with ½ lb. each of old Beans daily, another lot of eight had ½ lb. of Cotton-seed cake each, and the third lot of eight was served according to the directions on 'Thorley's Mug,' viz., one feed per day for two sheep. All these were mixed up with the chaff, but not sprinkled with water as directed, it being not convenient to do so. I trust I have now given in detail, both for Mr. Thorley's satisfaction and the information of your readers, that explanation he requires, and will now state again the result of the trial, which it seems, from his replies, he so much wishes to be made public. Each lot gained on the average per four weeks as follows:—

	Live weight.	Mutton.
	lbs.	lbs.
Beans	14¾	10
Cotton-cake	16½	11
Thorley's Food	13¼	9

This experiment shows that the Cotton-cake produced 2 lbs. more mutton or ¼ lb. each sheep per week more than Thorley's Food, whilst it cost 2*d.* per head less money per week, as may be seen more fully by reference to my former letter, a fact sufficiently indicative of the loss sustained by the use of Thorley's Food. Whether my statements are contradictory, I must now leave your readers to decide, and hope that I have given that 'fair play' Mr. Thorley so much desires. Still, however, should he not be satisfied, I will try the merits of his stuff again with sheep against any artificial food that he may require, although they might have as many ulcers or boils upon them after its use as was the case with those fed on his Food last season. In making that experiment, like others, the first object has been for my own benefit and satisfaction, and then to offer them to the notice of the public through the columns of your paper. I should not, however, have added my humble testimony to that of others on the uselessness of Thorley's Food, had it been offered to the public with less lofty pretensions. My statements are the results of personal experience and attentive observation, and should they warrant conclusions adverse to scientific principles or popular opinions, I can only say I have recorded facts for which alone I am answerable, not for the conclusions to which they lead.—I am, sir, yours, &c., *T. E. Paulett, Beeston, Sandy, Beds, March* 2.

The Labour of Threshing Machines.—As you desire to learn how far your estimate of the hands required for threshing out Wheat under the circumstances detailed in your Paper of the 25th ult. agrees with the actual experience of your correspondent, I will repeat your estimate, viz.:—One man and a boy to load the sheaves from the rick to the cart; one boy to load the carts; one lad to deliver from the cart to the threshing floor; two women to pass the sheaves to a third woman, who unties and hands to the man who serves the machine; two women on the ground floor to collect the straw as it passes from the machine into a heap for one man who carries it away, to another man who stacks it in the barn. I conceive my actual cost of hands would exactly correspond with your estimate; but in practice I find a man necessary instead of a lad to deliver from the cart to the threshing floor sufficiently fast to keep the machine well supplied. On the other hand, one woman below is quite sufficient to gather up the straw for the pitcher to carry away. I doubted the necessity of two women to pass to the woman who unties; but my women insist on it one could not do it. *L.*

* My sheep were not fed with the quantity of chaff as recommended by Mr. Thorley, for this simple reason, they could not eat so much with roots. He can have but an imperfect knowledge of the economy of animals when he says as much food should be given to four sheep as to a cow or a horse, it being well known to practical men that a bullock will eat as much as 10 sheep, and a horse as 12 or 14 sheep.

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

A MONTHLY COUNCIL was held on Wednesday, March 7, Lord Walsingham, President, in the chair. Present: Lord Feversham, Lord Leigh, the Hon. W. G. Cavendish, M.P.; the Hon. Col. Hood, the Hon. Augustus Vernon, Sir W. Williams Wynn, Bart., M.P., Sir Brooke Bridges, Bart. M.P.; Sir E. Kerrison, Bart; M.P.; Mr. Amos, Mr. Hodgson Barrow, M.P.; Mr. Barnet. Mr. T. Raymond Barker, Mr. Barthropp, Mr. Caldwell, Col. Challoner, Mr. B. T. Brandreth Gibbs, Mr. Hamond, Mr. Fisher Hobbs, C. Wren Hoskyns, Mr. Hudson, Mr. Humberton, M.P.; Mr. Lawes, Mr. Lawrence, Mr. Pope, Mr. Thompson, M.P.; Mr. Torr, Mr. Turner, Professor Voelcker, Mr. Wilson, Mr. T. B. Western.

The following new Members were elected:—

Newport, Viscount, M.P.
Cavendish, Lord Geo. Henry, M.P., 3, Upper Eccleston Street
Mildmay, Humphrey, M.P., Shoreham, Sevenoaks
Balston, Thomas, Chart Sutton, Staplehurst
Bancks, James, Prebendal House, Thame
Buggins, W., Booth's Farm, New Oscott, Birmingham
Cobbett, John M., Skeynes, Eden Bridge
Corner, Edward, Whitby
Drewitt, Henry, Milvill Farm, Titchfield
Dumbrell, James, Ditchling
Fisher, C. J., Huntley's, Tunbridge Wells
Gandy, Lieut.-Colonel Heaves, Milnthorpe.
Gray, William, Kingston, Drem, East Lothian
Grylls, Capt. Glynn, Waterhouse, Exbridge, Tiverton
Hall, George, Garford, York Hill, Ledbury
Henly, T. N., Calne, Wilts
Hobbs, Charles, Maisey Hampton, Gloucestershire
Hollier, Amos, Lindley Grange, Hinckley
Humphries, Twyning, Tewkesbury
Mayall, John E., 224, Regent Street
Pike, James, Reading
Ranken, W.B., Abbot's Langley, Herts
Reynolds, J. B., Lubberthorpe, Leicester
Roughed, James, Auldhame, North Berwick
Sanders, Wm. W., F.R.S., Reigate
Shaw, Wm., Cold Morton, Stowe, Staffordshire
Smith, Robert Thursfield, Whitchurch, Salop
Snewing, Charles, 56, Russell Square
Spencer, Captain, Distington, Whitehaven
Spencer, John, Whoolton Hall, Newcastle-on Tyne
Taylor, John, Aston Clinton, Tring
Welstead, Frederick, The Cottage, Stonely, Kimbolton
Wightwick, Thomas Norman, Canterbury
Wilkes, Rev. Robert, Loft's Hall, Elmdon, Royston
Williams, David, Kimmel Farm, St. Asaph's.

The usual Monthly Report of the Finance Committee was received, by which it appeared that the current cash balance in the hands of the bankers on Feb. 29 was 3998*l.* 10*s.* 8*d.* The Secretary's receipts during the past month had been duly examined by Messrs. Quilter, Ball, & Co., the professional accountants, and also by the Finance Committee. Sundry accounts were ordered to be paid.

The Committee recommended a payment of 25*l.* to Mr. Huxley for the extra duties he has had to perform during the past year.

The late Finance Committee handed in a statement of accounts from July 1 to Aug. 31, 1859, when the present committee came into office.

The report of the Committee appointed to select an Editor of the Society's Journals was presented by Mr. Thompson, M.P.; 25 applicants had complied with the conditions announced by advertisement. The whole of these candidates supported their claims by testimonials in proof of their ability and fitness for the office, and more than one have shown to the satisfaction of the Committee that they possessed the highest qualifications required in an Editor of an Agricultural Journal. The Committee had no hesitation in recommending Mr. Philip Howard Frere as a gentleman in every respect fitted to perform the duties of Editor to the Society. Mr. Frere was therefore duly appointed to the office.

CANTERBURY COMMITTEE.—The committee recommended that inquiries be made respecting a reduction in the cost of Catalogues for the country meeting. That the Secretary be authorised to communicate with the Railway authorities respecting the transport of live stock and implements to Canterbury. That the following reply from the general manager of the South Eastern Railway respecting the heights of bridges on that line be published for general information. "In reply to your letter of the 8th inst. the inside dimensions of our trucks are as follows:—Goods trucks: 15 feet long by 7 feet wide, 14 feet long by 6 feet 2 inches wide; coal trucks, 14 feet long by 6 feet 3 inches wide; cattle trucks, 13 feet 10 inches by 7 feet 1 inch wide; carriage trucks, 15 feet long by 7 feet wide. The majority of the goods trucks are of the largest size, and all may be laden 7 feet 6 inches above the top of their floors."

IMPLEMENT COMMITTEE.—The Committee recommended that in answer to inquiries made by different implement makers, a reply should be sent to the effect that it be left to the option of makers of threshing machines whether they put in a shaker or screen, or both, provided they keep within the limit of six-horse power; and also that combined finishing machines do not come within this year's prize sheet.

CHEMICAL COMMITTEE.—It was arranged that Professor Voelcker should investigate the following subjects during the present year:—

1. Continuation of field experiments on Barley.
2. " " " Wheat.
3. " " " Turnips.
4. The action of simple saline substances on the soil.
5. The feeding value and composition of Mangel pulp.
6. The chemistry of Cheese and Butter manufacture.

A vote of 200*l.* was granted to Professor Voelcker for his investigations during the past year.

On the motion of Mr. Thompson, seconded by Mr. Torr, the following committee was appointed to consider and report to the Council whether any and what changes should be made in the present mode of reporting the business transacted at the weekly and monthly Council Meetings, both for the use of the Society and for communication to the public journals, viz.—Journal Committee, Col. Challoner, Mr. Fisher Hobbs, and Mr. Brandreth Gibbs.

A deputation from the Local Committee at Canterbury, consisting of the Mayor, Mr. Punnett, and Mr. Collard, Hon. Sec., waited upon the Council to confer on the subject of local prizes. The following were accepted with thanks:—

LIST OF LOCAL PRIZES.

PLOUGHS.	First prize.	Second prize.	Third prize.
For the Plough on the Turnrise principle or otherwise best adapted to turn the furrow-slice, according to the Kentish system of ploughing, the depth of the furrow not to be less than 8 inches	£30	£20	£10
For the ploughman	6	4	2
For the Implement best adapted for the general cultivation of Hop lands	£10		
For the Machine best adapted for mowing Grass and Clover for agricultural purposes	20		
For the Machine best adapted for reaping agricultural crops	10		
For the Machine best adopted for pressing Hops (in cloth) for the home market	10		
For the design of the most economical building the best adapted for drying Hops, to be illustrated either by plans or models, accompanied with an estimate and specification in detail of the cost	30		
For the apparatus the best adapted for drying Hops ..	20		

HOPS.	First prize.	Second prize.	Third prize.
For the best sample of Golding Hops	£10	£5	..
For the best sample of any other kind of Hop	10	5	..
For the best managed sample of Golding Hops	7	5	£3
For the best managed sample of any other kind of Hop	7	5	3

WOOL.

For the six most valuable Kent fleeces combining quantity and quality of one year's growth £10
For the six most valuable Long-wool fleeces, Kent or otherwise .. ..
For the six most valuable Short-wool fleeces .. ..
[The wool to be the property and growth of the Exhibitor.]

SHEEP.	First.	Second.	Third.
Kentish or Romney Marsh Breeds.			
The best pen of 5 two-year old Ewes	£10	£5	
" " 5 three-year old Ewes	10	5	
The best Shearling Ram	5	5	£5
" Ram of any other age ..	5	5	5
" pen of Shearling Ewes ..	5	5	5
The Sheep to be from the same flock and bred by the exhibitor, and the Ewes to have brought up a Lamb to the 1st of June.			
CATTLE.—Sussex Stock.			
Class I. Bull calved on or before July 1, 1858, and not exceeding 6 years old	30	15	5
" II. Bull calved since July 1, 1858, and more than 1 year old	25	15	5
" III. Bull calf, above 6 and under 12 months old ..	10	5	..
" IV. Cow in milk or in calf, above three years old..	20	10	5
" V. Heifer in milk or in calf, not exceeding 3 years old	15	10	5
" VI. Yearling heifer	15	10	5
" VII. Heifer calf, above 6 and under 12 months old..	10	..	..
PONIES OF ANY BREED.			
The owner of the best Stallion Pony not exceeding 14 hands high ..	20	10	..
The owner of the best Mare.. ..	15	5	

The undermentioned Local Societies contribute from their funds towards the above-named Local Prizes viz.:—The Kent Cattle and Implement Association and the Faversham, Deal and Dover, Ashford, Norminger and Wingham, Sittingbourne, Chartham, Isle of Thane Gravesend, and Rochester Agricultural Associations.

It was resolved that the judges for local prizes b appointed by the Society in the usual way, due respe being paid to the recommendation of the Loc Committee. Mr. Humberston's motion relative to scientific investigation into the manufacture of chee was referred to the Chemical Committee. On t motion of Mr. Brandreth Gibbs, seconded by Mr. To the Council entered into the consideration of t districts for the future country Meetings of the Socie and it was resolved that Yorkshire be the distr selected for the meeting of the Society in 1861, and t Secretary was directed to furnish the schedule of r quirements to the authorities of any city or to desirous of inviting the Society. The invitatio received will be considered at the Monthly Council o the 4th of April, when a Committee will be appoint to inspect the accommodation offered.

On the motion of Mr. T. Raymond Barker, seconde by Colonel Challoner, it was resolved—

"That the Council concur in the re-transfer into the name

Mr. Huxley, in the 3 per Cent. Reduced Stock, in the Books at the Bank of England, of the sum of 300*l.*, transferred by him into the names of the Right Hon. Lord Portman and Thomas Raymond Barker, in September last, as security on his part for such sums as might come into his hands, on account of the Royal Agricultural Society, as Acting Clerk in the Financial Department. That the expense of such transfer be paid by the Society, and that the President be requested to convey to Mr. Huxley the deep sense entertained by the Council of his spontaneous and disinterested proposal when offering such guarantee."

A communication from Mr. Smith, of Woolston, relative to the judges' report on the steam cultivators exhibited at Warwick, was referred to the Implement Committee, who would confer with the Judges and Consulting Engineer.

A complete set of the Hereford Herd Book was presented by Mr. Duckham, and thanks ordered.

The Council then adjourned to its Weekly Meeting on the 14th inst.

Farmers' Clubs.

CENTRAL: *March* 5.—*The Over-Preservation of Game.*—A paper on this subject was read by Mr. Henry Corbet, from which we make the following extracts:—When the Committee placed this subject on their card, I do not imagine that they had any desire to countenance an attack on the national sports of the country. At any rate I have no intention to make one. On the contrary, I believe that any attempt to do away with our rural sports and pastimes would be a grievous error, and that none would oppose such a movement more than the farmers themselves. It is the practice of these pursuits that goes to cement the union between the landlord and his tenant, that teaches the one to regard the other with a feeling something beyond the mere consideration of pounds, shillings, and pence, and that nourishes between them a stronger sympathy, and a healthy tone of good fellowship.

You must all have witnessed the welcome with which the master of hounds greets the yeoman as he comes up to the cover side—a recognition that many a much finer gentleman looks in vain for. You well know, too, when the more humble harriers meet in the Grass-grounds, what a lunch the missis, of her own doing, is sure to have ready at that happy nick of time, when the squire having killed his first hare, curiously enough begins drawing close round the home buildings for a second. And you can picture faithfully enough how, when the major and his brother from Cambridge are seen beating the stubbles, the young one rides up on his pony to know whether they will come on to the house, or have it sent out to them? Need I say how much that significant "it" means? What genuine hospitality is not involved in "it?" Or, that master Tommy gallops back with a brace of birds slung each side of him, and a leveret in his hand, to tell mamma "they are coming to see her." I should be sorry to record such scenes as these as but the mementoes of a by-gone age. Or, that I had to draw only on my imagination for that we all hope so often still to realise. You will remember, again, one of the yet most popular toasts at your agricultural dinners, how, when you have cheered "the chairman"—and "the Society," and "The County Members," and "The Town Members," and "The Railways," and "The Turnpike Trusts," and "The Town Council," and "The Dean and the Clergy," and "The Canal Companies," and the hundred and one similar ceremonies which seem inseparable from such an occasion, you cheer and recheer more than ever for "foxhunting." How the glad tally-hoes and the triumphant who-whoops come from your very hearts; and how when the master, who has been sitting very quiet so far, gets up and says in a few straightforward sentences, "he wishes to show sport, but that he cannot do so without the farmers back him, as they have done, and as he hopes they still"—how here the orator is interrupted with an overflowing simultaneous outburst of applause that quite spoils the point of his speech, but that, I fancy, satisfies him well enough, nevertheless. A very startling antithesis here presents itself. Suppose that, at some of these gatherings, amongst the toasts bearing upon the pleasures of a country life some one should give "The noble and truly British sport of battue shooting." How he would dwell on the way in which it brought the English gentleman to the halls of his fathers; how it endeared him to his neighbours and his tenantry; and how it caused him to be beloved and respected by all around him. And then, as the noble Marquis, with whose name the toast was associated, rose to respond, with what a roar, too, would he be received! And he would go on, like our other friend the foxhunter, to say that he had always tried to show a good head of game; that, thanks to the farmers who had always kept it for him, he could kill his hundreds on hundreds of hares and pheasants in a day, and that he only hoped they would still continue to keep up—but here, too, would he be interrupted with such a roar as I care not to chronicle. As Sterne says, "the picture we have raised is too painful to pursue." I start, then, with the admission, that farmers as a class are generally partial to field sports.

It is the abuse, and not the use of game that we complain of.

In the first place let us ascertain the character of the battue in the eyes of the great body of Englishmen. What do 999 men out of 1000 think when they read the *Morning Post* paragraph of what the Earl of Wholesale and Retail, and three or four other great guns, did the day before yesterday at his lordship's magnificent seat, The Slaughter-house—when "in the course of the morning they killed some 200 head of pheasants, 150 hares, 300 rabbits, 2 woodcocks and a water-hen, seriously wounded a jack snipe, as well as an under-keeper, and half ruined a tenant farmer?" With what kind of feeling is it that we regard such terrible sportsmen who thus blazon forth their wondrous achievements? Is it with respect?—with a certain pride in the prowess and manhood of our English gentlemen?—Or, rather with something like disgust, and an inclination to ridicule the whole proceeding? Let me give you the opinion of a country gentleman, a good sportsman, a practical farmer, and a member of the Council of the Royal Agricultural Society of England. I mean Mr. Antony Hamond, of Westacre, Norfolk. At a public dinner in that country, in the spring of last year, Mr. Hamond said: "The squires were fast degenerating into poulterers. Things were very different now to what they were 50 years ago. Game was then used as a means by which gentlemen afforded amusement to the guests with whom they filled their houses; and it was a very charming amusement. But, although some of those gentlemen who now hired shootings showed extreme liberality and kindness, yet still game had become a commercial affair, and he hoped that the system would soon end in a thorough bankruptcy." I think I hear a good many say "Amen" to that.

But, still, "this is a free country." "A man may do what he likes with his own;" and what is it to you, or to me, or to Mr. Hamond, of Westacre, if my lord chooses to add to his income by breeding rabbits and hares for sale, just as the farmer does pigs and sheep?

Unfortunately it has a great deal to do with it. If my lord would only follow this out, and mark his hares and rabbits on the side as the shepherd does his flock, so that when found straying we might pound them at once, the case would be something more of a parallel. As it is, such a plan would not be altogether so outrageous as some might imagine. A Sussex gentleman I met the other day, not a heavy game preserver, but who has a little quiet shooting of his own, gave me the following anecdote:—During the past season he killed a few fine fat pheasants, to which his cook called his attention, as all remarkable for having no back claw. He could not explain this at the time, but meeting the head keeper of a neighbouring establishment a day or two after, he began to tell him the story, as rather a curious fact in natural history. He had got no further, however, than "they were in famous condition, and had no back claws," when the other savagely interrupted him, with "Why, dang it! that was our toe mark! You've been eating my pheasants!" as no doubt he had. But such kind of compensation is not too common, and this glorious privilege of doing what you like with your own gets a little lop-sided, when it comes to do what you like with other people's own, too. Just at present the matter is in something of this state: My lord—or my landlord, as you please—has all the pleasure of shooting the game, and all the profit of selling it, while the farmer has the simple satisfaction of keeping it. He pays dearly enough for the keep of it on his farm. He pays for the keep of the poacher in prison, and he pays for the keep of the man's family in the workhouse. Increased rates and taxes of all kinds speak to this; and it is not so much a question of how much the landlord gets by every head of game he sells, as how much the tenant loses?

HARES AND RABBITS.—Experiments have been entered on to show that one, two, or three hares, or even large rabbits, will consume as much as a sheep. This, though, has comparatively little to do with the actual extent of the evil. I shall prefer taking this on the authority of a gentleman whose name is well known to all—the late Mr. Philip Pusey, at one time of his life a game-preserver, a President of the Royal Agricultural Society, and the Editor of the Society's Journal.

He said, "Even if you ascertain that three or four hares do not eat more than one sheep, you could not estimate the amount of injury to a farmer by the food eaten by an equivalent number of sheep, because the hares are allowed to help themselves and to go everywhere where they ought not to go; and independently of that, the positive loss, the annoyance to a farmer who has cultivated his land upon improved principles, is very great. It may be a question upon certain kinds of soil, whether it is an injury or not to Wheat to be fed down; but still, as a farmer myself, I should like to have to decide upon it myself whether I would have my Wheat fed down. . . It is an interference with a farmer's crops; and where a man has been taking pains with his land, and spending a good deal upon artificial manure, and endeavouring to grow good green crops, it must try his temper very much." I have myself galloped through Wheat on the very verge of harvest, on land in the occupation of a near relative of my own, where I was assured I could do no harm; in fact, the crop was not worth cutting, owing entirely to the game-preserving instincts of an adjoining landlord. I have seen these men frequently driving the hares and rabbits back into their own coverts from the fields they had been feeding on. Rabbits do not range so far; but where they are suffered to abound, it is simply ruin for the farmer to submit to them. They poison the land, as well as rob it of its present produce, while the way in which they increase is really incredible. In fact, the evils of rabbits are so apparent, that no man going into business with his eyes open should barter away his power over such pests of the farm. Indeed this is seldom insisted on. The feeling is commonly the other way. It is only a very sharp agent who stipulates for a right to "the coneys;" and the Legislature very properly regards them as vermin. At least it did so until the appearance of Mr. Gladstone's Budget, and the new sliding-scale certificate. On first hearing of this I was inclined to look at the diminution of price as a matter of but small consideration to the farmer, either one way or the other. It reads chiefly as a boon to the occasional sportsman, and as an effort to catch a few stray pounds by such a means. But to our astonishment, we find this disciple of progress, and champion of the great principle that men should go about their business as unfettered as possible, actually retrograding! Rabbits are to rank as game again. No tenant shall under any circumstances destroy them without a certificate; and this in the face of a comparatively recent proviso that he should have a similar privilege for both hares and rabbits. The career of the present Chancellor of the Exchequer does not go to show that he had ever any very great respect for the interests of agriculture: but the coolness with which he now pushes the farmer aside, solely for a possibly paltry increase of revenue, is both a wrong and an insult. And what a commentary, too, on the agitation originated some years since by what is termed "the Manchester School" over the Game Laws, when we find their pet statesmen doing more to perpetuate, or rather to revive the worst evils of the system, than anything that has been attempted in the memory of man. I do not at this writing believe that such a proposition can be acceded to; but if it is, we may well look around us, and ask where "the farmer's friends" are?

THE KEEPER.—However, game or vermin as they may be classified, the rabbits naturally bring me on to their sworn friend and protector, the gamekeeper.

One loathes the very name of such an office. You must all know the authority he exercises—a power so much above his proper position in life; and that, as a rule, he proportionately abuses. To him the commonest act of husbandry is one of suspicion and distrust. He unites the invincible curiosity of our English Paul Pry with the malicious intent of a spy for the Inquisition. The farmer and his men are continually under his supervision. There is nothing they can do but it is his "duty" to overlook them. He stands by the mowers to see they do no harm to his nests. He struts into the reaping field to make sure they don't hurt his birds. The boy with his scare-crow, the shepherd with his dog, and the little lass with her kitten, are all alike the objects of his hatred and his tyranny. He has been known to wrench a gun from the hand of a farmer's son for shooting at a rat! He has told the farmer himself he should prefer his not firing at the birds on the corn, as it was "such a trouble to be always coming to see what he was after!" He has informed against a tenant, whom of course he was watching, when his victim got off and picked up a hare which his horse killed in her form; and a bench of magistrates at Newark positively followed this up with a conviction! To the disgust, however, of these Solons, the Commissioners of Taxes of course reversed the decision. He lays traps for the labourers, as has been proved over and over again; and rejoices, like another Jonathan Wild, or some other such a scoundrel, only in the downfall of his fellow men. He is the very essence of evildoing. He whispers characters away in the ear of his employer; he swears them away more openly in court. He is incessantly making ill-blood between man and man, and he is the one great blot on our fair English landscape. I have the experience of an old keeper himself to say that such men are rarely to be believed or trusted; and they are the greatest enemies to true sport that I know of. The rabbits are the keeper's perquisites; that is to say, the vermin which do the farmer the greatest injury are the animals above all others that the keeper has a direct interest in maintaining a stock of. The vermin which the law declares the tenant has a right to destroy as vermin the landlord transfers as a right to his servant. There is, I am happy to say, a growing feeling against the fashion of perquisites, or of paying a servant by any other means than by that of his fair wages. If a gentleman pays his servant fair wages the man has no claim to perquisites; and if the employer does not give him his due hire, he can certainly with but little justice look to the farmer to make it up to him. But we hear still of head keepers clearing their two or three hundreds a year by the rabbits; so much gain to them being, as a rule, so much loss to the tenants. I have termed the keeper an enemy to true sport—to the finest field sport this or any other country can boast of. There is no greater self-deception, no finer piece of humbug, than a game-preserver allowing his keeper to sell the rabbits, and telling him, at the same time, not to destroy the foxes. But, as Mr. Hamond tells us, "there are too many men who are the slaves of their keepers," and, as he adds, "the sooner they are emancipated the better." Of course there may be a few exceptions, but taking them generally, keepers are "a bad lot."

The ramifications of my subject, the abuses and injustice traceable to the over-preservation of game, are almost endless. Let me endeavour to epitomise some of them.

In the first place, the higher or the better farming, the more green crops, and so on, the greater the damage. The hare is an exquisite, who just tastes and tries, and then passes on, leaving the work of destruction either to the other offenders, or to gradual decay. Then, the greater the head of game, the stricter it is preserved, the more also will there be of other kind of vermin. Keepers may profess to kill rats and hedgehogs, and perhaps they do when they can find them: but they destroy far more systematically the great enemies of such a class of depredators. They shoot the terriers that kill the rats, they trap the cats that kill the mice, and they wage war against the hawks and owls. The balance of nature is, as it were, upset; and only that the farmer should suffer more and more from such a revolution. But even beyond this, over what the tenant-farmer loses either by game or vermin, the system of over-preservation actually interferes with the proper pursuit of his business. There was a favourite clause in some of the Norfolk lettings, that an occupier should not drill his Turnips and mow his Wheat Drilling caused the birds to run, and mowing left them no shelter. I was in hopes we had been growing out of this. But it is only a year or two since that the tenantry of a nobleman in the Midlands were ordered not to employ a reaping machine! I do not know what Messrs. Burgess and Key would say to this; but the farmers of England are. I am happy to add, not sunk quite so low, and they successfully resisted so monstrous and so unwarrantable an interference. Still the direct effect of the system is to humiliate and to lower their spirits and energies. How can a man properly respect himself when he knows he is more or less at the mercy of an ignorant self-sufficient underling? Game-preserving lessens the production of the soil, stays the full employment of capital, and mars the fair aim of industry and ability.

THE REMEDY.—And now comes the grave question—how shall we remedy such a state of things? Does not the tenant take his farm with his eyes open? Is not the game in the first instance his own property, without he chooses to sign it away? Has he not a right to destroy the hares and rabbits until he consents to a clause to the contrary? What, in the face of all this, can be done? Abolish game and the Game Laws altogether.

I for one should be very loath to see any such a measure attempted. Enact, then, that a man should never take a farm without having the game with it? I fear this is equally impracticable. In fact, I do not trouble the Legislature at all—that is, of course assuming this monstrous proposition to rank rabbits as game be given up. But I seek audience at once with the landlords, and I ask their agents and advisers to accompany me. I say the farmers of England are not enemies to sport; on the contrary, they like to see the gentlemen enjoy it. I say that they do not object to a fair head of game; but that, as a body, they would readily maintain it On the other hand, I say that battue shooting is not sport, and that systematically rearing a large quantity of game, and then as systematically selling it, is slowly but surely lowering the character of the English gentleman. Let the owner and the occupier learn to rely more upon each other. Let them free themselves from the thraldom of that officious, ear-wigging, scandal carrying, mischief-making keeper. Let the landlord address his tenantry as a noble duke, whose family name stands high in the annals of agriculture, did some years back when he gave up game preserving:—"Now, gentlemen, I mean to make you my keepers, and I hope when I come you will be able to show me some sport." Need I add, that hope has never been broken, and that no one has better sport, and that no man stands better with his tenantry or with the country than his Grace?

A word or so now to the agents and managers of estates. There are some sharp agents even now, who make it a point to reserve the right to "the coneys," as they are called. But beyond this they are too apt to stand aloof in the matter of game. It is a delicate question they do not care to interfere with, and so they leave it to the squire, and the tenant, and the keeper, to settle amongst themselves. Great people, however, it is said, often find it a difficult thing to hear the truth, and in this case they should hear it. Is an agent doing his duty when he witnesses in silence a tenantry half ruined by hares and rabbits, and who knows his employer is ridiculed and abused, if not cursed outright, at every farmers' ordinary in the country? Within the last 10 years or so I have been over the greater part of the United Kingdom. In doing so I have mixed continually with the agricultural classes, and I say advisedly that these heavy game preservers are marked men. A 10*l.* prize for the best bull, or a fine speech at a full meeting, can never outweigh the abuses they sanction, and the injustice they commit. The agents often know this better than their employers; and if any great landowner and great game preserver should do me the honour to read this paper, I only trust that he will at once summon his

right-hand man before him, and ask "if there is any truth in all this?"

It is now nearly two years since I first put this subject on our list, and many members will bear me out when I say my anxiety was not so much to associate myself with the question as to see it fully discussed by the Club. However, I have now encountered it, certainly without fear, and I trust without prejudice. My earliest and warmest sympathies were with a sportsman's life; my later career has been directly associated with the interests of agriculture, and I have here essayed to show how you may steady the balance between them. In the discussion that followed, Mr. Hudson, of Castleacre; Mr. Fisher Hobbs, Mr. James Thomas, Mr. Picksley, Mr. Parkinson, and Mr. Congreve supported the views of Mr. Corbet as to the great evils arising from the over-preservation of game. Mr. Ramsay dwelt on the necessity of upholding the law of tresspass, and Mr. Mechi gave high farming as a remedy for the evil.

Calendar of Operations.

MARCH.

WEST SUSSEX: *March* 5.—Since our last report we have had very disagreeable and changeable weather, and work has got farther behind than usual. For the past two or three seasons we have had Oats and Barley sown in February, but this year hardly any have been got in, and Peas, that ought to have been sown before, are only now being put in. But the land, though we have had so much rain upon it, works very freely, as soon as it gets a little dry upon the top; and with a fine March we shall get all square again. We can give no more favourable report of the Turnip crops; they are still all going rapidly, and the sheep must depend upon hay very much till other spring feed such as Vetches, winter Barley, &c., come to hand. And this will be a great drawback to getting the old ewes fatted off so as to make room for a new flock. All care must be taken to get the lambs fatted, and off as soon as possible. It seems that we must now, willing or unwilling, sow more Mangel, and perhaps Turnips late sown instead of Swedes. We find that late sown Turnips stored in the field in October and covered with earth have kept far better than when they were left standing all the winter. But after all we think the great loss has been caused by the unusually rapid changes of temperature. As a consequence of our declining feed all stock, if at all fleshy, is being brought to market, and so we have rather a stagnation in the beef trade, though prices are not much lower; mutton though plentiful still maintains its price, and those who can keep it till May will likely get a high price; pigs are rising in value. *G. S.*

Notices to Correspondents.

AUSTRALIAN SHEEP: *To A R.* Mr. C Dorrien, of Funtington, near Chichester, informs us that he has long been in the habit of breeding Merinos for the very purpose which "A. R." refers to, and that he will be happy to show "A. R." his flock, and afford him any information in his power. His opinion is that the Merinos are decidedly the most suitable for the colony, a sheep weighing 7 stone ought to yield 7 lbs of wool, and so on in proportion. That is the average of his flock, but some have much heavier wool. His nearest station from London is Rowland's Castle on the South Western and Portsmouth direct line. But "A. R." had better address him by post.

LAWN MIXTURE: *A Subscriber.* It is one of the worst samples of seed that it would be possible to produce from the sweepings of a Grass seed loft. In particular there is a large proportion of seed that should not be in lawn mixtures at all, viz., Dactylis glomerata (Cock's-foot), Phleum pictum (Timothy), Holcus lanatus (Yorkshire Fog), Arrhenatherum avenaceum (Oat Grass), Triticum repens (Couch Grass), Agrostis alba (Fiorin Grass), Festuca pratensis (Meadow Fescue), Trifolium pratense (Red Clover), Lolium italicum (Italian Rye-grass). The Clover seeds are not genuine, but adulterated and old. It is, indeed, very doubtful if anything would grow, and the seller no doubt speculated on nothing "rising up" against him—dirt fully 20 per cent. So gross, indeed, is the imposition in palming this stuff off for Lawn Mixture, that it raises a question of doubt as to its having been sent out at all. There is also another feature in it confirming this opinion, viz., the mixture of Clover with Grass seed. No seedsman who knows his business would send out seeds so mixed, for the heavy would naturally find their way to the bottom of the sack. It is the practice to send out mixtures in two parcels, viz., heavy seed and light seed—the former comprising the Clover and Timothy, &c.; the latter the natural Grasses.

PUMP, &c: *A Sub.* We do not know Sieber's pump. Apply to Weale, Publishers, Holborn, for the work you require.

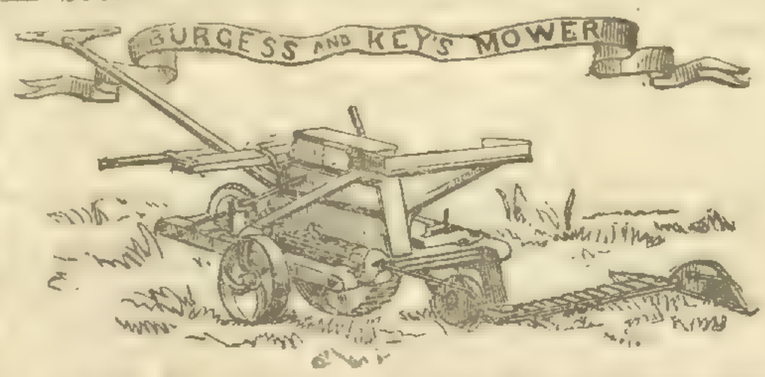
SKIM MILK: *S X.* Its value when used for the feeding of calves and pigs can not be put at more than 1*d* per quart.

SMALL FARMS: *Beth.* The Dairy Hand book (Longman) will help you. From half the arable land (you give no other indication of its quality except its rent) you ought to grow roots enough to enable you to keep more than half the Grass land for summer pasturage. Grow Mangel Wurzel, Kohl Rabi, Cabbage, anything to enable you to tide over the winter with the help of a pulping machine and a chaff-cutter and straw with a little hay, so as to keep your cows in good condition; and leave as little of the Grass to hay as possible. The more of your Grass land you can keep for pasturage during the milking season the better. It is better pay to give the Grass for milk which you sell next day, than to save hay and keep it till winter and then receive your pay for it next year in the condition of your cows. If necessary buy good straw and consume it with roots rather than make too much hay. Your land if able to grow heavy crops of roots by vigorous cultivation, is able to keep a herd of 20 cows. Whereas if you cannot grow winter food on your arable land the probability is that your herd will not be half that number.

SOOT: *J L.* If it be compared with guano on the score of ammonia only—the guano is worth only about 12 to 16 times its weight of soot. If guano costs 13*s.* a cwt, then soot may be worth 1*l* a cwt. It generally sells for more. Sometimes however instead of containing only 1¼ per cent. of ammonia, it contains as much as 4 per cent.; and its greater price than guano in average samples would give it is then perfectly justifiable. Dr. Voelcker says, that an average sample of soot contains about 1000 lbs. of organic matter, 20 lbs. of sal-ammoniac, 80 lbs. of sulphate of ammonia, 247 lbs. of gypsum, besides other mineral matter, and 237 lbs. of moisture in every ton. Soot weighs as much as 40 lbs. a bushel.

WEED SEEDS: *J W.* Your seeds are probably as follows:—1, *Juncus bufonius* (Bog Rush); 2, Seeds of some *Compositæ plant* most likely of the Camomile group. If the first be rightly named it may indicate a wet but silicious soil where it grew; but we are still wanting in observations on the characters of minute weed seeds. *J B.*

BURGESS AND KEY'S ROYAL AGRICULTURAL SOCIETY'S FIRST PRIZE GRASS MOWING MACHINE



This Machine has been introduced with the greatest success into this country during the last season, and a large number of them have been worked in a most satisfactory manner. A Silver Medal was awarded to it at the Royal Agricultural Society's Meeting at Warwick. It was also exhibited before the Emperor of the French at Fouilleuse, on which occasion it performed its work to the admiration of every one. Two of these Machines were purchased by the Emperor on this occasion, and an order for two more has since been received for the season of 1860. It was also exhibited in Scotland and Ireland with the same success. It also received the First Prize of the Norfolk Society at Swaffham, in competition with Wood's and others, besides many other Prizes. Price £30 at the Works. Extras are charged for.—Full particulars may be obtained of BURGESS & KEY, 95, Newgate Street, London, E.C. Early orders are solicited to insure delivery in time for hay harvest.

WARNER'S PATENT VIBRATING STANDARD PUMPS.

PATENT CAST-IRON PUMPS fitted with J. W. & SON'S Patent Buckets and Suckers, which cannot clog in action, for Farms, Cottages, and Wells not exceeding 25 feet.

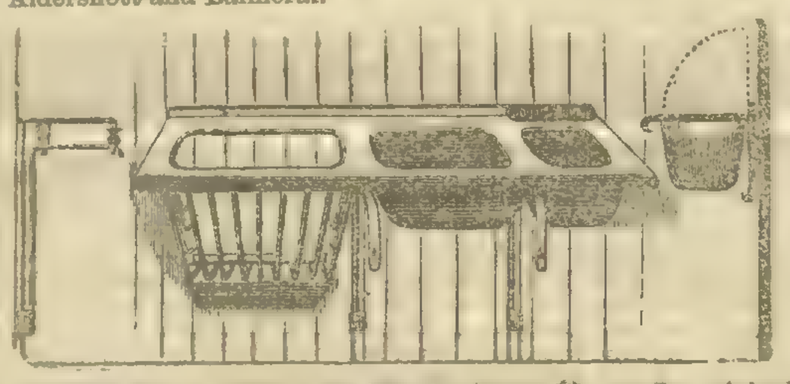
Diameter of Barrel.	Height.		£.	s.	d.
2½ in.	short 1 ft. 7 in.	Fitted for lead, gutta percha or cast iron flanged pipe as required.	1	1	0
2½ ,,	long 3 ,, 3 ,,		1	10	0
3 ,,	ditto 3 ,, 6 ,,		2	4	0
3½ ,,	ditto 3 ,, 6 ,,		2	9	0
4 ,,	ditto 3 ,, 6 ,,		2	18	0
2½ ,,	short, with 15 feet of Lead Pipe attached, ready for fixing		2	0	0
2½ in.	long ditto ditto	ditto	2	14	0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

May be obtained of any Ironmonger or Plumber in Town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER & SONS, 8, Crescent, Jewin Street, London, E.C.

Every description of Machinery for Raising Water by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. &c.—Engravings sent on application

COTTAM'S PATENT INVENTIONS FOR STABLE REQUISITES, awarded a Prize at the Paris Exhibition, patronised by the English and French Governments, as well as by the principal Nobility, Gentry, and Hunting Establishments in the kingdom. In use at her Majesty's Stables, Aldershott and Balmoral.



COTTAM AND COMPANY, Winsley Street, W., are the original inventors of the PATENT ENAMELLED MANGER, Water Trough, and Wrought Iron Rack, united to an iron top-plate, and forming one complete and useful fixture, having COTTAM'S patent noiseless halter guide and collar rein attached, which is taken to the back of the manger, and works with ease and freedom up or down the guide bar.

COTTAM'S NEW PATENT SEED-BOX, an important addition to the above fittings, being simple in construction, light, and durable, promotes cleanliness, and is economical in its results.

COTTAM'S PATENT PERMANENT ATTACHED DROP COVER, for the above, is a most essential addition to their fittings; it is never in the way; can be placed and replaced in an instant; while its cheapness, simplicity, and utility in keeping the contents of the troughs clean, and regulating the quantity to be taken, is quite sufficient to insure its use.

COTTAM'S PATENT SADDLE and HARNESS BRACKET combined, can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

COTTAM'S IMPROVED WROUGHT IRON VENTILATING BRACKET preserves the shape and allows a free admission of air to the under parts of the saddle.

COTTAM'S IMPROVED SURFACE CUTTER, with perforated moveable cover, the use of which prevents accidents, and can be easily cleaned out.

COTTAM'S CAST-IRON SANITARY TRAP, from its improved construction, gives a full water passage, and does not allow any smell to ascend from the drain.

PATENT LOOSE-BOX FITTINGS, and every article for the harness-room and stable, kept in stock, plain, galvanised, and enamelled. Iron gates, fencing, hurdles, &c.

The New Illustrated Catalogue and Estimates, gratis, upon application to COTTAM and COMPANY, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon).

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.

SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

PRICES REDUCED.

H. J. MORTON AND CO., Galvanised Iron Works 2, Basinghall Buildings, Leeds.

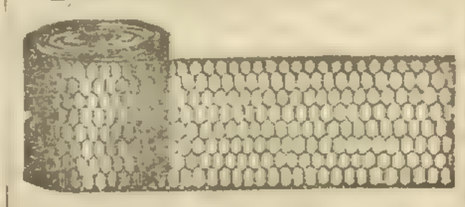
GALVANISED IRON ROOFING for Farm Buildings and other Roofs; the cheapest, most durable, and neatest Roofing in use; also Spouting at 10½*d* per yard.

WIRE STRAND CABLE FENCING.

(formed of Twisted Wires like a rope or cable), the strongest, cheapest, and neatest fence in use, will resist the largest cattle and will not bend or get out of form by trespassing upon or over. Price, with five lines of the Galvanised Strand, iron main posts, and pronged Standards, 1*s.* 2½*d.* per yard.

This fence is far cheaper than posts and rails, or any kind of iron fencing; and possesses four times the strength of solid bars. Will not rust nor corrode. Upwards of 1200 miles of this Fencing supplied.

GALVANISED GAME AND POULTRY NETTING.



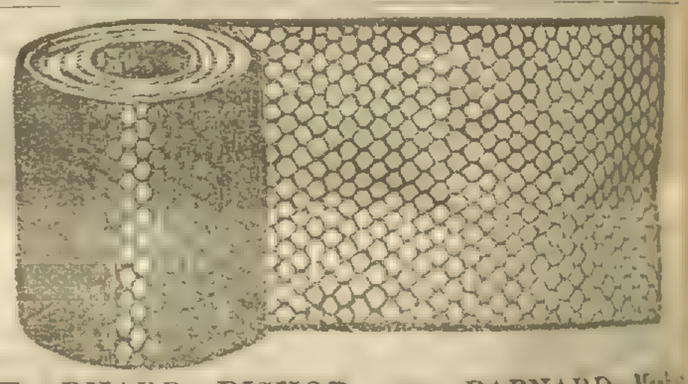
Galvanised, 24 ins. wide, 2 inch mesh, 5½*d*., 7*d*. and 9½*d*. per yard.

Galvanised, 24 ins wide, 3-inch mesh, 4*d*., 5*d*., and 7*d*. per yard. The Netting made any width, and with openings of any size.

GALVANISED IRON CHAIN CAMP STOOLS & CHAIRS POULTRY FOUNTAINS & FEEDERS, PRONGED DAHLIA RODS AND ROSE STAKES, &c.

Strong CATTLE HURDLES from 2*s.* per yard.

PATENT IMPROVED GAS WORKS, of all sizes, for the use of Private Houses, Mansions, Railway Stations, Mills, Collieries, Mines, Villages, &c. Works from 10 to 500 lights estimated for. The works can be entrusted to an ordinary labourer.—Apply to HENRY J. MORTON & Co. 2, Basinghall Buildings, Leeds.



BARNARD, BISHOP, AND BARNARD, Market Place, Norwich, in consequence of improvements in their machinery for the manufacture of the above article, have been enabled to make a great reduction in the prices.

			Galvanised.	Japanned.
2-inch mesh,	24 inches wide	..	5*d.* per yd.	4*d.* per yd.
2-inch ,,	strong do. ..	..	6 ,,	4½ ,,
2-inch ,,	intermediate, do.	..	7 ,,	5½ ,,
2-inch ,,	extra strong, do.	..	9½ ,,	7½ ,,
1⅝-inch ,,	24 inches wide ..	..	5½ ,,	4½ ,,
1⅝-inch ,,	strong, do. ..	..	6½ ,,	5½ ,,
1⅝-inch ,,	intermediate, do.	..	7½ ,,	6 ,,
1⅝-inch ,,	extra strong, do.	..	10 ,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 8½*d.* per yard, 3 feet wide. Galvanised Sparrow-proof Netting for Pheasantries, 2½*d.* per square foot. Delivered free of expense in London, Peterborough, Hull, or Newcastle. Manufacturers of Improved Strained Wire Cattle and Deer Fencing, Iron Hurdles, &c.

Illustrated Catalogues and Patterns forwarded by post.

BRADFORD'S PATENT WASHING MACHINE. SIMPLICITY AND WONDERFUL EFFICIENCY.

"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations."—THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63 Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"420, Strand, London.

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they can repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts as easily as if it were so much dough. I think it the duty of persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener may escape colds and rheumatism by the use of Gutta Percha Soles.

"Your obedient servant, G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Band Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Insect Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Tea Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town and country.—The Gutta Percha Company Patentees, 18, Wharf Road, City Road, E.C., London.

PINE APPLES, GRAPES, &c.

PINE PLANTS, Fruiting and Succession.
GRAPE VINES, from Eyes, for Fruiting in Pots or Planting.

JOHN WEEKS AND CO. can now supply any quantity of very fine strong healthy Pine Plants, either Fruiting or Succession; also remarkably fine strong Grape Vines from Eyes, all the best sorts.

JOHN WEEKS & Co.'s Horticultural Show Establishment is now entirely devoted to the Growing and Forcing of Fruits in great variety, thereby showing the most improved plans of construction, and the most superior system of Hot-water Apparatus.

JOHN WEEKS & Co., Horticultural Builders and Hot-water Apparatus Manufacturers, King's Road, Chelsea, London, S.W.

PYRAMIDAL PEARS ON QUINCE, 15s. per doz.; 80s. per 100.

		s.
FINEST STANDARD ROSES, per doz. 15s.; ..	per 100	60
" DWARF ROSES, per doz., 9s.; ..	"	50
" HOLLYHOCKS, named, ..	per doz. 6s. to	30
" NEW VERBENAS of 1859	"	4
" FLOWER OF THE DAY GERANIUM, 6s. p. doz.;	per 100	40
HARDY HERBACEOUS PLANTS, named, 1s. each;	"	25
" ROCK OR ALPINE " " 1s. each;	"	25

" CATALOGUES of the above on application.
HENRY MAY, The Hope Nurseries, near Bedale, Yorkshire.

WILLIAM HOLMES begs to offer the following in strong Plants of all the best varieties:—

	per doz.—s.
CHRYSANTHEMUMS	5
POMPONE Ditto	5
DAHLIAS .. .. 4s. to 6s. and	9
FUCHSIAS .. .. 4s. to	6
VERBENAS .. .. 3s. to	4

CATALOGUES in exchange for one stamp.
Frampton Park Nursery, Hackney, N.E.

TO LONDON MARKET GARDENERS.

WANTED, CHOICE VEGETABLES AND FRUIT, DIRECT FROM THE GROWER.—A weekly supply throughout the season will be required, and as the prices will be liberal, first-class goods are indispensable. Growers may apply to GEORGE TAYLOR,
VEGETABLE AND FRUIT SALESMAN,
The Grand Stand, St. John's Market, Liverpool.

HENDON PARK NURSERIES, HENDON, N.W.

NEW DAHLIA—"THE CHANCELLOR."—First Class Certificate of National Floricultural Society; First Class, Brighton; First Class, Saffron Walden; First Class, Stoke Newington, &c.; First Prize as best Seedling Dahlia, Stoke Newington, 1859.

Plants of this magnificent new variety will be sent out on May 1 next. Early orders are requested. Delivered carriage free in London.—EDWARD SHENTON.

CHINESE PRIMROSE.—Very superior fimbriated varieties saved by a first-rate private grower, per packet, 1s.: fimbriata alba, do., 1s. per packet; fimbriata striata, choice, from the continent, 1s. per packet. The Trade supplied.

CALCEOLARIA.—This is annually received from a private grower, for years renowned for his first-rate Calceolarias, and has given the fullest satisfaction, per packet, 1s.; extra, from finest new, 2s. 6d. per packet: also fine new continental dwarf growing varieties, see Catalogue.

STEPHEN BROWN, Seed Establishment, Sudbury, Suffolk.

CHOICE FLOWER SEEDS.—SPLENDID HYBRIDISED CALCEOLARIA, saved from Messrs. DOBSON & SONS' superb collection, with directions for sowing, 1s. 6d., 2s. 6d., 3s. 6d., and 5s. per packet.

CINERARIA from the newest kinds, with directions for sowing, 1s. and 2s. 6d. per packet.

PRIMULA SINENSIS, the most beautiful fringed, of various shades of colour, with directions for sowing, very fine, 1s. and 2s. per packet.

BALSAM, fine Camellia-flowered, 1s. per packet.
HOLLYHOCKS, superb mixed 100 seeds, 1s.
VICTORIA SCARLET TEN-WEEK STOCK, fine, 6d. per packet.
DELPHINIUM FORMOSUM, 6d. per packet.

The above are sent out in sealed packets, and warranted to be of a very superior kind. All post free.

JOHN DOBSON & SONS, Seedsmen, &c., Woodlands Nursery, Isleworth.

CHOICE PLANTS.

HENRY WALTON, Edge End, Marsden, near Burnley, Lancashire, begs to offer good strong Plants of the following at the prices annexed:—

GERANIUMS, show, fancy, and spotted varieties, at from 6s., 9s., 12s., and 18s per dozen.
FUCHSIAS of 1859, 9s., 12s., and 15s. per dozen.
CINERARIAS, 6s., 9s., 12s., and 15s. per dozen.
VERBENAS of 1859, 6s. per doz.; or 2 doz., 10s.; or 5 doz. for 1l.
CARNATIONS and PICOTEES, 9s. to 18s. per dozen, or 25 pairs for 1l.
PINKS, 4s. 6d. to 6s. and 9s. per dozen pairs.
PHLOXES, 6s., 9s., and 12s. per dozen.
GLOXINIAS, erect and drooping flowered, 9s., 12s., and 18s. per dozen.
BEGONIAS, including Marshalli, 3s. 6d.; Queen of England, 2s. 6d.; Madame Wagner, 1s. 6d.; Madame Alwardt, 2s. 6d.; and several others from 1s. 6d. to 2s. 6d. each.
ROSES of 1859, nice plants in April, 24s. per dozen.
DAHLIAS of last season and other bedding in May in great quantity.

Descriptive Lists on application enclosing one stamp. Post-office Orders to be made payable at Nelson, near Burnley.

MESSRS. WATERER AND GODFREY respectfully refer planters to the following LIST of well-known good hardy Plants:—

ARAUCARIA IMBRICATA, 1 foot, stout, healthy, 5l. per 100; larger, up to 8 feet.
CEDRUS DEODARA, 2½ to 3 feet, very handsome, 10l. per 100; larger, in any quantity, up to 10 and 15 feet.
PICEA NOBILIS, Seedlings, in quantity, 1 foot, stout.
Ditto larger and in every way perfect plants, up to 4 feet.
NORDMANNIANA, from seed, 2, 3, 4, and 6 feet.
PINSAPO, 2½ to 3½ feet, and as much through.
Ditto magnificent plants, 8 and 10 feet high.
CUPRESSUS LAWSONIANA, fine bushy seedling plants, 2½ feet high
JUNIPERUS, CHINESE, 3 feet up to 8 and 10 feet.
" IRISH, 5, 6, and 7 feet.
YEWS, IRISH, 5, 6, 7, and 8 feet.
" GOLDEN, from 2 to 7 and 8 feet.
" COMMON ENGLISH, in large quantities, 4 to 6, 7, and 8 feet.
THUJA AUREA.—Several hundred magnificent specimens, 3, 4, and 5 feet high, and measuring 10 to 15 feet in circumference
THUJOPSIS BOREALIS, 2½ to 3 feet.
WELLINGTONIA GIGANTEA, all from seed, 1½ to 3 feet, and as wide
HOLLY, GREEN, in quantities, 5, 6, and 8 ft.; VARIEGATED, especially the best gold striped, of all sizes, up to 6 feet.

All the plants referred to in this advertisement were removed in April last, and they are in a condition to travel any distance with perfect safety.—Knap Hill Nursery, near Woking, Surrey.

SIX SUPERB NEW FUCHSIAS.

GEORGE SMITH begs to announce that Illustrations of the above, beautifully coloured by Mr. Andrews, will be sent in exchange for 12 postage stamps. For description see *Gardeners' Chronicle*, February 4 and 11.

G. SMITH'S CATALOGUE is now ready, descriptive of the above; also a first-class collection of GERANIUMS, DAHLIAS, VERBENAS, PETUNIAS, &c., in exchange for one stamp.
Tollington Nursery, Hornsey Road, Islington, London, N.

SUPERB DOUBLE BALSAMS.

F. AND A. SMITH are now sending out SEED of their superb BALSAMS, which are unrivalled for size, form, brilliancy of colour, doubleness of flower, and habit of plant.

In collections of nine separate colours	2s. 6d.
" " mixed "	2 0
" " " " half quantity..	1 0

☞ The above are genuine only in our sealed packets, and may be had of most respectable Nurserymen and Seedsmen in the United Kingdom.—Dulwich, Surrey, S.

WARRANTED GOOD SEEDS.

GEORGE DAVISON'S PRICED SEED LIST is now ready, and will be forwarded post free upon application. It contains selections of all the most approved Vegetable and Agricultural Seeds in cultivation. No. 1, Complete Collection for a large garden, 3l.; No. 2, 2l.; No. 3, 1l.; and No. 4, 10s. 6d.

Especial attention is paid to Grass Seed Mixtures.

Permanent Pasture Grass Seed mixed to suit every description of land, at from 27s. 6d. to 32s. per acre. Renovating Mixture, 9d. per lb. Fine New Red Clover, 52s. per cwt., cash. Samples supplied.—Hereford Seed Establishment.

GENUINE GARDEN SEEDS.

TIMOTHY BRIGDEN, SEEDSMAN and FLORIST, begs most respectfully to inform his friends and purchasers of SEEDS generally, that his unrivalled Collection of GENUINE AGRICULTURAL, VEGETABLE and FLOWER SEEDS, is now ready, of which a PRICED CATALOGUE may be had upon application.

T. B. further guarantees that every article is GROWN and SELECTED with the greatest care under his own personal attention. Orders from unknown correspondents must be accompanied with Postage Stamps or P. O. O.

Seed Establishment, 10, Railway Arcade, London Bridge, S.E.

AYTON CASTLE GIANT LEEK.

CHARLES ALEXANDER, 30, West Register Street, Edinburgh, can supply a limited quantity of this unrivalled Scotch LEEK at 5s. per oz. and 1s. per packet in exchange for postage stamps.

"These Leeks were blanched upwards of 12 inches, and one of them measured 7 inches in circumference. The four together weighed 7¼ lbs."—*Gardeners' Chronicle, December* 17, 1859.

HENRY'S HYBRID SCOTCH LEEK.

CHARLES ALEXANDER, 30, West Register Street, Edinburgh, offers Seeds of the above Prize LEEK saved by Mr. Henry, and direct from himself, at 6s. per oz., 2s. 6d, and 1s. per packet, in exchange for postage stamps.

C. A. has not "secured the entire stock" of this Leek, but the following document speaks for itself:—

[COPY.]

"Broom House, by Dunse, Feb. 8, 1860.

"I have this season supplied Mr. CHAS. ALEXANDER of Edinburgh with part of the Seed of my Hybrid Scotch Leek.

(Signed) "WILL. HENRY."

"I have obtained a variety of good quality, capable of being grown to the weight of 4 lbs. 15 oz. the single Leek repeatedly, blanched to the length of 20 inches, and in one instance measuring in circumference 12½ inches."—WM. HENRY, *in Scottish Gardener, Feb.*, 1860.

ABIES INVERTA (new Weeping Spruce Fir), a variety of the common Spruce, in growth like a Kilmarnock Weeping Willow; its leader straightens itself in the old wood, like a Deodar Cedar. It is the best weeping variety ever introduced. A few photograph copies have been taken, one of which will be forwarded on receipt of 12 postage stamps.

Price 15s. each, with usual allowance to the Trade, and one extra added for every three ordered. A few extra fine specimens at increased prices.

RICHARD SMITH, Nurseryman, Worcester.

CHARLES DALY AND SON will Sell 2-years transplanted LAUREL, at 15s. per 1000; PORTUGAL ditto, 1 to 1½ foot, 3s. per 100; IRISH YEWS, 1½ to 2 feet, 12s. 6d. per 100; TREE BOX, 1 to 1½ foot, 30s. per 1000; IRISH IVY, 4s. per 100; HEDERA ROMERIANA, 4s. per 100; VARIEGATED HOLLY, 1s. each. For cash only; or to be paid to Messrs. HURST & MCMULLEN, 6, Leadenhall Street, London, E.C. Free in Liverpool.—Coleraine.

LARGE LIMES, ELMS, HORSE CHESNUTS, LAURELS, AND BEECH.

	Per 100.—s.		Per 100.—s.
English Elms, 9 to 10 ft. high	25	Beech, 4 to 5 feet high ..	10
English Elms, 6 to 7 ft high	20	Beech, 6 to 7 feet high ..	12
Horse Chesnuts, 6 to 8 feet	20	Laurels, fine, 3 feet high ..	16
		Laurels, 2 feet high ..	12

BENJAMIN R. CANT, St. John's Street Nursery, Colchester.

FRUIT TREES IN POTS.

H. LANE AND SON have to offer a large quantity of fine well grown FRUIT TREE in pots, well furnished with bloom buds, and suitable for bearing a crop this season, consisting of Apricots, Peaches, Nectarines, Cherries, Plums, Apples, and Pears, also Vines in pots from eyes.

This is a suitable time for sending them to any distance.

CATALOGUES of the above, together with those of Roses and Trees and Shrubs, may be had on application.

The Nurseries, Great Berkhampstead, Herts.

FRUIT TREES IN POTS.

H. LANE AND SON have to offer the following FRUIT TREES in Pots, well set with bloom buds for bearing this season, viz.:—

Apricots, 5s. to 7s. 6d.; extra large specimens, 21s.
Nectarines, 5s. to 7s. 6d.; extra large specimens, 21s.
Peaches, 5s. to 7s. 6d.; extra large specimens, 21s.

		s.	d.
Pears	3s. 6d. to	5	0
Apples	2s. 6d. to	3	6
Plums	3s. 6d. to	5	0
Cherries	3s. 6d. to	5	0

Also Vines in Pots.

Also Dwarf-trained Peaches, Nectarines, Apples, Cherries, &c.
Standard and Dwarf Roses in large quantities.

		s.	d.
Indian Azaleas, per dozen	12s. to	15	0
" " good blooming plants, per doz., 18s., 24s.	to	30	0
Camellias, per dozen	18s. to	24	0
" well set with bloom buds, per dozen ..	24s. to	36	0
Mandevilla suaveolens, each	1s. to	1	6
Achimenes and Tydeas in great variety, each ..	1s. to	1	6

Also a fine collection of Ferns and Mosses.

CATALOGUES of which, together with the one of Trees and Shrubs, may be had upon application to
The Nurseries, Great Berkhampstead, Herts.

FERN CATALOGUE.

ROBERT SIM'S DESCRIPTIVE AND PRICED CATALOGUE, No. 6 (62 pages) of his COLLECTION of BRITISH AND EXOTIC FERNS, can be had, post free, for 8 stamps. Gratis to all previous purchasers of Ferns.
Nursery, Foot's Cray, Kent, S.E.

NEW PLANT CATALOGUE.

WM. RUMLEY AND SONS' NEW DESCRIPTIVE SPRING CATALOGUE of New and Choice Fuchsias, Verbenas, Geraniums, Cinerarias, Petunias, Dahlias, Hollyhocks, Chrysanthemums, Phloxes, Calceolarias, Heliotropiums, Stove, Greenhouse, Bedding, and Hardy Plants, at reduced prices, is Now Ready, and may be had on application.
Gilling, near Richmond, Yorkshire.

NEW PLANT CATALOGUE.

MESSRS. WILLIAM ROLLISSON AND SONS respectfully announce to the Nobility, Gentry, and the Trade, that their GENERAL CATALOGUE OF PLANTS is now ready for distribution, and can be had on application by enclosing one stamp. The CATALOGUE contains names, description, and prices of upwards of

ONE HUNDRED NEW PLANTS

in species and varieties, besides descriptive Lists of the General Nursery Stock.—The Nurseries, Tooting, London, S.

NEW FARM SEEDS, GROWTH OF 1859.

ROYAL BERKSHIRE SEED ESTABLISHMENT.

SUTTON'S FARM SEED LIST IS NOW READY,
and will be sent post free to any address.
SUTTON & SONS, Seed Growers, Reading.

ROYAL SOUTH HANTS SEED ESTABLISHMENT.

Under the patronage of H. R. H. the PRINCE CONSORT, the Horticultural and Agricultural Society of India, the principal Nobility, Gentry, and Agriculturists of the United Kingdom.

PAGE AND TOOGOOD will forward their PRICES CURRENT upon application. It should be referred to by purchasers of Garden and Farm Seeds.

Collections of VEGETABLE SEEDS, 5s., 3s., 2s., 1s. The Quantities in the above selections will be found more liberal, and the prices 10 per cent. less than any house in the Kingdom.—Seed Establishment, Southampton.

CEDARS OF LEBANON.

LUCOMBE, PINCE, AND CO., Exeter Nursery, Exeter, have a very large stock of remarkably handsome specimens of these noble trees, from 6 to 12 feet high, furnished with abundance of healthy fibrous roots (having always been regularly transplanted), so that they can be moved with perfect safety to any distance.

Prices, which owing to the extensive stock possessed by L. P. & Co., are very moderate, may be had on application.

N.B. *The present is the last time for planting Cedars of Lebanon.*

GRAND EXHIBITION OF CAMELLIAS, &c.
IN THE EXETER NURSERY.

LUCOMBE, PINCE, AND CO. respectfully announce that the splendid specimens in their celebrated large Camellia House are now finely in flower.

Their SHOW HOUSE is also in great perfection, being filled with a choice and extensive collection of various ornamental plants.—Exeter Nursery, Exeter, March 17.

The Gardeners' Chronicle.

SATURDAY, MARCH 17, 1860.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, March 21—Royal Botanic (Spring Meeting).... 2 P.M.

WHEN Baron DE TCHUDY favoured the world with his ideas about HERBACEOUS GRAFTING, he probably did not anticipate such an application of the method as we are now about to describe. And yet, as it is the most easy of all modes when circumstances are favourable, and that most likely to be practised by one untutored in the art, so it is possible that the following curious case may not be quite without a parallel.

Early in the year 1853 a country ruffian, who had a grudge against the Earl of LEICESTER, conceived the idea of exhibiting his malice by destroying some fine Araucarias, which, alternately with Deodars, form an avenue called the "Fakenham Approach" to Holkham, and were then from 4 to 6 feet high. By means of a saw the man cut through their leaders in an oblique direction thus —, until the head fell down thus ⌐, suspended by the bark, with a very small portion of the wood attached. When Mr. BAKER, Lord LEICESTER's resident agent, an old gentleman of great intelligence and long experience, saw the mischief that had been done, instead of indulging in idle lamentation, he without a moment's delay placed the matter in the hands of Mr. GIBVAN, the gardener at Holkham, who immediately set to work to repair the injury; and with complete success as will be presently seen.

The heads of the plants were first got into their proper positions, then well secured with splints, with a small quantity of Moss behind to prevent the sap escaping, which was rather difficult to do, then more Moss was put over the wound and well secured so as to exclude air. Finally, the plants

were so staked and tied as to prevent their moving or rocking.

In this state they remained for two years, during which time the bandages were removed and renewed by Mr. GIRVAN several times "in order," as Mr. BAKER expresses himself, "to admit air and allow the sap to flow more freely." At the end of the two years the wounds were quite healed, and health restored, as will be seen from the following statement of the rate of growth each year :—

MEASUREMENT OF PLANTS AND WHEN MEASURED.

	Previous to being cut.	1853. July 27.	1854. July 5.	1855. July 26.	1856. July 21.	1857. July 31.	1858. July 26.	1859. July 30.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
1.	6 5	7 0	8 0¼	9 2¾	10 6	11 11	13 3	15 1½
2.	5 3½	5 7¼	6 5¾	7 4	8 2	9 9	10 10½	12 5
3.	6 5	6 10	7 7½	8 10½	9 7	10 4	11 3	12 2½
4.	4 5	4 6¾	5 2	5 8½	6 5¼	7 4	7 7½	8 0½

Thus it appears that the Araucarias began to grow more or less freely directly after Mr. GIRVAN had operated on them. The mutilation took place early in 1853. By the 27th July, that is to say in three or four months, one Araucaria had pushed 7 inches, a second 3¾ inches, a third 5 inches, and a fourth 1¾ inch, so that the wounds must have healed immediately. In six years more the growth had become as rapid as if the leaders had never been broken. Such is the effect of knowledge, skill, and *promptitude*.

For these very interesting facts we are indebted to Mr. BAKER himself, who communicated them to W. A. NESFIELD, Esq., our great landscape gardener, to whose skilful designs Modern Holkham owes so much of its beautiful scenery.

WE announced the other day the early appearance of a Floral Magazine, to be published by Mr. LOVELL REEVE. We have now before us, from the same enterprising publisher, the prospectus of a FRUIT MAGAZINE, comprising figures and descriptions of fruits and fruit trees; to appear monthly with four coloured plates, from the pen of Mr. ROBERT HOGG, the drawings being executed by FITCH. The prospectus states the object of this publication to be the publication of coloured representations and descriptions of the varieties of fruits that are cultivated in the gardens and orchards of Great Britain. The Editor will bring into notice those new or partially known varieties that have been introduced during the last few years; but he will at the same time give sufficient prominence to those older varieties of acknowledged merit, that have become established as favourites among fruit growers. Each plate will be accompanied by a leaf of letter-press containing a description and history of the variety, with an enumeration of the synonyms.

THE gardening world is aware that a Grape of singular excellence is now extensively grown under the name of the GOLDEN HAMBURGH, or BUSBY'S GOLDEN HAMBURGH, the latter name having been applied in consequence of its having been brought into notice by Mr. M. BUSBY, who raised it from seed, and who gives the following account of its history. Having for many years entertained a belief that Grapes might be improved by crossing, he tried the following experiment in the year 1849, then being gardener at Stockwood Park. In a note now before us he says—"The operation was performed by fertilising a shoulder of a bunch of Black Hamburgh with the White or Dutch Sweetwater. Only one berry received the cross, and it produced five seeds, which were sown in the following spring. They all vegetated and grew, one of them having become the Golden Hamburgh. The young man who lived foreman with me at the time will authenticate this statement, should it be required. I recollect when I exhibited the first or maiden bunch in Regent Street, you expressed your surprise at the unusual occurrence of a berry producing five seeds. Nevertheless, it is a real fact, as all the seeds grew, and I only saved one berry. If I had had the slightest idea that the crop would have proved so good I should have taken great care of the whole; but two or three showing signs of delicacy and weakness were thrown away. The two remaining were grown in pots, having no place to plant them out; in the meantime I one day broke one of the two remaining close off to the pot, and that shared the fate of the others—this brought me to one plant, which was planted on a narrow 2 feet wide border at the back of a late Vinery, and fruited the second year, producing a poor bunch of white Grapes, which I had the honour to exhibit before the Horticultural Society in, I think, October, 1853. Although a poor miserable bunch, Mr. HOGG thinks the weak-looking plants would have been the best."

This seems to us, as it has to others, a plain straightforward statement; and we have always been satisfied with its truth. For Mr. BUSBY is believed by those who know him to be an honest man, against whom no imputation rests. Nevertheless we find that in one of the Horticultural Journals its truth has been peremptorily denied, the writer asserting that the Golden Hamburgh is not a seedling, but an imported Italian variety. Now this is a serious imputation, and ought not to be lightly made. It conveys a direct charge of falsehood; and requires to be substantiated, not by renewed assertion but by irrefragable proof. Let it be shown that Mr. BUSBY did not raise any Vine whatever at Stockwood, but that he did receive there an Italian variety, which variety is well known and identical with the Golden Hamburgh, and then indeed a case of suspicion is made out. If that is done his accuser will have no difficulty in showing from whom he received it, and furnishing the name that the Grape bears in Italy. Growers will then have the opportunity of comparing the evidence and judging for themselves. For ourselves we can only say that we have been unable to find among the Grapes mentioned by Continental writers any description which applies to that before us; and that till we are better informed we shall not believe Mr. BUSBY'S statement to be untrue. It will be time enough to sanction the allegation which has been made when what has now the appearance of calumny shall have been shown to be the contrary.

MYCOLOGY.—No. X.

HYGROPHORUS PSITTACINUS, *Fr.*—Natural as is the group to which the subject of our present notice belongs, and easy as it is to recognise when once known, it is not very easy to draw up a distinctive character which shall be at once intelligible. The waxy nature of the sharp-edged gills, the confluence of the stem with the pileus, and the identity of the central substance of the gills or trama, as it is technically called, with that of the pileus are the most distinctive characters, but of

HYGROPHORUS PSITTACINUS.
Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

these the first only separates it decidedly from *Agaricus*, and is by no means readily understood in the absence of a familiarity with one or two examples. There are other Mushroom-like Fungi which have a waxy hymenium, but the two principal genera which could alone be confounded with *Hygrophorus* have in the first place a trama formed of large decided vesicles, and then of these two one has milky gills, so that there is no difficulty in distinguishing them even apart from their very peculiar habit.

Hygrophorus psittacinus does not recommend itself to our notice by any useful qualities, neither as far as we know is it dangerous. No one however would be likely to gather it, as its appearance, however beautiful as regards colouring, is not inviting in a culinary point of view. Our only object in choosing it as one of our early illustrations is because it affords a good example of a very distinct group of gill-bearing Fungi, and because from its lovely colouring and very constant occurrence in pastures after harvest it is likely to attract general attention.

The Parroquet Mushroom affects exposed localities where it can have the benefit of the light while it is protected from too rapid evaporation by the close Grass amidst which it grows. The ground colour varies from yellow, pink, and lilac to white, passing through almost every imaginable shade, but at first this is coated with a thick layer of green slime which covers the stem as well as the pileus, and whose colour at times appears the more vivid from the frequently yellow substratum. When dried between papers a bright green tint is often communicated to them. As in the Verdigris Agaric, the slime gradually disappears, being washed off by the heavy dews or rain, and as the pileus itself loses its moisture, or according to the weathering to which it has been subject, it varies in tint. The green colour is more persistent at the top of the stem than elsewhere, in consequence of its being less exposed. The pileus is when young bell-shaped, but is soon more or less expanded, and sometimes becomes quite flat with little streaks on the margin, showing the position of the gills. The stem is nearly equal, tough, and hollow, and its surface often varied with transverse undulations, though otherwise even. The gills are distant, thick, swelling in the centre, and attached to the stem, and bright yellow shaded with a greenish tinge.

In dry weather the surface of the pileus often cracks, otherwise it is not subject to much variation. This Fungus frequently grows in little scattered patches, but it often forms imperfect rings. It is a beautiful species everywhere, but nowhere have we seen it in such beauty as in Denbighshire, where it assumes such a variety of lovely colours that it is constantly suggesting some brilliant discovery of a new and interesting species.

It cannot be confounded with any other species of its own group, and it could scarcely be referred to *Agaricus æruginosus*, which agrees with it only in the presence of a green evanescent gluten. Its distinct ring, thin membranous gills, evanescent scales, and their brownish purple gills and spores at once distinguish that species which is closely allied to the common Mushroom. Greville's plate, it should be observed, is confined to the yellow variety. Mrs. Hussey's represents other tints, but beautiful and true as both are, they by no means give an idea of all the beauty with which the species is sometimes invested. *M. J. B.*

FARNHAM CASTLE.

THIS ancient fortress is proudly situated in the western corner of the county of Surrey on an abrupt eminence on the northern side of the important market town of Farnham. It was originally built by Henry de Blois, brother of King Stephen and Bishop of Winchester, in 1129, on part of the manor given to the see of Winchester by Ethelbald, King of the West Saxons, and it has ever since remained the property of the Bishops. It endured several sieges during the Civil Wars, and had been frequently restored, but was finally blown up by Waller, the Parliamentary general, in 1642. On its ruins the present palace has been erected at different periods and by successive Bishops of Winchester, whose principal residence it is. The approach from the railway station in crossing the town passes the birth-place of William Cobbett on the right, and proceeds through Downing Street and the Market Place up the steep ascent of the Castle hill, at the summit of which the road branches at right angles to the east; at the entrance is a noble gateway, in the style which became prevalent during the reign of Edward IV. It is surmounted by a handsome clock tower, and is deeply embosomed in trees, while masses of Ivy cluster over its irregular parapets. It opens up to view the grand terrace, which is 300 feet in length and of an irregular yet corresponding width. The road passes in a direct line to the entrance, which is in the middle of the castle, and is terminated by a noble group of Cedars of Lebanon of some 70 years' growth; they are nearly 70 feet in height and some of them cover with their beautiful spreading branches, which reach the turf, an area of 270 feet in circumference. At the period of my visit early in the autumn, the southern side of the drive was adorned with many fine forms of succulents, amongst which a noble plant of American Aloe of more than 90 years' growth had just then thrown up a robust flower spike of some 20 feet in height; other examples of Aloe were also very effective in forming a line of demarcation.

The general mass of building is quadrangular, and the central portion of the southern front bears the same architectural impress as the noble gateway; it is composed of very substantial brickwork; the walls of the greater portion of the new work have been stuccoed, and the whole of the roofs are tiled. The remains of the ancient

keep on the north side, and the walls of the principal apartments of the eastern front are covered with various kinds of Ivy, from amongst which Roses and gay flowering creepers peep out at intervals—the variegated Ivy, it may be remarked, producing an excellent contrast to the sombre colour of the more robust and broad-leaved variety. On the walls of the palace at the entrance point are some well-trained healthy Moor Park Apricots, which were growing freely and producing excellent crops of fine fruit, and on a western projection on the same side some noble specimens of Genoa and Turkey Fig trees cover a large portion of the wall; these are annually laden with heavy crops of fruit, which arrives at a very high degree of perfection. On the western side of the entrance there is a small conservatory heated with hot water; it contains some valuable specimens of Orange trees and Camellias in robust health—the former gay with golden fruit, and the latter well set with flower buds; amongst other gay plants with which this house was decorated, noble examples of the Giant and Japan Lilies were very conspicuous. On the external trellis-work between the upright sashes in front, Fortune's Yellow Rose was flowering very freely.

The terrace is faced by a wall of great height, on the lower part of which fruit trees are trained. The irregular parapet, which rises some 3 or 4 feet above the terrace, is covered with Ivy intermixed with Roses, Fuchsias, and a multitude of other flowering plants which produce a charming effect; Red Valerian too has taken possession of its summit, and its flowers being of a very decided colour, contrast admirably with the foliage and blossoms of the other plants with which the whole of the parapet is handsomely covered. A noble walk runs close to the wall during its entire length, from which exquisite views are obtained; far beneath the eye, extending to a considerable distance in all directions, a vast congregation of red roofs present themselves, relieved in the middle by the market house in the centre of a broad and open street in which is seen a busy throng; somewhat to the right is the grey tower of the parish church, and near at hand on the left are some stately Cedars, through the spreading branches of which a symmetrical flower garden in the Dropmore style is seen to advantage—the latter the appendage of a neighbouring villa. The whole, backed as they are by the well-clothed Surrey hills and their fertile valleys, form a scene of great grandeur and interest.

From the eastern end of the terrace the ancient walls and fosse commence, and are continued round to the offices at the western side, at a distance of something more than 110 feet from the palace; the whole of the space thus inclosed is admirably laid out in ornamental pleasure ground. It rises somewhat rapidly for a considerable distance from the terrace along the eastern side of the building, until it reaches nearly to the central point; from thence it has been lowered to a seeming level entirely round the base of the ancient keep, which is of a polygonal form, originally flanked with towers, long since demolished, and from the material thus obtained a double embankment has been formed in front of the exterior walls. Facing the keep on the southern side of these sweeping walls there is an excellent range of plant houses, 100 feet in length by 17 feet in width; they are supported by a stone terrace, suitably adorned with vases and other ornaments. The walk commences at the eastern end of the grand terrace, and is continued over these embankments in front of the walls and houses until it reaches the western end, thus forming a delightful promenade, from which new views are obtained into the distant country at almost every step. Some portion of these walls is covered with flowering plants, amongst which noble examples of Magnolia and the old Tecoma grandiflora were very conspicuous; the latter was gorgeously covered with singularly-shaped orange-coloured blossoms; the greater portion however is covered with fine old specimens of Peach, Apricot, and Plum trees in excellent condition, and in no season have they failed to produce a full crop of the very best description of fruit, and this, too, without the aid of any spring covering or protection of any kind. The elevated situation and immense thickness of the brick walls (from 6 to 8 feet) may be fairly assigned as the cause of this impunity from the ill effects of early frosts, which are generally so destructive to blossoms. The roots, too, are in an admirable medium; in traversing these terraced embankments they imbibe no stagnant moisture, nor are they subjected to periodical applications of farm-yard manure; they are consequently under conditions most favourable for the production of well-matured saccharine matter, the test of all good fruit, and this ought to be the aim of every cultivator.

Proceeding from the eastern corner of the terrace by the walk at the foot of the ancient walls, we find on the left hand side a flower-garden somewhat in the form of a Maltese cross; it was gay with flowers and the colours were very well contrasted; here May's variety of the rugose Calceolaria endured the cold of last winter unscathed. The left hand side of the walk was bordered with a row of robust standard Roses of the most select kinds, which were flowering exceedingly well. There is a narrow border close to the wall during its entire length in which there were many interesting herbaceous and other plants. The chapel, which is in the centre of the building, has a projecting balcony; from this a spiral staircase of iron descends to the turf, and opposite this in the middle of the open space is a noble fountain, around which 36 beds of various sizes are systematically arranged; the whole is planted with Geraniums, arranged with correct taste and producing an exquisite effect. Crossing to the other side and ascending by tortuous and somewhat rugged stairs over the débris of former ruins, which are partially and appropriately planted on either hand with the beautiful small-leaved Cotoneaster, occasionally relieved by the stiff form of some Yucca or other contrasting plant, we reach the depressed summit of the ancient keep, which is 40 feet above the turf and is 450 feet in circumference. Here a scene of unexpected beauty and wonder presents itself; in the centre is a beautiful panel garden consisting of 72 symmetrical beds of excellent form and admirably filled with a choice collection of bedding-plants, surrounding a large vase of Gothic design gay with flowers. The terrace by which it is encircled is 3 feet in height and 6 feet in width; an irregular parapet of broken ruin surrounds it, over which the broad-leaved Ivy has fully established its claim to ramble at will. On the side of the panel there are standard Roses associated with vases of flowers; on the gravel are several seats, invitingly attractive after so steep an ascent to view the beauties of this delightful place. On the southern side the ruin stands unbroken to a still greater height of some 20 feet; here and there are several openings from which views are obtained into the distant country. There is also a large fireplace, blackened, as it were, by the smoke of but yesterday.

The view from the western side of the terrace into Hampshire is altogether unrivalled of its kind. Near at hand, and at some distance below, in the open court, stands the great hall—a noble apartment 50 feet in length, 30 feet in width, and 31 feet in height; on the southern slopes to the right the ground is covered with a forest of Hop-poles, to which strong bines had just entwined themselves, and which since then have produced an ample and most excellent crop. This noble plantation is broken in the middle by the new erections of the Conservative Building Society. In the middle distance the Alton valley stretches forth its fertile meadows, enlivened and enriched by the serpentine waters of the Wey. On the high ground to the left is the Royal Forest of Alice Holt, in which the railway whistle is heard, and the steam horse is seen glinting through the trees at furious speed. Returning to the eastern side of the terrace an exquisite view of the magnificent park presents itself; it is some 350 acres in extent and of uneven surface, delightfully clothed with well disposed groups and masses of noble timber, broken in the foreground with some fine examples of Lebanon Cedars and undergrowths of grotesque Thorns; it is bisected by a stately avenue of Elms nearly a mile in length, the end of which directly faces the keep of the palace. In the middle distance a noble herd of deer was grazing, and the whole of these glorious scenes of loveliness was just then flooded with the light of golden noontide. Another park of 3000 acres formerly belonged to the castle, but this was disafforested by Act of Parliament during the reign of Charles II.

Descending by the steps over the ruins the Geranium garden forms an object of much attraction, its well-arranged parti-colours and lacings producing an excellent effect on the closely shaven upland lawn—a description of turf which we can scarcely hope to have superseded by any plant whatever. Crossing over and regaining the walk over the embankment on the eastern side, we noticed in our course some very beautiful plants with which it is adorned; amongst these were upright Cypress 35 feet in height, Pavia macrostachya, Irish Yews, variegated Acers, Pinus excelsa, and many others all objects of interest. A noble example of Pampas Grass was just then throwing up many spikes of flowers, and contrasted admirably with the other plants. Fine specimens of common Geraniums were imbedded at intervals in the turf near the walks, and their gay flowers seemed to enliven the dark green of the other plants, more especially the sombre tints of the Ivy, with which the walls of the keep are densely covered in the background.

The plant houses are in three divisions. The first is devoted to the display of plants in flower; it contained many excellent specimens of well-grown plants; conspicuous amongst which were many noble masses of Achimenes, which contrasted well with Geraniums, Gloxinias, Gesneras, and a multitude of other gay plants, the whole being intermixed with Ferns and other fine-foliaged plants, producing a charming effect. A single stem of the best kinds of Fuchsia was trained up each rafter, and their pendent branches loaded with beautiful flowers had a gorgeous appearance.

The middle house is a stove, and contained many interesting and well-grown specimens; we noted as particularly interesting a very fine example of Hæmatodictyon marginatum; some excellent specimens of the interesting and ornamental genus Begonia were also very attractive, amongst which Rex, ricinifolia, miranda, Reichenheimii, maculata, and splendida were probably the best. Cyathea medullaris, Aphelandra Leopoldi, Caladiums, Echites, a few Palms, and Arrowroot, Sago, and similar plants formed the principal attractions of this interesting assemblage. The rafters and cross beams of the roof were covered with Passiflora princeps; whose pendent spur shoots, each terminating with a beautiful raceme of scarlet flowers, had a glorious effect, and contrasted admirably with the fine foliage of the magnificent plants underneath.

The western house is devoted almost exclusively to the cultivation of Orchids, and it contains a superb collection of admirably grown specimens. The house is fitted up with a slate stage. The shelves are constructed so as to retain water; on these white pebbles are placed on which the pots rest, in order to prevent the continual absorption of water. There are also many basket plants suspended from the roof, and the surface of the whole of the pots and the interstices of the baskets were covered with a kind of white Sphagnum, chopped fine, which has a very clean and exceedingly neat appearance. We noted some noble specimens of Miltonia Clowesii, Oncidium sessile and Lanceanum, Cattleya labiata, Angræcum caudatum and virens, the former remarkable for its singular tails; Cypripedium villosum, and many others, all finely cultivated.* The front plate and some portions of the roof were covered with the magnificent Cissus discolor, whose inimitable foliage produced under circumstances so favourable was even more gorgeous and beautiful than usual.

Proceeding onwards to the forcing garden at the western end, we have a singularly beautiful view over the low grounds immediately in front, and through the trees into the distant landscape, the grand entrance forming the centre of the middle distance at the extreme end of the walk; on the top of the old wall there is a glass structure which has recently been planted with Vines, the roots depending entirely for sustenance on the mould which is contained in a small bed in the centre of the house. On the lower embankment, which is much wider at this part, is situated the forcing garden; it contains a Pine stove, heated with hot water, 45 feet long and 14 feet wide, in which the Cayenne, Black Jamaica, and Queen varieties are most successfully grown, and I may add that at the period of my visit a pair of noble specimens of the former variety were fast approaching maturity. There is a perpendicular moveable light immediately under the back plate, which very materially assists in bringing forward the crops of Beans and Strawberries which are grown on shelves behind the Pine bed during the winter months. The next house is devoted to the cultivation of Cucumbers, and is 30 feet by 12 feet; it is heated by hot water and presents the same general aspect as the Pine stove. The Frogmore forcing variety is usually grown in the winter. The forcing garden at Farnham Castle has long been famous for the production of this particular fruit; a former gardener used to reckon the amount of his success in this matter not at the usual mode of computation by the brace, but in the more definite form of inches, feet, yards, and so on; and as the season advanced his figures assumed a very formidable array, nor has their cultivation in any way deteriorated in other hands. The next house is a span-roofed structure in two divisions; it is 68 feet in length and 16 feet in width, and is admirably heated with hot water. The eastern division has a walk up its centre, and the space on either side is varied and enlivened with handsome pieces of sandstone rock, amongst which a very excellent collection of Ferns and Mosses is displayed to much advantage—the golden and silvery powdered species of Gymnogramma and Cheilanthes contrasting admirably with some of the more robust forms of other species, and also with the humble Mosses which seemed to insinuate themselves into every crevice. There is a jet of water on the right hand side, and altogether this is a most interesting house; every plant seemed to be in the highest health. The other division is devoted almost exclusively to the cultivation of Orchidaceous plants; a wide slate shelf is carried round the interior walls, on which small white pebbles are placed as in the other Orchid house, which can be flooded with water when required, and a wide sand bed occupies the centre of this stove. It contained some noble examples of Dendrobes, Cattleyas, Cœlogyne, Oncids, and many other beautiful plants; the rare Grammatophyllum multiflorum was also an object of attraction. A fruiting plant of the Cavendish Musa occupied the western end. Four ranges of frames and two of brick pits complete the amount of forcing conveniences in these grounds, and they are employed for the production of Melons, Pines, and Strawberries, and the forcing of vegetables and flowers. There are also some turf and boarded pits for the protection of bedding plants in the spring and late autumn months.

The eastern side has a partial screen of Rhododendrons and other evergreens, to break alike the violence of the storm or hide any unsightliness from the walks of the beautiful pleasure ground. The division wall which separates this garden from the stable-yard, and which extends to the keep, is faced on the garden side with rusticated sand-stone, on which some beautiful Ferns have completely established themselves, forming an object of considerable attraction.

The whole of these delightful grounds has been remodelled by the present Lord Bishop of Winchester, whose fine taste in such matters, as well as fondness for rare and beautiful plants, are well known. The

* We understand that at the present moment Dendrobium densiflorum is showing about 50 spikes of bloom; another has 23; and D. Farmeri 22 spikes, with bulbs 18 inches high and 3 inches in circumference.

keep, with its glorious garden suspended as it were in mid-air, was previously used for the production of esculents, and the charming grounds by which it is surrounded was a cultivated Apple orchard, which has now given way to a beautiful lawn, on which ornamental shrubs, flowers, and works of art are tastefully arranged. Broad, firm walks of the far-famed Farnham gravel were led along the ramparts of the original fortification, and all was rendered ornamental. Even the rubbish of the ruins has been re-arranged and appropriately decorated with beautiful shrubs. The whole of this enchanting place was in the highest style of keeping and management, and reflected much credit on Mr. Lawrence, his lordship's gardener. The splendid condition in which we found the large and valuable collections of rare and beautiful plants in the glass structures are evidences alike of his untiring industry and cultural skill.

The Bishop of Winchester, with a liberality that does him credit, opens up these grounds very freely to the public. On reference to the usual channels of information, we find that on Saturday the 17th July, 1852, the children from Price's Candle Factory spent the day very happily at Farnham Castle, enjoying the hospitality of the Bishop of Winchester, and the great delight of rambling over his beautiful grounds. In the summer of 1857 the Surrey Archæological Society held their meeting under the Cedars on the lawn. And in the summer of last year a grand Bazaar was held in the grounds in aid of the new local schools, the proceeds from which amounted to a sum sufficient for the benevolent purpose for which it was held.

The annual exhibition of the produce of the cottagers' gardens and the Farnham Horticultural Society's Shows are also held in the same appropriate place; and on such occasions all have the privilege of promenading at will, enjoying alike the beauties of the delightful garden, and the views of the superb scenery by which it is surrounded.

The kitchen garden is situated on a still loftier site, nearly a mile north from the castle, and proceeding towards it through the park we pass the keeper's lodge on a well marked position. A former bishop erected a greenhouse in front of it and surrounded it with a few acres of shrubbery. The kitchen garden is an inclosed area of nearly 4 acres of excellent land, which produces vegetables of very fine quality; here the gardener's house is situated, a neat and convenient structure. *D.*

COFFEE CULTIVATION.

Regarding the high culture of Coffee, it is evident that I cannot, within the limits of a letter, give you details that could alone be held in a volume. To practice high culture you must resort as far as possible to a strict garden culture. Commence your high culture with the planting of the seed, and look upon your nursery as the most important part of your plantation. What does the word "nursery" imply? Convert your nursery into a strict school-room for education.

"As the twig is bent the tree is inclined." Educate your seedlings to require constant high stimulants. Don't listen to the forebodings of friends. One will say that you will get too much wood, another leaf, and so on. Get "Johnson on the use of Lime" (published by Blackwood)—study this little book till you have it by heart—it goes thoroughly to the bottom of all manuring. Have two sets of nursery beds—dig deep and pulverise every clod whatever, and incorporate 5 per cent. of wood ashes if the soil is a sound black loam, otherwise manure. First sow your seeds (fresh ones) broadcast, then, when the second pair of leaves show themselves, transplant such seedlings to what I may call the permanent beds of the nursery (prepared as above) at 6 and 9 inches apart; here force the plants till they touch each other, *i.e.*, the leaves of one plant touch those of another. By the way, in the transplanting above mentioned, nip off all excess of tap root that may be noticed over 2 inches long. Use liquid manure once a week in the permanent nursery beds. In liquid manuring take off the rose of the watering-pot, and place the spout in pouring out close to the ground, so that none of the liquid manure shall fall on the leaves, which would much injure them. Liquid manure is made by filling a tub a third or quarter full of good sound manure (cowdung is the best), and fill with water—stir occasionally for a week, then take off the scum and pour off the supernatant fluid and use that. Immediately after liquid manuring water the plants lightly, with a fine-holed rose to the watering-pot—the whole object of this is to remove any liquid manure on the leaves. Liquid manure once a week, and give a common watering once a week. The nursery should be covered over by a pandal (shed? 6 feet high), but don't that all the sides except the south, or you will keep out the necessary circulation of air. After three months or so in the permanent nursery beds, gradually remove all the thatch of the pandals. In permanently planting out again, cut the tap root to half the length of the longest.

In liquid manuring in the nursery you must occasionally break up the soil and let in the air among the roots without injuring them, otherwise liquid manuring will cake the top soil. Of course in dry and wet weather you must supply or withhold moisture, according to your discretion and the healthy appearance of the plants. And during the last six months you must try to make the plants do without any liquid manuring or watering, not that you mean them to shift for themselves, but to prepare them for the less amount of attention you will be able to bestow on them when planted out. In the nursery do a little pruning—cut off extraneous branches, so that the secondaries shall run up the stem like a corkscrew. As you will get finer plants don't observe the distances apart followed in Ceylon, but a foot further apart every way. Top your plants at the age followed in Ceylon, don't be alarmed if your shrubs are higher than those of others; if they are, so much the better, as that will secure to you the two gourmand branches—the most productive of the lot, but the most exhausting, so if your topping preserves these you will have to keep up high culture. If the plants in the nursery don't bear a healthy look strew the surface soil with ashes—this will impart a fine green to the leaves—ashes are exhausting to the soil, but liquid manure will replenish it. All that I have now recommended need cost little more than a few extra gardeners for the nursery. Exclusive of the price of the land, if you in five years (including interest, everything) spend on your plantation at the rate of 25*l.* per acre, I think the sum to the last degree ample, and I think in the sixth year your receipts at the least should be cent. per cent. on the above. By this expenditure of course I suppose from the views you have expressed that you will not terrace. *H. D. Rae, Ootacamund, in the Colombo Observer.*

Home Correspondence.

Root Galls.—Having from time to time noticed the progress of the little insect you have again brought before the public (see p. 72), and its ravages on the Oaks of Devon, &c., I may mention that not only is it there, but in this county it is almost impossible to find either a young or old tree that is not more or less attacked. Last summer both my son and myself noticed innumerable quantities of galls on young Oaks in this park. I enclose you a specimen gathered in September last and you will readily perceive that two of the three galls are in a perfect state, consequently the insect has not yet escaped; so I have no doubt that you will find the living maggot inside. If so, it will go very far to establish the fact that nothing but fire will be effectual destruction; be this as it may, one thing is certain, viz., that unless something is done to destroy this pest, in a very few years there will be no Oak to build "the wooden walls of Old England" with. I don't know that I should have troubled you with this, but the extraordinary winds which we have had brought down one of the most venerable Oaks in Hackwood Park, and on examining the state of its roots I found them in a state of complete decay; yet there are numbers of fibres which are now in full activity. I enclose two or three spongioles which appear as healthy and vigorous as one could wish; but there are also a great number attacked with what to me seems a very singular disease and closely resembling the galls you speak of. I was induced to examine them, and to my surprise each excrescence or root gall contained cells, in several of which I found a number of little maggots; of these I send you three specimens. No. 1 is nearly the largest I have; No. 2, second size; No. 3, the smallest or youngest. You will perceive if you examine the seat of the disease that it is fixed on the side of a young root, and that the extremities of this same root have lost their spongioles, and that the fibres are prematurely decayed; this evidently shows that the living insect is within the galls or subsisting on the elaborated sap. I am not aware if this evil has ever been noticed before, but I believe it to be something new and different from the galls on the branches of Oaks; there is seldom more than one maggot in the galls just named, while each of the root excrescences contains numbers varying from 15 to 20. You will at a glance discover the empty cells, the insects having escaped long since. *W. P., Hackwood Park, Basingstoke.* [The excrescences on the ends of the root of the Oak tree above mentioned are in no wise connected with the globular English ink-galls referred to in page 72. They are a distinct kind of gall found only on roots, and are quite new to us. We hope a number of them have been preserved, as those which we have examined contained only the small white maggots or larvæ of parasitic flies which have destroyed the real inhabitant of the gall, which it is very desirable should be determined. There are several kinds of these underground galls; one on the Oak roots is large and solid, with a very great number of cells; whereas the ones now sent are about the size of Hazel nuts, closely pressed together, each having a single cell in the middle, occupied doubtless by a single larva. The insects which make these galls belong to the family Cynipidæ, and form a separate genus, characterised many years ago under the name of Biorhiza. *J. O. W.*]

Antiquity of the Cauliflower.—The subjoined extract from the "Prelude to the Parisians," by William Craw, suffices to show that the people of Britain had knowledge of the Cauliflower long anterior to its introduction into their gardens in the 16th century:—"In ancient times the priests and people performed their religious ceremonies in groves and under Oak trees; but as these were insufficient to keep them from the inclemency of the weather, they therefore built their temples, to imitate those original places of worship, to which the Abbey of Melrose bears a beautiful and near resemblance. There has been a double row of Gothic columns on the south side; many of them and their arches are still standing, spreading in all directions from each column like the branches of a tree; the keystones of which are also beautifully carved. On one I saw a perfect resemblance of a dependant Cabbage stock; on another a Cauliflower, as if growing from the roof, &c." The abbey was founded by King David I. in 1136. *W. Craw, Westbury.*

Mice.—Any one wishing to be free from mice cannot do better than procure one of Colin Pullinger's self-acting, self-setting, and self-baited traps, registered in May, 1855, No. 3717, which really does all it professes to do. His address is Selsey, near Chichester. *Constant Reader.*

Corkscrewed Pines.—A splendid Pine was overturned here during the great gale of last month; it measured 35 feet in height, and was only about 25 years old. The cause of the disaster was plain enough; the tree, in its young state, had been grown in a pot. A very fine Stone Pine about the same age met a similar fate a few years ago. At the present time when so many thousands of trees of this description are being planted annually, such cases as this may not be uninstructive. They ought to teach us never to plant a tree from a pot unless its roots can be easily uncoiled and spread out in their proper position. *J. W., Bentworth Hall, Alton, Hants.* [It seems to have been Pinus Austriaca, one of the finest forms of the Pinaster.]

Abies Finedonensis.—Allow me to thank Mr. Paul for bringing under notice in your impression for Feb. 25 that beautiful tree, Abies Finedonensis variegata; it is a perfect tree 14 feet high and 9 feet through, and is perfectly hardy; it readily takes, grafted on the common Spruce Fir, and no collection can be complete without it. The more it is exposed to sun and air the more beautiful are its colours. It came up accidentally in a bed of the Common Spruce. *George Archer, Gardener, Finedon Hall, Northamptonshire.* [This is really a striking variety.]

Chinese Yam.—From what I have gathered from your columns and other quarters I appear to be one of the most successful growers of this Yam; none however that I have heard of except Messrs. Ivery have anything like succeeded with it. My experience therefore may not be without interest. My opinion is that any ordinary soil will answer provided it is not gravelly or stony, and it should be from 2½ to 3 feet in depth. I do not recommend trenching, which in my opinion encourages the roots to grow much longer in proportion to their thickness than they do in untrenched ground. Then as to manuring, mistakes are often committed. Give a good dressing; the more in reason the better; but keep it as near the surface as possible, *i.e.*, not more than 10 or 12 inches deep, and let it be well mixed with the soil; but all put beyond that depth is comparatively wasted. Any careful observer will find that nearly all the really feeding fibres grow near the surface and spread horizontally; those deep down are all on the new root and very short compared with those near the top. Ridging the ground might, I think, be practised with advantage; but I am of opinion that the ridges, whatever may be their height, ought to be at least 10 inches wide on the top, that is, the top should be flattened to that width. The time spent in throwing up the ridges in this way will be more than saved at getting up time. As to the distance between the ridges, that must of course be regulated mainly by their height; they should at least be 2½ feet or more apart; sticks if easily got may be used as supports, but they need not be so very high as some recommend them to be; about 8 feet above the ground will be sufficient. The plants would of course grow much higher; but the tops will hang down and not be injured, except in very exposed windy situations. The sticks ought to be put in early, or they will be very likely to injure the fibres. I find sticking two rows together, if planted on ridges, to be best, that is, putting the sticks inside, so to speak, in such a manner as to meet at the top; the rows will, therefore, both be on the outside of the sticks; they will be firmer in this form, and they take to the sticks very readily. The distance apart in the row should be regulated by the size of the sets used; from 8 to 15 inches apart will answer, but for a crop of large roots no very small sets should be employed, that is, they should not average less than 1 to 1½ oz. each; 6 or 8 ozs. are of course better, and entire roots are to be preferred to pieces, except the small ends of large roots. These may be got, that is the sets, by planting small pieces one season for sets the next. These small pieces may be put in thickly in rows about a foot apart, to allow a hoe to be used between them, and about 3 inches asunder in the rows. Those I planted last season were dibbled in at the above distances on a flat surface; in this way I had about 2000 sets raised in a very small piece of ground, and although so thick I should think quite half the tubers were from 1-6th to ½ lb. each, and most of the remaining half about 2 oz. As to the time of planting it should not be later than the first week in April, but in March is better if the weather is dry. As respects lifting the crop I have nothing to add to what has already been said. In this matter there is nothing like practice; what I mean is two men will take up nearly double the quantity the second day that they would the first, and with far fewer cut or scratched tubers. As to productiveness I fully concur in all that Mr. Ivery has said on this point; but perhaps no one has had the opportunity I have had of knowing its acceptability as a vegetable to the number of persons

I have supplied with it. After a trial or two it becomes a general favourite. An Anglo-Chinese lady lodging here was very much amused on being invited by some friends to dine with them to see some on the table; she said it reminded her of home. I may add that why I advocate early planting is that I find it induces fibres early, and of course a longer period of growth, and the crop will be more matured and of much better quality. I know some differ from me on this as on other points, but I have stated exactly my experience, I perhaps ought to say careful experience. *G. Lee, Clevedon, near Bristol.*

Societies.

HORTICULTURAL: *March 8: Floral Committee.*—On this occasion prizes were awarded to the following Cinerarias, viz.: Miss Eyles and Handel, from Mr. Turner; and Amazon from Messrs. Smith, all promising kinds, especially the first, which had a First Class Certificate. A similar award was also made to a beautiful double-flowered Chinese Primula from Mr. Turner. This was named atro-rosea plena. A cut specimen of the golden-yellow-blossomed Rhododendron Brookeanum was furnished by Messrs. Veitch, who also sent a very fine specimen of Cymbidium giganteum from Pankabaree, with large green flowers, except the lip, throat, and contiguous parts, which were of a pale straw colour, spotted and streaked with rich dark brown. To these two plants were awarded First Class Certificates. M. Margottin, of Paris, sent a white Azalea; Messrs. Veitch a white Epacris named Queen Victoria; and Messrs. Lee and E. G. Henderson Camellias. From the last-named firm likewise came a beautiful collection of Cyclamens and other plants.

HORNSEY GARDENERS: The gardeners of Hornsey mustered in considerable force on Monday, the 12th, to hear a Lecture on the Cultivation of the Rose, in the School Room, Grove Road, Hornsey Rise. The chair was taken by J. R. Scott, Esq., supported by the Rev. the Rector, W. Halse, Esq., and others of the resident gentry. The front seats were mostly occupied by ladies. The lecturer, Mr. Shirley Hibberd, said the history of the Rose as a florist's flower dated from 1815. After briefly sketching the progress it had made in France under the fostering care of numerous eminent cultivators, among whom were MM. Vibert, Laffay, Hardy, Lacharme, Margottin, and others, he described the several leading species and varieties, and explained to his unprofessional hearers the manner in which varieties originated. The seedlings of Géant des Batailles were enumerated as including the most popular Roses, such as Lord Raglan, Evêque de Nîmes, Louis Chaix, Duchess of Norfolk, and the new and promising Eugene Appert. The Yellow Roses were dealt with as a separate class possessing features of peculiar interest; Isabella Grey proved a good pot Rose on its own roots, but when young the blooms were almost white, and, in common with other yellow Roses, such as Solfaterre, it required a hot position and age to develop its true character. Roses on their own roots were to be preferred before all others where the soil suited them, and beds of sorts, such as the General, which is the best of bedding Roses, would be found far more remunerative than mop-headed standards stuck about on lawns, where they were the ugliest of all objects during at least six months of the year. Pegged down in good time so that their bloom-shoots would be held up above the surface of the soil, bedded Roses were among the best of garden decorations, and ought to be grown to the discouragement of worked plants of all kinds. One advantage of working was that it enabled many varieties to prosper under circumstances adverse to them on their own bottoms—the Briar would give vigour to a Tea or Noisette in a heavy, damp soil, and the Manetti would serve a similar use on a chalky or gravelly soil. In fact, the question as to the value of the Manetti was one of soil and management. It is a vigorous grower, and where the soil suits is the best of all stocks for dwarfs; but we had yet to learn whether it would be used for standards, the general opinion being that Roses budded on it above ground would be short-lived. The lecturer said he had found, after having grown the Manetti five years, that it had the peculiarity of holding the inserted buds dormant for almost any length of time, unless the heads of the worked stocks were cut close over, when the inserted bud pushed vigorously, and if moulded over at the base would in time emit roots of its own. The various modes of layering, grafting, and budding were described by means of diagrams on a black board, and the propagation of Roses from eyes in the fashion of Grape Vines, but retaining the leaf with each eye, were severally described at length. The lecturer said the cultivation of pot Roses was the most remunerative of all horticultural pursuits in which amateurs could engage. The proceeds of the lecture will be devoted to a charitable purpose.

Notices of Books.

Another edition of *Rivers on the Orchard House!* The seventh, too!! If this does not show the importance of such buildings nothing will. The childish objections that were taken to them have all died away; the unwise gardeners who could not or would not manage them have vanished, and, like the Taverham paper-makers, have only shown their want of knowledge of their business. Orchard houses are now to be seen in all directions, which surely proves that experience is entirely in their favour; unless, indeed, we suppose that Mr. Rivers has infected the gardening world with madness, which, in this unenthusiastic island of ours, is not very likely to happen.

As usual, many little bits of novelty have been introduced into Mr. Rivers's pages. We confine ourselves to two extracts:—

"*A Vineyard under Glass.*—Some years ago I was much struck with the Vines in the gardens of the South of France, trained to upright stakes about 6 feet high, which, as my visits were made towards the end of autumn, I saw season after season loaded with fruit. They were pruned on the spur system, somewhat after the manner of pruning now practised in our Vineries, but not so close. I then planted some in a border at the back of a lean-to house with a Beech hedge for its back wall, to try if it were possible to grow Grapes after the same fashion under glass. They grew and bore well, but the hedge-house I found was too cold to ripen their fruit in all seasons; so they were taken up, and in the hurry of business the idea passed from my mind, and the experiment was not carried out fully. I have now, however, with the improvement that has taken place in building orchard-houses, no hesitation in recommending this very interesting mode of Grape culture in one of my small span-roofed houses 14 feet wide and 18 inches of glass in each side, as described in p. 16. A house of this width and 30 feet long will hold 12 Vines trained under the roof in the usual way, up one side and down the other. If however, the Vines are planted in the borders, and trained to upright iron rods 6 and 7 feet in height and at 30 inches apart, which will be found the proper distance, it will hold 48 Vines planted in two rows: one row to be within 2 feet of the side, and trained to 6-feet rods; the other 4 feet from it, next to the central path, and trained to 7-feet rods. Each border will thus serve for 24 Vines. They should be pinched in in summer and pruned in autumn, in the same manner as directed for bush Vines in pots (p. 82); or, if the minutiæ of this mode of pruning be irksome to the amateur, he has merely to cut each shoot down to two eyes, not leaving more than two stumps (the pruned shoots) to each joint. The Vine will have these all up the stem, at intervals of about 6 inches. I may mention that but little pruning science is required. I have a row of Vines in the open air growing in a sandy soil, which, with the rough pruning they receive from one of my labourers (as I merely give directions to prune the stout well-ripened shoots to two eyes, and cut off close to the stem all that are weak or not ripe), never fail to bear every year most abundantly. It may be questioned if the Vines will bear fruit from 'top to toe.' Perhaps the lower part of the stem may fail; still if each Vine gives fruit on only two-thirds of its height the produce will, I doubt not, be much heavier than from Vines trained under the roof in the same space. Twelve roof Vines may give 20 bunches each, or 240 in all, a most abundant crop. Forty-eight Vines trained to rods may give at 12 bunches each (a low estimate) 576 bunches, or an increase on roof cultivation of nearly 100 per cent. There is besides this the pleasure of walking among one's Vines, of being able to prune and train them without having the eyes strained by constantly looking upwards to the roof, if any bunches require thinning or shoots pruning. The borders for these upright Vines should be well forked over to a depth of 20 inches, and be enriched with a dressing of manure, half-inch bones, and lime rubbish, well mixed with the soil in stirring it. It may be advisable to annually root-prune and dress the Vines, after the manner of the Zante Vineyards, as mentioned in p. 138; but this must be a matter of experiment, to be carried out by the zealous amateur. I can imagine but few things more agreeable than walking in a Vineyard under glass while the Vines are in bloom and in fruit. Strong-growing and good-bearing sorts should be chosen for this kind of culture, such as Black Hamburg, Trentham Black, Black Prince, Chaptal, Chasselas Vibert, Royal Muscadine, Muscat de Sarbelle, Muscat St. Laurent, &c. The 14-feet wide span-roofed orchard-house seems to me the most eligible and agreeable of all for a Vineyard under glass. It should stand endwise north-east and south-west, so that the sun may shine all the morning on the south-east side, down the middle about 1 o'clock, and on the north-west side all the afternoon. This description of house appears much more agreeable than the span-roofed houses without sides recently patented by Sir J. Paxton, and can be built at a smaller cost than one of those 'hothouses for the million,' recently advertised. Judging from the figures given, these are like the 'ten pound Vineries' invented by Mr. R. Warner, of Broomfield; and, as Vineries for the roof culture of Grapes, they will be undoubtedly useful."

"*Compotes.*—These delicious French open tarts are made as follows:—Take half a pound of flour, 6 oz. of butter, and a little pounded loaf sugar; rub and mix thoroughly with an egg well beaten. Roll the paste into a thin crust, and then take hoops of tin about 3 inches in diameter and 1 inch deep; place your crust in these as when making a common tart (from which it differs in having upright instead of sloping sides and no top crust); the side and bottom crust to be of equal thickness. These tin hoops (which are bottomless), with the crust in them, should then be placed in the oven on a broad sheet of the same metal till the crust be half baked. Stew the fruit with sugar till half-cooked, then fill the half-baked crusts in the tin hoops with it. Sprinkle pounded loaf sugar over it and finish baking. You will then have a tart without upper crust, full of juice and fruit, with which our English tarts will bear no comparison, for the fine aroma of Strawberries, Raspberries, Cherries, and Mirabelle Plums is fully preserved. They should be taken out of the hoops as soon as cool, and eaten while fresh, as the juice soon soddens the crust. This receipt was given to me by a French *chef de cuisine*, and has answered admirably."

Gossip of the Garden, a Handbook for the Florist and Suburban Horticulturist. Vol. IV. London: Houlston & Wright.

This little serial, which is issued in monthly numbers, maintains its character as a well-conducted and well-got-up magazine of low price, abounding in trustworthy information on the subjects in which amateur gardeners take especial interest. Thus a large proportion of the space is devoted to florists' flowers, and we are glad to notice that the various discussions to be found in the pages of the volume before us, on subjects connected with this department, are carried on with a tone of courtesy not always to be found in writings of this class. Amongst the more important contributions to this volume may be mentioned an account of the new plants of the preceding year, a series of articles on the theory and practice of wall-fruit culture, papers on familiar botany, and a set of gossiping articles on popular garden flowers under the heading of the Ladies' Page. The series of papers on wall-fruit culture are capital teachings of plain practical horticulture, based on scientific principles. We have, too, in the following a useful hint, by a correspondent, dropped among some "Random Remarks about Roses:—"The Roses 'originated' (to use a favourite term of the Gallic raisers) so abundantly in France find their best market in this country; and such of them as can establish their claim soon became naturalised, and are prevented from being 'household words' solely because these names are expressed in a language which is only understood by the better educated classes. Why should this be? Is our mother tongue so poor that we can find no Anglo-Saxon equivalent for Œillet Parfait, Bouquet de Flore, Coupe d'Hébé, Berceau Imperial, Prince Noir, Toujours Fleuri, and a host of others? Surely our large growers—our Rivers's, our Paul's, our Cranston's, our Francis's, &c.—would do well to insert these sorts in their catalogues, translated purely and simply into the vernacular! Would not something more tangible and more definite be impressed on the minds of at least four out of every five readers of these catalogues, by substituting, in lieu of the names above mentioned, these English synonyms, viz., Perfect Carnation, Flora's Nosegay, Hebe's Cup, the Imperial Cradle, the Black Prince, Ever-blooming, &c.? I admit that so far as proper names are concerned we cannot do much, but even with these something might be effected. Why should we disguise Joan of Arc, Mary of Medici, Louis of Austria, and Guido's Aurora, under the foreign masks of Jeanne d'Arc, Marie de Medicis, Louis d'Autriche, and Aurore du Guide? I want to see English catalogues printed, as far as possible, in the English language. If it be thought desirable to retain the foreign name there can be no objection provided the English version is given also, *i. e.*, in all cases where translation is possible. For example:—La Ville de Bruxelles (The City of Brussels), Evêque de Nîmes (Bishop of Nîmes), Géant des Batailles (*The* Giant), Reine des Fleurs (Queen of Flowers), &c. If this were done for a year or two, the original designations might then be dropped altogether, as the public would soon recognise their old favourites, and as I believe love them all the better for being able to call them by their names without incurring the peril of being laughed at for their ridiculous mispronunciation of a word in an unknown tongue."

The volume contains besides notices of the various contemporaneous occurrences, reports of shows and meetings, both metropolitan and provincial, and a brief compendious calendar of operations. Altogether the book is one which, if continued in the same style as the portion before us, may be recommended to the class of readers for whom it is designed.

Garden Memoranda.

MESSRS. CUTBUSH AND SON'S NURSERY, HIGHGATE.—A magnificent exhibition of Hyacinths has been held here during the past week, and we observe by an advertisement in another column that it is still to remain open for another week. This nursery has of late years become celebrated not only for the quantity of its Hyacinths, but also for the excellence of their culture; and this season, it may be remarked, they are in even both respects an improvement on their predecessors. Indeed such a display of these charming spring flowers as is at present to be found here is worth going miles to see. Nearly 400 varieties of all shades of colour—reds, blues, whites, and yellows (the latter scarce) are effectively arranged in rows on the front shelf of a lean-to show house, the raised stage of which is literally one mass of flowering plants. The roof is covered inside with Shaw's Tiffany, and the front sashes with green baize, which serves to set off the colours of the flowers to much advantage. The pots in which the

plants grow are concealed among Moss, and the whole is tastefully edged with a row of striped lilac and yellow Crocuses. Among the Hyacinths are some of the showiest and best sorts at present in cultivation, together with the more striking new kinds, some of which appear to be improvements both in size and colour on those with which we are already acquainted. In the following list will be found the names of such sorts as appeared most worthy of notice:—

Double Red.—Duke of Wellington, fine pale rose, bells large and beautifully arranged, large spike; excellent; Koh-i-Noor, very fine deep crimson, spikes very large, with moderate-sized bells, new and very distinct; Princess Royal, fine red, very large bells and spikes; Susannah Maria, beautiful salmon rose, fine bells and good spike.

Double White.—Prince of Waterloo, pure white, bells very large, spike excellent; Tour d'Auvergne, pure white, moderate bells, and large spike.

Double Blue.—Laurens Koster, still one of the showiest, and of first-rate form, with an immense spike; Sir Colin Campbell, dark blue shaded, very fine bells and spike; new and excellent.

Double Black.—In this limited class the best is still perhaps Othello, a very dark kind.

Single Red.—Amy, fine bright red, beautifully formed, large bells and spike; Belle Quirine, pale flesh, beautifully striped with carmine, very large bells, spike moderate; Circe, carmine, shaded with salmon, beautifully marbled with pink, large bells, and handsome spike; Florence Nightingale (Fabiola), deep pink, shaded with orange, large bells, and good spike; new and excellent; Lady Sale, very deep red, large bells, and immense spike; an excellent kind; Lina, the brightest red of all, moderate bells and spike; new and excellent; Madame Hodgson, very fine pale pink, good bells, and finely formed spike; Milton, dark crimson, beautifully shaped bells, and large spike; new and excellent; Monsieur Feasch, pale pink, striped crimson, changing to deep red, large bells, and fine spike; excellent; Mrs. Beecher Stowe, pink striped red, large bells, and handsome spike; Norma, waxy pink, very large bells and spike; one of the most beautiful Hyacinths in cultivation; Queen Victoria, pale pink, with bright red stripes, large bells, and very handsome spike; Robert Steiger (Maria Catherina), fine deep crimson, large bells, and fine spike; Solfaterre, brilliant orange scarlet, large bells, and beautiful spike; Von Schiller, very fine dark red, good bells and spike.

Single Lilac.—L'Unique, purplish lilac, small bells, moderate spike; Honneur d'Overeen, fine bronzy lilac, large bells, and moderate spike, excellent; Lord Clyde, bronzy lilac, large bells, with distinct white eye, fine spike, new and excellent; Prince Alfred, dark purplish lilac edged with black, large bells and spike, new and excellent.

Single White.—Elfrida beautiful pale creamy blush, very large, well shaped bells, and good spike; gigantea, fine pale blush, large bells with peculiar narrow petals; very fine spike; new and excellent; Grandeur à Merveille, handsome pale blush, good bells, and large spike; La Balaine, very deep blush, good bells and spike; excellent; Madame van der Hoop, pure white, large bells, and immense spike; excellent; Miss Burdett Coutts, most beautiful creamy blush, with very large bells of great substance; spike large; an improvement on Voltaire; Orondates, pure white, with very large bells and an immense spike; new; Snowball, beautiful pure white, large well shaped bells, and very large spike; new.

Single Blue.—Argus, fine indigo blue, with very distinct white centre, large bells, with metallic-like tubes, and arranged on the spike somewhat thinly; nevertheless a useful variety; Baron Van Tuyll, fine dark blue, large bells, extra fine spike; excellent; Charles Dickens, pale blue, large bells, very fine spike; Couronne de Celle, pale blue, large bells and handsome spike; Grand Lilas, beautiful delicate azure blue, large bells, spike large and beautiful; Orondates, fine porcelain blue, large bells, and excellent spike.

Single Black.—Black Prince, very deep purple, almost black, good bells, and fine spike; and much darker than Prince Albert; General Havelock, dark purple changing to black, very large bells and spike; a remarkably vigorous grower; Prince Albert, deep purple, large bells, and good spike.

Single Yellow.—In this class the best are Anna Carolina, clear yellow, good bells and spike; and Heroine, pale yellow.

Messrs. Cutbush deserve credit for throwing such a beautiful exhibition open gratuitously to the public, and we recommend all lovers of Hyacinths to visit it speedily. It will well repay inspection.

We may also add that together with a fine stock of ornamental shrubs this nursery contains a remarkably fine specimen of Wellingtonia gigantea. It is nearly 7 feet in height, and beautiful in shape. It has withstood the severity of the winter unprotected without injury.

Miscellaneous.

Gothic Sculpture.—Unhappily, not caring, you know very little about Nature. You "admire" flowers no doubt, but what special admiration have you for leaves? The love of Nature in your favourite Greeks even was manifested in a very indifferent way. There are some leaves which are more exquisitely beautiful than three-fourths of the flowers which are petted and potted in your greenhouses. As you go to the old crumbling ruins of your forefathers' church, you may pass an orchard and gardens with green hedgerows. Forget debit and credit for awhile and look narrowly at the clusters of leaves on the Apple and Cherry trees, on the Rose trees, on the Hawthorn branches, but above all on the Oak tree if there be one. Look at the leaves everywhere. And when you come to the ruin look at the Ivy leaves, the real green ones. Not unlikely you will find some done in stone, if you look for them, and as like Nature's Ivy as need be; especially if the green Moss-mould be on them. Foliage is a lovely thing, and you would soon learn to love it if you saw more of it, and less of paving-stones. It was made to be loved, I rather think. Look round now upon the sculptured chapiters, the bosses, the corbels, the Vine leaves, cut on the angles of the bases, the cunning leaf work running up the shafts and round the arches, beautifying the doorways and the windows. There are flowers too, such as damask the Grassy bankside and Sedgy shallow. Examine it all closely, and see with what chaste delicacy the hand of the workman has wrought them out, with what loving tenderness he has traced the lineaments of the clustered foliage you saw awhile ago. Put in your fingers between the tendrils and feel how the stone is cut away carefully under the leaves they carry as if by faëry-craft. How gracefully the stone stalks curve and bend as if stirred by a gentle wind. No formal stiffness here, no measuring of modules with foot rules; though that can be done too in its place. And see what a pleasant life is breathed into all this by those grotesque little heads of squirrels or some such tribe—peeping out here and there as if from the shadow of their own branches in the wood. The memories of the old forest again. *Moir's Pagan or Christian.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—The occasional bright sunshine and cold drying winds which we are now experiencing will soon, unless means are used to counteract their effects, destroy the beauty of some of the finest specimens of plants in this house, particularly if their blooming has been forwarded in a close moist atmosphere, and, although it is yet too early to bring shading into general use, it will be difficult without its assistance to preserve blossoms in perfection during such weather as we have at present. Blinds must therefore be resorted to; but they should be arranged so as to be easily drawn up or let down. In admitting air avoid as far as possible allowing cold currents to blow over the plants. Many conservatories are very unfit places for Heaths, being generally too lofty and kept too warm for them; some of the winter flowering varieties are however very ornamental, and should be largely employed in their decoration during the spring months. As soon as they have done flowering let them be pruned back and give them a liberal shift when they start into growth, using good fibry peat for the purpose, and if they are well attended to during the growing season they will overcome any injury they may sustain through occupying an unsuitable position while in bloom. Azaleas, Camellias, Roses, early-flowering New Holland plants, and forced bulbs will keep show houses gay for some time yet.

FORCING DEPARTMENT.

PINERIES.—Look over young growing stock, occasionally examining and repotting such as is found to be in want of more pot room. The temperature may be slightly advanced, as the amount of light increases, but this is a matter in which the state of the plants will be the best guide. Aim at securing strong dwarf plants, with a free habit of growth; and if this is obtained, it is immaterial whether the night temperature is 60° or 70°, and very much will depend upon circumstances as to which will be proper. Plants that may be unhealthy and in an unkind state, if kept near the glass, will be benefited by a considerably higher temperature than would be suitable for others in a free state of growth. These are circumstances, however, which can be properly judged of only by those in care of the plants, but they are easily understood by a little careful observation. Use every means to induce a vigorous root action, and if this is obtained free strong growth will result with otherwise ordinary care only. VINERIES.—See that Vines starting into growth are tied up in their places before the shoots get so long as to be liable to be broken off in the operation. Syringe frequently until the leaves begin to unfold; but use the syringe sparingly after that is the case, and only on the afternoons of bright days. Where the buds do not promise to break regularly bend the Vines so as to place those that are backward in the most likely position to catch the sap, and this should be done directly any indications of their not breaking regularly are observed. If any of the bunches in houses where the berries are stoned look as if they would be improved by a few more berries being cut out, let this be done at once. FIGS.—Keep the shoots thin so as to expose the foliage to light and air, and persevere in the use of the syringe to prevent red spider. Give air freely on bright days, shutting early in the afternoon after syringing the house. PEACHES.—Proceed gradually with the disbudding of the early house, and where the fruit is very thick a portion should be removed as soon as fairly set; but the Peach is liable to drop until after stoning, and this must be borne in mind, and plenty left to allow for a few failing. Maintain a steady heat to Cucumbers of 65° or 70° at night, and allow it to rise 10° or 15° with sun heat. Give air on every favourable opportunity.

FLOWER GARDEN AND SHRUBBERIES.

If not done previously, the herbaceous ground should now be well cleaned and neatly raked over. Fill up vacancies either from the reserve garden or by sowing annuals in the intermediate spaces. Many plants, as for instance Phloxes, Asters, &c., throw up too many flowering shoots; where such is the case thin them out at once, so as to obtain not only fine heads of bloom but increased strength in the remaining shoots, to enable them to need less assistance from stakes. Hollyhocks for late blooming may still be planted, as it is best where they are grown extensively to plant at two or three times to ensure a succession of bloom. These showy plants are very suitable for long lines, parallel with straight walks, walls, &c., where they produce a grand effect.

HARDY FRUIT AND KITCHEN GARDEN.

See that recently transplanted trees are not suffering for want of water, a circumstance, which, however, will hardly happen except on dry porous soils, and in such cases the ground should be mulched with decayed leaves to preserve it in a uniformly moist state. Attend carefully to the preservation of blossoms of fruit trees. Where nothing better or more convenient can be obtained, Yew or Spruce branches will be of service, provided they are so fixed as not to be liable to be blown against the blossoms. Remove the covering as frequently as may be convenient on fine days, so as to fully expose the trees to sun and air. Sow Broccoli in beds of rich light soil in an open situation for the main crop, and Cabbages, Cauliflowers, &c., in succession. Attend also to sowing small breadths of Turnips about once a fortnight, so as to secure having a regular supply in a fit state for use. Put in a small breadth of some early French Bean on a warm dry sheltered border, and plant a quantity in small pots to be raised in a cold frame and planted out as soon as all danger of frost is over. Seldom have vegetables of every description been scarcer than they are this season; therefore endeavour to get spring crops in early. Use the hoe freely to keep the surface soil loose and friable.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending March 15, 1860, as observed at the Horticultural Gardens

March.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep	Of the Earth 2 feet deep.	Wind	Rain.
Friday 9	16	30.182	30.043	40	18	29.0	41	41	N.W.	.00
Satur. 10	17	29.950	29.700	41	27	34.0	40½	41	W.	.00
Sunday 11	18	29.631	29.453	45	29	37.0	41	41	S.W.	.08
Mon. 12	19	29.490	29.393	45	30	37.5	41	41	S.W.	.12
Tues. 13	20	29.528	29.462	47	31	39.0	42	41½	N.W.	.00
Wed. 14	21	29.510	29.398	47	25	36.0	41½	41½	W.	.00
Thurs. 15	22	29.823	29.756	49	35	42.0	41½	41½	N.W.	.03
Average..		29.730	29.601	44.8	27.8	36.3	41.2	41.2		.23

March 9—Clear and frosty; cloudy and cold; snow shower; clear.
— 10—Uniformly overcast; fine but cold; densely overcast; snow.
— 11—Hazy; fine; densely overcast at night.
— 12—Uniformly overcast; cloudy; rain at night.
— 13—Clear; cloudy; overcast.
— 14—Cloudy; overcast; frosty.
— 15—Clear and frosty; fine; overcast; rain at night.
Mean temperature of the week, 6 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending March 24, 1860.

March.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 18..	50.4	33.7	42.1	9	0.24 in.	3	8	2	1	2	7	9	2
Mon. 19	51.2	33.9	42.6	10	0.33	4	4	5	1	2	9	6	3
Tues. 20.	52.0	34.1	43.0	13	0.36	3	3	4	2	—	11	5	6
Wed. 21..	51.4	33.5	42.5	14	0.21	8	3	2	3	3	8	6	1
Thurs. 22..	50.5	34.8	42.7	16	0.44	6	3	4	2	4	8	5	2
Friday 23..	50.4	34.1	42.2	14	0.60	6	6	2	1	1	10	4	4
Satur. 24..	50.0	31.8	40.9	10	0.11	4	5	4	1	3	4	7	6

The highest temperature during the above period occurred on the 19th and 20th, 1836, and 24th, 1858—therm. 69 deg.; and the lowest on the 20th, 1845—therm. 16 deg.

Notices to Correspondents.

BOOKS: *L M.* Make yourself *master* of Dr. Lindley's School Botany; and when you have done that consult us again.

BRITISH BIRDS: *A Constant Sub.* would be obliged for information respecting the best author on British birds, with coloured plates of the birds and their eggs.

CALIFORNIAN TREES: *C P.* You will find Mr. Murray's paper on this subject reprinted from the Edinburgh New Philosophical Journal at p. 928 of our last year's volume.‡

COFFEE GROWING: *Muid.* See Porter's Tropical Agriculturist and an article in our columns to-day.

DISEASED PINE APPLE: *J C.* The miserable fruit you have sent has probably rotted in consequence of having had too much water, too little heat, combined with roots unable to perform their proper functions. It is what is technically called a starter.

MANURE: *Staines.* There is no occasion to put salt into a tree in order to kill it; nor is it an easy thing to do. Give the roots plenty of salt water, and that will kill soon enough. As to phosphorus let it alone, unless you have a mind to burn your fingers to the bone.

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*Emo.* We do not see how your seedling Pine differs from a Pinaster. You do not say where the seeds came from.—*J W B.* Struthiola virgata and the true Citron, fine and good.—*H J C.* Polystachya luteola.

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The Agricultural Gazette.

SATURDAY, MARCH 17, 1860.

MEETINGS FOR THE FOLLOWING WEEK.
WEDNESDAY, March 21—Agri. Society of England .... Noon.

— Mr. ALDERMAN MECHI has published, as a balance-sheet in the *Times*, a statement on the one hand of his sales of corn, seeds, roots and hay, as well as of meat, wool, and dairy produce, &c. (deducting lean stock purchased), amounting in all to 1884*l.*, or 11*l.* 1*s.* 1*d.* per acre; and on the other hand together with a statement of his expenses under different heads, not as actually incurred, *i. e.* in so many successive payments, but as reduced to their several amounts per acre, to be afterwards multiplied by 170, the number of his acres. The expenditure is as follows :

Several expenses as specified at 7*l.* 9*s.* 8 *l.* per acre		£1272	3*s.* 4*d.*
Rent at 42*s.*		£357	0*s.* 0*d.*
Tenant's profit, being 10*l.* 14*s.* 1*d.* per cent. on a capital of 2380*l.* ..	254 16 8		
		611 16 8	
Total income of the farm		£1884	0 0

Mr. MECHI has also a paragraph on the same subject in another column. The curious preciseness of some of the items in the list of his "gross expenses per acre on the whole farm," does, we must repeat, give an air of estimate rather than of actual experience to a good deal that is here set down as fact.
Manual expenditure, for instance, costs exactly 2*l.* per acre on Tiptree farm, horse labour exactly 20*s.*, purchased cattle food exactly 3*l.* per acre, steam-power just 5*s.* It is only fair to add that M. MECHI pledges himself "to the correctness of the items in the balance-sheet, which shows a gross return of 11*l.* per acre, and a profit of nearly 11 per cent. on the tenant's capital of 14*l.* per acre, and a house to live in, rent free, after paying the landlord's improved rental of 42*s.* per acre."
— We regret that we are unable until next week to give a report of the very vigorous discussion which followed Mr. CORBET's capital paper on the Over-Preservation of Game, read at the London Farmers' Club last week. The paper itself will, we are glad to learn, soon be published as a pamphlet by Mr. RIDGWAY, Piccadilly.

— Mr. STRAFFORD is to dispose on Wednesday, March 28th, of the herd of Short-horns belonging to J. C. ATKINS, Esq., of Milcote, near Stratford-on-Avon. We hope next Saturday to give a short report of the farm and of the herd.

THE duty is taken off Dates. Every one knows what a luscious and fattening food they are for man. The probability is that they may now become available for sheep and cattle. Treacle and sugar have been used successfully before now in the meat manufacture: malt is generally believed to be better food than Barley, more digestible and more nourishing: the Carob pod is now largely used and thought well worth its price, notwithstanding other cattle foods are, if anything, cheaper than they were. All these things point out sweet food, and especially food containing the so-called Grape sugar which exists in most ripe fruits, as practically useful in the cattle stall and feeding yard.

Dates are of course altogether new to English farmers, and we can only judge by the success of the Carob Bean and other similar foods of their probable utility; for as yet we have no analysis of the flesh of the Date to help us in our judgment. On representing this, however, to Dr. VOELCKER, of Cirencester, the chemist of the Royal Agricultural Society of England, he has at once engaged to analyse the new food; and we shall shortly be able to give our readers his report. We have no doubt, too, that ere long we shall be able to give an agricultural as well as a chemical report—to the extent at least of a few weeks' experience of a small parcel.

But it is not likely that Dates will be available as cattle food unless they can compete with such articles as Carob Beans in price. What then is the prospect of our obtaining them at 6*l.* or 7*l.* a ton? On this we can at present only say that the Date is a fruit which even more, it seems, than other vegetable produce varies exceedingly in its yield from year to year. And while, if we go to the Euphrates for instance, the prices at Busrah for the inferior kinds of Dates (their varieties being almost innumerable) may commonly be about 4*l.* a ton at the wharf, yet in abundant years they can be had much cheaper. Freightage thence would cost probably 4*l.* a ton, so that with importer's profit it is not likely that they can *generally* be imported thence and sold here for ~~much less than~~ 9*l.* or 10*l.* a ton. Still, if only for occasional ~~importation after a fruitful~~ season they would be useful we believe to English farmers.

It is, however, from the north coast of Africa that we are likely to obtain the cheapest supply; and we are told that Dates are to be had in any quantity at a distance which cannot involve more than 20*s.* or 30*s.* per ton at most for shipment to a British port. And if the African Date is to be bought from the grower as cheaply as that in the Persian Gulf, there can be little doubt of its being introduced in abundance to our markets at prices which will tempt the cattle feeder.

IN a former article, while treating of THE APPLICATION OF IRON TO AGRICULTURAL STRUCTURES, we gave a few notes on the construction and fitting up of cast-iron columns; we now take up in like manner the department of beams, as used either for the support of a floor as that of a granary, or of the "principals" of a roof which are placed over the spaces of columns, as in the case of shedding.

The form of the beam is a matter of the utmost importance: one form will give a stronger beam with less material than another which may be *apparently* stronger from the circumstance of its having so much more metal or other material in its construction. On the subject of beams a great amount of ignorance prevails amongst certain classes of country mechanics, and those engaged in the construction of agricultural implements. This ignorance is displayed not only in the use of wrong forms of beams, but in the *position* which is given to beams, the form of which may be right. If we devote this paper to a few notes illustrative of the most important of the truths connected with the subject, it may be of some utility.

Beams, of whatever material, are much weaker when em

ployed in the flat position, as *a* Fig. 11, than when laid on edge, as *b*. The increase of strength obtained by this last posi-

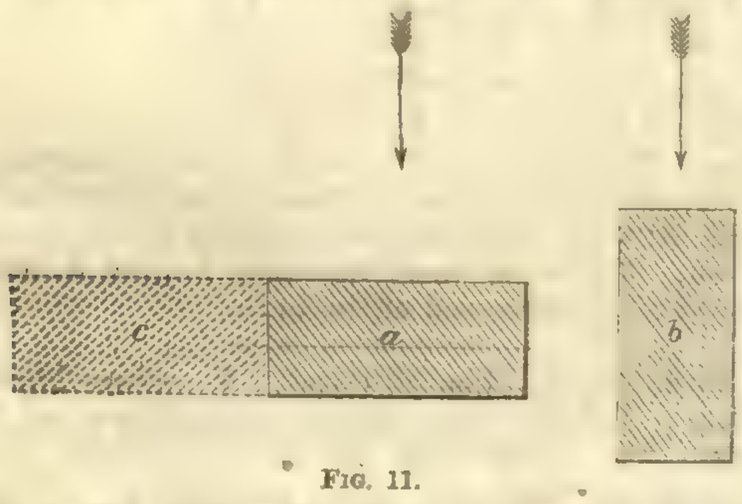

FIG. 11.

tion is much greater than one not familiar with the laws regulating the strength of materials would suppose. The strength of beams increases directly as their breadth increases, that is if a beam as *a* supported 20 cwt., if its breadth was doubled, as shown by the dotted part *c*, the strength would

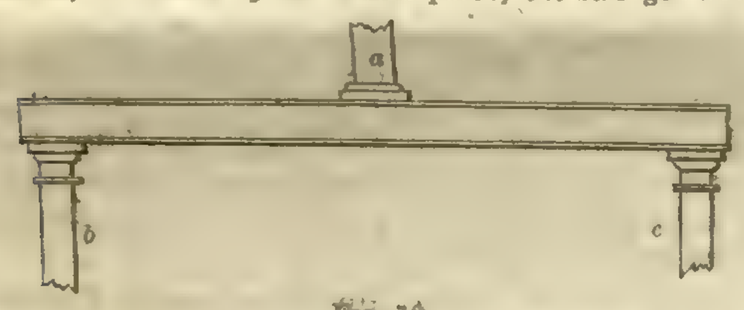

FIG. 12.

only be doubled. But as the strength of beams increases as the *square* of their depth, a much stronger beam would be obtained by placing the beam *a* as at *b*. For suppose the beam *a* to be 8 inches deep, its strength would be represented by 8^2 or 64, while by placing it on its edge the depth would be increased to

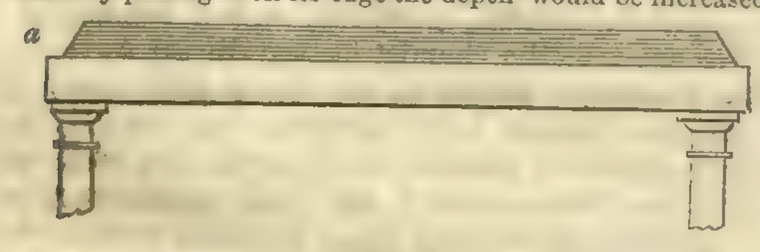

FIG. 13.

16 inches; the strength in this case being represented by 16^2, or 256, or four times the strength. A very familiar illustration of the truth that a thin and deep beam is stronger to resist cross strains than a broad one may be obtained by placing a weight or weights on the flat side of a saw while supported at

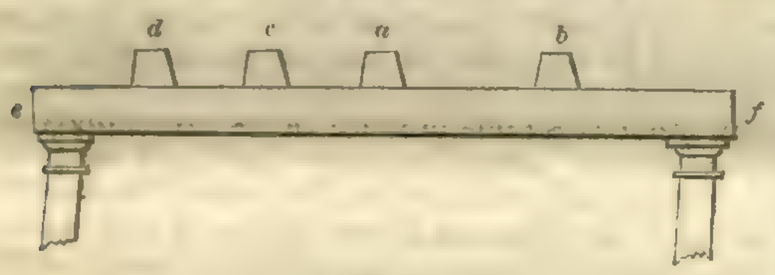

FIG. 14.

both ends, and the same weight on the thin edge. A small weight on the flat will make the saw bend and belly downwards, while a much greater weight on the thin edge will induce no perceptible deflection.

But the strength of a beam to resist pressure depends, not only on its form or position, but also upon the mode in which

FIG. 15.

the weight is applied. Thus, when a beam is weighted in the centre, as the beam over *b* and *c* in the centre *a*, Fig. 12, it will support or resist only *half* the weight which the same beam will sustain when the weight is distributed over the whole length as by the bar *a b* in Fig 13. From this it will be evident that the pressure on a beam by any given weight placed upon it is decreased by bringing the weight nearer to the points of support *b c*, Fig. 12. Thus the pressure exercised by the weights *a b c d* on the beam *e f*, Fig. 14 varies considerably in amount according to their distance from the points *e f* of support. As the pressure then decreases as the weight is placed further from the centre of the beam, the depth of the beam need not be uniform throughout its length; thus, if greatest at the centre (*a*, Fig. 15) it may gradually taper off to half the depth at the ends *b c*, and yet be as strong as when of uniform depth throughout, as shown by the dotted lines *d e*. The line of under side of beam should be part of a parabola. The saving of material in beams in this way is observable also in cases where the beam is supported at one end only, as in Fig. 16, which may be supposed as supporting the landing of an outer staircase. The beam *a*, Fig. 17, with its lower side cut away, is as strong as the

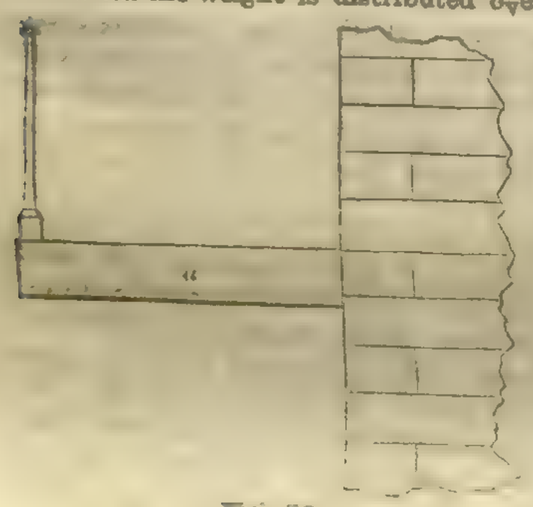

FIG. 16.

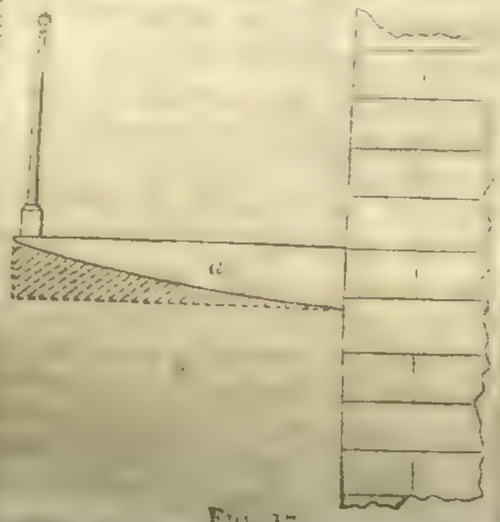

FIG. 17.

beam *a* in Fig. 6 with its depth uniform throughout. The influence of the position of the load on beams thus supported at one end only is as marked as in the case of beams supported at both ends (see Figs. 12 and 13). Thus, suppose the beam *a* supported at one end (Fig. 18) has the pressure applied to it entirely at one end as through the medium of the pillar or standard *b*, it will support one-half only of the pressure which a like beam *a*, Fig. 19, will support where the load is distributed over the surface as by the flag-stone *b c*. The beam in the circumstances displayed in Fig. 8 sustains only one-fourth of the pressure which the beam in circumstances as shown in Fig. 12 sustains.

The strength of a beam is also greatly dependent upon its length; or the distance between the points of support. It is evident that a short beam will sustain a greater pressure than a long one of the same scantling. Stated correctly, the ability of beams of similar sizes to resist any given pressure is inversely as the square of their lengths. Thus, a beam 6 feet between the supports would resist four times the pressure which a beam 12 feet long of same scantling; $6 \times 6 = 36$; $12 \times 12 = 144$; $36 \times 4 = 144$. A beam is in the strongest position when placed vertically, in the weakest when horizontally.

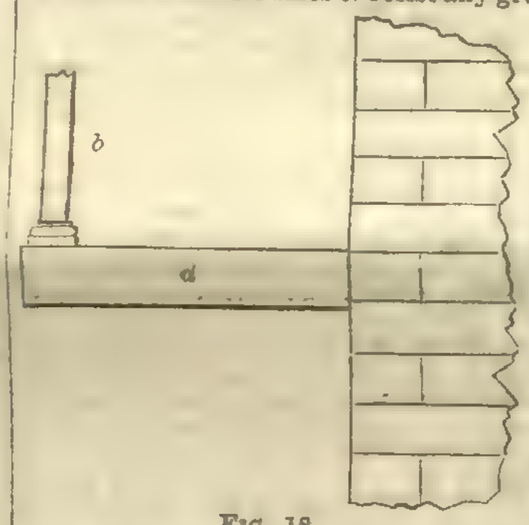

FIG. 18.

But we have still to refer to other and most important points connected with the form of beams. By altering the section of a beam a greater or as great a strength is secured with considerably less material. Thus in Fig. 20 we show different sections of beams supposed to be cut out of rectangular masses indicated by the dotted lines. The beam with equal flanges *a b c d*, and united by a central rib *e e*, is that form introduced by TREDGOLD; that with the central rib *f f* and bottom flange *g h* by FAIRBAIRN; and that with a broad bottom flange *i k*, and narrow upper one *l* united by a tapering rib *m* by HODGKINSON. The strength of the three is shown by the result of experiments instituted by Mr. HODGKINSON. The strength per square inch of section of TREDGOLD'S being 2368; of FAIRBAIRN'S 2886; and of HODGKINSON'S 3525. Mr. HODGKINSON'S form *i k l m*, Fig. 20, is now accepted as the strongest possible form of a cast-iron beam. In this the area of the bottom flange *i k* is six times that of the upper flange *l*. The thickness of the rib *m*, at top and bottom, where it meets the flanges, should be equal to the thickness of the flanges. We have already, in Fig. 15, illustrated the truth that as the pressure on a beam is not the same throughout the whole of its length, its dimensions may be lessened towards the ends; the line being that of a parabola. Now in the strongest section of iron beam, *i k l m*, Fig. 10, the strain is less on the flanges towards the points of support; the width may be reduced towards these as shown at *f*, in Fig. 21. The bearing surfaces, that is the points in which the beams rest on the supporting walls *m m*, or columns *n n*, should be a square, the side of which is equal to the width of bottom

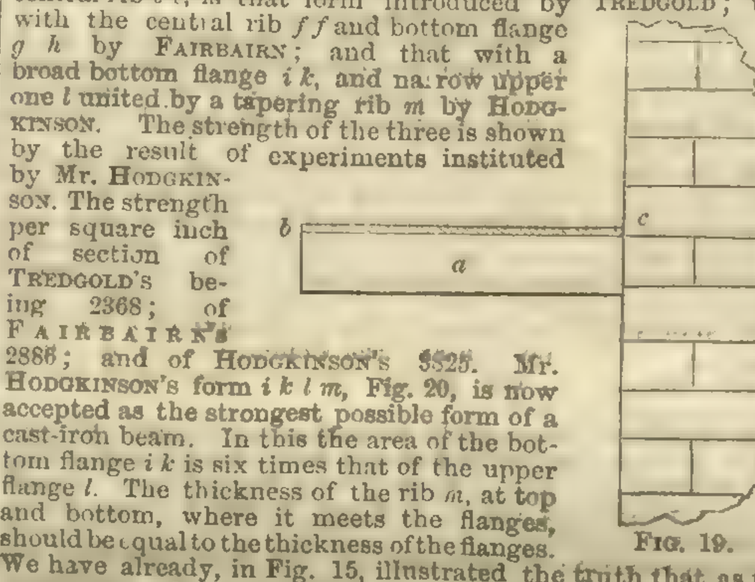

FIG. 19.

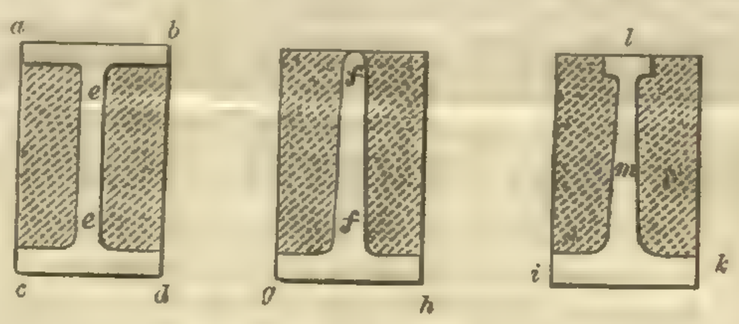

FIG. 20.

flange at centre of beam *e*. The width of flange at *f* should be half the width at *e*; the outline between the two being as before stated a parabolic curve. In place however of this curved outline being adopted, the flange may be of equal breadth throughout as at *g h*. This form is sometimes adopted where the beam has to support bricks. In the side elevation of the beam as given in Fig. 21, the diminution of height is shown; thus the ends *i j* are not so deep as the centre *k l*. The outline in this case is also parabolic.

The *position* of beams of the improved section shown at *i k l m*, Fig. 20, exercise as in other forms an important influence upon their capability to resist strains. Thus where the

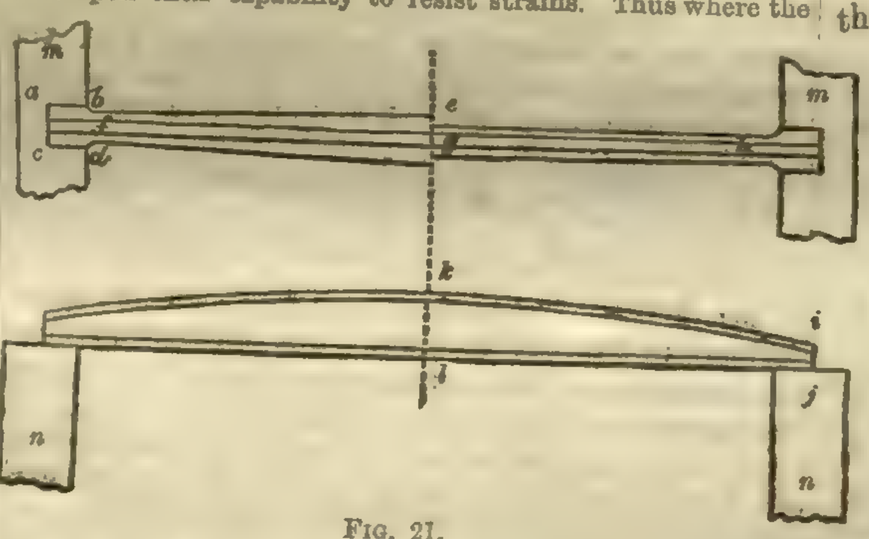

FIG. 21.

beam is placed as in the position shown in *i k l m*, Fig. 20, with the larger flange downwards, it will sustain two times more nearly than when the lower flange *l* is placed lowest. The correct proportion is according to Mr. FAIRBAIRN as 100 to 62.

From the various points now discussed, the reader previously unacquainted with the subject may be able to cull some information of practical value to him, either in designing structures in which iron is used or in ascertaining whether such works as carried out by others are in accordance with correct principles of construction. We endeavour in this way to make our remarks doubly useful, at once including the mechanic who may design and the farmer who may wish the results of such design to be carried out in the way best fitted to be of economical service on his farm. Correct information is we deem of as much importance to the one as to the other.

WE lately published extracts from a paper on Arterial Drainage by Mr. GRANTHAM, C.E., which was read some weeks ago before the Institution of Civil Engineers; and we expressed the opinion that a thorough under drainage, accompanied by such deep and perfect cultivation as it enables and permits, does not tend to the increase of flood water. It rather provides in the deeply cultivated soil and subsoil a capacious sponge, capable of retaining and gradually giving off large quantities of that rain-water which, in the case of undrained lands, runs into the ditches off the surface almost as soon as it falls.

Mr. BAILEY DENTON, in a contribution to the discussion of Mr. GRANTHAM'S paper, referred thus to this subject:—

"Our President, Mr. BIDDER, has cursorily referred to two points connected with under-draining of the highest scientific importance. I refer to his 'doubts' (1) whether the extension of under-draining has the effect of increasing the floods; and (2) whether the result of under-draining is to diminish evaporation. On these points I shall be happy at some future day, if agreeable to the Institution, to state in a short paper the results of some experiments I have made to arrive at some conclusions with respect to them, and though the deductions are somewhat at variance with former teachings, I am led to believe that an exposition of the facts will elicit some useful information from others who have attended to such inquiries. In the meantime I may observe, with respect to the subject immediately before us, that one result of the experiments on my own mind is, that while some anomalies present themselves with respect to *clay soils*, which support Mr. BIDDER'S 'doubts,' there can be no doubt that the extension of under-draining throughout the wet lands of the kingdom of *all* descriptions, must very materially increase the discharge of water to the main outfalls *during the winter months*."

The conclusions here indicated, supported by the experiments referred to, which are described, we believe, in the records of the Hinxworth drainage, published in the current number of the English Agricultural Society's Journal, will be generally admitted. But while we believe that during the winter and spring months when evaporation is low and when the rain fall is greatest, evaporation is the greatest and the drain water therefore is by so much diminished from undrained soils, it is probable that in summer on the other hand there is more evaporation from the drained soils than from the undrained. Certainly the cultivation which drainage permits enables the retention of moisture; no land becomes parched like an undrained clay; and this not because the moisture dries from it but because the rain water runs from it as it falls. The tillage of such land is necessarily imperfect. In the neighbouring field of similar soil which has been drained, and which therefore has been perfectly cultivated, the land is a perfect tilth to its full depth; while its surface is covered by the crop whose roots are a network throughout its substance. Such a soil absorbs the moisture of every shower, losing it gradually by evaporation from the leaves of the plants which it has fed, and through which it has circulated, while the undrained land alongside loses much of what falls on it directly by running off the surface.

The great advantage of land drainage, apart from that circulation of the feeding agent through the soil which it promotes, depends no doubt on the immediate penetration of the spring and summer showers, and their conveyance of the atmospheric temperature into the soil and subsoil, which without some such agency would retain the winter season for the roots of plants, while their leaves and stems were rejoicing in the summer sun and air. This influence is hardly injured by any merely surface cooling which evaporation may produce, and the probability that drained land experiences during summer even more of this surface cooling than land that is undrained is thus no difficulty in the way of our understanding the immense influence of land drainage on fertility.

The other point referred to in Mr. DENTON'S contribution to the discussion on Mr. GRANTHAM'S paper is the propriety of a central court or commission for the removal of local difficulties in the way of drainage improvements. The expenses of Parliamentary proceedings for the obtaining or enforcement of a great local benefit of

the kind is enormous, amounting in one instance to 2*l.* per acre of the land affected, while the cost of administering the Under-Drainage Commission does not generally exceed one-twentieth this amount.

We give this portion of Mr. Denton's letter in full. To the bearing of the Hinxworth records on the influence of drainage on arterial outfalls we must refer hereafter; but we cannot refrain from at once expressing, though in opposition to the opinion of a generally well-informed cotemporary, our high sense of their value and importance.

Mr. Denton writes as follows.—

"In Mr. Fowler's observations he appeared to consider that I had advocated the establishing of a central commission to carry out compulsorily the vast works of river reform and mill compensation. Now this was far from my intention. My experience in drainage works has so frequently made me acquainted with the want of outfall by the accidental interposition of a neighbour's land which must be crossed to secure a discharge of injurious waters, with the defective character of the shallow and tortuous watercourses which now exist (without any reference to mills), and with the inability of a majority of improving landowners to bind even a single objector to any good work, let it be ever so desirable, that personally I would much rather confine our efforts to obtaining a remedial measure, dealing with these minor evils by themselves, than complicate the question by connecting them with the gigantic matter of main rivers with mill compensations; though it cannot be long before this very important subject forces itself upon public attention.

"No one connected with drainage works would think of delegating to a central board, sitting in the metropolis, the *execution* of works of arterial drainage, though no one acquainted with the working of the 'Tithe Commission,' the 'Inclosure Commission,' the 'Copyhold Enfranchisement Commission,' and the 'Under-Drainage Commission,' can doubt that a central commission to administer a general Act for the improvement of outfalls, with power to appoint civil engineers duly qualified to act as assistant commissioners, would fully meet the requirements of the case. We do not want to take the Board of Health as an example (for the defects in the constitution of which the institution may possibly have itself partly to blame, in not having taken a timely and an earnest interest in the measure upon which that Board was founded). We have an excellent precedent in the Inclosure Commission. The actual work of inclosing and allotting is performed by persons appointed by the landowners interested, the duties of the commission being simply to see that the Act of Parliament is complied with. So it would be with a commission for the improvement of outfalls: the landowners would appoint their own engineer and the commissioners would facilitate his operations by the legal administration of the Act.

"In bringing the whole subject before the Institution Mr. Grantham has given the members an opportunity of suggesting the best mode in which the Legislature shall deal with it; and I beg most respectfully to submit to the council that we are hardly doing our duty to the country, who are so largely interested in this important matter, and to numerous members of the engineering profession, who might be most profitably engaged in agricultural drainage, by withholding an opinion on the legislative part of the question; for so monstrous are the evils daily brought to light as underdraining extends, that it can only be a question of time when the remedy shall be supplied.

"It may be the opinion of many that each evil should command its own remedy, and that a special act should be obtained for each district drainage and each separate outfall; but those who have acted on commissions of this sort know well that the immense waste of money in Parliamentary proceedings, and the practical evils resulting from the incompetent character of the tribunals before whom these measures are brought forbid any very general adoption of such a system. Let us look to the Parliamentary expenses incurred in some of the measures to which reference has been made in Mr. Grantham's paper, and in the discussion upon it.

"The cost of the Act of the Middle Level drainage (1848) was 10,990*l.* The cost of the Norfolk Estuary Acts has been 40,112*l.* 10*s.** The eight Acts of the Eau-Brink Cut cannot have cost less than 100,000*l.*, and what is a striking fact with regard to the Eau-Brink is that these eight Acts have now become obsolete, and the Commissioners are seeking to repeal the whole and establish a system of conservancy more in accordance with the existing state of things. But let me instance the cost of perhaps the most recent and most unsatisfactory specimen of outfall legislation, the 'Nene Valley Drainage.' In this case we have expended 30,083*l.* 0*s.* 10*d.* in Parliamentary proceedings and the progress made in the works is such that it is doubtful whether any benefit whatever has resulted, and the landowners are now disposed to let the matter remain as it is rather than involve themselves further by the obligation of parliamentary measures. The outside extent of land to be benefited by the Nene drainage is 16,000 acres, so that nearly 2*l. per acre* has been expended in *parliamentary proceedings* alone! How strangely does this contrast with the facts that the average actual cost of under-drainage is only 5*l.* per acre, including all expenses, and the average cost of the administration of the Under-Drainage Commission does not exceed 2*s. per acre!*"

* The amount of Messrs. Peto & Betts's contract to do the whole of the works was 142,000*l.*

AN AGRICULTURAL PILGRIMAGE.

No. II.—Haines Hill, Berkshire.—Having had a recent opportunity of inspecting certain farms and farmeries on the estate of J. C. Garth, Esq., in the parishes of Hurst and Ruscombe, I proceed to give such an account of them as my notes enable me.

1. The *Home Farm* at Haines Hill is furnished with as complete a set of farm buildings as I have anywhere seen. They are erected from the plans of Messrs. Beadel & Chancellor, of Gresham Street, E.C., and their leading feature—extensive yards under lofty roofing—is more or less carried out at all the other homesteads which those gentlemen have erected on the estate. The main block of buildings occupies a ground plan of about 140 feet by 100. There is a lofty range on the long side, which runs north and south, and from the middle of this projects a shorter piece of the same height towards the east, while the main block is an extension for about 100 feet westwards of the same roof of its full length, generally, however, of a somewhat lower elevation. The lofty range includes in its centre a very complete threshing machinery, worked by a steam-engine of 8-horse power—all erected by Messrs. Ransome, of Ipswich. On the one side of this centre-piece lie the granaries above and cattle food stores with chaff house below; and on the other side lies hay and chaffing apparatus above and roots below. The hay is put in, from the cart or waggon outside, on the level of the upper floor, the roots are thrown in from the ground floor below. The corn to be threshed is thrown in on the upper floor at the end of the arm of the buildings which projects eastward; the ground floor of that piece being occupied by carpenters' shops. The corn fed into the machine on the upper floor passes downwards, the chaff is blown out below; the straw reappears, being lifted by the clever elevating shaker employed by Messrs. Ransome in their fixed barn machinery; and the corn being winnowed on its descent is brought upwards in elevators and passed through another winnower before it reaches the separators, from which it is delivered in sacks on the granary level. These are at once wheeled off to the stores, while the straw is carried away and stored on a floor on the same level, which extends under the higher part of the roof right over the covered yard below, from which it is thrown down for the supply of the yards.

From this floor you look down upon the yard below and you see that the space is divided by three parallel gangways, extending westward from the north and south line of stores of chaff and roots, parallel with the sides of the yard. The two side gangways are about 4 or 5 yards from the side walls, the middle gangway extends down the centre of the intervening space. As you walk down one of these side gangways, you have on either hand the boxes in which the farm horses are kept solitarily, most complete in all their equipment with manger, water-trough, &c., only boarded up so high as to make it a case of complete solitary confinement except in so far as each has a look out on the gangway. As you walk down the other side gangway you have on one hand first boxes for cows, then little yards for sows with litters. On the other hand you have three yards each for six or eight cattle, either dairy stock, fatting beasts, or young and growing heifers and steers. The central gangway under the straw floor from which you see all this, has upon one hand a long range of sparred flooring divided into yards for 10 or a dozen sheep each, and containing in all about threescore useful Hampshire Down tegs, evidently in thriving condition. On the other hand and between you and the horse boxes lie another series of yards for fatting cattle. In some of the yards there were the red Suffolk polled dairy cow; in another Hereford steers; in a third some capital 2-year-old white Short-horn steers, purchased I understand from Mr. Bowley, of Siddington, near Cirencester.

Mr. Spencer, who manages the farm for Mr. Garth, evidently has the stock in capital and thriving condition. The feeding beasts are getting cake and meal along with cut Mangels and hay chaff. The sheep also get "artificial" food to the extent of about 1 lb. a day. I am told that over the sparred flooring gypsum is occasionally spread, and the whole is brushed over every now and then; but the sheep keep in capital condition; and when a lot have been brought in lame from the pastures they have soon recovered themselves on the sparred flooring. The horses receive about 2 trusses of hay a week and 2 bushels of crushed Oats, equal probably to 16 lbs. of hay and 10 lbs. of Oats daily a-piece. Eleven horses work the farm of 400 acres, about one-half being permanent Grass, besides doing a great deal of estate work. The yards are sheltered on the north and east by the highest portion of the erection, and being also walled up on the sides to the roof, they are left for the most part open on the western side. The ridge lines of the roof are glass, and there is ample window room for light, so that light and ventilation are provided along with perfect shelter.

Apart from this main block of buildings lies Mr. Spencer's house and out-houses, including an exceedingly neatly and even elegantly equipped dairy, a bake-house, slaughter-house, poultry-house and poultry yard.

The western and *open* side of the building presents a very tasteful elevation towards the mansion, which, at the distance of half a mile or more, presents its old Elizabethan gables amidst the wooded park.

The whole estate is very finely wooded. Game is preserved, but not excessively; and more mischief appears at present to be done by the rooks than from any other cause. And certainly the young and backward Wheats as well as the new sown Beans had suffered immensely from their attacks.

2. *At Hinton Farm*, one of the principal on the estate, in the occupation of Mr. W. Hicks, well known in Berkshire and the adjoining counties as a land and commission agent, and a public-spirited man, another set of first-class buildings have been recently erected. There is a considerable extent of outlying land with other farmeries attached to them in the same occupation; but the Hinton homestead has been erected for about 220 acres of land, of which about 170 acres are arable. The land is for the most part of an easily-worked soil; a great deal of draining has been done upon it, and more seems to be needed.

Of the horse stock required for the land in Mr. Hicks's occupation, probably eight or nine are needed for the Hinton farm. The arable land is cultivated for the most part on the four-course system. All or nearly all the more recent appliances of good agriculture are in use. Artificial manures are used—common salt being applied along with them to Mangels, Swedes, &c. The water drill is used for getting in both Swedes and Mangel Wurzel. A small dairy is kept, and large numbers of calves are reared and sold generally as yearlings. Cattle are fed during winter; steers purchased at the October Hereford fairs are sold off ready for the butcher in January and February, when the yards are given up to calves and young stock. Some 300 to 400 sheep are fed every winter on Turnips in the fields with cake and hay chaff, and 100 or so are kept with the young stock and cows during summer. Mr. Hicks uses the Turnip-pulper and mixes chaff and Turnips and Mangels pulped together as feed for his yearlings and calves. There is a capital stock of true Berkshire swine on the farm—combining quality with constitutional vigour in excellent proportion, as evidenced by both the fatting hogs and the breeding sows.

The farm is admirably equipped as regards accommodation for the tenant himself as well as for the tenant's stock. A better farm house—an old, apparently Elizabethan mansion, with wainscoted rooms, gothic windows, Oak carving, &c.—I have never seen. And the buildings, while evidently on a similar plan with that of the home premises at Haines Hill, though on a smaller scale, have some features in which I think they are superior. They, like those, include yards open to the south sheltered by a lofty roof supported on slender iron columns and surrounded by a wall on the north side, and by a range of barns on the west, and of granaries, root-stores, chaff-house, and stables on the east. The stables are thus open to the outer air, though well under the shelter of the roof, and the horses are arranged in pair stalls with swinging divisions. The central yard is surrounded by a gangway and includes divisions for cows, for fatting cattle, for calves and yearlings, with pens for swine. The floor is asphalte. The litter accumulates in the yards till perhaps 9 feet thick, and is cut out ready for immediate application to the land, and being derived from the excrements of cake-fed cattle, and undiluted by exposure to rain, is of first-rate quality. The barns include storage for a large quantity of corn, and the rick yard is full of neatly made and well thatched 60 and 70 quarter ricks. The prize of the Reading Farmers' Club for good thatching came this year to Mr. Hicks's thatcher. Both within and without there was ample evidence of good intelligent and prosperous management.

Mr. Hicks was good enough to accompany me round some of the neighbouring farms, and on two in particular there is evidence of the same enterprise and intelligence on the part of the landlord and his advisers.

3. The farm and buildings of Mr. Cotterell in the parish of Ruscombe are, in particular, praiseworthy. Most excellent land, fit for any kind of cultivation, and provided with capital buildings, an excellent farm house, and good cottages. Here, too, the system of covered yards is adopted, these being surrounded on three sides, by stabling on one side, food stores at the end, and barns and granaries on the other.

The system of covered yards as compared with covered boxes appears to me costly. There is certainly three-fold the room allowed for the cattle that is given them in a good stalled byre, and nearly twice as much room even as would be allowed them in boxes. Probably, however, it is more healthy for breeding cattle than either of the other plans. Neither box nor covered yards certainly answer for pigs, which, rooting about in the litter, allow the air to get in, so that it heats under them.

The difficulty in the management of these yards consists in the due littering of the cattle, so that the straw shall be sufficiently soaked with the excrement, and yet the cattle be kept dry and clean.

The cottages at Ruscombe are very conveniently arranged, provided with three bed-rooms, two of them having fireplaces, a rather small living room, passage and back kitchen and pantry, with shedding and out-houses and good garden. The whole estate appears

to be under good management, and rapidly improving in the hands of a wealthy and well-advised landowner, and an intelligent and prosperous tenantry. *J. C. M.*

ON TOWN SEWAGE.

ALLOW me to submit a few observations on some of the points raised by Mr. Alderman Mechi, in his paper read at the Society of Arts on the 7th inst.—"On the Application of Town Sewage."

With regard to his illustration of the applicability of dilute town sewage for agricultural purposes, founded on the fact that the average annual manuring per acre of the cultivated land of the United Kingdom is acted upon by a much larger proportion of water (in the form of rainfall) than is the human excretal matter in town sewage, surely little need be said. I may, however, mention in passing, that adopting Mr. Alderman Mechi's own figures, both as to the area of land under cultivation, and as to the number of animals of various descriptions yielding manure to it, I think he underrates the average manurial matter per acre when he reckons it, from the data in question, as equal to that of two sheep only. There would besides be the whole of the unconsumed litter, and the purchased manure of all kinds, to take into account in any such calculation. Even then, in the sense supposed by Mr. Mechi, "the ordinary farm manurial resources" are not diluted in anything like the degree he assumes, beyond the point of dilution of the excretal matters, &c., in town sewage. But, granting that they were so, just for the sake of argument, I am sure I need not tell Mr. Alderman Mechi that such a fact would have no direct bearing on the question of the utility of town sewage for agricultural purposes, and none whatever on that of its economical application.

Let us suppose, however, with Mr. Mechi that the excretal matters of two individuals of a mixed population will be equal to those of his two sheep, and that whilst those of the latter will, in his view, be diluted with about 2600 tons (26 inches) of rain, those of the two individuals will be mixed with only 160 tons of water. Now, the excretal matters of the two individuals, if brought to about the same condition of dryness and non-putrescence as the best Peruvian guano, would correspond very nearly both in weight and in money value at the present rates to 1 cwt. of that imported manure. But the question we have to consider in regard to town sewage is not even whether, supposing we could get the excreta of the two individuals on to the acre of land at the cost of, say 13*s.* 4*d.*, if in the portable form of guano (the lawyer's fee of 6*s.* 8*d.* for the excrements of each individual), they would then bear to be acted upon in the soil by 160 tons of water only? for would they not in addition, equally with the manure of the two sheep, receive the 2600 tons of rainfall? But the question surely is whether, if the 13*s.* 4*d.* worth of constituents were mixed with 160 tons of water in London (or some other large town), the farmer could then get them delivered on to his land at a cost equivalent to their assumed value?

But to leave this point: taking together Mr. Mechi's paper read before the Central Farmers' Club a few weeks ago, and that read at the Society of Arts on Wednesday last, I think I represent his views correctly when I say that, taking the population of London at 3,000,000 and the amount of sewage per head per annum at 80 tons, he supposes the whole should be distributed over 500,000 acres. For the sake of simplicity and brevity, I shall confine myself on the present occasion to indicating from one particular point of view, some of the conditions and requirements involved in the accomplishment of such an end; and I shall endeavour to do so in such a manner as to aid in providing a starting point for the consideration of those who may wish to form an estimate of the practicability, in a remunerative point of view, of the distribution of the sewage of London over such an area.

Adopting the figures just quoted, the excretal matters, &c., of six individuals of the mixed population, of both sexes and all ages, would be appropriated to each acre of land. The constituents of the excreta of these six persons, if brought to the same condition of dryness and non-putrescence as Peruvian guano, would be worth about as much as 3 cwt. of that substance—say 40*s.*, or 480 pence. But these 480 pence worth of excretal matters (at the rate of 80 tons per head, per annum, of water supply and rainfall), would be distributed through 480 tons of water. It is obvious, therefore, that we have only to suppose the cost of distribution of the sewage over 500,000 acres to be at the rate of 1*d.* per ton, and the manure of each acre would, on such a supposition, cost for distribution alone 480 pence, or 40*s.*; that is to say, exactly the estimated value of the constituents if taken to the land in the portable condition of guano. There would then, on this supposition of cost of distribution, and taking the estimated value of the constituents as manure as above assumed, be no margin whatever left for payment to the citizens for their manure. It is for those who propose the investment of capital for the distribution of the London sewage over such an area, to show at what cost they could accomplish their end—taking all difficulties and charges into consideration. They must also consider, on the one hand, how far manurial constituents will maintain their present estimated money value, when such a large additional quantity is brought into the market—and, on the other hand, how far the fact of the constituents being distributed over the land in a large bulk of water would affect their value.

But so far as the experience of liquid manure farms can be called to our aid, the conclusion would be, that the sewage would yield the most produce if applied either exclusively to Grass-land, or, in the case of rotation, almost exclusively to the Grass-crop of the course. Now, 500,000 acres is certainly much more than would be necessary to receive the sewage of London, if the whole were under Grass. Let us then, for the sake of argument, suppose that it were under a four-course rotation, and that, in accordance with the experience of the most successful Ayrshire liquid-manure farms, the whole, or nearly the whole of the liquid, were put upon one-fourth of the land (the Grass crop) each year. We should then have costly arrangements for the distribution over 500,000 acres, at the rate of 480 tons of liquid per acre, per annum, whilst only 125,000 acres would receive the liquid each year, but at the rate of 1920 tons of liquid per acre. It may be asked—would the advantage derived by the three other crops of the course, either from the occasional direct application of sewage to them, or from their following on the broken-up sewage-manured Grass land, compensate for a somewhere about four-fold expenditure for distribution?

Supposing this question were answered in the negative, the obvious conclusion would be to confine the distribution to Grass land. Nor do I think there need be much doubt, that if the application were so confined, the area might be considerably below 125,000 acres to secure the maximum crops over a given area. The area here supposed would imply that about 2000 tons of sewage, containing the excretal matters, &c., of about 24 individuals (equal in present estimated money value of constituents to about 12 cwts. of Peruvian guano), are to be applied to each acre of Grass land. But the question arises, whether it would not be more economical to limit the area of distribution at the cost of what might otherwise be considered as a waste of manurial matters? Concluding that it would be so, Mr. Lawes has suggested that, in this point of view, it might possibly be found desirable to apply, as a maximum, the enormous amount of 10,000 tons of dilute sewage per acre annually. This, taking a population of 2½ millions, and 80 tons of fluid per head annually, would require an expenditure for distribution to only 20,000 acres; and, at the rate of three millions of population, 24,000 acres. He at the same time stated that the exact point at which, in a certain sense, waste of manurial constituents would be compensated by limitation of area, could only be settled by actual experience. In regard to this point it should be borne in mind however that when the area is limited beyond the point at which a given amount of manurial constituents is the most productive, they cannot then be estimated at the same rate of value as when they are used in the proportion of their maximum productiveness.

It cannot for a moment be doubted that an enormous increase of produce would result from the application to the land of the excretal matters of our town populations; and certainly, least of all could those doubt it, who, like Mr. Lawes and myself, have devoted so much time and labour in investigating the chemical and agricultural bearings of the subject. Nor can it be doubted that these excretal matters, even when distributed through the enormous bulk of water as in town sewage, would, if judiciously applied, enormously increase the produce, particularly of certain crops. But, is there in these admissions alone any basis upon which to conclude that the increase of produce would be obtained remuneratively? Certainly not. All the evidence that can be adduced, showing the enormous increase of agricultural produce from the use of dilute liquid manure, is utterly irrelevant to the question, in a commercial point of view, unless it can at the same time be shown that such an increase can be obtained at a profit. Nor is it even of any avail to show that a profit has been obtained under any special circumstances, unless it can also be shown that, with a contemplated change of circumstances, a profit will still be obtained. The question of the application of town sewage is in fact one, not of increase of produce alone, but of increase of produce at a given cost. It is for those who believe that the increased production can be attained at a profit, to prove the strength of their convictions, and the trustworthiness of their data, by largely investing their own money in a scheme for its accomplishment; and whether they succeed in making or in marring their own fortunes, the nation will owe them a deep debt of gratitude.

Should it happen that the excretal matters of our town populations cannot at all, or only in small proportion, be rendered profitable for agricultural purposes, when once diluted with the enormous quantity of water which our modern sanatary arrangements require, we shall have to decide between the loss of this large source of manurial constituents, and some plan for collecting them more nearly in their natural state of hydration than they occur in London sewage—in which there are about 4000 parts of water to 1 part of the dry substance of human excretal matter! True it is, that each individual dwelling is the most perfectly cleansed of its own excreta by the use of large volumes of water. But this is not all gain, even in a sanitary point of view, so long as the excretal matters are thus carried into the nearest river, polluting the water perhaps of the immediate population, and also of all it may pass before it finally reaches the sea. We cannot, however, conceive of any exigency that would justify a return to the old cesspool system. But if it should be maintained that chemistry and mechanics conjointly cannot suggest a plan for collecting the excreta of our town populations at once in a portable and in an innocuous form, it must at the same time be granted that they have at present been no more successful in carrying them off by water without simply removing them from one sphere of mischief to that of another—discharging them unused into the sea—or both. *J. H. Gilbert, Harpenden, St. Albans, March* 12.

A GREAT HEAD OF GAME.

I SHALL allude to hares in the first instance, considering them to be the most objectionable; they are in the habit of congregating together, and may be seen as many as one, two, and three hundred or more in fields of from 20 to 40 acres, feeding on the produce of the land, and I need scarcely say they prefer the best and sweetest herbage. Game abounds chiefly on light soils, and dry seasons greatly favour their destructive habits. The cereals being of kinder growth, and naturally of sweeter quality, it is here that irreparable injury is done to the growing crop, be it Wheat, Barley, or Clover,—constantly eating day and night, and all the year round, does it not become evident they must consume and destroy what would and should have been additional food for man and beast? But hares are so destructive to crops in the months of May and June; always on the move, they cut their way through the corn and Clovers, and to such serious extent do they clear off roods, and in some instances acres together, that literally I have smelt the perfume arising from the withering influence of hot weather in those months. Independently of the loss just mentioned, which appears as it were sheer mischief, the corn thus prematurely cut off will attempt to grow again, and if some of it should be fortunate enough to get partially into ear, will always be so far behind the other portion of the field at harvest, as to greatly injure the sample of produce already diminished in yield. It may be considered a pretty and novel sight to see two or three hundred hares in an enclosure as we travel through the country, just as we view a herd of deer; but does it strike the beholder they are eating the farmer's produce? Is it just, I ask, that land capable of providing food for the country should be allowed, I may say, to be monopolised by game? Is it not sickening to the farmer, after his best endeavours, to see this sad destruction of his hopes and management, by consumption in excess of game? But let me be understood. There cannot like myself be a man, I am sure, but what delights to see the sudden start of a hare from his land, or has less objection to meet such on his table after legitimate sport. No; I am sure as "sons of the soil" we would never wish to see the extermination of game: it is the abuse I have endeavoured to expose, but fear I cannot fully express the very great amount of loss that is occasioned throughout the country from the great 'over-preservation of game.' Of course, game more or less must look to the land for its subsistence, and, like many of its productions, forms, at seasonable times, a welcome satisfaction to our epicurean appetites. Norfolk, Suffolk, Nottinghamshire, Lincolnshire, Yorkshire, Cambridgeshire, and Cheshire may be considered as special over-preserving game counties, and I believe it is a fact that in spite of great vigilance the poachers are known to carry off a large percentage of hares and pheasants, and partridges, far more than is ever received by the proprietor, which at once demonstrates the folly of such extravagant hordes of game. Yet I believe there is a growing disposition to reduce this great evil to agriculture among landowners; late years have given us proof of much modification in this respect, and I firmly believe it would be carried out much more extensively, were it not for neighbouring preservers vieing with each other to prove who can keep up and kill the most game. And to take another point of view; we know how difficult it is to eradicate a long established prejudice. We are great sticklers for our own ideas and to succumb or give way to change is always a tardy and unwilling act, nor can we do so without a certain amount of chaff which invariably follows as a matter of course. But for these obstacles, I believe we should find many of the great extensive game preservers reducing it to such a point as would create for themselves more real sport, and remove what is severely felt to be a great impediment to profitable and good farming. I am thoroughly convinced that the great amount of dropping as well as urine from these animals is of the most poisonous and obnoxious nature, and exceedingly detrimental to the development of Wheat particularly. We have all noticed where it is made—hillocks being a favourite spot for deposits—that the herbage is bleached, or as it were scorched and apparently lifeless: from this we may fairly conclude how offensive such must be to vegetation. It may be said we must be aware of the character of our occupation, before accepting. We conceive we do; but it is only by experience that we gain any idea of the destruction that an over supply of game will create. Looking over the hedge is one thing, and walking through your infested fields is another.

[The above is a letter from a tenant farmer read by Mr. H. Corbet, at last week's meeting of the London Farmers' Club.]

Home Correspondence.

Tiptree Profits and Sewage Irrigation.—You are mistaken in your leading article of last week, in supposing that I had not deducted horse-keep. The return was calculated over the whole farm after deducting horse-keep. There can be no mistake in this matter, for I test my profits by the amount of money I withdraw from the farm annually, without diminishing its working capital. The interest on tenant's capital this year (I mean crop of 1859) will be 11 per cent. and a house to live in rent free, which is less by 4 to 6 per cent. than that of past years. I repeat that the question of profit hinges mainly on irrigation, and beyond all, in the amount of meat made per acre with purchased food. You cannot grow great and frequent crops of corn for sale without large supplies of manure, and that manure can be in no other way so cheaply made as by feeding animals with purchased as well as home-grown food. Mr. Lawes's recent statement of the residual value of certain foods must satisfy every one that feeding out 1 ton of Rape-cake is a cheap and profitable way of getting a ton or 5 quarters of Wheat. It is the want of doing this that causes so much loss in agriculture. Tell me how much meat you make, and I will tell you how much corn you may sell off your farm. You are also wrong in asserting that the fertilising of land with one soaking of town sewage or liquid manure is an idea or assumption. Professor Voelcker proved this in his laboratory by mixing the clay and liquid manure. What is a heavy sheepfolding, diluted by rainfall, but a dressing of sewage—and does not that sheepfolding carry on a rotation? The power of soils to absorb, instantaneously, large quantities of fluidised manures are enormous. On making up my balance-sheet for 1859 (of which you shall have a copy) the result is—

Rent	£357
Farmer's profit..	255, and a house to live in rent free.
	£612

J. J. Mechi, Tiptree, March 12.

On Mr. Mechi's use of the word "Avail."—I regret to see in such favour with Mr. Mechi (whose English is usually so accurate and well selected) a use of the verb "avail," which is, as far as I am aware, quite peculiar and quite unauthorised. In last week's *Agricultural Gazette* he is reported as saying at a meeting of the Society of Arts "avail of the services;" and several times before I have observed in his lively communications a similar use of the word. Now I believe all correct writers use the verb either simply as a neuter (thus, "what would avail?") or as a reflective verb—thus "what avails it?" or "we avail ourselves of;" "let him avail himself of." There is no use allowing half the farmers of England to begin on Mr. Mechi's authority to talk of "availing of high prices," "availing of a dry season," and omitting "themselves" from any connection with the verb without at least a single word of protest. While on the subject of the use of words, will you allow me to ask whether it was an error of the press, or whether you imagine it to have been "*sic*" in Prof. Daubeny's own MS., when in the full, comprehensive, and philosophical paper with which you favoured your readers last week, he speaks of "sanatory" instead of "sanitary." "Sanatory" from the word "sanare," I suppose, means "curative," hence "sanatorium;" whereas "sanitary," from the word "sanitas," soundness, means of or pertaining to health. Pray permit an invalid before concluding to vent his querulousness on the misuse of the significant word "avocation," which he observes to be creeping into the speech even of good scholars and cultivated men. It is now constantly confounded in meaning with its opposite, "vocation." "Vocation" means the usual "calling" or "occupation" of a man; "a-vocation," that occasional, or, as it were, side-occupation, in which a man indulges in addition to his common occupation, and which in fact calls him away from it. I fear that I even saw Lord John Russell reported as speaking of "men giving up their constant daily avocations," meaning exactly the contrary to their "avocations," meaning, in fact, their "vocations." *An Exile.*

Mechi on Town Sewage.—In his lecture at the Society of Arts on the 7th, Mr. Mechi compared the sewage of towns with ordinary manurial matters in a way which I think was a violation of logic. He said that 50,000,000 of acres get less than the manure of two sheep per acre, and this is diluted by 26 inches of rainfall, equal to 2626 tons per acre. "The excrement of each resident in towns only receives as water supply 30 tons, and as rainfall 50 tons—80 tons," therefore "the much abused town manure is 16 times stronger than that on which the farmers of England depend," &c. If this reasoning be sound, it follows that when sewage is pumped on to the land it is not subject to dilution by rainfall, and therefore to enjoy such an immunity, the whole year's supply must be pumped on at one effort, and must be wholly absorbed by the soil *instanter* and before the next shower comes. Mr. Mechi evidently had in his mind the slow periodical deposit of manure by the two sheep, contrasted with a sudden large supply of town sewage, and in such a comparison the manure of the two sheep would be at a disadvantage But practically town sewage must also suffer dilution on the land, and the statement of the case decisively in figures evidently requires reconsideration. *Shirley Hibberd, Stoke Newington.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

At a Weekly Council held on the 14th inst, Lord Walsingham, President, in the chair, the report of the Consulting Chemist for the year 1859 was presented and read as follows:—

Report by Dr. Voelcker, and Chemical Investigations and Analytical Work carried out in 1859.

At the request of the Chemical Committee of the Royal Agricultural Society, I have undertaken the following investigations:—

1. Experiments on the changes which liquid manure undergoes in contact with soils of known composition.
2. Experiments and top-dressings for Wheat.
3. ,, ,, Barley.
4. Field Experiments and Swedish Turnips.

The investigations relating to the experiments on the changes which liquid manure undergoes in contact with soil and the experiments on top-dressings upon Wheat are published in the Journal for 1859. The experiments upon Turnips have been successful, and present interesting points which render a continuation of similar experiments very desirable. The Barley experiments unfortunately were completely spoiled by the ravages of the wire-worm. I would suggest a repetition of the Barley experiments. Besides these investigations I have published in the Journal for 1859 a paper on Anbury and the Composition of Diseased Turnips, another paper on the Composition of a Mangel Wurzel kept for Two Years, and a third paper on the Chemical Composition of the Chinese Sugar-cane (Sorghum saccharatum). Various visits to different agricultural districts gave me an opportunity of gaining information on practical matters, with which it is desirable a scientific man should be conversant, in order to take up with any hope of success inquiries relating to agricultural improvements. I would notice especially the pleasure and information which I derived from visits to Scotland, Warwickshire, and Norfolk. The analytical work done in my laboratory in 1859 for Members of the Society has been quite as brisk as in 1858. Letters of inquiry relating to chemical agricultural matters have been very numerous, and have taken up much of my time. As far as it is in my power I shall endeavour to answer all letters addressed to me by Members of the Society with as little delay and as fully as possible. It affords me much pleasure to report that the Members of the Society have largely availed themselves of the privilege of obtaining an opinion of the quality of oilcakes, bone-dust, and Peruvian guano, at the moderate charge of 5*s.* each per sample. It is satisfactory to report that comparatively few cases of adulterated guanos have been brought under my notice, and that the average quality of superphosphate of lime and Turnip manures in general has been greatly improved in 1859. Fraudulently prepared artificials and very inferior superphosphates are not nearly so common as they were a few years ago. In every market-place excellent artificial manures may now be bought at reasonable prices, and superphosphates may be obtained in almost every locality at lower prices than they can be prepared by the farmer himself, even if no allowance is made for expense of labour and trouble. The improvement in the trade of artificial manures is very marked indeed, and due no doubt in a great measure to the growing habit of agriculturists to have their manures tested in the laboratory. Whilst inferior manures are now the exceptions I regret to say the adulteration of oilcakes and the employment of bad and foul seed by oilcrushers is a growing evil, which requires to be checked. The number of inferior and downright injurious oilcakes submitted to me for analysis and examination has far exceeded that of really good cakes. Good American Linseed-cake is frequently recrushed in this country and mixed by unprincipled dealers with bran, Rape-seed, warehouse sweepings, and various other cheap materials. Linseed-cakes besides being made of inferior foreign Linseed, containing the seeds of numerous weeds, are occasionally obtained from a mixture of oily seeds such as Linseed, Rape, Gold of Pleasure, Hemp-seed, &c. All these cakes are greatly inferior to good English or American cake. Several cases of poisoning with adulterated or inferior oilcakes have been brought under my notice by members of the Society. In two or three instances the mischief done by bad oilcake was due most probably to the presence of numerous seeds of weeds, the botanical character of which could not be distinguished. In one instance, I was enabled to detect in an oilcake which had killed an animal the husks of the Castor-oil Bean. Rape-cake, with the exception of green German Rape-cake, very frequently contains Mustard, and should be used with great care and rejected as unfit for food if found to contain too much Mustard. I would recommend to the members of the Society particular caution in buying a variety of Rape-cake, which is now largely sold under the name of Indian Rape-cake or simply as Rape-cake. This cake appears to be made from a species of wild Turnip and not from Rape-seed at all, and to contain a variable and often very large proportion of wild Mustard. Several cases of poisoning with Indian Rape-cake have been brought under my notice in the course of 1859, and in one instance an action for damages for the loss of four cows, occasioned by eating Indian Rape-cake, was sustained successfully at the Wells Assizes. The cake which killed the animals was submitted to me for analysis and found to contain an unusually large proportion of Mustard, which seed no doubt had done the mischief. Since the trial at Wells I have examined a good many other samples of so-called Indian Rape-cake. Some of the samples I found perfectly wholesome and almost free from Mustard seed others contained so much of this pungent and irritating seed that I could not but advise to reject the cakes for feeding purposes. Cotton-seed cakes have been more frequently used last season than in the preceding one, and a considerable number of Cotton-seed cakes were submitted to me for analysis. The quality of these cakes was found to vary much, and the increased demand for Cotton-cake has lately rendered the best American decorticated Cotton-cake somewhat scarce. On a case of death caused by the use of Cotton-cake made of the whole seeds I have reported before this. At this time of the year I would recommend likewise caution in buying nitrate of soda and fine bone-dust, for in some samples of nitrate of soda analysed by me in 1859 I detected as much as 20 to 33 per cent. of common salt. Fine bone dust has lately been adulterated with Vegetable Ivory, a substance which in a manurial point of view is worth nothing. In addition to these analyses, which present points of general interest to the agriculturist, a great many analyses of more or less practical importance to the individual sender have been performed in my laboratory. Thus many soils, subsoils, marls, limestones, building stones, refuse materials of manufactories, spring and well waters, &c, have been referred to me for analysis. The question of the application of the sewage of towns for agricultural purposes has also engaged my attention, and led to much analytical work and many letters of inquiry on the part of gentlemen interested in this matter. In conclusion I beg to propose for the consideration of the Chemical Committee the following subjects for Investigation for 1860:—

1. The Continuation of Field Experiments on Barley.
2. ,, ,, Wheat.
3. ,, ,, Turnips.
4. The Action of Simple Saline Compounds on the Soil.
5. The Feeding Value and Composition of Mangel Pulp.
6. The Chemistry of Cheese and Butter.

Augustus Voelcker, March 7, 1860.

Communications were also received from Mr. Fulbrook, Mr. Farmer, and Messrs. Hardy.

Society of Arts: *March* 9.—*Town Sewage.*—Mr. Lawes, who presided at this meeting when Mr. Alderman Mechi read a paper on this subject, demurred to what Mr. Alderman Mechi had said. It was true that he had recommended that 10,000 tons of sewage should be used per acre, but at the time he did that, it was contemplated that the sewage would be distributed over enormous tracts of land—some 2,000,000 of acres—in the proportion of only 30 or 40 tons per acre. Having to combat that idea, he advocated the application of the large quantity per acre which had been stated, and to be used profitably, he considered it must be used in large quantities over a limited area. They had been frightened into the idea that the land of this country was becoming rapidly exhausted, and even Baron Liebig had lately written letters to that effect in the *Times*. If he (the chairman) thought such a result was happening, he should say that this must not remain a question of pounds, shillings, and pence, but that if the land had deteriorated in the way suggested, it must be immediately restored at any cost. But he did not think there were any grounds for saying that the land was deteriorated. It showed weakness in the argument when they were sent to Virginia, and other places, for examples of exhausted soil, inasmuch as the cultivation of land had been carried on this country from the earliest ages, and yet no one could point out any portion of the soil in Great Britain which had become exhausted. Twenty years ago he had himself entertained the idea that the soil could be exhausted; but at that time he began to do that which was considered by farmers to be most exhausting, viz., to grow a succession of Wheat crops without manuring. For 20 years he had done this, and the land now yielded as good crops as it did when he commenced that plan, and this went to show the great latent capabilities of the soil. He therefore hoped that this paper would be discussed as a commercial question rather than as one of exhaustion of the soil, as to which he felt sure there were no grounds for apprehension.

Mr. George Shepherd combatted the assertions of Mr. Bidder and Mr. Hawkesley on the strength of the London sewage. It appears that the various water-works supplied London daily with 80,000,000 gallons of water. It was consumed as follows:—About 25 per cent., or 20 million gallons in various household uses, drunk by animals, evaporated, used for watering roads and for manufacturing purposes; this amount disappeared entirely. About 60 per cent., or 48 million gallons, went into the sewers, after it had been used for the various household and other purposes. In addition to this, there was the wash from the slaughter-houses, gas works, manufactories, and various other places. These 48 million gallons of water, consequently, contained refuse of every character of the highest fertilising character. About 15 per cent., or 12 million gallons of water, went through the water-closets, carrying with it about 9,750,000 lbs., or 4352 tons, of excreta daily, in the best state for assimilation with the soil. For the last few years, during the hot months in summer, the intolerable stench from the Thames, caused by the sewage of London, was found to extend over a distance of upwards of 40 miles—a mass of water equal to 6,536,000,000 cubic feet. Now during the hot months in summer, the quantity of sewage discharged into the Thames did not exceed from 7,000,000 to 8,000,000 cubic feet per day. He would ask how it was that this small quantity of sewage, if it contained no manurial or fertilising matter, possessed the power of putting this enormous mass of water into such a state of fermentation.

Mr. Shepherd then referred to the effects of irrigation with sewage water at Ashburton, Malvern, Mansfield, Watford. On this last case the Earl of Essex had written as follows with regard to his land:—

"During the winter, from October to January, or longer, I apply the sewage to meadows for hay, two dressings per acre, each about 50,000 gallons—*i. e.*, 225 tons. I have done this now two winters, and the increase of hay, both in quantity and quality, is most extraordinary. It seems especially to thicken the bottom wonderfully, bringing up abundance of Clover. I think my produce of cut Grass this year, when the cutting are over and accounts made up, will not be less than 45 tons per acre. The year before last I kept 34 bullocks all the summer, with as much as they could eat, from seven acres. They had some cake also, and were well fattened."

With regard to the value of sewage for Wheat crops, the Earl of Essex had stated:—

"Last year, having heard it stated that sewage was not good for Wheat, I marked out two adjoining acres in the centre of a field. No. 1 received 60,000 gallons—270 tons. No. 2 received nothing.

No. 1 produced 53 bushels, worth at 6*s.* ..	£15	18	0
And straw, 5 loads, at 30*s.*	7	10	0
	23	8	0
No. 2, 44 at 6*s.*	13 4 0		
Straw, 4¾ loads	7 2 6		
	20	6	6
Profit per acre	3	1	6

The Earl had applied the sewage also to Rye Grass crops, with the following results:—

"I am now entering on my fifth cutting. No other manure has been applied, except 1½ cwt. of guano washed in after having four enormous cuttings, from sewage only."

Mr. S. Sidney said Mr. Mechi had carefully avoided quoting any facts, except his own extraordinary profits, in support of his sewage theory.

That statement of profits of 700*l.* a year from a 170-acre farm certainly had created a sensation. No doubt Mr. Mechi believed it, but he (Mr. Sidney) felt bound to tell the Society that, at a very numerous meeting of the Central Farmers'

Club on the previous Monday, including the first and most advanced farmers in the kingdom, the statement was received with perfect incredulity, and an offer to investigate the accounts, by three eminent farmers, one being Mr. Little, the land agent, of Chippenham, had been refused by Mr. Mechi. He valued London sewage at 2*d.* per ton. There was about 1 ton of solid sewage in 600 tons of London liquid sewage. A ton of solid nightsoil could be delivered in Kent for 10*s.* In 600 tons of water, according to Mr. Halkett, it would cost, at 2*d.* per ton, just 5*l.*, and he was at a loss to understand how Mr. Halkett and Mr. Mechi made 10*s.* worth 5*l.* by adding water. Mr. Sidney then referred to the alleged failure of the system in Ayrshire and elsewhere.

Mr. R. Rawlinson and Mr. P. H. Holland questioned Mr. Sidney's allegations of failure.

Mr. Hudson (of Castleacre) could not say that he had himself carried out the practice of irrigation with sewage water, but a neighbour of his had applied to him to introduce him to Mr. Mechi, with a view to gain a knowledge of his system. His friend visited Mr. Mechi, and was charmed with all he saw and heard, and went home and adopted the system. Mr. Sidney had mentioned the name of his friend, Mr. Chamberlain, who made a handsome fortune in business, and then turned farmer, and tried this liquid manure; but it became such a nuisance that an action was brought against him on account of the stench from his tank, and he was compelled to break up the works. Mr. Mechi had told them the astounding fact, which very much astonished farmers—that out of his little farm of 170 acres he had made the enormous profit of 700*l.* a year. He was sure Mr. Mechi had done much for the benefit of this country by showing them what could be done — what ought to be done — and what ought not to be done. He had pointed out quicksands upon which the farmer might be wrecked, but he (Mr. Hudson) questioned whether irrigation ought to be included amongst the number. He (Mr. Hudson) did not call it irrigation; they did not put enough upon the land to come up to his idea of irrigation. He had 50 acres of land which he irrigated from an adjacent stream, and the result had been very productive crops. He did not see how the "squirt" system could be made to answer. All that he could say was that at the present price of Wheat—42*s.* per quarter—if tenant-farmers paid their rent and taxes they had nothing left for profit; but Mr. Mechi had the advantage of being his own landlord. It was said that live stock produced a good deal of money, but they cost a great deal to feed. He had recently sent 250 sheep to the market when meat was quoted at a high price, but he had only been able to get 6*d.* a pound net for his mutton. He should be only too glad if Mr. Mechi's plan of dealing with the sewage of London could be brought to bear, and made profitable, for it would be followed generally throughout the country.

Mr. Parkinson said, Mr. Mechi had spoken of 3*l.* 7*s.* per acre per annum as the average produce of the land in England, whilst in his own case he had placed it as high as 11*l.* per acre. He confessed he was at a loss to know how those results were arrived at. His experience of farming was this, that it was stock farming that paid; and when Mr. Mechi put down 3*l.* 7*s.* per acre as the average of the kingdom, he underrated it, whilst in his own case the 11*l.* 15*s.* was, in his (Mr. Parkinson's) opinion, too large.

Mr James Thomas observed that it was most remarkable that in discussing the value of this manure, they had not heard of a single instance (Mr. Mechi's alone excepted) in which it had been beneficially applied to the cultivation of the soil, whilst other artificial fertilisers, in smaller compass, had been extensively used with good results. He contended that there had been no proof that this system had ever answered, or resulted in profit to those who had tried it; and he believed, do what they would, it would never do so. They had heard from Mr. Mechi that his farm of 170 acres yielded him an annual profit of 700*l.* He gave Mr. Mechi the fullest credit for completely believing all that he stated, but he thought there was scarcely another individual to be found who would do so.

Mr. R. A. Slaney, M.P., thought whatever might be the opinions with regard to its success in an agricultural point of view, there could not be a doubt that Mr. Mechi had, at a great cost, with great perseverance and with great ability, endeavoured to work out a problem of great value and importance, not merely to the farmers, but also to those who looked to the sanitary condition of our great towns.

Mr. Mechi would express his thanks to the meeting for the patient manner in which his long story had been listened to. With regard to his balance-sheet of profit and loss, he had been asked so many questions that he had thought it right to put those interrogations to himself which would be found in the paper. Those questions turned the farm inside out. He had answered those questions honestly and fairly, and by those questions they might judge of every penny of expenditure and every penny of return upon the farm.

Calendar of Operations.

MARCH.

CHESHIRE.—The weather of late has been so unfavourable for field operations that the usual work of the farm at this season of the year is very backward; there was however about the end of February some nice open weather, and the land being in good mellow condition from the effects of frosts many took advantage of it to put in the remaining portion of their Wheat crop, and in one instance we observed a large field of "leas" sown with Oats, the land being in the best possible condition, but we are sorry to find that on some farms where Wheat was sown in November last the grain perished in consequence of the severe frost coming on at a very critical time just before it began to bud, and one farmer had to sow 15 acres over again last week. Turnips have kept badly on account of the frost, and on most farms are all nearly consumed. Mangel Wurzel has kept even better than was expected, therefore we are inclined to believe that the plant is becoming acclimatised, as it appears to stand our frosts better than when it was first introduced into this country, and it is improved in other ways by greater attention to its cultivation. This is the busy season for preparing the land for early Potatoes, but in consequence of the cold frosty weather little yet has been done. We have however heard of some being put into the ground a week or two ago, we should suppose to the great discomfiture of the planter, as we have had some very sharp frosty nights since then. We are sorry to observe that the "pleuro" has not yet disappeared.

Notices to Correspondents.

CHICORY FOR GRAZING: *Agric.* Prepare the soil by thorough cleaning early in spring, applying a good coat of rotten dung. Drill 4 lbs. of seed per acre in March in rows 9 inches apart. Single them out when 5 inches high to 6 inches apart. The crop will continue luxuriant under good management for six or eight years. Let it get of full growth and then cut it down before flowering and carry it to stock in the house. It may be also depastured with sheep, but the other is the more productive use of it.

SORGHUM: *L M N.* There are several kinds of Sorghum. He should procure the true Chinese Sorghum saccharatum.

TOP-DRESSING FOR GRASS: *E O.* Two cwt. of guano and 2 cwt. of superphosphate mixed in a cartload of loam, and spread and washed in will be a good dressing per acre.

RANSOMES & SIMS, IPSWICH,

CONTINUE to give their best attention to the manufacture of the most Modern and Improved Agricultural Machinery, including

PATENT AND OTHER PLOUGHS, SUITABLE FOR EVERY SOIL AND PURPOSE.
HARROWS, CULTIVATORS, ROLLERS, AND OTHER FIELD IMPLEMENTS.
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CHAFF CUTTERS, ROOT CUTTERS, BRUISING AND CRUSHING MILLS FOR CORN, OILCAKE, &c.
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STEAM THRESHING MACHINES, BOTH PORTABLE AND FIXED, AND SINGLE OR DOUBLE BLAST.
HORSE POWER THRESHING MACHINERY, DRESSING MACHINES, CORN MILLS, HORSE GEARS, &c.

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COTTAM AND COMPY. having had upwards of 10 years' experience in the arrangement and construction of every description HORTICULTURAL BUILDINGS AND HEATING BY THE CIRCULATION OF HOT WATER, and well qualified to guarantee the perfect execution of any works intrusted to them in the erection of

Conservatories	Summer Temples	Orchid Houses	Apricot and Peach Houses
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Iron Hurdles, Strained Wire Fencing, Game Netting, &c.

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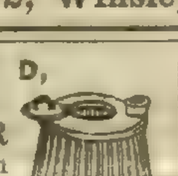

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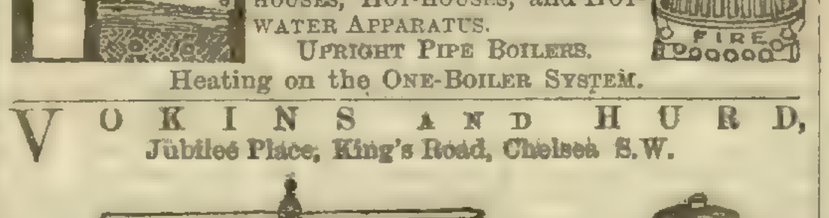

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Hothouses, Greenhouses, &c., as cheap as any house in the trade. Some Span-roofed Pits, and 2 and 3-Light Boxes ready for delivery.

BY ROYAL LETTERS PATENT.

T. G. MESSENGER, HORTICULTURAL BUILDER, PATENT HOT-WATER APPARATUS MANUFACTURER, &c., Loughborough, begs respectfully to call the attention of the Nobility, Gentry, Nurserymen, &c., to his Patented Divisionless Horticultural Erections and Mode for Ventilating same. A Model Erection, showing these as well as many other improvements, sent carriage free to any gentleman requiring the same. Also an Illustrated Price List of his Garden Engine, which is cheaper than any other. T. G. MESSENGER'S Boiler is now at work at many gentlemen's seats in the country, giving the utmost satisfaction.

T. G. M.'s perfect and simple Hot-water Valve, 4 in., 22*s.*; 3 in., 18*s.* 6*d.* Plans, Estimates, &c., sent upon application.

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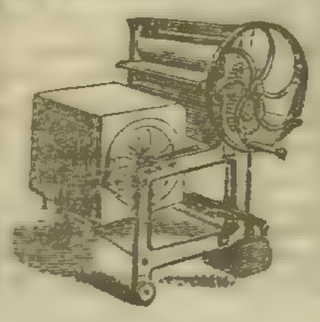
N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.



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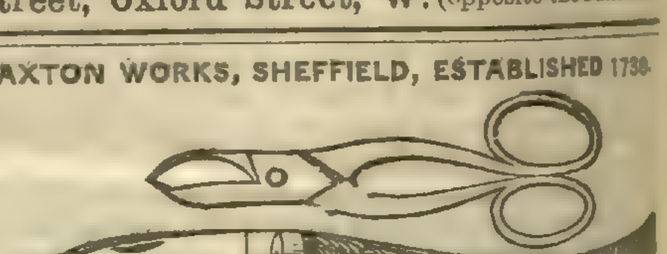

SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

WARNER'S IMPROVED LIQUID MANURE OR GENERAL PORTABLE PUMP.

These Pumps are fitted with WARNER'S Patent Bucket and Valve, and cannot clog in action. The barrel is made of galvanised iron, not likely to corrode, and can be raised or lowered at pleasure on the stand, the legs of which fold together, and may be carried with ease by one man to tank or pond.

	£	s.	d.
Stand and Pump, with screwed tail pipe, fitted with strong brass union for suction pipe	2	15	0
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2-inch patent rubber and canvas flexible suction pipe, on wires, either 10, 12, or 15 ft., per foot	0	2	2

May be obtained of any Ironmonger or Plumber in the country, at the above prices, or of the Patentees and Manufacturers, J. WARNER & SONS, 8, Crescent, Jewin St., London, E.C.

Every description of Machinery for raising Water, by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. Engravings sent on application

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J. AMADIO'S BOTANICAL MICROSCOPE packed in mahogany case, with three powers, condenser, pincers, and two slides, will show the animalcule in water. Price 18*s.* 6*d.*—Address JOSEPH AMADIO, 7, Throgmorton St., E.C.

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RESPECTFULLY offer fresh imported Seeds of the following rare and new CONIFERÆ, 1*s.* 6*d.* and 2*s.* 6*d.* each packet:—

PINUS LAMBERTIANA	WELLINGTONIA GIGANTEA
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RARE AND CHOICE MEXICAN PINES.

Pinus Don Pedri	Pinus Devoniana (most beautiful)
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THE ILLUSTRATED BOUQUET, Coloured Plates from the above, 1*s.* 6*d.* each, post free.
E. G. HENDERSON & SON's Catalogue, p. 96.

GAZANIA SPLENDENS, Best proved new Bedding Plant, 1*s.* 6*d.*, 2*s.* 6*d.*, and 3*s.* 6*d.* each.
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BEATON'S GOOD GRACIOUS POLYANTHUS.—E. G. HENDERSON's Catalogue, p. 94.

HENDERSON'S A 1 RIDGE CUCUMBER.—This remarkable variety is offered and proved by personal inspection as the best and only example of a perfect ridge or open-air Cucumber yet known, having the most essential features of such in its hardiness of constitution, robust growth, freedom from disease, most abundant and continuous fruit bearer, excellent flavour, absence from all bitterness, and the requisite proof of its true ridge character in its uniform average length of 10 to 15 inches, and its wonderful vigour of growth from single plants at 10 to 12 feet apart under the most simple treatment. See Catalogue for the Notes on the Cultivation of the Ridge Cucumber.

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NEW PLANTS NOW READY.
ACHIMENES LONGIFLORA FLORE PLENO.
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SALVIA TRICOLOR.
GERANIUM QUEEN VICTORIA.
CINERARIA MINNIE, ANNIE, AND FLORENZO.
E. G. HENDERSON & SON'S SEED CATALOGUE, p. 92.
Discount to the Trade.

MESSRS. E. G. HENDERSON AND SON, Wellington Nursery, St. John's Wood, London, N.W., respectfully announce their SEED CATALOGUE FOR 1860, including comprehensive and select Lists of FLOWER and VEGETABLE SEEDS, in sections of Hardy, Half Hardy, and Tender Annuals and Biennials, with Perennial, Herbaceous, Alpine, and Tree species, comprising numerous accurate and practically descriptive notes of the most novel and beautiful.

**** For descriptions of BANKS'S NEW FUCHSIAS and Winter-flowering ACHIMENES (TYDÆAS, &c.), also of NEW BEDDING GERANIUMS, CALCEOLARIAS, PETUNIA, &c., see the *Gardeners' Chronicle* of March 10 and 17.

WELLINGTON NURSERY.

ROYAL BOTANIC SOCIETY OF LONDON.

REGENT'S PARK, N.W.

THE FIRST SPRING MEETING OF THE SOCIETY took place on March 21. The following were the principal subjects of Exhibtion, and the Awards made on this occasion:—

NEW PLANTS, &c.—Small Silver Medal to Messrs. Low & Co., Clapton, for Erica aristata Barnesii, a remarkably fine rosy-salmon coloured variety of the aristata class; the flowers have an inflated varnished tube, darker at the mouth, and a reflexed limb of broad white obtuse segments. Small Silver Medal to Mr. Lawrence, gardener to the Rt. Rev. the Lord Bishop of Winchester, Farnham Castle, for Acineta sp.; this had a drooping spike of large fragrant flowers, of which the sepals were blunt, concave, greenish yellow, the petals oblong, dotted with maroon, and the lip yellow with a deep maroon blotch near the centre, and spotted towards the sides. Bronze Medal to Mr. Standish, Bagshot, for Myosotidium nobile, the Forget-me-not of the southern hemisphere, a native of the Chatham Islands, having broad cordate ribbed leaves, and pretty blue flowers edged with white. Bronze Medal to Messrs. Low & Co., for Erica aristata virens, another fine new Heath, well varnished, deep reddish flowers deepening to maroon at the mouth, and having a limb of blunt spreading blush-white segments. Certificate to Messrs. Low & Co. for Erica aristata Lowii, another new Heath, quite distinct from the foregoing, of a fine varnished red, with an inflated tube, and dark contracted mouth, the segments of the limb small and ovate. Certificate to Messrs. E. G. Henderson & Son, St. John's Wood, for Primula Fortunii, a plant having the general aspect of P. denticulata, but with flowers nearly an inch in diameter; the leaves are sharply dentate, and the flowers very numerous at the top of a scape 8 to 12 inches high, of a delicate lilac, with a straw-coloured eye. Certificate to Mr. C. Turner, Slough, and also to Messrs. E. G. Henderson & Son, for Primula sinensis atro-rosea plena, a beautiful new double form of the fringed Chinese Primrose. Certificate of Merit to Mr. Todman, gardener to R. Hudson, Esq., Clapham, for Azalea Prince of Orange, a remarkably smooth even well formed orange red flower of good substance, bright coloured, but without conspicuous spotting on the upper segment. Certificate of Merit to Messrs. E. G. Henderson & Son for Camellia Gordoni, a well formed deep rose-pink variety, blotched with white. Certificate of Merit to Messrs. F. & A. Smith, Dulwich, for Cineraria Géant des Batailles, a large bright crimson-purple, with a well proportioned disk; and for Cineraria Tyrian Prince, an evenly formed rose purple variety. Certificate of Merit to Mr. C. Turner, for Cineraria Miss Eyles, a flower of good properties, having the florets white at the base, forming a ring around the greyish disk, and heavily tipped with rose purple; also for Cineraria Lurline, a bold flower somewhat similar to Miss Eyles, but larger, and more heavily tipped; also for Cineraria Mabel, a very bright-looking showy kind, with a small compact very dark disk, the base of the florets of a remarkably pure white, rather strongly tipped with purple; also for Cineraria Royal Charlie, on account of its new colour, a kind of deep violet, with a dark disk, and broad well formed florets. Certificate of Merit to Mr. Wiggins, Gardener to E. Beck, Esq., Isleworth, for Cineraria marginata, a well-formed flower, the florets pure white, with a slight and even tip of rosy-lilac, the disk dark-coloured and small. Certificate of Merit to Mr. W. Lee, Hammersmith, for Primula sinensis variegata, a variegated-leaved form of the fringed Chinese Primrose, remarkable only on account of its variegation. Certificate of Merit to Messrs. Paul & Son, Cheshunt, for Tea Rose President, a full cupped flower of a deep blush with a buff tint.

There were also exhibited in this Class the following:—From Mr. Todman, Clapham: Azalea Clapham Beauty, a delicate [illegible] good form and of medium size; also Azalea Princess [illegible], white with a pale greenish blotch on the upper segment, the edges wavy. From Messrs. Jackson & Son, Kingston: Azalea unifera. From Messrs. Low & Co.: Erica aristata decussata, in the way of but inferior to E. aristata Burnesii; also E. Syrenghodes, not sufficiently in flower. From Messrs. E. G. Henderson & Son: Cyclamen persicum roseum coccineum, a pretty light rose-coloured variety, with deep crimson blotches at the eye; also Camellia Mathotiana alba, apparently a good imbricated white; and Camellia Madame Lebois, a deep carmine red. From Mr. Turner: Cineraria Beautiful Star, bright rose-purple, with an indistinct white ring at the base of the florets; Cineraria Titania, nearly the same colour as Miss Eyles; Cineraria Vincent Wallace, a rose-purple self; Cineraria Godfrey, another rose-purple self; Cineraria Rev. S. R. Hole, a large bright crimson purple, having many good properties, but with a disproportionately broad disk; Cineraria Sunlight, similar in colour to the last, but inferior to it; Cineraria Constellation, a loose deep purple, with white ring around the base; Cineraria Mademoiselle Parepa, white base, with deep purple crimson tips, showy; Cineraria Fairy Ring, purple, with a rosy base to the florets; Cineraria Star of Brunswick, deep purple crimson. Most of the foregoing were varieties of good average quality. From Messrs. F. & A. Smith: Cineraria Volunteer, a very promising flower, hardly enough expanded; the florets are of a bright rosy-purple, with a small white base, and appear to open remarkably flat and even; also Cineraria Crimson King, similar in colour and scarcely inferior in quality to Géant des Batailles; Cineraria Sultan, dark purple; Cineraria Singularity, deep blue-purple with pink base; Cineraria Rosalind, small rose-coloured. These were mostly varieties of showy character, and of average quality. From Messrs. Dobson & Sons, Isleworth: Cineraria Amy, white with small purple tip; also Cineraria Lurline, slight rosy purple tip: Cineraria Rifleman, bright rose-purple; Cineraria Pauline, white at the base with heavy rose-purple tip; Cineraria Hyperion, dull purple-crimson. From Mr. James, gardener to W. F. Watson, Esq., Isleworth: Cineraria Etna, heavy deep rose-purple tips. From Mr. Wiggins: Cineraria Bridesmaid, slight rosy-purple tips. From Mr. W. Lee: white ring around the grey disk, and tipped with purplish-lilac. From Mr. Gooch, gardener to Mr. Cubitt, Clapham: Cineraria elegans, grey disk and heavy rose-purple tips; also Cineraria Bijou, grey disk and light rosy tips; Cineraria formosa, dark disk and light rosy-purple tips; Cineraria conspicua, a showy variety for ornamental purposes, with dark disk and heavy rose-purple tips. From Mr. Standish: Hyb. Perpetual Rose Madame Standish, deep rose pink; also Hyb. Perpetual Rose Comte de Falloux, deep bright rose crimson. These were promising new varieties, but in too young a state to determine their qualities at this early season.

6 CINERARIAS.—Small Silver Medal to Messrs. Dobson & Sons, Isleworth. Bronze Medal to Mr. Todman, Clapham.

12 HYACINTHS.—Small Silver Medal to Messrs. Cutbush & Son, Highgate. Bronze Medal to Mr. Cross, gardener to Lady Goldsmid, Regent's Park. Certificate to Messrs. Jackson & Son, Kingston, and to Mr. G. McIntosh, Nurseryman, Hammersmith. Mr. Todman, of Clapham, was also an exhibitor. These collections contained many remarkably fine and well grown varieties.

6 CHINESE PRIMROSES.—Bronze Medal to Mr. Turner. The plants, which were in small pots and exceedingly well flowered, were all of the white fimbriated variety.

MISCELLANEOUS SUBJECTS.—Small Silver Medal to Mr. Lawrence, for a beautiful specimen of Dendrobium Farmeri. Small Silver Medal to Messrs. Cutbush & Son, for a collection of 50 finely grown Hyacinths, containing many of the newer and superior kinds of that popular flower. Bronze Medal to Messrs. E. G. Henderson & Son, for a collection of varieties of Cyclamen persicum, containing many interesting and dissimilar kinds; also for a miscellaneous collection of plants in flower, among which were the vermilion Imantophyllum miniatum, Camellia Targioni, an excellent variety, with smooth, even, cupped petals, white striped with rose; and many other interesting plants. Bronze Medal to Mr. Lawrence for a well-grown plant of Cypripedium villosum. Bronze Medal to Messrs. Cutbush & Son for 12 new Hyacinths, among which one named Snowball was particularly remarkable for the broad segments and wide expansion of its pure white bells. Certificate to Messrs. Cutbush & Son for 12 early Tulips. Certificate to Mr. Turner, for a well-grown plant of Cineraria Flower of Spring.

Messrs. A. Henderson & Co., Pine-apple Nursery, contributed a considerable collection of well-cultivated specimen Greenhouse and Stove Plants.

HOLLYHOCK SEED.

A. PAUL AND SON beg to offer collections of their HOLLYHOCK SEED in sealed packets, free by post.
FIRST QUALITY, 5*s.* per packet of about 500 Seeds, containing 12 good and distinct named sorts in 12 separate papers, with names and colours.
SECOND QUALITY good mixed Seed; 1*s.* to 2*s.* 6*d.* per packet.
A liberal discount to the Trade.
N.B. A list of SELECT Seeds free by post.
Nurseries, Cheshunt, Herts.

AZALEA INDICA.

J. IVERY AND SON'S New DESCRIPTIVE CATALOGUE of the above contains all the newest and best varieties. Will be forwarded post free upon application.
Dorking Nursery.—March 24.

SUPERB NEW VERBENAS of Last Season, 60 varieties. Good stock plants now ready for delivery at 7*s.* per dozen, or all the varieties for 30*s.*; package included.—W. KNIGHT, Floral Nursery, Hailsham, Hurst Green, Sussex.

LAWNS WITHOUT MOWING—SPERGULA PILIFERA.

J. A. SUMMERS supplies strong plants for immediate planting, taken from the original stock, at 1*s.*, 2*s.*, and 4*s.* per doz. A specimen post free, 1*s.*
Howard Park Nursery, Perry Hill, Sydenham, S.E.

REAL CHOICE SEEDS.—A GARDENER having been successful in saving a small quantity of really superb BALSAM SEED from a very magnificent collection, offers it in packets, post free, at 1*s.* Also ANTIRRHINUM, from 100 of the most varied colours, mottled, striped, spotted, selfs, &c., at 6*d.* per packet.
Address, HENRY KNIGHT, 34, High Street, Hastings.

ROYAL SOUTH HANTS SEED ESTABLISHMENT.

Under the patronage of H. R. H. the PRINCE CONSORT, the Horticultural and Agricultural Society of India, the principal Nobility, Gentry, and Agriculturists of the United Kingdom.

PAGE AND TOOGOOD will forward their PRICES CURRENT upon application. It should be referred to by purchasers of Garden and Farm Seeds.

Collections of VEGETABLE SEEDS, 55*s.*, 35*s.*, 20*s.*, 10*s.* The Quantities in the above selections will be found more liberal, and the prices 10 per cent. less than any house in the Kingdom.—Seed Establishment, Southampton.

NEW FARM SEEDS, GROWTH OF 1859.

ROYAL BERKSHIRE SEED ESTABLISHMENT.

SUTTON'S FARM SEED LIST IS NOW READY,
and will be sent post free to any address.
SUTTON & SONS, Seed Growers, Reading.

The Gardeners' Chronicle.

SATURDAY, MARCH 24, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, March 27 { Horticultural (election of Fellows) / Soc. of Arts, John St., Adelphi 1 P.M.

AMONG the other advantages attendant upon growing fruit on the orchard-house system is that of simplifying and facilitating the business of PRUNING and TRAINING wall trees. These operations are rocks on which many a goodly horticultural craft has made shipwreck, and many another will be added to the list; witness the shattered hulks called trees that may so often be seen laid up in ordinary against the walls of country gardens. We believe the greatest boon that could be conferred on gardeners would be to relieve them of this troublesome and difficult work, which consumes no end of labour, half-kills men in winter by cold, and in summer by baking them against hot walls, and is continually attended by disappointment instead of being rewarded by success. Doubtless the prejudices of many excellent gardeners will be shocked by an attack upon methods of cultivation which have in their case been attended by triumphant success, and they will point to their own trees as incontestable proofs of the value of practices which experience has sanctioned and affection endeared to them. Our old friend GLASSE used to say that he loved his wall trees as well as his children; which we hope was a figure of speech, although he would have sworn to its literal truth. Just as the old coachmasters maintained that there was nothing like the road and four spanking posters. In time, however, they were undeceived by the iron horse; and we venture to predict that a similar fate awaits our wall tree pruners.

Why are wall trees pruned and trained? It is as well to consider the answer to this simple but rather useful question. We say, then, why do men prune and train their wall trees? seeing that they let alone, or nearly so, trees of another kind. Is it to encourage the brick-maker? or to make walls look pretty, like a school-girl's sampler? or to show how clever men can torture unresisting trees into producing great fruit, as the men of Strasburgh torture geese into the growth of great livers. The answer to such inquiries will be an indignant No! no! although we are afraid a true reply would sometimes be the other way. Doubtless the reason really is to give trees a better climate by shelter,

and to increase their fruitfulness by maintaining an equipoise of growth. Now, if these two results can be obtained by simpler means than those in present use it would surely be a great gain; and we foresee that orchard houses will secure them. So far, indeed, as climate is concerned, the matter is settled. No wall, under any conceivable circumstances, can secure so good a climate as a well-managed glass-house; for in such a structure we not only gain heat and repel cold, but expose our plants incessantly to those rapid currents of fresh air which are denied to a wall, although they are the greatest cause of colour and flavour. The increase then of fruitfulness is all that our *customary* pruning and training upon walls can really effect beyond what arises in the absence of those wearisome and difficult processes. We say customary, because we are far from advocating the neglect of all artificial management of branches. Quite the contrary. All that we point to is the possibility of substituting for what we do something which is not done.

For a sharp knife we presume to recommend the finger and thumb; for pruning we propose pinching; as for shreds and nails we suggest that the first should go to the manure heap and the latter to the tool box. That is all.

What says Mr. RIVERS upon this subject?—"Pruning of bush trees by summer pinching only has been practised here the past season (1859) to a large extent. As this is the most simple of all the methods of pruning known, and may be practised by any lover of gardening who does not mind employing his finger and thumb when walking in his orchard house, it is worthy of a few lines of description. A Peach or Nectarine tree of the usual bush-like form, two, three, or four years old, may be potted in the autumn. In March its shoots should be shortened to about half their length, forming the tree into a round bush. In May it will put forth young shoots. As soon as they have made four leaves, the fourth leaf, with the end of the shoot, must be pinched off: every shoot must be thus operated on. In eight or ten days a fresh crop of young shoots will be ready for pinching. These must all be pinched down to three leaves, and so on all through the summer with every fresh crop of young shoots, till the trees cease to grow, which is generally about the middle of September. My trees, under this incessant pinching, are sturdy bushes, full of blossom-buds, and quite pictures of robust health. By this system the size and beauty of the fruit are increased, owing to its full exposure to the sun. In March it will be good practice to thin out some of the numerous blooming spurs with a sharp penknife, otherwise the trees will be too much crowded with blossoms. From closely observing my trees year after year, I feel that but little anxiety about pruning need be felt by the beginner, for when a Peach tree has been in a pot in an orchard-house for two years it *will* bear, prune it how you will. All that seems to be required is to make the tree symmetrical and prevent its bearing too bountifully, for it must be borne in mind that fruit from a tree overloaded, whether under glass or in the open air, is never of a fine flavour. Peaches, Pears, Plums, Apples, and indeed all descriptions of fruit, suffer in flavour to an extent scarcely thought of, if the tree be suffered to bear too many. It is better to have one dozen of Peaches large and of fine flavour than two dozen small and inferior; besides this, a tree suffered to bear too large a crop will be sure to fail the following season."

What do the trees at Sawbridgeworth say to this? The reader should go and see. He will see such crowds of spurs and blossom buds, all open on the Apricot, just bursting on the Peach, and making ready on the Pear, as will probably surprise him not a little.

For the satisfaction of those who cannot shake off their allegiance to writers on pruning and training, we may now add that after all there is nothing new in this proposal. The novelty consists in discovering the art of building cheap glass-houses. How did the great ANDREW KNIGHT manage his Fig trees? These are his words:—

"Whenever a branch appears to be extending with too much luxuriance, its point, at the tenth or twelfth leaf, is pressed between the finger and thumb, without letting the nails come in contact with the bark, till the soft succulent substance is felt to yield to the pressure. Such branch in consequence ceases subsequently to elongate; and the sap is repulsed to be expended where it is more wanted. A fruit ripens at the base of each leaf, and during the period in which the fruit is ripening, one or more of the lateral buds shoots, and is subsequently subjected to the same treatment, with the same result."

In a former volume (1855, p. 659) a writer relates how he also managed his Fig trees, by carrying the pinching system much further than KNIGHT; and with what great success. A success, let us add, which lasted until the roots of the Fig found their way into damp clay, when no amount of pinching would make the branches bear.

But the Fig was not the only tree thus dealt with by KNIGHT. The Peach tree was subjected to similar treatment.

"It is, I conceive, quite unnecessary to adduce arguments to prove that the buds, which are first formed in the spring, are most likely to undergo properly the necessary internal changes of structure above-mentioned, and consequently to afford more perfectly organised blossoms, than such as are not formed before the middle of the summer, or till near the approach of autumn; and if this be admitted, it will not be difficult to show that the mode of pruning and training the Peach-tree, which has been uniformly recommended, and almost as uniformly practised, is well adapted to favourable situations only. It has been derived from the practice of the French gardeners, and is probably perfectly well suited to the climate of Paris, but by no means so well calculated (I have, I think, very good reason to believe) for the colder parts of England, as that I proceed to describe and recommend.

"Every tree prepares in the summer and autumn many minute leaves, which expand and form the early foliage of the following spring, and the buds in the axillæ of these leaves are necessarily (consistent with the preceding statements) those best calculated, in cold and unfavourable situations and seasons, to generate well organised and vigorous blossoms; and in such situations, I have often witnessed the advantage of preserving as many as practicable of these, by deviating from the ordinary mode of pruning the Peach-tree. Instead of taking off so large a portion of the young shoots, and training in a few only, to a considerable length, as is usually done, and as I should myself do to a great extent, in the vicinity of London, and in every favourable situation, I preserve a large number of the young shoots, which are emitted in a proper direction in early spring by the yearling wood, shortening each where necessary, by pinching off the minute succulent points, generally to the length of 1 or 2 inches. Spurs which lie close to the wall are thus made, upon which numerous blossom buds form very early in the ensuing summer; and upon such, after the last most unfavourable season, and in a situation so high and cold that the Peach-tree, in the most favourable seasons, had usually produced only a few feeble blossoms, I observed as strong and vigorous blossoms in the present spring as I have usually seen in the best season and situations; and I am quite confident that if the Peach-trees, in the gardens round the metropolis, had been pruned in the manner above described, in the last season, an abundant and vigorous blossom would have appeared in the present spring."

Had our great horticulturist had glass at command as we have, he would doubtless have found how to reform our whole system of pruning and training: as it was, he only laid the foundation of a change.

But this is a very large subject, concerning the details of which, and the exceptions to which, a volume might be written. For the moment we can do no more than draw attention to some of the questions connected with it.

THE Secretary of the "Rural Empire Club," an association formed by Mr. J. W. BRIGGS at a place called West Macedon, in the State of New York, has lately sent over seeds of a Gourd which he calls the Honolulu Nectarine Squash, and describes as a variety possessing "a degree of sweetness before unknown in the Squash family." Along with the seeds came a small piece of the "stewed flesh dried upon earthenware," which was something of the consistence of English marmalade, though not so sweet. The seeds are large, pure white, and unknown to us. Mr. BRIGGS circulates extracts from letters highly encomiastic of his new Squash, and while he offers seeds gratuitously to the members of his club announces his willingness to sell seeds "at a reasonable price to outsiders." We suppose they can be had through the American houses in London or Liverpool.

THE BEAVER.

I HAD hoped that our fabulous accounts of beaver-architecture had long ago mouldered into dust on the undusted shelves of my old grandmother's nursery library. But, I have just read in the *Gardeners' Chronicle*, that they have risen from their slumbers, and are again offered to the inspection of the world at large.

I see that an essay on beaver-architecture has been selected from "Audubon's and Backman's valuable work on the Quadrupeds of North America." I know but little of the latter gentleman, but the former, many years ago, made an indelible impression on my mind, by his revival of the old story concerning the countryman's boot and the broken rattlesnake's tooth.

I really cannot peruse this account of beaver-architecture with any kind of composure. It actually makes me sick at stomach. It is like some portions of Gladstone's recent Budget—tough and difficult to swallow. I feel quite certain that neither of the two American worthies were ever at a beaver settlement during the periods that the sagacious operatives were working at their dam, or after they had finished it.

The essay sometimes raises the irrational little animals to a par with the intellect of rational man himself, and anon lowers them to the want of it in the humble unpretending jackass.

On taking the "length, breadth, height, and depth" of this fanciful essay on beaver-architecture and examining them minutely on my own dissecting table, I cannot help remarking with Sterne, in his paper on criticism, "'tis out, my Lord, in every one of its dimensions." *Charles Waterton, Walton Hall, March* 12.

REPORT ON THE VARIETIES OF GARDEN BEET,

GROWN AT CHISWICK IN 1859.

THE collection of this esculent was examined at the end of the growing season, by the section of the Fruit and Vegetable Committee appointed for that and similar purposes. At that period the leaves were uninjured by frost, so that advantage was taken of the comparative distinctions which these parts afforded. Another examination was made of the baked roots. The difference in quality was found to be so great as to justify the recommendation of frequently submitting the varieties of this vegetable to similar comparative trials, in order that only the best of them may be continued in cultivation, and more especially as even the best kinds are apt to degenerate.

Nutting's Selected Dwarf Red (Nutting).—Leaves 9 to 12 inches high, dark blood red. Roots chiefly underground, 9½ inches in circumference; flesh dark red, sweet, without the disagreeable earthy flavour of which many kinds of Beet partake. Baked, the flesh is deep crimson, of smooth close texture, remarkably sweet and well flavoured, and without the earthy flavour above alluded to. An excellent variety; it was decidedly the best of the varieties brought together on this occasion, both in appearance and quality, and was moreover remarkably true.

Short's Pine Apple (Turner).—*Syn.*: Pine Apple Dwarf Red (Veitch). Leaves 6 or 7 inches high, dark purple; stalks tinged with dull orange. Roots 8 inches in circumference, the surface obtusely furrowed; flesh deep crimson. Baked, the flesh is of a dull deep crimson, tender, mild, sweet, and well flavoured, though with a slight earthy taste. This excellent variety is remarkable for its dwarf compact habit, and for its uniformity and apparent fixity of character. It was raised by Mr. Charles Short, gardener to Sir William Beauchamp Procter, Bart., Langley Park, Norwich, and was introduced to the notice of the public by Mr. Turner, of Slough, who in 1854 distributed seeds of it for trial, under the name of Short's Beet. It was subsequently sent out by Messrs. Henderson & Co. as the Pine-Apple Beet, and has also been known as the Pine-Apple Compact Topped, and Short's Compact Topped. It is no doubt one of the best kinds at present in cultivation.

Sang's Crimson (Minier).—*Syn.*: Veitch's Dwarf Dark (Veitch, Exeter); Carter's Small Selected Blood Red (Carter & Co.) Leaves 15 to 18 inches high, greenish purple. Roots a foot long, 10½ inches in circumference. When baked the flesh is of good colour and quality, but not equal to the preceding sorts.

Paul's Superb Crimson (Paul & Son).—*Syn.*: Pine-Apple Short-top (Carter & Co.); Cutbush's Crimson (Cutbush). Leaves about a foot long, blood red, much wrinkled. Root 8 inches in circumference, broad at the crown, surface warty; flesh in the raw state, bright crimson; when baked, a fine deep crimson, sweet, and well flavoured, being mild and free from earthy flavour. It has the drawback of being liable to become forked, and on account of its broad crown it does not form a handsome root.

Melford Hall (Bass & Brown).—Leaves from 12 to 15 inches high; stalk slender, purplish-crimson. Roots 9½ inches; crown tapering; flesh bright light purplish crimson, alternating with white zones. When baked, it was found to be similar in quality to Sang's Crimson.

Cattell's Dwarf Blood Red (Lee).—*Syn.*: Josling's Scarlet (Josling). Leaves erect, 15 inches high, narrow, and elongated, purplish with a tinge of green. Root 10½ inches in circumference. Flesh wanting in crispness in its raw state; when baked, coarse and very inferior.

Low's True Dwarf Red (Veitch).—Leaves about a foot high. Root 8½ inches in circumference, and

standing as much as 3 inches above ground. When baked it proved very deficient in flavour.

Josling's Improved Scarlet (Josling).—The quality of the variety grown under this name proved to be very inferior. *Horticultural Society's Proceedings.*

MYCOLOGY.—No. XI.

Agaricus radicatus, *Relh.*—Few Agarics are more generally distributed than the subject of our present notice, though it seldom appears in the same profusion as many other species. Still as soon as the first heavy rains of summer arrive it is always to be found in the shrubbery or shaded parts of the garden, without troubling one's self to walk as far as the nearest wood. Sometimes it seems as if it grew from the ground itself, but when careful search is made, it will be always found in connection with some rotten stump or root below, though as much perhaps as a foot from the surface, and hence the stem is extended into a long spindle-shaped root, which is one of the striking characteristics of the species.

The pileus is 4 or 5 inches broad, fleshy, tough, and elastic so as to be capable frequently of being folded between the fingers without breaking, coated with a brownish or olivaceous separable gelatinous pellicle, in consequence of which it is more or less wrinkled in a radiating direction, the pellicle not growing so fast as the flesh beneath; the stem is long, attenuated upwards, twisted, paler than the pileus, with its surface covered with branny particles, paler above and streaked with raised lines; it is generally solid but as the inner substance is soft, it occasionally becomes hollow; the gills are white, thick, and distant, ventricose, attached to the stem with or without a tooth, and sometimes almost decurrent. Occasionally the whole plant is perfectly white, and in that case we have seen it about an inch only across, and so different in appearance as at first sight to suggest a very different affinity.

The species is not easily confounded with any other, but there is one, *A. longipes*, which has often been considered a variety, though its distinctive characters are as striking as those of any species of Agaric whatever. Both the pileus and stem are beautifully velvety, and the gills are rounded behind with the stem sometimes though not always sunk into the pileus. It is, moreover, not so truly a rooting species. When well grown it is one of the most beautiful of our Agarics, and far more easily preserved for the herbarium than many more juicy species, and amongst them *A. radicatus*.

The plant before us has probably no bad qualities, but it is so tough that no one seems to have thought it worth a notice in a culinary point of view. It is not even mentioned by Roques and Vittadini, and other authors who introduce the species say nothing of its qualities. Sometimes it is ungainly enough, but occasionally it assumes the most elegant forms, and is attractive at the same time from the beauty of its gills. *M. J. B.*

Agaricus radicatus.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

VEGETABLE SOAP.

Long before the invention of our alkaline soaps, and even up to the present day, several roots and fruits were known by their capability of being employed as soap, and botanists have distinguished them by the names of Saponaria in their systems of classification. Pliny gave a description of the Struthion—our Shrubby Gypsophila (Gypsophila Struthion, L.). "It is astonishing," he says, "how woollens are bleached, and made supple by it—*Radicula lavandis lanis succum habet mirum quantum conferens candori mollitieique.*" —L. 19; c. 18). Dioscorides mentions that the soapwort (Lychnis, our Saponaria) is everywhere sold in the shops for scouring and cleaning dresses. Several of the family of the Caryophyllaceous plants (Dianthus, Lychnis, Gypsophila, Silene) are remarkable for this property in a greater or less degree. By recent chemical means there has been extracted from these roots a special substance, called Saponine or Struthiine, and to this, notwithstanding the very small quantity contained in the roots, the singular power is attributed of making emulsions, and of being used for soap in washing. The Soap-wort of the Levant (Gypsophila) is, to this day, employed in the East for washing and cleaning silks and shawls. It was generally used in the Mediterranean districts of France and Spain; the French called it *herbe aux foulons* (the fullers' plant). The *Saponaire* or *Savonière* of the French is the root of a kind of Lychnis.

The vegetable soap principle, saponine, was found by Henry and Bourtron Charland, in the bark of the Quallaia saponaria. Le Quillay is a tree of the family of Rosaceous plants, a native of Huanuco, in Peru. Ferdinand Lebeuf made special mention of this bark in 1850 (*Comptes Rendus de l'Académie des Sciences à Paris*, xxxi., p. 652) for its richness in saponine, and recommended it for pharmaceutical use in preparing emulsions of oils, resins, balsams, and several other insoluble medicaments. He mentions likewise the bark of the Yallhoy (Monnina polystachia). From one bark, boiled with alcohol of 40° B. (or 0.828 sp. gr.), according to the method followed by Lebeuf, Rochleder, and Schwarz, the saponine was extracted. This substance is characterised by its lasting irritating smell, and by producing sneezing: in some cases a special aromatic flavour is perceived. It is remarkable how small a particle, a mere homœopathic dose, is sufficient to change a large quantity of oil into an emulsion. The saponine has likewise the power of reducing gold from its chloride. The extract of the Soap-bark, prepared as mentioned above, undergoes a spontaneous change, when exposed to the influence of the atmosphere for several weeks. The clear solution is then transformed into a colourless, thick, but transparent jelly, with a slight acid reaction Its property of making emulsions is not the least diminished, but it has lost the power of reducing gold and copper as before, and the reaction on the mineral chameleon proceeds very slowly. In short, to explain the change it is sufficient to say, that by absorption of oxygen from the air, the substance, extracted by water, has been oxidised. To conclude, it appears that the Soap-bark retains two substances, saponine and pectine, both soluble in cold water, and equally endowed with the faculty of making emulsions with oils and fatty substances. The large quantity of isolated pectine in the Soap-bark is explained by the separation from the lime during vegetation. The spontaneous oxidation has transformed the pectine into the gelatinous acids, the pectosic acid and pectinic acid. Several years ago, in 1832, M. Braconnot, in his inquiries as to the transformations of several vegetable substances into a new principle by the influence of concentrated nitric acid, remarked that he found the saponine in the bark of the Chicot de Canada, or Gymnocladus Canadensis, Lam. He says that it is possible to substitute this bark (and also its leaves) for the Soap-wort of the Levant. This tree is 30 or 40 feet high, able to stand our winters, and easily cultivated. I have also another sample of a bark containing saponine and pectine, which, when combined, are excellent for washing purposes.

Besides this a kind of Soap-bark is mentioned in the proceedings of the Boston Society of Natural History for 1855 (see also the "Edinburgh New Philosophical Journal," vol. ii., p. 201), obtained from a tree called Chelaria saponaria. As there is no plant known by the name of Chelaria saponaria, I suppose that it is wrongly printed for the Quillaia, treated of in this paper. The soap plants used for washing in California, and preferred by those who know their merits to the best kinds of soap, are the bulbs of Phalangium pomaridianum. In the above communication it is stated:—"All these contain considerable quantities of oleaginous and alkaline principles in their composition, on which their value depends." This opinion is altogether erroneous. None of the vegetables known as vegetable soaps contain oils and alkali; their property is entirely derived from neutral substances as above described. In Guiana, the bark and fruits of the Soap-wood Tree (Sapindus saponaria), called by the natives Hurawassa, is employed in the place of soap, and it is said that the fruit will clean 16 times more goods than the same weight of common soap. A kind of Sapindus, called Rarak, is used in the same manner at the Moluccas and at Java. The study of vegetable substances for their application as neutral soaps merits the attention of modern dyers and printers, and certainly they can be recommended for delicate colours which are liable to be injured by the alkaline soaps. *Pharmaceutical Journal.*

Home Correspondence.

Town Gardening.—Attention having lately been directed to the practicability of town gardening as a source of amusement as well as of useful occupation, I would venture to offer a few remarks founded upon my experience, being a resident in a city. We all know that the greatest enemy to town gardeners is smoke, and consequently few plants can be induced to thrive within the municipal boundary; however, there are some which defy this necessary evil, and in due season enliven our narrow limits by their gay colours. Our valuable friend Mr. Broome has taught us that when "autumn leaves are falling" we can still retain a memento of summer flowers in the cheerful and varied tints brought to such perfection under his superintendence at the "Temple Gardens;" and many admirers of his art try to imitate his skill by growing the Chrysanthemum in town gardens. There are other plants which, with attention to their wants in the way of cleansing and washing, will also supply us with pretty flowers and reward us for our trouble. I now speak only of out-door plants; but to those who can afford themselves the use of a small greenhouse I would say that much can be done to adorn our gardens, even during the spring season. I unfortunately have to contend with a northern aspect, the sun even in Midsummer seldom having power for more than two or three hours in the early morning, being also

surrounded on all sides with houses five stories high; notwithstanding I have at last succeeded and found a means by which I can afford our drawing-room and landings a supply of plants in blossom. I must not omit to mention that I have many kind friends who lend me their assistance and advice whenever my stock appears on the wane, or proves unwilling to shine forth at the time appointed by me. Of course I cannot expect my little greenhouse to supply me with cut flowers, and here again I must acknowledge the generosity of horticultural friends (a class of beings often set down as the most selfish and illiberal of mortals). My conservatory is only 9 feet in length and about 5 feet wide, and is constructed upon the most inexpensive principle. It is heated by an old-fashioned stove and brick flue (I found without artificial heat I could do nothing), and as I am seldom in town in summer, my ambition is to have a supply of plants in flower during the dull winter months. Immediately after cutting down my Chrysanthemums in the early part of January, I set to work to force. I had given my old plants a good pruning in July, and those I placed in their winter quarters. I had in November put out in pots, in an empty corner of my garden, some dozen and a half of Van Thol and other fancy dwarf Tulips, together with some Hyacinths. After a month or six weeks I took them up and placed them in a small frame; from thence I occasionally removed three and four to the greenhouse, and in this way kept up a succession. I have at present what I consider a very respectable display of plants in blossom, consisting of the above-named bulbous roots, and some very healthy plants of the Acacia Aramata, one of which is nearly 4 feet high, and forms a very pleasing object on the second landing outside our drawing-room; two more are nearly in blossom, besides a large and healthy Cytisus. I have also many fine bushy plants of the sweet-scented Geranium, Myrtle, some Ferns and Heliotropes, which, with two hanging baskets containing pretty plants of the Ivy-leaf Geranium, give the greenhouse quite a gay appearance. Although I attribute much of my success to the above, I must also mention that I have found it absolutely necessary to pay the most marked attention to the regulation of the atmosphere in the house, and I know that when we determine not to neglect the wants and daily requirements of our plants, they will not reward us as we desire. Even under glass that inveterate enemy smoke does much to mar the healthful aspect of our plants; any one who has given a little time to the study of horticulture must be aware that it is required by Nature that the air-cells or lungs of plants should be kept free from dust or other matter injurious to their respiratory organs. To secure this desideratum I have made it a practice to use the syringe freely twice a day, and I find by doing so that my plants maintain their healthful aspect. I must, however, warn those who have not fire-heat that at this season the syringe may do mischief when used inadvertently, though I would recommend all to try its influence at least once a week, selecting a bright sunny day for the ablution of their favourite plants. Upon those who have the advantage of a southern aspect, I would strongly urge the usefulness of the syringe. I really believe it to be indispensable to the health of plants grown in the midst of dust, smoke, and all the other disadvantages against which they have to struggle in town gardens. *E. A. M., Dublin.*

Effects of the High Winds of the 27th and 28th February.—I beg to forward an account of the destructive effects of the high winds we have experienced in this land of trees—the far-famed Dukeries, and once a part of the celebrated forest of Sherwood, North Nottinghamshire. On the estates of the Duke of Newcastle, Clumber, and Worksop Manor, no fewer than 10,000 trees were blown down by the awful storm which occurred on the dates mentioned. By many it may be presumed that the greater part of these trees were mere poles; but the fact is quite the contrary, as four out of every five may be fairly counted as trees, hundreds of them containing from 90 to 100 cubic feet of timber. Among them are Elms containing 400 feet of timber—Cedars 180, Beech 180, Larch, and Spruce, and Silver Fir 120, Lime 150, and Oaks with 90 cubic feet of contents. In their fall they tore up the ground, which, with the roots, amounted to the weight of many tons. The kinds of trees that suffered most are Spruce, Silver, Scotch and Larch Fir; though there are also among them many Oaks, Elms, Beech, Spanish Chesnut, and I much regret to say, many Cedars. Allow me to mention that these calculations are not loosely made, but matters of fact; the contents having been taken and valued and the greater part of them allotted and now offered for sale by public competition. Probably this number, 10,000, may represent about half the trees blown down in this neighbourhood, as the extensive estates of the Duke of Portland (Welbeck) and those of Earl Manners (Thoresby Park), both extensively wooded, join these estates; and on another adjoining estate of lesser dimensions (Osberton), I hear there no fewer than 1700 trees laid low by the terrible wind alluded to. *Geo. Spary, Clumber Park.*—During the hurricane of Tuesday, February 28, a large Ash tree was blown down at Acton Park, near Wrexham, Denbighshire, the seat of Sir Robert Alfred Cunliffe, Bart., which was measured in the year 1857. The dimensions were—Circumference at the base, 41 feet 8 inches; 3 feet higher, 20 feet. It was a magnificent tree; the branches covered a large expanse of ground. Is not this an unusual size? There is another Ash tree in the same park, which measures round the base 26 feet; 3 feet from it, 13 feet. *E. C.*

Protection of Wall Fruit.—The following are particulars of a method of growing Peaches and other wall fruit, which I have adopted with complete success for four successive seasons. The plan is simply this. On the trees being pruned and nailed in, which I generally do in the first week of March, I apply a temporary glass pent-house to the wall immediately over the trees. The glass sashes, which are 3 feet 6 inches long and 4 feet wide at the back against the wall, supported by a slip of wood which is nailed to it under a fixed coping of slate, while in front they are fastened to a wooden rail which runs along parallel with the wall, and rests on iron brackets at intervals of 6 feet. I place this glass covering over my Peach trees, as I have stated, early in March, and remove it usually the first week in June, and by this simple means I have, during four peculiarly trying seasons, saved each year a very large crop of fruit, the only difficulty being that of limiting the bearing on the trees! I firmly believe that every blossom comes to perfection. Nor is this the only recommendation of the plan, for by this means the wood is so thoroughly ripened that the trees, escaping as they do the pernicious canker-generating influences of the frost, are preserved in a uniformly healthy state. I have just had the glass put for the fifth time over my trees, which I am vain enough to think, covered as they are with blossom, would arrest the attention of any gardener, while their healthy state, notwithstanding the severity of the past season, is such as to justify my most sanguine expectations of an abundant crop. I may add that wherever the plan has been adopted, as it has by some of my neighbours, it has invariably succeeded, the result being not, as hitherto, the disappointment of a solitary Peach here and there, but a profuse bearing. Market gardeners would, I am convinced, find it well worth their attention, as by the small outlay required (for which they would be amply repaid in two or three years), the absolute certainty of a large supply of this delicious fruit would be insured. I repeat I can confidently recommend the plan, and its simplicity and economy will also, I hope, secure the adoption of it generally. *A Cornubian Horticulturist.*

Training Vines to upright Rods.—I have read with much interest what Mr. Rivers says about growing Vines trained to upright rods. I see various advantages in the plan, and perhaps the greatest is the leaving the roof of the house clear, so as to allow of other things being grown with the Vines, which cannot be done well with the Vines trained overhead. But what I want Mr. Rivers to tell me is, whether as fine Grapes can be grown on upright rods as on the old system; of course taking it for granted that the border, the management, and the age of the Vines are the same in both cases. *W. C., Garstang.*

Barbarossa Grape.—I have seen this Grape fail even in the hands of good gardeners, and in every instance the Vines at fault have been upon their own roots. I would advise all who find a difficulty in fruiting it satisfactorily to work it on another variety. Mine are upon the Black Hamburgh. I find the Barbarossa to be a useful late black Grape for the table in January and February; the flavour is not first-rate, and the skin is thick, but the bunch is very large and the berries are larger than those of either the Black Prince or West's St. Peter's, thereby making, as far as display is concerned, a much more creditable dish than either of the two kinds just named. *W. C. E.*

Pine Suckers.—One of your correspondents asks whether allowing three or four large suckers to remain on a Pine plant during the time of the fruit swelling is any hindrance to the proper development of the fruit. My own experience is, that they are not; I believe them to be an advantage. About the first week of March last year I had two dozen Queens showing fruit; they were strong plants, from 17 to 18 months old; they were planted out in a bed of earth heated by hot water; each plant had from four to nine suckers on it. At the time of showing fruit I reduced the suckers on one dozen of the plants to one or at most two; on the other dozen I left all the suckers till the fruit was ripe. These produced handsome well-ripened fruit, each from 5 to 6¼ lbs. in weight, many of the suckers being from 12 to 14 inches in height, and very strong. The plants on which the suckers were reduced to one or two also ripened some nice fruit, but they were not so fine as the others, none of them weighing more than 4¼ lbs. I am of opinion that it matters not how many suckers are left on a fruiting Pine plant, provided the leaves have sufficient room to develop themselves, as I think every healthy leaf "caters" for the fruit, consequently the more leaves the better. *H. Ellis, Ards Gardens.*

Mock Suns.—I was walking in the neighbourhood of Winchester on Friday, the 16th, between the hours of 7 and 8 in the morning, when my attention was called by my son to what he called a "mock sun," a bright light at a short distance from the sun—another patch of light appearing almost immediately at an equal distance on the other side of the sun, whilst above the sun there appeared a portion of a circle, all indeed apparently forming segments of one large circle, and exhibiting prismatic colours. Again above them appeared a piece of a circle in equally bright prismatic colours, but inverted to that which would surround the sun. They all continued in their beautiful rainbow-like adorning for about 20 minutes, and then faded away. Is this an uncommon phenomenon? I have never seen anything resembling it before, and should like to hear some explanation of it from those who "read the heavens." *Byrkhyrst.*

Dendrobium Falconeri.—Can any of your correspondents favour me with any information respecting the culture of this Dendrobe? I have grown a good-sized plant of it for two or three years, but I cannot get it to bloom. What kind of a place in the Orchid house should it occupy?—exposed or shaded?—in pot or basket?—wet or dry? Any information on these points will be gladly received. What, may I also ask, is the cause of spot appearing on some of the leaves of my Orchids? I never had it before, and they receive precisely the same kind of treatment as they have always had. *Amateur, Manchester.*

Bitter Cucumbers.—At one time I had occasion in the early part of January to plant in a three-light frame two plants of a different variety under each light. They were grown in the same kind of soil and subjected to the same sort of treatment. They pushed rapidly, and in the following March I commenced cutting fruit. Under the centre light was planted a variety known as Snow's Horticultural Prize, which was prolific. This Cucumber exhibits all the outward qualities that constitute a first-class variety, but strange to say, concerning every fruit of it that was consumed at my employer's table, the complaint was that they had a bitter taste. I mentioned the fact to a nurseryman of whom I procured the seeds, and he said that it had been noticed that where two fruit are permitted to grow at a joint the flavour of one will invariably be bitter. My observations will not however permit me to vouch for the accuracy of this statement. *J. F. M'Elroy, Stamford Hill.*

Societies.

Royal Botanic: *March* 21.—An exhibition of spring-flowering plants took place here on Wednesday last; and notwithstanding the backwardness of the season and continued coldness of the weather it was tolerably well supported. Messrs. Cutbush showed large quantities of Hyacinths, to which was justly awarded a first prize. The best of the kinds produced in this collection will be found fully noticed in our last week's Number. Other exhibitions of Hyacinths came from Mr. Cross, Regent's Park, Mr. Macintosh, nurseryman, Hammersmith, and Messrs. Jackson, of Kingston. Among these we noticed well-bloomed plants of Black Prince, Grand Lilac, a fine kind, Laurens Koster, Orondates, white, Alida Jacoba, yellow, Madame Hodson, pink, striped with white, and Anna Paulowna, white. Of Cinerarias, Messrs. Dobson & Son sent a collection of handsomely grown well-bloomed plants. They consisted of Brilliant, a good purplish crimson self, B. Rothschild, Etty, Master F. Watson, Mrs. Hoyle, and Capt. Schreiber; the last a good blue. Various seedling Cinerarias were exhibited, among which the best were Flower of Spring (Turner), a large showy purple and white kind, with a dark centre; Royal Charlie (ditto); Lurline, Mabel, and Miss Eyles (ditto); marginata (Wiggins); and Tyrian Prince and Géant des Batailles (Smith). These were all handsome kinds, apparently improvements on sorts at present in cultivation. Along with a fine collection of Camellias, Cyclamens, and other plants Messrs. E. G. Henderson sent specimens of the pretty yellow-eyed pale lavender-coloured Primula Fortuni, a kind in the way of denticulata; likewise a double Chinese Primula, which was also furnished by Mr. Turner. From Mr. Low came some five handsome Seedling Heaths, crosses from aristata, to three of which prizes were awarded; and Dendrobium nobile and some finely grown greenhouse plants (not for competition) came from Messrs. Henderson, of Pine-apple Place. Mr. Lawrence, gr. to the Bishop of Winchester at Farnham Castle, sent Acineta densa, a species with greenish yellow flowers spotted and blotched in the centre with dark brown; the charming Dendrobium Farmeri with 19 spikes of bloom on it, and Cypripedium villosum. Some promising seedling Azaleas came from Mr. Todman of Clapham; one called Prince of Orange possessed fine form and considerable brilliancy of colour. From Messrs. Paul of Cheshunt came a handsome new Tea Rose called President, and Mr. Standish sent a promising new Hybrid Perpetual called Mrs. Standish, which we hope to see again when the season has become farther advanced. The last-named nurseryman also sent the beautiful new Forget-me-not-like plant called Myosotidium nobile, a native of the Chatham Islands, and fully described by us in a former volume. From Messrs. Cutbush came a collection of early Tulips, consisting of Tournesol, Scarlet Duc Van Thol, Rex Rubrorum, Vermilion Brilliant, yellow and white Pottebakker, Imperator and Prince de Ligne, the last a good yellow. For other matters not mentioned in this report, see an advertisement in another column.

Notices of Books.

Palæontology, or a Systematic Summary of Extinct Animals and their Geological Relations. By R. Owen, F.R.S. A. & C. Black. Large 8vo. Pp. 420.

In this most important work the learned author reviews in detail the fossil remains of the whole animal creation, both geologically and systematically, beginning

with Sponges and other lowest forms, and ending with Mammals of the highest grade. In a very brief introduction we are made acquainted with the bearing of palæontology upon our knowledge of the history of our planet, in a passage not more remarkable for its scientific authority than its eloquent language.

"Finally, palæontology has yielded the most important facts to the highest range of knowledge to which the human intellect aspires. It teaches that the globe allotted to man has revolved in its orbit through a period of time so vast, that the mind, in the endeavour to realise it, is strained by an effort like that by which it strives to conceive the space dividing the solar system from the most distant nebulæ.

"Palæontology has shown that, from the inconceivably remote period of the deposition of the Cambrian rocks, the earth has been vivified by the sun's light and heat, has been fertilised by refreshing showers, and washed by tidal waves; that the ocean not only moved in orderly oscillations regulated, as now, by sun and moon, but was rippled and agitated by winds and storms; that the atmosphere, besides these movements, was healthily influenced by clouds and vapours, rising, condensing, and falling in ceaseless circulation. With these conditions of life, palæontology demonstrates that life has been enjoyed during the same countless thousands of years; and that with life, from the beginning, there has been death. The earliest testimony of the living thing, whether coral, crust, or shell, in the oldest fossiliferous rock, is at the same time proof that it died. At no period does it appear that the gift of life has been monopolised by contemporary individuals through a stagnant sameness of untold time, but it has been handed down from generation to generation, and successively enjoyed by the countless thousands that constitute the species. Palæontology further teaches, that not only the individual, but the species perishes; that as death is balanced by generation, so extinction has been concomitant with the creative power which has continued to provide a succession of species; and furthermore, that, as regards the various forms of life which this planet has supported, there has been 'an advance and progress in the main.' Thus we learn that the creative force has not deserted the earth during any of the epochs of geological time that have succeeded to the first manifestation of such force; and that, in respect to no one class of animals, has the operation of creative force been limited to one geological epoch; and perhaps the most important and significant result of palæontological research has been the establishment of the axiom of the continuous operation of the ordained becoming of living things."

The bulk of the work consists, as may be supposed, of scientific descriptions of all known fossil remains, and statements of the geological strata in which they occur. This part is richly illustrated with extremely good engravings on wood, a large number of which are from drawings by Mr. S. P. Woodward, F.G.S. Upon all such subjects the reader must necessarily consult the work itself. We can only mention some of the author's general conclusions. On the problem of the extinction of species Prof. Owen observes, *inter alia*:—

"That species, or forms so recognised by their distinctive characters and the power of propagating them, have ceased to exist, and have successively passed away, is a fact no longer questioned. That they have been exterminated by exceptional cataclysmal changes of the earth's surface has not been proved. That their limitation in time, in some instances or in some measure, may be due to constitutional changes accumulating by slow degrees in the long course of generations, is possible. But all hitherto observed causes of extirpation point either to continuous slowly operating geological changes, or to no greater sudden cause than the, so to speak, spectral appearance of mankind on a limited tract of land not before inhabited. It is most probable, therefore, that the extinction of species, prior to man's presence or existence, has been due to ordinary causes—ordinary in the sense of agreement with the laws of organisation and of the never-ending mutation of the geographical and climatal conditions on the earth's surface. The species, and individuals of species, least adapted to bear such influences, and incapable of modifying their organisation in agreement therewith, have perished. Extinction, therefore, on this hypothesis, implies the want of self-adjusting power in the individuals of the species subject thereto.

"But admitting extinction as a natural law, which has operated from the beginning of life under specific forms of plants and animals, it might be expected that some evidence of it should occur in our own time, or within the historical period. Reference has been made to several instances of the extirpation of species, certainly, probably, or possibly, due to the direct agency of man. The hook-billed parrot (*Nestor productus*) of Philip's Island, west of New Zealand, is, perhaps, the latest instance of this kind. But this cause avails not in the question of the extinction of species at periods prior to any evidence of human existence; it does not help us in the explanations of the majority of extinctions, as of the races of aquatic Invertebrata and Vertebrata which have successively passed away."

We observe too that the learned author accepts without reserve the recent evidence afforded by wrought implements—flint hatchets called Celts—as to the existence of man at a period far earlier than had been once supposed. He admits that man had already been created in those distant ages when mammoths or hairy elephants (*Elephas primigenius*) roamed in the forests of Holyhead, and had the rhinoceros for a companion; when deer (Irish Elks) had antlers with an expansion of 10 feet in a straight line from tip to tip, and the land abounded in gigantic bears (*Ursus spelæus*).

Upon Mr. Darwin's views Prof. Owen speaks with a good deal of reserve, not wholly objecting to the opinions entertained by that careful observer and acute reasoner, but pausing for further evidence. We presume however that the following sentence is intended to show that while he admires Mr. Darwin's speculation he is very far from being convinced by it. "*But*," says the learned geologist, "observation of the effects of any of the above hypothetical transmuting influences in changing any known species into another has not yet been recorded. And past experience of the chance aims of human fancy, unchecked and unguided by observed facts, shows how widely they have ever glanced away from the gold centre of truth."

With the author's own views, as expressed in the following sentences, our notice of a most interesting and valuable work of reference must conclude.

"In the survey which has been taken of the various forms of life that have passed away—of the character, succession, geological position, and geographical distribution—if I have succeeded in demonstrating the adaptation of any structure to the exigencies, habits, and well-being of the species, I have fulfilled one object which I had in view, viz. to set forth the beneficence and intelligence of the creative power. If, in all the striking changes of form and proportion which have passed under review, we could discern only the results of minor modifications of a few essential elements, we must be the more strikingly impressed with the unity of that cause, and with the wisdom and power which could produce so much variety, and at the same time such perfect adaptations and endowments, out of means so simple. For, in what have those contrasted limbs, hoofs, paws, fins, and wings, so variously formed to obey the behests of volition in denizens of different elements, differed from the mechanical instruments which we ourselves plan with foresight and calculation for analogous uses, save in their greater complexity, in their perfection, and in the unity and simplicity of the elements which are modified to constitute these several locomotive organs? * * * But we likewise, by these investigations, gain a still more important truth, viz., that the phenomena of the world do not succeed other with the mechanical sameness attributed to them in the cycles of the epicurean philosophy; for we are able to demonstrate that the different epochs of the earth were attended with corresponding changes of organic structure; and that, in all these instances of change, the organs, still illustrating the unchanging fundamental types, were, as far as we could comprehend their use, exactly those best suited to the functions of the being. Hence we not only show intelligence evoking means adapted to the end; but, at successive times and periods, producing a change of mechanism adapted to a change in external conditions. Thus the highest generalisations in the science of organic bodies, like the Newtonian laws of universal matter, lead to the unequivocal conviction of a great First Cause, which is certainly not mechanical."

Julian Home, a Tale of College Life. By F. W. Farrar, M.A. Pp. 447. Black, Edinburgh.

This is a well written description of college life, and will not fail to be acceptable to all who have been, or are likely to become members of the Universities. To the former, it will recall many fondly cherished and checkered memories of the past; to the latter, it will serve to point out some of the shoals and quicksands, upon which noble vessels have foundered; while it holds out a beacon light to those who wish for counsel by which to steer their course in the narrow channel that leads to fame, happiness, and usefulness of life.

Julian Home, the hero of the tale, was a fine English lad at Harrow, when the death of a beloved father, and the loss of an aunt's favour, quickens his sense of responsibility, and urges him to diligence, with the ennobling feeling that he is working for those who are near and dear to him.

Julian enters upon college life as a sizar, the name given to poor students towards whose maintenance the college makes some provision, and this is rather a mortification to his sensitive mind. It may with truth be said that at Trinity, of all places in the world, no right-minded person would ever willingly let any gentleman, who happened to be a sizar, feel that there was the least degree of inferiority in his position, and yet in practice a painful distinction is forced upon them from the circumstance of their dining after the rest of the students. They are thus cut off from all social intercourse and conversation with their proper companions in hall, where we may well suppose that friendships are often begun. Undergraduates too are gregarious, and the want of synchronism in their time of feeding serves so greatly to isolate a sizar from the rest of the community, that unless he happen to be a person distinguished for abilities, many will not even know of his existence. Mr. Farrar very properly desires to see this state of things altered.

Very interesting are the scenes which are described as taking place in the freshman's year—that year fraught with good or evil for after life. Some, like Bruce, have come up over-rated, conceited, and spoiled with adulation, to turn out idle, extravagant and dissipated; some, like Hazlet, fresh from the maternal home where he has been shielded from every temptation, are led by seducers, for mere wanton amusement, into every kind of excess, and once introduced to vice, pursue it helplessly to their destruction.

Some again, like Kennedy, coming up with the fairest buds of promise, are overtaken by sudden temptation, and commit an unworthy or dishonourable act, and this, like a worm at the root of a splendid plant, ruins his peace of mind, and mars all his brilliant prospects. How well has Mr. Farrar brought out, in Kennedy's case, that truth which should ever be borne in mind by the young, that in the physical world there is no forgiveness, *i.e.*, that though a fault, and much more evil courses, may be repented of and forsaken, yet is there no escape from the consequences; the sin may be pardoned, but the sinner does not regain his lost position; the natural results must follow, and cannot be avoided—as a man sows, so will he also reap.

Kennedy's history is that in which the most valuable though fearful lessons are taught; and one grieves to see his brillant talents and excellent qualities made worse than useless, weighed down, as he seems to be, by a terrible necessity which ever urges him farther from the path of right. Of Hazlet something might be said if his character were not a monstrous caricature of the religious man, but a few deep and sensible thoughts expressed in more than unexceptionable language at the last sufficiently vindicate his character. One of the very important lessons brought out in Julian's history is this, that genius is but another name for well-directed diligence, a truth which should be impressed upon all young men. What intense interest attaches to the first examination none but those who have tried can tell. What recollections cluster round the freshman's year! What an influence do the three years of college life exert upon one's prospects in after days! What an ordeal does the young student pass through; and yet, if habits of self-reliance and self-denial are to be formed, young men must have a certain amount of liberty, and be made to feel the moral responsibility of being their own masters. How many pass thus unscathed we cannot tell, but it is hoped the great majority are "kept in the right way, and returned at the close of their time to their homes, without a stain or blemish upon their characters."

Some have thought that the tutors of St. Werner's take too little interest in their pupils, or at least seem to show too little sympathy with them. Some on the other hand used to think that under the "Protection system" at St. Margaret's the young plants grew up less vigorous, looking too much to the sunshine of the tutor, and feeling too little the solemn sense of standing alone in the sight of God. Things may have altered since those days.

Much as Mr. Farrar deserves thanks for a volume alike interesting and instructive, nobody will admire his head-and-tail system of nomenclature, whereby such words as Harton, Marlby, Camford, &c., are concocted, though possibly the sagacious author may have some object in view, not dreamt of in the philosophy of the distant reader.

Let Mr. Farrar visit the cottages of the sick and suffering poor, "rich in faith and heirs of the kingdom." Let him study their hearts and his own in the pure light of God's unerring truth, and in the view of a coming eternity, and he will no longer need that one should be found to write and teach him a *religio clerici*. There is a promise given, "if any man will do His will he shall know of the doctrine."

The last number of Messrs. Henderson's *Illustrated Bouquet* (vol. 2, part viii.) contains excellent figures of several plants of striking beauty. First comes *Bignonia Chamberlaynii*, an old inhabitant of our hothouses, but like so many others of its magnificent race, not much grown. Then we have a superb double rose-coloured *Moutan* called Elizabeth Casoretti. A third plate is occupied by a mule Pink called *Dianthus Verschaffelti*, between a Sweet William and the old Tree Pink, extremely handsome and striking. Some of the great Japan Pinks with double flowers and slashed and jagged petals are represented on the fourth plate. And finally we have figures of varieties of Pyrethrum roseum, associated with the great scarlet Lychnis called Haageana. Good practical instructions for cultivation accompany every plant; and we must warn gardeners that if they expect to grow specimens like those represented in the plates, such instructions must not be forgotten.

Thompson's Supplement to the Gardening Book of Annuals (Simpkin) is a shilling pamphlet containing *good* instructions for growing all the newest annuals. No book has been more conscientiously written.

Garden Memoranda.

Messrs. Milne and Co.'s Nursery, Wandsworth Road.—The fine collection of Camellias for which this nursery has long been celebrated is now in full bloom and well worth inspecting. Corallina, imbricata, Woodsii, Altheæflora, Old Double White, elegans, Chandleri, and Donckelaari have attained quite the stature and proportion of little trees, and at present

are loaded with blossoms, which on account of their unusual size and beauty are particularly striking. The flowers of the three last-named varieties are this season blotched with white to a much greater extent than they usually are, which adds considerably to their beauty, and the mottled appearance of which we speak is not confined to large specimens only, for even the smallest plants of the kinds named are variegated this year in a similar manner. Among kinds comparatively little cultivated but well worth adding to any collection, however small, may be mentioned Archduchess Augusta, deep rosy purple, shaded and striped with white; Duc de Chartres, red blotched with white; Duc de Bretagne, finely formed rose; Dunlop's imbricata, fine rose marked with white; Fra Arnoldo da Brescia, finely shaped red marbled with white; Fordi, small delicate rose; Lady Mary Labouchere, rosy purple; Storeyi, rosy pink, striped with white; Valtevaredo, bright rose, sometimes blotched with white, and a large deep crimson seedling which is now blooming for the first time and has not yet received a name. This last promises to be an acquisition. Of Carnation kinds none are better than Albertus. To this class must, however, be added a seedling called Chandler's gloriosa, which is white, beautifully striped, and mottled all over with rose. The bloom we saw was on a very small plant, and therefore not a fair criterion of what the variety may be expected to become; but it was finely formed and the markings very complete. Among other sorts Teutoniana, a pink kind, on which however the flowers sometimes come white, was conspicuous. Of the Old Double White, which is still unsurpassed in its class, we observed a fine assortment of young plants, on each of which were one or more blooms. All were in most excellent health.

To the raising of young stock of Camellias great attention is paid here. Quantities of them occupy pits, and in the propagating house were some thriving grafted plants. Concerning the latter it may be worth notice that those worked in February last are quite as forward as plants grafted last autumn.

Camellias on the open walls have withstood the severity of the winter unhurt as far as wood and leaves are concerned; the flower-buds, however, have all perished, and are lying quite thickly under the trees. Young plants of Alaternus, one of the best of evergreens for town gardens, in a border in front of the Camellias, have had their tops browned.

Of Rhododendrons in pots this nursery contains a fine collection, well set with flower-buds; and of Magnolias of the Exmouth kind we also remarked a thriving stock.

In the show-house flowering plants have been mixed with Ferns with excellent effect; and in a house adjoining were some fine specimens of Dracænas, variegated-leaved Begonias, and other plants remarkable for the beauty of their foliage. Here were also quantities of Monochætum ensiferum, a rosy purple-flowered plant, which promises to be exceedingly useful for spring decoration.

The flower-garden portion of the grounds along the new frontage has been completed, and when filled with bedding plants cannot fail to be highly attractive. The walls are well furnished with trained fruit trees, and we understand that this nursery also contains a good collection of Vines, to the growth of which a house is about to be devoted.

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Climbers beginning to push should after this time be frequently examined to prevent a confused growth. Kennedyas, if crowded, should have their shoots thinned. Ipomœas and Thunbergias being subject to red spider should be well syringed to prevent that pest gaining ground. Where a large quantity of hardy shrubs is annually forced, either to decorate the drawing-room or the conservatory, it is not desirable to pot a fresh stock each season, as a number of deciduous things, such as Roses, Lilacs, Thorns, Honeysuckles, &c., may, by proper treatment, be made to bloom for several successive seasons. Select therefore the most suitable plants when removed from the houses, and give them some kind of temporary shelter to gradually harden their foliage; those cramped for pot room shift into a size larger pot in rich turfy loam, and towards the middle of next month plunge them in an open situation in order that the wood may get ripe early. These plants from having been previously forced will bloom earlier than the new stock, of which a portion should each year be potted to replace such plants as become useless for further work. Cut down and place in a cool frame the most choice kinds of Cinerarias for suckers after they have done flowering, and put in a stock of Chrysanthemum cuttings for autumn display. As winter and spring-flowering plants for the stove and for cutting none are more useful than Begonias. Now will be a good time to commence with a stock for next season's display; as they go out of bloom allow them a short rest in a rather dry house, when they may be partially disrooted and repotted, pruning in any straggling shoots. Keep them close, and syringe frequently, when they will soon commence growing. Abundance of light and a tolerable share of pot room are necessary to ensure fine plants. Above all keep them a good distance apart that the finely variegated foliage of some of the newer species may have full room to expand. As the plants advance liquid manure may now and then be given. Their period of blooming is from January to May.

FLOWER GARDEN AND SHRUBBERIES.

Look well to recently transplanted trees and shrubs, especially such as may have got shaken or partially uprooted by the recent high winds. Do not allow anything to suffer for want of water at the root. The soil about newly moved things should be kept moist but not saturated or run together by over watering, as is sometimes done. In the case of large plants which require securing against wind use three strong tarred cords for each specimen; fix them to the plant by means of a collar made of strong metallic wire and thickly wrapped round with canvas to prevent its injuring the bark, and then tie them to strong pieces of Oak driven into the ground at proper distances from the stem of the tree. For specimens in prominent situations metallic wires should be employed instead of cords, being neater in appearance; although somewhat expensive in the first instance they will last a lifetime. Take advantage of the present state of the ground to stir and rake the surface soil of shrubbery and herbaceous borders to prevent the growth of weeds and give a fresh neat appearance. Also plant out Wallflowers, Double Rockets, and young stock of herbaceous plants generally. Delphinium formosum is one of the finest plants we possess in this way, and should have a place in every garden.

FORCING DEPARTMENT.

VINERIES.—Give air as freely as the state of the weather will permit, using a little extra fire-heat, and leaving a little air on at night so as to prevent the bloom being injured by damp settling on the berries, as is apt to be the case where the house is shut up. FIGS.—Where the early crop is approaching maturity the borders should be well watered, so as to avoid the necessity of having to water the soil after the fruit begins to ripen, which is injurious to the flavour, and is also apt to cause the fruit to burst prematurely, particularly if the trees have been rather dry at the root previously. So far as the present crop is concerned the trees can, perhaps, hardly be too dry at the root while the fruit is ripening, but where a second crop is expected care must be exercised to keep the trees in health, and to prevent the foliage becoming a prey to red spider, otherwise the second crop can hardly be expected to be good for much. Use the syringe vigorously and maintain a moist atmosphere as long as this can be done without risk of injuring the fruit. Also keep the young wood thin and regularly tied in, stopping before the fourth or fifth leaf, according to the strength of the shoots, &c. MELONS.—Encourage those newly planted out with a moist warm atmosphere, so as to get them into full growth as quickly as possible; but plants that are fairly established should be kept cooler, admitting air on every favourable opportunity, in order to secure short-jointed fruitful wood. Keep the shoots thin and regular, pinching out any not wanted, but avoid stopping the main shoots until they reach the sides of the pit, when by pinching out the points the laterals will start into growth and show fruit abundantly; and by this time the plants will have gained sufficient strength to set and carry a fair crop. Do not exceed 65° at night, and admit air when the glass rises to 75°, but do this very carefully on cold days. Endeavour to maintain a steady bottom heat of about 80° or 85°, and keep the soil in a healthy state as to moisture. See to providing plenty of young plants for succession crops. CHERRY-HOUSE.—Syringe the trees daily with water at the same temperature as that of the house. Loosen the surface soil in the pots or borders with a hand fork, and supply the plants liberally with water until the fruit begins to change colour, after which gradually decrease the quantity and cease syringing; give abundance of air on all favourable opportunities. STRAWBERRIES.—Plants ripening their fruit should be placed by themselves and kept moderately dry. Those in later stages of growth should however be well supplied with moisture both over head and at the root. FRAMES.—All crops in these, such as Carrots, Potatoes, Radishes, and Cauliflowers, should have as much air as the state of the weather will permit, and be regularly supplied with water. Repot Tomatoes and Capsicums.

HARDY FRUIT AND KITCHEN GARDEN.

Seedling plants of Cauliflowers, Cabbages, &c., raised this present spring should be pricked off when large enough to get stocky for final transplanting. As the future growth of the Cabbage tribe depends much on not being drawn when young, some attention should be paid to this point when they are in a seedling state, for the best after culture barely compensates for the first neglect. As the time for sowing the principal crops of winter and spring Broccoli and Greens is now at hand, select if possible an open piece of ground rather poor than rich; let the seed be sown thinly, and when large enough to handle prick out on a similar soil. A crop of the Globe Artichokes should now be planted for producing a late supply of heads. In former Calendars have been given directions for preparing ground for these and other permanent plants; the young side shoots taken from the old stools may be planted in lines 4 feet apart and 18 inches between the plants, or trenches may be dug 18 inches wide, and the same in depth, in which some well-rotted manure should be dug and the plants put out as above.

COTTAGERS' GARDENS.

Potato planting, if not already done, should be finished as soon as possible. Potatoes and Onions should on no account be intermixed or shaded by other crops; there are however many things such as Carrots, Parsnips, Turnips, and all the Cabbage family which will not only bear being slightly shaded, but in warm summers like the past will enjoy it. Mixed cropping therefore is a point to which the cottager should pay especial attention. The mixture must however be arranged so as not to interfere with earthing up or gathering. In sowing annuals, which may now or soon be done, do not omit Nemophila insignis and the beautiful Phlox Drummondi.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending March 22, 1860, as observed at the Horticultural Gardens

March.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep	2 feet deep.	Wind	Rain.
Friday 16	23	30.010	29.932	55	38	46.5	42½	41½	N.W.	0.19
Satur. 17	24	30.041	29.995	56	45	50.5	41	42	W.	0.00
Sunday 18	25	29.972	29.962	55	33	44.0	45	43	W.	0.01
Mon. 19	26	30.121	30.109	53	39	46.0	45½	43½	S.W.	0.00
Tues. 20	27	29.967	29.726	52	41	46.5	46	44	S.W.	0.01
Wed. 21	28	29.554	29.367	51	26	38.5	46	44	S.W.	0.04
Thurs. 22	●	29.828	29.712	50	31	40.5	45	43½	N.W.	0.03
Average..		29.928	29.829	53.1	36.1	44.6	44.8	43.0		.28

March 16—Clear; fine; rain at night.
— 17—Uniformly overcast; cloudy; boisterous.
— 18—Overcast; cloudy; very clear at night.
— 19—Clear and fine throughout
— 20—Fine; heavy clouds; densely overcast; very boisterous.
— 21—Densely clouded; boisterous; clear at night; slight frost.
— 22—Clear; slight showers with some hail; overcast; clear.
Mean temperature of the week, 2 deg. above the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending March 31, 1860.

March.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 25..	50.38	32.29	41.33	12	0.50 in.	3	10	4	1	2	4	7	1
Mon. 26	51.76	32.41	42.08	12	0.17	1	6	4	2	5	5	6	6
Tues. 27..	53.67	33.94	43.80	10	0.37	2	6	3	2	3	7	10	1
Wed. 28..	52.94	33.76	43.35	13	0.68	4	6	2	2	4	7	7	3
Thurs. 29..	53.61	33.29	43.45	10	0.33	1	4	8	3	2	7	6	3
Friday 30..	53.44	34.20	43.82	13	0.50	3	5	5	1	5	8	4	3
Satur. 31	54.76	34.35	44.55	14	0.30	3	7	2	3	7	4	5	3

The highest temperature during the above period occurred on the 27th, 1830—therm. 75 deg.; and the lowest on the 25th, 1849—therm. 14 deg.

Notices to Correspondents.

THE METROPOLITAN BOARD OF WORKS have directed that in future the street in which our office is situated shall be called Wellington Street, and that the number of our office shall be 41. Correspondents are therefore requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

ANNUALS: *Sub.* Acroclinium roseum, Brachycome iberidifolia, Callirrhöe pedata, Phlox Drummondi, Datura Meteloides, Dianthus sinensis Heddewigii, Linum grandiflorum, and Mignonette form good bouquet flowers. Mossing the tops of pots is objectionable, except in drawingrooms and similar places, where it is desirable the soil should not be washed over their sides during the operation of watering. ‡

BOOKS: *A Z.* Study and learn how to apply the rules in Professor Lindley's *Descriptive Botany*. It is the drill book of that science and *must* be mastered if you are to pass well. The results of last year's examinations in London establish the fact incontestably. The work costs only a shilling and is expressly prepared for self-instruction. It is the neglect of such practice, that has produced the loose slovenly style and deplorable inexactness of some modern writers.

BOTANISTS: *Chirurgus.* A very great soldier used to say that men must not be supposed to be heroes because they wore a red coat. It may be said, with the same kind of truth, that men are not to be taken for botanists because they wear a professor's gown.

CIMICIFUGA: *Liverpool.* This can only be had by inquiry among the trade. It is hardly to be found except in Botanic Gardens.

INSECTS: *R D.* You will find all the more important of our Garden Cocci described in our former volumes under the names of Coccus or Aspidiotus. The mealy bug is Coccus adonidum.—*Rosalie.* The small caterpillar which had formed a cell in the pith of a Rose-snag is the larva of a saw-fly, (Emphytus cinctus?) which if not disturbed would shortly have assumed the pupa state, and the fly would have appeared in May or beginning of June. *W.*

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*E W.* Your Fern is Cystopteris regia. If you mean by its "growing in your neighbourhood," that it occurs in a wild state you should address a note containing the particulars to Mr. Moore, Botanic Gardens, Chelsea, for publication in the "Nature-Printed British Ferns" now in progress.—*J B.* Goniophlebium subauriculatum. Another capital basket Fern is G. verrucosum, which would match well with those you have. Woodwardia radicans does not require a stove, but might serve your purpose, if you cannot get the other. Most of the pendent kinds are of smaller size.—*S B.* The three leaves belong to some species of Citrus: possibly to one of the varieties called Bigaradiers. The sorts of Citrus cannot be ascertained with any certainty in the absence of flowers and fruit.—*Jno Smith.* 1, Kennedya Marryattæ; 2, Hardenbergia monophylla; 3, Gnidia pinifolia. We cannot answer inquiries privately.—*A Z.* Eria flava.—*Amateur.* Lycaste Deppei and Zygopetalum Mackaii.

PICEA PICHTA: *E C.* It is a rule with us never to recommend dealers. If seedling plants can be obtained it must be through some of the large nurserymen. ‡

SALADS: *Guildford.* Cabbage Lettuces were worth in Paris at the end of February from 6 to 14 fr. per 100; Corn Salad from 2½*d.* to 10*d.* the punnet.

VINES: *F H.* Your treatment is right. The Vines seem to be dead.

*** As usual, many communications have been received too late, and others are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspondents the insertion of whose contributions is still delayed.

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The high per centage of SOLUBLE PHOSPHATE and large amount of ANIMAL MATTER yielding Ammonia they contain not only render them the cheapest, but also the most Natural Manures, and the best calculated to produce a HEALTHY, SOUND, and HEAVY CROP.

ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.63	14.38	16.71	16.91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE..	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime ..	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates ..	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

MR WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

DR. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

DR. ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 5*s.* per ton."

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This Manure contains an unusually large per centage of Soluble Phosphate of Lime, and is, therefore, a highly valuable Manure for all Root Crops.

☞ *As security to the Purchaser every bag contains 2 cwt., is marked* **"ODAMS'S PATENT BLOOD MANURE,"** and sold only by the authorised Agents of the Company.

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Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

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The present Price of this valuable Manure is—
12*l.* per ton for 30 tons and upwards } at the Depôts in London,
12*l.* 5*s.* per ton for 1 ton up to 30 tons } Liverpool, and Bristol.

And, in order to protect themselves against the purchase of Adulterated Mixtures, and of inferior Guanos, purporting to produce results equal to Peruvian, consumers are recommended to apply either to ourselves; to our AGENTS, Messrs. GIBBS, BRIGHT, & Co., of Liverpool and Bristol; or to Dealers of established character throughout the Country, in whose honesty and fair dealing they can place implicit confidence.—ANTHONY GIBBS & Sons, 15, Bishopsgate Street Within, London, E.C.

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" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
LAWES'S BARLEY MANURE..	8	0
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" GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES'S Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES'S Agents.

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Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

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PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.

Apply to H. & T. PROCTOR, Cathay, Bristol; or PROCTOR & RYLAND, Birmingham and Chester.

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W. & R. JUPP & CO. having, from long experience in their business, satisfied themselves of the advantages resulting from the use of a preparation or condiment to be used with Cattle Food, beg to inform their friends and the public, that after considerable labour and expense they have succeeded in producing an article which, though differing from any in present use, possesses all the nutritive and other qualities so necessary in a preparation of this description, AND AT A CONSIDERABLY REDUCED COST. A copy of Dr. Letheby's Analysis appeared in this Paper of the 11th inst., and will be sent post free on application.

The material will be sent out in bags, with plain directions for use, at the following prices for cash only, which must be remitted with orders to ensure delivery, viz., 35*s.* per cwt.; 19*s.* per ½ cwt.; and 10*s.* per ¼ cwt.

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The Agricultural Gazette.

SATURDAY, MARCH 24, 1860.

MEETINGS FOR THE FOLLOWING WEEK.
WEDNESDAY, March 28—Agri. Society of England .... Noon.

MR. STRAFFORD is on Wednesday next to dispose of the herd of Short-horn cattle bred by Mr. ADKINS, of Milcote, near Stratford-on-Avon. Those who are interested, either specially in this sale, or merely in good and intelligent agriculture, however illustrated, will be glad to read the account of Mr. ADKINS's farm management, given by a correspondent in another column. Milcote may well attract many of the latter class, as it doubtless will a number of the former; and both will see the results of a perseverance and enterprise which Mr. ADKINS combines with an unusual freshness of interest in all that is agriculturally new. Mr. ADKINS has been a breeder of Short-horns for a quarter of a century, and has farmed largely his own land and much beside for as long a time. And, while on the one hand consistent in the plan acted on for many years in the management of his herd so that we see his name in a list of English breeders drawn up many years ago, he is on the other hand one of those foremost in the adoption of any proved improvement, who though hardly ever heard of by agricultural readers are the real pioneers of agricultural progress.

In the advertisement of his stock we see that Mr. STRAFFORD declares it to offer as much of the pure blood of Favourite (252) as can be found in any herd. We have tested this assertion by a laborious examination of the pedigrees, and several points of general interest connected with it appear worthy of discussion.

1. It is undoubtedly true that the market value of a well-bred animal depends not only on intrinsic merit but on the prevailing fashion in the breeding of the day. Clever and resolute men

who have acquired a reputation as breeders obtain a demand for their stock which necessarily raises its price beyond its actual value. *That* ought to be determined by unbiassed judgment; but the judgment of 20 men who are unanimous unavoidably exceeds in its intensity that which each would have pronounced alone, and it is the latter which ought to guide our estimate. Every one is urged beyond himself by the opinions of his neighbours, and thus the fashionable judgment always adds to or detracts from intrinsic merit.

In illustration of this, though the assertion cannot yet be proved, there can be little doubt that it will be shown by ultimate experience that the stock both of Mr. BATES and of Mr. BOOTH, at present of enormous real value in the market, however they may merit pre-eminence, do not deserve that paramount and exclusive demand which is made for them. In the forthcoming sale we shall probably arrive at the market value of a Short-horn, unaffected by any disturbing influence of this kind. Neither Mr. BATES nor Mr. BOOTH have had much to do with the Milcote breed. For their descent we go back to the stock of CHARLES and ROBERT COLLINGS, passing both Kirkleavington and Warlaby on one side.

2. What proportion of the intrinsic value of a bull or cow is due to individual character, and what to the influence of pedigree? Of course the individual character of the animal is itself the result of pedigree, and the question is thus indefinite. But it may be often noticed that two animals, and still more two herds shall differ in appearance, though similar in pedigree—and even that the better looking beast shall have the inferior descent. The calves of old cows by old sires may not be so valuable for breeding purposes as those of more vigorous parentage; and generous treatment, as compared with half starvation from calfhood upwards, will produce very different animals. The old saying, that "beef is made of veal," and that "breed goes in at the mouth," are the proverbial expressions of the same truth.

It is, however, unquestionable that the ability of cow or bull to transmit the merit either may possess does in a great degree depend upon its having been inherited by them through a long line of ancestry. Nothing is more remarkable than the way in which the earlier improvers of the Short-horn breed carried out their belief in this. They were indeed driven by the comparative fewness of well-bred animals to a repeated use of the same sire on successive generations of his own begetting, while breeders now-a-days have the advantage of 50 different strains and families from which to choose the materials of their herd; but whether it were necessity or choice, it is certain that the pedigree of no pure-bred Short-horn can be traced without very soon reaching many an illustration of the way in which "breeding in-and-in" has influenced its character, deepened it, and made it permanent, so that it is handed down unimpaired and even strengthened in the hands of the judicious breeder.

What an extraordinary influence has thus been exerted by a single bull on the fortunes of the Short-horn breed! There is probably hardly a single pure-bred Short-horn that is not descended from "Favourite" (252), and not only descended in a single line—but descended in 50 different lines. Take any single animal, and this bull shall occur in a dozen of its preceding generations, and repeatedly up to a hundred times! in the animals of some of the more distant generations. His influence is thus so paramount in the breed that one fancies he has created it, and that the present character of the whole breed is due to the "accidental" appearance of an animal of extraordinary endowments on the stage in the beginning of the present century. And yet this is not so; he is himself an illustration of the "breeding in-and-in" system—his sire and dam having been half brother and sister, both got by Foljambe. And this breeding in-and-in has handed down his influence to the present time in an extraordinary degree.

Take, for instance, the cow "Charmer," from which, as will be seen elsewhere, no fewer than 32 descendants are to be sold next Wednesday. She had of course two immediate parents, four progenitors in the second generation, eight in the third, 16 in the fourth, the number necessarily doubling each step farther back. Of the eight bulls named in the fourth generation from which she is descended one was "Favourite." She is one-sixteenth "Favourite" therefore on that account. But the cow to which he was then put was also descended from "Favourite," and so are each of the other 7 bulls and 7 cows which stand on the same level of descent with the gr. gr. g. dam of "Charmer." And in fact it will be found on examination that in so far as "Charmer's" pedigree is known, which it is in some instances to the 16th generation, she is not one-sixteenth only, but nearly nine-sixteenths of pure "Favourite" blood. This arises from "Favourite" having been used repeatedly on cows descended from himself.

In the pedigree of "Charmer" we repeatedly meet with "Comet"—"Comet" was by "Favourite," and his dam "Young Phœnix" was also by "Favourite;" with "George"—"George" was by "Favourite," and his dam "Lady Grace" was also by "Favourite;" with "Chilton"—"Chilton" was by "Favourite" and his dam was also by "Favourite;" with "Minor"—"Minor" was by "Favourite," and his dam was also by "Favourite;" with "Peeress"—she was by "Favourite," and her dam also by "Favourite;" with "Bright Eyes"—she was by "Favourite," and her dam also by "Favourite;" with "Strawberry"—she was by "Favourite," and her dam by "Favourite;" "Dandy," "Moss Rose," among the cows, and "North Star" among the bulls, are also of similar descent. There is no difficulty therefore in understanding how this name appears repeatedly in any given generation of the pedigree of any given animal of the Short-horn breed.

In the case of "Charmer" we find of her gr. gr. dams one was the produce of "Favourite." None of her progenitors in the immediately preceding generation were the produce of that bull, but of those in the next and successive generation preceding, there were so far as known 2, 8, 25, 58, 101, 99, respectively got by him. Of course these are not all separate individuals. When cousins marry their offspring counts as great grandmother and father the same individuals twice; and in such intricate combinations as an in-and-in-bred Short-horn exhibits the same individuals occur repeatedly. This does not, however, affect the result—which is, that the blood of "Favourite" exists in even greater quantity in individual animals 10 and 12 generations from him than it did in many a calf which he got himself. Of course this tells on the permanence of the character possessed by such animals as "Charmer" thus descended, whose produce is to be sold next Wednesday.

3. The individual character of "Charmer," apart from that which she has thus inherited, appears deserving of notice. Her grand-dam "Sylph" was bought by Earl SPENCER at Sir C. KNIGHTLEY's earliest sale in 1842, and she was sold at the Wiseton sale 17 years old, her calf "Browne," by her side, fetching 70 guineas. "Charmer" was bred from "Graceful," the daughter of "Sylph," by the Hon. C. ARBUTHNOT, and for her milking qualities was taken to town with him at two years old to supply his dairy. She was bought many years ago by Mr. ADKINS from Mr. ARBUTHNOT, and when he sold his herd some years ago she and her produce were wisely retained by him as the foundation for a future herd—for which good dairy quality combined with pure descent was desired.

Thus much is interesting as to the individual character of the animal from which so large a proportion of the cattle to be sold next Wednesday are descended. But it is to the general constitution of the Short-horn breed, to the effect of in-and-in breeding in perpetuating its character, and to the extraordinary influence which one animal "Favourite" (252) has thus exerted on its fortunes, to which, led by an examination of "Charmer's" pedigree, we have been anxious to direct the attention of our readers.

That Mr. STRAFFORD's assertion as to the Milcote herd being of pure descent from "Favourite" is true there cannot be a doubt, so far as "Charmer" is concerned. And "Mameluke," the bull which has been chiefly employed on her descendants, is also full of "Favourite" blood. But to his pedigree we have not room to direct attention now.

ON THE LINUM PERENNE, OR PERENNIAL FLAX.

By Professor JAMES BUCKMAN, &c.

THE capabilities of plants for the manufacture of paper is a matter of such great importance, that any evidence upon the subject can scarcely be considered other than valuable, and I therefore may be excused for calling more particular attention to the natural history of the plant named at the head of this article.

The *Linum usitatissimum*, the Flax or Linseed, has been more extensively employed in paper-making than perhaps all other plants put together; but of late years the demand for paper has so greatly increased that the sources of supply yielded by this plant have been found insufficient for the wants of the manufacturer. It is true that paper has usually only been made from it as a secondary kind of manufacture, that is, after the Flax has been employed for linen. The worn out linen, in the shape of rags, comes in for paper-making; but as this source of supply is found altogether inadequate for its requirements, inquiries have been set on foot for new and cheap sources of vegetable fibre suitable for the purpose, and refuse plants, such as Nettles, Hop-bines, Grasses, and straw, have been advocated, and, indeed, used with greater or less success; still it is admitted all but universally that the best paper is made from rags or the secondary form of Flax-fibre, but it may perhaps be taken for granted that equally good paper might be made from Flax direct. This, however, is a plant so expensive to grow, and when grown its fibre is so valuable for the linen manufacture that it is found altogether too expensive to use directly in the manufacture of paper. It is an annual plant which must be grown in a kind of rotation with other agricultural crops, which requires great care in the preparation of the soil, and is found to be of so exhausting a nature that no land will bear its frequent repetition.

Now under these circumstances I would ask particular attention to another form of Flax, some botanical experiments and conclusions connected with which I so fully communicated to the British Association for the Advancement of Science in 1857 that it will perhaps be as well to reproduce my remarks here before entering into a more particular recommendation of this plant for the use of the paper manufacturer.

"In 1854 I sowed one of my plots with seed of the L. angustifolium gathered at Hele in Cornwall. It came up very well, and in 1855 might have been seen its plants in rows with branches a few inches long trailing along the ground, some with light, others with dark-blue coloured flowers somewhat small when compared with L. usitatissimum or L. perenne; in this state it presented little to recommend it as a cultivated plant. In the past year it had advanced to a strong and vigorous upright plant somewhat more than 2 feet in height, with handsome dark blue flowers, indeed rivalling L. usitatissimum in size and beauty. As regards its fibre I have as yet had no opportunity to make experiments; but if in this respect it should equal the annual Flax, I cannot help thinking that we shall have in the Linum perenne a plant of great economic value.

"As regards the specific distinction of the L. angustifolium and L. perenne, I must after these experiments express great doubts; nay, I am almost inclined to think that L. usitatissimum is but an annual form of L. perenne, so that this year I shall collect the seeds of my perennial patch with a view to commencing an annual cultivation. At all events, should I fail in proving this point, we may fairly expect other changes of great interest, seeing that so much has already been done in bringing a little straggling Linseed from its wild habitat, and cultivating in a different soil and climate, not by imitating its wild conditions, but by making for it a new soil, and planting in rows so that one row has the effect of inducing the upright growth of its neighbour—a fact readily seen in examining the growth of my plant, as its shoots first start in a trailing method—a circumstance which shows that in order to test the capabilities of some plants for a crop, we can only do so not by growing single specimen examples, but by planting a quantity side by side.

"As subjects for experiment, it fortunately happens that the Linseeds are readily affected by cultivative processes, so that we possess in them subjects capable of affording much information as the result of carefully conducted experiments, which leads me to remark that, as there are some tribes of plants which we cannot so easily act upon, permanency of our appointed species must not be concluded from the failure of our limited experiments, though, on the other hand, species must give way in those cases where, as the result of properly conducted experiments, the seed of one plant can be made to produce what has been considered as a distinctly specific form."

It may here be noted in reference to this extract that I have made a new plot of this plant from seed collected from the old one, and the whole plant maintains its character, if anything in an improved condition, so that we may at present be said to possess in it a form of Linseed which grows to as much as 30 inches in height, and I should say capable of producing a far greater quantity from the readiness in which its stems branch, and this on very poor soil, not for a single year, but for years, as my plot sown in 1854 is still in good growth, and yielded a good crop in 1859 (its fifth year), although annually seeded for that time. However as regards its fibre I must confess that I am still in want of conclusive evidence with respect to its value and fitness for linen and paper-making, but of this I can have but little doubt as its family is a deservedly reputed one for these purposes. I still think this, as I have before stated, is not a distinct species, but in reality a perennial form of the Linum usitatissimum, as in all probability the latter is an annual form of the L. perenne. This view is strengthened by the following remarks from Bentham's Handbook upon L. usitatissimum:—"An extensively cultivated plant, whose origin is unknown, but it readily sows itself as a weed of cultivation in Europe, Asia, and other parts of the world, and as such may be occasionally met with in some parts of England."

As regards the question of the specific identity of L. perenne and L. angustifolium, I shall not here further inquire, though I am still of opinion that our three larger species of English Flax offer good examples of the changes in form as induced by external circumstances, to which indeed so many of our reputed species may be referred.

Now, if the Flax to which I have called attention should be found as valuable in an economic point of view as our cultivated form, there need be no end to the quantity which may be produced. Every bit of waste ground and road-side patches, corners of fields, and neglected places and rubbish-heaps, especially if in a limestone district, will readily grow it, and if it

importance should be generally recognised, and a market established for it, I do not see why every cottager should not have his contribution to the general stock, either as part of his garden produce, or as a substitute in waste lands for Nettles, Thistles, Dandelion, and hosts of other plants, which not only uselessly encumber the ground, but are allowed to grow as pest nurseries from which even good farming is supplied with innumerable hindrances and sources of expense and annoyance. Children also could soon be educated in the production of this easy-growing Flax, which would thus become a source of leisure-time industry to hundreds of poor people; and a desideratum in the spread of knowledge in a cheap source of supply of paper-making material would, as I think, be easily provided. *Cirencester, March* 12.

AN AGRICULTURAL PILGRIMAGE.

No. III. Milcote, near Stratford-on-Avon.—Mr. Strafford is on Wednesday next, as is stated in our advertising columns, to dispose of the herd of Mr. J. C. Adkins, at Milcote. Visitors and intending purchasers will there see not only a capital herd of pure-bred Short-horns, but a specimen of first-rate agricultural management generally, under the direction of one of the heartiest, most energetic, and most hospitable of men. It will be the herd no doubt that will attract them; but, like many another illustration of enterprise and intelligence, of which agricultural readers never hear—though they and not the more public and vaunted instances of good farming are the real proofs of our agricultural progress—the farm and its energetic tenant deserve a record.

Milcote is on the edge of the lias clay and new red sand formation. Four hundred acres, including about 60 of meadow land, by the river Stour, all the property of Lady Amherst, are occupied by Mr. Adkins, who also farms 300 acres of his own property. Some of the richest clay loam arable land in the kingdom is to be found in the neighbourhood of Milcote. The farm is a clay loam over the lias, and a lighter soil on the gravel and sand of the new red sandstone. It is cultivated on the six years' course of cropping, viz., 1st Wheat, 2d Beans, 3d Wheat, 4th roots, 5th Barley, 6th seeds. There is the same difficulty here as everywhere else in obtaining, or rather in keeping, a crop of Swedes. Of 30 acres grown last year hardly any survived. It was not the frost that killed them; they rotted, not downwards from the air-exposed surface, but upwards from the soil-touched surface. Mr. Adkins finds a remedy in simply giving up Turnip growing altogether, so that the whole 70 acres of his roots are this year to be in Mangel Wurzel.

And this is his resolution, not only because he finds the Swedes fail, but also because he finds Mangel Wurzel answer perfectly as food at all seasons. Taking care when starting his sheep on them in early autumn, to give them plenty of dry food with the Mangel at first, he finds that there is no better root for sheep food, even as soon as harvested, when it has been believed they are less food than physic. And using them pulped along with chaff of Barley-straw, he finds that there is no better food all through the season, and far on into the following summer, than the Mangels are for cattle.

The root cultivation consists in one thorough ploughing done before winter deeply, when the manure is ploughed in, followed by grubbing, harrowing, and drilling on the flat in spring. Autumn cultivation is the main feature of Milcote farming, as it ought to be, especially on all clay soils. It comes however so heavily on the labour at that time that several teams have to be purchased for the work, being sold again as soon as it is finished, so as to avoid the cost of horse-keep, except in payment for horse work. This extra force and expense will for the future however be in great measure saved by the use of the steam plough.

In addition to Clovers and pasture for summer food, a portion of Vetches is sown on the Wheat stubble preceding roots, and the Vetch land is broken up for Cabbages transplanted in June and July. The Wheat plant looked of a capital colour, and more promising than it generally does. Much of it, dibbled with Newberry's dibble at the rate of 9 gallons of seed per acre, looked exceedingly well. The fallows are in capital order—the stores of Mangel Wurzel proved fertile soil and good management—the young seeds look very promising indeed—and the roads and fences are in good trim, as they always will be in the hands of an energetic farmer. This included all that was to be seen in the field.

It is to the yards and sheds of the farm buildings, however, where the herd are housed and sheltered that the visitor will look. A reference is made to the herd in another column and a very general account of it is all that can be given here. Three daughters of "Charmer," with their descendants, including upwards of 30 head of cattle, are to be offered for sale. Of these "Sweetheart," a fine old white cow, with all the make (both in general form and udder) of a first-rate dairy animal, and with all the pedigree of a pure bred Short-horn—is the mother of the greater number. She has bred regularly year by year, and is now 12 years old. Some of her daughters—white and roan cows, retaining the dairy quality, good breeders, too—were in the same yard with her. And among a remarkably fine lot of yearling heifers were some from her daughters "Sweetheart 3d" and "Sweetheart 4th."

"Charmer 3d," by "Earl Dublin," is another of "Charmer's" produce. She is a red roan cow, also inheriting good dairy qualities, and that most valuable one of prolific breeding. Among her produce are several young bulls, and a five-year-old cow, "Charmer 5th," by "Garrick," which has already had three calves by "Mameluke," two of them bulls. "Charmer 2d," the third of "Charmer's" immediate descendants, a roan cow by "Earl of Dublin," has also contributed largely to the herd. One of her daughters, "Charmer 6th," by "Cardinal," is a cow of uncommon substance and remarkable excellence, and she has a very fine yearling bull, "Coxcomb," and a heifer calf, both by "Mameluke."

The following Table exhibits the ages, number in the catalogue, sex, and name of all "Charmer's" descendants. The bulls are printed in italics. In addition to them we have the descendants of "Young Frill," a roan cow by "Broughton Hero;" her dam descended from "Remus" 2524.

DESCENDANTS OF CHARMER.

Dam.	Gr. Dam.	Gr. Gr. Dam.	Gr. Gr. Gr. Dam.
1. Sweetheart, 1847, by *Accordion*	5. Sweetheart 2d, 1851, by *Earl of Dublin*	4. *Somnambulist*, 1858, by *Mameluke*	36. Starlight, 1859, by *Chivalry*
	6. Sweetheart 3d, 1853, by *Daybreak*	14. Sunflower, 1856, by *Mameluke* 21. Sunset, 1857, by *Mameluke*	
	20. Strawberry, 1857, by *Londonderry*	7. *Sunbeam*, 1858, by *Mameluke*	
	32. Serenitude, 1859, by *Mameluke*	37. Sunrise, 1859, by *Mameluke*	
	39. Sweetbriar, 1860, by *Mameluke*		
	9. Sweetheart 4th, 1854, by *Cardinal*	29. Sincerity, 1858, by *Mameluke*	
(Charmer 4th, by *Earl of Dublin*)	19. Charity, 1857, by *Londonderry*	18. Sylph, 1857, by *Londonderry*	12. Sylvan, 1859, by *Amiens*
3. Charmer 2d, 1850, by *Earl of Dublin*	23. Columbine, 1857, by *Londonderry*		
	28. Cordelia, 1857, by *Mameluke*	8. *Coxcomb*, 1859, by *Mameluke*	
	10. Charmer 6th, 1854, by *Cardinal*	38. Charming, 1860, by *Mameluke*	
4. Charmer 3d, by *Earl of Dublin*	11. Coral, 1855, by *Cardinal*	30. Cornelian, by Mameluke	
	5. *Combatant*, 1858, by *Mameluke*	6. *Comedian*, 1858, by *Mameluke*	
	7. Charmer 5th, 1855, by *Garrick*	11. Comical, 1859, by *Mameluke*	
	10. *Challenger*, by *Mameluke*	24. Coquette, 1858, by *Mameluke*	

YOUNG FRILL AND HER DESCENDANTS.

2. Young Frill, by *Broughton Hero*	14. Fringe, 1855, by *Londonderry*	27. Festoon, 1858, by *Kirkleavington*	
		14. Friendship, 1860, by *Mameluke*	
	27. Flounce, 1857, by *Londonderry*		
	18. *Freedom*, 1859, by *Mameluke*		
	17. Frontlet, 1857, by *Londonderry*	9. *Freeholder*, 1859, by *Amiens*	

Besides the above there are four or five descendants of "Welcome" and "Queen Anne" in the catalogue—cows by Baron Warlaby (7813) and otherwise well-bred—forming part of the herd.

Two bulls of Sir C. Knightley's breeding, "Londonderry" and "Mameluke," have been used on the cows, and the yearlings and two-year-olds are for the most part by the latter. He is a long red bull, remarkably fine both on and behind the shoulder, where the Short-horn is often coarse and deficient, and this fineness he has transmitted to his descendants. No doubt one of the features of next Wednesday's sale will be made by the four or five remarkably fine yearling and two-year-old Short-horn bulls by "Mameluke," viz., "Somnambulist," "Combatant," "Comedian," "Sunbeam," "Coxcomb." They are perfect in colour, good in the points just alluded to, of first-rate descent, and, to speak of the point which will make their descendants good useful stock for the feeder, they are remarkably thick and fleshy over the rib and sirloin, just where the meat is most valuable.

The herd appears to us to unite, in a very unusual degree, first-rate descent and useful dairy quality, with remarkable merit as to breeding freely. *J. C. M.*

Home Correspondence.

On Mr. Mechi's Profits.—Mr. Mechi, in what he calls his Agricultural Catechism, begins by informing the public that having spent 60*l.* on the purchase and improvement of the farm he occupies, he derives from the latter a rent of 2*l.* 2*s.* per acre; which, otherwise expressed, is interest on the purchase money and his subsequent outlay at the rate of 3½ per cent. This rate of interest wholly invested in land may suffice, but not so where a portion of such capital has been invested in improvements. Investments in the shape of improvements which are of a more perishable and uncertain value than the land itself call for proportionately larger returns, and comparatively few landlords would be disposed, the greater number unable, to follow Mr. Mechi's example, attended as it has been with such moderate results. He goes on to announce that the tenant-profits on his working capital (14*l.* per acre) are upwards of 15 per cent. This is little more than a good tenant ought to make, and what many have probably succeeded long since in making. But look at the character of the six years during which Mr. Mechi states he has been realising these profits—such exceptional years that in four of them every kind of agricultural produce, and in the other two every kind but that of Wheat were selling at far more than remunerating rates. During the greater part of the period I apprehend few farmers have been making less than 30 per cent. on their capital. If such has not been the case, I do not know how they have been able to recover the lost ground of earlier and more unfavourable years, when prices were low. It is upon the profitable years they depend to make up for the profitless ones, which have been, and which will come again in their turn. With respect to the gross produce, the large sum of 11*l.* 15*s.*, which Mr. Mechi takes credit for, a considerable portion of it must be due to extraneous food; but more light would be thrown on this and other statements of that gentleman, if he would allow an abstract of his debtor and creditor account to come before the public. From the information Mr. Mechi has given in your Paper, I as an owner and occupier of land, though only a successful one in those golden years I have referred to, cannot satisfy myself that either his landlord investments have been profitable, or his tenant profits considerable; but how much less considerable would they appear if, as you suggest, he has forgotten to debit himself with 175*l.* in respect of farm produce consumed by his horses? To Mr. Mechi however, and others like him, the agricultural world owe much. It is not every one, even if he has the ability, who is willing or can afford to act as a pioneer and experimentalist in the path of agricultural improvement. Thanks to liberal and enlightened men, and the associations they have formed, there is a great increase of practical knowledge and valuable appliances for the furtherance of agriculture. Line upon line, precept upon precept, meet the eye in every direction, and are illustrated by numerous examples in the form of model farms; so that the agriculturists of the present day can no longer sleep with the lights around them. Landlords and tenants will march forward, though not with Mr. Mechi's strides, in the path of progress. They may proceed cautiously, for daily experience warns them of the truth of that dictum of Adam Smith, that in no department of industry are the profits, compared with the capital to be invested in producing them, so small as in that of agriculture. They cannot, as a body, indulge in their philanthropic propensities, but must obey that law of trade which requires them to strive to obtain the greatest profits at the least possible cost consistently with what is right, and as prudent men they will first satisfy themselves before sinking their capital on the land, be their tenure of it longer or shorter, that they are likely to get a sufficient return for their outlay. *R. C. L., Hastings, March* 14.

Tiptree Profit.—The following letter is addressed in *Bell's Messenger* to Mr. Alderman Mechi:—

"Dear Sir,—I have seen your Catechism in the paper read by you before the Society of Arts; and to-day I find a letter in the *Times*, signed by you, and on comparing these two statements, find a great difference, which, if not explained by you, would induce people to believe (as they do not hesitate to say) that these are evidently not *bonâ fide* statements, or correct copies from any regular and well kept accounts; or why should any difference appear? Well and honestly kept accounts are valuable beyond measure; badly kept or made-up accounts are valueless as the paper they occupy.

Statement in Mr. Mechi's Catechism, read before Society of Arts, March 7.		*Statement in Mr. Mechi's letter, vide Times, March 14.*	
Annual Produce—Tiptree Hall		Annual Produce—Tiptree Hall.	
250 qrs. Wheat, at 42*s.* per qr.	£525 0	310 qrs. Wheat, at 42*s.* per qr.	£651 0
100 qrs. Beans, at 34*s.*	170 0	110 qrs. Beans, at 34*s.*	187 0
150 qrs. Barley and Oats. Take this as other side: ½ Barley, ½ Oats.			
100 qrs. Oats, at 16*s.*	80 0	80 qrs. Oats, at 15*s.* ..	64 0
50 qrs. Barley, at 39*s.*	97 10	40 qrs. Barley, at 39*s.*	78 0
Clover seed	70 0	Clover seed	65 0
Other produce ..	30 0	Sundry roots	39 0
Clover and Grass hay	100 0	Clover hay .. £55 Meadow hay .. £20	75 0
	£1072 10		£1150 0

Would you oblige me by stating which is the correct copy from your farm account books? Is it a mistake of the printer's? Or, in making out the two accounts, how came you not to make them both tally, which you could not fail to have done if copied from real account books? How is it you do not charge for the corn and food consumed by your horses, which you have not done? I find them a heavy item in my expenses. Is 5*s.* per

acre, or 42*l.* 10*s.* per annum, a sufficient sum to charge for coal, oil, repairs of engine, and annual depreciation of machinery? I also find you have not insured your stock against loss by fire; I always do; but probably, being a director in the Unity Mutual Insurance Company, you don't insure; or why, if these accounts are honestly copied from your account books, does it not appear? My dear old friend, we have broken many a lance together, and yet mutual good feeling exists, and I trust ever will. But do give us honest, legitimate accounts, or none. Look at your live stock account. I always, on the 11th of October each year, take stock, and keep the live stock account thus:—

Oct. 11, 1858	£	s.	d.
No. Stock. ...			
— Sheep	—	—	—
— Cows	—	—	—
— Pigs	—	—	—
1859.			
Jan. Bought Sheep	—	—	—
May ,, Bullocks	—	—	—
June Ditto ..	—	—	—
Food consumed	—	—	—
Beans for Sheep ..	—	—	—
Cake for Bullocks	—	—	—
Meal	—	—	—
Bran and Pollard	—	—	—
	£1400	—	—
Profit ..	100	—	—
	£1500	—	—

0—Oct. 11, 1859 ..	£	s.	d.
Stock.			
Sheep	—	—	—
Cows	—	—	—
Pigs	—	—	—
Bullocks	—	—	—
Sold.			
Bullocks	—	—	—
Sheep	—	—	—
Pigs	—	—	—
Calves	—	—	—
Sheep skins ..	—	—	—
Wool	—	—	—
	£1500	—	—

Or loss, if any, on the other side; and that does happen; for one year I lost 1258*l.* by fattening bullocks, and only gained by fattening them one year.

"But how is your live stock account kept? Why, in your Catechism you state you make 200 lbs. of meat per acre, over weight of animals bought. Thus:—

On 170 acres 34,000 lbs. of meat, 6*d.* per lb., is		£850	0 0
Per letter in *Times*—			
Sale of meat and dairy produce..	£1279 0 0		
Less cost of live stock	545 0 0		
		734	0 0
		£116	0 0

or less per letter in *Times* than your Catechism states.

"Pray explain these mysteries to us unenlightened ones; for, I assure you, in every direction I am asked: 'Have you seen Mechi's statement of profit? Do you know him? Is he crazy? or, What does he mean by such false statements?' My answer is: 'I do know him to be a real, good, kind-hearted fellow; but unfortunately he is of an extremely sanguine temperament, and not having in early life ever kept farming accounts, you must take no heed of his present statements.' *Samuel Jonas, Chrishall Grange, near Saffron Walden, March* 15."

Position of Agriculture.—Mr. Mechi's balance-sheet is before the country, and is accepted as a great fact, or a great mistake. However there are some profitable deductions to be made from it—only think of ordinary farming admitting the sum of nearly 11,000*l.* to be condensed into the compass of 170 acres! Yet that is only a portion of the great fact; a tenant may throw in nearly 3000*l.* more, making a grand total of 14,000*l.*; and yet two parties shall divide a high per-centage of profit off this limited area of 170 acres. It clearly demonstrates that we have not yet done with the land; we have only begun. In meditating, further, on this balance-sheet, other points have deeply impressed my mind, and ought to be treasured up for future application by the public; they may have escaped the notice of some, so allow me briefly to comment on them. On his little farm of only 170 acres Mr. M. employs profitably 13½ men, at 10*s.* per week wages, which is at the rate of 1 labourer to every 13 acres. At present there is not 1 million labourers employed on 50,000,000 acres of land, or 1 man to 50 acres. According to Mr. M.'s experience there ought to be 4 million labourers! I think myself that agriculture does not do its duty to the labour market, which may be one reason why the towns are so overstocked. It is within my own knowledge that out of every five persons, country-born, four go away, and only one remains at home to do the rural. Again, Mr. M. employs only six living horses on his farm of 170 acres; this rate ought to inflict upon the country 1,760,470; whereas it is now afflicted by some 2,223,335 horses, eating their own heads off and the farmers too. To make the lesson offered us by Mr. M. more impressive, it may be thus stated:—A farmer of 700 acres ought to employ 54 labourers at 10*s.* per week, keeping only 23 horses. Why is this not the case? I do not ask the question merely for my own information, but for that of divers citizens of London who do not understand farming. I shall be much obliged if any of your correspondents will inform us whether they employ and pay twice as much for manual as they do for horse-labour? Or, perhaps some other good farmer will favour us with a short balance-sheet, giving us a comparative table of expenditure for the manual, horse, and mechanical on his farm. *Circular Agriculture, London.*

Preservation of Game.—I was very much pleased with Mr. Corbet's paper on the Over-Preservation of Game; it is exactly what my sentiments have been for some years. I think the system of letting game from the tenants is very base. Who is so much entitled to the game where it cannot be any object to the landlord as the tenant? When landlords wish to reserve the game for their own amusement or that of their friends, they have of course a just right to do so, and 19 tenants out of 20 would be delighted to show them good sport; but I do not approve of its being let to strangers. A case in point occurred in this neighbourhood last year. A gentleman took a mansion with some of the land and the game upon the surrounding estate; he forbad the tenants destroying a single head, had a great number of keepers, and the game had so much increased that it became a nuisance to the tenants. One of them complained of the damage, and the reply was, "If you are not satisfied I will take your farm;" and I was informed the said gentleman sold 40,000 rabbits last year. *T.*

Wages in Sussex.—As a little inquiry is going on respecting wages, I send you an account of what they are in Sussex, at least in this neighbourhood, where perhaps they are as high as in any part of the county.

Carter, 11*s.* a week	£28	12*s.*	0*d.*
House rent at 2*s.*	5	0	0
Extra for harvest, as they have 5*l.* for the month	2	16	0
For beer at hay-making, 6*d.* per day	0	4	6
Ditto harvest	0	5	0
	36	17	6

or a little over 14*s.* a week. There are no perquisites of any kind, and though 11*s.* looks so much higher than 8*s.* or 9*s.*, yet one on adding all items together can find what at one time seemed to me a mystery—why the Sussex carter did not seem any better off than the Dorset one.

Ordinary labourers, 9*s.* a week	£23	8*s.*	0*d.*
House rent	5	0	0
Extra earned by piece-work	5	12	0
Instead of beer for hay and harvest day work ..	0	10	6
	34	10	6

or a little over 13*s.* a week. Ordinary shepherds are the same as carters, with a little for the extra trouble of lambing, perhaps from 10*s.* to 40*s.* But in Sussex we know what the wages are, as nearly all are paid in cash; some give beer during hay and harvest, but not so much as they do in Dorset, and this will not make much difference in the rate, as 6*d.* a day is deemed a fair substitute. But I must take the liberty of saying that I think the Dorset wages are drawn out rather farther than the labourers would be disposed to admit they really are. Having had several years' experience of them, I will state as nearly as I can from memory what they were 7 or 8 years ago:—

Carter, 8*s.* a week	£20	16*s.*	0*d.*
*House and garden	5	0	0
For fuel	1	0	0
Potato ground, commuted for money ..	3	3	0
Journey money, about	1	5	0
Extra for harvest	1	0	0
†Beer, hay and harvest, say	2	0	0
	34	4	0

or about 13*s.* a week, but this applies to the head carters only; the under ones have not the same journey money nor the same for harvest—perhaps 1*s.* a week less. Shepherds have about the same as carters, with perhaps 1*l.* extra for lambing, or 1*s.* a score. I cannot speak of ordinary labourers from memory, as they earned extra at piece-work; their regular wages were 9*s.* without house or garden, and if there was one on the farm they had it at 1*s.* a week, and I do not think I am far out in stating their average wages at 10*s.* 6*d.* to 11*s.* a week. *G. S.*

New Cattle Food.—Messrs. ——— having favoured me with a circular of their new cattle food, and the analysis of Dr. Letheby, I find that the mixture consists chiefly of cereals and Leguminosæ, and contains 80.2 per cent. of nutritive matter, viz.:—

Nitrogenous matter	12.1 per cent.
Carboniferous ditto	68.1 ,,
	80.2

From this data it is not difficult to ascertain its actual value. Mr. Spooner states the value of nitrogenous matter at 20*l.* per ton, and of carboniferous matter at 12*l.* per ton. A ton of the mixture contains of—

Nitrogenous matter, 271 lbs., at 20*l.* per ton	£2	8	4½
Carboniferous matter, 1525 lbs., at 12*l.* per ton	8	3	4½
	£10	11	9

A ton of Linseed-cake, according to Johnson, contains of—

Nitrogenous matter, 764 lbs., at 20*l.* per ton..	£6	15	11
Carboniferous matter, 875 lbs., at 12*l.* per ton	4	13	6
	£11	9	5

About the present value of the article in the market.

A mixture of equal parts of Barley, Beans, and Linseed-cake, according to Dr. Voelcker, contains of—

Nitrogenous matter, 509 lbs., at 20*l.* per ton	£4	10	10½
Carboniferous matter, 1162 lbs., at 12*l.* per ton	6	4	6
	10	15	4½

It is therefore evident that Linseed-cake at its present value, 11*l.* per ton, or a mixture of Barley, Beans, and Linseed-cake in equal parts, costing at the present prices 9*l.* 8*s.* 2*d.* per ton, either contains more nutritive matter than a ton of —— cattle food costing 36*l.* per ton. If you add to your own mixture the cost of grinding, &c., still you may be satisfied that your own combination of substances (containing a far larger portion of nitrogenous matter) stands you at barely one-third the cost of the new cattle food. Practical men of business consider these things, and are not caught and made to pay the forfeit of the inexperienced. *Old Bird.*

The Condition of Servant Girls.—The statement that appeared in your Paper a short time ago offered many good suggestions as to the best way to check a very unsatisfactory state of things, yet I think something more may be said on the point. There can be but one opinion entertained by those who are in a position to judge of what is taught at the schools—that the work that is begun there is a step in the right direction. In the first place I should suggest that all who visit the schools should lose no opportunity of exercising their influence over the minds of the children as a check against the wrong example they are constantly exposed to, but the time comes when these girls leave school to enter into service, and with very different mind from that of those who entered into service from the same class a few years ago, but do they meet with a corresponding difference from their employers? Have we all of us learnt the importance of appreciating those who serve us? Do we make it a daily duty to exchange a few kind or encouraging words with those about us? Young servants should not be left under the influence of those who may not advise them for the best, but rather let them find friends and advisers in those with whom they serve. Then let it be remembered that it is a subject that concerns us all, to have good servants, good mothers, and good and grateful members of society. *B. Ramsey, Farm Bailiff, Oxted, Surrey, March* 9.

The Negro Fowl.—On reading lately a copy of Dixon's "Ornamental and Domestic Poultry" I saw at the end a notice of a breed of fowls called Negro fowls. I possess at this time a black-feathered hen with black legs, skin, and comb; she is a good shape, gentle temper, and lays plentifully eggs of a brownish hue speckled with tiny white specks; sits well, and rears her chickens carefully; her offspring is mixed, some with dark combs like her own, some very brilliant red; these last have white bones, as other fowls; but in the former the bones are covered with a purple membrane, which also separates the muscles, but the flesh is very delicately white, and of a fine flavour, superior to the white-boned. That the purple appearance is not in the bone itself I discovered from the fact of the membrane becoming separated from the bone after long stewing. *Ilminster.*

Societies.

ROYAL DUBLIN: *Labour in Ireland.*—The following is part of a paper read by Mr. Baldwin, of Glasnevin:—I have been invited to assist in eliminating some conclusions from the voluminous answers given to the large number of questions issued last year by this section of the Royal Dublin Society. The range of subjects and interests embraced by these queries and answers is so comprehensive that on the present occasion I shall only attempt very imperfectly to follow up Mr. Hamilton's able introductory paper, and confine myself to one or two salient topics, leaving for future discussion the great principle of agricultural statistics which the queries involve. The most important subject on which information was solicited in the queries is the labour question; and whether we regard that question as it affects national wealth, social harmony and organisation, or the profits of arable farming in Ireland, it is deserving of the most profound consideration. It is universally admitted that up to a recent period the Irish farm labourer was badly paid. He contrived to eke out a miserable subsistence. His fare was often of the poorest kind, his dwelling a wretched hovel, which his employer rarely stooped to enter. No one save the clergyman ever brought a ray of cheerfulness to the hearth of the hard-wrought son of toil. I well remember the circumstance of a couple of parishes, owned by three proprietors, where the average wages of the able-bodied agricultural labourer varied from an average rate of 6*d.* per day in one, to 8*d.* per day in summer, and 7*d.* in winter, in another. In the former case, the men had to travel a mile to their work in the morning, which compelled them to rise before 5 o'clock, A.M., and the same distance to their dreary homes in the evening. The man's wife, or, if she was fortunate enough to be on the labour roll, a daughter or a son, who should leave school, had to walk these same two miles with the man's dinner. The hours of labour were from 6 A.M. to 6 P.M., an hour being allowed for meals. The labour of these men was apparently obtained at a very low rate; but had the employer the head or the heart to conceive and feel his position, he could procure the same amount of actual force or motive power by paying the men wages competent to maintain their muscles in an efficient state. At that time the supply of labour was excessive: and, by an unwise policy, its quality deteriorated in the inverse ratio of the surplus. The famine, and the tide of emigration which it set in motion, and which still continues to flow at a pretty steady velocity, has completely altered the state of the agricultural labour market in Ireland. Instead of a redundancy there appears in many districts a scarcity; and, judging from passing circumstances, it is greatly to be feared that the supply of able-bodied labourers in this country will, ere many years elapse, be so far weakened as to increase to an undue extent the breadth of land under permanent pasture. We have each year a fresh accession of labour in those who advance from youth to manhood; but a large number pass away from the stage of human existence, and the emigrant ship bears away to distant lands annually thousands of the very best agricultural labourers which the country produces. These statements are forcibly confirmed by the official returns of the Registrar-General. In 1858—

The number of deaths was	133,000
,, who emigrated (Irish) ..	64,337
	197,337
The number of births	193,347
Decrease in population	3,990

It appears to me that the time has arrived when

* Cottage rent is higher in Sussex than Dorset from 6*d.* to 1*s.*, but I have put them at the same.

† Hay making is a much longer business in Dorset than Sussex, as there are large tracts of water meadows in the former.

those who are deeply interested in the prosperity of Ireland should seriously reflect on the effects that may be expected ultimately to emanate from the present tide of Irish emigration. If not stopped in due time "none but decrepid paupers will be left to till the land," which would then necessarily revert to a pastoral state. The emigration of a portion of our population was perhaps necessary. It materially tended to shatter those ties which bound the labourer to a particular spot almost as firmly as a parasite plant clings to the trunk on which it lives—ties which induced Adam Smith to say that, "man is, of all sorts of laggish, the most difficult to be transplanted." But emigration has its limits. Labour is the primary source of wealth; and as the wealth of Ireland is principally derived from agricultural labour, it follows that the emigration of a large portion of our able-bodied and most efficient working men must materially militate against the industrial progress of this country. In order to check this emigration it is quite evident we must give the labourer adequate wages, and afford him decent accommodation. The country at large must adopt the wise and salutary example of Mr. Naper, of Loughcrew, who gives his men higher wages than most of his neighbours, and who assured me some time ago that an increase of two or three pence a day to the labourer's pay was soon perceived in the increased labour executed. Mr. Naper is a gentleman imbued with the highest and purest motives of philanthropy, and as he can afford to experimentalise it may be said that the tenant farmer cannot follow him in a matter of this kind. Now, it is necessary to make a distinction between the affluent country gentleman who cultivates a home farm as an expensive luxury and the tenant who farms for profit. But in considering a great public question like that which engages our attention this evening, we must give due weight to all well attested facts no matter whence they proceed. The average weekly wages of able-bodied men, women, and boys in the several districts from which answers have been received to the queries, are as follows:—

County.	District.	Weekly Wages. Men.	Women.	Boys.
Antrim ..	Ballycarey	9s.	4s.	3s.
,, ..	Ballymonoy	8s.	..	3s.
Cavan ..	Balieborough	8s. to 9s.	5s.	2s. to 7s.
Down ..	Moira	7s.	4s.	8s.
,, ...	Newry	6s. 6d.	..	..
Monaghan ..	Bath	6s.	3s. to 4s.	3s.
Tyrone ..	Loughash	6s. 3d.	..	4s.
Kilkenny ..	Kilkenny . ..	7s.	3s.	3s.
Cork ..	Farnahy	6s.	..	..
,, ...	Glandan	7s.	..	..
Limerick ..	Croom	6s. to 9s.	3s. to 4s.	2s. to 4s.
Mayo ..	Between Headford and Balinrobe	5s.	2s. 6d.	2s. 6d.
	Averages	6s 11½d.	3s. 7½d.	3s. 2½d.

Compared with the ratio of wages paid up to the period of the famine, these averages are exceedingly liberal. But are they adequate to sustain the working man in that state of strength and vigour in which he can execute a good day's work? *The Irish Agricultural Review.*

Farmers' Clubs.

London: *March* 5.—*Discussion on the Over-Preservation of Game.*—Mr. Corbet having concluded the reading of his paper, as reported last week, the discussion then opened. Mr. E. B. Acton (the Temple) contended—

Legally, however, farmers had a right to compensation for damage done to the crops by game, and it was their own fault if they did not enforce it by stipulative claims. Was he to be told that under a lease the tenant-farmer could not obtain compensation for excessive game-preserving, with the damage which it inflicted? He was of a different opinion. He had heard of a case in the North of England in which a farmer received 500*l.* as compensasion.

Mr. Wilsher (Welwyn) said the last speaker seemed to think that the farmer might remedy the evil by the terms of his tenancy. He denied that that was the case. If a person who was in treaty for a farm demanded the game, it would almost invariably be refused. In his own county, or at least for many miles round his own locality, no farm could be taken with the game.

Mr. J. Cressingham (Carshalton) said, having preserved game for the last 30 years, he had so managed as to reconcile the farmers concerned to his manner of preserving, and he had never had any complaints made against him of injury done by the game. If the game injured the farmer he had a remedy at law, no matter whether the injury arose from rabbits or from hares. He could have a surveyor, a properly-authorised man, employed to estimate the damage, and the landlord would be liable to the extent of the award.

Mr. Wilsher: How long after would the tenant continue to occupy the farm if he had not a lease?

Mr. Alderman Mechi thought Mr. Corbet went too far in saying that hares and rabbits were acting by day as well as by night.

Complaints were made, and very justly, of hares and rabbits eating the Swedes, and of the injury which ensued during the subsequent frosts. As a precaution against that evil he would recommend gentlemen present to imitate his friend Mr. Viall. On the 15th of November he found that gentleman carting his crop of Swedes, and the crop was covered with earth, so that neither hares, rabbits, nor frost could injure it. Many thousands of pounds had no doubt been lost during the last season through the neglect of that practice. If he had to pronounce an opinion on Mr. Corbet's paper as a whole, he should say that it was too highly coloured. He believed it was quite possible for a man to keep a good head of game, and yet be on the best terms with his neighbours. Some years ago he himself had the shooting of a farm of nearly 1000 acres, about 12 miles from London, and his neighbours very kindly placed at his disposal 1000 more. What course did he pursue? In the first place he took care that all his neighbours should have plenty of the game which he killed; he took care that they should have the option of having a pleasant day with him. Then, there being a very large quantity of rabbits, he used before the harvest to leave it to competent persons—men who enjoyed the confidence of their neighbours—to say what damage had been done, and the result was that he never paid more than 16*l.* 10*s.* in one year. He quite agreed with Mr. Corbet as regarded the evils of excess in game preserving; but on the other hand, allowance must be made for people's hobbies, and the hobby of game preserving might be ridden without the injury either to the interests or the feelings of farmers, which had been so powerfully described that evening. He also concurred with Mr. Corbet that it was a great mistake for landowners to allow their gamekeepers to have the rabbits as a perquisite, that being a direct premium to them to encourage vermin.

Mr. Parkinson, jun. (Notts), said he was too good a sportsman to wish to see all game destroyed, but he must say that when preservation was carried on without proper consideration for others, it became a fearful evil.

Mr. J. A. Nockolds (Stanstead, Essex) said, as a land agent he had always advocated the destruction of rabbits by the farmers after the 2d of February, and until pheasants and partridges had begun to lay (A voice: "All the mischief is done then"). On most estates where there were leases under his supervision, farmers had a right to kill rabbits at all seasons of the year. He could not help remarking that wherever he had seen farmers placed in the position of owners of the soil as regarded game, he had found them most strenuous preservers. When a person was observed riding with the hounds over young seeds or Wheat, the reply to the question "Who is he?" it is almost sure to be, "It is Mr. So-and-so riding over his own farm. He thought that, wherever shooting was let, the first offer should be made to the occupiers. That was a principle which he had always advocated.

Mr. G. H. Ramsay (Newcastle-on-Tyne) said, while admitting that their friend Mr. Corbet had treated the subject in a very attractive manner, he must declare that, in his opinion, his argument fell short of his language. Farmers had the laws of the country to guide and protect them, in relation to the preservation of game. Formerly, a man with 100*l.* a year might shoot with impunity; but the game-laws had recently been modified, and made laws of trespass. No man could now come upon their land, trespass on their corn, their Turnips, or anything else, without being amendable to the law; and he would ask farmers whether they wished that law to be abolished. The farmer took his farm knowing that there was a certain quantity of game upon it. If the landlord increased the quantity, the tenant would have a right to complain, and the landlord would be liable to pay damage; otherwise, the matter was one of fair bargain and arrangement between the two. All those figurative arguments on the subject went, in fact, for nothing. The grand point was for farmers to take care that they made a fair and reasonable bargain with the owners of the estate. It was useless to abuse the poor gamekeepers, who were set to perform a certain duty; you might just as well abuse the policeman.

Mr. Fisher Hobbs (Boxted Lodge, Essex), expressed his best thanks to Mr. Corbet for the manner in which he had introduced the question to the notice of the Club. He felt, when the subject was proposed to the Committee, that it was one that required delicate handling, and he really thought he might compliment Mr. Corbet on his mode of treating it, and his not painting the evils of game preserving in terms that were too high.

He (Mr. Hobbs) had himself been the occupant of a game farm for 13 years, and he had had some little experience of the damage inflicted by game; for surrounding a considerable portion of the arable was a large extent of woodland, and he must say that his crops were greatly injured by the game. This farm had been in the hands of the owner; had been farmed high, and upon which the game had been preserved. A promise was made that the game should belong to the tenant; but like many other verbal arrangements in that day—and he feared it was almost too much the case in the present day—the promise was not fulfilled. The fact was that landlords, generally speaking, did not like to tie themselves down to any contract with regard to game. In his own neighbourhood, a short time ago, pheasants were being purchased by the labourers and others at 1*s.* a head, partridges at 1*s.* a brace, and rabbits at 6*d.* a-piece. Of course, all these had come through the hands of poachers. He believed that farmers would be rather pleased than otherwise to be the means of maintaining a good stock of game, provided they were allowed to do so upon a liberal system; and an arrangement of the sort would no doubt tend to promote a different feeling from that which now existed between landlord and tenant upon the subject.

Mr. Hudson (Castleacre) said: I regret I could not hear all the excellent paper just read by our friend Mr. Corbet; and although I agree with him in many points, there are some with which I may beg to differ. I am an old sportsman, and like the crack of the gun as well as the crack of the whip; and I should be sorry to deprive the country gentlemen of their sport. We, the tenant-farmers of England, do not wish to drive them in the autumn to smoky London or gay and sunny Paris; we wish to retain them at home, where they can do so much good by spending a large portion of their income, and receive their friends at their country-houses. But then they must have some amusement. They cannot very well offer their friends a bag of marbles to play with; but if they can give them a mount, and show them a fox one day, and give them a good day's partridge-shooting the next, and then a day or two through the covers amongst the pheasants, they make a jolly week of it, and their friends will visit them. The poor people in the village will also reap some advantage after the great dinners at the hall. Let us do all we can to induce the landlords to live amongst us; let us endeavour to preserve the winged game; but let us condemn the over-preservation of vermin—*i. e.*, rabbits and hares. I am myself a small landowner, as well as a tenant farmer; and as one of my estates is suitable for rearing game, I keep a good stock upon it. There are 700 acres; 500 acres are let to a very respectable tenant; the remainder I keep in hand, and I farm all the land by the cover-side. For the last five years that I have had this, I have grown from 36 to 40 bushels an acre of Wheat, and from 40 to 50 bushels an acre of Barley, by the cover-side; so the game has not done much damage to my crops. My game is killed early; and on the 5th and 6th of last November my farmer-friends and myself killed 560 pheasants, 70 to 80 brace of which I gave to my neighbours and friends. I do not know whether our friend, Alderman Mechi, keeps a large head of game at Tiptree; I know him to be a keen sportsman. At any rate, his game has not done much damage to his crop; for it is in print that he has made 600*l.* a year profit as landlord and tenant upon his little farm of 170 acres at Tiptree. I hope we shall finish this discussion by saying, preservation to the game—pheasants and partridges; but destruction to the vermin—rats, rabbits, and hares.

Mr. Thomas (late of Lidlington Park) said that having listened very attentively to Mr. Corbet's paper he must declare that it contained nothing which he disapproved or which appeared to him to go beyond the mark. Other gentlemen in attacking it had introduced the game-laws, the right of trespass, and other irrelevant topics; but they had not refuted what Mr. Corbet said in dealing with the real question before them. They had been told by Mr. Ramsay that they ought to obey the law. He replied that there was a time when anyone who killed a hare or rabbit lost his ears, but it did not follow that the law was one that ought to be maintained. All laws were not immaculate; otherwise, perhaps, there would not have been so much agitation to obtain the repeal of many of them. He agreed with Mr. Hudson that hares, rabbits, and rats should be put in the same category; and as regarded legitimate game, all he desired was that a fair arrangement should be entered into between landlord and tenant. He believed that the best arrangement would be for the landlord to make the tenant his keeper, with the understanding that he would expect every year to have some good shooting. All asperity would then cease, a better state of feeling would spring up with regard to game, and they would get rid of a class of men, 30 years' experience of whom enabled him to testify that Mr. Corbet had not coloured his picture too highly. The hardest case of all, perhaps, was that of the shooting being let to a cockney-sportsman, a grievance which paralysed all energy and extinguished all hope.

Mr. S. Sidney (Kensington) said three views were taken of this question. The first was that of landlords, like the late Duke of Marlborough, who thought that all such persons had a right to do as they liked with their own; the second was that of persons who concurred in the opinion of Mr. Bright, that all game was to be regarded as vermin, and as such ought to be destroyed; the third view was that expressed by Mr. Shirley, in the remarks quoted by Mr. Corbet, and supported by the evidence of Mr. Alderman Mechi, Mr. Hudson, and even Mr. Ramsay. Mr. Corbet had set forth the results of carrying out the only rational view clearly and effectively, not less effective because his paper was sarcastic, comic, and amusing. On such a subject ridicule was the effective reformer, for which all persons connected with agriculture were deeply indebted to him. It was, no doubt, essential to the welfare of the nation that gentlemen should be living on their estates, and the preservation of game was one inducement to them to do so; but, on the other hand, tenant-farmers were not to be sacrificed to the gross abuses of the *battue* system.

Mr. Congreve (Leamington, Hastings) said that as no one had spoken from the midland counties he must express his approval of all Mr. Corbet had said, and he was of opinion that if landlords in his part of the country would give their tenants what Mr. Hudson very properly characterised as vermin—namely, hares and rabbits—the tenants would be most happy to do all in their power to preserve legitimate game.

Mr. Corbet said—However wide some gentlemen might seem to start from him, they all came to agree that the over-preservation of game was a great evil, and that the maintenance of fair field sport was highly desirable. What, for instance, could he wish for more than the testimony of the gentleman who sat by his side, the first farmer in England—Mr. Hudson, of Castleacre? Mr. Hudson upheld the shooting of winged game, and still more fox-hunting; but he denounced rats, rabbits, and hares in one sweeping condemnation as "vermin." He (Mr. Corbet) would only further express a wish that the meeting should pass no formal resolution, but leave the club and the country to draw its own conclusions from what had been said.

A vote of thanks was given to Mr. Corbet for his able paper.

Reviews.

The Quarterly Journal of Agriculture and the Transactions of the Highland and Agricultural Society of Scotland. W. Blackwood and Sons.

In the current number of the Journal which has just appeared the leading article by the editor is a paper on Clover Sickness, in which the suggestions of the Rev. M. J. Berkeley in our columns are discussed.

"In the case of sickness in Clover, Mr. Berkeley is 'inclined to attribute the condition of this plant in the majority of instances to infection from decaying matter,' and the subsequent appearance of Fungi. We had formerly stated that the most cursory view of the subject pointed to the vegetable matter in the soil as being the agent in the production of this disease. It has been shown that the mixing of bread with soil rendered the latter unfit for growing spelt, owing to the decaying matter injuring the roots and encouraging the growth of Fungi. In some cases, too, it was stated that the smaller roots of Swedes were so much affected by the condition of the vegetable matter in the soil, as to rot off while the bulbs continued to throw out fresh ones. It is satisfactory to find Mr. Berkeley agreeing with us so, far though we think he stops in failing to apprehend the cause which usually operates in the production of disease prior to the appearance of Fungi on the plants."

The writer adds:—"We have often thought that in classifying these plants which are most liable to disease, and these which are least, when repeated on the same soil, the outlines of a somewhat simple rule are not difficult to trace. Wheat, Oats, Barley, Rye, and indeed all annual plants, can usually be grown year after year on good sound land, if well manured and kept free from weeds. On the other hand, Clovers, Grasses, green crops, and other biennial and perennial plants, usually only thrive well when grown at intervals with the annuals. This does not arise, however, from

any peculiarities in their character, further than that the perennials do not exhaust in maturing their seeds the juices of their roots, and thus they leave a much larger quantity of putrescible matter in the soil.

"In the case of Clover, for instance, there is an immense quantity of vegetable matter left in the soil when a Clover stubble is ploughed under. The fresh succulent roots are ramified over a great extent of the superficies of the soil. If Clover is sown on the same land too frequently, the young roots, coming in contact with the decaying remains of the former crop, may be attacked with mildew; or, more probably, the rootlets do not exercise their functions in a healthy manner, and, failing to take up a proper quantity of earthy matter, render the plant weak and sickly. When in this state, mildew or insects may attack the plant, and complete its destruction.

"It is very different with the Cereals. A Wheat plant exhausts the juices of its roots as thoroughly in perfecting its seeds as it does those of its straw. It leaves nothing in the soil but its sapless root, which are not likely to have a corrupting influence, such as we could well suppose might arise from the acrid and juicy roots of the Turnip crop on a succeeding Turnip crop; for this reason, Wheat, Barley, and Oats can be grown year after year on the same land so long as it contains an abundant supply of earthy matters and substances yielding ammonia."

The other articles in this volume are on Belgian and American Agriculture, together with No. 67 of the Farmers' Note-book, which in the course of its publication has contained a large number of very useful and interesting paragraphs. In the present instance they refer to steam culture, town sewage, the milk sickness, Australian sheep washing, the culture of the Lupine, natural guanos, and the French commercial treaty.

The Transactions of the Highland Society include papers by Mr. Skirving on the Culture of the Mangel Wurzel in Scotland; by Mr. Bird of Renton Barns on the Management of Sheep; and a report on the Planting of Waste Land; and Dr. Anderson gives an interesting report of his analyses of the Turnip plant in various stages of its growth, to which in connection with Dr. Voelcker's researches into the composition of Holcus saccharatus we shall hereafter refer.

Miscellaneous.

Agricultural Statistics of Ireland for 1859.—The Registrar-General has issued the following abstract of the returns for the past year:—

	1858 Acres.	1859 Acres.	Increase Acres.	Decrease Acres.
Wheat	540,964	465,497	..	81,467
Oats	1,281,241	1,981,197	..	44
Barley	190,768	177,519	..	13,249
Bere and Rye ..	16,472	13,241	..	3,230
Beans and Peas ..	12,935	14,841	1,906	
Total	2,748,380	2,652,296	1,906	97,990

Decrease in cereal crops in 1859 .. 96,084 acres.

ABSTRACT OF GREEN CROPS.

	1858 Acres.	1859 Acres.	Increase Acres.	Decrease Acres.
Potatoes	1,150,707	1,200,144	40,437	..
Turnips	338,202	322,206	..	15,936
Mangel Wurzel and Beetroot	29,731	27,108	..	2,623
Cabbage	33,132	31,580	..	1,552
Carrots, Parsnips, & other green crops	23,399	22,056	..	1,343
Vetches and Rape .	33,360	33,207	..	153
Total	1,617,531	1,636,361	40,437	821,607

Increase on green crops in 1859 .. 18,830 acres.

GENERAL SUMMARY.

			Acre
Decrease in cereal crops		in 1859 ..	.. 96,804
Increase in green crops ..	18,830		
,, on Flax	14,683	in 1859 ..	.. 75,698
,, on meadow and Clover	12,185		
Total decrease in the extent of land under crops in 1859 .			20,386

Total number of live stock, 1852:—Horses, 628,916; increase, 72,629. Cattle, 3,810,136; increase, 225,736. Sheep, 3,588,356; decrease, 13,986. Pigs, 1,262,873; increase, 85,268.

Total value of live stock in 1859, calculated according to the rates assumed by the Census Commissioners of 1841, viz.:—For horses, 8*l.* each; cattle, 6*l.* 10*s.*; sheep, 22*s.*; and pigs, 25*s.* each:—Horses, 5,031,328*l.*; increase, 140,760*l.* Cattle, 24,765,884*l.*; increase, 928,408*l* Sheep, 3,947,192*l.*; increase, 102,700*l.* Pigs, 1,578,591*l.*; decrease, 183,703*l*, Total, 35,322,995*l.*; increase, 988,105*l.*

Notices to Correspondents.

CATTLE FOODS: Mr. Thorley has sent us a reply to Mr. Paulett who described the result of giving Thorley's Food to sheep in a letter which we extracted from the columns of a cotemporary. He asserts that the last paragraph of Mr. Paulett's last epistle contains "a round dozen of blunders!" and he enumerates five mistakes in the administration of the condiment shown by this letter to have been made. It is for sensible men to judge whether they are likely to have any better fortune with so puzzling a subject than one of Mr. Paulett's well-known agricultural experience seems to have had.

CHEESE: "*Cheese.*" Any soil will yield food from which cows will produce a cheese-yielding milk. Cheese is made in the *dairy.* See a little Handbook of Dairy Husbandry. (Longman.)

FARM ACCOUNTS: *Alfred.* Mr. Coleman is we hear engaged on a work of the kind. Apply to him at Cirencester College.

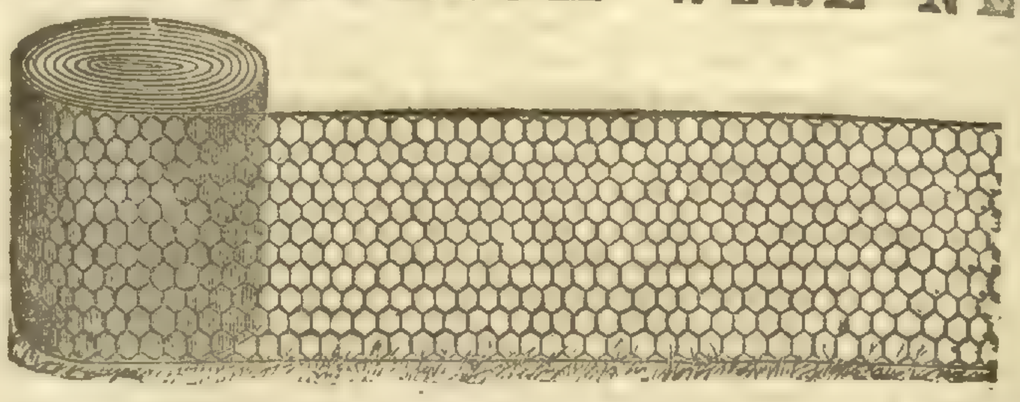
MR. MOULE'S PAMPHLET: *F G H.* We will inquire.

RYE-GRASS: *Young Tenant Farmer.* If seeded it is undoubtedly an "impoverishing" seed; but the phrase belongs to an antiquated if not "extinct" agriculture!

SHEEP HURDLES: *B Morrant.* They are made in abundance in the copse woods of Hampshire. No doubt there are commission agents in the island who have correspondents in that county.

TO LAY DOWN GRASS: *B.* This is the best time to sow Grass seeds. Sow 40 to 50 lbs. of mixed seeds per acre without a corn crop. Any of the great seedsmen will sell mixtures adapted for the soil and circumstances of your field.

IMPROVED PREMIUM WIRE NETTING.



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1⅝ inch	Small Rabbits, Hares, &c.	4½*d.*	5½*d.*	5½*d.*	6½*d.*	6*d.*	7½*d.*	8*d.*	10*d.*
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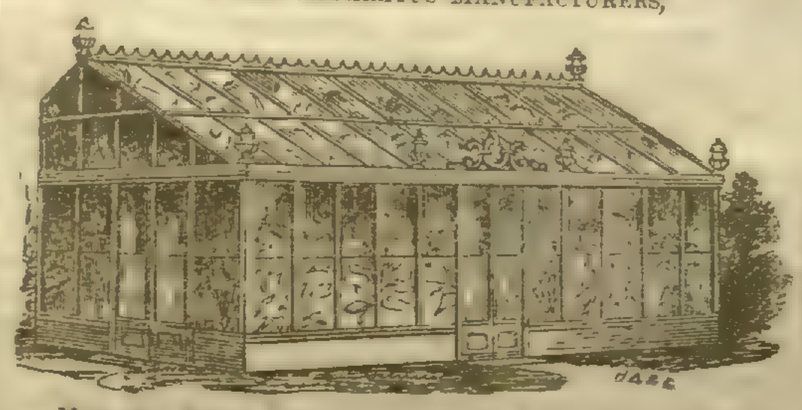

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REDUCTION OF TEN POUNDS PER TON IN THE PRICE OF
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Barrels containing 448 Feeds, weighing nett 112 lbs., with measure ... ... 40s. each.
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NUTRITIVE VALUE £15
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TOTAL ... ...£140 per ton.

Showing a Profit of £100 per ton, through the use of this invaluable Compound, adapted for the seasoning of all kinds of Food for Animals.

Owing to the discovery of a market for the refuse from my manufactory, hitherto not only valueless, but often incurring considerable expense to get it out of the way, and also owing to improvements in machinery and manufacturing apparatus, together with increasing wholesale orders, I am now enabled, you will perceive, to reduce the price 20 per cent., or 10*l.* per ton.

It is with the greatest satisfaction I embrace this opportunity of acknowledging with gratitude the favourable reception my Reply to Mr. Lawes has met with. The congratulations I have received are unbounded. My opponents cannot but experience the force of what Sir John Pringle, Bart., says, when he affirms that "All attempts to underrate the Food are absurd."

One of our very best scientific and practical authorities on the subject tells me: "When the value of your Condiment is fairly appreciated you will have to enlarge your manufactory before you can supply the British Capital." That this conclusion contains a general truth is already proved by the fact that the advantages arising from using my condiment are increasing as my customers are becoming better acquainted with its condimental value, and how it should be used in seasoning feeding materials so as to produce the greatest effect—some of them, for instance, who commenced ordering a single cwt. at a time, only for individual animals not thriving, now sending me orders for 1 and even 2 tons for seasoning the food of all their live stock. They find they realise a large profit on every animal whose food is properly seasoned with my condiment, so that the larger the number of animals whose food is thus seasoned, the greater the general profit gained.

HORSES require not a bulky diet, but the reverse—more especially road horses and hunters; while draught horses require food to support muscular strength. Brood mares and young horses require food to produce milk and a uniform growth of parts; while old horses require food easily digested and of a quality to support declining health. Now in all these cases the quality of the food required will be found to approximate more closely to a common standard than may at first sight be imagined, and in none of the cases can such a food be obtained from our present farm produce without an artificial supply of certain elements of food usually termed condiments. When food thus deficient of condiment is given the result is bad health, and a certain amount of debility, together with a waste of food—more food being consumed to procure a given amount of condiment, the rest passing through the body to the dunghill as waste. Add condiment as the food and animal require it, and each of the above cases receives its own peculiar demand—which enables Nature, when suffering from debility, bad health, or the impaired functions of old age, to recruit her health and strength. Thorley's Food for Cattle supplies these condimental elements, which accounts for its wonder-working efficacy in the following examples, which I have taken from my trade list. I cannot refer to them individually, owing to their number, but they are included in the above classes, and therefore they merit a careful perusal by all interested in horses. The economy of food expressed in money will depend upon the price of keep. At present prices it will amount to a saving of from 3*s.* to 4*s.* per week on the food of carriage, riding, cavalry, hunting, and farm horses; the horses, at the same time, doing more work, lasting longer, and requiring less grooming; and proportionately less for ponies, less food and condiment being consumed. In other words, 2*l.* spent in my condiment effects an economy of food equivalent to 4*l.* and upwards. Ample evidence will be found in support of this from first-rate authority in every case, and therefore I hope that the immense benefits thus gained by the use of my Condiment will be appreciated accordingly.

COWS.—Much that I have said of horses is applicable to milch cows. Being ruminant animals, and having larger organs of digestion than the horse, they require less concentrated food, but that food at present, more especially the food of in-door fed cows, is deficient of condiment, and requires an artificial supply; otherwise the result is what Sir John Pringle, Dr. Brown, and others experienced before they used my Condiment. For threepenny-worth of my Condiment daily, Dr. Brown's cow (see testimonial below) yields twice the quantity of milk; Sir John's cow three times the quantity, the milk being richer, and the cow healthier, and Mr. Valentine's cow four times the quantity, being just 6 quarts of rich milk for threepenny-worth of my Condiment—rich milk at a halfpenny per quart! Mr. Lowe's is even a more favourable example than any yet quoted. I respectfully recommend an attentive perusal of such triumphant examples of success to every one who keeps a cow.

CALVES.—Numerous examples will be found in favour of my Condiment for calves, the economy of food yielding a profit of more than cent. per cent., while the calves grow more evenly, so that my Condiment has a tendency to improve the breed. To our improved stock breeders this is a most important consideration.

SHEEP require more condiment in proportion to their size than other stock, deer excepted, and waste food accordingly when they do not get it. The example of Mr. Baylis is a favourable illustration of successful practice.

FATTENING STOCK.—My Condiment not only effects an economy of food, but an evenness of laying on fat which greatly enhances the market value of the carcass. The Earl of Aylesford, Captain Buchanan, &c., furnish ample experimental evidence in support of this.

PIGS, DOGS, &c.—Almost every example quoted makes favourable mention of my Condiment for pigs. For hounds I refer to the testimony of R. Lloyd Edwards, Esq., whose keeper's conduct merits favourable notice.

Report on "Thorley's Food for Cattle," by Alfred Brown, Esq., Wandsworth, Surrey, Member of the Royal College of Surgeons, England; Licentiate of the Apothecaries' Company, London; Fellow of the Medical Society of London; Late Demonstrator of Anatomy at the St. George's School of Medicine.

"Wandsworth, Surrey, Dec. 11, 1858.

"Sir,—I shall feel obliged by you sending me another cask of Thorley's Cattle Food. I have been making experiments with it upon one of my milch cows, and I think it only fair that I should let you know the results. My cow, before I used the Food, was fed upon hay, Wurzel, and water *ad libitum*, and upon this diet she yielded 1 gallon of milk per day, making 2 lbs. of butter per week. She was five months gone with her second calf; when she had the Food I discontinued giving her the Wurzel, and gave her a measure-full (about half a pint) of the Food with a peck of damp chaff night and morning; besides, she had as much good hay as she would eat. Upon this diet, in less than a week, she doubled the quantity of milk and butter; and in order that I might be sure that this excellent result depended upon the Thorley's Food, I discontinued it, and returned to her former diet, and she speedily went back to the gallon of milk per day. After waiting about a fortnight, I again returned to the Thorley's Food, and in a few days she increased to 2 gallons of milk per day. This experiment I repeated several times, and with the same results. I have tried the Food upon other animals—horses, sheep, &c. and with the most satisfactory results. I have also analysed the Food, and find that it contains nothing that would in any way injure the system or constitution of cattle. You are at liberty to make any use you please of this communication; and I am, Sir, yours, &c., "Alfred Brown.

"To Mr. J. Thorley."

From Mr. Henry Sharp, Steward to the Right Hon. the Earl of Aylesford.

"Dairy Farm, Packington, March 15, 1860.

"Dear Sir.—I have used your Food for Cattle for three years, principally for oxen, and I find it very beneficial, giving them a good appetite and keeping them in a very healthy state. I find they do not like their food so well without it, and I highly approve of it as a stimulant. I am, dear sir, yours very respectfully,

"Mr. Thorley." "Henry Sharp.

From Sir John Pringle, Bart.

"Undermount, Bonchurch, Isle of Wight, Feb. 8, 1860.

"Sir,—I have every reason to be highly satisfied with your 'Food for Cattle.' I had a cow in very low condition, not thriving, hide-bound, rough and penney in her coat, no appetite. From the first day, a little of the Food appeared to change her system; in a month, she was sleek and soft in the skin, filled up in flesh, and gave three times the quantity of milk, and much richer; and has continued to thrive for more than 12 months. All attempts to underrate the Food are absurd.

"John Pringle, Bart.

"Mr. Thorley, 77, Newgate Street, London."

From Captain Buchanan.

"Hill Fields, Bewdley, near Kidderminster, Feb. 6, 1860.

"My dear Sir,—I am in receipt of your letter of the 4th inst. Although much averse to seeing my remarks in print, I think, in this instance, I will waive my objection, and give you leave to publish my opinion—if, indeed, you deem my remarks worthy of this. In Mr. Lawes's last letter, dated from Rothamsted, he lays down a principle which is, in itself, an excellent one. He writes and dissertates upon the relative value derived from the manure from the feeding with this and that commodity, but he loses sight of the first principle in fattening, which is health; he sums decorticated Cotton-seed cake up with common Turnips, and leaves it to those who are able to deduce anything from such a jumble to decide by statistics what the results are he really wishes us to arrive at. To those who cannot work out his method it is purely Greek. Before I go any further, I must say that practical men, who have not used your Food, may fairly argue that they pay much, when buying your Food, towards your tremendous advertisements; and, as I think I have told you before your great enemy is the fact that no one can speak as to the gain or use of your Condiment in the manure. My own unadvised argument from the use of your Food is, that it has the effect of keeping the animal in such rude health that it has greater aptitude to fatten, and keeping it from any drawbacks to its growth, it continues from the first in one onward course, without any one single dereliction.

"'A stone of beef to a ton of Turnips,' so say old farmers; but if, by the application of an ounce per diem of a condiment, you get the ton of Turnips to bring you two stone of beef, surely a great object is gained; and even should that condiment be at the rate of 50*l.* per ton, that is nothing to the question, provided the beef is as good, and a stone of beef gained. I am, of course, arguing as to minute details off book; my meaning you will comprehend. One word about your Food in opposition to others: a most excellent and worthy man sent me, only the other day, a barrel from an opposition maker to yourself. He prefaced the sending by asking me to give it a fair trial. I have done so, and must in justice say that if this food is half as cheap, yours is three times as good. I should not use this Food again if there were no other makers. I would rather be without any. I will put the question of manure aside altogether, and will say that a two years' experience in the use of your Cattle Food makes me confident that its application gives me health, appetite, and an evenness in laying on fat which before I never attained.—Yours faithfully,

"John Buchanan.

"Mr. Thorley, Newgate Street, London."

From Wm. Hemming, Esq.

"Coldicot, near Moreton-in-Marsh, Aug. 18, 1858.

"Sir,—I herewith enclose you a cheque for 2*l* 10*s.* for the cask of Food, and shall feel obliged by your sending me another at once. I have used it for sheep only, but can speak in the highest terms of its excellence for those animals.—I am, Sir, yours respectfully, "Wm. Hemming."

From Fred. Lowe, Esq.

"Morden, near Mitcham, Feb. 10, 1860.

"Sir,—You ask me to give you my opinion on your Cattle Food, which I will do with much pleasure. I have now used it for some time, and feel I am in a position to speak of its influence, and as what I am about to speak has occurred under my own immediate observation, I can vouch for the truth thereof; and if you think it may prove of any use your publishing my remarks, pray do so. Early in 1858 I had a thorough bred gelding of a very hot and fretful nature, and, like most of those sort of horses, a very bad feeder, blowing into and wasting his manger-food, keeping sadly out of condition, and looking a perfect wretch, though he had the chance of eating the best hay and corn. I tried him with your Food. At first he refused, but soon took to it; and in a few weeks the change in his appearance was wonderful. He became really a handsome horse, with a beautiful coat, and still remains so. This is only one instance. I could tell you of several more, where I have had undeniable proofs of the great good your Food has done to horses. I bought a cow in August, 1859. The rings on her horns say she is 14 years old, at least. I gave something like 4*l.* 10*s.* for her. She was supposed to be quite worn out and useless; but having good reason to think her in calf, I turned her into a good pasture with some young stock, and they were all taken into a comfortable yard at night, and had as much good hay and Wurzel as they could eat. Still this old cow remained a bag of bones, till she calved the beginning of January, when I put her on to some of your Food (two measures a day) in two pecks of bran, hay, and a very little Wurzel. She is perceptibly making flesh, looks cheerful, and is daily giving over 15 quarts of rich milk. This is a very small cow, half-bred Jersey, and I shall be very happy to show her to any of your friends—or enemies, if they may call; and, as I do not know you personally, or have to my knowledge ever seen you, and having paid full price for what Food I have had, no one can accuse me of writing this letter with any other feeling than to assist in gaining the encouragement which is due to the inventor of this very valuable Food.—I am, yours faithfully,

"Fred. Lowe.

"Mr. Thorley."

From Eugene Valentine, Esq.

"Westchester, N. Y., Jan. 23, 1860.

"I have much pleasure in testifying that I have used Thorley's Food for Cattle upon a four-year-old milch cow. Before using this Food she produced only two quarts of milk per day, and after a few days' use of it she produced eight quarts of milk per day, and so continues to produce that quantity, much to the surprise of myself and neighbours.

"Eugene Valentine."

From Mark Baylis, Esq.

"Chatford, near Chipping Norton, Oxfordshire, Feb. 13, 1860.

"Sir,—I beg to acknowledge the receipt of your letter, also of your Almanack, for which I am obliged.

"In reference to your Cattle Food, I have used it for my feeding sheep about one year, and cannot speak too highly of it as medicine for their health, independent of its feeding properties, which give me great satisfaction. Before I used your Cattle Food, I lost, on an average, one sheep a week out of about 200, for more than 20 years, during the five or six months they were feeding on Turnips, hay, corn, and oilcake. The complaint was a stoppage in their water, for which I could get but little or no help. During the time I have used your Cattle Food, I have not lost one by that complaint; and they all now seem to do well and feed fast, though we have had a bad winter to feed sheep. I give one measure a day to eight sheep; as they are about two-thirds tegs that seems to do very well.—I am, Sir, yours truly, "Mark Baylis.

"Mr. Thorley."

From Thomas W. Overman, Jun., Esq.

"Maulden, Ampthill, April 9, 1859.

"Sir,—Be so good as to forward me two more casks of your Food. I have 30 young calves at it, and they are doing remarkably well, and appear very fond of it. I keep all my calves tied up by the head with a halter, and I find it entirely prevents them being blown up or hoven, as they cannot suck one another's ears, &c., which they will do when loose, after having their milk. Be so good as to forward the food immediately, by North Western Railway, to Ampthill Station, as I am almost out. I am, yours truly,

"Thomas W. Overman, Jun.

"Mr. Thorley."

From R. Lloyd Edwards, Esq.

"Nanhorn, Pwllheli, North Wales, March 8, 1860.

"Dear Sir,—I feel obliged by your attention in sending me the papers. All persons who have tried your Food in this district speak in the very highest terms of it, and I am sure I am only doing you common justice when I say that it is a most invaluable invention. My keeper is perfectly satisfied with the trials he has made of it. His mode of using the condiment is—he puts about a teaspoonful in each dog's food every day.—I am, dear Sir, yours truly,

"R. Lloyd Edwards."

AGENTS REQUIRED IN EVERY TOWN WHERE NONE ARE ALREADY APPOINTED.

JOSEPH THORLEY, the Inventor & Sole Proprietor,—Offices, 77, Newgate Street, London, E.C.

A Pamphlet sent free by post on application.

SEED BUSINESS ESTABLISHED UPWARDS OF ONE HUNDRED YEARS.

COVENT GARDEN MARKET, LONDON, W.C.

NOW READY, AND FORWARDED FREE AND POST PAID ON APPLICATION,

BUTLER AND McCULLOCH'S

ANNUAL SPRING CATALOGUE

OF

FLOWER, TREE, SHRUB, AND VEGETABLE SEEDS,

OCCUPYING 96 8vo pages, and arranged on a new and original plan, giving the Natural Order of each Genus, together with a short note indicating its character or adaptation. To each species and variety are given the colour, duration, height, and native country, and to sorts of recent introduction or of more than ordinary value are attached useful descriptive notes.

Amongst the numerous species and varieties will be found novelties of the highest merit not quoted in any other Seed List.

To the amateur and professional gardener, therefore, we doubt not this Catalogue will be found one of the most useful guides of the sort ever published, furnishing as it does the kind of information we have felt from long experience to be necessary in a work of this description.

Such Seeds as require for their maturation a warmer climate than that of England have been saved for us in Italy by that distinguished Amateur (whose Carnations, Picotees, Ipomœas, Tropæolums, Tacsonias, Acacias, and other choice Flower Seeds, have for many years given such universal satisfaction), *the* LATE *Sardinian Correspondent of Messrs. James Carter & Co.*, who has appointed us his representatives in this country. The following Seeds, worthy of especial attention, we quote from our SPRING CATALOGUE.

All Flower Seeds sent post paid.

ACACIAS.

These elegant and highly ornamental plants, after rendering the greenhouse and conservatory gay in spring with their charming blossoms, can be usefully employed in the decoration of the out-door garden, where their fine foliage and graceful habits cannot fail to excite admiration. When the time comes for placing them out of doors, let them be dotted in suitable situations about the lawn and shrubbery borders, plunging the pots to keep the soil about the roots moist, and in order that they might not suffer from drought they should be watered occasionally. Dealbata flowers magnificently on a wall in spring, where a well-drained border is afforded it; under such circumstances it stands the winter without protection, and will live and blossom every season for years.

Dried specimens from many of the varieties may be seen at our establishment.

30 magnificent species, 10*s.* 6*d.*; 20 do., 7*s.* 6*d.*; 12 do., 4*s.* 6*d.*

For enumerated list of nearly 60 species, see *Gardeners' Chronicle* for Jan. 28, or our SPRING CATALOGUE.

CANNAS

Sown now produce fine plants this season. These rank amongst the most picturesque of ornamental foliaged plants. If grouped in borders and centres of large beds, or grown in vases and dotted about the lawn or on terraces, the effect which their fine foliage of divers shades and colours produces is of the most imposing description. Thus managed, a new and important feature would, and in fact has already, in many instances, been added to our ornamental grounds, which gives them quite an oriental aspect. For winter decoration they are invaluable, especially when intermingled with flowering plants, and we may add few plants are more easily raised from seed or more easily cultivated.

30 magnificent species, 10*s.* 6*d.*; 20 do., 7*s.* 6*d.*; 12 do., 4*s.* 6*d.*; 12 species mixed, 1*s.*

For enumerated list of nearly 40 species, see our Advertisement in *Gardeners' Chronicle* of February 25, or our SPRING CATALOGUE.

RICINUS.

Plants remarkable for their stately growth and large handsome ornamental foliage, exceedingly effective planted in prominent parts of shrubby borders, on lawns, margins of plantations, or in mixed flower borders.

	Per packet.—*s. d.*
AFRICANUS, green, very handsome	0 6
ALBIDUS (new), white fruited, stems and leaves silvery, very handsome	0 9
OBERMANNI (new), red, splendid	1 0
PURPUREUS, purple	0 4
,, MAJOR, purple, magnificent (new)	1 6
SANGUINEUS (new), splendid red fruit, in large bunches, producing a grand effect	0 6
TUNICENSIS, very handsome and ornamental (new)	0 4

ORNAMENTAL CUCUMBERS AND GOURDS.

Those who have not hitherto cultivated the finer varieties of this singular and highly interesting class of plants will find them invaluable for covering rustic work, alcoves, arbours, verandahs, rough fences, old stumps of trees, or sloping banks. As striking objects in conspicuous places, such as prominent points of shrubbery borders, or on lawns, trained over wire-work, or other temporary supports, they will produce an effect at once interesting and pleasing; their large leaves variously coloured and singularly marked fruit, combined with curious and endless shapes and sizes, render them general favourites. See *Gardeners' Chronicle* of last week for a Descriptive List of 50 varieties. Thirty varieties for 7*s.* 6*d.*; 20 do., 5*s.* 6*d.*; 12 do., 4*s.* 6*d.*; mixed packets, 1*s.*

(*Cultural Directions accompany each packet.*)

ORNAMENTAL GRASSES.

Plants at once extremely interesting and highly effective; the taller growing kinds having an elegant appearance in shrubberies, islands, the sides of ravines, rivulets, or lakes; while the smaller sorts add beauty and variety to mixed flower-borders, and many of them, when cut and dried, are invaluable for winter decoration. Our Collection comprises many valuable varieties, which should occupy a place in every garden:—See descriptive List of 60 varieties in our Advertisement in last week's *Chronicle*. 30 vars. for 7*s.* 6*d.*; 20 do., 5*s.*; 12 do., 2*s.* 6*d.*

☞ NOW READY AND FORWARDED FREE AND POST PAID, A PRICED LIST OF FLOWER SEEDS SUITABLE FOR SECLUDED WOODLAND WALKS, WILDERNESS DECORATION, &c.

PELARGONIUMS.

The favour with which this splendid class of plants is now being regarded by all lovers of flowers, and the great desire manifested by amateurs for raising new and improved varieties, have induced our Sardinian Correspondent to give this department of floriculture his special attention.

☞ To enable our patrons to judge of the merits of the flowers they may expect to raise from the seed we offer, he has dried numerous specimens of seedlings raised by him during the past season, and which may be seen at our establishment.

For English, French, and Fancy varieties, see our SPRING CATALOGUE or Advertisement in *Gardeners' Chronicle* of February 4.

Eight Collections of the newest Pelargoniums saved from the choicest-named sorts, per packet—Large-flowering varieties, 2*s.* 6*d.*; Fancy ditto, 2*s.* 6*d.*; J. Odier's 4 spotted ditto, 2*s.* 6*d.*

CARNATION AND PICOTEE SEEDS, from one of the choicest Collections in Europe,

and only from the most perfect flowers of the newest and handsomest English stage varieties, or seedlings from them.

For the Collections of Carnations and Picotees, see our SPRING CATALOGUE or Advertisements in *Gardeners' Chronicle* of January 14 & 21.

Carnations saved from the choicest flowers mixed 2*s.* 6*d.* per packet
,, Perpetual or Tree .. .. ..2 6 ,,

Picotees saved from the choicest flowers mixed 2*s.* 6*d* per packet.
,, Perpetual or Tree .. .. 2 6 ,,

DATURA.

Humilis flore pleno (chlorantha flore pleno, Bot. Mag., July 1859) deep golden yellow. A magnificent plant, producing a profusion of very large, double, sweet-scented flowers, which continue in bloom till the frost sets in, one of the greatest novelties of the season (rare). 9*d.* per packet.

ERIANTHUS RAVENNÆ.

Extremely elegant and more graceful than the Pampas Grass, which it resembles in appearance and habit of growth; its noble plumes of silvery inflorescense are pure white, and most delicately beautiful; a dried specimen can be seen at our establishment. 1*s.* per packet.

CUPHEA EMINENS.

Long tubed flowers, bright red and yellow, free flowering, and exceedingly handsome, forming a bush from 3 to 4 feet in height and with branches rising above the other in a horizontal manner, like those of the Norfolk Island Pine 1*s.* 6*d.* per packet.

PASSIFLORA.—CONTESSA Clara Gigliucci. lavender shaded with rose; flowers large, and produced in the greatest abundance the whole year round. A magnificent variety, very hardy new (seeds rare). 2*s.* 6*d.* and 5*s.* per packet.

ARCTOTIS GRANDIFLORA (New).—Beautiful pale sulphur yellow, centre dark crimson, extremely large and exquisitely beautiful. 1*s.* per packet.

THUNBERGIA COCCINEA.—Scarlet, flowering in clusters; very elegant, new, and handsome. 1*s.* 9*d.* per packet.

A Splendid Collection of 100 sorts of ANNUALS, including the New Sorts introduced this year, for	£1 1 0
A Splendid Collection of 50 sorts of ANNUALS, including some of the New Sorts introduced this year, for	0 10 6
A Splended Collection of 30 sorts of the most Showy ANNUALS	0 5 0

SORGHUM, OR HOLCUS SACCHARATUS SEED.

SUTTON AND SONS, IMPORTERS, can supply genuine new Seed at 1*s.* 6*d.* per lb., or 6*d.* per packet. With Instructions on Cultivation.

GYNERIUM ARGENTEUM, OR PAMPAS GRASS.—A packet of Seed, with Instructions on Cultivation free by post on receipt of 12-penny stamps. Plants 1*s.* 6*d.* to 3*s.* 6*d.* each.

SUTTON & SONS, Royal Berks Seed Establishment, Reading.

KOHL RABI, OR TURNIP CABBAGE.

SUTTON AND SONS, SEED GROWERS, Reading, have a good stock at present of fine new seed of KOHL RABI, the same kind as the specimens exhibited on their stand at the Smithfield Club Cattle Show and at the Crystal Palace Root Show. This is a valuable plant for Sheep feed and will thrive where Swedes and Turnips fail, not being liable to suffer from mildew nor caterpillars. Present price, 5*s.* per lb. The cultivation is very simple, as see Sutton's Farm Seed List.

Royal Berkshire Seed Establishment, Reading.

ABIES INVERTA (new Weeping Spruce Fir), a variety of the common Spruce, in growth like a Kilmarnock Weeping Willow; its leader straightens itself in the old wood, like a Deodar Cedar. It is the best weeping variety ever introduced. A few photograph copies have been taken, one of which will be forwarded on receipt of 12 postage stamps.

Price 15*s.* each, with usual allowance to the Trade, and one extra added for every three ordered. A few extra fine specimens at increased prices.

RICHARD SMITH, Nurseryman, Worcester.

MARCH AND APRIL THE BEST TIME FOR PLANTING ASPARAGUS.

YOUELL AND CO. having a large Stock of the above growing on the Sea Coast, of the finest quality, beg to offer it at the following prices:—

ASPARAGUS, GIANT,	two years	2*s.* 6*d.* per 100.
,, ,,	three years	3*s.* 6*d.* ,,
,, ,,	four years	5*s.* 0*d.* ,,

Royal Nursery, Great Yarmouth.

NEW PEA.

NUTTING AND SONS having purchased the Stock of a NEW DWARF WRINKLED MARROW PEA, raised by Dr. Maclean, offer it for distribution in pint packets at 2*s.* each. NUTTING & SONS will grow it this season for next year's supply.

This Pea is remarkable for its earliness as a wrinkled Marrow, dwarf habit (2 feet), fine flavour, and great productiveness.

Seed Warehouse, 60, Barbican, London, E.C.

THE NEW ROCHELLE BLACKBERRY, calculated to produce 150 bushels to an acre of fine well flavoured fruit suitable for preserving, wine, or for the dessert, coming in after the Raspberry; grows to the height of 5 to 10 feet. The fruit is produced in large terminal racemes, the individual aggregate berries are large like small conglomerated bunches of miniature black Grapes, the individual berries weighing, in many instances, 80 grains. It bears on the previous year's wood, similar to the Raspberry. A fine stock of plants is now ready, 9*d.* each, or 6*s.* per dozen. The Trade liberally supplied. A printed circular of its history, culture, &c., will be forwarded to every purchaser.

HENRY MAY, The Hope Nurseries, near Bedale, Yorkshire.

TO LONDON MARKET GARDENERS.

WANTED, CHOICE VEGETABLES AND FRUIT, DIRECT FROM THE GROWER.—A weekly supply throughout the season will be required, and as the prices will be liberal, first-class goods are indispensable. Growers may apply to

GEORGE TAYLOR,
VEGETABLE AND FRUIT-SALESMAN,
The Grand Stand, St. John's Market, Liverpool.

A GEM FOR 1860 IS THE

NEW MAUVE COLOUR VERBENA, LADY MIDDLETON,—Pips and truss large, fine form, quite new in colour, particularly fragrant, and in every point first-rate for pots, for bedding, or exhibition. Mr. Taylor of Shrubland Park Gardens, having seen it growing, says it is of similar habit to "Géant des Batailles," and will make a charming bed, and a valuable addition for the shading of the soft lilac varieties. See "Cottage Gardener," October 4, 1859, page 54, where Mr. Beaton, writing upon it, says: "I hasten to congratulate Mr. Jeffries, of Ipswich, on his good luck in raising a Verbena at last worthy of the name of 'Lady Middleton.' It has passed through the office of the 'Cottage Gardener' to our censorship, and I had a glimpse of it. Its fragrance filled the room; the colour is charming, and it is warranted to stand all weathers as well as 'Géant des Batailles' or 'Mrs. Holford.' Five out of seven of the fashionable dresses of this season are of the same colour as this Verbena, and Mr. Jeffries would be in the fashion next year by sending out his 'Lady Middleton' Verbena as a mauve colour." Plants last week in April 5*s.* each, or six for 21*s.*, free by Post, where required to parties forwarding Post-office order payable to WM. B. JEFFRIES, Arboretum Nursery, Ipswich, Suffolk.

PINE APPLES, GRAPES, &c.

PINE PLANTS, Fruiting and Succession.
GRAPE VINES, from Eyes, for Fruiting in Pots or Planting.

JOHN WEEKS AND CO. can now supply any quantity of very fine strong healthy Pine Plants, either Fruiting or Succession; also remarkably fine strong Grape Vines from Eyes, all the best sorts.

JOHN WEEKS & Co.'s Horticultural Show Establishment is now entirely devoted to the Growing and Forcing of Fruits in great variety, thereby showing the most improved plans of construction, and the most superior system of Hot-water Apparatus.

JOHN WEEKS & Co., Horticultural Builders and Hot-water Apparatus Manufacturers, King's Road, Chelsea, London, S.W.

NEW FUCHSIAS.

STEWART AND NEILSON, Liscard, Cheshire, will be ready to send out on the first week in April good Plants of the following:—

REV. J. TOBIN.—Tube and sepals light crimson, corolla puce, funnel shaped, well reflexed; good habit, and free bloomer. 7*s.* 6*d.*

MRS. JOYNSON.—Tube and sepals fine waxy white, corolla lilac edged with crimson, reflexed, large flower; good habit, and free bloomer. 7*s.* 6*d.*

MISS C. JONES.—Tube and sepals white, corolla rosy scarlet, large flower, well reflexed; good habit, and free bloomer. 5*s.*

SUPERB DOUBLE BALSAMS.

F. AND A. SMITH are now sending out SEED of their superb BALSAMS, which are unrivalled for size, form, brilliancy of colour, doubleness of flower, and habit of plant.

In collections of nine separate colours	2*s.*	6*d.*
,, ,, mixed ,,	2	0
,, ,, ,, half quantity	1	0

☞ The above are genuine only in our sealed packets, and may be had of most respectable Nurserymen and Seedsmen in the United Kingdom.—Dulwich, Surrey, S.

CHRYSANTHEMUMS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington begs to inform his friends and the public that he has the finest Collection and the largest Stock of Chrysanthemums and Pompones in the world, and can supply them by the 100, 1000, or 10,000.

25 Pair of Best POMPONES, 10*s.*
20 Pair of Best Large Varieties, 10*s.*
25 Pair of Best POMPONE CUTTINGS, 5*s.*
20 Pair of Best Large Varieties, Do., 5*s.*

CATALOGUES for one stamp. To save trouble all orders to be pre-paid.

WILLIAM HOLMES begs to offer the following in strong Plants of all the best varieties:—

	per doz.—*s.*
CHRYSANTHEMUMS	5
POMPONE Ditto	5
DAHLIAS	4*s.* to 6*s.* and 9
FUCHSIAS	4*s.* to 6
VERBENAS	3*s.* to 4

CATALOGUES in exchange for one stamp.
Frampton Park Nursery, Hackney, N.E.

WARRANTED GOOD SEEDS.

GEORGE DAVISON'S PRICED SEED LIST is now ready, and will be forwarded post free upon application. It contains selections of all the most approved Vegetable and Agricultural Seeds in cultivation. No. 1, Complete Collection for a large garden, 3*l.*; No. 2, 2*l.*; No. 3, 1*l.*; and No. 4, 10*s.* 6*d.*

Especial attention is paid to Grass Seed Mixtures.

Permanent Pasture Grass Seed mixed to suit every description of land, at from 27*s.* 6*d.* to 32*s.* per acre. Renovating Mixture, 9*d.* per lb. Fine New Red Clover, 52*s.* per cwt., cash. Samples supplied.—Hereford Seed Establishment.

SIX SUPERB NEW FUCHSIAS.

GEORGE SMITH begs to announce that Illustrations of the above, beautifully coloured by Mr. Andrews, will be sent in exchange for 12 postage stamps. For description see *Gardeners' Chronicle*, February 4 and 11.

G. SMITH'S CATALOGUE is now ready, descriptive of the above; also a first-class collection of GERANIUMS, DAHLIAS, VERBENAS, PETUNIAS, &c., in exchange for one stamp.
Tollington Nursery, Hornsey Road, Islington, London, N.

SUPERB NEW DOUBLE COROLLA'D FUCHSIAS.

SIR BEVOIS.—Tube and sepals dark scarlet, beautifully reflexed (a quality hitherto wanting in double corolla'd Fuchsias), corolla intense dark violet, expanded, very free bloomer.

CONSTELLATION.—A flower of immense size and substance, tube and sepals light red, corolla a light violet-tinted lilac, very distinct.

Blooms of the above were submitted to Mr. Glenny's judgment, who describes them as being "fine examples of double corollas, and may be considered noble flowers." Plants ready the 1st of May. A remittance or reference from unknown correspondents. Usual discount to the Trade.

WILLIAM WINDEBANK, Bevois Valley Nursery, Southampton.

CHINESE PRIMROSE.—Very superior fimbriated varieties saved by a first-rate private grower, per packet, 1*s*; fimbriata alba, do., 1*s.* per packet; fimbriata striata, choice, from the continent, 1*s.* per packet. The Trade supplied.

CALCEOLARIA.—This is annually received from a private grower, for years renowned for his first-rate Calceolarias, and has given the fullest satisfaction, per packet, 1*s.*; extra, from finest new, 2*s.* 6*d.* per packet: also fine new continental dwarf growing varieties, see Catalogue.

STEPHEN BROWN, Seed Establishment, Sudbury, Suffolk.

HENDON PARK NURSERIES, HENDON, N.W.

NEW DAHLIA—"THE CHANCELLOR."—First Class Certificate of National Floricultural Society; First Class, Brighton; First Class, Saffron Walden; First Class, Stoke Newington, &c.; First Prize as best Seedling Dahlia, Stoke Newington, 1859.

Plants of this magnificent new variety will be sent out on May 1 next. Early orders are requested. Delivered carriage free in London.—EDWARD SHENTON.

CHOICE FLOWER SEEDS.—SPLENDID HYBRIDISED CALCEOLARIA, saved from Messrs. Dobson & Sons' superb collection, with directions for sowing, 2*s.* 6*d.*, 5*s.*, 10*s.* 6*d.*, and 21*s.* per packet.

CINERARIA from the newest kinds, with directions for sowing, 1*s.* and 2*s.* 6*d.* per packet.

PRIMULA SINENSIS, the most beautiful fringed, of various shades of colour, with directions for sowing, very fine, 1*s.* and 2*s.* per packet.

BALSAM, fine Camellia-flowered, 1*s.* per packet.

HOLLYHOCKS, superb mixed, 100 seeds, 1*s.*

VICTORIA SCARLET TEN-WEEK STOCK, fine, 6*d.* per packet.

DELPHINIUM FORMOSUM, 6*d.* per packet.

The above are sent out in sealed packets, and warranted to be of a very superior kind. All post free.

JOHN DOBSON & SONS, Seedsmen, &c., Woodlands Nursery, Isleworth.

HALF SPECIMEN TEA-SCENTED ROSES,

GROWN IN 6-INCH POTS FOR EXHIBITION.

FINE SELECTED PLANTS	per doz. 24*s.*
Smaller Plants in 48 or 4-inch pots	,, 12

Selection left to W. W. & S.

WM. WOOD AND SON are now prepared to supply fine strong Plants of the above from their extensive STOCK. CATALOGUES may be obtained on application, and extra plants added to each order to compensate for carriage.
Woodlands Nursery, Maresfield, near Uckfield, Sussex.

NEW ROSES FOR 1860.

WOODLANDS NURSERY, MARESFIELD, NEAR UCKFIELD, SUSSEX.

WILLIAM WOOD AND SON have now ready for delivery the following superb new ROSES, in fine strong healthy plants. 5*s.* each, retail; 2*s.* each, Trade price.

HYBRID PERPETUALS.

Admiral Nelson (Ducher)
Alexandrine de Belfroy (Fontaine)
Belle de Bourg-la-Reine (Margottin)
Duchesse de Magenta (Guillot)
Gloire de Santenay (Ducher)
Louis Quatorze (Guillot)
Madame Boll (Boyau)
Madame Charles Crapelet (Fontaine)
Madame Eugène Verdier (Guillot)
Madame Louise Carique (Fontaine)
Mademoiselle Bonnaire (Pernet)
Montebello (Fontaine)
Princesse Clothilde (Fontaine)
Sénateur Vaisse (Guillot)
Souvenir de Monceaux
Triomphe de Lyon (Pernet)
Vainqueur de Solferino (Damaisin)
Victor Verdier (Lacharme)

TEA-SCENTED.

Duc de Magenta (Margottin)
Mademoiselle de Sertot (Pernet)

DESCRIPTIVE CATALOGUES of the above may be had on application.

NEW ROSE.

A. PAUL AND SON invite attention to their NEW TEA-SCENTED ROSE "PRESIDENT," which obtained a Certificate of merit from the Royal Botanic Society on the 21st March, 1860, and which is now first offered for sale. It is figured in the Rose Annual for 1859-60. The plant is of hardy constitution; the flowers are large, full, of fine form, varying in colour from blush to salmon, and very sweet. It is confidently anticipated that it will prove one of the finest of Tea-Scented Roses. Price 5*s.* per plant; a few extra strong plants, 10*s.* 6*d.* each. The usual discount to the Trade when three or more plants are ordered at once.—Nurseries, Cheshunt, Herts.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SONS' PRICED and DESCRIPTIVE CATALOGUE for 1859, & SPRING 1860 comprising Fruit Trees of all the leading kinds; New and Selected Roses; fine varieties of American Plants; Choice and Rare Conifers; Evergreen and Deciduous Trees and Shrubs; and a fine stock of transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

GENUINE GARDEN SEEDS.

TIMOTHY BRIGDEN, SEEDSMAN and FLORIST, begs most respectfully to inform his friends and purchasers of SEEDS generally, that his unrivalled Collection of GENUINE AGRICULTURAL VEGETABLE and FLOWER SEEDS, is now ready, of which a PRICED CATALOGUE may be had upon application.

T. B. further guarantees that every article is GROWN and SELECTED with the greatest care under his own personal attention. Orders from unknown correspondents must be accompanied with Postage Stamps or P. O. O.
Seed Establishment, 10, Railway Arcade, London Bridge, E.C.

AMERICAN PLANTS, &c.

MESSRS. WATERER AND GODFREY'S CATALOGUE for the present season is now ready, and may be had on application. It describes fully all Rhododendrons worth growing, and contains a List of Azaleas, Hardy Heaths, and other American Plants, as well as a summary of the general stock of the most extensive Nurseries in England.

The Catalogue may also be had at Messrs. MAY'S & Co., 1, Wellington Street, Strand, W.C.
Knap Hill Nursery, near Woking, Surrey.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their PRICED AND DESCRIPTIVE CATALOGUES of Exotic Orchids, Stove, Greenhouse, and Hardy Ferns, Miscellaneous Stove, Greenhouse, and Hardy Plants, Variegated and Ornamental Foliaged Plants, Conifers, Roses, Rhododendrons, Indian Azaleas, Gloxinias, Fuchsias, Geraniums, Herbaceous Plants, Fruit Trees, &c., are now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

J. LINDEN'S ESTABLISHMENT at BRUSSELS for the INTRODUCTION of NEW PLANTS respectfully announces that the following select novelties will be ready for Sale on and after the 1st of May next. Delivery free out of the Custom House in London.

PTERIS TRICOLOR (LINDEN).—Wonderful and most extraordinary variegated Fern, described in *Gardeners' Chronicle*, p. 217. Fine plants, 42*s.*

CAMBYLOBOTRY'S REGALIS (LINDEN).—Charming plant with magnificent ornated foliage (the leaves being 8 inches in length by 5 inches broad), superior in beauty to any Anæctochilus. Nice plants at 21*s.*

	s.	*d.*
Begonia hypargyræa, species from Assam.	8	0
,, margaritacea, species from Assam.	8	0
,, nivosa, species from Assam.	8	0
,, Duchesse de Brabant	8	0
,, Funckii	5	0
Campylobotrys smaragdina, Linden	12	6
Columnea erythrophlœa, Decaisne	8	0
Cyanophyllum (?) assamicum	21	0
Gesnera ignea, Linden	8	0
Isotypus rotiflorus, Triana	21	0
Lasiandra Fontanesiana, D. C.	8	0
Locheria (Achimenes) œnochroa, Decaisne	8	0
Locheria (Achimenes) pardina, Decaisne	8	0
Maranta argyræa, Linden	21	0
Monochætum nitidum, Linden	8	0
,, tenellum, Naudin	8	0
Poggendorffia rosea, Karsten (a new genus of Passifloraceæ)	12	6
Salvia cacaliæfolia, Benth.	8	0
Triolena scorpioides, Naudin	8	0
Cibotium princeps (splendid Fern)	21	0

FOLIAGED PLANTS.

Cupania Pindaiba	42	0
Guarea brachystachya	25	0
Icica nucifera	42	0
Oreopanax (Aralia) dactylifolium	42	0
Oreopanax platanifolium	42	0
Rhopala crenata	42	0
,, frigida	42	0

J. LINDEN'S NEW CATALOGUE for 1860, just published, contains the descriptions of the above-mentioned plants, and will be sent free on application. Different species (among which is Pteris tricolor) are figured in the second Number of "Hortus Lindenianus," which will appear in the beginning of April at Mr. Lovell Reeve's, Henrietta St., Covent Garden, W.C.

Agent in London: M. R. SILBERRAD, 5, Harp Lane, Great Tower Street, E.C. Brussels: Royal Zoological and Horticultural Garden.—March 31.

GRAND EXHIBITION OF CAMELLIAS, &c.

IN THE EXETER NURSERY.

LUCOMBE, PINCE, AND CO. respectfully announce that the splendid specimens in their celebrated large Camellia House are now finely in flower.

Their SHOW HOUSE is also in great perfection, being filled with a choice and extensive collection of various ornamental plants.

CAMELLIA BLOOMS, CHOICE BOUQUETS, and CUT FLOWERS supplied to order on the shortest notice, and carefully packed to travel any distance with perfect safety. Prices can be had on application.—Exeter Nursery, Exeter.

EXHIBITION OF CAMELLIAS.

JOHN HALLY respectfully invites attention to the splendid collection of CAMELLIAS now in bloom in the Conservatory at his new Nursery, Granville Park, Blackheath; three minutes' walk from the Lewisham, and a quarter of an hour's walk from the Blackheath Station of the North Kent Railway.

N.B. Intending purchasers had better come on to the Blackheath Station and call at the Seed shop opposite, where conveyances are always in attendance.
Blackheath, opposite the Railway Station.

THE NEW HORTICULTURAL GARDEN.—Persons wishing to have specimens of their Works placed for Exhibition in the New Garden at Kensington Gore should now forward particulars of the class of articles they wish to exhibit, and the space required, that the Council of the Horticultural Society may decide whether the articles proposed to be exhibited will be appropriate to the Garden, and whether space can be found.

No space will be allotted to articles which it is proposed to remove at the end of a few months.

No charge will be made for space.

The name of the Exhibitor will be affixed to each article.

Space will probably be found for objects IN CEMENTS, such as Edgings, Balustrades, Vases, Statues—IN TERRA COTTA, such as Ornaments for Sundrils, Edgings, Balustrades, Vases—IN BRONZE AND IRON, such as Vases, Statues, Seats, Trellis work—IN STONE AND MARBLE, such as Statues, Vases, Edgings, for fountains; coloured varieties for pavements—IN CHINA, such as Vases, Jardinières—ENCAUSTIC TILES.

SLATES of large size and peculiar quality for Greenhouse walks.

Proprietors who may wish to exhibit specimens of their quarries will be able to exhibit such in the shape of pedestals, &c.

Letters to be addressed to the Assistant-Secretary, Horticultural Society, 8, St. Martin's Place, London, W.C.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.—The Horticultural Society is about to resume the importation of seeds and plants by means of Collectors in foreign countries. The Council are therefore desirous of finding a well informed active Gardener familiar with garden plants who is ready to engage in this undertaking. A knowledge of Spanish or Portuguese would be desirable. Salary in proportion to attainments.—Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, MARCH 31, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	April 2	Entomological	8 P.M.
WEDNESDAY,	— 4	Royal Botanic (Spring Meeting)	2 P.M.
THURSDAY,	— 5	Linnean	8 P.M.

THE PAPER MAKERS, or some of them, appear to be in the condition of GOETHE'S unfortunate apprentice to magic. After trying their charm in vain on Sir ROBERT PEEL and his successors they at last have found a Chancellor of the Exchequer who anticipates every wish. The apprentice cried for water to the broomstick, and the broomstick gave him enough to drown him; the paper makers cried for relief to the Chancellor, and the Chancellor has flooded them with it.

They now say that they will be ruined, and what is worse, that the public will be badly served. In like manner when corn-laws were repealed, our good old English farmers vowed that not only they, but the whole English nation was condemned to destruction. Yet the farmers were mistaken. And so with the glass makers: the excise of glass was a millstone round the neck of the manufacturer, but the removal of the excise was by some thought a greater evil. Both conjured up the demon of competition. Yet glass-making has thriven more than ever. The paper manufacturers are in the same predicament. It is certain that substitutes for rags, from which paper has been chiefly made, are around us in boundless profusion, but to use them instead of rags involves the necessity of altering machinery. You cannot convert into paper new materials with the same mechanical contrivances as are sufficient for rags, neither will it answer to employ for such a use foreign fibres which are fit for textile purposes, because they are worth more money than paper makers can pay. The material of paper must either be refuse or short-stapled substances not convertible into rope or woven fabrics. Rags are the favourite source of paper, because of the lowness of their price, and not because they are half-formed paper, as somebody says—which they are not. Machinery has been made to suit them. It is therefore quite natural that paper manufacturers should view with dislike whatever puts them to the necessity of expending more capital than has hitherto been required, in order to use unaccustomed substances. But to say that if they cannot get rags they cannot make paper is surely un-

worthy men of their intelligence. As to the fear that the English trade will be driven out of the market by foreign paper made from the rags of which foreign Governments prohibit the exportation, we shall only say that such low priced foreign paper as has been hitherto made is unfit for the purposes to which paper is principally applied in this country.

It is not worth while further to notice the statements that have been published respecting this matter; and we will only ask those who are concerned to think over the following suggestions, and consider whether it is not their interest to shake off the thraldom of rags, to do which is the only way to render themselves independent of foreign governments. There is an abundance of available short fibre in the common Furze, not fit for linen or cordage, easily extracted and easily bleached. There is an excellent material of a similar kind, with a longer staple, in the common Broom. Cannot the enormous quantity of land laid waste by railways be profitably *cropped* with Furze and Broom, which would embellish those dreary lines? The crop could be sown by any clever gardener, regularly cut at very little expense, be carried on by railway to retting ponds and mills for making "half stuff," that is to say, half-made paper; and thence transferred by those same railways to the paper manufacturer himself. The railway companies would thus receive some rental for their land, and a prodigious quantity of good material provided at a cost not greater than that of converting filthy cotton waste into paper would be available for the paper market. Another refuse material which promises well is the bine or stem of the Hop, after the Hops are picked. Surely it would pay to construct mills in the neighbourhood of the Hop gardens of Kent and Worcestershire. To these substances it is said that the fibre of Peat may be added; but of this we have no certain intelligence. It is true that the real worth of such articles can only be ascertained by manufacturing them; but the worst holds out a better prospect of fitness than the straw that was converted into the paper we are now writing on, which would have been regarded at one time as the most intractable of substances.

As to materials of exotic origin, there are the husks of Maize Cobs, that is to say, the thin leaves which protect the ear of Indian Corn, and the refuse fibre of Sugar-cane mills; they may be procured from an easy distance, and might come home as dunnage. Their quantity is inexhaustible. Then there is the bad short Cotton of India, now worthless in the market, and other common vegetable substances of the same country, such as Moonj, Bhabhur, Dhanche, and Vora, the cost of which should be little more than freight. We may also mention the wool of the Silk Cotton trees of tropical America, within a few days' sail of Liverpool, a substance only employed in stuffing pillows and mattresses, or blown away like the Tree Cotton of Canadian Poplars. This is a short-stapled article, *feræ naturæ* as they say, demanding no cultivation, and whose market value is 0. Its price is the cost of collection and freight. It is ready made matter, bleached easily, when bleaching is necessary. Cannot this, or the fleecy down of countless tropical Asclepiads, be compelled to obey the commands of the paper maker, armed as he is with size and whitening. We do not pronounce a positive opinion as to the value of any one plant in particular; but we are persuaded that commerce will easily bring all such substances under trial; and until they have been made the subject of fair experiment, we must withhold assent to the doctrine that nothing will make good paper except old rags. It is incredible that our machine makers are unable to provide mechanical contrivances capable of reducing the most obstinate fibre into pulp. It is equally incredible that merchants should be unable to procure worthless substances at as low a price as rags; and it is not less inconceivable that chemists cannot make bleaching materials at a far lower price than they now bear in the market.

All these improvements must however be a work of time. Machines cannot be altered, or experiments tried, or new materials obtained in a day. It would be 15 months before a crop of Furze or Broom could be cut even if railway wastes were sown immediately. In the meanwhile the price of paper cannot be expected to fall in any considerable degree.

A ROOT of the CHINESE YAM now before us is so much finer than any we have previously seen, as to call for a special description. It measures exactly 40 inches in length, and weighs 4¾ lbs. In form it may be compared to a huge Cucumber with a slender neck. The surface is even and unbroken; there is no tendency to fork; but, owing to the stiffness of the ground in which it has been grown, the outside is not so perfectly level as it would have been in sand or vegetable soil. Its greatest girth is 8 inches at 5 inches distance from the point. And all this is the produce of one season.

The specimen in question, which was grown at Hatfield and for which we are indebted to the kindness of the Marquess of SALISBURY, seems to confirm Mr. IVERY's opinion that this new esculent will become in time a crop of the same nature as the Potato, over which it has some advantages. It does not suffer from frost; it does not mildew; no one has seen it diseased; and it requires less fuel to cook it; 10 minutes' boiling is all that it demands. On the other hand it must have deep trenching, an excellent thing in gardens, which are scarcely ever trenched deep enough. If we assume that a square yard will be sufficient for a single plant, and that two such roots as that now described, or an equal weight—say 9 lbs.—will be produced by each plant—we shall have above 19 tons an acre. But it will be prudent not to calculate upon more than 10 tons, which we should think would be a paying crop even for a market gardener if he has good deep rich land. As to purchasers being unwilling to buy the roots, it is not a very hazardous prediction to say that as soon as they know the value of Yams they will take them in preference to Carrots or Parsnips. What chemists may say as to their nutritive value has to be ascertained; but it is incredible that a root which is the universal food of all tropical countries should be of less value than other farinaceous products of the earth. The starchy matter, or fœcula, of the Chinese Yam is among the purest that is known, and would enter into competition with Arrow-root itself.

AT a meeting of the Horticultural on Tuesday last 51 more Fellows were elected, making 572 since the commencement of the year. In another month there will be a further ballot.

The works at Kensington Gore are in active progress. The great levels have been almost finished; so has the arterial drainage, both of which operations are at the expense of the Royal Commissioners. The foundations of the main entrance and future offices of the Society are completed; the arcades to be built by the Royal Commissioners will soon begin to rise; and the future features of the garden will daily become more apparent. A general plan of the ground by Mr. NESFIELD has been finally accepted by H R.H. the President, and the Council of the Society; and as soon as the levels are complete Mr. EYLES will begin to execute the principal groundworks. In the meanwhile Mr. NESFIELD is occupied in working out the minute details of his plan.

In another column will be found an invitation to manufacturers of all kinds of horticultural objects, statuary, vases, tiles, border edgings, to make application for space in which to exhibit them; and it is now settled that the group of bronze castings and granite work designed by Mr. DURHAM in memorial of the Great Exhibition of 1851, and to be executed at a cost of between 6000*l.* and 7000*l.*, shall occupy a prominent situation in the Garden.

Chiswick, too, is once more rising into horticultural importance, as will be seen by a report in another column. Large numbers of fruit trees have been planted for trial, considerable collections of kitchen garden articles have been sown for comparison, and activity is infused into every department. So that although as an ornamental place of resort it has perished, yet as an experimental garden it must soon acquire a value it has scarcely possessed before. All that it now requires is supplies of seeds of new and handsome plants for distribution among the Fellows of the Society; and these cannot be had till a good, active, and conscientious collector shall have been set to work. The Society is, however, doing the best it can to meet the wants of the public.

GOOD MATERIALS FOR MARKING the labels of plants are of such general utility that it seems desirable to bring into notice every invention which promises to be better than those which have gone before. We cannot say that any at present in use are precisely what are most desirable. Sticks notched upon SETON'S, or any other plan, can only be used with a list, and when the list is gone all is gone. Lead stamped with steel letters are excellent, but rather expensive and troublesome to make well; besides which their weight soon causes the wire by which they are suspended to cut through them. Zinc labels written on with prepared ink are in many respects excellent, but they would be more handy if they could be marked with a solid pencil instead of a liquid. White lead paint rubbed on a smooth lath with the finger and then written on with a pencil, offers a very dirty and not very permanent method.

Our readers will, therefore, be glad to know that a "*solid marking ink pencil*" has been prepared by Mr. DUNN, of Durham Place, Dalston Green, London, which promises to supersede the old contrivances. In appearance it resembles those black-lead Cedar pencils, whose points are made to protrude by a spiral turn in the case. The material itself is in texture like lithographic chalk; that is to say, softer than the softest lead, but hard enough to write with. When used upon wood, linen, or ivory, it produces an indelible mark, which is red or black according to the firmness of the pressure, and the dampness of the surface written on. By exposure to light these marks become deeper coloured. Our experiments on ivory-handled knives and common deal tallies are perfectly satisfactory. But we see that if wood is previously soaked in a weak solution of common soda, the marks become blacker.

When used upon zinc which has been previously moistened it also seems to do very well. But the marks are rather too faint, and it would seem that a longer exposure to light is required in order to fix the colour on that metal. In effect it is inferior to the nitromuriate of platinum; but it is more easy to write with, and after all is probably dark enough.

We think these pencils well worth a trial. The case itself, or holder, only costs eighteenpence, and pencils for refilling it are supplied at a shilling apiece, so that they are within the means of everybody who requires such a contrivance.

SOME CLIMBERS IN CEYLON.—THE GOAT'S FOOT IPOMŒA.

From the Colombo Observer of 19th January, 1860.

SOME months ago when the Galle Face was being cleared of weeds, some person advised that the long straggling Creeper close to the sea-side road should be pulled up also; but the advice was overruled in consideration of the flowers this plant produces, and we are sure that the floral display now daily to be seen on each side of the road can seldom be equalled by any one plant growing in Ceylon. The thousands of large dark rose-coloured, bell-shaped flowers, with still darker coloured throats, intermixed with the dark green and curiously cloven leaves of this plant, cannot but be observed and admired. The creeper in question is known to botanists as the Ipomœa pes capræ, so named from the resemblance its two-lobed leaves bear to a goat's foot. It is peculiarly a sea-side plant, and is one of those referred to by Sir Emerson Tennent in his list of littoral plants. It is so tenacious of life in such places, that we have seen yards of its stems tossed up by each succeeding wave, and yet take root at once on being allowed to rest. It claims close alliance with two other seaside plants, both equally interesting, the one for its peculiar qualities, and the other as a magnificent Sweet-Pea-like plant. The former is a Grass, rejoicing under the name of Spinifex squarrosus, and is also referred to by Sir J. E. Tennent. When its seeds are ripe large balls of it with prickles (seed envelopes), about 2 to 3 inches in length, break off and run along the ground, sowing their seeds as they do so. Its Singhalese name is Rawana Ræwula, meaning Ráman or Ramah's beard. When burnt it makes a crackling noise, which strongly reminded us on one occasion of our boyish days, when we used to create a warlike sensation by throwing salt in the fire! The other plant is no doubt the Moodoo Avari, which Moon mistook for the West India Snail Bean, Phaseolus Caracalla, which we have not yet seen in Ceylon. Our Colpetty one is the Canavalia obtusifolia which we shall notice shortly amongst Mr. Thwaites's indigenous Leguminosæ.

Several years ago we saw the hedges in a portion of the Peninsula of Jaffna covered with a large blue flowered Ipomœa (?) which a good deal resembled some of the forms now cultivated about Colombo, and in this quarter we have various species, assuming every colour of the rainbow. Everywhere about Colombo the small Vistnu-krandi (cure for Vishnu's Dysentery), with its lovely blue Forget-me-not-like flowers, adorns the pastures and the sea shores—it is the Evolvulus alsinoides. The Ipomœa stipulata, and the only species of Breweria, and Aniseia with those gaudy night-blowing moon flowers, and the tiger-footed Ipomœa pes tigridis, so called from the resemblance its beautiful lobed leaves bear to a tiger's foot, have all flowers of snowy whiteness, and except the last, are most conspicuous in the jungles up from the coast to Puselava. The very curious Dodder plants, Cuscuta, with their rootless and leafless thread-like

stems, which are seen creeping over tall Grass, or in jungles, with their small nearly inconspicuous flowers, belong to the same order, and one with spotted stems and flowers, the latter very large for the genus, which we lately found at Neuera Ellia, and in flower on our way up to the summit of One Tree Hill, we hope will turn out to be a species not before well known. The various forms of Ipomœa tridentata and I. filicaulis (we consider them only one species), with their light cream-coloured flowers, with dark purple centres, are very pretty and very common cinnamon garden plants, and the Ipomœa obscura, with its white flowers and heart-shaped leaves, is also common everywhere here. The Ipomœa chryseides with its tassels of tiny yellow flowers about ¼ inch in size is common in most places, while one of our showiest jungle plants, dedicated to Mrs. Horsfall by being called I. Horsfalliæ, abounds in our jungles and is decidedly indigenous. It has rose-coloured flowers and deeply dissected leaves, with enormous Yam-like roots, and is known to the Singhalese as the Kiri-bada-ala. A species of Pharbitis which Mr. Lear raised at Peradenia and supposed to have sprung up amongst some South American seeds, turned out such a beauty that the great nurseryman, Mr. Knight, sent him 20*l.* for it, and we suppose it is the P. Learii of the books.

The Clove-scented and much dissected leaved Quamoclit, one of the most in request for covering trellis work, and the cordate-leaved one, both with scarlet flowers, are foreigners, and so are the Morning Glories now so common in Ceylon, and whose colours remind us of the lines:—

> "What skilful limner e'er would choose
> To paint the rainbow's various hues,
> Unless to mortal it were given
> To dip his brush in dyes of heaven."

The blue-flowered Jaquemontia was very lately introduced to Ceylon, but is now one of the most favoured perennial creepers we have got—it is always in flower. The Ipomœa dissecta and I. pulchella are equally famous for covering houses in a short space of time. The arrow-shaped leaves of the indigenous Ipomœa reptans, the Konkoon of the Portuguese, are a favourite vegetable, and are carefully cultivated for that purpose in gardens; while every person knows, or ought to know, that the famous Sweet Potato is the produce of the Batatas edulis, one of this order, and though now one of the most commonly cultivated plants in Ceylon, is a native of South America. For our own part we are very fond of good Sweet Potatoes, even with their frosty taste, and infinitely prefer them to bad, dear, common Potatoes, qualities now become frequent.

MYCOLOGY.—No. XII.

Lycoperdon giganteum, *Fr.*—In all the Fungi which we have hitherto described, the fructifying surface though turned away from the light, and concealed in infancy, is in free communication with the outward air. There is however a considerable tribe of Fungi in which the hymenium is never exposed till all the functions of fructification are finished, and the spores or fruit are ready for dispersion. Amongst these are the Puffballs, with which almost every one is familiar, either as playthings from their affording amusement by the issue of the spores in a smoky cloud when squeezed, or as a popular remedy for cuts and nose bleeding. The largest of these is *Lycoperdon giganteum*, which attains occasionally enormous dimensions, and occurs in great quantities, though in many districts it is local or only an occasional visitant.

Not only is the fructifying surface in the Puffballs and their allies inclosed in one or more coats called peridia, but the double membrane, like the gills of Agarics over which the hymenium is spread, is sinuated and waved in every direction so as to form an inextrible labyrinth, resembling when the plant is young the crumb of bread on the first glance, though not, like that, consisting of a mere mass of bubbles compacted into a solid mass without a general communication with each other. If these sinuous cavities are examined with a good lens, while they are yet entire, a few delicate threads will be seen to traverse some of them, and if a higher magnifying power be used the structure will be found to be precisely similar to that of an Agaric, the spores being produced perfectly free at the tips of little spicules seated at the top of the cells of which the hymenium is composed.

At first the contents of the Puffball are white as snow. A change however soon comes over the purity of the crumblike mass. A slight yellow tinge accompanied by an unpleasant odour first appears; the walls of the cavities become flaccid and moist, and soon their structure is altogether lost, and for a time the whole forms a soft mass like an olivaceous green poultice. Gradually the moisture is absorbed, the outer bark gives way if it did not crack at an earlier period, showing beneath it a thin tough peridium stained with the olivaceous mass within; and this in turn bursts and the whole cavity is filled with a dusty mass of threads and spores, the latter of which are dispersed in myriads with every rough motion of the wind.

Lycoperdon giganteum has sometimes been referred to the genus *Bovista*, which is distinguished from the more common Puffballs by the presence of two distinct peridia, and from most of them by the spores retaining the spicules at the tips of which they were first developed. The affinities however of the Giant Puffball are evidently with *Lycoperdon*, and therefore Fries has kept it in that genus notwithstanding its distinct outer bark.

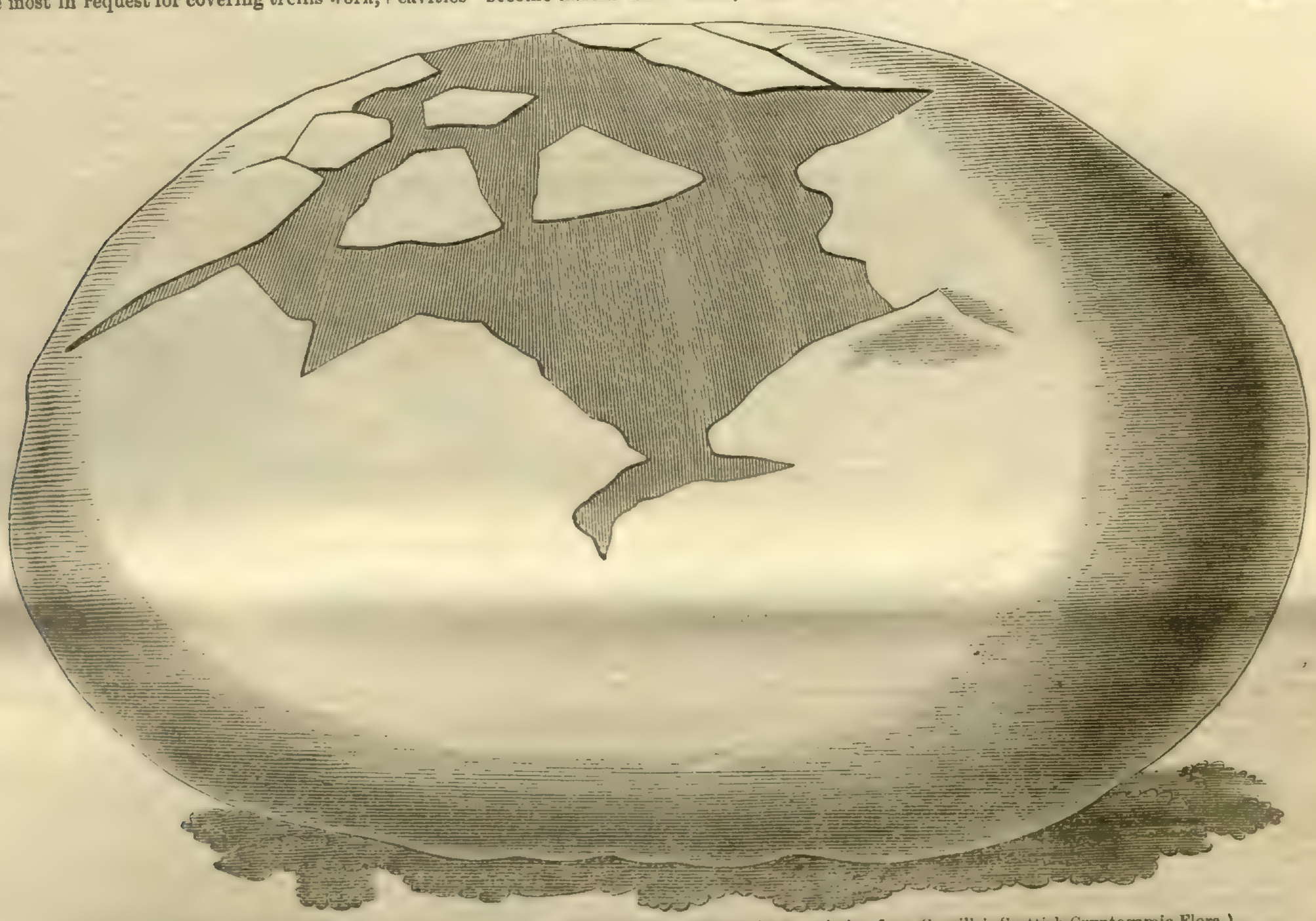
Lycoperdon giganteum is one of the very best of our esculent Fungi, when gathered in quite an early stage of growth and properly dressed. Both Dr. Badham and Mrs. Hussey speak highly of it. It is much used in Italy, where it is specially called Vescia maggiore buona da friggere (the large Puffball good for frying), but Roques does not speak of its use in France from personal experience, and there is very little about it in Paulet. This Fungus will not keep many hours after it is gathered, and Vittadini* therefore advises cutting slices from the Fungus as it grows, and in this way a supply may be obtained for a week.

Mrs. Hussey's directions for cooking the Giant Puffball are as follows:—They are in a proper state for cooking when, on cutting across, the interior is of an uniform pure white. If yellow stains appear they are too old. Slice them half an inch thick, have ready chopped herbs, pepper, salt, &c., as for an ordinary omelette of eggs, dip the slices into yolk of egg and sprinkle the herbs and condiments upon them, fry in fresh sweet butter, and let them be eaten immediately. They are much lighter and more digestible than egg omelettes and resemble brain fritters."

The whole of the Puffballs however young are certainly not good when dressed in this wise. We have found *Lycoperdon cælatum*, however young and carefully prepared, though it had when dressed a very delicate appearance, to be quite uneatable, and *Bovista plumbea* belongs, in our estimation at least, to the same category. Some species of Puffball is sold for food in the Bazaars at Secunderabad, but what we know not, as at present we have not been able to procure a specimen of it.

It has been long known that burnt Puffballs have anæsthetic properties, and they have in consequence been successfully employed for taking honey without destroying the bees. Of late a further use has been made of the dry mass as a substitute for chloroform, and some important operations have been performed under its influence with perfect success. The substance was once also employed as tinder, and there is little doubt that if well beaten to divest it of its spores it might be substituted for *Amadou*. The spores mixed with milk are a popular remedy in Italy against scouring in oxen.

M. J. B.



LYCOPERDON GIGANTEUM. Natural size of a very small specimen. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

* This is taken from Dr. Badham's book. We cannot find precisely this account in Vittadini, but as Dr. Badham was a good Italian scholar we have no doubt that he was correct in his report.

SIR W. J. HOOKER'S REPORT ON KEW GARDENS, &c.

Royal Gardens, Kew, 27th January, 1860.

Sir,—In obedience to your instructions I shall render this my annual Report on the Royal Gardens as brief as may be, for the past year 1859. The number of visitors has been 384,698; 20,000, indeed, short of the previous year, when it suddenly rose far above the average annual increase, so much so that we still show an increase of 23,000 over 1857. The diminution is to be in a great measure accounted for by the wet spring and autumn of the past year and the very sultry heats of summer.

1. *The Botanic Garden.*—In this department the most manifest improvement is in the increase of the general collection of plants, by an active correspondence and a system of exchange with almost all parts of the world, especially of such kinds as are useful and ornamental, rejecting such as have neither of these recommendation; but, of the latter, specimens are preserved in the Herbarium for the use of the scientific botanist. In pursuance of the instructions of the Board, the flower-borders have been considerably increased, and a great number of the more gloomy evergreens have been moved and replaced by flowering trees and shrubs. No additions to our hothouses and greenhouses have been required, but all our plants in the existing ones have greatly improved in beauty and fineness of specimens. The arrangement of the inmates of the Palm stove is at this time undergoing a change that has already proved highly advantageous, both for the better growth of the noble Palms and for the general effect of the interior

of that vast building; for all the largest plants (a few of them 60 feet high) are being removed from their huge and unsightly tubs and planted in the ground under the great dome, so that the visitor now walks among them on a level with their lofty but yet graceful trunks, and obtains such an idea of their magnificence as has no parallel in Europe.

2. *The Pleasure Ground or Arboretum.*—Besides the annual improvement here consequent upon continued planting from our nursery, the growth of existing trees and shrubs, the formation of new walks, and the better keep of the very extensive lawns, there are two features in anticipation which will add to the beauty and attractions of this ground more than anything that it has yet been my privilege to record. One is the new lake, of 5 acres in extent, with wooded islands (now in progress and nearly completed); the other is the forthcoming erection of what has long been the great desideratum of the Gardens, a Conservatory or temperate Greenhouse, on a scale commensurate with the extent and importance of this great national establishment, and destined for the reception of all trees and shrubs from extra-tropical countries, especially our own colonies. A grant has been sanctioned by Parliament for this structure during the past session, and a very beautiful and efficient plan prepared by Decimus Burton, Esq. (the designer of our Palm house); and tenders for the erection are now under consideration. As the contents of this structure will be of the same character as those hardy plants which constitute the "Arboretum," it is the intention to erect it within the so-called Arboretum (or pleasure ground), raised on a terrace, which will be parallel with and near to the fine Deodar vista leading to the Pagoda. As this noble piece of ground is annually becoming more popular and more frequented, it has been determined at once to extend the period of admission to the public, which was little more than four of the summer months, to six months in the year, namely, from the 1st of May to the end of October. Within these grounds is the private garden belonging to her Majesty. This has been greatly improved by the addition of new walks and extensive shrubberies, now completed. Attached to this ground also is the nursery formed for the supply of the Metropolitan Parks, which is well stocked with the necessary trees, &c., for immediate or future use.

3. *The Educational, Instructive, and Scientific Department,* including the two Museums stored with objects of the most varied and valuable description, systematically arranged; the continually increasing and certainly unrivalled Herbarium, and the Library. —These are more than ever frequented by persons who desire to obtain information on everything connected with Botany and Vegetable Economy, and the useful and commercial products of plants; not only by our own countrymen, but to a remarkable extent by foreigners; and there is scarcely a botanical work of any repute, whether published on the continent of Europe, in America, or in England, that is not largely indebted to Kew for much of its value. Full particulars were given on this head in my "Report on the Progress and Condition of the Royal Gardens of Kew from 1853 to 1859," addressed to the first Commissioner of Her Majesty's Works. Since that report appeared, six months ago, several short courses of excellent practical lectures have been voluntarily given by Mr. Oliver to our foremen and gardeners, who have eagerly availed themselves of this great boon, and which have already been productive of beneficial effects. We stand largely indebted to the several Government offices for the encouragement they extend to Botany as well as other departments of useful practical science. The Secretary of State for Foreign Affairs has sent one of our well-educated Kew gardeners as botanist to join the present Niger expedition under Dr. Baikie, as successor to the late Mr. Barter; and upon an equally important scientific mission, under the sanction of the First Secretary of State for the Colonies, a competent and experienced botanist is about to visit the Fejee Islands, to explore the vegetation, and to report on their products, soil, &c., and their suitableness for the growth of Cotton. A fourth appointment during the past year is that of a well-educated gardener from this establishment as foreman to the Royal Botanic Garden in Ceylon; and a fifth has accompanied Mr. Markham to the Andes of Ecuador and Peru, for the purpose of procuring plants and seeds of Cinchonas (Medicinal Barks), for transport to India on a very large scale. Mr. Bourgeau has recently returned from Captain Palliser's British North American Exploring Expedition (to which he was sent by Her Majesty's Secretary of State for the Colonies); while another able botanist, accompanying the Scientific Boundary Expedition, Dr. Lyall, is still investigating the vegetation of British Columbia, under the sanction of the Admiralty. Besides the several periodical works which are carried on exclusively from the materials, and by authors engaged at Kew (mentioned in my detailed Report), the past year has witnessed the completion of the "Flora of Tasmania," by Dr. Hooker, the last of a series of botanical works, the result of Captain Sir Jas. Ross's Antarctic Voyage, by order of the Lords Commissioners of the Admiralty; the appearance of the first part of Dr. Grisebach's "Flora of the British West Indian Islands," by order of the First Secretary of State for the Colonies, and Mr. Thwaites's work on Ceylon plants. And, lastly, I cannot close this Report without making allusion to a feeling expressed by the Secretary of State for the Colonies, already responded to by the Governors in Council of some of the most important of our Colonies, that a cheap and uniform series of Colonial Floras should be issued in the English language, and under the direction of the scientific officers at Kew. Already, indeed, such a system may be said to have commenced in the following works now in progress, viz., "A Flora of Victoria" (S. Australia), by Dr. Mueller, Colonial Botanist at Melbourne; of the extended "Cape Colony," by Drs. Harvey and Sonder, and of Ceylon, and of the West Indian Islands, just alluded to; and we have good reason for believing that very soon a Flora of "Hong-Kong," and another most important one, that of all our "Australian Colonies," will be in press. Should this measure be fully carried into effect, it will be productive, at comparatively little cost, of immense benefit to the Colonies and to the mother country, and raise this establishment to a position pre-eminent for practical utility in all that concerns Scientific and Economic Botany, as well as Horticulture.—I have, &c., W. J. HOOKER, Director. To the Right Honourable the First Commissioner of Works, &c.

No. 1.

No. 2.

Home Correspondence.

Orchid Houses.—Judging from the very excellent growth of my Cattleyas I am convinced that the forms of houses represented above are better than those generally used. Tall Vandas, Aerides, &c., are placed on the side stages, and low growing varieties in the centre. Every plant in proportion to its height is by this arrangement nearer the light than usual. The effect on entering is improved, especially if a few Ferns and variegated plants are interspersed among the Orchids. No. 2 represents my show house for Orchids when in bloom. The ornamental foliaged plants are placed at the furthest end. The woodcut represents the end of this house, which is furnished with side stages, and baskets hanging from the roof. In the centre is shown a large tank sunk below the level of the floor about 15 inches deep; in this I grow water plants, and enliven them with plenty of gold fish. This house is placed in a line with and at the extremity of the growing houses from which the show house is entered. A walk, 4 feet wide, is left on two sides of the tank, and a space 6 feet wide just at entrance for sitting and reclining benches. For many months last year this house required no fire-heat, and was never otherwise than enjoyable. No. 1 represents the form of house I prefer for growing these beautiful exotics. The advantages of this arrangement of roof are—1st, that every plant, as I have stated, is brought nearer the glass than by the old form—a consideration of much importance. 2d. The plants are more immediately under control and more easily cleaned. 3d. Less heat is required from the pipes, as it is more equally diffused over the whole space. 4th. The admission of cold air by drains under the floor, and its being introduced between the centre pipes warms it before reaching any of the plants. 5th. The ventilation at each end as shown enables the cultivator to regulate the heat to a nicety, as all the warmed air from the centre must pass among the plants before escaping. 6th. The gutter in roof being supported by hollow pillars of iron, the rain is brought down one of them into a tank in the house placed on a portion of the pipes, so that the water may be always lukewarm for watering. 7th. The slate tables are supported by iron standards, or the tables themselves may be of trellised iron work. 8th. The shading may be effected by stretching the material from point to point of roof; thus all danger from hail is prevented. *R. Warner, Broomfield.*

Scarlet Runner Beans in Beds.—It may not be known to some of your readers that these make a superb bed throughout the whole summer, merely by pinching off all the running shoots as they appear and keeping them dwarf. The mode I adopt is this. In the last week of March, or beginning of April, I sow the seed singly in 5-inch pots, which are placed in a moderate hotbed, and when the plants have pushed a leaf or two they are removed to a cold frame, where they are well protected with mats or other covering over the glass whenever the weather proves frosty. They are allowed to remain there until all danger of frost is supposed to be gone, say to the end of May or beginning of June, taking care, during that time, to pinch, or clip off with a pair of scissors, the top of every tendril when a few inches long. The plants, full of bloom buds, are then transferred from the pots, without disturbing the roots, into a bed prepared for them. They are placed a foot or so apart every way. In the course of a very short time, if the stopping has been properly managed, the bed becomes covered over with one dense mass of brilliant scarlet blossoms, which are very showy and attractive. Should it be desirable to prolong this display, of course the keeping the plants dwarf must be continued in the same way as formerly, and the pods gathered as soon as they are fit for cooking. Thus, by adopting this plan of culture, not only are Beans obtained for the table in great abundance at an earlier period than when sown at once in the open ground; but the plants also form a splendid feature in the flower garden. Should they occupy too large a portion of a gardener's time, the operation of stopping, as occasion may require, can easily be performed by a boy for a mere trifle, or it may afford a pleasurable occupation to the junior members of the family. A single row or patches in the border, treated in the manner just named, likewise produce a fine effect, especially if contrasted with white, blue, or other colours. *Subscriber, Whitland.* [We cannot advocate this method if Scarlet Runners are grown for the sake of their pods.]

Grafting Araucarias.—The perusal of your interesting statement of Mr. Girvan's clever grafting of wounded Araucarias at Holkham recalled to my recollection two occurrences of the description which occurred here, one about 25 or 30 years ago, and the other about June 1858. I was watching one of my workmen pruning a Walnut tree about 15 feet high, when his knife slipped and went almost through the tree. I thought it worth while to try its restoration, and assisted him in fitting the parts and binding them together with linen and bast, which succeeded perfectly, and my present gardener, Wilson, cannot now make out any trace of the cut. The other occurrence bears a still greater resemblance to the minutiæ of the attendant on the occurrence at Holkham. Two of my workmen, drunk, it is true, but malicious, destroyed a number of Pines by the road-side, and cut so badly an Araucaria, about 7 feet 6 inches high, one of an alternate row of Araucarias and Deodaras outside my nursery, that it hung only by the bark, and would have dropped off had it not been supported by its head resting on the trunk. On finding the state of the case, Wilson spliced, or grafted, the wounded tree immediately and carefully; and the tree, so far from failing has shown its gratitude to its preserver by growing vigorously ever since, and is now 13 feet 8 inches. *M.*

Jerusalem Artichokes.—I have lately been cooking the tubers of this vegetable, first boiling and then roasting them in an oven until they were nicely

browned. By this plan more of their watery juices are got rid of than by any other method with which I am acquainted. I have also planted the tubers closely in a box, and forced them gently until the stalks were about 8 inches long, but in my case they were not quite so tender as I expected they would have been. I have also cooked the tops when a foot out of the ground in spring; in this instance they boiled tender, and retained the flavour of the tubers. *James Cuthill, Camberwell.*

The Golden Hamburgh Grape.—My attention having been drawn to an article in your Paper in which it is stated that doubts have been entertained of the Golden Hamburgh having been raised here, I write to say that I know no more of its origin than that I was informed one day by my gardener that he had succeeded in raising a Grape of which he had great expectations, and asked what should be done with it. My reply was that as the merit was due to him he might sell the stock. I have neither directly nor indirectly received one farthing from the sale, and know nothing of the origin of the Grape beyond what I was told at the time, which corresponds with the statement in your Paper. My late father was constantly in the habit of sending plants and Vines from the Continent, which may have given rise to the report of the Vine being of foreign extraction. It is for others to decide on the merits of the case; but I would not allow the matter to pass without explaining to you that I know nothing more than what I have stated. *John S. Crawley, Stockwood.*

Early Grapes.—Black Hamburgh and some very fine bunches of Chasselas Musqué of this year's growth have been exhibited in Mr. Lewis Solomon's shop-window in Covent Garden Market during the early part of this week. These I am informed have been produced by Mr. Meikleham of North Berwick, an amateur whose garden lies within a gunshot of the sea. For some seasons past this place has become renowned for the production of very early Grapes. These Mr. Meikleham obtains with uniform success year after year, and from permanent Vines, the roots of which have no doubt entered the warm black sand of which the soil of his garden consists. The Hamburghs though not large are well coloured and in every way finely ripened. This, considered in connection with the case of good Grape-growing by Mr. Barrenger, a baker of St. Neots, recorded in your Paper some time ago, shows what amateurs can do when they set about their work in earnest, and with a determination to do it well. Mr. Meikleham, we understand, waters his border in autumn before forcing commences with liquid manure, mulches with littery dung, and covers with tarpauling. The border is mostly outside the house. *M.*

Spot in Orange Leaves.—I enclose a few leaves of an Orange tree which seems to have got some disease. Can you detect anything on the under side of the leaf? The spot first makes its appearance on the oldest leaves, and after a time they drop off, which leaves the tree very bare and naked. Can you form any idea of the cause, or suggest a remedy? I may here state that the tree grows in a box in a mixed conservatory, and has been for many years growing freely and in the best of health. *A. F.* [The leaves have all the appearance of having suffered from *cold in a damp atmosphere*. If so the trees will recover as soon as they are placed in heat and begin to grow. Dry cold, if moderate, does no harm. Damp cold is very prejudicial. If the cause suggested is not the real one then there *must* be something the matter with the roots.]

Societies.

Horticultural: *March* 27.—A special general meeting of this Society was held on Tuesday last at the house of the Society of Arts, John Street, Adelphi, for the purpose of electing various candidates who had been proposed for Fellowships. The Earl of Ducie, V.P., occupied the chair, and the following ladies and gentlemen were balloted for and duly elected, viz.:—Mr. S. Ainsworth, J. Angell, Esq.; T. R. Auldjo, Esq.; Mr. J. E. Benary, T. Brassey, Esq.; J. F. Campbell, Esq.; C. M. Campbell, Esq.; W. Cooper, Esq.; E. Coulthurst, Esq.; Miss A. G. Burdett Coutts, J. L. E. Curt, Esq.; Mrs. C. Z. Dresden, The Countess of Ducie, Lord Moreton, Lady C. Moreton, H. East, Esq.; H. W. Eaton, Esq.; J. E. Errington, Esq.; T. Fairbairn, Esq.; Mrs. Fenwick, C. J. Freake, Esq.; Mrs. C. J. Freake, T. G. Freake, Major Gammell, W. H. P. Goore, Esq.; Capt. W. Gray, M.P.; J. W. Hallewell, Esq.; Lieut.-Col. Hogg, S. G. Holland, Esq.; A. J. B. Beresford Hope, Esq.; Lady M. Beresford Hope, Mrs. S. Lincoln, J. Locke, Esq., M.P.; S. Morley, Esq.; Mr. W. J. Nutting, Miss A. Porter, Miss E. B. Pringle, Miss E. H. M. Pringle, Miss E. G. V. Pringle, Rev. T. Randolph, Mrs. Robarts, Miss S. Rowland, A. W. Rowland, Esq.; S. Scrivens, Esq.; Col. F. H. Turner, T. S. Wells, M.D.; Mrs. Weston, Miss M. Weston, Miss H. E. Weston, Mrs. White, Mrs. A. Zauzi. The chairman announced that the next meeting for the election of Fellows would be held on Tuesday the 17th of April.

Linnean: *March* 15.—Prof. Bell in the chair. G. E. Fryer, Esq., C. H. Gatty, Esq., G. Greenway Little, Esq., George Maw, Esq., and J. Shortt, Esq., M.D., were elected Fellows. The following papers were read:—1. "On Sycopsis, a new genus of Hamamelideæ," by D. Oliver, Esq. Mr. Oliver observed that in Northern India six species belonging to as many genera of Hamamelideæ were known. He had tried to ascertain whether the new form now described, which occurred in the late Mr. Griffith's collection, might not by a modification of the generic diagnoses be assigned to some one of these; but he had satisfied himself that this could not be accomplished with a proper regard either to "the community of appreciable affinities which constitute and characterise natural genera," or to the practice of those botanists who have been engaged in the study of this group. Sycopsis was stated to be most nearly allied to Distylium of Sieb. and Zucc. The number of species of Hamamelideæ at present known it was observed may be computed at from 26 to 30, distributed under 13 genera. The order was described as being widely dispersed; there were at least outlying individuals or small groups far removed from what must be regarded as being at the present period the focus of the plants referred to this order. From the preponderating number of genera occurring in the belt extending from Japan through China to the Himalaya, the author thought that this might be regarded as the centre of the order. Mr. Griffith, he observed, first called attention to the peculiar histological character of the wood of these plants, as seen in Bucklandia populifolia. Mr. Oliver himself had found a close uniformity in this respect throughout the genera Bucklandia, Rhodoleia, Trichocladus, Hamamelis, Sycopsis, Eustigma, Distylium, Corylopsis, and Liquidambar. The more or less circular and faintly defined discs of the often much elongated, and tolerably thick-walled prosenchyma of the wood, are, he stated, as in the Coniferæ due to the presence of minute lenticular cavities between the adjoining wood-cells. The canals traversing the secondary layers of these cells are opposed on each side to these intercellular spaces, and are almost invariably elongated laterally in a direction transverse or oblique to the axis of the cell, although sometimes nearly circular and very minute, and then in all respects quite similar to those of the so-called "glandular markings" of coniferous wood. A drawing of the Sycopsis (S. Griffithiana) by Fitch accompanied the paper.—2. "On Apocynum androsæmifolium," by J. P. Lichfield, M.D., of Queen's College, Kingston, Canada West. The author described the root of this native Canadian plant, which is large and contains a milky juice when fresh, and has a bitter unpleasant taste; as being employed officinally. He had used the powder of the recently dried root as an emetic, in doses of half a drachm; and in smaller doses where it did not produce nausea he had found it to be a very useful tonic and deobstruent. Apocynum cannabinum was also described as officinal. Dr. Lichfield stated that the dry root, which is easily pulverised, affords a powder like ipecacuanha in appearance, containing a bitter principle, tannin, gallic acid, resin, wax, caoutchouc, fecula, lignin, and an active medicinal principle called apocynin. Water is the best menstruum.—3. "On some new species of Musci from tropical Africa, in the herbarium of Sir W. J. Hooker," by W. Mitten, Esq. This technical paper was accompanied by sketches.—4. "Note on the species of Nissolia," by Dr. Asa Gray.

Notices of Books.

Actinologia Britannica: A History of the British Sea Anemones and Corals; with coloured figures of the species and principal varieties. By P. H. Gosse, F.R.S. 8vo., pp. 362. Van Voorst.

"In writing the following pages," says the author, "I have laboured to produce such a 'History of the British Sea-Anemones and Corals' as a student can work with. Having often painfully felt, in studying works similar to the present, the evil of the vagueness and confusion that too frequently mark the descriptive portions, I have endeavoured to draw up the characters of the animals which I describe with *distinctive precision* and with *order*. It is said of Montagu that, in describing animals, he constantly wrote as if he had expected that the next day would bring to light some new species closely resembling the one before him; and therefore his diagnosis can rarely be amended. Some writers mistake for precision an excessive minuteness, which only distracts the student, and is, after all, but the portrait of an individual. Others describe so loosely that half the characters would serve as well for half-a-dozen other species. I have sought to avoid both errors: to make the diagnoses as brief as possible, and yet clear, by seizing on such characters in each case as are truly *distinctive* and *discriminative*. Further to aid the student, I have given the characters in a regular and definite *order*, so that he may at a glance compare species with species, or genus with genus, in their several parts and organs."

Mr. Gosse's work justifies his announcement of it, as every student will discover. He describes 70 species, of which 54 have been examined by himself; and of those 34 have also been added to the British Fauna by his own observation. Let us add that the coloured figures are extremely good, which is more than can be said of some of the coarse lithographs that belong to English works of a similar nature. The manner in which the common Actinia Mesembryanthemum is treated is a good example of the remainder of the work. In the first place the reader is informed what constitutes an Actinia; and what the species called Mesembryanthemum. Then comes an enumeration of names given to it or its varieties by different authors; of these names there is a goodly array, no fewer than 14 being mentioned; 14 different names for the same thing! After this comes a general description of the Actinia, a brief account of the places where it is found, and a list of its varieties classed under the following heads:—1, liver-brown; 2, approaching the red; 3, approaching the green; 4, colours interrupted. Finally there is a long account of its habits, &c., from which we select the following:—

"As no species is more abundant nor more easily procured than this, since it affects the most exposed rocks, and does not seek the protection of hollows, so none is more easily reconciled to captivity, and few are more beautiful. It requires no special treatment; a surface for the support of its base and water sufficient to cover it are enough; nor is it essential to its existence that the latter should be very pure, for it will continue to drag on when its fellows have died out. Yet few species more immediately resent negligence of this kind, or more gratefully express their appreciation of a pure and limpid element. Widely as the species is distributed in a state of freedom, we scarcely ever see it except where the water is habitually clear. It is a curious fact, for which I am indebted to Mr. E. L. Williams, jun., that 'the Mersey estuary is the only place on our coasts in which he has not found this species;' which he attributes to the foulness of the water. This absence would be less remarkable were it not that *Tealia crassicornis* is abundant there; but *Actinia* is clean and *Tealia* is dirty in habits. In the neighbouring estuary of the Dee the former is common, as usual.

"With ordinary attention the pretty Beadlet will attain a good old age in captivity. A veteran, whose portrait is given by Sir John Dalyell, had lived in his possession 20 years (in 1848), and was judged to be not less than seven years old when he obtained it. At Sir John's death the specimen passed into the hands of Professor Fleming, and it was not many months ago that I heard of it as still surviving. If it is alive now it must be approaching 40 years old. This individual was the prolific parent of 334 children. A second specimen had lived about 14 years under the worthy baronet's care."

After saying thus much it is almost superfluous to add that Mr. Gosse's new volume is a most interesting companion at the sea-side.

Species Filicum; being descriptions of all known Ferns, illustrated with Plates. By Sir W. J. Hooker, K.H. Vol. III., Part 2. (Pamplin.)

This new part of the most important work that has yet appeared on Ferns, contains an account of the genera Woodwardia, Doodia, and Asplenium; the last, a huge conglomeration of species, is not completed. To this Asplenium the learned and experienced author reduces the following supposed genera distinguished by modern writers; viz., Thamnopteris, Neottopteris, Cœnopteris, Darea, Athyrium, Hemidictyum, Diplazium, and many more, for the very intelligible reason that the characters on which they are founded are fallacious. We observe with much satisfaction that two more parts (3 & 4) of this invaluable guide are nearly ready for publication.

Garden Memoranda.

Horticultural Society's Garden, Turnham Green.—Various useful alterations and improvements have been effected in this establishment since it has been placed under the superintendence of Mr. Eyles. Cucumbers, of which no fewer than 117 so-called sorts have been sent to the Society for trial, have to be proved this season; to do this long ranges of pits have to be employed, and these are already being put into efficient working order for the purpose. In one range, in which the bottom-heat has been supplied by means of hot water flowing in open tanks under moveable slate slabs, it has been found that the tanks have become so much incrusted and split that they were useless. These have, therefore, been removed, and hot-water pipes are being put up in their place. Pipes are also being substituted for tanks in a curvilinear Vinery contiguous to the pits in question, and the whole is to be heated by one of Ormson's large jointless tubular boilers, which that manufacturer has kindly presented to the Society for the purpose. In making room for this it was found that the boiler formerly in use and now displaced—one of Burbidge & Healy's corrugated ones—was fast becoming unfit for the purpose for which it had been applied. The corrugations, where they had been presented to the fire, were either furred up with incrustation or burnt off, and the whole boiler proved to be in a state of inefficiency. A range of deep pits which were originally built for the growth of Pines, but which for many years have been devoted to that of plants in pots, has been cleared out to the bottom, and is about to be converted into an early Vinery, in which the Vines will be grown and fruited in pots. In this way large quantities of Grapes may be obtained, and many new kinds proved without loss of time. Other pits have also been rendered better than they have been for the purposes to which they are applied, and everywhere evidences present themselves of skilful and judicious management.

In a small house devoted to Peaches and Nectarines planted out, both these kinds of fruit have set well; on

some of the trees the fruit is nearly as large as Cob Nuts, and there is every prospect of a fine crop. The principal orchard house has still a winterly aspect; the trees have not yet begun to move, but they have been pruned, dressed with the usual composition of sulphur, soft soap, and clay, and are otherwise made ready for a start. To its contents numerous additions have been made in the shape of young Peaches, Nectarines, and Plums; on some of these the French system of close spur management is to be followed; little or no knife pruning will be needed; all that will be necessary will be summer pinching with the finger and thumb, and thus treated the trees will present the appearance of little upright pyramids thickly furnished with fruitful spurs from top to bottom. To the interest which always attaches to the proving of new varieties will therefore be added that of new modes of pruning and training.

To the out-door collection of fruit trees, large additions must also be recorded, in the form of gratuitous contributions liberally made by the trade generally as well as from private sources. By these means the Society has been enabled to construct a new Pear garden, where the exhibition of implements was wont to take place. Here large pyramidal trees have been planted, from which fruit may be expected this year. Of these the larger number has been presented by Mr. Hogg, the Secretary in the fruit department. Cherry and Plum gardens are also, we understand, to be made on either side of the broad walk which leads from the great conservatory to the American garden, but as yet these are only in embryo. The orchard has also been improved by the addition of many new trees; from the fruit department, therefore, in the course of a year or two, much may be expected. It is evidently the determination of all concerned that it shall be as complete as it is possible to make it.

Nor is the vegetable department to be neglected; quite the contrary. Large quantities of seeds have been received for trial, and this is a matter which will receive especial attention. We learn that this season the principal objects will be Cucumbers, Peas, and Broccoli; but other vegetables will come under review in close succession. Much good must as a matter of course result from such trials, and we doubt not that they will be pursued with energy and with that amount of accuracy which the importance of the subject demands.

In the large conservatory the Vines are in remarkably fine condition. At present they are just beginning to break. Interesting as the collection here was admitted to be last season, it is to be rendered even more so by the introduction of a number of new varieties. These will be chiefly furnished in the shape of grafts put on the strong arms of the already existing kinds; we understand that the shoots for the purpose have been selected and will be operated upon immediately. This house is also to contain hardy fruit trees in pots, and on the side shelves Strawberries in pots, of which the garden possesses many thousands ready for forcing this season.

Out-of-door vegetation is at least a month behind what it usually is in ordinary seasons. The common Hawthorn has not yet begun to break into leaf, and in the way of flowers there is little except Crocuses and Primroses. Such a late season has not been on record for years, and the weather still keeps cold and ungenial. Nevertheless there is everywhere prospect of abundant crops of fruit. The trees on the Peach wall are nearly in blossom, and are protected at night with tiffany and other kinds of netting some 8 feet in width. They are, however, fully exposed in the daytime on all favourable occasions.

In the different plant houses everything looked promising. In a cool greenhouse Trymalium odoratissimum was in full flower and very fragrant, and in a stove nothing could be more striking than were some plants of Thyrsacanthus Schomburgki, which were beautifully ornamented with crimson scarlet blossoms. This is certainly one of the most showy of spring-flowering plants. Conoclinium opacum is another good decorative plant for this season of the year. Many good things are, we understand, ready for distribution; a ballot for them may therefore soon be expected to be announced.

Miscellaneous.

Testimonial to Mr. Watson.—We learn that the journeymen gardeners at Ripley Castle, Yorkshire, presented the head gardener, Mr. Watson, with a silver pencil case, on the occasion of his leaving that establishment.

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—See that nothing suffers from drought. Planted out things will require occasional waterings. The larger specimens in tubs or pots, if any, must also have a liberal supply, provided the drainage is complete. This is the period for free use of liquid manure, but take care that it is perfectly clear and not over strong. Large Orange trees are very fond of it. Where these trees produce gross wood, disbud or remove it altogether, and let the lower shoots take its place; this will induce fruitfulness by moderating the growth. Pay due attention to the watering, shifting, and stopping of plants in general. Make cuttings, as soon as they can be obtained, of Geisomerias, Plumbagos, Eranthemums, Justicias, Clerodendrons, Vincas, Euphorbias, Brugmansias, Begonias, and Thunbergias, &c., in order to keep up a succession of clean young stock. See that growing Orchids have abundance of atmospheric moisture with a liberal circulation of air early in the morning, shutting up close betimes, and take care to observe moderation in the use of fire heat in order that a pure atmosphere for the night may be ensured. Growing Dendrobiums will now require liberal supplies of water; and let plants on blocks be frequently syringed. Most stove plants will succeed in the mixed greenhouse, where a medium between the cold greenhouse and the stove is observed. See to securing cuttings of Heaths as soon as the wood is fit for the purpose. Fumigate the moment green fly appears; this is best done in a moderate way two evenings in succession. Some of the hard-wooded things of no particular importance might be removed at this period to furnish more room for growing young stock and fine specimens in flower.

FORCING DEPARTMENT.

PINERIES.—Plants swelling their fruit should be carefully attended to with water at the root; for, if allowed to get too dry, there is great danger of checking the fruit and preventing its attaining the size which it would do under proper treatment. It is, however, easy to err in the opposite extreme, and considerable care and practice are necessary to enable one to properly water plants having their pots plunged; therefore this should not be intrusted to inexperienced hands, who would probably water every plant if the surface soil indicated dryness. Use weak milk-warm manure water for plants that are well rooted, whether fruiters or growing stock, and keep the atmosphere thoroughly moist, giving air very sparingly on cold, drying, gleamy days, except where proper means of ventilation have been provided, such, for instance, as is shown in Mr. Warner's Orchid house, No. 1, in another column. Black Jamaicas and Montserrats expected to supply ripe fruit at Christmas should soon be ready for shifting into their fruiting pots, and care should be exercised to avoid checking their growth by any means, as this might lead to their fruiting prematurely. See to having the balls in a rather moist state at the time of repotting, and keep the bottom-heat regular and the atmosphere moist and rather close until the plants appear to have taken to the fresh soil. The same attention will be necessary in regard to watering and bottom-heat, &c., in the case of those growing in the open bed, for plants that are any size are apt to show fruit at this season if at all checked in their growth.

VINERIES.—Directly the fruit in succession houses is sufficiently advanced for thinning get this done, the laterals stopped, and the shoots regulated without loss of time, for allowing the berries to get so thick that the scissors can hardly be got amongst them renders thinning tedious, and also robs the Vines. Give inside borders a liberal supply of manure water, using that from the stable-yard tank where it can be obtained, and mixing with it a sufficient quantity of warm water to render it about milk warm. In all cases, give every possible attention to the state of the roots, securing a little artificial warmth where circumstances allow of doing so, for the ground is cold and very unfavourable for the roots of Vines. Where fermenting materials have been used on the border of the early house, the heat should not be allowed to decline until the fruit is fairly ripe, for it is easier to secure a heavy crop of well-swelled fruit than to perfectly colour and ripen even a moderate crop, and a healthy root action is perhaps more important while the fruit is colouring than at any other period. Therefore let the fermenting materials be turned occasionally, adding fresh as may be requisite to keep the temperature of the border at about 70°. In cases where red spider threatens to be troublesome, in succession-houses, rendering syringing necessary, rain-water should be provided for syringing with, as if water containing lime is used, the berries are apt to be disfigured by an incrustation of it.

CHERRY-HOUSE.—When the fruit begins to colour syringing overhead must be discontinued, and a less degree of moisture maintained in the house, decreasing this and the quantity of water given to the plants gradually. Give abundance of air on all favourable opportunities. Strawberries ripening fruit it would be well to remove here or to a similar situation.

PITS AND FRAMES.—Geraniums and other plants in these attacked with greenfly must be fumigated. Syringe frequently overhead as soon as the weather has become milder.

FLOWER GARDEN AND SHRUBBERIES.

The re-arrangement of herbaceous plants will now demand attention; if this has not been done no time should be lost in effecting it. Some of the grosser kinds get into too large masses, and thereby destroy all proportion in the mixed beds. Sow annuals wherever required. Early struck Verbenas, Calceolarias, &c., may soon if the weather becomes milder be planted out 2 or 3 inches apart in beds; with proper protection they will make nice plants by the middle of May, and may be removed either to masses or borders where they will bloom at once, and soon produce a striking effect.

HARDY FRUIT AND KITCHEN GARDEN.

This is an excellent time to plant a full crop of Potatoes; Kidneys with well protected sprouts or any other early kinds planted now will be little later than those planted in February. This, however, requires a little care; the sets should be placed in baskets a single layer thick on damp litter, and carefully handled; they should by no means be planted during either sunshine or wind. Those with sprouts 2 or 3 inches long, if managed thus and covered at night until the second week in May, will closely succeed those in frames. Let a sowing of all the winter and spring Broccoli be made forthwith. Cape Broccoli and Cauliflower for Michaelmas may, however, be sown a week or two later. See that plenty of Green Kale, Savoys, Brussels Sprouts, Leeks, Scorzonera, Salsify, Beet, &c., is got in without delay. Continue successions of Horn Carrots; indeed sow a bed every month from January to September. As soon as young Asparagus is from 3 to 4 inches high, let new plantations be made. Put in successional crops of Peas, and earth up and stake those above ground. Protect seeds appearing above ground from birds and slugs. Prick out Celery for succession crops, and attend well to the early plants with water; and if they are under glass see that sufficient air is given to keep them stocky. Seed should also be sown for the late crop. Attend to keeping up a supply of all kinds of small salads by sowing frequently. Stir the surface of the ground among all growing crops with the view of preventing the growth of weeds and keeping the soil open.

COTTAGERS' GARDENS.

March sown Cabbages may now be pricked off in some warm corner of the garden. They will succeed the autumn plants as well as give the latter time after the head is cut to make bold sprouts. Sow beds of Carrots and Parsnips, also a few Savoys and Kale for winter use.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending March 29, 1860, as observed at the Horticultural Gardens

March.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep	2 feet deep.	Wind	Rain.
Friday 23	1	29.675	29.026	49	30	39.5	44½	43½	S.W.	0.15
Satur. 24	2	29.020	28.949	49	35	42.0	44	43½	S.W.	0.03
Sunday 25	3	29.487	29.147	50	34	42.0	44	43½	N.W.	0.00
Mon. 26	4	29.658	29.586	49	24	36.5	44	43½	N.W.	0.00
Tues. 27	5	29.674	29.597	55	42	48.5	44	43½	N.W.	0.01
Wed. 28	6	29.696	29.617	58	46	52.0	45	44½	S.W.	0.04
Thurs. 29	7	29.549	29.497	60	41	50.5	47	44½	W.	0.01
Average..		29.537	29.203	52.8	36.0	44.4	44.6	43.8		0.24

March 23—Uniformly overcast; densely clouded; boisterous.
— 24—Fine; boisterous; low dusky clouds; clear at night.
— 25—Cloudy; overcast; clear.
— 26—Fine; cloudy; occasionally fine; clear; frosty.
— 27—Cloudy; slight showers; overcast at night.
— 28—Fine; cloudy and fine; rain.
— 29—Rain; fine; slight shower; fine.

Mean temperature of the week, 2 deg. above the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending April 7, 1860.

April.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 1..	54.79	34.92	44.86	18	0.76 in.	3	7	3	3	5	8	1	4
Mon. 2	55.64	35.48	46.01	17	1.19	4	4	4	3	4	9	1	3
Tues. 3	56.58	35.58	45.98	11	0.30	5	3	3	1	3	10	5	4
Wed. 4..	56.44	36.38	46.41	13	0.48	6	5	2	3	6	5	4	3
Thurs. 5..	57.17	36.26	41.71	14	0.65	—	5	4	2	3	6	12	2
Friday 6..	57.26	36.29	46.77	12	0.30	3	8	3	2	4	11	2	1
Satur. 7	57.64	37.32	47.48	16	0.50	2	7	3	2	2	11	6	1

The highest temperature during the above period occurred on the 7th, 1859—therm. 79 deg.; and the lowest on the 1st, 1838—therm. 16 deg.

Notices to Correspondents.

BEES: *A B C.* Old-fashioned bee-keepers prefer straw hives with their ekes and supers; and they are certainly excellent contrivances. Others advocate wooden boxes, and they undoubtedly offer greater facilities for seeing bees at work. We believe the best are Tegetmeier's, which may be had, we presume, of any dealer in beehives.

BOOKS: *A M R.* Try "the Culture of Flowers and Plants," by Glenny, just issued.—*A Subscriber.* Thompson's Gardeners' Assistant.

CUCUMBERS: *T B M.* The colour of paint has nothing to do with the production of red spider.

EMIGRATION: *Enquirer.* Under your circumstances you had better go somewhere out of England. In our colonies the real want is of practical men who can grow what is good to eat; Grapes and other fruits; and all sorts of kitchen garden stuff. Probably Vancouver in British Columbia is just now the most promising place for a strong active resolute man who can face hardships, and set up a market garden. We do not think however that he would be likely to get any engagement in that colony as a gentleman's gardener, though there is job work enough. Besides it is a very dear place at present; but then wages are high in proportion. Of the other colonies each offers pretty much the same advantages and disadvantages.

LEGAL RIGHTS: *A T.* You had better consult your solicitor All depends upon the agreement you have made, or the nature of your lease.

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*W W D.* Rhipsalis salicornioides.—*Amicus.* We know nothing of the plants you mention. Cariensis signifies we suppose "from the country called Caria."—*J A., Gloucester.* A bit of Lonicera fragrantissima.—*H G.* Polypodium vulgare.—*W K.* A good form of Scolopendrium vulgare, var. lobatum.

THE GOLDEN HAMBURGH GRAPE: *A Gardener.* We shall not enter further into this matter for the present. Assertion is not proof. If it can be proved that Mr. Busby has been misrepresenting the history of his Grape by all means let it be proved. But in the absence of proof it is not only libellous but quite unjustifiable to charge him with fraud. This is certain, that the public has obtained an excellent Grape.—*E R.* If you can prove your words do so; but do not continue to make assertions without having any means of supporting them. That is discreditable.

*** As usual, many communications have been received too late, and others are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspondents the insertion of whose contributions is still delayed.

ODAMS'S BLOOD MANURES,

MANUFACTURED BY THE

PATENT NITRO-PHOSPHATE or BLOOD MANURE COMPANY
(LIMITED).

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Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow Marshes, Essex, E.

The Directors recommend these Manures with every confidence to the attention of their brother farmers; and the fact that they and the Shareholders farm upwards of 30,000 acres of land, cannot fail to afford a guarantee and protection to consumers.

The high per centage of SOLUBLE PHOSPHATE and large amount of ANIMAL MATTER yielding Ammonia they contain not only render them the cheapest, but also the most Natural Manures, and the best calculated to produce a HEALTHY, SOUND, and HEAVY CROP.

PRICES.—Blood Manure for Corn, £7 10s.; Ditto for Roots, £6 10s.

Delivered to any Railway or Wharf in London.

☞ *As security to the Purchaser every bag contains 2 cwt., is marked* **"ODAMS'S PATENT BLOOD MANURE,"** and sold only by the authorised Agents of the Company.

ODAMS'S SUPERPHOSPHATE OF LIME.

This Manure contains an unusually large per centage of Soluble Phosphate of Lime, and is, therefore, a highly valuable Manure for all Root Crops.

ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.63	14.38	16 71	16 91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE..	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime ..	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58 53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates ..	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100 00	100.00	100.00

MR WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

DR. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless rich in *soluble phosphate, and unquestionably a valuable manure.*"

DR ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

DR. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

DR. HODGES states that—"It may be regarded as a good specimen of super-phosphate of lime." His calculation of its value is 7*l.* 13*s.* per ton.

DR. CAMERON reports:—"The above figures prove this superphosphate to be of excellent quality, and I have no doubt but that its application will be attended with the most satisfactory results. It would be good value at 7*l.* per ton."

Every Bag contains 2 cwt., is marked "ODAMS'S SUPERPHOSPHATE OF LIME," and is guaranteed to yield 20 to 25 per cent. of Soluble Phosphate of Lime.

PRICES.—Superphosphate of Lime, £5 10s. Delivered to any Railway or Wharf in London.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

ESTABLISHED 1812.

MESSRS. PROCTOR are now prepared to take orders for their special MANURES for 1860, which they unhesitatingly state are of a superior quality and charged at the lowest possible price, viz.:—

TURNIP MANURE | CLOVER MANURE | OAT MANURE
WHEAT ditto | POTATO ditto | BEAN ditto
GRASS ditto | BARLEY ditto | Also
PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.

Apply to H. & T. PROCTOR, Cathay, Bristol; or
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LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
" BARLEY MANURE..	8	0
" MANGEL MANURE	8	0
" GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 2000 tons Turnip Manure at Mr. LAWES'S Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES'S Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American Cakes at market prices.

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Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

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Agents required. A very liberal commission allowed.

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for Cottage Houses, &c., to contain 50 gallons, 25*s.*; 80 gallons, 30*s.* each; and 140 gallons, 36*s.*, and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

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for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32*s.* 6*d.* each.

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LOANS may be obtained under the General Land Drainage and Improvement Company's Act for the full amount required by the Owners of settled Estates, Incumbents, Trustees, Bodies Corporate, &c. for the erection of Farm Houses, Farm Buildings, and Labourers' Cottages designed by their own Agents and sanctioned by the Inclosure Commissioners.

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The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

The Agricultural Gazette.

SATURDAY, MARCH 31, 1860.

MEETINGS FOR THE FOLLOWING WEEK

MONDAY, April 2—Central Farmers' Club ..... 6 P.M.
WEDNESDAY, — 4—Agri. Society of England ..... Noon.

IN the due season of agricultural events seed time has returned to us, and the important duty of selecting the seed of our farm and garden crops for the present year presents itself. Those who are thoughtful upon the matter will probably buy of the most respectable merchants, and be prepared to pay accordingly; but by far the greater number of buyers will go to the cheapest market, in which case it will indeed be to their advantage if only a tithe of the dirt which they get should ever germinate. But whatever confidence one may feel in any particular seedsmen, we must bear in mind that all trades have their conventionalities, which were formerly no doubt comprehended in apprenticeship indentures under the title of "art and mystery," and in no part of the seedsman's calling do these show more prominently than in all matters connected with Grass seeds: in these we have formulæ for permanent pastures; for restoring decayed meadow; for laying down lawn, and for repairing lawn. These as they would appear to be compounded upon no fixed principle, probably comprehend the art and mystery of the matter, just as the quack who knows nothing of the chemical constituents, or the reaction of these upon each other in the medicine he prescribes, has far more mystery and pretends to more art than the educated physician.

The absence of sound education as regards the nature and value of different kinds of Grasses is painfully evident to those who have taken the trouble to analyse even the best of the seed admixtures sent out, unless indeed we prefer to believe that these compounds are put together without regard to what they may contain. But to whatever we may attribute the results one thing is certain, that even in the best samples the per centage which germinates is so small that those kinds only which are natural to any particular district ultimately prevail, and detection of the evil to the grower is very difficult. It may be, however, that he either views rough and innutritious Grasses and weeds,

if he can distinguish them, as having come up spontaneously, or if not he may perhaps welcome them on the understanding that all plants in a Grass field are useful—pasture with some being indeed nothing else but wild plants (weeds).

Now if these things be so with men who would do rightly, if they only knew how, what are we to expect from those who have no part in the principles of integrity and honour? What, but that their mixtures should be made up of old seeds without reference to their kinds, the sweepings of lofts, weeds, mouse dung, and all these probably in the first place purchased from men who have seeded a crop because it was too dirty to do anything else with. How fortunate will it then be if the dirty mixture does not germinate!—so much so that farmers might almost offer a premium or a prize for "seeds" warranted not to grow!

We have been painfully impressed with these facts during the past week, for as our lawn had become bare of Grass beneath the trees and in places where ornamental plants had been placed during the previous summer, it became an object of solicitude to have the mischief repaired. To this end our gardener was despatched to the seedsman for some lawn Grass seeds. He however, as it appeared, had not got any lawn Grasses in stock, but sent a mixture of "Mixed Permanent Pasture Grasses" instead, with an intimation that they would do as well; but how far the mixture was suitable either for lawn or pasture we would leave our readers to guess from the following:—

1. *Analysis of Mixed Permanent Pasture Grasses.*

1. Lolium perenne.	8. Poa pratensis.
2. „ italicum.	9. Alopecurus pratensis.
3. Bromus mollis.	10. Arrhenatherum avenaceum.
4. Festuca pratensis.	11. Phleum pratense.
5. „ duriuscula.	12. Cynosurus cristatus.
6. „ bromoides.	13. Holcus lanatus.
7. Dactylis glomerata.	

In addition there were of weeds, independent of Grasses, no fewer than 25,600 seeds per bushel.

Estimated weight about 14 lbs. per bushel.

Now let us look at Nos. 2, 3, 4, 6, 10, & 13, for pasture. The first two being annual Grasses, how "permanent" may they be! We would hope No. 3 very slightly so; but as respects No. 2 it is evidently "old Italian," of no good but "for mixing." The others it is true are Grasses, but properly can only be considered as weeds in so far as value is concerned.

But again what will be the effects of them in the lawn? Why, equally mischievous; for 4, 7, 9, 10, & 11, though tolerably good in pasture, would be rough enough to spoil any lawn in which they were found.

We would now notice a sample of Grass seed from a "Correspondent," of which we give the following:—

2. *Analysis of Mixed Grass Seeds from a Correspondent.*

a. Weeds and Weed Grasses.

	In sample.	
Bromus mollis	12	= 55b,960 to the bushel.
„ sterilis	6	
Arrhenatherum avenaceum	20	
Holcus lanatus	10	
Triticum repens	2	
Stellaria media?	2	
Undetermined	2	

b. Good Grasses and other herbs.

Festuca duriuscula, Poa pratensis, Dactylis glomerata, Phleum pratense, Lolium perenne, „ italicum, Trifolium pratense, „ repens. — Seeds old and weevil eaten, and much mixed with mouse dung.

Whether these were sold for pasture or lawn we cannot tell, but they were unfit for either, and would only fail of being as mischievous as they might be from the injuries they have suffered from age and general decay, as may be gathered from the fact that although Clover seeds were mixed with the sample, which is in itself an unusual matter, yet the estimated weight per bushel could hardly exceed 14 lbs.

The following is a sample of "Mixed Meadow Grasses" from a country seedsman, which will serve to show how different are samples from different places. In this the Grasses are placed in the order of their abundance.

3. *Analysis of Mixed Meadow Grass.*

a. Weeds.

	In sample.	
Ranunculus repens	16	= 71,680 per bushel.
Plantago lanceolata	16	
Small weeds	80	

b. Grasses.

Lolium italicum.	Alopecurus pratensis.
„ perenne.	Bromus mollis.
Holcus lanatus.	Poa pratensis.
Dactylis glomerata.	Avena flavescens.
Anthoxanthum odoratum.	

In this case the Italian Rye-grass was probably put to make a satisfactory show at starting. Notwithstanding the immense quantity of it, which is generally of a light weight, this was estimated, without Clover seeds, at 14 lbs. to the bushel.

We may well understand a seedsman being praised for his good mixture the first year of the growth when Italian Rye-grass has been largely used, but the after complaint of "My meadow has sadly gone off this year," is sure to follow, and as certain to be met with the rejoinder—"Ah, yes, it will do so sometimes!" and then comes a prescription for curing the bald places, and thus two sets of seed are sold, both probably bad, where one good would do. Our last example will be that of a lawn mixture in which, as will be seen, were detected Plantago media seeds with others, according to the following:—

4. *Analysis of Lawn Grass Mixture.*

a. Weeds.

	In sample.	
Juncus bufonius	160	= 102,400 to the bushel.
Plantago media		
Rumex		
Ranunculus repens		
Umbelliferæ and others		

b. Grasses.

Lolium perenne	In the order of their prevalence.
Festuca ovina	
Cynosurus cristatus	
Holcus lanatus	
Anthoxanthum odoratum	
Agrostis setacea	
Bromus mollis	

In examining the nature of the weeds, and uniting them with the Grasses, we are led to believe that the initiative of this mixture was derived from the ripened Grass mown from a Heathy common, probably from the south-west of England. Turf of this kind is often taken up for making lawns; and the Grasses, if the useless ones be avoided, in such situations are not bad for the purpose, far better indeed than the plan of trusting to people to make mixtures, who too frequently put Grasses together according to their cheapness, or what they may have in stock that it is most convenient to get rid of whether of new or old samples.

Now, having so far exposed what we consider a vicious system, our readers will naturally ask for the remedy. It is obvious: always buy from well-informed and honest seedsmen; and as these are so difficult to find, and the morality of trade too much allows the preparing the market for the cheap purchaser as for others, the bulk should always be examined before sowing it.

But, say the farmers, we don't know one Grass seed from another, or Grasses from weeds. Then do not consider that your sons have been properly taught, especially if destined for a rural life, until they can tell these things; insist upon botany and other branches of natural history as a part of their education. Our friend Professor Henslow is teaching these things to village school children with advantage to them in every respect, and until the future generation of farmers are trained herein, let seeds be properly examined by some competent man before being sown. We may take the credit to ourselves of having been the first to expose these matters; we have shown the loss and disappointment which result from the present system, and we now beg to state that we are still ready to examine and report upon this subject, and at this time we are especially anxious to obtain samples, not from seedsmen but from their customers, of what are called seeds, such as Clovers, Grasses (whether separate or mixed), which will in time be duly commented upon.

—— Dr. Gilbert, of Harpenden, St. Alban's, has been good enough to send us the following analysis of "inferior Dates," from which it will be seen that they form a food of inferior quality:—

Composition of inferior Dates.

Stones (air dried)	13.2
Fleshy portion (dry) consisting of:—	
Nitrogenous compounds	*1.39
Non-nitrogenous compounds (sugar, &c.)	66.31
Mineral matter	1.40
Total	69.1
Water	17.7
	100.0

Dr. Gilbert also quotes the results of another analysis made in another laboratory some time since, showing 75 per cent. of dry substance containing 2 per cent. ash, about 2 of nitrogenous compounds, and 71 per cent. of non-nitrogenous matter, including sugar, &c. The percentage of nitrogenous compounds in the flesh of Dates is thus exceedingly low. In one sample the amount is little more than 1-10th as much as in the average of the cereal grains: and in the other sample not materially more. Such material would, of course, only be suitable for food when mixed with some highly nitrogenous matter—such as cake, or the Leguminous seeds. But, if *cheap*, it might be a good adjunct to these. What the quantity of sugar present in the Date may be is not stated. This would be interesting to know as determining whether it may not be as cheap a source of sugar as malt is for the brewer or distiller, and whether on this account therefore it may not be economical as food for stock.

Its actual agricultural value as compared with other feeding stuffs must be determined by a prolonged experiment, which will probably be made at Rothamsted.

—— The sale at Milcote on Wednesday last proved unmistakeably the value of a pure bred Short-horn, irrespectively of anything like the influence of mere fashion. Fifty-one head of cattle realised 3156*l.* 7*s.*, or nearly 62*l.* each.

Take the descendants of "Charmer," to whose pedigree we refered last week, and we have the three old cows of which she was the dam averaging 64 guineas each; the 14 of which she was granddam averaging upwards of 68 guineas each; the 12 of which she was gr. gr. dam, many of them calves, averaging 68 guineas; besides which there were a couple of calves at 35½ guineas each. Her 31 descendants fetched 2139*l.* 18*s.*, and averaged 69*l.*

The other principal tribe—descendants of "Frill"—eight in number, fetched 448*l.* 7*s.*, or 56*l.* each. The highest priced animal on the list was "Charmer 6th," to which we especially referred last week, purchased by Mr. T. E. Pawlett, of Beeston, for 160 guineas. Among the purchasers were the Duke of Sutherland, Duke of Devonshire, Earl of Dartmouth, Lord Willoughby de Broke, Mr. Langston, M.P., Mr. Bramston, M.P., Messrs. Ayres, Howard, Oliver, Hales, Noakes, Tracey, Wells, and others.

The following are the results of the sale:—

	Realised.	Averaged.
20 cows and 3-year-old heifers	£1437 9	£71 17
7 2-year-old heifers	420 0	60 0
6 yearling heifers	422 2	70 7
4 heifer calves	194 5	48 11
37 females	£2473 16	£66 17
2 old bulls	102 18	51 9
1 2-year-old bull	30 0	30 0
5 yearling bulls	395 6	79 1
6 bull calves	154 7	25 14
14 males	£682 11	£48 15
Total 51 animals	£3156 7	£61 15

—— Mr. Lawes calls attention to the fallacy of supposing, as Mr. Mechi seems to do, that a system which may be profitable in instances is thereby proved profitable as a general rule. The profit made in the example quoted may be due to its being an almost solitary case; and would cease if any attempt at its general extension were made.

Mr. Mechi says:—"If all the land of this kingdom, 50,000,000 acres, which is equal in quality with my own, produced as much as mine does per acre, our agricultural produce would be increased by the enormous amount of 421,000,000*l.* annually; the present produce, according to my calculation, being only 3*l.* 7*s.* per acre, or 169 millions. According to my annual produce it 11*l.* 15*s.* per acre it would be 587 millions."

On this Mr. Lawes remarks:—"One of the most features in the system Mr. Mechi adopts, and advocates to this end, is the purchase of large quantities of *imported food and manure*. He says—'I think I right to state that I consider the items of 3*l.* per acre for purchased food, and 10*s.* per acre for guano, have a most important influence on my profit.'

"Now, if guano and imported food were used at this rate upon the whole of the 50,000,000 acres of the United Kingdom, we should require, at present prices, an annual importation of nearly 2,000,000 tons of guano, and of about 15,000,000 tons of oilcake, or of corn instead of oilcake, about 80,000,000 quarters of Beans, or about 85,000,000 quarters of Barley, or about 136,000,000 quarters of Oats!

"I have myself no doubt that the system of high-farming will be gradually extended over the country. But it seems to me that such a system pre-eminently implies dependence on foreign production rather than successful competition with it. It is evident, too, that the success of the plan adopted by Mr. Mechi must greatly depend upon its not being generally followed. A very slight increase beyond the ordinary demand for cattle foods rapidly increases their cost, and renders their employment unprofitable to the farmer."

AN AGRICULTURAL PILGRIMAGE.

No. IV. Didmarton, and Weston Birt, Gloucestershire.—These are two separate farms, some miles apart, indeed—the one close to Badminton, the park of the Duke of Beaufort, the other the home farm of R. S. Holford, Esq., M.P. for E. Gloucestershire. Both, however, lie on the same general Cotteswold level, and are for the most part under the same general style of

* Nitrogen 0.22 × 6.3 = 1.39

management. The one is in the occupation of an intelligent and enterprising tenant farmer; the other in the occupation of a wealthy landowner: no wonder that the latter excels the former in all that relates to the fixtures and permanent equipment of the estate, or that the especial merit of the former lies in its stock and annual farm management.

1. Let us take Didmarton first: The village lies sheltered by shrubbery and trees at the northern end of Badminton Park, on the high table land of East Gloucestershire, which is for the most part from 500 to 700 feet above the level of the sea on the Bathstone of the oolite formation. This farm, in the occupation of Mr. Stiles Rich, is about 680 acres in extent, 400 acres arable, and 280 acres pasture. The labour force of the farm includes 23 men, 7 boys, and 10 women; and 12 horses besides two ox teams. Extra hands are also sometimes employed, as during hay and corn harvest, and at Turnip-hoeing time. The cropping includes 170 acres in corn, 170 acres in Clover and Grass seeds and Sainfoin, and about 60 acres in Turnips. The rotation is 1, Wheat; 2, Oats or Barley; 3, Turnips; 4, Barley, or spring Wheat; 5, Clover, kept down a second year; and one-seventh of the land is generally in Sainfoin. A good deal of paring and burning is carried on upon the farm, and in the neighbourhood generally the old Sainfoin is thus broken up for green crop of some kind. The practice of stifle burning, by which a larger quantity of soil in proportion to the fuel is exposed to heat than by any other way, is also carried out to a great extent.

It is, however, the herd of pure bred Short-horns upon his farm that distinguishes Mr. Rich in a district which is generally well cultivated. The farm has always been to some extent a dairy farm, and the well selected ordinary Short-horn cows employed as dairy stock have for a quarter of a century and more been crossed by pure bred bulls. The same rule has, indeed, been acted on by Mr. Rich as Mr. Willoughby Wood recommends to stock farmers generally for the improvement of their cattle. Mr. Rich has, however, not been satisfied with the general improvement of his cows obtained in this gradual way; but for many years he has been attendant at the sales of pure bred Short-horn stock. And by descendants from cows purchased at these sales, crossed by pure bred bulls, he has gradually displaced his more ordinary dairy stock until there are very few in his herd which cannot boast of pure descent from the great originals of the Short-horn breed. And he now accordingly obtains for his young bull calves as great prices as are generally demanded for animals such as can claim like themselves the purest Short-horn descent.

Thus at the sale of Mr. Glass, of Worton, near Devizes, in 1847, three pure bred Short-horn cows were obtained which have several descendants now in the Didmarton herd. About 1852 a good cow of Lord Ducie's, "Ursula," by "Usurer," was obtained from Tortworth, and she has seven female descendants at Didmarton. Another "Usurer" cow ("Flourish") was bought at the Tortworth sale, and she has three descendants. Of "Splendour," a cow bred by the Hon. Noel Hill, and bought at Mr. Dickenson's sale six years ago, has two female descendants. Several of her descendants were sold the other day at Mr. Crawley's sale, in Bedfordshire, when two of them were purchased by Sir W. Miles, of Leigh Court. "Sweetbread," another cow bought at Mr. Dickenson's sale, has five female descendants at Didmarton. Captain Gunter's cow "Phœbe," descended from Sir C. Tempest's blood, has two female descendants at Didmarton, one of which is by "6th Duke of Oxford." From "Florentine," bought of Mr. Sainsbury, of Corsham, there are three female descendants. "Oakleaf," bought at Mr. Harvey Combe's sale, has two female descendants; and there are two heifers from another cow "Kathleen," directly descended from the Tortworth herd. In 1859 there were bought at Mr. Tracey's sale in the county of Kent, "Snowberry," her daughter "Gusterberry," and "Carolina 2d." And of Lady Piggott, "Belvoir Lady" and "Belvoir Duchess," a calf by the "6th Duke of Oxford," were purchased. A red cow "Libel," bred by Mr. Bolden, of Lancaster, and almost entirely of Warlaby blood, has also been added to the stock, by purchase from Mr. Strafford. The herd now comprises above 90 females and three adult males, the whole of which are in healthy breeding condition. The bull calves are usually disposed of early and sold at prices varying from 10 to 20 guineas.

The bulls employed on this herd have been as follows:—"Old Strickland" (11870), bred by Miss Strickland so long ago as 1837 or 1838; "Ned Poins" (6241), bred by the late Mr. Cotterell of Congresby in 1842; "Berkeley" (7830), bought a calf at Lord Ducie's sale in 1845; "White Helicon" (13999), bred by Lord Ducie, and bought in 1843; "Saturn" (12051), bred by Mr. Woodward in 1846; "Douglass" (12715), a grandson of Bates's "Duke of Northumberland;" "Valentine" (13932), bred by Lord Ducie, calved in 1852; "Duke of Ulster" (12774), bred from "Ursula," by "4th Duke of York," calved in 1858; "Koh-i-noor" (11642), bred by Lord Ducie, also by "4th Duke of York," calved in 1851, was used four years; "Cupid" (14959), bred by Mr. Sainsbury in 1856, by "4th Duke of Oxford," out of "Darlington 6th," the latter being bought by Mr. Thorne, America, at 300 guineas. There has thus been a great variety of bulls of the purest descent used at Didmarton on cows also of the purest Short-horn pedigree. And the result is shown in a very fine lot of heifers and calves, and several very fine young bulls. Among the latter is "Archduke," a son of "Cupid," and "Libra" from "Libel," by "Valentine" (13932).

The character and history of the herd appear to me to deserve being thus placed on record as an illustration of the enterprise and perseverance of a Gloucestershire tenant farmer.

2. Weston Birt is the seat of R. S. Holford, Esq., M.P. Very great improvements have lately been effected in the park and grounds by the diversion of the public road, the erection of lodges, and the transplanting of large trees. Elms and Oaks 30 and 40 years old have been successfully transplanted, and are now firmly rooted in their new positions, without having suffered any apparent check of growth. The estate is now being rapidly improved by the erection of new farm buildings, and home buildings have lately been erected for a home farm of about 600 acres, 420 acres of which are pasture. This farmery was designed by Mr. E. Rich, the agent for the estate, in order to suit the requirements of a large establishment, as well as to meet the wants of a large farm. They are built out of sight of the house and gardens behind plantations and in a hollow so as to be perfectly screened. The main block is in ground plan a sort of trident, the middle prong being represented by a double row of roomy cattle boxes with a central gangway—one of the side prongs being a row of cart-stables, &c., and the other being a row of cattle-stalls and shedding. The spaces between these lines are yards used for cattle. These three parallel rows of building thus separated are united by a cross head of cattle-sheds, opening into the yards on one side and sheds opening on the other side to the north and west for implements and carts. And over these latter are granaries. The handle of the trident, to maintain the comparison, is a range of building extending north, comprising most complete barn and steam-threshing and grinding machinery. And at the farther end lies a yard and saw-house for which the same steam-power is available, where carpenters' work for the estate is done.

The main road through the buildings lies across the points of the three teeth of this trident, to which the ground plan of the buildings has been compared. On one side, and in the spaces between these points, at the ends therefore of the two yards, are pig pits and piggeries; and on the other side lies the bailiff's house with admirable dairy, cottages, and yards and sheds for dairy cows. Provision is made for for poultry in a separate set of houses on one side of the main block of buildings. The whole arrangement is very convenient and economical of labour, and the construction of the several parts is praiseworthy. In particular the adoption of such a plan as was adaptable to any method of feeding, either in yards, sheds, or boxes, is worthy of being copied. The farm maintains a breeding flock of 200 Down ewes, rearing all their produce; also 25 dairy cows, rearing all their produce, and buying and fatting steers besides, bringing out the steers fat at 3 years old; there are also some 60 pigs fattened annually. The stables contain a dozen remarkably fine Suffolk cart horses for the farm and estate work generally.

At Weston Birt we have a specimen of first class farm buildings, which, with other farmeries on the estate, well deserves examination by improving landowners and their agents. And at Didmarton, equipped as poorly as may be with rickety old sheds and houses, without arrangement, with no connection among them whatever, we have a specimen on the other hand of what energy and perseverance in the tenant will do, in spite of difficulty, equally deserving the examination of all who are interested in the progress of good agriculture.

J. C. M.

MR. ALDERMAN MECHI AND THE LONDON FARMERS' CLUB.

Will you allow me to have a little imaginary conversation with those members of this Club who were present at Mr. Alderman Mechi's lecture on the Sewage of Towns? It appears from the newspaper reports of what occurred at the lecture that Mr. Mechi stated, among other things, that he for the six years previous to the last had made a clear annual profit of 700*l.*, after allowing for rent, tithes, rates, taxes, labour, and expenses of machinery, &c.; and that last year, after having made the same allowance, he had made a profit of 600*l.* from his 170 acres of land; thus Mr. Mechi stated that in seven years he had made an actual profit by farming 170 acres of land of 4800*l.*

It appears further from the newspaper reports that the members of the Club who were present at the lecture expressed strong doubts as to the correctness of the worthy lecturer's accounts; and it further appears, from other subsequent newspaper reports, that this scepticism has now extended nearly throughout the whole of the agricultural world.

I know nothing of the gentlemen, except from report, who at their Club threw the doubts upon Mr. Alderman Mechi's statements as to his profits; but I have little doubt they are honourable and excellent men, but certainly not candid ones, or they would not have condemned the successful results of a system of farming which they have never practised; they must drain their lands as well as Mr. Mechi has his, plough as deeply, seed as thinly, and keep their land in as good heart, and knock down all their useless pollard trees, and grub up all their useless hedge-rows; and further, they must have as good machinery and as good premises as Mr. Mechi has, before they can fairly compare their farming and profits with his, or his with theirs.

Can you account for the hostility agriculturists as a body exhibit against every man who tries an agricultural experiment, uses a newly invented machine, and does not follow in the beaten track of their forefathers, as one horse in a team follows another? In the darker ages in the times of Tusser and Tull, for examples when books were scarce, and few could read, prejudices of this kind might be excused; but now as education is become almost general among all classes, we look for more enlightenment, and are surprised that such prejudices are still so prevalent among us.

— Mr. Sidney and gentlemen, you do not believe Mr. Mechi made the profits he told you he did; but the late Mr. Piper yearly advertised that he made greater, or to the extent, if I remember correctly, of 6*l.* an acre of clear profit, and he showed the world how he did it; and I think also that the Rev. Mr. Smith, of Lois Weedon, writes that his profits are more than Mr. Mechi says his are. Now, I knew Mr. Piper well, and I believe no one ever doubted his veracity; and though I do not know the Rev. Mr. Smith, yet his statements carry the conviction of truth with them; and therefore, gentlemen, in calling in question the veracity of Mr. Mechi, you condemn all others who are breaking through the trammels of long-established and idolised custom as he has done.

We live in go-ahead times, when science has penetrated and revolutionised every other trade and profession, and for the benefit of mankind in general we are anxious to force it into agriculture, into farmyards and fields. But is it not so already? It is not, as it ought to be; the ancient Egyptians, Persians, North Africans, Greeks, Romans, and, above all, the ancient and modern Chinese, though they were and are all far behind us in some other useful arts and sciences, and had not the implements and machinery that we have, yet in many respects they equalled, and in some surpassed us in both agricultural knowledge and practice; indeed, at this very time scientific men, such as Liebig and Daubeny, &c., are demonstrating that if England should persevere in her present system of land cultivation for a few more years, the whole country will be exhausted of vegetable pabula, and dearth and famine consequently ensue; but were the changes generally introduced into our farmyards and fields, which Mr. Mechi has adopted in his, and which he so forcibly recommends to you, instead of the dire calamities predicted by the sages, and which otherwise must be fulfilled, England instead of importing would become a grain exporting country, and her ships would be freighted to all parts of the world with corn, as they are now with every kind of manufactured goods; farmers, also, would become rich and influential, and regain their power in the state and among the families of men.

But, gentlemen, let us make a mental visit to this now world-renowned farm, called Tiptree Hall, and let me be your cicerone, and for which I flatter myself I am tolerably well qualified, for I have known it from before Mr. Mechi was the cultivator of it, when not one of the buildings which are now the admiration of all visitors was erected at it, and when, indeed, all was a dreary waste, the old buildings having been pulled down, the hedges and hedge-rows grubbed up, and the trees felled, and the roads to it and about the fields were impassible from deep ruts and mire. Since then I have seen the present mansion rise in that then dreary wilderness, and all the fine buildings connected with it; the gardens and shrubberies laid out and planted; the farm everywhere drained, and the stagnant waters in it let loose, and brought for use and ornament to the homestead, and thence in part, when mixed with the fertilising manures made at the house and farmyard, forced through pipes laid underground by powerful steam machinery to every part of the farm. I have seen also, almost or quite, every implement and machine used on the farm, and almost every crop grown; and I was at every one of Mr. Mechi's princely and instructive agricultural gatherings, at which men of all ranks and degrees, from princes and noblemen who counted their acres by hundreds of thousands, and ambassadors and scientific men from all parts of the world down to the harmless possessor of his rood of land only, met together and were received by the hospitable host and his amiable consort with a hearty welcome, entertained, instructed, and, I will venture to predict, feasted mentally and bodily in a manner they never will be again.

But gentlemen, you do not, you say, like men who open the eyes of landlords! Do, my friends, I beseech you, drop these narrow-minded notions; the landlord's and tenant's interests are too closely united to be severed or injured were there three or four score Mechis in every county in England. But they would raise rents! So much the better for the tenants, if they were shown, as they would be, how to double, treble, or quadruple the produce of their farms, and at a less expense than they are now at to muddle out of their lands the small and miserable crops that too many valuable farms are now producing! And do not laugh at me, gentlemen, when I tell you that were lands thoroughly drained and scientifically cultivated, and the sewage of towns

villages, ay, and farmyards put upon them as it ought to be, the senseless cry about "The seasons! the seasons are against us!" which is always now the excuse for bad farming, would seldom or never be heard more.

But, gentlemen, I have said I knew Tiptree Hall Farm when it was a mere dreary-looking wilderness, producing on an average of years, as the labourers then informed me, about 66 quarters of Wheat only, and other crops in like proportion, from its then 130* acres of land; and I would inform you what it is producing now, but as I have, I fear, already spun out my letter to a rather tedious length, I must put off the interesting facts I have yet behind about the present crops till another week; and so for the present, gentlemen of the City of London Farmers' Club, I bid you adieu. *Geo. Wilkins.* [The worthy alderman has had to bear of late so many blows from angry disputants, that we must not refuse utterance to the only voice that has yet been raised for him.]

SEWAGE MANURE.

THE solution of this great question can scarcely be said to be advanced by the two long papers recently read by Mr. Mechi, or the discussions which arose upon them. On the contrary, the paucity of fresh information elicited, and the mass of topics so irrelevantly introduced by Mr. Sidney and others, betray a weakness in the present state of agricultural inquiry in connection with this social and agricultural subject, which is by no means cheering.

Every candid man must admit that Mr. Mechi has thrown his active and vigorous mind into the consideration of the subject; but it may be questioned if he is the man to grapple with one so intricate and difficult. Mr. Mechi can no doubt detail his own experience and conclusions in a clear and lucid manner. He may, like any other citizen, afford invaluable aid and excellent suggestions. Mr. Mechi has rendered excellent service to the cause of high farming by the zeal and public spirit with which he has experimented, and by laying bare some of the dangers and drawbacks of excessive investments. But Mr. Mechi must alter his course as an agricultural monitor or his success and usefulness have reached their culminating point.

British farmers as a body are not very eager to follow advice when it is either far-fetched, or when accompanied with any other drawback incidental to visionary theorists. And even the views of men of more sober judgment, like Mr. Mechi, whose success as a commercial man should alone entitle him to respect, are occasionally received with a bad grace. Mr. Mechi ought to know this as well as we can tell him; and ought studiously to guard against increasing the prejudice with which he and those who sail in the same boat with him have to contend against.

It is perplexing and vexatious, no doubt, to an agricultural experimentalist to find those who should cheer rather disposed to sneer at his efforts, no matter how patriotic. And this, it must be confessed, is the attitude of many of those who oppose all attempts at utilising the sewage of towns. Mr. Mechi is perhaps slightly to blame in the matter. His repeated and unnecessary references to the manner at which he is "amused" at the state of the "agricultural mind" can effect no good, while it is peculiarly calculated to provoke the hostility of those who must regard themselves as included in the worthy alderman's source of amusement. Now, the real fact of the case is that the solution of such a complicated problem as that of sewage cannot be solved by Alderman Mechi or the Farmers' Club. We are strongly of opinion that farmers regard Mr. Mechi's figures, and "round numbers," and "averages" per acre, with more or less scepticism. And, on the other hand, while they read with no dissatisfaction a speech spiced with personality like that of Mr. Sidney, they have ere this learned to look upon the sewage question as one pregnant with momentous interest to the nation at large.

The question should be considered from two distinct points of view:—first, as a great chemical problem directed to the discovery of some method of economically precipitating the chief manurial constituents of sewage; and secondly, the judicious application of sewage to the land as practised by Mr. Mechi and others. I shall give my own experience of the latter in a future article, and will now offer a suggestion on the former.

Several eminent chemists have expressed their belief in the impossibility of precipitating the constituents of sewage with any prospects of commercial success. It requires no great amount of chemical knowledge to know that there are great difficulties in the way. This part of the subject, however, has never been investigated in the manner its importance deserves. We are all aware, too, that chemistry has achieved most marvellous results in a comparatively short space of time. Every day witnesses the development of some new idea; and surely it is not too much to expect that a well-directed investigation, specially undertaken with a view of utilising the ammonia, phosphates, and potash of sewage would be crowned with success.

I would suggest that Mr. Mechi should originate a subscription—that Government would make a grant—or that the Royal Agricultural Society should vote a sum—of say 500*l.* or 1000*l.* for a special inquiry of this kind. The latter body, at one time, offered a premium of 1000*l.* for a far less feasible object—the discovery of a substitute for Peruvian guano.

An investigation of the kind referred to should, in our opinion, commence with an attempt to elucidate all that is at present obscure with reference to the chemistry of soils; and if it served no other purpose than to make us acquainted with the laws by which soils absorb, retain, and give up as they are required, the mineral food of plants, we should be amply rewarded for the outlay. Many of our agricultural societies annually spend large sums of money on experiments with manures which possess little practical and no scientific value.

The principles by which these experiments could be reconciled and made subservient to the establishment of great truths are entirely wanting, and can only be supplied by an investigation or series of investigations conceived and conducted on the most comprehensive bases. It is quite possible that such an inquiry would soon make us acquainted with the nature and properties of the substance or substances which arrest and fix in the soil the constituents of manure. And it is equally probable that when once made known such substance or substances could be manufactured at a cheap rate, and applied for absorbing the fertilising matters of sewage. *B.*

* Since then Mr. Mechi has added to his farm 40 acres more land, and consequently his farm is now 170 acres, as he told you it was.

FLEMISH HUSBANDRY.

A VERY noticeable feature in Flemish husbandry is the absence of the fallow in the routine of culture. For upwards of 200 years the Flemish have abolished fallows; finding in the introduction of crops which are capable of being repeatedly worked at various stages, and of a carefully carried out system of rotation, together with the use of manures of a special character, the means of retaining, nay increasing, the fertility of the soil. But more than this, the same land which gives alternate crops of Cereal and green crops gives often two crops in the same year. No sooner is one crop taken off the land than it is worked for another crop, which is sowed and harvested before the year has expired. There is thus literally no rest either for the land or the labourer, both are fully employed, and each is saved from exhaustion by a change in the degree and kind of work to be performed. The whole gist of the matter is so well put by a native writer on the agriculture of Flanders, and in a medium but little known if not now altogether out of circulation, that we here freely translate his remarks: "Our system of farming," he remarks with just, and —we think with others who have surveyed the country—well founded pride, "is what in other countries is the perfection of farming. Indeed, the first maxim of all farming is to draw from the land the greatest possible amount in Cereals with the least exhaustion of the soil. To obtain this desideratum the school of agriculture gives as its maxim, 'put half of the land in Cereal and the other half in pasture and in roots;' you will have thus to be sure less soil under Cereal, but it will produce more on account of the change of crop and the increase of manure. On the other hand the Flemings say; put three-fifths of your land under Cereals in place only of the half; secure the change of cropping necessary not in the exclusive cultivation of fodder plants but in the variety of produce, such as Flax, Hemp, Colza, Chicory, Poppies, Cameline, and farina of various kinds. But besides the crops already named, we can produce roots and pasture plants upon the same soil and in the same year. We have thus as much nourishment for our cattle as in the new system of agriculture—the alternate cropping—without reducing the extent of land under Cereals; and without renouncing our textile and oleaginous plants. Such is the essence of Flemish agriculture."

Although much used throughout Flanders it is an erroneous impression which is somewhat prevalent, that the spade is the only implement of cultivation employed. The plough is nearly always used, although the spade is often used immediately after the plough, still further to create a fine tilth. The furrows are all trimmed up by the spade and the superfluous earth thrown up on the adjoining stetches. But although the plough is chiefly used, it is by no means the only implement employed; as said above, the spade is used along with it. The hoe also is in frequent use; indeed long after the plough has done its work the farmers are seen busy either with the spade or the latter implement reducing the clods and eradicating the weeds. It is in the district of the Pays de Waes, in East Flanders, that spade husbandry, strictly so called, is carried out. When we passed through this district at a time where all were busy preparing the land for seed, we travelled miles without seeing a plough at work; but numerous labourers were busy with the spade. In some districts the land is dug every three years; in others they dig all soil intended to be laid under Cereals; so that the whole farm is dug every two years. The plough is sometimes used in conjunction with the spade, men placed at intervals taking up the earth and placing the spadefuls on the ploughed part; the land thus prepared is left all winter to atmospheric influences, and harrowed carefully in the spring. Deep ploughing is indeed one of the most striking features of Flemish farming; a depth of 50 centimètres is a usual thing, although this is often exceeded. When the land is prepared for white crops it is laid out into narrow stetches, about 2 mètres broad. A deep ditch separates these, and, as before mentioned, the edges of these are trimmed up with the spade till they look as even and satisfactory as if they had been executed by steady-going machinery. These ditches, some 30 centimètres in breadth, are taken in the following year to form part of the stetch, while a breadth is borrowed from the neighbouring stetch to form a new ditch or furrow. By this arrangement the ditches are not permanent, but form in the regular course part of the cultivated soil; and thus the whole of the land has been under ditches and stetches alternately. As the ditches or furrows are very deep, from three to four times the depth of the average seed bed obtained in English ploughing, it will be seen how by this method of working a fine tilth of unusual depth is soon obtained; and as manuring is carefully practised, and in such a way as to secure a uniform enrichment throughout its whole depth, a soil is obtained which in its character more nearly resembles that of a well-cultivated garden than that which we are accustomed to look upon as good farm land. The almost total absence of weeds in the Flemish farms keeps up this garden-like appearance of the lands more markedly. It is impossible to praise too highly the continued efforts of the farmers of Flanders to keep down all weeds, and one not the least valuable of the results obtained is that the very toil of the task is mitigated by the never-ceasing attention paid to it. Where weeds are allowed to cumber the land year after year the task of their eradication if once it is begun is all the more difficult to be performed; whereas by always endeavouring to get rid of them the perpetual disturbance prevents their perpetuation, and makes their removal more easy. It is pleasing to the eye of the educated farmer as he strolls along the Flemish roads to witness the number of people employed in the operation of weeding. The weeds taken up are not foolishly thrown aside, but are carefully collected and brought off the field to add to the manure or the compost heap.

In the preparation of some qualities of land not too tenacious, a custom is sometimes adopted of a man following the plough with a spade; as each furrow is opened up, he deepens the soil with the spade, and in the part already ploughed throws up the soil obtained. Exposed thus to the action of the atmospheric influences, the clods are disintegrated, and a considerable addition to the fertility of the soil obtained—equal in the opinion of many farmers to a good manuring.

Another point of interest connected with Flemish agriculture is the "rotations." In a future part of this Paper we shall dwell more particularly on this department. Meanwhile we shall take a brief glance at the features of the leading soils and the mode of cultivation adopted on them.

Throughout a great part of Flanders the soil is of an exceedingly light sandy nature, varying from a sand pure and apparently as sterile as that which skirts the sea-shore, to a richer loamy soil. The sandy zone, comprising part of the provinces of East and West Flanders, and of Brabant and Limburg, is that in which the peculiarities of Flemish husbandry can best be studied.

A part of this sandy zone is much intersected by canals and roads, by means of which a constant supply of manure can be obtained from the towns. M. Kervyn details a mode of cultivation adapted for such circumstances. The farm is supposed to be 33 arpents in extent (an arpent is 1.1086 acre); the soil best adapted for Rye, but nevertheless capable of carrying Wheat and winter Barley. The following will be the distribution of the crops:—10 arpents of Rye, 4 of Wheat, 3 of Oats, 3 of Buckwheat, 3 of Clover, 3 of Potatoes, 2 of Barley, 3 of Flax, 1 of Carrots, 1 in Lucerne (2) and in stolen crops, 12 Turnips after Rye and Barley, 1 Carrots after Flax.

Upon the 33 arpents they have crops as follows:—4 arpents of roots as a principal crop, and 13 of stolen crops. These are what may be called "cleaning" crops, clearing and preparing the soil for the other crops to follow in due rotation. For the feeding of the cattle there is thus obtained during the summer 3 arpents of the preceding year's Clover, and a cutting of the same year's upon 3 arpents; 1 arpent of Lucerne; ordinarily a certain quantity of Red Clover to meet the requirements of the early spring. During winter the wants of the cattle are met by 12 arpents of Turnips, 2 of Carrots, 1½ of Potatoes, hay of Clover or of Grass. This system of cultivation requires a large quantity of manure. Of this the 16 head of cattle which the farm maintains or should maintain, without taking into account the horses and pigs, should produce annually 115 to 130 cart-loads of 900 kilogrammes. The remainder of the manure required is obtained from a distance by means of the canals and roads of communication with which the district is intersected. In addition the farmer is careful to employ composts, ashes, and liquid manure formed of a mixture of oilcake and urine; of this using on a farm of 32 arpents as much as from 2250 to 2500 hectolitres. Turning our attention to a farm possessing a soil similar to the last, but in a district where extraneous supplies of manure are not obtainable, the following modification, as shown by M. Kervyn, is necessary. The cultivation of root and forage plants become now a marked feature of the distribution of the crops. Less of land under grain, more of artificial meadows in summer, a greater quantity of roots for winter, are the points for consideration. The following is the

distribution of the principal crops: — 10 arpents in Rye, 3 in Oats, 3 in Barley, 3 in Buckwheat, 3 in Clover, 3 in Flax, 3 in Potatoes, 1 in Peas, 1 in Beetroots, 1 in artificial Grass, 1 in Carrots, 1 in Lucerne. Of stolen crops, 10 arpents in Turnips or Carrots after Rye, 3 in Turnips after Barley, 3 in Carrots or Clover sown with the Flax.

Comparing this with the distribution before given, we find that the 4 arpents which are there given of Wheat are replaced by 3 of Barley and 1 of Peas, 1 of Beetroots and of artificial Grasses.

The zone of strong lands in the province of East Flanders comprehends all that part towards Brabant and Hainant, the arrondissements of Alost and of Oudenarde. In West Flanders it comprises part of the arrondissements of Roulers, Ypres, and of Courtray. In the neighbourhood of the latter place, so celebrated for its cultivation of Flax, the soil is of that quality known with us as loam, with the Flemish *leem aerde*. *R. S. B.*

Home Correspondence.

Alderman Mechi's Farm Balance Sheet.—Admitting, as farmers will generally do, that 254*l.* 16*s.* 8*d.*, besides, bailiff's wages and house rent and coals free, is a very fair profit to have realised off 170 acres in the unfavourable year 1859, still there is an item in the account which does not meet one's expectation, viz., "the return the live stock has given;" and this may be shown with advantage when so much profit is attributed to stock returns on arable land.

It appears from the sales in the year that the capital engaged in stock must have been about 1280*l.*, and the year's gross returns, after deducting the cost of lean stock purchased, has been only	£734	0	0
And against this there has to be charged the purchased food, laid by Mr. M. at 3*l.* an acre, on 170 acres	510	0	0
	£224	0	0
Leaving 224*l.* only to cover the proportion of the gross expenses of the farm incurred on account of the stock			
And more particularly of interest of capital in stock and implements and machinery bought for their use..			
Rent, rates, &c., of land appropriated to them, about 70 acres, with the buildings erected wholly for their use			
The labour with the stock			
Cost of cultivation of 70 acres in roots and other expensive cattle food			

Amounting altogether to at least a third of the gross expenses of the farm. Surely this speaks strongly in favour of developing fertility by cultivation and improvements, and of the importance of making the most of manure, so as to do with as little stock as possible. There can be no question that the resources of great towns are not made use of near to the extent that a right understanding of what manure made on a farm truly costs would lead to. *Hewitt Davis, Frederick's Place, Old Jewry, March* 21.

Extraordinary Fecundity in a Sheep.—A small ewe, the property of Randle Wilbraham, Esq., Rode Heath, Cheshire, has lately produced three fine lambs for the ninth time, each year in succession, thus making the unprecedented number of 27 in nine years, all of which she has reared and brought to maturity. The ewe we understand is cross bred between the Welsh mountain and Llynn sheep; the Llynn country as every Welshman knows, is a large tract of land bordering on the coast of Caernarvonshire which has long been celebrated for its excellent breed of sheep. *W. P., March* 21.

Rolling and Hoeing Wheat.—The continual cold rains and frosts without snow have drenched and lifted the late Wheat plants too much for their good on light and shallow soils, in some cases almost out of the ground, causing in them a sickly and unpromising appearance. Such however as were early sown on deeper and well cultured subsoils (which unfortunately are but few this season) have obtained a firmer hold, and are progressing more favourably in Essex, since the frosts and cold rains have subsided. As there are but few winter weeds this spring, we think it advisable to hoe it but little, if at all, especially as labour is scarce and dear, believing it would only tend to loosen it more; indeed it is questionable if even harrowing will not cause it to be much more root fallen, the land being so unusually puffy. To remedy the evil we intend immediately to repeatedly roll all our own down tight—surface solidity, with deep subsoil tillage, being now our motto. At all events, where it is thought best to hoe or harrow it, rolling it down firmly directly afterwards is an important point, and never ought to be neglected; but it is certainly the best policy to roll Wheat just as it is renovating, and not later. *Hardy and Son, March* 19.

Pulping Roots.—[Mr. McLagan, of Pumpherston, near Mid Calder, North Britain, who gives an account of his experience on this subject in the new number of the *Agricultural Journal*, has favoured us with the following account of the operation]:—As I mentioned before, the place where the operation is performed is taken off my straw barn, and is conveniently placed for the laying down of the roots, the taking away of the pulped food, and the using of the chaff and cutting of the straw. The pulper and straw-cutter are placed close together and were attached to the mill at an expense of 22*l.*, including the cost of the two machines. The Turnips being carted forward and laid down close to the pulper, the machines are put in motion, and one woman throws the roots into the pulper with a broad-mouthed shovel, a second cuts the straw, and other two take away the cut straw and pulped Turnips and mix them in layers, and as they are not fully employed they assist the woman at the pulper in throwing in some roots. Besides these a man is required to adjust the belts and put on and off the water, besides taking a general supervision of that and any other operation that may be going on at the time, such as cleaning grain in the barn, &c. I have charged his time at 1*d.* per ton, which will include the sharpening now and then of the knives of the straw-cutter. My usual rate of pulping is 3 tons per hour, and the expense is as follows, the women being paid at the rate of 1*s.* per day of 10 hours. I may mention that by a slight alteration of the position of the machines I could dispense with the services of one of the two who mix the pulped Turnips and cut straw. After the Turnips are pulped, three women turn over the heap and dust the meal amongst it at the rate of 18 stone of meal to 2½ tons of Turnips. This operation occupies them an hour for the 3 tons of roots, after which the heap is allowed to remain 12 or 18 hours before being removed by the shepherd or cattle-man.

	s.	d.
4 women for one hour pulping 3 tons of Turnips, cutting straw, and mixing the Turnips and straw together	0	4⅘
1 man superintending, &c., at 1*d.* per ton	0	3
3 women turning over heap and mixing meal ..	0	8⅗
3)	0	11⅘
Cost of manual labour preparing food p. ton of roots	0	3⅘
Interest on 22*l.* at 10 per cent., supposing the machinery used 100 hours during the season =1¾*d* per ton	0	1¾
Interest on 75*l.* at 10 per cent. for reservoirs and water-wheel, &c., supposing them used 600 hours in the year for threshing, pulping, bruising Oats, &c., that is 3*d.* per hour or 1*d.* per ton	0	1
Total cost of pulping a ton of Turnips, cutting straw, mixing, &c.	0	6½

This differs somewhat from the statement I sent you before, viz., 4*d.* per ton. The discrepancy is explained in this way—4*d.* is what I reckon the average cost of preparing the food on my farm, as I stated in my former letter that all my Oat and Wheat chaff was used for mixing with the pulped Turnips, so that there is a considerable saving in the cutting of the straw, which is included in the above statement, and no account taken for the Oat and Wheat chaff. Again, I have not been in the habit of allowing anything for the reservoirs and water-wheel, because the pulping was only done when the wheel was not otherwise required, and I was of opinion that it suffered less injury by being used than by being left alone and allowed to become dry. Your last letter, however, drew my attention more particularly to the relative cost of applying steam and water power, and I thought it necessary to take it into account in the foregoing. The reason for stating 75*l.* as the value of the reservoirs and the wheel is, I was charged, as I mentioned before, 145*l.* for them—the threshing mill, the winnowing machines, the Oat-bruiser, and a small water-wheel, and belt and pulleys for driving a separate winnowing machine. The threshing mill, &c., were valued at 70*l.*, leaving 75*l.* as the value of the wheel and the reservoirs. I calculate that I was fully paid for my labour in enlarging the reservoirs and strengthening the dams by the vegetable matter collected at the bottom of the ponds, and the use which I make of the dams as roads. *P. McLagan.*

Town Sewage.—We have received the following communication on this subject in the form of a letter to Professor Daubeny, with a request for its publication:—

"Honoured Sir—After perusing your lecture in the *Agricultural Gazette* of February, I was so much struck with it as to the exhaustion of the land in this country, and I might add in the whole of Europe, that, lying on my couch, I began to cast about how such a distress might be averted, for such a result has occurred to my own mind of late years. Indeed I have likened the land to the human frame, for by age it becomes exhausted; as by myself, being in my 84th year, I find my muscles and energy have much failed, though my health in reality, thank God, is very good. Now I will explain a small case of our own. We keep a small farm in our own hands; well, there was an ancient road down the side of our field a little elevated above the land in the field, and one of my sons had it hacked down and ploughed and sown, and the two or three crops since taken have been fully double the quantity of other parts of the field, showing those parts had never been fairly replenished since it was first turned out. This little case sufficiently proved to me how we neglect the injunction laid upon us—"Increase and multiply and replenish the earth." I recollect when in India many years ago an old story told of the Chinese that they gathered the human soil as gold, and when a friend or two came on a visit they would press them to stay a day or two longer on that account. This may be exaggerated, but they really weave their Bamboos together and lay them upon any stagnant water or pond, and cover them with soil for vegetation in droughts; they beat us hollow in endurance and patience. My simple suggestion regarding the distribution of the sewerage of London and other cities and towns is for London to select two large sites or areas, one on the north and another on the south, as reservoirs, and lay pipes all along or round such areas to communicate or branch off to all the railways, which pipes may be carried all over the country and have outlets everywhere required; but in the Act I would bind the railways to only charge a small compensation as carriage and wages for the parties attending the stopcocks or delivery and facility thereof. Thus I think the multiplicity of pipes after a time laid down would take off the daily accumulation of the sewerage, or at least during all the summer months, to prevent any bad effluvia. This mode or some other better digested plan of your own, assisted by eminent engineers connected with you, would prove in the end a saviour of our agricultural interests and an immense benefit to society at large. The pipes might be laid down a little undulating along the embankments of the railways; that would give a little spur or easy running of the sewerage. I would also have every landlord or owner allow pipes to be laid down to get to any district advisable free of charge, they being allowed to take sewerage for themselves without waste. Such carts as they use in summer for watering the roads would do well for farmers to irrigate their lands at the different stations or outlets. Dr. Johnson of Birmingham considered the human frame perfectly changed in about every 10 years, and Dr. Darwin thought a person of a good sound constitution might live to be 200 years old; but these, I think, are only ideas, for old age naturally brings on decay every day. Hoping you will have the goodness to pardon this freedom and any little inaccuracies in an old man, I beg to remain, with great respect and esteem, *Joseph Wooler, Whitfield House, Wolsingham, Durham, March* 22.

Societies.

Highland and Agricultural: *Feeing Markets—Hiring Markets—"Mops."*—These are different names for the same thing. The practice of hiring servants in the public market with hardly any reference to character was made the subject of discussion at the last monthly meeting of this Society, and we give the following abridged report of the speeches then made. A committee had last year been appointed to report respecting the system of engaging farm servants at hiring markets which prevails in most parts of Scotland. The Committee lost no time in sending to proprietors and tenants in different districts a schedule of queries. Of those about 300 were issued, and above 200 reports had been received. Opinions were pretty equally divided, as while nearly 90 reporters were in favour of abolishing hiring markets and substituting registers, above 100 considered abolition to be unadvisable or impracticable. The convener of the committee reported the opinions in detail of the correspondents, and thereupon a discussion ensued:

Mr. Wilson, Edington Mains, said he was one of those to whom these schedules were sent, and he had returned an answer. He must say he did think that the whole movement was a mistake. He was quite satisfied that the gentlemen who had originated the inquiry were actuated by the very best of motives. The fact of Mr. Heriot being at the head of the committee was of itself a sufficient guarantee that the object was one of benevolence, and affording a reasonable prospect of leading to useful results. But on receiving these schedules, and beginning to consider the question, they just at once suggested this consideration to him.

For instance, here was a query in these schedules—"Are you of opinion that hiring markets are susceptible of improvement, or that they ought to be abolished?" Now, pray, who was to abolish them? It appeared to him that this was a matter wherein the labourer had as distinct a standing as the farmer or proprietor. It was a matter where the interests of two parties were concerned, and it appeared to him to be a thing foreign to the whole genius of their constitution that one side, and that in no respect the stronger side, should propose to lay restrictions and limitations upon the mode in which the labourer was to dispose of his only commodity, his labour. He believed, so far as he had intercourse with the labouring community, that they have a very distinct impression on their part that the hiring market is a good thing for them—that it furnishes them with a good opportunity of meeting with employers, and of disposing of their only commodity in a satisfactory and ready way; and he was pretty sure that they would look with extreme jealousy on any proposal—especially a proposal coming from the employers of their labour—to interfere with the market of their only commodity. He thought that any effort on the part of employers to interfere with the labour market was to be deprecated and should be avoided. It was not a safe example to set to labourers of any kind, either farm servants or others. They saw how much mischief had grown out of such attempts in other departments of industry. He believed nothing of the kind had yet occurred in the case of agricultural labourers, and he thought that the parties disposed to enter into this matter should be very cautious in taking any steps that might at all tend to such misunderstandings as would have a tendency to lead to combinations either on the part of the employers of labour or of the labourers themselves. That appeared to him therefore as a preliminary objection to that movement. He did not like the appearance of a cool proposal on the part of the employers of labour to consider the question of abolishing these markets, which had been of very long standing. And how were they to be set aside? That came to be the next inquiry. Supposing that that meeting, or those whom it represented, should come to be of opinion that it would be desirable to get rid of these markets, how were they to do it? Were they to proceed by Act of Parliament? Or were they to hold a conference with the servants to induce them to agree to the abolition? It must be in one of these two ways; and he presumed that it would only be in the latter way, with the concurrence of the other party directly interested, that they would proceed. Well, if they canvassed the servants, or put it to them, he was pretty sure that they would get a very decided negative to the proposal. He must say, in common with others whose opinions had been quoted, that if the social system be right—if families were engaged as families, instead of separating one class and sex of people from the other, very much of the evil complained of as growing out of these markets would be no more heard of. He thought, when it was stated for instance, that these markets were looked upon in many quarters as the cause of the drunkenness and immorality that they complained of, that this was a mistaken view, and that these markets were rather the occasion than the cause of these evils. The evil that existed was seen probably in a more offensive way at these markets than at other times; but he very much doubted of these markets being the cause of the evil. And that whole matter, in fact, of dealing with hiring markets, with the view of remedying the evils that were known to exist amongst that class of the community, appeared to him to be very much akin to what medical men called "treating the symptoms"—it was not going to the root of the evil. They might get quit of these hiring markets, but unless something far more important be done than that, the evils would exist and would find vent in other forms. He did not think that these markets were the cause of the evils complained of—they certainly afforded facilities for much evil, but they could not, on that ground, get quit of such things. He saw that Mr. Stephens mentioned that under the bothy system, as regularly as the half year came round, there was a clean sweep of the servants. But in the counties on the border where only families were employed and married men, the changes were the exception. It was a very rare thing to find a farmer of character in the market needing a complete set of servants. A farmer might have changes over which he had no control, but the main bulk of the servants continued from year to year on the same farm, the changes being not a very considerable proportion of the whole number. Now, if it were conceded—and he did not think it could be

challenged—that markets for engaging servants were lawful, and that they were necessary, they could not set them aside merely because certain inconveniences grew out of them, or at least found more unmistakeable manifestation on such occasions. For instance his friend Professor Balfour was aware that at the University this winter there had been some inconveniences experienced from certain bickerings, and there were probably other evils of a more serious kind which arose every session from the crowding together of such a considerable number of young persons; but would any person for a moment seriously propose to set aside such an institution merely because they could not bring such a body of people together without certain inconveniences? He thought, therefore, that they must go a great deal deeper before they seriously proposed summarily, and on the ground of certain evils, to interfere with an arrangement which manifestly suited the convenience of the parties concerned.

Mr. Scot Skirving, Campton, said he had listened with great regret to the opinions just expressed, seeing that Mr. Wilson's opinion must carry with it considerable weight.

Mr. Wilson said there were two parties to this bargain, and that they must get both parties to consent, before they could abolish these markets. Now he (Mr. Skirving) admitted that there were two parties to every bargain, but he denied that in order to prevent a bargain, the consent of the two parties was required. All that they had to do, in order to do away with hiring markets, was for the employer not to go. He limited himself to his own county, East Lothian, and he maintained that in that county hiring markets were a great nuisance, and could be swept away by the mere will of one of the parties to the bargain; but he had no doubt that they could get the consent of both parties if it were properly gone about, and that the party who would most cheerfully consent would be the labourer, on certain conditions. These conditions were that each of these three parties, owner, occupier, and labourer should do as he would be done by. And the first thing that the owner in East Lothian should do was to provide fit and adequate houses for his labourers to live in. Then as to the farmers—were they not most grievously to blame for adherence to one of the most mischievous and degrading systems, the bondager system? For the information of those who might not be acquainted with that system, he might state that it was this:—That a labourer got a very small house, very often but with one single room. He might have a large family, and might have the greatest difficulty to preserve the decencies of life; and what did the farmer of East Lothian in many instances do? He compelled that unfortunate man to receive into his family a young person at most inadequate wages. That foreign inmate rendered his home so comfortless that he was glad to fly from his cottage to try and get another. Then he thought his fellow farmers in East Lothian ought always, where they could, to allow their labourers to keep a cow, as that would remove another cause of improvidence. If a proper house were given to the agricultural labourer, and no foreign labourer forced upon him, there would be an end to the hiring markets. He did not speak theoretically merely, but from practice, as he had practised the same system followed by his father, and he had on two occasions been at the funerals of men who had all their lives worked on the same farm. Nobody talked to him as to whether they would leave or not, and there was no such thing as a change; but when death or some reason caused a vacancy, and he did require a new shepherd, he put an advertisement in the local paper, and he had fourteen shepherds applying within a fortnight, when he wrote to their employers and found their characters. His mode of getting servants was to let it be known that he wanted one. That was the way to get a servant, and when they had got them, if they just said to them, "I do not approve of these markets; you shall have two holidays, but I need a bargain that you must not stand staring in the streets all day, till you get so cold that you must get half-drunk at night." And if they made that bargain he thought the whole matter would be at an end. What he would propose instead of hiring markets was simply "Hire in private."

Mr. Harvey, Whittingham Mains, begged to give his adhesion to Mr. Wilson's opinion.

As to the hiring markets, they could not make a change without the servants thinking that there was to be some oppression; and to send them to have strikes and meetings over the country was the worst thing that the Highland Society could do.

Mr. Hope, Fentonbarns, said: Any one who went to Haddington and saw the servants there collected, and experienced the difficulties in getting good men, would say that the market was not a place to get them. He did not mean to say that labour, as a commodity, ought not to be sold to the best advantage; but the people who bought must also see that they bought it properly. He thought the proper way to do was to engage the men before the hiring market a considerable time; and they would get plenty people any time it was known. They should just resolve never to go near the markets.

Mr. Aitchison, of Alderston, differed entirely from Mr. Wilson and Mr. Harvey, and agreed with Mr. Skirving and Mr. Hope.

Last year, five of his servants went away, and he desired his overseer not to hire the men in the market, but privately, and he did so. This year only two of his men went away, and he again told his overseer to engage privately, which he did. He would not enter into any agreement that would put the servants in a worse position; on the contrary, he wished to put them in a better position, because, when men came one year and went another, their masters could not take much interest in them, and they could not take much interest in doing their work properly; but if they stopped many years, the masters would take a greater interest in their welfare, and they would also take a greater interest in their work.

Mr. Douglas, Athelstaneford, said he took some part in the attempt to alter the day of hiring in the Haddington district.

The farmers as a body wished to change the market to the month of March, but the farm servants looked upon it as a combination on the part of the farmers against them. Their capital was their labour, as Mr. Wilson had so well stated to the meeting, and they looked upon the proposed change as a combination on the part of the farmers to take away from them their just rights and liberties; that it would seriously injure their wages; and that the farmers could make a wage for themselves to their prejudice. The masters had nothing to gain by the abolition of the markets, whereas the servants thought it injustice to them; and to attempt to abolish them would be setting up a feeling of hostility between master and servant, and serving no good purpose. His opinion was that it was not in their power to abolish the markets in the way proposed. The men had an equal power and an equal right in the matter; and to say that they would keep away from the markets would be a combination on their part, which would be followed by a combination on the part of the men, for such things were contagious.

Mr. Bell, Inchmichael, said that Lord Kinnaird took a great deal of trouble a good many years ago to establish a register, and held a great many meetings in Errol on the subject.

His lordship tried everything he could to induce ploughmen to register; he established a register, got two or three lectures delivered, and did everything in his power to promote the success of the experiment, but not a single ploughman could be got to register. He believed Lord Kinnaird was blamed for not taking the farmers along with him; but his Lordship took the movement upon himself, he believed, from the best of motives, that the ploughmen might not be able to say one word as to the farmers having any sinister design in the matter. It struck him (Mr. Bell) that much good sense had been spoken at that meeting on the subject, and that the ploughmen would resist anything in the shape of a combination against their just rights; and it was his opinion that they should rather try to improve the markets in the best way they could than try to put them down.

Sir Thomas Gladstone, of Fasque, must say that he could not admit the cogency of some of the arguments that had been used in support of the present system.

It had been stated that they must not attempt to establish a system of obtaining characters because the good nature that was inherent generally in men induced people to give what he did not call false characters, but what really were in truth false characters. Why, that was a very sad account of the moral condition of this country—and he must say that the sooner it was put an end to the better. From the county of Kincardine the secretary had received nine answers to the queries that were circulated, and he found that they were unanimous in condemning the feeing market system. He might be allowed as an individual to state what his own practice had been for some time, and which he had found to work well. He had adopted the plan suggested by one gentleman of abstaining from attending the feeing market, and engaging the servants privately, and he found no difficulty whatever. It was by such means as privately engaging the servants only, and not by an arbitrary or apparently tyrannical suppression of the old system, that they were to get any remedy. He should be most averse to offer himself in the most remote degree in the light of opposing the labourer, or of endeavouring to do away with what he considered to be necessary for his interest, and for his obtaining a fair price for his labour, to which he had a most undoubted right. It was by straightforward and legitimate means that they were to change all systems, if it was desirable to change them, whether social or political; and in the social system especially that they must proceed by gentle and moderate measures. It had been well said that there were two parties to the bargains made at these hiring markets, and it was by the absence of one of these parties that the system was to be brought to an end. It had been found that the registration system worked admirably, to a great extent, in regard to domestic servants; and he thought that, in the course of time, and by means of the encouragements which it was proposed to give it, there was no solid reason why it should not be equally applicable to the class of agricultural labourers. Sir Thomas concluded by reading the answer given to the seventh query of the committee by the Kincardine Farmers' Club, which was to the effect that the hiring markets were productive of dissipation; that they promoted the present changeableness of service so much complained of; and that they had taken so strong a hold on the habits of the people that it was in vain to propose their complete or summary abolition—the only feasible plan for improving the present system being the adoption of a system of registration.

Mr. Wilson—Allow me one word of explanation. My remarks have been held as too strong; but I beg to call Sir Thomas Gladstone's attention to the fact that I was warranted in assuming, from the terms used in these queries, that there was a serious proposal to abolish the markets. The word "abolish" was used once and again; now, that word "abolish," according to the known use, implies something stronger than gradual supersedure by social arrangements.

The Chairman thought the subject they had been discussing that day was of importance to the employers of labour; and, as Mr. Wilson had said, it was of no less importance to those who had labour as their only commodity.

He thought they must all feel very much indisposed to interfere with the last class of persons to whom he had referred; at the same time he most fully sympathised with those who thought that there were great evils—and he did not think any one who had taken part in the discussion had denied the existence of great evils—connected with these hiring markets. There were evils arising from misconduct and immorality, and there were evils from combination. He thought Mr. Wilson defended markets on the ground that they prevented combination against the labourers; but it appeared to him (Mr. Milne Home) that an opportunity was afforded for combination by masters meeting together and coming to an understanding that they were not to give more than a certain sum for labourers that might present themselves. They saw that these hiring markets were not absolutely necessary from the facts brought before them that day. It appeared that no such markets existed in Roxburghshire, and that in Haddington women servants were employed without hiring markets. A farmer in Haddington district told them that he did not resort to hiring markets, and his friend, Mr. Aitchison, told them that he did not resort to hiring markets, for the purpose of engaging servants. There was no difficulty experienced in regard to engaging domestic servants; and they had heard that those who adopted the principle of making inquiry into character before engaging servants had found no difficulty; and he thought, whether hiring markets were put down or not, that it ought to be the rule for masters to seek a character, as he hoped it would also become the practice of the servants themselves to inquire about the cottages. Mr. Skirving had scarcely done justice to the bondaging system as it existed in Berwickshire. The general character of the cottages in Berwickshire was such that there were means of separation of sleeping places not only to the members of the family, but to the bondager; but he was afraid that so long as that system of bondaging existed—and it ought to be put an end to independently of any system of hiring—but so long, he would say, as that system of bondaging continued, it would be a difficult thing to get rid of hiring markets where bondagers were engaged; because they could not expect ploughmen who were to take young men or young women with their families to assist them, to seek for these young persons in any other way than in the market. And he only trusted that, by the advance of religion and intelligence and moral feeling on the part of all classes of the community, a regard to character would be looked to in future by both masters and servants; and by-and-bye, when the system of inquiring into character was more observed, they would be able to dispense with these hiring markets. In the meantime the only thing they could do was to endeavour to regulate and control these markets by such means as had been alluded to in the course of that discussion. He knew that in Dunse the use of public-houses at these markets had been to a great extent superseded by the establishment of coffee-houses. But there was another view which he would wish to offer, and it was this, that he believed many of those servants went to the hiring markets not for the sake of being re-engaged, but for the sake of seeing their friends whom they had so little opportunity of seeing in the course of the year; and for the sake of a holiday, and for the sake of recreation. Many of these servants who went to the hiring markets really intended to continue in their service, and merely went to the markets because they expected that day to be a holiday. They had very few holidays, and he should be exceedingly sorry to see hiring markets discontinued, because he looked upon them more as a holiday than as a means of engaging servants; and their great aim should be to regulate them so as to prevent misconduct, and not to deprive their servants of the few opportunities they had of seeing their friends and having a day's enjoyment.

Reviews.

Practical Essays for the Improvement of Farming. By Hewitt Davis, Land Agent, &c., 3, Frederick's Place, Old Jewry. Simpkin, Marshall, & Co.

Mr. Davis could say in 1848 that for the previous 20 years he had generally farmed between 2000 and 3000 acres of land. He can now, we presume, say that for the last 20 years he has had large experience in the management of estates, in the drainage and permanent improvement of landed property, and in dealings with its tenantry and owners. The opinion of such a man is surely worth knowing, and his advice worth having. He has been in the habit of giving both, occasionally in agricultural pamphlet essays as well as continually in the columns of agricultural newspapers, and he has now collected all these literary fragments and published them in a five shilling volume. Readers will find in it instruction and discussion on a great many agricultural topics conveyed always in very lucid simple English, and dictated by experience and intelligence. The following passage relates to crops which will undoubtedly be more largely grown during the coming season than they have ever been before; and for reasons which are sufficiently given in Mr. Davis's words, and have been sufficiently realised by many of his readers during the past winter.

"*Winter Food in Severe Seasons.*—The variation in our seasons, the great differences in the temperature and in the fall of snow and rain of our winters, and the uncertainty of what may be the farmer's occasion for cattle keep, should make farmers always prepare for the extremes of weather they are exposed to. I can recall the winter of 1816, when snow lay so deep from January to late in April that there was no doing anything with the land for 14 or 15 weeks, and stock had to be kept all this time on housed food; and although nothing like this winter has since occurred, still we often have weather to greatly distress the less thoughtful farmer for his stock. I always had in mind the inconvenience and loss I sustained the first long severe winter that took me by surprise after I became a farmer, when the Swedes rotted in January, and the less hardy roots were destroyed by the severe frosts and heavy rains which alternated through December. The following spring was very backward, and vegetation made little progress until late in May, so that all through March and April I had nothing to give my ewes and lambs but hay, and was daily forced to run them over my seeds and Tares, long before they afforded sufficient bite to hold them. My loss was very severe, and I resolved never again to lay myself open to such a mischance; and to prevent it sought for a description of food that would stand severe frost and be come-at-able in deep snow, and I found it in the Drum-head Cabbage and Kohl Rabi, two descriptions of winter keep I recommend every farmer never to be wholly without, for so useful have they proved to me that I have since always had about a fourth of my winter food land appropriated to their growth. Besides their particular value in severe seasons, they have much to recommend them in ordinary years in their superior nutritious qualities, and the certainty there is always of getting a crop: and the certainty there is always of getting a crop: them. I believe there is no amount of food to be grown to the acre equal to that afforded by the large kind of Cabbages, and of all descriptions it is the most suited for ewes and lambs in February and March, and Kohl Rabi has the merit of affording an increased supply of sweet rich milk from cows fed with it, and is the most desirable of succulent food for the dairy at the season when sweet milk-forcing food is most scarce. Both these as field crops are best raised from plants planted out 30 inches square in April and May, taken from seed beds. The seed should be sown the end of February and early in March, in beds protected by bushes from the birds.—Dec., 28, 1859."

Sutton's Farmers' Manual and Seed List for 1860.

Besides a trade advertisement, it contains information on the cultivation of many of our farm crops. For instance, on that of Carrots, by Mr. T. Bowick, taken from the *Coventry Standard;* of Sorghum, from the *Gardeners' Chronicle* and other quarters; on Improving Permanent Pasture, from the *Agricultural Gazette;* on the Natural Distribution of Grasses, by Professor Buckman, also recognisable by our readers; on the Cultivation of Mangel Wurzel, by correspondents of the *Agricultural Gazette* and *Bell's Messenger;* on Kohl Rabi and Cabbage Worts, from the columns of the journal; on Lupines, from the *Journal of the English Agricultural Society;* and a Calendar of Farm Opera-

tions from *Morton's New Farm Almanack*. The following memorandum on Lucerne is new to us :—

"We have found the most certain mode of obtaining a crop is to drill the land with Beans rather than Barley or Oats, as the latter, however thinly sown (and I have known 1 bushel per acre tried), is apt to lodge and destroy the young Lucerne. The quantity of seed required is 20 lbs. per acre, and to be drilled alternately with the Beans (the rows of which are about 10 inches asunder) after having been well hoed. The land must be cultivated precisely as for a white straw crop, as it is most essential to have the land as free from Couch and small weeds as possible. By this mode of cultivation it will also escape the ravages of the 'fly,' one of its greatest enemies, and you will ensure a healthy and vigorous plant in the autumn."

Miscellaneous.

Root Growing and Sheep Feeding in Ireland.—At the beginning of the year I cannot resist sending greetings to my brother agriculturists across the water. The unusually severe weather coming so early has destroyed the greater portion of our Mangels and a large percentage of our Swedes, that we, as large flock-masters, shall have some difficulty to feed our stock till next May without their being injured. I have purchased some of the best ewes in our locality to employ the rams I kept back last year, and I have 550 to yean. The more I think of Ireland the more convinced I am that I was right when, at the great agricultural dinner, I stated that Ireland could profitably double or quadruple her stock, especially sheep; the temptation is great, viewing the price of mutton and wool. I am quite sure I have many sheep that in May will cut 25*s.* worth of wool each if wool keeps up, and there is no chance of a decline; but nothing is so ruinous in farming as keeping stock and not having plenty of good food for them. In the summer (unless such an unusual summer as last year) there is a superabundance of food in Ireland, but the growth of roots is not extending as it ought to be, and consequently winter food is scarce. I plant in England 150 acres of Swedes and Turnips, and I am a very successful grower; but when I farmed rather largely in Tipperary I found, even in a mountain farm, I could grow better roots than in England. If the rough pastures (not the splendid ones, as, unfortunately, has been the case in the vale of Tipperary) were to be drained and broken up for roots, what an untold supply of winter food could be obtained! Then, another point I want to press strongly is the vast injury the pastures sustain by allowing the Grasses to go to seed before they are cut, and the loss of aftermath. I know mowing has been very expensive, and mowers could hardly be obtained; but the splendid mowing machines of Messrs. Burgess & Key will obviate every difficulty; they cut several acres a day, and lower than any scythe; the lower Grass is allowed to be the best, and though mowing is not very expensive with me, yet I could not prevent the men cutting so high, that I have ordered two of their mowing machines myself. I do hope to see them in every district in Ireland next year. Then again with corn: it is very cheap now, but that is no excuse for waste. I travelled a good deal in England and Ireland last year, and I was grieved to see the great waste of the corn; the same cry everywhere, "We cannot get hands!" and I am sure in many instances nearly half the crop was shed in cutting, so dead ripe was the corn. Machinery must be had, and I merely hope Messrs. Burgess & Key and other makers will introduce their reapers as extensively as their mowers. They have been used by several leading agriculturists, and have been found to answer admirably in Ireland. I have written a longer letter than I had intended, but will, on a future day, compare the price of English and Irish work.—Yours, &c., *T. Beale Browne, Salperton Park, Andoversford, in the Irish Farmers' Gazette.*

Calendar of Operations.

MARCH.

Isle of Ely: *March* 19.—The winter has lingered long and appeared reluctant to take leave of us. It commenced with unwonted severity in October; for I find on the night of the 21st the thermometer fell as low as 26°, and on the 24th as low as 24°, and on the night of the 14th of the present month it fell 17°, and during the intervening five months cold and frost have prevailed. The winter has also been characterised by an unusual amount of downfall. From the 1st of February to the middle of this month we have not had two successive days free from either frost or downfall, either snow or rain. Happily the last three days have been more spring like; the temperature has been higher and the breezes balmy and genial. Vegetation is backward. The Wheat plant has suffered rather less than might have been anticipated, although in some instances it looks weak and sickly. The plant on the fen soils is stronger and more vigorous than it does on many of the strong tenacious clays. The frequent rains have suited the one, but have been too copious for the other. Undrained high lands (and some of these are even yet to be found—look miserably ill, and must yield a wretchedly poor crop. On some of our farms, gravelly or light lands, we see the Wheat plant is commencing its spring growth, and with a continuance of suitable weather will soon assume a widely different appearance to that presented during the last six weeks. We have just commenced hoeing our Wheats. Friday last was the first day on which we could perform this most important work. We find the same [illegible] last year was commenced on the 17th February, and completed on the 1st March. We roll about 500 acres ourselves, and use the Wheat rolls invented by the late Mr. Tuplolme, of Horncastle. These work admirably, and give to the soil a stability which is of immense service to the vigorous and successful growth of the plant. We employ nine horses in this work—three rolls with three horses each. The land becomes light as the frost lifts and raises it; and as this dries, it becomes dusty, frequently from 2 to 3 inches deep, which prevents the Wheat striking a strong root from near the surface of the ground, which it is wont to do at this season of the year. The roll overcomes this difficulty, but requires to be used before the surface becomes dry or dusty, and indeed should be done as soon as it will work clean. These 2 or 3 inches of raised soil, which would soon be mere dust, by this process are consolidated, and form firm and solid ground, in which the plant can strike its surface roots successfully, the result of which is a strong and vigorous plant. We commend the practice of rolling fen Wheats with an uneven surface roller to all fen farmers. A smooth roller leaves the surface too level and fine, and which, with a strong wind, is very liable to blow. Fen farmers will understand this. Beans and Peas are nearly all sown. The land has worked badly in many instances, and the work has been with difficulty accomplished. Oat seeding has commenced, and until the last few days has not done very well. The land has usually been too wet or too hard. Now however it is working admirably, and, with a continuance of the present weather, promises to finish much more satisfactorily than it began. Early sowing is still approved by the majority of our fen farmers, although the backwardness of the season has this year prevented many sowing as early as usual. The water-drill is a valuable implement in securing a good and rapid early growth of this crop on fen lands. Potatoes are now being planted, perhaps not as extensively as we have known on some former years. This root is scarce and will be thoroughly used up this season, all other vegetables commonly in season at this time of the year being destroyed by the severe winter. Land is being prepared for Mangels, and we expect an unusually large breadth of this crop will this year be sown. The root has become so invaluable, and so essential to our successful farming, that we anticipate a greatly extended cultivation of it. Keeping is becoming scarce, and our farmers are anxiously looking for Grass growing weather to keep them out of their difficulties. Store sheep are not a brisk sale at present, although we cannot avoid the opinion that sooner or later they will be very high. Wool and mutton point to this; sufficiency of Grass food is the only thing required to occasion it. When this is realised we believe extravagantly high prices will prevail. The corn trade steadily improves. Wheat sells more freely at rather higher prices. Stocks of old Wheat are working off, and the deficiency of the last harvest is becoming more felt, and will be increasingly so, as the summer advances. It would not take much to occasion some considerable advance in prices. *Your Fen Reporter, March* 19.

Notices to Correspondents.

THE METROPOLITAN BOARD OF WORKS have directed that in future the street in which our office is situated shall be called Wellington Street, and that the number of our office shall be 41. Correspondents are therefore requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

Address: *W R.* Dr. Voelcker, the consulting chemist to the Royal Agricultural Society, may be consulted at the College, Cirencester, Gloucestershire.

Burnt Bones: *A Young Beginner.* They are undoubtedly of great value as a manure.

Farm Bailiffs and Gardeners: *P, W, Equity, &c.* Our correspondent "W," a labouring man who has found leisure to give the results of his very extensive experience in frequent communications to the *Agricultural Gazette*, and who has in this way shown in our opinion considerable intelligence and ability, feels aggrieved by the appearance of a paragraph by "P" in a past Number, in which after the discussion of this subject had been formally closed, it is again referred to with the assertion that the correspondents of the *Agricultural Gazette* had distinguished themselves by "profuse argument and assertions not proveable." We have refused to insert a long paper by "W" re-opening the whole subject, and it is right therefore that we should here say that the paragraph by "P" was not inserted with any intention of renewing the discussion; and that it is absurd to suppose that any charge of *untruthfulness* was intended by him in the phrase "assertions not proveable."

Permanent Grass: *Cultivator.* Your light sandy soil after Turnips, if any portion of them have been fed on the land, does not want any manure before sowing Grass seeds. If the soil is at all too rich or the Barley likely to be laid, then the Grass seeds had better be sown by themselves without a light Barley crop

Sheep in Tasmania: *H S T* says: "Your correspondent 'A. R.' will find the Leicester rams the most profitable for Australia. They (imported rams) are often sold at very extravagant prices if good. Southdown rams many persons think very highly of, but for a profitable investment I should prefer the former. The object is to improve the carcase, not the fleece; it would be difficult to import sheep that would improve the wool of the Merinos, which are the sort most general, in fact almost the only sort in Australasia. There are deer in northern Tasmania, both in park (kept by — Cox., Esq., of Clarendon) and in the bush, running and breeding wild."

Sundries: *Observer.* 2 cwts. of salt and 2 cwts. of guano are a good dressing for Wheat and Oats; 1 cwt. of nitrate of soda and 2 cwts. of superphosphate per acre would make a good dressing for Clover. Hornsby, of Grantham, Garrett, of Saxmundham, are good makers of drills.

The Deer Park: *A Constant Reader* asks if any of our readers can inform him the reason that in a deer park in one of the western counties, the fawns of last year are all dying away. When opened they are full of water. The Grass of course with such cold weather as there has been all through the winter does not afford much food for them, but they are supplied with a large quantity of very good hay and Oats daily, and the thinnings of the evergreens are thrown out into the park for them. [Could the branches of a Cedar of Lebanon that was blown down and given to them have caused this mortality?]

Trottels: *W C K.* It is described in the following passage from Arthur Young's Farmers' Calendar. Does any one know what is referred to? "This plant is said by James Sibbald, Esq., of Paisley, to be of the Potato kind, and cuts of it are planted in the same manner, but in autumn so late as August and September. It grows so rapidly that its herbage may be gathered the following December and January, and served to all sorts of cuts raw, as it is, after being boiled. It is not injured by the severest frost, and it bears even in the middle of the winter thick leaves, curled and crisp, which are as tender as Asparagus, and rather like Seakale. In the spring months, when other vegetables are rare, this arrives at maturity, and the roots may then be dug up: there usually are 6 to 12 Trottels of 8 or 10 ounces each at every plant. When boiled they are of a yellow colour, and although they are somewhat similar in flavour to Carrots, they have a somewhat similar flavour to the most delicious vegetable as well as nutritious, and I grow it well. It was brought from Labrador, and is now cultivated by the nurserymen near Greenock, and its roots have been sent to Bristol for the purpose of cultivation. *Monthly Magazine*, V. 52, p. 104."

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		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in. / 20 in. by 14 in. / 20 in. by 15 in.	Common	14*s.* 0*d.* ..	£1 1*s.*
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6 by 4	6½ by 4½	7 by 5	7½ by 5½	11 6
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GLASS FOR CONSERVATORIES, ETC.

HETLEY and CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2*d.* to 3*d.* per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to James Hetley & Co., 35, Soho Square, London, W.

See *Gardeners' Chronicle* of March 3.

HORTICULTURAL GLASS—JUNE TARIFF.

THOMAS MILLINGTON'S reduced Tariff of GLASS, &c.

6 by 4, 7 by 5, 8 by 6, 9 by 7 / 6½ by 4½, 7½ by 5½, 8½ by 6½, 9½ by 7½ } 16 oz. to the foot, 11*s.* 6*d.* per 100 feet.

In 100 boxes,—4ths quality, 12*s.* 6*d.*; 8ds do., 14*s.* 4*d.*

10 by 8, 12 by 9, 12½ by 10½, 14½ by 10½, 13 by 11
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11 by 9, 13 by 9, 13½ by 10½, 12 by 11, 14 by 11
11½ by 9½, 12 by 10, 14 by 10, 12½ by 11½

	per 100 feet	16 oz.	21 oz.
20 by 12 / 20 by 13 / 20 by 14 / 20 by 15	Common ..	16*s.* ..	24*s.*
	Superior .	18*s.* ..	27*s.*

All Boxes included.

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Coloured Glass in great variety, at 9*d.* and 1*s.* per foot.

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200 CUCUMBER and MELON BOXES, and LIGHTS, and 500 LIGHTS of all Sizes kept in Stock, Glazed and Painted complete, ready for immediate use.

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A LARGE ASSORTMENT OF VASES, FOUNTAINS, BALUSTRADES, and other Garden Decorations; as also of CHIMNEY PIECES, TRUSSES, and other Dressings for Buildings, manufactured in Ransome's IMPERISHABLE STONE, are now offered to the public at a considerable reduction in price, immediate clearance being requisite in order to make room for the newly manufactured goods.

Application to be made to Mr. Frederick Ransome, Whitehall Wharf, Cannon Row, Westminster, S.W.; or Patent Stone Works, Ipswich. Specimens also on view at the "Exhibition of Materials, &c., 9, Conduit Street, Regent Street, London, W, during the Architectural Exhibition.

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MAULE and SONS manufacture and supply all sizes of the above mentioned Garden requisites in great varieties, at their Horticultural Potteries, Stapleton Road, Bristol.

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Inches.																	
Diameter		2¾	3½	4¼	4¾	5½	6	6½	7	8	9	10½	11¾	13¾	15	16¼	17½	19
Per Cast		2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	3*s.*	3*s.*	6*d.*	5*s.*	5*s.*	5*s.*	5*s.*	5*s.*

On lesser quantities, 6*d* per mile, for delivery to the station, would be charged. The usual discount to the Trade. Square Propagating Pans, Kale and Plunging Pots, Strawberry and Border Tiles, &c, made to order.

Country orders to be accompanied by a remittance.

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ROSHER and CO. beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.

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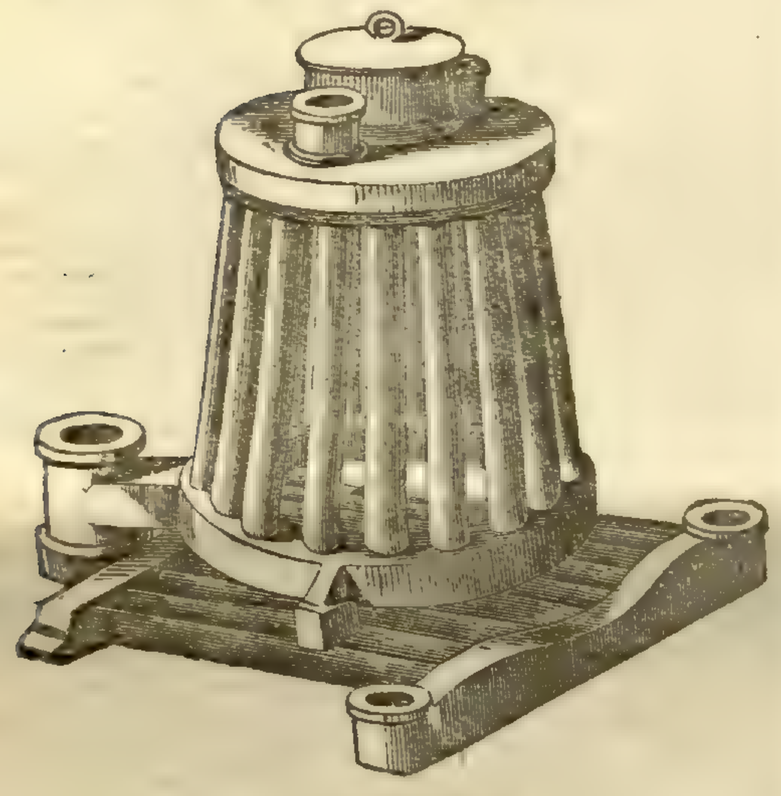
PATENT GUTTA PERCHA SOLES.—Important to Gardeners.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. Glenny, Esq., the celebrated Florist :—

"Gentlemen,—I have worn Gutta Percha Soles and Heels three or two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may [illegible] with part of all three by warming the material at [illegible] parts to the worn parts, [illegible] as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a cold I would escape of [illegible] and rheumatism by the use of Gutta Percha Soles [illegible]

Every variety of Gutta Percha articles such as Machine Bands, Tubing, Soles, Sheet, Pump Buckets, [illegible], Hooks, Fishing Joints, Flasks, Lines, Bowls, Leather Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calliotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.—The Gutta Percha Company Patentees, 18, Wharf Road, City Road, London, E.C.

By Her Majesty's Royal Letters Patent.



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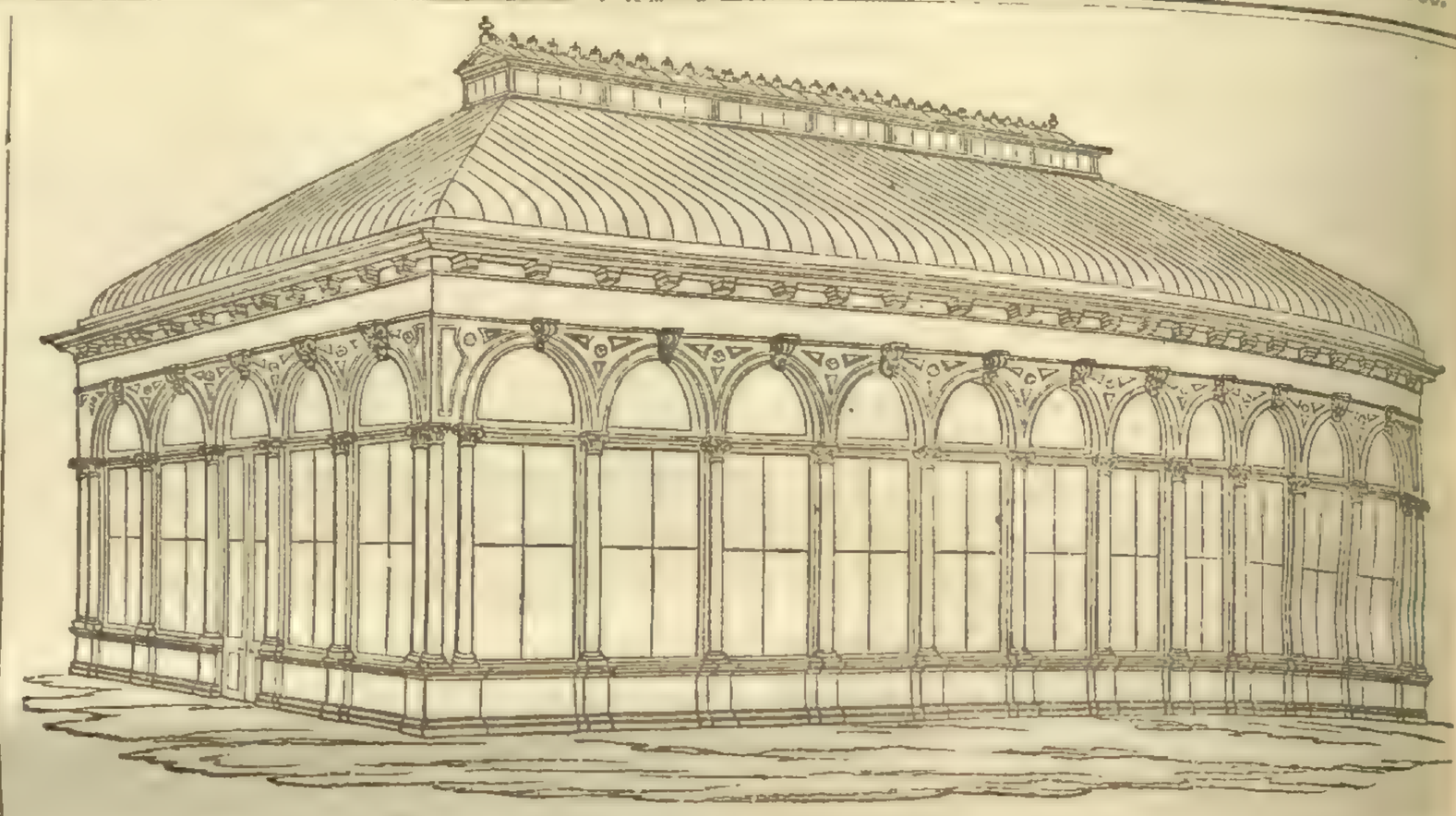

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CONTENTS OF TUB:—

10 gallons	15 gallons	28 gallons
£4 10	£5 10	£6 18

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No. 2. Ditto ditto 1 1 ,,
Telescope Branch Pipe for ditto .. .. 0 10 ,,

Fig. 619. GARDEN SYRINGE, with one rose and jet, 12s. 6d. each.
,, 620. Ditto ditto 11 6 ,,
,, 621. Ditto ditto 10 6 ,,
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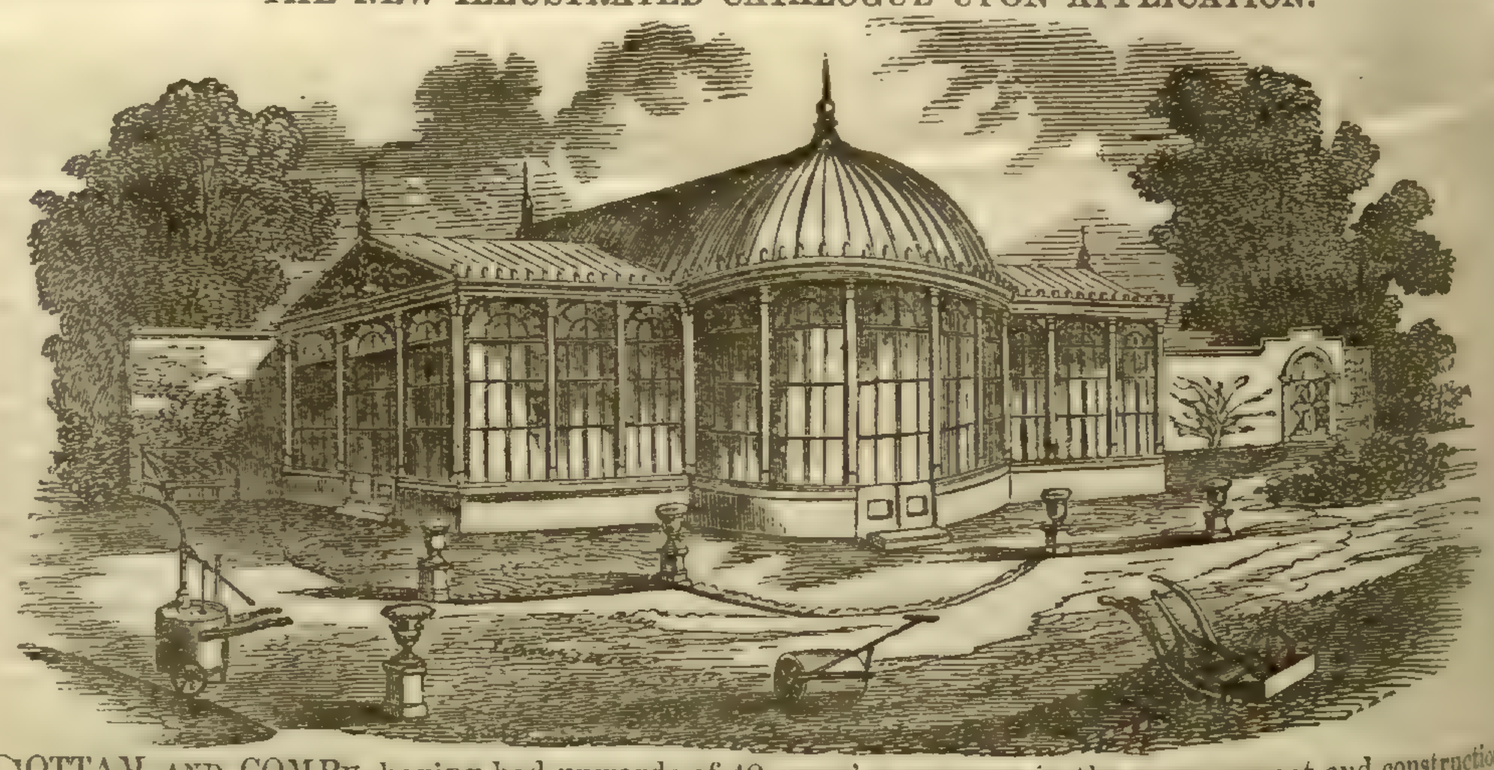

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HALF SPECIMEN TEA-SCENTED ROSES,

GROWN IN 6-INCH POTS FOR EXHIBITION.

FINE SELECTED PLANTS .. .. per doz. 24s.
Smaller Plants in 48 or 4-inch pots .. .. .. ,, 12
Selection left to W. W. & S.

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ROSES IN POTS.

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WM. WOOD AND SON are now executing orders for ROSES in pots, and will supply fine healthy dwarf plants as under:—

TEA-SCENTED ROSES	12s. to 18s. per doz.
CHINA DO.	9s. to 12s. ,,
BOURBON and NOISETTE DO...	9s. to 12s. ,,
HYBRID PERPETUAL DO. ..	9s. to 12s. ,,

The months of April and May are considered very eligible for planting out Roses from pots. The plants now offered are strong and well grown.
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Gloire de Santenay (Ducher)
Louis Quatorze (Guillot)
Madame Boll (Boyau)
Madame Charles Crapelet (Fontaine)
Madame Eugène Verdier (Guillot) (Fontaine)
Madame Louise Carique
Mademoiselle Bonnaire (Pernet)
Montebello (Fontaine)
Princesse Clothilde (Fontaine)
Sénateur Vaisse (Guillot)
Souvenir de Monceaux
Triomphe de Lyon (Pernet)
Vainqueur de Solferino (Damaisin)
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TEA-SCENTED.
Duc de Magenta (Margottin)
Mademoiselle de Sertot (Pernet)

DESCRIPTIVE CATALOGUES of the above may be had on application.

The Gardeners' Chronicle.

SATURDAY, APRIL 7, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	April 10	Horticultural (Fruit Committee) at St. Martin's Place	3 P.M.
WEDNESDAY,	— 11	[illegible]	8 P.M.
THURSDAY,	— 12	Horticultural (Floral Committee) at St. Martin's Place	2 P.M.

WERE it not that PAPER-MAKING holds out a prospect of profitably introducing new branches of cultivation, or of utilising refuse fibres, either here or in our colonies, we should probably have dropped the subject. But we think that the question has been examined from an erroneous point of view by the paper manufacturers, and we therefore venture to press the matter once more on public attention, not for the purpose of advocating the repeal of the paper duties, with which we have nothing to do, but as a mere question of applied science. The paper-makers believe that good printing paper can only be made profitably from rags. They say, to use the words of the *Times*, which has treated the question very fairly, that "Any raw material possessing the quality of fibre requisite for the manufacture of good paper would be available also for the manufacture of those articles out of which good paper is now made, and the latter, as a matter of course, would be the more profitable application of the two. The other day, for instance, a plant was found nearly as fit for these purposes as Hemp itself. It would make good paper, but it will also make good ropes, and so it was turned into ropes, and will not come to the papermill till it has served another purpose first." But here seems to us to lurk a fallacy. It is not necessary that fibres for paper should have the strength required for cordage or linen. Great toughness is not required for paper; at least if it is, where shall we find the paper which possesses great toughness? Nowhere, unless in Bank of England notes, which are of so exceptional a character as not to affect the question. Paper is not required to possess great toughness; it only requires to be strong enough to bear handling without breaking or tearing very easily. Nor is this the only weak point in the rag argument. It is also maintained that if a material unfit for cordage, but fit for paper, "could be discovered, it would have to compete in the market with rags—a material, equivalent to mere refuse, produced insensibly and without any expense whatever." It is here forgotten that although rags may be *produced* without expense they are *collected* by a very costly agency: human labour, which cannot be even made continuous; and they practically act like a monopoly. How far this is the case may be judged from the present exorbitant price of rags.

The true interest of the paper-maker is to render himself independent of the rag merchant and of those foreign powers which do their best to keep rags out of our market. That can only be done by calling in the aid of raw material, which once secured will place the *chiffonnier* at the feet of the manufacturer. All that is required to obtain raw material is to secure a steady demand for it, when come it will through the usual channels of trade, just as Cotton, Flax, Jute, and Hemp come now. It should never be forgotten that the rag market is in the nature of things limited, while the field of raw materials is absolutely unlimited. It seems absurd to say that an empire on which the sun never sets can produce nothing fit to compete with old rags.

But we are told that paper-makers have already tried many costly experiments without having found what they seek. We have no doubt of it. The Taverham manufacturers tell us they tried many experiments and spent much money, all in vain. Nothing is more likely. When we hear upon a similar authority that attempts have been made to form paper from some "Spanish Grass," whatever that may be, but that it did not succeed because the article was too good for the purpose, we can only express surprise that men of business should ever have tried such an experiment. When we are also informed that "we could dissolve a Mahogany dining table and make it into paper," we cannot but look with suspicion upon assertions made by those who can use so preposterous an argument. It might as well be said that if iron could be rendered ductile it would make broadcloth. Common sense seems to say that the material to be found must be something which is strong enough for paper and not tough enough for textile goods. When we know what the materials were on which costly experiments have been tried, we shall know better how to estimate their value. That articles promising well may turn out ill; that the most skilful experiments may fail, it is needless to say. Success is mostly, perhaps always, the child of failure. Even the powerful monarch who now rules a neighbouring kingdom did not achieve his successful greatness without tasting the bitterness of disappointment. It is unreasonable of paper manufacturers to expect exemption from the common lot. Let them read the life of GEORGE STEPHENSON; and follow his example. It is not in the nature of things possible that they should not triumph in the long run.

A correspondent of one of the daily papers is alarmed at the cost of conveying new materials from distant countries. He says that if 100 lbs. of rags will produce 70 lbs. of paper the same weight of "fibre" will not produce more than 40 lbs. Let us suppose him to say that for every 100 lbs. of rags 200 lbs. of raw material is required. But rags are made of cotton, and it will hardly be asserted that 200 lbs. of fresh cotton are required to do the work of 100 lbs. of cotton rags. We cannot but think the paper-makers' case much overstated. It would seem as if all new raw material is expected to be sent on board in an unprepared state; and not reduced in bulk or weight before it is embarked. We believe an unlimited supply of clean tough ill-made paper may be had from India and China. Suppose this were sent into our home paper market, could not the manufacturers work it over again, as they do European paper, without a loss of 60 per cent.; of if such a loss were inevitable would not the low price of the original article still ensure the process to be paying? What of the Grass cloths of the South Sea islanders? Has any one thought of bringing them, or the raw material from which they are formed into the market? We strongly advise those interested in this matter to pay a visit to the Museum of Œconomic Botany at Kew.

How far it may pay to grow crops in this country expressly for the paper mill no one can tell without a trial. Perhaps not on good land; but on poor land it may be and on waste land must be otherwise. There are Mallows, Nettles, and Jerusalem Artichokes; Hops, Flags, and Sedges, Furze and Broom; all worth a trial. In another column moreover will be found an official report made 5 years ago to the Board of Inland Revenue by Mr. PHILLIPS on the value of Holcus saccharatus. We would strongly advise our country friends to see what can be made of some of these plants. A quarter of an acre would be sufficient for a trial. They should take care that the crop is cut before the stems begin to die—not much sooner, not at all later—because, at the time when growth is ceasing fibre is most abundant, and at its greatest toughness; afterwards it is very likely to become brittle. Such trials would be easily conducted by intelligent gardeners whose employers have a little land to spare. Of course they should keep an exact account of their expenses, and of the weight of fibre obtained, the market value of which will be easily ascertained when the fibre is prepared. That by some of the means we have indicated plenty of good paper material may be procured we cannot doubt; for we do not believe that, as a correspondent remarks, it will be for ever a condition precedent that mankind must first wear out shirts before they can have bibles.

ON SOME CHINESE VEGETABLES NOW CULTIVATED IN CALIFORNIA.

THERE is no doubt of the fact (whatever may be the cause), that while many valuable additions have of late years been made to the plants cultivated in our woods, shrubberies, and flower gardens, scarcely one has been made to the kitchen garden. New varieties of old favourites are common enough, such as Peas, Strawberries, and Cabbages, but with the exception of the Dioscorea Batatas, we cannot recall a single new kind of edible added to our kitchen gardens.

What is the reason of this? Are there no new culinary vegetables to add? Do all the nations of the world feed upon the same plants? Do our explorers and botanists not look after these things in their foreign wanderings? Certainly these are not the causes. It may be and probably is the case that we are not to look for edible vegetables in different orders, or possibly not even in different genera from those which already furnish them, but if we may not expect to discover a new kind of food altogether, we might at least have new species with new variations upon the old tastes. Are there no new Potatoes, new Cabbages, or new Peas, with distinct and novel flavour, and if so why do we not possess them? If they are worth having there are plenty of people willing to pay for them, even although reared in the hothouse. It is not very easy to answer this question. There are certainly some plants said to be delicious in their own country, which have never been introduced into this, or if tried have failed; and we cannot help thinking that if the resources of different countries were reviewed and the causes of past failures examined, we might yet secure a number of additions known to be valuable if they could be made.

Let us look at some foreign country and see what might be got from it; let us take China, as an instance. There the Pak-choy or Pak-tsae of Pekin is well known to be a great favourite, and travellers speak of it as a great delicacy. Of it Fortune says: "Several varieties of the Cabbage tribe which seem indigenous to China are grown extensively in the fields at this season both in the south and north. These never produce a solid heart like our Cabbages, and are of no value when imported to England. But the celebrated Pak-tsae or white Cabbage of Shanghai and Pekin is a very different plant. It is never grown in the south of China, but is produced in the summer months in the north. Large quantities of this delicious vegetable are brought south every autumn in the junks which sail at the commencement of the north-east monsoon in October." Fortune sent home seeds, and they grew, but the plant did not realise expectation. There may have been two causes for this, for we must remember that there go more elements to the success of a culinary vegetable than other kinds of plants. We must not only know how to grow it, but also how to cook it.

We now know a little more about it. The Chinese, who like ourselves carry in their train much of their own peculiar civilisation, have in emigrating to California brought the Pak-choy along with them, and have proved that there is nothing peculiar to the soil or climate of China necessary for its success. It is already cultivated to a considerable extent by them in San Francisco, and is becoming known to the residents under the name of the Chinese Cabbage. It is there cultivated with great care. The beds are laid out somewhat after the fashion of our Celery beds, but not so closely planted. They are earthed up about the roots, and constantly watered with liquid manure. The liquid manure which they use for this purpose is concocted in little tanks. Into these they put the cleanings of their pigsties, &c., along with a quantity of stuff composed of the exuviæ of shrimps along with water, and the juice is their liquid manure. They use shrimps in vast quantities. They skin, salt, and dry them, and in all the Chinese provision shops bushels of dried shrimps are exposed for sale. They say that the exuviæ are very good for manure, and a pile of them, looking at a little distance like a heap of sawdust, is usually to be seen in their gardens. We notice this kind of manure as possibly embodying a hint as to the manure suitable for Pak-choy. The gist of the matter would seem to be the addition of a little salt and lime to the ordinary ingredients. When cooked it should be well boiled and strained, and served on toast with butter. The stem is the best part of it, and has considerable resemblance in taste and flavour to Asparagus. Here we see how ignorance of the proper mode of cooking, may even of the proper part to eat, may deceive one as to the value of a vegetable. Let a dish of Pak-choy be set down along with one of Greens, and the consumer be helped to the

stem of the Greens and the leaves of the Pak-choy—he may condemn them both; whereas had the process been reversed he would have been high in their praise.

Another reason which may have operated against the introduction of new vegetables for cooking is perhaps the fear that some of them may not be hardy, and that it would be useless, therefore, to send seeds of them home. Now, however, that the forcing of vegetables under glass forms an extensive department of industry this objection does not apply. There is a Dolichos (D. sinensis) called Tow-cock (the Tow pronounced as in cow) cultivated by the Chinese in San Francisco, which would form a valuable addition to the resources of the forcing house. It is a Kidney Bean, used by the Chinese in the same way that we use our Kidney Beans, that is, boiled in the green state, pod and all. The pod is about a yard in length and about the thickness of a Kidney Bean, and contains about 20 Beans. We have alluded to it specially as a plant for forcing, because the genus Dolichos is confined to the tropics; but we should remember that our own Kidney Bean was itself originally from the tropics, and it is quite possible that this plant may thrive as well as it in the open air. In San Francisco it is quite hardy. It is a runner and should be staked.

There are one or two other Beans allied to the Tow-cock which might prove useful. Their Chinese names are Bee y tow, Hoonglow, and Paktow.

Besides these, there is a curious little Pea which is worthy of being tried. It is called Look tow—Look in Chinese signifying dark green. There is nothing deserving of special notice in the mode of culture; but the mode of cooking is peculiar. The Peas are first steeped in water for about four days until they sprout, and have a radicle about an inch long. The hulls are taken off, and then the Peas are boiled in soup. It is to be seen constantly exposed for sale in the Chinese provision shops, all ready for use with the hulls off, and our informant tells us that "John Chinaman says it is very good, and in a measure medicinal—'suppose you belly hot inside it make you well.'" He does not tell us whether the word here used is the Chinese corruption of very (which it often is), or if it simply indicates the abdominal region as the seat of the internal caloric, nor is the information essential.

Henchoy or Hemtoy (different Chinamen have different pronunciations) is a kind of Spinach which is raised in the same way as our own Spinach. The flavour is pleasant. There is also a Turnip whose Pagan name we have forgotten, which may be worthy of attention.

The Chinese seem to have a considerable liking for salad plants. They have one, Sam-choy, which can scarcely be distinguished from our Cos Lettuce. They have two kinds of Mustard plant, the leaves of which are broad and Cabbage-like, and are eaten like Lettuce; the one is called Caichoy or Ki-choy; the other is merely a miniature of Caichoy, and is called Kilan. They are very fond of a small Coriander which they eat like a salad. It is called Yoon-si. We are afraid, however, that this would find no favour in this country, although it might perhaps please our neighbours across the Channel, as it is certainly no worse than Aniseed, or Wormwood, or Absinthe.

They have a considerable number of Melons—How-qua, Toong-qua, Hoon-qua, and Sui-qua; but we should question greatly if they are at all likely to approach our own Melons in flavour. Hoon-qua is a Cucumber, not so good as our own, but used in the same way. Sui-qua is what is known to botanists as the Luffa. It is used in soup, and is said to be very good. We should have no faith in it growing in the open air. It would do very well on the back wall of a Vinery, particularly as the Chinese say that it ought not to be allowed to trail on the ground, as it likes to be trained on a frame of sticks. After the husk is emptied, the inside is used as a scrubbing brush, the fibres being strong and coarse. Toong-qua is a green Melon, and is eaten either raw, cooked, or in soup.

In California they also use a sort of bulbous root or corm, but whether this be a wild Californian root or a Chinese introduction, we do not know. In China they are very fond of the root of the Nelumbium or Water Lily.

Fortune tells us that there they also extensively use the Shepherd's Purse and a kind of Trefoil or Clover, "And really," says he, "these things when properly cooked, more particularly the latter, are not bad."

Besides the foregoing and several others which we have not mentioned, the Chinese export to California many vegetables or fruits for consumption and sale. Among them there is the Dioscorea Batatas in abundance, Chinese Chesnuts (Hoongradt), Dates, Yams, &c., and a curious looking thing about the size of a child's head, apparently the rhizome of some kind of Fern. (Can it be the Tartarian lamb?)

When a cursory glance at the culinary vegetables of one country shows so much worthy of being tried and inquired into, we think we are borne out in the statement with which we commenced, that were a similar review made of the best known vegetables peculiar to other countries, such as Himalayah, India, New Holland, and Peru, we might yet add considerably to the resources of the gardener and the cook. *A. M.* [We observe from our advertising columns that seeds of several of the plants here alluded to are now to be purchased in this country.]

MYCOLOGY—No. XIII.

CANTHARELLUS CIBARIUS, *Fr.*—The genus *Cantharellus* is distinguished principally by the folds over which the hymenium or fructifying stratum is spread being rather thick with a blunt edge instead of thin and acute, and by their resembling prominent veins rather than gills. The hymenium is moreover of a rather waxy consistence, and the folds are branched. It is very true that a few Agarics have occasionally forked or branched gills, but with no constancy, and indeed in one species, *Agaricus umbelliferus*, this character is combined with a greater thickness of the gills than is usual in the genus, but the gills are still manifestly gills and not mere folds; indeed they are extremely broad, and their edge is not obtuse as in true *Cantharelli*. No one, however, is likely to mistake a *Cantharellus* for an Agaric if a single glance is cast upon the gills, though the contrary mistake may possibly be made on a superficial view.

Cantharellus cibarius is one of the greatest ornaments of our woods when occurring in profusion, which however it seldom does, and in a state of perfection. The pileus is irregular, variously lobed and waved, with the border vaulted, of a firm consistence, thin but fleshy, smooth and shining, of a deep yelk of egg yellow, though paler when dry, with white or yellowish flesh; the stem is rather thick, attenuated downwards, but blunt, of a tough consistence, smooth, diffused gradually into the pileus, and yellow; the folds are numerous, much sinuated, but evidently branched, thick, fleshy, and decurrent, of the same colour with the pileus. The smell is very pleasant, like that of ripe Apricots, and the taste agreeable but pungent. The only species with which it is all likely to be confounded is *Cantharellus aurantiacus*, which is extremely common in Firwoods and upon heathy ground, but is scarcely to be found in woods devoid of Conifers. *C. aurantiacus* is often as beautiful as its relative *C. cibarius*, but its slender stem, which is often black at the base, and straight, regular, very narrow, crowded bright orange folds readily distinguish it. And it is the more important that the distinction should be ascertained, as *C. cibarius* is with many a favourite esculent, while *C. aurantiacus* is suspected of being poisonous.

CANTHARELLUS CIBARIUS.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

The common Chantarelle is an excellent article of food when properly prepared, notwithstanding its pungent taste, and is occasionally served up at public dinners at the principal hotels in London on state occasions, where every effort is made to secure the rarest and most costly dainties. As it is rather tough in texture, it requires considerably culinary skill to bring out its good qualities in perfection. Battarra tells us that, if properly prepared, it would arrest the pangs of death, and Trattinick puts forth a similar sentence, though in the hands of British "plain cooks" it would be almost as indigestible as leather. It requires in fact long and slow stewing, and is much the better for being previously steeped some hours in milk. On no account must the temperature ever be raised too high, as not only will the Fungus be tough should this be allowed, but the volatile aroma will be liable to vanish.

Roques who like Vittadini speaks in ruptures of these Fungi, and who states that a *gourmet* of his acquaintance never thought that he had made a good dinner without a dish of Chantarelles when in season, gives directions for dressing them which perhaps are worth transferring to our pages.

The Chantarelles after being washed and peeled are to be dipped in boiling water, and then tossed up with fresh butter, a little Olive oil, chopped Tarragon, some pepper and salt, and a slight squeeze of lemon. When tender they are to be simmered for 15 or 20 minutes and sprinkled from time to time with stock or cream, or bound together with yelks of eggs. They may be also mixed with minced fowl, tendons of veal, &c. In the south of France they are often served with the legs of geese, and if properly prepared are attractive from their beautiful colour.

Where however there are not the means of preparing a delicate *entrée* of these excellent Fungi, they may be treated as common Mushrooms, and with the addition of slices of toasted bread make a *cheap and* agreeable food, and one *which is* perfectly wholesome and unless prepared in too great a hurry easily digestible. They are besides easily dried and preserved for winter use.

M. Roques kindly advises proprietors in France to call the attention of the peasants to these plants where they abound, since they are often neglected from ignorance or fear. In England they are seldom sufficiently common to make such an injunction of any importance, though in some parts of Kent and Sussex they may occasionally be procured in almost any quantity. *M. J. B.*

NATURE'S LAW OF SELECTION.

TRUSTING to your desire that every man should have his own, I hope you will give place to the following communication.

In your Number of March 31 I observe a long quotation from the *Times*, stating that Mr. Darwin "professes to have discovered the existence and *modus operandi* of the natural law of selection," that is, "the power in nature which takes the place of man and performs a selection, *suâ sponte*," in organic life. This discovery recently published as "the results of 20 years' investigation and reflection" by Mr. Darwin turns out to be what I published very fully and brought to apply practically to forestry in my work "Naval Timber and Arboriculture," published as far back as January 1, 1831, by Adam & Charles Black, Edinburgh, and Longman & Co., London, and reviewed in numerous periodicals, so as to have full publicity in the "Metropolitan Magazine," the "Quarterly Review," the "Gardeners' Magazine," by Loudon, who spoke of it as *the* book, and repeatedly in the "United Service Magazine" for 1831, &c. The following is an extract from this volume, which clearly proves a prior claim. The same volume contains the first proposal of the steam ram (also claimed since by several others, English, French, and Americans,) and a navy of steam gun-boats as requisite in future maritime war, and which, like the organic selection law, are only as yet making way:—

"There is a law universal in Nature, tending to render every reproductive being the best possibly suited to its condition that its kind, or that organised matter, is susceptible of, which appears intended to model the physical and mental or instinctive powers to their highest perfection, and to continue them so. This

law sustains the lion in his strength, the hare in her swiftness, and the fox in his wiles. As Nature, in all her modifications of life, has a power of increase far beyond what is needed to supply the place of what falls by Time's decay, those individuals who possess not the requisite strength, swiftness, hardihood, or cunning, fall prematurely without reproducing—either a prey to their natural devourers, or sinking under disease, generally induced by want of nourishment, their place being occupied by the more perfect of their own kind, who are pressing on the means of subsistence."

"Throughout this volume, we have felt considerable inconvenience, from the adopted dogmatical classification of plants, and have all along been floundering between species and variety, which certainly under culture soften into each other. A particular conformity, each after its own kind, when in a state of nature, termed species, no doubt exists to a considerable degree. This conformity has existed during the last 40 centuries. Geologists discover a like particular conformity—fossil species—through the deep deposition of each great epoch, but they also discover an almost complete difference to exist between the species or stamp of life of one epoch from that of every other. We are therefore led to admit, either of a repeated miraculous creation; or of a power of change, under a change of circumstances, to belong to living organised matter, or rather to the congeries of inferior life, which appears to form superior. The derangements and changes in organised existence, induced by a change of circumstance from the interference of man, affording us proof of the plastic quality of superior life, and the likelihood that circumstances have been very different in the different epochs, though steady in each, tend strongly to heighten the probability of the latter theory.

"When we view the immense calcareous and bituminous formations, principally from the waters and atmosphere, and consider the oxidations and depositions which have taken place, either gradually, or during some of the great convulsions, it appears at least probable, that the liquid elements containing life have varied considerably at different times in composition and weight; that our atmosphere has contained a much greater proportion of carbonic acid or oxygen; and our waters aided by excess of carbonic acid, and greater heat resulting from greater density of atmosphere, have contained a greater quantity of lime and other mineral solutions. Is the inference then unphilosophic, that living things which are proved to have a circumstance-suiting power—a very slight change of circumstance by culture inducing a corresponding change of character—may have gradually accommodated themselves to the variations of the elements containing them, and, without new creation, have presented the diverging changeable phenomena of past and present organised existence?

"The destructive liquid currents, before which the hardest mountains have been swept and comminuted into gravel, sand, and mud, which intervened between and divided these epochs, probably extending over the whole surface of the globe, and destroying nearly all living things, must have reduced existence so much, that an unoccupied field would be formed for new diverging ramifications of life, which, from the connected sexual system of vegetables, and the natural instincts of animals to herd and combine with their own kind, would fall into specific groups, these remnants, in the course of time, moulding and accommodating their being anew to the change of circumstances, and to every possible means of subsistence, and the millions of ages of regularity which appear to have followed between the epochs, probably after this accommodation was completed, affording fossil deposit of regular specific character.

"There are only two probable ways of change—the above, and the still wider deviation from present occurrence—of indestructible or molecular life (which seems to resolve itself into powers of attraction and repulsion under mathematical figure and regulation, bearing a slight systematic similitude to the great aggregations of matter), gradually uniting and developing itself into new circumstance-suited living aggregates, without the presence of any mould or germ of former aggregates, but this scarcely differs from new creation, only it forms a portion of a continued scheme or system.

"In endeavouring to trace, in the former way, the principle of these changes of fashion which have taken place in the domiciles of life, the following questions occur:—Do they arise from admixture of species nearly allied producing intermediate species? Are they the diverging ramifications of the living principle under modification of circumstance? Or have they resulted from the combined agency of both? Is there only one living principle? Does organised existence, and perhaps all material existence, consist of one Proteus principle of life capable of gradual circumstance-suited modifications and aggregations, without bound under the solvent or motion-giving principle, heat or light? There is more beauty and unity of design in this continual balancing of life to circumstance, and greater conformity to those dispositions of nature which are manifest to us, than in total destruction and new creation. It is improbable that much of this diversification is owing to commixture of species nearly allied, all change by this appears very limited, and confined within the bounds of what is called species; the progeny of the same parents, under great difference of circumstance, might, in several generations, even become distinct species, incapable of co-reproduction.

"The self-regulating adaptive disposition of organised life may, in part, be traced to the extreme fecundity of Nature, who, as before stated, has, in all the varieties of her offspring, a prolific power much beyond (in many cases a thousandfold) what is necessary to fill up the vacancies caused by senile decay. As the field of existence is limited and pre-occupied, it is only the hardier, more robust, better suited to circumstance individuals, who are able to struggle forward to maturity, these inhabiting only the situations to which they have superior adaptation and greater power of occupancy than any other kind; the weaker, less circumstance-suited, being prematurely destroyed. This principle is in constant action, it regulates the colour, the figure, the capacities, and instincts; those individuals of each species, whose colour and covering are best suited to concealment or protection from enemies, or defence from vicissitude and inclemencies of climate, whose figure is best accommodated to health, strength, defence, and support; whose capacities and instincts can best regulate the physical energies to self-advantage according to circumstances—in such immense waste of primary and youthful life, those only come forward to maturity from the strict ordeal by which Nature tests their adaptation to her standard of perfection and fitness to continue their kind by reproduction.

"From the unremitting operation of this law acting in concert with the tendency which the progeny have to take the more particular qualities of the parents, together with the connected sexual system in vegetables, and instinctive limitation to its own kind in animals, a considerable uniformity of figure, colour, and character, is induced, constituting species; the breed gradually acquiring the very best possible adaptation of these to its condition which it is susceptible of, and when alteration of circumstance occurs, thus changing in character to suit these as far as its nature is susceptible of change.

"This circumstance-adaptive law, operating upon the slight but continued natural disposition to sport in the progeny (seedling variety), does not preclude the supposed influence which volition or sensation may have over the configuration of the body. To examine into the disposition to sport in the progeny, even when there is only one parent, as in many vegetables, and to investigate how much variation is modified by the mind or nervous sensation of the parents, or of the living thing itself during its progress to maturity; how far it depends upon external circumstance, and how far on the will, irritability, and muscular exertion, is open to examination and experiment. In the first place, we ought to investigate its dependency upon the preceding links of the particular chain of life, variety being often merely types or approximations of former parentage; thence the variation of the family, as well as of the individual, must be embraced by our experiments.

"This continuation of family type, not broken by casual particular aberration, is mental as well as corporeal, and is exemplified in many of the dispositions or instincts of particular races of men. These innate or continuous ideas or habits seem proportionally greater in the insect tribes, those especially of shorter revolution; and forming an abiding memory, may resolve much of the enigma of instinct, and the foreknowledge which these tribes have of what is necessary to completing their round of life, reducing this to knowledge, or impressions and habits, acquired by a long experience. This greater continuity of existence, or rather continuity of perceptions and impressions, in insects, is highly probable; it is even difficult in some to ascertain the particular stops when each individuality commences, under the different phases of egg, larva, pupa, or if much consciousness of individuality exists. The continuation of reproduction for several generations by the females alone in some of these tribes, tends to the probability of the greater continuity of existence, and the subdivisions of life by cuttings (even in animal life) at any rate must stagger the advocate of individuality.

"Among the millions of specific varieties of living things which occupy the humid portion of the surface of our planet, as far back as can be traced, there does not appear, with the exception of man, to have been any particular engrossing race, but a pretty fair balance of powers of occupancy—or rather, most wonderful variation of circumstance parallel to the nature of every species, as if circumstance and species had grown up together. There are indeed several races which have threatened ascendancy in some particular regions, but it is man alone from whom any general imminent danger to the existence of his brethren is to be dreaded.

"As far back as history reaches, man had already had considerable influence, and had made encroachments upon his fellow denizens, probably occasioning the destruction of many species, and the production and continuation of a number of varieties or even species, which he found more suited to supply his wants, but which, from the infirmity of their condition—not having undergone selection by the law of nature, of which we have spoken, cannot maintain their ground without its culture and protection.

"It is, however, only in the present age that man has begun to reap the fruits of his tedious education, and has proven how much 'knowledge is power.' He has now acquired a dominion over the material world, and a consequent power of increase, so as to render it probable that the whole surface of the earth may soon be overrun by this engrossing anomaly, to the annihilation of every wonderful and beautiful variety of animated existence, which does not administer to his wants principally as laboratories of preparation to befit cruder elemental matter for asssimilation by his organs."

"Much of the luxuriance and size of timber depending upon the particular variety of the species, upon the treatment of the seed before sowing, and upon the treatment of the young plant, and as this fundamental subject is neither much attended to nor generally understood, we shall take it up *ab initio*.

"The consequences are now being developed of our deplorable ignorance of, or inattention to, one of the most evident traits of natural history, that vegetables as well as animals are generally liable to an almost unlimited diversification, regulated by climate, soil, nourishment, and new commixture of already formed varieties. In those with which man is most intimate, and where his agency in throwing them from their natural locality and dispositions has brought out this power of diversification in stronger shades, it has been forced upon his notice, as in man himself, in the dog, horse, cow, sheep, poultry—in the Apple, Pear, Plum, Gooseberry, Potato, Pea, which sport in infinite varieties, differing considerably in size, colour, taste, firmness of texture, period of growth, almost in every recognisable quality. In all these kinds man is influential in preventing deterioration, by careful selection of the largest or most valuable as breeders; but in timber trees the opposite course has been pursued. The large growing varieties being so long of coming to produce seed, that many plantations are cut down before they reach this maturity, the small growing and weakly varieties, known by early and extreme seeding, have been continually selected as reproductive stock, from the ease and conveniency with which their seed could be procured; and the husks of several kinds of these invariably kiln-dried, in order that the seeds might be the more easily extracted. May we, then, wonder that our plantations are occupied by a sickly short-lived puny race, incapable of supporting existence in situations where their own kind had formerly flourished—particularly evinced in the genus Pinus, more particularly in the species Scots Fir; so much inferior to those of Nature's own rearing, where only the stronger, more hardy, soil-suited varieties can struggle forward to maturity and reproduction?

"We say that the rural economist should pay as much regard to the breed or particular variety of his forest trees, as he does to that of his live stock of horses, cows, and sheep. That nurserymen should attest the variety of their timber plants, sowing no seeds but those gathered from the largest, most healthy, and luxuriant growing trees, abstaining from the seed of the prematurely productive, and also from that of the very aged and over-mature; as they, from animal analogy, may be expected to give an infirm progeny, subject to premature decay."—See "Naval Timber and Arboriculture," pages 364 and 365, 381 to 388; also 106 to 108. *Patrick Matthew, Gourdee Hill, Errol N.B., March 7.*

THE DYING ORANGE TREES AT VERSAILLES

(A Dialogue.)

[Freely translated from a paper by Carrière in the "Flore des Serres."]

"Good morning, my good friend; where in the name of fortune do you come from, that you look so miserable?"—"The cause of my misery is easily explained; I return . . . from Versailles."—"Ah! you have come back from Versailles. That is natural enough, since you went there; but what has that to do with making you so sad—what did you see there? Is the palace on fire?"—"No, by good luck, for there is no water to put it out." (This was written in July, 1858.)—"What! the immense reservoirs built by Louis XIV., are they burst?"—"No; but the continual drought has caused such a scarcity, that if it were not for the Swiss piece of water they would have been all hard up, and the garrison, like everybody else, would have been forced to beat a retreat, and abandon the post."—"Well, but what is the matter then?"—"Much better or rather much worse than that."—"The deuce, how you run on? Worse than that! tell me at once; your silence and manner alarm me."—"Well, the fact is, that . . . the Orange trees . . . and you can well understand how it must grieve an amateur like myself"*—"The Grand-Louis, the contemporary of the Grand-Bourbon, the oldest of all the Orange trees in France,† can he be dead?"—"It is all up with him, as old folks say, and in spite of titles

* It is a fact that many of the Orange trees are ill, very ill; and it is not unlikely that many will die. Moreover the mischief does not stop there. Independently of the loss of the trees, the collection of Versailles, once so numerous and varied, is now pretty well destroyed, for besides the gaps either made or about to be made by death, the many changes that have occurred during the last ten years have caused the original names to be lost. This is a great pity, for while the collection was so rich in varieties, it was also a sort of historical record, and formed one of the greatest ornaments of the celebrated palace.

† According to authentic documents, this Orange tree was raised from seed at Pampeluna (Navarre), in 1421, and sent to France towards the end of the same century, first to Chantilly, then to Fontainebleau, and finally to Versailles, where it has lived ever since 1684, under the names of *Grand-Bourbon, Grand' Connétable, François I.*

and illustrious origin, death has paid him no respect but has ruthlessly struck him down!"—"What! the Grand-Louis dead?"—"Yes, indeed; and instead of receiving such honours as were paid to Marlborough, they have grubbed him up, and what is more, have mutilated his dead body; his carcase has been cut to pieces, and numbered, that they may make it into historical snuff-boxes, which one of these days will ornament our Museum of Cluny, where death reigns supreme, and exults in the midst of victims of every rank and age. However, let us return to our Orange trees."—"But the Grand-Bourbon," I replied, "is he still alive?"—"Yes," he said; "but he seems inclined to follow his junior."—"Why, how's that?"—"Nothing more than that he too is also dying, and if the Bourbons wish to see their illustrious ancestor again, they have no time to lose."—"Has it really come to this, joking apart? And yet you would hardly joke about such a serious matter."—"I wish I could say that the mischief has stopped there. It seems, however, that not only the old ones are dead but their descendants are going the same way; in fact, nearly all the trees are more or less in a bad state."—"You astonish me; for you know although I have not the same love or passion for plants that you have, I am far from being indifferent to their loss, which in this case might be considered quite a crime . . . . . of *lèse-horticulture* — horticultural treason. I am the more astonished at what you tell me, since it is scarcely four years since I saw them, at which time they were magnificent; and everything about them seemed to bespeak perfect health."—"Possibly," he replied, "they may have seemed well, but in reality they were not, and any one acquainted with such matters could not have been deceived, for the symptoms were alarming! Besides you know that in the animal kingdom as with man, there are certain diseases so insidious, that you never dream of danger, until too late to stop it; it is precisely the same thing in the vegetable kingdom; therefore a doctor if he is wise will often visit his patients in order to know exactly in what state of health they are."——

"But, since there are doctors for plants as well as for men, how did it happen that one was not called in?"—"Oh, rest assured," he replied, "it was not for the want of a doctor, but in this case again, as it often happens with man, the Orange tree died . . . from having had too many doctors . . . only it is possible they were not altogether competent."—"After all, however, great as the evil may be, it cannot be without remedy?"—"For a certain number, yes; for many others, no."—"You shock me; however, let me ask you candidly what you think can be done?"—"What can be done? I really cannot say, the question is so serious that I hardly dare venture to answer it; still, as you ask me, I will tell you my opinion. Great evils demand great remedies, they say, and this is just the case to apply the proverb, but I must first tell you something about the Grand-Bourbon, in which you seemed just now to take so much interest. You must know, then, that the Grand-Bourbon is not one individual but several; there can be no less than four seedlings which were probably raised in the same pot and allowed to grow there, the pot being changed as they grew bigger, so that at last the stems grew together, and this instead of lessening their value, appears on the contrary to confirm the saying, 'union makes strength.'

"I now come to the great and important question, that of the disease. But I must first repeat that the disease is of very old standing. Every doctor (gardener) who has had anything to do with these trees for the last 15 or 20 years has had his share in it. The responsibility therefore does not fall upon the last doctor; each ought to bear his own share; the one upon whom it falls the heaviest just now is he who comes in at the death. But in fact he is the least culpable and in reality ought to go for nothing.

"To be clear and to understand this business, I must first explain the causes, which are rather complicated. The first is the great age of the trees. I hold very cheap all those theories and popular notions, such as an Orange tree is never old, or that it never dies, unless killed, &c.; people may say so, but there is no truth in it. Without admitting that the Orange trees have died of old age, I am not quite sure it may not have had something to do with it.

"Every living thing, whatever it may be, has during its lifetime two different phases of existence—the one in which it is constantly augmenting, the other when it is perpetually diminishing. However invisible these phænomena may seem, still they exist, so that very great age always causes in all beings a more or less rapid waste of strength; and from this simple fact, disease becomes more or less dangerous, and though of the same intensity, produces very different effects in different individuals according to the period of life in which they are attacked, either that of growing or having ceased to grow. Now it must be owned a good many of the Orange trees at Versailles have entered upon this last period, consequently additional care should have been taken of them. For with old people as with children, disease no sooner shows itself than it increases rapidly; still there is always this difference, the latter quickly recover, whilst the former take a much longer time, though all other circumstances may be the same."—"But permit me a moment to make one remark; Orange trees live many centuries, yet those of Versailles were not so old as that."—"In admitting that," he replied, "which I am quite ready to do, what does it prove? Do you not think that particular circumstances, the constitution of the individual, the regimen to which it is subjected, may make a considerable difference, and hasten decay, before its natural time. And allow me in my turn to make this comparison; because some men live to be 80 or even older, do you suppose that all ought to live to that advanced age? Do you not know on the contrary that some are old at 30 or even at 20, whilst others are still young at 40 or even 50? Besides most of these Orange trees have already lived more than one century and some of them more than two. They could not therefore be said to be in their first youth. But to return: The Orange trees of Versailles were already old, and for the most part had arrived at almost their full vigour, whilst many of them were ailing; they should therefore have been tenderly nursed or coddled, as you would an old man; their food should have been lighter, less solid, in order not to tax the already fatigued digestive organs, for digestion (excuse the expression) becoming less easy, the food ought to be prepared accordingly; in short, the invalids should have been dieted. Instead of that, what has been done? Just the reverse! They have been treated as though they were full of strength. Supposing that because they were old and large, they required stronger food, it was given them in such a way that instead of arresting the disease, it only increased it. Of course it would be so. If while stronger food was given them, the quantity had been diminished by increasing the layer of lime rubbish at the bottom of the tubs, so as to improve the drainage, good! But no! it seems to have been quite the contrary: while increasing the nourishment the layer of lime rubbish was diminished. Again later, and no doubt with the idea of giving them more strength, very strong manure was added to the soil, and this only increased the mischief; just as some doctors increase the doses of physic as the patient grows feebler. It was the finishing stroke, for in the state in which they were, even less would have killed them. I must add moreover that nearly all were buried too deep in the earth.

"If, to all these destructive causes, you add copious or too frequent waterings, it is plain enough why these Orange trees are ill; the only astonishment is, that they have been able to resist such irrational treatment so long. What must happen to them? Common sense tells us that the small roots at the bottom of the tubs could not fail to decay; the mischief would spread, and at length attack the large roots, eventually spreading to the neck of the trees. Such is in fact what has happened, and nearly all are now more or less rotten at the base. I doubt whether in this case the doctors (gardeners) can excuse their bad management, by making out, as many endeavour to do, that it is either some Fungus, or some atmospheric cause, and so forth, for facts to the contrary are too clear and palpable."

"Do you really think," I said, "that there is no other cause for the disease?"—"These are," he replied, "in all probability the principal ones, and such as can be most easily assigned without getting into a scrape."

(To be concluded in our next.)

SPRING.

SPRING is abroad!
There is life in the air,
There is life in the clod;
On the earth everywhere
There is life and to spare,
Spring is abroad.

No trumpet is blown, no earthquake is heaving,
Yet each seed its rent cerements and dark grave is leaving—
An infinite power,
Between orchard alleys,
Beside water-courses,
On hills and through valleys,
Musters the forces
Of Grass, leaf, and flower.

From the bare black earth the snowdrop peers,
And the sod is pierced by a million spears—
Tiny spears, in sheaf and rank,
Rising over field and bank—
These to form the lily's guard;
These from rifling winds to ward
The purple and gold of the crocus crown;
Those to lift to her regal seat
Over their heads the shining Wheat.

The brave old tree with his branches brown,
Through which the moon and the stars look down;
Ah, not the brightest beam of noon
Could reach his heart in his leafy dune!
Never a wail hath the rude wind wrung
From him, the sharpest bullets of hail
Made no dint in his close-ribbed mail,
And at each buffet he whistled and sung.
Can he feel at his feet
The Violets creep;
Or the Primrose sweet,
Stir in its sleep;
That up from his roots
To his topmost shoots
A tingling sense of joy awakes,
Swelling his heart till out he shakes
His leafy banners of green and gold;
And the wind comes smoothing each silken fold
With sighs, like a changeling's mean dismay,
When the beggar, scorned as poor and old,
Turns king, and wears his rich array.

In the time of spring,
If the sun but fling
A smile to the wint'ry sod,
Her heart will swell,
And in bud and bell,
She will bloom her joy abroad.
And gentle deeds,
Like flowers, have seeds,—
From beauty, beauty grows:
From eye to eye
Smiles multiply,
And joy's bright blossom blows.

Blow, breeze of spring!
Blow soft and ring
The snowdrop bells that they may bring
From their beds the flowerets fair!
Ringing soft—prepare! prepare!
'Tis time to rise,
With smiling eyes,
The bridegroom sun is in the skies!

Blow, breeze of spring!
Blow soft and ring
The snowdrop bells, that they may bring
Flowers on her bride-path to fling,
Flowers to her who is my spring,
To bid her rise,
With smiling eyes,
Her bridal sun is in the skies!

Isa Craig in "Frazer's Magazine."

REPORT UPON THE FITNESS OF HOLCUS SACCHARATUS FOR PAPER MAKING.

[The following letter is we believe unpublished. At any rate if published it deserves republication at the present moment.]

"Treasury Chambers, Feb. 26, 1855.

"Sir,—The Lords Commissioners of her Majesty's Treasury having referred the fibre of the 'Holcus saccharatus,' enclosed in your letter of the 23d ult., to the Board of Inland Revenue, in order that it might be analysed and reported on as to whether it is suitable for the manufacture of paper, I am directed by their lordships to transmit to you a copy of the report of Mr. George Phillips, the principal analysing officer to that department, together with five specimens of paper manufactured by him from the Holcus fibre in question. "I am, Sir, your obedient servant,

"JAMES WILSON.

Mr. John Henderson, King'sknowle, South Devon."

"Honourable Sirs,—The fibre of the Holcus saccharatus referred to in the annexed paper, and forwarded by Mr. Henderson to the Treasury, and thence here, for an examination as to its suitability for paper making, having been experimented on with a view to the purpose named, the results are now carefully submitted.

"A microscopical inquiry as to the structure of this fibre shows it to be composed of longitudinal fibrous tubes, membranous spirals, and perforated tissue, about nine-tenths of the whole being longitudinal tubes. The perforated tissue, which is not plentiful, is formed in bundles, bound together by tubular hoops or rings placed equidistant from each other, as represented in the annexed sketch, and which, so far as I am aware, is an arrangement that has not been before noticed in the structure of plants.

"As a large proportion of this is woody tissue of the kind proper for making paper, it promised fair as regards strength; but as this required to be known with some degree of accuracy, as a test of the value of the fibre in one of its most important attributes, two sets of experiments were made upon Hemp, Flax, and the Holcus for that purpose. In the first course the fibres were doubled, and suspended by the two ends, and in the loop formed by the doubling a scale pan was hung and loaded until the fibres broke. The results were that the

Hemp broke with	.. .. ..	5633 grains
Flax "	"	5025 "
Holcus "	"	4558 "

The length of each fibre was 10 inches, and from the loop where doubled to the points of suspension 3½ inches. Each fibre was of the same width and thickness, and weighed as follows:—

Hemp	.. ..	0.032 grains.
Flax	.. ..	0.033 "
Holcus	.. ..	0.030 "

"In the second course of experiments the fibres were suspended singly, and at a distance of 3½ inches from the points of suspension the scale-pan was attached; they broke as follows:—

Hemp with	.. ..	3189 grains.
Flax	.. ..	2919 "
Holcus	.. ..	2918 "

"The Hemp fibre having proved the strongest it may represent 100 as the maximum strength of the materials tried; and if so, the results of the first course of experiments will be—

Hemp	100
Flax	89
Holcus	81

and of the second course—

Hemp	100
Flax	92
Holcus	91

"The comparative strength of the fibre having been determined, portions of it were submitted to the ordinary cleasing and bleaching processes; and as the results were favourable, a pulp was formed and various samples of paper made to test the felting properties of the fibre. The paper thus formed was remarkable for strength, and proved the fibre to possess good felting properties.

"Annexed are five specimens of unsized Holcus paper varying in thickness, from which it will be seen that this paper is deficient in softness, but possesses a firmness and elasticity not observable in ordinary unsized paper.

"Firmness and elasticity, although valuable qualities

in some kinds of paper, may yet be objectionable in others; in such cases the fibre of the Holcus may probably be so modified by treatment, and toned down by admixture with cotton as to produce various kinds of paper, having more or less of these qualities at pleasure.

"The Holcus fibre, cleansed and bleached, assumes a glossy silk-like appearance, and as it bears a close relation to Flax in strength, the idea suggests itself that it may probably be found useful in the formation of textile fabrics. How far this supposition, founded on the mere strength and appearance of the fibre, may prove correct I have no means of testing, but to those who have the means a trial may prove to be interesting and useful. I am, honourable sirs, your obedient servant, *G. Phillips, S. G. Exr., Laboratory, Inland Revenue, Feb.* 12, 1855."

Home Correspondence.

Early Vineries.—The ill effects of the wet cold winter and early part of spring on the early Vineries in the neighbourhood of Brighton, a locality hitherto famous for the production of fine early Grapes, are unparalleled. Almost everywhere failures have occurred. Vinery after Vinery may be found in which the crop is entirely lost, or the production of bunches very limited; and, considering that the past summer was favourable for ripening the wood, these failures seem evidently attributable to the unfavourable weather we have recently been experiencing. In the first place the Vines did not break well, the most prominent buds only started at the expected time; indeed, in some cases ripe Grapes, bunches in bloom, and buds just breaking, are to be found in the same house, on the same Vine, and under the same management. In other houses the Vines have broken well and showed fully developed bunches; but before blooming they suddenly stopped growing, turned yellow, and dropped off, leaving the Vines to produce foliage only, and that of a sickly kind, and in some instances covered with rugged warts, similar to what appear on Vines growing in a warm moist atmosphere. In the present instance the evil however seems to arise from the plant having absorbed more moisture into its system than was necessary, and that owing to the long cold dull weather, without much sunlight, it has been unable to re-adjust itself in some Vineries where in past years the Vines have showed abundantly, for bunches have been substituted leaving only a few ill-formed "shows" and highly developed watery flaccid foliage. The early Vineries are only ripening very small crops, and shanking seems superadded to the disasters just related. Let me hope that other localities have fared better than this or reports of failures will be numerous. I send a specimen for inspection. Our borders are from 2 feet to 5 feet deep, and are for the most part on good natural drainage. *J.M.*

Dendrobium Falconeri.—This most beautiful of all Dendrobes is a rather slow-growing species. It has also a peculiar habit, each succeeding year's growth being a continuation of the same stem, branches being freely produced at the same time as in Vanda teres. Like most other Dendrobiums it likes the hottest end of the house during its growing season, and the coolest when at rest; it is very impatient of much moisture at the root. The only plants I have ever seen to succeed well have been suspended from the roof on blocks of wood, or what is preferable, a common drain-pipe, without Moss or any other substance being used to retain moisture, and watered once a day during the growing season if found dry; when dormant all that is required is to keep it in the coolest part of the house suspended as near the glass as possible, giving it just sufficient water to keep it from shrivelling. Once a week will suffice in winter. I have never yet seen it flower from the parent stem; the blossoms are borne on the two-year old portion of the branches, and are always produced freely under the above treatment. It would not grow at all in Mr. Warner's No. 1 Orchid-house, as represented in your Number of last week, there being no convenience for hanging such plants in the centre; and No. 2 would be ill adapted as a house in which to grow Orchids, having two dark sides and a very costly roof. Spot on the leaves of Orchids is attributable to many causes; it is often brought on by irregular treatment, such as a sudden change of temperature, watering with water under the mean temperature of the house, &c. *Gleanings.*

Bottoming for Walks.—I am making a walk through a shrubbery, and as material is scarce, would clay beaten down to a surface (and dry as at this time of year) do instead of rubbish below the coating of gravel? If so, I shall be obliged by your telling me what is the least depth of gravel that would be required. If clay would not answer the purpose, what is the objection? There is a sunk fence about 6 feet from the walk, which would effectually drain off any body of water. I am aware that burnt clay would be preferable; but this is attended with considerable extra expense. *H. J. T., Warwick.* [On no account use clay unless it has been burnt to redness. No walk with a clay foundation can be kept dry or free from Moss in wet seasons.]

Labels.—I have found from experience that the enclosed forms one of the best of labels where permanency is required. I observe you mention that one objection to lead labels is that their weight soon causes the wire by which they are fastened to cut through them. In the specimen I send you will perceive that I have attempted a remedy for this. *Philip Scolding.* [This invention consists in introducing a metallic eyelet into the hole through which is passed the wire that suspends the lead label. A part of this communication was an advertisement.]

Grafting Wax.—Some years ago I made a small quantity of this, according to the well-known recipe of sealing-wax, fat, wax, and honey, but found great difficulty in getting the sealing-wax to incorporate. The result however was far more satisfactory than clay, as it was lighter, took up less room on wall trees, was not so liable to crack, and the grafts under it seemed more certainly successful. As I believe the composition cannot be purchased, I attempted to make a large quantity of it this spring, but found the sealing-wax obstinately remain in a melted state at the bottom, showing no affinity with the boiling fat above. I hoped by removing it from the fire, and stirring briskly till it cooled, to effect a mixture, but the sealing-wax cooled by itself in hard lumps. Can any of your readers throw any light upon the proper mode of manufacture, besides that given in Loudon and other works? Sealing-wax is made of lac and rosin. It seems that the lac is the intractable part, for on making some more, and adding rosin instead of sealing-wax, a perfect mixture was easily obtained. The objection to this latter is that it sticks to the fingers, but as this is only a mechanical difficulty, it is probable that the addition of some dry powder would obviate it. I think that if grafting wax could be easily obtained, few amateurs would use clay. *G. S.*

Nettle Tops a Substitute for Greens.—From the general destruction throughout the country of the many varieties of Greens, I am induced to bring under the notice of your readers the merits of the above as a valuable substitute, and as I am now using them myself, I can do so with the more confidence. M. Soyer, in his "Shilling Cookery Book," says: "This extraordinary spring production, of which few know the value, is at once pleasing to the sight, easy of digestion, and at a time of year when Greens are not to be obtained, invaluable as a purifier of the blood; the only fault is, they are to be had for nothing. It is a pity that children are not employed to pick them and sell them in market towns." M. Soyer directs them to be cooked as follows:—"Wash them well, drain, put them into plenty of boiling water with a little salt, boil them for 20 minutes or a little longer, drain them, put them on a board and chop them up; and either serve plain or put them in the pan with a little salt, pepper, and a bit of butter, or a little fat and gravy from a roast; or add to a pound two teaspoonfuls of flour, a gill of skim milk, a teaspoonful of sugar, and serve with or without poached eggs." In "Chambers's Journal" for 1854, it is stated that this dish may be had during five months in the year; for even when the plant grows rank the tops are still tender. The young leaves of Mangel Wurzel dressed like Nettles are extremely good. No people make so little use of natural treasures as the English. The French find a meal in every hedge. The Burmese soldier is never at a loss, since he can always gather leaves from the trees to boil into soup. Nothing but prejudice can prevent Nettle tops from becoming an article of general use. *J. W. L.*

Cutting Potatoes for Planting.—Our predictions about two months ago that Potatoes would be very dear this spring are truly verified. Permit us therefore to record our experience as to the most successful and economical mode of cutting them to obtain the best crops. Small whole tubers may be safely planted to secure the best results if when the plants are up about 3 or 4 inches high, say at the end of May, the weakest shoots are pulled up and the number reduced to only one, two, or at most three; this may be performed by pressing the entire plant with the left hand and jerking off from the mother set the superfluous offshoots with the right hand. We have thus grown from seedlings one year old, not larger than Peas, very fine tubers the second season after the seed had been sown. Larger ones are preferable for planting, but not cheapest; the crown sets of such should first be cut off with a good thickness, to be planted by themselves, and treated when up as directed for the small whole ones, as this part of the Potato without this expedient always produces too superabundant a number of shoots, and consequently a weak and small progeny. The remaining part of the large-sized sets is best cut in halves from the upper part, and through the tail end or otherwise into single eyes; those, however, will not require so much thinning, if any, when growing. By adhering strictly to the above rules, nearly all the produce will prove large, and more in measure than where the process of thinning is not resorted to. *A. Hardy and Sons, Maldon.*

Gesnera cinnabarina.—This is a plant which should be encouraged by all who have the command of a stove; it is greatly superior to the old zebrina. I find it most effective for table decoration; the play of light on the rich hairy foliage is beautiful in the extreme, and it is an ornament to any collection of plants. It has the merit also of remaining in bloom during several of the dull months of the year. It should be started now, and grown on in a mixture of sand, leaf-mould, rotten dung, and a little loam. It requires plenty of light to keep it compact and bushy, and extra heat when showing flower; in fact, at that stage mine are transferred from a hot-water pit to an Orchid-house. I consider it one of the most valuable importations of late years. *J. W. L.*

Societies.

Horticultural.—The following notice has been issued on the part of the Floral Committee:—The ordinary Meetings of this Committee during the ensuing season, for the examination of Seedlings and other New Plants and Flowers, will be held at the Society's Rooms, at 2 P.M., on the following days:—April 12th, April 26th, May 10th, May 24th, June 14th, June 28th, July 12th, July 26th, August 9th, August 23d, September 13th, September 27th, October 11th, November 8th, December 13th. All persons, whether Fellows of the Society or not, are invited to send their New Plants and Flowers for the opinion of the Committee. Honorary First Class Certificates and Commendation Cards are at these meetings awarded, according to the discretion of the majority of the Members present, to such of the subjects exhibited as may be thought deserving thereof. The following are some of the principal regulations which have been adopted for the guidance of exhibitors:—The subjects for the consideration of the Committee are to be delivered free at the place of meeting, not later than 1 P.M. on the respective meeting days; and all necessary particulars respecting them are to be forthwith communicated, in writing, to the Secretary. Note.—The name and post address of the exhibitor; the name of the flower if a seedling; and that of the native country if an importation, will be considered essential particulars. Exhibitors are invited to communicate such further details of the origin, or introduction, or peculiarities of their plants or flowers, as they may think interesting for publication. The merits of the subjects exhibited shall not be discussed or decided on in the presence of the owners, or interested exhibitors thereof. Sufficient examples of every subject exhibited, to enable the Committee to form a fair opinion of its qualities, are to be produced. In all practicable cases, the growing plant will be required. All seedling flowers must be named, as a means of future recognition. If not named, they will be passed over. Newly imported or other new species of plants, not florists' varieties, will have to be submitted to the botanical advisers of the Committee, that they may be correctly named. Exhibitors of this class of plants will greatly facilitate the operations of the Committee by forwarding materials for this purpose, whenever practicable, previous to the days of meeting, addressed to "The Botanical Advisers of the Floral Committee." If not so done, provision must be made for this object at the time of meeting. All packages of plants or flowers must be forwarded at the risk of the sender. The subjects, whether plants or cut flowers, will be delivered up at the close of the Meeting to the owners, or to such persons as may be duly authorised to receive them. If left, it will be at the entire risk of the senders. The Committee will hold the power of examining with all necessary minuteness the subjects submitted for its opinion. Exhibitors of seedling florists' flowers, and others, will facilitate the working of the Committee by the production of specimens or collections of known varieties to serve as references, and for comparison with new flowers. Copies of the regulations may be had on application to "The Secretary to the Floral Committee of the Horticultural Society, 8, St. Martin's Place, Trafalgar Square, London, W.C."

Royal Botanic: *April* 4.—At a second spring meeting which took place on this occasion several interesting subjects were produced. From the Royal Nursery, Slough, Mr. Turner sent various Cinerarias, conspicuous among which were Darling and Reynolds Hole, the last a crimson purple kind, remarkable for the brilliancy of its colour. The same exhibitor also sent a large-flowered variety of Rhododendron ciliatum, which promises to supersede the species as far as decorative purposes are concerned. From the same collection likewise came a variegated Pelargonium named Flower of Spring, which appeared to be an improvement on some of the kinds now in cultivation. Cineraria Bridesmaid and other varieties were again produced by Mr. Wiggins, gr. to E Beck, Esq., of Isleworth, and Messrs. Dobson sent a collection in which one named Mr. Marnock, a well-formed variety, white, tipped with purple, and having a disc of the last-named colour, appeared to be a good and attractive kind. Mr. Hoyle, of Reading, furnished a Pelargonium named Reading Volunteer, a high-coloured early kind of considerable promise. Various Cinerarias were shown by Mr. Holland and Messrs. Smith, of Dulwich. From Messrs. Ivery, of Dorking, came Azalea Leviathan, a large semi-double variety commended for the purity and whiteness of its blossoms. Miscellaneous plants were contributed by Messrs. Fraser, Cross, and others. Among them were Medinella magnifica, Azaleas, Acacias, Boronias, and Ericastemons. Messrs. Fraser also furnished a fine specimen of Cyanophyllum magnificum, which must certainly be regarded as one of the most striking of recently introduced plants remarkable for the beauty of their foliage. Some of the more showy varieties of spotted Pelargonium and other kinds came from Messrs. Turner and Cuthush: and of Hyacinths there was also a good display from the same exhibitors. Of Auriculas Mr. Turner sent Dickson's Duke of Wellington, Straton's Alexander, Barlow's Morning Star, Traill's Champion, and Headley's Royal Purple. From Messrs. E. G. Henderson came a collection of Camellias, among which were Beali

superba, a fine large crimson-cupped sort; Princess Frederick William, one of the finest of recently introduced striped kinds; Jenny Lind, a very pretty faintly striped variety, and Storeyi, a good rose. The same firm also sent the Indian Rhododendron Falconeri, with greenish white flowers, having a dark-coloured base; and from Mr. Standish, of Bagshot, came R. fulgens, a bright scarlet kind of considerable beauty. Messrs. Henderson, of Pine-apple Place, exhibited (but not for competition) a collection of Hyacinths, among which were some fine kinds, the names of which have been given by us on former occasions. For a list of prizes and other matters not mentioned in this report, see advertisement in another column.

ENTOMOLOGICAL: *March* 5.—The President in the chair. Mr. Stevens exhibited a portion of Mr. Wallace's recent collections of Coleoptera from Batchian, an island near New Guinea, containing many fine insects, one-third at least of the species being undescribed. Mr. Ianson exhibited various rare beetles taken by Mr. Turner at Rannock in Perthshire, including Pytho depressus, Septusa fumida, Bradycellus placidus, &c. Mr. Dunning exhibited Mamestra anceps from the Isle of Portland, taken in the autumn. He also read a letter from the possessor of the Sphinx Pinastri exhibited at the last meeting, affirming it to have been taken by himself at Rumsey, Hants, among Fir trees in June last. Dr. Wallace mentioned that he had observed Acosmetia caliginosa in the Ryde Museum, taken in a wood near that town. A letter was read from Mr. G. Wailes, on the hybernation (if such a term might be allowed) of female specimens of Vespa vulgaris under pieces of slate on the summit of Skiddaw, from the end of June to the end of August. It was suggested that these were females which had either completed their work in the nest of the present year, and had gone away to die, or that having in the previous autumn taken up their winter quarters under these stones they had not been revived by the sun of the following summer. The first of a series of memoirs on the Entomological productions of the valley of the river Amazon, by Mr. Bates, was read, being the result of 11 years' residence in that part of the world. The geographical and geological peculiarities of the valley were described, and it was stated that it was divisible into three separate districts, namely, the Upper Amazon, the Lower Amazon, and Para. Some new and beautiful species of butterflies from the Upper Amazon were also described by Mr. Bates.

Notices of Books.

The Culture of Fruit and Vegetables and *The Culture of Flowers and Plants* (Houlston & Wright) are two neat 8vo volumes, in which Mr. Glenny records his experience as to the management of the more commonly cultivated races in the Orchard, the Kitchen Garden, and the Flower Garden. We believe that the whole or the greater part of the treatises which are here collected have appeared before, and been favourably received. To bring them all into one form cannot be otherwise than useful. Among other subjects of description is the Truffle, for managing which detailed instructions are given, founded we presume upon the experience of "several eminent horticulturists who have succeeded in obtaining good crops." Considering the interest which the attempts at cultivating what is generally thought to be uncultivable have excited, it is to be regretted that Mr. Glenny has not mentioned the names of those whose experiments have been attended by such success.

Some *Biographies* contributed by the late Lord Macaulay to the Encyclopædia Britannica have been published separately by Messrs. Black of Edinburgh. To the volume are prefixed between 50 and 60 pages of notes by Mr. Adam Black, explaining the connection of the great historian with Edinburgh. This correspondence begins in May 1839, and closes in September 1857. The biographies are those of Atterbury, Bunyan, Goldsmith, Johnson, and Pitt; literary critics may call them slight, but less critical readers will pronounce them extremely interesting. And what of Macaulay's was otherwise?

Messrs. Black, of Edinburgh, have just brought out a good useful *Military Map of Upper Italy* from Rome to the Alps, in which the new boundaries of France and Northern Italy are correctly laid down, at the low price of eighteenpence.

Miscellaneous.

Temperature of Europe.—The following was the temperature (Fahrenheit) at the hour of 8 A.M. on the 18th ult. in the principal towns of Europe:—Dunkirk, 46° 4′; Mézières, 44° 1′; Strasburg, 40° 9′; Paris, 46° 4′; Havre, 45° 6′; Brest, 50° 4′; Limoges, 45° 1′; Montauban, 47° 8′; Bayonne, 51° 8′; Avignon, 45° 6′; Lyons, 43° 2′; Besançon, 40° 8′; Brussels, 47° 5′; St. Petersburg, 6° 8′; Copenhagen, 35° 2′; Lisbon, 55° 9′; Rome, 44° 6′; Stockholm, 33°; Madrid, 39° 9′. From this it appears that the temperature of Rome was inferior to that of the towns in France, except four, viz., Strasburg, Mézières, Lyons, and Besançon. On the 17th, we had at Turin 44° 6′; Haparanda, 11° 48′. On the 16th, S. Fernando, 46° 6′; Florence, 41° 9′; Moscow, 11° 7′; Kief, 14° 36′; Warsaw, 23° 0′; Helsingfort, 15° 8′. *Builder.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Where hardy shrubs are annually forced, select the most suitable when removed from the houses, and give them some kind of temporary shelter to gradually harden their foliage; those cramped for pot room shift into a size larger pot in rich turfy loam; towards the middle of the month plunge them in an open situation in order that the wood may get ripe early. From having been previously forced these will bloom earlier than new stock, of which a portion should each year be potted to replace such as become useless for further work. Cut down and place in a cold frame the most choice kinds of Cinerarias for suckers after they have done flowering, and put in a stock of Chrysanthemum cuttings for autumn display. As spring-flowering plants for the stove and for cutting we know of none more useful than Begonias. Now will be a good time to commence with a stock for next season's display; as they go out of bloom allow them a short rest in a rather dry house, when they may be partially disrooted and repotted, pruning in any straggling shoots. Keep them close, and syringe frequently, when they will soon commence growing. Abundance of light and a tolerable share of pot room are necessary to ensure fine plants. As the plants advance liquid manure may now and then be given. Keep specimens planted in beds and borders properly supplied with water at the root, and see that everything is clear of greenfly or other insects.

FLOWER GARDEN AND SHRUBBERIES.

Look well to recently transplanted trees and shrubs. Do not allow anything to suffer for want of water at the root, but one good soaking after planting to settle the soil will be sufficient in most cases until we have more sunshine to warm and dry the ground. The soil should be kept moist but not saturated or run together by over-watering, as is sometimes done. A sprinkling over head with the engine on the evening of drying days will, when the weather shall have become a little warmer, be of more service to large evergreens than over-watering them at the root. See that all recently planted things, whether large or small, are well secured against wind. A good way of effecting this in the case of large plants has been described in former Calendars. Take advantage of the present state of the ground to stir and rake the surface soil of shrubbery and herbaceous borders to prevent the growth of weeds and give a fresh neat appearance. Also plant out Wallflowers, double Rockets, and young stock of herbaceous plants generally. Sow hardy annuals, not forgetting a liberal supply of Mignonette; also biennials and perennials where these are in demand. Prune Tea and other Roses not already done, and also attend to the pruning of shrubs that require that attention. See that gravel walks are put in perfect order for the season, and give turf a good rolling preparatory to mowing.

FORCING DEPARTMENT.

VINERIES.—Give air as freely as the state of the weather will permit, using a little extra fire heat, and leaving a little air on at night so as to prevent the bloom being injured by damp settling on the berries, as is apt to be the case where the house is shut up.

FIGS.—Where the early crop is approaching maturity the borders should be well watered, so as to avoid the necessity of having to water the soil after the fruit begins to ripen, which is injurious to the flavour, and is also apt to cause the fruit to burst prematurely, particularly if the trees have been rather dry at the root previously. So far as the present crop is concerned the trees can, perhaps, hardly be too dry at the root while the fruit is ripening, but where a second crop is expected care must be exercised to keep the trees in health, and to prevent the foliage becoming a prey to red spider, otherwise the second crop can hardly be expected to be good for much. Use the syringe vigorously, and maintain a moist atmosphere as long as this can be done without risk of injuring the fruit. Also keep the young wood thin and regularly tied in, stopping before the fourth or fifth leaf, according to the strength of the shoots, &c.

MELONS.—Encourage those newly planted out with a moist warm atmosphere, so as to get them into full growth as quickly as possible; but plants that are fairly established should be kept cooler, admitting air on every favourable opportunity, in order to secure short-jointed fruitful wood. Keep the shoots thin and regular, pinching out any not wanted, but avoid stopping the main shoots until they reach the sides of the pit, when by pinching out the points the laterals will start into growth and show fruit abundantly; and by this time the plants will have gained sufficient strength to set and carry a fair crop. Do not exceed 65° at night, and admit air when the glass rises to 75°, but do this very carefully on cold days. Endeavour to maintain a steady bottom heat of about 80° or 85°, and keep the soil in a healthy state as to moisture. See to providing plenty of young plants for succession crops.

CHERRY-HOUSE.—Syringe the trees daily with water at the same temperature as that of the house. Loosen the surface soil in the pots or borders with a hand fork, and supply the plants liberally with water until th fruit begins to change colour, after which graduall decrease the quantity and cease syringing; give abundance of air on all favourable opportunities.

STRAWBERRIES.—Plants ripening their fruit should be placed by themselves and kept moderately dry. Those in later stages of growth should however be well supplied with moisture both over head and at the root.

FRAMES.—All crops in these, such as Carrots, Potatoes, Radishes, and Cauliflowers, should have free exposure in fine weather, and be regularly supplied with water. Repot Tomatoes and Capsicums.

HARDY FRUIT AND KITCHEN GARDEN.

Seedling plants of Cauliflowers, Cabbage, &c., raised this spring should be pricked off when large enough to get stocky for final transplanting. As the time for sowing the principal crops of winter and spring Broccoli and Greens has arrived, select if possible an open piece of ground rather poor than rich; let the seed be sown thinly, and when large enough to handle prick them out on a similar soil. A crop of Globe Artichokes should now be planted for producing a late supply of heads. The young side shoots taken from the old stools may be planted in lines 4 feet apart and 18 inches between the plants; or trenches may be dug 18 inches wide and the same in depth, in which some well-rotted manure should be dug and the plants put out as above.

COTTAGERS' GARDENS.

Let all Potato planting be finished as soon as possible. Carrots, Parsnips, and Turnips may be sown and young Cabbages planted out. Mixed cropping is a point to which the cottager should pay especial attention. The mixture must however be arranged so as not to interfere with soiling or gathering.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending April 5, 1860, as observed at the Horticultural Gardens

March and April.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	3 feet deep.	Wind	Rain
Friday 30	,,	29.691	29.434	55	42	48.5	48	45	S.	0.01
Satur. 31	8	29.234	28.640	52	43	47.5	48	45	S.W.	0.17
Sunday 1	9	29.189	29.053	55	35	45.0	48	45	S.W.	0.14
Mon. 2	10	29.203	29.059	46	33	39.5	47	45	S.W.	0.22
Tues. 3	11	29.605	29.456	55	26	40.5	47	45†	S.W.	0.01
Wed. 4	12	29.729	29.676	56	37	46 5	46	45	E.	0.00
Thurs. 5	○	29.816	29.694	56	39	47.5	47	45	N.E.	0.01
Average..		29.495	29.287	53 5	36 4	45.0	47.3	45.1		0.56

March 30—Slight haze; overcast; slight rain.
— 31—Overcast; boisterous, with rain
April 1—Cloudy; boisterous; clear at night.
— 2—Fine; snowery; thunder in afternoon; clear.
— 3—Partially overcast; fine; very clear; slight frost.
— 4—Foggy; fine; cloudy; partially overcast; fine.
— 5—Fine; cold wind; with easterly haze; overcast.
Mean temperature of the week, ½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending April 14, 1860.

April.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 8..	56.0	35.8	45.9	18	0.46 in.	2	6	6	1	5	7	—	—
Mon. 9	54.9	35.6	45.3	17	0.30	4	5	6	1	4	7	1	1
Tues. 10..	55.4	33 8	44 6	13	0.27	2	6	7	3	4	6	1	1
Wed. 11..	55.5	35.8	45.7	18	0.51	2	8	3	1	5	9	3	3
Thurs. 12..	55.6	37.4	46.5	23	0.56	2	6	5	—	2	8	2	5
Friday 13..	55.7	34.5	45.1	14	0.45	2	5	2	4	4	7	2	5
Satur. 14..	57.6	37.1	47.3	13	0.36	2	6	6	2	4	7	2	3

The highest temperature during the above period occurred on the 14th, 1852—therm. 73 deg.; and the lowest on the 13th, 1853—therm. 22 deg.

Notices to Correspondents.

THE METROPOLITAN BOARD OF WORKS have directed that in future the street in which our office is situated shall be called Wellington Street, and that the number of our office shall be 41. Correspondents are therefore requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

BOOKS: *A F D.* Sowerby's British Grasses and Gardner's First Lessons in British Mosses.

FAGUS CUNNINGHAMI: *G.* This is a Tasmanian evergreen small tree. It is tolerably hardy near London, and perfectly so in the South and West.

FUNGI: *J B.* Your Fungus is a slight variety of the common Mushroom, *Agaricus campestris*, and we have no doubt is free from poisonous qualities, but it appears to be rather tough. *M J B.*

LABELS: *Inquirer.* The address you ask for was given in the article to which you refer. You will find it repeated in an advertisement in another column of to-day's Paper.†

MAHONIA INTERMEDIA: *R S W.* What is the new variety of which you speak? We are unacquainted with it.—*G W.* Statice Holfordi is, we believe, a variety of either S. arborea or macrophylla. Send a specimen and we will determine of which.

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*J P.* Probably Olea fragrans.—*W C E.* The Aubergine blanche is an eatable variety of Solanum Melongena. We have mentioned it on many occasions. It must be grown like a tender annual. To cook it is the difficulty.—*E D.* It looks like a bit of Cupressus Goveniana.—*W Muir.* 7 is Myrica quercifolia. We never undertake to name Florists' flowers.

NEW PLANTS: *H W C.* We are unacquainted with such a plant as a deciduous Culce. Upon the whole Loudon's Arboretum is the best work of its kind; but Gordon's Pinetum Britannicum is required to complete the account of Conifers.

PAPER MATERIALS: *C M.* We fear that Seakale leaves cannot be had in any quantity; their fibre too is very coarse. The fibre of Nettles is fine, white, and well known.

*** As usual, many communications have been received too late, and others are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspondents the insertion of whose contributions is still delayed.

ODAMS'S BLOOD MANURES,

MANUFACTURED BY THE

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ODAMS'S SUPERPHOSPHATE OF LIME.

This Manure contains an unusually large per centage of Soluble Phosphate of Lime, and is, therefore, a highly valuable Manure for all Root Crops.

ANALYSES.

	Mr. J T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.68	14.38	16.71	16.91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first class articles of the same description in the market, and much more than the average."

Dr. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

Dr. ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

Dr. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

Dr. HODGES states that—"It may be regarded as a good specimen of super-phosphate of lime." His calculation of its value is 7*l.* 13*s.* per ton.

Dr. CAMERON reports:—"The above figures prove this super-phosphate to be of excellent quality, and I have no doubt but that its application will be attended with the most satisfactory results. It would be good value at 7*l.* per ton."

Every Bag contains 2 cwt., is marked "ODAMS'S SUPERPHOSPHATE OF LIME," and is guaranteed to yield 20 to 25 per cent. of Soluble Phosphate of Lime.

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Are now prepared to send out the following MANUFACTURED MANURES:—
SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

ESTABLISHED 1812.

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TURNIP MANURE		CLOVER MANURE		OAT MANURE	
WHEAT	ditto	POTATO	ditto	BEAN	ditto
GRASS	ditto	BARLEY	ditto		Also

PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.

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" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
LAWES'S BARLEY MANURE	8	0
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TOTTENHAM SEWAGE MANURE.—For top-dressing Wheat and Grass, also for manuring Mangels and Turnips, use the above highly concentrated Manure. Price 3*l.* 15*s.* per ton.—Particulars and testimonials of Mr. J. L. EVANS, C.E., Sewage Manure Works, Tottenham, N.

Agents required. A very liberal commission allowed.

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The present Price of this valuable Manure is—
12*l.* per ton for 30 tons and upwards } at the Depôts in London,
13*l.* 5*s.* per ton for 1 ton up to 30 tons } Liverpool, and Bristol.

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The Agricultural Gazette.

SATURDAY, APRIL 7, 1860.

MEETINGS FOR THE FOLLOWING WEEK
TUESDAY, &c. April 10, &c.—Royal Dublin Soc. Spring Show.

—— WE have received a letter from a London firm, makers of a new cattle food, who believe that they are referred to by "An Old Bird" in a paragraph published at page 272. They allege that our correspondent is mistaken in imagining from Dr. LETHEBY'S analysis that he has ascertained the cost of the article which they manufacture. On the contrary, they could tell him something about a large percentage of waste, about a costly commission agency, about expenses of London premises, labour, carriage, printing, and advertising, of which he seems to know nothing. "Besides, as a physician claims his guinea for writing a prescription, so we fancy our invention, which has cost us some labour and expense, is entitled to a profit."

Now, if "An Old Bird" is to be misled by such reasoning as this, he has no claim whatever to the signature which he has adopted. What is it to him or to any one who may wish to try this cattle food whether the process of its manufacture be costly or not; the only point for his consideration is, whether or not the article offered be worth the price asked for it. To that end let him try it if he chooses. But as this involves considerable expense it is perhaps reasonable in the first place to ask the chemist what the food contains. Dr. LETHEBY is accordingly consulted, and he says, so our correspondent alleges, that 12.1 per cent. of the food is "nitrogenous matter," and 68.1 per cent. of it is "carbonaceous matter." Now, Mr. SPOONER says that the nitrogenous matter of any nutriment may be had in most foods for 20*l.* a ton, and that the carbonaceous matter of any nutriment may be similarly had for 12*l.* a ton.

If these data be correct what can be easier than to ascertain the value as a nutriment of the new cattle food in question? This accordingly has been done, and our correspondent, finding that the article comes out of this arithmetical examination worth 10*l.* 11*s.* 9*d.* a ton, whereas the manufacturers ask 35*s.* a cwt. for it, declares he is not to be caught, and very properly signs himself "An Old Bird." The manufacturers may be losers or they

may be gainers, that is nothing to him. If they can offer in their food these two classes of nutriment at a smaller price than he pays for them in Beans or Linseed-cake, he will gladly be a customer, but seeing that they offer them at more than three times the price for which he can procure them elsewhere, he is wise enough to decline the offer, and good enough to point out the snare to others.

Let any manufacturer of a new cattle food buy Beans and Linseed, Lentils, cake, &c., and mix a little salt and grind them up so as to be immediately available for use in the feeding house, and farmers will pay him handsomely for his labour. The division of labour principle is economical, and therefore profitable for all; and there can be no reason why the grinding of food for cattle should not be a business as much as the grinding of food for man. But if any one, as we believe that many do, justifying themselves by the expenses of London management and by the cost of some mysterious condiment which they use in their manufacture, shall offer his manufactured food at three or four times the cost of the only nourishing ingredients it contains, certainly we shall not help him to a customer.

WE should always follow Nature in our treatment of poultry ailments, and must therefore, when we have diseases or disorders, endeavour to discover by what deviation from Nature, or by what violation of first principles, we have brought trouble on ourselves, and suffering on our stock. When wild all animals follow by instinct that course which is best for them, but they are no sooner domesticated than they seem to lose the faculty of caring for themselves. It is not difficult to understand this. In all birds save those that nest in trees, walls, ruins, or other places raised from the ground, in fact, in all that are hatched on the level, the young have to search for food almost from the first. Take the young partridge for instance: at four days old it is a forager. This sharpens the intellect, and is not without its influence on the character of the bird. It becomes self-dependent, it cares for its comforts in every way. It learns where food and water are to be had in time of scarcity. It chooses proper roosting places, and deserts such as are damp, cold or insecure. But our bird, artificially reared, is provided with food from the day it is hatched, its home, its roost, everything is provided, and in many instances if it would use a little liberty by choosing a more airy, and hence a more wholesome roosting place, it is caught when asleep on the perch and restored to what its owner honestly believes to be a better place. We have been led thus far by the complaint of a correspondent—"Numbers of my birds lose the power of their legs." A wooden, stone, or brick floor to the poultry house will cause this. It is cramp, impeded circulation, numbness, weakness, death. Some friends have told us, "It is very well to tell us we must not have brick or stone floors; but we cannot do without them." Well, then, keep them; but take care to have them spread over with dry gravel at least 4 inches deep, and let the surface be frequently renewed, as the sweeping and cleansing will lower it. This will after a time form a hard bottom, keeping away the damp rising from stones or brick, which is so injurious to poultry, and which, in all probability, causes the paralysis of which you complain. We have imagined that it does; but you will perhaps tell us you have no poultry-house, your fowls roost where they will. We have had trying weather, especially in the north, and as it requires a great deal of food to keep the body warm in such weather, we should be disposed to think your poultry under-fed. If adult fowls, that can roost where they please and that have the ordinary necessary shelter always at hand, lose the use of their legs, it is sheer weakness, and can only be overcome by better feeding.

As a rule the more severe the weather, the more generous the diet should be. We were much struck and we hope instructed by a passage in MCCLINTOCK's narrative of the discovery of the remains of Sir JOHN FRANKLIN's party, in which after proving that all the gallant men fell down one by one, and died of starvation, he gives the detail of the articles of food found in the boat tenanted by the two last skeletons. Starvation seems an impossibility, but an after remark explains it; the stores found, all excellent in their way, were not good enough to support life in such latitudes. If the natives form a "cache" they fill it with blubber. We are not sure we may not learn something in the management of our poultry from this. We must meet cold with heat. All food contributes heat to the body. It is fuel then we must consume—fuel in proportion to the degree of cold that renders it necessary. In plain language, the colder the weather, the better and more plentiful the food should be. That which is more than sufficient in the summer when the earth teems with vegetation, and insect food may be found under low-boughed trees, among dead leaves and in every shade, will not keep life in the frame when the surface of the earth is frozen, and no insect or animal can live upon it.

When cramp begins in a fowl it must be met at once with stimulants, and we know none so good as strong beer. It is good economy to soak meal or stale bread in strong beer and give it to the fowls in severe weather—chickens can hardly do without it.

If we are right in our conjecture that the cramp is caused by the flooring of houses, remove or cover it. If by want of proper feeding, give them bread and ale, as soon as you have read this, unless the improved condition of the birds proves they no longer need it. *B.*

ADDRESS TO A LANDOWNER ON THE NEED OF IMPROVING HIS FARMS.

I MUST at once confess to you that, with all the aids improved farming affords, I can see little prospect of our being able to continue to farm to a profit those inferior soils of Britain that high prices have fostered into cultivation, while their produce shall realise only the low prices it is now fetching, unless the owners shall first put them into the best order and condition, to admit of their being made the most of. Before these can be worked to advantage, they must be trenched, drained, freed of surrounding trees and unnecessary hedges, and provided with proper accommodation for stock; that is to say, "the soil must be deepened" to afford a continuance of growth and nourishment to the growing crops through summer; "it must be drained" to early attain the highest temperature in the spring, and gather from the descent of rains all the nutriment they leave when they percolate into the earth; the fields must be laid open to admit of their being most economically worked and made most productive, and to allow the sun and air free access into them; the land must be laid out so as to admit of being tilled at least charge to the tenant, and buildings and yards must be provided to give ample accommodation for the stock that the land may be made to support, with least waste of its manure.

I look at the position of farmers of inferior land wanting draining, which is divided into small enclosures, shaded by trees and high hedges, or without the necessary conveniences for keeping stock and forming manure, as most unfortunate. Their labour, during these low prices, is being thrown away, their capital is dwindling, and notwithstanding heavy privations, constant anxiety and toil, I am convinced there is no other hope for them than from the occasion which, sooner or later, will be pressed on landowners, to afford them the assistance I point out as indispensable to amend their farms. As regards your farm at ——, I have now done all I can to amend it; my further progress is arrested by trees and hedges, and the restrictions you have put upon the use of it, which I will not at all disguise from you are fatal to views of profit from farming it. With respect to your observations as to the loss from attempting to highly cultivate small enclosures and headlands near to trees, I beg to represent to you that I understand the term "cultivation" as only applicable to an expenditure that produces a profitable return, and I cultivate more highly to give a proportionate larger return for my expenditure, and I am quite sure that improved tillage is ever desirable, and becomes more essential the poorer the soil, and at this time it is made the more necessary by the progress that others are making, and the larger returns that better soils naturally yield; indeed, the worse the land the greater occasion there is for higher cultivation, to bring it up into successful competition with richer. In my opinion, there is not (or should not be) a question between the choice of high or low cultivation, any more than there is as to the choice of the best implements and machinery, but there may be between high and no cultivation. I admit of no other test of farming, as applicable to the merits of any system, than that of figures. I hold that he is the best farmer who raises produce "at the least cost;" but I must add, that this is nearly equivalent to the commoner one, "of largest amount," for I believe that corn can generally be raised cheapest only by developing the returns of the farm to the greatest extent. In writing thus much to you, I have rather in view the interesting you and benefitting the numerous tenants with whom you have relations, than a mere reply to your letter, as it applies to ——.—*H. Davis's Practical Essays.*

MANURE MAKING AND STOCK FEEDING.

IT may be safely and positively given as a rule that ordinary farm-yard manure ought to be charged with no more fermentative or organic matter, as the droppings from animals, than will decompose it by a slow process of fermentation. If active fermentation be produced by heavily charging it with animal ejecta, and then lightly heaping it for the circulation of free air, a wasteful heat will take place by the union of oxygen with the carbon present, and a compound of gases will be thrown off in the form of carbonic acid, ammonia, and whatever volatile matters may happen to have been in combination with the non-fermentative carbon of the matured gum-like straw, or with the actively fermentative refuse of the green food the animals ate. If straw manure be required in a perfectly decomposed form for a winter or an early spring dressing, this must be managed, to be done economically, by "taking time by the forelock," by getting the straw sufficiently trodden down and charged early enough in the autumn to admit of the required result without unnecessary loss by dissipation. Some loss of gases will no doubt take place by fermenting straw at a moderate degree of heat, but the gain by transformation and decomposition till it can be readily fed on by the plants it is to be applied to, far surpasses that loss.

If the green crops, that straw manure is generally applied to, collect for returning to the soil the atmospheric elements that have been taken up by, and carried off in, corn crops, why, it is evidently requisite that these green crops should have the greatest possible benefit to be imparted to them by the use of straw as a fertiliser. An observation, made I believe by Mr. Hudson, to the effect that he "found his farm-yard manure greatly improved by exposing it to the sun and air of summer for a fortnight," is suggestive on this point, although his theory, that "something was absorbed by it from the air during the exposure," is certainly erroneous. It would lose a certain proportion of its carbonaceous compounds by being charged with water by dews and rain, if any fell, and evaporation by the sun's heat. This loss would vary according as the elements of the straw had been liberated by fermentation in the heap. Therefore, although the above observation would undoubtedly be correct as regards the fact, the theory of it would be untenable. Its "improvement" would simply arise from a much greater proportion of the straw being reduced to a state of solubility, or to a condition for the first crop of plants to take it up: and as green crops are the agents used to restore soils, partially decomposed straw manure would be "improved," or made more profitable, if so treated. Exposure to dews, or "dew-rotting," is a rapid natural process of decomposing vegetable textures, particularly when they have been subjected to slight fermentation. These considerations prove two things: the necessity of gummy insoluble textures, as straw, being decomposed by a slow process of fermentation; and the great importance it is to have this perfectly done for rapid-growing restorative crops.

The only considerations that require observance in regard to pits and covered sheds is to have enough dry straw at hand to prevent any of the droppings from running away through the walls and floors of them, and from dripping on the roads to the field when they are being emptied. If this be done in the winter, the generally economical method of a light and frequent dressing should be especially practised in this case, for a large proportion of the fertilising elements are in a soluble form, and as few soils are of a condition to suddenly unite with and fix a large amount of these elements, subsequent heavy rains may wash them into drains or deep into the subsoil beyond the reach of domestic plants. I have seen water highly coloured running off clay lands after a heavy winter dressing, and this too when it has been ploughed in.

Much inconvenience and loss often arise from too little care being taken to keep straw dry. If it be necessary to thresh out as much as can be trodden down in two or three months, it should be stacked evenly—it is no more trouble—and roughly thatched. I often see as much as one-half, at the least, of the value of the ejecta from a row of bullocks running to waste out of the sink-hole from the place they are tied up in. There are brick reservoirs, it is true, and liquid carts with troughs and all complete, but a man or boy cannot always be there to sweep the places down and then empty them into the water-tight cart, that they may not soak into the sandy soil beneath. It may be said, "asphalte the floor and cistern that they may be impervious." But something better than that can be said on behalf of plain farming; there ought to be no call for a liquid manure-cart at all. Liquid manure (if there be any) from a farm-yard ought not to be worth carriage. If straw be kept dry, and the liquid of the yard cannot be soaked up, then the yards are at fault. If, too, the straw to each yarded animal be so small in quantity that an ordinary rain washes much of value from the yards, then the system is bad. Either too many bullocks are kept in proportion to sheep, or winter feeding is practised where it would be better to expend money in cake and corn, in the spring and summer on Tares, Rye, Clover, Rape, and early Turnip lands.

Where it is possible to arrange the straw of a farm so that that which grew on one determined soil shall be applied to another determined soil—for example, from heavy to light, and *vice versâ*, or from chalk to soil deficient in that earth—by all means let this be done. This is not always practicable where a farm is situate on a table land of uniform soil; but the crust of the country is so variable that a vast amount of good may be produced by forecasting and incurring the trifling

expense that this change would require. When a purchase of straw is about to be made this view should not be forgotten. If it be good to apply clay, chalk, sand, moor, and so on, according to circumstances, it must be good to vary the great fertiliser straw in a similar way. The atmospheric constituents of straw are much alike; but the inorganic or earthy are quite different where grown on different determined soils. Analytical chemists have favoured us with numerous results of what 100 or 1000 parts of Wheat and Barley straw have yielded, and they have told us that as this is so, Wheat or Barley straw requires so and so. But this is more suggestive than conclusive. It would be folly to accept the theory that because one sample of vegetation or animal substance possessed certain constituents in given proportions, the same sorts must contain the same classes and proportions of elements. Animals would thrive equally well on a variety of kinds of food. Nature admits of this. So it is with corn crops, and especially the straw of them. As great a collection of fertilisers in the shape of straw will take place on a soil containing no earth but fine clay as will grow on a soil principally made up of silicates. A dressing of one earth on another earth does more good than by merely altering its physical character. This is proved by the facts that an application of chalk will be entirely taken up in the course of time by the crops that follow: also by the exhaustion of clay when applied to moor or fen soils, and so on. Therefore as the chemical character of soils is changed by their physical opposites, and as straw contains some of the inorganic elements of the soils it grew on, what can be more worthy of attention than the point in question, how these elements are so easily made soluble, and when sundered are available for again entering into reproduction? This point chanced to be the last in this part of our subject, but it is not the least. *W. G.*

THE LIMIT OF WHEAT CULTURE IN SCOTLAND.

By James Stark, M.D., F.R.S.E., &c.

The object of all scientific investigations is to reduce them to some practical end; and as we know the influence which temperature exerts on the flowering of plants and in the ripening of their seeds, the extensive meteorological observations made in different parts of the country, if turned to their proper use, ought to throw much light on the subject. At present I purpose to offer a few remarks on the bearing of some of these observations on the limits of Wheat culture in Scotland.

In the cultivation of the cereal crops it is of little or no consequence what the temperature or severity of the weather may be during six months of the year, whether the ground during that period be bound up with hard frosts and covered with ice and snow, or whether it be saturated with rain and enjoy a moderate temperature rarely below the freezing point. Hence it happens that though many parts of the United States and all Canada have their soils bound up with hard frosts, ice, and snow for five or six months every year, as good or better Wheat is raised there as in Britain, where the winter is usually so open that the plough is rarely interrupted above a week or two continuously. For a country like Scotland, situated just on the very verge or limit of the Wheat region, it is of very great importance to ascertain what that degree of temperature is which will render it profitable to cultivate Wheat, as it is a known fact that thorough drainage and improved shelter have so improved the climate of many districts that Wheat can now be regularly and profitably raised where a few years ago it would not ripen, or only do so in favourable seasons.

In Scotland the months of June, July, and August are those within which Wheat shoots into ear, flowers, ripens its seed, and is cut down; it is therefore unnecessary to take the temperature of any other months into consideration when endeavouring from the meteorological observations of the last three years to ascertain the mean temperature necessary to bring that crop to perfection. The following instructive table, the result of observations made at different stations in Scotland during the years 1857, 1858, and 1859, shows the mean temperature of the air 4 feet above the ground during the months of June, July, and August, as well as the height of each station above the mean level of the sea. At a few of the stations the temperature of the soil also, 1 foot below the surface, is given. As it is often desirable to estimate the probable temperature of a locality where observations cannot be conveniently taken, it may be mentioned that this may easily be done by getting hold of observations made in the neighbourhood and allowing a fall of one degree of temperature for every 300 feet of elevation above that station, which is sufficiently accurate for all practical purposes.

Mean Temperature of June, July, and August, during the Years 1857, 1858, and 1859, with the Height above the Sea Level, at Places in Scotland Within, on the Borders of, and Beyond the Wheat Region.

Within the Wheat Region.

Year.	Smeaton, in Haddington. 100 feet.		East Linton, in Haddington. 90 feet.		Nookton, in Fife. 80 feet.		Millfield, in Stirling 160 feet.		Thirlestane, in Berwick. 558 feet.		Barry, Forfar. 35 feet	Yester, Haddingt. 420 feet.	Culloden, Inverness 104 feet
	Air	Soil	Air	Soil	Air	Soil	Air	Soil	Air	Soil	Air	Air	Air
1857	59.7	59.1	60.2	59.4	59.4	58.2	56.8	60.7	58.9	56.9	59.6	61.3	58.8
1858	59.0	60.7	59.1	59.9	57.9	58.9	58.0	60.0	57.9	59.2	58.7	58.3	58.2
1859	57.7	60.1	57.6	59.0	56.7	58.8	56.5	58.2	?	57.4	58.0	59.8	58.4
Mean	58.8	59.9	58.6	59.4	58.0	58.6	57.1	59.6	57.9	57.8	58.8	59.8	58.4

Year.	Within Wheat Region.		On the Borders of Wheat Region					Beyond Wheat Region.					
	Makerstoun Roxburgh	Bailleston Lanark	Fettercairn Kincardine	Aberdeen Aberdeen	Tongue Sutherland	Stobo Peebles	Banchory Kincardine	Castle Newe Aberdeen	Braemar Aberdeen	Stornoway in Lewis	Sandwick in Orkney	
	213 feet	242 feet	241 feet	115 feet	40 feet	605 feet	99 feet	868 feet	1110 feet	70 feet	100 feet	
	Air.	Air.	Air.	Air.	Air.	Air.	Air.	Air.	Air.	Air.	Air	Soil
1857..	57.9	59.1	57.4	57.2	57.8	57.6	?	56.7	56.2	55.7	56.2	55.2
1858..	57.8	59.2	55.2	56.6	56.0	56.7	56.4	55.7	54.8	54.5	54.8	55.3
1859..	56.5	57.6	56.5	56.2	55.8	55.7	55.2	54.6	53.6	55.0	54.0	54.8
Mean	57.4	58.6	56.4	56.7	56.5	56.7	55.8	55.7	54.9	55.1	55.0	55.1

The above table, which might have been greatly extended, shows some valuable facts relative to Wheat culture. It will be observed, from the observations made on the temperature of the soil, that in the best Wheat districts of Scotland the temperature of the soil itself 1 foot below the surface was, generally speaking, nearly one degree higher than the temperature of the air 4 feet above the surface. This is a fact most important to note, inasmuch as it shows that if the soil be in a thorough drained and porous state, as in the best Wheat districts, the heat absorbed from the sun's rays raises its mean temperature above that of the air over it, and also keeps the temperature of the soil much more uniform from year to year than that of the air, which last is of course more under the influence of all atmospheric agencies, as winds, rains, &c. These facts are especially notable during the year 1859. Thus though the mean temperature of the air during these three months was about 1½ degree lower than during the previous year, the mean temperature of the soil itself was only about half a degree lower, and was in every instance from 1½ to nearly 3 degrees of temperature higher than the mean temperature of the air over it. This greater heat of the soil must have compensated to a great extent for the lower temperature of the air during these months in 1859, and must have contributed powerfully to bring the crop of that year to early perfection.

The principal fact, however, which the table elicits is that in all the good Wheat districts of Scotland the mean temperature of the air during the months of June, July, and August amounted to, and exceeded 57° Fahr.; that in the districts which are on the borders of the Wheat region (that is, districts where Wheat may be, and often is, raised successfully, but cannot be trusted to as a regular crop, and is almost always of inferior quality,) the mean temperature of the air during these months ranges from 56° to 57°; while in all the districts where the mean temperature of the air during these months falls so low as 55° Fahr. Wheat cannot be raised as a crop. Speaking in a general way therefore the table seems to show that the limits of the Wheat region in Scotland may be defined to consist of a line drawn through all districts where the mean temperature of the air during the months of June, July, and August amounts to 56° Fahr; all those districts where the mean temperature of these months is greater being within the Wheat region, and those where the temperature is lower beyond it.

Now some useful practical conclusions may be drawn from the facts just noticed. It is seen from the above table that nearly all the low-lying lands on the mainland of Scotland are within the Wheat region, those in the northern counties however being rather on the borders of that region than within it. It is next apparent that where the land is thorough drained and in good cultivation, the mean temperature of the soil during the Wheat months exceeds that of the air over it, so that the Wheat crop is brought to perfection even though the air temperature be from 1° to 3° below the average. This is a truly important fact for the agriculturist who is situated on lands bordering the Wheat region, for it indicates to him that if he can so improve his land as to cause it to absorb and retain a greater amount of heat, he may bring his land within the Wheat region, even though the temperature of the air rather indicates him to be beyond it.

All are aware that thorough drainage and shelter improve the climate, as it is termed; and numerous spots could be pointed out where Wheat now forms one of the staple crops, where formerly its growth was quite precarious, and it only ripened in favourable seasons. What has been done in one place may be done in nearly all the districts of Scotland where the ground is arable; for there are few level or gently undulating spots of good soil in Scotland under 600 or 700 feet of elevation above the sea in the southern and midland counties, gradually sinking to 200 feet in the northern counties, where Wheat may not be grown as a regular crop, provided the ground be thorough drained and sufficiently sheltered. Few seem to be aware of the effect of drainage in improving the temperature. So long as land is in an undrained and damp state much evaporation of water goes on from it, and the first and immediate effect of this evaporation is the production of cold, cold to the amount of from 1° to 3° Fahr. according to the dampness of the land. Any one may convince himself of this simple fact by looking at Mason's Hygrometer. This instrument consists simply of two ordinary thermometers, one of which has its bulb covered with muslin, which is kept constantly wet, while the other is in its natural state and is dry. During the months of June, July, and August, the wet bulb thermometer indicates a temperature from 3° to 4° colder than the dry bulb thermometer; and this is just the difference of temperature between wet and dry land. Thorough drain and thus dry the wet land, and at once the land, from having a low temperature similar to the wet bulb thermometer, assumes a warmer temperature similar to that of the dry bulb thermometer; and the natural consequence is, that as it only required to gain 1° or 2° of additional temperature to bring it within the Wheat region, its additional dryness being attended with an increased temperature enables it to bring a crop of Wheat to perfection, which formerly it was unable to do. This then is the boon held out to proprietors and tenants to thorough drain their lands, and a few striking examples might be cited where good crops of Wheat have been raised on lands naturally beyond the Wheat region, but which, from thorough draining and the nature of the soil, has the soil temperature so raised as to enable it to ripen Wheat perfectly. From the table above given it will be seen that Banchory is naturally beyond the Wheat region, and it is a fact that on the heavy damp clayey soils there Wheat cannot be raised as a regular crop. When mentioning the above facts, however, some time ago to Alexander Thomson, Esq., of Banchory, he mentioned that having thorough drained a field of black peaty soil and broken it up, he found that it produced an excellent crop of Wheat; and theory shows that such was likely to be the case inasmuch as the dark and porous and now dry peaty soil would absorb and retain a much larger amount of heat than the damp clays around, and thus furnish the degree of heat requisite to bring the crop to perfection. Several exactly similar instances in different parts of the country are known to me, one indeed in Lanarkshire, where on a similar drained and dark moorland almost peaty soil a crop of Wheat ripened at a height of 900 feet above the level of the sea, though in the district Wheat cannot be grown profitably even 400 feet lower.

From all this it is apparent that Wheat culture may be much and profitably extended in Scotland, but that the first step to take towards this consummation is to thorough drain the land. So long, however, as great tracts of undrained land exist, it is next to hopeless to expect even the best drained farm in the immediate vicinity will raise as fine crops of Wheat as it otherwise would. The evaporation from the great extent of undrained land will lower the temperature of the air all around, and counteract to a considerable extent the higher temperature on the drained farm. In proportion however as the land around is drained, the general climate will so improve that Wheat crops will be enabled to be raised regularly; and the difference between the value of land capable of raising Wheat, and that only capable of raising Oats or Barley, is so great that it is worth every one's while to thorough drain his land, and thus bring it within the limits of the Wheat region. That Wheat was formerly raised in many localities in Scotland, where it will not now ripen is well known, as the charters of several of the old families record the quantities of Wheat which certain lands were to pay over annually to monasteries and religious houses; whereas at the present day not a grain of Wheat is raised on the same properties.

It is no degeneration of climate which has led to this result, for the meteorological observations of the last century have proved beyond a doubt that the general climate of Britain is improving. But the result has been produced by the woods which gave shelter to the country having been cut down or otherwise destroyed, and to the land having been allowed to get into a marshy undrained condition; and as all the lands of Scotland a few hundred feet above the level of the sea are just on the borders of the Wheat region, the fall of mean temperature to the extent of either 1° or 2° Fahr. which would follow as a natural result of the land getting again damp, would throw it at once beyond the Wheat region.

Even the lands of Orkney, though naturally beyond the Wheat region, lie so closely upon it that the low-

lying and more sheltered localities might, by proper drainage and cultivation, yield a considerable amount of Wheat. It is known that within the last 10 years Wheat culture has extended there, and this is evidently due to the improvement in the temperature of the soil produced by drainage alone, as trees cannot be reared for shelter. Here however the extreme limit of the possible Wheat region is so close on the sea level, that an elevation of 100 to 150 feet above the sea level raises it beyond the Wheat region, and destroys all prospect of a Wheat crop. 21, *Rutland Street, Edinburgh.*

Home Correspondence.

Irish Agriculture.—The remarks which I made on this subject in a recent Number of this journal have elicited some criticism. The editor of the *Irish Farmers' Gazette*, a journal which has been very useful in Ireland, has curiously misconceived my argument. He says:—"In a recent impression of the *Gardeners' Chronicle*, a writer who treats of the agricultural state of this country (Ireland) asserts that the restriction of cultivation and the extension of pasture must be a sound system, because the Registrar-General's returns show that there were more cattle in Ireland in 1859 than in 1849." In my former paper on Irish agriculture I did not say a single word on the merits of "restricting" the land under cultivation, and "extending" pasture. My object was to combat what I regarded as erroneous views propounded by another writer on the position and progress of Irish farming. That writer directed his well-practised pen against the agricultural societies, school farms, &c., of Ireland. It is true that I differed with the writer in some of the conclusions he deduced from the Registrar-General's returns of the arable under crops in Ireland. Our friend the Dublin editor has given a great deal of his attention to these statistics, which appear to have afforded him evidence that Irish farmers are a race incapable of studying their own self-interest. I interpret these returns somewhat differently. I found one plea for the practice of the Irish farmers in the history of prices. *E.g.*, speaking of Wheat I said, "if the state of the corn trade indicated an upward tendency, the Irish farmer would not be true to self-interest, if he did not extend the area under that crop." But I did not express an opinion that the restriction of cultivation was a sound system; on the contrary, I did not wish in any way to undervalue green crop culture. I adduced as a significant fact that the number of cattle and sheep has rapidly increased in Ireland.

	Cattle.	Sheep.
In 1849	2,771,139 ..	1,777,111
In 1859	3,810,136 ..	3,588,356

This comparison appears to have afforded the critic satisfactory evidence that I "know little of the actual state of Ireland in 1849 and subsequent years; because at that period, and from 1847 to 1850, and even 1852, vast tracts of land in many parts of the country lay not only without inhabitant but untrodden by a single hoof. These deserted tracts were in 1849 to all intents and purposes desolate wastes, which are now occupied." My view of the case does not rest on a comparison of the statistics of 1849 and 1859; and I instanced those years because they were selected by "G." I now supply more complete statistics of the live stock in Ireland, which may have the effect of setting aside the statement that "in 1852 vast tracts of land in many parts of Ireland lay untrodden by a single hoof."

	Cattle.	Sheep.
1841	1,863,116	2,106,189
1847	2,591,415	2,186,177
1848	2,401,754	1,843,436
1849	2,771,139 .. .	1,777,111
1850	2,917,949	1,876,096
1851	2,967,461	2,122,128
1852	3,095,067	2,613,943
1853	3,383,309	3,142,656
1854	3,497,901	3,722,219
1855	3,564,400	3,602,342
1856	3,587,858	3,694,294
1857	3,620,954	3,452,252
1858	3,661,594	3,487,785
1859	3,810,136	3,588,356

These figures prove that one of the items which constitute the wealth of Ireland is increasing at a steady rate. And coupled with the exports of Irish live stock they also prove that Ireland has more than "a limited export of linen" to procure her essential imports. *B.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

A Monthly Council was held on Wednesday, April 4, Lord Walsingham, President, in the chair. Present:—Lord Tredegar, Sir Watkin W. Wynn, Bart., M.P., Sir John Villiers Shelley, Bart., M.P., the Hon. W. E. Cavendish, M.P., Mr. Amos, Mr. T. Raymond Barker, Mr. C. Barnett, Mr. Barthropp, Mr. Bramston, M.P., Colonel Challoner, Mr. Exall, Mr. Brandreth Gibbs, Mr. Hamond, Mr. Howard, Mr. Fisher Hobbs, Mr. Wren Hoskyns, Mr. Hudson, of Castle-acre, Mr. Humberston, M.P., Mr. C. Lawrence, Mr. Pain, Mr. Shuttleworth, Professor Voelcker, and Mr. Jonas Webb.

The following new Members were elected:—

Arkcoll, Thomas, Langley, Eastbourne.
Arnold, Rev. Richard Aldous, Ellough, Beccles.
Bigge, Charles Selby, Linden, Morpeth.
Bosley, John, Lower Leyde, Hereford.
Cadle, Clement, Ballingham Hall, Ross.
Carnegie, David, Eastbury, Watford, Herts.
Chinnery, John, Woolton, Milton, Lymington.
Clayton, John, Hook, Kingston, Surrey.
Hay, Charles Anderson, York Terrace, Regent's Park.
James, James William, Mappowder, Blandford.
Johnstone, John Cartledge Hirst, Hardwicke Hall, Castle Eden, Durham.
Kearsey, Charles, Glewstone, Ross.
Keep, Richard, Aldermaston, Reading.
Lay, John Watson, 3, Savage Gardens, Tower Hill.
Martin, Edward Hall, Jun., Barr Hill, Madeley, Staffs.
Miller, Seymour, Bradpole, Bridport.
Murton, Frederick, Smeeth, Ashford.
Neate, John Reeks, Northington Farm, Overton, Hants.
Prodgers, Herbert, Ayott Rectory, Welwyn.
Rigg, Joseph, Fillougley, Coventry.
Sladen, Joseph, Hartsbourne Manor, Bushey.
Smith, Felix, Upton Bishop, Ross.
Snowden, William, Longford, Gloucester.
Taylor, Robert Parker, Adelaide Place, London Bridge.
Tindall, Frederick, Preston, Faversham.
Tomlin, J. Currer, Manchester.
Towell, Samuel, Rutland House, Newmarket.
Wigmore, John, Weston-under-Penyard, Ross.
Woolf, Thomas, Standon Hall, Eccleshall, Staffs.

FINANCES.—Mr. Barnett, Chairman of the Finance Committee, presented their report, by which it appeared that the current cash balance in the hands of the bankers was 4926*l.* 18*s.* 2*d.* The Secretary's receipts during the past month had been duly examined by the committee and by Messrs. Quilter, Ball, & Co., the professional accountants.

IMPLEMENT COMMITTEE.—Colonel Challoner, chairman, reported that they had had an interview with certain implement makers who requested information as to the conditions stated in the Prize Sheet under Art. 3, and who were informed that the combined finishing machine does not come within this year's Prize Sheet, as settled by the Council in 1858.

CANTERBURY COMMITTEE.—Mr. T. Raymond Barker presented the report, which recommended an alteration in the mode of printing the Catalogues, and that the Implement Catalogue be charged at 1*s.* 6*d.* each.

The Secretary was directed to write to the Local Secretary, pressing him to carry forward the construction of the approaches to the Show Yard.

On the motion of Mr. Brandreth Gibbs, seconded by Mr. T. Raymond Barker, the subject of the visits of the Veterinary Inspector were referred to the Veterinary Committee, with a request that they will report whether any alterations can advantageously be effected whereby more numerous applications for his services would come from Members of the Society, as suggested in the report from the Governors of the Royal Veterinary College.

On the motion of Mr. Hudson, seconded by Mr. Hamond, Dr. Augustus Voelcker, Consulting Chemist to the Society, was unanimously elected an Honorary Member of the Society.

Memorials accompanied by pressing and cordial letters from the authorities were received from Doncaster, Harrogate, Hull, Leeds, Wakefield, and York, on the subject of the country meeting to be held next year in Yorkshire. An Inspection Committee consisting of the Hon. W. G. Cavendish, M.P., Sir W. Wms. Wynn, Bart., M.P., Mr. Brandreth Gibbs, Mr. Fisher Hobbs, and Mr. Milward, were appointed, with a request that they would visit the proposed sites and report on their suitableness or otherwise for the purposes of the Society by the next Monthly Council.

A copy of the Magnetical and Meteorological Observations made at the observatory in Bombay during the year 1857 was received from the Secretary of State for India in Council and ordered to be placed in the library.

The current numbers of the Society's Journal were directed to be sent to the Agricultural Society of the State of Wisconsin, in exchange for the Transactions of that body.

Leave of absence was granted to the Secretary for a week.

The Council then adjourned over Easter week till their Weekly Meeting on Wednesday, the 18th inst.

Farmers' Clubs.

CENTRAL: *April 2.—The Merits of Pure-bred and Cross-bred Sheep.*—Mr. Charles Howard said—

"The subject for discussion this evening was not proposed by myself; but receiving an unanimous request from the committee, with some diffidence I consented to introduce it. It is not my intention to extol one particular breed at the expense of another, for doubtless each has its advantages according to soil and climate, but I shall endeavour to confine myself as much as possible to the subject of my paper, viz, 'The Merits of Pure-bred and Cross-bred Sheep.' From a very early period in the history of the world the sheep has been necessary to the existence of man, and has consequently received corresponding attention at his hands. We read Abel was a keeper of sheep, and that it formed a very considerable portion of the wealth of the patriarchs; that it was well cared for is conclusive from the history of Jacob, who seemed to be tolerably well up in his experience as a shepherd. The sheep now, as then, I may truly say engages the chief attention of the farmer, and no doubt will continue so to do, for notwithstanding the glowing picture of farming sometimes drawn by Mr. Alderman Mechi, I feel certain that with our present knowledge and appliances Wheat cannot be grown at a profit, at the prices we have lately realised; and as in all probability we shall continue, so far as bread stuffs are concerned, to feed the people at cost price, we must look well to our flocks and herds and encourage those breeds that we find the most profitable, for it is from this branch of our business we must expect remuneration.

"The cultivation of the sheep is of great national importance, for it supplies us with the most nutritious food, which I may fairly state is now the chief diet of Englishmen.

"Our roast beef has always been our national boast, but not less so now is our mutton, for in no country is it equalled, and the demand for it is enormously on the increase; but important as is the carcase, not less so is the fleece, for it forms the staple commodity of a most important branch of our national industry, and thereby affords employment and sustenance to many thousands of our fellow countrymen. The importance of sheep to agriculture is well known; the sandy plains of Norfolk, the hills of Hampshire and Wiltshire, and the wolds of Gloucestershire, Lincolnshire, and Yorkshire have all been made fertile by its means; and although folding since the introduction of portable manures has not been carried on to so large an extent, yet there are whole tracts of country inaccessible to a dung-cart that are still made productive by this invaluable animal. The sheep of this country are divided into two classes, short-woolled and long-woolled; the established breeds under the former are South or Sussex Down, Hampshire or West Country Down; under the latter are Leicester, Cotswold, and Lincoln; all possessed of some most excellent qualities, or they would not have made their way and all but exterminated the various local breeds that were once to be found in this country; and perhaps it will be well briefly to glance at the history of these breeds.

"The South or Sussex Downs are most probably descended from small grey and dark-faced sheep, which were found upon the hilly and mountainous districts throughout England.

"The late Mr. John Ellman found a very inferior and ill-formed description of sheep upon the downs of Sussex, but being possessed like Bakewell of an intimate knowledge of the physiology of breeding, by a judicious selection of his animals (but what selection it was the world is not acquainted with), he produced an animal with as many good points as its prototype had bad; but their greatest improvement devolved upon a gentleman, a worthy member of this Club. I allude to Mr. James Webb, who regardless of expense has moulded the sheep to his own views, and made it as regards its shape almost perfect. The peculiar merits of this breed consist in its superior quality of mutton and wool, and I gather from a letter of Mr. James Webb's in reply to a statement of Mr. Druce's in Vol. XIV. of the Royal Agricultural Society's Journal, their average weight at from 13 to 15 months old is about 9 stone, and the weight of wool of the entire flock about 6 lbs. Doubtless this is beyond an average of the breed, but as Mr. Webb is a ram breeder and a high keeper, this can be easily accounted for. That this is above an average I am supported by my friend Mr. G. W. Baker, who for some years had the management of the Park Farm at Woburn, where a large flock of Southdowns is kept. He states 'that not more than 5 lbs. each was their average weight of wool, and as they do not develop themselves so quickly as the Leicesters or crosses, he found it the most profitable to keep them until they were 18 or 20 months old before disposing of them, when from their superior quality and nice weights, they command a very high price per lb. in all markets.' The ewes are capital breeders, generally producing one-third twins, and are excellent mothers. This breed is doubtless best adapted for elevated situations and bare pasturage, where activity is necessary for getting the stomach filled, and where folding is pursued, their activity being in their favour, they are a highly desirable class of sheep; from their gay and beautiful appearance they have strong supporters amongst our nobility and amateur farmers and are considered by them the *élite* of our breeds.*

"The Hampshire or West County Down is a very important branch of the Down family.

"The Sussex Down is the favourite in the eastern counties, and this breed in the western and south-western counties. Again, as the Sussex Downs are descendants of the sheep which formerly occupied those hills, the latter are descendants of those white-faced horned sheep that had ranged from a very early period the hills and downs of Wiltshire and Hampshire. Their improvement dates from the commencement of the present century, when recourse was had to the Southdown; from successive crosses this very valuable class of sheep was established, and I think it will be generally admitted that a flock of Hampshire Downs now presents as great a uniformity in wool, colour, and general appearance as their smaller but handsomer cousins the Southdowns. They have lately rapidly risen in public estimation, and find considerable favour in the London markets, but it is said by some (with what truth I know not) that like the Londoners, who are fond of them, they have rather large appetites. A gentleman who stands high as a successful exhibitor of this class of sheep at our national shows, in reply to my inquiries, states that 'they are the best description of sheep for Wiltshire, Berkshire, and Hampshire; in fact, the large sheep fairs, such as Overton, Alresford, Wilton, Ilsley, and Weyhill, are supplied with very little stock of any other sort; they are very hardy and of good constitutions, good wool bearers (the average weight of a well kept flock is from 6 to 7 lbs. each fleece), of early maturity, and have plenty of lean as well as fat meat; they will graze to almost any weight you may think proper to make them.' The same gentleman also states 'that they have been very much improved the last few years by a slight cross with the Southdown." Another gentleman, not a breeder of Hampshires but who has had considerable experience in the feeding of them, states that 'they are a good useful sheep, the better bred ones will bear comparison with other breeds, but there are some not to be desired, those that are too large are very slow in feeding, and when fat are of second quality,' and in his opinion 'it is very easy to get a Hampshire too fat.' The ewes are good breeders and sucklers, and combined with the excellent management they receive in these counties, some most extraordinary lambs are raised, which at barely eight months old command enormous prices at their autumn fairs. Their draft ewes also find a ready sale, and are distributed throughout many parts of England, chiefly with the view to cross with the Cotswold or other long-woolled rams; but the former is more commonly used, and I have seen some very wonderful lambs the result of this cross. So much for the short-woolled sheep.

"There is no reliable information as to the course pursued in establishing the Leicester sheep.

"Bakewell died, and his secret was buried with him; but there is very little doubt they are the result of a cross of the various long-woolled breeds in his own immediate locality, and which he succeeded in turning to a good account by the production of this valuable breed of sheep; for it cannot be denied that to this animal all other long-woolled sheep, and perhaps some others, are indebted for their improved shape and greater disposition to fatten. These sheep have been long before the public, and their qualities are so well known, that I shall not occupy your time with any lengthened remarks upon them; their characteristics are aptitude to fatten, with a comparatively small consumption of food, and early maturity; they cut a good fleece of wool, upon an average of 7 lbs. each, and weigh at 14 or 15 months old from 9 to 10 stones each. Some time since I mine in our own county, who have been very successful exhibitors at the Smithfield Club Show in this class, maintain that they cannot be considered good breeders or sucklers—that a rare thing to have more lambs than there are ewes put to the ram; they also inform me, that they find some difficulty

* Before dismissing this popular class of sheep perhaps I ought not to omit a strong point often urged in their favour, viz., that a larger number can be kept upon the same acreage than of the larger breeds.

satisfactorily disposing of them when fat, as the public taste shows a decided preference for a black leg and a dark face.

"The Cotswold or Gloucester sheep is one of the oldest of our breeds.

"Mention is made of them in the early history of this country, and Miss Strickland says in her 'Lives of the Queens of England,' vol. i., page 449, 'that there is little more than tradition to support the assertion that to Eleanora of Castile,' Queen of Henry II., 'England owes the introduction of the breed of sheep for which Cotswold has been so famous. A few of these animals were introduced by the care of the Queen from Spain, and they had increased to that degree in about half a century, that their wool became the staple riches of England.' If this be true they doubtless became very much improved upon their introduction to this country, for it is recorded that some 300 years after Edward IV. gave permission for some to be sent back to Spain. They were originally very coarse animals with a thick heavy fleece and well adapted for the bleak, unenclosed Cotswold hills, but since the enclosure of the land and its better cultivation, a great improvement in this class of sheep has taken place; there is little doubt this was effected by the use of the Leicester, which without diminishing their size improved their quality, and gave them a greater aptitude to fatten. Among the men to whom this country is indebted for improving this breed were Messrs. Charles Large, William Garne, W. Hewer, and C. Barton. To Mr. Robert Garne, the well-known breeder, I am indebted for much of my information. Among other observations he states, 'they are capable of enduring great hardships, succeed well in exposed situations, and on nearly every kind of soil adapted for sheep farming, producing a great amount of mutton and wool at an early age, and it is no unusual thing to see in the best flocks sheep of 16 stone when only 12 months old' In confirmation of this I saw, when at the Oxford Cattle Market the second week in March last, a pen of shorn tegs of Mr. Gillett's of Astrop weighing quite 16 stones. Mr. Garne also states that 'the weight they may be made as old sheep is enormous, he had one at the last Christmas Cattle Market weighing 43 stones or 86 lbs. per quarter, for which he obtained 8*l.* 10*s.* The average weight of an ordinary flock when fit for the butcher at 14 or 15 months old is from 12 to 13 stones, and the weight of wool of the whole flock would approach to 8 lbs. each. The Cotswolds cut a grand figure and generally form a very attractive portion of the Royal Agricultural Shows; there are between 3000 and 4000 rams annually disposed of, and a good export trade is now carried on with Australia as well as to the Continent. The great demand for them is for crossing, and perhaps it may be considered one of our best sheep for this purpose; I think it most likely our friends on the Cotswolds will retain their monopoly, for perhaps in on other part of England can they be so successfully bred.

"The heavy woolled and large framed Lincoln sheep, like the Cotswold, have been improved by an admixture of Leicester blood.

"Mr. J. Clarke, who is well known to many of you and who reads a paper here next month, thus speaks of them:—'The present improved Lincoln sheep partake largely of the peculiarities of both Cotswold and Leicester, having the expansion of frame and nobility of appearance of the one, with the quality of flesh, compactness of form, beauty of countenance, and propensity to fatten of the other; but they far exceed either in the weight of their fleece. Under good management their wool is of a quality which rarely fails of obtaining a price equal to that of the lighter long wools, and there is therefore no breed perhaps that can equal this in rapidity of growth and propensity to fatten under a skin so weighty and so valuable.' There are instances of a most remarkable weight to which these sheep have attained. In 1826, Mr. Dawson, of Withcall, killed a three-shear sheep, weighing 96½ lbs. per quarter; a two-shear, weighing 91 lbs. per quarter; and a shearling, 71 lbs. per quarter. Mr Robert Smith, in his report of Lincoln sheep at the Warwick Show, states that 'he has known 14 months' old lamb-hoggs slaughtered at Lincoln April fair, 30 together averaging 35 lbs. per quarter, and 100 together clipping 14 lbs. of washed wool each.' It is not the common practice for breeders of Lincolns to have them fit for the butcher at 14 or 15 months old, but they are generally kept until they are 22 to 28 months old, when their weight will be from 30 to 40 lbs. per quarter, and cut a second fleece, weighing from 10 to 14 lbs. The weight of wool of an entire flock, under fair average management, is about 8½ lbs. each; in some cases, especially on good layer, this weight no doubt is exceeded. Mr. John Clarke's Lincoln prize ram clipped 51¾ lbs. of wool in three years, an average of 17¼ lbs. each year, while a neighbour of his in 1859 clipped 327 hogget fleeces, which weighed altogether 130 tods, an average of over 11 lbs. per fleece. The Lincoln breeders consider the mutton of admirable quality, having less fat, and a greater portion of fine grained lean flesh, than the Leicester. The ewes are good breeders, but like the Cotswolds and Leicesters are not good sucklers. Mr. Clarke concludes his letter by stating that 'it is certain that neither Cotswold nor Leicester sheep, in cases where they have been tried (I suppose in that district), have equalled the Lincolns in the value of wool and mutton together produced per acre, and no other breed can furnish such big and heavy skinned lamb hoggs as those which are the grazier's attraction at Lincoln, Caistor, and Boston spring fairs. So much for the long-woolled breeds. Having touched upon the history and merits of the leading breeds of sheep, I now approach that part of my paper upon which, doubtless the discussion will turn.

"The progress crosses have made in this country is proved by their competition at the Smithfield Club.

"Through the kindness of Mr. Brandreth Gibbs, I am enabled to give the return of the entries. Prizes were first established for cross-breds in 1843, now 17 years ago. During the first nine years the average number of pens was only 8½, but during the last eight years they have averaged within a fraction of 17, while the Leicesters during the first nine years averaged 19 pens, they have during the last eight only reached to 17. I do not intend to go into the question of food, for it must be admitted that the long-woolled breeds will doubtless put on the greatest amount of fat in proportion to the food consumed than any other, but this is not all the farmer requires; when he has produced his mutton he wants a market for it, crosses find a more ready sale and a much better price, which more than make up for the increased consumption of food. There is a very great difference of opinion upon the subject of crossing, many, very many, still contending that it is not desirable to go beyond the first cross; and the most successful and common mode pursued is to use a long-woolled ram upon South or Hampshire Down or other dark-faced ewes. This course has been found to answer better than a short-woolled ram upon long-woolled ewes, for the produce generally partakes of the size of the male, and this, having an eye to the butcher, is a great desideratum in crossing. The great objection urged by many against this system is, that as all the produce is sold off annually the breeder is driven into the market every year for ewes, which are mostly the drafts of other people's flocks, thereby running the risk of introducing all manner of diseases on to his farm; besides there is a want of uniformity in the lambs, some taking after the sire and others after the dam; moreover having to purchase ewes every year the demand is increased and the supply is diminished. This cannot be desirable, for with a fast increasing and flourishing population, bringing with it a growing demand for meat, the breeding of sheep cannot be too extensively carried on. Although I may be travelling somewhat out of the record I would observe in passing that I am aware an objection is raised by some farmers to the keeping of a breeding flock, but taking a run of years on most farms, I must think it to be greatly in favour of such a system. A custom has become prevalent in many quarters of keeping only what is called a dry flock, with an idea that such a course is more profitable; it certainly may be attended with less trouble, but I very much doubt its policy. I can look round me and find that most of those men who have made farming a successful occupation have generally been extensive breeders and rearers of stock. The objections I have stated to the mode of crossing I have described have been felt by many, and successful efforts have been made by the men of Shropshire, Oxfordshire, and other districts to produce sheep that unite the well-known and acknowledged good qualities of the Down with the larger framed and heavier fleeced long wools. What has been done can be done again. If it was possible for Mr. Bakewell by a judicious selection from the various long wools to produce the new Leicester; for the Hampshire men by the use of the Sussex Down to change the characteristics of their native horned breed; who shall say it is not possible at the present day with our enlarged knowledge and increased facilities to produce results equal to those who have gone before us? The Oxfordshire and Shropshire men in their attempt to establish these newer breeds are backed up in their principles of breeding by a very high authority, a gentleman who is a member of this Club. I allude to Mr. Spooner, who has written a most excellent paper upon the Cross-breeding of Sheep in the last Journal of the Royal Agricultural Society of England, and I will take this opportunity of saying that for practical papers and good downright farmers' reading no previous journal has equalled it. Mr. Morton, I know, did his best to make it so. I trust now that it has fallen into other hands it may be conducted in like manner. Mr. Spooner says in one of his conclusions bearing upon this point, 'Although the benefits are most evident in the first cross, after which from pairing the cross-bred animals the defects of one breed or the other or the incongruities of both are perpetually breaking out, yet unless the characteristics and conformation of the two breeds are altogether averse to each other, Nature opposes no barrier to their successful admixture, so that in the course of time by the aid of selection and careful breeding it is practicable to establish a new breed altogether. This in fact has been the history of our principal breeds.' Mr. Spooner goes on to show that the Leicester was produced from crossing in the first instance, the Cotswold and Lincoln have been improved by the Leicester, and the Hampshire and Wiltshire have also been crossed and improved by the Southdown; and as regards the latter there is a doubt in some minds whether their improved chines and backs were not brought about by some such means. From all this it would appear the word 'pure' is out of place when speaking of any breed, and therefore I prefer to use the term happily chosen by Mr. Robert Smith in his reports of the Royal Agricultural Shows at Chester and Warwick, viz., the 'established' breeds.

"Having thus introduced the subject of crossing, I shall now proceed to speak of those sheep that have not yet arrived at the honourable position of being placed amongst the established breeds.

"Our friends the Shropshire men will deem it no doubt very impertinent of me to associate them still with Oxfordshire men; but I cannot allow them to part company until after the Canterbury Show, where, after repeated applications to that very useful but irresponsible and slow-moving institution, the Royal Agricultural Council, they are at last to have a class to themselves; they will doubtless avail themselves of their improved position, and show in such numbers and excellence that will entitle them for the future to take rank amongst the other established breeds of this country. There is no doubt that Shropshire, for very many years past, has possessed a breed of sheep peculiar to that county: the originals had a speckled face, and were larger and coarser than the present Shropshire breed. This breed has been established by a prudent selection of the breeding animals, and I learn from a gentleman who kindly favoured me with information upon the point that the late Mr. Meire was the first to improve upon the original type. This he did in the first place by the use of the Leicester; as their faces became white he would then have recourse to a Southdown or other dark-faced sheep. It was, however, left to the son to carry out and bring to a successful issue what the father had commenced, and Mr. Samuel Meire no doubt may be looked upon as the founder of the improved Shropshire sheep. We gather from his address to the Wenlock Farmers' Club that he accomplished this, not by reverting to any of the established breeds, but by using the best animals from his own large flock. I have received a somewhat different account of the origin of the Shropshire sheep. It is from a gentleman who is native of the county, but has since left it to manage an estate in another. I will read some extracts from his letter. He states: 1st. 'Having been born in the county and accustomed to the sheep as long as I have known any, there cannot be a question raised in favour of purity of blood. I have always regarded the Salop sheep to have had its origin from a breed of sheep known as the 'Clun Forest,' but since its enclosure they have entirely disappeared; they were short-legged, square-framed, symmetrical sheep, with dark brown face and legs, and occasionally small horns curling close into the head. 2dly. The Ryeland sheep which in early days was occupier of the common lands in the neighbourhood of Bridgnorth and the southern districts of Shropshire; this was a larger animal, have always understood the Shropshire sheep owed its origin by but not so compact as the 'Clun.' From these two parent stocks I crossing chiefly with the Sussex or Hampshire Down, and then by any other animal that the breeder thought best suited either to increase size or remedy any other defect.' The particular merit of Shropshires consists in their superiority over any other breed in their own county; they possess hardiness of constitution, excellent quality of mutton, and are prolific breeders. My friend also observes—The yearling wethers will cut from 5½ to 7 lbs. of wool, and if they have been well kept will weigh from 16 to 18 lbs per quarter, but they are not calculated to come out as yearlings, and are more frequently run on until the following Christmas or second year's clip, when they can be made 25 or 30 lbs. per quarter. Lately a very great change has come over the breeders of Shropshire; they have assailed themselves of larger sheep of heavier fleece and earlier maturity, so that the only affinity they bear to the original Shropshire are dark faces and legs; they now pride themselves in exhibiting some well fatted shearlings weighing upon times 22 to 24 lbs. per quarter, but this is not general.

* The "Clun" cross Shropshires are to be found in the western and south-western division of the county or "Corve Dale" district; although not so large as the Ryeland cross, they are of better quality and symmetry, and I am informed are decidedly the best specimens of their class. The "Ryeland" cross Shropshires are peculiar to the south-eastern division of the county; they are larger, higher standing animals, with more open fleece, but not the aptitude to fatten, nor of so hardy a constitution as those met with in the western division. There is another family of these sheep lately advertised as the 'Midland Downs' common to Staffordshire, produced by crossing the 'Whittington Heath' sheep with the Shropshire, but since special prizes have been offered by Local Committees of the Royal Agricultural Shows, for 'Shropshire Downs,' the breeders have dropped their previous title, and have made common cause with their neighbours, and to this class of sheep which are somewhat larger, the prize was awarded at Warwick. Mr. John Conon being the winner, the sheep was sold to go to Ireland for 100*l.* The Shropshires have of late deservedly found considerable favour; it was at the Gloucester Meeting in 1853 where they first commanded notice, some most beautiful animals being exhibited. At Warwick last year they showed in considerable numbers, and formed one of the greatest attractions of the show-yard.

"The 'Oxfordshire Downs' are what are commonly styled cross-bred sheep, but their patrons in 1857 determined upon giving them a definite name.

"They were originally produced by crossing the Hampshire and in some instances South-down ewe with a Cotswold ram—most commonly the former, for it gave increased size, and the putting the crosses together, by constant attention and weeding, a most successful result has been accomplished, producing a kind of sheep that possess with uniformity of character and hardiness of constitution, large frames, good fleeces, aptitude to fatten, and mutton of superior quality. It is about 27 years since they were first established in Oxfordshire, and Mr. Druce, in a letter to the Journal of the Royal Agricultural Society in 1853, thus speaks of them:—'It is now 20 years since I began crossing between the Southdown and Cotswold sheep, and with the ordinary skill of sheep farming, I find no difficulty to keep the form and size of the animal as it should be, the wool of a valuable quality and not deficient in quantity, and I maintain that the good qualities can be better secured by employing the cross-bred animals on both sides than by using the first cross.' Mr. Druce has confirmed his statement by producing many extraordinary sheep at the Smithfield Club, where he has often been successful; also last year at Warwick, by taking the first prize in the old ram class, beating both West Country and Shropshire Downs. His son Mr. Joseph Druce, after a lengthened experience, now writes of them: 'This particular locality is situated on the edge of the Cotswolds, and embraces a large area of heavy mixed soils, abounding in springs near the surface requiring much draining, and upon which it was found that the Cotswolds and Southdowns did not thrive at particular periods of the winter season, which suggested the admixture of the two breeds. The flocks generally drop their lambs in the month of February, and at 13 or 14 months old they are ready for market, weighing upon an average 10 stones each, with a fleece varying from 7 to 10 lbs. The ewes are good mothers, and produce a great proportion of twins.' He also adds, 'It is seldom this breed is attacked with giddiness or water upon the brain, so prevalent with some kinds.' Another breeder, Mr. Hitchman, who has been one of the most successful exhibitors at Baker Street in the cross-bred class, having taken five 1st prizes in succession, besides nine medals and several 2d prizes, states that it is 25 years since he began breeding this description of sheep, by crossing Hampshire Down ewes with a Cotswold ram, and considers them for his neighbourhood the most rent-paying sort, and believes there is no breed of sheep that will produce better quality of mutton and more of it than the Oxfordshire Downs; his tegs when shorn will average 11 stone, and his entire clip of wool about 7 lbs. per fleece. I will only add one other testimony, that of a large breeder, Mr. Joseph Roberts, who says, 'I have kept cross-breds, now Oxfordshire Downs, for 27 years, 19 at Waterperry on very wet land, where leng-woolled sheep could not be kept at a profit; we could make a fair return from cross-breds; I have been here (Caswell) eight years with the same sort on land some persons consider calculated for Cotswolds, but I think otherwise. My wool weighed last year under 4 fleeces to the tod; I consider four to be a satisfactory average. I generally sell my tegs in April, averaging from 10 to 14 stones, a few even heavier, and my ewes this season weighed from 12 to 17 stones. I have no doubt Cotswold sheep can in their locality be brought to greater weight per sheep of both mutton and wool, than any other breed save Lincolns; but I question whether they can be made to produce more money value as a whole flock than Oxfordshire Downs, allowing for the prolificacy of the latter, and I am of opinion that the produce from the same number of ewes will exceed in weight of flesh any other breed.' The first Oxfordshire Down ram exhibited at our Royal Shows was at Windsor in 1851, by the late Mr. John Gillett, of Brize Norton, who was a very successful breeder of them; but as no separate class is assigned them they have but seldom competed until last year at Warwick, when there were 37 entries, thus bidding fair for a very strong competition when the Council of the Royal Agricultural Society determine to place them upon the same footing as their rivals the Shropshires. Until this is the case they will have to compete with an old established breed, the Hampshires, a state of things alike unsatisfactory to both exhibitors and judges. They have the last few years spread most rapidly in Oxfordshire and distant counties, and a very large number of rams is annually disposed of not only by private contract but by auction at the Oxford Cattle Market, not a few finding their way into Hampshire and Shropshire. In a letter I received from Mr. Jonas Paxton, the well known auctioneer of Bicester, who sells by far the greatest number, he says, 'although I find an annual increase in the number produced for sale, I find more than a corresponding increase in the demand.' I shall close my remarks upon this breed by quoting again from Mr. Robert Smith's report of the Warwick Show, a very high authority upon such matters. He writes, 'The Oxford Downs date from the year 1833, when a neat well made Cotswold ram was used with Hampshire ewes; at that period several breeders tried the same experiment, which by subsequent attention has resulted in the establishment of this rent paying class of sheep,' and he adds, 'Some excellent sheep of this breed have been shown at the various meetings, but their career has been the most noticed in the yard of the Smithfield Club Cattle Show. As fat wethers they have again and again astonished the public, while the prize ram exhibited by Mr. Druce at Warwick went far to recommend them as male animals.' I have gone more fully into the history and merits of the two last breeds, and have obtained more evidence from those who are well acquainted with them, for this reason, they have not been so long before the public, consequently not so well known.

"It does appear from the success which has attended the efforts of these breeders the theory is correct, 'that from a judicious pairing of cross-bred animals it is practicable to establish a new breed altogether.'

"The breeders of these sheep, more particularly those of the Oxfordshire, contend that they can produce animals with more uniformity of character, a heavier fleece of wool, and greater aptitude to fatten than are to be obtained by crossing the established breeds, such as the Hampshire or Southdown ewe, with a Cotswold or other long-woolled ram. If it be true that the advantages I have indicated are realised, these breeds must be highly desirable, and perhaps not their least valuable quality is that the breeder who is anxious to obtain the same results as by crossing is not driven yearly into the market for his ewes. Probably some may be disappointed with my treatment of this subject, but after due

deliberation, I resolved to adopt the course I have done, viz., to place the various leading breeds, with as much information as I could gain upon them, fairly before the Club, and to leave the members to discuss their relative merits. I would observe that should a good discussion ensue upon this paper, I shall be amply compensated for any little trouble I may have taken. I hope I have not taken up so much of the evening as to prevent a full discussion of the subject, for I hold that quite as much information is conveyed to the Club, and through it to the public, by the remarks of subsequent speakers as by the introductory papers. In conclusion, I have to express my acknowledgments to those gentlemen in different parts of the country who have kindly favoured me with much information upon the respective breeds to which they have more immediately directed their attention."

Notices of Books.

Our Farm Crops. Parts I. to VII. By John Wilson, F.R.S.E., Professor of Agriculture in the University of Edinburgh, &c. Blackie & Son.

The series now includes all our corn and Pulse crops, besides the Turnip, Kohl Rabi, Rape, Cabbage, Mustard, Mangel Wurzel, Carrot, Parsnip, and Potato crops. Their publication has been most seasonably conducted, and agriculturists cannot do better than purchase a work which will not only keep them abreast of the knowledge of the day on the various topics of plant-cultivation, but which has called their attention just at the proper time to those particular plants on which the hopes of farmers rest now that their confidence in the Turnip is being shaken.

Calendar of Operations.

MARCH.

SOUTH LANCASHIRE, *March* 26.—Wheat is not looking well anywhere, and especially upon heavy, cold, or undrained soils. It has a brown, stunted appearance, and instead of being sufficiently high to 'hide a hare,' as is sometimes said of it at the end of March, it would just now scarcely hide a mouse. The root has entirely perished in some places, but, upon the whole, continues its hold upon the ground tolerably well, and there is perhaps fully an average breadth sown, so that with a favourable change the crop may eventually prove abundant. Farmers generally are but just beginning to sow their spring corn (Oats and Barley) and to plant their earliest Potatoes; and they are in no hurry about this either, so long as the cold and unsettled weather continues; but as regards cultivation the land is now pretty well prepared. Hay has risen to 15*d.* a stone, straw to 9*d.*, Mangels and Swedes to 27*s.* or 28*s.* per ton. Other produce, too, has risen considerably except Wheat, which has only recently made a decided advance of two or three shillings a quarter, and we think it undoubtedly must still further share the general rise. But these prices are beginning to be sorely felt by even some of the farmers themselves, as dire necessity is now compelling them to purchase food for their stocks. We apprehend, indeed, that before the end of May arrives many will deeply regret having been tempted by high prices to part with too much of their produce. Some Cumberland, and, it is said, even Scottish farmers have already been buying Oat straw in Liverpool and the neighbourhood for fodder. The other day we heard of a farmer, located somewhere in the neighbourhood of Keswick, who had a stock of 2000 sheep, for which he had but three or four days' feed on the spot—a sad prospect for the poor things in lambing season. Now's the time for oilcake and other artificial food to assist us; and it is the time also for a plentiful use of guano and other stimulating, natural and artificial manures, to Italian Rye-grass and other forceable crops. And *apropos* of this, we have to notice the timely advent of a new invention, if not an entirely new machine, for the distribution of guano and artificial manures, but especially for sowing guano. This was a desideratum the want of which has long been felt; as under even the most favourable circumstances guano cannot be applied regularly, expeditiously, and economically by hand. But this light one-horse machine obviates all difficulties, and only requires to be carefully tended and driven along in order to attain its object. No matter what the state of the weather may be at the time, any quantity per acre, small or great, can be applied with the utmost regularity. To-day we witnessed a public trial of this machine on the Royal Oak Farm, Whiston, near Prescot, and all present at the time seemed to concur in expressing their decided approval and satisfaction. The machine consists of a long cylindrical tube or trough, capable of holding from 1 to 2 cwt. or so, of manure. This rests upon two wheels — one at each end—and is very easily drawn by a horse or pony. Inside the tube a toothed or pronged roller revolves amongst the guano, which again on the lower side is met by the cross or horizontal motion of a serrated-edged plate running along the aperture, which extends from end to end, and whence the manure is finely and unceasingly delivered. When in use the machine, as seen from a distance, is not unlike a roller at work, and at the very least as much ground may be gone over in a day as with that implement, or say about 12 statute acres. The implement was invented expressly to compete for a prize offered by the local committee at the Manchester and Liverpool Agricultural Society's exhibition at Liverpool last year, by Mr. William Roscoe, of Kirkby, near Croxteth, and has since been amended and patented by him. Mr. Melling, of Rainhill, is the manufacturer, and at present the price of it is likely to be fixed at about 12*l.*, which seems rather high; but it must be borne in mind that one machine may serve half a dozen parties at least, and would no doubt pay well to be let out on hire.—*T. B. Ryder, Liverpool, March* 28.

Notices to Correspondents.

BUTTER MARKET: *Dorset.* Thanks for your memorandum; which shall next week be attended to.

"GROWAN" SOILS: *Old Subscriber.* We imagine there is no efficient substitute for alumina, and that if your soil is very deficient in it and there is no source of it within reach, it will be impossible to raise it to first-class fertility. The shell sand and of your shores has been found of great value as an application to such soils as yours.

CHICORY FOR GRAZING. *P P P.* The soil should be prepared by thorough cleaning early in spring, and a good coat of rotten dung applied. Drill 4 lbs. of seed per acre in March in rows 9 inches apart. Single them out when 5 inches high to 6 inches apart. The crop will continue luxuriant under good management for six or eight years. After full growth is obtained cut it down before flowering and carry it to stock in the house. It may also be depastured with sheep, but the other is the more productive use of it.

MOVEABLE CATTLE SHEDS: *L W G.* Perhaps some correspondent acquainted with the late Mr. Turnor, of Ruthin, may be able to say if his plans for this purpose exist in any published or erected form.

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MEADOW AND PASTURE GRASS SEEDS.

GEORGE GIBBS AND CO., 26, Down Street, Piccadilly, W., beg to announce they are now sending out their Mixtures of GRASS SEEDS, as follows:—

For PERMANENT MEADOW and PASTURE, 30*s.* to 34*s.* p. acre
For improving OLD GRASS LAND, 1*s.* per lb.
For forming new or improving OLD LAWNS, 1*s.* 3*d.* per lb.

Directions for sowing and treatment accompany the seeds.

PRICED LISTS OF AGRICULTURAL SEEDS forwarded free on application.

GEORGE GIBBS AND CO., SEEDSMEN,
26, Down Street, Piccadilly, W.

CATTELL'S DWARF PURPLE-TOP BEET.—Seed of the above handsome and very excellent Beet may be had free by post of JOHN CATTELL, Westerham, Kent, at 1*s.* per oz. In reply to the many communications J. C. has received respecting the report on the trial of his Beet in the Gardens at Chiswick, he begs to say some other kind has been grown there for his, and reported on accordingly.

J. C.'s Beet has been grown by him for nearly 40 years, and no pains has been spared to keep it select and true. The following is its character:—Leaves about 9 inches long, broad, reflexed, fine dark purple; roots 9 inches in circumference; flesh dark blood red, without the white centre possessed by many other sorts; remarkably sweet, tender, and well flavoured.

AGRICULTURAL SEEDS.—The Editor of the *Gardeners' Chronicle and Agricultural Gazette*, in a leading article, March 31, having so forcibly pointed out to agriculturists the necessity of applying to respectable houses for their Farm Seeds, more particularly for the Grasses required for laying down land to permanent pasture, has induced me to take this opportunity of informing the public that my PRICED CATALOGUE OF AGRICULTURAL SEEDS is now ready, and may be had on application. It contains the most valuable Grasses, and each kind may be had separately, clean, true, and new, so that the purchaser may mix them himself in the proportions required, and thus avoid the rubbishy, weedy mixtures spoken of by Professor Lindley.

CLOVERS of sorts, of finest quality; TURNIPS, WURZEL, BEETS, CARROTS, CATTLE CABBAGE, &c., saved from finest selected sorts.

Carriage of all packages paid to the Edenbridge Station, Croydon, and London.

JOHN CATTELL, Seed Establishment, Westerham, Kent.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, His Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and —Collier, Esq., of Dartford.

PROTECTION FROM THE MORNING AND EVENING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide, 1*s.* 6*d.* per yard run.
Four, 3*s.* per yard; also,
An improved make three yards wide, 2*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, whole and sole manufacturer, 7 Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

PATENT PREPARED GARDEN AND OTHER NETTING, to be had in any quantity at the Spital Tongues Factory, Newcastle-upon-Tyne.

TANNED NETTING at reduced prices, 200 square yards 10*s.*; 500 yards, 24*s.* Scrim Canvas for Wall Fruit, Greenhouse Shades, and Tulip Covers. Address to Mr. FREDERICK EDGINGTON, Marquee, Flag, and Banner Manufacturer, Thomas Street, Old Kent Road, London, S.E.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

An allowance to Nurserymen.

BRITTAIN'S GARDEN NETS are admitted to be the best and cheapest protection to Fruit Trees, and the most durable Hothouse Shading for summer. 55 inches wide. No. 1, 5*d.*; 2, 6*d.*; 3, 8*d.* a yard. TIFFANY, 2½*d.* and 3*d.*

Sold by all Nurserymen.—BRITTAIN & Co., Manchester.

RICK CLOTHS, New, with Poles, Pulleys, and Lines complete.

RICK CLOTHS, a large quantity of Second-hand, in good condition.

MARQUEES AND TENTS of all dimensions.

TENTS, SECOND HAND, from the Crimea.

FLAGS AND BANNERS OF ALL NATIONS.

NETTING (BRITTAIN'S), New and Second-hand, for preserving Fruit from Birds, Frost, &c.

Address—BENJAMIN EDGINGTON, 2, Duke Street, Southwark, London Bridge, S.E.

West End Establishment, Charing Cross, S.W.

SHAW'S TIFFANY for protecting the bloom of Fruit Trees from spring frosts and for every description of shading. Sold by all respectable Nurserymen and Seedsmen. Circulars, with samples, sent free by post.—JOHN SHAW & Co., Manufacturers and Dealers, Princess Street, Manchester.

GARDEN BORDER EDGING TILES.

ROSHER AND CO beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass edging in that they afford no harbour for slugs, &c., take less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises, Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.

N.B. Outline sketches of the patterns will be forwarded by post on application.

ORNAMENTAL PAVING TILES FOR CONSERVATORIES, HALLS, CORRIDORS, BALCONIES, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs. Also WHITE TILES, highly glazed, for Lining Walls of Bathing Rooms, Dairies, Kitchen-ranges, Larders, &c. To be obtained of Rosher & Co. at their premises as above.

BEDDING PANSIES FOR THE SPRING MONTHS,

FOR DECORATIVE EFFECT.

In strong Plants for immediate display in April and May of the richest self white, yellow and parti-coloured ground tints, or separate if required, in choice named sorts at 6*s.* to 9*s.* per dozen; and new varieties 12*s.* to 18*s.* per dozen; or in hundreds or thousands for large masses.

MESSRS. E. G. HENDERSON & SON

ALSO OFFER THE FOLLOWING

NEW AND ORNAMENTAL BEDDING PLANTS, &c.

GAZANIA SPLENDENS.
Brilliant orange yellow with dark centre.

BEATON'S GOOD GRACIOUS POLYANTHUS.
Effective rich golden yellow bedding plant, profuse bloom, 1*s.* 6*d.* each.

CALCEOLARIAS.
Shrubby and bedding varieties, in distinct colours for masses, 6*s.*, 9*s.*, and 12*s.* per dozen; and in superior varieties for pot culture, 9*s.*, 12*s.*, and 18*s.* per dozen.

TRITOMA UVARIA GRANDIFLORA.
The finest flower truss of all the tribe, 3*s.* 6*d.* each.

TRITOMA UVARIA GLAUCESCENS.
The true Kew variety, 1*s.* 6*d.* and 2*s.* 6*d.* each.

No one should buy T. Uvaria alone, in consequence of many inferior seedling varieties, to ensure the above fine coloured kinds.

GREEN-CENTRED HELIANTHUS or SUNFLOWER,
2*s.* 6*d.* per packet.

For testimonials of this fine New American Annual, said to equal the Dahlia for effect, see the *Gardeners' Chronicle*, April 7, page 308.

YUCCA PARMENTIERI.
This fine species offered in one-year English grown plants, 2*s.* 6*d.* each.

PERILLA NANKINENSIS.
One of the most beautiful and effective of Flower Garden plants, its richly unique dense chocolate-black foliage forming a wonderfully vivid and most original contrast to every other green or light-tinted flower. *Nothing else like it in colour, form, or effect.* Seed packets 6*d.* and 1*s.* each.

SPERGULA PILIFERA.
Substitute for Grass on Lawns, verges, or flat terraces, &c. Seed packets, 6*d.*, 1*s.*, 2*s.* 6*d.*, and 5*s.* each. Clumps for immediate planting, 8*s.* and 16*s.* per 100.

THE DORCHESTER BLACKBERRY,
3*s.* 6*d.* each, and

THE LAWTON BLACKBERRY,
2*s.* 6*d.* each, are proved to be the two best American varieties.

HENDERSON'S A 1 RIDGE CUCUMBER.
Packets of Seed, 1*s.* and 2*s.* 6*d.* each.

This first class variety is distinguished by its hardiness of constitution, robust growth, freedom from usual disease, most abundant and long continued bearing, excellent flavour, and lastly the requisite and uniform length which marks it as a true ridging kind, from 10 to 15 inches.

CLIANTHUS DAMPIERI.
A very beautiful specimen of this gorgeous flowered greenhouse shrub is now in bloom at the Wellington Nursery, having 100 blossoms upon it, and 500 or more to expand in succession. Those who have not yet seen it in luxuriant growth will be highly gratified by its brilliant display of flower.

Wellington Nursery, St. John's Wood, London, N.W.

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CUSTARD MARROW, the Sudbury Improved, as figured last year, packets, 6*d.* and 1*s.* each. Price to the trade on application.

MAMMOTH GOURD, the largest sort, 1*s.* per packet.

FURRELL'S PROLIFIC CUCUMBER, a fine long hardy sort for frame or open ground, 1*s.* per packet; also 20 other choice frame varieties. See CATALOGUE.

Stephen Brown, Seed Establishment, Sudbury, Suffolk.

AYTON CASTLE GIANT LEEK.

CHARLES ALEXANDER, 30, West Register Street, Edinburgh, can supply limited quantity of this unrivalled Scotch LEEK at 5*s.* per oz. and 1*s.* per packet in exchange for postage stamps.

"These Leeks were blanched upwards of 12 inches, and one of them measured 7 inches in circumference. The four together weighed 7¼ lbs."—*Gardeners' Chronicle, December* 17, 1859.

HENRY'S HYBRID SCOTCH LEEK.

CHARLES ALEXANDER, 30, West Register Street, Edinburgh, offers Seeds of the above Prize LEEK saved by Mr. Henry, and direct from himself, at 6*s.* per oz., 2*s.* 6*d.*, and 1*s.* per packet, in exchange for postage stamps.

C. A. has not "secured the entire stock" of this Leek, but the following document speaks for itself:—

[Copy.]

"Broom House, by Dunse, Feb. 8, 1860.

"I have this season supplied Mr. Chas. Alexander of Edinburgh with part of the Seed of my Hybrid Scotch Leek.

(Signed) "Will. Henry."

"I have obtained a variety of good quality, capable of being grown to the weight of 4 lbs. 15 oz. the single Leek repeatedly, blanched to the length of 20 inches, and in one instance measuring in circumference 12½ inches."—Wm. Henry, in *Scottish Gardener, Feb.*, 1860.

ROYAL SOUTH HANTS SEED ESTABLISHMENT.

Under the patronage of H. R. H. the Prince Consort, the Horticultural and Agricultural Society of India, the principal Nobility, Gentry, and Agriculturists of the United Kingdom.

PAGE and TOOGOOD will forward their PRICES CURRENT upon application. It should be referred to by purchasers of Garden and Farm Seeds.

Collections of VEGETABLE SEEDS, 55*s.*, 35*s.*, 20*s.*, 10*s.* The Quantities in the above selections will be found more liberal, and the prices 10 per cent. less than any house in the Kingdom.—Seed Establishment, Southampton.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY

BEING ABOUT TO RESUME THE

IMPORTATION OF SEEDS AND PLANTS

by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. A knowledge of Spanish or Portuguese would be desirable. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, APRIL 14, 1860.

MEETINGS FOR THE ENSUING WEEK.

Tuesday, April 17—{ Horticultural (election of Fellows) / Soc. of Arts, John St., Adelphi } 1 P.M.

Thursday, — 19—Linnean ..... 8 P.M.

THE time has now arrived when certainty may be obtained as regards the effects upon garden plants of the disastrous FROSTS OF LAST AUTUMN. It will be remembered that after a summer of unusual heat and drought, the ground temperature in September having risen to 63°, and in much of October still remaining at 62°, rain began to fall heavily by the beginning of September. In about 40 days, prior to the 21st of October when the frost occurred, not less than 5¼ inches of rain had fallen; the effect of all which was precisely that of a smart bottom-heat at the end of winter. Numerous plants were forced into unnatural growth. Some, more excitable than others, had formed shoots several inches long; others of a more torpid nature had filled themselves with sap, and were ready to grow. Spring flowering shrubs thought that spring had come. At this conjuncture, without any material gradual decrease of temperature, the thermometer suddenly, on the 21st of October, fell to 23°, on the 22d to 21°, and on the 23d to 17°. The ground actually lost 10° of its heat in five days! The watery juices of plants were congealed, and all succulent vegetation had the air of being boiled. In the gardens near London Broccoli, Coleworts, Brussels Sprouts, Cottager's Kail, and even Celery so utterly perished, that as soon as temperature once more rose nothing was seen except brown flabby dead leaves hanging lazily from rotting stems. The loss of market gardeners and of farmers with their root crops was enormous; and it was evident that the destruction of exotic plants must be also very great. To say to what extent this destruction has been carried the time, as we have already said, has come, and we solicit information upon the subject from our correspondents, for their mutual benefit. It is evident that all such exotics as have borne the shock of last October are to be regarded as absolutely hardy.

For ourselves we only propose to mention a small number of instances of death or escape from death which have come beneath our own notice, in cases where plants have been wholly

unprotected, and which appear to be most especially deserving of remark.

Among the plants that have been UTTERLY DESTROYED are great numbers of *Standard Rhododendrons*, the bark of whose stems has been split and thrown off; this is most especially the case with standards worked on *R. ponticum*; those on *Catawbiense* have suffered less. *Hardy Heaths* are gone in many places, with the exception of *Erica carnea*. So is *Dacrydium Franklinii*, the Huon Pine, from which so much was expected. *Laurus regalis*, the Californian Bay tree, is not in much better plight. *Eugenia apiculata*, which had lived many years under a north wall, and *Olea ilicifolia*, about whose hardiness scarcely any doubt was entertained, are both gone. And, what was most especially unexpected, *Farfugium grande* has to be added to the roll of deaths in some places. Among American and Indian Conifers *Cupressus Macnabiana* has died in warm places though unharmed in cold ones; *Cupressus Uhdeana* has suffered much in all directions, and has even perished outright, and must in future be regarded as incurably tender; and the state of *Pinus Llaveana* and *australis* is such as to hold out little hope of their recovery.

Among the species which are VERY MUCH INJURED, but not killed at present, one of the most striking cases is that of *Pinus excelsa*, the beautiful Himalayan Weymouth Pine, the ends of whose shoots are wholly destroyed. Another is that of *Peaches*, *Nectarines*, and *Apricots* in the nursery quarters; and of a standard Brussels Apricot, 20 feet high, and probably 30 years old, which will never recover; yet a Breda Apricot tree in the same garden seems to have taken no harm; both these stand on Grass. The hardy *Riccarton Fuchsia*, under a north wall, whose branches have generally survived, is dead to the ground. *Spiræa Lindleyana* has died back two-thirds; and so has an old tree of *Kölreuteria paniculata*.

INJURY, WITHOUT PROBABILITY OF DEATH, has been sustained by the rare *Thujopsis dolabrata*, which was making some young sprouts when the frost came; *Myrica californica*, the upper branches having gone, while the lower, protected by the upper branches, survive; *Fagus Cunninghamii*, the evergreen Tasmanian Beech tree; *Garrya elliptica*, which has lost the ends of most of its shoots; *Viburnum Tinus*, the common Laurustinus, which is in the same state except in sheltered places; *Jasminum nudiflorum*; *Cupressus funebris*, so far as the primordial prickly shoots are concerned; *Cupressus Knightii*, and *Pinus insignis*. Perhaps, too, *Pinus Montezumæ* and *tuberculata* must stand in the same rank, although their leaves alone are brown at present.

On the other hand the following have been found PROOF AGAINST FROST:—*Cupressus Lambertiana*, *Goveniana*, *torulosa*, *Lawsoniana*, and *Macnabiana* (the latter in cold places); *Thujopsis borealis*; *Libocedrus chilensis* and *Doniana*; *Thuja gigantea*; *Abies bracteata* and *Pinsapo*; *Torreya grandis* and *Myristica*; *Juniperus oblonga* and *mexicana*; *Larix Griffithii*; *Sequoia sempervirens*, although a little burnt in some places; all the species of *Cephalotaxus*, which are evidently as hardy as a common Yew. As for *Pinus Gerardiana*, *Lindleyana*, *Benthamiana*, *monticola*, *muricata*, *Fremontiana*, and *cembroides*, they are not even browned. *Pinus radiata* must be mentioned separately because of the singular beauty of its emerald green foliage, which no cold seems to harm. The new *Rhododendron Fortuni* has saved its beautiful foliage and is now pushing vigorously; *Viburnum hirsutum*, the hairy Laurustinus, maintains its ancient reputation for hardiness; the great *Japanese Bamboo* and the *Pampas Grass* are safe (but the little black Bamboo does not look well); as for *Skimmia japonica*, the *Japanese pinnated Berberries*, *Cotoneaster marginata*, *microphylla*, and their allies, *Berberis Darwinii*, and the *Chinese Box*, they all have the constitution of a Whitethorn. *Camellias* under north walls have proved more hardy than Laurels; but their flower buds are dead. Finally, the *Hovenia dulcis*, a tree 40 years old in the Chiswick Garden, has sustained no damage, although a species of southern China, and trained to a south wall.

It would be a vain attempt to endeavour to reconcile facts like these with any theory of climate. What we learn from them is that plants, like animals, have each their own peculiar constitutions; that some are capable of bearing what is fatal to others from the same country; and that although these peculiarities have probably been implanted in species by long exposure to certain conditions to which they have been able to adapt themselves, yet there still remains behind what animal physiologists term idiosyncrasy, which seems to be beyond the reach of explanation. This moreover is demonstrated, that although introduced plants may for a long series of years appear to be capable of bearing a new climate, yet there will arrive, at some time or another, a set of conditions which they cannot support, and which drive them out of their adopted home. And thus it is that the great features of vegetation remain the same essentially in every country, from age to age, notwithstanding the interference of mankind.

IN another column will be found the end of a long yarn which M. CARRIÈRE has been spinning about ORANGE TREES. This gentleman being one of the most celebrated gardeners in France, his opinions are important inasmuch as they may be taken to express the views of a very experienced and intelligent man upon a subject that puzzles many a gardener on this side the Channel. The Orange trees of Versailles have had a European reputation, and the French have the credit of being excellent managers of such plants. Nevertheless, it now turns out that the trees are dying in consequence of thoroughly bad gardening. So that incompetency is to be seen in other high places than those of England. Let that console us.

What will be found of most value in M. CARRIÈRE's article (which we have been obliged to curtail very much) is the account he gives of the manner in which he proposes that the moribund trees at Versailles should be treated; and this may be taken as a guide to the restoration of similar trees elsewhere, for which the season has now arrived. We are however inclined to think that the progress of cure would be much more rapid if the air of the damp Orangery in which the trees are to be placed after retubbing was kept for some time at a higher temperature than 50°. There is nothing like a smart bottom-heat in dealing with sickly Orange trees; and we suspect that the greater advantage of plunging the boxes in fermenting litter until young roots are formed would very soon be seen.

New Plants.

235. CORYDALIS SPECIOSA, *Maximovicz*.

This uncommonly handsome herbaceous plant, which is mentioned in another column, is very near the Altai *Corydalis stricta* of Stephan. Our copy of Maximovicz's Flora amurensis being in the hands of the binder, we are unable to say in what peculiarities the Russian Botanist discovers its specific distinction; it is however certain that it is very different from any plant in our gardens. The stems curve gracefully upwards to the height of a foot or so, and are of a dull but agreeable red. Sessile bipinnatifid delicate leaves clothe them, emerald green on the upper side, while a clear bloom is spread over the under side. The flowers, which grow in dense spikes at the end of the stems, are large golden yellow, stained with bright brown towards the point. Mr. Moore, of Glasnevin, to whom we are indebted for specimens,* speaks of it thus:—"I herewith send you specimens of the pretty Corydalis speciosa, which you noticed in the *Gardeners' Chronicle* of Dec. 1858. It makes a fine addition to our spring plants, and probably will be easily managed. At any rate it is perfectly hardy in this climate. The flowers I send you were cut from a plant which stood in the open border all the winter without protection, and the thermometer fell so low as 6° above zero. Wanting its usual covering of snow it may prove impatient of our changeable winters, as I have already found it. Out of four plants two have died which were kept in a cool frame, and one is sickly, which grew near that which has flowered so finely in the open border. The bright yellow flowers contrasted with the purple stems and glaucous foliage combine to make it a conspicuous plant. Is it more than biennial?"

GERMAN CHINA ASTERS.

IN no class of flowers with which I am acquainted has greater improvement been effected than in that of Asters, and as they have always been favourites with me perhaps a few words on their culture may not be unacceptable.

I do not sow too early; on the contrary, some say I sow too late; but I have never experienced any disappointment on that account. As a rule my seed is generally sown the last week in April; but it has sometimes been put in later than that. The young plants are pricked out about the middle of June, and are finally planted where they are to bloom about the end of that month. I sow in a cold frame under glass in drills. The plants come up in a few days, after which I give them as much air as the weather will permit, and as soon as they are about an inch high remove the lights for two or three days and then prick out on a slight hotbed 3 or 4 inches apart. Before the plants begin to run transplant to where they are to bloom Previous to planting the soil should be well broken up and made tolerably rich with well rotted manure, and the plants should be moved with as much ball as possible. Plant in rows a foot apart and 10 inches asunder in the row.

Concerning kinds, those I have hitherto grown I have had from M. Vilmorin, of Paris; but this year I have had some from Messrs. Carter, of Holborn, of which I entertain great expectations. Of these the following descriptions have appeared in their "Gardeners' Vade Mecum":—

Truffaut Pyramidal Aster.—This indicates the great care and perseverance the grower has taken in rearing it; there are now five varieties of it, viz., Fleur Perfection: the blossoms of this kind are unusually large; petals long and but slightly reflexed; height from 2 to 2½ feet. Fleur Bombée: the flowers of this variety are very large and full, and form almost half a ball; height from 2 to 2½ feet. Fleur Chrysanthème: the blooms of this are not so large as the preceding; the petals are entirely reflexed; height about 2 feet; produces more side flowers than the previously described varieties. Fleur Pivoine: the Pæony-flowered Asters turn their petals towards the centre, and a flower not quite in full bloom resembles a ball; height from 1½ to 2 feet; produces but few side flowers. Fleur Imbriquée and Pompone Imbriquée: the petals of these over-lie each other exactly like slates, one on the top of the other to the centre of the flower; the Pompone produces smaller blooms, but of such beauty that they resemble a perfect half ball, and being dwarf, look well planted in front of taller kinds.

Quilled Aster.—The individual petals of the ordinary blossom consist wholly of tubes or quills, and the exterior crosses only are blossom petals, which are slightly reflexed; it is from 1½ to 2 feet in height, branches freely, and throws out many large blossoms; its fittest use is for flower groups in parks or general ornamentation in the flower garden.

Turkish Aster.—This very much resembles the quilled, but it grows only to a height of 1 to 1½ feet, has many branches, and the flowers are smaller than the preceding.

Dwarf Aster.—The individual portions of the blossom-tube are partly tube-like and partly leaf-like; it reaches a height of from ½ to 1 foot, and is richly covered with moderate-sized flowers; they are principally used for edging.

Globe Aster.—The principal flowers of this Aster are very large, and so arched that they may be compared to a half ball; most are quilled; height from 2 to 2½ feet.

Pyramidal Aster.—The beautiful large flowers appear on this nearly all of one height; it produces very few side flowers; most probably it received its name because it resembles an inverted pyramid; some blossoms are quilled and others not; height from 2½ to 3 feet.

Bouquet Aster.—This deserves its name, for each individual plant is so richly covered with bloom that the green of the foliage is scarcely visible; almost every plant forms itself into a perfect bouquet; height from ¾ to 1¼ foot; highly ornamental in pots; blooms for a long time.

Giant Emperor Aster.—This variety has sprung from the Pyramidal, and for size and form is unsurpassed; the flower consists in the middle of little tubes, outwardly they are little leaves, and are so regularly formed as to leave nothing to be desired; it bears only a few flowers on a robust, strong stem, from which the side-sprouts grow in the form of a candelabrum; in favourable cases it produces five flowers, of which the chief blossom is 4 inches in diameter; in spite of its size, all its flowers are of an equal height.

If these prove more beautiful than the striped kinds and brilliantly coloured selfs I have been in the habit of growing, they must be fine indeed.

I may add that if the weather is dry after planting out I water until the young plants have fairly taken root. About the first week in August I top-dress with rotten dung from an old hotbed, and again give a good soaking of water if the soil is dry. When the plants come into bloom, if some of the latter are wanted in unusually good condition or for exhibition, they must be shaded and secured from wind waving. Some thin out the blooms and tie the plants to small stakes; but this attention I pay as a rule only to the outside row; the interior of the bed I leave to take care of itself. *M.*

MYCOLOGY.—No. XIV.

AGARICUS FASCICULARIS, *Huds.*—The subject of our present illustration is one of the most widely diffused species of the genus *Agaricus*. In consequence it attracted the notice of our earlier English botanists, and the plant described by Hudson has been universally received as identical with the species known under his name on the continent, as it certainly is with a species which is often found in extra-European collections from various parts of the globe. Like many other common species, however, it is not without its own difficulties, and it is very probable after all that *A. fascicularis*, Huds., is not always the same thing with what passes under that name amongst foreign mycologists.

The difficulty is this. The genus *Agaricus* is very cleverly divided by Fries into five tribes, distinguished by the colour of the reproductive bodies or spores. This

* At the same time we received some twigs in flower of the very pretty Leucopogon ericoides, which deserves to be better known than it is.

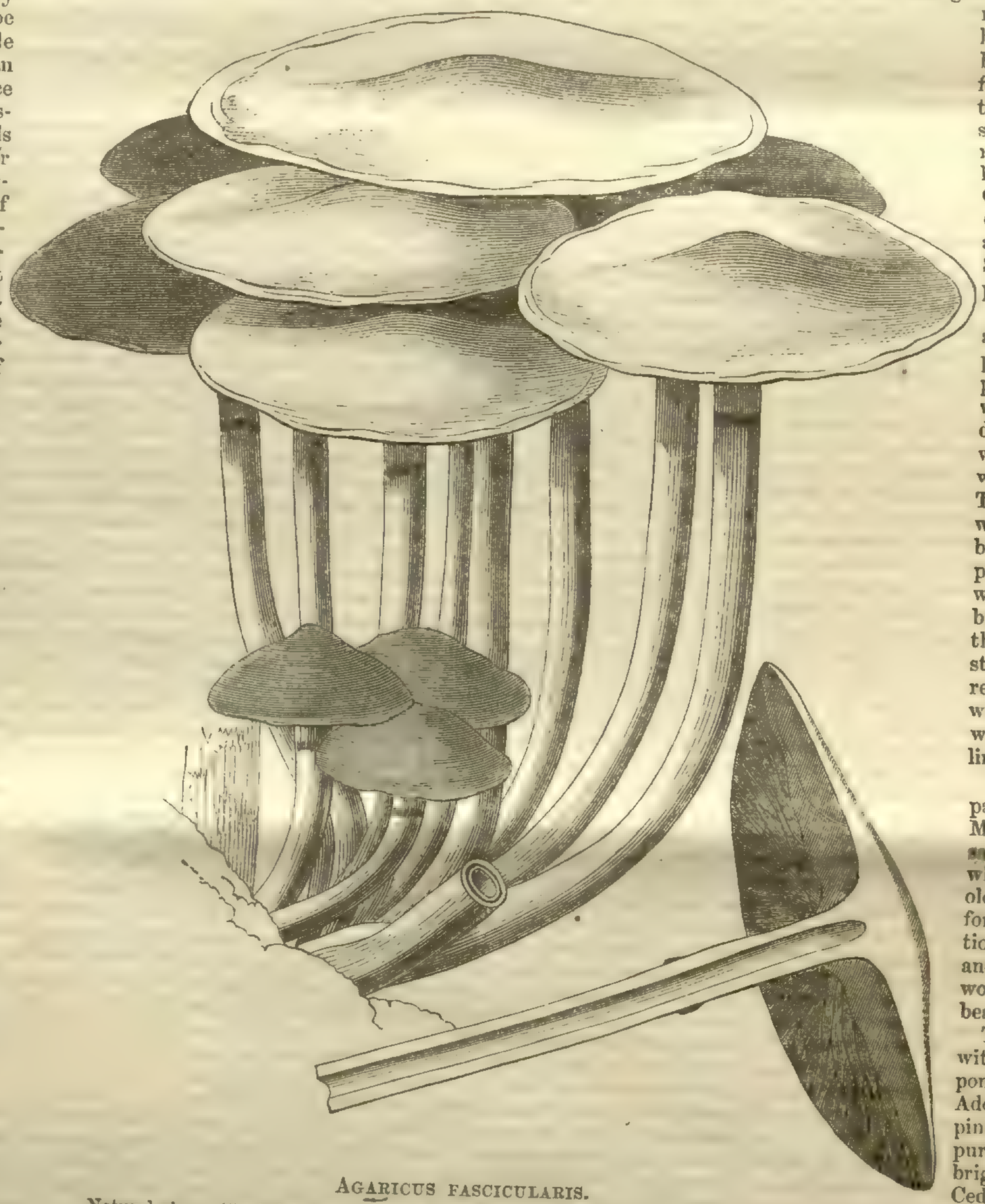
at first sight may seem a very trivial distinction, but it is found to combine with singular precision species which are evidently most closely related to each other. The divisions comprise—1. Those with white spores. 2. Pink or salmon-coloured. 3. Ferruginous, including pure brown, or brown tinted with red or yellow. 4. Dark purple. 5. Black. The exceptions to these divisions are far fewer and of less importance than might be supposed, and if in any individual species the white is slightly tinted with yellow or pink, the tint is so slight that it could scarcely be classified with Numbers 2 and 3, and the affinities are so certain that the case is immediately seen to belong to one of those in which the exception proves the rule.

Now *A. fascicularis* is comprehended by Fries in a section with dark purple spores, and if the common Agaric before us be gathered in perfection, the pileus is found dusted with a thick layer of snuff-coloured spores as mentioned by Greville, which by no latitude of interpretation could be referred to the series with dark purple spores. It however happens that an Agaric so similar in appearance that it cannot very readily be distinguished does occur in our woods in which the spores are of the proper dark purple tint, and though opportunities have not yet occurred of examining the matter fully our suspicions are excited that the *A. fascicularis* of Hudson is not the plant of Fries, but in all probability his *A. conissans*. This must however be left to future investigation, and if our view is correct it is the business of continental botanists to show that they have rightly interpreted Hudson's species.

In moist weather, nothing can be more common than the plant before us about old stumps, gate posts, or squared wood in damp places, as on the walls of wells, or even scattered over the ground without any very evident connection with subjacent wood.

It grows in dense masses, and varies somewhat in colour, though always exhibiting a strong admixture of yellow shaded more or less with brick red. The pileus has often slight traces of the spider-web veil attached to the surface, and unless it remains tolerably perfect upon the stem the edge is fringed with little fragments. The flesh, which is very thin towards the margin though tolerably thick in the umbonate centre, is slightly tinged with yellow, and has a disagreeable extremely bitter taste; the stem is yellow and slightly fibrillose, and the gills are adnate, crowded, and at length more or less tinged with green, though at first yellow, and inclined to become deliquescent.

The flavour is so bad that no one would ever think of dressing this very common species, and our only object in introducing it to notice is the enabling persons interested in such matters to give a specific name to a very pretty and familiar inhabitant of our gardens and plantations. *M. J. B.*



Agaricus fascicularis.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

CULTURE OF THE POMPONE CHRYSANTHEMUM.

I have been induced to pen the following from the perusal of various treatises by different practical growers on the culture of that beautiful autumn flower the Pompone Chrysanthemum. In these short works I have noticed remarkable omissions of most particularly important points; and it is to supply these omissions that I have jotted down a few plain directions for the benefit of your readers. The course of treatment herein recommended is one which I have pursued with the success alluded to in the *Gardeners' Chronicle* for 1858 and 1859, in the "Midland Florist," and in many other papers not devoted exclusively to horticultural subjects. Six first prizes in two years sufficiently attest the merits of my plan of cultivation, and render needless anything that I can say in its praise. I have omitted no point whatsoever, have kept nothing secret, but have disclosed the whole truth and nothing but the truth. Great as is the perfection to which the Pompone has been brought by skilful nurture, yet we may hope for even larger results from greater experience, not so much in the size of the plant as in the quality of the flower. As regards the former particular we desire nothing better than what we have obtained, seeing that we have grown plants in 8-inch pots, and on a single stem, more than 4½ feet across, and bearing from 1000 to 1200 flowers. But if we direct our attention too exclusively to size of plant we are apt to lose sight of quality in the bloom. By quality we mean not only the size but also the colour, which we esteem far more than extraordinary largeness in the plant.

I shall commence my remarks with the treatment of the plant in its earliest stage, putting them, for brevity and clearness sake, in the form of a monthly register.

December. — Select the strongest cuttings from healthy plants, whose variety is true; extract all leaves and eyes to the height of about 3 inches. Put each cutting in a 3-inch pot, in compost, which should consist of rich loam and silver sand. Then plunge the pot in a cold frame filled with ashes, taking care to exclude frost and chilling winds. Water sparingly.

January.—The plants will just be starting. Keep them in the same state, gradually hardening them by admitting more air.

February.—Repot into 48's. Add to the compost old cowdung and broken oyster-shells. Place the plants in the same frame; give them at every suitable opportunity abundance of air, keeping them moderately damp.

March.—Continue the same course. Toward the end of the month the ealier plants will be far enough advanced for their first stop.

April.—The plants are now growing rapidly, and require shifting into 32-sized pots. Give them plenty of drainage, and use as rich a compost as you can. I employ one composed of rich fibrous loam, cow and pigeon dung, silver sand, and a little soot. Water continually with weak liquid manure, and keep them exposed as much as possible. Success much depends upon the care taken in April to render the plants thoroughly inured to any change. Your plants have now made good growth. Remove the bottom leaves and eyes to the height of 3 inches; take out the crown eye, and allow the plant to make from 7 to 10 breaks.

May.—Repot with the same compost into 24's. The shoots are now at least 4 inches long. Carefully peg them out with thin painted wire. Should the plants have made more than 10 breaks remove the weaker. Plunge the pots half way in open ground, having a southern aspect. Give the plants their second stop.

June.—Leave the plants as they are till the latter end of the month, when they will be sufficiently advanced to be stopped again, and shifted into 16's. The same compost as before, with an additional quantity of oyster shells. Bury the pots three parts up in the same ground, giving the full heat of the sun. Strictly attend to pegging down.

July.—Be most careful to keep them pegged, but not too near the ground, lest they should root. Train the shoots, so as to preserve a perfect circle, and fill up all vacancies. In this month, the plants are very liable to break; care must be taken in this respect.

August.—Take a favourable opportunity for removing all the pegs, carefully lifting the plant, cleaning off all dead leaves, and searching thoroughly for mildew. Should this have made its appearance, give the plant a good dusting with flowers of sulphur; and, before replacing it, stop the bottom of the hole in the ground from which the pot has been removed, with slate or tile, to prevent the plants rooting through. The best way to hinder the lateral shoots from rooting is to support them with pieces of tiles or wood, placed round the rim of the pot.

September.—Since this is the month of fastest growth, attend in the early part most sedulously to pegging and training the shoots into the final form. Keep the shoots down as close as possible. Give plenty of liquid manure, and syringe three times a day—morning, noon, and night; occasionally washing them with a little tobacco water, which will at this season keep away the green-fly and mildew.

October.—When the buds have made their appearance, the plants should be taken up, their pots cleaned, all the dirt and grit syringed off the leaves, and sticks, radiating from the centre, fixed horizontally, and connected together by one or two circles of twine or fine wire. Tie the outside shoots to these, as the plants cannot possibly support their own branches; and remove them into a thoroughly clean house, in which they are to bloom. Give plenty of air, and syringe not only the Pompones, but the stage also, in order to diffuse moisture. Shut up early, with a little sun if possible.

November.—The work is done; and, if these rules have been properly attended to, instead of 100 poor plants, scraggy and scarcely worth looking at, we have seen a dozen which will fill a large stage, with thousands of fine flowers, and whose foliage is truly beautiful. They will last nearly to Christmas, when scarcely any other flower is to be seen. We like to form our own plants when intended for exhibition, we like to arrange our flowers in the best possible manner; and therefore think it beneficial to introduce a few sticks and ties, as the plants may require, adding anything to them which will conduce in any way whatsoever to neatness and cleanliness.

I cannot better conclude this short paper than by mentioning a few of Mr. Salter's new varieties of Chrysanthemums, which, I feel assured, when grown in connection with the old well-established favourites, will form an extremely beautiful collection. I paid his nursery a visit, and was rewarded by a sight which would delight every lover of these beautiful flowers.

The following are the best kinds with which I am acquainted:—Pompones: Miss Talfourd, pure white; Adonis, rich pink; Mrs. Dix, light pink; Bob, dark brown; Ceres, purplish pink; General Canrobert, bright yellow; Helène, rosy violet; Cedo Nulli, pure white (Anemone-centred); La Vogue, yellow, tipped brown; Andromeda, cream yellow, tipped brown; Modèle, good white; St. Thais, chesnut; Salaman, carmine; Madame Rossalon, rosy lilac; Duruflet, rosy carmine; Dr. Bois Duval, dark red; Maid of Saragossa, rosy lilac; Baron d'Adsward, lilac and white; Bernard de Rennes, yellow and buff.

More common varieties, worth growing: Adèle Presset, Alexander Peel, Argentine, Aureole, autumnum, Beryl, Brilliant, Bijou de l'Horticulture, Columbine, Crœsus, Drin-drin, Fenella, Fleurette, Justin Tissier, Madame Alibert, Madame Fould, Madame Miellez, Riquiqui, Aurore Boreale (Anemone-centred Pompone, in which there is great beauty), Golden Cedo Nulli, Astrea, Mr. Shirley Herbert, Mr. Astie, M. Achille Dutour, La Sapagon, Atropos, Eugene Langanlet, Golden Drop, Mr. Gush, Reine des Anemones.

Large varieties, the best, both for colour, size, and abundance of bloom, with good habits, for pot culture: Annie Salter, yellow; Cloth of Gold, golden yellow; Christine, rosy pink; Valérie, brown and orange; Vesta, pure white; Aurora, yellow; Cassandra, white, tipped rose; Madame Closs, rosy lilac; Pilot, deep rose; Mount Vesuvius, large fiery red; sulphureum superbum, sulphur; Leon Lequay, lilac; Progne, crimson carmine; Madame Domage, pure white; Bossuet, carmine; Princess Marie, rosy pink; Julie Lagravie, dark crimson; Auguste Mie, red, tipped with gold; Hermione, light rosy pink; Golden Lotus, bright yellow; Prince Albert, orange crimson. Miss Augusta (Holland) is a great advance on all preceding varieties in its way.

All the above I have myself thoroughly inspected and selected, and can recommend to any person desirous of growing this popular flower. Let them only treat them after the manner just described, and I hesitate not to say that they will be highly gratified with the result. *J. Wiggins, gardener to Mr. Beck, in Turner & Spencer's Florist for February.*

THE DYING ORANGE TREES AT VERSAILLES.

(A Dialogue.)

[Freely translated from a paper by Carrière in the "Flore des Serres." *Concluded from p.* 314.]

When I met my friend a few days afterwards, I reminded him of his promise, and he at once began.

"I have come to the conclusion that the causes which have led to the death of so many of the Orange trees may be reduced to six heads:—

"1. The soil was too stiff.

"2. The boxes were not renewed soon enough.

"3. The plants were watered too often, and at times too much, or too little.

"4. The drainage was insufficient.

"5. The trees were buried too deep in the soil.

"6. They were pruned too severely and without skill."

— "But, my good friend," I replied, "all this, though very instructive, is not satisfactory. You have been talking about nothing except the mischief, but you promised to tell me how to remedy it. What I want to know is how to meet the evil which you have so well described."

—"In addition to the causes already pointed out, all of which are important, there are more, which though different are not less serious, and this obliges me to say a few words about vegetable physiology, of which, I dare say, you know very little. However, don't be alarmed; I shall be as concise as possible, and only tell you as much as is strictly necessary.

"You know that in general the two parts of a plant (the part above ground and the part beneath) ought to be in the most perfect relation to each other, and one cannot suffer without the other being affected. The part above ground, being that which evaporates, ought to be sufficiently strong to excite the part beneath, which is the absorbing portion. Absorption and evaporation are the principal actions, the basis, if we may call it so, upon which organic life rests. Now, it is obvious that with most of these Orange trees that relation does not exist. Do you imagine it to be in accordance with the laws of nature that plants in confinement (cultivated in boxes), and that for more than a century, can submit to such mutilation as men called pruning and pinching? to say nothing of the manner in which the roots are cramped. I do not think so! Moreover, these Orange trees are constantly under the hands of the doctor. One operation is scarcely over before another is begun. For this there are two reasons—firstly, to make the trees assume the stiff, formal shape which it is the custom to give them; the 2d, in order that the pieces cut off may be added to certain heads of receipt (*budgets*) without considering whether the one is not increased at the cost of the other.

"As to the form generally given to Orange trees, just consider the consequences. The absurdity of the form is admitted; one might imagine, indeed, that the Orange trees were cropped in imitation of the little trees met with in a toy-shop. Gardeners sometimes go so far as to snip off the end of a leaf, so as to give the plant what they called a regular head. Not a twig may project beyond its neighbour; in short the Orange trees look as if they had been cast in a mould. . . . . Poor Nature, how ill-treated you are! There is not an old Orange tree in the Palace whose branches forming the head, though large at starting, do not suddenly run into a crowd of twigs, the ends of which alone bear a very few leaves, upon which therefore falls the whole work of life by exciting vitality throughout the tissues. How do you imagine that the sap which circulates in living skeletons like these can possibly keep alive the action of the roots? The thin covering of leaves which conceals the miserable framework of the Orange trees puts me in mind of a dying man dressed up in fine clothes to conceal his condition."—"So then," I observed, "you would not assist Nature, but leave the trees to themselves. Do you think they would be as graceful as they now are? and, besides, how could so many be stowed away as are now received in the lodgings prepared for them?"—"Stop! stop! I do not agree with any one of your opinions. In the first place, is Nature assisted by continually mutilating her? Certainly not; to destroy is not to assist, and the system now practised is nothing short of destruction. As to graceful form, where is that to be found in the absurd heads with which our trees are provided? Certainly the places in which Orange trees are kept during winter will not hold so many unless the trees are cropped; and so much the better. Who would not rather have 10 beautiful trees than 15 or 20 ugly ones? Were I sovereign I would take pity on both the trees and the credit of the managers, and send each to the right about."—"The deuce! Such a cure might be infallible, but do not you think it rather radical?"—"Perhaps so; it is an extreme measure, I allow; but the only way of curing an evil is by going to the opposite extreme."—"But," I replied, "without going quite so far, is there no middle course?"—"Certainly," he said, "and I shall come to it, at least as concerns pruning the trees. Pruning should never be practised except to maintain the equilibrium I have already mentioned, and to regulate the form of a tree; that is to say, those ends only of the branches should be removed which interfere with each other, sufficient space being left for air to circulate freely, so that young wood may be formed, well covered with leaves, which not only greatly contribute to the support of the trees, but add much to their beauty. To this objection will doubtless be taken by those whose interests are affected, for the Orange leaves are sold every year, so that the more there are the more money is obtained. Moreover, the flowers being sold as well, everything is sacrificed to securing as many as possible. This is done by keeping the trees without water, that is to say, they give them only enough to prevent their casting their leaves. In this way the soil becomes dry, the roots lose their strength, and the spongioles, the all-important absorbing points, mostly die. At a later period they give water abundantly; a reaction takes place; roots are again excited; other spongioles form; and in consequence of this extra growth new flowers and new leaves soon make their appearance. Tricks like these, if often repeated, soon destroy a tree.

"Another and a very serious evil lies in indiscriminate watering; the gardener or his foreman orders each tree to receive a certain quantity of water—1, 2, 3, or 4 pails full, according to the size of the boxes. The order is strictly attended to, the sick and the healthy are all treated alike. Then they are all kept in a box of the same size. Such trees resemble patients in the wards of an hospital. The doctor one day bleeds all on one side of the ward, and purges all on the opposite side. In this way some are cured and some are killed—so much the worse for the last.

"There is still another cause of the Versailles Orange trees having died; but of quite another kind: it comes entirely of ill-judged economy. To avoid the expense of new boxes they were never renewed in proper time. The plants lost their roots, and when they were shifted it was necessary to cut them hard in, which only increased the mischief. Now to save time and trouble I should begin by throwing away not only all the Orange trees that are dead, but such as are irrecoverably ill; I should then untub the remainder, beginning with the worst, carefully removing all the worn-out earth and cutting to the quick every root that is decayed or very far gone. If I found that what I had done was too severe, I should then take off as many leaves as will restore the balance between the top part and the roots. The soil for retubbing should consist of a third part of rather sandy peat, the remainder should be leaf-mould and well rotted manure mixed with the top spit of some light pasture land. This mixture should not be too damp, so as to form a close mass like dough, and yet moist enough for the particles to adhere. This done I should use for drainage a good layer of lime rubbish, which for large boxes should be at least 14 inches deep; this should be covered with earth pressed down firmly so as to run no risk of its settling. On that should stand the ball of the Orange tree prepared as already mentioned, taking care to keep it if anything too high in the soil than to let it be buried too deep. The boxes should be filled in immediately, lightly pressing down the earth, but firmly enough to keep the tree upright. In the next place the ball should be watered just enough to make the earth slightly damp, so that it may stick to the roots. Great care should also be taken to syringe the leaves frequently so as to keep up their action, and hinder, or at least diminish their evaporation. Even when the trees have cast their leaves, syringing should be continued so as to prevent the bark from shrivelling and assist its action, which in young shoots is almost equal to that of the leaves. Finally the trees should be immediately placed in a conservatory, of which the temperature should be kept at 50°, and the air rather damp than dry. It would also be as well to give them a good watering now and then, with water that has just had the chill taken off, an indispensable precaution for Orange trees."

— With this our conversation ended. I promised not to mention what he had told me, intending however all the time to do as I liked, and so I have, for which the reader will not judge me too harshly when he considers how necessary it was to throw a little light upon this Orange-tree question.

Home Correspondence.

Grafting Wax.—No means that "G. S." can employ will make sealing wax amalgamate with fat. I think that stearine would be a good substitute for sealing-wax. This article is not easily procurable in the country, but if "G. S." is disposed to try the experiment, and will let me know his address, I will send him enough for such a purpose. *Thos. Hancock, Stoke Newington.*——"G. S." would find his difficulty removed by dissolving the sealing-wax in just sufficient spirits of wine to keep it from hardening when cool. *Anon.*

Clay Foundation for Walks.—If "H. J. T., Warwick," will apply a good coating of coal-tar to his clay before he puts on the gravel he will find it answer his purpose. My paths were so treated, and are now doing well though done many years ago. *Thos. Hancock, Stoke Newington.*

Hollies.—Your pages have more than once attempted to divest your readers of the idea so finely poetical and so entirely unsupported by fact, that the lower branches of the Holly put forth leaves edged with strong sharp spines, while the leaves of the upper branches are entire and simply mucronate. But I want to plant a few Hollies to grow into large timber trees, that is to say, as large as Hollies will grow without check or lopping, and I shall be much beholden to the observation of any of your correspondents who will advise me whether, for rapid growth, and for the attainment of bulk in future years, I should select plants which exhibit in the nursery lines spinous-waved leaves, or whether the entire-leaved variety will prosper best. Are the largest Holly trees (I do not ask about Holly bushes) that are at present standing, entire-leaved or otherwise? *Diss.*

Early Vineries and Early Pot Vines.—The reading in your Paper of April 7 the remarks of "J. M." on the failure of early Vineries (which I have no doubt is very general this season, some having come under my own notice in this county), has induced me to urge upon all who have convenience the importance of providing a batch of fruiting Vines in pots. By this mode of growing the Vine the roots are at all times under control. The plants look interesting, and under good management are very productive, and in my opinion are better adapted for very early forcing than established Vines, except in cases where the roots are under perfect command. I have grown Vines in pots for several years with perfect success. My young ones I keep in the front of the Vineries, wherever convenient, potting them as they require it until August, when they receive their final shift into 14-inch pots. Every encouragement should be given to get the canes thoroughly ripened. I have now 12 Vines with on an average 9 bunches each in a very forward stage of growth, thus affording a very nice crop of early Grapes for a private family. The sorts I find most suitable for pot culture are Black Hamburgh, Sweet Water, and Royal Muscadine. *W. R., Notts.*——I fear that the Vines alluded to by "J. M." have suffered from frost, and if so nothing can be done except cutting them down close to the earth. If there is a chance of their breaking they will throw up shoots at once. Examine the canes from the ground upwards, and I fear dead wood will be found, and dry too, in many places; if so, start with a determination to repair damages in good earnest. I should be glad to learn the age of the Vines, and if planted inside or otherwise the heating, &c. This has been a bad winter. *John Jennings, Knowsley.*

Jerusalem Artichokes.—In my notice respecting the cooking of this vegetable, your printer made me say "boiling" instead of "peeling." They are merely peeled, and then put into the oven. However, I took advantage of the error, and find it an improvement to peel first and then boil and roast them, or brown them afterwards, only it gives more trouble to the cook. *James Cuthill, Camberwell.*

Orchid Houses.—Your correspondent "Gleanings" has misunderstood the woodcut representations of my Orchid houses. The sides are glass and therefore not dark as he imagines, and in practice the houses will be found to afford every facility for hanging plants on blocks near the glass. As regards labels I may add that the most durable and cheapest I have used are made of zinc, painted white, with the name written with a lead pencil before the paint is quite dry. As to the expense of roof in my Orchid houses, I may remark that it is poor economy to spare a few pounds in houses intended for the growth of valuable plants. *Robert Warner, Broomfield, Essex.*

Societies.

Horticultural: *April* 10.—*Fruit Committee.*—Two beautiful dishes of Strawberries were shown at this meeting by Mr. Smith, of Twickenham. One was Sir Charles Napier, a bright red kind, whose only fault is that it is somewhat too acid, and the other Keens' Seedling. Both were excellent examples of skilful Strawberry growing. The large Chinese Yam mentioned in our columns last week was also laid on the table for inspection.

April 12: *Floral Committee.*—On this occasion several interesting plants were produced. A new Thibaudia with bunches of drooping, pale, transparent flowers set in a brownish red calyx, and prettily marked with short brown horizontal lines in the way of T. macrantha, was shown by Messrs. Veitch. From the same firm also came Rhododendron Prince Camille de Rohan, a white kind prettily marked with rich salmon-coloured spots; and several very beautiful imported varieties of Lycaste Skinneri. These were remarkable for the brightness and striking contrast of colours which they presented, points in which they wholly differed from varieties hitherto in cultivation. To one of the handsomest of them a First-class Certificate was awarded. Associated with these was also a cut spike of the handsome Vanda gigantea, beautifully ornamented with large yellow flowers spotted with brown. To this a prize was also awarded. Flower of Spring Geranium was furnished by Mr. Turner, and was awarded a First-class Certificate. Its foliage is finely variegated like that of Flower of the Day, and its blossoms vivid orange scarlet, large and showy. A white Azalea of little merit came from M. Baumann, of Ghent. Of Cinerarias, collections came from Messrs. Smith and Turner; Magenta, a showy purple self from the latter, was commended by the judges, and in the same collection was also an equally fine rich velvety crimson kind, called Duke of Cambridge. Mr. Standish furnished Solanum laciniatum, an old plant figured very many years ago in the Botanical Magazine; but since lost to gardens, or so seldom seen as to be forgotten. It has purplish-lilac flowers, about as large as those of a

Petunia, which are said to be succeeded by yellowish green berries, and is altogether a plant of sufficient beauty to render it not only useful for pot-culture but an acquisition to our flower borders in summer. It is not hardy enough to stand out-of-doors in winter. The same exhibitor also sent a very pretty red striped Azalea called Constancy, which was stated to be a good kind for forcing, and the rare New Zealand Fern Todea pellucida. A new Clerodendron, bearing a large head of orange red flowers, was exhibited by Mr. Veitch.

Linnean: *April* 5.—The President in the chair. A. B. Squire, Esq., and L. Barrett, Esq., were elected Fellows. The following papers were read:—1. "On the discovery of Alpheus Edwardsii on the coast of Cornwall;" by Jonathan Couch, Esq.—2. "Notes on Ants;" communicated by Mr. Paterson, of Belfast, through the President.—3. "Notes on Ternstrœmiaceæ;" by G. Bentham, Esq. This paper consisted of critical notes on the natural order Ternstrœmiaceæ, and embodied the considerations which suggested themselves to the author while making a complete revision of the order for the new Genera Plantarum he is preparing in conjunction with Dr. Hooker. Respecting Camellia, Mr. Bentham observed:—"The genus Camellia has been lately monographised by Seemann. He admits that the separation of Thea, as limited by the older authors, is untenable, Griffith and others having already proposed its re-union with Camellia; but by transferring to it three or four species hitherto reckoned as Camellias, Seemann has obtained more precise limits for Thea, which he maintains as a genus. To me it appears that the whole group forms a much more natural and better characterised genus, having the flowers of Gordonia, with a well marked capsule and seed, and that Seemann's genus Thea is better classed as a distinct, though somewhat artificial section of it." Mr. Bentham proposed to unite the Marcgraviaceæ of Jussieu with the Ternstrœmiaceæ; they seem, he observed, to be so closely connected with the tribe of Ternstrœmieæ proper, as to be necessarily included in the same family. In noticing at the close of the paper some species of Dilleniaceæ, collected by Mr. Spruce, the author observed that he did not intend to adopt the genus recently proposed by Triana, under the name of Ricourtea, for certain species of Doliocarpus, in which the fruits are less succulent than is usual in that genus, and open in two valves when quite ripe. "Important as is in most cases the distinction between a berry and a capsule because usually accompanied by other characters, we cannot consider it so essential a one *per se* as to be always absolutely genuine."

Botanical of Edinburgh: *Feb.* 9.—Prof. Balfour, V.P., in the chair. The following communications were read:—I. "Biographical notice of the late Dr. Gilbert M'Nab, of Jamaica," by Prof. Balfour.—II. "On the Phytotype or Archetype of the Flowering Division of the Vegetable Kingdom," by J. Birkbeck Nivens, M.D., Lond. In this paper the author endeavoured to show that in these plants there is noticed, in their early stage of growth, a central spiral vessel, surrounded by cellular tissue, and he considered this as the true archetype. The paper was illustrated by numerous large drawings.—III. "Notice of Ferns from Old Calabar, sent by the Rev. W. C. Thomson to William Oliphant, Esq." The following is an extract from Mr. Thomson's letter:—

"Ikoneto, Old Calabar, October 29, 1859.

"I write chiefly on account of the enclosures, a bottle containing living specimens of the Water Fern, and one or two other kinds. The Fern seems to be viviparous. I found it while up the Odot Creek. There was to be seen here and there a plant or two, floating amid sheets of the little Moss near the banks, in parts where the current ran less rapidly, its aerial fronds with their narrow revolute segments rising aslant above the surface, while the natant leaves spread out their broad segments a little beneath, being submersed rather than natant. What is novel in it to me is its mode of multiplication, the species being propagated not by the usual spores, but by axillary and occasionally marginal buds becoming perfect plants on the parent frond. A minute roundish leaf is the first produced, others following with gradually increasing dimensions, but of the same form, till a genuine frond is unrolled, the little plant having in the meanwhile shot out several roots vertically into the water, and laterally along the surface of the parent segments. The aerial fronds of this plant are much divided into narrow segments, which have their margins rolled back upon themselves, so as to make them look narrower still. The segments of the submersed leaves are broad. The embryo plants thrive equally well with their leaves above or below water, and separation takes place only by the decay of the mother frond."

The aquatic Fern referred to by Mr. Thomson was Ceratopteris thalictroides. Its viviparous character is well known.—IV. "On the Palms of the Feejee Islands," by Mr. William Milne. The author stated that after the departure of the Herald for Sydney on the 28th October, 1856, he examined the Palms of the Feejee Islands, and the following are those which he observed:—Cocos integrifolia, a dwarf Coco-nut Palm, which seldom exceeds 12 feet in height; and two species of Areca. He also noticed several forking varieties of Palms as occurring on the islands.

Notices of Books.

Under the title of *Index to Current Literature* for the year 1859 (Sampson Low & Co.) has appeared a most useful pamplet of 85 pages, printed closely in double columns. It furnishes a very convenient alphabetical clue to the multifarious subjects treated of in daily, weekly, and monthly periodicals, as well as a catalogue of the books of the year.

"The Quarterly Reviews referred to are, the Edinburgh, Quarterly, British, London, North British, North American, Westminster, and Bentley's. The Monthlies—Blackwood's, Gentleman's, Fraser's, Colburn's, United Service, Bentley's Miscellany, the New Monthly, Dublin University, and Macmillan's. Weeklies—Athenæum, Literary Gazette, Critic, Saturday Review, Spectator, Builder, Economist, Gardeners' Chronicle, and Examiner. Daily—The Times. Occasional Publications include—The Transactions of the learned Societies, Reports, and Parliamentary Papers, where it appeared desirable. Magazines, Reviews, and Papers, not indexed, but the speciality of which requires a special reference, are entered in the alphabet under their subjects, to give the information of such publications on the class or subject of which they treat."

A subscription of the small sum of 4*s.* 4*d.* annually ensures the punctual delivery of the work quarterly.

Routledge's *Illustrated Natural History*, Part XIII., for April, continues the history of Rodent animals, among which our little friend the Guinea Pig is conspicuous, along with Hares, Rabbits, the Gerboa, Dormice, and the whole race of Squirrels. It commences the subject of Oxen. The excellent woodcuts have lost none of their high character as works of art.

With Part VI. the new edition of *Ure's Dictionary of Arts, Manufactures, and Mines* commences Vol. 2. The principal articles of general interest are Diamond, Disinfectant, Distillation, Diving Bell, Dyeing, The Applications of Electrical Action, Engraving, and Cotton Factory.

The third Book of "*The Graduated Series of Reading Lesson Books*" (Longmans) is out. It forms a little volume of 304 pages, containing reading lessons in Travels, History, Natural History, Poetry, and Miscellaneous matters. The subjects appear to be well selected, and we do not remark any instances of the vicious style characteristic of some writers having been introduced.

Trade Lists Received.—John Weeks & Co. (Chelsea), a pamphlet on Conservatories, Greenhouses, Pits, Hot-water Apparatus, and Ventilation, with a few remarks on their improved arrangements. With numerous woodcuts and much explanatory matter.

Garden Memoranda.

Glasnevin Botanic Garden.—Last week we paid a visit to this extensive establishment, where we found active operations going on for spring and summer work, and also saw many fine plants in flower. The high octagon house, formerly built for the Norfolk Island Pine, but now occupied chiefly with New Holland Conifers and the hardier sorts of Palms, has lately undergone extensive repairs, during which the plants suffered considerably, but are now recovering. One of the finest white Tree Rhododendrons, R. arboreum album, we have seen, was in full flower in this house. The plant, with tub, stood 14 feet high, and was covered with bloom.

The men were busy in the Victoria House removing the old soil in which the great Water Lily flowered so well last year, and making other preparations for the reception of a young plant. During the winter this house affords shelter for a good many half-hardy Rhododendrons and Azaleas, some of which are beginning to bloom. The New Holland house is very gay with showy Acacias, Epacrises, Hoveas, and other spring-flowering plants; but the most remarkable among them is Doryanthes excelsa, which is now in flower. The flower stem of this noble Amaryllis-looking plant is nearly 15 feet high, and the flowers are produced in a large bunch at its top. Many of the spring-flowering Heaths are in bloom in the Heath house, which looks gay. The large Palm stove, although 40 feet high, is filled with its splendid inmates. Some of the Palms have already reached to the top. It is evident that more room must speedily be supplied for these noble-looking plants, and we were glad to be informed that an estimate is now before the Lords of the Treasury for a sum to build a house of much larger dimensions. A good many Palms have already flowered, and we observed a fine specimen of Chamærops Martiana, 30 feet high, in bloom. Among the singular forms in the Cactus house, there was one old friend in a new dress, which, although not akin to that curious tribe, appeared at home among them, namely, Solandra grandiflora. In our younger days the first flower we saw of this plant astonished our then untutored eyes, with its great size and beautiful form. Since then we have occasionally seen plants with one or two flowers on them, stiffly grown in small pots, supported by a few ugly stakes, which is evidently far from the method on which it ought to be cultivated. At Glasnevin it is treated as a climber, and planted out against one of the supporting pillars of the house, the top of which it has long ago reached, and is now trained across the roof. When we saw this plant last week there were from 100 to 200 expanded flowers on it, and it was then past its best. In the large stove for tropical fruits, &c., we found another magnificent plant in flower, viz., the Brownea grandiceps, which is a native of Jamaica, and considered one of the most splendid flowering plants of that island, so rich with luxuriant vegetation. The flowers are borne in large bunches at the ends of short branches, and are of a rich, deep, pink colour. In this same house grew a fine plant of Bignonia Tweediana, which we now consider one of the best of the genus; the flowers are golden yellow, large, and produced in great profusion; there must have been some thousands expanded on the plant at the time we saw it. The Mango tree was in flower, and fruit seemed likely to set on it. In the Orchid house there are some good things not often seen in bloom. Ansellia africana, which has not yet appeared among the Orchids sent to any of our flower shows, seems to be well adapted for cultivating as an exhibition plant. The flowers are large and prettily barred with dark brown. The showy Phalænopsis grandiflora is beginning to expand its first blossoms.

The Ferns, of which there is so fine a collection at Glasnevin, are beginning to get into good frond after the winter. It will, however, take another month to bring the stove species into their best condition. The half hardy Tree Ferns which are growing in the large central conservatory are beginning to have a grand effect. Alsophila australis has already fronds on it from 10 to 12 feet high. Dicksonia antarctica, Dicksonia squarrosa, Cyathea medullaris, and Cyathea dealbata are making fine plants. The Camellias were a little on the wane when we saw them, but they must have been fine. Among the best red sorts were C. Francofurtensis and C. Perfection. Among the whites, the old double and fimbriata are still favourites. A large double-roofed low house, 100 feet long, has lately been built, for cultivating soft-wooded bedding-out plants in. This is considered the greatest desideratum which has been provided in the way of house accommodation for some time. The back wall has been taken advantage of, and a fine range of frames, with sashes lifting up on hinges, has been erected against it, for propagating in, and for holding Alpine and other plants during winter. The effects of the late severe weather are visible among the out-door plants, some of which are only now showing the injury they have received. Until very lately they appeared sound enough, but limb after limb is becoming brown, and withering on some of them as active growth advances, indicating that we do not yet know to what extent they have been hurt; consequently, we consider it better to delay any observations on this point at present. Whilst looking through the early spring flowering herbaceous plants, we observed among them some recent introductions which are great acquisitions to the welcome harbingers of summer, particularly the newly introduced species of Helleborus, or what our readers may know by the old-fashioned name of Christmas Roses. Helleborus atrorubens, purpurascens, olympicus, orientalis, and odorus, fine hardy border plants, are all in flower at Glasnevin. The old genus Epimedium furnishes some good recently introduced species, such as Epimedium pinnatum elegans, E. versicolor, and E. pumilum. But the greatest novelty in this department is a beautiful yellow Corydalis, C. speciosa,* which was recently found by a Russian traveller growing on the banks of the Amoor river. The flowers are golden yellow, and grow in bunches at the end of the stem and branches. This is considered by Mr. Moore to be the first instance of the plant flowering in any British collection; but whether such be the case or no, it is an excellent addition to the hardy flower-border plants which bloom at this early period of the year. *Irish Farmers' Gazette.*

Miscellaneous.

Keeping Fruit.—In the following letter accompanying some fruit of the Winter Nelis Pear, Mr. Tillery, of Welbeck, recommended bran for the purpose of keeping and of packing fruit. He writes:—"I find bran the best of all substances for packing late Apples and Pears in shallow boxes. They want no care afterwards, as all sweating and decay are dried up. When sand is used in jars and boxes, it is usually too wet or too dry, and particles are left on the fruit about the eyes and stalks. I have no hesitation in saying, that by keeping the following varieties of late Pears and Apples packed in bran, I shall be able to supply dishes of those fruits for the dessert all the year round. *Late Pears.*—Easter Beurré, Doyenné d'Hiver Nouveau, Joséphine de Malines, Bergamotte d'Esperen, Winter Nelis, Ne Plus Meuris, Zéphirin Grégoire, Beurré de Rance, Prince Albert, Léon le Clere de Laval. *Late Apples.*—Bess Pool, Court-pendu Plat, Keddleston Pippin, Cox's Orange Pippin, Ribston Pippin, Reinette du Canada, Fearn's Pippin, Sturmer Pippin, Holbert's Victoria. Bran is likewise an excellent clean elastic substance in which to pack Peaches, Apricots, and Grapes to go long distances. I have used it to send fruit to Caithness this last summer and autumn, and they travelled quite safe all that great distance both by sea and land." *Horticultural Society's Proceedings.*

Paris Zoological Garden.—The greatest activity reigns in the works of the Zoological Garden of Acclimation of the Bois de Boulogne, which is to be open to the public next spring. The gardens have been designed and laid out; the principal buildings indispensable to an establishment of this nature have been erected; and the interior arrangements of the dwellings for the numerous species of animals belonging to the society are to be commenced forthwith. Every day their collection receives augmentation. A gold medal of the value of 400f. has been offered by the above society in its annual meeting of the 10th ult., to be presented on the same day in 1862 to the American or African traveller who

* Of this a short account will be found in another column.

will have rendered the greatest service to the institution by his discoveries, especially as regards human food. This prize has been given to the society by Madame Guérineau in the name of her late brother, Pierre Delalande, travelling naturalist of the Museum of Natural History *in* Paris, one of the principal explorers of Brazil, and also of South Africa, whose death took place on his return from the Cape, which he left in a complete state of prostration from fatigue and illness. *Builder.*

Rules to be observed by Candidates for the Botanical Prizes offered at Marlborough College in 1861.—N.B. These have been adopted chiefly at the recommendation of Professor Henslow. I. Each candidate must be prepared to certify that every specimen in his own collection was procured and dried by himself. One half of the species may have been obtained from any part of Great Britain or Ireland; the rest within 10 miles of the College. II. The number of species must not be less than 250, obtained within 14 months, viz., from March, 1860, to 21st May, 1861. III. Each specimen must be placed on a separate piece of paper, but not fastened down in any way. The papers to be uniformly 16 inches by 10. Any paper may be used. Old newspapers answer for this purpose. IV. The species to be arranged, and labels neatly written with the Latin and English names, according to G. Bentham's Manual of British Plants. The localities and dates to be added, and the labels signed by the name of the collector. As an example:—

CL. 1. OR. 1. GEN. 6. SP. 10.

Ranunculus Bulbosus. Bulbous Ranunculus.

MARLBOROUGH, MAY 7TH, 1860.

JOHANNES BOTANOPHILOS.

The prizes to be determined by the No. of Marks obtained according to the following scale:—One mark for every label correctly spelt, provided the name is also accurately given. One to three marks according to the completeness of the specimen and the beauty of its preservation. Where an illustration may require the species to be displayed on more than one paper, it must be prepared accordingly. Ex. gr: The large leaf of an Angelica may be on one and the umbel on another. Where plants are small two or more specimens should be prepared: Ex gr: Three or four of Anemone nemorosa (Wood Anemone), in different stages of development, could easily be laid down on the same paper. A memorandum should be retained where each was procured. Such complete illustrations, as contain both flowers and fruit well dried, should command three marks. Although the Candidates are at liberty to obtain the names of their specimens in whatever way they can, those who secure a sufficient number of marks to have any chance of a prize, will then have their own powers of classifying and naming plants tested as follows. The additional marks thus obtained will be added to the former. Twenty specimens selected from each collection to be classed and named at sight by their respective collectors, thus:—

	CLASS.	ORDER.	GENUS.	SPECIES.
No. 1.	*Dicotyledones*	*Violaceæ*	*Viola*	*Odorata*
No. 20.	*Monocotyledones*	*Araceæ*	*Arum*	*Maculatum*

Four marks as a maximum for each species. N.B. A quarter of an hour ought to be more than sufficient for this. Twelve fresh specimens (Exotic or British) belonging to British Orders, to be classed as far as Bentham's Manual (allowed to be consulted) will admit of this, and eight marks as a maximum allowed for each, thus:—

	CLASS.	ORDER.	GENUS.	SPECIES.
No. 21.	*Dicotyledones*	*Cruciferæ*	*Exotic*	*
No. 31.	*Monocotyledones*	*Orchidaceæ*	*Orchis*	*Exotic*
No. 32.	*Dicotyledones*	*Leguminosæ*	*Ononis*	*Arvensis*

N.B. Three-quarters of an hour should be sufficient for replying to these questions; and consequently an hour may be allowed for the completion of the whole 32. As the maximum which these tests allow is 20×4+12×8=176, it is easy to determine which of the Candidates should be selected for the test examination. No one can have a chance of a prize whose marks added to 176 do not bring him above the next above himself for marks obtained for the dried specimens. [We think this scheme may furnish useful hints to all who take an interest in Village Schools.]

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Heat and moisture may now be more liberally supplied to tropical plants. As the season advances these should be gradually increased, but in all cases avoid a high night temperature. That must be principally obtained by closing early, and so retaining heat derived from the sun; when fires are required they must not be so strong as to render it necessary to admit currents of cold air to keep the thermometer down. This, however, will be unnecessary where properly constructed ventilators have been provided. Attend to Achimenes, Gloxinias, and other summer and autumn flowering plants. The last succession of Achimenes, to flower late in the season, should now be placed in heat. Some of those formerly started may be potted for hanging vases, for which A. longiflora and cupreata are particularly well adapted. Employ pans or broad shallow pots for their general cultivation, and as they require an abundant supply of moisture when they are in flower, let the drainage be as efficient as possible, in order that they may be freely watered without stagnating the soil. Let Fuchsias for summer and autumn display have due attention, repotting them as may be required in rich compost, and occasionally watering them with liquid manure. Much however of their beauty depends on the shape of the plant. Nearly all the varieties have a natural tendency to form pyramidal bushes, and by a little attention they may be guided into that very appropriate form; only one shoot should be allowed to take the lead; this should be trained perfectly upright, and the side branches regulated by stopping any overluxuriant ones which may be outstripping their neighbours.

FORCING DEPARTMENT.

VINERIES.—Where it is desirable to retard breaking in the late house as long as possible, and the glass cannot be removed nor the Vines exposed to the open air, they should be let down as far from the glass as can be done, shading the roof, and giving all the air possible. Some however maintain that there is no decided advantage in retarding Vines by artificial means after this season. They prefer allowing the buds to start at the bidding of the weather after this time, merely giving all the air possible, and take chance as to the fruit keeping until next March. Weakly or overcropped Vines ought to be very carefully examined for red spider, which may be expected to make its appearance on these, particularly if the weather becomes bright, and means should be used to thoroughly eradicate it the moment it is perceived. Probably the best method is to well wash every affected leaf with a sponge, for it is useless trying to overcome it in such cases by syringing, which only serves to keep it in check, and when the fruit begins to colour, and syringing must be laid aside, it will increase with fearful rapidity. Keep the atmosphere moist, sprinkling the floors, &c., frequently on bright days, and take care that inside borders are well supplied with water.

PEACH HOUSE.—The fruit in the earliest house will now be swelling fast; use water liberally until it begins to colour. In thinning later crops be guided by the vigour of the trees as to the quantity they may be allowed to bear. Syringe regularly and give air liberally on all favourable opportunities.

CHERRY HOUSE.—Where the leaves are thickly clustered together and shading the fruit a few may be removed to let in sunlight. Fumigate if necessary before the fruit gets so near ripe as to be affected by the necessary washing afterwards.

FIG HOUSE.—Maintain steady treatment, as any check is apt to make the trees cast their fruit. Aim at preserving uniform growth.

MUSHROOM HOUSE.—Trap woodlice by means of flower-pots laid on their sides, placing in the bottoms of them a Mushroom, a cut Potato, or a little dry Moss. Watering occasionally round the sides of the bed with boiling water will also effectually thin their numbers.

STRAWBERRIES.—Water regularly and give abundance of air. Those which have ripened their fruit may be planted on a rich border to make runners; they may possibly also produce some late fruit if the autumn proves favourable.

FLOWER GARDEN AND SHRUBBERIES.

Lose no time in potting off bedding plants or pricking them out into frames or boxes. As the potted plants become established they should be hardened off by gradually inuring them to the open air whenever the weather is favourable. The hardier kinds may soon be set upon a bed of coal ashes or plunged in old tan, ashes, or some other light material. Much of the labour of watering will thus be saved, many deaths avoided, and the plants will altogether be in a better state when planting out season arrives. Patches of showy hardy annuals should now be sown in vacant places which usually exist in herbaceous beds and in the edges of clumps and borders in the shrubbery. Double Poppies, of various colours; Lupins, Sunflowers, African and French Marigolds, Erysimum, Clarkias, Gilias, Collinsias, Silene, and Nemophila are excellent for that purpose. A sufficient quantity of cuttings and seedlings of half hardy climbers should now be potted for planting out in May. With such plants as Cobæas, Maurandyas, Lophospermums, Calampelis, Loasa, Tropæolum canariense, &c., many bare places on the walls and trellises may be covered and made ornamental which would otherwise be unsightly blemishes.

HARDY FRUIT AND KITCHEN GARDEN.

The disbudding of Peaches and Nectarines will soon require attention. First remove a portion of the superfluous shoots, and in a week or 10 days go over them and regulate them finally. The superfluous shoots of Apricots must also soon be removed and the remaining ones carefully examined in search of a green caterpillar which not only injures them but also eats holes in the young fruit, thereby causing it to gum, grow deformed, or fall off before it is stoned. As regards vegetables, continue to make periodical sowings of Spinach once a fortnight, and Peas, Beans, and Turnips once in three weeks. Successional sowings of all salads should be made with strict regularity, and proper attention should be paid to preserving them from the ravages of birds and insects. If the crops of Onions, Leeks, Parsnips, Beets, Salsify, Scorzonera, and Skirret are not yet sown no time should be lost, and the latest period for sowing the main crop of Carrots is near at hand. A sowing of tall Kidney Beans may now be made in early localities; the early sowing of this useful vegetable not unfrequently gets cut off by late spring frosts, but when this happens the ground should be left undisturbed, as shoots will be produced from beneath the surface.

COTTAGERS' GARDENS.

As was stated last week mixed cropping should receive attention. Let Broad Beans be planted between lines of Cabbages; a little late Spring Broccoli may also be sown, and take care to have plenty of Winter Greens to succeed the summer crops. Perhaps these may be obtained from the nearest gentleman's gardener, if he happens to have more than he wants, which is almost always the case. Scarlet Runners should now be sown without delay.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending April 12, 1860, as observed at the Horticultural Gardens

April.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep	2 feet deep.	Wind	Rain.
Friday 6	14	29.828	29.738	60	30	45.0	47	45½	N.E.	0.00
Satur. 7	15	29.864	29.824	63	36	49 5	47	46	S.W.	0.00
Sunday 8	16	29.807	29.436	57	35	46.0	49	44½	S.W.	0.01
Mon. 9	17	29.603	29.557	48	38	43.0	49	46	W.	0.00
Tues. 10	18	29.971	29 665	50	20	35.0	49	46	N.W.	0.00
Wed. 11	19	30.145	30.096	48	32	40 0	47	46	N.W.	0.00
Thurs. 12	20	30.089	30.049	48	25	36.5	47	46½	S.W.	0.02
Average..		29.886	29 776	53.4	30 8	42.1	47.8	45 8		0.03

April 6—Overcast; clear; slight frost.
— 7—Fine throughout; very clear at night.
— 8—Cloudy; fine; drizzly; rather boisterous.
— 9—Clear and cold; patches of low white clouds; boisterous overcast.
— 10—Clear; fine but cold; slight snow and hail; sharp frost.
— 11—Frosty; cloudy; overcast; cold and dry; overcast; thunder.
— 12—Uniformly overcast; cloudy; overcast; clear; frosty.
Mean temperature of the week, 4½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending April 21, 1860.

April.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 15..	58.00	38.32	48.16	19	0.47 in.	7	8	5	1	2	5	3	3
Mon. 16	56.85	36.52	46.68	15	0.63	6	7	6	2	3	3	4	3
Tues. 17..	57.17	35 82	46 49	14	0.32	7	7	6	2	1	7	2	2
Wed. 18..	58.17	35.91	47.04	14	0.49	5	6	6	1	4	3	6	3
Thurs. 19..	58 61	34.85	46 58	7	0.45	6	10	3	3	1	6	5	—
Friday 20..	60.05	35.52	47 78	14	0.39	3	7	4	2	—	9	5	4
Satur. 21	58.82	37.97	48.39	13	0.28	2	7	6	3	2	4	8	2

The highest temperature during the above period occurred on the 19th, 1854—therm. 77 deg.; and the lowest on the 16th, 1847—therm. 20 deg.

Notices to Correspondents.

*** *The Metropolitan Board of Works have directed that in future the Street in which our Office is situated shall be called Wellington Street, and that the Number of our Office shall be* 41. *Correspondents are therefore requested to address all letters, whether to Editor or Publisher,* 41, *Wellington Street, Covent Garden, London, W.C.*

CHINESE PRIMROSE: *B S.* Your striped single white is pretty, and, if constant, will be an acquisition.‡

INSECTS: *C M.* The white webs sent are the nests of a species of spider frequent under loose bark. The natural history of the Onisci is given in *Gardeners' Chronicle*, 1844, p. 356; and in Mr. Curtis's work on Farm Insects.—*A Constant Reader.* Successful attempts were made during last year to introduce queens and workers of the honey bee of North Italy into England. It is a species distinct from our Apis mellifica, and was named A. ligustica by Spinola. It is rather larger and brighter coloured than the common species, and is said to be more robust and a better honey collector. The specimens were sent in small boxes with apertures to allow the introduction of fresh air. We are not aware that any can be at present obtained in Devonshire, although an apiarian in that county has issued notice of his intention to introduce more this season for purpose of sale.—*A Y.* The small black beetles sent are Attagenus pellio, the larvæ of which feed upon skins, feathers, and other animal matter in houses. *W.*

NAMES OF FRUITS: *A C.* Not known. The Pear has tender but remarkably granular sweetish flesh. The Apple is an acid fruit only fit for kitchen use.‖

NAMES OF PLANTS: *Alpha.* 1, Davallia decora, often misnamed D. dissecta, which is larger; 2, Asplenium polyodon, a form of **A. falcatum**; 8, Cheilanthes hirta; 4, too imperfect for recognition.—*A Y.* 1, Pteris hastata, v. macrophylla; 2, Cyrtomium falcatum.—*R C.* 1, looks like a bit of Actæa spicata; 2, Passiflora fœtida; 3, Chenopodium Botrys.—*B.* 1, Double Red Hepatica; 2, Garrya elliptica; 3, Single Blue Hepatica; 4, Hyoscyamus physaloides.—*Medico.* 1, Anemone nemorosa; 2, Mercurialis perennis; both most miserable specimens. A "Medico" should know how to preserve his plants.—*A Subscriber.* Senecio mikanioides.—*C D.* The name Q. Dalechampii (so called after Dalechamp, an ancient herbalist) has been applied to some Oak by the Neapolitan Botanist Tenore. What you send is very like Q. australis. It is now evident that the Isabella Gray Rose requires artificial heat. About Lapageria rosea you shall have some information next week.

PAPER: *C W.* The following extracts are, we should think, sufficient to show that the paper-makers were once anxious to be rid of the excise:—The modern discoveries in chemical science have not only materially facilitated the manufacture but *have greatly enlarged the supply* of materials from which paper may be made. *Macculloch's Commercial Dictionary;* and repeated by Mr. Dickinson in 14*th Report of Excise Commissioners* 1834.——Paper has been reduced in price "by the discovery and reduction to practical purposes of raw materials such as cotton, tow waste, mill sweepings, &c."—Mr. John Smith, of Morton Mills, near Bingley. *Ibid.*——The excise regulations shackle the manufacturer in the exercise of his skill, and prevent his entering into fair competition with foreign manufacturers.—Memorial of Messrs. Dickinson, Phipps, Gaussen, and Magnay. *Ibid.*——There is no other manufacture, in comparison with paper, of which so little of its value consists in the material and so much of it in the labour which converts a material worthless for any other purpose into an article of prime necessity.—Mr. B. Sullivan. *Ibid.*——As to the question of duties on imports and exports, and the action of foreign governments, however important it may be for the moment, it can have no permanent interest if the natural supplies of fibrous tissues within our reach are made available.—*C C.* We are aware that some materials are said to be unfit for paper-making either because they will not become white or do not remain so. But this is in reality a gain—not a disadvantage. Our paper is much too white, and dazzles the eye. A light nankin or straw colour is far more agreeable for use, and it is mere idle fashion that says the contrary.

PROTECTION OF WALL FRUIT: *G P.* The glass penthouses spoken of at p. 266 are not intended to be horizontal. They should be sloping, as in a lean-to greenhouse or Vinery. If you will look at the article again you will find that the length of the sash is given and its distance from the wall at the bottom.‡

SHADING: *R G.* Shaw's Tiffany will answer your purpose perfectly. It may remain stationary during the summer months.‡

MISC.: *A Subscriber.* Some European trees thrive at the Cape of Good Hope, such as Oaks and Stone Pines. But we have no detailed information about them. Witch Elm seeds may be had at the season; but not now. The Blue Gum tree is Eucalyptus globulus.—*R A M.* Rogiera belongs to Cinchonads; Cheirostemon to Sterculiads; see Lindley's Vegetable Kingdom.

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The Directors recommend these Manures with every confidence to the attention of their brother farmers; and the fact that they and the Shareholders farm upwards of 30,000 acres of land, cannot fail to afford a guarantee and protection to consumers.

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ODAMS'S SUPERPHOSPHATE OF LIME.

This Manure contains an unusually large per centage of Soluble Phosphate of Lime, and is, therefore, a highly valuable Manure for all Root Crops.

ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	8.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.63	14.38	16.71	16.91	16.48
Equal to Neutral Soluble Phosphate	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

Dr. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

Dr. ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

Dr. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

Dr. HODGES states that—"It may be regarded as a good specimen of super-phosphate of lime." His calculation of its value is 7*l.* 13*s.* per ton.

Dr. CAMERON reports:—"The above figures prove this super-phosphate to be of excellent quality, and I have no doubt but that its application will be attended with the most satisfactory results. It would be good value at 7*l.* per ton."

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DISSOLVED BONES.
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MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
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WHEAT ditto	POTATO ditto	BEAN ditto
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"	MINERAL	5	5
LAWES'S BARLEY	MANURE	8	0
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Two yards wide, 1*s.* 6*d.* per yard run.
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ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

CANTERBURY MEETING, 1860.

ENTRIES for IMPLEMENTS, FIELD GATES, HOPS, and WOOL must be made on or before MAY 1.

ENTRIES for LIVE STOCK must be made on or before JUNE 1.

*** All Entries received in each case after those respective dates will, without any exception, be disqualified, and returned to the senders.

Prize Sheets and Forms of Entry may be had on application at the Offices of the Society, 12, Hanover Square, London, W.

H. HALL DARE, Secretary.

The Agricultural Gazette.

SATURDAY, APRIL 14, 1860.

MEETINGS FOR THE FOLLOWING WEEK

WEDNESDAY, April 18—Agri. Society of England ..... Noon.

HAVING in a lately published article on THE APPLICATION OF IRON TO AGRICULTURAL STRUCTURES drawn attention to a few of the most important of the points connected with the forms and position of beams, we propose now to describe the methods of fitting them up, in cases where they are used to support the principals of roofs; or for the floors of buildings.

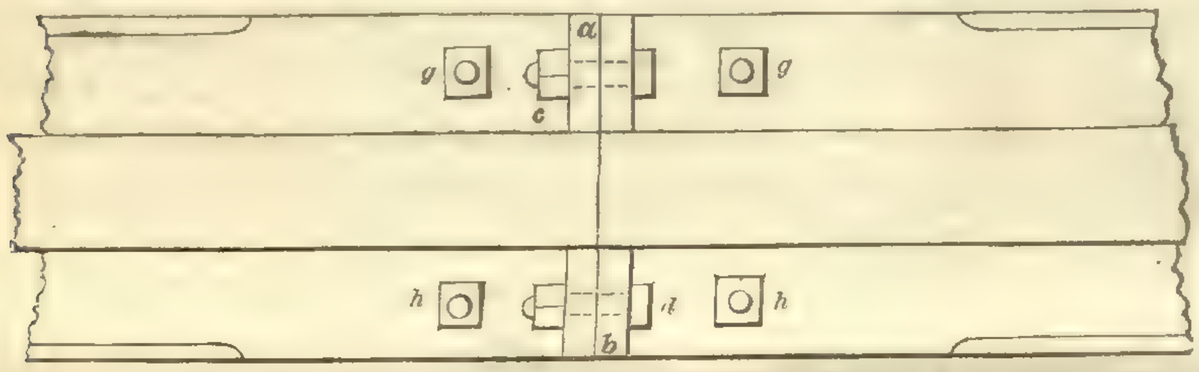
Where the beams are used to support the floor of a granary, they may be joined on the caps of the columns in either of the ways shown in Figs. 22, 23, and 24. In Fig. 22

the ends of the beams rest upon the cap of the column, and are finished with flanges *a b*, in which bolt holes are made through which to pass the bolts *c d*, by which the two are secured together. A side elevation is given in which the beams *e f* are shown connected together by the bolts and nuts, and to the cap of the column by others *g h*. In place of uniting the two beams by the bolts and nuts as in Fig. 22, projecting snags or horns may be given as *a b*, in side elevation, *c d* in plan, and *f f* in end elevation Fig. 23. When these come together they are kept in contact by passing iron hoops or rings over them and drawing them tightly up. One of the rings is shown in plan *g*, and elevation at *h*. The end flange of the beam is shown at *i i*, *k k*; in place of having it rectangular in this way, the sides may be bevilled or sloped off, as shown by the dotted line *l m*. The dotted lines, *l m n o*, give the section of beam at the central part.

Where the column is finished with a continued circular part, as *a a*, Fig. 24, the ends of the beams should be made circular, so as to embrace this part, and provided with flanges, as *b c*. One beam is shown in its position, as *d e*. The two are kept together by horns, *f g*, over which the iron hoops are driven. In Fig. 24 the plan of beam as looking down upon it when in position is given—*h h* being the upper flange, *i i* the lower one. An elevation of end of beam is also given, in which *k k* is the circular part which embraces the part *a a* of column, and *l m* the flange.

In some cases the junction of four columns must be provided for, as where one part of a granary is at right angles to the other part. Thus let *a e'*, *d e'* be the lines of outer wall of building; *d e'* is the beam spanning the space between the pillars placed at *d* and *e'*; *a e* the first beam of the part building at right angles to *d e'*, *e' b* is the first beam which supports the floor of part of building at right angles to *a e*, and *e' c* is the beam spanning the part of the building which is at right angles to *a c*.

In such a case as we have here supposed the junction is effected by having the ends of each beam finished as at *e f g*, Fig. 25; the part *e* embracing the circular cap of column, and flanges *f g* being provided, through which bolt holes are cast. The four columns are shown in conjunction at *h i k*. Where the beam of the side of a structure meets the beam of the end, in the other part of Fig. 25, the end of each



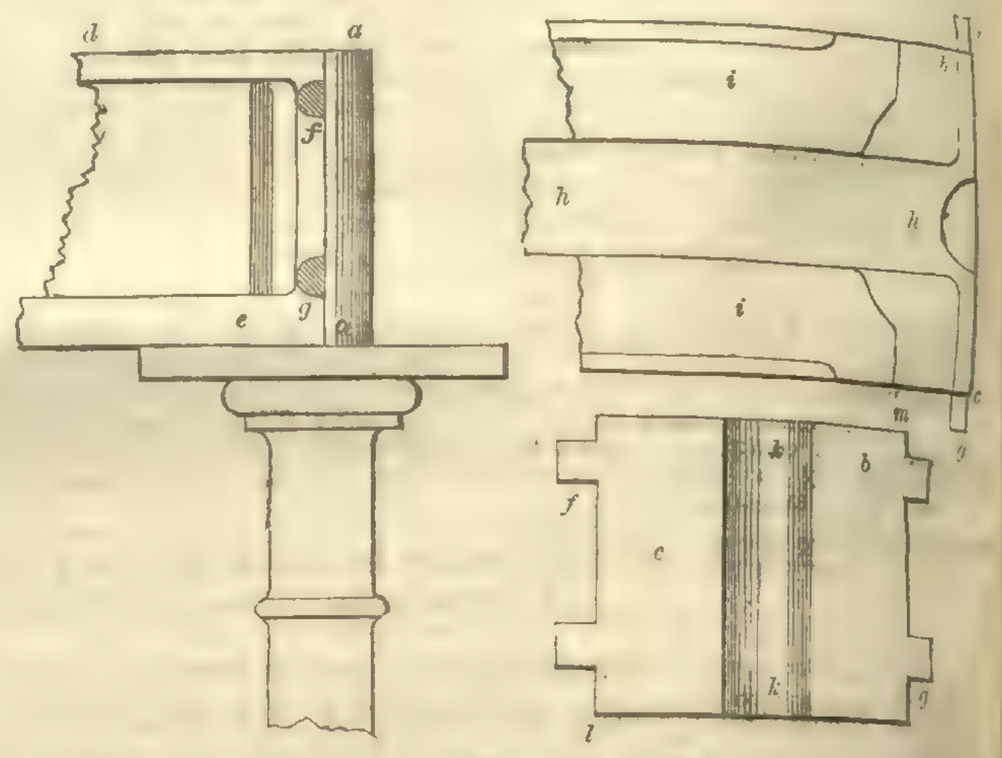


FIG. 24.

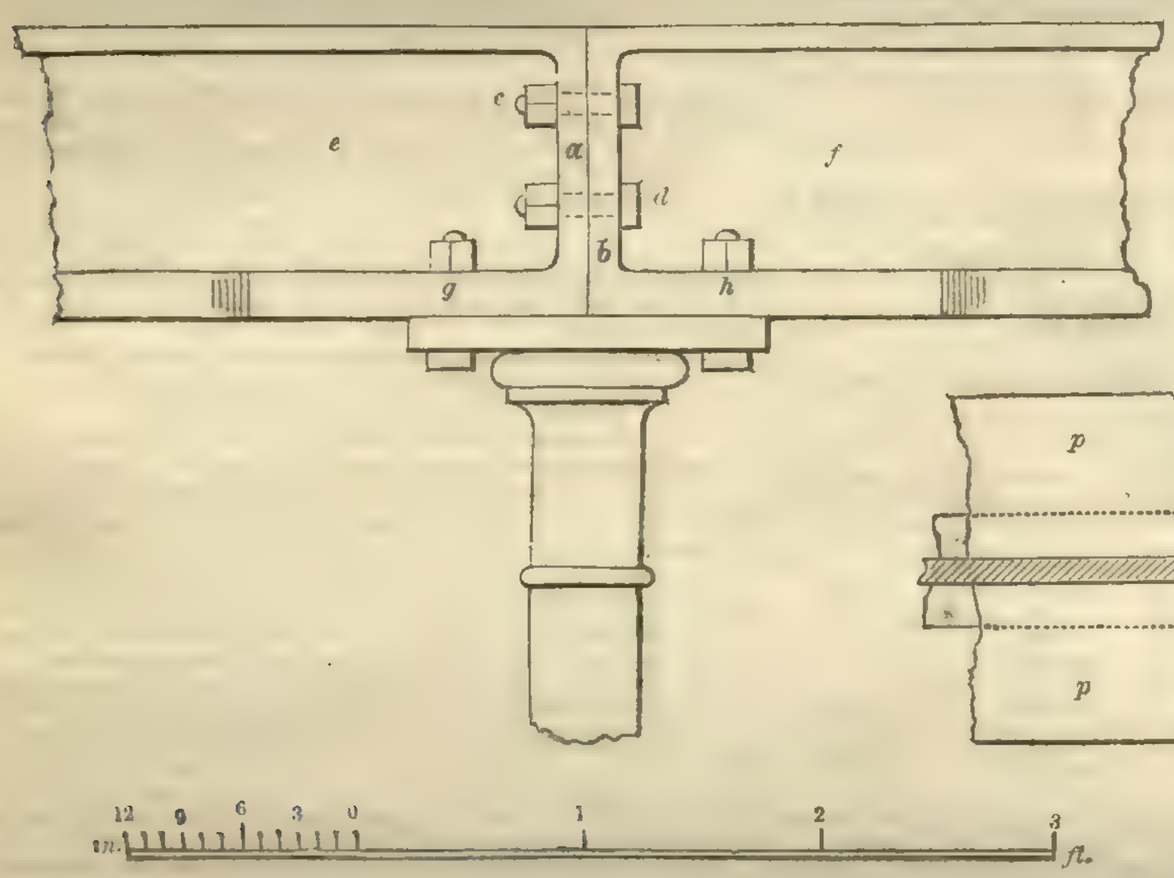


FIG. 22.

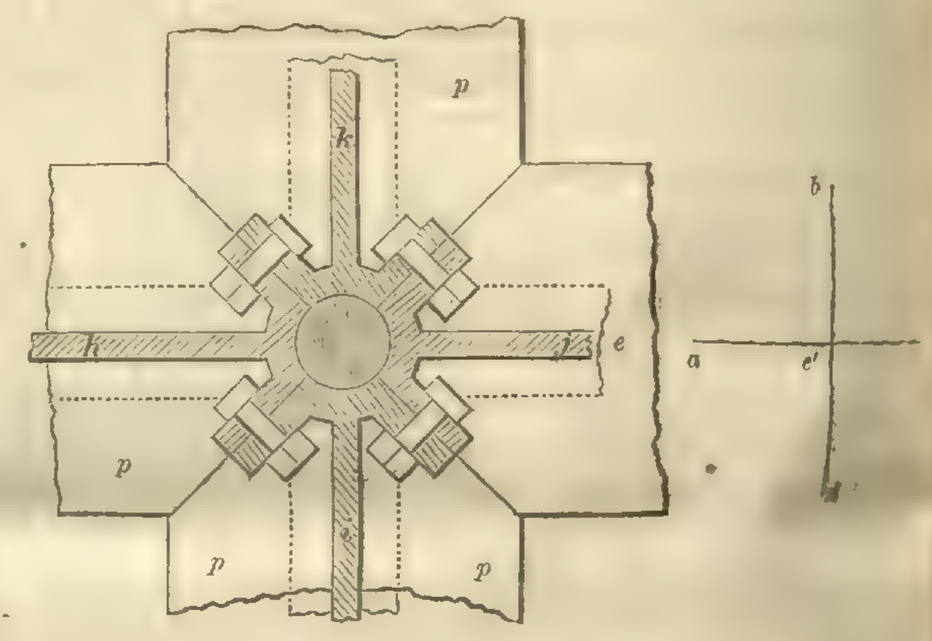
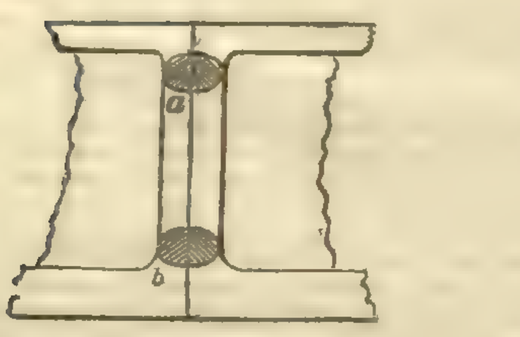
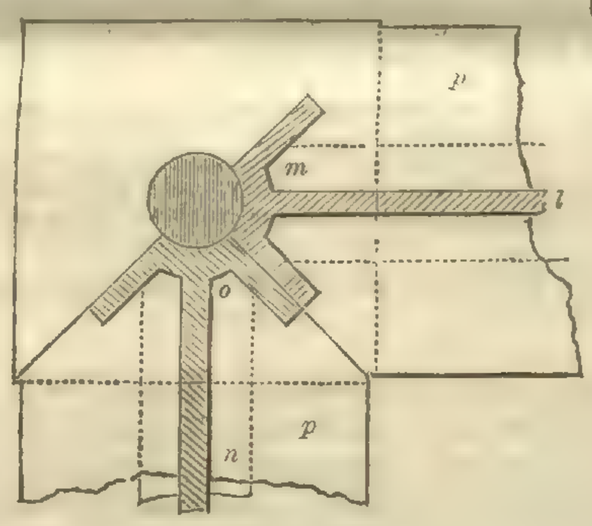


FIG. 25.





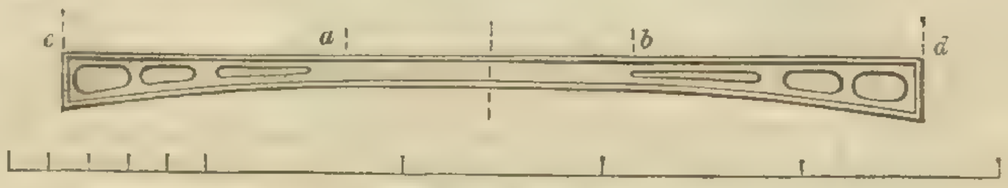


FIG. 26.

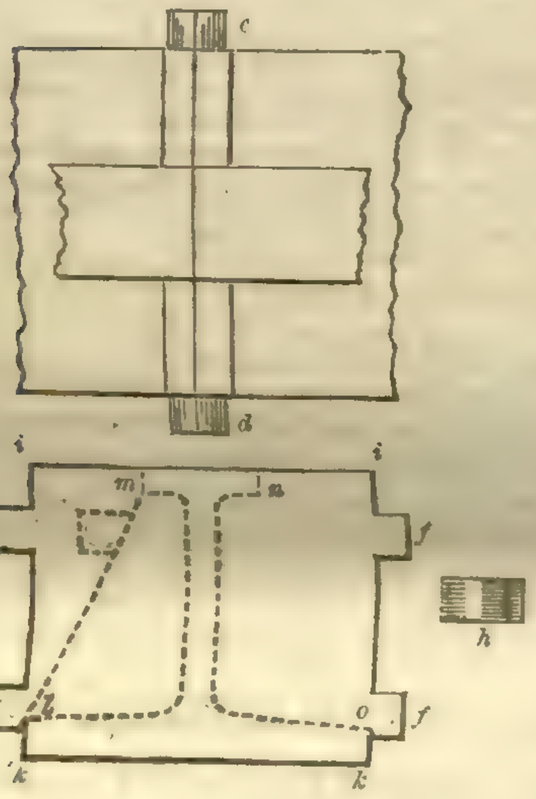


FIG. 23.

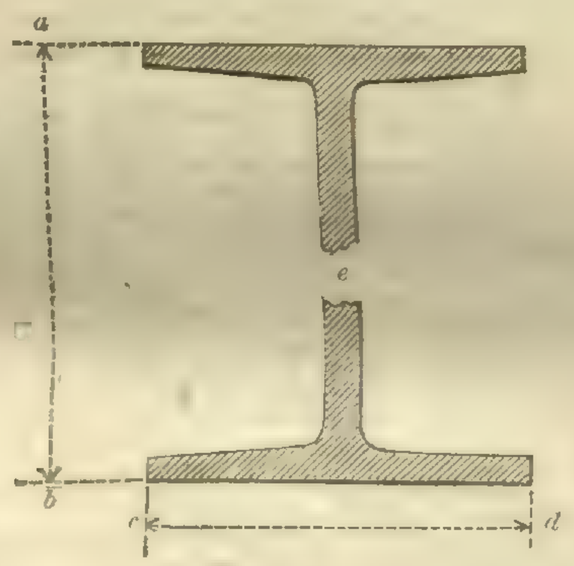


FIG. 27.

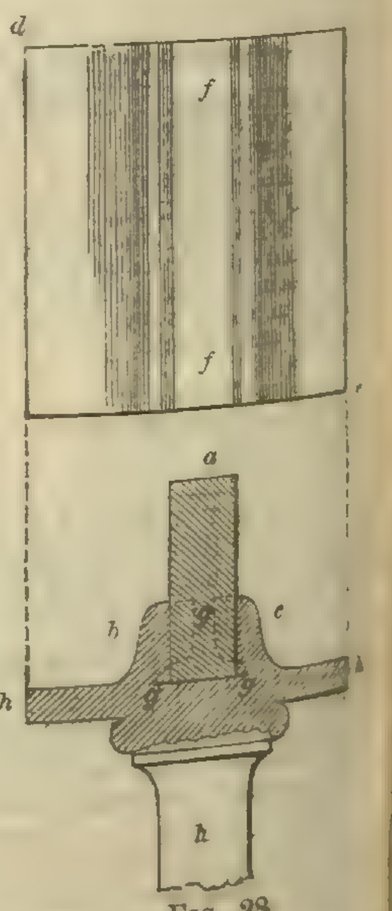


FIG. 28.

beam may be formed as represented. The two beams are shown in position at *l m n o*. In the drawing the dotted lines indicate the upper flanges, the letters *p p p* the lower flanges of beams. In place of uniting the beams together by bolts and nuts as shown, projecting horns and rings may be employed, as shown in Figs. 23 and 24. The sketches in Fig. 25 show sectional plans taken at a line immediately below the upper flanges of the beams. The scale to which drawings in Figs. 23, 24, and 25 are made is given in Fig. 22.

In place of the beams of section and form as already given in Figs. 22, 23, and 24, an open beam of form as in Fig. 26 may be adopted. *a b c* and *d* are the points at which the principals of the roof join.

Wrought-iron beams are now being introduced very largely; one great advantage they possess is their lightness as compared with their strength; thus a cast-iron beam calculated to support the same weight as a wrought-iron one will weigh 2½ times as much as the wrought-iron beam, or in the proportion of 40 to 16. Much wider spans can also be obtained by the use of wrought-iron beams, spans of 50 and 60 feet being quite within their compass.

Wrought iron beams are now rolled in one piece as in the example given in Fig. 27, being the form manufactured by Messrs. MATHER, LEDWARD, & Co., Liverpool. The length of this is 28 feet, the depth *a b* 12 inches, the width of flanges at top and bottom as *c d* 5 inches; thickness of middle rib at *e* ⅜ of an inch. The sketch is one-fourth the full size. Where beams of this section are used, the cap of column may be made as shown at *h h* in the succeeding figure (28), the slot being of the form as indicated by the dotted lines *g g g*. The ends of the beams are inserted in the slot, and they may be secured from lateral movement by bolts passing through the and the sides *b c* Fig. 28 of the shoe which retains them

Where timber is plentiful, the beams which run from pil to pillar to support the roof of the shed may be made of it form as shown at *a* in Fig. 28. In this case the cap of co is made as shown in the drawing so as to receive the be It may be kept in position by a bolt passing through the and the sides *b c* of the "shoe" in which it rests. The cap is shown at *d e*, *f f* being the part which receives beam *a*.

A THUMPING profit from a heavy investment capital in farming is "an old old story." The have always been examples of extraordinary advan tage found in marling a sand, in claying a pe

in deeply and profusely draining a clay, in building "desirable residences" for live stock, with a millful of machinery for cooking and manipulating their home-grown and far-fetched foods. But when such a case is clearly proved, it is by no means certain to be generally imitated. For in our condition of fettered fee-simple, of life-interest and mortgage, of will-tenancy and strict covenants, of game-preserving and little tenants'-right, the permanent improvement of land moves slowly; and until the landowner has done his share towards the amelioration of a property, the tenantry cannot commence those better systems of management which are to secure them such handsome results. Markets, however, inexorably fix their terms for the farmer to meet if may be; and the wealthy aspirant for a country house and a little amateur agriculture bids against the business husbandman, till rents look more and more perplexing. So that the farmer seeks anxiously in every quarter for prompt and ready means of battling against the difficulties of his position.

Now of all men, we consider that the occupier of heavy land has most cause for cheerfulness in the prospect opened before him; for he it is that will reap most by the great agricultural feat of our age, the achievement of TILLAGE BY THE STEAM-ENGINE.

Permanent improvements of estates may linger or creep slowly onwards; but long before our babbling brooks are made drainage water-ways of correct engineering level and section, long before our town sewage is injected through pipage under environs of meadow and market garden, the sturdy farmer of the clays will have pioneered his way into great yields and profits by the power of steam cultivation. The moist and sticky districts of our country will be completely remodelled; for the deep, founderous lanes and farm roadways must be made high, hard, and sound to bear the tread of the engine; the tortuous watercourse, with its straggling brambly hedgerow, will be straightened and tidied that the grounds may be squared, and the drain-water led into field tanks whereat the new motive-power may drink; game-harbouring plantations and copses of wasteful brushwood will be quickly uprooted when the soil is fully found out to be precious; and those undulating curving "lands," half agricultural, half aquatic, which have for centuries lifted part of the surface into dry ridges by dropping the other part into soaked and sodden furrows, will all be thrown down and levelled, for the heaviest rainfall will filter freely downward when we cease to seal up the way to our drain pipes by the squeezing and glazing of animals and implements of tillage. And the revolution in outdoor management will surely also effect some little stir in the land-steward's office, and among the tin boxes and tape-tied bundles of the solicitor, who has framed for ages the antiquated leases and restricting covenants which bind the farmer not to be too spirited or improving.

A few words on the theory of the matter will further show how an improved mechanical tillage will be not only the salvation of the clay land farmer, but will bring forth results surpassing any that the science of nitrogenous and phosphatic manuring has achieved upon lighter lands. We know better now than to drain our land merely to dry it and facilitate its tillage; we bury our pipes a yard or two below the upper air, so that the percolating streams of rain and following currents of air which they suck down after them may fructify the deepest available stratum; for a year's downfall, with its 3000 hogsheads of water per acre, brings as much of the costly ammonia to each acre as is contained in a dressing of guano, or in the coating of farmyard dung which we apply every fourth year. And the dews and snows may add a still larger proportion of the manurial substances in a gaseous state which they wash out of the atmosphere. For clay or any soil containing aluminous earth is not that inert passive material that it seems, helplessly subjected to the natural culture of the elements, coalescing into an impervious mass under prolonged wetness and pressure, and bursting into myriad atoms when frost congeals the moisture in its interstices. The soil has been recently discovered to be an incessantly active agent, busy as the rootlets of plants. It not only seizes with avidity the stores of nutriment for vegetation carried down into it in the rains and melting snows filtrating through its cavities, and permeating its capillary pores; but when brought into contact with the air a mysterious chymical action goes on, by which nitrogenous and other elements are rapidly abstracted from the atmosphere, and powerfully appropriated by the particles of soil, to be yielded up only to the living roots which pasture upon them. There are even chemical effects created by the sunbeams, and electric and magnetic influences teaching us to open and subdivide and invert and expose the inmost practicable recesses of our fields at certain propitious seasons. And there is experiment enough in every district, as well as in the deeply-dug Wheat stripes of Lois-Weedon, to prove that tenacious clay may be tempered by tillage alone into a rich and porous mould. Wonders were reported of the ameliorating effects of deep drainage; but the difficulty has always been to let the surface-water down to the hollow conduits beneath; for unless the "pan" formed a few inches below the surface by continual ploughing and trampling is frequently broken through with the trench-plough or subsoiler, the stiff and sticky clay agglutinates and indurates, closing the subterranean storehouses alike against the feeding rain-water and the famishing roots of crops.

Drainage has done grand things; but perhaps the best that can be said of it is that it prepares the way for deep tillage and the steam plough. This engine will enable us to break down through the time-hardened pan stratum as frequently as we please, giving free play not only to air, water, and descending roots, but also to our friend the worm—for we have other fish to catch with him yet—and it is he that will be a fast agent in intermingling our superficial applications of manure with the true interior of our farms, where the quick-scented rootlets of plants will find it.

Artificial enrichers applied by hand at any time upon the growing crop have proved most convenient and efficacious in augmenting the produce of heavy lands, it is true; but they leave the cleansing tillage as troublesome and expensive as before; and too often, indeed, afflict the farmer with the other horn of the dilemma of "too much crop," which in a rank and growing season gets weakly in the straw, and blights his pleasing anticipations with a prostrate Wheat harvest, yielding a mean and scanty sample. But the steam plough is teaching us that better tillage, not guano, is the one thing needful on the clays. *I. A. C.*

BREEDING CATTLE FOR DAIRY PURPOSES.

Mr. Robert Smith, in his report on the live stock exhibited at Warwick, remarks that "dairy produce is now at its top figure; and as a commercial eye is now being turned in that direction, the question need no longer be asked, does a dairy pay? but, rather, what is a dairy cow?" As apparently anticipating the latter question, Mr. Smith had previously observed that "the first cross between the Alderney and Short-horn bull is found to be especially good for dairy purposes, and is worthy of trial. The Alderney and Ayrshire also mix well for these purposes." The classes under review in the portion of the report in which these sentences occur are those for which prizes were offered by the Local Committee (cattle best adapted for dairy purposes), but all that relates to the Short-horns, whether in these special classes or in those competing for the ordinary prizes of the Society, may be fairly taken together and treated as leading to the same conclusions. Mr. Smith's report on the Shorthorns brought together at Warwick may, then, be pronounced an unfavourable one; and that it conveys his own impartial opinion, founded upon such an inspection as he had the opportunity to make, there can be no question. It is not only unfavourable as regards some of the animals exhibited on this occasions, but it has a further and more important bearing, and at once leads the reader to make the inquiry, "How is it that our great national society has not been able to assist in giving that practical direction to the breeding of stock as to lead to the production of what is required by a large number of tenant farmers?" Prizes on a very liberal scale have been offered for 20 years for pure-bred animals, and it would certainly be a strange result if the farmer should still be compelled to resort to cross-bred stock in order to obtain what is essential to his success in an important branch of his operations. That a great error has been committed by the owners of some of the most fashionable herds of Short-horns, in neglecting milking qualities, there can, we think, be no doubt whatever; and in condemning this error Mr. Smith will meet with almost universal support. If, however, what he advances is to be received as well founded, to a considerable extent at least, so far as these exhibitions are concerned, there is still no real ground for the opinion that his strictures have a general application, that the examples seen in the show yard must be taken as a rule, and not as, which is really the fact, exceptional cases. The careful and judicious breeding of cattle for dairy purposes has indeed been carried on largely for a number of years, and a striking improvement is not only shown in many localities, but the subject is exciting general attention wherever this description of stock is needed. If the principal agricultural society in the kingdom has afforded but little aid in this respect, so much the worse; but we must not confine our views to its country meetings, or, from what we may occasionally see there, commit a still greater mistake by joining in the unphilosophical recommendation to rely upon cross-bred stock for that which a pure breed will supply with much greater certainty. The Short-horns are now the chief dairy stock of the United Kingdom; with proper care in breeding they are by far the best milkers we have, and that without losing their other valuable properties, as hardihood of constitution, size, quality, and aptitude to fatten. The cross which Mr. Smith recommends may sometimes produce a very useful animal, but, we repeat, satisfactory results can be less safely relied upon in this case than with the pure breed; the same Alderney cow may bring one calf that shall be a good milker, and three or four that shall be nearly worthless in this respect. Suppose a farmer to possess a herd bred in this way, which had taken considerable time and a large expenditure to establish, what is to be his next step? He cannot go on with his cross-bred animals, as he could with a pure breed.

At the same time, it must be admitted that there is in some quarters a prejudice against the use of pure-bred cows for milking, and that cross-breeding is still too frequently resorted to. We may, therefore, usefully employ a portion of our space in bringing together a few facts and the opinions of practical men, in order to show that this prejudice is not only unfounded, but that it is most injurious to the interests of those who are under its influence. [Quotations are then made from the writings of Mr. Strafford, Mr. W. Wood, and others to this effect.]

These extracts are, we think, perfectly conclusive on the points to which they refer, and there would be no difficulty in supplying much additional evidence to the same effect. It cannot, therefore, be right to urge upon breeders of stock the adoption of a course which nearly every man of intelligence who has given attention to the subject must know to be objectionable in practice,—as calculated to deteriorate rather than to improve. From what we are now witnessing, it appears to be pretty certain that cross-breeding of cattle will in a few years be well-nigh abandoned, for the advocates of this system find it difficult to maintain their ground; while, as regards our sheep stock especially, pure breeds are rapidly displacing the mongrels which were so frequently seen a few years ago. Many sheep farmers have, indeed, suffered severely from not being content with good and improving flocks, well adapted to the locality, and have found it an expensive process to repair the mischief caused by the introduction of an injudicious cross.

With regard to the exhibition of Short-horns at Warwick, we believe the general opinion will be that Mr. Smith has rather underrated the character of that class of stock, and especially of the classes for cattle best adapted for dairy purposes. The latter classes were considered by competent judges to be amongst the most interesting features of the show, and they undoubtedly brought together many very useful animals. In this case it was not quite "a distinction without a difference;" but that the object of the Local Committee in offering the prizes was not more intelligible to visitors was alone the fault of the Council, who declined to adopt publicly the regulation pressed upon their attention, and which was to the effect that in these classes the Judges would be instructed to take into consideration, as of primary importance, the milking properties of the animals exhibited, in addition to their general form, size, quality, purity of breed, and aptitude to fatten. The two classes for pairs of cows and heifers in milk or in calf unquestionably contained a number of remarkably fine animals, to all appearance well adapted for the dairy; and, notwithstanding the absence of any special instruction, there is a well-founded impression that the Judges of Short-horns at Warwick looked more to useful qualities than had been the case at previous meetings.

We publish these observations not for the purpose of cavilling at Mr. Smith's report, but mainly in order again to draw attention to a subject of great interest, to which frequent reference has been made in our columns. We are aware also that those portions of the report in question to which we have alluded have excited some surprise amongst the breeders of Short-horns, and it was therefore desirable to show that different opinions are entertained by competent judges, not only as regards the Warwick Show, but on the breeding of dairy stock generally. *Midland Counties Herald.*

TIPTREE HALL LIVE STOCK ACCOUNT.

A desire having been expressed by several very intelligent agriculturists to see the particulars of my live stock account, and knowing that their motive is not a captious one, but a desire for comparative facts on this important part of farming, I cheerfully accede to their request. This balance-sheet will prove what I have so long and so often said, that live stock are necessary evils—that they entail an immediate loss for a prospective benefit. You cannot do without them; on the contrary, the more you have of them, up to a certain point, the more profit you will make by farming. This appears paradoxical, but it is, nevertheless, quite true. The quantity of manure you make bears an exact relation to the quantity of meat you produce; and we know that if you are to sell off your farm abundant and frequent crops of cereals and other exhausting crops,

you must apply plenty of manure. Taking the country on an average, there is not half enough meat made per acre; and this accounts, in part, for the miserable crops we see.

My Scotch friends were particularly angry with me for calling live stock necessary evils, but I would illustrate my argument by stating that no man who had not a farm could feed a lot of animals with profit if he had to buy, and pay market price for their food. I know by long and large experience that pigs pay better for purchased food than any other stock—and even they will by no means "clear their teeth;" and if you charge attendance, shelter, and casualties, they will show a loss of 10 per cent. or more, with the best management. I have seen a great many balance-sheets of pig feeding from village tradesmen, labourers, and others, who were knowing hands at this business, and in almost every instance there was a loss.

In making out my live stock balance sheet I always carefully take stock at beginning and end of the year, and the balance represents the quantity of meat produced. The market value of lean stock at the end of 1858 and 1859 being pretty equal, makes this balance sheet extremely accurate, as an average one. Twenty-nine acres of fine root and green crops are consumed, besides the aftermath of 18 acres. A good deal of straw is also consumed, for which I make no charge, as I take no credit for it. But if I charge the green and root crops and the horse and manual labour, casualties, mill power, &c, there will be a loss of 172*l*. This statement in no way affects my general balance sheet.

I consider this a fair average year of my general stock management. It is certainly infinitely more favourable than could be obtained under ordinary management, by those who allow their cattle to wander about the fields late in the season, without shelter, and who do not soil their green crops. In my case the animals are all comfortably housed, the food cut up, steamed, &c, on the most approved plan, the corn, &c., ground for pigs or crushed for horses at my own mill, the green Clover and Tares passed through the chaff-cutter, cut straw chaff given to the sheep, as detailed in my book on Farming. Had I used Linseed-cake instead of Rape-cake my account would have been less satisfactory. Strange to say, farmers tell me their animals will not eat Rape-cake. I have used 100 tons, and never saw a bullock or sheep that would not eat it, and thrive upon it. I adhere strictly to Mr. Horsfall's practice, as detailed in the Royal Agricultural Society's Journal—vol. xvii. p. 260, vol. xviii. p. 150—in the mode of feeding my cows and cattle. I am often astonished at the miscalculation which permits large farmers to send to the mill their corn for stock, when they might grind it at home so much cheaper. In fact no farm of 200 acres ought to be without mill stones, and all the other necessary attachments to steam power.

We must, as agriculturists, prepare for great changes in our economical arrangements, with a view to the more profitable results. This has been done in threshing. Let the principle be carried out. In my general balance sheet I make no charge for horse keep, nor do I take credit for what they consume. The six consume about fifty quarters of Oats annually, being allowed two bushels (70 lbs.) each. weekly during eight months. They get no hay, except for three weeks in October. Their Oats are crushed and mixed with fine cut straw, and green food passed through the chaff-cutter. From October to May they get Mangel Wurzel, which are carefully cleaned, and placed whole in the manger. They seldom or ever are turned out. The stables are properly ventilated. Their condition is excellent. They clear or consume about 10 acres of green and root crops, and 5 acres of Oat crops, annually, or something less than 2½ acres per horse annually. The ordinary clearance in this neighbourhood is quite 5 acres per horse annually. I still continue of opinion that sparred floors are an advantage, as they economise straw for food, and the animals thrive upon them. Probably we shall find it best to substitute iron grating or trellis work upon iron girders, as being, in the long run, cheaper than wooden spars.

I have an impression that they might be advantageously used for horses. In fact Mr. Young, the great livery stable keeper at Leeds, has always used them—they save him so much in the purchase of straw; 13-14ths of animal manure being urine, one can easily understand that much less straw is required on the boards. It has long been the custom in Essex to fat calves on boarded floors, with openings to let the urine pass between them. It is said they die of a better colour, and the same remark applies to pigs. With respect to horses, it is my intention carefully to try them with Rape-cake instead of corn. It is much cheaper, and its elements, both as food and as manure, are more valuable than those of corn. Everybody now knows the value of decorticated Cotton-seed cake for feeding purposes, and ultimately for manure.

In conclusion, I am satisfied that the same principles apply to animals as to ourselves. Warmth, dryness, and shelter in cold weather, and plenty of air and shade in hot weather, are sought alike by both. If you will provide a brush, in the shape of a cut haulm wall, animals will groom themselves; but, if they have not that, a little artificial grooming will be as acceptable to our bullocks as to our horses. How would our carriage horses thrive without the removal from their skins of the dust and crusted exhalations? If I am asked which stock I should prefer, I would say it is very desirable to rear good stock—where the farms are suitable. But we must remember that the manure from breeding and suckling and young animals is of very little value compared with those of full-grown fattening animals; therefore we must make up for this by very high feeding and artificials, or we shall grow small crops of corn. When our farmers know more of the chemistry of agriculture—and some are studying it—they will feel the force and truth of Baron Liebig's remark, page 173 of his work on Modern Agriculture, where he says:—

"A practical agriculturist, Albrecht Block, is reported to have said:—'A farmer can afford to sell and permanently alienate only that portion of the produce of his farm which has been supplied by the atmosphere—a field from which nothing is abstracted can only increase, not decrease in productive power.' If we express the same idea in another form, viz., 'A farmer may sell and permanently alienate all the portion of the produce of his farm which has been supplied by the atmosphere—a field from which something is permanently taken away cannot possibly increase, or even continue equal in productive power,' the axiom thus enunciated is simply a natural law. In this opinion of this truly experienced man, to whom future agriculture will surely raise a monument, is at once expressed the whole foundation and groundwork of rational farming, and all the knowledge that the science of nature can teach the practical farmer. Every act of the farmer which violates the laws of nature must justly be branded as an act of spoliation."

A great deal of my live stock has been purchased full grown pigs, fattened to hogs, by Barley ground into meal. Nothing pays so well as Rape-cake given to sheep and bullocks. The late Mr. Pusey knew this; and I should recommend young farmers to cover their land with sheep eating Rape-cake or decorticated Cotton-seed cake. The result in the succeeding corn crops must be profitable. My sheep eat more cake as they increase in fatness: they begin with ¼ lb. daily, and finish with 1½ lb. daily. It is desirable to give them hay instead of cake for a few days before they are killed. I would recommend every farmer who can afford it, to make at least 4*l*. to 5*l*. worth of meat per acre. To do this he will have to purchase food equal to 3*l*. per acre. Supposing you lose 7½ per cent. by this purchase, or 4*s*. 6*d*. per acre, your gain, in the succeeding corn and other crops, will be at least 1*l*. per acre. I say nothing about the breeding question. A man, having first-rate powers of observation in regard to stock, is sure to do well in such matters. *J. J. Mechi, Tiptree, March* 30.

LIVE STOCK.

Dr.	£	*s.*	*d.*
Lean stock purchased	545	0	0
Purchased food—Barley and Rape-cake, 3*l*. per acre on 170 acres	510	0	0
Horse and manual labour, carting and cutting up roots and green crops, preparing food, &c.	104	0	0
Steam engine grinding corn, breaking cake, chaff-cutting, &c.	22	0	0
Casualties, 1*s*. per acre	8	10	0
Sundry other expenses	10	0	0
10 acres Mangel Wurzel (cost 10*l*. per acre)	100	0	0
6½ acres Swedes (cost 9*l*. per acre)	58	10	0
About 12 acres of green crops	60	0	0
22 acres aftermath, Clover and Grass	33	0	0
	£1451	0	0

Cr.	£	*s.*	*d.*
Meat, wool, dairy produce, and poultry sold	1279	0	0
Apparent approximate loss	172	0	0
To which, in fact, should be added the interest on the buildings affording them shelter, and wear and tear of troughs, implements, &c., used in feeding; also the value of much straw used as food.			
	£1451	0	0

Home Correspondence.

The Science of Plant Cultivation.—I have often thought that a popular book on agriculture, like Dr. Lindley's "Theory and Practice of Horticulture," is much wanted for the farmers to lead their minds into a train for reflection on what would improve the varieties of the plants they produce, either by hybridising or acclimatising what might perhaps be got from warmer climates. Something may be learned of my meaning at page 489 of Dr. Lindley's book already referred to; and now, when plants are wanted to make paper, a botanist like Professor Buckman might suggest much. The farmers have lost much by being so blind to the advantages of Mangel Wurzel, Kohl Rabi, and Cabbage, which suit the climate, and sticking so closely to Turnips, which do not; of course I refer to the South of England.——The article about Chinese Cabbage in the *Gardeners' Chronicle* illustrates in some measure what I mean regarding a book for agriculturists like Dr. Lindley's "Theory and Practice of Horticulture." The kitchen gardener may have been at fault in not trying to find out more useful plants, but I think the farmers have been much more so. Such a book as I fancy is wanted is not such as could be written by practical farmers, or chemists, or mechanics, but by botanists like Dr. Lindley, Professor Buckman, or Dr. Balfour. Professor Wilson's books, which your Paper referred to on Saturday, are scarcely what I mean for of practical information about working the land it seems enough can be obtained, though not about improving plants. A little has already been done in the way from the improved plants drawn, I suppose, from the wild Cabbage, such as Rape, Kohl Rabi, &c. Then there are the various varieties of Wheat, some of them no doubt hybrids, also Turnips, and I have heard of a certain 40 or 50 Day Maize grown by Page at Southampton some years ago, advertised in your newspaper. Could not this perhaps be crossed with some of the sorts n the South of France and made useful in England—I mean the South of England? Of course this is only an idea which strikes me at the moment as an illustration of my meaning. The Lupine I see is now spoken of in the agricultural papers, but I see Liebig alludes to it in his extracts from some of the Romans, in his letters on Modern Agriculture. Of course climate must have much to do with all this. This few farmers know anything of or seldom think of, and a botanist would be the best person to point it out in an attractive book. *Surrey.*

Price of Labour on Tweed-side.—Having attempted to describe the system of farm management in that highly cultivated district which lies between the Cheviots and the Lammermoors, allow me to correct an error I committed in reducing to cash the quantity of payment in kind paid to a hind in a twelvemonth for his own and his bondager's work. You will observe by referring to page 81 of the *Agricultural Gazette* for 1859 that "54*l*. 16*s*. 4½*d*. is all the hind receives for his own wages, for paying the bondager's wages, giving her board, lodgings, and materials for washing her clothes." In looking over the various items I observe 8*l*. 18*s*. 1½*d*. for Oats, which should have been 10*l*. 17*s*. 6*d*. And I charge 5*s*. per week for two weeks in harvest for the bondager's board, which ought to have been deducted from the 52 weeks. So, had I made out a correct statement, 57*l*. 6*s*. 9*d*. is the gross total paid to the herd, and 31*l*. 4*s*. 9*d*. ought to have been the hind's wages. But it requires 2*l*. 10*s*. for being allowed to keep a pig, and the bondager to have wrought full time to make up such a wage; but as very few farmers prohibit householders from feeding pigs, and as very few farmers allow anything for the hind not keeping a pig, the 2*l*. 10*s*. ought to be excluded. So, taking the aggregate average prices of grain for 1859, and allowing 12*l*. for the bondager's wages, I make the above form of payment, exclusive of a garden and the liberty to feed a pig, equal to 25*l*. 2*s*. 6*d*. Not being employed in the bondage district at present, I beg to state that I have taken the quantity of payment in kind which was paid in 1856, and the present rate of bondager's wages as my guide. In the hiring of single servants the average price for the winter half year for females was 3*l*. 10*s*., and for the male servants 7*l*. to 8*l*., with whom a great many engagements were made. Few have had better opportunities of being conversant with the bondager system of management than I had by residing nearly 28 years amongst it, coupled with my father being employed during a period of 34 years as a farm steward on five farms—two of 600 acres each, two of 1300 acres each, and one of 1800 acres in extent. And I trust Mr. Grey, of Dilston, will either cease speaking about his hinds being able to "indulge in beef and mutton," or prove that his hinds' wages are equal to 15*s*. per week. *A Labourer.* [The following is the corrected statement of the wages paid in Roxburghshire to farm labourers, according to the average prices of grain during the 52 weeks ending on the 24th September, 1859:—

60 bushels of Oats, at 2*s*. 11½*d*. per bushel	£8	17	6			
24 do. of Barley, at 4*s*. 2½*d*. to 4*s*. 2½*d*. do.	5	0	3			
6 do. of Peas, at 4*s*. 9½*d*. do.	1	8	9			
1500 yards Potato drills	3	0	0			
Money	4	0	0			
A month's food during harvest	1	0	0			
A cow's keep	7	0	0			
The cartage of 7 cartloads of coals	2	16	0			
House rent	2	16	0			
Hind's wages for his own work	£35	18	6	35	18	6
Money paid to the hind for his bondager's work:—						
12 days during harvest, at 2*s*. 4*d*. per day	1	8	0			
223 days, at 1*s*. per day	11	3	0			
78 days, at 10*d*. per day	3	5	0			
Bondager's board for 2 weeks in harvest	0	10	0			
	16	6	0	16	6	0
Supposed gross total paid to the hind for his own and bondager's work				52	4	6
What the bondager costs the hind:						
Wages	12	0	0			
Board for 50 weeks, at 5*s*. per week	12	10	0			
Lodgings for 52 weeks, at 1*s*. per week	2	12	0			
				27	2	6

Societies.

ROYAL DUBLIN: SPRING CATTLE SHOW.—When the Royal Dublin Society, the oldest incorporated agricultural association in the empire, was established by a few well-meaning Irishmen, they could have had little hope that it would grow into a great national agricultural Society. The improvement of Irish husbandry was one of the fundamental objects which these patriots contemplated. But it was to be a collateral and not the leading object of solicitude. And so the Royal Dublin encouraged husbandry in a variety of ways, and with increased or diminished zeal according to the views of its governing body. Like every other institution of a similar kind in the sister isle the capacity of the Royal Dublin was tested by the calamitous events of the period from 1846 to 1850. It were useless to speculate in this place on the operations of the Society in that period. It is enough to say that for some time past at all events the Royal Dublin has been in every sense of the word the leading agricultural Society in Ireland. It has two annual exhibitions of live stock and farm produce which reflect the state of agriculture in the country. One of these, the annual

Spring Cattle Show, opened on Tuesday, the 10th. Before proceeding to review the several points of attraction which the exhibition presented, we may say a word or two about the prize list. It is necessary to remark that the Royal Dublin Society is very peculiarly circumstanced. Each man pays an annual subscription of 2*l.* a year, besides an entrance of 3*l.* 3*s.*, a charge which, for agriculturists, is preposterous. There is a large annual grant from Parliament, From both sources the Society's income is very considerable.

Now, notwithstanding that its agricultural is at this moment the most useful section of the Society, and the one, too, from which it is most actively and heartily supported, the scale of prizes for cattle is meagre in the extreme. Indeed, to descend from the consideration of the standing of the Society and its income to the premiums for pure-bred stock, is like gliding from the sublime to the ridiculous. From a hasty tabulation of the prize list we make out the following summary :—

113 Money Prizes—their total value	.. ..	£228
Average value of each	.. ..	2
113 *Prizes*, viz. :—Bronze Medals	.. .. ..	8
Silver Medals	.. .. ..	100
Gold Medals	.. .. ..	5
		113

The paltry money prizes of the Royal Dublin Society can exercise little influence on stock breeders; and until the Society deals with that class in the same liberal spirit as the other agricultural societies, we should consider it would be wise to substitute "certificates" or silver medals for the 2*l.* and 3*l.*, and to employ the money so economised on some of the other objects which appear more in favour with the governing body of this institution. The Society is far more stringent in its conditions for successful competition than liberal in its prizes. Thus it is exacted that "bulls entitled to the prizes as best and second best of all the prize bulls—the extra premiums for which superexcellence are gold and silver medals—must each serve 20 cows (approved by the owners of the bulls) belonging to tenant farmers in Ireland, at 10*s.* each cow." A silver medal is a poor compensation for a restriction of this kind, with which, morever, it may be impossible to comply.

We would also venture to offer a suggestion to the framers of the prize list. The best Short-horn heifer or cow gets a prize of 3*l*; and the same premium is awarded to the best sow. We should consider that common sense, irrespective altogether of the relative value of the animals as well as of precedents, would ere this have pointed out a different course. We should also consider that the second best Short-horn heifer would be entitled to a more valuable prize than a duck or a pigeon. But some of the agricultural (?) authorities of the Royal Dublin Society seem to think otherwise; and we shall not quarrel with them further than thus briefly to direct attention to the interesting fact.

The strongest part of an Irish agricultural show, and more especially of the Royal Dublin Society's, is the Short-horn classes. Confining ourselves to the mere question of numbers, we find that in

	1859.	1860.
There were yearling Short-horn bulls ..	84	120
Ditto heifers	32	31
Other Short-horns	112	107
Totals	228	258

So far it may be considered that the exhibition is a success; but, then it must be borne in mind that the merely numerical is a very poor standard whereby to judge of the progress of a show of Short-horns. The increase consists of yearling bulls; and we are reluctantly compelled to say that a very large percentage of these were ill-shaped and unprofitable creatures, that reflect little credit on the taste or skill of their owners —a remark which, by the way, applies with equal truth and still greater force to several animals shown in the other sections.

Making the necessary deductions on the score of numbers the show of Short-horns has been on the whole creditable to the Society, and to the skill and enterprise of Irish Short-horn breeders. The competition this year has excited unusual interest, owing to the large number of Cups and piece of Plate announced as extra stimuli.

In Section I., for instance, Short-horn bulls calved in 1859, we find "Soubador," bred by his present succesful owner, Mr. Richardson, of Glenmore, Lisburn, Co. Down, obtained the 1st prize of 5*l.*, a large Silver Medal, and the Challenge Cup presented by the spirited auctioneer, Mr. James Ganly, value 50*l.* Soubador is an animal of apparently great substance, but his appearance is greatly due to a fine coat of hair. He is possessed of a fine constitution, and is well descended.

The Ganly Cup is accompanied with the following restrictive clause :—

"The owner must engage that the bull shall remain in Ireland for one year subsequent to the Show, and serve twenty cows belonging to *bonâ fide* tenant farmers at 10*s.* each; and agrees to forward a certificate from the owners of the cows served to the Committee of Agriculture, within 12 months, to return them if the cows proved in calf. This Cup to be changed every year at the Spring Cattle Show of the Royal Dublin Society. The holder to give security that it shall be duly engraving, and delivered up to the Assistant Secretary ten days before the commencement of the Show : to be won three years successively by the same Exhibitor before it becomes his property."

The second prize in this Section has been awarded to Mr. Crosbie, of Ardfert Abbey, Tralee, county Kerry, for "Lord Darnley," [we correct a mistake in the Catalogue, which says he was got by a bull of that name] an animal which in many respects we prefer to "Soubador." He has better turned shoulder-blades, fuller and in every way better formed ribs, and is well-filled in most parts. In this Section Mr. Majoribanks, Bushy Grove, Herts, was highly commended for "Young Mogul," a roan out of the "Great Mogul." The "Young Mogul" handles admirably; and when grown he acquires a little more depth of rib will prove a smart and valuable animal.

We now proceed to review the several animals exhibited in Section II., Short-horn Bulls, calved in 1858.—To Lord Talbot de Malahide was awarded 1st prize in this class for "Clydesdale," which was bred by Mr. Tynte, of Dunlavin, county Wicklow. "Clydesdale" was ranked first in his class at the Dundalk Meeting of the Royal Agricultural Improvement Society of Ireland; and it is enough to say that he has not fallen off in any of his points since that meeting. Mr. Lyndsay, of Killyleagh, county Down, won 2d prize in this class with "Mystery," which also stood 2d to "Clydesdale" at Dundalk, and of which we remarked at the time (and the remark is still applicable) that his "points" are of average quality. This bull is deficient in the loin, his neck is rather coarse, and his head can scarcely be said to deserve more favourable mention. The shoulder is also a little coarse.

In Section III., Short-horn Bulls calved in 1857, the 1st prize was awarded to "Dr. McHale," the property of Mr. Barnes, Moynalty, county Meath, by whom the "Doctor" was bred, and for whom the animal has already, as the reader is aware, gained some distinction. The "Doctor" wants that extreme mellowness of touch without which a Short-horn is not perfect; but, taking him all in all, he is far and away the best animal exhibited on this occasion—the best bull in Ireland; one of the best in the United Kingdom. Stands admirably; is square and even; has well formed and well set shoulders; a good masculine head and neck; and in short has developed those points which give excellence to a bull. He carries with him to Westland on this occasion not only the 1st prize in his class, but the Gold Medal as the best of all the prize bulls, the *Irish Farmers' Gazette* Challenge Cup, and the Irish Railway Cup. Thus he distances "Sir John," the property of Mr. Jaffray Barcroft (bred by Mr. Tynte), by which he was beaten on two former occasions. Verily the chances of success in Short-horn competition are very fickle. This time last year, under the same roof and under the auspices of the same Society, "Dr. McHale" was judged and found defective. The second place was also awarded him at Dundalk last July; but within the space of nine months the balance order of merit of the animal is reversed. We rejoice that it is so. For notwithstanding that "Sir Colin" as a yearling and as a two-year old came out with some excellent points, he cannot stand comparison with "Dr. McHale." An anatomical examination of "Sir Colin" brings several defects to our mind. His fore legs are radically bad; and from his nose to his tail a critical eye would find some point at which to rail. He is notwithstanding a substantial animal.

The reversal of the decision in the case of these two animals betrays a glaringly weak point in our mode of adjudication. It is quite evident, even to those who are outside the "ring," that there is no standard scale of points. We adverted to this on a former occasion. We recur to it again in the hope of inducing those most interested in the subject to give it that attention which its importance deserves. The interests involved are momentous interests. Need we apprize any Short-horn breeder how judges are nominated? At a meeting, say of the Agricultural Committee of the Royal Dublin Society, one gentleman proposes Mr. Torr (and we select him because he is highly competent), whose name may have been suggested to the gentleman who nominates him by a third gentleman who may perhaps feel an interest in the success of Booth blood, which every intelligent agriculturist knows to be Mr. Torr's favourite breeding. Mr. Torr becomes a judge, and another having the same leaning is appointed with him. The result suggests itself. The case we put has occurred over and over again; and what is more, those who adopt a particular class of Short-horn are urged by self-interest to combine, we will say legitimately, to raise that class—that blood or line of Short-horns—as high as possible in public estimation. It occurs to us that the interests of Short-horn breeding absolutely require that combinations of this kind should not be carried so far as to influence public awards.

Farmers' Clubs.

London: *Cross-bred Sheep.*—The following is an abridged report of the discussion which followed Mr. Howard's paper on this subject :—Mr. Coleman of Holkham, said—He had been a cross breeder for the last seven or eight years, and the practice he had adopted was to use the long-woolled ram and the short-woolled ewe. By getting the best male animals his flocks were kept right, and he could depend upon what they would be. One great advantage of crossing the long and the short wools was, that the animals did not require so much food as the pure breeds, in the winter, on the light lands. A few persons were trying the system of putting the cross-bred ewe to the long-woolled ram for the sake of getting a large animal and a greater amount of wool; but he could not learn that they were likely to continue that practice very long. The Club were much indebted to Mr. Howard for the information contained in his paper; but he could have wished that gentleman had told them a little more about what he himself had done as a producer of cross-bred sheep; and he hoped that before the discussion terminated he would state his reasons for using cross-bred sheep over and over again. Were Mr. Howard to go to Norfolk, he would find himself with comparatively few followers; but in Bedfordshire the state of things was totally different, and he (Mr. Coleman) was obliged to own, though he did it reluctantly, that he was a convert to his way of thinking.

Mr. Thomas (Lidlington) wished to point out the fallacious idea which was entertained by some gentlemen, especially young farmers, that because certain breeds of sheep were of greater weight than others, they must therefore be necessarily more profitable. It had occurred to his mind, whilst listening to the present discussion, that a long series of experiments have been carried on by the late General Wemyss upon the Prince Consort's Flemish farm. Year after year General Wemyss had tried comparative amounts of food consumed by the pure-bred Southdown and the pure-bred Hampshire Down; and he arrived at the conclusion that five Hampshires ate as much as eight Downs. The extra weight, therefore, which so many Hampshire breeders prided themselves upon, as compared with the Southdown, might, after all, be obtained too dearly.

Mr. Fisher Hobbs said the point for the farmer's consideration was, what breed of sheep would pay him best to keep per acre—and whether the cross-bred short-wools or long-wools were the best for this country they could not decide that night. His own opinion was that there were climes and soils for every description of breed and cross judiciously managed. The first point which had struck him in Mr. Howard's remarks was the statement that the cross-breeds of this country having much increased within the last few years, folding had become proportionably less general. If that were so, and the only merit of the cross-bred sheep was that of capability of fattening and early maturity, the question was whether the producer was not losing as much one way as the consumer was gaining the other. Mr. Howard had asserted that the practice of folding sheep had decreased since the introduction of the use of artificial manures. Now, if those manures were of the value which they were considered to be, and they were being introduced to such an extent that some persons laid out as much as 1*l.* an acre for them, the increased production arising from their use ought also to give an augmented supply of sheep to improve the land. He was not inclined to think, therefore, that the folding of sheep had decreased in this country. Certain breeds were better adapted to one climate than to another, and at certain periods of the year were more useful. He had been a cross-breeder himself to some extent; at the same time he kept one or two pure-bred flocks on his farm, and this practice he had adhered to for 20 years. The more cross-breeding there was, the more would pure breeds be encouraged, and the more valuable would they become; but he contended that they must select their animals to suit the particular soil and climate.

Mr. R. Bond, Long Melford, might state that he started some years since upon a heavy land farm, and of course sought out the most profitable system. In fact, he looked upon it, not as a matter of breeding or blood, symmetry or size, but simply as one of profit. What he wanted was an animal that would return the largest quantity of meat and wool for a given quantity of food. Living amongst Southdown breeders he had adopted their opinions, and was perhaps rather prejudiced in favour of the Southdown breed. After giving the pure breed a trial, he picked out the best Southdown ewes in the flock, and hired the very best tups he could meet with; the result was, that he obtained a lamb which did not sell freely and readily in the market. He then made a change, still using the Southdown ewe and hiring a Leicester tup, and the change was decidely advantageous. Afterwards he substituted a Cotswold tup, and the conclusion at which he had arrived from the experiment was that upon heavy lands the Cotswold was greatly superior to the Leicester. But he did not stop there. He next used a Hampshire ewe and a Cotswold tup; and although he was not prepared to assert that it was the best cross that could be adopted, yet it had answered his purpose remarkably well. Subsequently others had taken the experiments up where he had left off, and gone still further, especially his friend Mr. Fyson, who had resorted to the system of breeding from cross-bred animals on both sides, and had told them that he was better satisfied with breeding from the two crosses than from one. That gentleman's flock consisted of crossed half-breds from Leicester tups and Down ewes, and in a letter which he had written to him he stated that his ewes had done particularly well this year; that from 20 score of ewes he had 30 score of lambs, and that he expected a score more. This evidently showed that the system was attended with considerable success. He further stated that the deaths among his ewes had amounted to only three. The experiments which had been made by Mr. Lawes scarcely bore out the remarks which had fallen from Mr. Thomas as to the quantity of food consumed by

different breeds, inasmuch as he showed that the Hampshire and Cotswolds produced a larger quantity of meat and wool from a given quantity of food than the Southdown.

Mr. Cother (Woodstock), said he was a breeder of Cotswold sheep; and, in the capacity of an auctioneer, had had a great deal to do with the sale of Cotswold rams. Mr. Howard's estimate of the number of Cotswold rams sold in the course of the season was, he believed, far under the mark. In the last season his sales for a professed breeder and himself amounted to nearly 800, and he thought that the sales by various other auctioneers would go far towards making up 4000. There were, moreover, a great number of rams sold privately for removal to various counties of England—the majority going eastward. Cotswold rams were not unfrequently sold for exportation at 40, 50, and even 60 guineas apiece. To whatever extent crossing might be carried, he did not think the Cotswolds would, as a race, ever be severed from their native district, the Cotswold Hills. They were not, as some people supposed, a large and unkindly breed of sheep, but had an extraordinary propensity to fatten. This year a nephew of his connected with Smithfield market sold a number of ewes at 3 guineas apiece, and a number of tegs at 60s., and those were not bad prices. And he should be rather surprised to find other sheep yielding more per head.

Reviews.

The Over-preservation of Game; a Paper read before the Members of the Central Farmers' Club. By Henry Corbet, the Secretary. J. Ridgway, 169, Piccadilly.

We called attention to this clever paper on a most important subject at the time the author read it. He has now published it in pamphlet form; and we hope it will obtain the large circulation which it deserves.

Notices to Correspondents.

AGRICULTURAL DIPLOMA: *R.* The examiners of the Highland Agricultural Society have, it is said, had but one candidate this year for their diploma.

BOOKS: *Agricola.* We would advise you to procure the "Encyclopædia Britannica," more especially the parts containing Mr. Wilson's essays on Agriculture and Dr. Anderson's on Agricultural Chemistry, two of the most complete studies which exist upon their respective subjects in our language.

BRITISH ECONOMICAL MANURE: *J M.* If it be the same as was offered under this name several years ago, we advise you to have nothing to do with it. That which we then examined, though attested by many certificates of merit, was worthless.

GREEN MANURING: *A Subscriber.* There is nothing of more rapid growth for the purpose than Mustard. It will be ready for that purpose—i. e. just before it breaks into bloom—about seven weeks after sowing in good weather.

LUPINES: *A Subscriber.* Apply to any of the great seedsmen.—About Trottels see below. The paragraph was written a great many years ago.

PULPING ROOTS FOR CATTLE FOOD: *R.* Mr. Sadler, of East Lothian, who contributed a paper on this subject to the last Number of the Agricultural Society's Journal, has given to the *North British Agriculturist* the following further statement of an experiment showing a saving of Turnips by about 50 per cent., and by working the pulpers by steam, which he now does, the expense is very considerably reduced. Mr. S. is so satisfied of the advantage of the system that not only all the cattle on his farm, but the sheep as well, are kept on a mixture of pulped Swedes and Mangels mixed with cut hay and straw:—

Four Cattle fed for 72 days on 84 lbs. pulped Swedes and cut straw and 4 lbs. oilcake per diem.

No.	Live Weight of Each Beast at 2d Jan., 1860.	Live Weight of each Beast at 14th March.	Increase.	Swedes consumed pulped.
	cwts.	cwts.	cwts.	tons cwts.
1	8 1-8th	10¼	2 1-8th	10 16
2	8	9½	1½	
3	7	8	1	
4	7½	9 3-8ths	1 7-8ths	
	30 5-8ths	37 1-8th	6½	

Four cattle fed for 72 days. ad libitum, on sliced Swedish Turnips, fresh straw uncut, and 4 lbs. oilcake per diem.

No.	Live weight of each Beast at 2d January, 1860.	Live weight of each Beast at 14th March.	Increase.	Swedes consumed sliced.
	cwts.	cwts.	cwts.	tons cwts.
1	8	9½	1½	15 15½
2	7¾	9	1¼	
3	8¼	10½	2¼	
4	7½	8¾	1¼	
	31½	38	6½	

SEEDS: *A Constant Reader.* The seeds of the Grasses you have sent certainly do not belong to any British species, if indeed to our native genera. We have sown them, and shall hope to be able to make them out with accuracy.—Other samples of "seeds" are under examination.

TROTTEL PLANT: *W C K*, page 299. "W. B. B." says that the Trottel plant or Trottel root is an old story, and nothing more than a silly hoax that was played off in 1823 on the editor of the Monthly Magazine of that day.—*G J S, Camphill, Bedale*, says:—"Twenty-five years since I planted roots given me by that name in good land, having seen sheep, cattle, and pigs stall-fed upon the leaves in summer in Ireland, and I was told (and as it appeared) successfully. I was also told that donkeys (which are very prevalent in that country) were very partial to them. Nothing would touch them on my farm in Yorkshire, and they have ever since defied all attempts to be eradicated. It is the Symphytum tuberosum, a Comfrey."

*** As usual, many communications have been received too late, and others are detained till the necessary inquiries can be made. We must also beg the indulgence of those correspondents the insertion of whose contributions is still delayed.

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Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens
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Mr. Clark, Streatham Place, Brixton Hill, S.
Mr. Barnes, Camden Nursery, Camberwell, S.
Mr. Hopgood, Shepherd's Bush, W.
Cutbush & Sons, Highgate Nursery, N.
and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

FUMIGATING AND SYRINGING.
To GARDENERS, HORTICULTURISTS, FLORISTS, AND OTHERS.
GRIFFITHS AND AVISS, TOBACCONISTS, &c., High Street, Coventry, beg to call attention to their TOBACCO PAPER FOR FUMIGATING. There is nothing in its preparation injurious to vegetation, although it deals death and destruction to all insects ("except the red spider") that infest the greenhouse. G. & A. warrant their Tobacco Paper to keep good and retain its killing properties for six months. Price 12s. 6d. per dozen lbs., sent to any part of the kingdom on receipt of Post-office Order. N.B.—Tear the Tobacco Paper into pieces about the size of a florin, and ignite it with a piece of red-hot iron large enough for the purpose.
Very strong Tobacco Water for Syringing, 1s. 6d. per gallon.

KEEP YOUR PREMISES FREE FROM MICE AND SPARROWS.
BARBER'S POISONED WHEAT kills them (only) on the spot. In 1d., 2d., 4d., and 8d. packets.—W. SUTTON & Co., 10, Bow Churchyard, London, E.C Agents. Sold by all Druggists, &c., throughout the Kingdom. Works: Ipswich.

KEATING'S PERSIAN INSECT-DESTROYING POWDER.—Poultry, Dogs, and Plants are freed from Fleas and all other Vermin by the above Powder, which is quite harmless to animal life. Bugs, Cockroaches, Beetles, Moths in Furs, and every Insect are also instantly destroyed.—In packets, post free, for 14, or treble size for 36 stamps, by T. KEATING, Chemist, 79, St. Paul's, London, E.C.

GARDEN BORDER EDGING TILES.
ROSHER AND CO. beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.
Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.
N.B. Sketches of the patterns will be forwarded by post on application.

ORNAMENTAL PAVING TILES FOR CONSERVATORIES, HALLS, CORRIDORS, BALCONIES, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs. Also WHITE TILES, highly glazed, for Lining Walls of Baths, Dairies, Kitchen-ranges, Larders, &c. To be obtained of ROSHER & Co., at their premises as above.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—
"420, Strand, London.
"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles.
"Your obedient servant, G. GLENNY."
Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Callotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.—The Gutta Percha Company Patentees, 18, Wharf Road, City Road, London, E.C.

GARDEN WATERING ENGINES, PAIL MACHINES, CONSERVATORY PUMPS, and GREEN-HOUSE SYRINGES, with all the latest improvements.
Manufactured only by the Patentee,
RICHARD READ, 35, Regent Circus, Piccadilly, London, W.
Descriptions and Drawings post free.

PARKES' STEEL DIGGING FORKS.
BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require
ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

GARDEN POTS, VASES, ETC.
MAULE AND SONS manufacture and supply all sizes of the above mentioned Garden requisites in great varieties, at their Horticultural Potteries, Stapleton Road, Bristol.
☞ ILLUSTRATIONS AND PRICED LISTS sent on application.

GARDEN POTS AND PANS, in quantities of not less than 20 casts, delivered to the London Railway Stations at the following prices:—

Nos.	Thbs. 60.	60.	54.	48.	40.	32.	28	24.	16.	12.	8.	6.	4.	3.	2
Inches.															
Diameter	2⅜	3½	4½	4⅜	5½	6	6½	7	8	9	10½	11½	13¾	15	16½ 17½
Per Cast	2s.	2s.	2s.	2s.	2s.	2s.	2s.	2s.	2s.	2s.	3s.	3s.6d.	5s.	5s	5s. 5s. 5s

On lesser quantities, 6d. per mile, for delivery to the station would be charged. The usual discount to the Trade. Square Propagating Pans, Kale and Plunging Pots, Strawberry and Border Tiles, &c., made to order.
Country orders to be accompanied by a remittance.
J. & W. ADAMS, Kilns, Belle Isle, York Road, King's Cross, N

A LARGE ASSORTMENT OF VASES, FOUNTAINS, BALUSTRADES, and other Garden Decorations: as also of CHIMNEY PIECES, TRUSSES, and other Dressings for Buildings, manufactured in RANSOME'S IMPERISHABLE STONE, are now offered to the public at a considerable reduction in price, immediate clearance being requisite in order to make room for the newly manufactured goods.
Application to be made to Mr. FREDERICK RANSOME, Whitehall Wharf, Cannon Row, Westminster, S.W.; or Patent Stone Works, Ipswich. Specimens also on view at the "Exhibition of Materials, &c.," 9, Conduit Street, Regent Street, London, W., during the Architectural Exhibition.

PATENT PREPARED GARDEN AND OTHER NETTING, to be had in any quantity at the Spital Tongues Factory, Newcastle-upon-Tyne.

BRITTAIN'S GARDEN NETS are admitted to be the best and cheapest protection to Fruit Trees, and the most durable Hothouse Shading for summer. 55 inches wide No. 1, 5d.; 2, 6d.; 3, 8d. a yard. TIFFANY, 2½d. and 3d.
Sold by all Nurserymen.—BRITTAIN & Co., Manchester

TANNED NETTING at reduced prices, 200 square yards 10s.; 500 yards, 24s. Scrim Canvas for Wall Fruit, Greenhouse Shades, and Tulip Covers. Address to FREDERICK EDGINGTON, Marquee, Flag, and Banner Manufacturer, Thomas Street, Old Kent Road, London, S.E.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1½d 2 yards, 3d.; 3 yards, 4½d.; and 4 yards, 6d per yard, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.
An allowance to Nurserymen.

NETTING for Fruit Trees, Seed Beds, Ripe Strawberries, &c. TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3d. per yard, or 100 yards, 20s.; 4 yards wide, 6d. per yard, or 50 yards 20s. New Tanned Netting, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 5d. per yard 4 yards wide, 10d. per yard; 6 yards wide, 1s. 3d. per yard ¾-inch mesh, 4 yards wide, 1s. 4d. per yard.—Can be had in any quantity of EATON & DELLER, 6 and 7, Crooked Lane, London Bridge, E.C.

RICK CLOTHS, New, with Poles, Pulleys, and Lines complete.
RICK CLOTHS, a large quantity of Second-hand in good condition.
MARQUEES AND TENTS of all dimensions.
TENTS, SECOND HAND from the Crimea.
FLAGS AND BANNERS OF ALL NATIONS.
NETTING (BRITTAIN'S), New and Second-hand for preserving Fruit from Birds, Frost, &c.
Address—BENJAMIN EDGINGTON, 2, Duke Street, Southwark London Bridge, S.E.
West End Establishment, Charing Cross, S.W.

BROWN'S FLORAL SHADING.—The cheapest material for protecting the Bloom of Fruit Trees from frost.—Sold by all Nurserymen and Seedsmen in rolls 20 yards long, 38 inches wide, No. 1, 4s.; No. 2, 4s. 6d. per piece.—CHARLES BROWN, Greenheys, Manchester.

SHAW'S TIFFANY, a light, cheap, and durable material for Shading Conservatories and other Hothouses effectually securing Plants from the scorching rays of the sun without obscuring the light; also the best protector for Fruit and Seeds from Birds and Wasps, and the Bloom of Wall Trees from Spring Frosts.
SOLD IN PIECES. Per piece
No. 1.—20 yards long, by 38 inches wide
No. 1.—20 yards long, by 38 inches wide, the same material, manufactured with a Patent Mineral Solution to prevent it from rotting
No. 3.—(Double strength) 18 yards long, by 30 inches wide
No. 4.—(Treble strength) 18 yards long, by 30 inches wide
As a Shading material, No. 1 Tiffany is unequalled either in regard to price or the use and beauty of the article, for when drawn over the glass roof of a Conservatory, or stretched permanently on the inside, the effect is, as Professor Lindley remarks, "that of a white cloud reflected on the glass, which does no more than diffuse light, without obstructing it."
In protecting the bloom of Wall Trees, if the situation be exposed, Nos 3 and 4 are recommended, but where only a slight protection is required, No. 1 will be sufficient
Manufacturers and Dealers in every description of Matting, Canvas, and all such like materials for Garden purposes.
A liberal allowance to the Trade on taking four pieces.
CAUTION.—See that every piece is marked "SHAW'S TIFFANY, Manchester"
Address, JOHN SHAW & Co., 40, Princess Street, Manchester

PERMANENT GRASS SEEDS, CARRIAGE FREE.
Price 22*s.* 6*d.* per acre.

GEORGE CHIVAS is this year supplying his best MIXTURE OF GRASS SEEDS FOR PERMANENT PASTURE at 22*s.* 6*d.* per acre. A Copy of the numerous Testimonials in proof of the decided superiority of these Mixtures will be forwarded on application, and from which the following are selected, showing their general success in various parts of the kingdom :—

From the Right Hon. Lord DE FREYNE, *French Park, Ireland.*
"I laid down a field of, I believe, 9 acres, with your Mixtures of Grasses in the year 1855, which I highly approve of, and am now preparing to lay down a field of 16 acres, for which I will thank you to send me Grasses of a similar description."

From the Rev. THOMAS STEVENS, *Bradfield Rectory, Reading.*
"The Grass Seeds mixed by you for Permanent Pasture in my meadow have given great satisfaction this year; they have answered better than some others tried against them."

From Mr. GEORGE HATTON, *Southworth Hall, Lancashire.*
"I beg to assure you of my entire confidence in your Mixtures. I have always found them to answer well, and the second year's produce is superior to an old turf."

From Mr. J. W. SCRIVEN, *Throstle's Nest, Yorkshire.*
"Your Mixture of Grass Seeds is the best I have ever used.'

From Mr. BENJAMIN BOWLES, *Spalding, Lincolnshire.*
"The yield of your Grass Seeds was immense the first and second year."

From THOMAS KEEN, Esq., *Croydon, Surrey.*
"I have the highest opinion of the Permanent Grass Land laid down from your Mixture in the spring of last year. The Seeds were sown upon the young Wheat, and after harvest were very strong and healthy. They were rolled before Christmas, and again this spring, with a heavy iron roller, and without any exception it was the finest piece of seeds ever seen in our county."

From Mr. THOMAS READING, *Fulford Hall, Warwickshire.*
"The Grasses I had from you for permanent seeding have, I am glad to say, exceeded my expectations."

From Mr. W. LYCETT, *Shallowfield, Staffordshire.*
"The Grass Seeds with which you supplied me have given me general satisfaction. I can, with the utmost confidence, recommend them to every farmer laying down land to Permanent Pasture."

From THOMAS DORINGTON, Esq., *Newport, Salop.*
"I have great pleasure in recommending your Grass Seeds to those who wish to lay down land to Permanent Pasture those which you sent me are equal to an old sward."

From HENRY MUIR, Esq., *Tunstal, Staffordshire, Feb.* 8, 1859.
"I sowed the Grass Seeds you sent me without a crop on light sandy soil, reclaimed from common land, and am happy to say they quite answered my expectations, and look at the present time as well as I could wish them. I shall send you an order for more when I know the quantity of land I have to seed down this spring."

From C. GARFIT, Esq., *Agent to the* Rt. Hon. Lord DE TABLEY.
"Your Seeds are excellent, and as a proof of the high opinion I have formed of them I have purchased large quantities from you each year. I will thank you to send me this spring the usual supply for 20 statute acres."

North-West of England Seed Warehouse, Chester.

REIGATE SILVER SAND.—Best quality for Florists, 16*s.* per ton; less quantities 1*s.* 6*d.* per bushel, delivered to any London Wharf or Railway. Sacks for Sand, 1*s.* 6*d.* each; or on hire, 6*d.* each (five hold a ton); KENTISH and HAMPSHIRE PEATS, LOAM, and LEAF MOULD, in large or small quantities.—JOHN KENNARD, Purveyor to her Majesty, Swan Place, Old Kent Road, London, S.E.

TO LANDSCAPE GARDENERS AND OTHERS.

BOROUGH OF BIRMINGHAM.—The Burial Board Committee of the Council of the Borough of Birmingham are desirous of RECEIVING DESIGNS and ESTIMATES for LAYING-OUT and PLANTING the LAND purchased at Witton, distant about 2½ miles from Birmingham, for the purposes of a CEMETERY. The Designs must embrace the following particulars :—

First,—A Ground Plan of the Site, showing the proposed Roads and Walks, the Ornamental Planting, the portions to be used far the purpose of Interment, and all other requirements for the proper working of the Cemetery.

Second,—Sections showing the Earthwork required for the arrangement of the surface.

Third,—Such other details and suggestions as the Competitors may think necessary for the information and guidance of the Committee in their selection.

The site includes an area of about 105 acres, but it is only intended to appropriate about 60 acres in the first instance.

A premium of 30*l.* will be given for the Design considered first in point of merit, and one of 20*l.*, and another of 10*l.*, for the second and third. The Designs obtaining Premiums to become the property of the Committee, who are not to be bound necessarily to employ any of the Competitors to carry out the works.

Competitors to state the terms upon which they will carry out the Works.

Lithographed plans of the site, drawn to a scale of one chain to an inch, with contour lines marked thereon at every 10 feet of altitude, the sites of Chapels, Superintendent's Residence, Lodge, Entrances, and further particulars as to the competition, may be obtained on application to the Borough Surveyor, Public Office, Moor Street.

The Plans, Estimates, and Particulars, with the name and address of the competitor marked thereon, to be enclosed in a sealed cover, endorsed, "Plan for Laying out the Borough Cemetery," addressed to the undersigned, at his Offices, in Temple Street, Birmingham; and they must be there delivered, free of expense, on or before the 1st day of June, 1860.

THOMAS STANDBRIDGE, Town Clerk.
Birmingham, April, 21, 1860.

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"420, Strand, London.

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GENUINE TOBACCO PAPER FOR FUMIGATING.

H. APPLEBY (Foreman to Messrs. Ivery & Son, Surrey), takes this opportunity of informing his patrons and the public that he is now offering the above at a very considerably reduced price. It is now sold in packets of 4 lbs. each at 1*s.* 3*d.* per lb. A liberal discount allowed to the Trade. For testimonials that will guarantee its quality, see *Gardeners' Chronicle*, February 25, page 165.

SHEET IRON POTS FOR FUMIGATING, 3*s.* 6*d.* each.

N.B. All orders to be accompanied with a Post-office Order, payable to HENRY APPLEBY, Dorking, Surrey.

GENUINE ROLL TOBACCO CLOTH.
WARRANTED EQUAL IN STRENGTH TO TOBACCO.

JOSEPH BAKER, 10, Gough Square, Fleet St., E.C., having dealt upwards of 20 years in the above, can recommend it as the best article for destroying the Fly. 1*s.* 4*d.* per lb.; over 10 lbs., 1*s.* Post-office Orders payable Fleet Street.

NURSERYMEN supplied with the best genuine TOBACCO PAPER at 4*l.* per cwt.; 2*l.* per half cwt.; any quantity less than half a cwt., 10*d.* per lb. The above article is warranted genuine. Terms cash.—Address TOM BRYANT, Messrs. Jackson & Sons, Tobacco Manufacturers, Leeds.

GISHURST COMPOUND,
PATENTED,
FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN
AMERICAN BLIGHT	ANTS	FLY

BED BUGS, &c.,
And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1*s.* for first trials and small uses, such as destroying bed bugs; 3*s.* for not large gardens; 10*s.* 6*d.* for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

PAGE'S COMPOSITION FOR THE DESTRUCTION OF BLIGHT upon Roses, Wall-fruit Trees, Cucumbers, Melons, Vines, Stove and Greenhouse Plants, has stood the test of eight years' public trial, and its great success has led to numerous imitations. Dr. Lindley, in his leading article of October 25, 1856, reported 182 cases in its favour—sufficient to convince the most sceptical.

4*s.* per gallon, (sufficient to make four fit for use).
10 gallons and upwards, Carriage paid to London.

LONDON AGENTS :—
Henderson & Co., Pine-apple Place, W.
Hooper & Co., Covent Garden, W.C.
Mr. Veitch, King's Road, Chelsea, S.W.
Mr. Clark, Streatham Place, Brixton Hill, S.
Mr. Barnes, Camden Nursery, Camberwell, S.
Mr. Hopgood, Shepherd's Bush, W.
Cutbush & Sons, Highgate Nursery, N.

and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

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Very strong Tobacco Water for Syringing, 1*s.* 6*d.* per gallon.

RATS, MICE, AND BIRDS.—How to paralyse and render them immoveable on the spot, though there be hundreds, so that they may be gathered with a shovel and finally drowned. This is the plan adopted in Russia, communicated by a Russian prisoner. Sent to any address, post paid, for eight penny stamps, by FISHER & SON, Publishers, Kingsland, London, N.E. Punctually sent the following day.

Note.—If swarming the whole may be cleared in one night. Warranted at 1*s.* cost.

KEATING'S PERSIAN INSECT-DESTROYING POWDER.—Poultry, Dogs, and Plants are freed from Fleas and all other Vermin by the above Powder, which is quite harmless to animal life. Bugs, Cockroaches, Beetles, Moths in Furs, and every Insect are also instantly destroyed. —In packets, post free, for 14, or treble size for 36 stamps, by T. KEATING, Chemist, 79, St. Paul's, London, E.C.

HORTICULTURAL AGENT AND VALUER.

MR ALFRED CHANDLER, (of the late firm of CHANDLER & SONS,) 28, Priory Road, Wandsworth Road, S.

HOTHOUSES FOR THE MILLION.
MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete					£ 30
Do.	do.	40 ft. by 20 ft.	do.	do.	50
Do.	do.	60 ft. by 24 ft.	do.	do.	90

LIST OF PRICES of any size forwarded on application to J. LEWIS.

HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.
KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they Erect all kinds of Conservatories, Vineries, Greenhouses, &c, combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & SON have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

GARDEN WATERING ENGINES, PAIL MACHINES, CONSERVATORY PUMPS, and GREENHOUSE SYRINGES, with all the latest improvements.
Manufactured only by the Patentee,
RICHARD READ, 35, Regent Circus, Piccadilly, London, W.
Descriptions and Drawings post free.

GARDEN POTS, VASES, ETC.

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Nos.	Thbs.	60.	48.	32.	24.	16.	12.	8.	6.	4.	3.	2.	1.
						Inches.							
Diameter	2¾	3½	4¼	4¾	5½	6	6½	7	8	9	10½	11¾	13¾
Per Cast	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	2*s.*	3*s.*	3*s.*	6*d.*

Diameter	15	16¼	17¼	19									
Per Cast	5*s.*	5*s.*	5*s.*	5*s.*									

On lesser quantities, 6*d.* per mile, for delivery to the station, would be charged. The usual discount to the Trade. Square Propagating Pans, Kale and Plunging Pots, Strawberry and Border Tiles, &c., made to order.

Country orders to be accompanied by a remittance.
J. & W. ADAMS, Kilns, Belle Isle, York Road, King's Cross, N.

BLOSSOM OF WALL FRUIT TREES EFFECTUALLY PROTECTED BY WORSTED NET, lasts 10 years, require no removal. New Twine Garden Net, 1½*d.* per yard, Kyanised to prevent decay; Tanned Garden Nets, 6*s.* 3*d.* per 100 yards. All kinds of Sheep Nets, Fishing Nets, &c. &c. —R. RICHARDSON, Net Maker, 99. Euston Road, London, N.W.

NETTING for Fruit Trees, Seed Beds, Ripe Strawberries, &c. TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard, or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard, or 50 yards, 20*s.* New Tanned Netting, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 5*d.* per yard; 4 yards wide, 10*d.* per yard; 6 yards wide, 1*s.* 3*d.* per yard; ¾-inch mesh, 4 yards wide, 1*s.* 4*d.* per yard.—Can be had in any quantity of EATON & DELLER, 6 and 7, Crooked Lane, London Bridge, E.C.

PATENT PREPARED GARDEN AND OTHER NETTING, to be had in any quantity at the Spital Tongues Factory, Newcastle-upon-Tyne.

BRITTAIN'S GARDEN NETS are admitted to be the best and cheapest protection to Fruit Trees, and the most durable Hothouse Shading for summer. 55 inches wide. No. 1, 5*d.*; 2, 6*d.*; 3, 8*d.* a yard. TIFFANY, 2½*d.* and 3*d.*
Sold by all Nurserymen.—BRITTAIN & Co., Manchester.

TANNED NETTING at reduced prices, 200 square yards 10*s.*; 500 yards, 24*s.* Scrim Canvas for Wall Fruit, Greenhouse Shades, and Tulip Covers. Address in full, FREDERICK EDGINGTON, Marquee, Flag, and Banner Manufacturer, Thomas Street, Old Kent Road, London, S.E.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.
An allowance to Nurserymen.

RICK CLOTHS, New, with Poles, Pulleys, and Lines complete.

RICK CLOTHS, a large quantity of Second-hand, in good condition.

MARQUEES AND TENTS of all dimensions.

TENTS, SECOND HAND, from the Crimea.

FLAGS AND BANNERS OF ALL NATIONS.

NETTING (BRITTAIN'S), New and Second-hand, for preserving Fruit from Birds, Frost, &c.

Address—BENJAMIN EDGINGTON, 2, Duke Street, Southwark, London Bridge, S.E. West End Establishment, Charing Cross.

BROWN'S FLORAL SHADING.—The cheapest material for protecting the Bloom of Fruit Trees from frost.—Sold by all Nurserymen and Seedsmen in pieces 20 yards long, 38 inches wide, No. 1, 4*s.*; No. 2, 4*s.* 3*d.* per piece.—CHARLES BROWN, Greenheys, Manchester.

SHAW'S TIFFANY, a light, cheap, and durable material for Shading Conservatories and other Hothouses, effectually securing Plants from the scorching rays of the sun, without obscuring the light; also the best protector of Fruit and Seeds from Birds and Wasps, and the Bloom of Wall Trees from Spring Frosts.

SOLD IN PIECES.	Per piece.—*s.*	*d.*
No. 1.—20 yards long, by 38 inches wide	5	0
No. 1.—20 yards long, by 38 inches wide, the same material, manufactured with a Patent Mineral Solution to prevent it from rotting	6	0
No. 3.—(Double strength) 18 yards long, by 39 inches wide	7	6
No. 4.—(Treble strength) 18 yards long, by 39 inches wide	9	0

As a Shading material, No. 1 Tiffany is unequalled either in regard to price or the use and beauty of the article, for when drawn over the glass roof of a Conservatory, or stretched permanently on the inside, the effect is, as Professor Lindley remarks, "that of a white cloud reflected on the glass, and does no more than diffuse light, without obstructing it."

In protecting the bloom of Wall Trees, if the situation be exposed, Nos. 3 and 4 are recommended, but where only a slight protection is required, No. 1 will be sufficient.

Manufacturers and Dealers in every description of Mats, Netting, Canvas, and all such like materials for Garden purposes.

A liberal allowance to the Trade on taking 10 or more Pieces.

CAUTION.—See that every piece is marked "SHAW'S Tiffany, Manchester."

Address, JOHN SHAW & Co., 40, Princess Street, Manchester.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, His Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and —Collier, Esq., of Dartford.

PROTECTION FROM THE MORNING AND EVENING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide, 1*s.* 6*d.* per yard run.
Four, 3*s.* per yard; also,
An improved make three yards wide, 2*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, whole and sole manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

NEW AND CHOICE PLANTS.

JOHN STANDISH, in offering the following Plants can assure his customers that they are now in fine condition for sending out:—

MYOSOTIDIUM NOBILE, or Antarctic Forget-Me-Not, each 31*s.* 6*d.*—This plant, from the Chatham Islands, is one of the most remarkable that has been introduced for some years, being totally distinct from all others. It has large thick leaves, 8 or 9 inches across, of a dark glossy green, and sends up magnificent trusses of bloom of the most beautiful blue and white, similar to a Forget-me-not, but of a giant form. A Drawing of it is published in Curtis's "Botanical Magazine" for September. A description taken from the above is also published in the *Gardeners' Chronicle* of Sept. 17, 1859, wherein Dr. Lindley says:—"This is the handsome perennial provisionally named Cynoglossum nobile by Dr Hooker in our last year's Volume, page 240. It is quite deserving all the encomiums that have been passed upon it."

RHODODENDRON NUTTALII.—The largest flower of all yet known, having 11 flowers in a truss, each flower being 6¼ inches across. Seedling plants, 3 inches high, 7*s.* 6*d* each; 60*s.* per dozen; or 20*l.* per 100.

PHLOX MRS. STANDISH.—The purest white, with a large red eye, 5*s.* each. Also a large collection of the finest kinds which J. S. has shown during the last summer and in every case received the First Prize. Plants from 1*s.* to 2*s.* 6*d.* each.

A CATALOGUE containing a full description of the best Hardy Plants in cultivation will be forwarded on application to The Royal Nursery, Bagshot.

CAMELLIAS full of Bloom Buds, showing colour, 18*s.*, 21*s.*, and 24*s.* per dozen; without Buds, 15*s.* per dozen. ORANGE and LEMON TREES, with Fruit and Bloom, 2*s.* 6*d.*, 3*s.* 6*d.*, 5*s.*, 6*s.*, and 10*s.* 6*d.* each. A great variety of choice FERNS, BEGONIAS, &c. GREENHOUSE and STOVE PLANTS of every description.—R. GREEN, 154, Kingsland Road, 55 doors from Shoreditch Church, N.E.

MANGEL WURZEL, CABBAGE, AND COLLARD SEED.

R. GREEN having purchased a large Stock of the above previous to the late rise in the market, is enabled to offer them at the following extremely low prices:—MANGEL WURZEL YELLOW GLOBE, 9*d.* per lb., or 4*l.* per cwt; LONG RED, 50*s.* per cwt., 9*d.* per lb.; LONDON COLLARD, 3*s.* per lb.; CABBAGE ENFIELD MARKET, EARLY YORK, BATTERSEA, EMPEROR, EAST HAM, &c., 3*s.* per lb.

154, Kingsland Road, 55 doors from Shoreditch Church, N.E.

NEW CHINESE VEGETABLES.—See the elaborate and truly important article thereon in the *Gardeners' Chronicle* of the 7th inst.

A Collection comprising 12 varieties of the above interesting productions, with descriptions and suggestions for their various uses, &c., may be obtained free by post for ONE GUINEA, from CHARLES TURNER, The Royal Nurseries, Slough, whose PRICED LIST of AGRICULTURAL SEEDS is just published, and may be had free on application.

NEW HARDY WHITE SWEDE TURNIP.—Notwithstanding the severity of the winter this hardy and productive Swede has kept perfectly sound in all parts of England until now (April 16), all other kinds having been much injured by the severe weather.

Seeds supplied by RAYNBIRD & Co., of Basingstoke, and 89, Seed Market, Mark Lane, London, E.C.

ROYAL SOUTH HANTS SEED ESTABLISHMENT.

Under the patronage of H. R. H. the PRINCE CONSORT, the Horticultural and Agricultural Society of India, the principal Nobility, Gentry, and Agriculturists of the United Kingdom.

BOTLEY PRIZE FOR THE BEST TEN-ACRE SWEDES, November, 1859.

PAGE'S IMPROVED (grown by John Crosskey, Esq.).

Heaviest weight of Mangel, per acre, 61 tons 2 cwt.—PAGE'S IMPROVED ORANGE GLOBE (grown by Steuart MacNaghten, Esq.).

Mangel, sown July 7, weight and shape—PAGE'S IMPROVED RED GLOBE (grown by W. Warner, Esq.).

Mangel, 50 tons per acre—PAGE'S IMPERIAL ORANGE GLOBE (grown by W. Dickinson, Esq.).

Carrots, 35 tons per acre—PAGE'S IMPORTED WHITE BELGIAN (grown by R. Trench, Esq.).

Six Prize Swedes, for heaviest weight—PAGE'S IMPROVED (grown by W. C. Humphries, Esq.).

VALES OF AVON AND STOUR FARMERS' CLUB, 1859.

Vales of Avon, Prize for best 5 acres Mangel—PAGE'S IMPERIAL ORANGE GLOBE (grown by Mr. Salway).

Second best—PAGE'S IMPERIAL ORANGE GLOBE (grown by Mr. H. Bone).

Third ditto—PAGE'S IMPERIAL ORANGE GLOBE (grown by Mr. Baker).

Best 2 acres ditto—PAGE'S IMPERIAL ORANGE GLOBE (grown by Mr. James Salway).

Second ditto—PAGE'S IMPERIAL ORANGE GLOBE (grown by Mr. John Withers).

Third ditto—PAGE'S IMPERIAL ORANGE GLOBE (grown by Mr. Bone).

PAGE AND TOOGOOD have the pleasure to state that their IMPROVED MANGELS, SWEDES, &c., are saved from fully developed roots, and have been awarded the principal Prizes for Acreage and Specimens.

MANGEL WURZEL.—PAGE'S Imperial Orange Globe has acquired the weight of 44 lbs., as shown at the Botley Club, the Smithfield Club, &c.

	Per lb.—*s.*	*d.*		Per lb.—*s.*	*d.*
PAGE'S Imp. Orange Globe	1	3	Long Red	0	10
Yellow Globe	1	0	Elvetham Long Red	1	0
Red Globe	1	0	Long Yellow ..	1	0

SWEDISH TURNIPS.—P. & T.'s superior quality of Turnip Seeds are all of home growth, and saved from Transplanted Stock.

	Per lb.—*s.*	*d.*		Per lb.—*s.*	*d.*
PAGE'S Improved Hardy	0	10	PAGE'S Sussex Swede ..	0	10
,, ,, Skirving's	0	8	Ashcroft	0	9
,, ,, White ..	1	0	Green Top	0	10
,, Sutton's Champion	1	0	Tankard	0	10

Holcus saccharatus .. .. 1*s.* 6*d.* per lb.

Turnips, in sorts, Cattle Carrot, Rape, Clovers, Buck Wheat, Tares, Mustard, Linseed, Imported Italian Rye-grass, Rye-grass for one or two years lea, Permanent Pastures and Lawn Grasses, Alsike Clover, &c.

Agents for Adams' Blood Manures and Superphosphate.

PAGE AND TOOGOOD, SEED GROWERS and MERCHANTS, Oxford St. (facing the Railway), and Above Bar, Southampton.

MESSRS. E. G. HENDERSON & SON

RESPECTFULLY ANNOUNCE THEIR

NEW SPRING CATALOGUE OF BEDDING PLANTS,

TO BE ISSUED EARLY IN MAY,

in which the undermentioned new and desirable novelties for Flower Garden Decoration are fully described, with numerous other beautiful varieties for Amateur cultivation.

Dianthus Verschaffelti.
Of hardy robust habit, very novel and picturesque.

Hybrid Bedding Geranium "Britannia."
The most brilliant coloured variety in the section of the perpetual flowering class, a fine plant for bedding, vases, and pot culture.

Beaton's "Carmine Nosegay."

Beaton's "Stella" Nosegay.

These are distinct and elegant shades of colour in this unique bedding section of the Geranium.

Calceolaria "Unique."
The finest pure Orange, true bedding habit.

New Mauve Coloured Verbena "Fascination."

New Sulphur Yellow Verbena "Welcome."

New Brilliant Coloured Verbena "Fanny Stracy"
Géant des Batailles Type.

New Blue Do. (improved Blue Bonnet) "Invincible."
With other great improvements in this popular flower.

PANSIES FOR THE SPRING MONTHS,

OF THE CHOICEST NAMED VARIETIES.

In strong Plants for immediate display; self, white, yellow, and parti-coloured ground tints, or separate if required, at 6*s.* to 9*s.* per dozen; and new varieties 12*s.* to 18*s.* per dozen.

GAZANIA SPLENDENS.
Brilliant orange yellow with dark centre.

BEATON'S GOOD GRACIOUS POLYANTHUS.
Effective rich golden yellow bedding plant, profuse bloom, 1*s.* 6*d.* each.

CALCEOLARIAS.
Shrubby and bedding varieties, in distinct colours for masses, for pot culture, &c.

TRITOMA UVARIA GLAUCESCENS.
The true Kew variety, 1*s.* 6*d.* and 2*s.* 6*d.* each. No one should buy T. Uvaria alone, to ensure the above fine coloured kinds.

GREEN-CENTRED HELIANTHUS or SUNFLOWER,
2*s.* 6*d.* per packet.
For testimonials of this fine New American Annual, said to equal the Dahlia for effect, see the *Gardeners' Chronicle*, April 7, page 308.

TRITOMA UVARIA GRANDIFLORA.
The finest flower truss of all the tribe, 3*s.* 6*d.* each.

PERILLA NANKINENSIS.
One of the most beautiful and effective of Flower Garden plants. *Nothing else like it in colour, form, or effect.* Seed packets 6*d.* and 1*s.* each.

SPERGULA PILIFERA.
Substitute for Grass on Lawns, verges, or flat terraces, &c. Seed packets, 6*d.*, 1*s.*, 2*s.* 6*d.*, and 5*s.* each. Clumps for immediate planting, 8*s.* and 16*s.* per 100.

THE DORCHESTER BLACKBERRY,
3*s.* 6*d.* each, and

THE LAWTON BLACKBERRY,
2*s.* 6*d.* each, are proved to be the two best American varieties.

HENDERSON'S A 1 RIDGE CUCUMBER.
Packets of Seed, 1*s.* and 2*s.* 6*d.* each.

CLIANTHUS DAMPIERI.
A very beautiful specimen of this gorgeous flowered greenhouse shrub is now in bloom at the Wellington Nursery.

Collections of Choice ANNUALS for present sowing, 12, 3*s.*; 24, 5*s.*; 50, 10*s.*, post free.

Wellington Nursery, St. John's Wood, London, N.W.

SPECIAL OFFER OF SELECT PLANTS.

HENRY WALTON, Edge End, Marsden, near Burnley, begs to offer the following at the prices annexed:—

GERANIUMS.—The following show varieties, 15*s.* per dozen, viz., Aurelia, Competitor, Cynthia, Etna, Etty, Impératrice, Julia, Lucifer, Minnie, Rosalie, Richard Benyon, Sprightliness, Signora, Siron, and Vestal. The following and several other varieties, 6*s.* and 9*s.* per dozen, or 50*s.* per 100, viz.: Agnes, Amethyst, Ardens, Admiration, Attraction, Admirable, British Queen, Conqueror, Corsair, delicatum, Empress, Edith, Florence, Fidelia, Fair Ellen, Gaiety, General Williams, Jessica, King of Scarlets, Marvellous, Miss Foster, Prince of Prussia, Purple Prince, Rosa Mundi, rubens, Sultan, Selim, Symmetry, Seraskier, Topsy, Una, Videnda, Yerda, &c. French and English spotted varieties, 6*s.*, 9*s.*, and 12*s.* per dozen, viz.: Aurélie Duval, Alexander, Alphonse Leroy, Aspasia, Brilliant, conspicuum, Eugène Duval, Excelsior, Glowworm, Guillaume Sovereyns, Hendersoni, Hortense, James Odier, La Belle Alliance, La Ristori, Le Tasse, Le Titien, Lord Raglan, Madame Martine, Madame Lemichez, Mazeppa, Mr. Beck, Mr. Hoyle, Perugino, Prince Napoleon, Queen of Beauties, Roi de Pourpres, Spotted Gem, Van Houttei, &c. Choice Fancy varieties, 6*s.* to 12*s.* per dozen.

H. W.'s Selection of SHOW, SPOTTED, and FANCY GERANIUMS.—Good plants, 45*s.* per 100.

FUCHSIAS.—All the new varieties of last season, 9*s.* and 12*s.* per dozen.

CINERARIAS.—6*s.*, 9*s.*, and 12*s.* per dozen.

VERBENAS.—New varieties of last season, 6*s.* per dozen; two dozen, 10*s.*

PINKS, 4*s.* 6*d.* to 6*s.* and 9*s.* per dozen pairs.

PHLOXES, 6*s.*, 9*s.*, and 12*s.*

ROSES of last season in pots; nice plants, 24*s.* per dozen.

DAHLIAS of last and previous years and other bedding plants in May.

DESCRIPTIVE LISTS of the above on application, inclosing one stamp.

GLOXINIAS.—New varieties, 20*s.* per dozen, or six for 12*s.* Erect Flowering: atroviolacea, Lady Victoria Noel, Lady C. Villiers, Sierra da Estrella, Madame Auguste Miellez, Madame Jules Margottin, Madame Picouline, Minas Geraes, Perfection, Princess Alice. Drooping Flowered varieties: Attraction, Cartoni robusta, Foxglove, Fascination, Hercyi, La Rosière, Mathilde de Landevoisin, Madame Symon Brunelle, Meteor, Murillo, Sir H. Havelock de Lucknow, Spagnoletti, Scholastice, Symmetry, Sebastiano, and Thomas Lobb. H. W.'s selection, 12*s.* per dozen.

TYDEAS.—New varieties, the set for 18*s.*, or 2*s.* each; Aurora, Adonis, Cornet, delicata, Denton Beauty, erecta multiflora, Mars, gigantea ignea, Lady Digby, and Lady Caroline Kerrison.

BEGONIAS.—Marshalli, 3*s.* 6*d.*; Queen of England, 2*s.* 6*d.*; Madame Alwardt, 2*s.* 6*d.*; Madame Wagner, 1*s.* 6*d.*; splendida argentea, 2*s.* 6*d.*; Miranda, 2*s.* 6*d.*; Prince Troubetskoi, 1*s.* 6*d.*; Isis, 2*s.* 6*d.*; Urania, 2*s.* 6*d.*; picta, 2*s.* 6*d.*; Thwaitesi, 2*s.* 6*d.*; Zanthina argentea, 1*s.* 6*d.*; Zanthina Reichenheimi, 1*s.* 6*d.*

CYANOPHYLLUM MAGNIFICUM.—Nice young plants, 5*s.* 6*d.* and 7*s.* 6*d.* each, free by post.

Post-office Orders payable at Nelson, near Burnley.

NEW PEA.

NUTTING AND SONS having purchased the Stock of a NEW DWARF WRINKLED MARROW PEA, raised by Dr. Maclean, offer it for distribution in pint packets at 2*s* each. NUTTING & SONS will grow it this season for next year's supply.

This Pea is remarkable for its earliness as a wrinkled Marrow, dwarf habit (2 feet), fine flavour, and great productiveness.

Seed Warehouse, 60, Barbican, London, E.C.

YOUELL'S "NORFOLK HERO" CUCUMBER.—Without exception the very best Cucumber for open ground cultivation that has yet been offered. It is a most prolific bearer, as handsome as any frame variety, and is as delicate in point of texture, the fruit measuring from 16 to 20 inches in length. Packets containing 6 seeds, 1*s.*; 18 seeds, 2*s.*

YOUELL & Co., Royal Nursery, Great Yarmouth.

BEDDING PLANTS—BEDDING PLANTS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington, can supply the following Plants, first-class stuff, at 12*s.* per 100, or 5*l.* per 1000, in large or small quantities to suit all purchasers:—Tom Thumb and other Geraniums, Fuchsias, Verbenas, Lobelias, Calceolarias, Heliotropes, Petunias, Salvias, Ageratums, Cupheas, Pompones, &c. To save trouble all orders to be pre paid.

GERMAN AND OTHER FLOWER SEEDS, ETC.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their PRICED and DESCRIPTIVE CATALOGUE of FLOWER SEEDS, in which is enumerated every novelty of proved merit, also all the best of the older kinds, is now published, and will be forwarded post free on application. The sealed Collections of French and German Asters, Balsams, Carnations, Stocks, Zinnias, &c., are from the best foreign sources, and have hitherto given unqualified satisfaction. Every article has been selected with the greatest care, and is warranted true to name and of the finest quality.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

KINGHORN'S CHRISTINA GERANIUM is perfection as a rosy-pink bedder, for colour, habit, and free blooming, and a perpetual ornament for the greenhouse.

FRANCIS R. KINGHORN can supply the above in three different sizes, at 7*s.* 6*d.*, 10*s.* 6*d.*, and 12*s.* 6*d.* per dozen.

Also a fine Stock of the most popular BEDDING PLANTS, &c., at moderate prices. The usual allowance to the Trade.

Sheen Nursery, Richmond, S.W.—April 21.

SCARLET GERANIUM—"SHEEN RIVAL."

FRANCIS R. KINGHORN is now prepared to send out the above, the finest of all existing varieties; is conspicuous among the best sorts. It was awarded a Prize at the Crystal Palace, in 1858, and also commended by the Floral Committee of the Horticultural Society, on September 22d, 1859. Is much superior to "General Pelissier." The trusses of bloom are very large, and flowers of the finest form; colour orange scarlet, horse-shoe foliage, and variegated footstalks. Stout Plants in large 60-pots, 5*s.* each. The usual allowance to the Trade.—Sheen Nursery, Richmond, S.W.—April 21.

NEW CHRYSANTHEMUMS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington begs to inform his friends and the public that he has the finest Collection and the largest Stock of Chrysanthemums and Pompones in the world, and can supply them by the 100, 1000, or 10,000.

25 Pair of Best POMPONES, 10*s.*
20 Pair of Best Large Varieties, 10*s.*
25 Pair of Best POMPONE CUTTINGS, 5*s.*
20 Pair of Best Large Varieties, Do., 5*s.*

CATALOGUES for one stamp. To save trouble all orders to be pre-paid.

NEW CHRYSANTHEMUMS.

JOHN SALTER is now sending out several splendid New CHRYSANTHEMUMS, both large flowers and Pompones; also those of his unrivalled general Collection, which is the most extensive in Europe. His DESCRIPTIVE CATALOGUE of Chrysanthemums, Dahlias, Hardy Variegated Plants, &c., is now ready, and will be sent free upon receipt of one stamp.—Versailles Nursery, William Street, near Hammersmith Turnpike, W.

CHINESE PRIMROSE.—Very superior fimbriated varieties saved by a first-rate private grower, per packet, 1*s.*: fimbriata alba, do., 1*s.* per packet; fimbriata striata, choice, from the continent, 1*s.* per packet. The Trade supplied.

CALCEOLARIA.—This is annually received from a private grower, for years renowned for his first-rate Calceolarias, and has given the fullest satisfaction, per packet, 1*s.*; extra, from finest new, 2*s.* 6*d.* per packet: also fine new continental dwarf growing varieties, see Catalogue.

STEPHEN BROWN, Seed Establishment, Sudbury, Suffolk.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their PRICED AND DESCRIPTIVE CATALOGUES of Exotic Orchids, Stove, Greenhouse, and Hardy Ferns, Miscellaneous Stove, Greenhouse, and Hardy Plants, Variegated and Ornamental Foliaged Plants, Conifers, Roses, Rhododendrons, Indian Azaleas, Gloxinias, Fuchsias, Geraniums, Herbaceous Plants, Fruit Trees, &c., are now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SONS' PRICED and DESCRIPTIVE CATALOGUE for 1859, & SPRING 1860 comprising Fruit Trees of all the leading kinds; New and Selected Roses; fine varieties of American Plants; Choice and Rare Conifers; Evergreen and Deciduous Trees and Shrubs; and a fine stock of transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

AMERICAN PLANTS, &c.

MESSRS. WATERER AND GODFREY'S CATALOGUE for the present season is now ready, and may be had on application. It describes fully all Rhododendrons worth growing, and contains a List of Azaleas, Hardy Heaths, and other American Plants, as well as a summary of the general stock of the most extensive Nurseries in England.

The Catalogue may also be had at Messrs. MAY's & Co., 1, Wellington Street, Strand, W.C.

Knap Hill Nursery, near Woking, Surrey.

HARDY RHODODENDRONS.

MESSRS. WATERER AND GODFREY invite attention to their Seedling RHODODENDRONS, which they are selling without names, and which they strongly recommend as being very superior in point of HABIT, FOLIAGE, COLOUR, and GENERAL HARDINESS. They are from 1½ to 2½ feet high, and as much through, and no plants can possibly be in finer health. They will be sold at very liberal prices, and purchasers can select from a stock of many thousands.

Knap Hill Nursery, near Woking, Surrey.

RHODODENDRONS.

JOHN WATERER'S CATALOGUE OF HARDY, SCARLET, and other choice RHODODENDRONS, as annually exhibited at the Royal Botanic Gardens, Regent's Park, is now published and will be forwarded on application. Faithful descriptions of all the esteemed varieties will be found detailed, with a list of the popular kinds of AZALEAS and other AMERICAN PLANTS, as well as a selection of CONIFEROUS TREES, with height and prices.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

THE SUBSCRIBERS offer to the Trade and other parties a Surplus Stock of 2 and 3-year Seedling SCOTCH FIR; 2 and 3-year Seedling Norway SPRUCE; 2 and 3-year Seedling ASH; 2-year transplanted ALDER, 2 to 3 feet; ASH, 3 to 4 feet; BEECH, 1½ to 2 feet; SCOTCH FIR, Native, 9 to 15 inches, 2-year transplanted. Prices on application.

FOWLER & SON, Glasgow.—April 21.

WHEELER'S NEW SEEDLING FUCHSIAS.—MARQUIS OF BATH.—A superb double flowered variety. The tube and sepals crimson scarlet, well reflexed; corolla deep violet purple, finely formed, of good substance, large and regular; robust, and of good habit. This was one of a bed of Seedlings in the open border, and first bloomed in September last, when a small branch was exhibited to the London Floral Society, who very highly commended it "as the finest double flowered variety which had come under the notice of the Committee." Price 10*s.* 6*d.* each.

LORD OF THE ISLES.—Fine double-flowered. Tube and sepals scarlet, well reflexed; corolla dark purple, large, smooth, and of good substance; free bloomer and good habit, distinct. Price 5*s.*

HERO OF WILTS.—Fine double-flowered. Tube and outside of sepals scarlet, underside of sepals rose; corolla light violet, similar to Souvenir de Chiswick in colour; a good bloomer. Price 5*s.*

The forementioned have been figured by Andrews, and plates may be obtained of G. W. in exchange for 12 postage or receipt stamps.

MAGNUM BONUM.—Single-flowered. Tube large, scarlet, very long; sepals light scarlet, the inside rosy scarlet, well reflexed and broad; corolla rich crimson, large, finely shaped, and smooth; considered the most showy and striking single Fuchsia ever offered. Blooms 7 inches long were gathered from the Seedling plant in November last. Price 5*s.*

Plants of all the above will be ready to send out on and after May 5.

NEW SEEDLING VERBENAS.

Price 3*s.* 6*d.* each, or 20*s.* per dozen.

ROSALIE.—Rosy salmon, with a yellowish green eye, surrounded with crimson, a very pretty and desirable variety.

DUCHESS OF SOMERSET.—Mauve coloured, good truss, large pips, and a good grower, quite distinct from any variety in cultivation.

The above should be in every collection.

DIOSCOREA BATATAS OR CHINESE YAM.—Strong tubers averaging 2 feet in length, 6*s.* per dozen; 42*s.* per 100, if 100 or more be taken at a time. Sets 6*s* per 100.

G. WHEELER, Warminster Nursery.—April 21.

NEW SUMMER FLOWERING ROSE.

A. PAUL AND SON invite attention to their NEW TEA-SCENTED ROSE "PRESIDENT," which obtained a Certificate of merit from the Royal Botanic Society on the 21st March, 1860, and which is now first offered for sale. It is figured in the Rose Annual for 1859-60. The plant is of hardy constitution; the flowers are large, full, of fine form, varying in colour from blush to salmon, and very sweet. It is confidently anticipated that it will prove one of the finest of Tea-Scented Roses. Price 5*s.* per plant; a few extra strong plants, 10*s.* 6*d.* each. The usual discount to the Trade when three or more plants are ordered at once.—Nurseries, Cheshunt, Herts.

HALF SPECIMEN TEA-SCENTED ROSES,

GROWN IN 6-INCH POTS FOR EXHIBITION.

FINE SELECTED PLANTS .. .. per doz. 24*s.*
Smaller Plants in 48 or 4-inch pots .. .. ,, 12

Selection left to W. W. & S.

WM. WOOD AND SON are now prepared to supply fine strong Plants of the above from their extensive STOCK. CATALOGUES may be obtained on application, and extra plants added to each order to compensate for carriage.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

ROSES IN POTS.

WOODLANDS NURSERY, MARESFIELD, NEAR UCKFIELD, SUSSEX.

WM. WOOD AND SON are now executing orders for ROSES in pots, and will supply fine healthy dwarf plants as under:—

TEA-SCENTED ROSES .. .. 12*s.* to 18*s.* per doz.
CHINA DO. .. .. 9*s.* to 12*s.* ,,
BOURBON and NOISETTE DO... 9*s.* to 12*s.* ,,
HYBRID PERPETUAL DO. .. 9*s.* to 12*s.* ,,

The months of April and May are considered very eligible for planting out Roses from pots. The plants now offered are strong and well grown.

Plants presented to compensate for carriage.

SUPERB PENTSTEMONS AND ANTIRRHINUMS.

WOODLANDS NURSERY, MARESFIELD, NEAR UCKFIELD, SUSSEX.

WM. WOOD AND SON have much pleasure in directing especial attention to their exceedingly rich and beautiful collections of the above, which have been selected from the best sorts in cultivation.

The Plants are strong and healthy and are ready for immediate delivery.

The best and newest proved kinds, 12*s.* to 18*s.* per dozen.
Older but approved sorts, 4*s.*, 6*s.* to 9*s.* per dozen.

Plants presented with each order to compensate for carriage.

SPLENDID VERBENAS NEW OF 1859.

WILLIAM KNIGHT invites especial attention to his very extensive stock of the above, which he is now prepared to supply at 5*s.* per dozen; 2 dozen, 9*s.*; or 5 dozen, in 60 varieties, for 20*s.*, package included.

DESCRIPTIVE CATALOGUES of the above on application.—Post-office Orders made payable at Hailsham Floral Nursery, Hurst Green, Sussex.

NEW VERBENAS, ETC.

CHARLES TURNER can now execute orders for the beautiful and distinct varieties raised by EDMONDS and Dr. SANKEY. Also VARIEGATED GERANIUM FLOWER OF SPRING, received two First Class Certificates this season. FROST'S two new AZALEAS, PERFECTION and SIR H. HAVELOCK; and ACHIMENES DAZZLE.

For description and price see SPRING CATALOGUE, to be had on application.—The Royal Nurseries, Slough.

HOLLAND AND BAYLEY beg to offer from their unrivalled Collections, in strong healthy plants,

25 pairs CARNATIONS and PICOTEES, fine show flowers, for 1*l.*
Extra fine show PANSIES, 6*s.* per dozen.
Extra fine show PHLOXES, 8*s.* per dozen.
Extra fine BELGIAN DAISIES, 4*s.* per dozen.
Hamper and package included.

PRICED CATALOGUE OF DAHLIAS, BEDDING, AND MISCELLANEOUS PLANTS, &c., may be had on application.

Bradshaw Gardens, Chadderton, Manchester.

AZALEA INDICA.—Splendid varieties, plants fine, strong, and bushy, with a profusion of flower buds.

Selections at the following low prices (prices per 100 to the Trade on application):—

	£	*s.*	*d.*
20 superb varieties	1	15	0
12 ditto ditto	1	2	0

Carriage free to all railway stations in London, or on the Colchester line to Norwich.

☞ A CATALOGUE OF SUPERB GLOXINIAS, ACHIMENEAS, GERANIUMS, FUCHSIAS, BEDDING PLANTS, and ROSES in Pots, is now ready. Copies on application.—STEPHEN BROWN, Seed and Nursery Establishment, Sudbury, Suffolk.

TO LONDON MARKET GARDENERS.

WANTED, CHOICE VEGETABLES AND FRUIT, DIRECT FROM THE GROWER.—A weekly supply throughout the season will be required, and as the prices will be liberal, first-class goods are indispensable. Growers may apply to

GEORGE TAYLOR,
VEGETABLE AND FRUIT SALESMAN,
The Grand Stand, St. John's Market, Liverpool.

CUSTARD MARROW, the Sudbury Improved, as figured last year, packets, 6*d.* and 1*s.* each. Price to the trade on application.

MAMMOTH GOURD, the largest sort, 1*s.* per packet.

FURRELL'S PROLIFIC CUCUMBER, a fine long hardy sort for frame or open ground, 1*s.* per packet; also 20 other choice frame varieties. See CATALOGUE.

STEPHEN BROWN, Seed Establishment, Sudbury, Suffolk.

AYTON CASTLE GIANT LEEK.

CHARLES ALEXANDER, 30, West Register Street, Edinburgh, can supply limited quantity of this unrivalled Scotch LEEK at 5*s.* per oz. and 1*s.* per packet in exchange for postage stamps.

"These Leeks were blanched upwards of 12 inches, and one of them measured 7 inches in circumference. The four together weighed 7¼ lbs."—*Gardeners' Chronicle, December* 17, 1859.

HENRY'S HYBRID SCOTCH LEEK.

CHARLES ALEXANDER, 30, West Register Street, Edinburgh, offers Seeds of the above Prize LEEK saved by Mr. Henry, and direct from himself, at 6*s.* per oz., 2*s.* 6*d.*, and 1*s.* per packet, in exchange for postage stamps.

C. A. has not "secured the entire stock" of this Leek, but the following document speaks for itself:—

[COPY.]

"Broom House, by Dunse, Feb. 8, 1860.

"I have this season supplied Mr. CHAS. ALEXANDER of Edinburgh with part of the Seed of my Hybrid Scotch Leek.

(Signed) "WILL. HENRY."

"I have obtained a variety of good quality, capable of being grown to the weight of 4 lbs. 15 oz. the single Leek repeatedly, blanched to the length of 20 inches, and in one instance measuring in circumference 12½ inches."—WM. HENRY, in *Scottish Gardener, Feb.*, 1860.

FLOWERING PLANTS.

F. AND A. SMITH have now in bloom Geraniums, Lescheneaultia, Azaleas, Heliotropes, Fairy Roses, Cramoisie Superior do.; Colonel Fabvier do.; Boronia Drummondi, Acacia, Erica Cavendishi, E. coccinea minor, E. hybrida, E. Willmorea, E perspicua nana, E. Westphalingia, E. intermedia; Boronica Drummondii, Fuchsias, Cinerarias, and Verbenas, &c.—Dulwich, Surrey, S.

BEDDING PLANTS, ETC.

F. AND A. SMITH beg to offer in May quantities of fine Plants of Trentham or Crystal Palace Geranium, Gazania splendens, Dianthus Heddewigi monstrosus and giganteus, Tropæolum Stamfordianum, Tropæolum Lobbianum elegans or Crystal Palace Nasturtium, and Attraction; Verbenas, the old favourites, and the best of last year's new varieties; Rose Devonensis, Yellow Noisette, Mrs. Bosanquet, Cramoisie supérieure, and Colonel Fabvier, &c., with the usual assortment of Bedding Plants, a List of which may be had on application.—Dulwich, Surrey, S.

THE NEW HORTICULTURAL GARDEN.—Persons wishing to have specimens of their Works placed for Exhibition in the New Garden at Kensington Gore should now forward particulars of the class of articles they wish to exhibit, and the space required, that the Council of the Horticultural Society may decide whether the articles proposed to be exhibited will be appropriate to the Garden, and whether space can be found.

No space will be allotted to articles which it is proposed to remove at the end of a few months.

No charge will be made for space.

The name of the Exhibitor will be affixed to each article.

Space will probably be found for objects IN CEMENTS, such as Edgings, Balustrades, Vases, Statues—IN TERRA COTTA, such as ornaments for Spandrils, Edgings, Balustrades, Vases—IN BRONZE AND IRON, such as Vases, Statues, Seats, Trellis-work—IN STONE AND MARBLE, such as Statues, Vases, Edgings, for fountains; coloured varieties for pavements—IN CHINA, such as Vases, Jardinières—ENCAUSTIC TILES.

SLATES of large size and peculiar quality for Greenhouse walks.

Proprietors who may wish to exhibit specimens of their quarries will be able to exhibit such in the shape of pedestals, &c.

Letters to be addressed to the Assistant-Secretary, Horticultural Society, 3, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, APRIL 21, 1860.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, April 25—Royal Botanic (Spring Meeting) 2 P.M.
THURSDAY, — 26 { Horticultural (Floral Committee) at St. Martin's Place ..... 2 P.M.

"IT were desirable to have the dispute as to the PRUNING OF FOREST TREES settled by an appeal to facts, which might be ascertained by those who are much conversant in the sawing and planing of old timber. There are two methods of pruning, each of which has its peculiar fault. One method is to cut off a branch close by the stem, and allow the bark to grow over the wound; and the fault of this method is, that the process of healing may require some years, during which time a certain decay on the surface of the wound ensues, and the decayed matter, not being absorbed, as improper substances are in the animal frame, must continue as it is, and may probably constitute the source of a spreading decay at a future period, after the new and healthy wood has grown deep around it. Hence, it may be contended, the origin of cavities so frequent in the heart of old timber. The other method is not to amputate near the stem, but to mutilate the branch that ought to give way, so as to check its growth, *but leave the life in it;* and the fault of this method is, that the successive layers of new wood, deposited year after year, are every one marred by this stump, *which continues its cross grain through them all, making a bad knot in every plank,* and must either prolong this mischief for 50 years, or be cut off some time, and cause the evil complained of in the former method, or it must decay, and allow the successive layers to grow around a decayed substance, proving a worse danger, by leaving outwardly a hole, and inwardly a tube for conveying wet. The evil of the cross stump is well seen in Firs whose branches fall of their own accord, not without leaving a host of ragged remains, which, though dead, last a long time, and show in the subsequent sawing of the timber, as it were, the transverse perforations which they have made in every deal that is cut; the perforations are indeed fitted with a knob or plug, but the plug, though neatly fitted, is so indifferently fixed that it may often be pushed out with the thumb. Such are the two methods of pruning, together with the fault of each. The last is by much the worse, unless the first cause rotting. Let some proprietor of old trees cut down one of which he knows the very spot whence a large branch was amputated some 10 or 20 years before, and after taking off a slab opposite the ancient wound let the plane be applied, proceeding, under his own eye, by hairbreadths, till the vertical grain be separated from those that meet the plane at right angles, this being the exact seat of the supposed disease. The last shaving will be worth gold, as it will finish the controversy, determine the rules of a delightful science, and give, as the author expects, *a victory to Scotland over the English,* who

are enemies to the first mode described, and which obtains in the north. The experiment ought to be made with respect to wounds that have been anointed, and to such as have not. It would be interesting to see the paint in the middle of the shaving. But apart from all experiment, two things are clear: first, that by pruning in due time, no branch thicker than the wrist would ever need to be amputated at all; and second, with regard to Firs, that if the broken, barkless stumps, when past bleeding, were cut clean off with axe or saw, a great many deals of the future growth would be free from the annoyance both of knots and plugs."

Thus writes the author of the Manse Garden upon a subject which some recent correspondents wish to see revived, but which we had imagined to be threadbare. It is clear however, since Dr. PATERSON himself is not quite conversant with the question, that there is room enough for further discussion, and that the correspondents alluded to are in the right. It seems to us that in the passage above quoted the author confounds different methods under the same name, and that his description is not so exact as was to be desired. There are four modes of timber pruning and no more. The first is *pruning*, properly so called, consisting in the removal of twigs or young shoots by the PRUNING KNIFE only. The second is *foreshortening*, in which a considerable portion of the branch is left with its twigs and leaves, so much only of the upper part being removed as will arrest the future enlargement of the branch. The third is *snagging*, in which branches are chopped short with a bill hook or hatchet, and left to die. The fourth is *amputating*, that is to say, cutting off limbs close to the trunk from which they spring. To one or other of these methods all others are reducible; and they require to be carefully distinguished. Pruning *may* be useful, though it often is much the contrary. Foreshortening is usually necessary, can produce no ill consequences, and is certainly not open to the charge put in italics, as we shall show on another occasion. Snagging is barbarous, and must be mischievous. Amputating becomes necessary when trees have been much neglected, or in consequence of unavoidable accidents, such as are born of storms, but is always injurious to the quality of timber; it is a necessary evil endured in the hope of preventing greater evil.

Now, it seems to us that Dr. PATERSON does not distinguish between foreshortening and snagging. At least if he does, we cannot assent to the doctrine that the former process causes every successive layer to be marred by the stump which the timber pruner has left with a little life in it. Our experience tells us exactly the contrary. Neither can we admit that English foresters are opposed to pruning, properly so called, although they certainly are to amputating, unless in case of unavoidable accidents, and above all to the barbarous practice of snagging or chopping off a limb down to some small distance from the trunk, and leaving a little life in it. We trust that some of our foresting friends will take up this question in good earnest, and give us their experience, so that we may at least know whether England deserves the imputation that the worthy doctor has made against her. That done, we ourselves promise to return to the question.

AT a late meeting of the Horticultural Society of the Haute Garonne, a surgeon at Angoulême, one Monsieur LESCURE, laid before the Society the following statement:—"When the sap was rising, about the beginning of May, *he sowed*, or if you please worked, on a strong stock, in the same manner as if it had been a bud with a pushing eye, a *seed* of the Duchesse d'Angoulême Pear, taking no other precaution than that of inserting the seed with its point downwards. From this seed sprang a shoot which in the second season (*à la seconde pousse*) bore fruit, which proved to be the same as that of the Duchesse." From this M. LESCURE inferred that the seed of the Pear will always reproduce the variety whenever it is treated like a bud.

It would seem that this statement was not very favourably received, the members who heard it having been so incredulous as to laugh at the author. And this is not to be wondered at since hoaxing has been introduced into horticulture by Pea Lentils, wooden Melon seed, and the like. Nor is it possible to conceive that even if the seed of the Pear did grow like a bud it could have formed a branch strong enough to bear in the second year. Nevertheless Pear has this value—that it opens the question of whether a seed will grow and form an adhesion to a stock provided it is treated like a bud. Theoretically a bud and a seed are alike the representatives of a new individual, and budding is merely sowing a bud on the surface of alburnum, or beneath the bark of a tree, as a seed is sowed upon the ground. But although the analogy is true it by no means follows that the first operation is practicable. It has always been held that although the new wood produced by a bud, and by the agency of which the latter adheres to alburnum, is analogous to the root by which a seed establishes itself in the ground, yet they are organically so different that the comparison can be carried no further. But M. LESCURE positively asserts the contrary. It would be little trouble to try the experiment now, and we recommend it to the attention of gardeners. If the seed of a Pear tree will really behave in the manner described then some interesting consequences are very likely to flow from it.

MYCOLOGY.—No. XV.

HELVELLA CRISPA, *Fr.*—Fungi are divided into two great sections, viz., those which produce their fruit upon the tip of certain privileged cells, and those whose fruit is contained, often in definite numbers, in distinct sacs or cells known by the name of asci or vesicles. Like many other distinctive characters in the vegetable world, these differences are not absolute, for instances occur, whether of primary or secondary importance, in which the spores of Fungi of the first division are surrounded by a common sac, and in the second division there is often naked fruit and fruit contained in sacs in the same species. Still notwithstanding these difficulties the distinctions are founded in nature, and the student will be seldom led astray by such exceptional cases.

The subject of our present illustration, next to the Morel, is one of the most useful members of the second division, and where it occurs in any quantity it may be used with great advantage instead of that widely recognised Fungus. It is however far later in its period of growth.

Almost every one is acquainted with the large, juicy, cup-like Fungi, which so frequently grow upon the dung which surrounds hotbeds. In that case there is a very short and often indistinct stem, though enough to show that a stem is not an impossibility in some allied species.

HELVELLA CRISPA.
Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora).

Let us suppose then the stem to be more decided, and the grooves at the base more distinct, and we shall have a wide, well-formed cup at the top of a grooved stem. Now let the margin of this cup be more or less deflected and attached to the stem and we have by a very simple transition an *Helvella* formed out of a *Peziza*. The truth of this view, in theory at least, is proved by the fact that there is one species of *Helvella* which is often very difficult to distinguish from a *Peziza*.

The stem of *Helvella crispa* is generally white, but like the whole plant it varies from white to flesh coloured and yellowish. The grooves are deep and complicated, and the surface nearly smooth. The under surface of the deflexed head, which at length becomes free from its attachment to the stem, is smooth or slightly mealy. The head itself is often much waved, from whence it takes its specific name. The asci are straight, and contain eight oval sporidia, each of which has two nuclei.

The characters are indeed so clear that there is no difficulty in distinguishing the species. The darker *H. lacunosa* is by no means so inviting in appearance, while *H. esculenta*, which is a rare native, and has been found hitherto by Mr. Currey alone at Weybridge, is so different in general appearance that there is no danger of confusion in that quarter.

The *Helvellæ* are sometime confounded by country herbalists with Morels, a mistake which would be innocent enough as many think them quite as wholesome, while the flavour is more delicate; but a mistake which we have witnessed of substituting large Peziæ like *P. venosa* for the true Morel may not always be so innocent. The *Peziza* appears about the same time of the year and sometimes attains a large size, and is extremely abundant, added to which the hymenium is sometimes as full of pits and depressions as that of the Morel, but its nitrous odour ought at once to cause it to be ejected, on the score of culinary demerit, if not of positive unwholesomeness.

The Helvellæ may be prepared nearly in the same manner as the Morels, though from their different form they cannot so readily be introduced as *Farcies*.

Like Morels they should be always gathered in dry weather, for a little damp soon causes them to mould, and putrescence rapidly follows. They should not be steeped too long or too frequently in water as it destroys their delicate flavour, though it is always prudent to divide them and dip them for an instant in hot water to get rid of snails or other inmates. Too much care, moreover, cannot be taken to remove any dirt which may fall upon them, as the most scientific preparation will be quite lost, if they should prove gritty. The best way of preparing them perhaps is to dress them after the fashion of Oyster Olives, with a little minced veal or chicken wrapped up in thin slices of bacon, after they have been first stewed till quite tender and properly seasoned. *M. J. B.*

LAPAGERIA ROSEA.

ALTHOUGH this charming Chilian climbing plant has now been in the country some years, few have as yet been very successful in their attempts to flower it properly. Some account, therefore, of the different modes of managing it by which abundance of blossoms have been secured may not be unacceptable; for when well bloomed it is a plant of unusual attractiveness and beauty; the flowers are bell shaped and pendent, of the richest carmine mottled with white, and measuring from 2 to 3 inches across—a glowing description certainly, but a correct one. Its roots are thick and fleshy, and it is doubtless a plant tenacious of life and not easily destroyed under ordinary management; but like many other fine plants it requires peculiar culture for its perfect development.

A. says: "I have grown my Lapageria in a stove, where for the last three or four years it has never failed to bloom beautifully. One planted out," he says, "in the border of a Camellia house has not grown any. Another planted in the border of the stove in one season made a shoot 20 feet long, and is now trained up the rafter. It is found to grow best in pure leaf-mould mixed with pieces of decayed wood, taking care to have the roots near the surface.

B. writes: "I have a fine specimen of this charming plant, which is unquestionably one of the finest half-hardy climbers in cultivation. My plant blooms freely, and the blossoms last long in perfection. I keep it in my greenhouse. The soil I use for it is leaf-mould, turfy loam, and peat in equal portions, to which are added a few potsherds and a little sand. My plant is in an 11-inch pot standing on a platform, and trained along a wire across the house about 9 inches from the glass."

Here, therefore, are two very different modes of treating this plant, and yet both are reported to have been attended with equal success. My own experience, however, teaches me that the greenhouse is the proper place for it, and in this I am supported by the Messrs. Veitch, in whose nursery at Exeter it has produced more flowers, perhaps, in a given space, than in any other establishment in England. In order to flower it in perfection it is found that it must have a well drained highly porous soil of peat and loam which will admit of the plant while growing being deluged with water; in short, too much of the latter can scarcely be given from the time it begins to push till it has done blooming, after which moisture should be gradually withdrawn with the view of inducing it to ripen its wood. Under this treatment, which is that practised by the Messrs. Veitch, it flowers most profusely, each shoot forming a wreath of gay blossoms for several feet in length.

Your correspondent, therefore (see p. 340), who has had a plant three years in a warm greenhouse and can

not get it to flower may gather a hint from the above. The principal points evidently are porosity of soil, and during the growing season abundance of water, which the Asparagus-like roots eagerly suck up. I would advise your complainant to lift his plant carefully and replant it, after having prepared a station for it as directed by the Messrs. Veitch. After that, with due attention to watering, it might perhaps be induced to reward him with a fine display of blossoms. *M.*

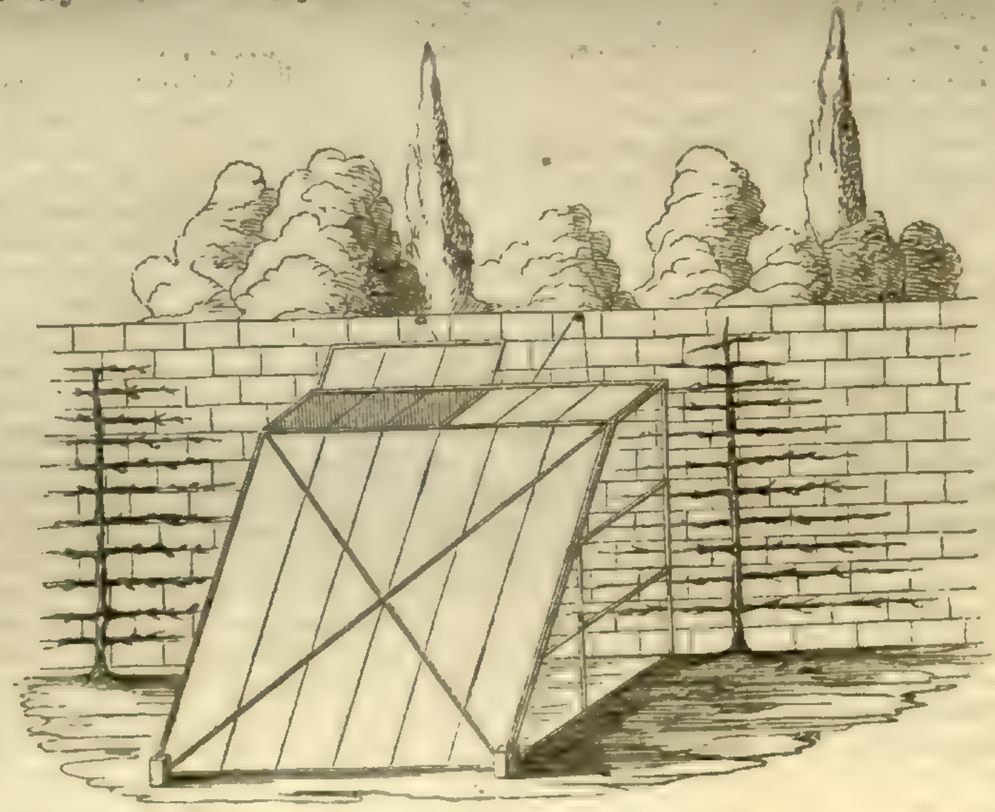
SHAW'S TIFFANY,

FOR PROTECTION, FOR SHADING, FOR WINTER GARDENING, AND FOR ORCHARD-HOUSES.

Having felt the want of a place for shading and for hardening off plants taken from the propagating house before placing them out of doors, or before sending them away (on a journey), I thought from the texture of Tiffany it would be just the thing to cover a place which I call a Tiffany house.

It is made with unbarked Larch poles 7 or 8 feet apart, and 7 feet out of the ground, the tops cut off square

and gouged out to receive the imposts, which are formed of rather small poles sawn through the middle and nailed to the uprights round sides downwards. Cross-pieces of deal, 1½ inch by ¾ inch thick, are then introduced to form a stout frame over which the Tiffany is stretched and nailed on with list; the cross-pieces should be 19 inches apart, the Tiffany being 38 inches wide, thus taking two cross-bars for each width of Tiffany, or the wind will get hold of it and fray it to pieces. During the winter and early part of the season the sides are covered except a portion to give air; the lower part or one-half is covered with the same material nailed down on pieces of wood, the same as on the top; but the upper half is covered with a stronger material and let down with small wooden rollers. My Tiffany house is 60 feet wide by 90 feet long, and laid out in beds underneath where I have placed a great number of plants during last summer, which without a single exception have grown better than I ever saw the same plants grow under glass, and as a test for light I placed a few plants of Roses there, which grew and flowered admirably; in fact I never saw them finer, and the Teas have remained all the winter without the slightest injury, whereas all the Tea Roses out of doors, even the Gloire de Dijon, have been killed. I consider Tiffany the cheapest and best material for many gardening purposes that has been known for years, quite a boon to gardeners; and from my experience of it I believe it can be converted into winter gardens, orchard houses, shelter for fruit trees, and for growing salads during spring and summer, since Lettuces, Radishes, &c., might be grown under it at all times of the year, as they would be protected from the frost during winter and early spring, and in summer from the fierce rays of the sun, thus making them more delicate and of better quality than when grown in the open ground. I believe I shall be able to ripen nearly all kinds of fruits under Tiffany; and as an experiment, I have erected an orchard-house, where I intend to grow Peaches, Nectarines, Plums, Vines, and a variety of other fruits. The following is a skeleton house before the Tiffany is put on, and the expense is so trifling that it may well be called an orchard-house for the million. My house is 16 feet wide, and 27 feet long, made of Larch poles; the butt ends serve for posts and the tops sawn through the middle placed with the round sides downwards serve as rafters and side pieces to nail the Tiffany on—all are placed at 19 inches apart, so that two rafters are wide enough for one width of Tiffany, but as the house will require air in mild and hot weather I have small frames or flaps 20 inches wide by 6 feet 4 inches long fixed with hinges on the ridge-board to open with a piece of strong string fixed to the middle of the flap and drawn through a small pulley, which is screwed into a piece of wood about a foot long fixed on the top of the ridgeboard. In appearance it looks quite as well if not better than a glass structure, and at one-tenth the cost, viz., the whole cost of the above house when finished with Tiffany was under 5*l*., reckoning everything; but in a garden where there are plenty of handy men who could do a good deal of the labour it need not cost more than one-half. It may not be generally known that the finest Pears, both as to flavour and size, are grown in the most temperate parts of France and the Channel Islands, where it is never very hot nor ever very cold; in fact, a long temperate season. By the use of Tiffany I intend to produce such a climate in England as I find in my Tiffany house after 12 or 14 degrees of frost that the soil 7 feet from top is not even frozen. In very hot weather the scorching rays of the sun are broken, in winter the frost is kept out, which makes the air more temperate than under glass, consequently more adapted for growing such fruits as Pears. I should recommend erecting a Tiffany house where all the finest French Pears might be grown, as the blooms in spring will be protected from frost, and the season lengthened in the autumn so that they will get thoroughly ripened. For protecting pyramid trees already grown in the open ground, I propose driving in split Larch poles, 8 (half) poles for a single tree with a frame to connect the poles at top with a wooden pulley let into one of the poles which should stand up above the others, and a cap or frame to fit the top, to draw up in mild weather, and in summer to be kept up entirely. This protection I anticipate will benefit the fruit all the summer and autumn as well as the trees. Above is a sketch showing how it is done; also a sketch for protecting wall trees, which consists of a series of frames with two stumps for each frame driven into the ground, about 4 feet from the wall, with a couple of saw cuts in each post sloping from the edge downwards and inwards towards the middle to receive the lower part of the frame—the top part to be fastened with two iron hooks, about 1 foot long, so as to keep the frame about 1 foot from the wall, fastened to two strong eyes driven into the wall; the opening to be covered with a flap like those in the Tiffany house, and when shut should fall down on the frame. Each flap should have a couple of straps of iron, the ends of which should have hooks to them, and hitched into a couple of eyes to serve as hinges. This is for giving air during all mild weather, the whole of which could remain all the summer or be taken away in a few minutes, as found best for the trees. Another and most delightful purpose the Tiffany can be used, is for making a winter garden for protecting in the winter and for shading in the summer such plants as will not flourish well in the full sun, as Camellias, Daphnes, Skimmias, Chinese Berberis, &c. A walk might be made with gravel in the centre and borders on the sides—the whole covered with Tiffany at such trifling cost as to give persons with small means an opportunity of growing plants such as they never grew before. I am confident that Camellias might be grown under it without the slightest assistance of fire heat,



as well as a great many half hardy plants which cannot be grown in the open air.

For the information of your readers I may add that Mr. Shaw has recently made a great improvement in the Tiffany by making it somewhat stronger, and has mineralised it, so that it will last much longer than formerly. From the experience I have had of it, if well tacked down with list, which is indispensable, I have no doubt it will last two years. So that the expense of Tiffany will be about one-half of what it would cost to have a glass structure painted. *John Standish, Bagshot.*

Home Correspondence.

Polyanthuses.—I had some Polyanthus seed of Mr. James Wood, of Harwich, who has for these 40 years prided himself on possessing a good stock of these peculiarly hardy and beautiful flowers. Mine are all coming into bloom. They are prettily marked, and are evidently bred from Star of the West. Mr. Wood's sorts of Polyanthus ought to be better known. All gardeners ought to have a large batch of these plants in their reserve gardens to cut from every morning for ladies' tables to mix with other things. *James Cuthill, Camberwell, S.*

Corydalis speciosa.—This beautiful spring-flowering plant bloomed with us for the first time in 1859; it was raised from Siberian seeds sent by Dr. E. Regel, Horticultural Director of the Botanic Gardens, St. Petersburg, in 1858. It is not so hardy as the article in your Paper of last week would lead us to suppose, as many plants have perished although covered with snow for many weeks during the severest part of the late long

winter. Plants on a south border have stood best; and those where the bulbs were planted from 5 to 6 inches are the strongest and best. It is decidedly one of our most showy spring plants. With the above came seeds of 11 varieties of Aquilegia; some of the varieties of A. glandulosa are splendid: also several species of Allium, Iris, Lilium, and Statice. Among the seeds from the Amoor River, Fraxinus Mandschurica, Syringa amurensis, and Vitis amurensis appear the most distinct. *T. S., Raby Castle, Durham.*

Effects of the Late Severe Winter.—As you have invited information on this subject, I have been induced to make a few observations on what has occurred in this locality. In a new kitchen garden lately formed here none of the Broccoli, Brussels Sprouts, Coleworts, or Kales have been in the least injured by the frosts of October and December. The situation of this garden is on the outside of the park on a piece of table land comparatively high for the neighbourhood, and quite unsheltered by trees of any kind. The soil before being made was of a very stiff and adhesive character, and the subsoil a strong red clay. The drains put in were nearly 4 feet deep, the clay from them was all burnt, and what was not required for filling up was mixed with the soil. No extra precautions were taken for preserving any of the winter vegetables, except Broccoli, which was all laid down close to the ground with the head to the north, and some charred refuse placed round the stems. I have been cutting Snow's and Dilcock's Bride, both excellent in quality, for the last three weeks, and other later sorts yet to come in will keep up the succession till the middle of June. In all the kitchen gardens in this neighbourhood, especially in low sheltered situations, I hear of nothing but desolation amongst the vegetables. No Broccoli Sprouts or Coleworts of any kind are to be seen. The extraordinary nature of the season in autumn, and the severe touch of frost so early in October, seem to have been best withstood in gardens openly situated and well drained, like the new one at Welbeck. In the nurseries and pleasure-grounds here hardy Rhododendrons, both standards and dwarfs, have suffered much, the bark being split off the stems; and hybrids of the campanulatum breed, being earlier in flowering than others, have had the young shoots and flower-buds killed. Farfugium grande will not stand above 8° or 10° of frost safely; at least, that is my experience of it. Amongst Coniferous plants which have been totally killed here may be reckoned Cupressus Knightii or elegans, Chamæcyparis thurifera, and a species from the Horticultural Society; also all the young plants of Pinus insignis and the Mexican species Teocote. Among Conifers very much browned but not killed may be named Pinus excelsa, Montezumæ, muricata, tuberculata, large plants of insignis, and Sequoia sempervirens. Among Coniferous and other plants which have proved quite hardy must be mentioned Pinus monticola, Jeffreyii, Beardsleyii, Lambertiana, Benthamiana, Sabiniana, and cembroïdes; Abies grandis, amabilis, Nordmanniana, Pinsapo, and Menziesii; Cupressus Macnabiana, Lawsoniana, Goveniana, Lambertiana, and Thujopsis borealis. Thuja gigantea is as hardy as the common Arbor-vitæ, and much handsomer in colour and foliage. Libocedrus chilensis, Torreya grandis, Thujopsis dolabrata, and Wellingtonia gigantea have everywhere proved quite hardy; only in exposed windy situations the latter gets a dingy brown colour like the common Arborvitæ, but soon changes as it begins to grow in the spring. Wall fruit and hardy fruit of all kinds promise to produce the best crops known for many years, judging from the quantity of bloom, the ripeness of the wood, and the backward state of the spring. They are at least three weeks later than usual in blooming, and there is an excellent chance of their setting well in consequence. *William Tillery, Welbeck, April* 16.—— The cold commenced here (Barking Side) as in other parts of the kingdom on October 21. The weather had been previously mild, and on the above day changed suddenly to a sharp frost accompanied by a piercing north wind; the same night the thermometer fell to 22°, and on the 23d to 18°. Much damage was undoubtedly done though not apparent for some time, all kinds of vegetation being full of sap and growth. In the middle of December we had a return of severe weather, commencing the night of the 13th, when the thermometer fell to 22°; on the 14th to 18°; on the 15th to 10°; on the 16th to 7°; on the 17th to 12°; on the 18th to 3°; on the 19th to 7°; on the 21st a thaw set in. In my garden the result is rather singular. Broccoli is almost entirely destroyed, while Savoys, Brussels Sprouts, Turner's Cottager's Kale, and Winter Spinach are perfectly uninjured. The kitchen garden is walled on three sides, the house and offices constituting the fourth; it is open towards the north-west. In this same kitchen garden there is a small Rosery. Cloth of Gold and Solfaterre were killed outright; these were standards. Other Noisettes, standard and dwarf, were materially injured; Jaune Desprez against a wall, but facing north-west, scarcely injured at all; on the other side of the house, facing south-east, the injury to the Noisettes is but slight; all other kinds have escaped. Strange enough, evergreens, such as Laurustinus, Aucubas, and common and Portugal Laurels have not suffered in the least, though quite open to the north-east. The temperature I have quoted was taken with a thermometer, one of Negretti and Zambra's, placed on a pedestal 4 feet high in the kitchen garden, about 20 yards from the house, and the same distance from a wall. When the thermometer in December fell so low I began to doubt its accuracy, and placed a mercury thermometer by the side of it; they agreed in the main, though varying sometimes 2° or 3°. Negretti and Zambra's, though sufficiently accurate for garden purposes as it essays to be, cannot, I presume, be depended upon for absolute nicety from the degrees being cast in the metal, which, of course, must be done before the spirit tube is adjusted. Can the depth at which springs lie from the surface have anything to do with the effect of severe frost upon vegetation? Here the springs are high; a well of 9 feet deep affords a never-failing supply of good water; the soil is gravel with a superstratum of loam, from 1 to 4 feet thick. *S. C., Essex.* —— We have passed quite 11 years in this climate, and no winter has been so destructive to plants as this one; although we have before experienced a greater degree of frost. We never had the glass below 10° this season, and then only for a night, but the changes from wet to frost have been very frequent. We have suffered most in evergreens. The common Laurustinus have lost all their leaves and have died back a good deal; Sweet Bays have not lost leaves, and are alive below, but very much cut; Portugal and common Laurels and Arbutus have suffered, but not severely; Evergreen Oaks are much browned; a large plant of Garrya is dead, Escallonia macrantha has been killed to the ground; Deodara and Cryptomeria are not hurt. All shrubby Heaths have been killed, and double Furze; Myrtles are also cut down to the ground. Veronicas (Andersoni, Lindleyana, and speciosa) are quite dead. Coronillas, Clianthus, Pittosporum have all been killed, even fine plants of six and seven years' growth; Ceanothus dentatus is not hurt; Jasminum nudiflorum is not touched on an east wall. No Roses are hurt except a few that were moved too late; narrow-leaved Laurel is uninjured, and herbaceous plants are all safe; Cerinthe aspera (self-sown) has lived and flowered all winter. A Banksia Rose is not in the least cut. Fruit trees are covered with bloom, and never looked better; Forsythia viridissima is very finely in bloom; a three-year old Pampas Grass shows no signs of life—three out of six (two-year old) only show green. Our Myrtles are 10 years old and quite trees. They are not dead at the root. Nothing is protected in these parts. It was the October 21st night that did us the most harm. Rhododendrons are pinched, but none are killed; Andromeda floribunda flowered as well as usual, and is not in the least hurt; nor is Farfugium grande or Chusan Palm, or Skimmia japonica. The nights are still very cold. *J. and M. Marryat, Maes-y-dderwen, Vale of Swansea, 230 feet above sea-level* —— The following is a list of a few plants, principally of recent introduction, which have been injured or have weathered the storm. You will find that accounts from different parts of the country will vary considerably, as very much depends on the soil and situation the plants are growing in, as well as the state the plants were in at the time the frost occurred. I find that many plants which had been transplanted only a little time before the frost set in and were in a dormant state have not suffered, while precisely the same plants in a luxuriant state of growth have been killed to the ground. For instance common Hollies where in a thriving state have been killed nearly to the ground, but the Chinese kinds growing by the side of them, viz., Ilex cornuta and furcata, have not been injured, yet I consider the common Holly hardiest. In former years I have seen Laurus regalis cut down to the ground, but here it is uninjured, so after all I do not consider that this winter will afford a fair test of what will stand and what will not. Very few people ever remember such hot damp weather, followed by such a frost as we had last October, and we may not have such another season for 100 years to come. Monsieur Keteler, of the firm of Thibaut and Keteler, of Paris, was at Bagshot last week, and he says that they had no sudden frost at Paris last October, but they have had a more severe winter there than they have had for years, the thermometer sometimes sinking 21° Centigrade below the freezing point. Sad havoc has therefore been committed amongst evergreens, all the Araucarias, Deodars, Mount Atlas Cedars, &c., have been either killed or injured, so much so that they will never be fit to look at again, while the same plants here have not been injured in the least. The Yellow Camellia, quite out in the open nursery, has not been hurt; on the contrary, it is much hardier than Laurels or Hollies; all the Chinese Cephalotaxus and Berberis are amongst the hardiest of the hardy. I never remember seeing so many Roses destroyed by frost as this season. I have a great many Hybrid Perpetuals and Bourbons killed, and I have thousands of Teas and Noisettes totally destroyed. All my yellow Roses out of doors are killed except one sort, called Noisette Celine Forestier, which has not been injured, but is as hale as it is beautiful. I had a few Teas and yellow Noisettes planted out under the protection of Tiffany, not one of which has been injured. Among plants that have not suffered from the late frost may be mentioned Abies jezoensis, Berberis japonica and Bealii, Cephalotaxus (all the varieties), Fortune's Yellow Camellia, Juniperus sphærica, Ilex cornuta and furcata, Libocedrus chilensis, Pinus Benthamiana, Thuja Craigiana, and Wellingtonia gigantea. Cryptomeria japonica, where in a luxuriant state of growth, is very much injured; Cupressus macrocarpa and Sequoia gigantea, the same; common Holly growing freely very much cut; FitzRoya patagonica and Saxegothæa conspicua either killed or very much injured; Pinus insignis and radiata, young growing plants, very much injured. *Jno. Standish, Bagshot, April* 17.—— The following is my experience of last winter here on the borders of Northamptonshire: — Killed: Cupressus gracilis (after standing in vigour for five years), C. Goveniana (not healthy before), Berberis intermedia, Stauntonia latifolia, all the Sikkim Rhododendrons, Farfugium grande. Much cut: Berberis Darwinii and Fortuni, Gynerium argenteum (? killed), Dacrydium Franklini, Abies Brunoniana, Chamærops excelsa (Chusan Palm). Cut: Cupressus Knightii and Uhdeana, Araucaria Cunninghamii, Rosa Fortuni, Arbutus, Laurustinus, Pinus insignis, Libocedrus chilensis. Entirely uninjured: Berberis japonica and Bealii, Cupressus funebris, Juniperus excelsa, FitzRoya patagonica, Wellingtonia gigantea, Thujopsis borealis, Thuja gigantea, Photinia serrulata. To this account I may add that two-thirds of my standard Roses have been killed, the summer shoots of both Deodars and C. Lambertiana cut off, and (as far as I can judge) both Paulovnia imperialis and Catalpas cut far back into last year's wood. *P.*——With me Cupressus Lambertiana is much injured, and I doubt if it will recover; common upright Cypress quite killed; Taxodium sempervirens and Laurustinus are much injured, but not killed; Cryptomeria japonica has escaped without much harm, a few inches of some of its shoots only being cut. Araucaria imbricata, Cedrus Deodara, Juniperus chinensis and recurva, and Pinus excelsa are proof against frost. A fine plant of the Pampas Grass is cut down to the ground, but it seems inclined to spring again. Broccoli is killed. *George Frost, Nurseryman, Bruckford, near Dulverton, Somerset.*

Paper Materials.—In your remarks upon different substitutes for rags for making paper, I have not observed any mention made of Holcus saccharatus. I grew some last year which I cut green for my cattle, and the second growth was cut down by the frost. I inclose a portion of the stalks which have stood out through the winter, and on looking at them the other day it occurred to me that the quantity of fibre the plant evidently contains might be made useful. Be good enough to notice whether it may be so. *E. M. Smith Bigg, The Hyde, Crawley, Sussex.* [If you will refer to p. 314 you will find that very full mention has been made of Holcus saccharatus.]

Grafting Wax.—Allow me to thank your kind correspondent, Mr. Hancock, for his offer of stearine; but I now find that by reducing the sealing wax to a fine powder, and beating it up with the other ingredients after they have been melted and cooled, a sufficiently good mixture is obtained. Of course the mixture is merely a mechanical one, and therefore some cheaper insoluble powder might answer equally well. It is certainly a singular fact that the only recipe given in several works of authority should be one absolutely impracticable. Are we to infer that no one has ever thought it worth while to make the experiment? *G. S.* [We never before heard of sealing-wax being used in preparing grafting wax. It is far too costly an ingredient, even if it possessed any peculiar merit.]

Lehmann's Herbarium.—Dr. John George Christian Lehmann, of Hamburgh, who died on February 12, aged 68, was Professor of Natural History at the Gymnasium of Hamburgh from 1818, and Director of the Botanic Garden from 1821. The widow of the late Professor Lehmann intends to sell the herbarium which he has left, and she has asked me to give you notice of the contents and condition of the collection. It consists of:—1. The general herbarium, containing about 70,000 specimens of plants (about 30,000 species) arranged on the Linnæan system. Each species is fixed to a single sheet of paper, either with gum or with small slices of gummed paper, or with pins. With the name belonging to each species is given the name of the collector, the country or place where it came from, and the name of the donor. This collection is particular rich in original specimens, which will not be often met with in other collections of dried plants; for instance the original plants of Wallich, the collection of Thonning from Guinea, of Olaf Swartz, Bunge, Fischer, Vahl, Forskael, Raddi, Jussieu, Labillardiere, Preiss, the orchids of Ledebour, &c. The Cyperaceæ are very rich, they containing all the American species of Asa Gray. The estimated price for this general collection is 800*l.* 2. A collection of the original plants collected by Dr. Preiss, according to the Plantæ Preissianæ, price 200*l.* 3. The collection of the Potentillæ, original plants, very rich, price 150*l.* 4. Two collections of Hepaticæ; the first containing the original plants of the Synopsis Hepaticarum, by Nees v. Esenbeck and Lindenberg, folio, price 150*l.*; the second in 4to, containing suboriginal plants, price 100*l.* 5. The Primulaceæ, by Lehmann, price 50*l.* 6. The Asperifoliaceæ, by Lehmann, price 40*l.* 7. A portfolio with Algæ and Lichens, price 15*l.* The estimated price for the general collection or those for the others will be reduced and any reasonable offer that may happen to present itself will be accepted. *Edward Otto, Curator of the Botanic Garden, Hamburgh.*

Natural Selection.—I have been much interested by Mr. Patrick Matthew's communication in the Number of your Paper, dated April 7th. I freely acknowledge that Mr. Matthew has anticipated by many years the explanation which I have offered of the origin of species, under the name of natural selection. I think

that no one will feel surprised that neither I, nor apparently any other naturalist, had heard of Mr. Matthew's views, considering how briefly they are given, and that they appeared in the appendix to a work on Naval Timber and Arboriculture. I can do no more than offer my apologies to Mr. Matthew for my entire ignorance of his publication. If another edition of my work is called for, I will insert a notice to the foregoing effect. *Charles Darwin, Down, Bromley, Kent.*

Societies.

Horticultural.—A Special General Meeting of this Society was held on the 17th inst., at the House of the Society of Arts, John Street, Adelphi, Rev. L. V. Harcourt, V.P., in the chair, when the following candidates were elected Fellows: viz., Mrs. J. Alexander, H. Chester, Esq.; Mrs. Chester, Mrs. W. H. Cole, C. Gayford, Esq.; G. Goss, Esq.; E. B. Green, Esq.; H. Hammersley, Esq.; Mrs. Hammersley, Rev. F. R. Hepburn, E. J. M. Herapath, Esq.; A. Jardine, Esq.; Sir R. Jarvis, Sir E. Lacon, Bart, M.P.; H. Langley, Esq.; T. Y. Learmonth, Esq.; C. J. A. MacLean, Esq.; Hon. Mrs. Maude, Mrs. J. Maudslay, Miss I. A. Maudslay, Miss C. R. Maudslay, W. R. Mitchell, Esq.; Capt. W. Pixley, Mrs. Pixley; R. E. Pixley, Esq.; Lieut.-General Sir G. Pollock, G.C.B.; Lady Pollock, Dr. D. Preston, Miss E. Ricardo, A. G. Robarts, Esq.; W. Scott, Esq.; Mr. J. Salter, H. W. Segelcke, Esq.; Col. Sidley, Major-Gen. Sir S. W. Steel, K.C.B.; E. D. Verner, Esq.; Mrs. H. B. Ward, The Lady H. Wardlaw, E. Warwick, Esq.; Mrs. E. Warwick, S. H. Waterlow, Esq.; Mrs. L. Wight, and Mrs. B. Wynne.

The Chairman announced that the Anniversary Meeting would be held on Tuesday, the 1st of May, and we observe by an advertisment in another column that it is to take place in the Museum of Science and Art at South Kensington, by permission of the Lord President of the Council.

Apiarian: *April* 17.—Dr. Hall, of Tottenham, in the chair. Mr. Tegetmeier reported the death of one of the Ligurian queens, lately introduced into the Society's apiary. Mr. Shirley Hibberd read a paper on Bee-keeping in London, in which he related his own experiences in the three-mile circle during the past three years. A Stewarton super, weighing 32 lbs., was exhibited as a sample of what could be accomplished in the London suburbs. It was unanimously pronounced excellent both in colour and flavour, and the style in which the box was worked a credit to apiarian science.

Notices of Books.

The Manse Garden; or, Pleasant Culture of Fruit Trees, Flowers, Vegetables, and Sweet Herbs for the Beauty or Profit of the Villa or Farm. By N. Paterson, D.D. Small 8vo, pp. 234. James Blackwood.

If there is one kind of book with which readers are more apt to be dissatisfied than another, it is one upon gardening. So many different kinds of plants are in cultivation, and so many different tastes and objects prevail among cultivators, that to attempt to satisfy all inquirers is as hopeless as the task of Sisyphus. One reader wants a book of directions ample and detailed as Mrs. Acton's "Cookery;" such a one is recommended, and when bought the purchaser calls it nought because it does not explain how to hoe, and rake, and dig. A second wants what he calls "general practical instruction," and is indignant when he finds it tells him nothing but what he thought he knew before. This zealous gentleman asks for a work on growing flowers: and when he cannot find in it all the newest names he pronounces it worthless. Perhaps a book on first principles is sought for; this is too learned, that too trifling; the first demands an effort of thought, the second gives nothing to think about. A very good-natured gentleman bought Loudon's Encyclopædia, but put it aside because it contained so much about everything; and on buying another work with a similar name, but which we name not, returned it to his bookseller because it contained nothing about anything. In short this book is too clever, that too trifling; one is too full, another too empty; some are too old-fashioned, some not new-fashioned enough. Perhaps the best form of book would be that of Æsop's Fables; the way of growing every plant standing instead of the old author's *story*; the reason of it replacing his *moral*. If a book like this were published it need not fill more than 50 volumes 8vo, nor cost more than 50*l*.; but then who is to buy it?

The picture thus sketched of the misfortunes of gardening authors is no caricature, as publishers find to their cost. The truth is nobody knows exactly what he wants in the gardening line when he buys a book; and the only thing an author can do is to write a book which tells a man all he ought to want. The work at the head of the present notice fulfils that condition, and admirably. It is exactly what its name indicates. Its object is to show what work has to be done in the garden of a Manse or Scotch Vicarage, and how to do it. It does not explain, indeed, that we perceive, what a gardener is to do when he sets about hoeing; it does not say that the body must be bent, the hoe handle grasped firmly near the middle by the left hand while the right seizes it higher up, and so on. Dr. Paterson is not a drill serjeant, and passes by the manual exercise. But he gives more than an equivalent; his little book is full of moral drill, of priceless value, as will be admitted by every one who has had to do with men well drilled perhaps in the manual but not at all in the moral exercise.

In the way of practical instruction we do not believe that a single thing is required in a Manse garden properly so called, we might even add in a small English parsonage, that is not here fully treated of, from the implement called "the Minister's Boy," up to Pears, Peaches, and border flowers. Grapes are omitted because they will only ripen in greenhouses in Scotland, and a greenhouse forms no part of the dignity of a Scotch clergyman. The book too has a charm beyond even that of clearness and fulness, in which two important qualities there is nothing left to be desired. Its style is delightful; a little quaint, racy with dry Scotch humour, nervous and vigorous like that of Roger Ascham. No such example of the pure old English style has appeared in modern garden literature. If it were permitted to compare mean things with graceful, we should almost say that the Manse Garden might have been written by Cobbett, had he only been a gentleman and a clergyman, and had understood what he was writing about.

Let us first take an example or two of practical instruction. Dr. Paterson is no advocate of directions for cropping being conveyed in the form of Gardening Calendars. "Season," he remarks, "is the chief thing to be observed, *as no art of man can make up for the loss of time, and the difficulty of redeeming it may be seen in a late sown and worthless crop.* But it is not easy to the inexperienced gardener to recollect what should be done in the several months as they proceed. To meet this difficulty, some have arranged their directions for the garden by making the months of the year the heads of their chapters, and setting down in each the work appropriate to the time. But this, which seems a simple and perfect method, happens in reality to be the most confused and inconvenient that has yet been devised. The preparation of the ground for any crop is to be found in one month, the sowing in another, and the future operations necessary to its culture must be sought at a venture, under some of the 12 heads, and most probably will not be sought at all. How much easier is the process, if you are interested about the production of an Artichoke, to go to that article, and find all you want in one page. Let the doing once follow the reading, and then there is no more to learn, and no forgetting of what has once been so acquired." The italics are ours; and we recommend them to the serious consideration of all garden dawdlers. Nevertheless, our author does not altogether object to a few concise hints being given in the shape of a Calendar, and he gives a short but good one himself.

He discourses thus of Artichokes:—"The Artichoke is a delicious and wholesome vegetable, provided it be itself eaten rather than used as a spoon. It is propagated by offsets from the roots; and as part of these require to be cleared away from old plants in order to leave no more stems for next crop than have room to grow, there is no difficulty in finding materials for a young plantation. Choose the deepest of your soil, keeping off the borders with this as with all high-growing crops, in order not to shade the wall-fruit; and in April, for each row of plants make a ditch 2 feet deep and 3 feet wide, on the bottom of which spread a layer of manure 4 inches thick. Then fill in half the earth, putting that lowest which was formerly on the top; and with the other half let more dung be mixed in the course of filling up the trench. Set the plants, three in a clump, 18 inches separate; and let the nearest part of each clump be at least a yard distant from the nearest part of the next. The roots will grow like stakes, penetrating the under stratum of manure, and send up strong stems, with large heads, for seven years, without requiring any more trouble than a rough digging of the ground before winter, and slight covering of litter in severe frosts." And thus of Dandelion:—"Dandelion is used as salad, chiefly by the French. It is said, when well blanched, to lose its extreme bitterness; and it has got, by the ceaseless greed of new things, into the garden books and cultivation of this country. Those who desire to feed on it may find plenty by the wayside. It is the most troublesome of all garden weeds. It is perennial, flowers early, and has winged seeds. The light down skims along the ground till it is interrupted by the Box edgings or the stems of fruit trees. In such places, finding shelter, it takes root; and there is no getting it dislodged. The best implement for the management of this plant is a blunt chisel with a long handle. By working this carefully down, the root may be extracted without uprooting the Box or inflicting canker on the fruit trees. The next resource is industry to prevent a single plant from ripening its seed; and to match its perennial virtue, let no piece of ground be dug without first scrutinising every inch for this delicate salad herb, in order that its roots may be carefully gathered and stored—in the bottom of the dunghill."

To our taste, however, the choicest of Dr. Paterson's dishes is that which relates to the Minister's Boy, some passages from which will give an excellent example of the moral drill to which allusion has already been made:—

"Garden books commonly terminate in a description of garden tools; and something, indeed, as to the best means of accomplishing the end their authors have in view may very naturally be expected. But as the dealers in tools as well as others in trade are usually quick-sighted enough to discover what sorts have the readiest sale, and as that sale soon comes to progress in the ratio of merit, the writer of the previous treatise is quite satisfied with the market as it is, together with the law which, without checking the multiplicity of inventions, circulates only the best. Instead, therefore, of describing the shape, size, or otherwise improved construction of spades, rakes, mattocks, and mouse-traps, he proceeds to consider only one implement of the manse garden, and which truly needs no little attention to its proper use and amendment, namely, the minister's boy. In former years the minister's man was a functionary of some note in the parish; but whether of late servants have risen in rank or ministers fallen, certain it is that the minister's man has now very generally dwindled to a boy. It may be, however, that a better economy, without supposing either a rise or fall in the rank of either, may account for the change. Descending from feudal times, when servants did nothing but kill and steal as they were bid, we find their wicked and in the long run ungainful employments substituted by a system of field labour, which for a long period had indeed its busy seasons, those of sowing and reaping, of collecting hay and fuel, with comparative idleness all the rest of the year. But now the dead of winter has less of leisure than the stirring summer had then; and the farm, more like a factory, finds work for all hands at all times. The fields, it is true, differ from the factory as to the matter of a roof for shelter; but the genius of the farmer compensates the deficiency by suiting the work to the weather; and the gleeful toil goes on as steady as in a house full of spindles and cards. Such an arrangement, if it do not cheapen provision, must raise the rent of land as well as the labourer's hire; and hence, as an idle day is now rare upon the farm, so an idle man, whether about the farm or the manse, becomes a nuisance to be no longer tolerated. * * * But the minister is not fit for the parish without a pony, and the pony cannot be kept without a boy, who will be half, and consequently wholly idle, if he have not other work to do. Such is the garden implement now under consideration. Whatever may be the outcry as to the uselessness of this official, let it be remembered, in the first instance, that he is indispensable to the pony, as the pony is to the minister; and further, that he is, if an idle boy, a substitute for an idle man; a spectacle less easy to be looked at. And as an encouragement to choose the least of two evils, the author avers, that the boy under proper direction is fully equal to all the work of the garden, with the exception of three or four days in the year, when better hands, whether as to strength or skill, may be required to lay up a winter furrow of deep digging, or to train a fruit tree round the stalk of a chimney; a height too great, it may be, for the minister's nerve, and perhaps for the decencies of his calling. This sufficiency of the boy, however, presupposes on the part of his master the possession of 'My Book,' together with such work of his hand as, giving health to his frame, shall be found also a pleasure to his heart. But it is further to be understood, that the following directions with regard to the improvements and use of the boy, are made some matter both of care and of conscience. In general boys are plagues. Something above what is usually denominated an urchin, and beneath a varlet, they are of the most impracticable age; an age when wit is the weakest and will is the strongest; an age when independence, as an end, is desired the most, and character, as means, regarded the least. They have escaped from school at a time when, conscious of strength, they begin to despise the master of a lowly seminary; and the parental authority to which they are required to submit is rarely good. The father being himself a servant, his children, by an instinct that needs to be amended, fail of respect; and he, most of his waking hours abroad, can do but little with the authority he has; whilst the mother, not careful of training at an early day, and used to the issue of uncertain commands, has recourse to persuasions and condescends to entreaty. Boys so reared come home, as their instalment to office is termed; and though at first shy and dumb as a sheep, yet no sooner has a small command by a superior servant been imposed than it provokes a loud defiance, so naturally, in their new yoke, do they slide into the wonted rut of their ill made roads. Trained to no habits of industry, they like no sort of work. Their pleasure lies in idle companions; and their haunt is not yet the tavern, but the smithy, where they may spend the long hours in bartering a knife, in arranging a gallop, or marvelling at a gun-lock, with longing eye to the possession but with no liking to the labour that might purchase the manly toy. So constituted, a boy cannot fall into worse hands than those of the minister, or enter upon work he is more reluctant to than his. On the farm the crack of the whip is music to his ear; the assemblage of labourers, the jibe and the jest, have the liveliness of a camp; whilst the yoking and unyoking of horses, the plunging of one unbroken to the yoke, and the upsetting of a cart, are a perfect Waterloo to his soul; and being there under authority, he is also surrounded with examples, which rouse his ambition, or soothe the toils of the day. But the scene is different at the manse: the boy works alone, if he work at all; he is depressed

by solitude, and the eye of his master is seldom upon him; he hates his task, and spends his time in thinking which of a thousand lies will serve the best for an excuse. It ought to be a serious consideration with ministers, that boys, bringing to the manse the seeds of corruption, should find there the best soil on which to sow them, and the best leisure for tending their growth. And this they will do if not narrowly watched, and submitted to a treatment answerable to their nature; and freely it may be asserted, that neither catechising, nor reading the Bible, nor family prayer, will ever produce the least salutary effect, if idleness be allowed and lies go unpunished. Let the reflection be added, that as six months are the probable period of an ill-doer's service, it may happen that the minister, in the course of his life. has sent out to the world half a hundred youths, who at the manse have been endured merely as useless, but have gone somewhere to be endured as blackguards; whilst it may not be so certain that, of all that number, one convert has been made in all that time. The author claims the privilege of one old in experience; and begs leave to offer to his younger brethren some hints as to the methods of making the boy good, and of turning his service to good account. * * * Make great use of the law of kindness: a boy should not feel, on his first outset, that on leaving home he is without a friend. Fail not to instruct him in the fear of God. Appear thus in the character of a guardian, not of a taskmaster: he has no way of avoiding the impression that your admonitions are solely for his good, and when spoken kindly and earnestly, they fail not to reach his heart; whereas his ill-taught selfish spirit always suspects a selfish end in the issue of every precept that concerns only the quality or the amount of his working. Angry threats provoke hatred and tempt to lying; but gentleness, urging the necessity of truth, will lead to the owning of a fault. It is a capital rule never to charge your boy with any crime without making sure of conviction. If you have begun the charge, spare no pains to make the conviction complete; for if you fail in this, and the accused be really guilty, you have, designing good, done incalculable harm; you have strengthened, all the time of examination, his hardihood of denial; you have allowed his lies to pass off triumphant; and have increased at once his sulkiness, self-esteem, and hatred of your person. But the moment that proof comes home and conviction is wrought, shame and perhaps tears show the good that has been gained, and give hope of future amendment. Make your boy to understand that you want diligence, not hard work; and indeed compassion ought always to be had for a frame that is but little matured. It is of great use to know what is reasonable to expect of such an age. A boy at 14 is not equal to more than one-fourth of a man's work at anything heavy; but in lighter tasks, such as picking up stones and weeds, he may be equal to a half. Give him all the benefit of common rules: a full hour of rest twice within the ordinary period of labour; and if you have a message to any considerable distance, let the requisite time be taken from the working hours. This adds greatly to the willingness, which, if it be gained, will make all right; for the physical powers are quite adequate to all that you want; the difficulty is to enlist the moral powers; and with regard to these there is as often a mistake on the part of the master as there is a failure on the part of the servant. Your boy wants to go home to see his parents; and his idea is that you cannot grudge him the Sabbath for that purpose. But give him rather any other day. He will be surprised that you do not value his work so much as you do his morals: he will carry, by his visit, a lesson to his brothers and sisters; it may be to his parents also; and whilst you prevent as much Sabbath profanation as might spoil a whole week's instructions, you are effectually making more useful hands by providing first for a better heart. The want of something to do in leisure hours is a perpetual cause of running to idle companions. The poor boy has learned to read; but it is only in the best schools, and of late years, that children have discovered any connection between the words of a book and the ideas which they are meant to convey, and the probability is that your boy has never read a page either for his instruction or amusement. To what a flood of light might his mind be at once opened by giving him a little book, and requiring him to tell what he had read of. He has learned to write and do accounts by rote, but has no notion of the use of either. The gift of a few sheets of paper and a slate, with as much intelligence as might be communicated in half an hour, might, by exercising his mental faculties, attach him to his abode, save him from bad company, and prevent the annoyance of not knowing where to find your boy when a friend arrives on horseback."

This is only part of the worthy Doctor's moral drill; but it is all for which we can find room. The remainder must be sought in the pages of the book itself, of which the 9000 copies already sold will be merely the advanced shadows of crowds to come if this admirable work is appreciated as it ought to be.

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—While cold drying winds and occasional bright sunshine prevail considerable attention will be necessary to maintain a moist healthy atmosphere in this house, and no effort necessary to secure this should be spared, for it is needless to expect flowers to last in a dry warm atmosphere. A thin shade should be used to break the force of the sun, and in giving air every care should be taken to avoid drying currents, opening the top ventilators only as long as these will suffice to prevent too high a temperature, and every available surface of bed or border should be kept constantly moist, in order to secure plenty of evaporation to counteract the drying effects of the external atmosphere. Give frequent attention to climbers in free growth, regulating the young wood before it gets entangled, and see that Hardenbergias, &c., are properly supplied with water at the root. At this busy season there is great danger of neglecting the winter-blooming favourites, such as Epacrises, Daphnes, &c., but if these are to be had in anything like perfection next season they must be properly cared for now. Show houses are generally kept too close and warm for Epacrises and Heaths, and in that case they should be removed to the greenhouse as soon as out of bloom, affording them a rather damp and shady situation for a few weeks. Attend to repotting such as have started after being cut back, and keep them moist and rather close until the roots get hold of the fresh soil. Shift and attend to tree Mignonette, for flowering the ensuing season, and see that tree Violets are not infested with red spider.

FORCING DEPARTMENT.

PINERIES.—In cases where a regular supply of fruit is required at all seasons of the year, it will be necessary to examine the stock of plants frequently, marking those considered the most likely for fruiting, so as to be able to keep them rather dry at the root for a month or so, which will in most instances have the desired effect of checking growth and throwing the plants into fruit. The only effectual method, however, of securing a supply of fruit at any particular time is foresight in the management of the stock, taking care to get the growth well matured in sufficient time to allow of affording the plants a short period of comparative rest, which is the only certain means of inducing them to fruit at any desired season. With plenty of convenience this is easily enough managed, but where the accommodation is limited, it is by far the most difficult part of the culture of the Pine. And in cases where a regular supply of fruit has to be furnished from limited accommodation, it is safer to grow the plants in pots, so as to secure perfect command over the roots, and also be able to move the plants to a cooler pit or otherwise, as may be necessary. Black Jamaicas and Cayennes are the best varieties for winter fruiting, and the stock of these should receive every attention at this season so as to induce them to make free growth, and a portion of them should be shifted into their fruiting pots as soon as possible. Use every means to afford growing stock a moist atmosphere, which in the present state of the weather is a work that requires much attention, but must be done if the plants are to be kept in first-rate condition. Give air freely, but avoid draughts of cold drying air, and use shading to assist in keeping down the temperature without being under the necessity of admitting cold drying air too freely.

VINERIES.—In cases where Muscats are grown in the same house with Hamburghs and other free setting varieties the temperature must be kept sufficiently high during bloom, and until the berries are fairly set, to suit the Muscats; for a crop of these cannot be depended upon from the most healthy Vines, unless they can be afforded a brisk temperature while in bloom and setting their fruit. It will be better, however, to risk having the Muscat bunches somewhat thin than to injure other varieties by maintaining a night temperature of 75°, which is sometimes the practice; 68° or 70° will be found quite sufficient. Get the borders prepared for planting out young Vines, and if these are started into growth before planting do not keep them too warm, or it will be difficult to prevent their sustaining a check after planting out.

MELONS.—Encourage those newly planted out with a moist warm atmosphere, so as to get them into full growth as quickly as possible; but plants that are fairly established should be kept cooler, admitting air on every favourable opportunity, in order to secure short-jointed fruitful wood.

FLOWER GARDEN AND SHRUBBERIES.

The cold weather which we have for some time past been and are now experiencing, renders the management of bedding plants somewhat difficult; it is dangerous without great caution to risk even the hardier kinds from under the protection of glass. All that can safely be done until the weather becomes warmer, in the way of hardening stock preparatory to its being planted out, is to give as much air as circumstances will admit without injuring the plants, and to place Calceolarias and the strongest Verbenas in turf pits, where they can be securely protected at night and sheltered from drying winds. Such things, when removed to cold pits, should be planted out in light soil, which will save trouble in watering and be much better for the plants than keeping them confined in small pots. Tender annuals that have been raised in heat should be pricked out in light soil under glass in order to get them strong before planting-out time. If not already done, hardy annuals should be sown after the first shower, and do not forget plenty of Mignonette and Stocks, the fragrance of which will always render them favourites. Look over plants at present in flower and mark the most admired for propagation at the proper season.

HARDY FRUIT AND KITCHEN GARDEN.

Recently transplanted trees must soon be carefully attended to with water, giving the ground where it may be found necessary a liberal soaking, so as to thoroughly moisten it, lightening up the surface with a blunt fork when it has become firm. Be prepared with a supply of Tobacco water with which to attack Aphides the moment they are perceived upon the Peach trees. Clean and loosen the surface about Strawberries; go over plantations made late last autumn, and replant places (numerous we fear this season) where the plants have failed. Take advantage of the dry state of the ground to get manure wheeled upon quarters where it may soon be wanted, and see that there is a good supply being prepared for the Celery crop, for without plenty of old rich manure large crisp Celery can hardly be obtained. As soon as the weather shall have become more favourable, get spring-raised Cauliflowers and Lettuces planted out, if not yet done, selecting for them a sheltered situation and light rich soil. A few branches of evergreens stuck amongst such things after planting so as to screen them from the sun is a great protection, and prevents their being dried up until the roots get hold of the ground. Get Scarlet Runners planted, also French Beans, if not yet done, and give the former an open situation and good deep rich soil, of which they are well deserving. Attend to ridge Cucumbers, Vegetable Marrows, Tomatoes, &c., and endeavour to get strong stocky plants, keeping them where they can be placed near the glass, and freely exposed to air on fine days; avoid getting them leggy and tender by too close treatment.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending April 14, 1860, as observed at the Horticultural Garden

April.		Moon's Age.	Barometer.		Temperature. Of the Air.			Of the Earth		Wind	Rain
			Max.	Min.	Max.	Min.	Mean	1 foot deep.	2 feet deep.		
Friday	13	☽	30.039	29.923	49	25	37.0	46	45	N.E.	.01
Satur.	14	22	30.150	30.122	49	31	40.0	47	45	N.E.	.01
Sunday	15	23	30.217	30.153	55	39	47.0	46½	45	N.E.	.00
Mon.	16	24	30.279	30.179	60	32	46.0	47	45	N.E.	.00
Tues.	17	25	30.229	30.093	66	34	45.0	48	46	N.E.	.00
Wed.	18	26	30.082	30.037	60	32	46.0	46½	46	N.	.00
Thurs.	19	27	30.064	29.993	44	32	38.0	47	46	N.	.01
Average..			30.151	30.071	53.3	32.1	42.7	46.8	45.4		0.03

April 13—Hazy and drizzly; fine; clear; frosty at night.
— 14—Hazy; drizzly; overcast.
— 15—Slight haze; fine; overcast at night.
— 16—Overcast; fine with bright sun; clear and cold; brilliant aurora borealis.
— 17—Dusky white clouds and cold wind; fine; clear at night.
— 18—Clear, cold, and windy: very dry air; overcast; boisterous.
— 19—Cloudy and cold; a few snow-flakes; hail shower; very clear at night.

Mean temperature of the week, 4 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending April 28, 1860.

April.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 22..	58.6	37.8	49.2	17	0.32 in.	4	8	5	3	1	4	6	3
Mon. 23..	58.5	37.4	48.0	17	0.52	1	8	5	1	4	4	5	6
Tues. 24..	58.3	35.8	47.0	12	0.60	5	4	6	5	1	8	3	2
Wed. 25..	58.5	37.7	48.1	16	1.40	5	6	5	5	6	3	2	2
Thurs. 26..	59.2	36.3	47.7	14	0.53	3	8	5	1	1	5	9	2
Friday 27..	58.5	36.1	47.3	15	0.14	11	1	7	2	5	5	2	1
Satur. 28..	60.1	36.6	48.3	14	0.64	5	4	7	4	5	5	2	2

The highest temperature during the above period occurred on the 28th, 1840—therm. 81 deg.; and the lowest on the 28th, 1857, and 22d, 1859—therm. 23 deg.

Notices to Correspondents.

*** *The Metropolitan Board of Works have directed that in future the Street in which our Office is situated shall be called Wellington Street, and that the Number of our Office shall be* 41. *Correspondents are therefore requested to address all letters, whether to Editor or Publisher,* 41, *Wellington Street, Covent Garden, London, W.C.*

AZALEA: *J G.* Your seedling is a showy rich salmon coloured kind, in the way of Perryana. You should send a plant of it for inspection to the Floral Committee of the Horticultural Society.‡

CINERARIA: *G D.* Very handsome, but not more so than varieties possessing the same colours already in cultivation.‡

NAMES OF PLANTS: We have been so often obliged to reluctantly decline naming heaps of dried or other plants, that we venture to request our correspondents to recollect that we never have or could have undertaken an unlimited duty of this kind. Young gardeners, to whom these remarks more especially apply, should bear in mind that, before applying to us for assistance, they should exhaust their other means of gaining information. We cannot save them the trouble of examining and thinking for themselves; nor would it be desirable if we could. All we can do is to *help* them—and that most willingly. It is now requested that, in future, not more than four plants may be sent us at one time.—*G.* Your seed belongs to some species of Leucadendron.—*F H.* Anemone pavonia, A. hortensis, and A. apennina.—*R.* 1, is a Fern not in fructification; 2, Erica versicolor.—*R & W.* In our opinion Berberis japonica, B. Bealii, and B. intermedia are merely well marked forms of one species.—*A T.* Luzula campestris.—*D R.* 5, Platycerium alcicorne; 6, Niphobolus lingua; 7, Lomaria, apparently attenuata; 8, Polystichum coriaceum, var. capense.—*Rosa.* 13, Blechnum occidentale; 14, Lastrea acuminata, *alias* atrovirens; 15, Lastrea aristata, *alias* Polystichum aristatum; 16, Pteris hastata, var. macrophylla.—*O J M.* One of the Marchantias or Liverworts, which so freely make their appearance on the soil of neglected pot plants, especially when kept in cold frames.

OAK GALLS: *A B & G J.* Your galls are the same as those figured and described at p. 72 of our current year's volume.‡

MISC: *E W.* Apricots cast their fruit when nearly ripe because the roots are too dry. Put guano—or if you like turpentine, into the runs of ants.—*P W S.* The postal regulations prevent us from acting on your suggestion.

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MANUFACTURED BY THE

PATENT NITRO-PHOSPHATE or BLOOD MANURE COMPANY
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ODAMS'S SUPERPHOSPHATE OF LIME.

This Manure contains an unusually large per centage of Soluble Phosphate of Lime, and is, therefore, a highly valuable Manure for all Root Crops.

ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.63	14.38	16.71	16.91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE..	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime ..	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.63	50.33
Alkaline Sulphates and Muriates ..	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

Dr. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

Dr. ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

Dr. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

Dr. HODGES states that—"It may be regarded as a good specimen of super-phosphate of lime." His calculation of its value is 7*l.* 13*s.* per ton.

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Every Bag contains 2 cwt., is marked "ODAMS'S SUPERPHOSPHATE OF LIME," and is guaranteed to yield 20 to 25 per cent. of Soluble Phosphate of Lime.

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(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

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ESTABLISHED 1812.

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WHEAT	ditto	POTATO	ditto	BEAN	ditto
GRASS	ditto	BARLEY	ditto	Also	

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LAWES'S PATENT TURNIP MANURE	£6	6
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,, MINERAL	5	5
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13*l.* 5*s.* per ton for 1 ton up to 30 tons } Liverpool, and Bristol.

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ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
CANTERBURY MEETING, 1860.

ENTRIES for IMPLEMENTS, FIELD GATES, HOPS, and WOOL must be made on or before MAY 1.

ENTRIES for LIVE STOCK must be made on or before JUNE 1.

*** All Entries received in each case after those respective dates will, without any exception, be disqualified, and returned to the senders.

Prize Sheets and Forms of Entry may be had on application at the Offices of the Society, 12, Hanover Square, London, W.
H. HALL DARE, Secretary.

The Agricultural Gazette.

SATURDAY, APRIL 21, 1860.

MEETINGS FOR THE FOLLOWING WEEK
WEDNESDAY, April 25—Agri. Society of England ..... Noon.

—— A valuable report by Dr. VOELCKER on the Agricultural Value of DATES AS FOOD will be found in another page. There is every reason to believe from the results of his investigations that they may be imported and profitably used by the sheep and cattle-feeder, even though they should cost in the English market somewhat more than is givin for the Carob Beans.

—— Messrs. JUPP have offered a new horse and cattle food for 35*l.* a ton; and Mr. THORLEY—a singular coincidence—is enabled by the fortunate discovery, at the same time, of a market for his waste, to make a reduction of 10*l.* a ton in the price of his food for cattle.

We have great faith in the value and importance of what is generally wasted, but still greater faith in the usefulness of competition, and Messrs. JUPP therefore deserve our thanks. It is plain that the argument which they have wielded has been more powerful than any that "Messrs. LAWES and MORTON" have yet conceived or uttered. We believe, however, it is one which will be by and bye successfully urged against themselves; and that cattle foods at 25*l.* and 20*l.* and 15*l.* a ton are on the card equally suggestive of profitable markets for waste and other excuses for a diminished charge by the older manufacturers. And while the oldest of them all confesses in his advertisement that the nutritive value of his food does not exceed 15*l.* a ton, why should any one give more than this for food?

Mr. THORLEY'S market for waste, which he finds so profitable, should recall the remarks of Mr. LAWES on the value to the farmer of the waste occurring during the feeding process. If the value in the manure derived from any concentrated food given to fully grown beasts be 3*l.* or thereabouts per ton, then the comparison as to cost of our first class foods with the manufacture of Mr. THORLEY is not that of 10*l.* with 40*l.* per ton, but of 7*l.* with 37*l.* The price demanded,

diminished though it be, is not merely four times, but really more than five times that of the best natural foods that can be purchased.

IT is long since agriculture has sustained such a real loss as that recently inflicted on it by the death of M. LOUIS VILMORIN, the head and heart of the well-known firm of VILMORIN-ANDRIEUX & Co., Merchant Seedsmen, of Paris. For nearly two centuries had his ancestors occupied a first place among the commercial houses of the capital, but it was reserved for their late representative to elevate the firm to a higher position than, with perhaps one or two exceptions, that enjoyed by any similar house of business in Europe, Incapacitated to a great extent by a bodily defect. he was physically unfitted for the active routine of business occupations, and was led to devote the energies of a vigorous and richly stored mind to the higher branches of his profession—the improvement of the ordinary, and the generation of new varieties of our cultivated plants. His great object was to work out the best means of fixing in plants the possession of hereditary properties, by which their special values as crops might be rendered more certain, and under judicious treatment greatly increased. This was the work of many years of his life, and the most marked success attended his honourable labours. The basis of his principle of improvement was in the judicious selection of the parent stock; and long experience, combined with his great natural powers of observation, enabled him at once to recognise in the seed the very qualities which he wished to develop and to augment in the offspring plants. These were most carefully watched and attended to during their growth and submitted again to his scrutiny, and only those returned for the reproduction of their kind, which, according to his judgment, assisted frequently by direct experiments, were considered to possess in the highest degree those qualities which conferred the value upon the individual plant or crop. Thus, wellnigh all the principal plants of French agriculture occupied from time to time his attentions, and none passed through his experimental farm at Verriéres without testifying by their increased vigour and production to the value which the study and treatment of a scientific farmer had conferred upon them. The results of his improvements, and the means he took to secure them, were always made known to the public, every opportunity was readily afforded them of visiting the farm, of seeing the experiments in progress, of obtaining details of cultivation, and, indeed, of taking every advantage of the lessons there to be learnt.

The principal crops with whose improvement the name of LOUIS VILMORIN is most associated are the Cereals, Beetroot, Potatoes, Madder, Colza, &c. the benefits of which have been spread over the whole cultivated surface of his country, and have also been participated in by the agriculture of our own. We are indebted to him for the botanical division of the genus Triticum, our cultivated Wheats—and were we to apply the same principles of improvement to our Turnips and Mangel in reference to their feeding properties that he so successfully carried out in reference to the saccharine properties of the Beet, the food produce of our root crops would be enormously increased in the course of a few years, and every member of the community, consumers as well as producers, would be proportionately benefited. M. VILMORIN died comparatively a young man—too young for the interests of agriculture and of his country, but not too young to have acquired by his high scientific and practical acquirements, his devotion to the profession always uppermost in his thoughts and in his heart, by the amiability and excellence of his private character in every relation of life—as son, husband, and father—the love and confidence of a large circle of private friends and the esteem and respect of every one, whether Frenchman or foreigner, to whom either personally or by correspondence he was known.

He was born in Paris April 16, 1816, and died at Verriéres, March 21, 1860, thus nearly completing his 44th year. The funeral cortége clearly marked the stamp of the man whose remains were being taken to their last home. In its ranks were seen mingled together representatives of the science and representatives of the practice he had so successfully united in his own person, and of each the highest were there to do honour and pay homage to the memory of one who had conferred benefits upon all. Among those who formed part of the mournful procession we find the illustrious names of BOUSSINGAULT, BECQUEREL, BROGNIART, CHEVREUL, COMBES, DECAISNE, DUMAS, FRÉMY, PASSY, PÉLIGOT, VALENCIENNES, Members of the Academy; AMADE-DURAND, DAILLY, DARBLAY, HUZARD, MAUNY DE MORNAY, MOLL, POMMIER, ROBINET, representatives of the Society of Agriculture; BIXIO, DROUYN DE LHUYS, THENARD, HERVÉ MANGON, MILLE, and many others well known for the position they occupy in the landed and agricultural interests of the country.

The orations over the grave were made by MM. DECAISNE, CHEVREUL, and ROBINET, who by the graceful and feeling manner in which they severally expressed themselves, testified to the high esteem in which LOUIS VILMORIN was held by all who had the happiness to be ranked among his friends, and to the great loss his early death has inflicted upon the whole community. *W.*

WHAT a pity it is that the experiment of paper-making from Couch came to an untimely end: the product being too brittle, we believe, whether as paper or cardboard; so that the mill in Northamptonshire is now working away upon other raw material, with great ricks of the collected Couch slowly rotting down around it. To be sure a new invention is now promising to work up our straw into quires and envelopes; but we shall still have the expensive root-weed to extirpate as a nuisance, without value received, and with no chance of even a bad market. Well might Mr. PUSEY enforce his recommendation of autumn fallowing by a woodcut portrait of a long runner of "Twitch"—somewhat in shape like a centipede, and as hateful to the eye of the cleanly farmer. Labourers regard the plant (or rather the class of plants not very botanically but for practical purposes grouped together as "Couch") as a provider and promoter of work; and the managers of light moist soils in which it can burrow deep and revel in mischief ever rife and thriving, are able to make out a fearfully heavy bill against it for extra cost of cultivation and loss of cropping by direct damage or indirect delay. Over a large portion of our country the agriculture is conducted as much with a view to the requirements of this imperious and exacting weed as to the wants of the fold, the stall, or the corn market; and untold numbers of acres in good heart are obliged to be sacrificed to its infesting presence, and fallowed for cleaning when they should be bearing a good harvest of profit. On most of our friable loams and on still lighter lands, a continual battle is being waged by the farmer against this pertinacious and ineradicable enemy. With creeping and matting roots for ever being subdivided by the operations of tillage, and each joint starting a fresh plant on its own account, the Couch is to the fields what the new Water-weed proved in our choking canals; and the husbandman endeavours only to reduce and check it by the battues and razzias of the Couch-fire seasons, without hoping to exterminate this vegetable vermin.

But in that fatal time for weeds, the scorching autumnal months, when the stubbles are first bared to the baking sun, the teams are too busy with harvest-carting, preparing land for Wheat sowing, and other labours, to break up the next year's fallow; except, indeed, partially where an early harvest or a small breadth of Bean and Pea crops cultivated may give a better opportunity. So we have recourse to wet winter ploughing, that cannot half sever and shatter the soil; cross-ploughing in spring, followed by a tedious succession of scufflings to lift out with tines and prongs—and ploughings, to turn up by inversion fresh coats of Couch for harrowings, rollings, rakings, and hand-pickings to shake out, gather, and remove. STEAM CULTIVATION, however, completely alters the case. The steam-driven scarifier anticipates and prevents most of the costly and delaying business by "smashing-up" the hard stubble in autumn, exposing the Couch naked on the surface, and causing annual weeds to grow and be destroyed; without simultaneously burying again a large proportion of the root-weeds, as the turn-over plough does. And practical experience has shown that several ploughings and grubbings (varying much according to the nature and locality of the ground), are thus wholly saved—enabling a much greater amount of moisture to be conserved in the soil in spring and early summer, killing the Couch and fertilising the land by the longer exposure to atmospheric agencies, and amazingly forwarding the sowing of the root-crops (so important a point for growing bulk and weight, and for completing the hoeing before hay and harvest interfere with the labour). And all this is in addition to the pecuniary economy of the tillage, both in the fewer operations required and the less cost of each as compared with horse-power.

At the public competition, when the steam plough and steam grubber are tearing away—with the mysterious force-giving vapour at an explosive pitch of compression within the plate-and-rivet body of the boiler—we reckon the cost of the operation, as compared with the expense of so much draught done by live horses, and award our prizes and commendations accordingly. But the steam-engine might haul at a dearer rate per cwt. of draught, and yet be better worth having than horses. No team can scuffle so deeply without treading down their work again; so that for every cwt. of draught the steam power performs most effect upon the ground. And apart from comparative effectiveness of the process, there is this piece of logic in the case: autumn-grubbing stubbles for fallow saves, say only one ploughing and two scufflings in the ensuing spring; you cannot get this autumn grubbing done without the steam-cultivator, but you can with it; therefore the steam-cultivator in this grubbing does work worth the price of one grubbing, one ploughing, and two scufflings. You pay say 8*s*. an acre for the work, and you keep in your pocket 12*s*. per acre that must have been expended in spring tillage if you had laid out the aforesaid 8*s*. in winter ploughing instead of autumn grubbing. So that you would not be paying too dearly for the steam-grubbing in autumn even at 20*s*. per acre; and it would be well worth doing, because of the advantage of such early cultivation. Let not the practical farmer overlook this point in expecting cheap work from the steam-engine. *I. A. C.*

POTATO CULTIVATION.

I HAVE been very successful for several years in my crops of this root both as to quantity and freedom from disease, and a notice of my system of farming for this purpose I think may be useful.

I double fork the land to the depth of 16 to 18 inches, commonly a Wheat stubble, throwing the lower spit uppermost. I begin as soon after harvest as I conveniently can, finishing the work if possible before Christmas. The soil is thus left in a rough cloddy state exposed during the winter to the frost, snow, and atmospherical influences. In the following spring so soon as the land is sufficiently dry and will work into a fine mould, I harrow once, then sow 3 bushels of salt to the acre broadcast, and proceed to open the drills or furrows 5 inches deep, and 1 yard apart with a triangular hoe, made for the purpose. I deposit the tubers in these furrows 15 inches from set to set. I then sprinkle over them 1½ cwt. of guano mixed with 10 or 15 bushels of burnt earth or ashes to the acre, and cover over with a common hoe. I have this day (March 31) finished planting 5 acres, my usual quantity. No horse labour has been employed except for one harrowing. I plant whole tubers and endeavour to select them of a uniform size, neither large nor small; the quantity required for an acre is about 28 bushels of 56 lbs. In taking up some Flukes three years ago my men found several roots which were round tubers, larger and better than the Flukes. From these I raised the stock I now plant; they have been free from disease and are an excellent variety, and much in demand in this neighbourhood. The subsoil of my land is partly tender brick earth, some of it stony loam, and occasionally chalky marl or gravel. Whatever it may be, it is thrown upon the surface and in it the Potatoes are planted, and the crop is the better when the soil is stony. The cost per acre up to this time is as follows:

	£	s.	d.
Double forking 6*d*. per rod	4	0	0
28 bushels of sets at 2*s*.	2	16	0
1½ cwt. guano and 3 bushels of salt	1	4	0
Harrowing	0	0	6
Mixing the manure and planting 1½*d*. per rod ..	0	16	4
	£8	16	10

When the plants show 3 or 4 inches above the soil and taking advantage of dry weather, they will be moulded up on both sides, leaving a ridge 18 to 24 inches wide. This work, and keeping the land clear from weeds, will cost about 10*s*.; taking up the crop with the fork and storing at 1*d*. per bushel (say 360 bushels or 9 tons) will be 1*l*. 10*s*., making the entire expense per acre 10*l*. 16*s*. 10*d*. I commenced this system of double forking in the autumn of 1854 in a field of 5 acres, which was in Wheat last year. In the following spring it was planted with Potatoes as previously described—the sorts York Regents, Scotch Dons, and Flukes. I will detail the cropping of that field till the present time.

1855.—Potatoes, 416 bushels per acre.

1856.—Turnip seed with guano. After the Turnip seed was threshed, 10 loads of farm-yard manure to the acre was ploughed in, and Cole seed sown fed off with sheep in November, ploughed once; then sown with rough chaffed White Wheat.

1857.—Wheat of excellent quality, 48 bushels per acre. With the Wheat was sown Red Clover, which was manured with 10 loads of muck in the autumn to the autumn.

1858.—A large and full crop of Clover mown for hay.

1859.—Red Wheat, which is just threshed; the yield 44 bushels per acre. The land ploughed soon after harvest, and again in February, and sown with Barley without manure on the 18th of this month.

1860.—Will be therefore a Barley crop.

I ought to have been satisfied with the Wheat crop, and to have prepared this field for roots (Mangel); but I did not want it for that purpose. After the Barley I shall fork again as before for either Potatoes or Mangel; if for the latter I shall put on a heavy dressing of manure, but if for the former I shall rely upon guano and salt as heretofore. If I produced a balance sheet of this field (which is a ticklish subject just now) I think I should beat my friend and neighbour Mr. Alderman Mechi.

I shall pursue the subject of this mode of cultviation on another occasion. I have many facts which I deem worth notice, showing that on such soils as mine deep stirring and mixing the land is a successful method of farming. *Henry Dixon, Dorwards Hall, Witham, March* 31.

ON THE COMPOSITION AND FEEDING VALUE OF DATES.

BY DR. AUGUSTUS VOELCKER,
Royal Agricultural College, Cirencester.

In an article which appeared a few weeks ago in the *Agricultural Gazette* the probability is held out that in years of abundance Dates may become available as cattle food. It appears that the Date is a fruit which more than almost any other vegetable produce varies exceedingly in its yield from year to year. Whilst in ordinary seasons Dates probably cannot be imported and sold with a fair profit for much less than 9*l.* a ton, it may be reasonably expected now the duty is taken off them that in years of great abundance they may successfully compete with Carob Beans, a food which, like Dates, is extremely rich in sugar, and which now can be procured at about 7*l.*, a price at which Carob Beans are certainly not too dear in comparison with the prices of other descriptions of feeding material.

As far as I am aware, the published analyses of Dates are not sufficiently complete to allow any trustworthy inference to be made from them as to their feeding and fattening properties, or their adaptation for distillery purposes. In order to supply this deficiency I had a careful analysis made in my laboratory by my first assistant, Mr. Sibson, who under my direction obtained the following results.

I purposely selected for analysis an inferior description of Egyptian Dates, and I may mention that 52 Dates weighed 1 lb.

The proportion of stones in the fruit in its natural state amounted to 12.55 per cent. As nearly as possible one-eight of the weight of Dates consists of indigestible and useless matter in addition to the indigestible fibre, which it will be seen by the subjoined results is extremely small in Dates.

In the natural state the Dates contained 21.6 per cent. of water, and yielded 1.51 per cent. of ash. By far the greater part of the Date is soluble in water, as will be seen by the following:—

General composition.

Water	21.60	
Soluble organic matters	68.54	69.84 soluble in water.
Soluble mineral matters	1.30	
Insoluble organic matters	8.3$^{5}_{1}$	8.56 insoluble in water.
Insoluble mineral matters	.2	

It appeared to me of interest to determine separately the amount of soluble and of insoluble flesh-forming substance, and to direct special attention to the accurate determination of sugar. The proportion of the latter was accordingly ascertained in a separate quantity of fruit by the well-known fermentation process. The results obtained lead to the following:—

Detailed Composition of Egyptian Dates.

Water	21.60
Oil	.19
Sugar	56.40
Soluble protein compounds*	10.68
Soluble inorganic salts	1.30
Insoluble protein compounds**	.25
Indigestible woody fibre (cellulose)	2.38
Pectin, gum, and digestible fibre	6.99
Insoluble mineral matters	.21
	100.00
*Containing nitrogen	1.71
**Containing nitrogen	.04

An inspection of these analytical results will show:—

1. That the proportion of ready made fat in Dates, as might have been expected, is quite trifling.

2. That the amount of sugar is very considerable. More than half the weight of Dates consists of sugar, or in exact numbers they contain 56½ per cent. of sugar.

This large amount of sugar I need hardly say renders this fruit very valuable, alike as a fattening food and a material from which a large yield of spirit is to be expected.

Although we do not possess a sufficiently extensive series of experiments which are calculated to bring to light the relative value of starch and of sugar, which we know are both used in the animal economy for keeping up animal heat, and for the production of fat, I am inclined to think that sugar has an advantage over starch, inasmuch as it is more eagerly consumed by most animals, and if I am not mistaken is more readily assimilated and changed into fat.

3. That the proportion of protein compounds in Dates is by no means inconsiderable. It is indeed as large as in Barley-meal. The protein compounds or flesh-forming matters in Dates, being nearly wholly soluble in water, we may reasonably expect that they are readily assimilated in the system, and with as little waste as possible. As a flesh-producing food the Dates analysed in my laboratory are certainly not inferior to Barley-meal and most other kinds of starchy food.

In the *Agricultural Gazette* for March 31 two partial analyses of Dates are given. In one the amount of nitrogen is stated to be 0.22, and that of protein compounds 1.39; in the second analysis the proportion of flesh-forming matter is quoted to be 2 per cent. According to these determinations Dates are extremely poor in nitrogenised constituents; indeed poorer than any kind of feeding material with which I am acquainted. It is, however, mentioned that both analyses were made with inferior Dates, and certainly the Dates must have been inferior if they have really yielded as little nitrogenised matters as stated by the writer. Having found in round numbers eight times as much nitrogenised matters in Dates, which I with others considered of an inferior description, I cannot help thinking that there occurs probably some error in the analyses which were published in the *Agricultural Gazette* for March 31. At all events it is satisfactory to know that common Egyptian Dates are not much, if at all, inferior as a flesh-producing food to most cereal grains. This agrees well with all accounts of travellers in the East, from which we learn that Dates are a most nutritious and invigorating food.

4. That the amount of woody fibre is extremely small. This of course is a great recommendation in an article of food.

On the whole the preceding analysis induces me to consider Dates to be a good feeding and fattening food, which certainly would be cheap if it can be supplied at 7*l.* per ton, or even at 8*l.* per ton.

Dates have a striking similarity in composition with Carob Beans, as will be seen by comparing the preceding results with the subjoined analysis of Carob Beans:—

Composition of Carob Beans.

Water	14.22
Sugar	54.07
Mucilage, pectin, and digestible fibre ..	17.41
Woody fibre	3.88
Oil	.96
Protein compounds	7.72
Insoluble mineral matters	.62
Soluble mineral matters	1.12
	100.00

Carob Beans, it appears, contain about 7 per cent. more solid matters, but notwithstanding the somewhat larger proportion of water in Dates, those analysed in my laboratory contain 2½ per cent. more sugar than Carob Beans.

Dates likewise are richer in flesh-forming matters than Carob Beans, and on the whole (at least those analysed by me) are superior to the latter as an article of food.

The Carob Bean encloses a number of dark brown and extremely hard seeds, which are rejected by the animals. A direct determination has shown that they constitute about 13½ per cent. of the whole weight of the Bean as imported into this country.

Date-stones, though larger than the hard seeds of the Carob Beans, it will be noticed scarcely form so large a portion of the fruit as the seeds of the whole Bean pod.

For distillery purposes I conceive Dates are more valuable than Carob Beans, inasmuch as they are likely to produce a more fragrant and altogether better spirit than Carob Beans, which in their natural state contain appreciable quantities of butyric acid, which confers a disagreeable smell on the spirit obtained from them.

PLEURO-PNEUMONIA.

Mr. Palin, of Tarvin, Cheshire, lately read the following paper on this subject before a local Agricultural Society.]

The "Pleuro-pneumonia" made its appearance in this county in its formidable character about the year 1842, and at that time it carried off the greatest portion of many valuable stocks of dairy cows. In consequence of such a serious visitation, cattle clubs were formed in different parts of the county, for the protection of farmers from that disease alone; and two other societies were established in London for the same object. So alarming did it become in a very few years, that the Royal Agricultural Society of England, in 1847, offered a prize of 50*l.* for the best essay on "Pleuro-pneumonia." Several essays were sent in, and the prize was awarded, in 1848, to the author of an apparently clever, well-written essay; but it is much to be regretted it threw very little light upon the subject, and I greatly fear that the country, after an experience of eighteen years, is quite as ignorant of the cause or the cure as it was at that time. If the disease usually made its appearance at any particular time of the year, or under any visible peculiar circumstances, we might possibly form some idea at least as to the cause, but we hear of it presenting itself at every period of the year without exception, and under almost every circumstance, in all kind of seasons and situations, where cattle are in high condition, and where they are in low condition, where they are well managed, and where they are badly managed, in fine dry weather, in very hot weather, in cold frosty weather, in mild wet weather, upon every description of land, from the dryest sand to the wettest clay (and I believe if there is an exception, it is in the hilly districts of Wales, Scotland, Derbyshire, &c.) and this too where farmers have been most cautious in introducing fresh cattle into their stock.

The symptoms, too, vary considerably; an altered gait in walking, as if from stiffness of the limbs, is frequently one of the first indications of the disease; sometimes a peculiar and unmistakable grunt, at others a failing of the milk, soreness of the udder, and tenderness of the spine, quickness of breathing, short cough, horns alternately hot and cold, suspension of rumination, costiveness, partial loss of appetite which gradually diminishes until it is entirely gone (and yet I have known instances where the appetite has continued until the end, when the animal has dropped down dead whilst eating). It is a much more serious business when the disease enters a dairy stock than a feeding one, especially if, as is generally supposed, the flesh of the animal is not unwholesome, but fit for human food, for although a milking cow may be of great value to her owner for dairy purposes, she might be worth little or nothing for the slaughterhouses, and there is also the danger, if not the certainty, of abortion during six or eight months of the year, *i.e.*, in every decided case of "Pleuro"—either from the effects of medicine or the disease itself; but as regards feeding animals, assuming that the flesh is not unwholesome, the loss would be trifling as compared with dairy cows, provided the animals were slaughtered immediately on being taken.

I believe the "Pleuro" made its appearance in England previous to the year 1842; for, to the best of my recollection, it broke out in Yorkshire and some few distant counties, before it found its way into Cheshire, and from a memorandum in my own possession, I find, that previously to forming a cattle club in the parish of Tarvin, for protection against that disease, two stocks of dairy cows in the neighbourhood having then been attacked, a preliminary meeting was held at the "Bull's Head Inn," Tarvin, on the 24th December, 1842, for the purpose of taking into consideration the propriety of establishing such a club; and on the 10th of January, 1843, the club was actually formed, and it continued to work remarkably well until a few of the principal members became dissatisfied because it did not protect them against all losses, but confined itself solely to the "Pleuro," and, in consequence, the club broke up, and many of its members then joined the "Mutual," or the "Agriculturist," two London offices, the latter a proprietary one, which, from want of experience and good management, soon broke up also; several other clubs and insurance companies were soon formed, and from increased experience and a better system of management, are undoubtedly working better than formerly.

As regards veterinary or medicinal treatment during a period of 18 years, we cannot expect much success until one uniform system of treatment is adopted, based upon scientific principles and a thorough knowledge of the disease from its commencement; but here we are at a loss. No one appears to know for a certainty whether the attack and one or more of the symptoms are simultaneous, or whether the disease generally lurks in the system for some time previously to the symptoms manifesting themselves; nor is it generally agreed where the disease commences, some contending that it commences in the pleuro and then spreads to the lungs; others, that it has its origin in the lungs themselves. There are also others of considerable professional experience who are of opinion that the disease originates in the blood, and that the first step should be to endeavour to thin and purify the blood in the very earliest stages of the complaint. These are points which I do not pretend to determine, but having examined a great number of cattle after death, I think myself justified in stating that I have generally found the pleuro much inflamed, and one division of the lung in a highly gangrenous state and the other comparatively healthy, but in every case the appearance was such as to lead me to believe that the affected lung could not possibly be restored to a healthy state by any medicinal treatment. At the present day there are advocates for severe bleeding, as the "sheet anchor," and from a combination of powerful medicines down to homœopathy, in which bleeding is strictly forbidden; and, according to my own observations, about an equal number have recovered under each kind of treatment, and where they have not been treated at all, probably one in every seven or eight. Others are of opinion that the disease arises from the use of bone and our several new manures, but their opinions also will appear fallacious when I state the fact that on many farms where the disease first appeared, neither bone or any new manure had been used; and on one farm which was visited by it in its most malignant form in 1847, at least two-thirds (50 acres of its dairy pasture had been bone manured in 1838, about nine years previously) without a single case of "Pleuro" having manifested itself between these two periods, although the disease carried off about half the dairy stock of an adjoining farm early in 1843 (nearly five years before) on which bone manure had not been applied at all. Many persons doubt its being infectious or contagious, but the circumstance of its spreading through a stock, when once it makes its appearance, to the annihilation generally of one-half or two-thirds of its number, leads to the inference that it is infectious, although it frequently happens that where

animals are kept in close contact with diseased ones, one-third or more escape. It generally makes its appearance as an epidemic or epizoötic, attacking several stocks in the neighbourhood about the same time, and this I think may be attributed to some atmospheric agency. Can anything be done to arrest its progress? There will not I think be a question in your own minds as to its effect upon the price of animal food, and dairy produce, especially when you are informed that on an area of less than three square miles within a short distance of Chester, upwards of 120 dairy cows have fallen a sacrifice to the disease in the short space of about eight months, and if it progresses in this ratio for a few years, or even a few months, it must tell a fearful tale upon the stock of this country.

I think that a searching investigation should be commenced at once, but this important step cannot be taken by any private individuals, or even public body less than the Government itself, or under its direction and support. It would require the greatest amount of talent and experience that could be brought to bear upon it, and there must be a very considerable pecuniary inducement offered to bring out men of talent, eminence, and integrity to devote so much of their valuable time as would be required in such an undertaking; stocks of cattle would have to be visited in different parts of the kingdom, subjects would have to be purchased from infected stocks, diseased ones in their different stages of the complaint, apparently healthy ones from the same stocks, some for the purpose of being slaughtered for examination—others for experimenting upon. Perfect illustrations of the whole of the internal organs, connected in the slightest degree with the disease, showing the interior of the different vessels, as well as the exterior, would have to be given, the condition of the blood both in diseased and apparently healthy subjects in diseased stocks, and also of undoubtedly healthy cattle from districts where the disease had never appeared, would have to be reported upon, and the services of some of our most eminent professional men would have to be secured to assist in adjudicating upon the momentous question—can anything be done by human agency to arrest in its progress the much-to-be-dreaded scourge, "Pleuro-pneumonia" in cattle? How is this to be accomplished? Not by private individuals, not by public companies, nor by the Royal Agricultural Society of England, but by the government of the country, who might call in the aid of the Royal Society to assist if necessary in arranging and carrying out the scheme. As I have before said, considerable pecuniary aid would be required to carry out the scheme satisfactorily, therefore the plan I suggest is, that Government, being the bearer of the public purse, should offer three prizes for the best essays on the "Pleuro-pneumonia" in cattle, viz., one of two thousand pounds, one of one thousand, and one of five hundred—of course under certain conditions and regulations—and I fully believe that the Royal Agricultural Society would render all the assistance in its power to further the objects of the inquiry. To show the view Government took of a disease amongst cattle, called the "Malignant Epidemic Murrain," about the year 1745, I quote the following passages from a valuable work upon cattle, and their diseases. After speaking of its devastation in the neighbourhood of London, and some of the midland counties, it says:—

"For more than 12 years it continued to lay waste the country. The number of beasts that were actually destroyed by it was not, and perhaps could not, be ascertained; but in the third year of the plague, when the Government had so seriously taken up the matter, as to order that every beast that exhibited the slightest marks of infection should be destroyed, a remuneration being made to the owner, no fewer than 80,000 cattle were slaughtered, besides those which died of the disease, and which formed, according to the narration of one of the commissioners, nearly double that number. In the fourth year of the plague, they were destroyed at the rate of 7000 per month, until from the numerous impositions that were practised, this portion of the preventive regulations was suspended. In the year 1747 more than 40,000 cattle died in Nottinghamshire and Leicestershire, and in Cheshire 30,000 died in about half a year."

Surely, after such an example by Government upwards of a century ago, our present Government cannot well refuse its aid, by the advancement of a few thousand pounds, in endeavouring to ascertain the cause and cure of a disease, not so dreadful perhaps in its character as the murrain, but fatal in its effects to a fearful extent, almost ruinous to individuals, and seriously affecting the whole community. It appears that England is not the only place where the disease exists at the present time, and I quote the following passages from a London paper of the 10th inst.:—"A communication was received by the Royal Agricultural Society at its last meeting, from the Central Society of Agriculture in Belgium, requesting information on 'Pleuro-pneumonia,' and the means adopted to combat the disease, having particular regard to inoculation. A reply was ordered to be made that inoculation was not found in this country to rest on any scientific basis, and as such it has not received the sanction or support of the Society." In this country no statistics of the number of cases of "Pleuro-pneumonia" have been kept, and consequently little is known of the number of those of inoculation. Some time ago experiments were made upon cattle by inoculation, but I never heard of any very favourable results; and I think if the experiments had been tolerably successful the public would not have been kept in comparative ignorance on such an important matter; and it certainly appears strange that such a mode of treatment should have been resorted to, *i. e.*, to introduce so malignant a disease into the system of a healthy animal, which might possibly escape the disease altogether; for I think it will bear no analogy to the system of vaccination in the human subject, for a mild kind of disease was in the first instance introduced into the system from the cow with admirable effect for the purpose of arresting that dreadful disease the small-pox. Formerly, the small-pox itself (until the discovery of vaccination by Dr. Jenner) was introduced into the system of human subjects by inoculation, and frequently lamentable consequences ensued, which I fear would be the case if inoculation was resorted to in "Pleuro." And now the question again presents itself—Can anything be done to arrest the progress of "Pleuro-pneumonia," carrying away, as it does, every year some thousands of valuable dairy and other cows? It appears to me to be worth the experiment I have presumed to suggest, and if successful, the public would be well repaid for any pecuniary assistance Government may think proper to advance in the undertaking; and if, on the contrary, it should prove unsuccessful, the country will, I think, be satisfied that everything that can be done has been done, and that we must in future look to an All-Wise Creator for that comfort and support under the infliction which He alone is able to give.

WOOLSTON FARM.

[The following is Dr. Voelcker's report on the clay soil of this farm, extracted from the lately published pamphlet by Mr. W. Smith, of Woolston, on Steam Culture.]

COMPOSITION OF SURFACE AND SUBSOIL FROM FIELD No. 3, HEAVY LAND.

"(*a.*) *Mechanical Analysis.*

	Surface Soil.	Subsoil.
Moisture	4.39	3.68
Organic matter and water of combination	8.19	4.68
Lime	20.40	6.14
Clay	60.20	76.86
Sand	6.82	8.64
	100.00	100.00

It will be seen that there is very little sand in either surface or subsoil, and that the preponderating constituent of each is clay. In the surface soil there is 60 per cent. of clay, in the stiffer subsoil no less than 76 per cent. of clay.

"(*b*). *Chemical Analysis.*

		Surface Soil.	Subsoil.
Soluble in dilute Hydrochloric acid.	Moisture	4.39	3.68
	*Organic matter and water of combination	8.19	4.68
	Oxides of iron and alumina	11.40	12.38
	Phosphoric acid	.33	.19
	Carbonate of lime	20.40	6.14
	Sulphate of lime	.22	.20
	Magnesia	.08	.24
	Potash	.85	.69
	Soda	.03	.14
Insoluble in Hydrochloric acid.	Silica	49.82	62.71
	Alumina	3.11	7.25
	Lime	.49	.65
	Magnesia	.35	.30
	Potash	.22	.59
	Soda	.12	.16
		100.00	100.00
	*Containing nitrogen	.39	.14
	equal to ammonia	.47	.17

The preceding analyses exhibit several points of interest to which I would briefly allude. 1. In the first place I notice that the proportions of organic matter and of phosphoric acid are much greater in the surface than in the subsoil. This difference arises from the organic remains of the preceding crop, and from the manure, which was applied to the land. 2. The larger proportion of nitrogen in the organic matter of the surface soil deserves particular notice. This proportion is capable of yielding ½ per cent. of ammonia; whereas the subsoil will yield ultimately only $\frac{1}{6}$th of a per cent. of this important fertilising material. The greater part of the nitrogen no doubt exists in the soil in the state of organic remains, but some unquestionably is due to the action of the atmosphere on the well pulverised surface land. In other words, steam cultivation has rendered the soil capable of absorbing ammonia from the atmosphere; an improvement has thus been effected which cannot be too highly estimated. This power of absorbing ammonia is mainly due to the presence of clay in the surface soil; and as we have in the subsoil an inexhaustible supply of clay, deep cultivation, which admits air into the subsoil, must have a powerful influence in raising the productiveness of the land. 3. It will be observed that the total quantity of potash present in the surface soil is nearly the same as that contained in the subsoil; but there is this remarkable difference, that whilst the surface contains by far the greater part of potash in a state of combination, in which it is readily soluble in dilute acid, the subsoil contains much less soluble potash and a much larger proportion of insoluble silicates than the surface soil. We may learn from this, that contact with air, induced by efficient cultivation of the soil, has had the effect of decomposing a large proportion of the insoluble silicates, and rendering the important alkali potash soluble. At the same time it will be observed that even the subsoil contains a good deal of soluble potash, which appears to me to indicate that the subsoil has been subjected to some extent to this ameliorating influence of the atmosphere, although it has not been turned up and brought to the surface. It will thus appear that both surface and subsoil, the former to a greater extent than the latter, have undergone important chemical changes, in consequence of which mineral food for plants has been rendered available, and the land has acquired, in a higher degree than in its natural state, the power of absorbing ammonia from the atmosphere. I may notice that I found the subsoils on Mr. Smith's farm open and free from any stagnant water."

The examination of the soil and subsoils from Woolston Farm fairly represent the chemical constitution of a great many heavy and light soils in England. In their natural state many clay soils are most obdurate and unproductive; but nevertheless they contain inexhaustible stores of mineral riches, required for the growth of all cultivated plants. They moreover possess, when properly pulverised, in an eminent degree the power of absorbing moisture and fertilising gases from the atmosphere. Thus mineral and atmospheric food are furnished in almost unlimited extent to the crops we grow. To talk of ultimate exhaustion of such soils appears to me as unreasonable as the fear entertained by some speculative persons with respect to the ultimate exhaustion of our English coal fields. However, there is one great obstacle which prevents the cultivator of the soil growing year after year splendid crops of corn and roots with scarcely any manure. This obstacle lies in the difficulty of efficiently and economically preparing the land by manual or horse labour. In soils like those analysed by me there is abundance of food for plants, but in their natural state but little of that food is available to plants. By deep cultivation, exposure to frost in ridges, avoiding the treading of horses, by exposing the subsoil as much as possible to the ameliorating influence of the atmosphere without bringing it to the surface, and by accumulating the fine soil as near as possible in the top layers of the land, not only much of the unavailable mineral food in the soil is rendered fit to be taken up by the growing plant, but land thus treated also acquires the marvellous property of holding better moisture and of absorbing more readily organic food from the atmosphere. Land resting on an impervious subsoil, whilst full of water in wet weather, dries up into hard masses in continued dry weather. On the other hand, land with an open subsoil freely allows the excess of water to percolate into a stratum not reached by the roots of plants, admitting at the same time plenty of air into the land. In dry weather the well pulverised surface does not bake into hard masses, thereby preventing all capillary attraction in the soil, but on the contrary, it remains porous and full of minute capillary tubes, which suck up moisture from the lower strata. Thus it happens that a well pulverised clay soil is comparatively moist, when a badly-managed clay soil is too dry to allow vegetation to make any progress. Now these great and beneficial changes in clay-land are brought to pass by steam cultivation, which I feel confident will, ere many years have passed, produce a complete revolution in the present prevailing system of managing clay farms. Personal inspection of Mr. Smith's farm has convinced me that his plan of smashing up the top-soil, subsequent ploughing into ridges and subsoiling between the ridges, sufficiently covers and mixes the manure with the soil. In my opinion Mr. Smith's plan of treating his land is decidedly preferable to spade husbandry when it has to be carried on on a large scale; and I am convinced that steam cultivation, when properly carried out, will tend to increase both the produce of corn and roots in a surprising degree. It is foreign to my chemical pursuits to inquire into the economic advantages likely to result from steam cultivation in general, and from the system pursued by Mr. Smith in particular; but I cannot help observing, that his plan of preparing the land is in many respects in singular accordance with my own scientific views on the subject. I have long maintained that steam cultivation is indispensable in the management of clay land; that it is undesirable to bring up much of the subsoil at one time; that putting up the land into ridges before the frost sets in, and subsoiling between the ridges, completely alters the character of clay land; and that many heavy soils will yield abundant crops with scarcely any manure, when due care is bestowed upon the mechanical preparation of the land.

WATER MEADOWS.

[From "Bickford's System of Irrigation, described by Mr. Barker," republished from the Bath and West of England Agricultural Journal. Ridgway.]

IN commencing the construction of a water meadow a carriage gutter is cut along the line of the highest ground. This main gutter is for the purpose of taking the water from the brook, or other source from which it may be derived, in order to feed the smaller or irrigating gutters—in fact it acts the part of a main artery. This main gutter need not be laid out by the level. A rapid inclination should be given to it, according to the nature of the ground, and the quantity of water which can be made available. Where it can be had, a fall of 2 inches in a chain is convenient, but if need be a less rapid fall will answer the purpose. The width of the main carriage gutter should be about 18 inches, and the depth from 6 inches to 1 foot. The dimensions must, however, in some measure be regulated by the quantity of water to be conveyed along it; the gutter

diminishes in size as it approaches its termination, so that at last it runs out to nothing.

Immediately below the carrier should be cut a set of small tapering gutters. The office of these tapering gutters is very important, as they secure the even apportionment of the water over different sections of the field, adjusting the supply in the way of a self-acting valve. Sometimes the end of a carrier itself performs this office, and is tapered accordingly.

The Small Irrigators.—A series of smaller gutters are cut below the main carrier (at different levels), in the same general direction in order to catch the water as it overflows from the carriage gutter through the small taper gutters. The distance between these gutters greatly depends on the shape of the ground; where it is undulating and uneven more are required. These small gutters ought to be laid out quite level. I say quite level, subject however to a qualification to be named hereafter. The water as it flows over the land is collected in these small gutters, and as they are practically level they again distribute the water evenly over the surface, when they become filled; were it not for these small gutters the water would get into little streams and flow down along the hollows, instead of the ground being all equally covered, especially where the land has never been ploughed or levelled. I mentioned that the small gutters ought to be level, this however in practice must not be carried out with mathematical correctness; in crossing any hollows the gutter should be kept rather higher, say an inch on 33 feet run, or the water will gather in the hollow and overflow too fast at these points. On passing along projecting ground on the other hand the same difference should be made in the contrary direction, viz., an inch lower than the strict level, in order that that portion of the ground may receive its due share of the water.

Outlets, Driers, or Drawing-off Gutters.—It is of quite as much importance to get the water off quickly as it is to get it on evenly. To effect this gutters are cut in the direction of the inclination of the ground, *i.e.*, in the exact same line along which the water would flow if left to itself to run; if the gutters take any other direction, swerving too much to the right or the left, they will cut off the water from some of the land on one side or the other.

The Drying Gutters also act as Feeders.—The downward gutters also serve the purpose of feeders. Were it not for these transverse feeding gutters the land nearest the carriage gutter would always have the first water, and thus receive the greatest benefit, and the lowest portion of the field would come the worst off. In order to obviate this the feeders or transverse gutters are cut, from the carriage gutter at the top, across all the level gutters to the lowest. By placing stops in the proper places the water can be conveyed directly from the carrier to any of the catch gutters, without passing on the intervening land, so that the lowest part of the field can be watered first if thought desirable. The level gutters being marked out by means of the A level, are easily and rapidly cut with a plough made for the purpose, which can be obtained on application to Mr. Bickford, Crediton, Devon (the inventor of the system above described).

Cleaning out of Gutters.—Gutters cut on the old system require to be cleaned out every year just before the watering season, and this for two reasons. First, because they become choked up with rank Grass and hinder the free flow of the water in a horizontal direction, which flow is essential to the success of the level or nearly level carriage and level feeding gutters. Secondly, because the sides of the gutters are trampled down by the live stock all through the summer; thereby spoiling the even edge of the gutter, and rendering the distribution of water irregular. In order to put the old gutters into a good state a man is employed to clean them out and trim them up, at an expense of about 2*s.* 6*d.* per acre. The man so employed leaves a heap of refuse at about every 20 paces, and these heaps have to be removed before the meadow is laid up for hay. The gutters consequently become wider every year, till at last the width is so inconvenient that they have to be filled up at great expense and relaid. If the system explained in this paper be adopted, it is recommended that fresh gutters should be cut every year: there is no difficulty in doing this, it is only necessary to follow the line indicated by the original ones, cutting one year above and another below the original gutter. The expense of cutting the gutters out afresh is very trifling, about 1*s.* or at most 2*s.* per acre; the sods which come out of the new furrow are placed in the old one by its side and trodden in, and thus all the ground is made good. The cutting of new gutters every year has the advantage of entirely preventing the growth of coarse Grasses and weeds along the gutters. In very porous or peaty soils the water is apt to sink away rapidly in the main carriages; on such land it is advisable to cut the carriers wider and not so deep. If clay or road scrapings can be procured within an easy distance, I should recommend a thin coating being put along the main carriers. I have known instances of its being done with great advantage.

The Quality of Water.—Before laying out meadows for the purpose of being irrigated there are several important questions which ought to be taken into consideration. A proper supply of water is of course the first and most essential point, and even if this can be had it must not be taken for granted that all waters will have a beneficial effect when used for the purpose of irrigation. It is found that water flowing from the surface of "wet peaty" or "black moory" soils is positively injurious; water also which contains large quantities of iron is hurtful.* But streams in which Watercress flourishes, and those containing Mossy stones, are for the most part good for irrigation. Water which flows from springs, such as are never found to freeze, are almost invariably well suited for irrigation; in fact water from those which are termed "warm springs" in most cases produces the earliest Grass. I presume this is owing in a great measure to the temperature of the water being higher than ordinary water, and thus keeping the ground warmer. Drainage and ditch water should be conveyed into the meadows if possible. Water, especially after heavy rains, in passing down to the drains, not unfrequently takes along with it some of the manuring substances contained in the soil: if then this water is allowed to escape, these manuring matters are wasted, but when it is used for irrigating any meadows below, these valuable ingredients are again deposited, so that what is lost in one field is gained in the other. In mountainous districts much of the water which forms bogs at the foot of hills and the head of valleys may be turned to account. If a deep drain can be run up into the subsoil, the bog may be tapped, and some excellent water may generally be drawn off before it has become contaminated by the peat. In fact, the cases in which underground draining fails to yield useful water for irrigation may be regarded as exceptional.

Time for Watering.—It is a good plan to commence watering the meadows early in the season—not later than the beginning of November.† From this period up till February the water should, as a general rule, be kept on about six days and off three days. This of course will partly depend on circumstances, such as the supply of water, weather, &c. In frosty weather the water should not be removed from that portion of the meadow on which it was at the time the frost set in, it should if possible be kept gently moving, and as long as it does so the shallower it is the better. If the ground becomes covered with a sheet of ice the water may then be turned off. After February the meadows require rather more attention, and the water should be more frequently removed as the weather gets warmer. Care should be taken not to allow the Grass to get a white scum upon it, for if this is not prevented serious mischief is done, the Grass, instead of improving, will grow less. In hot weather the water ought to be changed every day. The land selected for a meadow should either be naturally dry, or made so by draining. If the latter plan has to be resorted to, the drains should be cut deep, otherwise the water will soak into them too quickly; and the water must not be laid on the same year as that in which the draining is done. Where practicable, as is the case on farms where the meadows are situated below the farm premises, it is a good plan to bring the water along by the farm steading, in order to catch any washings from the yards, and thereby to enrich the quality of the water used for irrigation. These washings, or liquid manure, are often, even at this improved period of agriculture, allowed to run to waste, whereas they might be made to put money in the farmers' pockets, by producing early and plentiful crops of Grass. The water in brooks after heavy rains is generally thick and muddy; this is chiefly owing to the washings of the land above, and as there is generally a considerable value in the finely divided particles of mineral matter thus held in suspension, the opportunity should not be lost for giving the meadows the benefit of it.‡ The first crop of Grass in water meadows is generally fed off, the meadow should then be carefully looked over and the water turned on again. As the weather becomes warmer, the water, as I have before stated, should be kept on for shorter periods. The second crop is mown in most cases, as it is found dangerous, at least for sheep, to water and feed again, especially if the weather is warm, owing to that fatal disease called rot being apt to be produced amongst them. The two great advantages of water meadows are that they produce a large quantity of early food in the spring, which is so valuable for ewes and lambs, and that they yield heavy crops of hay after the first crop of Grass has been eaten off, and this, mark, without any manure being applied. The cost, a most important question, according to the present system of laying out water meadows, is very moderate. The late Mr. Pusey, whose name is familiar to every agriculturist, and who was always amongst the first to improve his estate and confer a benefit upon his tenants, had a large quantity of Grass land converted into water meadows; the cost, including every expense, with hatches across the brook, did not exceed 2*l.* per acre §. In many places the cost would be little more than half as much. I think, therefore, looking at the small outlay and the great advantages to be derived, that landlords and tenants ought to look well around them, and let no opportunity escape where such a system can be carried into effect.

* This kind of water should be ponded before it is used. R. S.

† In the West from October to March. T. D. A.

‡ In support of this statement I may refer to a meadow on my own farm. It was made in 1850 upon the rugged mountain slope, then next to worthless, overrun with natural weeds; it has since received the washings of the upper land, and a quantity of peat soil washed on to it by the water carriers; it is now worth 50*s.* per acre as meadow land. R. S.

§ Mr. Pusey's meadows on Goosey Farm were laid down by Mr. Bickford himself; the cost was less than 2*l.* per acre.

MANGEL WURZEL.

[The following is the greater portion of the capital paper read last week by Mr. Williams, of North Court, Abingdon, before the Oxford Farmer's Club, as published in the *Oxford Journal*.]

THOUGH Mangel has been cultivated to a small extent on most farms, and, latterly, to a large extent on others, it has not taken the prominent position in our general cultivation that circumstances seem to indicate it should. Let us see what evidence can be brought to bear on our subject. I shall first revert to that oft quoted experiment of the late Earl Spencer, who put up two oxen of equal merit on the 24th of December, feeding one on Swedes and the other on Mangels; on the 24th of January, by admeasurement of the beasts, it was evident that the one fed on Mangels had made more weight than the one fed on Swedes. He then reversed them for another month, and still with the same result. The third month he put them as at first, and in each case the Mangels exceeded the Swedes in proof on the beasts. The Earl says, in relation to this experiment, "The result appeared so satisfactory, that I have not tried the experiment with the same accuracy since; but I did try the following year the feeding a cow alternately on Swedes and Mangels, and though I have not the details before me, I remember the result confirmed the experiment of the former year."—Mr. Charles Hilliard says, on this subject, "I have grown Mangels for 30 years, and stall fed largely, and come to the conclusion that Swedes, if kept from being frozen, are as good as Mangels for stall feeding till February; after that time Mangels will feed fastest."—The late Philip Pusey says, "There is no doubt that in Berkshire it is as easy to grow 30 tons of Mangels as it is 20 tons of Swedes per acre." Then referring to Colonel Macdowal's result of testing their relative value in successive trials, "he adduces the money value of Mangels to be 13*l.* 2*s.* 6*d.* per acre, and that of the Swede 6*l.* 5*s.*"—Mr. Hyatt, in his article on "Comparative Value of Different Crops," going deeply into the question in several experiments, sums up by saying, "While one acre of Swedes would only have given 640 lbs. of beef, one acre of Mangel would have given 1275 lbs., so that a crop of the latter is worth nearly double that of the former."

Lord Lovelace in 12 successive experiments, from 1831 to 1842, grew, on the average, 10 tons per acre more Mangels than Swedes. Mr. Charles Paget, in his article on Cultivation of Mangels, says, "I can reckon upon 30 tons of Beet per acre quite as securely as upon 20 tons of Swedes; notwithstanding the large produce derived from this crop, the succeeding Wheat or Barley will generally be very good, for many years having grown six quarters of Wheat per acre after Mangels." Most of you are conversant with the discussion on "Cultivation of Mangels" by the London Farmers' Club about two years since. The late Mr. Baker introduced the subject strongly in favour of increased cultivation of that root. He was followed by several speakers—for instance, Mr. Stagg said, "He kept a large number of store pigs, and sows in furrow, which brought up good litters, kept chiefly on Mangels. He had kept 600 ewes and sheep, on the average, for 15 years, with scarcely any other root than Mangels, from November to March, and he would show them against any stock in Bedfordshire."

Mr. Thomas said, "For more than 25 years he had invariably fed off Mangels with ewes, and during the last month, previous to yeaning, had always found it to be most beneficial. After trying the system for many years he made a memorandum of the result of his pratice to this effect. There was no kind of food so suitable for ewes during the last five or six weeks before parturition as Mangels. He could assure every gentleman who grew Mangels and possessed a flock of ewes being in lambs, that he never found the least injurious result from the practice, but, on the contrary, very great advantage in the production of fat and milk at the same time." The next evidence I shall lay before you is the result of the inquiries of the Doncaster Association in 1828, appointed to elicit "the comparative value, in all respects, of Mangels and Swedes." The Committee wrote to the most leading agriculturists in the kingdom to report to them on the subject. They say, "Having gone through all the points mentioned in the queries, they consider, on the whole, the answers are most satisfactory in favour of an increased cultivation of the Mangel Wurzel, and recommend it to be grown from one-fourth to one-half of the fallow crop," summing up, as their reasons—"It is more secure to plant, being little liable to fly or grub; it will produce more weight; it is off the land earlier; it is useful as a change of fallow crop when the land is tired of Turnips; it will grow on land where Turnips cannot be raised; it is a better spring food." It is recorded of a market gardener, near London, that he grew 88 tons of Mangels per annum; and also that when the Regent's Park was formed, part was planted with Mangel, and the produce sold by auction for 80*l.* per acre.

To come to our own immediate neighbourhood and time, as the result of the Faringdon Root Competition last year the greatest weight grown was, 42 tons 10 cwt. of Mangels, and 21 tons 7 cwt. of Swedes. This, and all the tests applied, showed that about double the weight of Mangels was grown to that of Swedes. It

may be that more dressing was applied to the former, assuming they were to be all drawn off; but one extra crop grown presents an opportunity of applying more dressing in future. The more root one year grown will make more muck for the next year's crop.

The most interesting feature in this question is—Can sheep be kept to advantage on Mangels during the autumn? I have quoted writers on this point, and have consulted many large farmers, who have done so to a large extent with great success. Mr. John King, of Beeden Farm, writes to me—"I fed the greater part of my Mangels in the autumn, and never had my sheep do better; the only difficulty was in getting them to eat Turnips and Swedes after; even then, I could not keep them in condition without corn. I shall plant double the quantity I have done."—Mr. Hannam, of Burcott, writes—"I have been a grower of Mangels upwards of thirty years, to the extent of not less than one-third of my fallow crop; latterly, two-fifths. It is quite equal to Swede when in its prime, and superior in the spring—not only for cattle, but sheep and ewes and lambs. I have latterly found it an excellent thing pulped for horses, with two-thirds of cut chaff."

Mr. Pullen, of Sutton, tells me he has consumed Mangel largely with sheep in the autumn, and has always found them quite as good as Swedes, both as regards their feeding properties and promoting the health of the animal, care being taken in using them by degrees at first. The season before last he planted nearly a sack of Swede seed, without producing one acre of good roots. He now plants his main crop with Mangel. The point Mr. Pullen refers to, viz., "Care should be taken in using them by degrees at first" is not to be lost sight of, as it has a very great influence on the health of the animal when put to Mangels. I have heard of considerable ill effects ensue from the reverse practice; reason at once dictates it should be so, for the animal frame will not bear great changes in diet without suffering from it. "Use is second nature," it is true, but how the European constitution would revolt at the idea of partaking of a pint of whale oil, while the Esquimaux, in his native land, would rejoice at the opportunity. I admit the climate in the Arctic Zone to differ widely from that of the temperate; the amount of carbon driven off by the intense cold must be replenished, and the whale oil well answers the purpose. Just so, when we take sheep or cattle from Grass and put them to Mangel, we should begin by giving them a little at first, and, by degrees, bring them to it. We do not always bear in mind that the animal, to a certain extent, seeks food suited to its constitution; thus, when feeding at large, it does not partake of one description of Grass exclusively, but amid the thousands of blades which so thickly stud our fields, and those blades made up of such vast variety of kinds, each possessing its several individual property, then unitedly tend well to build up the animal frame; but when you take an animal from this sort of food, and shut him up in hurdles to one description of diet alone, and that possessing its own native properties, the suggestion thrown out is good.

Mr. Williams then read the following letter from Mr. Hayward, of Wittenham:—

"Dear Sir,—I am truly pleased you are about taking up the subject of 'Mangel Cultivation' at the Club. In my experience Mangels have fully enabled me to double the stock on my farm. From small beginnings, I this year lay out 85 acres to Mangel. I have used them at all seasons with all cattle—sheep, cows, pigs, horses, &c., and always advantageously, with ordinary care taking; never finding any ill result from scour, &c. I plant at a width of 30 inches in drill, and set out the plants 18 to 20 inches. In later planting, after a green crop, I reduce this to 15 inches, and the width of planting 10 to 12 inches. After Rye (fed off) on one plough, I had this year a crop I estimated at 30 tons; and, after Hop clover, drilled the 2d of July, a crop estimated at 20 tons. I do not find the cultivation more expensive than Swedes; in fact, considering how often I have had to plant twice or thrice for Swedes, on an average less expensive. Beyond farmyard manure, I use no artificials, except about 4 cwt. of salt, and this year I have sown the salt when the plants have nearly met in the drill, and, I think, advantageously."

For young cattle and feeding beasts Mangel is excellent food. For milch cattle and sucking ewes it far surpasses the Swede. For store or fatting sheep, I have proved it to be very forcing; and, as far as I could judge, it excels the Swede. During the spring and summer months, store pigs will do well with it, having, as addition, a few Beans or other corresponding food. Pulped Mangel, mixed with meal, is a cheap food for feeding hogs in their early stage of fattening. In the North, cart horses are partly kept on them to advantage. I have tested that it is highly relished by them, and, with dry food, helps them eat up more chaff, so that they are kept at less expense, and in better condition by its use. There is an old axiom that has been verified in my experience this spring, viz., "The blessings brighten as they take their flight;" though I had grown 49 acres of Mangel, some time since I found them getting short. I felt the sheep must have a good supply, therefore took off the pulp from about 100 pigs; but they ate almost double the quantity of meal afterwards, and did not appear to fatten much faster than when having half pulp. The milch cows lost their share of Mangel, but we could not keep up their milk even with a good supply of miller's offal to take its place. We feel the value of a root most when we are deprived of it.

It is the misuse of the root that has often created prejudice against it, and it will be fair to look at the other side of the question, and see when it is misused. Most of us have noticed prejudicial effects produced in keeping very young pigs almost entirely on Mangels; it has often, in such cases, produced fever and death. Cattle, also, when kept entirely on it, will get permanently weakened in their constitution, and I have known an entire herd of heifers slip their calves when having as many as they could eat. I have attributed injury to my own ewes by eating rotten Mangels till lambing this year, but rotten Swedes often have the same effect. Rotten Mangels have not injured the dry sheep in any instance, though mine have eaten a large quantity during the winter. We must not condemn the root, if it is unfairly used. It is the judicious admixture of varied substances that tends best to build up the animal frame.

The great objection to the use of Mangel has been its purgative quality; to remedy this, cattle of all kinds should not have too much at first—come to it gradually, and have dry food with it. So much has been said on pulping, and all are so very conversant with its merits, that it is hardly necessary to touch on it; but when store or young cattle are kept there is no system that will bear comparison in affording opportunity profitably to increase your head of stock. The straw being mixed with the pulped Mangel, gradually ferments, and is eaten with avidity by the beasts. The one counteracting the purgative properties of the other, proves a nutritive and valuable description of food. Last year I worked 12 oxen; at first I fed them on cut Swedes, mixed hay and straw chaff, and 1 bushel of Barley meal per head per week. Afterwards I began pulping Mangel for them, and to ascertain the exact quantity consumed, found they ate 6 cwt. 14 lbs. of pulped Mangels, mixed with 1 qr. 3½ lbs. of straw chaff, and 3 qr. of cut Swedes per week. With the latter diet the oxen performed their work, and maintained their condition better than when they had meal, hay, and Swedes. To enable us to consume Mangels to profit, one great point to be attained is to harvest them securely, and in good condition. We have had such a lesson this year that we shall never forget. Heaps of damaged Mangels in abundance; but how few those quite free from rot: and this only because time was lost in not harvesting them soon enough. If we are to grow Mangels in large quantities, it must be dealt with as part of the work on the farm, which must be done, and at the right time. There is no part of a farmer's superintendence that requires a more judicious plan in arranging his work, at a time when autumn cultivation, and the general work of the farm, is so pressing. Hands must be secured according to the work to be done, and employed by the piece to execute it in the best way. The roots once in the cart, to be stacked as near as possible the place of consumption. Those needed for consumption during the first two months after storing to be cleaned fit for use when pulled. The one operation involving less cost. A vigilant eye to saving of expense in every way must be kept observant, both in the cultivation, harvest, and consumption of the plant, to enable you to secure the profit. One caution—let not the idea of saving be carried too far in the production of the crop. The same rent, taxes, seed, and often more labour is expended in growing a bad crop of Mangels as to produce a good one. And what a loss does it entail in ability to keep stock, which should afford a direct return, and especially of copious manure made, to produce corn for the future. A man losing his crop of roots does not recover himself under four years, and then not without additional outlay: here the Mangel stands pre-eminent in our root cultivation; you may be defeated in growing your Swedes, but it is your own fault if you do not grow a good crop of Mangels.

You say it impoverishes the land more than Swedes; long experience has convinced me it does not; plough the leaves in soon after they are taken off, and you may grow plenty of corn. The land is sadly robbed by allowing the leaves to dry up by exposure to the atmosphere; the character of the plant, with its rootlets shooting deep into the subsoil and its magnificent leaves, show it does not. You say, look at the labour it entails; but do we hesitate to grow a good crop of anything else, because of the expense of getting it home? Apply plan and piecework to meet the difficulty. It is the glory of the British character that he surmounts difficulty. If we can grow one-third more or double the quantity of Mangels we can of Swedes (and it is equally if not more nutritive), then why not grow it generally in its stead? I would not say give up the cultivation of the Swedes entirely, but I would plant the greater portion of the land ready before the 20th of June (whether fallow or green crop eaten off with sheep) with Mangels. The exact quantity must be governed by the nature of your land; the security of tenure and inscribed covenants by which you hold your occupation, and the length of your purse; for it is little use to grow food without providing your own stock to eat it. Commence eating with sheep as soon as affording good keep on the land; when ripe, draw half home, and safely secure them from frost for consumption with cattle, pigs, and sheep in yards, &c., for successive months, and with judgment and care let the horses take their share also. The remaining half consume with sheep in the field, care being applied in storing them in good condition.

Home Correspondence.

Deep Cultivation of the Soil.—No marvel that my idea of ridiculing draining the land and advocating deep cultivation in its stead, should meet with dissent, as the necessity of the former has been a settled question long since; but, not only is deep cultivated soil, whether by steam-power or manual labour, conducive to greater productiveness from its evaporating power, and its capability of receiving and retaining, and also giving off rain and dew, but crops growing on such soils are to a certain degree favourably influenced. An exemplification of this truth was noticed particularly in a field of mine, quite by chance, about 30 years ago, when a very severe frost occurred in Suffolk on the night of May 29, such a one as I never before or after witnessed so late, cutting off and blackening all the Nettles by road sides, and many of the Potatoes and French Beans in gardens after they were moulded up, and nearly all in the fields which were growing under shallow cultivation. All crops that year were very forward, and I had about an acre of Dwarf French Beans in full splendour; but the whole were completely blackened and destroyed on that memorable night; with the exception of one solitary spot fully exposed, of only a few yards square, which to my own and my neighbours' surprise was not at all injured by the frost. This curious circumstance induced me to ascertain the cause. To my surprise and delight at about two spades deep was deposited a hidden treasure of several thousands of new tiles, which had evidently been hidden there to escape the eye of the excise officer, as the property had formerly been a brickyard. I and many others concluded the cause to be perfect drainage which prevented the frost and spared the crop; but experience since in similar matters has proved the contrary, and that it was not so much percolation, or drainage, but the receptive powers of all atmospheric moisture, and quick evaporation afterwards, as this very spot from its loose subsoil was subjected to the absorption of all the rain and snow falling upon it, and was without drain to carry off excessive moisture. Many similar circumstances have attracted my notice since, fully corroborating deep cultivation to be of much greater consequence to obtain superior and enhanced productions of the soil than all the draining which ever was or ever will be performed on ordinary soils, except on those which have been hitherto drained, where those old drains are often bursting and overflowing, and which must necessarily be redrained, or the worst of consequences may follow; and on such soils as are naturally springy, and, on a whole, are by far the least in area, in most localities. *Abraham Hardy, Seedgrower, &c., Maldon, Essex.* [No good purpose is served by attempting to contrast two useful operations, both of which must be effected in order to good cultivation.]

Societies.

ROYAL DUBLIN.—At the annual meeting of this Society (see p. 345), when the awards of prizes were read, the following remarks were made by his Excellency the Lord-Lieutenant:—

"It would be impossible for any ruler or any native of Ireland to be indifferent to her agricultural success; for Ireland, however fondly her poets and orators may recur to the memories and legends of the past, is in fact becoming in every successive year more and more of a nation—for in what does the life of a nation mainly consist but in the industry, the enterprise, the energy, and the welfare of the people that inhabit it. And if she still become more and more of a nation, it also follows from the circumstances of climate, of position, of temperament, that she will be above all things an agricultural nation; and if we descend further into particulars, the species of agriculture by which she will be certainly not exclusively but still very prominently distinguished, must be the encouragement of land held in pasture and the growth of live stock. Now, to any nation so circumstanced, a central and metropolitan exhibition like this must be of the very highest importance; and, in common with those who have preceded me, I feel that I can cordially congratulate the present company, and the members of the Royal Dublin Society, on the welfare of Irish agriculture generally, upon the results which we have witnessed in the show of to-day. Like my excellent friend, your honorary secretary, who opened these proceedings, I confess that I had felt some apprehension that the dismal and ungenial weather with which it has been our disagreeable lot to be misled of late, our protracted winter, the blasts of our March, and the snows of our April, would have told with untoward effect upon the varied and animated assemblage in the courts below. Far otherwise, however, has been the case, and true it is that though the leaves hardly peep out yet from the trees, though the hedges have no fresh shoots, and the banks no Primroses, though our gardens grow blacker instead of greener, and our Asparagus refuses to swell, yet out come our Short-horns and Kerries with more rounded proportions of form, and more sleeky glossiness of skin than ever—out comes in unrivalled majesty and placidity of form 'Dr. MacHale' himself—and who could look upon him without being reminded of the snow-white herds of the Clytumnus? But so far from the entries having been at all diminished in consequence of the unfavourable nature of the season, I find the entries in Short-horn yearling bulls amount to no less than 120, or an increase on the show of last year of 37 head; and as to sheep there are 85 lots, being an increase of 18 lots on last year, or a total of 108 sheep. Now I think, considering the circumstances to which I have alluded, and that the quantity is kept up at least fully equally with the quality, this is a very gratifying result. I know that attention has been considerably drawn of late to the circumstance of there appearing to have been a deficiency of produce in the corn and several other crops in Ireland, as appears from the return of the Registrar-General for the last year. Now, every one must be aware that under the paramount influence of weather and climate, as well as of the thousand causes which must tell upon yearly supply and demand, it would be utterly useless to lay stress upon the actual amount of cultivation or rate of production in any single or scattered years, for that the general question of national progress or decay must be drawn from a much more extended source. Now, I am glad to find condition of Ireland in this point of view, I find since the census of 1841, not 20 years ago, there have been of waste land no less than a million and a-half of

a million of acres have been added to the land actually under tillage, a point where the deficiency of cultivation complained of was existing, and with respect to live stock the value since the period I have named has fully doubled. In cattle alone the quantity itself has fully doubled, and the value I believe has increased in a far greater proportion. And what I value still more than even the symmetry or substance of the best Durhams, Devons, and the best Leicesters or Cotswolds, is that the wages of the people themselves, of those by whose strength and skill this vast amount of animal growth and development, as well as of that varied vegetable produce, which sustains man and beast, is produced and tended and improved, has exhibited at least a corresponding ratio of increase. The Irish labourer is infinitely better fed, better clothed, and better attended in sickness; and I trust by the operations of a recent Act of Parliament, I may say soon, with the same confidence, better housed than he ever has been before. I know that there is still a higher influence to be brought to bear upon him and upon all of us than the bread we eat or the raiment we put on; but still I contend that agriculture in our days holds a very high position when its processes generally have attained to the dignity of a science, and when its daily work corresponds with the best directed efforts of patriotism and of charity."

The following is the Shorthorn Prize List:—

CHALLENGE CUP.

The *Farmers' Gazette* Challenge Cup, awarded to Thomas Barnes, Westland, Moynalty, for Short-horned Bull, Dr. M'Hale. The Irish Railway Challenge Cup, awarded to Thomas Barnes, for Short-horned Bull, Dr. M'Hale. Ganly Challenge Cup, awarded to J. Richardson, Lisburn.

SHORT-HORNED BREED.

Bulls.—Best Bull, 1859, Jonathan Richardson, Lisburn; 2d, W. T. Crosbie, Tralee; 3d, J. Richardson. Best, 1858, Lord Talbot de Malahide; 2d, Francis Lindsay, Killyleagh. Best 1857, Thomas Barnes, Westland, Moynalty; 2d, Jaffray Barcroft, Kilbogget. Best, prior to 1857, Captain Spencer, Whitehaven; 2d, Earl of Clancarty. Best of all the prize Bulls, Thomas Barnes, Moynalty, the Gold Medal; 2d, J. Richardson, Lisburn, Large Silver Medal.

Heifers.—Best, 1859, W. T. Crosbie, Tralee; 2d, Stewart Marjoribanks, Watford. Best, 1858, in Calf, or producing a Live Calf within 12 months, subsequent to the date of the show, Messrs. Turnbull, Renton; 2d, John Christy, Adare. Best, 1857, giving milk or in calf, Charles Landes, Ballylongford; 2d, Fitzwilliam Welsh, Limerick. Best of all the prize breeding heifers, either having had a living calf or producing a live calf within 12 months subsequent to the date of the show, Messrs. Turnbull, Renton, the Gold Medal.

Cows.—Best Short-horned cow, of any age, either having had a living calf with 12 months preceding the date of the show, or producing a live calf within six months subsequent to same, Richard Eastwood, Burnley, Lancashire. 2d, Fitzwilliam Welsh, Limerick. Best of the prize milch cows, Richard Eastwood, the Gold Medal.

Farmers' Clubs.

BLANDFORD: *March* 31.—*The Agricultural Labourer.*—Mr. Robert Fowler, of Whitchurch, said:—"The agricultural labourers are no less than 950,000 men, assisted by about 400,000 women and boys, representing with their families nearly 5,000,000 souls, or about one-fifth of the population of this kingdom.

"I fear this number is rather decreasing than otherwise, and as they are the most useful class of all human beings, it behoves us to try to find out the cause of this decrease, if it is so, with a view to a remedy, for it is acknowledged on all hands that the need of their assistance is yearly increasing. I know, during the last few years, much has been done for their improvement. Still much more doubtless remains to be accomplished; and I trust our devoting this evening to the subject may be the means of furthering their improvement. I think, for instance, if we were to study their little wants more than we do, as a body, it may be the means of drawing them into a closer bond of union with us. If we prove to them by our actions, by our words, and by our manner, that we have their welfare, their interest, and their comfort at heart, I believe it would be the means of inducing them more to study our interest, and to give us their good will, as well as their time and labour. If we have a horse or cow taken ill, we immediately give it our especial care, watch over it, and provide it with whatever necessaries are required. I trust in these particulars our labourers do not fare worse than our stock. If our rich neighbours are ill, we immediately call on them, and inquire after them; I hope we all do the same with our neighbours, the poor labourers. Mr. Seymour mentioned at our last agricultural dinner that the labourers in this part of the country were not so good as in many others, and consequently were not deserving of such good pay. I believe him to be under a wrong impression, for I consider as good and as well paid labourers are to be found in this county as in any other, and I feel proud of belonging to a class second to none in the regard we have for those who are born to earn their bread by the sweat of their brow. We know they are better educated, housed, and paid than they were some years since, and that gradual improvement on the whole is still going on, and where such is not the case I consider an immense responsibility rests on the shoulders of both the owners and occupiers of the soil, for on these two classes much of the moral and social position of the labourer depends. I regret that more suitable employment for the females is not to be had in this neighbourhood. Many of us remember when button-making was a good source of income amongst the poor; 4*s.* and even 5*s.* per week were frequently earned by the women at this employment, but it has now entirely disappeared; bone and pearl buttons are now used in the place of those cotton-worked ones, and unfortunately nothing else has taken its place. Hundreds of women have now little to do but tale-bearing, chit chat, and tittle tattling; their children are taken very young to the infant schools, and farm labour is become somewhat distasteful to many of them. It has often occurred to me if some glover, stocking-maker, or other manufacturer requiring the employment of females were to get up a business in this neighbourhood what good might thus be done—anything, in fact, that would give the females constant employment, adding to their income, and making them more useful members of society.

"I will now pass on and call your attention to the education of our poor.

"And though now the most laborious work is done by the aid of steam, it has been found that the demand for manual labour does not decrease, but we require it to be more skilled and experienced, for the labourer is at last the great weapon in our hands that has enabled us, by the assistance of steam and improved implements, to bring such large tracts of poor land into cultivation, producing golden treasures instead of remaining a barren waste. I would wish that under all circumstances our labourers should receive the rudiments of education: that children should be able to read so as to understand what they read, to write sufficiently to communicate with their friends, and also thoroughly to understand the four simple rules of arithmetic: and one thing in particular, which is too often neglected in our village schools, I would teach them freely to use soap and water, for cleanliness is next to godliness, and ignorance and filth the parents of crime and misery; girls also should be better trained for domestic servants, washing, baking, &c. Thus far I would educate them, using such means as may be found available in every parish, and at as little expense to them as possible, but something they should pay, however trifling it may be, for it too often happens that what costs nothing is but little valued, and a low estimate of education should be avoided. Do not suppose that I consider this sketch a sufficient education for a poor person, only that, further than his grounding, he should be left mostly to his own resources, lest we place him in a better position than the class who have, by their frugality and perseverance, raised themselves higher in the scale of society, which, in my humble opinion, is wrong, and would go far to remove that stimulus to exertion which is so commendable. Boys have of late years been kept longer from labour for the purpose of education. We know a few years since, at about seven or eight years of age, they were expected to earn something. In the majority of cases, they are now kept at school until nine or 10 years old, and I rejoice that it is so, for we all know, from daily experience in life, that the man is most useful who has learnt to value knowledge and the use of his brains as well as to exert his strong arm. The labour of the head of a workman is to us most valuable."

"I will now call your attention to the cottages of our labourers, which is the next portion of my subject.

"Decent and respectable homes for our labourers are not so numerous as they should be, and this is the great cause of our constantly hearing of a want of young men, and can we not trace it to this great scarcity of cottages, driving young people from the place of their birth? I believe few farms have as many cottages as are required for the proper residences of those working on the farm; but where is the farmer that will not pay an increased rental for a farm having cottages on it for the use of his labourers? All new cottages should have three bed-rooms—and just half of mine have this number. All large grown up families should have cottages with this accommodation. I consider to every 100 acres of land there should be at least two cottages, and frequently three would not be too many, and to each cottage from 30 to 40 perches of land, and then allotments would not be necessary. They should also have a fuel-house and pigstye. It gives me pleasure to see a poor man with a pig always in his stye."

"I will now proceed to consider the wages and advantages of the agricultural labourer:—

"It is calculated that one labourer is required to every 30 acres of land, with equal portion of arable and pasture, and a few extra at harvest according to circumstances and the quantity and quality of the arable land, the cost of the management of which also varies, but is generally between 30*s.* and 40*s.* per acre. The mode of payment in this county has mostly been partly in money and partly by no end of perquisites—a custom that has long been established between master and his man, and one that I should have supposed did not require the interference of third persons; for though in the case of a few close-fisted men it is possible somewhat to abuse it, still on the whole, it is one that provides for the comfort of the poor as well, if not better, than any other that can be devised. In many cases it insures for the family a comfortable home, fuel, cheap bread, and Potatoes under all circumstances, regularly supplied. Notwithstanding this, it has, undoubtedly, been the cause of many hard sayings. People from not understanding the true state of things have held us up to the derision of the public, and made us the butt of the nation." Mr. Fowler then read an extract from the Journal of the Bath and West of England Society on "The Labourer's Pay whether in Money or in Kind," which went to show that the latter system was not altogether bad, as the labourer was saved the retailer's profit, and had the staff of life supplied at a reasonable price in times of scarcity. He then proceeded: "I cannot, however, but express my surprise that such a society as the Bath and West of England should have opened their Journal for such a purpose, and publishing such a statement as can be found in the essay of Messrs. Spender and Isaac, in the last year but one, They have not only published it, but awarded it their prize, thus stamping it with all the authority this Society can give it. I should naturally have supposed that some evidence would have been given to prove the position they have given our county—viz., the lowest in the scale of payment for labour of all in the West of England. I trust before we part this evening we shall satisfactorily prove the statement of Messrs. Spender and Isaac to be void of foundation and truth for I consider it a positive duty, when such statements are made, to come forward with facts; and although it is not at all times desirable to publish our private affairs, I have determined to give you my labour account, as it has actually been paid, during the past year; and that no mistake may be supposed to have been made in the value of their perquisites, I am prepared to give my men the amount in cash I have valued them at, if they will accept it, or I will give any one the amount that will find my men in their perquisites for the next seven years. The only payment I cannot guarantee the exact amount of is their ale; but I have endeavoured to place that rather under the quantity than over what they actually get. I employ my men as much as possible at piece work; it gives the best labourers advantages; it relieves me of having to see they keep their regular hours; and they know as they work so they will be paid, be it more or less. I have taken for my use this evening the wages of 15 men, who have worked for me and my father a great number of years, averaging 17 each man. I value their house and garden at 4*l.* per annum; their fuel at its cost; their flour I consider to be worth, on an average of seven years, 6*s.* per bag more than I charge them for it; and their Potato land ploughed and prepared at 1*s.* per perch, each man being allowed a day to plant and a day to dig up at my expense. My plan of supplying them with flour is different from that of my neighbours, though it has the same end in view. If I employ a man it is to my interest to place him in a position to provide necessaries for his family, be it large or small; I consequently allow them whatever flour they require at 30*s.* per bag, which is equivalent to good Wheat at 5*s.* per bushel, it being entirely optional to themselves what quantity they have. I have other men than those whose wages I shall presently read to you, but they are not strictly what are known as agricultural labourers. For instance, one who works in the wood for my landlord in winter, and for me in summer; this man has house, garden, and fuel free, and his earnings are not less than from 15*s.* to 18*s.* per week. Another, who makes my hurdles, cribs, and spars in winter, and is at piece work in summer, earns at least 15*s.* per week. To another, who does the rough carpentering for Mr. Ffooks and myself, but has no pretensions to a tradesman, we pay 15*s.* per week; and others who have not worked for me any length of time, or are irregular workmen, I shall entirely disregard; and be it remembered if our labourers are ill, *i.e.*, our regular labourers, we pay them pretty much the same as if they were at work. Of course this does not apply if the illness is of very long duration. They have also many other little advantages which partake of a charitable nature, such as a supply of coals, where wanted, at a reduced price, clothing clubs, and the like." Mr. Fowler then submitted the subjoined labour sheet, which will explain itself, with the few preceding remarks:—

Labourers.	No. of Weeks at work.	Cash payment for the year	Average per week.	Value of house and garden.	Value of fuel.	Bags of Flour.	Advantage at 6*s.* per bag.	Value of Ale.	Value of Potato Land.	Total Perquisites.	Total payments.	Average per week.
		£ *s.* *d.*	*s.* *d.*	£ *s.* *d.*	£ *s.* *d.*		£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
1. Foreman	52	35 13 8	13 8	4 0 0	3 15 0	8	2 8 0	5 0 0	1 10 0	16 13 0	52 3 8	1 0 0
2. Carter	52	27 13 4	10 6	4 0 0	3 15 0	6	1 16 0	4 0 0	1 0 0	14 11 0	41 14 4	0 16 0
3. Ditto	49	25 15 5	10 6	4 0 0	3 15 0	8	2 8 0	4 0 0	1 0 0	15 3 0	40 18 5	0 16 9
4. Shepherd	52	23 19 4	9 3	4 0 0	3 15 0	7	2 2 0	5 0 0	1 5 0	16 2 0	40 1 4	0 15 10
5. Maltster and Thatcher*	46	34 10 4	15 0	4 0 0	..	6	1 16 0	10 0 0	1 0 0	16 16 0	51 6 4	1 2 3
6. Maltster and Labourer	52	39 2 3	15 0	..	..	6	1 16 0	8 0 0	1 0 0	10 16 0	49 18 3	0 19 3
7. Labourer	52	28 5 0	10 10	4 0 0	..	4	1 4 0	4 0 0	0 15 0	9 19 0	38 4 0	0 14 8
8. Ditto	52	27 12 0	10 5	4 0 0	..	6	1 16 0	4 0 0	0 15 0	10 11 0	38 3 0	0 14 8
9. Ditto	52	28 9 3	11 0	..	2 0 0	8	2 8 0	4 0 0	1 0 0	9 8 0	37 17 3	0 14 6
10. Ditto	52	25 7 7	9 9	4 0 0	..	6	1 16 0	4 0 0	1 0 0	10 16 0	36 3 7	0 14 0
11. Ditto	52	26 1 2	10 0	..	2 0 0	6	1 16 0	3 0 0	0 15 0	7 11 0	33 12 2	0 13 0
12. Ditto*	46	26 17 7	11 8	..	..	6	1 16 0	3 0 0	0 15 0	5 11 0	32 8 7	0 14 0
13. Ditto	52	26 2 7	10 0	..	..	4½	1 7 0	3 0 0	0 15 0	5 2 0	31 4 7	0 12 0
14. Ditto	52	26 2 0	10 0	..	..	2	0 12 0	2 0 0	0 10 0	4 12 0	30 14 0	0 11 10
15. Ditto	52	21 19 6	8 3	..	..	4	1 4 0	2 0 0	0 10 0	3 14 0	25 18 6	0 9 10
	765	422 18 0									580 3 0	

* Nos. 5 and 12 were away six weeks sheep shearing.—Average per man per week, 15*s.* 2*d.*

After reading a variety of testimony to show that the above was not an exceptional illustration, Mr. Fowler quoted an extract from the prize essay of Messrs. Spender and Isaac, in which the wages paid in Dorsetshire were stated to be 7*s.* per week, or the lowest in the four western counties. He then continued:—"I have had many letters from farmers in different parts of the county, and from them I find in the neighbourhood of Bridport the average sum paid to the best labourers is about 10*s.* per week in cash and 3*s.* per week in perquisites—total 13*s.* per week. From the neighbourhood of Dorchester the average of my communications gives the cash payments and perquisites rather higher, viz., 10*s.* 6*d.* in cash and 4*s.* in advantages—total 14*s.* 6*d.* per week. From Purbeck I find the average still higher—cash payments 11*s.* 6*d.* per week, perquisites 4*s.* per week. From Sherborne also I find the best labourers earn, on an average of the statements I have received, 11*s.* 6*d.* per week, with a large quantity of cider; but their advantages are not so numerous as in other parts of the county, though they take more holidays. From Wimborne my information leads me to believe the wages are about the same as at Dorchester, 10*s.* 6*d.* per week in cash, perquisites 4*s.* I have a statement of the wages of Mr. Saunders, of Watercombe, but as it has already been published, I do not propose to refer to it more than to say it can be found in the Feb. number of the *Farmers' Magazine*, p. 123. Now, if all these statements be correct, and I pledge you my word that I have used my best endeavours to make them so, what becomes of Messrs. Spender and Isaac's statement? The one or the other must be grossly wrong. The Bath and West of England Society have awarded them a prize, thus giving an official stamp to the gross misrepresentation that had been made. I need not tell you that this is the reason why the funds do not flow in so quickly to the exchequer for the forthcoming meeting at Dorchester."

The following resolutions were then adopted:—

1. It is the opinion of this club that more good cottages in this neighbourhood are required for the proper accommodation of the labourers.
2. That the statements of Messrs. Spender and Isaac in their essay, as published by the Bath and West of England Society, so far as regards the wages of the agricultural labourer of the county of Dorset, are incorrect and without foundation.
3. That the wages of good labourers in this county are paid partly in money and a variety of perquisites, but cannot be of less value than 12*s.* per week.

Notices of Books.

A Letter on Steam Cultivation addressed to the Right Hon. B. Disraeli, M.P. By W. Smith, of Woolston, Bucks.

Mr. Smith here gives the history of his own connection with this subject. It appears to be for the most part an account of personal success rendered all the more agreeable by the cordial support and encouragement which he has received from his neighbours, and made all the more honourable by the discouragement, which he has accidentally, as it appears to us, received from the Royal Agricultural Society of England. Mr. Smith exhibited his apparatus most successfully at Chelmsford; the same apparatus shown at Chester was declared to work more cheaply and efficiently than a horse-drawn implement would have done; but though this was necessarily also true at Chelmsford, yet he received no prize because the judges there felt bound by the condition that the implements competing for the prize must invert the soil. Mr. Smith's grubbers do not *aim* at the inversion of the soil, but in so far as a new surface is to a great extent exposed after they have been dragged through the land, they do to a certain extent effect that inversion; and certainly the language of the Society's judges at Chester would have justified the award of the prize at Chelmsford.

Mr. Smith feels of course aggrieved that he, one of the oldest and most successful leading men in steam culture, should have lost the honours to which he had so fair a claim. It is needless to discuss whether or not the progress of good agriculture has been stimulated by the postponement of any award by the Society until Mr. Fowler had made good what

the majority consider a superior claim to the Society's premium. However this may be, Mr. Smith may certainly console himself with the reflection that so large a body of his brother farmers have adopted his methods, so that probably the greater portion of steam-cultivated land is now worked by his grubber. It is the actual efficiency of his methods rather than the honour which has been paid to the inventor by which he will be rewarded.

The pamphlet which he has now published is perhaps most interesting for the report of Dr. Voelcker on the Woolston farm, which we shall hereafter extract.

Calendar of Operations.

APRIL.

ESSEX: *April* 14.—The early Wheats on rich and well cultivated lands, and especially on Clover and Trefoil leas which had been highly manured or fed off by large flocks of sheep, are fully planted, and are now looking quite as luxuriant as ought to be wished for, and may prove to be too proud, if storms should prevail much during their future growth. More extensive breadths however from excessive and successive frosts and rains, and which were necessarily planted late on lands in not so good order, have somewhat misplanted, and do not as yet present so good an appearance (not unpromising), for I verily believe that the chances for such are notwithstanding favourable, though I confess paradoxical. Many trifling misplants have been condemned and injudiciously ploughed up, and the land resown, or a mixed crop have been introduced; some persons who have done this may have reasons to repent of so doing. In fact, if many of such scanty plants had been rolled down well, and in due time, and the same expense had been bestowed upon them, for eradicating large weeds, such as Thistles, Docks, &c. by small hoes or spuds in summer, as is commonly expended upon them for close hoeing with a view of eradicating small annual seedlings of less consequence to the growing crops, the best of results might have followed, surprising to thick seeders, and simply for the very reason that their extravagant thick plants had been thinned for them (though against their will) regularly, universally, and in due time, by one who never errs. *Abraham Hardy.*

TYNESIDE: *April* 17.—With a continuance of changeable weather, farm operations are still in arrear. On all the higher lying situations very little has yet been done in sowing of spring corn, but in the earlier soils this is now completed, and the Grass seeds are being put in. Preparations for Potato planting will now tax the energies of the farmer, as a large breadth will be planted this season, and in many cases very little has been done to get the land ready for the seed. The practice of ploughing them in every second furrow, the planters following the ploughs, and the manure placed by hand above the sets, is almost universal in this district, but we see little to recommend it, either as regards the cleaning of the soil, or the superiority of the crop, in preference to the drill method. A good deal of land is taken from the farmers in this neighbourhood by market gardeners, who have regular customers in the more populous districts; and the prices paid this season for land, manure, and horse labour vary from 10*l.* to 14*l.* per acre. Turnips have long been finished, and Grass has been too closely watched by stock to have a promising appearance, and in consequence the value of lean stock has declined since the earlier spring markets. Winter Beans have been severely tested this season; we fancy those sown on the flats look greener than where they have been elevated as drills and exposed to the frost winds. At our hiring a fortnight since men were in good demand, and in some instances obtained an advance of wages; an average for ordinary ploughmen is 15*s* per week in money; besides house and garden, coals led, 2 bushels Wheat, 2 bushels Barley, and 80 stones Potatoes; and we know of many cases where 16*s*. and 17*s*. with the same extras is paid. It ill became the "Labourer" in your last Number to cavil at Mr. Grey's account of the comfortable circumstances of our labourers, as every employer of labour in Tyneside will admit his statement to be a very moderate one, and within the mark.

Notices to Correspondents.

DIRTY SEED: *J S.* The sample of Grass seeds is estimated to contain as many as 102,400 weeds in the bushel, besides a tolerable admixture of Bromus mollis (Lop), Triticum repens (Couch). It may be pronounced as quite an inferior sample. The Clover seed by which this was accompanied contained in a pint 24,960 weeds, mostly Plantain; this latter was estimated at a little more than 7 per cent. of the whole.—*H H.* The seed above the average quality; but not of the species we like. It contains 30,720 weed seeds in a bushel, almost all Lop.—A packet of five sorts of seed from (?):—1. Italian Rye-grass with the small number of 7680 weeds to the bushel. 2. Mixed Grasses.—A good general mixture, contains both Lop and Plantain. 3. Rye-grass.—A remarkably pure sample, contains an occasional capsule of Myosotis. 4. Red Clover.—Contains 320 weed seeds to a pint; the purest sample we have seen. 5. White Dutch.—Estimated at 6400 weeds to the pint, mostly small. This for the kind is a very pure sample. As regards the whole of these samples, we should say that if the bulk be equal to the samples themselves, the seeds will be far beyond the average. *J B.*

FOOD FOR CATTLE: *Wm. A H* is "in possession of a recipe for a cattle food dependant upon a particular exotic plant, the effect of which is to increase the secretion of milk from 25 to 40 per cent." Is it worth the trouble to bring it before the public, supposing its cost, with the additional food consumed, did not increase the expense of keep more than 10 to 20 per cent.? The "trouble" will consist not in the expenditure of so much money in the manufacture and its advertisement, but in proving the alleged properties of your exotic plant. There we think you will fail. Dorset dairy farmers have more than 3*l.* to 5*l.* per acre farm capital. We are glad that as a reader of our Journal you have lost your confidence that you could give up a town life, and after spending a year at Cirencester take a farm of 5000 acres of land and make a livelihood off it with a capital of 2000*l.* You had better not take a farm under two years' experience on a farm, or under 10*l.* an acre of farm capital.

GRASSES: *G.*

	lbs.		lbs.
Alopecurus pratensis ..	2	Poa trivialis	2
Dactylis glomerata ..	4	Trisetum flavescens ..	1
Festuca duriuscula ..	2	Lotus corniculatus ..	½
,, elatior	2	,, major	½
,, heterophylla ..	2	Medicago lupulina ..	1
,, pratensis	2	Trifolium hybridum ..	2
Lolium italicum	6	,, pratense ..	1
,, perenne	8	,, ,, perenne	3
Phleum pratense	2	Trifolium repens	4
Poa nemoralis sempervirens	2		

Add 1 or 2 lbs. each of Festuca rubra and Poa pratensis on dry sandy soils. If a crop of hay is to be taken in the first year both the Rye-grasses (Lolium) may be increased by a third, and 2 lbs. of Trifolium pratense added.

JUPP'S NEW HORSE AND CATTLE FOOD.—Dr. Letheby in his analysis of this new Food says, "*The nutritive value of the food is therefore good, for it amounts to* 80.2 *per cent.*"

Sent out in bags with directions for use, for cash only, at 35*s.* per cwt.; 19*s.* per ½ cwt.; and 10*s.* per ¼ cwt.

W. & R. JUPP & Co. 6, Cross Lane, Eastcheap, E.C.

*** Agents wanted in large Towns.

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD, POULTRY AND GAME.—RICE SWEEPINGS, 8*s.* 0*d.* per cwt., in 1¼ cwt. bags; SCREENED RICE, 11*s.* per cwt., in 1¼ cwt. bags; DOG BISCUITS, 14*s.* per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6*s.* and 8*s.* per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP. 6, Cross Lane, Eastcheap, E.C.

REDUCTION OF TEN POUNDS PER TON
IN THE PRICE OF
THORLEY'S FOOD FOR CATTLE
On and after the 1st of April, 1860.

Important to every man who keeps

Barrels ctg. 448 Feeds, wg. nett 112 lbs., with measure, 40*s.* each.
Cases ,, 448 Feeds, ,, 112 lbs., in Packets, 45*s.* each.
Carriage paid to any Railway Station in the Kingdom.

Nutritive Value	15*l.*
Condimental Value	125*l.*
Total..	140*l.* per Ton.

Showing a profit of 100*l.* per Ton, through the use of this invaluable compound, adapted for the seasoning of all kinds of food for animals.

Agents required in every town where none are already appointed.
JOSEPH THORLEY, the Inventor and Sole Proprietor.
Offices: 77, Newgate Street, London, E.C.
A pamphlet sent free by post on application.

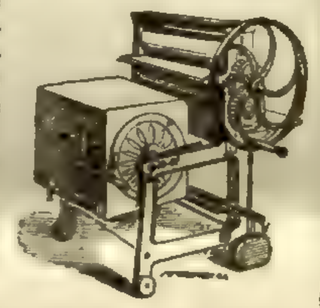
THE annexed sketch represents the GLENNY WATERING POT, which will be found a decided improvement upon the old-fashioned one, as from the peculiar construction of the handle the weight is more easily balanced in the hands, which enables the user to empty with far less muscular exertion and fatigue a pot of this kind than one upon the old plan.

Of all Ironmongers, Hardwaremen, and Seedsmen; and of LOVERIDGE & SHOOLBRED, Wolverhampton, Sole Manufacturers.

BRADFORD'S PATENT WASHING MACHINE SIMPLICITY AND WONDERFUL EFFICIENCY.

"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations."—THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.



JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

COTTAM'S PATENT INVENTIONS FOR STABLE REQUISITES, awarded a Prize at the Paris Exhibition, patronised by the English and French Governments, as well as by the principal Nobility, Gentry, and Hunting Establishments in the kingdom. In use at her Majesty's Stables, Aldershott and Balmoral.

COTTAM AND COMPANY, Winsley Street, W., are the original inventors of the PATENT ENAMELLED MANGER, Water Trough, and Wrought Iron Rack, united to an iron top-plate, and forming one complete and useful fixture, having COTTAM'S patent noiseless halter guide and collar rein attached, which is taken to the back of the manger, and works with ease and freedom up or down the guide bar.

COTTAM'S NEW PATENT SEED-BOX, an important addition to the above fittings, being simple in construction, light, and durable, promotes cleanliness, and is economical in its results.

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HORSE RAKES AND HAYMAKERS.
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YOUELL & CO.

ARE now sending out strong flowering Bulbs of this magnificent variety, the colour of which is bright vermilion scarlet. A box of its flowers was forwarded to the Editor of this Paper in August last, whose opinion of it will be found in the publication of August 20, page 694, as follows:—

"This must certainly be regarded as one of the most showy and beautiful of the class to which it belongs."

Price 6s. per dozen; 40s. per 100. Trade price on application.

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Also a fine Stock of the most popular BEDDING PLANTS, &c., at moderate prices. The usual allowance to the Trade.

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FRANCIS R. KINGHORN is now prepared to send out the above, the finest of all existing varieties; is conspicuous among the best sorts. It was awarded a Prize at the Crystal Palace, in 1858, and also commended by the Floral Committee of the Horticultural Society, on September 22d, 1859. Is much superior to "General Pelissier." The trusses of bloom are very large, and flowers of the finest form; colour orange scarlet, horse-shoe foliage, and variegated footstalks. Stout Plants in large 60-pots, 5*s.* each. The usual allowance to the Trade.—Sheen Nursery, Richmond, S W.—April 28.

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JOHN HALLY, NURSERYMAN, SEEDSMAN, and FLORIST, Blackheath, S.E., begs to announce that he intends to commence sending out the two following GERANIUMS on May 1 next:—

1. BLACKHEATH BEAUTY.—Flower a bright blush, produced most abundantly in compact round trusses, with fine dark Horse-shoe leaf of very neat habit. Has been flowering freely through the winter. Was exhibited before the Floral Committee of the Horticultural Society, August 11, 1859, and received a label of commendation as "a dwarf, neat, and distinct variety for the flower garden;" was also exhibited at the Crystal Palace September Show, and gained a prize in Miscellaneous Class.

2. AURORA, having similar habit and foliage with the former, with flowers of a deep salmon colour, and quite distinct. Exhibited before the Floral Committee of the Horticultural Society, 1860, March 29; also a First-class Certificate, April 26, and received a label of commendation as "a pretty dwarf free flowering Horse-shoe leaved variety, with deep salmon-coloured flowers."

The following gentlemen having seen them have ordered them in quantity, and can supply the Trade:—Messrs. Low & Co, Clapton Nurseries, N.E.; Mr. Charles Turner, Slough; Messrs. Parker & Williams, Paradise Nursery, Hornsey, N.

Both varieties may be seen at the above Nursery literally smothered with flowers, and can be recommended as the very best and showiest of their class, either as Bedding or Pot Plants.

Nice flowering Plants of either of the above, 10*s.* 6*d.* each, with usual allowance to the Trade when three or more are ordered.

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25 pairs CARNATIONS and PICOTEES, fine show flowers, for 1*l.*
Extra fine show PANSIES, 6*s.* per dozen.
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Hamper and package included.

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AZALEA INDICA.—Splendid varieties, plants fine, strong, and bushy, with a profusion of flower buds.

Selections at the following low prices (prices per 100 to the Trade on application):—

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20 superb varieties	1	15	0
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WOOD AND INGRAM beg to offer the following, which may be relied upon as fine stocky, well-established Plants:—

Per dozen.—	s.	d.		s.
Alyssum variegatum	2	6	to	3
Ageratum, sorts ..	2	6	,,	4
Calceolaria, ditto ..	3	0	,,	4
Ditto ditto, per 100	20	0		
Dahlias, ditto ..	4	0	,,	6
Fuchsias, ditto ..	4	0	,,	6
Geraniums, Scarlet, sorts	2	6	,,	4
Ditto ditto, per 100	20	0		

Per dozen.—	s.	d.		s.
Ditto, Variegated ..	3	6	,,	6
Heliotropes, sorts ..	2	6	,,	4
Lantanas, ditto ..	3	0	,,	4
Lobelia speciosa ..	2	6	,,	3
Ditto ditto per 100,	16	0		
per 1000 ..	£7	10	0	
Petunias, sorts ..	2	6	,,	4
Verbenas, ditto ..	2	6	,,	3
Ditto ditto, per 100	16	0		

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N. LAWRENCE, NURSERYMAN, SEEDSMAN, and FLORIST, begs to call attention to his Collection of choice BEDDING PLANTS and DAHLIAS, embracing all the best sorts of the season in strong and healthy condition:—

	Per doz.—s.	d.
Dahlias of 1859	12	0
,, older sorts	4	0
Show Geraniums, strong bushy plants, full of flower buds	5	0
French or Spotted ..	5	0
Fancy:—Flower of the Day	2	6
,, Brilliant	2	6
,, Golden Circle ..	2	6
,, Punch	2	6
,, Lady Middleton ..	2	6
,, Commander-in-Chief	2	6
,, Kingbury Pet ..	2	6
,, Shrubland Pet ..	2	6
,, Improved Frogmore	2	6
,, Tom Thumb ..	2	6
,, Mrs. Townley ..	2	6
,, Virginatum ..	2	6
Verbenas of 1859 ..	2	6
,, older sorts ..	2	0

Per doz.—	s.	d.
Petunia Slightii, a fine purple for bedding ..	2	6
Petunias, sorts	2	0
General Havelock, double white	4	0
Lobelia speciosa, strong plants from seed ..	3	0
Calceolarias, sorts ..	2	6
Ditto herbaceous, fine ..	5	0
Fuchsias of 1859	6	0
,, older sorts, from ..	3	0
Heliotropes, sorts ..	2	6
Phloxes, from	3	0
Salvia fulgens	2	6
Ditto patens	3	0
Humea elegans	4	0
Cupheas, sorts	2	6
Alyssum variegatum ..	2	6
Lantanas, in sorts ..	3	0
Mesembryanthemums ..	3	0
Pentstemons, sorts ..	3	0

Choice Collections of Hardy Herbaceous Plants, 3*s.* per doz., or 25*s.* per 100.

Alpine Plants suitable for Rockwork, 3*s.* per dozen.
Nasturtium Tom Thumb, 2*s.* 6*d.* per dozen.
Cupressus macrocarpa, 2 feet, 1*s.* each, or 9*s.* per dozen.

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J. LINDEN'S ESTABLISHMENT at BRUSSELS for the INTRODUCTION of NEW PLANTS respectfully announces that the following select novelties will be ready for Sale on and after the 1st of May next. Delivery free out of the Custom House in London.

PTERIS TRICOLOR (LINDEN).—Wonderful and most extraordinary variegated Fern, described in *Gardeners' Chronicle*, p. 217. Fine plants, 42*s.*

CAMPYLOBOTRYS REGALIS (LINDEN).—Charming plant with magnificent ornated foliage (the leaves being 8 inches in length by 5 inches broad), superior in beauty to any Anæctochilus. Nice plants at 21*s.*

	s.	d.
Begonia hypargyræa, species from Assam.	8	0
,, margaritacea, species from Assam. ..	8	0
,, nivosa, species from Assam.	8	0
,, Duchesse de Brabant	8	0
,, Funckii	6	0
Campylobotrys smaragdina, Linden	12	6
Columnea erythrophlœa, Decaisne	8	0
Cyanophyllum (?) assamicum	21	0
Gesnera ignea, Linden ..	8	0
Isotypus rotiflorus, Triana	21	0
Lasiandra Fontanesiana, D. C.	8	0
Locheria (Achimenes) cœnochroa, Decaisne ..	8	0
Locheria (Achimenes) pardina, Decaisne ..	8	0

	s.	d.
Maranta argyræa, Linden	21	0
Monochætum nitidum, Linden	8	0
,, tenellum, Naudin ..	8	0
Poggendorffia rosea, Karsten (a new genus of Passifloraceæ) ..	12	6
Salvia cacaliæfolia, Benth.	8	0
Triolena scorpioides, Naudin	8	0
Cibotium princeps (splendid Fern)	21	0

FOLIAGED PLANTS.

Cupania Pindaiba ..	42	0	
Guarea brachystachya ..	25	0	
Icica nucifera	42	0	
Oreopanax (Aralia) dactylifolium	42	0	
Oreopanax platanifolium	42	0	
Rhopala crenata	42	0	
,, frigida	42	0	

J. LINDEN'S NEW CATALOGUE for 1860, just published, contains the descriptions of the above-mentioned plants, and will be sent free on application. Different species (among which is Pteris tricolor) are figured in the second Number of "Hortus Lindenianus," which will appear in the beginning of April at Mr. Lovell Reeve's, Henrietta St., Covent Garden, W.C.

Agent in London: M. R. SILBERRAD, 5, Harp Lane, Great Tower Street, E.C. Brussels: Royal Zoological and Horticultural Garden.—April 28.

HALF SPECIMEN TEA-SCENTED ROSES

GROWN IN 6-INCH POTS FOR EXHIBITION.

FINE SELECTED PLANTS	.. per doz.	24*s.*	
Smaller Plants in 48 or 4-inch pots	,,	12	

Selection left to W. W. & S.

WM. WOOD AND SON are now prepared to supply fine strong Plants of the above from their extensive STOCK. CATALOGUES may be obtained on application, and extra plants added to each order to compensate for carriage.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

ROSES IN POTS.

WOODLANDS NURSERY, MARESFIELD, NEAR UCKFIELD, SUSSEX.

WM. WOOD AND SON are now executing orders for ROSES in pots, and will supply fine healthy dwarf plants as under:—

TEA-SCENTED ROSES	12*s.* to 18*s.* per doz.
CHINA DO.	9*s.* to 12*s.* ,,
BOURBON and NOISETTE DO...	9*s.* to 12*s.* ,,
HYBRID PERPETUAL DO. ..	9*s.* to 12*s.* ,,

The months of April and May are considered very eligible for planting out Roses from pots. The plants now offered are strong and well grown.

Plants presented to compensate for carriage.

NEW ROSE.

A. PAUL AND SON invite attention to their NEW TEA-SCENTED ROSE "PRESIDENT," which obtained First-class Certificates from both the Royal Botanic Society and Horticultural Society of London in March last, and which is now first offered for sale. It is figured in the Rose Annual for 1859–60. The plant is of hardy constitution; the flowers are large, full, of fine form, varying in colour from blush to salmon, and very sweet. It is confidently anticipated that it will prove one of the finest of Tea-Scented Roses. Price 5*s.* per plant; a few extra strong plants, 10*s.* 6*d.* each. The usual discount to the Trade when three or more plants are ordered at once.—Nurseries, Cheshunt, Herts.

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NEW CONTINENTAL PHLOXES.

The best proved kinds, from 12*s.* to 18*s.* per dozen.

Older but well proved sorts, from 4*s.*, 6*s.*, to 9*s.* per dozen.

100 first-rate PHLOXES will be selected by the Subscribers for 40*s.*

50 for 25*s.* | 25 for 12*s.* 6*d.* | 12 for 6*s.*

12 older sorts, 4*s.* to 6*s.* per dozen.

As the present season is very eligible for planting, WM. WOOD & SON respectfully offer the above Phloxes to be selected from their first-rate collection. The larger proportion of the plants offered have been grown in the open ground, and are all strong and well rooted, comprising the most *recherché* and newest kinds, selected from the best collections grown on the Continent, which have all been proved by the Subscribers.

DESCRIPTIVE CATALOGUES will be sent on application, and extra plants presented for carriage.

Address WM. WOOD & SON, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

THE NEW HORTICULTURAL GARDEN.—Persons wishing to have specimens of their Works placed for Exhibition in the New Garden at Kensington Gore should now forward particulars of the class of articles they wish to exhibit, and the space required, that the Council of the Horticultural Society may decide whether the articles proposed to be exhibited will be appropriate to the Garden, and whether space can be found.

No space will be allotted to articles which it is proposed to remove at the end of a few months.

No charge will be made for space.

The name of the Exhibitor will be affixed to each article.

Space will probably be found for objects IN CEMENTS, such as Edgings, Balustrades, Vases, Statues—IN TERRA COTTA, such as ornaments for Spandrils, Edgings, Balustrades, Vases—IN BRONZE AND IRON, such as Vases, Statues, Seats, Trellis-work—IN STONE AND MARBLE, such as Statues, Vases, Edgings, for fountains; coloured varieties for pavements—IN CHINA, such as Vases, Jardinières—ENCAUSTIC TILES.

SLATES of large size and peculiar quality for Greenhouse walks.

Proprietors who may wish to exhibit specimens of their quarries will be able to exhibit such in the shape of pedestals, &c.

Letters to be addressed to the Assistant-Secretary, Horticultural Society, 8, St. Martin's Place, London, W.C.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY

BEING ABOUT TO RESUME THE

IMPORTATION OF SEEDS AND PLANTS

by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. A knowledge of Spanish or Portuguese would be desirable. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, APRIL 28, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	May 1	Horticultural (Anniversary) in the Museum of Science and Art at South Kensington	1 P.M.
THURSDAY,	— 3	Linnean	8 P.M.
		Pomological	2 P.M.

A FEW months since we gave an account of a very fine and prolific variety of the garden Mushroom which had been developed in the course of cultivation together with another distinct form of less consequence. As its qualities were excellent and its promise great, we urged if possible the increase of its spawn, and we look with some interest to the result of the experiment.*

This morning we received specimens of another supposed variety of large size and peculiar appearance, which however even before it was unpacked did not promise well, as it had a heavy unwholesome smell, precisely like that of a very damp room in which the floor and wainscoat are affected with dry rot. The odour was peculiarly oppressive when the box was opened, and to our

* Since the account of Mr. BUCHANAN'S Agaric was published we have lost no opportunity of examining cultivated Mushrooms, especially in Covent Garden, and we have never seen a single specimen bearing the least resemblance to it.

great surprise we saw a Fungus with very narrow pale free gills and an extremely thick fleshy pileus, very unlike in many respects the ordinary cultivated Mushroom. On a closer inspection we found the case to be one of considerable interest, and as far as we know new in the history of Mushroom cultivation.

A single luxuriant group of this supposed variety sprang up in the centre of a bed which had just come into bearing, and if the rest of the bed should be infected with the same form, the whole crop must fall a sacrifice, as it appears on close inspection that the peculiar appearances are due to the presence of a parasitic Fungus, whose spawn pervades the plant and has completely disguised the usual characters of the species. The gills in consequence never attain their proper growth, and are entirely devoid of the slightest trace of fruit, and at length they are bound together into a solid mass, in which at a later period little spherical sacs will be produced containing the proper fruit of a *Sphæria*. As the plant is still in a young condition, we are unable to say what the precise species is, but in all probability it is *Hypocrea floccosa*, FR., a species which has been hitherto very rarely observed in England.

The alteration of form which is caused by this and one or two other species of the same genus in the Agarics on which they grow is so remarkable that two of them have been figured by SOWERBY as true species, and have even been referred to a distinct genus in comparatively modern days on account of the total obliteration of the gills caused by the parasite. Those who are possessed of SOWERBY'S work may refer to t. 402, *Merulius helvelloides*, and t. 153, *Helvella infundibuliformis*, both of which probably owe their origin to the same parasite, *Hypocrea lateritia*. The milky Agarics in our woods are especially subject to this disease, and we have seen *Boleti* similarly attacked. The parasite, however, is not perfectly developed unless the weather be peculiarly favourable, and in consequence the real origin of the disease is often concealed.

In the case before us every individual of a large group seems equally affected, and that from the earliest stage of growth. To attempt any palliation is completely hopeless. If, therefore, the disease should seem inclined to spread, we should counsel not only the complete destruction of the bed as soon as possible, but should suggest that the whole should be at once burnt, so as to prevent if possible the contamination of other crops.

The effect of the spawn of parasitic Fungi in causing the tissues of plants to swell out and become distorted is well exhibited in the garden Anemone, where the leaves which will ultimately bear the pretty *Æcidium*, which is so destructive to these plants, may be distinguished from their earliest stage of growth. The distortion, however, produced in this case is nothing to what takes place in the United States in branches of Elder attacked by a peculiar *Æcidium*, which curls them up and causes them to swell, till they have not the slightest resemblance to their normal condition.

We trust that the present is merely an isolated case, and that we shall hear no more of it, for should the disease become prevalent, the loss to Mushroom growers would be enormous. Even in a young state it is very possible that the affected crop may prove injurious when cooked; when full grown, if we may judge from the specimens before us, they would be absolutely intolerable. *M. J. B.*

SMALL as is the amount of intelligence as yet received concerning the LOSSES AMONG EXOTIC TREES AND SHRUBS believed to be hardy, one or two general facts of some importance have been elicited. This has been more especially made clear: the same species of plant, exposed to the same degree of cold, has perished in some places and survived in others, although the dead and living grew within a few yards of one another. Of this the Brussels Sprout Cabbage furnishes an example; in the full sunshine in a warm corner both it and Cottager's Kail were immediately changed by the frost into rotting pulp, but within the influence of a north wall and fully exposed to the north their constitution was scarcely shaken. In another case the Rose Jaune Desprez, trained to a north-west wall, received no injury though the thermometer is said to have fallen there to 3°!! Neither in that place did the Laurustinus, "quite open to the north-east," feel the cold, although in warm places where the temperature was not lower than 17° it was half killed. This arose, we apprehend, from one cause only. Where plants were exposed to the sun or sheltered in warm corners they were in full growth, and therefore excessively sensitive to frost. Where on the contrary the same kinds of plants were in bleak places, or where the sun had little power, they either remained torpid, or were slightly excited, and suffered little. It is only in this manner that it would seem possible for such a tree as Cupressus Lambertiana to have remained untouched in the cold clay near London, and to have been nearly killed in the much better climate of Somerset. It is well worth inquiring whether all the conflicting evidence concerning the hardiness of certain exotics may not be explained with reference to these causes.

It must, however, be remembered that, after all, plants have specific constitutions, which are wholly beyond the reach of explanation, and the nature of which can only be ascertained by repeated experiment. Who, for instance, could have anticipated the absolute indifference to cold of Skimmia japonica, a shrub nearly related to the Orange and Lemon trees, every one of whose kindred is, as far as we know, incapable of bearing this climate? Yet we have no report against that beautiful little shrub; but every one bears witness to its hardiness. So again, how entirely inexplicable is the instance mentioned by Mr. STANDISH of the Celine Forestier Noisette Rose, which stood alone untouched and hale amidst a universal destruction of other Noisettes.

It will also be found that among Camellias some will be quite hardy, while others are constitutionally tender. To the former we have often referred on former occasions; and it is now ascertained that Fortune's Yellow is more hardy than Hollies and Laurels. Another kind, a rich double crimson, with the name of which we are unacquainted, has been sent us by a correspondent at Aimes Lodge, Ascog, Bute by Rothesay, in as fine condition as if it came out of a greenhouse. And what does he write of this variety:—

"It is the first flower produced this season from a Camellia tree which grows in the open border in my flower garden here. It was planted here as a standard about 15 years ago, when it was 3 feet high. It is now 10 feet high by 28 feet in circumference, and during that time it has never had even the protection of a mat. It has several hundred buds upon it, which I expect will flower in succession till the middle of June. It is quite as hardy with me as the Portugal Laurel or Sweet Bay, perhaps more so, as I have never lost a shoot either from the frost or from the north-east wind to which one side of it is exposed, blowing for 4 miles unbroken across the sea. Its flowering seems to depend more on the heat of the previous summer than upon the temperature of the winter." Now, in general, Camellia flowers produced in the open air are insignificant, however healthy the foliage. Such however was by no means the case with the Rothesay specimen.

While writing upon this subject, a letter reached us from Mrs. BERRINGTON, of Llanover, containing some very interesting information concerning the effects of the winter upon the large collection of exotics cultivated in the garden of the Château St. Georges, at Cannes in the South of France, a residence originally built by Sir Herbert Taylor. The present proprietor, a French gentleman devoted to his garden, has introduced many plants into Cannes, and from him the information proceeds. We should add that the Château is close to the sea, but owing to the formation of the ground, part of the garden is considerably sheltered:—

"I subjoin the list of plants which you desired in order to judge from the experience of this winter of their relative hardiness. Although we have fared so much better than other places in the south, the season has been unprecedented in Cannes, and on one night the thermometer fell to 4° Réaumur below zero (21° Fahr.); heavy rain immediately followed, which, freezing as it fell, covered the foliage with ice, and this was again succeeded in the morning by a violent mistral and bright sun, threatening to complete the work of destruction. Nevertheless the first list comprises all the plants that, in our garden, have been killed nearly down to the ground, but are now again shooting forth from the roots, while the much more numerous List 2, of plants entirely uninjured, shows the greater hardiness of many I had considered tender.

"*No. 1. List of Plants killed back by the Frost, but now springing up again.*—All the Salvias and Gesneras, Tecoma fulva, Tacsonia ignea, mollissima, and splendens; Dracæna rubra and variegata, Hexacentris coccinea, Passiflora Impératrice Eugénie, Buddlea nepalensis, and Plumbago rosea.

"*No. 2. Plants perfectly uninjured up to this time.*—Acacia pendula elegans, dealbata, longissima glauca, Bathesiana, verticillata, trinervia, Cyclops, mollissima, and albicans; Aralia trifoliata, Paggrifica (?), and japonica Sieboldi; Abutilon Duc de Malakoff and Manettii; Araucaria Bidwillii, excelsa, Cunninghamii, glauca, and Braziliensis; Hakea gibbosa or cristata, Abelia uniflora, Habrothamnus elegans, Aspidistra variegata, Beaufortia decussata, Burchellia capensis, Brachysema speciosum, Dracæna australis, congesta, ferrea, and fragrantissima; Hexacentris Mysoreana, Eucalyptus cordatus, Erythina caffra, Jubæa spectabilis, Desfontainia spinosa, Franciscea latifolia, Justicia rosea, Gelsemium nitidum, Correa splendens, rosea, cardinalis, and alba; Cissus lucidus, Cocos coronata, Cestrum angustifolium, Ceanothus africanus, Lapageria rosea, Maurandia, Cobæa, Lophospermum, Bignonia jasminoides, capreolata, speciosa, and capensis; Kennedya Marryattæ and coccinea; Polygala grandiflora, speciosa, and Zeyheri; Leptospermum bullatum, Myrica edulis, Mahonia Bealii and nepaulensis, Pinus longifolia and canariensis, several varieties of Mexican Pines raised from seed three years old; Grevillea robusta, flexuosa, and Manglesii; Russellia juncea, Sollya Drummondi, Swainsona ——(?) Strelitzia reginæ, Plumbago capensis, Templetonia glauca, Tritoma Uvaria, a large collection of succulents, such as Cactus speciosus, &c.; Melocactus, Epiphyllum, Cereus, &c.; different Sikkim Rhododendrons, such as Edgeworthii, &c., with many kind of greenhouse and hothouse Ferns and Cape Heaths, &c."

To gardeners this list is of the highest interest, confirming completely what we have so often urged as to the folly of keeping up a high temperature in the winter receptacles of greenhouse plants. Although the thermometer fell to 21°, and immediately afterwards vegetation was covered with frozen rain, the most difficult to bear of all visitations, its danger augmented by a rapid thaw and bright sun, yet we find Tacsonias, Tecomas, Dracænas, Salvias, Gesneras, and even the Hexacentris coccinea only killed down to the ground, while a great variety of New Holland, Cape, South American, and other greenhouse plants remained absolutely uninjured. An instance of this kind is of the utmost importance as a guide to those who have the management of collections of greenhouse plants; for it must be remarked that in the Cannes garden many of the survivors were what are called soft-wooded plants, such as Abutilons, Dracænas, Habrothamnus, Cestrum, and even Cobæa scandens, the very last one would expect to bear such inclement weather.

THE ANNUAL MEETING of the HORTICULTURAL SOCIETY will, by permission of the Lord President of the Privy Council, be held in the Lecture Theatre of the Kensington Museum on Tuesday next, at 1 o'clock. Mr. NESFIELD'S plan as accepted by the Council will be in an adjoining room, together with a model of the proposed garden on a considerable scale, and also drawings of the meeting room now in course of erection.

The models of arcades, the size of those intended to be erected by HER MAJESTY'S Commissioners, will also be open to inspection in the grounds of the Department.

The site of the new garden will be open to all Fellows, Debenture holders, and ivory tickets.

New Plants.

236. VACCINIUM RUGOSUM. *Hooker fil. et T. Thomson ined. in herb.*

V. rugosum; ramulis tomentosis squamatis interruptè foliosis, foliis sessilibus angustè lanceolatis acuminatis grossè serratis rugosis basi obtusis, umbellis paucifloris pendulis, calyce campanulato laciniis ovatis discoloribus, corollâ angulatâ cylindraceâ subinflatâ 5-dentatâ triplò longiore, ovario pentaptero 5-loculari polyspermo.

A beautiful shrub exhibited the other day to the Floral Committee of the Horticultural Society as a Thibaudia, by Messrs. Veitch and Son, who received it from the Khasya Hills through Mr. Thomas Lobb. Drs. Hooker and Thomson found it in the same country at an elevation of from 4—5000 feet, and also in Sikkim, where it occupied stations a thousand feet higher.

It forms an evergreen bush, with light green narrow leaves and little umbels of flowers, white at first but changing to deep red, with cross markings of a triangular form like those of *Thibaudia macrantha* of the Botanical Magazine, t. 4566, which is also a Vaccinium, as is the *Thibaudia pulcherrima* of the same work. At least such is the opinion of Wight, Hooker, and Thomson, with whom we concur; for no intelligible character to distinguish these plants from Vaccinium has been pointed out. It is true that the name Agapetes has been applied to the Thibaudias of East Indian Botanists, but a change of name does not constitute a distinction.

MYCOLOGY.—No. XVI.

Boletus luridus, *Schæffer.*—Most of our readers must have observed in the woods a peculiar set of Fungi, differing from Agaricus in the gills by which that genus is distinguished being replaced by multitudes of tubes as if the fructifying surface had been pricked all over with a large pin. If the hymenium is carefully examined it will be found however that these are not mere perforations, but that each is the cavity of a tube separable from its immediate neighbours and from the pileus from which it proceeds, very much as the mass of seeds and filaments separates in a boiled Artichoke from the receptacle. These plants are often extremely abundant, and attract notice either by their bright colours, or by their disagreeable slimy aspect. Some of them are excellent articles of food, while others are the most poisonous of Fungi. They are known to botanists by the name of *Boletus*, a name which was applied by the Romans more especially to the large Orange Mushroom *A. cæsareus*, which is said to be one of the most delicious of the tribe. Innocent and admirable however as its own qualities might be, it was not always safe to partake of it, as it was a favourite vehicle for the administration of poison, insomuch that Martial has more than one epigram intimating the danger, and when he and Juvenal sing of its merits they expressly except such Boleti as Agrippina set before Claudius.

Our Boleti however have only a very distant relationship to the imperial Agaric, and our present business is with one of the poisonous, and not of the esculent species.

Boletus luridus has a thick convex cushion-shaped pileus of a dull dingy olive inclining to umber, and rather downy. As it grows old it is often still more dingy and slightly viscid. The stem is stout and of a bright vermillion red shaded with yellow or orange, especially above, and either netted or sprinkled with little dark red specks. The mass of tubes is rounded behind and not attached to the stem. They are yellow at first, then tinged with green, with the orifice of a deep red or orange. The flesh of the whole plant is yellow, but turns a bright blue on exposure to the air, a circumstance which is not peculiar to this species alone. It was once supposed to depend upon an alteration of the molecular arrangement of the fluid contained in the plant, but it is now ascertained from actual experiment that it due to the action of the ozone contained in the atmosphere.

There is no doubt that *Boletus luridus* is, to say the least, a suspicious species, though it is not always easy to ascertain to what precise kind particular instances of poisoning have been due, as there are three or four allied species, which are somewhat difficult to distinguish. Nothwithstanding its bad qualities, as proved by experiments on animals, it is sold in the markets at Vienna and Prague, and is sometimes dried for winter use. Accidents however constantly take place, if care is not taken to throw away the first water in which the Fungus has been boiled, which doubtless dissolves a large portion of the alkali on the presence of which its poisonous property depends. Lenz informs us that having partaken of it without any bad effects, he tried *Boletus Satanas*, a species very nearly allied, and distinguished by its smooth pileus, which is at first brownish buff, but at length whitish. This species occurs occasionally in our woods, and has a mild taste without any disagreeable twang. The odour of the Fungus had previously given him a headache, but he had attributed this to exposure to bad weather while botanising, and in fact did not recognise the cause in sufficient time to prevent his experiment. At 10 o'clock he took a small portion of the uncooked plant, without however swallowing the solid part, and in an hour and a half afterwards he had a sudden thrilling pain through the whole body, which nevertheless soon went off. A few hours afterwards he again tasted a piece, and in a short time he was seized with violent sickness, which again left him after a few paroxysms, and he experienced no further bad effects. His fellow botanist however had partaken largely of a fine fresh perfect specimen which was cooked, and after nearly a week's suffering recovered with some difficulty. The Fungus seems to act differently at different times and on different constitutions, but in one case where a small portion eaten raw produced no bad consequences, a larger slice taken by a bystander caused sickness and other evil symptoms.

This Boletus and its poisonous allies may in general be known from the true esculent species, by the red colour of the mouth of the tubes. This rule is not however absolute. In general all specimens of Boletus should be treated cautiously in which the flesh turns blue when exposed, though the mark cannot, upon the whole, be considered to be altogether without exception. *M. J. B.*

Boletus luridus.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

AN ESSAY ON THE CULTURE OF THE FUCHSIA.

(Read before the South Eastern Floricultural Society, April 23.)

In submitting to your notice a few brief remarks on the culture of the Fuchsia it would not, I think, be amiss for me to just glance at the early history of the plant, as there is something very romantic in its introduction to general culture. Any of you who have ever travelled as far as Hammersmith will have observed in that locality a very large nursery, the original proprietor of which was Mr. Lee, the celebrated founder of the nursery called the Vineyard, at Hammersmith. This nursery during the 18th century could boast of as large a trade as any nursery in the three kingdoms, therefore it will not be surprising when we find him introducing the rarest and best novelties of the age. Well, you will ask me now, what about Mr. Lee and the Fuchsia? I will at once reply to your question by relating the following story.

It was said that Mr. Lee had been informed that in the neighbourhood of Wapping, in the window of a humble dwelling, growing in a pot, was to be seen a graceful plant with beautiful drooping flowers like earrings. Of course his curiosity was excited; the description given was such that he knew of no plant in his nursery whose character corresponded with the glowing account afforded him of the said plant, so at once he procured a coach and posted off to the said locality, having obtained an introduction to the owner of the plant, whom he found to be no other person than the wife of a sailor. After speaking of the good qualities of the plant he asked the good woman what price she demanded for it, at the same time offering her a golden coin; but she refused it, saying that her "Jack" had brought it home from a foreign country, therefore she would not part with it for his sake, and after using all the persuasive language he was possessed of, and a promise that he would propagate a plant of the same for her, he succeeded in obtaining possession of it, not without first depositing in her hands all the cash he had about him, which was a trifle short of 10 guineas. Homeward bound, and carefully nursing his treasure, we find him busy in propagating and converting into a plant every available piece of the same. Soon it found a ready sale at an enormous profit; and to the above source may be traced the general culture of the Fuchsia.

I will now proceed to furnish you with a few remarks respecting its general character and culture. Speaking first of varieties, these may be divided into four classes:—First, *Dark*; second, *Light*; third, *White corolla'd*; and fourth, *Fancy varieties*. Of course the floral market can boast of numerous varieties belonging to each class, numbers of which except for novelty are unworthy of being cultivated. Therefore it is for the cultivator to know which kinds are most suitable for the purpose he requires them for, because some are dwarf, others tall and straggling in their habit; again some are slender and graceful, others will flower prematurely, without making the slightest disposition to grow. Now we will consider what are the requisite qualities of a good Fuchsia: first, a free growing graceful habit, not rampant in its growth, but imparting in form as it grows the shape of a pyramid, the lower branches becoming widened in circumference as the upper ones extend; the second, fine healthy foliage; the third, abundance of bloom; and the last, but not least, quality of the flower—never banish one from your collection that pertains to the above perfection until you are satisfied that its successor is a decided improvement. You will perhaps ask me to recommend sorts. I will enumerate those that I grow, as I am conversant with their merits. Others I must leave to your better judgment and the recommendation you may receive from the seller and the raiser. Mine are as follows:—

Dark Varieties.—Catherine Hayes, Souvenir de Chiswick, Little Bo-peep, Donna Joaquina, British Sailor, Governor General, General Williams, Tristram Shandy, Wonderful.

Light Varieties.—Fair Oriana, England's Glory, Clio, Fairest of the Fair, Duchess of Lancaster, Rose of Castille, Prima Donna, Venus de Medici, Queen of Hanover.

White Corolla'd.—Princess of Prussia, Princess Royal, Mr. Story.

Fancy Corolla'd.—Serratifolia, Dominiana, fulgens.

I shall simply confine myself to the general culture of the plant, supposing you grow it for all purposes, exhibition and home decoration. If you propagated your own plants, you would do so early in the spring or in the month of July. I prefer the latter month if I cannot obtain cuttings till late in the spring, because those struck in July will not generally flower the same season, but continue to grow fast during the humid months of the autumn, and if convenience favours you you can maintain their growth till their flowering season, whereas those propagated in the spring flower before the plants have had time to shape themselves or acquired sufficient strength to form a good specimen for the future. In striking them use a little silver sand, say about 2 inches, on the surface of the pot; cover the cuttings with a bell glass, for that will hasten their rooting. Take care to wipe the glass dry every morning. After they have rooted pot them into 3-inch pots, place them on a little bottom-heat, if you have it; if not, cover over with a hand-glass. Continue to shift from one size to a larger one till you have gained your desired object, viz., that of a good-formed plant, suitable for the structure you grow it in or the purpose you require it for. Now during all these various stages of growth we will suppose you have carefully attended to the stopping or the pinching off of the shoots with the view of inducing a bushy habit; for instance, when the plant is fully established in its first shift you must stop the leader if there is not a tendency to emit laterals regularly up the stem, and then again whenever you find the same fault prevail; so that the eye of the cultivator must be constantly on the alert, watching his favourite objects as he would some little foundling.

Some of the plants will not bear the rays of the sun when powerfully shed on them so well as others, so that they will need a slight shading, and all sorts require it during the hottest months of the year when in flower or else the flowers will drop quickly. So they will if you allow the soil to become soddened with too much water, for this like everything else must be applied judiciously; by no means let them get dry or the foliage will soon afford you evidence of the fault by turning yellow, and gradually losing its healthy hue; during the last stages of the plant's growth you may apply weak liquid manure water. If the plant is of a robust habit it does not need so much stimulating. Now I will come to the kinds of soil I employ, and here again a little judgment is required; that for such weak growing varieties as the Princess of Prussia and others should be much lighter than that used for the stronger habit one. The heavier the soil the slower the growth, but a bushier habit will accompany it in its infancy.

I find them thrive well in the following compost, well-incorporated:—one part good mellow loam, one of rotten dung, and a small quantity of peat earth for making the soil light, and a fair sprinkling of silver sand. Take care and provide plenty of drainage and clean pots, and by following the above directions success will attend your exertions.

And now for the after treatment. When they have done flowering let them be placed out of doors in a situation fully exposed to the due influence of the sun; this will assist in ripening the wood; apply water

sparingly, just sufficient to prevent them from suffering through drought, so that they may by degrees lose their foliage, but by no means expose them out on frosty nights or the frost will materially injure the wood that produces shoots for the forthcoming season. Having accomplished the above you may store them away in a cool part of the greenhouse, giving them enough water to keep them from dying.

The Fuchsia is a very accommodating plant, for it will commence growing at any period after a rest that you like to excite it; but that must depend on circumstances that are at your command for favouring an early growth, and also what season you wish them to be in flower.

I will now say something about pruning old plants previous to their new growth. Some of the sorts partake of a weak growth, and only require the ends of their shoots nipped off; others of a robust habit will bear being cut into three or four eyes; but the cultivator in performing this operation must have an eye to the shape he intends his plant to assume.

One word more and I close my essay. I have not said anything respecting their preparation for exhibition—such as the sorts best adapted, and the best mode of packing and conveying them to the exhibition, and other little trifles worth knowing.

I believe I am somewhat qualified for the task, having during the past season had three first prizes awarded to me at two of the principal horticultural exhibitions in the kingdom, I may say the world—the Crystal Palace and the Royal Botanic flower shows, so that at some future period I shall feel most happy in giving you my experience on the above subject. *Robert Oubridge, Gardener to J. Foster, Esq., Stamford Hill, N.*

Home Correspondence.

Effects of the Winter.—The information now being published by you will be of some value in determining the hardiness of the more recently introduced Coniferæ. But such data as will be furnished by this season's reports cannot be depended upon; for the past winter has been a most exceptional one. As an instance, I may note that upon a swampy piece of bog soil in our nurseries some common Laurels, Hollies, and even common Oaks have lost all their last year's growth, and many Laurels and Hollies are literally killed; while at a distance of some 200 yards, and upon dry heathy ground, such plants are not injured in the slightest degree. I find, also, that just in proportion as plants had or had not matured their season's growth when the October frost set in, that exactly in the same ratio have they been injured. The following Coniferæ, which have all been raised from seeds, and are one, two, three, and four years old, have all been cultivated in the open nursery quarters upon exposed forest land, and have not been injured in the slightest degree, viz.:—Abies alba, canadensis, Douglasii, Morinda, Menziesii, nigra, orientalis, and rubra; Cedrus africana, Deodara, and Libani; Cupressus horizontalis, Lambertiana, Lawsoni, and torulosa; Libocedrus chilensis, Picea amabilis, grandis, nobilis, Nordmanniana, picta, Pindrow, Pinsapo, religiosa, spectabilis, and taxifolia; Pinus austriaca, Brutia, Cembra, Coulteri, calabrica, excelsa, Hamiltoni, Hartwegi, Lambertiana, Laricio, maritima, Mugho, montana, pyrenaica, pumila, rigida, rubra, Strobus, and uncinata. The following have been more or less injured, but not to any serious extent, viz., Pinus Ayacahuite, abchasica, Benthamiana, Commonforti, Don Pedri, Fenzleyii, Gerardiana, gracilis, insignis, Jeffreyi, inflexa, Monte-allegri, Ocampoi, pinea, robusta, Sabiniana, and verrucosa. The following are very much injured, in most cases killed, viz., Pinus Endlicheriana, Ehrenbergii, filifolia, leiophylla, Llaveana, Montezumæ, magnifica, and nitida; also Cupressus Benthamiana, funebris, Knightii, and M'Nabiana; Wellingtonia gigantea, one, two, three, and four-year old plants are not in the least injured. *J. E. Nelson, the Nurseries, Rinefield, New Forest, Hants.*——The following is a list of trees that have survived the late winter here without injury; and a goodly list it is of beautiful, and now I may say permanent additions to our forest scenery. I state also what are more or less injured, and what perished. I believe the mischief was mainly done in October, though not then apparent, and perhaps we do not yet know the full extent of it. My climate is favourable to the growth of Rhododendrons in general, and I have therefore added a list, that may be interesting, of what I have found hardy. Entirely uninjured: Wellingtonia gigantea, Pinus excelsa, Sabiniana, Ayacahnite, Padufia, Parolinii, Fremontiana, macrocarpa, Jeffreyi, species from Erzeroum, Beardsleyi, M'Intoshii, monticola, Craigiana, insignis, and muricata; Picea Hudsoni, cilicia, Nordmanniana, cephalonica, Webbiana, and Pindrow; Abies Pattoni, Kuhtrow, Smithii, Morinda, Whitleyi, grandis, amabilis, nobilis, bracteata, Pinsapo, taxifolia of Jeffrey, Menziesii, monstrosa, Kæmpferi, and Douglasii; Cunninghamia lanceolata in an orchard house, Thujopsis borealis, Cephalotaxus Fortuni, FitzRoya patagonica, Saxegothæa conspicua, Salisburia adiantifolia, Jasminum nudiflorum, Skimmia japonica and laureola, Libocedrus chilensis, Biota pendula, Chamæcyparis thurifera, Sequoia sempervirens and the broad-leaved var., Deodaras of all sorts, Cryptomerias do., Cedrus atlantica, Araucaria imbricata, Fagus betuloides (evergr.) and antarctica (decid.), Cupressus Lawsoniana, Kewensis, Lambertiana, and Cashmeriana; Juniperus mexicana, tetragona, fragrans, and recurva; Thuja aurea, Ilex latifolia, and Quercus glabra. Of 23 Mexican Pines in an orchard house I can only speak positively of robusta, Don Pedri, Richardiana, and Lowii. Ilex dipyrena has the young shoots killed. The new Ceanothuses have suffered to the same extent but not more, and will doubtless be covered again in their season with a sheet of blue flowers. Garrya elliptica, both male and female, very much browned. Pinus tuberculata has the leaves browned, but the buds appear sound. Pinus Edgariana, allied to insignis, has perished except when exposed to the north. Single red Camellia has the flower buds destroyed. Cupressus macrocarpa, often sold for Lambertiana, is universally half dead; C. M'Nabiana has the young shoots killed. Escallonia macrantha has its fine foliage destroyed for the season, but the wood appears sound. Pinus Hartwegii looks very sick. Specimens of the following have been killed:—Abies jezoensis; Rhododendrons Boothii, Hookeri, argenteum, and Falconeri; Podocarpus andina and nubigena; Ilex cornuta and furcata; Swammerdamia, Myrtus apiculata, Erica codonoides, Dacrydium Franklini, Desfontainia spinosa. Rhododendrons proved hardy: lanatum, barbatum, setosum, lepidotum, niveum, lancifolium, cinnabarinum,* do. var., ciliatum,* glaucum,* fulgens, Thomsoni,* campylocarpum, æruginosum, and Alpine 14,000 feet, foliis cordatis. Not yet proved: virgatum, Campbellii, Hodgsoni, Aucklandii, Wallichii, Wightii, Roylei, Falconeri, and argenteum. Greenhouse: Camelliæflorum,* Dalhousei,* Edgworthi,* and Maddeni.* All marked * have either flowered or are covered with flower-buds. The flower-buds of ciliatum and glaucum have been killed this year like those of the Camellia. except on specimens growing on rockwork near running water. I have seedlings from Rhododendron formosissimum crossed with Edgeworthi that show distinctly in the foliage the character of both parents, and the same crossed with Dalhousei. *H. R. S., Hafoduno, near Llanrwst.*——Among plants injured most here are Abies Morinda, Cedrus Deodara and atlantica, Biota aurea and orientalis, Benthamia fragifera (killed), Abies Brunoniana (ditto), Cupressus M'Nabiana, Goveniana, Cashmeriana, Knightii, and Lambertiana, all very much cut down; Cryptomeria japonica, very much injured; Escallonia macrantha and pteroclada, killed; Hedera Regneriana, ditto; Clematis Sieboldi, do.; and C. azurea grandiflora, do.; Magnolia grandiflora, browned; trained Peaches, Nectarines, and Apricots, many killed; Libocedrus chilensis, very much cut; Podocarpus andina, browned; Pinus Edgariana, insignis, Fremontiana, muricata, and Sabiniana are all very much injured, some killed; Juniperus Lycia, burned; Taxodium sempervirens, cut down; also Deodara robusta, Bupleurum fruticosum, Laurustinus, Common Laurels. On the whole the destruction far surpasses anything I can remember. Many other plants are more or less injured, and my fears are that as the warmth increases deaths will be more numerous. *George Davison, Hereford, April* 20. [This is a very extraordinary return for Herefordshire: and surely is susceptible of some explanation.]——Among plants entirely destroyed here are some of the most brilliant of the scarlet Rhododendrons, one Cupressus Uhdeana, Buddlea Lindleyana, and Ozothamnus thyrsiflorus. In the open ground these are quite destroyed, but on a south wall are uninjured. Injury without probability of death has been sustained by Eugenia Ugni and apiculata, Escallonia macrantha, Euonymus japonicus variegatus, Aster argophyllus, all the young wood dead, but growing vigorously from the old wood; Pittosporum Tobira and Mayii; Leptospermum obovatum is dead to the ground where grown in the shape of bushes, but is uninjured on a south wall. New Zealand Flax is dead to the ground, but is starting from beneath the surface. Tasmania odorata, Solanum crispum, and Cupressus funebris are all injured. The following have sustained little or no injury:—Sikkim Rhododendrons, R. arboreum lancifolium (two flower buds on it are dead), campylocarpum, cinnabarinum (flower buds, I think, uninjured), niveum and ciliatum, the latter was in full bloom the third week in March; another variety of ciliatum with smaller foliage and the flowers more pink has had all its blossom buds destroyed. Photinia serrulata, a tree nearly 30 feet high, is quite uninjured, and the young leaves are out beautifully. Griselinea littoralis, Forsythia viridissima, Cineraria maritima, Escallonia pteroclada, Pernettya mucronata, Kölreuteria paniculata, a large tree which flowered freely, and produced seed last year; Colletia Bictonensis, Cerasus japonica, Skimmia japonica, Olea ilicifolia, Akebia quinata (on an east wall, and is flowering profusely). Fabiana imbricata, a large plant on Grass, is uninjured; others in the nursery, growing in rich mellow loam, are nearly all destroyed. Desfontainia spinosa, two plants on Grass, uninjured; others shared the same treatment and fate as the Fabianas. Juniperus sinensis, Pinus insignis, excelsa, Benthamiana, muricata; Cupressus Lambertiana, Goveniana, torulosa, and Lawsoniana; Picea Nordmanniana, Pinsapo, and Webbiana; Abies cephalonica and Smithiana; Araucaria imbricata and Cunninghami are all uninjured. Leptospermum lanigerum, both on a wall and standing alone, is unhurt. None of these plants have been protected. The Sikkim Rhododendrons are planted on a high sheltered bank, and their wood was thoroughly ripened last autumn. *J. Garland, Killerton, Exeter.*——Allow me to mention that a large stock of well-grown seedlings and other Cacti which were out and had grown prodigiously from the continuous rains of autumn were only partially affected; some died, but the larger number, though sharply touched in the younger and more succulent growths, survived, and are now showing for bloom. The older specimens, and especially of Cereus crenatus near 6 feet high, were sadly cut down, still they are now coming forward again. An old plant of Tecoma jasminoides in a large pot had all its young wood destroyed, but is now breaking vigorously from the old wood; it continued out for some time after the frost, and I regarded it as lost. It was placed afterwards in the coach-house, and within the last few weeks I put it in an intermediate house, and it is doing well. In a cold pit where I had stowed away a great number of Geraniums and other plants which were all destroyed, I found a Hoya carnosa and a plant of Echites picta, which had been put there by mistake, perfectly healthy and growing, and a quantity of pots of Achimenes and Gloxinias, the greater part of which are now coming on well. My Evergreens and shrubs have not suffered so much as my neighbours', and my fruit trees are covered with blossom. A plant of the Caracalla out almost all the winter, and killed down to a few inches from the earth in the pot, is shooting out healthily. *Thomas Ingle, M.D., the Villetta, Emsworth, Hants.*

Canvas Houses.—Perceiving in your Paper of last week a sketch of a Tiffany house, and a letter from Mr. John Standish explaining its advantages, I beg to confirm his statement, and to say that I have erected a canvas house in these gardens made precisely as described by Mr. S. with rough Larch poles; but the roof has been formed of wood frames with strained canvas nailed thereon to facilitate the removal and refixing—and this canvas house I have erected so as to cover a row of standard Pear trees which the last three seasons have borne no fruit owing to the severe frosts generally prevalent at this season of the year. My house is about 12 feet wide and 150 feet long, and high enough to cover a tree about 15 feet in height. I have a corresponding row of fruit trees adjoining, but uncovered, so that I shall be able to test to a certainty the advantage of the protection afforded; and only yesterday, with 10° of frost, I observed that my trees under cover were looking up boldly, while those exposed to the weather had suffered severely. *Isaac Hill, Norbury Park Gardens, near Dorking, April* 25.

Grafting Wax.—If several stocks are to be grafted, take 27 oz. of common yellow rosin, melt it gradually so as not to drive off the turpentine. When reduced to the consistence of a syrup, add 10 oz. of alcohol, shake them thoroughly together, and pour the mixture at once into a well stopped bottle. When the graft is inserted and tied in its place with a strand of matting in the usual way, cover the surface of the whole with this varnish with a small painter's brush. Such varnish may be used in any weather, and is neither affected by heat, cold, or wet. I believe this to be a German recipe. I have used it for some years, and found it in all respects a very convenient and effective substitute for the troublesome protection of clay mixtures. *C. Lawrence, Cirencester.*

Packing and Keeping Fruit.—In a letter from Mr. Tillery, accompanying some well kept Winter Nelis Pears, to the Horticultural Society, he recommends bran as a material for keeping and for packing fruit in for travelling long distances. From the experience Mr. T. must have had in fruit and its packing, his advice is worthy of attention, coming as it does from Welbeck; and yet I, for one, cannot endorse it favourably as far as packing in bran is concerned, much less as an article for keeping or storing Pears or Apples in. Mr. T. says he packs in shallow boxes; let any one reverse it and pack their Apples or Pears in deep boxes or barrels in bran, and I venture to say they will scarcely care to record their disappointment. Bran is a fermenting substance, and soon heats if put with fruit in quantity, and no doubt fermentation is hastened by the moisture given off by the fruit. I think if Apples or Pears were wrapt first in straw paper, and then packed in fine sawdust, no risk would be incurred from heating. Some, "perhaps many," good practical gardeners still stick to bran, and think there is nothing like it as a packing for fruit for travelling. I differ also from others in this matter; after having proved almost everything for the purpose, I have not yet found anything for packing Grapes equal to tissue paper and paper shavings. Peaches and Nectarines however require different treatment. *J. Bisset, Gardener and Forester to the Earl of Sefton, Croxteth Hall, Liverpool.*

Labels.—I enclose a specimen of a label which I do not recommend to nurserymen or gardeners, as I know both would condemn it on account of the waste of time it requires to complete it; but to the enthusiastic amateur who on a wet summer day or a long winter night might consider he could not be better employed, it may be interesting. My process is this:—I order from the carpenter perhaps 20 feet of prepared wood, half an inch broad and well painted. When the paint is thoroughly dry I cut the wood into convenient lengths, of say 3 or 4 feet. I then take one, and with steel pen and common ink (adding only a little copperas to prevent the ink from spreading), begin at the end of one piece, finish it on one side, and lay it down dry. I then take another, finish it, then a

third, and a fourth; by this time the ink on the first is quite dry, I then cut it off at the proper length, taking next the second, third, and fourth in rotation. By this means I am neither straitened for want of room, however long the name may be, nor waste my material however short, as I found was invariably the case when I had the wood or the zinc cut into lengths before commencing operations. After I have 20 or 24 all printed, and the ink completely dried, I cover them over with a coat of varnish, which both gives them a clean shining appearance and assists in withstanding the inclemencies of the weather. It occurs to me, however, that the best tally that could be got would be this: viz., that nurserymen furnish themselves with glass phials in the form of parallelograms, about 3½ or 4 inches long, ¾ inch wide, just the shape of our common wooden labels, the slit to be at the bottom, through the top a hole to suspend it by; the label itself to be printed in strong characters on fine pasteboard on both sides, so that it might be legible in all directions, and of course of the size to fit exactly the aperture in the inside of the glass, and then corked, the cork to be of the same shape, viz., a parallelogram. Messrs. Paul, Rivers, Wood, Turner, Keynes, and others might get printed 1000 of each of the names of their established plants, such as Géant des Batailles, General Jacqueminot, Madame Vidot, President, Hon. Mrs. Trotter, Lord Palmerston, Neville Keynes, Sir George Douglas, &c. These two items would add but little to the price of the plant, and how tidy, correct, and finished-like would be their appearance in comparison with the clumsy, illegible, dubious indicators we so often see in our nurseries and gardens. Were the glass only provided in the first place it would be a step in the right direction. Let us hope that some of our patriotic nurserymen will take up the suggestion and embark in the undertaking. *D. D., Makerston.* [This last is a very old plan, and does not answer well.]

Societies.

Horticultural: *April* 26.—Rev. J. Dix in the chair. Messrs. E. G. Henderson exhibited on this occasion an interesting collection of variegated Geraniums, to which a prize was awarded; two of them, Sunset and aurantia coccinea, had particularly handsome leaves, and the plants appeared even more robust in growth than others with less attractive foliage. These two especially must be regarded as valuable additions to the class to which they belong. From Mr. Hally of Blackheath came a pretty rose salmon-flowered Horseshoe-leaved Geranium, called Aurora, to which a prize was awarded, and blooms of a late flowering Camellia. Mr. Turner sent Auricula Volunteer, to which a prize was awarded, and Cinerarias Duke of Cambridge and Constancy, both of which are mentioned below. From Messrs. Parker & Williams came a Tydæa, with prettily marked rose and orange scarlet flowers.

Royal Botanic: *April* 25.—At this the third spring meeting several interesting plants were exhibited. From Mr. Turner, of the Royal Nursery, Slough, came a very fine self-coloured Auricula named Volunteer, to which a prize was awarded. Its flowers possessed good shape and were of a deep mulberry purple with even well proportioned paste. From the same establishment also came various Cinerarias, among which the best were Duke of Cambridge, a brilliant purplish crimson kind, which has been favourably noticed by us on a former occasion; Miss Marnock, Queen Victoria, Solferino, and Constancy, the last a showy kind, white with heavy purplish tips and dark disc. Mr. Shrimpton, gr. to A. J. Doxat, Esq., Putney Heath, contributed Cineraria Martha, white tipped with rosy crimson, a pretty flower, but not so good as some possessing the same colours already in cultivation. E. Saunders, Esq., of Wimbledon Park, also sent several Cinerarias, among which one named decorata was a showy sort, but coarse. Of Cinerarias, Messrs. Dobson produced Masterpiece, white tipped with bright rosy crimson; and Beauty, white with rosy purple tips, both handsome varieties. From Mr. Davidson, gr. to R. Bishop, Esq., of Regent's Park, came Calceolaria pendula, a seedling with leaves distinctly edged with white; Rose Madame Boll, a fine kind with handsome flowers of a light rose colour; and Victor Verdier, deep rose, large and full, came from Messrs. Fraser, of Lea Bridge. Messrs. Ivery & Son, of Dorking, exhibited Azalea tricolor, a good addition to striped varieties; Leviathan, a semi-double white, large and showy; and Carnation, a pretty sort, with variously coloured flowers on the same plant. Mr. Todman sent Azalea Clapham Hero, light purplish rose. From Mr. Young, gr. to R. Barclay, Esq., of Highgate, came Begonia Marshallii, one of the most showy of the variegated leaved sorts. Of Miscellaneous Plants some good collections were furnished by Messrs. Fraser and others. Among them were fine examples of Medinilla magnifica, Cereus crenatus, various Heaths, Boronias, and Eriostemons. Azaleas came from Messrs. Fraser, Turner, Todman, and Cross. They consisted for the most part of finely bloomed plants of well-known varieties. Among fine-foliaged plants were Ferns and a handsome Cyanophyllum magnificum. Messrs. Cutbush sent a dozen of Hyacinths; and Pelargoniums, Roses, and Auriculas came from Messrs. Turner and James of Isleworth. Mr. Gaines sent Amaryllises, and Mr. Young a collection of plants consisting of Tropæolums, Gloxinias, Tulips, and Lachenalias. Three fine specimens of Dioscorea Batatas came from Messrs. Ivery, and a dish of Keens' Seedling Strawberries from Mr. Taylor, gr. to C. A. Hanbury, Esq. For list of prizes see our advertising columns.

Notices of Books.

British Butterflies. Figures and Descriptions of every Native Species, with an Account of Butterfly Development, Structure, Habits, Localities, Mode of Capture and Preservation, &c. By W. S. Coleman. 12mo. Routledge.

Illustrated by the author in 16 really excellent plates representing butterflies, eggs, and caterpillars; all for one shilling. This forms no part of the title-page, but we add it in justice to the author, who has produced what would have been one of the most useful of our little books on Home Natural History, had he only condescended to add a better index. Butterflies are coming; already the one whose caterpillars eat our Cabbages has made its appearance, and we trust as there are no Cabbages for her young to feed on, it is to be hoped that she will remain for once in a state of helpless celibacy. Schoolboys above all will be delighted by Mr. Coleman's little book, but children of a larger growth may study it to advantage. He first describes what a butterfly is and how it is to be known from a moth, and then passes to a little biography which his readers will find as entertaining as a tale of fiction, and much more worth reading. We are there taught how a butterfly is formed, and all about her eyes, and horns, and wings and legs, and toes, and marvellous colours. Next in order come instructions about the way of catching butterflies, and sticking them, and killing them, and laying out their corpses so as to look beautiful, and keeping them from corruption. At last we arrive at separate descriptions of the different sorts of butterfly. What more would a reader have? And all this is well done—very well—as the following extracts sufficiently prove.

"*What Butterflies never Do.*—Among the negative attributes of butterflies, I may state positively, that no butterfly whatever can either sting or bite in the least degree; and from their total harmlessness towards the person of man, conjoined with their outward attractiveness, they merit and enjoy an exemption from those feelings of dread and disgust that attach to many, or, I may say, to almost all other tribes of insects; even to their equally harmless near relatives the larger moths. At least, it has never been my misfortune to meet with a person weak-minded enough to be afraid of a butterfly, though I have seen some exhibit symptoms of the greatest terror at the proximity of a large Hawk-moth, and some of the thick-bodied common moths—'Match-owlets,' the country folk call them."

"*Advice to the Young Entomologist.*—Don't waste time in trying to puzzle out the meaning, the why or the wherefore, of butterflies' scientific names. Now and then, certainly, they have some allusion to the insect's appearance, or to the plant on which it feeds; thus, for instance, Gonopteryx Rhamni, the entomological name of the Brimstone Butterfly, means the 'Angle-winged (butterfly) of the Buckthorn,' and this is very appropriate and descriptive; but in general there is no more connection between the name and the character of a butterfly, than there is between a ship's name—the 'Furious,' the 'Coquette,' or the 'Pretty Jane,' as it may be—and the moral disposition or personal appearance of the vessel that bears it. Don't waste money and encourage dishonesty, by giving the absurdly large prices put upon British, or pretended British specimens of butterflies, or other insects that are rare in this country, though common on the Continent; when, for all purposes of science, or the pleasure derived from their beauty, avowed Continental specimens, at one-twentieth of the price, will do just as well. In putting these into your cabinet, however, always attach to the pin underneath the insect a label, bearing some mark to denote the specimen's foreign origin."

"*What is a Butterfly.*—The usual notion of a butterfly is of a gay fluttering thing, whose broad painted wings are covered with a mealy stuff that comes off with handling. This is all very well for a general idea, but the characters that form it are common to some other insects besides butterflies. Moths and hawk-moths have mealy wings, and are often gaily coloured too; whilst, on the other hand, some butterflies are as dusky and plain as possible. Thus the crimson winged Tiger and Cinnabar moths get the names of butterflies, and the Meadow brown butterfly is as sure to be called a moth. So, as neither colouring nor mealy wings furnish us with the required definition, we must find some concise combination of characters that will answer the purpose. Butterflies, then, are insects with mealy wings, and whose horns (called 'antennæ') have a clubbed or thickened tip, giving them more or less resemblance to a drum-stick. So the difference in the shape of the antennæ is the chief outward mark of distinction between butterflies and moths, the latter having antennæ of various shapes, threadlike or featherlike, but never clubbed at the tip.

"*Caterpillar Habits and Extraordinary Growth.*—The juvenile caterpillar, or larva, gnaws his way through the shell into the world, and makes his appearance in the shape of a slender worm, exceedingly minute of course, and bearing few of the distinctive marks of his species, either as to shape or colouring. On finding himself at liberty, in the midst of plentiful good cheer, he at once falls vigorously to work at the great business of his life—eating; often making his first meal—oddly enough—off the egg-shell, lately his cradle. This singular relish, or digestive pill, swallowed, he addresses himself to the food that is to form the staple fare during the whole of his caterpillar existence—viz., the leaves of his food-plant, which at the same time is his home-plant too. At this stage his growth is marvellously rapid, and few creatures can equal him in the capacity for doubling his weight—not even the starved lodging-house 'slavey,' when she gets to her new place, with *carte blanche* allowance and the key of the pantry; for, in the course of 24 hours, he will have consumed more than twice his own weight of food: and with such persevering avidity does he ply his pleasant task, that, as it is stated, a caterpillar in the course of one month has increased nearly 10,000 times his original weight on leaving the egg; and, to furnish this increase of substance, has consumed the prodigious quantity of 40,000 times his weight of food—truly, a ruinous rate of living, only that green leaves are so cheap."

"*What Butterflies are good for.*—Utilitarians may, perhaps, inquire the *uses* of butterflies—what they do, make, or can be sold for; and I must confess that my little favourites neither make anything to wear, like the silkworm, nor anything to eat, like the honey-bee, nor are their bodies saleable by the ton, like the cochineal insects, and that, commercially speaking, they are just worth nothing at all, excepting the few paltry pence or shillings that the dealer gets for their little dried bodies occasionally; so they are of no more use than poetry, painting, and music—than flowers, rainbows, and all such unbusiness-like things. In fact, I have nothing to say in the butterfly's favour, except that it is a joy to the deep-minded and to the simple-hearted, to the sage, and, still better, to the child—that it gives an earnest of a better world, not vaguely and generally, as does every 'thing of beauty,' but with clearest aim and purpose, through one of the most strikingly perfect and beautiful analogies that we can find throughout that vast Creation, where—

'All animals are living hieroglyphs.'

The butterfly, then, in its own progressive stages of caterpillar, chrysalis, and perfect insect, is an emblem of the human soul's progress through earthly life and death to heavenly life."

Garden Memoranda.

Messrs. E. G. Henderson and Sons, Wellington Road, St. John's Wood.—At this nursery, where the plant houses for the last few months have been beauteous and fragrant with Cyclamens of every shade, between white and deep rose colour, a most gorgeous sight may now be witnessed—a large plant of Clianthus Dampieri being covered with its richly coloured blossoms. This plant has generally proved shy-growing, but here in a low span-shaped house, where the glass is brought down to the level of the soil or nearly so, planted out in a bed of prepared soil, it made free and healthy growth during last summer and autumn, and having been successfully watered is now developing its flowers in such profusion that on each of its many branches several of the clustered racemes of flowers are developed, the growth of last season being so compact and short-jointed that the flowers literally cover the branches. The flowers are at the present time in a high state of perfection, and will well repay a visit.

We may add that the whole of the many glass houses and pits at this establishment are heated on Weeks' one-boiler system, and that during this and several previous severe winters it has given perfect satisfaction. By its employment a saving is found to be effected, both in fuel and labour.

Miscellaneous.

Crystal Palace Exhibitions.—These, we observe, by a schedule of prizes which has been sent us, are this year reduced to one show, which is to take place on the 26th of next month. The regulations differ from those of the meetings of last season, more particularly on the following points:—The distinction between amateurs and nurserymen has been abolished. The regulation confining an exhibitor of stove and greenhouse plants to one class has been omitted, and the same thing has been followed in regard to Orchids and Azaleas. The rule allowing only one prize in a class to be given to the same exhibitor, has also been struck out, and the whole of the classes have apparently been revised. Whether these alterations are improvements or not the forthcoming show will soon prove. The amount of money offered in prizes is 531*l.* 7*s.* 6*d.* The National Rose show we notice is to take place at the Palace on June 30; a National Hollyhock Show on August 6; and an Annual Chrysanthemum Show on November 15, 16, and 17.

Sale of Seeds of Chinese Vegetables.—The following to which attention was directed in our Number of April 7, were sold by auction the other day by Mr. Stevens, viz.:—Tow cok (Dolichos sinensis).—A Kidney Bean, bearing a pod about a yard long and about the thickness of a Kidney Bean. A runner and

should be staked. It is boiled in its green state like the Kidney Bean. Seems well adapted for winter forcing. Pak-choy (Pak-tsae of Fortune) (Sinapis sp.).—The celebrated White Cabbage of Shanghai and Pekin. Grown in beds which are laid out somewhat after the fashion of our Celery beds, but not so closely planted. Earthed up about the roots and constantly watered with liquid manure. To be well boiled and strained, and served on toast, with butter sauce. The stem is the most delicate portion. Caichoy or Kichoy.—A species of Mustard, with a broad Cabbage-like leaf and a yellow flower, used as Lettuce. Hen-choy or Hem toy.—A kind of Spinach and to be treated as such. Hoo-qua.—A species of Melon. Toong-qua.—A green Melon, used either raw, cooked, or in soup. Woong-qua or Hoong-qua.—A species of Cucumber. Suiqua (Luffa of botanists).—A species of Cucumber or Melon used in soup. Should be trained on a frame of sticks. Look tow.—A green Pea; when used it is first steeped in water for about four days until it sprouts and has a radicle about an inch long; it is then boiled in soup. Bee i tow.—Something between a Pea and a Kidney Bean, used in soup, &c. Pak tow.—A small species of Kidney Bean. Hoong tow.—Another allied to it. Yoon si.—A small species of Coriander used as salad. Sets of the above, of which there were in all 73, fetched from 16*s.* to 2*l.* 4*s.* per set.

Gymnastic Exercises.—The blessing to Oxford men of the great gymnasium there—the best in the kingdom, if not in Europe—is altogether inestimable. It is a resource which has restored health to many a man too old to begin learning the sports of the undergraduates. It has made the middle-aged man feel his youth renewed by giving him the full use of his muscles again—perhaps a fuller use than he ever had in his life. One of the most striking evidences of Mr. McLaren's science and skill in physical training is the benefit he renders to children, on the one hand, and elderly men on the other. Many boys at our public schools are injured by the violent exercises to which they are tempted there—the long and desperate running especially. In the holidays they are taken to Oxford, and put under Mr. McLaren, who at once discovers the seat of the mischief, and soon and infallibly redresses the balance of the muscular action. And so also with his oldest pupils. He measures the chest, he detects the enfeebled muscle, and by gentle and appropriate exercises strengthens the weak part, till the spindle-arms become muscular, the chest expands, the back becomes straight, with the head properly set on the top of it; there is an end of the need of easy-chair and sofa after meals; nothing comes amiss at dinner, and there is no indigestion to make it remembered afterwards. *Once a Week.*

Hatred towards the Lurcher.—"Possessing many of the elements of the sheep-dog, but employed for different purposes, the lurcher has fallen into great disrepute, being seldom seen as the companion of respectable persons. It is bred from the greyhound and sheep-dog, and is supposed to be most valuable when its parents are the rough Scotch greyhound and the Scotch colley. It is a matter of some regret that the dog should bear so bad a character, as it is a remarkably handsome animal, combining the best attributes of both parents, and being equally eminent in speed, scent, and intelligence. As, however, it is usually the companion of poachers and other disreputable characters, the gamekeeper bears a deadly hatred towards the lurcher, and is sure to shoot the poor animal, at the earliest opportunity. For this conduct there is some pretext, as the creature is so admirably adapted for the pursuit and capture of game that a single poacher is enabled, by the aid of his four-legged assistant, to secure at least twice as much game as could be taken by any two men without the help of the dog. That punishment generally falls on the wrong shoulders is proverbially true, and holds good in the present instance. For the poor dog is only doing his duty when he is engaged in marking or capturing game, and ought not to be subjected to the penalty of wounds or death for obeying the order which he has received. If any one is to be punished, the penalty ought to fall on the master, and not on his dog, which is only acting under his orders, and carrying out his intentions." *Routledge's Illustrated Natural History.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.— When this house contains a mixed collection of plants, which it generally does, aphides are usually very troublesome, and it is always desirable to avoid smoking here, for besides the expense and annoyance, it is no pleasant job to fill a large house with tobacco-smoke. Plants in pots that require fumigating may be removed to a close room, or put under a frame covered with calico or canvas rendered air-tight either by means of a coat of boiled oil, or put where the remedy can be much more conveniently and cheaply applied than in a lofty house; and the risk of injuring the blossoms of things which do not require fumigation will be avoided. Suspected plants should be frequently examined, and immediate steps taken to clean such as are found to be in the least infected, otherwise the pest will spread to an inconvenient extent to allow of its being eradicated, without smoking the whole house. Should twiners or specimens planted out in beds get infested, these should be cleaned with Gishurst Compound, or they should be syringed with the following mixture, viz. :—½ lb. of soft soap, 1 gallon of tobacco water, and 6 gallons rain water, properly dissolving the soft soap in a portion of the water. But as there is some uncertainty about the strength of this mixture, and about its action on different plants, it should not be used without first making sure that it will not injure the foliage or young shoots, and also that it is sufficiently strong to destroy the insects. The beauty of Azaleas and many other hard-wooded plants, which are now the principal ornaments here, will soon be fading, and every effort should be used to be prepared to supply their places with others in full flower.

FORCING DEPARTMENT.

PINERIES.—In cases where a regular supply of fruit is required, we may repeat that it will be necessary to examine the stock of plants, frequently marking those considered the most likely for fruiting, so as to be able to keep them rather dry at the root for a month or so, which will, in most instances, have the desired effect of checking growth and throwing the plants into fruit. The only effectual method, however, of securing a supply of fruit at any particular time is foresight in the management of the stock, taking care to get the growth well matured in sufficient time to allow of affording the plants a short period of comparative rest, which is the only certain means of inducing them to fruit at any desired season. With plenty of convenience this is easily enough managed, but where the accommodation is limited, it is by far the most difficult part of the culture of the Pine. And in cases where a regular supply of fruit has to be furnished from limited accomodation, it is safer to grow the plants in pots, so as to secure perfect command over the roots, and also to be able to move the plants to a cooler pit or otherwise, as may be necessary. Jamaicas and Cayennes are best for winter fruiting, and the stock of these should receive every attention at this season so as to induce them to make free growth, and a portion of them should be shifted into their fruiting pots as soon as possible. Use every means to afford growing stock a moist atmosphere, which in the present state of the weather is a work that requires much attention, but must be done if the plants are to be kept in a first-rate condition. Give air when favourable, but avoid cold draughts and use shading to assist in keeping down the temperature without being under the necessity of admitting cold drying air too freely.

VINERIES.—While Muscats are blooming, and indeed until the berries are fairly set, a tolerably brisk temperature must be maintained, for a crop of these cannot be depended upon from the most healthy Vines, unless they can be afforded a sharp heat while in bloom and setting their fruit. It will be better, however, in the case of mixed houses, to risk having the Muscat bunches somewhat thin than to injure other varieties by maintaining a night temperature of 75°, which is sometimes done; 68° or 70° will be sufficient. Get the borders prepared for planting out young Vines, and if these are started into growth before planting do not keep them too warm, or it will be difficult to prevent their sustaining a check after planting out.

CUCUMBERS.—Encourage those newly planted out with a moist warm atmosphere, so as to get them into full growth as quickly as possible; but plants that are fairly established should be kept cooler, admitting air on every favourable opportunity, in order to secure short-jointed fruitful wood.

FIG-HOUSE.—Give air and water as before, but do not syringe trees over head whose first crop is ripening off, or use cold water.

STRAWBERRIES.—Give abundance of air on every favourable opportunity, and let late crops be carefully attended to with water.

FLOWER GARDEN AND SHRUBBERIES.

While the weather keeps so cold and unpromising it will be well to defer planting until we experience a decided change. Meanwhile take every favourable opportunity of exposing the plants to the open air, so as to get them well hardened off, and see that everything is perfectly free from insects, and also have the whole of the stock nicely arranged, so that when planting-out has commenced everything may be in readiness. Push forward late propagated stock, and endeavour to keep the whole growing on slowly. It is a bad practice to allow bedding stock to stand in small pots exposed to bright sunshine and drying winds and but scantily supplied with water until they get almost dried up, and this with the view of preparing them for planting out. The plants should be exposed to the weather as freely as circumstances will admit; but this should be done by degrees, and never to the extent of browning the foliage and drying up the tissues, and they should never be allowed to suffer for want of water, for unless the plants are in good health when planted out they require endless care afterwards if the beds are to be covered in any reasonable time, and despite every attention are long in getting into free growth. Take advantage of showery days to give the Grass and gravel a thorough rolling.

HARDY FRUIT AND KITCHEN GARDEN.

Where Peach and Nectarine trees are sufficiently advanced proceed gradually with disbudding, but remove only a portion of the buds at once, selecting the strongest first and going over the trees two or three times at intervals of about a week. This will avoid checking the trees to the same extent as when disbudding is done all at once. Look carefully over Apricot trees and destroy caterpillar wherever it is found. This is sometimes very destructive to the foliage, and also the fruit when neglected but for a few days. Be in no haste to remove protecting materials. Take advantage of showery weather to plant out Lettuce, Cauliflower, &c., and see to getting Tomatoes, Cucumbers, Vegetable Marrows, &c., prepared for planting out. Make a sowing of Sweet Basil, Marjoram, Savory, &c., on a light, rich, warm border; also get early Celery prepared for planting out. Attend to plants for succession crops, keeping them at all times well supplied with water.

COTTAGERS' GARDENS.

Manure and dig all vacant ground for Brussels Sprouts, a little Broccoli, Winter Greens, &c. Plant a few Lettuces under walls and in other sheltered situations. Sow Radishes and a little Spinach for successional crops, and keep early Potatoes when up well earthed; it will save them from frost.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending April 26, 1860, as observed at the Horticultural Gardens.

April.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 20	28	29.884	29.772	49	25	37.0	46	45½	N.	0.00
Satur. 21	●	29.729	29.695	50	21	35.5	46	45	N.	0.07
Sunday 22	1	29.794	29.721	49	25	37.0	45½	44½	W.	0.02
Mon. 23	2	29.740	29 623	52	32	42.0	46	45	S.W.	0.16
Tues. 24	3	29.746	29 689	40	36	38.0	46	45	N.E.	0.26
Wed. 25	4	29.991	29.872	55	37	46.0	46	45½	N.E.	0.00
Thurs. 26	5	30.150	30.099	55	31	43.0	47	46	N.E.	0.00
Average..		29.847	29.781	50.0	29.5	39.8	46.1	45.2		0.51

April 20—Clear and cold; fine; clear; frosty.
— 21—Clear; fine but cold; showery; sharp frost at night.
— 22—Frosty; cloudy; cold showers; very clear at night; frosty.
— 23—Fine; rain; cloudy; cold showers.
— 24—Rain; sleet; broad flakes of snow 12—1 P.M.; overcast; cold wind.
— 25—Cloudy and cold; low white clouds and clear intervals; boisterous.
— 26—Overcast and cold; low dusky white clouds; clear; large lunar halo.

Mean temperature of the week, 8¼ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending May 5, 1860.

April and May.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 29..	60.9	38.5	49.7	12	0.75 in.	4	3	6	2	4	7	2	6
Mon. 30	61.2	40.3	50.8	14	0.31	5	3	7	1	3	7	3	5
Tues. 1..	60.9	39 9	50.4	12	0.26	3	5	7	3	5	7	4	—
Wed. 2..	62.2	39.4	50.8	12	0.72	3	4	8	1	3	6	3	6
Thurs. 3..	61.4	40.3	50.9	16	0 58	2	6	9	1	4	6	1	5
Friday 4..	61.8	38.3	50.1	11	0.70	5	9	8	—	5	4	2	1
Satur. 5	62 1	39.0	50.5	18	1.26	5	10	3	3	7	4	1	1

The highest temperature during the above period occurred on the 4th, 1833—therm. 81 deg.; and the lowest on the 2d, 1855—therm. 20 deg.

Notices to Correspondents.

*** The Board of Works have directed that in future the Street in which our Office is situated shall be called Wellington Street, and that the Number of our Office shall be 41. Correspondents are therefore requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

BOOKS: *J B.* In order to "learn Botany" begin at the beginning. just as when you learn to read you begin by the alphabet and then go to spelling. The book you have had recommended will not do. You should make yourself master of Lindley's School Botany and Descriptive Botany.—*H W.* We should recommend you to procure Asa Gray's "How Plants Grow," an admirable work, to be had of the American booksellers in London. The small edition of the work you mention might accompany it; but the large one with coloured plates is generally so badly coloured as to be quite spoiled. The uncoloured edition would be better. There is little difference in the means possessed by the great London nurserymen for executing orders. We cannot, with any kind of fairness, name one in preference to another.

CUCUMBERS: *R H.* We think there can be no doubt that your fruit has been chilled by the late bleak weather. There is nothing in the appearance of the fruit to raise a suspicion of any other cause, and the treatment by your gardener seems to have been perfectly right.

GRAPES: *W C E.* Your berries are attacked by rust, not mildew, and rust is caused by some injury sustained by the skin of the berry when very young. The usual cause is cold acting upon the surface at that time. Are you sure that no indraughts of air at a low temperature have taken place during this very bleak spring?

MOWING MACHINES: *G E.* We cannot answer inquiries in any other way than in these columns. And we make it a rule not to recommend privately one person rather than another.

MYCOLOGY: *J A W.* The work of Fries is entitled Epicrisis Systematis Mycologici. It is unfortunately very scarce, but may possibly be procured through some foreign bookseller in London. A microscope for your purpose ought to have two object glasses, a ⅔ and a ⅓. The price depends entirely upon the apparatus you require, and can best be ascertained by personal application at some first-rate optician's. Do not buy one of the low-priced instruments. They are generally worthless. *M. J. B.*

NAMES OF PLANTS: *Enquirer.* Gagea sylvatica.—*Ledbury.* Echeveria retusa.—*T Jones.* Genista rhodopnœa; a very common plant.—*Mill.* A Cape plant not indigenous we think at St. Helena; viz., Pelargonium pictum.—*A S W.* Kennedya rubicunda.—*Folkestone.* There is a purple Lælia purpurata called aurorea, but we never saw it. As to Aërides Lindleyanum, we have nothing to add to what is stated in the Journal of the Linnean Society: "one of the finest of the order, the flowers being larger than in either A. crispum or falcatum, and in larger more branching panicles. In front of the opening into the spur stands a pair of large curved tubercles which have not been observed in A. crispum." Permit us to add that Aërides should neither be spelt Erides nor Ærides.—*R D.* A. Doodia, *alias* Woodwardia caudata; B. Asplenium marinum; C. Lastrea quinquangularis; D. Davallia pentaphylla.—*O B.* 1, Blechnum occidentale; 2, Pteris serrulata; 3, Asplenium fragrans; 4, Platyloma rotundifolia; 5, Doodia, *alias* Woodwardia media; 6, Selaginella uncinata.—*P B.* Lithospermum purpuro-cœruleum.—*J M.* Pentlandia miniata.

SILKWORMS: *J A N.* These would certainly thrive in the parts of New Zealand at present colonised. You should obtain the *graine* or eggs from the Italian *magnaneries.* The best Mulberry is said to be Morus philippinensis; but they will thrive on any other variety of Morus alba.

TANKS: *E B.* Next week; it requires some consideration.

MISC.: Full price will be given for Dec. 10, 1859.

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ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.63	14.38	16.71	16.91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

Dr. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

Dr. ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

Dr. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

Dr. HODGES states that—"It may be regarded as a good specimen of super-phosphate of lime." His calculation of its value is 7*l.* 13*s.* per ton.

Dr. CAMERON reports:—"The above figures prove this super-phosphate to be of excellent quality, and I have no doubt but that its application will be attended with the most satisfactory results. It would be good value at 7*l.* per ton."

Every Bag contains 2 cwt., is marked "ODAMS'S SUPERPHOSPHATE OF LIME," and is guaranteed to yield 20 to 25 per cent. of Soluble Phosphate of Lime.

PRICES.—Superphosphate of Lime, £5 10s. Delivered to any Railway or Wharf in London.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—
SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
LAWES'S BARLEY MANURE	8	0
" MANGEL MANURE	8	0
" GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Dr Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES'S Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES'S Agents.
Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemica Manures.
American Cakes at market prices.
Address, J. B LAWES, 1, Adelaide Place, London Bridge, E.C., or 1 Liffey Buildings, Eden Quay, Dublin.

TOTTENHAM SEWAGE MANURE.—For top-dressing Wheat and Grass, also for manuring Mangels and Turnips, use the above highly concentrated Manure. Price 3*l.* 15*s.* per ton.—Particulars and testimonials of Mr. J. L. EVANS, C.E., Sewage Manure Works, Tottenham, N.
Agents required. A very liberal commission allowed.

ESTABLISHED 1812.

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TURNIP MANURE	CLOVER MANURE	OAT MANURE
WHEAT ditto	POTATO ditto	KOHL RABI do.
GRASS ditto	BARLEY ditto	Also

PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.
Apply to H. & T. PROCTOR, Cathay, Bristol; or PROCTOR & RYLAND, Birmingham and Chester.

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CONCENTRATED TURNIP MANURE, equal in value to the preceding.
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BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.
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SHAW'S TIFFANY, a light, cheap, and durable material for Shading Conservatories and other Hothouses, effectually securing Plants from the scorching rays of the sun, without obscuring the light; also the best protector of Fruit and Seeds from Birds and Wasps, and the Bloom of Wall Trees from Spring Frosts.

SOLD IN PIECES.	Per piece.—*s.* *d.*
No. 1.—20 yards long, by 38 inches wide	5 0
No. 1.—20 yards long, by 38 inches wide, the same material, manufactured with a Patent Mineral Solution to prevent it from rotting	6 0
No. 3.—(Double strength) 18 yards long, by 39 inches wide	7 6
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As a Shading material, No. 1 Tiffany is unequalled either in regard to price or the use and beauty of the article, for when drawn over the glass roof of a Conservatory, or stretched permanently on the inside, the effect is, as Professor Lindley remarks, "that of a white cloud reflected on the glass, and does no more than diffuse light, without obstructing it."
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Manufacturers and Dealers in every description of Mats, Netting, Canvas, and all such like materials for Garden purposes.
A liberal allowance to the Trade on taking 10 or more Pieces.
CAUTION.—See that every piece is marked "SHAW'S Tiffany, Manchester."
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THE AGRICULTURAL ENGINEERS' COMPANY (LIMITED), Swan Lane, Upper Thames Street, London, E.C., hold in stock the following GOODS suited to the season:—Steam Engines, Horse Powers, Ploughs, Drills, Clodcrushers, Carts, Waggons, Pumps, &c. PRICE LISTS can be had post free on application.

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The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
CANTERBURY MEETING, 1860.
ENTRIES for IMPLEMENTS, FIELD GATES, HOPS, and WOOL must be made on or before MAY 1.
ENTRIES for LIVE STOCK must be made on or before JUNE 1.
*** All Entries received in each case after those respective dates will, without any exception, be disqualified, and returned to the senders.
Prize Sheets and Forms of Entry may be had on application at the Offices of the Society, 12, Hanover Square, London, W.
H. HALL DARE, Secretary.

The Agricultural Gazette.

SATURDAY, APRIL 28, 1860.

MEETINGS FOR THE FOLLOWING WEEK
WEDNESDAY, May 2—Agri. Society of England..... Noon.

MR. CAIRD has very opportunely called attention in the *Times* to our great present need in the country, and to the only means which remain to us of its early supply. The following is his letter:—

"The unusual lateness of the season, and the extraordinary dearth of roots and fodder, especially in the North and West, and in Ireland, are driving stock farmers to their wits'-end for the maintenance of sheep, cattle, and dairy stock. The cost to which they have been put for purchased food and corn is quite unprecedented, and the quantity of corn thus consumed will undoubtedly enhance the price of bread, while the reduced condition of all kinds of live stock will limit the supply of meat, butter and cheese. An early spring would have been invaluable, but that hope is lost.

"The first remedy we can look for is early Grass, and it may be useful at present to remind farmers that all young Grass or 'seeds,' and good meadow, may not only be greatly increased in produce, but forwarded a fortnight or three weeks by the application of certain portable manures. The most sure in its action, either in dry or wet weather, and probably also the most rapid, is nitrate of soda. I have been buying it at Liverpool at 13*s.* 6*d.* a cwt., and shall use it pretty largely at the rate of 2 cwt. an acre. No

outlay can pay better, and at this price it is undoubtedly the cheapest manure in the market.

"The addition of 1 cwt. of Peruvian guano or 2 cwt. of the best superphosphate of lime will materially increase the produce, and cannot fail to be remunerative this year, either for Grass or corn. No time should be lost in applying the manure, and damp weather is peculiarly favourable to the success of the last-named substances.

"If in ordinary times it is good to make two blades of Grass grow where one grew before, that result will this season be doubly useful and important."

To this advice, based upon the facts that soluble manures are of course the quickest in their influence on growth, and that nitrogenous manures are found especially to stimulate that succulent growth on which we now depend for early cattle food, we add, that in order to the immediate action of the nitrate on the Rye, or Grass, or Vetches, to which it is applied, it will be found advantageous to apply it already dissolved by means of the water drill.

THERE was no competition in the IMPLEMENT DEPARTMENT of the late SHOW of the ROYAL DUBLIN SOCIETY. This was the first national agricultural Society which abandoned the prize system. We have so frequently discussed "both sides" of this system, that it may seem superfluous to open the discussion again. Its opponents have fortified their position by cogent reasoning. The late trial of ploughs at Strathord has afforded them another link in their chain of evidence. Many, no doubt, will interpret the result of that meeting otherwise. An argument in favour of prizes may even be founded upon it. Now, without entering upon the disputed point at present, it appears to us that the Agricultural Committee of the Royal Dublin Society could not more advantageously employ itself than in instituting a few careful trials of farm implements. If, *e. g.*, we consider the mass of ploughs used in Ireland we shall find ample evidence of the defective state of agricultural mechanism in that country. We can conceive no more effectual way of correcting this defect than in presenting to Irish farmers by means of the dynamometer the waste of motive power which these implements entail. Generally speaking, Irish farmers have paid little attention to this matter; and it becomes the bounden duty of the leading agricultural societies, and especially the two national ones, to come to their assistance. It is their legitimate business as it is their bounden duty.

Many amateur agriculturists and tenant farmers whom we met at the late show regretted exceedingly that no opportunity was afforded them of seeing at work those implements which were to them new. We may instance, for illustration, Messrs. HORNSBY'S Warwick prize plough, and Mr. SETON'S novel rotatory harrow. The HORNSBY plough is now a notorious implement, whose merits have been much canvassed by ploughites. It is, as our readers are aware, a beautifully finished and admirably constructed piece of mechanism; the general shape may be traced to the ploughs of other firms, from which it differs chiefly in its convex mould-board. Irish farmers were naturally enough desirous to know how the implement would work on Irish soil, and in the hands of Irish ploughmen. And so it is, again, with the rotatory harrow, which is a still more recent invention than HORNSBY'S plough. The harrow exhibited on this occasion by Mr. SETON—intended for two horses, price 4*l.*—consists of nine (wooden) bars, which form as many radii of the circle of the harrow, and in which the teeth are fixed in three concentric rows or circles. Attached to the harrow from its centre is a frame with its pair of handles (analogous to those of an ordinary plough), and a beam or bar to which the draught can be yoked. The harrow can revolve on the central pivot independently of the frame. If the implement possessed no other parts than those just described, it is quite evident that on being dragged forward it would not rotate. How then, is the rotatory motion communicated to it? Simply in this way. A friction roller is connected with the handle-frame, and that roller is made to press, by means of the handles, on one of the circles connecting the bars (radii) *not* in the line of draught, but on one side of the man who stands between the handles (or 90° from the point of attachment of the draught chain); and no sooner is the implement pulled forward than the harrow rotates. We have not seen the harrow at work; but its execution is very highly spoken of by those who have tried it. Mr. YULE, of Bagnalstown, in a communication addressed to a contemporay, says—

"It rotated beautifully, bringing all weeds and dirt to the surface, and leaving all behind as it rotates, which prevents any possibility of the teeth getting clogged, or choking the harrow in its operations, and saves a great amount of time, trouble, and annoyance in cleaning the teeth, which is a great consideration in a damp, dirty field or wet season at sowing time. It was drawn by two ordinary farm horses with ease, notwithstanding the field was lately ploughed 9 inches deep for green crops. There is still another great improvement in this harrow, viz., the facility and ease with which the horses can turn into their work at the headlands, as they don't require to turn the harrow round, the handles turning on the pivot on which the harrow revolves when working. By this improvement the traces, draught bars, &c., are prevented from getting tangled together, as is often the case with the other harrows when turning at headlands."

At present the rotatory harrow is by no means highly finished; but if it works well, it will no doubt receive more attention.

To recur again to the subject of trials, is it not quite evident that it were very desirable that the Dublin Society should on this occasion have instituted a trial of Mr. SETON'S harrow? It would, for instance, have been very interesting to ascertain how far the draught is lessened or increased by the rotatory movement, in comparison with other harrows of equal execution—a point on which some of those who visited his stand seemed to differ with Mr. SETON.

ALTHOUGH our readers have been so often and so long directed to the consideration of THE DIRTY SEED QUESTION, that is no reason for discontinuing the subject. And like the good parson who was interrogated respecting the preaching of the same sermon Sunday after Sunday, we deem it right to dwell upon the same text until we see that our discourse has produced some decidedly good effects; and we would it were possible to work a complete reformation.

Let us now lay before our readers in a more connected form than we have hitherto done the results of some of our analyses and investigations into seeds of the four following groups, namely: Clovers, Common Rye-grass, Italian Rye-grass, and Meadow Grass Seeds. The results are placed in tabular forms, and it will be seen that our computation of the amount of admixtures of the seeds of plants other than that of the crop named is made up for bushels. The calculations have been derived from an examination both of bulk and of small market samples, and it may be stated that in some instances three distinct samples of the same seed have been subjected to examination, in which case the mean has been given. Of course greater or less differences in the number of mixed seeds are observable in different samples of the same bulk, so that it is next to impossible to be absolutely correct. At the same time it may be repeated that the error is more likely to be one of omission than of addition, as the seeds of many grievous weeds are so small that the best eye and glass will often lose sight of individual seeds; besides which the seeds mentioned as interlopers are those only which do not belong to the same species as the crop. The adulteration arising from bad sorts or old worn-out and useless seed, it would be impossible to calculate. We now present

TABLE I.—*Analyses of Clover Seeds, &c.*

No.	Copy of Label.	Weeds in a bushel.	Remarks.
1	Red Clover	2,560	Weeds mostly consisting of Plantago lanceolata, Ranunculus repens, and Polygonum, and others.
2	Ditto	66,560	
3	Ditto	140,880	
4	Ditto	245,760	
5	Ditto	807,200	
6	Ditto	1,085,440	
7	Ditto	2,524,160	
8	Red Cow-Grass Clover	2,560	As above, with Sherardia arvensis, &c.
9	Ditto ditto	40,960	
10	Ditto ditto	102,400	
11	Ditto ditto	807,200	
12	Ditto ditto	409,600	
13	Ditto ditto	768,000	
14	Ditto ditto	778,240	
15	White Dutch Clover ..	40,960	Sherardia, Stellaria, small Umbelliferæ, and Compositæ as Chamomiles.
16	Ditto ditto ..	256,000	
17	Ditto ditto ..	1,024,000	
18	Ditto ditto ..	1,290,840	
19	Ditto ditto ..	1,843,200	
20	Ditto ditto ..	4,505,600	
21	Ditto ditto ..	7,680,000	
22	Genuine Imported Alsike Clover .	1,556,480	The label is by a respectable London seedsman.
23	Trifolium hybridum ..	368,640	
24	Milled Hop Clover ..	25,600	A very good sample.
25	Lotus corniculatus ..	179,200	Mostly Plantain, here quite inexcusable.
26	Egyptian Clover ..	358,400	
27	Trifolium incarnatum	245,760	
28	Sainfoin	276,720	The weeds consist for the most part of False Burnet.

In offering a few remarks upon this table, we would first direct especial attention to Nos. 1, 8, and 15, at the head of the samples of Red Clover, Cow Grass, and Dutch Clover; as considering the nature of these seeds and their minuteness, the weeds here tabulated are reduced almost to the smallest possible quantities. These samples were obtained from a respectable seedsman, and are an evidence of a striking kind—especially when compared with the other samples—of what may be done towards getting cleaner Clover seeds to market than we have yet been accustomed to. Of course such samples ought to command a higher price—taking for granted that the true seed in all is equally good—than those respectively below the above numbers: and it is plain that the agriculturist ought in his own interest to be able to distinguish and separate the weeds in choosing his seed stock. If he concludes, as we have long done, that dirty seed is usually dear at any price while clean seed is a matter of the utmost importance, he will hesitate to buy impure seed at any price, while any reasonable demand will not be considered too much for seed that has been carefully grown and well cleaned.

Indeed care in growth is all important, as if clean seed be demanded, it will be more profitable to grow than to clean it afterwards, so that from all these considerations we conclude that watchfulness on the part of the farmer would soon bring about a most salutary reform in the seed market.

Now if we just glance at the kinds of weeds we usually find in Clover, we shall see that they are of those that may produce from one to three crops of seed before the Clover crop is developed; thus, let any one look to patches of Creeping Crowfoot with its useless green and gold flowers; of Creeping Buckwheat with its wiry arms that have killed yards of Clover, as witness the bare patches of winter; and then again see the perennial green mat of the Chickweed. We have this week been in a field of Clover sown with last year's Barley, more than half of which is weeds, and we happen to know that they are mostly the result of what the farmer has himself sown. Surely such company is enough of itself to make the Clover sick! And yet some sturdy stocky plants seemed to look as though this crop might have done well if it only had had fair play. As regards the fourth division of this table we would especially call attention to the label of sample 22, genuine Alsike Clover, and this from a respectable house. We can only conclude from this label that the seed had not been subject to admixture since its importation, or that the seedsman was not well skilled in his calling, for surely the ever-ready adjective, however conventional, would otherwise hardly be so used by respectable men.

The quantity of Plantain amongst the Lotus corniculatus must have been by design, as its separation from so small a seed must have been ensured by proper treatment.

The quantity of False Burnet in Sainfoin is so important a subject that we shall direct attention to it at a future period. Reference to our analyses of Rye-grass seeds must also be postponed for a week. Let us add that in any future parcels of seed sent for our examination, correspondents should name their seedsman.

—— We have received from Dr. GILBERT, of Rothamsted, unfortunately too late for appearance in this week's impression, a further statement of Dr. GILBERT'S analyses corroborating the results he had published in the *Agricultural Gazette* of March 31. Dr. GILBERT'S paper will be given next week; it embraces the results of no fewer than nine analyses singularly agreeing in the conclusion to which he was led by his first examination as to the inferior character of Dates as cattle food—which conclusion was not borne out by the analyses in the Cirencester laboratory published last week.

—— In another page will be found information on the value of agricultural labour in different parts of the country, which, though obtained by inquiry made a month or two ago, may be received as true of the present time—for our questions related generally to summer and winter wages respectively, and not to the actual date. If any one wishes to compare these figures with the corresponding figures of a period exactly 10 years ago, they will find the latter in our impression of April 27, 1850. The comparison leads to the conclusion that labourers are better off now than then.

IMPLEMENT SHOW AT DUBLIN.

A LENGTHENED and detailed account of the implements exhibited would be quite superfluous in the columns of the *Agricultural Gazette*, the readers of which have been made acquainted with the progress of the agricultural implement trade as presented to view at

the Royal English Agricultural Society's Shows. It is enough to say that on the whole it may be said to be the most select collection which we have seen in Ireland. A fair amount of improvement has been effected in the style and general character of Irish-made implements and machines. In addition to the Dublin makers, we have noticed Mr. Shackleton, from Dundalk, with a varied and valuable assortment; Messrs. Ritchie, of Ardre, with their admirable drilling ploughs, &c.; and Messrs. Musgrave, of Belfast, whose beautifully finished suite of stable fittings and other useful and ornamental articles reflect infinite credit on their establishment.

The English houses have also been fully and most creditably represented. Messrs. Hornsby, in addition to the Warwick prize plough, exhibited a steam-engine of their best construction, and the well-known winnowing and cleaning machine, &c. Messrs. Howard, of Bedford, not only exhibited themselves their celebrated ploughs, harrows, &c., but were represented by a great many Irish manufacturers. Messrs. Clayton & Shuttleworth showed one of their unique portable engines, &c. Messrs. Garrett & Sons, of Saxmundham, who have found much favour in Ireland, exhibited as usual several of their admirable machines. Messrs. Richmond & Chandler sent over their chaff-cutters and a variety of other machines of merit.

As artificial manures and artificial cattle foods form a prominent part of cattle shows now-a-days, we must say a word or two on those offered to the notice of Irish farmers on the occasion of the late cattle show. Mr. Lawes was of course represented, and so were many Irish manufacturers. Messrs. Goulding, of Cork, charge 10*l.* a ton for their special manures. We believe these manures are honestly compounded. We have no knowledge of the peculiar formula in accordance with which they are prepared; nor have we any great faith in the special manures recommended in many works on agricultural chemistry. It is quite true that Mr. Lawes has shown that the manures best adapted for the several families of crops differ somewhat; and so far manures may be somewhat special in their character, and so far only, it is to be hoped, do such men as the Messrs. Goulding go in the manufacture of special manures for the several crops.

Provided the farmer gets the several constituents at the lowest price, the higher priced the manure is the better for him, as he saves the carriage of the large quantity of useless materials that necessarily exist in low-priced manures. With reference to artificial cattle foods, we notice a tendency to diminish the price, and when it is reduced still further by 50 per cent. agriculturists, as a body, may think seriously of using them. The names of the principal foods used are so familiar to our readers that we shall not particularise them. We place them all in the same category. The price is exorbitant; and in no way commensurate with the results of chemical investigation or practical experience of those who have faithfully experimented with those foods. We have no wish to discourage honest and intelligent men from embarking in the fabrication of artificial cattle food. On the contrary we think if some person acquainted with the nutrition of animals, and having some practical experience of stock, were to take the thing up, he might carry on an honest and a lucrative trade, and confer a benefit on agriculturists. But many of those at present engaged in the manufacture of these so-called cattle foods have had few of the qualifications necessary for such a trade; and their proceedings appear to be directed more by quackery than scientific intelligence. *B. G.*

THE CULTIVATION OF KOHL RABI.

[The following remarks are by Mr. W. Bennett, of Cambridge, in the current number of the English Agricultural Society's Journal.]

The two most important varieties for field cultivation are the Large Green and Purple. Both can be had either of the round or oblong shape, and it is difficult to say which shape or colour is best. We have a predilection for the Green, whether oblong or round.

The Kohl Rabi seed is extremely difficult to grow true, as it is apt to sport or to be inoculated by bees. It is also generally meagre in quantity. The oblong and round varieties are not usually kept distinct, and it will frequently occur that plants raised from the seed of perfectly round bulbs will grow of the oblong shape. But, whether oblong or round, purple or green, we greatly mistake if it be not shortly regarded as the most valuable of our root-crops. We saw it grown upwards of 30 years ago by that eminent agriculturist the late John Foster, Esq., of Brickhill House Bedford, who was accustomed to speak of it in the highest terms. After that gentleman left England for the West Indies, whether from its cultivation not being much understood, or from the just popularity of the Swedish Turnip in those days, the cultivation of Kohl Rabi did not much increase. It seemed, indeed, quite unnecessary to seek for a better root than the Swede. It is now far otherwise: we question much if, in the majority of cases, in this and several adjoining counties, Swedish Turnips are worth anything like the cost of cultivation. Seeing, then, what a miserably precarious crop the Swedish Turnip had become, about five years ago we purchased a little Kohl Rabi seed and sowed it on a seed bed. The land intended for this crop having been cleaned and manured in the previous autumn, after a crop of Tares had been mown and carted off, we gave it one good deep ploughing (using the skim-coulter), harrowed and rolled it, and then set the plants 2 feet apart by 1½ foot. The land being dry, and not then knowing the hardihood of the plants, we gave them one watering, which, however, we have not since had occasion to do, although we are not sure that, in a very dry season, when water is at hand, 6*s.* or 7*s.* per acre would be thrown away when so applied; as by this means the plants get an immediate start, almost without dropping a leaf.

Our first efforts were quite successful: we obtained a beautiful crop, which stood the winter well, furnishing very excellent feed for the ewes and lambs through March and most of April. We always in this case adopt the Hertfordshire system, using lamb hurdles, which allow the lambs to run first, eating the tops with a few cut bulbs, the ewes in the fold cleaning up after them, and, before the Kohl Rabi is exhausted, give a little Mangel in the fold. We have seldom had them do so well, and never since have felt any necessity for a change. It is a good practice, however, when in the spring the Kohl Rabi gets hard, to run the offal through the cutter and put it into troughs. The food being always clean, this may be done without inconvenience. Within the last few years we have abandoned the seed bed, drilling our general crop on the fallows in May on ridges: the surplus plants will be quite fit for transplanting by the time the green crop is mown off the land which is intended to be subsequently planted with Kohl Rabi; so that by one operation we provide sufficient plants for setting, and at the same time leave, properly singled out, enough for the general crop. Light one-horse or donkey carts track the rows close at hand, to receive and carry them off to the parties planting them. It may be useful here to observe, that the general crop should be drilled on ridges, at some little intervals as to time; because the exact period required to raise the plants will depend more or less upon the weather, and it will take comparatively but few acres from which to draw plants for a considerable area—the surplus plants of a single acre will furnish enough (after casting the bad away) to plant four or five. Our practice has been, not to drill the Kohl Rabi before the middle of May. It may be wise, however, to commence with some a fortnight earlier if the land is in good order. We seldom use more than about 2 lbs. of seed per acre, drilled on ridges at 27 inches apart, thinning the rows to about 16 inches from plant to plant.

The mode of cultivation pursued by us has been the same as for Swedish Turnips, using about 10 loads or tons of farm manure and from a fourth to a fifth of a ton of good artificials, such as blood manure, superphosphate, Rape-cake, or the like, drilled down the ridge or scattered on the manure. We prefer the latter mode, as it spreads the hand-tillage over rather a broader space. By this kind of cultivation, on land worth 30*s.* per acre to rent, we usually grow from 25 to 30 tons per acre of excellent bulbs, besides the tops, which are the best of food; and where a dairy is kept, and tolerably near at hand, they are of no small value to the milking cows, giving no unpleasant flavour to the butter. The transplanted crop will perhaps be from 5 to 7 tons per acre less than that grown upon the fallows in the regular way. In addition to the land from which the usual crop of Tares has been mown off, we have occasionally planted Kohl Rabi after a crop of Italian Rye-grass, alternately land for land, with drilled Rape; feeding the whole off with sheep, which will unmistakeably show you which they prefer. The question is not limited to whether you gain in the single crop more than pays the expense of growing it, as you make in addition a far better preparation for Wheat—Rye-grass immediately preceding Wheat being the worst of all rotations. If the weather prove favourable, and the operation is completed ere July closes, the crop will more than pay the cost, to say nothing of the incalculable benefit the following Wheat crop derives. We simply plough the Rye-grass land once, using the skim-coulter and roller, setting the plants down every alternate furrow. Our more experienced farmers would say "a coat of manure would be an improvement;" which is doubtless true, if it could be had. The cost of planting the Kohl Rabi may be taken at from 8*s.* to 10*s.* per acre; much depending, however, on the rate of wages and supply of labour in the neighbourhood. If in a district of market-gardens—where the labourers are accustomed to that kind of work—you may do it for the lower sum, and the labourers will earn good wages; but if among the woods and rooks, the master's eye will be wanted to get it done well even at the higher price. It will be fair to take the average cost at 10*s.* per acre. And when you take into the calculation that scarcely any hoeing is required, the excess in expense over ordinary drilled crops is not serious; more especially when it is borne in mind that they are planted on land where Turnips could scarcely be grown, or if at all, at much greater cost of cultivation.

The next point is the most approved method of consuming the Kohl Rabi, &c. Our usual custom is to commence feeding off our drilled crop with the lamb noggs and cull ewes in the autumn when wanted. For the lamb hoggs we should not commence using the cutter before January, except that up to Christmas we want most of the tops for the dairy cows. Whether, however, you cut the bulbs or allow the lamb-hoggs to feed the entire crop off the ground, we have not found them do better on any food the farm produces. Any other kind of sheep do on it equally well; our nearest neighbour has for the last two years sent off from his Kohl Rabi the best fat wethers that our Cambridge butchers exhibit, and no small number of them. We invariably cart off one-third of the crop to the farmstead, where every description of stock—horses, bullocks, cows, calves, and pigs—eat it most freely, and do remarkably well upon it. We have hitherto done but little in the way of storing the crop, save to get up a few to carry us through the frost; nor does it seem necessary, for we have scarcely seen a decayed bulb on the farm since we commenced growing it, bearing out the statement of Mr. Stewart, of the Norwich Nursery, that "Kohl Rabi will stand a severe winter." It will this season, however, be severely tested. Our report so far will be regarded as favourable to the cultivation of this plant. It will be but fair now to notice some of the objections which are urged against it; the principal of which are—first, that it is a great exhauster of the land; and, secondly, that the stalks and roots are both inconvenient and troublesome. Taking the subject of exhaustion first, it will be but fair to admit that, with common cultivation, it may pull somewhat harder upon the land than the common Turnip: but the question is to what extent you may rely upon receiving value in exchange. We have already stated that our practice has been to cultivate just as highly as for Swedish Turnips, and that from the fallow crop we invariably draw off one-third of the bulbs, and often the greater part of the tops—feeding only two-thirds upon the land; and hitherto, we have had no reason to complain of the succeeding crop of Barley. It has not been quite so bulky as after Turnips, but stiffer in the straw, and of better quality; the crop last season in particular was worth considerably more in value per acre than that after Turnips, side by side, in the same field. We come next to the objection as to the stalks and roots, and it will be candid to admit that to a beginner the complaint is not altogether groundless. The stalk running from the root to the bulb is very hard, and if not properly severed from the latter is apt to damage the cutter. This, however, may be easily obviated by a properly made pecker, formed somewhat like a cooper's adze, only not so wide or so much hooked, and the severance should be made close to the bulb, when, without the trouble of tailing or cleaning them, a perfectly clean mass of bulbs may be thrown together quite fit for use—a benefit to the sheep which all practical men will known how to appreciate.

The next inconvenience complained of is that the stalks prevent the furrow being properly turned, and interfere with the working of the land. The too general system has been to plough thin, work out the roots, and carry them off before sowing the Barley. This is faulty in principle, and unnecessarily expensive. Our plan is to send a man over the ground with the same sharp pecker as before, and peck them off close to or a little in the ground—the stalk (if the stock be good) will not be more than 2 or 3 inches long; then plough all in a little deeper than common; by this means everything is put into a state of decomposition, furnishing a quantity of vegetable manure for the ensuing crops, and avoiding all trouble of extraction. It is worthy of notice, too, that in no instance have we seen the stalks or roots of the Kohl Rabi sprout again!

How then stands the question of expense between this crop and Swedish Turnips? You have in the former an extra pecking, at the cost, perhaps, of 2*s.* or 2*s.* 6*d.* per acre, while you save on the other hand all the expense of cleaning, with the consequent remaining dirt and waste incident thereto. In both cases the tops are presumed to be cut off by a sharp hook while standing. The balance, therefore, in the expense of feeding off is clearly in favour of the Kohl Rabi, while the value of the food is vastly superior to any modern crop of Swedish Turnips. We have now put the matter, to the best of our ability, before the farming public; we cannot hope all at once to allay prejudice, but it is satisfactory to know that the cultivation of this excellent plant is greatly extending, both here and in the adjoining counties. In Hunts, among others, the Messrs Bowyer, no mean authorities in the farming world, have been extending its growth every year; Mr. Pawlett, the eminent breeder and feeder of stock, in Beds, has reduced his growth of Swedes this year to one solitary acre; while his brother at Peterborough has been latterly supplying us with the best stock of Kohl Rabi seed we have yet met with: we regret to learn, however, from him that in his last year's crop of seed he has obtained but one bushel where he hoped to get 20—too truly bearing out our statement that the seed of Kohl Rabi is a very precarious crop. Although it is but five years since we first introduced it into the adjoining parish, there is not a single farmer there who does not now cultivate it; every year increasing the extent—it is in fact now to be seen dotted over this entire county; and it is but honest to admit that on the deeper and better soils there are to be found some few heavier crops than our own, from which bulbs have been exhibited weighing upwards of 14 lbs. each. In reviewing our communication we imagine our more practical farmers will, probably, think we have gone somewhat further into detail than was necessary, but they will excuse us when we say that we have been requested to furnish information for parties supposed to be thoroughly unacquainted with the plant and its cultivation.

THE VALUE OF AGRICULTURAL LABOUR, 1860.

Column A gives the present weekly wage of able-bodied plough men. Column B gives the wages of shepherds. Columns C and D give ordinary and harvest wages of common labourers. Columns E and F give the ordinary and harvest wages of women working in the field. Columns G H I give the price per acre of cutting Clover and Meadow, and of cutting and tying Wheat. Columns K and L give the rent and accommodation in number of rooms of labourers' cottages. The first and last columns in the page give the county and the authority for the return.

COUNTIES.	A	B	C	D	E	F	G	H	I	K	L	AUTHORITY.
SCOTLAND.												
INVERNESS ..	30l[1]	..	12s	15s	8d	1s 3d	..	..	..	..	..	ALEX. SIMPSON, Teavig
ABERDEEN ..	22l[2]	..	12s	15s[2]	..	1s 6d[2]	..	..	..	10s to 30s	2 to 3	J. MACDONALD, Huntly
ELGIN	7s 6d[3]	7s 6d[4]	12s	14s[3]	10d	..	2s 6d	..	8s	35s	2	J. HAMILTON, Forres
	13l 10s[5]	..	12s	16s 6d	10d	1s 3d	3s	..	..	5l	2 and closet	J. GRIGOR, Forres
FORFAR	8s[6]	8s[6]	14s	23s 6d	..	1s 6d	2s 6d	..	5s	35s	2	R. COLVILLE, East Newton
	12s	14s	12s	20s	10d	3s	3s 6d	..	..	50s	3	W. SMITH, Brechin
FIFE	11s 6d	12s	11s	15s[7]	9d	..	2s	..	9s 6d	45s	2	G EDIE, King's Kettle
STIRLING	13s to 15s	..	12s	15s to 18s	1s	2s 6d	3s 6d	..	10s	50s	2	A. BUCHANAN, Whitehorn
EAST LOTHIAN ..	12s 6d[8]	14s	12s to 15s	..	1s	..	4s	..	8s	40s	2 & pantry	G. HOPE, Fenton Barns
MID LOTHIAN ..	21l[9]	37l[1]	13s	..	1s	2s 6d	3s 6d	..	..	50s	3	——, Ratho
AYR	13s	13s	13s 6d	18s	10d	..	3s	3s 3d	9s	60s	2 and closet	A. RALSTON, Ayr
ROXBURGH ..	12s	14s	12s	22s	1s	..	3s 6d	2s 6d	15s	50s	..	P. BRODIE, Selkirk
BERWICK	12s	15s	13s	17s 6d	10d to 1s	..	3s	..	..	45s	2 or 3	J. WILSON, Edington Mains
WIGTOWN	11s	11s	12s	15s to 24s	10d	..	2s to 3s	2s 6d to 4s	10s to 12s	40s to 60s	2	A. H. M'CLEAN, Stranraer
	14s	..	12s	18s	10d	..	4s	..	..	..	..	J. CAIRD, Baldoon
ENGLAND.												
NORTHUMBLND.	15s[10]	18s	16s	26s	1s	..	3s 6d	4s	10s 6d.	3l	2 and closet	J. GREY, Dilston
	15s[11]	12s[12]	15s to 18s	20s to 29s[13]	10d to 1s	2s to 3s	2s 6d to 4s	3s to 5s	10s to 15s	2l to 4l	2	T. P. DODS, Huxham
CUMBERLAND ..	18l	12s[15]	15s	15s[7]	1s	2s	3s	3s	10s	52s	..	T. GIBBONS, Longtown
	21l[14]	10s[15]	15s	18s[13]	1s 1d to 1s 3d	..	2s 6d	3s 6d	10s	52s	6	G. SMITH, Penrith
DURHAM	15s	15s	13s	16s 6d	10d	..	6s	6s	12s	2l to 5l	2 or 3†	R. B. DIXON, Darlington
YORKSHIRE ..	12s[16]	..	12s to 15s	18s	10d	2s	3s to 4s	4s to 8s	8s to 20s	2l to 4l	4	H J. TURNER, Richmond
	14s	15s	14s	..	1s	..	3s	3s 6d to 4s	12s	3l to 4l	4†	H. BRIGGS, Wakefield
	17l[17]	13s to 15s	12s	20s[7]	9d	1s 6d	3s 6d to 4s.	3s 6d to 4s	..	3l to 4l	3†	P. STEVENSON, Thirsk
LANCASHIRE ..	15s	16s	15s to 16s 6d	10s to 30s	1s	..	4s	5s	12s to 16s	52s	4†	G. DREWRY, Holker
	15s	16s	14s	25s	1s	..	5s	5s	12s	5l	4	F. TWINING, Wightington
DERBYSHIRE ..	14s	14s[18]	11s	15s	..	..	3s 6d	4s 6d	7s to 9s	4l	..	J. PARKIN, Wirksworth
NOTTS	10s[20]	13s to 14s	10s to 12s	20s[19]	8d	1s	3s	4s	12s to 15s	52s to 78s	4†	J. BUCKLEY, Normanton Hil
CHESHIRE	12s to 14s	..	10s to 12s	18s to 20s	1s	..	2s 9d to 3s[19]	3s 3d, 3s 6d[19]	15s to 18s	50s to 80s	4 and offices	W. PALIN, Stapleford Hall
LINCOLNSHIRE ..	13s	15s	12s	24s	1s	..	2s 6d	3s	10s	4l. 10s	4	F. SOWERBY, Aylesbury
	15s	15s	12s	24s[21]	1s	..	3s[21]	3s 6d[21]	15s	3l to 4l	3 to 4	E. DARBY, Horncastle
	10s to 17s	16s to 18s	10s to 12s	25s[22]	10d to 1s	..	2s 6d to 3s 6d	3s to 4s 6d	12s to 18s	3l to 6l	..	J. CLARK, Long Sutton
SHROPSHIRE ..	11s[23]	11s	10s	10s[7]	8d	..	2s 6d	2s 6d	6s to 9s[24]	50s	4s	E. BOWEN, Bromfield
WARWICKSHIRE .	12s 6d[27]	13s 6d[27]	11s[27]	16s[27]	8d	..	2s 6d†	3s[13]	12s to 15s	50s to 80s	3	J. H. BURBERY, Kenilworth
	11s[28]	11s[30]	10s	20s[29]	7d to 8d	..	3s	3s 6d	10s to 14s	50s to 80s	3 to 4	W. GIBBS, Stratford-on-Avon
	13s	14s	12s	18s[29]	1s	..	3s	4s	14s	80s	..	W. AITCHESON, Berks
RUTLAND	12s 8d[37]	..	10s to 12s	22s[30]	9d	1s[31]	3s 4d	4s	10s to 18s	..	..	W. FANCOURT, Empingham
LEICESTERSHIRE	12s[25]	12s to 13s[25]	11s to 12s	15s	9d	..	4s	4s 6d	10s to 20s	30s to 70s	2 or 3	T. SPENCER, Knossington
STAFFORDSHIRE.	10s	12l[3]	10s	10s[13]	1s	..	3s	4s 6d	12s[13]	3l	Good	J. ASTON, Market Drayton
NORTHAMPTON-SHIRE	12s[26]	14s	12s	24s	8d to 9d	..	2s 6d	3s 6d	9s to 12s	52s to 60s	3	W. GRAY, Courteen Hall
WORCESTERSH. ..	11s	11s	10s[30]	10s	4d	..	2s 6d to 3s	2s 6d to 3s	10s to 14s	3l	4 or 5	C. RANDALL, Evesham
	11s to 12[31]	11s to 12s[31]	10s	15s[26]	8d	1s	2s 3d to 2s 6d	3s	10s	63s	3	H. HUDSON, Pershore
HEREFORDSHIRE	10s[32]	..	9s[33]	14s[34]	10d[35]	..	3s[36]	3s[36]	12s[37]	4l to 5l	5, &c.	W. PRICE, Ross
	10s[38]	11s[38]	10s[33]	15s 8d	9d	..	3s[36]	3s[36]	13s	5l	..	J. MATHEWS, Blakemore
MONMOUTH ..	10s[39]	10s[39]	12s	..	10d	..	3s[34]	3s[36]	8s[36]	5l	3	G. R. G. RELPH, Usk
GLOUCESTERSH.	10s[40]	10s[41]	9s[30]	12s[30]	8d	1s	1s 6d[42]	2s[42]	9s	52s to 60s	4, &c.	J. B. BROWNE, Hampen
	11s[38]	11s[41]	9s to 10s[30]	..	8d to 10d	..	2s[30]	2s 6d[30]	7s to 10s[31]	3l	3	S. RICH, Didmaston
	11s to 12s	12s[41]	11s	11s[38]	10d	1s	2s 6d[36]	3s[36]	8s to 12s	52s to 63s	2 or 3	J. T HARRISON, Frocester
	10s[43]	10s[44]	9s[43]	12s	8d to 9d	..	2s	3s	9s	2l	2	G. N. HULBUT, Bagenden
	11s[30]	11s[30]	9s[30]	15s[42]	8d	..	2s 6d	3s 6d	10s 6d	52s	3	J. F. PEACEY, Winchcombe
	12s	13s[46]	12s	15s	1s	.	3s 9d	3s 6d	9s	50s	5	J. COLBURN, Whitfield
	10s to 12s	11s to 13s	8s to 10s	8s to 10s[31]	7d to 8d	..	2s to 3s	2s to 3s	8s to 12s	50s to 60s	2 or 3	G. EDWARDS, Lechlade
	9s to 11s	15s	10s	18s	8d	..	2s 6d to 3s	..	10s to 12s	5l	3	J. COLEMAN, Cirencester
OXFORDSHIRE ..	12s to 14s	11s to 13s[48]	10s to 12s	10s to 15s[40]	8d to 1s	..	3s 3d	3s 3d	12s	1s to 2s wkly	4	J. DRUCE, jun., Eynsham
BERKSHIRE ..	10s[50]	10s[50]	10s	10s[13]	9d	..	3s 6d	3s 9d	11s	7s	4	G. Pocock, Bornton
and 1s. per double couple.	9s[28]	9s*[28]	8s to 9s[30]	15s[30]	7d to 8d	1s	2s 6d to 3s	3s to 3s 6d	10s to 12s	50s to 70s	2 or 3	T. OWEN, Hungerford
	10s to 15s	11s to 14s[46]	8s to 10s	12s[30]	8d to 10d	..	2s 6d to 3s	3s 6d	10s	2l to 5l	2 or 3	E. W. MOORE, Coleshill
	10s to 11s[40]	11s[46]	10s[50]	..	8d	1s	2s 6d to 3s	3s 6d to 4s 6d	10s	2l to 3l	3	J. BARTHOLOMEW, Streatley
BUCKS	11s	11s	10s	16s	1s	..	2s 6d	4s	12s	52s	3	A. FRASER, Claydon
	13s to 14s	12s to 14s	10s to 12s	20s[30]	..	..	3s 6d	4s	10s to 15s	78s to 6l	4, &c.	W. G. DUNCAN, Bladwell
	13s	12s	12s	24s	8d	..	4s	5s	13s	5l	3 and closet	E. EVANS, Windsor
	12s	12s	10s	26s	1s	..	2s 6d	3s 6d	16s	52s	4, &c.	W. SMITH, Woolston
HERTS	12s	12s to 14s	10s	20s[30]	..	..	2s 6d[30]	3s 6d[30]	14s to 20s[30]	4l to 5l	2 or 3	G. WEBB, Redburn
CAMBRIDGESH. ..	10s to 11s	10s[47]	10s[30]	21s[30]	10d	..	2s 3d to 3s 6d	3s to 5s	10s to 15s	3l to 6l	..	A. S. RUSTON, Chatteris
NORFOLK	10s 6d	..	9s	27s 6d	8d	..	2s 9d	2s 6d to 4s	8s to 12s	70s	2 or 3	W. CUBITT, N. Walsham
SUFFOLK	10s[57]	..	9s[51]	..[51]	6d to 3d	..	1s6dto1s10d[30]	2s to 2s 6d[30]	..[51]	63s to 84s	2 or 3 and closet	G. EDWARDS, Framlingham
	10s to 12s	15s to 20s	9s	30s	7d	1s	2s 6d	3s	12s	30s to 70s	3	L. D. COTTINGHAM, Saxmundham
ESSEX	12s[46]	12s[46]	10s	20s	8d	..	2s 6d	4s	12s	6l 10s	4	C. HALL, Romford
	11s and 12s[30]	16s[30]	10s[30]	6l[30]	8d	..	3s[30]	3s 6d[30]	11s to 14s	70s	small	W. HUTLEY, Witham
	11s[30]	..	9s[30]	30s	..	..	2s 6d	4s	..	78s	3	J. J. MECHI, Tiptree
KENT	13s to 14s[52]	13s to 14s	11s to 12s	24s	10d to 1s	..	3s to 4s	3s to 3s 3d	10s to 12s	4l to 5l	2 or 3	M. SANDFORD, Dover
SUSSEX	13s[53]	14s to 17s	12s	21s[30]	1s	..	2s 6d[30]	3s[30]	11s to 16s	52s to 4l	3 and wash-house	A. SCOTT, Hayward, Pulkington
	13s 6d	15s	11s	15s	10d	..	2s	4s	12s	4l	..	J. BROTHERSTON, Rosehill
	13s 6d[54]	14s 6d[39]	11s	..[54]	8d to 10d	..	3s 6d to 4s	4s 6d to 5s	12s	5l 4s	4 or 5	H. E. SADLE., Chichester
HANTS	10s to 12s	11s to 12s	10s	20s	8d	..	2s 6d	3s	8s to 10s	50s to 60s	3 and pantry	H. RAYNBIRD, Basingstoke
DORSET	8s[55]	8s[56]	7s[58]	..	6d	1s	1s 9d[30]	2s[30]	9s	4l	..	T. H. SAUNDARS, Dorchester
	9s[57]	10s[57]	9s	12s[42]	8d	1s	1s 6d[30]	2s 3d[30]	..	52s	4 or 5	W. J. VOSS, Corfe Castle
SOMERSET	10s	15s[57]	10s	15s[13]	8d	..	2s	2s 10d[42]	10s[13]	70s	3 and pantry	C. P. COLLYNS, Dulverton
WILTS	9s to 10s[43]	9s to 10s[48]	8s	..	7d	10d	2s 6d to 2s 9d	3s to 4s	8s to 12s	40s to 60s	..	T. ARKELL Swindon
	9s[58]	10s[59]	8s[30]	14s[30]	7d	..	2s to 4s	3s to 4s	7s to 12s	50s to 60s	3	T. CHANDLER, Aldbourne
	9s to 10s[57]	9s to 10s[57]	8s to 9s[27]	12s[30]	8d to 9d	1s	3s	3s 6d	10s to 14s	40s to 5l	3 or 4	—— Swindon
	10s[57]	10s[57]	8s	12s[42]	7d to 8d	1s	2s	3s to 3s 6d	9s to 14s	30s to 60s	4	G. BROWN, Avebury
DEVON	11s to 14s	12s 6d	11s	11s[13]	10d	..	2s 6d	3s 6d	8s 6d	52s to 78s	2 to 5	J. BENSON, Tavistock
	13s	14s	12s	24s	..	..	4s	5s	9s	4l	Good	G. TURNER, Exeter
CORNWALL ..	12s	12s	10s[30]	15s[30]	8d	..	2s 6d[36]	3s 6d[36]	15s	3l	4	J. WILLS, Launceston
	12s	12s	12s	16s	8d	..	3s[36]	5s[36]	9s	2l to 4l	3 or 4	J. MICHELL, Truro
CAERMARTHEN ..	12s	..	13s	..	8d to 10d	..	3s	3s	8s to 10s	20s	Poor	J. BURNELL, Llanelly
IRELAND.												
DONEGAL	6s	..	6s	12s to 10s	6d to 9d	..	3s	3s	10s	26s	1 and a closet or two	A. WEIR, Strabane
DERRY	8s	10s	7s	10s	6d	..	2s 6d	4s	8s	30s	2	J. CAMPBELL, Limavady
ANTRIM	9s	..	7s 6d to 8s	10s 6d	7d to 8d	..	3s 6d	3s 6d	9s to 10s	2l to 3l	2 or 3	T. BARKLIE, Inver
ARMAGH	..	12s	7s 6d	15s	6d	..	4s	5s	8s to 10s	40s to 52s	..	J. ROBERTSON, Tynan
DOWN	7s	10s	6s	9s	6d	..	3s 6d	4s	12s 6d	52s	3	W. SEDLIE, Newry
	7s[46]	..	7s	9s to 12s	6d	..	2s 3d	..	6s	26s to 40s	2 or 3	J. ANDREW, Comber
	8s	..	7s	9s to 15s	7d	..	..	..	..	52s	3	R. CALLWELL, Lisburn
MONAGHAN .	7s 6d	9s[46]	6s	12s	8d	1s	3s 6d*	5s*	..	50s to 4l	3	T. M'CABE, Castleblayney
* Qy. Cuningham acre (6250 yards).												
LEITRIM	6s	6s	5s	10s	6d	..	4s 6d*	..	..	50s	2	F. LA TOUCHE, Drumview
Irish acre, 7840 yds												
LONGFORD ..	8l[3]	..	4s[3]	12s	..	..	4s	..	..	30s	2	J. M. GOODIFF, Granard
CAVAN	7s 6d	..	6s	12s	8d	..	4s*	4s*	..	40s	2	T. CHAMBERS, Bailieboro
? Cuningham acre 6250 yards ..												
MEATH	9s[60]	..	7s[60]	18s	8d	..	4s	..	18s	..	..	C. W. HAMILTON
WESTMEATH .	7s[46]	7s[46]	6s	12s	8d	..	4s*	7s	12s*	20s	..	E. KENNEDY, Moate
* Irish acre, 7260 yards.												
DUBLIN	11s	12s	9s	18s	10d	..	4s 6d	5s 6d	16s	5l	2, &c.	C. TRACEY, Stormanstown
GALWAY	8l	7s[60]	5s	9s	6d	..	5s*	6s*	12s*	..	..	R. HEY, Clonbrock
* Irish acre, 7840 yards.												

THE VALUE OF AGRICULTURAL LABOUR—*Continued.*

COUNTIES.	A	B	C	D	E	F	G	H	I	K	L	AUTHORITY.
IRELAND.												
KING'S	6s	7s	5s to 7s	10s to 14s	6d to 7d	1s to 1s 4d	4s*	5s*	13s*	2 0s to 50s	1 or 2	S. RAIT
KILDARE . ..	8s	6s[62]	7s	18s	10d	2s	4s 6d*	6s*	16s*	3*l*	2	W. O'NEILL, Athy
LIMERICK	7s	10s	7s	16s	8d	..	5s*	8s*	18s*	1*l* to 4*l*	1, 2, or 3	J. KENNY, Limerick
	6s 6d[64]	..	8s[63]	11s	..	..	5s*	7s*	15s*	40s	2	P. CONNOR, Foynes
TIPPERARY ..	7s	8s or 9s	6s to 7s	9s to 16s	6d	1s	4s*	6s*	16s*	50s	2	Rev. J. ORR, Clonmel
KILKENNY ..	7s 6d to 8s[46]	8s[46]	6s[46]	9s[30]	6d	..	2s 9d[30]	4s[30]	..	2*l*	2	D. H. MILWARD, New Ross
	8s 6d	11s	7s 6d	16s 6d	8d	..	2s 9d	3s	11s	45s	..	R. LINDSAY, Kilkenny
KERRY	10s	6s	6s	12s	6d	..	..	..	..	3*l*	1 or 2	J. T. TRENCH, Kenmare
WATERFORD ..	6s[46]	7s[46]	5s[46]	9s to 12s	6d	..	3s	3s 6d	8s to 10s	38s	2	T. E. CURREY, Lismore
CORK	8s[46]	..	7s[46]	12s	7d	..	2s 6d	2s	8s to 12s	52s	2	D. CUNNINGHAM, Munster
	8s[46]	8s[46]	8s	12s	10d	..	2s 6d	2s	12s	40s	2	E. MURPHY, Queen's College
	6s[57]	8s	5s 6d[57]	15s	6d	..	3s	3s 6d	10s	..	2	J. BYRNE, Shanbally
	7s 6d to 8s[46]	7s 6d[46]	6s[46]	12s	6d	..	2s 6d	2s 6d	8s	40s	1 or 2	D. BARCLAY, Blarney

1 Per annum with free house.
2 With board and lodging.
3 With food.
4 With food and the keep of 3 or 4 sheep.
5 Per annum, with 3 bolls of meal, house, fire, and light, free.
6 With perquisites equal to 7*s.* 6*d.* a week.
7 And their dinner.
8 Paid in grain, cows' keep, &c.
9 Per annum, with 1050 lbs. of Oatmeal, 896 lbs. of Potatoes, coals carted, 4 weeks of food at harvest, house free.
10 With perquisites worth 3*s.*, and 6*d.* a day extra in harvest with a few presents at Christmas.
11 With 2 bushels of Wheat, 2 bushels of Barley, 80 stones of Potatoes, house free, and coals carted.
12 The above with the keep of 3 or 4 ewes and 3 or 4 hoggs.
13 With meal and drink.
14 Per annum with food and cottage.
15 With cottage, and coals carted, and keep of sheep or cow.
16 And 4 tons of coal.
17 Per annum with meal.
18 And 6*d.* per lamb extra.
19 With beer.
20 With rations.
21 With 3 pints of beer a day.
22 With 6 pints of beer a day.
23 With 2 quarts of beer a day and fuel hauled.
24 With food and 6 quarts of beer or cider a day.
25 With cottage free, coals hauled, and sometimes 2 bushels of malt.
26 With beer and 6*d.* for every 10 quarters of corn delivered.
27 One quart of beer a day.
28 With house and garden free, Potato ground free, beer, and double wages in harvest.
29 5 quarts of beer a day.
30 With beer at certain times.
31 With 2 quarts of beer a day and 20*s.* extra at harvest.
32 With cottage and garden worth 2*s.* 6*d.*, and cider daily, worth with 20*s.* in harvest 3*s.* 6*d.* a week.
33 3 quarts of cider daily and 20*s.* extra in harvest.
34 4*s.* of cider a week.
35 And 2 quarts of cider.
36 And 4 quarts of cider.
37 And 12 quarts of cider per annum.
38 Cottage, garden, and cider, and Potato ground, with 4*s.* a week.
39 With cider and ground equal to 2*s.* extra.
40 With cottage 1*s.*, beer 1*s.*, and 1*l.* harvest.
41 Cottage and beer or ale, and 3*l.* yeaning, shearing, and thatching.
42 And a gallon of beer.
43 With cottage and garden free, and 4 bushels of malt, and 1*s.* per 10 quarters of corn delivered.
44 Cottage, garden, and malt, and 2*l.* for yeaning.
45 With occasional piece-work, and 4 bushels of malt in the year.
46 House free.
47 And 1*l.* to 3*l.* perquisites.
48 And 2*s.* 6*d.* a score for shearing.
49 With 2 bushels of malt and 2 lbs. of Hops.
50 And 1*l.* at Michaelmas.
51 With harvest wages—the harvest generally costs 5*l.* in cash with 10 pecks of malt and 1 stone of pork.
52 And 50*s.* at harvest.
53 Beer when carting and 1*l.* at harvest.
54 Double wages in harvest and 2 quarts of beer daily.
55 House and garden, Potato land ploughed, Furze faggots, carriage of fuel, 1*l.* for harvest and beer, 1*s.* a journey with team, beer at haymaking, and Wheat at 5*s.* a bushel.
56 Same as 55, with 3*l.* for sheep shearing, and 1*s.* a score for lambs, and 6*d.* for every ram sold.
57 With perquisites.
58 Harvest money, 65*s.*
59 Lambing 40*s.* and shearing 55*s.*
60 House free, garden, fuel, and 2 quarts of milk daily.
61 With house and keep of 2 cows and calves, also Grass for mare and foal.
62 With house and Grass for a cow.
63 Or 6*s.* and two meals daily.
64 Or "3*s.*, 5*s.*, and board and lodging, 3*s.* 1*d.*"!

Home Correspondence.

Trial of different Manures in Grass Field at Wimbeldon Englefield.—Six lots of 1 acre each. No. 1, 4 cwt. of bone dust, 4 cwt. of salt; 2, 4 cwt. of guano, 4 cwt. salt; 3, 4 cwt. of superphosphate, 4 cwt. of salt; 4, 8 cwt. of salt; 5, 2 cwt. of guano, 5 cwt. of superphosphate, 5 cwt. of salt; 6, 5 cwt. of bone dust, 2 cwt. of guano, 5 cwt. of salt. Feb. 16, 1859: Nos. 1, 3, and 4 are nearly equal, 4, if any difference, best—more bottom Grass—and continued so until mowing time. There is a decided difference in favour of No. 2, which continued up to mowing time. There is no difference apparently in 5 and 6. All the manures were sown Jan. 28, 1859.

Trial of different Manures in Englefield Deer Park.—Six lots of one acre each. No, 1, 4 cwt. of guano, 4 cwt. of salt; 2, 4 cwt. of bone dust, 4 cwt. of salt; 3, 4 cwt. of superphosphate, 4 cwt. of salt; 4, 8 cwt. of salt; 5, 5 cwt. of superphosphate, 2 cwt. of guano, 5 cwt. of salt; 6, 5 cwt. of bone dust, 2 cwt. of guano, 5 cwt, of salt. Feb. 16, 1859: No perceptible difference in either; No. 4 most fed by deer. Feb. 24, 1860: No. 4 looking best. Other two meadows tried with 2 cwt. of guano, 5 cwt. of superphosphate, and 5 cwt. of salt; one acre. 2 cwt. of guano, 5 cwt. of bone dust, and 5 cwt. of salt. The appearance was in favour of guano, bones, and salt March 16, 1859, and still so when cattle were turned in to Grass at May Day. All the manures sown Jan. 29, 1859. *J. Horsburgh.*

The Errors of Agricultural Experiment.—Will you allow me to call the attention of those of your readers who intend to make experiments on the relative effect of different manures upon Mangel Wurzel and Swedes to a source of error which appears to be very generally overlooked, and which I think seriously detracts from the value of many experiments. The farmer chooses a field which he believes to be tolerably homogeneous, and divides it into plots, one for each of the different manures, and one to receive no artificial manure at all. When the roots are ready for lifting the produce of each plot is weighed, and whatever weight he finds in each plot beyond that in the plot which had no manure is set down as due to the manure applied to it, and in comparing two manures, that is assumed to be best which has been applied to the most productive plot. Here there is a tacit assumption that if all the plots had received the same manure or no manure at all the result would have been the same on every plot. This, I believe, would be by no means always the case, but that, on the contrary, a field of 6 acres divided by straight lines into 12 equal parts would be found to vary many tons an acre in the produce of the different plots. Finding that to be the case on my own farm, I have for some years adopted the following plan:—I take great pains in drying my manures under a shed till they are in such a condition that they will drill well in a common corn drill. The drill is 90 inches wide, and has four coulters, so that a "bout" contains 8 rows, and is 5 yards wide. My experimental plots consist of a "bout" each, and succeed each other, lying side by side. When there are more than four plots I repeat an experiment by way of comparison with the first, and to ascertain whether there is any change in the quality of the land. As each experiment is carried the whole length of the field I am enabled to choose a place where the plant is tolerably regular in all the plots; and as a further precaution I count the number of roots at the time of weighing, which enables me to judge how far a diminution of weight on any plot may be due to the fewness of the roots. If I think it necessary I repeat the weighing at another part of the field:—

TABLE I.—*Mangel Wurzel, Orange Globe.*

	Dung.	Salt.	Shoddy.	Lawes's Superphosphate.	Walker's Blood Manure.	Number of Roots.	Weight per Acre in Tons.	Average Weight of Roots.	Gain.	Compared with
	loads.	cwt.	cwt.	cwt.	cwt.		tons.	lbs.	tons.	
H_1	10	4	15	..	3	221	30.98	3.14	..	H^1 by Lawes.
H_2	10	4	15	3	..	194	34.29	3.96	3.31	
H_3	10	4	15	..	3	220	31.38	3.2	..	H^3 by Lawes.
H_4	10	4	15	3	..	211	35.94	3.82	4.56	

TABLE II.—*Swedes.*

	Dung.	Shoddy.	Lawes's Superphosphate.	Mineral Superphosphate.	Walker's Blood Manure.	Number of Roots.	Weight per Acre.	Average Weight of Roots.	Gain.	Compared with
	loads.	cwt.	cwt.	cwt.	cwt.		tons.	lbs.	tons.	
B_1	10	15	3	..	..	177	16.03	2.03		
									2.4	B_1
B_2	10	15	..	..	3	200	18.43	2.06	2.4	B_3
									1.42	B_4
B_3	10	15	..	3	..	167	16.03	2.15		
B_4	10	15	..	..	3	183	17.01	2.08		

I weigh only the 6 inner rows, so that no plot is affected by a manure in the adjoining plot. Six rows 58½ links long measure exactly the hundredth part of an acre. Yet even with these precautions the plots H_1 and H_3 though manured in precisely the same way, and containing within one the same number of roots, produce respectively 30.98 tons and 31.38 tons per acre. B_2 and B_4 though so near each other, being separated by only 7 or 8 yards, produce 18.43 tons and 17.01 tons per acre, weights nearly in proportion to the number of roots. These tables, extracted from large tables of experiments made last year, show, I think, that we must not assume that two plots at a short distance from each other, and treated in the same way, will produce the same result; but that we must repeat some of the experiments by the side of those with which they are to be compared. For instance, if plots 2 to 7 are manured with six different manures, to be compared with each other and with No. 1, which has no manure, let a plot, No. 8, also have no manure, and if the result on No. 8 is the same as on No. 1, a considerable amount of dependence may be placed on the series of experiments; but if, on the other hand, they vary much, the experiments must be looked upon with a proportionate distrust until they are confirmed by subsequent experiments. *J. P., Staffynwood, Maresfield.*

Societies.

BLANDFORD: *Wages of Dorsetshire Labourers.*—Mr. H. Fookes hoped that after the able manner in which Mr. Fowler had treated this subject (see page 371), the stigma under which the county had been lying would be removed.

He corroborated the statement as to young able-bodied men becoming scarce, and expressed his belief that this would not be the case if they could get proper cottage accommodation. He had not a yearly labourer on his farm, but always "gave a week or took a week." In the lower part of the county he thought the Dorchester Candlemas hiring fair was a great curse. He knew, on good authority, that there were a certain class of labourers that could not be happy unless they went to fair yearly to try and get a better place. One farmer, last fair, agreed with 26 labourers, and if so that number must have left their places. Candlemas, too, was the worst time that they could change their shepherds, as the lambs were just coming in, and it was most inconvenient. He had never hired a labourer at the Candlemas fair in his life. Mr Fowler had not touched upon one subject connected with wages, which was the crime of the county. He was proud to say that if they looked at the statistic of crime, it would be found that Dorsetshire was lowest on the list. He thought this would prove that their labourers were tolerably well off, because if labour was badly paid there would be more crime committed.

Mr. G. Harding remarked on the injurious effect which the encouragement of emigration had upon the home labour market by taking away the best families that could be found, and contended that the value of the land itself depended upon the supply of hands they could get to work it, and these they could not expect without proper cottage accommodation. It was thus very bad policy for a landlord to lessen the number of cottages on his farm.

As to the rate of wages, he had always seen the advantages to the labourers of the perquisites; but ever since he had been in the county he had followed the system of money payment, both for the sake of his own credit and for the sake of economy. He was quite sure it would not detract from Mr. Fowler's statement when he said money payments were the most economical, besides which it saved the credit of having it said his labourers only received 7*s.* per week.

Mr. H. Richards dealt in what the world called the "truck system," but he found it was so far valued by the labourer, that when a young man got married he often said, "Won't you let me have the grist?"

With regard to cottages he thought landlords took a wrong view in lessening the accommodation, in order not to get, as they considered, too much labour in the parish. If it was not provided by the landowner it was in some measure by speculators, who built miserable little cottages, for which they exacted a high rent, collecting the money monthly, and serving a monthly notice to quit, so that if the money were not paid the family had to leave. As to emigration, he was once asked by a clergyman to give a subscription for such an object, and he replied, "If you will let me select the men I will readily give my subscription, but here you are sending away the very best parent stock, leaving behind the lazy, the drunkard, and the imbecile." Although a cottage under the miserable system he had been speaking of would come to about 3*l.* 18*s.* a year, yet in estimating the advantages to the tenant he did not think they should reckon above 1*s.* per week, not but that the farmer would be ready to give 5*l.* a year if he could have as many good cottages as he wanted. He also thought that the farmer should have the control of the cottages for his labourers—when he had a good labourer nothing would be more likely to enable him to keep him than having a good cottage for his accommodation.

Mr. J. Ford, jun., said he had travelled through many parts of the country and he never saw that the labourers were better fed and better clothed than they were in Dorset. He paid his men in money, and thought it would be better if all did so. On looking through his labour book he found they averaged about 12*s.* per week, and he had not a man in his employ but what got 9*s.* or 10*s.* a week. If he could have more cottages than he had got it would be a great advantage. Young men when they got married sometimes went to live in the back streets of a town, such as Blandford, and they were very little use to a farmer afterwards.

Mr. G. Summers said as to education he thought it would be better if they had more schoolmasters than mistresses, because the former had greater influence over the boys; and he also thought a great deal of good might be done by the establishment of evening classes, which would keep the young men from idleness and evil speaking. It was desirable the labourers should have good cottages, but it was also necessary to attend

to their habits as well as their accommodation. With respect to wages he considered it a bad plan to pay all men alike, and thought they should begin a different system and pay a man according to what he earned. He believed the advantages of the agricultural labourer in this country were very great, and hoped their proceedings this evening would go forth to contradict the unfounded statements that had been made with respect to their position.

Mr. Joel Roper said he had made a calculation of what a few of his best men received. His hedger, independent of fuel, grist, a cottage at 6*d.* a week, and Potato ground which was dunged for him, had had at the rate of 13*s.* 7½*d.* a week. Another, independent of advantages, got, on an average, 17*s.* 6½*d.* per week; and another 12*s.* 0½*d.*; while several young men, besides grist and Potato ground, averaged about 9*s.* 9*d.* If they looked into the village church on a Sunday, they would see there was not that poverty which was represented in the Bath and West of England Society's Journal.

The Chairman observed that some allusion had been made to education. Now he was not one who objected to the education of the poor man, but he thought it ought to be based on a right foundation. In the present day he was afraid, instead of having an education useful to them, it was an injury, especially to females, who were taught crochet and net work, and such things, but when they became mothers did not know how to mend a stocking, and became a drag upon a man instead of a help to him. As to cottage accommodation, it was almost useless to teach morality at school if it were untaught at home. As to wages, his shepherd had 8*s.* per week and perquisites, which brought it up to about 11*s.* He had been with him and his father more than 40 years, and now expressed his intention to retire as he had got enough money in the bank to keep him. His carter, in wages and perquisites, received about 12*s.* per week, and his best labourers about 10*s.* 6*d.* That his men remained so long with him was a proof that they were not in a very bad position.

Notices of Books.

National Health and Wealth, &c. By Rev. Henry Moule, M.A., Vicar of Fordington, Dorset. Bradbury & Evans, Bouverie Street.

This pamplet, to which we alluded some weeks ago as printed for private circulation, is now to be had of the publishers. It describes an efficient way of deodorising and rendering useful the waste of the house for use as a manure, and refers to other ingenious methods of increasing both health and wealth.

Calendar of Operations.

APRIL.

ISLE OF ELY: *April* 16.—The cold weather still lingers. After six months of genuine winter we had anxiously looked for a mild and genial spring, but it is yet future. Cold winds and frosty nights have generally prevailed with only a mild day occasionally to break the monotony of the cold. To-day we have an east wind with a higher temperature, but there are indications of a return to frost and cold again ere many hours have passed. The season is decidedly backward, and vegetation has made but little progress. The hedges are only just breaking into leaf, and the trees are yet destitute of foliage. But notwithstanding the lateness of the season, we cannot report unfavourably of the growing Wheats generally. On our best farmed and strongest Fen soils the Wheat plant is looking healthy and promising, and where early rolled is growing strong and vigorous, although backward. On some of the weak and naturally unkind Fen lands, the plant is looking very thin and sickly, and can scarcely make a crop, however favourable the weather may come. Some of the gravelly high lands too are not quite as promising as they were. They are turning a little pale in colour, arising from the hardness of the surface. The heavy rains of the winter, followed by strong penetrating winds, have occasioned the soil to set as hard as a road and the Wheat is suffering. We are harrowing ours to break this hard crust, and make the land again susceptible of benefit from atmospheric influences. Most of our farmers are getting their lands prepared for Mangels, but many of them still obstinately refuse to sow this crop before the very end of the present or the beginning of the following month, notwithstanding the many remonstrances and kind rebukes they have received. Potatoes are nearly all planted, but the growth this year will be smaller than usual. Oat sowing is about completed. Many of the first sown are up and look healthy and well, although growing slowly. Beans and Peas are also showing themselves very generally. Last year at this time we were hoeing Peas, such is the difference in the seasons. Grass on good dry lands is growing, and our earliest pastures now look beautiful, and are quite big enough for sheep. Warm nights and frequent showers are required to make the bullock pastures good. Store stock of all sorts are a slow sale, prices move up very tardily, and it will only be when Grass is plentiful that they will rally, and then we expect, as we stated last month, a decided reaction. The corn trade is improving, and Wheat has advanced considerably, but not more than we anticipated. Prices must yet be higher. All feeding stuffs are high, with a brisk demand. Meat must sell well to pay for all this, or our graziers will suffer. *Your Fen Reporter.*

Notices to Correspondents.

ADDRESS: *T R Z* must advertise.

EMIGRATION: *Migratory.* We are unable to answer your question. You had better acquire experience on the spot before investing your capital: and we should recommend avoiding any partnership except one made there after experience both of the work and of one another under it.

FOOD FOR PIGS: *C E B.* The brine we consider would have an injurious effect on the pigs, the extent of which depends on the quantity of saltpetre and salt consumed. *W C S.*

GAS LIME: *W P.* We should prefer old gas lime to chalk.

IRISH AGRICULTURAL PAPERS: *W T, Neath. Irish Farmers' Gazette*, 23, Batchelor's Walk, Dublin; *Irish Agricultural Review*, 7, Great Brunswick Street, Dublin.

SMALL FARM: *Hortus.* If you are near a good market for milk you cannot do better than keep cows, and as the arable land is probably more than you will want for that purpose you might in part carry out your scheme of a market garden.

"TILLAGE A SUBSTITUTE FOR MANURE:" *R.* The subject of Lois-Weedon husbandry is to be discussed before the London Farmers' Club on May 7. You will find in this volume, published by Whittaker, a full account of the system and the principles on which its permanence depends.

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	£	s.	d.
8-Horse Patent Double Cylinder Engine	265	0	0
Extra strong Leather Driving Band	7	0	0
Windlass, with Anchors, Snatch Blocks, and Rollers, complete	125	0	0
1100 yards of Steel Wire Rope	61	5	0
No. 3 B Cultivator	16	10	0
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Turning Bow	21	0	0
	£503	5	0

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☞ **A SHOW ROOM DEVOTED ENTIRELY TO ARTICLES OF HORTICULTURE.**

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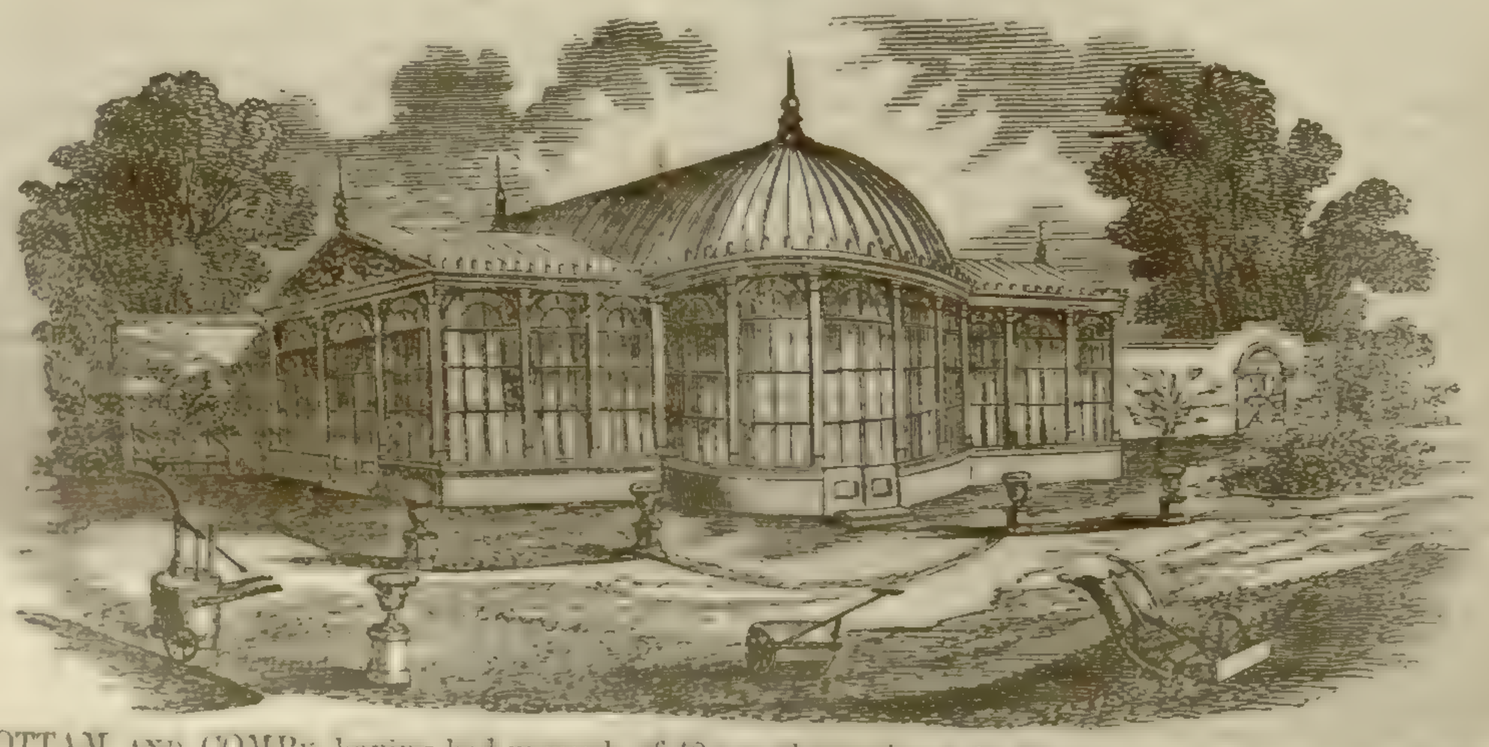

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Iron Hurdles, Strained Wire Fencing, Game Netting, &c.

Every description of Plain, Ornamental, Cast and Wrought Iron, and Wire Work

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PATENT CAST-IRON PUMPS fitted with J. W. & Son's Patent Buckets and Suckers, which cannot clog in action, for Farms. Cottages, and Wells not exceeding 25 feet.

Diameter of Barrel.	Height.		£.	s.	d.
2½ in.	short	1 ft. 7 in.	1	1	0
2½ ,,	long	3 ,, 3 ,,	1	10	0
3 ,,	ditto	3 ,, 6 ,,	2	4	0
3½ ,,	ditto	3 ,, 6 ,,	2	9	0
4 ,,	ditto	3 ,, 6 ,,	2	18	0

Fitted for lead, gutta percha or cast iron flanged pipe as required.

2½ ,, short, with 15 feet of Lead Pipe attached, ready for fixing 2 0 0

2½ in. long ditto ditto ditto 2 14 0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

May be obtained of any Ironmonger or Plumber in Town or country, at the above prices, or of the Patentees and Manufacturers, John Warner & Sons, 8, Crescent, Jewin Street, London, E.C.

Every description of Machinery for Raising Water by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. &c.—Engravings sent on application.

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PRIZE LIQUID MANURE DISTRIBUTOR.

JAMES'S PATENT LIQUID MANURE DISTRIBUTOR OR WATER CART, warranted not to choke up or otherwise get out of order. It is thoroughly adapted for Drill Crops, or Pasture Land, or for Watering Streets; has been awarded NINE FIRST PRIZES.

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N.B.—Improved LIQUID MANURE PUMPS, either fixed or portable.

HARTLEY'S PATENT ROUGH PLATE GLASS

Packed in Boxes of 50 feet each.

6 by 4 and 6½ by 4½	.. 10s. 6d.	8 by 6 and 8½ by 6½	.. 1?s. 6d.
7 by 5 and 7½ by 5½	.. 12s. 0d.	9 by 7, 9½ by 7½, & 10 by 8	15s. 0d.

Boxes 2s. each, returnable at full price.

This Glass weighs 32 oz. to the foot, and is admirably adapted or Cucumber Lights, Border Frames, &c.

HAND GLASSES.

12 inches	.. .. 6s. 0d. each	18 inches	.. ..	9s.	0d each
14 ,,	.. .. 7 0 ,,	20 ,,	.. ..	10	0 ,,
16 ,,	.. .. 8 0 ,,	24 ,,	.. ..	12	0 ,,

Painted and glazed with 16 oz. Sheet Glass.

If open at top, 1s. extra.

CUCUMBER GLASSES.

24 inches long	.. 2s. 0d.	16 inches long	.. 1s. 4d.
22 ,,	.. 1 10	14 ,,	.. 1 2
20 ,,	.. 1 8	12 ,,	.. 1 0
18 ,,	.. 1 6	Made to any length.	

JAMES PHILLIPS AND CO.,

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GLASS FOR CONSERVATORIES, GREENHOUSES, PIT FRAMES, ETC.

HETLEY AND CO. are supplying 16-oz. Sheet Glass of British Manufacture, packed in boxes, containing 100 square feet each, at the following REDUCED PRICES for cash. A reduction made on 1000 feet.

Sizes.—Inches		Inches.		Per foot.		Per 10 feet.
	Under 6	by 4	at 1½d.	is	£0	12 6
From 6 by 4	,, 7	,, 5	,, 2d.	,,	0	16 8
,, 7 ,, 5	,, 8	,, 6	,, 2½d.	,,	0	18 9
,, 8 ,, 6	,, 10	,, 8	,, 2½d.	,,	1	0 10
,, 10 ,, 8	,, 12	,, 9	,, 2¾d.	,,	1	2 11

Larger sizes, not exceeding 40 inches long.

16 oz. from 3d. to 3½d. per square foot, according to size.
21 oz. ,, 3½d. to 5d. ,, ,, ,,
26 oz. ,, 3¾d. to 7½d. ,, ,, ,,

PATENT ROUGH PLATE, THICK CROWN GLASS, and PATENT PLATE GLASS, for Horticultural purposes, at reduced prices, by the 100 square feet.

GLASS TILES AND SLATES made to any size or pattern, either in Sheet or Rough Plate Glass.

Propagating Glasses, Beehive Glasses, Cucumber Tubes, Glass Milk Pans, Glass Water Pipes, and various other articles not hitherto manufactured in Glass.

PATENT PLATE GLASS.—The present extremely moderate price of this superior article should cause it to supersede all other inferior window glass in a gentleman's residence. No alteration connected with the sash is required.

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GARDEN NETS, FISHING NETS, SHEEP NETS, —New TWINE GARDEN NET, 1½d. per yard, kyanised; Tanned Nets, 6s. 3d. per 100 yards; Drag Nets, 20 yards, 2l. Flue Nets; Trammel Nets, 20 yards, 3l. (other sizes in proportion); Casting Nets; Sheep Nets, 1l. per 50 yards, very thick cord.—R. Richardson, Net Maker, 99, Euston Road, London, N.W.

TANNED NETTING at reduced prices, 200 square yards 10s.; 500 yards, 24s. Scrim Canvas for Wall Fruit, Greenhouse Shades, and Tulip Covers. Address in full, Frederick Eddington, Marquee, Flag, and Banner Manufacturer, Thomas Street, Old Kent Road, London, S.E.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1½d.; 2 yards, 3d.; 3 yards, 4½d.; and 4 yards, 6d. per yard, in any quantity, may be had at Chas. Wright's, 376, Strand, W.C.

An allowance to Nurserymen.

NETTING for Fruit Trees, Seed Beds, Ripe Strawberries, &c. TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3d. per yard, or 100 yards, 20s.; 4 yards wide, 6d. per yard, or 50 yards, 20s. New Tanned Netting, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 5d. per yard; 4 yards wide, 10d. per yard; 6 yards wide, 1s. 3d. per yard; ½-inch mesh, 4 yards wide, 1s. 4d. per yard.—Can be had in any quantity of Eaton & Deller, 6 and 7, Crooked Lane, London Bridge, E.C.

TO FARMERS.—If you wish to preserve your Hay go to Davis & Co., 64, West Smithfield, London, E.C., where you may purchase a RICK CLOTH of the best material and workmanship cheaper than at any other house in London.

RICK CLOTHS, New, with Poles, Pulleys, and Lines complete.

RICK CLOTHS, a large quantity of Second-hand, in good condition.

MARQUEES AND TENTS of all dimensions.

TENTS, SECOND HAND, from the Crimea.

FLAGS AND BANNERS OF ALL NATIONS.

NETTING (BRITTAIN'S), New and Second-hand, for preserving Fruit from Birds, Frost, &c.

Address—Benjamin Edgington, 2, Duke Street, Southwark, London Bridge, S.E. Warehouse, 32, Charing Cross, S.W.

*** No other establishments.

GUTTA PERCHA TUBING FOR WATERING GARDENS.

THE GUTTA PERCHA COMPANY have the pleasure to acknowledge the receipt of the following

Testimonial from Mr. J. Farrah, *Gr to* Roswell Middleton Jalland, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider this tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

Manufactured by the Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their Wholesale Dealers in town and country.

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CONTINUE to give their best attention to the manufacture of the most Modern and Improved Agricultural Machinery, including

PATENT AND OTHER PLOUGHS, SUITABLE FOR EVERY SOIL AND PURPOSE.
HARROWS, CULTIVATORS, ROLLERS, AND OTHER FIELD IMPLEMENTS.
HORSE RAKES AND HAYMAKERS.
CHAFF CUTTERS, ROOT CUTTERS, BRUISING AND CRUSHING MILLS FOR CORN, OILCAKE, &c.
STEAM ENGINES, BOTH PORTABLE AND FIXED, WITH PATENT OR OTHER BOILERS.
STEAM THRESHING MACHINES, BOTH PORTABLE AND FIXED, AND SINGLE OR DOUBLE BLAST.
HORSE POWER THRESHING MACHINERY, DRESSING MACHINES, CORN MILLS, HORSE GEARS, &c.

RANSOMES AND SIMS have long been celebrated for combining in their Agricultural Machinery the utmost simplicity, durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture.

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HORTICULTURAL TOOLS.

GARDEN ENGINES, Galvanized Iron
Prices 55s., 63s., 105s., 120s.
Ditto, Wood, 84s,, 105s, 130s.
Flower Stands, 4s. 6d. each.
Cast Iron Ornamental ditto, to hold 7 Vases, 27s.
Deane's Mowing Machines, with Boyd's Patented Improvements, £4 17s. 6d, £6 6s. 0d., £6 17s. 6d., £7 7s. 0d.
Green House Syringes, 8s., 10s., 18s. 6d
Garden Rollers, £1 14s. 6d., £2., £2 12s.
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Wire Work, 18in. 4d. per yard run.

Every Implement for Garden use on the lowest Terms.

DEANES:—Opening to the Monument, London Bridge.

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Reduced Tariff for Horticulture, Pictures, and Dwellings.

ORCHARD-HOUSE SIZES.

In. by In.			16 oz.	21 oz.
20 .. 12	Common, per 100 feet,		13s. 6d.	18s.
20 .. 13				
20 .. 14	Super	,,	16s.	23s.
20 .. 15				

SMALL SQUARES.

In. by In.			In. by In.			Per 100 feet.	Per foot.
6	..	4	8	..	6	Common	1½d.
6½	..	4½	8½	..	6½	11s. 6d.	
7	..	5	9	..	7	Super.	1¾d.
7½	..	5½	9½	..	7½	12s. 6d.	

Supplied to Mr. Rivers and many Others.

Squares in 100 and 200 Feet Boxes.

Inches by Inches.			Inches by Inches			Inches by Inches.			Inches by inches.				P. 100 feet.	P. foot.
10	..	8	12½	..	9½	13	..	10	15	..	10	13½ .. 11½	4ths.	12s. 6d.	1½d.
10½	..	8½	13	..	9	13½	..	10½	12	..	11		3ds.	14s. 3d.	1¾
11	..	9	12	..	10	14	..	10	12½	..	11½	14 . 11	2ds.	18s.	2¼
12	..	9	12½	..	10½	14½	..	10½	13	..	11		1sts.	21s. 6d.	2¾
15	..	11	15	..	12	16	..	13	24	..	14	24 .. 16	4ths.	13s. 6d.	1¾d.
16	..	11	16	..	12	17	..	13	20	..	15	20 .. 17	3ds.	16s.	2
17	..	11	17	..	12	20	..	13	22	..	15	20 .. 18	2ds.	19s. 8d.	2½
18	..	11	18	..	12	23	..	13	24	..	15	.. ..	1sts.	24s.	3
13	..	12	20	..	12	20	..	14	20	..	16	.. ..			
14	..	12	22	..	12	22	..	14	22	..	16	.. ..			

If less quantity than 100 feet is taken, a moderate charge made for package.

GLASS CUT TO ANY GIVEN SIZES NOT ON LIST.

16 oz.—4ths, 1¾d., 2d., and 2¼d. per foot.
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21 oz.—4ths, 2¾d., 3d., and 3½d. per foot.
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Not accountable for breakage.

GENUINE WHITE LEAD	.. ..	32s. 0d. per cwt.	LINSEED OIL	.. ..	2s. 4d. per gall.
ANTI-CORROSION PAINT	.. ..	34 0 ,,	BOILED ,,	.. ..	2 9 ,,
LINSEED-OIL PUTTY	.. ..	8 0 ,,	TURPENTINE	.. ..	3 3 ,,

BLACK, GREEN, and all other kinds of PAINTS, VARNISHES, BRUSHES, &c.

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ACACIAS.—Thirty magnificent species, 10*s.* 6*d.*; 20 ditto, 7*s.* 6*d.*; 12 ditto, 4*s.* 6*d.*

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The following make splendid BEDDING PLANTS—

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LINUM GRANDIFLORUM COCCINEUM, brilliant scarlet, centre crimson, 4*d.* per packet.

	Per pkt.
CALLIRRHOE PEDATA, purple crimson, with white eye, 6*d.* per packet.	
LOBELIA GRACILIS ERECTA COMPACTA, bright blue	0 6
,, RAMOSA ALBA, pure white	0 6
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NASTURTIUM, new dwarf Tom Thumb, scarlet	0 6

	Per packet.—*s.* *d.*
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PELARGONIUMS, saved from a splendid collection.—Large-flowered, Fancy, and Odier's five-spotted, each sort, 2*s.* 6*d.* per packet. For named Collections see *Gardeners' Chronicle*, February 4, or our SPRING CATALOGUE.

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A splendid Collection of 100 sorts of ANNUALS, including the new sorts introduced this year, for 21*s.*

A splendid Collection of 50 sorts of ANNUALS, including some of the new sorts introduced this year, 10*s.* 6*d.*

A splendid Collection of 30 sorts of the most showy ANNUALS for 5*s.*; 21 for 3*s.* 6*d.*; 15 for 2*s.* 6*d.*

Webb's GIANT COWSLIP, 6*d.* & 1*s.* per packet. | Webb's GIANT POLYANTHUS, 6*d.* & 1*s.* per packet.

AGRICULTURAL SEEDS,

MANGEL (CROP 1859) YELLOW GLOBE AND LONG YELLOW, SAVED FROM PRIME STOCKS.

These are the richest in saccharine matter, and are unsurpassed by any other varieties as regards weight per acre, 1*s.* per lb. 21 lbs. sent Carriage paid.

Agents for GISHURST COMPOUND in boxes, 1*s.*, 3*s.*, and 10*s.* 6*d.*; do. BRITTAIN'S GARDEN NETTING for protecting Fruit Trees or shading, Nos. 1, 2, and 3, 5*d.*, 6*d.*, and 8*d.* per yard, 55 inches wide, 10-yard pieces; do. TIFFANY for shading, 3*d.* per yard, 10, 20, and 30-yard pieces; SHAW'S TIFFANY at advertised prices.

HOLLAND AND BAYLEY beg to offer from their unrivalled Collections, in strong healthy plants,
25 pairs CARNATIONS and PICOTEES, fine show flowers, for 1*l.*
Extra fine show PANSIES, 6*s.* per dozen.
Extra fine show PHLOXES, 8*s.* per dozen.
Extra fine BELGIAN DAISIES, 4*s.* per dozen.
Hamper and package included.
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MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their PRICED AND DESCRIPTIVE CATALOGUES of Exotic Orchids, Stove, Greenhouse, and Hardy Ferns, Miscellaneous Stove, Greenhouse, and Hardy Plants, Variegated and Ornamental Foliaged Plants, Conifers, Roses, Rhododendrons, Indian Azaleas, Gloxinias, Fuchsias, Geraniums, Herbaceous Plants, Fruit Trees, &c., are now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

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JOHN HALLY, NURSERYMAN and FLORIST, Blackheath, begs to announce that he is now sending out the two following GERANIUMS:—

1. BLACKHEATH BEAUTY.—**Flower a bright blush, produced most abundantly in compact round trusses, with fine dark horse-shoe leaf of very neat habit. Has been flowering freely through the winter. Was exhibited before the Floral Committee of the Horticultural Society, August 11, 1859, and received a label of commendation as "a dwarf, neat, and distinct variety for the flower garden." Was also exhibited at the Crystal Palace September Show, and gained a Prize in Miscellaneous Class.**

2. AURORA.—Having similar habit and foliage with the former, with flowers of a deep salmon colour, and quite distinct. Exhibited before the Floral Committee of the Horticultural Society, March 29, 1860, and received a Label of Commendation as "a pretty, dwarf, free-flowering Horse-shoe leaved variety, with deep salmon-coloured flowers;" but the Committee thinking it rather early to judge of its real merits, and wishing to see it again, awarded it a First Class Certificate of Merit, on April 26, 1860.

Both varieties may be seen at the above Nursery covered with flowers, and can be recommended as the very best and showiest of their class, either as Bedding or Pot plants. Nice flowering plants of either of the above, 10*s.* 6*d.* each, with the usual allowance to the Trade when three or more are ordered.

The following gentleman having ordered them in quantities can also supply the Trade:—Mr. CHARLES TURNER, Royal Nursery, Slough; Messrs. Low & Co., Clapton Nursery, N.E.; Messrs. PARKER & WILLIAMS, Paradise Nursery, Holloway, N.; and Messrs. LUCOMBE, PINCE, & Co., Exeter.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND. THOS. GIBBS & Co. Corner of HALF-MOON St. PICCADILLY, London. APPOINTED APL 3, 1844. THE SEEDSMEN

SEEDS.—AGRICULTURAL, of all descriptions.

GRASS.—Mixtures for Permanent Meadows and Pastures to suit different soils.

KITCHEN GARDEN AND FLOWER Do. } In Collections or separate.

(PRICED LISTS on application.)

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CORNER OF HALF-MOON St. PICCADILLY, LONDON, W.

SEEDSMEN BY APPOINTMENT Sutton AND Sons

MANGEL AND TURNIP SEEDS

FROM LARGE BULBS.

PRICES ACCORDING TO QUANTITIES REQUIRED.

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PERMANENT PASTURE GRASS SEEDS
SUTTON'S YELLOW GLOBE MANGEL
HORSBORO'S ENGLEFIELD MANGEL
SUTTON'S ELVETHAM MANGEL

ALSIKE and other CLOVER SEEDS
ITALIAN and other RYE-GRASSES
SORGHUM, or HOLCUS SACCHARATUS
FINE NEW LUCERNE

SUTTON'S CHAMPION SWEDE
SKIRVING'S and other TURNIP SEEDS
GARDEN SEEDS, of sorts
LUPINS for SHEEP FEED

SPERGULA PILIFERA, PLANTS AND SEEDS

Goods delivered Carriage Free. *No Agents appointed.*

*** THE PRICE LIST FOR MAY WILL BE SUPPLIED POST FREE ON APPLICATION.

N.B. ALL SEEDS SENT FROM THIS ESTABLISHMENT ARE GENUINE, NEW, AND UNADULTERATED.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

NEW ROSE.

A. PAUL AND SON invite attention to their NEW TEA-SCENTED ROSE "PRESIDENT," which obtained First-class Certificates from both the Royal Botanic Society and Horticultural Society of London in March last, and which is now first offered for sale. It is figured in the Rose Annual for 1859-60. The plant is of hardy constitution; the flowers are large, full, of fine form, varying in colour from blush to salmon, and very sweet. It is confidently anticipated that it will prove one of the finest of Tea-Scented Roses. Price 5*s.* per plant; a few extra strong plants, 10*s.* 6*d.* each. The usual discount to the Trade when three or more plants are ordered at once.—Nurseries, Cheshunt, Herts.

HALF SPECIMEN TEA-SCENTED ROSES

GROWN IN 6-INCH POTS FOR EXHIBITION.

FINE SELECTED PLANTS .. .. per doz. 24*s.*
Smaller Plants in 48 or 4-inch pots .. .. .. ,, 12
Selection left to W. W. & S.

WM. WOOD AND SON are now prepared to supply fine strong Plants of the above from their extensive STOCK. CATALOGUES may be obtained on application, and extra plants added to each order to compensate for carriage.
Woodlands Nursery, Maresfield, near Uckfield, Sussex.

ROSES IN POTS.

WOODLANDS NURSERY, MARESFIELD, NEAR UCKFIELD, SUSSEX.

WM. WOOD AND SON are now executing orders for ROSES in pots, and will supply fine healthy dwarf plants as under:—

TEA-SCENTED ROSES	12*s.* to 18*s.* per doz.
CHINA DO.	9*s.* to 12*s.* ,,
BOURBON and NOISETTE DO...	9*s.* to 12*s.* ,,
HYBRID PERPETUAL DO. ..	9*s.* to 12*s.* ,,

The months of April and May are considered very eligible for planting out Roses from pots. The plants now offered are strong and well grown.
Plants presented to compensate for carriage.

PELARGONIUMS, &c.—2000 Show, Fancy, French and English Spotted varieties, from 6*s.*, 9*s.*, 12*s.* to 18*s.* per dozen; FUCHSIAS of 1859, 9*s.* per dozen; GLOXINIAS new, 20*s.* per dozen, 6 for 12*s.*; TYDÆAS, new, 11 varieties for 18*s.*; ACHIMENES, choice, 9*s.* per dozen; BEGONIAS, several choice varieties, from 1*s.* 6*d.* to 3*s.* 6*d.* each. Also a large quantity of VERBENAS, DAHLIAS, and other Bedding plants. The Trade supplied. Catalogue for one stamp.—HENRY WALTON, Edge End, Marsden, near Burnley.

ABIES INVERTA (new Weeping Spruce Fir), a variety of the common Spruce, in growth like a Kilmarnock Weeping Willow; its leader straightens itself in the old wood, like a Deodar Cedar. It is the best weeping variety ever introduced. A few photograph copies have been taken, one of which will be forwarded on receipt of 12 postage stamps.

Price 15*s.* each, with usual allowance to the Trade, and one extra added for every three ordered. A few extra fine specimens at increased prices.
RICHARD SMITH, Nurseryman, Worcester.

MESSRS. J. AND H. BROWN offer the following selection of choice PLANTS, which they will forward to any part:—

	s.	*d.*
Andromeda floribunda, spring flowering, per doz. ..	15	0
25 Azaleas, new hardy Belgian varieties, one of a sort, on their own roots, by name, well set for bloom, fine for beds or pot culture for forcing	20	0
25 Azaleas, hardy American varieties, do. do	15	0
12 hardy Rhododendrons, including scarlet, white, and rose colour	12	0
Fine hardy Scarlet Rhododendrons, per dozen ..	12	0
New Yellow Rhododendrons, each, 3*s.* 6*d.* to.. ..	5	6
Roses, best sorts, Standards and Half-standards, per dozen, 12*s.* to	15	0
Climbing Roses of best sorts, rapid growers, per doz.	6	0
6 fine hardy Magnolias, one of a sort	10	0
Greenhouse Azaleas, fine varieties, per doz., 10*s.* to..	12	0
Camellias, best double varieties, per dozen	28	0
24 Epacris and Ericas, one of a sort, in small pots ..	16	0
50 choice hard-wooded Greenhouse Plants, one of a sort	42	0
12 Achimenes and Gloxinias, new sorts, by post ..	10	0
Fine Cinerarias coming into flower, per dozen ..		
Choice Carnations and Yellow Picotees, per doz. ..	8	0
Best Pansies and Pinks, per doz.	6	0
Herbaceous Pæonias, including New White, Blush and Pink, per dozen	8	0
30 choice hardy Herbaceous plants, one of a sort ..	10	0
Chrysanthemums, the new varieties, do.	6	0
Phloxes, perennial new Belgian varieties, do. ..	6	0
Verbenas and Petunias, new varieties, do.	4	0
Scarlet Geraniums and Flower of the Day, per doz...	5	0

18 papers choice Flower Seeds, 5*s.*; 40 do. 10*s.*, free by post.
Evergreen Shrubs and Ornamental Trees of all kinds cheap.
NEW CATALOGUE OF PLANTS, &c., FOR 1860, by post.
Albion Nursery, Stoke Newington, N.—May 5.

STRAWBERRY,—WIZARD OF THE NORTH (ROBERTSON'S)

DANIEL ROBERTSON continues to supply strong Plants of the above fine variety at 63*s.* per 100 or 9*s.* per dozen. For description, &c., see former advertisements. It can also be supplied genuine by the following parties in the Trade in and around London:—

Brigden, Mr. Timothy, 10, Railway Arcade, London Bridge, S.E.
Boshell, Mr. Frederick, 86, High Street, Borough, S.E.
Carter, Mr. James, & Co., 237 and 238, High Holborn, W.C.
Charlwood & Cummins, Messrs., Tavistock Row, Covent Garden, W.C.
Chartres, Mr. James, 74, King William Street, City, E.C.
Cornwell, Mr. George, Barnet, Herts.
Cuthill, Mr. James, Camberwell, S.
Dancer, Mr. Alexander, Fulham, S.W.
Denyer, Mr William, 82, Gracechurch Street, E.C.
Dodds, Mr. G. S., Epsom Nursery, Epsom, Surrey.
Francis, Mr E. P., Hertford.
Fraser, Messrs. J. & G., Lea Bridge Road Nurseries, N.E.
Fraser, Richardson, & Goad, 82, Bishopsgate Street, E.C.
Gibbs, G., & Co., 26, Down Street, Piccadilly, W.
Gibbs, T., & Co., 47, Half Moon Street, Piccadilly, W.
Glendinning, Mr. R., Turnham Green, W.
Henderson, Messrs., Pine-apple Place, Edgeware Road, W.
Hurst & McMullen, Messrs., 6, Leadenhall Street, E.C.
Jackson, Messrs. T., & Son, Kingston, Surrey.
Jones, Mr Edward, Hart Street, Henley-on-Thames.
Kernan, Mr. J., 4, Great Russell Street, Covent Garden, W.C.
Kinghorn Mr. F. R, Sheen Road, Richmond, S.W.
Lawson, Messrs P., & Son, Great George St., Westminster, W.
Lea, Messrs. J. & C, Hammersmith, W.
Low, Messrs. Hugh, & Co., Upper Clapton, N.E.
May, Mr. Joseph, & Co., 1, Wellington Street, Strand, W.C.
McIntosh, Mr. George, Hammersmith, W.
Osborn & Sons, Messrs., Fulham, S.W.
Pamplin & Son, Lea Bridge Nursery, N.E.
Paul, Messrs. A., & Sons, Cheshunt, Herts.
Robinson, Messrs., & Sons, Tooting, S.
Smith, Mr J., Romford, Essex.
Turner, Mr. Charles, Royal Nursery, Slough.
Veitch, Mr. James, Jun., Exotic Nursery, King's Road, Chelsea, S.W.
Watt, Mr. Alexander, Edgeware Road, W.

NEW DAHLIAS.

CHARLES TURNER is now sending out strong Plants of the following:—

	s.	*d.*		*s.*	*d.*
Acme (Perry).. ..	10	6	Mrs. H. Vyse (Church)	10	6
Beauty (Turner) ..	10	6	Purple Standard (Fellowes)	7	6
Bravo (Holmes) ..	7	6	Scout (Holmes) ..	10	6
Clara Novello (Turner)	7	6			
Conqueror (Cook) ..	7	6	FANCY DAHLIAS, NEW VARIETIES.		
Crinoline (Turner) ..	7	6			
EarlShaftesbury (Perry)	7	6	Bellona (Fellowes) ..	7	6
Enchantress (Fellowes)	7	6	Ethil (Turner).. ..	10	6
Flower of the Day (Turner)	10	6	Harlequin (Grant) ..	10	6
George Eliot (Turner)	10	6	Pluto (Turner) ..	10	6
Lady Taunton (Turner)	10	6	Queen Mab (Turner)..	10	6
Lilac Queen (Grant)..	10	6	Splendid (Green) ..	7	6

The above are first-class varieties for exhibition. A full DESCRIPTIVE CATALOGUE may be had on application.
The Royal Nurseries, Slough.

BEDDING PLANTS.

WOOD AND INGRAM beg to offer the following, which may be relied upon as fine stocky, well-established Plants:—

Per dozen.	*s.*	*d.*		*s.*
Alyssum variegatum	2	6	to	3
Ageratum, sorts ..	2	6	,,	4
Calceolaria, ditto ..	3	0	,,	4
Ditto ditto, per 100	20	0		
Dahlias, ditto ..	4	0	,,	6
Fuchsias, ditto ..	4	0	,,	6
Geraniums, Scarlet, sorts	2	6	,,	4
Ditto ditto, per 100	20	0		

Per dozen.	*s.*	*d.*		*s.*
Ditto, Variegated ..	3	6	,,	6
Heliotropes, sorts ..	2	6	,,	4
Lantanas, ditto ..	3	0	,,	4
Lobelia speciosa ..	2	6	,,	3
Ditto ditto per 100, per 1000 ..	16	0		
	£7	10	0	
Petunias, sorts ..	2	6	,,	4
Verbenas, ditto ..	2	6	,,	3
Ditto ditto, per 100	16	0		

Huntingdon Nurseries.

CHOICE CONIFERS.—All seedling plants, three years old, in pots, very healthy and fit for planting out.

	s.	*d.*		*s.*	*d.*
Pinus Don Pedri ..	3	6	Pinus Ehrenbergii ..	1	6
,, Veitchii	2	6	,, popelini	1	6
,, Popocatepetli ..	2	6	Abies religiosa	2	6
,, macrocarpa, fine	2	6	,, hirtella	2	6
,, Llaveana	1	6	Cupressus M'Nabbiana, true	1	6
,, tuberculata ..	1	6	Picea amabilis, 2 years..	2	6
,, Benthamiana ..	1	6	,, grandis, 2 years ..	2	6
,, Lerdoi	1	6	Wellingtonia gigantea, splendid plants, 2 to 3 feet	21	0
,, resinosa	1	6			
,, cornea	1	6			
,, patula	1	0			

J. HENCHMAN, Edmonton, Middlesex, N.

DO NOT PURCHASE MORE SEED THAN YOU REQUIRE.

JAMES TYNAN can still supply the following seeds of the very best quality, for second and late sowings:—

Truffaut's Pæony-flowered ASTERS, in separate colours, each per packet, 2*d.*
Truffaut's Pæony-flowered ASTERS, in mixed colours, per packet, 6*d.*
Truffaut's Pæony-flowered ASTERS, in mixed colours, smaller packet, 3*d.*
Chrysanthemum flowered ASTERS, the same as above.
German dwarf ten-week STOCK, ,, ,, ,,
German large flowering STOCK, ,, ,, ,,

Per packet.			Per packet.	
Fine Calceolaria	6*d.*		Fine Zinnia elegans ..	4*d.*
,, Cineraria	6		,, German double Larkspur	3
,, Primula	6		,, German double Wallflower ..	3
,, Balsam	6			
,, Phlox Drummondii	4			

Enclose postage stamps and addressed envelope for any of the above.—JAMES TYNAN, Importer of Continental Seeds, Seed Warehouse, 68, Great George Street, Liverpool.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:—

P. packet—	*s.*	*d.*
BROCCOLI, Penzance White (Mitchinson's) ..	1	6
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation..	1	6
CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
,, Moor Park, extra fine..	1	0
MELONS, all the best varieties	1	0
TOMATO, Early Red (Powell's)	1	6
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed ..	2	6
CINERARIA, from finest named varieties ..	2	6
,, maritima	0	6
CELOSIA aurea pyramidalis	1	6
,, crimson-feathered variety	1	6
COCKSCOMB, dwarf, extra fine	1	0
DIANTHUS Heddewiggi	1	0
LOBELIA erinus speciosa (true)	1	0
PANSY, from named varieties	1	0
PERILLA Nankinensis	0	6
PRIMULA sinensis fimbriata	1	6
SOLANUM capsicastrum	1	0
,, pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

An inspection and comparison with the prices of several Firms advertising Seeds carriage free is respectfully solicited.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

NEW AND CHOICE PLANTS.

JOHN STANDISH, in offering the following Plants can assure his customers that they are now in fine condition for sending out:—

MYOSOTIDIUM NOBILE, or Antarctic Forget-Me-Not, each 31*s.* 6*d.*—This plant, from the Chatham Islands is one of the most remarkable that has been introduced for some years, being totally distinct from all others. It has large thick leaves, 8 or 9 inches across, of a dark glossy green, and sends up magnificent trusses of bloom of the most beautiful blue and white, similar to a Forget me-not, but of a giant form. A Drawing of it is published in Curtis's "Botanical Magazine" for September. A description taken from the above is also published in the *Gardeners' Chronicle* of Sept. 17, 1859, wherein Dr. Lindley says:—"This is the handsome perennial provisionally named Cynoglossum nobile by Dr. Hooker in our last year's Volume, page 240. It is quite deserving all the encomiums that have been passed upon it."

RHODODENDRON NUTTALII.—The largest flower of all yet known, having 11 flowers in a truss, each flower being 6¼ inches across. Seedling plants, 3 inches high, 7*s.* 6*d.* each; 60*s.* per dozen; or 20*l.* per 100.

PHLOX MRS. STANDISH.—The purest white, with a large red eye, 5*s.* each. Also a large collection of the finest kinds which J. S. has shown during the last summer and in every case received the First Prize. Plants from 1*s.* to 2*s.* 6*d.* each.

A CATALOGUE containing a full description of the best Hardy Plants in cultivation will be forwarded on application to
The Royal Nursery, Bagshot.

CHINESE PRIMROSE.—Very superior fimbriated varieties saved by a first-rate private grower, per packet, 1*s.*: fimbriata alba, do., 1*s.* per packet; fimbriata striata, choice, from the continent, 1*s.* per packet. The Trade supplied.

CALCEOLARIA.—This is annually received from a private grower, for years renowned for his first-rate Calceolarias, and has given the fullest satisfaction, per packet, 1*s.*; extra, from finest new, 2*s.* 6*d.* per packet: also fine new continental dwarf growing varieties, see Catalogue.
STEPHEN BROWN, Seed Establishment, Sudbury, Suffolk.

AZALEA INDICA.—Splendid varieties, plants fine, strong, and bushy, with a profusion of flower buds.

Selections at the following low prices (prices per 100 to the Trade on application):—

	£	*s.*	*d.*
20 superb varieties	1	15	0
12 ditto ditto	1	2	0

Carriage free to all railway stations in London, or on the Colchester line to Norwich.

☞ A CATALOGUE OF SUPERB GLOXINIAS, ACHIMENEAS, GERANIUMS, FUCHSIAS, BEDDING PLANTS, and ROSES in Pots, is now ready. Copies on application.—STEPHEN BROWN, Seed and Nursery Establishment, Sudbury, Suffolk.

THE NEW HORTICULTURAL GARDEN.—Persons wishing to have specimens of their Works placed for Exhibition in the New Garden at Kensington Gore should now forward particulars of the class of articles they wish to exhibit, and the space required, that the Council of the Horticultural Society may decide whether the articles proposed to be exhibited will be appropriate to the Garden, and whether space can be found.

No space will be allotted to articles which it is proposed to remove at the end of a few months.

No charge will be made for space.

The name of the Exhibitor will be affixed to each article.

Space will probably be found for objects IN CEMENTS, such as Edgings, Balustrades, Vases, Statues—IN TERRA COTTA, such as ornaments for Spandrils, Edgings, Balustrades, Vases—IN BRONZE AND IRON, such as Vases, Statues, Seats, Trellis work—IN STONE AND MARBLE, such as Statues, Vases, Edgings, for fountains; coloured varieties for pavements—IN CHINA, such as Vases, Jardinières—ENCAUSTIC TILES.

SLATES of large size and peculiar quality for Greenhouse walks.

Proprietors who may wish to exhibit specimens of their quarries will be able to exhibit such in the shape of pedestals, &c.

Letters to be addressed to the Assistant-Secretary, Horticultural Society, 8, St. Martin's Place, London, W.C.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY
BEING ABOUT TO RESUME THE
IMPORTATION OF SEEDS AND PLANTS
by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. A knowledge of Spanish or Portuguese would be desirable. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, MAY 5, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	May 7—	Entomological	8 P.M.
TUESDAY,	— 8—	Horticultural (Fruit Committee) at St. Martin's Place	3 P.M.
WEDNESDAY,	— 9—	Microscopical	8 P.M.
THURSDAY,	— 10—	Horticultural (Floral Committee) at St. Martin's Place	2 P.M.

A CIRCULAR letter from Manchester announces the formation of a new association to be called the MANCHESTER FIELD-NATURALISTS' SOCIETY, the object of which is to provide those residents in and about Manchester, who possess a taste for Natural History, with frequent opportunities of social intercourse; thus bringing together persons of congenial spirit, and encouraging the arts and sciences that have immediate relation to the works of Nature. The plan seems to have been commenced with a spirit which promises success, above 200 members having already joined the Society.

From a report published by the *Manchester Courier* we learn that the association has already held its first meeting:—

On Wednesday evening the inaugural meeting was held at the Athenæum, and was numerously attended. In the library were displayed rare and beautiful objects in natural history, including a fine collection of British Mosses, supplied by Mr. HOLLAND, a member of the Society. There was also an extensive collection of insects, lent by Mr. JOHN WATSON, of Plymouth Grove. Cases of birds were there, sent by Mr. CARTER, of Lower Mosley Street, and prepared by the late DAVID DYSON, and EDWARD JACQUES, of the Medical School. These specimens are described as being of much beauty and rarity. The walls were decorated with a great number of preserved flowers and plants, supplied by Mr. GRINDON and other botanists; there was also a beautiful display of the flowers of forest trees, from the neighbourhood of Hazel Grove. Microscopes were furnished by Mr. THOMAS TURNER, Mr. DANCER, and others; and included two fine polarising instruments. An aquarium was filled by Mr. STRANGE. The tables received their finishing touches of beauty from the vases of fresh and elegant flowers supplied by Mr. YATES.

Amongst the company present were J. A. TURNER, Esq., M.P.; Mr. THOMAS TURNER, M.R.C.S.; Mr. JAMES PERCIVAL, President of the Lancashire Botanical Societies; Mr. JOHN SHAW, of Eccles, a working man, described as an extremely clever and original botanist, and a considerable number of other students of natural history, both ladies and gentlemen. The card of membership, designed by Mr. J. NAYSMITH—depicting a beau-

tiful sylvan scene—has been much admired, and with justice, for it is really a charming bit of art.

Mr. THOMAS TURNER, F.R.C.S., presided, and delivered an inaugural address, in which he adverted at considerable length to the advantages of studying natural history, including geology, entomology, and zoology. The establishment of the Field-Naturalists' Society, he said, was an entirely new idea, there being no institution of the kind previously in the United Kingdom. The intention was to afford an opportunity for the study of natural history, not simply from books or plates, or even from museums, but in nature's own haunts, in the fields and the forests, where she loved to be studied, and there to see the living plant and the living animal in their natural habitats and under the circumstances of their natural instincts. The suggester of the association was Mr. LEO H. GRINDON, whose "Manchester Flora" and "Walks and Wildflowers" were works too well known to require recommendation. The objects of the Society were threefold. First, to take excursions into the country at appointed periods, to study wild flowers and wild animals, ponds and their contents, living or dead; secondly, to hold during the winter season, when all nature out of doors was in a state of hybernation, meetings for conversation and for examining various objects of natural history which would be brought under observation, with the aid of the microscope and by other means; and, thirdly, the delivery of lectures on interesting branches of natural history. Mr. TURNER mentioned that he had recently, with the aid of Mr. STAINER, delivered a course of lectures on natural history to the deaf and dumb, in John Dalton Street, and the delight with which the knowledge had been received showed that there was an instinctive love in the human heart for the study of nature. He urged his auditors to become members of this Society, believing they would obtain thereby intellectual, recreative, and sanitary advantages. The Society was intended as much for those who knew nothing of botany as for those who were adepts in the science. The ladies would of course find a pleasure in becoming members, and botanical studies would afford agreeable occupation for their leisure. Delightful social meetings would result from this Society. The real enjoyments of life did not consist in the pleasures of the table, or in attending concerts and theatres; these amusements did not satisfy the mind and improve the heart, as was the case when Nature and science were studied from a right motive.

The rules of the Society having been read by Mr. GRINDON, and adopted, the Earl of ELLESMERE was appointed president, and an acting committee formed out of residents in the city.

Mr. J. A. TURNER, M.P., expressed his great admiration of the objects of the Society, and spoke from personal experience of the pleasures to be derived from a study of natural history. A vote of thanks to the chairman for his inaugural address was carried unanimously, and the remainder of the evening was spent in the inspection of specimens and conversation. In short the whole affair seems to have been so judiciously planned and successfully executed, that the formation of the Society appears to be certain.

Such associations are calculated to do real social good. They bring together persons who might not otherwise meet on terms approaching equality, and greatly promote good feeling. On this occasion we observe, and with very great satisfaction, that "a working man," Mr. JOHN SHAW of Eccles, who appears to have local reputation as a Botanist, was present as a member. We hail such a circumstance as a sign of excellent omen. Working men too seldom join such societies, either because they cannot afford the expense, or because of some foolish exclusiveness on the part of the founders of the associations. Nothing can be more unwise than their exclusion, nothing more judicious than their admission; and if the Manchester Field-Naturalists' Society will take our advice they will do all they fairly can to encourage their admission. He who, from his love for Natural History, will pay half a guinea a year and give up his time, which is more money, to "frequent" excursions, is not to be confounded with that lower stratum of society whose home is the public-house and whose field is the skittle-ground. Manchester has produced a HOBSON, a working man, one of the most skilful muscologists of his day, whose collections were sold and may still be found among the natural history shelves of many an English library; there is no reason why his example should not be followed by hundreds of others, if the gentle hand of encouragement be held out to them, and when this is done it will be discovered that political harangues, the curse of working men, will have lost their attractions. The quiet study of natural history always produces a distaste for the tempting but dangerous stimulants offered by the adventurers who drive a dishonest trade by ranting about what is called the oppression exercised by every rank above that of their listeners.

WE have received from Messrs. SANG & SONS what appears to be a convenient INSTRUMENT FOR MEASURING THE HEIGHT OF TREES and other erect objects. Everybody living in the country must have occasionally felt the want of a portable instrument for the purpose. We are therefore glad to announce the invention of one which is to be called the *Dendrometer*, and which is offered at a very reasonable price.

There is at first however a slight difficulty in using the instrument. A good object for the first trial is the gable of a house or a tall erect pole, with the height of the observer's eye marked distinctly on it. It will be easier *at first* to bring the reflection of the top of such an object and the mark together, than it would be with the more vague outline of the summit of a tree.

A similar instrument is described in the *Gardeners' Magazine*, vol. xvi. p. 190, under the name of "Hypsometer, (measure of height), an instrument invented by JOHN SANG, Esq., Land Surveyor, for taking the height of trees, buildings, and other objects." The principle is simple, being exactly the same as that of the sextant, which of course would answer the same purpose in the hands of a person accustomed to the use of that instrument. It is a well-known fact that when a ray of light is reflected from any surface, the angle of reflection, as it is called, is equal to the angle of incidence; also that when an object, as the top of a tree, is seen at an angle of 45°, the distance from the stem is exactly equal to the height of the tree above a point on the stem level with the height of the eye. The horizontal line from the eye to the tree, and the perpendicular line from that to the top form the base and perpendicular of a right-angled triangle, whilst a line from the top of the tree to the eye is the hypothenuse, and when the angle which the latter makes with the sides is 45°, the base and perpendicular are of equal lengths. By means of the above convenient instrument the distance which subtends an angle of 45° is readily ascertained, and consequently the height of the tree.

The instrument is in the form of a small cylindrical box, about $1\frac{1}{4}$ inch across, and $\frac{3}{4}$ inch deep. There is a small round sight-hole in the side, and two rectangular openings, one of them larger than the other, and which should be held uppermost in using the instrument. In the interior, two small mirrors are fixed perpendicular to the bottom of the box, but their surfaces are inclined to each other at a particular angle. From the upper part of one of them, however, the silvering is removed, so that an object—for instance, a white cord attached to the stem of a tree—can be seen directly through that part and the smaller opening on applying the eye to the sight hole; at the same time rays of light are admitted to the wholly silvered piece of glass, and are reflected to the adjoining one, and again from the silvered portion of it to the eye; and so will be likewise the image of any object to which the upper and larger opening is presented. Now when objects are seen by reflection from two mirrors, the angular distance of the object and its image is double the inclination of the mirrors. In the instrument under consideration, the mirrors are placed at an angle of $22\frac{1}{2}$°, and consequently the object and its image subtend an angle of 45°. Therefore when the top of a tree coincides by reflection with a mark on the stem, at the height of the eye, it must be seen at an angle of 45°; and the height of the tree above the mark is then equal to the horizontal distance from the latter to where the instrument is held. If the observer is nearer than this to the tree, the image of the top of the latter will appear above the mark at the height of the eye on the stem; if farther, the image will be lower than the mark. At a considerable distance further, the top of an object will be seen on the ground a few yards before the observer. Some practice is necessary to enable those that have not been accustomed to reflecting instruments to bring the image to coincide with a mark seen in a direct line. A straight perpendicular pole is best. If the instrument is not held properly the pole will appear in an oblique position; but after a few trials the instrument will be readily held so as to give the pole an upright appearance close to the line which separates the reflected and transparent views. We have tried the instrument and find it perfectly correct, and heights may be exactly taken by it with careful observation, or at all events within 2 or 3 inches, with very little trouble.

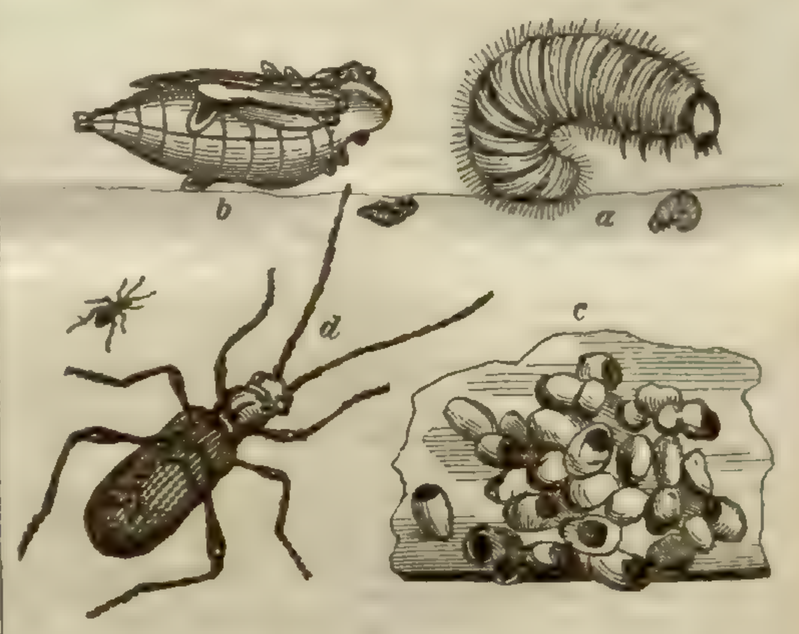
IN another column will be found the report made to the Horticultural Society by their Council at the Anniversary held on Tuesday last. Next week we shall have the satisfaction of laying before our readers a COLOURED ENGRAVING of Mr. NESFIELD's plan of the Garden, which was produced at the Meeting, and we confidently anticipate universal admiration of the beautiful design. It is understood that another fortnight will complete the earthworks which the Royal Commissioners are executing, immediately after which the Society's operations will commence. From information that has reached us we believe that the estimates for the whole operation are nearly finished, and that they have proved entirely satisfactory. Means will be very shortly taken to admit Fellows of the Society and their friends to view the ground, which however is at present scarcely passable except in fine weather.

ENTOMOLOGY.

THE HERBARIUM BEETLE.

THERE is a class of persons who ingeniously test every production both of Nature and Art by its *cui bono* character, and who are wonderfully clever in detecting the final causes of everything. What for instance could be the object of the Creator in forming such disgusting insects as the bug or the louse? Their ready answer suggests that it was for the purpose of inducing a greater degree of cleanliness in mankind. Such persons would doubtless consider that the little beetles which infest neglected herbariums, the dried plants in which are gnawed to pieces by their larvæ, were created with the object of inducing the possessors of such collections of plants to look over them at stated intervals, and so keep up in their minds a knowledge of the species of plants of which they might be in possession of dried specimens.

Leaving such ingenious theorists to their own fancies, we shall here describe the different states of the insect last mentioned, as they may not possibly be known to many of our readers. The perfect insect itself is a rather elegantly shaped little beetle with long antennæ and legs, the thighs being thickened at the tips, and which belongs to the family *Ptinidæ*, and from its destructive habits has been technically named *Ptinus fur*, or the thief. Linnæus says of it, "*Habitat in musæis pessimus, destruens Herbaria, insecta, aves, pelles, utensilia, culinaria, imo pulverem Tabaci: non pellitur ambrosiacis, occiditur arsenico et allumine.*" It is about one-



sixth of an inch in length, of a ferruginous brown colour, clothed with very short pubescence, the head ferruginous, eyes black, thorax with four transverse fascicules of very short hairs, the back channelled, the scutellum cinereous, the elytra rather dusky and marked in fine fresh specimens with two interrupted white fasciæ, one a little bent towards the base and the other near the apex; the disc crenate-striate, legs ferruginous as well as the antennæ, which latter are more elongate in the males than in the females. It is very variable both in size and colour, being dark or redder brown or testaceous, and the male is more elongate and slender than the female.

It is very abundant in old houses at the latter end of summer, and in the autumn we have found the perfect beetles creeping about the room in which our English herbarium is placed. They had doubtless arrived at the perfect state but a short time previously, and were wandering in search of their partners.

The young grubs hatched from the eggs deposited by the female insect are found in and about the stems and buds of the dried plants upon which they feed. They are very small, white, slightly downy, and of a soft fleshy consistence, with the body curved like that of the larva of the cockchaffer, which they greatly resemble, the hind extremity of the body being bent underneath the breast, so that the insect forms nearly a circle and generally lies upon its side. It is however furnished with six short-jointed legs, placed in pairs on the three segments immediately following the head, the hind part of the body being swollen, fleshy, and transversely wrinkled, and destitute of the terminal prolegs which assist many coleopterous larvæ to creep along with greater ease. The head is rounded and rather horny, with the mouth placed on the lower part. It is furnished with short jointed antennæ inserted just above the sides of the mouth, which is armed with a pair of strong horny jaws, with obtuse teeth, and two broad masticating surfaces on the inner edge. It has nine pairs of breathing pores, the first placed in the fold between the two

segments behind the head and the others in the abdominal segments.

It is during this period of its existence that the main injury is effected to the objects upon which it feeds, the larva especially gnawing those parts of the specimens where the buds occur, or where the stems of the leaves originate, or where there is a greater amount of vegetable matter than is presented by the leaves themselves.

When the larvæ have acquired their full size they make globose cocoons for themselves, composed of particles of the substances on which they have fed; these are very smooth in the inside, having a fine layer of silk, but on the outside the particles of materials are worked into the structure. In the accompanying woodcut a number of these cocoons are represented which had been formed by the larvæ out of the gnawings of the soft wood of a box which had been destroyed by considerable numbers of them.

Within these cocoons the larvæ become inactive pupæ, having the wings, antennæ, and legs of the future beetle enclosed in separate sheaths and folded upon the breast.

De Geer states that it was on August 12 that one of the larvæ underwent its change to the pupa state, and that the perfect insect had made its appearance before the end of the month. In November, 1836, the late Professor Audouin communicated to the Entomological Society of France a series of observations on a number of the larvæ of this insect which had been found to infest the magazines of meal and flour at Versailles to an alarming extent, the larvæ forming galleries in those materials as well as coating their cocoons with them.

The best means of destroying these destructive insects in herbariums is probably that mentioned by Linnæus above; namely, washing the plants with a weak solution of corrosive sublimate or arsenic in spirit.

The figures in the accompanying woodcut represent —Fig. *a*, the larva; *b*, the pupa; *c*, a mass of the cocoons spun by the larvæ for their transformations; and *d*, the perfect insect, all magnified.

In addition to the Ptinus fur, we learn from competent authority that another beetle belonging to the same family, namely, Anobium paniceum, is a still more obnoxious enemy to the herbarium, and that another species of the same family, A. castaneum? is also occasionally destructive to such collections. *J. O. W.*

MYCOLOGY.—No. XVII.

ÆTHALIUM SEPTICUM, *Fr.*—One of the most curious discoveries which has lately been made in the vegetable world is that of the curious phenomena exhibited by the spores and spawn of this and some nearly allied Fungi. So curious indeed are they and anomalous that their talented discoverer De Bary has been induced in the exuberance of his surprise to deny the title of the plants in question to be ranked as vegetables at all, thereby in our view impairing rather than enhancing the brilliancy of his discovery.

It is well known that the spores of Fungi in general germinate by the simultaneous elongation of a portion of the two membranes of which their walls are composed, or by the protrusion of the second coat through the first, either by a positive rupture, or through an already existing aperture. Now there is a large group of Fungi in the greater part of which the germination takes place in a totally different manner, though in a few species belonging clearly to precisely the same group it follows the more ordinary course. These Fungi when old contain a mass of dust-like spores and threads very much after the fashion of the puff-balls with which they have been long associated. They differ, however, greatly in their young state, when instead of exhibiting like the puffballs a cellular mass, with a distinct though concealed hymenium, they consist of apparently structureless slimy threads forming collectively a gelatinous substance, which ultimately gives rise to one or more sacs containing spores and threads disposed in various ways.

The subject of our present illustration is one of the largest of the group, being often some inches across, and so common in hothouses upon tan or other substances that its evolution may be examined with great facility. If a small portion of the yellow gelatinous spawn be carefully removed and placed in a watch glass with a little water, it will be seen to throw out threads in various directions, many of which become incorporated with each other so as to form a network. After the threads however are thrown out some of them are frequently drawn back into the original mass, exactly after the fashion of the peculiar substance called Sarcode by Dujardin, of which the minute Infusorial animals called Amœba are composed. This substance after a time forms a mass, containing imperfect cavities filled up with dark closely compacted spores, the outer surface of the general mass consisting of scurfy membranous fragments felted together into a thin brittle imperfect membrane covering the innumerable spores, which when exposed fly about everywhere like soot.

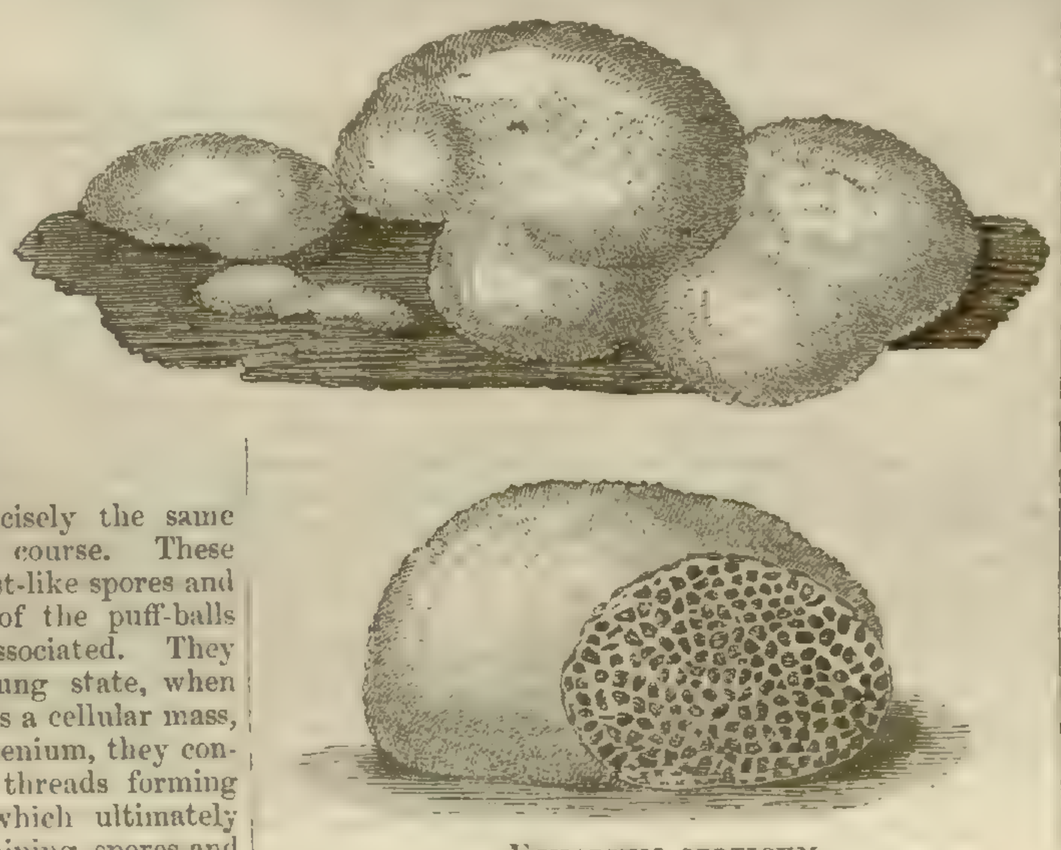
If these spores are placed in water, the outer coat soon bursts and a little body, resembling the spores of some Algæ or the Infusorial genus *Euglena* breaks forth, furnished with one or sometimes two long thread-like appendages at one extremity, with the aid of which it moves about. After a time this body puts out threads like the spawn above described, when it closely resembles an *Amæba*, and then gives rise to the ordinary spawn of the Fungus.

Now it would be as unreasonable to consider Algæ animals because of the similarity of their spores and spermatozoids to Infusoria, as it is to set down *Æthalium* and its allies as animals for similar reason, or because the substance of which they principally consist, *Sarcode*, has been hitherto detected only in animals. The substance of which the walls of vegetable cells is principally composed, and which turns blue when treated with sulphuric acid and iodine, and known under the name of cellulose, was once supposed to be confined to vegetables, but now it is known to exist in many undoubted animal productions. Such productions are not to be considered vegetables merely on this account.

As regards the allies of *Æthalium*, it must be remembered that some germinate like other Fungi, while some have a distinct root, like *Lycoperdon*. It is very possible, moreover, that all may occasionally exhibit both forms of germination, and some of them produce their fruit in distinct sacs, in which the spores are either attached to a fixed point, or are freely generated from the contents of the sacs, as in a vast variety of Fungi.

On the whole, then, interesting as the observations of De Bary may be in themselves, they do not, we think, justify him in removing these productions from the vegetable to the animal kingdom.

Æthalium septicum as produced in stoves is, we believe, always yellow; but on old stumps in woods it assumes a variety of colours as cinnamon, rufous, and violet. It is a great nuisance in hothouses, and we believe may best be destroyed by dusting the plant when young with quick lime. No time, however, must be lost when the spawn appears, as its evolution is often extremely rapid. *M. J. B.**



ÆTHALIUM SEPTICUM.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

AN ESSAY ON THE CULTURE OF THE CHRYSANTHEMUM.

(READ BEFORE THE SOUTH METROPOLITAN CHRYSANTHEMUM SOCIETY, APRIL 23.)

IN the cultivation and propagation of large-flowered varieties as specimen plants on single stems in 11-inch pots for exhibition, my practice is as follows:—

As soon in November as suckers are sufficiently strong I select the one which is most vigorous from a healthy plant, and remove all eyes with a sharp knife so as to prevent the plants from producing suckers till they have completed their flowering season. I then insert in a 3-inch pot each sucker singly, using the following compost:—A little rotten dung and some nice mellow loam, with a good sprinkling of sharp silver sand, draining the pots with small clean crocks. They are then placed in a cold frame or on the shelf of a greenhouse, where no cold draughts can affect them while rooting.

If in the latter part of December you find that they are becoming established, admit plenty of air when the weather is mild, in order to prevent weakly growth, and thus cause the plants to be short-jointed. In January choose the strongest of those plants that are well rooted, and pot them into large sized or 5-inch pots in the compost just mentioned, and encourage growth as much as the season will permit, but take care that the vigour and sturdiness of the plant are in proportion to its growth. One point in growing plants for exhibition I would impress upon beginners, and that is, do not subject them to bottom or top-heat with the view of pushing on their growth; if frost is just excluded that is enough. By the middle of February, if all has gone on well, the plants will be sufficiently strong to be stopped; the number of breaks or shoots you desire to ensure must depend on the vigour of your plants (and here the operator must use his own judgment), but I would advise from six to seven eyes to be left; should more be allowed to remain the chances are that the lower eyes will not emit shoots, or if they do they will break weakly. Remember that in proportion to the attention bestowed on training in the earlier stages of growth, so will be the result as regards future growth and perfection of flowers. Some varieties of Chrysanthemum differ from others in constitution, a knowledge of which can only be acquired by close observation; some, for instance, will bear several degrees of frost with impunity, while others will not stand frost at all. The wisest plan is, however, not to subject them to it. When giving air observe the quarter from which the wind blows, as an easterly or north-easterly wind, if allowed to have free access to the plants, will prove injurious.

If in March you find that the plants have emitted shoots freely from all the eyes you left at the period of stopping, you may at once repot them into 32-size pots, but do not do so unless they have pushed shoots regularly from every eye; sometimes the lower eyes will not break so early as the upper ones, therefore in order to induce a uniform emission of shoots have recourse to the simple plan of gently bending the heads of the stem downwards, fixing it in that position by means of a peg, returning it to its original position as soon as your object is attained. The plants will require the protection of glass till the middle of May, but remove the lights on all favourable occasions previous to that time, or you will not ensure robust growth, and no after treatment will make up for this neglect. In potting at this season use a small quantity of mellow cowdung, but as worms generate abundantly in this manure they should be carefully picked out before incorporating it with the rest of the compost. Should mildew make its appearance slightly dust with powdered sulphur. Green-fly should also be watched for; it feeds greedily on the new or sappy portion of the wood, and sadly cripples the progress of the plants if not speedily destroyed by fumigating with tobacco.

In April if previous directions have been attended to the plants will be assuming a bushy habit and daily exciting interest. The way in which they are to be trained must therefore now engage attention; for on this no mean portion of the beauty of a specimen depends, and in order that you may the better preserve your plants in good condition. As regards foliage do not let them suffer from drought, but on the other hand do not water too copiously; both extremes soon change the colour of the foliage from green to yellow, and decayed leaves are the result. In training for the first time fix a stick to the main stem; to this loop your side shoots, and then proceed to bend some of them down to the edge of the pot; this had better be done gradually at two or three different times, as they require to be tenderly handled, the young wood at this stage being brittle and apt to snap. When you have completed this operation, and your plants are thoroughly rooted in the pots they now occupy, you may stop all or such shoots as you may consider to require it; the length at which they are to be left must be in proportion to their strength. Do not let the plants be cramped for want of top room or they will become spindling and long-jointed. On fine mornings they may now be syringed with clean water, this will free the foliage from any dirt that may have settled on; but take care that your plants are perfectly dry before you shut them up for the night, for fear frost should find its way to them.

As soon in May as you discover the break caused by the last stopping shift into 8-inch pots, selecting for the purpose the healthiest and strongest of your plants. For this potting let your soil consist of as much turfy loam as possible; mix it with the formerly mentioned ingredients, also pound a quantity of oyster shells and mix them with the soil; they will assist in keeping it porous and supply food to the plants, as they contain a good deal of the superphosphate of lime; likewise use a little charcoal in your drainage—it helps to preserve the foliage in a healthy green state. After potting, if the weather will permit, you may move the plants from under glass to a sheltered spot in the garden; towards the latter end of the month shift them to a more exposed situation; but in doing this be sure you place a slate or something of the kind under the pots to prevent worms from entering it; for should they gain admission they would destroy the activity of the soil by clogging up the drainage.

In June the plants if properly treated will be growing fast; stop them again if their strength will allow of it; place them at such a distance apart as will admit a free circulation of air all round them; keep them constantly turned so as to prevent one-sidedness of growth; I aim at training the plants in the form of a pyramid. As June is generally a very hot month drop the pots in which the plants are growing in to one a size larger; that will check the rapid evaporation which otherwise would take place from the soil. The Chrysanthemum being a gross feeder and fond of plenty of moisture, on no account let it suffer for want of it or else you will mar the beauty of your plants; in very hot weather let the ground round them be watered with a fine rose, by which means a genial moisture will ascend and refresh the plants. You may also syringe them night and morning, which will prevent the

* De Bary's Memoir will be found in Siebold & Kolliker's Journal, Vol. X., Part 1. There is an abstract of it in Taylor's Annals and Magazine of Natural History, April, 1860.

attack of thrip; attend as hitherto to training in order to prevent the shoots from becoming overcrowded.

The month of July having arrived finally shift into 11-inch pots; use a small quantity of sharp sandy grit with the soil this time and add also strong rich manure with other stimulants that may afford a vigorous growth. When the plants have been some time inured to their final shift, and the roots begun to expose themselves on the surface of the pots, supply manure water. During the hot season I use cow manure for mixing with the water on account of its cooling and nourishing properties; and in autumn sheep's dung and soot, which possess very stimulating powers, producing when used judiciously healthy and beautifully robust growth.

August.—This is generally a very hot month. Take care the plants do not flag for want of water, examine them twice a day at least; also attend to the training of the shoots to prevent crowding.

September.—This month is more favourable to the generation of sap than any month of the year on account of the warm humid atmosphere which prevails; and that growth made at this may be encouraged, supply the plants liberally with manure-water as previously recommended.

It will now be time to select the late-flowering varieties and place them under a south wall, as that will forward their flowering. But look sharply after earwigs, which now make their appearance and commence the work of destruction among the points of the shoots; use every means in your power for their extirpation; you will best discover them after dark by searching for them with a lighted candle or bull's-eye lantern. When the flower buds appear only let each lateral shoot mature a well-formed bud; remove the remainder. If the early-flowering sorts are likely to be too forward, do not place them under glass till the weather compels you, but form a temporary shelter for them from slight frost and rain. It should not be a south aspect.

The following 12 varieties I have found to be in every way best suited for pot culture, as they all possess an excellent habit and maintain their foliage.

Annie Salter	Christine	Progne
Arigene	Defiance	Pilot
Alboni	Prince Albert	Vesta
Chevalier Dumage	Golding Christine	Phidias

Robert Oubridge, Gardener to J. Foster, Esq., Stamford Hill.

Home Correspondence.

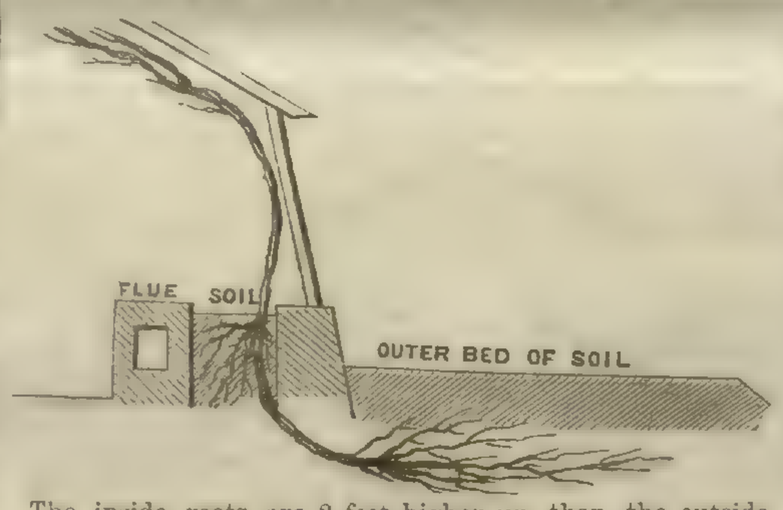
Packing Late-keeping Apples and Pears in Bran.—I am glad that Mr. Bissett has called attention to the danger of using bran in large quantities for packing late Apples and Pears for keeping purposes. If used in deep barrels or boxes I have no doubt that mustiness would taken place, especially in damp fruit rooms, and that the flavour of the fruit might be impaired. I believe I distinctly stated that I used the bran in shallow boxes only, one layer of Apples or Pears being packed together. The bran I used last October in fruit boxes is now as sweet as when first put in. Some late Pears from a S.E. wall were packed in it, after being frozen as hard as bullets by the severe frost on the 21st October. The Winter Nelis was so long after its season in getting melting and ripe that I thought it must have been some other variety, but when ripe was well flavoured, and the bran seemed to have prevented the frost from injuring the fruit. Straw, Moss, brown paper, and many other substances are bad for packing fruit in, and in my opinion the worst of all is sawdust unless it is taken from some particular hard inodorous wood. Bran I have found an excellent light, clean, and elastic material for packing Peaches, Nectarines, Apricots, and Grapes to go long distances. I wrap the fruit singly in tissue paper, and any quantity of Peaches, Nectarines can be sent safely. Grapes are best sent in paper bags in single layers, and the bran run in between the layers of bags to keep all firm. The bran I use is made from Wheat, and is well sifted to get all the small heavy particles of the husks removed. *William Tillery, Welbeck.*

Rust on Grapes.—From often having seen inquiries as to the cause of this accident (if I may so call it) to the anxious fruit grower, I am induced to offer an opinion upon the subject and to give a caution which if attended to will save that bitter feeling of disappointment which arises in the breasts of those who see in that ugly mark upon their fruit all their hopes dispelled. Rust proceeds from a sudden transition from heat to cold acting upon the young and tender skin of the Grapes, which is most in danger from its setting up till the time it is as large as an early Pea (dry seed); but it is not cold wind that does it except any one is so imprudent as to give front air at the season of the year to early Grapes; but it does proceed from the vapour caused by pouring water upon or syringing the flues or pipes while the young Grapes are in that tender stage of growth. My caution is, therefore, during the time the house is in bloom and until the Grapes are as big as Peas never wet the flues, pipes, or floors, and if plants are obliged to be in the house use as little water as possible; I will then guarantee no rust will be seen. If the pipes or flues are rained upon by the glazing being defective rust will occur; and if sulphur is painted on the pipes or flues while the Grapes are in bloom or very young the very worst sort of rust will appear; but if any one wishes to avoid it they must avoid steam as they would a pestilence. These remarks I hope will help to keep others off the rock upon which I have been wrecked. *C. E. W.*

Azalea Iveryana.—I have a very large plant of this at present beautifully in bloom. Its height is 4 feet 6 inches, width 4 feet 3 inches, and it measures 3 feet 6 inches through. The plant has (or was originally tied to) one front, and is one complete mass of very fine blooms, with only here and there a small piece of foliage visible. Have any of your correspondents a specimen of it of larger dimensions? *R. W. C., Stourbridge.*

Effects of the Winter.—Our kitchen gardens in this neighbourhood are nearly empty; Broccolis with scarcely an exception are all killed, both hardy and tender. Out of a patch of the Frogmore Protecting, consisting of about 200, we have only one left. Cottagers' Kale, Brussels Sprouts, and Scotch Kale have stood without injury. The former is now proving invaluable—Cauliflower, Lettuce, and Cabbage plants are very much cut up. Bay trees are now quite brown. Laurustinus very much injured, all the bloom being killed; Cupressus Lawsoniana uninjured; Wellingtonia is browned, but the young shoots are beginning to look green again; Thuja Lobbii is uninjured. Of Cedrus Deodara, whose young shoots were all killed last spring, the late growth has stood without injury. The choicer kinds of Pinus will not grow here; we are within a foot of the surface of the Stourbridge clay. *R. W. C., Stourbridge.*——My grounds are on a lofty hill sloping south and north. More injury was done on the south than on the north side. Leaders of Cryptomeria are killed back 2 feet. Pinus excelsa is much damaged. Cupressus funebris and C. elegans are destroyed on the south side. Of shrubs, Berberis Darwinii, double blossom Furze, and Ceanothus rigidus, are partially killed; and Pinsapo, Pinus insignis, and Abies Douglasii, are uninjured. All the young plants of Pampas Grass are killed, as are also all the Cabbage tribe. Laurels, Laurustinus, and Rhododendrons have not even changed colour. Strawberry plants are very much damaged; Hollyhocks generally are destroyed. At this time, April 22, Apricots have set abundantly, and the Peach blossom is falling healthily. The extreme cold of the week does not appear to have injured them. *E. W. C., Highwood Hill, Hendon.*

Vine Growing.—It may be that the plan of which the following is a sketch may have been often acted upon before; but I have neither seen nor heard of it. About four years ago my gardener, at a residence of mine in Denbighshire, was in the habit of growing his Cucumbers in boxes placed before the windows of the Vinery. Into some of these boxes, which had touched the sides of the Vines, he observed that little rootlets



The inside roots are 2 feet higher up than the outside ones.

had penetrated, and it occurred to him that it would be a means of strengthening the Vines, which had suffered from the neglect of a former tenant, if they had two sets of roots. Having had good reason to confide in his opinions, I allowed him at a very trifling expense to remove the front flue backwards, and to make a narrow bed of soil next the front windows. The most complete success has attended the plan, and I know of no Vinery, slightly heated, more productive; so much so, that I have now adopted the plan in my Vinery at this place. Cucumbers are grown in the inside bed, and some fresh soil each year is carefully introduced, and occasionally dung-water. If there is no novelty in this take no notice of it. *North Wales.*

The May Queen Strawberry.—About a year ago I received some plants of this Strawberry from Mr. Nicholson, of Egglescliffe, in Yorkshire. I planted them in the open border, but did not find them come into fruit earlier than other sorts, and the size of the berries was small. This year I cultivated a quantity for early forcing, for which I think they are admirably adapted. My crop is just over, it was a most abundant one; the size of the berries was much larger than in the open air, and the flavour was excellent. *R. Hanbury, Poles, Ware, April 27.*

Lycopods out of doors.—To-day one of my young men brought me the enclosed Lycopodiums, which he found under an Portugal Laurel. On examining the spot I found scores of plants of it growing amongst the Grass and in a fine healthy state. To me it looks like L. brasiliense, but I am not aware that it would withstand our winters without protection. If not that variety, can you favour me with its name? *Thos. Jones, Ribston Park, Wetherby, Yorkshire.* [It is Lycopodium denticulatum.]

Societies.

Horticultural: *May* 1. *Anniversary.*—As had been previously announced this meeting took place in the Lecture Theatre of the Museum of Science and Art, Kensington Gore, by permission of the Right Hon. the Lord President of the Council, for the purpose of electing Council and officers for the ensuing year. The Earl of Ducie having taken the chair and named Mr. Ingram, of the Royal Gardens, Frogmore, and Mr. C. B. Warner, of Hoddesdon, to be scrutineers of the approaching ballot, called upon the secretary to read the following annual report from the Council to the meeting:—

When the Society last assembled on an occasion of the present kind, it was the unpleasant duty of the Council to announce that their attempts at improving the financial position of the Society had been attended by no success. They had to report an income, which, though reviving, was still so inadequate that the liabilities had increased within the year by above 600*l.*, and that the necessity of selling the house in Regent Street, and all that it contained, in order to reduce the debt bearing interest, which in the beginning of 1859 amounted to nearly 8000*l.*, exclusive of above 2700*l.* of simple contract debts, had become urgent. Such being the result of the most strenuous efforts on the part of the Council to revive the Society, it became evident that retrenchment in every direction had become so inevitable, that it was proposed to bring the expenditure down if possible to 1800*l.* a year, of which Chiswick was to receive 1300*l.*: and if this has not been wholly effected, it has been because the sudden alteration in the prospects of the Society rendered it indispensable to engage in expenses which would have been needless had circumstances remained as they were. Great retrenchment in a public body was, moreover, too dangerous a course to be permanently adopted. It could only be effected by inaction. The income at the disposal of the Council was placed in their hands for the purpose of actively promoting the interests of the Fellows, and was not likely to be maintained unless that purpose, which was incompatible with excessive economy, was fulfilled. The Council, therefore, while reducing expenditure in every direction as a temporary expedient, anxiously occupied themselves with the task of discovering in what way the income of the Society might be so increased as to enable them again to venture upon measures more conducive to its general interests. A Garden accessible without trouble or expense, in which the progress of Horticulture should be shown, not merely by what it might itself contain, but by the results of the advancing skill of others exhibited within it, was clearly indispensable. The time had passed when monthly meetings in a small room in a London street would satisfy the expectations of the public. It was necessary to exhibit gardening on a great scale, and on its own ground. The Garden at Chiswick was no longer able to supply that want. Inaccessibility, according to modern notions, and original faults of construction, had rendered it useless for exhibition purposes, and a large annual pecuniary loss. Nevertheless the principal income of the Society from the year 1832 had been derived from Chiswick, either directly or indirectly, and the Council felt persuaded that if some other garden more favourably placed, and constructed with all the advantages of modern skill, could be obtained, the utility and prosperity of the Society would rise higher than ever. While endeavouring to find a site near London fit for this purpose, the Council learned that her Majesty's Commissioners for the Exhibition of 1851 were contemplating the appropriation of the central part of their land at South Kensington as a Garden, to be surrounded by Italian arcades. On this becoming known, application was immediately made for the part so enclosed to be used by the Society as a Town Garden for shows and promenades. His Royal Highness the Prince Consort supported the application as President of the Society; and at a meeting held at Buckingham Palace on June 27, the Prince announced to the Council that her Majesty's Commissioners were ready to grant a lease of 20 acres at Kensington Gore upon certain conditions, the more important of which were the following:—The Commissioners to expend 50,000*l.* upon a highly decorated Italian Arcade, and certain costly earthworks required as the foundation of a Garden. The Commissioners to claim no rent until the expenses of the Society—which include interest upon money borrowed—shall have been defrayed; all income beyond such expenses to be apportioned in the manner following; that is to say, interest to be paid by the Society on the 50,000*l.* borrowed by the Commissioners, and then, as rent, one moiety of any surplus that may have arisen during each year. The Commissioners to grant the Society a lease of the land for 31 years. The amount of annual expenditure and the mode of general management to be determined by a joint Committee consisting of six members, of whom three shall be named by the Commissioners. The Society to lay out a sum equal to that of the Commissioners in the formation of the Garden, one feature of which would be a Conservatory or Winter Garden of considerable extent; and also to provide reasonable facilities for the admission of the public at a low price. The Council could not but feel that such an offer was deserving the favourable consideration of the Society, and they were of opinion that the income to be expected from a place of such magnificence, in the finest situation in London, would justify the acceptance of the terms, if not in their integrity at least in some modified form. They also learned with the highest satisfaction that the Queen had been graciously pleased to signify her Majesty's intention to contribute to the fund that would have to be raised for carrying out the works. The Prince Consort having moreover authorised the Council to state that his Royal Highness took the warmest interest in the arrangement, a general meeting of the Society was held on the 7th July in the rooms of the Society of Arts, when certain tentative sketches for the Garden, and the propositions of her Majesty's Commissioners were submitted to the Fellows for approval. A large number of Fellows assembled on this occasion, the Earl of Ducie, V.P., taking the chair, when the correspondence with the Royal Commissioners was read, the general scheme of the Garden described, and the manner in which the Council contemplated the possibility of raising the sum of 50,000*l.* pointed out. In the course of their report to the meeting the Council showed how great were the advantages of the site proposed. The Garden would be in the immediate neighbourhood of Hyde Park and Kensington Gardens, and in the very centre of a new and rapidly rising town of first-class houses, which bids fair to become one of the most popular and fashionable districts in London. The shape and situation of the ground, which slopes gradually from the North to the South, admitted of the formation of successive terraces on different levels, affording peculiar facilities for effective and ornamental treatment, and was well adapted for the display of sculpture; while a fine Conservatory at the upper end, and a Colonnade extending round it, would afford a promenade of three-quarters of a mile in length, sheltered from heat and cold, wind and wet. The Colonnade would also offer peculiar facilities for the display of Flowers and Fruit on occasions of bad weather, a misfortune which so frequently marred the Chiswick Fêtes. As to the mode of raising 50,000*l.* the Council believed that it might be effected by the issue of a certain number of Life Memberships; but as the success of the undertaking would in some measure depend upon the vigour with which it was prosecuted, and it was of importance that the works should not be delayed if once de

termined on, it would be requisite to obtain the money immediately required for the progress of the works by the issue of debentures, bearing interest at 5 per cent., to be redeemed as the receipts from Life Memberships became available. Donations in aid of the undertaking would at the same time be thankfully accepted by the Council, and they would be prepared to extend to the donors of sums exceeding Twenty Guineas, privileges similar to those possessed by members. After a long and animated discussion, it was finally resolved—

That the meeting generally approved of the plan of gardens at Kensington Gore, and requested the Council to continue their negotiations with the Royal Commissioners, reporting as early as possible to the Fellows of the Society the final proposal of the Commissioners."

This resolution having passed, a letter was placed in the hands of the noble Chairman from Colonel the Honourable Sir C. B. Phipps, her Majesty's private Treasurer, containing the following important communication :—

"BUCKINGHAM PALACE, *July* 7, 1859.

"My Lord,—I have received the commands of her Majesty the Queen, and of his Royal Highness the Prince Consort, to inform you that in the event of the plan being carried out for the establishment of the Garden of the Horticultural Society of London upon the estate at South Kensington, belonging to the Royal Commissioners of the Exhibition of 1851, it is the intention of her Majesty and of his Royal Highness to make donations towards the execution of this undertaking of one thousand pounds (1000*l.*), and five hundred pounds (500*l.*) respectively. It is also the intention of her Majesty, should it be in accordance with the rules of the Society that parents or guardians should purchase Life Memberships for children or persons not yet of age, to place the name of his Royal Highness the Prince of Wales and the younger Princes and Princesses upon the list of Life Members. I have further the pleasure of informing your Lordship that I am authorised by her Royal Highness the Princess Frederic William of Prussia, Princess Royal of England, to announce the intention of her Royal Highness to become likewise a Life Member.—I have the honour to be, my Lord, your Lordship's most obedient humble servant,

"The Earl of Ducie, &c. "C. B. PHIPPS."

Immediately afterwards, Mr. Dilke announced that H.R.H. had further commanded him to say that should the meeting decide on raising money by debentures, The Prince would take debentures to the amount of 1000*l.* It is almost needless to add that this most interesting intelligence was received by the Society with feelings of the deepest gratitude. The Council having renewed their correspondence with the Royal Commissioners for the purpose of obtaining a reconsideration of the points which, in the opinion of the meeting, demanded some alteration, a second general meeting assembled on the 20th July The Council then explained what progress had been made in the negotiations. The Commissioners had agreed to add to the arrangements with the Society stipulations to the following effect:—Upon the Society giving two years' notice previous to the expiration of the lease the lease to be renewed for a further period of 31 years upon the same condition as to rent, &c., as already proposed. The Commissioners, however, to reserve to themselves a pewer to decline to renew the lease, in which case they would take upon themselves the responsibility of any Debentures that might be outstanding at the expiration of 31 years, to any extent not exceeding a *maximum* of 20,000*l.* But the Commissioners required the Society to devote in each year not less than 50 per cent. of their surplus balance to paying off outstanding Debentures. And in the event of the Society being unable for any five consecutive years to pay interest on the 50,000*l.* to be borrowed by the Commissioners, then the Commissioners to have the right of re-entry without any payment of compensation. On this occasion the two following resolutions closed the debate :—

"That this meeting approves of the steps already taken by the Council, authorises the negotiations with the Royal Commissioners to be continued, and empowers the Council to proceed to raise the sum required for the construction of a Garden at Kensington Gore, and if the money shall be obtained to complete the arrangements."

"That the Council be instructed not to accept the clause about re-entry in case of failing to pay interest for five years, and that in the event of the Commissioners cancelling the lease, an equitable adjustment of mutual interests be made."

Armed with this authority, the Council have unremittingly pressed forward their negotiations with the Commissioners, and although the terms of agreement are not finally settled, yet the Council can now state that they have arrived very nearly at a conclusion, which, in their opinion, will be found to secure a satisfactory as well as "equitable adjustment of mutual interests." The support which the Council have received in their attempt to raise the 50,000*l.* required has been of the most gratifying nature, and shows with what interest the public looks upon the attempt to bring horticulture to the very gates of the metropolis. The Donations announced amount to the sum of 1974*l.* Six hundred and one new Fellows have joined the Society since the beginning of the year. The sum of 39,900*l.* has been offered the Council on the security of the Society's debentures; and in addition, application has been made for 8000*l.* more, since the Debenture list was closed. The names of the new applicants are placed in a reserved list, in order that they may have the opportunity of being provided for should any of the first subscribers be willing to reduce the amount of their subscriptions. From this it appears that the sum of about 62,000*l.* has been placed at the command of the Council for the execution of the works in the new Garden. But the Council trust that no outlay beyond the stipulated 50,000*l.* will be needed. As soon as it had been ascertained that the funds required would be provided, measures were taken for settling the plan of the Garden Mr. Nesfield, whose knowledge of the principles and practice of geometrical garden designs, ranks among the highest in Europe, was intrusted with this operation. Many meetings of a Sub-committee of the Council, and of the Council itself with Mr. Nesfield, to determine on general principles, were held by command of the Prince Consort, at which H.R. Highness presided, and the Council can now refer to the detailed design itself, which is before the meeting. While this has been proceeding the Arcades have been very fully considered by the Chief Officers of the Departments of Science and Art, where we are now assembled, by the special permission of the Lord President of the Council, and specimens of what it is intended to construct are at hand, where any Fellows of the Society can inspect them. The Garden itself is at present in the earliest stage of construction. The heavy preliminary earthworks and the arterial drainage are nearly completed. Mr. Eyles, who has been appointed the Garden Superintendent, is prepared to push forward the Society's part of the execution with the utmost possible speed, and measures have been already taken to admit Fellows and their friends to inspect the progress of the works. The object of first necessity in connection with the Garden was an office and general entrance to the ground, where the business of the Society could be carried on, and the meetings, whether monthly, or those for exhibitions, of the floral and fruit Committees, could be held in a manner worthy of the Society. A single room in a small house near Trafalgar Square was obviously altogether unsuited to any purpose of the Society in its new position. Plans of such a building to form the principal entrance to the Garden, prepared by Captain Fowke, R.E., have been accepted, and the building is now rising rapidly. From the plans and elevations suspended in an adjoining room, the Society will be able to see how beautiful an edifice this will become. And here the Council desire to give public expression to their sense of the very valuable assistence that has been rendered the Society by that most intelligent officer; with whom they must also associate Mr. Henry Cole, C.B., and Mr. Redgrave, R.A., the two principal officers of the Department of Science and Art. The arrangements for the great Conservatory demand such long and serious consideration, that no report can as yet be made on that subject; but the Council are promised the detailed plans and specifications by the 10th May; and they hope and believe that in the absence of unforeseen obstacles, the Garden will be for the most part completed by Midsummer in next year. The Council have always expected that works of high art, suitable to garden embellishment, would be offered to the Society as soon as it was known that a place worthy of them was ready to receive them. That expectation has already begun to be realised. A group of sculpture, commemorative of the Great Exhibition of 1851, and costing above 6000*l.*, has been most liberally placed at the disposal of the Society by the Committee entrusted with its execution, and will form a noble object at the head of the great basin on the upper level of the Garden, the Society having only to pay for such alterations as are necessary in order to make it harmonise with the surrounding objects An account of the money received and expended on the Kensington Gore account, up to the 31st of March, will be found in the Appendix. From Kensington the Council turn to Chiswick and the ordinary working of the Society. It has now been finally settled that Chiswick, although no more to be the scene of brilliant exhibitions and agreeable promenades, shall be maintained for the purpose of experimental cultivation, and of rearing plants both for Kensington and for distribution among the Fellows. In consequence of the forced economy of the Council it had fallen into decay; but under Mr. Eyles' superintendence it has already so greatly revived, that the Council are now able to say that it deserves a visit from all interested in the progress of practical gardening. Large additions have been made to the collections of fruit trees, spaces vacant and unprofitable have been filled with them, new Cherry and Plum gardens, each containing upwards of 100 varieties, have been formed; all the known sorts of Strawberry have been brought together for comparison; and the great Conservatory, now containing the largest collection of Vines in Great Britain, is preparing to be loaded with a noble crop of fruit. Kitchen Garden produce is being dealt with in the same spirit; for example, preparation is made, among other things, for proving a very large number of so-called varieties of Cucumbers, Peas, and other esculents. In carrying out this work the Society is greatly indebted to the nurserymen and seedsmen who have liberally contributed seeds and plants, and to Mr. R. Hogg, now the Secretary of the Fruit and Vegetable Committee, who has presented his entire private collection of Pear trees to the Garden. Nor are flowers to be neglected; numerous varieties of which, annual, perennial, and shrubby, hardy and tender, have been contributed by the trade for examination by the Floral Committee. A considerable number of plants has been provided for ballot in May, June, and July; and a much more extensive collection is coming forward, although at present too young for the purpose. But the Council feel that no provision for this purpose will be satisfactory until the Society shall once more import its own supplies; and they are only waiting to find a collector who can be depended upon before despatching him to some rich and uninvestigated country. Some years ago the noble Duke, who so long presided over the Society, and from whom the Garden is held, most liberally reduced the rent from 300*l.* to 200*l.* a year, until the Society should again be in a condition to pay the full rent. Acting in the same munificent spirit, the Dowager Countess of Granville, who has succeeded to the estate since the decease of the Duke of Devonshire, has also relinquished her claim to more than 200*l.* a year till March 25, 1861. The Council feel that this important aid to the finances of the Society calls for the warmest acknowledgment. They have also the satisfaction to report that the income from the sale of produce at the Garden was last year considerably increased, notwithstanding the almost total destruction of out-door fruits by spring frosts. In 1857-8 it amounted to 142*l.* 18*s.* 3*d.*; in 1858-9, to 190*l.* 10*s.*; and last year it rose to 292*l.* 13*s.* 8*d.* In the course of the year the Flower and Fruit Committees have been re-constructed and placed upon a more active footing, Mr. Thomas Moore having been appointed Secretary of the former, and Mr. Robert Hogg of the latter. Their operations having been recorded in the Monthly "Proceedings" of the Society, sent free to all Fellows, require no comment. The Secretaries have laboured earnestly to do all that has been practicable under the circumstances; but until a proper place of meeting and exhibition shall have been provided at Kensington, it will be impossible to render them as efficient as they must be when suitable accommodation shall have been found. With regard to the monthly issue of what are called "Proceedings," it is obvious that it can only be regarded as a temporary expedient to furnish the Fellows with periodical accounts of the progress of the Society. The Council contemplate giving it a new and very different form as soon as the numerous other subjects that press upon their attention will permit them to consider its future plan. The present state of the accounts of the Society will be found in the Appendix, and the Council trust that they will be regarded as satisfactory, when it is seen that the entire debt, everything of every kind included, which on the 31st of March last year stood at 10,752*l.*, is now represented by the comparatively small sum of 4296*l.* Liabilities so small as these have ceased to have any significance, and the Council entertain the confident belief that the Society is now entering upon a career of utility and prosperity such as it has never before experienced.

Mr. Dilke observed that it should be borne in mind that the 50,000*l.* which the Society was bound to expend on the new Garden did not include furniture, fittings, tents, or other moveables, and that therefore there would be some additional outlay on that account.

W. Wilson Saunders, Esq., added that all monies received by the Society on the Kensington Gore account were invested in Government securities so as to yield interest in aid of that payable upon Debentures.

John Claremont Whiteman, Esq., of Theydon Garnon, then moved, and Sir Philip De Malpas Grey Egerton, Bart., M.P., seconded the adoption of the report, which was carried unanimously.

The Scrutineers having reported that H. T. Hope Esq., of the Deepdene, near Dorking; H. Pownall, Esq., of 63, Russell Square; and R. Wrench, Esq., of London Bridge, had been unanimously elected new members of council; that H. R. H. the Prince Consort had been unanimously elected President, W. Wilson Saunders, Esq., Treasurer; Prof. Lindley, Secretary; Mr. J. Clark, Mr. E. Rosher, and Mr. George Paul, Auditors for the ensuing year, the members present proceeded to inspect the drawings, and a model of the various parts of the new garden, the tentative sketches alluded to in the report, the patterns of colonnades as prepared by the Royal Commissioners, and the ground works in the garden itself, all of which appeared to give universal satisfaction.

ENTOMOLOGICAL: *April* 2.—The President in the chair. The chairman exhibited some samples from a large number of bags of Rice imported from the Bay of Bengal, and lying in Humphrey's New Hibernia Wharf, infested to a very great extent by a small beetle belonging to the genus Trogoderma, both in the larva and perfect states. Mr. S. Stevens exhibited some new and beautiful butterflies forming part of Mr. Wallace's Batchian collection. Mr. Lewis exhibited Telephorus ater of Linnæus (a new British beetle) taken at Renfrew. Specimens of several other rare species of beetles collected by Mr. Turner at Rannock in Perthshire, including Boletophagus crenatus, Elater Pomonæ, Lesteva pubescens, and two new species of Tomicus, were also exhibited. Mr. Westwood made some observations on the different species of Bruchi, which infest Palm seeds, Cocoa-nuts, Coquilla-nuts, &c., which had been much confused under the name of Bruchus Bactris. Mr. Douglas directed attention to various new and interesting species of butterflies figured by Mr. Hewitson in the last part of his fine work on the Diurnal Lepidoptera which had been collected in the Upper Amazon country by Mr. Bates. The death of Mr. Foxcrott, an assiduous collector of insects at Sierra Leone, was mentioned.

Notices of Books.

The Amateur Florist's Guide. By John Slater. Small 8vo. Pp. 111. Simpkin.

This is one of those little practical books written by practical men that will always be found useful by the class for which they are intended. Mr. Slater is a veteran in his line, as no Manchester gardener requires to be told. In the matter of Auriculas, Tulips, Polyanthuses, Carnations, Pinks, and similar classes of plants, he speaks with the authority of a master who has a right to be listened to; and we advise our readers to do what he directs. They will not be alarmed by long and contradictory recommendations; but will find just what small gardeners want to know, and no more. From this it is evident that Mr. Slater is a safe guide to those who do not wish to trouble themselves with all the mysteries of what is called "growing for Exhibition." He tells them what is required for the decoration of their own gardens and the gratification of their friends, and we suspect that most people will find that enough.

A Catalogue of Ferns, Exotic and Indigenous, offered for sale by Robert Kennedy, Conservatories, Covent Garden.

If we take this out of an enumeration of Trade Catalogues it is because in reality it is of a different order. It is not merely a list of Ferns for sale, but it is illustrated with very good woodcuts explanatory of the distinctions between the different genera, so that it is in some degree a work of science. To gardeners this sort of information may be of great use if they will apply themselves to understanding what the woodcuts really mean; in doing which they will find Moore's Handbook of British Ferns a considerable assistance.

The Italian Alp-bee, or the Gold Mine of Husbandry. By H. C. Hermann. Neighbour & Sons. (A pamphlet.)

Newspapers have lately been much occupied by discussions respecting a new sort of bee which apiarians have discovered to be domesticated in the Swiss Alps, which entomologists call *Apis helvetica* or *Apis ligustica*, and which also bears the name of the Ligurian Bee. We have now before us the translation of a good practical account of this little insect from the hand of a Swiss bee master familiar with its habits, which nobody in this country can yet be, at least in an equal degree.

Mr. Hermann informs his readers that "As all good and noble things in the world are more scarce than common ones, so there are more common black bees than of the noble yellow race, which latter inhabit only a very small piece of country, while the black ones are at home everywhere in Europe, and even in America. The Italian yellow bee differs from the common black bee in its longer, slender form, and light chrome yellow colour, with light brimstone-coloured wings, and two orange-red girths, each one-sixth of an inch wide. Working bees as well as drones have this mark. The drones are further distinguished by the girths being scolloped, like the spotted water-serpent, and obtain an astonishing size; almost half as corpulent again as the black drones. The queen has the same marks as the working bees, but much more conspicuous and lighter; she is much larger than the black queen, and easy to be singled out of the swarm, on account of her remarkable bodily size and light colour. * * * They are extremely tender, amiable little creatures, and a bee protector is not necessary with them, as, unprovoked, they never sting, least of all their own master. It is a specific Swiss bee; the Alps are their home, and there they thrive beautifully; the higher the better. The exhalation of an Italian bee-hive is pungent, and easy to be distinguished from a German hive. * * * It is seldom known that an Italian hive will harbour German bees, for the Italians resist an attack much more courageously, and

know how to keep their house clear. On the other hand, after a few weeks, Italian bees will be observed to march in and out of German hives, just as if they were quite at home; such is the case if there is only one Italian hive on the stand. The cause is easily explained. The Italians belong to the long-fingered craft, and creep into other hives, probably to look after the stores; then they begin to like the place, and they stop, joining the black people. In Germany the commencement has been made some years since to keep those bees, but they were only obtained in a bastard condition; many stories go the round about our dear creatures, and virtues and vices are attributed to them which they do not possess. * * * These poor people bother themselves about half or whole, and three-quarters or full blood, and many other subtilities, without arriving at the idea that there is no medium between pure and impure. What is not a pure Italian is not Italian at all. If she is Italian she can only produce Italians; but a bastard never; just as a bastard can never produce an Italian. That which is not genuine, is, and remains, spurious."

To this account of his Alp-bee Mr. Hermann adds copious information about its management, all which may be had for a shilling. We, therefore, pronouncing no opinion concerning the merits of the little creature, refer our readers to his pamphlet, and to Messrs. Neighbour & Sons, of 187, High Holborn, the great commercial apiarians, who are the sole agents of the author for the sale of Swiss bees in this country.

The first number of Mr. Moore's new *Floral Magazine* (Reeve) has appeared, and justifies the expectations formed of it. With Fitch's skilful pencil to aid him, Mr. Moore has advantages enjoyed by no one else. The *Countess of Derby Camellia*, an exquisitely beautiful Italian variety; the *Double-fringed Chinese Primrose*, some varieties of *Persian Cyclamens*, and the elegant *Pteris argyræa*, are the four subjects with which the author begins, and they deserve the prominence that is given to them. Each plate is accompanied by a leaf of well written useful letter-press describing the peculiarities of the plants, with their distinctions, and giving such instructions for cultivation as appear to be necessary.

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

Conservatory, &c.—As soon as cold frames and pits are clear of bedding stuff they should be occupied with young stock of hard-wooded plants, for the summer growth of which they are better adapted than large houses. Such places will also be found suitable for dwarf Lobelias, Balsams, Salvia splendens, S. gesneræflora, and many other things which are generally grown for flowering in the conservatory in summer and autumn; indeed most plants which require only a moderate temperature will be more manageable here and thrive better than in lofty houses with double the attention. As early flowering New Holland plants go out of bloom they should be treated in the way most favourable to secure compact growth, placing them in an airy part of a greenhouse. When the buds have fairly started will be the proper time for shifting such as require more pot root, as they can then be kept somewhat close for a fortnight to encourage a free root action without incurring the risk of the buds breaking scantily. Look well to the stock of plants for summer and autumn decoration, and do not allow them to sustain any check through want of pot room or carelessness in watering. Fuchsias for late blooming must not be kept too warm; they should be placed in a moist shady house, where they will grow much more freely than in a high temperature. Stove plants will now be pushing freely, and will require frequent attention as regards stopping and training. Keep them properly supplied with pot room, and afford them all the sunshine they will bear without scorching, with a moist atmosphere, admitting air freely on mild days. Also afford them sufficient space for the perfect development of their foliage. Look sharply after insects, and attend to cleanliness, washing the floors and pots as often as it may be necessary to do so. Go over creepers frequently, so as to regulate their growth and prevent confusion, which without attention soon happens. Syringe and shut up early on the afternoons of bright days, and be as sparing as possible in the use of artificial heat. Afford Orchids in growth a thoroughly moist atmosphere, giving them a good steaming every bright afternoon by syringing and shutting up early. Admit air in moderate quantities on mild days, but carefully avoid currents of drying wind. Examine the plants individually every other day, and water such as require it, but be careful not to give too much to those starting into growth; a cool atmosphere will greatly assist in prolonging the beauty of such as are in bloom.

FORCING DEPARTMENT.

Pineries.—In the case of plants swelling their fruit the usual practice is to divest them of all suckers, except as many as may be wanted for stock, directly they make their appearance. This it is believed throws more of the energies of the plant into the fruit, and also secures stronger suckers than if too many are left. Some are, however, of a different opinion, and allow all suckers to remain, alleging that they get larger fruit by leaving them on than if they were removed. A case in favour of this plan has recently been recorded in our columns. Our more valuable sorts of Pines are not, however, very apt to produce any great excess of suckers, and therefore such as are produced may in general be left untouched. Guard against any decline of bottom-heat, and where this is obtained from fermenting materials, a little fresh tan should be added before the heat gets too low; and it will be much safer to add a few inches occasionally as it may be wanted than to follow the old practice of renewing the bed only once or twice in the year. See to keeping the soil about the roots, where the plants are in pots or planted in the open bed, in a nice healthy state as to moisture, and give manure-water regularly to fruiters and stock in free growth.

Vineries.—Go over the Vines in succession houses, frequently removing laterals, &c., before they shade or interfere with the principal foliage. Where plants must be grown under the Vines the latter should be kept sufficiently thin to allow of a moderate share of light reaching the plants, and neither laterals nor any useless wood should be allowed to obstruct the light. See that none of the plants are infested with red spider or thrips, especially the latter, which if once allowed to get upon the Vines is very difficult to eradicate, and is most destructive to the foliage. Azaleas are very subject to this pest, and if these are grown under the Vines they must be closely watched, and kept clean at any expense. See that Vines in the late house are tied up in their places before the shoots get too far advanced, as there is considerable danger of breaking these off when they are allowed to get too long before the rods are tied up. Look sharply after red spider, and use every means to keep clear of this pest.

Figs.—Attend to stopping and thinning the shoots, and aim at securing short-jointed strong growth, by exposing the young wood to all the light possible. This will of course necessitate keeping the trees rather thin, but it is useless hoping for a crop of good fruit from trees that are crowded with wood. Keep the atmosphere moist, and give the foliage a good washing with the syringe after shutting up the house in the afternoon.

FLOWER GARDEN AND SHRUBBERIES.

Recently transplanted shrubs and trees must be carefully attended to with water until they get fairly established. It is frequently the case however that too much water is given at the root, thereby souring the soil, and rendering it uncongenial to the young rootlets and the after growth of the plants. The soil should be kept moist, but not to saturation, and the plants as soon as the weather gets warmer might be watered over head with the engine on the evenings of bright days, which will be of vastly more service in repairing the loss sustained by evaporation than if given in excess to the soil while there is a deficiency of active rootlets to absorb it. Where Roses are infested with the grub it will be necessary to go over the plants frequently to destroy this pest. Green-fly is also very troublesome; a good washing with the garden engine on two or three successive evenings will greatly assist in getting rid of these destructive pests, but this must be done after all danger of frost is past. Planting of bedding stock must be deferred for a week or two yet. Begin with Calceolarias, Verbenas, Scarlet Geraniums, &c., leaving Heliotropes, Lantanas, Anagallis, and such things as are usually injured by frost until planting of the more hardy kinds is completed. Branches of evergreens are easily enough obtained about most places, and a sprinkling of these stuck into the beds after planting will be of great service in protecting the plants from the drying effects of bright sunshine, and will also help to ward off frost. In the meantime get all beds well prepared for the reception of their summer occupants, thoroughly pulverising the soil by occasional diggings; also get arrangements for planting decided on, so as to be able to add manure or leaf-mould for such things as will be benefited by such additions to the soil.

HARDY FRUIT AND KITCHEN GARDEN.

Pay great attention to the destruction of insects on fruit trees in order to afford the young shoots a fair chance to make healthy growth; also proceed with disbudding. See that recently transplanted trees are not allowed to suffer through want of water. Look after the caterpillar on the Gooseberry trees. One way of getting rid of this pest is to give the trees a heavy washing with a powerful engine, throwing the water against the under sides of the leaves, which will wash off the caterpillars, and they are readily killed on the ground by means of an iron rake. Get trenches filled with some fermenting materials in readiness for Cucumbers, &c., and expose the plants rather freely to light and air, to prepare them for planting under the protection of hand-glasses. If not already done see to sowing plenty of sweet Basil, Savory, &c., on a warm border of light rich soil.

COTTAGERS' GARDEN.

Every spare half hour may now be profitably employed in stirring the ground among growing crops. Vegetation, which has so long been checked by cold north-easterly winds, is now beginning to make some progress; and weeds, like other things, grow apace; they therefore require sharp looking after. Planting, if any, in the way of vegetables, should be done in drills. In that way the plants get more effectually watered, and the first hoeing, by filling in the drills, acts as a slight earthing up. Keep paths clean, straighten their edges, and otherwise render them not only neat, but otherwise as comfortable as circumstances will admit for walking on.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.
For the Week ending May 3, 1860, as observed at the Horticultural Gardens.

April and May.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 27	6	30.223	30.219	51	23	37.0	47	46	N.E.	.00
Satur. 28	7	30.269	30.244	57	24	40.5	46	46	N.E.	.00
Sunday 29	8	30.309	30.250	65	31	48.0	47	46	S.W.	.00
Mon. 30	9	30.394	30.331	64	35	49.5	48	46½	E.	.00
Tues. 1	10	30.324	30.125	66	38	52.0	49	46½	N.E.	.00
Wed. 2	11	30.098	30.042	67	40	53.5	49½	47	E.	.00
Thurs. 3	12	30.156	30.133	66	33	49.5	50	47½	N.E.	.00
Average..		30.253	30.192	62.2	32.0	47.1	48.1	46.5		.00

April 27—Cloudy and fine; low dusky white clouds; clear and frosty at night.
— 28—Frosty; clear; fine but cold; very clear at night; frosty.
— 29—Fine; very fine; hazy at night.
— 30—Fine, very fine; clear.
May 1—Fine; very fine; dry air; clear and cold at night.
— 2—Dry, slight haze; very fine; excessively dry air; clear.
— 3—Clear; fine, dry N.E. wind; clear and fine.
Mean temperature of the week, about the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending May 12, 1860.

May.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 6..	60.5	39.2	49.8	13	0.68 in.	—	10	4	4	4	6	4	2
Mon. 7..	61.6	40.2	50.9	13	0.39	4	6	5	2	6	6	3	2
Tues. 8..	61.6	39.4	50.5	13	0.45	2	5	7	—	5	5	6	4
Wed. 9..	61.7	40.2	50.9	13	0.60	3	8	7	1	4	9	2	—
Thurs. 10..	62.0	39.7	50.9	13	0.10	4	6	7	1	2	7	4	3
Friday 11..	62.6	40.2	51.4	12	0.36	6	8	4	1	5	5	3	2
Satur. 12..	63.5	40.9	52.2	15	0.70	5	6	9	1	4	5	1	3

The highest temperature during the above period occurred on the 6th, 1830—therm. 81 deg.; and the lowest on the 8th, 1855—therm. 21 deg.

Notices to Correspondents.

*** The Board of Works have directed that in future the Street in which our Office is situated shall be called Wellington Street, and that the Number of our Office shall be 41. Correspondents are therefore requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

Books: *Viator*. There is no such book as you mention. The Vegetable Kingdom approaches nearest. There is however in preparation a work on the plan of Maunder's Treasury of Natural History, which will possibly meet your expectation. As to Floras of different countries all you can do is to collect them separately. As good practical directions as any for managing greenhouse plants are to be found in Sweet's Hothouse and Greenhouse Cultivator, Mackintosh's Book of the Garden, or Thompson's Gardener's Assistant, or Paxton's Botanical Dictionary.

Dried Apples: *Leicester*. We will inquire and answer next week.

Ferns: *A Y*. Cyrtomium falcatum, which is what we suppose you mean by "Cytorium falcata," is hardy in favourable seasons and situations. Pteris hastata is a hardy greenhouse Fern. Cheilanthes hirta is a greenhouse Fern preferring a comfortable atmosphere. There is no Cheilanthes Lomari. If you had examined Mr. Smith's Catalogue ever so slightly you would have found Pteris hastata under Pellæa hastata.

Fungi: *Florence*. Your Fungus on Juniper is *Gymnosporangium Juniperi*, a plant which notwithstanding its highly gelatinous nature is nearly allied to the common Wheat mildew.—*E B*. A Mushroom almost exactly like what you have sent is figured in *Gardeners' Chronicle*, 1859, p. 1018, where you will find an explanation of the curious growth. *M J B*.

Insects: *A Y*. Your moth is not the wax moth. It is the Calocampa exoleta, and is harmless.—*D K R*. The insects you have sent are a small species of rove beetle which preys on mites and other very minute insects in manure, &c. We believe them to be harmless so far as injuring living plants is concerned.—*C P T*. Your young Wheat plants are infested with the larvæ of the Oscinis vastator. Probably if the rows were to be well watered with liquid manure the plants would throw up side shoots (as is often the case) and so lessen the damage. But this weather is sadly against the plants in the weak state to which they are reduced. *W*.

Names of Fruits: *W B*. 1. Its season is far past, so that little of distinctive character remains; it is perhaps the White Russet; 2, 3, Sturmer Pipp n.—*G I*. Like Green Nonpareil.‖

Names of Plants: *Pendlebury*. 1, Lycaste Deppei; 2, some Maxillaria, but we do not recognise the species. It is probably one of the crowd of unexamined and undescribed species.—*F*. Globularia Alypum.—*D R*. 1. Drynaria diversifolia; 2. Onychium lucidum; 3. Pteris crenata; 4. Asplenium bulbiferum: but they are miserable scraps to send for determination.—*Wyon*. A. Asplenium cicutarium. B. Polypodium pectinatum. C. Woodwardia *alias* Doodia media. D. Nephrolepis tuberosa.—*A Y*. It may be Acacia juniperina but as there is no flower it is uncertain. A. pendula is weeping but not hardy.—*A S W*. Mercurialis perennis.—*Emo*. It looks like a piece of Pyrus baccata.

Peach Leaves: *Charles Little*. There is no mildew. The holes in the leaves are caused by their membrane being killed. Such death may arise either from the presence in the soil of some injurious substance, such as over strong manure; or from drip; or from small drops of water suddenly evaporating on the surface of the leaves and destroying the vitality of the part they lie on, by the sudden cold which results from such evaporation. You can probably ascertain which. There is also a fourth possibility; your leaves may have been grown in a high temperature, and very rapidly, and they may have been unable to throw off the superfluous moisture by the pores of the skin. Occasional cold will then produce the effect you complain of.

Tanks: *E B*. A house 32 feet long and 16 feet wide has a base of 512 superficial feet. The quantity of rain which falls in a week in summer occasionally exceeds 2 inches, rarely 2½ in the general climate of England. Two inches on the above area is equal to 85⅓ cubic feet, or to 531.8 gallons of water. A tank to hold this would require to be about 4 feet 5 inches each way, if in the form of a cube; but of course it can be varied as may be found most convenient, for instance it may be 6 feet long, 3½ wide, and 4 deep, which will be equal to a cubic content of 84 feet.‖

Water: *Warwick*. The advantage of pond or river water over pump water is that it is softer and warmer. The latter is usually more or less charged with lime, and to some plants, such as Heaths for example, is death. But for kitchen garden crops, or common coarse vegetation, one is pretty nearly as good as the other. Use pond or river water if you can.

Misc.: Full price will be given for the Number for Dec. 10, 1859.

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MANUFACTURED BY THE

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ODAMS'S SUPERPHOSPHATE OF LIME.

This Manure contains an unusually large per centage of Soluble Phosphate of Lime, and is, therefore, a highly valuable Manure for all Root Crops.

ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2 28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.63	14.38	16.71	16.91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

Dr. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

Dr. ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

Dr. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

Dr. HODGES states that—"It may be regarded as a good specimen of super-phosphate of lime." His calculation of its value is 7*l.* 13*s.* per ton.

Dr. CAMERON reports:—"The above figures prove this super-phosphate to be of excellent quality, and I have no doubt but that its application will be attended with the most satisfactory results. It would be good value at 7*l.* per ton."

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(ESTABLISHED 1840),
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DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

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" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
LAWES'S BARLEY MANURE	8	0
" MANGEL MANURE	8	0
" GRASS MANURE	8	0

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WHEAT ditto | POTATO ditto | KOHL RABI do.
GRASS ditto | BARLEY ditto | Also

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Apply to H. & T. PROCTOR, Cathay, Bristol; or PROCTOR & RYLAND, Birmingham and Chester.

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The present Price of this valuable Manure is—
12*l.* per ton for 30 tons and upwards } at the Depôts in London,
13*l.* 5*s.* per ton for 1 ton up to 30 tons } Liverpool, and Bristol.

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NATIONAL CATTLE SHOW.

ROYAL AGRICULTURAL SOCIETY OF IRELAND.—The great ANNUAL CATTLE SHOW of this Society will be held at CORK on JULY 25, 26, and 27.

Favourable arrangements have been made with the Rail and Steam Packet Companies for the conveyance of Stock and Implements to and from the Show.

Prize sheets and forms of entry can be had on application to J. B. THORNHILL, Secretary.
42, Upper Sackville Street, Dublin.—May 5.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
CANTERBURY MEETING, 1860.

ENTRIES for LIVE STOCK must be made on or before June 1.

*** All Entries received in each case after those respective dates will, without any exception, be disqualified, and returned to the senders.

Prize Sheets and Forms of Entry may be had on application at the Offices of the Society, 12, Hanover Square, London, W.
H. HALL DARE, Secretary.

The Agricultural Gazette.

SATURDAY, MAY 5, 1860.

MEETINGS FOR THE FOLLOWING WEEK

MONDAY, May 7—London Farmers' Club (Mr. J. A. Clarke on Lois Weedon Husbandry) 6 P.M.
WEDNESDAY, — 9—Agri. Society of England..... Noon.

THE opportunity which the census of 1861 will give, of a last attempt to gain some general agricultural information, has not been lost sight of by Mr. CAIRD, who has given notice to insert a clause on the subject in the Census (England) Bill which is now passing through the House of Commons. He proposes that schedules shall be prepared for the purpose of being filled up by or on behalf of the several occupiers of such dwelling-houses as have 2 acres and upwards of land held therewith, with particulars of the average extent of such land during the year 1860 under the several crops of Wheat, Barley, Oats, Beans, Rye, Potatoes, Turnips, Mangel, other green crops, and of pasture Grass and hay. Such schedules shall be marked "Optional Returns," and shall be left along with the householders' schedules at each such dwelling house; but it shall be optional to the occupier aforesaid to fill up such return or not as he may deem proper, the enumerator, in the case of refusal, filling up the return from the best information he can gather, and marking it as having been so filled up by him.

It is to be hoped that this proposal will be received with favour both in and out of the House, and that speculations as to the statistics of the food question, which after every bad season become

of national importance, will for the future have a trustworthy basis of figures indicating acreage, on which to rest.

WE continue our remarks on the samples of Grass seeds which have come under our examination :—

TABLE II.—*Analyses of Rye-grass Seeds.*

Number.	Copy of Label.	Weight of Bushel.	Weight in grs. of 2 oz. by Measure	Number of Weeds in a Bushel.	Remarks.
		Lbs.			
1	Light Rye-grass ..	14½	184	444,800	Holcus lanatus. 6,400 Bromus mollis. 500 Ranunculus repens .. .. 50 In a pint .. 6,950
2	Rye-grass	16	216	430,080	The same kinds
3		18	240	288,000	The same with Festuca bromoides.
4	Rye-grass	20	264	184,320	Much as 1 and 2.
5	Rye-grass	22	276	73,080	Much as 1 and 2.
6	Rye-grass	24	288	102,400	The same with the addition of Myosotis arvensis and small weeds.
7	Perennial Rye-grass	24	296	56,320	Mostly Holcus lanatus.
8	Ditto ditto	26	320	76,800	Much as 1.
9	Ditto ditto	28	352	10,240	Ditto.
10	Ditto ditto	28	360	6,400	Ranunculus and Plantago.
11	Extra fine short ditto	28	368	15,360	A tolerably pure sample.
12	Ditto ditto	30	380	6,400	A very pure sample.
13	Ditto ditto	30	382	1[illegible],240	Weeds all Holcus.
14	Ditto ditto	32	402	3,200	Difficult to find a weed.
15	Ditto ditto	32	400	12,800	Mostly Ranunculus repens & Sherardia.
16	Ditto ditto	34	464	25,600	Ditto and Holcus.
17	Ditto ditto	36	480	20,280	Much as above.
18	Ditto ditto	38	520	40,960	The plump grains of the Grass very large and freed from the glumes.
19	Ditto ditto	40	544	20,480	Bromus mollis absent
20	Common Rye-grass	40	..	32,000	Ranunculus repens and others.

In this table we may remark in the first place upon the great differences in the weight of a bushel of Rye-grass seed. The lowest weight here tabulated is 14½ lbs. per bushel, but we have examined even lighter samples; of course in these cases the preliminary test of weighing ought to satisfy any one that if of less weight than 20 lbs.—and this is quite a low quotation—the seed is not worth buying. This is a matter which can easily be approximately ascertained from as small samples as 2 oz. by measure, and for ourselves we would say that we should not look at a Rye-grass sample if 2 oz. by measure did not weigh as much as at least 270 grains.

Of course in estimating the weight of samples it is always necessary to see that it is made up of the proper seed, as if it be full of plump grains of *Bromus mollis* (Soft Brome or Lop), *Triticum repens* (Couch), or as is frequently purposely done to add to weight, *Plantago lanceolata* (Lancet-leaved Plantain), its weight will be greatly added to and unfortunately in such a way as that the Grass will be too poor to grow, but the weeds will be sure to succeed. We have seen fields sown with "Rye-grass" in which the only crop visible has been Plantain; and we must recollect that Plantain and Lop are completely annual plants, and will have sown a good crop of seed even while the Barley with which the "seeds" may have been sown is being harvested.

And again, talking of the harvesting of Barley, it may not be out of place to remark that carelessness in this respect—letting this crop shed its seed either naturally or by rough handling—is very destructive to the young seeds, as it immediately germinates, and just as the seeds should be making a "stubby" growth to give them constitution to withstand the winter, they are drawn up weakly or perhaps killed by the larger blades of the cereal, which in its turn gets killed by winter, and so bare patches are left to the undisputed dominion of weeds. In fact, the error of sowing weeds or allowing any extraneous matters to grow with the crop only entails a war for possession, when, as usual, the weakest goes to the wall.

The point we would here advert to is that our table demonstrates that for the most part the lighter samples of seed are fullest of weeds. This may arise from the carelessness of its growth on the one hand, and the impossibility of duly cleaning mere chaffy stuff on the other. As may be expected, the heavier samples of seed have been more carefully grown, it being next to impossible to get the best samples by dirty cultivation; and then again the heavy grains are more plump and rounded, the chaff fits to the seed, is not so pointed, and therefore not so liable to entanglement, so that these can be separated with tolerable ease. That clean samples can be obtained is obvious from our examples—10, 12, and 14—in which the weeds are remarkably few, and in the first of these of such weeds as are easily separated. Let us repeat here that our correspondents should give us the names of their seedsmen, in order that credit may be given for such pure samples as came under our notice.

That the heavier samples of Rye-grass seed are the cheaper, we can state from repeated experiments, as we have sown the lighter ones in which scarcely a genuine seed would germinate, whilst of the heavier samples only a slight proportional fails, and if we had to appraise the value of the samples before us merely from the evidence afforded by the table we should estimate them almost in multiple proportions to their weight, the lower numbers next to nothing in value, and the higher ones at full 10 times the worth. Of this the following may offer an approximative example :—

Table of Value of Rye-grass Seed.

Numbers in Table 2.	Weight per bushel in lbs.	Proportional of Value.
1 to 3	14 to 18	5
3 to 7	18 to 24	15
7 to 13	24 to 36	25
13 to 16	30 to 34	40
16 to 20	34 to 40	50

In all the lighter samples of Rye-grass we find a varied quantity of the Italian Rye. This of course is mixed in the way of direct adulteration, usually being old worn-out Italian Rye, aiding immensely in filling up the measure from the looseness derivable from the long awns of this variety; and this circumstance of course aids greatly in decreasing the weight per bushel. The evil of this is much more than at first appears, as although the Italian would grow and make a great appearance the first year if at all worth anything, yet the fact of its being annual is fatal in any position where perennial growth is required, and more especially in the permanent meadow.

We have kept our lists of Italian Rye-grass separate, as we view this variety as so different from the common sort agriculturally, that though both are good for their several purposes, the Italian in the perennial Rye-grass can only be considered as a weed :—

TABLE III.—*Analyses of Italian Rye-grass Seeds.*

No.	Copy of Label.	Weight in grains of 2 oz by measure.	Number of Weeds in a bushel.	Remarks.
1	Imported Italian Rye grass ..	212	78,216	Ranunculus repens, Plantago lanceolata, Bromus mollis.
2	Ditto	216	261,120	The same, and Holcus lanatus.
3	Ditto	216	79,240	The same.
4	Ditto	224	81,920	Bromus mollis and Holcus.
5	Ditto	..	204,800	Ditto ditto.
6	Ditto, 15 lbs...	..	102,400	Ditto ditto.
				In the Pint.
7	Ditto, cleaned and recleaned, 15½ lbs. ..	204	79,240	Ranunculus repens .. 320 Plantago lanceolata 160 Holcus mollis .. 120 Caryophyllaceæ, &c. . 360
8	Foreign Italian as received..	..	23,040	Brymus mollis .. 240 Others 120
9	Do. as cleaned for sale. ..	..	1,280	Bromus absent.
10	Heavy Italian ..	..	1,600	Good seed.
11	Home-grown Italian, off Lombardy seed.. ..	240	5,120	Not fully cleaned,
12	Imported Italian..	212	92,160	Ranunculus repens, &c.
13	Ditto ditto	216	39,240	Ditto ditto.
14	Ditto ditto	224	14,336	Bromus mollis, Holcus lanatus, &c.
15	Ditto ditto	216	261,120	Ranunculus repens, Plantago lanceolata, Holcus lanatus.
16	Ditto ditto	172	146,800	Very poor
17	English Italian Rye-grass ..	..	196,800	Sherardia arvensis, Arenaria, Scabiosa columbaria, &c.
18	Ditto ditto	..	25,600	Might easily have been better.
	CLEANED.			
19	Imported Italian Rye-grass ..	..	102,400	Bromus mollis, &c.
20	Ditto ditto	..	450,560	Ranunculus repens, Bromus mollis.

In looking over this list we shall at once see that we have not here the amount of variation in weight; in fact, Italian of from 15 to 18 lbs. per bushel may be considered as good in so far as the weight is concerned. As regards the weeds they are pretty much of the same kinds as those which occur in the perennial Rye-grasses, but as a general rule the Italian Rye is more dirty than the other kind, so much of its seed is imported, and this unless well cleansed is very foul indeed; but that cleaning can be adopted to the improvement of all dirty samples is quite evident from the difference in the weed column shown in Nos. 8 and 9. We take the label of No. 7 to be merely a trade trick, as certainly cleaning, to say nothing of recleaning, should, and indeed would, have a better effect, as even a fine sieve would have separated the minute seeds of the Caryophyllaceæ and the like. This remark applies also to 17 and 18, as although four-fifths of the weeds have been removed, yet there seems little reason why the small seeds mentioned could not have been separated to a still greater extent.

Looking, however, at the whole question of weeds as it affects the Italian Rye-grass, we are obliged to come to the conclusion that it is to the grower that we must first look for better samples, for in nearly all the cases we have seen the dirt has been grown with the Grass. This is an important consideration, for with want of care as regards weeds will ever be found other evils, so that the seed itself is not nearly so good.

This, however, may be easily remedied; let the farmer insist upon clean seed, and the seedsman will either be his own grower or only buy from the man who renders him the best and cleanest sample, for, after all, the best and most profitable way of obtaining clean seeds, if they be demanded, and the market should cease for the contrary, will be to grow them carefully; and if, as regards the Rye-grasses, the two important elements of weight and cleanliness be duly considered and valued at their proper price, greater care will thenceforward be taken in its growth and harvesting.

TABLE IV.—*Analyses of Meadow Grass Seeds.*

	Name.	Weeds in a bushel.	Remarks.
1	Alopecurus pratensis (Meadow Foxtail..	84,840	Principally Alopecurus agrestis.
2	Ditto ditto	1,228,800	More than half Holcus lanatus.
3	Dactylis glomerata (Cocksfoot)	588,800	Arrhenatherum avenaceum.
4	Festuca duriuscula (Hard Fescue)	294,000	Holcus lanatus and Bromus mollis.
5	Festuca ovina (Sheep's Fescue)	166,400	Holcus, &c.
6	Anthoxanthum odoratum (Sweet Vernal)	102,400	Caryophyllaceæ and small weeds.
7	Ditto ditto	6,400	Holcus lanatus.
8	Phleum pratense (Timothy Grass)	3,404,800	Foreign weeds.
9	Ditto ditto	2,000	Exceedingly pure.
10	Poa pratensis (Smooth Meadow Grass)	768,000	Holcus.
11	Poa trivialis (Rough Meadow Grass)..	Too great for estimation.	Stalks and dirt 2 parts. Weeds 2 parts. Poa 1 part.
12	Cynosurus cristatus (Crested Dogstail)	409,600	Bromus mollis, &c.
13	Avena flavescens (Yellow Oat Grass	35,840	Mostly Juncus.
14	Arrhenatherum avenaceum (Tall Oat-like Grass) ..	51,200	Bromus mollis.
15	Mixed "seeds"	38,040	Ranunculus and Plantago, &c.
16	Ditto	537,600	Ditto ditto.
17	Ditto	245,760	Ditto ditto.
18	Ditto Meadow	112,640	Ditto ditto.
19	Ditto ditto	25,600	Ditto ditto.
20	Ditto Lawn	6,950	Ditto ditto.

The general conclusions at which we have arrived as regards the separate species of Meadow Grasses as obtained in the seed market are :—

1st. That they are to the full as dirty as Rye-grasses, and usually of the same kinds of weeds. These are weeds of cultivation, as they are evidently grown for the most part with the samples themselves, and, as in the Rye-grasses, are only to be kept out by care in cultivation.

2d. Another source of dirt in the meadow, only casually noticed in the list, is that of admixture of other species; these though not always mischievous weeds are nevertheless to be deplored as taking from the value and genuineness of the crop as they are usually of a heavier, and sometimes, too, of a larger and coarser description than the seed of the species bargained for, as thus *Festuca* with *Dactylis*, or *Poa* and *Arrhenatherum* with *Alopecurus* or *Cynosurus*. Of course the bine-weedy Grasses, as *Triticum repens* (Couch), *Bromus mollis* (Soft Brome or Lop), *Holcus lanatus*, are still more mischievous; and these are always too abundant in almost every specimen, whether of Rye-grasses or any species of Meadow Grass.

The third point to which we must direct attention has reference to really dishonest dealing, about which there can be no doubt, and no pleading of ignorance. It is the practice of mixing old and decayed seeds and dirty sweepings and refuse of every kind with Meadow Grasses; look, for example, to No. 11 of the above table.

As with the Grasses before commented upon, meadow species are as easy to grow pure and clean, and even if sold as grown after being carefully collected the evils will not be so great; but if

dirty it will be the more difficult to clean in proportion to the smallness of the seeds and the nature of the adhering membranes, the curvature and length of awn, and such like mechanical differences.

That the same sort of seed even in that small seed which is free from membranes, namely, the Timothy-grass, can be obtained almost pure is certain. Our sample 8 is a not unusual sample of American seed, with all the usual weeds, that we have seen accompanying its heavy crops on the alluvial banks of the Ohio, or the lake flats in Canada; and when sent, as in this case, with all its weeds, it is not worth half the price of the sample (9) of our table. At the same time we venture the assertion that there is hardly a farmer but would prefer the dirty sample at half the price of the clean. Here then we may well leave these tables to speak for themselves: they show that dirty seeds are a rule, not an exception, in the market, and our reasoning certainly goes to show that it is a matter almost entirely within the power of the agriculturist to remedy, and we still hope that the time will come when he will know what is and what is not dirt, and not content himself with merely paying accordingly, but refuse the dirty at any price.

THE following essay on a point of great agricultural interest is given in full, though occupying so large a portion of our impression, as a specimen of the detailed discussion which such a subject needs but has never yet received. It is in order to induce its further discussion, and not as entirely agreeing with the conclusions of the writer, that we give this prominence to his essay. The main conclusion which he reaches is the enormous charge upon the farm of its green crop culture—most inadequately balanced by the direct receipts from it. But he makes the cattle crop so great a charge upon the corn crops of his farm by what appears to us an obvious undervaluing of these returns from the live stock which he feeds. To this, however, and to other points we must refer hereafter.

—— It is a remarkable circumstance in the history of English arable husbandry, that neither in the text books nor journals of the profession, nor even in the treatises devoted to those points of agricultural policy which lead to the valuing of tenant-rights, has the question ever been raised or determined, WHAT IS THE COST OF CONVERTING A GIVEN EXTENT OF CATTLE-CROPS INTO MANURE? or, to vary the form of the problem, what is the capital absorbed and the annual outlay expended, in producing a given quantity of farm dung? For this there was of old the apology, that not only are the calculations involved in the inquiry intricate and the matters of fact difficult of ascertainment, but up to a certain period, the determination of the point was comparatively unimportant. A very little reflection, however, suffices to show, that as soon as extraneous fertilisers became abundant in the manure market, it thenceforward was a very plain duty which agriculturists owed to themselves, to ascertain by some method or other whether they could not promote the yield of their farms at less cost and more plentifully, from external resources, than from the internal supply of their own cattle courts. It is very true that were the inquisition to terminate in a verdict against the economy of growing green crops for conversion into dung, the prevailing device of rotation farming would be shaken to its base, and that more or less difficulty might ensue in adjusting between landlord and tenant fresh rules of management; but how greatly to be deprecated is the notion that for any such reasons as these, the first agricultural community in the world should shirk the solution of a question so financially important as that we have here raised.

But it is not to assume the ungracious office of censors that we have mooted this unseemly and, probably, very prejudicial ignorance on a matter which in English husbandry, peculiarly, is of great gravity, but to state and illustrate a mode of procedure by which we conceive the point raised could satisfactorily be ascertained.

First, then, in order to form a starting point or basis of argument, it is necessary to construct, what may be called, a mixed hypothetical and practical instance; and for this purpose we will assume the case of a thoroughly improved farm of 400 acres of medium land, managed with fair enterprise and skill, and cultivated on the still predominant, though now less relied on, system of a four-course rotation.

Secondly, in conformity with these premises, we would further say preliminarily, that this farm would require a capital of 3837*l.* (see No. 7 and 9 of the Schedules to be given next week), on which the tenant would be entitled to earn a yearly profit for his livelihood at the rate of 10 per cent., and that the yearly expenditure of management, and the annual returns would be as follows:—

TABLE I.

	£	s.	d.
Expenditure connected with the green crops, the cattle, and the manuring of the farm. See Table II.	1196	18	10
Expenditure connected with the corn crops. See Table III.	919	8	4
Note.—In these sums are included the ordinary allowances for maintaining the value of the working animals and implements against casualties and wear and tear	2116	7	2
Returns from sales of feeding stock £773 13 4)	2498	13	4
Ditto ditto corn 1725 0 0)			
Balance yielding 10 per cent profit to the farmer on his capital of 3837*l.*, over and above the accommodation of the dwelling house and other domestic conveniences of the farm	£382	6	2

Thirdly, putting aside, now, the corn part of this table, we shall next expound the details of the cattle crop portion of it as follows:—

TABLE II. SHOWING THE AGGREGATE YEARLY EXPENSES OF THE MANURE DEPARTMENTS OF THE FARM; THE PARTICULARS OF EACH HEAD BEING GIVEN UNDER CORRESPONDING NUMBERS OF THE SCHEDULE OF DETAILS AT THE END OF THE ARTICLE.

No. of the Schedule.		£	s.	d.
1	Expenses of tilling and sowing the root crops, exclusive of those operations which go to the general cleansing of the land for the rotation	100	0	0
2	A moiety of the expenses incurred in cleansing the farm for the common benefit of all the four crops of the rotation	102	18	4
3	Expenses of tilling and saving the Clover crop	67	0	0
4	Expense of converting the green crops and fodder of the previous year into manure	463	16	0
5	Expenses of hauling the manure from the dung court and applying it to the land	117	4	6
6	Rents chargeable against this department of the farm	346	0	0
		1196	18	10
7, 8, 9	Proportion of the tenant's profit chargeable against this department, viz. 10 p. ct. on 1334*l.* 16*s.*, and 1369*l.* 12*s.* 11*d.*, 2704*l.* 8*s.* 11*d.*, being the capital invested therein	270	8	9
		1467	7	7
10	Deduct annual returns from sales of feeding stock	773	13	4
	Annual loss chargeable against the corn crops in respect of the manurial benefits supposed to be received by them from this procedure..	693	14	3

From these figures, then (assuming them to be approximately accurate), is deducible the following anomaly, that under a four-course rotation a full half of the farm is yearly appropriated to a branch of industry which not only yields no profit, but entails on the other moiety an annual loss amounting to 700*l.* on 400 acres. And if the motive for this self-inflicted sacrifice be sought for, it is found to resolve itself into a mere blind belief by the votaries of the system, that by no other means can the soil in arable farming be efficiently kept in heart. But of this very costly article itself, it may be remarked, that while the use of a given quantity of any extraneous manure represents the positive addition of a certain amount of fertile matter to the soil, it is true of farm dung that every atom of its mineral elements (and these according to the best authorities constitute its most valuable constituents) had already been obtained from the identical source to which they are applied, and thus are no more to be regarded as a real acquisition to the fertility of the staple, than the ashes which the careful housewife gathers up from the hearth and returns to the grate, form any actual augmentation of the stock of fuel. Nor is it less certain that from the very large proportion of the choicest riches of the soil, yearly alienated in the condition of corn and butcher's meat, as well as from the unthrifty waste incidental to the cattle court,—each years dunging, instead of being an entire, is at best a very partial return to the fields of what, in the preceeding year, had been withdrawn from thence by the plants, whose excreted and trodden down remains form the sole exponents of industrial success in the husbandry of cattle crops. Nay, more; of this merely residual commodity a still farther reduced remainder only reaches the corn crops, since the Roots and Clover of the rotation each abstract a portion so considerable, as probably to leave no more than a mere moiety available to the cereal members of the course. Hence, if we assume the yearly quantity of dung produced on a farm of 400 acres to be 1875 tons, it follows that only 937½ of these stand good to the corn crops (being at the rate of no more than 4¾ tons, at a cost of 3*l.* 10*s.* per acre); so that while in point of fact corn re-imburses the whole loss of 693*l.* incurred yearly in making dung, it only gets half the benefit of the product, that product itself being a substance which, derived from the very soil to which it is returned, adds nothing to the indigenous fertility of the staple, as is done by extraneous manuring. Hence, then, it may here not inaptly be said, that in like manner, as we may correctly infer from a large accumulation of ashes under the grate, that a corresponding dissipation of fuel has taken place in the process of burning, so we may conclude that the more abundant the remains of the vegetation of the farm exhibited in the dung court, the greater must have been the absolute alienation of the choicest riches of the soil concentrated in the live stock and corn yearly sent to market. From these observations it must be abundantly obvious, that in proportion as we clearly discern how exhaustive rather than restorative are the principles involved in the elaborate and expensive manufacture of court-yard manure, the more perceptible is the importance of the point embodied in the question which now naturally presents itself; viz., whether a decreased expenditure in the production of this specious fertiliser, in other words, a greater or less diminution of the area of the farm commonly devoted to cattle crops, and an increased use of extraneous fertilisers, ought not to be adopted? With no intention of entering on this subject at large, it may be well, however, to illustrate its bearings on the main question put in issue at the outset of this paper, by the following three Tables:—

TABLE III.

	£ s. d.	Totals. £ s. d.	Per acre. £ s. d.
1. Estimated produce of 100 acres of Barley under a four-course rotation:—38 bushels per acre = 3800 bushels, at 3*s.* 6*d.* per bushel		665 0 0	6 13 0
2. Estimated produce of 100 acres of Wheat, at 28 bushels per acre = 2800 bushels, at 6*s.* 6*d.* per bushel		910 0 0	9 2 0
3. Value of the straw of these crops, 100 tons at 15*s.* ..		150 0 0	0 15 0
		1725 0 0	
DEDUCT.			
1. Expenses of tilling, sowing, reaping, dressing, and marketing the Barley crop, exclusive of those operations which belong to the general cleansing of the land (See No. 11 of the concluding Schedules—to be given next week)	260 16 8		
2. Ditto Wheat (No. 11 of the Schedules)	261 13 4		
3. Rents chargeable against this department of the farm (No. 12 of the Schedules)	294 0 0		
4. Proportion of the expense incurred in each rotation in cleansing the farm (No. 2 of the Schedule)..	102 18 4		4 12 0
Total yearly expense of the corn crops, *exclusive* of the charge for profit on the capital invested therein	919 8 4		
5. Yearly expense of the green crop, cattle, and manure departments, 693*l.* 14*s.* 3*d.*, less 270*l.* 8*s.* 9*d.*, being the charge for profit on the capital invested therein (See Table II.)	423 5 6	1342 13 10	2 2 4
Balance in favour of the farm, being 10 per cent. on the entire capital of 3837*l.* 8*s.* 6*d.* invested therein ..		382 6 2	
6. The proportion of capital absorbed by the corn crops is		1132 19 7	5 13 4
7. The proportion of capital absorbed by the cattle crops and cattle.. ..		2704 8 11	13 10 5
		3837 8 6	9 11 10

Let it next be assumed that this ideal farm of 400 acres, in place of being managed in a four-field course were subjected to the following rotation:—1, roots; 2, Barley; 3, Clover; 4, Wheat; 5, Oats. Here the results may approximately be stated as follows:—

TABLE IV.

Produce of 80 acres of Barley, at 6*l.* 13*s.* per acre ..	£532 0 0
,, 80 ,, Wheat, at 9*l.* 2*s.* ,, ..	728 0 0
,, 80 ,, Oats at 6*l.* 5*s.*, viz., 50 bushels per acre, at 2*s.* 6*d.* per bushel	500 0 0
Straw of these crops, 240 tons, at 12*s.* 6*d.*	150 0 0
Total produce	£1910 0 0

Brought forward		£1910	0 0
Deduct expenses of corn, viz., 4*l.* 12*s.* per acre on 240 acres	£1104 0 0		
Expense of the cattle crop, cattle, and manurial departments at the rate of 2*l.* 2*s.* 4*d.* on 160 acres	338 13 4		
10 per cent. profit on the capital, now reduced to 3519*l.*, as explained below	351 18 0		
		1794	11 4
Extra profit beyond 10 per cent.		£115	8 8

The reduction of capital arises thus:—By Table III., No. 6, it is shown that the acreable sum which attaches to the corn division of the farm is 5*l.* 13*s.* 4*d.*

Hence, at this rate, the 240 acres in this instance yearly under grain, give		£1356	0 0
In like manner in Table III., No. 7, the acreable expenses attaching to the other department of the concern were shown to be 13*l.* 10*s.* 5*d.*, which on 160 acres (the quantity here supposed to be under grain crops), gives		2163	0 0
Total reduced capital		£3519	0 0

	Tons.
By the prior calculations it was shown that the green crops furnished 4¾ tons per acre of available manure to the cereals, and hence (the extent under green crops in a four-course management, being 200 acres), the yearly quantity applied to the corn in the former instance (Table III.), was	950
In the present instance the breadth supposed to be under cattle crops, is only 160 acres, and in it, therefore, the manurial benefit conferred on the other, i.e., the corn department, is only	760
Decrease under this supposed five-course	190

Here, then, the question suggests itself whether, on the one hand, this lessened quantity of a fertiliser which has itself been wholly derived from the farm, or, on the other hand, the expenditure of the foregoing extra profit of 115*l.* in procuring the substantive fresh addition of an extraneous manure, would keep the farm in best heart.

The next illustration will be one of a supposed six-course routine of cropping, viz., 1, roots; 2, Barley; 3, Clover; 4, Wheat; 5, Beans; 6, Wheat. Here the produce and expenses may approximately be stated as follows:—

TABLE V.

Produce of 66⅔ acres of Barley, at 6*l.* 13*s.* per acre	£443	6	8
,, 133⅓ ,, Wheat, at 9*l.* 2*s.* ,,	1214	17	0
,, 66⅔ ,, Beans, at 5*l.* 5*s.* ,,	350	0	0
Straw of these crops, 267 tons, at 11*s.* 3*d.*	150	0	0
	2158	3	8

EXPENSES.

Tillage, &c., of the 266⅔ acres of corn and Beans, at 4*l.* 12*s.* per acre ..	£1226	12	0
Tillage and other expenses of the cattle crops and manure department, at 2*l.* 2*s.* 4*d.* per acre, on 133⅓ acres ..	281	10	4
10 per cent. on the capital, now reduced to 3314*l.*, as explained below	331	8	0
	1839	10	4
Extra profit over and above 10 per cent. to be expended, wholly or in part, in applying extraneous manures to the grain crops ..	£318	13	4

The proportion of capital necessary for the corn department in this rotation (viz. 5*l.* 13*s.* 4*d.* per acre on 266⅔ acres) is	£1511	0	0
Do. for the cattle crop. do. (viz. 13*l.* 10*s.* 5*d.* on 133⅓ acres)	1803	0	0
	3314	0	0
Capital required in a four-course rotation (See Table III.	3837	0	0
Saving of capital under a six-course ..	£523	0	0

	Tons.
The proportion of home-made manure available to the corn crops under the four-course was	950
Do. under a six-course, viz. 4¾ tons per each acre of cattle crops (133⅓ acres) is	632
Decrease under the six-course	318

The foregoing examples show the fertilising and monetary consequences of diminishing the breadth of cattle crops and increasing in a proportional degree the corn acreage. The next Table exhibits speculatively the effect of removing the cattle crops from the rotation altogether by means of a course consisting of 1 bare fallow; 2, Wheat; 3, Beans; 4, Barley.

TABLE VI.

Produce of 100 acres—Wheat. at 9*l.* 2*s.* per acre	£910	0	0
,, 100 ,, Beans, at 5*l.* 5*s.* ,, ..	525	0	0
,, 100 ,, Barley, at 6*l.* 13*s.* ,, ..	665	0	0
Straw 300 tons, at 10*s.*	150	0	0
	£2250	0	0

Expenses of cultivating 300 acres of Grain, at 4*l.* 12*s.* per acre ..	£1380	0	0		
Rent of 100 acres of bare fallow ..	100	0	0		
Note.—The cost of working the fallow to the amount of 155*l.* (being at the rate of 30*s.* 6*d.* per acre fallowed), is included in the foregoing charge of 1380*l.* for the grain crops.					
Ten per cent. on capital, now reduced by the total withdrawal of the feeding stock, to say, 2000*l.*	200	0	0	£1740	0 0
Extra profit (over and above 10 per cent) which if laid out in extraneous manures would yearly give 33*s.* 4*d.* worth to each acre of the farm under crop				£510	0 0

Of this series of Tables, it has to be remarked of the last three, that they are, at best, to be regarded as hypothetical illustrations, introduced merely to indicate the practical bearing of that which at the outset was stated to be the real question put in issue, namely, What is the cost to the farmer of manuring his corn crops with home-made farm dung? Assuming Table II. to present a fair average result, this annual cost is about 3*l.* 10*s.* for each acre under corn, and therefore the expense of manuring of a farm of 400 acres with home made manure amounts in aggregate to the very large sum of 700*l.* yearly, or more exactly, 693*l.* 14*s.* 3*d.* But then, it must not for a moment be forgotten that the designed object for which the figures in that Table were given, was not as being in themselves of any conclusive authority, *but rather as affording a formula, which when applied to the results of experience might ultimately give us a reliable verdict.*

ON THE AMOUNT OF NITROGEN, AND THE CORRESPONDING NITROGENOUS OR PROTEIN COMPOUNDS, IN DATES.

By Dr. J. H. GILBERT, F.C.S.

IN the *Agricultural Gazette* of March 31, a partial analysis of inferior Dates, made in the Rothamsted Laboratory, was given on my authority. The amount of nitrogen (exclusive of that in the stones) was 0.22 per cent. = 1.39 per cent. of nitrogenous compounds. It was also stated that the results of an analysis of Dates made in another laboratory had been communicated to me, and that in that case the amount of nitrogenous compounds was found to be about 2 per cent. But, in the *Agricultural Gazette* of April 21, in an article on the composition and feeding value of Dates, Professor Voelcker gives the results of an analysis which shows a total amount of nitrogen of 1.75 per cent. = 10.91 per cent of nitrogenous or protein compounds. Comparing these results with those given by me, Dr. Voelcker says:—"Having found, in round numbers, eight times as much nitrogenised matters in Dates, which I with others considered of an inferior description, I cannot help thinking that there occurs probably some error in the analyses which were published in the *Agricultural Gazette* for March 31."

It seems only due, therefore, to the readers of the *Gazette*, to provide some additional and more detailed statements, calculated to aid them in making their choice between the very conflicting evidence which has been brought before them as to the probable amount of nitrogenous matters which they may expect to provide to their stock, in purchasing and using the fruit in question as a feeding material.

The inferior Dates analysed in the Rothamsted Laboratory were much broken and matted together. They were sold retail at 4*d.* per lb.; the price of dessert Dates being 8*d.*, 10*d.*, and 1*s.* per lb. It happened that these damaged Dates were the only ones we could procure at the time; but it was thought that as only inferior qualities were likely to come in as stock food, the selection of such a sample was rather an advantage than otherwise. Two determinations of nitrogen were made, the results of which agreed very closely with each each other. They were as under:—

	Nitrogen.	Nitrogenous or protein compounds.
	per cent.	per cent.
Experiment 1	0.218	1.37
Experiment 2	0.222	1.40
Mean	0.220	1.30

Since the publication of Dr. Voelcker's results, two other samples of Dates have been purchased, and three determinations of nitrogen have been made in each. One of these samples cost, retail, 8*d.* per lb. The Dates were pretty sound, but comparatively small. They counted 50 per lb.—those analysed in Dr. Voelcker's laboratory counting nearly the same, namely 52 per lb. The results of the determinations of nitrogen in this, our second sample, were as follows:—

	Nitrogen.	Nitrogenous or protein compounds.
	per cent.	per cent.
Experiment 1	0.278	1.75
Experiment 2	0.265	1.67
Experiment 3	0.282	1.78
Mean ..	0.275	1.73

The third sample consisted of what were called by the dealer—"The best Tiflis Dates." They were much finer than those last referred to, and counted only 33 per lb. The retail price was 10*d.* per lb. The results of the determinations of nitrogen were as under:—

	Nitrogen.	Nitrogenous or protein compounds.
	per cent.	per cent.
Experiment 1	0.286	1.80
Experiment 2	0.278	1.75
Experiment 3	0.278	1.75
Mean ..	0.281	1.77

To these particulars I may now add that the results which had been communicated to me from another laboratory, and which were referred to in the *Agricultural Gazette* of March 31, were obtained in the laboratory of Dr. J. Forbes Watson of the India House, and that Dr. Watson has kindly authorised me to quote them on his authority. They were as under:—

Nitrogen.	Nitrogenous or Protein compounds
per cent.	per cent.
0.32	2.02

The following summary table shows the mean percentages of nitrogen, and of the corresponding nitrogenous compounds, in each of the four different samples of Dates:—

	Nitrogen	Nitrogenous or protein compounds
	per cent.	per cent.
1. Damaged Dates, analysed at Rothamsted	0.220	1.39
2. Dates counting 50 per lb., analysed at Rothamsted	0.275	1.73
3. "Best Tiflis Dates," counting 33 per lb., analysed at Rothamsted..	0.281	1.77
4. Dates from Bombay, analysed in Dr. Watson's Laboratory	0.320*	2.02*
Mean	0.274	1.73

Dr. Voelcker, on the other hand, finds:—

	Total Nitrogen per cent.	Nitrogenous or protein compounds. per cent.
Egyptian Dates counting 52 per lb. ..	1.75	10.91

From a consideration of the facts adduced, I am quite disposed to agree with my friend Dr. Voelcker—"that there occurs probably some error in the analyses"; but I do not think that that error has been committed either at Rothamsted or in the laboratory of Dr. Watson. It is only necessary to add on this subject, that should the reader found his estimate of the probable average percentage of nitrogenous compounds in Dates upon the results of the analyses of the four samples as given above, he cannot then adopt Dr. Voelcker's conclusions as to the probable comparative value of the fruit in question as stock food.

Dr. Voelcker further refers in his article to the want of experimental evidence as to the relative values of starch and sugar as constituents of food. I may mention, therefore, for the information of the readers of the *Agricultural Gazette*, that they will find an account of some direct experiments made by Mr. Lawes and myself with pigs—"On the Equivalency of Starch and Sugar in Food," in the "Report of the British Association for the Advancement of Science for 1854." They will also find the results of two series of experiments (series 2 and series 4) on the comparative feeding qualities of Barley and malt, in our paper on Sheep-feeding in the Journal of the Royal Agricultural Society of England, Vol. X., Part I., 1849. Dr. R. D. Thomson has also made comparative trials with Barley and malt with milch cows, the results of which will be found in his work published in 1846, and entitled, "Experimental Researches on the Food of Animals and the Fattening of Cattle." *Harpenden, St. Alban's, April* 26, 1860.

CROSS-BREEDING.—THE FOSCOTE FLOCK.

I BEG leave most fully to coincide with and to thank you for the clear and able distinction you have drawn between cross-breeding as a means of producing an animal for the butcher, and the butcher only, and adopting the same system as a means of perpetuating a breed of animals, and most fully endorse your reprobation of the latter practice. You have demonstrated the fallacy of it so completely that I need not reopen the question; but when you proceed to adduce my flock as bearing on the subject, the assertions show such an imperfect acquaintance with its history and the principles that have guided me in the management of it, that I must offer some explanations. To refresh the memory of the reader, I will transcribe the passage. "He [Mr. Spooner] cites the Leicester flock of Mr. Valentine Barford, of Foscote, near Towcester, as an instance of pure breeding, and says that gentleman 'has the pedigree of his sheep from the days of Bakewell in 1783 to the present time, and from 1810 he has bred entirely from his own stock, without any interchange of male or female from any other flock.' And Mr. Barford rather prides himself on breeding from the nearest affinities. Though his sheep are small they have not lost any of their fecundity, which is supposed to result from in-and-in breeding. But it is a mistake to note this as an instance of pure breeding, for Mr. Barford neglects the advantages offered to him by his fellow-breeders of Leicester sheep for the sake of preserving purity of descent from a particular flock, that of the original improver Bakewell. Surely some credit might be given to subsequent improvers of Leicesters, &c."

I do not "pride myself on breeding from the nearest affinities." It is true that half a century of experience has convinced me, where two nearly related animals are true in form, sound in constitution, and I am sure that they have no hereditary tendency to disease, in-and-in breeding does not induce degeneracy, and therefore I have no hesitation in coupling them. In fact, I think

* I have some reason to believe that these per centages are calculated upon the fleshy portion of the fruit exclusive of the stones; and if this be the case, the per cent. upon the whole fruit, including the weight of the stones, would agree very closely with that in the determinations made at Rothamsted.

relationship is a consideration of much less importance than form and constitution.

Nor do I "neglect the advantages offered to me" by my fellow-breeders merely "for the sake of preserving purity of descent" (this being, as I have just said, when not combined with purity of form, of no value at all, but rather the reverse), but because I doubt whether they are advantages. At one period of my life, from about the years 1812 to 1825, I was anxious to improve my flock, if possible, by the introduction of fresh blood; and for this purpose I inspected, I believe, every flock of new Leicesters then in any repute, but (I say it without any wish to depreciate others) I could not find one whose form and quality I thought equal or at least superior to my own, and so I became an in-and-in breeder, if you call it so, not so much from choice as necessity, and the same reason for remaining so has existed ever since; for it is absurd to suppose that I should, knowingly, use an animal inferior to my own. I grant that in this view of the case, my ultimate success or failure hinged upon whether I had or had not formed a correct opinion as to what was the true form of a sheep. That I was correct, is, I think, amply demonstrated by the undisputed fact that my sheep have not degenerated in any one desirable quality; for it is evident that any flock or herd bred for the number of years I can point to without addition of fresh blood, must have almost died out from sheer diminution of numbers, under the "careful selection and rigorous weeding" necessary in all flocks, and in the few remaining, purity of descent would only increase the evil, from the greater liability to transmit defect to their offspring; and, on the other hand, purity of descent, when combined with true form, becomes of immense, I had almost said of inestimable value, and which increases with every year the breed is maintained.

But, I go a step further, and without ignoring "the labours of improvers subsequent to Bakewell," let me ask if most of them have not sought to improve the breed by introducing alien blood. Judging from the diversity of type and character that nearly every flock of Leicesters exhibits when compared with others, and with those of 10 or 20 years since, as well as from common report, I firmly believe this. In fact, I cannot account for this diversity in any other way; and taking into consideration the frequent exchange of rams between all the principal breeders, it is almost impossible that one can exist without some stain in blood, however remote. How, then, can I, who have kept mine pure, use a ram of any other breeder without cross-breeding, and thus committing the very error you have so clearly described and so emphatically condemned?

I shall, perhaps, be considered too partial a witness if I assert that my sheep are not small. An animal of true symmetrical proportion always appears smaller than he really is, and I invite every one, before giving a decided opinion, to measure the girth, length, &c., of mine, and compare them with others. And I am certain I could by now have shown them many sizes larger, had I indulged and forced them as many breeders have, but I am sure I should have lost more in hardihood and constitution than I should have gained in size. *Valentine Barford, Foscote, near Towcester, in the Economist.*

Home Correspondence.

Seton's Revolving Harrow.—My attention has been drawn to a leading article in your Journal of the 28th April, describing the principle of and commending what is there called Seton's Rotatory Harrow. Now it appears Mr. Seton registered a rotating harrow on the 6th December, 1859, and the principle of which as detailed in your article is the same as that contained in the patent of Messrs. Smith & Ashby, of Stamford, of the 25th August last (being a communication from Messrs. J. Pintus & Co., of Berlin), and which is now vested in Messrs. T. W. Ashby & Co., of this town, successors to Messrs. Smith & Ashby. The following extract from my clients' specification will show that the principle claimed by them is the same as that of the Seton harrow:—"We claim imparting to harrows a rotatory motion during their progressive motion by causing a greater depression into the ground of the tines on one side than at the opposite side." Now, although the principle of this harrow is not new on the continent, and in America, where it has been successfully used for a considerable period (a print of a harrow exactly similar to that registered by Mr. Seton having appeared in an American publication many months previously), it was first manufactured in the United Kingdom by Messrs. Smith & Ashby. It would be unfair therefore to my clients that Mr. Seton should be allowed to take advantage of the great expense and trouble my clients have been at in obtaining patent, carrying out experiments, &c. As additional testimony to my clients' priority of claim, I may add that Messrs. Samuelson & Co. and other large makers, after carefully inquiring into the matter, are now working under Messrs. Smith & Ashby's patent; and my clients foreseeing that the rotating harrow will in all probability become one of the most important implements of the day, and as they are preparing to manufacture under the patent are compelled to act on the defensive, and have instructed me to take proceedings in Chancery against Mr. Seton for an injunction and an account. Will you therefore in fairness to Messrs. T. W. Ashby & Co., be good enough to insert this letter in your next Number and oblige *Thomas Laxton, Solicitor for Messrs. T. W. Ashby & Co.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

A Monthly Council was held on the 2d May, Lord Walsingham, President, in the chair. Present: Lord Berners, Lord Faversham, Lord Leigh, Lord Tredegar, the Hon. Colonel Hood, the Hon. W. G. Cavendish, M.P.; the Hon. A. Vernon, Sir John V. Shelley, Bart., M.P.; Sir J. V. B. Johnstone, Bart., M.P.; Mr. Amos, Mr. Barnett, Mr. Raymond Barker, Mr. Barthropp, Mr. Bramston, M.P.; Mr. Brandreth, Mr. Caldwell, Colonel Challoner, Mr. Exall, Mr. Brandreth Gibbs, Mr. Hamond, Mr. Fisher Hobbs, Mr. Chandos W. Hoskyns, Mr. James Howard, Mr. Hudson, of Castleacre; Mr. Humberston, M.P.; Mr. Jonas, Mr. C. Lawrence, Mr. Milward, Mr. Pope, Mr. Shuttleworth, Professor Simonds, Mr. H. S. Thompson, M.P.; Mr. Torr, Mr. Turner of Barton, Professor Voelcker, Mr. Jonas Webb, and Mr. Wilson, of Stowlangloft.

The following new members were elected:—

Bayley, Thomas, Lenton, Nottingham
Bywater, R. T., Coniston, Windermere
Dowden, Thomas, Roke Farm, Bere Regis
England, Richard, Binham, Wells, Norfolk
Gascoyne, William W., Sittingbourne
Keeling, Charles R., Yew Tree Farm, Penkridge
Marriott, Rev. James P., Cotesbatch, Lutterworth
Masfen, Robert Hanbury, Pendeford, Wolverhampton
Moxon, William, 3, St. Martin's Place, London, W.
Ostler, John, jun., Walrond Park, Isle Brewers, Taunton
Page, Edward, Bedford
Patron, Simon, 19, Bedford Place, Russell Sq., London, W.C.
Rich, Stiles, Didmarton, Chippenham
Robinson, Isaac, Iron Foundry, Halesworth
Royston, Viscount, Wimpole, Cambridgeshire
Shaw, John, Britannia House, Banbury
Yoomer, George Edgar, Hoaden House, Ash, Sandwich

Finances.—Mr. Barnett, Chairman of the Finance Committee, presented their report, by which it appeared that the current cash balance in the hands of the bankers was 5429*l.* 12*s.* 7*d.* The Secretary's receipts during the past month had been duly examined by Messrs. Quilter, Ball & Co., and were found correct.

Implement Committee.—Colonel Challoner, chairman, reported the recommendation of a letter to various implement makers, informing them that the combined finishing threshing machine does not come within this year's prize sheet. The report was adopted.

Reporting Committee.—Mr. Thompson, M.P., presented the report, to which the numerous body of the Committee had unanimously agreed, after a long and careful consideration of the subject. They recommended that the Secretary should prepare notes of the business transacted at the Monthly Councils, the principal grounds of the decisions arrived at, with the numbers of the majority and minority in each case, and should furnish the newspaper press with a report of the proceedings as soon as practicable after the rising of the Council, and that the substance of reports received and adopted by the Council should also be given; and in cases where any written paper is read or laid before the Council, which is of too great length for immediate insertion in the proceedings, it shall be referred to the Editor to report upon at the following Weekly Council.

Country Meeting of 1861.—The report of the Inspection Committee having been read, deputations from the following cities and towns of Yorkshire were received, and very great interest was excited by the numerous and influential body of noblemen and gentlemen attending to advocate the interests of the various places with which they were connected, and their desirability for the purposes of the Society:—

Doncaster Deputation.—The Earl Fitzwilliam, Mr. W. B. Wrightson, M.P.; Mr. G. H. Packe, M.P., Vice-Chairman of the Great Northern Railway; Mr. F. T. Foljambe, M.P.; Mr. Wm. Aldam, Frickley Hall, Doncaster; Mr. Thomas Walker, Doncaster; Mr. John Hatfield, Mayor of Doncaster; Mr. Alderman Dunhill, Doncaster; Mr. George Hutfield, Doncaster; Mr. L. B. Mason, Town Clerk, Doncaster; Mr. John Butterfield, Steward to the Town Council, Doncaster; Mr. William Tindall, Wheatley, near Doncaster (with respect to the Land); Mr. Seymour Clarke, General Manager, Great Northern Railway.

Harrogate Deputation.—John Greenwood, Esq., M.P.; Basil Thomas Woodd, Esq., M.P.; Thomas Collins, Esq., M.P.; George Kennion, Esq., M.D.; Mr. Samuel Powell, Land Surveyor.

Hull Deputation.—The Mayor of Hull (Z. C. Pearson, Esq.); the ex-Mayor (Martin Samuelson, Esq.); Wm. Wright, Esq. (Sigglesthorne), Deputy Chairman of the Hull Dock Company and landowner; Mr. Alderman Bannister, shipowner and landowner; Mr. Alderman Moss, shipowner; Mr. Councillor Harrison, wine merchant; Mr. Councillor Dannatt, shipowner and landowner; the Town Clerk of Hull (Robert Wells, Esq.) Accompanied by the Lord Hotham, M.P.; Lord Ashley, M.P.; the Hon. Admiral Duncombe, M.P.; James Clay, Esq., M.P.; Joseph Somes, Esq., M.P.; James Hall, Esq., Scarborough.

Deputation for Leeds.—Leeds: Mr. Beckett, to introduce; the Mayor (Wm. Kelsall); the Hon. George Lascelles, Harewood; the two Members, Mr. Baines and Mr. Beecroft; Magistrates, Sir Peter Fairbairn and John H. Shaw; Aldermen Kitson, George, and Botterill; Councillor Wright. Bradford: the Mayor (Mr. Wright); the two Members, Mr. Wickham and Mr. Salt. Halifax: the Mayor (Mr. Welsh); Mr. Stansfield, M.P. for Halifax. Huddersfield: the High Constable, Mr. Wright Mellor. Ripon: the Mayor (Mr. Kendall). Scarborough: Mr. J. Dent Dent, M.P. Keighley: Mr. Ambler. Edwin Eddison, Hon. Secretary.

Wakefield Deputation.—The Mayor of Wakefield (Mr. Henry Brown); Mr. Councillor Lamb, Mr. Thomas Cutwright Johnson, of Chevet; Mr. Wordsworth, Stump Cross, and Oakenshaw; Mr. M. E. Naylor, Wakefield; Mr. Edwin Green, Harecroft, Members of the Wakefield Farmers' Club; and Mr. William Barratt, Secretary to the Farmers' Club.

York Deputation.—The Lord Mayor; Alderman Meek; Alderman Herbold; Alderman Leeman; Alderman W. Richards; and the Town Clerk.

Addresses signed by large numbers of the landholders in the county were presented; and the Council having heard the respective claims advanced by the several places, proceeded to the election, which terminated in Leeds being selected as offering the greatest advantages for the country meeting next year, on condition that the Mayor of that town entered into the usual agreement with the Secretary of the Society by the next monthly Council on the 6th June.

Canterbury Committee.—Lord Leigh, Chairman, presented the report, which recommended the insertion of the usual advertisements for tenders for refreshments in the showyard at Canterbury in the London agricultural and local papers. The Secretary was directed to write to the Mayor calling his immediate attention to the absolute necessity of safe communication over or under the railway to the showyard. On the motion of Mr. Brandreth Gibbs, seconded by Mr. Barnett, a new Rule for the Prize Sheet was agreed to, viz.:—That it be incumbent on Exhibitors to prove the correctness of their Certificates if called upon by the Stewards or the Council to do so. On the motion of Sir John Shelley, seconded by Mr. Fisher Hobbs, it was resolved—That the Veterinary Committee be requested to inquire and report as to the advantages derived by the members of the Society from the annual grant made to the Royal Veterinary College. The Secretary was directed to request Governors and Members of the Society to forward their nominations of Judges of Live Stock to him by the 15th of June, in consequence of the early period of the month at which the Canterbury meeting is to be held.

A deputation consisting of the President, Lord Walsingham, Sir John V. Shelley, Bart., M.P.; the Hon. Colonel Nelson Hood, and Mr. Brandreth Gibbs, was appointed to confer with the Right Hon. the Chief Commissioner of Works, Parks, and Buildings for the purpose of ascertaining if any and what sites can be granted the Society's proposed Metropolitan Meeting.

House List.—Agreeably with byelaws, the Council arranged an election list, to be recommended by them for adoption at the ensuing General Meeting.

The Council then adjourned to its Weekly Meeting on the 9th inst.

Chemico-Agricultural, Ulster: *April* 20. *Council Meeting.*—Professor Hodges laid before the meeting the opinion of counsel on the method to be adopted for the publication of the names of parties selling adulterated manures or articles of food, and announced several large subscriptions to the defence fund. After some consultation on the subject, it was proposed by John Andrews, Esq., J.P., and seconded by John Borthwick, Esq., J.P., and resolved—"That the opinion of counsel relative to the legality of publishing the analysis and valuation of the several manures subjected to examination in the laboratory having been read, the consideration of the subject, with a view of giving instructions and authority to Dr. Hodges, be entered into at next meeting of Council."

Greensand as Manure.—The suggestion of Professor Hodges that the supply of fertilising material which our beds of greensand were shown by his analyses to contain should be rendered available has already excited considerable attention. Mr. Andrews stated that he had ordered one hundred tons of the sand. He found that in the districts in which it abounded bone manures had no marked effect. Mr. Walker said that on the soils on the greensand the grain was much plumper and better filled than in other localities differently circumstanced. The following is the composition of a sample of greensand, from Kilroot, county Antrim, which Dr. Hodges some time ago reported to the Society:—

100 parts contained—	
Water	0.97
Organic matters	0.73
Potash	0.56
Soda	0.25
Lime	4.14
Magnesia	0.41
Oxide of iron	4.85
Ammonia	2.41
Sulphuric acid	Trace
Chlorine	0.04
Phosphoric acid	3.24
Equal to 7 per cent. of bone earth phosphate.	
Silica, soluble in potash	6.41
Insoluble silicious matters	74.88
Carbonic acid and loss	1.11
	100.00

One ton, therefore, of the sand would yield about 156 lbs. of phosphates, worth 9*s.* 9*d.*, and 12½ lbs. of potash.

Edinburgh: *On Road Reform.*—At a public meeting of those interested in the management of public roads in Scotland, and desirous to have turnpike tolls and pontages, and statute-labour and bridge money abolished, and the necessary funds provided by assessments, Mr. Milne Home moved the first resolution, which was as follows:—"That the meeting desire to express their approbation of the admirable manner in which the Commissioners on Scottish roads conducted the inquiry, and their thanks for the very able and instructive report drawn up by them."

He was desirous that no one should be held committed to any particular views on matters of detail by agreeing to the resolutions which might be proposed. Many gentlemen entertained very considerable doubts as to the propriety of introducing a law, which should be applicable to every

county in Scotland, insisting on the abolition of tolls, and the introduction in lieu thereof of a general assessment. He confessed that, although he had had his own prejudices with regard to tolls, he saw, from reading the report of the Royal Commission, that there were counties where it would not be judicious to abolish tolls. His only desire was to have the public roads of the country maintained in an efficient and economical manner, and if had any opinion as to the way in which that opinion was to be carried out, it was not for him to express that opinion at present, except to say that he thought the most judicious and useful course would be that some general law should be passed allowing each county to judge for itself what might be expedient for that particular county.

Mr. Hope, Fentonbarns, in seconding the motion, said—There are few or none who do not confess that in some shape or other improvements are practicable, but there are many stout sticklers for tollbars. For a clear and concise statement of the inequalities and inherent evils of the toll system, the evidence of our esteemed friend, Mr. Pagan, stands unrivalled, and the Commissioners pay him the well-merited compliment of calling special attention to the fact. It is pretty generally admitted that tolls may be abolished with advantage in most rural districts, but it is frequently denied to be practicable or just to do so in the neighbourhood of large towns. A most skilful and talented defence of tollbars was made by some of the Renfrewshire gentlemen, and I confess that on first reading their evidence I was rather staggered by it. For instance, it is stated that certain quarries in Renfrewshire, but within 4½ miles of Glasgow in Lanarkshire, paid of tolls for stones going to Glasgow 2600*l.* a year, while the rent of the quarries was only 2300*l.* or 2400*l.* That certain bleachfields, also a little over 4 miles from Glasgow, paid 120*l.* a year in tolls for four horses, or 30*l.* for each horse. Of course, by an assessment these parties would be gainers, and certain farmers would have more to pay. But then it comes out that the whole expense of maintaining the road over which the stones are carted, and for which the carters themselves pay 2600*l.* in tolls, does not amount to that sum. That of 14,000*l.* a year raised by tolls in Renfrewshire upwards of 8000*l.* is obtained within a radius of 4½ miles of Glasgow. The conclusion forced upon me is that an unfair share of the burden of keeping up the roads in Renfrewshire is thrown on the people of Glasgow. Why, Glasgow, with its trade and manufacturers and teeming population, has had no inconsiderable effect in raising rents in East-Lothian, situated 60 or 70 miles from it. If the fair city was blotted from the map, very different indeed would be the rent-rolls of most of the proprietors of Renfrewshire. It certainly deserves kinder treatment at their hands than to be hemmed in and shut off from the surrounding country by this remnant of feudalism, the odious tollbars. If there is a case at all in favour of tolls it is in Renfrewshire, but in my opinion they have failed to make it out, and the Commissioners seem to be of the same judgment. Their report occupies a separate volume of 300 pages, including their most valuable tabular views of the mileage, cost of maintenance, revenue, and debts of the public roads, giving us a thorough knowledge of the whole subject. Their proposals for the future management appear to be singularly simple and just. They propose first that the real value of all debts affecting the roads in different districts should be ascertained and imposed as a burden on all real property within the same district as ascertained by the valuation roll—the payment to be spread over a series of years. 2d That statute labour and turnpike roads be thrown together, and maintained by county boards from a similar assessment, one-half to be paid by owners, the other half by occupiers, but during existing leases wholly by occupiers. That burghs maintain the roads within their Parliamentary boundaries from a separate assessment on themselves, and that all causeway mail and customs now levied for that purpose be abolished. The Commissioners do not object to a rate on horses, provided [illegible] that half the sum required is raised in that form, and that farm horses are charged half the rate levied on all other horses. They admit also that quarries, mines, and public works might be by warrant of the Sheriff surcharged two, three, or four times the amount of the general assessment, when the injury done to the roads by these particular works was extreme. For myself, I consider it utterly hopeless to make any men or class of men pay for the roads in exact proportion to the use they make of them; but further, I do not think it is either just or expedient to do so even if we could. I consider every man interested in the roads in proportion to the value of his property, and he should be assessed for maintaining them accordingly. No class of men have such a direct interest in good roads as farmers. It is impossible to estimate the damage frequently done to horses passing over bad roads with a heavy load, even for a short distance. Horses travelling on bad roads not only lose condition, but it frequently tends to excite inflammation, and proves the cause of death. I go into this matter, so far as the expenditure of money is concerned, with clean hands; any change, or what I would esteem an improvement, would throw a considerable additional charge upon me; but to get quit of tollbars, to obtain a more efficient and economical management, and above all, improved roads, would be to me ample compensation—even if I was not conscious, as I am at present, that I take far greater use of the roads than I pay for.

Mr. Charles Cowan moved the second resolution, which was to the following effect:—"That the meeting approve of the consolidation of road and bridge trusts, and that the present trustees and the Commissioners of Supply and tenants to be nominated by the ratepayers should form the general body of road trustees for each county, and elect a Road Board annually for the management of the county roads and bridges; and that the roads within the Parliamentary bounds of burghs should be managed and obtained by the burgh authorities; and that the existing road debts and engagements be valued and provided for—all in manner mentioned in the report."

In supporting the resolution, Mr. Cowan expressed his concurrence in the remarks of the previous speakers as to the value of the report of the Commission, and as showing the absurdity of the present system alluded to the fact that there were no less than 1060 turnpike trusts in Scotland, the revenue of some of them being as low as 20*l.* or 30*l.* a year. If many of these trusts were conjoined, it would certainly tend to the great advantage of the country at large. He hoped that Mr. Pagan, the pioneer of road reform, who had had a hard battle to fight against antiquated prejudices and selfish feelings, might see, before many years had elapsed, the great object for which he had so long laboured, fully achieved to the great satisfaction of the country.

Mr. Scot Skirving seconded the resolution. In doing so, he referred to the advocates of tollbars, having diminished in numbers, as shown in the fact that several gentlemen who were a few years ago in favour of the toll system gave evidence before the Commission condemning it as no longer tenable. Those who now advocated the tollbar system based their support of it almost exclusively upon the principle that those who used a road should pay for it; and the Renfrewshire supporters of tollbars and the petitioners against Lord Elcho's Bill went a step further, and maintained that those only who used a road should pay for it. He denied that, when traffic was driven along a road, the road was used merely for the profit of the particular person engaged in the traffic, and maintained that the benefit was diffused equally through the whole community in proportion to the stake which each individual had acquired in the property of the kingdom, which would never have been prosperous nor powerful had it not been for the public roads. After complimenting Mr. Pagan on his labours in connection with road reform, and especially on his conceding his views as to a rate on horses in favour of a rate on lands and heritages, Mr. Scot Skirving noticed as one reason against a rate on horses that if it were adopted the increasing use of the steam-engine on highly cultivated lands might do away with the necessity for a great many of the agricultural horses.

Mr. Pagan rose, amidst applause, to move the third resolution, which was as follows:—"That turnpike tolls and pontages and statute-labour assessments and bridge money be abolished; and that funds be provided for maintaining the roads and bridges in the respective counties and burghs on the basis of an assessment on the lands and heritages in the county and burgh valuation rolls, divisible betwixt landlord and tenant, and to be supplemented, where considered necessary, by a rate on assessed horses, or an additional rate on quarries, mines, and public works; and that toll-houses and gates, and gardens and steelyards be sold, and the proceeds applied in part of the road debts." Mr. Pagan said—

That after the addresses already made, he should not presume to detain the meeting at any length, more especially as, in various shapes and forms, he had laid his opinions upon that subject before the public. If they came to the resolution to abolish the existing machinery of road management, it was pretty clear that a large annual saving would accrue. In the first place there were 1060 toll-keepers on turnpike roads, and there were also the assessors and collectors of the statute labour road money, which would probably increase the number by one or two hundreds. There were also the collectors of bridge-money. The services of all these people would be dispensed with, and if the assessment was placed on lands and heritages, the collector of county rates could collect it by merely adding a line to his receipts. As there were only 26 tollbar counties in Scotland, there would thus be 26 collectors of road-money instead of 1060. It had been called extravagance to burn the candle at both ends, but by this system of tollbars and statute-labour collectors, they were burning the candle not only at both ends, but in the middle, and on all sides, until they had burnt it almost to the water's edge. Then if the present system were abolished it would be no longer necessary to have local Acts of Parliament. During the period from 1750 to 1844 they had got 350 local road Acts in Scotland, and since that time 41 had been added to the list. That was a second very important branch of saving—namely, to have one general Act of Parliament for all the roads and bridges in Scotland. Whether that was to be a compulsory Act, to which the Commissioners rather pointed, and to which he himself leaned, it was for Parliament to determine; but that it should be a general Act for all Scotland was most clear. Now, the local Acts from 1750 to the present day were about 400 in number, and estimating these at the moderate average amount of 500*l.* each—and the Ayrshire Act cost 4300*l.*, of which 2000*l.* was paid by assessment on the land—but, taking them at 500*l.* each, 200,000*l.* had been spent in getting these Acts of Parliament. There were general Acts for prisons, for the poor, for the county valuation for lunacy, for police, and for registration, and other public matters; and was it not most extraordinary that they should have local Acts for the public roads? Mr. Pagan went on to notice the great debt on the road trusts in Scotland, alluding to the fact that the Scotch counties free from tolls were free from debt, and urging that as an encouragement to change the system. In England the same curse of debt hung upon the system of tollbars, and it could not well be otherwise, as a very heavy expense was incurred in getting the Acts and erecting tollhouses before a penny of revenue could be raised. Madame Ida Pfeiffer had, in journeying through Norway and Sweden, contrasted the absence of tolls there with the state of things in Germany, where a toll was charged of 1*d.* for almost every mile, which was surely the perfection of tollbar management. After referring to the absence of tolls in the Isle of Man, and to the legislation which had produced their recent abolition in Ireland, Mr. Pagan quoted the evidence of Lord Belhaven before the Commissioners to show that the abolition of tolls in Ireland had operated beneficially, and said that, having the example of Argyllshire, of the Isle of Man, and of Ireland before them, he did not see why they should be afraid to abolish tolls altogether. He trusted that the valuable report of the Royal Commissioners might not be allowed to be without action being taken upon it, but that the matter might be taken up by the Legislature and settled without further delay. He understood the Lord Advocate had been pleased to give directions for preparing a draft of a Bill, and that when his lordship saw that draft he would consider what course to adopt. He trusted that the Legislature might be induced soon to take the matter up, and pass an Act of Parliament satisfactory to the country, either in the shape of a compulsory or a permissive Act. If it was in the shape of a permissive Act, he did not doubt that it would be very soon adopted throughout Scotland. When he proposed a rate on horses they were then in the days of coaching and posting, but now horses had greatly disappeared from the roads; and when he saw the Valuation Act passed it naturally occurred to him that they should adopt it as the basis of an assessment. He agreed with Mr. Thompson, of Banchory, that they should hold by lands and heritages, and not assess horses at all; but as various gentlemen who took a part in originating this movement thought that the rate on horses should be mentioned in the resolution, he agreed that it should be mentioned on the understanding that he should exonerate himself as he had now done.

Mr. Dickson, Saughton Mains, seconded the resolution, which was unanimously adopted.

Resolutions with reference to petitions to Parliament and the appointment of an acting committee were then adopted.

Reviews.

Our Farm Crops, Part VIII. By John Wilson, F.R.S.E., Professor of Agriculture in the University of Edinburgh.

The present section includes the Jerusalem Artichoke, Clover, Lucerne, and Lupine. Of these the second is treated, as it deserved, much more completely than the others. We extract from it those passages which bear upon the question of the Clover sickness.

1. *As to the influence of rotation.*—"In the Norfolk or four-course rotation, Clover as a rule follows Barley and precedes Wheat. In the five-years, six years, or longer rotations, it is met with following either Barley, Oats, or Wheat. In these rotations it is kept down a second or even a third year, and is generally succeeded by Wheat, except, of course, in cases where it was sown down with the Wheat crop. For either of these grain crops Clover no doubt is an excellent change, as it differs widely from them in its food requirements from the soil, and also in its habit of growth and general tillage treatment. Now, if these be the true principles upon which our system of rotations is based—a system which long experience has pointed out as necessary, and which science has confirmed and explained to us—we appear to be sadly negligent of our own interests in departing so widely as we usually do from the principles involved, by mixing with our Clovers other plants belonging to exactly the same order as those to which the Clover is intended to be a change. Throughout the country far and wide the universal practice is to mix Rye-grass, either alone or combined with other Grasses, with the Clovers, and thus to a great extent to neutralise the benefits which Clovers sown by themselves would confer upon the rotation. The Rye-grass, which is the common companion of the Clovers, is identical in its botanical characters with the ordinary straw crops which both precede and succeed the Clover crop: its food requirements are the same, and it forms a home for the continuous production of the various fungoid diseases and insect enemies which so frequently and so seriously injure our grain crops. Here, then, our practice is totally opposed to our principles, and instead of growing an intermediate crop, differing in its agricultural characters and requirements from those which are next to it in the rotation, we diminish the benefits we might fairly expect to receive, by mixing with it plants belonging to the same family as those to which the Clover crop ought to be an entire change."

2. *As to the chemical theory of Clover sickness.*—"A few years back we were inclined to trace many of the various unaccountable effects in farming to chemical causes, and sought, by analysis of our soils, &c., to arrive at their defects, and thus readily provide compensating remedies for them. Vital effects however are clearly not to be judged by chemistry alone. Each plant we cultivate probably differs in its nature and powers from the others, and is influenced for good or for bad by entirely different causes. "If the analysis of plants alone could tell us precisely what has been withdrawn by a given crop from the soil, and what must be restored to it to insure success, agriculture would become in a great measure a matter of certainty, instead of being subject to a thousand accidents, as it is. That the farmer may and does derive great advantage from his own chemical knowledge or that of others, it would be folly to deny; but he must not suppose that all begins and end there. There are mysteries far beyond the reach of the highest human knowledge; but the veil is sometimes capable of being withdrawn, yet only where people do not rest satisfied with a foregone conclusion, but are content to keep their minds open to fresh suggestions, without indolently making up their bundle of faggots, and wrapping themselves up in their own prejudices." The investigation into the composition of soils on which Red Clover succeeds and fails, by Dr. Anderson,* clearly shows that we must seek elsewhere for the cause of the disease, and fully justifies Mr. Berkeley's opinion, that 'it seems quite preposterous to believe that Clover will not succeed once in a four-years' course, from mere exhaustion of the soil.' Dr. Anderson's investigations were made in reference to a field at Craiglockart, on a particular part of which Red Clover always succeeded, though it failed on the adjoining portions, and even when it did not fail altogether, the crop on this particular part invariably presented a remarkable superiority, in strength of plant and abundance, to that on the remainder of the field. This difference was traced distinctly to a sort of shale, which formed the main proportion of the soil where the Clover succeeded, which had been thrown out of an old quarry in the corner of the field; the same luxuriance of growth had also been noticed in a shale of precisely similar character in Fife. Every precaution was taken to obtain a fair sample of the soil (page 84, vol. i.), its examination was conducted with great care, and with the following results:—

	Shale.	Cultivated Soil.
Organic matter	6.526	6.65
Peroxide of iron	4.248	4.69
Alumina	1 740	1.84
Lime	2 268	.83
Magnesia	traces.	.27
Sulphuric acid	.400	.01
Phosphoric acid	.042	.14
Carbonic acid	.560	traces.
Potash	.329	.24
Soda	.121	.02
Insoluble silicates	84.170	85.93
	100.404	100.12

"The only difference worthy of remark between the two analyses exists in the reduced proportions of sulphuric acid and lime in the soil which has been under Clover cultivation, both of which substances appear to be essential to the healthy development of the plant. In some analyses of other soils on portions of which Clover had succeeded, and on some portions failed, the results were even less satisfactory, the portions on which it failed giving higher indications of fertility than where it succeeded."

3. *Other causes of Clover sickness.*—"The mechanical

* *High. Soc. Trans.*, 1849, p. 202

treatment of the soil has been assigned by some as the cause of failure; and rolling, pressing, and consolidation, by keeping sheep penned on the field, have been recommended as the remedy. Mr. Berkeley, to whose opinions we are obliged so frequently to refer, is inclined to trace the cause of the disease to infection, from the decaying vegetable matter of previous crops in the soil in which it is grown. He says *—'Now, as Clover is usually sown with Barley after a crop of Turnips, portions of which are always buried with the plough, it is not impossible that occasionally, though not always, the plant may be impaired in constitution in an early stage of growth from this cause, though the evil is not apparent in general, or at least is not observed until the following year. We have examined the roots of sick Clover repeatedly, without ever finding any unhealthy appearance about them, or the slightest trace of any Fungus spawn which might affect them. It is the part above the ground which is the seat of the disease. The leaves lose their healthy green, and ultimately the base of the stem, or what is often called the crown of the root, decays, and the whole plant falls a sacrifice. Minute Fungi may exist upon the leaves, but if so, they are in no way the cause of evil. It is indeed possible that in some instances there may have been some original constitutional defect, which was inherent in the seed; but such defects usually show themselves at an early stage of growth, and we are far more inclined to attribute the condition of the plant in the majority of instances to infection from decaying matter than to the cause just named. Mr. Berkeley continues the subject by saying, 'that whatever may be thought of the notion just put forward as to the origin of "Clover sickness," we would strongly recommend no one to attempt to sow Clover seed where a large portion of the crop has failed, for the produce is almost sure to be diseased. In the case of Oats we have proved, by consecutive experiments, that seed from diseased plants will produce a diseased offspring, and we do not doubt that even where the original cause of disease may not exist, it may be propagated by seed, an evil which no one can guard against, till measures be taken by agriculturists to insure a supply of seed from healthy sources. More, we are convinced, depends upon this than is generally imagined.'"

Professor Wilson makes most interesting use of his subject to introduce reflections on subjects of general agricultural interest. And the Clover plant gives him occasion to discuss the general topics of crop rotation, plant diseases, and to some extent the geography of plants. The two last are considered in the following well written passage:—

"A mere glance at the vegetable kingdom, as it is distributed over the face of the globe, is sufficient to show that plants are greatly affected by inorganic agents. Not merely is there a visibly marked difference between the vegetable productions of the tropical and temperate zones, but in proportion as there are differences of soil and altitude, we see this plainly enough at home. The driest and the wettest places have their peculiar denizens; the meadows and the woods have again theirs; and, according to the nature of the soil, these are clothed with different vegetables, which are wholly absent in some spots, and in others barely maintain an existence; while very slight alterations of drainage or tillage completely drive away some, and others take their place. Some species, again, which abound for miles in certain districts—as the Foxglove and the Red Campion—in other tracts, where they flourish perfectly when introduced into the garden, are wholly wanting. If resident in a mountainous district, especially one that ascends up as high as perpetual snow, we see distinct zones of vegetation; and if the plants of the upper zones are brought into the garden, with every care and skill, and a perfect knowledge of their exigencies of a long rest and of abundant light and warmth at the period of active growth, it is frequently found impracticable to preserve them. It is clear, then, that certain conditions of soil, atmosphere, and other inorganic agents, are not merely necessary to the healthy development of particular vegetables, but that any great derangement of these conditions, or of any one of them, is sufficient to prevent their growth; for if this were not the case there could not exist, as there does at present, a distinctly marked distribution of vegetable forms. These changes are often inappreciable to our senses and powers of observation, and consequently disease may often be set up in plants which come within our care and notice, without our being able to assign the reason or to suggest the remedy. Good cultivation consists in adapting the mode of treatment to each particular plant; and without some knowledge of general principles success is seldom attainable. By cultivation plants are led more and more from their natural habits of growth: in some the conditions are so widely different as to interfere greatly with their vital powers; in others, again, they exert a less debilitating influence. At all times, however, a departure from normal conditions engenders a susceptibility to disease, which may exist in every degree, from a simple constitutional derangement up to such an aggravated form as to be fatal to the plant. In the first stages altered conditions may be able to arrest the progress of the malady, and it is here that the observation and knowledge of the cultivator is called into play to apply the proper remedy. In a state of nature, when disease is once set up there is but little probability of amendment, as the plants are confined to the spot on which they grow, and there is no power of selection. The air is imbibed by the leaves, whatever be its quality, and the moisture and inorganic matter by the roots, in whatever state they may be, and however they may be deficient in the constituents necessary for the healthy nutrition of the plant; and if these are not suitable to the nature and requirements of the plants we have at once the elements of internal disease."

* *Agri. Gaz.* 1860, p. 10.

Calendar of Operations.

APRIL.

Wester Ross: *April* 28.—Not only has our winter been unusually severe, it has also been unusually protracted. It set in so early that the ordinary breadth of autumn Wheat was not sown, and less than the usual amount of autumn labour was accomplished; and it has continued so long that our spring has been little else than a continuation of severe winter weather. Wheat that lay unbrairded for some four months came above ground greatly closer and more vigorous than could have been expected, but from a long continuance of severe night frosts and piercing northerly winds its beautiful green has given place to a blighted and miserable appearance. Although the limited breadth sown cannot now be increased, a few days of genial weather would have a surprising effect upon the growing plant. As Barley has been fetching a price unusually high, a larger breadth has been sown; not, however, in the best condition, the soil being cold and damp. A large breadth of Oats has been sown in similar condition, and the earlier sowings of both are now making their appearance above ground. A large breadth of Potatoes is being planted, and is now nearly completed. Keep for stock in the house is completely exhausted, and bare and forbidding as the Grass is the cattle are all upon it. Not only is there no growth, but the little progress that was made in better weather has been lost, and all again looks wintry and scorched. Fat stock have been easily disposed of at a remunerating figure, but lean beasts have had few purchasers at any price. The spring of 1860 cannot fail in becoming a household word both with arable and sheep farmers. Many are now willing to purchase hay at 2*s.* per stone, and cannot, even at that figure, meet with a supply. As the wind has now changed to the west we may expect more seasonable weather, which at this advanced season of the year would cause rapid growth, and would speedily put within reach of the stock, on all early arable farms, an abundant bite. Well it is that sheep-farming has been so profitable for many years, as losses altogether extraordinary have this season been sustained, whilst keep has been exorbitantly high. Our forces will now be all turned on to preparing the ground for Turnips, the only portion of the crop that remains to be sown.

Notices to Correspondents.

Cows: *Fear.* It is common for a cow to continue a yield from six to eight months before she gives below 12 quarts per day, at which time she has usually, if not invariably, gained weight. The cows giving less than 12 quarts, and down to 5 quarts per day, are found when free from ailment to gain without exception. This gain, with an average yield of nearly 8 quarts per day, is at the rate of 7 to 8 lbs. per week each. This of course is only in the case of cows not in calf and intended to be dried and sold fat.

Holcus lanatus: *A B.* This Grass is said to be natural to damp and peaty soils; to give a considerable amount of after-math, but not be liked by cattle either when green or in hay, being too soft, spongy, and insipid. In fact, some consider it as almost a weed.

Permanent Grass Seed (sown on Earl Granville's lawn), contains the following:—

Grasses.	*Weeds*—a small sprinkling, as
Lolium perenne	Holcus lanatus
Alopecurus pratensis	Bromus mollis
Phleum pratense	Ranunculus repens
Festuca duriuscula	Plantago lanceolata
Dactylis glomerata	,, media,
Clovers	and others

This is a better mixture for "Permanent Pasture" on good soil than one generally meets with, not only as regards the species but their proportionals in as far as we can judge from a mixed sample and their general freshness and cleanliness. It is not, however, fit for lawn of a fine kind, but perhaps this is sown a lawn meadow; only the Lolium perenne and Festuca duriuscula are fine enough for lawn. *J B.*

Poissy Show: *R.* The Show has exceeded that of last year in the number of most classes of stock exhibited. The following figures are taken from the *North British Agriculturist*:—"The following shows the numbers of the respective years:—

	1859.	1860.
Oxen	257	281
Calves	11	11
Sheep	810	450
Swine	89	78
	667	820

The following table gives a favourable impression of the general appreciation of the Short-horn in France. There are districts, however, in which the Short-horn is wholly unknown:—

Shorthorns — pure and crosses	100	Salers	22
Charollais	44	Choletais and Parthenais	21
Garonnais	25	Bazadais and Landais ..	15
Limousins	22	Ayrshire and Devon ..	2

The sheep were in pens of 10. The following gives the number of pens of each breed:—

	Pens.		Pens.
Merinos and cross Merinos	9	Southdown — Berrichons	10
Southdowns	3	Other breeds	25

In the classes for swine pigs of the following breeds were entered for competition—

Augerons	11	English breeds	41
Normands	5	Crosses — English and French breeds ..	13
Garonnais	7		

Scarcity of Food: *H J Turner.* Thanks for your paper, which unfortunately reached us too late for this week. It shall appear in next Number.

Seeds: *W C M, J J H, &c.* Please tell us from whom you obtained your seeds in order that honour may be given where honour is due.

Turnips: *O H P.* Your question reached too late for last week. You must not plant Turnips for seed whose top has been cut off close to the bulb. The top ought to have been removed so that every leaf fell apart.

Weed Seeds: *S A.* 1, *Juncus bufonius* (Bog Rush); 2, Seeds o some *Composite plant* most likely of the Camomile group.

JUPP'S NEW HORSE AND CATTLE FOOD.—Dr. Letheby in his analysis of this new Food says, "*The nutritive value of the food is therefore good, for it amounts to* 80.2 *per cent.*"

Sent out in bags with directions for use, for cash only, at 35*s.* per cwt.; 19*s.* per ½ cwt.; and 10*s.* per ¼ cwt.

W. & R. Jupp & Co. 6, Cross Lane, Eastcheap, E.C.

*** Agents wanted in large Towns.

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD, POULTRY AND GAME.—RICE SWEEPINGS, 8*s.* 6*d.* per cwt., in 1½ cwt. bags; SCREENED RICE, 12*s.* per cwt., in 1¼ cwt. bags; DOG BISCUITS, 14*s.* per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6*s.* and 8*s.* per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. Jupp, 6, Cross Lane, Eastcheap, E.C.

PLOUGHING AND ALL OTHER AGRICULTURAL OPERATIONS BY STEAM.

BANKS'S COMBINATION AND ORNAMENTAL FARM SYSTEM MODEL, now exhibiting at the Society of Arts Exhibition, Adelphi, London. No. on Catalogue, 171.

D. L. Banks, 26, Wellington Road, Cold Harbour Lane, Camberwell, S.

REAPING AND MOWING MACHINES.—Caution.—Notice is hereby given that any person or persons INFRINGING any of the PATENTS of Cyrus Hall M'Cormick for REAPING and MOWING MACHINES, or making, or vending, or using, or exercising any machines which in any way infringe any such patents, will be proceeded against according to law. The main features of M'Cormick's patents consist in a zig-zag serrated cutting blade, spear head shaped, holding fingers, and a gathering reel.

Prichard & Collette, Solicitors for C. H. M'Cormick. 57, Lincoln's Inn Fields, London.—May 5.

OIL PAINT NO LONGER NECESSARY.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which Hill & Smith will forward on application.

Sold in casks of about 30 gallons each at 1*s.* 6*d.* per gallon at the manufactory, or 1*s.* 8*d.* per gallon paid to any station in the kingdom.—Apply to Hill & Smith, Brierley Hill Iron Works, near Dudley, from whom only it can be obtained.

THE annexed sketch represents the GLENNY WATERING POT, which will be found a decided improvement upon the old-fashioned one, as from the peculiar construction of the handle the weight is more easily balanced in the hands, which enables the user to empty with far less muscular exertion and fatigue a pot of this kind than one upon the old plan.

Of all Ironmongers, Hardwaremen, and Seedsmen; and of Loveridge & Shoolbred, Wolverhampton, Sole Manufacturers.

J. WATTS AND CO., Hothouse Builders and Hot-Water Apparatus Manufacturers,

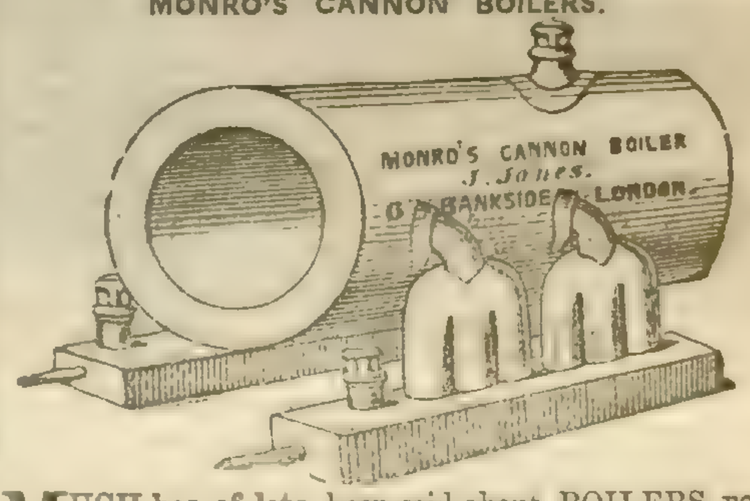
Near the Green Man, Old Kent Road, London, S.E.

200 CUCUMBER AND MELON BOXES AND LIGHTS, AND FROM

300 TO 400 LIGHTS FOR PITS OF ALL SIZES KEPT IN STOCK, glazed and painted complete, ready for immediate use, packed and sent to all parts of the Kingdom.

References to the Nobility, Gentry, and Trade in most of the counties in England.

MONRO'S CANNON BOILERS.



MUCH has of late been said about BOILERS FOR HEATING BY HOT WATER, but these Boilers have now proved themselves to be the best at present invented. They are adapted for Heating every description of Building, and are made of various sizes. The price of the

24-inch Cast Iron is	£5	10*s.*	each.
24-inch Wrought Iron is	6	10	,,
36-inch Wrought Iron is	8	10	,,
48-inch Wrought Iron is	12	0	,,

References to Gentlemen and Nurserymen where these Boilers are now at work. The Cannon Boilers are now kept in stock, and are to be had only of J. Jones, 6, Bankside, S.E. Also, every description of Saddle and Cylinder Boilers. Hot-water Pipes and Connections at prices lower than those of any other house in London. Estimates for Hot-water Apparatus erected complete in any part of the country, and an Illustrated Catalogue on application to J. Jones, 6, Bankside, Southwark, London, S.E.

MICROSCOPIC PHOTOGRAPHIC NOVELTIES Now Ready.—Dr. Livingstone, Cardinal Wiseman, Charles Dickens, Albert Smith, Miss Amy Sedgwick, Ecce Homo, Paul preaching at Athens, St. Paul's Cathedral, Houses of Parliament, the £5 Bank Note, Smugglers Watching, Windsor Castle, Congratulation, Interior of Highland Home, View of Dover, Sheep Washing, The Corsair's Tale, The Death of Ananias, 2*s.* 6*d.* each, or post free for 32 stamps.

Just published, Second Edition, an ILLUSTRATED and DESCRIPTIVE CATALOGUE containing the names of 1500 Microscopic Objects, post free for six stamps.

7, Throgmorton Street, London, E.C.

GREEN'S PATENT GRASS CUTTING, COLLECTING, and ROLLING MACHINES for 1859.

TESTIMONIALS.

Trial at the London Horticultural Society's Gardens, Chiswick, June 5, 1857.—FOUR COMPETITORS

First trial on level ground; second trial on undulated; third trial on intricate places around trees, &c., when GREEN'S PATENT was unanimously declared to be the best in each trial by Colonel Challoner, Dr. Lindley, and George M'Ewen, Esq., the appointed Judges.

See the *Gardeners' Chronicle* of May 22, 1858, p. 423, under the heading of "Garden Memoranda."

"LONDON HORTICULTURAL GARDENS, CHISWICK.—The Grass in the Arboretum and elsewhere is in excellent condition; t is kept in order by means of one of GREEN'S 2-feet Mowing Machines, which does its work very satisfactorily, and compared with the scythe, effects a saving of at least one half."

Extract from the *Times* of June 8, and *Gardeners' Chronicle* of June 12, 1858.

"TRIAL OF MOWING MACHINES.—A considerable number of various sizes having been brought to the ground, it was agreed that the trial should take place between One Hand Machine of each exhibitor, as nearly as possible of uniform size and worked by themselves or their men. The ground to be worked was determined by lot, the pieces having been previously selected of as uniform a quality as possible. After trials on level ground and round trees, the judges, Colonel Challoner and Mr. Edward Easton, declared GREEN'S PATENT to be the best.

(Signed) "C. B. CHALLONER, EDWARD EASTON, Judges."

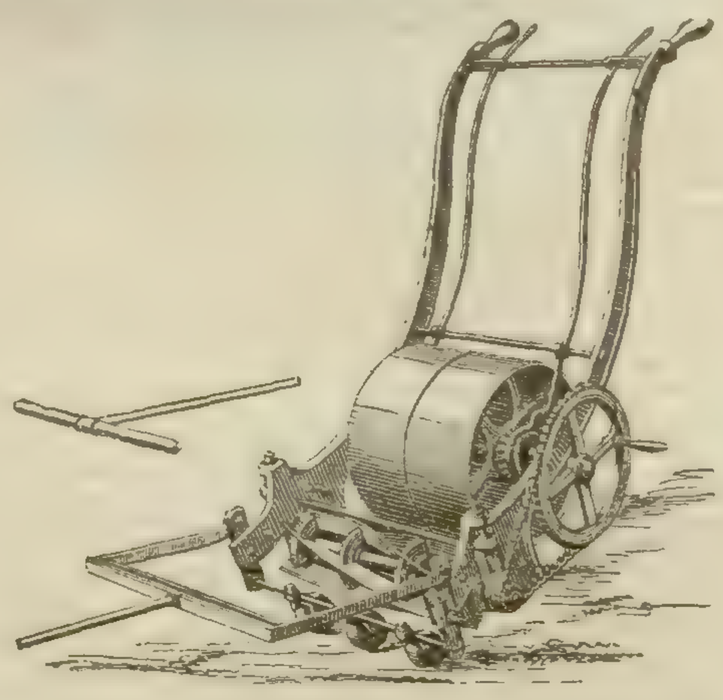
Extract from the "Cottage Gardener" of June 15th, 1858.

"The decision was just what was anticipated, all present being satisfied of the manifest superiority of GREEN'S Machine, both in construction, lightness of draught, and superiority of work."

The Patentee has spared neither time nor expense in producing the best and cheapest Mowing, Collecting, and Rolling Machines ever brought before the public. Hundreds of Testimonials unsolicited) may be seen, and references given with regard to the superiority of the Machines, by applying at the Works.

GREEN'S PATENT OR NOISELESS LAWN MOWING, COLLECTING,

BY ROYAL LETTERS PATENT,



SILENS MESSOR, AND ROLLING MACHINES for 1860.

dated JUNE 6, 1859

THOMAS GREEN,

IN RESPECTFULLY returning thanks to the Nobility, Gentry, and the Public generally, for the very liberal support he has received for some years past, informs them that (although he has for the last three years, at all the principal AGRICULTURAL AND HORTICULTURAL SHOWS in the kingdom, proved the superiority of his Machines over all others, carrying off every Prize that has been given, and highly commended by the Judges,) he this season offers for competition an entirely new Implement, Invented and Patented by his Son Mr. WILLOUGHBY GREEN. Its unparalleled and unprecedented success and manifest superiority over all others has induced him to undertake the sole manufacture of this truly valuable Machine, it being the acme of perfection.

HAND MACHINE.

The SILENS MESSOR is worked with a Patent Pinion Chain, and the motive power obtained by a direct movement, having simply a light Wheel and Pinion gaining the same speed, and thereby doing away with the original Wheels, Pinions, Top-shaft, Bearers, &c.; it reduces the frame of the Machine 2 inches in width; for instance, a 16-inch Cylinder or Cutters will work in a 14-inch frame, thus doing away with all the gearings before mentioned, and making the weight and friction 25 per cent. less. It is also much stronger, easier to work, and less liable to get out of repair.

REGULATION OF SPEED.—The Inventor specially calls attention to this important item. No Lawn Mower that has ever been offered to the public possessed these advantages. When the Grass is of unusual length, of course the resistance to the cutters necessarily must be greater, and more motive power required. By reducing the speed you gain power, and the difficulty is removed; but where the Grass is fine and delicate, more speed is wanted, otherwise the lawn will be left with marks or ridges. Extra speed can be obtained by merely changing the pinions; the operation is easy and simple. It has been incomprehensible to many how it is that a Machine will do its work well on one lawn and on another it is an entire failure—the cause is obvious; more or less speed is required. Here you get all that is needed.

HORSE, PONY, AND DONKEY MACHINES.

The SILENS MESSOR has an extraordinary advantage over all others of this class; it is worked with a Patent Pinion Chain, and although much lighter, possesses greater strength. he noise has hitherto been a great obstacle in the working of these Machines; Horses and Ponies taking fright at the shaking and rattling noise, running away and doing inconceivable Tamage. This Machine can be worked with any draught or carriage horse, however spirited, doing its work silently and effectually. It has greater facilities in quick turning than any dther Machine now in use—can be readily raised or lowered to cut the Grass any height required.

GREEN'S PATENT DOUBLE SELF-ACTING GRASS DELIVERY BOX.

The Patentee, in respectfully submitting the above to the Public, informs them that he has at length succeeded in offering to their notice a PERFECT IMPLEMENT. The Grass is collected in a small box, and by a simple contrivance, when full, transfers the contents to a larger one, which eventually deposits its burden in one large heap. Illustrated Price Lists are in preparation which can be had on application.

LIST OF PRICES:—

HAND MACHINE.
Including Box of Requisites.

To cut 14 ins.	..	..	£6	10	0	To cut 20 ins.	£8	0	0
16 ins.	..	..	7	0	0	,, 22 ins.	8	10	0
18 ins.	..	..	7	10	0	,, 24 ins.	9	0	0

DONKEY AND PONY MACHINE.
Including Box of Requisites and Traces.

To cut 24 ins. ..	..	£11	10	0	Leather Boots for			
,, 26 ins. ..	..	12	10	0	Donkey, per set .	£0	16	0
,, 30 ins. ..	..	16	14	0	Do. for Pony, do. ..	1	0	0

HORSE MACHINE.
Including Box of Requisites and Traces.

To cut 30 ins. ..	..	£20	0	0	To cut 48 ins. ..	..	£29	0	0
,, 36 ins. ..	..	23	0	0	Leather Boots for				
,, 42 ins. ..	..	26	0	0	Horse, per set ..		1	4	0

AUTHORIZED AGENTS:—

London	.. DRAY & Co., London Bridge, E.C., Agricultural Implement Makers
London	.. SMITH, 214, High Holborn, E.C., Agricultural Engineer
Dublin	.. THOS. KENNAN & SON, Engineers
Ipswich	.. RANSOME & SIMS, Engineers and Agricultural Implement Makers
Birmingham	. MAPLEBECK & LOWE, Ironmongers
Norwich	.. BARNARD & BOULTON, Ironmongers
Chester	.. DICKSON, F. & A., Seedsmen
Colchester	.. JOSLIN & SON, Ironmongers
Reading	.. BEAUMONT & STEEL, Agricultural Engineers
Nottingham	. DANKS & NIXON, Ironmongers
Bristol	.. BROMHEAD & SON, Ironmongers
Coventry	.. .. MATTERSON & HUXLEY, Ironmongers
Frome	.. .. E. COCKEY & SONS, Ironmongers
Bath	.. .. WALKER & PARHAM, Ironmongers
Retford	.. .. J. CURTIS, Ironmonger
Bury St. Edmunds	R. BOBY, Ironmonger
Liverpool	.. .. JAS. TYNAN, Seedsman, 68, St. George's Street.
York	.. .. JOSEPH GIBSON, Wire Worker
York	.. .. WILLIAM DOVE, Ironmonger
Derby	.. .. J. & G. HAYWOOD, 9, Market Place

SMITHFIELD IRON WORKS, Leeds, and 2, Victoria Street, Holborn Hill, London, W.C.

☞ These Machines are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in the kingdom; are warranted to give satisfaction, and if not approved can be at once returned, if sent carriage free.

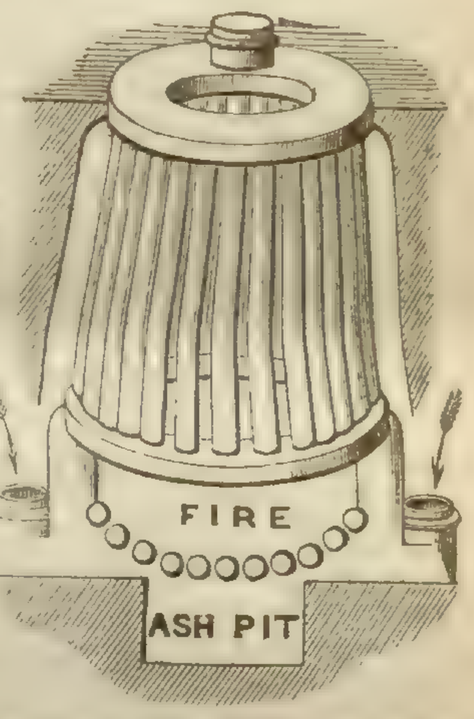
WEEKS' "ONE-BOILER SYSTEM."

FOR RENEWED PROOFS,

VISIT MESSRS. E. G. HENDERSON & SON'S NURSERY,

WELLINGTON ROAD, ST. JOHN'S WOOD.

THE repeated extensions of Apparatus where WEEKS' "ONE BOILER" is adopted render it truly difficult to define the limitation of its incredible power. The wonder-working Apparatus of Messrs. E. G. Henderson & Son, which the Nobility and Gentry are specially invited to inspect, has been so repeatedly augmented that the present Boiler is now most efficiently Heating the enormous length of houses as follows:—1 range 200 feet long, 2 ranges 160 feet long, 2 ranges 200 feet long, 4 ranges 600 feet long, 1 range 120 feet long, 2 ranges 80 feet long, 1 range 30 feet long, 1 range 50 feet long, and 4 ranges 280 feet long, making a total length of Hothouses and Pits, with sundry Warehouses, Seed Shops, &c., exceeding a quarter of a mile, and the total length of Pipe for Heating same exceeds 7900 feet.



J. WEEKS & COMPANY

have also the honour of stating that their Fruit Forcing Show Establishment, Chelsea, contains all the most modern improvements of the day in the science of Horticultural Building, Ventilation, and Decoration. Numerous structures of great variety are there erected to facilitate the selection of the Nobility and Gentry who may kindly honour them with their much esteemed patronage.

In many of the above structures is a grand display of splendid Forced Fruits, consisting of PINES, GRAPES, PEACHES, and other delicacies, fully proving the great advantages derived from superior construction and efficient ventilation.

JOHN WEEKS & COMPANY,

Horticultural Builders, Hot-water Apparatus Manufacturers, Engineers, and Ironfounders,

KING'S ROAD, CHELSEA, S.W.

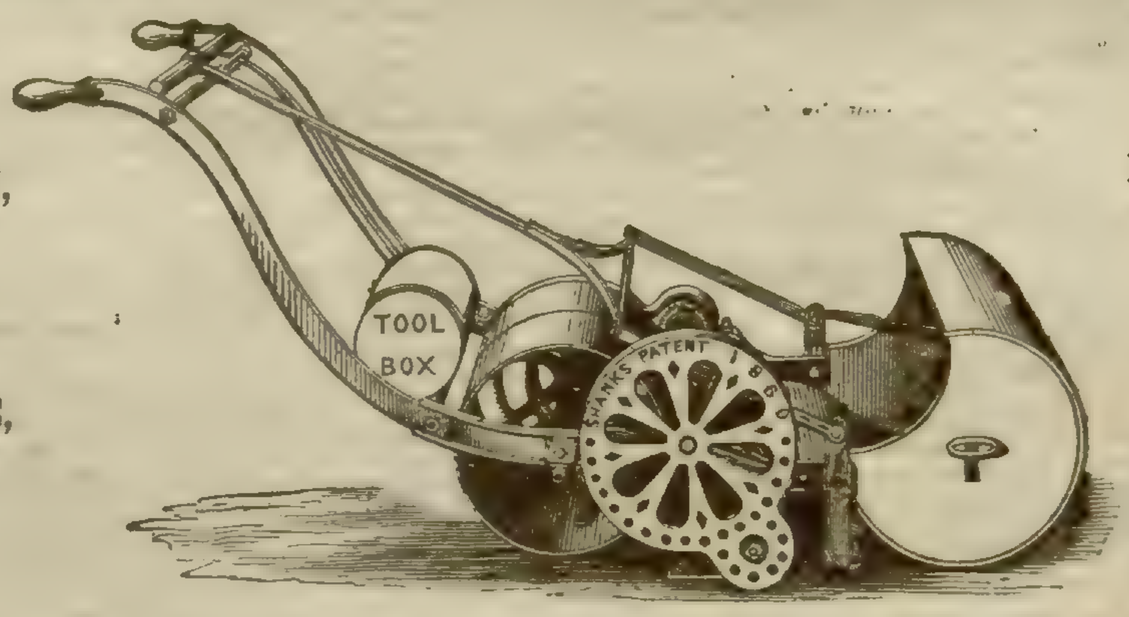
PLANS, ESTIMATES, AND PAMPHLETS FREE ON APPLICATION.

SHANKS' NEW PATENT LAWN MOWING, ROLLING, COLLECTING, AND DELIVERING MACHINE FOR 1860

MOWS the GRASS WET or DRY,

ON

LAWNS UNEVEN or OTHERWISE,



In a MUCH NEATER MANNER

than the SCYTHE,

at HALF the EXPENSE.

☞ The Machines are warranted to give ample satisfaction, and if not approved of they may be at once returned.

SHANKS' MOWING AND ROLLING MACHINE is in successful operation in Her Majesty's Gardens at Kew, Windsor, Buckingham Palace, Osborne, and Balmoral; in the Gardens of the Emperor of the French; in the Grounds of His Royal Highness the Prince of Prussia; and in many other places throughout the Continent, as well as in the United States, British America, and other parts abroad. It is also used in most of the gardens of the principal Nobility and chief Landed Proprietors in the Kingdom; and it may be seen constantly at work on the Lawns of the Crystal Palace, Sydenham,—where its merits have been fully proved, and its success established.

TESTIMONIALS:—

From Mr. GEORGE EYLES, *late Chief Superintendent of the Grounds and entire Horticultural Department of the Crystal Palace, Sydenham, and now appointed to the Superintendence of the Horticultural Society's New Gardens, Kensington Gore, and the Gardens, Chiswick, in favour of* SHANKS' *Patent Lawn Mower—(the 30-inch Horse-power Machine used on the Lawns of the Crystal Palace):—*

"Crystal Palace, December 20, 1859.

"I have much pleasure in bearing testimony to the excellence of the 30-inch Shanks' Patent Lawn Mowing Machine you sent us. We have had it in use almost daily up to the end of the mowing season, and it has always performed its work in the most satisfactory manner, *and has never been once out of repair.* The contrivance for emptying the Grass Box is *a great acquisition, and effects a considerable saving of time.*"

Report of the Royal Dublin Society's Agricultural Spring Show held at Dublin April 10, 1860, *in* Irish Farmers' Gazette, *April* 14.

"Shanks' Patent Lawn Mower, with the admirable new improvements, takes this season a high position. *These celebrated Machines seem now as perfect as they possibly can be.*"

SOLE AGENTS FOR LONDON

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

SEED BUSINESS ESTABLISHED UPWARDS OF 100 YEARS.

BUTLER AND McCULLOCH,

COVENT GARDEN MARKET, LONDON, W.C.

AGRICULTURAL SEEDS,

MANGEL (CROP 1859) YELLOW GLOBE AND LONG YELLOW, SAVED FROM PRIME STOCKS.

These are the richest in saccharine matter, and are unsurpassed by any other varieties as regards weight per acre, 1*s.* per lb. 21 lbs. sent Carriage paid.

ACACIAS.—Thirty magnificent species, 10*s.* 6*d.*; 20 ditto, 7*s.* 6*d.*; 12 ditto, 4*s.* 6*d.*

CANNAS.—Thirty magnificent species, 10*s.* 6*d.*; 20 ditto, 7*s.* 6*d.*; 12 ditto, 4*s.* 6*d.*; 12 species mixed, 1*s.*

ORNAMENTAL GRASSES.—Thirty beautiful varieties, 7*s.* 6*d.*; 20 ditto, 5*s.*; 12 ditto, 2*s.* 6*d.*

CHAMÆROPS HUMILIS.—Exceedingly ornamental Fan Palm, which will stand the winter out of doors with very little protection. 4*d.* per packet.

ORNAMENTAL GOURDS AND CUCUMBERS.—Thirty beautiful varieties, 7*s.* 6*d.*; 20 ditto, 5*s.* 6*d.*; 12 ditto, 3*s.* 6*d.*; mixed, 1*s.*

RICINUS.—Six splendid species, 2*s.* 6*d.*; 6 species mixed, 1*s.*

SOLANUM CAPSICASTRUM.—Miniature Orange tree, covered all the winter with a rich profusion of scarlet fruit; a magnificent plant for greenhouse or sitting-room decoration. (See Professor Lindley's remarks on it in *Gardeners' Chronicle*, Dec. 17, 1859.) 6*d.* and 1*s.* per packet.

☞ WOODLAND WALKS, WILDERNESS DECORATION, &c.

The sowing of Flower Seeds, especially the showier sorts of Californian and other hardy kinds, beyond the limits of the flower garden, though by no means a new idea, is a subject which has, as yet, in this country, received but little attention.

To all who are interested in this kind of decoration, and the improvement of such places, we offer the following mixture of from 60 to 70 varieties of Flower Seeds best adapted for this purpose, at 5*s.* 6*d.* per lb., or sufficient to sow an acre for 21*s.*

The following make splendid BEDDING PLANTS—

DIANTHUS CHINENSIS GIGANTEUS (Heddewigi).—A magnificent Chinese Pink with flowers 2 to 3 inches in diameter and varying in shade from the richest crimson to the most delicate rose, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.* per packet.

GAZANIA RINGENS, orange with crimson centre, flowers large and beautiful, 6*d.* per packet.

CALLIRRHOE PEDATA, purple crimson, with white eye, 6*d.* per packet.

	Per packet.—*s.*	*d.*
LOBELIA GRACILIS ERECTA COMPACTA, bright blue	0	6
,, RAMOSA ALBA, pure white	0	6
,, ROSEA, rose lilac	0	4
,, ERINUS COMPACTA, deep blue	0	4
MESEMBRYANTHEMUM PINNATIFIDUM, yellow	0	4
,, POMEREDIANIA, yellow	0	4
NASTURTIUM, new dwarf Tom Thumb, scarlet	0	6
NASTURTIUM, new dwarf spotted, bright yellow and crimson	0	4
,, ,, crimson, very rich	0	3
,, ,, Tom Thumb yellow	1	0
NEMESIA VERSICOLOR COMPACTA, various shades	0	4
ŒNOTHERA DRUMMONDI NANA, bright yellow, covered with bloom the whole season	6*d.* and 1	0
ŒNOTHERA BISTORTI VEITCHI, fine yellow, spotted crimson	0	6

FLORISTS' FLOWER SEEDS.

PELARGONIUMS, saved from a splendid collection.—Large-flowered, Fancy, and Odier's five-spotted, each sort, 2*s.* 6*d.* per packet. For named Collections see *Gardeners' Chronicle*, February 4, or our SPRING CATALOGUE.

CARNATIONS, saved from a splendid collection.—Choice mixed, 2*s.* 6*d.* per packet. Choice mixed Perpetual, 2*s.* 6*d.* per packet. For named collections see our SPRING CATALOGUE.

PICOTEES, saved from a splendid collection.—Choice mixed, 2*s.* 6*d.* per packet. Choice mixed Perpetual, 2*s.* 6*d.* per packet. For named collections see our SPRING CATALOGUE.

THE "SAM SLICK" EARLY DWARF MAIZE,

introduced from Nova Scotia by the Hon. Justice Haliburton, M.P., and successfully cultivated by him for the last three years at Isleworth, in Middlesex. The Maize cooked when green is a favourite dish in America, and visitors to that country do not readily forget how much they enjoyed this wholesome and delicious vegetable. Amongst the many varieties "The Sam Slick" stands pre-eminent for earliness and superior flavour. 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.* per packet.

A splendid Collection of 100 sorts of ANNUALS, including the new sorts introduced this year, for 21*s.*; a splendid Collection of 50 sorts of ANNUALS, including some of the new sorts introduced this year, 10*s.* 6*d.*; a splendid Collection of 30 sorts of the most showy ANNUALS for 5*s.*; 21 for 3*s.* 6*d.*; 15 for 2*s.* 6*d.* Webb's GIANT COWSLIP, 6*d.* & 1*s.* per packet. Webb's GIANT POLYANTHUS, 6*d.* & 1*s.* per packet.

Agents for GISHURST COMPOUND in boxes, 1*s.*, 3*s.*, and 10*s.* 6*d.*; do. BRITTAIN'S GARDEN NETTING for protecting Fruit Trees or shading, Nos. 1, 2, and 3, 5*d.*, 6*d.*, and 8*d.* per yard, 55 inches wide, 10-yard pieces; do. TIFFANY for shading, 3*d.* per yard, 10, 20, and 30-yard pieces; SHAW'S TIFFANY at advertised prices.

DUNN'S SOLID MARKING-INK PENCILS.—Every Amateur and Gardener should purchase this Pencil, sent post paid on receipt of 18 postage stamps.

HOLLAND AND BAYLEY beg to offer from their unrivalled Collections, in strong healthy plants,
25 pairs CARNATIONS and PICOTEES, fine show flowers, for 1*l.*
Extra fine show PANSIES, 6*s.* per dozen.
Extra fine show PHLOXES, 8*s.* per dozen.
Extra fine BELGIAN DAISIES, 4*s.* per dozen.
Hamper and package included.
PRICED CATALOGUE OF DAHLIAS, BEDDING, AND MISCELLANEOUS PLANTS, &c., may be had on application.
Bradshaw Gardens, Chadderton, Manchester.

CHOICE FUCHSIAS.

WILLIAM HUSSEY begs to offer the undernamed collection for 14*s.*, package included, viz., Isa Craig, Sir C. Campbell, Flower of France, Pericles, Chancellor, Conqueror, Rose of Castile, Guiding Star, Magic Flute, Prince of Prussia, elegans, Little Bopeep, Marquis of Bristol, Leoline, Le Prophète, La Crinoline, Wiltshire Lass, British Sailor, Kitty Tyrrell, Souvenir de Chiswick, Maid of Kent, Lord Clyde, Venus de Medicis, Omar Pacha, Vanguard, Wonderful, Monarch, Prince Albert.—Horticultural Gardens, Norwich.

ABIES INVERTA (new Weeping Spruce Fir), a variety of the common Spruce, in growth like a Kilmarnock Weeping Willow; its leader straightens itself in the old wood, like a Deodar Cedar. It is the best weeping variety ever introduced. A few photograph copies have been taken, one of which will be forwarded on receipt of 12 postage stamps.
Price 15*s* each, with usual allowance to the Trade, and one extra added for every three ordered. A few extra fine specimens at increased prices.
RICHARD SMITH, Nurseryman, Worcester.

HARDY RHODODENDRONS.

MESSRS. WATERER AND GODFREY invite attention to their Seedling RHODODENDRONS, which they are selling without names, and which they strongly recommend as being very superior in point of HABIT, FOLIAGE, COLOUR, and GENERAL HARDINESS. They are from 1½ to 2½ feet high, and as much through, and no plants can possibly be in finer health. They will be sold at very liberal prices, and purchasers can select from a stock of many thousands.
Knap Hill Nursery, near Woking, Surrey.

AMERICAN PLANTS, &c.

MESSRS. WATERER AND GODFREY'S CATALOGUE for the present season is now ready, and may be had on application. It describes fully all Rhododendrons worth growing, and contains a List of Azaleas, Hardy Heaths, and other American Plants, as well as a summary of the general stock of the most extensive Nurseries in England.
The Catalogue may also be had at Messrs. MAY'S & Co., 1, Wellington Street, Strand, W.C.
Knap Hill Nursery, near Woking, Surrey.

GERMAN AND OTHER FLOWER SEEDS, ETC.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their PRICED and DESCRIPTIVE CATALOGUE of FLOWER SEEDS, in which is enumerated every novelty of proved merit, also all the best of the older kinds, is now published, and will be forwarded post free on application. The sealed Collections of French and German Asters, Balsams, Carnations Stocks, Zinnias, &c., are from the best foreign sources, and have hitherto given unqualified satisfaction. Every article has been selected with the greatest care, and is warranted true to name and of the finest quality.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

ROSES IN POTS.

WOODLANDS NURSERY, MARESFIELD, NEAR UCKFIELD, SUSSEX.

WM. WOOD AND SON are now executing orders for ROSES in pots, and will supply fine healthy dwarf plants as under:—

TEA-SCENTED ROSES	12*s.* to 18*s.* per doz.
CHINA DO.	9*s.* to 12*s.* ,,
BOURBON and NOISETTE DO.	9*s.* to 12*s.* ,,
HYBRID PERPETUAL DO.	9*s.* to 12*s.* ,,

The months of April and May are considered very eligible for planting out Roses from pots. The plants now offered are strong and well grown.
Plants presented to compensate for carriage.

NEW ROSE.

A. PAUL AND SON invite attention to their NEW TEA SCENTED ROSE "PRESIDENT," which obtained First-class Certificates from both the Royal Botanic Society and Horticultural Society of London in March last, and which is now first offered for sale. It is figured in the Rose Annual for 1859-60. The plant is of hardy constitution; the flowers are large, full, of fine form, varying in colour from blush to salmon, and very sweet. It is confidently anticipated that it will prove one of the finest of Tea-Scented Roses. Price 5*s.* per plant; a few extra strong plants, 10*s.* 6*d.* each. The usual discount to the Trade when three or more plants are ordered at once.—Nurseries, Cheshunt, Herts.

BEDDING PLANTS.

GEORGE STANLEY, Manor Lane Nursery, Lee, Kent, S.E., begs to offer the following, which may be relied on as strong well-established Plants:—

Per dozen.—*s.*	*d.*		*s.*
Ageratums	2	6 to	3
Alyssum variegatum	2	6 ,,	3
Calceolaria, of sorts	3	0 ,,	4
,, per 100	20	0	
Geraniums, Scarlet, of sorts	2	6 ,,	6
,, per 100	18	0 ,,	24
,, variegated, of sorts	3	6 ,,	12
Fuchsias	3	0 to	4
Heliotropes	2	6 ,,	4
,, per 100	18	0 ,,	24
Lobelias	2	6 ,,	3
Salvias	2	6 ,,	3
Verbenas	2	6 ,,	3
,, per 100	16	0 ,,	20
,, per 1000	150	0 ,,	190
Gaillardias	3	0 ,,	4

The true New AUSTRALIAN CRESS, 1*s.* per packet.
A remittance from unknown correspondents. Post-office Orders payable at Lee, Kent, S.E.

DO NOT PURCHASE MORE SEED THAN YOU REQUIRE.

JAMES TYNAN can still supply the following seeds of the very best quality, for second and late sowings:—

Truffaut's Paeony-flowered ASTERS, in separate colours, each per packet, 2*d.*
Truffaut's Paeony-flowered ASTERS, in mixed colours, per packet, 6*d.*
Truffaut's Paeony-flowered ASTERS, in mixed colours, smaller packet, 3*d.*
Chrysanthemum-flowered ASTERS, the same as above.
German dwarf ten-week STOCK, ,, ,, ,,
German large flowering STOCK, ,, ,, ,,

Per packet.	*d.*	Per packet.	*d.*
Fine Calceolaria	6	Fine Zinnia elegans	4
,, Cineraria	6	,, German double Larkspur	3
,, Primula	6	,, German double Wallflower	3
,, Balsam	6		
,, Phlox Drummondii	4		

Enclose postage stamps and addressed envelope for any of the above.—JAMES TYNAN, Importer of Continental Seeds, Seed Warehouse, 68, Great George Street, Liverpool.

NEW CHRYSANTHEMUMS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington, N., begs to inform his friends and the public that he has the finest Collection and the largest Stock of CHRYSANTHEMUMS and POMPONES in the world, and can supply them by the 100, 1000, or 10,000.
25 Pair of Best POMPONES, 10*s.*
20 Pair of Best Large Varieties, 10*s.*
25 Pair of Best POMPONE CUTTINGS, 5*s.*
20 Pair of Best Large Varieties, do., 5*s.*
CATALOGUES for one stamp. To save trouble all orders to be pre-paid.

NEW FARM SEEDS, GROWTH OF 1859.

ROYAL BERKSHIRE SEED ESTABLISHMENT.

SUTTON'S FARM SEED LIST will be sent post free to any address.
SUTTON & SONS, Seed Growers, Reading.

STRAWBERRY,—WIZARD OF THE NORTH (ROBERTSON'S)

DANIEL ROBERTSON continues to supply strong Plants of the above fine variety at 63*s.* per 100 or 9*s.* per dozen. For description, &c., see former advertisements. It can also be supplied genuine by the following parties in the Trade in and around London:—

Brigden, Mr. Timothy, 10, Railway Arcade, London Bridge, S.E.
Boshell, Mr. Frederick, 86, High Street, Borough, S.E.
Carter, Mr. James, & Co., 237 and 238, High Holborn, W.C.
Charlwood & Cummins, Messrs., Tavistock Row, Covent Garden, W.C.
Chartres, Mr. James, 74, King William Street, City, E.C.
Cornwell, Mr. George, Barnet, Herts.
Cuthill, Mr. James, Camberwell, S.
Dancer, Mr. Alexander, Fulham, S.W.
Denyer, Mr. William, 82, Gracechurch Street, E.C.
Dodds, Mr. G. S., Epsom Nursery, Epsom, Surrey.
Francis, Mr. E. P., Hertford.
Fraser, Messrs. J. & G., Lea Bridge Road Nurseries, N.E.
Fraser, Richardson, & Goad, 82, Bishopsgate Street, E.C.
Gibbs, G., & Co., 26, Down Street, Piccadilly, W
Gibbs, T., & Co., 47, Half Moon Street, Piccadilly, W.
Glendinning, Mr. R., Turnham Green, W.
Henderson, Messrs., Pine Apple Place, Edgeware Road, W.
Hurst & McMullen, Messrs., 6, Leadenhall Street, E.C.
Jackson, Messrs. T., & Son, Kingston, Surrey.
Jones, Mr. Edward, Hart Street, Henley-on-Thames.
Kerman, Mr. J., 4, Great Russell Street, Covent Garden, W.C.
Kinghorn, Mr. F. R., Sheen Road, Richmond, S.W.
Lawson, Messrs. P., & Son, Great George St., Westminster, W.
Lee, Messrs. J. & C., Hammersmith, W.
Low, Messrs. Hugh, & Co., Upper Clapton, N.E.
May, Mr. Joseph, & Co., 1, Wellington Street, Strand, W.C.
McIntosh, Mr. George, Hammersmith, W.
Osborn & Sons, Messrs., Fulham, S.W.
Pamplin & Son, Lea Bridge Nursery, N.E.
Paul, Messrs. A., & Sons, Cheshunt, Herts.
Rollisson, Messrs., & Sons, Tooting, S.
Smith, Mr. J., Romford, Essex.
Turner, Mr. Charles, Royal Nursery, Slough.
Veitch, Mr. James, Jun., Exotic Nursery, King's Road, Chelsea, S.W.
Watt, Mr. Alexander, Edgeware Road, W.

TO MANGEL GROWERS.

SUTTON'S ELVETHAM MANGEL WURZEL and Selected YELLOW GLOBE.—These two sorts of Mangel are still preferred to all others by the principal root growers throughout the kingdom.

SUTTON & SONS have some fine SEED of each sort saved from large Roots, price 1*s.* 3*d.* per lb.

Royal Berkshire Seed Establishment, Reading.

SORGHUM, OR HOLCUS SACCHARATUS SEED.

SUTTON AND SONS, IMPORTERS, can supply genuine new Seed at 1*s.* 6*d.* per lb., or 6*d.* per packet. With Instructions on Cultivation.

GYNERIUM ARGENTEUM, OR PAMPAS GRASS.—A packet of Seed, with Instructions on Cultivation, free by post on receipt of 12 penny stamps.

Plants, 1*s.* 6*d.* to 3*s.* 6*d.* each.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

SEEDS.—AGRICULTURAL, of all descriptions.

GRASS.—Mixtures for Permanent Meadows and Pastures to suit different soils.

KITCHEN GARDEN AND FLOWER Do. } In Collections or separate.

(PRICED LISTS on applica tion.)

THOS. GIBBS & Co. Corner of HALF-MOON St. PICCADILLY, London.

CORNER OF HALF-MOON St. PICCADILLY, LONDON, W.

MESSRS. E. G. HENDERSON & SON

RESPECTFULLY ANNOUNCE FOR CIRCULATION (PRE-PAID ON APPLICATION) THEIR

NEW SPRING CATALOGUE FOR 1860,

in which the following and numerous other MISCELLANEOUS BEDDING and SOFT-WOODED GREENHOUSE PLANTS for decorative purposes in the Flower Garden generally, are noticed with their descriptive features.

The NEW VARIEGATED GERANIUMS.—CLOTH OF GOLD, GOLDEN FLEECE, QUEEN'S FAVOURITE, GOLDEN VASE, BEATON'S SILVER VARIEGATED NOSEGAY.

NEW HYBRID EVERBLOWING GERANIUM.—The BRITANNIA, of dazzling colour.

FUCHSIA SOLFERINO.—A new and very distinct double-flowering variety, imported by us from France, where it has been much admired and highly commended, having obtained a first prize, when exhibited last season at Paris. The flowers are very large, tube and sepals bright scarlet, well reflexed; corolla very [illegible], brilliant violet, changing to amaranth, a very striking [illegible] 5*s.* each.

NEW EXHIBITION CHRYSANTHEMUM, MISS AUGUSTA.—Its merit as a desirable addition to all collections may be inferred from having had six premiums awarded to it in the exhibitions of 1859.

THE NEW VERBENAS for the season include the NEW YELLOW VERBENA, NEW IMPROVED BLUE, do. MAUVE COLOURED, do. STRIPED VARIETIES.

LANTANA FULGENS MUTABILIS.—The most brilliant flowered variety, opening yellow and expanding to a very rich orange-tinted crimson.

NEW SKY-BLUE PENTSTEMON.—Of shrubby habits.

TWO NEW ERICA-LIKE TUBE-FLOWERED PENTSTEMONS.—Lavender, blue, and pink colours.

NEW BEDDING TROPÆOLUM.—Superior to T. elegans, Tom Thumb, or any previous variety offered.

NEW PYRETHRUMS.—In very rich rose and rosy-crimson flower-rays, and elegant leaved habits of growth, hardy.

THE NEW WINTER FLOWERING ACHIMENES (TYDEA).—Of neat growth, with very brilliant and picturesque violet-crimson and orange-tinted scarlet blossoms.

GLOXINIA DOMENICHINO.—Rich violet-blue flower, with white blotch on the lower lip, beautiful and distinct.

CLEMATIS VITICELLA VENOSA.—One of the most beautiful kinds yet introduced, and more useful than C. lanuginosa. A figure of this fine plant will be given in Part IX of the "Illustrated Bouquet."

THE MOST REMARKABLE HYBRID PINK yet offered is the DIANTHUS VERSCHAFFELTI, figured in Part VIII of the "Illustrated Bouquet."

STOKESIA CYANEA.—A fine free blooming herbaceous plant, equal to any French Aster flower. A figure of it will be given in Part IX of the "Illustrated Bouquet."

BEATON'S NOSEGAY GERANIUMS.—Two new shades of this elegant class of bedding plants.

THREE SPLENDID NEW ZONALE, or Horseshoe leaved varieties, namely, New White, New Rose, and New Salmon, in colours.

WELLINGTON HERO.—The best white-eyed scarlet or zonale variety.

CALCEOLARIA UNIQUE.—An excellent bedding variety, with large erect trusses of rich clear buff orange blossoms, well distinguished by its short leafy involucres and upright growth, as well as in its profusion of bloom and conspicuous effect.

PETUNIA THE QUEEN.—The finest clear rich rose-coloured variety for bedding or large groups yet offered, forming a first-class habit for bedding, being of a dwarf, compact, and firm close jointed free growth, well up in verdure of leaf growth, and free from all brittleness or rigid leaf nerve, as in P. Phaeton, and a great advance upon the well known P. Shrubland Rose in all features, by its profusion of large and brilliant rose-tinted blossoms nearly double the size of the last named variety, and far more picturesque by the large conspicuous star-like white centre. The bloom is well thrown out, and in such abundance that a vigorous dwarf growth will secure a fine effect in flower-garden masses throughout the summer months. In the colour most scarce amongst bedding plant, this variety will prove a desideratum for all complete flower-garden arrangements in harmony of colour and design.

NEW FUCHSIAS.—Messrs. E. G. HENDERSON & SON respectfully offer this selection of new Fuchsias (as the seedling productions of Edward Banks, Esq.,) with renewed confidence that since their introduction of the admired "Catherine Hayes," "Little Bo Peep," and "Souvenir de Chiswick," &c., they have not expected the varieties now offered for their combined excellence in size, form, and effect. The addition of a new corolla tint in Count Cavour, the massive proportions of Lord Macaulay, and the distinct features of Prince Alfred, with the very superior exhibitional properties of the whole, are qualities which will ultimately prove their bold effective outlines and brilliant sepal-tints worthy of general cultivation for the twofold object of home culture and open competition.

SPERGULA PILIFERA.—Substitute for Grass on Lawns, verges, or flat terraces, &c. Seed packets, 6*d.*, 1*s.*, 2*s.* 6*d.*, and 5*s.* each. Clumps for immediate planting, 8*s.* and 16*s.* per 100.

TRITOMA UVARIA GRANDIFLORA.—The finest flower truss of all the tribe, 3*s.* 6*d.* each.

TRITOMA UVARIA GLAUCESCENS.—The true Kew variety, 1*s.* 6*d.* and 2*s.* 6*d.* each. No one should buy T. Uvaria alone, to ensure the above fine coloured kinds.

GAZANIA SPLENDENS, 9*s.*, 12*s.*, and 18*s.* per dozen.
PERILLA NANKINENSIS, 3*s.* per dozen.
CERASTIUM TOMENTOSUM, 6*s.* per dozen.
DIANTHUS HEDDEWIGI, 6*s.*, 9*s.*, and 12*s.* per dozen.
DIANTHUS LACINIATUS, 18*s.* and 30*s.* per dozen.
BEDDING DAHLIAS, 6*s.* and 9*s.* per dozen.
GERANIUM GOLDEN CHAIN, 6*s.* and 9*s.* per dozen.
SCARLET LOBELIAS of sorts, 6*s.* per dozen.
PANSIES, choice named flowers, 4*s.*, 6*s.*, and 9*s.* per dozen.
CARNATIONS and PICOTEES, 7*s.* 6*d.* and 9*s.* per dozen.
CLOVES, CARNATION, in six colours, 6*s* per dozen.
CRYSTAL PALACE TROPÆOLUM ELEGANS, 6*s.* & 9*s.* per doz.
Improved variety, (higher coloured) STAMFORDIANA, 12*s.* per dozen.
CRYSTAL PALACE SCARLET GERANIUM, 6*s.* per dozen.
LITTLE DAVID SCARLET GERANIUM, 6*s.* per dozen.

LILLIPUT OR BOUQUET DAHLIAS.—This novel section includes a highly valuable class of varieties which are distinguished by a profusion of extremely elegant miniature blossoms, about the size of a Ranunculus flower, which the present collection now rivals in symmetry of form and beauty of colour, and bids fair to equal the finest Pompone Chrysanthemums by their profusions of bloom and compactness of habit, though higher in growth; but, for usefulness in the decoration of table ornaments and designs by cut flowers, the Bouquet Dahlias now surpass all other autumnal flowers in their neatness for flower-vases, baskets, and entrance hall pedestals, reflecting the brilliant tints of the large-flowered section, without their accompanying heavy outline, and, by their exquisite proportions and symmetry of petals, uniting the most essential features of beauty with admirable adaptation to the most limited designs of the Flower Garden, or as drawing room cut groups. The free growth and almost infinitude of gracefully curved flower heads in these varieties is well suited for planting in the medium frontage ground of select shrubberies, arboretums, and flower borders, whilst the apparent tendency to bloom up to the very latest autumn months, will ultimately place them amongst the most singularly interesting and beautiful garden ornaments of the season,

Wellington Nursery, St. John's Wood, London, N.W.

CHOICE PELARGONIUMS.

WILLIAM HUSSEY begs to offer the following collection at 18*s.*, package included, viz., Evening Star, Majestic Lucy, Mrs. Turner, Captivator, Richard Benyon, Negro, Rose Celestial, Metropo, General Williams, King of Scarlets, Scarab, Zeno, Sovereign, Cynthia, Phaeton, Desdemona, Mary, Petruchio, Eugene Duval, Viola, Standard, May Queen, Admirable, Saracen, Competitor, Evangeline, Decision. Horticultural Gardens, Norwich.

PELARGONIUMS, &c.—2000 Show, Fancy, French and English Spotted varieties, from 6*s.*, 9*s.*, 12*s.* to 18*s.* per dozen: FUCHSIAS of 1859, 9*s.* per dozen; GLOXINIAS new, 20*s.* per dozen, 6 for 12*s.*; TYDEAS, new, 11 varieties for 18*s.*; ACHIMENES, choice, 9*s.* per dozen.; BEGONIAS, several choice varieties, from 1*s.* 6*d.* to 2*s.* 6*d.* each. Also a large quantity of VERBENAS, DAHLIAS, and other Bedding plants. The Trade supplied. Catalogue for one stamp.

HENRY WATTS, Edge End, Marsden near Burnley.

THE NEW HORTICULTURAL GARDEN.—Persons wishing to have specimens of their Works placed for Exhibition in the New Garden at Kensington Gore should now forward particulars of the class of articles they wish to exhibit, and the space required, that the Council of the Horticultural Society may decide whether the articles proposed to be exhibited will be appropriate to the Garden, and whether space can be found.

No space will be allotted to articles which it is proposed to remove at the end of a few months.

No charge will be made for space.

The name of the Exhibitor will be affixed to each article.

Space will probably be found for objects IN CEMENTS, such as Edgings, Balustrades, Vases, Statues—IN TERRA COTTA, such as ornaments for Spandrils, Edgings, Balustrades, Vases—IN BRONZE AND IRON, such as Vases, Statues, Seats, Trellis-work—IN STONE AND MARBLE, such as Statues, Vases, Edgings, for fountains; coloured varieties for pavements—IN CHINA, such as Vases, Jardinières—ENCAUSTIC TILES.

SLATES of large size and peculiar quality for Greenhouse walks.

Proprietors who may wish to exhibit specimens of their quarries will be able to exhibit such in the shape of pedestals, &c.

Letters to be addressed to the Assistant-Secretary, Horticultural Society, 8, St. Martin's Place, London, W.C.

HORTICULTURAL SOCIETY.—Notice is hereby given, that the next Ordinary Meeting of the Horticultural Society for the Election of Fellows will be held at the Museum of Science and Art, South Kensington (by permission of the Lord President of the Privy Council), on TUESDAY, May 22; the Chair to be taken at 1 o'Clock, P.M. On this occasion a Ballot for Plants will also take place.

LIST OF PLANTS FOR BALLOT.

1. THUJA GIGANTEA. A hardy coniferous tree, from California.
2. CUPRESSUS CASHMERIANA. A hardy Cypress, from Cashmere.
3. PINUS LONGIFOLIA. Half-hardy tree, from the Himalayas.
4. ACACIA CULTRIFORMIS. A greenhouse shrub.
5. ACACIA PYCNANTHA. A greenhouse shrub.
6. CISSUS STANS. A hardy deciduous climber.
7. BUDDLEA SP. with large leaves, from Peru. Greenhouse shrub.
8. HARDENBERGIA MONOPHYLLA ALBA. A greenhouse climber.
9. SOLLYA HETEROPHYLLA. A greenhouse climber.
10. BERBERIS NEPALENSIS. Nepal Berberry.
11. CALLITRIS VENTENATI. A greenhouse shrub.
12. LONICERA FRAGRANTISSIMA. A very fragant Honeysuckle.
13. LILIUM PULCHELLUM. A hardy bulb, from Amoy.
14. THUNBERGIA LAURIFOLIA. A beautiful stove-climber.
15. PLATYCODON CHINENSIS. A hardy herbaceous plant.
16. IMPATIENS JERDONIÆ. A succulent-stemmed stove plant.
17. VERONICA DECUSSATA DEVONIANA. A beautiful greenhouse plant; or it may be grown in the open air in summer.
18. HIBISCUS STEWARTII. A greenhouse shrub, from New Holland.
19. CLEMATIS APPENDICULATA. A greenhouse climber, from [Australia.

Fellows of the Society desirous of obtaining any of these plants, if life members of 40 guineas, or subscribers of 4 guineas a year, are requested to name the FOUR sorts they would prefer; or, if life members of 20 guineas, or subscribers of 2 guineas a year, to name the TWO sorts they would prefer. Should there be more applications for any particular plant than the number available for distribution, a Ballot will then take place to determine which applicants are to be supplied.

The arrangements for conducting this Ballot render it necessary that the names or numbers prefixed to the plants to be drawn for, should be sent to the office of the Society, 8, ST. MARTIN'S PLACE, W.C., on or before SATURDAY, MAY 19.

The Gardeners' Chronicle.

SATURDAY, MAY 12, 1860.

MANY years since a plant called BOUGAINVILLÆA SPECTABILIS found its way from South Brazil to Europe, with a very high character for beauty. Its admirers even went so far as to say that no American climber, for it was a climber, would bear comparison with it—a very strong statement considering that the South American Continent produces some of the finest climbing plants in the world. In appearance the young plant had nothing prepossessing; its leaves were dull green, its branches covered with dirty hairiness, and it seemed more inclined to creep or stoop than to climb. Its good character however secured for it horticultural attention, and many a tedious experiment was tried in the hope of making it flower—but in vain. It still retained the same unattractive countenance it first put on, and if Herbaria had not furnished evidence which in some degree corroborated the reports that came to Europe with it, we at least should have withdrawn from the crowd of admirers expectant. In time a few flowers peeped out here and there, as at Chatsworth, and in Lord COREHOUSE's garden, but so far were they from being what was anticipated that the discontinuance of attempting to grow the plant was precipitated.

At last a traveller from Sicily brought to England some dried fragments of what he called a wonderfully beautiful purple Hop plant, which he had seen growing over a wall in Palermo. The masonry he said was, for we forget how many square yards, on fire as it were with the vivid gleams of richly coloured masses of crimson flowers illuminated by a Sicilian sun. Those fragments proved to belong to Bougainvillæa, and once more attention was directed to it, though still in vain. The thing was coy, and most obstinately refused to unveil its charms. Among other places in which attempts at cultivation were renewed was Chiswick, where Mr. GORDON, whose skill as a practical cultivator is undeniable, tried various plans without success. The plant grew freely

enough, as it always does, but no flowers would come.

Skill and patience have at last reaped the reward which always follows them. A horticultural "RAREY" has learned how to subdue our vegetable "Cruizer." On Monday last a wooden box reached us, filled with Bougainvillæa blossoms; and a more gorgeous spectacle never greeted horticultural eyes. Imagine piles of great veiny scales like those of the female Hop, dyed with the richest tints of what is now-a-days called mauve colour; a tint in which crimson and violet and purple are exquisitely blended. And now for the first time we recognised the truth of the reports that had attended the first visit of the plant to Europe. Assuredly there is nothing in the whole vegetable kingdom more gorgeous than this.

Along with the box came a well-written little note, the contents of which we print verbatim:—

"Sir,—I inclose for your inspection a small branch of Bougainvillæa spectabilis, in my opinion one of the most beautiful stove plants ever introduced. I am told it is but little known, and in very few collections. No one that has a stove ought to be without it. I have heard it said that it is difficult to bloom, but nothing can possibly grow or bloom more freely than it does here. The original plant was received here from the continent three years since in a thumb pot; it was grown on for one year into a 12-inch pot, when it was turned out into a square brick pit, 3 feet by 3, into a mixture of leaf soil and loam, with a good proportion of broken bricks and charcoal. It bloomed well last year, and this year it is covered all over with the same beauty as the piece I send you, and for cutting it is invaluable. The plant is now trained to the roof of a span-roofed house, and covers about 200 square feet, and its stem near the ground is 6 inches in circumference, and if allowed to run it would soon cover 1000 feet. But I consider the back wall of a lean-to house would be the most suitable place for it, as it would be seen to greater advantage. (Signed) J. DANIELS, *Gardener, Swyncombe House, Henley-on-Thames.*"

All honour to Mr. DANIELS, for he deserves it. Henceforth he must stand in the foremost rank of British gardeners. What he has done is something to be indeed proud of. We now know what it is necessary to do in order to secure the superb drapery with which Bougainvillæa will festoon our conservatories; and if men fail hereafter the fault will be their own.

WE learn that a very considerable collection of FINE SHOW PLANTS IS TO BE SOLD in Belgium. They were the property of Baron HEYNDERYCX, a Belgian nobleman lately and for many years President of the Royal Agricultural and Botanical Society of Ghent. It appears from the Catalogue that there are some very important lots, such as 600 or 700 fine plants of *Camellias*, 70 noble *Rhododendron arboreum*, large *Araucarias*, fine *Orange trees*, many rare *Orchids*, grand specimens of *Palms*, &c. The sale will take place on the 16th, 17th, and 18th of next July at the Château of Destelbergen, a place a short 2 miles from Ghent, of which some description has been given in our columns at p. 993, 1859.

THE Chromolithograph which we have the pleasure to send our readers with the present Number of the *Gardeners' Chronicle* will supply as good an idea of the design for the NEW GARDEN AT SOUTH KENSINGTON as a mere ground plan can convey. It had from the first been seen that a Garden to be surrounded by palaces could not be constructed on any other than geometrical principles if good taste were to be consulted; and such a garden could not consist merely of trees and walks and flowers, but would have to be enriched with groups of sculpture, vases, fountains, and similar objects, just as in a drawing room, however beautiful its proportions, the floor and walls require to be decorated with furniture and objects of *virtu*. The plan now before the public will, we think, amply justify the determination of the Council to place the design in the hands of Mr. NESFIELD instead of throwing it open to competition, as we once suggested; for a more ingenious application of refined taste to works of this kind will not be found in Europe. In order to understand the exact meaning of the plan it will be necessary to examine it with the references prepared by the great garden architect himself. But we are inclined to believe that a concise additional description of its principal features will not be unacceptable to those who have never seen the ground.

The site selected for the Garden slopes gently from north to south, forming a parallelogram, semi-elliptical at the northern end, and between 700 and 800 feet broad by more than 1200 feet long. This area has been formed into three principal levels, themselves broken by subordinate terraced levels connected by slopes, and all reached by flights of steps.

Through the middle from south to north passes a grand walk 40 feet wide, gradually conducting the visitor to the highest levels and the conservatory, but interrupted by a large piece of water (Fig. 24), furnished with a cascade of considerable dimensions, and forming the background, as a visitor advances, to a highly decorated compartment of flowers and green embroidery, about 125 feet in diameter. A great variety of other walks pass away from the main walk to the other parts of the garden, eventually reaching terrace walks communicating with the arcades to be mentioned hereafter.

The principal entrance near the south-east end opens at once into what is called the ante-garden, which is much less decorated than the other parts, and in which it is in contemplation to hold great public exhibitions under canvas. Through this ante-garden runs a walk which is intercepted by the principal walk already spoken of.

In addition to the large piece of water just described smaller basins and canals are placed in different situations, so as to destroy any monotony in the design.

At the upper or northern end will stand a very large conservatory of iron and glass surrounded by a glass verandah, and formed in the interior 22 feet 6 inches above the floor, into an upper garden, or terrace, which may be reached from the roof of the arcades, while the lower, or ground floor will be in direct communication with the garden itself. It has been settled that this building shall not be occupied by plants which need a higher winter temperature than a greenhouse.

As music will be required almost daily two band-houses (Fig. 30) will be provided in front of the conservatory, placed on platforms paved with coloured tiles and seen from seats arranged in a semicircle facing the south.

Over the surface of the garden will be dispersed single trees with groups of shrubs and flowers, among which will be placed statues, vases, and similar objects so arranged as to form with the surrounding architecture one harmonious whole.

Such will this garden be. Its enclosure, which rests with H.M.'s Commissioners of the Exhibition of 1851, is to consist of arcades opening towards the garden only, about 25 feet wide and 20 feet in height, which in unfavourable weather will afford a sheltered walk about three-quarters of a mile long. It is intended that in constructing these arcades a different style of architecture shall be employed on each of the three levels of the ground, and the full-sized patterns which may be seen in the Museum of Science and Art at Brompton show that the garden will thus be set in a frame of singular architectural beauty.*

REFERENCES TO THE DETAILED PLAN OF PROPOSED GEOMETRICAL GARDENS AT SOUTH KENSINGTON.—APRIL, 1860.

W. A. NESFIELD.

In the accompanying plan the Architecture is represented by dark grey shading, the walks by orange. Trees of various sizes are shown by green circles. The Grass slopes of terraces and shrubs are neutral green.

A. Entrance from Exhibition Road.
B. Centre walk to Ante-Garden, leading to the principal garden.
C. Entrance from Prince Albert's Road.
D. Centre walk to principal garden on a higher level than Ante-Garden.
E. Branch walk to Conservatory terraces.
F. Lower or first Terrace.
G. Second Terrace.
H. Third Terrace.
K. Upper Terrace on a level with Upper Corridor.
L. Centre cross walk from East and West Corridors.
M. Middle Corridor Walk.
N. South cross walk of principal garden.
P. Walk under the Bridge leading through the lower Corridor of Ante-garden.
R.T. Walk from North to South lower Corridor.
S. Signifies Sites for principal Sculpture, whether for figures or large Tazzas. The upper Terrace K (above the Band-house) would be favourable for Statues of eminent musical composers.

1. Basin for Nymphæas and other aquatics.
2. Space left for Exhibition Tents, &c., &c.
3. Ferns and rock plants.
4. Detached groups of low flowering shrubs.
5. Tall trees, round and spiral.
6. Belt of evergreen shrubs.
7. Compartment for American plants with Grass Alleys.
8. Belt of Evergreens to seclude the American compartment.
9. Pheasantry, 50 feet by 30 feet.
10. Mass of Shrubs.
11. Aviary (for song birds).
12. Maze formed by hedges—about ¼ acre.
13. Basins.
14. Diagonal cross Promenade (reached by Grass ramps).
15. Large compartment for flowers and box embroidery.
16. Mass of very low shrubs.
17. Group of low trees.
18. Shrubs of medium height.
19. Avenue of spiral evergreen shrubs.
20. Standard Portugal Laurels on the verges, which latter are 15 inches above the surface of compartments and promenades.
21. Circular compartment for flower beds and box embroidery.
22. Standard Roses.
23. Dwarf evergreen shrubs.
24. Large Basin with Cascade, the latter 18 feet wide and 11 feet high.
25. Compartment for flower beds (without embroidery) accompanied by
26. Groups of flowering shrubs, &c.
27. Standard Rhododendrons.
28. Memorial sculpture for Great Exhibition of 1851.
29. Large trees.
30. Band Houses (East and West) on circular paved platforms.
31. Kerbed Beds for flowers between steps to Conservatory Arcade.
32. Belt of shrubs.
33. Steps down to Band House and Lower Terrace.
34. Kerbed Bed for tall flowers.
35. Steps to the lowest level of the Garden.
36. Canals of running water supplied by Cascades.
37. Walks round Canals (Seats under retaining walls of East and West Terraces).
38. Basins with jets.
39. Steps to Lower Terrace opposite centres of Middle Corridor.
40. Avenue of standard Roses, and beds for dwarfs.
41. Frieze Compartments for medium-sized flowers.
42. Kerbed beds for tall flowers.
43. Moulded kerbed beds with large Tazzas for tall flowers.
44. Group of low-flowering shrubs.
45. Spiral plants and simple kerbed beds for tall flowers, such as Dahlias and Hollyhocks.
46. Panels of East and West corridor terraces with Lime trees on their flanks.
47. Glacis sloping towards Canals, each embellished with embroidery only. The object of the Glacis is that the running water of the Canals, together with all other features across the Garden, may be visible from the Corridor or 1st terrace.
48. Bridge and steps.
49. Ramp to descend to the level of Canals.

* We observe that these arcades are the subject of a drawing by Mr. SIDNEY SMIRKE in this year's exhibition of the Royal Academy.

EVERGREENS IN FLOWER GARDENS.

IF the present fashion of planting flower gardens is persisted in much longer, all our grand British gardens will be so much alike that it will be a mere toss up which is the best worth seeing. As it is, we judge gardens now by a very different standard from what existed 20 years back. The rarest exotic trees and shrubs, the richest collection of plants, or the highest degree of cultivation, go now almost for nothing with our modern ideas; and the comparative standard of excellence is really this:—How many thousand pots of bedding plants do they turn out, as if the entire beauty and interest of a place depended on so many hundred feet more or less of ribbon border, or on two or three thousand Geraniums or Verbenas systematically pitted against each other. This mode of comparing places with each other reminds one of the announcement very seriously made by guides to cathedrals and large show-houses to their visitors, that the buildings contain exactly so many doors and windows, a point of so much importance in their estimation that the grandeur and associations of the edifice are insignificant in comparison. Now, with all deference to the admirers of modern flower gardening, who are so much in love with strong colouring, we must express an opinion that there is a wide field for improvement in this particular line of garden decoration; and that this taste for multiplying masses of colours at the expense of every other feature of landscape gardening is neither based on sound principles, nor yet justified by any authority of recognised talent. The question is an important one, and we moot it by way of discussion, being fully persuaded ourselves that a more general introduction of certain classes of evergreens as elements in the composition of geometrical gardens, not only as giving effect to the general design, but as neutralising glaring colours, and we may add of giving a higher finish and a more permanent character to this style of gardens than

HORTICULTURAL SOCIETY,

GENERAL DETAILED PLAN OF PROPOSED GEOMETRIC GARDENS.

April, 1860.

CONSERVATORY

PROPOSED SITE FOR FLORAL EXHIBITION

PROPOSED SITE FOR FLORAL EXHIBITION

Presented with the Gardeners Chronicle
May 12th 1860

they at present possess, would be much preferable, more particularly when not filled with plants. It may be considered by some of our readers that we are carrying our ideas quite as far in one direction as the taste we are criticising goes in the other, that, in fact, we are retrograding and going back to the times of Le Nôtre and the "Grand Monarque" instead of progressing with the age. We are willing to admit that this is true to some extent, and that we are going back to the oldest and purest style of geometrical gardening. But we wish only to graft the improved materials which are now furnished us in the shape of new evergreens and flowering plants on the elaborate "arabesques" and beautiful scroll-work of the old masters; in fact, to combine the interest and beauty of modern results in gardening with that perfectness of pattern and rich elaborateness of design, which characterised the school of Le Nôtre.

We speak advisedly when we say that very many of our most celebrated gardens, and with them we shall class those of the Crystal Palace, are laid out with no leading principle of design in their composition. They are, to speak plainly, composed of miscellaneous aggregations of parts, frequently at variance with each other, and very rarely presenting a unity of composition, taking even each part by itself. We do not condemn this arrangement so much as we do the after-management, or planting, on which point nearly every garden we inspect appears to us to be degenerating into a mere formality—a repetition over and over again of the same system and the same plants. We regret this the more as we frequently have witnessed marked and distinctive features about places which, if taken advantage of, might have been converted into scenes individually interesting and appropriate to the situation.

We have stated already how much the taste for excessive flower colouring has increased of late years—we fear at the expense of more really important objects. How interesting in our young days used to be a visit to Woburn, to look over the various collections of plants, hardy and exotic, for which it was then famous; or to Wentworth, to see Mr. Cooper's Orchids and Scitamineæ, to say nothing of the kitchen garden; or to magnificent Chatsworth (thanks to Sir J. Paxton, we hear that this place is not modernised yet), with its giant conservatory, its Lily house, Orchid houses, and, above all, its carefully arranged arboretum and conservative wall. Then there was Syon, when Forrest maintained a style of keeping most admirably adapted to the place. At the present time the arboretum at Bicton is worth a journey from London into Devonshire to see; planted by Glendinning before flower-gardening, as it is now, had absorbed every thought, it is the great feature of the place and county. Let us ask what comparison can be drawn between a modern flower garden and the interesting and unique collection of plants which occupy the grounds at Abbotsbury Castle on the Dorset coast (which affords a striking evidence of what may be done by taking advantage of peculiar localities), or let us take the Coniferæ at Bayfordbury, or the general collection of evergreens at Elvaston, where we hardly know which to admire most, the beauty of the plants or the artistic skill which arranged them. Thanks to some proprietors, there remain many places where other things beside Calceolarias and Scarlet Geraniums are cared for. The grand banks of American plants at Tottenham Park and Highclere are not yet grubbed up to make room for Verbena beds, and we hope will long remain, as worthy the hands that planted them and the sites which they so magnificently adorn.

We understand that the first landscape gardener of the day is much averse to over-floral decoration, and that, taking advantage of the many suitable forms of evergreens for decorating geometrical gardens, he is employing them more largely on every occasion, not only as architectural trees, but extensively for scroll patterns, as well as more simple figures. We therefore hope to see, at Kensington Gore, good examples in this style of art, by the gentleman we allude to—Mr. Nesfield.

It is a necessary principle in geometrical gardening, that, however elaborate the design, each figure of it, and each member of the figure, should be clearly defined. The importance of this was well understood by the originators of the style, and the beautiful arabesque patterns and embroidery work usually planted out in dwarf Box, was surrounded by coloured gravel, to contrast with, and bring out the figures in relief. The introduction of variously shaded evergreens will at the present time admit of several combinations of colours, which may be worked into the design, so as to produce the richest effect, and these again may be relieved by edging the figures of the pattern with flowering plants to contrast, just as Le Nôtre relieved his figures with different coloured gravel.

For large figures and scrolls, where the centre lines will be from 18 to 36 inches in height, the common Yew and Tree Box will still be the most useful plants for the purpose, presenting two distinct shades of green. Both these may be relieved by edging them with the variegated kinds of each species. Thus, take the common Yew for a centre, then a band on each side it of the best variety of gold-striped Yew, edging off with the paler coloured silver-striped variety, and you have a band which, when carried out through all the intricacies of a scroll or arabesque pattern will give an effect of the richest description; and by leaving a margin round the outside for an edging of variegated Geraniums, themselves to be edged with blue Lobelia, and one of the most pleasing combinations of colour is the result. If only the common Yew is employed, the scarlet and rose-coloured Geranium would suit better, but we have no room for close particulars. The gold and silver-striped Box should shade off the common Box and its varieties with self-coloured leaves. Another very beautiful scroll plant, of the richest golden variegation, is the Chamæcyparis variegata, and one easily kept into shape by pruning. The golden Thuja is another plant which could be worked up with the best effect; the striped Hollies present us with several variations of colour, all valuable for this purpose. We may mention the variegated and self-leaved Euonymus, the common Savin and J. tamariscifolia and its variegated ally. The common Juniper forms a beautiful plant for bordering, but it should be trained. We need not allude to the common and Colchis Laurel, the Phillyrea, and several other plants, which will be called for, when once public taste leads in this direction.

The introduction of clipped evergreens for carrying out elaborate designs in garden patterns, would have a charming effect in winter, when ordinary flower gardens are naked, or at best with the beds promiscuously filled with dwarf shrubs, which never look satisfactory, and would present a no less pleasing combination of colour during the summer season, with the outline of the figures tastefully relieved by flowers. *Taxus in Turner & Spencer's Florist, Fruitist, and Garden Miscellany for May.*

PAPER MATERIALS.

Uses of the Yercum-Mudar or Calotropis gigantea.—In your issue of the 1st February there is an article on the subject of Yercum cultivation which calls for a few remarks, as it contains only a small part of the information regarding the Yercum plant with which the public are now acquainted, and winds up by stating that, "under the microscope the hairs of the Yercum do not seem to contract in the same manner as those of cotton; they will therefore be difficult to spin, and easily pulled asunder in thread. From the rigidity of the walls of the hairs too, they must be brittle. Yercum hairs therefore can never enter the market as a substitute for cotton." Your correspondent does not appear to be aware that machinery has been invented and already very successfully applied to overcome the difficulty of spinning this and some of our Indian smooth fibres, as Plantain and the Jutes, which are all now coming into use for manufacturing purposes. Messrs. Thresher and Glennie of London lately exhibited in Madras a great variety of fabrics of a light soft texture made from mixtures of the Yercum silk cotton and other substances. The fabrics were well suited as substitutes for flannel in warm climates. Some large bales of the fibres have been collected for despatch to Messrs. Thresher and Glennie of London. There are some peculiarities about the growth of this plant which are worthy of attention. In the first place, although it seems to grow luxuriantly almost everywhere as a weed, it thrives best in the neighbourhood of neglected rubbish heaps, and this is because the plant there gets an abundant supply of nitrogen, which seems to be essential to its perfection. Another use to which the silk cotton is going to be applied is the manufacture of paper. Some bales of it have been carefully cleaned and put up at the request of Messrs. Cowan and Co. to be tried for making some of the fine descriptions of note and letter paper: it will probably not answer alone, but with the fibres of the Plantain and Aloe, it might yield papers of great strength and whiteness. We are glad to find the subject of Indian fibres attracting the attention of merchants both in Madras and Bombay, and while we are on the subject we may point out some of the other uses of the Yercum plant, and the importance of continuing to direct public attention to the raw products of India. While we are making inquiries in this Presidency regarding the silk cotton of the pod, an enterprising firm in Bombay is collecting the fibre of the bark, as one of the best substances for Flax, and the natives in Bengal are collecting the milky juice for export as a substitute for shellac or Gutta Percha. The exhibitions held in Madras proved how many good fibrous materials this Presidency produces; and the contributions in this department to the last Exhibition, showed that the natives were willing to take advantage of any suggestion that might be offered for the improvement of the raw products of the country. A very full report upon these fibres has been drawn up for publication by Dr. Montgomery, and inquiries have lately been instituted at the request of some enterprising manufacturers regarding some of the most important Indian vegetable products. Some very interesting facts regarding the plants yielding silk cotton have been brought to light, and the importance of a combination of botanical, chemical, scientific, and manufacturing science have been clearly demonstated. The merchant and the manufacturer are now finding that science in almost every branch of knowledge is no mean handmaid in the acquisition of wealth, and that the botanist relies on some of the immutable laws of creation for detecting or tracing affinities in the vegetable kingdom. The chemist shows us how by following some of the simplest rules, materials of good quality may be easily prepared, or how by the neglect of some of the laws of nature, valuable materials may be spoilt or allowed to go to waste. The microscopist can also prove to us indisputably in many instances at a glance what is likely to be the economic value of a substance in relation to others of the same class—but we shall reserve our further remarks on this subject till we have examined a number of species of silk cottons that have lately been collected from the following plants of the natural family, Asclepiadaceæ: viz., Yercum or Calotropis gigantea; Ootamunnie or Dæmia extensa; Palay or Cryptostegia grandiflora; Marsdenia tenacissima; Coorinja—Tylophora asthmatica. In addition to the feathery pappus in the pod these all yield a fibre like Flax from the bark and a milky juice possessing properties like India rubber or shellac. The roots have also emetic, cathartic, or irritant qualities. *Alexander Hunter, M.D., Madras Spectator.*

Home Correspondence.

The Origin of Species.—I notice in your Number of April 21 Mr. Darwin's letter honourably acknowledging my prior claim relative to the origin of species. I have not the least doubt that, in publishing his late work, he believed he was the first discoverer of this law of Nature. He is however wrong in thinking that no naturalist was aware of the previous discovery. I had occasion some 15 years ago to be conversing with a naturalist, a professor of a celebrated university, and he told me he had been reading my work "Naval Timber," but that he could not bring such views before his class or uphold them publicly from fear of the cutty-stool, a sort of pillory punishment, not in the market-place and not devised for this offence, but generally practised a little more than half a century ago. It was at least in part this spirit of resistance to scientific doctrine that caused my work to be voted unfit for the public library of the fair city itself. The age was not ripe for such ideas, nor do I believe is the present one, though Mr. Darwin's formidable work is making way. As for the attempts made by many periodicals to throw doubt upon Nature's law of selection having originated species, I consider their unbelief incurable and leave them to it. Belief here requires a certain grasp of mind. No direct proof of phenomena embracing so long a period of time is within the compass of short-lived man. To attempt to satisfy a school of ultra sceptics, who have a wonderfully limited power of perception of means to ends, of connecting the phenomena of Nature, or who perhaps have not the power of comprehending the subject, would be labour in vain. Were the exact sciences brought out as new discoveries they would deny the axioms upon which the exact sciences are based. They could not be brought to conceive the purpose of a handsaw though they saw its action, if the whole individual building it assisted to construct were not presented complete before their eyes, and even then they would deny that the senses could be trusted. Like the child looking upon the motion of a wheel in an engine they would only perceive and admire, and have their eyes dazzled and fascinated with the rapid and circular motion of the wheel, without noticing its agency in connection with and modifying the moving power towards affecting the purposed end. Out of this class there could arise no Cuvier, able from a small fragmentary bone to determine the character and position in Nature of the extinct animal. To observers of Nature aware of the extent of the modifying power of man over organic life, and its variations in anterior time, not fettered by early prejudices, not biassed by college-taught or closet-bred ideas, but with judgment free to act upon a comprehensive survey of Nature past and present, and a grasp of mind able to digest and generalise, I think that few will not see intuitively, unless they wish not to see, all that has been brought forward in regard to the origin of species. To me the conception of this law of Nature came intuitively as a self-evident fact, almost without an effort of concentrated thought. Mr. Darwin here seems to have more merit in the discovery than I have had—to me it did not appear a discovery. He seems to have worked it out by inductive reason, slowly and with due caution to have made his way synthetically from fact to fact onwards; while with me it was by a general glance at the scheme of Nature that I estimated this select production of species as an *a priori* recognisable fact—an axiom, requiring only to be pointed out to be admitted by unprejudiced minds of sufficient grasp. *Patrick Matthew, Gourdie-Hill, Errol, May 2.*

The Miselto.—I see it stated in the Pharmaceutical Journal that when parasites grow on poisonous trees they themselves become poisonous, although not so otherwise. Thus a Loranth taken from a Nux Vomica tree in India contained the principle called strychnia and destroyed animals to which it was given. May we infer from this that when our own Miselto grows on the Oak it acquires the tonic property of that tree, although it has no such property when living upon a Linden? And can this have been the reason why the Druids sought for the Miselto of the Oak? *Dorset.*

Pleroma elegans.—I have a plant of this Pleroma which appears to be in a bad state of health. I kept it during the whole of the winter in a greenhouse. I thought, therefore, that by putting it in a frame with a little bottom-heat it might recover, but it has not done so. Perhaps some of your correspondents might inform me what to do with it. *W. B.*

Roses.—I have a fine large Rose tree, Souvenir de Malmaison, the flowers of which always blow with half

the leaves rotten. It is very double and a magnificent blossom, but many of the flowers are quite disfigured by rotten leaves. What can be the cause of this imperfection? *Q. C.*

Striking Cuttings.—Some 7 or 8 years ago I sent you some little plants grown in nutshells, of which you gave a woodcut representation in your columns. I now beg to inform you that I have discovered a means by which I am enabled to strike and grow an almost incalculable number of plants in a very small space without an atom of soil of any kind. I herewith send you a few budding plants as an illustration. Not only may plants of this description be struck and grown, but Roses of all kinds, from the hard-wooded crested Moss to the most delicate China; and not only may they be grown as isolated plants, but by dozens in bundles, so that Roses may now be propagated annually and bedded out like Scarlet Geraniums, Lantanas, &c. I also enclose a bundle of Roses which you will perceive are making roots, and will be ready to send out with the usual stock of plants. But my system is not confined to this tribe, for I am prepared to show that Apples, Pears, Plums, indeed any deciduous plants whatever, can be propagated by cuttings in the same manner, namely, without soil. Nor has age of cutting anything hardly to do with the process, for all kinds will strike and grow, almost at any age, at least from one to ten years' old wood. I am not aware that this mode of propagation has ever been made known by any other person, so that if you think it worthy of notice you will do me a favour if you will give it publication. I also further beg to state that my striking apparatus is simple, portable and my own invention, and I need not explain to you that it is on strictly scientific principles founded on the organic structure of plants. After the cuttings are probably struck a little Moss is tied round them; they will keep for a month in that state. *W. Prestoe, Hackwood Park.* [The cuttings sent us are exactly as Mr. Prestoe describes, and promise well. The gardening world would doubtless wish to know the particulars of his management.]

Rust on Grapes.—I agree with your correspondent "C. E. W." that "a sudden transition from heat to cold" is liable to cause rust, and I am also inclined to believe that the cause must often be looked for at the roots when not under proper control, and therefore liable to sudden chills through cold drenching rains. A little reflection would enable any intelligent person to see the evil of admitting front air while cold cutting winds prevailed; but front air may be admitted when the air is soft and warm during all stages of the growth of the Vine and with advantage. A good brisk circulation on a warm day, even in early spring, tends to strengthen growth materially. I have grown Grapes extensively with Pines, and though always keeping a moist atmosphere for the latter, I have never found the vapour to cause rust; neither have the Vines (even Muscats) failed to set their fruit. I avoid a dry atmosphere as much as possible; moisture is congenial to the Vine throughout its growth, and materially tends to keep down insects. I cannot see how your correspondent accounts for vapour causing rust on his Grapes, except he has been so imprudent as to damp his house whilst subject to a cold current of air, which would be highly reprehensible and quite at variance with sound practice. "North Wales's" plan, though not altogether new, may perhaps, nevertheless, have a certain amount of novelty about it. I have taken advantage where Vines were feeble to feed them by means of their stem roots, by tying Moss, or some other absorbent round their stems, and soaking it frequently with liquid manure; but it is a practice that I would not recommend. Weakly Vines are very liable to produce a great quantity of stem roots; it is an effort of nature to make good the deficiency caused by the want of a proper reciprocity of action between roots and branches, owing to the former not being placed in a position to act in unison with the latter. It would be more profitable to lift the Vines and prepare a proper border for them, than to attempt to feed them by means of stem roots, and in the end it would doubtless prove by far the best method. *G. Blake, Gardener, Clyro Court, Radnorshire.*

Decaying Aloe.—Can you give me any advice as to the best means of stopping decay in the large fleshy leaves of an Aloe? The decay has advanced already so far as to make it necessary to scoop out the rotten soft portions nearly to the centre of the plant. The hole thus made is nearly as large as a pint measure. Would it be advisable to fill this with some composition like grafting wax to keep out rain and scorching suns? *John Fryer, Manor House, Chatteris.* [All depends on the cause of decay. If it is extrinsic it may be stopped by cutting away the dead matter to the quick, and then filling the hole with a mixture of well tempered lime and clay coated with anything that repels moisture. If it is the result of internal disease local applications are useless, and the cause itself must be removed.]

May Queen Strawberry.—This variety promises to prove invaluable for early fruiting. I forced it this year along with Black Prince and Sir Harry. It ripened 10 days earlier than the Prince, and fully a fortnight before Sir Harry. Its fruit was large and good, and while the other two kinds were attacked with mildew the May Queen remained clean and healthy. I shall grow no other for forcing for another year, and I would advise all who have not grown it to give it a fair trial. If they will do that I think they will have cause to thank Mr. Nicholson of Egglesclife for introducing so truly useful a variety. *J. W. Kinmont, Auckland Castle, Darlington.*

Asparagus.—I am glad to see in Covent Garden Market this morning (May 10th) Asparagus short and all eatable, almost down to where it is cut off. This is following out my directions as well as what the *Gardeners' Chronicle* has so long advocated. *James Cuthill, Camberwell.*

Societies.

Horticultural: *May* 8.—Rev. L. Vernon Harcourt in the chair. A beautiful dish of Peaches of the Royal Kensington variety was exhibited on this occasion from the garden of Sir G. R. Phillips, Bart., near Tewkesbury. To these a label of commendation was awarded. Some good-looking Ribston Pippin Apples which had been wintered in glazed earthenware jars in a cellar came from John Lamb, Esq., Staffordshire. Fruit of what is called the Meikleham Pearmain, a good and evidently a late-keeping Apple, was again shown by Mr. Ivery, of Dorking. Mr. Hill, gr. to R. Sneyd, Esq., sent fruit of Oscar Strawberry, an excellent variety which was stated to force well; and from Mr. Reeve, of Rochford, Essex, came a seedling Strawberry, named Eclipse, which promises to be valuable on account of its fine flavour, which was stated to resemble that of the Old Hautbois. It was requested to be brought again when the season has become further advanced. From the garden of Lord Eversley, at Heckfield, came handsome boxfuls of Sir Charles Napier and the white Bicton Pine, both well-known varieties of Strawberry. With regard to the former, it was mentioned that it is very tender, and that great numbers of it have been killed this winter by frost.

Linnean: *April* 19.—The President in the chair The following papers were read:—1. "Note on the Tree Mallow, Lavatera arborea," by John Hogg, Esq. The author pointed out that the inner portion of the bark was extremely fibrous, and that although coarse, it might be useful in an economical point of view. —2. "Note on the germination of certain species of Cyrtandreæ," by Mr. C. W. Crocker, foreman in the propagation department in the Royal Gardens at Kew. The Streptocarpus polyanthus produces a single large leaf, from the base of which the flower-scapes spring up. This leaf, it was stated, had been found to be one of the cotyledons, which becomes foliaceous and expanded to a remarkable degree. The seeds were described as being exalbuminous, one-fiftieth of an inch long, tapering to each end. The cotyledons were found to be quite equal in size while enclosed in the seed and for the first few days after germination, which took place in about a week from the time of sowing. At first they both grew in an equal degree, but by the end of a week one had increased to more than double the size of the other, and still continued to grow until the plant reached its full size. In fact, in most cases, no other leaf is produced. Out of dozens of plants examined, there had not been the slightest attempt to produce a plumule, but in one or two instances a small abortive leaf about an inch in length, and in a reversed position, has been produced in the sinus of the large cotyledonary leaf. This peculiar mode of growth, although best seen in the species above named, was stated to be exhibited to a certain extent in some other nearly allied species, particularly in S. Rexii and S. biflorus, both of which produce two or three true leaves, which are however smaller than the single enlarged and foliaceous cotyledon, which is much developed, and in the latter plant is always double the size of any of the leaves afterwards produced. Chirita Moonii exhibited the same mode of growth, only in a less degree, the cotyledons being equal at first, but after a week or 10 days' growth one of them had become about one-third larger than the other.—3. "Contributions to the Lichenographia of New Zealand," by C. Knight, Esq., and W. Mitten, Esq. A technical paper, illustrated by numerous microscopic drawings by Mr. Knight.

May 3.—Prof. Bell, President, in the chair. J. G. Wainwright, Esq., and Dr. D. Brandis were elected Fellows: and M. Edmond Bossier and the Rev. M. Sars, M.D., were elected Foreign Members. The following papers were read:—1. "On certain Sensory organs in Insects hitherto undescribed," by J. B. Hicks, M.D. This paper was profusely illustrated by drawings of the organs described.—2. "Catalogue of Hymenopterous Insects collected by A. R. Wallace, Esq., in the Islands of Bachian, Kaisua, Amboina, Gilolo, and Dory in New Guinea;" by Mr. F. Smith.—3. "On two Tuberiform Vegetable Productions from Travancore," by the Rev. M. J. Berkeley, M.A. One of these was found under the floor of a room. On digging down 3 feet below the surface several holes perfectly smooth and circular, and of sufficient size to admit a man's head, were met with; while hanging from the sides of the cavities were clusters of from 5 to 10 of these bodies of various sizes and shapes. The native practitioners eagerly took possession of them, calling them Poottii-Manga, which is interpreted cancer-curer, and stating that they were formed or produced by white ants. Mr. Berkeley described the structure as in some respects resembling that of Pachyma, and considered it to be of fungous character. The other production was dug from the chalk beds in the mountains which separate Travancore from Tinnivelly. It also is much esteemed by the native practitioners. This Mr. Berkeley stated was in structure very much like Mylitta australis, and was probably the same thing with the Mylitta of China.—4. "Remarks of Sclerotium stipitatum, Berk. and Carr., Pachyma Cocos, Fr., and some similar productions," by F. Currey, Esq., and D. Hanbury, Esq. This was a detailed account of the microscopical structure of the productions referred to in Mr. Berkeley's paper.—5. "Notes on Anonaceæ," by G. Bentham, Esq. This paper consisted of remarks on the affinity of certain genera and species belonging to this order, and was purely technical.—6. "On Fissicalyx, a new genus of Dalbergieæ," by G. Bentham, Esq. One of M. Fendler's plants from Venezuela.—7. "Notes on Ventilago, a genus of Rhamnaceæ," by G. Bentham, Esq.

The Chorleywood Association.—The following interesting report has been lately published:—The chief objects of the Association have all made progress during the past year. They are—The encouragement of habits of order and of self-management, of economy or saving, of education or the use of the mind, of healthy recreation, and of goodwill and mutual respect between all classes. With regard to the first object, viz., The encouragement of habits of order and self-management, there have been two remarkable opportunities of bringing out such habits. The first arose in the following manner:—In the spring of 1859, some petty pilfering took place in the allotment gardens. It was not known with certainty who were the culprits, but certain members of the Association were suspected. Accordingly some of the holders sat up at night to watch the gardens. Late one night two young men were seen getting over the hedge, who were recognised as sons of members. They said they came only to look after their fathers' gardens, but it was naturally considered a somewhat odd time to choose for the purpose. These facts were brought before the managers of the Association, and it was thought desirable that the members should meet to discuss the subject and decide for themselves the course which should be taken. It was clear there was not a shadow of proof that the young men in question were the culprits and the rules of the Association did not forbid their entering the gardens at any time of night. Accordingly, on Wednesday evening, April 27th, the members assembled. There were present about 40 men, who nearly all belonged to the labouring class. The Chairman, or Mr. Speaker as he became for the occasion, opened the proceedings, and explained that the object of the meeting was "to consider the best method of protecting the gardens." The business of the evening was despatched in the most regular manner. A considerable number of the men made speeches. There was no interruption nor confusion arising from several men trying to speak at the same time, and what was said was practical and to the point. Many suggestions were made, which it was explained were called motions; and, when other suggestions were offered, it was pointed out that these were called amendments, and that the amendments would be put to the vote first It was finally agreed that the gardens should be open only during certain hours, and that a committee of holders of allotments should be appointed to consider further the means of protecting them. The following is a copy of the record of the proceedings:—It was moved by James Tibbles, Jun.: That no person be allowed to be in the Allotment Gardens after 10 o'clock P.M., from April 15th to August 15th. It was moved by William Aldridge: That no person be allowed to be in the Gardens before 4 o'clock A.M. from April 15th to August 15th It was moved by Thomas Miles: That no person be allowed to be in the Gardens for the remainder of the year, after 7 o'clock in the evening, or before 5 o'clock in the morning. It was proposed by Thomas Miles: That a Committee be formed, to consider what means should be taken for protecting the Gardens. Such Committee to be elected annually, and to consist of six members of the Association, viz.:—Three holders of Gardens on the Common, and three at the Swillett; and that the Committee shall have the power to carry out their decisions. The following members to form the Committee for the present year from May 1st, 1859, to April, 30th, 1860:—John Abbott, Thomas Miles, James Swain—Common; Azel Thompson, Joseph Hawkins, George Humphrey—Swillett. The whole of the foregoing propositions were adopted, and it was also agreed that they should be added to the previous rules of the Association. It is to be feared that the Committee have not met very frequently to carry the resolutions into effect, but there has been no pilfering since the meeting, and it is clear that the men have learned a lesson of order and self-management. The second opportunity of the kind occurred very recently. Although it is certain that much good has been done by the Association, it cannot be expected that its members should never misconduct themselves, and lately there took place a discreditable scene of drunkenness and fighting. The environs of Chorleywood Common are retired, and seldom frequented by any, except the inhabitants of the district. There are, unfortunately, very many beer houses in places removed from observation. It was at one of these that the disturbance in question took place. Six of the members of the Association were said to be implicated. It was clear that so glaring a disregard of the rules of the Association could not be borne, and the rural parliament having acted well on the former occasion, it was thought desirable to re-assemble it. Accordingly on Monday evening, Feb. 6, the members met to consider what course should be taken. There were present about 35 men. The accused, being members, had a right to attend, and four of them were present. The proceedings were opened by a narrative of the circumstances of the case, and the accused made their own statements separately It must be confessed that neither the facts which they admitted, nor the condition of three of the defendants, at all tended to improve their position. The meeting was as much, or more, a jury than a parliament and it was obvious that it could not debate in presence of the accused. The four men therefore withdrew; which they did without opposition. The remaining members then stated their views. Their speeches were short, but there was no mistake about their sentiments. They all said that it was of no use making rules unless rules were followed. The case of each of the accused was then put separately to the vote. Three were dismissed from the Association, three were acquitted; the sixth not having been present, apparently, at the disturbance. The four who had retired were then requested to re-enter the room, and, on their presenting themselves, the decision of the Association was communicated to them. A little angry speaking and recrimination was indulged in by the three who were dismissed from the Association, and one of them declared that he would not give up the key of his garden; but, on reflection, both he and another who was inclined to follow his example, thought better of it, and sent back the keys of their own accord; and it must be admitted that, on the whole, they behaved very well, and the meeting passed off with an order and regularity which would do credit to any meeting of 30 or 40 men. It is but justice to add, that the speaking and voting

for the expulsion of the accused exhibited a considerable amount of moral courage on the part of the members. It was explained to those who were expelled that good conduct might, after a time, entitle them to readmission. There can be but little doubt that such meetings have a powerful influence in educating the people in many important directions. The encouragement of habits of economy or saving is of great importance. With this view, a small savings bank has been set on foot, under the personal superintendence of the Rev. A Scrivenor, the Manager of the Association. Considering the short time it has been established, the result may be considered very encouraging. There have been 22 depositors: the lowest total amount deposited during the year is 5*s.*, and in one instance the sum of 5*l.* has been paid in. This depositor is a journeyman carpenter. The total amount deposited is 37*l.* 12*s.* The object of the savings bank being to provide a means of accumulation to pay rent at the end of the year, a considerable proportion, viz. 22*l.* 9*s.*, was drawn out at the end of the year; but out of the 22 depositors only nine have thus drawn out, and in every instance a small balance has been left, with which to begin a new account. The anxiety of the depositors to keep their accounts open is shown by the small balances left in many instances. It seems that their necessities compelled them to draw out nearly the whole of their savings, but that they were determined to leave something, and in several cases 6*d.* only was left. The next point of importance is, the progress of education in connection with the Association. This, as stated on a former occasion, is promoted principally by lectures, and by encouraging the habit of writing reports of them. The most popular lecture of the present season was, unquestionably, one delivered by the Rev. G. R. Gleig, on the Life of George Stephenson. Of this lecture, 19 reports were sent in. Many of them were of great length, and were extremely creditable. The most remarkable of the reporters is a man who works at farm labour at 12*s.* a week, who has a sick wife and several children. His reports often fill from 20 to 25 pages of note paper, well written, and well expressed. There are several other reporters who acquit themselves remarkably well, but it is obvious that it would be impracticable to specify the merits of each. There have been altogether 46 different persons who have sent in reports. Of these, seven are men above 30 years of age; eight are men between 17 and 30; five are under 17, but are at work; and five are schoolboys. There are also five women over 25 years of age; nine over 15; and seven school-girls. The men, with the exception of one who is a groom, are all labourers. There has been one most gratifying result of Mr. Gleig's lecture. Among the audience was the son of the village blacksmith. On his return home he turned over in his mind what he had heard, and said he thought, that if Stephenson could make a steam-engine of clay, he could make one of tin, and so he set to work. His parents were surprised one evening that he did not come home as usual; he and his family being most regular in their habits. At last, at 9 o'clock, the mother said, "I shall go down to the shop to see what can have become of John." She went, and there she found him hard at work. He was making his steam-engine. He could read and write but imperfectly, and, therefore, from books he could obtain little or no help. But he had seen steam threshing-machines in the farm-yards, and these he took as his model. At length he produced an engine with safety-valves, governor, steam whistle, and all the parts complete, and the engine worked perfectly. It was felt by some visitors in the neighbourhood that an effort should be made to enable him to follow out his natural bent of mind, by finding him employment in some machine factory, and I am happy to be able to state that this object has been accomplished. Messrs. Ransomes, of Ipswich, have nobly interested themselves in his behalf and have taken him into their employment. The Flower Show, promised in the former statement of the doings of the Association, took place, and was very satisfactory. Lastly, there remains only to be mentioned, that a Cricket Club was established last year, which was well attended and afforded the men a great amount of healthy enjoyment. In order to enable strangers to appreciate the amount of effect produced, it may be desirable to state that the district contains under 1000 inhabitants, of all classes, and that they are widely scattered over a tract of country 4 or 5 miles in length by 2 or 3 miles in breadth. Sixty-three men, representing as many families, belong to the Association, and, as each family is usually taken to comprise an average of five individuals, it may be considered that about three-tenths of the entire population of the district, or nearly one-half of the labouring population, belong to the Association. *W. Longman, Chorleywood, near Watford, March* 1860.

Notices of Books.

Some time ago (see a former volume of *Gardeners' Chronicle*) we mentioned the appearance of a singularly good *Lecture on the History of England*, delivered by Mr. Wm. Longman to the Chorleywood Association, a little rural Society established near Watford, concerning the progress of which a most satisfactory report will be found in another column. A second lecture on the same subject by the same gentleman has just appeared, and inasmuch as it treats of the origin of landed property and the tenure of land, with the history of our laws, constitution, and courts, it will be read with even more interest than the first by all who are not already conversant with such subjects. The style is admirably adapted to the purpose, so that the simplest minds may clearly understand it; and the illustrations, one, coloured, representing a tournament, others copied on wood from curious ancient manuscripts, are happily selected for the purpose of fixing the attention of either hearer or reader. A few sentences pointing out the relation that anciently existed between the lords of the soil and their vassals, will show how well Mr. Longman's lecture will repay perusal:—

"*Feudalism suited to Ancient Times.*—But we must remember that, while on the one hand, the vassal (as the tenant or occupier of the land was termed) swore to be faithful to his lord (as the grantor of the land was called) and to yield himself up to him, the lord, on the other hand, swore to protect his vassal. So great was the benefit of this protection, that many men who held allodial lands were glad of their own will to make them feudal, for the sake of the protection of the lord whose vassal they became. Indeed, 'the greater part of the allodial land had become feudal in the 11th century.' The feudal system began in barbarous times, when every man's hand was against every other man's, and when men were therefore glad to bind themselves together for mutual help. The duties which the king's vassals engaged to perform were purely military. Each tenant, or vassal, was compelled to provide a certain number of knights or horsemen, fully armed, and ready to fight under the king's banner, and he was bound to keep them in the field at his own cost for a certain number of days. It mattered not whether the tenant was a layman or a priest; the same duties fell on each. It was a duty which fell on every man who held land of the king. Those vassals who held land of the king as his immediate tenants were called tenants in chief. These had numerous retainers dependent on them, and they imitated the king in parcelling out the land among these retainers, exacting from them services similar to those which the king exacted from themselves, as well as other services, of which I shall presently give you an account. This practice was not prohibited, provided sufficient land were retained by the tenant in chief to enable him to perform the services due to his superior lord. After a time, however, this practice was found to be against the interests of the superior lord, and a celebrated Act of Parliament, known by the name of *Quia emptores* (which means 'forasmuch as purchasers' did such and such things), was passed in the reign of Edward the First, to provide that whenever a vassal granted land to a subvassal, the subvassal should hold his land on condition of rendering the required services to the superior lord of whom the vassal held his land.

"*Tenure of Land.*—From various causes the king's tenants found it convenient thus to parcel out their lands. Sometimes they had more land than they themselves could easily manage, and their military duties often prevented them from cultivating their lands. They, therefore, granted portions of their estates to inferior tenants, some on military tenure, and some on, what was called, socage tenure—that is, on condition of making returns in service, corn, cattle, or money, the term socage being derived from the Anglo-Saxon word, *soc*, which means a plough. This was the origin of rents. The services exacted by these lords of their subvassals or tenants were of different kinds. First, there was free service, which meant such as was not unbecoming a soldier,—as, to serve under a lord in his wars, and so forth. Next, there were base services, or such as were fit only for peasants—as to plough the lord's land, to make his hedges, to carry out his manure, and so forth. These services, whether free or base, were also either certain or uncertain. Certain services were such as were stinted in quantity, and could not be exceeded on any pretence; as to pay a stated annual rent, or to plough such a field for three days. The uncertain services depended on unknown contingencies—such as, to do military service in person, or to pay an assessment instead, whenever called on, or to wind a horn whenever the Scots invaded the kingdom (which applied of course only to the northern counties), which were free services; or to do whatever the lord should command, which was a base service."

Let us hope that Chorleywood will continue to prosper, and to deserve instruction of such sterling value as this.

In *Van Houtte's Flore des Serres*, of which the numbers for May and June, 1858, have just appeared, we find original figures of the following:—*Calonyction diversifolium sulfureum*, a handsome kind of Convolvulus with yellow flowers, having a pale violet eye; *Azalea ledifolia umbellata alba*, a white Chinese Azalea with nine instead of five divisions of the corolla; a leaf of the superb *Begonia grandis*; *Phyllocladus hypophylla*, a coniferous plant, very different from that so named by Dr. Hooker, and probably a mere variety (?) of Phyllocladus trichomanoides; the handsome *Lord Clyde*, the still finer *Auguste Gevaert*, and the huge *Béranger Fuchsias*; *Lilium speciosum roseum* with broad golden edges to its leaves; *Sauromatum guttatum*, a very striking stove Arad, with the inside of the great long spathe spotted with crimson on a yellow ground—*gules* on a field *or*; a *violet coloured China Aster*, called gigantic by Gotthold & Co., of Arnstadt; *Salvia albo-cærulea*, a very pretty Mexican species of Linden's, with pale yellow flowers wonderfully set off by a deep blue lip; a *Verbena* called Madame Jourdier with scarlet flowers edged with pink. As usual, every spare place in the pages is filled with interesting miscellaneous information.

The second part of Linden's *Hortus Lindenianus* gives figures of *Triolena scorpioides*, an uncommonly pretty little Melastomad, of the same race as the Sonerilas, with richly coloured metallic leaves, and therefore a capital addition to variegated plants; *Columnea erythrophæa*, a noble looking Mexican plant with great scarlet flowers sitting in a spreading calyx green and rich rose; *Salvia cacaliæfolia*, another Mexican, with deep blue flowers; *Lasiandra Fontanesiana*, an old inhabitant of our stoves, but difficult to grow well, apt to cast its flowers early, and now almost forgotten, although when in perfection quite superb; and the *Peris tricolor*, that most lovely Fern, thus named by Mr. Moore in our columns at p. 217 of the present year, and figured in the Botanical Magazine by Sir William Hooker as a variety of Pteris quadriaurita.

We have received the following works, viz., *Ure's Dictionary of Arts, &c.*, Part VII., containing articles on Fire Arms, Flax, Glass, &c. *A Visit to Sherwood Forest* (Longmans), including the Abbeys of Newstead, Rufford, and Welbeck; Clumber, Hardwick, Bolsover, and other places in the locality: a useful guide book to summer tourists, and containing a list of plants growing about Mansfield. *Seedtime and Harvest, or Three Pleas for Ragged Schools*, by Dr. Guthrie (Edinburgh, Black), in which the social importance of such associations is very ably argued. The *Welcome Guest*, for 1860; a clever magazine, full of entertaining or harmless reading, and woodcuts, many of which possess considerable artistic merit. The volume, which consists of 532 pages, is published by Houlston & Wright. The *Tin Box, a Story of the last Century*, and *the Autobiography of an Italian*, by G. Ricciardi (Bradbury & Evans), two agreeable works of light literature, especially the latter, which relates the feelings and adventures of a Neapolitan exile, between 1818 and 1837, and has an air of truth which renders it peculiarly acceptable at the present crisis of affairs in Sicily.

Garden Memoranda.

GEELONG BOTANICAL GARDENS. — After years of petitioning, and fighting, and grumbling, Geelong got her site for Botanical Gardens, and shortly afterwards the trustees commenced enclosing the ground, laying-out some of the walks, and planting a few trees. But it was not till the appointment of Mr. Bunce to the superintendentship that any great progress was manifest. Since that gentleman's appointment the improvement of the gardens has been rapid, almost beyond belief, considering the very limited means placed at the disposal of the trustees and the superintendent. The public who now throng the gardens daily will scarcely credit that all that tastefully laid-out maze of foot and carriage ways, adorned with endless varieties of young shrubs, trees, and flowers, and that elaborately-crammed nursery, with its tanks, &c., and the lodge at the entrance to the gardens, have been the result of the expenditure of less than 4000*l.* The first year's grant was 1500*l.*, and the second grant, for the year just expired, 2000*l.*

The ground devoted to these gardens is beautifully situated on the eastern side of the town, presents a fine undulating surface affording every variety of aspect, and is generally of a rich black or dark-coloured chocolate soil, with a limestone substratum. It is oblong in shape, running down to the banks of the Eastern Beach, and contains about 200 acres, four times the size of the Melbourne Gardens. The gate, or entrance, and the lodge in which the head gardener and his family live, are on the town or west side of the Garden. The superintendent's house stands about half-way across from the main entrance, near the sea end, commanding a beautiful view of the inner and outer harbours, and the Bellerine, You Yang, and Anakie countries. About one-half of the ground—that end next the Bay—has already been fashioned into shape, although a great deal of work will still remain to be done to complete the gravelling of the walks and drives, and the planting of the trees. A nursery, containing 5 acres, in which Mr. Bunce has got 2500 varieties of plants, has been prepared at a short distance from his own residence. In this nursery a conservatory has been erected, at an expense of about 300*l.*, which it is intended to supplement with a greenhouse as soon as the funds will admit. As soon as a sufficient supply of water can be obtained, Mr. Bunce intends to establish an aquarium and a *materia medica*. About 100*l.* has been expended in the formation of a tank in the nursery, and the laying of pipes and drains to convey the water to it. A series of buildings—including stables, seed-rooms, and cartsheds—have been erected at the lower end of the nursery, and numbers of commodious seats have been made, and placed in the most favourable positions.

The gardens are open to the public daily, from 6 o'clock in the morning to 6 o'clock in the evening, except Sundays, when they are open from 7 till 6. The nursery is open to the public only from 2 to 6 daily, when the superintendent has to place a man in charge of it, owing to the abominable practice indulged in by numbers of people, of not only pulling the flowers and seed-pods and of cutting sets, but of tearing down and trampling some of the rarest flowers and plants. Few towns in the world will be able to boast of finer public gardens than these will be in a few years' time; and as they are free to the public—its own property—it is to be hoped it will protect Mr. Bunce in his untiring efforts to embellish, beautify them, and keep them from such acts.

On entering the gateway the first thing that attracts notice is the grand effect produced by the ample carriage drives, which wind fantastically through the elaborately and tastefully laid out grounds. These and foot-walks are fringed with many thousands of trees and shrubs, and among these may be noticed a few British and other foreign forest trees. The Poplar, the Elm, the Oak, and the Laburnum are among the most conspicuous; while the Blue Gum and Silver Wattle are rapidly assuming the dimensions of young native trees. When Mr. Bunce first took charge of the Gardens, about 18 months ago, he planted a great number of the rapidly growing Cape Wattles * all round the northern and western sides of the ground, to afford shelter. As the other trees come on, however, these will nearly all be dug up and destroyed, to make way for those that are more ornamental and durable.

In Acacias—numbering nearly 40 varieties indigenous

* Acacia lophantha.

to this colony, and to tropical Australia—the greatest vegetable vigour seems to manifest itself. They look beautiful, and seem to defy both sun and wind.

Among individual plants that deserve special notice may be mentioned the magnificent Clianthus Dampierii, better known as Sturt's Desert Pea. There was a gorgeous specimen of this plant in the nursery some time ago, but it has been ravished of its beauties by the hands of robbers, and is now not one-fourth of what it was. Still it displays its magnificence—its "field of blood"—the huge clusters of great red flowers almost dazzle the eye. Mr. Bunce has seen miles of country near the desert covered with this glorious flower. What a sight for an enthusiast in botany to feast his eyes upon! It is just about 11 months since the plant first began to flower, and Mr. Bunce assures us it has been blossoming ever since. The next plant is one of the Mimosa family, the seed of which was collected in the neighbourhood of the hot springs during Major Warburton's expedition in South Australia. It is a most beautiful plant, and if introduced here would be invaluable as a hedge, either for shelter or keeping out cattle. It is armed with strong thorns, even to the points of the leaves; although, of course, the prickles become more delicate as they reach the point. It promises to grow most luxuriantly in the nursery in the open air. Buddlea madagascariensis next deserves notice, not so much on account of the beauty of the plant, as from a singular peculiarity connected with it while in flower. When this plant blossoms a handsome beetle is to be found in considerable numbers on all the flowers; but on no other plant or flower at any time of the year is the same insect to be found, and Mr. Bunce does not recollect ever having seen a similar beetle in any of his many travels through this country. Last year when the plant first blossomed, there were but few of these insects to be seen; but they are much more plentiful this year. They seem quite fascinated with the flower of the Buddlea, for the moment you let one go that has been removed it flies direct to the plant. The Leycesteria is another handsome plant. It bears a purple berry, very full of juice, and is being rapidly introduced into preserves for feeding pheasants. It affords these birds abundance of the finest food.

In the conservatory was a magnificent collection of flowers and plants, among which I noticed three of the famous Port Curtis Bottle-tree, with the swelling of the trunk already formed, although the plants were not above 4 inches high; and last, though not the least curious, but decidedly the most offensive, is the Carrion Plant. It may be called one of the prettiest and the most abominable flowers in nature. Any person desirous of satisfying himself of its odour had better be cautious that he does *not* take too strong a *sniff* at it. It would occupy too much space to notice many more rare and choice plants in Mr. Bunce's collection; but he has just published a catalogue of them all, by order of the trustees. *Melbourne Argus, Jan.* 4, 1860.

Miscellaneous.

The Umbrella that won't Act in Wet Weather.—A net that has been a good deal used of late opens and shuts on the umbrella principle, and with the same celerity, forming a ring-net when open—when shut going into a case like that of an umbrella. Some entomologists, nervously sensitive to public opinion, are, however, somewhat shy of sporting these umbrella nets, for should rain perchance come down while he is on the road, the villagers may be astonished at the insane spectacle of a man scuttling along through the torrent and getting drenched through, while he carries a good-looking umbrella carefully under his arm for fear it should get wet; and if, on the other hand, the weather be fine, the carrying such a protective would seem an equally eccentric whim. But only the very thin-skinned would be driven from the use of a good weapon by such a harmless contingency as I have here supposed. *British Butterflies, by W. S. Coleman.*

Lecture on Flowers.—Mr. William Fowler, of the gardens at Beesthorpe Hall, delivered a very interesting and entertaining lecture upon "Flowers, and their influence on Mankind," to an audience composed of the principal parishioners, on the evening of Thursday last. The school-room was appropriately and tastefully decorated with beautiful specimens of Camellias, Chorozemas, Azaleas, Deutzias, Cinerarias, Hyacinths, &c., as well as with bouquets of Primroses and Violets collected by the village children. The walls were covered with dark baize, on which were coloured drawings of flowers, some of them kindly lent for the occasion by Mr. C. Turner, of Slough. The lecturer was especially happy in his remarks upon the refining influence of flowers in every grade and at every epoch of life, whether upon little children making up their posies in farmer Simpson's meadows, courtly gentlemen in their geometrical gardens and gay conservatories, merchants in their pretty suburban villas, shopkeepers with their roof-gardens, or pale mechanics with their window plants. By a judicious introduction of lively anecdotes among his more serious observations, he kept the attention of his hearers throughout, and at the conclusion of his address was heartily thanked and cheered. *Newark Advertiser.*

Lectures to Gardeners on Botanical Matters at the Royal Gardens, Kew.—We observe that a summer course of lectures on botany, by Mr. Oliver, Librarian to the Royal Gardens, to the foremen and gardeners employed there will commence on Tuesday, the 22d May, and will be continued on two evenings weekly (at 7 o'clock, on Tuesdays and Fridays), until Friday, the 20th July. Examinations on the subjects lectured upon will be held from time to time; also at the close of the course—on Monday and Tuesday, the 23d and 24th July. The prizes will be awarded on Wednesday, the 25th July. The first 10 or 12 lectures will be devoted chiefly to the structure of plants and botanical demonstrations. The latter portion of the course to the principles of classification, the characteristic marks of the leading natural orders, and their general history. The lectures are abundantly illustrated by fresh specimens, &c., from the gardens, museums, and herbarium, and by numerous diagrams and drawings. The course is open to all employed in the Royal Gardens.

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—All climbing or trained plants will now require attention in regard to thinning, training, stopping, &c. If the weather become very bright and warm, which we may expect it to do soon, shading must be employed. Many new Holland Plants will now be in bloom, and if fully exposed their beauty will be but of short duration. As regards stove plants thorough cleanliness, free ventilation, plenty of atmospheric moisture, and slight shading in very bright sunshine, are at present the chief requisites. No means should be neglected to encourage a free growth at this period in Orchids, in order to get their pseudo-bulbs firm, well fed, and well ripened betimes. In mixed greenhouses fires may now be nearly or entirely dispensed with. If the weather is genial and accompanied with bright sunshine heat sufficient for the night may be secured by shutting up early, not however soon enough to scorch. A general rule can scarcely be laid down in such cases to guide the inexperienced. On a sunny afternoon one-half of the air may be reduced at 3 o'clock, and the whole taken away at 4 o'clock. Continue the various points of cultivation previously recommended, remembering that now is the period for rapid growth and for applying all the encouragements accessary thereto.

FORCING DEPARTMENT.

PINERIES.—Where the quality of the fruit is the first consideration, which it is or should be in every instance, care must be observed to have the soil about the roots in a rather dry state during the ripening period, and where it can be done without injuring the rest of the stock the atmosphere should be kept rather dry, admitting air more freely while the fruit is colouring; for there is no chance of fruit of first-class quality if the soil is very wet about the roots, and the atmosphere kept close and saturated with moisture during the ripening period. In the case of plants growing in pots the trouble of collecting and placing together those approaching ripeness, so as to be able to treat them properly, would be well repaid. Use fire-heat as sparingly as may consist with maintaining the proper degree of temperature. Be very careful to keep the plants properly supplied with water at the root, and give plenty of manure water to those in vigorous growth, and also to plants swelling their fruit.

VINERIES.—Where Muscats are grown for a late crop the night temperature of the house must not be allowed to fall too low after the bunches begin to appear, and a temperature of from 65° to 70° must be maintained while the fruit is setting to ensure good sized, close bunches. Keep a sharp look out for red spider in houses where the fruit is colouring, and if this pest makes its appearance lose no time in coating the hot-water pipes with sulphur. It will soon be time to think of removing the litter from outside borders, but if it is found that the roots have crept up into it, which will probably be the case where the Vines were started early in the season, the decayed portion at the bottom should be left, and every caution used not to disturb the young roots. And if many roots are found at the surface it will be necessary, after removing the litter, to top-dress the border to prevent these getting dried up; a slight coat of turfy loam, leaf soil, and horse-droppings will answer very well for this purpose. See that the borders of houses where the fruit is swelling are not allowed to get too dry.

MELONS.—Maintain a rather close, moist, warm temperature to plants recently planted out until they get into full growth, but avoid inducing a gross habit of growth by too much moisture and warmth after the roots fairly get hold of the soil, for it is generally somewhat difficult to secure a crop from wood of this sort. Give air as freely as the state of the weather will admit, in order to secure firm short-jointed wood, and where the crop is setting, as the young fruit is very apt to damp off unless the atmosphere is kept moderately dry. Endeavour to secure a steady bottom-heat of about 75° or 80° for plants in all stages, and also to keep the soil in a proper state as to moisture; avoid having to water while the crop is setting, by well soaking the soil before the principal blossoms begin to expand. Keep a careful look out for insects, and use every precaution to prevent these getting established upon the foliage, for there is hardly any chance of a crop of fruit unless the leaves can be preserved in health.

FLOWER GARDEN AND SHRUBBERIES.

Endeavour to harden bedding plants as much as possible preparatory to their being planted out. Much may be done as to display by a judicious arrangement or combination of both colour and form. As a general principle, our best authorities seem to agree that the various shades of orange and yellows will class well with the various purples and blues; whites are suitable with the blues, oranges, and reds; whites however derange the effect of the yellows as also the violet shades, whilst the various red or rose-coloured flowers are, as far as colour is concerned, capable of forming a bed by themselves. Every individual bed of a flower garden should, in our opinion, be complete in itself, both with regard to colour and outline. Sow the more useful and showy kinds of hardy annuals about shrubbery and herbaceous borders, or wherever room can be found for them.

HARDY FRUIT AND KITCHEN GARDEN.

Let a sowing of Endive now be made; also a sprinkling of early Dutch Turnips on a cool border, neither digging nor using manure. It is a mistaken notion to persist in digging ground for these in kitchen gardens, so full as they are of old manures, the Turnip being naturally too gross then under any circumstances. Always choose the poorest hardest ground you can find, and merely hoe the seed in; by these means you will always procure good Turnips. Let full crops of Kidney Beans be planted forthwith, and a row of Knight's Marrow Peas or the British Queen. The row should be prepared after the way of a Celery drill, and the manure completely saturated with moisture. Sow Radishes and small salad.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending May 10, 1860, as observed at the Horticultural Gardens.

May.	Moon's Age.	Barometer.		Temperature. Of the Air.			Of the Earth		Wind	Rain.
		Max.	Min.	Max.	Min.	Mean	1 foot deep.	2 feet deep.		
Friday 4	13	30.202	30.063	65	30	47.5	51	48	N.	.00
Satur. 5	○	30.111	30.085	60	32	46.0	51	47½	E.	.00
Sunday 6	15	30.165	29.930	59	30	44.5	51½	47½	E.	.90
Mon. 7	16	29.856	29.566	63	46	54.5	50	48	E.	.02
Tues. 8	17	29.628	29.498	64	46	55.0	51	48½	S.W.	.01
Wed. 9	18	29.806	29.565	60	27	46.5	52½	49	S.W.	.03
Thurs. 10	19	29.823	29.506	64	50	57.0	51½	49	S.W.	.11
Average..		29.941	29.572	63.0	37.2	50.1	51.2	48.2		.17

May 4—Slight haze; dry air; clear and fine; slight frost.
— 5—Dry uniform haze; clear and fine at night.
— 6—Slight haze; clear and fine; slight frost at night.
— 7—Slight haze; very fine; overcast; slight rain.
— 8—Overcast; cloudy and fine; overcast.
— 9—Cloudy, showery; overcast; frosty at night.
— 10—Overcast, rain; showery and mild.
Mean temperature of the week, ½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending May 19, 1860.

May.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 13..	62.7	39.5	51.6	16	1.10 in.	3	8	5	2	3	7	3	3
Mon. 14	63.3	40.7	52.0	13	0.66	3	7	3	1	4	6	4	1
Tues. 15.	64.6	41.1	52.9	11	0.41	3	9	3	2	8	6	2	1
Wed. 16..	65.9	43.0	54.4	12	0.34	6	6	6	—	2	10	3	1
Thurs. 17..	65.4	42.5	54.0	14	0.53	2	6	4	1	4	9	4	4
Friday 18..	64.9	43.3	54.1	15	0.17	2	6	5	3	2	10	5	1
Satur. 19..	66.0	43.7	54.8	12	0.50	2	6	6	3	4	10	3	—

The highest temperature during the above period occurred on the 15th and 17th, 1833—therm. 86 deg.; and the lowest on the 15th, 1850—therm. 25 deg.

Notices to Correspondents.

*** The Board of Works have directed that in future the Street in which our Office is situated shall be called Wellington Street, and that the Number of our Office shall be 41. Correspondents are therefore requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

DEBTS OF SOCIETIES: *Jabez.* You should have taken better care. From a corporate body you can obtain payment by suing the corporation. From a mere association you can obtain payment by suing any individual member, who must discharge the debt, if he has the means of doing so. In the case to which you allude there is no difficulty in singling out a good man.

DUNN'S MARKING PENCILS. We find that Mr. Dunn has now prepared a larger and stronger pencil than formerly; and that it fixes an indelible black colour on galvanised iron. See our page 288 of the present year.

GRAPES: *Fred and J O.* It is impossible to say what ails your crop without knowing much more than you mention. The Grapes are in all cases discoloured or killed first *on the outside of the bunch*, and this looks as if draughts of cold air had been able to pass over them while very young and tender. If that is not so then you had better consider whether the border is not too cold for the roots.

MELONS: *A Subscriber's* Melon bed is infested with the Æthalium septicum mentioned in last week's Number, p. 409. The marine production is not a plant, but a mass of eggs of the great whelk.

NAMES OF PLANTS: *Totteridge.* We do not find such a name as Rhododendron calycatum. What you have sent is probably Rh. Thomsoni, though not exactly like the usual state of that species.—*J D Mitchell.* 1, Acacia dealbata; 2, A. melanoxylon.—*P Y G.* 1, Tecoma jasminoides; 2, Forsythia viridissima.—*M G P.* Rhododendron Keysii.—*A Y.* We never name Cryptogamic plants, except Ferns and Lycopods. *Henry.* Medicago maculata.—*A C.* Dendrobium cucullatum.—*W H.* Certainly; it is the variegated Funkia.

NORMANDY PIPPINS: *Leicester.* We are unable to find any statement that can be depended on, and have therefore written to France for information.

PAINT FOR IRON: *Gyp.* Coal tar by itself is a bad substance; but if prepared as at Trentham and as is directed in a former volume, it is one of the best applications known. But you must not apply it to the roots of trees.

THE SEASON: *Exul.* The spring of France has been even worse than that of England. In Normandy warm weather scarcely occurred before the very end of April; and at Paris in the middle of that month Almonds, Apricots, and Peach trees were scarcely in flower. The Cornelian Cherry (*Cornus mas*) was alone in blossom in the woods; and Crown Imperials had not opened in gardens.

MISC.: Full price will be given for the Number for Dec. 10, 1859.

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The Directors recommend these Manures with every confidence to the attention of their brother farmers; and the fact that they and the Shareholders farm upwards of 30,000 acres of land, cannot fail to afford a guarantee and protection to consumers.

The high per centage of SOLUBLE PHOSPHATE and large amount of ANIMAL MATTER yielding Ammonia they contain not only render them the cheapest, but also the most Natural Manures, and the best calculated to produce a HEALTHY, SOUND, and HEAVY CROP.

PRICES.—Blood Manure for Corn, £7 10s.; Ditto for Roots, £6 10s.

Delivered to any Railway or Wharf in London.

☞ *As security to the Purchaser every bag contains 2 cwt., is marked* **"ODAMS'S PATENT BLOOD MANURE," and sold only by the authorised Agents of the Company.**

ODAMS'S SUPERPHOSPHATE OF LIME.

This Manure contains an unusually large per centage of Soluble Phosphate of Lime, and is, therefore, a highly valuable Manure for all Root Crops.

ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.23
Biphosphate of Lime	16.77	15.63	14.38	16.71	16.91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

Dr. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

Dr. ANDERSON reports:—"This is an excellent super-phosphate Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

Dr. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

Dr. HODGES states that—"It may be regarded as a good specimen of super-phosphate of lime." His calculation of its value is 7*l.* 13*s.* per ton.

Dr. CAMERON reports:—"The above figures prove this super-phosphate to be of excellent quality, and I have no doubt but that its application will be attended with the most satisfactory results. It would be good value at 7*l.* per ton."

Every Bag contains 2 cwt., is marked "ODAMS'S SUPERPHOSPHATE OF LIME," and is guaranteed to yield 20 to 25 per cent. of Soluble Phosphate of Lime.

PRICES.—Superphosphate of Lime, £5 10s. Delivered to any Railway or Wharf in London.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
LAWES'S BARLEY MANURE	8	0
" MANGEL MANURE	8	0
" GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES'S Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES'S Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemica Manures.

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C, and Liffey Buildings, Eden Quay, Dublin.

ESTABLISHED 1812.

MESSRS. PROCTOR are now prepared to take orders for their special MANURES for 1860, which they unhesitatingly state are of a superior quality and charged at the lowest possible price, viz.:—

TURNIP MANURE | CLOVER MANURE | OAT MANURE
WHEAT ditto | POTATO ditto | KOHL RABI do.
GRASS ditto | BARLEY ditto | Also

PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.

Apply to H. & T. PROCTOR, Cathay, Bristol; or PROCTOR & RYLAND, Birmingham and Chester.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

TO COWKEEPERS, GRAZIERS, ETC.

ON SALE, a consignment, of superior quality, of thin decorticated COTTON CAKE, now being discharged ex the Columbia, direct from New Orleans.

The valuable feeding properties of superior thin decorticated Cotton Cake have been referred to in Vol. XIX. of the Royal Agricultural Society's Journal, and being considerably lower in price than Linseed-cake, it is well deserving the notice of Cowkeepers, &c.

The manure from a ton of it used as food has also been estimated by agricultural authorities as more valuable than that from almost any of the other artificial foods generally in use. (See extract from Circular of Mr. Lawes, in *Mark Lane Express* of 24th January, 1860, and in *Gardeners' Chronicle and Agricultural Gazette*, about 15th or 22d of same month).

Apply to BEGHIE, YOUNG, & BEGHIES, 27, Mark Lane, City; and 22, Old Corn Exchange, E.C.—London. May 12.

REIGATE SILVER SAND.—Best quality for Florists, 16*s.* per ton; less quantities 1*s.* 6*d.* per bushel, delivered to any London Wharf or Railway. Sacks for Sand, 1*s.* 6*d.* each; or on hire, 6*d.* each (five hold a ton); KENTISH and HAMPSHIRE PEATS, LOAM, and LEAF MOULD, in large or small quantities.—JOHN KENNARD, Purveyor to her Majesty, Swan Place, Old Kent Road, London, S.E.

JUPP'S NEW HORSE AND CATTLE FOOD.—Dr. Letheby in his analysis of this new Food says, "*The nutritive value of the food is therefore good, for it amounts to* 90.2 *per cent.*"

Sent out in bags with directions for use, for cash only, at 35*s.* per cwt.; 19*s.* per ½ cwt.; and 10*s.* per ¼ cwt.
W. & R. JUPP & Co. 6, Cross Lane, Eastcheap, E.C.
*** Agents wanted in large Towns.

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD, POULTRY AND GAME.—RICE SWEEPINGS, 8*s.* 6*d.* per cwt., in 1½ cwt. bags; SCREENED RICE, 12*s.* per cwt., in 1¾ cwt. bags; DOG BISCUITS, 14*s.* per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6*s.*6*d.* and 8*s.* 6*d.* per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

WEST OF ENGLAND AND SOUTH WALES AGENCY FOR GREEN'S PATENT "SILENS MESSOR" AND OTHER MOWING MACHINES.—BROMHEAD & SON'S Ironmongery Warehouses, 6, North Street, Bristol, where the Machines can be seen and their working explained.

AGRICULTURAL AND GENERAL MACHINERY.—AS PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C. Orders for delivery this season must be given early to avoid disappointment.

MOWING MACHINE—BURGESS AND KEY'S PRIZE MOWER, the most valuable ever manufactured, can be seen at their Stores, 95, Newgate Street, E.C.

HENRY J. MORTON AND CO.
2, Basinghall Buildings, Leeds.

GALVANISED IRON WATER CISTERNS
for Cottage Houses, &c., to contain 50 gallons, 25*s.*; 80 gallons, 30*s.* each; and 140 gallons, 36*s.*, and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

GALVANISED IRON PUMPS
for Liquid Manure or Domestic Use, 3 inches diameter, 30*s.* and 32*s.* 6*d.* each; Tail Pipe for same at from 10*d.* per foot.

GALVANISED IRON SWING WATER BARROWS
for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32*s.* 6*d.* each

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LOANS may be obtained under the General Land Drainage and Improvement Company's Act for the full amount required by the Owners of settled Estates, Incumbents, Trustees, Bodies Corporate, &c. for the erection of Farm Houses, Farm Buildings, and Labourers' Cottages designed by their own Agents and sanctioned by the Inclosure Commissioners.

The loans are repaid by a Rent Charge on the estate for any term the Landowner may fix, not exceeding 31 years.

No investigation of title being required or notices given to Reversioners or Mortgagees, no legal expenses are incurred.

The Company furnish designs of every description, and undertake the entire responsibility of the works wherever desired by Landowners.

No profit whatever is taken by the Company on any works they execute, the actual expenditure only approved by the Inclosure Commissioners, with a commission thereon, being charged in all cases.

Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

SHOW-YARD REFRESHMENTS.—Persons desirous of having the privilege of supplying either First or Second Class REFRESHMENTS for the Visitors in the Society's Show Yard at Canterbury, in July next, can obtain the particulars and Forms of Tender, on application at 12, Hanover Square, London, W. Tenders must be delivered in as above on or before May 17.
By Order of the Council,
H. HALL DARE, Secretary.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
CANTERBURY MEETING, 1860.

ENTRIES for LIVE STOCK must be made on or before June 1.

*** All Entries received in each case after those respective dates will, without any exception, be disqualified, and returned to the senders.

Prize Sheets and Forms of Entry may be had on application at the Offices of the Society, 12, Hanover Square, London, W.
H. HALL DARE, Secretary.

The Agricultural Gazette.

SATURDAY, MAY 12, 1860.

MEETINGS FOR THE FOLLOWING WEEK
WEDNESDAY, May 16—Agri. Society of England..... Noon.

THE discussion before the London Farmers' Club last Monday which followed Mr. CLARKE'S capital paper on Lois-Weedon husbandry was one of the most imperfect that has ever befallen any topic on which that Association has undertaken to collect the opinions of its members.

A committee had been appointed to visit the scene of Mr. SMITH'S labours; and their report, it had been hoped, would have at least thrown some guiding light upon the question, so far as a few hours' inspection could acquire or furnish it; but no report apparently had been drawn up, and the only speaker who referred at any length to the excursion of the previous week was evidently too

much under the impression that a single visit was enough to justify a foregone condemnation of the system. Mr. SMITH's operations were on the smallest scale—his personal and domestic servants had performed all the work of the land—the Wheat looked well, but most of the visitors had left Wheat looking equally well at home—the land so far from being of ordinary or inferior quality was as good Wheat soil as any one could wish to farm—the scheme was incapable of general development, for the labour it involved was most unequally distributed among the months—and the absence of Clovers, root crops, and other food for live stock, shut out from an agriculture on that plan that which is at present our most profitable department of farm practice. It was evident that the majority of those who listened were already convinced that the authorities had been at fault in proposing so chimerical a speculation as Lois-Weedon husbandry for discussion before practical men.

Nevertheless that no disproof of Mr. SMITH's and Mr. CLARKE's assertions had been effected, even if attempted, was obvious enough. The land it was stated was good Wheat soil; but it was estimated at that after a 13th Wheat crop had been taken in succession without manure, and the average yield had been annually increasing under Lois-Weedon management, while the annual expenses, if anything, had diminished. Is not this a proof of Lois-Weedon doctrine even more than it is conclusive of the original quality of the land? The difficulties on the score of labour may be considerable; but if the profit be as Mr. SMITH and Mr. CLARKE declare, they will not be insurmountable, and steam-drawn implements will no doubt help to overcome them. We join Mr. CLARKE in the hope that further trial of the plan may be made on the soils—perhaps the exceptional soils—to which it is adapted. And to that end we recommend a careful perusal of his paper.

—— ON next Tuesday week the general meeting of the English Agricultural Society will be held in Hanover Square for the election of office bearers during the ensuing year. It must not be supposed that the house list, which will then be presented to the members for adoption or modification, is the result of unanimous consideration and decision by the Council, from whom it emanates.

The dissatisfaction of any considerable portion of the general body of members is necessarily represented to some extent in so large a body as the Council; and most of the points to be mooted at the ensuing general discussion have been carried already only against considerable opposition. That there is this dissatisfaction is plain from the fact already announced, that almost all the leading manufacturers of agricultural implements have refused to exhibit at Canterbury; and it is also obvious enough from the manner in which the recent appointments by the Council have been received by agriculturists generally. The system, for so it appears to be, of seeking for efficiency outside of the agricultural ranks rather than accept it from within, where it can easily be found, finds a new development in the house list of five new members of Council, to be presented for election at the general meeting. Mr. PAWLETT, of Beestone; Mr. RIGDEN, of Hove; Mr. OWEN WALLIS, of Overstone; Mr. JAMES CAIRD, M.P.; though all proposed for the membership are refused, and three out of the five vacancies are filled with the names of titled men of no strictly agricultural standing whatever. That the practical farmer, even including machine makers and engineers along with him, is represented in the Council to the extent of only 27 per cent. of the body must surely be generally considered a mistake. It is not considered so by those who have drawn up this year's house list.

Let those who do consider it to be a blunder attend for its correction at Hanover Square on Tuesday, the 22d of this month.

WE would particularly direct the attention of our readers to the "Notices to Correspondents" of this week's impression, as also of some previous Numbers, at least in so far as the question of dirty seed is concerned. They will find that the samples of seeds sent to us have been duly reported upon, and with results of a very variable character, some samples turning out good and others of a very inferior kind. Now that examinations of this nature are comparatively easy to the botanist is not all astonishing, but that the ordinary farmer is capable of properly conducting such an inquiry can hardly be expected, for just as it is true that some of our rising agriculturists, who have been educated it may be at the Royal Agricultural College, can analyse a sample of guano, and determine the amount of sand or lime adulteration which it may contain, so may he be able to analyse seeds and detect any impurity which may be present in them, even though uneducated in the principles of the sciences by which such determinations are accurately made. It will however be impossible for the unpractised eye to detect the differences in things which are only brought together, because there is after all a general likeness sufficient to deceive a superficial inquirer—a fact usually at the basis of all sophistications. That seeds are capable of this analysis, and that it is as important that their investigation should be entered into to ensure a good result as that an examination should take place of guano or superphosphate—is a matter that cannot be too generally understood, and we, therefore, direct attention to the notices of samples of this week, and also to the following results of an investigation of nine samples of seed sent from a private source.

The samples now to be reported upon are seeds which we recommended for laying down a permanent pasture in a situation described as follows: "The field consists of a chalk gravel soil 3 to 4 or 5 inches in thickness along the bottom of a vale upon the wolds of Yorkshire; hence it may, I think, be called upland. Previously it has been subject to the growth of the common White Daisy." The species as under we recommended to be got in *separate parcels*, and samples *from the bulk* to be sent to us for examination, of which the following is the result:—

	Weeds in a Pint.	
1. Broad Red Clover ..	1,600	All Plantain.
2. White Dutch do. ..	11,200	Small weeds.
3. Millefoil	1.920	Plantain and others.
4. Anthoxanthum odoratum	16,800	About one-third weeds.
5. Avena pubescens ..	1,000	Dusty and chaffy.
6. Poa pratensis		More than half its weight made up of stalks, dust, dirt, and weeds, such as Ranunculus repens, Juncus?
7. Alopecurus pratensis	very pure	Remarkably free from weeds; but its germination must be limited, as most of its flowers are still in anther, so that it is nearly useless as being unripe.
8. Festuca duriuscula ..	24	Mostly Holcus lanatus; too much stalks and the like.
9. Lolium perenne ..	320	Mostly Ranunculus repens.

These samples were classed as follows:—

Nos. 1, 3, 8, and 9. Good samples.
2, 5. Of very medium quality.
4, 6, 7. Very bad indeed.

Now had these been mixed it would have been much more difficult to have made these determinations, but as it is we should certainly refuse to sow the bad examples of seed. That mixed seeds are made by the dishonest trader a medium for getting rid of all kinds of dirty valueless Grass and other seeds there can be no doubt, and there is no way of detecting the imposture from the results, as no land is clean enough to be free from wild plants, and good Grasses, weed Grasses, and weeds are "natural to the land," so that it is difficult for any but a botanist, and often for him, to decide what has been sown and what has come up spontaneously; and besides the farmer is too often satisfied at seeing anything green in the artificial meadow or pasture, so that he is not sufficiently critical as to the specific identification or special qualities of what may come up.

These are questions which we hope to see the future race of farmers prepared to grapple with, and for which a scientific education is necessary, but that farmers have made money without this is true, still not without paying more than he ought, and many a seedsman of the present day is getting rich upon this sort of ignorance. Let him, however, know his true position and interest herein, and he will demand a genuine seed. It may be at an enhanced price, yet he will not require so much of it, and besides what he does sow will have fair play, which can never be where Tares are sown with the Wheat.

WHEAT-GROWING ON THE LOIS-WEEDON SYSTEM.

[The following paper, written by Mr. J. Algernon Clarke, of Long Sutton, Lincolnshire, was read at last Monday's meeting of the London Farmers' Club.]

THOUGH I am to bring before you on this occasion some extraordinary results of the mechanical tillage of soil, I have no wish to disparage the equally important art of manuring; and while I hope to show the advantage of growing Wheat in annual succession on the same field, I shall not dispute the importance of a judicious rotation of cropping, or the value of alternate husbandry. My purpose is simply to describe in a few words (1) what is being done at Lois-Weedon, (2) what has been accomplished in other instances, and (3) what are the results and deductions from my own experience; and I shall then offer (4) a brief explanation of the principles on which Lois-Weedon Wheat-growing is founded. The importance of the subject is of course fully recognised and felt by the Farmers' Club; and, therefore, I need not dwell upon the necessity for some means of augmenting our yield and diminishing expenditure, now that prices are so unpromising, rents and public burdens so heavy and threatening, while guano is becoming so scarce and dear, and the tantalising town sewage still flowing to waste. Happily, however, the new power of cultivating by the steam-engine has been given to us just as the productiveness of mechanical tillage is being demonstrated on a great scale, and at a time when the expensiveness of manual labour and the defective as well as costly character of horse-power culture are being generally acknowledged. So that if "Wheat-growing on the Lois-Weedon system" should be found advisable, we shall certainly have ample means for carrying it into practice, whether by steam or horse-power.

1. The Rev. Samuel Smith, the Vicar of Lois-Weedon, near Towcester, in Northamptonshire, published his first "Word in Season" 10 years ago; he had then threshed his third successful harvest, and was warranted in expecting that his extraordinary and profitable experience, in spite of low prices, would be tested at once in every part of the kingdom, seeing that farmers were at that time in a condition of distress, and almost despairing of ever being able to grow Wheat, or any other crop, remuneratively. But so slow is the progress of a novelty in farm-management, that Mr. Smith has had to plod on, patient and undiscouraged, through all the long seasons of sowing, culture, and harvest, during 13 tedious years, with a success ever increasing, and falsifying all the forebodings of incredulous individuals, both scientific and practical. And still he finds only a few imitations here and there, and comparatively small interest taken by the agricultural public in the results of his marvellous cultivations. I trust that the practical members of this Club will bring this discussion to a really practical issue, and not let the year 1860 pass away without sowing, in various districts, a considerable number of experimental pieces of the three-row stripes of Wheat. I have inspected the astonishing crops on Mr. Smith's little farm more than once, and did the limits of my subject permit, I could tell of winter Beans, in single rows 5 feet apart, branching so as to meet across the intervals, with stalks bearing 40 or 50 pods each, and yielding over six quarters per acre; while in the fallow spaces between were raised 8 or 9 tons of Carrots besides. I could tell of 27 tons per acre of Swedes, also grown in single rows 5 feet apart, with their leaves touching across the intervals, and their bulbs flattening each other's sides, though singled with a 12-inch hoe—of prodigious weights of Mangel Wurzel, and enormous Drumhead Cabbages 40 lbs. in weight, cultivated with the same wide spaces. For the intercultural tillage is indeed a marvellous promoter of the growth of vegetation, the trenching being deep, as well as the manuring heavy, farmyard dung being buried 15 inches below the surface, and artificials plentifully supplied. And latterly Mr. Smith has placed the manure along the middle of the fallow intervals, 24 feet from the rows of plants which are to profit by it when they have matured their growth, and spread out their network of root-fibres like spiders' webs for some feet on all sides. But our business is with the Wheat crops, which are not manured, for the simple reason that they are quite heavy enough to stand their ground as it is; though both corn and straw are abstracted every year without any manurial return.

Mr. Smith's land is just what his publications have told you it is: one field is the ordinary heavy Wheat soil of the oolite formation, generally rented at not more than 30*s.* an acre; the 4 acres of lighter soil have chiefly a gravelly subsoil. The same qualities of land exist over tens of thousands of acres; and, undoubtedly, any tolerably fair Wheat land may be brought by the same means to a similarly fertile condition.

The history of the clay piece is as follows: Fifteen years ago it was in Grass, which was pared and taken off the land: it was then ploughed the full depth of the 5-inch staple for Oats, followed by Vetches. After this came the first triple-rowed Wheat, the wide intervals being dug by spade one spit deep, bringing up to the surface only a few inches of yellow clay subsoil. The second year, these well-stirred and horse-hoed intervals bore the three-row stripes of Wheat, and the stubble-row stripes were dug in; and so on, fallow intervals and Wheat rows succeeding one another alternately. In the third and fourth years the spade went down a little deeper: and so, gradually and regularly for four years more, till a depth of 16 or 18 inches was reached. Mr. Smith then cultivated for the next four years with only single-spit digging, and in 1858 again returned to the trenching two spits deep with a fresh inch of clay. Conscious, however, that the spade must always be an implement of limited and expensive use, Mr. Smith has been for some years labouring to improve the digging-machine, or rotary forker, and has now succeeded in his invention of a digger, which, drawn with wire rope by Mr. Fowler's horse-power capstan, or his steam-engine and windlass, perfectly inverts the soil, throwing the upturned subsoil on the top. Preparatory to working it, the stubble is pared and burnt; then comes the digger, with three subsoil tines on the same frame going before the digger, and loosening the stubborn soil to the full depth required. The revolving tines raise the whole stratum in spits, which are cast off behind in an inverted posture by a rotating clearer or beater, the breadth taken being 22 inches. As a stirring implement in the summer season its action is perfect. The average annual expenses per acre are—

Digging and cleaning the moiety of each acre ..	£1	14	0
Horse hoeing ditto three times, 6*s.*: ploughing, 4*s.*	0	10	0
Hoeing and hand weeding	0	5	0
Rolling with crusher at seed time, and spring 1*s*	0	3	0
Two pecks of seed, 2*s.* 6*d.*; dibbling, 5*s.*	0	7	6
Bird keeping	0	4	0
Earthing up Wheat	0	3	0
Reaping, &c., to threshing and marketing ..	1	13	0
	£4	19	6
Rent—say 2*l.*, rates and taxes, 4*s.* 3*d.*	2	4	3
	£7	3	9

To this should be added something for interest, insurance, &c.; so that the total outlay may be taken at 7*l.* 10*s.* per acre. The digging machine will, of course, enable the whole to be done much more cheaply. What has been the produce? The aver-

age of the first eight years, beginning with the harvest of 1847, was fully 34 bushels per acre; in 1855, the yield was 40 bushels; in 1856, 37 bushels; in 1857, 36 bushels; in 8*th*, upwards of 40 bushels; and in 1859, the last harvest gave 38 bushels. The general average for the 13 years is 35½ bushels per acre. The quality of the grain is so good that Mr. Smith has usually made the highest Red Wheat price of his market; and this fact is thus accounted for:—The straw grows stout and stiff, owing to the free access of air and light from the ear down to the very base of every stem; and just before flowering time, the rows are lightly earthed up with the plough mould-board. A good deal of the straw of last year's crop was upwards of 6 feet high, yet none of it laid; though all other bulky crops in the neighbourhood (fed by guano or otherwise), were either wholly or partially beaten down and damaged by the rains. The average amount of straw has been about 1½ ton per acre; and must be reckoned as part of the realised produce, because it is never retured to the land. At 40*s.* per quarter the return will be

35½ bushels at 5*s.*	£8	17	6 + 1½ ton of straw.
Deduct outlay	7	10	0
Clear profit per acre ..	£1	7	6 + 1½ ton of straw.

Mr. Smith's straw is worth 2*l.* per ton to him; and consequently, his net proceeds must be 4*l.* 7*s.* 6*d.* an acre at the present low prices. And when Wheat was at 56*s.* per qr., his net gain was not less than 7*l.* 18*s.* 6*d.* per acre. But if you choose to put the straw at 10*s.* a ton, the profit (with Wheat at 40*s.*) is still 2*l.* 2*s.* 6*d.* an acre. The question now arises, what is the present condition of the land, after this flogging course of cropping, of Wheat after Wheat 13 years in succession? Well, the proof is in the produce; the average of the first eight years was fully 34 bushels, but the average of the succeeding five years has been fully 38 bushels—that is, the land yields a coomb an acre more than it did. The light land field, with its one dressing of clay, continues (at the ninth year of experiment) to maintain its average yield of 34 bushels. [A letter from Mr. Smith, to which allusion will be hereafter made, was here read.]

2. Is there some peculiar and marvellous property, then, both in the clays and light lands of Mr. Smith's neighbourhood, giving a miraculous degree of fecundity that cannot be expected elsewhere? No. There are many examples of successive Wheat-growing, by means of intercultural tillage, which shows its practicability on soils of very diverse qualities, though my space forbids any description of the methods employed. And at the same time, it must be owned that many persons have tried and failed; though I believe, in all cases, either from a misunderstanding of the principles of procedure or inattention to essential details of the management.

[Mr. Clarke here quoted a number of instances from Mr. Burnett's "Tillage a Substitute for Manure."]

3. I now come to the relation of my own experience. My piece is just 10 acres in extent, low-lying, flat, and naturally wet; but relieved of excessive moisture by a few Thorn under-drains. The soil is an alluvial loam; rather too clayey to have had a good character; in fact, the field has always been one of the lowest and worst on the farm. The subsoil is adhesive for a loam, and rests at considerable depth upon silt, or anciently deposited tidal sand.

Mr. Smith cautions us against commencing upon ground in too productive a condition. In my case, however, the preparatory exhausting was miserably overdone; and indeed Mr. Smith's caution is only against commencing upon land in a really rich state, as after a dead fallow, or a heavy manuring. On my piece the last fallow had been for Turnips in 1850; and the last application of any species of manure whatever was for Beans in 1854. A heavy Wheat crop on the ordinary plan followed in 1855; succeeded by Barley in 1856; and my first year's Lois-Weedon Wheat was grown in 1857. The 10 acres produced within a trifle of 30 quarters, or 24 bushels per acre. Yet this was the third white straw crop on the same land. The harvest of 1858 gave just 30 bushels per acre of dressed corn. The crop of 1859 was the largest and heaviest of all; looking so beautiful when in bloom, and occupying so much space in the stack yard. But the average was only 25 bushels per acre of Wheat, weighing 60 lbs. the bushel. The terribly adverse season refused to develope and ripen the ears as was expected. The present (fourth) crop is coming on remarkably well, though it is the sixth white straw crop in annual succession, and the seventh corn crop since the land was manured. The deduction from my experience so far is that, with the same amount of tillage, any moderately good loam taken at a suitable part of the usual rotation—say after Beans, Peas, Oats, Clover, or even roots not richly manured, unless drawn off the land—would be pretty certain to yield 4 quarters; and (judging by Mr. Smith's experience) might yield 5 quarters or even more per acre; and this for, say, at least two or three years. This important result, with its application to the improvement of our present system of husbandry, I hope to make still clearer by and by; and now pass on to the consideration of the mode of culture, and its expenses and profit. The

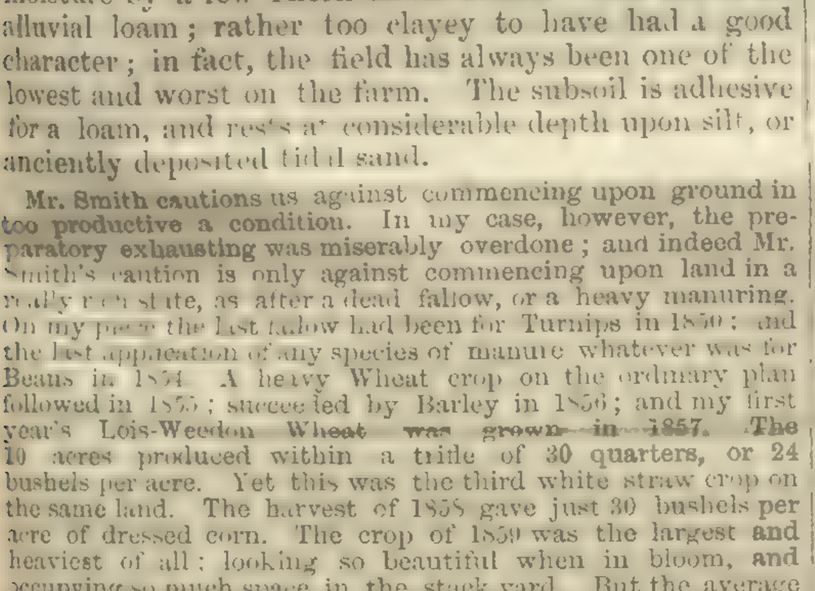

FIG. 1.

Wheat is drilled in triple rows, the "spaces" *a a a a* [Fig 1] being 10 inches each, and the "intervals," *b b*, 40 inches; so that from the middle of one stripe to the middle of the next is 5 feet. Next year's crop is of course sown upon the fallowed intervals *b b*, and the stubble stripes *a a* fallowed in turn, as indicated by the waved lines. So that though the crop is taken from the whole field the rows do not follow upon the same identical places; and, indeed, instead of being a system of "Wheat after Wheat" it is in reality an alternate course of "dead fallow and Wheat." Tillage in close proximity to the growing plants, and the admission of air and light amongst the green and flaggy stems do wonderfully promote the increase of the crop, at the same time strengthening the straw and saving the grain from the damage always inflicted by lodging and mildew. For while over-heavy crops sown on the ordinary plan come up a mass of flaccid stems, too weak at bottom to spring up against the weight of rains and violent winds, the stalks of a Lois-Weedon crop are stout, green, and strong, and bear aloft the ears, to ripen and grow plump and heavy in the sunlight. The details of management are abundantly simple. After harvest, fork out Couch from the closely-mown stubbles. Broadshare or scarify the fallow intervals, to keep down the weeds. Shortly before seed-time again scarify and harrow; prepare a suitable mould by harrowing, taking care to set the harrows widely apart, in order to miss the stubble rows. The drilling I manage as follows:—

The drill is arranged with four coulters, two toward each end of the coulter-bar, with the distances already mentioned; and the horses walk along the middle of the interval. Going in

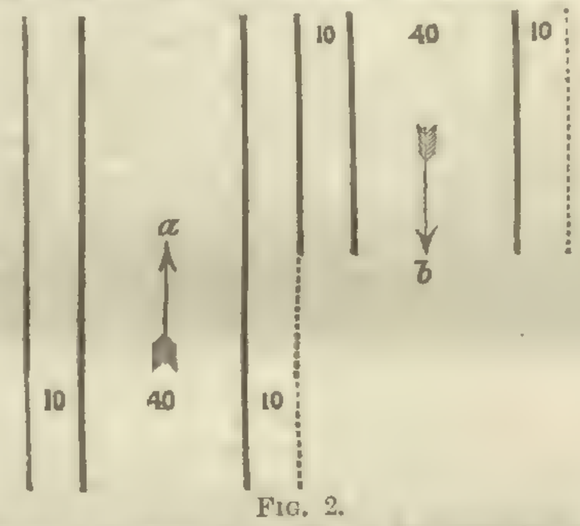

FIG. 2.

the direction of the arrow (*a*) Fig. 2, the outside coulter has its seed shut off, and acts only as a "marker"; in returning in the direction of the arrow (*b*), this coulter runs again in the same track, depositing seed; while the other outside coulter is used as a marker. Sow 3 pecks per acre, that is, using the same drill-wheel that would sow 6 pecks an acre, if the rows had been 10 inches apart all over the ground, instead of averaging 20 inches as they do. And be sure to get the Wheat in early because of this thin sowing and the effects of the after-tillage. When the Wheat is well up, take a plough (with two horses in length) once along each interval, the coulter running within 6 inches of the Wheat on the near side, and the furrow-slice covering up the old stubble. The furrow may be 5 inches deep, without the upturned earth falling upon the Wheat on the other side the interval; and a sub-soiler, drawn by say 3 horses in length, breaks up the furrow bottom to a depth of 5 inches more, making a total depth of 10 inches. The fallow interval thus treated is represented in the engraving at A, Fig 3. In spring, say in February, or as soon

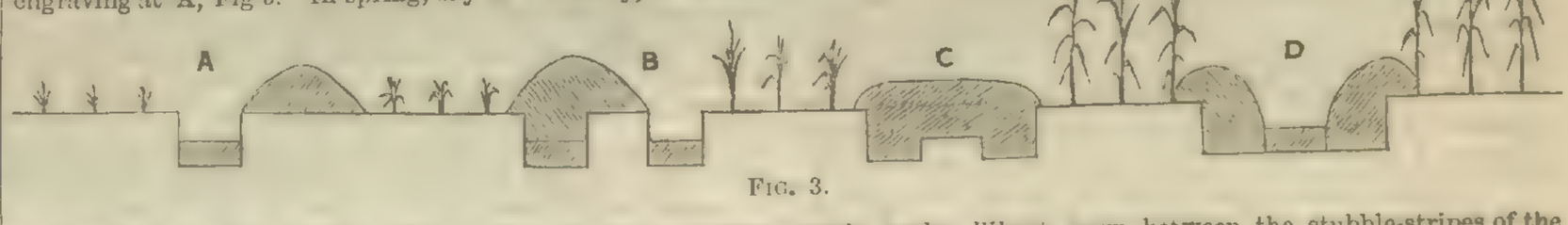

FIG. 3.

as the land is dry enough after a time of frost, perform the same operation along the opposite side of the interval, as at B. In March or April hand-hoe the Wheat rows. In April, when the upturned furrow-slices are in a crumbling state, tear them down by passing a narrow harrow along the intervals; and then stir deeply with a good grubber, set about 26 or 28 inches wide, the horses walking in length. It will be necessary to go over the field with a hand-rake, to pull off any clods that may fall upon and bury the outside rows of Wheat. This stage of the fallowing process is represented at C. Horse-hoe the fallow intervals deeply at least twice during the summer; and hand-weed the Wheat when requisite. When the ears are fully out and in bloom, take a double-mouldboard or ridge-plough up the intervals, so as to partially mould-up the Wheat on each side: this will prevent many stalks from being blown down by winds or borne down by heavy rains. A subsoil-plough should break up the bottom of the furrow left open in the middle of each interval, all this being represented in the engraving at D. The crop may be mown or bagged close to the ground; and bear in mind not to obliterate the lines of stubble by harrowing or otherwise, because these form the "guideways" for the next sowing. It may be necessary to gather the soil again into the middle of the intervals, say by a "pony plough." You will observe that the subsoiled furrows of A, B, and D lie open to the weather for many weeks; and, by the end of the year the whole interval has been exposed and pulverised to a depth of 10 inches, forming an uncommonly fine dead fallow for a succeeding Wheat crop. And as far as cleanliness is concerned, I find that the Couch has decreased so as to be now little or no trouble; and a thick mat of Buttercups and Thistles which pestered the field is also rapidly diminishing. Annual weeds have been annoying and expensive, owing to the access of air and light into every portion of the crop, but are becoming less troublesome every year; and according to the experience at Woolston, my non-inversion husbandry will ultimately wear them all out. In fact, after bearing six white corn crops in succession, the piece is so free from filth that I should simply have to plough, harrow, and sow, if I chose to have any other sort of crop after the present year's Wheat. Now, as to expenses. You cannot tell, excepting approximately, and by assuming some debatable items for granted, what a Wheat crop costs in ordinary farming; but as in this experiment I use no manure and graze no stock, I have simply to reckon the outlay for tillage operations. During the experiment, wages have ranged from 10*s.* up to 12*s* per week, with an addition for harvest; and I allow 2*s.* 6*d.* a-day for a horse and implement—which should be enough, seeing that it is equivalent to 37*l.* 10*s.* for 300 working days in the year. At these prices the cost per acre of the several operations has been as follows:—

		£	*s.*	*d.*
August	—Scarifying fallow intervals	0	3	0
Sept.	—Forking out Couch	0	3	0
,,	—Scarifying and twice harrowing intervals	0	2	0
Oct.	—Drilling and harrowing	0	2	5
,,	—Seed 3 pecks (at 5*s.* per bushel)	0	3	9
Dec.	—Ploughing and subsoiling	0	3	6
Feb. or March	—Ploughing and subsoiling, and removing clods off Wheat	0	3	7
April	—Hand-hoeing the Wheat	0	1	6
,,	—Harrowing and scuffling the intervals ..	0	1	4
May	—Hand weeding the Wheat	0	0	9
,,	—Horse-hoeing the intervals	0	1	10
June	—Horse-hoeing the intervals second time ..	0	1	0
,,	—Moulding-up Wheat	0	0	8
,,	—Subsoiling	0	2	0
,,	—Hand-weeding Wheat	0	0	4
August	—Mowing and harvesting	1	1	0
,,	—Threshing and marketing	0	10	0
		£2	19	2
To this must be added, for rent 30*s.*, tithe 8*s.*, rates and direct taxes, say 7*s.*; making together ..		2	5	0
So that the total expense per acre is		£5	4	2

The outlay being so low, I am able to show you a profit even from the poor yields obtained on my over-exhausted ground. Taking Wheat at 40*s.* per quarter, a yield of 21 bushels just meets the expenses; and all above this quantity is surplus for profit and interest of capital. Then, the straw is all clear gain besides, for none of it has yet been returned to the land. Of course, if you dare hope for the old standard market of 56*s.* a quarter, the profit may be placed at 4*l.* 4*s* per acre; and those who can make a sovereign a ton of their straw must add about another pound, and so bring up the gain in that case to no less than five guineas an acre! Some people may say that 2*l.* or 3*l.* per acre clear profit is no such great thing for a Wheat crop, even though the price be down at 40*s.* But remember that this profit is obtained every year, or at least for a number of years in succession, off the same land; whereas the large balance left by a Wheat crop in common farming is not clear, but has to defray the previous outlay for fallowing and the loss by certain crops which cost more to grow than they realise in return.

But to show the advantage of growing Wheat on the Lois-Weedon system, I will take an illustrative case. I am quite satisfied, from the experience already related, that on any proper Wheat soil (that is, of course, containing a fair proportion of clay in its composition), at least two good Wheat crops in succession may be grown by the system described.

I say "two" crops; because after the examples I have adduced, no person can reasonably dispute the feasibility of such a moderate cropping of land in fair order. And you must bear in mind that of these two successive crops, the first will be—say after Beans, Peas, Oats, Clover, Vetches, or roots; while the second will be sown upon the fallowed intervals of the first; so that Wheat will nowhere follow Wheat exactly upon the same portions of ground. Such being the case, my unhesitating belief is that a yield of more than four quarters per acre would be obtained from each crop; but say 4 quarters. And if Mr. Smith's light-land piece, tilled 13 inches deep, has brought nine crops of 34 bushels each, surely a loamy soil, tilled 10 inches deep, may be expected to bring two crops of 32 bushels each. Now, suppose 300 acres arable to be farmed on a three-course rotation (which, by the way, would be rather a novelty), as represented by the following diagram. Fig. 4:—Let 200 acres, A and B, be in Wheat; and 100 acres, C, in other corn or green-cropping. Next year, have B and C in Wheat, and A in other produce. The year after that, C and A in Wheat, and B in other produce. That is, each division would be one year occupied by a variety of cropping; next year it would be under Lois-Weedon Wheat-rows; the third year,

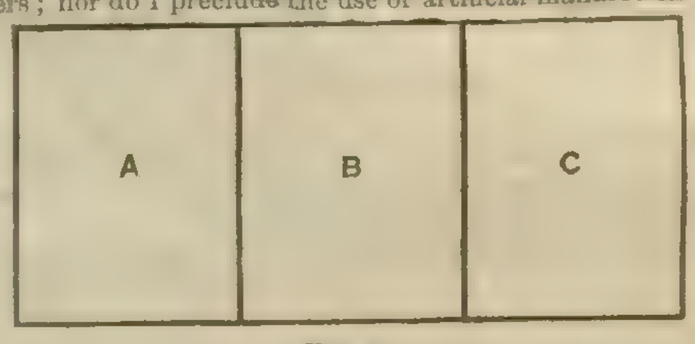

FIG. 4.

again under Wheat sown between the stubble-stripes of the former crop; and then broken up for the various cropping. The assumed yield of 32 bushels would give a clear profit (including interest) of 8*l.* 10*s* per acre, with the expenses already stated, and Wheat at only 40*s.* a quarter. The 200 acres of Wheat would thus bring 700*l.* net annual income. Then, as no manure is required for the Wheat, the other 100 acres would have the benefit of all the straw from the 200 acres; and with this large quantity of straw for manure, enriched with corn and cake as in present practice, there would be a chance of a good profit also from the produce of this division. The result, then, is a clear surplus—say of 800*l.* to 900*l.*, over and above all expenses, on 300 acres of land, when Wheat is down at 40*s.*

There may be difficulties in the way of such a system of husbandry; but the principal one, that of having so much horse-work to be done in the Wheat field at seasons when other crops require their labour, is already obviated in anticipation by the steam trench plough and grubber. And of course I do not set up this threefold rotation as advisable beyond all others; nor do I preclude the use of artificial manures for the triple-row Wheat, seeing that more than 40 bushels per acre may stand and ripen on the land (as at Lois-Weedon); and provided you do not overdo the crop in luxuriance, guano or nitrate will pay handsomely for their use here as well as in ordinary farming.

Mr. Clarke then referred to the theory or scientific explanation of the subject, for his discussion of which, however, we have not room this week. He concluded as follows:—

Science, then, corroborates the expectation of the practical experimenter that Wheat may be grown year after year, for a considerable period of time, without appreciable deterioration of the soil. And it is now for you to consider whether an introduction of two or three successive Wheat crops into the rotation, upon heavy or loamy lands, would not secure a handsome profit from the business of husbandry, in spite of cheap corn, and the competition of wealthy gentlemen for every available farm.

CROPS IN YORKSHIRE.

EARLY last autumn I stated in this Paper that I did not think over the whole of England Turnips were more than half an average crop, and that the bulbs seemed to me to be deficient in feeding qualities. The result has sadly confirmed both those fears. In ordinary years most of the large farmers in the North have Turnips until up to May-day (13th May), but this year the general stock of Turnips was used up a month ago, and this too after feeding with them most sparingly all through the winter. Much corn and more than the usual quantity of cake has been given to cattle, and owing to the severe weather of winter continuing through much of the spring season there is no Grass. Hay and other fodder has been completely eaten up

in many districts, and much cattle reduced to little better than skeletons. I learn from a venerable salesman that there has not been a year of such scarcity of fodder since 1790; in that year it was much as it is now, sheep died by hundreds; and after Grass came more animals died then than previously from dysentery, &c. It seems reasonable to expect similar results this year, and I strongly recommend, as a preventative, that for the first fortnight after cattle are turned out to Grass they should have a little Bean-meal once every day. Hay can scarcely be obtained to meet the wants of the salesmen, although a great deal has been imported from Hamburgh, and dealers have brought large quantities from more favoured districts. Good English hay is selling here now at 1*d.* per lb.

In many places the cattle have been turned into woods and plantations and almost left to live or die there. A sad result attended this practice in one instance a few days ago. A respectable farmer named Spencely living about 5 miles west of Richmond turned 19 of his cattle into a wood adjoining his farm; at night they were brought into the houses on the homestead and jumped and played in their way there as if in perfect health. Next morning 16 out of the 19 animals were found dead, and it was subsequently ascertained that while in the wood the preceding day they had eaten the tender parts of some Yew tree branches, and this had caused their death.

Beef has now advanced to 9*s.* per stone of 14 lb. and scarce, while mutton is selling regularly at 9*d.* per lb. without the wool, and instances are known where 1*s.* per lb. has been given for sheep in the wool. There have been many hoggs killed already, and I believe that by the end of May good mutton will hardly be to be found at any price.

Corn of all kinds sells well. The total imports of Wheat for the 3 months ending March 31 have only been 337,739 quarters as against 749,411 quarters for corresponding period of last year. The great falling off seems to have been from France and Egypt.

The departure of the frost has now opened the Baltic and other ports, and we shall soon have large supplies from them, though it is stated much of that country Wheat has been already purchased by millers here. Still I am inclined to think Wheat has seen its maximum price for this season, with present prospects for harvest; however I do not look for prices of corn receding much.

Wheat, especially on undrained land, has suffered greatly from the severity of the weather. On much wet land the plant has absolutely died from starvation, the roots in their saturated state being unable to bear the severe and long continued frosts, and even when the plant has not actually perished it is small, feeble, and late.

The land generally has worked well for Oats and Barley, but owing to the cold weather they come up slowly.

The land is now being prepared for Turnips and Mangels. The latter has proved, notwithstanding a great deal was lost by not being early got up, a most valuable root, and its culture is everywhere, and most prudently, extending. It can be grown where Swedes would prove a failure, and thus far is free from finger and toe and many other diseases incident to Turnips.

Potatoes are plentiful, but they command high prices in the market. *H. J. Turner, Richmond, Yorkshire.*

ON THE AMOUNT OF NITROGEN IN DATES.

By DR. AUGUSTUS VOELCKER, Royal Agricultural College, Cirencester.

SINCE the publication of a complete analysis of Egyptian Dates, I have had made in my laboratory several determinations of the amount of nitrogen in different kinds of Dates. The following are the results:

1st sample—damaged Dates:

	Nitrogen per cent.	= to Protein compounds.
1st experiment ..	.645	4.031
2d ,, ...	.665	4.156

These Dates contained 31.40 per cent of water.

2d sample—superior Dates:

1st experiment	.441	2.756
2d ,, ...	.449	2.806

These Dates contained 18.60 per cent. of water.

3d sample—sound Dates:

Per centage of nitrogen	.504
Equal to protein compounds	3.150

4th sample—small Dates:

Percentage of nitrogen	.297
Equal to protein compounds	1.856

In the Journ. Chim. Med., IV., 173, I also find an analysis of dates by Kletzinski, who found in them 85 per cent. of pulp, 10 per cent. of stones, and 5 per cent. of skin. Exclusive of stones, the results obtained by Kletzinski are:—

Water	30	
Sugar	36.2	
Extractive matters soluble in water ..	22.9	
Or, containing nitrogen		(1.145)
Equal to protein compounds		(7.156)
Pectin	8.5	
Cellulose	1.5	
Cumarin and citric acid	.1	
Mineral matters	8	
	100.0	

It thus appears that the amount of nitrogenous compounds in Dates is subject to considerable fluctuations. This is just what would be expected by scientific men who have given special attention to the analysis of feeding materials.

Dr. Gilbert's communication in last week's *Agricultural Gazette* conveys the impression to the general reader that the proportion of nitrogen in Dates is not subject to such fluctuations, and is always very small. Dr. Gilbert's extensive experience in the analysis of all kinds of feeding stuffs must have convinced him that the proportion of nitrogen in Turnips, Mangels, Swedes, Grass, &c., varies considerably in different samples of the same description of food; and that generally the samples containing more nitrogen are inferior in feeding quality to others of the same kind containing less nitrogen. Dr. Gilbert considers Dates an inferior food, because those analysed by him and by Dr. Watson contain but little nitrogen.

He must be aware, however, that the percentage of nitrogen in an article of food is not a safe indicator of its superior or inferior value to the feeder of stock, for he has on various occasions publicly opposed the opinions of chemists and physiologists, who attach an undue importance to a high proportion of nitrogen in food.

The favourable opinion which I have expressed respecting the probable value of Dates to the feeder of stock is not based on the proportion of nitrogen which Dates contain. To the farmer or distiller it is, comparatively speaking, a matter of little import whether Dates contain much or little nitrogen. The chief point for him to consider is the price at which Dates can be delivered in England. If they can be procured at something like 6*l.* a ton, I believe Dates will be considered by practical men a valuable article of food, although Dr. Gilbert might inform the public that they did not contain a particle of nitrogen.

The nitrogen determination in the fourth sample was made with Dates kindly sent to me by Dr. Gilbert.

Dr. Gilbert's analysis gave	.275 per cent. of nitrogen.
Mr. Sibson obtained	.297 ,, ,, ,,

Thus showing a close agreement in the results of the analyses of the same samples, and proving that the method employed in my laboratory is not less accurate than that followed at Rothamsted.

In the *Agricultural Gazette* for March 31 it is not stated by whom the analyses communicated by Dr. Gilbert were made. Of the accuracy of Dr. Gilbert's analytical results, and those obtained under his immediate direction, I do not entertain the slightest doubt. I have an equal confidence in Mr. Sibson's conscientious and accurate analytical work, and therefore much regret that my friend Dr. Gilbert should have charged Mr. Sibson with having made an error in his analysis of Dates without having any foundation for such a charge.

TOP-DRESSINGS OF GRASS.

THE following are the conclusions which Dr. Gilbert and Mr. Lawes draw from elaborate experiments described in their recent communications to the Royal Agricultural Society's Journal on permanent meadow land:—

1. *On the Produce of Hay per acre.*—"The more practical conclusions may be very shortly stated. In order that the more temporary, or more rapidly acting means of increasing the produce of meadow land, may have their full effect, the more permanent means of amelioration that may be required—such as draining, marling, liming, and the like—must not be neglected. The application of bones is not recommended for general adoption. They appear to be chiefly adapted to the exhausted pastures of certain localities, and not to be generally applicable to meadow land which is mown for hay. The hay crop is a great exhauster of the mineral constituents of the soil; and these, owing to the high price of salts of potash, cannot, with profit, be fully restored in artificial manures. The return of the mineral constituents is better accomplished by means of farm-yard manure, stable dung, night soil, and the like; which, at the same time, bring on to the land a more or less considerable quantity of available nitrogen. The best 'artificial' manures for Grass land are Peruvian guano, which is rich in phosphates as well as nitrogen; and nitrate of soda, and sulphate of ammonia, which are rich in nitrogen, but contain, of course, no phosphates. Peruvian guano, when used alone, may be employed at the rate of from 1½ to 2½ cwts. per acre; nitrate of soda alone, or sulphate (or muriate) of ammonia, at the rate of 1½ to 2 cwts. per acre. The salts of ammonia are, however, relatively too expensive to be employed largely with profit; and both ammoniacal salts and nitrate of soda are more advantageously used in combination with guano. A very generally useful top-dressing for the hay crop may be made of 3 parts Peruvian guano, 1 part nitrate of soda, and 1 part sulphate of ammonia. Of this mixture, 2 to 2½ cwts. per acre may be employed. With this applied annually, and the application of 10 or 12 tons per acre of the poor rotten dung once every four or five years, a good crop of hay may be taken off every year, without injury to the land. The best time of sowing the 'artificial' manures is generally in January; and it should at any rate be seldom postponed beyond February."

2. *On the Produce of Constituents per acre.*—"The main facts elicited on a consideration of the acreage yield in the hay-crop, of some of its important constituents, according to the condition of manuring, may be summed up as follow:—

"1. The average annual produce of total dry substance, in the unmanured meadow-hay-crop, was about 1 ton per acre, which would contain about 900 lbs. of carbon. These amounts are somewhat less than were annually obtained without manure in either Wheat or Barley.

"2. Purely carbonaceous manures did not appear to increase the assimilation by the Graminaceous herbage of either carbon or nitrogen.

"3. Purely mineral manures induced little or no increased assimilation of either carbon or nitrogen by the Graminaceous, but a considerable amount by the Leguminous herbage.

4. Specially nitrogenous manures, such as ammoniacal salts, even when used alone, notably increased the assimilation of carbon and nitrogen by the Graminaceous, but not by the Leguminous herbage.

"5. By means of manures supplying both mineral constituents and nitrogen, but no carbon, there was an annual increase of Graminaceous produce, equal to about 1½ ton of dry substance per acre, which would contain about 12 cwts. of carbon.

"6. The annual yield of mineral constituents in the unmanured hay-crop was nearly 1¼ cwt. This amount is about one-and-a-half time as much as was contained in either Wheat or Barley when unmanured.

"7. By means of mineral manure alone, or ammoniacal salts alone, the annual yield of mineral matter in the hay-crop was raised to about 2 cwts. per acre; and by mineral and nitrogenous manure combined, to about 4 cwts. per acre.

"8. It is particularly in potash, that the hay-crop is more exhaustive of soil-constituents, than either Wheat or Barley.

"9. Owing to the comparatively large amount of mineral constituents taken from the land in the hay-crop—to the less regular return of them by the home manures—and to the less exposure of the soil in the case of meadow-land—more special attention is required to prevent its practical exhaustion of soil-constituents, than in the case of arable-rotation-land.

"10. The annual yield of nitrogen per acre was, in the unmanured hay-crop, nearly 40 lbs. This is from one-third to one-half more than was annually obtained in unmanured Wheat or Barley.

"11. The hay grown by mineral manures alone yielded considerably more nitrogen per acre than that grown without manure. The increased amount was due to an increased growth of the Leguminous, and not of the Graminaceous herbage.

"12. Nitrogenous manures alone (ammoniacal salts and nitrate of soda) gave an increase of nitrogen in the produce equal to only about one-fourth of that supplied in the manure.

"13. Mineral and nitrogenous manures combined gave an increased produce of nitrogen equal to from 45 to 50 per cent. of the nitrogen supplied in the manure. Wheat and Barley, under similar circumstances, gave an increased produce of nitrogen equal to rather more than 40 per cent. of that supplied in the manure. The rather more favourable result with the hay crop is not more than is probably attributable to the more complete distribution of the under-ground feeders of the crop.

"14. In the case of the Meadow-Grasses, as in that of the Graminaceous plants grown in rotation, the growth was much increased by direct nitrogenous manures; and, in both cases, from 50 to 60 per cent. of the supplied nitrogen remained unrecovered in either the immediate, or the closely-succeeding increase of crop."

1. *On the Plants Developed by Different Manures.*—"From a review of the whole of the facts adduced in the Third Part of our Report, it would appear:—1. That, however the produce of hay be considerably increased—whether by means of farm-yard manure alone, farm-yard manure and ammoniacal salts, or artificial mixtures of suitable mineral manure and ammoniacal salts—the proportion of the whole which will be Graminaceous will be very much increased.

"2. That the produce will be by far the most Graminaceous when the 'artificial mixtures' are employed. In fact, when the increase of hay is obtained by artificial manures containing both the necessary mineral constituents and ammoniacal salts——and it is then greater than under any of the other conditions — both the Leguminous and the weedy herbage are nearly excluded, and the produce is then, therefore, almost wholly Graminaceous.

"3. That the Graminaceous produce itself, when grown by farm-yard manure, is less complex in character than that grown without manure; whilst that grown by the most active artificial manures is less complex still.

"4. That, up to an equal period of the season, the Graminaceous produce grown by the active artificial manures, will be in larger proportion in flowering and seeding stem, than that grown without manure; and that the produce grown by farm-yard manure will be in still larger proportion in that condition.

"5. That the description of the produce grown by farm-yard manure alone was upon the whole superior to that grown without manure.

"6. That when the crop was further increased, by the addition of ammoniacal salts to the farm-yard manure, the character of the produce was somewhat

deteriorated, both in regard to the description of the useful plants grown, and on account of the large proportion of miscellaneous or weedy herbage then developed.

"7. That, when in a mixed mineral and ammoniacal manure the ammoniacal salts were not used in excessive amount, the herbage, which was then almost exclusively Graminaceous, and comprised also but very few species, nevertheless, included a considerable proportion of Grasses of recognised good quality. But, when excessive amounts of ammoniacal salts were employed, the character of the produce was deteriorated, both in regard to its condition, and to the description of the Grasses that were developed."

SCHEDULES OF FARM EXPENDITURE.

[The following are the tables referred to in our leading article last week.]

SCHEDULE of the particulars of the yearly expenditure and returns of the following departments in the management of a farm of 400 acres, cultivated on a four-course rotation, viz. :—

I. The Cultivation of the Green crops and the General Cleansing of the Land.

II. The Management of the Cattle and the conversion of the Green crops and Straw of the Corn crops into Manure.

III. The application of the home-made Manure to the Soil.

IV. The proportions of Rent, Capital, and Profit, chargeable on these departments.

V. The annual returns from them.

VI. The expenses of the Corn crops, proportion of Capital and Rent chargeable against them.

I. THE CULTIVATION OF THE GREEN CROPS AND THE GENERAL CLEANSING OF THE LAND.

1. The expense of sowing and tilling the root crops exclusive of those operations which go to the general cleansing of the land.
2. The expense of those operations performed in each rotation in cleansing.

	Expense chargeable against the Root Crop.	Expense of Cleaning.
Ploughing the Wheat crop once, 100 acres at 8s. per acre	£40 0 0	
Cross ploughing, 100 acres at 8s. per acre		£40 0 0
Two double turns of the harrow, 100 acres at 2s. per acre	10 0 0	
Gathering weeds, 100 acres at 1s. 6d. per acre		7 10 0
Working with the cultivator or grubber, 100 acres at 3s. per acre		15 0 0
Harrowing and weeding, 100 acres at 2s. per acre		10 0 0
Drilling up to receive the manure and splitting the drills to cover it, 100 acres at 5s. per acre	25 0 0	
Seed and sowing, 100 acres at 5s. per acre	25 0 0	
Singling and hoeing, 100 acres at 6s. per acre		30 0 0
Two subsequent hand-hoeings, 100 acres at 7s. 6d. per acre		37 10 0
Three horse-hoeings, 100 acres at 5s. per acre		25 0 0
Cleansing operations connected with the Corn crops :—		
Horse-hoeing, 200 acres at 1s. 8d. per acre		16 13 4
Hand-hoeing, weeding, and picking stones, 200 acres at 2s. 5d. per acre		24 3 4
Yearly expense against Roots	100 0 0	
Yearly expense against the cleansing of the farm chargeable in moieties of 102l. 18s. 4d. on the cattle crops on the one hand, and the Corn crops on the other		205 16 8

Note.—These and all other items of the same nature in the Schedule are to be held as including a charge besides the actual outlay, equal to maintain the working live stock and implements against casualties and wear and tear.

3. Expenses of cultivating and saving the Clover crop.

		£	s.	d.
Seed	100 acres, at 15s.			
Sowing and harrowing	" " 1			
Mowing and making one crop	" " 5	120	0	0
Stacking and thatching	" " 3			
	24s.			
Less value of 70 tons of Green Clover consumed by horses, at 20s. per ton		70	0	0
Ditto 12 tons of hay, at 3l.		36	0	0
		106	0	0
Off one-half returned in dung		53	0	0
		53	0	0
		£67	0	0

II. THE MANAGEMENT OF THE CATTLE AND THE CONVERSION OF THE GREEN CROPS AND THE STRAW OF THE CORN CROPS INTO MANURE.

4. Management of the cattle, &c.

	£	s.	d.
Gathering, trimming, and throwing into the carts, 10 tons per acre of roots (i. e., one-half of the entire crop), at 5¾d. per ton	24	3	0
Note.—The other half of the crop is supposed to be consumed by sheep, on the ground.			
Hauling to the homestead 10 tons per acre = 1000 tons, an average distance of 4-5ths of a mile out and in, at 11d. per mile	45	17	0
Storing at 2s. per 10 tons	10	0	0
Wages of cattle man, and shepherd, and other assistants	68	16	0
Feeding stuffs bought	100	0	0
200 tons of straw used as food and litter at 15s. p. ton	150	0	0
Average annual loss by casualties amongst the feeding stock, say 5 per cent. on the amount invested (viz., 1300l., see after, No. 9)	65	0	0
	463	16	0

III. COST OF APPLYING THE HOME-MADE MANURE.

5. Expenses of loading, hauling, &c.

	£	s.	d.
Filling the carts and forming heaps in the field, say 2500 cubic yards (1875 tons)	85	19	0
Carting the manure an average distance of 4-5ths of a mile out and in, at 11d. per ton			
Turning the heaps twice and filling the carts for spreading on the ground at 2d per yard	20	17	0
Spreading in the drills at 1d. per yard	10	8	6
	117	4	6

IV. PROPORTIONS OF RENT, CAPITAL, AND PROFITABLE RETURN ON CAPITAL, CHARGEABLE AGAINST THESE DEPARTMENTS.

6. Rent.

	£	s.	d.
Proportion of rent for buildings appropriated to stock	£52	0	0
Proportion chargeable against roots ; for buildings, 41l 8s. 9d. ; land, 119l. 7s. 6d.	294	0	0
Proportion chargeable against Clover ; for buildings, 13l. 16s. 3d. ; land, 119l. 7s. 6d.			
	346	0	0

7. Capital and the tenant's return thereon.

	£	s.	d.
Capital invested in the green crops (see after, No. 9)	£1369	12	11
" " cattle and dung	1334	16	0
	2704	8	0

8. Proportion of the tenant's profit chargeable against this department.

Viz., 10 per cent. on the above sum of 2704l. 8s. 0d	£270	8	9

9. The following Table shows the entire capital invested in the concern and its distribution among the several departments.

	Capital. £ s. d.	Distribution. Cattle and Dung. £ s. d.	Green Crops. £ s. d.	Corn. £ s. d.
Payments to the outgoing tenant for tillages, manure and straw	935 0 0			
Yearly expenses of tillage, including the dunging of the root division	990 11 8			
Outlay on 10 horses, at 30l. = 300l. ; implements, 520l.	820 0 0			
Outlay on 200 ewes and lambs bought in May, 400l. ; 60 head of cattle bought in October and November, 900l. ; cost of 4 breeding sows, 14l. ; feeding stuffs, 100l. ; wages and labour connected with the cattle, 68l. 16s. and 80l.	1562 16 0	1562 16 0		
Rent, tithe, and rates :—				
On outlay on buildings appropriated to cattle, 800l. ; and on the part used for the general purposes of the farm, 1700l. = 2500l., at 6¼ per cent.	640 0 0	52 0 0	427 4 6 / 410 0 0	291 13 4 / 410 0 0
On land	162 10 0		55 5 0 / 288 15 0	55 5 0 / 288 15 0
	477 10 0			
Total rent	£640 0 0			
Reckoned by the acreage this is at the rate of 32s. per acre.				
Deduct payments met by returns from the farm within the year	4948 7 2	1614 16 0	1774 11 2	1559 0 0
	1110 18 8	280 0 0	404 18 3	426 0 5
	3837 8 6	1334 16 0	1369 12 11	1132 19 7

V. ANNUAL RETURNS FROM SALE OF LIVE STOCK.

10. From the sale of 200 fat sheep, tegs, or fatted ewes, averaging 20 lbs. a quarter, at 5½d. per lb.	£366	13	4
From 60 head of cattle kept for 26 weeks on roots and hay for the first half of the period, and on oil cake and roots for the second half, at a profit per week of 4s. each	312	0	0
From 20 porkers sold at 25s., and 20 bacon pigs at 3l. 10s.	95	0	0
	£773	13	4

VI. THE EXPENSES OF THE CORN CROPS AND THE PROPORTION OF TENANT'S CAPITAL AND RENT CHARGEABLE AGAINST THEM UNDER A FOUR-COURSE ROTATION.

	Barley per acre.			Wheat per acre.		
11. Expenses.						
One ploughing	£0	8	0	£0	8	0
Two harrowings	0	2	0	0	2	0
Seed, 2 bushels	0	7	6	0	9	9
Sowing and harrowing in the seed	0	2	3	0	2	3
Horse-hoeing						
Hand-hoeing, and weeding, and picking stones						
These last two items are charged to the cleansing of the farm ; see before, No. 2.						
Reaping, tying, raking, and loading the carts	0	10	6	0	10	6
Carrying and ricking	0	9	0	0	9	0
Threshing and dressing	0	7	11	0	5	10
Marketing	0	5	0	0	5	0
	2	12	2	2	12	4
Per 100 acres	260	16	8	261	13	4
12. Proportion of rent of buildings				55	5	0
" " land				238	15	0
				£294	0	0
13. Proportion of Capital. See No. 9				£1132	19	7

HOME AND ITS DUTIES.

MY friends, I believe it is every man's duty, whatever his position in society, to make his own home as happy, as comfortable, and as pleasant as possible. I would spare no pains, neither would I be niggardly in expense, so long as it was becoming and within my means, to surround my own home, and the home of my wife and children, with all that would make that home desirable. If a man is not happy at home he is not happy anywhere, and there is something wrong either in that man or in his home. Do your utmost, then, to make your own home happy ; to make it such as your children will regret to leave, such as they will be delighted to return to, and such as in after life they will look back upon with feelings of tender affection. The home where they first learnt lessons of wisdom, where they were first trained up in the way they should go, where they were first taught their duty to God and to man, where by example and by precept they learnt that the ways of virtue were the ways of peace, and the fear of the Lord was the beginning of wisdom. Remembrances of such a home often have, and I am persuaded often will, check the thoughtless and the young in the ruinous course of recklessness and folly. But let not your sense of duty stop here. Try what you can do to make the homes of those about you—your labourers—your poorer neighbours—your friends, the better for your example and your influence. You feel how much your comfort depends upon the kindness, the consideration, and the sympathy of your landlord ; no less are your labourers dependant upon you—the chain of society, to be strong, must be strong in every link ; and I cannot help thinking that the want of sympathy in one class for another does more to weaken the bonds of union all would wish to see strengthened than almost any other want. Nothing is cheaper than sympathy, nothing more gratefully received ; it is twice blest—blest to him who gives, and to him who receives. Sympathise, then, with all your neighbours, but especially with your own labourers and poorer neighbours ; assist them by little acts of kindness, which cost you nothing, but which to them are invaluable, in making their homes more comfortable, their houses clean and well drained ; endeavour to promote amongst them habits of sobriety, neatness, and industry. Above all I enjoin you, nay more, if what I have said hitherto has found favour in your eyes, I entreat you, I implore you, not to be the means of keeping the young people you employ—boys and girls—from the means of instruction. I know that boys at an early age must be trained to labour—perhaps it is well they should be ; but there is the Sunday school, and the House of God on the day of rest, and it is your duty to do all you can to encourage them to avail themselves of these opportunities of instruction ; they are, in a certain sense, committed to your care, and upon you, to a great extent, rests the responsibility of training them for time and eternity. Whether we feel the responsibility or not, still it is there, we cannot shake it off ; let us see that we make the best use of it.

There has, I rejoice to think, been a great improvement of late in the labouring classes, but there is room for still greater. I trust the day is gone by when ignorance was considered no evil ; the statistics of every gaol, the records of vice, and the history of criminals, have proved that such a notion is as false in theory as it is contrary to fact. Let us then do our best to raise the moral, intellectual, and religious state of our poorer neighbours, and depend upon it we shall make them not only better men but better labourers. Assist them in forming their sick clubs—excellent institutions in themselves, but many of them notoriously so badly constituted that they fall to pieces when most needed. Encourage the system of small garden allotments, and take an interest in their crops and cultivation. Do your best, if you have such things in this neighbourhood, to put down statutes or mops, which I look upon as an unmixed evil, and the fruitful source of much mischief. In short, in all things, but especially in those things where they are striving to help themselves, lend them a helping hand ; and, above all, show them an example which will not be lost upon them of the value you set upon whatever things are lovely and of good report.

Oh ! this old world might be better,
If each hand would break a fetter ;
If each one would do his part
To bind up one poor stricken heart.

I have often heard it asserted that the agricultural labourer is a man without hope in this world ; that he rises in the morning to go to his early labours, and returns at night with no prospect of bettering his condition, no chance but to labour on in the same way, so long as he is able, and then, perhaps, when he can labour no longer, to be dependant upon parish relief. If I thought this were the condition of so large a number of our working population, I should indeed think it a melancholy picture ; but I deny that it is so ; and too much pains cannot be taken to convince the rising population of agricultural labourers that they have great privileges, of which, if they will but avail themselves, their duties to themselves and their employers may be comparativeiy light, and that they have the prospect before them, if not of great, yet of valuable promotion. They are afforded means of instruction which

were denied to their fathers. The village school in almost every parish, the Sunday school, the evening school, will, with very little time and pains-taking, enable them, even while engaged in working for their daily bread, to acquire as much knowledge as will fit them to take precedence of those who neglect to avail themselves of these privileges, and entitle them to engage in places of trust. The demand for skilled labour is daily increasing; no good farmer is content to have his work badly done; and if it is to be well done, he must employ skilful men to do it. Let then the labouring classes seize the opportunities within their reach; let it be our aim to urge them to do so; let us seek to elevate them as a class to something beyond mere animal machines; let us teach them that they have souls as well as bodies, and depend upon it we shall always find a good man will make a good servant. I would say to them, my friends, as I would say to you, that exalted character is above exalted station, and, generally speaking, will ultimately find its true level. *Mr. Beasley's Lecture before the Faringdon Book Club.*

Home Correspondence.

Scarcity of Cattle Provender.—Many thanks are doubtless expressed to Mr. Caird for his letter lately noticed in the *Times*. It is full of truth as regards the universal scarcity of provisions and cattle provender at the present time from the continued cold and wet in the past winter, but we ourselves differ much from him and many others in their fearful forebodings for the safety of crops the ensuing summer. It is also too late and dry now, we think, for much success or excess to be expected from the applications of superphosphates, &c., on Grass and corn which he recommends; nor do we think it absolutely needful, for notwithstanding the lateness we have many good reasons for expecting a greater crop of Grass and Clover from the late excessive wet than we have had for many years past of severe droughts. Corn also promises a full crop though thin in plant, and we believe that on the whole signs of more productive crops of fruit and staple food never before appeared; late they must be, but most likely the autumn will be prolonged to ripen and gather all in, as it often has been before when the springs were backward. The writer has lived to see many backward springs prove most favourable, and his late honoured father well remembered in his youthful days once skating on North river, Colchester, between large heaps of snow on March 24, and had done so daily for 14 weeks previous, the frost subsiding on the 25th with rain and heavy floods. That year, he said, was signally the most fruitful and plenteous he ever experienced. *A. Hardy & Son.*

Societies.

Dublin: *May* 1.—*Tillage.*—A paper on this subject was read by Mr. Pringle, from which we make the following extracts:—

Deep cultivation is a comparative term, and what is so in one case may be the reverse in another. The common plough in ordinary ploughing does not in most cases turn a furrow exceeding 7 inches in depth, and in many cases not above 4 or 5 inches. Whatever may have been the depth which has hitherto been the rule in any particular instance, if we go deeper—even an inch or two—it is, to a certain extent, an example of deep culture, and as such will be found productive of certain results. But this is still only comparative, and of a shallow and superficial kind, compared with a moving and mixing of the soil to the depth of 12, 15, 18, 20, and even 24 inches. It is frequently astonishing, however, where circumstances are otherwise favourable, to those who are ignorant of the stores of plant food which a little deeper ploughing renders available, in cases where the surface soil had for many years been only lightly tilled, to witness the results of breaking into and bringing up that really virgin soil which is found in such cases under the thin layers of exhausted surface soil. In fact, it appears almost like magic, and not a little difficulty will sometimes be experienced in convincing such people as to what is the real cause of the increased fertility which so much surprises them. Down to a very recent period the use of the spade or fork was considered the most efficient mode of deepening and mixing the soil, whenever it was thought proper to go beyond that depth which could be effected by the plough. During the famine years, and prior to that period, this mode of deepening the soil was strongly insisted upon as affording remunerative employment for labourers in our rural districts. Since that period, however, it has rather fallen into disuse, chiefly in consequence, perhaps, of the scarcity of labourers, as well as other reasons to which it is not at present necessary to allude. At the time referred to I had considerable experience in this mode of improvement, and am perfectly satisfied as to its beneficial operation, when properly carried out. We may still, however, find cases where it is practised, and in such the steel fork has generally superseded the spade, the former being lighter, and altogether better adapted for the purpose. Without entering into particulars—which my limits will not permit—I may be permitted, merely by way of illustration, to say that Mr. Brady has, I believe, gradually increased the depth of soil at Merino from 7 inches to at least 18 or 20 inches, chiefly by the use of the spade or fork. Mr. Niven also uses the fork rather extensively in deep cultivation, trenching the land 2 feet deep by means of it, at a cost per Irish acre, by day's wages, of 7*l.* 13*s.*; and although the expense appears to be large, yet he finds it repaid in the first crop. The introduction, by the late Mr. Smith, of Deanston, of the subsoil plough, as a follower of the thorough drain was an event of much importance, not only from the effects produced by the use of this implement when employed in breaking up the indurated subsoil, but also from the enlarged and more correct views which it was the means of imparting to many on the subject of deep culture. Its application by some, as a substitute for, instead of a follower of the thorough drain militated against it in certain cases; but it is most unquestionably a valuable implement when properly applied. Still, with all my predilections for the Deanston subsoil plough, arising from a rather extensive experience of its use, I do not consider it a perfect implement. It rips up the under soil, and gives additional depth; but it does not effect this in such a perfectly uniform and complete manner as all the requirements of deep culture demand. Some, indeed, allege that the effects of subsoiling are not lasting; but I am not of that opinion. I have, no doubt, met with cases where the results apparently favoured such views; but in tracing the history of those cases—which were always in connection with stiff, cold clays—it was evident that the subsoil plough had followed the drain too closely and without giving the latter proper time to act. Where the latter point was attended to, however, I have seen, even on very obdurate clays, that the effects of subsoiling by the Deanston plough were perfectly visible at least 15 or 20 years after the work had been done. Various forms of subsoilers have been introduced, and many of these possess great merit. The most perfect implement, however, or rather combination of implements, for effecting deep and uniform culture is to be found in the Tweeddale plough and the Tweeddale subsoil-trench-plough. These were invented by the Marquis of Tweeddale, and first used by him in the improvement of his farms on the Yester estate. The Tweeddale plough, at first sight, appears to be a heavy and cumbersome implement; but although it turns a furrow 15 to 16 inches deep, and 14 inches wide, it is held by the ploughman with as much ease as any common swing plough turning a furrow of 6 or 7 inches in depth. This arises from the structure of the mould-board, which, to use Mr. Stephens's description, "instead of pressing against the furrow-slice along its entire length, gets quit of it at once by its convex breast, and causes it to slip along in a straight line till it reaches near its ear, when the furrow-slice assumes its proper position by its own gravity. Friction of the furrow-slice is thus practically avoided." In another place he says, "The furrow-slice, in place of being turned over in an entire form, as by our fine working ploughs, is only so far turned, and at the same time broken, as serves to present the soil in the best possible state to the ameliorating effects of atmospheric influences. In this respect, the Tweeddale plough stands unequalled; and since the extinction of the old Scottish wooden plough, no implement has approached the point to which this has attained, for enlarging the extent of surface exposed to the atmosphere." It is scarcely possible, without actual field demonstration, to convey a perfectly correct idea of the really beautiful manner in which those implements act in loosening and commixing the soil, to a depth of from 20 to 24 inches.

Reviews.

A Lecture delivered to the Members of the Faringdon Agricultural Book Club on the Duties and Privileges of the Landowners, Occupiers, and Cultivators of the Soil. By John Beasley. Longman & Co.; Hamilton, Adams, & Co.

This lecture is published at the request of those in whose hearing it was delivered. They have judged wisely that the agricultural community generally must benefit by the record which it gives of an experience so large as that of Mr. Beasley. We cordially recommend it to our readers of all the classes whose interests and duties it describes—to landowners, farmers, agents, and labourers.

We can here only give them a passage or two illustrative of the way in which they are severally warned and exhorted; and, therefore, confident that no man will regret our advice, we recommend each to purchase the pamphlet for his own careful perusal. The following are illustrative extracts:—

The Landlord.—"It has often been remarked, and with great truth, that the landlord, the tenant, and the labourer, swim in the same boat: but, after all, the boat belongs to the landlord; he is both the pilot and the owner of the vessel—it not only rests with him whether the bark should sink or swim, but whether it should sail gallantly, and end in a prosperous cruise. He mans the ship, he finds the tackling, he can tighten or slacken the ropes, he can spread or furl the sails, and it depends upon his will whether the crew shall be engaged for a long voyage,—to which all their energies and interests will be devoted—or a short and precarious one, in which they are for the time content to sail, but all the while upon the look out for a better and more permanent berth. The landlord is in possession of the raw material—the land is in his hands—there is nothing, as there ought to be nothing, to prevent his disposing of it as he will, to whom he will, and upon what terms he will. Clearly, then, the landlord is the mainspring of the agricultural machine—upon the metal of which he is made and tempered, will depend the speed, the correctness, and the soundness of agricultural movements. His privileges are great, and so are his responsibilities; and I hesitate not to say, that upon the manner in which he exercises them, will, in a great measure, depend the prosperity and well-doing, the character, morality, and religion, not only of the agricultural classes, but of all within the circle of his influence."—"Believing as I do, that it will generally be found that what is a man's duty is also his interest, I feel sure it is both the interest and duty of every landlord to provide comfortable farm houses and good and sufficient farm buildings. By having the former, he will command a greater choice of respectable tenants—a tenant is naturally tempted, and I think properly tempted, by a residence suited to his means; he will enable that tenant to bring up a family with greater comfort and respectability; make him set a higher value upon his own home—more inclined to cleave to it; and last, not least, enable him to have a greater choice in that most important of all steps—the selection of a good wife. The wife delights in a neat and comfortable home, and there are no wives more deserving of such a home, than the excellent and praiseworthy wives of the yeomanry of England."

The Farmer.—"The *Times* newspaper said some time ago that they hardly ever met with any man who did not think he could do three things—make a speech—drive a gig through the streets of London—and write a leading article for the *Times*—but when they came to try, they discovered that they had made a miserable mistake. If they made a speech nobody would listen—if they attempted to drive a gig through London they were upset—if they wrote an article for the *Times*, the editor would not insert it. Now, I do not subscribe to this opinion. I have met with many men who had none of these ambitions; but I confess that I have met with very few men in my life, who did not think they could farm, and farm well, and even far better than the general run of farmers, and grow rich too. Why, men of all professions, all trades, all ranks, all positions, think how well they could manage a farm; most of them are wise enough to content themselves with the idea of what an example they could set if they had but the opportunity; but some of them put the idea into practice, and it generally happens that the same fate befals them as befell the inexperienced 'whip' who thought he could drive a gig through London. But I am disposed to think that to farm well and successfully requires as much training, as much observation, as much thought, as much experience, as any other calling. I am a disbeliever in anything like instinctive knowledge. If you wish to learn how a thing should be done—do it; if you wish to know the result, observe it. If you were to ask me how I would teach a young man to farm, the only answer I could give you would be, I would give him great opportunities of learning. Now, I would venture to say, especially to my younger hearers, if you wish to be a successful agriculturist, learn your business thoroughly, and set about it in the right way. If you wish to be a good and prosperous farmer pay attention to little things, and however high a position you may hereafter attain, or however eminent you may become as an agriculturist, you will never repent of the time and attention you have bestowed upon the rudiments of your calling. And allow me, as an old man, who has had many opportunities of observing his own, as well as his neighbours', short-comings, to tell you what I consider constitutes a good man of business—attention to details. If any of the young gentlemen who are doing me the honour to listen to my remarks were to ask me to give them a motto for their guide in business, I would give them these three words, 'Attention to details'—'great things will generally be looked after—but the many little things which make up the whole are overlooked or forgotten. You might construct a very clever and powerful machine—perfect in all its design and mechanism—but by omitting one little cog-wheel, probably it would not go, and you would be as unsuccessful as if you had forgotten the chief moving power. If a tenant farmer applied to me for a farm, the first thing I should inquire about would be his character. I should learn all I could of his antecedents; how he had conducted himself through life; if he had been on a farm before and how he had behaved towards his landlord. I should go even further. I should endeavour to know something of his ancestors—whether he was well-bred—had been well trained—and lived under the light of a bright example. Well this is exactly what I should recommend you to do when you are about to take a farm, in reference to your landlord."

Farm Capital.—"The late Mr. Bakewell, of Dishley, was not only an eminent agriculturist and breeder of stock, but a very wise and shrewd man, and his neighbours were in the habit of resorting to him for counsel and advice. On one occasion an old friend went to pay him a visit, for the purpose of explaining to him his position, and at the same time begging that he would recommend him what to do. He had lived all his life upon his own farm of 1000 acres; he lived very well.

but he had never saved a shilling. He had three daughters, and the eldest was about to be married; he highly approved of the match, but the intended husband expected some portion, and he had nothing to give him. Should he mortgage his estate, or what should he do? Mr. Bakewell begged of him to spend the night with him, and promised the next morning to give him the result of his cogitations. Accordingly, the next morning, when they met at breakfast, Bakewell said, 'I have made up my mind what you ought to do; give your son-in-law one-fourth of the farm, keep the remaining three-fourths, and do not part with any portion of your capital and stock, and work the remaining three-fourths with it. Do it better than you have hitherto done, and your income will be rather increased than diminished.' His friend followed his advice; but at the end of two or three years, another daughter would be married, and the perplexed father again resorted to his friend Bakewell for advice, under this new difficulty. Bakewell coolly said, he had watched his proceedings, and seen their results; he must do in this case as he had done before, he must give up another fourth of his farm, and keep the original capital and stock. The father seemed somewhat puzzled, but as the first experiment had succeeded, he determined to try it in this case also. Last of all the youngest daughter was to be married, and, in utter despair, the poor father paid another visit to Dishley to explain his perplexity. 'Well,' said Bakewell, 'tell me honestly whether your income has diminished by having reduced your farm by one-half.' The father acknowledged he thought it had not. 'Then,' said Bakewell, 'you must give up another fourth of your farm, and keep your house and the remaining 250 acres for yourself, and, to tell you the truth, you will then have just such a farm as your stock, your capital, and your head are fit for, and will be a better and happier man than ever.' Old Bakewell used to tell this story with great glee, and declared his friend left as much stock and capital upon the 250 acres as he had ever had upon the one thousand, and, as he believed, made a better income out of it. This may be a somewhat exaggerated statement, but of this I am sure: a small, well-cultivated farm, will make a better return than a large ill-cultivated one."

Miscellaneous.

The Emperor of the French and Steam Cultivation.—From the *Morning Star* of Tuesday we learn that some interesting experiments with Smith's Steam Cultivator have been made by the Emperor of the French on the Imperial Farm at Vincennes, and that they have proved so successful that the Emperor has ordered the system to be adopted on the other Royal farms. Messrs. Howard, of Bedford, who manufacture Mr. Smith's implements, have accordingly received the commands of the Emperor to supply the apparatus.

Warranty of Sheep.—At the Salisbury County Court last January an action was brought by Mr. Strong, a farmer of Evercreech, to recover the sum of 38*l.* 19*s.* 3*d.* from Mr. Phillips, a farmer of Barford, for a breach of warranty. Mr John Strong, the plaintiff, was at Wilton Fair on the 12th September last—looked at some sheep belonging to the defendant—made a bid for them—said, "Are they sound?" Defendant replied, "Hear! I warrant them sound. You needn't do so; I warrant them all to be six-tooth sheep."—Upon that made a deal at 1*l.* 13*s.* 6*d.* a head. There were 52 sheep—one died on the 18th September, another died on the 26th, another on the 30th, and another within a month. Mr. Whitmore, a veterinary surgeon at Shepton Mallet, had two of the sheep slaughtered and examined. The two sheep which he examined were killed on the 26th November. Mr. Edward Ashford, a neighbouring farmer, saw the livers of two of the sheep that died. Seven of the sheep died altogether, and two were killed. The remainder, 43, were sold at Shepton Mallet market, and realised 57*l.* 1*s.* 6*d.* Evidence was given of the diseased state of both liver and lungs of the sheep that were killed. Mr. Charles Phillips, the defendant, was at Wilton Fair on the 12th September. Mr. Stone asked the price of the ewes, and bought them. He did not ask if the sheep were sound. No question was asked about their soundness. Jesse Ridgeley, shepherd to Mr. Phillips, was present when the deal took place between master and Mr. Strong. Didn't hear any question about their soundness. Other witnesses having been examined, the judge summed up, and the jury returned a verdict for the defendant, to the surprise, we believe, of the majority of persons in the court. The judge intimated that he would grant a new trial. *Devizes Gazette.* [This trial has just been held, and the above verdict was reversed].

Calendar of Operations.

MAY.

WEST SUSSEX: *May* 1.—We have now got into the month of May, and we are not likely to have any spring. Every kind of vegetation is nearly the same as at Christmas, and farmers have been at their wits' end to find food for their stock. Swedes and Turnips have been gone for some time, and the Wheat, short enough before, has been fed up to the present time by many, which we should hardly have thought safe. But necessity has no law. If anything tends to increase the cultivation of Mangels, this season must. It is the only root that has kept well if protected from the frost, and those who have had a little store in this hard spring are likely to have a better supply next year. It may be a little more expense to grow, though I do not think it is weight for weight, but then what a reserve for any stock on the farm, and for any time during the year, and we often see spring corn sown so late after the sheep have fed off the Swedes, that in years like the last two only a very poor crop follows; whereas if we were to sow the same extent of ground with Mangels, and have them carted off the field, it could be sown in good time; and if after harvest some of the Wheat stubble is ploughed up, and sown with Vetches, winter Barley or Oats, sheep may be turned into it and have a feed of Mangels with it, and if they have cake as well, the land will be in good heart for Turnips or Swedes, and there will be no delay in sowing the spring corn. And this is not the only year that we are to feel a short supply: the hay that we have been accumulating for some years, till in many cases we had as we thought enough for two years, has all been used up, and to make the matter worse the Clover and meadows that ought to have been standing for hay are being fed off, and though they may be laid up by and by the crop is not likely to be heavy, so that we must plan a little carefully for next year, and this may tend to keep down prices a little though there is no signs of stock being very low, for even now though not a ready sale, yet prices are well supported. As a matter of course everything fat is sold off as quickly as possible, and our market is more than usually full at this season; mutton is dear, but lambs have not yet been in great demand owing to the cold weather, and the nakedness of gardens, which for vegetables present a dreary aspect. We have had very sharp frosts at night for the last 10 days and frequent east winds, but the last day of April, though frosty in the morning turned out a very warm day, and the Wheat looks changed this morning, though it seems impossible that we can have many, if any, Wheat ears in May. Though the season is late, work is now pretty well up, as there has been no hindrance from the weather, and the frequent frosts that we have had made the land work freely. And now we are getting in the Mangels for which the land is in good condition, neither too dry nor too wet. *G. S.*

WARWICKSHIRE.—As to Mangel sowing, these are now chiefly planted in this neighbourhood. The ground, where deeply winter ploughed, and only worked with the cultivator shortly before sowing, has come down kindly. Where late spring ploughing has been needed, the case is very different. We subjoin a mixture of artificials, applied without yard manure, and from which we anticipate a good crop of Mangels:—

4 cwt. superphosphate of lime, at 7*s.* ..	£1	8*s.*	0*d.*
2 cwt Peruvian guano, 13*s.* 6*d.*	1	7	0
4 cwt common salt, 1*s.*	0	4	0
Ashes	0	1	0
Total, per acre	£3	0	0

Also a similar dressing to the above, for Carrots and for Potatoes:—

1 cwt. sulphate of soda	£0	5*s.*	0*d.*
1 cwt. sulphate of magnesia	0	8	0
2 cwt. Peruvian guano	1	7	0
2 cwt. superphosphate of lime (superior), at 8*s.*	0	16	0
3 cwt. common salt	0	3	0
Ashes	0	1	0
Total, per acre	£3	0	0

It does people good to compare notes together, and we therefore add another couple of dressings which we have pretty largely employed in the past few months:—

For Wheat, and also for Clover, 35 to 40 bushels of soot per acre. For mowing Grass—

2 cwt. superphosphate of lime (highly soluble)	£0	16*s.*	0*d.*
1 cwt guano	0	15	6
2 cwt. salt	0	2	0
Per acre	£1	11	6

Mr. Caird, we observe, very judiciously recommends nitrate of soda and Peruvian guano as top-dressings for both grazing and mowing grounds. It is probably a matter of taste, what mixture may be applied; but we do respectfully submit that in our inland districts the free use of salt should not be omitted. At least we use some 20 tons, or over, in the course of the year, with manifest advantage. As the stock of hay is now worked very close, and likely to be still more so, the extensive application of artificials has been attended to, in order to aid the ensuing crop. But unfortunately the windy weather we have had—especially the low, raking, east or north-east wind—has tended to dissipate a portion of the more volatile constituents. Sometimes valuable manures are to be seen broad casting on blowing days when such an operation ought not to be attempted. With a "Reeves' Manure Distributor" (or "Humanity to the labourer," as it may be termed) the thing can be better managed. *Probatum est. J. B., in Coventry Standard.*

Notices to Correspondents.

FRENCH AGRICULTURE: *Winkfield.* Your letter will be answered next week.

GRASS SEEDS: *J J H.* Nine-tenths of your sample is *Holcus lanatus* (Woolly Soft Grass), the rest is mostly *Bromus mollis* (Soft Brome or Lop), so that the whole may be considered as weeds of the worst description and should at once be burnt.—*Exile* Yours is a poor sample of Grass seed; its weeds are *Holcus lanatus*, *Bromus mollis*, and more of *Triticum repens* (common Couch) than we remember to have seen in mixed Grasses before. The Clover accompanying the Grasses is estimated to contain 35,200 weeds to a pint, principally Plantain (*Plantago lanceolata*), which makes up about one-fifth of the weight of the sample.—*W C M.* Your samples may be judged of by the following notes:—

	Weeds in a pint.		
1. Cow Grass ..	7,600	Principally	Plantain.
2. Red Clover ..	2,400	,,	,,
3. White Clover ..	2,560	,,	small weeds.
4. Alsike Clover ..	2,760	,,	,, ,,
5. Lolium perenne..	160	,,	Lop.
6. Lolium italicum .	140	,,	Ranunculus repens.
7. Alopecurus pratensis	160	,,	Holcus lanatus.
8. Dactylis glomerata	pure!		
9. Phleum pratense	pure!		
10. Festuca pratensis (Not Fescue but a bad sample of Lolium perenne.)	1,000	Lop, Oat-like Grass, &c.	
11. Poa memoralis ..	contains a little Holcus.		

Taken altogether this is a better collection of samples than we usually have to examine, but there is probably some mistake about the Festuca (10). As regards the Plantain with the Clovers this is so universal and we think so mischievous that we would advise farmers to look more carefully at samples than hitherto seems to have been the case. It is true that there is a similarity in the colour of the Clovers and the Plantain seeds, but the difference in shape is easily recognised if once looked into. *J B.*

JOHN BELL'S COMPOSITION FOR DESTROYING MILDEW ON VINES, PEACH, AND NECTARINE TREES, and every other plant subject to this pest.

J. B. can Warrant this mixture to entirely eradicate mildew when applied according to the printed directions. Sold in Bottles, 1*s.* 6*d.*, 2*s* 6*d.*, and 5*s.* each.

10 & 11, Exchange Street, Norwich, opposite the Corn Hall.

NURSERYMEN supplied with the best genuine TOBACCO PAPER at 4*l.* per cwt.; 2*l.* per half cwt.; any quantity less than half a cwt., 10*d.* per lb. The above article is warranted genuine. Terms cash.—Address TOM BRYANT, W. Jackson & Sons, 6, Lady Lane, Leeds.

GENUINE ROLL TOBACCO CLOTH.
WARRANTED EQUAL IN STRENGTH TO TOBACCO.

JOSEPH BAKER, 10, Gough Square, Fleet St., E.C., having dealt upwards of 20 years in the above, can recommend it as the best article for destroying the Fly. 1*s.* 4*d.* per lb.; over 10 lbs., 1*s.* Post-office Orders payable Fleet Street

GISHURST COMPOUND,
PATENTED,
FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN
AMERICAN BLIGHT	ANTS	FLY

BED BUGS, &c.,
And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1*s.* for first trials and small uses, such as destroying bed bugs; 3*s.* for not large gardens; 10*s.* 6*d.* for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

PAGE'S COMPOSITION FOR THE DESTRUCTION OF BLIGHT upon Roses, Wall-fruit Trees, Cucumbers, Melons, Vines, Stove and Greenhouse Plants, has stood the test of eight years' public trial, and its great success has led to numerous imitations. Dr. Lindley, in his leading article of October 25, 1856, reported 182 cases in its favour—sufficient to convince the most sceptical.

4*s.* per gallon, (sufficient to make four fit for use).
10 gallons and upwards, Carriage paid to London.

LONDON AGENTS:—
Henderson & Co., Pine-apple Place, W.
Hooper & Co., Covent Garden, W.C.
Mr. Veitch, King's Road, Chelsea, S.W.
Mr. Clark, Streatham Place, Brixton Hill, S.
Mr. Barnes, Camden Nursery, Camberwell, S.
Mr. Hopgood, Shepherd's Bush, W.
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and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

KEEP YOUR PREMISES FREE FROM MICE AND SPARROWS.

BARBER'S POISONED WHEAT kills them (only) on the spot. In 1*d.*, 2*d.*, 4*d.*, and 8*d.* packets.—W. SUTTON & Co., 10, Bow Churchyard, London, E.C. Agents. Sold by all Druggists, &c., throughout the Kingdom. Works: Ipswich.

RATS, MICE, AND BIRDS.—How to paralyse and render them immoveable on the spot, though there be hundreds, so that they may be gathered with a shovel and finally drowned. This is the plan adopted in Russia, communicated by a Russian prisoner. Sent to any address, post paid, for eight penny stamps, by FISHER & SON, Publishers, Kingsland, London, N E. Punctually sent the following day.

Note.—If swarming the whole may be cleared in one night. Warranted at 1*s.* cost, for ingredients which can be bought of every Chemist or Druggist in the kingdom.

SLATE WORKS, ISLEWORTH, MIDDLESEX, W.

EDWARD BECK MANUFACTURES in SLATE a variety of articles for Horticultural purposes, all of which may be seen in use at Worton Cottage, on application to the Gardener, Sundays excepted. PRICED LISTS of PLANT TUBS and BOXES forwarded on application.

GARDEN POTS AND PANS, in quantities of not less than 20 casts, delivered to the London Railway Stations at the following prices:—

Nos.	Thbs.	60.	60.	54.	48.	40.	32.	28	24	16.	12.	8.	6.	4.	3.	2.	1.
		Inches.															
Diameter		2¾	3½	4¼	4¾	5½	6	6½	7	8	9	10½	11¾	13¾	15	16¼	17½ 19
Per Cast		2*s*	2*s*.	2*s*.	2*s*	2*s*.	2*s*.	2*s*.	2*s*	2*s*	2*s*.	3*s*.	3*s*	6*d*.	5*s*.	5*s*.	5*s*. 5*s*.

On lesser quantities, 6*d.* per mile, for delivery to the station, would be charged. The usual discount to the Trade. Square Propagating Pans, Kale and Plunging Pots, Strawberry and Border Tiles, &c., made to order.

Country orders to be accompanied by a remittance.
J. & W. ADAMS, Kilns, Belle Isle, York Road King's Cross, N.

SHAW'S TIFFANY, a light, cheap, and durable material for Shading Conservatories and other Hothouses, effectually securing Plants from the scorching rays of the sun, without obscuring the light; also the best protector of Fruit and Seeds from Birds and Wasps, and the Bloom of Wall Trees from Spring Frosts.

SOLD IN PIECES.	Per piece.—*s.*	*d.*
No. 1.—20 yards long, by 38 inches wide	5	0
No. 1.—20 yards long, by 38 inches wide, the same material, manufactured with a Patent Mineral Solution to prevent it from rotting ..	6	0
No. 3.—(Double strength) 18 yards long, by 39 inches wide	7	6
No. 4.—(Treble strength) 18 yards long, by 39 inches wide.	9	0

As a Shading material, No. 1 Tiffany is unequalled either in regard to price or the use and beauty of the article, for when drawn over the glass roof of a Conservatory or stretched permanently on the inside, the effect is, as Professor Lindley remarks, "that of a white cloud reflected on the glass, and does no more than diffuse light, without obstructing it."

In protecting the Bloom of Wall Trees, if the situation be exposed, Nos. 3 and 4 are recommended, but where only a slight protection is required, No. 1 will be sufficient.

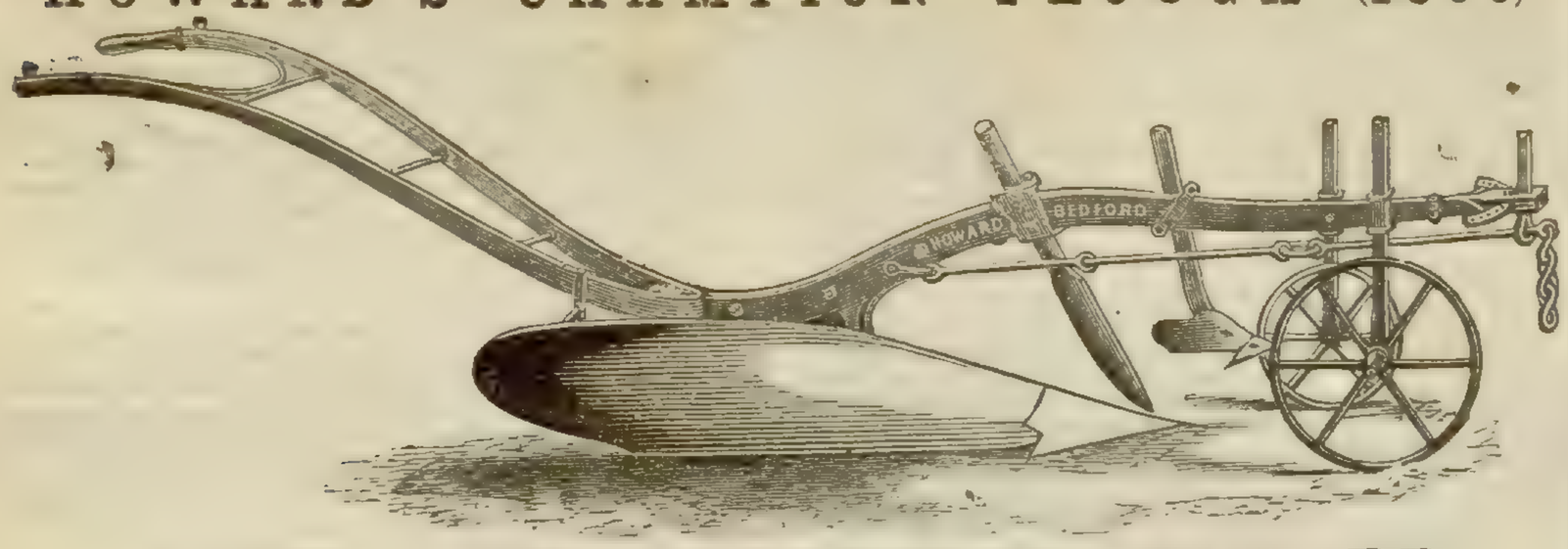
Manufacturers and Dealers in every description of Mats, Netting, Canvas, and all such like materials for Garden purposes.

A liberal allowance to the Trade on taking 10 or more Pieces.

CAUTION.—See that every piece is marked "SHAW'S Tiffany, Manchester."

Address, JOHN SHAW & Co., 40, Princess Street, Manchester.

HOWARD'S CHAMPION PLOUGH (1860).



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Direct attention to their NEW PATENT PLOUGHS marked H, and H H, which they believe to be not only the cheapest, but the best and most durable Ploughs for General Purposes yet produced. The Frames and Necks are much stronger, and the breasts or mould-boards are more perfect in form than any of their former patterns.

J. & F. HOWARD have made upwards of 2000 of their NEW PATENT PLOUGHS since the last Meeting of the Royal Agricultural Society of England, at Warwick, in 1859, and not a single instance of breakage has come to their knowledge.

PLOUGH marked H ... ... £4 2 6 | **PLOUGH marked H H £4 7 6**

If with Skim Coulter, 5s. 6d. extra. New Patent Shares, 8s. 6d. per dozen.

Free delivery to Basingstoke, Birmingham, Bristol, Canterbury, Cardiff, Colchester, Derby, Gloucester, Hull, Leeds, Lincoln, Liverpool, London, Manchester, Norwich, Nottingham, Reading, Retford, Salisbury, Shrewsbury, Southampton, Swansea, Wisbeach, Worcester, and York; or to Dublin, Edinburgh, Glasgow, and other parts, at fixed rates.

CATALOGUES, with prices and particulars of all J. & F. HOWARD'S IMPLEMENTS, including description of and Reports from persons working SMITH'S STEAM CULTIVATOR, sent post free on application.

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GARDEN ENGINES, Galvanized Iron
Prices 55s., 63s., 105s., 120s.
Ditto, Wood, 84s,, 105s, 130s.
Flower Stands, 4s. 6d. each.
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Deane's Mowing Machines, with Boyd's Patented Improvements, £4 17s. 6d, £6 6s. 0d., £6 17s. 6d., £7 7s. 0d.
Green House Syringes, 8s., 10s., 18s. 6d
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Garden Stools, 4s. 6d.
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Every Implement for Garden use on the lowest Terms.

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200 CUCUMBER AND MELON BOXES, AND LIGHTS, AND 500 LIGHTS of all Sizes kept in Stock, Glazed and Painted complete, ready for immediate use. Packed and sent to all parts of the kingdom.

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BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

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OIL PAINT NO LONGER NECESSARY.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

Sold in casks of about 30 gallons each at 1s. 6d. per gallon at the manufactory, or 1s 8d. per gallon paid to any station in the kingdom.—Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, from whom only it can be obtained.

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Testimonial from MR. J. FARRAH, *Gr. to* BOSWELL MIDDLETON JALLAND, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider this tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

Manufactured by the Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their Wholesale Dealers in town and country.

THE annexed sketch represents the GLENNY WATERING POT, which will be found a decided improvement upon the old-fashioned one, as from the peculiar construction of the handle the weight is more easily balanced in the hands, which enables the user to empty with far less muscular exertion and fatigue a pot of this kind than one upon the old plan.

Of all Ironmongers, Hardwaremen, and Seedsmen; and of LOVERIDGE & SHOOLBRED, Wolverhampton, Sole Manufacturers.

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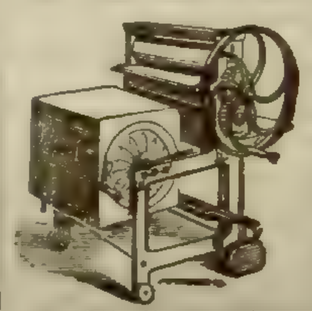

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N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

WARNER'S IMPROVED LIQUID MANURE OR GENERAL PORTABLE PUMP.

These Pumps are fitted with WARNER'S Patent Bucket and Valve, and cannot clog in action. The barrel is made of galvanised iron, not likely to corrode, and can be raised or lowered at pleasure on the stand, the legs of which fold together, and may be carried with ease by one man to tank or pond.

	£	s.	d.
Stand and Pump, with screwed tail pipe, fitted with strong brass union for suction pipe	2	15	0
If fitted with barrel of planished copper	3	17	0
Stand and Pump, with plain tail pipe, for tying on suction pipe	2	9	0
2-inch patent rubber and canvas flexible suction pipe, on wires, either 10, 12, or 15 ft., per foot	0	2	2

May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, J. WARNER & SONS, 8, Crescent, Jewin St., London, E.C.

Every description of Machinery for raising Water, by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. Engravings sent on application.

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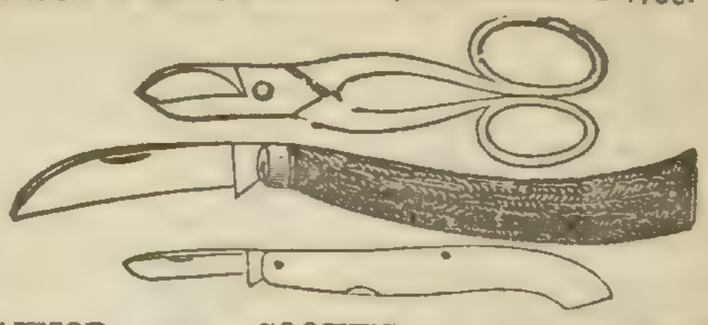

SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

BEE-HIVES.—PRIZE MEDAL AWARDED TO G. N. & SONS, FOR BEE-HIVES AND HONEY, AT THE PARIS EXPOSITION OF 1855.

NEIGHBOUR'S IMPROVED COTTAGE BEE-HIVE, as originally introduced by GEORGE NEIGHBOUR & SONS, with all the recent improvements, three glasses, and thermometer, price 35s, securely packed for the country.

This unique Hive has met with universal commendation, and may be worked with safety, humanity, and profit, by the most timid; its arrangements are so perfect that the Honey may be taken at any time of the gathering season without at all injuring the Bees.

Early applications addressed to GEO. NEIGHBOUR & SONS, 127, High Holborn, W.C., or 149, Regent Street, London, W., will receive prompt attention.

Their newly-arranged CATALOGUE of other Improved Hives, with drawings and prices, sent on receipt of two stamps.

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" Manchester. J. WILSON, 50, King Street.
" Birmingham J. H COTTRELL, 15, Bull Ring.
" Dublin .. J. EDMONDSON & Co., 61, Dame Street.

J. AMADIO'S STUDENTS' BOX OF MICROSCOPIC PREPARATIONS, containing Six dozen beautiful specimens in polished Mahogany Box, fitted with racks, brass lock and key, &c., produced under J. AMADIO'S immediate superintendence, specially adapted for the Student. Price 3l. 18s. 6d.

Just published, 2d ed., an Illustrated Catalogue, with the names of 1500 Microscopic objects. free for 6 stamps.

7, Throgmorton Street, E.C.

LIVE FISH FOR STOCKING PONDS, AQUARIUMS, &c.—Carp, Tench, Roach, Dace, Perch, Chub, Gudgeon, Minnows, Gold and Silver Fish, Eels, &c. To be had at CHARLES WRIGHT'S, Fishing Tackle Manufactory, 376, Strand, W.C. Aquariums sold.

HANDSOME BRASS AND IRON BEDSTEADS.—HEAL & SON'S Show-rooms contain a large assortment of brass bedsteads, suitable both for home use and for tropical climates; handsome iron bedsteads with brass mountings and elegantly japanned: plain iron bedsteads for servants; every description of wood bedstead that is manufactured, in mahogany, birch, walnut-tree wood, polished deal and japanned, all fitted with bedding and furniture complete, as well as every description of bedroom furniture.

HEAL AND SON'S ILLUSTRATED CATALOGUE, containing designs and prices of 100 bedsteads, as well as of 150 different articles of bedroom furniture, sent free by post. —HEAL & SON, Bedstead, Bedding, and Bedroom Furniture Manufacturers, 196, Tottenham Court Road, W.

FENDERS, STOVES, FIRE-IRONS, and CHIMNEY-PIECES.—Buyers of the above are requested, before finally deciding, to visit WILLIAM S. BURTON'S SHOW-ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, CHIMNEY-PIECES, FIRE-IRONS, and GENERAL IRONMONGERY as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright Stoves, with ormolu ornaments and two sets of bars, 3l. 15s. to 33l. 10s.; Bronzed Fenders, with standards, 7s. to 5l. 12s.; Steel Fenders, 2l. 15s. to 11l.; ditto, with rich ormolu ornaments, from 2l. 15s. to 18l.; Chimney-pieces from 1l. 8s. to 80l.; Fire-irons, from 2s. 3d. the set to 4l. 4s.

The BURTON and all other PATENT STOVES, with radiating hearth plates.

BEDSTEADS, BATHS, AND LAMPS.—WILLIAM S. BURTON has SIX LARGE SHOW ROOMS devoted exclusively to the SEPARATE DISPLAY of LAMPS, BATHS, and METALLIC BEDSTEADS. The stock of each is at once the largest, newest, and most varied ever submitted to the public, and marked at prices proportionate with those that have tended to make his establishment the most distinguished in this country.

Bedsteads, from	12s. 6d. to £20 0s. each.
Shower Baths, from	8s. 0d. to £6 0s. each.
Lamps (Moderateur), from ..	6s. 0d. to £7 7s. each.
(All other kinds at the same rate.)	
Pure Colza Oil	4s. per gallon.

CUTLERY, WARRANTED.—The most varied assortment of TABLE CUTLERY in the world, all warranted, is on sale at WILLIAM S. BURTON'S, at prices that are remunerative only because of the largeness of the sales. 3½-inch Ivory-handled Table Knives, with high shoulders, 12s. 6d per dozen; Desserts to match, 10s.; if to balance, 6d per dozen extra; Carvers, 4s. 3d. per pair; larger sizes from 20s. to 27s. 6d. per dozen; extra fine ivory, 33s.; if with silver ferrules, 40s. to 50s.; White Bone Table Knives, 6s. per dozen; Desserts, 5s.; Carvers, 2s. 3d. per pair; Black Horn Table Knives, 7s. 4d. per dozen; Desserts, 6s.; Carvers, 2s. 6d.; Black Wood-handled Table Knives and Forks, 6s. per dozen; Table Steels from 1s. each. The largest stock in existence of Plated Dessert Knives and Forks, in cases and otherwise, and of the new Plated Fish Carvers.

WILLIAM S. BURTON'S GENERAL FURNISHING IRONMONGERY CATALOGUE may be had gratis, and free by post. It contains upwards of 400 Illustrations of his illimited Stock of Sterling Silver and Electro Plate, Nickel Silver and Britannia Metal Goods, Dish Covers, Hot Water Dishes, Stoves, Fenders, Marble Chimneypieces, Kitchen Ranges, Lamps, Gaseliers, Tea Trays, Urns, and Kettles, Clocks, Table Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bedroom Cabinet Furniture, &c., with Lists of Prices and Plans of the Twenty large Show Rooms, at 39, Oxford Street, W.; 1, 1A, 2, 3, and 4, Newman Street; 4, 5, and 6, Perry's Place; and 1, Newman Mews, London.

NEW CHRYSANTHEMUMS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington, N., begs to inform his friends and the public that he has the finest Collection and the largest Stock of CHRYSANTHEMUMS and POMPONES in the world, and can supply them by the 100, 1000, or 10,000.

25 Pair of Best POMPONES, 10*s*.
20 Pair of Best Large Varieties, 10*s*.
25 Pair of Best POMPONE CUTTINGS, 5*s*.
20 Pair of Best Large Varieties, do., 5*s*.

CATALOGUES for one stamp. To save trouble all orders to be pre-paid.

AZALEA INDICA.

J. IVERY AND SON most respectfully invite admirers of this lovely tribe of Plants to an inspection of their unrivalled collection of half specimens of the newest and best kinds, and at the same time beg to say that many of them are now in Bloom and others will continue until the end of June. May be seen gratis. Catalogues free by post.

Dorking.—May 10.

TO THE SEED TRADE.

JOHN MALDEN has to offer from 10 to 15 cwt. of Transplanted GREEN TOP KOHL RABI, his own growth, being surplus stock over and above quantity required for his retail trade. Warranted all new, good sample. Price in quantities not less than 2 cwt., 2*s*. 6*d*. per lb.—Direct, JOHN MALDEN, Agricultural Seed Grower, Biggleswade, Beds.

WHEELER'S NEW FUCHSIAS.

GEORGE WHEELER, NURSERYMAN, &c., Warminster, can still supply his four SEEDLING FUCHSIAS, as described in *Gardeners' Chronicle*, May 5, and preceding Numbers; also his fine SEEDLING VERBENAS.

A good stock of DIOSCOREA still on hand.
BEDDING PLANTS of the most approved kinds.
One hundred thousand RHODODENDRONS for covert, &c., in good order for planting at very moderate prices.

BEDDING PLANTS.

JAMES DICKSON AND SONS have an exceedingly large and very healthy stock of VERBENAS, CALCEOLARIAS, GERANIUMS, PETUNIAS, LOBELIAS, HELIOTROPES, DAHLIAS, and other plants of the most approved varieties for bedding purposes. Many thousands of these are autumn struck, in 4-inch pots, and will give immediate effect when planted out.

Parties requiring large quantities will have special prices sent on receipt of a list, specifying sorts and quantity required.

A DESCRIPTIVE CATALOGUE, containing all the best new varieties sent on application.

JAMES DICKSON & SONS, Newton Nurseries, Chester.

BEDDING PLANTS.

W. H. DAVIS'S CATALOGUE of the above is Now Ready, and will be forwarded gratis upon pre-paid application.

CALCEOLARIA AUREA FLORIBUNDI
Do. KOII
Do. Do. superb, strong well-rooted plants, established in 48-inch pots, at 5*s*. per dozen.
Edmonds's New VERBENAS of 1859, at 8*s*. per dozen.

Rose Nurseries, Newbury, Berks.

CHEAP BEDDING PLANTS, FUCHSIAS, &c.

WILLIAM RUMLEY AND SONS have to offer a fine stock of the best Bedding Calceolarias, Verbenas, Geraniums, Heliotropes, and other choice BEDDING PLANTS, from 2*s*. to 4*s*. per dozen; or 15*s*. to 30*s*. per 100. For particulars see CATALOGUE

FUCHSIAS, the best of 1859, 6*s*. to 9*s*. per dozen; and all other plants equally cheap, a DESCRIPTIVE PRICED CATALOGUE of which may be had on application.

Gilling, near Richmond, Yorkshire.

CHOICE PLANTS.

WILLIAM KNIGHT, FLORAL NURSERY, Hailsham, Sussex, has now commenced sending out his superb collection of 100 Bedding Plants in first-rate varieties for 1*l*. 5*s*. package included, consisting of 1 dozen CHOICE DAHLIAS; 2 dozen NEW VERBENAS; 1 dozen PHLOXES; 1 dozen GERANIUMS; 1 dozen CALCEOLARIAS and SALVIAS; 1 dozen FUCHSIAS and SENECIOS, and 16 plants of HELIOTROPES, PETUNIAS, and NIEREMBERGIAS, &c.—Post-office Orders payable at Hailsham.

PELARGONIUMS, &c.—2000 Show, Fancy, French and English Spotted varieties, from 6*s*., 9*s*., 12*s*. to 18*s*. per dozen; FUCHSIAS of 1859, 9*s*. per dozen; GLOXINIAS new, 20*s*. per dozen, 6 for 12*s*.; TYDÆAS, new, 11 varieties for 18*s*.; ACHIMENES, choice, 9*s*. per dozen; BEGONIAS, several choice varieties, from 1*s*. 6*d*. to 3*s*. 6*d*. each. Also a large quantity of VERBENAS, DAHLIAS, and other Bedding plants. The Trade supplied. Catalogue for one stamp.

HENRY WALTON, Edge End, Marsden, near Burnley.

KINGHORN'S CHRISTINA GERANIUM is perfection as a rosy-pink bedder, for colour, habit, and free blooming, and a perpetual ornament for the greenhouse.

FRANCIS R. KINGHORN can supply the above, good plants in 60-pots, at 7*s*. 6*d*. per dozen.

Also a fine Stock of the most popular BEDDING PLANTS, &c., at moderate prices.—Sheen Nursery, Richmond, S.W.

SCARLET GERANIUM—"SHEEN RIVAL."

FRANCIS R. KINGHORN is now prepared to send out the above, the finest of all existing varieties; is conspicuous among the best sorts. It was awarded a Prize at the Crystal Palace, in 1858, and also commended by the Floral Committee of the Horticultural Society, on September 22d, 1859. Is much superior to "General Pelissier." The trusses of bloom are very large, and flowers of the finest form; colour orange scarlet, horse-shoe foliage, and variegated footstalks. Stout Plants in large 60-pots, 5*s*. each.

Sheen Nursery, Richmond, S.W.—May 19.

NEW SCARLET GERANIUM "JOHN WINCHCOMBE."

W. H. DAVIS has much pleasure in offering his New SEEDLING, which is of the deepest crimson scarlet, large round pip, of great substance, and very fine truss, fine for exhibition, and a first-rate bedder.

This is undoubtedly the best scarlet of the Horse-shoe varieties for bedding purposes that has yet been introduced.

The following gentlemen will bear testimony to its superior qualities:—Mr. Spary, Nurseryman, Brighton; Mr. Brown, Gardener to W. Chatteris, Esq., Sandleford Priory, Newbury

Extra strong Plants now ready, at 3*s*. 6*d*. each. The usual discount to the Trade.—Rose Nurseries, Newbury.

COMMON HOLLIES.—The present being very good and favourable time for removing Hollies, Messrs. WHITEHOUSE & WHITTAKER beg to call the attention of purchasers to their Summer Stock. The plants are well grown, and remove with fine fibrous roots, which ensures their [illegible] giving the greatest satisfaction. Large purchasers [illegible] Trade liberally dealt with. Prices and other particulars [illegible] on application.—Brereton Nursery and Seed Establishment, Rugeley, Staffordshire.

HARDY RHODODENDRONS.

MESSRS. WATERER AND GODFREY invite attention to their Seedling RHODODENDRONS, which they are selling without names, and which they strongly recommend as being very superior in point of HABIT, FOLIAGE, COLOUR, and GENERAL HARDINESS. They are from 1½ to 2½ feet high, and as much through, and no plants can possibly be in finer health. They will be sold at very liberal prices, and purchasers can select from a stock of many thousands.

Knap Hill Nursery, near Woking, Surrey.

AMERICAN PLANTS, &c.

MESSRS. WATERER AND GODFREY'S CATALOGUE for the present season is now ready, and may be had on application. It describes fully all Rhododendrons worth growing, and contains a List of Azaleas, Hardy Heaths, and other American Plants, as well as a summary of the general stock of the most extensive Nurseries in England.

The Catalogue may also be had at Messrs. MAY'S & Co., 1, Wellington Street, Strand, W.C.

Knap Hill Nursery, near Woking, Surrey.

HORTICULTURAL SOCIETY.—Notice is hereby given, that the next Ordinary Meeting of the Horticultural Society for the Election of Fellows will be held at the Museum of Science and Art, South Kensington (by permission of the Lord President of the Privy Council), on TUESDAY, May 22; the Chair to be taken at 1 o'Clock, P.M. On this occasion a Ballot for Plants will also take place.

LIST OF PLANTS FOR BALLOT.

1. THUJA GIGANTEA. A hardy coniferous tree, from California
2. CUPRESSUS CASHMERIANA. A hardy Cypress, from Cashmere.
3. PINUS LONGIFOLIA. Half-hardy tree, from the Himalayas.
4. ACACIA CULTRIFORMIS. A greenhouse shrub.
5. ACACIA PYCNANTHA. A greenhouse shrub.
6. CISSUS STANS. A hardy deciduous climber.
7. BUDDLEA SP. with large leaves, from Peru. Greenhouse shrub.
8. HARDENBERGIA MONOPHYLLA ALBA. A greenhouse climber.
9. SOLLYA HETEROPHYLLA. A greenhouse climber.
10. BERBERIS NEPALENSIS. Nepal Berberry.
11. CALLITRIS VENTENATI. A greenhouse shrub.
12. LONICERA FRAGRANTISSIMA. A very fragant Honeysuckle.
13. LILIUM PULCHELLUM. A hardy bulb, from Amoy.
14. THUNBERGIA LAURIFOLIA. A beautiful stove-climber.
15. PLATYCODON CHINENSIS. A hardy herbaceous plant.
16. IMPATIENS JERDONIÆ. A succulent-stemmed stove plant.
17. VERONICA DECUSSATA DEVONIANA. A beautiful greenhouse plant; or it may be grown in the open air in summer.
18. HIBISCUS STEWARTII. A greenhouse shrub, from New Holland.
19. CLEMATIS APPENDICULATA. A greenhouse climber, from [Australia.

Fellows of the Society desirous of obtaining any of these plants, if life members of 40 guineas, or subscribers of 4 guineas a year, are requested to name the FOUR sorts they would prefer; or, if life members of 20 guineas, or subscribers of 2 guineas a year, to name the TWO sorts they would prefer. Should there be more applications for any particular plant than the number available for distribution, a Ballot will then take place to determine which applicants are to be supplied.

The arrangements for conducting this Ballot render it necessary that the names or numbers prefixed to the plants to be drawn for, should be sent to the office of the Society, 8, ST. MARTIN'S PLACE, W.C., on or before SATURDAY, MAY 19.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY BEING ABOUT TO RESUME THE IMPORTATION OF SEEDS AND PLANTS by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. A knowledge of Spanish or Portuguese would be desirable. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, MAY 19, 1860.

MEETINGS FOR THE ENSUING WEEK.

THURSDAY, May 24 { Horticultural (Floral Committee) at St. Martin's Place ..... 2 P.M. / Linnean (Anniversary) ..... 1 P.M.
SATURDAY, — 26—Crystal Palace ..... Noon.

IT was once a prevalent opinion that all commercial articles if sold as imported would certainly be free from fraudulent mixture. "Genuine as imported" was in former days the assurance with which buyers were satisfied, and we suppose that their confidence was not misplaced. It is true that the Chinaman would now and then put a few bricks into a chest of Tea in order to give it weight; but in such a case it was only the merchant who suffered. Matters are now however changed, and "genuine as imported" no longer looks like a guarantee of honesty. We must cease to trust to the fair dealing of exporters, for they have found out that cheating is profitable—at least for a time, and are not slow to take advantage of the discovery. Buyers must therefore now trust to their own eyes and not to the smooth-worded warranty of dealers. They will find no guarantee equal to that of the sight, smell, and taste.

These hints are not addressed to the horticultural and agricultural interests alone. The outrageous sophistication of seeds, lately exposed in our agricultural columns, is glaring enough to put buyers on their guard in that respect; and they may be sure that seeds are far from standing alone in the market of fraud. The present remarks are suggested by a new discovery in the article of TEA. Those who are much acquainted with the quality of the stuff sold under this name in country places will be fully prepared to expect something very [illegible] in its modern composition. Under the name of a cup of tea a beverage is now prepared which, if it does not produce serious illness, at least is destitute of every agreeable quality; bitter, or tasteless, or musty, or even acrid, the poorer classes exchange a wholesome refreshing potation for what is neither the one nor the other. Their Chinese Tea has no more virtue than the home-made herb Tea, formerly prepared from Sloe leaves, or Ash leaves, or Vervain leaves, or any similar trash. And yet we have no reason to suppose that adulteration takes place to any extent in this country, unless it be with redried Tea "leaves." Merchants sell what they import, and Tea dealers doubtless sell what they buy. The fraud, when there is any, is committed in the Celestial Empire itself. Lie Tea, consisting of little balls of dust and Rice-water, glazed to look like Gunpowder Tea, was one example of the tricks that the Chinese would continue to practise if they would pass in Europe. Some years ago a whole cargo of Tea was seized by the Custom House officers, and upon examination it was found not to contain a single leaf of the Tea plant. It was reported to have come from Cochinchina, and consisted of the dried leaves of some Zizyphus, whose action, if any, was purgative and not tonic. A fraud of this kind was however too clumsy to escape detection, and does not seem to have been repeated, at least in this country. We have, however, reason to believe that leaves much like those of Tea are now mixed by the Chinese without attracting attention.

Since his residence at Bangkok, the capital of the kingdom of Siam, the British Consul, Sir ROBERT SCHOMBURGK, has found in nearly every garden a shrub there called the "Tea plant," which he believes is employed for the purpose of adulteration in China, though not by the Siamese. If so it is not likely to be detected after the leaves are roasted and curled up, for in form and texture they are much like those of the true Tea shrub. They are however distinguishable by the trained botanical eye. Now this shrub belongs to the genus called Acalypha, and is allied to the plant distributed by WALLICH under the name of Acalypha alnifolia. And since Acalypha is a member of the poisonous Euphorbiaceous order we must not be surprised at any disagreeable effects produced by Tea in which its leaves shall have been mixed. We recommend the buyers of low-priced Tea or the consumers of bad Tea to look to this.

Nor is it merely in preparing Tea for export that frauds are committed. Coffee is having its share. We do not speak of adulteration at home, but of what is going on in Coffee-growing colonies. There is everywhere in tropical countries a certain Earth Nut or Ground Nut called *Arachis hypogæa*, whose seeds are largely employed in being crushed for oil, the proper use of which is in finishing the finer descriptions of woollen fabrics, but which is said to be also used for mixing with Olive oil. Now it appears from the *Ceylon Overland Observer* that these Nuts go into consumption as an ingredient in the Coffee trade. It is asserted that they are imported from Africa and sold in London at 24*s*. per cwt. for mixing with Coffee. If so, the officers of Inland Revenue will have a new branch of investigation to enter upon, and the consumers of Coffee must expect to find their favourite beverage as bad as it was in the time when Chicory was in favour with shop-keepers.

EVERY one complains that diseases are much more prevalent in the garden and farm than they used to be in the good old times. There is, however, frequently much error in such notions. Diseases are far more commonly and accurately observed in the present days; but they are not in reality more common, and the assertion itself is altogether akin to that which SOLOMON reproved some thousands of years ago—"Say not thou, what is the cause that the former days were better than these? for thou dost not inquire wisely concerning this."

Amongst other instances of this supposed increased prevalence of malady amongst plants, one in Japan Lilies has lately been brought under our notice. The [illegible] of this disease are so far like those of the Potato-murrain that it commences in the form of round discoloured spots upon the leaves and stem, that the [illegible] rapidly, [illegible] causes drying up, but more frequently converting the young and tender parts immediately below the terminal bud into a pulpy mass, while the scales of the bulb are more or less affected, and like the tubers of the Potato exhibit a brown spotted [illegible] with shallow depressions externally,

and in the midst of their tissues, especially near their point of attachment. Here however the resemblance ceases, for there is not the slightest trace of any parasitic mould to account for the decomposition.

Now it is very difficult from a mere inspection of specimens, without any information as to culture or peculiar outward conditions, to pronounce as to the cause of disease. From the diseased appearance however of the bulbs and roots, our attention must necessarily be turned to the soil, and from the sample which adhered to them in some abundance, it is at least clear that there is a considerable admixture of imperfectly decomposed vegetable matter likely to generate spawn of which we think we see evident traces. If so, we should not at all wonder at the unhealthy symptoms which the plants exhibit; but even supposing the evil has not arisen from this particular circumstance, the cause must still be sought beneath the surface of the soil. Half the diseases which exist amongst plants, where not produced by parasitic Fungi, are due to the bad condition of the roots. This is a point now so notorious to Vine-growers that, in case of anything wrong above, their first attention is at once directed to the condition of the roots; and such a condition may arise not only from bad drainage, want of moisture, depressed temperature, or other similar conditions, but also in very many cases from contamination of fungous spawn generated on vegetable matter in the neighbourhood of the roots. Where leaf-mould or the decayed matter at the base of woodstacks is used, such instances are very frequent, especially in pot culture. Thousands of seedlings and young cuttings damp off from this single cause, and it is an accepted fact that it is one of the most prevalent generators of disease in open air culture; whether the objects of cultivation be small, like the Strawberry, or large, as the Larch or Deodara. We suspect that something of the kind has taken place with the Japan Lilies, though we cannot speak positively on the point from want of accurate information.

The subject, however, will not be without its use, though it contains no novel information, if it leads cultivators in all such cases to examine for themselves, which they can do with far more chance of arriving at a profitable issue than by merely submitting specimens of the diseased plants to parties, however well informed, who can from the very nature of the case give only a qualified opinion. *M. J. B.*

We observe with no little pleasure that the gardeners at Kew are now receiving regular Botanical Instruction from Mr. Oliver, than whom they could not have a better teacher. Let us hope that they will make the most of their great opportunity. Of this they may be assured, that the value of a gardener, like that of all other persons, is measured by his qualifications, and that he who knows most will advance fastest. That information in botanical science is sorely wanted by the rising generation is unfortunately too obvious. For many years past attention has been almost exclusively directed towards plant-growing, to the entire neglect of everything else, just as 50 years ago a man fancied that he must be a gardener if he had a small amount of botanical information. When that mistake was found out a reaction took place, and botany was discouraged, attention being concentrated upon mere cultivation. It is time that this should be changed. A gardener ought to know not only how to grow a plant, but its name, its structure, its native country, and the climate of that country; unless, indeed, it is admitted that those are right who think all learning a nuisance. "What's the use of botany I should like to know," mutters Growler, a good gardener and ignorant man. "Can't a man grow a plant without bothering himself about the name of the thing?" He might as well inquire the use of decent clothes, seeing that a bundle of rags would keep him as warm.

We hope to see the day when some authorised public body will hold examinations in horticulture open to every young gardener, granting certificates to none who cannot pass, and conferring honours upon those who distinguish themselves. Should such examinations ever be held, botany and vegetable physiology will be the foundation of success, no less than practical skill and good personal character. In these days of progress such an event cannot be far distant, and young men who are wise will look out for it in time; for they may be assured that whenever it comes to pass there will be no places for those who have not certificates of competency to produce.

New Plants.

237. Clerodendron cruentum.

C. cruentum; foliis inflorescentiâ habitu Clerodendri macrophylli *Blumii*; pedicellis glanduloso-tomentosis, calyce angusto colorato nec foliaceo herbaceo punctato, staminibus inclusis, corollâ cruentâ.

This is the plant which was exhibited a few weeks since by Messrs. Veitch (see *ante*, p. 339) and a noble species it is. The leaves are deep green, oblong, 10 inches in length by 4 in breadth, and there is a fine branching panicle of blood red flowers; so that it will stand in the front rank of stove shrubs. But it is in some respects so much like Blume's Clerodendron macrophyllum (now called Cl. phyllomega), that it may be a question whether it is botanically distinct. The flowers however are a very rich red, not a dirty white, the stamens do not project but are hidden in the corolla, the flower stalks are clothed with a short glandular fur, and the calyx instead of being green, dilated, and dotted, consists of five very narrow crimson lobes on which no dots are perceptible. It is therefore at any rate distinct enough in a gardening point of view. It was found by Mr. Thomas Lobb in some part of tropical Asia.

MYCOLOGY.—No. XVIII.

Agaricus tuberosus, *Bull.*—One of the great difficulties which attends the study of Fungi arises from the great difference of form and character which is assumed by the same species in the course of growth, insomuch that under varying circumstances a single species may not only be divided into two or more, but may even be referred to distinct genera. And the perplexity connected with this fact is often the greater, because under different conditions two or more distinct kinds of fruit may be produced.

The safest rule, where no fructification is produced in such temporary or abnormal states, is to be almost sure that the productions in question are not what Botanists call autonomous, or in other words that they are not distinct species, confined within the peculiar limits which they present to the naked eye, by their own laws; and where the productions seem exceptional

Agaricus tuberosus.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

and not evidently related to others, even though fruit be present, to exercise a proper degree of caution, and to strive if possible to trace what the real limits of the plant in question may be.

Now every one who has turned his attention to Fungi at all must have noticed some of the productions belonging to the first class. If he picks up the decayed head of a Sunflower or Artichoke, if he examines the pith in their rotting stems, if he looks at a heap of Carrots laid up for Winter use, or if he searches amongst the fallen leaves of his Cabbage, or the bulbs of his mildewed Onions he will find productions which are evidently fungoid, but which present nothing more than a uniform mass of cells without any fruit-bearing organs, and if he were to use the microscope he would not be more successful. Amongst the chaff on the receptacles of the Sunflower and Artichoke or in the pith of the stem, as also amongst the decaying Carrots, he finds irregular solid masses like little Truffles, black externally and white within, but, unlike the Truffles, without a trace of fruit; and on his Cabbage leaves and Onions he finds hundreds or even thousands of little grains so closely resembling Cabbage or Onion seed that he is almost inclined to believe that they have arisen from decay by some freak of nature. All these however and 50 more productions of a like kind, are merely the autumnal or winter condition of certain Fungi of various kinds, which in due season if they survive the cold and damp will be properly developed.

Of this nature is the curious tuber which produces the Agaric which we have chosen for the present mycological notice. There are certain Fungi in our woods of a more dry consistence than is usual amongst their allies, which in decay become tough and black, and remain for months in this condition. These afford a bed for the production of several Fungi, and amongst others we frequently observe certain oblong chesnut brown bodies resembling the root of some Oxalis, and exhibiting not the slightest trace of fruit. In this condition they have been referred to a distinct genus, under the name of *Acrospermum cornutum*, though they have little in the general aspect, and nothing in point of structure to justify such a reference. After a time these tubers fall to the ground, and in the following season produce their own proper fruit, while a few still adhere to the old black Agaric and are then fertile. This fully developed plant consists of a delicate white minutely silky or pubescent but at length smooth Agaric, with a long slender slightly mealy stem, flat head swollen more or less in the centre, and white slightly attached gills. When it springs from the ground, its real nature may be overlooked except care is taken to dig down to the tuber, which is often as difficult to find as the earthnuts are which exercise the skill and patience of schoolboys, with little profit after all their pains.

The whole interest of this little Agaric depends upon its connection with the tuber, taken in connection with which it is a pretty and attractive object. Beyond this it has no pretensions, but on some future occasion it will be seen that there are tubers of a very similar nature, at least to the outward eye, which have their own importance even in an economical point of view.

It may not be uninteresting to some of our readers to state that many of these tuberlike bodies will produce their true fruit if placed under proper conditions of air, light, heat, and moisture. We have ourselves shown this to be the case in one instance many years since, and Mr. Currey, who bids fair to follow in the steps of the Messrs. Tulasne in the study of Mycology, has been successful in several more or less important cases. *M. J. B.*

CULTIVATION OF MEDICINAL PLANTS AT HITCHIN, HERTS.

Belladonna.—Belladonna or Deadly Nightshade (Atropa Belladonna, Linn.) has been cultivated at Hitchin, more or less, for more than 30 years. It is now grown there by Messrs. Ransom and Perks, and on an average of some years, about 4 acres of land are reserved for its culture. The London Pharmacopœia states "that the herb which grows spontaneously in hedges, and in uncultivated places, is to be preferred to that cultivated in gardens." This is, moreover, the more common opinion respecting its activity, but we believe with Dr. Christison, that there is no good evidence of the medicinal activity of the plant being diminished by cultivation. We expressed a like opinion upon the comparative activity of wild and cultivated Henbane, when treating upon that plant in the present volume of the *Pharmaceutical Journal*, at page 414, and the same observations which we there made upon it, we also apply to Belladonna, namely—that it is an important circumstance, that there is probably but little difference in the medicinal activity of the wild and cultivated plants; for Belladonna is employed at the present time far too extensively for our supplies to be derived entirely from wild plants, as it is now by no means abundant in this country, and is, moreover, becoming less so every year, such a source of supply would soon become exhausted. In fact, at the present day, we know that nearly all the preparations of Belladonna, in this country at least, are made from the cultivated plants. Some further experiments upon the comparative medicinal activity of wild Henbane and wild Belladonna and those of cultivated plants, are however desirable, before we can arrive at any absolutely positive conclusions respecting them. In a wild state, Belladonna is found growing in moist situations, and commonly in a loamy soil, in waste places, and near ruins. At Hitchin, we find that both the cultivators of Belladonna grow it, as far as is possible, in a similar soil to that in which it thus occurs wild. Belladonna is propagated in two ways at Hitchin; that is, by division of its roots, and from seed. When it is grown by division of the roots (which mode is adopted by Mr. Perks), the plants are taken up when about three or four years old, at which period they are in the most perfectly mature state; the roots are then divided, and the cuttings afterwards planted out in autumn, in rows about a yard apart, and at a distance of about one foot between each plant, in a damp stiff loamy soil. After

the operation of planting has been performed, a good topdressing of farm-yard manure is applied. This manure is given for the purpose of affording a free supply of nourishment to the young plants, and also, to preserve their young shoots from injury by the late frosts in the spring, when, as sometimes happens, after a mild winter, they appear above ground at an early period. When Belladonna is raised from seed (which mode is adopted by Mr. Ransom), it is the usual practice to sow about March, in a moist loamy soil, as already noticed with the roots. The seedlings begin to make their appearance in May; they grow very slowly for the next two months, but towards the autumn they progress more rapidly. These plants usually flower but little, or not at all, during their first year's growth, and do not appear to possess so great an activity as those of the second and following years' growth, in which respect they resemble the biennial Black Henbane. The comparative medicinal activity of the first and second year's growth of Belladonna is well worthy of some experiments. We think it most probable that the plants of the second year are in the most active condition; and if such should ultimately prove to be the case, it would be found very desirable to prevent any flowering of the plants during the first year should they exhibit a disposition to do so, as by such a course of proceeding no such exhaustion would take place as is always observed after that process, and in proportion to its extent; and hence they would have time to mature themselves, and to store up for the next year those substances upon the presence of which their medicinal activity is due. The first frosts in the autumn cause the plants to die down to the ground; and then before the winter approaches, while the weather is still open, these young first year's plants are planted about 2 feet apart in rows, which are also placed about the same distance from each other. The ground is then well manured with stable manure. During the winter, there is no trace of the plants above ground. On their first appearance in the spring, the ground around them is well hoed, and a like operation is repeated every few weeks during the summer months. When the plants have arrived at their maturity in June, if the weather should be very hot and dry, they are liable to be attacked by a kind of blight, in which case, although previously healthy and vigorous, they begin to droop, the leaves alter in colour, and soon become completely withered. In this way, in dry hot seasons, much injury is done to the Belladonna crop. About the end of June, or in the month of July, according to the season, the Belladonna is considered to be in perfection. Mr. Ransom regards it as in the most active medicinal state when most of the flowers are over, and the seeds thoroughly developed, He also believes that the plants are best adapted for making extract when they do not grow too luxuriantly. When the Belladonna is in full flower, as mentioned above, the preparation of extract commences. For that purpose, the herb is generally cut with a hook, and then brought from the field to the laboratory in a perfectly fresh state, every two or three hours. It is then carefully picked over, and all the decayed leaves removed, and the remainder used for the extract. The whole time, according to Mr. Ransom, from the herb growing in the field to its conversion into extract fit for use, only occupies from 12 to 16 hours. By thus making up the Belladonna as quickly as possible into extract, all danger of its heating is prevented; if, on the contrary, it is packed up into heaps in the laboratory, even for a short time, when the weather is hot and damp, it is much injured, and the quality of the extract deteriorated in consequence. While the extract is being prepared, the men engaged in the laboratory have their eyes, &c. much affected, so that great care is required to be exercised in stirring it as it is being prepared, and in regulating the temperature, which is always kept as low as possible. The yield of Belladonna per acre varies much, as we have already seen is the case with Henbane, according as the season is favourable or otherwise; for while in some years it is more than 5 tons per acre, at other times it does not exceed one ton. The amount of extract obtainable from a given quantity of Belladonna is also liable to much variation. From 4 to 5 lbs. of extract per cwt. is the average yield, but in some cases, as much as 6½ lbs. per cwt. have been obtained. Two crops of Belladonna are sometimes obtained in one year; the first in June, and the second in September; but we regard this as a very objectionable practice, as the extract obtained from the autumn plant is very inferior, both in appearance and in activity, to that prepared in the summer months at the time previously mentioned. When a second crop is thus desired, it is considered advantageous to give the plants after the collection of the first crop a topdressing of stable manure. This is found to be very efficacious to the plants, and more especially so, should the weather be afterwards showery. Belladonna plants rarely live beyond a period of from three to five years, and as the older plants die out, fresh seedlings are put in to supply their place.

Aconite or Monkshood.—The only cultivator of Monkshood or Aconite, at Hitchin, is Mr. Ransom. At the time we were at Hitchin to visit his ground, viz., in September, the plants were out of flower, and we had therefore no opportunity of examining the particularly species of Aconitum cultivated by him, but he informs us, that he only grows the officinal species of the British Pharmacopœias, namely, the Aconitum Napellus. Aconite is propagated by dividing the roots of the mature plants; but in order to explain this operation in a satisfactory way, it will be necessary for us to refer briefly to the mode in which the roots of Aconitum Napellus and other species of Aconitum are developed, It is as follows:—Each root developes at its upper end at the side—that is, at the point where it is connected with the stem, during the spring, summer, and autumn—one or more roots or tubercules; these are nourished by the old root at first, which gradually decays as they progress in growth, and ultimately perishes. The young roots thus produced on the side of the parent form in like manner, during the succeeding year, one or more roots from their sides, and after affording nourishment to them, perish like the former, and a similar formation of roots, with decay of the parent, takes place every year. Hence, if the root of Aconitum Napellus, or other species, be taken up early in the spring, it is seen to consist of but one axis, but when dug up in the autumn, it is surrounded by one or more offsets, and hence also each root of an Aconite is biennial, but as it has the power of forming new ones every year, the duration of the whole plant is perennial. The plan adopted for propagating Aconite is founded upon this mode of development of its roots. Thus, when it is desired to increase the breath of land under cultivation for Monkshood, the old beds in which it has been grown are dug up, the finest roots are taken out, and reserved for future use, and the smaller ones are then planted out in rows about 9 inches or 1 foot apart, and a like distance is maintained between the rows. The ground before planting is well pulverised, and afterwards mixed with a moderate quantity of good stable manured. This operation of digging up the roots for use, and for the purpose of replanting, is commonly performed in December and January, at which periods they appear to possess the greatest amount of medicinal activity, and are best adapted for transplanting. It is in all cases considered desirable to transplant thus early in the year, as Aconite is one of the earliest spring plants to make its appearance above ground. In late seasons, however, the collection and transplanting of roots may be postponed with advantage till February. Perhaps it would be more desirable to perform the above operation of digging up the roots for use, and for transplanting, late in the autumn. The roots of Aconite which are not replanted are dried by steam heat, and reserved for making an alcholic extract of Aconite. and for sale for the preparation of the tincture. This alcoholic extract of Aconite is not, however, that of Pharmacopœias, for that is ordered to be made from the fresh leaves. This Pharmacopœia extract is made from the leaves by Mr. Ransom, about the first week in July. This extract is made as quickly as possible after the leaves have been brought in from the fields, in the same way as we have mentioned such to be the case in the preparations of the extracts of Henbane and Belladonna. The leaves from some of the plants are collected in the field, and dried as soon as possible afterwards by steam heat, and then sold as Folia Aconiti. It is necessary to exercise much care in making the preparation, &c., of Aconite, as the men engaged in such operations are often much affected in the throat, nose, &c., by the fumes, also by the juice in bruising the roots, and by the powder during their pulverisation. We have now treated of all the medicinal plants that are commonly cultivated to any extent at Hitchin, namely, Lavender, Elaterium, Henbane, Belladonna, and Aconite or Monkshood; but, besides these, several others are also grown there. Thus Savine (Juniperus sabina) is propagated from slips, which are planted in the autumn. This plant is there used for the purpose of distilling the oil, and for making extract and ointment. The Opium or Garden Poppy (Papaver somniferum) is also frequently cultivated at Hitchin, for the sake of its capsules or heads; but the large quantities of these which are now imported in a crushed condition, &c., has been found to interfere materially with its profitable cultivation, and hence this crop is not a general one at Hitchin. The other plants which have been, or are now grown at Hitchin, are Peppermint, Lettuce, Liquorice, Carraway, Colchicum, Stramonium, &c. These are not, however, cultivated to any extent worth notice, so that we are unable to gather any satisfactory information as to their modes of propagation and collection from their culture at Hitchin.* *Pharmaceutical Journal.*

CONIFERS IN SCOTLAND.

[We abridge the following from the *Falkirk Herald.* It expresses the views of Mr. Neilson, an experienced horticulturist, and will be read with some interest in the south.]

The beautiful Cedrus Deodara, from the Himalaya Mountains, with its ever-verdant glaucous foliage and pendent shoots, drooping elegantly like water falling from a crystal fountain, must take a foremost place on the lawn to represent grace in all the loveliness of the vegetable creation. A large specimen of this fine tree (as I have seen upon the ornamental nursery grounds at Bagshot, west of London, belonging to Mr. Waterer, nearly 40 feet in height), with its under trusses of flounced branches resting upon the Grass, is one of the grandest objects that the eye could desire to look upon.

The next I shall name as a companion to the Cedrus Deodara must necessarily be the Araucaria imbricata, from the mountains of Chili, with its strange indescribable appearance of symmetry, whose strong arms and needle-pointed scaly foliage, which is retained by it from the first to the last days of its existence without shedding a single leaf, renders it an exception to the general rule. When this noble tree attains the height of 20 feet and upwards, it becomes an imposing object of great magnificence. Fine specimens may be seen at Rozelle, near Ayr; as also Dysart House, Fifeshire; the Botanic Gardens, Edinburgh; and Keir, Perthshire; and no one can look upon such objects of natural grandeur without reverencing the Author of all things.

Another plant that demands a prominent position is Picea nobilis, from the auriferous regions of California, where it attains the height of 200 feet, but has not yet been long enough in this country to perform any such gigantic achievement. Its Ivy-coloured dark shining green with horizontal outspreading branches, each tier forming complete platforms round the tree, with a surface almost as level as Utrecht velvet, never fails to put the stranger into a state of amazement, while he contemplates such wonderful arrangement of beauty, elegance, and perfection. There are a few fine plants in the neighbourhood of Falkirk, one of which, at Arnotdale, grew 6 feet within the last two years.

I shall now admit into this honourable society as a good and respectable companion to the last-mentioned tree a dignitary from the never-to-be-forgotten field of blood and battles, the Crimea—viz., Picea Nordmanniana, which attains the height of 100 feet in its native habitation, and is of a silvery green colour, with outspreading, gracefully-formed branches, and does not seem to be affected by heat or cold, or whether the thermometer is above or below zero. There are, comparatively speaking, no large plants of this beautiful tree in Britain. The largest specimen I have seen is about 12 feet high, in the ornamental nursery grounds at Woodlands, in Sussex, belonging to Messrs. Wood & Son.

We must pay great respect to Picea Pinsapo, from the mountains of Spain, whose introduction into this country was in the year 1838, and whose claims to a position in the front of the lawn cannot be well resisted by whatever amount of sophistry may be used by any of the Fir tribe. Its pyramidal growth and pale green foliage, with thick, compactly set bristling shoots of a uniform and stylish appearance, renders it one of the most interesting of trees. A fine specimen, upwards of 12 feet in height, and otherwise perfect as a plant possibly could be, was lately sold from the nursery grounds of Messrs. Drummond & Sons, Stirling, but died in consequence of the removal, which I regret very much, as it was something worth going to see; indeed, a much more interesting object at any time, to a plant fancier, than a view of "Mar's Wark," in the same town.

At a meeting of such notables of competitive beauty and fashion, it is not an easy matter to resist the claims of the great Wellingtonia gigantea from the Californian grove, whose patriarchal fathers have, according to the rings of growth, arrived at the respectable age of 3000 years and upwards, and attained the height of 360 feet, and are in the same position that they were on that day when the Children of Israel passed through the Red Sea. This magnificent tree is neither a Fir, Cedar, Juniper, Cypress, Yew, nor Arborvitæ, but a kind of conglomeration which partakes freely of all the grandeur, loveliness, and beauty of the whole. Its foliage is a lively evergreen of elegant growth, and is without doubt one of the handsomest trees that a lawn can be adorned with. The largest in Britain are little over 10 feet in height. A fine plant at Rose Hall, Falkirk, 6 feet 3 inches, and one at the Kilns, Falkirk, nearly the same height, have stood this season 27° of frost, by a Kew registering thermometer, without being the least injured. Such hardihood entitles this noble giant of the forest to be admitted freely into the land of the mountain and the flood. Before taking leave of this mammoth of the vegetable world let me add that there is in the Crystal Palace at Sydenham a specimen represented by the bark, which has been stripped off some giant in the Californian grove. The bark is about a foot in thickness, and has been so erected as to show the tree in all its glory, standing erect to the height of about 70 feet, and inwardly furnished with forms and chairs, so that those who are weary of sight-seeing in the Palace may find a resting-place within this temple of bark, in whose capacious hall there is more ample accommodation than in some of the worshipping places of the Mormonites.

At such a highly respectable meeting of the congress of trees from different parts of the world, we must admit the claims of Cupressus Lambertiana from Upper California, which has now been about 22 years in this country, consequently has acquired a residence, and been much admired for its splendour as an ornamental tree. It attains the height of 60 feet in the land of its nativity, with a stem 9 feet in circumference, and is one of the fastest growing and most beautiful of the Cypress tribe, but should be planted in a situation where it will not get a severe stroke of wind, as it has a tendency to be easily uprooted. Beautiful specimens, upwards of 20 feet in height, may be seen at Dysart House, in Fifeshire, and the Botanic Gardens, Edin-

* We shall be much obliged to any correspondents who will give us any information respecting the cultivation of Chicory, Colchicum, Liquorice, Carraway, Rhubarb, Lettuce, &c., in any part of the country. Any details as to the quantities of medicinal plants cultivated in particular localities will also be acceptable.

burgh, where at each place it forms an object of great beauty.

The next that I shall add to this list of notables is Cupressus Lawsoniana, from the Shasta and Scots valleys, in Northern California, discovered by the famous plant collector, Mr. Murray, who says he found this species growing 100 feet high, and 2 feet in diameter, forming the handsomest tree found by him in his whole expedition, the habit being most graceful, with the branches at first curved upwards like those of the common Spruce, and towards the end hanging down like an ostrich feather, with the leading shoots when young drooping like those of the Deodar. This lovely tree is named in honour of Mr. Lawson, of Edinburgh, who has done so much for the introduction of fine Conifers into this country which fully entitles him to have his name handed down to posterity by such a tree. The largest plants in this country are not much over 4 feet in height with the exception of a very few that may be 2 or 3 feet higher.

As a northern luminary, Thujopsis borealis, of frost-bearing qualifications, requests to be admitted to get his rights of comparative beauty discussed upon the green, as he considers there should have been honourable mention made of his name at a much earlier stage of the proceedings. This is a tall evergreen tree from Nootka Sound in Observatory Inlet, where it grows to the height of 100 feet, with gracefully curved outspreading branches, and has very much the appearance of the tree which preceded it, viz, Cupressus Lawsoniana, with the exception that its habit of growth is more robust and masculine, and that when it become aged it is covered with small blisters that are filled with a fine aromatic balsam, which make grace, beauty, and fragrance combine. It has only been a few years in Britain, therefore is too little known to most people.

There are numerous other justifiable claims from several of the Pinus and Picea tribe, as also from Cedrus atlantica, the Scotch and Irish Yews, and a great host of Cypresses, Junipers, and Arbor-vitæs, all demanding a representation with a fair field and no favour; but as each would require a somewhat lengthened description to show their genealogy and prove their propinquity, I shall defer their claims till a more favourable opportunity, with the exception of two favourites, which I shall admit in order to throw light upon the lawn, like golden candlesticks ornamented with glowworms. Taxus baccata variegata or Golden Yew, when trained to the height of 8 or 10 feet, has no rival for ornamentation, as each leaf is edged with a fine golden yellow colour, and the effect of richness and grandeur thus produced is most wonderful. And lastly, the beautiful Thuja aurea or Golden Arbor-vitæ, of Knaphill and Bagshot celebrity, with its neat compact growth and beautiful yellow colour, must come forward. When the points of the shoots open in spring, it has the appearance of being literally gilded with gold. The largest plants do not exceed 4 feet in height.

Home Correspondence.

Bougainvillæa spectabilis.—This was, I think, flowered some years ago by a lady in the New Forest, and last autumn magnificently at Mount Edgecumbe, in a conservatory. Stove heat is beyond what it wants. *I.*——As I find that you entertain the same high opinion of Bougainvillæa when well grown as myself and all who have seen it blooming at this place, and in order that no one may by any possibility be misled as to my mode of cultivation, I give you a more detailed account of the treatment it has received than appeared in your columns last week. My employer, the Rev. C. E. Ruck Keene, received the plant in question from the Count de Roullée, a French nobleman, whose instructions were that it must be starved into bloom. It has, however, long since occurred to me that a more appropriate expression as regards tropical plants would be, burn them into bloom; with Bougainvillæa, "if we put the fire in at his toes it is sure to come out at his head." The plant now blooming here is growing in a brick pit 3 feet square, one side of which is close to the back end of the boiler that heats the house, merely having a few loose bricks laid up against it to prevent scorching; and till within these last few months there run close under the roots a flue that was burning hot, and which partly heated the house, but which is now discontinued and hot-water pipes substituted for it. Here in my opinion lies the grand secret. The flowering took place after the brickwork round the roots had been heated to about 140°. I should consider that the roots had a bottom-heat of about 100°. The plant was a good size when planted out; it was put into a rough compost of loam, leaf-soil, charcoal, and broken bricks. Very little water is given in winter, just enough to keep it alive and prevent its foliage from dropping, but when water is given care should be taken to soak the whole mass of soil, but not more than will do that should be given when the foliage begins to change colour, which it will do early in March. Water abundantly with a weak solution of guano or any other stimulant, and you will be rewarded with the most gorgeous display of bloom it is possible for the eye to behold, which will endure for three or four months. I may also add that it does not require a very high temperature except at its roots; the house here this last winter has not averaged a night temperature of more than 50°, and in October last in that severe weather the heating apparatus was out of order, and the plant then endured several degrees of frost. I should have no hesitation in saying that it would do in a warm conservatory if the requisite bottom-heat was given by means of a hot chamber, or any other arrangement of that kind. The plant must never be pruned after it has made its summer growth, but allowed to run perfectly wild as the blooms are produced from the axil of every leaf, and if any stopping or pruning takes place it will only have a tendency to produce premature growth and no flower. *J. Daniels, Gardener, Swyncombe House.*——Some six or seven weeks ago I had a flowering twig of a plant new to me sent from a gentleman's stove near Mansfield, Notts. It was stated that he had the plant from the Continent without a name, and that it was flowering freely, and had the most gorgeous effect in his hothouse. I have no doubt from the description of Bougainvillæa in your last week's Number that it is the same plant, the flowers being of a mauve colour, and of the shape of the female Hop. I managed to strike a plant from a young shoot, but failed with two other cuttings made from where the wood was older. Without wishing to detract in the least from Mr. Daniels' merit in flowering so successfully such a magnificent addition to our stove climbers, I merely desire to make known the fact of the plant having flowered in another locality. *William Tillery, Welbeck, May* 14.——A small plant of Bougainvillæa was sent to my employer last year from Swyncombe gardens. It was placed under my care in June, and was potted and duly attended to all the summer. It grew rapidly until autumn, when the wood showed signs of ripening. It was then gradually hardened off and was wintered in a cool dry temperature of from 45° to 50°. In February it was replaced in the stove, where it is now in fine bloom, and has been in that condition for some weeks past. It fully bears out all that has been said in its favour. *Peter Milroy, Gardener to J. L. W. Naper, Esq., Loughcrew, Oldcastle, Ireland.*——In a place of which I once had the care we had a Bougainvillæa which had grown two years in a small stove without flowering. I therefore wanted to see in its place some of those magnificent creepers of which I had read in books, and I would fain have controlled my master's taste in the matter, but he was too stiff in his notions for me to lead him. When I suggested some fine flowering climber to take the place of the Bougainvillæa he would drily observe, "P'raps it'll flower next year, my lad, and if it doesn't it makes a good shade for other plants." The last anticipated next year of its flowering was the third year after being planted, and a richer feast my eyes never had, for it flowered beautifully. The plant in question was grown at a small unassuming place, not 20 miles from Derby. Six years ago I saw a plant of the same kind in one of the stoves of the Earl of Shrewsbury at Alton Towers, and so full of mauve-coloured bracts, that at a distance it looked like a brightly lighted up cloud. This plant was growing in a bed of soil similar to the one just described, and trained up a column until it reached the rafters of the house, which was span-roofed; some of the strong shoots were tied to two of the rafters, which went right and left across the house; it was then allowed to grow wildly, and it formed itself into an irregular bush, the grandeur of which, when in full bloom, is hardly to be described. It has also been successfully cultivated at Osmaston Manor, the seat of T. Wright, Esq., where Mr. Lamb, the gardener there, is particularly fortunate in flowering shy blooming plants, such as Renanthera coccinea, which he blooms annually, and upon Dendrobium speciosum he had this year 17 spikes of bloom, averaging in length 1½ feet, the average number of flowers on each spike being 80. My own experience and observations upon this plant furnished me with the following rules for its successful flowering:—1st. It is indispensable (whether grown in a stove or intermediate house) that the plant shall have room to grow into a good-sized plant, whether trained upon the rafters of the house or upon the back wall, as suggested by Mr. Daniels; 2d. That the situation be in the lightest part of the house, and the atmosphere be a moderately dry one, with abundance of air: and last, but not least, that the space allotted to the roots be limited. Under these circumstances the plant will hardly fail to yield a profusion of its beautiful bracts. *Z. Y. S., Trentham.*

Early Swarming Bees.—The dates on which the earliest swarms come off are always interesting, and this season they will be especially so on account of the length and severity of the winter. On Saturday last, May 12, I had a very fine swarm from a set of Stewarton boxes, the same stock which last year gave me the two heavy boxes which were exhibited before the Apiarian Society. The swarm contained two queens, and the clusters were hived separately and then united, thus forming a powerful colony, which is now working with might and main. *Shirley Hibberd, Stoke Newington.*

Spiders in Greenhouses.—My greenhouse swarms with the small description of spider commonly known as "money spider." Can any of your readers inform me of any remedy for getting rid of it? I have tried syringing, tobacco smoke, and brushing the rafters, &c., but nothing destroys it, as the more I sweep the more it seems to increase. *O. L., Worthing.*

Vegetable Fibre.—Is the inclosed fibre likely to be of any commercial value? It ought to be obtainable at a low price, if it were worth collecting. *C. W. Strickland, Hildenley.* [It looks like a good paper material. Can it be had abundantly as well as cheaply?]

Wild Bees.—Can any one suggest a remedy for the depredations of wild bees? The lawn is annually ploughed up by blackbirds and thrushes seeking for the eggs laid there by the bees, which renders it very unsightly. Various suggestions have been made and tried without avail. *M. King Bleayard, Whiteholme, Clitheroe, May* 14.

Effect of the Winter on Camellias and other Plants out of doors at Annes Lodge, Ascot, Rothesay.—I forward a Camellia twig with a fully expanded white flower and a closed and opening bud. It is from a standard near the tree from which I sent you a red flower on the 21st ult. The two trees were planted at the same time 12 years ago, but the white one is not so vigorous as the other, its dimensions being only 7½ feet high by 19 feet in circumference. Neither have ever had even the protection of a mat. Unfortunately an ignorant gardener allowed the stock, a single red, to get the better of the scion, and now more than three-fourths of the tree consists of the former. Clianthus puniceus and Acacia armata were killed here last winter. Wellingtonia gigantea, Cupressus funebris, Myrtus Ugni, Broad-leaved Myrtle, Cryptomeria japonica, and Sequoia sempervirens were all very much injured, but most of them will recover. Cryptomeria Lobbii, Cedrus Deodara, and its variety robusta; Veronica Andersoni, Cupressus Lawsoniana, Sikkim Rhododendrons, Gold-leaved Chinese Arbor-Vitæ, Chinese Privet, and Juniperus chinensis, are all uninjured. Also Cupressus macrocarpa, not a leaf of which is browned. Of this last I have a tree planted in 1852, when it was 3 feet high; I measured it last in August 1858, when it was 18 feet. It must have grown since that time 6 or 7 feet at least. Its growth never ceases, as it makes wood in winter as well as in summer. *R. B., May* 16.

Rust on Grapes.—When I gave my opinion (see page 425) as to the cause of rust on Grapes, I did it with a view to benefit the inexperienced gardener and the amateur, and I have a very strong conviction that Mr. Blake's idea (see p. 434) of an uncovered or a deep border having anything to do with it is erroneous. How Mr. B. manages to maintain a moist atmosphere without damping his house while he has air on, is to me rather a mystery. Rust may proceed from causes with which I am unacquainted, but I confidently repeat, that water poured upon a hot pipe, or flue, will invariably produce it; and all I have to add is, that if Mr. Blake or any one else doubts it a trial would convince them. *C. E. W.*

Miselto.—Your correspondent "Dorset" (see p. 433) writes learnedly upon the parasitical character of this plant, which he spells as above, but does not seem equally well acquainted with the derivation of the word. In "Mudie's British Birds," under the heading "The Missel-Thrush, Turdus viscivorus," may be found the following paragraph:—"There is a sort of double naming in this bird: it is called the 'missel-thrush' because it 'missels' (soils) its toes with the viscid slimy juice of the Mistletoe berries, of which it is very fond in the winter; and the Mistletoe gets its name because it 'soils' the toes of the bird." Both the Latin and English name of the bird seem to attest the truth of this observation, and it may perhaps not be without interest to some of your readers. *Gerard Barton, Fundenhall, Wymondham, May* 15.

Societies.

Botanical of Edinburgh: *Thursday, March* 8.—Professor Balfour, V.P., in the chair. The following donations were announced to the Herbarium:—Specimens of Tephrosia toxicaria var. schiediana (Sch.), from Dr. W. H. Campbell, Demerara. The plant had been sent to Dr. Campbell as being used by the negroes in one or more cases of poisoning, which had lately occurred near Georgetown, Demerara. Specimens of Cuscuta Epithymum, from Penmanshiel, sent by Mr. James Hardy. Mr. Hardy states that he found it in a field. "It was confined to one spot which is under tillage for next year's crop, so that it may disappear. The soil was originally reclaimed from a state of nature; and whether it was attached to the wild Thyme or Heather that once grew there, or has been introduced with Clover seeds, I cannot ascertain. The Dodder is a new plant to Berwickshire, for the specimen mentioned in Dr. Johnson's Flora was found on the lower range of the Cheviot Hills in Northumberland." The following donations to the Museum at the Botanic Garden were announced:—From Messrs. P. Lawson & Son, Cones of Cedrus Atlantica and Cupressus macrocarpa; also specimens of Juniperus tetragona. From Dr. Macfarlane, Montego Bay, per Dr. Douglas Maclagan, hammock and ropes, prepared from the fibres of Lace Bark tree (Lagetta lintearia). The following communications were read:—I. "Contributions to Microscopical Analysis." No. II. Celastrus scandens (Linn.), with remarks on the colouring matter of plants. By George Lawson, Ph. D., Professor of Chemistry and Natural History, Queen's College, Kingston, Canada. Communicated by Prof. Balfour. Dr. Lawson says—"On the present occasion I select for remark one of our most ornamental Canadian plants, Celastrus scandens (Linn.), chiefly on account of an interesting structure observable in the colour-

substance of the arillus, which presents a very distinctive histological character. This is one of the most conspicuous plants which attract the attention of autumn visitors to the Falls of Niagara; for, although its flowers are small and greenish, the fruit-clusters are large, and showy in their colouring. The fruit is globose, of a very bright orange colour, and opens (usually by three, sometimes two or four valves) to display a deep scarlet coloured pulpy mass, consisting of the arilli, in which the large brown seeds are enveloped. The chief point of interest in the histological structure of Celastrus scandens is found in the tissue of the arillus, which presents a kind of colouring matter of which we as yet know but few examples in the vegetable kingdom: the pulpy arillus, which, although of a different colour, strongly reminds one, in its histological characters, of the yellow parts of the perigone of Strelitzia. In the Celastrus the arillus consists of more or less elongated oblong cells, whose membranes are colourless and quite transparent. The colouring matter is contained in these cells, and presents itself in the form of numerous minute elongated granules, exhibiting well-defined outlines; they present considerable uniformity both in size and shape. They are slender, between linear and lanceolate in form, and either acute or more or less acuminate at both ends. They are for the most part straight, but in some cases curved more or less perfectly into a crescent; and, more rarely, the curvature is so great that the two extremities meet, and then the granule assumes the form of a ring. These granules are all of a uniform bright scarlet colour; usually, however, they are quite separate, and lie without order in the cell, crossing each other in various directions. In narrow, elongated cells, whose diameter is less than the length of the contained granules, the latter are usually arranged conformably, lying in the longitudinal direction of the cell, just as we find in the case of the raphides which occur in elongated special cells in endogenous plants. On an average, the colour-granules measure the $\frac{1}{2000}$th of an inch in length, by $\frac{1}{12000}$th of an inch in breadth—being thus about six times as long as broad. The cells in which the granules are contained are somewhat variable, both in size and form; when quadrangular, and not much longer than broad, they measure about $\frac{1}{670}$th of an inch in diameter; but, in cases where they are much elongated, the breadth is proportionately decreased, as is usually the case in parenchymatous tissues. Under a low power (as, for example, the lowest power of Nachet's microscope), the seed of Celastrus scandens also presents a characteristic aspect in its minutely embossed surface of a fine fawn colour. On increasing the power, it is found that the embossed appearance is dependent upon the slightly elevated surfaces of the cells, which are compact, regular-sized, and sufficiently distinctive of themselves to lead to the discrimination of the tissue from most other vegetable tissues. A cross section of the membrane forming the seed-covering (readily obtained by making a thin horizontal slice of the whole seed), presents a peculiar striated appearance, which is also characteristic enough. The cells of the albumen contain oil."—II. "On Trichotomous Arrangements of Plants." By Mr. William Mitchell, Associate, Botanical Society. Mr. Mitchell remarked that in the classification of natural objects, of which our knowledge is limited, it is desirable to have the decisions capable of embracing all that the progress of discovery may make known. This advantage, however, we cannot easily gain unless it is in our power to make use of the number, position, presence, or absence of parts or organs as essential characteristics in our comparison of the objects in question. But on glancing over the more common classifications of plants we find cases admirably illustrative of scientific tact in seizing hold of such leading characters as render the divisions all-embracing in their own provinces; and singularly enough these divisions generally come out in threes. A principle of arrangement was then struck out, which was partially employed by Ray; but clearly enunciated by Jussieu when he ushered in that grand and ever-memorable ternary of the Dicotyledonous, Monocotyledonous, and Acotyledonous plants. He could now pass at once to the flowering plants, and produce another trichotomous arrangement in the same manner, which he did in his Polypetalæ, Monopetalæ, and Apetalæ. Mr. Mitchell then proceeded to illustrate his remarks by various instances of trichotomy in the vegetable kingdom.—Mr. Burnett exhibited branches of Hollies gathered at Killarney, exhibiting great variation in the forms of the leaves. The specimens were so different that they might have been regarded as distinct varieties, and yet most of the variations occurred on the same tree.

Notices of Books.

The Larch Disease, and the Present Condition of the Larch Plantations in Great Britain. By Charles M'Intosh. 12mo. Pp. 136. W. Blackwood & Sons.

It is now many years since attention was drawn to the unexpected and alarming fact that the Larch, when ready to be felled, proves to be unsound, its centre having been so attacked by dry rot as to render the timber unfit for purposes of construction. This is a most serious matter when we consider how many millions of trees must now be growing in Great Britain, and how large a proportion of the value of landed property is in numerous cases represented by that crop, some poor estates in Scotland being worth from 10,000*l.* to 20,000*l.* for the Larches alone now growing on them, according to Mr. M'Intosh, provided the trees prove sound.

Mr. M'Intosh, who has had as much practical knowledge as most men of the facts relating to this important matter, has collected in the volume before us all the written evidence that he has been able to discover, with the view of thus comparing different and differing opinions on the subject, and enabling the reader to draw his own conclusions. He has also gathered together the unpublished views of several foresters supposed to be well acquainted with the tree in question. Opinions then we have in plenty. To what conclusions do they lead? Here we quote Mr M'Intosh himself:—

"That the decay in the health of the Larch, in whatever form it may appear, has not arisen from any natural change in the constitution of the tree itself, as asserted by some, is a fact borne out by physiological science; its present debilitated and unhealthy condition is owing to mismanagement. Our present object is to endeavour to determine in what this mismanagement consists; and, in order to present our remarks in the clearer form, we shall arrange them under the following heads:—

I. Total neglect in procuring seed from healthy and fully developed trees.
II. Planting on soils and in situations unsuited to the nature of the trees.
III. Want of sufficient drainage in waterlogged land.
IV. Too thick planting, neglect of thinning, and injudicious pruning.
V. Planting in ground on which a previous crop of Larch, Scotch Fir, or other Coniferous trees, has been grown.
VI. Pampering young trees in rich soils in nurseries, with a view to their attaining a large size within the least possible time.
VII. The attacks of game, and browsing of cattle and sheep.
VIII. The period at which the disease attacks them.
IX. The accidental misfortunes they are liable to, such as the attacks of insects, parasitic Fungi, late spring-frosts, diseases in the bark, dying away of the branches, &c."

We do not quite see how viii., the period at which Larches are attacked, can be a cause of disease: we only give the author's words as we find them.

It will probably strike most readers of this catalogue of causes that they must relate to different kinds of disease; and in fact Mr. M'Intosh himself points out the fact that there are two maladies present in Larch trees, the one an internal dry rot, the other a superficial ulceration. Now in considering a question like this the two should be carefully distinguished, for they probably bear no nearer relation to each other in the constitution of the Larch than carbuncles and consumption in the constitution of man. It is reasonable to suppose that they originate from distinct causes, and therefore require to be considered apart. Dry rot is certainly caused by the action of a dry-rot Fungus; and the question is, how the Fungus reaches the interior of the Larch. Ulceration, which is analogous to the gum of stone-fruit trees, is probably caused by an imperfect action of the leaves; and the question is why the leaves act imperfectly. We are not aware that these two diseases accompany each other; they probably do in some instances; but they certainly do not in other instances. Some years ago we spent several hours in a great Larch plantation in N. Wales, of 30 years' growth, where the trees were for the most part showing unmistakable signs of dry rot near the ground; but we failed to discover a single instance of ulceration. It is unfortunate that this point should not have been more constantly borne in mind in the work before us.

Mr. M'Intosh attaches very great importance to the selection of seed from healthy trees, and we understand him to say that the absence of this precaution is one of the most certain causes of unhealthy plantations.

"Cultivators well know the importance of a healthy, vigorous, and carefully-selected stock, from which to obtain seed, when they wish to maintain the integrity or secure the improvement of the progeny. The Turnip-grower selects the best-formed bulbs to plant for seed, the Cabbage-grower the strongest plants; neither, if they wish to continue a superior variety, gather their seeds indiscriminately. The florist is even more particular in endeavouring to continue a favourite flower; and our best stock-masters incur almost fabulous expense in procuring the very best animals, for a similar reason. Is it not evident that the same care should be taken with the Larch, if we wish to improve it, or even to retain it in a healthy state? Some of the nurserymen who rear these trees from seed, no doubt profess to do so; but the public demands something more than mere profession. Undoubted blame attaches to selling trees warranted to be from a healthy stock, when the seller knows well that he cannot tell whether the seed was collected from healthy or unhealthy trees—from the worst or the best varieties; for at best he has only the bare assertion, and that not often asked, of the itinerant seed-gatherers, who are often women and children, and whose only care is to fill their bags with cones, knowing how unlikely it is that any question will be asked as to what trees the cones were taken from. The public should, however, know that a nurseryman, selling under such a warranty, renders himself liable by law to whatever damages the purchaser may sustain, just as he is liable to the farmer or gardener for selling him a bag of inferior or spurious Turnip or other seed. Unfortunately, in the case of trees, the evil is not detected for years, while in that of farm or garden plants it shows itself within, at most, a few months; and the difficulty and expense of securing a conviction in the case of tree seeds is such as to afford endless chances for the nurseryman to escape.

"On the other hand, we do not ascribe the whole blame of this evil to the nurseryman; planters and proprietors themselves are equally and often more at fault in this matter. The rage nowadays for cheap forest-trees, and cheap planting by contract, has very much to do with the case. Many gentlemen run from one nursery to another to see where they can purchase their trees cheapest, and who will contract to furnish and plant per acre at the lowest figure."

"The consequences of this penny-wise and pound-foolish practice is, that the honest man in the trade is put on an equal footing with his less scrupulous neighbour. He is compelled to sell cheap, or starve, because if he does not he loses his business; and therefore to meet this cheap selling he must purchase his raw material at the lowest possible cost, and he must also manufacture his goods in the cheapest way possible. He therefore ceases to be at all particular about where, or from whom, the seed is purchased; the one requisite is that it be cheap. The seed-collector, again, knows that stunted and half-dead trees produce the greatest quantity of seed, and are also by far the most accessible, and with such he is quite contented. Here begins the mischief—cheap trees and an unhealthy progeny.

"It is a fortunate circumstance that in this indiscriminate mode of collecting the seed, there are some chances of a portion being got from healthy trees; and as good, bad, and indifferent are so thoroughly mixed during the manipulations of cleaning, a certain percentage of healthy trees find their way to our plantations: for even in very bad cases a few healthy trees may be found, although surrounded by others in the most diseased state.

"It is not absolutely impossible to get healthy Larch seed of native growth, but certainly not to the amount at present annually sown. This seed is to be collected from those few healthy plantations of aged trees which are known to exist; but the cones from such trees are not only difficult, but even dangerous, of collection. Healthy trees produce few cones compared with unhealthy ones; and, as a consequence, healthy seed can only be procured at a vastly increased price, compared with that paid for such inferior seed as we have spoken of. Cheap trees and a healthy stock are things quite incompatible."

"As the Larch, when of large size, is in general felled during winter, at which time the seed is ripe, a considerable supply of good seed may be very conveniently procured when the trees are down, as at that time their healthy or unhealthy state can be more readily ascertained than while they are still growing. But the older and larger the trees are, even in this case, the more likely is the seed to be in a healthy state."

These views are fortified in some measure by the opinion of M. De Candolle:—"But it should be observed that he knew nothing of the rot disease, it not having come under his notice in the Swiss forests." The last part is of no small significance. In Switzerland, the home of the Larch, dry rot is unknown! Here we may probably find the key to the secret cause of the disease.

For ourselves we adhere to Mr. Berkeley's opinion, that among the causes of dry rot in Larch, that of planting it among the dead roots of other trees is one of the most active. It has been demonstrated—we have ourselves witnessed the fact too often—that if a dead root is left in ground and becomes attacked by dry rot, as most commonly happens, it communicates the mischief to living roots in its neighbourhood, especially to those of Conifers; and that with such rapidity as to render two-years transplanted nursery trees worthless, or worse. This is in all probability the explanation of the case mentioned by Mr. Brown:—

"The Larch, like every other tree, is liable to disease from its earliest infancy; even in nurseries they are not always healthy. 'I have known,' Mr. Brown observes, 'an instance of diseased trees from a nursery being the cause of propagating the same disease through several plantations in the neighbourhood. In asserting this, however, I do not mean to say that any respectable nurseryman would be guilty of sending diseased trees to any of his customers; but I do mean to say that every planter, previous to making a purchase, should go and visit the nursery, and judge for himself.' We have frequently observed in nurseries young Larches, both one and two years transplanted, having their lower side-branches browned, as if scalded, and after a time losing their leaves, the upper shoots being slightly affected, and also the leader for a few inches upwards; while many of the plants die, and all have a sickly appearance. This is evidently incipient disease; what becomes of the plants afterwards we know not, as they disappear from the nurseries generally during the following winter or spring. If, therefore, the trees in this young state be attacked by disease, it is only natural to suppose that they will carry it with them to wherever they are to be planted; and the check which they, in common with all other plants, experience when removed from the sheltered and richer soil of a garden or nursery to a poorer soil and much more exposed situation, will rather hasten than retard, much less remove, the disease, whatever it may be. And if that disease be

infectious, as stated above by Mr. Brown, not only will the plantation in course of formation be diseased, but the contiguous plantations, of whatever age they may be, will run a great risk of being destroyed by the infection."

No doubt! The "infection" is the spawn of the dry rot, which the plants carry with them.

But we must pause. Enough has been said to show that Mr. M'Intosh's book is a valuable epitome of evidence upon this subject; and although we could have wished that it had been otherwise arranged, it nevertheless remains a work indispensable to the planter's library.

We have the following before us:—*Moore's Index Filicum*, Part 7 (Pamplin). This useful book is now much improved by the addition of figures representing the differences between genera; the letterpress has reached Athyrium.—The *Cook's own Book* (Routledge) is a sixpenny pamphlet, in favour of which we have not a word to say.—*Routledge's Illustrated Natural History*, Part XIV., concludes oxen and deer, and commences sheep and goats.—Mr. Robert Scott Burn's excellent *Handbook of the Mechanical Arts* (W. Blackwood & Sons), one of the best guides to building dwelling houses, making roads, enclosing land, well-sinking, as well as the usual work of carpenters, masons, &c., has reached a second edition.—Among literary productions we may also mention *After Many Days*, a tale of social reform, by Seneca Smith (Tweedie); *Harry Birkett, the story of a Man who helped himself* (Tweedie); and the *Lady of the Manor*, by Mrs. Sherwood (Houlston & Wright).

Trade Lists Received.—Catalogue of plants and trees sold by Wm. Barnes, Camden Nursery, Southampton Street, Camberwell.—Retail Catalogue of new, beautiful, rare and other plants, trees, shrubs, &c., offered for sale by Wm. Rollisson & Sons, Tooting.—Wm. Barratt's Annual Catalogue of Plants for Stove, Greenhouse, and Bedding, grown for sale at St. John's and Newton Moor Nurseries, Wakefield.—Catalogue of Plants grown for sale by F. Godwin, Broadfield Nurseries, Sheffield.—A List of Soft-wooded, Bedding and other Plants cultivated and sold by E. G. Henderson & Son, Wellington Road, St. John's Wood.—Charles Turner's Catalogue of Azaleas, Auriculas, Dahlias, Fuchsias, Geraniums, Verbenas, Pinks, Picotees, and other Florists' Flowers, together with Miscellaneous, Herbaceous, Bedding and Border Plants, grown for sale at the Royal Nurseries, Slough.—A Catalogue of Soft-wooded Plants sold by John Sampson, Pilsley Nursery, Clay Cross.

Miscellaneous.

A Moor Blackbird [What is that?].—It is important to occupy one of the corners having partly a south and partly an east or west exposure exclusively with your Cherries; and to plant them, both dwarfs and riders, so as to fill the wall at the soonest. For no sooner will fruit appear than it will be carried off by birds, unless protected by a net. By having a double aspect, you prolong the fruit season; and by having the trees of that species brought together, one net will serve for all that you require. A most pestilent fellow, a moor blackbird, without any coral on his bill, sooty, tuneless, and ill-shaped, has of late years, like the old invaders of Italy, found the fruit of our gardens better than that of his native wilds; and having once tasted the Cherry, he cannot forget the flavour of it. He comes a host exactly at the season of ripe fruit, and never fails, with an angry chatter, when he is disturbed, to intimate that you are as annoying to him as he is to you. He is sure to have the advantage of you in early rising, which both quickens his appetite, and affords him leisure for his morning meal. He is, besides, less shy as to the quality of his food; for whilst you are judging that your fruit has not quite attained the mellowness that is wholesome for your stomach, he is busy eating; and that he has no complaint of acidity, he proves by a readiness to fall upon your Plums when he has done with your Cherries. Thus, differing from you only a little as to the nice point of perfect ripeness, he makes the round of your several crops, and is about to conclude his harvest of each sort just when you had thoughts of beginning yours. Finding my sooty foe too many for me; that he was ready enough to quaff in Cherry juice, "a good conclusion to the harvest," but never once to think of the sentiment that "fair play is a jewel," I thought of saluting him with a little sparrow-hail, of which, on making the attempt, I observe no further effect than the provoking of that peculiar chatter by which he is wont to express his disapprobation as often as he is disturbed in his interesting avocation. In this I felt some sympathy with my antagonist, perceiving that he regarded the hail not otherwise than I have done certain visitors who had as little to say, although they did not fail to make havoc of time, and hindrance of important duty. He lost no feathers, but merely an hour of harvest work; and yet the loss was more apparent than real; for getting thereby a rest for remuneration and whetting of teeth, he resumed, as others martyrs to small hail must do, his beloved task, and with redoubled quickness soon made amends for all his loss. Doubting whether my aim might not be too erring, I inquired of an old man, who was known to the premises for half a century, what in former times had been done with an enemy so untractable and persevering. Upon which my old friend, with a shake of his grey locks, which intimated that the case was a hopeless one, said, "I dinna ken; the doctor used to shoot them whiles, but it never did them meikle guid." Judging that, if no better for being shot, their manners were not likely to amend by mere provocation, I determined to alter my mode of warfare; and so, grubbing up my trees, I gathered them into one place, that one mode of defence might serve for all, and sent, by a herring cart, for a long web of decayed net, which cost only ten shillings, and has lasted nearly as many years. Thus, paying the enemy the same kind of compliment that Agricola did the aborigines of the north, I have found the defensive system entirely successful. *Dr. Paterson's Manse Garden.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

Conservatory, &c.—Some of the earlier flowering New Holland and other greenhouse plants will soon be getting past their best, and a judicious amount of foresight and care will be necessary to avoid being short of specimens in bloom with which to supply their places. Many things in the stove, as Achimenes, Gloxinias, &c., should now be in a forward state, but these must be carefully prepared for removal to the cooler and drier atmosphere of the conservatory, otherwise there will be great risk of injuring the foliage, &c. Where circumstances will admit, plants that have been grown in a warm moist atmosphere should be removed to an intermediate house about a fortnight previous to their being taken to the conservatory and gradually inured to a free circulation of air, &c. By attention to this and placing the plants in the warmest corners in the conservatory, Clerodendrons, Allamandas, &c., will continue growing slowly and blooming for some three months at a time, whereas if this is neglected, their beauty may be very short-lived. Aim at maintaining an even temperature in the conservatory after removing plants thence that have been grown in the stove, and furnish a little shade on bright sunny days. Also see that every plant is perfectly clean before placing it in this house, and that the creepers, &c., are not infested with insects. To the last-named class of plants should be added the charming Bougainvillæa, mentioned in last week's Number, and the beautiful Lapageria rosea. For the former the warmest part of the house should be selected, and where if possible its roots can have a little artificial heat. Young stock in pits will now be making rapid growth, and must be carefully attended to as to watering, stopping, training, &c. Examine Heaths frequently for mildew, and apply sulphur the moment it is perceived, some of the soft-foliaged varieties being very liable to be attacked by that pest at this season.

FORCING DEPARTMENT.

Pinery.—Where the quality of the fruit is of great importance, care must be observed to have the soil in a healthy rather dry state during the period of ripening, for as there is no reasonable hope of obtaining high-flavoured fruit from plants growing in pots, the trouble necessary to collect and place together those approaching ripeness, so as to be able to afford them a rather dry atmosphere, and avoid touching them with the syringe after they begin to colour, will be well repaid. Suckers that are not very strong will be benefited by being left on the stool for a month after the fruit is cut, but this will seldom be necessary in the case of healthy vigorous plants. Any neglect in the way of watering and maintaining a moist atmosphere in the case of succession stock may lead to their fruiting prematurely, therefore let there be no lack of attention at present. Plants swelling their fruit should be encouraged with plenty of liquid manure and a moist high temperature, shutting up early in the afternoon after syringing.

Vines.—If red spider makes its appearance on the foliage after fruit has commenced colouring, no time should be lost in coating the hot-water pipes with sulphur. The sulphur should be mixed in water with about equal quantities of lime and soot, and applied with a brush. The lime serves to prevent the sulphur from being washed or rubbed off, and the soot helps to prevent any disagreeable appearance. The temperature of late houses where the fruit is now showing must not be allowed to fall too low at night if good-sized bunches are expected, and where Muscats are grown for a late supply, there will be but little chance of securing a good crop of these unless a temperature of 70° is maintained. Attend carefully to young Vines recently planted, keeping the borders in a healthy moist state, maintaining a moist atmosphere, and shading if necessary until the Vines get a fair start. Proceed diligently with thinning the berries, &c., immediately they are ready, for they progress rapidly at this season; stop all the laterals in time, and allow no confusion.

Melons.—Where the fruit is swelling the soil should be kept in a properly moist state, and every means should be used to preserve the foliage in perfect health, as there is no possibility of obtaining good flavoured fruit unless the foliage is kept in health. Keep the Vines thin, and prevent their being encumbered with useless laterals, and remove any decaying leaves at once, as these when left only serve as a harbour for insects. There is yet plenty of time to secure a good crop in dung beds, and if any of the frames which have been used for getting up "bedding-out stuff" can be spared for this purpose the plants should be got out at once.

FLOWER GARDEN AND SHRUBBERIES.

Examine recently transplanted trees, shrubs, &c., frequently to see that they are progressing favourably. Give a liberal soaking of water where necessary, and stir and mulch the surface afterwards. Half-hardy plants now being consigned to their summer places after many months' shelter under glass and much attention and care, must be duly attended to with water until they lay hold of the soil, and with the present favourable weather and proper attention they will speedily cover the beds and will repay all the trouble that has been bestowed upon them, but every effort must be used to prevent their sustaining any check, for if allowed to get into an unhealthy state at present there will be much difficulty in getting them into free growth without much loss of time. Spare hand-glasses should now be used for the propagation of favourite spring blooming plants, as Pansies, Phloxes, &c. These do best on a shady border. Get what beds yet remain to be filled prepared with as much expedition as possible for the reception of their summer occupants.

HARDY FRUIT AND KITCHEN GARDEN.

Peaches and Nectarines will now require particular attention; destroy green fly on its first appearance; for this purpose a good wash may be made by boiling in water 2 lbs. of Tobacco, 2 lbs. of soft soap, and 2 lbs. of sulphur; boil for one hour and strain through a fine sieve, then add sufficient water to make in all 20 gallons, and sprinkle the trees with this in the evening after the sun is off them. Strawberries, should the weather again become dry, may soon require attention as to watering, &c. After thoroughly cleaning the beds a thorough soaking should be given, and if manure-water from the stable-tank can be given when the ground has been well saturated with clear water, it will assist in securing large fruit. The beds should be mulched as soon after watering as convenient, in order to prevent evaporation and the fruit from being soiled. Where clean straw cannot be afforded, fresh litter from the stable-yard will form a very good substitute.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.
For the Week ending May 17, 1860, as observed at the Horticultural Gardens.

May.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain.
Friday 11	20	29.747	29.700	66	48	57.0	52	49½	S.W.	.12
Satur. 12	0	29.730	29.611	66	49	57.5	53	50	S.	1.14
Sunday 13	22	29.795	29.690	67	37	52.0	54½	50½	W.	.02
Mon. 14	23	29.851	29.762	65	40	52.5	54½	51	S.W.	.05
Tues. 15	24	29.843	29.809	68	37	52.5	54½	51	S.W.	.14
Wed. 16	25	29.904	29.775	62	45	53.5	55	51½	S.W.	.09
Thurs. 17	26	29.609	29.522	62	38	50.0	55	51½	S.W.	.25
Average..		29.783	29.681	65.1	42.0	53.5	54.1	50.7		1.81

May 11—Overcast; rain; overcast.
— 12—Very fine; densely clouded; constant and very heavy rain at night.
— 13—Densely clouded; fine; very clear at night.
— 14—Hazy and mild; clear; rain.
— 15—Slight haze; cloudy and fine; thunder, lightning, rain and some hail, 7 P.M.
— 16—Overcast; cloudy; showery; overcast.
— 17—Rain mostly throughout; very clear in the evening; rain.
Mean temperature of the week, ¼ deg. above the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending May 26, 1860.

May.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 20..	65.9	43.5	54.7	17	0.64 in.	2	5	7	3	4	8	1	4
Mon. 21	68.7	45.2	56.9	15	0.36	3	6	9	2	5	5	2	2
Tues. 22	65.3	43.5	59.3	16	0.30	6	7	4	3	3	8	2	1
Wed. 23..	67.4	45.4	56.4	11	0.53	1	6	6	4	2	6	4	5
Thurs. 24..	68.0	44.8	56.4	11	0.54	2	7	7	1	5	8	3	1
Friday 25..	66.5	44.3	55.4	14	0.64	4	11	3	2	1	8	3	1
Satur. 26	66.9	43.4	55.2	15	0.48	2	11	5	1	3	7	3	2

The highest temperature during the above period occurred on the 26th, 1855—therm. 82 deg.; and the lowest on the 25th, 1839—therm. 29 deg.

Notices to Correspondents.

*** The Board of Works have directed that in future the Street in which our Office is situated shall be called Wellington Street, and that the Number of our Office shall be 41. Correspondents are therefore requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

Books: *A Subscriber*. Buy the Manse Garden noticed lately at p. 363.

Budding: *G W N*. If a Peach or Apricot dies and the stock springs up as a sucker, that sucker may be rebudded, if it is not disturbed. But if you take it up for planting elsewhere we should think it better to buy a stock, unless the sucker and its roots are very young

Cape Bulbs: *Constant*. Next week.

Concrete Walks: *Shepherd*. Next week.

Names of Plants: *J H*. Lasiopetalum quercifolium.—*G X*. Iris pumila.—*Evan Dhu*. Dryas octopetala.—*Singleton*. Pentlandia miniata. Rigidella flammea is quite different.—*Medico*. 1. Stellaria graminea; 2. Erysimum Alliaria *alias* Alliaria officinalis.—*P McP*. 1. Anemone pavonina; 2. Anemone hortensis; 3. Anemone apennina.—*W M*. 1. Adiantum cuneatum; 2. Adiantum formosum; 3. Adiantum capillus-Veneris; 4. Woodwardia (or Doodia) caudata.

Paint for Iron: *Gyp*. For *roots* in last week's notice read *bark*.

Susquehanna Root. *H H* will feel obliged by being informed what "Susquehanna root" is and where it is procurable. We never heard of it and do not know.

Vines: *A H*. It is cold which has done the mischief—a cold atmosphere or cold border while the plants have been growing. You are of course aware that some Vines are much more tender than others.—*A L*. Your leaves are covered on the under sides with little green excrescences which do no harm, and are dying off. They, however, indicate that your house is very close and damp, and not sufficiently ventilated.

ODAMS'S BLOOD MANURES,

MANUFACTURED BY THE

PATENT NITRO-PHOSPHATE or BLOOD MANURE COMPANY
(LIMITED).

CONSISTING OF TENANT FARMERS, OCCUPYING UPWARDS OF 30,000 ACRES OF LAND.

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JOHN BRADY, Esq., M.P., Warwick Terrace, Belgrave Square, S.W.

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Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow Marshes, Essex, E.

The Directors recommend these Manures with every confidence to the attention of their brother farmers; and the fact that they and the Shareholders farm upwards of 30,000 acres of land, cannot fail to afford a guarantee and protection to consumers
The high per centage of SOLUBLE PHOSPHATE and large amount of ANIMAL MATTER yielding Ammonia they contain not only render them the cheapest, but also the most Natural Manures, and the best calculated to produce a HEALTHY, SOUND, and HEAVY CROP.

PRICES.—Blood Manure for Corn, £7 10s.; Ditto for Roots, £6 10s.
Delivered to any Railway or Wharf in London.

☞ *As security to the Purchaser every bag contains 2 cwt., is marked* **"ODAMS'S PATENT BLOOD MANURE," and sold only by the authorised Agents of the Company.**

ODAMS'S SUPERPHOSPHATE OF LIME.

This Manure contains an unusually large per centage of Soluble Phosphate of Lime, and is, therefore, a highly valuable Manure for all Root Crops.

ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.32	3.33	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.68	14.33	16.71	16.91	16.43
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	40.80	39.40	40.33	50.33
Alkaline Sulphates and Muriates	0.72	1.25	1.78	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

Dr. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

Dr. ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

Dr. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

Dr. HODGES states that—"It may be regarded as a good specimen of super-phosphate of lime." His calculation of its value is 7*l.* 13*s.* per ton.

Dr. CAMERON reports:—"The above figures prove this super-phosphate to be of excellent quality, and I have no doubt but that its application will be attended with the most satisfactory results. It would be good value at 7*l.* per ton."

Every Bag contains 2 cwt., is marked "ODAMS'S SUPERPHOSPHATE OF LIME," and is guaranteed to yield 20 to 25 per cent. of Soluble Phosphate of Lime.

PRICES.—Superphosphate of Lime, £5 10s. Delivered to any Railway or Wharf in London.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	.. ..	£6	6
,, SUPERPHOSPHATE OF LIME		6	6
,, MINERAL		5	5
LAWES'S BARLEY MANURE		8	0
,, MANGEL MANURE		8	0
,, GRASS MANURE		8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

ESTABLISHED 1812.

MESSRS. PROCTOR are now prepared to take orders for their special MANURES for 1860, which they unhesitatingly state are of a superior quality and charged at the lowest possible price, viz.:—

TURNIP MANURE	CLOVER MANURE	OAT MANURE
WHEAT ditto	POTATO ditto	KOHL RABI do.
GRASS ditto	BARLEY ditto	Also

PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.

Apply to H. & T. PROCTOR, Cathay, Bristol; or PROCTOR & RYLAND, Birmingham and Chester.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

PERUVIAN GUANO.—
The present Price of this valuable Manure is—
12*l.* per ton for 30 tons and upwards } at the Depôts in London,
13*l.* 5*s.* per ton for 1 ton up to 30 tons } Liverpool, and Bristol.

And, in order to protect themselves against the purchase of Adulterated Mixtures, and of inferior Guanos, purporting to produce results equal to Peruvian, consumers are recommended to apply either to ourselves; to our AGENTS, Messrs. GIBBS, BRIGHT, & Co., of Liverpool and Bristol; or to Dealers of established character throughout the Country, in whose honesty and fair dealing they can place implicit confidence.—ANTHONY GIBBS & Sons, 15, Bishopsgate Street Within, London, E.C.

REAPING AND MOWING MACHINES.—CAUTION.—Notice is hereby given that any person or persons INFRINGING any of the PATENTS of CYRUS HALL M'CORMICK for REAPING and MOWING MACHINES, or making, or vending, or using, or exercising any machines which in any way infringe any such patents, will be proceeded against according to law. The main features of M'CORMICK's patents consist in a zig zag serrated cutting blade, spear head shaped, holding fingers, and a gathering reel.

PRICHARD & COLLETTE, Solicitors for C. H. M'Cormick.
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JUPP'S NEW HORSE AND CATTLE FOOD.—The utility of this new preparation being now fully established, W. & R. JUPP & Co. beg to say that they are prepared to execute orders to any extent. A trial will prove its beneficial qualities. Price 35*s.* per cwt.; 19*s.* per ½ cwt.; and 10*s.* per ¼ cwt., carriage free to nearest railway stations in Great Britain. Pig Meal, 16*s.* per cwt. Cash or a London reference expected from unknown correspondents.

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*** Agents liberally treated with.

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD, POULTRY AND GAME.—RICE SWEEPINGS, 8*s.* 6*d.* per cwt., in 1½ cwt. bags; SCREENED RICE, 12*s.* per cwt., in 1¼ cwt. bags; DOG BISCUITS, 14*s.* per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6*s.* 6*d.* and 8*s.* 6*d.* per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

LAND DRAINAGE.

WORKS OF DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.

Repayment may be made by the Landowner as successive portions of the works are completed; or the actual expenditure, with a commission thereon, may be charged on the property improved, by way of rentcharge on the estate created for various terms of years so as to adapt the rate per cent. of annual charge to the circumstances of the tenants.

No investigation of title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.

Works of Irrigation, Enclosing, Wood Grubbing, Road Making, and Farm Buildings are executed in a similar manner.

Landowners desirous to execute any of the Improvements by their own Agents, and charge the outlay and expenses on the Estate, may obtain Loans for the purpose.

Applications to be made to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.

Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.—The GENERAL MEETING OF MEMBERS will be held at the Society's House, 12, Hanover Square, London, W., on TUESDAY, May 22, at 12 o'Clock.
By order of the Council, H. HALL DARE, Sec.
London, May, 1860.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
CANTERBURY MEETING, 1860.

ENTRIES for LIVE STOCK must be made on or before June 1.
*** All Entries received in each case after those respective dates will, without any exception, be disqualified, and returned to the senders.
Prize Sheets and Forms of Entry may be had on application at the Offices of the Society, 12, Hanover Square, London, W.
H. HALL DARE, Secretary.

The Agricultural Gazette.

SATURDAY, MAY 19, 1860.

MEETINGS FOR THE FOLLOWING WEEK

TUESDAY, May 22 { Royal Agricultural Soc. of England (General Meeting) ..... Noon
Central Farmers' Club ..... 6.30 P.M.

AN advertisement in this column intimates Professor BUCKMAN's willingness to give professional advice on those points where the practice of agriculture touches the sciences of geology and botany. It is especially to the latter we would now refer. For many years this Journal has taken every opportunity of throwing such light as the botanist can direct on the quality and genuineness of agricultural seeds. It has been almost alone in the exposures thus made of the roguceries and recklessness of disreputable seedsmen. It has in numbers of instances proved that samples are falsely designated, containing other seed, and dead seed, and worthless chaff, besides that which they profess to be.

The percentage of dilution by that which will not grow, and the percentage of adulteration by that which will indeed grow but which had better have been dead; the extent of that carelessness which sows multitudes of weeds, and of that fraud which mingles rubbish with the genuine article; have been every seed time, every hoeing time, every harvest time, over and over again pressed upon the attention of our readers. And there cannot be a doubt that very general attention has thus been directed with wholesome effect to an important subject.

The whole credit of what has thus been done in

the *Agricultural Gazette* is due to Professor James Buckman, of the Cirencester Agricultural College. His laborious analyses of seeds have been the *matériel* on which all the discussions connected with this subject have turned, and to him is due the exposure of the risks which in this particular the English farmer runs from his own carelessness and from the roguery of others.

Mr. Buckman has directed his gratuitous labours to the elucidation of this subject long enough, and now like his colleagues in the sister science—chemistry—he offers his professional services in the analysis of seeds, as well as in other departments of scientific agriculture. Agriculturists and seedsmen will do well to seek the assistance of the botanical analyst for their security and authentication, just as farmers and manure makers seek the certificate of chemical analysis.

We shall still take every fitting opportunity of laying information on both subjects before our readers, but samples of seeds, like samples of soil and of manure, must for the future be sent to the professional analyst. We cannot for the future systematically, as hitherto, undertake to report on either for our correspondents here.

—— We commend Mr. Clarke's most effective reply on the discussion which succeeded his paper on Lois-Weedon husbandry, read last week before the London Farmers' Club, to the attention of our readers, who will find it in another column.

The Appeal to English Husbandmen.—There has lately appeared in our advertising columns an "Appeal to Husbandmen," holding out to enterprising young men such tempting and glowing expectations, connected with taking farms in France, that a certain excitement has naturally been produced in the agricultural world of this country, and some of our friends have addressed us upon the subject to obtain our views and to a certain extent our advice also. These views we will now endeavour to lay before our readers, together with the facts upon which they are founded, and on the accuracy of which every reliance may be placed.

In the first place, it is a lamentable fact that in the central districts of France there are vast tracts of rich land so wretchedly cultivated that their scanty crops can scarcely yield the cost of tillage, miserable though it be, and the value of the seed. So small are the returns, that it does not unfrequently occur that the ruined tenant closes the door of his farm-house, puts the key beneath it, and altogether abandons his holding without even apprising his landlord of the step he has taken. Thus it happens that farms remain tenantless for several years, a prey to weeds and lapsing into a state of perfect wilderness. In the departments of the Loire, Cher, Creuze, Allier, Puy de Dôme, Haute Loire, &c., these occurrences are by no means unfrequent, and within the last few days we have had brought under our notice well-authenticated instances of that nature.

From personal observation we can testify to many instances where the tenant has not been able to pay his rent for several years, barely supporting himself and family from the produce of the land. It is scarcely necessary to observe that this lamentable state of things prevails only in the central districts. In the north of France agriculture flourishes, and tenants prosper. In the west the land is rich, and although badly managed yields crops of sufficient bulk and value to enable the tenant to live and pay his rent. In the south the cultivation of the Vine, the Olive tree, and other special crops, places agriculture in such circumstances of local import that its status can have no weight upon a consideration of French agriculture in an English point of view.

Such being the facts—and they are admitted by all, and expatiated upon with peculiar emphasis in the advertisement alluded to—before an English agriculturist can make up his mind to betake himself, together with his goods, capital, and skil , to a place confessedly so wretched, it is natural he should first inquire what are the causes which have produced so lamentable a result, and then satisfy himself that his superior skill, his greater spirit of enterprise and activity, and, lastly, his capital, will enable him to overcome these adverse circumstances and turn that wretchedness into prosperity, that scarcity into abundance, and that desolation into luxuriant fertility.

There can be no doubt of the facility with which an English farmer could find a farm of sufficient size to form a suitable field for his enterprise, and whereon to apply his capital. Although large holdings are scarce in France, on account of the extreme division of property, yet we can fully bear out the advertisement alluded to in stating that we personally know several estates, the owners of which would be very glad to obtain English tenants. In the central districts of France the land is moreover of average quality, and when drained, well cleansed, and properly enclosed, would undoubtedly yield most abundant crops. The rent is also moderate, although we do not think it much lower than in England, but there would be no difficulty in obtaining a long lease, at a moderate rental, so that the tenant might safely apply his capital in improvements, with a certainty of fully reaping the fruit of such an investment. Good average land, for instance, can be had at a rental not exceeding 20s. an acre.

Then the advertisement goes on to hold out the expectation of the tenant easily becoming the owner of his farm. If a man has a sufficient capital, it is certain he could buy an estate on reasonable terms. There is no lack of freehold estates in the French market, as we shall presently show, but it would be a great mistake to think that land is cheap in France. Even in the most neglected districts, land always commands a full price, from certain circumstances we will presently develope. But the possession of land, although much coveted by a certain class of society, is in general so much encumbered with heavy burdens; the laws which regulate its transfer by sale or heritage are so stringent and so fatal to the true interests of landed property, that landowners are glad to get rid of it, in order to invest their capital in other securities bringing a higher interest, more easily realised, and moreover free from that heavy taxation under which the soil of France is so unjustly crushed.

It is perfectly true then that there exists in the central provinces of France a vast field for English agricultural skill and capital, and were it not for the unfavourable circumstances we will now describe, such an investment would undoubtedly prove a most profitable one, and all the advantages held out by the advertisement in our columns would assuredly be speedily attained. But unfortunately there is a reverse to that bright medal, the obverse of which is alone exhibited to English husbandmen. We will now endeavour to describe the drawbacks which an English farmer would have to encounter in that land of promise, and the burdens, difficulties, and responsibilities that would become his inevitable lot.

We must at once assure our readers that in holding out before them the following picture, we are by no means actuated by a desire of discouraging the emigration of young farmers to France: our sole aim is to prevent disappointment by faithfully and correctly describing all the circumstances in which emigrants would be placed by settling in France. We are aware that the life of an agriculturist is nowhere exempt from difficulties and heavy burdens, in the shape of taxation, vexatious covenants and charges upon the fruit of his industry; we know very well that all is not sunshine in English agriculture, for instance, and that a battle is to be fought in our favoured land as well as elsewhere. In thus describing the difficulties under which an English farmer would labour in France, our sole aim is then to furnish our readers with a term of comparison which may enable him to form a correct judgment, whatever may be his resolve.

The value of land in France is gradually diminishing in the same ratio as it is more and more frequently brought into the market. The law which compels an inheritance, personal or real, to be equally divided among the surviving children or collateral heirs, whatever their numbers may be, has had for natural result to divide property to the most infinitesimal proportions, as the following official statistics will show. The surface of France, in lands not built upon and amenable to taxation, comprises 123,212,500 acres. Of this surface 19,256,087 acres are in woods and forests, and 17,941,507 in fens and waste lands, generally owned by the state or the parishes. These two items being deducted from the total surface leave an arable acreage of about 87,000,000 acres. In 1854 the number of fragments into which this surface is divided cannot have been less than 125,000,000, which gives an average of about two-thirds of an acre to each.

No doubt there are still to be found in some parts of France, such for instance as La Brie, La Beauce, Le Berri, and Le Bourbonnais, some estates of considerable size, but estates of 100 acres and above do not comprise more than one-third of the arable surface, so full two-thirds of that surface are divided into small fragments.

In 1850 there were found in France 7,846,000 owners of landed property, 3,000,000 of whom were too poor to pay any personal tax at all, and 600,000 were found whose average taxation did not exceed one half-penny a head.*

* These facts are taken from M. Casabianca's Official Report to the Senate.

It has been denied that the subdivision of property under French laws is increasing; some economists have even asserted that it is now diminishing, but an official report recently made to the Senate by one of their members, M. de Casabianca, proves beyond controversy that from the year 1850 to 1854 the number of fragments of landed property, exclusive of houses and other buildings on freehold land, had increased by 263,893, the total increase being 428,372.

It is obvious that such a subdivision of property must produce extraordinary facilities to the gratification of that inordinate and fatal ambition of all French peasants to become owners of the soil. On the one hand the smallness of the fragment offered for sale and the insane competition of the numerous buyers greatly enhance the value of the coveted morsel, and land is not unfrequently sold at 40 years' purchase: on the other it is an admitted fact that the general return of landed property in France does not exceed 2½ per cent. When a large estate is for sale it is generally bought by a class of speculators called *Marchands de biens*, who resell it in small lots to the neighbouring peasants at a considerable profit. The peasants besides sinking in that transaction whatever little money they may have eked out of their sordid privations and almost incomprehensibly economical or rather penurious mode of living, generally borrow money at a high rate of interest to become owners of a property that scarcely return 2 per cent.

The law which on the one hand renders the sale of property compulsory at the death of the owners especially when he leaves heirs under age, has on the other burdened the transfer with such a heavy tax, that after a property has exchanged hands five or six times by way of heritage or purchase, the whole of its value has passed into the bottomless pit of the Government Exchequer and the pockets of the lawyers. Besides the probate duty, which is extremely high, the tax gatherer levies on the gross proceeds of all land sales no less than 6.60 per cent. If to this enormous amount the law expenses are added, the total cannot be less than 12 or 15 per cent. Where the property is mortgaged the expenses are still increased by the clearance or the new transfer of the mortgages. And that there is scarcely an acre of land in France that is not burdened with a debt, the following official figures will show.

On the 1st of July, 1852, the amount of money mortgaged upon the landed property of France reached the astounding amount of 449,330,631*l.* On the 1st of July, 1857, the amount had increased to 508,840,000*l.* The interest paid for this sum of borrowed money including the deed and other expenses, cannot be less than 6 per cent.; so the land property of France is burdened with the annual payment of sixteen and a half millions sterling. To this heavy incubus must be added the no less grievous one of the transfer duty, which amounts to another fearful item. From 1833 to 1840 the transfer duties averaged yearly 3,166,280*l.*; from 1841 to 1847 the average had increased to 3,803,160*l.*, which would suppose annual sales of property to the amount of 63 millions sterling. But this figure is undoubtedly below the mark, for it is notorious and in fact winked at by the Government, that the amount upon which the duty is paid represents only a portion of the price agreed upon. Generally the price declared comes only to four-fifths of the real amount. Since that period the proportion has been steadily increasing, with the exception of two or three years after the revolution of 1848, when the sales of property were diminished from the uncertainty of political events.

Let us see now from official documents what is the value of landed property in France. The estimate arrived at by the French Government is pretty accurate from the data furnished by that most admirable and stupendous work called the *Cadastre*. This is the name given to the complete survey of the whole surface of France on a sufficient scale to enable every field, however small, to be distinctly delineated on the map, together with the statement of the nature of its soil, its degree of fertility, and its commercial value. From the report of M. Casabianca, already alluded to, the total value of the land property in France, including houses and industrial buildings, amounted in 1850 to about 335 millions sterling, yielding an annual net income of 105,750,000*l.* Although we think this estimate exaggerated, yet in the absence of any other official data we are compelled to accept it, and we come to the conclusion, that after the property-tax, which amounts to about 12½ per cent. of the net income, as we will presently show, is levied, the interest paid to the mortgagees swallows up full one-third of the whole income of the real property of France!

We now come to the subject of taxation. In France there is an income-tax, but it is levied only upon landed property. A man may derive his thousands a year from the public funds, commercial pursuits, railway and other shares; yet pays absolutely nothing to the state. It is true a small income-tax has lately been established upon shares in speculative enterprises, but it is only a small exception. This property tax is not levied after a fixed per centage; in some provinces it is much higher than in others. In some departments it reaches fully to one-fifth of the rental, or 20 per cent.; in others it comes only to 10 per cent., in others to 15 per cent.; and this last figure may safely be taken as the average rate of land property taxation through France. In 1854 the

total amount yielded by this enormous impost came to 10,573,800*l.*; so that instead of the income from the landed property of France being, as M. Casabianca asserted, 105,750,000*l.*, it would hardly reach 80,000,000*l.* sterling, which is in our opinion much nearer the truth.

Calculating from the authentic returns of the annual sales of landed property, it would appear that an acreage equal to the whole surface is bought and sold every 30 years.

The probate duty to which we have alluded is another excessive burden laid upon landed property. This duty yields to the French exchequer about 2,000,000*l.* sterling every year. It is levied upon the value of all inheritances and varies from 1½ to 11 per cent. of the gross value. But as no deduction is allowed for any debt or mortgage owed by the estate, this duty reaches in reality up to a much higher per centage. If, for instance, the half of the value is mortgaged and the duty is 10 per cent., it comes up in such a case to 20 per cent. So it generally happens that every new proprietor is obliged to borrow money or sell a portion of his inheritance to pay the probate duty.

In England we complain of the malt tax; but in France there exists also a heavy tax upon all manner of beverages, and as cider, wines, beer, and spirits may be ranged under the head of agricultural produce, this tax may be considered as another burden upon the land—it yields annually to the French Exchequer more than 4,000,000*l.* sterling.

The municipal tax called *octroi* is another impost laid upon agriculture, inasmuch as it is levied especially upon all articles of food, drink, fuel, &c., consumed within the precincts of the boroughs. This tax amounts annually to nearly 4,000,000*l.* sterling. So the taxes and charges which landed property has to pay every year may be thus summed up:—

Interest on debt from mortgages, &c.	£16,500,000
Property-tax	10,573,800
Probate duty	2,000,000
Duty on sales	4,000,000
Excise taxes on wines, cider, beer, spirits, &c.	4,000,000
Octroi	4,000,000
Total paid annually by landed property in France	£41,073,800

The above burdens may be regarded as peculiar to landed property alone; but besides these an agriculturist or landed proprietor has to bear his due proportion of all the other taxes laid upon individuals and moveable goods or personal property, such as the personal tax, the tax on furniture calculated upon the rental of dwelling houses, door and window tax, local taxes of every kind, for the repair of highways and other expenses of local administration, &c. Indeed, it is not much to say that all the taxes and charges on French landed property being generally considered, nearly 60 per cent. of the rental has to be paid directly or indirectly to the State, the local administration, and the holders of mortgages.

One of the most energetic causes which act adversely upon agriculture in France, especially on the improvement of lands, is the uncertainty of ownership. The law of inheritance enacts that no proprietor can will away his property as he likes; it must be divided equally among the rightful heirs, and if any of these be minors the property must be judicially sold, that is, through the costly machinery of a court of law. The consequence of this pernicious code is that no one dare spend his money upon an estate which at any moment may be brought to the hammer and pass into strange hands. In justice to his children a father cannot apply to the improvement of his estate the fruit of his savings, from fear of others deriving all the advantages of such an expenditure, and thereby injuring his own offspring. Should for instance an Englishman buy an estate in France, of say 500 acres, which would probably cost him in a favourable locality as regards a near market and easy means of communication, about say 8000*l.*; he would have to pay as transfer duties and expenses nearly another thousand; the draining of that estate, the cleansing of the land, its general improvement, the erection of suitable buildings, machinery, &c., would not be less than 15*l.* per acre, considering the total absence of even passable buildings, and the extreme foulness of the land in France. This would entail the laying out of at least 7000*l.*, besides the regular working capital of the tenant, which could not be less than 4000*l.*, so that at least a capital of 20,000*l.* would be immediately required for an estate of 500 acres. But this we apprehend would not offer any serious difficulty; an estate of that importance, with such an outlay judiciously applied, would certainly yield a good return. But the difficulties of an English settler would only just then begin. The tax-gatherer would immediately commence his attacks; the surrounding peasantry would show their ill-will, not to say their enmity; everything surrounding the Englishman's life would assume a frown and an unpleasant contrast with his existence at home; every detail of his daily pursuits would show him he is an alien in language, in religion, in habits, in tastes, in views, in interests. He would at once be enveloped in the meshes of a vast instinctive rather than definite conspiracy. His labourers would exact high rates of wages and do no work; their labour would be as wilfully unintelligent as it would be inactive and inefficient, and in times of pressure every possible advantage would be taken of his necessities. His efforts would excite everywhere feelings of distrust and envy, and no opportunity would be neglected to outrage his good faith and generosity. Alas! the writer of this article can speak feelingly upon the subject, for it is pretty much his own experience he is now faithfully describing, and if this true and unexaggerated experience of the difficulties an Englishman would have to encounter in France can spare any one the disappointment he has experienced himself, his trouble will indeed be amply rewarded.

To the drawbacks above alluded to must be added the difficulty of obtaining artificial manures, machinery, and suitable implements. An 8-horse portable steam-engine would cost in duty and transit expenses alone at least 80*l.* The expenses upon a common four-horse gear threshing machine would be fully 20*l.*; a reaping machine which in England costs about 40*l.* could not be had in France for less than 60*l.*; and so in proportion with every other implement. There is not in France a single manufacture of superphosphate; and guano, owing to the navigation laws, is nearly 40*s.* more per ton than in England.

Then comes the question of market. France, especially in the central districts, has no large centres of population; the towns are small and scanty, their lack of commercial activity precludes every possibility of life-giving expenditure; generally the population are solely and exclusively bent upon saving their money, and eschew every indulgence or fancy that might lead to expense; they live a life of wretched penury. Those who by their rank and fortune can afford a high style of living, repair during the season to the gay capital of France, there to spend in a few months the fruit of their savings whilst they live in their château. So there is no great *local* market for the agriculturist. He must take his produce to the commercial marts, and of course everything depends upon his proximity to those marts, and the state of the roads that lead to them. Railways are being constructed in France, it is true, but as yet the centre of France is scantily provided with railway accommodation; the lines that exist are generally main arteries, going right through without any of those branch and feeding lines that bring railway accommodation nearly to the door of every farmstead in this country.

Then, only imagine a young married English farmer dying suddenly after having invested his whole capital in the purchase and the improvement of an estate, leaving a wife and young children at the mercy of the French code. What would his estate realise on a compulsory sale?

That there exists in France a most advantageous field for a profitable investment of capital for agricultural purposes, there can exist no possible doubt, but it equally certain that nothing could be more ill-advised than for individual Englishmen to settle there as farmers on their own account. The only way it could be done with a certainty of advantageous results would be by means of an association on the principle of limited liability, and on a sufficiently large scale to justify the expense of a thorough good management. In such a case most of the adverse circumstances above described would not obtain, for, on the one hand, the company would be sufficiently powerful and important to be entirely independent of *local* labour, the evils of isolation could be remedied by the settlement of a staff of English labourers and servants, and the baneful law of inheritance would not apply. We are personally acquainted with several localities where English industry and capital would be most profitably employed, but only on the principle of association.

There are prosperous land companies whose field of action lies in Australia, there are some for Holland and other countries; why should there not be some for France? The proximity of that beautiful country to our own shores, its highly favoured climate, the unexplored fertility of its soil, the sincere anxiety of its Government for the progress of her agriculture, and the favourable terms upon which land could now be obtained, the early prospect of an important diminution in the tariff on agricultural implements, are surely sufficient encouragements to induce a combination of agricultural skill and capital to cross the Channel and pitch their tent upon the neglected and almost virgin soil of Central France.

That the Government of that country are favourably disposed towards agricultural progress may be gathered from their late efforts to promote it. These efforts it is true have not been very successful; for instance, some years ago they voted a subsidy of 4,000,000*l.* sterling for drainage and other requirements, and yet, owing to the difficulties which the monster Red-tapeism has entwined around it, only 1600*l.* have actually been so applied. But it is an encouraging feature of the enterprise we recommend, that no obstacle whatever, beyond an authorisation from the State, would lie in the way of investment of English capital for the improvement of land.

Should any further elucidation of this interesting subject be desired, the writer of this article will gladly place any additional information he may have it in his power to give at the disposal of those who would like to make further inquiries.

One conclusion is sufficiently obvious from what we have said, and may be expressed in the following words: We strongly deprecate any individual attempt at farming in France, either as landlord or tenant; but we equally strongly recommend a collective enterprise on the principle of limited liability.

—— One word more on next Tuesday's general meeting of the Royal Agricultural Society. It is admitted, we imagine, by everybody that a certain number of the members present at each Council meeting should be practical agriculturists. Let the proportion be fixed as high or as low as it may, the object of those who elect the Council no doubt is to attain the proportion which each believes to be the best.

But there is a preliminary difficulty urged by those who have longest had the management of the Society's affairs, which well deserves attention. They say, "Doubtless it is desirable that practical farmers should have a certain proportionate voice in our decisions; but we find that though practical farmers are nominated and elected they do not attend. Perhaps, of the 50 leisurely gentlemen interested in agriculture who are on the Council list, 20 per cent. may attend the ordinary meetings; while, of the two dozen business men who are members not 10 per cent. ordinarily attend." And this consideration, it is urged, leads inevitably to the conclusion that the Council should consist, if anything, more largely even than it does at present, of members who are sufficiently at liberty from business and professional engagements!

It is not too much to say that such a conclusion is the very reverse of that to which the facts as stated naturally lead. That, owing to this varying facility of attendance, the numbers of the several classes within the Council actually present at an ordinary meeting are not in the same proportion to each other as the numbers of those classes *on the list*, is plain; but in order to the attainment of any given ratio of actual attendance it is also plain that the number of any class upon the list must be *increased*, not diminished, in proportion to the difficulty or rarity of their attendance. It is obvious that if the attendance of 20 per cent. of a class who do actually attend on the average with one-half the regularity of the others be desirable, then there ought to be 40 per cent. of that class on the list of members.

The case therefore preferred by those who advocate a larger nomination on the merely amateur division of the Council does, in effect, really cut the very ground beneath their feet. It may be the fact that farmers can attend comparatively seldom; but this only proves that a larger number should be authorised in order that a given number may be enabled.

Let us hope, then, that at the general meeting of the members on Tuesday next, the retiring councillors may be sufficiently replaced by men belonging more strictly to the agricultural class than those who then retire.

THE LATE DISCUSSION BEFORE THE LONDON FARMERS' CLUB.

As I could not be present at the Farmers' Club discussion, and personally reply to the observations of the speakers, may I request the insertion of a few remarks in your journal?

The Chairman considers that the Lois-Weedon method, with manual digging, could not be carried out on a large scale because of the great amount of labour required at once. I think so too, and therefore proposed my modified plan with horse-labour. I also agree with him that a combination of Woolston and Weedon, the intercultural tillage between stripes of Wheat being performed by steam-power, would largely add to the profit, while enabling the system to be pursued on a scale of any magnitude.

Mr. Green's crop on one field was not quite so great as I stated from the particulars with which that gentleman obligingly supplied me. He did not inform me that his last crop had not been threshed, but the deficiency of such a failing year will make only a difference in my estimate of his nett profit, which may still be 2*l.* instead of 3*l.* per acre, at the present low prices. Mr. Green, like the chairman, fully believes in the profitableness of the system on a small scale.

Mr. Williams thinks the earthing up when the Wheat is in bloom to be a great objection. At Lois-Weedon it is practically found to answer extremely well; and though a rough wind may twist the crop considerably, the Wheat however heavy and laid suffers little injury because of the open space, which admits air to ventilate and sunshine to ripen it.

Mr. Charles Howard pronounced Mr. Smith's heavy field to be "as fine Wheat land as any man could possibly desire," while the lighter soil is not by any means an inferior light soil. Precisely so; Mr. Smith all along affirms that a soil with a fair proportion of clay in its composition, and free from positively noxious constituents, is well adapted for Wheat growing, and that his system is not applicable to "inferior light soils."

But Mr. Howard says, "Mr. Smith's land is some of the finest I have ever seen for the growth of Wheat," and "Mr. Smith would have to go down a deal lower than he has yet done to bring any subsoil up." This is good evidence in favour of the Lois-Weedon trenching, for this is the character given to the soil after many years of the culture, not its original character before operated upon. Now it is a splendid rich unexhausted Wheat soil, with a staple so deep that 20-inch digging fails to reach the bad unmitigated subsoil; but 15 years ago it had only a 5-inch deep staple, and underneath that a "yellow clay subsoil;" and on the occasion of the first trenching (bringing up only a few inches of the raw clay), neighbouring farmers foretold that his field was spoiled, and that Mr. Smith would never get another crop—so he has informed us. No one would then have pronounced his field to be superb Wheat land; but its native mineral riches have been developed by the clever cultivation bestowed upon it, and Mr. Howard should have made allowance for what he very well knows—the transformation of heavy soil by deep and thorough tillage, as especially shown at Woolston. It will not do to disparage the resultant produce by making out Mr. Smith's 14 alternate stripe crops to be only seven really successive ones upon the same intersticial spaces of ground. This only makes the result appear more wonderful still, for you have thus seven crops of 71 bushels each, or nearly 9 quarters per acre average. Nobody ever heard before of nearly nine dead—fallow—unmanured Wheat crops in succession, yielding an average of 9 quarters per acre. The marvel is that the result has been achieved not on a naturally fertile mould unprecedentedly rich in vegetable matter, and of the physical quality of texture so highly prized in some favoured districts, but on a field of strong soil, 5 inches deep, having a subsoil of yellow clay.

Mr. Howard thinks lightly of my even 26 bushel average, because the land in the locality is very far beyond the average for Wheat-growing purposes. But what has the high average quality of soil in this neighbourhood to do with my particular plot, for we have in this neighbourhood some of the poorest silty marsh land, as well as some of the best Wheat soil. And my piece of ground is exactly what I said it was; so long cropped and worn out that to expect a yield of Wheat after Barley, after Wheat, after Beans (manured), at the very outset was chimerical; but in spite of two very defective general harvests and bad markets, I have made 2*l.* an acre on each of my three crops, that is, no less than 30 per cent. interest upon the outlay, with the price at only 40*s.* per quarter. "26 bushels of Wheat to the acre is nothing very extraordinary;" perhaps not, but I maintain that a percentage like this upon capital now engaged in farming *is*.

Mr. Fisher Hobbs adduces some very interesting facts as to loss of yield through scorching of the soil and suffering of the Wheat root from drought just prior to harvest, which results from over wide drilling. The controversy between the shadists and the advocates of exposure has arisen mainly from the different soils and climates known to the experimenters. The Lois-Weedon system is not purposed for light lands needing to be covered by summer vegetation, and on suitable Wheat soils on a dry climate, perhaps the stripes would be best drilled east and west. But one advantage of this system is that while common crops are being parched up without possibility of relief, the Wheat stripes are sucking up moisture from the capillary store existing in the deeply unworked fallow intervals, which repeatedly stirred and pulverised by the horse-hoe, imbibe the refreshing dews.

Mr. Hooker instanced an unsuccessful trial of the plan, in which the hares and rabbits appear sadly to have wanted Mr. Corbet among them. Of course Mr. Smith would not succeed very well on the "Bagshot sand;" his system is adapted for his own land—the heavy soils of the oolite formation, and for many thousands of acres of the same character.

Mr. Skelton justly discriminates between the double-spit digging of Mr. Smith, and the "never plough below the staple" of Jethro Tull, the father of drill rows and intercultural Wheat crops.

Mr. Wilson's opinion that no principle can be evolved from the Lois-Weedon system which would be "applicable to our farm," is rather too lengthy a subject to be followed up in this communication. At the risk of being classed among the theorists I must affirm my convictions from the practical trials made, that on some suitable soils it is practicable and will pay to grow cereals and other corn on Lois-Weedon principles, either with horse-hoe or steam power, in preference to keeping any live stock beyond the animals necessary to till the land and eat the straw into manure. On some other soils the new method of grain culture may be profitably combined with the growing of roots and Clovers for sheep and cattle breeding, and there are also soils on which the system would be a failure instead of an advantage. *John Algernon Clarke, Long Sutton, Lincolnshire, May* 15.

Home Correspondence.

Farming Economics, No. 1.—*Garrett's Horse-Hoe.*—Instead of wasting our time by the mere personal discussion whether Mr. Mechi is a good or a bad farmer, making or losing money, let us see how we can diminish the expense and increase the profit of everybody's farming. In my Agricultural Catechism I ask (Question No. 24): Do you use Garrett's horse-hoe for your corn and root crops? Answer: Yes. Nine farmers out of 10 would answer No; and I now want to convince them that that word is to them an expensive negative, causing them a diminution of their farming profits. Let me illustrate it. This is a late season, and a sudden favourable change may naturally be expected to cause a rush of vegetation, and an impossibility of cleaning the corn crops by hand-hoeing. Last week being so dry and suitable for weed-killing I stimulated my horse man to do extra hoeing. Having only one Garrett's hoe my man put on a pair of horses in the first half, and a fresh pair in the second half of a long day, say from sunrise to sunset, and in that one day clean horse-hoed 21 acres of Wheat on stiff clay. I gave him extra pay for his overtime:—

	£	s.	d.
Two pair of horses	0	9	0
Ploughman	0	2	0
Do. extra time	0	1	0
Wear and tear of hoes and implements, and interest on ditto	0	2	0
	£0	14	0

The 21 acres were thus well and deeply horse-hoed for 8*d.* per acre. Unless pressed for time and opportunity a man with one pair of horses usually horse-hoes from 8 to 10 acres per day of either Wheat, Beans, Mangel, or Turnips at a cost of 1*s.* per acre. In the case of root crops the hoeing is almost as deep and efficient as a ploughing. Different hoes are used for root crops. The lines of Wheat are picked over by hand-labour. It is essential to use the horse-hoe before the spring fibres of the Wheat push into the spaces or they would be injured by the hoes. Garrett's horse-hoe covers a space of 7 feet 2 inches. I have used this horse-hoe for 16 years. *J. J. Mechi, May* 7. P.S. May 14.—As I anticipated, the splendid rain of the 12th inst. has rendered weed killing a much more expensive and difficult operation.

"*Mr. Mechi and the Hounds.*"—For the last two months nothing has been heard in the agricultural world but a perfect storm of abuse against Mr. Mechi. Go where you like, you hear the foulest aspersions made upon his motives and his character, and our agricultural papers fill column after column with sarcasm levelled at his statements. We have Mr. Bond, for instance, shrewd enough, we imagine, to know that Mr. Mechi's self-respect forbids him to accept his insulting challenge, making a gratuitous show of his philanthropic generosity. I think by this time the public are sufficiently aware that Mr. Bond has 300*l.* to devote to charitable purposes. Any one not acquainted with the true nature of this tempest would naturally think that poor Mr. Mechi has singularly disgraced himself, and rendered himself guilty of a very heinous offence. But after all what is Mr. Mechi's crime? He has merely directed the extraordinary gifts of his mind and his devotedness to the cause of progress, towards agricultural improvements. He has waged a war to the knife with the most inveterate of prejudices—those of the agricultural classes. He has shown that by a judicious application of capital employed in removing old uses and abuses, and establishing means suggested and corroborated by the discoveries of modern science, twice as much profit could be realised by agricultural enterprise as the upholders of routine are wont to get. For many years he opened to all comers the treasures of his hospitality, he showed his crops to all, opened his books for their inspection, published his balance-sheets, did in fact everything that the most inquisitive can demand short of impertinence, to prove the soundness of his views. The fact that his detractors came smiling to his hall with foresworn but concealed enmity, quaffed his wines and drank his health, and then skulked back to their abodes to forge shafts of abuse, leads to this inevitable conclusion—that all the opposition raised professedly against Mr. Mechi's agricultural theories is intended against the man. He forsooth, a city merchant, a "razor grinder," has dared to intrude into the time-hallowed and venerable precincts of the agricultural interest, and not content with spending his money as he lists, he has been so bold as to tell the Mistresses Gamp of agriculture that their ways were not what they ought to be, that they had too many wooded hedges on their farm, too much water in their clays, too many weeds in their stubbles, too much waste in their dung heaps, too much foulness in their byres, too little brains in their skull, and consequently too little money in their pockets. And for telling all these wholesome truths, certainly not discovered by him, he is placed upon the index, he has become a marked man for that species of bitter persecution and abuse which is the fruit of bigotry. Are we then to conclude that money cannot be gained by agricultural pursuits? Have no fortunes been realised by farming? Are the tenant farmers of this country in such a state of poverty and want as to warrant the assertion that when Mr. Mechi says that he has realised in his twofold position of landlord and tenant a net return of a little more than 3*l.* per acre, the statement is incredible? And is Mr. Mechi the only man that has ever obtained it? Really, Mr. Editor, I have no heart to continue the consideration of this truly disgraceful subject, and I venture to express the sincere hope that this ungenerous persecution of an amiable and estimable man will at last come to an end, and remove from the character of British agriculture that stain of bitterness and malice which certain busy bodies would fain affix upon her hitherto glorious and honourable fame. *A Lover of Fair Play.* ["A Lover of Fair Play" is a known correspondent.]

Steam Cultivation.—In the course of a few weeks a great struggle for "championship" will take place at Canterbury, but instead of its being between "man and man," which it ought not to be, it will be between "machine and machine," as in this civilised age it ought to be. It is true the machines are not yet on the "train," but we all feel interested and begin to wonder whether this long and so oft repeated trial of steam-diggers, steam-ploughs, steam-horses, and steam-cultivators will be brought to a satisfactory issue, or whether we of this present generation shall only add another to our "Canterbury Tales," our mechanical appendix to poetic Chaucer! Let us hope the "coming man" will appear at Canterbury; sure sir, Chaucer ought to inspire them more than Warwick did? There one plough broke down, a second ran aground instead of into the ground, and a third was withdrawn. In fact the trial ended in a "combat of two" ploughs. The issue everybody knows. Let us seriously ask why this important question of steam culture has so long vexed the agricultural, the engineering, and the public mind, without satisfactory result. Considering how many ingenious minds have been devoted to this subject, people begin to feel surprised at their failure. If its solution depended solely on erudition or philosophy, then Hoskyns would have long since solved the problem: if on elaborate mechanism, then Canadian Romaine would have shot "ahead," like a canoe down his native cataracts: if on a knowledge of human nature, and the application of money, then Mechi would have added another leaf to his hard won wreath; if on sound practical agricultural knowledge, then Williams of Baydon or John Algernon Clarke would have pointed the way; if on manufacturing skill, then Ransome, Fowler, Garrett, and Boydell, one or the other, would long since have settled the matter; or probably Howard, duke of ploughs, would have upturned the soil with "touch more delicate than the human hand," could he but have seen "how steam was to do the business cheaper than the horse;" or if it depended on arithmetic and minutiæ, combined with a power of mechanism, then Halkett, the last prominent investigator who appeared before us would have settled the entire question, and I, even I, should have lost the mental relief of writing to my favourite the *Agricultural Gazette.* None of the gentlemen I have mentioned has solved the problem of steam culture so as to satisfy the just expectation of an Englishman, who, now rendered familiar with the wonderful advance of electro-telegraphy over the old clumsy sign-board telegraphy, and of steam-driven locomotives over the old carts, caravans, and 10 mile-an-hour mail coaches, has found a standard of measurement by which he can judge progress and invention, and hence cannot tolerate the idea that anything so inferior as equality with horse power is to be, or will be, the order of the day, when all-potent steam shall be correctly introduced to assist in the work of our fields. Once again we ask why the problem has not been solved, when so many sagacious minds have been directed to the subject? There must be a cause, latent or patent? It cannot have arisen from want of money, for we may truly say that one of the investigators, Mr. Mechi, represents a mint; it cannot have arisen from want of manure, for this same gentleman (to adopt his own impressive simile) in his own person represents a mountain; it cannot have arisen from want of mechanism, for his farm is a factory. What, then, does failure or ill success result from? Want of method. Yes, this is the element wanting; but at present they do not—will not—see it. I find our improvers and even inventors have no objection to a modification, but will not listen to a total alteration of the method of farming. The method must be totally changed, or no progress in steam cultivation can be made. *Circular Agriculture, London.*

Black Jack Fly or Caterpillar in Turnips.—Probably you may think these few lines worthy of a place in your valuable Paper, and as I found last year so great benefit from the use of 1 cwt. per acre of M'Dougall's disinfectant powder, I wish others, if they think proper, to try and do likewise. I applied the powder as a preventive, and out of about 25 acres of Swedes I did not lose a plant, whereas my neighbours (who had not used the powder) lost acres of Turnips. I sowed the powder mixed with superphosphate with the Turnip seed by drill at one operation, and the effect was most satisfactory. No farmer, I think, needs reminding of the destruction by those pests (fly, black jack, or caterpillar) to that valuable crop (Turnips) last year. I shall be glad to give any gentleman requiring it further information. *Geo. T. Atherton, Beech Cottage, Wrexham.*

Dipping Sheep and Lambs prejudicial or otherwise, according to the Method of conducting the Operation.—In common, I have no doubt, with many of your readers, I have often been struck by the conflicting opinions of writers, and even of practical farmers, on the effects of arsenical and other preparations, as steeps or washes for sheep and lambs. One man (as in the case of Mr. Black, of New Heaton) loses 850 out of 869 dipped, whilst others, amongst whom I may reckon myself, have followed the practice through a long course of years without losing a sheep, or (that ever I heard of) causing any injury to the men engaged in the

operation. Whence this discrepancy—one might almost say this antagonism—of result? Mr. Black's mixture may have been too powerful, and contained an injurious proportion of arsenic as compared with the quantity of water and other ingredients employed. I suspect it was so, but was even this sufficient to account for such a fearful amount of mortality? Ought all the blame to be laid upon the wash and none upon the washers? It appears that the operation was performed at the rate of 75 sheep an hour, or five in every four minutes, and then, dripping as they were, turned into a meadow, thereby serving as so many water-carts to distribute the poison over the Grass, which, being forthwith eaten by the poor hungry animals, would easily account for the subsequent calamity. And is it fair to visit the disastrous consequences of this slovenly, I had almost said, reckless proceeding, on the head of the unfortunate vendor, whilst not a word of inquiry or remonstrance shall be instituted into the system by which this dangerous operation has been effected, for dangerous it assuredly is, unless conducted with the utmost caution? I have spoken of my own experience through a long course of years, as leading to far different results; and as I have a great respect for practical details on such matters, shall at once proceed to narrate the method pursued by many of my neighbours and myself in dipping our lambs. Dissolve in 4 gallons of hot water ¾* lb. of arsenic, 1 lb. soft soap, aud ½ lb. kali preparate, to which add 36 gallons of cold water. This will suffice to dip 100 Southdown lambs (say in August or Sept.), paying strict attention to the following particulars. Provide a tub sufficiently large and deep to cover the animals. Be careful not to let their heads or ears go under water, to which end let it be the business of one man to keep his hands behind the back of their ears; station another at their rump, whilst a third, who likewise assists in bringing the animal to the tub, is provided with a bit of short ladder, ley tongs, or something of that kind, which he slips across the top of the tub when the sheep or lamb is taken out of the mixture. On this, as a frame, it is laid sideways, and as much of the liquor as possible squeezed out of its fleece into the tub below. On the care bestowed on this part of the process, everything depends. Not a drop should be left to injure the feed, and thus endanger the lives of perhaps a whole flock. In fact, to insure safety from this cause, I used to take the precaution of turning them when dipped into an adjoining piece of waste or "pightle," as we term it in Norfolk, as bare of Grass as possible. The expense of the operation even on the most elaborate principle is trifling, when compared with its advantages. The flock will not be plagued with ticks or lice, and (as I have observed in very many cases besides my own) little if at all with flies, often a serious nuisance in woody situations. Indeed, I have heard it stated as the opinion of many flockmasters, that were dipping of no other use than to keep off the flies, it would amply repay all the expense and trouble of the operation. So much for the system carefully administered. Now for an instance of mismanagement of precisely the same ingredients, for the recipe was furnished by myself. One of my neighbours, pleased with its success in my case, applied it to his own flock, but as he flattered himself in a condensed, and as he believed, an improved form; so he boils the materials according to my directions in 4 gallons of water, but omitting the 36 gallons of water in addition. This mixture, ten times its proper strength, he then administers by virtue of a teapot, making a channel for the tiny stream by dividing the wool along the back, neck, and shoulders; and having in this concentrated form applied the prescription, with great self-complacency awaited the result. Nor had he long to wait. The effects were soon obvious enough. Wherever the poison had traversed the skin, scabs and loss of wool gave ample proof of its strength and of the folly and danger of administering it without sufficiently diluting it, and carefully expressing all superfluous moisture out of the fleece. I don't think he lost one; but a shabbier, more ragged lot than these poor anointed creatures it never was my ill-fortune to set eyes on. The moral of all this is: that the success or failure of the operation of poisonous mixtures on sheep depends quite as much on the *modus operandi* as on the nature of the ingredients applied. With proper care it is not only safe, but highly beneficial; but without proper care, one might just as well make a plaything of gunpowder for a child

Samuel Taylor, Gloucester, May 11.

Agricultural Servants and Feeing Markets.—[Our correspondent "S" has forwarded to us the following excellent communication, contributed to the columns of the *North British Agriculturist*.] As this topic—the two subjects are so closely allied that we may consider them as one—is now undergoing a discussion which cannot fail to be useful, and as you are anxious that the opinions of persons holding varied views and in different parts of Scotland should be expressed—that the topic should be, to use a common phrase, well "ventilated"—I willingly make my contribution to its elucidation. My acquaintance with feeing markets, though I have run a good share of the currency of a 19 years' lease, has been almost nothing. I believe I have engaged a lad or two there in the time past; and I do not anticipate having greater occasion to frequent them in the time to come. But I can contribute the experience of 30 years in the management of servants of different colours in different parts of the world, and I testify that no man is more easily dealt with than a Scotch agricultural servant, when the first principles of his management are comprehended and consistently acted upon, and these are very simple:—

1st, Deal with him liberally—*i.e.*, give him the full wage of the district; 2d, Be strict in exacting obedience to orders, and the full execution of his duties; 3d, Treat him as a fellow man and a fellow Christian in your bearing towards him, and in your provision for his sustenance and lodging.

Given a course of action directed by those principles—the details of action will vary in different districts and in different circumstances; but the right principles being acted upon, the working out of them will be right; and I engage that visits to "feeing markets" on the part alike of masters and servants will be "few and far between." I by no means, however, from this leap to the conclusion that they should be abolished. I would be sorry to see that, and would consider it an infraction of the right of the owner of labour (and labour is the working man's wealth), as of every other commodity, to seek for it the best market. I see no degradation in an agricultural labourer, whether male or female, going to make proffer of their services at that settled place where masters come to look for persons qualified to perform those services. If the service is an honest one there is no shame in tendering for it; and surely there is nothing approaching to what our national poet stigmatised as

"Begging a brother of the earth
To give him leave to toil,"

in an honest ploughman or a decent field-worker standing in a market-place, and thus, without using the actual words, saying that they are willing to give "fair work for fair wage." We see men of high position in literature, in science, and in business eagerly pressing their claims, supporting these with certificates, and backing them by assiduous canvassing, when a Professorship, a Secretaryship, or such like is vacant; and I do believe that "the little cherub aloft" would less blush in looking at a peasant girl waiting on the market for a hiring than in regarding the maiden of a higher *status* manœuvering for an eligible husband. Thus we may well let the charge of impropriety drop out of consideration. But, it will be said, these markets are scenes of drunkenness. I believe the reports to this effect are exaggerated. I believe that a very small proportion of the servants attending there desire to drink. I would trust every servant I have in a wilderness of public-houses. We are not a nation of abstainers; I am old enough to remember the time when among masters a roup dinner was invariably a scene where a large number of the attendants got intoxicated. That is pretty well worn out now. May we not hope for a similar reform in the doings in their holidays of our labouring men? And hoping for such a reform, should not each in his sphere labour for it? Should not houses be established and encouraged in which broth and meat, tea and coffee, would be the staples of consumption, rather than adulterated whisky? Should not clergymen be there to give a word of counsel to members of their flock exposed to temptation? Should not elders and deacons—should not all Christian men—aid them? The enterprise is not an untried one. In the Huntly district of Aberdeenshire at recent markets men of a sacred calling appeared in the crowd—spoke in "the streets and openings of the gates;" and without discussing any matter pertaining to the revival movement, I believe I may say that it is acknowledged that their presence and exhortations had a markedly beneficial influence. I hope we shall see them equally active and equally useful at our approaching Inverness "Feeing Market." *S.*

Foreign Correspondence.

Paris, *May* 11.—Seeing in my walks to-day the streets placarded with the announcement of *the coming Agricultural Exhibition in June*, I am reminded that some information connected with it will be interesting to your readers. In the first place let me put them right on one point—it is not to be a universal Exhibition open to all nations, as we believe was many months ago announced, but a general and national one only. I have, however, high authority to state that everything bids fair to give it great *éclat* as a *concours national*. It is to commence on the 17th of June, and to terminate upon the 23d. Although the great attraction will chiefly be confined to the stock, machines and implements will be exhibited, and several tried at the Imperial farm at Vincennes.* And here I would draw the special attention of those of my readers who are interested in the manufacture or trials of haymaking machinery and implements to the fact that prizes are to be given for mechanism in this department, the competition for which is to be universal. I hope to see at the trial field in June some English faces interested in the success of certain well-known machines I wot of.

But to proceed with my task of giving the classification of animals to be exhibited, and the prizes which are proposed to be given.

The Exhibition will comprise, according to the official announcement, breeding stock of oxen, sheep, pigs, and poultry, together with implements and machines, and the products of agriculture. To these will be added two very interesting sections—horses and asses. The exhibition of these animals was not originally contemplated, but on a representation of the benefits to be derived from such a display as might reasonably be expected to be made on the offer of prizes, &c., it was decided by the Minister of Agriculture that these two sections should be added to the *concours*.

In the 1st division, Class 1st, Oxen, there are 398 prizes to be given of the value of 156,425 francs. For the cattle of the race of Normandy 18 prizes are to be given; for the Flemish cattle, 18; for Durham breed, 21; Ayrshire, 15; Dutch, 15; Swiss, 15. Each division is divided into five sections, two being given to the males and three to the females. Bulls born since the 1st May, 1858, and before the 1st May, 1859; Bulls born before the 1st May, 1858; Heifers born since the 1st May, 1858, and before the 1st May, 1859, not having been in calf; Heifers born since the 1st May, 1857, and before the 1st May, 1858; Cows born before the 1st May, 1857, in calf or in milk.

The 2d Class of the 1st division is the Sheep. For this department 124 prizes are to be given, the value of which is 27,490 francs. All animals exhibited to be born before the 1st May, 1858.

The 3d Class of the 1st division comprises the Pigs, for which 38 prizes are offered, of the value of 6650 francs.

The 4th Class of the 1st division comprises Rabbits and the Domestic Animals, for which nine prizes are offered, of the value 435 francs.

The 5th Class of the 1st division comprises the Birds of the Courtyard, for which 85 prizes are offered of a value of 3845 francs.

For the division of Horses, 209 prices are offered. For Mules seven, and for Asses 12 prizes.

The 2d division comprises the Implements and Machines, divided into 35 sections, for which 175 prizes will be given, consisting of medals of gold, silver, and bronze.

The 3d division comprises the Products and various Materials useful to Agriculture.

Gold medals will be given for exceptional cases, and where the party exhibiting shall have obtained several prizes.

The juries will be composed of agriculturists taken from the members of the Imperial and Central Society of Agriculture; to which the Minister of Agriculture may add members of the provincial agricultural societies. The reports of the various juries will be published under the care of the Imperial and Central Agricultural Society.

The expenses of taking the animals, &c., to the Exhibition to be defrayed by the exhibitors according to the reduced rates agreed to be taken by the railway companies. The administration of the Exhibition will take the charge of the feeding and all expenses connected with the animals while being exhibited. The animals and articles which shall have taken the prizes will be transported free of all cost.

The following are the dates of admission, classification, and the days on which the juries go through their labours. The products of agriculture will be admitted and classified the 11th, 12th, and 13th June, the 14th 15th, and 16th being taken up by the examination of the juries. The implements and machines will be admitted, and classified, and reported upon on the same days; as also the animals.

The public will be admitted on the payment of 1 franc on the 17th, 18th, 19th, 20th, 21st, and 22d June. On Thursday, the 21st, the prizes and medals will be distributed. On Friday, the 22d, the animals will be sold, admission 1 franc.

It may be interesting to your readers to have a few historical notes on the subject of French agricultural shows. In 1851 one general and three regional or provincial exhibitions were instituted. Such was the success of the regional exhibitions that the number was increased to 10; they stood at this figure till last year, when the number was increased to 12.

The Regional Exhibitions this year are to be held—some are in fact now being held—in the towns of Lons-le-Saulnier, Montpelier, Poitiers, Amiens, Aurillac, Bordeaux, Vannes, Tarbes, Troyes, Caen, Colmar, Le Puy. In 1861 they will be held at Beauvais, Rouen, Chalons-sur-Marne, Metz, Quimper, Orleans, Lyon, Angoulême, Rodez, Digue, Toulouse, Marseille. The Exhibitions of the present year are all held during the present month—the first six from the 8th to the 13th, the second six above named from the 22d to the 27th May. For the cattle there are prizes offered to the amount of 374,650 francs; for sheep, 82,420 francs; for pigs, 36,290 francs; for poultry, 5250 francs; in all 498,810 francs. In addition 96,000 francs will be divided between the 12 Exhibitions as grand prizes of honour, each prize consisting of a sum of 5000 francs, together with a *coupe d'argent* of the value of 8000 francs. These prizes of honour are given to the agriculturists in each department in which an Exhibition is held, who show in their several farms the best management and a display of improvements calculated to be of service to their neighbours. Amongst the labourers and parties connected with the working of the farm to which the prize of honour is given, a sum of 500 francs is divided. Medals of gold and of silver are accorded to the agriculturists of the district in which the shows are held, who carry out the best drainage or irrigation works, display the best management of rural buildings, the wisest management of manures, and the most economical and productive feeding of the stock.

The Concours General were instituted in 1851—in that year the first was held at Versailles; in 1852 at the same place; in 1853 at Orleans; in 1854 at Paris; and at the same place in the two following years. The one to be held this year we have already at the beginning of this letter given a preliminary notice of.

It may be interesting to notice the gradual increase in the stock as exhibited at the regional meetings. In

* I lb. was in the recipe given me, on wishing to try how small a quantity would do, I reduced it to ¾ lb., which I found sufficient.

* I propose in a future letter to give an account of my visit to this farm, the buildings of which, for their completeness of arrangement and the wonderful simplicity and cheapness of construction, are well worthy of description.

1851, 624 head of stock were exhibited, and 185 implements and machines; in 1852, 1037 stock and 595 implements; in 1853, 1519 stock and 679 implements; in 1854, 2358 stock and 795 implements; in 1855, 2202 stock and 382 implements; in 1856, 3228 stock and 2256 implements; in 1857, 3423 stock and 1237 implements; in 1858, 4013 stock and 2107 implements; in 1859, 4806 stock and 2860 implements. *R. S. B.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

A Weekly Council was held on Wednesday, April 16, Lord Walsingham, President, in the chair—Present: Lord Berners, the Hon. Colonel Hood, the Hon. W. G. Cavendish, M.P., Mr. Raymond Barker, Mr. Hodgson Barrow, M.P., Mr. Dent Dent, M.P., Mr. Foley, M.P., Mr. P. H. Frere, Mr. Brandreth Gibbs, Mr. Humberston, M.P., Mr. Knowles, Colonel Macdoual, Major Munn, Mr. Simpson, Mr. T. B. Western, Professor Wilson, and Mr. G. Wood. The names of candidates for election were read. A letter from Mr. Hardy, of Maldon, was read on Deep Cultivation. Mr. Frere laid upon the table specimens of the strata underlying the bed of Whittlesea Mere, now drained, and added some explanatory observations in anticipation of an article on the draining of the Mere, by Mr. Wells, to appear in the forthcoming article of the Journal. He explained the general aspect of the Mere and adjacent lands, and the old value for Reed, Sedge, and pasturage, prior to the work of reclamation. He went on to say that the land reclaimed might be divided into three classes.

1st. The bed of the Mere (about 1600 acres) covered with 3 feet of silt and capable of bearing first-rate crops.

2dly. On Mr. Wells's estate, about 1000 acres adjacent to the Mere, which from floods had received such smaller deposits on the peat as gave them a moderate value for cultivation, though subject to great injury from spring frosts.

3rdly. A tract of about 900 acres belonging to Mr. Wells remote from the Mere, with little or no deposit from floods, which are now almost valueless though subject to drainage taxes.

Mr. Frere gave information as to the work now in progress for claying the land of this last-named kind from the bed of the Mere, by aid of a railroad nearly 1 mile in length; and concluded with a few observations on the mode of culture to be adopted prior and subsequent to the dressing of clay. He also expressed a wish that landowners or occupiers in the north or west, who had undertaken or contemplated similar works, would put themselves into communication with the Society, anticipating mutual benefit from the comparison of the experience of the past and of designs for the future, drawn from different localities.

Lord Berners spoke of the great crops grown on reclaimed lands 30 miles east of the Mere, and of the consequent rise in value to such an extent that land was now let for 3*l.* 10*s.* per acre which had been purchased for about that same sum.

Colonel Macdoual, of Logan, spoke of similar improvements effected in the south-west of Scotland, particularly on a hungry iron-bound gravel soil, which when dressed with 2 inches of clay had been converted into pasture, the feed of which was worth from 2*l.* to 3*l.* 10*s.* per acre.

The Council then adjourned over Derby Day to its Weekly Meeting on the 30th inst.

Reviews.

Notes and Recollections of an Angler: Rambles among the Mountains, Valleys, and Solitudes of Wales. By John Henry Cliffe. London: Hamilton, Adams, & Co.

Angling! What in the world has a farmer to do with angling? His hooks ought to be reap-hooks, his lines ploughlines; and instead of whipping the sluggish waters, he had better whip his sleepy horses; his best cast should be broadcast; his surest ground-bait a sound healthy seed.—Gentle reader, whether of the gentle craft or not, a brother of the rod or of the sod, we are free to own there is much wisdom in these aphorisms of yours; at the same time we beg to announce with all deference to agricultural profundity, that we too have, or at least have had, our maxims, one of which we continue sedulously to inculcate to the present day, and that is this: "All work and no play, make Jack a dull boy." Now, angling is a play which even an agriculturist may indulge in without degradation; for we own we see no great inconsistency between the production of fish and that of flesh. We are not without experience in both, though in the former case, perhaps we ought to read abduction rather than production; but let that pass.

There is however a higher species of recreation than is obtainable by mere rod and line, even in the skilful hands of Mr. Cliffe; *i.e.* his masterly and interesting descriptions in this little volume of what he not unaptly calls "the hidden scenery of the country—seldom explored, the wild mountain tops, the lonely llyns, and the secluded cwms." It is this part of the book (we say it even at the risk of offence to the disciples of old Isaac Walton, 'lovers of virtue who go angling') that has the greatest charms for us. It is a practical illustration of a favourite maxim of ours that it is good for farmers to see the world; those on the mountains to visit the plains, and *vice versâ*, those of the plains to ascend the mountains. True, this implies travelling, and travelling implies money; but what earthly enjoyment can be obtained without? And have we not in this case full value received for our money? We will venture to say that no man, whether of land or sea, of town or country, with Mr. Cliffe's book in his pocket, and a few spare sovereigns in his purse, but will return to his home better and wiser for a month's ramble among the "nooks and corners" of old Cambria. To the majority of Englishmen it is a *terra incognita*, or was so till the gradual extension of railroads and the attractions of the Royal Agricultural Society's meetings induced our tourists to "look at home" and judge for themselves as to the relative beauties of the Rhine, the Wye, and other of what may be termed our native streams; and we are not sorry to announce that the result has been an increase of home over foreign travel; for it would have been little short of a national reproach to go hunting after foreign scenery when so much remained unexplored at home.

To return to Mr. Cliffe, from whom our limits will only permit a short extract, premising that on one point we venture respectfully to differ from him, viz., "whenever safe and practicable to dispense with the services of a guide" in ascending a mountain, who is to decide upon the safety or practicability of such advice? Is it not enough that Mr. Homer, Mr. Starr, and many others have fallen victims to their own rashness in so doing? Nay, the very last time that we were at Llanberis, the following incident was related to us at the Victoria Hotel. A gentleman arrived there early one afternoon in July (leaving his family to follow him from Caernarvon) for the purpose of ascending Snowdon. "You will have a guide, sir?" inquired the waiter. "Oh dear, no; the day was very bright, and the way plain enough, he had been told." "Bright enough here, sir, certainly; but how do you know what the weather may be before you reach the top?" "Nonsense! all right, I tell you." And off he started, saying they might expect his family in the evening, when, if not back, he very soon would be. The family did come, but hour passed after hour, and he came not. All the guides about the place were mustered, and after a long and tedious search he was found lying on the verge of a precipice, drenched to the skin, cold, and insensible, but still living. They carried him down to the hotel, but it was full six months before he recovered the full use of his limbs. The result is the moral we deduce from his narrative. He had accomplished a considerable part of the ascent, when a dense fog came on, followed by driving rain, and so violent a wind, that, to save himself from being blown away, he had to throw himself down on the spot where he was found, too benumbed to be able to rise, as already related.

We had marked for insertion the "Ascent to the summits of Carnedd Llewelyn and Carnedd Davydd," but regret that our space will not admit of so long an extract, however interesting. The correctness of the following remarks referring to Llyn Idwal, but equally applicable to other secluded gems, we can verify from our own experience. "Although in the immediate vicinity of Nant Ffrancon and the Holyhead road, it is comparatively little frequented by strangers. The fact is, the majority of tourists in Wales are acquainted only with the landscape which presents itself from the road. Reclining at their ease in their car or carriage they hurriedly pass through the finest scenery, contented with the hasty glance which the rapidity of travelling affords, and carry with them merely a confused recollection of scenery, which, to be indelibly impressed on the memory, must be minutely examined. Many of the finest mountain scenes, for instance, lie away from the beaten track, and require nerve and vigorous activity to reach. Then, again, time is required to effect a general knowledge of the picturesque beauties of a country; and how few, even among pedestrian tourists, can afford to spare it! In the course of our wanderings in the Principality we have hardly ever met amongst our coffee-room acquaintance a single individual who was not pressed for time; and when we have mentioned some of the most celebrated scenes as well worthy of a visit, we have been met with the reply, 'Yes, we should like much to go, but we are limited as to time.'" *S. T.*

Notices to Correspondents.

DISINFECTING POWDER: *H Bowler.* We do not know of any agency. He should advertise.

ENGLISH AGRICULTURE: *J L.* It is impossible always to judge of any alleged experience by your own *elsewhere.* Read Caird's English Agriculture (Longmans) for a description and explanation of varying English experience.

GUANO: *W C H.* We should not fear sowing and stirring in a dressing of guano on a sandy soil a month after liming.

GUANO AND SALT: *Sol.* We have to apologise for the delay owing to a mislaid letter. We should use them thus:—Lay the farm-yard manure in the drills ready to be covered by the plough, and sow broadcast by hand the mixed guano and salt over all. By then splitting and covering the drills you will, to some extent, mingle the dressing with the soil, but you will at the same time put it into the new drill, whereabout the roots first obtain their food.

HORSE POWER: *W T.* You can see them in the Crystal Palace. Apply to Mr. Hartas, Pickering, Yorkshire, who makes them. A two-horse power would probably suffice.

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J. B. can Warrant this mixture to entirely eradicate mildew when applied according to the printed directions. Sold in Bottles, 1*s.* 6*d.*, 2*s.* 6*d.*, and 5*s.* each.

10 & 11, Exchange Street, Norwich, opposite the Corn Hall.

PAGE'S COMPOSITION FOR THE DESTRUCTION OF BLIGHT upon Roses, Wall-fruit Trees, Cucumbers, Melons, Vines, Stove and Greenhouse Plants, has stood the test of eight years' public trial, and its great success has led to numerous imitations. Dr. Lindley, in his leading article of October 25, 1856, reported 182 cases in its favour—sufficient to convince the most sceptical.

4*s.* per gallon, (sufficient to make four fit for use).

10 gallons and upwards, Carriage paid to London.

LONDON AGENTS:—

Henderson & Co., Pine-apple Place, W.
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Mr. Veitch, King's Road, Chelsea, S.W.
Mr. Clark, Streatham Place, Brixton Hill, S.
Mr. Barnes, Camden Nursery, Camberwell, S.
Mr. Hopgood, Shepherd's Bush, W.
Cutbush & Sons, Highgate Nursery, N.

and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

GISHURST COMPOUND, PATENTED,

FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN
AMERICAN BLIGHT	ANTS	FLY

BED BUGS, &c.,

And useful in winter dressing.

Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
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The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1*s.* for first trials and small uses, such as destroying bed bugs; 3*s.* for not large gardens; 10*s.* 6*d.* for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by PRICE'S PATENT CANDLE COMPANY, Limited, London.

KEATING'S PERSIAN INSECT DESTROYING POWDER.—Poultry, Dogs, and Plants are effectually freed from Fleas and all other Vermin with which they are infested, by the above Powder, which is quite harmless to animal life. The Farmer, the Gardener, or the Sportsman, will therefore find it invaluable. Bugs, Cockroaches, Beetles, Moths in Furs, and every other species of Insect are also instantly destroyed.—In packets, post free, for 14, or treble size for 36 postage stamps, by THOMAS KEATING, Chemist, 79, St. Paul's Churchyard, London, E.C. Take notice each genuine packet bears the above name and address.

INSTRUMENT FOR MEASURING THE HEIGHT OF TREES.—The DENDROMETER described at page 408 of the *Gardeners' Chronicle* may be had post free for 13*s.* from EDWARD SANG & SONS, Kirkcaldy, N.B.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

AGRICULTURAL AND GENERAL MACHINERY.—As PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

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PRIZE MOWER, the most valuable ever manufactured, can be seen at their Stores, 95, Newgate Street, E.C.

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JAMES FERRABEE & CO., Agents, 70A, High Holborn, London, W.C., and Engineers, Millwrights, Machinists, and Iron Founders, at Phœnix Iron Works, Stroud, Gloucestershire.

PATENT LAWN MOWING AND ROLLING MACHINES.

30-inch wide PONY POWER MACHINE, made also of Smaller Sizes for Hand Power.

B. SAMUELSON'S LAWN MOWERS,

WITH BOYD'S PATENT IMPROVEMENTS,

CAN BE USED IN WET AS WELL AS DRY WEATHER.

Last year's sales were nearly a Thousand, every one of which gave the greatest satisfaction.

TESTIMONIALS expressing such satisfaction have been kindly sent by some hundreds of the purchasers to the Manufacturer, who will be glad to forward a copy with description and prices of Machines post free on receipt of application.

Mr. SAMUELSON is now receiving orders for Twenty to Thirty a day, and will execute them in the order they are received.

London Warehouse: 76, Cannon Street, West, E.C. Manufactory: Britannia Works, Banbury.

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RANSOMES & SIMS, IPSWICH,

CONTINUE to give their best attention to the manufacture of the most Modern and Improved Agricultural Machinery, including

PATENT AND OTHER PLOUGHS, SUITABLE FOR EVERY SOIL AND PURPOSE.
HARROWS, CULTIVATORS, ROLLERS, AND OTHER FIELD IMPLEMENTS.
HORSE RAKES AND HAYMAKERS.
CHAFF CUTTERS, ROOT CUTTERS, BRUISING AND CRUSHING MILLS FOR CORN, OILCAKE, &c.
STEAM ENGINES, BOTH PORTABLE AND FIXED, WITH PATENT OR OTHER BOILERS.
STEAM THRESHING MACHINES, BOTH PORTABLE AND FIXED, AND SINGLE OR DOUBLE BLAST.
HORSE POWER THRESHING MACHINERY, DRESSING MACHINES, CORN MILLS, HORSE GEARS, &c.

RANSOMES AND SIMS have long been celebrated for combining in their Agricultural Machinery the utmost simplicity durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture.

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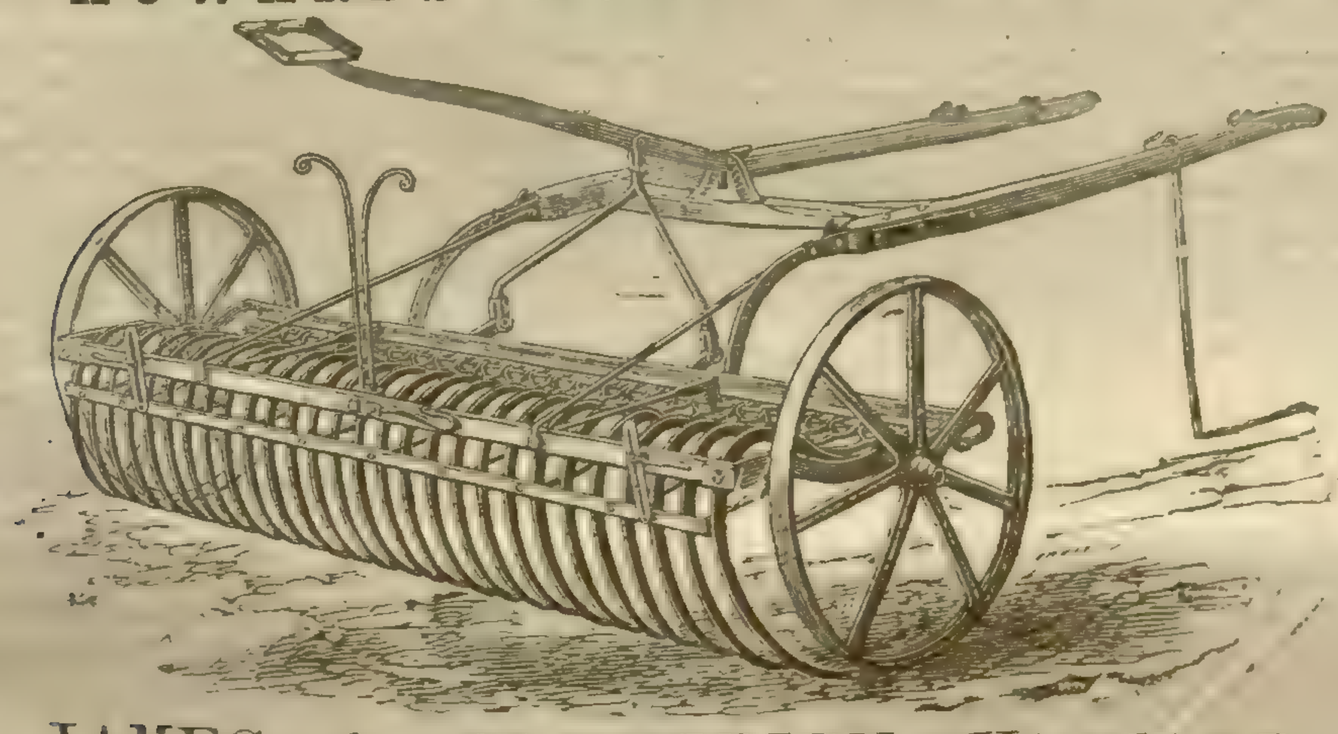
HOWARDS' HORSE RAKES—1860.



JAMES & FREDERICK HOWARD,

BRITANNIA IRON WORKS, BEDFORD,

HAVING made upwards of 6000 of their PATENT HORSE RAKES, and availed themselves of every improvement which so extended an experience has suggested, have the utmost confidence in bringing them before the Public, as not only the cheapest, but the best Horse Rakes yet produced.

J. & F. HOWARD'S NEW PATENT HORSE RAKES, brought out this season, are not only stronger, simpler, and more durable than their former patterns, but are made so that they collect less rubbish with the corn.

Small size, 7½ feet wide, marked H,	with 24 iron teeth	.. ..	£7 10 0
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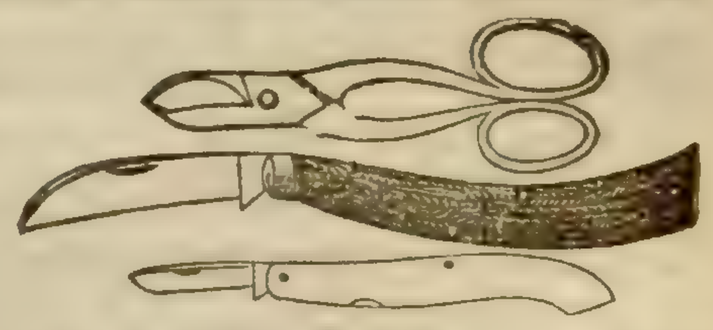
Large size, 8½ feet wide, marked H H,	with 28 iron teeth	.. ..	8 0 0
Large size, 8½ feet wide, marked H H,	with 28 steel teeth	.. ..	8 10 0
Extra size, 8½ feet wide, marked H H H,	with 24 steel teeth	.. ..	10 10 0

Free Delivery to Basingstoke, Birmingham, Bristol, Canterbury, Cardiff, Colchester, Derby, Gloucester, Hull, Leeds, Lincoln, Liverpool, London, Manchester, Norwich, Nottingham, Reading, Retford, Salisbury, Shrewsbury, Southampton, Swansea, Wisbeach, Worcester, and York; or to Dublin, Edinburgh, Glasgow, and other parts, at fixed rates.

CATALOGUES, with prices and particulars of all J. & F. HOWARDS' Implements, including description of and Reports from persons working SMITH'S STEAM CULTIVATOR, sent post free on application.

WEST OF ENGLAND AND SOUTH WALES AGENCY FOR GREEN'S PATENT "SILENS MESSOR" AND OTHER MOWING MACHINES.—BROMHEAD & SON'S Ironmongery Warehouses, 6, North Street, Bristol, where the Machines can be seen and their working explained.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.

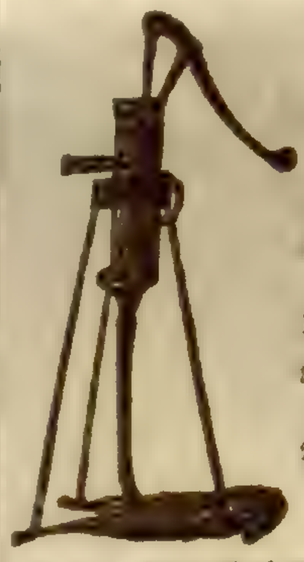


SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

THE annexed sketch represents the GLENNY WATERING POT, which will be found a decided improvement upon the old-fashioned one, as from the peculiar construction of the handle the weight is more easily balanced in the hands, which enables the user to empty with far less muscular exertion and fatigue a pot of this kind, than one upon the old plan.

Of all Ironmongers, Hardwaremen, and Seedsmen; and of LOVERIDGE & SHOOLBRED, Wolverhampton, Sole Manufacturers.

WARNER'S IMPROVED LIQUID MANURE OR GENERAL PORTABLE PUMP.



These Pumps are fitted with WARNER'S Patent Bucket and Valve, and cannot clog in action. The barrel is made of galvanised iron, not likely to corrode, and can be raised or lowered at pleasure on the stand, the legs of which fold together, and may be carried with ease by one man to tank or pond.

	£	s.	d.
Stand and Pump, with screwed tail pipe, fitted with strong brass union for suction pipe	2	15	0
If fitted with barrel of planished copper	3	17	0
Stand and Pump, with plain tail pipe, for tying on suction pipe	2	9	0
2-inch patent rubber and canvas flexible suction pipe, on wires, either 10, 12, or 15 ft., per foot	0	2	2

May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, J. WARNER & SONS, 8, Crescent, Jewin St., London, E.C.

Every description of Machinery for raising Water, by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. Engravings sent on application.

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MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their PRICED and DESCRIPTIVE CATALOGUE of FLOWER SEEDS, in which is enumerated every novelty of proved merit, also all the best of the older kinds, is now published, and will be forwarded post free on application. The scaled Collections of French and German Asters, Balsams, Carnations, Stocks, Zinnias, &c., are from the best foreign sources, and have hitherto given unqualified satisfaction. Every article has been selected with the greatest care, and is warranted true to name and of the finest quality.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

STRAWBERRY,—WIZARD OF THE NORTH (ROBERTSON'S).

DANIEL ROBERTSON continues to supply strong Plants of the above fine variety at 63*s.* per 100 or 9*s.* per dozen. For description, &c., see former advertisements. It can also be supplied genuine by the following parties in the Trade in and around London :—

Brigden, Mr. Timothy, 10, Railway Arcade, London Bridge, S.E.
Boshell, Mr. Frederick, 86, High Street, Borough, S.E.
Carter, Mr. James, & Co., 237 and 238, High Holborn, W.C.
Charlwood & Cummins, Messrs., Tavistock Row, Covent Garden, W.C.
Chartres, Mr. James, 74, King William Street, City, E.C.
Cornwell, Mr. George, Barnet, Herts.
Cuthill, Mr James, Camberwell, S.
Dancer, Mr. Alexander, Fulham, S.W.
Denyer, Mr. William, 82, Gracechurch Street, E.C.
Dodds, Mr. G. S., Epsom Nursery, Epsom, Surrey.
Francis, Mr. E. P., Hertford.
Fraser, Messrs. J. & G., Lea Bridge Road Nurseries, N.E.
Fraser, Richardson, & Goad, 82, Bishopsgate Street, E.C.
Gibbs, G., & Co., 28, Down Street, Piccadilly, W.
Gibbs, T., & Co., 47, Half Moon Street, Piccadilly, W.
Glendinning, Mr. R., Turnham Green, W.
Henderson, Messrs., Pine-apple Place, Edgeware Road, W.
Hurst & McMullen, Messrs., 6, Leadenhall Street, E.C.
Jackson, Messrs. T., & Son, Kingston, Surrey.
Jones, Mr. Edward, Hart Street, Henley-on-Thames.
Kernan, Mr. J., 4, Great Russell Street, Covent Garden, W.C.
Kinghorn, Mr. F. R., Sheen Road, Richmond, S.W.
Lawson, Messrs. P., & Son, Great George St., Westminster, W.
Lea, Messrs. J. & C., Hammersmith, W.
Low, Messrs. Hugh, & Co., Upper Clapton, N.E.
May, Mr. Joseph, & Co., 1, Wellington Street, Strand, W.C.
McIntosh, Mr. George, Hammersmith, W.
Osborn & Sons, Messrs., Fulham, S.W.
Pamplin & Son, Lea Bridge Nursery, N.E.
Paul, Messrs. A., & Sons, Cheshunt, Herts.
Rollisson, Messrs., & Sons, Tooting, S.
Smith, Mr. J., Romford, Essex.
Turner, Mr. Charles, Royal Nursery, Slough.
Veitch, Mr. James, Jun., Exotic Nursery, King's Road, Chelsea, S.W.
Watt, Mr. Alexander, Edgeware Road, W.

DAHLIAS.

F. GODWIN has pleasure in offering as under, having an unusually fine Stock :—

DAHLIAS OF 1859.—Brentford Hero, Chairman, Daughter of the Morning, Dr. Livingstone, Emperor, Golden Drop, Grand Master, Lord Eversley, Mentor, Mr. C. Waters, Mrs. Keynes, Orb of Day, Philomel, Pioneer, at 9*s.* per dozen.

DAHLIAS.—Admiral Dundas, Alice Downie, Amazon, Archbishop of Canterbury, Attractive, Captain Ingram, Cherub, Colonel Windham, Commander, Cynthia, Deutsche Würde, Dr. Gully, Elizabeth, Empress, Glenlyon, Harbinger, Hon. Mrs. Trotter, John Keynes, King, Lady Folkestone, Lady Franklin, Lady Mildmay, Lady Popham, Lollypop, Lord Bath, Lord Cardigan, Lord Palmerston, Merveille, Midnight, Miss Pressley, Miss Watts, Mrs. Church, Mrs Edwards, Mrs. Legge, Mrs. Turner, Mrs. Wheeler, Pandora, Perfection, Preeminent, Princess, Rachel Rawlings, Robert Bruce, Royal Scarlet, Royal White, Salvator Rosa, Satirist, Shaded Model, Sidney Herbert, Sir C. Campbell, Sir F. Bathurst, Sir J. Franklin, Sir J. Paxton, Sir C. Napier, Touchstone, Standard, Bearer, Triomphe de Pecq, Venus, Village Gem, Yellow Beauty, at 3*s.* per dozen.

FANCY DAHLIAS OF 1859.—Comus, Dandy, Jessie, Kean, Leonard, at 9*s.* per dozen.

FANCY DAHLIAS.—50 varieties, at 3*s.* per dozen.

BEDDING DAHLIAS.—Profusion, Orb of Day, at 9*s.* per dozen.

BEDDING DAHLIAS.—Beauté de Massifs, Golden Ball, Prince Frederick William, Royal Purple, Sir J. Watts, at 6*s.* per dozen, 40*s.* per 100.

BEDDING DAHLIAS.—Alba floribunda, nana, Captain Ingram, Colonel Wyndham, Crystal Palace, Henderson's Dwarf White, L'Emancipé, Titian, Zelinda, at 3*s.* per dozen, 20*s.* per 100.

F. G.'s D. CATALOGUE is now ready, and contains description of above.—Sheffield, May 26.

F. GODWIN offers in strong plants as under :—GERANIUMS of 1859.—Excellent Fire Queen, Lady Canning, Monarch, Prince of Wales, Sir C. Campbell, Star, Telegram, at 2*s.* each.

GERANIUMS.—Candidate, Competitor, Constantine, Julia, Marie, Prince of Prussia (Story's), Prince of Prussia (Turner's), Princess Royal, Rose Celestial, Selim, Triumphant, at 12*s.* per dozen.

GERANIUMS.—Admirable, Agnes, Cato, Clara, Conqueror, Cynthia, Fanny, Floretta, Gem of the West, King of Scarlets, Lord Raglan, Miss Foster, Marvellous, Mathilde, Meteora, Midnight, Phaeton, Polly, Rose Raglan, Seraskier, Serena, Topsy, Una, Wonderful, at 9*s.* per dozen.

SPOTTED GERANIUMS.—Aglaia, Astarte, Eunice, Fanty, Guido, Hersilia, Irene, Julia, Lampetia, Lottie, Lucy, Menestho, Metis, Parthenope, Peacock, Salacia, Sisera, Tethys, Theodosia, at 24*s.* per dozen.

SPOTTED GERANIUMS.—Dame du Halle, Frederike Meuner, Grand Duchesse, Stephanie, La Ristori, Le Titien, Madame Rendatler, Minerve, Paul et Virginie, Prince Jerome, Reine Hortense, Spotted Gem, Stuart Low, William Bull, at 12*s.* per dozen.

SPOTTED GERANIUMS.—Adèle, Alphonse Leroy, Auguste Miellez, Boule d'Hortensia, Brilliant, Chauvieri, Dr. Audry, Etoile du Jardin, Eugène Duval, Eugenie Duval, Eugenie Scribe, Godefroid, Hendersoni, La Belle Alliance, Le Tasse, Leopard, Louise Miellez, Madame Binder, Madame de Rougement, Madame Furtado, Madame Heine, Madame Laffay, Madame Place, Madame Pescatore, Madame Sueur, Marquise de Marnesia, M. de la Guilleserie, Medaille d'Or, M. Beck, Napoleon Third, Ne Plus Ultra, Ostrie, Papin, Perugino, Peseatorei, Prince Napoleon, Princesse Mathilde, Roi des Pourpres, Rubens, Scaramouche, Vespa, at 9*s.* per dozen.

FUCHSIAS of 1859.—Chancellor, Crown Jewel, Eclat, Fanny, Fascination, Flower of France, Golden Plover, Isa Craig, La Crinoline, Leoline, Le Prophète, Little Dorrit, Lord Clyde, Marie Flinte, Pericles, Sir C. Campbell, Stradella, Village Bridge, Wiltshire Lass, at 9*s.* per dozen. All older varieties, 4*s.* to 6*s.* per dozen ; 30*s.* per 100.

For descriptions of above see F. G.'s CATALOGUE of PLANTS, which may be had post-paid on application.—Sheffield, May 26

F. GODWIN begs to offer the undermentioned choice Bedding Plants :—

	Per doz.—*s.*		Per doz.—*s.*
Ageratum mexicanum	3	Lobelia erinus speciosa	3
Alyssum variegatum	3	Petunias, crimson purple and white, per 100, 20*s.*	3
Calceolaria aurea floribunda, the best yellow bedding variety, per 100 20*s.*	3	Petunias, double, 20 vars.	4
Calceolaria, other varieties, 2*s.* 6*d.* to	4	Verbenas, crimson, per 100, 20*s.*	3
Delphinum formosum, per 100, 20*s.*	3	Verbenas, purple and blue, per 100, 20*s*	3
Geraniums, variegated Bijou	9	Verbenas, rose and pink, per 100, 20*s.*	3
,, variegated Brilliant, 3*s.* to	4	Verbenas, scarlet, per 100, 20*s.*	3
,, ,, Fairy Nymph	4	Verbenas, white, per 100, 20*s.*	3
,, ,, Jane	12	Verbenas, intermediate shades, per 100, 20*s.*	3
,, ,, Julia	12	Verbenas of 1859, more than 40 varieties	4
,, ,, Perfection	9		
,, ,, Queen Victoria	6		
Heliotropiums of sorts, per 100, 20*s.*	3		

F. G.'s CATALOGUE is now ready, and can be had on application.—Sheffield, May 26.

BEDDING PLANTS.

GEORGE STANLEY, Manor Lane Nursery, Lee, Kent, S.E., begs to offer the following, which may be relied on as strong well-established Plants :—

	Per dozen.—*s. d.*	*s.*		Per dozen.—*s. d.*	*s.*
Ageratums	2 6	to 3	Fuchsias	3 0	to 4
Alyssum variegatum	2 6	,, 3	Heliotropes	2 6	,, 4
Calceolaria, of sorts	3 0	,, 4	,, per 100	18 0	,, 24
,, per 100	20 0		Lobelias	2 6	,, 3
Geraniums, Scarlet, of sorts	2 6	,, 6	Salvias	2 6	,, 3
,, per 100	18 0	,, 24	Verbenas	2 6	,, 3
,, variegated, of sorts	3 6	,, 12	,, per 100	16 0	,, 20
			,, per 1000	150 0	,, 190
			Gaillardias	3 0	,, 4

The true New AUSTRALIAN CRESS, 1*s.* per packet.

A remittance from unknown correspondents. Post-office Orders payable at Lee, Kent, S.E.

BEDDING PLANTS.

WOOD AND INGRAM beg to offer the following, which may be relied upon as fine stocky, well-established Plants :—

	Per dozen.—*s. d.*	*s.*		Per dozen.—*s. d.*	*s.*
Alyssum variegatum	2 6	to 3	Ditto, Variegated	3 6	,, 6
Ageratum, sorts	2 6	,, 4	Heliotropes, sorts	2 6	,, 4
Calceolaria, ditto	3 0	,, 4	Lantanas, ditto	3 0	,, 4
Ditto ditto, per 100	20 0		Lobelia speciosa	2 6	,, 3
Dahlias, ditto	4 0	,, 6	Ditto ditto per 100,	16 0	
Fuchsias, ditto	4 0	,, 6	per 1000	£7 10 0	
Geraniums, Scarlet, sorts	2 6	,, 4	Petunias, sorts	2 6	,, 4
Ditto ditto, per 100	20 0		Verbenas, ditto	2 6	,, 3
			Ditto ditto, per 100	16 0	

Huntingdon Nurseries.

CHARLES TURNER has now ready the following BEDDING and BORDER PLANTS to supply per dozen or hundred at very moderate prices :—

Ageratum, blue
Antirrhinums of sorts
Bouvardia Hogarth
,, Oriana
,, Rosalinda
,, others in variety
Calceolaria aurea floribunda, fine dwarf yellow, large truss
,, Yellow Prince of Orange, very fine dwarf yellow
,, Prince of Orange, an excellent bedding variety
Dianthus Heddewigii
Dahlias for beds or border decoration, bedding vars.
Double Purple Senecio
Fuchsias of sorts
Heliotropes of sorts
Koniga variegata, pretty for edges
Lobelias, blue, in variety
Nierembergia gracilis, very beautiful, and from its long continued flowering a great acquisition
Œnothera macrocarpa, yellow, dwarf
Petunias of sorts
Perilla nankinensis
Pyrethrum album pleno
Phloxes, herbaceous, in variety
Scarlet and other Geraniums
Tropæolum elegans, fine dwarf
Verbenas, various colours
Variegated Geranium, Golden Chain
,, ,, Bijou, fine
,, ,, Perfection, fine
,, ,, Julia
,, ,, St. Clair
,, ,, Alma
,, ,, Shottesham Pet
,, ,, Lady Plymouth
,, ,, Jane

The Royal Nurseries, Slough.

BEDDING PLANTS, ETC.

F. AND A. SMITH are sending out fine plants of the following :—

Ageratum mexicanum
,, variegatum
Alyssum, yellow
,, white
,, variegatum
Calceolaria aurea floribunda
,, aurantia floribunda
,, angustifolia
,, amplexicaulis
Cuphea platycentra
Dianthus in variety
Delphinium formosum
Fuchsias, various
,, acubæfolia
Geranium, scarlet in variety
,, Trentham
,, fancy do.
,, Brilliant
,, Flower of the Day
,, Lady Plymouth
,, Mangle, silver edge
,, Alma
Heliotropium
Hollyhock
Lantana in variety
Lobelia crinus racemoides
,, speciosa
Linum flavum
Melissa variegata (Balm)
Nasturtium Tom Thumb
Nierembergia gracilis
Pansies, French fancy
Pentstemon in variety
Petunias, purple and others
Phlox Drummondi
Portulaca
Rhodanthe Manglesii
Roses, Tea and others
Salvia fulgens
,, Gesneriflora
,, tricolor
Senecio, double crimson
Thunbergias, various
Tropæolum Stamfordianum
,, Lobbianum elegans
Verbenas, all colours
Zinnia elegans

CLIMBERS.

Cobea scandens
Eccremocarpus
Lophospermum
Maurandya in variety

GENERAL CATALOGUE on application.—Dulwich, Surrey, S.

CHOICE CONIFERS.—All seedling plants, three years old, in pots, very healthy and fit for planting out.

	s. d.		*s. d.*
Pinus Don Pedri	3 6	Pinus Ehrenbergii	1 6
,, Veitchii	2 6	,, popelini	1 6
,, Popocatepetli	2 6	Abies religiosa	2 6
,, macrocarpa, fine	2 6	,, hirtella	2 6
,, Llaveana	1 6	Cupressus M'Nabbiana, true	6
,, tuberculata	1 6	Picea amabilis, 2 years	1
,, Benthamiana	1 6	,, grandis, 2 years	2 6
,, Lerdoi	1 6	Wellingtonia gigantea, splendid plants, 2 to 3 feet	21 0
,, resinosa	1 6		
,, cornea	1 6		
,, patula	1 0		

J. HENCHMAN, Edmonton, Middlesex, N.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended :—

	P. packet—*s. d.*
BROCCOLI, Penzance White (Mitchinson's)	1 6
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation	1 6
CUCUMBERS, all the best varieties	1 0
LETTUCE, Alma (Griffin's)	1 0
,, Moor Park, extra fine	1 0
MELONS, all the best varieties	1 0
TOMATO, Early Red (Powell's)	1 6
FLOWER SEEDS.	
CALCEOLARIA, herbaceous, finest mixed	2 6
CINERARIA, from finest named varieties	2 6
,, maritima	0 6
CELOSIA aurea pyramidalis	1 6
,, crimson-feathered variety	1 6
COCKSCOMB, dwarf, extra fine	1 0
DIANTHUS Heddewiggi	1 0
LOBELIA erinus speciosa (true)	1 0
PANSY, from named varieties	1 0
PERILLA Nankinensis	0 6
PRIMULA sinensis fimbriata	1 6
SOLANUM capsicastrum	1 0
,, pseudo-capsicum ; this is quite equal in beauty for decorative purposes to the preceding	1 0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

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	Per lb.	Per bush.
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SEEDS AND PLANTS.

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HENRY JESSE begs to thank his friends for the support he has received for many years, and to inform them, that in addition to his CORN AND SEED BUSINESS, he has now added the MANURE, CAKE, AND TURNIP SEED TRADE. The latter he has devoted his particular attention to, having made arrangements with a first-class House ; and trusts by keeping articles of the best quality, to supply his customers on such terms as will give satisfaction and ensure their support. Orders.—Railway Stores, Basingstoke ; and 109, Seed Market, Mark Lane, London, E.C.

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JOHN STANDISH, in offering the following Plants can assure his customers that they are now in fine condition for sending out:—

MYOSOTIDIUM NOBILE, or Antarctic Forget-Me-Not, each 31*s.* 6*d.*—This plant, from the Chatham Islands, is one of the most remarkable that has been introduced for some years, being totally distinct from all others. It has large thick leaves, 8 or 9 inches across, of a dark glossy green, and sends up magnificent trusses of bloom of the most beautiful blue and white, similar to a Forget-me-not, but of a giant form. A Drawing of it is published in Curtis's "Botanical Magazine" for September. A description taken from the above is also published in the *Gardeners' Chronicle* of Sept. 17, 1859, wherein Dr. Lindley says:—"This is the handsome perennial provisionally named Cynoglossum nobile by Dr. Hooker in our last year's Volume, page 240. It is quite deserving all the encomiums that have been passed upon it."

RHODODENDRON NUTTALII.—The largest flower of all yet known, having 11 flowers in a truss, each flower being 6¼ inches across. Seedling plants, 3 inches high, 7*s.* 6*d* each; 60*s.* per dozen; or 20*l.* per 100.

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FRANCIS R. KINGHORN can supply the above, good plants in 60-pots, at 7*s.* 6*d.* per dozen.

Also a fine Stock of the most popular BEDDING PLANTS, &c., at moderate prices.—Sheen Nursery, Richmond, S.W.

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Sheen Nursery, Richmond, S.W.—May 19.

NEW BEDDING GERANIUM "DAYSPRING."

WILLIAM BADMAN AND CO., Gravesend, are now prepared to send out this distinct and beautiful plant, which they can with confidence recommend as a great acquisition among variegated kinds.

The foliage, which is large, is distinctly flaked with sulphur yellow, giving it a novel and picturesque appearance.

The flower is bright scarlet, truss carried up well above the foliage, closely resembling in colour and size the well-known Geranium "Punch."

The habit is free but compact, making it very suitable for beds, or for the second row in a ribbon border; it grows and flowers freely in winter, so that it must prove very useful for winter decoration in the conservatory.

Received Certificate of Merit at Maidstone, June, 1859.

Plants 7*s.* 6*d.* each, four for three to the Trade. Remittance or reference from unknown correspondents.—May 26.

NEW GERANIUMS.

WM. DENNIS, FLORIST and NURSERYMAN, King's Road, Chelsea, S.W., begs to inform ladies and gentlemen that he has been successful in obtaining three splendid new varieties, viz., HAVELOCK, MRS. DENNIS, and ARABELLA GODDARD, in the style of his OLD PERFECTION and his ALMA of later date, both of which have stood the test of years, and are acknowledged to be still unrivalled. The three now offered are of different colours from the above, and if possible much more abundant in bloom, and in growth nearly resembling Alma; in fact, they must be in every collection where good flowers and showy handsome plants are required.

The three will be sent in good blooming plants on receipt of a Post-office Order on Chelsea, or satisfactory reference in London, for 10*s.*, including package and two or three plants added to pay the carriage, and when received if not approved they may be returned carefully repacked, so as not to sustain any injury and the carriage paid; the money will then be returned.

CHOICE PELARGONIUMS.

WILLIAM HUSSEY begs to offer the following collection at 16*s.*, package included, viz., Evening Star, Majestic, Lucy, Mrs. Turner, Captivator, Richard Benyon, Negro, Rose Celestial, Mazeppa, General Williams, King of Scarlets, Seraph, Zeno, Seraskier, Cynthia, Phaeton, Desdemona, Mary, Petruchio, Eugene Duval, Viola, Standard, May Queen, Admirable, Saracen, Competitor, Evangeline, Decision.

Horticultural Gardens, Norwich.

CHOICE FUCHSIAS.

WILLIAM HUSSEY begs to offer the undernamed collection for 14*s.*, package included, viz., Isa Craig, Sir C. Campbell, Flower of France, Pericles, Chancellor, Conqueror, Rose of Castile, Guiding Star, Magic Flute, Prince of Prussia, elegans, Little Bopeep, Marquis of Bristol, Leoline, Le Prophète, La Crinoline, Wiltshire Lass, British Sailor, Kitty Tyrrell, Souvenir de Chiswick, Maid of Kent, Lord Clyde, Venus de Medicis, Omar Pacha, Vanguard, Wonderful, Monarch, Prince Albert.—Horticultural Gardens, Norwich.

NEW SPRING CATALOGUE.

WILLIAM BARNES begs to inform his patrons and friends that his New DESCRIPTIVE CATALOGUE for the present season is Now Ready. It contains selections of Indian Azaleas, Ferns, Stove and Greenhouse Plants, Chrysanthemums, Fuchsias, Pelargoniums, Verbenas, Petunias, Phloxes, Cinerarias, Hollyhocks, Liliums, Roses, Miscellaneous Bedding Plants, Hardy Trees and Shrubs, Fruit Trees, &c., and will be forwarded post free on application.

Camden Nursery, Camberwell, London, S.

NEW VERBENAS.

MESSRS. J. AND C. LEE can recommend the following 12 VERBENAS, now sent out for the first time, for size, shape, and superior bedding qualities.

GEORGE STEPHENSON.—Rose, large and fine, of good habit.
MISS RUTH.—Purple, large and fine, of excellent habit.
MISS EGLA.—Deep scarlet, clear white eye, very fine, in the class of "Géant des Batailles."
LADY MARY BOUVERIE.—Crimson, white eye, in the class of "General Simpson."
CAROLINE.—Rose shaded violet, large and very fine.
ROYAL SCARLET.—Intense scarlet, finely shaped flower, of first-rate habit.
PRETTY POLLY.—Light rose, dark eye, neat and pretty.
WALTER.—Dark crimson, pale eye, fine.
MRS. GLYN.—Light rose, fine.
EDWARD OLIVER.—Lilac, fine and large.
LORD CLYDE.—Rose shaded, purple, large and good.
MISS ANNA.—Scarlet, fine clear yellow eye, in the class of "Miss Trotter." Price 30*s.* the set.

Nursery and Seed Establishment, Hammersmith, London, W.

NEW CHRYSANTHEMUMS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington, N., begs to inform his friends and the public that he has the finest Collection and the largest Stock of CHRYSANTHEMUMS and POMPONES in the world, and can supply them by the 100, 1000, or 10,000.

25 Pair of Best POMPONES, 10*s.*
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CATALOGUES for one stamp. To save trouble all orders to be pre-paid.

NEW CHRYSANTHEMUMS.

JOHN SALTER, F.H.S., is now sending out strong plants of his Seedling Chrysanthemums with all the other new varieties of 1860, as well as those of his general collection, which is the most extensive in Europe.

Versailles Nursery, William Street, Hammersmith Turnpike, W.

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JOHN SALTER respectfully invites the admirers of Ornamental Plants to an inspection of his collection of HARDY HERBACEOUS PLANTS WITH VARIEGATED FOLIAGE, which for extent and beauty he flatters himself is unrivalled in this or any other country. The Gardens are open every day except Sunday.—Versailles Nursery, William Street, near Hammersmith Turnpike, W.

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SAVED FROM THE

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LUCOMBE, PINCE, AND CO. have now ready for sending out SEEDS of very superior CINERARIAS, which have been carefully saved from fine selected flowers of all the best new varieties.

The great satisfaction which their Cineraria Seed has given for several successive years, has induced them to pay even greater attention to the quality, which enables L., P., & Co. confidently to recommend the Seed of this present season's saving, as being vastly superior to any previously sent out by them.

Packets sealed and warranted at 2*s.* 6*d.* each, free by post.

The present is an excellent time for sowing, and as their stock owing to its select quality is limited, early orders are respectfully solicited.

Exeter Nursery, Exeter, established 1720.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY

BEING ABOUT TO RESUME THE

IMPORTATION OF SEEDS AND PLANTS

by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. A knowledge of Spanish or Portuguese would be desirable. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, MAY 26, 1860.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, May 30—Royal Botanic ..... 2 P.M.

So! heat is at the bottom of it all. We suspected as much. The result is conformable to both theory and practice. Let us hope that the case of BOUGAINVILLÆA will be a warning to all men engaged in gardening.

The supplemental account given by Mr. DANIELS of his management is like the postscript to many a letter; it contains the most important part of the communication. The roots of the plant were kept in soil heated far beyond anything customary. They were in a brick pit only 3 feet square, touching the back end of a boiler, and having beneath it a brick flue "that was burning hot."—"The flowering took place after the brickwork round the roots had been heated to 140°"—"I should consider," adds Mr. DANIELS, "that the roots had a bottom-heat of about 100°."

Herein lies the secret.

There can be no doubt that the temperature of the soil in which plants grow is of more importance than that of the atmosphere which surrounds their branches. This fact has been recognised from an early period in the history of modern gardening; as the term BOTTOM HEAT indicates. But so far is such an important truth from being regarded as universal, that it has been, and still is by many, supposed to have quite a special application. Pine Apples, Melons, and Cucumbers, and a few tropical plants are thought to require bottom heat and they get it; but only they. Is there one gardener in 10 who warms his Vine border, for instance, or that in which his forced Peaches are growing in February? In such cases it is thought enough to keep the roots of the plants inside the house, instead of permitting them to straggle into an outside border. But that by no means secures the subterranean temperature in which Vines and Peach trees grow naturally when in perfection. That it is owing to the unnatural coldness of the earth that so many Vines shank or remain absolutely sterile we cannot doubt; the same circumstance explains the refusal of Peaches to stone, and of exotic seeds to grow in the open air.

It may be taken as a safe rule, though doubtless a rough one, that the temperature of the earth at 2 feet below the surface should correspond with the mean temperature of the air. Let us suppose that in a Vinery in February the lowest temperature of the air is 55°, and the highest 75°, the average being 65°. Is that the temperature of the earth in which the Vines grow at 2 feet below the surface? It is unnecessary to answer such a question; in an open border it will be only 40° or 41°—a few degrees above freezing!

Let us see what bearing this fact may have upon the case of BOUGAINVILLÆA. The plant is a native of Brazil; of what part we are uncertain. Suppose it to come from Rio Janeiro; the mean summer air heat of that city is about 80°; therefore 80° should be the bottom heat of the plant when in cultivation. But it is not improbable that Bougainvillæa lives in a more considerable temperature, where the earth is sun baked; and if so a higher bottom heat would suit it still better; as seems to be indicated by its vigour in Sicily, where the soil must be heated to at least 85° at Catania, during the summer months, as well as by the statement made by Mr. DANIELS.

A correspondent asks us why he cannot make his Cape bulbs flower more than once, if at all. If he consults the *Theory and Practice of Horticulture* he will find the explanation in the curious observations made by Sir JOHN HERSCHEL, who when at the Cape of Good Hope remarked that "in the hot months the roots of bulbous and other plants which do not seek their nourishment very deep must frequently, *and indeed habitually* attain temperatures which we can only imitate in our hothouses by actually suspending over the soil plates of red-hot iron. For it must be remarked that heating the ground *from below* would not distribute the temperature in the same way."

There is somewhere in the Transactions of the Horticultural Society a description of the manner in which *Bignonia venusta*, another superb climber, which rarely flowers, was compelled to pour forth its masses of orange-coloured blossoms in the utmost profusion; and again the effect was produced by nothing unusual except an excessive bottom heat.

Old gardeners used to maintain that summer had never come until the Mulberry tree was in leaf; and they were right, although they could not explain the reason for their belief. The geothermometer furnishes it. The Mulberry grows nowhere better than in Turkey. The mean air temperature of Constantinople in May is 61° 34′; the mean earth temperature of London in the same month at 2 feet below the surface is 61°; and it is not till the earth becomes thus warmed that summer weather lasts.

Were these things well considered and rightly applied Horticultural failures would not be so often heard of.

BEFORE this appears it will have become generally known that the House of Lords has refused to sanction the repeal of the EXCISE ON PAPER. This course was taken, not because their lordships thought the paper duty a good one; on the contrary, no voice was raised in its favour; nor because they believed in the outcry about a deficiency in the rag-market, for we do not see that the subject was mentioned; but because the country cannot just now afford to abandon thirteen hundred thousand pounds a year for an idea. It was however admitted that before long the paper duty will disappear; the fitness of taking it off is no longer a question; all that is required to extinguish it is a more peaceful condition of political affairs. It is, therefore, clear that the paper duty is doomed, although not yet to be executed.

We cannot say that we regret the course that has been taken, which will probably prove as advantageous to the public as it is said to be necessary to the national finances. For although the outcry about the impossibility of making good paper from anything but rags was most absurd, yet we must admit that a sudden change might have proved extremely embarrassing to manufacturers and not very profitable to the public. In all great manufacturing changes which involve the necessity of providing new raw material time is indispensable; for a supply of such articles in the markets of the world cannot be suddenly created. Experiments must be tried, many of which are certain to fail; materials must be obtained where they are cheapest; colonial markets must be roused into action in a new direction, and even at home the ingenuity of inventors must be gradually excited and encouraged before satisfactory results can be obtained. For these reasons we are far from regretting the course which the Lords have taken. It is enough for to-day to have gained the admission, by both Houses of Parliament, that

paper must be released from taxation at the first convenient opportunity.

In the mean while the discussion caused by Mr. Gladstone's intentions will have done good. It has shown unmistakeably that the paper makers cannot indulge in dreams of security. The paper duties will probably be removed at very brief notice, and if manufacturers are wise they will be prepared for the inevitable change, by shaking off the trammels of the rag market. Even should that change be deferred for years, still the ventilation of the question will have proved of much advantage; for it is impossible that it should not speedily lead to the discovery of commercial value in what have been considered worthless articles both at home and abroad. Upon this subject a paper lately read before the Society of Arts by Dr. Forbes Watson may be usefully consulted.

About two years ago we gave an account of the ravages which had been committed in one of our most important nurseries by a little mould, the threads of which ran from plant to plant, carrying destruction with them in every direction. Great pains were taken to transmit instructive specimens, but these necessarily arrived in an unsatisfactory condition after a journey of more than 150 miles.

A similar case has however just occurred in our own garden, in which we have been enabled to watch the progress from a very early stage, though the parasite in question is so small as to be almost invisible to the naked eye. A pot of seedling *Agrostis pulchella*, which for a time looked very flourishing, suddenly began to fail, as we conceived in the first place, and probably correctly, from having been watered with too heavy a rose. The plants however which had fallen down and come in contact with the soil were not the only ones to fail, but as the others soon became affected, we were induced to watch the case more narrowly. On examination it was at once evident that delicate spider-like threads ran from the diseased to the sound plants and soon involved them in the same destruction. The appearance was so like that of the Wellingtonias and other Coniferæ which had perished in the case above-mentioned, that we felt sure at once that there must be something very similar. Accordingly we were soon able to trace the development of these threads though the greater part of them perished, and the little Fungus to which they gave rise was so minute that it was quite invisible without a lens. Under a high power of the compound microscope, these threads were seen closely attached to the leaves of the Grass, sparingly branched and jointed, and giving off little more or less closely compacted tufts of jointed-branched, necklace-like threads, terminated by curved, somewhat apiculate spores about $\frac{1}{500}$ of an inch in length, and furnished according to their age with from one to five hyaline septa. When perfectly grown, each articulation is somewhat swollen, and in a few instances the spore is perfectly developed when three septa alone are formed. The Fungus evidently belongs to the genus *Fusisporium*, and is certainly undescribed, and may be characterised *Fusisporium insidiosum*, Berk.—white, mycelium creeping, producing subglobose tufts of short necklace-like simple or branched threads, each terminal joint of which bears a curved fusiform apiculate 1—5-septate spore.

At present the Fungus has not spread to other members of a collection of seedling Grasses in the same frame. To prevent if possible the chance of contagion, the *Agrostis* has been removed far away; but it can scarcely be expected that it will be the only sufferer. From former experience in such matters, we fear very much that should the mould spread the only remedy will be for a time to abandon the particular frame. The case, however, is interesting, as showing that though Fungi may be generated in the first instance on decaying plants, they are capable when once established of spreading to others which are perfectly sound. The best plan in all such cases, when once ascertained, is at once to use precaution, especially in large establishments, or the evil may spread so as to cause very serious loss and inconvenience. If a leaf affected by spawn in this way has once been observed, the appearance is so peculiar that a similar affection in other cases can scarcely fail to be recognised, and if so, the affected plant should at once be removed. The time, we fear, is far removed when cultivators will be able to examine such matters under the microscope for themselves, but a little intelligence will go a great way assisted merely by a good pocket lens, an instrument which no gardener who has any pretensions to skill should ever be without.

Our figure represents the general appearance of *Fusisporium insidiosum* slightly magnified; and two

tufts in different stages of growth springing from a thread of mycelium, together with two young and two perfect spores highly magnified. *M. J. B.*

ON THE ART OF PERFUMERY, ITS HISTORY, AND COMMERCIAL DEVELOPMENT.

BY EUGENE RIMMEL.

[Abridged from the Journal of the Society of Arts.]

Perfumery may be defined as the art of collecting and presenting in a convenient and fixed form, for the gratification of the sense of smell, the numerous volatile and evanescent fragrant principles diffused throughout nature. Perfumes are invisible and imponderable emanations from all odoriferous bodies carried through the atmosphere and rendered perceptible to our senses by means of our olfactory organs. They can become fixed in other bodies with which they come in contact, and on the degree of affinity which exists between them may be said to rest the principles of the art of perfumery. Animal substances are found to absorb odours more readily than any others; vegetable substances possess that property to a less extent, whilst metallic bodies entirely repel them. The odoriferous particles are of such tenuity that no perceptible difference in weight can be observed in bodies which emit them unceasingly. A single pod of musk was found to have discharged in one day 57 million particles in a radius of 30 yards, without having become in any way diminished. Other very abstruse calculations have been made to determine the exact size of an odoriferous particle, but the results obtained by the various learned men who have made these experiments so totally differ from each other, that it is permitted to doubt their accuracy.

Criton, Hippocrates, and other ancient doctors, classed perfumes among medicines, and prescribed them for many diseases, especially those of a nervous kind. Pliny also attributes therapeutic properties to various aromatic substances, and some perfumes are still used in modern medicine. A certain class, however, of our medical men entirely prohibit the use of scents, pretending that they are injurious to health. In this I think they are mistaken. It is true that flowers, if left in a sleeping apartment all night, will sometimes cause headache and sickness, but this proceeds not from the diffusion of their aroma, but from the carbonic acid they evolve during the night. [This is a mistake; the evil arises from the specific action of certain odours.] If a perfume extracted from those flowers were left open in the same circumstances, no evil effect would arise from it. All that can be said is that some delicate people may be affected by certain odours, but the same person to whom a musky scent would give a headache might derive much relief from a perfume with a citrine basis. Imagination has, besides, a great deal to do with the supposed noxious effects of perfumes, and Dr. Capellini relates the story of a lady, who fancied she could not bear the smell of a rose, and who once fainted at the sight of one of those flowers, which turned out after all to be artificial. Numerous examples might be adduced, on the contrary, tending to show that perfumes are beneficial and prophylactic in the highest degree. After the Dutch had destroyed, by speculation, the Clove trees in the Island of Ternate, that colony was visited by a series of epidemics, which had been kept off until then by the fragrant smell of the Cloves; and in more modern times, when London and Paris were ravaged by cholera, there was not, to my knowledge, a single victim among the numerous persons employed in the perfumery factories of either city. In fine, we are prompted by a natural instinct to seek and enjoy pleasant odours, and to avoid and reject unpleasant ones; and it is unreasonable and unjust to suppose that Providence has endowed us with this discerning power to mislead us into a pleasure fraught with danger.

Odours have been classified in various ways by scientific men. Linnæus divided them into seven classes, three of which only were pleasant odours, viz., the aromatic, the fragrant, and the ambrosial; but however good his general divisions may have been, the above were far from correct, for he classed Carnation with Laurel leaves, and saffron with Jasmine, than which nothing can be more dissimilar. Fourcroy divided them into five series, and Haller into three. All these were, however, more theoretical than practical, and none classified odours by their resemblance to each other. I have attempted to make a classification comprising only the various odours used in perfumery, by adopting the principle that as there are primary colours from which all secondary shades are composed, there are also primary odours with perfect types, and that all other aromas are connected more or less with them, and can be obtained by the combinations of those primary odours. They are as follows:—The Rose, Jasmine, Orange flower, Tuberose, Violet, Balsamic, Spice, Clove, Camphor, Sandal, Citrine, Lavender, Mint, Aniseed, Almond, Musk, amber, and fruit flavour. This is the smallest number of types I could reduce it to, and even then there are some particular odours, such as that of winter-green, which it would be difficult to introduce into either class; nor does this list comprise the scents which are produced by the combination of several classes together.

From the earliest ages perfumes have been in use among civilised nations, both for sacred and private purposes. Some writers state that perfumes originally came from Elam, or ancient Persia, but it is more natural to suppose that they were discovered and used in the various countries which produced them, such as spices in India, Balm in Judæa, Frankincense in Arabia, &c., and thence carried to other places in the course of trade. The first mention we find of them in the Scriptures is when Joseph was sold by his brothers to some Ishmaelites who came from Gilead with their camels, bearing spicery, and Balm, and Myrrh, and carrying it down to Egypt. This would confirm my preceding proposition. In the book of Exodus full directions are given to Moses how to make the holy anointing oil and the incense of sweet spices. The anointing oil was a mixture of Myrrh, Cinnamon, Calamus or Sweet Rush, Cassia, and Olive oil; and the incense consisted of Stacte, Onycha, Galbanum, and Frankincense. The former was used to anoint the tabernacle, the holy vessels, and the altar of burnt offerings. It was also poured on the head of the high priest, in sufficient profusion to run down his beard and the skirts of his garments, and was intended as a symbol of everlasting priesthood among Aaron and his generation. The incense was burned in a censer, and also on the altar. Those two preparations were to be strictly confined to sacred purposes, and persons employing the same for private uses were cut off from the people. It was also strictly forbidden to any but the descendants of Aaron to offer incense before the Lord, and Korah, Dathan, and Abiran, with 250 others, were burnt for having violated that law. Uzziah, the king, was likewise reprimanded by Azariah, the priest, for attempting to burn incense in the temple, and having persisted in his design was struck with leprosy on the spot.

Perfumes were largely used by the Jews for private purposes, and were esteemed as of great value. When Hezekiah received the envoys of the King of Babylon he showed them all his treasures, the gold and the silver, and the spices, and the precious ointment; and sweet spices also formed part of the costly presents brought to Solomon by the Queen of Sheba. The principal ingredients employed at that time are thus summed up in the Canticles:—"Spikenard and saffron, Calamus and Cinnamon, with the trees of Frankincense, Myrrh, and Aloes, with all the chief spices." They were principally made up in the shape of ointments, which were lavishly used by the rich, not only in their toilet, but also as a mark of distinction bestowed on their guests. Thus we find Mary Magdalene, when Jesus was sitting at table in the house of Simon the leper, pouring a costly ointment of spikenard on his head and on his feet. They also used perfumes in a dry form, to impart a sweet odour to their garments and their beds, and for the purification of the women as ordained by law. Aromatics were likewise burned during their entertainments, and used for preserving the bodies of the dead. The body of Jesus was embalmed with a mixture of Myrrh and Aloes, brought by Nicodemus. Cosmetics were besides in use among the women, and we are told that Jezebel painted her face when she was expecting Jehu. It is, however, the opinion of most commentators, that it was not her face, but her eyes, which she painted, in the Egyptian fashion. Ezekiel explains that mode of painting more clearly, and says, "Thou didst wash thyself, paintedst thine eyes, and deckedst thyself with ornaments." Soap does not appear to have been known by the Jews. It is true that the word soap occurs once in the Bible, but in this instance the Hebrew word "borith," according to Beckmann's opinion, ought to have been translated lees or alkali, and is supposed to mean a natural alkaline production of Judæa, somewhat similar to the Egyptian natron or nitrum. In the Talmud (Book Cheritoth) we find in the description of the composition of the holy incense, the words "borith Carshina," which are usually translated "soap of Carshina," but soap would form a very bad ingredient for incense, and it is more likely to mean a sort of natural alkali or saltpetre, found at Carshina, which would serve to promote combustion.

In Egypt, perfumes were likewise applied to three distinct purposes—offerings to the gods, uses in private life, and embalming the dead. Besides the information

we gather respecting them from the Greek and Roman authors, the numerous allusions to this subject in their sculptures and paintings, and the relics found in their tombs, prove to us that perfumes were in general use among the Egyptians. Incense was offered to all the gods, and introduced on every grand occasion when a complete oblation was made. It was usually accompanied with a libation of wine, but was sometimes presented alone. The ingredients differed according to circumstances. Plutarch tells us that for offerings to the sun they consisted of myrrh, resin, and a mixture of 16 ingredients called kuphi. The high priest usually presented the incense, but in grand ceremonies the king himself held the censer in one hand, and with the other threw balls or pastilles of incense into the flames. The censer was a sort of cup fixed at the end of a stick, and not attached to a chain like the modern ones. Sometimes also they introduced the fragrant substances into the body of an ox, or other victim after it was slain, and burned it on the fire, pouring over it a quantity of oil. The aromatics in that case had the effect of counteracting the unpleasant smell of burning flesh.

(To be continued.)

TREE MIGNONETTE.

The Reseda odorata, or common sweet Mignonette, treated after the following manner, forms a real treat in the conservatory during the winter and spring months.

Sow in spring a number of small 4-inch pots. When up, clear off all the plants but one in the centre; as it grows train it upwards to a stick until it is a foot high, or two if you please; do not allow any side shoots to grow on the stem, and remove all leaves to within a few inches of its top. When the plant gets as high as you wish it, top it, and then it will throw out side branches; as they advance, pinch off their tops until you have formed a nice bushy head to your plant, and above all do not allow any bloom to appear until it has become strong, which will be by winter, if it has been well attended to. For the first winter it will be advisable not to have them in larger than 8-inch pots. Mignonette being an annual, if the seeds are not picked off after flowering it is ten to one that the plant will die. I have had excellent tree Mignonette three years old—very bushy, and full of flower all winter. Mignonette is often neglected at Midsummer, when our hands are full of other work, and yet this is the very time when Tree Mignonette wants most care, for the flowers not being wanted during summer ought then to be removed, in order to have a fine winter display. To keep worms from entering and disturbing the roots, add a handful of soot at each shifting over the drainage.

Mignonette delights in a sandy loam, not too light, and being a gross feeder a little diluted manure-water may be given once a week with advantage. If this is contemplated the mould need not be made so rich in the first instance.

Winter Mignonette, as it is generally called, requires to be treated differently from the above. It is generally sown about the 20th August, if later it will not acquire sufficient strength by winter for the London market. I generally grow from 8 to 10 plants in a 48-sized pot, which is 6 inches deep. For this sowing it is safest to use a light sandy and rather poor mould, for if the latter is too rich and strong the plants damp off during winter. Out of nearly a thousand pots, I have often scarcely lost one by attending to this: by not allowing a drop of rain to fall on them during winter, by never watering them unless they were flagging, and by admitting at all times plenty of air. In the case of frost coming, however, they are closely covered up, sometimes for a week or fortnight together; and if you have not followed the above rules, you will suffer severely from damp. Do not expose your plants for some days after the frost breaks up, and that only by degrees; above all things do not expose them to the sun. My anxiety to give them light, after being so long covered up, has sometimes led me for the moment to forget this, and I have suffered severely for my negligence.

Should the winter prove mild, the plants will root into the ashes they are placed on; therefore they must be lifted up occasionally to break the roots. Slugs will annoy you if you do not look after them; they fatten on Mignonette. To retard some of the pots pinch the heads of the plants; by this means they will not flower so strongly as those not pinched, and will yield a succession of bloom. *J. Cuthill, Camberwell.*

MYCOLOGY.—No. XIX.

—Corticium quercinum, *Fr.*—One of the principal characteristics of the vast division of Fungi to which the more noble species, as for instance the Mushrooms belong, is that they turn away their fruit-bearing surface from the light. In a few cases, indeed, spurious gills are formed on the upper as well as the under surface of the pileus; but this is quite accidental, and of very rare occurrence, and wholly distinct from those cases in which a second inverted pileus is attached to the umbo of the first, as in the example figured in this Journal, 1859, p. 1018, where the effect has been produced by the grafting together of two individuals whose pilei inclined towards each other, and the subsequent lifting up of the weaker of the two from the soil.

Though however this law of turning the hymenium away from the light prevails amongst the higher species, even in the genus *Agaricus* there are a few stemless or very shortly stipitate species which are at first resupinate, that is, lying upon their backs and exposing the gills to the light. We ought not then to be surprised when we come to those Fungi belonging to the same division which have lost all trace of decided prominences in the shape of gills, pores, teeth, &c., on their hymenium, if they deviate entirely from the ordinary rule, and in their normal condition expose their hymenium. In some instances indeed the hymenium is in effect removed from the influence of light, as where species or individuals grow on the under side of logs or sticks, while in others where the plant in infancy is entirely resupinate, the border separates from the substance on which it grows and becomes more or less reflected, but this does not apply to a great many species which are permanently resupinate, and in which, if the border separates at all, there is no tendency to turn over.

The subject of our present illustration is a case in point. Nothing can be more common than it is wherever there are fallen branches of Oak or Beech, with a due proportion of shade and moisture. It first appears in the shape of a little waxy mass closely glued to the branch on which it is developed. This gradually spreads,

Corticium quercinum, Fr.

(Copied by permission from Greville's Scottish Cryptogamic Flora.)

and as it comes in contact with other masses unites with them to form circular patches an inch or more across, slightly uneven and tuberculate, and of a delicate pink or pale orange. It soon begins to separate all round at the margin like the shields of some Lichens, being nearly black and smooth beneath. The substance is in some conditions brittle, in others tough and leathery, and the hymenium is inclined to crack when dry.

The species of *Corticium*, together with the two closely allied genera *Stereum* and *Thelephora*, are very numerous. In this country alone we have nearly 50. We are not aware that any one of them can be put to any economical use. The principal part which they perform in nature is to accelerate the decay of the wood or branches on which they grow, and from this property one at least of them is like the dry rot, a fatal enemy in ships and other wooden structures. One of them, *Corticium cæruleum*, known by its bright tint of indigo, and which is extremely common at the foot of pales or on old pieces of wood lying in damp corners of the garden, has the reputation of being luminous, like a glow-worm at night. This report has not been confirmed by late observers, but Mr. Churchill Babington has found luminous spawn near Cambridge, and similar phenomena are not uncommon in the case of Fungi growing in mines. In the South of France the Agaric of the Olive is so luminous that it is possible to read small print by it, and a luminous appearance has been observed in the same country even upon decaying leaves in woods. In Australia, Amboyna, Brazil, &c., there are highly luminous species, some of them exceeding in brilliancy the Olive Mushroom. At present the whole subject is wrapped in obscurity, though very distinguished mycologists have attempted its investigation. The formation of touchwood, which is occasionally luminous, is said to be due to a slow combustion, and dependent in some measure on the action of ozone. Fungus spawn is, we believe, invariably present in touchwood, and we suspect that to the spawn alone the luminous appearance is due. *M. J. B.*

Home Correspondence.

Cuthill's Princess Royal Strawberry.—I am desirous of giving publicity to a fact which I imagine may prove useful to amateurs and others having close confined town gardens. I am in the occupation of a garden like the above, and I was told that it was of no use attempting to grow Strawberries. I tried however, and found that my plants would bear a little the first year; the second year absolutely nothing but leaves. Well in 1857 I ordered some plants of Mr. Cuthill of Camberwell, called Princess Royal of England, and planted them along with several others—the British Queen, Keens' Seedling, &c. In 1858 the Princess bore a heavy crop, the others a little. In 1859 the Princess bore an amazing crop, the others nothing; and this year the same Strawberry is, every plant without exception, loaded or covered with fine stout healthy blossoms, and there is not a blossom on any other. They seem to possess the property of not running to leaves at all. It is probable that you know what sort a Strawberry the Princess is; to my fancy, if not quite equal to the British Queen in flavour, it is second to no other, and is nice and sweet, large, early, and prolific beyond all belief. Should this meet the eye of any one who has met with great discouragement in Strawberry growing, let such a one just try the Princess Royal, and the highest expectations he may entertain will be fully realised; and at the same time let him order of Mr. Cuthill his valuable little pamphlet on the Strawberry; it contains everything that is wanted in the way of instruction, but the Princess Royal requires only to be planted, and it will grow and flourish for years. *Charles Walker, Solicitor, Malton.*

Birds and Fruit.—Forty years ago, when I was young, we never required to protect any garden fruit from birds, except Cherries from blackbirds and thrushes and jackdaws. Now, every kind of fruit but Black Currants is eaten up the moment it approaches ripening, unless protected by nets, and not only by our former enemies, but rooks, robins, chaffinches, and other small fry, are as busy as if fruit was their natural and only food. Netting a whole garden is so serious and impossible a job, and keeping small people there with a rattle from dawn till dark such a nuisance, that some of your correspondents will greatly oblige the public if they can suggest any means for checking such wholesale destruction of fruit. Powder and shot is out of the question. Our enemies are legion, and the most careful shot could not avoid doing more injury to his trees than the fruit is worth. The remedy must be something to alarm the robbers or poison them. *J. Mackenzie, M.D., Eileanach, Inverness.*

Rust on Grapes.—Allow me to thank "C. E. W." for publishing his opinion as to the cause of rust on Grapes. A little good-natured discussion on this subject would, I imagine, help to elucidate the causes of the evil, for I am inclined to believe that more than one cause must be assigned for the mischief. I unhesitatingly sprinkle pipes or flues (when they are not uncomfortably hot), and from practical observations extending over 20 years, I can assert that I never saw any ill effects arise from that practice, therefore it would appear that treatment precisely similar produces opposite results; surely then there must be more causes than one at work, either local or otherwise. I have no hesitation in damping my houses whilst I have air on, but I am careful not to have a circulation of air on while the wind is cold enough to condense the vapour in the house; at such times I give only sufficient back ventilation to let the heated air escape, and to keep the temperature within bounds. I hope to see the time when we shall be enabled to keep a free circulation of warm air both night and day in all our forcing structures; I have no doubt that then a great many of the evils attending the present system of forcing would disappear entirely. *G. Blake, Great Clyro Court, Radnorshire.*

Early Swarming of Bees.—The first swarm I had come off this season was on Sunday, May 20, from a common straw hive. Bees are extensively kept in this locality, and we are about a week later in early swarms this season than last year, when my first swarm came off on May 12 from a "Neighbour's Improved Cottage Hive" working three glasses. *J. E. Nelson, Rinefield Nurseries, New Forest, Hants.*

Orchard Houses.—I have an orchard house erected and managed as nearly as possible according to Mr. Rivers's plan. The trees this season looked well and were full of flower. Pears set plenty of fruit, and are doing well; Nectarines, Plums, and Cherries are much too thin; Peaches are almost a complete failure. Could the severe frost last winter have any effect on them? The mercury was not lower than 20° Fahr. They were not injured by green fly or red spider; the trees are clean and healthy, and about four years old. Would they do better, do you think, if they were planted in the borders? *A Subscriber.* [No. The frost of October was in all probability your enemy.]

Dying Peach Trees.—Something is the matter with my Peach trees. I have not many, and two which have been planted about 10 years against a south-west wall, with a flower bed beneath them, are in apparently a dying state. They were covered with blossom, the fruit is set, and the leaves were coming on, but the last few days the leaves are withering, the fruit falling off, and the wood seems drying up. I cannot find any insect on the trees, nor does there seem anything the

matter with the roots. I send a small branch just cut off, which shows the nature of the mischief. *P. T. Ouvry, Wing Vicarage, Leighton Buzzard.* [These plants are now showing the effects of the frost of last October.]

Home-made Tobacco for Fumigating.—Last year I grew a quantity of Tobacco—dried and packed it close—and it has turned out so far satisfactory; but I find in fumigating it invariably injures everything to which I have applied it, viz., Cucumbers, Verbenas, Calceolarias, &c., turning the edges of the leaves quite brown. I have used it in nearly the same manner and quantity as the Tobacco of the shops. I have thought that there might be oil in it that I have not been able to extract, which caused the injurious effect of which I complain. How can I remedy the evil? *Felix, Clapham Park.* [You have not properly fermented it, a difficult thing to do.]

Oxford Museums.—During the past year an interesting feature has been arranged and added, by the zeal of Dr. Daubeny and his assistant Mr. Baxter, to the botanic establishment of this University, the various specimens belonging to the Museum illustrative of the structure, functions, and uses of vegetables, together with the products, useful or ornamental, which have been obtained by art from their several parts, having been arranged in a separate apartment on the plan of the remarkable Museum formed at Kew in connection with the Royal Botanic Garden under the superintendence of Sir William Hooker, and on Wednesday evening a *soirée* was given by Dr. Daubeny to commemorate the opening of this Economic Museum, which was attended by the Vice-Chancellor and most of the heads of colleges, professors, and other celebrities, both of the University and city, with their ladies. The large laboratory, decorated with greenhouse plants, formed the refreshment room, and the herbarium room opposite the garden was provided with books of prints, &c., whilst some very beautiful galvanic experiments were exhibited in one of the upper rooms, another being devoted to microscopes and stereoscopes. The favourable position of Venus, Jupiter, and Saturn also rendered the telescope a constant attraction during the evening. The new Museum itself was however the chief object of attention, the specimens being arranged, according to their natural orders, in a large number of wall and table cases, and on entering the apartment a small pamphlet giving a description of the Museum was presented to each visitor. The new Museum is fast approaching completion, and will be ready, so far at least as the building itself is concerned, for the reception of the members of the British Association at the ensuing meeting at the end of June. The architectural museum is broken up, a portion of its contents having gone to the new Kensington Museum, and the remainder stowed away for the present. The Ashmolean Museum also will soon be amongt the things which are past, the manuscripts having been transferred to the Bodleian Library; the natural history specimens will be moved to the new Museum, and the coins and antiquarian articles will in all probability be stowed away, the Ashmolean building being required for other purposes. * * *

Societies.

Horticultural: *May* 22.—An Ordinary Meeting for the election of Fellows and Ballot for Plants was held on Tuesday last at the Museum of Science and Art, South Kensington, by permission of the Lord President of the Privy Council, J. J. Blandy, Esq., V.P., in the chair. The Chairman having intimated that H.R.H. the Duke of Cambridge had been pleased to signify his wish to become a Life Member, the usual method of ballot was dispensed with, and his Royal Highness was elected by acclamation. The following ladies and gentlemen were afterwards elected Fellows:—Mrs. E. Eddison, Sir C. Knightley, Bart.; Rev. T. W. Franklyn, C. Paget, Esq., M.P.; Lady Ashburton, Mrs. J. W. Burmester, D. C. Marjoribanks, Esq., M.P.; Mrs. Newman Smith, Mrs. M. W. Savage, T. N. Arber, Esq.; R. Pulsford, Esq.; S. Sandars, Esq.; Lady Filmer, Mrs. Chesterfield Gayford, Mrs. Bailey Denton, the Earl Grosvenor, M.P.; the Earl Spencer, the Countess Spencer, J. Cawley, Esq.; W. D. Howard, Esq.; F. B. Bernard Natusch, Esq.; R. N. Grenville, Esq.; R. Broadwater, Esq., and H. G. Poole, Esq. The Ballot for Plants, the names of which have been given in our advertising columns (*see ante* p. 431), was then proceeded with. It appeared that 337 Fellows had given notice of their desire to share in the distribution. Of most of the plants there was a sufficient number to supply all applicants; but for several a ballot was necessary in order to determine who should have them.

Floral Committee, May 24.—At this meeting Mr. Standish, of Bagshot, exhibited some handsome, hardy, cross-bred Rhododendrons, for two of which he received First-class Certificates, and one was commended. The two first were named Hamilcar and maculosissimum, and the third Rosabelle. In point of form, brilliancy, and delicacy of colour, these seemed to be considerable improvements on already existing kinds. From Messrs. Veitch came a double-flowered Hemerocallis, called disticha flore pleno, for which a First-class Certificate was awarded, and deservedly, for it is really a handsome plant, with fine spikes of large showy orange flowers, each of whose petals near the base is beautifully stained with reddish brown. From the same firm also came Cissus cordifolius (?), a species which, if not so strikingly handsome as discolor, must nevertheless be regarded as a very desirable addition to ornamental foliaged plants. A brilliant red Azalea called Mars was shown by Mr. Kinghorn, and received a Label of Commendation. Some prettily variegated-leaved Geraniums were contributed by T. J. Lenox, Esq., of Hammersmith, and Mr. Prodgers, of Letton Hall, Yaxham, Norfolk.

Royal Institution: *March* 16.—Sir Benjamin C. Brodie, Bart., in the chair. A lecture on the Relation between the Abnormal and Normal formations in Plants was delivered on this occasion by M. T. Masters, Esq., Lecturer on Botany, St. George's Hospital, &c. The object of this discourse was to point out certain interesting facts, relating to the natural and abnormal development of plants, and to the impossibility of drawing any absolute distinction between the two; to show their bearing upon the theory of vegetable morphology, and on the views lately propounded by Mr. Darwin. Premising that no general law can be laid down to include all plants, as each large group has, to a certain extent, its own special organisation, the speaker briefly adverted to the natural conformation of plants under the following heads: 1st, Alimentary system; 2nd, Tegumentary; 3rd, Reproductive; 4th, Fibrous; 5th, Appendicular system. All plants possess alimentary, tegumentary, and reproductive systems, and the humblest plants have no others. All plants, but Thallogens, possess in addition a fibro-vascular system, and an axis, co-existent with which is the presence of an appendicular system, in the form of scales, leaves, and in the higher plants of sepals, petals, &c. All these organs have a common origin, and this relationship is only partially obliterated throughout life; so that there is a much closer homology between the organs of one class of plants, and those of another, than is the case in the animal kingdom. In considering what is natural and what is not so, a great deal is of necessity assumed. Naturalists construct for themselves a sort of type or ideal standard of perfection, which does not of necessity exist in nature, but which enables us to gain a clearer insight into the truth. If this be not borne in mind, in speaking of "the laws" of creation, &c. we are likely to be charged with the sin of presumption, and to foster the very prevalent error, that because one hypothesis is shown to be false by arguments derived from another, that the latter is of necessity true. In natural science, that theory has the greatest claims to acceptance which satisfactorily explains the largest number of facts, and by means of which our store of knowledge is most augmented. For the present purpose, the speaker assumed the correctness of the heretofore generally received opinion of the existence of "species," endowed with a very variable but a limited power of variation; and then proceeded to discuss what degree or extent of variability might be considered natural, and what unnatural. The distinction is not always easy, and in many cases it is impossible. Where the variation is slight, and apparently co-existent with a change in the conditions of growth, the variation is evidently natural. Allusion was made to such facts as that of Peaches and Nectarines found growing on the same bough, to alterations effected by changes in climate, &c. When the variation is greater, of course greater difficulty exists in determining whether or no it be natural. Reference was made to the Primrose, the Cowslip, and the Oxlip, which differ in many important points one from the other, but which nevertheless seem to be variations of one form; in evidence of which, amongst other facts, are these, that all three have been raised from seeds derived from the same fruit; and that in the Hookerian herbarium there exists a specimen wherein a Primrose and a Cowslip spring from the same stem. Some plants are especially liable to vary; such as Orchids, Ferns, Grasses, and especially Fungi, some of which latter have no less than five different modes of reproducing themselves by as many distinct organs. The speaker was enabled, through the kindness of Professor Buckman, to exhibit specimens illustrating the very curious experiments of that gentleman in ennobling the wild Oat, and in producing from the seeds of two so-called species of aquatic Grasses, Glyceria aquatica and Glyceria fluitans, when grown in a dry soil, a form unlike either of the parent plants,—a form in which the herbage of Glyceria aquatica was combined with the inflorescence of Poa trivialis. The experiments of Professor Buckman have the more value as they have been made without any reference to theoretic views.* Another difficulty in distinguishing the abnormal from the normal in plants, arises from the fact that what is unnatural or unusual in one plant is the common condition in another nearly allied plant. In illustration of which several instances were cited; and one in particular, which led Herr S. Reissek, in some measure, to anticipate the views of Mr. Darwin. The changes took place in a species of Thesium, affected by a parasitical Fungus, in consequence of which apparently the plant underwent many changes, some of which caused it to assume many of the characteristics of allied species and even genera. "Suppose," says the author, "the condition originally caused by the Fungus to become constant in the course of time, the plant would, if found growing wild, be considered as a distinct species, or even as belonging to a new genus. Nature appears to have set up a fingerpost, to show the way in which species and genera may have been formed out of a previously existing type," &c.† Here, however, there is no reference to the ceaseless process of natural selection, and of very gradual change. Another circumstance which adds to the perplexity that is felt in distinguishing the normal from the abnormal in plants is that irregularity of growth can hardly be considered abnormal, because it is in many instances a constant condition; the health of the plant is in no wise impaired, the irregularity does not exist at first, but arises during development, and it is subject to definite laws. Certain changes may be physiologically abnormal, because they interfere with the due fulfilment of the functions of the part affected; and yet morphologically they can hardly be considered abnormal, because they do not violate any of the laws of morphology, and are caused perchance by a mere reversion to a simpler form. Reference was then made to the classification of malformations in plants, adopted by M. Moquin Tandon, in his standard work on the subject, in order to exemplify the impossibility of drawing a line between what should and should not be deemed a malformation, for the reasons already mentioned. Even in the class of malformations grouped under the head of "Deformity" the change was so slight as not to interfere with the physiological functions, or it was one which occurred naturally in other plants. "Peloria," or that change whereby a flower usually irregular becomes regular, may occur in two ways—one where the flower becomes regular by the increase of its irregular portions, so as to restore the symmetry, as in the Pelorian varieties of the common *Linaria;* the other, almost entirely overlooked, is where the flower preserves throughout life its original equality of proportions. The calyx of the double *Tropæolum* affords an illustration of this. The calyx of the simple form is coloured, with its upper sepal prolonged in the shape of a spur; in the double variety all five sepals are green, and of equal size. We can hardly consider a return to regularity, in whatever way it be effected, as anomalous; and it has been before shown that irregular flowers are not necessarily monstrous. It is not requisite to go through the classification of M. Moquin Tandon at any greater length, as the same remarks, to a greater or lesser extent, apply to all the groups. As confessedly artificial distinctions, it may be said that a variety is some change from the ordinary condition of a plant—a change in no wise impairing the exercise of the physiological functions—a change affecting the whole, or at least several parts of the plant—a change which is more or less constant and permanent and which is reproduced. On the other hand, in a monstrosity, there is a change which does more or less interfere with the due exercise of the functions of the organs affected—a change usually affecting one organ, or one set of organs in a plant—a change, less constant and permanent than in a variety,—a change which is rarely reproduced. Allusion was then made to the value of Teratology as affording the basis on which the now generally received theory of vegetable morphology rests. No doubt the unusual conditions of plants, whether they be called varieties or monstrosities, arise frequently from the operation of that ceaseless struggle for existence in the battle of life, to which Mr. Darwin, as well as the late Dean Herbert, attribute so much importance; but we should be extremely careful in reasoning from malformations, and even from varieties, either in support of or in opposition to Mr. Darwin's views, especially if the word species be understood in its widest acceptation. The amount of change, great as it is in certain instances, is not greater than is the diversity of form under which the same individual plant may occur: moreover, the changes on which Mr. Darwin relies are small in degree, but constantly increasing. Violent and sudden changes are disavowed by him; for though the result of a struggle for life, yet they tend rather to the extinction of the organ or of the plant than to the production of a new species. If Mr. Darwin's views be pushed to their fullest consequences, it would appear as if there were no limits to variation; and it is of the highest importance to ascertain whether this be so or not. Without forgetting the necessity of caution in employing teratological facts in such a question, the speaker cited, as tending to show the probability that there were limits to variation, the fact that in the malformations of what are considered to be the most highly specialised groups of plants, those whose structure is most complex, most concentrated, and furthest removed from the leaf type, as *Compositæ, Umbelliferæ*, &c., little or no exaltation of the type ever occurs, whereas in other orders whose structure does not so widely depart from the leaf type, such an exaltation is frequent, though always less so than the opposite process of degeneration. The degree of constancy is very various, and most important to be considered in questions of this kind. The speaker is under obligations to his father for the following interesting facts bearing on this point. A tree of that variety of the weeping Willow, whose leaves are rolled up in a spiral coil, after retaining its character for 25 years, at length sent forth a shoot in an ascending direction, this shoot being clothed with flat leaves, as in the common form. There are several varieties of the sweet Pea: many years of observation have shown that the white flowered sweet Peas seldom, if ever, vary; but that in proportion as the flower becomes darker in colour, so is the liability to vary greater: and these changes are not confined to the colour merely, but affect the pods and other organs. So too, the yellow

* Buckman, Rep Brit. Assoc. 1857.

† Linnæa, Vol. 17, 1843,

varieties of the Hyacinth are more constant than those of other colours. On the whole the varieties, and still more the malformations, are characterised by a want of constancy and a tendency to degenerate; a tendency not overlooked by Virgil, as witness the following lines:—

"Vidi lecta diu, et multo spectata labore,
Degenerare tamen; ni vis humana quotannis
Maxima quæque manu legeret: sic omnia fatis
In pejus ruere, ac retro sublapsa referri:
Non aliter, quam qui adverso vix flumine lembum
Remigiis subigit, si brachia forte remisit,
Atque illum in præceps prono rapit alveus amni."
Georg. i., 197.

Reviews.

View of the Salmon Fishery of Scotland. By the late Murdo Mackenzie, Esq., of Ardross and Dundonnell. W. Blackwood & Sons. 8vo. Pp. 182.

The owners of Salmon rivers will do well to study this remarkable book, the posthumous work of one whose great knowledge of Salmon and their habits was the result of personal observation and nothing else. In a singularly caustic style the author examines the published evidence on the subject, and it must be owned that naturalists and lawyers come off the worse from the encounter. He says, indeed, that—"Much cannot be expected from a mere salmon fisher, *qui devient barbouilleur de papier malgré lui*, and whose hand an oar would suit much better than a pen. All he can pretend to is experience of the fishery. He has killed salmon with stake-nets and with coble-nets, with cruives, spears, and rods,—in the tide-way and out of the tide-way, and has paid deep attention to all their motions, having really a friendship for the whole persecuted race; and if the facts he states cannot be controverted, or the inferences that result from them be denied, he cares very little about the style in which they are expressed. If salmon-fishers minded such bagatelles as style, grammar, or orthography, neither a late author, the salmon-fishing patriarch of Dochnalurg, nor himself, would venture to put pen to paper. All he asks is to be judged with candour and impartiality, if such things there be; for, to say truth, he has met with very few of these exotics in his journey through life, the corner of the country where his unlucky stars have placed him being of too barren a soil for the generous plants to thrive. Where his statements do not carry the conviction of truth with them let them be condemned at once without mercy. They are only presented as mere sketches for others to follow up; and the greatest gratification he can receive is, that they will do so, since truth must ultimately prevail. It is like a fishing-cork, which may be kept for a time under water, but will at last get to the surface. *Au reste*, the same points recur so often in different parts, that repetition may be expected without ceasing; repetition, besides, refreshes bad memories; but, says a French author, '*Q'importe la route pourvu qu'on arrive au but?*' and our *but* is that the true nature of the fishery and the obstruction to its improvement should be better understood."

The reader will nevertheless discover that though "he is not to expect much" he will find very much. It would be foreign to the objects of the *Gardeners' Chronicle* to enter into any formal discussion of the great questions—great inasmuch as they affect great interests—with which Mr. Mackenzie deals. Some quotations from the chapter in which he examines the evidence given by Dr. Fleming before a Parliamentary Committee illustrates far better than any description of ours the manner in which he deals with scientific witnesses.

"The Doctor (Fleming) first tells usthat the length a salmon will go into a river depends upon the degree of terror he experiences: and then he informs us, that after he has got a considerable way into it, 'instigated by his own natural instincts,' he proceeds to the place of his destination. But why should he suppose that, after salmon had entered a river at all, they would return before they had reached the place of their destination? Does he think their 'natural instincts' do not begin to operate till they advance a 'considerable distance' into the river? At what distance do their instincts commence to operate? How did he ascertain the fact, or that, after entering a river, they do return to the sea? Has he made any experiments to that effect? Did he tie a bladder to a salmon that had entered the Tay, in order to trace his motions under water? If he had done this, we believe the salmon would have soon led him up the river, *au pas de charge*, through Briars and Thorns, till he saw his balloon fairly skimming the surface of Loch Tay;

"Monsieur l'Abbé où allez-vous?
Vous allez vous casser le sou,
Vous allez sans chandelle, &c.
French Song."

"The worthy Doctor calls the salmon a sea fish, because he resides, during his migration, in the sea. On the same principle he might call a Highland stot, bred in Skye and fed in Yorkshire, an English bullock. He, however, again admits, as we shall see immediately, that salmon belong to the rivers; and if they belong to the rivers, how can they belong to the sea, or be sea fishes?" * * *

"The Committee ask the Doctor,—'Do you think that the fish of a particular river can be distinguished from the fish of other rivers?'—'I have heard experienced fishermen make the assertion, and I have heard other experienced fishermen give a flat contradiction to such a statement—so I have much hesitation in admitting that they are readily distinguished.' * * *

"If there are, as the Doctor has said, different breeds belonging to different rivers, how does he suppose there can be different breeds, if they cannot be distinguished from each other? Can there be a difference without a distinction? If the different breeds cannot be distinguished, is it not nonsense to say there are different breeds? Whatever ignorant fishermen might have said, the Doctor should not advance an inconsistency. When so logical a head admits a fact, it should not deny the conclusion that must necessarily result from it. * * *

"The Committee farther ask,—'Is it not a fact that salmon differ very much in form?'—'It certainly is a fact that salmon do differ very considerably in point of form from one another, as I have repeatedly witnessed by looking at the fish taken at the same place, and collected together in a boat.'

"'How do you account for individuals of the same species differing in form?'—'Precisely as individual differences are accounted for in other species of animals. Salmon are exposed, in their young state, to very different circumstances. Some are longer in the river after having left their spawning-beds than others—and it may be supposed, likewise, that during their residence in the sea they may have access to different quantities and different qualities of food. In fact, the ordinary circumstances that produce varieties in other individuals of other species, I should think likely to exist and produce individual differences in the salmon.'

"Having admitted that there are different breeds belonging to different rivers, we should think that it would be more consonant with the Doctor's sagacity, and to common sense, to impute the difference of form to that circumstance. If he saw salmon of different shapes collected in a boat in the Tay, he might have concluded that they were the fish of the Earne and of the Tay itself, and its different branches or tributary streams, which we suppose was the fact; but to impute difference of form to difference of feeding, was, of all reasons, the most absurd. Difference of feeding may increase the size or improve the condition of an animal; but how can it alter its form or shape? How could it make the whole of the salmon of one river, uniformly, and year after year, round or hog-backed, and others straight-backed? Would difference of feeding give a dray-horse the symmetry of a race-horse, or a mastiff the shape of a greyhound? We would recommend to the Doctor to keep this in view when he writes his next book on natural history." * * *

And thus the author proceeds to deal with other witnesses whose evidence before Mr. Kennedy's committee has been recorded. With one other example we must conclude. A "gentleman of scientific pretensions, Mr. John Steavenson of Fortrose," stated in his examination, "that the fish taken in rivers are always of finer or inferior quality according to the state the river is in to receive them. When the river is in a state (that is, when the water is exactly to their taste) to induce fish, we get them of much finer quality than at a period when they do not enter so readily; they are apparently better fed—in better health, and in every respect superior fish."

"This is a rare discovery. The feeding, and health, and quality, and appearance of the fish depend, not upon the parts they have come from, but upon the state of the water that is to receive them. *Cela est piquant!* It is no wonder if Mr. Steavenson was a favourite witness of the Committee.

"'The nearer (continues this poetical salmon-fisher) salmon are got to salt water, the finer is that quality; so much so, that any one versed in the state of salmon would at once be able to pick out from 500 head of fish those that had been more than two or three days in the river: indeed, I am not sure that I could not distinguish the fish which had been taken one mile from the sea!'

"Now, a salmon will run a mile in less than ten minutes or a quarter of an hour. What an admirable *coup d'œil* Mr. Steavenson must have—*qu'il a le nez fin!* Baron Munchausen himself could scarcely do more. Messrs. Hogarth, Little, and Wilson—all great salmon fishers—declare that it would be impossible to see any difference in a salmon that had been only a week in fresh water; but these men are mere drivellers compared with this salmon-fishing Mattadore, who can perceive the difference which running a mile in fresh water would make in the quality of the fish so clearly, that he could at once pick such a salmon out of 500 head, even though he had entered a water that was quite to his taste. We wonder how Mr. Steavenson discovered *ce beau secret*. We suspect he must have found it from the old rascal of a seal who misled Mr. Halliday—for the Highlanders believe that the fallen spirits have been sent into seals; and certainly it required something more than human—or, as our neighbours would say, *il fallait être un peu plus que diable*—to have made the discovery."

In an appendix the question whether grilse grow to be salmon is discussed at much length and answered in the negative.

Garden Memoranda.

Messrs. Lee's Nursery, Hammersmith.—The large conservatory which was stated in our last report on this nursery to be in course of constrction by the side of the principal walk near the entrance is now completed, and a very light looking, commodious, and useful building it is. It is span-roofed, 75 feet in length, 30 feet in width, and 17 in height. The roof is glazed with 15 oz. sheet glass on rafters, fixed 16 inches apart, and supported in the middle by light iron columns, on which choice creepers are trained. The upright glass sides stand on dwarf brick walls, and are tied by means of slanting iron stays fixed into the ground. The floor is composed of Portland cement and gravel concrete, and feels under the feet as hard and firm as stone. Ventilation has been amply provided for both at top and sides. The side lights are opened or closed simultaneously during their whole length by means of a horizontal rod and lever arm attached to the end. Along the ridge of the roof a double row of glazed ventilators or sashes is also made to move up and down, as may be required, by means of a ratchet and wheel, over which passes a chain that reaches to the floor, and to which is attached a weight to assist the arm in raising or shutting the lights. Than these contrivances nothing could possibly work more efficiently, and by their introduction a great saving of time is effected. The heating is by means of hot-water pipes, and of the flue to the chimney, which has been carried along one side of the building.

The centre of this house is chiefly devoted to the growth of Orange trees in tubs, and large Camellias while on the side shelves are placed plants in flower' This arrangement presents a very gay and dressy appearance. At present it contains some promising Orange trees in light Teak tubs, which are said to answer better than others made of heavier material. On one or two of these trees of the Myrtle-leaved kind is a heavy crop of fruit. In addition to Oranges there are also in this house some handsome Standard Portugal Laurels, of which Messrs. Lee have a fine stock; standards of Pittosporum Tobira and its prettily variegated-leaved variety, some thriving Wellingtonias of large size, and some interesting little bushes of Box trained in the form of bird's nests, a shape which it is also intended to give to some standards of the same kind of shrub.

In a cool house are several beautiful varieties of Epacris, and to the growth of Cape Heaths a large amount of house-room is set apart. These are at present well worth inspection, many of the varieties being in full flower. Among them we noticed the comparatively new kind called E. Spenceriana, a free flowering and pretty sort. Of the New Zealand Cordyline indivisa, of which a full account will be found at p. 868 of our last year's volume, we remarked a number of young plants. When fully grown this will doubtless make a charming plant for the decoration of conservatories, in which its magnificent growth and beautifully veined leaves cannot fail to produce a striking effect. It may also probably become a good plant for placing out-of-doors in summer in conspicuous positions such as those in which Cannas and plants of that description are found to succeed.

A damp stove was literally, as it always is, a forest of rich and luxuriant vegetation not only in plants remarkable for fine foliage, but also in Orchids both in pots and baskets and on blocks. These grow here with unusual vigour, small plants in a comparatively short time acquiring considerable size.

Vines for fruiting in pots are produced in great numbers in this nursery. Two large houses are entirely devoted to their culture, and a third has just been added, These houses at present contain some hundreds of Vines from eyes, in all stages of growth, the whole strong, healthy, and vigorous. The demand for this kind of stock has been during the last few years greatly on the increase, and the failure of permanent Vines in early Vineries this season will doubtless turn attention even more permenently in this direction.

The cultivation of fruit trees in pots is also very much on the increase. An orchard house 180 feet in length is devoted to them here by Messrs. Lee, who have an excellent collection on which much care and pains are bestowed. They are just going out of bloom and promise to yield an abundant crop, which when ripe will be well worth seeing. Some of the double red and white Chinese Peaches are in the same house; these, if not injured by frost, are very ornamental in spring. Nearly a quarter of an acre in the open ground is now occupied by fruit trees in pots.

In light wooden span-roofed houses are numbers of Variegated Geraniums, not only of well known sorts, but also of kinds of more recent date. These houses form excellent hybernatories for these and other bedding plants, for the summer accommodation of which a tiffany house is in course of erection.

In the open ground we noticed a fine plantation of standard and pyramidal Box trees, in the production of which many years have been spent. They have fine heads and clean straight stems, and will doubtless be found useful in highly dressed terrace gardens. The disastrous effects of the late winter have apparently been less severely felt here than at most other places; few things have suffered much injury. Even hardy Heaths are for the most part unhurt.

Miscellaneous.

The British Museum.—This Committee met for the first time last Monday week, and consists of the following members:—Sir G. Grey, Mr. Hardy, Mr. Turner, Lord Stanley, Mr. M. Milnes, Mr. Walpole, Mr. Tite, Sir P. Egerton, Mr. Ayrton, Mr. Knight, Lord Elcho, Mr. Puller, Mr. Lowe, Mr. Stirling, Mr. Gregory. Two of these are trustees, the third is the son of a trustee, the fourth is the assistant Parliamentary Secretary of one of the trustees. Three others, including the chairman, Mr. Gregory, have already prejudged the question whether or not the accidental medley of the Collections at the British Museum shall be put into any logical arrangement. So much for the chances of an impartial verdict. If any one will consult the records of the history of the British Museum, he will find that the collections, instead of being the result of forethought or the embodiment of any definite idea, have been brought together by whim and accident. In 1847, Mr. Hume obtained a parliamentary return, which showed how 345,122*l.* had been, between the year 1753 and the year 1846, apportioned to the various departments. Put down 20,000*l.* for Sir Hans Sloane's Collection, 10,000*l.* for the Harleian Manuscripts, and, in rough numbers, the following was the apportionment:—30,000*l.* to manuscripts; 92,000*l.* to printed books, maps, and music; 10,000*l.* to natural history generally; 17,000*l.* to minerals and fossils; 12,000*l.* to zoology; 1200*l.* to botany; 122,000*l.* to antiquities, coins, and medals; and 28,000*l.* to prints and drawings. The share thus absorbed by books and antiquities resulted from the mere accident that the trustees happened to understand those subjects, and to have crotchety partialities for them rather than the others. There are no similar return subsequent to 1846, or they would probably show the same kind of bias. It is to be hoped that the committee will cause these returns to be continued; and in order that the public may not suppose that such returns give the whole of the expenditure of public money in behalf of the British Museum, the committee should call for an account of further sums which have been expended by the Lords of the Treasury, or by the Commissioners of Works. The total sum which the British Museum has cost will be found to be nearer three than two millions. The opponents of logical arrangement have recently issued an announcement, in which they profess to give a History of the British Museum. They forgot to mention the curious fact that the British Museum was the result of a lottery! The Act of the 26th George II., printed in picturesque black letter illegibility, enabled 300,000*l.* to be raised by lottery, and authorises the issue of 50,000 tickets, of which 4159 were to be "fortunate" tickets, and the awarding one prize of 10,000*l.*, one of 5000*l.*, two of 2000*l.*, 15 of 500*l.*, 130 of 100*l.*, 1000 of 20*l.*, and 3000 of 10*l.* The profits of the lottery paid Sir Hans Sloane 20,000*l.* for his Museum; 10,000*l.* to the Earl of Oxford for the Harleian Manuscripts; and provided a general repository for these things and the Cotton Manuscripts. Thus a process which Lords Ellesmere and Shaftesbury lately repudiated in denouncing Art-Unions for promoting Science and Art, was in the year 1755 adopted and carried out by the Archbishop of Canterbury and all the King's Ministers. As the British Museum originated in a lottery, so have its collections been made upon a somewhat lottery principle, through the agency of its illustrious trustees, from the year 1755 to the present time. The naturalists who oppose the removal of the Natural History westward do not tell us that the Collections of Natural History, whatever they were, came originally from Sir Hans Sloane's Manor House, in the parish of Chelsea; a spot nearly as far west of London as Brompton, and in which the old President of the College of Physicians desired that his collection should be "kept and preserved together, whole and entire." But they do say that the British Museum, in 1755, was "essentially a Natural History Collection," founded by Sir Hans Sloane, which is not correct. Before his Collection was purchased by lottery, the nation had already acquired the Cotton Manuscripts, and the Oxford family had agreed to sell the Harleian Manuscripts for 10,000*l.* So that the origin of the British Museum was really books, not beasts. It would not appear from Sir Hans Sloane's will that his Museum had indeed much Natural History; for it recites that his Collection consisted "of all his library of books, drawings, manuscripts, prints, medals and coins ancient and modern, antiquities, seals, cameos and intaglios, precious stones, agates, jaspers, vessels of agate and jasper, crystals, mathematical instruments, drawings, and pictures;" so that in what the naturalists call essentially a Natural History collection, the old physician did not even mention birds, beasts, fishes, or reptiles. The fact is, as already said, that this Babel Collection has been brought together by all kinds of caprices and accidents, just as might have been predicted from the irresponsible and *dilettante* administration of 47 (now 50) trustees. Sometimes the rage has been for antiquities, Egyptian, Roman or Greek, according to the taste of some pushing trustee; then a little start was made with Natural History; then a strong man gave books all the pre-eminence; and so must the Babel Collection continue to grow and burst its walls, until Parliament insists upon having a definite plan and system before it, and a minister who shall be paid to bring forward its estimates, which ought not to be left in the hands of a member without ministerial responsibility. If necessary, keep the trustees as inspectors, but if the nation desires to have a proper administration of its annual expedition of 80,000*l.* intrust it to an individual responsibility answerable in Parliament, rather than leave it in the hands of 50 noblemen and gentlemen, who have plenty of other work to do, and are not paid for this particular service. Before the question of separation or removal of the Collection is entertained, the essential thing is to reform the administration, and substitute a system more consonant to common sense than trusteeships created in 1755, as part of an immoral lottery scheme. But this is too large a topic for the present. *The Athenæum.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

Conservatory, &c.—The conservatory should now be thoroughly relieved of all superfluous stock, for the reception of which Tiffany houses will be found extremely useful. Nothing therefore will be required in show houses or structures of that kind but to carry out a cleanly system of cultivation and to introduce specimens in flower from other houses or pits. Keep the atmosphere as moist as circumstances will admit. Ventilate thoroughly, and shade with thin canvas during bright sunshine. Attend to plants for autumn and early winter decoration, such as Japan Lilies, Chrysanthemums, Scarlet Salvias, Tree Carnations, and things of that sort. Give them plenty of pot room, good rich compost, a moist atmosphere, and plenty of space for the proper development of their branches and leaves. Selago distans is a useful plant which must not be forgotten; it flowers freely and requires nothing beyond a cold pit to grow in. Epacrises, winter blooming Heaths, and Cytisus should likewise be cultivated in quantity, for few plants surpass them for winter decoration. The atmosphere of plant houses can scarcely be kept too moist at this season; therefore sprinkle every available surface frequently and syringe growing stock lightly twice a day during bright weather.

FORCING DEPARTMENT.

Vineries.—In the case of fruit intended to be kept as long as possible, the berries should be thinned, so that they will hardly touch each other when fully swelled, for it is scarcely possible to keep Grapes through the winter except they are severely thinned. Be particularly careful of the foliage of Vines intended to furnish a late supply of Grapes, and if plants must be grown in the house, see that they are not infested with black thrips or red spider, for if either of these pests is allowed to gain a footing on the Vines, the foliage will probably be greatly injured, and then there will be no chance of keeping the Grapes in good condition for any length of time after they are ripe. Muscats must be encouraged with a brisk temperature while setting.

Peach House.—Use means to eradicate insects if any from the early house as soon as the fruit is gathered, in order that the trees may be perfectly free from them before the lights are removed. Syringe copiously to destroy red spider, dust with sulphur for mildew, and smoke with tobacco for green fly.

Melons.—In dung beds keep up a good heat by means of linings. Give air pretty freely. Sprinkle late varieties overhead early in the afternoon before closing up the frames; a little air may be left on during warm nights if the bottom heat is brisk. Keep the shoots thin and shade lightly if the weather should become very dry or hot.

Cucumbers.—Attend to watering and thinning out superfluous shoots. If in frames, and the latter are small, they may be raised by placing bricks under the corners so as to allow the shoots to run outside. Stop and train those under handlights, and supply them liberally with water.

FLOWER GARDEN AND SHRUBBERIES.

Should the weather become dry and warm all newly bedded-out plants will require daily watering. The benefit of little basins round each plant will then be readily seen. Let the young shoots on all old Fuchsia stools be thinned out to five or six. Attend diligently to standard Roses; constant disbudding is necessary at this period; also keep down suckers. Let every attention be paid to propagating reserve stock to fill gaps, and let that already rooted, or the remains of store pots, have kindly cultivation forthwith, in order to be ready to fill blanks. They should be kept in a shady border by themselves.

HARDY FRUIT AND KITCHEN GARDEN.

In order to have a good and constant supply of Endive a sowing should now be made. Endive is generally sown too thickly. Another good sowing should be made in the first week of July, and a third towards the middle, after which the plants will not attain full size. As soon as the plants are a few inches high some mow the tops of the leaves off with a scythe, cutting about one-third of the leaves away. This they do to stiffen the plants and cause more heart to develope itself; it also enables them to bear transplanting better. A good breadth of dwarf and compact Cabbages may be sown for early Coleworts; also a bed of Horn Carrots. This is a good time for a liberal sowing of autumn Turnips; the Dutch or Stone are useful sorts for the kitchen garden. Prepare for Leeks by heavy dressings of manure, also for Celery. If the weather should become dry water late Cauliflowers abundantly, also Lettuces for salad. Mulch trees that have been recently planted.

COTTAGERS' GARDEN.

Early Potatoes will be late this season; but as soon as they are fit for use and up let the ground be immediately cropped with Winter Greens. The Early Ulm Savoy, Brussels Sprouts, and above all Green and Cottagers' Kale should be amongst the foremost to claim attention. A bit of the early Potato ground when cleared should be sown with Turnips. Celery and Leek ground may be got ready. Leeks well grown and large are most useful in a cottager's family. Blanks among late Potatoes should be filled up with transplanted Cabbages.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending May 24, 1860, as observed at the Horticultural Gardens.

May.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain.
Friday 18	27	29.440	29.336	66	39	52.5	55	52	S.	.14
Satur. 19	28	29.947	29.683	70	38	54.0	55	52	S.W.	.00
Sunday 20	●	30.212	30.075	74	39	56.5	55½	52½	N.E.	.00
Mon. 21	1	30.312	30.258	75	38	56.5	57½	54	E.	.00
Tues. 22	2	30.266	30.034	74	38	56.0	58	55	S.W.	.00
Wed. 23	3	30.027	29.820	75	47	61.0	58	54½	S.W.	.00
Thurs. 24	4	29.977	29.932	75	40	57.5	59½	55½	S.W.	.00
Average..		30.026	29.877	72.7	39.8	56.3	56.9	53.6		.14

May 18—Rain; clear and fine at night.
— 19—Fine; very fine throughout
— 20—Clear; very fine, cloudy; fine.
— 21—Fine; dry haze; very fine at night.
— 22—Very fine; dry air, overcast; fine.
— 23—Very fine; cloudy; very fine.
— 24—Very fine throughout.

Mean temperature of the week, ½ deg. above the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending June 2, 1860.

May and June.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 27..	68.4	45.2	56.8	18	0.44 in.	2	10	6	2	1	9		2
Mon. 28	67.5	44.9	56.2	14	0.97	—	10	8	1	3	7		1
Tues. 29..	66.2	44.8	55.5	13	0.97	3	11	3	2	6	5	3	1
Wed. 30..	67.5	45.0	56.3	13	0.34	3	7	6	—	3	8	4	3
Thurs. 31..	69.1	45.2	57.2	12	0.46	2	7	6	1	4	8	4	2
Friday 1..	68.0	44.8	56.4	12	0.27	1	10	3	—	5	9	3	4
Satur. 2..	67.7	45.1	56.4	14	0.52	1	5	3	3	3	9	5	5

The highest temperature during the above period occurred on the 31st, May, 1858, and 2d of June, 1834—therm. 85 deg.; and the lowest on the 31st May, 1857—therm. 32 deg.

Notices to Correspondents.

Beech Rot: *C M.* The white matter growing on the piece of rotten Beech blown down October 25, 1859, is the spawn or mycelium of dry rot destroying timber.

Books: *R M.* Jukes's Manual of Geology.—*Louisa.* The Manse Garden.—*R J P.* The Theory and Practice of Horticulture.—*Saxon.* Dupuy's Traité de la Greffe, to be had of the foreign booksellers.

Cape Bulbs: *A Constant S.* You will find something about them in a leading article to-day. Most of them flower freely for one year and then leave off; which arises from the roots not being properly and gradually ripened; and very often, too, from the leaves not being allowed to act freely while growing. They require the utmost possible light, the most copious ventilation, and the most vigorous growth while they are leafing and flowering.

Concrete Walks: *Sheffield.* Very good ones may be made by laying down 3 inches of clean coarse gravel, and pouring upon it a thin grouting of Portland cement, smoothed over with a trowel. Such walks will stand for years if done in the summer. If the walks are to bear much wheeling then the gravel must be at least 4 inches thick.

Greengage Trees: *Ravenswood.* The symptoms you describe are such as indicate a bad state of the roots; and if so, there is no remedy where trees are so old. You had better dig down and ascertain how the matter stands. Stable manure should never be given to stone fruit.

Herbaceous Grafting: *W.* This consists in using the soft young succulent shoots of Stock and Scion, instead of ripe wood. No real gardener can be ignorant of that.

Names of Plants: *M W.* It is something bred from Rosa Banksiæ.—*H Thompson.* Your double Cherry flowers had dropped to pieces. It is impossible to name them.—*J D.* Geranium potentilloides.—*B W S.* Trifolium subterraneum.—*A G.* Erica bruniades.—*J D.* They look like morsels of Bignonia picta.—*Sligo* 1, Spergula arvensis. We do not name Cryptogamic plants, as we have stated over and over again.—*E H.* Narcissus Jonquilla, the common Jonquil.—*D B.* 1, apparently Platyloma Brownii in a simple state; 2, some Diplazium, too young to make out; 3, Anemidictyon Phyllitidis; 4, Adiantum pubescens.

Old Fruit Trees, &c.: *An Old Subscriber* had better consult his solicitor as to the *legal* meaning of the words in his agreement. Fruit trees, shrubs, &c. cannot be removed without consent, unless there is some special agreement authorising their removal

Parroquets: *K K K* asks what is the most suitable food for the South American little green Parroquets, and the best and general treatment for them. Can they be taught to talk, or are they easily tamed? Anything about their general treatment and food is particularly wanted to be known.

Peach Leaves: *Constant.* They are in a very bad way. What have you put into the border? Look there.

Peach Trees: *W N.* Curl in the leaves of Peach trees is caused by cold at night; it therefore seldom takes place to any great extent where a proper system of spring protection is adopted. The best prevention is canvas blinds on rollers which can be drawn up in the day time and let down at night. But if that is too costly and if a fixed protection must be employed, then it should be thin netting or other material that will allow air to pass freely through it and not produce too much shade. All that you can, however, do this season now is to frequently syringe the trees well with the garden engine, keep them clear of insects and otherwise endeavour to induce as healthy a condition as you possibly can.

Susquehanna Root: *H H.* Professor Bentley has pointed out to us a notice of this article in the Pharmaceutical Journal, Vol. 14, p. 476. It appears to be some North American production, but what is unknown. One "Professor Webster," of Nottingham, is the author of the name We don't imagine it to be worth while to make inquiry about the plant, which has the appearance of being merely some quack affair. At all events it is a secret remedy, and all secret remedies are to be distrusted.

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Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.63	14.38	16.71	16.91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates	0.72	1.25	1.73	2.45	4.26	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

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Dr. ANDERSON reports:—"This is an excellent super phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

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MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
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They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

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WHEAT ditto	POTATO ditto	KOHL RABI do.
GRASS ditto	BARLEY ditto	Also

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President: HIS GRACE THE DUKE OF RICHMOND, K.G.

FOUNDED 1860.

FOR THE RELIEF OF DECAYED FARMERS, THEIR WIDOWS AND ORPHANS.

The FIRST FESTIVAL in aid of the Funds of the Institution will take place at the London Tavern, on TUESDAY, June 26.

His Grace the Duke of RICHMOND, K.G., in the chair.

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The Right Hon. Earl of Yarborough
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Dinner Tickets, 21*s.*; Ladies' Tickets, 5*s.* To be had of the Secretary, CHARLES SHAW, Esq., at the Office of the Institution, 55, Charing Cross, W.; and at the Bar of the Tavern.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
CANTERBURY MEETING, 1860.

ENTRIES for LIVE STOCK must be made on or before June 1.

*** All Entries received in each case after those respective dates will, without any exception, be disqualified, and returned to the senders.

Prize Sheets and Forms of Entry may be had on application at the Offices of the Society, 12, Hanover Square, London, W.
H. HALL DARE, Secretary.

The Agricultural Gazette.

SATURDAY, MAY 26, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

WEDNESDAY, May 30—Royal Agricultural Soc. of England.

—— THE report of the Council to the members of the Royal Agricultural Society which was read last Tuesday at the general meeting in Hanover Square will be found in another page. It was received after considerable discussion, in which Mr. SIDNEY, Lord FEVERSHAM, Mr. GIRDWOOD, Mr. TURNER, of Exeter, Mr. TORR, of Lincolnshire, and others took part. The discussion turned chiefly upon the constitution of the Council and on their recent appointments to the offices of secretary and editor.

Mr. SIDNEY asserted that the governing body of the Society was very differently constituted now as compared with the days when Lord SPENCER, Mr. PUSEY, and Mr. HANDLEY were the leaders of the association; that its meetings were, in fact, degenerating into the weekly gatherings of a merely agreeable club, having an altogether amateur character; that the practical and strictly agricultural section of its members was entirely overborne, as shown not only by an analysis of its constitution, but by the recent appointments that it had made. Mr. HALL DARE had been chosen as secretary in preference to others who were perfectly qualified for the office, and who were at the same time known in the agricultural world; and Mr. FRERE had been appointed to the editorship, though previously utterly unknown to either the readers or the workers of English agriculture. The latter gentleman no doubt took his very first steps in agricultural literature when he accepted the office thus conferred upon him, and thus distanced competitors from among whom many may be named who have long and successfully laboured in agricultural literature as a profession, and who are well known and trusted by the agricultural body. Mr. GIRDWOOD still more vigorously

assailed the appointment of Mr. FREBE as editor of the Journal as impolitic and unjust, and gave expression to what seemed to be the general feeling of the meeting on that subject.

No reply was made on this point, but on the general constitution of the Council a vigorous defence was offered by Lord FEVERSHAM, who disputed with great energy the assertion that he only was a practical farmer who himself held the plough, himself milked his cows or fed his pigs; and declared that adding the practical men among the landowners of the country to the number of the tenantry on the list of the Council, he believed that in place of 27 per cent., it would be found that there were 50 per cent. of the Council who thus strictly came under the denomination "agriculturist"! Whereupon Mr. SIDNEY exclaimed—as well he might—"Hear! Hear!"

It must not be supposed, because the house list of the Council for the ensuing year has been accepted, and nothing in opposition to it has been actually done, that no end has been served by last Tuesday's discussion. Little doubt can be entertained that a most effective exhibition has been made of the general feeling of the members; and that the house list presented at future annual meetings will be more than one-half what it ought to be—at which, according to Lord FEVERSHAM'S estimate of the present constitution of the Council, we should be now inclined to value it.

THE thorough wetting which recent rains have given the land has in effect put in our lately planted seeds with a natural WATER DRILL; and the advantage of it will no doubt soon be seen; indeed it is already visible in the full plant of Mangels which everywhere is coming through; and it will be further exhibited by the good hold which the young plant will no doubt soon obtain, enabling it to withstand future drought. We may not however, and so much rain has fallen that it is hardly likely that we shall, have so good a seed time when the Swede and Turnip drill will be at work. Failing the natural supply then we cannot do better than try to imitate it artificially; and we therefore cannot do wrong by directing the attention of our readers to the useful, seasonable, and practical essay on the water drill in the last number of the English Agricultural Society's Journal, by Mr. A. S. RUSTON, of Chatteris.

Mr. RUSTON gives his experience chiefly on a light Fenny soil, describes his method of using the machine, and relates the consequences of its use during several years on several sorts of corn crops and of green crops. The following extracts will sufficiently illustrate the method and results of using the implement which he has found so valuable; but readers will of course find both more fully detailed in the essay which we quote:—

"*The mode of working these drills* is far less difficult than would be generally conceived. The main thing is the supply of water required, and, upon an occasional farm, this does grow into a slight difficulty. On our Fen-farms, where every field is surrounded by ditches, which throughout the entire year have a supply of water, this difficulty has no existence. And upon what we technically term our high land farms, where hedges generally prevail, we have either open ponds and reservoirs, or pumps supplied by unfailing springs, where ample supplies of water can be procured. In cases like these we find it necessary to purchase either some old oil casks, or what is better, because stronger and more durable, some old sherry butts. These we fit up with a sort of hopper at the top, where the water is cast into them, and a leather hose at the end, where the water is discharged; this hose being made sufficiently long to admit of its being hung by a loop upon one end upon the top of the cask, when no discharge is required, by which means any improper escape of the water is avoided. These casks are placed in an ordinary dung-cart, and, to prevent any rolling motion, a little long soiled straw is placed on either side of them. This simple and inexpensive method, where proper water-casks, for other uses, are not required, answers every practical purpose. It very seldom happens that more than two of these casks are required to keep a drill fully at work. These will serve for a distance exceeding half-a-mile, and three would convey the full quantity of water required if the distance exceeded a mile. Where two only are required to be used one horse is ample, where three are needed two horses will be necessary. One cart containing the full cask may always be set down in the field where the drill is working, being careful to place it in such a position that it will not interrupt the drill in its work, but will, at the same time, be convenient for use. The hose is unfastened from the top of the cask, and that end of it is placed in the cistern of the drill, allowing the water to continue to run until a sufficient quantity has been obtained, when the hose is again fastened as before. Where water is procured from the ditches which surround the field in which the drill is at work, the method adopted is very simple indeed. A large tub is placed at the side of the ditch just where the drill turns out at the end; this tub is kept filled with water, the drill draws up by the side of it, and the men at once, with pails, fill the cistern."

Manure Used.—"I may here remark that it has not been my practice to sow any kind of liquid manure tanks, such as urine or yard drainage, but simply water, in which I have placed either superphosphate of lime, guano, or a mixture of the two. My general practice is to use superphosphate alone, but in a few instances with Oats grown upon Wheat stubbles, I have thought it desirable to supply ammonia in some form to a moderate extent, and have consequently sown from 1 to 1½ cwt. Peruvian guano, mixed with 1 cwt. superphosphate, per acre. And when this has been done I have had the two mixed together and riddled in some spare building, that the large hard lumps, which are generally found in considerable quantities in the guano, might be thoroughly broken and pulverised before going into the field. But where superphosphate alone is used this is altogether unnecessary. My plan then is, to take the bags of manure, just as they come from the manufacturer, into the field; a man then prepares for use. He has a wheelbarrow and a fine sieve, with a shovel; he takes the manure from the bag with the shovel, places it in the sieve, and then sifts it into the wheelbarrow; the lumps which will not pass through the sieve he throws into a small tub taken to the field for that purpose; these he breaks until they are sufficiently small. I usually sow from 2 to 3 cwt. per acre, and with a 4 feet 6-inch drill sow 7 acres per day. One man will sift all the manure, help to fill the drill with water, and, if in a field where the supply can be obtained from the ditches, will also keep the large tub filled with water. In such cases this single man is the only additional labour required by the water drill over the dry, and, indeed, where that is used, some preparation of the manure is necessary. Where the water has to be conveyed a distance, as previously stated, an additional man with a horse will be required, and sometimes a boy also to pump."

Quantity of Water Used.—"In sowing Mangel, Coleseed, or Turnips (the last-named, however, are scarcely ever sown in this locality), I invariably use only two coulters, which, with a 4 feet 6-inch drill, make the rows just 27 inches apart. Careful and close observation during the last five years has fully and thoroughly convinced me that this distance is in every respect better for either of these crops than three coulters 18 inches apart would be. The horse-hoe can be used freely and frequently, and a stronger and more vigorous plant secured. When sowing any crop, where only two coulters are employed, we use plates in the cistern for the discharge of the liquid, with holes punctured through them from one-half to five-eighths of an inch in diameter; and with these a cistern full of water, which is about 60 gallons, will sow 40 chains, which will give a total of about 220 gallons per acre. With larger-sized holes an increased quantity of liquid could easily be sown, but experience does not prove that this would generally be of practical advantage. In sowing Oats and other cereals, where it is found necessary to use the whole six coulters, a different plate should be used. This is of the utmost importance, although frequently neglected. The large holes in the plates just described allow of too rapid a flow of liquid where six coulters have to be supplied, and it frequently occurs that the drill becomes nearly emptied much before it ought to be, and, consequently, that those parts of the rows sown first, after the drill had been refilled, get a much larger share of manure than they ought to have; whilst the other ends of the rows, sown as the supply was becoming exhausted, get far too small a quantity, and hence you have a very uneven and irregular growth. It may, however, be easily obviated by using a different plate. The results of several trials made during the last few years on a somewhat extended scale, show that the plate best adapted for the successful working of six coulters is one with holes from three-eighths to five-sixteenths of an inch in diameter. With these we sow 60 gallons of water in about 30 chains, which will give a total quantity of nearly 300 gallons per acre. In sowing with six coulters it is very needful when the drill is full that the holes should not be quite opened, as the flow from the weight of liquid in the cistern is necessarily more rapid than when the quantity becomes lessened; this can be easily managed by the slide, but requires constant attention if the discharge throughout the whole length of the field is to be equal. It can be done, as was proved by my own crop of Oats sown last spring. I put in 112 acres with the water drill, the whole of which came up and grew as uniformly even and regular as could be desired. But, besides the equal distribution of the manure from the drill, there is also needed the equal and regular supply of it to the drill. This is managed by ascertaining in each field into which the drill enters how many rounds the drill must perform to sow an acre. Having calculated this, and knowing the number of half-pecks each bag of manure contains, it becomes an easy matter of calculation to learn how many half-pecks are required for each drillful of water. These are then properly measured and applied, and the object sought is attained."

We give but one of several tables of results, as Mr. RUSTON'S experience seems to have been uniformly favourable to the use of the machine. The following figures certainly exhibit contrast enough to induce its general use:—

THE MANGEL WURZEL CROP.

Number of Experiments.	When sown.	What Drill used.	Quantity and Description of Artificial Manure used.	Cost per acre for Artificial Manure.	Farm-yard Manure per acre.	When Weighed.	Produce per acre.		
				s. d.			tons.	cwt.	st. lbs.
1.	April 26	Water drill	1½ cwt. Lawes' superphosphate of lime	11 3	13 loads	Oct. 16	11	2	0
		Dry drill	Ditto	11 3	13 loads		8	10	5 10
2.	April 26	Water drill	1½ cwt. Lawes' superphosphate of lime	11 3	13 loads	Oct. 16	11	2	6 12
		Dry drill	Ditto	11 3	13 loads		13	5	0 0
3.	April 25	Water drill	2 cwt. Lawes' superphosphate of lime	15 0	13 loads	Oct. 15	14	2	6 12
		Dry drill	Ditto	15 0	13 loads		12	15	5 10
4.	April 21	Water drill	1½ cwt. Lawes' superphosphate of lime	11 3	13 loads	Oct. 17	11	5	5 10
		Dry drill	Ditto	11 3	13 loads		10	0	0 0
5.	April 28	Water drill	1½ cwt. Lawes' superphosphate of lime	11 3	10 loads	Oct. 17	11	0	0 0
		Dry drill	Ditto	11 3	10 loads		11	13	4 8

Mr. RUSTON gives also the experience of Mr. SOWERBY, of Aylesby, on Turnips sown with the water drill, from which it appears "that 2 bushels of dissolved bones sown with the water-drill produced 5 tons 14 cwt. more Turnips per acre than did 6 bushels of bones mixed with 12 bushels of ashes, and sown with the dry drill, all other things being equal; and that 2 bushels of of dissolved bones, sown with the water-drill, and without farm-yard manure, produced 1 ton 14 cwt. greater weight of Turnips per acre than 6 bushels of bones and 12 bushels of ashes with 10 loads of manure per acre added."

AN AGRICULTURAL PILGRIMAGE.—No. VI.

THE THAMES-SIDE MANURE MANUFACTORIES.—At Deptford, Blackwall, and Barking there are enormous stores of artificial fertilisers, almost equal in value to the quantities of fertilising material that pass them in the annual guano fleet to the warehouses of Messrs. Gibbs & Co., or to the monstrous quantities which are carried seawards out to waste every tidal ebb from the sewers of the metropolis. There are many smaller manufactories of superphosphate manures, and various factories where fish and other waste are turned to use, but the establishments of Mr. Lawes at Deptford and Barking, of the London Manure Company at Plough Wharf below Greenwich, and of the Patent Nitrophosphate or Blood Manure Company by the Victoria Docks may be fairly placed at the head of any list of the Thames-side manure factories, and the following are notes of these establishments in the order just named.

1. *Mr. Lawes's Factories at Deptford and Barking.*—Near the latter place Mr. Lawes has within the last few years purchased 100 acres of land, in order that he may gradually transport certain portions of his work from a populous neighbourhood, where a nuisance is sure to provoke litigation. He has now extensive sulphuric acid works at Barking, and to these acid works he brings ground coprolites and bones for the manufacture, with this acid, of superphosphate; at the same time sending acid from Barking up to Deptford for the manufacture of superphosphate there. Twelve chambers, 80 feet by 17, and 13 feet high, are already at work at Barking capable of making 150 to 200 tons of acid weekly, and four additional chambers are in process of erection. The acid is prepared from pyrites and a sulphur-waste of the gas works, from which the sulphur is burned off in furnaces. The sulphurous acid gas from the pyrites, &c., mingles with nitrous acid fumes from pots of nitre and sulphuric acid in the chimney which leads them to the leaden chambers; and that process of constant exchange between the nitrous acid, the sulphurous acid, and the oxygen of the air by which the latter is made to combine with the sulphurous acid and convert it into sulphuric acid, goes on there; the resultant oil of vitriol being absorbed by steam driven at the same time into the chamber and condensing on the floor of the chamber until the liquid is of about the specific gravity of 1.6 at which it is used.

It is pumped up at a certain rate into a long cylin-

...chanic delivers at a corresponding rate the mixed ...

...A continuous stream of these mixed ingredients ... in endless length, being consigned as it goes, and ... on the ground floor, so that the mixed materials ... be conducted by shoots to any part of the ... It is an effort with the proprietors of the ... factory to do everything by machinery, and ... an extensive system to carry out even by machinery ... which the latest introductions admit. Even ... a great economy in packing, although it has ... is poured out, brushed small, and packed away in large ... Many thousands of tons pass in this way ... of superphosphate, in the shortest space ... compared to the old plan, which involved ... and filling, and from handling ... acquire and dissipate the ammonia.

In handling the tons of materials required and ... in and out of the manufactories of superphosphate ... ...

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In handling the tons of materials required and ... in and out of the manufactories of superphosphate ... given a series of figures illustrative of the present magnitude and the rapid progress of the manufacture ... of the trade. These figures I shall be able to give ...

3. *The London Manure Company's Works.*—At Plaistow Wharf, on the opposite side of the river, and ... of the London Manure Company within the ... years have been under the management of Mr. Purser. A comprehensive arrangement of buildings on a square of ground, with ample ... and frontage to the river, facilitating the transfer of both raw materials and the manufactured articles by land or water, and the ... are the means by which the company carry out a very large business. Great stocks of both materials and bones indicate the ... which, ... A commodious ... with ... which the ... Many ... are employed in the ... and ... which ... of ... are ... given a series of figures illustrative of the present magnitude and the rapid progress of the manufacture ... of the trade. These figures I shall be able to give ...

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have the Lois-Weedon fallow, and only 60 rows, being the actual moiety of an acre of Wheat. I am much indebted to that one day's well timed frost; for otherwise months might have passed without the means of correcting my own error of two bushels too much, and the Hertfordshire Farmer's droll estimate of three-and-twenty too little.'

"Here, then, is a crop of Wheat yielding from its 60 rows at 10 inches apart far beyond the farmer's average from 120 rows 10 inches apart. How could this be? I do not mean, how can a crop of Wheat be grown in this way as good as my neighbour's on the same description of land well-manured—for that is the subject of my whole pamphlet on growing Wheat, and to repeat it here would be tiresome tautology. The question is:—How can it be that this crop of Wheat was twice as good as my neighbours'? The secret is simply this: I sow only in September, and thus the plant tillers fully before winter. Now, compare a fully-tillered crop with late-sown Wheat which has not tillered at all, or only partially tillered, and you will find that the straw of the former, from the manner of its growth from the coronal root, stands by many degrees closer and thicker on the ground than either of the latter; and in nine seasons out of ten I can save this thick and heavy crop from falling, by earthing it up with a bout of the plough. When it does fall, it lies uninjured and well ventilated across the open furrows of the intervals. Let the farmer sow early on land in good heart, and his Wheat, too, will tiller of course; or let him top-dress at spring with guano or nitrate of soda; and in both cases his crop will exceed mine by a quarter or more of good Wheat in his one sunny season out of ten: but the other nine years, down comes the bulky mass, with the old result of mildewed straw and shrivelled grain.

"There is another thing. The wide space of the intervals admits the full force of the sun and the air, and that gives increased health and vigour to the plant; while its roots, spreading far and wide without check, find a never-failing supply of food from the grain, from its first formation in embryo till it flowers and fully ripens. The general result is, ears far beyond the average size of the Wheat ear, filled with at least a fourth part more than the average amount of grains.

"Taking these two facts together, then, we are able to solve the problem how it is that the 60 rows of the Lois-Weedon moiety of an acre of Wheat yield as large an average amount of grain as the ordinary farmer's full acre of 120 rows.

"I said just now that for two years my light land crops of Wheat have been unreported, and withdrawn from public inspection, in order to be set apart for private experiments. What occurred, however, in my Wheat cultivation there last year is so much to the point of the present inquiry, that I think it right not to withhold it on this occasion. When I first took this 4-acre piece in hand for Wheat, it was exceedingly foul from the accumulated filth of perhaps a century. For nine years I did battle with the weeds with partial success; and in order to shorten, if possible, the road to victory, I made the following experiment: Immediately after the crop of 1858 was carried, I broadshared and stirred the fallow intervals, killing the first growth of weeds, and leaving it for a second weed crop. At the end of a few weeks, I stirred and killed the second growth. I waited another few weeks, and did the same; and so for the last time about the end of November; and then at last got in my Wheat, nearly three months after my usual time. The time for safe tillering was now over. The dry winter and spring which followed were much against me; and I could not venture to touch the poor miserable plant till May. I had lost one of my great means of competing in produce with the full acred farmer: how, then, could I escape almost utter failure? To force those thin and sparse lines to tiller late in the spring would have been to ruin the sample by an uneven and mildewed crop. My only resource, then, was to seize the proper moment between too soon and too late for pampering the plant, such as it was, with the hoe and the plough; to feed it profusely in this way early and late; giving the last copious meal with the subsoiler, to swell the grain as the flower fell off.

"The process succeeded to the full extent of my hopes; for, I think, of all the crops of Wheat I have ever had, this turned out the largest-headed and most even, the ears being more than double the size of my neighbours' on the same description of soil, and grown from much the same sort of seed. The four acres yielded 11 quarters 5½ bushels, being somewhat under 3 quarters to the moiety of each acre.

"Very faithfully yours,

"Mr. John Algernon Clarke, "S. Smith."
"Long Sutton."

ON THE PASTURAGE OF THE SWISS ALPS.

The pastures in Switzerland, principally Alpine, are used year after year during the whole time that they are free from snow, and form the principal resource of the cattle owners of the country. In ascending into these regions where one sees stretched out in immeasurable extent mile after mile and acre after acre of beautiful green fields, the first idea which presents itself is, that all this vegetable wealth must belong to owners, each having the boundary of his land clearly defined. This is, however, not the case; in this still primitive region there are divisions of land and rights of property quite different from those of more populous and civilised countries. The pastures of the Alps are bounded at their lowest range by rich valleys of meadows and arable land, and extend thousands of feet above the level of the sea, until they are finally lost in the eternal snow. They are divided into three classes, which are designated as private and communal Alps, and Alps for the poor.

Those of the first class belong to one or more private individuals, and are generally sublet to cattle owners; those of the last-named division are only to be found in some cantons (principally in Appenzell) of Switzerland, and have been either purchased with Government money, or bequeathed by will for the use of those poor people, who do not, either in their own right or that of their wives, possess property of a greater value than 2000 gulden (11⅓ gulden are about equal to an English pound sterling).

Our business is at present with those Alps which are known under the name of communal Alps (Gemeinde-Alpen), and which form one of the peculiar agricultural features of this country. The real meadow land of Switzerland reaches a height of about 2500 feet above the level of the sea; from this point to about 4000 feet higher is the region called "the Voralpen," where various kinds of grain are cultivated, Pine forests flourish, and here and there in more sheltered spots are to be found groups of Beech and Maple, and a flora of about 600 different specimens of wild flowers and plants. Hamlets and isolated chalets, surrounded by carefully cultivated vegetable gardens, occasionally meet the eye, and cattle stalls scattered here and there connect this with the next territorial division, generally called the Tannen-region, which advances from 5500 to 6000 feet higher up the sides of the mountain. This is properly the home of the Swiss forests, which are composed of Firs, Larches, and Sycamores. In some places Rye, Barley, Oats, and Potatoes, are still to be found. The sub-Alpine Flora consists of about 450 plants, which are less delicately formed than those of the higher regions, and are provided with thicker stems, more succulent leaves, and shorter leaf-stalks.

The flowers are somewhat larger, and of a deeper and more intense colour than those of the same species in loftier regions. The upper Alpine country begins at the confines of the Tannen-region, and is remarkable principally for the barrenness of its soil and the absence of all forest trees, only a few dwarf Firs and stunted bushes breaking the monotony of the mountain side. The wild flowers are very beautiful however and numerous, and are to be found growing close to the line of eternal snow, a height of about 8000 feet above the level of the sea. In this country the face of man is only seen for a short time at stated periods, but the wooden chalets remain, and every year again receive their former summer occupants.

These three divisions of the Alpine regions are the sole or at least main dependance of the Swiss farmer for the summer months, and at first it would appear as if he had nothing to do but to turn his flocks out on rich pasture provided by nature, without any expenditure of time or toil on his part; such is not the case; the Swiss farmer must expend an amount of labour and manure which in this country is unknown. As soon as the snow begins to disappear from the fields, the sheep and goats are driven forth from their winter quarters, and by degrees eat their way up from the bottom of the mountain to the uppermost snow line. These are followed by the cows, oxen, and horses, all returning again in autumn. In the absence of the cattle the meadows are irrigated, fed two or three times with liquid manure, covered with solid dung from the farm-yard compost heap, and cleaned of all loose stones or other substances, which might in any way impede the growth of the Grass. The preparation and amassing of manure is a matter of great moment to the Swiss farmer, as his stock of winter food depends upon it; and as straw is too expensive a substance to be used for bedding, much depends on the amount of coarse Grass and weeds which can be collected in summer and autumn on the mountain side, and the quantity of earth which at every spare moment can be carted and mixed up with the farm-yard manure. In most parts of Switzerland the cattle are never bedded, but always stand or lie on boards, which are slightly inclined and carefully scraped at intervals during the day, so that all matter, solid as well as liquid, is collected and wheeled out from time to time to the manure heap.

The gathering together of Grass and weeds on the mountain side is an exciting and dangerous occupation. A certain day in the year is appointed by the magistrates of the canton or commune, when the "Wildheuer" are allowed to begin their work. At midnight a bell is sounded and each gatherer hurries off to secure his place, which having once chosen he is allowed to keep undisturbed, first possession being here considered as equal to the other nine points of the law. This coarse Grass only grows in places above the pasture line, and out of the reach of the cattle, so that the "Wildheuer" must provide themselves with ropes to facilitate their descent over the sides of precipices; their calling being as dangerous as, and somewhat similar to that of our samphire gatherers on the coast. The booty collected with so much risk is gathered into small heaps, and weighted with stones, so that it may not be scattered by the winds, and so left till the winter snows fall, which make an easy road for its descent on sledges to the valley.

The labour of the farmer is by no means confined to his meadows and arable land in the valley; he must continue his work on the mountain side collecting and spreading the manure, clearing away as much as possible the rubbish and stones which the melting of the early summer snows bring down from the mountains, draining marshy and swampy spots, and, when feasible, conducting streams so as to irrigate parched and arid land; in short, by all and every means assisting Nature to keep up the supply of food.

As the cattle ascend higher with the advance of summer the difficulties of labour increase, since here Nature herself has to be kept in check, and bounds have to be set to her destructive powers; a sudden avalanche or lavine, as it is here called, or a torrent of rain, may bring down an overwhelming mass of rocks, stones, and rubbish, which, if not confined to its proper bed, might in the course of a few hours destroy whole acres of good and wholesome pasturage. No efforts of man can at all times prevent this terrible evil, but a careful and ever-watchful clearing and keeping open of the usual passages through which the mountain streams flow may do much to avert the misery consequent on these freaks of Alpine Nature. Here, more perhaps than under any other circumstances, can be appreciated the truth of our English proverb that "a stitch in time saves nine." Another, and no small item of Alpine labour is the careful clearing of the pathways, the hewing of steps in the sides of the rocks, and the building of new and keeping in repair of the old châlets. For this last purpose the timber must often be carried on men's shoulders a distance of many miles up the sides of precipices, and by difficult and dangerous paths. Two dairymen are generally employed in tending a herd of 50 or 60 head of cattle, among which there are perhaps from 30 to 40 cows, which must be milked regularly twice every day. The first milking over, the cheesemaking begins, which is the business of one man, whilst the other carries the cheese made the day before to the next depôt 8 or 10 miles off, and returns laden with bread and whatever other stores may be necessary for their nomadic life. This labour finished, both men must work at whatever seems most important at the time.

In spite of the toil and danger of this mountain life the time of its approach is always hailed with rejoicing by the whole village. Where there is a lower range of mountain pasture "Voralpen," the "Senner" quit the low lands in May; but when the change is at once made from the valleys to the real Tannen-region not until June. They set off from their village, followed by all the inhabitants old and young, and accompanied by the Leitkuh, the queen of the herd, who marches with much dignity at the head of the flock, and decorated with garlands of flowers, streamers of ribbons, and with a huge bell hung round her neck, maintains a strict discipline amongst her subjects. Arrived at the Alps, the best feeding grounds are at once taken possession of by the cows, horses and goats, the poor sheep being driven higher up to seek a scanty nourishment in places inaccessible to the rest of the flock. These mountain sheep are always to be seen on small patches of short pasture, on the sides of rocks, and before the season is over, they become as fleet and surefooted as the chamois; they never seem to care for rain or storm, choose for themselves places sheltered from the sun during the heat of the day and always return towards nightfall to the huts, where the herdsman throws them a few handfuls of salt, which they greedily devour.

In the beginning of June the "Senner" makes his first great change, and with all his flocks and belongings leaves the closely cropped lower Alps and takes up his abode in the Tannen-region. This is naturally a day of rejoicing, for from this time the best feeding season begins. The earth, kept comparatively warm during the winter by its thick white mantle and moistened by the gradual melting of the snow, throws out under the influence of the burning summer sun a rich nourishing Grass, which is unknown in more temperate latitudes, and which, mixed with various kinds of sweet herbs, imparts to the Swiss butter and cheese that peculiar flavour for which it is so celebrated. The same plan is here pursued as in the lower Alps; the cows and oxen remain at first in the immediate neighbourhood of the huts, and their manure is carefully collected and spread over the adjoining land; the goats make more extended excursions, and may occasionally even be seen scrambling about on the higher pinnacles with the sheep. By degrees the horses and cows widen their circuit, but they always return, the former once, the latter twice a day to the chalêts.

At the end of the month of August the food of the Tannen-region is usually exhausted, and the third and last flitting is undertaken. The best and most intelligent farmers at this time divide their flocks, confining the milch cows and goats to the lower and more accessible feeding grounds, and driving the oxen, young cattle, and horses higher up where the food is equally nourishing, but the toil and exertion of attaining it is much greater. What these latter animals lose, however, in ease and comfort is fully made up to them in the improved development of their muscles and the greater strength, activity, and powers of endurance which they acquire.

When the supplies of this loftiest region fail, the cattle descend, feeding as they go, to their winter quarters, the cows taking this time the lead, and the sheep bringing up the rear, gleaning all that their more favoured brethren of the herd have left for them.

The sheds in which the Swiss cattle are housed in winter are dark and dirty, their food scanty, and their condition in winter so far inferior to their healthy summer appearance, as to render them hardly recog-

The right of pasture which every Swiss peasant possesses in the Alps of his district in no way directly depends on his worldly wealth, or even landed estate, but on the number of cows or other beasts which he can be proved to have fed in the valley in winter. A three-year old horse is considered when pastured on the mountain, as equalling in its consumption three cows; a two-year old horse, two cows; and one which is only 12 months old, one cow; a foal equals half a cow; a heifer, a whole cow; a steer, only half a one; whilst a calf is reckoned as a quarter, a pig as a half, a little pig as a quarter, a goat or sheep as one-third, and a kid or lamb as one-twelfth of a cow. These divisions seem absurd, but are at the same time necessary, as the measure invariably used here is a Kuhrecht, that is the amount of pasturage which one has a right to demand for a cow.

The furniture of an Alpine châlet is of the simplest imaginable kind; it consists usually of a few knives and spoons with some earthen pans for the men, with a cauldron to boil the milk for the cheese and the vessels necessary for butter making.

In former times the rules of pasturage on the Alps,

and the laws controlling the hewing of wood in the forests, were much more strictly observed than at present. Then and in some places still, the management was intrusted to a sort of rural district police officer, who saw that no one ever pastured more cattle on the mountain side than he was entitled to, that the paths were kept in order, and the forests maintained undamaged. He was empowered to fine or otherwise punish those who had transgressed them, and inscribe their name and faults in the so-called "Alpbüchli."

In this short description of the Alpine pasturage, I had nearly forgotten one most important matter, viz., that certain long-headed and experienced men are selected from each village or commune, whose business is, at stated periods during the summer, to be present during the milking of each cow and satisfy themselves as to the quantity yielded, and assign to the owner of the animal the value of the average amount of milk, which is delivered to him in cheese and butter, or in the money which it brings when sold. In many places the same system is pursued in winter as well as in summer. A senner or dairyman is chosen for the village, who receives all the milk from the different cow-owners, and gives them in return cheese, butter, and money, he, of course, being paid at a certain regulated price for his time and trouble.

PHILOSOPHY OF TILLAGE.

The following is a section of Mr. Clarke's paper on Lois-Weedon husbandry omitted last week.]

The chemist enables us to take a reasonable view of the wonderfully prolific effects of mechanical tillage, dispels our fears about premature exhaustion of the land, and shows us how to provide against it. A soil analysis is a capital process for opening a young farmer's eyes. And it certainly is wonderful to see a spit of earth crumbled, roasted, boiled, and finally separated into a number of brown, red, and white powders, having the same appearance, taste, and chemical and medicinal properties as similar substances kept in bottles in the druggist's shop. More marvellous still, to learn that the silica and alumina, the lime and magnesia, soda and potash, are simply the rusts of certain metals. Thus, the alumina is compounded of three parts of oxygen gas combined with two parts of the silvery-looking metal called aluminium; so that on strong land containing 60 per cent. of clay, there is enough of this precious metal (in a state of oxide or rust) in one acre of ground, 6 inches deep, to make 90 tons weight of tea-spoons! Why, it is almost past belief that the principal portion of the sticky clay we find so awkward to cultivate is really the rust of this light shining silver; and as a matter of fact, is at the same time nothing less than the dust of rubies, sapphires, and other gems, existing in immense quantities in the form of a white powder, easily extractable by the chemist.

The Wheat plant, like others, feeds to some extent upon these mineral substances contained in the soil; and a crop of 30 bushels, weighing 60 lbs. per bushel, and having over 1¾ ton of straw, takes from the land the following quantities of the several ingredients:—

	Grain.	Straw.	Total.
	lbs.	lbs.	lbs.
Silica	1.18	142.55	143.73
Potash	10.50	25.50	36 00
Phosphoric acid	16.00	11 55	27.55
Lime	1.19	13.00	14.19
Magnesia	4 25	5.70	9.95
Sulphuric acid	0.112	8 10	8 212
Soda	1.35	1.26	2.61
Peroxide of iron, and loss	0.28	1.85	2.13
Chloride of sodium	0.042	0.46	0.502
	34 904	209 97	244 874

Of the 245 lbs. of mineral matters in a crop of Wheat, 210 lbs. are in the straw; so that by returning the straw to the land, in the form of manure—not necessarily every year, but say every third or fourth year—we have only to demand of the soil a perpetual supply of 35 lbs. of minerals, that is, 1 lb. per bushel, sent off the farm in the corn sold; to which must be added the waste of a portion of these substances during the conversion of the straw into dung. What stock of these particular minerals, then, have we in a common loam? The following actual quantities are calculated from an analysis of a loam containing 80 per cent. of silica; and I will take the depth of staple at 10 inches, as calculated in my experiments, the weight of 1 acre being about 3,267,000 lbs., or 1,458 tons:—

	Lbs.	Enough for Crops.
Silica	2,646,666	22,144,444
Potash	26,024	2,484
Phosphoric acid	12,414	775
Lime	42,470	35,388
Magnesia	36,590	8,555
Sulphuric acid	2,940	26,222
Soda	49,004	37,777
Peroxide of iron, &c.	111,077	396,666
Chloride of sodium	"trace."	abundance.

Were we to take away both grain and straw, without any return whatever, there would be sulphuric acid enough for 366 crops, phosphoric acid for 451 crops, potash for 725 crops, lime for 3033 crops, and the other minerals in a still larger profusion. So that the only substances that a long-continued series of crops could sensibly reduce are just those which can be readily supplied again in a dressing of ordinary artificial manure. But I advocate the successive growth of only a limited series of Wheat crops upon the various fields of a farm in their turn, the straw being restored to each field in the year occupied by the leguminous or green crop which follows; the foregoing table showing that, with such a rotation, a common loam is practically inexhaustible of mineral constituents. And therefore no landowner or vigilant agent need look grave when tenants ask permission to adopt Lois-Weedon Wheat-growing on such land. It is supposed that the various mineral substances exist in the soil in a crude condition unfitted for the use of plants, only a small proportion being directly available as food for the roots. And this stock of liberated or active mineral matter is maintained or increased by exposing the crude substance to the solvents of the atmosphere; which is principally effected by drainage and mechanical cultivation. The action of atmospheric agencies upon the constituents of the soil is too lengthy a subject for notice at this time; and I need only mention one fact—that the slow and continuous action of rain-water containing carbonic-acid is found to dissolve substances which resist the most biting corrosive acid or the most caustic alkali. The idea that roots take up nourishment only in solution is giving way, however, to a new opinion—that roots are enabled by some process of vital chemistry to feed upon perfectly insoluble particles of aliment with the surface of which they are in contact. The power with which earth seizes and retains plant-food in defiance of all the natural solvents has led Liebig to this conclusion: just the theory, you will remember, of our profound agricultural discoverer, old Jethro Tull, on which he built his system of frequent intercultural tillage. How much tillage, then, will provide and prepare a sufficiency of the minerals for the wants of the crop while growing? Well, the amount of forking and horse-hoeing bestowed at Lois-Weedon has been found amply sufficient for a long series of the heaviest crops; my own ploughing, subsoiling, and scarifying have been found sufficient for several fair crops; and the cultivation practised in other cases has also been adequate for the purpose. On Mr. Lawes's heavy loam at Rothamsted, one scarifying and cleaning, and one ploughing 5 or 6 inches deep, followed by a few harrowings, are found enough for the production of a yield of 16 bushels per acre, for any number of years in succession. And the corroborative evidence from the steam-farming of Mr. Smith, of Woolston, and numerous other instances, shows that, on any soil not too thin and light, minerals enough for a long succession of heavy corn-crops can be prepared by a very moderate and practicable amount of tillage operations.

Besides this terrestrial nutriment, however, plants require "aërial," or organic, food: indeed, all but a fractional portion of the substance of our crops is built up out of such unstable materials as gas and water. I cannot now branch off into an elucidation of the absorptive functions of leaves and green stems, and the necessity for having a store of organic matter within the soil, as well as floating in the air above. The only element which it may be feared would fall short in our successive Wheat-growing is the expensive nitrogen. No chemist or vegetable-physiologist ventures to say that the Wheat-flag and succulent stalk are utterly unable to absorb this element out of the atmosphere in the form of volatile ammonia or other compounds; only the supply in this manner is thought to be comparatively little. Doubts also exist as to the quantity of nitrogen brought down to the soil in one year by the rains and dews, which wash it out of the atmosphere in the form of nitric acid and ammonia; but the most subtle and delicate analyses appear to show that it is a good many pounds' weight per acre short of the amount required by a Wheat-crop. How, then, shall it be obtained without manuring? Well, there is a good stock of nitrogen already in the soil to begin with. Accordingly to Mr. Lawes's analysis of the Rothamsted and Lois-Weedon soil, an acre of land 10 inches deep contains 2¼ tons of this precious element; or as much as would be removed by 35 Wheat crops. Our culture will be, therefore, far from permanent unless we can add to the staple as much nitrogen as we abstract from it in a course of years. We can get little from the subsoil; for rich as it may be as a source of additional minerals, it contains only a third or fourth as much nitrogen as the upper soil. Perhaps we may develope a considerable quantity from another source, viz., by the decomposition of the humus or organic matter of the soil in contact with the atmosphere; it being supposed that nitric acid is formed through the agency of the ozone occasioned by this decay. Be this as it may, there is another source of nitrogen, which is perfectly able to furnish all that we require. Nine years ago, Professor Way made the following experiment, wonderfully simple in itself, yet marvellous in the insight it afforded into the properties of soil. He filled a bottle with air impregnated with carbonate of ammonia so as to be highly pungent to the smell. He threw in a little ordinary dry soil, and then shook the bottle once or twice. What was the effect? Why, the ammoniacal smell was entirely destroyed: the dry soil had instantaneously absorbed from the air every trace of the ammonia. He also filled a tube with small fragments of dry clay, and passed through it air highly charged with volatile carbonate of ammonia; and the whole of this gas was arrested. Subsequently, Professor Way spread a very thin layer of clay soil on a sheet of paper at the bottom of a large cupboard. In this cupboard a small open dish containing water and lumps of carbonate of ammonia (smelling salts) was kept heated by means of a little gas flame. Sufficient air was admitted to cause a gentle circulation; the result being that the cupboard was filled with a moist atmosphere considerably charged with carbonate of ammonia. The soil was exposed to the ammoniacal fumes for several hours, and upon analysis was found to have absorbed ammonia at the rate of 3 tons per acre of 10 inches' depth—equivalent to 20 tons of guano.

Hence it appears that a roughly-upturned fallow sucks from the passing breezes the ammonia which they bear in minute but ever present quantity; and as often as we replace the charge of air in the interstices of the soil, it is robbed at once of the nitrogenous element. So that the more extended superficies we can expose, and the greater indraughts of atmospheric air we can let down into the ground, the more nitrogen will our land acquire for our crops. Only till; and you shall have ammonia in plenty: Ceres will not faint for want of the smelling-bottle. How much nitrogen may be absorbed in this way has never been ascertained; but one thing is certain—the crops that are grown prove that enough and to spare is really obtained. Then, how much tillage is required to ensure this result? Well, Mr. Lawes grew six successive crops of Barley on unmanured ground, each taking away, in grain and straw, 170 lbs. of nitrogen per acre—considerably more than the quantity supplied to the soil in the ammonia and nitric acid of the rainfall. And the annual cultivation which supplied the 170 lb. consisted in once scarifying, once ploughing at ordinary depth, and a number of harrowings. At Lois-Weedon, the yearly increasing magnitude of the yield, both in straw and corn, shows that the store of nitrogen is augmenting rather than diminishing. And the forking, scuffling, and horse-hoeing which have caused this accumulation of plant-food are abundantly cheap, in comparison with the riches thus obtained. I say that, after all these years of Wheat-cropping, both the heavy and light land fields at Lois-Weedon (so far from being exhausted of their native stock of nitrogen) now possess a larger amount of nitrogen than before. Chemical analysis proves it. The subsoil of the light piece contains (according to Mr. Lawes) 3128 lbs. of nitrogen per acre, in a stratum of 1 foot thickness; while the upper staple contains 6200 lbs.—just double. Well, the staple has been deepened to 13 inches—more than twice its original depth—the 7 inches of additional staple taking the place of as much subsoil; so that there must be, say 1500 lbs. more nitrogen per acre in the field than existed there before. The staple of the clay piece contains a proportion of 7000 lbs. of nitrogen per acre, in a stratum reckoned 1 foot thick; and the subsoil contains only 2600 lbs. in a similar quantity of earth. As the staple has been deepened from its original 5 inches down to 20 inches, there must have been 15 inches of subsoil replaced by staple soil—that is, there is now a 15-inch stratum, containing nearly three times as much nitrogen as it did before. And the latter Wheat-crops are so luxuriant and heavy, that Mr. Smith dare not manure them.

Home Correspondence.

The Editorship of the Royal Agricultural Society's Journal.—Will you allow me to say a few words on one statement in the Report of the Council of the Royal Agricultural Society, published yesterday? Mr. Frere is said to have been selected in consequence of his "high testimonials." Now, sir, everybody knows that testimonials alone are perfectly valueless. They can readily be obtained, and their strength depends much upon the friendship of the donor and the grade of the candidate. If general report speaks correctly Mr. Frere is an unknown man, and there is not a public proof of his having written a single article on agriculture or its collateral branches. Then how, let me ask, could these high testimonials be given? Why are they not published? There is another feature in the report that should not escape observation. The Council advertised for a "scientific" editor, but in the Report they say "scientific and literary." Why was the word "literary" withheld from the advertisement? Is this, sir, quite as it should be? Against Mr. Frere I have nothing to say, he may be a light hidden for a long time under a Cambridge bushel, or he may be like some seeds—now that he is brought to the surface, vivify and bear abundant fruit. This will be determined by his papers in the Journal; but at present there is something strange and inexplicable about the affair, which leads even the passive men, constituting nineteen-twentieths of the Society, for once to open their eyes and ask a question. *Anti-Testimonial, May 23.*

Wages in Caermarthenshire.—Permit me to correct an error in the amount of ordinary wages said to be paid in Caermarthenshire in the *Agricultural Gazette* of April 28. It is there stated that 13*s.* is the ordinary wage, and from the statements of house rent and other advantages attached to the wage for ordinary labour in other counties, it would appear that the pay of men in constant employment or engaged by the year is meant. No such wages are given to ordinary agricultural labourers in either Caermarthenshire or Pembrokeshire. Living on the confines of the former county and in the latter, I can say with certainty that 9*s.* per week with some advance in harvest is all that is given. For instance, the Hon. Mr. Yelverton and Major Northey,

my next neighbours, have their men the year through for that. Men employed by the week or day as occasional assistants are paid in ordinary 2*s.* a day, or a trifle over sometimes but not generally, and it was this that your Llanelly correspondent probably referred to. It appears to me that a clearer distinction should have been drawn between the wages of men employed by the week and those by the year. *Alexander Boyle, Upper Wayngwn, near Narbeth, Pembrokeshire.*

Rats we are told by naturalists frequently change their residence, and move from one locality to another in battalions, and they are correct in their observations. My farm-yard, that was never before troubled by these pests, was taken possession of last autumn by at least a couple of battalions. It may also be true that the Russian prisoner when at home was able to paralyse and render them immovable, so that they might be gathered together with a shovel and finally drowned. Still I have my misgivings whether he was not a bit of a wag and disposed to play a joke upon his captors, as I have not found his method of proceeding to give me the same facilities for slaughtering the intruders. The prepared substance was eaten, but the shovel was not needed, and the master was sold and done brown before his less credulous servants. *R.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

GENERAL MEETING: *Tuesday, May* 22.—The general meeting of the members was attended somewhat more numerously than usual. Probably 50 or 60 gentlemen were present. The Earl of Powys was elected president for the year, and the list of vice-presidents and trustees was also accepted. The house list of the new Council, including a large re-election of those who go out by rotation and five new names, was then submitted to the meeting, and notwithstanding the attempt of many members to substitute the names of Messrs. Owen Wallis, Rigden, Pawlett, Sandy, and Caird, M.P., for some of those recommended to them, the house list was adopted. The following report was then read, and after a somewhat stormy discussion, to which reference is made elsewhere, it was adopted.

ANNUAL REPORT.

"The Society consists, at the present time of—72 Life Governors, 119 Annual Governors, 927 Life Members, 4047 Annual Members, making a total of 5165 names on the list. The finances of the Society have on no former occasion been in so favourable a condition. The dividend on the estate of the late Secretary amounts to 970*l.* 11*s.* 10*d.*, being at the rate of 10*s.* 11½*d.* in the pound, which has been paid into the Society's bankers. The funded capital, which stood at 10,000*l.*, has been raised by further investment to the amount of 12,000*l.* in the New Three per Cents. The Finance Committee have appointed Messrs. Quilter and Ball to be the Professional Accountants of the Society, who by frequent and close examination of the books and accounts will materially assist the Committee. The Council have elected Professor Voelcker, the Society's Consulting Chemist, to be an honorary member of the Society. The Consulting Chemist is engaged in investigations on the following subjects: Field Experiments on Wheat, Barley, and Turnips; the Action of Simple Saline Compounds on the Soil; the Feeding Value and Composition of Mangel Pulp; the Chemistry of Cheese and Butter. The Council having determined to select a literary and scientific Editor of the Society's Journal, have appointed Mr. Philip H. Frere to that office, and, from the high testimonials exhibited by that gentleman, feel confidence in hoping that he will succeed in conducting the Society's publications with efficiency and talent. The arrangements for the Canterbury Meeting, to be held during the week commencing the 9th of July, are proceeding satisfactorily. The Implement Yard will contain nearly a mile and a quarter of Shedding, in addition to a very large entry of Machinery in motion; and the entry of Stock, which will close on the 1st of June, is already large. The Council, in the spirit which has guided them on former occasions, and considering the cordial reception which awaits them in the county of Kent, have thought they could not do otherwise than defer to the strongly expressed wishes of the locality, that this special opportunity should not be lost for directing attention to the agriculture peculiar to the district, and have been induced to accept the offer of a considerable sum, to be distributed in prizes for Ploughing on the Kentish or turnrise system, as also for Hops, Wool, and certain Breeds of Live Stock. The Council have decided, subject to the usual conditions, to hold the Society's Country Meeting next year at Leeds, for the district comprising the three Ridings of Yorkshire. Great anxiety was evinced by many localities in the county to be selected as the place for the Country Meeting; but the advantages of Leeds and its neighbourhood, joined to the eligibility of the sites offered for Show yards and Trial-fields, have induced a decision in its favour, which it is confidently hoped will result in a most successful meeting. In conclusion, the Council trust that the Society will prove itself to be in a position to pursue its career with renewed energy, and that its future may be marked by increased endeavours to advance the important objects for which it was specially constituted. By Order of the Council, H. HALL DARE, *Secretary.*"

The report of the Finance Committee, from which the financial condition of the Society appears to be most satisfactory, was then laid before the meeting:—

Half-Yearly Account, extending from the 1st of July to the 31st of December, 1859.

RECEIPTS.

Balance in the hands of the Bankers, July 1, 1859	£2047	18	7
Petty Cash Balance in hand, July 1, 1859	6	8	1
Dividends on Stock	141	17	6
Governors' Life Composition	50	0	0
Governors' Subscriptions	50	0	0
Members' Life-Compositions	125	0	0
Members' Subscriptions	409	2	0
Journal	231	11	3
Country Meeting (Warwick)	5407	13	6
Sale of Sundries	8	2	6
	8477	13	5

(Signed) A. N. HOOD, WILLIAM FISHER HOBBS, R. MILWARD, } *Finance Committee.*

PAYMENTS.

Establishment, including Rent, Rates, and Salaries	£482	5	4
Postage and Carriage	14	10	1
Advertisements	1	18	0
Journal	964	14	7
Essay Prizes	50	0	0
Veterinary Grant (extra)	25	0	0
Chemical Grant	150	0	0
Subscription returned (paid in error)	1	0	0
Country Meeting (Warwick)	5432	13	9
Sundry items of Petty Cash	3	12	4
Petty Cash not accounted for by late Secretary ..	9	7	0
Balance in the hands of the Bankers, Dec. 31, 1859	1339	8	0
Petty-Cash Balance in hand, Dec. 31, 1859	3	4	4
	8477	13	5

Examined, audited, and found correct, this 18th day of May, 1860.

(Signed) WILLIAM ASTBURY, JOHN DRUCE, HENRY CORBET. } *Auditors on the part of the Society.*

After the usual complimentary votes the meeting separated.

Farmers' Clubs.

LONDON: *May 7.—Discussion on the Lois-Weedon System of Wheat Culture.*—Mr. Greene, of Mortivalds, Little Canfield, Chelmsford, considered that the main objection to it was the large amount of labour that was required at one particular period of the year. Still, he believed the system did maintain a certain fundamental principle, and was therefore interesting so far. He also thought that it might be carried on advantageously upon a small scale. He had carried out the system on 58 acres. The principal labour is in digging the intervals in October. We ought to finish sowing in September. It could be broken up by machinery. He required 20 men for 58 acres, using the fork. The cost of the manual labour per acre is rather under 4*l.*; the manual labour and horse labour together make about 4*l.* 15*s.* The depth of forking is about 10 inches. The soil is clay principally. One field contains a great proportion of gravel. The subsoil is chiefly of a loamy character, somewhat calcareous.

Mr. C. Howard (of Biddenham) said, that he went down to Lois-Weedon, as a member of the deputation from the Club. As regarded the soil, Mr. Smith, unlike many landlords, considerably under-rated it. In fact, and he (Mr. Howard) thought he should be borne out by the practical men who accompanied him, it was as fine Wheat land as any man could possibly desire; and with respect to the lighter portions of the soil, he must say that, if that was light soil, he should only like to be its possessor. As to the portion which was nearest Mr. Smith's house, and which he stated was new land that had been broken up for 14 years, it must be remembered that that had only seven crops upon it, according to his system. Therefore, most farmers would say that upon new land, with only seven crops, they could hardly expect it to be exhausted, considering the quality of the soil. The whole of the operations upon the 4 or 5 acres were performed by the groom, coachman, &c. He must say, moreover, that he was not at all surprised at the crop which Mr. Smith had grown upon that land. Indeed, he should have expected that the produce would be still greater, and he rather wondered at Mr. Clarke's average, too, because his land was very far beyond the average of the kingdom for Wheat-growing purposes. Twenty-six bushels of Wheat to the acre was nothing very extraordinary; and when he considered that, if they carried out the Lois-Weedon system, they must neglect the growth of roots and Clover, from which they produced their meat, he questioned whether they would be doing right in losing those crops, and going after another, which, certainly, so far as the last few years were concerned, had by no means paid them so well. If the Lois-Weedon system was to be at all successful it must be through the application of steam cultivation, and that too upon some of the ordinary Wheat soils. He felt quite convinced that upon the tenacious clay soils with which many present were acquainted—not such as he found at Lois-Weedon—no farmer would consider himself compensated in growing the quantity of which Mr. Smith boasted. Again, if the system were adopted, the covenants which were now contained in farm leases must be very much altered and modified. They all knew that a strong prejudice existed in some quarters against the farmer taking two white straw crops in succession, and it appeared to him that that would be urged as an objection to the Lois-Weedon system upon many estates. He believed that Mr. Smith managed his 4 or 5 acres of land in the best possible manner; but he (Mr. Howard) had left crops of Wheat in his own neighbourhood, raised by the ordinary system of farming, which looked quite as well as what he saw at Lois-Weedon.

Mr. Wilson (of Althorne, Essex) stated that he had visited Lois-Weedon several years ago, and he presumed that everybody who had since visited the farm had arrived at the same conclusion he did, which was that the system was utterly impracticable in this country. That it paid the gentleman who practised it he would not pretend to dispute, because there was every reason to believe that he was a truth-loving man; but if the Club were to occupy a whole week in the discussion of the subject, he did not think that they would be able to evolve any principle from it which would be applicable to their farms.

Mr. F. Hobbs.—According to what they had heard so lucidly described by Mr. Howard that evening, and all they had previously learned respecting the Lois-Weedon system of cultivation, he should say that there could be no advantage in it to the practical farmer. He recollected visiting, some 15 or 20 years ago, a friend, who called his attention to a similar system which had been carried out in his neighbourhood for upwards of 50 years, but with no very beneficial results; for it had not caught the attention of the neighbours, and no one else seemed to have followed it out. Even now the system was being pursued by an amateur, with no very great advantage. So far as Mr, Smith of Lois-Weedon was concerned, it appeared that he amused himself on his few acres of glebe land, and employed his poorer neighbours around him, and in this way he was doing good; but to lay his system before this Club as one of general application was altogether absurd. He was quite aware that Mr. Smith was acting with the very best intentions; but he felt persuaded that no one could adopt the system on an extensive scale, inasmuch as there was an inadequate supply of labour in the country, whilst if there were a fault in the existing practice, it was that they grew too much Wheat already, and Wheat had not been a paying crop of late years, and certainly it was an exhausting one. The proposition, therefore, to raise Wheat alternately year by year was one which he did not think the farmers of England would be inclined to entertain. It was nothing new. They had all read of it in Jethro Tull. One of its advantages was that it promoted the aeration of the soil; but even that they were doing as effectively by other means, and with a good rotation of cropping secured good root crops. A few years since, when in France, he was shown a farm of about 800 acres, upon which the crops were exceedingly fine. He was invited to point out all the faults that he could discover, and it struck him that one fine field of Wheat which was excessively green appeared to be too thickly planted. This was in the month of April. He inquired how much seed had been sown there, and was told three bushels per acre. It looked to him as if it would be all down in the straw, and turn out to be a very inferior yield; and he observed that if they drilled it a foot apart, with one-half the quantity of seed, the crop would be much better. They said they anticipated that that would be his remark; but they had tried the experiment with English drills, and found that at the period of the year when the Wheat came on to blossom, if the ground were not covered, the roots suffered so much from the drought that the Wheat was not worth grinding. The year previously he had what appeared to be a very heavy crop of Wheat upon very light land. It was drilled from north to south, and the yield greatly disappointed him. This practice was now avoided upon light lands, and they drilled from east to west, by which means the sun did not reach the soil in which the plant was growing. He thought, therefore, that the same principle which the Frenchman had carried out would be most beneficial on light lands, and that wide intervals between the rows of Wheat would be decidedly injurious, especially upon farms in the south of England.

The Chairman, as one of the deputation to Lois-Weedon, said that, so far as he could see, Mr. Smith's plan was a practicable and good one for his extent of land. His farm was about 12 acres, and upon that it did very well; and if the system were carried out thoroughly upon it, he saw no reason why it should not pay. To think, however, of putting it in operation upon a large scale would be a perfect absurdity. After quitting Lois-Weedon, the deputation visited Mr. Smith, of Woolston; and he might here state that the next month's discussion upon the substitution of steam power for horse and manual labour would relate considerably to what they had seen there. For his own part, he thought that, if the two systems were combined—if they could unite the Woolston system with the Lois-Weedon system of alternations—the two might be made to work well; but as to getting such an amount of manual labour as was required by the Lois-Weedon system to trench up the land immediately after harvest, was, he considered, utterly impracticable and out of the question. If they could perform the operation by means of the Woolston steam machinery, then it would be all right. In his opinion the Lois-Weedon system was only adapted to small farms. It was very well done, so far as it went, but he concurred with the opinion expressed by Mr. Hobbs that it was of no use to the practical agriculturist.

Mr. Corbet was sorry that, as the discussion had

assumed the tone it had done, neither Mr. Smith nor Mr. Clarke were present to answer many of the objections which had been raised. Unfortunately, too, there was no one present to advocate the system pursued at Lois-Weedon, except Mr. Greene, from Essex, who had been kind enough to answer several questions that had been put to him. No doubt Mr. Clarke would prepare a reply on the present discussion, and publish it in the agricultural journals, and afterwards in the Journal of the Club.

Mr. Corbet announced that, on the 22d inst., a special general meeting of the Club would be held, for the purpose of considering the question of the malt tax; and how far the members of the Club would give their assistance to certain local societies in the re-establishment of an "Anti-Malt-tax Association."

Miscellaneous.

Kohl Rabi.—My success in growing heavy crops of this root for some years upon poor soils, and more particularly their goodness this year in contrast to the general failure of Swedes and Turnips from the summer drought, induces me to bring its valuable qualities to more general notice. Many of your readers may be unacquainted with it, and I therefore may mention that it is grown largely in the north of Europe, and found to stand its severe frosts, and being raised in beds in the spring, and transplanted out in May and June like Cabbage plants, it is not liable to the casualties that Turnips are exposed to. It partakes of the form and qualities of both the Swede and Cabbage, that is to say, it has the leaves of the field Cabbage, with a bulb very similar to the white Swede. It is a native of Germany, very hardy, withstands frost better, and affords more winter cattle-food to the acre, in February and March, than any root that I am acquainted with. I have tested its feeding qualities against the Swede, and am disposed to think for sheep, and more particularly for couples in the spring, it is superior. They certainly prefer it, hares and rabbits pick it out, and are attracted to it from long distances. The bulb grows above ground, and is come-at-able in frost, and when the ground is covered with snow. It is very sweet and juicy, and the leaves are excellent picking for young lambs. There are two sorts, namely, the Green and the Purple; the former affords the greatest produce per acre, but perhaps the Purple is the most nutritious. My practice is to prepare a seed-bed in winter by well dressing and digging in a corner of my earliest piece of Tares. The seed is sown the end of February or early in March, thinly in rows 12 inches asunder, the beds are kept perfectly clean by hoeing and hand-weeding; and as the Tares are cleared off in May and June, the ground is deeply ploughed, ridged up, dressed and planted. The plants, at the first putting out, are placed 3 feet apart, the ridges being 28 inches asunder; but as the season advances, and the opportunity for reaching a full size diminishes, the distance between the plants is lessened. The value of this root, I assure your readers, is very considerable in any year, but more particularly after a dry summer, when most other winter food is scarce, or in severe weather when the land is covered with snow, and the Turnips are buried out of reach of sheep. I am very fortunate this year, when Turnips have so generally failed, having on each of my farms a considerable breadth; and I so much approve of it, that I intend never being without it at this season. Lean stock, after such a season as we have just had, always sell low in the autumn, from the prospect of a want of winter keep; while fat stock, in the following spring, sell very high, so that a crop of this description is most profitable in seasons when Turnips fail. Upon a field of 10 acres, broken up from heath last year (part of Bagshot Heath), I have at this time more winter food to the acre than is commonly grown on good soils in favourable seasons from any other root—this, too, has been raised without the aid of any purchased manure, and on land hitherto supposed of no value, and incapable of returning any produce paying for cultivation. My next attempt there will be Oats or Barley, and I have little doubt of a crop of corn.—Feb., 1848. *Hewitt Davis's Practical Essay.*

Mortality amongst Fell Sheep.—The recent mortality amongst fell sheep is reported as very great, and is indeed too clearly indicated by the large heap of fallen skins which may be seen in any market town on a market day. The cause is obvious—hunger. The cattle, too, wherever you go, are extremely lean and haggard, and are trying to pick up the smallest morsel of anything they can find to satisfy their natural cravings. The sufferings of the poor brute creation have been great from the recent snow storms. It is said that one-half of the sheep in the parish of Bampton have perished, and that Mr. Thomas Mounsey, in that parish, has lost above 500; and Mr. Thomas Abbott, of Thornthwaite Hall, near Shap, counts up his loss at more than 1200 head. Indeed the loss has been fearful all along the Lake Mountains, and the range of hills extending from Coniston Old Man to Stainmore. From Coniston, Hawkshead, Ambleside, Troutbeck, Kentmere, Longsleddale, Selside, Shap, Bampton, Crosby, Ravensworth, Ravenstonedale, Kirkby Stephen, Garsdale, Hawes, Wensleydale, and Dent, the loss has been great, and the flocks are very weak and sickly, and large numbers are daily dying. Never in the memory of the oldest shepherd on the hills of Westmoreland can be remembered so fearful a mortality amongst the mountain sheep, and great fears are entertained that it has not yet reached its highest pitch, as it is thought that as the sheep begin to feed on the young sprouts of green Grass which are now making their appearance, it will cause dysentery in their flocks; and then there is no remedy, for they are lost. *Kendal Mercury.*

Calendar of Operations.

MAY.

Essex: *May* 14.—All doubtful forebodings of a late and deficient harvest in 1860 are now falsified, vanished, and set at rest. Many springs, and especially those of 1838 and 1839 were both later than this, and in the former year, 1838, no warm weather occurred till about the 3d June, yet there was a productive and early harvest. Notwithstanding the coldness, wetness, and lateness of the weather a month ago, it is now, thanks to a kind Providence, all that need be desired; at least it is so in Essex, and bids fair to make up for some of the truly grievous losses which were universally sustained by the late unprecedented long, cold, and wet winter. Now, at nearly middle of May, we have the genial warm sunny days, and the nights are not cold, accompanied by copious, steady, and unchilled rains. In short, a more promising and productive summer for corn, provender, and fruit never before presented itself; barring, however, the loss of the Potato sets and tender Peas, together with many other tender plants and esculents from cold rain and melted snows, just at the identical time of sowing, which either rotted or chilled them, and thus prevented germination of the seed. This is an occurrence which has often happened in former years, on retentive lands imperfectly or flatly cultivated, especially when the indurated subsoil had been trodden down still harder by horses, it may be for ages past, to an iron-like pan, with a waterproof bottom, holding to overflowing cold rain and melted snow, which when frozen at night is sufficient to drown and to destroy all delicate or tender vegetation. Not so however on deeply dug or forked fields or gardens, even though the land may have been heavy or of a loamy character. Such cultivated soils self-drain themselves sufficiently, and seldom on them do such serious losses or failures happen. We hail then the all-powerful steam-plough to effect this desired object. "Deep cultivation," in lieu of the spade or fork (which, by the bye, are not to be scoffed at), or the paltry common plough, which, in point of expense, will not exceed half the cost of either horse or manual labour we are obliged to accede to now, and which always have been imperfectly performed by one and all. We look forward then for greater revolutionary achievements in agricultural science to be yet accomplished by mighty steam never before heard or dreamed of, when the said indurated horse-trodden clay and rocky subsoil will be "smashed up" and turned into comminuted rich soil, affording a better opportunity of its receiving and retaining all rain, dews, and melted snows, impregnated all of them more or less with ammonia; also of giving off from the soil by quick evaporation what excess of moisture Dame Nature refuses to retain, the whole of which under present circumstances, or modes of cultivation, is too often carried off by surface drainage or water furrows, sometimes, nay often, when it is actually required for the full development of summer crops, as is especially the case now this very day, May 14, 1860, from extraordinary copious rains fallen on the night of the 12th inst. and following Sabbath day. Thousands of hhds. are thus unnecessarily, strictly speaking, carried off from some elevated fields, and overflowing to excess others in low situations, to the utter ruin of the crops growing thereon; which would otherwise on deep culture have been stored and advantageously disposed of where it fell, during the dry summer months, as it undoubtedly was designed to do by the great wise Creator of all things. *Abraham Hardy & Son.*

Isle of Ely: *May* 21.—Very great changes have occurred in the character of the weather since our last report was written. We then predicted that we were again on the eve of a return to cold, and so it proved. We continued to have frosty mornings, frequently with ice, with bitterly cold north-east winds for nearly three weeks. This weather told seriously upon vegetation. On the 18th April we had a terrific gale of wind from the north-east, which threatened to be very destructive to many of the crops in our Fen districts. The dust was blowing in clouds in all directions from the land. Newly sown Oats were threatened with entire destruction, and doubtless many were seriously injured. The Wheats, too, on light weak soils sustained considerable injury. On the morning of the 7th inst. we had one of the sharpest frosts we had experienced all the spring. The ice was quite thick. On the few days previously, as also on the day immediately succeeding it, we had a good deal of brilliant sunshine. And we always find bright days with a high temperature before and after a severe frost in the spring, tend to make it much more destructive to vegetation on our Fen lands. And in this particular instance our previously formed opinions received a full confirmation. This one night, followed by a sunny day, did more mischief to our Fen Wheats than all the adverse weather of the long and protracted winter had done. The flag and stem were cut, and in many instances looked quite white in colour, and lay upon the ground in all directions, smelling almost like hayfields. Happily this weather did not continue, but was immediately succeeded by a freedom from cold frosts at nights, and in a few days by a magnificent rain, which has thoroughly saturated every inch of ground. On Saturday the 12th inst. the rain began to fall about 8 P.M., and continued without intermission till 4 P.M. on the following day (20 hours). During the whole of last week, too, we had copious showers, and on Tuesday a very severe thunderstorm, when the rain fell in torrents, and our farmers were beginning to fear that an excess of moisture would be realised; but the clouds have been dispersed, and again we have brilliant weather, and vegetation is making rapid progress. Our crops are generally recovering and presenting a more promising appearance. The wireworm is rather busy on some of the Oat lands, and is thinning the plant a good deal in some instances. Mangel seeding was scarcely finished when the rain fell, and has consequently been suspended for a week. The pastures are in their very best attire, and present a most beautiful aspect. Shortness of keeping will not be again the complaint for many a day. Our prospect for hay is good, and crops must be heavy. Both bullocks and sheep sell more freely at considerably better prices. The opinion we ventured to offer in our two last reports as to the sale of sheep when the Grass season had arrived appears likely now to be confirmed by fact. Prices are pointing upwards, and will ere long, we conceive, be extravagantly high. The corn trade progresses slowly, but is slightly dearer, and we still anticipate higher prices. *Your Fen Reporter.*

Notices to Correspondents.

Ants: *B H.* Try plentiful dressings with guano. This in spring, and feeding hard in summer and autumn, together with folding sheep on it in winter, giving them roots and fodder, will probably get rid of the nuisance.

"National Health and Wealth": *Holmrell Vicarage.* Mr. Moule's pamphlet is, we think, published by Messrs. Bradbury & Evans, Bouverie Street, Fleet Street.

Taste of Butter: *T T H.* The taste of the butter cannot be attributed to the Bean-meal you are giving

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. Nesbit, F.G.S., F.C.S., &c.
The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

CHEAPEST AND BEST.
JUPP'S NEW HORSE AND CATTLE FOOD.—The utility of this new preparation being now fully established, W. & R. Jupp & Co. beg to say that they are prepared to execute orders to any extent. A trial will prove its beneficial qualities. Price 35s. per cwt.; 19s. per ½ cwt.; and 10s. per ¼ cwt., carriage free to nearest railway stations in Great Britain. Pig Meal, 16s. per cwt. Cash or a London reference expected from unknown correspondents.
W. & R. Jupp & Co., 6, Cross Lane, St. Mary-at-Hill, Eastcheap, E.C.
*** Agents liberally treated with.

TO PIG, POULTRY, AND GAME FEEDERS.
JUPP'S RICE FOOD, POULTRY AND GAME.—RICE SWEEPINGS, 8s. 6d. per cwt., in 1½ cwt. bags; SCREENED RICE, 12s. per cwt., in 1¾ cwt. bags; DOG BISCUITS, 14s. per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6s. 6d. and 8s. 6d. per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. Jupp, 6, Cross Lane, Eastcheap, E.C.

INSTRUMENT FOR MEASURING THE HEIGHT OF TREES.—The DENDROMETER described at page 408 of the *Gardeners' Chronicle* may be had post free for 13s. from Edward Sang & Sons, Kirkcaldy, N.B.

JOHN FOWLER, Jun., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

AGRICULTURAL AND GENERAL MACHINERY.—As PRIZEHOLDERS for the best Articles manufactured, Messrs. Burgess & Key, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and hoice Stock.

REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by Burgess & Key, 95, Newgate Street, London, E C. Orders for delivery this season must be given early to avoid disappointment.

MOWING MACHINE—BURGESS AND KEY'S
Prize Mower, the most valuable ever manufactured, can be seen at their Stores, 95, Newgate Street, E.C.

PARKES' STEEL DIGGING FORKS.
BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.
ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society: it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. Burgess & Key, 95, Newgate Street, E C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

GARDEN POTS AND PANS, in quantities of not less than 20 casts, delivered to the London Railway Stations at the following prices:—

Nos.	Thbs.	60.	L60.	54.	48.	40.	32.	28	24.	16.	12.	8.	6.	4.	3.	2.	1.
		Inches.															
Diameter		2¾	3½	4¼	4¾	5½	6	6½	7	8	9	10½	11¾	13¾	15	16¼	17½	19
Per Cast		2s.	2s.	2s.	2s.	2s.	2s.	2s.	2s.	2s.	2s.	3s.	3s. 6d.	5s.	5s.	5s.	5s.	5s.

On lesser quantities, 6d. per mile, for delivery to the station, would be charged. The usual discount to the Trade. Square Propagating Pans, Kale and Plunging Pots, Strawberry and Border Tiles, &c., made to order.
Country orders to be accompanied by a remittance.
J. & W. Adams, Kilns, Belle Isle, York Road, King's Cross, N.

GARDEN BORDER EDGING TILES.
ROSHER AND CO. beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.
Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.
N.B. Sketches of the patterns will be forwarded by post on application. Ornamental Flower Boxes kept in stock.

ORNAMENTAL PAVING TILES FOR CONSERVATORIES, HALLS, CORRIDORS, BALCONIES, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs. Also WHITE TILES, highly glazed, for Lining Walls of Baths, Dairies, Kitchen-ranges, Larders, &c. To be obtained of Rosher & Co., at their premises as above.

INDELIBLE GARDEN TALLIES.—Mark your Tallies of wood, parchment, or zinc for the greenhouse or garden, with Dunn's PATENT SOLID MARKING INK PENCIL. Retail at Messrs. Butler & McCulloch's and Messrs. Hooper & Co., Covent Garden, W.C.; J. Carter & Co., 237, High Holborn, W.C.; T. Brigden, Railway Arcade, London Bridge, S.E.; and all Nurserymen and Seedsmen, Chemists, Stationers, &c. With screw-holder, complete, 1s. 6d. each; will refill for 1s.; by post for 19 penny stamps. Wholesale by J. Lusher, 19, Holborn Hill, E.C.; Barclay & Sons, Farringdon Street, E.C.; or any other wholesale house; and Crowhurst, 7, Fownes Street, Dublin. Further information obtained by addressing Arthur Dunn, the Patentee, at the Manufactory, 1, Durham Place, Dalston Green, London, N E.
N.B. These Pencils are unequalled for marking indelibly on Linen, &c., for which purpose a much finer point is made, at same price, than that contained in the Gardener's Pencil, but this is well adapted for all coarse woven fabrics.

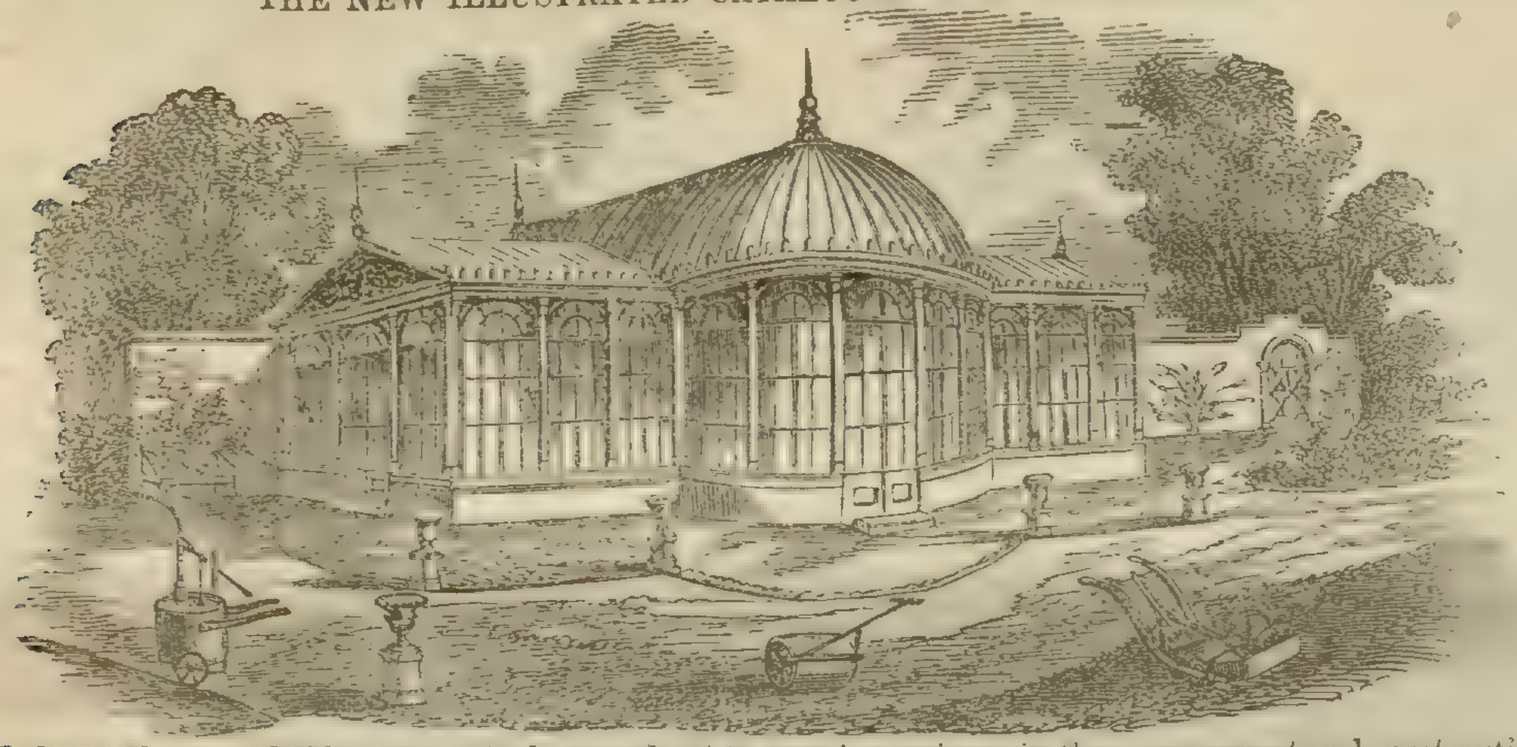
OIL PAINT NO LONGER NECESSARY.
HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which Hill & Smith will forward on application.
Sold in casks of about 30 gallons each at 1s. 6d. per gallon at the manufactory, or 1s. 8d. per gallon paid to any station in the kingdom.—Apply to Hill & Smith, Brierley Hill Iron Works, near Dudley, from whom only it can be obtained.

COTTAM & COMPy., Engineers, Founders, &c.,

2, WINSLEY STREET, LONDON, W.

☞ **A SHOW ROOM DEVOTED ENTIRELY TO ARTICLES OF HORTICULTURE.**

THE NEW ILLUSTRATED CATALOGUE UPON APPLICATION.



COTTAM AND COMPy. having had upwards of 40 years' experience in the arrangement and construction of every description HORTICULTURAL BUILDINGS AND HEATING BY THE CIRCULATION OF HOT WATER, and well qualified to guarantee the perfect execution of any works intrusted to them in the erection of

Conservatories	**Summer Temples**	**Orchid Houses**	**Apricot and Peach Houses**
Conservatory or Glass Walls for the protection of plants or ripening wall fruit	Arbours, &c.	Conservatories for Window or Balcony Gardening	Tropical Fruit Houses
	Greenhouses	Vineries	Forcing Pits and Frames
	Orangeries		Cucumber and Melon Houses

☞ *Drawing and Estimates free upon application.*

EXHIBITION PRIZE MEDAL GATES AND STABLE FITTINGS.

Iron Hurdles, Strained Wire Fencing, Game Netting, &c.

Every description of Plain, Ornamental, Cast and Wrought Iron, and Wire Work

SEE SEPARATE LISTS UPON APPLICATION.

COTTAM & COMPy. Iron Works, 2, Winsley Street, Oxford Street, W. (opposite the P a nth

DEANE & COMPANY'S
HORTICULTURAL TOOLS.

GARDEN ENGINES, Galvanised Iron. Prices 55*s.*, 65*s.*, 78*s.*, 90*s.*, 100*s.*, 110*s.*

GARDEN ENGINES, Wood, 90*s.*, 110*s.*, 138*s.*

FLOWER STANDS, 4*s.* 6*d.* each.

CAST IRON ORNAMENTAL FLOWER STANDS, to hold seven Vases, 27*s.*

DEANE'S MOWING MACHINES, with Boyd's Patented Improvements, 4*l.* 17*s.* 6*d.*, 6*l.* 6*s.* 0*d.*, 6*l.* 17*s.* 6*d.*, 7*l.* 7*s.* 0*d.*

GREEN'S PATENT MOWING MACHINES.

GREENHOUSE SYRINGES, 8*s.*, 10*s.*, 18*s.* 6*d.*

GARDEN ROLLERS, 1*l.* 14*s.* 6*d.*, 2*l.*, 2*l.* 12*s.* 3*l.* 3*s.*, 3*l.* 18*s.*, 4*l.* 13*s.*, 5*l.* 12*s.*, 7*l.* 10*s.*

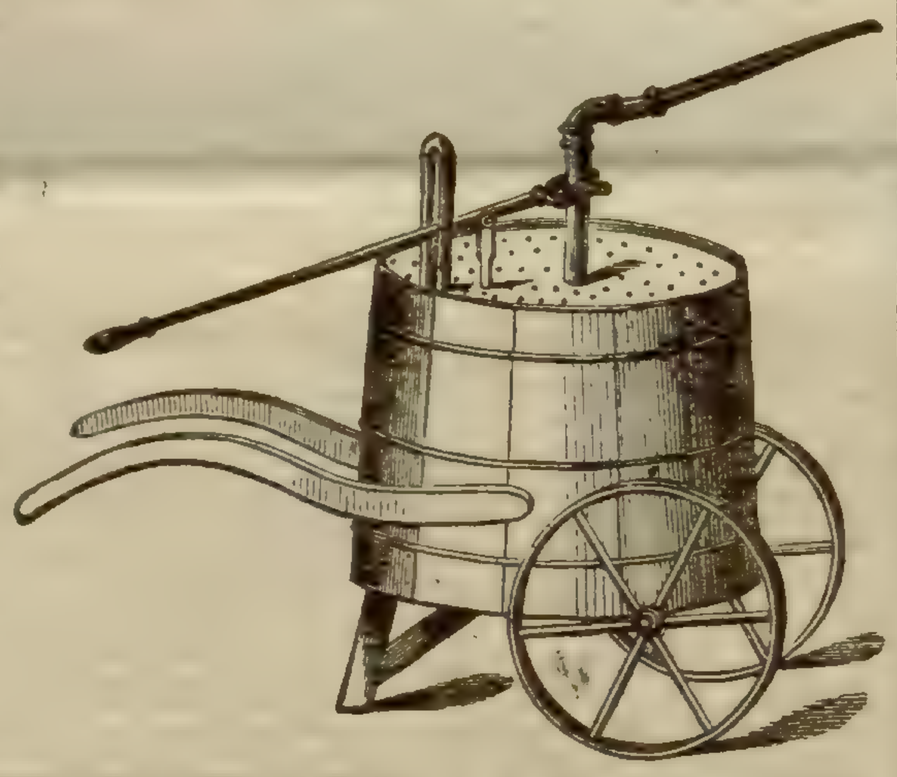
GARDEN STOOLS, 4*s.* 6*d.*

GARDEN SEATS, from 25*s.*

BOYD'S SELF-ADJUSTING SCYTHE, 10*s.* 6*d.*

WIRE WORK, 18 in., 4*d.* per yard run.

Every Implement for Garden use on the Lowest Terms.



DEANE'S, Opening to the Monument, London Bridge, E.C.

WILLIAM HEALY
(Late Burbridge & Healy),
118, Dorset Street, Fleet Street, London, E.C.
HOT-WATER APPARATUS MANUFACTURER.

C. STEPHENSON, late STEPHENSON AND SONS, 61, Gracechurch St., London, E.C., Manufacturer of Iron Hurdles, Fencing, &c., Improved Iron and Copper Conical Boilers, and Apparatus for Warming Buildings of every description by Hot Water.

Prices and Estimates furnished upon application.

HOTHOUSES FOR THE MILLION.
MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete £30
Do. do. 40 ft. by 20 ft. do. do. £50
Do. do. 60 ft. by 24 ft. do. do. £90

LIST OF PRICES of any size forwarded on application to J. LEWIS.

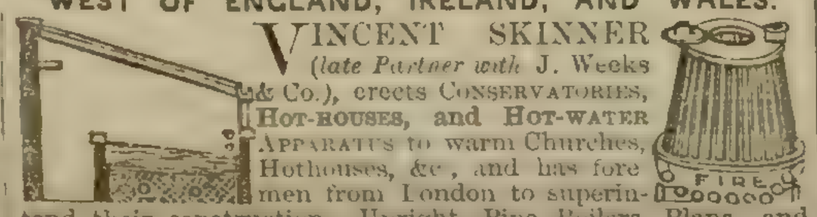
HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.
KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they Erect all kinds of Conservatories, Vineries, Greenhouses, &c., combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & Son have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

WEST OF ENGLAND, IRELAND, AND WALES.



VINCENT SKINNER (*late Partner with* J. Weeks & Co.), erects CONSERVATORIES, HOT-HOUSES, and HOT-WATER APPARATUS to warm Churches, Hothouses, &c., and has foremen from London to superintend their construction. Upright Pipe Boilers, Plans, and Estimates.—V. SKINNER, Bridewell Street, Bristol.

HOT-WATER APPARATUS.

J. JONES begs to offer a complete HOT-WATER APPARATUS FOR GREENHOUSES, at the following prices, delivered free to any Railway Station in England:—

Size of House.	With Cylinder Boiler.	With Saddle Boiler
20 feet by 10 feet	£8 10 0	£9 0 0
25 ,, by 12 ,,	10 0 0	10 10 0
30 ,, by 12 ,,	11 10 0	12 0 0
30 ,, by 15 ,,	13 10 0	14 10 0
40 ,, by 15 ,,	16 10 0	17 10 0
50 ,, by 15 ,,	18 10 0	20 0 0

The above prices include Boiler, strong Furnace Doors, Bars, Soot Doors, Cistern, Damper, Hot water Pipes and Connections, Air Pipes, &c., all ready for fixing, and of the best quality. Further particulars will be sent on application. Parties ordering must send plans, showing doorways, position of boiler, &c.—J. JONES, Hot-water Apparatus Manufacturer, 6, Bankside, Southwark, London, S.E.

200 CUCUMBER AND MELON BOXES, AND LIGHTS, AND 500 LIGHTS of all Sizes kept in Stock, Glazed and Painted complete, ready for immediate use. Packed and sent to all parts of the kingdom.

JAMES WATTS & Co., Hothouse Builders and Hot-water Apparatus Manufacturers, near the Green Man, Old Kent Road, London, S.E.

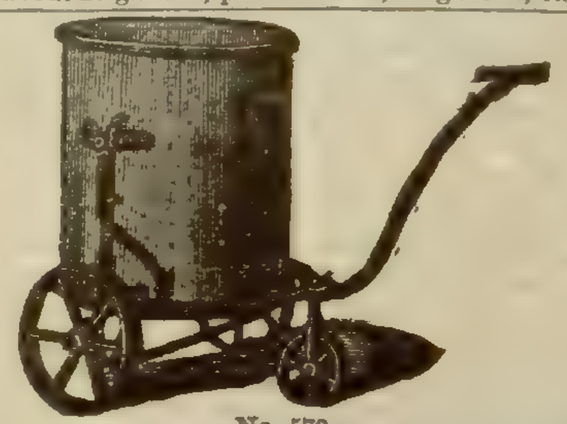
BY ROYAL LETTERS PATENT.

T. G. MESSENGER, HORTICULTURAL BUILDER, PATENT HOT-WATER APPARATUS MANUFACTURER, &c., Loughborough, begs respectfully to call the attention of the Nobility, Gentry, Nurserymen, &c., to his Patented Divisionless Horticultural Erections and Mode for Ventilating same. A Model Erection, showing these as well as many other improvements, sent carriage free to any gentleman requiring the same. Also an Illustrated Price List of his Garden Engine, which is cheaper than any other. T. G. MESSENGER'S Boiler is now at work at many gentlemen's seats in the country, giving the utmost satisfaction.

T. G. M.'s perfect and simple Hot-water Valve, 4 in., 22*s.*; 3 in., 18*s.* 6*d.* Plans, Estimates, &c., sent upon application.

THE IMPROVED PATENT GARDEN, WATER AND ROLLING ENGINE may be had at J. DORE'S, the sole Manufacturer, 17 Exmouth Street, Clerkenwell, London, E.C.

The threefold use of this neat little Machine must be obvious in Watering, Rolling, or Syringing; it will throw about 60 feet, and is so portable that any ordinary domestic may use it. It contains about 20 gallons, price 5*l.* 10*s.*; 25 gallons, 6*l.* 10*s.*



No. 579.

WARNER'S SWING WATER BARROW (holding about 35 gallons), is intended for all large establishments where much watering is done by the watering pot. By its use the gardener will save much time and labour, particularly where the tank, pond, or pump is at a distance from the garden. Price 3*l.* 3*s.*

BRASS SYRINGES, from 9*s.* to 21*s.*

The above may be obtained of any Ironmonger in town or country, or of JOHN WARNER & SONS, 8, Crescent, Cripplegate, London, E.C.

GARDEN ENGINES AND SYRINGES.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 598. J. TYLOR & SONS' BARROW GARDEN ENGINE in best well painted Oak tub, fitted with J. TYLOR & SONS' Improved Brass Pump, Universal Joint, and Registered Spreader, which answers the purpose of the separate rose, fan, and jet.

CONTENTS OF TUB:—
15 gallons .. £5 10 | 28 gallons .. £6 18

Fig. 599. Ditto TINNED IRON TUB.

CONTENTS OF TUB:—

8 gallons	12 gallons	16 gallons	24 gallons	30 gallons
£2 15	£3 5	£4	£5	£5 18

Fig. 618. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. .. £1 5 each.
No. 2. Ditto ditto 1 1 ,,
Telescope Branch Pipe for ditto .. .. 0 10 ,,

Fig 619. GARDEN SYRINGE, with one rose and jet, 12*s.* 6*d.* each.
,, 620. Ditto ditto 11 6 ,,
,, 621. Ditto ditto 10 6 ,,
,, 622. LADIES' GARDEN SYRINGE, with do. 8 0 ,,

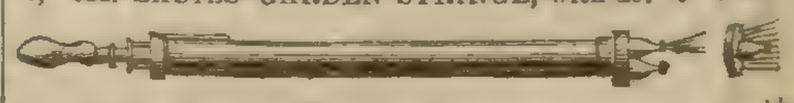


Fig. 623. READ'S SYRINGE, with two roses and one jet, 18*s.* 6*d.*
,, 324. READ'S SYRINGE, with one rose and jet .. 16 6
,, 625. Improved ditto ditto .. 14 6
,, 626. Ditto ditto ditto .. 13 0

Manufacturers of Pumps and Well Engines (for shallow or deep Wells), Plumbers' Brass Foundry of every description, High Pressure Cocks and Closets, Copper and Tinned-iron Baths, Garden and Fire Engines, Lamps of every description, Copper Goods, &c. Estimates given for Hot-water and Bath Apparatus.

ROYAL BOTANIC GARDENS,

REGENT'S PARK, N.W.,

WEDNESDAY, MAY 30, 1860.

LIST OF AWARDS.

EXTRA GOLD MEDAL.

To Mr. W. May, Gr. to Josiah Spode, Esq., Hawkesyard Park, Rugeley, Stafford, for 16 Stove and Greenhouse Plants
To Mr. Bullen, Gr. to J. Butler, Esq., Woolwich, Kent, for 20 Exotic Orchids

LARGE GOLD MEDAL.

To Mr. Whitbread, Gr. to H. Colyer, Esq., Dartford, Kent, for 16 Stove and Greenhouse Plants
To Mr. Gedney, Gr. to Rev. W. Ellis, Hoddesdon, Herts, for 20 Exotic Orchids

MEDIUM GOLD MEDAL.

To Mr. B. Peed, Gr. to T. Tredwell, Esq., St. John's Lodge, Norwood, for 16 Stove and Greenhouse Plants
To Mr. W. Cutbush, Nurseryman, Barnet, Herts, for 12 Stove and Greenhouse Plants
To Mr. Green, Gr. to Sir E. Antrobus, Bart, Lower Cheam, Surrey, for 10 Stove and Greenhouse Plants
To Mr. Turner, Nurseryman, Slough, for 10 Greenhouse Azaleas
To Mr. Carson, Gr. to W. R. G. Farmer, Esq., for 8 Greenhouse Azaleas
To R. Warner, Esq., Broomfield, Essex, for 20 Exotic Orchids
To Mr. Carson, Gr. to W. R. G. Farmer, Esq., or 12 Exotic Orchids
To Messrs. Paul & Son, Nurserymen, Cheshunt, for 10 Roses in pots
To Mr. Woolley, Nurseryman, Cheshunt, for 16 Exotic Orchids

GOLD MEDAL.

To Messrs. J. & J. Fraser, Nurserymen, Leyton, Essex, for 12 Stove and Greenhouse Plants
To Mr. J. Peed, Gr. to C. F. Gabriel, Esq., Norfolk House, Streatham, for 10 Stove and Greenhouse Plants
To Mr. B. Peed, Gr. to T. Tredwell, Esq., for 8 Cape Heaths
To Messrs. Lane & Son, Nurserymen, Great Berkhampstead, Herts, for 10 Greenhouse Azaleas
To Mr. Green, Gr. to Sir E. Antrobus, Bart., for 8 Greenhouse Azaleas
To Mr. O. Rhodes, Gr. to J. Philpott, Esq., Stamford Hill, for 20 Exotic Orchids
To Mr. Page, Gr. to W. Leaf, Esq., Park Hill, Streatham, for 12 Exotic Orchids
To Mr. C. Turner, Nurseryman, for 12 Pelargoniums
To Mr. Nye, Gr. to E. Foster, Esq., Clewer Manor, Windsor, for 10 Pelargoniums
To Messrs. Lane & Son, Nurserymen, for 10 Roses in pots

LARGE SILVER GILT MEDAL.

To Mr. Baxendine, Gr. to Haydon Smallpiece, Esq., Guildford Surrey, for 16 Stove and Greenhouse Plants
To Messrs. Jackson & Son, Nurserymen, Kingston, Surrey, for 12 Stove and Greenhouse Plants
To Mr. T. Page, Gr. to W. Leaf, Esq., Park Hall, Streatham for 10 Stove and Greenhouse Plants
To Mr. Chilman, Gr. to Rev. W. Denshire, Ashstead House, Epsom, Surrey, for 6 Stove and Greenhouse Plants
To Mr. R. Attbee, Nurserymen, Stockwell, for 10 Greenhouse Azaleas
To Mr. Whitbread, Gr. to H. Colyer, Esq., for 8 Greenhouse Azaleas
To Mr. C. Turner, Nurseryman, for 6 Greenhouse Azaleas
To Mr. Penny, Gr. to H. Gibbs, Esq., St. Dunstan's, Regent's Park, for 6 Exotic Orchids
To Messrs. Dobson & Son, Nurserymen, Isleworth, for 12 Pelargoniums
To Mr. Bailey, Gr. to T. T. Drake, Esq., Amersham, Bucks, for 10 Pelargoniums
To Mr. E. P. Francis, Nurseryman, Hertford, for 10 Roses in pots
To Mr. Terry, Gr. to E. W. G. Puller, Esq., Youngsbury, Ware, Herts, for 6 Roses in pots

LARGE SILVER MEDAL.

To Mr. Carson, Gr. to W. R. G. Farmer, Esq., Nonsuch Park, Cheam, Surrey, for 6 Stove and Greenhouse Plants
To Mr. Tegg, Gr. to Baron Hambro, Roehampton, Surrey, for 6 Stove and Greenhouse Plants
To Mr. Harlock, Gr. to R. W. Nutter, Esq., Wanstead, Essex, for 8 Cape Heaths
To Mr. W. May, Gr. to Josiah Spode, Esq., for 6 Cape Heaths
To Messrs. J. Ivery & Son, Nurserymen, for 6 Greenhouse Azaleas
To Mr. May, Gr. to J. Spode, Esq., for 6 Exotic Orchids
To Mr. Turner, for 6 Fancy Pelargoniums
To Mr. Bailey, Gr. to T. T. Drake, for 6 Fancy Pelargoniums

SILVER GILT MEDAL.

To Mr. O. Rhodes, Gr. to J. Philpott, Esq., Stamford Hill for 10 Stove and Greenhouse Plants
To Mr. Uzzell, Gr. to Dowager Duchess of Northumberland, Twickenham, for 6 Stove and Greenhouse Plants
To Mr. J. Peed, Gr. to C. T. Gabriel, Esq., for 8 Cape Heaths
To Mr. Page, Gr. to W. Leaf, Esq., for 6 Cape Heaths
To Messrs. J. & J. Fraser, for 10 Greenhouse Azaleas
To Mr. J. Peed, Gr. to C. T. Gabriel, Esq., for 8 Greenhouse Azaleas
To Mr. Carson, Gr. to W. R. G. Farmer, Esq., for 6 Greenhouse Azaleas
To Mr. Green, Gr. to Sir E. Antrobus, Bart., for 6 Exotic Orchids
To Messrs. Dobson & Son, for 6 Cinerarias
To Messrs J. & J. Fraser, for 12 Pelargoniums
To Mr. Weir, Gr. to Mrs. Hodgson, The Elms, Hampstead for 10 Pelargoniums
To Messrs. J. & J. Fraser, for 6 Fancy Pelargoniums
To Mr. J. Holland, Gr. to R. W. Peake, Esq., Spring Grove, Hounslow, for 6 Fancy Pelargoniums
To A. Rowland, Esq., Lewisham, Kent, for 6 Roses in pots

SILVER MEDAL.

To Mr. George, Gr. to J. Nicholson, Esq., Stamford Hill, for 6 Stove and Greenhouse Plants
To Mr. Chilman, Gr. to Rev. W. Denshire, for 6 Cape Heaths
To Messrs. Rollison, Nurserymen, Tooting, for Epacris multiflora
To Messrs. Rollison, for Ixora robusta
To Mr. Lawrence, Gr. to Bishop of Winchester, for Cypripedium caudatum roseum
To Messrs. Veitch & Son, Nurserymen, Chelsea and Exeter, for Cypripedium sp.
To Messrs. Veitch & Son, for Hemerocallis distichia flora pleno
To Mr. Cross, Gr. to Lady Goldsmid, Regent's Park, for 6 Greenhouse Azaleas
To Mr. G. H. Bunney, Nurseryman, Stratford, Essex, for 6 Exotic Orchids
To Mr. J. Shrimpton, Gr. to A. J. Doxatt, Esq., Putney Heath, for 6 Cinerarias
To Mr. Windsor, Nursery, Child's Hill, Hampstead, for 12 Pelargoniums
To Messrs. Dobson & Son, for 6 Fancy Pelargoniums
To Mr. Tandy, Gr. to E. Saunders, Esq., Fair Lawn, Wimbledon Park, for 6 Fancy Pelargoniums
To Mr. George, Gr. to J. Nicholson, Esq., for 6 Roses
To Mr. Young, Gr. to R. Barclay, Esq., West Hill House, Hampstead, for 6 Fuchsias
To Mr. G. H. Bunney, for 6 Anæctochilus

SMALL SILVER MEDAL.

To Mr. O. Rhodes, Gr. to J. Philpott, Esq., for 6 Cape Heaths
To Mr. Baxendine, Gr. to H. Smallpiece, Esq., for 6 Cape Heaths
To Mr. Gedney, Gr. to Rev. W. Ellis, for Lælia Zanthina
To Messrs. Parker & Williams, Nurserymen, for Statice sp.
To Mr. J. Standish, Nurseryman, Bagshot, for Rhododendron mirabile
To Messrs. Rollisson, for Biota orientalis elegantissima
To Mr. Lawrence, Gr. to the Bishop of Winchester, Farnham Castle, for Epidendrum maculatum
To Messrs. Veitch & Son, for Cattleya Dominiana
To Mr. Woolley, for Correct Labels
To Mr. May, for Arrangement of Colour
To Messrs. Ivery & Son, Nurserymen, Dorking and Reigate, for 10 Greenhouse Azaleas
To Mr. B. Peed, for 8 Greenhouse Azaleas
To Mr. Green, for 6 Greenhouse Azaleas
To Mr. Chilman, for 6 Exotic Orchids
To Mr. Farmer, Gr. to S. Morley, Esq., Stamford Hill, for 6 Cinerarias
To Rev. C. E. Ruck Keene, Swynecombe House, Henley-on-Thames, for Bougainvillæa spectabilis
To Mr. T. Gaines, Nurseryman, Battersea, for 12 Pelargoniums
To Mr. J. Windsor, Nurseryman, for 6 Fancy Pelargoniums
To Mr. Weir, Gr. to Mr. Hodgson, for 6 Fancy Pelargoniums
To Messrs. Downie & Laird, Edinburgh, for 36 Pansies
To Mr. J. James, for 24 Pansies
To Mr. Turner, for 18 Tulips
To Messrs. Lane & Son, Nurserymen, for Collections of Rhododendrons
To Messrs. Lane & Son, Nurserymen, for Standard Azaleas
To Messrs. Lane & Son, Nurserymen, for Collection of Cut Roses
To Messrs. Parker & Williams, for Rhododendron Dalhousieanum
To Messrs. E. G. Henderson, Nurserymen, Wellington Road, for 9 Begonias
To Messrs. E. G. Henderson, for 8 Caladiums
To Mr. O. Rhodes, for 12 Foliage Plants

BRONZE MEDAL.

To Messrs. Paul & Son, Cheshunt, Herts, for Collection of Hardy Ferns
To Messrs. Rollisson, for Daphne formosissima
To Mr. B. Peed, for Correct Labels
To Mr. B. Peed, for ditto
To Mr. Baxendine, for Arrangement of Colour
To Mr. T. Gaines, Nurseryman, for 10 Greenhouse Azaleas
To Mr. T. Whitbread, for 6 ditto
To Mr. Gaines, for 6 Fancy Pelargoniums
To Mr James, Gr. to W. F. Watson, Esq., Isleworth, for 6 Fancy Pelargoniums
To Mr. Bragg, Nurseryman, Slough, for 36 Pansies
To Mr. C. J. Perry, Castle Bromwich, for 24 Pansies
To Mr. Norman, Bullfield, Kent, for 11 Tulips

CERTIFICATE.

To Mr. Whitbread, for Correct Labels
To Mr. Green, for Correct Labels
To Mr. Cutbush, for Arrangement of Colour
To Mr Shenton, Nurseryman, Hendon, for 36 Pansies
To Mr. Young, for 6 Tall Cacti
To Mr. Green, for 6 Tall Cacti
To Mr. James, for 12 Pansies in pots
To Mr. Cole, Nurseryman, for 40 Calceolarias

CERTIFICATE OF MERIT, FIRST CLASS.

To Mr. Turner, for Pelargonium Patroness
To Mr. Turner, for Fancy Pelargonium Arabella Goddard
To Mr. Turner, for Fancy Pelargonium The Champion
To Mr. Turner, for Gloxinia Etonia
To Mr. Turner, for Azalea General Havelock
To Mr. Young, for Seedling Cactus grandis
To Messrs. Parker & Williams, for Pteris tricolor
To Messrs. Parker & Williams, for Pteris crispa
To Mr. Taylor, Gr to Lady Middleton, Shrublands, for Phlox Lady Middleton
To J. Veitch & Son, for Cissus porphyrophyllus
To J. Veitch & Son, for Dracæna sp New Zealand
To Mr. Hally, for Horse-shoe Geranium Aurora
To Mr. Hally, for Horse-shoe Geranium Blackheath Beauty.
To Mr. Nye, Gr. to E. Foster, Esq., for Pelargonium Perdita

CERTIFICATE OF MERIT, SECOND CLASS.

To Mr. Turner, for Dish of Strawberry Oscar

HORTICULTURAL SOCIETY.—Notice is hereby given, that the next Ordinary Meeting of the Horticultural Society for the Election of Fellows will be held at the Museum of Science and Art, South Kensington (by permission of the Lord President of the Privy Council), on TUESDAY, June 26; the Chair to be taken at 1 o'Clock, P.M. On this occasion a Ballot for Plants will also take place.

LIST OF PLANTS FOR BALLOT.

1. CUPRESSUS LAWSONIANA. One of the finest of the new hardy Californian Cypresses.
2. CUPRESSUS GOVENIANA. A hardy tree.
3. PINUS TUBERCULATA. A hardy Californian tree.
4. CHOROZEMA CORDATUM. A greenhouse shrub.
5. SEEDLING CAMELLIAS. From Florence.
6. CALLISTEMON RUGULOSUM. A greenhouse shrub.
7. VIMINARIA DENUDATA. A greenhouse shrub.
8. LEPTOSPERMUM JUNIPERINUM. A greenhouse shrub.
9. PITTOSPORUM UNDULATUM. A greenhouse shrub.
10. SPIRÆA CALLOSA. A hardy shrub.
11. ERIOBOTRYA JAPONICA. Japan Medlar.
12. PAULOWNIA IMPERIALIS. A hardy deciduous tree, with blue flowers, from Japan.
13. VITIS POLYMORPHA. A hardy creeper.
14. GLYCINE SINENSIS ALBA. A hardy creeper.
15. GARDENIA FLORIDA, var. FORTUNIANA. A greenhouse shrub.
16. ADHATODA CYDONIÆFOLIA. A stove shrub.
17. CEANOTHUS VERRUCOSUS. A hardy shrub, from California.
18. VIBURNUM MACROCEPHALUM. From China.
19. CLEMATIS MICROPHYLLA, var. LEPTOPHYLLA. A greenhouse creeper, from Australia.

Fellows of the Society desirous of obtaining any of the plants to be balloted for are requested, if life members of 40 guineas or subscribers of 4 guineas a year, to name the FOUR sorts they would prefer; or, if life members of 20 guineas, or subscribers of 2 guineas a year, to name the TWO sorts they would prefer. Should there be more applications for any particular plant than the number available for distribution, a Ballot will then take place to determine which applicants are to be supplied.

The arrangements for conducting the Ballot render it necessary that the names or numbers, prefixed to the plants to be drawn for, should be sent to the office of the Society, 8, ST. MARTIN'S PLACE, W.C., on or before SATURDAY, JUNE 23d, AFTER WHICH DATE NO APPLICATIONS CAN BE ATTENDED TO.

ROYAL OXFORDSHIRE HORTICULTURAL SOCIETY.

Patrons:—H.R.H. THE PRINCE CONSORT, and H.R.H. THE PRINCE OF WALES.

The SUMMER EXHIBITION of the above Society will be held in the Gardens of Worcester College, Oxford, on TUESDAY, June 19, when, in addition to the Prizes confined to Members, the following are offered, Open to All England, entrance free:—

A. Stove or Greenhouse Plants (not Fuchsias or Geraniums), nine varieties: 1st Prize, 10*l.*; 2d Prize, 8*l.*; 3d Prize, 7*l.*
B. Cape Heaths, six varieties: 1st Prize, 5*l.*; 2d Prize, 4*l.*
C. Geraniums (not fancies) in 8-inch pots, 12 varieties: 1st Prize, 6*l.*; 2d Prize, 4*l.*
D. Geraniums (fancies) in 8-inch pots, 12 varieties: 1st Prize, 5*l.*; 2d Prize, 4*l.*

No person will be allowed to take more than one Prize in a class.

Notice of intention to exhibit must be given to the Secretary, by post, on or before Saturday, June 9.

The Flowers must be labelled with their names, and staged ready for the Judges by half-past 10 o'Clock on the morning of the day of Show, and will not be allowed to be removed till the close of the Exhibition (7 o'clock P.M.).

Exhibitors will be required to sign a declaration that the Flowers are *bonâ fide* their property, or the property of their employers.

The Judges have the power of withholding the first or any other Prize if the Flowers exhibited are not worthy.

The Bands of the Royal Artillery, Woolwich, and of the 2d Oxon R. V. C. (Oxfordshire Militia), will play during the afternoon.

W. R. HOBBS, Acting Secretary.

23, St. Giles's Street, Oxford.—June 2.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY

BEING ABOUT TO RESUME THE

IMPORTATION OF SEEDS AND PLANTS

by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. A knowledge of Spanish or Portuguese would be desirable. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, JUNE 2, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY, June 4—Entomological ..... 8 P.M.
THURSDAY, — 7—Linnean ..... 8 P.M.

WE are asked upon what ground we refer to the frost of last October the death of the PEACH TREES mentioned in our last Number (p. 481). The trees in question after flowering and even setting their fruit were described as withering away. One correspondent is unable to see any relation between a frost in October and death in the May succeeding. To us the relation does not appear by any means obscure. The trees in question grew on a south-west wall; they must therefore in so warm a place have had their sap rising after the ground, heated to 65°, had been soaked with rain. Under such circumstances a sudden fall of temperature to 17° or 15° below freezing could not fail to give a shock to the constitution of so tender a tree as the Peach, from which it would never recover. It was like a hard frost in May when leaves are fully formed; but worse because the previous warmth of summer must render a tree more susceptible of cold in October than it would be in May after the previous cold of winter.

It is true that no visible sign of injury was made in October; and hence it may be inferred,

though not very legitimately, that what could not be seen could not have happened. But the Peach trees had not had time to commence any visible second growth. Sap was flowing upwards through their vessels; but it had not told upon their buds, and hence the mischief that was done could not be perceived. There is, however, no doubt that the effects of frost, when felt by the interior of plants, are infinitely more serious than when merely indicated by foliage suddenly killed. The latter is readily repaired; the former never. As in the animal kingdom, so in the vegetable: internal injuries are the most formidable of all.

It is not, however, a mere matter of inference that Peach trees dying now are only revealing the injury they experienced last October. Evidence lies before our own eyes. Two young and vigorous Peach trees, of the double Chinese kinds, appeared to have escaped the injury of October; their branches were plump and healthy, except at the points; and we had congratulated ourselves upon their remarkable hardiness. They received a winter pruning, and pushed as usual in the spring; but shortly afterwards the shoots began to droop and wither; one is now dead to the ground, and the other is following it. In this case, as it probably was in others, the sap vessels of the stem were killed; and it was only when they were called upon to feed the young leaves that their powerless condition was made manifest.

We shall probably be asked how frost acts on plants; in what way it kills them. Such a question has been often put, and never answered satisfactorily. The honest reply is, "We do not know." All that can be said is that plants, like animals, are bodies possessing life or vitality; that life is a something beyond human understanding; and that it is affected by a variety of circumstances varying in different plants. Among those circumstances stands prominently forward temperature, which regulates the geographical position of species more than any other known agency. Some plants can bear the cold of zero; others are not scorched by soil at 180°. Such is the fact: about which all that can be said is that every species of plant has its *own peculiar vital power*—four words which serve as well as others to explain the inexplicable.

In one letter before us the writer asks us to tell him how to repair the present mischief. Alas! we have no power to restore the dead to life. If his trees were ours we should wait to see what the summer does for them, and if they do not recover we should replace them by others.

IN the gale of last Monday one of the great ELMS, IN HYDE PARK, opposite Lord AUCKLAND'S, was uprooted with a mighty crash, tearing away a huge branch from its neighbour, smashing strong iron posts and rails, and losing its own limbs in the ponderous fall. Passing it shortly afterwards we took advantage of the opportunity to examine it carefully, and the result was precisely what we have frequently stated that it must be; the tree was rotten from head to heel, although, to judge from its green leaves, it was in perfect health. A thin layer of sapwood overlaid a core of corruption, and served to preserve an appearance of vigour. As to the great roots by which it was moored to the ground, they were full of the white spawn of dry rot, and their power as timber was gone. We could not avoid thinking of decaying gunboats masked from observation by their metal sheathing.

That all the old Elms in Hyde Park are in a similar state is not to be doubted; and their total disappearance can only be a question of a few years, more or less. No Elms can live very long on a thin soil over gravel. These trees want a deep damp bottom; in such a situation they arrive at a colossal stature without any symptoms of decay. Hence it is probable that in the clay of the Regent's Park they will remain for centuries the ornament of the northern suburb of London. But in Hyde Park there is no hope for them; and it is impossible not to feel surprise that in the face of such proof of their unfitness as has been there afforded for almost half a century the managers of the Park should still persevere in planting this species of tree. It is true that it grows fast, and looks well as long as it lasts; so did our gunboats; they were built fast, and looked well as long as they could hold together. But it is not fair to posterity, and it is far from being creditable to the good sense of Park superintendents that nothing should be regarded except present appearance. Other trees suited to the soil grow as fast, look as well, and run no risk of premature decay.

Notwithstanding the notorious rottenness of the Hyde Park Elms, we hear not unfrequently of querulous letters in the newspapers, complaining that these trees are "wantonly" or "ignorantly," we forget which, felled by the authorities. The foolish writers of such letters ought to be thankful for the removal of the trees, for they are extremely dangerous to passers by, and we fully expect to hear of animals more important than sheep being killed by their fall. That which came over on Monday would have destroyed a dozen people had they been within reach of its huge limbs. If the wind had been a little more northerly it would have fallen across the drive, and might have smashed a carriage or a few horsemen.

Instead therefore of blaming the Park authorities for causing such trees to be taken down we ought to be grateful to them for their vigilance. Of this they may be assured, that if any fatal accident occurs in consequence of a rotten Elm being allowed to remain, they will, after the warnings they have received, stand in an awkward position before a coroner's inquest. Or supposing that nothing worse happens than the Duchess of Belgravia being smashed in her chariot, we are afraid that the friends of her Grace would not be satisfied by the cry of "Who could have thought it?"

A SHORT time ago we drew attention to a singular experiment said to have been tried successfully in France of getting a Pear seed to grow on a Pear stock and unite itself with it as if it had been grafted (see p. 360). We now find in the Revue Horticole the following strange story, extracted by M. LAUJOULET from an account of travels in Chaldæa in 1827 by a Captain ROBERT MIGNAN.

"The ALHAGI (*Hedysarum Alhagi* of Linnæus) is a very common plant in the deserts of Arabia, India, Africa, Tartary, and Persia, in whose deserts it is the sole nourishment of the camel. The roots of this plant have the property, by means of their long leathery fibres, of collecting what moisture is found in those arid plains, and the Arabs avail themselves of it to obtain a pleasant and wholesome food (*nourriture*). The stem of Alhagi in the spring is slit (*partagée*) close to the ground, and the Arabs insert in the cleft a seed of Water Melon. The seed thus becomes a parasite, and the Melon, whose delicate fibres are incapable of collecting sufficient food, is nourished abundantly by the strong deep roots of the Alhagi. In this way the Arabs compel a soil which rebels against cultivation of any kind to supply them periodically with plenty of Water Melons."

Can there be any truth in this? We do not find the circumstance mentioned in works on Oriental plants, and we doubt whether it is possible, unless indeed the Melon roots follow the Alhagi roots on the outside and live by absorbing moisture from them. FORSKAHL, who described the Alhagi fully and knew it well, merely says that it is common in Egypt, where it is used for fuel and greedily fed upon by camels. Others add that its leaves yield a sort of manna.

WE have received from the Earl of ILCHESTER a specimen of PINUS TENUIFOLIA, which has just produced male flowers, for the first time, as far as we know, in Europe. The tree is now 30 feet high, and was sent to Melbury by the Horticultural Society some five-and-twenty years ago. The anthers are collected in small spikes the size of a Kidney Bean, and are each furnished with a rounded denticulate violet crest.

CULTURE AND TRAINING OF THE PEACH TREE IN THE SOUTH OF FRANCE.

"Simplification is the law of progress."

FOR some years past the pruning and training of the Peach tree has greatly occupied the attention of horticulturists. I take the liberty of sending you the results of many years' experience in an orchard containing 1500 of these trees. I have not of course the presumption to suppose that my observations can be regarded as likely to afford the greatest results that may be obtained; I merely submit them to amateurs, thinking that they might be useful to those in the south of France and interesting to those in the north. Cultivation is a science of observation and practice, and not an exact science; and the system which in some localities would afford the greatest pecuniary result would in others be attended with decided loss.

Before applying a remedy it is necessary to ascertain the nature of the evil. Left to itself the Peach tree, whether budded or not, pushes vigorously for the first two years. In the third, its lower branches near the fork become weak and decay; and vigour is only maintained in the extremities of the main branches. The evil is not great at first, but it increases every year; the upper shoots make less growth, and by the spring of the third year, one-third at least of the shoots perish. At the age of eight or 10 years, a Peach tree that has never been pruned exhibits only a few weak twigs situated at the extremities of the strongest branches. In violent gales, such as we experience in the south of France, the branches, bending under a load of fruit, are split from the stem; the fruit is lost, and one may consider himself fortunate if the tree survive the mutilation. If the splitting of the tree does not cause its death, yet it leaves it one-sided, and the portion left is so much more exposed to the action of the wind that, by its swinging, the fruit is tossed to a considerable distance, and is lost.

When the Peach tree is not pruned, its branches droop owing to the weight of the fruit, and the cultivation of the ground is consequently much more expensive because draught animals cannot pass under the trees, and the soil has to be worked by the spade. Now 10 good workmen would scarcely do so much in a day as one would in the same time with a plough drawn by good cattle; and I hold that the great secret of successful cultivation consists in obtaining the greatest and best amount of produce with the least expenditure of time and money.

Having pointed out the evil, I now proceed to the remedy which with me has proved successful. The art of pruning consists in aiding Nature. Remove from the tree that which only weakens it; induce a flow of sap towards the weak parts; maintain, in short, a proper equilibrium between the production of fruit and that of young wood for bearing in the following season, for the Peach bears on the one-year-old shoots, and never on the older wood.

In the vicinity of Toulouse thousands of Peach trees are cultivated in the open ground, without shelter; the fruit would be roasted on the trees if these were planted against a wall.

My orchard is situated in a plain; the soil is a light, very deep, sandy clay; the trees are planted in rows 13 feet apart each way; the intervals are sown with Lucern, but not within 2½ feet of the trees; the ground is ploughed in spring. Every third year when the roots of the trees are uncovered, I put to the foot of each tree some half-rotten dung, and over this two good handfuls of half-slacked lime. Since I adopted this proceeding the trees have made shoots from 30 to 40 inches long.

If we leave a Peach tree for a year without pruning it must suffer from the cutting necessary to bring it into proper form. In the second year I commence giving the branches their right direction. On account of the violent and prolonged high winds which prevail in the south of France I limit the height of the stems to about 2½ feet, so that for several years there is no necessity for using a ladder.

When a young shoot is cut with a very sharp knife, gumming does not take place. I am no advocate for disbudding, which sooner or later induces that disease.

Supposing we have before us a Peach tree three years old, and which has been allowed full liberty of growth. Before touching the tree it is necessary to understand why such and such branches should be cut; and the form which the tree ought to take should be constantly kept in view.

1st. I commence by removing all the horizontal and drooping branches from the outside of the principal branches. I do so because these branches, being most exposed to the air, extend much and cause the tree to lose its form by the weight of fruit which they bear. The weight being more easily borne on a perpendicular than on a horizontal support, it is well to preserve for the principal branches those that are the most upright.

I suppress all the exterior branches in order to give the tree a goblet form. On this form the wind acts generally and consequently it offers more resistance and less elasticity than a single branch, so that the fruit is not so liable to be shaken off.

2d. The tree being formed, it is no longer necessary to encourage the vigour of the tree, or the flow of sap, chiefly to the extremities of the principal branches, but rather to the branches which produce succession shoots; for the more these are increased the greater is the chance of an abundant crop, as the fruit is only borne on the one-year-old wood. I do not mean to say, however that we ought every month, or oftener, to shorten all the shoots which a tree may produce in the course of the year. No. This would be impossible in cultivation on a large scale; and besides it would cripple and stunt the tree; for many of the twigs or laterals so produced would perish in spring following. This always happens where there is too much spray; and when the tree becomes like a bush, it produces only small fruit. It should be recollected that if a tree grows too much to wood, it will produce but little fruit and *vice versâ*. We should therefore endeavour to maintain, as above recommended, a proper equilibrium between these two productions.

3d. In order to attain this object I pinch all the extremities of the branches to a variable length, according to their position and the vigour of the tree, rarely however to less than 8 or 10 inches; and I always cut to a bud pointing inwards for a leader. This with me is an invariable rule; and I always choose the most vigorous double buds.

If a tree runs up too high and at the same time is naked at the bottom, I cut back all the new upper branches to five or six buds. This proceeding checks

the flow of sap to the top, and generally induces shoots to push from the naked parts below. If the shoots so produced attain the length of 1 foot, I cut them back for two seasons to four or five buds. When these young branches are in a condition to take the place of the old, the latter are cut back in the course of a year, but not all at the same time; the wounds are covered with grafting wax.

Unless in the case of an excess of sap, I only prune at two seasons. The first at the new moon in May. The buds situated near the extremities push, either immediately or in August, four or five vigorous shoots, and often more. The second pruning takes place at the time of the old moon in January. The buds swell, become robust, and at least two-thirds of the flowers set, unless cut off by frost. The fruits are often so numerous that they displace each other; but abundance is a fault easily remedied by removing the smaller fruits, either by twisting or with curved scissors. *Emm. Pendaries, Toulouse, in the Revue Horticole.*

[From the above we learn that even in the south of France the Peach tree left unpruned soon becomes naked and worn out, as is the case with it in the climate of Britain. From its mode of bearing it requires the annual removal of the wood that has once borne fruit, and which is incapable of doing so again. It is also necessary to shorten well the bearing shoots at the winter pruning, in order to insure successional bearing shoots as near as possible to the old wood. Some, on the contrary, recommend the bearing shoots to be left at full length. The consequence would be, as at Toulouse, weaker succession shoots, situated every year, as technically expressed, farther and farther from home, thus leaving a great extent of naked branches, with the exception of perhaps occasional chance outbreaks.]

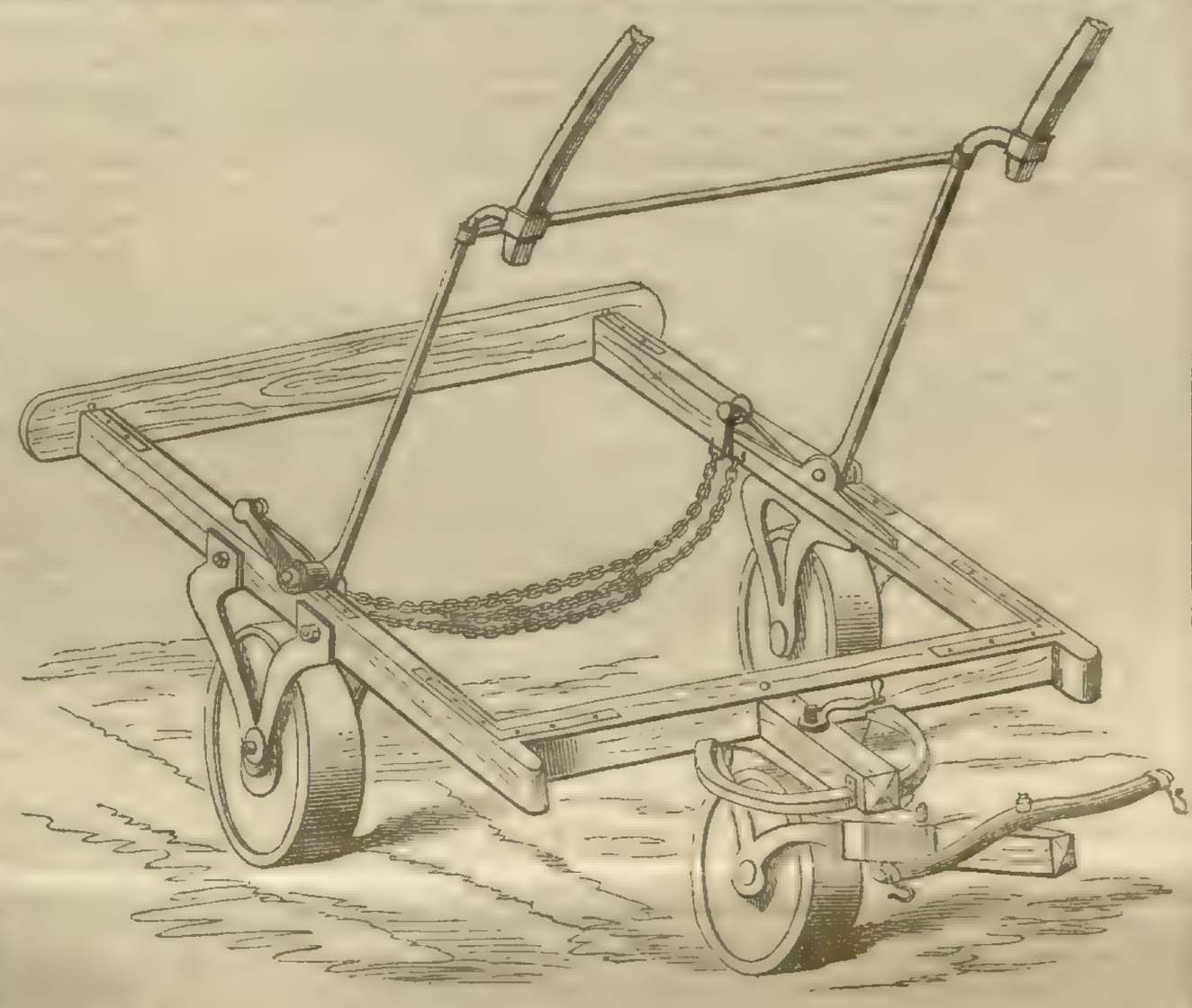
MACHINE FOR MOVING PLANT BOXES.

(Translated from the "Revue Horticole.")

THE rigours of winter are now no longer to be feared, and the tender shrubs which have been artificially protected for the last six months require free sun and air. It is therefore time to carry to their vacant places in the avenues and parterres the heavy boxes which encumber the orangery and conservatory; but the difficulties which we experienced in autumn again recur in spring. We must take care of the tender foliage which the commencement of hot weather causes to push indeed with too much rapidity; we must promptly and safely remove these heavy boxes; and this may be done economically, for it can be accomplished by the gardener and some ordinary labourers.

The Sébire machine appears to me to be one of the best for the purpose. It is simple, of moderate price, and so easily managed that after a few minutes' trial the most awkward workman will find no difficulty in using it.

The accompanying engraving represents the machine. It is composed of a rectangular frame, the sides and front of which are firmly secured to each other by strong brakes of wrought iron; the other end is moveable, and merely kept in its place by bolts. The framework is mounted on three wheels, about 16 inches in diameter, with tires 4 inches broad. Two of these wheels are fixed, one to each side of the machine, by strong iron bearings; the fore wheel, on the contrary, is moveable in all directions, by means of a pole bolt in the usual way. To this a pole is attached, and a draught bar for two men. The above composes the traction portion of the machine.



In this, it will be said, there is nothing extraordinary; but the suspending apparatus is remarkable for its simplicity. On the middle of each side, above the axis, are two strong levers of forged iron, at right angles to each other, turning at their junction on a sort of hinge or turning joint. The shortest of these levers, that which bears the weight, and which is seen in the figure parallel to the frame, is about 8½ inches long; it is furnished with a double hook, to which two chains are attached, and so that they can each be drawn round the feet of the box to be moved.

The perpendicular or acting lever is 2½ feet long, terminating in wooden handles 4½ feet long, thus making the whole length 7 feet. When these are brought down to a horizontal position and parallel to the sides of the machine, the short levers are moved in a contrary direction, and owing to the power gained in consequence of the difference in the length of the respective levers, a man can raise a box of almost any weight. Here the power gained is nearly as 1 to 10, so that 1 cwt. applied to the handles would raise half a ton attached to the hooks of the short lever.

The connecting bar between the handles of the lever is brought down to rest on the top of the pole bolt in front, where it is fixed by a small bolt pin, which is sufficient to maintain it in the horizontal position, whilst the box is being conveyed to its destination.

In order to be more fully understood, I shall add a few words with regard to the practical operation. Supposing a plant in a box is to be removed, take away the moveable back end of the Sébire machine, run back the latter till the box is under the centre of the carriage, pass the chains round the four feet of the box, fasten the chains by small hooks with which the end of each is furnished, then secure the frame of the machine by fixing the back end beam; pull down the upright levers by the wooden handles and the box with the tree will be raised 8 or 10 inches from the ground. It is fixed in position by means of the small bolt above mentioned, at the top of the pole bolt, and according to the size of the machine and the weight to be moved, one or two men, or a horse if necessary, effects the transit of the box to its intended destination, where by reversing the operation it is lowered with equal facility.

I have stated that the Sébire machine was comparatively cheap. In giving the prices, I ought to state that the four sizes of machines have been carefully and conscientiously made. Of this any one may be convinced by inspecting the specimens deposited at the Entrepôt Général of E. Ganneron, Quai de Billy, 56. The price varies according to the sizes of the boxes. No. 1, from about 2 to 2½ feet, 175 fr.; No. 2, from 2½ to 3 feet 4 inches, 225 fr.; No. 3, from 3 feet 4 in. to 4 feet, 275 fr.; No. 4, from 4 feet to 5 feet 4 inches, 325 fr. *H. E. René.*

ON THE ART OF PERFUMERY, ITS HISTORY, AND COMMERCIAL DEVELOPMENT.

BY EUGENE RIMMEL.

[Abridged from the Journal of the Society of Arts.]

(*Continued from* p. 481.)

THE perfumery the Egyptians used for private purposes consisted principally of ointments, of which there was a great variety. Some were composed of grease, and some of oil. Among the latter the Moringa pterygosperma, called by the Arabs *ben* and the Ricinus communis, or Castor Oil plant, were chiefly used as bases, and flavoured with Origanum, Bitter Almonds, spices, and other odoriferous substances. The castor-oil, from its abundance and cheapness, was chiefly used by the poorer classes, who anointed their whole body with it, a custom still prevalent in some parts of India. At all the feasts of rich people it was the fashion to anoint the heads of the guests when they arrived, and it was the first duty of the servants to pour some sweet-scented oil on their hair, or rather on their wigs, for they were all shaved, and wore that artificial head covering. Ointments were also used as offerings to the gods, and one of their most curious applications was to anoint the statue of a god, which was done on particular occasions. The bottles in which they kept their ointments, of which a great many specimens have been found in the tombs, were usually made of alabaster, onyx, or other stone, glass, ivory, bones, or shells. One of those, preserved in Alnwick Castle, contains an ointment which has retained its scent to this day, after having been made perhaps 3000 or 4000 years. A celebrated preparation for the toilet was the Kohl or Kheul, a black powder, used by the ladies for darkening the inside of the eyelids. It was supposed to increase the beauty and brilliancy of the eye, and to make it appear larger; they even thought it beneficial to the sight. It was made, according to some, from antimony, and according to others, from burnt Almonds. The vases used for the Kohl were generally of a fantastical form, and the bodkins for applying it were made of stone, wood, or pottery, specimens of which are to be found in the British Museum. This preparation, strange to say, is still in great use among Eastern nations, and even in some parts of Europe. I have a recipe for that used by the modern Arabs, which will be mentioned in its proper place.

The process of embalming caused also a great consumption of aromatics, and is thus described by Herodotus:—After extracting the brain from the nostrils, and filling the head with drugs, they cut a hole through the side of the body, removed the intestines, washed the cavity with Palm wine, and filled it with powder of pure Myrrh, cassia, and other fragrant substances, Frankincense excepted, after which the body was sewn up. This was the first class or most expensive mode of embalming. For the second class, they injected oil of cedar into the abdomen, and kept the body in salt for several days. The third kind, which was only adopted for the poor, consisted simply in cleansing the body with an injection of syrmœa and salt. Diodorus gives a somewhat similar account, stating that they use Myrrh and other drugs, which have the power, not only of preserving the body for a length of time, but also of imparting to it a fragrant odour.

The ingredients used by the Egyptians for their perfumery were about the same as those employed by the Jews. A few of them, such as Bitter Almonds, Origanum, &c., were indigenous to the soil of Egypt, but they also imported a great quantity of foreign aromatics, principally from Arabia and India. In the time of the Ptolemies Frankincense trees were first planted in Egypt, and Cleopatra likewise introduced the Balm trees from Judæa.

The Persians, the Assyrians, the Phœnicians, and other great ancient nations, were greatly addicted to the use of perfumes. Five times a day the priests of Zoroaster burnt fragrant woods and spices on his altar, and the sculptures of Nineveh bear witness to the use of perfumes by the Assyrians in their sacred rites. There is no doubt that they were also largely used for private purposes by those nations, for among the treasures left by Darius in his tent were several chests of perfumes. In those times Tyre and Babylon were the two great marts for perfumes, the former for the shipping trade, the latter for internal consumption.

The Greeks, being a most refined nation, were naturally great admirers of perfumes. Not only did they offer them in their religious ceremonies as a homage due to their gods, but they also looked upon them as a sign of their presence. Homer, Euripides, and other poets never mention an apparition of their deities without adding that they shed an ambrosial fragrance around them. Besides the sacred uses, perfumes were lavishly employed in private life, and their consumption increased at one time to such an extent, that Solon thought it necessary to forbid the Athenian people from using them. We may suppose, however, that this law was not long observed, for in the time of the Roman Empire, the Athenians were still celebrated for their talent in making up perfumery. Their principal perfumes were unguents, and the most famous was the *panathenaicon*, of which Athenæus gives us the recipe. They also used various aromatics for burning at their festivals or private entertainments, and dry perfumes for scenting their clothes, a custom which is still prevalent among the modern Greeks. Odoriferous herbs and spices were likewise burned with the bodies of the dead, and perfumes poured on their ashes. Another purpose to which perfumes were applied by them was to flavour wines, which was supposed to render them beneficial, as well as more agreeable. Pamphilius, Columella, and others give us the recipes for obtaining those perfumed wines, which were generally made with spices and aromatics from India or Arabia. The most esteemed, however, were prepared by infusing flowers in them, which gave them a very delicate flavour. Athenæus mentions one of those wines called *sapria*, which was made by infusing in it Roses, Violets, and Hyacinths. Although applied to a different purpose, this may be looked upon as the first step to alcoholic perfumes.

The Romans carried the art of perfumery to great perfection, and their productions were as numerous, if not as excellent, as those of modern perfumers. Pliny, Dioscorides, Galen, and other authors, give us the fullest particulars on this subject. In the early times of the Roman monarchy, the use of perfumes seems to have been confined to sacred purposes and funeral rites, but during the Consulate, and still more so under the Roman Empire, the gradual increase of luxury gave a great impulse to the perfumery trade. In the year of Rome 565, during the censorship of P. Licinius Crassus and Julius Cæsar, an edict was issued to prohibit the sale of exotic perfumes. They were already used at that time in such profusion that Lucius Plautius, after being proscribed by the Triumvirs, was betrayed in his place of concealment at Salernum by the smell of his unguents. At a later period Nero consumed, at the funeral of Poppœa, more aromatics than could be produced by Arabia in a twelvemonth; and in a feast given to him by Otho, gold and silver pipes shed costly perfumes around the hall during all the time of the entertainment.

There were three kinds of perfumes principally used

—the *hedysmata*, or solid unguents, the *stymmata*, or liquid unguents, having an oily basis, and the *diapasmata*, or powdered perfumes. The unguents formed a numerous class, and their names were borrowed, some from the ingredients which entered into their composition, some from the original place of their production, and others, again from the peculiar circumstances under which they were first made. Like our present preparations they succeeded each other in public favour, and novelty was as great an attraction to the Roman belles as it is to our modern ladies. There were the simple unguents, flavoured with one aroma, such as the Rhodium, made from Roses, the Crocinum, from saffron, a favourite perfume of the Romans; the Melinum, from Quince blossoms; the Metopium, from Bitter Almonds; the Narcissinum, from Narcissus flowers; the Malabathrum, prepared from a tree called so by Pliny, and supposed by some to be the Laurus cassia; and many others too numerous to mention. The compound unguents were prepared by combining several ingredients. The most celebrated were the *susinum*, a fluid unguent, made of Lilies, oil of ben, Calamus, honey, Cinnamon, saffron, and Myrrh; the *nardinum*, made of oil of ben, Sweet Rush, Costus, spikenard, Amomum, Myrrh, and Balm; and, above all, Pliny praises the regal unguent, which was originally prepared for the King of the Parthians, and which consisted of no less than 27 ingredients. Some of those preparations were very costly, and sold for as much as 400 denarii per lb., or about 15*l*. The Romans not only applied them to the hair, but to the whole of the body, even to the soles of the feet. The most refined, indeed, adopted a different perfume for each part of the person. Besides this their baths, their clothes, their beds, the walls of their houses, and even their military flags, were impregnated with sweet odours. Some carried that taste so far as to rub their horses and dogs with perfumes. In addition to the unguents I have named, the Roman ladies made use of numerous cosmetics to increase their beauty, and they attached so much importance to that branch of their toilet, that they had some slaves, called cosmetæ, whose special duty was to apply these preparations. Some of those cosmetics consisted of Pea-flour, Barley-meal, eggs, wine-lees, hartshorn, bulbs of Narcissus, and honey; others simply of corn-flour, or crumb of bread soaked in milk. They made with those pastes a sort of poultice, which they kept on the face all night and part of the day. Some, indeed, only removed them for the purpose of going out, and Juvenal tells us, in one of his satires, that the Roman husbands of his time seldom saw their wives' faces at home. Asses' milk was also much esteemed for the complexion, and Poppœa, who used to bathe in it every day, obtained permission, when she was exiled from Rome, to take with her 50 asses, to be able to continue her favourite ablutions. Besides these, they used Bean flour to remove wrinkles; *psilotrum*, a sort of depilatory; white lead or chalk for the face, vermillion for the cheeks, Egyptian kohl for the eyes, Barley-flower, kneaded with fresh butter, to cure pimples; calcined pumice-stone to whiten the teeth, and various sorts of hair dyes. Of the latter some were intended to turn the hair black, and the most curious preparation consisted of a liquor prepared from leeches which had been left to putrefy during 60 days in an earthen vessel with wine and vinegar. As, however, blondes were very scarce among the Roman ladies, the most fashionable dye was one which turned their naturally dark hair into a sandy or fair colour. This was principally accomplished by means of a soap from Gaul or Germany, called *sapo* (from the old German *sepe*), and composed of goats' fat and ashes. It is rather remarkable that this was the first introduction of soap we find mentioned, and that it was then solely applied to the purpose of dyeing the hair. It has not been clearly ascertained at what precise period the detergent properties of soap were discovered and made use of; but it is evident that in Pliny's time they only used Struthion (Gypsophila struthion) and Saponaria (Saponaria officinalis), besides the Egyptian nitrum for washing. In this instance, therefore, a most useful discovery was due to a very frivolous cause.

(*To be continued.*)

TRADE MEMORANDA.

WE find the following in the columns of a contemporary:—

SECRETS IN HORTICULTURE.

TO PERMANENTLY CHANGE OR GROW FLOWERS, Black, Green, Blue, and Purple; also how to communicate a delicious odour to any particular flower. Enclose 18 postage stamps, with stamped directed envelope to Mr. BROWN, 31, Gower Place, Euston Square, London.

For ourselves we must decline Mr. Brown's offer of selling his secret for eighteenpence and a penny more.

Home Correspondence.

Education of Gardeners.—In the last Number but one of your Paper I read with much pleasure a statement that a class of young gardeners at Kew has been placed under the charge of Mr. Oliver for the purpose of his instructing them in botany. It is to be hoped that the example thus set at Kew may be followed in other places. Wherever there is a sufficient number of gardeners to be formed into a class—wherever, for example, there is either a very large public or private garden, or a considerable number of smaller gardens, as in the neighbourhood of London or of other large towns—a class ought certainly to be formed for the instruction of gardeners in the principles of those sciences on which their practical art of gardening is founded; and in districts where gardens are few and far between, the same object might be obtained by the formation of "Gardeners' Improvement Societies," for the circulation of books and papers and for occasional meetings for mutual instruction and discussion. Every friend of horticulture and agriculture must wish success to Mr. Oliver's class. It is not, however, enough that means and opportunities of instruction should be provided. There must be a testing and attesting of the results of the instruction; and there ought to be prizes for the encouragement of successful studies. All this and more than this has been already provided for the benefit of the industrial classes, in the annual examinations established by the Society of Arts. These examinations, commenced in 1856 at the Society's house in the Adelphi, were held there and at Huddersfield in 1857; at 39 different places in 1858; at 54 different places in 1859; and at 63 different places in England, Scotland, Ireland, and Wales, in the second week of May, 1860. In future they are to be held throughout the United Kingdom in all places where the requisite simple arrangements are made for co-operation with the Society of Arts. I enclose a list of the 25 different subjects of examination, Among them are Botany, including Vegetable Physiology and Horticulture; Chemistry, and Latin. I enclose also a list of the examiners. Your readers will see that no board of examiners can excel the Society of Arts' Board in the value and influence of their names. The question for gardeners and persons in general who are interested in horticulture to consider is, whether their practical art shall be exercised empirically or on the bases of the sciences on which it rests. I regret that hitherto the number of gardeners who have availed themselves of these examinations is exceedingly small. The late Professor Henfrey, who was the Society's Examiner in Botany, appended the following remarks to his awards in 1859:—"One thing only strikes me as curious—that there should be so few candidates in this subject, considering the large number of well-paid gardeners employed in this country, not to speak of agriculturists. This would give one the idea that their education is at present wholly empirical." The reproach contained in the last sentence is (I fear) but too well founded; and a very grave reproach it is; but there is now such a spirit of improvement abroad among all persons engaged in horticulture that it is to be hoped that Professor Henfrey's distinguished and well-known successor in the examinership of botany may soon be enabled to make a better report. If the candidates were required to go to a distant university to be examined, the inconvenience would be too great for persons in their condition of life: but, as the system of the Society of Arts brings the advantages of an university (so to speak) with its examinations, certificates, and prizes, to the very doors of the candidates, wherever they are to be found, it is not too much to expect that hereafter they will be found in great numbers ready and anxious to be examined and certificated; and there can be but little doubt that before many years have passed over our heads, no very valuable appointments will be offered to gardeners who can produce no certificates to show that their skill in gardening is not merely empirical. N.B. Full particulars respecting the examinations may be obtained on application to "the Secretary, Society of Arts, John Street, Adelphi, London, W.C." The following is the list above alluded to:—1. Arithmetic, Rev. A. Wilson, M.A., National Society, London. 2. Book-keeping, J. Ball, Esq., of the firm of Messrs. Quilter & Ball. 3. Algebra, The Very Rev. H. Goodwin, D.D., Dean of Ely. 4. Geometry, Rev. B. M. Cowie, M.A., Professor of Geometry at Gresham College; one of H.M. Inspectors of Schools. 5. Mensuration, J. Sykes, Esq., M.A., Fellow of Pembroke College, Cambridge, Assistant Secretary to the Committee of Privy Council on Education. 6. Trigonometry, W. Spottiswoode, Esq., F.R.S. 7. Conic Sections, Rev. B. Price, M.A., F.R.S., Sedleian Professor of Natural Philosophy in the University of Oxford. 8. Navigation and Nautical Astronomy, J. Riddle, Esq., F.R.A.S., Head Master of the Nautical Schools, Greenwich. 9. Principles of Mechanics, Rev. J. Bates, M.A., Fellow of Gonville and Caius College, Cambridge. 10. Practical Mechanics, T. M. Goodeve, Esq., Professor of Natural Philosophy, King's College, London. 11. Electricity, Magnetism, and Heat, C. Brooke, Esq., M.A., F.R.S., Surgeon to the Westminster Hospital. 12. Astronomy, Rev. B. Powell, M.A., F.R.S, Savilian Professor of Geometry in the University of Oxford. 13. Chemistry, A. W. Williamson, Esq., Professor of Chemistry, University College, London. 14. Animal Physiology, W. Sharpey, Esq., M.D., F.R.S., Examiner in the University of London. 15. Botany, Dr. Lindley, F.R.S., Professor of Botany, University College, London. 16. Agriculture, J. C. Morton, Esq. 17. Political and Social Economy, C. Neate, Esq., M.A., Professor of Political Economy in the University of Oxford. 18. Geography, W. Hughes, Esq., F.R.G.S., Professor of Geography in Queen's College, London. 19. English History, E. S. Creasy, Esq., M.A., Professor of History, University College, London. 20. English Literature, Rev. S. Clark, M.A., F.R.G.S., Principal of the Training College, Battersea. 21. Logic, Rev. W. Thomson, D.D., Provost of Queen's College, Oxford. 22. Latin and Roman History, Rev. F. Temple, D.D., Head Master of Rugby School. 23 French, A. Mariette, Esq., M.A., Professor of French King's College, London. 24. German, Dr. Bernays, Professor of German, King's College, London. 25. Theory of Music, J. Hullah, Esq. *Harry Chester.*

Tea.—Will you allow me to ask why no attempts are being made to grow Tea in Australia, where there is so many varieties of climate, some of which must be suitable for the Tea plant, and as there are so many Chinese there, their aid could be readily procured? There are many other parts of our vast colonial possessions which must be as well suited to the growth as China, and as any number of Chinese to assist can be obtained, this useful article might be most extensively increased in our colonies and in many parts of the world not under English rule, including Madeira, Portugal, Spain, and a large portion of Europe, as well as at Jersey, the Scilly Isles, the West of England, &c., the greater part of our fruits, shrubs, and vegetables being natives of more favoured climates than England. The difficulties of growing Tea could as well as other things be overcome by English perseverance and ingenuity as it now is by Chinese industry. Nor can I but believe it might be grown in nearly half the world if necessary. We are at present almost entirely dependent on China for all we require, and any great convulsion of that kingdom would stop our supply. An enlarged growth and a gradual reduction of the duty to 8*d.* a lb., the same at which it is taxed in America, would be a great boon to so many of our poor who can scarcely ever afford to get a really good cup of tea, little of any worth being sold under 3*s.* a lb. An increased growth would tend to give employment and profit in growing and shipping it, and might aid in some degree to promote sobriety. *G. H.*

Home-grown Tobacco.—During the past few years I have grown Tobacco for fumigating, and have paid especial attention to the curing of it properly or in a manner to prevent its injurious effects upon vegetation. My method of curing is this: gather the leaves when fully matured, and run a needle threaded with packthread through the mid-rib of each leaf. I then hang them in a house where Melons have been grown during the summer, giving all the air possible with brisk temperature. When partially dried they are dipped in water and hung up to dry. This operation is again repeated when they are dry, after which they are taken down and placed in a heap to ferment. Afterwards they are once more thoroughly dried and removed from thence to some dry room where they may be packed into a box or barrel for use as required. The dipping of the leaves and subsequent fermentation are essentially necessary for the formation of nicotine, to which Tobacco owes its poisonous properties in destroying insects. Notwithstanding the above precautions I find that it requires great discretion in using it or it will inevitably destroy more plants than insects; and I am often obliged to soak it in water a day before using it, in order to dissipate the alkaline nitrates with which it abounds, and which I think the cause of its injurious effects on vegetation when used for purposes of fumigation. *H. Munro, Cleveland Gardens.*

Juniper Fungus.—I have observed a curious formation of some substance on two large bushes of the common Savin. It is a semi-transparent gelatinous substance, of a dull amber-brown colour, deposited upon and adhering to the smaller branches. It usually appears after any rain has fallen, and after a short time comes away and disappears. These bushes are perfectly loaded with it at times, and I suppose that a bushel or more might be gathered from each. I removed a small quantity, intending to forward it to you; but in a short time it liquified. I have observed that the portions of the bark upon which it is deposited is generally more or less covered with nodules, and the bark sometimes appears abrased. I should be glad to know whether this is an exudation from the branches, or a Fungus, or other parasite? I annex from memory a rough sketch of its appearance. *Alpha.* [The formation in question is a Fungus called Gymnosporangium Juniperi. Linnæus named it Tremella juniperina.]

Dying Peach Trees.—Your correspondent's case (see p. 481) is not an isolated one; my Peach trees are suffering in all probability from the same cause. The Peach wall here has a southern aspect, against which are planted in a well-drained shallow border several trees, nearly all of which have suffered more or less. Some finely grown well balanced trees of Acton Scot, Noblesse, Bellegarde, and Barrington varieties are amongst the worst, and no doubt past recovery. Each of them flowered well and set a fair crop, the wood buds developing themselves to the extent of two or three leaves, when they suddenly began to show symptoms of dying. Upon examining them and last year's shoots we found the cuticle in spots or patches much ruptured, from whence gum or sap exuded freely; the young shoots gradually died, the leaves and fruit falling simultaneously. This occurred during wet foggy weather, which is so prevalent near the sea-side. The greatest drawback to successful fruit-tree culture in this locality is the tendency of the trees to make late autumnal growth, accelerated by the humid atmosphere, the consequence of which is unripened wood. This was particularly the case during the last autumn, when frost set in so early and sharp that it cut the whole leaves and shoots from the wall trees in one night. Broccoli and all vegetables suffered

severely; most of them died during the winter. *H. Munro, Cleveland Gardens, Lyme, Dorset.*

Cape Bulbs.—As an old cultivator of Cape bulbs I venture to answer your correspondent's question in detail; in principle it has been answered in your leader of Saturday. The plants generally known as Cape Bulbs are either Irideæ or Amaryllidaceæ. The Irideæ require abundance of light and air, and just before they flower of water also; when they go out of flower shut them up in a pit or frame, letting the temperature rise to 120° or upwards, taking care that the plants are 18 inches or 2 feet from the glass. Repot in August, and get as much foliage as you can before winter and keep it by light and air with a temperature not below 38°. The Amaryllidaceæ require slightly different treatment; pot them, except Nerine, rather deep in their pots. (Brunsvigia falcata for instance almost buried); grow them in winter as Irideæ with abundance of light. When the leaves die off in spring, put them into the same place as the Irideæ, but place under each pot a pan two-thirds full of sand and never let that sand get quite dry, but do not cover it with water. Treated thus soon after the middle of August they will throw up their flowers, and I have flowered four bulbs out of six of Brunsvigia Josephinæ and made them flower in successive years. Nor is there any difficulty in making Nerine flower regularly every year, but they do not require quite so much moisture as the Brunsvigias and other large bulbs. Lachenalias and Oxalis require nearly the same treatment but no water when at rest, as they flower after they have made their growth, not before, as the Amaryllidaceæ. In short, the treatment of all Cape bulbs is very similar, only that the large ones require more water in proportion than the small ones to their size. In their native country they are buried much deeper and root much deeper than the small ones, and consequently enjoy more permanent moisture. In conclusion I would add, do not think bulbs dead because they do not grow. Several of the Ferrarias and some of the rarer Lachenalias often will not grow or make any leaves for four or five years together, and then under precisely the same treatment will come up and flower strongly. The impatient gardeners of modern days have small chance of seeing their flowers; but those who will wait patiently are generally gratified at last. The terrestial Orchideæ of the Cape are more troublesome and quite as capricious; but I have cultivated several of them with success, when I could watch them individually myself. I can hardly recommend their cultivation except to an amateur who will ascertain the precise habits of each individual species and act accordingly. *J. B.*

Bees.—Can any of your bee-keepers account for the following fact:—A swarm of bees evidently from a distance came into the garden about noon and clustered on the roof of an out-house. A hive was prepared in the usual way and placed over them, into which they all settled, and were in the evening carried to the stand among the other hives. The next morning every bee was dead. The garden is in a high situation in Cornwall. *A Constant Reader.*

Societies.

Crystal Palace Horticultural Exhibition: *May* 26.—This company's grand floral fête of the season took place on Saturday last, and was well attended although heavy showers continued to fall at intervals during the whole of the day. The exhibition itself was in every respect highly successful. Never before perhaps were so many plants brought together on one occasion as there was upon this. The west end of the nave was remarkable for its long banks of Pelargoniums and Roses in pots, both magnificent examples of skilful cultivation. In the neighbourhood of the centre transept were brilliant groups of Indian Azaleas, associated with statuary in such a manner as to be extremely effective. Fruit, surrounded by a living frame-work of Miscellaneous Stove and Greenhouse plants, occupied the south end of the transept, and along each side of the eastern portion of the nave were arranged Orchids, which were present in unusual numbers, Cape Heaths, Azaleas, fine-foliaged plants, and Calceolarias, the whole forming almost continuous lines of floral beauty from the warm end of the building to within a short distance of the crystal fountain at the west end of the Palace. So great a display elicited, and justly, the admiration of all who had the good fortune to see it.

Of collections of 20 Stove and Greenhouse plants there were four exhibitions. That to which the first prize was awarded came from Mr. Whitbread, gr. to H. Colyer, Esq., of Dartford. It contained beautiful specimens of Azaleas, Eriostemons, Allamandas, Boronias, among which Drummondi was conspicuous for its numberless rosy red star-like flowers; a capital specimen of the blue Leschenaultia, noble bushes of Aphelexis, Chorozema Henchmanni, and varium nanum; the charming Dipladenia crassinoda, and immense plants of Erica elegans, in vigorous health and extremely well bloomed; a magnificent example of the Willow-leaved Ixora, and some of the finer varieties of Epacris and Polygala. The next group in point of merit came from Mr. Peed, gr. to T. Treadwell, Esq., of Lower Norwood. Many of the plants in this were the same as those in the first collection and equally fine specimens; but others were scarcely so good. If any one plant in it attracted more attention than another it was the Heath-leaved Tetratheca, a noble bush covered in the greatest profusion with beautiful lilac blossoms. This is a greenhouse plant of the easiest possible culture, and one which even small collections should not be without; it blooms freely even in a young state, and ought to be a universal favourite. Of Adenandras, especially fragrans, there were also some good specimens, and a large plant of Dracophyllum gracile, the snow-white tops of which when cut are very useful in bouquets. The other two collections came from Mr. Baxendine, gr. to W. H. Smallpiece, Esq., Guildford, and Mr. Page, gr. to W. Leaf, Esq., of Streatham. These exhibitions consisted among other things of Hoyas, the bright crimson-flowered Combretum purpureum, Coleonema rubrum, the charming blue Hovea Celsi, Rhynchospermum jasminoides loaded with sweet scented white flowers, Cyrtoceras reflexum, and the singular looking Hederoma tulipiferum, tolerably well furnished with drooping bell-shaped bright brown and white blossoms.

Groups of 12 Stove and Greenhouse plants were contributed by Messrs. Green, Peed, Kail, Cutbush, and Rhodes. Among these we noticed Gompholobium polymorphum trained in the form of a bush by means of small neat upright stakes concealed from view by numberless slender stems covered with multitudes of comparatively large orange red Pea-shaped blossoms. Managed in this way it has a much more graceful appearance than when tied stiffly to a wire trellis, which is the usual way of training it. Mr. Green's 12 plants, to which the first prize was awarded, were in all respects excellent. His Allamandas, Ixoras, Ericas, Azaleas, Tetrathecas, Polygalas, Pimeleas, Everlastings, and Leschenaultias fully maintained the reputation he has so long and deservedly held as a skilful cultivator; and in addition to fine growth, they had evidently been managed so as to have them in the greatest perfection just on the day of exhibition, a point worth the attention of less experienced growers, and one which practice and observation alone can determine. The orange red bell-flowered Genetyllis Hookeriana came from Mr. Rhodes; Hoya Paxtoni, Pentas carnea, Abelia floribunda, the Oleander-leaved Allamanda, and Æschynanthus longiflorus from Mr. Peed; and in the other collections were also many well grown plants of kinds whose names have been already mentioned in this report.

Exhibitions of other Stove and Greenhouse plants in collections of eight and six were numerous. The best came from Messrs. Chilman, Carson, Green, and Fraser. Among these we observed Acrophyllum venosum beautifully in bloom, each little branchlet being furnished for a considerable portion of its length with whorls of pure white flowers crowned by tufts of pretty red leaves; also some well managed "Union" Azaleas, *i.e.*, two or more sorts of different colours worked on one stem; the white Boronia tetrandra, the white-flowered sweet-scented Rhododendron formosum, Kennedya coccinea minor, and one or two other well-known plants.

Of Plants remarkable for the beauty of their foliage, Messrs. Young, Rhodes, and Hutt sent highly interesting collections. Among these were beautiful masses of the yellow-spotted leaved Coltsfoot (Farfugium grande), Caladiums of different kinds, Aralias, Marantas, of which one of the handsomest is capitata, a noble plant with large obovate lively green leaves, prominently ribbed, striking and effective; Cissus discolor, Palms, Ferns, Rhopalas, Dieffenbachias, and plants of that description, together with a handsome collection of variegated-leaved Begonias from Mr. Young.

Orchids, as we have already stated, were produced in great abundance and beauty. We, however, missed the magnificent specimens from Messrs. Veitch and Mr. Rucker which were wont to grace Chiswick displays of this kind. Collections of 16 were contributed on this occasion by Mr. Gedney, gr. to the Rev. Mr. Ellis, of Hoddesdon; Mr. Bullen, gr. to J. Butler, Esq., of Woolwich; R. Warner, Esq., and Mr. Rhodes, gr. to J. Philpot, Esq., Stamford Hill. In the first of these collections were one or two varieties of Aerides, Lycaste Skinneri, the White Butterfly Plant (Phalænopsis), Phaius Wallichii, Cattleya citrina, with three charming canary coloured flowers; the handsome purple-lipped Lælia purpurata, an example or two of Moss Cattleya, Vanda suavis and tricolor, Dendrobium primulinum, with pale sulphur lip and delicate pink petals; the brilliant orange scarlet Epidendrum rhizophorum, the hairy Lady's Slipper (Cypripedium villosum), and Calanthe veratrifolia. From Mr. Bullen came the orange red Saccolabium curvifolium, a Lælia allied to purpurata, Oncidium luridum guttatum, Cattleya Mossiæ, Aerides affine, an excellent specimen of white Calanthe, Saccolabium guttatum and præmorsum, the latter bearing a large cluster of small spikes of flowers; Lælia purpurata, two kinds of Vanda, Cattleya intermedia, and the rare and beautiful Cattleya Aclandiæ, producing three brown barred purple-lipped flowers; a large Phalænopsis, Phaius Wallichii, the rare rather than beautiful Chysis Lemminghi, and a large Aerides odoratum. In the other collections were the Fielding Fox-brush Aerides, Cattleya labiata, Dendrobium nobile, a variety of Trichopilia coccinea, loaded with blossoms; Lælia cinnabarina, with six spikes of orange red blossoms; the purple and green flowered Cypripedium hirsutissimum, Oncidium ampliatum majus, the Rhubarb-scented Dendrobium macrophyllum, and the Wallich Phaius.

Mr. Rhodes' plants were for the most part of smaller size than those of the others. The most conspicuous among them was a nice specimen of the Fielding Foxbrush Aerides.

Groups of 10 Orchids were contributed by Mr. Carson, gr. to W. F. G. Farmer, Esq., of Cheam, Mr. Lovell, gr. to H. E. Gurney, Esq., Mr. Woolley of Cheshunt, and Mr. R. Warner, of Broomfield. In the first collection, which altogether consisted of finely grown plants, were Cypripedium barbatum superbum covered with flowers; Camarotis purpurea, Calanthe veratrifolia, Arpophyllum giganteum with six spikes of small shell-like rosy purple flowers whose arrangement on the spikes when closely examined is singularly beautiful; Vanda teres, forming a globular mass of blossoms situated on the top of a strong wooden pedestal overgrown with Ferns and Lycopods, a tasteful way of growing this plant; Cœlogyne asperata, with pale greenish yellow flowers and brown blotched lip; the handsome Lælia purpurata, Cattleya Mossiæ, Oncidium ampliatum majus, and Brassia verrucosa. From Mr. Lovell came Cattleya Mossiæ, Aerides roseum, Dendrobium tortile, white with pale yellow lip; a small Aerides odoratum, Lycaste aromatica, Cyrtochilum stellatum, a Calanthe, some Saccolabiums and Cattleyas. Mr. Woolley sent Cattleya intermedia, Vanda suavis, and one of the better varieties of tricolor, the Bearded Lady's Slipper, Calanthe veratrifolia, Aerides crispum, Dendrobium Paxtoni, a handsome orange-flowered kind with dark eye; D. nobile, Saccolabium retusum, and one or two kinds of Oncidium. Mr. Warner had Cypripedium villosum, with polished yellowish brown blossoms; the Moss Cattleya, Dendrobium nobile and tortile, the White Butterfly Plant, Vanda suavis, a handsome Cattleya or two, and some Aerides and Oncids. In a group of 10 from Mr. Green we noticed a most beautiful specimen of Dendrobium speciosum, loaded with its singularly beautiful bunches of orange-yellow blossoms.

Collections of six Orchids came from Messrs. Warner, Bullen, Bunney, Carson, and Woolley. In these were Anguloa Ruckeri, Dendrobium transparens, with small blush white flowers, to which a pretty little purple blotch gave life and beauty; a pale variety of Dendrobium densiflorum, Cattleya candida, the White Butterfly Plant, and others whose names have been already recorded.

Of Azaleas there was, as might be expected, a grand display. The plants from Messrs. Carson & Green being large and very full of blossom, and occupying as they did conspicuous positions near the centre of the building, were very effective, and were deservedly much admired. In both were good examples of the yellow sinensis. The others were equally well-known kinds. Messrs. Whitbread, Gaines, and Peed also showed large collections. Groups of smaller plants were abundant. For newer kinds Mr. Turner received a first prize; the sorts were Gem, rich rosy salmon, and one of the best shaped Azaleas in cultivation; Stanleyana, Empress Eugenie, purple; Sir H. Havelock, bright orange red; Criterion, Miltoni, rosy purple; Prince Jerome, brilliant orange red; and Petuniæflora, rosy lilac, a distinct and pretty kind. Mr. Ivery, of Dorking, sent Beauty of Europe, a sort like Criterion but with more colour in it; Duc de Nassau, showy purple; Stanleyana, Empress Eugenie, Admiration, white with red flake; Gem, Criterion, and crispiflora, the last an extremely pretty purple kind with curiously crimped edges. Messrs. Green, Fraser, and Jackson also showed in this class. Mr. Barnes had some neat little standards of Magnet, a rosy salmon kind, very hardy and free flowering.

Cape Heaths were produced in large quantities, and in good condition. We, however, did not observe among them anything new or remarkable.

Tall Cacti were furnished by Messrs. Green and Young. Both collections contained good plants of well-known kinds, among which we noticed a white kind allied to Epiphyllum crenatum.

Roses in pots were truly magnificent, and, as a matter of course, were much admired. Notwithstanding the severe winter and long cold spring we have just experienced, we do not recollect ever seeing finer Roses than those produced by Messrs. Paul on Saturday last, to whom was deservedly awarded the first prize. They were loaded with bloom, and there was a degree of health and freshness about the leaves which was quite remarkable. The sorts were Madame Willermoz (Tea), creamy blush, 7 feet high, with more than 100 expanded flowers; Souvenir d'un Ami (Tea), rosy salmon, large egg-shaped blossoms; Coupe d'Hébé, (Hybrid Bourbon), pink; Paul Perras (Hybrid Bourbon), rose colour, 6 feet high, and 5 feet through, with nearly 100 blossoms; Paul Ricaut (Hybrid Bourbon), brilliant crimson; Auguste Mie (Hybrid Perpetual), Peach blossoms, very large and of fine form; Géant des Batailles (Hybrid Perpetual), purplish crimson; Louise Odier (Hybrid Perpetual), pink; Duchess of Sutherland (Hybrid Perpetual), rose colour; and Souvenir de Malmaison (Bourbon), white flesh-coloured centre flowers, very large. Messrs. Lane sent Coupe d'Hébé, Chenèdolé, Paul Perras, Devoniensis (very fine), Souvenir d'un Ami, Queen, and Jules Margottin. Mr.

[illegible] Ami, Jules [illegible], Comte de Hebe, Prof. Perras, Madame E. [illegible], Docteur Jacqueminot, Chenèdolé, Blairii, Augustine Mouchelet, Comte Boubert, and Baron Prevost.

No amateur Rose growers showed upon this occasion, which was doubtless owing to their being compelled to compete with such cultivators as the nurserymen just named, and against whom they would have no chance of winning. On this, however, and on the other new regulations to which we briefly alluded in a previous Number, we understand the judges have been instructed to make a special report.

New and rare plants were scarce. Those that were shown came chiefly from Messrs. Low, of Clapton, who sent Alocasia metallica, an ornamental foliaged stove plant allied to Caladium, with large, shining, bronzy leaves covered with a singularly beautiful metallic bloom; Sphærostema marmoratum, a silvery white mottled-leaved climbing stove plant, which will form a good companion to the well-known Cissus discolor; Anæctochilus Petola from Java, with dark green leaves beautifully traversed with pale yellow veins; Pleurothallis lasiantha, a warm greenhouse species, with flowers resembling those of Cyrtoceras reflexum; and the pretty little Bornean Fern called Lindsæa Lowii. Stangeria paradoxa, a singular plant described in former volumes, was shown by Mr. Young, of Epsom. Mr. Gedney, gr. to the Rev. Mr. Ellis, sent a brown-spotted bright sulphur-coloured Iris-like plant, said to be a Cypella from Southern Africa. From Messrs. Jackson, of Kingston, came Quercus lanuginosa, and an Ilex from Upper India. A blush-white purple-tipped Lælia was shown by Mr. Warner, of Broomfield, and a handsome leaved Begonia by Messrs. Ivery.

Some fine specimens of the Dalhousie Rhododendron were furnished by Mr. Carson and others, the beauty and fragrance of which attracted numbers of admirers.

In Pelargoniums the competition was of the strongest description, all growers of this flower being admitted thereto. In the large class one prize only was awarded to a private grower. In Fancies two were taken by nurserymen and two by private growers, every plant exhibited being good. The first prize for 10 varieties of the large kinds was awarded to Mr. Turner, of the Royal Nurseries, Slough, for Prince of Wales, Governor-General, Desdemona, Impératrice, Admirable, Fairest of the Fair, Evangeline, Rose Celestial, Mr. Marnock, and Etna. Messrs. Fraser, of Lea Bridge, and Messrs. Dobson were placed second and third. Messrs. Fraser's plants were Meribumeno, Sanspareil, Rosamond, Governor-General, Pallas, Mokanna, Admirable, Una, Mr. Hoyle, and Fair Ellen. Messrs. Dobson showed Aurelia, Sanspareil, Una, Rosalie, Vestal, Euphemie, Governor-General, Bride (a beautiful white variety), Rose Celestial, and Fairest of the Fair. Mr. Turley of Putney Heath, and Mr. Weaver were the other successful competitors. Mr. Turley's plants were Lucy, Symmetry, Clara, Thisbe, Eclipse, Una, Faustus, Governor-General, Admirable, and Sanspareil.

Fancy Pelargoniums were exceedingly beautiful, and were deservedly the admiration of all beholders. Mr. Turner was awarded the first prize for modestum, Circle, Adela, Cloth of Silver, Acme, Negro, Madame Rougière, and Clementia. Messrs. Fraser exhibited Cloth of Silver, carminatum, Evening Star, delectum, Queen of Roses, Cassandra, formosissimum, and Celestial. Mr. James's collection consisted of carminatum, Attraction, Evening Star, delectum, Lady of the Lake, Madame Rougère, purpureum album, and Celestial.

Of Cinerarias we cannot report favourably. One collection was exhibited which may be said to have been well grown, but the plants were staged so badly that their effect was all but lost.

Cinerarias were nearly over. Messrs. Dobson and Mr. Turner produced the best, among which were Queen Victoria, Lady Seymour, Miss Marnock, Perfection, and Slough Rival.

Tulips were shown in great condition; those from the Slough collection and from R. H. Betteridge, Esq., of Abingdon, as well as those from Mr. Norman, of Woolwich, were of the finest stamp. The last were, however, too much crowded together to be effective. George Hayward we may select as the best Bizarre, the Duchess of Cambridge as the best Byblœmen, and Sarah Headley as the best rose; these were fine indeed, and so were many others.

As yet it is too early for seedling Pelargoniums, and as we expect to see all again we shall defer our description of them till the season is more advanced; merely noting that the first prize was awarded to a lovely fancy, of a rose colour, with clear white throat and edge, called Arabella Goddard, and that some very prettily spotted kinds resembling the French varieties were exhibited by Messrs. Rollisson, of Tooting.

We must not overlook the Pansies in pots from Mr. James, of Isleworth; they were particularly fine, and formed a pretty and by no means uninteresting feature of the exhibition.

Fruit considering the unfavourable season of the year for early forcing, was highly satisfactory, more especially Black Grapes, which were excellent. Pine Apples were, however, scarcely so fine as we have seen them; the best came from Messrs. Page, Drewitt, Laybank, and Davis. They consisted chiefly of Queens and smooth and prickly Cayennes.

Black Hamburgh Grapes were shown in admirable condition by Mr. Henderson, gr. to the Duke of Sutherland at Trentham; Mr. Hill, gr. to R. Sneyd, Esq., Keele Hall, Staffordshire; and Mr. Frost, gr. to E. L. Betts, Esq., of Tyrling Hall, near Maidstone. To the [illegible] awarded. Mr. Frost's fruit, though scarcely so well coloured, was also otherwise an extremely good example of successful Grape growing; Messrs. Tegg, Bates, Euston, Baker, and others also showed in this class. In the class of baskets of 10 lbs each, (Black Hamburgh), the best came from Messrs. Hill, Frost, Smith, and Powell. These, especially the first two lots, consisted of extremely well ripened fruit. Mr. Spary also contributed a basket of Black Hamburgh, very perfect as regards colour, but somewhat small in the berry. Muscats, with the exception of a fine dish from Mr. Embry, gr. to A. Moss, Esq., were not good. Those just mentioned, however, considering the season were excellent; White Muscadine came from Mr. Frost and Mr. Jones, and Dutch Sweetwater from Mr. Euston.

Violette Hâtive Peaches, [illegible] fruit large and well coloured, came from Mr. Dawson, jun., Rotherham, near Rotherham. Very fine fruit of Royal George also came from Mr. Robertson, of Troutbeck, and Mr. Williamson, gardener to Viscount Enfield, Wrotham Park, Barnet. Violette Hâtive Nectarines, fine specimens, came from Mr. Henderson, to whom a first prize was awarded, and from Mr. Peacock, who was second. Mr. Peterson showed Hunt's Tawney in excellent condition.

Of Cherries admirable dishes were shown by Mr. Henderson, who sent Eltons, Black Circassians, and May Dukes. A dish of May Duke also came from Messrs. Jackson.

The best Strawberries were contributed by Mr. Smith of Twickenham. The sorts were Sir Charles Napier, and a large dark-coloured new variety which was said to be of good flavour. The only other new kind we saw was Oscar, of which Mr. Turner, of the Royal Nursery, Slough, showed a dish of large and beautiful fruit.

Melons were for the most part good. Among scarlet-fleshed varieties the best was Norwood Gypsey from Mr. Peed, which on this occasion beat Gem, from Messrs. Bailey and Tegg. The best green-fleshed sort was Perfection, from Mr. Kail, gr. to Lord Lovelace. A Pine Apple Melon from Mr. Whiting was placed second, and a hybrid green-fleshed sort, from Mr. Taplin, third.

Among Miscellaneous fruit were some large and fine Oranges and Citrons from Mr. Williams, gr. to Mrs. Warner, of Heddesden; and Mr. Waters, gr. to A. Moore, Esq. We also noticed two dishes of Apples, apparently French Crab, plump, and in excellent preservation.

ROYAL BOTANIC, REGENT'S PARK.—*May 30.*—This was in all respects another excellent exhibition. Azaleas and Pelargoniums, being numerous and effectively arranged, made a brilliant display. Roses were also in first-rate condition, and there was, as usual, a very large assemblage of stove and greenhouse plants. The day, though cloudy, being favourable, there was a large attendance of visitors. Fading so soon as it did after the exhibition at the Crystal Palace the great bulk of the plants was as a matter of course the same as was present upon that occasion. In the following report we shall therefore only notice such as have not been previously described.

Stove and Greenhouse plants as a whole were in excellent condition; at this Show Mr. Colyer was beaten by a new exhibitor, Mr. May, gr. to J. Spode, Esq., who sent from the neighbourhood of Rugeley 16 specimens, which, for freshness and beauty were the admiration of everybody. They consisted of Hedaroma tulipiferum, well furnished with bloom, but still not a very effective plant for purposes of exhibition; the Willow-leaved and scarlet-flowered Ixoras; an extremely handsome bush of Gompholobium polymorphum; Dipladenia crassinoda with 45 bright rosy blossoms on it, all in great perfection; some Everlastings; a most beautiful specimen of Acrophyllum serpyllifolium; fine specimens of Azalea Criterion, Exquisita splendens, one of the best of the many varieties of that showy kind; the Heath-leaved Tetratheca, an Eriostemon or two, and the pretty Boronia Drummondi. To these a 1st prize was justly awarded.

Of Orchids, the same exhibitor also sent a small collection, in which were Trichopilia tortilis, the White Butterfly Plant, the orange Saccolabium curvifolium, and S. guttatum.

Azaleas and Rhododendrons were beautifully in bloom. Of the latter a fine collection of yellow or buff coloured kinds was shown by Messrs. Lane of Berkhampstead. Among them there was, however, nothing different from what has been noticed by us on former occasions. Azalea rosea grandiflora, Volunteer, and variegata superba, all fine kinds, were shown by Messrs. Jackson of Kingston.

Among Cape Heaths we noticed a new variety of depressed habit from Mr. Rollisson. It appeared to be of more upright growth than the parent, and the flowers were also of a different shade of yellow.

Roses in pots were again shown by nurserymen in beautiful condition, and this time there were also fine collections from Mr. Terry, gr. to Lady Puller, and A. Rowland, Esq., of Lewisham. The former had an admirable specimen of the bright yellow Vicomtesse Desprez; and in Mr. Rowland's group were also equally fine kinds.

Of real novelty there was little. Messrs. Veitch contributed a Cypripedium in the way of hirsutissimum a long-leaved handsome orange red veined Dracæna from New Zealand; and the double-flowered Hemerocallis and Cissus, noticed in our last report of the Floral Committee of the Horticultural Society. From Mr. Lawrence, gr. to the Bishop of Winchester at Farnham Castle, came Cypripedium candidum roseum, with long pendent twisted brown tails, and Epidendrum maculosum, a species with dark spotted narrow green-coloured sepals and petals, and fine tipped lip. To both of these prizes were awarded. Two handsomely variegated Pteris tricolor and P. crispa were shown by Messrs. Parker & Williams, and Pteris orientalis elegantissima, Ixora robusta, and a pretty purplish rose Epacris, with a bold white tip, came from Messrs. Rollisson, of Tooting. Other plants shown in this class consisted of a double flowered Fuchsia (Applause) from Mr. Smith, of Hagley, a purple Statice called profusa, and Vitmannia macrocephala, from Messrs. Parker & Williams; and Petunia The Queen, deep purple in tint, with a large white eye, from Messrs. E. G. Henderson, St. John's Wood.

Among Miscellaneous subjects was a collection of finely flowered Amaryllids from Mr. Gaines, of Battersea and we noticed two pretty boxfuls of Ferns, from, Messrs. Paul, of Cheshunt.

Of Bougainvillæa a boxful of magnificent blooms was shown by Mr. Daniels, and also some not half the size from a plant to which no bottom-heat had been applied. This therefore fully confirms what was said respecting its culture at p. 479 of last week's Number.

Pelargoniums, especially the two first collections, both from nurserymen and private growers, have seldom [illegible] been seen in such fine condition as they were on this occasion, taking size of plant and quality of flower into consideration. Leviathan and Etna from Mr. Turner, and Symmetry from Mr. Foster, were the admiration of everybody. For 12 plants the first prize was awarded to Mr. Turner, Slough, who sent Mazeppa, Governor-General, Impératrice, Fairest of the Fair, Desdemona, Rose Celestial, Festus, Leviathan, Etna, Sir Colin Campbell, Lord Raglan, and Fair Ellen. Messrs. Dobson were second with Pallas, Bride, Sanspareil, Una, Aurelia, Vestal, Admirable, Rosalie, Agnes, Euphemia, Governor-General, and Fairest of the Fair. A third collection came from Messrs. Fraser, of Lea Bridge. For Fancies the first prize was awarded to Mr. Turner, for Negro, Beauty, formosum, Acme, modestum, and Madame Rougière. Messrs. Fraser, who were second, sent Cloth of Silver, Celestial, Evening Star, Queen of Roses, formosissimum, and Cassandra. For plants from private growers, Mr. Nye, gr. to E. Foster, Esq., took the first prize, with Margaret, Fairest of the Fair, Sanspareil, Viola, Fair Ellen, Sarah, Symmetry, Prince of Wales, Rose Celestial, and Sprightliness. Mr. Turley, gr. to J. T. Dudley, Esq., Streatham, was second, with Eugene Duval, Formosissimum, Una, Mr. Marnock, Carlos, Spotted Gem, Fair Ellen, Sanspareil, and Admirable. Of Fancies from private growers, Mr. Bailey sent Celestial, Lady of the Lake, Attraction, formosissimum, Evening Star, and Acme. Mr. Holland showed carminatum, Cloth of Silver, Madame Van de Weyer, Celestial, Evening Star, and Queen of Roses.

Seedling Pelargoniums were numerous. Those selected for awards were Patroness (Turner), white with large dark spot on the top petals; Perdita (Foster), a very smooth fine formed flower, white centre, dark top; and two fancy kinds, Arabella Goddard and the Champion, both from Mr. Turner, the former a beautiful rose. Mr. Hoyle and Mr. Bass sent some promising flowers, which we hope to see again in June. Messrs. Rollissons sent some prettily spotted kinds, of which Prince of Orange appeared to be the best; it is bright in colour, and the spots dark and striking.

Although fruit formed no part of the Show on this occasion, we noticed two handsome Queen Pines from Mr. Barnes of Bicton. It is to be regretted that their weights were not attached to them; also beautiful specimens of the fine new Strawberry called Oscar from Mr. Turner, of the Royal Nursery, Slough.

SOUTH METROPOLITAN AMATEUR CHRYSANTHEMUM SOCIETY. (TULIP CLASS.)—The First Annual Show of this Class took place on Tuesday, May 29th, at the Society's meeting house, the Sutherland Arms, Walworth. There were 24 stands exhibited, consisting of 6 stands of 12 flowers each, and 6 stands of 6 flowers each in the classes for competition, the remainder being stands of very fine Tricolors and Seedlings by Messrs. Queich, Hughes and Morgan; several stands were also exhibited, but not for competition.

In the First Class of Twelves Mr. Queich obtained the First Prize for Pinder's Maid of Athens, Mountain Sylph, Strong's Eliza, La Belle Nanette, Aglae, Sir Roger de Coverley, Polyphemus, Charleston Beauty, and Dixon's Duke of Devonshire. The second was awarded to Mr. Rose for Vivid, Desdemona, Strong's King, Lord Stanley, Siam, La Belle Nanette, Rose Bagut, Pilot, Ivanhoe, Rose Emily, Rose Amburg, Hamlet, Cerise Belle Forme, Polyphemus, and Fleur des Dames. The third was given to Mr. Ware for Vivid, Louis XVIII., Rutley's Queen, Sir Roger de Coverley, Delatorre's Commodore Optimus, Aglae, Walker's Duchess of Sutherland, Catalini, May's Prince Albert, Groom's F. Perkins, and

Norah Creina. The other stands in this class were exhibited by Mr. Bellamy, Mr. Lee, and Mr. Morgan.

In the Second Class of Six Mr. Chappell was successful with Norah Creina, Imperatrice Royal, Vivid, Duke of Devonshire, Maid of Athens, and Mountain Sylph, and gained the first prize; Mr. Mousley, for Fraulein George, Triumph Royal, La Belle Nanette, Francesca Primus, Lord Byron, and Delaforce's King the Second; and Mr. Castle for Vivid, Unknown, Agliaea, Triumph Royal, Lord Byron, and Globe Bizarre; the third and fourth stand, by Mr. Street, deserved especial praise, and also a Card of Commendation.

In the Extra Class for Maiden Growers (also Six) the first prize was given to Mr. Tolley for Claudine, Roberta, Triumph Royal, Diana, Salamander, and Duchess of Wellington; the second was awarded to Mr. W. Ridge for Wellington, La Vie Parisien, Darius, Carn Dhu, Hudson's King, and Triumph Royal. The show was well attended, and considering its being the first in the Extra Class of a young Society, with an almost unprecedented bad season, may be said to have been decidedly successful.

ENTOMOLOGICAL: *May 28.*—The President in the chair. The President exhibited two new species of small beetles found in the nest of the sooty ant near Micklehum, and Mr. S. Stevens a large case of beautiful Coleoptera, taken near Rio by Mr. [illegible]. Various rare insects taken in Perthshire by Mr. Turner and others by Mr. Rye were also exhibited. Mr. Scott called attention to the remarkable structure of the legs in Ephemeridæ noticed on previously described; he also exhibited a singular variety of Dicranota gongabeira, destitute of the hind of the fore-wings. Mr. W. W. Saunders exhibited some singular galls found at the roots of Oak and Ash trees, also a small beetle (Ptenidium —) which in the larva state inhabits one of the five cells in the seed-vessel of a Mesembryanthemum, the other four cells being formed together by the growth of the larva. Mr. C. Cocks, of Brighton, exhibited a singular hybrid variety between Ephyra orbicularia and E. trilineata; and Mr. Bond a strange specimen of Sphinx ocellatus, having one side of the abdomen perfectly white. Mr. Saunders communicated an extract from Frœbel's Travels in Central America, on the habits of species of ants which build their nests exclusively of small stones of particular kinds collected by the insects; thus one nest is formed only of small imperfect crystals of red transparent garnet; also an extract from the same work relative to a poisonous caterpillar found at San Antonio. He also read a paper on new species of the genus Eudamus, a singular group of veined moths from the Andes. The Secretary announced that a new part of the Society's Transactions was ready for distribution.

Notices of Books.

We have before us a sixth edition of *Taylor's Bee-Keeper's Manual* (Groombridge), a little volume which meets with steady popularity because it is useful. That it deserves the good opinion of the public the following practical account of SUMMER MANAGEMENT will show:—

"The question has often been put to me, 'How and at what time can an apiary be best commenced?' Some remarks in reference to this subject will be found under the heads both of Autumnal and Spring Management. At present the reader is supposed to have been put in possession of a prime swarm, in the season, which is the best method of stocking a new hive of whatever kind, and the earlier the better. On this head we may with advantage quote the words of Mr. Golding. 'Notwithstanding,' says he, 'all that has been said about tenanting hives by the removal of the bees of other hives into them, there is no plan so safe or certain as peopling them by good early swarms. When these are brought from a distance, it should be on the day in which they are hived, and in a cloth of coarse texture, which should be tied round near the bottom of the hive, so as to prevent the escape of the bees. Tie up the cloth by its corners over the top of the hive; and, if carried by the hand, or properly suspended, a swarm may be removed in this manner for miles.'

"All experienced agriculturists know that no colony of bees thrives, or works so well, as one that is populous at the outset. Should any doubt exist on this point, it is often expedient to unite a second smaller swarm to the first, but this can only be attempted within a few days, before many combs are made, or mischief would result. Our recommendation applies with greater force in a late season, or to the case of second swarms, which are rarely strong enough, separately, to collect sufficient winter stores. Of the mode of proceeding in effecting these junctions we shall hereafter speak, when treating of Uniting Swarms, under the section of Spring Management.

"The plan originally proposed in the 'Bee-Keeper's Manual' supposes, as has before been intimated, an arrangement embracing directions for the management of an apiary, 'according to the order of the seasons.' Our legitimate commencement, therefore, must practically date from the separate existence of the recently established colony; noticing, as we proceed, the various substances stored or used in a hive, and collected more or less abundantly, according to circumstances and season.

"Should the weather now be fine, operations are commenced with astonishing activity, the bees being at first solely intent on preparing their new dwelling for its intended objects—the rearing of young, and storing supplies for the future requirements of the family. If, however, circumstances are such as to prevent them from quitting the hive for several successive days following swarming, and before provision is accumulated, recourse to feeding becomes expedient, or starvation might ensue. Under any circumstances, some apiarians have advised giving honey, or a syrup of sugar, to a newly-hived colony. It is well known that, on leaving the parent stock, the bees carry with them a good deal of honey. There is little doubt that the main object in this provident proceeding is to enable them at once to commence the work of building, that they do almost as soon as they are hived, a piece of comb being frequently made on the same day, which is so speedily accomplished, either as a receptacle of honey or of eggs, if the Queen is already fertile. Where a young Queen has accompanied the swarm, such is not always the case, and this occasions a delay in laying of several days.

"The entrance of the hive should now (and at all times when the bees are at full work) be opened to its whole extent.

"*Wax and Combs.*—The material of which the combs are so curiously formed is wax, secreted by the bees themselves, and not any substance directly conveyed into the hive, as is generally, but erroneously, supposed. Its component parts are carbon, oxygen and hydrogen. To enable them to form this secretion, the workers must have access to honey or some other saccharine matter, and this is the first thing sought by a new colony. The quantity required is very great, it being estimated that 13 to 20 lbs are necessary to make 1 lb. of wax. The common opinion is, that the substance often seen adhering so abundantly to the legs of bees is wax, and as such is the basis of the combs. Has it never appeared strange to the observer of a new swarm, that at the time when comb-building is proceeding more rapidly than at any other period, the bees are loaded with but little of this substance? On the other hand, is it not equally clear, that in the early spring, when few or no combs are constructed, they carry it into the hive with the utmost avidity? * * * An extraordinary degree of heat always accompanies comb-building, supplied no doubt by the large quantity of oxygen at that time generated. * * * The form and number of the combs in a hive vary considerably, the bees adapting them according to the shape of their domicile, so as to fit and fill in every part, and often very irregularly. At first they are invariably white, but soon, from the soot of the hive, become stained, and finally turn nearly black. The worker-breeding cells are made the first; they are invariably hexagonal in form, and of uniform size and depth; but those intended only for the storing of honey are often somewhat larger and elongated; sometimes more so on one side than the other. A small dip or inclination upwards is given to the cells, the better to prevent the honey from running out, assisted, moreover, by a small bar or thickened border of wax, at the entrances. The cells in which the drones are bred are larger in diameter than the common ones, and they are generally placed nearer the outside of the hive, though occasionally joined on to the others. When this takes place, our little architects have the sagacity to interpose two or three rows of cells of an intermediate size, gradually enlarged to the proper dimensions. In this, as in everything else, the bees adapt their operations according to circumstances; constructing their combs, either by suspending them from the top of their dwelling, or occasionally by working them from the bottom, upwards.

"*Propolis.*—To attach the combs firmly in their place, the bees employ a pliable substance of Balsamic odour, called propolis, a glutinous exudation from certain trees, or their buds, of a grayish colour, which they collect immediately on swarming, blending with it a portion of wax. With this material they varnish the lids of the closed honey-cells, glue up all crevices in the hive, and cement it down to the floor.

"*Honey.*—We have seen that the first want of the swarm is honey, for the purpose of comb-building. This valuable article the bees collect, by means of their proboscis, from the nectaries of certain flowers, from whence it derives a higher or less degree of flavour, together with its colouring matter; sometimes nearly transparent, to various shades of brown. They receive it into their first stomach or honey-bag, the greater portion being subsequently regurgitated into the cells, employing for the purpose those of both workers and drones. As these become severally filled, they are coated over or sealed with a thin covering of wax. * * *

"*Pollen, or Farina.*—The hive will be rapidly filled with combs, and progressively with an increased population, for the eggs, as we have seen in page 13, are matured in three weeks. In the mean time, the bees will have commenced a new labour—that of collecting pollen or farina. This is the anther-dust of the stamina of flowers, varying in colour according to the source from whence it is derived; and it may be remarked that the bees in their collection never mix together the pollen of different plants, but in each excursion visit only one species of flower. By a peculiar adaptation, they are enabled to brush this off, and pack it into the spoon-like cavities (or baskets as they have been termed), furnished for this object, on the centre joint of their hind legs; being often, as has been already pointed out, mistaken for wax. The powder or meal thus conveyed into the hive is by other bees afterwards kneaded up into paste, and stored for use in the worker cells, adjoining those containing brood. To preserve it from the air, a small portion of honey is put on the top of each cell, coated over with wax.* * *

"*Water.*—At certain dry periods, but always in the breeding time, bees require a supply of water, which is necessary in preparing the farina and honey for the brood, as well as to enable them to secrete wax. If no pond or brook is within a reasonable distance, a shallow vessel will be found frequently to the brim, having a piece of thin perforated wood floating on it and covering the whole surface; or it may be filled with Moss or pebbles, pouring in water to the top, and placing it near the apiary. Precaution is necessary, for the bees easily slip into the water and are drowned. So essential is water, that it has been recommended to place a supply, early in the year, within the hive.

"*Shade.*—It has already been observed that out-door hives ought not to be left exposed to the mid-day and afternoon sun in sultry weather; the heat not only rendering the bees extremely irascible, but subjecting the combs to melting, and especially in wooden boxes, with most disastrous consequences. In all such cases it is well, therefore, to give the comfort of a mat, or something of the kind, thrown over them. In the words of Golding, 'they delight not in Hot Houses, for there they find a uniform temperature and a propitious season. It is a mistake to suppose that bees exposed to the sun produce the earliest and strongest swarms. I have often experienced the reverse. Bees use the shade when working, and the sun only when in the hives.'"

The pages are abundantly illustrated by good engravings on wood.

In its fifth edition Mr. Ball's *Peaks, Passes, and Glaciers* (Longmans) has assumed a more portable form, the size having been reduced by omitting the coloured plates, the maps being retained, and Prof. Ramsay's paper on the ancient glaciers of Wales, which is now to be had separately. The new Tariff of the Chamounix guides, which is included in the present volume, will be a very useful addition by those who take the volume with them to Switzerland.

A Flora of Cambridgeshire; or a Catalogue of Plants found in the County of Cambridge. By C. C. Babington, Esq., M.A. Van Voorst. Small 8vo., pp. 327.

Botanical students in the county of Cambridge will doubtless find this volume a most acceptable guide; for although some may have the misfortune, like ourselves, to look at what are called the species of plants from a point of view quite different from that of the author, nevertheless all competent observers will admit that Mr. Babington's knowledge of our wild plants is of the highest order. And after all in a local Flora it may be better to refine upon differences than to be critical about distinctions. To the rambler in the country it is more interesting to occupy himself with a study of the many forms, whether accidental or permanent, assumed by plants than to consider into how small a number of types they may be condensed. The system of hair-splitting has, moreover, this attraction with some minds, that it leads continually to the discovery of something "new"—an unlikely event when absolute distinctions are alone regarded. By the former process Mr. Babington has succeeded in adding new Poppies, new Thalictrums, new Arenarias, more new Brambles, and new Grasses, to his list of Cambridge plants; by the latter he would have been obliged to make terrible holes in their ranks. As may be supposed, a copious list of places where less common plants are to be found forms a great feature in the volume; which is also enriched with careful topographical remarks and various miscellaneous matters. The number of Cambridge plants now utterly extinct there is very remarkable, and furnish hints for geological inferences.

A third volume of *Henry Bradbury's* wonderful *Nature-printed British Seaweeds* is out. It is entirely occupied by the green species, which we should have thought would, owing to their thinness, have proved more unmanageable than the red ones. Such, however, is not the case. Filmy as these plants are, they are defined with the same admirable clearness as the others. Some, however, have proved unmanageable, and are represented by woodcuts. Another volume concludes this most beautiful work, which ought to be found in every drawing-room.

Messrs. Adam & Charles Black have issued a new edition of *Dr. Balfour's Manual of Botany*, revised by the author, and therefore containing his latest views. We observe, however, that by some oversight the number of genera and species included in each natural order upon the authority of Lindley are taken from the first edition of that author's Vegetable Kingdom, and not from the last, in which considerable additions were made.

Miscellaneous.

Celery grown at Chiswick in 1859.—A collection of 15 samples of Celery was cultivated for comparative trial at the garden in 1859, and various notes and me-

moranda concerning the peculiarities of the varieties, as well as their quality, were made; but the unusually severe and early autumnal frost injured the plants so much that these memoranda could not be satisfactorily completed. It has accordingly been thought desirable to submit a more complete collection to a fuller examination during the present season. It may, however, be stated, that so far as the examination was carried, it was found that the variety sent as Ivery's Ne plus Ultra, by which name it appears that Ivery's Nonsuch was intended, and another called Hood's Dwarf Red, were the two best of the red kinds, both these being of very excellent quality; and that a dwarf variety, sent under the names of Superb Dwarf White and Incomparable Dwarf White, was the best of the white kinds. This latter closely resembles the Céleri Court Hâtif of the French. *Horticultural Society's Proceedings.*

Stothard the Artist, and the Butterfly.—The owners of many a name great in the arts have been enthusiastic collectors of butterflies. Our distinguished countryman, Thomas Stothard, was one of their devotees, and the following anecdote, extracted from his published life, shows how he was led to make them his special study:—"Stothard was beginning to paint the figure of a reclining sylph, when a difficulty arose in his own mind how best to represent such a being of fancy. A friend who was present said, 'Give the sylph a butterfly's wing, and then you have it.' 'That I will,' exclaimed Stothard; 'and, to be correct, I will paint the wing from the butterfly itself.' He sallied forth, extended his walk to the fields, some miles distant, and caught one of those beautiful insects; it was of the species called the Peacock. Our artist brought it carefully home, and commenced sketching it, but not in the painting room; and leaving it on the table, a servant swept the pretty little creature away, before its portrait was finished. On learning his loss, away went Stothard once more to the fields to seek another butterfly. But at this time one of the tortoise-shell tribe crossed his path, and was secured. He was astonished at the combination of colour that presented itself to him in this small but exquisite work of the Creator, and from that moment determined to enter on a new and difficult field—the study of the insect department of Natural History. He became a hunter of butterflies. The more he caught, the greater beauty did he trace in their infinite variety, and he would often say that no one knew what he owed to these insects—they had taught him the finest combinations in that difficult branch of art—colouring." *British Butterflies, by W. S. Coleman.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Many of the new Holland plants and other greenhouse subjects will soon be getting past their best, and some foresight and care will be necessary to avoid being short of specimens in bloom with which to supply their places. Where circumstances will admit, plants that have been grown in a warm moist atmosphere should be removed to an intermediate house about a fortnight previous to their being taken to the conservatory, and gradually inured to a free circulation of air. By attention to this, and placing the plants in the warmest corners in the conservatory Clerodendrons, Allamandas, Achimenes, &c., will continue growing slowly and bloom for some three months, whereas if this is neglected their beauty may be very short-lived. Aim at maintaining an even temperature in the conservatory after removing thence plants that have been grown in the stove, and avoid allowing the atmosphere to become very dry on bright warm days. Also see that every plant is perfectly clean before placing it in this house, and that the creepers, &c., are not infested with insects. Go over the house every morning, and remove decaying flowers and leaves as they make their appearance. Young stock in pits and frames will now be making rapid growth, and must be carefully attended to as to watering, stopping, training, &c. Examine Heaths frequently for mildew, and apply sulphur the moment it is perceived, some of the soft-leaved varieties being very liable to be attacked by that pest at this season. If the permanent occupants of the beds and the twiners, however, are such as require a free circulation of air, the house must not be kept so close as to injure them; but where Passifloras, Ipomœas, Mandevilla suaveolens, Tecomas, Bignonias, &c., are grown for covering the roof, and Orange trees and other things that enjoy a fair amount of warmth and moisture while making their wood occupy the beds, the hardier stove plants will form the most suitable decoration for the next three months. Go over the twiners frequently and regulate their growth before the shoots get entangled, but avoid keeping them tied too closely, for they are never seen to advantage unless they are allowed to hang in a natural and graceful manner.

FORCING DEPARTMENT.

PINERY.—Where Pines are grown to any extent on the Hamiltonian system, a close watch must be kept upon the most likely plants for immediate fruiting, so as to keep them dry at the root or otherwise as circumstances may dictate, and those showing fruit must not be syringed over head to the extent of causing water to lodge in the centres of the plants, for this would probably cause the fruit to be deformed. Young stock growing in dung pits must be allowed plenty of air to prevent their making weakly growth, and must not be overwatered, which through the greater amount of moisture in the atmosphere is more apt to be the case here than in houses heated by any other means. Encourage recently potted stock with plenty of warmth and a corresponding degree of humidity in the atmosphere, but water carefully until the roots get hold of the fresh soil. The most certain method of obtaining a regular supply of fruit is by securing and potting a limited number of suckers at short intervals throughout the growing season; therefore attend to this, which will save much trouble and disappointment as compared with the old practice of doing this but once, or at the most but twice in the year. Where the bottom-heat is obtained from tan it will often be found necessary to add a little fresh material at intervals, in order to recruit the heat, but at this season it will be safer to surface with a few inches of fresh tan in a rather dry state than to turn the bed, mixing the fresh materials, which often cause too strong a heat; and at this season there is much more danger of erring on the side of too much than too little bottom-heat. Give every attention to keeping up a succession of fruit. Take care to attend to keeping up a regular supply of young plants even if doing this should necessitate throwing away a few overgrown plants which have failed to fruit at the desired time. We have frequently seen cultivators allow the number of large plants to increase, so that there was little room left for the young stock, which suffered accordingly, and disappointment came in due course. Do not let the growing stock suffer for want of pot room, or through dryness at the root, and afford a moist atmosphere, syringing and shutting up early in the afternoon, so as to give the house a good steaming. Recently potted plants, especially if they be much pot bound before being repotted, should be kept rather close and shady, with a thoroughly moist atmosphere, and very carefully attended to with water until they appear to have taken to the fresh soil.

VINERIES.—Attend to keeping cool and moist where early fruit has been cut in order to preserve the foliage in a healthy state as long as possible. The laterals need not be kept very closely stopped after the fruit is cut, but they must not be allowed to shade or injure the principal leaves. If there is any appearance of red spider give the foliage a good washing with the engine directly the fruit is cleared off, and repeat this as long as there is a vestige of the enemy to be seen. Give prompt attention to the thinning of the fruit in succession houses, for like many other jobs this is most easily and expeditiously done when taken in time. Look well to the state of the borders where the fruit is swelling, and give a thorough soaking of tepid, good strong manure-water wherever the soil is found to be at all dry, and aim at having the borders in a healthy state as to moisture where the fruit is about colouring, for a healthy root action has more to do with the colouring of the fruit than many persons seem to suppose. Young Vines planted out this season should be encouraged to grow freely, and as the roots will be near the surface see that they are not allowed to suffer for want of water, and in the event of continued dry weather a slight mulching over the roots would be useful. Do not keep the laterals too closely stopped, as the more leaves, &c., the Vines are allowed to make the more freely the roots will run in the border, and this deserves attention the first season.

PEACHES.—Spare no means to maintain a moist state of the atmosphere where the fruit is swelling, syringing freely, and shut up early in the afternoon, but give air sufficiently early in the morning to prevent the least risk of scorching.

FLOWER GARDEN AND SHRUBBERIES.

Late-sown annuals should be thinned out as soon as they are well above ground, for if left to grow too thickly they spoil one another, and never make half the display plants do that are allowed plenty of space and which are grown strongly from the first. Attend to staking such of the herbaceous plants as require it before they get blown about and injured, and do not huddle the stems together, as is too frequently done. The early flowering bulbs, as Tulips, Hyacinths, Turban Ranunculuses, &c., will soon be ready for taking up, and should not be left in the ground after the decay of the foliage, as if wet weather occurs they will be making fresh roots, which weaken them for next season. Attend to the propagation of the better varieties of Pentstemons, which are exceedingly useful plants. Also see to having a good stock of the border Picotees and Carnations, which are invaluable for cutting. Cuttings of these, if put in before the wood gets too hard, root as freely as Pinks.

HARDY FRUIT AND KITCHEN GARDEN.

Strawberry beds may soon require attention as to watering, should the weather become dry. After thoroughly cleaning the beds, a thorough soaking should be given and if a moderate watering from the stable tank can be supplied when the ground has been well saturated with clear water it will greatly assist in securing large fruit. The beds should be mulched as soon after watering as convenient, in order to prevent evaporation and the fruit from being soiled. Next to slates or tiles clean straw is the best material for this purpose, and mowings of lawns the worst. The latter besides forming an excellent harbour for slugs soils the fruit, spoils its flavour, and in wet seasons hastens the decay of any over ripe fruit. Where clean straw cannot be afforded, fresh litter from the stable yard will form a very good substitute. Exposure to the air and a few showers will perfectly sweeten this, so that there need be no fears entertained of its injuring the flavour, but it should be applied immediately. Persevere in the destruction of insects on fruit trees as soon as they are perceived.

COTTAGERS' GARDEN.

If Carrots have failed a small bed of Early Horn may be sown. Spare ground must soon be filled with various winter greens. York Cabbages may be sown for autumn use; they will do to plant in any small gaps that may exist among other crops. Stake up flowers, and render everything about the garden as neat as possible.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending May 31, 1860, as observed at the Horticultural Gardens.

May.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain.
Friday 25	4	29.953	29.609	67	50	58.5	59½	56	S.W.	.04
Satur. 26	5	29.466	29.336	66	40	53.0	60	56	S.W.	.03
Sunday 27	6	29.751	29.657	62	45	53.5	58	56	N.W.	.30
Mon. 28	7	29.888	29.502	63	35	49.0	58	56	N.W.	.00
Tues. 29	8	30.005	29.953	63	36	49.5	56	55	W.	.00
Wed. 30	9	29.906	29.827	64	40	52.0	56	55	N.W.	.07
Thurs. 31	10	29.783	29.553	58	44	51.0	57	54½	S.	.48
Average.		29.821	29.632	63.3	41.4	52.3	56.3	55.5		.92

May 25—Very fine; cloudy and fine; rain at night.
— 26—Cloudy; heavy clouds and showers; clear and cold.
— 27—Cold and dry; fine, rain at night, very boisterous.
— 28—Boisterous, heavy clouds with strong gale; clear and cold.
— 29—Cloudy throughout; overcast and cold at night.
— 30—Fine; clear and cold at night; rain.
— 31—Rain throughout; cold and drizzly at night.
Mean temperature of the week, 3¾ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending June 9, 1860.

June.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 3..	69.0	44.4	56.7	14	0.91 in.	—	4	5	1	5	12	3	4
Mon. 4..	69.1	45.1	57.1	12	0.76	1	5	2	2	4	9	7	4
Tues. 5..	71.0	47.3	59.1	18	0.64	2	7	2	1	5	8	6	3
Wed. 6..	69.8	47.9	58.8	17	0.28	6	5	2	2	4	9	3	3
Thurs. 7..	69.0	47.5	58.3	12	0.53	3	8	—	4	4	8	3	4
Friday 8..	70.5	47.7	59.1	12	0.45	3	8	1	—	4	12	4	2
Satur. 9..	70.7	48.2	59.5	16	1.48	1	6	2	2	3	14	3	3

The highest temperature during the above period occurred on the 7th, 1846—therm. 90 deg.; and the lowest on the 5th, 1856—therm. 33 deg.

Notices to Correspondents.

*** The Board of Works have directed that in future the Street in which our Office is situated shall be called Wellington Street, and that the Number of our Office shall be 41. Correspondents are therefore requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

DISEASED PEAR LEAVES: *E W.* They seem to be attacked by the formidable Fungus called Æcidium laceratum. If so you will soon see the enemy appearing in the form of pustules.

INSECTS: *J L B.* The insect received in company with some bits of Potato was not a wireworm. It is a small species of centipede (Geophilus, sp.) found in earth filled with decaying vegetable matter, and probably feeds on the eggs and young of small insects, mites, &c. The ground should be well stirred and cleaned, and gas-tar water used plentifully. —*N L M.* The minute insects attached to your Apricot shreds are a species of mite, and possibly make their way into crevices of the bark, which must be carefully examined, and if such should be the case it would be well to wash the trees with a soft brush and hot soft soap-suds and lime.—*C M.* The beetles in your granary are the troublesome Calandra granaria. We know no better plan to destroy them than to put the grain in the kiln for a short time. We shall always be happy to answer such questions.—*T W.* Your Raspberry canes have been gnawed by that sad pest Otiorhynchus vastator. You must examine the plants after dark and shake them over a sheet, when the insects will fall down and must be destroyed. No wash will hurt them. *W.*

MELON FRAMES: *Amateur.* A convenient size for lights for Melon frames is 3½ feet wide and 6 feet long. The frames should stand about 10 inches higher at back than front. Only one plant should occupy a light; therefore the number of lights required will depend on the quantity of plants you intend to grow. We prefer wood to iron for ordinary glass houses. If properly seasoned and kept well painted it may be expected to last good for nearly a century. ‡

NAMES OF PLANTS: *J N C, Trowbridge.* As far as we can judge from such a miserable specimen it is a flower of Zygopetalum stenochilum.—*A Pontey.* Poa rigida.—*W R.* We do not recognise it. Wait till it flowers, which it will do some day.—*M R.* Some Cassia, perhaps new; but not to be ascertained without the pods.—*W D W.* The plant found growing on the crown of a sandy hillock among Clover and Ryegrass of the the first year's growth (sown last year) appears to be Alyssum serpyllifolium, introduced with Clover seed. But in the absence of fruit this identification is uncertain.—*B W.* Fabiana ericoides.—*C P.* Plants so dried up as yours were when they arrived cannot be named.—*Henry.* Dielytra spectabilis.—*T W.* You shall know next week. — *Botanophilus.* Ribes campanulatum, a Mexican hardy shrub, introduced many years ago by the Horticultural Society. — *Peter.* 1, Duranta Plumieri; 2, Bignonia picta; 3, some Arrhostoxylum, but which the specimen does not show.—*Kyloe.* 1, Lithospermum purpuro-cœruleum; 2, an Erysimum, probably alpinum; 3, Juniperus excelsa; the berries are not used. — *Medico.* Veronica Chamædrys.—*W Fuller.* 1, Eriophorum polystachyum; 2, Carex cæspitosa; 3, C. strigosa; * Scirpus setaceus.

PEACH TREES: *G P.* It is the laterals on the wood of the present season that should be pinched back to the first leaf. Ample instructions on this, however, and other points connected with pruning may be found in Rivers on the Orchard House ‡

PINCENECTITIA: *Bradford.* The history of this strange name is thus given by Professor Scheidweiler, of Ghent. It seems that about the year 1836 Galeotti sent to Van der Maelen some plants whose half illegible ticket appeared to be Freycientia. The gardener to whose care they were consigned changed the word to Pincenectitia, and so it has remained ever since. Fruits of the plant, lately received from Mexico, show this Pincenectitia and the plant called Bonapartea glauca both to be species of the genus Dasylirion.

VINE LEAVES: *20 years.* They are "scorched;" and possibly by the use of very cold water; or by too rapid evaporation while the leaves are young and tender.

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ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5.28
Biphosphate of Lime	16.77	15.63	14.38	16.71	16.91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

Dr. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

Dr. ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

Dr. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

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MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
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LAWES'S BARLEY MANURE	8	0
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WHEAT ditto	POTATO ditto	KOHL RABI do.
GRASS ditto	BARLEY ditto	Also

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The Agricultural Gazette.

SATURDAY, JUNE 2, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

MONDAY,	June	4	Central Farmers' Club ..... 6 P.M. (Mr. Wells on the Economy of Steam Power.)
TUESDAY,	—	5	
WEDNESDAY,	—	6	Bath and West of England Agricultural Society at Dorchester.
THURSDAY,	—	7	
FRIDAY,	—	8	
WEDNESDAY,	—	6	—Royal Agric. Soc. of England .... Noon

WHO among us can place himself in imagination exactly in the position occupied by the man whom he employs? Where will you find the employer who naturally and cordially accepts exactly the point of view from which any right-minded labourer of course must contemplate his prospects? It is easier to look down with good will on those of lower station from your own high place than to stand as one of them on their platform and thence look up, desirously for them, like the thoughtful ones among themselves, at the possibilities of advantage and improvement within their reach. And so, it is rare to find a benevolence in this particular department which does not think of agricultural labourers as a body needing to be managed, directed, and provided for as such—rather than as neighbours in whose personal and family interests warm regard is felt altogether independently of their relationship as servants.

Is this denied? Then let any one who doubts it take up his residence in a country village, and becoming acquainted through the evening school and otherwise with the boys and young men, sons of labourers around him, exert himself first for

their instruction, and afterwards for their advancement in any station, agricultural or otherwise, for which their character and attainments fit them. Will his efforts be generally sympathised with by employers? They are losing their best men—the most promising young fellows find better employment at a distance—all very well for *them*—but how about those for whom they would have worked, and "on whose well-doing the prosperity of the neighbourhood depends?" *This* is the leading idea, and it is generally felt even by the unselfish that the only true way of benefitting the labourer is by making him better as a labourer, and thus more useful to his master.

And probably this is true; but the fortunate thing is that no man can become perfectly qualified for the station which he holds without being thereby better qualified for the station immediately above him than the most of those who occupy it. If any man knows perfectly the duties of a ploughman, or a shepherd, or a general agricultural labourer, he is better qualified for a bailiff's place than many of those who hold it; and it is likely that by-and-bye one of them will be displaced by him. Let any young man learn perfectly the duties of his position and he will most likely rise above it. And this is a good thing, not a bad one, both for the class he leaves and for those whose interests depend on its efficiency.

A farmer was asked by a clergyman to subscribe towards an emigration fund. His reply was:—"I will gladly do so if you will allow me to choose the men who are to be thus assisted to go out." Of course he would choose the "blind, the halt, the maimed, the discontented." He would naturally wish to retain the well-conditioned, vigorous, and trustworthy in his service; and possibly any artificial interference with the natural tendency, such as an emigration fund no doubt is, ought to be administered on his principle. Nevertheless it is fortunately inevitable that all the prizes of life—and if ability to emigrate be one of them, then that as well as others—fall to the lot of the energetic and the worthy, not to that of the listless and the pauper. And it is fortunate for the class which thus sends its shoots upwards, that this is the tendency—that this efflorescence upwards is thus encouraged—and that a crop of the very best is being thus always draughted into higher places. Such a premium on good conduct, skill, and industry affects the whole body beneficially as well as those who win it. And the master who thoroughly sympathises with his young men in their efforts after self-improvement, even assisting them to a higher station as they become qualified for its duties, although he thereby loses his best servants, will be better served than another is who looks coldly on any qualification which they may acquire beyond those fitting them for just the places he has given them.

There are instances enough in proof of this; and we need not argue *à priori*, or merely from the obvious tendencies of things, as if ample experience did not exist in illustration of it.

A few days ago we had the pleasure of joining a party of smock-frocked Berkshire farm-labourers in their annual excursion to the Crystal Palace. This yearly fête superintended and carried out by their master, though its cost is partly defrayed by a weekly contribution from themselves throughout the year, is but one of a constant series of things illustrative of the mutual goodwill by which the relation of master and servant is in this case beautified. The master, a Berkshire farmer—a member, by the way, of the council of the Central Farmers' Club—employs some 30 men and lads as annual servants. Many of the latter lodge in his house; and had Mr. MORTON known them when he read his paper last December before the Society of Arts he would not have said of Old Michaelmas Day that it witnesses "a complete sweep" of all the young men employed upon the farms where this system of half-board and wages prevails. The case to which we now allude is at any rate an exception to that rule, and one that helps to prove a rule to which we believe there is no exception—that a good master will make good servants—and that kindness with care for the interests of the latter will beget kindness and care for the interests of the former.

These young men will work over hours in harvest time if there be a difficulty about hiring hands. They will get up over night and cover up a rick that has been left exposed if a thunder-storm awakens them. All this and more of the same kind they have already done for their employer in instances enough: and for themselves they are saving money in the bank, and assisted by their master they are adding both on weekdays and on Sundays to knowledge that will serve them in good stead hereafter. The upshot hitherto has been that the bond between the master and the servants is in this case with difficulty severed—it is fruitful of good to both; the latter are growing into manhood with characters strengthening in everything that is desirable, the former is being served with love, which is even better than being treated with mere justice.

A PAMPHLET on the present condition of the labour-market* has been lately published at Manchester. The author, a Manchester man, knows that industry is well rewarded there, and that employers are checked by want of hands. He also knows or believes that "in the south and west of England agricultural labourers are toiling from sunrise to sunset, exposed to all the vicissitudes of our climate, underfed, badly lodged, poorly clad, and enduring all this labour for less wages than a girl or lad of 17 years of age can obtain, and grumble at, in Lancashire and the neighbourhood, while the work of the artisan is performed, too, under the most favourable conditions." He accordingly recommends that in every locality there should be an industrial labour office, where the "supply" at each and the "wants" at every other place should be known; and where information as to employers, wages, lodgings, and labourers can be had. We cordially approve of the proposal in the interests of agriculturists—quite as cordially as Mr. GREGORY recommends it in the interests of manufacturers. As he himself observes, "Three things are wanted:—municipal [or local] industrial labour offices, industrial labour trains, and a lodging committee, wherever there is an office seeking and reciving supplies of labour. There are great water-sheds on one side of the country, and there are great reservoirs on the other,—is there nobody of sufficient social engineering talent to connect the two?"

Let us add that the hopes of individual employers in the agricultural world must depend more than ever they have done upon strengthening the personal relations which exist between them and their servants. Mr. GREGORY offers the young people who may read his pages an independence, the attraction of which will easily overcome anything but the conviction that in their agricultural home they are acquiring character and ability whose future advantages will more than compensate a present inferiority. Read his most telling contrast:—"Two servants in a family, not far from the writer, have a sister each, of about equal age; one servant's sister lives in Manchester, and earned last week in a mill 16*s.* 5*d.*, and has earned about the same sum for many weeks past. She pays 7*s.* per week for board and lodging, and spends the rest *on herself and a dancing-room*. The sister of the other servant, living in Bucks, an intelligent girl, and a very good hand at her work, scarcely earns 4*s.* 6*d.* a week at pillow lace, sitting at it ten hours per day." The italics are our own.

It is just within the range of possibility, within the range we will even say of likelihood, that the Manchester girl may be worse off in the future than her friend in Buckinghamshire. Let it not be pretended that independence and good wages are not good things when combined with good character. But the last is of such paramount importance, and agriculturists have in the close relation which they are able to maintain with those whom they employ such means of fostering it and of otherwise conferring benefit, that they can, if they choose, successfully withstand not, we are glad to say, the tendency towards higher wages which everywhere prevails, but the rivalry of districts where the young, though better paid, cannot be cared for as they may be at home.

THE STRUCTURE AND ACTION OF THE SOIL.

IN a late article "On the Cost of manufacturing Farmyard Manure," p. 115, we presented the various modes of increasing or maintaining fertility in two lights; one on which the materials used are derived internally from the farm itself; the other in which they are obtained from external sources. Of the former of these classes, indigenous fertilisers, we pointed out that farmyard dung was the type; whilst to the latter division belong all the commercial manures, whether general or special; and in the course of our statement we took occasion to demonstrate certain distinctions which exist in the practical benefits due severally to those fertilising agents. In doing this a chief conclusion arrived at was this: that the growing of cattle crops, and the conversion of them into manure by means of live stock does tend not only not to enrich the staple but actually to impoverish it; and in this paper we purpose more particularly to explain the physical and physiological principles on which this proposition is based. In this we shall of course have to encounter the adverse dogmas of the orthodox rotationist; but until such uninquiring believers in home-made muck as the best of all manurial processes, shall demonstrate what part of the increased fertility of modern farming is due to that mere return to the soil of substances derived from itself which is characteristic of farm-yard manure, and what to the extraordinary improvements in shelter, drainage, and tillage which are so characteristic of the improved husbandry of the last 20 or 30 years, we must take leave to argue the point now raised on general principles rather than on the basis of popular conception.

To understand the principles involved in the process of manuring, whether of internal or extraneous origin, it is primarily indispensable to form a correct notion of the constitution of soils in relation to their function of fertility; and to this end we will first relate a few simple propositions in geology.

Now by this grand science it is taught that the external portion of the globe we inhabit is a stony crust encircling a region of intense heat, and that from this interior there have, in all ages of the earth's physical history, been vast outpourings of mineral matter in a state of molten fluidity, which, hardened by subsequent cooling on or near the surface, become rock. Incessantly however the ejected matters thus consolidated are subject to subsequent fracturing and disintegrating causes as well as to the action of running water in torrents, rivers, and ocean currents, which assorting them into beds has formed those parallel deposits of more or less comminuted materials which constitute the aqueous strata of geology. To this class of detrital deposits belong the soil and subsoil of husbandry; and in this light, then, the unstratified masses, as well as the stratified formations derived from them, which as igneous rocks, sandstones, and soils are conjointly the earth's crust, possess one common character namely, that of having been subjected, prior to their original effusion from within, to intense degree of temperature.

From the domain of geology we now pass to that of inorganic chemistry, which teaches that generally it is true of substances exposed to great heat that when cooled down to ordinary temperatures they are left chemically in a state of unstable equilibrium, and therefore prone to enter into processes of decomposition and recomposition, resulting in compounds possessed of properties very different from those which belonged to the newly associated elements in their prior chemical conditions. As an instance of this general rule none better can possibly be cited than that actual process of reaction which unceasingly is going on between every species of exposed rocks on the earth's surface and their insidious enemy the air of the atmosphere; and of this last-mentioned great element of creation we shall now very briefly speak.

The atmosphere, then, may be defined to be a vast volume of nitrogen gas, holding in diffusion the following other gases, namely, oxygen, carbonic acid gas, and carbonate of ammonia. Intermingled with these there is constantly present a large proportion of aqueous vapour, between which and the three diffused gases just mentioned there exists that kind of affinity called absorption; and by virtue of it every fall of rain and every deposition of dew precipitates to the earth and waters its surface with an aqueous impregnation of these aërial substances. Now, greatly at variance with the commonly entertained conceptions respecting the properties of the atmosphere as is the chemical fact which we are about to state, yet none of the phenomena of nature are better determined than this one—that no species of rock, however great its induration or compact its texture, is able to withstand an ever-active corrosive property belonging to these seemingly feeble but really powerful atmospheric agents, which, disintegrating layer after layer of the surface, and destroying by means of the entrance given by pores and cracks even the internal cohesion of the mass, form the first beginning of those detrital accumulations which are the sandstones of geology, and the under and upper soils of the agriculturist.

But because the soil and subsoil have in this manner attained through the agencies here described a comparatively great degree of detrition, they are by no means exempted thereby from the still incessant attacks of this decompositive action. On the contrary, it is peculiarly important for the agriculturist to understand that, operating as this decompositive power of the air does with an energy proportioned to the surface exposed to atmospheric contact, minutely divided fragments are those most amenable to its chemical reaction.

Arrived at this stage of our argument, we are now enabled to give to what has been written a practical application by stating, that out of this process of natural chemistry mutual to the ingredients of soils on the one hand, and the constituents of the air on the other, are produced two results essential to the phenomenon of vegetation; for, first, by virtue of the fragmentary, and hence pervious condition into which the decomposed matters are reduced, the roots are enabled to spread abroad, both to fasten the plant and

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* *Industrial Labour; where and how to get it.* ISAAC GREGORY, F.R.G.S. D. KELLY, 53, Market Street, Manchester.

to seek for food. And secondly, the products of the decomposition—in other words, the new compounds formed between the union of the mineral substances reposing below and the atmospheric constituents descending from above—form that very pabulum which the radical organs, permeating in innumerable threads through the interstices of the ground, are constantly absorbing as food, and without which there could be no vegetation. In the phenomenon of combustion a process very analogous to what we have been describing takes place. The oxygen of the air uniting with the carbon of the fuel produces a fresh compound (carbonic acid gas) with development of heat. Prevent the free access of air and the fire will languish. Stir up the coals and thereby promote abundant atmospheric accession, and the combustion will proceed with corresponding energy. Exclude the oxygen, the carbonic acid, and the ammonia of the air from the pores of the soil either by leaving them supersaturated with excessive moisture, or impervious to the atmosphere by reason of defective tillage, and comparative sterility will exhibit itself; but withdraw by drainage the superabundant water from the pores and impart to the land by the trituration and stirring of thorough working a maximum degree of porosity, and the elimination of vegetative nutriment will be correspondingly plentiful.

But although in these last expressions we have glanced at what forms the great fundamental element of tillage husbandry, viz., the perfect working of the soil, yet the basis of argument we are here constructing and will eventually build on has reference to manuring only; and we therefore pass on to the consideration of another phenomenon in the formation of soils through the reaction of the atmosphere.

Subjected to the investigations of the mineralogist no species of rock is found to be absolutely homogenous, but, on the contrary, in all kinds the texture consists of a greater or less variety of substances, each possessing a distinctive mineralogical character, but all falling within the following category (and too much attention cannot possibly be given, or too great importance attached to the circumstance), that one or other or all of the chemical elements forming the mineralogical constituents of rocks belong to the list of those inorganic ingredients which are essential to vegetative nutrition. The disintegration of mineral substance whether in the condition of rock or of soil, is in truth therefore identical with the process of elimination of vegetative pabulum.

But besides containing constituents which when duly acted on by the atmosphere become the designed food of plants, most rocks combine with these in preponderant abundance a certain mineralogical constituent, which yields on decomposition a substance itself altogether innutritious to vegetation, but possessed of functional relation to fertility, namely, alumina or CLAY; and to understand the appointed office of this invaluable constituent of the staple it is necessary to explain that the primary results of the processes of decomposition which eliminate the mineral food of plants from its original condition of crudity present themselves in the condition of aqueous solution; and thus were no preventive provided, the dissolved ingredients would infallibly be washed away by rain-fall. But to clay, which itself is insoluble and yields up no part of its composition as aliment to plants, is given the property of absorbing the nutriments from their nascent solutions, and of storing them within its own texture, safe from waste, but in a condition fit to be withdrawn by the radical functions of plants. Other products of decomposition besides clay very probably possess a similar property; but enough has already been said to explain the general nature of this conservative capacity of all productive soils.

Shortly recapitulated, the chief topics of the foregoing observations are as follows:—1st, That a constant decompositive and recompositive action is going on between the solid ingredients of soils on the one hand and certain of the gaseous elements of the air on the other; 2dly, That one set of the resultant substances consists of new compounds, partly terrestrial and partly atmospheric in their origin, and these form the radical element of plants as contradistinguished from the elements obtained from the atmosphere only by the leaves and other green parts; 3dly, That another result of that natural chemistry exhibits itself in the formation of an argillaceous component of soils, physiologically innutritive, but physically imbued with the power of garnering the nutrimental substances in a state unsusceptible of removal by aqueous solution, but capable of being freely absorbed by the roots of growing plants. On these premises we shall in subsequent papers found the following propositions:—(1st) That the alimentary demands of cultivated crops may be such, quantitatively, as to withdraw yearly from the land each year's elimination of nutrient matters; and this is what occurs in ordinary tillage farming; or (2dly) where a less active vegetation is promoted, as in pasture, that an accumulation of pabulum may take place in the soil; or (3dly) that an accumulation so formed may by the subsequent institution of energetic cultivation be withdrawn, and the nutritive resources of the staple reduced to its current yearly supply. But (4thly) that beyond the withdrawal of accumulated nutriment, no species of plants, however abnormally great their appetites may be rendered by cultivation, and no order of succession in their yearly growth in the fields, can in any wise injuriously affect the innate and primary alimentary functions of the land. *A. B.*

LABOURERS AND COTTAGES.

AN entire want of labourers' cottages on farms in some districts, and unsuitable cottages in other districts where it is the rule for married men to reside in cottages adjacent to the farm steadings—too low a rate of wages, which is the necessary result of an overcrowded working population—coupled with the law of settlement, early improvident marriages, improvident and intemperate habits and extravagance in dress—and a culpable neglect of duty on the part of too many landowners, tenant-farmers, and rural clergy—are the principal causes of the existing state of things in rural districts. Allow me to quote the following reliable statements to show where landowners, tenant-farmers, and labourers are respectively at fault:—

"We have already given in full detail outline plans illustrative of the right construction of cottages; but before proceeding to give our remarks on the constructive details of cottages, let us once more recur to the importance of having arrangements calculated to aid the development of the comforts of domestic life. We trust that the necessity of having these arrangements will become more and more obvious to those who have the influence and somewhat of the will to aid the establishment of homes for the labouring population of our rural districts. Without some such alteration in the domestic arrangements of our cottages we may talk till Doomsday about the drinking and improvident habits of the poor. They are thrust into places into which we would be ashamed to put our dogs or our cattle; and a diseased desire for stimulants and all its concomitant vices and misery is thereby created. Nor can we unreasonably blame those who are subjected to such depressing influences for the display of what we are pleased to term 'uncouth and vulgar' habits and manners. So extensive is the field of operation in this important department of social economics, that much as has apparently been, it is as nothing compared with what has yet to be done. Dens in the city street, hovels in the village stare us in the face as frequently as of old; and yet are unheeded by many who are set over their miserable inhabitants. Truly, he who called our British labourer the 'best living tool' must have had such places in his mind. Tools in truth they are. Strange it is that many of those who handle them see not that it would be best in a paying sense to have them kept in good working order. And it is just in view of the importance of keeping these same tools of ours, the labourers, in fair working trim that we wonder all the more deeply at the indifference which many manifest in housing them."—*Agricultural Gazette.*

You quote in the same column a few paragraphs from the *Economist*, which emanated from that paper owing to a report of some proceedings in the Town Council of Lincoln, respecting a letter addressed to that corporate body as proprietors of farms in Buckinghamshire. The placing in juxtaposition the statements of men residing in different districts will give an epitome of the comparative condition of labourers. The following is a copy of the farmer's letter:—

"The fact that my labourers (about two-thirds of them on an average) have had to travel a distance of about six miles daily to and from their work nearly ever since I have been here (viz., 21 years), proves the necessity of something being done. I could, and although it may appear selfish, yet I feel I ought to plead on the behalf of these poor men, who waste so much of their strength upon the roads instead of at their work. Just think of them in the winter groping their way over ridge and furrow, and sometimes losing their way in the dark; and in summer being so weary that they often prefer throwing themselves down on some straw in some outhouse to walking home to their beds."—*Agricultural Gazette* for 1858, p. 689.

I quote the following from your report of a paper read by Mr. Morton before a meeting of the Society of Arts, which shows the state of things at Dumpton, near Ramsgate:—

"Our labourers pay about 2*s.* 6*d.* per week rent for their cottages, and for this many get but a miserable home. I know of nothing in the neighbourhood so disgraceful as the want of accommodation for our labourers. They are (many of them) driven to reside in the worst parts of the towns, many of them in hovels, built or rather stuck up for the sole purpose of investment, without any regard to health, comfort, cleanliness, or morality. No garden attached, or anything else to make a poor man's home comfortable; completely away from the eye of his master, and all others that feel an interest in his welfare. The consequences I need not describe. With every inducement for him to spend his spare time and his hard earnings at the public house or beer shop, often having from two to three miles to go in all weather to his labour, never knowing the luxury of hot dinners except on a Sunday, or a meal with his family, the children run the streets in the worst parts of the town, and get early imbued in every vice and wickedness. With no father near to instruct or correct them, how can it be otherwise? I do hope this subject will be pressed before the public on every favourable opportunity."—*Agricultural Gazette* for 1858, p. 1001.

Having quoted sufficient to show that the prevailing mode of lodging farm labourers in England has faults peculiar to itself, allow me to point out the marked peculiarities which come out in connection with the system of farm management in the bondage district. The following quotation from "Stephens's Book of the Farm" is a description of what too many Northumbrian hinds had to live in in 1850:—

"The general character of the best of the old-fashioned hinds' cottages in the neighbourhood is bad at the best. They have to bring everything with them—partitions, window-frames, fixtures of all kinds, grates, and a substitute for ceiling; for they are, as I have already called them, mere sheds. They have no byre for their cows, no sties for their pigs, no pumps or wells—nothing to promote cleanliness or comfort. The average size of these sheds is about 24 feet by 16; they are dark and unwholesome. The windows do not open, and in many of them are not larger than 20 inches by 16. Into this space within the shed are crowded 8, 10, and even 12 persons. How they lie down to rest, how they sleep, how they preserve common decency, how unutterable horrors are avoided is beyond all conception. The case is aggravated when there is a young woman to be lodged in this confined space, who is not a member of the family, but is hired to do the field work, for which every hind is bound to provide a female. It shocks every sense of propriety to think that in a room and in such a place as I have been describing civilised beings should be herding together, without a decent separation of age and sex."

Mr. Stephens states in the "Book of the Farm" that

"A second sitting room in a hind's house is an unnecessary appendage to it; it will never be used as such. When in the second story it will be converted into a sleeping room, and when on the ground floor into a meal or Potato store, besides the beds that may be put into it. The fire will never be kindled in it, and it will become damp and cold. It is only when the labourer is a fixed resident, holding directly under the landlord, that he will furnish his second room on the ground floor comfortably, and warm it by occasional fires."

You will observe at page 55 of the *North British Agriculturist* for 1859 an abridged report of a paper on labourers' cottages, which was read before a meeting of the Architectural Institute by Mr. Chambers, the eminent publisher, who is now proprietor of Glenormiston, from which I quote the following:—

"Each contained a kitchen or living room below in which were two beds, a store closet for Potatoes, meal, &c., a place for coals, and above, in the garret, a bedroom (without a fireplace), rendered warm by being immediately over the kitchen. Several sanitary arrangements were introduced in and around the cottages, but it would be found useless, considering the habits and feelings, as well as the means, of agricultural labourers, to give a larger number of rooms, which would in all probability only be used as places for lumber, or else sublet to lodgers. It was not a question of mere expense, but the habits and even prejudices of the rural population must be studied, else a great deal of money and a great deal of science may be expended, merely to produce a failure." (!)

You will observe in your report of the discussion before a meeting of the Highland and Agricultural Society, at page 298 of the *Agricultural Gazette*, respecting the necessity for abolishing hiring markets, Mr. Skirving stated that, "The first thing that the owner in East Lothian should do was to provide fit and adequate houses for his labourers to live in. Then as to the farmers, were they not most grievously to blame for adherence to one of the most mischievous and degrading systems, the bondager system? For the information of those who might not be acquainted with that system, he might state that it was this:—That a labourer got a very small house, very often with but one single room. He might have a large family, and might have the greatest difficulty to preserve the decencies of life; and what did the farmer in East Lothian in many instances do? He compelled that unfortunate man to receive into his family a young person at most inadequate wages. That foreign inmate rendered his home so comfortless that he was glad to fly from his cottage to try and get another." Mr. Fowler, of Whitchurch, stated at Blandford that "All new cottages should have three bed-rooms, and just half of mine have this number. All large grown-up families should have cottages with this accommodation." Claiming a little knowledge of Berwickshire, which I acquired by being regularly employed in that county from the autumn of 1846 to the spring of 1854, I rejoice to see by the statements of Mr. Milne Home that "the general character of the cottages in Berwickshire was such that there were means of separation of sleeping places, not only to the members of the family, but to the bondager." (See page 298 of the *Agri. Gaz.*)

Since my father lived for nearly 20 years and died in a house with only one apartment on the ground floor, with an attic room above the kitchen, which were the only places my father and his family had for eating and sleeping, I rejoice to see so many noblemen and middle-class gentlemen making such laudable efforts to ameliorate the condition of farm labourers in different parts of the United Kingdom, and most especially in my native district. I trust Messrs. Stephens and Chambers will feel angry with themselves for submitting the above statements to the public. Since my parentage connects me with the middle and working classes, allow me to inform Messrs. Chambers and Stephens that my mother kept her house scrupulously clean; but that female field labourers are just as cleanly in their habits as women born and brought up in the middle ranks of life. Mr. Chambers is now the proprietor of Glenormiston, upon which he has built cottages with only one room and a garret above the kitchen, and the garret without a fireplace. An able-bodied farm labourer is entitled to be able to rent a house which contains the requisite number of apartments to enable him and his wife to teach their family to cultivate habits of decency and self-respect. Those who are anxious to alleviate the sufferings of an affectionate parent do not feel the fatiguing nature of lifting an adult patient every few minutes; but they soon feel the reactionary pressure on the system after death has deprived them of the object of their affectionate solicitude. Had my father died in one of Mr. Chambers's houses at Glenormiston, what sort of position would the surviving members of the family have been in, in a house which "only contained a kitchen, a living room below in which were two beds, a store closet for Potatoes, meal, &c., a place for coals, and above, in the garret, a bedroom, (without a fire-place) rendered warm by being immediately over the kitchen?" No expense is spared to make every provision in the Highlands and lowlands in different parts of the United Kingdom for cows' calving; but Messrs. Chambers and Stephens deem it a "waste of money and science" to make provision for such events as the accouchement and confinement of hinds' wives, the majority of whom are in full communion with the Christian Church. I need scarcely attempt to describe the position of a family in such a house during sickness till after the funeral. The family cannot shut up the house, and few would be so callous

as to remove the corpse of a relative before it is put in the coffin. If there is no appearance of the corpse bursting, the coffin is put near the bed, and the end of the coffin projects into the floor of the family room, or the coffin is put on chairs in front of the beds which are set across the interior of the house. My statement that my father was a tenant farmer's steward, and died in such a house, will excite surprise. The landowner, tenant-farmer, and labourer, each, according to his sphere, has duties to perform. No one will dispute that the building of cottages is a duty which devolves upon the landowner; so, in case you may think I am prejudiced against either landowners or tenant farmers, which I am not, I may state, if you deem it judicious, that my father's master paid my mother my father's wages in full for the twelve month he was engaged. My statements in No 12 of the *Agricultural Gazette*, at page 224, under the heading "Notions on Farm Capital," and my statements in No. 52, at page 946 for 1858, will, I think, practically evince that I have seen a little of agricultural enterprise on the part of tenant farmers, and that landowners are not responsible for all the evils which some suppose them to be. ***A Labourer.***

LOIS-WEEDON AGRICULTURE.

NOT being present at the discussion on this subject, permit me to express my obligation to Mr. Clarke for his able and convincing addition to our agricultural literature. Of its truthfulness no one dares express a doubt. I confess myself, however, astonished at the tone and course of the discussion. Where is the report of the members of the Club who were to anatomise Mr. Smith's practice as well as his mutton and roast fowl? Where the comparison between the past and present condition of his land? and where the contrast between his crops and those of his neighbours on the same description of soil; Echo says, where? Then what have we learned from this deep and prying investigation by the sharp men of the London Farmers' Club? Literally nothing. They don't tell us that the adjoining lands are only tilled to the depth of a common wine-glass, all below that being like cast iron. They don't say that owing to Mr. Smith's cultivating to four times that depth, he grows much more on half an acre than his neighbours do on a whole acre. They don't say that by employing a greatly increased amount of human labour on a limited space he has on that area created an additional market for his increased produce and diminished crime and pauperism.

Do not farmers want a market close to their farms? Some years ago I went to see the Rev. Mr. Smith and his farm. Like the London farmers I taxed his liberality, and enjoyed the happiness of his intelligence and kindness, and that of his amiable lady. But, sir, everything in this world is comparative, and I ventured to compare his neighbours' crops with his own; it was only thus I could arrive at the outward sign of his great success. No one could doubt the soundness of his theory. His practice of deep cultivation is a permanent and pungent condemnation of the shallowness of British agriculture, I mean in its first great principle and basis, "deep cultivation;" and I feel humiliated that the Central Agricultural Club of the kingdom did not recognise the advantage of this great truth and award to Mr. Smith that meed of praise to which he is so pre-eminently entitled. The question of how we shall disturb our soil deeply is a mere matter of cost and opportunity. If we have not steam we must use horses or men. It will pay to do it in either way. My own experience has taught me that you may get plenty of diggers if you will pay them. I have dug some 60 acres of my land, and know that in November men will come a long distance to obtain such employment. Even now at this busy time my men are forking land "over time" after their day's work to add to their weekly stipend. The fact is that British agriculture does not accept deep cultivation as a recognised principle, otherwise it would do as I invariably do —make one plough follow in the track of the other for every root crop. In some cases I have used eight horses for the double operation, seldom if ever less than six. If, as Liebig says, the compression and consolidation of our stiff clays render the treasures they contain physically inaccessible to the roots of the plants, it follows that their subdivision and aëration must be profitable; but then half our farmers don't believe that water will go through those nasty stiff soils, and, therefore, don't drain them; and we all know that subsoiling and deep cultivation on undrained clays are ruinous. Herein lies the secret of the apathy of farmers about deep cultivation. When they have learned from chemistry that air is as necessary to the roots of plants as to their leaves, and that on the multiplication of their roots depends their development, they will then be devoted to deeper cultivation and duly appreciate in after times the enormous value of Mr. Smith's principles. I believe very few farmers examine what is going on subterraneously. I looked at the root of a Bean that was scarcely out of the ground 1 inch, and found that its tap-root had descended vertically more than 9 inches, pushing out numerous side or lateral fibres, and I know that young Wheat plants have roots quite 9 inches deep, often much more; but then as British agriculture is only 5 inches deep as a rule, when the plant strikes its roots against the almost impervious subsoil over which the plough sole has grated for centuries, its bilious leaves soon show that it has not only to contend against the physical difficulties of impenetrability, but also the equally serious obstacle of encountering a sour unalkalised and stagnated soil and atmosphere, deprived by want of drainage and of cultivation of all these advantages which in Mr. Smith's case give to and accumulate in the soil the materials for filling the farmer's pocket. I consider it childish and contemptible to draw adverse conclusions, because Mr. Smith's coachman, cowman, or servants till his soil. What does it signify who does it, so long as it is done and paid for at a remunerative rate? I object entirely to a system of examination which draws no comparisons and sees no contrasts. I remember many years ago visiting Mr. Hewitt Davis's farming, and knowing the strong prejudices against him, after leaving his land I strode across the adjoining corn fields at the risk of being impounded." What, did I see? That whilst by very deep and clean tillage, and a small quantity of seed, Mr. Davis's crops on a naturally miserable soil were full, even, and abundant, those of his neighbours with nearly three times the quantity of seed were thin, foul, and irregular, and promised a very small comparative result. The same remarks applied on my visit to the Rev. Mr. Huxtable's farm, and yet these three men to whom their country owes so much have been snubbed, twitted, and pooh-poohed in the leading articles of the farmers' own papers. Sir, I do consider this pandering to the vanity, and truckling to the prejudices of agriculture, unworthy and exceedingly damaging to the cause of agricultural progress, and I beg to enter my protest against it. If agriculture is in its infancy as regards a knowledge of the great natural laws and chemical and physical principles upon which it should be based (and Liebig says so), we ought to stimulate it and arouse it from its lethargy, for its own profit and for the good of our country. *J. J. Mechi, Tiptree Hall, Kelvedon, Essex, May* 25, 1860.

P.S. What has been the effect of the late heavy rains on the shallow ploughed (*alias* thin skinned) stiff, undrained clays? Why, to wash away from the surface and send down to the rivers the fine soluble surface, the most valuable portion of the land.

[The following is the Lois-Weedon reply to the Farmers' Club discussion on this subject:—

"SIR,—I received a copy of the *Mark Lane Express* on the morning of May 15, giving a circumstantial account of the discussion on Lois-Weedon, and in the evening sent for my tenant. I told him what the deputation from the Farmers' Club had unanimously resolved—that my land was the best Wheat land they had ever seen. 'Now, Stuchfield,' I said, 'you have nearly 400 acres of mine, the greatest portion of which is of exactly the same quality with the field in question, with this difference, that whereas my land had only a 5-inch staple, and yellow clay under it, yours has a clay subsoil with from 5 to 10 inches of staple. So that you see yours is better than the best Wheat land ever seen by the Farmers' Club; and this being the case I cannot do otherwise than raise your rent at once from 27*s.* an acre to 50*s.* at least, with an increase to my income of 400*l.* a year.' We then talked over the fact of the whole parish of 2000 acres being generally of a similar quality, a very small portion being worse, a great portion better. In fact, the whole geological formation of the same oolite, to the extent of tens of thousands of acres running right across England from Dorset to Whitby, is much of the same quality, and rented at much the same sum, that is, from 27*s.* to 30*s.*

"The gentlemen of the deputation, without knowing the reason, were stating the fact, notwithstanding. Inch by inch this clay subsoil of mine has been brought to the top and mixed with the staple, till, from a yellow clay, it has become, gradually, a fine dark loam from 15 to 18 inches deep, or more. This has been a progressive work of 16 years, after I had first pared the turf, and taken it off the land. And the deputation were quite right when they walked over its surface and pronounced it to be the best Wheat land they ever saw. It really is so. 'Why, it's worth 45*s.* an acre!' said one. He was much below the mark. It is well worth 60*s.* an acre; and if I were to let it, it should not be for a shilling under. 'The produce not so much as you expected?' What! nearly five quarters of Wheat to the moiety of each acre, being at the rate of nearly 10 quarters per acre, and 'not so much as expected?'

"'*The plan impracticable?*' Surely not. It might have been thought so once, but that time has past. A principle can be exhibited as clearly on five acres as on 500. I may fairly, then, suppose a case. I will suppose a farmer to have a 400-acre arable farm, and that he sets apart 100 acres of it for Wheat upon the Lois-Weedon plan. I will suppose his land to be like mine, with a 5-inch staple, and a good heavy clay under it. Immediately after harvest the steam cultivator 'smashes it up' for the first time, stirring and bringing up within reach of the frost 2 inches of this subsoil, making 7 inches in depth altogether. This depth of virgin soil will be sufficient for 4 years. In the spring and during summer, and up to September the farmer cleans and stirs and prepares the land as for Barley. After that, and year after year, he carries out the plan without any forking by hand at all, trenching as he goes deeper with the steam trenching implement. Why, steam not merely makes the plan feasible, but lessens the expense of tillage from 34*s.* to 8*s.* or 10*s.* How is the plan impracticable, then? Suppose the farmer to do well what he does do, and consequently to succeed—for I reject the unpleasing flattery that I can accomplish what others cannot—he then gains, with low prices, a net profit of 500*l.* a-year from one fourth part of his 400 acres. He has his Clover, roots, stock, &c., on the remaining three-fourths of his land, which he deals with in the ordinary way, in whatever rotation he may choose, including Wheat, as a separate farm.

"Your obedient servant,

"*Vicarage, Lois-Weedon.*" "S. SMITH]

Home Correspondence.

Farming Economics, No. 2, *Rape cake.*—I know of no more striking proof of the prejudice and want of calculation in British agriculture than the non-use of Rape-cake as a profitable feeding stuff. Having during the last seven years used more than 100 tons of it, I can speak of its value with certainty. Mr. Pusey's evidence on this subject in the Royal Agricultural Society's Journal, Vol. X., p. 247, ought long since to have carried conviction to the agricultural mind. Professor Way's analysis shows (Vol. X., p. 424) that its elements have all the value of Linseed-cake, and I have proved practically that, weight for weight, it will make as much meat as Linseed-cake, although it costs less than half the price. Its residuary effect in manure according to Mr. Lawes gives it a superiority over Linseed-cake to the extent of 20*s.* per ton. Above all, its use as a destroyer of wire-worm should commend it especially to the farmer of light lands, where, this season, many thousands of acres of corn have been crippled or destroyed. On my light land which used to be particularly subject to wire-worm, by feeding sheep with Rape-cake, my Wheat crop to follow Clover is this year a full and luxuriant plant, whilst that of many of my neighbours is seriously injured. A friend of mine who farms loose light lands in the neighbourhood of Reigate assures me that he has almost cleared his farm of wire-worm by the use of 5 cwt. per acre either ploughed in or sowed broadcast on the surface. By the latter mode he saved his Clover crops which the wire-worm was eating, the Rape acting also as a most valuable manure. As one of my sources of profit Rape-cake is an important element, enabling me to produce my meat at 50 per cent. less than other farmers. Of course, if they were as convinced of its value as myself the price would rise to an equality with Linseed-cake. A recent trial so alarmed agriculturists as to its use, and so annoyed the firm who had to pay the damages, that they decline warranting any for feeding purposes, and thus its price is kept down. I continue to feed my sheep and bullocks with the same sort of cake which was made the subject of the trial, and which I have bought of the same firm for many years to the extent of 100 tons. It is made from East Indian seed, a sort of mustardy hot oleaginous seed. It should not be given to the animals fresh made, they will not then eat it, but after keeping for a month or two, sheep and cattle relish it. My fat sheep are now eating 1½ lb. per day each. Bullocks will eat from 3 to 5 lbs. It is most excellent for cows, Mr. Horsfall being also of that opinion (see Society's Journal). It would be wrong to give it immediately to animals just brought in, after much driving and excitement, but, when comfortably settled and recovered from their fatigue, begin with a little and gradually increase it. I trust that the saving of 50*l.* out of every 100*l.* will tend to remove prejudice in this matter, and thus increase the farmer's profit. I see no reason why it should not be very nutritious for horses and shall carefully try it on one to satisfy my mind. *J. J. Mechi, Tiptree, May* 28. P.S. I have at length succeeded in convincing a neighbour of mine. His lean sheep and mine came in the same day; he gave oilcake, mine had Rape-cake. When both were fat at the same period the butcher offered most money for mine. He is now a Rape-cake feeder. As I now use about 40 tons a year, my saving as compared with Linseed-cake is fully 160*l.* per annum, or near 20*l.* per acre. Surely my farming friends can now understand how I make my profits. Sheep that have been fed on Linseed-cake will not eat Rape-cake unless starved to it.

The Editorship of the Agricultural Society's Journal.—As one of the late candidates for the editorship of the Agricultural Journal, I crave permission to enter a protest through the columns of your widely disseminated *Gardeners' Chronicle* to the new phase of nepotism which the Council of the Royal Agricultural Society have inaugurated. Knowing the tendencies of that Society, no one would have been surprised had the Council appointed an editor on their private opinion of his merits without soliciting any parade of testimonials. As however they thought fit to adopt the contrary system, it must be regarded as an insult to all who have been at the trouble to collect testimonials, that the editor now appointed is absolutely unknown both to science and to literature. For myself, it is not asserted that I advanced claims to more favourable consideration than those of any other candidate; but my pretensions were respectable as you will see. Firstly as to scientific ability; the circumstance of my having held the chair of chemistry in a leading metropolitan medical school may perhaps be considered to have given me some presumptive claim to favourable consideration; in addition to which I presented testimonials of scientific ability from nearly every metropolitan chemical professor of name and position. Moreover I have written many scientific books, which are before the world, and which have been mostly well received. One is now in its fourth edition. In regard to my literary ability in connection with periodical writing, it was vouched for by no less than three chief editors of three daily metropolitan morning newspapers of highest rank; by the editors of two first-class monthlies, and of at least two weekly journals. Other testimonials I have no doubt were forwarded in the shape of letters addressed to the Council direct. It was my intention that the latter course should have been adopted in every case; but the parties appealed to thought proper in many instances to make me cognisant of what they had stated in my favour. In addition to all these marks of confidence and recommendation, I must not forget to add that Judge Haliburton was kind enough to "soft sawder" together the fragmentary tablets of my laudation by a testimonial of his own, his knowledge of me being acquired through our co-operation in the same journal. It appears Mr. Frere has been elected "in consequence of his high testimonials." If this be indeed true, their publication would

remove a cloud under which the scientific and literary antecedents of that gentleman are now somewhat obscured. *J. W. Scoffern, M.B. Lond., Late Professor of Chemistry and Forensic Medicine at the Aldersgate School of Medicine.*

The Central Farmers' Club.—The hope entertained that the monthly discussions of this society would become a school of national agricultural teaching has scarcely been realised. Indeed, from the statistics of its proceedings, which shall presently be given, its debates would appear to be degenerating into mere expressions of provincial opinions and individual experience; for although nominally the forensic as well as the convivial department of the institution is open to all England, an overwhelming majority of the speakers who habitually address the chair are gentlemen belonging to counties in the immediate vicinity of the metropolis. Thus, since January, 1855, 39 questions have been put and discussed, and of these, no less than 30 were introduced by members residing within a circle of 70 miles radius from London as a centre. Of the remaining nine, the contribution was from only three counties, viz., one from Cheshire, three from Devon, and five from Lincoln. The total number of speeches delivered in discussing these points (exclusive of the opening addresses) was 320, of which 262 were delivered by members of 13 counties within the circuit above-mentioned; 54 by representatives of 13 of the 26 outside ones, and only six by gentlemen belonging to the remaining 13 external counties of England. Of the 262 occasions on which the floor of the club-room has been occupied by the inside constituency, 101 of the speeches emanated from six counties—Sussex, Surrey, Wilts, Essex, Cambridge, and Bedford. The number of speakers from the 26 outside counties was 28, giving an average of one speech to each outside county member; but inside the home circle, four of the counties nearest London were heard through their representatives 156 times; three of the members delivering their sentiments in the course of the four years in question no less than 20 times per man; one other member spoke 19 times, another 14, another 11, and another 10 times. Whether these anomalies (for surely they are such in any institution professing a national object) are avoidable or not, shall not here be discussed; but two deductions may certainly be drawn from the figures which have been given. 1stly. That the remarkable deficiency of generalised reasoning, and the great preponderance of mere provincial argument which of late years have characterised the debates that follow the opening essays, are due to the comparatively narrow locality to which the speaking members belong; and 2dly, that however convenient and proper the institution may be as a national agricultural *rendezvous*, as a school of agriculture it possesses no well-founded pretensions to authoritative teaching beyond those of any other of the more comprehensive debating clubs of the kingdom; and that the report of a Norfolk, Lincoln, Yorkshire, or Northumbrian discussion of a question of husbandry, is not less likely to promulgate liberal views and enterprising practice than the wisdom of Essex, Kent, Wilts, Suffolk, Surrey, Cambridge, or Hertford, even though concentrated into one metropolitan focus. In evidence of the foregoing statements the following Table is given:—

	Counties.	No. of Speeches.	No. of Speakers.	No. of Openings.
1	Surrey	45	8	
2	Essex	46	6	7
3	Bedford	43	9	3
4	London	41	16	4
5	Cambridge..	26	7	2
6	Wilts	20	3	3
7	Hampshire	16	7	
8	Berks	12	6	1
9	Sussex	12	2	2
10	Northampton	10	2	3
11	Hertford	8	3	2
12	Suffolk	8	3	3
13	Kent	5	4	
		293	76	30
1	Lincoln	12	5	5
2	Devon	11	3	3
3	Cheshire	8	2	1
4	Leicester	6	2	
5	Worcester	6	1	
6	Oxford	3	3	
7	Warwick	3	2	
8	Gloucester	2	1	
9	Huntingdon	2	1	
10	Nottingham	2	1	
11	York	2	1	
12	Norfolk	2	2	
13	Monmouth	1	1	
		60	25	9
1	Cornwall	1	1	
2	Somerset	1	1	
3	Dorset	1	1	
4	Bucks	1	1	
5	Shropshire	1	1	
6	Northumberland.. ..	1	1	
7	Rutland			
8	Stafford			
9	Derby			
10	Lancaster			
11	Durham			
12	Westmoreland			
13	Cumberland			
		6	6	

A. B., May 21.

Agricultural Diplomas.—It is so obviously true that unapplied knowledge is of no commercial value, that those qualifications which enable a man to turn to use what knowledge he has have a higher market value than others attested by an examination which can only ascertain that the knowledge is there whether capable of application or not. A man may know in complete detail; but listlessness, lethargy, and carelessness may make him practically worthless. A man may know the general truth, and if he could find any one to carry out his intention, his knowledge would drive a profitable trade, or manufacture; but failing the ability to direct his servants or to superintend details his knowledge fails, while another man whose plans do here and there fight against the laws of nature will succeed, because notwithstanding a more limited knowledge he is a business man. The knowledge of details which constitutes the business qualification is thus of more immediate money value than the knowledge of plan which is given by a scientific education. An exaggerated impression of this kind led the *Economist* lately to depreciate the value of diplomas given after examination by competent men; and to remarks of this kind "A Practical Farmer" thus replies in the *North British Agriculturist. M. S.* [The following is the passage referred to, though somewhat abridged:—The *Economist* has earned a title to speak on several subjects, and having also taken agriculture under its protection, may be presumed by many to be equally oracular on that art. It appears from the article that the writer sounded the depths of knowledge possessed by farmers, has taken note of it and found it ample, and the announcement is made with all authority that every incentive to a deeper, fuller, keener study of the laws of nature, of more correct habits of observation, of all attempts to keep pace with the advance in knowledge which other professions are making, and of even an acquaintance with the very nomenclature which chemistry, as applied to agriculture, has been urgently demanding him to make, is utterly and entirely useless to the farmer, and that the rising generation must content themselves with the wisdom of their fathers. And even that they must only pick up as they best can, no facilities or inducements being held out to them. Strange doctrine this, certainly, to come from one of the representatives of the school which used to speak of the ignorance and dulness of the agricultural mind. Energy and capital, forsooth! is all that farmers require, and if what the writer calls pseudo-feudalism, be withdrawn from the composition of the farmer, he will then have attained that millennial state which the writer, I suppose, means us to believe consists in knowing no more than did our fathers, being content with all the old defunct systems of management, the inferior breeds of cattle, the obsolete machines and primitive manures, and provided he can only bargain with his landlord as the cotton buyer does with the cotton-producer, he has then attained with poor Peter Peebles the summit of all earthly glory. What then is to become of your own profession? there will be no need of any more *North British Agriculturists*, if, as the *Economist* says, energy and capital and emancipation "from pseudo-feudalism with the application to husbandry of the knowledge already possessed by farmers" is sufficient. We must go back over your old files and be content with these. Everything old will do, no new patterns, no new seeds, roots, methods, systems, improved animals, new books, or any newspaper purporting to supply new ideas, fresh information, and valuable facts, never before announced. This would be economy with a vengeance. The slightly qualifying clause, "that scientific knowledge will give occasional advantages," cannot be accepted as any modification of the previously quoted opinion, as it precedes it, and is merely used as a set-off to his utterly and entirely condemning the institution of an agricultural diploma, which is characterised as ambitious. It certainly is so if the writer is right in supposing that farmers have already plenty of knowledge if they could but apply it. But that an agricultural certificate or diploma is not thought so ambitious a thing in Scotland, at least the priority of being the first to suggest it as a means of improving the status and position of the farm labourer, has proved the subject of a keen controversy in your paper. It has answered admirably for the Veterinary School of Edinburgh, and we challenge the *Economist* to discover any district in Scotland with one-tenth of the stock of which the same can be said as is said of the famous stock county of Norfolk in the report on its farming in the "Journal of the Royal Agricultural Society," vol 19:—"That the great mass of cattle doctors are but a shade better than the cow leeches of older times." "The blunders these men make are endless, and the consequence of such errors necessarily fall on their employers." "Farmers themselves know little of the diseases of cattle, and the cow doctors even less.' 'They grumble at paying a respectable veterinary surgeon's fees, but do not mind the farrier's small account dovetailed in with the blacksmith's bill;' and "when other professions are overcrowded, that this one should be left almost entirely in the hands of unqualified and ignorant persons." Does such a state of matters exist in any district here? What material advantage had Scotland over England in any respect save the possession of the Edinburgh Veterinary School and the Highland Society's diploma for a period of nearly 40 years? Is mental labour applied to agricultural pursuits to be considered of a lower grade than such labour applied to curing of disease? Is there not a large class of men to whom the possession of a diploma would be of service? Is there not in the three kingdoms a vast number of land stewards, factors, and estate agents to whom the possession of a certificate saying that these men have been examined in certain branches of knowledge, and found to possess the specified attainments would be valuable? Is there so little earnest zeal on the part of young farmers, that they care nothing for the possession of a degree which will ultimately lead to their taking place among the learned? Surely the impulse recently given to university teaching in Scotland will diffuse itself among the agricultural classes. The *Economist* points to Cirencester and to the Highland Society's diploma as being failures. Did it never occur to him that the depreciating tone along with others in which he speaks of agriculturists tends to produce that result? If we are told by some of his friends we are like dumb driven cattle, and by him as knowing plenty already, is it not very natural to be content? But allow me to tell him there are other and very different causes at work to produce this result. In place of there being a sufficiency of knowledge, there is a deficiency of it, and it is the want of properly qualified teachers of practical agriculture in which the cause is to be found. If men, earnest and learned in all the sciences bearing on the practice of the art, able to work up the knowledge which these sciences supply, and safe guides in practical matters were to be found as teachers, it would not be long in Scotland at least ere there would be more demand for diplomas. This must first be supplied. Farmers, although not learned enough already, are knowing enough not to be made to pay for what is not worth having, or in such a state that it is valueless. As to pseudo-feudalism—the worst we are acquainted with is that resulting from the application of the *Economist's* landed mercantile system—when a mercantile landowner accepts of the highest rent that can be offered for his land, and although knowing it more than it is worth, roups (sells by auction) out the tenant and throws him destitute on the world when he cannot pay the uttermost farthing.]

Farmers' Clubs.

AYRSHIRE: *The Quality of Guano.*—A special meeting of the Directors of the Ayrshire Agricultural Association, "to consider of the steps which it may be necessary to adopt for the purpose of ascertaining the Quality and Value of Guano, and other Manures, sold within the last twelve months, or in course of being offered for sale to farmers and others in the County of Ayr," was lately held.

The Chairman said the Directors of this Association had on a former occasion given a recommendation that farmers should be very careful in purchasing guano to employ agents of known respectability. He had taken their advice, and, for his own part, had seldom obtained an analysis except for experiment to show how the crop and the analysis corresponded. But this year he employed, as usual, a gentleman of high respectability,—a gentleman in whose word, so far as his knowledge went, he had still, notwithstanding the circumstance to which he was about to refer, the most perfect confidence—he meant Mr. Andrew Smith, than whom he believed there was not a more upright dealer in guano or any other thing. It so happened that he got from him a portion of guano, for which he was charged nearly 13*l.* per ton; and on getting an analysis of it from Dr. Anderson, he found that it contained no less than 18 per cent. of sand, 14 per cent. of water, and only about 10 per cent. of ammonia. Now, this analysis did not show the real quality of the cargo, for although he had no doubt the analysis was correct of the sample sent, yet by another analysis of a portion of the same cargo it appeared there was only 8 per cent. of sand—so that it appeared there were differences of quality in the same cargo; and this rendered the matter more difficult to deal with. He had also obtained part of another cargo from Mr. Smith, which instead of containing 18 per cent. of sand, contained only 1.32 of sand, 12.88 of water, 17.91 of ammonia, and 22.40 of phosphates. It was in fact one of the best samples of guano imported into this country. It appeared to him that the plain course would be if the whole of a cargo were uniform, to make the person who sold that cargo as containing certain ingredients and worth a certain sum answerable for any deficiency. But here they found different qualities in the same cargo, so that they needed a good deal of information. Perhaps the best course of proceeding was for those who had received bad guano to demand deduction from the parties who had sold it, who again would have recourse on the importers, or whoever sent it to them. That would not at all compensate for the damage sustained by loss of crop, but it might make the dealers more careful in future. They would require, however, to act with great caution, and they would need to know a good deal more about it before taking any steps. They must be careful not to find fault without cause, for they were very much indebted to those gentlemen who imported manures of all kinds. He believed the mistakes he had referred to were quite unintentional. Differences in a cargo might be caused in the loading, but the importer should be bound to see that his cargo was all alike. The guano was imported

in bulk, but was delivered to retailers in sacks from the ship's side. He might mention an incident which had come to his recollection. A dealer in town sent off a considerable quantity of guano to a friend of his (Mr. Campbell's) in the north. Shortly after he received a note from the dealer stating that on taking out some of the same cargo, he had found it was not good, and he was afraid that the thing he had sent off must be bad also. But on writing to his friend he was informed that the guano was first-rate, and had grown fine crops.

Mr. Cathcart said he had got parts of two cargoes of guano from Mr. Flint. The one was part of the cargo of the Mary White, which arrived on the 19th March, and it was delivered to him (Mr. Cathcart), on the 21st. The other was part of the cargo of the Bell and Mary, which arrived on the 1st April, and it was delivered to him on the 2d. This showed that the custom of dealers was to deliver the guano as they received it direct from the importers. He understood Mr. Flint got a cargo in February, to which there were serious objections, but he (Mr. C.) got none of it. He was sure, however, that Mr. Flint would give it out just as he got it.

The Chairman said he understood Mr. Flint's cargo in February was part of the same cargo as that which he had spoken of at the outset; the next cargo was very good.

Mr. Hamilton of Sundrum said he got six tons of guano early in April. He heard of there being doubts regarding it, and he accordingly took portions from ten different sacks, mixed them altogether, and sent two pounds of this away for analysis. The analysis showed that there was 18 per cent. of sand, and only 10 per cent. of ammonia, instead of 17.

Mr. Bell said it appeared to him they ought to try and get redress for what had been done. He was aware it was a difficult matter, but a small committee might be appointed to try and trace a quantity of bad guano, so that they might bring it home to some party. If a person sold an article purporting to be genuine, and worth 12*l.*, while on analysis it turned out not to be worth 8*l.*, they could surely obtain redress. The Association might assist some individual in getting a decision on this point. (Two stones, one weighing 15 lbs., and the other the fragment of a stone which weighed 48 lbs., were produced, as part of a parcel of guano, in bags, sent to Mr. Dunn, Glastron.)

Mr. Boyle had great doubts as to the propriety of applying the funds of the Association to this purpose. If the dealer stood on his defence, they might require to go before a jury, which would entail enormous expense. He thought they should be content with recommending agriculturists as to the course they should follow, and leave individuals to take steps for obtaining redress if they pleased.

The Chairman said one thing was quite clear, that no one was safe to buy guano without an analysis.

Mr. Bell said it would not take a large sum to bring a case before the Sheriff Court, and one case would decide all the others. In answer to a question, the Clerk said as the dispute would turn on a point of law in the Small Debt Court, he thought 12*l.* to 15*l.* would cover all the expenses of an action.

Mr. Gemmell said it might simplify the matter if this sum were subscribed before the action was raised.

After some further conversation, a committee was appointed, consisting of Messrs. Campbell of Craigie; Drennan, Holmston; Smith, New Prestwick; Ralston, Lagg; Turner, Dean Castle; Dykes, Maybole; Hamilton of Sandrum; and Bell of Enterkine, to receive complaints from parties who had got inferior guano, and to make such inquiries by analysis, or otherwise, as they may think proper, and report to a future meeting.

The meeting thereafter adjourned. [Farmers who have complaints to make about guano should communicate immediately with Mr. M'Murtrie.] *Ayr Advertiser.*

MORAYSHIRE: *Farm Leases.*—Mr. John Collie, of Ardgay, introduced the subject for discussion—"Farm leases, as regulating the cropping and cultivation of land, with their relative effects on the interests of landlord and tenant." A notice of "Farming Covenants" in the *Economist* the other day had attracted his notice. It bore so particularly on the point that he could not help reading an extract from it. After mentioning that they had "often had occasion to show the impolicy of the numerous and restrictive regulations which are usually introduced into leases and farming agreements," which "are commonly useless to the landlord, though often vexatious to the tenant," the article went on to say that "all the regulations of the strictest lease ever used can never make a bad tenant farm well or prevent him from having his land in bad condition;" and that, strange though it may at first appear, "there is always a tendency amongst English landlords, and their agents, to take the most inferior tenants, from whom they believe payment of the rent can be got," as "an inferior tenant will often engage to give more rent than a better farmer would think it prudent to offer, having regard to the actual state of the farm; he will make less difficulty about bad buildings, bad roads, or no drainage; he will be more easily satisfied by the assurances usually made that the game will not injure his crops; and he will be more submissive to the gamekeeper, and more respectful to the steward, ay, and to the landlord himself, than a man of capital and enterprise." This was written with regard to England, but it applied with equal force to this part of the country. The only security a proprietor can have for the proper treatment of his farm and the improvement of his estate he held to be by selecting his tenants not by any clause he may introduce into his leases, to ensure good cropping. The mere fact of taking Wheat after Grass, or roots after Wheat, is surely not sufficient to ensure anything like good farming. But if these clauses are of no use for the purposes they are intended to serve, are they not obstacles to improvement? However well adapted a rotation of cropping may be for a locality at the commencement of a lease, it may be very different in the course of a few years. Science and capital have introduced many auxiliaries to farming, which can be applied with advantage now, but which might have been unknown some years previous. They were not to suppose that, because the five-course shift of cropping (that most practised in our district) was the best at the time of its introduction, it must be the best at the present day. At that time, farmers had little beyond the manure of their farmyards to depend on for growing their crops, but now they have almost inexhaustible supplies. The five-shift rotation may be a very good, a very easy-going course, for light land, but it has been found that it is not sufficient to bring out of good land the same amount of money as other courses of rotation. In consequence, a four-shift course has superseded it, in many cases, upon good land. But if they were tied down by restrictive clauses, they could not take advantage of any change, however sure of benefit from it both to landlord and tenant. He might show many other reasons for the necessity of doing away with these restrictions. Are not the prices of farm produce elements that ought to weigh with a farmer in laying his land out to crop? At one time they find Wheat paying very badly; at another they find Potatoes very profitable, but by these restrictive clauses they were prevented from making any change. The very seasons seem also at work to render a change necessary. Last year, for instance, on light soil the young Grass has been in many instances a failure, yet, according to those restrictive clauses, you are obliged to leave the field in whatever state it happened to be—without Grass, and sure in consequence, to get overrun with weeds. This may be thought a very slight matter, but just fancy a farmer with the fifth part of his farm for two years lying waste. Mr. Collie repeated his behalf that the only security a proprietor can have against the miscropping of his land is by selecting a good class of tenantry. These restrictive clauses he considered useless for the purposes they are intended to serve, and stood much in the way of improvements which might otherwise take place. But while these were his opinions he did not think it would be advisable to do away with them entirely. He believed it was necessary that certain restrictions should be put upon the farmer as to cropping towards the end of his lease—that there should be at least one-fifth under Grass, another fifth in fallow preparing for roots (this applies to a Whitsunday entry), and the remaining portion under other crops which come in by the ordinary course, so that the proprietor at the end of the lease may have his farms in a fit course for a new tenant to go on with. He was certain that if these restrictive clauses were done away with to the extent he had indicated, in 99 cases out of 100 it would be followed by increased progress and improvement.

Mr. Geddes, Orbliston, ventured to say that the interests of landlords and tenants were identical—that they not merely rowed in the same boat, but that their interests were identical. Let a proprietor have a bad tenant, and let the restrictive clauses be what they may, he will receive his land at the end of 19 years in a worse state than he gave it, while, if he give his land to a good tenant, there is no doubt but he will receive it back considerably improved, for this reason, that bad farming will not pay. Bad farming will pay no man now-a-days. The better a man farms his land the better will it pay. Therefore, he held it almost savoured of tyranny and cruelty to exercise these restrictive clauses in the case of a good tenant. It was an injustice also, for they prevent those who work the land taking out of it what is in it, by turning it to the best account. Circumstances are very much changed within the past few years. They had now a plentiful supply of so many kinds of manures that it was almost impossible to enumerate them. They knew by experience, and some little chemical knowledge, that they were good for certain crops, and it was hard that they were not allowed to exercise their knowledge and their experience in the application of manures, and cropping the land, as he held they were entitled to do. Mr. C. had alluded to one case very much in point—that last year's Grass seeds failed not only in light but in heavy soil, and the consequence is that these fields lie for two years a nullity, except that they nurse weeds, which are very ready to spring up when the land is not occupied with Grass or some other crop. The tenant who is bound to farm in a five-shift course has no alternative but to leave this land all but waste for the two years it should have grown Grass, or give up his lease. He believed it was quite possible for a landlord and tenant to frame a lease so that there may be certain necessary restrictive clauses, but none such as would be inimical to good farming, and the general good of the country. There is one clause which all proprietors insist upon, that is, a rise of rent, and he believed land was worth more rent than it was some time ago, and it might be worth still more under a different system of cropping and regulations from what they had been accustomed to; and therefore he should strongly recommend gentlemen in taking farms to make distinctive offers—to specify that they will give so much for the land, and farm it in such and such a way, and if they are allowed to farm it in their own way that they will give so much more.

Mr. Stephen, Inchbroom, thought these restrictions odious. What would any commercial man think if they were to tell him what he must do for 19 years hence—that he must work with the same machinery as now? It would stop all improvement, and in the profession of farming it is very much the same.

Mr. Webster, Keam, said the other day he had run his eye over some new leases, drawn up for large estates in this county, in which you are bound to have four-fifths of your fallow land under Turnips. You are not allowed to grow anything else in the remaining fifth—no Mangel Wurzel or anything, while they knew that Turnips are beginning to fail. Landlords might appear at first sight to blame in this matter; but landlords cannot pay attention to everything. Factors are the men who are really to blame, because they ought to know, and should tell the landlord.

Mr. Allan, corn factor, mentioned that he had the other day renewed his lease of Bishopmills, under that most excellent landlord, as he is, the Earl of Seafield, and though he paid more rent he was not fixed with any restrictions. He mentioned this as illustrative, and because he believed that what is good for a mill is good for a farm. The proprietor did not think it necessary to lay down any restrictions for him how he should grind his Wheat. And, besides, he had a clause allowing him to lay out a considerable sum of money on improving the premises if required, and was bound to leave the houses of the same value as when he got them. He thought this was not a bad illustration of their wishes in regard to farms—that if he left his mill at the end of the 19 years at the same value as he got them, he might take as much money out of them in the course of the 19 years as he could.

Mr. Leitch, Inchstellie, remarked that all he could say about Lord Moray's estates was that they had a very good landlord and a very good factor. They were bound to a certain system in their land, but they could labour as they thought proper. He had a field of his very best land, which was a failure in Grass. He ploughed it up, manured it well, re-sowed it, and in with Grass seeds again. Now, the factor was too sensible a man to think that his tenantry will labour their land but to the advantage of themselves, and that will be to the advantage of the proprietor also. There was another subject which they had been neglecting, and that is the game. Their landlord, the Earl of Moray, acts as all landlords should do. He gives his game to his tenantry for paying a nominal sum for them. He allows them to go over their ground, and shoot for themselves, and, at same time, protects the game for the proprietor, if he comes the way.

The Chairman had drawn up the following as the deliverance of the members:—

"That as every system of operations on the soil, for any lengthened period, is equally injurious or beneficial to landlord and tenants; that as different qualities of soil upon the same farm, and different seasons, often reqeire different kinds and modes of cropping and treatment; that as many of the conditions of labouring and cropping in leases operate prejudicially, it is considered that the limiting of these conditions until towards the end of the lease, would be favourable to landlord and tenant."

Reviews.

Agricultural Benevolent Institution. Founded 1860 *for the Relief of Farmers, their Widows, and Orphans. List of Subscriptions and Donations.* Office: 35, Charing Cross, S.W.

The Institution which Mr. Mechi has the merit of imagining and of laboriously but successfully prosecuting up to its present promising position, is at length prepared for that species of inauguration which in this country a public dinner in behalf of its object is supposed to give it. The pamphlet whose title is given above records donations and annual subscriptions towards its object approaching 3000*l.* and 700*l.* respectively, and no doubt can be entertained that it will soon be in successful and beneficent operation. His Grace the Duke of Richmond is its president—a long array of noble and distinguished names graces the lists of vice-presidents and trustees—its executive council includes such well-known names as Westbrook Baker, Joseph Druce, Chandos Wren Hoskyns, James Howard, and W. Sanday—Colonel the Hon. H. N. Hood is its treasurer. The first festival in aid of its funds is to be held on Tuesday, June 26, and is to be presided over by his Grace the Duke of Richmond; and Mr. Charles Shaw, its Secretary, has issued a vigorous appeal for aid to landowners, farmers, and others connected with British agriculture, from which we extract the following passage:—

"Backwardness in works of benevolence has, it is true, never been a characteristic of the agricultural classes—of no class, probably, less! But their charity has hitherto been promiscuous and individual, while the condition of the times imposed upon it organisation and publicity. Let us hasten to correct an oversight which may so easily be misrepresented as a reproach. Let us assume that place among the labourers in this 'thrice blessed' cause, which belongs, by right, to the influence and dignity of agriculture. Let us have our colleges for the unfortunate among our brethren; our asylums for their widows; our schools for their orphans. Let us, in short, collect into one grand reservoir—organised, imposing and exhaustless—all the streams and rivulets of private charity—scattered—often, haply, misapplied—almost always unobserved—through every nook and corner of the land. Towards the fulfilment of this worthy object, support has already flowed in from zealous well wishers of every grade. His grace the Duke of Richmond has accepted the post of President, and among the promoters of the scheme names honoured by us all will be found in profusion. That these examples will be eagerly followed, we cannot allow ourselves to doubt."

Let us hope with Mr. Shaw that an Institution for whose efforts there is ample room, and which has

already received such large promises of support, will fully realise the expectations which we may now confidently entertain of its speedy success.

Calendar of Operations.

MAY.

BORDER OF THE FENS: *May* 28.—The country is fast emerging from the blank unproductiveness of a long late spring, unusually inclement and marked by numerous casualties among stock, and the prevalence of ague, bronchitis, and rheumatism among all classes of people. Two or three weeks of favourable weather has worked wonders. Grass is once more abundant, Highland Wheat is growing thick and strong and where the frost and wire-worms spared a plant, even the Fen Wheats have assumed a new colour and revive the hope of a fair crop; but there are numerous pieces where such havoc has been made that hardly anything can restore them, and we have seen the plough at work and Potatoes or Oats substituted. The Barley looks well everywhere, and Oats also with a few exceptions. There never was so good a time for sowing Mangels, particularly for such persons as had patience to wait for the regular period, but some folks think an early sowing will be an early gathering. The same with Clover, only the latter process had to be performed a second time, for the dry and cold weather during April exercised a most killing effect upon Clover sown previously, whereas that put in before the late welcome rains has sprouted vigorously, and come up as "thick as Mustard." Fallows are well forward, and generally waiting only the final stirring before putting in the Turnips. Peas and Beans are likely to suffer from the storms still prevailing, which threaten to shatter everything to atoms. Early Potatoes also suffer from the same cause, and in the Fens where the fallow or late-sown land has been left light the soil has been blown away terribly, clouds of dust being borne away by the day together, a serious loss to those farmers who are so taken by surprise, or whose land is in that condition to be carried bodily away for a depth of several inches, and where sown with Oats, in some cases when just deposited, seed and soil have found their way together into the neighbouring dykes or drains. Hoeing is in full operation; those who prefer hand-hoeing contend that horse-hoeing is prejudicial, and a certain loss in practice. We continue to use a horse-hoe still, and think if hoeing is of any use at all, that the most thorough stirring of the land, if guided by a careful and clever workman, must be the better plan of the two; at all events, as soon as the horse-hoe has executed its work we see an instant alteration in the appearance of the plant, whether Beans, Wheat, Barley, or Oats. Weeds grow also, to extirpate which there is much controversy about the employment of children; in arriving at right conclusions each advocate is guided much by his own personal experience—1st, in the difficulty of obtaining sufficient help at the exact time wanted; 2dly, in the character of the man who engages the gang; and, lastly, in the character of the children themselves. We think a false appearance of help to employ very young children, they are more a hindrance than help, apart from the cruelty of attempting to extract sustained effort from brats of eight or nine years. If labourers are scarce, so much greater is the necessity of obtaining efficient hands, and from 15 to 20 children above 12 years of age will do more work and do it better than a more numerous fry of younger ones. Then as you have older children they should, if possible, be separated—the boys in one gang, the girls in another—as it is a painful fact that an indiscriminate assortment of both sexes, being almost sure to include some of loose habits, the morals of the rest can hardly fail to be tainted in the license that is apt to prevail after work or when under the management of improper persons. If well conducted the labour of these young folks is extremely valuable; and, indeed, may be said to be indispensable, and the habit of order and application, if judiciously inculcated, cannot be otherwise than beneficial to the young folks themselves; their earnings also add greatly to the resources and comfort of the labourer—the system only wants more attention and consideration devoted to it than it has hitherto received. Twitch and weeds will grow where the land is kept in good heart, and if not subdued by these young hands would grow beyond all power of extirpation, for what machine could detect Hariff or pick Twitch like human agency. Women require as much looking after as children, and are more out of place in the field if a more fitting occupation could be found for them at home. The breeding of sheep has this year been a hazardous business; there has been great loss of lambs, and an unusual number of sheep of all ages have died, and up to a very late period the fleeces on the living animals indicate a shorter production of wool than in ordinary seasons. Beasts have been rather expensive to keep in condition, though we have not suffered to the extent of the farmers of the north. Fat stock is much in demand and high in price; the wages of ordinary labourers 12*s.* a week. *J. W., Peterborough.*

Notices to Correspondents.

ARTIFICIAL MANURE: *Thormanby.* Gypsum will do little good; use superphosphate of lime 4 cwt. per acre—that is more likely to produce a crop of Turnips than any other application.

LUCERNE: *A Z.* It is sometimes raised in a seed-bed and transplanted into the field, a practice which has been recommended by some of the earlier authors as producing in rich deep soils even greater returns than by the ordinary method of drilling. On such soils it is recommended to nip off the main tap-root to about 8 or 9 inches long, so as to induce the formation of lateral roots that should ramify through the upper layers of the soil. On the Continent this practice is still followed in many places; it can, however, only be admitted where either the breadth to be planted is very limited or manual labour very cheap; at the same time a small patch of Lucerne raised in the garden is very useful to furnish plants for any blanks that may occur in the field.

OATS: *J B.* If sown very late a dressing of guano in wet weather might even yet repay its application. Sow it broadcast and hoe it in. If the weather should be dry however, it will be money thrown away so far as the Oat crop is concerned.

SEEDS: *T H S.* Your seeds, obtained from W. Power's, Waterford, are reported upon as follows:—The Clover is a very fine sample, containing to a pint only 1600 weed seeds, which are principally Plantain. The Rye-grass is a poor sample, estimated to contain 25,600 weed seeds per bushel, mostly of Plantain and Creeping Buttercup; and besides it is largely mixed with Italian Rye-grass. Its weight is not more than 16 lbs. per bushel. *J B.*—Other correspondents will have replies on this subject next week.

THE WEATHER: *Sandgate.* A correspondent expresses his belief, founded on 30 years' observation, that the summer season is, as to meteorological character, prefigured by the weather prevailing during the spring equinoctial week; and as March 18 to 25 was an extraordinarily stormy period this year he anticipates "a summer unexampled in its tempestuous character." Perhaps he will state the facts of his 30 years' observation of the past in the first place.

IMPROVED PREMIUM WIRE NETTING.

PRICES PER LINEAL YARD, 24 INCHES HIGH:—

Size of mesh.	Mostly used for	Light.		Medium.		Strong.		Extra strong.	
		Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.
2½ inch	Hares, Dogs, Poultry	3½*d.*	4½*d.*	4½*d.*	5½*d.*	5*d.*	6½*d.*	6*d.*	8*d.*
2 inch	Game Netting	4*d.*	5*d.*	4½*d.*	6*d.*	5½*d.*	7*d.*	7½*d.*	9½*d.*
1⅝ inch	Small Rabbits, Hares, &c.	4½*d.*	5½*d.*	5¼*d.*	6½*d.*	6*d.*	7½*d.*	8*d.*	10*d.*
1½ inch	Smallest Rabbits	6*d.*	7½*d.*	7½*d.*	9*d.*	9*d.*	11*d.*	11*d.*	13*d.*

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland or Ireland.

Any width of Netting under 8 feet made at proportionate prices.

☞ **Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.**

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CONTINUE to give their best attention to the manufacture of the most Modern and Improved Agricultural Machinery, including

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HARROWS, CULTIVATORS, ROLLERS, AND OTHER FIELD IMPLEMENTS.
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HORTICULTURAL TOOLS.

DEANE'S MOWING MACHINES, with Boyd's Patented Improvements, 4*l.* 17*s.* 6*d.*, 6*l.* 6*s.*, 6*l.* 17*s.* 6*d.*, 7*l.* 7*s.*
GARDEN ENGINES, Galvanised Iron. Prices 55*s.*, 65*s.*, 78*s.*, 90*s.*, 100*s.*, 110*s.*
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FLOWER STANDS, 4*s.* 6*d.* each.
CAST IRON ORNAMENTAL FLOWER STANDS, to hold seven Vases, 27*s.*
GREEN'S PATENT MOWING MACHINES.
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GARDEN STOOLS, 4*s.* 6*d.*
GARDEN SEATS, from 25*s.*
BOYD'S SELF-ADJUSTING SCYTHE, 10*s.* 6*d.*
WIRE WORK, 18 in., 4*d.* per yard run.

Every Implement for Garden use on the Lowest Terms.

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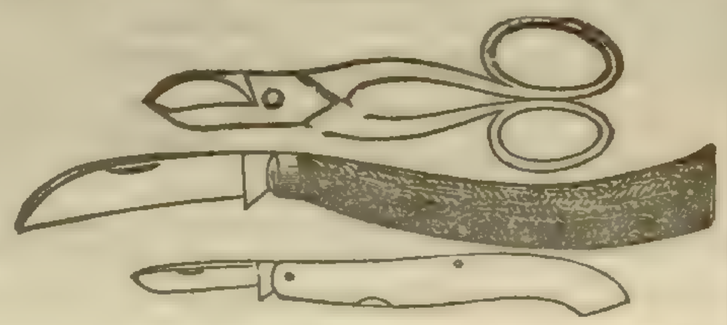

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THE annexed sketch represents the GLENNY WATERING POT, which will be found a decided improvement upon the old-fashioned one, as from the peculiar construction of the handle the weight is more easily balanced in the hands, which enables the user to empty with far less muscular exertion and fatigue a pot of this kind than one upon the old plan.

Of all Ironmongers, Hardwaremen, and Seedsmen; and of LOVERIDGE & SHOOLBRED, Wolverhampton, Sole Manufacturers.

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57, Lincoln's Inn Fields, London.—June 2.

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WEST OF ENGLAND AND SOUTH WALES AGENCY FOR GREEN'S PATENT "SILENS MESSOR" AND OTHER MOWING MACHINES.—BROMHEAD & SON'S Ironmongery Warehouses, 6, North Street, Bristol, where the Machines can be seen and their working explained.

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NEIGHBOUR'S IMPROVED COTTAGE BEE-HIVE, as originally introduced by GEORGE NEIGHBOUR & SONS, with all the recent improvements, three glasses, and thermometer, price 35*s*, securely packed for the country.

This unique Hive has met with universal commendation, and may be worked with safety, humanity, and profit, by the most timid; its arrangements are so perfect that the Honey may be taken at any time of the gathering season without at all injuring the Bees.

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PATENT LAWN MOWING AND ROLLING MACHINES.

30-inch wide PONY POWER MACHINE, made also of Smaller Sizes for Hand Power.

B. SAMUELSON'S LAWN MOWERS,

WITH BOYD'S PATENT IMPROVEMENTS,

CAN BE USED IN WET AS WELL AS DRY WEATHER.

LAST YEAR'S SALES WERE NEARLY A THOUSAND, EVERY ONE OF WHICH GAVE THE GREATEST SATISFACTION.

TESTIMONIALS expressing such satisfaction have been kindly sent by some hundreds of the purchasers to the Manufacturer, who will be glad to forward a copy with description and prices of Machines post free on receipt of application.

Mr. SAMUELSON is now receiving orders for Twenty to Thirty a day, and will execute them in the order they are received.

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J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 598. J. TYLOR & SONS' BARROW GARDEN ENGINE in best well painted Oak tub, fitted with J. TYLOR & SONS' Improved Brass Pump, Universal Joint, and Registered Spreader, which answers the purpose of the separate rose, fan, and jet.

CONTENTS OF TUB:—

15 gallons .. £5 10 | 28 gallons .. £6 18

Fig. 599. Ditto TINNED IRON TUB.

CONTENTS OF TUB:—

8 gallons	12 gallons	16 gallons	24 gallons	30 gallons
£2 15	£3 5	£4	£5	£5 18

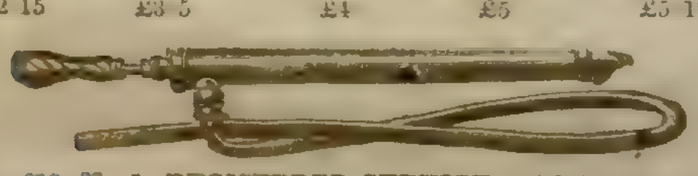


Fig. 618. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. .. £1 5 each.

No. 2. Ditto ditto 1 1 ,,

Telescope Branch Pipe for ditto .. .. 0 10 ,,

Fig 619. GARDEN SYRINGE, with one rose and jet, 12s. 6d. each.

,, 620. Ditto ditto 11 6 ,,

,, 621. Ditto ditto 10 6 ,,

,, 622. LADIES' GARDEN SYRINGE, with do. 8 0 ,,

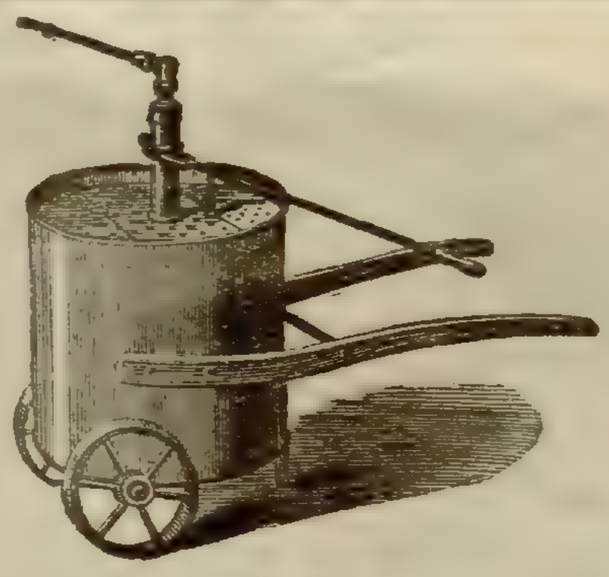
Fig. 623. READ'S SYRINGE, with two roses and one jet, 18s. 6d.

,, 624. READ'S SYRINGE, with one rose and jet .. 16 6

,, 625. Improved ditto ditto .. 14 6

,, 626. Ditto ditto ditto .. 13 0

Manufacturers of Pumps and Well Engines (for shallow or deep Wells), Plumbers' Brass Foundry of every description, High Pressure Cocks and Closets, Copper and Tinned-iron Baths, Garden and Fire Engines, Lamps of every description, Copper Goods, &c. **Estimates given for Hot-water and Bath Apparatus.**



No. 554½.

GALVANISED IRON TUB GARDEN ENGINE, with WARNER'S registered Spreader, is strongly recommended for durability and low price, viz.:—

10 gallons .. £2 15s. 0d. | 16 gallons .. £3 15s. 0d.

24 gallons .. .. .. £5 0s. 0d.

Larger sizes in either Wood or Iron.

BRASS SYRINGES, from 9s. to 21s.

May be obtained of any Ironmonger at the above prices, or of JOHN WARNER & SONS, 8, Crescent, Cripplegate, London, E.C.

WARNER'S PATENT VIBRATING STANDARD PUMPS.

PATENT CAST-IRON PUMPS fitted with J. W. & Son's Patent Buckets and Suckers, which cannot clog in action, for Farms, Cottages, and Wells not exceeding 25 feet.

Diameter of Barrel.	Height.		£. s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead, gutta percha or cast iron flanged pipe as required.	1 1 0
2½ ,,	long 3 ,, 3 ,,		1 10 0
3 ,,	ditto 3 ,, 6 ,,		2 4 0
3½ ,,	ditto 3 ,, 6 ,,		2 9 0
4 ,,	ditto 3 ,, 6 ,,		2 18 0

2½ ,, short, with 15 feet of Lead Pipe attached, ready for fixing 2 0 0

2½ in. long ditto ditto ditto 2 14 0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

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Every description of Machinery for Raising Water by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. &c.—Engravings sent on application.

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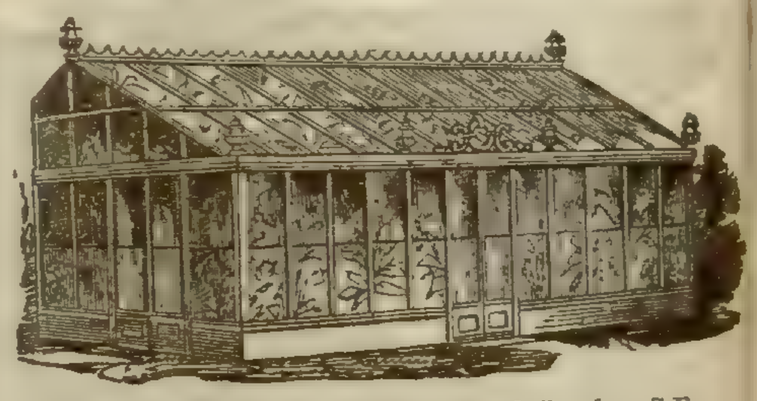

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200 CUCUMBER AND MELON BOXES AND LIGHTS,

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300 TO 400 LIGHTS FOR PITS OF ALL SIZES KEPT IN STOCK, glazed and painted complete, ready for immediate use, packed and sent to all parts of the Kingdom.

References to the Nobility, Gentry, and Trade in most of the counties in England.

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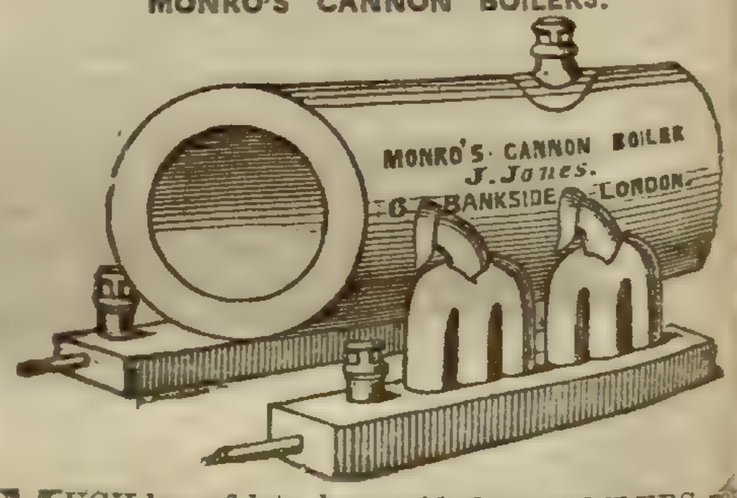

MUCH has of late been said about BOILERS FOR HEATING BY HOT WATER, but these Boilers have now proved themselves to be the best at present invented. They are adapted for Heating every description of Building, and are made of various sizes. The price of the

24-inch Cast Iron is	..	..	.. £5 10s.	each.
24-inch Wrought Iron is	..	..	.. 6 10	,,
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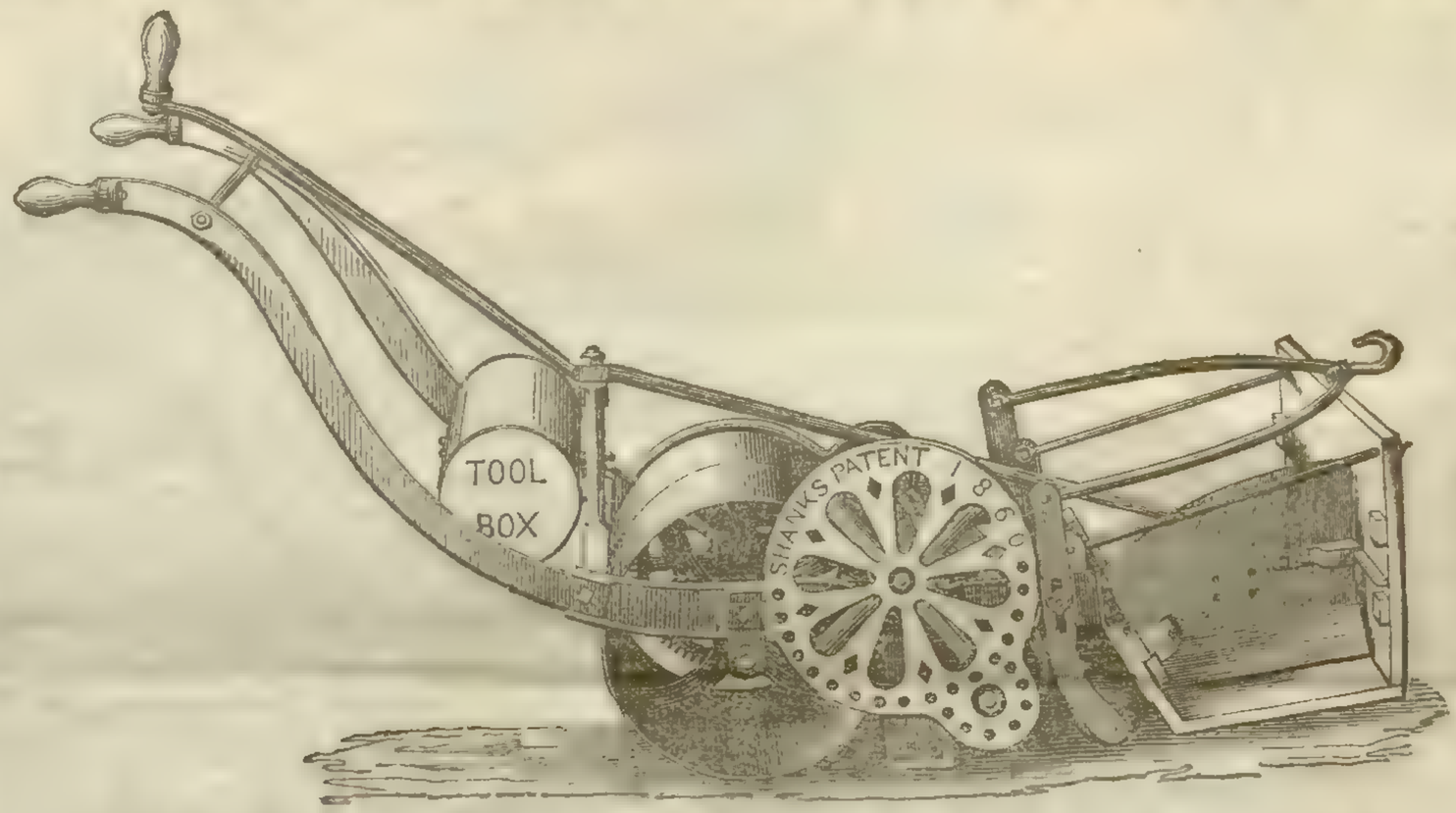
References to Gentlemen and Nurserymen where these Boilers are now at work. The Cannon Boilers are now kept in stock, and are to be had only of J. JONES, 6, Bankside, S.E. Also, every description of Saddle and Cylinder Boilers. Hot-water Pipes and Connections at prices lower than those of any other house in London. Estimates for Hot-water Apparatus erected complete in any part of the country, and an Illustrated Catalogue on application to J. JONES, 6, Bankside, Southwark, London, S.E.

SHANKS' NEW PATENT LAWN MOWING, ROLLING, COLLLECTING, AND DELIVERING MACHINE FOR 1860

MOWS THE GRASS WET OR DRY, ON LAWNS UNEVEN OR OTHERWISE,



IN A MUCH NEATER MANNER THAN THE SCYTHE, AT HALF THE EXPENSE.

NEW PATENT PONY MACHINE FOR 1860.

ONE of the most valuable of the Patent Improvements Messrs. Shanks have effected in their Machine is in the method of emptying the Grass-box. The want of a speedy and efficient method for this purpose has been much felt for many years past. In the Spring, more especially, when the Grass springs up rapidly, nothing is more annoying in working a Mowing Machine than the stopping, and almost constant travel from the handles to the box, and *vice versâ*, for the purpose of emptying the Grass. A great deal of time is thus lost, independent of the hard work to the man, not only in walking some hundreds of times the length of the Machine in a day, but more especially in that stooping posture which he has so often to endure. Many a Gardener can testify to this. This great want in all Mowing Machines, whether past or present, is completely obviated in Shanks' New Patent Mowing, Rolling, Collecting and Delivering Machine for 1860. The improvement consists in the introduction of a simple and efficient apparatus for emptying the box without the man being under the necessity of either leaving the handles or stopping the Machine. So effective and complete is this valuable improvement, that the box, if it were possible to fill it, could be emptied at the rate of 60 times a minute, without any undue strain being put on the apparatus. The immense advantages of this invention must be at once apparent to the practical Gardener. It will enable the Machine to do at least a third more work, while the labour and annoyance in working it, as compared with ordinary Machines, is three-fourths lessened. If a Lawn, which formerly took a Machine nine hours to mow can now be done in six hours, with three-fourths less labour to the man who works the Machine, nothing further is necessary to establish the utility and worth of the invention.

PRICES.

SHANKS' NEW PATENT HORSE MACHINE.

Including Box of Tools for Sharpening, &c., and Directions.

Width of Cutter.		
No. 1.—48-inch Machine	£28 0 0	*Drawn by a Horse.*
No. 2.—42-inch Machine	26 0 0	
No. 3.—36-inch Machine ...	£22 0 0	*Drawn by a Horse.*
No. 4.—30-inch Machine ...	19 0 0	*Drawn by a Horse or a strong Pony*

SHANKS' PATENT PONY AND DONKEY MACHINES.

Including Box of Tools for Sharpening, &c., and Directions.

No. 5.—30-inch Machine . £15 15 *Drawn by a Pony* | No. 6.—28-inch Machine . £14 10 *Drawn by a Pony* | No. 7.—25-inch Machine, £12 10 *Drawn by a Donkey*

SHANKS' NEW PATENT HAND MACHINES, FOR PUSHING OR DRAWING SEPARATELY OR TOGETHER.

Including Box of Tools for Sharpening, &c., and Directions.

No. 8.—24-inch Machine	£8 17 6	*Easily worked by Two Men*
No. 9.—22-inch Machine	8 7 6	
No. 10.—19-inch Machine... ...	£7 12 6	*Easily worked by a Man and Boy*
No. 11.—16-inch Machine... ...	6 17 6	*Easily worked by a Man*
No. 12.—13-inch Machine...	£6 2 6	*Easily worked by a Boy*

The Patent Delivering Apparatus if attached to the Hand Machines, and they are strongly recommended to be so, 20s. extra.

SHANKS' PATENT HAND MACHINE, FOR DRAWING ONLY.

Including Box of Tools for Sharpening, &c., and Directions.

No. 13.—22-inch Machine ... £7 5 0 *Easily worked by a Man and Boy* | No. 14.—19-inch Machine ... £6 15 0 *Easily worked by a Man and Boy*

No. 15.—16-inch Machine ... ... £6 5 0 *Easily worked by a Man*

***** The Machines are warranted to give ample satisfaction, and if not approved of they may be at once returned.**

The Prices include delivery at most of the Railway Stations throughout the Kingdom.

TESTIMONIALS:—

From Mr. GEORGE EYLES, *late Chief Superintendent of the Grounds and entire Horticultural Department of the Crystal Palace, Sydenham, and now appointed to the Superintendence of the Horticultural Society's New Gardens, Kensington Gore, and the Gardens, Chiswick, in favour of* SHANKS' *Patent Lawn Mower—(the 30-inch Horse-power Machine used on the Lawns of the Crystal Palace):—*

"Crystal Palace, December 20, 1859.

"I have much pleasure in bearing testimony to the excellence of the 30-inch Shanks' Patent Lawn Mowing Machine you sent us. We have had it in use almost daily up to the end of the mowing season, and it has always performed its work in the most satisfactory manner, *and has never been once out of repair.* The contrivance for emptying the Grass Box is *a great acquisition, and effects a considerable saving of time.*"

From the Hon. M. F. T. BERKELEY, *Berkeley Castle, January* 21, 1860.

"I have found your Mowing Machine answer perfectly. It does its work well, cutting closer and more evenly than the scythe: collects and delivers the Grass, thereby saving much time and labour."

From Mr. J. RICHARDSON, *Gardener to* JOSEPH PEASE, ESQ., *Southend Gardens, near Darlington, January* 21, 1860.

"Your Lawn Mowing Machine is the best of any I have yet used, doing the work speedily and well. The Delivering Apparatus is a decided improvement, and the best recommendation it can have is its own simplicity."

From Mr. J. KIDD, *Gardener to the* Right Hon. The EARL OF AIRLIE, *Cortachy Castle Gardens, January* 20, 1860.

"After having had one season's trial of your new and improved Mowing and Rolling Machine, I feel highly satisfied with the manner it does the work in every way. Your last improvement, viz., the apparatus for emptying the Grass-Box, I consider a very great saving, both of time and labour, as the Machine does not require to be stopped to have the Grass-Box emptied. Before I got this Machine nearly half the time was taken up in having so often to stop to have the Grass-Box emptied. There is another improvement which was not on my last Machine, viz., the tempering of the cutters either to cut long or short Grass; it is now so simple that any of my men can alter it in five minutes. In short, I would be sorry to be obliged to use your old Machines (although good) where it was possible to have your last improved one."

From Mr. J. MOIR, *Gardener to the* Right Hon. LORD LOVAT, *Beaufort Castle, Beauly, January* 23, 1860.

"I am happy to have it in my power to add my testimony to the utility of your improved Grass-Cutting Machines. The Delivering Apparatus works admirably and is a great saving of time. I think no one having a Lawn to keep should be without a Mowing Machine with your improvements."

SOLE AGENTS FOR LONDON

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

PATENT LAWN MOWING AND ROLLING MACHINES.

30-inch wide **PONY POWER MACHINE**, made also of Smaller Sizes for Hand Power.

B. SAMUELSON'S LAWN MOWERS,

WITH BOYD'S PATENT IMPROVEMENTS,

CAN BE USED IN WET AS WELL AS DRY WEATHER.

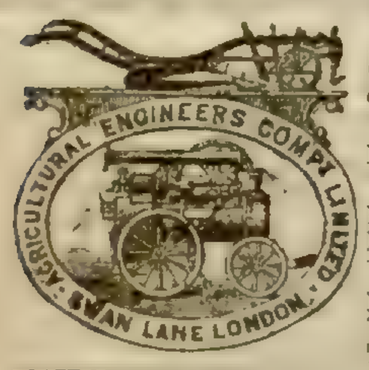
LAST YEAR'S SALES WERE NEARLY A THOUSAND, EVERY ONE OF WHICH GAVE THE GREATEST SATISFACTION.

TESTIMONIALS expressing such satisfaction have been kindly sent by some hundreds of the purchasers to the Manufacturer, who will be glad to forward a copy with description and prices of Machines post free on receipt of application.

Mr. SAMUELSON is now receiving orders for Twenty to Thirty a day, and will execute them in the order they are received.

London Warehouse: 76, Cannon Street, West, E.C. Manufactory: Britannia Works, Banbury.

TO BE HAD OF DEANE & CO., LONDON BRIDGE, E.C., AND ALL IRONMONGERS.



LAWN MOWERS, ROLLERS, WATER ENGINES, CHAIRS, TABLES, and every description of Garden requisites.

HURDLES, GATES, WIRE FENCING, &c.

CARTS, MOWERS, HAYMAKERS, HORSE RAKES, DRILLS, PLOUGHS, &c.

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Price Lists free upon application to

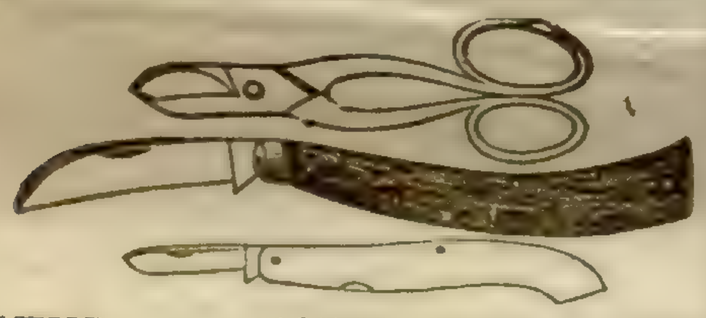
THE AGRICULTURAL ENGINEERS' CO. LIMITED,

SWAN LANE, UPPER THAMES STREET, LONDON, E.C.

THE annexed sketch represents the GLENNY WATERING POT, which will be found a decided improvement upon the old-fashioned one, as from the peculiar construction of the handle the weight is more easily balanced in the hands, which enables the user to empty with far less muscular exertion and fatigue a pot of this kind than one upon the old plan.

Of all Ironmongers, Hardwaremen, and Seedsmen; and of LOVERIDGE & SHOOLBRED, Wolverhampton, Sole Manufacturers.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.

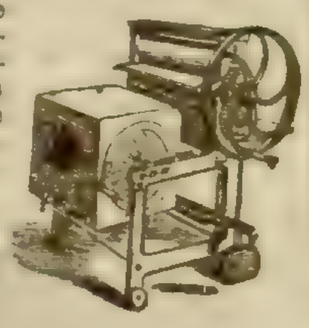


SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

BRADFORD'S PATENT WASHING MACHINE
SIMPLICITY AND WONDERFUL EFFICIENCY.

"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations." — THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.



GARDEN ENGINES AND SYRINGES.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 598. J. TYLOR & SONS' BARROW GARDEN ENGINE in best well painted Oak tub, fitted with J. TYLOR & SONS' Improved Brass Pump, Universal Joint, and Registered Spreader, which answers the purpose of the separate rose, fan, and jet.

CONTENTS OF TUB:—

15 gallons .. £5 10 | 28 gallons .. £6 18

Fig. 599. Ditto TINNED IRON TUB.

CONTENTS OF TUB:—

8 gallons	12 gallons	16 gallons	24 gallons	30 gallons
£2 15	£3 5	£4	£5	£5 18

Fig. 618. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. .. £1 5 each.
No. 2. Ditto ditto 1 1 ,,
Telescope Branch Pipe for ditto .. .. 0 10 ,,

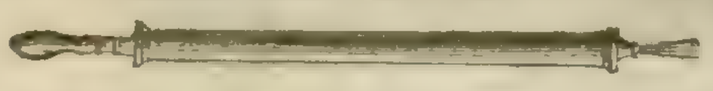


Fig. 619. GARDEN SYRINGE, with one rose and jet, 12s. 6d. each.
,, 620. Ditto ditto 11 6 ,,
,, 621. Ditto ditto 10 6 ,,
,, 622. LADIES' GARDEN SYRINGE, with do. 8 0 ,,

Fig. 623. READ'S SYRINGE, with two roses and one jet, 18s. 6d.
,, 624. READ'S SYRINGE, with one rose and jet .. 16 6
,, 625. Improved ditto ditto .. 14 6
,, 626. Ditto ditto ditto .. 13 0

Manufacturers of Pumps and Well Engines (for shallow or deep Wells), Plumbers' Brass Foundry of every description, High Pressure Cocks and Closets, Copper and Tinned-iron Baths, Garden and Fire Engines, Lamps of every description, Copper Goods, &c. Estimates given for Hot-water and Bath Apparatus.

No. 579.

WARNER'S SWING WATER BARROW (holding about 35 gallons), is intended for all large establishments where much watering is done by the watering pot. By its use the gardener will save much time and labour, particularly where the tank, pond, or pump is at a distance from the garden. Price 3*l.* 3*s.*

BRASS SYRINGES, from 9*s.* to 21*s.*

The above may be obtained of any Ironmonger in town or country, or of JOHN WARNER & SONS, 8, Crescent, Cripplegate, London, E.C.

SLATE WORKS. ISLEWORTH, MIDDLESEX, W.

EDWARD BECK MANUFACTURES in SLATE a variety of articles for Horticultural purposes, all of which may be seen in use at Worton Cottage, on application to the Gardener, Sundays excepted. PRICED LISTS of PLANT TUBS and BOXES forwarded on application.

BEE-HIVES.—PRIZE MEDAL AWARDED TO G. N. & SONS, FOR BEE-HIVES AND HONEY, AT THE PARIS EXPOSITION OF 1855.

NEIGHBOUR'S IMPROVED COTTAGE BEE-HIVE, as originally introduced by GEORGE NEIGHBOUR & SONS, with all the recent improvements, three glasses, and thermometer, price 35*s.*, securely packed for the country.

This unique Hive has met with universal commendation, and may be worked with safety, humanity, and profit, by the most timid; its arrangements are so perfect that the Honey may be taken at any time of the gathering season without at all injuring the Bees.

Early applications addressed to GEO. NEIGHBOUR & SONS, 127, High Holborn, W.C., or 149, Regent Street, London, W., will receive prompt attention.

Their newly-arranged CATALOGUE of other Improved Hives, with drawings and prices, sent on receipt of two stamps.

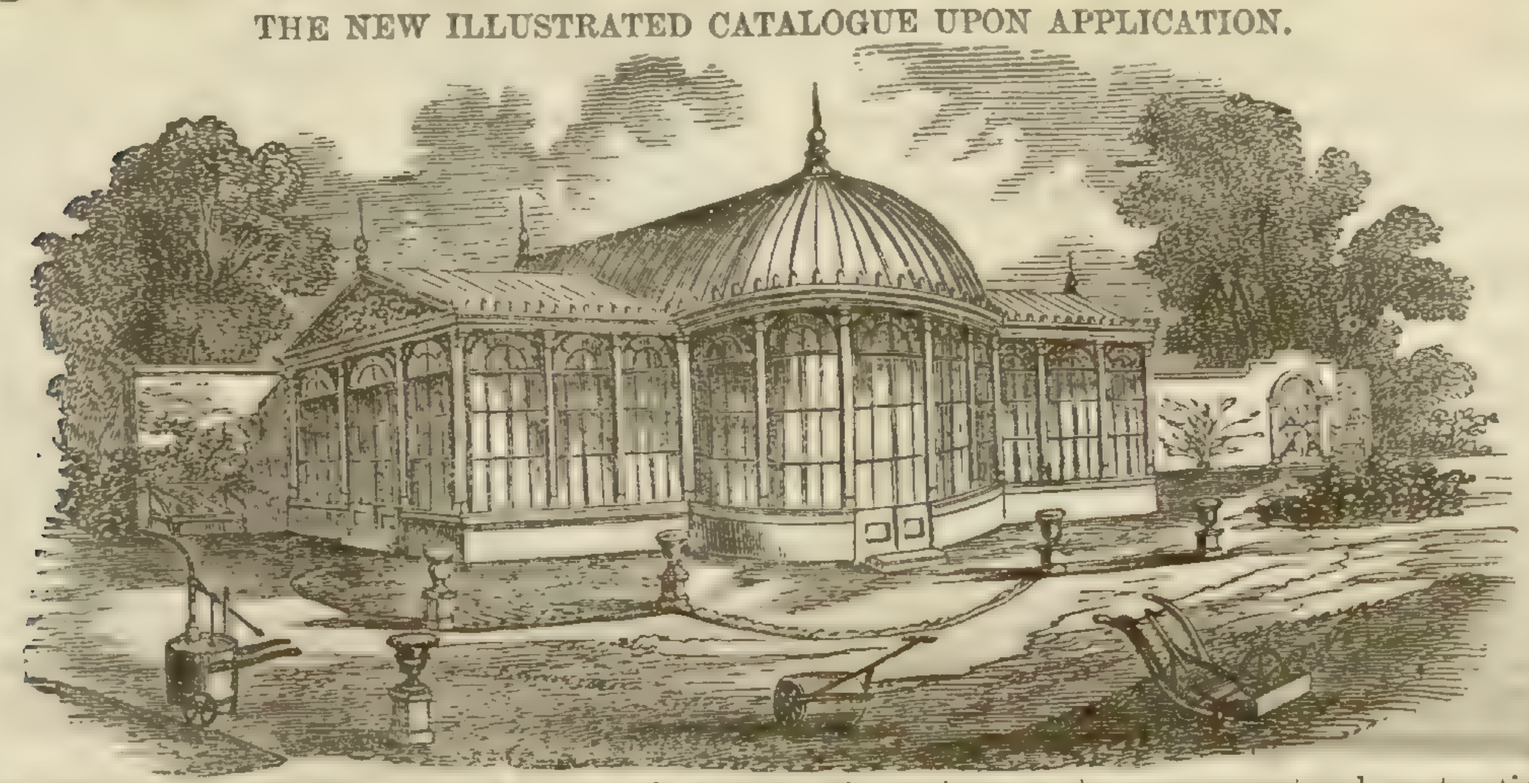
AGENTS:—Liverpool .. JAMES CUTHBERT, 12, Clayton Street.
,, Manchester. J. WILSON, 50, King Street.
,, Birmingham J. H. COTTRELL, 15, Bull Ring.
,, Dublin .. J. EDMONDSON & Co., 61, Dame Street.

COTTAM & COMPY., Engineers, Founders, &c.,

2, WINSLEY STREET, LONDON, W.

☞ **A SHOW ROOM DEVOTED ENTIRELY TO ARTICLES OF HORTICULTURE.**

THE NEW ILLUSTRATED CATALOGUE UPON APPLICATION.



COTTAM AND COMPY. having had upwards of 40 years' experience in the arrangement and construction of every description HORTICULTURAL BUILDINGS AND HEATING BY THE CIRCULATION OF HOT WATER, and well qualified to guarantee the perfect execution of any works intrusted to them in the erection of

Conservatories	Summer Temples	Orchid Houses	Apricot and Peach Houses
Conservatory or Glass Walls for the protection of plants or ripening wall fruit	Arbours, &c.	Conservatories for Window or Balcony Gardening	Tropical Fruit Houses
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☞ *Drawing and Estimates free upon application.*

EXHIBITION PRIZE MEDAL GATES AND STABLE FITTINGS.

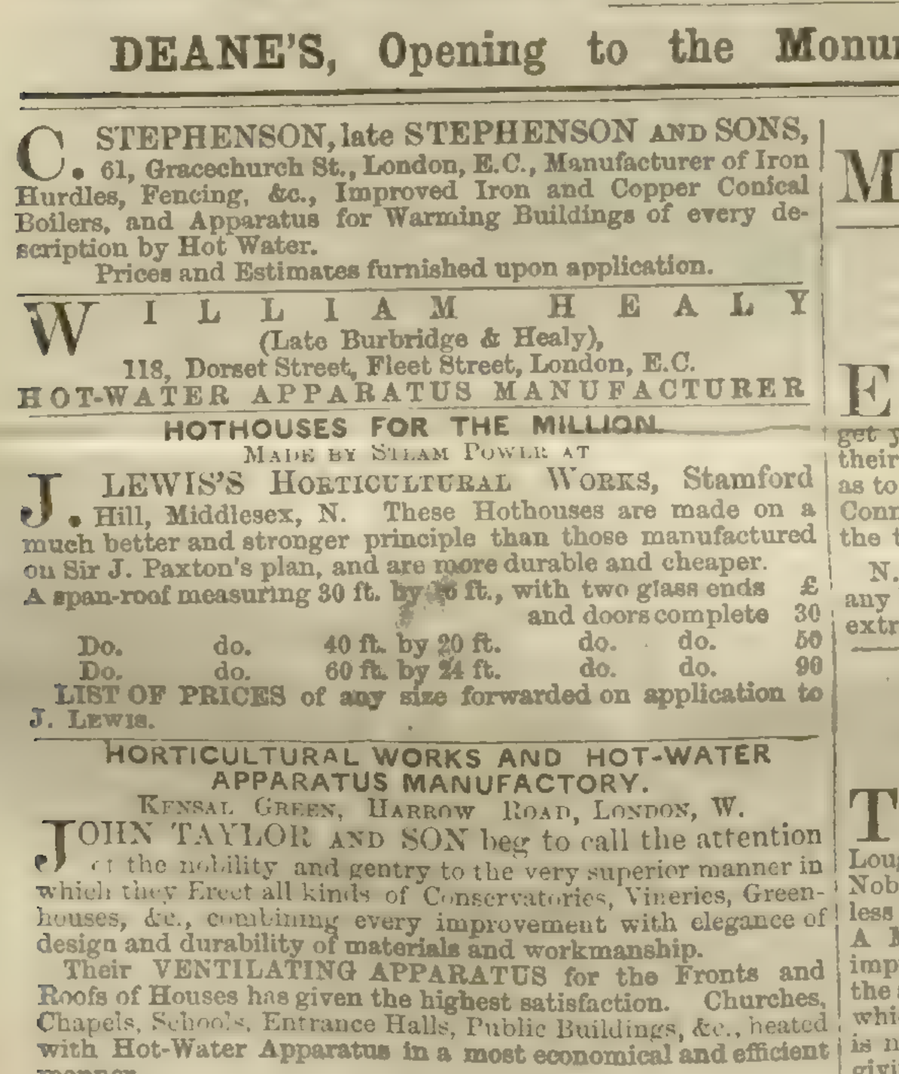
Iron Hurdles, Strained Wire Fencing, Game Netting, &c.

Every description of Plain, Ornamental, Cast and Wrought Iron, and Wire Work

SEE SEPARATE LISTS UPON APPLICATION.

COTTAM & COMPy., Iron Works, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon).

DEANE & COMPANY'S
HORTICULTURAL TOOLS.



GARDEN ENGINES, Galvanised Iron. Prices 55*s.*, 65*s.*, 78*s.*, 90*s.*, 100*s.*, 110*s.*

GARDEN ENGINES, Wood, 90*s.*, 110*s.*, 138*s.*

FLOWER STANDS, 4*s.* 6*d.* each.

CAST IRON ORNAMENTAL FLOWER STANDS, to hold seven Vases, 27*s.*

DEANE'S MOWING MACHINES, with Boyd's Patented Improvements, 4*l.* 17*s.* 6*d.*, 6*l.* 6*s.*, 6*l.* 17*s.* 6*d.*, 7*l.* 7*s.*

GREEN'S PATENT MOWING MACHINES.

GREENHOUSE SYRINGES, 8*s.*, 10*s.*, 18*s.* 6*d.*

GARDEN ROLLERS, 1*l.* 14*s.* 6*d.*, 2*l.*, 2*l.* 12*s.* 3*l.* 3*s.*, 3*l.* 18*s.*, 4*l.* 13*s.*, 5*l.* 12*s.*, 7*l.* 10*s.*

GARDEN STOOLS, 4*s.* 6*d.*

GARDEN SEATS, from 25*s.*

BOYD'S SELF-ADJUSTING SCYTHE, 10*s.* 6*d.*

WIRE WORK, 18 in., 4*d.* per yard run.

Every Implement for Garden use on the Lowest Terms.

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DEANE'S, Opening to the Monument, London Bridge, E.C.

C. STEPHENSON, late STEPHENSON AND SONS, 61, Gracechurch St., London, E.C., Manufacturer of Iron Hurdles, Fencing, &c., Improved Iron and Copper Conical Boilers, and Apparatus for Warming Buildings of every description by Hot Water.

Prices and Estimates furnished upon application.

WILLIAM HEALY
(Late Burbridge & Healy),
118, Dorset Street, Fleet Street, London, E.C.
HOT-WATER APPARATUS MANUFACTURER

HOTHOUSES FOR THE MILLION.
MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

					£
A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete					30
Do.	do.	40 ft. by 20 ft.	do.	do.	50
Do.	do.	60 ft. by 24 ft.	do.	do.	90

LIST OF PRICES of any size forwarded on application to J. LEWIS.

HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.
KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they Erect all kinds of Conservatories, Vineries, Greenhouses, &c., combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & SON have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

HORTICULTURAL AGENT AND VALUER.

MR ALFRED CHANDLER, (of the late firm of CHANDLER & SONS,) 28, Priory Road, Wandsworth Road, S.

E. ELEY, HOTWATER ENGINEER, 216, City Road, London, E.C., opposite the Eagle Tavern, is the place to get your HOT-WATER APPARATUS. To those who prefer their own workpeople to fix E. ELEY will give every instruction as to the best manner. Can supply them Pipes, Boilers, and Connections of every kind cheaper than any other house in the trade.

N.B. By sending a rough sketch E. E. will cut the pipe any length, drilling for cistern pipes, screwing, &c., free of any extra charge. Contracts taken to any extent. Estimates free.

BY ROYAL LETTERS PATENT.

T. G. MESSENGER, HORTICULTURAL BUILDER, PATENT HOT-WATER APPARATUS MANUFACTURER, &c., Loughborough, begs respectfully to call the attention of the Nobility, Gentry, Nurserymen, &c., to his Patented Divisionless Horticultural Erections and Mode for Ventilating same. A Model Erection, showing these as well as many other improvements, sent carriage free to any gentleman requiring the same. Also an Illustrated Price List of his Garden Engine, which is cheaper than any other. T. G. MESSENGER'S Boiler is now at work at many gentlemen's seats in the country, giving the utmost satisfaction.

T. G. M.'s perfect and simple Hot-water Valve, 4 in., 22*s.*; 3 in., 18*s.* 6*d.* Plans, Estimates, &c., sent upon application.

WEST OF ENGLAND, IRELAND, AND WALES.

VINCENT SKINNER (*late Partner with* J. Weeks & Co.), erects CONSERVATORIES, HOT-HOUSES, and HOT-WATER APPARATUS to warm Churches, Hothouses, &c., and has foremen from London to superintend their construction. Upright Pipe Boilers, Plans, and Estimates.—V. SKINNER, Bridewell Street, Bristol.

FOUNTAINS IN CAST IRON, from 30*s.* each. VASES, PORTABLE IRON CONSERVATORIES, STATUES, FLOWER STANDS, PORTABLE HEATING APPARATUS, with TRUSS'S JOINT.

DRINKING FOUNTAINS.

Please address in full, WILLIAM HOOD, Horticultural Engineer and Founder, 68, Upper Thames Street, London, E.C.

BEAUTIFUL TERRA COTTA GARDEN DECORATIONS selling off at very reduced prices, in consequence of expiration of lease, at 204, Marylebone Road, N.W. This is the last week of sale, including 1851 PRIZE MEDAL and other VASES, FIGURES, SUN-DIAL PEDESTALS, ART FLOWER POTS, EDGING, FILTERS, &c., by

JAS. PULHAM, Terra Cotta Works, Broxbourne, Herts.

GARDEN BORDER EDGING TILES.

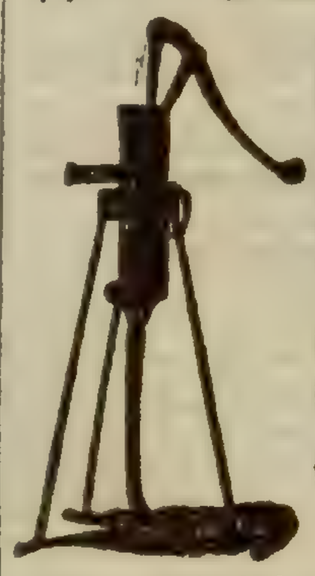
ROSHER AND CO. beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.

Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.

N.B. Sketches of the patterns will be forwarded by post on application. Ornamental Flower Boxes kept in stock.

ORNAMENTAL PAVING TILES FOR CONSERVATORIES, HALLS, CORRIDORS, BALCONIES, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs. Also WHITE TILES, highly glazed, for Lining Walls of Baths, Dairies, Kitchen-ranges, Larders, &c. To be obtained of ROSHER & Co., at their premises as above.

WARNER'S IMPROVED LIQUID MANURE OR GENERAL PORTABLE PUMP.



These Pumps are fitted with WARNER'S Patent Bucket and Valve, and cannot clog in action. The barrel is made of galvanised iron, not likely to corrode, and can be raised or lowered at pleasure on the stand, the legs of which fold together, and may be carried with ease by one man to tank or pond.

	£	s.	d.
Stand and Pump, with screwed tail pipe, fitted with strong brass union for suction pipe	2	15	0
If fitted with barrel of planished copper	3	17	0
Stand and Pump, with plain tail pipe, for tying on suction pipe	2	9	0
2-inch patent rubber and canvas flexible suction pipe, on wires, either 10, 12, or 15 ft., per foot	0	2	2

May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, J. WARNER & SONS, 8, Crescent, Jewin St., London, E.C.

Every description of Machinery for raising Water, by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. Engravings sent on application.

FLEMING'S SALTING MACHINE FOR DESTROYING WEEDS ON GRAVEL WALKS, &c.—This most useful Machine has given the greatest satisfaction wherever it has been introduced, and it is the only effectual means of keeping Drives and Walks completely clear of Weeds.

Extract from Article "Trentham," in *Gardeners' Chronicle* of January 22, 1859.

"And I would observe in passing from these grounds that the whole of the Grass and Gravel are kept in the most perfect order by the aid of machinery; the former by a Horse Machine wherever it can be worked, a small hand instrument being used in places of difficult access; the latter is kept in order by a Salting Machine, the invention of Mr. Fleming, and judging from the beautiful condition of the Gravel in every direction, I should say that it was altogether most efficient."

The Mowing Machines here referred to are SHANKS'.

From *The Field* of April 2, 1859.

"The Salting Machine will effectually destroy the Weeds on Gravel Walks and Drives."

Testimonials with full particulars and prices may be had on application to ALEXANDER SHANKS & SON, Dens Iron Works, Arbroath, Patentees of Improved Mowing, Rolling, Collecting, and Delivering Machine for Lawns, Hot-Water Apparatus Manufacturers, &c.

SEED BUSINESS ESTABLISHED UPWARDS OF 100 YEARS.

BUTLER AND McCULLOCH,

COVENT GARDEN MARKET, LONDON, W.C.

ERICA, collected from the choicest Cape species, per packet, 1s., 1s. 6d., and 2s. 6d.

Strong Plants of **SPERGULA PILIFERA**, from the Original Stock,

For Rockwork, Edgings to Flower Beds, Fountains, Sloping Banks, Terraces, and Lawns. It requires no mowing, and when well established is very superior to Turf.

8s., 15s, and 20s. per 100. Seed, 1s., 1s. 6d., and 2s. 6d. per packet.

PELARGONIUM.

The great desire manifested by amateurs for raising new and improved varieties of this splendid class of plants has induced our Sardinian Correspondent to give this matter his especial attention. He has, therefore, collected seed only from flowers of the highest merit; thus affording a chance of raising varieties equal to any at present in cultivation. The dried specimens exhibited at the Crystal Palace may be seen at our Establishment.

A collection saved from 12 English varieties each containing 10 seeds	..	..	7s.	6d.	|	Choice mixed, saved from finest English varieties, per packet	..	..	2s.	6d.
ditto	ditto	12 French	ditto	ditto	..	..	7	6	|	ditto	ditto	ditto	French	ditto	,,	..	..	2	6
ditto	ditto	12 Fancy	ditto	ditto	..	..	7	6	|	ditto	ditto	ditto	Fancy	ditto	,,	..	..	2	6

SPLENDID DOUBLE ITALIAN-SAVED CARNATION AND PICOTEE SEED,

IN SEALED PACKETS, FROM ONE OF THE CHOICEST COLLECTIONS IN EUROPE.

The following Carnations and Picotees have been saved with the greatest care by our Sardinian Correspondent, a most successful and distinguished Amateur, and only from the most perfect flowers of the newest and handsomest of the English stage varieties, or seedlings from them; they can be confidently recommended to the lovers of this exquisitely beautiful class of plants, as certain to produce at least 80 per cent. of fine double flowers, and with a fair chance of obtaining varieties of the greatest value. The Perpetual or Tree varieties bloom beautifully in the open ground, during the whole of the Autumn months; and, if grown in pots, are highly ornamental for Conservatory or Greenhouse decoration in Winter and Spring.

A collection of 12 varieties, each containing 10 seeds	..	..	..	..	6s.	0d.	|	A collection of 12 varieties Fancy, each containing 10 seeds	..	..	..	..	6s.	0d.
,, 12	ditto	ditto	5 seeds	..	..	3s.	6d.	|	12	ditto Fancy	ditto	5 seeds	..	..	3s.	6d.	|	Choice mixed, per packet	..	2s.	6d.
A collection of 12 varieties (Perpetual), each containing 10 seeds					6s.	0d.	|	A collection of 12 varieties (Perpetual), each containing 5 seeds					3s.	6d.	|	Choice mixed, per packet		2s.	6d.
A collection of 12 varieties, each containing 10 seeds	..				7s.	0d.	|	A collection of 12 varieties, each containing 5 seeds	..				4s.	0d.	|	Choice mixed, per packet	..	2s.	6d.
A collection of 12 varieties (Perpetual), each containing 10 seeds					6s.	0d.	|	A collection of 12 varieties (Perpetual), each containing 5 seeds					3s.	6d.	|	Choice mixed, per packet		2s.	6d.

BEAUTIFUL BIENNIALS AND PERENNIALS.

D Collection contains 25 packets in 25 varieties for 5s.; E Collection contains 18 packets in 18 varieties for 3s. 6d.; F Collection contains 15 packets in 15 varieties for 2s. 6d.

Agents for GISHURST COMPOUND in boxes, 1s., 3s., and 10s. 6d.; do. BRITTAIN'S GARDEN NETTING for protecting Fruit Trees or shading, Nos. 1, 2, and 3, 5d., 6d., and 8d. per yard, 55 inches wide, 10-yard pieces; do. TIFFANY for shading, 3d. per yard, 10, 20, and 30-yard pieces; SHAW'S TIFFANY at advertised prices.

DUNN'S SOLID MARKING-INK PENCILS for writing indelibly on garden labels.—Every Amateur and Gardener should purchase this Pencil, sent post paid on receipt of 18 postage stamps.

SCARLET GERANIUM, "THE BEACON."

R. LAING is still sending out Plants of the above, a fine dark Horse-shoe leaved variety suitable for bedding, a splendid bright scarlet with clear white eye, habit similar to Tom Thumb. It has been pronounced by good judges to be a great acqhisition.

Early orders are requested to secure good plants, as the stock is now limited. Plants 3s. 6d. each. Discount to the Trade when three or more are taken.

Twickenham Nurseries, Middlesex, S.W.

NEW BEDDING GERANIUM "DAYSPRING."

WILLIAM BADMAN AND CO., Gravesend, are now prepared to send out this distinct and beautiful plant, which they can with confidence recommend as a great acquisition among variegated kinds.

The foliage, which is large, is distinctly flaked with sulphur yellow, giving it a novel and picturesque appearance.

The flower is bright scarlet, truss carried up well above the foliage, closely resembling in colour and size the well-known Geranium "Punch."

The habit is free but compact, making it very suitable for beds, or for the second row in a ribbon border; it grows and flowers freely in winter, so that it must prove very useful for winter decoration in the conservatory.

Received Certificate of Merit at Maidstone, June, 1859.

Plants 7s. 6d. each, four for three to the Trade. Remittance or reference from unknown correspondents.—June 9.

NEW AND CHOICE PLANTS.

JOHN STANDISH, in offering the following Plants can assure his customers that they are now in fine condition for sending out:—

MYOSOTIDIUM NOBILE, or Antarctic Forget-Me-Not, each 31s. 6d.—This plant, from the Chatham Islands, is one of the most remarkable that has been introduced for some years, being totally distinct from all others. It has large thick leaves, 8 or 9 inches across, of a dark glossy green, and sends up magnificent trusses of bloom of the most beautiful blue and white, similar to a Forget-me-not, but of a giant form. A Drawing of it is published in Curtis's "Botanical Magazine" for September. A description taken from the above is also published in the *Gardeners' Chronicle* of Sept. 17, 1859, wherein Dr. Lindley says:—"This is the handsome perennial provisionally named Cynoglossum nobile by Dr Hooker in our last year's Volume, page 240. It is quite deserving all the encomiums that have been passed upon it."

RHODODENDRON NUTTALII.—The largest flower of all yet known, having 11 flowers in a truss, each flower being 6¼ inches across. Seedling plants, 3 inches high, 7s. 6d each; 6os. per dozen; or 20l per 100.

PHLOX MRS STANDISH.—The purest white, with a large red eye, 5s. each. Also a large collection of the finest kinds which J. S. has shown during the last summer and in every case received the First Prize. Plants from 1s. to 2s. 6d. each.

CATALOGUE containing a full description of the best Hardy Plants in cultivation will be forwarded on application to

The Royal Nursery, Bagshot.

PLANTS OF CABBAGE, SAVOY, KALE, BROCCOLI, CAULIFLOWER, AND CELERY.

JOHN CATTELL begs respectfully to inform the public that he has a plentiful supply of Plants of the above superior true sorts, which he will forward to order on receipt of postage stamps or Post office Order, made payable here, at the following prices, package included:—All the sorts of Early Cabbage, Savoy and Kale, including Brussels Sprouts, 6s. per 100; 4s 6d per 1000. All the sorts of Autumn and Spring Broccoli, 9s. per 100; 5s 6d per 1000. Early and Late Cauliflower and Red Pickling Cabbage, 10s. per 100. Bedded Celery, 8d. per 100; 5s. 6d. per 1000 Drumhead or Cattle Cabbage, 3s 6d. per 1000. Packages containing plants to the value of 1l. and upwards will be delivered carriage free to London, Croydon, and the Edenbridge Station of the South-Eastern Railway.

Seed of Cattell's Reliance Cabbage may be had free by post at 1s. per packet, containing half an ounce.

Nursery and Seed Establishment, Westerham, Kent.

SEEDSMEN BY APPOINTMENT Sutton AND Sons

SPERGULA PILIFERA FOR GARDEN LAWNS AND VERGES.

SEEDS AND PLANTS.

SUTTON AND SONS having obtained a large Stock, are enabled to supply the same at low rates, viz.:—

SPERGULA PILIFERA SEED (Post free with instructions).—Large packets, 5s. and 10s. each; small packets, 6d. and 1s. each.

SPERGULA PILIFERA PLANTS.—Strong plants for division, 4s. per dozen, 30s. per 100; smaller, 1s. 9d. per dozen, 12s. per 100.

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GYNERIUM ARGENTEUM, OR PAMPAS GRASS.—A packet of Seed, with Instructions on Cultivation, free by post on receipt of 12 penny stamps.

Plants, 1s. 6d. to 3s. 6d. each.

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SWEDES AND EARLY TURNIPS, CARRIAGE FREE.

The best sorts for present sowing are:—

PAGE'S Improved Hardy Swede	.. ..	1s. 0d.	per lb.
This variety has stood the severe winter well.			
PAGE'S Improved Skirving's	.. .. ..	0 9	,,
,, ,, Hardy White, good stock		1 0	,,
Sutton's Champion	.. ..	1 0	,,
PAGE'S Improved Early Red Globe Turnip	..	0 10	,,
Pomeranian White Globe ditto	.. ..	0 9	,,
Yellow Globe Mangel	.. ..	1 0	,,
White Belgian Carrot	.. ..	1 0	,,
Kohl Rabi, imported	.. ..	1 0	,,
Cattle Cabbage	.. ..	5 0	,,
Holcus saccharatus	.. ..	3 6	,,
Dwarf Essex Rape	.. ..	1 6	,,
		0 4	,,

Imported Italian Rye-grass, per qr., 50s.

Tares, Buckwheat, Furze, Lucerne, Mustard, &c. Finest mixed Pasture and Lawn Grasses.

PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

NEW VERBENAS.

MESSRS. J. AND C. LEE can recommend the following 12 VERBENAS, now sent out for the first time, for size, shape, and superior bedding qualities.

GEORGE STEPHENSON.—Rose, large and fine, of good habit.
MISS RUTH.—Purple, large and fine, of excellent habit.
MISS EGLA.—Deep scarlet, clear white eye, very fine, in the class of "Geant des Batailles."
LADY MARY BOUVERIE.—Crimson, white eye, in the class of "General Simpson"
CAROLINE.—Rose shaded violet, large and very fine.
ROYAL SCARLET.—Intense scarlet, finely shaped flower, of first-rate habit.
PRETTY POLLY.—Light rose, dark eye, neat and pretty.
WALTER.—Dark crimson, pale eye, fine.
MRS. GLYN.—Light rose, fine.
EDWARD OLIVER.—Lilac, fine and large.
LORD CLYDE.—Rose shaded, purple, large and good.
MISS ANNA.—Scarlet, fine clear yellow eye, in the class of "Miss Trotter." Price 3s. the set.

Nursery and Seed Establishment, Hammersmith, London, W.

NEW FUCHSIAS.

MESSRS. J. AND C. LEE beg to offer the undernamed FUCHSIAS as superior for size, shape, colour, and substance. They are also of remarkably good habit and very free bloomers.

CRINOLINE has an enormous jupe or petticoat of violet crimson, surmounted by bright crimson waxy sepals, finely reflexed.

JESSY DOUGLAS is an exceedingly rich flower, resembling the above in colour, and is very prolific. Both are first-class show flowers, and are now offered for the first time. Price 7s. 6d. each.

Nursery and Seed Establishment, Hammersmith, London, W.

CALADIUM CHANTINII.

MESSRS. PARKER AND WILLIAMS beg to state that they can supply fine Plants of the above (the finest species in cultivation) at 10s. 6d. each.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

NEW SPRING CATALOGUE.

WILLIAM BARNES begs to inform his patrons and friends that his New DESCRIPTIVE CATALOGUE for the present season is Now Ready. It contains selections of Indian Azaleas, Ferns, Stove and Greenhouse Plants, Chrysanthemums, Fuchsias, Pelargoniums, Verbenas, Petunias, Phloxes, Cinerarias, Hollyhocks, Liliums, Roses, Miscellaneous Bedding Plants, Hardy Trees and Shrubs, Fruit Trees, &c., and will be forwarded post free on application.

Camden Nursery, Camberwell, London, S.

PELARGONIUMS, &c.—2000 Show, Fancy, French and English Spotted varieties, from 6s., 9s., 12s. to 18s per dozen; FUCHSIAS of 1859, 9s. per dozen; GLOXINIAS new, 20s. per dozen, 6 for 12s.; TYDEAS, new, 11 varieties for 18s.; ACHIMENES, choice, 9s. per dozen; BEGONIAS, several choice varieties, from 1s. 6d. to 3s. 6d. each. Also a large quantity of VERBENAS, DAHLIAS, and other Bedding plants. The Trade supplied. Catalogue for one stamp.

HENRY WALTON, Edge End, Marsden, near Burnley.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:—

	P. packet—s.	d.
BROCCOLI, Penzance White (Mitchinson's) ..	1	6
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation..	1	6
CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
,, Moor Park, extra fine..	1	0
MELONS, all the best varieties	1	0
TOMATO, Early Red (Powell's)	1	6
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed ..	2	6
CINERARIA, from finest named varieties ..	2	6
,, maritima	0	6
CELOSIA aurea pyramidalis	1	6
,, crimson-feathered variety	1	6
COCKSCOMB, dwarf, extra fine	1	0
DIANTHUS Heddewigii	1	0
LOBELIA erinus speciosa (true)	1	0
PANSY, from named varieties	1	0
PERILLA Nankinensis	0	6
PRIMULA sinensis fimbriata	1	6
SOLANUM capsicastrum	1	0
,, pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

An inspection and comparison with the prices of several Firms advertising Seeds carriage free is respectfully solicited.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

CINERARIA SEEDS.

SAVED FROM THE

CHOICEST NEW SORTS.

LUCOMBE, PINCE, AND CO. have now ready for sending out SEEDS of very superior CINERARIAS, which have been carefully saved from fine selected flowers of all the best new varieties.

The great satisfaction which their Cineraria Seed has given for several successive years, has induced them to pay even greater attention to the quality, which enables L., P., & Co. confidently to recommend the Seed of this present season's saving, as being vastly superior to any previously sent out by them.

Packets sealed and warranted at 2s. 6d. each, free by post.

The present is an excellent time for sowing, and as their stock owing to its select quality is limited, early orders are respectfully solicited.

Exeter Nursery, Exeter, established 1720.

HORTICULTURAL SOCIETY.—Notice is hereby given, that the next Ordinary Meeting of the Horticultural Society for the Election of Fellows will be held at the Museum of Science and Art, South Kensington (by permission of the Lord President of the Privy Council), on TUESDAY, June 26; the Chair to be taken at 1 o'Clock, P.M. On this occasion a Ballot for Plants will also take place.

LIST OF PLANTS FOR BALLOT.

1. CUPRESSUS LAWSONIANA. One of the finest of the new hardy Californian Cypresses.
2. CUPRESSUS GOVENIANA. A hardy tree.
3. PINUS TUBERCULATA. A hardy Californian tree.
4. CHOROZEMA CORDATUM. A greenhouse shrub.
5. SEEDLING CAMELLIAS. From Florence.
6. CALLISTEMON RUGULOSUM. A greenhouse shrub.
7. VIMINARIA DENUDATA. A greenhouse shrub.
8. LEPTOSPERMUM JUNIPERINUM. A greenhouse shrub.
9. PITTOSPORUM UNDULATUM. A greenhouse shrub.
10. SPIRÆA CALLOSA. A hardy shrub.
11. ERIOBOTRYA JAPONICA. Japan Medlar.
12. PAULOWNIA IMPERIALIS. A hardy deciduous tree, with blue flowers, from Japan.
13. VITIS POLYMORPHA. A hardy creeper.
14. GLYCINE SINENSIS ALBA. A hardy creeper.
15. GARDENIA FLORIDA, var. FORTUNIANA. A greenhouse shrub.
16. ADHATODA CYDONIÆFOLIA. A stove shrub.
17. CEANOTHUS VERRUCOSUS. A hardy shrub, from California.
18. VIBURNUM MACROCEPHALUM. From China.
19. CLEMATIS MICROPHYLLA, var. LEPTOPHYLLA. A greenhouse creeper, from Australia.

Fellows of the Society desirous of obtaining any of the plants to be balloted for are requested, if life members of 40 guineas or subscribers of 4 guineas a year, to name the FOUR sorts they would prefer; or, if life members of 20 guineas, or subscribers of 2 guineas a year, to name the TWO sorts they would prefer. Should there be more applications for any particular plant than the number available for distribution, a Ballot will then take place to determine which applicants are to be supplied.

The arrangements for conducting the Ballot render it necessary that the names or numbers, prefixed to the plants to be drawn for, should be sent to the office of the Society, 8, ST. MARTIN'S PLACE, W.C., on or before SATURDAY, JUNE 23d, AFTER WHICH DATE NO APPLICATIONS CAN BE ATTENDED TO.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY

BEING ABOUT TO RESUME THE

IMPORTATION OF SEEDS AND PLANTS

by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. A knowledge of Spanish or Portuguese would be desirable. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, JUNE 9, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	June 11	Royal Botanic (Exhibition of American Plants)	2 P.M.
TUESDAY,	— 12	Horticultural (Fruit Committee) at St. Martin's Place	Noon
WEDNESDAY,	— 13	Microscopical	8 P.M.
THURSDAY,	— 14	Horticultural (Floral Committee) at St. Martin's Place	1 P.M.

THE rapid decay which has taken place in some of the gunboats which were built under peculiarly urgent circumstances in 1856 has made the subject of decomposition in timber, whether arising from mere chemical change or from the influence of Fungi, of more than ordinary interest at the present moment. We purpose therefore to devote two or three articles to the subject, even although we may not be able to introduce much novelty into a matter which has been so thoroughly ventilated for many years past among men of science.

As regards the gunboats themselves the facts are confined within a very limited compass. There has been much exaggeration respecting their condition, but still there is so much of the deepest importance remaining after every allowance as to render it indispensable that proper inquiries should be made. The assertion that it was possible to thrust an umbrella through the bottom of some of the vessels is palpably absurd to any one who has had an opportunity of examining their condition. That any pointed instrument might be forced with little effort through the sapwood of some of the timbers used in the construction may be true enough, but setting aside the Teak-wood lining, which appears to be everywhere pretty sound, there was nothing about the outward planking so far as we have seen which could justify such an assertion.

Out of the 46 gunboats at Portsmouth 24 have long since received such slight repairs as were needful, and of the remainder three only, the Caroline, Mackerel, and Cherokee, are in such a condition as to require many of the ribs to be replaced. These are materially affected by dry rot, and there are some of them which show several gradations of foxy shading indicative of internal mischief which may be entirely independent of any fungous growth. The dry rot has been principally destructive where wood has been inserted from which the sapwood has never been removed, though more or less general throughout the structures. On examining the wood it is quite clear that a great deal has been admitted which would have been at once rejected had the vessels been built in her Majesty's dockyards. In no case, as far as we could see, has there been the slightest attempt to remove the sapwood, and it is pretty clear that the wood itself, even had this precaution been taken, was in many cases neither properly seasoned, nor was the selection sufficiently careful, if indeed any care was taken in the selection at all. Some of the wood is clearly of such rapid growth—the annual rings or what carpenters call the lease being peculiarly wide—as not to promise much durability, such wood in fact as is produced in moist warm valleys where vegetation is too rapid to insure great powers of resistance; and some was most probably foxy from the beginning, *as is almost uniformly the case with trees which have not grown from Acorns but from old stools.* There was moreover we believe not sufficient room for all the vessels to be built under shelter, and thus the wood, whether unseasoned or in itself unfit for use, had its bad qualities increased by the free accession of atmospheric moisture, which, from the rapidity with which the boats were constructed, had no chance of drying up, but served as a stimulus to the immediate growth of Fungi.

There was also another evident cause of mischief arising from the imperfection of the caulking, the oakum not being driven completely home. The decay of the ends of the ribs where the component parts join each other, which is peculiarly evident, is probably owing to this as much as to any other cause.

A great deal of the evil doubtless arose from the necessity of having the vessels ready for use as quickly as possible, but whether sufficient precautions or not were taken to secure reasonably good workmanship and materials under the existing pressure it is not within our province to pronounce; and there is the less necessity for saying much about the matter, as the whole subject will doubtless be thoroughly sifted by the committee appointed to investigate it.

Those of our readers who are acquainted with the extraordinary rapidity with which decay takes place occasionally in vessels where the utmost precautions have been made to secure the very best materials, will cease to wonder at what has happened in the gunboats. Nay it may even be matter of surprise that the destruction was not far more complete. It is notorious that none but the very best wood is used in our public dockyards. It is not only seasoned in the most approved manner, but selected with the greatest care, and yet instances are on record in which dry rot has made great ravages in a ship even before it has been completed. But even natural decay will sometimes under such circumstances render timber completely useless. In a particular vessel which was some years on the stocks, when alterations were necessary in consequence of improvements in naval architecture which had been made since it was first laid on the stocks, it was found that the keel, which is, we believe, always made of British Elm, was one mass of decay, so as to make its complete renewal an absolute necessity.

A FEW remarks made by ourselves in a late Number of the *Gardeners' Chronicle* and the suggestions of Mr. CHESTER are beginning to attract the attention of thoughtful men. The EDUCATION of the rising generation of GARDENERS is a subject which all well wishers to those who are to live by horticulture are deeply interested in; for it must be admitted that in this part of our social arrangements there is room for much improvement. The race of gardeners who have carried and are carrying the art of horticulture to so high a point in this country cannot last for ever; and it behoves us to take care that those who must succeed them possess attainments at least equal to their own. Among the mature gardeners of England are men whose knowledge goes far beyond what is required to grow a plant; excellent business habits, skill in construction, good taste in arrangement, sound knowledge of practical physiology, and an acquaintance with various collateral matters are qualities by no means rare among them. To name individuals would be invidious; nor is it necessary, for our own columns have for 20 years borne the strongest possible testimony to the justice of this representation. The best writers on practical subjects have been gardeners, or have been educated as such, who can lay down the pruning knife, or put aside the potting-board and take up their pens with equal skill. It is not for improving men like them that an educational horticultural movement is desirable, but to increase their number and secure an ample supply of able successors.

There are, however, unusual difficulties in carrying out any general scheme, on account of the distance of gardens from each other, and the insufficient means of intercommunication among the young men employed there. Small gardens in or around towns are not the best schools of horticulture, and, with the exception of the metropolis, great gardens are chiefly remote from populous places. Young gardeners have therefore little means of joining schools of mutual instruction, or attaching themselves to the Mechanics' Institutes or other associations for local education in regular communication with great central boards, so that no general scheme for ascertaining educational attainments would be likely to suit the men unless some portion at least of the qualifications expected of them could be ascertained satisfactorily by local certificates, parochial or nearly so, receivable for a part of the branches of knowledge to which they might be invited to apply themselves.

Upon this subject we have a rather long communication from a correspondent signing himself *Linager*, who appears to entertain views of this subject so moderate as to deserve attention. He says that he has been a gardener, although for some years he has ceased to follow the business: he professes to be well acquainted with the real wants and means of young gardeners, and he fully concurs in our opinion that educational certificates would have great practical value in their after career, provided care was taken to demand nothing more of them than what has an evident relation to their future wants. He proposes that some central body, of acknowledged authority, should promulgate a scheme of education, provide means of testing qualifications, grant certificates of merit, and offer money prizes for those who most highly distinguish themselves. We annex his scheme printed nearly in his own words, to which we add such of his comments as are most likely to promote discussion.

It will be seen that he proposes three distinct examinations to be held; the first PRELIMINARY; the second what is called a PASS; and the third for HONOURS. The two first he would make imperative, the third might be optional.

In the PRELIMINARY EXAMINATION he would require little more than what every decently educated lad must learn if he intends to rise above the level of a labourer. The only higher points would be *land-surveying*, which would be made a separate subject, while *book-keeping* and *timber measuring* would form part of arithmetic. These last would serve as a test of what is known beyond what is commonly called cyphering. The examination should not be taken before the age of 18, nor after that of 21; and LINAGER would be satisfied with reports from local boards, or the parochial clergy.

In the PASS EXAMINATION he would require firstly ample evidence of the possession of *Practical skill as a cultivator;* this would have to be supplied by some first class gardener residing in his neighbourhood who should be called upon to inspect his work. Such an inspector should be approved by the central board, appointed by it, and paid a reasonable fee for his trouble. On no account should any inspector be allowed to certify to the skill of his own men. In the second place he would insist upon a knowledge of *Practical botany*, a prominent feature of which should be naming at sight cultivated plants, whether in leaf and flower, or in neither. This he would ask the Horticultural Society to place in the hands of the Secretary of their Floral Committee. If a candidate had passed the first five subjects of examination, LINAGER thinks that the Horticultural Society should contribute to the expenses of the candidate's journey to London. The result of getting through this pass examination should be the acquisition of a formal certificate that the candidate is fitted to fill a situation. But as the pass examination could not take place later than the age of 23, there would be plenty of time to prepare for a final examination which we have named for honours.

The EXAMINATION FOR HONOURS would of course

be optional; but no one should be permitted to offer himself unless he had already received a certificate of having passed. As this would be one of great importance it ought not to be accessible to men under the age of 25. It should consist—1, of *Vegetable physiology* in its relation to the functions of plants; 2, of *Geography*, so far as the native countries of cultivated plants and the climate to which they are naturally exposed are concerned; 3, of *Climate*, that is to say of the influence exercised upon plants by temperature, moisture, &c. These three subjects might be taken by the Society of Arts.

LINAGER further proposes a *Pomological Examination*, for the purpose of ascertaining the knowledge of varieties of fruit, which he thinks Mr. HOGG as Secretary of the Pomological Committee might be induced by the Horticultural Society to undertake. And to all these he would add so much of *Mathematics* as are required for understanding the first book of Euclid; but he would allow any candidate to decline this subject without prejudice.

Such are LINAGER'S proposals, not put altogether in his own language, which required condensation and arrangement, but expressed in a methodical way. We cannot say that we wholly concur in every part of the scheme, but we regard it as a good basis, upon which something valuable may be built if experienced gardeners will take it seriously into consideration and point out how it may be improved.

THE EDUCATION OF GARDENERS.

THE following scheme for ensuring to young men learning to be gardeners an economical education better suited to their wants than they can now obtain is submitted to the consideration of those who have to guide their course, whether as friends, guardians, or parents:—

	Examiners.
I.—PRELIMINARY EXAMINATION. (To be passed at any time between the ages of 18 and 21.)	
1. *Writing*	Local Institutions, or Clergy.
2. *Spelling*	
3. *Arithmetic*, including book-keeping and timber measuring	
4. *Land Surveying*	
II.—PASS EXAMINATION. (To be passed between the ages of 22 and 23.)	
5. *Practical Skill* in cultivation	Some first-class gardener.
6. *Practical Botany* and naming plants at sight	Secretary of the Floral Committee of the Hort. Society.
III.—EXAMINATION FOR HONOURS. (To be passed between the ages of 24 and 25.)	
7. *Vegetable Physiology*, in its relation to cultivation	Society of Arts.
8. *Geography*, so far as relates to vegetation	Do.
9. *Climate*, in its relation to vegetation	Do.
11. *Mathematics* (optional), not to go beyond the first book of Euclid	Do.
10. *Pomology*, naming fruits at sight	Secretary of the Pomological Committee of the Horticultural Society.

Linager.

FERTILISATION OF BRITISH ORCHIDS BY INSECT AGENCY.

I SHOULD be extremely much obliged to any person living where the Bee or Fly Orchis is tolerably common, if he will have the kindness to make a few simple observations on their manner of fertilisation. To render the subject clear to those who know nothing of botany, I must briefly describe what takes place in our common British Orchids. The pollen-grains form two pear-shaped masses; each borne on a foot-stalk, with a sticky gland at the end. The pollen masses are hidden in little pouches open in front. When an insect visits a flower, it almost necessarily, owing to the position of the parts, uncovers and touches the sticky glands. These firmly adhere to the head or body of the insect, and thus the pollen-masses are drawn out of their pouches, are dragged over the humid stigmatic surface, and the plant is fertilised. So beautifully are the relative degrees of adhesiveness of the gland, and of the grains of pollen to each other and to the stigmatic surface mutually adapted, that an insect with an adherent pollen-mass will drag it over the stigmas of several flowers, and leave granules of pollen on each. The contrivance by which the sticky glands are prevented from drying, and so kept always viscid and ready for action, is even still more curious; they lie suspended (at least in the two species which I have examined) in a little hemispherical cup, full of liquid, and formed of such delicate membrance, that the side projecting over the gangway into the nectary is ruptured transversely and depressed by the slightest touch; and then the glands, sticky and fresh out of their bath, immediately and almost inevitably come into contact with and adhere to the body which has just ruptured the cup. It is certain that with most of our common Orchids insects are absolutely necessary for their fertilisation; for without their agency, the pollen-masses are never removed and wither within their pouches. I have proved this in the case of *Orchis morio* and *mascula* by covering up plants under a bell-glass, leaving other adjoining plants uncovered; in the latter I found every morning, as the flowers became fully expanded, some of the pollen-masses removed, whereas in the plants under the glass all the pollen-masses remained enclosed in their pouches.

Robert Brown, however, has remarked that the fact of all the capsules in a dense spike of certain Orchids producing seed seems hardly reconcileable with their fertilisation having been accidentally effected by insects. But I could give many facts showing how effectually insects do their work; two cases will here suffice; in a plant of *Orchis maculata* with 44 flowers open, the 12 upper ones, which were not quite mature, had not one pollen-mass removed, whereas every one of the 32 lower flowers had one or both pollen-masses removed; in a plant of *Gymnadenia conopsea* with 54 open flowers, 52 had their pollen-masses removed. I have repeatedly observed in various Orchids grains of pollen, and in one case *three* whole pollen-masses on the stigmatic surface of a flower, which still retained its own two pollen-masses; and as often, or even oftener, I have found flowers with the pollen-masses removed, but with no pollen on their stigmas. These facts clearly show that each flower is often, or even generally, fertilised by the pollen brought by insects from another flower or plant. I may add that after observing our Orchids during many years, I have never seen a bee or any other diurnal insect (excepting once a butterfly) visit them; therefore I have no doubt that moths are the priests who perform the marriage ceremony. The structure, indeed, of some Orchids leads to this same conclusion; for no insect without a very long and extremely fine proboscis could possibly reach the nectar at the bottom of the extremely long and narrow nectary of the Butterfly-Orchis; and entomologists have occasionally captured moths with pollen-masses adhering to them. If any entomologist reads this, and can remember positively having caught a moth thus furnished, I hope he will give its name, and describe exactly to which part of the moth's body the sticky gland adhered.

We may now turn to the genus Ophrys; in the Fly Orchis (*Ophrys muscifera*), the pollen-masses, furnished with sticky glands, do not naturally fall out of their pouches, nor can they be shaken out; so that insect-agency is necessary, as with the species of the other genera, for their fertilisation. But insects here do their work far less effectually than with common Orchids; during several years, previously to 1858, I kept a record of the state of the pollen-masses in well-opened flowers of those plants which I examined, and out of 102 flowers I found either one or both pollen-masses removed in only 13 flowers. But in 1858 I found 17 plants growing near each other and bearing 57 flowers and of these 30 flowers had one or both pollen-masses removed; and as all the remaining 27 flowers were the upper and younger flowers, they probably would subsequently have had most of their pollen-masses removed, and thus have been fertilised. I should much like to hear how the case stands with the Fly Orchis in other districts; for it seems a strange fact that a plant should grow pretty well, as it does in this part of Kent, and yet during several years seldom be fertilised.

We now come to the Bee Orchis (*Ophrys apifera*), which presents a very different case; the pollen masses are furnished with sticky glands, but differently from in all the foregoing Orchids, they naturally fall out of their pouches; and from being of the proper length, though still retained at the gland-end, they fall on the stigmatic surface, and the plant is thus self-fertilised. During several years I have examined many flowers, and never in a single instance found even one of the pollen-masses carried away by insects, or ever saw the flower's own pollen-masses fail to fall on the stigma. Robert Brown consequently believed that the visits of insects would be injurious to the fertilisation of this Orchis; and rather fancifully imagined that the flower resembled a bee in order to deter their visits. We must admit that the natural falling out of the pollen-masses of this Orchis is a special contrivance for its self-fertilisation; and as far as my experience goes, a perfectly successful contrivance, for I have always found this plant self-fertilised; nevertheless a long course of observation has made me greatly doubt whether the flowers of any kind of plant are for a perpetuity of generations fertilised by their own pollen. And what are we to say with respect to the sticky glands of the Bee Orchis, the use and efficiency of which glands in all other British Orchids are so manifest? Are we to conclude that this one species is provided with these organs for no use? I cannot think so; but would rather infer that, during some years or in some other districts, insects do visit the Bee Orchis and occasionally transport pollen from one flower to another, and thus give it the advantage of an occasional cross. We have seen that the Fly Orchis is not in this part of the country by any means sufficiently often visited by insects, though the visits of insects are indispensable to its fertilisation. So with the Bee Orchis, though its self-fertilisation is specially provided for, it may not exist here under the most favourable conditions of life; and in other districts or during particular seasons it may be visited by insects, and in this case, as its pollen masses are furnished with sticky glands, it would almost certainly receive the benefit of an occasional cross impregnation. It is this curious apparent contradiction in the structure of the Bee Orchis—one part, namely the sticky glands, being adapted for fertilisation by insect agency—another part, namely the natural falling out of the pollen-masses, being adapted for self-fertilisation without insect agency—which makes me anxious to hear what happens to the pollen-masses of the Bee Orchis in other districts or parts of England. I should be extremely much obliged to any one who will take the trouble to observe this point and to communicate the result to the *Gardeners' Chronicle* or to me. *Charles Darwin, Down, Bromley, Kent.*

THE CROWN ESTATE OF CHOPWELL WOODS.

I SAW a statement in a public paper the other day, showing the income and expenditure of the Crown estate of Chopwell Woods, in the county of Durham, from May 1853 to May 1859; and as it was given in such a way as to bring out the actual result of the system of management which has been pursued, compared with that recommended by me in my report on these woods, detailed in the thirtieth report of the Commissioners of H.M. Woods and Forests, bearing date November 29, 1852, I think it right, in justice to both the Right Hon. T. F. Kennedy and myself, to refer very shortly to the results as now brought out.

In December 1851 Mr. Kennedy, who was then Commissioner in charge of H.M. Woods and Forests, requested me to inspect the Crown woods and plantations at Chopwell, and to report to him my opinion in regard to them; and this I did in a report to him dated December 31 of the year last named. The substance of my recommendations in regard to this property of the Crown may be summed up thus:—"Seeing that the existing stock of wood on these lands, to the extent of 779 acres, is in such an unhealthy state, in consequence of past neglect, that it will not now produce more than one-eighth of the value it would have done had it been in time attended to and well managed, I would strongly advise to have the crop on the extent above specified entirely cut down and disposed of, the land effectually drained, and properly replanted with Larch alone, for which it is well adapted." I stated in my report that "the present value of the crop on the extent advised to be cleared was 11,138*l.*, and that although it should be allowed to stand for other 20 years it could not at the end of that period be worth more than 15,100*l.* while if it were cleared and properly replanted immediately after, there would, under future good management, exist upon the same land in 20 years after the completion of planting, a crop of Larch worth at least 17,000*l.*"

After a great deal of discussion with the Treasury in respect to my recommendations for the improvement of this woodland property of the Crown, Mr. Kennedy was authorised to put them in operation and to carry them out; and now that they have been carried out, the result is that 15,079*l.* has been realised by the sales of the wood upon the 779 acres recommended to be cleared, which is 3941*l.* more than my valuation of it at the time. This difference is accounted for from the facts that in 1851, when I valued the crop in these woods, the price of such small trees as it consisted of was very low, and that in about one year afterwards it rose nearly 20 per cent. As it stands, however, this result is doubtless satisfactory to all parties.

With regard to the expenditure, I estimated the cost of clearing, draining, and replanting at 4767*l.* 14*s.* in all, while the actual result is an expenditure of 4792*l.* 5*s.* This, then, must also be considered satisfactory, and goes to prove that the Deputy Surveyor has acted energetically and judiciously in the performance of all the operations he has now completed for the future improvement of the Chopwell Woods; that Mr. Kennedy, in appointing him to the charge, put the right man in the right place; and that if he (Mr. Kennedy) had remained in the office of Woods, the improvements he contemplated and projected, in respect to the other woodlands of the Crown, would, by this time, have been equally as satisfactorily carried out.

With regard to the crop of Larch which has been planted on the 779 acres which were cleared at Chopwell, I may only remark that it is in the most promising condition possible, and gives evidence that the land is now well suited to bring the trees to even more than the value which I anticipated, and which I stated in my report on the subject. In proof that the crop is making satisfactory progress, I may only state that although the oldest portion of it is only six years planted, thousands of the trees are already upwards of 18 feet high. This extraordinary result is no more than I expected when I recommended the planting of this estate with Larch, and goes to prove the immense advantages of a thorough and well-conducted system of drainage in the rearing of healthy Larch plantations.

Mr. Clutton, however, did not anticipate such a state of things in regard to the clearing and replanting of the estate of Chopwell, as he states in his report on it, at page 218 of the Blue Book referred to above, "I would not advise the clearing of the whole of the ground; if it is only partially cleared and replanted, the shelter of the masses of the present crop would be found highly useful." He does not even suggest drainage, and at page 219 he seems to infer that it

would not pay to plant Larch, as he refers to some case of the Dean and Chapter of Durham having planted extensively, and that the trees grew so badly that they thought it would not answer. Were Mr. Clutton to inspect the Chopwell woods now, he would I have no doubt have his eyes opened in regard to the effects of drainage in the growing of woods, and would give a very different report on the subject from that which he made in reference to my suggestion in 1852. He then stated in regard to the value which I said the crop would attain in a certain number of years: "I confess this result is startling." If he were to visit these woods now, he would indeed be startled by a reality, and not by an idea. I conclude my remarks by stating that if the crop in them be properly attended to, it will be of more value to the Crown than even my report sets forth, startling as that appeared to those seemingly unacquainted with the results arising from an improved state of arboricultural matters. *James Brown, Grantown, May* 30. [We have received another letter upon this subject; but it is too intemperate for our columns.]

MYCOLOGY,—No. XX.

BOLETUS ELEGANS, *Fr.*—The subject of the present notice, together with several allied species, is said by authors to be esculent; but their qualities, if unattended by anything noxious, are not such as to recommend them to notice except in countries where the peasantry are reduced to eat bark bread, a substance whose character no one can easily realise who has not had an opportunity of seeing and tasting specimens.

It is not therefore on account of any properties which are likely to make it available for food that it is now introduced, but because when well grown it is a common and far from inelegant object, and because of its close connection with one or two far more common species, which sometimes grow in such incredible quantities as to make it a question whether they cannot be put to some economical use.

Boletus elegans is remarkable in common with some two or three other British species of the same genus for being extremely viscid when moist, though in dry weather it becomes perfectly dry, as well as for possessing a distinct veil which forms a slight ring upon the stem, and is sometimes attached in fragments to the edge. From its nearest allies it is distinguished by its brilliant golden yellow, or ferruginous tint, its neat form, its firm equal stem, which is at first coloured like the cap, and then acquires a rufous tint; but especially by its being marked with little dots, but not reticulate, above the fugacious ring, which is at first whitish, and then acquires a yellow tinge; and its decurrent, minute, simple golden-yellow pores inclining to sulphur. The flesh moreover is of a decided, though pale yellow.

This species, in conjunction with *Boletus flavus*, is *Boletus Grevillei*, Klotzch, and as such was published in 1836, in the English Flora; but whether the two are considered mere varieties or not the question of priority is so uncertain that it is far best to take the name proposed by Fries, which has been adopted above. It occurs not only in Fir woods, but also in Heaths, and in mixed woods, though certainly more abundant where Conifers prevail. It is to be found in all parts of England and in most parts of Scotland, but as it has been mixed up by authors with other species it is difficult to ascertain its exact geographical limits. It is never however so abundant as *B. flavidus* and *laricinus*, the latter of which, as the name implies, is peculiar to Larch woods, and is almost destitute of any yellow tinge.

As these and especially the former occur sometimes in such quantities that it is possible without much trouble to collect them by cartloads, it becomes a question whether they may not be profitably employed as manure. Their highly nitrogenous quality renders this probable, and the effect of decayed Fungi as a stimulant to Grass land is visible enough to every one in fairy rings, but the question, like most other agricultural questions, is one of comparative estimate of outlay and return. The great drawback to such sources of manure is, that the quantity of water which they contain is so great that the residuum when this has passed off is comparatively small. River weeds for example have been collected on a large scale by an intelligent farmer in our neighbourhood, but the quantity of solid matter obtained from them was so small as to render their collection unprofitable, and it is to be feared that Funguses, though more promising from their constituent elements, may from the same cause not yield a remunerative manure. It is however well worth the experiment where they abound. If a trial should be made the best method would be to treat them in somewhat the same way in which Seaweed is treated on the coast, where alternate layers of sand and Seaweed are heaped together and left till the vegetable matter is thoroughly decomposed. Both in the case of river weeds and Seaweeds there is a large admixture of animal matter, which at any rate does not take from their value, and the same may be said of Fungi. We know of no good quantitative analysis of Fungi which may enable us to judge of the probable result of such an experiment, but we have little doubt that the residuum would be a useful manure, provided the cost of its production does not exceed its intrinsic value. Sand is not always easily procured, and is not perhaps the best absorbent matter which might be used in the preparation of the compost. Road scrapings, peat, peat ashes, or other locally available substances, might be substituted with advantage. It would of course be useless to make any attempt where Fungi are not produced in sufficient quantities to make remuneration probable, and to enable the scale on which the experiment is made to be such, as to be likely to lead to some certain result. *M. J. B.*

BOLETUS ELEGANS.

Natural size. (Copied by permission from Greville's Scottish Cryptogamic Flora.)

ON THE ART OF PERFUMERY, ITS HISTORY AND COMMERCIAL DEVELOPMENT.

BY EUGENE RIMMEL.

[Abridged from the Journal of the Society of Arts.]

(*Continued from* p. 501.)

THE perfumers of Rome (called unguentarii) were very numerous, and occupied a quarter of the town named Vicus thurarius, in the Velabrum. They were principally Greeks, and their shops were the common resort and meeting-place of the fashionable loungers. It would far exceed the limits of this paper to give a complete history of Roman perfumery, but those who may feel some interest in the subject will find in "Pliny's Natural History" the list and description of the ingredients used for this purpose, which were imported from all parts of the known world.

At the fall of the Roman empire, when a horde of barbarians drove away civilisation and luxury from the imperial city, perfumery took refuge for a time in the new eastern metropolis. The Greek emperors and their court made a lavish use of perfumes, and at all public festivals fountains of fragrant waters perfumed and refreshed the air. The Oriental Church consumed also at that time such a quantity of aromatics for religious ceremonies that they purchased in Syria a piece of ground 10 square miles in extent, planted with incense trees for their own special use.

The Arabs, originating as they did from a country producing perfumes, were naturally very fond of them, and have preserved that taste to the present day. They introduced perfumery into Spain, and at the brilliant fêtes given by their caliphs at Granada, Cordova, or Seville the atmosphere was always impregnated with the sweetest odours. I have in my possession (owing to the kindness of M. Chapelié, of Tunis) the recipes of the principal perfumes and cosmetics which are in use among the modern Arabs. I look upon them as very interesting in this point of view, that they are undoubtedly the same preparations that were used centuries ago, their composition and appearance being of the most primitive description. Indeed, I am inclined to think that some of them were borrowed by the Arabs from the Egyptians. This is evidently the case with the celebrated Kohl or Kheul, the recipe for preparing which is very curious. They remove the inside of a Lemon, fill it up with plumbago and burnt copper, and place it on the fire until the whole becomes carbonised; then they pound it in a mortar with coral, Sandalwood, pearls, ambergris, the wing of a bat, and part of the body of a chameleon, the whole having been previously carbonised and moistened with Rose-water whilst hot. They apply it inside the eyelids with a small ebony stick, and believe, as did the Egyptians, that it strengthens the eyes and cures inflammation. Henné or henna is made with the powdered leaves of the Lawsonia inermis, which is used throughout the east by the women for dyeing of a red colour their hands and nails, their feet, and even their hair; also a turpentine paste used as a depilatory, and a white composition called *schouda*, which they apply instead of rouge for raising a natural bloom on the cheek.

Among modern nations, France and Italy were the first to resume the use of perfumes. In the Catholic churches they not only burnt incense as they do now, but they used fragrant tapers to perfume the air at all grand ceremonies; and we find that such was the case at the baptism of Clovis, the first Christian King of France, in the year 496. Perfumes were also introduced into private life at an early period, and Charlemagne is said to have made great use of them. In the year 1190 Philip Augustus granted a charter to the master perfumers, which was confirmed by John in 1357, and later by Henry III. in 1582. That charter was for the last time renewed and enlarged by Louis XIV. in 1658. It was then requisite to serve four years as an apprentice and three years as companion to be elected master, which shows it was already considered a handicraft of some importance. Their preparations were at first very simple, such as aromatics to burn in apartments, various ungents, and Rose-water, which was always offered by noblemen to their guests at table. Alcoholic perfumes were not made till about the 14th century, and the first we find mentioned is Hungary water distilled from Rosemary, which, according to some authors, was prepared in the year 1370 by a Queen of Hungary, named Elizabeth, who had the recipe from a hermit, and became so beautiful through the use of it that she was asked in marriage at the age of 72 by the King of Poland. The truth of this story is, however, doubted by Beckmann, who devotes a whole chapter to the subject, and I am inclined to be of the same opinion.

When Catherine de Medicis came to France to marry Henry II., she brought with her a Florentine, named René, who was very expert in preparing perfumes, for the Italians were then more advanced than the French in that art, and from that time perfumery came into general use among wealthy people. This René also possessed the art of preparing subtle poisons, and his royal mistress is said to have had frequent recourse to his talents to get rid of her enemies. Among her victims, the historians mention Jeanne d'Albret, mother of Henry IV., and state that she was poisoned by having worn some perfumed gloves presented to her by Catherine, but some modern chemists doubt whether it was possible to poison any one by such means.

Perfumery was still at that time in a semi-barbarous state, and I have met with a French recipe-book bearing date 1599, which bears evidence of having been written by some ignorant and superstitious alchemist. I shall merely quote, as a specimen of the state of the art of that period, a recipe for making a marvellous water for the complexion, which is as follows:—"Take a young raven in the nest, feed it on hard eggs for 40 days, kill it, and distil it with Myrtle leaves, talc, and Almond oil." It also gives a recipe for making pomatum with Apples, which was the custom then, and was the origin of the name. From that time, however, perfumery went on progressing, and at the court of Louis XV. etiquette prescribed the use of a particular perfume for each reception day, which caused it to be named the "perfumed court." Since then, the advance of civilisation and public welfare has rendered the use of perfumery general in all ranks of society, and France has now become the chief mart of that article for all parts of the world.

In England perfumes were at first imported from Italy and France, and came into great vogue during the reign of Queen Elizabeth. Shakspeare often mentions Musk, civet, perfumed gloves, and pomanders, or pommes d'ambre, which were balls of perfume, to be held in the hand and smelt occasionally: the latter were supposed to preserve from the plague.

It is difficult to ascertain the precise date when manufactories of perfumery were first established in England, as perfumers did not form here a separate corporate body as they did in France, but in an old English recipe book, in my possession, printed in 1663, I find a dentifrice prepared by M. Ferene, of the New Exchange, Perfumer to the Queen, so that they had already at that time begun to manufacture. Those recipes are about in the same style as those of the French book. In Dean Swift's time perfumers' shops seem to have been the resorts of loungers, as they were in ancient Rome, for he says,—

"First issued from perfumers' shops
A crowd of [illegible] fops"

And since that period the perfumery trade of England has followed about the same progress as that of France, until it has reached its present state of prosperity.

To conclude the history of perfumery, I shall briefly state that, besides the nations I have mentioned, others

have been in the habit of manufacturing and using perfumery for ages past. The inhabitants of India were among the first to make perfumes, possessing as they did most of the elements at home. Their perfumery, however, has not advanced with the times, and is consequently far behind our modern productions. The Chinese are also very partial to odours. You will find on the table specimens of the joss sticks they burn in temples and private houses, and of some of their perfumes. The latter, however, are only essential oils, some of which I suspect to be of Indian origin. The Japanese use, likewise, many cosmetics for their toilet, and the Tagals of the Philippine Islands are passionately fond of scents. The use of perfumes was even known to the ancient Mexicans, and Montezuma used to mix ambergris with his Tobacco. In fine, it is to be supposed that in all countries which produce perfumes, men find means to appropriate them to their use and pleasure, and even in a half-savage island like Otaheite, the natives anoint their hair with a pomatum called Monoï, prepared from Cocoa-nut oil flavoured with the flowers of the Tiaré, a sort of Jasmine, with large petals, which exhales a beautiful odour.

I shall now give you the statistics of the present state of the perfumery trade in England and France, confining myself to those two countries, not only because they are the most important, but also because they are the only recognised centres of manufacture of that article with which they supply the whole world.

There are about 40 manufacturing perfumers in London, employing from 20 to 100 hands each, according to the importance of their business. I exhibit here a table of the exports from 1853 to 1858, such as are found in the Blue Books, but I must tell you I consider those returns as quite incorrect. Thus, in 1858, it would appear that the total exports of perfumery from the United Kingdom was only 80,791*l*., whilst I am certain that they were at least three or four times that amount. It is true that fancy soaps are not included in this table, but the amount reported (4928 lbs. for 1858) is so ridiculously small, that it is also evidently wrong. Our exports of scented soaps to the United States alone would far exceed that quantity. From the table of imports of essential oil and perfumery materials during the same years, it will be seen that in 1858, the quantity of essential oils imported amounted to 290,204 lbs. in weight, of a value of 168,330*l*.; and if we add to that the other perfumery materials not included in essential oils, such as Musk, of which 10,957 ozs., worth at least 15,000*l*., were imported, we shall find that the total amount of those imports exceeded 200,000*l*. If we consider that those do not include spirits of wine, which are very costly in this country; fancy soaps, of which immense quantities are made; and many other materials, we may fairly assume that the total production of perfumery in the United Kingdom does not fall short of 1,000,000*l*. per annum.

In Paris there are about 80 perfumers, employing together from 2000 to 3000 hands. The annual amount of the export trade of perfumery averages from 12 to 13 millions of francs, or about 500,000*l*. The yearly average export trade for 10 years, from 1827 to 1836, was six millions of francs; from 1837 to 1846, 8 millions; from 1847 to 1856, 10 millions, and that for 1858 above 12 millions, so that the trade has doubled since 25 years. It is difficult to estimate the amount of home consumption, but it is at least equal to that of the exports, which gives a probable total product of 1,000,000*l*., or about the same as that of England.

The principal branches of the perfumery trade are making scented soaps, compounding perfumes, and preparing various articles for the toilet. The process of soap-making is so well known to you that I need not describe it here; I shall only mention that there are four kinds of soap generally manufactured by perfumers, hard soap by the hot process, which is made by boiling grease, and sometimes a small portion of resin, with an excess of soda-lees, until they become saponified; hard soap by the cold process, which is prepared by introducing a fixed dose of concentrated soda-lees into grease in a liquefied state; soft soap by the cold process, which is obtained in the same way as the last, only substituting potash for soda-lees; and transparent soap, which is a combination of soap and alcohol. The cold process is principally resorted to when a delicate colour or fine odour is to be procured. By substituting a pomade for the grease, you obtain the true scent of the flower. I have here specimens of a Violet and a Jasmine soap, prepared in that way, which no essential oil could give. The removal of the excise restrictions has caused great improvements in the manufacture of English toilet soaps, by giving the perfumers free scope to make experiments, and to prepare scented soaps with all the care they require, instead of being compelled to resort, as before, to the common soapmakers.

(To be continued.)

Home Correspondence.

Material for Sash Lines: Thongs of Raw Hide.—I have often thought that it would be well if we could find a more durable material than "hemp" for the manufacture of sash lines for horticultural buildings. May I ask some of your correspondents: "Would not cord, made of raw hide far surpass the ordinary sash-line in durability and answer as well in every other respect?" I am not aware if such can be purchased at a moderate rate; but I think I noticed, a year or two ago, an importation of ropes made of raw hide from India. If your correspondent Felix, Clapham Park, will turn to the Number of your paper for September 27, 1856, I think he will find his remedy. *Amateur.* [Nothing can be worse than common sash-lines, which are only made to sell.]

Nicholson's May Queen Strawberry.—Early in 1859 Mr. W. J. Nicholson with great liberality sent me 25 plants of his new seedling Strawberry May Queen, which were planted in the open border, but owing to the rigour of that inclement springtide they produced only a few blossoms, but perfected no fruit. During the summer I rooted in thumb-pots 70 plants, which in September were detached from the parent plants and placed close together on an adjacent gravel walk, where they remained without any plunging, covering, or other protection, exposed entirely to the severity of the long winter. In February 1860 when I arranged the trees in my orchard-house in their summer quarters, I removed the May Queen plants and placed them on the back border of the house, from 7 to 10 feet from the glass, where they soon rooted themselves through the holes at the bottom of the pots into the soil of the border. They first expanded their blossoms on the 21st April, and pushed up large trusses of good-sized fruit (for an early Strawberry), which they are now ripening, and which is of good colour and flavour. The expanded leaves of the orchard-house trees, which were crowded, shaded the Strawberries rather too much, and of course retarded their ripening, which would no doubt have been also promoted had they been shifted into 6-inch pots and placed nearer the glass in a less shaded position. Suffice it that, notwithstanding all these less favourable circumstances, it has proved itself, among the 114 sorts in my garden, to be by far the earliest Strawberry in cultivation, especially for forcing, and capable of producing trusses of fair regular-sized fruit, 12, 20, or even 30 in number. The May Queen plants in the open border blossomed early in May, and have set their fruit well, which with a few days of warm sunshine, (instead of the incessant rainy and cloudy cold weather we have had here for the last nine days), will soon begin to ripen. In the summer of 1859 I also rooted 25 Keens' Seedling in 6-inch pots, which were left all through the winter on the gravel walk close by the May Queen plants. These were also in February 1860 removed to the orchard-house and placed side by side with the May Queen, and subjected to the same watering—both with river water every day and liquid manure (guano 1 lb. to 20 gallons of water) once a week. These are now only in full blossom, and whilst every plant of the May Queen blossomed and fruited, out of the 25 Keens' Seedling not more than 10 blossomed. Some Cuthill's Black Prince rooted in 6-inch pots and treated as above expanded their blossoms on May 12 in the orchard-house, and have scarcely set their fruit as yet. In the open border the Black Prince is now only in full blossom, and promises an immense crop. *Rev. W. A. Leighton, Luciefelde, Shrewsbury, May* 29.

Wireworms.—The parents of these pests are now on the wing and will be so daily until the 20th or 25th; everybody should lend a hand in their destruction. In small gardens they may be almost entirely eradicated in two years. In 1853 I collected and placed in a case wireworms in all their changes and transformations,

from the almost invisible worm up to the winged beetle; they are now as fresh as ever they were and have been the means of instructing scores of individuals who would otherwise never have believed the wireworm would become a beetle. I would willingly supply specimens to any one who does not know the parent of the wireworm. A stamp or two should as a matter of course accompany the inquiry, *W. Prestoe, Hackwood Park, near Alton.*

Holly Trees.—Nobody appears to have answered the inquiries of "Diss" respecting the timber qualities of Hollies. In the absence of better information, I venture to inform him that in the pleasure grounds here there are some 60 or 70 large trees, many of them centenarians. I have selected about 40 as referees, 16 of which are strictly speaking poets' Hollies; 14 are covered with spinous leaves; and the remainder entire-leaved, or what is provincially called "Maiden Hollies." They one and all assume something of the timber-like properties your correspondent is desirous of obtaining, and they all girth over 2 feet at about 3 feet from the ground. Most of them are from 30 to 40 feet in height, and all incline to assume a nice pyramidal shape, so it is rather difficult to determine which would ultimately be the best timber; but I should certainly prefer the entire-leaved. Take for instance a single individual tree and it will be found to be the tallest and consequently to contain more timber than any other, for there is not to be found one spinous leaf on this tree; every leaf is plain and entire. Poets may amuse themselves and their readers; ay more, they furnish some useful information and interesting lessons even in the Holly tree, so give poets their Hollies; hedges and plantations may have the spinous-leaved; and let "Diss" take the entire-leaved for timber and to decorate the old hall at Christmas—

> "For Christmas was no Christmas to me,
> Without Mistletoe and Holly tree."

The entire-leaved or "Maiden Holly" produces at all seasons a much greater abundance of Holly-berries than any other variety. *W. Prestoe, Hackwood Park.*

Bougainvillæa spectabilis.—Several notices have appeared in your columns respecting this plant, and if it can but be successfully cultivated in this country it will be found to deserve all the encomiums that have been bestowed on its beauty. I doubt indeed if the vegetable world knows anything more glorious than the Bougainvillæa in full blossom. Some specimens were exhibited at the last flower show in Regent's Park, but they conveyed but a faint impression of the magnificent tint which the plant displays when growing in a state of nature, nor do I know any language by which to convey an idea of it. It thrives well in the west of India, both on the high table land and on the coast, but the colour is darker and more brilliant in the former locality; it is there in full beauty in the months of January and February during the prevalence of the cold dry north-east winds; indeed the setting in of those winds is the signal for the Bougainvillæa to put on its glorious apparel, at a temperature perhaps varying from about 60° to 75°. At that time of the year the sun is of course still to the southward, and the branches having a full southern exposure display foliage of darker and more brilliant tints than that on the north side. The floral leaves recently exhibited in the Regent's Park were very faint in hue, and pink in colour, resembling those growing on the north side in the shade, while the long gracefully drooping sprays, sometimes upwards of 20 feet in length, sparkling with dew and waving in the full sunlight of a tropical morning, must be seen to be appreciated or indeed believed. *G. H.*

Dead Deodar.—Your remarks on the subject of the death of Peach trees, from the 1st of last October, induce me to state a case which has just happened to a valuable Deodar which has been growing in the gardens here vigorously for these last 10 years, but which has suddenly lost its foliage, and is perfectly dead. The tree was purchased in 1849 from a nursery-ground at Epsom, and was from 15 to 18 feet in height, and from 10 to 15 years' growth, at the time of its removal; it has since attained an elevation of at least 25 feet, without the slightest appearance of weakness or disease—in fact, during the last summer, nothing could have looked more healthy and vigorous. It is now suddenly killed as if by fire-blast or lightning. It stands on a sharp slope of lawn on a chalk formation, in a south-west aspect. If any of your readers can enlighten me as to the cause of its death, I shall be much obliged to them. *Isaac Hill, Nubury Park, Dorking.*

Bottoming for the Serpentine.—The cleansing of the Serpentine which is about to be effected is an improvement of some importance. In my opinion the bottom if springy ought to be well drained; fill up with chalk and gravel; the mud will bind the materials, which as they dry will become quite solid; surface the whole with a layer of gravel and gas tar. This will prevent the growth of weeds, and leave sufficient depth for water, say not more than 6 feet and not less than 4 feet; with a good supply of water the whole will cleanse itself. *C. A.*, 13, *North Street, Grove Road, W.*

Pleroma elegans (see p. 433).—Your correspondent's plant may have got into ill health from two causes—first, from the soil being in a bad state; and secondly, from the plant being wintered in a greenhouse. I would advise him to examine the roots, and if he finds that the soil has become sour, let him reduce the ball considerably, and repot in as small a sized pot as possible, using the following mixture, viz:—Two parts good rich loam, one part peat, and one part silver sand. Place the plant in a greenhouse; shade at all times during the summer when the sun is bright, syringe occasionally, and about the beginning of October let the plant be placed in an intermediate house, where the temperature will not be less than 40° at any time during the winter. In April it must be replaced in the greenhouse, where it exposed to the sun, and if a liberal amount of air be given in fine weather, it will ripen the wood made during winter. By the beginning of May flower buds will appear and expand by the middle of June, and will in all probability fully repay the grower for any extra trouble he may have taken with it. *S.*

Peach Trees and Frost.—I learn from your Paper of last week, as well as from other sources, that Peach trees have suffered much from the severe frost we experienced in October last. I am living in rather a low situation, where everything tender is killed in the autumn a month or six weeks before my neighbours' plants show the least sign of being injured by cold. Mangel and even Skirving's Swede were very much injured by the frost above mentioned, but the Peach and Nectarine trees have not in the slightest degree suffered; on the contrary, although they were very hard worked last year they have pushed and set their fruit

unusually well, and the only difficulty we have had with them is the trouble of thinning the fruit and checking luxuriance by means of summer pruning. Some one will say, well, what of that? Why, it proves what my father so much insists upon in his little book, that if the wood is well ripened frost will do it no injury, and that without attending to this point the culture of fruits need not be attempted. We have trees here more than 50 years old, which had been given up as useless more than 30 years ago; but they are now standing in the same spot in the same soil (and never had any other protection than an old net) in the greatest luxuriance, having produced last year the finest fruit it has been my lot to see, and they are this year in good health and studded with 20 times too much fruit. These trees have not missed a crop during the last 21 years, and there have been only two occasions on which the crop was thin. All this has been accomplished simply by attending to the simple rule of well ripening the wood. *E. Cox, Longford.* [What Mr. Cox says is very true; but does not seem to us to touch the question referred to in a leading article of last week. He assumes that the wood of our correspondent's dying Vines was not ripened; but there is no reason to suppose that such was the case.]——Our Peach trees look very badly. They have plenty of fruit on them, but very few leaves. The trees were protected with Shaw's Tiffany. They blossomed and set their fruit well, but the leaves have all withered and died off, with the exception of a few on the points of the shoots. One tree is completely killed; the wood is quite fresh, but it is covered all over with gum. Our trees are mostly young, and have a south exposure and good border, resting on gravel. I syringe them once a week with the garden engine; they are perfectly free from greenfly. What had I better do? *An Old Subscriber, Charlton Cottage.* [Let them alone, and wait the event.]——Having occasion to write to Lord Ilchester last week, amongst other things I mentioned the condition of our Peach trees on the open walls, and incidentally alluded to the stormy and severe weather experienced here in April last year, and the October frosts, &c. In a letter received from his lordship to-day I am desired to send the same to you for publication. The Peach trees in question which are upon the open wall look wretchedly bad. They flowered and pushed young wood all over, though not quite so vigorously as usual; but about the 18th of last month something was observed to be seriously wrong, and at the present time, taking the trees generally, three-fourths of the lower branches are leafless, the young wood going off at the base first as if chilled, and the bare branches throwing out gum. However, we have still got a few fruit left. We are not much troubled with severe frosts here, but have frequently more moist dull weather than we like. On referring to our register of the weather for last year I find that in April from the 9th to the 15th we had close upon 2 inches of rain with thunder on the 11th, blustering and stormy on the 12th and 13th, with snow and sleet on the 15th. April 14th, 1859, lowest temperature 33°, wind N.W.; 18th, do., 32°, do. N.; 20th, 29°, do. E.; 22d, 30°, do. N. Fruit trees came early into flower last year, and gave promise of a good crop, but the above-mentioned weather destroyed it and blighted the trees. In October our registering thermometer had gone wrong; but the lowest I observed it at was on Oct. 22, 27°; Oct. 23, 27°; Oct. 24, 27°: wind North. Ice seen ¼ of an inch thick. December 18th, thermometer lowest, 12°; Jan. 28th, 1860, do., 24°; Feb. 10th, do., 21°; March 10th, do., 20°. *T. C. Elliott, Melbury House, Dorchester.*

Keeping Birds off Fruit.—The following is a plan I once saw succeed very well for some time, but the birds at last got familiar with it; still I think it might answer for two months or so. An old gardener being greatly troubled with birds applied to his master for nets to cover his fruit with; but no, they would be too expensive. He therefore got a hawk stuffed in what he called a hovering position, put it on the end of a long wire, attached the wire to the top of a tree, and thus had the hawk suspended in the air as if it had been alive. He had, however, another hawk which really was alive put into a cage, and had the cage put into the same tree where the dead hawk was. The gentleman in the cage was by no means mute, and I may add that I scarcely ever afterwards saw birds in that garden except perhaps a few sparrows. *Carr Bridge.*

New Strawberries.—The season now having commenced for the ripening of Strawberries in the open ground (an advertisement stating that for three or four years they have been gathered May 29), I trust that the various vendors will not be afraid of submitting them to the judgment of the Fruit Committee of the Horticultural Society or Pomological Society (both of which now hold their meetings at short intervals). And I would suggest that they be exhibited not in the form of a few potted berries grown and pampered for the purpose, but a large basket full, accompanied by a few plants in a bearing state taken from the open ground, thus showing their habits and capabilities for culture on a large scale. One of the new sorts has been and is now splendidly exhibited under glass in a frame in every seed and nursery establishment; surely the vendor will not shrink from showing us the luscious realities from whence the artist drew his picture. There has been also a mysterious withdrawal (after being announced to be sold) of Eclipse—an effective way of exciting the curiosity of purchasers. Will the proprietor exhibit it as I have asked for the others? We shall then have some data to form our judgment whether it is worth purchasing or not. *Richard S. Yates, Sale, Cheshire.* [The Eclipse in question was exhibited (see p. 434) to the Fruit Committee of the Horticultural Society on the 8th of last month, and was considered to be a promising sort; its flavour was stated to have a strong resemblance to that of the old Hautbois.]

Strawberries growing in or near a Town.—Your correspondents need not despair of fruiting the old and yet invaluable Keens' Seedling in the midst of smoke, provided they are properly cultivated and not overshaded with walls or trees. I had awarded to me 25 years ago amongst large competitors the first and an extra prize for Keens' Seedling grown in open ground within one mile of the Manchester Exchange. *R. S. Y., Manchester.*

Societies.

LINNEAN: *May* 24 (*Anniversary*).—The President in the chair. The special thanks of the Society were given to H. Christy, Esq., for the donation of a bust of Sir W. J. Hooker, by Woolner. It was reported that since the last anniversary 18 Fellows, 1 Foreign Member, and 1 Associate had died; that 3 Fellows had withdrawn; and that 36 new Fellows, and 2 Foreign Members had been elected. It was then moved by the President, and unanimously resolved, "That the Society desire to record their deep and affectionate regret at the retirement, on account of illness, of Mr. Bennett, from the office of Secretary, the duties of which he has fulfilled with unexampled zeal, judgment, and courtesy for 20 years; and to this expression of regret at his retirement they would add their cordial thanks for these unrequited services, and their earnest hope that his health may speedily be restored, so that the Society may enjoy the pleasure of his presence and the advantage of his counsels for many years." The financial report showed a balance in favour of the Society on the year's account of 299*l.* 13*s.* At the ballot which ensued W. B. Carpenter, M.D.; R. E. Grant, M.D.; John Lindley, Ph.D.; Sir Charles Lyell, D.C.L.; S. J. A. Salter, M.B., were removed from the Council, and the following Fellows were elected in their room:—John Ball, Esq.; T. S. Cobbold, M.D.; J. B. Hicks, M.D.; J. D. Hooker, M.D.; T. H. Huxley, Esq. The following officers were then re-elected:—Thomas Bell, Esq., President; and Francis Boott, Esq., M.D., Treasurer; George Busk, Esq., was elected Secretary in the room of Mr. Bennett; and Frederick Currey, Esq., Under Secretary in the place of Mr. Busk. Resolutions requesting that the President's address and the obituary notices by the Secretary might be printed were unanimously adopted.

Notices of Books.

Flora Capensis: being a systematic description of the plants of the Cape Colony, Caffraria, and Port Natal. By W. H. Harvey, M.D., F.R.S., and Otto W. Sonder, Ph.D. Vol. I. 8vo., pp. 546. Hodges & Smith.

What a treasure this important work would have been when "Cape Plants" were the glory of European gardens; when sweet-leaved Pelargoniums, Oxalids, Mahernias, Hermannias, Proteas, Gnidias, Struthiolas, and Diosmas, to say nothing of Ixias and Gladioles, were as fondly cherished as now are South American or Australian Verbenas, Calceolarias, Petunias, Pimeleas, and Lobelias, with all the swarm of Geraniums, children of no country, but the illegitimate progeny of Flora imprisoned in a garden. Are those days never to return? Are our greenhouses to be filled for ever with the same herbs and shrubs as now? Is no country worth a revisit by horticultural collectors except the tropics and temperate regions of Asia and America? It is to be hoped that something better is in store for us, and that the mountains and high plateaus on the frontiers of the Cape colony will soon be explored by some skilful hawk-eyed traveller capable of judging how far the native beauties of those little known regions will repay the assiduities of English gardeners.

To such an expedition the work before us—the joint production of two most able men—would be an invaluable guide. Dr. Harvey resided for several years in the colony, of whose peculiarities he therefore has personal knowledge; Dr. Sonder has been all his life occupied in the study of its vegetation. The result is the first volume of a systematical account of its plants, written in the English language, and perfectly adapted to the use of even those who have a very limited acquaintance with botany, while to men of science it is an acquisition of the greatest importance. The arrangement is on the natural system; each species has a good differential character, attended by such remarks as may be necessary in illustrating its peculiarities; localities in which the species are found are carefully pointed out; to the whole is prefixed the outline "of an introduction to Systematic Botany, taken with slight alterations and additions, and by permission of the author, from Mr. Bentham's admirable introduction to his Handbook of the British Flora."

In this first volume are comprehended the great garden genera Pelargonium, Oxalis, Diosma, Malvastrum, Polygala, Hibiscus, Heliophila, Phylica, and Hermannia all very carefully worked up. We estimate the whole number of species admitted into its pages at about 1000, after deducting all the spurious species which the authors have struck out. This clearing away has been carried out with scrupulous exactness, and must win the applause of all rational botanists. As for the farrago unfortunately adopted by the elder De Candolle in the great genus Pelargonium, that is at last reduced to its true value. "Little known," says Dr. Harvey, "and doubtful species, and all the *ephemeral* garden Pelargonia are here omitted. Nearly 200 of them are characterised in De Candolle's Prodromus, Vol. I. Many more may be found in Sweet's Geraniaceæ (5 vols., 500 coloured plates), and in other works on gardens and gardening. We see no necessity for burdening our pages with these truly trivial names; 'names ignoble, born to be forgot;'" to which we cordially exclaim, Hear, hear!

Ure's Dictionary of Arts, &c., Part VIII. (Longmans), contains a long article on Guano, and others on Hemp, Horse-power, Incubation, Indigo, Ink, and Iron.——In *How to Nurse Sick Children* (Longmans) Dr. West points out the importance of paying the utmost attention to infantile diseases, gives valuable information on the subject, and advocates the establishment of Hospitals for Sick Children, one of which under his own direction already exists in Great Ormond Street, to the inestimable advantage of the London poor.——*The Girl's Birthday Book* (Houlston) is a collection of tales, essays, and narratives illustrated by clever woodcuts. Among the essays is one called Teaching by Flowers.——*Introduction to the History of English Literature* (A. & C. Black) is a sketch by Mr. Demaus for the use of schools. It contains sound information briefly but skilfully conveyed, and has an excellent Index; a most important point.——Of *Mr. Coleman's British Butterflies* noticed lately (p. 439), we have received the coloured edition, which is really a beautiful little volume.

Garden Memoranda.

MESSRS. E. G. HENDERSON'S NURSERY, WELLINGTON ROAD, ST. JOHN'S WOOD.—There has been a beautiful exhibition of early Tulips here this season, set out in beds 32 in number, each bed measuring upwards of 42 feet in length, and containing 10 rows. So many thousands of Tulips therefore all in full bloom at one time produced an unusually brilliant effect, and were as they deserved to be greatly admired. For an amateur of limited means nothing can be more valuable than these showy spring flowers. They are cheap and easy to cultivate, and if planted in sufficient numbers add an inexpressible charm to the flower border until their places can be supplied with ordinary kinds of bedding plants. What for instance can be compared with a bed of Double Tournesol or Rex Rubrorum, for regularity of surface and splendour of colours. In single scarlets Van Thol is still the best. Next come Vermillion Brilliant and Rembrandt, to which may be added Feu d'Anvers and La Belle Alliance, all fine kinds of different shades of scarlet. Crimsons of various kinds—Cramoisie Fidéle, Couronne Pourpre, Royal Queen, Couleur Cramoisie, and Sunbeam rank among the best; and of pure whites we observed none better than White Van Thol, Reine Blanche, Queen Victoria, alba regalis, Luna, and White Pottebakker; the latter is the tallest and should be used for centres of beds. Queen Victoria is the next size and a clearer white. Bronze red and crimson, a rich effective tint, contained La Majestueuse, Holofernes, and Artemis, three handsome varieties. Bright rose or cherry on white ground:— In this class Cerise non Rectifié, Drapeau de Rouge, Couleur Ponceau, and Sultana were truly beautiful. Of deep rose or salmon, Monument was the only representative worth naming. Among selts or pure yellows were Yellow Pottebakker, Golden Prince, Yellow Van Thol, and Canary Bird, all rich and showy beds. White ground with deep rose or cherry-feather, a gay and effective class, comprised Leander, Duchesse de Clairmond, and Rose and Silver Claremonts, the last two very showy. In yellow with bronze-red stripes, the best were Grand Duc and Hof Van Brabant, and in bronze-red with yellow line on the top or margin, Drusilla and Commandant, both effective kinds. Among dwarf yellow streaked with bronze red were Bizard, Verdict, and Souvenir. Bronze-red or crimson, with a broad yellow belt or margin, comprised Archiduc d'Autriche, Duc de Chartres, Duc Vorhelm, and Prince of Orange. Of white, feathered with cerise or crimson rose, the best were Tendre, Cour de France, and Köning Assingaris. Among orange-shaded scarlets Couleur de Cardinale was the most effective. Puce or dark purple, with lilac or white margin, consisted of Archus or Caiman, and Lac Van Ryn. Of white with cherry or crimson flakes Grootmeester and Standard Royal, alias Royal Standard, are the showiest. Golden Standard is nearly as good. Among violet-crimson selfs, Duc de Luxemburg stood conspicuous: among violet-purples with white marginal lines, Violette Hâtive and Belle Laura; and among self-purples, Molière.

The outlay for 100 of each of these varieties will not exceed the cost of half as many first-class Hyacinths; and while the latter have to be bought annually, these will last for years. They should be planted in autumn in beds or borders where they will bloom next spring,

and a portion of them might be potted for window decoration the following season. The soil in which they are planted should be rather light and rich and ought to be well loosened to the depth of 15 inches at least; for although they grow and flower if put into any soil, they will yearly become weaker and fewer in number, until they ultimately disappear altogether. In planting the bulbs ought to be placed about 5 inches apart, and covered with about 2 inches of soil. They require no protection or further care except a few small sticks to support the taller blooming sorts, and having the surface of the soil stirred occasionally. As soon as the leaves decay, the bulbs may be taken out of the ground and put in a dry place for a time in order that they may get thoroughly dry before storing for the winter. Any cool place will answer for this purpose; but they must be kept from mice.

For flowering in windows or balconies plant in 7-inch pots, in each of which put five bulbs of Van Thol or three of Rex Rubrorum, Tournesol, Florentine, or Mariage de ma Fille, all fine kinds for pots. After potting they should be placed in some spare corner out of doors and covered about 2 inches deep with coal ashes, or any material which can be easily removed. Here they may be allowed to remain till about Christmas, when a portion may be removed to the greenhouse to forward their blooming season. Van Thol is the earliest and ought to be treated as such; but for the sake of variety take also Rex Rubrorum and Tournesol; these may be had in bloom in February. Of course provision must be made for keeping up a succession of bloom. When done flowering early Tulips must not be turned out of doors or otherwise ill-treated; they should be allowed a place in a frame or greenhouse where they can go gradually to rest.

Miscellaneous.

The Metropolitan Squares.—Just now the squares of the west end, and of some of the regions between that and the far east, present a pleasant aspect: the young buds, in all their tender shades of greenery, have suddenly burst forth, and not yet had time to be polluted with the London smoke. In Russell Square, which, so far as the planting and arrangement of the trees and shrubs is concerned, is one of the most beautiful in its neighbourhood, the Lilac and other blossoming plants make a great display; and the Grass, just at the present time, looks as green as emerald; the early summer flowers give good promise. These spots are cheering to the sight of the wayfarer, and a means of health to many. Although but a limited number have a right of admission into these places, they are, notwithstanding, so far as the pleasure of the general appearance is considered, and in the health-giving qualities of open and well-planted space, a kind of public property. Many thousands of persons take a great interest in these grounds besides the dwellers around. The children of the poor, who often live in dingy places not far off, come to feast their eyes upon the fresh green foliage; and foot travellers, who pass to and from the City, look with critical comparison at the different squares. We have our flower-shows and other horticultural exhibitions: prizes are awarded to successful competitors in this department, and for the breeding of animals; societies are established for the promotion of various improvements; and it would be useful to found a society for the purpose of encouraging the improvement of the metropolitan square gardens, so that the gardeners might be tempted by suitable rewards, to be raised by general subscription, and awarded by a judicious committee, to increased exertions. We would have a prize for the best blossom of Hawthorn within a certain radius of the centre of the City, and the same for red and white Roses blossoming there; others for the best keeping of the green sward, flowers, and general matters; and it is most desirable that the seasons of the year should be noticed, and the best conditions of these spaces in spring, summer, autumn, and winter considered, and the most successful in preserving their beauty at the various seasons properly rewarded. The notice in such a way would lead to competition and great improvements, and, considering the difficulties with which the metropolitan gardeners have to contend, they are well worthy of encouragement. Besides the stimulus given to the gardeners, the publicity which would be the result of carrying out the above suggestion would cause persons to take increased interest in their own squares. *The Builder.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c. — Shading should be used sparingly here, except on bright days, for during showery unsettled weather like the present, plants require all the light that conservatories afford, and are greatly benefited by an occasional gleam of sunshine. The beauty of most soft-wooded plants will be considerably prolonged by the use of weak manure water, which should be given frequently wherever it can be done. Indeed, such things as Achimenes, Clerodendrons, &c., may be had in full beauty from June to October through being liberally supplied with manure water, but this must not be given too strong at first. Keep the atmosphere as moist as can be done, but avoid damp on cold nights by leaving sufficient air to cause a gentle circulation, and spare no attention to keep plants clear of insects. Stock for autumn and winter flowering will require careful attention to get it sufficiently forward. Chinese Primulas, especially the double varieties, if at all backward should be placed in a cold frame and shaded from the sun, where they will make rapid progress, particularly if the pots stand on a slight bottom heat. Cinerarias for early flowering should also be potted, choosing the strongest suckers, and placing them in a close shady frame till rooted. These are sometimes very subject to the attack of thrips at this season, but if they are kept cool and moist, and fumigated occasionally, there is no danger of their keeping clean and growing vigorously. In stoves the stock will be growing rapidly, and must be afforded sufficient space to allow of the perfect development of the foliage and the formation of compact handsome specimens. The atmosphere of this house can hardly be kept too moist, and the plants should be sprinkled overhead morning and evening and every available surface kept moist.

FORCING DEPARTMENT.

PINERIES.—Such varieties of Pine Apple as are at all liable to spoil at the bottom before the upper pips are coloured should now be kept as dry as possible immediately they show the least signs of colouring, keeping the atmosphere also as dry as can be done without injury to the rest of the stock.

VINERIES.—As formerly recommended, Grapes intended to hang through the winter should be thinned very freely, and, if necessary, they should be gone over a second time, leaving them so that the berries when fully swelled will scarcely touch each other. A moderate crop only should be left on the Vines; for to ensure success in keeping Grapes fresh and in good condition till next March the Vines must be in first-rate health; be satisfied, therefore, with a moderate or rather light crop in the late house. Keep the atmosphere of houses where the fruit is colouring in active circulation, using gentle fires by day, with abundance of air, and leaving a little air on at night to prevent damp. If red spider appears inclined to be troublesome, wash the pipes, &c., with a mixture of soot and lime, and if the colour is objectionable add more soot.

FIGS.—Trees that have been kept dry while ripening the first crop, and are now cleared of this, should be well watered at the root, and if there is any appearance of red spider the leaves should be thoroughly washed with the engine. Give manure-water to trees showing a heavy second crop, and keep the atmosphere moist by frequently sprinkling the passages and borders, &c. Keep the shoots thin and regularly tied, so as to avoid confusion, and expose all parts of the tree equally to the light. Where the fruit is ripening attend to previous directions, and keep the atmosphere and borders as dry as can conveniently be done. Assist trees in pots by giving them a liberal supply of manure-water.

FLOWER GARDEN AND SHRUBBERIES.

Go over the beds frequently and keep the young shoots of Verbenas, &c., nicely regulated and pegged down until the ground is fairly covered, after which the shoots may be allowed to grow more at liberty. On poor dry soils two or three applications of weak manure water given at intervals of a few days, and when the ground is moist, will greatly assist in getting the beds covered without loss of time. Remove dead and dying leaves from Roses, and give the autumn flowering varieties plenty of manure water in order to keep them in vigorous health, and secure plenty of wood for blooming in autumn. Those budded on the Dog Rose must be kept clear of suckers, which, when allowed to grow, weaken the head, besides having an unsightly appearance. Mildew is sometimes troublesome after this season, and no time should be lost in dusting the infested plants with sulphur, for the evil will soon spread and destroy the foliage, and ruin the plants for blooming in autumn. Proceed with the propagation of herbaceous plants as expeditiously as possible, in order to get this work out of hand and the lights, &c., at liberty. Take advantage of the present showery weather to give walks and lawns a good rolling, and endeavour to keep the Grass short and neatly mown; nothing looks worse than a badly kept lawn.

HARDY FRUIT AND KITCHEN GARDEN.

The occasional showers we are now experiencing will be found favourable for the growth of Strawberry runners, and a sufficient stock for forcing next season should soon be potted, and placed in a shady frame until they get established. Prepare ground for fresh plantations by heavily manuring and trenching, or if ground cannot be obtained at once select the strongest runners and plant them on a shady border in rich soil, to be transplanted with balls early next month. Asparagus beds can hardly have too much manure-water from the stable or farmyard tank during the present month. On dry friable soils salt may be applied with advantage, but this should not be used on strong adhesive soils, as it keeps the ground wet in winter and rots the roots. See that there is plenty of Peas planted for furnishing a late autumn supply, and also attend to keeping up a succession of French Beans, Spinach, and salad.

COTTAGERS' GARDEN.

Let every bit of spare ground be constantly broken up and filled with some kinds of greens or Turnips. Of autumn Coleworts, what is called the Rosette is the best for small gardens. If manure is scarce, extra spade husbandry will in some degree compensate for the want of it.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,
For the Week ending June 7, 1860, as observed at the Horticultural Gardens.

June.		Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday	1	10	29.676	29.559	65	43	54.0	56½	54	S.W.	.00
Satur.	2	11	29.480	29.160	64	46	55.0	57½	55	S.E.	.87
Sunday	3	12	29.486	29.330	61	45	53.0	56½	55	S.W.	.04
Mon.	4	13	29.703	29.629	63	43	53.0	57	54½	S.W.	.07
Tues.	5	○	29.801	29.740	61	38	49.5	57	55	S.W.	.32
Wed.	6	15	29.767	29.730	64	46	55.0	57	55	W.	.08
Thurs.	7	16	29.765	29.740	60	40	50.0	58	55	S.W.	.12
Average..			29.668	29.555	62.5	43.0	52.8	57.1	54.8		1.43

June 1—Cloudy; fine; very fine.
— 2—Fine; boisterous, with constant heavy rain.
— 3—Boisterous; showery; very fine at night.
— 4—Fine; heavy shower; very fine at night.
— 5—Very fine; cloudy and showery; clear and cold.
— 6—Rain; heavy clouds; boisterous; overcast.
— 7—Rain; cold and drizzly; clear and cold at night.
Mean temperature of the week, 4¼ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending June 16, 1860.

June.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 10..	71.5	48.0	59.8	14	0.95 in.	1	9	2	2	3	5	3	4
Mon. 11	72.1	48.5	60.3	10	0.47	—	7	3	3	4	7	10	—
Tues. 12..	71.3	49.8	60.5	15	0.78	—	7	3	1	6	11	3	3
Wed. 13..	72.0	48.9	60.4	16	0.77	1	5	5	1	2	10	8	3
Thurs. 14..	72.6	49.0	60.8	15	0.36	1	3	5	1	3	9	7	2
Friday 15..	73.0	49.2	61.1	14	0.38	1	4	7	2	4	7	3	2
Satur. 16..	72.7	49.1	60.9	14	0.46	2	4	6	1	9	7	3	2

The highest temperature during the above period occurred on the 16th, in 1858—therm. 97 deg.; and the lowest on the 15th, 1850—therm. 30 deg.

Notices to Correspondents.

ADULTERATIONS OF FOOD: *A West Country Man* need not be surprised. A gross fraud was committed upon the public. Pepper containing flour, Mustard skins, and Capsicum skins was publicly sold in Liverpool. The Excise prosecuted the vendors, as they were bound to do. The vendors obtained the assistance of some blind scientific people, who swore they could not find flour or Mustard or Capsicum skins in the pepper seized; this testimony was permitted by the Liverpool magistrates to outweigh that of the quick-sighted well-trained officers of Excise, and the fraud obtained a momentary triumph. Then came further evidence on the part of the Crown, exposing what in Liverpool are called scientific witnesses, the frauds were proved, and fines inflicted. That is all.

BOOKS: *Isle of Wight.* Both Glendinning on the Pine Apple and Hamilton on the Pine Apple should be consulted.

CARDAMINE: *J. G.* Many thanks. We are well acquainted with this monster, and a most curious thing it is.

CUCUMBERS: *Mr Cuthill* has sent us specimens of what are called "Prolific new Cucumbers." One is a good-looking Black Spine, the other is a Smyrna; the first is Cuthill's old Black Spine, the other is the well-known Highland Mary, a very great bearer. So much for what are called NEW THINGS.

CUTHILL'S BLACK PRINCE STRAWBERRY: Specimens of this variety, the first that have ripened in the open border this season, have just been sent to us by Mr. Cuthill. This usually very early kind is later this year than it has been since 1855, when the first ripe fruit was gathered on the 15th June. Last year it furnished ripe fruit on the 27th May. No open air Strawberries have as yet made their appearance in Covent Garden Market.

INSECTS: *E M R.* Your insect is not a pupa. It is the nearly full grown larva of the bloody-nosed beetle, Timarcha tenebricosa. The small oval erect sacs on the Lime leaves are we believe a disease of the leaves themselves, and not produced by insects, of which we have never found any traces in their insides. *W.*

MESPILUS JAPONICA: *G W.* The common Mespilus or Eriobotrya japonica, if you want to fruit it, must be grown under glass like an Apple tree in the open air.

NAMES OF PLANTS: *Peter.* The plant No. 3 is we see Dipteracanthus Schauerianus.—*W Dean.* We cannot find any such name as Psychotria leucantha. Your plant seems to be Coffea nodosa.—*T W.* Macrotomia Benthami, a plant quite new in gardens. A pity it is not handsomer, considering that it is quite hardy.—*E K, St. Alban's.* What is called Veronica polita, a variety of V. agrestis.—*J M P.* Some Opuntia; but Opuntias cannot be named from mere flowers. — *W Dean.* Cymbidium pendulum. — *Emo.* Acer tataricum.—*C L.* It is probably Festuca bromoides in a *very young* state.—*J K.* 1, Anguloa Clowesii; 2, Aerides crispum. —*Sarah.* 1, Ruscus androgynus; 2, Fuchsia arborescens; 3, Columnea Schiedeana.

NEW ZEALAND FLAX: *J S.* The flowering of this Flax is not an uncommon occurrence in this country. It often does so, especially after hot summers like that we experienced last year.‡

PONDS: *A Subscriber* having puddled a pond with bad clay is anxious to obtain a recipe for making a good concrete, which would adhere to the clay and hold water, and he hopes that some of our correspondents will kindly give one. We should use a concrete made in the usual builders' way, only using good Portland cement instead of fresh-burnt lime.

PRICES OF TROPICAL VEGETABLES AND FRUITS: *Abeundus.* Information upon this point can only be found in colonial papers. According to the last Ceylon Overland the following were the current prices in Colombo on the 28th April. Plantains, 1st size, per dozen, 2*d.*; 2d size, per doz., 1½*d.*; 3d size, per doz., 1*d.*; Pine Apples, each, 1*d.*; Mangoes, ½*d.*; Oranges, 1st size, per doz., 6*d.*; 2d size, 3*d.*; Cocoanuts, 1st quality, per 100, 8*s.*; 2d quality, per 100, 7*s.*; Chillies, dry, per lb., 3½*d.*; Chillies, green, per 100, 1½*d.*; Garlic, per lb., 3½*d.*; Ginger, dry, per lb., 2½*d.*; green, per lb., 1½*d.*; Onions, large, per lb., 3*d.*; small, per lb., 1½*d.*; Limes, per 100.. 1*s.*; Potatoes, per lb., 3*d.*; Yams, 1st size, per doz., 1*s.* 6*d.*; 2d size, per 100, 1*s*; Sweet Potatoes, per 100, 1*s*; Spinach, per bunch, ½*d.*; Salad, per bunch, ½*d*; Greens, ½*d.*; Soup Vegetables, per bunch, ½*d*; Beans, per bunch, 2*d.*; French Beans, per bunch, 1½*d.*; Bread Fruit, each, 1½*d*; Jack Fruit, each, 1*s*; Cucumber, each, 1½*d.*; Water Pumpkin, each, 6*d*; Green Plantain, per doz. 2½*d*; Radish, per bunch, ½*d*; Brinjall, per doz., 3*d.*; Snake Gourd, each, 2½*d.*

ERRATUM. In the list of awards made at the Crystal Palace (see p. 500 of our Advertising columns of last week), there is a mistake in Peaches, Class E. Instead of "2d, Charles Smith, gr. to A. Anderson, Esq., Norwood;" it should be "2d, Mr. Henderson, gr. to the Duke of Sutherland at Trentham."

ODAMS'S BLOOD MANURES,

MANUFACTURED BY THE

PATENT NITRO-PHOSPHATE or BLOOD MANURE COMPANY

(LIMITED).

CONSISTING OF TENANT FARMERS, OCCUPYING UPWARDS OF 30,000 ACRES OF LAND.

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Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow Marshes, Essex, E.

The Directors recommend these Manures with every confidence to the attention of their brother farmers; and the fact that they and the Shareholders farm upwards of 30,000 acres of land, cannot fail to afford a guarantee and protection to consumers.

The high per centage of SOLUBLE PHOSPHATE and large amount of ANIMAL MATTER yielding Ammonia they contain not only render them the cheapest, but also the most Natural Manures, and the best calculated to produce a HEALTHY, SOUND, and HEAVY CROP.

PRICES.—Blood Manure for Corn, £7 10s.; Ditto for Roots, £6 10s.

Delivered to any Railway or Wharf in London.

☞ *As security to the Purchaser every bag contains 2 cwt., is marked* **"ODAMS'S PATENT BLOOD MANURE," and sold only by the authorised Agents of the Company.**

ODAMS'S SUPERPHOSPHATE OF LIME.

This Manure contains an unusually large per centage of Soluble Phosphate of Lime, and is, therefore, a highly valuable Manure for all Root Crops.

ANALYSES.

	Mr. J. T. Way, London.	Dr. Anderson, Glasgow.	Dr. Hodges, Belfast.	Dr. Voelcker, Cirencester.	Dr. Macadam, Edinburgh.	Dr. Cameron, Dublin.
Moisture	13.19	10.86	21.50	21.62	14.56	16.20
Organic Matter, Salts of Ammonia, &c	2.28	7.82	3.38	7.02	7.63	4.17
Sand, &c.	3.82	3.18	3.44	3.31	3.87	5 28
Biphosphate of Lime	16.77	15.63	14.38	16.71	16.91	16.48
EQUAL TO NEUTRAL SOLUBLE PHOSPHATE	26.18	24.39	22.50	26.07	26.48	26.20
Insoluble Phosphate of Lime	4.69	9.01	5.77	9.49	11.84	6.14
Hydrated Sulphate of Lime	58.53	52.25	49.80	39.40	40.83	50.33
Alkaline Sulphates and Muriates	0.72	1.25	1.73	2.45	4.36	1.40
	100.00	100.00	100.00	100.00	100.00	100.00

Mr. WAY reports:—"It contains fully as much soluble phosphate as the first-class articles of the same description in the market, and much more than the average."

Dr. VOELCKER says:—"I have much pleasure in enclosing a copy of your super-phosphate, which, though apparently recently made, is nevertheless *rich in soluble phosphate, and unquestionably a valuable manure.*"

Dr. ANDERSON reports:—"This is an excellent super-phosphate. Calculated at the usual rates, I find it to be worth about 8*l.* 5*s.* per ton."

Dr. MACADAM says:—"The above is a first-class super-phosphate, and at present rates is worth to the farmer 8*l.* 2*s.* per ton, when purchased in quantities under 30 tons, and 7*l.* 10*s.* in quantities of 30 tons and upwards."

Dr. HODGES states that—"It may be regarded as a good specimen of super-phosphate of lime." His calculation of its value is 7*l.* 13*s.* per ton.

Dr. CAMERON reports:—"The above figures prove this super-phosphate to be of excellent quality, and I have no doubt but that its application will be attended with the most satisfactory results. It would be good value at 7*l.* per ton."

Every Bag contains 2 cwt., is marked "ODAMS'S SUPERPHOSPHATE OF LIME," and is guaranteed to yield 20 to 25 per cent. of Soluble Phosphate of Lime.

PRICES.—Superphosphate of Lime, £5 10s. Delivered to any Railway or Wharf in London.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	.. ..	£6	6
" SUPERPHOSPHATE OF LIME		6	6
" MINERAL	.. .. ..	5	5
LAWES'S BARLEY MANURE	.. .. ..	8	0
" MANGEL MANURE	.. .. ..	8	0
" GRASS MANURE	.. ..	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemica Manures.

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

ESTABLISHED 1812.

MESSRS. PROCTOR are now prepared to take orders for their special MANURES for 1860, which they unhesitatingly state are of a superior quality and charged at the lowest possible price, viz.:—

TURNIP MANURE		CLOVER MANURE		OAT MANURE	
WHEAT	ditto	POTATO	ditto	KOHL RABI	do.
GRASS	ditto	BARLEY	ditto	Also	

PERUVIAN GUANO, BONE DUST, SUPERPHOSPHATE OF LIME, &c., all of which are warranted of the best quality.
Apply to H. & T. PROCTOR, Cathay, Bristol; or PROCTOR & RYLAND, Birmingham and Chester.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

NORTH HANTS SEED ESTABLISHMENT.

HENRY JESSE begs to thank his friends for the support he has received for many years, and to inform them, that in addition to his CORN AND SEED BUSINESS, he has now added the MANURE, CAKE, AND TURNIP-SEED TRADE. The latter he has devoted his particular attention to, having made arrangements with a first class House; and trusts by keeping articles of the best quality, to supply his customers on such terms as will give satisfaction and ensure their future orders.—Railway Stores, Basingstoke; and 100, Seed Market, Mark Lane, London, E.C.

PARKES' STEEL DIGGING FORKS.

BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

CHEAPEST AND BEST.

JUPP'S NEW HORSE AND CATTLE FOOD.—The utility of this new preparation being now fully established, W. & R. JUPP & Co. beg to say that they are prepared to execute orders to any extent. A trial will prove its beneficial qualities. Price 35*s.* per cwt.; 19*s.* per ½ cwt.; and 10*s.* per ¼ cwt., carriage free to nearest railway stations in Great Britain. Pig Meal, 16*s.* per cwt. Cash or a London reference expected from unknown correspondents.
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REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C.

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MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6*l.*; 19 in., 6*l.* 10*s.*; 22 in., 7*l.*; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

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LOANS may be obtained under the General Land Drainage and Improvement Company's Act for the full amount required by the Owners of settled Estates, Incumbents, Trustees, Bodies Corporate, &c. for the erection of Farm Houses, Farm Buildings, and Labourers' Cottages designed by their own Agents and sanctioned by the Inclosure Commissioners.

The loans are repaid by a Rent Charge on the estate for any term the Landowner may fix, not exceeding 31 years.

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The Company furnish designs of every description, and undertake the entire responsibility of the works wherever desired by Landowners.

No profit whatever is taken by the Company on any works they execute, the actual expenditure only approved by the Inclosure Commissioners, with a commission thereon, being charged in all cases.

Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
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The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
At Half-past 12 o'Clock on WEDNESDAY next, the 13th inst, PROFESSOR VOELCKER will deliver a Lecture on OILCAKE, at the Society's House, in Hanover Square.
London, June 8. H. HALL DARE, Sec.

The Agricultural Gazette.

SATURDAY, JUNE 9, 1860.

MEETINGS FOR THE FOLLOWING WEEK.
WEDNESDAY, June 13—Royal Agric. Soc. of England .... Noon

WE have this week much pleasure in laying before our readers some valuable analyses of farm seeds, together with a report of experiments in their germination—both of great importance to those interested in the condition of the seed market.

We have the more pleasure in quoting the accompanying tables, because they embody the praiseworthy labours of a student of the Royal Agricultural College, and they show that advantage is being taken by the pupils of that Institution of the experiments and examinations connected with the botanical department, which we may fairly hope will in time render it next to impossible to find a market for the trash which is too often offered to purchasers of seeds.

Mr. CHARLES SELBY BIGGES, to whom we refer, took the college diploma in June 1859, having been previously a successful competitor for some of the best prizes of that institution. It is satisfactory to find that perseverance and study does not in his case end with the acquisition of college honours.

The first of the following tables shows the results of his analyses of Rye-grasses, of which it will be necessary to explain that the samples

which are numbered in the first column are those that were the subjects of experiments in germination. The second column contains a copy of the label of the sample. The third the price as quoted by the seedsman from whom the sample was obtained. The fourth the weight per bushel. This is followed by a column of the most startling figures meant to acquaint us with the estimated number of *seeds of weeds* in a bushel of the sample examined, whilst under the head of Remarks we have a general analysis of the kinds of the weeds which occur in such prodigious quantities.

TABLE I.—ANALYSES OF RYE-GRASS SEEDS, &c.

	Label, &c.	Price.	Weight.	Number of Weeds in Bushel.
	Messrs. A.		lbs.	
	Perennial Rye-grass	4s. per bushel or 30s. per qr.	24	101,400
	English Italian	4s.6d. p.bushel or 34s. per qr.	19¼	225,280[1]
	New Foreign ditto	36s. per qr.	26	46,080[2]
	Per GEORGE BIGGE, Esq.	Per bushel		
1	Perennial Rye, A	4s. 9d.	18	327,680[3]
2	Ditto ditto B	5s. 0d.	18	471,040[4]
3	Italian ditto A	6s. 0d.	16	440,320[5]
4	Ditto ditto B	5s. 6d.	15	495,360[6]
	Per J. COLEMAN, Esq.			
12	Perennial Rye	4s. 0d.	24	133,120
13	Ditto ditto	3s. 0d.	18	510,8007
14	Ditto ditto	2s. 6d.	14	655,360[8]
	Per B BURN, Esq.			
	Ayrshire Perennial Rye ..	4s. 6d. to 5s.	22	83,200[9]
	Ditto ditto	5s. to 5s. 6d.	23	96,560
	PACEY's ditto, winnowed ..	6s. to 6s. 6d.	26	30,720
	Ditto ditto	6s. to 6s. 6d.	28	40,960
15	English Italian	6s. to 6s. 6d.	..	163,840[10]
16	Foreign ditto	5s. 6d. to 6s.	..	409,600[11]
	Messrs. B.			
17	Ayrshire Perennial	9s.	33	25,600
18	Ditto ditto	6s.	28	101,400[12]
	Messrs. C.			
7	Perennial Rye (1)	4s. 6d.	27	101,400
8	Ditto ditto (2)	4s.	23	108,480[13]
9	Ditto ditto (3)	29s. per qr.	20	283,720[14]
10	English Italian	34s. per qr.	..	174,080
11	Imported ditto	34s. per qr.	..	1,136,640[15]
	Arcade, London Bridge.			
	Italian Rye	6s. per qr.	23	235,520
	English Perennial	6s. per qr.	23	101,400[16]
	Messrs. D.			
	Perennial Rye, second crop..	4s. 6d. per qr.	..	143,360
	Ditto, PACEY'S	6s. per qr.	..	40,960
	Italian Rye, finest foreign ..	5s. 6d. per qr.	..	56,320
	Per R. SHERITON, Esq.			
	Perennial Rye..	6s. 6d. per qr.	24	79,440
	Ditto ditto	8s. per qr.	28	92,160[17]
	Italian ditto	7s. 6d. per qr.	..	79,440
	Wakefield.			
	Perennial Rye..	....	..	138,240[18]
	Italian ditto	....	..	230,640[19]
	From Farnham, Surrey.			
	Rye-grass	....	..	199,680[20]
	Messrs. E.			
	PACEY's Rye-grass	....	..	204,800[21]
	Scotch ditto	....	..	184,320[22]
	From *Farnham.*			
	Italian Rye	....	..	494,080[23]
	Mr. F.			
	Festuca elatior	....	..	655,360[24]

REMARKS.

[1] Much L. perenne, Ranunculus repens, Holcus lanatus
[2] Seed dusty.
[3] Holcus lanatus, Bromus mollis, Dock.
[4] Do. do. and sterilis, do., Plantago.
[5] Nearly all Holcus, a few Compositæ, and dirty.
[6] Do. do. much Lolium perenne, and dirt.
[7] More than half the weeds Bromus mollis.
[8] Holcus lanatus, Bromus mollis, Ranunculus repens, Plantago lanceolata, Umbelliferæ, &c.
[9] 640 seeds in a drachm.
[10] Mostly Holcus.
[11] Very dirty and dusty.
[12] 727 seeds in a drachm.
[13] Some Bromus sterilis, Ranunculus repens.
[14] Bromus mollis, B. sterilis, Ranunculus, and Plantago.
[15] The seed eaten out by weevil; about one-fourth useless.
[16] Holcus, Ranunculus, Convolvulus arvensis, Umbelliferæ, and Plantago.
[17] Holcus, Bromus, Ranunculus, and Plantago.
[18] In ¼ oz. 1000 seeds.
[19] Mixed Grasses.
[20] Holcus, Bromus, Plantago, Ranunculus, Polygonum, &c.
[21] Mostly Bromus mollis or Lop Grass.
[22] Holcus, Bromus, and Plantago.
[23] Arrhenatherum avenaceum .. 8
Bromus mollis 16
Holcus lanatus 17
Other Grasses 9
Plantago lanceolata 4
Ranunculus repens 5
Various 25
84
The numbers of weeds separated from a quarter of an ounce by weight of this sample of seed.

[24] Ranunculus, Compositæ, Umbelliferæ, Plantago, Polygonum, Bromus, Holcus, &c. Very dirty.

The next table records the results of a like examination of the different kinds of Clover seeds: it will be seen, however, that under the head of Remarks we have less of detail than in the first table; the fact being no doubt that in such small seeds as Clovers the species of weeds are so numerous and usually so minute that it requires long practice to distinguish them. Still it will be found that the generality of weeds in Clovers may be referred to the following, which indeed will ever be found in a patch of mixed seeds, *i.e.*, Rye-grass and Clovers, sometimes indeed occupying half the surface of the soil, so that with the larger weeds of the Grasses and weed Grasses themselves it is not wonderful that some patches of "seeds" ought more properly to be called fields of weeds, as it is not at all uncommon to see a field of mixed Clovers and Grass seeds in which the Clover is the rule rather than the exception.

List of the more General Weeds in Clovers.

Plantago lanceolata —Lancet-leaved Plantain Ribgrass.
,, *media.*—Broad-leaved Plantain.
Ranunculus repens.—Creeping Crowfoot.
,, *parviflorus.*—Small-flowered Crowfoot.
Arenaria serpillifolia.—Thyme-leaved Sandwort.
Stellaria media.—Chickweed.
Sherardia arvensis —False Alkanet.
Polygonum aviculare.—Knot Grass.
Myosotis arvensis.—Corn Forget-me-Not.
Alchemilla arvensis.—Field Lady's Mantle.
Spergula arvensis.—Spurrey.
Juncus bufonius.—Bog-rush.
Anthemis arvensis.—Corn Chamomile and other Compositæ.

In this list we would refer to two or three species; first, the Ranunculus parviflorus is now becoming one of the most abundant denizens of the arable field over a great part of England, whilst a few years since it was a comparatively rare British plant. So, again, Spergula is becoming general in sandy fields in arable cultivation, but spreading with the seeds.

Now the foregoing list enumerates some of the more common weeds which will be found in Clover seeds, and if we add to those the special weeds of Rye-grass, most of which are remarked upon in Table I., we shall have no difficulty in accounting for the general dirtiness of "seeds."

With these few remarks we give now the table of the analyses of Clover seeds mostly obtained with the Rye-grasses:—

TABLE 2.—ANALYSES OF CLOVERS.

	Label, &c.	Price.	Weight.	Number of Weeds per Bushel.
	Mr. G.			
	Red Clover	....	..	158,600
	Trifolium incarnatum ..	....	..	61,440[1]
	Trefoil	....	..	97,480
	Per GEORGE BIGGE, Esq.			
5	Red Clover .. .. (A)	7½d. per lb.	64	97,280
6	do. do. .. .. (B)	7d. per lb.	64	419,880
	Per J. COLEMAN, Esq.			
21	Red Clover .. .. (1)	62s. per cwt.	..	61,440[2]
22	do. do. .. .. (2)	62s. per cwt.	..	174,080
	do. do. .. .. (3)	58s. per cwt.	..	214,800
23	do. do. .. .. (4)	54s. per cwt.	..	481,280
	Per B. BURN, Esq.			
	Superior Red Clover	60s. to 65s.	..	215,040
	Fine do. do.	55s. to 60s.	..	217,600
25	White Clover	90s. to 95s.	..	3,991,200[3]
	Trefoil	30s. to 32s.	..	168,960
	Messrs. H.			
19	Red Clover	78s. per cwt.	..	179,200
20	French Clover	60s. per cwt.	..	430,080
	Messrs. D.			
	Extra White Clover ..	1s. per lb.	..	215,140
	Fine Red Dutch Clover ..	8d.	..	363,520[4]
	Per R. SHERITON.			
	Red Clover	9d. per lb.	..	245,760
	Farnham.			
	White Clover or Dwarf ..	..	..	1,955,840[5]
	Per B. BURN, Esq.			
24	Superior White	95s. to 100s. cwt.	..	972,800
	Messrs. E.			
	Fine Cow Grass	....	..	266,240
	Dutch Red	....	..	512,000
	Fine English Red	....	..	245,760
	Flemish Red	....	..	389,120
	English Red	....	..	1,105,920[6]
	Trefoil	....	..	460,560
	Farnham,			
	Red Clover	....	..	409,600[7]

REMARKS.

[1] Very dirty for so large a seed and so easily cleaned.
[2] Of these samples we should prefer No. 1.
[3] Full of weeds as this is, we have yet seen worse samples in this respect.
[4] All Plantain.
[5] Plantain .. 41
Umbelliferæ 13
Others .. 113
167 = Weeds in the eighth part of an ounce.
[6] So large a quantity of weeds is not common for English seed.
[7] Dirty and dusty.

On examining these Tables it will be seen that though the samples are all dirty yet that some are more so than others, and this would seem to be not at all a matter more particularly referable to one seedsman more than another. This is quite in accordance with our own observations: the largest firms send out seeds quite as dirty as the smaller dealers, and indeed the latter are doubtless mostly supplied from the former. Foreign seeds are, however, for the most part more full of weeds than home-grown, and it would seem that, whether foreign or English, there is a market for the very dirtiest rubbish that may be grown. This the seedsman may try to clean, and we have seen samples that have been so tried over and over again, but all will not do; it is next to impossible to quite clean foul seeds; these can only be obtained by careful cultivation, and so growing them clean.

The column representing the weight will show that dirty seed is usually lighter in weight than the purer samples; this arises from the circumstance of greater care having been bestowed upon its culture, as well from the lighter admixtures.

But perhaps the most important point to which we might here direct attention is that the quoted price is no unerring test of value. Seedsmen in fact would seem to charge what they can get, or else we must suppose that they are such bad judges themselves that very often they sell their best seeds at anything but the dearest price, indeed cheaper than those they call better. This would seem to be the most serious part of the subject as connected with the trade; "nasty" is always attempted to be excused by "cheap," and it would seem but reasonable to recommend our friends to give a good price for their seeds, and trust the rest to your seedsman, but in the present state of the seed market we are bound to say—let a sample from the bulk be thoroughly well examined by the educated farmer or some one for him, and so buy upon analysis. These remarks will be apparent upon examining the results of experiments in the germination of seeds. The examples experimented upon are those to which the numbers were attached in the first column of the former table.

We would introduce the table of germination with the following remarks from Mr. BIGGE of the manner in which his experiments were conducted:—"The seeds were sown in pots of silver sand well drained, 50 seeds in each pot, the bottoms of the pots standing in a metal tray, which was occasionally filled about a quarter of an inch deep with water. The temperature was kept at about an average of 56°, and never higher than 65°. Nos. 22 and 25, both inclusive, were grown in loamy soil in pots, but not in bottom moisture. The system of germinating in sand is that used by Messrs. SUTTON. The treatment of all the lots was identically the same; the plants were examined daily by myself, and the individuals carefully counted as they sprang up."

We do not give the journal of germination extending from February 25 till April 15. Most of those seeds which sprouted showed between March 5 and 15, but the results were not taken till April 3. The per centage of germination is shown in the last column of the next table, in which we have brought together the general results obtained in as far as the 25 specimens experimented upon for germination are concerned. Figures expressive of the price, weight, the estimated weeds, and the per centage of germination are here arranged side by side, and as regards the latter column it will of course be understood that the figures only express the per centage of the *crop seeds* that were sown; the mass of weeds in most would very much lessen those numbers as it respected the whole sample of seeds and weeds.

TABLE 3.—GENERAL RESULTS OF THE ANALYSIS.

Number.	Label.	Price.	Weight.	Weeds per Bushel.	Per Centage of Germination.
		s. d.	Lbs.		
1	Perennial Rye ..	4 9 p. bush.	18	327,680	22
2	Do. Do. ..	5 0 ,,	18	471,040	24
3	Italian do. ..	6 0 ,,	16	440,320	6
4	Do. do. ..	5 6 ,,	15	495,360	6
5	Red Clover	0 7½ per lb.	64	97,280	84
6	Do. do. ..	0 7 ,,	64	419,880	76
7	Perennial Rye ..	4 6 p. bush.	27	101,400	64
8	Do. do. ..	4 0 ,,	23	108,480	72
9	Do. do. ..	29 0 per qr.	20	283,720	64
10	English Italian ..	34 0 ,,	..	174,080	68
11	Imported do. ..	34 0 ,,	..	1,136,640	36
12	Perennial Rye ..	4 0 p. bush.	24	133,120	62
13	Do. do. ..	3 0 ,,	18	510,800	46
14	Do. do. ..	2 6 ,,	14	655,360	34
15	English Italian	6 0 to 6s. 6d. p. bush.	..	163,840	84
16	Foreign do...	5 6 to 6s. p. bush.	..	409,600	4
17	Ayrshire Perennial	9 0 p. bush.	33	25,600	86
18	Do. do. ..	6 0 ,,	28	101,400	72
19	Red Clover	78 0 per cwt.	..	179,200	86
20	French do.	60 0 ,,	..	430,080	62
21	Red Clover	62 0 ,,	..	61,440	18
22	Do. do... ..	62 0 ,,	..	174,080	66
23	Do. do... ..	54 0 ,,	..	481,280	68
24	White Clover	95s. to 100s. per cwt.	..	972,800	42
25	Do. do.	90s. to 95s. per cwt.	..	3,991,200	48

It is quite clear from this table that the highest priced Rye-grass, the No. 17 Ayrshire Perennial, is not only the heaviest but the cleanest sample, and of the highest germinating power of all the examples; and also 19, the highest priced Red Clover, has the highest germinating power, yet it is not the cleanest. At the same time, if we look carefully over the list we shall find that the highest of medium samples are no better and sometimes not so good as the cheaper ones, as compare Nos. 3 and 4 with 13 and 14, or 22 and 23 with 20 and 21.

With these remarks we leave these tables to the consideration of the agriculturist, being heartily glad that the subject is not only exciting the attention of the practical farmer, but that, through the medium of an institution like the Royal Agricultural College, the true principles affecting

these matters, which are included in the phrase, "Science with Practice," are being disseminated among the rising generation of farmers.

The prospectus of the international competitive trial of Steam Ploughs and Reaping Machines, under the General Royal Agricultural Society of the Netherlands, to be held in the week beginning August 5, 1860, has just been issued. The trial will take place at the Wilhelmina Polder, near the town of Goes, in the Province of Zealand, and the following Prizes are offered:—

For the exhibitors of the best machines for ploughing and preparing the soil for crops, which shall at the same time serve as profitable substitutes for horse-power and manual labour:

First prize .. .. 1200f. (about 100*l.* sterling);
Second prize .. .. a Gold Medal.

For the exhibitors of the best machines for reaping corn cheaply in a workmanlike manner, as a substitute for manual labour:

First prize .. .. 500f. (upwards of 40*l.* sterling);
Second prize .. a Gold Medal.

Those who propose to compete must give notice in writing before July 1, 1860, to the Secretary of the Society, W. J. Wolterbeek, at the Hague, mentioning the description of machine, and the price for which it can be furnished.

The machines must be delivered at Wilhelminadorp before August 3.

The land, horses, and men, necessary for the trial of the machines will be furnished on the part of the Board of Management, free of charge to the exhibitors. The exhibitors will, however, provide for the attendance of at least one qualified person for the working of the machines.

Further information will be given on application to the Secretary. It is to be hoped that a satisfactory trial of the rival machines may be made, for there cannot be a doubt that the level lands and homogeneous soils of Holland will provide a capital field for the steam plough and the reaper; and an excellent market therefore for their makers.

It may fairly and naturally be expected that in so old a practice as the management of a mass of farm-yard manure there should exist uniformity, and that at the present time the opinions of practical farmers on the subject would be guided by well attested principles. But it is not so. Farmers entertain conflicting notions on the matter, which are clearly evidenced in their practice. A practical agriculturist of our acquaintance, for instance, adopts the following plan. As soon as the site of his manure heap is clear he puts on it a layer of clay 12 inches deep, places over this the dung, and covers it with another layer of earth. But the point in which he considers his system superior to all others is frequent turnings. He turns it over no less than six times, covering it each time with a little earth. We heard his story with attention, and that deference due to a successful practical man. There is something in it to commend; but it seems to us objectionable to turn manure so frequently as six times in a season. Another agriculturist, equally distinguished, puts all his dung into a hollow averaging 6 feet beneath the surface, never touches it till required for use; and expresses his conviction that turning manure is a wasteful practice, and that he secures all the "juices" of the dung. In reference to this part of our subject it may be remarked—1st, That in turning manure there can be no material loss of fertilising ingredients if the heap is properly rebuilt, and covered over with mould at once. 2d, It does not, however, seem advisable to turn manure too frequently, as it induces too rapid decay. If the heap is built properly, one turning, and at farthest two, is quite sufficient. With us it is turned over and completely mixed about a month before it is required for the green crops. 3d, For some crops which require rapid foreing, it may be desirable to turn the manure over twice, so as to promote its putrefaction; but if a farmer has to buy artificial manures, some guano or vitriolised bones seem better calculated to force on the young plants than any other manure, and, and after all, no matter how skilfully managed, farm-yard manure undergoes a loss when its putrefaction goes beyond a certain stage.

We have embodied in these three maxims the deductions of correct science and enlightened practice, both of which are opposed to the experience of our (1st) successful practical friend. His supply of the components of farm-yard manure—the dung and litter of the domestic animals—may be, and no doubt is, unusually large—and he has found by experience that he can permit the fermentation of his manure to proceed to an extent which would, perhaps, prove ruinous to the mass of farmers. He obtains a highly concentrated species of dung, at the expense of some of the carbonaceous matter originally present in it; he applies this concentrated stuff—the essence of the heap—to a limited area of grain crops, and by this means obtains enormous crops of Mangel and Swede that well deserve a notice among "Agricultural Maxima." He naturally concludes that 1 ton of this is worth 2 tons of farm-yard manure made in the "ordinary" way. We fully subscribe to the opinion that 1 ton of well-made and carefully preserved farm-yard dung is worth 2 tons of that contained in those heaps that have been drenched by the rain and bleached by rain and air. But it is not prudent to recommend a farmer who keeps a limited number of stock to turn his manure heaps six times in one short season; and particularly if on a farm which is benefitted by the application of a manure such as farm-yard dung, containing a large proportion of organic matter. Of this statement every-day experience affords constant illustration. The action of farm-yard manure cannot be ascribed to any one of its constituents. In accordance with the extreme construction put upon some of Liebig's views farm-yard manure has been burned, the ashes applied, and the result has not encouraged the practice. Its efficacy, therefore, cannot be referred to its mineral (ash) constituents alone. And so it is again demonstrable that the results obtained from this fertiliser do not always depend on even the first action of its ash and nitrogenised constituents, but must in many cases be sought for partly in its carbonaceous or non-nitrogenised organic matter. And in such cases it is sheer folly to so promote the fermentation as to diminish to an undue extent the percentage of the matter. *T. B.*

The Bath and West of England Agricultural Society have during the past week gathered at Dorchester a marvellous exhibition of implements, art treasures, and stock, and attracted in spite of weather large numbers of people as spectators. Certainly there has been no fall off in implements exhibited at meetings of this Society since the prize system was abandoned by them, and though this provincial meeting perhaps benefits by the schism at Hanover Square, firms exhibiting at Dorchester who are shut out from Canterbury, yet the progress in this department has been constant. Barnstaple was a better show than Cardiff, and now Dorchester greatly exceeds Barnstaple.

All the leading makers have given as full illustration of their manufactures as is generally given at the annual gathering of the English Agricultural Society. Messrs. Ransome, Howard, Hornsby, Burgess & Key, Garrett, Clayton & Shuttleworth, Samuelson, Barrett & Exall, Tuxford & Son, Heywood, Cambridge, Smith, of Stamford; Turner, Priest & Woolnough, Boby, Snowdon, Reeves, Wallis, and Haslam, Nicholson, Richmond & Chandler, send steam-engines, threshing machines, drilling machines, ploughs, harrows, cultivators, reapers, and hay-makers, and every variety of farm implement. The showyard is as full and large as that of the National Society hitherto has been. And we understand the business transacted, which of course is the real attraction to implement makers, has been satisfactory.

One characteristic feature of the Bath and West of England annual show is that department of it which exhibits specimens of fine art. A building 100 feet long by 40 feet wide was thus filled with contributions from Kensington and from various public bodies and private sources illustrative of the state of art-manufacture at various periods and in various countries as well as at the present day in England. Pictures also, many of them of the very highest class, formed a considerable section of the objects in this class, and visitors to Dorchester during the week have had the advantage of something more than mere utilitarian or mere money-making instruction. Some of the details of the gathering will be found reported in another page. The managers of the meeting may be congratulated on its extraordinary success, which has been achieved in spite of most untoward weather.

THE STRUCTURE AND ACTION OF THE SOIL.

(*Continued from* p. 511.)

In concluding our former article the following results were arrived at, that not only are all soils incessantly elaborating from their crude materials the alimentary substances of vegetable life and growth, but that contemporaneously with this function they provide a means by which the elaborated matters are stored up safe from waste until sought out and abstracted by the innumerable root-fibres which plants extend in every direction in search of terrestrial food.

A few instances illustrative of these natural functions of soils will now be given:

In the reign of Elizabeth, the famous Walter Raleigh took possession for the Crown of England of that territory, now part of the Southern United States of America, to which in compliment to his maiden sovereign he gave the name of Virginia. In the course of the next century it began to be colonised from the mother country, and at the hands of the original settlers the soil received the first stimulus of cultivation ever bestowed on it, yielding in return the most exuberant products. In process of time Wheat and Tobacco became the staple crops, and these year after year were sown and reaped in uninterrupted succession and with no appliance of manure. For more than a century, the yield was unabatingly plentiful, but at last a diminished return began to exhibit itself; and this gradually increasing, the original locations were abandoned and left to the care of nature, and fresh appropriations of virgin soils made elsewhere in the surrounding wilderness. In this manner Virginia as well as several of the other older states, similarly farmed, were gradually reduced from a very high to a comparatively low degree of fertility; in other words the stored up nutriment, the accumulation of ages whilst the soil lay clothed with an unexhaustive natural vegetation, was drawn off and realised, thereby reducing the fertility of the land down to that standard condition of all soils under active cultivation, where each year's crop absorbs each year's elaboration of nutriment. The case we have thus cited was simply analogous to that of the owner of a water cistern exhausting its whole contents, without impairing the yield of the spring which filled it.

Passing now to another and more familiar instance: in England there are pastures which have existed as such undisturbed by the plough for many centuries; and when any of these old Grass lands are at last broken up for corn husbandry, their power of vegetation is often so extreme as, in the first year at least, to be beyond the competence of our insular climate to mature the produce. Usually in such cases the practice is to grow successive and unmanured cereal crops, till the first exuberance of the soil is sufficiently reduced, and then to throw the broken-up ground into that system of management which in rotation farming is designed to abstract yearly, by means of the active absorptive powers of the plants of alternate husbandry, the annual supply of nutriment elaborated in the same season. "Much heavy land," says Caird, writing of the husbandry of Suffolk, "has been broken up from pasture within recent years. The native vigour of the soil in such cases is very great, and it is usual to take several crops of Wheat in succession without any manure. The mode of breaking up the land at first is to pare and burn it at a cost of about 25*s.* per acre. If this can be done early enough in the season, a crop of Oats is taken. If too late for Oats, the land is sown with Rape and fed off. Wheat is then taken in succession, four or five times, and great crops are reaped." English Agriculture, p. 157.

Now, amongst agriculturists of every grade of intelligence, the occurrence of innumerable cases analogous to the one last stated has begot the universal and well-founded conviction that soils exempted from arable husbandry and left in a natural or semi-natural state, as in pastures, accumulate within themselves a store of nutriment, which like the filling of the mill pond whilst the wheel is standing still becomes available whenever the machinery is again put in motion; and in point of fact various modes of corn farming have been contrived on the basis of this highly important circumstance in the functions of soils. Thus in the higher districts of Somersetshire, and probably in many other of the best improved parts of England, the farmer subjects the outlying parts of his holding to uninterrmittent and unmanured corn growing for a certain number of years according to the quality of the soil, and then throws them out of tillage to undergo those restorative processes resulting in accumulated nutriment belonging to all soils when withdrawn from cultivation. Thus replenished, the accumulations of five, six, or seven years are again abstracted by means of the cultivation and growth of a series of successive corn crops of longer or shorter duration according to the discretion of the farmer. In Scotland the same principle was long acted on in a more enlightened manner. There, during the earlier history of convertible husbandry, the usual practice was to have three-sevenths of the farm in yearly rotation under corn, and only one-seventh in the manure-yielding product of roots, the expedient adopted to compensate this seemingly exhaustive treatment consisting in this, that in each rotation (septennial in its course), the fields enjoyed a three years' rest under the semi-natural vegetation of Grass, and thus were permitted to replenish themselves with a three years' accumulation of normal fertility, adequate to meet the abnormal demands of the tilled crops of the other years of the rotation. Under this system, the Scottish farm suffered no ultimate diminution of product, nor are we aware that any well-founded practical objection has ever been stated against it, except the more operative difficulty of restraining the increase of foul vegetation where so small a proportion of the land is subjected to the cleansing procedure of fallow cropping.

Passing now from the province of industrial

husbandry, the ultimate arguments of this paper will receive very instructive preliminary illustration from an instance afforded by the well known Rothamsted Essays on experimental agriculture. Here, certain plots forming part of a field, the soil of which was a clay loam of rather inferior quality, were subjected to successive Wheat growing without the application of any manure. On one of the plots there was no intermission for 13 years, and the produce, though annually fluctuating in quantity according to the climatic character of the seasons, averaged over the entire period 16 bushels per acre of prime marketable corn; the conviction hence arising that a continuation of the same treatment, how long soever protracted, would have been attended with the same productive result; in other words, the conclusion deducible from this experiment was, that these yearly 16 bushels of Wheat represented the quantum of Wheat-growing pabulum which this particular soil was capable of yearly elaborating. Remembering then the accumulative power of soils to store up their own vegetative secretions when not withdrawn by the abnormal appetites of tilled plants, it is very conceivable, *a priori*, that had a bare fallow intervened in any year of this experiment, the produce of the succeeding one would have been of doubled amount. And such in reality was the actual consequence in another of the plots, which for six successive years was alternately cropped and bare fallowed.

But what the practical bearings of these instances? And to this we reply that they serve to illustrate this most important agricultural proposition, that while it is physiologically true that certain of the plants of ordinary cultivation consume in their growth a larger proportion of mineral pabulum than others, yet nevertheless a constant succession of the greediest of them can in no wise impair the elaborative functions of the soil in which they are rooted and grow or go one step beyond a more or less rapacious appropriation of the aliments when once elaborated. If indeed from any circumstance an accumulation of nutriment has taken place in the staple, then of course the fast feeders will soonest withdraw it; but beyond this the term exhaustion, as applied in agricultural parlance to the effects arising from the cultivation of any given tribe of plants or from any given form of rotation, has no meaning soever. Under the old Scottish seven years' course, the fields received no check to their perennial fertility through more than a half of the farm being yearly under corn and only one-seventh under fallow treatment. The Somersetshire husbandman's outlying closes suffer no secular deterioration from their periodical subjection to unintermittent cereal cropping. The pilgrim fathers of America stamped no indelible infertility on their Wheat and Tobacco fields, since every observed phenomenon in soils gives rise to the conception that were the land of the older states left to rest from cultivation for a period of time as vast as that which preceded the white man's landing on the western continent, the depleted fields would again accumulate an exuberant fertility co-equal with that which they yielded up to the first settlers.

Discharging therefore from his creed the superstitious notion that the growth of any given species of plants in any given order of succession can either hinder or promote those chemical actions in the soil which result in the normal secretion of vegetative pabulum, the rational farmer's first care should be centered on that fundamental proposition of tillage farming which truly teaches that although the staple even of untilled land spontaneously yields a certain amount of increase, yet that this is by virtue of a function susceptible of a greatly increased action by means of skilful and thorough cultivation. Hence perfect tillage ought to be the primary object of the rational farmer's solicitude. Next in importance is the expedient of manuring, and into the principles involved in this department of agricultural practice we will inquire in a subsequent paper. Meanwhile we may thus far anticipate the subject as to state, that when discriminately examined, manures do by no means possess one common class of properties but belong to two well-marked divisions, separated from each other by this most important distinction—that in one set the office is to actually add to the soil those ingredients which plants build up in their substance, and which the mere action of air or soil will not provide them with in sufficient quantity; such are farm-yard dung, guano, Rape-cake, and by far the greater number of the substances usually applied as fertalisers; whilst the office of the other class is to stimulate the natural elaborative functions into action by means of substances playing little or no part but that of re-agents, and themselves deficient in a greater or less degree of the elements of vegetative fertility. *A. B.*

A LECTURE ON WEEDS.*

A WEED has been described as "any plant which grows spontaneously on cultivated ground." It is almost superfluous that I should point out to those whom I am now addressing what are the disadvantages and losses sustained on those farms where weeds are suffered to exist; at the same time, I feel that this address would be incomplete if I did not do so; I shall, therefore, briefly refer to them. In Grass and Clover crops weeds often occupy space which should be filled with profitable plants. In arable lands they prevent the crops receiving that beneficial influence of the atmosphere which they otherwise would do. In both they appropriate to themselves nutriment from the soil for which the farmer gets no return; and, if they are permitted to grow up in the corn crops, they increase the risk at harvest time; for we all know that weedy crops cannot with safety be removed so soon to the barn or the stack as clean ones.

Strangers in passing through Cheshire and Lancashire often notice the Rushy state of many of our pastures and meadows; but the occupier is not, I think, responsible for these. It is well known that the only effectual way of destroying Rushes is by draining—an operation which it is unreasonable to expect a tenant, unless he holds a long lease, wholly to effect. I contend, therefore, that where Rushes do still exist, the landlord should have the full share of the blame.

I have within the last few years had occasion to inspect estates in different parts of England, and I must say that I think weeds are more indigenous to Cheshire and Lancashire than they are to many other counties, and that the farmer here has therefore more to contend with. And you all know that the clay-land farmer is often afraid to plough a little deeper than usual, lest he should bring to the surface the seeds of Thistles, Coltsfoot, and other weeds, which have lain dormant for ages, but which the genial influence of light and air soon cause to vegetate and to take possession of the soil. Our coalpit hills and the sides of our many old marl pits bear similar testimony.

Having made these few introductory remarks, I will now proceed to notice a few of the most troublesome and common weeds of this district; and I hope you will bear with me if I fail, as I fear I shall do, to make the subject interesting, and to extract from these noxious plants any matter that will suit your tastes or satisfy your expectations.

Couch Grass.—Its botanical name is Triticum repens (Creeping Wheat Grass), or, as some writers have it, Agropyrum repens arvense. This weed is found in both light and strong soils, and in both Grass and arable land, but it is most prevalent and luxuriates the most in loose sandy or peaty loams, in an arable state, especially if they have been long tilled and by a slovenly farmer. Its creeping and jointed roots grow and spread very rapidly, and it is in this way, more than by the dropping of its seeds, that it usually becomes propagated. I need not tell you that, when it exists in arable land, and is undisturbed, it rapidly spreads and vegetates, and it is difficult to thoroughly dispossess it. Formerly, when land became very foul, and especially if the soil was a stiff one, the farmer's only remedy was a summer-fallow, and, indeed, now, in undrained clayey soils, that course has to be adopted. But the more general practice is to cultivate and clean the land as much as the weather in autumn and spring will permit, plant Potatoes, Turnips, Mangel Wurzel, or other green crops in drills, and so complete the extermination of the weeds, by the means of implements and hands, whilst the crop is growing up. In corn-stubbles, where Couch is not very prevalent, it is not too much trouble to fork it out, and a better plan cannot be adopted, especially on small farms.

When land in tillage is about to be laid down, either to temporary or permanent Grass, nothing is more important than the thorough extirpation of Couch and other weeds. If Couch exists, it will spring up and displace some of the Clover, Rye-grass, and other seeds, and continue to spread when the Red Clover and the Rye-grass have disappeared. The Cheshire farmer expects, to some extent, to counteract this evil by the application of bone manure; but whilst this stimulates the best herbage, and is, no doubt, highly beneficial, it will not annihilate the Couch, although it may less obstinate weeds.

Bent Grass.—I am not aware whether it has any local names, excepting the Creeping or Black Bent variety (Agrostis nigra), which is sometimes called Black Twitch. The other varieties are the Common Bent, (Agrostis vulgaris); White Bent (Agrostis alba); Marsh Bent (Agrostis palustris); and the Broad-leaved Creeping Bent or Fiorin (Agrostis stolonifera latifolia). I am not myself sufficiently acquainted with these different varieties to identify them, but that which I take to be the Black Bent is what I have found most prevalent in Cheshire. The same means are necessary for the extirpation of this tribe of Grassy weeds as for Couch.

Meadow Soft Grass, or Woolly Soft Grass (Holcus lanatus), often abounds in the second year after laying down land to Grass. It springs spontaneously, for no one who knows it ever thinks of sowing its seeds. Like other natural Grasses it is perennial, and often yields a considerable quantity of herbage. Cattle will eat it, but only when they cannot get anything better. It is distinguished from the Creeping or Bearded Soft Grass (Holcus mollis), another inferior Grass, by the root not creeping, and by being much more woolly. Neither of these Grasses can be got rid of except by a course of tillage, and by sowing plentifully other natural Grass seeds of a better kind when the land is again laid down to Grass.

Buttercup, or Crowfoot.—The name buttercup seems to have originated in the fallacious supposition that the eating of the plant by milch cows imparted a yellow colour to butter. The term Crowfoot may have had its origin in the resemblance of the leaf to the outline of a crow's foot. The plant is perennial, and flowers from May until July. The varieties of this plant, all of which are more or less common in Cheshire and Lancashire, are the Common Buttercup or Bulbous Meadow Crowfoot (Ranunculus bulbosus); the Upright Meadow Crowfoot, or the Acrid Crowfoot (Ranunculus acris); the Creeping Crowfoot (Ranunculus repens); and the Corn Crowfoot (Ranunculus arvensis). The Acrid Crowfoot is considered the most objectionable, but all are more or less so. Not only do these weeds occupy considerable space in many of our Grass fields—especially in those which are rather moist, where they are generally most prevalent—but they are absolutely injurious as food for cattle, and should therefore be expelled from the land as soon as possible. Curtis, in his "Flora Londinensis," referring to the Ranunculus acris, says:—"Instinct rarely fails in directing graminivorous animals to reject such herbs as would prove injurious to them; hence we seldom find this and the other acrid species of Crowfoot eaten by cattle; but we know that under certain circumstances they will err, and become poisoned or diseased." Gerard (an old writer) says:—"This plant is called Bane-wort by some, because it is dangerous and deadly for sheepe, and if they feed of the same, it inflameth their liver, fretteth and blistereth their entrailes."

It will be unnecessary, I am sure, to multiply these opinions. I am satisfied that the more you study the question as to the Buttercups, the more convinced you will be of the propriety of destroying them. In moist lands draining will assist you; in pastures, mow them down early, or, if not very abundant, cut them out with a sharp spud or hoe. But the most effectual remedy, where they are very prevalent, is to break up the land, pass it through a course of tillage, and expose it well to the winter frosts. If you fail to wage continual war against these and other noxious weeds of your Grass lands and hedges, you have no right to expect either that your cattle will be always healthy, or that their produce will be always wholesome.

Charlock (*Sinapis arvensis*) infests your arable lands, and is, perhaps, better known to you as Yellow Weed or Wild Mustard. This weed is an annual, and is propagated wholly by seed; so that if it is cut down before seeding, it cannot multiply; but it is well that it should be pulled up or hoed down before it is even in flower, if you would save the nutriment of the soil for more profitable plants. Farmers should make themselves well acquainted with the seed, in order to avoid sowing it with Turnips, Oats, or Barley, the crops which Charlock is often prevalent amongst. In some instances—perhaps in many—it is taken to the field with some manure that has probably been collected near the barn doors, and which has become mixed with refuse of the winnowings. These, I need not tell you, often abound with many objectionable seeds besides Charlock. The Wild Radish (Raphanus raphanistrum), another annual weed, is sometimes confounded with Charlock, but is easily distinguished from it. It requires the same means for its destruction as Charlock. The seeds of both weeds have been known to have vegetated after having lain in the soil for 40 years. I ought to remind you that this, as well as all the Sinapis tribe, ripen before or quite as soon as the corn crops, and many of their seeds are, therefore, likely to be shed with the act of reaping; this is another reason, if any be needed, why the corn crops should be carefully weeded. I may mention, in passing, that the White Mustard (Sinapis alba), and the Black Mustard (Sinapis nigra), are cultivated plants; the latter is considered a weed in some districts, but is not troublesome with us. White Mustard is that usually sown in our gardens to be eaten as a salad along with Cress, Lettuce, and vegetables; and it is the pounded seed of this and the Black Mustard that affords one of the most common domestic condiments of our dining tables. It is now grown in some parts of England either to be fed off by sheep or to be ploughed in as a green manure. A full account of it is given in the seventh volume of the Royal Agricultural Society's publication. Black Mustard, which is more pungent that the White, is, I believe, the kind most commonly adopted for domestic use in France.

Common Thistle (Carduus arvensis) is a difficult weed to eradicate, particularly in clay soils; and the seeds after lodging in these soils for many years appear to lose not the vital principle; for who has not often seen, when a clayey field has been ploughed a little deeper than usual, or when in draining the subsoil has any of it been left on the surface, how soon this unwelcome guest presents itself to our notice? Various suggestions have been made for destroying the Thistle, but so long as there is one slovenly farmer in a neighbourhood who allows it to go to seed, either in his crops or his hedges, the most tidy farmer must never expect to be wholly free from it. A recent writer—an agriculturist in Rutlandshire—says: "One plan is to have them drawn or pulled up by the roots twice a year (the first time of going over them being about the end of May, the second time either just before harvest or directly after, according to local circumstances): the other plan is to spud or hoe them up below the knot or first joint of the Thistle; by this means each Thistle is destroyed. The time of performing this work is the same in both cases as that of drawing them. Where disappointment occurs after spudding or hoeing, it is in consequence of the work of eradi-

* "A few Remarks on the Weeds of Agriculture." Read at a meeting of the members of the Over Agricultural Society, Cheshire, April 26, 1860, by Henry White, Land Agent, &c., Warrington.

cation not being done properly. Those Thistles that have been cut off above the knot throw up an increased number of fresh shoots, while those cut below are certain to decay. Some farmers think it best to allow the Thistles to remain until they are ready to flower; they are then mown and raked up and carried away. This, however, is by no means an example of good and clean husbandry, though it is argued that by this process the water gets into the crown of the Thistle that remains, and it is thus destroyed." He adds that a Common Thistle is best eradicated by an implement called a "Thistle drawer," or may be removed by placing a drop of sulphuric acid on the crown. There are other kinds of Thistles, mostly biennial, and less prevalent, which I will merely enumerate. These are the Stemless Thistle (Carduus acaulis) (no doubt known to you); the Spear-plume Thistle, or Bur-Thistle (Carduus lanceolatus); the Marsh-thistle (Carduus palustris); and the Musk-thistle (Carduus nutans); one plant of which Professor Buckman says contains sometimes as many as 3750 seeds. The last-named Thistle, I am happy to think, is not indigenous on the soils of the new red sandstone formation of this district, but is said to be so on the calcareous ones. The Common or Cornfield Sow-thistle (Sonchus arvensis) will be known to all of you; it is a perennial, and difficult to eradicate, as the roots strike deep in the ground, and throw up fresh shoots every year. It should be extracted with the "Thistle-drawer." One plant has been estimated to contain 19,000 seeds; you may readily imagine, therefore, if these are allowed to be dispersed, what evil consequences will follow.

Common Dock (Rumex obtusifolius) is, if possible, more common than the Thistle, and is equally objectionable. Eleven species of this perennial plant are said to be indigenous in Britain, including the Water Dock, and the Curled Dock. But it is the Common Dock that chiefly infests our Cheshire Grass lands and cornfields, and with which you have most to contend. To destroy it, the means must be similar to those employed for the Thistle, that is, either spudding or drawing up by the roots when the ground is moist. Mowing will not effectually destroy it, but it is much better to cut it down with the scythe than allow it, as some do, to run to seed. If you would extirpate this weed, do not, as I have seen too many do, gather it when ripe or nearly so, and throw it by handfuls into the nearest hedge or ditch bottom, into the occupation roads of the farm, or even into the highways. If you do this, what right have you to expect the seeds will be destroyed, and that they will not be returned to your land with the scrapings of the road or the scourings of the ditches? If you are wise you will throw them in heaps and burn them. And don't, as some do, harbour them about your stack-yards and homesteads. I think there is no more slovenly sight than to see big Docks and other big weeds going to seed near the homestead. Dock seeds, it is to be feared, exist in some samples of Clover and other seeds, and to this may often be attributed the existence of Docks in Clover and corn crops. To avoid it, you should make yourselves intimately acquainted with Dock seeds, and should examine your Clover seeds and seed corn in the bulk, to ascertain whether they are present or not. When the seedsmen find that the farmer is more particular, they will be more so in purchasing from the growers and merchants, and in time we may hope a more genuine article will be obtained. But if you would have others act with the strictest integrity towards you you must so act towards others. And whether you are selling your corn, which is not altogether so clean as you could wish, or your cow, that is not so good a milker as you could like, or is perhaps in a state of incipient disease, or your horse, who has perhaps some vicious habit or some not easily detected unsoundness, you must make the buyer acquainted with all the facts—or even with your doubts, if you are not certain. I remember reading many years ago the wholesome maxim of an old moralist, which has made a lasting impression on my mind; he says:—"Everything should be fairly told, that the buyer be ignorant of nothing the seller knoweth of."

Ragwort (*Senecio jacobæa*), and which I think I have heard some Cheshire farmers call Fleanard or Flea-wort, and others Ketlock, but the latter term is applied in some parts of England to Charlock. It is perennial, but belongs to the same family as Groundsel, one of the most abundant annual weeds of our gardens and Potato lands, especially if the soil is light and loamy, and not short of manure. Ragwort grows chiefly in dry pastures, and from 2 to 3 feet high. Its leaves are ragged, and its flowers, which make their appearance in July, August, and September, are a bright yellow. This plant remains untouched by cattle so long as they can find anything else to eat, and it emits a fetid odour when bruised. It is easily cut down with the scythe, but to destroy it, it should be pulled up after rain, or when the ground is moist. An eminent agricultural writer says:—"The prevalence, or more than the bare existence of this plant, but especially the seeding of it on any land, is disgraceful to the farmer, and affords a distinct indication of his being either too sick, too lazy, or too ignorant to attend to his business."

Self Heal (Prunella vulgaris) is often very prevalent in Clover leas and pastures, and very commonly springs up when the Red Clover is beginning to disappear. It seems probable that the seeds of this weed are unwittingly bought by the farmer, and perhaps as unwittingly sold by the seedsman, with his Clover and Grass seeds. As the seeds somewhat resemble Clover seeds, it is probable that neither the farmer nor the seedsman would detect their presence without a very careful scrutiny, and without having a sample of Self-heal seed before them at the time of the examination. Where the weed exists in pastures it should be cut down before it is ripe, if you would prevent its spreading. I am disposed to think there would be less of this weed than there usually is in our Grass lands, if, on laying down land to Grass, the land was cleaner and in better condition, and if more perennial Rye-grass and natural Grass seeds were sown, and less Red Clover. Time will not permit me to do more than merely refer by name to a few other weeds. Those most common in Cheshire, and which are the most likely to prove troublesome to you, are the Coltsfoot, the Shepherd's Purse, Spurry, Dandelion, Daisy, Field Wood Rush, Carex, Knapweed, yellow Rattle, Persicaria, Knot Grass, Orache (fat-hen); together with Nettles, Fern, &c.

A word as to hedges and ditches. Why are they allowed to remain so weedy? Is there any doubt but that weeds are injurious to the White Thorn or other wood of which the hedges are composed? Do farmers keep their hedges and ditches slovenly for the sake of encouraging game, or vermin, or insects? Where the land is naturally dry or has been drained, might not many of the ditches be filled up? If it is too much expense to dig up and fork out the weeds from the hedges, by all means let them be cut down before they are ripe, and before they drop their seeds; else how can you ever expect to be even comparatively free from weeds in your fields? You will excuse my putting these questions and making these suggestions for your consideration. They are not made with especial reference to anything I have seen in this neighbourhood, or in the district of your society; for, previous to coming here this afternoon, I had not been in the district for several years, beyond passing through it by railway; but I don't suppose your district is an exceptional one, and it must be obvious to most of you that whilst much has been done, there is still great room for improvement. In conclusion, allow me to ask your assent to the following propositions, or, at least, to ask that you will consider and discuss them.

1st. That it is desirable that farmers should become better acquainted with the English and botanical name of weeds, that they may be enabled to refer to them in books, and thus to take advantage of the information and experience afforded by others.

2d. That they should ascertain more of the habits of these plants, and what is the principal cause of their existence on their farms—whether it is from the seeds having lain previously dormant in the soil or subsoil; from their existence in the manure or in the seed-corn or Clover seeds; from their having been wafted on the land by the winds; or whether they have been propagated by vivacious roots, such as that of the Couch, which have been cut, but not destroyed, in the process of cultivation.

3d. That they should thoroughly examine their seed-corn, and their Clover, Grass, Turnip, and other seeds, in the bulk, previous to sowing, and become better acquainted with the seeds of weeds, so as more easily to detect their presence. As the seeds of weeds are nearly all small, the examination will often be more easily and more satisfactorily effected by a small magnifying glass or microscope, such as the one I hold in my hand. This small glass may also be used for the examination of plants and insects. It is the kind used by botanists, and may be obtained at any respectable optician's for about 5*s*.

4th. That when weeds do exist, farmers should well consider and ascertain if they can what are the most effectual and cheapest means of eradicating or otherwise destroying them.

And here I would make one final remark, which is, that no one knows better than the Cheshire farmer how many of the small weeds of his Clover and Grass lands can be destroyed by a very simple process—that of bone-manuring. This is a fact worthy of notice, and one which he has cause to rejoice at. By the application of bone, and, indeed, of other manures on the surface, the best herbage is invariably stimulated, and its successful growth promoted, to the destruction of many of the smaller weeds. You must not, however, rely on this process too much for the destruction of all weeds, nor be disappointed if you find that Couch and Bent-grass, Crowfoot, and some of the larger weeds still exist in your Grass lands. And in your arable lands you will find that Persicaria (Lakeweed), Fat-hen, Groundsel, and some other weeds, are as fond of a little good manure as any of your cultivated plants.

Home Correspondence.

Editorship of the Royal Agricultural Society's Journal.—I cannot help thinking that two men made themselves very remarkable by their absence at the late meeting; I refer to Mr. Thompson and Mr. Chandos Hoskyns. To these two the agricultural world now imputes the responsibility of the late extraordinary choice of Editor of the Journal; and as they must have known that that appointment was to be called in question, they ought to have been present to defend it. That no reply to my remarks was made, I in common with others attribute to the feeling amongst the members of Council present, that no defence could be made; and that the whole affair and the non-selection of Mr. Morton was a great mistake, and a most unwarrantable blow, from an unwarrantable quarter, to the cause of scientific agriculture. In my remarks at the meeting I purposely avoided giving any one the opportunity of raising and riding off on a side question, as Lord Feversham so skilfully attempted to do in his reply to Mr. Sidney; and I felt that neither I myself nor my motives were open to the very slightest imputation of factiousness. It is now upwards of 20 years since I began to take an active part in the cause of scientific agriculture, and it is nearly as long since, in common with my late lamented friends Lord Murray and Professor Johnston, and the leading agriculturists of Scotland, I promoted the objects and acted as a director of the "Agricultural Chemistry Association of Scotland;" and since that time, whether as a member of the two great agricultural societies, as aiding the movement which the late Sir Robert Peel commenced for the establishment of an agricultural professorship in connection with the Royal Agricultural Society, or in taking part in the agricultural literature of the day, or in my own practice as a farmer and as an improver of landed property, I have done what I could to aid the cause of progress; and, therefore, hearing on all sides and in all parts of England the loud expressions of discontent in reference to the late appointment, I felt that I was fully justified in taking upon myself the expression of that feeling at the meeting. I also take this opportunity of saying that, although I have had the pleasure of an acquaintance with Mr. Morton for nearly 20 years, it has been entirely confined—to my great regret—to correspondence on agricultural literature; and I believe I have never in the whole course of my life met Mr. Morton under any other roof than that of the Royal Agricultural Society, except on one occasion, when, in a geological and agricultural tour with the late Professor Johnston, I had the pleasure of visiting Whitfield farm for an hour and making the acquaintance of Mr. Morton's father—the well-known author of the admirable work on Soils. I also take the opportunity of saying that I hardly even know Mr. Sidney, that I had no communication with Mr. Morton, Mr. Sidney, or with any one before speaking at the meeting; and that I did so solely from a desire to express my own surprise and that of others at what had been done, and my feeling and sense of the injustice to Mr. Morton; and to endeavour to elicit some explanation of so remarkable a decision as the Committee have come to. I make these latter remarks because an impression has been attempted to be created that I acted as a personal friend of Mr. Morton, and in concert with Mr. Sidney, who himself was a candidate for the office of Secretary, but who most clearly expressed the very general feeling of the agricultural world; and I should be sorry if any such impression should (where I am unknown) have the effect of weakening my protest in the slightest degree. *John Girlwood*, 49, *Pall Mall*, *June* 6. [We believe that neither Mr. Thompson nor Mr. Hoskyns voted on the question of the editorship.]

Cheap Seeds.—The public are much indebted to Professor Buckman for the exposure he has made of the deleterious substances mixed in the various descriptions of seeds which are sold to farmers; but it is to a very great extent the fault of the farmers themselves, as many of them often purchase what is called "cheap," or, in other words, low-priced, and will not be persuaded to touch really good and genuine articles, which are in reality much cheaper, but for which a little more money is asked. Of course there are some farmers who know their own interest sufficiently well to use only the best descriptions, but as a body most of the country merchants complain that they can sell them the low-priced articles best. Could the farmers be persuaded to profit by the examinations and disclosures of Professor Buckman, it would be greatly for their interest. *Mercator.*

Hedgerow Timber.—During the month that is now closed a vast quantity of trees, especially Oaks, will have fallen before the woodman's axe, for at present there is a rage for clearing away hedgerow timber, and removing every tree that it is possible to get condemned out of the way of the farmer's plough. Now this is a great change on what we have seen, and a change in many respects for the better. But with our energetic race there is often no moderation in reforms. We set about them in a kind of rage, as if determined to make up, by a fatal form of compensation, for the mistakes that we have made in one direction by committing an equal number in the opposite. Thus there is no doubt that hedgerow timber has ceased to be regarded as always protective to the land, or even as always a picturesque addition to the landscape, and trees in fields have been found not only to interrupt and interfere with the progress of the plough, but by their far-extending roots and shade materially to injure the health and luxuriance of the crops within their influence. Under this impression the improving landlord, or the spirited agent, vigorously sets about clearing the estate of these foes to agriculture. As our friends across the Channel used to say, "Ireland for the Irish," so he says, "the woods for trees;" and presently the straggling and unsightly hedgerow, with its stunted, distorted, miserable tree-lets, is turned into a neat and really pleasant-looking fence; the ploughman is no longer betrayed into curses by the constant and provoking encounter with the tree-roots, and trees are relegated to their proper places—the plantation or the wood. But the improved farm seems like a place that has been redeemed from a common, so bare, exposed, and bleak have learnt to look the once rather wild and over-wooded fields. To the eye of the farmer, *pur et simple*, this may perhaps be an advantage; to the eye of the lover of the picturesque it is a melancholy change in appearance; but to that of a lover of stock and green pastures it is something worse still. For suppose that (as is to be hoped) after a few years of deep and clean tillage, and a good manuring, some of these cleaned and improved fields are laid down again in Grass-seeds or permanent pasture, where is the tossing, running, raving cow or ox to find a single spot of shelter or a single trunk to rub itself against, in the hot, glaring, mid-day field—

far perhaps from the homestead and the shade of its friendly byre? Why should not the landed proprietor, if he mark his wood himself, or his agent, if it be committed to him, take the occupant of the land into friendly counsel and save one tree to every 3 or 4 acres, to be at once an ornament to the land, and a comfort to the herd? I should have thought such a suggestion too obvious a one to have rendered it necessary to trouble you with an allusion to the subject, had I not seen considerable portions of more than one estate stripped straight ahead of their timber at the felling and barking season, without apparently any consciousness on the part of the directors of the raid of the irreparable mischief they were doing, not by their clearings, but by their unmodified, and let me add unmollified way of effecting them. *Exile.*

Yield of Milk.—At the Ayrshire Society's Cattle Show a novel feature was a competition for premiums offered by the Duke of Atholl for the best milking cows; eight cows competed, and they were kept together for five days, and carefully watched and milked. Mr. Robert Wallace, Kioklandholn Street, Quivox, was first in competition; Mr. William Reid, Clune Street, Quivox, second; Mr. Henry Bliston, Ayr, third; and Mr. Andrew Hendric, Ayr, fourth. The following is a statement of the quantities of milk given by the cows belonging to the competitors:—

	Greatest Milkings.			Average of ten Milkings.			Per Centage of Cream.
	lb.	oz.		lb.	oz.		
1.	28	7	..	26	5	..	12
2.	26	10	..	24	7	..	9
3.	24	13	..	22	10	..	11
4.	24	12	..	22	1	..	15

Barley Growing.—Messrs. Blizard and Godsall, of Tewkesbury, have for four years given prizes in order to stimulate and improve the growth of English Barley. From amongst the immense number of lots of that important grain which have been sold to them, the produce of last year's harvest, about 50 samples, comprising all the best, were submitted to three judges of acknowledged capability, viz.: Mr. Tom White, Tewkesbury, corn-merchant; Mr. W. Turk, Cheltenham, maltster; and Mr. Saunders, of the same place, brewer. There were two prizes offered, one of which was an elegant silver cup value 15*l.*, and the other a smaller one value 5*l.* The first was awarded to Mr. W. Attwood, of Conderton; and the other to Mr. F. Ashwin, of Sedgeberrow; the Barley shown by Mr. Smith, of Dumbleton, being highly commended, and that of E. Holland, Esq., M.P., of Dumbleton Hall, commended. The adjudication was signalised, as usual, by a dinner, which took place at the Black Bear Inn, to which between 40 and 50 landowners, farmers, tradesmen, and other gentlemen sat down; Edward Holland, Esq., M.P., occupying the chair. The following observations were made:—The Chairman said Messrs. Blizard, as they well know, did their best to bring farmers together, and further the progress of improvement, a procedure which did them great credit. Farmers, in this respect, laboured under peculiar disadvantages. While Mr. Blizard could run round the corner of a street, and consult with a friend about anything he might require, they (the farmers) would have to go a long distance. It was then more expedient for them to meet together whenever occasion offered than any men in the country, and Messrs. Blizard had done well in seeking to afford them such an opportunity. They had with great liberality given premiums for the best article that could be used in their trade; but while benefiting themselves, an important advantage also resulted to the agricultural community, as they were enabled to ascertain what quality of Barley was grown; what sort of land would grow the best Barley; and from the data given, and comparison, form a judgment as to the best mode to secure the best end.—Mr. G. Blizard said, that was the fourth time their firm had given prizes for the best 200 bushels of Barley. There was a matter to which he would wish particularly to direct their attention, and that was the manner in which some of the Barley was sent to market. It was really shameful to see the state of it. He would impress upon them the importance of removing the tail from the Barley, reminding them that 100 bushels well winnowed were worth much more than when badly winnowed. By the former a good sample was secured; while by leaving in the tail, at the saving of some little trouble, a bad one was presented. They had heard him formerly complain bitterly against the threshing machines, and the injurious effect their action had on the Barley. He had still to complain in this respect, but at the same time, felt bound to state that the grain was not now so badly broken as it used to be. Last year, in reference to this subject, he had suggested the offer of a prize of 50*l.* for the production of the best instrument for threshing Barley; and Mr. H. Butt had observed that it was very probable the subject would be taken up by the Royal Agricultural Society. Such, however, was not the case. It was well to remark, however, that machinists were well aware of the evil, and were striving to remedy it. The effect on the maltsters was serious; for when the grain of Barley was cut or broken, a blue mould was engendered, and when this prevailed among a large number of bushels, great loss was necessarily incurred. He considered that farmers would find their account in giving a little more time to preparing their Barley, feeling assured that they would be repaid for their outlay, in the production of an improved sample. It was astonishing the difference this would make. *Abridged from Tewkesbury Record.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

A Monthly Council was held on Wednesday, June 6, Lord Walsingham, President, in the chair. Present: Marquis Camden, Earl Powis, Lord Faversham, Lord Leigh, Sir W. B. Bridges, Bart., Sir E. Kerrison, Bart., M.P., the Hon. Colonel Hood, the Hon. W. G. Cavendish, M.P., the Hon. A. Vernon, Mr. Amos, Mr. Raymond Barker, Mr. Barnet, Mr. H. Barrow, M.P., Mr. Caldwell, Mr. J. Druce, Mr. Frere, Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Hoskyns, Mr. Humberston, M.P., Mr. Lake, Mr. Lawes, Mr. Milward, Mr. F. Neame, Professor Simonds, Professor Spooner, Mr. H. S. Thompson, M.P., Professor Voelcker, Mr. Jonas Webb, Mr. T. B. Western, Mr. Wightwick (Mayor of Canterbury), and Professor Wilson.

Sir John Ratcliffe, Bart., of Wydrington, Birmingham, was elected a Governor of the Society.

The following new members were elected:—

Cathcart, Earl, Woodland, Thirsk
Jervis, the Hon. E. Swinfen, Aston Park, Staffs.
Baker, Anne, Grendon, Atherstone
Dewar, William, Middleton, Bicester
Prescott, William, Clarence Roehampton
Jones, John, Bryn Adda, Dolgelly
Fothergill, John, Nottingham
Constable, Rev. John, Principal, R.A. College, Cirencester
Williams, W. R., Dolgelly
Hickman, Captain, Doliar Street, Cirencester
Wilson, Thomas, Jun., 20, Gloucester Street, Hyde Park
Wedgwood, W. R., Heavitree Park, Exeter
Stow, Arthur, Bredon, Tewkesbury
Kirkpatrick, Captain, Monk's Horton, Standford, Hythe
Edge, Davis, Burslem
Furnival, Stephen, Napeley Heath, Macclestone, Market Drayton
Sherborn, Francis, jun., Bedfont, Middlesex
Donovan, John Clarke, Gatwick Mill Hill, Billericay
Biddell, William, Hawkstead Hall, Bury St. Edmunds
Jackson, Richard, Noctorum, Birkenhead
Ashby, T. W., Rutland Works, Stamford
Priest, Alfred, Kingston-on-Thames
Fenton, John Thomas, Thorpe Hall Colliery, Leeds
Dyott, Colonel, Freeford Manor, Lichfield
Woolnough, William, Kingston on-Thames
Lintott, William, Holmbush, Slinfold, Horsham
Holmes, Sleigh, Ellerton Grange, Newport, Salop
Gould, Rev. Joseph, Hurst Green
Shaw, Charles Henry, 55, Charing Cross
Evans, John, Effington, Salop
Ashcroft, Thomas Walford, Eccleshall, Staffs.
Wilkinson, John Sutton, Hungerford House, Madeley, Staffs.
Thompson, William, Weymouth

The names of five candidates for election were then read.

FINANCES.—Mr. Barnett presented the report of the Finance Committee, from which it appeared that the current cash balance in the hands of the bankers on May 31 was 4183*l.* 19*s.* 4*d.* The Secretary's receipts during the past month had been duly examined by Messrs. Quilter, Ball & Co., and were found correct. The amount already received on account of implement shedding and entries for live stock at Canterbury amounted to 1037*l.* The sum of 1220*l.* has been received during the present year on account of arrears of subscription, and a considerable sum still remained overdue, for the recovery of which the adoption of more stringent means was recommended. At the suggestion of the Committee, the Secretary was directed to prepare a complete list of Members of the Society for publication in the Journal.

PRIZE ESSAYS.—Mr. Thompson, M.P., Chairman of the Journal Committee, announced the following awards from the Judges of Essays:—

I. John B. Spearing, of Moulsford, near Wallingford, Berks, the prize of 50*l.* for the best report on the Agriculture of Berkshire.
II. John Fulton, of Temple, Mary Hill, Glasgow, the prize of 10*l.* for the best Essay on recent improvements in Dairy practice.

The Essay on the Agriculture of Berkshire bearing the motto "Long Wittenham" is much commended.

CHEMICAL.—Mr. Hoskyns, Chairman of the Chemical Committee, presented the Report, wherein application was made for a grant of 100*l.* for the collection of information on the Manufacture of Cheese in the different dairy districts of the kingdom, as it will necessitate certain outlay in travelling expenses, and the employment of local aid in the tour of inspection. The annual grant of 200*l.* for chemical investigations during the year 1860 was recommended.

CANTERBURY COMMITTEE.—Lord Leigh, Chairman, reported the favourable progress of the arrangements for the Society's meeting on the 9th July and following days. The Local Committee having applied for an extension of the time allowed for the entry of ploughs for the ploughing match, it was recommended that the time be extended to June 30, and that the ploughs be delivered into the trial field by 7 o'clock on the morning of Wednesday, July 11. At the request of the Mayor of Canterbury, the Council considered the question of the advisability of holding a dinner at Canterbury under the auspices of the Society, and it was resolved on the motion of Mr. Fisher Hobbs, seconded by Mr. Amos, that the Dinner should take place at 6 o'clock on Tuesday, the 10th July, and that the Council would guarantee a proportion of the tickets at 10*s.* each which may be obtained of the Secretary.

The following letter relating to the proposed Metropolitan Meeting of the Society in 1862 was read:—

"Office of Works, &c., S.W.
"May 22, 1860.

"MY LORD,—I have the honour to acknowledge the receipt of your lordship's letter, dated the 9th inst., intimating the wish of the Council of the Royal Agricultural Society of England to have their exhibition in the metropolis in the year 1862, and inquiring whether a site in the Regent's Park could be granted for that purpose; and I have to acquaint your lordship in reply, that her Majesty has graciously consented to allow the exhibition to be held in one of the parks in London, and that the Society will be informed of the precise spot and of the conditions upon which it is to be occupied, whenever it may be necessary for the Council to make their final arrangements.

"I am, my Lord,
"Your Lordship's obedient servant,
"ALFRED AUSTIN, Secretary."
"The Right Honourable Lord Walsingham."

On the motion of the Hon. Col. Hood, seconded by Mr. Fisher Hobbs, it was resolved that on the day the Special Council meet in May to prepare their report to the General Meeting of the Society, the election of President for the ensuing year should be considered.

On the motion of the Earl of Powis, seconded by Mr. Raymond Barker, it was resolved that Mr. Edward Price of the Court House, Pembridge, having been shown to the satisfaction of the Council to come within No. 18 of the General Rules relating to exhibitors, he cannot consequently be allowed to compete for any of the Society's prizes.

On the motion of Mr. Milward, seconded by Mr. Brandreth Gibbs, the Hon. W. G. Cavendish was unanimously elected a Steward of Live Stock. It was arranged that Professor Voelcker, Consulting Chemist to the Society, would deliver a lecture on "Oilcake" to the members at the Society's house on Wednesday, the 13th inst., at half-past 12.

A communication was read from Mr. J. C. Morton, inclosing a detailed prospectus, received from Mr. Vanden Bosch, of Wilhelminadorp, near Goes, Holland, of an international competitive trial of Steam Ploughs and Reaping Machines to be held on his farm, when liberal prizes are offered in order to secure a vigorous competition. [This is referred to in a leading article, page 535.]

The Council then adjourned.

BATH AND WEST OF ENGLAND AGRICULTURAL.

THE annual meeting of this Society, held this year at Dorchester, is now so nearly one of the first-class agricultural gatherings that farmers in all parts of the country look with interest to a report of its proceedings. It is, indeed, but a limited section of the island that the association deals with, but great varieties exist in its climate, soil, and agriculture; and it is possible for them to select for their successive shows districts altogether dissimilar. If this had been their purpose in the present case it would scarcely have been possible to do intentionally what has accidentally been brought about by the selection of the locality of Dorsetshire in succession to that of Barnstaple. Whilst the beautiful breed of cattle belonging to the latter district presented an attractive and distinctive feature, yet its agriculture properly so called was with some few exceptions rather remarkable for its wants than its possessions, and had considerably more to learn than to teach. The present district, on the other hand, without any peculiar attraction in its breed of animals, is yet a truly agricultural locality, surrounded with large farms of mixed and varied soils, not rich enough to dispense with artificial assistance, nor so poor as to prove ungrateful for its aid. We know of no district in which greater progress has been made during the last 20 years.

The interest of the show was somewhat enhanced by the fact that three years since Dorchester competed, though unsuccessfully, for the meeting of the Royal Agricultural Society, which was held at Salisbury in preference, the latter being a place of somewhat greater importance, and better furnished with railways. The latter reason for preference however does not exist at present, for within the last few years additional facilities have been given by the extension of both broad and narrow gauges, so that every communication that can be desired for the transit of stock and implements to every part of England is now abundantly afforded. Under these favourable auspices the present meeting was held on a spot of ground to the right of the old London Road leading to Blandford on the north-east side, and immediately adjoining the town. The land in question belongs to the town, and if the weather preceding the meeting had been fine and dry, no situation could have been better, but with the deluge of rain which we have had during the last week the low situation of the ground, almost on a level with the river, has rendered it a complete swamp for the last few days, and has certainly taxed to the utmost the skill and industry of the managing committee. No efforts could have been more successful, and without enumerating them it was quite a marvel to find how comparatively dry and sound the surface had been rendered on Tuesday, particularly that part of it devoted to live stock. The rain however on Tuesday night again saturated the soil, which presented a very singular appearance, somewhat resembling the bogs of the New Forest, on the borders of which the ladies, by no means few with their light dresses, were almost as wild fowl

in a decoy pond. However, hurdles, straw, bushes, and gravel were employed with much success in affording a sound and dry footing.

It would at first sight appear a matter of surprise that for a district or local show so large a space of ground as 20 acres could require to be enclosed, but this feeling of surprise was on our entrance to the yard quickly changed to one of astonishment at the immense and superb exhibition of implements which both demanded and deserved so large a space. We find there were no less than 150 exhibitors, a fact which speaks strongly in favour of the self-supporting power of this part of the exhibition, and the non-necessity of the prize system to uphold it.

On taking up the catalogue we find that local manufacturers fairly sustain their parts. Thus Messrs. Taskers, of the Waterloo Works, near Andover, exhibit no less than 24 implements of all kinds, from the steam engine and threshing-machine to the horse-hoe and Bean-mill, whilst Messrs. Maggs & Hindley, of Bourton, Wincanton, have no less than 54.

Messrs. Hallam, of Basingstoke, had also a large show. Messrs. Barrett, Exall, & Andrews exhibit some engines and threshing machines, and about 10 other implements. Mr. Pearce, of Poole, Dorset, exhibited about 80 implements of all kinds, including some brick-making machines and ploughs, for which he has a local celebrity. We notice amongst his implements a tile-machine of novel construction, and likely to prove valuable. Messrs. Dowell, from the same locality, have no less than 26 in their stand.

Mr. Galpin, of Dorchester, has no less than 80 implements in his list, and likewise greatly assisted the Council by lending the use of his forges for the interesting prize competition of shoeing smiths, respecting which we must make some remarks in our next.

There were other local exhibitors who deserved much credit, for the names of which we must refer to the catalogue. The old firms came out right royally. Ransome & Sims, Garrett & Sons, Hornsby, Clayton & Shuttleworth, Howard, &c., each brought an array of implements, the aggregate value of which we should not like to guess. The long line of locomotive steam engines, drawn up as if they were in martial array, presented a most attractive feature of the show, and afforded a most convincing proof of the progress of the age and the march of agricultural improvement. An opinion was strongly expressed by some of the exhibitors that the Implement Show at Canterbury would not be superior to this.

It is difficult to find out new implements or any great novelties amongst the old ones, but we must not fail to notice a most admirable corn screen exhibited by Messrs. Ransome & Sims. It consisted of a cylinder of wires or rather a double cylinder, made with mathematical accuracy, one inside the other at the upper part, but both on a level at the under surface, so that this irregularity operated as a cleaner, and the space between each could be altered and adjusted so as to suit any sample of Barley or other grain.

A great many ploughs were exhibited in work, Messrs. Howard's, Messrs. Hornsby's, and Messrs. Ransome's attracting perhaps the most attention. Smith's Steam Scarifier was exhibited by Mr. Howard and did its work. Several Mowers and Grass Cutter, were also shown in work in a field of green Rye, but the incessant rain sadly interfered with the exhibition of their performances. Probably the American Reaper which goes under the name of Wood's Combined Mower and Reaper, exhibited by Mr. Cranstoun, of London, made the best work; but Samuelson and Burgess & Key maintained a prominent position, and a small local one-horse Reaper was very well spoken of, and was exhibited by the Lord President.

Although the Show ground from its low situation was rendered by the constant wet weather most unfortunate, yet it served to demand and bring out the exertions of the managers of the Show, whose efforts were at once most energetic and beyond all praise. They have learnt a lesson with regard to the selection of the ground which will not speedily be forgotten. In future they will always prepare for wet weather.

The EXHIBITION OF STOCK was very good, and on the whole probably superior to any previous show. The Short-horns, however, did not afford so much competition as could be wished. Mr. Stratton and a few others had no difficulty in earning their prizes; two heifers shown by a local breeder, Mr. Hill, of Came, were greatly admired. The entries of this breed were under 30. Colonel Towneley and Mr. Stratton, and Mr. Hewer, Mr. Holland, M.P., and Mr. E. Bowly, are among the best known names of the exhibitors, Mr. Stratton alone entering no fewer than eight animals.

There was a considerable show of Herefords contributed by H.R.H. Prince Albert, Lord Bateman, and Messrs. Price, Duckham, and other well-known breeders.

The Devons of course figure first on the list, and comprised 6 old bulls, 6 3-year old and 11 young bulls, 9 cows, 11 heifers, and 5 pairs of heifers—four dozen entries in all. They form by no means so full or so excellent a class as last year at Barnstaple (which of course could not be expected), but the character of the breed was well sustained and worthy of great commendation. We missed some of the eminent breeders who came forward so successfully last year, but there were many good men in the present show. In the prize list we read Mr. Turner, Mr. Turner, Mr. Turner, almost continuously: indeed the extraordinary success of this gentleman has been one of the features of the Show. But for the honour of Dorsetshire we have also Mr. E. Pope, of Toller, for two prizes; Mr. Bodley, Mr. Mogridge, Mr. Newbury, Mr. Mildon, and Mr. Buller, take all the other prizes back with their animals to their native county. The Prince was by no means in the first rank. Good as the Devons undoubtedly were, the Herefords however were the cream of the cattle show, the competition was good, and the prize animals the object of general admiration. The show of Pigs was good, not coming up of course to the all England competition of the Royal Agricultural Society, but decidedly better than at Barnstaple, and at least as good as any previous show. The competition was very fair, and the winners of prizes well worthy of the awards.

What shall we say of the Horses, probably the weakest part of the show; but then we must bear in mind that the battle-fields of this society are not so celebrated for their horses as the east and north and middling districts. If there were fewer good there were fewer bad horses than at Barnstaple, and whilst the splendid ponies which formed so distinguished a feature in the latter exhibition must ever give it the pre-eminence, yet in the Horse classes the Dorchester meeting was the best. We may justly point out as worthy of note the first prize mare and foal belonging to Lady Pigot, No. 281; the 2-year old cart filly, No. 297, the property of Mr. Josiah Hill; No. 314, a yearling colt, belonging to Mr. T. Pain, of Laverstock, a most promising animal; both first and second prize animals in Class 48, the one a splendid 3-year old mare, thoroughbred, belonging to Mr. T. Pain, which with some difficulty beat a most attractive dark brown half-bred 4-year old horse, No. 321, belonging to Mr. W. Gapper, a winner of last year at Barnstaple. The animals we have enumerated we consider occupied the first rank in the horse classes, and were well worthy of a good place in any show, whilst for the second rank of merit we must refer to our Prize List. The pony stallions were not good, and the prizes were withheld. The pony mares were much better. Several small prizes were awarded to the extra stock in the horse classes, a very useful stallion of Mr. Olding's, a capital black filly, belonging to Mr. James Rawlence, and a capital pony belonging to Mr. Strange, and a pony stallion owned by Mr. Wall. The following is the award:—

CATTLE.—DEVONS.

Class 1.—Old Bulls: 10*l*., Mr. E. Pope, Great Toller.
Class 2.—Bulls under 3 years: 12*l*., Mr. G. Turner, Barton; 6*l*., Mr. J. Bodley, Stockley Pomeroy.
Class 3.—Bulls under 2 years: 10*l*., Mr. R. Mogridge, Molland; 5*l*., Mr. G. Turner; 3*l*., Mr. S. P. Newbury, Scruel Barton.
Class 4.—Cows in calf: 10*l*., Mr. G. Turner; 5*l*., Mr. E. Pope.

(COMMENDED.)

Class 5.—Heifers in calf: 8*l*., Mr. G. Turner; 4*l*., Mr. J. Mildon, Woodington Farm.

(COMMENDED.)

Class 6.—Pairs of Heifers: 8*l*., J. W. Buller, Esq., M.P.; 4*l*., Mr. G. Turner.

SHORT-HORNS.

Class 7.—Old Bulls: Mr. W. Hewer, Sevenhampton.
Class 8.—Bulls under 3 years: 12*l*., Mr. R. Stratton, Broad Hinton; 6*l*., Mr. Robert Cozens, Pilton.
Class 9.—Bulls under 2 years: 10*l*., Mr. Stratton; 5*l*., Mr. W. Hewer.
Class 10.—Cows in calf or in milk: 10*l*., Mr. C. H. Abbott, Long Ashton; 5*l*., Mr. R. Stratton.
Class 11.—Heifers in calf: 8*l*., Mr. R. Stratton; 4*l*., Mr. R. Stratton.
Class 12.—Pairs of Heifers: 8*l*., Mr. Josiah Hill, Came; 4*l*. Mr. R. Stratton.

OLD HEREFORDS.

Class 13.—Bulls: 10*l*., Mr. J. Williams, St. Mary's, Hereford.
Class 14.—Bulls under 3 years: 12*l*., Mr. T. Edwards, Wintercott; 6*l*. Mr. T. Duckham, Ross.
Class 15.—Bulls under 2 years: 10*l*., Mr. W. Perry, St. Oswell's; 5*l*. Lord Bateman.
Class 16.—Cows in calf or in milk: 10*l*., Mr. Henry Coate, Sherborne; 5*l*., Mr. J. Taylor, Stretford Court.
Class 17.—Heifers in calf or in milk: 8*l*., Messrs. J. W. & C. James, Mappowder; 4*l*., Mr. J. Williams.
Class 18.—Pairs of Heifers: 8*l*., Lord Bateman.

SHEEP.—LEICESTER, or LONG-WOOLLED.

Class 19.—Yearling Ram: 6*l*., Mr. G. Turner; 4*l*., ditto; 2*l*., Mr. G. Radmore, Court Hayes.
Class 20.—Old Rams: 5*l*., Mr. G. Turner; 3*l*., ditto.
Class 21.—Pens of five two-teeth Ewes: 5*l*., Mr. G. Turner; 3*l*., ditto.
Class 22.—Pens of five Ewes: 3*l*., Mr. G. Turner, Barton, Exeter.

COTSWOLD.

Class 23.—Yearling Ram, 5*l*., Mr. J. K. Tombs, Lechlade; 3*l*., Mr. W. Garne.
Class 24.—Old Rams: 4*l*., Mr. J. K. Tombs; 2*l*., Mr. W. Garne.
Class 25.—Pens of five two-teeth Ewes: 5*l*., Mr. J. K. Tombs; 3*l*., Mr. T. B. Brown, Salperton Park.

SOUTHDOWNS.

Class 26.—Yearling Rams: 5*l*., Mr. G. J. Wood, Athelhampton; 3*l*., Mr. J. Harding, Waterson.
Class 27.—Old Rams: 4*l*., Mr. G. J. Wood; 2*l*., Mr. James Harding.
Class 28.—Pens of five two-teeth Ewes: 5*l*., Sir R. G. Throckmorton, Bart.; 3*l*., Mr. G. J. Wood.
Class 29.—Pens of five Ewes; 3*l*., Mr. J. Moore, Littlecott Farm.

SHROPSHIRE DOWN OR HAMPSHIRE DOWN.

Class 30.—Yearling Ram: 5*l*., Mr. J. Moore; 3*l*., Mr F. W. Bennett, Chilmark.
Class 31.—Old Ram: 4*l*., Mr. J. Moore; 2*l*., Mr. G. Harbin, Newton.
Class 32.—Pen of five two-teeth Ewes. 5*l*., Mr. W. F. Bennett; 3*l*., Mr. J. W. Brown, Uffcotte.
Class 33.—Pen of five Ewes: 3*l*., E. Holland, Esq., M.P.

SOMERSET AND DORSET HORNS.

Class 34.—Yearling Ram: 5*l*., Mr. F. Bond, Ilminster; 3*l*., Mr. T. Danger, Huntstile, Bridgewater.
Class 35.—Old Rams: 3*l*., Mr. E. Legg, Beaminster; 2*l*., Mr. E. Legg.
Class 36.—Pens of 5 two-teeth Ewes: 5*l*., Mrs. J. Pitfield, Bridport; 3*l*., Mr. T. Danger.
Class 37.—Pens of 5 Ewes: 3*l*., Mrs. J. Pitfield.

MOUNTAIN SHEEP.

Class 38.—Old Ram: 4*l*., Mr. F. Quartly, Champson; 2*l*., ditto.
Class 39.—Pens of 5 Ewes: 4*l*., ditto; 2*l*., ditto.

HORSES.—FOR AGRICULTURAL PURPOSES.

Class 40.—Mare and Foal: 10*l*., Lady Pigot; 5*l*., Messrs. J. & E. Symes, Coombe Farm, Sherbourne.
Class 41.—Colt foaled in 1858: 10*l*., Mr. R. Jacobs, Glastonbury; 5*l*., Mr. E. Pope, Great Toller.
Class 42.—Filly foaled in 1858: 5*l*., Mr. J. Hill, Came Farm; 3*l*., Mr. T. Keable, Devizes.
Class 43.—Colt or Filly foaled in 1859: 2d prize, 3*l*., Mr. H. Bailey, Berkley.

HACKS OR HUNTERS.

Class 44.—Mare and Foal: 10*l*., the Hon. Baron Hambro, Milton Abbey; 5*l*., Mr. W. H. Hawkins, Dorchester.
Class 45.—Filly foaled in 1858: 5*l*., Mr. R. Passmore, Barnstaple; 3*l*., Mr. W. Lucas, Yeovil.
Class 46.—Colt or Filly foaled in 1859: 5*l*., Mr. T. Pain, Laverstock Hall, Salisbury: 3*l*., Mr. W. Marden, Pen Mill, Yeovil.
Class 48.—Horse, Mare, or Gelding, foaled on or after Jan. 1, 1855: 5*l*., Mr. T. Pain, Laverstock Hall, Salisbury; 3*l*., Mr. W. Gapper, Taunton.

PONIES.

Class 49.—Mare Pony: 4*l*., Mr. J. C. Wall, Redland Lodge, Bristol; 2*l*., Mr. W. A. Maule, Stoke Gifford, Bristol.

PIGS.—LARGE BREED.

Class 51.—Boar, under 2 years: 4*l*., Mr. W. Wells, jun., Highworth; 2*l*., Mr. W. Hewer.
Class 52.—Breeding Sow in Farrow: 4*l*., Sir R. G. Throckmorton, Bart.; 2*l*., Mr. William Hewer.
Class 53.—Pen of three Breeding Sows, under 9 months: 3*l*., Mr. W. Hewer; 2*l*., Rev. H. G. Baily, Swindon.

SMALL BREED.

Class 54.—Boar, under 2 years: 4*l*., Mr. J. A. Smith, Bradford, Peverel.
Class 55.—Breeding Sow: 4*l*., Mr. G. Turner; 2*l*., Mr. W. Marden, Yeovil.
Class 56.—Pen of three Breeding Sows, under 9 months: 3*l*., Mr. W. Marden; 2*l*., ditto.

JUDGES.—DEVONS AND HEREFORDS.

Mr. H. W. Keary, Holkham; Mr. E. L. Franklin, Wantage; and Mr. J. Quartley.

SHORT-HORNS AND LONG-WOOLLED SHEEP.

Mr. W. Bartholomew, Wragley; Mr. H. Trethewey, Grampound; and Mr. J. Tremaine, Newlyn.

SHORT-WOOLLED SHEEP.

Mr. J. Lawrence, Wilton; Mr. W. Humphrey, Wantage; and Mr. Joshua Whittaker, Sarum.

HORSES, PIGS, AND SHOEING.

Mr. H. Gibson, Exeter; Mr. W. C. Spooner, Southampton; and Mr. J. Moon, Plymouth.

PRIZES FOR HORSE SHOEING.—11 COMPETITORS.

AWARD:—For the best Shoeing Smith, 3*l*., Thomas Barrett, Bradford Peverell, Dorset.
Second best, 2*l*. 2*s*., Charles Way, Frampton, Dorset.
Third best, 1*l*. 1*s*., Francis Cape, Ilminster.
Highly commended, G. Rowe, Charminster, Dorset.
Commended, J. Tizard, of Chorminster; and B. Barret, of Fordington, Dorchester.

It is to be regretted that on Thursday morning the rain descended very heavily, and in spite of the most strenuous efforts to keep it dry, the ground was in a most deplorable condition. About 2 o'clock the wind blew with so much violence that the supports of the shed appropriated to the Poultry Show gave way, and the whole nearly came to the ground. Fortunately, however, no one was hurt, although several of the coops containing the poultry were broken, and the birds were running out from all sides, adding to the confusion by their outcry of astonishment at suddenly finding themselves at liberty. The Show of poultry was on the whole remarkably good, and there are very few pens which do not reflect credit on the exhibitors. The Dorkings were especially fine, and the Cochin Chinas, although fewer in number than in former exhibitions, are yet by no means inferior in quality. We observe that the prize for the best pen of bantams was given to Mrs. Pellat, of Ash Rectory, in Hampshire; Mr. Henry Tomlinson, of Birmingham, and Mr. B. J. Ford, of Exeter, carried away the laurels for the Cochin Chinas; and the Most Hon. the Marchioness of Winchester gained the Silver Cup for Dorkings; and among the other successful candidates may be named that very successful lady competitor, Mrs. H. Fooks, of Whitechurch, Dorset, who was a winner in various classes.

We add to these few notes, which will be greatly extended next week, that the trials of field implements attracted great attention, and excited as much competition and interest as though prizes were dependent on success. The mowers and reapers were tried on Wednesday on Clover and Rye, and Wood's combined mower and reaper appeared to greatest advantage in both cases. At the ploughing match, where 20 ploughs competed, the contest lay equally amongst Howard, Hornsby, and Ransome, or rather among those who held their implements.

Smith's Steam Cultivator, exhibited by Howards of Bedford, did good work in a Grass field, which was torn up and cultivated by Smith's 3-tined implement in an efficient manner.

ROYAL AGRICULTURAL OF IRELAND: *May* 31.—*The Turkish Bath for Cattle.*—Captain Ball previous to the last council meeting had addressed a letter to the secretary asking the council to appoint two or three members as a sub-committee to go to the place where information could be obtained on the subject, and report thereon to the council. He was informed that a Turkish bath had been used by Dr. Barter in January

and February last in the case of eight milch cows that had been seized with distemper; the first of the lot was neglected for a short time, and the animal died; but the seven other cows were treated in the bath from three to seven days, and recovered, and it was stated that uniformly milch cows taken and treated in that way were on the ninth or tenth day in as good a state of efficiency for the dairy as they had been previously. If that gentleman could show them how they could get the better of the distemper, and how the farmer, at the expense of a few pounds, could invest his capital in safety in horned stock, the society ought to take the matter in hand. Any person who had not seen, lived, and mixed among the people of dairy districts—and he could not himself believe it till he went to reside in the south—could scarcely estimate the importance of anything that would tend to make the dairymen of the south of Ireland feel to any extent that ease with regard to the distemper. It was the great bugbear that stood in the way of investing capital in dairy stock; even the enormous price of butter last year had failed to make men invest in dairy property; and why? Because they or their friends a few years back had been nearly ruined by the distemper. It was stated to him that within a very few miles of the same place there was a frieze-coated farmer—he did not know his name, but that did not matter for the purpose—who had up to last November a dairy of thirty cows; he lost every cow he had; he was set on "his legs" again, and two of his cows fell sick, Dr. Barter went over to him and showed him how for the sum of 6*l.* he could put up a rude Turkish bath, and in that bath he treated the remainder of his stock, and since then he has not lost a single cow, although they had been all attacked with distemper; and it was stated that the result in every case with regard to milch cows was the same—that after such treatment they were again in milk in the course of ten days. That statement, he thought, was worthy of consideration. A committee was appointed to go to Blarney and other places to collect evidence, and make a short report to the council, with a view to enabling parties interested to bring the matter forward in the show yard at Cork, where Dr. Barter would himself put up a booth and show the working of the system.

Lord Lansdown's Cottage Prizes.—The following report from the judges was read:—

"These cottages, which are situated in the town of Kenmare consist of two detached lots, one containing seven, called 'Downing's Row' and the other six, called 'The Sound Cottages.' From the appearance of the cottages in the neighbourhood of the former, we should be led to the opinion that 'Downing's Row,' had been in a very wretched state, but it now presents a very favourable contrast. Each of the cottages in Downing's Row consist of a kitchen and bedroom on ground floor, and two bedrooms above. We were informed that the walls, roof, and loft floors had been untouched (saving a few necessary repairs), but that all the doors and fittings had been renewed; metal sashes, with stone window stools and skylights inserted; the floor of the kitchen tiled, cottages neatly dashed, chimneys perfected, also such buildings erected as are required by the 'Cottier Tenant's Act. We object to the arrangement of the bedrooms. The necessity of passing through one bedroom to reach the other might, we think, have been easily avoided. The absence of gutters and down pipes to carry off the water from the roof is objectionable, causing damp to the ground floor. The offices are all newly built, and consist of privy, fowl house, and turf-house and pig-sty, with a compartment for dung; each yard is enclosed by a wall, and a lane runs along the rear of the yards; but we regret we cannot recommend the arrangement of the out-offices. We could see nothing novel in the stile leading from the road to each cottage (which the accompanying statement particularly brings under our notice): it consists merely of two stones placed very near each other at the bottom, and gradually widening as they reach the level of the wall. The 'Sound Cottages' contain each a kitchen and one room over it; they have no door going into the yard, nor windows in the rear. The walls and roofs of these cottages are also untouched, but all the rest had to be made anew. The flooring boards, which are 1½ inch thick, are planed on both sides, and tongued with hoop iron, supported on planed joists laid 2 feet 8 inches asunder, resting on neatly cut stone corbels, which we were informed cost but sixpence each. The under side of flooring and joists are varnished, giving a good effect. Each kitchen was provided with a sink stone, discharging into a sewer which empties itself into an adjoining field, and close to the cottages. The metal sashes of those cottages are of a different construction to those in 'Downing's Row,' with neat, simple fastenings. They have very well constructed hinges, not on a pivot, as in the above named cottages. But these also are without gutters and down pipes, the out-offices consist merely of privy and pig-sty, with yard attached, but no separate compartments for the ashes, &c., from the house; we like them less than the out-offices of Downing's Row, but the general appearance of the cottages is very good. We were informed that all the cottages were let for one shilling per week, and almost entirely occupied by labourers earning six shillings per week. Taking everything into consideration, and feeling strongly that the improvement of the existing cottages of the labourers is most desirable, we are of opinion that the Marquis of Lansdowne deserves much credit for being the first to come forward as a competitor for the prize offered; and although he has had no rival this year, yet we consider that he is fairly entitled to the gold medal of the society."

The Half-yearly General Meeting.—The general half-yearly meeting of the society was held at 3 o'clock. The report of the Council was read and the following is an extract:—

"Your council have accepted the invitation of the County of Cork Agricultural Society to hold the annual cattle show in that city. From the many local advantages it possesses, together with the very favourable arrangements entered into with the rail and steam packet companies for the transit of stock and implements, a very large number of entries may be calculated on. Your council regret the prizes offered by this society for building and improving labourers' cottages have not induced a greater spirit of competition among landed proprietors generally. In accordance with the 9th rule of the society, ten members of Council lowest on the list retire from office, but are eligible for re-election. The names of all gentlemen qualified for seats at your council have been furnished to the members of the society, in pursuance of the rule referred to. At this meeting it is your prerogative to elect a president, to succeed your present very efficient one, the Earl of Erne, who retires, and is not eligible for re election. The name of the Right Hon. Lord Clonbrock, recommended by your council to fill that important office, has been posted in the secretary's office in accordance with your rules."

Mr. Roper said: There is a matter of very material importance to the society, which is not alluded to in the report. I understand that Dr. Apjohn, Chemist to the society, has been forced to send in his resignation, and those who are aware of his long connection with, and the services rendered by him to the society, will, as well as myself, consider it too vital a matter to be passed over without some notice.—Considerable discussion ensued, and at length it was remitted to the Council to "reconsider the question of Dr. Apjohn's resignation."

Farmers' Clubs.

CENTRAL FARMERS' CLUB.—At the Meeting of the Committee, June 4, the following members were elected: H. Hall Dare, Hanover Square, London; C. Davison, Pier-pont, Farnham; W. Guerrier, The Crescent, Camden Road Villas; Major Onslow, Dunsboro' House, Ripley; Captain Phelp, Woodland Spa, Horncastle; H. Reed, Brent Villas, Hendon; J. Shaw, Hunsbury Hill, Northampton; J. Turner, Fen Place, Crawley, Sussex; G. Young, Apley Towers, Ryde, Isle of Wight. Nine other names were read for the first time.

The following bye-laws for the due regulation of the discussion meetings of the Club were proposed and passed:—1. That a Chairman shall be elected for 12 months, from the 1st of January in each year. 2. That at each meeting the authority of the Chairman on all disputed matters shall be final. 3. That in the absence of the Chairman, the Committee appoint a President for the evening. 4. That the Chairman be at liberty to introduce visitors, and Members one friend each at a meeting. 5. That none but members of the Club address the meeting, except on the invitation of the Chairman. 6. That the introducer of the subject have the right of reply at the close of the discussion, but that no other member address the meeting more than once during the evening, except in explanation, and then only with the consent of the Chairman. 7. That all persons address the chair standing, and that no one except the introducer of the subject be allowed to occupy the time of the meeting for more than a quarter of an hour. 8. That the subjects for discussion during the year be selected at the January meeting of the Committee, and that the time for holding these meetings be the first Monday in the months of February, March, April, May, June, and November, and in December on the Monday in the week of the Smithfield Club Show, at half-past 5 o'clock, P.M. 9. That members be requested to send in subjects to the Secretary, from which the selection will be taken; and that those unable to attend the meetings be invited to forward practical information upon them; such communications to be handed to the introducer of the subject to which reference is made.

It was arranged to have the anniversary dinner of the Club at "The Ship," Greenwich, on Monday, July 2, at 5 o'clock.

June 4.—On the Economy of Steam Power. Mr. Wells read a very elaborate paper on this subject, which we must give in more detail next week. His calculations, based upon the experience of several years, proved steam power applied to threshing to be one-half the cost of horse power applied to that purpose. On the subject of steam power for ploughing we can merely quote the following statement from the paper, leaving till next week the full discussion on which he afterwards entered: "I proceed to consider to what extent it displaces manual labour and horse-power, and also how far it can be made available for general introduction. First, then, as regards *Manual Labour*. I am of opinion that no saving in this portion of the farm expenditure is directly gained by the introduction of steam cultivation. In the whole of the calculations I am going to submit for your consideration the reverse will be found to be the result. Mr. Fowler's plough averages, on 200 working days, 16*s.* 7½*d.* per day, without including the labour of fetching coals, and the removal of the engine and apparatus, but inclusive of water carriage; and if I average the work performed at 4½ acres per day on 200 working days, giving 900 acres per plough per annum of soil turned over, or 3*s.* 8*d.* per acre, I trust it will be considered a fair basis to found an opinion upon. Mr. Smith's cultivator averages 17*s.* 4*d.*, which on the same calculation gives 3*s.* 10*d.* per acre. So far, therefore, as manual labour is concerned, both may be considered on an equality. On strong clay land it will take one man at 2*s.* and one boy at 1*s.* to plough, with four horses, an acre of land as deep as the animals can draw the plough, to move steadily, and which will not exceed 6 inches on the first ploughing, costing, in manual labour, 3*s.* per acre; whilst on light soils one man at 2*s.* per day, with one pair of good half-bred horses, will plough from 6 to 9 inches deep an acre and a half per diem, costing in manual labour 1*s.* 4*d.* per acre. It is, therefore, very evident that in neither case is there any displacement of manual labour by the introduction of steam cultivation. Secondly, as regards horse-power, I believe it is universally admitted that to work arable land well it requires, on the average, two pairs of horses for every hundred acres, where steam has not been introduced. In corroboration of this I may state that, in the year 1850, I applied to the occupiers of 10 distinct farms, situate in the counties of York, Nottingham, and Lincoln, varying in area from 100 to 1000 acres, and representing in the whole upwards of 3400 acres of strong clay land, wold, and warp land, for an account of the number of agricultural horses working on each separate holding. The return I received showed the number of horses so employed to be 137, or one pair for every 49½ acres. The cost of horse-keeping at that time was about 25 per cent. less than at present, so that I prefer at the present date to take Mr. Morton's tabular statement on the cost of horse-power, published in the Royal Agricultural Society's Journal, vol. xix., p. 451, Table 3, which shows the keep on 21 farms to average annually for each farm-horse 24*l.* 2*s.* 8*d.* This, with 5*l.* 10*s.* for depreciation of the animal, blacksmith's, saddler's, and farmer's charges, make a total of nearly 30*l.* My own experience on 50 draught-horses, with interest on average value added, corresponds with this amount. Mr. Robertson, as previously stated, cultivates his farm of 385 acres by Smith's cultivator, with only eight horses; and Mr. Saltmarshe by Fowler's, with nearly five hundred acres, proposed to reduce his number from 25 to 15. Mr. Redman, of Overton, on 410 acres arable land, has dispensed with three teams of oxen and one of horses. Mr. Hallam, M.P., in his speech at the East Gloucestershire Society stated that, "instead of 20 horses, he only now keeps 12." Mr. Richard Burniston, of Henley-on-Thames, on one thousand acres, calculates to spare 10 horses; and Mr. Pike of Stevington, who uses Smith's says, "I have reduced my horses from 15 to 11, and flatter myself I can do with nine." It is, therefore, a fair basis for calculation, to presume that the introduction of a steam-plough or cultivator will displace eight horses.

Notices of Books.

Fowls: A Plain and Familiar Treatise, &c. By John Baily, 113, Mount Street, Grosvenor Square. Henningham & Hollis, Mount Street, Grosvenor Square.

A fifth edition has just been published of a useful book by a man of experience on its subject, and better qualified than any other man by long practice as a judge to describe the different breeds and point out their respective merits.

Among the topics on which especially he is an authority is the character of the several breeds as exhibited in birds fit for competition at our poultry-shows. As an illustration of the detail possible on such a point, we quote his description of a prize Hambro' fowl:

"HAMBRO' FOWLS.

"PENCILLED.

"COCKS.

"Double combs, full of points, ending in a stout pike turning upwards. This must be firmly fixed on the head. It must not protrude nor hang over, nor must it be hollow in the centre. Even if firm it must not incline to either side. White deaf-ear, size and shape of a fourpenny piece. If larger, it should not exceed a sixpence in size. Ample tail, foundation colour black, but every feather should be laced on both sides with silver or gold. The black should predominate, and the silver or gold should be only an edging. White or red body, sometimes a little spotted at the hinder parts, and on the extremity of the wings. Blue legs.

"HENS.

"Double comb firmly seated on the head, and scrupulously straight, full of points, and like that of the cock, pike behind and turning upwards. Deaf-ear small, round, and perfectly white. Hackle quite clear from spots. Body pencilled all over from the end of the white hackle to the tip of the tail, and, if perfection be sought, the plumage of the hen should bear taking feather by feather and scrutinising. Each should have ten or more distinct markings, and tail coverts still more.

"These remarks apply alike to Golden and Silver, with this difference, that the ground colour of one is red, the other white. In both, the breast should be protuberant, the body round, the legs blue, the tail ample, and the whole carriage of the bird pleasing and cheerful.

"GOLDEN SPANGLED.

"COCKS.

"Large double comb, full of points, but neither overhanging the eye nor the nostrils; the points clear and sharp, not smoothed over till the comb looks like a Fungus. Full pike behind turning upwards. Dark rim round the eye. Round smallish deaf-ear, brilliantly white. Well-spangled breast; barred and laced wing; full black tail; blue legs; cheerful carriage. The under part of plumage bright buff. The hackle of the cock well clouded, and, if possible, the colour so distributed as to present no patches or circles of black. The saddle should also be well clouded. All the colours should be rich, especially on the wing, where a metallic black should bar and lace on a deep red or maroon ground.

"HENS.

"Bright red, spiked and piked, moderate-sized comb firmly seated on the centre of the head, without the slightest deviation to either side. Ear white, but not black hackle. Body spangled all over, wings laced and barred, under feathers deep buff. The colour of the body should be deep and rich, the spangling, barring, and lacing correct, sharply defined and bright with metallic lustre. The deaf-ear snowy white, small, and round; legs dark and blue. It is very essential that the pike of the comb should incline upwards.

"The cock of the Silver Spangled is not shaded or clouded like the Golden in the hackle and saddle, but he requires to have his tail quite white, with the exception of a black point at the extremity of each feather. A most accurately spangled breast is also required.

The hen of the Silver variety requires all these points, and in addition a thoroughly clouded hackle, and a clouded tail spotted at the end with black. Nothing is more important than the cloudy hackle.

"BLACK HAMBRO'S.

"These birds are subject to the same rules as the other breeds, simplified by the fact that the plumage is of one colour only. The combs must be spiked, pike

firm and straight as in the others, and the deaf-ear scrupulously white.

"SPANISH.

COCKS.

"Large comb, and perfectly upright. It should also be even on its surface, having no indentation popularly known as the thumb-mark in front. Spotless white face from the comb to the throat. Long, deep, smooth white ear-lobe; very full tail. Erect, haughty carriage, unmixed plumage, long blue legs.

"HENS.

"Large, soft, smooth red comb, hanging over, and concealing one side of the face. Face thoroughly white. Very full breast; body tapering to the tail, which is very full, and carried erect. Long thin skinny face, strong long beaks, and long blue legs; long ear-lobe, perfectly white.

"Both cocks and hens have in common rich metallic lustre on the plumage. They should also be rather leggy than otherwise.

"No bird pays better for care in preparing for exhibition than this does. No other bird presents such a contrast as the white face, red comb, and black feather. The white face is indispensable to success, and is perhaps the most important point in judging; but it must be borne in mind that not any excellence in this respect can palliate a drooping comb in the cock, or an upright one in a hen. Many birds have a much better face on one side than the other. No amount of white on one side will counterbalance red on the other."

There are full chapters on keeping, feeding, fattening, and exhibiting fowls, and a good deal of useful information on the diseases of poultry.

Calendar of Operations.

JUNE.

WESTER ROSS: *June 4.*—The month of May has passed away and has left us in a greatly more comfortable and hopeful condition than when it came. Although the rainfall has been unusually small, not exceeding in the whole month 1 inch, and although easterly scorching winds have latterly prevailed, the weather on the whole has been so genial and forcing that the astonishing progress has been made. Grass, which at the beginning of the month was so bare that a beast although nibbling with great industry the whole day could make only a stinted livelihood, is now so improved as to afford a full bite; whilst reserved Grass on early fields is being cut for the horses. Wheat that was greatly thinned by the long-continued severity of the season is rapidly improving, and on dry well-cultivated fields promises to be a heavy crop. On many fields, however, the plants are so diminished that the season, how good soever it may be, can scarcely bring them to a full crop. Oats have come away rapidly, and seldom have we seen them promise better than they now do. Barley brairded equally and promisingly, but these biting east winds have been too much for it; and meanwhile it is checked and discoloured. This, however, will be now rectified by the rain we had yesterday, and that continues to fall to-day. Potatoes are coming above ground, and appear strong and regular. The sowing of Swedes has been finished, and most of them are already beautifully brairded. The weather has been so suitable for cleaning and preparing the ground for Turnips, and the work now-a-days is so speedily accomplished with grubbers and well-adapted implements, that already little remains to be done. Turnip sowing will not be completed till towards the end of this month. Mangel Wurzel has been grown only to a very limited extent in the north, principally because Turnips thrive so well, and fail so rarely; but from the little experience we have had of it we are satisfied that, when necessitated to grow it, we will find it a good substitute. Swedes, Green-top Yellow, and Pomeranian Turnips are the kinds principally grown here. Pomeranian, although soft, are suitable for early eating, and can be grown to an extraordinary size; whilst Swedes and Yellow Turnips are better adapted for spring eating. We have well nigh forgotten the scarcity and destitution of spring, our stock are getting fast into good condition, and with the abundance of Grass we now have, we expect a brisk demand with high prices.

Notices to Correspondents.

BOOKS: *J A.* You will find all about it in Caird's English Agriculture.

DAIRY MANAGEMENT: *Chiswick.* Read the "Handbook of Dairy Management" (1*s.* 6*d.*) published by Longmans. Dairy produce is disposed of if on a small scale to neighbours, or on a large scale to Newgate Market or Leadenhall market salesmen. It is hardly likely that taking as an entire novelty to dairy farming you will succeed, unless you have already had the management of labourers, and know how to choose and retain the services of competent hands. Pleuro-pneumonia and the distemper may well deter any one who has not capital to fall back upon from entering into dairy husbandry.

DORKING FOWLS: *G.* All Dorkings, of both sexes, should have deep square bodies, broad backs, very full breasts, and white legs. The symmetry of the body will be easily judged and ascertained, if being viewed as if divested of head, legs, and tail, it presents a square.

SEEDS: *J Paget, Mansfield.* Your seeds from Doncaster are as follows:—1. White Clover—11,360 weed seeds in a pint, mostly of the small annual kinds, and is besides dusty; it is not, as its label declares, of "best quality." Its quoted price is 12*s.* per stone. 2. Trefoil—1920 weeds to the pint; it is a tolerably pure sample; price 3*s.* 6*d.* 3. Italian Rye-grass, 5*s.* per bushel. Contains 113,920 weeds per bushel, of which 43,520 are those of Ranunculus repens, or Creeping Crowfoot. 4. "Derbyshire hay seeds," 15*s.* a quarter. This is unmitigated dirt, nine-tenths being weeds (possibly the refuse from the clearing of different kinds of "seeds)". If sown, the best that could happen would be its not growing. Guess then if it be not worse than valueless. 5. "Red Clover, Sutton, Reading," 10*s.* per stone—2880 weeds to a pint, half of which is Plantain. This is as good a sample of Clover as we have seen. 6. White Clover, from do., 14*s.* per stone—1280 small weed seeds per pint. A remarkably clean and pure sample.—*A H, Herefordshire.* Clover for permanent pasture—very good, but intermixed with Plantain to the extent of 17,600 seeds of this plant per pint: this has in all probability been added as a desirable pasture plant. The Grasses with this may be pronounced as a better mixture than usual for good meadow land; it contains a little Holcus, but much less than is generally the case. The Buckwheat will be reported upon next week. *B.—J F A.* Your parcel and letter have been sent to Professor Buckman.

ERRATUM: In Mr. Mechi's paragraph last week on Rape-cake its superiority over oilcake as to the manure derived from its consumption should have been valued at 6*s.* a ton; and the saving at Tiptree by its consumption instead of oil-cake should have been put at 20*s.* an acre.

RANSOMES & SIMS, IPSWICH,

CONTINUE to give their best attention to the manufacture of the most Modern and Improved Agricultural Machinery, including

PATENT AND OTHER PLOUGHS, SUITABLE FOR EVERY SOIL AND PURPOSE.
HARROWS, CULTIVATORS, ROLLERS, AND OTHER FIELD IMPLEMENTS.
HORSE RAKES AND HAYMAKERS.
CHAFF CUTTERS, ROOT CUTTERS, BRUISING AND CRUSHING MILLS FOR CORN, OILCAKE, &c.
STEAM ENGINES, BOTH PORTABLE AND FIXED, WITH PATENT OR OTHER BOILERS.
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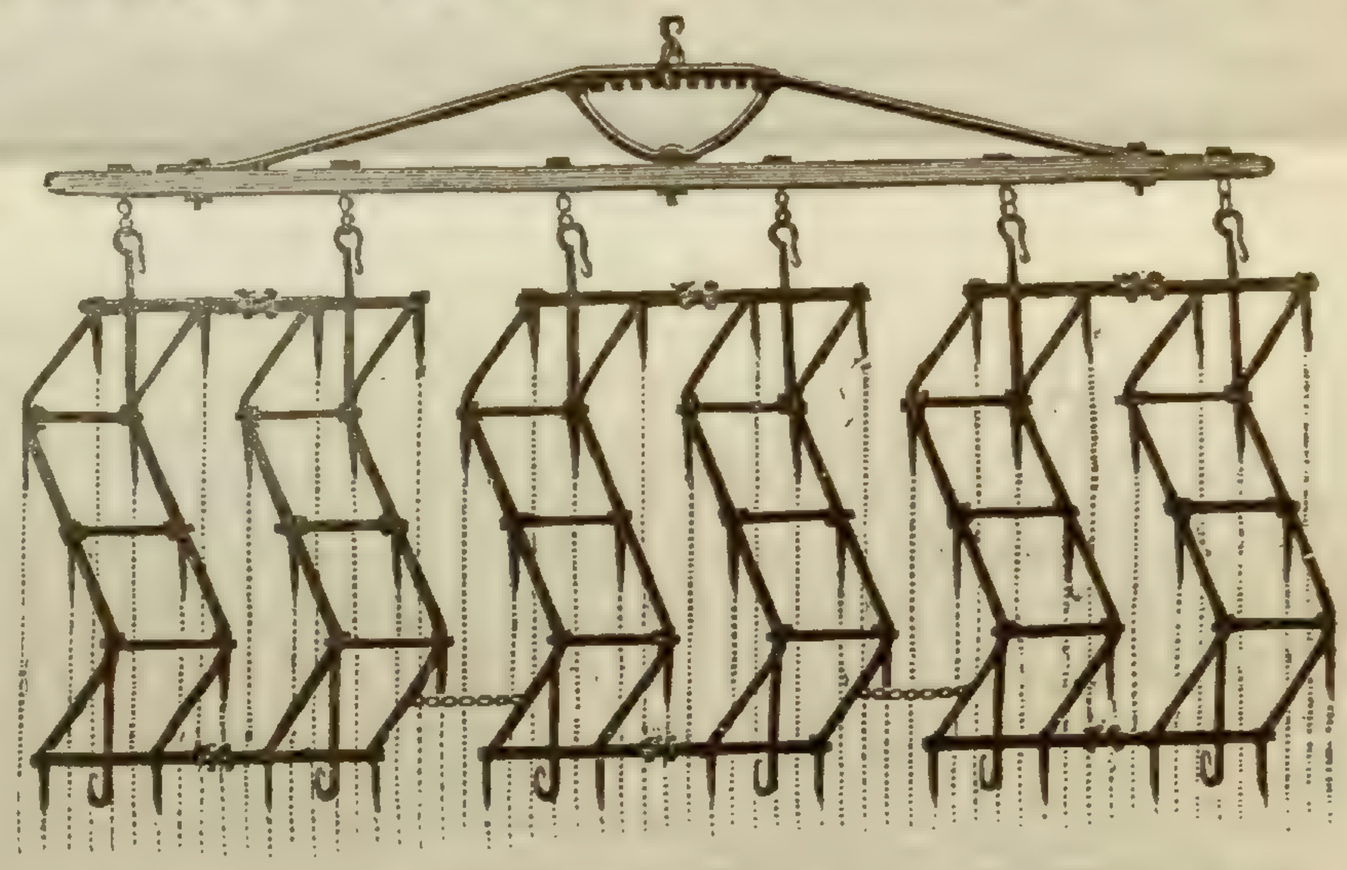

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From their long experience in the manufacture of HARROWS, having made about 20,000 sets, have the utmost confidence in bringing them before the Public as not only the *cheapest*, but the *best* and *most durable* Harrows yet produced. The teeth are now fitted into the frames in so secure a manner that it is impossible for them to work loose.

A Set of three 4-beam Harrows with Whippletree, recommended as general Seed Harrows, 9½ feet wide, marked No. 12 .. .. £3 10 0
A Set of Three 4-beam Harrows with Whippletree, adapted for three horses, 10 feet wide, marked No. 11 .. 4 0 0
If with Patent Joints, as above, 6*s.* per set extra.

Free Delivery to Basingstoke, Birmingham, Bristol, Canterbury, Cardiff, Colchester, Derby, Gloucester, Hull, Leeds, Lincoln, Liverpool, London, Manchester, Norwich, Nottingham, Reading, Retford, Salisbury, Shrewsbury, Southampton, Swansea, Wisbeach, Worcester, and York; or to Dublin, Edinburgh, Glasgow, and other parts, at fixed rates.

CATALOGUES, with prices and particulars of all J. & F. HOWARDS' Implements, including description of and Reports from persons working SMITH'S STEAM CULTIVATOR, sent post free on application.

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Reduced Tariff for Horticulture, Pictures, and Dwellings.

ORCHARD-HOUSE SIZES. **SMALL SQUARES.**

Supplied to Mr. Rivers and many Others.

In. by In.	16 oz.	21 oz.	In. by In.	In. by In.	Per 100 feet.	Per foot.
20 .. 12	Common, per 100 feet, 13*s.* 6*d.*	18*s.*	6 .. 4	8 .. 6	Common 11*s.* 6*d.*	1½*d.*
20 .. 13			6½ .. 4½	8½ .. 6½		
20 .. 14	Super „ 16*s.*	23*s.*	7 .. 5	9 .. 7	Super. 12*s.* 6*d.*	1¾*d.*
20 .. 15			7½ .. 5½	9½ .. 7½		

Squares in 100 and 200 Feet Boxes.

Inches by Inches.	Inches by Inches	Inches by Inches.	Inches by inches.	Inches by inches.		P. 100 feet.	P. foot.
10 .. 8	12½ .. 9½	13 .. 10	15 .. 10	13½ .. 11½	4ths.	12*s.* 6*d.*	1½*d.*
10½ .. 8½	13 .. 9	13½ .. 10½	12 .. 11		3ds.	14*s.* 3*d.*	1¾
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 . 11	2ds.	18*s.*	2¼
12 .. 9	12½ .. 10½	14½ .. 10½	13 .. 11		1sts.	21*s.* 6*d.*	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13*s.* 6*d.*	1¾*d.*
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16*s.*	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19*s.* 8*d.*	2½
18 .. 11	18 .. 12	23 .. 13	24 .. 15	.. ..	1sts.	24*s.*	3
13 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 12	22 .. 14	22 .. 16	.. ..			

If less quantity than 100 feet is taken, a moderate charge made for package.

GLASS CUT TO ANY GIVEN SIZES NOT ON LIST.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2½*d.* per foot.
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21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot.
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HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Not accountable for breakage.

GENUINE WHITE LEAD .. .. 22*s.* 0*d.* per cwt.
ANTI-CORROSION PAINT .. .. 24 0 „
LINSEED-OIL PUTTY .. .. 8 0 „
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BLACK, GREEN, and other kinds of PAINTS, VARNISHES, BRUSHES, &c.

GLASS FOR ORCHARD HOUSES & CONSERVATORIES.

JAMES PHILLIPS AND CO. beg to submit their prices of GLASS for the present month.

SHEET GLASS, in Crates, of superior quality, 16 oz. to the foot.

	Best.	Seconds.	Thirds.	Fourths.
	5½*d.*	4¾*d.*	2½*d.*	2¼*d.*
21 oz.	Best.	Seconds.	Thirds.	Fourths.
	7½*d.*	5*d.*	3½*d.*	3¼*d.*

Packed in 200 feet cases, 16 oz. £2 2 0
Packed in 300 feet cases, 16 oz. 3 0 0
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ORCHARD HOUSE SIZES, as supplied by us to Mr. Rivers.

		16 oz.	21 oz.
20 in. by 12 in.			
20 in. by 13 in.	Common	14*s.* 0*d.* ..	£1 1*s.*
20 in. by 14 in.	Superior do.	16 6 ..	1 5
20 in. by 15 in.	English Glass	18 0 ..	1 9

Boxes included and not returnable.

SMALL SQUARES, per 100 feet box. *s. d.*

6 by 4 6½ by 4½ 7 by 5 7½ by 5½ 11 6
8 „ 6 8½ „ 6½ 9 „ 7 9½ „ 7½
10 „ 8 10½ „ 8½ 12 6

HORTICULTURAL GLASS, in Squares, cut to specific sizes.

16 oz. per foot, from 2*d.* to 3½*d.* | 26 oz. per foot, from 3*d.* to 7½*d.*
21 oz. „ „ 3 „ 5 | 32 oz. „ „ 4 „ 9½

Special prices quoted for large or specific quantities.

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PAINTS.
Genuine White Lead, Linseed Oil, Boiled Oil, Turpentine, Putty, Colours, Varnishes, Brushes, &c.
JAMES PHILLIPS AND CO.,
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GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2*d.* to 3*d.* per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

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See *Gardeners' Chronicle* of June 2.

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Size of House.	With Cylinder Boiler.	With Saddle Boiler
20 feet by 10 feet	.. £8 10 0 ..	£9 0 0
25 „ by 12 „	.. 10 0 0 ..	10 10 0
30 „ by 12 „	.. 11 10 0 ..	12 0 0
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The above prices include Boiler, strong Furnace Doors, Bars, Soot Doors, Cistern, Damper, Hot-water Pipes and Connections, Air Pipes, &c., all ready for fixing, and of the best quality. Further particulars will be sent on application. Parties ordering must send plans, showing doorways, position of boiler, &c.—J. JONES, Hot-water Apparatus Manufacturer, 6, Bankside, Southwark, London, S.E.

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for Cottage Houses, &c., to contain 50 gallons, 25*s.*; 80 gallons, 30*s.* each; and 140 gallons, 36*s.*, and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

GALVANISED IRON PUMPS

for Liquid Manure or Domestic Use, 3 inches diameter, 30*s.* and 32*s.* 6*d.* each; Tail Pipe for same at from 10*d.* per foot.

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N.B. Speaking Tubes fitted up.

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"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider this tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

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"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and — Collier, Esq., of Dartford.

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"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide .. .. 1*s.* 6*d.* per yard run.
Four yards wide .. .. 3*s.* per yard.
An improved make, 3 yards wide, 2*s.* 6*d.* per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 4*d.* per yard run.

ELISHA THOMAS ARCHER. Whole and Sole Manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

"East Keal, Spilsby, Lincolnshire, April 30, 1858.

"Sir,—I will thank you to send 12 yards (at 1*s.* 8*d.* per yard) of your 'Frigi Domo,' from King's Cross Station, to be left at the Firsby Station, Spilsby, Lincolnshire. After using it (since I last got it of you some four years ago). I affirm it to be, incomparably, the best and most lasting thing of the kind ever hitherto manufactured.—I am, yours, &c., Rev. J. SPENCE."

TANNED NETTING FOR FRUIT TREES.—200 square yards for 10*s.*; 500 yards, 24*s.*; 1000 yards, 47*s.*; Scrim Canvass for Wall Fruit; Rick Cloths with Poles and Ropes complete, New and Second-hand; Sun Blinds and Awnings.—EDGINGTON & Co., 17, Smithfield Bars, London, E.C.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard, in any quantity, may be had at CHAS WRIGHT'S, 376, Strand, W.C.
An allowance to Nurserymen.

NETTING for Fruit Trees, Seed Beds, Ripe Strawberries, &c. TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard, or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard, or 50 yards, 20*s.* New Tanned Netting, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 5*d.* per yard; 4 yards wide, 10*d.* per yard; 6 yards wide, 1*s.* 3*d.* per yard; ½ inch mesh, 4 yards wide, 1*s.* 4*d.* per yard.—Can be had in any quantity of EATON & DELLER, 6 and 7, Crooked Lane, London Bridge, E.C.

TO FARMERS.—If you wish to preserve your Hay go to DAVIS & Co., 64, West Smithfield, London, E.C., where you may purchase a RICK CLOTH of the best material and workmanship cheaper than at any other house in London.

RICK AND HAY CLOTHS, HAY ROPES, New and Second-hand NETTING; also BUNTING for Protecting Fruit Trees, SCAFFOLD CORD, and PATENT SASH-LINES for Builders; MARQUEES and TENTS, &c.
JOHN MORISON, 25, Norton Folgate, N.E.

WHY NOT PRESERVE YOUR HAY? BENJAMIN EDGINGTON respectfully informs the nobility and gentry that they can be supplied on the best terms with RICK CLOTHS, with poles complete.

Early application should be made for Second-hand RICK CLOTHS, MARQUEES, TENTS, and FLAGS.

A great variety of MARQUEES and TENTS may be seen erected on the premises.

A quantity of Second-hand TENTS from the Crimea at a greatly reduced price.

A Warehouse at 32, Charing Cross, S.W.

An Illustrated Catalogue sent free per post.

Address, BENJAMIN EDGINGTON, 2, Duke Street, London Bridge, S.E. No other Establishments

BROWN'S SHADING TIFFANY, the cheapest material for protecting Plants from the scorching rays of the Sun, and being of a light texture does not exclude light. Sold by all Nurserymen and Seedsmen in pieces.

No. 1.—20 yards long by 38 inches wide .. 4*s.* 0*d.* per piece
No. 2.—20 yards long by 38 inches wide .. 4 3 „
No. 3.—Extra stout, 18 yds. long by 39 in. wide 7 0 „
CHARLES BROWN, Greenheys, Manchester.

SHAW'S TIFFANY.—The cheapest and most effectual material for Shading Hothouses, Protecting the Bloom of Walls, Trees, &c. SOLD IN PIECES. Per piece.—*s. d.*

No. 1.—20 yards long, by 38 inches wide 5 0
No. 2.—20 yards long, by 38 inches wide, mineralised to prevent it from rotting 6 0
No. 3.—18 yards long, by 39 inches wide (Double strength) 7 6
No. 4.—18 yards long, by 39 inches wide (Treble strength). 9 0
No. 1 coloured, 2*s.* per piece extra.
JOHN SHAW & Co., 40, Princess Street, Manchester.

OIL PAINT NO LONGER NECESSARY.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

Sold in casks of about 30 gallons each at 1*s.* 6*d.* per gallon at the manufactory, or 1*s.* 8*d.* per gallon paid to any station in the kingdom.—Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, from whom only it can be obtained.

INDELIBLE GARDEN TALLIES.—Mark your Tallies of wood, parchment, or zinc for the greenhouse or garden, with DUNN'S PATENT SOLID MARKING INK PENCIL. Retail at Messrs. BUTLER & MCCULLOCH'S and Messrs. HOOPER & Co., Covent Garden, W.C.; J. CARTER & Co., 237, High Holborn, W.C.; T. BRIGDEN, Railway Arcade, London Bridge, S.E.; and all Nurserymen and Seedsmen, Chemists, Stationers, &c. With screw holder, complete, 1*s.* 6*d.* each; will refill for 1*s.*; by post for 19 penny stamps. Wholesale by J. Lusher, 19, Holborn Hill, E.C.; Barclay & Sons, Farringdon Street, E.C.; or any other wholesale house; and Crowhurst, 7, Fownes Street, Dublin. Further information obtained by addressing ARTHUR DUNN, the Patentee, at the Manufactory, 1, Durham Place, Dalston Green, London, N.E.

N.B. These Pencils are unequalled for marking indelibly on Linen, &c., for which purpose a much finer point is made, at same price, than that contained in the Gardener's Pencil, but this is well adapted for all coarse woven fabrics.

MICROSCOPES.

JOSEPH AMADIO'S Improved Compound MICROSCOPE, 2*l.* 2*s.*; Students', 3*l.* 13*s.* 6*d.*

"Both these are from Amadio, of Throgmorton Street, and are excellent of their kind, the more expensive one especially."—*Household Words*, No. 345.

A large Assortment of Achromatic Microscopes.

HANDSOME BRASS AND IRON BEDSTEADS.—HEAL & SON'S Show-rooms contain a large assortment of brass bedsteads, suitable both for home use and for tropical climates; handsome iron bedsteads with brass mountings and elegantly japanned; plain iron bedsteads for servants; every description of wood bedstead that is manufactured, in mahogany, birch, walnut-tree wood, polished deal and japanned, all fitted with bedding and furniture complete, as well as every description of bedroom furniture.

HEAL AND SON'S ILLUSTRATED CATALOGUE, containing designs and prices of 100 bedsteads, as well as of 150 different articles of bedroom furniture, sent free by post.—HEAL & SON, Bedstead, Bedding, and Bedroom Furniture Manufacturers, 196, Tottenham Court Road, W.

METCALFE, BINGLEY, AND CO.'S NEW PATTERN TOOTH BRUSHES, Penetrating Unbleached Hair Brushes, genuine Smyrna Sponges, and every description of Brush and Comb and Perfumery for the toilet. METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box.

THE FAIRY BOUQUET.—This delicious perfume was originally discovered by one of Titania's principal attendants. It is made from wild flowers, culled by fairy hands from "the bank whereon the wild Thyme grows." The authenticity of the recipe is vouched for with the same degree of certainty as is the existence of Titania herself. It is now prepared solely by METCALFE, BINGLEY, & Co., Perfumers, &c., 130 B and 131, Oxford Street, London, W.—In bottles, 2*s.*, 3*s.* 6*d.*, and 5*s.* each.

GENUINE ROLL TOBACCO CLOTH.

WARRANTED EQUAL IN STRENGTH TO TOBACCO.

JOSEPH BAKER, 10, Gough Square, Fleet St., E.C., having dealt upwards of 20 years in the above, can recommend it as the best article for destroying the Fly. 1*s.* 4*d.* per lb.; over 10 lbs., 1*s.* Post-office Orders payable Fleet Street

KEEP YOUR PREMISES FREE FROM MICE AND SPARROWS.

BARBER'S POISONED WHEAT kills them (only) on the spot. In 1*d.*, 2*d.*, 4*d.*, and 8*d.* packets.—W. SUTTON & Co., 10, Bow Churchyard, London, E.C. Agents. Sold by all Druggists, &c., throughout the Kingdom. Works: Ipswich.

JOHN BELL'S COMPOSITION FOR DESTROYING MILDEW ON VINES, PEACH, AND NECTARINE TREES, and every other plant subject to this pest.

J. B. can Warrant this mixture to entirely eradicate mildew when applied according to the printed directions. Sold in Bottles, 1*s.* 6*d.*, 2*s.* 6*d.*, and 10*s.* each.

10 & 11, Exchange Street, Norwich, opposite the Corn Hall.

PAGE'S COMPOSITION FOR THE DESTRUCTION OF BLIGHT upon Roses, Wall-fruit Trees, Cucumbers, Melons, Vines, Stove and Greenhouse Plants, has stood the test of eight years' public trial, and its great success has led to numerous imitations. Dr. Lindley, in his leading article of October 25, 1856, reported 182 cases in its favour—sufficient to convince the most sceptical.

4*s.* per gallon, (sufficient to make four fit for use).
10 gallons and upwards, Carriage paid to London.

LONDON AGENTS:—
Henderson & Co., Pine-apple Place, W.
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Mr. Veitch, King's Road, Chelsea, S.W.
Mr. Clark, Streatham Place, Brixton Hill, S.
Mr. Barnes, Camden Nursery, Camberwell, S.
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and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

GISHURST COMPOUND, PATENTED,

FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN
AMERICAN BLIGHT	ANTS	FLY

BED BUGS, &c.,
And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens
Messrs Rollisson & Sons, Tooting, S.

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1*s.* for first trials and small uses, such as destroying bed bugs; 3*s.* for not large gardens; 10*s.* 6*d.* for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

THE BEST REMEDY FOR INDIGESTION.

NORTON'S CHAMOMILE PILLS are confidently recommended as a simple but certain remedy for Indigestion, which is the cause of nearly all the diseases to which we are subject, being a medicine so uniformly grateful and beneficial, that it is with justice called the "Natural Strengthener of the Human Stomach." NORTON'S PILLS act as a powerful tonic and general aperient, are mild in their operation, safe under any circumstances, and thousands of persons can now bear testimony to the benefits to be derived from their use.—Sold in Bottles at 1*s.* 1½*d.*, 2*s.* 9*d.*, and 11*s.* each, in every town in the kingdom. CAUTION.—Be sure to ask for "NORTON'S PILLS," and do not be persuaded to purchase the various imitations.

BLAIR'S GOUT AND RHEUMATIC PILLS.—Price 1*s.* 1½*d* and 2*s.* 9*d.* per box. This preparation is one of the benefits which the science of modern chemistry has conferred upon mankind; for during the first 20 years of the present century to speak of a cure for the gout was considered a romance; but now the efficacy and safety of this medicine is so fully demonstrated, by unsolicited testimonials from persons in every rank of life, that public opinion proclaims this as one of the most important discoveries of the present age. These Pills require no restraint of diet or confinement during their use, and are certain to prevent the disease attacking any vital part.—Sold by all Medicine Vendors, and at 229, Strand, London, W.C.

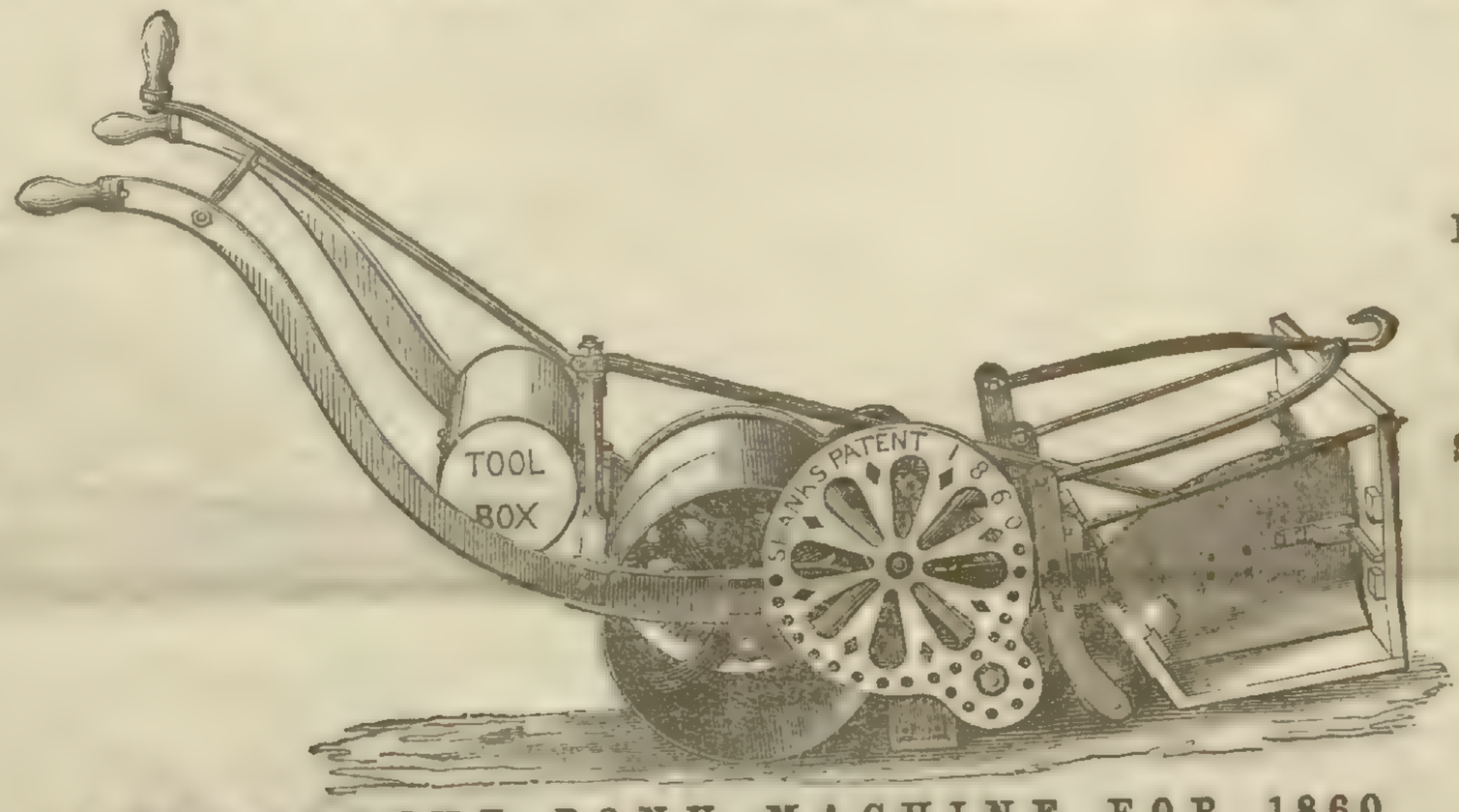
HOLLOWAY'S PILLS.—YOUTHFUL INFIRMITIES.—From causes scarcely perceptible at first, the young become prematurely enervated and debilitated. They lose alike their looks, energy, and confidence. The general cause of this melancholy state is a disordered stomach, which HOLLOWAY'S Pills will regulate. By improving the digestion and purifying the blood they work wonders. They act so kindly, yet so certainly upon every organ necessary for healthy digestion that the nervous system soon recovers, and the wonted good spirits speedily return, with strength, vivacity, and vigour. The most delicate may safely take HOLLOWAY'S Pills. They cause no violent effects upon the system, but gradually accomplish their end without much restriction in diet or pleasure. The composition of these Pills secures them from doing mischief.

DR. ROBERTS' POOR MAN'S FRIEND AND PILULE ANTISCROPHULE have been proved, by 60 years' experience, successful in the cure of eruptions and wounds of every description. Mr. George Thatcher, East bourne, was for 21 years afflicted with frightful eruptions on the face; at times he was so disfigured that he would keep out of sight. After following the advice of 100 individuals, and trying as many remedies without effect, he saw an advertisement of the "Pilule Antiscrophale," and although he had little confidence, yet he resolved he would venture once more. To his great delight it performed a cure; even after taking the first box the result was astonishing; although 10 years have elapsed there has been no return of the malady.—May, 1858

Price, 1*s.* 1½*d*, 2*s.* 9*d.*, 4*s.* 6*d*, 11*s*, and 22*s.* each. Sold wholesale by the Proprietors, BEACH & BARNICOTT, at their Dispensary, Bridport, and by all the London Houses; and retail by all respectable Medicine Vendors in the United Kingdom and the Colonies.

SHANKS' NEW PATENT LAWN MOWING, ROLLING, COLLLECTING, AND DELIVERING MACHINE FOR 1860

MOWS THE GRASS WET OR DRY, ON LAWNS UNEVEN OR OTHERWISE, IN A MUCH NEATER MANNER THAN THE SCYTHE, AT HALF THE EXPENSE.



NEW PATENT PONY MACHINE FOR 1860.

ONE of the most valuable of the Patent Improvements Messrs. Shanks have effected in their Machine is in the method of emptying the Grass-box. The want of a speedy and efficient method for this purpose has been much felt for many years past. In the Spring, more especially, when the Grass springs up rapidly, nothing is more annoying in working a Mowing Machine than the stopping, and almost constant travel from the handles to the box, and *vice versâ*, for the purpose of emptying the Grass. A great deal of time is thus lost, independent of the hard work to the man, not only in walking some hundreds of times the length of the Machine in a day, but more especially in that stooping posture which he has so often to endure. Many a Gardener can testify to this. This great want in all Mowing Machines, whether past or present, is completely obviated in Shanks' New Patent Mowing, Rolling, Collecting and Delivering Machine for 1860. The improvement consists in the introduction of a simple and efficient apparatus for emptying the box without the man being under the necessity of either leaving the handles or stopping the Machine. So effective and complete is this valuable improvement, that the box, if it were possible to fill it, could be emptied at the rate of 60 times a minute, without any undue strain being put on the apparatus. The immense advantages of this invention must be at once apparent to the practical Gardener. It will enable the Machine to do at least a third more work, while the labour and annoyance in working it, as compared with ordinary Machines, is three-fourths lessened. If a Lawn, which formerly took a Machine nine hours to mow can now be done in six hours, with three-fourths less labour to the man who works the Machine, nothing further is necessary to establish the utility and worth of the invention.

PRICES.

SHANKS' NEW PATENT HORSE MACHINE.

Including Box of Tools for Sharpening, &c., and Directions.

Width of Cutter.				
No. 1.—48-inch Machine	£28 0 0	*Drawn by a Horse.*	No. 3.—36-inch Machine ...	£22 0 0 *Drawn by a Horse.*
No. 2.—42-inch Machine	26 0 0		No. 4.—30-inch Machine ...	19 0 0 *Drawn by a Horse or a strong Pony*

SHANKS' PATENT PONY AND DONKEY MACHINES.

Including Box of Tools for Sharpening, &c., and Directions.

No. 5.—30-inch Machine . £15 15 *Drawn by a Pony* | No. 6.—28-inch Machine . £14 10 *Drawn by a Pony* | No. 7.—25-inch Machine, £12 10 *Drawn by a Donkey*

SHANKS' NEW PATENT HAND MACHINES, FOR PUSHING OR DRAWING SEPARATELY OR TOGETHER.

Including Box of Tools for Sharpening, &c., and Directions.

No. 8.—24-inch Machine	£8 17 6	*Easily worked by Two Men*	No. 10.—19-inch Machine... ... £7 12 6 *Easily worked by a Man and Boy*
No. 9.—22-inch Machine	8 7 6		No. 11.—16-inch Machine... ... 6 17 6 *Easily worked by a Man*
No. 12.—13-inch Machine...			£6 2 6 *Easily worked by a Boy*

The Patent Delivering Apparatus if attached to the Hand Machines, and they are strongly recommended to be so, 20s. extra.

SHANKS' PATENT HAND MACHINE, FOR DRAWING ONLY.

Including Box of Tools for Sharpening, &c., and Directions.

No. 13.—22-inch Machine ...	£7 5 0 *Easily worked by a Man and Boy*	No. 14.—19-inch Machine ...	£6 15 0 *Easily worked by a Man and Boy*
No. 15.—16-inch Machine			£6 5 0 *Easily worked by a Man*

***** The Machines are warranted to give ample satisfaction, and if not approved of they may be at once returned.**

The Prices include delivery at most of the Railway Stations throughout the Kingdom.

TESTIMONIALS:—

From Mr. GEORGE EYLES, *late Chief Superintendent of the Grounds and entire Horticultural Department of the Crystal Palace, Sydenham, and now appointed to the Superintendence of the Horticultural Society's New Gardens, Kensington Gore, and the Gardens, Chiswick, in favour of* SHANKS' *Patent Lawn Mower—(the 30-inch Horse-power Machine used on the Lawns of the Crystal Palace):—*

"Crystal Palace, December 20, 1859.

"I have much pleasure in bearing testimony to the excellence of the 30-inch Shanks' Patent Lawn Mowing Machine you sent us. We have had it in use almost daily up to the end of the mowing season, and it has always performed its work in the most satisfactory manner, *and has never been once out of repair.* The contrivance for emptying the Grass Box is *a great acquisition, and effects a considerable saving of time.*"

From the Hon. M. F. T. BERKELEY, *Berkeley Castle, January* 21, 1860.

"I have found your Mowing Machine answer perfectly. It does its work well, cutting closer and more evenly than the scythe: collects and delivers the Grass, thereby saving much time and labour."

From Mr. J. RICHARDSON, *Gardener to* JOSEPH PEASE, ESQ., *Southend Gardens, near Darlington, January* 21, 1860.

"Your Lawn Mowing Machine is the best of any I have yet used, doing the work speedily and well. The Delivering Apparatus is a decided improvement, and the best recommendation it can have is its own simplicity."

From Mr. J. KIDD, *Gardener to the* Right Hon. The EARL OF AIRLIE, *Cortachy Castle Gardens, January* 20, 1860.

"After having had one season's trial of your new and improved Mowing and Rolling Machine, I feel highly satisfied with the manner it does the work in every way. Your last improvement, viz., the apparatus for emptying the Grass-Box, I consider a very great saving, both of time and labour, as the Machine does not require to be stopped to have the Grass-Box emptied. Before I got this Machine nearly half the time was taken up in having so often to stop to have the Grass-Box emptied. There is another improvement which was not on my last Machine, viz., the tempering of the cutters either to cut long or short Grass; it is now so simple that any of my men can alter it in five minutes. In short, I would be sorry to be obliged to use your old Machines (although good) where it was possible to have your last improved one."

From Mr. J. MOIR, *Gardener to the* Right Hon. LORD LOVAT, *Beaufort Castle, Beauly, January* 23, 1860.

"I am happy to have it in my power to add my testimony to the utility of your improved Grass-Cutting Machines. The Delivering Apparatus works admirably and is a great saving of time. I think no one having a Lawn to keep should be without a Mowing Machine with your improvements."

SOLE AGENTS FOR LONDON

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

PATENT LAWN MOWING AND ROLLING MACHINES.

30-inch wide **PONY POWER MACHINE**, made also of Smaller Sizes for Hand Power.

B. SAMUELSON'S LAWN MOWERS,

WITH BOYD'S PATENT IMPROVEMENTS,

CAN BE USED IN WET AS WELL AS DRY WEATHER.

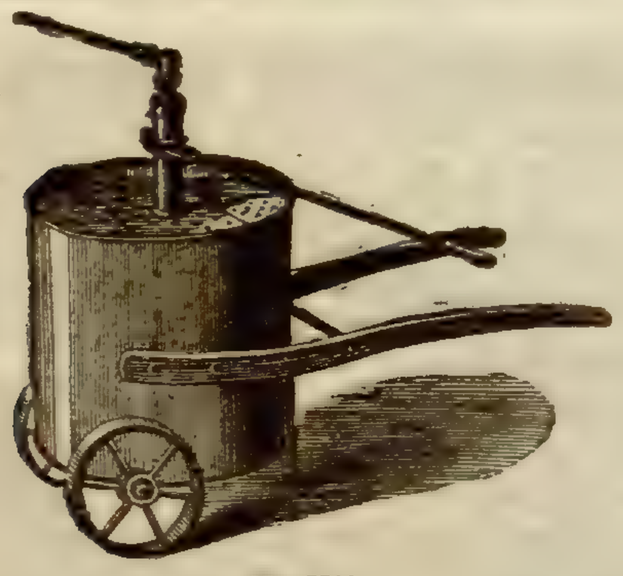
LAST YEAR'S SALES WERE NEARLY A THOUSAND, EVERY ONE OF WHICH GAVE THE GREATEST SATISFACTION.

TESTIMONIALS expressing such satisfaction have been kindly sent by some hundreds of the purchasers to the Manufacturer, who will be glad to forward a copy with description and prices of Machines post free on receipt of application.

Mr. SAMUELSON is now receiving orders for Twenty to Thirty a day, and will execute them in the order they are received.

London Warehouse: 76, Cannon Street, West, E.C. Manufactory: Britannia Works, Banbury.

TO BE HAD OF DEANE & CO., LONDON BRIDGE, E.C., AND ALL IRONMONGERS.



No. 554½.

GALVANISED IRON TUB GARDEN ENGINE, with WARNER'S registered Spreader, is strongly recommended for durability and low price, viz.:—

10 gallons .. £2 15s. 0d. | 16 gallons .. £3 15s. 0d.
24 gallons .. .. .. £5 0s. 0d.

Larger sizes in either Wood or Iron.
BRASS SYRINGES, from 9s. to 21s.

May be obtained of any Ironmonger at the above prices, or of JOHN WARNER & SONS, 8, Crescent, Cripplegate, London, E.C.

THE IMPROVED PATENT GARDEN, WATER AND ROLLING ENGINE may be had at J. DORE'S, the sole Manufacturer, 17 Exmouth Street, Clerkenwell, London, E.C.

The threefold use of this neat little Machine must be obvious in Watering, Rolling, or Syringing; it will throw about 60 feet, and is so portable that any ordinary domestic may use it. It contains about 20 gallons, price 5l. 10s.; 25 gallons, 6l. 10s.

GARDEN ENGINES AND SYRINGES.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 598. J. TYLOR & SONS' BARROW GARDEN ENGINE in best well painted Oak tub, fitted with J. TYLOR & SONS' Improved Brass Pump, Universal Joint, and Registered Spreader, which answers the purpose of the separate rose, fan, and jet.

CONTENTS OF TUB:—
15 gallons .. £5 10 | 28 gallons .. £6 18

Fig. 599. Ditto TINNED IRON TUB.

CONTENTS OF TUB:—

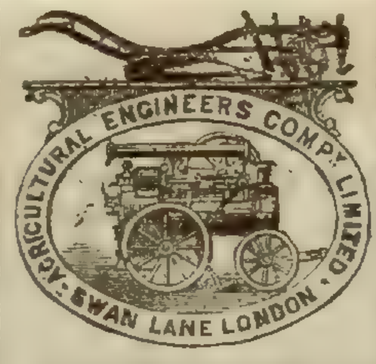
8 gallons	12 gallons	16 gallons	24 gallons	30 gallons
£2 15	£3 5	£4	£5	£5 18

Fig. 618. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. .. £1 5 each.
No. 2. Ditto ditto 1 1 ,,
Telescope Branch Pipe for ditto .. .. 0 10 ,,

Fig. 619. GARDEN SYRINGE, with one rose and jet, 12s. 6d. each.
,, 620. Ditto ditto 11 6 ,,
,, 621. Ditto ditto 10 6 ,,
,, 622. LADIES' GARDEN SYRINGE, with do. 8 0 ,,

Fig. 623. READ'S SYRINGE, with two roses and one jet, 18s. 6d.
,, 624. READ'S SYRINGE, with one rose and jet .. 16 6
,, 625. Improved ditto ditto .. 14 6
,, 626. Ditto ditto ditto .. 13 0

Manufacturers of Pumps and Well Engines (for shallow or deep Wells), Plumbers' Brass Foundry of every description, High Pressure Cocks and Closets, Copper and Tinned-iron Baths, Garden and Fire Engines, Lamps of every description, Copper Goods, &c. Estimates given for Hot-water and Bath Apparatus.



LAWN MOWERS, ROLLERS, WATER ENGINES, CHAIRS, TABLES, and every description of Garden requisites.

HURDLES, GATES, WIRE FENCING, &c.

CARTS, MOWERS, HAYMAKERS, HORSE RAKES, DRILLS, PLOUGHS, &c.

STEAM ENGINES, THRESHING MACHINES, HORSE WORKS, MILLS, CHAFF CUTTERS, &c.

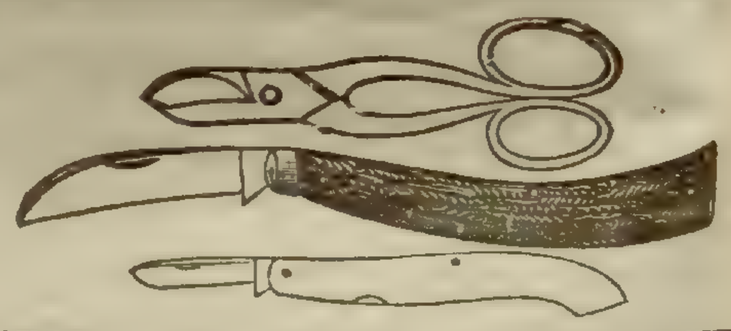
PUMPS, CHURNS, MANGLES, BINS, &c.

Price Lists free upon application to
THE AGRICULTURAL ENGINEERS' CO. LIMITED,
SWAN LANE, UPPER THAMES STREET, LONDON, E.C.

THE annexed sketch represents the GLENNY WATERING POT, which will be found a decided improvement upon the old-fashioned one, as from the peculiar construction of the handle the weight is more easily balanced in the hands, which enables the user to empty with far less muscular exertion and fatigue a pot of this kind than one upon the old plan.

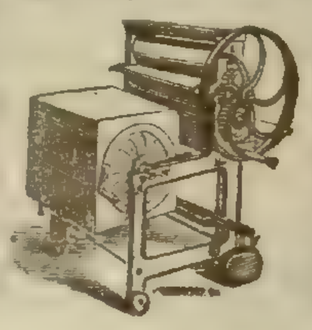
Of all Ironmongers, Hardwaremen, and Seedsmen; and of LOVERIDGE & SHOOLBRED, Wolverhampton, Sole Manufacturers.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.



SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

BRADFORD'S PATENT WASHING MACHINE SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations." — THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

Garden Engines, Syringes, &c., upon the most approved principle.

GARDEN ENGINES, MACHINES, AND GREENHOUSE SYRINGES,

WITH ALL THE LATEST IMPROVEMENTS, MANUFACTURED BY THE PATENTEE,

RICHARD READ, Instrument Maker (by Special Appointment) to Her Majesty,

35, REGENT CIRCUS, PICCADILLY, LONDON, W.

CAUTION.—R. READ begs respectfully to assure the Public that the Syringes advertised weekly by a London Firm as READ'S are not his make, but are mere imitations; and on trial many of them will be found defective and useless. All Syringes made by READ are marked with the Royal Arms, and Address,

"35, Regent Circus, London, W." ☞ *Descriptions, with Drawings, sent post free.*

E. ELEY, HOTWATER ENGINEER, 216, City Road, London, E.C., opposite the Eagle Tavern, is the place to get your HOT-WATER APPARATUS. To those who prefer their own workpeople to fix E. ELEY will give every instruction as to the best manner. Can supply them Pipes, Boilers, and Connections of every kind cheaper than any other house in the trade.

N.B. By sending a rough sketch E. E. will cut the pipe any length, drilling for cistern pipes, screwing, &c., free of any extra charge. Contracts taken to any extent. Estimates free.

J. WATTS AND CO., HOTHOUSE BUILDERS and HOT-WATER APPARATUS MANUFACTURERS,

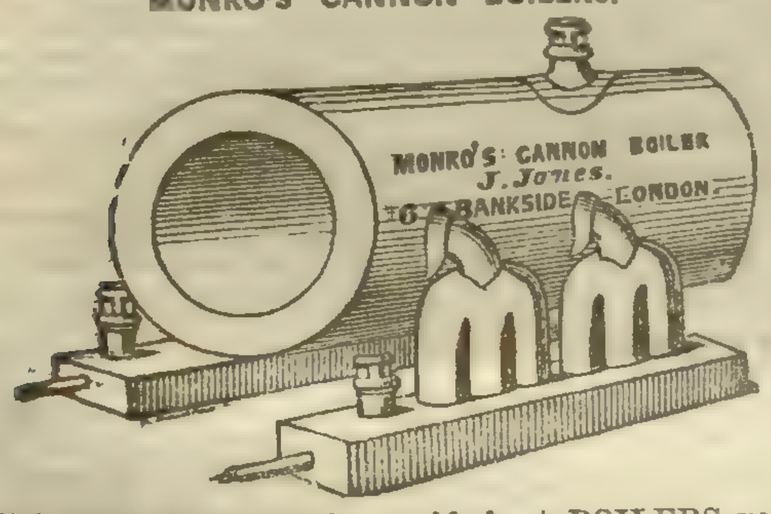
Near the Green Man, Old Kent Road, London, S.E.

200 CUCUMBER AND MELON BOXES AND LIGHTS, AND FROM

300 TO 400 LIGHTS FOR PITS OF ALL SIZES KEPT IN STOCK, glazed and painted complete, ready for immediate use, packed and sent to all parts of the Kingdom.

References to the Nobility, Gentry, and Trade in most of the counties in England.

MONRO'S CANNON BOILERS.



MUCH has of late been said about BOILERS FOR HEATING BY HOT WATER, but these Boilers have now proved themselves to be the best at present invented. They are adapted for Heating every description of Building, and are made of various sizes. The price of the

24-inch Cast Iron is	..	..	..	£5 10s. each.
24-inch Wrought Iron is	..	..	..	6 10 ,,
36-inch Wrought Iron is	..	..	..	8 10 ,,
48-inch Wrought Iron is	..	..	..	12 0 ,,

References to Gentlemen and Nurserymen where these Boilers are now at work. The Cannon Boilers are now kept in stock, and are to be had only of J. JONES, 6, Bankside, S E. Also, every description of Saddle and Cylinder Boilers. Hot-water Pipes and Connections at prices lower than those of any other house in London. Estimates for Hot-water Apparatus erected complete in any part of the country, and an Illustrated Catalogue on application to J. JONES, 6, Bankside, Southwark, London, S.E.

IMPERIAL WIRE WORKS AND WINDOW-BLIND MANUFACTORY, 370, Oxford Street, W., conducted by W. RICHARDS. Just opened, four New Show Rooms for the display of his Improved and Elegant Designs in Flower Stands, Flower Baskets, and every description of Wire Work for Conservatory, both useful and ornamental. Several fine Aviaries on Show.

WILLIAM HEALY
(Late Burbridge & Healy),
118, Dorset Street, Fleet Street, London, E.C.
HOT-WATER APPARATUS MANUFACTURER

HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.

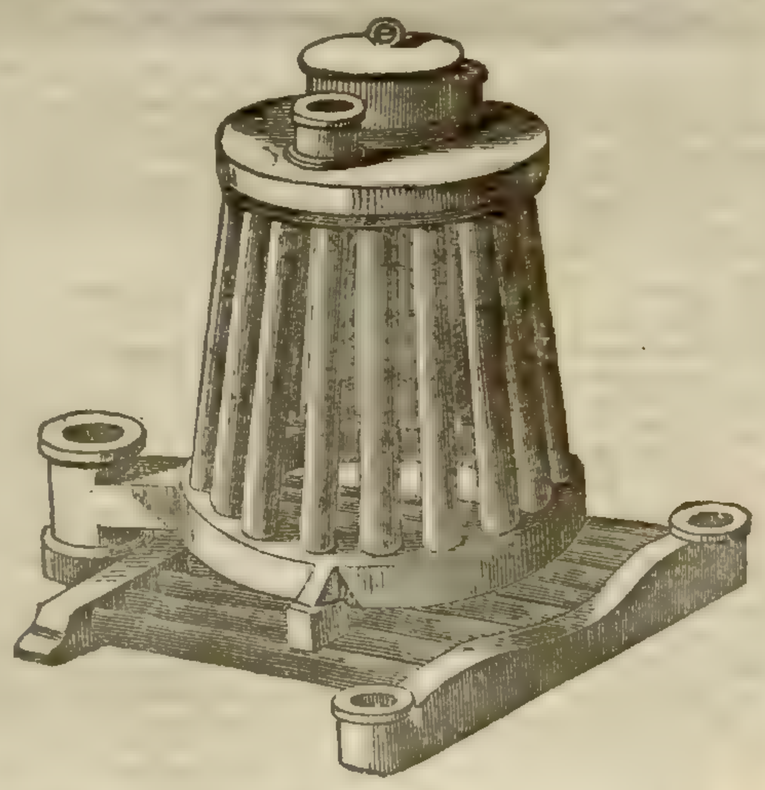
KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they Erect all kinds of Conservatories, Vineries, Greenhouses, &c., combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & SON have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

ORMSON'S PATENT JOINTLESS TUBULAR BOILER is the best ever invented, and possesses immense advantages over ALL OTHER UPRIGHT TUBULAR BOILERS, in the fact of there NOT being a single JOINT exposed to the action of the fire.



H. O. will undertake to heat the largest Establishments on the most approved and scientific principles by ONE of his PATENT JOINTLESS BOILERS.

Horticultural Buildings manufactured by Steam-power Machinery. Lowest prices and best materials. Plans, Specifications, and Estimates free.

HENRY ORMSON, Stanley Bridge, King's Road, Chelsea, S.W.

THE ONE BOILER SYSTEM.

"SIR.—I feel much pleasure in bearing testimony to the efficiency of your PATENT JOINTLESS TUBULAR BOILER. The long winter just past has been severe enough to test the merits of any heating apparatus, and I am pleased to assure you that the one you fixed for Sir Charles Knightley, Bart., in October last, has surpassed my most sanguine expectations, and reflects the highest credit on you as the Patentee of so unrivalled an invention. There are at this time sixteen houses heated by ONE of your BOILERS,—the heat of each being regulated with the greatest simplicity and facility. ONE fire now does the work of eight as formerly required. Independent of the saving of fuel, I must not omit the very great economy in labour. The fire in the most severe frost may be left for TWELVE HOURS without any attention, whereas according to the old system, a man was obliged to be up the greater part of the night. I have never seen or heard of any BOILER which would bear the slightest comparison with it, and wherever it may be used it cannot fail, in my opinion, to give the most perfect satisfaction.

—Yours respectfully, JOHN BROWN,

"Gr. to Sir C. Knightley, Bart., Fawsley Park, Daventry.

"Mr. Ormson, June 12."

BEE-HIVES.—PRIZE MEDAL AWARDED TO G. N. & SONS, FOR BEE-HIVES AND HONEY, AT THE PARIS EXPOSITION OF 1855.

NEIGHBOUR'S IMPROVED COTTAGE BEE-HIVE, as originally introduced by GEORGE NEIGHBOUR & SONS, with all the recent improvements, three glasses, and thermometer, price 35s., securely packed for the country.

This unique Hive has met with universal commendation, and may be worked with safety, humanity, and profit, by the most timid; its arrangements are so perfect that the Honey may be taken at any time of the gathering season without at all injuring the Bees.

Early applications addressed to GEO. NEIGHBOUR & SONS, 127, High Holborn, W.C., or 149, Regent Street, London, W., will receive prompt attention.

Their newly-arranged CATALOGUE of other Improved Hives, with drawings and prices, sent on receipt of two stamps.

AGENTS:—Liverpool .. JAMES CUTHBERT, 12, Clayton Street.
,, Manchester. J. WILSON, 50, King Street.
,, Birmingham J. H. COTTRELL, 15, Bull Ring.
,, Dublin .. J. EDMONDSON & Co., 61, Dame Street.

WARNER'S PATENT VIBRATING STANDARD PUMPS.

PATENT CAST-IRON PUMPS fitted with J. W. & Son's Patent Buckets and Suckers, which cannot clog in action, for Farms, Cottages, and Wells not exceeding 25 feet.

Diameter of Barrel.	Height.		£.	s.	d.
2½ in.	short	1 ft. 7 in.	Fitted for lead, gutta percha or cast iron flanged pipe as required.	1	1 0
2½ ,,	long	3 ,, 3 ,,		1	10 0
3 ,,	ditto	3 ,, 6 ,,		2	4 0
3½ ,,	ditto	3 ,, 6 ,,		2	9 0
4 ,,	ditto	3 ,, 6 ,,		2	18 0
2½ ,,	short, with 15 feet of Lead Pipe attached, ready for fixing			2	0 0
2½ in.	long	ditto ditto ditto		2	14 0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

May be obtained of any Ironmonger or Plumber in Town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER & SONS, 8, Crescent, Jewin Street, London, E.C.

Every description of Machinery for Raising Water by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. &c.—Engravings sent on application.

COTTAM'S PATENT INVENTIONS FOR STABLE REQUISITES, awarded a Prize at the Paris Exhibition, patronised by the English and French Governments, as well as by the principal Nobility, Gentry, and Hunting Establishments in the kingdom. In use at her Majesty's Stables, Aldershott and Balmoral.

COTTAM AND COMPANY, Winsley Street, W., are the original inventors of the PATENT ENAMELLED MANGER, Water Trough, and Wrought Iron Rack, united to an iron top-plate, and forming one complete and useful fixture, having COTTAM'S patent noiseless halter guide and collar rein attached, which is taken to the back of the manger, and works with ease and freedom up or down the guide bar.

COTTAM'S NEW PATENT SEED-BOX, an important addition to the above fittings, being simple in construction, light, and durable, promotes cleanliness, and is economical in its results.

COTTAM'S PATENT PERMANENT ATTACHED DROP COVER, for the above, is a most essential addition to their fittings; it is never in the way; can be placed and replaced in an instant; while its cheapness, simplicity, and utility in keeping the contents of the troughs clean, and regulating the quantity to be taken, is quite sufficient to insure its use.

COTTAM'S PATENT SADDLE and HARNESS BRACKET combined, can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

COTTAM'S IMPROVED WROUGHT IRON VENTILATING BRACKET preserves the shape and allows a free admission of air to the under parts of the saddle.

COTTAM'S IMPROVED SURFACE CUTTER, with perforated moveable cover, the use of which prevents accidents, and can be easily cleaned out.

COTTAM'S CAST-IRON SANITARY TRAP, from its improved construction, gives a full water passage, and does not allow any smell to ascend from the drain.

PATENT LOOSE-BOX FITTINGS, and every article for the harness-room and stable, kept in stock, plain, galvanised, and enamelled. Iron gates, fencing, hurdles, &c.

The New Illustrated Catalogue and Estimates, gratis, upon application to COTTAM and COMPANY, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon).

SEED BUSINESS ESTABLISHED UPWARDS OF 100 YEARS.

BUTLER AND McCULLOCH,

COVENT GARDEN MARKET, LONDON, W.C.

ERICA, collected from the choicest Cape species, per packet, 1s., 1s. 6d., and 2s. 6d.

Strong Plants of SPERGULA PILIFERA, from the Original Stock,

For Rockwork, Edgings to Flower Beds, Fountains, Sloping Banks, Terraces, and Lawns. It requires no mowing, and when well established is very superior to Turf.

8s., 15s., and 20s. per 100. Seed, 1s., 1s. 6d., and 2s. 6d. per packet.

PELARGONIUM.

The great desire manifested by amateurs for raising new and improved varieties of this splendid class of plants has induced our Sardinian Correspondent to give this matter his especial attention. He has, therefore, collected seed only from flowers of the highest merit; thus affording a chance of raising varieties equal to any at present in cultivation. The dried specimens exhibited at the Crystal Palace may be seen at our Establishment.

A collection saved from 12 English varieties each containing 10 seeds .. .. 7s. 6d.
ditto ditto 12 French ditto ditto 7 6
ditto ditto 12 Fancy ditto ditto 7 6

Choice mixed, saved from finest English varieties, per packet .. .. 2s. 6d.
ditto ditto ditto French ditto ,, ... 2 6
ditto ditto ditto Fancy ditto ,, ... 2 6

SPLENDID DOUBLE ITALIAN-SAVED CARNATION AND PICOTEE SEED,

IN SEALED PACKETS, FROM ONE OF THE CHOICEST COLLECTIONS IN EUROPE.

The following Carnations and Picotees have been saved with the greatest care by our Sardinian Correspondent, a most successful and distinguished Amateur, and only from the most perfect flowers of the newest and handsomest of the English stage varieties, or seedlings from them; they can be confidently recommended to the lovers of this exquisitely beautiful class of plants, as certain to produce at least 80 per cent. of fine double flowers, and with a fair chance of obtaining varieties of the greatest value. The Perpetual or Tree varieties bloom beautifully in the open ground, during the whole of the Autumn months; and, if grown in pots, are highly ornamental for Conservatory or Greenhouse decoration in Winter and Spring.

A collection of 12 varieties, each containing 10 seeds .. .. 6s. 0d. | A collection of 12 varieties Fancy, each containing 10 seeds .. .. 6s. 0d.
,, 12 ditto ditto 5 seeds .. .. 3s. 6d. | 12 ditto Fancy ditto 5 seeds .. .. 3s. 6d. | Choice mixed, per packet .. 2s. 6d.
A collection of 12 varieties (Perpetual), each containing 10 seeds 6s. 0d. | A collection of 12 varieties (Perpetual), each containing 5 seeds 3s. 6d. | Choice mixed, per packet 2s. 6d.
A collection of 12 varieties, each containing 10 seeds .. 7s. 0d. | A collection of 12 varieties, each containing 5 seeds .. 4s. 0d. | Choice mixed, per packet .. 2s. 6d.
A collection of 12 varieties (Perpetual), each containing 10 seeds 6s. 0d. | A collection of 12 varieties (Perpetual), each containing 5 seeds 3s. 6d. | Choice mixed, per packet 2s. 6d.

BEAUTIFUL BIENNIALS AND PERENNIALS.

D Collection contains 25 packets in 25 varieties for 5s.; E Collection contains 18 packets in 18 varieties for 3s. 6d.; F Collection contains 15 packets in 15 varieties for 2s. 6d.

Agents for GISHURST COMPOUND in boxes, 1s., 3s., and 10s. 6d.; do. **BRITTAIN'S GARDEN NETTING** for protecting Fruit Trees or shading, Nos. 1, 2, and 3, 5d., 6d., and 8d. per yard, 55 inches wide, 10-yard pieces; do. TIFFANY for shading, 3d. per yard, 10, 20, and 30-yard pieces; SHAW'S TIFFANY at advertised prices.

DUNN'S SOLID MARKING-INK PENCILS for writing indelibly on garden labels.—Every Amateur and Gardener should purchase this Pencil, sent post paid on receipt of 13 postage stamps.

EARLY TURNIPS for FEEDING OFF PREVIOUS TO SOWING WHEAT.

SUTTON'S EARLY SIX WEEKS, 1s. per lb., 45s. per bushel.

POMERANIAN WHITE GLOBE, 1s. per lb., 45s. per bushel.

SUTTON'S LINCOLNSHIRE RED, (The heaviest cropper known). 1s. per lb., 45s. per bushel.

SUTTON & SONS confidently recommend the above as the best Turnips for present sowing. The seed is new and genuine. Goods delivered carriage free, and 5 per cent. allowed for cash payment. A remittance or reference is requested with orders from unknown correspondents.

Royal Berkshire Seed Establishment, Reading.

UNEQUALLED SHRUBBY CALCEOLARIAS.

JOHN COLE has still on hand plants of his matchless CALCEOLARIAS which gained all the First Prizes offered last Summer by the Royal Botanic Society, strong healthy plants 6s. and 9s. per dozen; also LOBELIA SPECIOSA, in full bloom, 2s. per dozen, 12s. per hundred; Scarlet and Crimson VERBENA, strong, 2s. per dozen. Carriage free to London upon prepaid application.

Keyfield Nursery, St. Alban's, Herts.

ORCHIDS.—An Amateur wishing to part with a few plants of the above will be glad to hear of a purchaser; or would have no objection to exchange for a few choice Odontoglossums, and Cypripediums. Amongst them are the following:—

Aërides nobile
,, Fieldingii
,, crispum
Vanda Roxburghii
,, cœrulea
Lælia purpurata
Saccolabium retusum
Calanthe Masuca
Miltonia Clowesii
Cattleya labiata (true)
,, Mossiæ

Full particulars may be had by addressing, post paid, ORCHID, Box 165, Post Office, Huddersfield.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:—

	P. packet—s.	d.
BROCCOLI, Penzance White (Mitchinson's) ..	1	6
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation..	1	6
CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
,, Moor Park, extra fine..	1	0
MELONS, all the best varieties	1	0
TOMATO, Early Red (Powell's)	1	6
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed ..	2	6
CINERARIA, from finest named varieties ..	2	6
,, maritima	0	6
CELOSIA aurea pyramidalis	1	6
,, crimson-feathered variety	1	6
COCKSCOMB, dwarf, extra fine	1	0
DIANTHUS Heddewiggi	1	0
LOBELIA erinus speciosa (true)	1	0
PANSY, from named varieties	1	0
PERILLA Nankinensis	0	6
PRIMULA sinensis fimbriata	1	6
SOLANUM capsicastrum	1	0
,, pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

An inspection and comparison with the prices of several Firms advertising Seeds carriage free is respectfully solicited.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

JOHN KERNAN, 4, Great Russell Street, Covent Garden, W.C., begs to recommend to his customers the following Agricultural TURNIPS, to be sown all this and next month (July), genuine and true to their kind:—

Laing's Swede Turnip ..)
Skirving's ,, ,, ..)
Matson's Purple-topped)
Dale's Hybrid .. ..) 9d. per lb.
Yellow Bullock .. ..)

Green Bullock Turnip ..)
White Norfolk ,, ..)
Green ,, ,, ..)
,, Globe ,, ..) 9d. per lb.
Eclipse Bullock ,, ..)

The following Grasses may be sown to great advantage all through August for an early bite in spring:—

Sweet-scented Vernal for early lambs.
Sheep's Fescue.
Meadow ditto
Slender leaved ditto.
Hard ditto ditto.
Italian Rye-grass imported.
Pacey's ditto.
Stickney's ditto.
Poa pratense.
A fine mixture to renew old pastures; 3 bus. p. acre, 5s. p. bus.

Alsike Clover best sown separate. This when more generally known will, I think, be a great favourite with stock and other farmers. Broad-leaved Red Clover, White Clover, Trifolium incarnatum, Winter Tares and Rye, Mustard, Rape, Kohl Rabi, Parsley for sheep walks, Winter Barley, and genuine Guano.

BEDDING PLANTS, ETC.

F. AND A. SMITH are sending out fine plants of the following:—

Ageratum mexicanum
,, variegatum
Alyssum, yellow
,, white
,, variegatum
Calceolaria aurea floribunda
,, aurantia floribunda
,, angustifolia
,, amplexicaulis
Cuphea platycentra
Dianthus in variety
Delphinium formosum
Fuchsias, various
,, acubæfolia
Geranium, scarlet in variety
,, Trentham
,, fancy do.
,, Brilliant
,, Flower of the Day
,, Lady Plymouth
,, Mangles, silver edge
,, Alma
Heliotropium
Hollyhock
Lantana in variety
Lobelia erinus racemoides
,, speciosa
Linum flavum
Melissa variegata (Balm)
Nasturtium Tom Thumb
Nierembergia gracilis
Pansies, French fancy
Pentstemon in variety
Petunias, purple and others
Phlox Drummondii
Portulaca
Rhodanthe Manglesii
Roses, Tea and others
Salvia fulgens
,, Gesneriflora
,, trico or
Salvia, patens blue
,, ,, alba
Senecio, double crimson
Thunbergias, various
Tropæolum Stamfordianum
,, Lobbianum elegans
Verbenas, all colours
Zinnia elegans

CLIMBERS.

Cobea scandens
Eccremocarpus
Lophospermum
Maurandya in variety

GENERAL CATALOGUE on application.—Dulwich, Surrey, S

PLANTS OF CABBAGE, SAVOY, KALE, BROCCOLI, CAULIFLOWER, AND CELERY.

JOHN CATTELL begs respectfully to inform the public that he has a plentiful supply of Plants of the above superior true sorts, which he will forward to order on receipt of postage stamps or Post-office Order, made payable here, at the following prices, package included:—All the sorts of Early Cabbage, Savoy and Kale, including Brussels Sprouts, 6d. per 100; 4s 6d. per 1000. All the sorts of Autumn and Spring Broccoli, 8d. per 100; 5s. 6d per 1000. Early and Late Cauliflower and Red Pickling Cabbage, 10d per 100. Bedded Celery, 8d. per 100; 5s. 6d. per 1000. Drumhead or Cattle Cabbage, 3s. 6d. per 1000. Packages containing plants to the value of 1l. and upwards will be delivered carriage free to London, Croydon, and the Edenbridge Station of the South-Eastern Railway.

Seed of Cattell's Reliance Cabbage may be had free by post at 1s. per packet, containing half an ounce.

Nursery and Seed Establishment, Westerham, Kent.

NEW AND CHOICE PLANTS.

JOHN STANDISH, in offering the following Plants can assure his customers that they are now in fine condition for sending out:—

MYOSOTIDIUM NOBILE, or Antarctic Forget-Me-Not, each 31s. 6d.—This plant, from the Chatham Islands, is one of the most remarkable that has been introduced for some years, being totally distinct from all others. It has large thick leaves, 8 or 9 inches across, of a dark glossy green, and sends up magnificent trusses of bloom of the most beautiful blue and white, similar to a Forget-me-not, but of a giant form. A Drawing of it is published in Curtis's "Botanical Magazine" for September. A description taken from the above is also published in the *Gardeners' Chronicle* of Sept. 17, 1859, wherein Dr. Lindley says:—"This is the handsome perennial provisionally named Cynoglossum nobile by Dr. Hooker in our last year's Volume, page 240. It is quite deserving all the encomiums that have been passed upon it."

RHODODENDRON NUTTALII.—The largest flower of all yet known, having 11 flowers in a truss, each flower being 6¼ inches across. Seedling plants, 3 inches high, 7s. 6d. each; 60s. per dozen; or 20l. per 100.

PHLOX MRS. STANDISH.—The purest white, with a large red eye, 5s. each. Also a large collection of the finest kinds which J. S. has shown during the last summer and in every case received the First Prize. Plants from 1s. to 2s. 6d. each.

A CATALOGUE containing a full description of the best Hardy Plants in cultivation will be forwarded on application to

The Royal Nursery, Bagshot.

SURPLUS STOCK OF BEDDING PLANTS.

JAMES DICKSON AND SONS, the Newton Nurseries, Chester, have still to offer FINE PLANTS of the following, at VERY LOW prices, which will be sent on application:—Scarlet and Variegated Geraniums, Calceolarias, Heliotropes, Petunias, Verbenas, of sorts, Variegated Alyssum, Dianthus Heddewigi, Lobelia speciosa, Cuphea platycentra, &c.

BEDDING PLANTS.

J. SCOTT, Merriott, Somerset, begs to say that his CATALOGUE OF CHEAP BEDDING PLANTS has now been all sent out; he, however, has still a considerable number of many kinds of Verbena, variegated and other Geraniums, &c., to offer. Parties stating the colours they require and leaving the selection to J. S. will be liberally dealt with.

MESSRS. J. AND H. BROWN inform the nobility and gentry their NEW CATALOGUE can be had by post on application of Stove, Orchidea, and Greenhouse Plants, Azaleas, Flowering Shrubs, and Miscellaneous Plants in great variety. New Conservatories furnished cheaply; and all kind of Bedding Plants at the usual prices.

Albion Nursery, Stoke Newington, London, N.

NEW SPRING CATALOGUE.

WILLIAM BARNES begs to inform his patrons and friends that his New DESCRIPTIVE CATALOGUE for the present season is Now Ready. It contains selections of Indian Azaleas, Ferns, Stove and Greenhouse Plants, Chrysanthemums, Fuchsias, Pelargoniums, Verbenas, Petunias, Phloxes, Cinerarias, Hollyhocks, Liliums, Roses, Miscellaneous Bedding Plants, Hardy Trees and Shrubs, Fruit Trees, &c., and will be forwarded post free on application.

Camden Nursery, Camberwell, London, S.

NORTH HANTS SEED ESTABLISHMENT.

HENRY JESSE begs to thank his friends for the support he has received for many years, and to inform them, that in addition to his CORN AND SEED BUSINESS, he has now added the MANURE, CAKE, AND TURNIP SEED TRADE. The latter he has devoted his particular attention to, having made arrangements with a first class House; and trusts by keeping articles of the best quality, to supply his customers on such terms as will give satisfaction and ensure their future orders.—Railway Stores, Basingstoke; and 100, Seed Market, Mark Lane, London, E.C.

HORTICULTURAL SOCIETY.—Notice is hereby given, that the next Ordinary Meeting of the Horticultural Society for the Election of Fellows will be held at the Museum of Science and Art, South Kensington (by permission of the Lord President of the Privy Council), on TUESDAY, June 26; the Chair to be taken at 1 o'Clock, P.M. On this occasion a Ballot for Plants will also take place.

LIST OF PLANTS FOR BALLOT.

1. CUPRESSUS LAWSONIANA. One of the finest of the new hardy Californian Cypresses.
2. CUPRESSUS GOVENIANA. A hardy tree.
3. PINUS TUBERCULATA. A hardy Californian tree.
4. CHOROZEMA CORDATUM. A greenhouse shrub.
5. SEEDLING CAMELLIAS From Florence.
6. CALLISTEMON RUGULOSUM. A greenhouse shrub.
7. VIMINARIA DENUDATA. A greenhouse shrub.
8. LEPTOSPERMUM JUNIPERINUM. A greenhouse shrub.
9. PITTOSPORUM UNDULATUM. A greenhouse shrub.
10. SPIRÆA CALLOSA. A hardy shrub.
11. ERIOBOTRYA JAPONICA. Japan Medlar.
12. PAULOWNIA IMPERIALIS. A hardy deciduous tree, with blue flowers, from Japan.
13. VITIS POLYMORPHA. A hardy creeper.
14. GLYCINE SINENSIS ALBA. A hardy creeper.
15. GARDENIA FLORIDA, var. FORTUNIANA. A greenhouse shrub.
16. ADHATODA CYDONIÆFOLIA. A stove shrub.
17. CEANOTHUS VERRUCOSUS. A hardy shrub, from California.
18. VIBURNUM MACROCEPHALUM. From China.
19. CLEMATIS MICROPHYLLA, var. LEPTOPHYLLA. A greenhouse creeper, from Australia.

Fellows of the Society desirous of obtaining any of the plants to be balloted for are requested, if life members of 40 guineas or subscribers of 4 guineas a year, to name the FOUR sorts they would prefer; or, if life members of 20 guineas, or subscribers of 2 guineas a year, to name the TWO sorts they would prefer. Should there be more applications for any particular plant than the number available for distribution, a Ballot will then take place to determine which applicants are to be supplied.

The arrangements for conducting the Ballot render it necessary that the names or numbers, prefixed to the plants to be drawn for, should be sent to the office of the Society, 8, ST. MARTIN'S PLACE, W.C., on or before SATURDAY, JUNE 23d, AFTER WHICH DATE NO APPLICATIONS CAN BE ATTENDED TO.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY

BEING ABOUT TO RESUME THE

IMPORTATION OF SEEDS AND PLANTS

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The Gardeners' Chronicle.

SATURDAY, JUNE 16, 1860.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, June 20—Royal Botanic ..... 2 P.M.
THURSDAY, — 21 { Pomological..... 2 P.M. / Linnean ..... 8 P.M.

NOTHING is more true, both as regards nations and individuals, than that the multitude buy their experience, while few profit by it. Three thousand years ago it was said by the wisest in his generation—"The thing that hath been it is that which shall be, and that which is done is that which shall be done," and if this be applied to the question of the GUN-BOATS, it is as clearly true now as it was then. Towards the end of the long war, from 1812 to 1814, much interest was excited on the subject of dry rot by the disastrous condition of many of the ships. Immense exertions had been made to get ready a fleet commensurate with the urgencies of the conflict, and in consequence 40 line-of-battle ships were built in merchants' yards of green timber, which were so notoriously bad that they were commonly known under the name of the Forty Thieves. The resources of one dockyard at the time in question were perfectly inadequate to meet the great and peremptory demand, and we believe that every ship launched from merchants' yards proved a "miserable failure," and in consequence the Commissioners of Woods and Forests instituted some strict inquiries, and themselves entered on a series of experiments which ought to have prevented a similar condition of things recurring some 40 years after this positive and costly experience. The Rodney, which was launched from a private yard (BARNARD'S) in 1809, and built of unseasoned timber, was obliged to be paid off in 1812, and the Dublin, built also at a merchant's (BRENT'S) in 1812, was condemned even more rapidly, and in 1813 was obliged to be submitted to repairs which cost 20,000*l*. The Benbow, built in 1813, was repaired at Portsmouth in 1818, at a cost of 45,000*l*. About 40 years earlier the fate of ships built at Hull was precisely similar, insomuch that Lord SANDWICH made a note, "No more large ships to be built at Hull." Even in cases where vessels were not run up with such rapidity, either from an injudicious mixture of materials, or from the great difficulty of securing conditions favourable to exemption from dry rot, ships built in our own dockyards have met with a similar fate. The Queen Charlotte built in 1810, partly of English Oak and Fir, partly of American Oak and Pitch Pine, was a mass of dry rot. Some of the timber indeed of native growth was well seasoned, but some of it was quite green, and the effect of mixing the two would be somewhat like that of turning in a detachment of raw troops affected with fever amongst a mass of veterans. A high temperature, moreover, was kept up by means of stoves with a view to dry the raw timber, but the effort was merely to stimulate the growth of Fungi, the whole vessel becoming as it were a hotbed for their propagation. The Queen Charlotte was seven years upon the stocks, and from the variety of timber used in her construction afforded the late Mr. SOWERBY, who was employed by Government to investigate her, a rich harvest of Fungi, some of the specimens of which still exist in his herbarium, now in our possession.

Other examples might be brought forward, all tending to prove that it almost amounts to madness, except in cases of absolute necessity where a certain sacrifice is made with the eyes open to attain a temporary end, to trust the building of vessels, without any proper supervision, to mere chance, or to sanction their construction of raw materials, or of such as the experience of shipwrights or of the commonest country artisans must at once pronounce to be totally unfit for the purpose.*

The gun-boats at Chatham, as far as their condition has been ascertained, present a state of things which in some respects exceeds that at Portsmouth. The only two which have been examined, Nos. 30 and 32, were broken up as too bad for repair. The same reckless use of sap wood is visible there as at Portsmouth, and it is clear that in some cases the trenails themselves were prepared from the same perishable material. With the Oak was an admixture of Moulmein and African Teak, but both in a state of fungous decay, a very unusual condition with those woods, especially the former. But whatever excuse may be made for the use of indifferent wood, none whatever can be brought forward for a shameful fact which has been disclosed by the breaking up the vessels. It is well known that much of the strength of a vessel consists in the firmness with which the heads and heels of the component parts of the ribs are united, and depends upon the pains taken in fitting with the greatest possible accuracy the connecting pins or dowells. It appears, however, that in almost every case, the dowells were shaved off into a conical form, to save the trouble of driving the parts accurately together, a difficult and tedious operation, and in consequence the moment there was the least strain, there would have been nothing to prevent the most fearful collapse. So much for vessels built in private yards, under contract.

In our own dockyards there is not the slightest chance of indifferent timber passing muster under the searching eye of the inspector. He sees at once the slightest suspicious tinge, and the smallest particle of fungous spawn in any internal crevice would at once be fatal to a log or to the part of it in which it appeared, and we do not doubt that, except under contract, the inspection in private yards, on the ground of self-interest alone, would be almost as stringent.

It may be worth while, however, to inquire what are the circumstances under which timber becomes unfit for use, especially as regards decay whether arising from the attacks of Fungi, or from other causes. Our remarks will for obvious reasons be confined principally to Oak, though at the present time it can scarcely be considered as the staple of our dockyards.

The discoveries of TRÉCUL respecting the growth of those trees which, like all our own timber trees, form a distinct annual ring every year, have greatly simplified the questions which arise as to this part of the subject, and which will be better reserved for that portion of our remarks which relates to seasoning. Every one knows that the layers of wood are in a more active state of vegetation as we proceed from the centre to the circumference, while those of the bark are in a precisely contrary condition. As therefore the outer layers of bark die visibly after they have performed their proper functions, so the innermost rings of wood after a time lose their vitality and at last decay. This condition may take place at different periods of growth and under vastly different circumstances, and it is clear that when once decay has commenced, the timber must gradually deteriorate. The best timber must be that which is secured while the whole is in health. When decomposition has once commenced in the centre, the taint is rapidly communicated to the layers which surround it, and this will be readily seen by the dark-coloured ulmates, humates, &c., which are naturally substituted for the healthy cellulose and lignite, together with the other matters which they enclose or have taken up into their pores, and it is well if this chemical decomposition be not aggravated by the growth of internal Fungi.

It is obvious, moreover, that all ground cannot be equally adapted for the growth of first-rate timber. It may be too moist and rich, and so while the growth is extremely rapid and vigorous, may fail to secure the requisite strength and tenacity, while the loose tissues may be ultimately more subject to decay; or the soil may be so completely ungenial that the growth, though slow, is so imperfect that early disease is the sure consequence. In some situations, too, the taproots soon become diseased, either from sticking into an unsuitable soil, or from the attacks of extraneous Fungi, and in this case the tree exhibits at an early period, what is in every case a sure sign that it is past maturity, that peculiar decay of the terminal branches which is commonly known under the name of stag's head.

The effect of the spawn of Fungi from old decaying roots of trees which have been long felled is now an established fact, and recognised every day more generally as a point towards which especial attention must be turned by every intelligent planter and gardener. In Larch plantations it is notorious that the disease which is so common, and which has so sadly damped the expectations which were formed from the peculiar excellence of the first native Larch-built ship, the Atholl, is due almost entirely to this single cause, and there is every reason to believe that Oaks are often affected from a similar cause though in a different way. The notion that trees are more likely to imbibe fungous contagion from the soil in those situations where Fungi in general abound, arises from an incorrect notion as to the relation of such Fungi to the species which peculiarly affect the Oak. Fungi may exist in excess where there are none of those species which attack the Oak, as on the contrary the arboreal Fungi may abound where the terrestrial are scarce. The question, in fact, is similar to that on the fungous origin of cholera, in which as a proof of such origin it is said that cholera abounds where Fungi abound, though not the slightest attempt is made to show that those Fungi have any connection with the disease. Both the disease and the vegetable may abound under the same conditions, without any necessary connection, and in the same way Oaks may be diseased where terrestrial Fungi abound, without the slightest necessary connection between the two. We shall however have more to say on this hereafter.

It is clear that even in situations best adapted for the growth of the Oak, accidents may occur which may induce disease. Severe blows, the attacks of animals, intense frosts, violent winds, lightning, &c., may in various ways cause partial destruction or decay which may taint the sound tissues that surround them, besides the actual lesions of a different nature which may exist without decay, though highly injurious to the timber. Some of these may be completely masked by after-growth, but in general their effects are visible enough in the growing state; and where large branches have been removed and the scar grown over so as to cause knots or swellings, mischief may always be suspected. In Oaks the pruning should be conducted while the plants are young, when the wounds heal over so rapidly as to prevent the decay of the cut surface. Large branches, if removed, infallibly lead to decay.

One of the most prevalent causes of decay, however, in well-grown Oaks arises from the attacks of Fungi, mostly at the base of the trees, except in the rare cases when large branches have been broken off, or water has been admitted by means of fissures caused by lightning. In such cases there has always been previous mischief. Some

* It was asserted, for instance, by Lord CLARENCE PAGET, that the substitution of Elm for Oak in planking was permitted by the Admiralty in the case of the gun-boats, in consequence of the scarcity of Oak. It is well known that Elm when constantly immersed in water is almost indestructible, and is therefore used for the keel and garboard, and sometimes for the five or six tiers of planks immediately succeeding, an example of which is visible in the Aretusa now under repair at Chatham, after a career of more than 20 years. It is, however, quite inapplicable where there is alternate exposure to drought and moisture, or where it is constantly in contact with a damp atmosphere; and even in the parts of the vessel in which its use was legitimate the whole would be almost sure to perish when the gun-boats were drawn up into the slips. We mentioned last week the case of the Royal Frederick, in which the keel perished before the vessel was off the stocks. A curious instance of the rapid decay of Elm occurred to ourselves a few years since. Elm is often, even invariably substituted for Oak in covered coffins. A coffin of this description was deposited in a vault in the old church at Margate, and at the end of two years, when the vault was reopened, the whole of the outer case had fallen away from the inclosed lead. We may add that the common mode of seasoning Elm favours such a result. Of this we shall have more to say in the sequel.

Fungi will, indeed, attack the healthiest tissues, but the Fungi of which we speak never flourish except on tissues previously more or less decomposed. The decay may have commenced in the centre, at the base, where the very oldest part of the tree is inclosed, or it may have proceeded from the roots; but from whatever quarter the mischief has arisen, whether the spawn of the Fungus has run from the heart or root to the outer surface, or whether the Fungus has been established from without on a pre-existent unsound spot of the wood or bark, the effect is the same. The Fungus grows at the expense of the tree, taints the surrounding tissues, and disposes them sometimes for many feet to decay. The Fungi which produce this effect are principally *Polyporus fomentarius*, *P. dryadeus*, and *P. lucidus*, and one or two closely allied species, and where they appear at the root, the intelligent valuer always makes a note in his field book as each tree is valued, exactly as the trees attacked by woodpeckers are entered in the books as "pecquered," because he knows that he is subject to a call for some reduction in the measured valuation by the purchaser, and if such wood gets into the dockyard after the butt has been well removed, there will generally be a slight alteration in tint indicative of the mischief. There are one or two Fungi, as *Fistulina hepatica* and *Polyporus quercinus*, the former of which grows sometimes to an enormous size, which occur on the trunks of living Oaks, but never, we believe, except on very old trees, and such as are left for ornament.

There is however another source of mischief which cannot be too seriously adverted to. The only safe Oaks are those which grow from Acorns. Those which spring up from the old stools are never safe, and in our experience where they form the exception and not the rule in forests, are, like the "doted" and "pecquered" trees, marked in the field books as "stavens," intimating that they are of less value than others. These trees are what Mr. BURNELL in his lecture, delivered a few days since before the Society of Arts, and containing much valuable practical information, calls Pollarded, but that name is more usually applied (as the etymology of the name implies) to such trees as are lopped several feet from the ground, a practice which has prevailed in some of our public forests from the loppings being the perquisite of some public officers. Both the trees from stools or stavens and the Pollards are equally unfit for ship-building, from the inevitable seeds of decay which they contain. The imperfectly healed wounds of the Pollards cause decay from above, while the stavens deriving the growth not immediately from the soil, as Oaks grown from the Acorn, but from a stump in a state almost always of partial decay, some of the moisture from the decomposed cells is imbibed, and this containing matter in a state of chemical change acts as a putrefactive ferment upon tissues which would otherwise possibly remain healthy. Stavens, indeed, may find their way into the public dockyard; but Pollards very seldom can. Gate-posts from Pollard Oaks become sometimes so thoroughly decayed as to lose all coherence, and to break off short like Carrots, and such would inevitably be the case with any parts of them which should be employed in ship-building.

In conclusion of this part of our subject, we may call attention to a work but very slightly known in this country in which the several appearances of unsound Oak timber are very admirably represented.* The edition we have seen is compiled from the Danish treatise on ship-building which was published by FUNCK, in 1833, and in all probability the plates are the same.

WE are asked to point out the best course to pursue for the purpose of ENSURING GERMINATION in seeds of the LAMBERT Pine which have been kept about 20 years. It is almost like asking a surgeon to bring to life a patient who has been buried for 10 or 12 years. The difference in the two cases is only this, that in the latter vitality is certainly and in the other probably gone. There is a "spark of life" in plants as well as animals, in seeds as well as eggs, which once extinguished is never again revived. In plants, however, it will flicker for a very long time, and as Raspberry seeds have certainly grown after being buried for 1600 years, it is just possible that some LAMBERT Pine seed may have remained in a state of suspended animation for 20 years.

Similar questions are often put, as may be expected in a country like this where everybody is a gardener, or at least a bit of one, and where exotic seeds are so continually introduced from far distant lands. As to what may be done in such cases we know nothing more than is stated in the *Theory and Practice of Horticulture*, to which we might refer our readers if we were sure they possessed the work. Since, however, that is not likely to be the case in many instances, the passage in question is here extracted.

"If seeds have become sickly or feeble, from age or other causes, some precautions become necessary, to which, under other circumstances, no attention requires to be paid. When the vital energies of a seed are diminished, it does not lose its power of absorbing water, but it is less capable of decomposing it. The consequence of this is that the free water introduced into the system collects in the cavities of the seed, and produces putrefaction; the sign of which is the rotting of seeds in the ground. The remedy for this is to present water to the seed in such small quantities at a time, and so gradually, that no more is absorbed than the languid powers of the seed can assimilate; and to increase the quantity only as the dormant powers of vegetation are aroused. *One of the best means of doing this is to sow seeds in warm soil tolerably dry; to trust for some time to the moisture that exists in such earth and the atmosphere for the supply required for germination; and only to administer water when the signs of germination have become visible; even then the supply should be extremely small.* If this is attended to, carbonic acid is very slowly formed and liberated; the chemical quality of the contents of the seed is thus insensibly altered, each act of respiration may be said to invigorate it, and by degrees it will be brought to a condition favourable to the assimilation of food in larger quantities. Mr. KNIGHT used to say that these effects were produced in no way so well as by enclosing seeds between two pieces of loamy turf, cut smooth, and applied to each other by the underground sides; such a method is, however, scarcely applicable to any except seeds of considerable size."

Since it was by the careful application of the rules here printed in italics that the ancient Raspberry seeds above mentioned were caused to grow, we are justified in saying that Practice has completely confirmed what Theory suggested. In the case of the LAMBERT Pine seeds, we should adopt Mr. KNIGHT'S method mentioned in the last sentence, placing the turves in a Cucumber frame on the surface of the bed.

WE learn that our valued correspondent, the Rev. Professor HENSLOW, has had the honour to be selected by HER MAJESTY to deliver a course of Botanical Lectures to the younger branches of the Royal family in succession to Professor OWEN.

THE EDUCATION OF GARDENERS.

I REJOICE to see that the important subject of the Education and Certification of Gardeners continues to attract attention. No subject can be more important to those who are concerned in horticulture.

I recommended the gardeners and their friends to take advantage of the system of examinations, certificates, and prizes, which the "Society for the Encouragement of Arts, Manufactures, and Commerce" has established for the benefit of the industrial classes in general; and I cannot but hope that, if your correspondent "Linager" will examine that system in its principles and in its details, he will find that it needs only to be fully developed in order to become all that he can desire for gardeners. "Linager's" proposals, though good in many points, appear to me to be too complicated and to impose too great a burden on those whom he wishes to benefit. Young men living in distant districts cannot and will not travel to London to be examined. His three examinations, really four at the least, are too many as a minimum. His proposed certificates from clergymen, in respect of the elementary knowledge of the young gardeners, would be of very various values in various places. His proposed certificates from practical gardeners, in respect of practical skill, would be little regarded if issued by more than a few celebrated "experts" in gardening; and, if the power to issue those certificates was limited to such celebrities, large numbers of candidates would be absolutely unable to resort to them, while they themselves would be unable to devote the requisite time to those who were within their reach. I do not think it expedient to prescribe one uniform course of study for all young men intended to be gardeners; and I am satisfied that they ought to be allowed to take their final degrees before the age of 25.

The education of a gardener, as of every other human being, must of course be begun in childhood. In the schools for the children of the industrial classes a good solid foundation must be laid in elementary subjects common to all, and without any variations having reference to varieties of future callings. On that foundation must be reared a substantial structure of the special knowledge suitable to the future callings. Of that special knowledge little can be acquired, and therefore little—indeed, nothing but the merest rudiments—ought to be attempted to be taught, during the few years that the child can remain at the day-school. The education ought to be carried on afterwards at evening schools until 16, and at institutions after 16 years of age. By "Institutions" I mean not merely Mechanics Institutes but Institutes, People's Colleges, Evening Classes, Improvement Societies, and all other useful associations for the instruction of adults, apart from children. When, however, the school and the institution have done their best, there arises a further want of a tribunal of competent authority by which the results of their instruction may be tested and attested. How inferior would have been our great public Schools and Grammar Schools, and the Colleges at Oxford and Cambridge, if there had been no University of Oxford or Cambridge to test and to attest their results! How inferior has been the condition of our Middle Schools from the want of a connection with the Universities! and how great an improvement the Universities have recently effected by the institution of their local examinations for Middle Schools! A like effect will be produced among our schools for the children, and among our institutions for the adults, of the industrial classes when they have their own proper university to test and to attest the results of their education; and I hope that "Linager" and other friends of gardeners will perceive that in the system of examinations which the "Society of Arts, Manufactures and Commerce" has instituted, there are many of the essential elements, I might almost say there is the foundation, of an "University of Arts, Manufactures, and Commerce," an university which may do for the industrial classes a large and important part of what is done for the higher classes by the Universities, apart from the Colleges, of Oxford and Cambridge. The Society's system of examinations is two-fold. There are the "Previous Examinations" by Local Boards, and there are the "Final Examinations," in which papers of examination questions, set by the Central Board of Examiners in London, are worked under the supervision of the Local Boards. Where the candidates live, there the examinations, both previous and final, are held. They were held in May last without any difficulty at 63 places, where Local Boards had been established for the purpose, and next year they may be held at any number of places (630 if needs be), where they may be wanted, and where the necessary arrangements, which are exceedingly simple, may by any possibility be locally made.

Any gardener or other person who wishes to be examined for a certificate may at once ascertain, on application by letter to the Society of Arts in the Adelphi, whether a local board already exists within his reach, and if not, what steps should be taken to establish one. He will have the summer, autumn, and winter in which to prepare himself; and early in April he will undergo the "previous examination." To pass it he must be able to write and to spell well, must have a fair knowledge of English grammar and composition, must be able to work sums as far as the rule of three, and must show himself acquainted with the special subjects which he proposes to take up for the final examination early in May. He cannot take up more than four of those subjects in one year. Suppose him to begin with two or three, Arithmetic and Botany; or Arithmetic, Mensuration, and Botany. Let him not attempt too much; rather let him strive to do a little well. No amount of merely superficial knowledge, such as may be got by cramming, will entitle him to a certificate. A few accurate and sensible answers will gain a higher number of marks than a great many indifferent attempts. In Arithmetic not only the correctness of his answers, and the excellence of his mode of working them out, but the clearness and neatness of his working will be taken into account by the examiner In Mensuration the candidates will be required to show that they can measure and estimate the work of a joiner, a bricklayer, a plumber, and other artificers. In Botany and the various branches of Horticulture it is sufficient for me to tell the gardeners that Dr. Lindley is the examiner.

I am far from desiring to suggest that the examinations of the Society of Arts are at present sufficient to meet the case of the gardeners, for example; but I am anxious to point out that, if they will cordially support the Society in its efforts for their advantage, and if the invaluable co-operation of the Horticultural Society should also be given to the Society of Arts, its system of examinations might be placed on a much broader basis than it has at present, though even at present it is very far indeed from being narrow; and might receive such developments and special applications as would leave nothing to be desired in the testing and attesting of the gardener's attainments, whether theoretical or practical, general or particular. *Harry Chester, V.P. Society of Arts.*

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* Zusammenstellung der Kennzeichen der in Deutschland wachsenden verschiedenen Eichengattungen und ihrer hauptsächlichsten Fehler. Unter Benutzung des Dänischen Werkes, Practisk Skibbygerie, af D. H. FUNCK. Kiobh, 1833. Bearbeitet von HARING, Hauptmann in Kriegs Ministerium im Jahre 1852. Berlin, 1853, pp. 164. Tab. Pict. 56. London: WILLIAMS & NORGATE.

ON THE ART OF PERFUMERY, ITS HISTORY, AND COMMERCIAL DEVELOPMENT.

BY EUGENE RIMMEL.

[Abridged from the Journal of the Society of Arts.]

(*Continued from* p. 530.)

THE next important branch of the trade is the preparation of perfumes, of which large quantities are consumed both at home and abroad. The basis of all fine perfumes is obtained by treating with alcohol the pomade or oil extracted from the flowers, as I shall explain hereafter. This may be called the truly artistic part of perfumery, for with a very limited number of flowers the perfumer has to imitate all the others. This is done by studying resemblances and affinities, and blending the shades of scent as a painter does the colours on his palette. Thus for instance no perfume is extracted from the Heliotrope, but as it has a strong Vanilla flavour, by using the latter as a basis with other ingredients to give it a freshness, a very perfect imitation of that flower is obtained, and so on with the others. You will find on the table specimens of those natural and artificial perfumes. There is also a large quantity of toilet waters manufactured chiefly with an alcoholic basis. The most widely known is the Cologne-water, which was invented in the last century by an apothecary in Cologne. It can, however, be made just as well anywhere else, as all the materials for it come from the south of France. Its perfume consists principally of the flowers, leaves, and rind of the fruit of the Bitter Orange tree, which blend well together, and form an harmonious compound. The toilet vinegar is a sort of improvement on Eau-de-Cologne, with the addition of balsams and vinegar. Lavender water was formerly distilled with alcohol from fresh flowers, but is now prepared by digesting the essential oil in alcohol, which produces the same result at much less cost.

The ingredients used for making up perfumery are very numerous, and come from all parts of the world. There is:—

1. The animal series, comprising musk, civet, and ambergris. It is very useful in perfumery on account of its durable aroma, which resists evaporation longer than any other. Musk is a secretion found in a pocket under the belly of the musk deer, a ruminating quadruped, inhabiting principally the mountains of Thibet, Tonquin, and China. The best is called Tonquin musk, the next in quality is the Assam musk, and the most inferior is the Caberdeen musk, which comes from Siberia. Civet is the secretion of the civet cat, an animal found in the Indian Archipelago and in some parts of Africa. It has a most repulsive odour by itself, but combined in small quantities with other perfumes it produces a pleasing effect. Ambergris is a curious substance, which for a long time puzzled the savans, but is now acknowledged beyond a doubt to be a morbid secretion of the sperm whale. When the animal is thus diseased it ejects the ambergris, which is found floating on the sea, or more frequently deposited on the coast. I have here a very curious specimen, which was found inside a whale before the disease had come to its maturity, which accounts for its black colour. Ambergris, although apparently possessed of little scent, imparts a most ethereal and delicate odour to other perfumes.

2. The floral series includes the following, which have hitherto been the only flowers available for perfumery purposes:—Jasmine, Rose, Orange-flower, Cassie, Tuberose, Violet, Jonquil, and Narcissus. Out of those eight, four only yield an essential oil by distillation, viz., the Rose, Orange-flower, Jasmine, and Cassie. The essence or otto of Roses comes principally to this market from Turkey, where the flower is largely cultivated in the neighbourhood of Adrianople. The competition in price, however, causes it to be very seldom pure, being more or less adulterated with an oil called Turkish Geranium, which is in reality nothing but Indian Ginger-grass oil. The usual market price of Turkish otto varies from 15*s.* to 30*s.* per oz., according to its degree of purity. The otto made in the South of France is very fine, but not so rich in flavour as the Tunisian otto, which is worth 4*l.* per oz. If, however, we are to judge quality by price, the palm must be awarded to the East India otto, made at Ghazepore, which costs there 12*l.* per oz. The essence of Orange-flower, called Neroli, is of two sorts. The best is made from the flowers of the Bigarrade, or Bitter Orange tree. The flower of the edible Orange tree commonly called Portugal, yields a very inferior essence. The two other essential oils, Jasmine and Cassie, are only distilled in Algeria and Tunis, and their high price precludes their being used to any extent. The most ordinary way of extracting the aroma of flowers is by means of fatty bodies through a process, which I shall describe hereafter.

3. The herbal series, distilled from the flowers, leaves, or stalks of plants or shrubs, and comprising principally Geranium, Lavender, Peppermint, Fennel, Thyme, Marjoram, Serpolet, Spike, Rosemary, Verbena, Petit grain, made from the leaves of the Orange tree, Patchouly, and Wintergreen.

4. The Andropogon series, which comes all from the island of Ceylon, and consists of the Andropogon schœnanthus, or Lemon-grass, which is used to imitate Verbena, which it closely resembles. The Andropogon citratum, or Citronella, used principally for scenting honey soap, and an undefined species, which yields the Ginger-grass oil of commerce. [This is Andropogon Nardus.] This is a very useful series, and the two former especially are grown to a considerable extent in the island of Ceylon.

5. The Citrine series, comprising the Bergamot, Orange, Lemon, Cedrat, and Limette, all belonging to the Citrus family. The rind of the fruit only is used, and yields an essential oil by expression or distillation—the former is by far the best. On the coast of Genoa it is prepared by rubbing the fruit against a grated funnel; in Calabria, by squeezing out the oil on a glass surface; and in Sicily, by pressing gently the pared rind in cloth bags.

6. The spice series, including Cassia, Cinnamon, Cinnamon-leaf, Cloves, Mace, Nutmeg, and Pimento.

7. The wood series, consisting of Sandal-wood, Rose-wood, Rhodium, Cedar-wood, and Sassafras.

8. The root series, comprising Orris root and Vetivert. The Vetivert or Anatherum muricatum, called by the Hindoos Kus-kus, is extensively used in India for making mats and blinds, which, being frequently watered in the sun, shed a most pleasant fragrance. It gives a very lasting perfume.

9. The seed series, composed of Aniseed, Dill, and Carraway.

10. The balm and gum series, including Balsam of Peru, Balsam of Tolu, Benzoin, Styrax, Myrrh, and Camphor. With the exception of the last, they are all exudations of various trees. Camphor is obtained by boiling the wood of the Laurus camphora.

11. The fruit series, including Bitter Almonds, Tonquin Beans, and Vanilla. The essential oil of Bitter Almonds contains from 8 to 10 per cent. of prussic acid, which can be removed by distilling it over potash. Vanilla is the fruit of a creeper found principally in Mexico.

12. The artificial series, comprising all the artificial flavours produced by chemical combinations. Of these the most extensively used in perfumery is the nitro-benzine, usually called mirbane, or artificial essence of Almonds. This is obtained by treating rectified naphtha with nitric acid and sulphuric acid, or by some with nitric acid alone. The naphtha is poured slowly through a tube into the acids, decomposition follows, and the essence is found floating on the surface. Artificial essences of Lemon and Cinnamon have also been produced, but have not been brought to sufficient perfection to be available for practical use. Besides these, artificial essences, imitating fruit flavours, are manufactured, but principally for making confectionery. The Pear essence is an amylic ether, the Apple essence a valerianic ether, containing amyl, and the Pine Apple essence a butyric ether. The whole of those require diluting with five or six times their weight of alcohol to develop their flavour.

In the above I have not comprised the inodorous materials used for perfumery as bases, such as spirits of wine, oil, &c., as they are also applied to other purposes. I shall only allude to four oils which might perhaps be employed for perfumery, and of which I exhibit specimens. The oil of ben, produced on a large scale in Jamaica, by Mr. Kemble, which has the advantage of not becoming rancid; crab-oil or carapal-oil, from Demerara, which can be obtained also from the west coast of Africa; gingelly or sesamum oil, from India, used by the Hindoos for toilet purposes; and oil of tamanu, from Otaheite, which is yielded by a sort of wild Almond. [?]

(*To be continued.*)

NEW FLORAL HALL, COVENT GARDEN.

AN exhibition of plants in flower was opened to the public in this new building, the glass annexed to Covent Garden Theatre, on Wednesday and Thursday last. The arrangement was in some respects different from that of ordinary displays of the kind, the intention having been apparently to show the fitness of the place for a flower market, for which it is intended.

Next Bow Street was a huge flat bank, sloping from the glass end of the building at an angle of about 45° down to within 3 feet or so of the floor. This was entirely filled with sweet-scented plants, such as purple and white Stocks, Musk, and Mignonette in straight bands of distinct colour, varying from 2 to 3 feet in width, the whole bordered by a double row of white Stocks, and flanked by some Standard Bays from Messrs. Veitch.

In front of this in the middle of the building rose a pyramid some 27 feet in height, and nearly as broad at the base, covered with flowers of yellow Calceolarias and purple Pelargoniums, arranged so as to form bands of both colours, running from top to bottom. Right and left of this were beds of fine foliaged and other taller growing plants, which occupied the centre of the building lengthwise. Against the west end or that next the market were three half pyramids; the one in the centre consisting of scarlet Geraniums and two others of Hydrangeas, while in front was a circular stage for holding bouquets, well contrived for such a purpose. On one side throughout the whole length of the house was a border of beautiful Rhododendrons from Messrs. Standish, Noble, and Baker, of Bagshot, and on the other side, occupying a corresponding position, was another border filled with Azaleas, yellow Rhododendrons, Roses in pots, and other flowering plants from various growers, intermixed with Palms, Rhopalas, Ferns, and things remarkable for the beauty of their foliage.

For theatrical purposes such an arrangement was possibly well suited, but the pyramids and sloping bank just mentioned were contrivances by no means adapted to purposes of either sale or decoration. Had they been at all disarranged by the removal of the portions sold they would have looked extremely ill. In some matters more taste was apparent. For instance along the front of the Rhododendron border was a row of Scarlet Geraniums, the brilliant blossoms of which set off the white and pale purple flowers of the Rhododendrons to good advantage. The centre stage, which was covered with grey stone-coloured cloth, a material that looked much better than green for such a purpose, was prettily bordered with rows of common toothed Lycopod and the pendent Isolepis gracilis, well lighted up and relieved by the Golden Chain Geranium, thus giving a finish to the beds of stove and greenhouse plants sent by Messrs. Rollisson, of Tooting; Arthur and E. G. Henderson; Lane, and others.

Upon the whole the display was satisfactory; and the beautiful interior, with its nicely kept floor, its fresh decorations, and countless festoons of artificial flowers, was a perfect model of a ball-room, which, when lighted up, could not be otherwise than a striking spectacle of its kind. How far it may be able to retain its effect when it shall have been stripped of its temporary decorations, uncarpeted, and intrusted to the care of market people we shall see hereafter.

Home Correspondence.

Old Scarlet Strawberry.—Where can I procure 100 plants of this Strawberry? No other is equal to it for preserving. I have in vain tried to get it from our local gardeners and nurserymen. Three several times have I been supplied with plants as the "real scarlet," but they have turned out to be one or other of the modern sorts, so unfit for preserving, and I shall therefore be extremely obliged for the information I desire. *A Regular Subscriber, Kennington College, near Ashford, Kent.*

Cucumbers.—We beg to send you for inspection three of Butler's Empress Eugenie White Spine Cucumbers, and a new Black Spine, a hybrid between Eugenie and Imperial. Our object in sending them is to show how rapidly they grow, only eight days having elapsed from the time of setting until they were cut. Later in the season we hope to forward you handsomer specimens. Last autumn we had them (Eugenie) 30 inches in length carrying their blossom at the point and beautifully proportioned. The flavour is unusually fine, and you may cut several without finding any seed. The Empress measures as follows:—1, 22 inches long and 7 inches round; 2, 23 ins. long and 8 ins. round; and 3, 22 ins. long and 7½ inches round. The hybrid measures 23 inches in length and 7 inches in circumference. *Butler & McCulloch, Covent Garden.* [Of the Empress we find the following in Messrs. B. & C.'s Catalogue—"This variety was raised by Mr. Webb, of Calcot, near Reading, from seed impregnated with the 'Imperial White Spine,' and 'Ne Plus Ultra;' it possesses perhaps more good qualities than any other sort at present in cultivation. It grows from 24 to 30 inches in length, and sometimes even more, carrying its blossom on the end of the fruit, and is large, straight, handsome, and remarkably prolific. When cut, it has the good property of remaining fresh and crisp for at least a fortnight, without becoming at all wilty. In short, it is a first-rate Cucumber for purposes of exhibition; and its long-keeping qualities render it invaluable to cultivators who have to send the produce of their gardens to a distance." Both are very nice Cucumbers: even, so that they do not cut to waste, and in the state required for present table use. The new Black Spine seems to have a touch of the Smyrna in it.]

Rotten Gunboats.—My attention has just been drawn to an article in your last Number, from which the following are extracts:—"The assertion that it was possible to thrust an umbrella through the bottom of some of the vessels is palpably absurd to any one who has an opportunity of examining their condition." Again, "there was nothing about the outward planking so far as we have seen which could justify such an assertion." The extracts put into the plain language I am accustomed to use imply that I, in my place in Parliament, told a palpable falsehood. It so happens that in the month of July, 1858, upon going to see the gunboats then hauled up at Haslar, I thrust the point of my umbrella through the bottoms of three of them, and having that umbrella now by me, I am enabled to inform you that the length of the point of it is 3½ inches. It appears to me palpably absurd for an editor of a newspaper either to write, or to insert an article upon a subject of which he appears to know nothing, more especially when such article accuses another of wilful lying. *A. Duncombe, 33, Bruton-Street, June 14.* Why what is the matter with the gallant Admiral? We knew nothing and said nothing about him and his umbrella. Nor does the article of which he complains refer to what may have happened in 1858; we spoke of what was to be seen 10 days ago.]

Transplanting Evergreens.—The time having arrived (June, July, and August) at which I consider that evergreens of every description, particularly large ones, can be transplanted with much greater success than at any other period, may I ask any of your readers who may have the opportunity, to try the effect of moving at this season only a few plants and afterwards report

the result? If the practice is followed as given in my communication last September (p. 774), I feel confident that not one in 50 will be lost. In fact after a few days not one in a score will show the least sign of having been removed. After seeing the effects of the past severe winter on recently planted shrubs, I am still more confident that the time I have stated is the best. We removed a great number last year, and in nearly every month in the year. Of those planted in June, July, and August, particularly the two latter months, nothing can look better, whilst of those removed after that time, every plant more or less gives unmistakeable evidence of too late removal. The trial of a few plants any time betwixt now and the end of August will, I think, satisfy the most sceptical. *Henry Groom, Gardener to Sir John H. Lowther, Bart., Swillington House, near Leeds.*

Diseased Peach Trees.—Are the ravages of the frost in October last generally felt throughout the country, or am I wrong in attributing to that cause a disease which has attacked my Peach trees, aggravated perhaps by a combination of other unfavourable circumstances, as will be seen from the following record of the conditions under which the trees are placed? Nearly all of them are from "maiden plants" which have been two or three years in their present situation. They grew over luxuriantly last summer, but the wood had the appearance of being fairly ripened, and certainly nothing in the look of the plants indicated before their starting into growth anything wrong. Some, indeed nearly all of them, flowered well, but very few "set" healthily, which I attributed at the time to inefficient covering and the almost constant prevalence of dry, cutting, easterly winds, together with hoar frosts during the flowering period. Shortly after pushing disease was quite apparent, and in such a form as I had never previously observed in trees of such age as ours. Many of the leaves were twice and some even thrice the size of the healthy leaf of the Peach. Besides being unusually broad and long, they are excessively thick and succulent, pale in colour, usually quite entire, but sometimes deeply serrated, and even laminate, in varieties which in health have entire leaves. Insects did not appear until after the plants were so debilitated that they were an easy prey to their attacks. In a little time dark brown spots like ulcers made their appearance on both old and young wood, from which a gummy discharge oozed out. These ulcers spread and become more numerous in all parts of the most severely affected trees; on old wood they were mostly confined to joints, while on new shoots they might be found on all parts. In a few days the young shoots began dying off. On cutting off some of the branches the heart and pith were found to be quite dead and black, as in old trees liable to lose limbs by "gumming." Though every tree on the wall is more or less affected with this disease, three only have died outright, which is remarkable because all grow side by side; two of those that have died are young, and one old and exhausted. The old tree was taken up, the roots examined, and were found to be quite dead and fibreless. One of the young plants had its roots laid bare; they were quite dead to the extent of 1 foot at the extremities, and all fibres elsewhere were gone. The border, which is 3 feet deep, consists of strong loam rather greasy to the touch, and nothing prevents the roots from penetrating to the extreme depth of this mass of earth. The fresh compost which had been applied to the trees at planting time was a brown loam with a certain proportion of leaves and dung mixed with it, the latter I presume from the hotbeds. The border is well drained, but is cropped to the base of the wall with Cauliflower, Broccoli, Cabbage, &c., all of which, of course, require frequent and heavy applications of manure. The aspect is a good southerly one, and the wall itself is brick. I have been thus minute in order that I, as well as others perhaps similarly situated, may have the opinion of the more able and experienced of our correspondents on the subject. For myself, I am of opinion that the mainspring of the evil lies in the over-depth of the border and the constant system of cropping it, which is carried on. Such cultural operations and dungings as are necessary for vegetables I know will be pronounced, to say the least of them, unfavourable to the maintenance of healthy Peach trees. *W. Sutherland, Bellegrove, Ireland.*

Eclipse Strawberry,—I see that Mr. Yates asks whether this Strawberry will be exhibited from the open air. It is my intention to show it at the meeting of the Fruit Committee of the Horticultural Society on the 10th of July, if I can get fruit of a fair average size and quality, but my soil does not produce Strawberries well, generally speaking, and it is very cold and late. With reference to its withdrawal I was advised (after my advertisement had been inserted) to keep the stock for another year, as it had only been exhibited once, and the stock is very limited. *Willis Reeve, Rochford, Essex.*

Spiders in Greenhouses.—If "O. L., Worthing," would like to try a few green tree frogs as most likely to thin his crop of money-spinners, I will gladly send him half a dozen, as I have a colony of about 50. It may save correspondence if he will name a place in London to which they may be sent for him in a glass ar. *Shirley Hibberd, Stoke Newington.*

Bees Dying Suddenly.—Before your "Constant Reader" is entitled to a consideration of his curious case, he should add a few words on the nature of the hive used, and what was the "usual way" of preparing it. Was it newly painted; was it stuffed half full of some poisonous herb; was it in fact spoilt for use, or in a thoroughly clean and wholesome condition? *S. H.*

Roses in Ireland.—The south of Ireland must be a most favourable climate for Roses, as the following note recently received from a friend will prove:—"*Cork, May* 30. We have a flower show here to-day, and have at it as fine a collection of Tea Roses grown in the open air as you would desire to see; also plenty of Noisettes, including dozens of Cloth of Gold." Tea Roses in England in the open air are things to dream about, but not to be seen to any extent this summer. *T. R.*

Wizard of the North Strawberry.—Observing in your Paper of the 9th inst. that the British Pomological Society has offered a prize of two guineas for a dish of Robertson's Wizard of the North, grown in the open air, if the variety is considered worthy, I beg to thank the Pomological Society for thus noticing my seedling. At the same time I deem it due to myself and to the interest of Strawberry growers to call attention to the fact that not a single plant of my seedling was sent to England until the 10th of September last, when I supplied two dozen to a gentleman in a northern county, and including these only 56 plants had been sent to England on the 1st of November last. I have, however, sent a large quantity of plants to various parts of England since, the great bulk of which was sent between the 19th of April and the 21st of May, the severity of the weather and the condition of the plants preventing me from executing orders sooner. I feel confident that these plants will well next year sustain the high character which my seedling has established for itself here, and it is almost unnecessary to remark that it is only from well established plants of any kind that fruit can be produced in such perfection as may fairly exhibit its true character. Taking into account the lateness of the period at which my Wizard was first sent into England, and the unusually severe and protracted winter following, experienced Strawberry growers will not expect that plants so treated can produce fruit anything like a fair sample of what the variety is capable of producing. Indeed, under the circumstances it is absolutely impossible. I also beg to observe that although the 21st of June may perhaps be about the ordinary ripening season of the Wizard in the neighbourhood of London in ordinary years, the extraordinary lateness of the present season must not be overlooked. The plant of Wizard to which a certificate of merit was awarded by the Paisley Horticultural Society, and from which plant the drawing alluded to by Mr. Yates was made at the time, was exhibited on the 17th of July 1857; the crop was then in perfection. I beg further to refer to my advertisements in your Paper of last October, wherein I stated a fact which had then for the first time become known to me, viz: That a Strawberry was then being sold in England under the name of "Wizard of the North," no raiser's name being given, and to which Mr. Yates has drawn the attention of Strawberry growers, pronouncing it a worthless variety. Now, whatever the merits or demerits of this "Wizard" of unknown origin may be, I know nothing of it. For the guidance of the public I advertised the names of the nurserymen who were at that date in possession of "Robertson's Wizard." Taking the above statements into consideration, I submit that the prize offered by the British Pomological Society is premature, and if any award is made I would suggest that the competitors for Robertson's Wizard of the North should be required to produce certificates showing when they obtained their plants, and from whom they obtained them. This I deem necessary in order that no spurious variety may be passed off as Robertson's Wizard. I have sent plants of my seedling to the London Horticultural Society's Gardens, where its merits will doubtless be fairly and openly tested in 1861. So confident do I feel that the Wizard will sustain its character, not only as a most valuable variety for general culture, but as a first-class kind for late forcing, that in order to have its character fully and fairly tested, I beg to announce that I will give the following prizes to be competed for at the meetings of the London Horticultural Society in 1861, viz.:—In March, for the best three plants in pots—1st, 2*l.*; 2d, 1*l.* In April—1st, 2*l.*; 2d, 1*l.* In May—1st, 2*l.*; 2d, 1*l.* At a summer meeting, for the best dish—1st, 2*l.*; 2d, 1*l.* Best three plants grown in the open ground and exhibited in pots or baskets—1st, 2*l.*; 2d, 1*l.* *Daniel Robertson, Linside Nursery, Paisley.*

Foreign Correspondence.

Life in British Colombia.—The following letter from a lady newly arrived in this distant land will be read with interest:—

Victoria, Good Friday, April 20, 1860.—My first trip out of town was in a four-wheeled cart drawn by one horse, and much we all enjoyed it; the weather was lovely, the road through the Indian encampment frightfully rough, threatening a capsize every moment; but the scene around us most novel and strange—Indian huts and wooden houses like flat-roofed barns all around, with the natives in crowds walking about in their gay-coloured blankets, bare legs and feet, and painted faces, some bedecked with rings in the ears and nose, with bones let into their under lips, and many others with large rings on their fingers and ankles. They are very smart in their way, and lavish a large amount of pearl buttons and beads on the trimming of their blankets. Our drive through the wood was very interesting; once or twice we came to trees which had fallen across the road, and were obliged to dismount while the horse and cart were led over. Although the roads in general were dry enough for dust to be flying, yet every now and then we came to places about the width of a room into which the horse sunk up to his knees in thick mud; but he seemed accustomed to it, and pulled us bravely through. We first called at the house of an old settler, a friend of ours, who gave us some hot crossed buns. On our way home in the evening our cart came to pieces about a mile and a half from where we had spent the day, so we had no choice but to return to our hospitable friends and remain the night.—Last week we had the eventful ceremony of laying the first stone of the bishop's new church. The gathering was a very large and respectable one, the "Ganges" band attended, and the officers presented themselves in full uniform. The governor laid the stone, gave a very appropriate address, and the bishop afterwards a very long one.

This is a bad place for a gentleman without some profession for which there is a decided want; common labourers and artisans are the people to make money, and who find themselves decidedly better off than in their native homes. A good market gardener with capital would soon realise a fortune, as would also a dairy farm and keeper of fowls. There are actually no vegetables to be had but Potatoes, Onions, Carrots, and Turnips; twice by the greatest good fortune I have had a dish of Greens, the first cost me 6*d.*, the second 1*s.* To give you an idea of our little dinners when we have two or three friends, I will send you as a sample our fare of yesterday:—1st, boiled fish, with melted butter and Potatoes; 2d, roast sirloin of beef, with a dish of Greens and Potatoes; 3d, a suet pudding with sweet wine sauce; 4th, cheese maccaroni; afterwards a dessert of Apples, Dates, Raisins, Nuts, and biscuits, with port and sherry in the way of wines; afterwards coffee, then tea and cake or biscuits. So you see we are not in such a state of barbarism as I anticipated before I came. Our visitors also were all as well and neatly dressed as if they had been dining with you in London. We have been suffering much lately from weak eyes. I have had bad colds, sore throat, and bad eyes ever since I have been here. My sight has been so bad of an evening as not to see anything except as through a fog. The tips of my fingers crack terribly with the hard water, but all these discomforts are passing quickly away. The soap I brought out is invaluable. I don't think there is any good soap in the colony.

Brussels: *June* 9.—As this is the season generally selected by tourists for visiting the continent, I would advise those who may contemplate visiting Belgium to pay attention to its gardens, as there is much of interest in this land connected with horticulture, though I must confess, as regards neatness and taste in the laying out and keeping of gardens, our Belgian friends are somewhat behind their neighbours. I shall commence by giving a brief account of one of the public gardens in this city. Having an introduction to M. Linden, I availed myself of it to visit his collection of tropical plants, and felt much gratified to have an opportunity of making the acquaintance of this celebrated naturalist. Few men can boast of possessing so ingenuous a love for his profession as he has, for I believe it is well known that he has devoted many years of his life, to say nothing of his substance, in the research of the inexhaustible works of Nature. The gardens to which I wish to direct attention are those of which he is "directeur," and which are in connection with "the Royal Zoological and Horticultural Society," supported by the public. The portion of them to which I would ask my friends to accompany me now is reserved by M. Linden for his own purposes, and entirely supplied with plants and kept up at his own expense. To enter more particularly into details, I shall begin by noticing his Ferns, of which a more extensive collection could scarcely be found, I might almost say, in Europe. His Tree Ferns are truly noble, and when we consider that Mr. Linden possesses at present a larger variety of this particular class than was known to exist in the entire world a few years since, I think we must admit that he has not spared himself to do honour to this interesting tribe. Then amongst those of the minor class, of which M. Linden has a large supply, is that exquisite one "Pteris tricolor," lately introduced by him, and which unless seen can scarcely be realised; the delicate shadings of its various hues alone could be produced by a master hand. M. Linden has within the last few weeks sent out some dozen plants of this Fern, and has another stock nearly ready for distribution. Ornamental plants occupy a larger space than any others in his houses; and here I must say a word about the beautiful Begonias, which in themselves are worth a chapter. Among the many which attracted my attention were Begonia Leopoldi, Rex, Duchesse de Brabant, margaritacea; these for beauty of foliage and exquisite colouring cannot be surpassed. I think it may not be amiss to draw the notice of such persons who may feel an interest in horticulture to these gardens, particularly that portion under Mr. L.'s care, for many persons who visit the Royal Zoological and Botanical gardens of this city go away without ever having seen, or perhaps without knowing, that such a treat is within their reach. *E. A. M.*

Societies.

Horticultural: *Fruit Committee, June* 12.—At this meeting two seedling Strawberries were exhibited, one by Mr. Small, of Colnbrook, and the other by Mr. Prestoe, of Hackwood Park, near Alton. The first was named Prince Arthur; it was of fair average size, had the bright red colour of Sir C. Napier, and as regards flavour was considered very promising; the second was so much injured by travelling that no correct opinion of its merits could be formed. A dish of Lemons was also shown at this meeting by Mr. Lockyer, of Plymouth.

Floral Committee: June 14.—On this occasion Mr. Standish, of Bagshot, showed two beautiful Tree Ferns

from New Zealand, one Cyathea Smithii, the other C. Cunninghami; both are new to gardens, and are certainly valuable acquisitions. First class certificates were awarded them. From the same exhibitor also came an extremely useful rosy purple Azalea, a hybrid between amœna and lateritia. This Mr. Standish has found to stand the winter uninjured out of doors: it was awarded a certificate. From the same establishment also came a beautiful white Rhododendron, named Athenia, which was prettily blotched and spotted on the upper petals with yellow. To this a certificate was also awarded. From Wellington Road Nursery Messrs. Henderson sent various plants, among which were Imatophyllum Cyrtanthiflorum, Hydrangea cyanea, a pale rosy kind in the way of japonica, and Gesnera gloxinæflora, a useful looking variety with bright reddish purple flowers. Tropæolum Cavendishii, an orange scarlet kind in the way of Lobbianum, came from Mr. Catt, of Welwyn, and from the same locality Mr. Parsons sent a very pretty white red-striped seedling Azalea. Blooms of Bougainvillæa were furnished by Mr. Daniels. A Hybrid Dianthus was shown by Mr. Laxton, and from Messrs. Carter came cut flowers of the handsome, double white striped Columbine (Aquilegia caryophylloides). To this a Certificate was awarded. A Begonia, named Prince of Wales, was contributed by Mr. Cutbush, and cut blooms of the extremely handsome Dendrobium Falconeri, by Mr. Baines. A basket of Fuchsias came from Mr. Keynes, and some variegated Geraniums from other growers.

LINNEAN: *June* 7.—**The President in the chair** The President nominated J. J. Bennett, Esq., G. Bentham, Esq., Professor Owen, and W. W. Saunders, Esq., Vice-Presidents for the year ensuing. C. L. Bradley, Esq., was elected a Fellow. The following papers were read:—**1. "On the poisonous effect of a small portion of the Liver of a Diodon inhabiting the Seas of** Southern Africa," by Sir John Richardson. A brief note, introductory to an "extract of a letter from Mr. H. Jameson, surgeon, H.M. ship Winchester, Simon's Bay, Cape of Good Hope, dated October 1, 1845, addressed to Sir W. Burnett, Director-General of the Naval Medical Department." Two men who had between them eaten the liver of a Toad Fish (the liver weighing about four drams) died almost immediately from its poisonous effects. "Dinner had been piped to at 12 o'clock, after finishing which the fatal morsel was cooked; this could not have been sooner than 20 minutes after 12 o'clock. At 12.15 I got on board, at which time life had been extinct for some minutes, so that the period from the taking of the poison until death could not have exceeded 20 minutes."—**2.** "On New Oceanic Entomostraca, collected by Capt. T. Toynbee," by J. Lubbock, Esq.—**3.** "The Nervous System of the Asteridæ, with observations on the Structure of their Organs of Sense, and remarks on the Reproduction of Lost Rays," by **Dr. H. S. Wilson, Junior Demonstrator of Anatomy in the University of Edinburgh. This paper was illustrated by a series of very beautiful anatomical drawings.**

Notices of Books.

Edwin Adams—Notes on the Geology, Mineralogy and Springs of England and Wales (Longmans), is a useful little book for schools. It does not profess to teach much—which is no small merit; but what it does teach is done correctly. We must however except from this remark the "Glossarial Appendix," which should be rewritten by some one acquainted with natural history.

Black's Handbooks, with maps and illustrations (small 12mo, A. & C. Black). One of these new volumes is occupied by Kent and Sussex; another by Gloucester, Hereford, and Monmouth. They are well illustrated by views, and owing to their small size are very convenient for travellers. Nevertheless the publishers have managed to introduce useful maps of the counties described. To the second of the volumes above mentioned is added a sketch of the geology of Gloucester and Hereford by Mr. Leifchild.

The June Number of Moore's *Floral Magazine* (Lovell Reeve) contains two varieties of the awned Heath, *Erica aristata*, 5 new Cinerarias: Reynolds Hole, Bridesmaid, marginata, Constancy, and Garibaldi; a *Primula* called *Fortunii*, very much like denticulata; and a *Cattleya Rollissonii*, resembling C. Mossiæ after its colour is discharged, and like C. Wageneri a mere variety of that species.

Flora of the British West Indian Islands. By A. H. R. Grisebach, M.D. Parts 1 and 2. 8vo. Lovell Reeve.

Another commencement of a Colonial Flora is here before us from the pen of a most able and conscientious German botanist. It is written in English with short specific characters and concise notes, the whole printed in a remarkably clear small type, so as to compress the matter into the smallest possible compass, it being announced that six such parts will complete the work. The natural orders introduced into those before us are Ranunculaceæ, Dilleniaceæ, Magnoliaceæ, Anonaceæ, Myristicaceæ, Menispermeæ, Cruciferæ, Capparideæ, Bixineæ, Lacistemeæ, Violaceæ, Droseraceæ, Polygaleæ, Euphorbiaceæ rich in West Indian species, and many others. We estimate the number of species included in the two first parts at about 800, which would give a total of 2400 for the whole work when completed—a small number in the eyes of some botanists. But Dr. Grisebach quite understands the necessity of reducing the upstart species of modern days to their proper rank in scientific society.

There being no introduction or explanation at present published we are unable to state what our learned friend proposes ultimately to introduce into its work; and for the same reason we have no means of explaining his reason for adopting for his natural orders a new sequence with the principle of which we are unacquainted. Doubtless these things will appear hereafter in future numbers; but seeing that the natural orders follow on no known plan, we would seriously suggest to Mr. Reeve the propriety of printing on the cover of each number an index to the orders it contains. Unless this is done the work will be unconsultable until the whole shall have appeared, which cannot happen for a year or two.

To the third edition of Moseley's *Astro-Theology* (Longmans) we find the following introduction:—

"It is the object of the following papers to treat of those evidences of the wisdom and goodness of God, which may be seen in the daily changes of the Heavens. They were first published in the 'Church of England Magazine,' in the year 1838, and were republished in the hope that they might promote the cause of popular instruction."

The chapter on the *Temperature of the Soil* will interest our horticultural readers:—

"It is not only by the properties in respect to heat of the ocean, or by those in respect to heat and vapour of the atmosphere, by marine currents, by the winds, by rains, and by the dew, that the processes of vegetation are influenced, and the geographical distribution of plants modified; another vivifying element not less important in its agency is the native temperature of the soil. There is a heat proper to the mass of the earth, increasing from a short distance beneath its surface downwards at the rate of about 1° of Fahrenheit's thermometer for every 15 yards. This central heat becomes sensible in excavations reaching anywhere beyond a certain depth, and in deep mines it is oppressive. It is a constant heat. It does not by the slightest appreciable quantity vary from year to year, or season to season. Observations were made in 1671, by Cassini, on the temperature of the air in certain closed cellars beneath the Observatory of Paris; they were repeated in 1730 by La Hire, and during the last 45 years thermometrical apparatus of great sensibility have been fixed in these cellars and constantly observed; the temperature thus observed through a period of 175 years has never varied by more than one quarter of a degree from 11°.82 of the Centigrade thermometer, or 53°.37 of the thermometer of Fahrenheit. There is, however, a temperature proper to the surface soil which is influenced at once by this constant subterranean heat, and by the superficial absorption and radiation of solar heat. This is a variable temperature. It extends in different localities to different depths, varying from 40 to 60 or 80 feet on the continent of Europe, but being bounded in tropical regions at the depth of a single foot. If a sheet be imagined to pass through all those points beneath the earth's surface, to which the surface heat is propagated, and to which, therefore, a variable temperature extends, it will cover that imaginary surface called 'the surface of invariable temperature.' Theory and experiment agree in indicating the temperature of any point in this surface of invariable temperature to be the mean temperature of that point in the earth's surface which is immediately above it. It is not a regular or an even surface, but one having elevations and depressions dependent partly upon corresponding elevations and depressions of the earth's surface, and partly upon irregularities in the strata which constitute the earth's crust. Whilst beneath this surface there reigns an invariable temperature, a constant change is taking place above it, and that of a very remarkable kind. From experiments made at Edinburgh, Zurich, and Strasburg, it appears that, during the winter months, January, February, and March, the temperature increases uniformly as we descend from the earth's surface to the surface of invariable temperature; that in the months of April and May there comes, with the spring, a sudden and remarkable elevation of the temperature, extending to a depth of about 2 feet into the soil, but continually diminishing to that depth; whilst beneath it, the earth retains the temperature of the two preceding months, continually increasing as we further descend, so that there is a depth (and a surface) of minimum temperature, situated between the surface of the earth and the surface of invariable temperature.

"As the year advances this surface of minimum temperature sinks continually deeper and deeper, until in the month of August it reaches the surface of invariable temperature and identifies itself with it. In this month, however, the mean temperature of the surface has begun to diminish, and beneath the surface it is reduced, at different depths, more nearly to a state of uniformity, which state it actually attains in September to the depth of 10 or 20 feet. It is in the month of October and November that this uniformity changes into an increasing temperature. And the temperature which in the preceding months had increased from the depth of 15 or 20 feet to the surface of invariable temperature, now becomes throughout that space uniform. Although the temperatures of the atmosphere and the soil are dependent for their variations on the same causes, yet in their amounts they are essentially different. During the day the temperature of the soil is much higher than that of the air. At Paris the temperature of the soil is not unfrequently 112° F.; and in the summer of 1824 it attained 149° F. At night it is sometimes from 14° to 18° below it. The relations by which these changes in the temperature of the soil are connected with atmospheric causes and the solar radiation it is not easy to trace; who can, however, doubt that when in the month of March and April the temperature of the soil so suddenly and so rapidly ascends, it is to meet the first efforts of vegetation—the bursting of the germ and the putting forth of the bud and blossoms. The black colour of the earth, favourable as it is to the absorption of heat, is one of the causes which contribute to give to the soil a temperature higher than that of the air above it. Were some limit not, indeed, placed to the operation of this cause, the moisture of the soil might everywhere be transferred to the atmosphere. **That limit is found in** the fact, that although black be the colour most favourable to the absorption of heat, it is also that most favourable to its radiation. Since, moreover, during the whole day, whilst the earth is in the act of receiving heat from the sun, it is also in the act of radiating it, in some degree unknown to us, into space; and since this process of radiation is going on also all night, it follows that the radiating properties of a body may **have a greater influence to keep down its temperature** than its absorbing properties have to raise it; and thus we may understand why vegetable mould, which is commonly the darkest, is at the same time the most humid; and why the gardener whitewashes the wall against which his fruit trees are nailed: not that **reflecting the heat it may be cooled, but that**, radiating it ill, it may remain hot. We may also understand why regions of sand are parched with heat, and why the Almighty in his wisdom and goodness has given to the animals of cold regions a white covering, and one of a darker colour to those within the tropics; man himself being, in this respect, an obvious example. Thus, too, that is no visionary analogy which the covering of animals presents in arctic regions to the covering of the earth's surface. In winter a white mantle of snow is thrown down upon it, for the same reason that the bodies of animals are then enveloped in thick white furs. When summer comes, under the form of a single day of from five to six months' duration, **and the clothing of animals is made thinner and lighter, the surface colour of the earth is also changed, and its snowy covering is withdrawn.**"

Garden Memoranda.

MR. JOHN WAIERER'S EXHIBITION OF AMERICAN PLANTS.—This is held as heretofore in the grounds of the Royal Botanic Society, Regent's Park, and, notwithstanding the long and severe winter we have just experienced, is quite as effective and beautiful as in more favourable seasons. True, we miss the altaclerense and Smith's breeds, which must be numbered with the multitudes of plants that have been killed as we have shown by the frosts of October last; but in their place we have equally showy kinds into which has been infused by repeated cross-breeding a hardier constitution. On entering this "garden of flowers," for so it emphatically is at the present moment, one is struck with the variety which is presented, the entire surface under cover of a large tent being richly clothed with blossoms of the most brilliant colours, the whole being agreeably and tastefully broken up into clumps by gravel walks neatly margined with Grass. Here and there single specimens stand out in bold relief and are extremely effective. Among the largest of these may be named nivale, album elegans, Attila, roseum elegans, bicolor, Everestianum, delicatissimum, and last but not least, Lady Eleanor Cathcart, which is one of the handsomest Rhododendrons in existence, its beautiful clear rosy Geranium-like flowers being set off to excellent advantage by a black blotch in the upper petals.

Among other kinds the best were Æneas, a bright rosy crimson which comes in after Blandyanum; Bassaro, deep rose with dark spots; Blatteum, claret with large blooms closely arranged in immense trusses; Bronzino, dark crimson with black spots; Broughtoni, bright rose, a free bloomer and very handsome; Butlerianum, white spotted in the upper petals with brownish yellow; Canaletto, fine clear rose; celebrandum, claret coloured, compact and good; concessum, light centre margined with deep rose; congestum roseum, salmon rose with dark spots; Duke of Norfolk, dark rose, very showy; Fleur de Marie, rosy crimson blotched with white; Garibaldi, shaded dark claret; Gozzodi, rosy scarlet with dark spots; Gretty, a handsome rosy purple with black spots; John Waterer, one of the very best of the glowing carmine coloured kinds, and so late as scarcely to be in full bloom even now; Madame Van de Weyer, clear rose, very effective and striking; Mammoth, large pale pink: Minnie, blush white, spotted with chocolate; Pasithea, rosy crimson with dark spots; Raphael, bright deep rose, richly

spotted, large and showy; Rembrandt, rosy crimson; Salvator Rosa, a new and attractive kind, with pale centre, bordered with purplish crimson; luciferum, a useful showy white; and Nereus, a dark purplish violet with conspicuous clear white anthers. The last and Everestianum should be grown in every collection for the sake of variety, their colours being strikingly different from those of all other kinds. The best white is perhaps still album elegans. Duchess of Sutherland we had nearly forgotten; it is a beautiful kind, white in the centre, with a deep crimson border, trusses large and produced in great profusion.

Of hardy Azaleas Mr. Waterer also possesses a rich collection; a long border of them is, we understand, now beautifully in bloom in his well-known grounds at Bagshot, which at present richly deserve inspection.

As regards the cultivation of American plants it cannot be denied that light sandy peat is the most suitable soil for them to grow in; but where this cannot be procured other materials must be employed. Of these the best are leaf-mould and turfy loam in equal parts with a small admixture of white or other sand; or the top spit of any plantation, wood, or Grass land, the more impregnated with vegetable particles the better. The thickness of the spit will depend upon the composition of the soil, the more turfy the better for the growth of plants. A small portion of sand with well-rotted stable manure should be added, the proportions of the latter being one barrowful to six of the former. Numberless instances are however recorded of Rhododendrons thriving in almost every kind of soil, particularly in light fertile loams of which peat forms no part.

One point of considerable importance in connection with their successful cultivation is the immediate removal of all decayed blooms as soon as they cease to be ornamental; this facilitates the growth of the plants, and has a tendency to induce a greater profusion of blossom the following year.

Miscellaneous.

The Botanic Garden, Liverpool.—The *Liverpool Mercury* states all the heating apparatus here is in course of reconstruction by Messrs. Weeks of the King's Road, upon their "one-boiler system," by which "every section of the department, now being enlarged, will be readily heated to any extent required, and at the same time a great saving of fuel and labour will be effected."

Dr. Nuttall's Herbarium.—The following are the prices which some of the more important lots fetched:—Plants, from California, 1; Cape, 1, and 2 others, 4 parcels; 1*l.* 8*s.* An extensive series of East Indian, probably 5000 specimens, mostly localised and many named, 14 parcels; 7*l.* Valuable general herbarium of Phænogamous plants (exclusive of Cyperaceæ and Gramineæ); the whole named and localised, and arranged in generic-covers, but not mounted; about 10,000 species, with many duplicates, from different stations, especially from North America, California, Red River, Oregon, Boston, and United States generally, 24 thick parcels; 30*l.* Collection of Cyperaceæ and Gramineæ, about 5000 to 6000 species, mostly named and localised, principally North American and East Indian, 4 thick parcels; 8*l.* 8*s.* A good set of North American plants, from 2000 to 5000, named and localised, and in good preservation, 7 thick parcels; 2*l.* 12*s.* 6*d.* General herbarium, containing from 3000 to 4000 species, nearly complete, of British plants, a large portion from Wm. Gardiner, of Dundee, mounted in 4to cases, to arrange as vols. of books, with an alphabetical list of families and genera, 80 vols; 10*l.* Java plants, from Horsfield, about 600 species, 4 parcels; 1*l.* 14*s.* Other lots fetched from 10*s.* to 2*l.* per lot.

A *Determined Rat-Killer.*—"One of these highly bred animals, which was celebrated in the sporting world under the title of 'Tiny,' weighed only 5½ lbs., and yet was known to destroy 50 rats in 28 minutes and 5 seconds. It is estimated that this dog must have killed more than 5000 rats, the aggregate weight of which nearly equals a ton and a half. He could not be daunted by size or numbers, and was repeatedly matched against the largest rats that could be procured. He used to go about his work in the most systematic and business-like style, picking out all the largest and most powerful rats first, so as to take the most difficult part of the task while he was fresh. When fatigued with his exertions, he would lie down and permit his master to wash his mouth, and refresh him by fanning him, and then would set to work with renewed vigour. He was a most excitable little creature during his younger days, running about the room with such preternatural activity that a gentleman to whom he was exhibited declared that he could not distinguish the dog's head from his tail, or pronounce judgment on the colour of his fur. As he grew older, however, he became more sedate in his demeanour, and used to sit in state every evening on a crimson velvet cushion edged with gold fringe, and flanked with a candle on each side, so that he might be inspected at leisure. However quiet he might be in external demeanour, he was hardly less excitable in disposition, and actually died from the effects of over-excitement. He happened to hear or to smell a rat which was in a cage in another room; and being chained in an adjoining apartment, and unable even to see the rat, he chafed and fretted himself into such feverish agitation that he died in a short time afterwards, although he was permitted to kill the rat. There are dogs which have destroyed more rats in less time than this little creature; but none which was nearly so successful in proportion to its size and weight." *Routledge's Illustrated Natural History, by the Rev. J. G. Wood.*

Eggs of Butterflies not affected by cold or heat.—The eggs of butterflies, in common with those of insects in general, are capable of resisting not only vicissitudes, but extremes of temperature that would be surely destructive of life in most other forms. The severest cold of an English winter will not kill the tender butterfly eggs, whose small internal spark of vitality is enough to keep them from freezing under a much greater degree of cold than they are ever subjected to in a state of nature. For example, they have been placed in an artificial freezing mixture, which brought down the thermometer to 22° below zero—a deadly chill—and yet they survived with apparent impunity, and afterwards lived to hatch duly. Then as to their heat-resisting powers, some tropical insects habitually lay their eggs in sandy, sun-scorched places, where the hand cannot endure to remain a few moments; the heat rising daily to somewhere about 190° of the thermometer—and we know what a roasting one gets at 90° or so. Yet they thrive through all this. *British Butterflies, by W. S. Coleman.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—As soon as Camellias, Azaleas, and other plants shall have been placed in summer quarters out-of-doors, painting and other repairs required by any of the plant-houses should be commenced, as they can be more conveniently done then than at any other season. As recommended last week pay great attention to plants for autumn and early winter decoration. Let them have plenty of pot-room, good rich compost to grow in, a moist atmosphere, and plenty of space for perfect development, regulating the temperature according to the nature of the plant, and they will make rapid progress. Mealy bugs and thrips will require to be looked after; the utmost diligence must be used to keep these in check. If among stove plants there are any sickly or badly rooted specimens they should be frequently examined for red spider; otherwise they will become a nursery for this pest, and from them it will soon spread to adjoining plants. See that young growing stock is not allowed to suffer for want of pot room; attend carefully to watering, giving manure-water to all plants in free growth that require it. Gardenias and other things that have been in the conservatory while in bloom should be replaced in heat as soon as their beauty is over, in order to allow time for getting their growth ripened before short days and dull weather have arrived. Orchids in a growing state will require encouragement. Shading must be promptly attended to when bright sunshine occurs. Allow them, however, as much light as they will bear without injury, using a very light screen, and that only when absolutely necessary. Keep them clear of insects and dust by frequent syringings of spongings.

FORCING DEPARTMENT.

PINERIES.—Such varieties as are at all liable to spoil at the bottom before the upper pips are coloured should now be kept as dry as possible immediately they show the least signs of colouring, keeping the atmosphere also as dry as can be done without injury to the rest of the stock.

VINERIES.—Grapes intended to hang through the winter should be thinned very freely, and, if necessary, they should be gone over a second time, leaving them so that the berries when fully swelled will scarcely touch each other. A moderate crop only should be left on the Vines; for, to ensure success in keeping Grapes fresh and in good condition till next March, the Vines must be in first-rate health; be satisfied, therefore, with a moderate or rather light crop in the late house. Keep the atmosphere of houses where the fruit is colouring in active circulation, using gentle fires by day with abundance of air, and leaving a little air on at night to prevent damp. If red spider appears inclined to be troublesome, wash the pipes, &c., as before recommended, with a mixture of soot and lime, and if the colour is objectionable add more soot.

FIGS.—Trees that have been kept dry while ripening the first crop, and are now cleared of this, should be well watered at the root, and if there is any appearance of red spider, the leaves should be thoroughly washed with the engine. Give manure-water to trees showing a heavy second crop, and keep the atmosphere moist by frequently sprinkling the passages and borders, &c. Keep the shoots thin and regularly tied, so as to avoid confusion, and expose all parts of the tree equally to the light. Where the fruit is ripening attend to previous directions, and keep the atmosphere and borders as dry as can conveniently be done. Assist trees in pots by giving them a liberal supply of manure-water.

FLOWER GARDEN AND SHRUBBERIES.

Remove everything in the way of bedding plants whose beauty may be over or that is at all ineffective, and introduce good things from pots in the reserve ground. A good reserve ground, if properly situated and systematically planned and conducted, would be one of the most useful plots about a garden. Such a valuable adjunct as this would, however, require the constant attendance of a man possessing some knowledge of flowers, and therefore could not be carried out where there is scarcity of labourers. Decayed patches of bulbs which are required to stand for early spring flowering may have Verbenas or other things introduced from pots between them, so as to give gaiety to the places they occupy. Cuttings of Pansies should be got out in succession before the shoots are too much exhausted. All boundary or other hedges should be clipped forthwith.

HARDY FRUIT AND KITCHEN GARDEN.

Tomatos must be regularly attended to, keeping the shoots thin and stopping them above a cluster of fruit, for if the plants are allowed to ramble and grow too freely there will be a poor chance in an unfavourable season of securing a good crop. Shallots, if left in the ground after the bulbs are ripe, are apt to mildew and rot in wet weather, therefore these should be pulled as soon as the tops begin to decay, and should be spread out in an airy place to dry before storing them away. Get early flowering herbs cut and dried for winter use. Where a sufficient breadth of Celery is not yet planted out, this must be attended to as speedily as possible, and must be attended to with water, &c., until well established after planting, otherwise good sized heads need hardly be expected. Earth up former plantings, and encourage rapid growth by occasional waterings with manure water. Ply the hoe freely among growing crops, both for the destruction of weeds and for loosening the surface of the soil after the heavy rains we have just experienced. Look over all trained fruit trees frequently for the purpose of stopping and shortening any gross shoots, and keeping the growth nicely regulated; also get the young shoots of wall trees laid in where not already done.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending June 14, 1860, as observed at the Horticultural Gardens.

June.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 8	18	29.832	29.786	63	46	54.5	57	55	S.W.	.19
Satur. 9	19	29.748	29.493	56	45	50.5	57½	55	E.	.20
Sunday 10	20	29.731	29.639	64	36	50.0	56	55	W.	.04
Mon. 11	0	29.934	29.810	65	49	57.0	57	55½	S.W.	.06
Tues. 12	22	29.575	29.423	61	49	55.0	58	55½	S.W.	.40
Wed. 13	23	29.607	29.536	64	41	52.5	57	55½	S.W.	.00
Thurs. 14	24	29.691	29.686	63	34	48.5	58	56	W.	.02
Average..		29.731	29.621	62.2	12.8	52.5	57.2	55.3		0.87

June 8—Overcast; rain, cloudy; overcast; rain.
— 9—Rain throughout with cold easterly wind.
— 10—Overcast; fine, thunder 4 P.M.; fine; lightning in the evening.
— 11—Hazy; cloudy; white and dark masses of low clouds; fine at night.
— 12—Uniformly overcast; heavy and continuous rain; boisterous.
— 13—Cloudy; very boisterous; clear and cold at night.
— 14—Fine; windy, masses of dusky clouds, with clear intervals; very clear at night; almost freezing.

Mean temperature of the week, 7 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending June 23, 1860.

June.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 17..	72.9	48.5	60.7	19	0.80 in.	1	4	3	—	—	9	5	3
Mon. 18	72.6	50.3	61.5	17	0.30	3	2	3	2	5	6	10	3
Tues. 19..	70.7	49.2	59.9	18	0.62	2	3	2	2	3	5	16	1
Wed. 20..	72.1	49.5	60.8	16	0.68	1	4	1	1	6	9	11	2
Thurs. 21..	74.1	50.8	57.5	14	0.68	2	4	3	2	1	15	5	2
Friday 22..	73.4	49.6	61.5	12	0.59	2	2	1	1	2	14	9	3
Satur. 23..	71.8	47.2	59.5	12	0.44	2	1	3	11	4	5	5	3

The highest temperature during the above period occurred on the 19th and 22d, 1846—therm. 93 deg.; and the lowest on the 20th, 1855—therm. 30 deg.

Notices to Correspondents.

*** The Board of Works have directed that in future the Street in which our Office is situated shall be called Wellington Street, and that the Number of our Office shall be 41. Correspondents are therefore requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

DISEASED HORNBEAM: *R H.* The leaves appear to have been attacked by some insect which has caused galls to form on the upper surface.

INSECTS: *Cicindela.* We use equal proportions of gum arabic and gum tragacanth dissolved in water, (with a drop of spirit of wine to prevent mould) for gumming small insects on card. *W.*

LAMBERT PINE. *N B.* See a leading article in another column.

MONSTROUS COWSLIP: *H B K.* Very curious and interesting. Much obliged.

MONSTROUS CUCUMBER: *Shrewsbury.* It is not uncommon to find leaves growing from the side of a Cucumber. The case of sepals growing into leaves is rare: it is rather fully adverted to in the *Gardeners' Chronicle* of last year, p. 664.

NAMES OF PLANTS: *A J H.* It is impossible to name hybrid Cacti with any degree of certainty; the large flower is evidently bred from Epiphyllum Akermanni, and the small one from E. truncatum.—*Ada.* 1, Pteris umbrosa; 2. Litobrochia vespertilionis *alids* L. incisa; 3, Hypolepis tenuifolia; 4, Gymnogramma ochracea.—*A G.* Berberis aristata.—*Botany.* Chrysanthemum leucanthemum.—*Garlies Mitchell.* It is not Spergula pilifera.—*A H.* 1, Spiræa triloba; 2, Double Lychnis viscaria; 3, Lamium garganicum; 4, Saxifraga Cotyledon.—*M C.* Echeveria secunda, a Mexican plant.—*Thompson.* 1, Asphodelus luteus; 2, Campanula garganica.—*N A.* Brassia verrucosa.—*Tyne.* Aerides affine; 1, Epidendrum cochleatum 2, Epidendrum calochellum; and what appear to be flowers of Dendrobium Heyneanum.—*J R D.* Some Ixia, but it is impossible to say what.

STRIKING CUTTINGS: *R S.* We know nothing more of Mr. Prestoe's plan of striking than was stated in the paper to which you refer.

YEWS: *Enquirer.* The best time to transplant these and all other Evergreens is certainly the first half of September, unless the last week in August should be more convenient.

CHEAPEST AND BEST.

JUPP'S NEW HORSE AND CATTLE FOOD.—The utility of this new preparation being now fully established, W. & R. JUPP & Co beg to say that they are prepared to execute orders to any extent. A trial will prove its beneficial qualities. Price 35*s.* per cwt.; 19*s.* per ½ cwt.; and 10*s.* per ¼ cwt., carriage free to nearest railway stations in Great Britain. Pig Meal, 16*s.* per cwt. Cash or a London reference expected from unknown correspondents.

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MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

The Agricultural Gazette.

SATURDAY, JUNE 16, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

MONDAY, &c., June 18, &c.—Great Meeting at Paris.
TUESDAY, June 19—Royal Agricultural Society of England.

AN unusual continuance of cold and rainy weather, and the consequent excitement in the corn market, render no apology needed for filling a considerable portion of our columns for a week or two to come with reports of the appearance of the crops in different parts of the country.

——FROM a translation in the *Chemical News* we learn that M. BOUSSINGAULT has published certain analyses of "earthy" guanos containing hardly any ammoniacal salts, which had however exhibited more favourable results on their application to crops than would have been anticipated from their phosphates only. And they have been found to contain a very considerable percentage of nitrate of potash—sufficient, so it is said, to account for their fertilising influence. The following is a portion of his report:—

"Ammoniacal guano is without doubt the most active manure with which we are acquainted, inasmuch as it contains phosphoric acid and assimilable nitrogen. Earthy guano only contains one of these fertilising elements, phosphoric acid. Abundant deposits of it are met with on the coasts of Chili. At present when analysis decides on the quality of the manure, an earthy guano, the usefulness of which I am far from contesting, has never the value of an ammoniacal guano.

"Two years ago I received from the Government of Ecuador a large sample of a guano discovered in the Galapagos Islands. An analysis made in my laboratory gave in 100 parts—

Phosphate of lime	60.3
Nitrogen	0.7
Sand and clay	19.7

"It was an earthy guano, rich in phosphate, but almost destitute of nitrogenised substances. As, however, its action on the soil, according to a report addressed to me, was much more favourable than might have been anticipated from the phosphate alone, it occurred to me to look for nitric acid, and I then discovered in nitrates the equivalent of 3 per cent. of nitrate of potash. Now there can be no doubt that three parts of nitrate of potash with 60 parts of phosphate would have a much more favourable action as a manure than the phosphate of lime alone; and this accounts for the superior qualities noticed in the earthy guano of the Galapagos. I have since met with nitric acid in all the guanos I have been able to examine.

"For some time large quantities of an earthy guano have been imported from several islands in the Pacific—Jarvis, Baker, Howland Islands, &c.

"In a sample from Jarvis Island, M. BARRAL has found:—

Phosphate of lime	82.3
Nitrogen	0.3
Sand and clay	0.2

"A kilogramme (nearly 2¼ lbs.) of a guano said to come from the same place, gave in nitrates the equivalent of 5 grammes (77 grains of nitrate of potash).

"An earthy guano from the coast of Chili yielded in 100 parts:—

Phosphate of lime	44.0
Nitrogen	0.6
Sand and clay	6[illegible]

and in a kilogramme of this sample we estimated in nitrates the equivalent of 6.33 grammes (97 grains) of nitrate of potash.

"In a Chilian guano analysed by M. GIRARDIN which gave

Phosphate of lime	37.0
Nitrogen	2.1
Sand and clay	15.4

I found the equivalent of 2.34 grammes of nitrate of potash in the kilogramme."

Though the proportions here indicated—5, 6.33, and 2.34 of nitrate in 1000 of the manure—hardly justify the assertion that the earthy guanos must hereafter, notwithstanding the absence of ammonia, be classed with "materials richly nitrated," yet there can be no difficulty in agreeing with BOUSSINGAULT that the facts indicate the necessity in all future chemical examinations of guanos of looking for nitrates as well as for ammonia.

——We learn from the *North British Agriculturist* that it is proposed to establish in Scotland an "Association for the Promotion of Rural Economy," with the following objects in view—"the improvement of the breeds of domesticated animals, particularly of animals intended for food,—the improvement of the breeds of poultry and of cage birds,—the improvement of those products of the soil, combined under the terms agricultural seeds and roots, and of the produce of the garden and orchard—the improvement of domestic manufactures, especially in relation to the rural population—and the discussion of the subjects embraced by the Association.

"It is proposed to have an autumnal exhibition of fat stock and poultry, roots and vegetables, and probably also a spring show of fat animals, along with male breeding animals; together with competitions for seed corn embracing the whole of Scotland; one show to take place in February or March, and another in October. The latter mainly for the exhibition of Wheat; the former of Wheat, Oats, Barley, and Beans. The department for domestic manufactures is intended to be confined chiefly to objects of general utility, such as pottery, furniture, &c."

Does this indicate a schism in the ranks of the Highland and Agricultural Society, or is it merely the occupation of ground which, though surely consistent with the objects of the national society, is idly left uncultivated?

——AT the late annual meeting of the Smithfield Club, a committee was appointed to inquire into the practicability of procuring a more commodious place, in which to hold their annual exhibitions. This committee, after several meetings, ultimately reported in favour of a plot of land called Dixon's Lairs, near the Angel, Islington, recommending that—

"If a responsible company be formed who will enter into an agreement to erect a suitable building on the site known as Dixon's Lairs to the satisfaction of the Club, also to pay to the Club 1000*l.* a year, and to enter into an agreement in similar terms now made with Mr. BULNOIS, the Club shall lease their exhibition for a term not exceeding 21 years, commencing 1862."

In consequence of this report the Agricultural Hall Company has been formed, and at a recent special general meeting of the Club the report of the committee was adopted, and the trustees were requested to sign on behalf of the Club an agreement for leasing the exhibition of the Club for 21 years to the company on the terms proposed. Sir JOHN SHELLEY at that time moved an amendment that, as the trustees have no power to bind a Club which has no charter of incorporation, they would, in fact, be rendering themselves personally liable, and that it would not be proper for the Club to ask them to incur such liability, and that it was therefore desirable that each member should be written to for his approval, or otherwise, of the proposed arrangement, the results to be reported to a future meeting of the Club. This amendment was rejected by a majority, and Sir J. SHELLEY now writes to the *Times*, calling attention to the fact that notwithstanding this decision a printed circular, letters, &c., has been sent to members of the Club, but at the instance of the directors of the new company only, asking for their approval of this proceeding, and intimating that if no answer be returned before the 18th inst., each member will be assumed to be satisfied with the judgment and recommendation already adopted. Sir J. SHELLEY writes as follows:—

"My object as an old member of the Club, and as an exhibitor of stock, is to attract the attention of the Club to the fact that we are asked to lease our exhibition for 21 years to a company which being under limited liability is composed of those who, however respectable, are liable only for the amount of shares for which they may have subscribed; that we have no guarantee that the present chairman and directors will continue in their office, or that the affairs of the company, after the building is raised, will be carried on satisfactorily; added to which, if they should prove to be in error as to the suitability of the locality they have selected for their building, they will have succeeded in getting the Smithfield Club tied and bound to them, for better for worse, for 21 years, without any escape. We have hitherto been eminently successful in our exhibitions: why not leave well alone? and why risk our previous success in our live stock exhibitions because the space for the show of agricultural implements, for which the Club was not originally intended, may not be sufficient?

"I believe that two of the trustees have already resigned their office rather than sign the agreement, and I feel that it would be a most improper course to ask the remaining trustee, his Grace the Duke of RICHMOND, to take such responsibility upon himself. I therefore urge the members of the Club to refuse their sanction to the proposal. If our exhibitions are of such pecuniary value, by all means require the increase of rent from Mr. BULNOIS so soon as the agreement with him shall have run out, but do not let the Club bind itself for 21 years to hold their exhibitions in a locality, to say the least, far removed from the centre of the metropolis, and the result of which consequently must be an experiment."

In reply to Sir J. SHELLEY, Mr. DORNAM, for the Agricultural Hall Company, has replied that the resolution passed at the late special meeting merely adopted the report of the Committee, expressing nothing as to the trustees being called upon to sign the agreement for the Club; that the Directors of the Hall seek merely that the Club should be bound to them in honour; that of the two retiring Trustees, since re-elected, one has consented to act, the consent of the other, Lord PORTMAN, who was absent, has not yet been obtained; that the circular has been sent round at the instance of Mr. JONAS WEBB, merely in order that the Directors might feel that they were acting in accordance with the wishes of the members and not for the purpose of entailing legal responsibility on any one whatever.

THERE is a singularity about the customs and terms of the agricultural labour question in some parts of Cheshire, that we have not met with in any other county, nor seen described in writing.

The labourers' cottages are studded about the country by the road side, or bordering on cross lanes. Villages are few and far between. There are parishes or townships, but so far as the term "village" is represented, it generally consists of a dozen scattered cottages that may be seen in three or four separate views by scaling as many roofs of them. To these cottages, in which Cheshire peasants dwell, there are invariably, or at any rate so generally that it may be given as a rule, attached two, three, or four pieces of ground in the form of a garden and "crofts." Where there is a garden only, it is regularly divided for cultivation, one half for Potatoes, the other for Rye; the latter being grown to feed a large pig for bacon, or two or three smaller ones up to 4 or 5 scores weight for dairy stores when there is a demand for them at the flush of Grass in May or June, as now. Rye and Potatoes are thus grown alternately, and by these means the cottagers make most excellent pigs; if for bacon, half or a side goes for rent, if there be a family, and a pig is the only live stock, and the remainder is salted for "rashers" during summer.

But pig-keeping is not the limit of the peasant's stock. Fowls are general, and therefore to be cheaply purchased in the local market. And often where the cottager has not got a rod of Grass-land that he can strictly lay claim to, a cow is kept by turning it into the wide lanes in summer, and collecting bank and ditch trimming made roughly into hay to assist the feed of the roads in the winter. This may read strangely to southern, eastern, and midland ears; but the manner of living in respect to the produce of the soil is as primitive in character as are the manners and habits of the people and their use of the parts of speech. Gipsies have no difficulty to find a place in which to pitch their tents, and fox

hunters may still do that which is forgotten in many hunts, viz., jump "on and off."

Where there are crofts attached to the cottage one or two cows are kept, and their calves, if heifers, are reared till two years old by means of that close attention which is paid to them, and that economy in road scraping and manure which is practised to put "a little something" on the crofts every year. There is, however, some extra help required to admit of the best being made of these small means, for it is necessary to provide fodder for the winter, as well as to make the most by butter in the summer, which could not be often done by keeping the cows' big daughters at home. This difficulty is provided for by what is termed "making a ley," or lair, for young stock at 28*s.* for year-old, and 40*s.* for two-year old heifers. This is frequently done by gentlemen with a portion of a park, or meadows retained for the purpose of accommodating cottagers and small folks in this way. Sometimes it is done by men who have more land than pecuniary means. When the book of a good "ley" is opened it is usually filled up at once. Thus cottagers can for a small sum get rid of their heifers from "old May day" till the 12th of October, with the opportunity of selling them or not, according as the summer yields fodder. But, if possible, they are kept till they are ready to calve, when they are sold to the dairy farmers, or the cows are sold and heifers fill their places as circumstances may warrant or suggest.

Out of all this arises one great feature which is conspicuous: the women for the most part live in their proper place—at home. Agriculture, except at particular seasons, as hay time and harvest, can be well pursued in these days of mechanical contrivances without the wives and daughters of peasants doing laborious out-of-door work. The wives of Cheshire peasants have full employment with their cow and pig, and the undivided attention they bestow on them brings them up to the mark for sale with incredible rapidity. In many parts of England cottagers are now receiving 9*s.* or 10*s.* per week, and nothing else, while in Cheshire nearly every one has a cow or a pig, or both, or a pair of each, besides. Under these advantages it will be anticipated that good husbandmen have here an independent air about them; and this will be admired, rather than objected to, by people of well regulated mind, who possess some knowledge of human nature and an acquaintance with the business that peasants are required to labour in. The Cheshire peasants are not a very active race, it is true, but they have a stability that ill-fed men cannot possibly possess. They are systematic too, and can work well at most jobs—ploughing excepted. But the best way to meet them is by "piece," or as it is here termed "hagg" work. If labourers can feel the slightest independence, they do not like to be always tied to regular wages and strict time the year in and year out. Who would? Good labourers, though respectful when well treated, here accost the occupiers of land more as though they expected to be asked *to* work than to ask *for* work.

But the Cheshire peasant looks for indulgences at stated times. "Suppin'," that is, either buttermilk or whey, is looked for on the dairy farms when it is to be had, and on those of any size this is generally all the year round.

But though Cheshire as a rule is a "suppin'" county—and that not merely in respect of its peasants—cottagers have a real English relish for beer, when they can get it; and they expect it on special occasions. If, too, the weather be cold, they prefer it warm, and with a little sugar and ginger in it. Cheshire peasants have a great liking for something warm, and at meal times they will go a long way to get it, or have it brought some distance to them.

But, to the point:—Cold "small," it must be admitted, is poor "tackle". with snow on the ground, or with a heavy fog or rain, or in a dull cutting or biting and howling north-easter: and if for the gratification of genteel society our Government can afford to admit French wines free of duty, surely the time has arrived when "Old England" can concede to her sons of toil the indulgence of warm ale on a cold day with the addition of "a little sugar and ginger." Cheshire peasants, though independent and well behaved, as we have said, sometimes require coaxing; the most telling method of doing this in mid-winter is to give them beer warmed, with "a little sugar and ginger"!

Let us understand these words in the wider meaning which may be given to them.

PRESENT CONDITION OF THE CROPS.

(From our own Correspondents.)

EAST NORFOLK.—The westher continues most unseasonable, with no immediate prospect of improving. The Wheats in the good loamy soils have hitherto looked pretty well, and in appearance were recovering from the effects of the late hurricane, but this continued wet weather is beginning to tell upon them. The crop has received some injury from the gale of the 28th ult.—to what extent it would be difficult to estimate; where the plant is thin the damage is more perceptible. Oats and Beans are looking well, but Barley, of which a large breadth is sown, is far from promising; many thousands of acres are partially destroyed by wireworm. The ravages of that pest are yearly becoming more serious. Where the plant is good it is losing colour for want of warm and dry weather. The artificial Grasses are not so good as was expected hay cutting will be at least a fortnight later than usual, the same may probably be said of harvest without a speedy change in the weather. The prospect of a root crop is at this moment most precarious. A large breadth of Mangel Wurzel was sown under the most favourable circumstances the seed rapidly vegetated, but the storm and subsequent heavy rains having seriously injured the crop, hundreds of acres in this district will be ploughed up or resown with Turnips. The sowing of Swedes is backward; many farmers are waiting for better weather while others are putting them in, regardless of the state of the land, which is certainly in wretched condition for receiving the seed. On the heavy lands the season will be lost, if we do not get dry weather from this time. The price of Wheat has been gradually rising, best red is now worth over 60*s.* per quarter. Stocks were never lower in the hands of the growers, nor is it supposed that either merchants or millers are unusually stocked; this, coupled with the prospect of a late harvest will prevent any material decline in prices for the next few weeks; indeed with a continuation of such unsettled weather, we may rather look for a further serious advance. *W. C., on the Coast, June* 12.

GLOUCESTERSHIRE.—The late wet weather has been very unfavourable for tillage operations, consequently the Turnip crop is only partially planted, and that which is in does not flourish. The heavy rains having rendered the surface hard and crusty, wherever much cleaning was necessary, the work is entirely suspended, and the land cannot be properly cleaned. I never remember so many weeds in the spring corn, Charlock especially, and very little can be done towards keeping it in check. Where there is a plant of Wheat it looks healthy, though backward, but much of the Cotswold district being very exposed, is thin and can never become anything like an average crop. The attempt to fill up by drilling spring Wheat has been generally unsuccessful, as wire-worm has been unusually abundant, and a great portion is destroyed. Some of the early-sown Lent corn has lost colour lately, and looks spindly; the most promising and the cleanest crops are the later sown ones. These are promising, though of course backward. Peas and spring Beans are generally good, and the crop of seeds much better than was expected, though the plant is often very thin in the ground. On the whole the prospects for another harvest are anything but encouraging, and should the present unfavourable weather continue much longer it will become very serious. The produce of lambs is very short; few have a lamb to an ewe (turned out), and the mortality amongst the ewes has been much above the average. Harvest will probably be three weeks later than last year. The crops of the College farm are generally good. All our Wheat is good; the earliest Barley looks yellow and unhealthy; the later sown is very promising. *John Coleman, The College, Cirencester, June* 10.

ISLE OF THANET.—I cannot report anything favourable of the growing Wheat crop. The continual wet weather is showing its effects more and more daily. The Wheat on the leys is the best; all that was planted after other green crops is thin, yellow, and unkind; it will be quite three weeks later than usual in coming into ear. It is not too forward yet to be much benefited if we should be favoured with a continuance of warm genial weather. We have less land planted with Wheat than usual, and the stock of Wheat in farmers hands is very small. Barley in many cases has suffered from the wireworm; where it has not it is looking much better than Wheat, and there is no reason yet why it may not produce a good crop; notwithstanding the wet there is a marked improvement within the last week. Oats are not extensively grown here; what there are, are generally looking well. Our dry light soils are not suited for Beans, but where they are planted, they look better this year than usual. Peas in exposed situations have been much damaged by the gales we have had; in sheltered situations the early planted are looking very well; this relates only to the common hog Peas; it has been much too wet and cold for all delicate varieties. There is a large breadth of Potatoes planted; they at present look strong and well, and I have heard of no disease yet. Mangel Wurzel is generally a good plant. This useful root is more extensively grown every year; it is impossible to say what we should have done without it this spring, and those are fortunate that have a little left yet. It has generally kept well, and what I have is sound and good now. We have commenced mowing our Sainfoin; the crop is heavy, and so it is of Clover and all artificial Grasses, but fine weather is very much wanted for all our crops as well as for the hay. I believe it is a fact that we have less rainfall here on an average of years than in most parts of England. Our chalk soil seldom has more rain than is beneficial for our crops, but this year is quite an exception. We have not had two fine days in succession for the last month, and during this time we have been visited by several gales—I may say hurricanes—that have done the growing crops in exposed situations much injury. It has been raining and blowing here nearly all day, and the mercury is still falling. We have no old hay left, therefore we are looking with more than usual anxiety to the weather. Three weeks of warm sunny weather would be a boon indeed. *W. Manser, June* 12.

LANCASHIRE.—The severe winter and late spring so retarded vegetation that the few fine growing days in May were not sufficient to restore vigour; 7 wet days at the end of May quite prevented working fallows, were enough to saturate the ground, but it was soon dried up by the gales on the 27th and 28th, the most severe felt for many years. On the 1st of June this district was visited with heavy thunder and rain; since then there has been only one fine day. At times the rain has lasted long and so soaked is the land, that even on the best drained and farmed the crops look yellow and unhealthy, and the Grass does not grow on the pasture or meadow land as could be wished. However, dry hot weather would soon alter the face of the country. The amount of Wheat sown is not so large as usual; it is (with exceptions) thin on the ground, looks healthy, but will be short of straw and corn. Barley and Oats exceed the quantity sown last year, the former wants dry weather, the latter look more promising than for some years past. Beans are not largely sown, but are looking well. Of Potatoes a great quantity are set, and they are coming up well but slowly and require fine weather. It is too soon to remark upon Turnips and Mangels; Grass land is too wet for the well doing of stock or even of the meadows. The crops of the latter will not be heavy, but great exertions are being made to mow as large a breadth as possible as there is next to no old hay in the country. There is every prospect of hay and straw being a scarce article for the next two years, as all may be said to be used up. Fat cattle and sheep sell high, which will somewhat compensate for the extra cost of feeding during the spring. The fall of lambs has not equalled past years by 25 per cent., neither will the weight of wool shown be so great as an average by 30 or 40 per cent.—*Francis Twining, Wigan, June* 11.—P.S. 12*th*. Since writing the above yesterday we have had a fearful thunderstorm and very heavy rain, and a thorough wet night and day. *F. T.*

LINCOLNSHIRE.—A continuance of wet weather for upwards of a month cannot fail to have exerted considerable influence upon the growing crops. The temperature too, during a good deal of that time has been low, accompanied by strong, and sometimes terrific gales of wind. Perhaps no soils are better able to bear a continuance of wet weather than the well-drained fens. The subsoil is so porous and sieve-like, that the water percolates freely and quickly through it. On these lands the Wheat plant is looking tolerably strong and healthy, although not likely to be a bulky crop, even where well planted. It is also very backward on lands where the plant is thinner; the storm of May 28 has done some mischief. The stem is bruised a good deal, and many plants instead of standing erect are prostrate on the ground, but are again raising their heads as drawn up by the sun; how far these broken and bruised stems are injured can scarcely at present be estimated. There are no symptoms of decline or decay, the sap must therefore continue to circulate, but whether sufficiently to enable the corn to be perfectly matured remains to be seen. On our high lands where the soil is more tenacious, the plant has lost its colour to some extent, and in many instances will yield a small bulk of straw whatever the produce of grain may be. On some of the more open and deep soiled lands, where a few weeks ago there was some danger of the crop becoming too luxuriant, there is now the prospect of a thoroughly good and yielding crop. If called upon to-day to estimate our crop of Wheat as a whole, I should say, a light crop of straw with an average yield of grain of good quality. Barley is not enough grown to warrant any remarks being made about it. Oats are extremely various. Some crops are as fine and promising as ever were grown; others are looking sickly and starved, as if needing much finer and warmer weather: whilst others have been seriously thinned by the wire worms and look stunted and unpromising. Beans look well at present and are just in blossom, as are also the Peas; and with a change of weather both crops promise to be good. Mangels have planted well, but are suffering from too much wet in many instances. Potatoes are also sustaining injury from an excess of moisture and a low temperature. The hay crop is good; several fields both of Clover or seeds and of permanent Grass are already cut, but require better weather or they must be seriously damaged. Turnips not grown. Colesed not yet sown. Pastures yield an abundance of food. *A. S. Ruston, Chatteris, June* 12.—I am glad to give you any and all the information I can. We have suffered much from the many storms, and that on the 28th May twisted our thin Wheats about so much that they looked to be past recovery. I have examined them in the past day or two, and am surprised to find that the broken and twirled stems have after all become sound, and will I doubt not produce ears of corn. The bruised and broken parts are strengthening every day, and shortly it will not be seen where the injury appeared so great. The plants which lay flat about the soil now stand nearly erect, and look flourishing. As a whole our Wheat crop is looking well, but backward; we have no signs of earing at present, which is about a fortnight later than for the past four or five years. Unless a premature ripening occurs our harvest must be late, and judging from the wet and cool state of our lands that is very unlikely to take place. Oats are looking well, but like most of our crops require weeding, which the weather has much retarded. Barley is not much grown here. Beans are a thin and backward crop, and have suffered greatly from the storms. Peas likewise suffered much, but are recovering fast, and will be a good crop. Potatoes we have in abundance, and at last they are all up and progressing well. The early and late planted are all coming together, and are getting very weedy. Owing to the wet state of the land we cannot horse-hoe them freely. Mangels are largely cultivated; they come up badly; some are resown; they never did do well in wet weather. Very few Swedes are yet sown, and when the land can be got in order for them it is impossible to say, as we have copious rains every day. No chance of "sowing in dust." This year Cabbages and Kohl Rabi are coming more into favour. Our meadows are growing fast, but it was long ere they could be laid in. Clovers have suffered very much from the whipping winds. Grazing lands look well, but the stock do not prosper. The Grass is always wet and cold. Our long wools are making from 48*s.* to 50*s.* per tod, a higher price than short wools. *Jno. Clarke, Long Sutton, June* 12.

NORTHUMBERLAND.—The crops on dry warm lands are looking well, but on cold lands they are the very reverse, thin and sickly; we have had a very great deal of rain. Even on my dry land I have only had one day's work upon it since a fortnight past on Saturday, and I don't expect to be on it this week even though it should continue fair, of which there is no appearance at present. Harvest must be late now even on our early lands, and there will be little cutting in August. I see no corn into the shot blade yet, and if you allow a fortnight for it shooting and eight weeks from earing to shear, disposes of a good deal of August. Mangels and Potatoes have brairded and grown well. Turnips have had too much wet and make little growth, and a great breadth still to sow. *Thomas P. Dods, Hedgeley, Alnwick Grange, June* 13.

SOUTH HANTS.—The Wheat is very late, and looks altogether unhealthy, and so much of the crop having lost plant in the winter and being very thin on the ground, cannot now under the most favourable circumstances at blooming time yield an average crop. The Lent corn shows at present two different states: that on the cold lowlands, being sickly and unhealthy in appearance, cannot prove anything but a light crop; on good land in a high state of cultivation, however, the crop is very bulky and much lodged, and with the present wet weather must soon become damaged by blight and red rust, &c.; there is therefore no prospect of an average crop of Lent corn. Peas and Beans, although usually requiring a showery season to come to perfection, are at present looking very indifferently, and the excessive rains are beginning to tell unfavourably upon the crops. Potatoes were not very extensively planted this season, but were put in under favourable circumstances; the now unfavourable weather will however sow the seeds of disease in the plant, and a sound crop of tubers cannot be expected. The Grass crop is most abundant. The Mangel crop has planted badly, large quantities having been carried away by insects, such as wireworm. Large breadths have been resown, but with little prospect for a crop, as the land is now completely sodden; in those cases wherein a plant is left they look very sickly and unpromising. The best season for sowing Swedes in this district is the first week in June, and no Swedes have as yet been sown. It may be said that an average growth of Swedes is not likely to be obtained, as farm work is completely at a stand still, and no Turnip sowing can be done until past the middle of the month should the weather change to fine. *Joseph Blundell, June* 12.

SUFFOLK.—I can scarcely give you a satisfactory answer in a tabular form, without first telling you our (what I hope I may call) temporary appearance, so much will depend on the

succeeding weather. Wheats we expect to be showing an ear here and there at this date, and must now have favourable weather to give the ear in a fortnight; not very ill spoken of generally. Barley generally much more injured by wet and cold than Wheats, and not so much power of recovery in them from the nature of the plant and the increased "sadness" of the soil. Beans and Peas not complained of, but the hoeing irrecoverably backward, the first operation not above three fourths accomplished. Clovers likely to be good. Grasses (meadow) have grown rapidly occasionally, but did not begin to grow early enough: the bottom is not thick. Beet later than usual, and in some instances not a good plant, some of our lands being too adhesive, caking together, if rains come immediately after ploughing—much put in before the land was in proper state—if otherwise the plant is good. Many fallows not yet half prepared for Turnips, and cannot be cleaned of Grass (water Grass, I mean), without dry weather. My man went to Yarmouth yesterday, and says corns all look overdone with rain. I had a letter from Thetford this morning. They complain much Wheat is injured in plant on their exposed open sand, and that their Barleys are making a sad appearance. I hear as great complaint of too much wet from our sand lands on the coast from Yarmouth to the mouth of the Deben river. It seems they cannot stand wet at this season for Barley better than our heavy soils. For a summary, say—Wheat: middling, backward, requiring sun. Barley: permanently injured by wet and cold. Beans: fair, not hoed. Peas: same, but better cleaned. Clovers: good, want sun. Meadow Grass: wants sun. Say Wheat 4th and Barley 5ths of a crop, under average. Notwithstanding the rains, where lands are drained and in good heart we have many fields looking like doing well. *G. Edwards, Framlingham, June* 11.

WARWICKSHIRE.—The season is too far advanced for us longer to hope for an average crop of Wheat. On the lighter land of this neighbourhood there is scarcely a farm (if there be one), where a large proportion of the Wheat is not a very deficient plant. During the whole of this ungenial spring it has gradually and almost imperceptibly wasted away, and some of the plants appear unhealthy even now. Almost every farmer has drilled a considerable portion of his land a second time with bearded spring Wheat, and we have one farm, and some of the warmest and driest land in the district too, where the whole of the Wheat land was obliged to be re-drilled. For some reason unknown to me the plant has not tillered as it has done in other seasons, where the land was in good condition, but has grown up with very few stems; a field which in ordinary springs would have "stooled" (as we term it), and become tolerably thick on the ground at harvest, this year makes scarcely any effort to do so. I think, on the Turnip-growing soils, at least 15 per cent. of the Wheat land is less than half a plant. Strange to say, in such a season, on the heavier land the appearance is far better, although many instances occur of loss of plant, yet generally there is less reason to complain of the prospect of a crop on such soils; but the late cold rains have put a distinctive yellow colour on every piece of Wheat growing on shallow drained or undrained land, and only a poor chance of a full crop. From these statements you will gather that (in my opinion) Wheat must inevitably be below an average crop in our district. It is also three weeks later than usual. The Barley is generally looking well, some of it too luxuriant, but as it is early we may fairly expect a full crop. The Beans have been doing badly; they are of various lengths, and very weak in the stem, which are bad indications. They are much improved the last few days, and the plant luxuriates so much in a moist season that we may yet see a full crop of Bean straw. Great complaints are heard about the ravages of plants on the Mangel Wurzel plant, and many acres have been destroyed by slug in the leaf, and an insect at the root; but as transplanting has been very general, and as the plant bears that operation well when carefully performed, and as the weather has been so favourable, I trust that we may see a full crop of this now invaluable substitute for the Swede. Our pastures are not over-luxuriant, indeed the Clovers and Rye-grass have yet produced but little keep; they are suffering for want of warmth. *J. C. Adkins, Milcote, Stratford-on-Avon.*

WILTSHIRE.—I am sorry I cannot speak in favourable terms of the Wheat: with a few exceptions it is unusually thin on the ground and very backward. Barley and Oats are looking well. Beans and Peas are not good; generally speaking, very foul for want of hoeing. Mowing will be backward, and in some instances not a heavy crop. Sainfoin not so good as expected, from so much rain and cold for the season. Swede and Turnip sowing very backward, the land so saturated from so much rain; the meadows, provided we get heat, will, I think, be good. The prospects on the whole at present are not good. *Geo. Brown, Arborn, Chippenham, June* 11.

WORCESTERSHIRE.—In this neighbourhood the Wheat crops after Vetch and Italian Rye grass were thinned by frost, and the sudden change to forcing weather caused these thin Wheats to "spindle" instead of "tillering;" consequently they remain thin. The other Wheat after Clover, Beans, and roots look moderately well, considering the excess of rain we are now having. Unless we get dry hot weather soon the crop will be below an average, and must be three weeks later than last year. Barley, though suffering from too much rain, may be an average crop. Winter Beans bad; most of them were ploughed up. Spring Beans and Peas very good. Clover and hay abundant, the latter damaged in many places by flood. Mangels a good plant but foul. *C. Rendell, Chadbury, near Evesham, June* 13.

YORKSHIRE.—This has been one of the most extraordinary springs we have experienced for many years. After a winter unusual in its severity and duration, we suddenly, but not until May, had a few delightful days of mild and warm weather; these, however, were unexpectedly succeeded by a general cover of snow when Apple trees were in full blossom. Since that memorable storm, when the thermometer fell to 1° below freezing point, we have had very unsettled weather; rain has fallen in greater or less quantities every day, and more than once it has rained steadily for 12 successive hours. The effect of this continued wet weather on agricultural crops has been very various, and furnishes many an instructive lesson to the observant farmer. On poor, undrained land, Wheat plants have assumed a spindle form, and have changed their colour from green to yellow, while on such land Oats seem to have grown very little since they came up, and now look purple in colour. Poor, wet pastures show very little Grass, and have a sickly, poverty-stricken appearance. On good, dry, old Grass land the season has produced luxuriant crops of Grass. The meadows are forward, and promise a heavier crop of hay than we have had for several years, while the pastures are thickly set, yield a plentiful bite, and excepting what may fairly be attributed to the effects of wet on the animals, I think I never saw cattle feed faster than they are doing now. On good dry land Oats, Beans, and Barley all look well; but Wheat is a plant that does not like much wet either above or below, and has grown very slowly. In 1858 I obtained a Wheat ear fully out on the 16th of June; last year I could not find one until 15th June; and this year I am satisfied that I shall not get one in this neighbourhood before the 22d inst. This under any circumstances we must have a late harvest, but as yet it is not possible to form a reliable opinion as to what the produce of the general crop will be. Early sown Swedes came up well; but there has been too much wet for them, and during the last 10 days they have not grown at all. On a great deal of arable land it has not been possible to work for the last fortnight, and a large breadth intended for Swedes must now be sown with Yellows or Whites. Beef has sold as high as 10*s.*; mutton (in wool) at 14*s.* per stone of 14 lbs. Wheat has slightly advanced in price during the last two weeks, and first class Red has brought as much as 62*s.* per quarter. Oats have marked 36*s.* per quarter. Wool is much sought after, and 2*s.* per lb. has been asked, and for some picked parcels is said to have been obtained. *H. J. Turner, Richmond, Yorkshire, June* 12.

THE DORSETSHIRE EXHIBITION.

(*Concluded from* p. 539.)

[Some further reference is made to the meeting of the Bath and West of England Society in another column.]

THE TRIALS OF IMPLEMENTS.—Although Smith's apparatus for scarifying or smashing up, exhibited by Howard, did its work well in every respect, yet it was scarcely appreciated by the farmers of the locality, who occupying for the most part light hilly land were impressed with the importance of turning over the soil, and would have been pleased to have also seen Fowler's plough in work. If the latter could be adapted so as to be readily worked by the ordinary steam-engine, it would be a step in the right direction, for although the scarifier can in numerous instances be substituted for the plough, yet when the soil really requires to be reversed so as to expose it to the winter's frost or to bury a Clover lea in preparation for a Wheat crop, nothing can so effectually or so economically accomplish this purpose as the much abused-plough. What can be more truly scientific than this implement in the hands of Howards, Ransomes, and Hornsby? The wedge, the screw, and the inclined plane are all brought to bear, and the power of the horse or the steam-engine are not called upon to do that which Nature can do far better. The digger, whose advent was foretold long ago, has hitherto been a myth. If ever really experimented with it has resulted only in miscarriage and abortion, and we doubt whether mechanism will pursue any further such a Will of the Wisp. The horse ploughs of the above firms went through their work in a satisfactory manner.

The weather was very unfavourable for the reapers, but several made very good work, one being a small one-horse machine. The high price of these implements is a serious drawback to their general use, in consequence of the very short period during which they can be used. A cheap implement is therefore not to be despised, although it might require more assistance from hand labour. The Grass cutters of Burgess & Co. afterwards did their work very well, and excited much interest. It was felt however that either stewards or judges should superintend the operations, as the arrangements were left too much to the will or caprice of the exhibitors. We venture to record an opinion which, if carried out, would we think settle the vexed question of prizes for implements, respecting which, both from implement makers and the public, we hear the most discordant opinions. We suggest that prizes should only be given to new or improved implements—that no implement should receive a second prize, unless in the opinion of the judges it shows a decided improvement. Thus whilst the labours of inventors would be stimulated and rewarded, the makers of good and acknowledged prize machines would not be compelled for ever and a day to wear the champion's belt and to compete with every fresh comer. We do believe that by this means the ghost of dissension would be laid which now disturbs the peace of the agricultural scientific world, and we therefore commend our suggestion to the earnest consideration of the Council of the Royal Agricultural Society.

THE INSTITUTION OF PRIZES FOR SHOEING SMITHS, although not entirely a novelty, having been first commenced at the Barnstaple show, is sufficiently so as to demand a special notice. No one can doubt the utility or importance of encouraging skill in this most essential handicraft, and when we consider that the foot of the horse, although externally a horny box, is yet full of vascular and sensitive parts which are in constant danger of being injured by the nails or the undue pressure of the shoe, we must be well aware that a considerable amount of skill is required. The scene of competition was in the workshop of Mr. Galpin, kindly lent for the occasion, and which being situated at no great distance from the show-yard proved very convenient. Five forges with five horses were placed at the disposal of the stewards, and in order that too much time should not be taken up the contest was limited to making shoe nails, fitting and preparing the foot, and putting on a single shoe on the fore-foot. There were 10 competitors, so that only five could work at one time. The signal was given for starting, and in the course of 22 minutes for the shortest and 32 for the longest, the five shoes with the requisite number of nails were reported to be made, after which the signal was again given for nailing on, which was accomplished in from four and a half to seven minutes. No filing of shoes was allowed, as it was held that this, though very proper in ordinary usage, was yet no proof of skill, and might serve to hide defects. It is evident that the amount of excellence was not confined to one point only, but to several, for instance—

1. The time of making.
2. The levelness of the shoe.
3. The situation of the nail holes and the fullering.
4. The proper and even seating of the shoe.
5. The preparation of the foot, such as the removal of ragged parts, which only harboured filth, without cutting away the bars or too much of the frog and sole.
6. The fitting of the shoe so that the wall or crust might have a firm and even bearing, the shoe not projecting at the sides or too much so at the heels. The shoes to rest very slightly on the heels, and the sole and seat of corns particularly being secured from pressure.
7. The nailing on so that each nail should have a firm holding the first time it is driven, so that the crust may not be injured by drawing the nails and paring the horn uselessly. The nails not to be too numerous nor too near together, nor the heads to be so large as to project much beyond the shoe, and above all to be placed at some distance from the heels, particularly for the inside heel, so that there may be no impediment to the foot's expansion.
8. The time taken by each competitor to perform these various operations in a proper manner.

It will be seen by reference to these various points that the judgment was by no means trivial, as it had to take all these points into consideration. One of the best workmen failed to get a prize in consequence of too great haste both in making and putting on; whilst another skilful maker of a shoe wanted experience in fitting it to the foot and putting on. It is usually the case in large establishments that the man who makes the shoe rarely puts it on, so that two men are employed on one horse (the shoes being previously made), one in fitting the shoe and the other in nailing it on; the former operation is considered to require the most skill. The prizes were awarded as follows:—1st of 3*l.* 3*s.* to Thomas Barnett, of Bradford Peverell; time occupied, 26 minutes in making and fitting, and 7 minutes in putting on. 2d, 2*l.* 2*s.*, to Way, of Frampton; time, 32 minutes and 4½ minutes respectively. 3d, 1*l.* 1*s.*, to Cape, of Ilminster; time 25 minutes and 5 minutes. Highly commended: Row, of Warminster; 30 minutes and 7 minutes. Commended: B. Barrett, of Fordington, who did his work in 22 minutes and 4½ minutes; also commended, J. Lizzard of Warminster, whose time was 32 minutes and 7 minutes. We have dwelt the more on this subject in consequence of its novelty and the interest it excited.

FINE ARTS SHOW.

This was by no means the least important department of the Show, since it forms an additional source of attraction to those who may not take particular interest either in the live stock or in the implements, but who may yet desire to feast their eyes on the beautiful productions of art. The first exhibition took place last year at Barnstaple on the recommendation of Mr. T. D. Acland, who was elected chairman, and was so eminently successful that it was determined that it should form a permanent portion of the Bath and West of England Society's Show. The exhibition was opened at Dorchester on Monday morning, at 10 o'clock, but the articles were not arranged till some time later. Two tents, each about 100 feet in length and 40 in breadth, were appropriated to it; they were well lit by skylights from end to end, and thus presented the different articles under a favourable aspect.

The most important and valuable collection was borrowed from the Science and Art Department of the South Kensington Museum. It comprises ancient and modern jewellery, metal work, carvings in ivory, bone, and lac; bookbinding, modern and ancient; basket-work, original drawings of flowers by Ehret in 1770, specimens of engraving and illumination, large photographs of Raphael's Cartoons, photographs of furniture, metal work, pottery, and other ornamental work, armour, iron *repoussé* work, &c.

On each side of the apartment are hung numerous and beautiful pictures from various parts of the country, the most conspicuous of which is a striking picture by Holman Hunt, entitled "The Strayed Sheep"—illumined by a splendid sunlight, which produces the most gorgeous tints and colours.

Among the antiquities is a large collection exhibited by Mr. Durden, of Blandford, of Roman remains collected on Hod Hill, near Blandford, comprising iron spears, daggers, points of arrows, and many other of those warlike instruments with which this renowned nation conquered the uncivilised inhabitants of our island. Charles Hall, Esq., of Weymouth, also exhibited a large collection of Roman antiquities.

Mr. Damon, of Weymouth, exhibits a large assortment of both land and marine shells, as well as of fossil illustrations of local geology, in the Natural History Department; and Miss Pidgeon, of Weymouth, some beautiful specimens of Marine Algæ, all gathered from the immediate locality of Weymouth.

Mr. Mansell also contributes a geological series from the lower Silurian to the upper Tertiary formation, with their characteristic fossils.

Mr. Bryer, of Southampton, exhibits many specimens of carving in woods, amongst which may be observed a carving in Boxwood entitled "The Moment of Victory." It represents a battle between two cocks, one of whom has just slain his adversary, and is standing and probably crowing over him in a triumphant attitude. The countenances of the spectators expressing

interest in the combat are executed in a masterly style and attracted much attention.

Messrs. Pellatt & Co. produced a large assortment of glass, china, stone ware, ornamental vases, &c., and Mr. John Galpin some splendid works in bronze manufacted by the Coalbrookdale Company.

Mr. Wyatt, of Blandford, has sent a large number of rifles of all descriptions, including several patent ones invented by himself.

On first entering the left shed we observed a full-sized model horse, exhibited by Messrs. Hansford, saddlers and harness makers, Dorchester, which was ornamented by a handsome set of silver mounted harness, and attached to it was a light phaeton with reversible and sliding-seats, by the alteration of which four distinct carriages could be formed, namely, a single-seated driving phaeton, a double-seated driving phaeton, a four-wheel dog-cart, and a waggonette.

We have briefly alluded to some of the principal exhibitions in the Arts Department, and must refer to another page for further remarks.

Possessing equal if not superior attractions to the Arts Department may be reckoned Messrs. Veitch's Floricultural Show, full of beautiful and gorgeous specimens. Nor is the Show of the Dorchester Horticultural Society unworthy of notice, especially considering this as its first meeting and the difficulties contended with in consequence of the tent being blown down on Saturday, and not being able to be repaired until Tuesday.

STEAM POWER IN AGRICULTURE.

[The following instructive paper was read last week by Mr. Wells, of Booth Ferry House, Hendon, at the monthly meeting of the London Farmers' Club. Though slightly abridged we are unable to give the whole of it this week.]

STEAM power a few years ago was confined in agricultural operations to threshing out the produce of the farm, cutting hay and straw, bruising horse and pig corn, and sawing refuse of timber; and even in those works only very partially employed until the locomotive was introduced. Where fixed machinery propelled by horse-power indeed now exists, we find that mode of making the produce ready for market to be the exception rather than the rule.

FIXED VERSUS LOCOMOTIVE ENGINES.

This leads me to the first consideration of this day's discussion, whether fixed or locomotive engines are most desirable; and, having been in the habit of using both for several years, I will as briefly as possible lay my experience before you. In the year 1840 I commenced farming an area of about 300 acres, land subsequently increased to 450 acres. The steading principally required rebuilding, which I arranged as conveniently as possible for machinery, to be worked by a six-horse wheel, capable of propelling threshing-machine, Linseed-crusher, a pair of stones, chaff-cutter, and cake-breaker, the cost being 165*l*.

No. I.—COST OF WORK PERFORMED—THRESHING.

	£	s.	d.
By 3 pair of horses, at 5*s*.	0	15	0
4 men and 2 boys	0	11	0
Ditto half a day dressing and blowing twice over, and carrying away	0	6	3
	£1	12	3

Quantity per day 18 qrs.; or, manual labour 1*s*. per qr.; horse labour 10*d*. ditto.

CHOPPING 9 TONS HAY AND STRAW PER DAY.

	£	s.	d.
2 pair of horses, at 5*s*.	0	10	0
Manual labour, 2 men and 2 boys	0	6	0
	£0	16	0

Or 1*s*. 9¾*d*. per ton.

BRUISING OATS, &c.

2 pair of horses	£0	10	0
Manual labour, 1 man and 1 boy ..	0	3	0
	£0	13	0

Or 8½*d*. per qr. 2 qrs. per hour.

TOTAL COST OF WORK PERFORMED DURING THE YEAR BY HORSE POWER ON THE FARM.

400 acres arable land, producing—

100 acres Wheat, at 4½ qrs. per acre ..	450 qrs.				
80 acres spring corn, equal to ..	450 ,,				
	900 ,,				
900 qrs. at 1 10*d*. per qr.		£82	10	0	
180 tons hay and straw chopped, at 1*s*. 9¾*d*. per ton		16	6	3	
Bruising 400 qrs. Oats and Barley, at 8½*d*. per qr. ..		14	3	4	
Depreciation in wear and tear of machinery, at 10 per cent		16	10	0	
Total annual cost by horse power		129	9	7	

In 1846 I succeeded to another farm of similar area and quality of land. The inconvenience I had suffered during the spring and autumn in having to break off from sowing corn, planting and lifting Potatoes, to thresh and chop, convinced me that the substitution of steam for horse-power to carry out these operations would be ultimately advantageous, if even no saving in a pecuniary point of view was effected. The proprietor gave me materials for altering the barn, building the engine-house, chimney, &c. on the understanding that I discharged the labour connected therewith. The outlay stood thus:—

Labour bill for building engine-house, chimney, alteration of barn and chop house, and adding mill house	£100
Engine 10-inch cylinder, 12-inch crank, 2 feet stroke at 30 lbs pressure, but safe to use at 60 lbs; 7-horse power boiler, and shafting, all fixed complete	210
Threshing mill and chopper, pair stones, cake breaker, Linseed crusher, and saw table ..	185
Total outlay	£495

Work performed:—I find the best plan is to thresh one-half of the day; the other half to chop, grind or crush horse corn, and break cake. By adopting this principle, if the weather is suitable, it gives the farmer the opportunity of having his horses at work at the same time: the only loss sustained is the engine driver's time, half a day.

MORNING'S WORK.

From 6 A.M. to 12 threshing.

	s.	d.
Five men 10*s*. 6*d*., one boy 1*s*., engine driver, 2*s*. 6*d*. half a day	7	0
Coals, 6 cwt., 2*s*. 6½*d*., oil 6*d*.	3	0
	10	0

Work performed, 17 quarters—dressed, weighed, and ready for market, being—

Manual labour	5*d*. per qr.
Fuel and grease	2*d*. ,,
Total	7*d*. per qr.

I have threshed 70 loads or 26¼ qrs. within the time named above; but in making this calculation I have taken an average of years, some seasons the yield being so much greater than others, in proportion to the straw; and I never like the corn to be put too rapidly through the machine, as I find by so doing the straw is not so clean threshed, and consequently the saving of labour is not true economy. I ought not to omit mentioning that on the warp land districts the quantity of straw in proportion to the yield of corn is much greater than the average growth of most other soils.

AFTERNOON'S WORK.

From 1 P.M. to 6 P.M., one hour stopping.

	Half a day.	s.	d.
Chopping 2 tons per hour—2 men 4*s*., 1 boy 1*s*. ..		5	0
Grinding horse corn 2 qrs. per hour Or cake-breaking 2 tons per hour ..	1 man .. 2*s*. 6*d*. engine-driver		
Fuel and grease		3	0
Total		8	0

8 tons of hay, at 9*d*.	6*s*.	0*d*.
8 qrs. of corn, at 3*d*.	2	0

Manual labour at 6*d*. per ton cutting, fuel at 3*d*. per ton cutting—total 9*d*. per ton.

Grinding at 1½*d*. per qr., fuel at 1½*d*. per qr.—total 3*d*. per qr.

No. II.—TOTAL COST OF WORK PERFORMED BY FIXED STEAM-POWER ON THE FARM.

900 qrs. grain at 7*d*. per qr. fuel and labour	£26	5	0	
100 tons hay and 80 tons straw at 9*d*. do.	6	15	0	
400 qrs. Oats and Barley bruising at 3*d*. do.	5	0	0	
	£38	0	0	
Wear and tear of engine on 210*l*. at 5 per cent. £10 10 0				
Actual cost of repairs of engine and boiler for 7 years at 6*l*. 5*s*. per annum, or only about 3 per cent—				
1853-4 .. .. .. £7 4 9				
1855 .. .. .. 7 5 4				
1856 .. .. .. 6 2 6	£6 5			
1857 .. .. .. 2 10 6				
1858 .. .. .. 2 4 4				
1859 .. .. .. 12 1 9				
Wear and tear of machinery on 185*l*., at 10 per cent. £18 10 0				
	29	0	0	
Total cost by steam power, exclusive of interest on outlay calculated below	£67	0	0	
Total cost of same work by horse-power, exclusive of interest on outlay, calculated below	129	9	7	
Saving effected by fixed steam power	£62	9	7	
On difference in capital employed—				
Fixed steam power £495 0 0				
Ditto horse-power 165 0 0				
Extra capital £330 0 0				

A profit on investment of 37½ per cent., without taking into consideration the breaking of 30 tons Linseed cakes per annum for beast and sheep feeding, pumping 8000 gallons water weekly for cattle and domestic use, sawing up old wood and stumps for fuel, timber and deals for the repairs of the farm carts and implements of husbandry, and two days per week steaming refuse Potatoes or other roots with the spare steam, independently of offering an opportunity of pulping-roots, which I am convinced will prove a considerable item of saving if attached to the engine. On the farm where horse-power is fixed, the aid of a portable steam threshing machine is occasionally resorted to. The expenses run as follows:—

No. III.

	s.	d.
9 men at 2*s*.	18	0
1 man at 2*s*. 6*d*.	2	6
6 women at 1*s*.	6	0
Allowance	4	0
Fuel 12 cwt. at 8*s*. 6*d*. per ton	5	4½
Blowing over for market	3	0
Fetching water	2	0
Quarters threshed 35	£2	0 10½

Or 1*s*. 2*d*. per quarter.

If the engine is the property of the farmer, the wear and tear must be calculated at a higher rate than a fixed one, for reasons to be subsequently stated; and if hired, the price paid averages in my district 1*s*. per quarter, to which must be added the value of six horses fetching or returning the machinery, which will increase the cost per quarter, in proportion to the quantity required threshing, prior to sending the machinery home, and the distance to be fetched or returned.

(To be continued.)

THE VALE OF STRATHMORE.

"TIMES change, and we change with them." This holds good in regard to all sublunary things; and it is not less true as regards the cultivation of the fields and the management of live stock. At least we very decidedly thought so, on revisiting some of the scenes of early days, after an eight years' absence in the highly favoured regions south of the Tweed. In these notes we therefore give the substance of a few jottings from our memorandum book—made during the first half of the bygone month of May. This was just before the advent of the fine summer weather, which has since made the dessert to blossom as the Rose; and the higher hill tops along the Grampian range were still deeply clothed with their wintry mantle. A powerful noonday sun, however, was telling on the mass by surface meltings, and the various rivers running seaward through the vales were dark and heavy with the melted snow. Along the Sidlaw hills, which run parallel with the Grampians, but at an elevation of only from 400 to 700 or 800 feet, a few occasional snowdrifts were likewise visible, especially where situated with a north-eastern exposure. In fact aspect seems almost everything along these hillsides. We saw among the south country hills an unenclosed grazing, with a south and south-western exposure, the rent of which was 1*l*. 18*s*. per Scots acre; whereas the other side the hill, belonging to another farm, was valued at less than half the money. It will be admitted that this is a long price for unenclosed sheep pasture; but on the principle that "the best is the cheapest," it may probably be well worth it, as the wedders are sent fat from the hill to the London market.

You do not require to go beyond the Forth, at Stirling, in order to see that you are in a totally different country, agriculturally speaking, from that in which you sojourned only 12 hours before. But it is in going further north, along the line of the Scottish Central Railway, that the stranger notices the greatest and most striking differences. You are now in the land of stone dykes and of wide open fields, innocent of hedgerows or of hedgerow timber. On the right and on the left, pairs of horses are stepping smartly along at plough, while in the freshly opened ridges women, in companies of half-a-dozen or more, are engaged spreading the manure just carted out for the later Potato planting. The houses are built of freestone, and covered with heavy grey slates; the cattle, turned out to work for their living on the short rations of that date, were of various sorts, kinds, and colours — well-bred and ill-bred Short-horns, and mongrel beasts with no horns at all, in addition to sundry lots of very handsome polled Angus. Some of the land, through the Carse of Stirling, is of a rich alluvial character, and rents, in a few instances, as high as 4*l*. per Scotch acre. In other cases, where less favourably situated, the rent decreases according to altitude, to almost a nominal sum.

The beautiful tract of country to which the name "Vale of Strathmore" belongs is not very accurately defined as to its boundaries. By some it is regarded as being the whole of the valley stretching obliquely across the central parts of Scotland from almost one side to the other. If so, it starts on the west from the base of the strangely-fashioned hill of Dumbuck, on the Clyde, and ends on the shore of the German Ocean, at Stonehaven, on the east coast. The Grampian mountains form its northern wall from first to last; while three separate chains of hills of less altitude—the Campsie hills, the Ochills, and the Sidlaws—uprear their heads on the southern side, and leave a noble vale of from 3 or 4 to ten miles in width intervening. At Stirling, where the majestic Forth breaks through to the eastward, and at Perth, where the Tay likewise presses onwards to lose itself in the North Sea, there are of course interruptions to the continuity of the Vale. Hence we find different names attached to different portions of it. To the westward of the "Fair City" we have the well-farmed lands of Strathearn; while in the other direction Strathord (of Wheel *versus* Swing Plough reputation) stretches its fair and broad acres along. Then when Perthshire is left behind, we enter on Strathmore-in-Angus, the region to which, with strictest propriety, the appellation belongs. Further on, the rich How of the Mearns forms the terminal continuation. With Strathmore-in-Angus, or the Forfarshire district of the Vale, our remarks are chiefly connected. The Scottish North-eastern Railway runs through nearly the whole of its course, and so far as farming can be practicably observed when looking out at the window of a railway carriage, a good view of these regions is readily obtained. But a nearer inspection is essential. And this closer acquaintance led us to mark many of the improvements which have of late years seen the daylight. Few districts can show greater comparative increase in the rent rolls of the proprietors during the last 10 years—in many instances varying from 30 to 60 or 70 per cent. of a rise; and few localities, too, can show a more spirited outlay of capital by the tenantry, in the reclamation of waste bog or moorland. In one instance lately, where a farm was let under the auctioneer's hammer to the highest bidder, the next issue of the local paper, which contained a paragraph stating who was to be the new tenant of such and such a farm, also had in another column an advertisement from the said tenant that "Contractors for Draining" were wanted, and that too on an extensive scale. This was by no amateur occupant, who wished to invest the surplus gains of the counter, or to have a pleasant retreat for summer days and fresh butter or eggs for the family in town in winter. It was by a plodding practical man, whose lease on another property had nearly run out, and who was outbid for his own occupation by a money-making shoemaker in a neighbouring town.

On his farm we saw a reclaimed field, with a promising braird of Oats, after the same cereal—a field which in our earlier days was deservedly named the "Muir Park," then reckoned as waste ground, and unequal to carrying anything better than a few lean stirks on its whole extent. At one side was a range of old quarries, long unworked, and having a perpendicular face of some 20 or 30 feet deep. Beyond them were the spoil banks, on which literally nothing grew; and further on a continuation of the former class of waste ground, but worse in degree. This has now been all levelled, and appears as a field of passable land, which yielded well to the scythe last harvest. On another farm and property adjoining, an equally striking instance presented itself. A large tract of unpromising muirland, carrying Broom and Whins and tufted Heather, was now part sown with Oats, part planted with Potatoes, and the remainder a good fair bottom of Rye-grass and Clover laid in for mowing. Around it were boulder stones collected, which had come in the way of the plough, but were at once removed for the prospective building of a dry stone boundary wall. Nearly 20 years ago, we remember a very spirited tenant on the same occupation who wished to proceed in the track of reclamation which has since been followed; but after having obtained one field from the waste, at a considerable cost, he was told by his landlord that "he thought there was now plenty of land under cultivation." With a larger command of artificial manures, and the stimulus of an increased rent, the change has since been made by another man. While on this topic, reference may be made to a few other cases of reclamation—one or two at the base of the Grampians, and one on the range of the Garvock hills, to the eastward. These may only be taken as samples of the march of improvement, which the last few years has witnessed; and are not held up by the writer as remarkable either for their extent or for their results.

Instance No. 1.—Stretching to the northwards, many a beautiful glen gently merges from its surrounding hills and loses itself in the expanse of the vale below. There are many such glens along this portion of the Grampian range at Glenesk, Lethnol, Clova, and Glenisla, with others of a lesser magnitude. From each a river or stream of greater or less dimensions flows rapidly along, and sooner or later finds its way to the German Ocean. At the outlet of one of these smaller vales a large farm is in the occupation of a medical man of high repute. It contains no great amount of flat or haugh land, but is principally on the slope, or what our friends locally call "brae-set." In years gone by the greater part used to consist of barren unpromising waste; but at harvest the rickyards are now filled with stacks, which may be numbered, if not by the hundred, at least by many scores. A threshing-machine, driven by water, has been erected; the steading has been enlarged; the whole is in a state of capital cultivation; and the manure bill would, we believe, show as spirited an outlay as on the crack farms of Norfolk.

No. 2.—Nor have we to go far to find a counterpart. On the other side the stream is a very large farm, on the Panmure estates. It is held by one of the most extensive tenant farmers in the county. Part of it is composed of vale land, of a light or free workable texture. Then on the lower slopes of the hill are many fine lying, and neatly squared large fields, of first-rate Turnip-growing quality. But higher and higher man's labours have reached, and his industry has conquered; until even the very hill top, which one would have regarded as nearly irreclaimable, has surrendered itself to the ploughshare. A heavy stock of cattle is kept and of prime weights and qualities, many bullocks having been sold during the present season at from 22*l.* to 27*l.* each.

No. 3.—Cases such as these are not confined to the larger holdings. In the one before us, a small farm, with only work for a pair of horses, with half the extent of the farm consisting of the poorest muirland, or most indifferent of bogs, we now find a couple of teams in regular employment. Scarce a vestige of waste is to be seen; a horse-power threshing machine has been erected, and a cart-horse stable as well; other additions have been made to the steading, and the yards are now inhabited by decent looking "Angus doddies;" while nearly 100*l.* were received this spring for Potatoes, which grew on a part of the reclaimed fields. The whole of these matters have been gone about without assistance from the owner of the soil, but merely under the potent influence of a 19 years' lease.

No. 4 is a larger farm than the previous one, but more land has been reclaimed, and greater difficulties encountered. It lies on the other side the valley, near the summit of the Garvock Hills, and is situated in the county of Kincardine or Mearns. This range of hills has the trap rock outcropping in many places, while the hollows are often sour bogs, filled with springs. Altogether, from altitude, aspect, and general backwardness of climate, such land forms a stiff subject to deal with. But a rent laid on pretty firmly forms sufficient stimulus to endeavour to make the most of it. In the case before us, nearly 60 acres have been reclaimed since 1852, and the artificial manure bill on this 6-horse farm reaches over 160*l.* a year. As to the mode of reclaiming such lands, the preference is given to a heavy 4-horse plough, with which the ground is broken up in summer, when the horses have a slack time. The furrow is turned over in a very coarse rough way, but when worked about, and being well disintegrated by the winter's frost, it is not very difficult to prepare for a crop of Oats in spring; or, as some prefer it, to be got ready for a crop of White Turnips, and fed off with sheep on the ground. Compared with trenching by hand labour, which would be worth probably 6*l.* per Scotch acre, you have it done after a much more economical fashion, viz. at the cost of four horses, two men and a boy, who will get over half an acre or 3 roods in the course of a day. But it is evident that at some former period there have been lands under cultivation among the hill-sides, which have since been allowed, from some cause or another, to revert in a measure to their natural condition. And at all events the first 20 years of the century saw as much accomplished by way of reclamation as has probably been attempted in either of the like periods which have since elapsed. Both the principles and the practices of such improvements were then fairly understood and acted upon. We find Sir John Sinclair, the enlightened president of the Board of Agriculture, giving in 1812 an account of five modes which had been tried with success:—"1. By ploughing; 2. By trenching; 3. By paring and burning; 4. By floating away the sterile surface; and 5. By flooding or covering the whole surface with water." These various practices are well illustrated by a description of the places where they were practised. But the absence of artificial manures, and the consequent exhaustion of the virgin soil, where beyond the reach of farmyard dung, may have tended to produce the result above referred to. Lime was freely used, it is true, but this in a few years would only tend to leave the soil more impoverished than before. Marl, also, was largely used as a top-dressing; and as marl-pits could not be dug on almost every farm, as has evidently been the case in many of the midland counties of England, it had to be dredged from the bottom of the inland lochs, such as those of Forfar and Rescobie. For the produce of their labour, the boatmen received from 1*s.* to 1*s.* 3*d.* per boll of 8 cubic feet. This dressing has long fallen into disuse. Bones came to the rescue, at a later date, and Mr. Valentine, a Mearns farmer of high standing, was the first in that county to use part of a cargo that were crushed at the port of Dundee. Red Clover made its appearance into Forfarshire more than a century ago. At Logie Pert, in 1748, a farmer sowed one of the first lots that had then been known; for persons came from far and near to see it, and a proclamation was put forth by the owner of the patch, forbidding undue trespass or carrying away of the plant. Clovers and Rye-grass still hold their place in the Vale of Strathmore, but some fields which we saw had been laid down with rubbish which would ill have stood the analytical examination of Professor Buckman. Indeed, secondary qualities of seeds seemed to prevail largely; and under the system of two years in Grass, it need hardly be added that the second year's appearance is worse than the first. *T. Bowick.*

(To be continued.)

THE HEREFORD BREED.

A writer in the *New York Tribune* gives the following account of this breed in America.]

THE most authentic account of this breed we have is that given by Mr. C. Hillyard, who published in 1844 a most excellent treatise on "Practical Farming and Grazing." Speaking of the improvement in Herefords, he says that Benjamin Tomkins, of Wellington Court, was famed for a superior herd of that breed, many animals of which getting into the hands of John Price, of Ryal, near Upton-on-Severn, he in a few years had a herd, that at his sale in 1816 brought wonderful prices. Cows sold as high as 200*l.* to 260*l.* each; and bulls for 300*l.* to 360*l.* each. Lord Talbot purchased 23 animals for 2500*l.*, an average of 108*l.* 14*s.* each. During seven years Mr. Price sold 100 Herefords for 10,400*l.* Among the earlier breeders of note the names of Tully, Yeoman, Skyrene, Williams, and Weyman, are on record; and in 1844 Earls Talbot and Oxford, Sir Francis Lawley, Hungerford Hoskyns, Sir Francis Goodericke, Sir Robert Price, John Arkwright, Jeffrey, Turner, Yeld, Hewer, Rayner, Knight, and Smithies, led the van. Mr. Hillyard says that at this period "they were breeding too fine, too narrow in the chine, the fore legs too close together, and not capacious enough in chest; too thin in thighs, with a want of muscle, and therefore, when well fed, there was a want of due proportion of lean to fat meat."

This was no doubt true, for the treatise of Mr. Hillyard bears the marks of having been composed by a candid and practical man, and one whose opinions should be received with due respect. The same bad points are not to be charged to the best Herefords of to-day, for the herds of Lord Berwick, Lord Bateman, and other leading breeders, can perhaps show as good an average as any Short-horn herds of similar size.

The Herefords are placed by all the leading writers in the class of "Middle-horns;" that is, they are neither long-horned, like the Cravens and Leicesters, not short-horned, like the prevailing blooded stock that is now in fashion; but are in the same rank as the Devons, Sussex, Glamorgans, and others. The Herefords are considered an aboriginal breed, and as having, perhaps, the same origin as the Devons. Those who have only known them with white faces, throats, and bellies, would scarcely believe that it has been a difficult matter to distinguish a heavy Devon from a light Hereford but such is the fact. Youatt says that, "compared with the Devons, they are shorter in the leg, and also in the carcass; higher, broader, and heavier in the chine; rounder and wider across the hips, and better covered with fat; the thigh fully and more muscular, and the shoulders larger and coarser."

A few years since they were not of the same uniformity of appearance as now, for we learn from Mr. R. Smith's report on the stock exhibited at Chester last year, that formerly "there were some herds self-coloured like the Devon and Sussex breeds, and opinions have been published that this was their original character. Subsequently we find the gray, the mottled, and the white-faced, each with their distinct admirers and their successful breeders. That the race was originally red with a white face is indicated by the almost perfect uniformity of colour which the breed of the county now presents." If this peculiarity were not inherent in the race, but merely the result of mongrel breeding, we should find every imaginable variation of the colour; or rather, where herds had been bred pure, we should see the colour recurring to some other original type; for this is the peculiarity of well-established strains, to overcome modifications attained by art and preserve their ancient landmarks.

Milking Properties Neglected.—Hereford oxen have ever been noted for their strength, endurance, docility, and feeding propensities, as well as for the fine quality of the best pieces of beef. The general introduction of horses has in great measure driven them, however, from the plough; while as a further reason we might add that the farmers find it more profitable to grow them so as to be fit for the butcher at three years of age than to keep them as working animals until they are six or seven.

As regards their performance "at the pail," not much can be said, for while Hereford milk is confessedly rich in quality, the efforts of breeders have been so turned to developing beef-making qualities that no heed is given to the production of milk. In fact, it is a common practice in their native county to let the calves run with their dams in the natural state; and even then, it is sometimes necessary to have common cows to act as wet-nurses to the young beef-makers. This is a crude state of things that should be replaced by a better system, but especially so if it is expected that Hereford cows may sometimes be needed to give milk to their owners. The Short-horn men are not a whit better in this respect, for they put forth all their energies to get a heifer up to an enormous weight, and neglect milk-making properties altogether. The scale of points given by our agricultural societies to their judges on cattle, as a guide to their decisions, tells the whole story; the development of bag, and signs of milking ability, are put down in the merit list at three or four per cent., while the beef points are exalted to the highest degree. What is the result of this treatment? The system becomes so overloaded with fat that the mammary glands and ducts, that should be left free to secrete and convey milk, are coated over with fatty matter, and the flow of milk becomes at first almost, and ultimately quite, impeded. The heifer coming in calf and near her time, the system is overheated and inflamed, and there is great danger that she will lose her own life, or that of her calf. Our breeders know this better than we can tell them; but in England and this country, let two lots of cattle of equal excellence be shown, and, in nine cases out of ten, those which are in proper breeding condition will lose the prize, and it will be given to the lot in high flesh. Fat, like charity, "covereth a multitude of sins."

Management of Breeding Cows.—In Herefordshire it is customary with the farmers to make the cows come in in the winter months. The calves suckle their dams until May, when Grass is ready for them. When the cows are dry, they are driven to the poorer pastures towards the hills; but if they do not come in calf again, they are put upon the richer grazing land to fatten. The larger breeders of course treat their herds as do the owners of the best herds of other breeds. Mr. Henry Tanner, in a prize report on the Agriculture of Shropshire to the Royal Agricultural Society, mentions that in the district of Corve Dale, comprising an area of 35,000 acres, the stock-growers have met with serious losses from the premature dropping of their calves by the Hereford cows; and he attributes it to too close breeding, which he thinks has enfeebled them, and made them susceptible to the malady when the direct producing cause is presented. This cause, he claims, is to be found in the ergot or fungoid growths which attack, not only Rye, but most of the pasture Grasses of the district as well. If this theory be true how can we account for the prevalence of this same trouble in the dairies of Orange County, where the cows are of mongrel extraction, and in no case pure-blooded? If the introduction of fresh blood would be, as he claims, a remedy, surely in our dairy districts we should be exempted from the difficulty. This not being so, we can scarcely charge it to the Herefords as a weakness of constitution on their part; we must look for some other explanation of the mystery. Perhaps certain conditions of atmosphere, an excess of moisture or something else, may favour the growth of fungi on our pasture Grasses, and thus induce the abortion. Pro-

fessor Buckman says that Rye-grass is especially subject to ergot, and care should be had in feeding it to valuable breeding animals on this account.

(To be continued.)

A NEW VARIETY OF WHEAT.

MR. PATRICK SHERIFF, of East Lothian, has lately published a correspondence with the Highland Society, refusing their "Medium" Gold Medal for a report on a new variety of Wheat, on the ground that the "Society's" Gold Medal was offered for reports of the kind, and that the award of an inferior prize was a slur on the value of the new variety cultivated by him. Mr. Sheriff is well known for his previous labours in this field, and agriculture owes the Hopetoun Wheat and the Hopetoun Oat, and other new sorts of agricultural plants, to his intelligent research and perseverance. The following is the report he had drawn up:—

"The improvement of plants is interesting to the agriculturist and the gardener, whether the subject of cultivation be intended to gratify or to feed the human race, and the Cereal Grasses are so important to the population of Britain, that their improvement ought to form one of the leading objects of agricultural associations.

"Man possesses but little control over the Cereals. However skilful the farmer may be in the preparation of the soil and in the application of manures, he can produce no lasting change in any variety of the Cereals. The Wheat plant which is represented in the relics of some of the nations of the East is the Egyptian variety (Triticum compositum) of the present time, and there is no evidence to show that either the oldest or newest kind in British agriculture has undergone a change in any respect. It may be true that some of the kinds which have been recently introduced are superior to those which were formerly cultivated, but the excellences of such varieties were stamped by nature at the time of their origin, and it may with confidence be stated that there is no way of improving the Cereals but by cultivating new varieties. The attempts which I have made to improve the Wheat plant shall now be detailed.

"In early life I obtained from the late John Claudius Loudon, well known for his writings on gardening and agriculture, many varieties of Wheat which had been forwarded to him by correspondents in almost every country of the globe, but after years of experience few of them were found to be congenial to the soil and climate of East Lothian, and still fewer deserving of a place in the farm.

"I afterwards directed my attention to artificial impregnation by fecundating florets with pollen from another sort, which was generally accomplished without difficulty. The grains which were produced by this process germinated freely, and gave life to a plant which at first seemed to partake of the characteristics of both of the parent varieties, but upon sowing the produce a second time different kinds appeared in the crop, and the mixtures increased with every succeeding generation. The plants also fell off in fruitfulness and ultimately dwindled into comparative barrenness. Experience therefore leads me to conclude that a variety capable of being reproduced with constancy from seed is not likely to be obtained by cross impregnation, and that the improvement of the Wheat plant must be attained by other means.

"I have also selected from the growing crops varieties which are generally known as sports, and which have been found to retain all their properties on reproduction from seed for any length of time. My first attempt in this way produced Mungoswell's Wheat, and for raising this variety I was awarded the Highland Society's silver medal in the year 1829. From circumstances connected with the selling of grain at the time in East Lothian, the name of this new variety was soon changed for one more fashionable, and at length it became unheard of if not forgotten. Of late years Mungoswell's Wheat has attracted the notice of farmers under the name of Fraser's, East Barns, Lady Hall, and other aliases, and at the present time this variety occupies in East Lothian the second place in point of extent of surface cropped with Wheat. I also raised from a single ear the variety known as Hopetoun Wheat, and for having done so received the Highland Society's gold medal in the year 1841. Both of these varieties retain their properties unimpaired up to the present time.

"In order to carry out the views of improving the Wheat plant which had proved to be attended with success, a collection of Wheat was made in 1856, containing named varieties as well as sports which I personally selected in different counties of England and Scotland, and the whole, numbering 70 sorts, were sown in the autumn of that year. After the harvest of 1857, half a dozen of the finest samples of the red Wheats in the collection were placed before persons of skill in distinctly numbered wine glasses, and there was a unanimous opinion in favour of the grain in a certain glass being the best in quality. The grains of crop 1858 were subjected to the like ordeal, and again an award was given in favour of the Wheat which was considered the best in the previous year. This variety forms the subject of the present report.

"This Wheat was selected in 1856 from a field of Hunter's on the farm of Tynefield, in the parish of Dunbar, East-Lothian. The ear is long, the chaff is red in colour, and furnished with a stout beard. The straw is of considerable length, strong, elastic, and often tinged with pink on the plant reaching maturity. The grain is red in colour, long shaped, and large in size. The variety is a true autumn Wheat, ripening at the time of the other sorts of the class cultivated in the Lothians, and is unquestionably new in the agriculture of Scotland.

"In common with many modern agriculturists I at one time entertained a dislike to bearded Wheats, believing that such varieties produced inferior grains; but after my experience of 1857 and the following year, when a Red as well as a White bearded Wheat respectively yielded the finest grains in the collection which I had grown under a parity of circumstances, the error regarding this appendage became obvious. The beard or awn of Wheat is unlike that of Barley, being attached to the outer paler or chaff, and not to the skin of the grain. The beard also projects from the ear at an angle varying from 10 to 50 degrees, and its strength and elasticity, which are both considerable, are neither much impaired by wind or moisture. When the crop is driven to and fro by the violence of the Wheat, the spring of the beards lessens the shocks of the ears, and prevents the corns at the apex being shed, which is so common with beardless varieties. The elasticity of the beards also tends to promote a circulation of air in the bound sheaf, thereby retarding the sprouting of the grains in wet seasons, and hastening the hardening of them in fine weather. Under no circumstances is the beard injurious to the Wheat plant, and in the fickle climate of Scotland it is found to be a valuable appendage.

"This Wheat resembles the well-known Red Lammas in the size and quality of grain, as well as in the general appearance of the crop when growing, and while new and distinct it is not inferior to any variety of Red Wheat at present cultivated in Britain. Upwards of 15 acres of land have been sown with this Wheat during the present month for crop 1860. *Haddington, November* 1859.

Home Correspondence.

The Journal of the Royal Agricultural Society.—Permit me to correct Mr. Girdwood, whose speech I applauded and with whose opinions I agree. I was not a candidate for the office of Secretary to the Royal Agricultural Society, but for the editorship of the Journal. I certainly had no communication with Mr. Girdwood; but slight as is my acquaintance with that gentleman, I should have thought it my duty to have combined with him in his remonstrance against—to use a mild term—the transaction perpetrated by the Journal Committee with a unanimity worthy of a good old select vestry. I shall not say more of my competence for the office of editor (for which I competed under the idea that Mr. Morton would not accept it on the terms) than that an influential member of the Journal Committee wrote to a friend of mine "that there could be no doubt of Mr. Sidney's qualifications." But I have been informed by a member of the Council that my disqualification rested on the same grounds as Mr. Morton's—we had both been "professional writers connected with newspapers," that is, we were not amateurs; and we had neither of us "graduated at an English University." I do not understand what you mean by Mr. Thompson and Mr. Hoskyns not having voted. Was there a vote in Committee? At the Meeting of Council at which the Report of the Committee was confirmed, it is said that the President refused to put an amendment in favour of Mr. Morton, proposed by Mr. Hudson and seconded by Mr. Pope, and declined to hear two gentlemen who rose to support the amendment, and that he put the original resolution as a matter of form—without calling for a division. This common report sounds like truth. As for the silence of the Council, all must admit that it is discreet. What could they say, except that they wished to provide for a gentleman whom they could teach his duty? Now, Mr. Morton would have been able to teach the Journal Committee, and would probably have so much improved the new series of the Journals as to have reduced the importance of the preceding volumes. By the bye, who writes the Council's Half-Yearly Reports? The Report presented in May contains in the two last paragraphs extraordinary specimens of English style—at once obscure and grandiloquent. *S. Sidney, Central Farmers' Club, June* 14.

The Editorship of the Royal Agricultural Society's Journal.—I do not see that your footnote to Mr. Girdwood's letter in last week's Paper at all affects the question raised by that gentleman. Sins of omission are as bad in their effects as those of commission. What does it matter whether a man who has had a most important duty confided to him performs it badly by acting wrongfully or by neglecting it altogether? The very fact of Mr. Thompson and Mr. Hoskyns not voting in so small a committee establishes fully in my opinion the accuracy of Mr. Girdwood's information, for with their knowledge of the subject, their connection with the Journal itself, and their reputation, the other members of the committee must at once have yielded to any well defined opinion expressed by them. It may be interesting to your readers to know that this committee which has arrived at so extraordinary a result consisted of Sir John Shelley, Sir W. Miles, Mr. Thompson, Mr. Chandos Wren Hoskyns, Sir John Johnstone, Mr. Dyke Acland, and the Speaker of the House of Commons. These gentlemen chose for the editorship a man no doubt of great classical attainments, but wholly unknown to agricultural literature, agriculture, or agriculturists—one who took his degree I believe in 1836, and who in all that long time has not distinguished himself very particularly in any department, either of literature or science, but has been enjoying the *otium cum dignitate* as Bursar of his college. Nor was it for want of fitter candidates that they chose him; for they had a great array of distinguished names to choose from, and amongst others, in Mr. Morton, a man whose name since 1843 (it may be longer for aught I know) has always stood amongst the foremost in the van of agricultural literature; who has earned the respect and confidence of agriculturists throughout the length and breadth of the land; who has secured the co-operation of many of the most distinguished amongst them in various ways for the promotion of agriculture, and has in his Cyclopædia of Agriculture shown he can marshal such forces in the cause of agricultural literature; has been elected the honoured member of foreign agricultural societies; has filled with *éclat* the Edinburgh Chair of Agriculture during the illness of the professor; has edited ever since its establishment the paper in which this letter has now the honour of appearing; and has actually, I believe, assisted in editing the Society's Journal for some time! The Council of the Royal Agricultural Society may be assured that this matter cannot rest here. An account of their stewardship in this matter must be given. The all-pervading nepotism of the present age becomes truly alarming. It has digged the graves of our Crimean heroes, and now in times of peace it is ready in almost every department to barter away the birthright of the able and the fit for a mess of pottage for a friend. It is enough to make every well-wisher of his country tremble. *Investigator, June* 13. [We are bound to publish the letters of known and trustworthy correspondents on topics of public agricultural interest; and this, notwithstanding its personal references, and notwithstanding one or two errors of detail which do not affect the argument, must therefore appear as it has reached us.]

Price of Labour in Northumberland.—Taking as my guide the maximum rate of wages paid to able-bodied and experienced bondagers on Tweedside in 1850, and a fair allowance to the hind for the bondager's board, lodgings, and other expenses which such a form of agreement causes to devolve upon the hind, I am at a loss to perceive what grounds I have given your Tyneside reporter for stating that "it ill became me to cavil at the statements of Mr. Grey." Bondagers' wages varied from 5*l.* 10*s.* to 6*l.* 10*s.* for the summer half-year, and from 2*l.* to 2*l.* 15*s.* for the winter half-year about 1850, till within the last two years they have risen to 12*l.* per annum. I have reduced to cash the various items enumerated in the scale of payment which Mr. Stephens gives in the second volume of the Book of the Farm, at p. 743, and makes equal to 12*s.* per week; but I am at a loss how Mr. Stephens can make 46*l.* 15*s.* pay the hind 12*s.* per week, and the bondager's wages, board, lodgings, and other incidental expenses. Taking the same scale of payment for the past year which ended on May 15, the average prices of grain during the 52 weeks ending on Sept. 24, 2*s.* 6*d.* per bushel for the Potatoes, 1*s.* 7*d.* for wood, and 12*l.* for bondagers' wages, I make the same scale of payment equal to 54*l.* 16*s.* 9*d.* So 20*l.* 3*s.* and 27*l.* 4*s.* 9*d.* are the respective rates of wages in 1850, and in 1860 up to May 15. Much misunderstanding was caused amongst English farmers who pay their ploughmen with hard cash by the address delivered by Mr. Grey at the Hexham Farmers' Club (See No. 4 for 1859). "N.," for instance, gave his opinion of Mr. Grey's statements, and you appended the following to "N.'s" remarks:—"'N.' appears to forget that the hind receives wages for his bondager's labour, viz. 1*s.* 6*d.* a day in harvest time, 1*s.* in summer and 10*d.* in winter. Of course her support is nevertheless often a loss to him, but it is rather as a nuisance than as a loss that the bondager system is objected to. Let us add that our correspondent had better exhaust whatever other means he may possess of answering Mr. Grey before he ventures on charges of carelessness or misrepresentation." *Agricultural Gazette*, 1859, p. 248. Now I stated in the *Agricultural Gazette* (1859), under the heading "Farm Labour on Tweedside," that the greater part of the manual labour which is connected with the threshing and dressing of corn by machinery, the filling the manure into the carts when cleaning out the cattle pens, the turning the manure heaps and spreading the manure in the drills, the singling, hoeing, pulling, rooting, and topping the Turnips is executed by women in the neighbourhood of both sides of the Tweed. And with the exception of the cutting and harvesting the hay and the corn, when the requisite number of extra hands are employed, the greater part of the work which does not require horse-power is done by bondagers at 1*s.* per day. So I should like to be shown, through the medium of the *Agricultural Gazette*, that I am wrong in stating that manual labour is cheaper in the bondager district than in the counties of Norfolk and Dorset. Will your Tyneside reporter take up the gauntlet? It is self-evident that the

estimated cost of the bondager to the hind is the cause of my disagreeing with Mr. Grey respecting the rate of a hind's wages. But taking Mr. Grey's own statements and the laborious nature of a bondager's duties as my guide, I think any one acquainted with the cost of manual labour will agree with me that 6*s.* per week is a small enough allowance to the hind for the bondager's board, lodgings, washing, and other incidental expenses. For instance, Mr. Grey states in his address:—"Since I recollect, it was hardly the case that the labouring population of this country were able to indulge themselves with eating butchers' meat at home. The father of a family thought himself very well off if he could feed one or two pigs, and exceedingly well off if he could maintain a cow; but you now see the butcher's shop in every village, and the butcher's cart dispensing joints of meat at every cottage door as you go along the road. Such is the difference in the way of living, and I am sure you will all rejoice with me in thinking that it is so."—*Agricultural Gazette*, page 59, 1859. Deducting the maximum rate of bondagers' wages on Tweedside—12*l.*—from the 58*l.* 3*s.* 8¾*d.*, how can 46*l.* 3*s.* 8¾*d.* enable a hind with a wife and young family and a bondager to indulge in beef and mutton during a twelvemonth? The eliciting what is the comparative cost of manual labour in this country having been the object of Mr. Morton's paper at the Society of Arts, I am surprised that he should put himself to the trouble of reducing to an imperial standard a local form of payment in Dorsetshire, and neglect to reduce a local form of payment in kind, coupled with a disgraceful form of agreement, the bondager system, to an imperial standard. Mr. Morton states respecting Mr. Saunders's mode of payment:—"This is a most elaborate scheme of payment, and certainly a very liberal one, though I do not value the items so highly as Mr. Saunders does by about 6*l.* a year, making the yearly wage of his ploughmen 33*l.* 14*s.*, or as nearly as possible 13*s.* a week." *Agri. Gazette*, 1859, p. 1001. Perhaps my intimate acquaintance with the bondager form of agreement, coupled with my having discussed the system so fully through the medium of the *Agri. Gazette*, may cause me to take what may be regarded as too strong a view of the subject; nevertheless, having stated to the Editor of an agricultural paper that "the Editor of the *Agricultural Gazette* appears to allow his respect for Mr. Grey, of Dilston, to bias his judgment as an Editor," I trust if I have misconstrued your statements, you will practically evince I have done so by allowing me to request Messrs. Grey and Dods, or your Tyneside reporter, to answer the following questions:—

1. Does each hind who has not a sister or a daughter to act as bondager give his bondager board, lodgings, and washing? 2. A man or a woman who is engaged for six months' service in Scotland can claim his or her wages in full for the six months' service, irrespective of having or not having been absent from work through illness which did not exceed six weeks. Is that law enforced in England? Do the farmers pay the hinds only for each day the bondagers work? 3. Or do the farmers pay the bondagers as yearly servants? 4. Are there any hinds who have to reside in houses which are so graphically described in Stephens's Book of the Farm? 5. What is the gross total paid to a hind for the last twelvemonth for his own and his bondager's work? 6. What is the maximum rate of able-bodied and experienced bondagers' wages for a twelvemonth? 7. Is 6*s.* per week too large an allowance to the hind for giving the bondager her board, lodgings, and washing? 8. Since it requires 39*l.* 2*s.* 6*d.* to pay the hind 15*s.* per week, and 27*l.* 12*s.* to defray the expenses of the bondager, to make Mr. Grey's wages equal to a house free, and cartage of coals, and 15*s.* per week (assuming that 12*l.* is the maximum rate of wages), how does Mr. Grey make up the deficit of 8*l.* 10*s.* 9½*d.*? 10. No reference being made to the bondager in your article on "The Value of Agricultural Labour, 1860," is the bondager form of agreement abolished?

A Labourer.

MacDougall's Disinfecting Powder.—I saw recently a statement in the *Agricultural Gazette* that Macdougall's disinfecting powder was an effectual remedy for "Black Jack" on Turnips. If by "Black Jack" is meant the soft black grub which occasionally appears, and disappears as suddenly, on limited spots in the Turnip fields, indeed after a smart shower of rain, I believe that any application may get the reputation of its destruction. This powder is very effective and useful for its special purpose of neutralising the gases which are offensive and injurious in stables, piggeries, and other sources of irritation to the olfactory nerves; but it is not fair by the public, nor politic to the manufacturer, to attribute to any article in the market qualities it does not really possess. I have seen it stated in a particular in print of this article, either that it prevents or destroys the Turnip fly. I procured some for this purpose, and had it sown along the ridges of some Swedes on which there was a good deal of the flea. As this produced no effect, I thought it might have been unskilfully done; and I then applied some on a portion of the plants affected while moist, so that it should adhere and be an unquestionable test, and it had not the slightest effect on the flea or its operations. *From a Correspondent.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

WEEKLY COUNCIL.—*Wednesday, June* 13: Present, Lord Walsingham, President, in the chair; Sir J. Johnson, Bart., M.P.; Sir E. C. Kerrison, Bart., M.P.; the Hon. Colonel Hood, the Hon. A. Leslie Melville, Mr. Raymond Barker, Mr. Corbet, Mr. Dent Dent, M.P.; Mr. Frere, Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Holland, M.P.; Mr. W. Hutton, Mr. Kingsford, Mr. Lee, Mr. Majendie, Mr. Pain, Prof. Simonds, Prof. Voelcker, Mr. G. H. Vernon, Mr. Weiss, Mr. H. White, Prof. Wilson, &c. &c.

A lecture on Oil-cake was delivered by Prof. Voelcker, consulting chemist to the Society, but which we must defer until next week. A vote of thanks was unanimously awarded to the lecturer.

The Council then adjourned to its special meeting on the 19th inst.

BATH AND WEST OF ENGLAND AGRICULTURAL: *June* 8.—At the general meeting of members on Thursday the Council's report was read. We make the following extracts:—The Council have to report an increase in the number of members, which at present stands at 1250.

Stock Department.—The entries comprise cattle, 130; sheep, 369; horses, 58; pigs, 12; total, 599.

Poultry Department.—The steward of the poultry department reports entries amounting together to 373 pens. In the opinion of the judges the present exhibition has surpassed any former one, both in the extraordinary number of first-rate birds, and the almost total absence of inferior specimens.

Implement Department.—In this department great increase is observable. At Barnstaple, the number of stands was 104, being an advance on all preceding meetings. At Dorchester there are no less than 155 stands, demanding an enlargement of the Society's shedding to 2000 feet run. There are 29 exhibitors of machinery in motion, as against 18 last year, and the requests for uncovered ground have been in like proportion. So great an increase of exhibitors was not anticipated, and the steward of shedding discovered that the manufacturer of the canvas (expressly made for the Bath and West of England Society) had no stock in hand. Since the 21st April, however, nearly two miles of the Society's canvas have had to be made in Scotland; and so late was it delivered, that had it not been for the facilities afforded by the use of the special protection building, it would have been impossible to erect the shedding in time for the exhibition. The whole of the shedding was in a complete state of readiness to receive the implements on the 20th of May, but owing to the situation and character of Fordington meadows, on which the meeting of the Society is being held, all the shedding poles, instead of being firmly fixed in the ground, are sunk in 3 feet of water, and it has consequently been impossible to ram down the earth in the holes. On Sunday and Monday, the 28th and 29th May, so severe was the gale, and so wet the meadow, that the anchors slipped, the posts were lifted, and the whole of the canvas was slipped off by the violence of the gale. All was restored by the afternoon of Saturday, the 2d inst., when a second gale caused a repetition of the damage effected one week before.

Arts Department.—Encouraged by the success of the exhibition of fine and industrial art, attempted for the first time at the Barnstaple meeting, the committee have accepted the arts department as an established branch of the Society's operation. The special prizes for shoeing, offered by W. Miles, Esq., of Exeter, have led to a satisfactory amount of competition, and the liberality of Mr. Galpin, in placing his forge at the service of the Society, has relieved the Society of one of the principal difficulties in awarding the prizes. The Council report the resignation of Mr. T. D. Acland as editor of the Society's Journal, and the appointment of Mr. Josiah Goodwin as paid editor. The Council also report that the Society's meeting for 1861 would be at Truro, the site having been selected. Colonel Buller, of Downes, was named as president for next year.

AT THE PUBLIC DINNER OF THE SOCIETY, Mr. Silifant referred thus to the difficulties and successes of the meeting:—The stewards of departments had indeed had a most arduous duty to perform, for never was true British energy more severely taxed, and never was British spirit more manfully shown, than in the way in which they had gone through fire and water for the comfort of bipeds and quadrupeds. The articles exhibited had shown that there was an increasing stimulus on the part of the producer, and they excited an increasing interest on the part of the spectators. He believed he might say that a better bazaar of articles of interest and usefulness could scarcely be exhibited, whether as regarded agricultural stock, implements, or works of art and taste. Whoever had visited the field must have had his taste improved, his judgment exercised, and his enthusiasm increased on behalf of all that was most useful, most agreeable, most ornamental and conducive to the purposes of civilisation. Nothing could be more delightful to those engaged than to see that it was not only the higher classes and the well-dressed, but the humbler ones, who engaged themselves in analysing the works of art. It was indeed delightful to see the labourer in his smock leading his little boy or girl through mud knee deep to enjoy the luxury of that beautiful exhibition. When he said this, he did not mean to say that the exhibition of arts alone was to be valued; but this he would say, fond as he was of a good piece of beef, he should be sorry to be kept upon beef continually. There were various sweets and condiments that added to the agreeable repast they had enjoyed to-day; and so it was well that they should not only cultivate the useful but promote a taste for the ornamental. Well, therefore it was that the exhibition of arts had been added to the society. He thought that if they had selected out 20 acres in any part of England they could scarcely have chosen a spot where the Society had such an opportunity of showing that the work of agricultural improvement was required. Improvement was their motto, and he did hope that after the delightful visit they had paid on the present occasion, the time would arrive when, if they came again, they would not see so much of the subsoil. It was bad enough to have water upon their heads, but when he saw the quality of the subsoil, and observed that, ankle deep, it was of the richest loam, he regretted that drainage was not applied to it. It should be borne in mind that the Bath and West of England Society was originated for the sake of effecting improvements in agriculture, and he did hope that those expansive acres, through which they had been wading like web-footed animals, would, when he visited them again, be found covered with rich herbage, and he should be enabled to wear much thinner boots than he had to-day.

To the department of Arts and Manufactures we make one further reference in order to notice the behaviour of the people on the shilling day. On this a neighbouring clergyman writes as follows:—

"Several of the Committee said they had never seen anything equal to it. Labourers, their wives and children, were for some time passing in and out of the Arts Department at the rate of 60 per minute, and yet not an instance was witnessed of disorderly or rude behaviour. Only two attempted to break the rule, that no smoking was allowed in the rooms. Mr. John Mansel in his confidence in the British public threw open his valuable geological collection without the slightest protection, and not a specimen was lost, nor (I believe) even touched. You speak very correctly of the amazing array of locomotives; I gazed on them with wonder. But my delight, if not wonder, was greater at witnessing within a parish in which 29 years ago a threshing machine was broken to pieces by an ignorant mob, the interest and the pleasure with which men, women, and children of the labouring classes gazed on them too. And this their interest and pleasure was evidently increased in not a few instances by the intelligence and politeness of the attendant exhibitors. In three cases a class of my Sunday school who were under my charge received a full explanation of the machine to which I had led them. These were ploughboys and apprentices."

Among the more useful of the objects exhibited in this department was one of the kitchen ranges on the principle patented by the Rev. H. Moule of Fordington, to which we have referred in a past notice of his pamphlet on various points in domestic economy (*National Health and Wealth*—Bradbury & Evans). The range was exhibited by Messrs. S. Taylor & Son, of Fordington, near Dorchester; it contains oven, 35-gallon boiler and hot plate, and is capable of cooking for 600 men. A cottage range and other stoves on the same principle were also exhibited. The principle involved is the use of steam as fuel, the vapour being decomposed and producing heat by the combustion of its elements when thrown among incandescent fuel, so that an actual saving of fuel is produced; and the cottage range exhibited is stated to consume less than 1 lb. of fuel per hour. In the yard, too, was a cask of earth which had been used five times over for the deodorisation of manure, thus becoming a concentrated fertiliser itself.

The Situation of the Show-yard.—It is of no use to mince the matter. The choice of the ground was a mistake—convenient from its being under control and close to the town, it might be, and the soil was no doubt porous, but it was far too low and near the level of the river, besides which several better and drier sites could have been readily secured. From the wetness and softness of the subsoil a firm hold could not be secured for the stakes and posts, and thus with the unexampled wind and rain the scene presented on Thursday baffles all description, and appeared indeed to be a show-yard better adapted for amphibious animals than for the bipeds and quadrupeds of the present day. The lessons of experience, though dearly bought, were not thrown away. We will venture to say that such a situation will never be chosen again. This, however, must be said—that everything that could be done to repair the disasters were energetically accomplished by the Stewards of Departments, and if with all these difficulties the Show was on the whole successful, what might be expected under happier auspices? The weather on Friday was fortunately fine, and it was surprising to find how very much the ground had dried. The attendance was considerably greater than at any previous day, the majority consisting of the labouring classes, with many others who were prevented from attending in consequence of the bad weather on the previous days. It is worthy of the consideration of the Council whether this important gathering could not be held either a week earlier or later so as not to clash with Ascot Races, which is objectionable not only because it lessens the attendance, but also because it materially interferes with the railway facilities. On the Cup day, Thursday, this inconvenience was much felt by the deprivation of the special excursion train on the very day it would have been mostly required if the weather had been fine.

We omitted to state in our last that the show of long-woolled sheep (not Cotswold) was good, but it consisted almost entirely of Leicesters. The competition was not particularly good, and the prizes were monopolised for the most part by Mr. G. Turner.

Farmers' Clubs.

LONDON: *Steam Culture.*—Mr. Wells's paper on this subject will be found in another page. The following is an abridged report of the discussion which ensued upon it.

Mr. Smith, of Woolston, said that according to Mr. Wells's statement, "Mr. Smith does not reduce the amount of manual labour." He could prove that his system did reduce manual labour. On the cold heavy land, which the deputation from this Club visited a few weeks ago, he had never been able to plough more than 5 acres with six 4-horse teams twice over, and cross it with less than three horses, in five days; and even that turned out to be tremendously hard work. Whereas, by means of his eight horse-power engine, he could easily smash up 5 acres of this work in a single day, with 45 lbs. of steam. Having smashed it up once by steam, he next put it into ridges for his Turnips, and there they were growing now. Formerly he could not have ridged after one ploughing, so that he must have cross-cultivated before he ridged. But how did the cost stand for the 5 acres? Seven men to the cultivator at 2*s.* 6*d.* a day came to 17*s.* 6*d.*, as against 11 men at 2*s.*, and 11 boys at 6*d.* a day, or 1*l.* 7*s.* 6*d.* Thus steam beat manual labour upon the 5 acres, to the extent of 10*s.*, or by nearly one-half. Wear and tear was the next point to which he would advert; and he confessed that he went entirely upon estimate, inasmuch as he had never yet worn out a pair of ropes. His first set of ropes cost him 34*l.* about five years ago, and they were still in good working order. His farm was 110 acres in extent, and the ropes had done 550 acres of work, with the exception of 32 acres for experimenting upon, with a new set of tackle, during last winter and the present spring. His practice was always to take advantage of the best weather directly after harvest. The moment his harvest operations were finished he got the steam cultivator to work upon the Bean stubbles, which he would smash up once, whilst his horses were engaged in ploughing the Clover leas. As soon as that was done, and whilst the land was aerating for Wheat, he manured the Wheat stubble for Beans and Turnips. The horses would then go back to cultivate the Bean stubbles, and drill the Wheat; as his steam cultivator smashed up the Wheat stubbles, the horses ridged them for the winter. The whole of his ridging work last year upon the 110 acres was effected in the course of 10 days, in the last week of October and the first week of November, and when finished it looked like a garden. The deputation from the Club saw it a few weeks ago in the state in which it was left in November, and it was for them to say whether the work was done well, or whether horse labour could approach it. Four horses had done the drilling and everything else by the first week of November. He had gone 14 inches deep; but respecting that depth Mr. Wells had told them very little indeed. He could assure them, however, that it was a most important matter. Where horses were used, the soil became clogged up, and converted into a sort of plaster by their tread, until indeed it resembled a turnpike road more than arable land. What then happened when the rain fell? Why, that the water ran down the furrows, and carried valuable muck with it into the rivers; but steam cultivation thoroughly broke up the ground. As the rain passed through it, the earth appropriated whatever was good and nutritive in it, and as soon as the water had disappeared the air acted upon the mineral muck contained in the soil, and produced abundance of food, as was proved at Lois-Weedon beyond all question. In conclusion, Mr. Smith said—It is that subsoil to which we farmers must look; and I contend that steam has beaten horses all to pieces.

Mr. Owen Wallis said Mr. Smith's land was cultivated by steam power, in a manner that he had thought was altogether impracticable. Parts of it were of the most stubborn and tenacious character, irregular as to boundary, most irregular as to surface, yet the work done by the steam cultivator was of the most satisfactory kind. The land was deeply cultivated and well ridged up, and the crops which were growing upon it were, in every respect, as good as could be desired upon land of that description. He was now speaking of Mr. Smith's clay lands. The better sorts of soil had all the characteristics of garden farming. Deeper cultivation he had never seen; in fact he had never seen any so deep, or land in so friable and beautiful a tilth for receiving any class of plants that it might be desirable to grow upon it. With regard to the question of steam cultivation, he thought that too much stress had been laid upon the relative cost of steam power and horse labour. He admitted that when the two were compared horse labour was in some instances apparently the cheaper, but when they came to consider results comparison must cease; and steam cultivation, although it might cost more per acre, left the land in such capital condition for any future cultivation, that it was far cheaper than it appeared to be in the end. Another of its features was, that they could do a great quantity of work immediately after the harvest, when the land was warm, and one stirring by the cultivator was worth three at any subsequent period of the year. His advice was that they should get their land broken up when in a dry state, and keep the Twitch on the surface; for he had become a convert to Mr. Smith's system of never ploughing it in. If they ploughed it in, they might rely upon it that every bit of plant would rise in judgment against them on some future day. Keep it on the surface, and what they could not kill in the autumn, the frost of winter would destroy; or, if any survived, it might easily be eradicated in the dry spring weather. Supposing them to have succeeded in killing all the Twitch, the land would then be in the best state for receiving manure. They might cart it in either frosty or dry weather, spread it, and let it lie until they had leisure to plough it in; for he believed it would do more good upon the surface than if ploughed into the rock or a porous subsoil; and they would thus have their land in a condition fit for Turnips, Mangel, or other crop, almost without any additional labour in the spring, when they were most busy. He did not wish to enter into the vexed question whether Fowler's or Smith's tackle was the better. That was a subject for purchasers to satisfy themselves upon. All he could say, was, that so far as scuffling went, nothing could be superior to what he saw at Woolston. Everybody must keep a certain number of horses upon the farm, for carting dung and other operations, and it might be ploughing the Clover leys for the Wheat crop, whilst the steam-engine was at work upon the stubbles. Steam cultivation was no doubt the most valuable auxiliary ever offered to the farmer, but it could never displace horse labour altogether; and in his opinion the two used conjointly would be much more economical than either used separately. With regard to the relative economy of the fixed and the portable engine, it was clear that the former was preferable for certain operations; but if they could make their farming arrangements so as to work their threshing machines, mills, and other apparatus, by a portable engine, and afterwards take that engine into the field, and apply it to the cultivation of the soil, then he should say that the portable engine was altogether the more economical of the two.

Mr. Howard said, as to skilled labour, that his firm had had some experience with steam cultivators, having started some 70 or 80 sets, and they had never experienced any difficulty in finding men enough on a farm sufficiently intelligent to work the machines after two or three days' instruction. He might further mention, that on a farm of the Emperor of the French, he had taken six Frenchmen, and having given them two or three days' instruction, they proved themselves to be perfectly equal to the work. As to the wear and tear of wire ropes, when once they had worn out a rope they would know how to use them; and he undertook to say that the second rope would last three times as long as the first. Everything depended upon how these matters were managed, and nothing in steam cultivation demanded greater care than the wire rope. One important fact which had not been touched upon either by Mr. Wells or the gentleman who had followed was, that the farming of this country had arrived at a crisis in which some other power than horse power was imperatively required. The value of autumn cultivation was now fully known and appreciated, and the question was, not whether the land could be ploughed at as cheap a rate by horse power as by steam power, but whether, seeing that the farmers were offered a valuable auxiliary like steam power, they would not do well to avail themselves of it during a few weeks in the autumn and those other parts of the year when they were the busiest. It was also important to consider whether it would not be an advantage to cultivate with 8 instead of 16 horses, and at the same time have the land in higher condition, and with much better crops.

Mr. Pike (Bedfordshire) said, he should be sorry, on his heavy land, to abandon steam cultivation, and go back to the use of horses. Mr. Smith had told them that he would have horses ploughing the Clover leas; but he (Mr. Pike) differed from him, for he had steam-cultivated his Clover lea also, and had a better plant than any of his neighbours could boast who had ploughed it. Steam cultivation had that evening been compared with horse ploughing; he was prepared to go a step further than that, and place it alongside of spade husbandry, for it left the land in a much better state. He had been asked on one occasion, what he would do in the event of a wet season. Well, the present had not been a very dry one—and he was happy to say that his land did not look a bit worse than his neighbours'. In fact, he thought it was a little better than theirs. The Barleys appeared to be quite as well as when they were cultivated by horses. One of his fields of 50 acres, all strong land, had not been ploughed for two years, and there was not a single furrow upon it.

Mr. J. A. Williams (Baydon, Hungerford) said, he had never yet seen a person who had purchased or hired a steam plough or cultivator, and regretted that he had done so. Mr. Fowler's testimonials showed that every man who had bought one of his implements was satisfied with it, and the same was to be said with regard to Mr. Smith. A friend and neighbour of his, Mr. Richard Stratton, of Broad Hinton, well known as a successful breeder of Short-horns, had recently told him (Mr. Williams) that, with a 12 horse-power engine of Fowler's, he had this spring broken up 200 acres of land, at an average of 7 to 10 acres per day. The soil at Broad Hinton was one of the strongest, stiffest, and wettest that could be met with, yet Mr. Stratton was perfectly satisfied with the implement, for it was utterly impossible that horse-power could have put that land in its present capital condition. After a steam cultivator had gone over the land he considered that the work done was equal to any two operations of ploughing by horses. He was not, however, the advocate of any steam cultivator in particular; having therefore alluded to what one of Mr. Fowler's was capable of doing, he would read a letter which he had received from his friend Mr. Pullen, of Sutton Courtney, who was using one of Mr. Smith's. Mr. Pullen wrote thus:—"Agreeably to your request, I will give you the results of my experience in steam cultivation. I bought my apparatus in the autumn of 1858, which was a very dry one. In fact, my strong land was so hard that I would not plough it with Howard's plough, but the steam cultivator smashed it up, and nearly cleaned the land at one operation; and I think the advantage derived therefrom was nearly equal to the outlay for the apparatus. Another advantage is in the saving of horse labour. I worked on an average 30 horses before I applied steam power, and I have only worked 18 since, and am always forward with my work, which last autumn was of very great importance. The first 100 acres of Wheat I drilled one bushel to the acre, and my Wheat looks as well as it is possible for Wheat to look. While on the contrary my neighbours, who never plant less than two bushels per acre, have not got half a plant, and some are drilling more in with it, and others are ploughing it up and sowing Barley." Now that letter, he thought, "spoke volumes" in favour of the steam cultivator. And there was no doubt that the system, whether it was Mr. Smith's or Mr. Fowler's, which dispensed with the treading of the soil by horses' hoofs, must be a very superior method of culture, as compared with the ordinary practice of horse ploughing. They had seen such work done by the steam cultivator at the Warwick meeting as no practical farmer had ever witnessed before; and last week he was at Mr. King's, at Beedon, near Newbury, a member of the committee of this Club, who was using a steam plough and cultivator that had been put upon his farm by Mr. Plummer, his landlord, as part of the stock, and for which he was paying the latter 10*s.* an acre to cultivate about 100 acres for him. The result was that Mr Plummer was well satisfied with the purchase of the machine; whilst Mr. King was equally satisfied with the character of the work for which he was paying 10*s.* an acre—in fact, he stated that he had never known work done like it. He (Mr. Williams) looked back with pride to the part he had taken in promoting cultivation by steam-power; and he hoped ere long to see the system in operation throughout the whole kingdom.

Mr. Fisher Hobbs.—One point that was worthy of consideration in connection with the subject of steam culture was, whether or not the common steam-engines, generally used for the purposes of threshing and grinding, were of sufficient power to be applied to steam ploughs and cultivators, as had been recommended by the leading makers of those implements in the present day. His own opinion was that they were too weak. Therefore, he did not quite agree with Mr. Howard, when he observed that the farmers would purchase these engines and ploughs; but rather he concurred with Mr. Wilson in the opinion, that if steam cultivation was to become general, as he hoped it would do in autumnal operations, it must be effected by means of joint-stock companies. If the implement makers represented that their portable engines of six or eight-horse power were suitable for the traction of cultivators, all he could say was that they were misleading the farmers, especially if the soil was to be turned up 10 or 12 inches. His own experience, in fact, went to show that there was a deficiency of power in all the steam-engines that had been applied to ploughs and cultivators. He hoped, however, to see the day when a more perfect and efficient instrument would be produced, and one which this Club might recommend with confidence to general adoption by the farmers.

Notices of Books.

Our Farm Crops. Part IX. By Professor John Wilson. Blackie & Son.

The ninth part of this series includes Sainfoin, Vetch, Gorse, and Rye-grass, and gives the same modest but substantial and satisfactory account of each plant's history, species, cultivation, diseases, and produce, as has already been given of the grain and root and forage crops of English agriculture in preceding Numbers. We select for extract a passage on the cultivation of Gorse, although the plant does not possess any general agricultural value in the presence of the better plants which are under ordinary circumstances within the farmer's choice. The following passage describes its cultivation:—

"Gorse may either be sown by itself or treated like the foregoing plants, and sown down with the grain crop. If the former method be adopted it should follow a straw crop, by which ample time would be afforded in the autumn for thoroughly cleaning the land, while the stubble would assist in keeping it loose and open to the winter frosts and rains. If the soil be good enough to render the latter mode desirable, the same precaution should be taken as to the width of rows of the straw crop that have been already recommended. In either case the seed should be deposited by the drill, in rows from 18 to 24 inches apart, and about 1 inch deep. Where a grain crop is taken the rows of the two crops should cross each other at right angles, the harrows and light roller finishing the operation. From 8 to 10 lbs. of seed per acre are sufficient to insure a thick plant; and the latter end of March or beginning of April is the best time for the purpose of sowing.

"The only attention the crop requires the first year is to be kept clear of weeds by means of hoeing; this, where a green crop has been taken, will hardly be necessary, if the land was well prepared and cleaned previous to sowing. The young plants, however, are extremely delicate, and require to be carefully protected from weeds; it is also of great importance that they should not be allowed to be touched by sheep or cattle, as any want of attention to these two points would be sure to be followed by a proportionate failure in the crop. The practice of sowing the crop broadcast is still followed in some districts, chiefly in Wales; it possesses, however, no compensatory advantages, and double the quantity of seed is required, and the difficulty of keeping the crop clear of weeds during its early growth, which is the great obstacle to its success as a crop, is considerably increased. As the crop is intended to be of some years' duration, it is always desirable to have some spare plants to fill up any blanks that may occur in the drills; a small patch should therefore be kept as a seed bed, to furnish the supply that may from time to time be necessary in the field. The blanks should be carefully filled as soon as the winter is fairly over; then the only attention the crop requires during the spring and summer months is that it be kept free from weeds. In the autumn of the second year the plants are sufficiently advanced to give a crop which may be mown with a scythe in the usual manner. After the first cutting, it is recommended by some to cut only every alternate row each year, thus giving each row a two years' growth, and at the same time better access to air and light than if grown and cut down altogether. In this case the crop has to be cut with the hook instead of the scythe; this, however, is but of small importance as regards the labour, as it is desirable not to cut more at a time than sufficient for a day or two's consumption, and the hook will do this as quickly as the scythe. Others, again, consider it best to sow the plants in wider rows, and mow the whole crop every year, as the shoots are more tender, and there is less bottom and dry stems than in the two-year-old plants.

"The great advantage that Gorse offers as a forage crop is the supply it furnishes during the winter, when any succulent green food is extremely scarce, and of course proportionately valuable. Where it is regularly grown for feeding purposes it generally comes into use in November, and lasts until the end of April or beginning of May, when, having flowered and matured its seeds, it becomes less succulent and palatable to stock, and by which time, indeed, the Italian Rye-grass, Winter Vetches, or some other early keep, ought to be ready to take its place."

Agricultural Essays.—No. 2. *Manures.* By Thomas Baldwin, Lecturer on Agriculture, Albert Institute, Glasnevin.

This is another serial work; its author also is engaged in the work of teaching agriculture, and thus now also provides a text-book for his class. Each part is remarkably cheap; and describes a complete subject

The first part was on soils—the second is on manures. Its four chapters refer respectively (1) to the inorganic, and (2) the organic constituents of manures; (3) to the money value of manures, and (4) to farmyard manure. The first discusses in some detail the inconsistencies of Liebig's writings. The labours of Mr. Lawes and other chemists and practical men—the details of the scientific bookkeeping proposed by Dr. Daubeny, in which an account is kept between the demands on the soil of crops and the supplies to the soil of farm dung and other fertilisers—the theory of Lois-Weedon culture—the oft-quoted history of exhausted American soil—all these are described in the first and second chapters of the pamphlet. In the third chapter, on the valuation of fertilisers, Mr. Baldwin discusses the various values put upon the several ingredients of manures, and gives the following instance of a valuation in which a "bone manure" worth 1*l.* 13*s.* 6*d.* per ton had been offered for sale at 7*l.* until exposed by Dr. Hodges. "Its analysis and value may be stated thus:—

	Per cent. composition.	Value of 100 tons.
Water	5.42 × £0 =	£0 0 0
Organic matter	19.98 × 10*s.* =	10 0 0
Ammonia	None	0 0 0
Phosphate of lime ..	13.08 × £7 =	91 0 0
Carbonate of lime ..	9.30 × £0 =	0 0 0
Alkaline salts	29.18 × £1 =	29 0 0
Containing phosphoric acid, equal to soluble phosphate of lime ..	1.46 × £25 =	37 10 0
Sand	23.04 × £0 =	0 0 0
Value of 100 tons		£167 10 0
,, 1 ton		1 13 6
Selling price		7 0 0
Deficit per ton		£5 6 6"

Calendar of Operations.

JUNE.

BERWICKSHIRE MERSE FARM: *June* 11.—During the past fortnight we have had heavy showers, and one or two days of rain from N.E., which has almost entirely suspended operations since the end of May. Previously to that Mangels and Swedes were got in in capital order, even clay soils working quite kindly. Most of the Yellow and White Turnips, however, remain to be sown; and the season is now sufficiently advanced. The Turnip flea made his appearance in due season, but was kept in check by timeous showers. Winter Wheat is a good deal cut up by wireworm, and Winter Beans are slow to recover from their trials. Spring corn is well planted and growing vigorously. Fears were at one time entertained with regard to the hay crop; but these have been set at rest by the late rains, now followed by heat. Pastures, on the contrary, are mostly bare, having been too early stocked. Where they got a fair chance they are thickly planted. At our great fair last week there was a small show of lean stock, and scarce any demand; indeed it was altogether one of the poorest June fairs ever seen. Fat cattle disappeared long ago; and but few fat hoggs remain. Many ewes and lambs are wanting; in favourable circumstances the deficiency may not exceed 20 to 25 per cent. The price of Wheat is firm, and spring corn rather cheaper, but that matters little when few farmers have any to sell. *J. T.*

Notices to Correspondents.

FARM CAPITAL: *P C.* The usual computation is 10*l.* per acre for arable land. Under very vigorous cultivation and consequent need of heavy stocking, a larger sum will be necessary. The cutting and threshing of corn crops must be done by hand if there is no machine for hire; but as regards the threshing, this is a rare case now in England. It is not necessary to drill and machine-hoe the grain crop On a very small farm we would use Sigma's hand-dibble, and save in the seed enough to pay the extra labour the same year.

FOOT ROT: *P P.* Pare away all the dirt and excrescent growth and touch the place with some caustic, as muriate of antimony, which may be applied with a feather; or if a stimulant only be more proper, melt 8 oz of tar and 4 oz. of lard together, and add ½ oz. each of oil of turpentine and sulphuric acid, and apply the mixture after paring the foot.

GIDDY SHEEP: *Mr. Brown, Mereside Hall,* says:—"On opening the head of a sheep after death, it was found to contain a quantity of large grubs, as large as the larva of the cock-chafer, and these were only amongst the brain, which he informed me had eaten nearly half of it away." [We have heard of such an instance before. The eggs are probably deposited in the nostrils, and the maggot finds its way to the brain by the course of the olfactory nerves. *W C S.*]

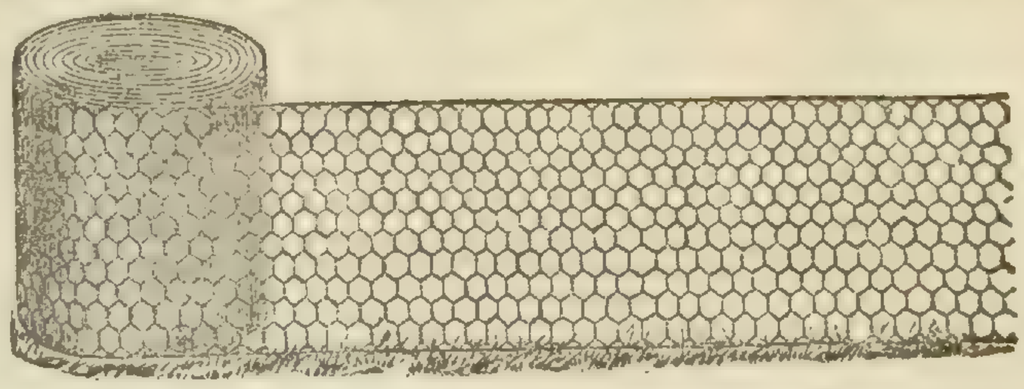
HOW TO BECOME A FARMER: *K L.* You must serve an apprenticeship just as you would to any other art or business.

MANURE FOR BEANS: *Agric.* The most recent experience on this subject is given in Mr. Dove's paper on Substitutes for Guano, published in the Highland Society's Transactions, and referred to in a previous Number. He found guano to exceed all other fertilisers in its effect: 2 cwt. per acre applied towards the end of May, and scuffled in the same day, increased the produce about 7 bushels per acre—worth 8*s.* more than the manure that was used; 3 cwts of superphosphate applied at the same time and at the same cost increased the produce 6 bushels per acre—worth about 5*s.* more than the manure. None of the other manures, sulphates of soda and potash, Rape-cake, and sulphate of ammonia, raised the crop enough to repay their cost. If you had mixed guano and superphosphate half and half, and applied broadcast about 4 cwt. per acre after the Beans were up, say early in April, and horse-hoed them in, you would probably have found it answer; but it would depend of course on the condition of your land.

IRISH PEAT CHARCOAL: *W Von Hanxleden.* It may be considered as a strong box for manure—not a manure in itself. If well charged with manure it will keep it with little waste, and if then applied to the soil it will gradually give up its stores for the use of plants. But the soil is itself a strong box for manure, and improves in this respect according as it is well cultivated. The Rev. H. Moule, of Fordington near Dorchester, who has published a pamphlet on the subject, will tell you that there is no better strong box for manure than a heap of pulverised clay, which will over and over again absorb and render inodorous large quantities of ordure, until it shall become as good as guano for the land to which it is applied. So long as in a well cultivated soil we have the best security against the waste of the manure applied, we do not recommend the purchase of charcoal. If you half char a lot of vegetable refuse it will form a valuable ingredient in a compost—but that may arise in part from your thus rendering available as manure the mineral substances locked up in their substance.

SEEDS: *Correspondents.* Next week

IMPROVED PREMIUM WIRE NETTING.



PRICES PER LINEAL YARD, 24 INCHES HIGH:—

Size of mesh.	Mostly used for	Light. Japanned.	Light. Galvanized.	Medium. Japanned.	Medium. Galvanized.	Strong. Japanned.	Strong. Galvanized.	Extra strong. Japanned.	Extra strong. Galvanized.
2½ inch	Hares, Dogs, Poultry	3½*d.*	4½*d.*	4½*d.*	5½*d.*	5*d.*	6½*d.*	6*d.*	8*d.*
2 inch	Game Netting.....	4*d.*	5*d.*	4¾*d.*	6*d.*	5½*d.*	7*d.*	7½*d.*	9½*d.*
1⅝ inch	Small Rabbits, Hares, &c.	4½*d.*	5½*d.*	5½*d.*	6½*d.*	6*d.*	7½*d.*	8*d.*	10*d.*
1½ inch	Smallest Rabbits.....	6*d.*	7½*d.*	7½*d.*	9*d.*	9*d.*	11*d.*	11*d.*	13*d.*

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland or Ireland.

Any width of Netting under 8 feet made at proportionate prices.

☞ **Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.**

Illustrated Catalogue of Iron and Wire and Ornamental Fencing, Hurdles, Gates, Wire Netting, Garden Rollers and Engines, Fountains, Vases, &c., on application.

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

RANSOMES & SIMS, IPSWICH,

CONTINUE to give their best attention to the manufacture of the most Modern and Improved Agricultural Machinery, including

PATENT AND OTHER PLOUGHS, SUITABLE FOR EVERY SOIL AND PURPOSE.
HARROWS, CULTIVATORS, ROLLERS, AND OTHER FIELD IMPLEMENTS.
HORSE RAKES AND HAYMAKERS.
CHAFF CUTTERS, ROOT CUTTERS, BRUISING AND CRUSHING MILLS FOR CORN, OILCAKE, &c.
STEAM ENGINES, BOTH PORTABLE AND FIXED, WITH PATENT OR OTHER BOILERS.
STEAM THRESHING MACHINES, BOTH PORTABLE AND FIXED, AND SINGLE OR DOUBLE BLAST.
HORSE POWER THRESHING MACHINERY, DRESSING MACHINES, CORN MILLS, HORSE GEARS, &c.

RANSOMES AND SIMS have long been celebrated for combining in their Agricultural Machinery the utmost simplicity, durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture.

ILLUSTRATED CATALOGUES, Post free, on application to the

Orwell Works; or to their London Agent, SHEPPARD RANSOME, 31, Essex St. Strand, W.C

BARNARD, BISHOP, AND BARNARDS,
NORWICH.

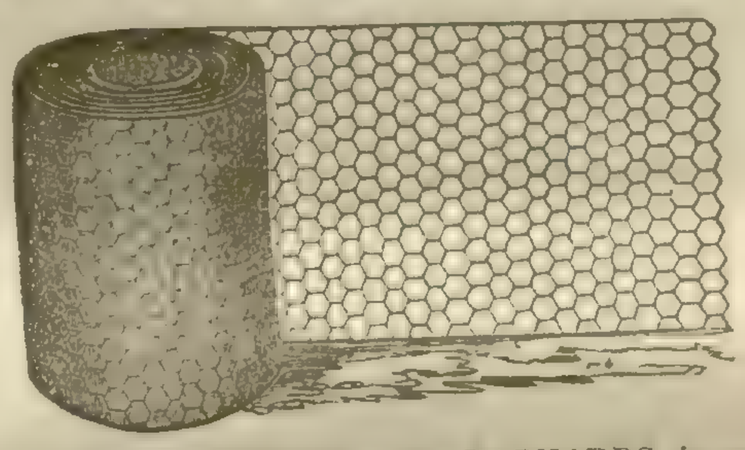
Reduced Prices of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 8 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 10*d.* per yard.

The same with Galvanised Wire Rope, 1*s.* per yard.

Illustrated Catalogues with prices of every variety of Wire Fencing and Wire Netting forwarded free on application.

MACHINE MADE GALVANISED WIRE NETTING.



BARNARD, BISHOP, AND BARNARDS, in consequence of improvements in their machinery for the manufacture of the above article, have been enabled to make a great reduction in the prices.

		Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide		5*d.* per yd.	4*d.* per yd.
2-inch ,,	strong do.	6 ,,	4¾ ,,
2-inch ,,	intermediate, do. ..	7 ,,	5½ ,,
2-inch ,,	extra strong, do. ..	9½ ,,	7½ ,,
1⅝-inch ,,	24 inches wide	5½ ,,	4½ ,,
1⅝-inch ,,	strong, do.	6½ ,,	5½ ,,
1⅝-inch ,,	intermediate, do. ..	7½ ,,	6 ,,
1⅝-inch ,,	extra strong, do. ..	10 ,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 8¼*d.* per yard, 3 feet wide: Galvanised Sparrow-proof Netting for Pheasantries, 2½*d.* per square foot. Wire Netting of every mesh from half an inch to 6 inches.

Wire Fencing and Netting delivered Carriage Free to al the principal Railway Stations.

PRICES REDUCED.

H. J. MORTON AND CO., Galvanised Iron Works
2, Basinghall Buildings, Leeds.

GALVANISED IRON ROOFING

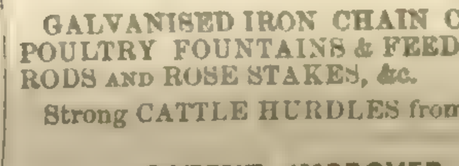
for Farm Buildings and other Roofs; the cheapest, most durable, and neatest Roofing in use; also Spouting at 10½*d.* per yard.

WIRE STRAND CABLE FENCING.

(formed of Twisted Wires like a rope or cable), the strongest cheapest, and neatest fence in use, will resist the largest cattle and will not bend or get out of form by trespassing upon or over. Price, with five lines of the Galvanised Strand, iron main posts, and pronged Standards, 1*s.* 2½*d.* per yard.

This fence is far cheaper than posts and rails, or any kind o. iron fencing; and possesses four times the strength of solid bars. Will not rust nor corrode. Upwards of 1200 miles of this Fencing supplied.

GALVANISED GAME AND POULTRY NETTING.



Galvanised, 24 ins. wide 2 inch mesh, 5½*d.*, 7½*d.*, and 9½*d.* per yard.

Galvanised, 24 ins wide, 3 inch mesh, 4 , 5*d* , and 7*d.* per yard The Netting made any width, and with openings of any size.

GALVANISED IRON CHAIN CAMP STOOLS & CHAIRS, POULTRY FOUNTAINS & FEEDERS, PRONGED DAHLIA RODS AND ROSE STAKES, &c.

Strong CATTLE HURDLES from 2*s.* per yard.

PATENT IMPROVED GAS WORKS.

of all sizes, for the use of Private Houses, Mansions, Railway Stations, Mills, Collieries, Mines, Villages, &c Works from 10 to 500 lights estimated for The works can be entrusted to an ordinary labourer —Apply to

HENRY J. MORTON & Co. 2, Basinghall Buildings, Leeds.

OIL PAINT NO LONGER NECESSARY.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone The Varnish is an excellent substitute for oil paint on all out door work and is fully two thirds cheaper It may be applied by an ordinary labourer, requires no mixing or thinning and is used cold. It is used in the grounds of Windsor Castle, Kew Gardens, and at the seats of many Members of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application

Sold in casks of about 50 gallons each at 1*s.* 6*d.* per gallon at the manufactory, or 1*s.* 8*d.* per gallon paid to any station in the kingdom.—Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, from whom only it can be obtained.

GLASS FOR ORCHARD HOUSES & CONSERVATORIES.

JAMES PHILIPS AND CO. beg to submit their prices of GLASS for the present month.

SHEET GLASS, in Crates, of superior quality, 16 oz. to the foot.

	Best.	Seconds.	Thirds.	Fourths.
	5½d.	3¾d.	2½d.	2¼d.
21 oz.	Best.	Seconds.	Thirds.	Fourths.
	7½d.	5d.	3½d.	3¼d.

Packed in 200 feet cases, 16 oz. £2 2 0
Packed in 300 feet cases, 16 oz. 3 0 0
Packed in 200 feet cases, 21 oz. 2 18 0

ORCHARD HOUSE SIZES, as supplied by us to Mr. Rivers.

		16 oz.	21 oz.
20 in. by 12 in.	Common	14s. 0d. ..	£1 1s.
20 in. by 13 in.	Superior do.	16 6 ..	1 5
20 in. by 14 in.	English Glass	18 0 :	1 9
20 in. by 15 in.			

Boxes included and not returnable.

SMALL SQUARES, per 100 feet box. s. d.

6 by 4	6½ by 4½	7 by 5	7½ by 5½	11 6
8 „ 6	8½ „ 6½	9 „ 7	9½ „ 7½	
10 „ 8	10½ „ 8½ ..	.. ..	.. ..	12 6

HORTICULTURAL GLASS, in Squares, cut to specific sizes.

16 oz. per foot, from 2d. to 3½d. | 26 oz. per foot, from 3d. to 7½d.
21 oz. „ „ 3 „ 5 | 32 oz. „ „ 4 „ 9½

Special prices quoted for large or specific quantities.

AGENTS FOR
HARTLEY'S PATENT ROUGH PLATE GLASS.
PAINTS.

Genuine White Lead, Linseed Oil, Boiled Oil, Turpentine, Putty, Colours, Varnishes, Brushes, &c.

JAMES PHILLIPS AND CO.,

180, Bishopsgate St. Without, London, E.C.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2d. to 3d. per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 35, Soho Square, London, W.

See *Gardeners' Chronicle* of June 2.

GARDEN BORDER EDGING TILES.

ROSHER AND CO beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.

Albion Wharf, Holland Street, Blackfriars, S.E.; and **Kingsland Road Wharf, near the Canal Bridge, N.E.**

N.B. Sketches of the patterns will be forwarded by post on application. Ornamental Flower Boxes kept in stock.

ORNAMENTAL PAVING TILES FOR CONSERVATORIES, HALLS, CORRIDORS, BALCONIES, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs. Also WHITE TILES, highly glazed, for Lining Walls of Baths, Dairies, **Kitchen-ranges, Larders, &c. To be obtained of ROSHER & Co.,** at their premises as above.

FLEMING'S SALTING MACHINE FOR DESTROYING WEEDS ON GRAVEL WALKS, &c.—This most useful Machine has given the greatest satisfaction **wherever it has been introduced, and it is the only effectual** means of keeping Drives and Walks completely clear of Weeds.

Extract from Article "Trentham," in *Gardeners' Chronicle* of January 22, 1859.

"And I would observe in passing from these grounds that the whole of the Grass and Gravel are kept in the most perfect order by the aid of machinery; the former by a Horse Machine **wherever it can be worked, a small hand instrument being used in places of difficult access; the latter is kept in order by a Salting Machine, the invention of Mr. Fleming, and judging from the beautiful condition of the Gravel in every direction, I should say that it was altogether most efficient."**

The Mowing Machines here referred to are SHANKS'.

From *The Field* of April 2, 1859.

"The Salting Machine will effectually destroy the Weeds on Gravel Walks and Drives."

Testimonials with full particulars and prices may be had on application to ALEXANDER SHANKS & SON, Dens Iron Works, Arbroath, Patentees of Improved Mowing, Rolling, Collecting, and Delivering Machine for Lawns, Hot-Water Apparatus Manufacturers, &c.

SHAW'S TIFFANY.—**The cheapest and most effectual material for Shading Hothouses, Protecting the Bloom of Walls, Trees, &c.** SOLD IN PIECES. Per piece.—s. d.

No. 1.—20 yards long, by 38 inches wide 5 0
No. 2.—20 yards long, by 38 inches wide, mineralised to prevent it from rotting 6 0
No. 3.—18 yards long, by 29 inches wide (Double strength) 7 6
No. 4.—18 yards long, by 39 inches wide (Treble strength). 9 0

No. 1 coloured, 2s. per piece extra.

JOHN SHAW & Co., 40, Princess Street, Manchester.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, **his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and — Collier, Esq., of Dartford.**

PROTECTION FROM THE COLD WINDS & MORNING FROSTS

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide .. .. 1s. 6d. per yard run.
Four yards wide .. .. 3s. per yard.

An improved make, 3 yards wide, 2s. 6d. per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1s. 4d. per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

"East Keal, Spilsby, Lincolnshire, April 30, 1858.

"Sir,—I will thank you to send 12 yards (at 1s. 8d. per yard) of your 'Frigi Domo,' from King's Cross Station, to be left at the Firsby Station, Spilsby, Lincolnshire. After using it (since I last got it of you some four years ago). I affirm it to be, incomparably, the best and most lasting thing of the kind ever hitherto manufactured.—I am, yours, &c., Rev. J. SPENCE."

TANNED NETTING FOR FRUIT TREES.—200 square yards for 10s.; 500 yards, 21s; 1000 yards, 47s.: Scrim Canvass for Wall Fruit; Rick Cloths with Poles and **Ropes complete, New and Second-hand; Sun Blinds and** Awnings.—EDGINGTON & Co., 17, Smithfield Bars, London, E.C.

TANNED GARDEN NETTING for preserving Seed-beds, Fruit, Strawberries from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. One yard wide, 1½d.; 2 yards, 3d.; 3 yards, 4½d; and 4 yards, 6d. per yard, in any quantity, may be had at CHAS WRIGHT'S, 376, Strand, W.C.

An allowance to Nurserymen.

NEW TANNED GARDEN NETS, so efficacious for the protection of Fruit Trees, Flower Beds, &c., includes a good sound second-hand Tanned Net at 6s. per 100 square yards, likewise Rabbit, Pheasant, Cricket, Bird, and Fishing Nets of every description, Tents, Marquees, and Rick Cloths—**J. ALLEN, Manufacturer, 10, Ossulston Street, St. Pancras, London, N.W.**

NETTING for Fruit Trees, Seed Beds, Ripe Strawberries, &c. TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3d. per yard, or 100 yards, 20s.; 4 yards wide, 6d. per yard, or 50 yards, 20s. New Tanned Netting, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 5d. per yard; 4 yards wide, 10d. per yard; 6 yards wide, 1s. 3d. per yard; **¾-inch mesh, 4 yards wide, 1s. 4d. per yard.—Can be had in any** quantity of EATON & DAVIES, 6 and 7, Crooked Lane, London **Bridge, E.C.**

RICK AND HAY CLOTHS, HAY ROPES, New and Second-hand NETTING; also BUNTING for Protecting Fruit Trees, SCAFFOLD CORD, and PATENT SASH-LINES for Builders; MARQUEES and TENTS, &c.

JOHN MORISON, 25, Norton Folgate, N.E.

RICK CLOTHS, New, with Poles, Pulleys, and Lines complete.

RICK CLOTHS, a large quantity of Second-hand, in good condition.

MARQUEES AND TENTS of all dimensions.

TENTS, SECOND HAND, from the Crimea.

FLAGS AND BANNERS OF ALL NATIONS.

NETTING (BRITTAIN'S), New and Second-hand, for preserving Fruit from Birds, Frost, &c.

Address—BENJAMIN EDGINGTON, 2, Duke Street, Southwark, London Bridge, S.E. West End Establishment: 32, Charing Cross, S.W.

PATENT WOOL NET 40 inches wide, 8d. per yard; 6 feet 8 inches wide, 1s. 5d. per yard; 10 feet wide, 2s. 2d. per yard. NEW TWINE NETTING, Tanned if required, 1 yard **wide, 2d. per yard; 2 yards wide, 4d. per yard; 4 yards wide,** 8d. per yard. Half-inch MESH ditto, 2 yards wide, 8d. per yard. The ELASTIC HEXAGON GARDEN NETTING, 76 **Meshes to the square inch, effectually excludes birds, wasps,** flies, &c., from fruit trees, flower or seed beds, 4½d. per square yard. TANNED NETTING, 2 or 3 yards wide, 1½d. per yard; 4 or 6 yards wide, 3d. per yard. At W. CULLINGFORD'S, 1, Edmund Terrace, Ball's Pond, Islington, N.

HOTHOUSES FOR THE MILLION.

MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

					£
A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete					30
Do.	do.	40 ft. by 20 ft.	do.	do.	50
Do.	do.	60 ft. by 24 ft.	do.	do.	90

LIST OF PRICES of any size forwarded on application to J. LEWIS.

TO AMATEUR GARDENERS, NURSERYMEN, AGRICULTURISTS, ETC.

VULCANIZED INDIA RUBBER TUBING AND GUTTA PERCHA TUBING FOR WATERING GARDENS.—Brass Hand branches with Stop-cocks and Roses, and every description of Garden Tubing Fittings, sold wholesale and retail by W. R. WOOD, 94, Goswell Road, near the Angel, Islington, London, E.C. Price Lists may be had on application. Please to notice the address, 94, Goswell Road London, E.C.

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THE GUTTA PERCHA COMPANY have the pleasure to acknowledge the receipt of the following

Testimonial from Mr. J. FARRAH, *Gr. to* BOSWELL MIDDLETON JAILAND, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider this tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

Manufactured by the Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their Wholesale Dealers in town and country.

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PRICHARD & COLLETTE, Solicitors for C. H. M'Cormick. 57, Lincoln's Inn Fields, London.—June 16.

AGRICULTURAL AND GENERAL MACHINERY—AS PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and **choice Stock.**

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And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C.

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MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6l.; 19 in., 6l. 10s.; 22 in., 7l.; **including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.**

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N.B. These Pencils are unequalled for marking indelibly on Linen, &c., for which purpose a much finer point is made, at same price, than that contained in the Gardener's Pencil, but this is well adapted for all coarse woven fabrics.

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J. AMADIO'S BOTANICAL MICROSCOPES, packed in mahogany case, with three powers, condenser, pincers, and two slides, will show the animalculæ in water. Price 18s. 6d.—Address JOSEPH AMADIO, 7, Throgmorton St., E.C.

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METCALFE, BINGLEY, AND CO.'S New Pattern and Penetrating Tooth Brushes, Penetrating unbleached Hair Brushes, Improved Flesh and Clothes Brushes, and genuine Smyrna Sponges; and every description of Brush, Comb, and Perfumery for the Toilet. The Tooth Brushes search thoroughly **between the divisions of the Teeth and clean them most effectually—the hairs never come loose. M., B., & Co.'s new and** delicious perfumes the Fairy Bouquet and the Oxford and Cambridge Bouquet, in bottles 2s., 3s. 6d., and 5s. METCALFE'S celebrated Alkaline Tooth Powder, 2s. per box.—Sole Establishment, 130B and 131, Oxford Street, 2d and 3d doors west from Holles Street, London, W.

ROWLANDS' MACASSAR OIL possesses wonderful properties for promoting the growth and improving and beautifying the human hair. It prevents hair from falling off or turning grey, strengthens weak hair, cleanses it from scurf and dandriff, and makes it beautifully soft, pliable, and glossy. Its operation in cases of baldness is peculiarly active, and in the growth of the whiskers, beard, and **moustachios, it is unfailing in its stimulative operation.** For children it is especially recommended as forming the basis of a **beautiful head of hair. The patronage of Royalty and the aristocracy throughout Europe, its introduction into the Nursery** of Royalty, and the numerous testimonials constantly received of its efficacy, afford the best and surest proofs of its merits.—Price 3s. 6d. and 7s. Family bottles (equal to four small), 10s. 6d.; and double that size, 21s.—CAUTION. On the wrapper of each bottle are the words, "ROWLANDS' MACASSAR OIL," &c., in white letters, and their signature, "A. ROWLAND & SONS," in red ink.—Sold at 20, Hatton Garden, London, E.C., and by Chemists and Perfumers.

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Extensive experience, and the recorded testimony of numberless eminent medical practitioners prove that a half pint of DR. DE JONGH'S Oil is equal in remedial effects to a quart of any other kind. Hence as it is incomparably the best, so it is likewise far the cheapest.

Palatableness, speedy efficacy, safety, and economy unitedly recommend this unrivalled preparation to invalids.

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"Dr. Granville has found that DR. DE JONGH'S Cod Liver Oil produces the desired effect in a shorter time than others, and that it does not cause the nausea and indigestion too often consequent on the administration of the Pale Newfoundland Oils. The Oil being, moreover, much more palatable, Dr. Granville's patients have themselves expressed a preference for DR. DE JONGH'S Light Brown Cod Liver Oil."

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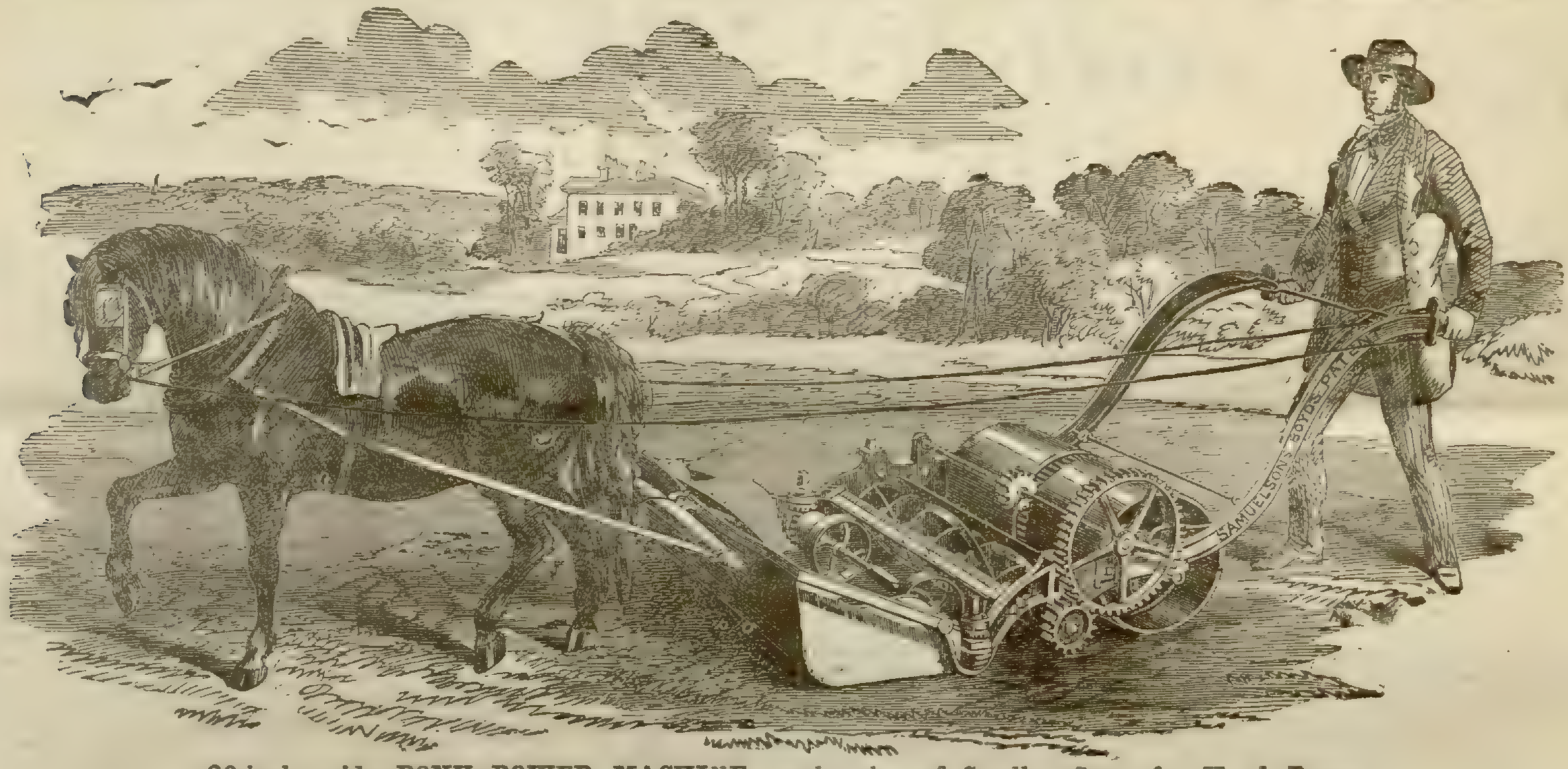

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WITH BOYD'S PATENT IMPROVEMENTS,

CAN BE USED IN WET AS WELL AS DRY WEATHER.

LAST YEAR'S SALES WERE NEARLY A THOUSAND, EVERY ONE OF WHICH GAVE THE GREATEST SATISFACTION

TESTIMONIALS expressing such satisfaction have been kindly sent by some hundreds of the purchasers to the Manufacturer, who will be glad to forward a copy with description and prices of Machines post free on receipt of application.

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BY HER MAJESTY'S ROYAL LETTERS PATENT.

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is now allowed to be the best ever invented, and possesses immense advantages over **all other Upright Tubular Boilers**, in the fact of there **not** being a single **Joint** exposed to the action of the fire. H. O. will undertake to heat the largest Establishments on the most approved and scientific principles by **ONE** of his **PATENT JOINTLESS BOILERS,**

THE ONE-BOILER SYSTEM.

"SIR,—I feel much pleasure in bearing testimony to the efficiency of your **PATENT JOINTLESS TUBULAR BOILER. The long winter just past has been severe enough to test the** merits of any heating apparatus, and I am pleased to assure you that the one you fixed for Sir Charles Knightley, Bart., in October last, has surpassed my most sanguine expectations, and reflects the highest credit on you as the Patentee of so unrivalled an invention. There are at this time 16 houses heated by **ONE** of your **BOILERS,** the heat of each being regulated with the greatest simplicity and facility. **ONE** fire now does the work of eight as formerly required. Independent of the saving of fuel, I must not omit the very great economy in labour. The fire in the most severe frost may be left for **TWELVE HOURS** without any attention, whereas according to the old system a man was obliged to be up the greater part of the night. I have never seen or heard of any **BOILER** which would bear the slightest comparison with it, and wherever it may be used it cannot fail, in my opinion, to give the most perfect satisfaction.

"Mr. Ormson, June 12. "Yours respectfully, "JOHN BROWN, Gardener to Sir C. Knightley, Bart., Fawsley Park, Daventry."

Horticultural Buildings of all sizes and descriptions Manufactured by Steam-Power Machinery. Lowest prices and best materials. Plans, Specifications, and Estimates free on application.

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STANLEY BRIDGE, KING'S ROAD, CHELSEA, S.W.

ROYAL BOTANIC GARDENS,

REGENT'S PARK, N.W.,

WEDNESDAY, JUNE 20, 1860.

LIST OF AWARDS.

EXTRA GOLD MEDAL.

To Mr. T. Whitebread, Gr. to H. Colyer, Esq., Dartford, Kent, for 16 Stove and Greenhouse Plants

To Mr. R. Bullen. Gr. to J. Butler, Esq, Woolwich, for 20 Exotic Orchids

LARGE GOLD MEDAL.

To Mr. W. May, Gr. to J. Spode, Esq., Hawkesyard Park, Rugeley, for 16 Stove and Greenhouse Plants

To R. Warner, Esq., Broomfield, Chelmsford, Essex, for 20 Exotic Orchids

MEDIUM GOLD MEDAL.

To Mr. B. Peed, Gr. to T. Tredwell, Esq., St. John's Lodge, Norwood, for 16 Stove and Greenhouse Plants

To Messrs. J. & J. Fraser, Nurserymen, Leyton, Essex, for 12 Stove and Greenhouse Plants

To Mr. J. Green, Gr. to Sir E. Antrobus, Bart., Lower Cheam, Surrey, for 10 Stove and Greenhouse Plants

To Mr. Gedney, Gr. to Rev. W. Ellis, Hoddesdon, Herts, for 20 Exotic Orchids

To Mr. T. Woolley, Nurseryman, Cheshunt, for 16 Exotic Orchids

To Mr. R. Stone, Gr. to J. Day, Esq., Tottenham, for 12 Exotic Orchids

To Mr. E. P. Francis, Nurseryman, Hertford, for 10 Roses in pots

COLD MEDAL.

To Mr. R. Baxendine, Gr. to Haydon Smallpiece, Esq., Millmead House, Guildford, for 16 Stove and Greenhouse Plants

To Mr. Kaile, Gr. to Earl of Lovelace, East Horsley Towers, Ripley, for 10 Stove and Greenhouse Plants

To Messrs. Jackson & Son, Nurserymen, Kingston, for 10 Cape Heaths

To Mr. B. Peed, Gr. to T. Tredwell, Esq., for 8 Cape Heaths

To Mr. M. May, Gr. to J. Spode, Esq., for 8 Cape Heaths

To Mr. Rhodes, Gr. to J. Philpott, Esq., for 20 Exotic Ferns

To Mr. Carson, Gr. to W. R. G. Farmer, Esq., for 12 Exotic Orchids

To Mr. E. Turner, Nurseryman, Slough, for 12 Pelargoniums

To Mr. Nye, Gr. to E. Foster, Esq., Clewer Mannor, Windsor, for 10 Pelargoniums

To Messrs. Lane & Son, Nurserymen, Great Berkhampstead, for 10 Roses

LARGE SILVER GILT MEDAL.

To Mr Page, G. to W. Leaf, Esq., Park Hill, Streatham, for 10 Stove and Greenhouse Plants

To Mr. Carson, Gr. to W. R. G. Farmer, Esq., Nonsuch Park, Cheam, Surrey, for 6 Stove and Greenhouse Plants

To Mr. Page, Gr. to W. Leaf, Esq., for 12 Exotic Orchids

To Mr. Bunney, Nurseryman, Stratford, Essex, for 6 Exotic Orchids

To Mr. Cr[illegible]ss, [Gr. to Lady Goldsmid, Regent's Park, for 6 Fuchsias

To Messrs. Dobson and Son, Nurserymen, Isleworth, for 12 Pelargoniums

To Mr. T. Bailey, Gr. to T. T. Drake, Esq, Amersham, Bucks, for 16 Pelargoniums

To Messrs. A Paul & Son, Cheshunt, 10 Roses in pots

To Mr. Terry, Gr to C. W. Giles Puller, Esq., Youngsbury, Ware, Herts, for 6 Roses in pots

LARGE SILVER MEDAL.

To Mr. Chilman. Gr. to Rev. W. C. Denshire, Ashtead House, Epsom, Surrey, for 6 Stove and Greenhouse Plants

To Mr. Harlock, Gr. to R. W. Nutter, Esq, Wanstead, Essex, for 8 Cape Heaths

To Mr. Page, Gr. to W. Leaf, Esq., for 6 Cape Heaths

To Mr. Green, Gr. to Sir E. Antrobus, Bart, for 6 Orchids

To Mr. C. Turner, Nurseryman, for 6 Fancy Pelargonian

To Mr. Bailey, Gr. to T. T. Drake, Esq., Amersham, for 6 Fancy Pelargoniums

To Mr. Green, Gr. to Sir E. Antrobus, Bart, for 8 Azaleas

SILVER GILT MEDAL.

To Mr. Rhodes, Gr. to J. Philpott, Esq, Stamford Hill, for 10 Stove and Greenhouse Plants

To Mr. Tegg, Gr. to Baron Haunbro, Roehampton, for 6 Stove and Greenhouse Plants

To Mr. Baxendine, Gr. to H. Smallpiece, Esq., for 8 Cape Heaths

To Mr. J. Peed, Gr. to C. T. Gabriel, Esq., for 6 Cape Heaths

To Mr. G. H. Bunney, Nurseryman, Stratford, for 6 Foliage Plants

To Mr. Baillie, Gr. to W. C. Carbonell, Esq, Harrow Road, for 12 Exotic Ferns

To Mr. B. Peed, Gr. to T. Tredwell, Esq, for 12 Exotic Orchids

To Mr. May, Gr. to J. Spode, Esq, for 6 Orchids

To Mr. Cole, Nurseryman, St. Albans, for 6 Calceolarias

To Mr Davidson, Gr. to J. Bishop, Esq., Regent's Park, for 6 Fuchsias

To Mr. Elliot, Gr. to C. Davidson, Esq, Sydenham Hill, for 6 Fuchsias

To Messrs. J. & J. Fraser, Nurserymen, Leyton, Essex, for 12 Pelargoniums

To Mr. Shrimpton, Gr. to A. Doxat, Esq., Putney Heath, for 10 Pelargoniums

To Messrs. J. & J. Fraser for 6 Fancy Pelargoniums

To Mr. James, Gr. to W. F. Watson, Esq., Isleworth, for 6 Fancy Pelargoniums

To A. Rowland, Esq, Rosenthal, Lewisham, Kent, for 6 Roses

To Mr. Terry, Gr. to C. W. G. Puller, Esq., for 25 Cut Roses

To Mr. Carson, Gr. to R. G. Farmer, Esq., for 6 Azaleas

To Mr. Ruffett, Gr. to Lord Palmerston, Brockett Hall, Herts, for a Providence Pine Apple

To Mr. Young, Gr. to C. Baily, Esq., Aberaman Park, Glamorgan, for 1 Queen Pine Apple

To Mr. Bailey, Gr. to T. T. Drake, Esq., for 1 Pine Apple

To Mr. Henderson, Gr to Sir G. H. Beaumont, Bart., Coleorton Hall, for Black Hamburgh Grapes

To Mr. Allport, Gr. to — Akroyd, Esq., Nantwich Cheshire, for Black Hamburgh Grapes

To Mr Bailey, Gr to T. T Drake, Esq, for White Muscadine Grapes

To Mr Wilkinson, Gr. to Lord Lonsdale, Whitehaven Castle, Cumberland, for Frontignan or Chasselas Musqué Grapes

To Mr Drewett, Gr to Mrs. Cubitt, Denbies, Dorking, for Frontignan or Chasselas Musque Grapes

To Mr. Bones, Gr. to J. Barnett, Esq, Solway Hill, Herts, for Frontignan or Chasselas Musqué Grapes

To Mr. Snow, Gr. to the Countess Cowper, for a dish of Peaches

SILVER MEDAL.

To Mr. J. Peed, Gr. to C. T. Gabriel, Esq., Norfolk House, Streatham, for 6 Stove and Greenhouse Plants

To Mr. O. Rhodes, Gr. to J. Philpott, Esq, for 6 Cape Heaths

To Messrs. Rollisson & Son, Nursery, Tooting, for Cattleya Mossiæ spectabilis

To Messrs. Parker & Williams, Nurserymen, Holloway, for Cattleya sp.

To Mr. J. Standish, Nurseryman, Bagshot, Surrey, for Cyathea Cunninghamii

To Mr. J. Standish, for Cyathea Smithii

To R. Warner, Esq., for Cattleya sp.

To Mr. H. Blunt, Gr. to J. L. Craigie, Esq., Chigwell, Woodlands, Essex, for 6 Foliage Plants

To Mr. G. H. Bunney, for 12 Exotic Ferns

To Mr. Chilman, Gr. to Rev. W. Denshire, Esq., for 6 Exotic Orchids

To Mr. James, Gr. to W. F. Watson, Esq., Isleworth, for 6 Calceolarias

To Mr. Young, Gr to R. Barclay, Esq., Highgate, for 6 Fuchsias

To Mr. Windsor, Nurseryman, Child's Hill, Hampstead, for 12 Pelargoniums.

To Mr Parmenter, Gr. to J. W. Taylor, Esq., Highgate Rise, for 10 Pelargoniums

To Mr. Windsor, Nurseryman, for 6 Fancy Pelargoniums

To Mr. Tandy, Gr. to E. Saunders, Esq., Fair Lawn, Wimbledon Park, for 6 Fancy Pelargoniums

To J. Hollingsworth, Esq., Maidstone, Kent, for 25 Cut Roses

To Mr. Temple, Gr. to J. Clark, Esq., Dowlais House, Merthyr Tydvil, for 1 Providence Pine Apple

To Mr. Barnes, Gr. to Lady Rolle, Bicton, Devon, for 1 Queen Pine Apple

To Mr. Bray, Gr. to E. Lousada, Esq., Park House, Sidmouth, for 1 Pine Apple

To Mr. A. Henderson, Gr. to the Duke of Sutherland, Trentham, for Black Hamburgh Grapes

To Mr. Henderson, Gr. to Sir H. Beaumont, Bart., for Black Prince Pine Apple

To Mr. Little, Gr. to A. Darby, Esq., Stoke Court, Slough, for White Muscadine Grapes

To Mr. Young, Gr. to Lord Barrington, Becket House, for Frontignans or Chasselas Musqué Grapes

To Mr. Cox, Gr. to Earl Beauchamp, Madreafield Court, Worcestershire, for Frontignans or Chasselas Grapes

To Mr. Little, Gr. to A. Darby, Esq., for a dish of Nectarines

To Mr. Smith, Gr. to H. Littledale, Esq., Liscard Hall, Cheshire, for a dish of Nectarines

To Mr. Henderson, Gr. to Sir H. Beaumont, Bart, for a dish of Nectarines

To Mr. Evans, Gr. to C. Newdegate, Esq., for a dish of Nectarines

To Mr. Frost, Gr. to E. L. Betts, Esq, for a dish of Peaches

To Mr. Saunders, Gr. to Sir H. Meux, for a dish of Peaches

To Mr. Davis, Gr. to J. Dixon, Esq., for a dish of Peaches

SMALL SILVER MEDAL.

To Mr Chilman, Gr. to Rev. W. C. Denshire, for 6 Cape Heaths

To Messrs. Parker & Williams, for Tydæa formosa

To Messrs. Parker & Williams, for Lycænis Haageana

To Messrs. Jackson, for Argyrea choisyana

To Messrs. Jackson, for Meconopsis Wallichii

To Mr. J. Standish, for Rhododendron Criterion

To R. Warner, Esq., for Caladium, sp.

To Mr. G. Young, Gr. to W. Stone, Esq., Dulwich Hill, for 6 Foliage Plants

To Mr. Woolley, Nurseryman, for 12 Exotic Ferns

To Mr. Baillie, Gr. to W. C. Carbonell, Esq., for 12 British Ferns

To R. Warner, Esq., for Correct Labels [Colour

To Mr. Whitebread, Gr. to H. Colyer, Esq, for Arrangement of

To Mr. Lamb, Gr. to Messrs. Thackthwaite, Norwood Green, for 6 Calceolarias

To Mr. Gaines, Nurseryman, Battersea, for 12 Pelargoniums

To Messrs. J. Dobson, Nurseryman, for 6 Fancy Pelargoniums

To Mr. J. Weir, Gr. to Mr. Hodgson, The Elms, Hampstead, for 6 Fancy Pelargoniums

To Messrs. Downie & Laird, Nurserymen, Edinburgh, for 36 Pansies

To Mr. James, Gr. to W. F. Watson, Esq., for 24 Pansies

To A. Rowland, Esq., for 25 Cut Roses

To Mr. Turner, for 24 Cut Roses

To Messrs. J. & J. Fraser, Nurserymen, Leyton, Essex, for 6 Greenhouse Azaleas

To Mr. Bullen, Gr. to J. Buller, Esq., for Collection of Anæctochilus

To Messrs. Ivery & Son, Nurserymen, for 10 Azaleas

To Mr. Carey Tyso, Florist, Wallingford, Berks, for Collection of Ranunculus

To Mr. Bailey, Gr. to T. T. Drake, Esq., for 1 Providence Pine Apple

To Mr. Allen, Gr. to J. B. Glegg, Esq., Withington Hall, Cheshire, for 1 Providence Pine Apple

To Messrs. Weeks, King's Road, Chelsea, for 1 Queen Pine.

To Mr. North, Gr. to Captain Cannon, Ware, Herts, for 1 Queen Pine

To Mr. Williamson, Gr. to Earl Lonsdale, Whitehaven Castle, for 1 Queen Pine

To R. Crawshay, Esq., Cyfarthfa Castle, Merthyr Tydvil, 1 Pine

To Mr. Tegg, Gr. to Baron Haunbro, Roehampton, for 1 Greenfleshed Melon

To Mr. Allen, Gr. to J. B. Glegg, Esq., Withington Hall, Cheshire, for Black Hamburgh Grapes

To Mr. Bones, Gr. to J. Barret, Esq., Solway Hill, Woodford, for Black Hamburgh Grapes

To Mr. Frost, Gr. to E. F. Betts, Esq., Preston Hall, for Black Hamburgh Grapes

To Mr. Tegg, Gr. to Baron Haunbro, Rochampton, for white Muscadine Grapes

To Mr. Kately, Gr. to J. Thorne, Esq., Turret House, South Lambeth, for White Muscadine Grapes

To Mr. Henderson, Gr to G. Beaumont, Esq., Coleorton Hall, Ashby-de la Zouch, for Frontignans or Chasselas Grapes

To Mr. Bartlett, Gr to B. Cotton, Esq., Raynors, High Wycombe, for a dish of Black Cherries

To Mr. Cox, Gr. to Earl Beauchamp, for a dish of Nectarines

To Mr. Masters, Gr. to the Earl of Macclesfield, for a dish of Nectarines

To Mr. Peacock, Gr. to S. Crawley, Esq., Stockwood Park, Luton, for a dish of Nectarines

To Mr Cox, Gr. to Earl Beauchamp, for a dish of Peaches

To Mr Miller, Gr. to Sir W. Smith, Bart., for a dish of Peaches

To Mr Ruffett, Gr. to Viscount Palmerston, for a dish of Peaches

To Mr. R. Smith, Market Gardener, Twickenham, for 2 Dishes of Strawberries

BRONZE MEDAL.

To Mr. Ellis, Gr. to A. R. Dunn, Esq., Pymmes Park, Edmonton, for 6 Cape Heaths

To Messrs. Parker & Williams, for Orchis foliosa [Ferns

To Mr. Lavey, Gr. to E. A. De Graves, Esq., for 12 Exotic

To Mr. J. Elliot, Gr. to Miss Clarkson, Avenue Road, for 12 British Ferns

To Mr. B. Peed, for Correct Labels

To Mr. B. Peed, for ditto

To Mr. Baxendine, for Arrangement of Colour

To Mr. Bragg, Nurseryman, Slough, for 36 Pansies

To — August, Beddington, Surrey, for 24 Pansies

To Mr. R. Marcham, Gr. to E. Oakes, Esq., Rydorp House, Hanwell, for 25 Cut Roses

To Messrs. Lane, Nurseryman, for 24 Cut Roses

To Mr. Gedney, Gr. to Rev. W. Ellis, for Nepenthes Rafflesiana

To Messrs. Lane and Son, Nurserymen, for 6 Azaleas

To Mr. B. Peed, Gr. to T. Tredwell, Esq., for 6 ditto

To Mr. Lakeman, Gr to — Campbell, Esq.,' Grove House, for Cyanophyllum magnificum

To Mr G Smith, Nurseryman, Hornsey Road, for 24 Cut Blooms of Verbenas

To Mr. O Rhodes, Gr. to J. Philpott, Esq., for 1 Queen Pine

To Mr. Young, Gr. to W. Stone, Esq., Dulwich Hill, for 1 Queen Pine [Melon

To Mr. Bailey, Gr. to T. T. Drake, Esq., for 1 Green-fleshed

To Mr Robertson, Gr. to R. Benyon, Esq., M.P., Englefield House, Reading, for 1 Green-fleshed Melon

To Mr. Bundy, Gr. to Countess De Morella, Wentworth, Surrey, for 1 Green-fleshed Melon

To Mr. B. Peed, for 1 Scarlet-fleshed Melon

To Mr. Young, Gr. to Viscount Barrington, Beckett House, Shrivenham, for a Dish of Black Hamburgh Grapes

To Mr Little, Gr. to A. Darby, Esq., Stoke Court, Slough, for a Dish of Black Hamburgh Grapes

To Mr. Drewitt, Gr. Mrs. Cubitt, for Black Hamburgh Grapes

To Mr. G. Taylor, Gr. to C. R. Hanbury, Esq., Barnet, for Black Hamburgh Grapes

To Mr. Henderson, Gr. to Sir G. H. Beaumont, Bart., for a Dish of Peaches

To Mr. Masters, Gr. to Earl of Macclesfield, Sherborne Castle, Isleworth, for a Dish of Peaches

To Mr. Hill, Gr. to R. Sneyd, Esq., Keele Hall, Stafford, for a Dish of Peaches

To Mr. Rawbone, Gr. to — Adderley, Esq., Barlaston Hall, Staffs., for a Dish of Peaches

To Mr. Hill, Gr. to R. Sneyd, Esq., for a Dish of Nectarines

To Mr. Rawbone, Gr. to — Adderley, Esq., for a Dish of Nectarines

To Mr. Cox, Gr. to Earl Beauchamp, for a Dish of Black Cherries

To Mr. Evans, Gr. to E. N. Newdegate, Esq., Arbury Gardens, Nuneaton, for a Dish of Black Cherries

To Mr. Henderson, Gr. to the Duke of Sutherland, for a Dish of White Cherries

To Mr. Clarke, Market Gardener, Twickenham, for 2 Dishes of Strawberries

To Mr. Snow, for a Dish of Figs

To Mr. Henderson, for 1 Box of Hamburgh Grapes

To Mr. Frost, for 12 lbs. of Hamburgh Grapes

To Messrs. Weeks & Son, for 3 Pines in Pots

CERTIFICATE.

To Mr. A. Henderson, Gr. to the Duke of Sutherland, for Bilbergia vittata

To Mr. G. H. Bunney, Nurseryman, for 12 British Ferns

To Mr. Lavey, Gr. to E. A. De Graves, Esq., for 12 British Ferns

To Mr. Woolley, for Correct Labels

To Mr. Woolley, ditto ditto

To Mr. May, for Arrangement of Colour

To Mr. E. Shenton, Nurseryman, Hendon, for 36 Pansies

To Mr. C. J. Perry, Castle Bromwich, for 24 Pansies

To J. Hollingworth, Esq, for 24 Cut Roses

To Mr. Bunney, Nurseryman, Stratford, for Collection of Anæctochilus

To Messrs. Veitch, Nurserymen, Chelsea and Exeter, for Eliocarpus reticulatus

To Messrs. A. Paul & Son, for Collection of British Ferns

To Mr. Kaile, Gr. to Earl of Lovelace, for 6 Azaleas

To Mr. Lamb, Thackthwaites, for 6 Coxcombs

To Mr. Harlock, Gr. to R. W. Nutter, Esq., for 6 Azaleas

To Mr. Henderson, Gr. to Duke of Sutherland, for

To Mr. Davis, Gr. to J. Dixon, Esq, Astle Hall, Congleton, Cheshire, for 1 Pine Apple [Melon

To Mr. Snow, Gr to Countess Cowper, Wrest Park, for 1 Green-fleshed Melon

To Mr. Ruffett, Gr. to Viscount Palmerston, for 1 Green-fleshed

To Mr. Maker, Gr. to Sir W. Bulkeley, Bart., for 1 Green-fleshed Melon

To Mr. Kaile, Gr. to Earl Lovelace, for 1 Green-fleshed Melon

To Mr. Godfrey, Gr. to W. Shepherd, Esq., Herts, for 1 Scarlet-fleshed Melon

To Mr. Low, Gr. to R. Baker, Esq., Bayfordbury, Herts, for 1 dish of Black Hamburgh Grapes

To Mr. Miller, Gr. to Sir W. Smith, Bart., Eardiston, Worcestershire, for Black Hamburgh Grapes

To Mr. Rutland, Gr to Captain Peploe, Garnston Castle, Hertford, for Black Hamburgh Grapes

To Mr. Hannan, Gr. to Earl of Crawford and Belcarres, Haig Hall, Wigan, for Black Hamburgh Grapes

To Mr Smith, Gr to A. Anderson, Esq., Norwood Grove, Surrey, for Black Hamburgh Grapes

To Mr. Sage, Gr. to Earl Howe, Gopsall Hall, Athersham, for Black Hamburgh Grapes

To Mr. Goldsmith, Gr. to Sir W. Farquhar, Bolesdon, Dorking, for 2 dishes of Strawberries

To Mr. How, Gr. to W. R. Baker, Esq., for one dish of Golden Hamburgh Grapes

To Mr. Miller, for Box of Peaches and Nectarines

To Mr. Hammond, for Basket of Hamburgh Grapes

To Mr. Henderson, for Peaches and Nectarines

To Mr. Davies, for Peaches

FIRST-CLASS CERTIFICATE OF MERIT.

G. Smith, Nurseryman, Tollington Nursery, Hornsey Road, Islington, for Calceolaria canariensis

Messrs. Veitch & Son, Royal Exotic Nursery, Chelsea and Exeter, for Aralia japonica

Messrs, Veitch & Son, for Campylobotris regalis

Messrs. Veitch & Son, for Macodes petala

Messrs. Veitch & Son, for Caladium Bellymeii

Messrs. Veitch & Son, for Pteris argyrea

Messrs. Veitch & Son, for Reichardia oculata

(For continuation see next Page.)

FIRST-CLASS CERTIFICATES—*Continued.*

Messrs. A. Paul & Son, Nurserymen, Cheshunt, Herts, for new Tea-scented Rose President
Messrs. Veitch & Son, Royal Exotic Nursery, Chelsea and Exeter, for Rhododendron edanitosum
Messrs. Veitch & Son, for Chelanthes Bersgiana
G. W. Hoyle, Esq., Reading, Pelargonium Rosa Bonheur
G. W. Hoyle, Esq., for Pelargonium Beauty of Reading
To Mr. Nye, Gr. to E. Foster, Esq., for Pelargonium Rosa Bonheur
To Mr. Hoyle, for Pelargonium Alpha
To Messrs. Rollisson, for Pelargonium King of the Belgians

SECOND-CLASS CERTIFICATE OF MERIT.

Messrs. Veitch & Son, Royal Exotic Nursery, Chelsea and Exeter, for Aralia japonica foliis variegatis
Messrs. Veitch & Son, for Lomaria Banksii
Messrs. Veitch & Son, for Microlepis hirsuta
Messrs. Parker & Williams, Nurserymen, Holloway, for Rhipidapris peltata
To Messrs. Rollison, for Pelargonium Prince Consort
Mr. Winsor, Gr. to G. A. Crawley, Esq., Fitzroy Farm, Highgate, for Seedling Geranium Snowflake
Mr. Standish, Nurseryman, Bagshot, Surrey, for Lomaria discolor
Messrs. Veitch, Royal Exotic Nursery, Chelsea and Exeter, for Imatophyllum cyrtanthiflorum
To Messrs. Dobson, for Pelargonium Volunteer
To Messrs. Dobson, for Pelargonium General Garibaldi
To E. Beck, Esq., for Pelargonium Victor

NEW AND CHOICE PLANTS.

JOHN STANDISH, in offering the following Plants can assure his customers that they are now in fine condition for sending out:—

MYOSOTIDIUM NOBILE, or Antarctic Forget-Me-Not, each 31*s.* 6*d.*—This plant, from the Chatham Islands, is one of the most remarkable that has been introduced for some years, being totally distinct from all others. It has large thick leaves, 8 or 9 inches across, of a dark glossy green, and sends up magnificent trusses of bloom of the most beautiful blue and white, similar to a Forget-me-not, but of a giant form. A Drawing of it is published in Curtis's "Botanical Magazine" for September. A description taken from the above is also published in the *Gardeners' Chronicle* of Sept. 17, 1859, wherein Dr. Lindley says:—"This is the handsome perennial provisionally named Cynoglossum nobile by Dr. Hooker in our last year's Volume, page 240. It is quite deserving all the encomiums that have been passed upon it."

RHODODENDRON NUTTALII.—The largest flower of all yet known, having 11 flowers in a truss, each flower being 6¼ inches across. Seedling plants, 3 inches high, 7*s.* 6*d.* each; 60*s.* per dozen; or 20*l.* per 100.

PHLOX MRS. STANDISH.—The purest white, with a large red eye, 5*s.* each. Also a large collection of the finest kinds which J. S. has shown during the last summer and in every case received the First Prize. Plants from 1*s.* to 2*s.* 6*d.* each.

A CATALOGUE containing a full description of the best Hardy Plants in cultivation will be forwarded on application to

The Royal Nursery, Bagshot.

THE THIRD GRAND NATIONAL ROSE SHOW will be held, under distinguished patronage, in the Crystal Palace, on THURSDAY, July 12. Schedules may be obtained from the Rev. S. REYNOLDS HOLE, Hon. Sec., Caunton Manor, Newark, Notts; and from Mr. W. HOUGHTON, Crystal Palace. Further particulars will be published.

The Gardeners' Chronicle.

SATURDAY, JUNE 23, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	June 26	Horticultural (Election of Fellows and Ballot for Plants) South Kensington	1	P.M.
THURSDAY,	— 28	Horticultural (Floral Committee) at St. Martin's Place	1	P.M.

WE find that we have very unwittingly offended Admiral DUNCOMBE by our observations on the present state of the gun-boats at Portsmouth. We beg however to assure him that we had not the slightest intention of making any personal allusion whatever, nor did we know by whom the remark to which we adverted, and which was generally current, was in the first instance made. Our object was simply to give a true and unprejudiced account of their *present* condition, and to make such inquiries as may furnish a mass of tolerably certain information to our readers on a matter of great public interest and importance, and one by no means unconnected with the especial objects of this Journal.

Decay is inherent in the constitution of all organic substances. It depends upon circumstances alone how long that decay can be arrested, for come it must at last.

As regards the important question of ship-building, it is necessary, before we attempt to show how it can in any case be arrested, to state the condition under which decay actually takes place, for even with the very best materials and the utmost care, serious decomposition of the wood will often occur.

This may be brought about by two principal causes, viz., external or internal chemical agents and parasitic Fungi. How far the action of the last may accord with the mere chemical effects which take place when no Fungi are present, has not hitherto been ascertained.

The most obvious cause of chemical decay is a want of proper seasoning of the wood. Every one knows that wood consists of two parts, distinguished by the name of sap-wood and heart-wood. Supposing that the whole is perfectly healthy the main distinction is that the cells of which the latter is composed are far more compact and contain less fermentible matter than those of the sap-wood.

The cells of the sap-wood become heart-wood by the repeated deposit of layer after layer of lignine within the primary sac of cellulose. In this process the cavity of course becomes gradually less, and at length nearly vanishes, and there is very little left behind which, if once thoroughly dried, can easily pass into a state of decomposition by the agency of any putrefactive ferment. Whatever does exist has been absorbed into the substance of the lignine, and so incorporated with it as to give way with comparative difficulty.

Precisely the contrary condition exists in the sap-wood. The walls of the outer cells are still soft and pappy, and as we advance to the centre, though some consolidation has taken place, matters are in such an unstable condition, that the balance is soon deranged, and decay rapidly ensues. Such cells are morever in a peculiarly favourable condition for the development of Fungi, and on both accounts, therefore, every particle of sap-wood should carefully be removed in all timber employed in ship-building.

But even supposing this to be done carefully, though the immediate mischief may not be so rapid, if the timber be not seasoned, the heart-wood itself will still be liable to decay. So long as life exists in the cells there is a certain quantity of moisture left behind, which is favourable to chemical change under untoward circumstances. Without moisture, indeed, it is quite certain that absolute decomposition, except, as it appears, from actual contact with wood already decaying, will not take place. The only difference will be that the change will be slower, though in the end not the less sure. In the usual mode of felling timber when the sap is most active, it might be supposed that decay would be accelerated; but though a higher price is still given for winter-felled timber, experience does not show that it is less subject to natural decay than spring-felled timber when properly seasoned. The more perfectly all natural moisture is driven from the substance of the timber, the more secure it is from decay; but if water gains admission, or there is a complete absence of ventilation, even the best materials will fail.

It is well known that where timber becomes wet, and is then exposed to the action of the air, a kind of combustion takes place known to chemists under the name of eremacausis. The oxygen of the air it should seem combines with the hydrogen, and carbonic acid is given off from the residue, and this constantly recurs till the texture of the wood is destroyed and the crumbling mass left behind has assumed a different chemical condition, containing in proportion a greater quantity of carbon than the original wood.* It is this evolution of carbonic acid which makes damp rooms and marshes so unwholesome, and consequently the matter is of scarcely less importance in a sanitary than an economical point of view.

How far the decomposition which takes place in unseasoned wood arises from the fermentation of albuminous or other fermentible matter contained in the cells, or from the mere presence of internal moisture, or whether the two conditions of decay may not exist together has not at present been ascertained. Certain it is that in such maladies as the Potato murrain, the substances produced in the decomposition of the saturated cells is much the same as those which occur in eremacausis; and as in those cases where Fungi are evidently the agents, the results are scarcely distinguishable from those in which such agency cannot be admitted, there is good reason to believe that there is more identity than is usually supposed. One circumstance attending this process is worthy of notice—that where timber affected with eremacausis comes in contact with sound timber the disease spreads, though the sound timber may never have come in actual contact with moisture, exactly as combustion extends from one beam to another. GREGORY explains this by the theory that the effect is due to "the communication of motion from the particles of the decaying body to those of the other substance, which motion, as in the case of fermentation, overturns the existing balance of affinities, unstable as it is in organic compounds, and gives rise to the formation of new products."

Though water may not be actually admitted so as to come in contact with the timber, the mere presence of damp pent-up air may have precisely the same effect, and it is on this account that ventilation is so important in all questions respecting the prevention of dry rot.

Where moist wood is not in contact with the air, as for example where it is isolated by a thick coat of paint, or in its natural position by the bark, a different effect is produced. Instead of presenting a brown hue the wood becomes nearly white, and contains less carbon in proportion than it did before. This condition is often known under the name of touchwood, but we believe that the substance which FARADAY calls touchwood in his six lectures, and attributes to the effect of ozonised oxygen, is the brown matter with which all shipwrights are so familiar as the product of dry and wet rot.

This white condition above mentioned is undoubtedly often produced by Fungi, but every country carpenter knows that if green wood is used for gate posts and at once painted, the centre is almost sure to turn into touchwood.

The consideration of Fungi as the cause of dry rot must be reserved for another article.

Now that every one is talking of our unusually wet spring, the following return of rainfall in the Garden of the Horticultural Society will be read with interest:—

January	2.18 inches	
February	1.20	
March	1.63	
April	0.95	
May	3.04	= 9.00 to the end of May: about 1 inch short of the average for the 5 months.
June, to 17th	3.26	
	12.26	

This shows that after all we were not last Sunday much more than an inch above the average, and that February, March, and April were less wet than seems to be generally supposed.

WE observe with unfeigned satisfaction that the Committee of the GARDENERS' BENEVOLENT INSTITUTION have at length determined upon a course which we have for many years felt it a duty to press upon their attention. Nothing could possibly be more injurious to the interests of the charity than the system of placing on the same level candidates for pensions who had for years assisted the institution by their annual subscriptions, not unseldom spared with difficulty from scanty incomes, and those other candidates who had never subscribed a shilling. So long as so pernicious a rule was observed there was no personal inducement to a gardener to contribute his annual guinea; for it availed him nothing. And the consequence has been that the institution, although appearing to be most honestly and carefully managed, has by no means received that general support which another course would, we think, have secured to it. The motto of the Gardeners' Benevolent should be "We help those who help others." If instead of words like these the public reads, "We help those who have helped nobody," the question naturally arises whether the last, however philanthropic, is a sound principle of action in a charity with very limited funds and very extensive demands upon it. In our opinion no one ought to be placed among the candidates who has not been previously included among the annual subscribers.

In the circular lately issued to the supporters of the Charity the Committee say that "in consequence of JAMES WELLS, of Bramshaw, Lyndhurst, Hants, aged 73, being in distress, having subscribed to the Society for upwards of 15 years, and in every way complied with the regulations of the Society, he will be placed on the List of Pensioners without an Election."

This is acting like men of business, and cannot fail to have an important effect upon the funds. But we should like to see the principle carried still further.

One of the most prosperous, because best managed associations of this kind is the Job and Post Masters' Provident Fund (established in July, 1839). It has very considerable funds, a large income, and is able to render most important assistance to its distressed members; *but to no one else.* In order to become a member, a "fine," varying in amount we believe according to age, must be paid on admission, and also an annual subscription, or what is declared by the rules to be equivalent to it. By this means, aided by donations and bequests, an income sufficient for the

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* Supposing the formula of woody fibre to be—

C_{36}, H_{22}, O_{22},

the oxygen of the atmosphere combining with the hydrogen will abstract H_2, and the carbonic acid separated will be CO_2; so that the compound left behind will be

C_{35}, H_{20}, O_{20},

and if the same process be repeated we shall have

C_{34}, H_{18}, O_{18},

C_{33}, H_{16}, O_{16}, &c., so that the relative quantity of carbon is constantly increased. See GREGORY'S Organic Chemistry, p. 391.

purpose is readily obtained. And, although the association in question is necessarily in many respects different from one for the aid of gardeners, nevertheless its rules would furnish hints that might be advantageously taken by the Committee.

We have heard that one reason which has prevented any such rules as those we have suggested from being adopted is that to do so would be to convert the association into a Benefit Society. We do not know how that may be; but *if it is for the advantage of Gardeners* that it should be converted into a Benefit Society or assume any other form, the sooner the change is effected the better.

We observe that as Lord CAERNARVON takes the chair at the annual dinner on the 27th inst., there is an early opportunity of saying something either for or against the views here expressed. If we are wrong we shall be happy to stand corrected; if right the Committee will be supported by others in the course of action they may in that case find it desirable to follow.

WE have received from Messrs. BUTLER & M'CULLOCH another specimen of the EMPRESS EUGENIE CUCUMBER mentioned in our last. Although still perfectly fit for table it weighed 4 lbs., was 2 feet 3 inches long, 8 inches round on an average, and 6½ inches round just above the stalk. When cut it was found to be extremely good, and so nearly solid that scarcely any space remained for seeds. It was very much like the magnificent Cucumbers exhibited by Mr. ROBERT CRAWSHAY before the Horticultural Society in 1858, although neither so heavy nor so long. It is very remarkable that all the large Cucumbers of which we have authentic records were white-spined.

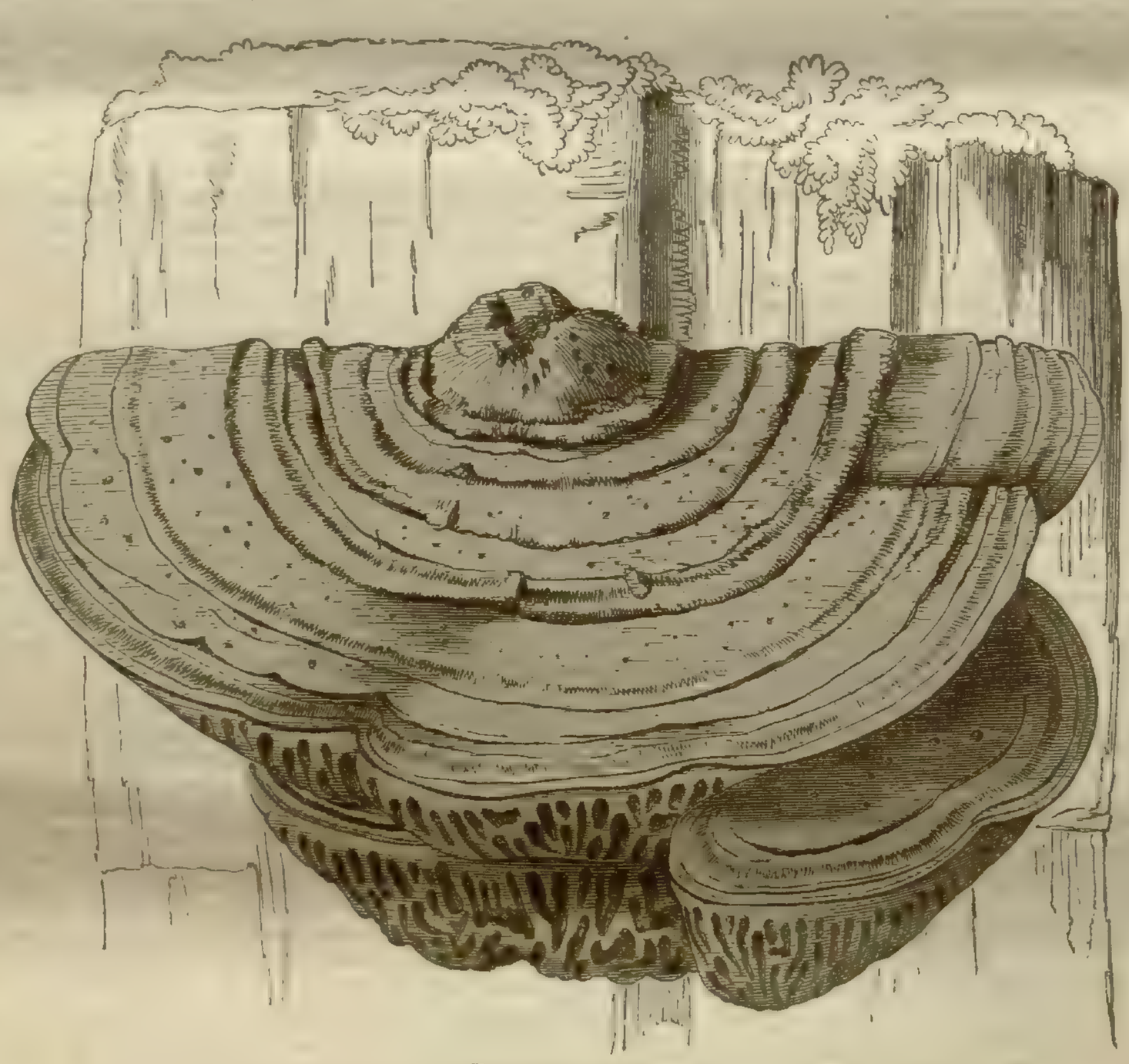
MYCOLOGY.—No. XXI.

DÆDALEA QUERCINA, *P.*—The general notion of Fungi is that they are soft evanescent productions, which spring up in a night and vanish almost as rapidly. This may be true enough of many, but there are some which vie with wood in hardness and last for some years. A few of these attain a very large size. One, for example, *Polyporus fraxineus*, which grows at the foot of old Ash trees, sometimes reaches a yard in diameter, and we have just seen two specimens attached together to the base of a tree which fell a sacrifice to the late heavy gales, of nearly equal size, which must have required a considerable time for their development. Their texture is like that of hard Cork, or even denser towards the outer surface; and the subject of the present notice, though not acquiring such dimensions, is of equally firm consistence.

Dædalea quercina occurs on old Oak stumps or palings, and is, as far as our own experience goes, strictly confined to the genus Quercus, though it occurs on more than one species. It is usually from 4 to 6 inches across, nearly flat above but rugged and marked with obscure concentric bands, and of a pallid wood colour. Beneath it is convex, and consists of stiff rigid waved and sinuous pores, the walls of which are variously toothed or broken, and are nearly of the same colour with the pileus. In an early stage the fructifying surface is even, becoming gradually pitted like a honeycomb, and then by the breaking up of the walls of the cells as they are gradually developed and elongated, the apertures gradually lose their rounded form and become waved. There is not the least disposition to present the appearance of regular gills radiating from a common centre, and the relation therefore is clearly rather to the genus *Polyporus* than to the Mushroom tribe. Indeed *Dædalea* differs from *Polyporus*, rather in the more constant development of sinuous pores connected with their compact texture than in any essential character, for many species of the latter genus occasionally present pores quite as sinuous, and the walls as decidedly broken up. The genera of Fungi, especially of the more noble kinds, run into each other by such nice shades of difference that it is quite impossible to define them very strictly, and specimens of the genus *Leuzites* which we shall hope to illustrate hereafter, and which bears almost precisely the same relation to *Agaricus* that *Dædalea* does to *Polyporus*, are found occasionally which it is very difficult to distinguish generically. *Dædalea quercina* sometimes occurs without the slightest trace of a pileus, spreading for several inches over the wood, and consisting of nothing more than pores, and if the surface on which such specimens grow is perpendicular the walls lie like tiles one upon the other and present a very singular appearance.

Dædalea quercina is, we believe, applicable to no especial use; the substance is too thin to make it available for tinder. It is, however, a very pretty object, and when occurring on the side of a shrubbery walk, as we have seen it in Wales, it is really a striking ornament.

Occasionally the spawn of this species increase to an enormous extent without producing pilei, and is then not distinguishable from the production known under the name of *Xylostroma giganteum*, which is so universal in vessels affected with dry rot. This substance is not however entitled to a generic name, being nothing more than mere spawn. We have once met with an instance in which *D. quercina* was developed in a hothouse to such an extent as to destroy the main timbers very rapidly, but this is a very uncommon occurrence. There is not as far as we know the slightest evidence to prove that, though so strictly connected with the Oak, it has anything to do with marine dry rot, the *Xylostroma* in that case producing a totally different Fungus. *M. J. B.*



DÆDALEA QUERCINA.

(Copied by permission from Greville's Scottish Cryptogamic Flora.)

THE EDUCATION OF GARDENERS.

I AM glad to see that attention has been so prominently directed to the education of young gardeners, for if my experience of the last few years is to be relied upon I fear there is ample room for more spirit and enthusiasm to be infused into the rising generation. Within the last four years I have on four different occasions had to send into the London market for a foreman, and on each occasion have experienced considerable difficulty in getting a suitable man. In the spring of last year my foreman having left me, I applied to one of the largest London firms to send me a man in his place, and I fixed my standard of qualification high in order that I might get a man worthy of being pushed forward in the world. I therefore required that the man should not only have a good general knowledge of gardening, properly so called, and new ground in particular, but that he should be able to measure solids and superficies, and keep such memoranda of the work of a large staff of men as were necessary for a correct weekly pay sheet. This was no great requirement, but strange as it may seem the head of the firm replied, "I could send you several good garden foremen, but out of more than thirty young gardeners on our books there is not one that will venture on the land and timber measuring." This I think shows something rotten in the state of horticultural education, for certainly with the national schoolmaster in almost every parish, and the parade of Mechanics', Literary, Self-Improvement, and adult educational Societies, something better ought to be forthcoming. Other sources were tried with the same result, and hence I was obliged to fall back upon a young man who had served me in the same capacity before.

Being, as I have been for more than 20 years, busily employed on new ground-work, it is singular how very exceptional are the cases in which you meet with a man capable of carrying out work of that kind in a proper manner, and I can safely say that in my 20 years' experience I have not met with a dozen young gardeners who at the time they came to me could be considered good workmen. This arises in a great measure from their commencing their education at the wrong end; they get into the stoke-holes and houses as boys, and with an occasional morning's mowing, or a spell at the wall-trees, they work their way until they get sent out as foremen or under-gardeners. Now many of these men are clever at growing a big Fuchsia or a Balsam, and expert in putting a deformed Heath or Azalea on crutches. But ask them to put in the levels for a piece of ground-work, or lay down a plan to scale, and they are completely at sea. True, many have not a chance of seeing ground-work carried out, and others think such work beneath their notice, but it may be laid down as a rule that a man who is not thoroughly up in ground-work, and upon whose eye harsh lines do not grate, as much as discordant notes would upon the musical ear, will never make a clever and artistic gardener. He may plod through the world as hundreds have done before him, but he will never, as poor Loudon used to say, see things "with the eye of an artist." Nor is this in all cases to be regretted, for a man so circumstanced will the more easily bend to external whims and fancies, and thus secure repose, and perhaps applause, where better things might be expected of him.

You have very justly remarked that the growth of specimen plants has been the all-absorbing attraction for some years back; the strictly practical has been in the ascendant, and so far as my own experience extends I fear first principles and scientific deductions have been unnoticed, for if you ask a man why he does a certain thing he will tell you, "Because I see So-and-so treated his plants in that manner," and not because reason, experience, and natural induction had led him to conclude the method he was pursuing was the right method. The laws of horticultural science are not inscrutable, but happily the science of cultivation is now reduced to a code of rules which cannot be disregarded without the natural penalties resulting. Practice, with science, must be the rule, and gardeners of the rising generation who cannot strike out a track for themselves, must not expect to keep pace with the times in which we live.

Great as has been the progress of education in this country of late years, it is still doubtful whether it does not require a more practical and generally useful direction. There is still a sad want of knowledge of common things, even among those considered educated. Last autumn my son, a youth of 15, in passing through a field of Clover noticed several patches of the Clover Dodder, and being on his way to a cricket match he took a handful of the plant with him. Strange however to say, though the company consisted of farmers and their sons, and some who had travelled the country for information, there was not a man who either knew the plant or had heard of its destructive influence in the Clover field. I warned the tenant of the loss he would sustain if he did not destroy the plant at once, but with true west country simplicity he only smiled and replied, "thick thing ul do no harm," and it was not until I assured him of the "action" that he would subject himself to if he sold the seed, and the resulting crop was destroyed by Dodder, that he was induced to destroy the weed by burning, which by the way is the most effectual way of getting rid of it in the Clover field. First mow and dry it, and then with the aid of a few trusses of straw burn and char the whole surface of the parts of the field affected.

Not long ago I saw a young farmer with a gang of

weeders busily employed in a Wheat stubble, hand-pulling the annual Milk Thistle, he no doubt thinking it was the perennial kind, but a little knowledge of common things, more especially of the rudiments of botany, would have taught a different lesson. It is a great pity, I might say a national calamity, that the example which Professor Henslow has so worthily set is not more generally followed in our national and village schools, and if, without entering into the *minutiæ* of botanical arrangement our children were only taught to recognise the poisonous plants of our native flora, it would be a great and sanitary gain. But it may be asked, what has this to do with the education of gardeners? I reply it has everything to do, for as most of them make their way to the garden through the village school, so it is important that they should be properly instructed at the commencement of their education. Indeed the rudiments of natural science must be more attended to in our scholastic arrangements, for it is abominable that a man should be a wanderer on the face of the earth all his natural life, and yet be ignorant of its formation or the character of the plants and animals which inhabit it.

I now come to "Linager's" proposals as noticed in your leader of the 9th ultimo, and I think they fall short of what ought to be expected of a youth or young man at the ages stated. Writing, spelling, arithmetic and land surveying, ought certainly to be learned before a boy takes up gardening as a calling at all; indeed I should want to add geography, botany, plain and free hand drawing, and mapping and plotting as connected with land surveying. A youth ought to be able to pass this examination before he is 18 years of age. At 21, the pass examination, I should want, in addition to skill in cultivation and "naming plants at sight," a knowledge of structural and physiological botany, geology, the rudiments of natural philosophy, and a knowledge of the natural sciences. The most difficult part for examination will be "practical skill." Knowing something of cultivation I should not like to pass an opinion upon a man's qualifications without at the least a six months' inspection of his proceedings, and that during the winter months, when his knowledge and skill would be the most taxed.

> "Words learnt by rote a parrot may rehearse,
> But talking is not always to converse."

Many men can talk glibly on horticultural matters, but are sad bunglers at the practical application of their theories; indeed, it has been remarked in these pages, the best writers are not always the best cultivators. I once heard a gentleman who had employed a most voluminous writer remark, "Set a man on horseback and tell him to ride till he finds the worst gardener in England and I will guarantee he will never stop until he comes to ——," the writer in question. It is for this reason that I should have men practically tested, so that the smooth-tongued and ready-witted should not steal a march upon their hard-headed and hard-handed but less loquacious brethren.

What "Linager" proposes as an examination for honours has been partly taken up by my preliminary and pass scale of examination, but still there would be no objection, indeed it would be very desirable that Vegetable Physiology, Geography, and Climate, as connected with cultivation, should be duly studied; to these I would add Geology, Chemistry, Architectural Drawing, and the principles of Construction. Mathematics would be indispensable to this scale, but as for "Pomology, naming fruits at sight," I do not regard it as a very indispensable qualification. The varieties of fruit really indispensable to the supply of a gentleman's table are not legion, and if I insisted upon an extended knowledge of fruits, it would be rather to enable a man to know "what to avoid," than for any other purpose, for it is a sad misapplication of responsibility to plant collections of fruit trees, half of which frequently when they come to maturity or a bearing state are found to be worthless.

I have thus indicated what I should regard as indispensible qualifications for those young men who aspire to the first rank in the future of horticulture. It may be thought that I require too much, but this knowledge is worth pursuing for its own sake, and when attained will be found a much sweeter solace for leisure hours than the attraction of games of chance, the pipe, the pot, or the grog shop. Knowledge of this kind, abilities thus vouched, may not in all cases command their just reward, but this is a matter for consideration before a youth commits himself to the spade. No doubt in many other walks of life, the same ability will command a much more remunerative price, but gardeners as a body follow their calling from a love of gardening, and I believe its progress of late years is more attributable to that one fact than to any innate love of it in the majority of their employers. It may be said that I require in others abilities which I do not possess myself; true, but it is the want which I have felt, and daily feel of the qualifications which I have enumerated which makes me insist upon a high standard for the rising generation. The young and enthusiastic gardener who pursues his calling from a love of it must not be deterred from his object by the world's coldness, but he must console himself with a scrap from Shakespeare—

> "'Tis not in mortals to command success:
> But we'll do more, Horatio! We'll deserve it."

W. P. Ayres, Orchardleigh Park, Frome.

ON THE ART OF PERFUMERY, ITS HISTORY AND COMMERCIAL DEVELOPMENT.

BY EUGENE RIMMEL.

[Abridged from the Journal of the Society of Arts.]

(*Concluded from* p. 553.)

There are now two processes in use for making scented pomades and oil; one is by maceration and the other by absorption. The former is used for the less delicate flowers, such as the Rose, Cassia, Orange-flower, Jonquil, and Violet, which can bear a tolerable degree of heat without losing their scent. A certain quantity of grease is placed in a pan fitted with a water bath and brought to an oily consistency. Flowers are then thrown in and left to digest for some hours, after which they are removed and others are put in, and so on for two or three days, until the grease is quite saturated. It is then taken out and pressed in cloth bags. The process of absorption, called by the French *enfleurage*, is chiefly confined to the Jasmin and Tuberose flowers, but is sometimes applied to the Cassie. It consists of a series of square glass frames, covered with a thin layer of purified grease, in which ridges are made to facilitate absorption. Fresh-gathered flowers are strewed on that layer, and renewed every morning as long as the flower is in bloom, and by that time the grease has acquired a very strong flavour. The same process is used for oil, but the frames instead of a glass have a wire bottom, over which is spread a thick cotton cloth soaked in Olive oil. Flowers are laid on in the same way, and the cloths submitted to a strong pressure to extract the oil when sufficiently impregnated. The frames are piled up on each other to keep them air-tight.

The three principal towns where this manufacture is carried on are Grasse, Cannes, and Nice. From the details furnished by M. Pilar, one of the first manufacturers of Grasse, it appears that there are about 100 houses engaged in that occupation, and in that of distilling essential oil, materials for which abound in the neighbourhood. Out of that number 70 are in Grasse, which may be called the head-quarters of the trade. The following are approximate numbers and values of the flowers consumed in that locality for manufacturing purposes:—

kilos.	lbs.		£
800,000 or	1,760,000	of Orange flowers, worth about	32,000
250,000 ,,	550,000	,, Rose flowers ,, ,,	10,000
50,000 ,,	110,000	,, Jasmine flowers ,, ,,	6,000
30,000 ,,	66,000	,, Violets ,, ,,	7,000
30,000 ,,	66,000	,, Cassia ,, ,,	10,000
15,000 ,,	33,000	,, Tuberose ,, ,,	3,000

The average quantities of the principal articles manufactured are:—

kilos.	lbs.		£
300,000 or	660,000	of scented pomades and oil, worth about	250,000
80,000 ,,	176,000	,, Rose-water ,, ,,	5,000
500,000 ,,	1,100,000	,, Orange-flower water, 1st qty.	30,000
1,000,000 ,,	2,200,000	,, ,, ,, ,, 2nd ,,	50,000

This does not include the essential oils, of which the list would be too long, but some of them are very valuable, such as the Neroli, for instance, which is distilled from Orange flowers, and is worth about 10*l.* per lb.

It has been proposed to cultivate flowers in England on a large scale for perfumery purposes, but the climate renders this scheme totally impracticable—English flowers, however beautiful in form and colour they may be, do not possess the intensity of odour required for extraction, and the greater part of those used in the south of France for perfumery would only grow here in hot-houses; the only flower which might be had in abundance would be the Rose, but the smell of it is very faint compared with that of the southern Rose, as you may judge by the specimen of English Rose-water exhibited. The English oils of Lavender and Peppermint are superior, it is true, to those made in France and Italy, but I think that is owing to the very cause which would militate against the success of other flowers in this country. If we add to this the shortness of the flowering season and the high price of land and labour, we may arrive at the conclusion that it would prove as bad a speculation as that of attempting to make wine from English Grapes.

There are, however, other countries, where this scheme could be carried out with much better success, and where the materials abound, growing spontaneously in wild profusion. Spain and Portugal both teem with an endless variety of fragrant flowers and aromatic plants. M. Robillard, manager of the Botanical Gardens at Valencia, has commenced distilling essential oils of Geranium, Verbena, Artemisia, Petit-grain, Spike-nard, and bitter Almonds, as well as of sundry fragrant herbs found in the fertile Huerta de Valencia. They also manufacture very good essence of Lemon in the neighbourhood of Malaga. In the plains of Spanish Estramadura, I have passed through miles and miles of waste land covered with Lavender, Rosemary, and Iris growing wild in the greatest abundance. The only use made is to burn them; a few Lavender flowers find their way to Madrid, where they are used to strew on the floor; they sell there for 16 reals per fanega, which is about equal to 3*s* 6*d*. per cwt. In Andalusia all the flowers cultivated in the south of France abound, and could be profitably worked. In Portugal, and especially in the provinces of Alentejo and Algarves, aromatic plants grow wild in great quantities. One which they call Rosmarinho, is in reality a sort of wild Lavender (Lavandula stœchas). It gives, when bruised, a delicious scent—the Alecrim do Sul, or common Rosemary (Rosmarinus officinalis) and the Alecrim do Norte (Diosma ericoides), a variety with a very fine scent. Besides that, there are immense quantities of Orange trees, the flowers of which appeared to me superior in intensity of fragrance to those of France or Italy. There are also some trees which bear beautifully-scented flowers, such as the Pawlovnia imperialis, the Nessri or African Musk Rose, and the Phaseolus caracalla, a beautiful creeper. In short Portugal, from its richness of produce and facility of communication with England, seems to me a very eligible spot for manufacturing perfumery materials for this market; and I can assure those who would feel inclined to undertake this speculation, that they would meet with every encouragement from the young and intelligent King of Portugal, to whom I had the honour of being presented during my stay in Lisbon, and who seemed very anxious to assist in developing the natural resources of his country.

In Algeria the colonists have for some time turned their attention to utilising the flowers and plants of their country, and principally the Jasmine, Orange flowers, Cassie, Violets, Narcissus, and Geraniums. I exhibit here some pomades, oils, and essences produced by M. Richard, of El-Biar, near Algiers.

In Tunis they manufacture some essential oils of the finest descriptions. They consist of Rose, Jasmine, Cassie, Aloes, Nessri or white Musk Rose, Zensfour, the flowers of a species of Willow, Misk-snadak, made from a sort of Thistle, Apple, Quince, Violet, and Narcissus. The price of those essences is, however, very high, ranging from 4*l.* to 8*l.* per liquid ounce.

From the East Indies we procure already many perfumery materials, but none of them are extracted from flowers, yet highly fragrant flowers are there in abundance, and could be rendered available if colonists would take the trouble of gathering and distilling them. Those that could not be easily distilled might no doubt be treated by the absorption process, and yield a fine pomade or oil. I sent out some time since some oil frames to Madras to make experiments in that way, but have not received the results in time for this paper. I exhibit here a small collection of East Indian oils, comprising Sohag, Jasmine, Bayla, Sumbar, Musk root, and Khurakhah, but they are all, more or less, impregnated with the flavour of Sandalwood, which, it appears, is occasioned by their distilling the flowers with Sandalwood, in order to obtain a larger quantity of essential oil. I expected another collection from Ghazepore, containing otto of Roses, Khoss, Keorah, Jasmin, Bayla, Johee, Chomalee, Sohag, Musk, and amber, but unfortunately it will not arrive until the end of this week. I shall be happy, however, to show it to any person who may feel interested in the matter. Those essential oils are all very costly, varying from 1*l.* to 12*l.* per ounce, but they would no doubt be obtained much cheaper if there was a regular market for them, which would warrant the extension of the cultivation of flowers for that purpose. In China fragrant flowers likewise abound, and could be easily rendered available when we get a firmer footing in the country. Among the most odorous are the Chulan, Jasmin, and Kohé-wha, which the Chinese use to flavour their fine teas. An exquisite essence is also obtained from the Alfangilan, a Manilla flower, which is probably also found in India and China.

Australia and Tasmania abound in fragrant flowers and aromatic plants. I have appended to this paper a very interesting report on the subject, with which I was favoured by Dr. Müller, of the Botanical Gardens at Melbourne. It appears from it that plants of the Myrtle, Rue, and Mint tribe grow wild in Australia in great abundance, and that there are also many varieties of the Acacia and other flowering trees and shrubs which could be turned to some account. I have a specimen here of the flowers of the Acacia dealbata, or Silver Wattle (a Tasmanian tree), which have the same flavour as the French Cassie, but are somewhat smaller. Another curious specimen is that of the Myall wood, obtained from a species of Acacia [A. pendula] which has an intense smell of Violets, a very scarce odour in nature. This would prove valuable if it could be obtained in sufficient quantities. There is also a great quantity of Sandalwood of fine flavour in West Australia.

The botanic riches of the Cape colony are well known; and could be turned to good account for perfumery with little cost and labour; the same may be said of British Guiana. I have here a specimen of indigenous Vanilla from Demerara, the cultivation of which would give a good return. Our West India Islands produce the Frangipane and other highly scented flowers, besides many aromatic herbs, such as Lemon Grass.

I have also a specimen of a very fragrant wood from Cayenne, which they call in French "bois de rose femelle," and which is no doubt found likewise in British Guiana.

British Honduras, with its luxuriant vegetation, would also probably yield a rich crop of fragrant treasures to those who would take the trouble to seek them. In fine all our colonies, favoured by sun and climate, can in course of time be made to supply their share of aromatics, affording thus greater variety to the perfumer, and increasing their own resources.

Home Correspondence.

Shreds.—Can you or any of your correspondents suggest a good substitute for tailors' clippings, or shreds, for the fastening of fruit trees to walls? This article

which could formerly be got for about 2*d.* per lb., is now bought up at double that price by cloth manufacturers for the purpose of being converted into "shoddy," and then re-manufactured into "fine Saxony," and other choice kinds of cloth. May we venture to hope that the promoters of the Act for the prevention of the adulteration of food will also try to put a stop to the equally prevalent adulteration of raiment? *A Gardener.*

Leaves for Garnishing.—The best leaf for garnishing fruit with during the summer season is that of common curly Mallow. Seed of this can be bought of any seedsman. It ought to be sown at three different times between April and July; a few square yards will produce a large quantity of leaves, which are of a dark green colour, and nearly as large as those of a Vine. The plant whose leaves I now use is one of recent introduction, called, I think, Malope trifida; it has a beautiful Geranium-striped flower, and makes a handsome border plant. Surely it is high time that market gardeners were taking to some other leaf to garnish their Strawberries with than those picked off bearing plants, thus depriving the Strawberry of the very means on which the fruit greatly depends for flavour. *James Cuthill, Camberwell.*

Thinning Peaches.—I agree with your correspondent Mr. Cox that much depends upon thinning. I have had charge of Peach trees here for 20 years, and my experience tells me that this should have careful attention. One Peach to every 6 inches of surface is in my opinion sufficient for a crop. In cultivating Peaches on open walls especial attention should also at all times be paid to what is planted on the border. Ordinary vegetables are bad enough, but I have seen Hollyhocks 6 rows deep towering as high as the wall, and also Dahlias adorning the Peach border. I think the gardener who could do this should have taken a mattock first and "grubbed up" the Peach trees. There would then have been no disappointment. *D. G. R., Montrose.*

Golden Hamburgh Grape. — Like many of your readers I am deeply interested in everything relating to Grapes and Grape culture, and some weeks ago was much struck with a quotation you made from a communication you had received from Mr. Busby respecting the origin of this Grape. It was to the effect that after impregnating a bunch of Black Hamburgh with the pollen of a Sweetwater bunch, he found that "only one berry received the cross," and that from the seeds of this berry, five in number, sprung the Golden Hamburgh. Now what I am at a loss to understand is how Mr. Busby knew that this one berry had its seeds crossed, and not other berries in the same bunch, for nearly every berry in a Hamburgh bunch produces mature seeds. Will Mr. Busby, or any other of your correspondents enlighten me on this and on the following subjects: viz., can such Vines as either the Muscat of Alexandria, Black Hamburgh, or Black Barbarossa be considered species, or are they mere varieties of the Vitis vinifera? [Most undoubtedly.] If seed of either of these varieties sown without having by any possibility been crossed always produces the exact counterpart of the parent in every respect, does it not go far to prove that they are at least strikingly distinct varieties; and if in sowing uncrossed seed of such evident hybrids as Snow's Muscat Hamburgh, Lady Downe's Seedling, or Golden Hamburgh, one might not expect to get varieties distinct from the parents, as is the case with nearly every other hybrid? The insertion of this communication to elicit the opinions of your correspondents will much oblige *Vitis, Dalkeith.*

Old Scarlet Strawberry.—If your correspondent (see p. 553) means the Grove End Scarlet (which I consider to be the best grown for preserving purposes), I shall be happy to send him 100 runners in the course of six weeks' time. If he will send me his address I will send him a sample of the fruit in about a week's time. *Edward J. Walker, F.H.S., Chester.* [Although the Grove End is not the same as the Old Scarlet it is quite the same as to preserving qualities.]——We can supply any quantity of plants of Old Scarlet at the proper season, that variety having been grown by our family in our nursery here (where it may now be seen in fruit) for upwards of 50 years. We believe our establishment to be one of the first in which this sort was grown. *G. & W. Steele, Richmond, Surrey.*

White-flowering Cereus.—I have a slender-stemmed Cereus creeping about the top of my stove that for the first time is now in bloom. The flowers are 14½ inches in diameter; the outer petals are long and slender, of a greenish yellow; the inner petals a beautiful white, 7 inches long; the neck is about 8 inches and of much greater thickness than the stem of the plant. The flowers are without scent, and opened in the afternoon. I have the night-flowering kind beside it, to which it has no resemblance. I think I had it as Cereus M'Donaldiæ, but this I understood was striped with red. Can you tell me its name? It is a very magnificent thing. I have a large collection of seedling Cacti, but nothing resembling that I have described. I have hybridised the first flower. *T. J.* [If not M'Donaldiæ we cannot tell what it is.]

Effects of the Winter.—We have at length got rid of the longest winter I ever remember; it began with us here in October last, and has completely usurped the place of spring this year. My evergreens suffered severely, not from the intenseness, but the long continuance of cold. Sequoia, or as it is otherwise called, Taxodium sempervirens, of which I have some fine specimens, lost the leading shoots universally. The common Yew trees were particularly affected, and the younger shoots of many were killed, yet Cephalotaxus Fortuni and pedunculata did not suffer in the least; but the greatest loss I have sustained is that of Pinus Lindleyana, which had flourished with us for some years, and had borne the severe frosts of 1854 without injury. It looked as healthy as usual during the last winter; but in the month of April the leaves became brown, the terminal buds of each branch lost their vitality, and the whole plant died suddenly without any apparent cause. I have just had the dead plant taken up, and I find the roots vigorous and healthy, but the stem above ground and all the branches completely dead. Could this mischief have been caused by the severe frosts in October and November last? [Most undoubtedly.] *O. M., Burton-on-Trent.*

New Strawberries (see p. 531).—Thanks for the insertion of my letter; it has been represented to me that there is a certain amount of asperity about my observations. I beg most distinctly to disclaim the slightest intention on my part to rob the several competitors of one jot of their honour or profit derivable from their productions but I admit my anxiety to guard purchasers from imposition arising either from ignorance or design. I am glad to see that the Pomological Society offers (conditionally) an award for the best dish of one kind, viz., Robertson's Wizard of the North. It is my intention to submit when ripe to some of the metropolitan authorities fruit and plants of the Wizard, as purchased from "one of the most respectable nurserymen in the south of England in 1858."* and since proved to me to be identical with Mr. Robertson's Wizard by comparison with plants purchased this spring from him through Mr. Watkinson, one of his accredited agents in Manchester. So far as I can yet judge it has a robust hardy constitution, and a strong bold stem and flower. I repeat I have no desire to curtail in the slightest degree the advantages justly deserved by the raisers of new fruits or flowers, but if I can be instrumental in guarding the trade and through it the public against the mistakes that have been lately made such as sending out as new what we have long possessed, *e. g.*, Omer Pacha (Myatt's Eliza) Nimrod (Myatt's Admiral Dundas) &c., or against vending through plates and advertisements what has merely received the commendation of ignorant or venal local judges, I shall not have troubled you in vain. *Richard S. Yates, Sale, Cheshire.* [We are well acquainted with the marvellous qualities of Myatt's Pine, the finest Strawberry in the world. But we like others, have never been able to grow it, and if Mr. Yates would have the goodness to say how he manages it, no greater service could be rendered to Strawberry growers.]

Monstrous Apple Tree.—The following particulars may be considered additional proof of the truth of morphology. I have in my garden a young Apple tree, grafted in 1855 on the Kerston Pippin, which at the beginning of last May was well ornamented with blossoms of unusually large size and beauty, and at the beginning of this month, June, on the end of a shoot about 3 inches in length a base was formed for a bunch of blossoms, from which five footstalks arose; one of these ran into a shoot, three formed tufts of leaves at the top, and the other produced a well-formed double flower, which when fully expanded measured 2½ inches across its centre, and resembled a double white Rose, but in its earlier stages of development it had all the delicate rosy tints of the Apple blossom. As we have not before seen or heard of a similar case happening with the Apple tree, perhaps you will be kind enough to inform us if this is the first instance of the kind on record. I enclose a sketch of the flower taken by J. Couch, Esq., F.R.L.S. *James Pond, Vine Cottage, Polperro, Cornwall.* [As far as we can judge from the description and its accompanying sketch this is an unusual occurrence. Perhaps Mr. Pond will be good enough to report upon it further at a more advanced period of the year.]

Araucaria imbricata.—I have a plant 15 feet high, the lower branches of which are getting quite brown and have been so for these last few years. The tree nevertheless seems to grow luxuriantly; several of the upper branches are becoming brown this year. What would you recommend me to do? The ground where it grows I had thoroughly drained. Would nitrate of soda applied in a liquid state be useful; if so, what quantity should be put to a gallon of water? *E. B. N.* [Instead of trying this dangerous experiment, open a trench round the ends of the roots carefully, remove by degrees as much earth as you can, and replace it by burnt clay with bits of charred wood, &c., in it.]

* See my letter in *Gardeners' Chronicle* in February last.

Societies.

ROYAL BOTANIC, REGENT'S PARK: *June 20.*—This was an excellent exhibition, and, notwithstanding the heavy showers which fell at intervals during the day it was tolerably well attended. Stove and greenhouse plants were in great perfection, and so were Roses, Cape Heaths, and Pelargoniums. The only weak point was Azaleas, the beauty of which in the majority of cases was nearly over. Among Ferns were some beautiful specimens which were, as they deserved to be, greatly admired. The fruit show was in many respects excellent.

Stove and Greenhouse plants were contributed by the usual exhibitors. Among large collections that to which the first prize was awarded came from Mr. Whitbread, gr. to H. Collyer, Esq., of Dartford. It contained charming plants of the bright rosy-flowered Dipladenia crassinoda and blue Leschenaultia, both loaded with bloom and highly effective. Other plants in this group, which greatly resembled that described by us on former occasions, were also extremely well bloomed. Mr. May, gr. to J. Spode, Esq., sent from the neighbourhood of Rugeley admirably examples of Dipladenia splendens and crassinoda, Acrophyllum venosum, a little past its best, but still beautiful, although it has now been many weeks in bloom; some large Vincas, Cape Heaths, and Everlastings. From Mr. Peed, of Norwood, came a handsome specimen of Ixora Lobbii, a brilliant orange salmon-coloured species, which gave life and beauty to a well-grown and tastefully varied collection. Mr. Baxendine contributed a well-flowered Stephanotis floribunda.

In groups of 10 Stove and Greenhouse plants, Mr. Green stood first. In addition to blue Leschenaultias, Polygalas, Cape Heaths, Allamandas, Azaleas, Epacrises, and plants of that description, he had an admirable specimen of Hoya bella, whose blossoms have not inaptly been described as resembling rubies set in frosted silver, and a well-grown plant of the old Mahernia incisa thickly studded with charming little drooping orange bells. Mr. Kaile, gr. to Lord Lovelace, sent a very fine Pleroma elegans, one of the very handsomest of Melastomads, its blooms being of the most beautiful Tyrian purple, and each of them larger than a five shilling piece; also a capital specimen of Rhynchospermum jasminoides, whose numberless fragrant white blossoms were well backed up with clean, healthy, bright green foliage. Mr. Page and Mr. Rhodes sent some good Ixoras, Erica depressa, Azaleas, and other hard-wooded greenhouse plants. Smaller collections were furnished by Messrs. Carson, Tegg, and Chilman. Among these were Mussænda frondosa, a singular-looking plant with large white bracts and small yellow flowers.

In the Nurserymen's Class of 12 Stove and Greenhouse plants, Messrs. Fraser showed a good group. It contained two good Allamandas, a small Polygala, a glowing orange salmon Azalea called ardens, some Epacrises and Cape Heaths.

Orchids were furnished in beautiful condition; in general, however, they were very much the same as those reported on already this season. The large collection to which the first prize was awarded, was contributed by Mr. Bullen, gr. to J. Butler, Esq., of Woolwich. It contained a beautiful variety of Cattleya Mossiæ called superba, the charming little C. Aclandiæ, Lælia purpurata, various Vandas, the White Butterfly plant, and a deep chocolate-coloured variety of Bearded Lady's Slipper. From R. Warner, Esq., of Broomfield, came a pink-flowered Miltonia, with large rosy crimson-streaked lip and yellow eye; Oncidium Papilio, with eight large and handsome blooms on it; O. divaricatum, in beautiful condition; the singular looking Cypripedium hirsutissimum, Lælia purpurata, a magnificent species, extremely well flowered; some good Vandas and Cattleyas. Mr. Gedney, gr. to the Rev. Mr. Ellis, contributed the orange Lælia cinnabarina, Cypripedium villosum, with five large yellowish brown polished blossoms; the large, rich, clear, yellow-flowered Oncidium sessile, Dendrobium tortile, with twisted pink sepals and petals and pale yellow lip; Cattleya lobata, a large-flowered showy species; a remarkably fine Dendrobium Devonianum in a basket, studded with blossoms from bottom to top, rich and beautifully varied in colour and extremely handsome; D. Farmeri, also an attractive kind; and various Vandas. A large group was also contributed by Mr. Rhodes of Stamford Hill.

In the class of 16 Orchids, Mr. Woolley sent some fine plants, among which were Dendrobium densiflorum, a well flowered Lady's Slipper, Sobralia macrantha and a variety with more colour in it called splendens, and the white flowered Chysis bractescens.

In collections of 12 plants, Mr. Stone, gr. to J. Day, Esq., of Tottenham, sent by far the finest White Butterfly plant we have seen for years; its noble spikes of blossoms, drooping gracefully on all sides over ample healthy foliage, formed a mass of floral beauty at least 3 feet in height and as much through. This and Dendrobium Devonianum from Mr. Ellis, mentioned above, were two of the most striking and beautiful plants at the whole Show. There were also in Mr. Stone's collection good examples of Cattleya Aclandiæ, different varieties of Bearded Lady's Slipper, Trichopilia crispa, with deep rosy crimson flowers; and Saccolabium guttatum. From Mr. Carson came a well flowered plant of one of the best varieties of Bearded Lady's Slipper, the Fielding Foxbrush Aerides, Oncidium ampliatum majus, Vanda teres, the white Calanthe, and one or two varieties of Aerides. Mr. Page sent a fine plant of Cattleya guttata, but insufficiently in flower; also Lælia purpurata, Cattleya amethystina, Brassia verrucosa, and some well flowered Lady's Slippers and Oncids. From Mr. Peed and Mr. Bunney came collections of small but well flowered plants.

Among Cape Heaths, several collections of which were exhibited, were some beautiful specimens of the brilliant crimson flowered Westphalingia Massoni, small, but beautiful; a bright coloured kind, called Paxtoni; tricolor Wilsoni, one of the best of the class

to which it belongs; ventricosa magnifica, and coccinea nana, the orange red Alberti, and the white old rosæ

Conspicuous among Azaleas were Ivery's Gem, of which some pretty examples were exhibited; Extrani, a lively rosy pink kind still in fine flower; Chelsoni, Perryana, and Symmetry, all showy bright coloured kinds; white striped and variegated varieties consisted of Iveryana, Criterion, and Beauty of Europe. Several small Standard Azaleas were shown by Messrs. Lane.

Roses in pots were again produced in admirable condition, more especially those from Mr. Francis, of Hertford, to whom the first prize was awarded. This collection contained Coupe d'Hébé, Niphetos, with large yellowish white flowers; Baronne Prevost, Souvenir d'un Ami, Madame Willermoz, extremely well grown and flowered; Aubernon, General Jacqueminot, loaded with glowing crimson scarlet flowers; and a well bloomed plant of the yellow Viscomtesse Decazes. Mr. Lane, whose collection was also in fine condition, had Coupe d'Hébé, Paul Perras, Comtesse Mole, Chenêdolé, and Miss Glegg, all well flowered and in great perfection. Among Messrs. Paul's plants were good examples of Souvenir d'un Ami, Count Boubert, Madeline, Duke of Cambridge, Paul Ricaut, Blairii No. 2, and last but not least, Charles Lawson, a Rose well deserving of notice. It is very double, something like Coupe d'Hébé, but not so much cupped, and altogether a very fine kind. In the Amateurs' Class Mr. Terry, gr. to Lady Puller, and A. Rowland, Esq., of Lewisham, also showed fine specimens. Cut Roses as a whole were not good, and in some instances afforded unmistakeable evidence of the unfavourableness of the weather which we have lately experienced. One box filled with Cloth of Gold came from Edmonton; but the blooms were so small and bleached that they might easily have been mistaken for those of some other variety. The handsome new Rose President was shown in good condition by Messrs. Paul.

Of plants remarkable for fine foliage several collections were shown; but there was little among them that has not been described in reports of former exhibitions. Some pretty Begonias, and a very fine Cyanophyllum magnificum, came from the neighbourhood of Hendon.

Of Ferns beautiful collections were shown by Mr. Baillie, gr. to W. C. Carbouell, Esq.; Mr. Bunney, Mr. Woolley, and others. In the first group were some beautiful plants of Gleichenia, Davallia tenuifolia, Pteris scaberula, Cheilanthes elegans, and large specimens of Dicksonias, Cibotiums, and Cyatheas. Among others we remarked Pteris argyræa, the beautiful silvery variegated Fern introduced by Messrs. Veitch; Todea pellucida, the powdered Gymnogramma peruviana, Nephrodium corymbiferum, various kinds of Cheilanthes, and Pleopeltis musæfolia. Some interesting collections of British Ferns were also exhibited.

Among new plants was a handsome Cattleya in the way of Mossiæ from Mr. Robert Warner; also another closely resembling it from Messrs. Parker and Williams. From Messrs. Veitch came Cheilanthes Borsegiana, Microlepis hirsuta, and Lomaria Banksii; also Campylobotrys regalis, a handsome fine foliaged plant; a variegated variety of Aralia japonica, Anæctochilus Petola, the small yellow flowered Calla called oculata, whose colour was this time better brought out than when shown on a former occasion; Imatophyllum cyrtanthiflorum, and Caladium Belleymei, a handsome kind resembling argyræa but larger; Mecanopsis Wallichii, a blue Hymalian Poppy, was shown by Messrs. Jackson. Messrs. Parker & Williams sent Rhipidopteris peltata, a terrestrial Orchis foliosa, of Madeira, with handsome spikes of purplish lilac flowers; and the scarlet Lychnis Haageana. From Mr. Standish came some fine New Zealand tree Ferns, the white yellow spotted Rhododendron formerly described, and a large showy rosy purple kind called Criterion. Podocarpus japonica elegantissima was shown by Messrs. Rollisson, but not in a condition to form any correct opinion of its merits.

Among other plants not shown as new, we noticed some fine specimens of Lilium giganteum from Messrs. Jackson, and also the pretty shrub Elæocarpus dentatus, loaded with flowers, which looked like so many drooping fringed blooms of Lily of the Valley. Messrs. E. G. Henderson had a handsome Billbergia, and Mr. Gedney a fine plant of Nepenthes Rafflesiana. From Messrs. Carter came a dwarf Tropæolum in the way of Tom Thumb. Messrs. Butler & McCulloch showed some interesting specimens of dried Grasses, Geranium blooms, Acacias, Celosias, and other plants tastefully mounted on paper, and framed and glazed.

Pelargoniums were remarkably fine, but required more sunlight than the day afforded to give them brilliancy. The collections of large varieties furnished by Messrs. Nye, Bailey, Turner, and Dobson were very superior, and not less can be said of the two collections of fancy varieties sent by Mr. Turner and Mr. Bailey, which both stood first in their respective classes. Mr. Turner's varieties were Celestial, Captivator, Acme, Cloth of Silver, Madame Rougiere, and Rosabella. The best of Mr. Bailey's plants were Acme, Princess Royal, and Celestial.

In the Class of large kinds, amateurs, Mr. Nye, gr. to E. Foster, Esq., Clewer Manor, exhibited 10 large and finely-bloomed plants, among which Carlos was conspicuous; Fair Ellen, Saracen, Flora, and Fairest of the Fair were also particularly good. Mr. Bailey, gr. to T. T. Drake, Esq., Shardeloes, had excellent examples of Viola, Miss Foster, and Bianca.

In the Nurserymen's Class Mr. Turner sent a well varied lot, not so large as we have seen exhibited from Slough, but the flowers were large and of fine quality. The sorts were Prince of Wales, Monarch, Festus, Governor-General, Sanspareil, Desdemona, Viola, Prince of Prussia, Matilda, Fairest of the Fair, Rose Celestial, and Carlos. Among Messrs. Dobson's plants were Viola, Symmetry, Admirable, Fairest of the Fair, King of Scarlets, Blink Bonny, Carlos, and Fair Ellen, all fine specimens.

Seedlings were shown in great numbers by Messrs. Foster, Beck, Hoyle, Turner, Dobson, Rollisson, and others. Among the more conspicuous were Rosa Bonheur (Hoyle), rich rosy crimson, clear white throat; Beauty of Reading (Hoyle), rich painted crimson; Transcendant (Beck), very dark and novel; Gem of Roses (Beck), fine rose, large; Garibaldi (Foster), rose lower petals, dark top, large, fine form; Psyche (Hoyle), very dark top, lower petals peach; Perdita (Foster), fine quality; Mrs. Benyon (Hoyle), large showy rose, clear throat; Norma (Hoyle), very fine and true; Red Jacket (Beck) crimson, rich, and of fine form; Duchess of Kent (Rollisson), a shaded spotted kind; Prince Consort, dark; Prince of Orange, scarlet; Mulberry (Beck), rich dark; Mr. Beck sent two and Mr. Hoyle one plant of very promising yearlings.

In Fancies, Empereur de Maroc and King of Roses were the only good kinds different from existing varieties. Mr. Perry, of Birmingham, sent Rosy Gem, a promising bedding Geranium.

Of Fuchsias, Messrs. Cross and Davidson sent some well-grown plants. Among the most conspicuous were Souvenir de Chiswick, Tristram Shandy, and Little Bo-Peep all fine dark kinds; among light sorts the most remarkable were Queen of Hanover, Venus de Medici, and England's Glory. From Mr. Elliot, of Sydenham, came Princess of Prussia, a white-corolla'd kind of considerable beauty, its colours being of a different shade from those of any of its associates.

In Calceolarias six magnificent plants were staged by Mr. Burley, Nurseryman, Limpsfield, Surrey, but owing to some mistake, they were not entered sufficiently early for competition—a fortunate thing for the other exhibitors, for they were far in advance of any there. General Havelock was the admiration of all who saw it, and as all the kinds were shrubby, they will also be valuable for out-door purposes.

Ranunculuses were small but very pretty. Messrs. Tyso showed a stand of 50, in which were fine blooms of a new spotted seedling; also Berinus, Linden, Herald, Pertinax, Commodore Napier, Festus, Coronation, Topsy, Rose Rival, Liffey, Alexis, Kilgour's Queen, and Zemindar.

Fruit was tolerably plentiful. Providence Pines large and handsome came from Messrs. Young, Temple, and Burley, and of Queens there were also some admirable specimens the heaviest of which weighed nearly 6 lbs. These were furnished by Mr. Young, gr. to Crawshay Bailey, Esq., and Mr. Barnes of Bicton. A Black Prince was shown by Mr. Bray, a Black Jamaica by Mr. Davis, gr. to H. Dixon, Esq., and a Prickly Cayenne weighing 6¾ lbs., by Mr. Bailey. Mr. Weeks had some plants of the Queen variety in pots each producing well swelled handsome fruit.

Black Grapes were plentiful and generally in good condition. Beautiful exhibitions of Hamburgh came from Messrs. Henderson, Allen, Bones, Frost, Young, Little, and Drewitt. Black Frontignan very fine was furnished by Mr. Drewitt, Denbies, and excellent West St. Peter's by Mr. Allport. Of Black Prince we also noticed some good bunches. Boxes of 12 lbs. well-coloured and beautiful fruit of the Black Hamburgh came from Messrs. Henderson & Frost. Of Grizzly Frontignan very perfect specimens were shown by Mr. Cox, gr. to Lord Beauchamp, and from Mr. Williamson. The first were very highly coloured and in other respects faultless. White Grapes were not good. Of Muscadine and Sweetwater some fair specimens were shown; but Muscats were unripe. Of Busby's Golden Hamburgh we noticed two exhibitions; but they failed to indicate the true character of this when well grown, fine-looking Grape.

Of Peaches, by far the best came from Mr. Snow; but some good fruit was also shown by Messrs. Sanders, Davis, Frost, Miller, Ruffet, Cox, Henderson, Hill, and others. The sorts were for the most part Royal George, Gallende, Noblesse, and Violet Hâtive. The best Nectarines were shown by Messrs. Evans, Little, Smith, Henderson, and Cox. The sorts were Violet Hâtive and Elruge.

Cherries were shown by Messrs. Bartlet, Evans, and Cox. The varieties were May Duke and Black Tartarian. The best white came from Mr. Henderson, of Trentham, who showed a fine dish of Eltons.

Strawberries, with the exception of some magnificent fruit of British Queen and Sir C. Napier from Mr. Smith, of Twickenham, were not very good or very plentiful. Among new sorts was a large kind called Empress, and a smaller Pine-shaped variety from Mr. Small, of Colnbook.

Of Figs, the best dish was shown by Mr. Snow, who sent beautiful fruit of Brown Turkey.

Of Melons a great many were exhibited. The best green-fleshed was Snow's, from Mr. Tegg, gr. to Baron Hambro, and the best scarlet-fleshed Norwood Gypsy, from Mr. Peed. Among other varieties were Bromham Hall, Snow's Green-fleshed, Greengage, Marquis of Ailsa, Golden Perfection, and Orion.

Among Miscellaneous fruit were some Citrons and Apples, the last the Scarlet Nonpareil still in good condition.

Among Cucumbers we noticed some fine fruit of Butler's Empress Eugenie, of which some account will be found in another column.

Notices of Books.

The second volume of the 8vo edition of *Nature-printed British Ferns* is before us complete, with an index and glossary of technical terms. To Fern fanciers it is most interesting, the more especially since Mr. Moore has to add to his former list a considerable number of new sorts. The lovers of beautiful books will find that it forms a worthy companion to the exquisite series of Nature-printed books which Mr. Henry Bradbury is producing with such admirable skill as renders them a perfect marvel of PHYTOTYPOGRAPHY.

Among class books have appeared *The Geological Examinator*, by Mr. Page (Blackwood, 6*d.*), a series of questions, the answers to which are to be found in the same author's "Introductory Text Book."—*A Book of Biography*, by the Rev. G. R. Gleig; and *Practical Geometry* by Thos. Tate, form two new parts of Messrs. Longman's Schoolseries. The first contains lives of Samuel Crompton, Wm. Herschel, Hugh Miller, George Stephenson, and Philip Beaver, selected as Mr. Gleig informs his readers in order "to prove that the obstacles neither of poverty nor of lowly station can hinder the success in life of youths who to fair ability add the qualities of perseverance and temper." It costs 9*d.* The second, costing a shilling, contains all that beginners require to know concerning the method of drawing diagrams and solving useful geometrical problems. It contains 180 diagrams.

In *My Kitchen Garden, my Cows, and half an acre of Pasture* (Bradbury & Evans, 6*d.*) "A Country Parson" writing from "Fordington Vicarage" tells how he has managed to make a very small holding very largely productive. The three subjects which form the title of his pamphlet "are intimately connected together. The garden derives some measure of its support from the cows; and these during eight months of the year depend for their daily supply of food mainly on my churchyard, and to a considerable extent upon the garden. This garden is a very few square yards more than the tenth of an acre; the cows live in a stable; and the churchyard, though an acre in extent, yet having many tombstones in it, and being the burial-place of a population of 3000 people, cannot be reckoned more than half an acre of pasture. Yet, from these three sources combined, I and my family have for some years derived a good supply of vegetables, fruit, and milk; and this, if with no great profit, yet certainly without loss. During six or seven months of the year, two or three families have shared by purchase in our supply of genuine milk. Many a sick family has from the same source gratuitously received help which otherwise they could not have obtained. Families without gardens have occasionally shared in the same manner in the abundant supply of vegetables and fruit. And I have had the satisfaction, which the author of 'My Farm of Two Acres' so justly appreciates, of affording to my man, now in the 16th year of his service and the 77th of his age, an employment in which he takes delight, and a means of support equal to 14*s.* a week. Add to all this, that my garden has supplied myself with recreation and healthful exercise, which of themselves have been well worth a great portion of the outlay; and, once more, when thus engaged there has been before me a scope for observation and experiment which, though small in itself, seems likely to be productive of most important results. It has been thought, therefore, by some of my friends, that a few statements on the subject may be interesting to others, and may encourage, not only my brother clergymen in similar circumstances to my own, but persons of all classes to try to make the most of a little and the best of everything."

So says our author. It is surely worth sixpence to know how he has done all this.

Routledge's Illustrated Natural History, in its last Numbers (XV. and XVI.) deals with Sheep, Stags, Camels, Horses, Donkeys, Elephants, Swine, the Rhinoceros, Sloths, and all their kindred, and thus completes the first volume, which has no equal in this country for the cleverness of its wood engravings. Mr. Wood's letter-press, although sharply criticised by Mr. Waterton for its leaning too much to the marvellous, is nevertheless written in a manner that will render it popular among general readers. The volume closes with a compendious account of the natural history distinctions by which the family and genera are divided, and an index of names.

Miscellaneous.

How to Manage a Garden Boy.—Of petty faults, stealing fruit is likely to be one, as the opportunities are many. In the heat of the sun make your boy lay down his hoe, and refresh himself at the fountain of Gooseberries. I have never seen any other effect of this than greater modesty and better work. Give liberty as to this fruit, the best of all, and which it is easy to have as plentiful as an ocean. Tell your little man that you will give him other fruits when ripe, but that he must not take with his own hand, as all theft

is bad to the value of a pin; and your word of kindness, together with the word of God's law, will do far more than spring-guns or man-traps. A further rule of moral discipline, and one most essential, is to provide for working hours a constancy of work, and so arranged that the boy may know at all times what he has to do. This alters the natural current of his ideas, and cuts off at once a perpetual fountain of falsehoods. The great object of the youngster is to get done and away; but he sees by this plan that it is of no use to do a thing ill in order to have it soon over; and he is afraid to run off to idlers, for the ready excuse of not knowing what to do will in no case serve. The most unmanageable part of his duty is that of going messages. Two or three that might occupy as many half-hours are sufficient to consume the day; new attractions are formed, whilst old ones, as with a retouch of the magnet, are refreshed; and there is no willing return to work after a conversation. To mitigate an evil which cannot be prevented, let the missions of the unfittest person about the house be few; not on the spur of the moment, and at the bidding of everybody, otherwise the solid day, broken in pieces, is thrown away like the fragments of a jar not fit to be mended; but for such loved excursions allot such hours as are followed by a better inducement to return than that which the spade presents. All housework will be found bad for the boy; though trifling as to time, such jobs are great as to pretence, and all out-of-door work is by them rendered nugatory. Get up early some morning, and see the stable duties sufficiently well done; mark the time that may be requisite, make a liberal allowance for less activity in your absence, and point out the allowance; then fix the hour at which the garden work must commence, and see that the hour is exactly observed, though the work of the broom should be left unfinished. This neglect may be noticed at the breakfast hour of rest. There is no harshness in this, but merely what is felt to be just, and such strictness is essential to moral discipline; for what is neglect or idleness but a species of theft? The reasonableness of this even a stubborn youth cannot resist, and he will be brought by a little patience to see that regularity is a saving to himself, and a little perseverance on your part will add to the value of his discovery the force of a habit. But if you would have reason and conscience to rule, avoid everything that is not reasonable. Show no passion; for that always makes the youth think that, whilst you profess to aim at mending his conscience, your zeal is to make the most of his labours. Avoid bad names, lest you appear in his eyes to forget what he has read about "Raca," and "Thou fool;" and never threaten dismissal without a true purpose to effect it, should the offence for which it is threatened be again repeated. If dismissal be spoken of lightly, it is of none effect, and if not put in force after a serious declaration, good cause is given for casting off the respect that is due to your word. It may be, too, that the boy, not daring to run home of his own accord, desires nothing so much as to be sent away, in which case a threat to that effect is the best sound he can hear, and a strong inducement to do worse, resting as he does in this, that he can contrive what to say for himself when he gets to the ear of his mother. But as compassion is due to one of so little discretion, that in the eye of the law he is not held fit to conduct his own affairs, and whose bread yet depends on the character he attains, it is the most humane, as it will prove the most successful method of dealing with him, to explain before one or more of his fellow-servants the loss which, in his early career, he must suffer by a dismissal from his place, and to assure him that you will not inflict so much grief on his parents without first sending for them, in order to make known his faults, and to try the effect of their admonitions on his subsequent behaviour. *Manse Garden.*

Tenders for the New Iron Conservatory in the Gardens of the Horticultural Society, Kensington Gore.—

	Iron, &c.	Bricks, &c.	Glazing, &c.	Totals.
	£.	£.	£.	£.
Mr. MYERS	8,642	3,865	1,660	14,167
Mr. STAP	8,328	4,393	1,741	14,462
Mr. KELK	9,434	3,625	1,460	14,519
Messrs. KIRK & PARRY ..	9,690	3,960	1,820	15,470
Messrs. LUCAS BROTHERS ..	12,500	4,342	2,061	18,903
Mr. H GRISSELL	12,340	4,720	2,180	19,240
Messrs. COTTAM & Co. ..	13,780	4,879	2,118	20,777
Mr. SMITH	14,288	4,760	2,066	21,114
Messrs. HERNULEWICZ & Co.	11,832	8,284	2,524	22,640
Messrs. WEEKS & Co. ..	18,500	4,300	..	22,800
Mr. PETERS	..	..	..	22,900

KELK's accepted.

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—While out-of-door flowers may soon be expected in abundance, nothing should be brought here at present but what is well grown and bloomed, nor should any plants be allowed to remain here that are at all shabby; for it seems a waste of means, and certainly betrays bad management to occupy glass houses with plants of inferior interest to such as are plentiful in the open air. It is not desirable, however, to crowd the house with flowering plants; the aim should rather be to have a moderate number of handsome specimens effectively arranged, which will yield more solid interest and pleasure than a greater amount of floral display from plants of no individual merit. A thin arrangement of pot plants will also be advisable on account of the permanent occupants of the beds or borders, which at this season should be allowed plenty of space, in order to secure strong and well ripened wood, without which they need not be expected to bloom finely. Use every means to keep down insects. Give clear weak manure-water to young growing specimens, and repot any that are intended to have another shift this season, so as to have the pots well filled with roots before winter. Maintain a moist growing atmosphere, and syringe vigorously any plant at all infested with red spider. Encourage backward plants of Orchids with plenty of heat and moisture while that can be done safely. See that plants on blocks and in baskets are properly supplied with moisture at the root; to prevent any mistake in this matter, carefully examine every plant at least once a week, and immerse any found to be dry in tepid water until the material about the roots shall have become well soaked. Syringe lightly morning and evening, and sprinkle floors, &c., in order to keep the atmosphere thoroughly moist.

FORCING DEPARTMENT.

PINERY.—Attend carefully to growing stock, keeping the bottom-heat regular and the atmosphere warm and moist, and use every means to secure rapid vigorous growth. This will not be obtained, however, unless all is right at the root; therefore attend well to watering, and never allow any of the plants to become pot-bound. Give air moderately to young stock, and shut up early in the afternoon, giving the plants a gentle wipe with the syringe, and the house a good steaming by wetting every available surface. Continue to pot a few suckers as they can be obtained of sufficient strength, and do not allow too many to be produced by one plant, as they weaken each other. Indeed we never allow a sucker to grow to any size that is not likely to be wanted for stock, and, unless in the case of any scarce sort, never more than two on a plant. Plants growing in beds of soil must be very carefully attended to with water, giving enough at each application to moisten the whole body of soil; for unless this is attended to, the bottom of the bed will sometimes get quite dry, while the surface is moist.

VINERIES.—The inside borders of houses intended to furnish late supply of Grapes should be well soaked with manure water as soon as convenient, so as to allow of their becoming dry before the damp cloudy days of autumn set in, for damp will be most injurious then, and anything likely to cause it should be avoided. Muscats beginning to ripen should be assisted with fire heat, for it is hardly possible to ripen these properly at any season without artificial heat; and those for late use should be pushed on, so as to get them right by the end of next month at the latest; for those ripened later in the season are seldom of good quality, and we have always found them to hang better when ripened early in autumn than those that were ripened later in the season.

FIGS.—The second crop on the earliest trees will be fast advancing towards maturity; as soon as the fruit begins to ripen the atmosphere should be kept dry and rather cool, giving air freely every fine day, and using a little fire on wet cloudy days, to prevent damp and allow of a gentle circulation of air. Use every care to keep the foliage clean and healthy, and clear of insects, and do not crowd the young shoots.

MELONS.—Plants on which the fruit is ripening should be kept dry at the root, and freely exposed to air on fine days, avoiding moisture in the atmosphere as far as can be done without injury to the other plants. Do not allow the bottom heat to decline where the fruit is setting, which is a frequent cause of the young fruit dropping off. Keep a watchful eye on the foliage, and guard against red spider, which, if once allowed to establish itself, can hardly be removed without greatly injuring the tender foliage.

FLOWER GARDEN AND SHRUBBERIES.

Remove suckers from Roses and clear the stems of wild shoots. Strong shoots of Chrysanthemums may now be layered in pots to produce dwarf compact bushes. Those in pots may soon receive their final shift. Carnations and Picotees will soon be in bloom; let plants in pots be moved under an awning like that used for Tulips. Here they may be arranged on a raised platform or not according to taste. Picotees may be grouped on one side and Carnations on the other, taking care that the tallest plants are behind, and at the same time contrasting the colours as much as possible. Pipings may be put in on a gentle hot-bed. Layering may also now or very soon be proceeded with. Much of next year's success depends on this matter. All seedlings should be marked, noticing their various properties as to form, colour, and substance, &c. Ranunculuses may be taken up as soon as the foliage has turned yellow; for should wet weather continue they might emit fresh fibres, and if taken up then they are likely to be worthless.

HARDY FRUIT AND KITCHEN GARDEN.

Endive may now be planted without delay. High manuring is necessary to have it in perfection. In planting succeeding crops keep raising the beds higher as the season declines. Keep succession beds of Horn Carrots duly thinned. Let a good breadth of ground be prepared for Winter Spinach; trench it thoroughly and let it be heavily manured. It generally succeeds best in beds slightly raised. Continue getting out Cape and other Broccoli, and also some late Cauliflowers. An autumn Mushroom bed may now be made; throw the dung together to ferment for a few days; when half dry, mix one-third of loamy soil with it to keep in check any further fermentation, and tread or beat hard while making the bed, forming the spawn holes immediately it is finished to assist in keeping down the heat. Strawberry runners should be procured for new plantations without delay. Those who cannot spare ground for a new plantation may prick them out in prepared beds about 6 inches apart, and remove them with balls in October or in the early part of February.

COTTAGERS' GARDEN.

If not already done take advantage of the present showery weather to plant out all kind of winter Greens; stir the soil frequently among growing crops, and keep down weeds. Secure Dahlias and Hollyhocks, if any, from winds, and water the former with manure water. Guard them also as much as possible from earwigs, which are apt to disfigure their blooms. Inverted flower-pots with a little dry Moss in them make good traps; dry Bean stalks also answer the same purpose.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending June 21, 1860, as observed at the Horticultural Gardens.

June.	Noon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 15	25	29.681	29.622	62	45	53.5	58	56	S.W.	0.07
Satur. 16	26	29.640	29.579	65	49	57.0	58½	56½	E.	0.28
Sunday 17	27	29.577	29.512	65	45	55.0	58	56½	N.	0.54
Mon. 18	28	29.748	29.715	71	39	55.0	57½	56	N.W.	0.00
Tues. 19	●	29.760	29.657	65	51	58.0	58	56	E.	0.34
Wed. 20	1	29.627	29.603	68	47	57.5	58½	56	S.W.	0.12
Thurs. 21	2	29.830	29.556	71	48	59.5	59	56	S.W.	0.19
Average..		29.700	29.610	66.7	46.3	56.5	58.2	46.1		1.54

June 15—Densely clouded; rain; masses of white clouds, with clear intervals; fine.
— 16—Fine; overcast; rain at night.
— 17—Heavy and constant rain; lightning in afternoon; rain.
— 18—Fine; very fine, clear and cold at night.
— 19—Foggy; rain; overcast; rain at night.
— 20—Cloudy; rain; heavy clouds and showers.
— 21—Overcast; fine; cloudy; showery; thunder-storm 6 P.M.; densely overcast at night.

Mean temperature of the week, 3½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending June 30, 1860.

June.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 24..	73.7	49.3	61.5	11	0.49 in.	—	3	4	2	2	15	7	1
Mon. 25..	72.9	50.5	61.7	16	0.72	1	1	6	2	5	11	5	3
Tues. 26..	73.9	50.9	62.4	14	1.00	1	2	5	1	3	12	9	1
Wed. 27..	74.4	50.9	62.6	18	0.80	3	2	2	2	4	15	6	—
Thurs. 28..	73.5	50.1	61.8	12	0.65	3	2	6	1	2	10	4	6
Friday 29..	73.0	49.1	61.1	8	0.20	3	4	3	1	1	14	5	3
Satur. 30..	73.2	49.5	61.3	12	0.80	—	5	4	2	4	11	5	3

The highest temperature during the above period occurred on the 27th 1826—therm. 93 deg.; and the lowest on the 24th, 1859—therm. 36 deg.

Notices to Correspondents.

*** Correspondents are requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

COLONIAL NEWSPAPERS: *J G.* Very likely. If those who favour us with newspapers from the colonies would only mark the places to which our attention should be directed nothing would be overlooked. But London life is not long enough to enable us to toil over acres of printed matter to find something to which we have no clue.

DRY ROT: *R.* Your inquiry will be answered next week by *M J B.*

FIXTURES: *A Z.* You cannot legally remove brickwork without consent; and even the wood and glass buildings connected with it may give rise to an awkward dispute.

FUNGI: *F S.* Your Fungus is *Polyporus squamosus*, not *Hydnum repandum*. It is sometimes eaten on the Continent, and we have seen this wet season specimens as tender as a common Mushroom. *M J B.*

INSECTS: *W B S.* Your Raspberry shoots have apparently been gnawed through by the troublesome Weevil, Pachygaster vastator. It should be sought for after dark, and sheets should be laid along the rows over which the stems should be shaken.—*E M F.* The Apple buds are infested with the larvæ and pupæ of a small Weevil (Anthonomus Pomorum). The mischief is done for this year. The beetles will shortly appear and should be hunted for and destroyed.—*W W.* The appendages on the nose of the honey and humble bees sent are not fungoid. They are the pollen masses on some Orchis. See Mr. Darwin's late paper on this subject in *Gardeners' Chronicle. W.*

LABURNUM: *Somerset.* What you send is the common Cytisus Adami, a very strange production, the nature of which has been repeatedly discussed in our columns.

NAMES OF PLANTS: *Jno Stroud.* 1, Berberis aristata; 2, B. Lycium. Both are Indian.—*D W H.* The Soy Beans are rightly named. It is they which, being fermented, produce the Chinese condiment so called. The French are growing them under the name of Pois oléagineux; they are probably too tender for this climate.—*C M.* Allium magicum.—*Little Know.* Not from Australia, surely. It is a Rhamnus of some sort, and very like the Rhamnus saxatilis.—*A C.* 1, Saccolabium micranthum; 2, a very curious thing with which we are unacquainted; 3, Asclepias curassavica.—*M D Y.* Populus monilifera.

NATIONAL ROSE SHOW: *Beta.* You will see by our advertisement in another column that in consequence of the lateness of the season this Show is postponed from the 30th of June to the 12th of July. Entries, we observe, close on July the 5th.

PEACH TREES: *Otho.* They are dying, and you can do no more than cut the shoots back to the quick. Why dying we know not. We suspect last October, notwithstanding what you say.

RHODODENDRONS. We have received from Mr. Pope, of Harewood, Bletchingley, a remarkable specimen of Rhododendron flowers, measuring 2 feet 6 inches in circumference. This has been caused by a shoot producing, instead of a single truss as usual, no fewer than 6 trusses at its extremity. Should the habit be constant, instead of accidental, the plant ought to be propagated, as it is extremely handsome.

RHUBARB LEAVES: *Stroud.* They do not appear to be attacked by either Fungus or mining insect; but look as if they had suffered from a hailstorm.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch Gentlemen desirous of receiving instruction in Chemica Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—
SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
,, SUPERPHOSPHATE OF LIME	6	6
,, MINERAL	5	5
LAWES'S BARLEY MANURE..	8	0
,, MANGEL MANURE	8	0
,, GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemica Manures.

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

NORTH HANTS SEED ESTABLISHMENT.

HENRY JESSE begs to thank his friends for the support he has received for many years, and to inform them, that in addition to his CORN AND SEED BUSINESS, he has now added the MANURE, CAKE, AND TURNIP-SEED TRADE. The latter he has devoted his particular attention to, having made arrangements with a first-class House; and trusts by keeping articles of the best quality, to supply his customers on such terms as will give satisfaction and ensure their future orders.—Railway Stores, Basingstoke; and 100, Seed Market, Mark Lane, London, E.C.

FARM BUILDINGS.

LOANS may be obtained under the General Land Drainage and Improvement Company's Act for the full amount required by the Owners of settled Estates, Incumbents, Trustees, Bodies Corporate, &c. for the erection of Farm Houses, Farm Buildings, and Labourers' Cottages designed by their own Agents and sanctioned by the Inclosure Commissioners.

The loans are repaid by a Rent Charge on the estate for any term the Landowner may fix, not exceeding 31 years.

No investigation of title being required or notices given to Reversioners or Mortgagees, no legal expenses are incurred.

The Company furnish designs of every description, and undertake the entire responsibility of the works wherever desired by Landowners.

No profit whatever is taken by the Company on any works they execute, the actual expenditure only approved by the Inclosure Commissioners, with a commission thereon, being charged in all cases.

Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

CHEAPEST AND BEST.

JUPP'S NEW HORSE AND CATTLE FOOD.—The utility of this new preparation being now fully established, W. & R. JUPP & Co beg to say that they are prepared to execute orders to any extent. A trial will prove its beneficial qualities. Price 35s. per cwt.; 19s. per ½ cwt.; and 10s. per ¼ cwt., carriage free to nearest railway stations in Great Britain. Pig Meal, 16s. per cwt. Cash or a London reference expected from unknown correspondents.

W. & R. JUPP & Co., 6, Cross Lane, St. Mary-at-Hill, Eastcheap, E.C.

*** Agents liberally treated with.

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD FOR POULTRY AND GAME.—RICE SWEEPINGS, 8s. 6d. per cwt., in 1½ cwt. bags; SCREENED RICE, 12s. per cwt., in 1¾ cwt. bags; DOG BISCUITS, 14s. per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6s. 6d. and 8s. 6d. per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

HENRY J. MORTON AND CO.
2, Basinghall Buildings, Leeds.

CALVANISED IRON WATER CISTERNS
for Cottage Houses, &c., to contain 50 gallons, 25s.; 80 gallons, 30s. each; and 140 gallons, 36s., and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

CALVANISED IRON PUMPS
for Liquid Manure or Domestic Use, 3 inches diameter, 30s. and 32s. 6d. each; Tail Pipe for same at from 10d. per foot.

CALVANISED IRON SWING WATER BARROWS
for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32s. 6d. each.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

PARKES' STEEL DIGGING FORKS.

BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

KESTELL'S PATENT GARDEN LABELS can now be had in any quantity.—W. G. NIXEY, Proprietor. Office: 12, Soho Square, London, W.

INDELIBLE GARDEN TALLIES.—Mark your Tallies of wood, parchment, or zinc for the greenhouse or garden, with DUNN'S PATENT SOLID MARKING INK PENCIL. Retail at Messrs. BUTLER & MCCULLOCH'S and Messrs. HOOPER & Co., Covent Garden, W.C.; J. CARTER & Co., 237, High Holborn, W.C.; T. BRIGDEN, Railway Arcade, London Bridge, S.E.; and all Nurserymen and Seedsmen, Chemists, Stationers, &c. With screw-holder, complete, 1s. 6d. each; will refill for 1s.; by post for 19 penny stamps. Wholesale by J. Lusher, 19, Holborn Hill, E.C.; Barclay & Sons, Farringdon Street, E.C.; or any other wholesale house; and Crowhurst, 7, Fownes Street, Dublin. Further information obtained by addressing ARTHUR DUNN, the Patentee, at the Manufactory, 1, Durham Place, Dalston Green, London, N.E.

N.B. These Pencils are unequalled for marking indelibly on Linen, &c., for which purpose a much finer point is made, at same price, than that contained in the Gardener's Pencil, but this is well adapted for all coarse woven fabrics.

FLEMING'S SALTING MACHINE FOR DESTROYING WEEDS ON GRAVEL WALKS, &c.—This most useful Machine has given the greatest satisfaction wherever it has been introduced, and it is the only effectual means of keeping Drives and Walks completely clear of Weeds.

Extract from Article "Trentham," in *Gardeners' Chronicle* of January 22, 1859.

"And I would observe in passing from these grounds that the whole of the Grass and Gravel are kept in the most perfect order by the aid of machinery; the former by a Horse Machine wherever it can be worked, a small hand instrument being used in places of difficult access; the latter is kept in order by a Salting Machine, the invention of Mr. Fleming, and judging from the beautiful condition of the Gravel in every direction, I should say that it was altogether most efficient."

The Mowing Machines here referred to are SHANKS'.

From *The Field* of April 2, 1859.

"The Salting Machine will effectually destroy the Weeds on Gravel Walks and Drives."

Testimonials with full particulars and prices may be had on application to ALEXANDER SHANKS & SON, Dens Iron Works, Arbroath, Patentees of Improved Mowing, Rolling, Collecting, and Delivering Machine for Lawns, Hot-Water Apparatus Manufacturers, &c.

RICK AND HAY CLOTHS, HAY ROPES, New and Second hand NETTING; also BUNTING for Protecting Fruit Trees, SCAFFOLD CORD, and PATENT SASH-LINES for Builders; MARQUEES and TENTS, &c.
JOHN MORISON, 25, Norton Folgate, N.E.

TO AMATEUR GARDENERS, NURSERYMEN, AGRICULTURISTS, ETC.

VULCANIZED INDIA RUBBER TUBING AND GUTTA PERCHA TUBING FOR WATERING GARDENS.—Brass Hand-branches with Stop-cocks and Roses, and every description of Garden Tubing Fittings, sold wholesale and retail by W. R. WOOD, 94, Goswell Road, near the Angel, Islington, London, E.C. Price Lists may be had on application. Please to notice the address, 94, Goswell Road London, E.C.
N.B. Speaking Tubes fitted up.

GUTTA PERCHA TUBING FOR WATERING GARDENS.

THE GUTTA PERCHA COMPANY have the pleasure to acknowledge the receipt of the following

Testimonial from Mr. J. FARRAH, *Gr. to* BOSWELL MIDDLETON JALLAND, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider this tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

Manufactured by the Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their Wholesale Dealers in town and country.

SHAW'S TIFFANY.—The cheapest and most effectual material for Shading Hothouses, Protecting the Bloom of Walls, Trees, &c. SOLD IN PIECES.

	Per piece.—s. d.
No. 1.—20 yards long, by 38 inches wide	5 0
No. 2.—20 yards long, by 38 inches wide, mineralised to prevent it from rotting	6 0
No. 3.—18 yards long, by 39 inches wide (Double strength)	7 6
No. 4.—18 yards long, by 39 inches wide (Treble strength).	9 0

No. 1 coloured, 2s. per piece extra.
JOHN SHAW & Co., 40, Princess Street, Manchester.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and — Collier, Esq., of Dartford.

PROTECTION FROM THE COLD WINDS & MORNING FROSTS

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1s. 6d. per yard run.
Four yards wide	3s. per yard.

An improved make, 3 yards wide, 2s. 6d. per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1s 4d per yard run.
ELISHA THOMAS ARCHER. Whole and Sole Manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

"East Keal, Spilsby, Lincolnshire, April 30, 1858.

"Sir,—I will thank you to send 12 yards (at 1s. 8d. per yard) of your 'Frigi Domo,' from King's Cross Station, to be left at the Firsby Station, Spilsby, Lincolnshire. After using it (since last got it of you some four years ago) I affirm it to be, incomparably, the best and most lasting thing of the kind ever hitherto manufactured.—I am, yours, &c., Rev. J. SPENCE."

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

YORKSHIRE AGRICULTURAL SOCIETY.—PONTEFRACT MEETING, AUGUST 1 and 2.

The entry closes on the 18th of July. For Prize Lists and Forms of Entry apply to JOHN HANNAM, Secretary.
Kirk Deighton, Wetherby.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.—CANTERBURY, 1860.
PROGRAMME.

WEDNESDAY, July 4; THURSDAY, 5; FRIDAY, 6; SATURDAY, 7.—Trial Yard open on Wednesday, at Noon; and three following days, at 9 o'clock in the Forenoon, when the Public will be admitted on each day at 5s. for each person, to view the Trials of the Threshing Machines, Chaff Cutters, Mills, Oilcake Breakers, and Turnip Cutters. This payment has special reference to the Trial Yard only: the Implement Show Yard not being open on these days.

MONDAY, July 9.—The Implement Yard open from 7 o'clock in the morning till 6 o'clock in the evening, at an admission charge of 2s. 6d. for each person. Machinery will be exhibited at work on this day. The Judges to inspect the Live Stock, and to award the Prizes.

At 1 o'clock (or as soon after as all the Judges shall have delivered in their awards, of which Notice will be given) the Public will be admitted into the Cattle Yard on the separate payment of 5s. each person, at the Special Entrances; Members of Council and Governors of the Society being admitted by Tickets to be purchased at the Finance Department of the Society at the Show Yard; and Exhibitors of Live Stock on producing their Exhibitor's Ticket. Arrangements have been made for distinguishing the animals that have won the Prizes immediately the Judges have made their awards. At 8 o'clock in the evening the Cattle Yard will be closed.

TUESDAY, July 10.—The General Show Yard of Cattle, Horses, Sheep, Pigs, and Implements open to the Public from 6 o'clock in the morning till 6 in the evening; admission 2s. 6d. each person.

Public Dinner at 6 P.M. Tickets, 10s. each, to be obtained of the Secretary.

WEDNESDAY, July 11.—The General Show Yard open to the Public from 6 o'clock in the morning till 6 in the evening; admission 1s. each person.

Public working of the Steam Cultivators, on land in the neighbourhood of the city, during such hours as the Stewards may determine.

THURSDAY, July 12.—The General Show Yard open to the Public from 6 o'clock in the morning till 6 in the evening; Admission 1s. each person. General Meeting of the Members in the Town Hall, at 10 o'clock in the forenoon.

By Order of the Council, H. HALL DARE, Secretary.

CRYSTAL PALACE, SUMMER POULTRY SHOW.—The Summer Show of POULTRY, PIGEONS, and RABBITS will be held on SATURDAY, MONDAY, TUESDAY, and WEDNESDAY, August 25, 27, 28, and 29. Schedules of Prizes can be had on application to Mr. W. HOUGHTON, Secretary to the Show, Crystal Palace. The ENTRIES close on SATURDAY, July 28.

The Agricultural Gazette.
SATURDAY, JUNE 23, 1860.

MEETINGS FOR THE FOLLOWING WEEK.
WEDNESDAY, June 27—Royal Agricultural Society of England.

—— A CORRESPONDENCE in another page elicits information of considerable importance on the cost of African Dates and the probability of their introduction into this country at a price which would induce their importation as cattle food. One thing seems clear—that a very large profit is made on the Carob Beans imported from the Mediterranean, which might be sold at a much cheaper rate than they are and yet leave ample profit to the importer.

IT is plain from the paragraphs on the appearance of the crops which we have lately published, that a very late harvest must be looked for. The Wheat is not yet generally in ear over the southern counties, and is everywhere declared to be three weeks or a fortnight later than it generally has been. And it is equally certain that whatever the weather of July may be, the harvest when it comes will not be nearly so good as that of last year, much as that fell below the average of the previous crop. No wonder, then, that with unusually short stocks in the hands of the growers, prices in the corn market should everywhere be rising. We direct attention to a long article in another page by one of our most diligent and experienced meteorologists, on the weather of the past eighteen months.

IT is not a little remarkable that the most deeply ploughed arable land in this island should be in the occupation of those who attach the greatest importance to the form of the mould-board. Land in the Lothians is ploughed, as a general rule, a foot deep for fallow crops, and yet it is from the reports of ploughing matches at Midcalder, if we

remember rightly, and of papers read by Mr. MELVIN and others at local farmers' clubs in that neighbourhood, that we have the most detailed discussions of the right form of the furrow slice and of the influence exerted by the way in which the plough is made, and set, and held.

And it is equally a noteworthy thing that *this*, of all periods in the history of English agriculture, when the steam-plough and the steam-cultivator are prepared to rip up and turn topsy-turvy a deeper layer of the soil than ever horse-power could have stirred at once, should have been the time for reviving a controversy on the very last and most minute details of plough construction.

Where the purpose is simply to expose a new surface and remix the particles which have lain together so many inches deep for so many months undisturbed, it surely cannot matter much whether the mould-boards by which the soil is thus cut and turned be flat-breasted or slightly full or slightly hollow. This however is the point on which some of the angriest talk and keenest competition of the past twelve months have turned. And because two or three gentlemen appointed as judges at the last Warwick meeting declared that the work done by Messrs. HORNSBY's ploughman with Messrs. HORNSBY's ploughs was, by a shade, the best in the field, the contest between their comparatively full-breasted and Messrs. HOWARD's comparatively flat-breasted mould-boards is elevated into a question of equal rank with that between deep and shallow, or thorough and imperfect cultivation. It is not the intrinsic or essential value of a correct choice between HORNSBY's mould-board and that of HOWARDS—it is the commercial value of a decision in one' favour by the Society's judges that is the real source of this rivalry.

It is the depth to which a plough is made to cultivate the ground and the thoroughness with which every portion of the soil is thus turned over that is the real test of its work after all. And, supposing a plough made strong enough and deep enough for the most efficient work, we may under the existing circumstances of the plough manufacture in this country say that the ploughman and not the ploughmaker must have the credit of its performance.

There are, however, certain circumstances under which it still remains of some importance whether a furrow-slice be cut rectangularly or with a trapezoidal section, and whether it be suffered to take that place upon the slice last turned which its shape will give it, or be pressed home along the middle of its breadth so as to give a peaked shape to the ridge line which it leaves. In ploughing lea, when grain is to be sown broadcast over the first furrow, it is of consequence that the Grass be turned completely under—that each furrow-slice be pressed tightly home upon its predecessor—and that the ridge be left distinctly and unbroken so that the seed may fall into the intervening furrows and come up in rows. In light land districts in England these purposes are better served by the skim coulter, which cuts off that portion of the surface which had any chance of reappearing at the joints of the furrow slices, and throws it first into the furrow, so that it is perfectly buried; and by the drill presser, which ensures the existence of a perfectly formed surface-furrow for the reception of the seed.

According to experience afforded by a recent trial of ploughs in Scotland, reported on by men well known in the agricultural world, the accomplishment of these objects was on that occasion attempted in three different ways:—

"1st. By an almost rectangular furrow, with the width too great in proportion to its depth, thus causing it to be turned too much over, as represented in J. and R. HOWARD's wheel plough. 2d. By the pressing of a slightly crested furrow by means of a convex mould-board, as represented in RICHARD HORNSBY & SONS' ploughs. 3d. By cutting the furrow of a trapezoidal form, or rather of an irregular form of unequal depths at the two sides, and in some instances slightly deficient in depth or thickness in its middle; such a furrow, when turned over and placed in its proper position, presents a sharp apex, crest, or shoulder, and was represented by ANDREW GRAY's swing-plough, No. 4, and JAMES FINLAYSON's wheel-plough, No. 6.

"According to the first method, the effect is to lay the furrow too much on its back, a position justly condemned by all practical men, as though the Grass may be well enough covered, the same amount of mould cannot generally be obtained for the covering of the seed as in the crested furrow. According to the second method, considerable pressure is required to maintain the furrow in the proper position; and often, in the case of old lea or stiff soils, the elasticity of the turf overcomes the pressure, the furrow tends to stand on edge, and an opening is left between the furrows—so that in sowing, some of the seed drops to the bottom of the opening, and an irregular braird and consequent unequal ripening of the crop is produced. We observed this opening of the furrows to have taken place in some degree the day after the lea was ploughed, in Nos. 24 and 27, HORNSBY's wheel-ploughs. We consider a crest or shoulder in the lea furrow, whether of the form of a rhomboid or trapezoid, but especially the latter, an advantage in most of the soils of Scotland, in the present circumstances of agriculture, for the following reasons: 1st, Because the Grass is more easily buried by this form of furrow, and consequently the ground kept cleaner. 2d, Because there is more compactness, and less tendency of the furrow to open up again after being laid over, as its edge falls into the hollow or grove in the middle of the furrow previously turned over. 3d, Because more mould is obtained and less harrowing required for the covering of the seed. 4th, Because, on account of the compactness of the furrows, a more regular and equal braird, and earlier and more equal ripening of the crop are produced. While we give the preference to a crested furrow in lea-ploughing, we do not extend this preference to all kinds of crested furrows; for many ploughmen not acquainted with the proper way of dressing their irons often overdo the crest, and produce work that is not firmly put together, and cannot support the treading of men and horses."

The extreme detail of this comparison of methods does not commend itself to the judgment of those agriculturists who are in the habit of using either the drill press or indeed the drilling machine, and the sentences quoted, taken from the report of the recent trial of swing and wheel ploughs at Strathord, are in our opinion a laboured defence of what, if indeed it be worth discussion at all, is strictly speaking indefensible.

The gentlemen who superintended the trials at Strathord gave the preference to the swing as compared with the wheel plough, and they selected the full-breasted ploughs in preference to the hollow-breasted ploughs. Their decisions related of course only to the particular implements before them; but if they be taken as professing to express a general truth, we believe that their decisions are wrong in both particulars. It is no praise of a machine that its efficiency depends on the skill of the man who works it, and yet that involves the whole argument between swing and wheel ploughs. And it is a costly way of bringing the requisite pressure to bear upon the soil, to slide instead of roll the weight which is to act upon its surface, and that again, in our opinion, involves the whole argument between curved and hollow-breasted mould-boards.

There are many fields no doubt awkward to plough by reason of the roughness of their surface and the irregularity of their soil which may best be cultivated by the swing plough, but for nineteen twentieths of the arable land of Great Britain the wheel is undoubtedly an advantageous appendage; and we should like to have seen appended to the report a description of the Dynamometer, which declared its addition to make the draught of the implement one stone heavier.

COST OF AFRICAN DATES.

[The following correspondence has been forwarded to us for publication.]

To the Right Hon. Lord John Russell, M.P., &c., Foreign Office, &c.

MY LORD,—A question of considerable importance to the agricultural interest has arisen out of the repeal of the duties on foreign fruits.

It is believed that Dates of inferior quality and unfit for the fruit market might be imported at a price low enough to make them valuable as cattle food. Such Dates, it is said, upon what is supposed to be good authority, may be had in large quantities at Bagdad for about 4*l.* a ton; but the cost of freight from the Persian Gulf would bring the price up to 9*l.* or 10*l.* here—which would prevent their use; Carob Beans being now procurable for from 6*l.* to 7*l.*

But large quantities of Dates are also obtainable at many ports, both in the Mediterranean and on the Morocco coast, whence freight would be comparatively low. I therefore venture to ask your lordship to have the goodness to cause inquiry upon the subject to be made by H.M. Consuls in those places, for the information of farmers; and I shall be happy to be the medium of making the result public through the Editor of the *Agricultural Gazette*.

Should you think the request I take the liberty to make deserving attention, then I would add that the questions to which answers would be desirable are such as are sketched on the enclosure sent herewith.

I feel that I ought to apologise for thus intruding upon your lordship's attention, but I trust that the importance of the subject will be accepted as an excuse.

I have the honour, &c., JOHN LINDLEY.

QUESTIONS, &c.:—

1. At what price per ton can Dates of the most inferior description used for food be obtained in your Consulate?
2. And in what quantity?
3. Can refuse Dates, not used for food, be obtained in your Consulate?
4. At what price?
5. And in what quantity?
6. Is it probable that these prices would rise in the face of a large demand?
7. And if so, within what limits?
8. At what rate of freight per ton could such an article be sent to England?
9. Can you furnish any information respecting the quantity and cost of any other product of your Consulate which is applicable on a large scale for cattle food?

Foreign Office, June 13, 1860.

SIR,—I am directed by Lord John Russell to inform you that, in compliance with the request contained in your letter of the 17th of March, his Lordship instructed her Majesty's Chargé d'affaires at Tangier, and her Majesty's Consuls General at Tripoli and Tunis, to transmit to this department all the information they could obtain respecting the practicability of procuring at those places Dates suitable for feeding cattle, and I enclose herewith for your information the answers to your queries which have been received from Tunis and Tripoli.

With respect to Tangier, Mr. Drummond Hay reports that it is not a place to which Dates are sent for exportation in any large quantities, as the Date tree does not grow in the Northern provinces of Morocco.

Mr. Hay adds that though he believes that at Isafilett and other parts of the interior, Dates could be obtained in large quantities and at a low price, he fears that the cost of transport would be so great that the total cost would be found too high to render the article available as food for cattle.—I am, Sir, your most obedient humble servant, WODEHOUSE.

Answers to the above questions respecting Dates, &c., from Mr. Woods, at Tunis, May 16, 1860.

1. The most inferior quality of Dates used for cattle food is produced at Gabes (on the eastern coast of this Regency), and may be obtained at from 4*l.* 15*s.* to 5*l.* per ton free on board.
2. Not known, but of course depends upon the crop.
3. The above quality is also used for human food, and there is besides another inferior quality produced at Agpyawah (in the interior of the Regency); but the charges of transport are much heavier than its first cost.
4. Not known.
5 and 6. It is most probable that those prices would rise in the face of a large demand, and in proportion to the demand.
7. Freight to England from 25*s.* to 30*s.* per ton.
8. Information on Carob Beans, the only product in this country besides Dates applicable for cattle food, will be forwarded as soon as obtained from the coast.

Answers to the above questions respecting Dates, &c., from Tripoli.

1. The common price of Dates of inferior quality fit for cattle food varies from 3*l.* to 3*l.* 10*s.* per ton of 2240 lbs., but when in demand at Malta, as is often the case, prices increase in ratio to the consumption, and frequently reach to 5*l.* and 7*l.*, to which must be added 16 per cent. for export duty and all other expenses free on board.
2. In the case of good crops the exportation is calculated at from 10 to 15 vessels of 80 tons burthen.
5 and 6. Prices would undoubtedly rise much in the face of a large demand, and in ratio to the demand.
7. There being no direct trade with England, it would be impossible to state the freight. But from 13*s.* to 15*s.* per ton for Malta.
8. With the exception of Barley and Carobs, the country produces no other cattle food for exportation on a large scale. The prices of Barley are regulated by the markets of Europe. A few cargoes of Carobs have been sold this year for exportation at the rate of 1*l.* 8*s.* and 1*l.* 10*s.* per ton, expenses not included.

THE NATIONAL AND GENERAL AGRICULTURAL EXHIBITION OF FRANCE, IN PARIS, 1860.

(From our Special Correspondent.)

THERE has been no general agricultural gathering in France since the memorable international exhibition of 1856. The present show thus affords an excellent opportunity of judging what progress has been made in French agriculture during the last four years, and in some measure of tracing the influence which that remarkable event necessarily exercised in every branch of French agricultural industry. There could not have been a better display of those varied standards of excellence which by being compared one with another elicit in the mind a true appreciation of what is perfect, and a right judgment as to the best means to obtain it. The greatest obstacle to progress is isolation; that is, the want of opportunities to compare what is considered as a standard of perfection in one locality with the standard of another. The range of our observation is strictly that of our judgment, and that range expands in the same ratio as the field of our observations. Previous to the years 1855 and 1856 French agriculture had but very scanty opportunities of judging or even knowing the gigantic strides which English agriculture, for instance, had achieved. Each district in France has its own peculiar breed of cattle, no doubt perfectly adapted by nature to the peculiar local circumstances of soil, climate, nature of surface, markets, wants, popular habits, and civilisation. Each province gave

the preference to its own breeds, its own implements, its own modes of cultivation, and the thought that by improved systems of husbandry these local exigencies could be entirely removed, had never entered into the minds of French agriculturists, with the exception of a few educated men who were looked upon as insane schemers for advocating improvement and progressive changes.

The show in 1855, although a very insignificant event as to number and quality of the stock and implements exhibited, was, however, the first ray of light that rent asunder that stolid ignorance and routine in which French agriculture was so hopelessly shrouded. A few men from distant provinces came and saw and compared. Nearly all the animals sent from England were purchased by eager buyers, and like pioneers of a better and more profitable system of tilling the soil and developing its natural resources, they penetrated into distant provinces and began to upset the hitherto recorded notions of what constitute excellence in cattle, and exerted everywhere an earnest desire to improve everything connected with agriculture by the adoption of new methods and new means which hitherto had been derided and rejected as pernicious by even men of sound judgment and first-rate ability.

What was so happily begun in 1855 was further developed by the Great International Exhibition of 1856. English implements and stock of cattle excited a most eager attention. A vast number of French and foreign agriculturists flocked to the capital of France, and thronged the beautiful Industrial Hall of the Champs Elyseés, wherein thousands of animals gathered from the whole of Europe, even from the most distant countries, were arranged in numerous and well-arranged groups, exhibiting to the eye every variety of shape, colour, and merit.

Such an event could not pass without leaving its influence behind. It was not possible that so favourable an opportunity of forming one's judgment by comparison, could have been offered to the agriculturists of France and other nations without strongly disquieting their minds on the one hand with a galling consciousness of their inferiority, and on the other with an earnest ambition to improve.

It is now our pleasing duty to record the great fact, that the present show exhibits in the most glowing and gratifying manner such a step in advance, so conspicuous a progress in every department of agricultural industry, that those who remember the stock, produce, and implements which France contributed to the shows of 1855 and 1856, could scarcely believe, in contemplating the beautiful exhibition of 1860, that in four short years so great an improvement could be achieved.

This then is a national show, and none but natives can compete in any class or department, and as regards stock with any other animals but those that were born and bred in France. However, it is not difficult to perceive at a glance, even without the help of the catalogue, by the bye a large 8vo volume of 652 pages, that Old England is after all well represented in it, directly and indirectly, and it may be pleasing to our national feelings to state that stock of English origin, implements of English make or design, form by far the principal and the most perfect features of the whole exhibition. Out of 1470 entries of cattle, comprising all the various and numerous breeds of France, as well as all other foreign races bred in France, no less than 413 belong to English blood, divided as follows:—

	Number of Entries.
Pure Short-horns	168
Crosses by a Short-horn bull	146
Do. by Ayrshires and others	30
Pure Ayrshires	59
Various breeds, Herefords, Devons, &c. ..	10
Total	413

The other entries are divided as follows:—

	Number of Entries.
The Norman French breeds	122
Flemish	90
Charolaise	80
Gascon	17
Garonnaise	28
Bazadaise	17
Maraichine	5
Femeline	37
Bressane	10
Mancelle	17
Lourdes	10
Béarnaise	12
Ariègeoise	15
Limousine	43
Salers	47
Aubrac	31
Mezene	7
Parthénaise	66
Bretonne	114
Various breeds	24
Extra Stock, other than foreign breeds ..	12
Crosses with other bulls than English breeds	46
Total of French breeds	870
Dutch breed	89
Swiss breed	50
Other Foreign Breed other than English..	19
Total	158

Making, together with some Algerine and other cattle, a grand total of nearly 1500 entries.

In the former general shows, the cattle classes were not arranged according to breeds, as is the case this year, but according to district. The whole of France was divided into regions, and all the animals entered by breeders living in each region were grouped together, forming each a distinct exhibition on a small scale, divided into so many classes as there were breeds entered. This arrangement, although presenting the useful advantage of enabling the visitor to compare the agricultural status of each region one with another, created nevertheless a great deal of confusion, as the animals of one breed were distributed all over the building, and it was next to impossible to judge of its merit as a whole, and to compare it with others. In this exhibition another, and it must be confessed, a much better classification has been adopted, so that all the animals of one breed are gathered into one group, thus affording a good opportunity for judging their peculiarities and those distinctive traits and features that characterise them as a breed.

The prizes offered for the 25 categories into which the cattle exhibition is divided, are both numerous and on a liberal scale. Among these 25 classes no less than 398 prizes, amounting to 6240*l.* in English money, are distributed. Besides the money prizes each 1st prize is accompanied by a Gold Medal, each second by a Silver, and each third by a Bronze one.

If the Paris exhibition is remarkable for the number and the unusual merits of the cattle classes, it is not less so in its other departments. In the sheep classes there are no less than 546 entries, many of which are composed of lots of fine animals, so that the number of sheep exhibited cannot be less than 1200. This category was, like the cattle one, divided into native and foreign classes. The French native breeds consisted of the Merino and its various crosses, numbering 187 entries; the Mauchamp breed numbering 7 entries; the Charmoise breed numbering 17 entries; the Barbarine 4; and the various other French breeds 44. The crosses mustered no less than 148 entries.

The foreign breeds consisted almost exclusively of English breeds, divided into long and short wool. Of the former the Leicester sheep were represented by 25 entries, the Cotswolds 2, and the Lincoln 1. The short wools were entirely limited to the Southdowns, showing by this exclusiveness and the number, together with the singular merit of the animals exhibited, what a favourite this beautiful breed seems to be with the French, and how well it seems suited to the requirements of French agriculture, both as regards climate and modes of cultivation. With the exception of five entries the whole of the 148 lots of cross-bred sheep were the produce of an English parent; so that out of the whole 546 entries, no less than 317 belong directly or indirectly to English breeds, which seem to monopolise, with the beautiful Merino sheep, the attention of French agriculturists.

If in the bovine and ovine species the prevalence of English blood is very prominent, it is not less so in the pig classes, which, for excellence and good feeding, would have vied with the best exhibitions we have ever seen in England. The show of pigs comprises 237 entries; of these only 32 belong to French breeds, about which the less that is said the better; so that no fewer than 205 entries were solely comprised of English pigs.

Besides these there were 13 entries of goats, 70 of rabbits, and no less than 839 entries of poultry, numbering about 2500 birds.

The horses were a very attractive feature of this show. It is only very recently that horses are at all admitted in French agricultural shows. The first attempt at a horse show was made 10 years ago at the district exhibition of Alençon, where such a collection of first-rate horses was exhibited as would scarcely be equalled in any country. The success which attended this innovation induced the French authorities to make it general this year throughout the whole of France, and altogether it was not first anticipated to include horses in the national and general exhibition of this year in Paris, yielding to a very general desire on the part of the most influential men in France—a desire which found a most sympathetic response from the Emperor himself—the French Government decided on the admission of horses, and prizes amounting to no less than 8000*l.* Besides the horse classes there is a special one for asses, of which there were exhibited some most remarkable specimens, and for which prizes to the amount of 280*l.* were offered. Several stallions of that breed so much despised in England were pointed out to us for which 600 guineas were freely offered. They are chiefly used for the breeding of mules. There were nearly 1000 horses and 28 asses exhibited.

It would be impossible for us to give here anything like a detailed account of the peculiarities of the breeds in general, and the prize animals in particular, which were exhibited in the various classes of this wonderful Show. This we will do in a future Number; for amidst the excitement of the week, the long time spent in examining everything which is worth attention, and the limited space at our disposal, it cannot be expected of us that we should do more than summarily describe the more conspicuous features of the exhibition. We will now proceed to the Mechanical and Produce Departments, which from the extent of ground they cover and the magnitude of their entries would well nigh engage all the time the Exhibition remains open.

The entries of implements amounted to nearly 4000: Most of the French-made implements were evidently copied from English models, but were generally heavy and uncouth; indeed their unwieldy appearance, their ill-jointed parts, and indifferent workmanship painfully contrasted with the neat and strong-looking implements made by our best English manufactures, and which had been imported for the occasion by several French firms, and amongst others by Messrs. Ganneron of Paris, Messrs. Bonnet, Andrew, and Ducoray, of Boulogne; M. Piednue of Dieppe, Messrs. Claudore and Co., of Clermont, &c. The Messrs. Ransomes had as beautiful a collection of their far-famed machinery exhibited by Mr. Ganneron as ever was sent from the Orwell works. The Messrs. Garrett were also represented by a set of their drills and horse-hoes, and by their excellent compact threshing machine which bids fair to eclipse all others by the simplicity of its construction, the completeness of its arrangements, and the compactness of its bulk. Burgess & Key's celebrated reaping and mowing machines are there also, the latter competing in a special trial which we will presently describe. Messrs. Hornsby's celebrated and new Champion ploughs were also greatly admired. In fact there were specimens of the best English implements from all our principal makers, so that nothing could be more complete than the mechanical department altogether.

The various classes of the exhibition of agricultural produce comprised 3615 entries, embracing every possible article of produce from France and her colonies. To attempt to describe this department would tax a far stronger endurance than is our share. In a future article, however, we will point out those articles which can prove most interesting to our readers, but for the present we will confine our remarks to the general expression that a more instructive museum of all the riches which Nature can supply out of her bountiful and extensive stores could scarcely be seen anywhere, and that department of the Paris Show may certainly be pronounced as the most complete and the most judiciously arranged collection that has ever been made.

The beautiful Palace of Industry in the Champs Elyseés is the fitting abode of this gorgeous and truly magnificent display of agricultural riches. Beautiful as this palace is of itself, it has been made still more so for this interesting occasion. The cattle, judiciously grouped according to breed, are comfortably placed in spacious stalls running in a four-fold row beneath the galleries, which are devoted to the exhibition of agricultural produce. The centre of the building is transformed into a most beautiful lawn through which meanders a miniature river spanned by a rustic bridge, and gushing forth from a graceful jet of water, pleasantly cooling the temperature with its mist-like spray. A Flower Exhibition is most tastefully arranged in glittering and fragrant masses all over this lawn, and such a display of border annuals, Roses, and Geraniums we have seldom if ever seen. In the galleries are placed all the light implements, together with the produce; the pigs, sheep, poultry, and the large implements are outside the building under canvass sheds; and the horses are most splendidly lodged in three rows of boxes running the whole length of the Cours-la-Reine along the river Seine—a distance of about 600 yards. It is said the French excel in all those matters of management and distribution of things which require taste and judgment; certainly the clever administrators who have organised this Show, and amongst others the general commissioner in chief, M. de St. Marie, deserve the highest credit for the taste and the perfect judgment in their arrangement which they have displayed and so successfully carried out.

It had been remarked on a former occasion that in all the shows which have hitherto taken place, both in Paris and in the provinces, the bulk of the population had scarcely felt any interest in these meetings. The most apathetic indifference had been shown by the town and even the country population. In 1855 and 1856 the Parisian public were scarcely aware that there was such a thing going on as an agricultural show, and did not evince in the least degree any curiosity about it. It is decidedly a most remarkable feature of this present exhibition that it has excited the greatest interest among all classes of society. On Sunday last, the first day the show was opened to the public, with an admission fee of 1 franc, nearly 28,000 visitors entered on payment; and if we reckon the non-paying visitors, consisting of exhibitors, attendants, and their friends, there were at least 40,000 people in the exhibition on that day. On the following day there were 22,000 paying visitors.

We now come to the special competitive show of all implements connected with hay-making—an event of no ordinary interest to French agriculturists, who have now to contend, perhaps more than any other nation, against the want of manual labour. This was an international competition, and on the part of England two candidates for the first prize and medal of honour had entered the field—Messrs. Burgess & Key with their Arden's mower, and Mr. Cranston with Wood's combined mowing and reaping-machine. The trials began on Monday, the 18th, on the Imperial farm at Vincennes. On that day and on the 19th, the public were not admitted, as the trials were exclusively made with the view to enable the judges to test the respective merits of the machines. What took place at these behind-the-corner trials we of course cannot tell; but on the Wednesday there was really a public trial before practical men come from all parts of Europe, and their judgment, we regret to say, was far from coinciding

with the official award given by the Parisian agriculturists who composed the jury, and whose knowledge of farm work was gathered, we apprehend, in the secluded privacy of their study, or at best under the cool shades of the avenues of the Champs Elysées or the Bois de Boulogne. A more egregious mistake never was made we will venture to say by any body of judges. It seems that the merits of a mowing machine must in the opinion of these sapient judges consist in its insignificance and toylike lightness. Passing over the acknowledged excellence of Allen's mower, they actually have given not only the 1st prize, but also the prize of honour, to a modification of Wood's machine, and whose only merit consists in the adaptation of two travelling wheels, and a lightness which allows it to be drawn by one horse only. As to the work done, as compared even with Wood's two-horse machine, it was as unsatisfactory as anything could be. The breadth cut did not exceed 2 feet, and the stubble left behind the machine was high enough to conceal a hare, and was besides interspersed with tufts of uncut Grass, nay, whole patches of standing hay. There was but one opinion on the trial ground among the multitude of practical agriculturists who witnessed these trials as to the incomparable superiority of the work done by the English mower. The rapidity with which it accomplished its allotted task, taking more than double the breadth of the Peltier mower, and the closeness of its cutting were the theme of the encomiums and admiration of the public whose comments we could hear around us in French, German, Italian, and Spanish, all concurring in the meed of praise and satisfaction.

There seems to be among French proprietors an unmitigated horror of all agricultural appliances that cost money: what they want is cheapness. Perhaps it is an exaggeration to say that it matters not how weak and indifferent an implement, how defective and low bred an animal may be, how foul and shrivelled seeds may be, how spurious and falsified artificial manures may be, but if these are cheap they will do, and in their eyes cheapness is merit, and cheapness deserves prizes and honour. As it is, Messrs. Burgess & Key have obtained the Silver Medal and second prize for their two-horse mower, thus getting the only prize given to that kind of machine.

It is to be hoped, that in future international trials the French government will see the necessity of getting international judges and select them from the body of practical farmers who can understand what mowing and reaping ought to be.

Such are the leading features of this wonderful exhibition. Marred though it be by a few unaccountable blunders on the part of inexperienced judges, it is nevertheless a great and a most satisfactory and pleasing event. It certifies in the most unmistakeable manner to the earnestness of the efforts lately made by the Emperor to promote the improvement of the agriculture of France, and it shows clearly how powerful and great are the sources of that beautiful country, when we consider and realise, as this exhibition enables us to do, what a stride its agricultural industry has made in the short space of time that has elapsed since the year 1856! English agriculture may be proud indeed of the influence she has so manifestly exercised in this happy and glorious revolution. Such achievements, although noiseless and scarcely noticed by the trumpet of fame in the records of history, so lavish of the praise of successful warriors whose glory rests upon the ruins their blood-stained career has heaped, are nevertheless far more worthy of the acclamations of posterity than military deeds, because their aim is to foster good will and peace among men, prosperity and comfort to society, and civilisation to the human race.

STEAM POWER IN AGRICULTURE.

(*Continued from* p. 560.)

OBJECTIONS TO THE USE OF STEAM POWER.

Having thus shown the pecuniary saving effected by the substitution of a fixed steam engine for horse-power in preparing the produce of the farm for market, and the food for the cattle, I will proceed to notice some of the objections which at various times have been urged against the general adoption of steam-power for these purposes. First, we are frequently told that during the time the engine is working the horses are idle; secondly, that farmers have not generally the command of capital for carrying out such expensive arrangements; and thirdly, that for want of security of tenure (if even the capital was forthcoming) prudence forbids its investment in such a manner. My answer is, that no doubt in some instances the horses are not working; but idleness and rest are two very different things, and I think I shall be able to prove that the farmer's interest does not suffer from the portion of the work we have been describing being carried out by steam in lieu of horse-power. I practically find that on the farm where I entirely use steam, though I have not reduced the number of horses previously employed, I can keep them in the same condition with one-third less corn, leaving a clear saving of upwards of 80*l.* per annum, or 4*l.* per horse. This is easily accounted for, when we consider how injurious it is for a horse to be for hours exercising a circular motion, pulling in such a manner that his muscular strength is not properly balanced; add to this diminution of his physical power the still further injurious effect of having to stand in a constant draught whilst in a heated state during the frequent stoppages necessary to rest the work-people, oil the machinery, and clear away the chaff and pulls, as it happens the horse-wheel is invariably constructed in such a manner that every thorough current of air that is possible to be had is obtained.

In reply to the second objection, I think that the day is past for opposing the adoption of any system which tends profitably to increase the produce of the soil, on the ground of outlay. The last objection is one which deserves great consideration from all connected with agricultural pursuits. It cannot be expected that tenant farmers will, as a rule, incur the risk of investing large sums in fixed machinery upon yearly tenure, without some prior understanding as to its disposal in case of leaving their farms. I remember only last year an occupier in East Yorkshire giving up his farm, and his successor refusing to buy on any terms the machinery, which had only been erected two or three years previously by one of the first firms in England. The consequence was, an outlay of nearly 500*l.* did not realise one-third of the original cost; and the buildings, which the proprietor had erected expressly with a view to the convenient working of the machinery, were rendered useless. In my own case the arrangement was that every portion of the machinery should be put up of the best construction, and in the event of my leaving the farm the whole should be taken by the in-coming tenant at a valuation, to be made by two valuers or their umpire in the usual manner. Upon the several estates I have the honour to have entrusted to my management, I have authority to offer the same facilities to any of the tenants who are desirous of adopting similar fixed machinery and power; terms which all must consider liberal, and which also, if it were not for fear of extending my remarks this evening to too great a length, I should have no difficulty in proving are advantageous to all connected with landed property. In the absence of such an arrangement, or of a lease of the farm, one other course is open, viz., that a prospective yearly interest to the tenant so erecting be agreed upon by both parties previous to the erection, and should the tenant from any cause quit his holding before the expiration of the specified time, compensation for such portion of the unexpired period be allowed him. The farmer who erects a fixed engine and machinery should be careful, when securing his corn, to make the dimensions of his ricks correspond with those of his barn. He is then enabled to get a stack under cover when the weather permits, and on the first broken or wet day at his command it can be threshed out. By adopting this course he will find himself enabled to thresh out one-half of his produce at seasons when, in all probability, his farm-servants and labourers would lack employment independently of the advantage of having the straw fresh threshed, sweet, under cover, and on the spot required for consumption, likewise giving him an opportunity of marketing his corn at regular intervals.

PROPER SIZE OF FARMS.

In offering an opinion on how small a farm it will pay to erect a steam-engine, it ought to be calculated by the produce and not by the area; and I have no doubt that any farmer occupying land producing annually from 400 to 500 quarters of grain, and requiring food for eight or ten horses with the other usual stock in proportion, would find a fixed engine, and such machinery as I have described, a profitable investment. The advantages derived by the use of locomotive steam-power are the saving of loss of corn by shaking, and the expense of getting the rick into the barn; the escape by the workpeople from the annoyance of dust, which naturally is more confined in a building, and (where the occupier has separate holdings) a saving of outlay, by the removal of the engine from one steading to another. The argument sometimes used that he can thresh his neighbour's corn as well as his own, I treat precisely on the principle as the miller's work by the fixed engine; and if steam cultivation, which is referred to hereafter, comes into general operation, no doubt it can be made available for that purpose. These disadvantages I believe, on examination, will be found to out-weigh what I have enumerated; and in this I am borne out by the fact of three gentlemen resident in my own neighbourhood, who had purchased locomotive engines with the idea of carrying out more or less the views I have laid down, having either made fixtures of them, or changed them for fixed engines. Let us, therefore, consider the cause.

First, then, as regards an engine of equal power, the prime cost of a locomotive is 10 per cent. above a fixed one: this, with a shade brick-built and tiled or slated, for the protection of the engine and machine when not at work, will be about equal to the cost of the additional buildings for a fixture. The piston of an 8-horse engine makes 220 feet per minute, the crank of the fixture being generally one-third larger than the locomotive; thus a fixed engine with 12-inch crank would require a 2-foot stroke, and make 55 revolutions per minute, where the locomotive with 9-inch crank and 18 inches stroke would, to perform the same work, have to make 73 revolutions in a similar space of time, consequently causing considerable increased friction; the horizontal position of the piston, without great care, rapidly becomes oval-shaped, which is not the case when perpendicular. The concentrated form of the boiler, compared with those attached to fixed engines, is another serious item in expense; being multitubular, is difficult to clean, and wears rapidly away; and, what is still more fatal, the injurious effect produced by transition on bad roads, and constant oscillation when working. From these causes I think I may safely estimate the wear and tear of a locomotive to be fully 20 per cent. above that of a fixed engine. The slovenly state the stack-yard has for a time to be left in after a threshing-day, the detriment to the chaff and pulls, the increased number of hands required (about double)—many, not being regular labourers, have to be paid a higher rate of wage—the extra liability to accident by fire, the fetching of water, carrying away of corn, restacking of the straw, and the not unfrequently having all thrown out of work by wet weather sometimes for days, and at other periods during the day by storms or by thunder-showers, all tend to injure the produce and increase the expense. The reasons I have advanced, and the calculations I have this evening laid before you, I think must prove the advantages gained by the substitution of steam for horse power in that department of agriculture that I have introduced for discussion; and, further, that where the quantity of produce on the farm is such as I have previously intimated, the occupier who is desirous of adopting the most economical, safe, and convenient course will determine in favour of a fixed engine. Though more a landlord's than an occupier's question, I must not omit mentioning the benefit arable land lying below the level of the nearest outfall has derived from the introduction of steam-power in conjunction with the Appold and other pumps, which, by raising the water to a sufficient altitude to allow it to pass away through high-level drains, has made many thousand acres of unimproveable waste into land of the most fertile description. This subject was so ably introduced by Mr. Mechi in his paper on steam in agriculture, that it would be bad taste on my part to comment further thereon.

(*To be concluded next week.*)

PRESENT CONDITION OF THE CROPS.

(*From our own Correspondents.*)

BERKSHIRE.—The severe winter caused the Wheat to lose plant, and an ungenial spring following prevented it from tillering to fill up the gaps thus occasioned; weeds natural to the soil have grown instead. Much more rain has fallen latterly than the Wheat required, and the temperature has been very low. It therefore presents a backward uneven appearance, and indicates a crop much below an average. Should forcing weather set in it would improve rapidly, but then danger of blight would arise from a thin plant. We must therefore expect a crop much below an average. The spring corn on warm lands looks very promising; but on cold clays and poor land it begins to look sick and yellow, from which it never recovers. The Beans and Peas have suffered from want of dry weather for hoeing them, and are fouler than usual, but still look pretty well. Clover and Grass is a good crop. Mowing machines are busy at work. Sunny weather is sadly wanted. Mangel is planted more extensively, and is coming up well. Swedes and Turnips are a good plant. *Jas. Williams, Abingdon, June* 19.

BERWICKSHIRE.—Wheat crops generally have not a satisfactory appearance. Many fields are thinly planted, and although they seem luxuriant when viewed at a distance, on a closer inspection the stalks are seen to be very irregular in height and strength, and do not look likely to yield a full crop. Barley, Oats, and Beans all show a close healthy plant, and with favourable weather bid fair for healthy crops. From present appearances it seems likely that all our grain crops, but more particularly Wheat, will be from 10 to 14 days later of coming into ear than on the average of years. A good many Swedes were sown during the second week of May, and these have suffered so much from the fly that many places have had to be re-sown. The later sowings have hitherto escaped that plague, and show brilliant lines of green. Turnip-sowing is drawing near a close, notwithstanding the interruption from the recent heavy rains. There has this year been a more general and extensive sowing of Mangel than ever before occurred in Berwickshire. In most cases the seeds have germinated irregularly, the plants making their appearance in successive flights, the latest of which it is to be feared can scarcely now produce full-sized roots. None of them have made much progress since the cooler weather of the past fortnight. Potatoes look well, and pasturage is now abundant. *J. Wilson, Edington Mains, Chirnside, June* 13.

CHESHIRE.—The crops, as usual in trying seasons, vary considerably in appearance, in proportion to the quality and condition of the land. Upon our best soils and where the Wheat plant escaped the ravages of the frost in the early part of the winter, the crops are as full and healthy as we could desire; but on those soils where in ordinary seasons it is hardly safe to sow very early, many crops have suffered to a considerable extent from the effects of the severe frosts about the time that the seed was germinating; and judging from their present appearance we think it scarcely possible that they can ever become fine full crops of corn, notwithstanding the opinions and glowing descriptions of many of our "thin seeding" agriculturists; for in many instances where the usual quantity of two imperial bushels of good seed were sown to the statute acre, the plants now stand at a foot and even a yard or more from each other. The mischief appears to be greatest upon Clover leas, where the "grub" or caterpillar has to a considerable extent assisted in these devastations, although many farmers are of opinion that the late severe winter was sufficient to kill all the grubs in the country. The Wheat too, on cold clay land, especially the undrained, has a starved, unhealthy appearance and shows great want of vigour in the plant, and the season is now so far advanced that its recovery we think is very doubtful; therefore under these circumstances we can hardly expect more than average crops. Barley and Oats on the best soils are promising, but on the colder lands they have suffered considerably from the effects of cutting winds and cold wet weather. Complaints are made about the slow growth of the Mangel crops, which does not surprise us, as we know from experience that the weather can scarcely be too hot and dry for this plant after it has once made its appearance above ground. We cannot at present say much about the Turnip crop as many acres have only just been sown, and there are yet a great deal of land to be sown, the wet weather having retarded the various operations in working the land. Potatoes look healthy and regular in plant generally; but these,

too, where very early, have experienced the effects of the late severe gales, and we believe that the early Potato crop will be about three weeks later than usual. Grass is plentiful, and the meadows are well-grown for the time, but in some situations the floods have done great damage to them. The "pleuro" still lingers in the county to the discouragement of many of its dairy farmers. *W. P., Tarvin, June* 12.

INVERNESS-SHIRE.—Wheat: thin on the ground, but healthy in colour; at least a month later than last year; small breadth sown. Barley: vigorous and promising; a large breadth sown. Oats: thick enough, but growth very languid. Potatoes: coming up slowly, with many blanks. Grass: pasture very short; cutting Grass very thin on the ground, and promises to be less than half a crop. *A. Simpson, Beauly, June* 16.

LINCOLNSHIRE.—Wheat must be a light crop, and falling ten days later than last year. It sustained considerable damage from the fearful storm we had on Monday, the 28th ult., particularly upon the thin crops—many stems bruised and broke down that cannot possibly recover. Barley and Oats are both looking well, except the badly drained land. Mangels planted well, but the storm did them considerable damage; they are now growing in consequence of the wet weather. Swedes are being put in later than usual, many not sown yet. I started sowing on the 23d May; those early sown are looking well; quite clear of fly. *F. A. Sowerby, Aylesby, June* 16.—The Wheat crops in this neighbourhood are not looking at all well; grubs or the very severe weather that we had in winter destroyed much of the plant, and the late very high winds have so broken the stems that it can never overset it. At present the Wheats do not look like being more than two-thirds of an average crop. The Barley crops which came up and looked very well at first have suffered very much from wire-worm and grubs, and are consequently very patchy. Oats are looking pretty well, but very backward. Mangels and Potatoes are much hurt by the very heavy rains we have had. Meadows and seeds are looking well. *Edward Darby, Gretham, Horncastle, June* 14.——The spring has been very unfavourable for the Wheat plant on the peaty Fens, and it will there be a very deficient crop; on the heavier Fen soils it promises a fair crop, excepting the portion sown after Coleseed, which generally is a complete failure in many cases which have come under my notice in the same field and all sown on the same day, one part after Mangels or Oats a good crop, the other, after Coleseed, very bad. I do not consider the Wheat an average plant, and 10 days later than an average of seasons. The Oats are looking very well; Beans and Peas a fair appearance; Mangels a good plant, but starved with the cold and wet, and on strong soils will make slow progress. It will require a long time of dry warm weather to put the land in order for Coleseed. *Thos. Aitken, Pode Hole, Spalding, June* 18.

THINS OF GALLOWAY.—Winter Wheat in most cases thin on the ground; spring-sown well planted, but the very wet weather for some time is seriously affecting it. Oats on all dry soils in good condition—very luxuriant; on damp soils rather unpromising. Almost no Bere or Barley sown. Turnips a good braird where early sown, but not making much progress, still a good breadth of Turnips to sow on late and damp soils. Mangel Wurzel well planted, and also Carrots. Hay will be a fair crop, but the pastures have not got very rough, the weather being cold, and they were very early stocked. The demand for lean cattle has not been so brisk as was expected; beef very high, but few fat cattle to sell in this district at this season. Lambs for keeping have been selling considerably above last year's prices, the general opinion being that they will be very deficient in numbers. *A. H. M'Clean, Auchneel, Stranraer, June* 16.

SOUTH ESSEX.—A month ago we had to write favourably of the growing crops; the weather had very suddenly become propitious, and all vegetation had been resuscitated in a surprising degree, and considering the extent of damage done to them, during the late extreme cold and wet winter, all augured well beyond expectation for a fine and plenteous summer. Now, unhappily, conflicting accounts of the weather and crops reach us from every quarter; cold rains, hail, and boisterous winds continue to encompass us, deteriorating the growing crops to an almost unprecedented extent, even up to this very date, and the only hope now left, for the full ripening of the fruits of the earth (and which no doubt we shall yet experience), is sunny and warm weather during the first month after the longest day, and should this occur, we have still good reason to expect a full and bountiful harvest; late it must be, but a fine autumn would no doubt bring all in time. Without genial sunshine however all hopes may be considered lost, as the summer will be gone by. For several years past, the sun has been too scorching in the fortnight of longest days, and has brought the corn on prematurely and immaturely; but should it be so this year, no doubt it will be otherwise, as the super-abundant supply of moisture in the earth will tend to bring it (though quickly) to maturity. As it is, however, corn is coming into ear at its usual time; but it is to be feared the ears are many of them bent, and weak at their birth as it were, or when bursting from their sheaths they are not fully developed. Fruit, Grass, Clover, and all provender, except Mangels, Swedes, Turnips, and seeds are plentiful, as we before anticipated they would be. Bad as crops are generally, we have a specimen plot of Winter Barley growing on the Lois-Weedon principle, now in full ear, and 4 feet in height, bidding fair to produce on one moiety of the land equal to 10 quarters per acre; and can boast of several very large fields of Wheat opposite our dwelling (not our own crops) now coming into ear, the best for 100 miles around us. *Abraham Hardy & Son, Maldon, Essex, June* 18.

WEST SUSSEX.—This season will be long remembered for the terrible hurricanes that we have had. For the past fortnight we have had most unsettled weather, wind and rain with now and then a dry day. But yesterday we had the heaviest fall of rain that has been for a long time, and Turnip sowing upon the heavier land must be put off for some days. As a matter of course work is getting behind, and we shall have too many irons in the fire soon, but as there has been a greater breadth of Mangels sown, there will not be so many Swedes to put in, and so we shall gain a little on that score. Crops that did well during the first rains are now beginning to show symptoms that they have had more than enough. Wheat for the last 10 days has made very little progress, and will not be so good as was expected at one time. And it will be under ordinary circumstances later than usual; but we shall have ears in a few days. Barley that came up well and promised to be too heavy has lost ground, but this is so far well. Oats look well, except that the wire-worm has been more than usually busy. Peas and Beans look well. The hay crop will be heavy, and though a good deal has been fed that should have stood for mowing yet the heavier crop will make up for this, and we may have a return to compensate for our last winter's heavy consumption. There has been a little cut, but of course has had to be, and we are deferring to cut as long as possible. Mangel has generally come up well; but has not advanced at all for the past 10 days. Potatoes look well. Our markets have fluctuated considerably of late. It was thought that the supply would fall off when the growing weather set in, which it did one market day, and prices went up to from 5*s.* 6*d.* to 6*s.* 6*d.* per stone (of the wool for good mutton. But that brought out a very heavy supply next market day, with few buyers, and there were but few sold at rather below previous prices; but still there is no chance of mutton being bought much cheaper. Good beef is dear and scarce, but there is a good deal of inferior offering. Our corn market is still well supplied, but there is not so much as usual to thresh out, which, coupled with signs of a late harvest, will no doubt tend to enhance prices. *G. S.*

THE WEATHER OF THE PAST EIGHTEEN MONTHS.

(AT THE HIGHFIELD HOUSE OBSERVATORY).

WE have now experienced some months of extraordinary weather, perhaps more extraordinary than ever before recollected, and as we depend so much upon our climate for the abundance or failure of our crops it seems desirable to place upon record the various weather changes of the past few months in comparison with the averages of the same periods, as well as the different atmospheric phenomena which have accompanied these changes; and to no periodical can such a history be of more interest than to a leading agricultural organ largely read by the agricultural public. To make such a history really useful it will be necessary to divide the weather under the various heads. In the first place it will be essential to give the averages of temperature and rain for each month, and as regards the former, within 200 yards of the Highfield House Observatory, the late Mr. M. Needham carefully recorded the temperature of the air several times daily from the year 1810 to 1804, and from that year to the present time these observations have been continued by myself, therefore the large series of 50 years gives a valuable mean of the temperature of this locality, and I may say of the centre of England, as we are removed from the influences of sea breezes, away from large hills, 2½ miles S.W. of the town of Nottingham, and nearly central as regards the geographical position of this Observatory.

The following is the mean temperature of the last 50 years:—

	Deg.		Deg.
January	36.6	July	61.3
February	38.6	August	60.3
March	42.1	September... ...	56.6
April	47.3	October	49 4
May	53.1	November	42.4
June	58.7	December	39.2
Mean of the first six months	46.1	Mean of the last six months	51.5

The mean temperature of the whole year being 48°.8.

To compare the past winter and spring thoroughly, it will be necessary to commence with Jauuary 1859, as the weather throughout 1859 was also singular in character.

Mean Temperature of the past 18 *Months.*

1859.	deg.	Excess or defect of the Mean. deg.	1859.	deg.	Excess or defect of the Mean. deg.
January ..	39.7	+ 3.1	July ..	65.2	+ 3.9
February ..	42.1	+ 3.5	August ..	61.7	+ 1 4
March ..	45.3	+ 3.2	September	55.2	— 1.4
April ..	45.0	— 2.3	October ..	48.4	— 1 0
May ..	52.3	— 0.8	November	40.4	— 2.0
June ..	58.8	+ 0.1	December	34.0	— 5.2
Mean of 1st 6 months	47.2	+ 1.1	Mean of last 6 months	50 8	— 0.7

Mean temperature of 1859, 49 .0, being 0°.2 above the mean.

1860.	deg.	Excess or defect of the Mean. deg.
January ..	37.4	+ 0.8
February ..	35.3	— 3.3
March ..	40.5	— 1.6
April ..	43.1	— 4.2
May ..	53.2	+ 0.1
June (to 17th) ..	53.4	— 5.3
Mean of 1st 6 months	43.8	— 2.3

(+ being in excess and — in defect of the mean.)

A comparison of the above tables show, that the first three months of 1859 were much warmer than the average—April, considerably colder; June, of about the usual heat; July and August, much warmer; September, October, and November, colder; and December, as much as 5¼° below the mean. In 1860, January was above the mean; February, March, and April, considerably below the mean; May, about equal to the mean; and June, up to the 17th, above 5¼° colder than the usual temperature.

But although the mean temperature of some of the months shows a considerable departure from the mean, the period has been rendered more remarkable from the sudden great changes, as instance the temperature on the 4th of October, 1859, which rose in the shade to 77°.5, and on the 24th fell to 19°.4. Again: on the 6th of November it rose to 55.5; and on the 14th fell to 18°.0; on the 19th of December it fell to 7°.0, whilst on the 31st it rose to 53°.8, the 17th, 18th, and 19th being excessively cold, the temperature never rising above 22°.5, 22°.0, and 23°.5 respectively, the mean temperature of the whole 24 hours of the 18th being only 14°.4, whilst that of the 31st was 49°.0. The 1st of January, 1860, was remarkable for its warmth, the thermometer in shade rising to 56°.1, and the mean temperature of the 24 hours being as high as 51°.3, a great contrast to the temperature of a fortnight previous when it was only 22°.0, giving a range in mean temperature of 29°.3, and an actual range of 49°.1. On the 10th of January the temperature had descended to 24°.8, and on the 26th was 22°.0. In February the 5th was the hottest day, viz., 51°.5 (in the shade), and on the 10th it was the coldest, viz., 19°.8. In March the temperature reached 57°.8 on the 29th, falling to 22°.0 on the 17th. In April, on the 30th, it was 67°.5, two days previous having been as low as 27°.5, and on the 22d being 25°.0. In May, on the 21st, the thermometer rose to 79°.8; on the 10th having fallen to 30°, the month closing with a memorable gale and excessive snow in some parts of England and Scotland. In June the highest temperature reached has been 73°, whilst it has been as low as 39°.5.

In comparing the extremes of heat and cold of the past 15 months, it will be necessary to place in a tabular form the greatest heat and cold which has occurred in the different months during the past 18 years, viz.:—

Month.	Greatest Heat in Shade in last 18 Years.	Greatest Heat of 1859.	Greatest Cold in past 18 Years.	Greatest Cold of 1859.
1859.	Deg.	Deg.	Deg.	Deg.
January	56.0	54.5	—4.0	27.0
February	61 0	57.2	+6.1	27.4
March	71.5	64 0	13.0	25.2
April	79.0	78.0	21.8	21.8
May	84.5	78.5	26.0	30.8
June	92.2	80.4	35.1	41.9
July	91.0	89.5	36.3	45.6
August	92.5	86.0	34.2	44.4
September ..	85.0	74.0	32.0	37.5
October	71.7	77.5	23.0	19.4
November.. ..	62.0	55.5	13.2	18.0
December	62.0	53.8	12.0	7.0
1860.		Of 1860.		Of 1860.
January	56.0	56.1	—4.0	22.0
February	61.0	51.5	+6 1	19.8
March . ..	71.5	57.8	13.0	22.0
April	79 0	67.5	21.8	25.0
May	84.5	79.8	26.0	30.0
June (to 17th) ..	92.2	73.0	35.1	39.5

From the above table we see that in April, 1859, the temperature descended as low as in any year. In October, 1859, it rose 5°.8 beyond, and fell 3°.6 lower than any previous year, in December, 1859, falling 5° lower than in any previous year. In January, 1860 it rose a tenth of a degree higher than in any other year. In March the temperature had been 13°.7 hotter than in 1860, and in April it had been 11°.5 hotter.

With regard to the rain which has fallen during the past 18 months, the subjoined table will exhibit in a concise form the amount in comparison with the average:—

RAIN DURING THE PAST 18 MONTHS IN COMPARISON WITH [illegible] YEARS.

Month.	Mean Amount of the past 17 Years.	Greatest Amount in last 17 Years.	Least Amount in last 17 Years.	Amount in 1859 and 1860.	Excess of Defect of 1859 and 1860 of the Mean of last 17 Years.
1859.	Inches.	Inches.	Inches.	Inches.	Inches.
January	1.9	3.5	0.2	0.6	—1.3
February	1.4	3.6	0.3	1.2	—0.2
March	1.4	3.9	0.3	1.7	+0.3
April	1.9	4.3	0.5	2.4	+0.5
May	1.8	5.0	0.5	0.5	—1.3
June	2.7	5.0	1.0	3.2	+0.5
July	2.5	4.6	0.7	0.7	—1.8
August	3.0	6.2	1.0	3.0	+0.0
September ..	2.5	5.6	0.7	2.6	+0.1
October	2.9	4.7	0.9	1.8	—1.1
November.. ..	2.0	7.0	0.7	1.4	—0.6
December	1.9	4.0	0.4	1.5	—0.4
1860.					
January	1.9	3.5	0.2	2.6	+0.7
February	1.4	3.6	0.3	0.8	—0 6
March	1.4	3.9	0.3	2.0	+0.6
April	1 9	4.3	0.5	0.5	—1.4
May	1.8	5.0	0.5	3.3	+1.5
June (to 17th) ..	1.3	5.0	1.0	2 0	+0 7

+ being in excess, and — defect of the average amount.

Average yearly amount, 25.9 inches.

Amount in 1859, 20.6, or 5.3 inches below the mean.

Average from January 1st to June 17th, 9.7 inches.

Amount from January 1st to June 17th, 1860, 11.2 inches, or 1.5 inch above the mean.

There was a great deficiency of rain in 1859 during the months of January, May, July, and October, and a small deficiency in February, November, and December. In 1860 there was a great deficiency in April, an excess in January and March, and a great excess in May and June.

THE BAROMETER IN 1859—60.

Turning to the pressure of the atmosphere The barometer in 1859 was very high in January from the 2d to the 10th, reaching 30.773 on the 9th.; when corrected to sea level, from the 16th to the end of the month, the pressure was under 30 inches; and on the 23d had descended to 29.143 inches. It was low again in February from the 5th to the 10th, and high on the 23d and 24th. In March it was very low on the 15th and 29th. In April low on the 11th and 14th, scarcely reaching 30 inches during the month. In May, June, July, and August there was a very small range. In September rather greater. In October on the 26th at 8 A.M. it was only 28.790, reduced to sea level; and on the 31st descended to 28.735, scarcely ever rising to 30 inches. In November on the 1st it descended to only 28.520 at 1 P.M., reduced to sea level; it was low on the 4th and very high on the 9th, 10th, and 11th; reaching on the 10th, 30.761, reduced to sea level. In December it was low on the 5th, 21st, and 28th; and very low on the 24th, 25th, and 26th falling on the latter day to 28.751; it was very high on the 9th, 10th, and 11th, reaching 30.824 on the 10th

In 1860, in January, the barometer was very low on the 3d

4th, and 5th, 21st and 22d, 23d, 24th, 25th, and 26th, ranging to 28° 700 on the 4th, to 28° 744 on the 5th; on 21st to 28°.764, and on the 24th to 28° 758. In February it was low on the 27th and 28th, and high on the 14th, 14th, and 15th, reaching on the 14th 50°.717. In March it was low on the 23d, 24th, and 31st, ranging on the 24th to 28°.536, and on the 31st to 28°.594, being high on the 6th, reaching 30° 752. In April it was low on the 1st and 2d, being on the 1st 28° 643. In May there was rather less range. In June it was low on the 2d.

THE THERMOMETER IN 1859—60.

Returning to the temperature of the air in 1859. **January** the mean temperature ranged between 50 on the 18th, and 31°.4 on the 8th; the temperature reached 54°.5 on the 18th, and 50° and upwards on the 11th, 12th, 22d, 25th, and 26th, and only rising to 50 on the 8th, 37°.2 on the 9th, and 38°.5 on the 14th. The cold of night did not descend below 45° on the 25th, 44°.5 on the 18th, and 44° on the 21st, the coldest point reached being 27 on the 8th. **There were 21 frosty nights on the Grass.**

February, 1859.—The adopted mean 51°.7 on the 16th, and only 34°.2 on the 3rd and 7th, the temperature rising to 57°.2 on the 17th, and 55°.5 on the 16th, and never exceeding 39°.5 on the 3d, and 40 on the 6th, falling as low as 27°.4 on the 8th, and never going below 18°.5 on the 10th. There were 14 frosts on the Grass.

March, 1859.—The 8th, 9th, 10th, and 26th were cold days, the mean on the 26th being only 35°.6, and on the 9th 36°.7, and being 56° on the 4th; the four warmest days were the 3d, 4th, 5th, and 6th, the temperature rising to 61°, 64°, 63°, 60½, respectively. On the 30th the temperature only rose to 43°, and on the 31st to 31°, falling on the 31st to 25°.2, and never being below 48° on the 4th. There were nine frosty nights.

April, 1859.—The mean temperature was low on the 1st and 12th to end of the month, being only 36°.5 on the 1st, and never above 45°.5 from the 12th to the 30th. The mean temperature of the 2d was 14° higher than on the 1st, the 6th and 7th being the warmest days, the mean being 60°.1 on the 6th, and 62°.9 on the 7th. The greatest heat was 78° on the 7th, and 77°.8 on the 6th, whilst it was only 46°.8 on the 1st, 46°.5 on the 24th and 26th, 46° on the 27th, and only 45°.5 on the 29th. The greatest cold being as low as 21°.8 on the 1st, 23° on the 19th, 24°.5 on the 22d, and 25°.5 on the 23d, never descending below 47°.2 on the 4th, 48°.5 on the 7th, 46°.5 on the 8th, and 47°.5 on the 9th. There were 13 frosty nights.

May, 1859.—On the first fine day the mean ranged between 43°.5 and 45°.5, and on the 10th was 44°.9; whilst from the 24th to the 31st it ranged between 55°.6 and 65°.6. The greatest heat rose to 78°.5 on the 29th, to 77°.5 on the 26th, and to 75 on the 25th and 30th, never exceeding 51°.5 on the 4th. The greatest cold fell to 30°.8 on the 3d, was not below 50 on the 18th, 52°.5 on the 29th, 55° on the 30th, and 54° on the 31st. There were two frosty nights, viz., the 3d and 6th.

June, 1859.—The mean ranged between 54°.3 (on the 21) and 66°.3 (on the 19th). The greatest heat reaching 80 on the 26th, and 78° on the 25th, the 4th, 6th, 7th, 8th, 13th, 18th, 19th, 22d, and 27th, being also warm; it only rose to 57° on the 24, 59° on the 3d, and 59°.5 on the 28th. The greatest cold occurred on the 15th, viz., 41°.9, and it was only 42° on the 21st, being never below 48°.5 on the 26th, nor 57°.5 on the 27th. The temperature was never within 7° of a frost on the Grass.

July, 1859.—The mean temperature was 72°.8 on the 11th, 72°.5 on the 12th, 71°.8 on the 17th, 71°.2 on the 18th, and 70°.4 on the 19th; and only 53°.8 on the 1st, and 57°.9 on the second. The greatest heat reached 80°.5 on the 17th, was 87°.5 on the 10th, 87°.8 on the 11th, 85°.8 on the 12th, 87° on the 18th, and **84°.2 on the 19th, rising to 80° and upwards on 14 days.** On the 1st it only rose to 59°.5, on the 2d to 65°.1, and on the 3d to 64°.2. The greatest cold was 45°.6 on the 25th, and 46°.5 on the 1st; never being below 61°.4 on the 19th, 60°.5 on the 22d, nor 60° on the 7th. The temperature on Grass was never less than 8° above freezing.

August, 1859.—**The mean temperature was only 56°.2 on the 29th, 54°.9 on the 30th, and 52°.2 on the 31st,** and as high as 66°.5 on the 12th, 67°.7 on the 13th, 66°.1 on the 18th, 69°.2 on the 19th, 67°.5 on the 20th, 69° on the 25th, and 66°.9 on the 26th. The greatest heat reached 81° on the 12th, 80° on the 19th, 85°.8 on the 20th, 82° on the 23d and 25th, and 80° on the 24th, never exceeding 64°.5 on the 8th, 66° on the 15th, 63° on the 30th, and 60°.5 on the 31st. **The greatest cold was as low as 44°.4 on the 13th, and as high as 60° on the 15th, and 60°.5 on the 18th.** The temperature on Grass never was less than 9° above the freezing point.

Sept., 1859.—The mean temperature was as low as 47°.7 on the 13th, and as high as 64°.9 on the 24th, and 65°.8 on the 25th; on other days ranging between 50°.2 and 62°.6. The greatest heat was 74° on the 24th, and 72° on the 25th; only 58° on the 13th. The greatest cold was 37°.5 on the 15th, 37°.8 on the 20th, 38°.5 on the 5th and 14th, and 39°.8 on the 12th; **and never below 50°.8 on the 6th and 7th, 52° on the 8th, 54°.5 on the 9th, 60°.5 on the 24th, 57°.8 on the 25th, and 54° on the 26th. The temperature on Grass was only 4° above freezing on the 13th and 27th.**

October, 1859.—This was an extraordinary month as regards temperature. The mean being as high as 60° on the 1st, 59°.6 on the 3d, 57°.5 on the 7th, 57°.1 on the 1st, 56°.6 on the 2d, 55°.5 on the 8th, and 55°.2 on the 9th; whilst it was as low as 27°.3 on the 24th, 29° on the **23d, 29°.9 on the 21st,** and 31°.6 on the 22d. **The 19 first days were hot,** the temperature rising on the 1st to 76°.5, and on the 4th to 77°.5, the latter being a perhaps unheard of temperature for **October in this climate. On the 21st the temperature never exceeded 41°.5, the 25th 42°,** and the 23d and 24th 43°. The greatest cold was as low as 19°.4 on the 24th, 21°.5 on the 25th, 22°.4 on the **23d, and 23°.5 on the 22d,** never being below 34°.2 on the 8th, 35° on the 3d, 36°.5 on the 1st, and 4th, 37° on 7th, 31½° on the 21st and 22d, and 32° on the 1st. The range of temperature for the month was the extraordinary amount of 58°.1, the temperature ranging higher and falling **lower than on any other occasion in October on record. There were nine frosty nights.**

November, 1859.—**The mean temperature was as high as** 51°.1 on the 6th, and as low as 28°.2 on the 14th, the greatest heat reaching 56°.5 on the 6th and only 55°.8 on the 5th, the **greatest cold** descending to 18 on the 22d, and never below 45 on the 6th, and 46 on the 2d. There were 14 frosty nights.

December, 1859.—The cold was exceedingly severe from the 12th to the end, and very great on the **4th, 5th, 29th, 30th, and 31st,** the mean temperature being **as high as 45°.4 on the 5th, 45°.3 on the 29th, 46°.4 on the 30th, and reaching 49° on the 31st.** The greatest heat was 56° on the **4th, 53° on the 5th, 51°.5 on the 29th,** 52° on the 6th and 7th, 53°.5 on the 31st, the mean not exceeding 42° on the 17th, 52° on the 18th, 49° on the 19th, there being 7 days on which the mean was below the freezing point. The greatest cold fell to 18° on the 14th, 19°.5 on the 15th, 19° on the 16th, 20°.5 on the 17th, never exceeding 41°.5 on the 3d, 40° on the 1st. There were 14 frosty nights.

January, 1860.—The cold was connected with fine days, the temperature ranging 51°.3 on the 1st to 41°.1 on the 4th, 41°.7 on the 10th, and 41°.6 on the 14th, and 42° on the 15th, being only 28°.1 on the 13th. The greatest cold was extraordinary, being 9°.1 on the 1st, 10°.6 on the 3d, 9°.6 on the 4th, and 5° on the 10th. The greatest heat was 52° on the 1st, 51°.5 on the 2d, 50° on the 3d, 51° on the 4th, 50° on the 9th, and 52°.5 on the 10th; and never below 41°.5 on the 15th. There were 22 frosty nights.

February, 1860.—The mean temperature was as high as 50° on the 4th, and as low as 26°.6 on the 10th, the greatest heat reaching 51°.5 on the 5th, and only 35°.6 on the 15th. The greatest cold falling to 19°.8 on the 10th, and never below 28° on the 5th. There were 15 frosty nights.

March, 1860.—The mean temperature rose to 49°.5 on the 17th, 49°.4 on the 24th, and 48°.9 on the 27th; falling to 31° on the 10th, and 32° on the 8th and 11th. Greatest heat: 57°.8 on the 20th, 57°.5 on the 17th, 55° on the 18th, and 54°.8 on the 28th, and only 50°.5 on the 10th. Greatest cold: 22° on the 17th, and never below 45°.5 on the 31st, 42°.8 on the 28th, and 41°.8 on the 26th. There were 19 frosty nights.

April, 1860.—Mean temperature: 55°.7 on the 30th, and 51° on the 29th, and only 37°.5 on the 2d, 37°.6 on the 10th, and from 38° to 39° on the 9th, 11th, 20th, and 21st. Greatest heat: 67°.5 on the 26th, and 63°.5 on the 29th; and only 46°.2 on the 20th, and 50°.5 on the 21st. Greatest cold: 25° on the 22d, and never below 44°.5 on the 30th and 42° on the 8th. There were 16 frosty nights.

May, 1860, mean temperature on the 20th 60°.1, on the 21st 62°.9, and on the 22d 63°.4, whilst only 44°.9 on the 5th, and **45°.5 on the 6th. Greatest heat** 72° on the 4th, 72°.5 on the **12th, 76°.5 on the 20th,** 79°.8 on the 21st, and 73°.8 on the 22d, **and only 53° on the 5th,** and 57°.3 on the 28th. Greatest cold: **30° on the 10th,** 51°.5 on the 11th (a rise of 21°.5 in 24 hours), 52°.8 on the 22d, and 51°.5 on the 23d. There were four frosty nights, viz., the 4th, 6th, 7th, and 10th.

June, 1860, up to the present time, *i. e.*, the 16th, the highest temperature has been 75° (on the 15th), and the lowest 39°.5 (on the 8th), the temperature falling within 2° of freezing on the 15th, and rendering a thunderstorm on the Grass to 31°.5 on the 16th (the temperature in the air never falling below 50° on that occasion, a difference between the Grass and 4 feet of 18°.5).

RAINFALL OF 1859 AND 1860.

January, 1859.—Scarcely **any rain during the first half,** and **more or less during most** days on the last half of the month, **the greatest amount being** 0.162 (on the 23d). There were 15 days on which rain fell.

February, 1859.—The largest amount fell on the 6th, viz., 0.315 inch, on three other occasions above a tenth of an inch fell. Rain on 16 days.

March, 1859.—On the 14th 0.428 inch fell, on the 13th 0.270, and on the 21st 0.215 inch; on four other days above a tenth of an inch fell. Rain on 16 days.

April, 1859.—On the 14th 0.415 inch fell, on the 25th 0.430, on the 28th 0.300, and on the 29th 0.325 inch; on five other days above a tenth fell. Rain on 16 days.

May, 1859.—On the 7th 0.110 inch fell, on the 8th 0.200 inch. Rain on eight days.

June, 1859.—On the 2d 0.655 inch fell, on the 3d 0.280, on the 4th 0.808, on the 16th 0.880, and on the 28th 0.530 inch; on one other day above a tenth of an inch fell. Rain on 14 days, the weather very dry from the 6th to the 21st.

July, 1859.—No rain from the 4th to the 18th, and scarcely any except on the 29th, 0.280 inch, and on the 31st 0.218 inch. Rain on nine days.

August, 1859.—On the 6th 0.500, on the 7th 0.780, on the 8th 0.415, on the 15th 0.625, and on the 29th 0.250 inch; on three other days above a tenth of an inch fell. No rain from the 8th to the 14th, and from the 17th to the 27th. Rain on 15 days.

September, 1859.—On the 24 0.560, on the 19th 0.210, on the 21st 0.420, and on the 30th 0.490 inch; on two other days a tenth of an inch fell. Rain on 20 days.

October, 1859.—On the 1st 0.240, on the 16th 0.200, on the 25th 0.440, and on the 26th 0.218 inch; on 3 other days a tenth of an inch. Rain on 16 days. No rain from the 2d to the 8th.

November, 1859.—On the 4th 0.390, on the 6th 0.210, on the 28th 0.210, and on the 30th 0.220 inch; on 1 other day a tenth of an inch. Scarcely any rain from the 7th to the 28th. Rain on 17 days. Rain on the first 7 and last 5 days.

December, 1859.—On the 29th 0.260, and on the 31st 0.405 inch; on 5 other days above a tenth of an inch. No rain from the 5th to the 11th, nor from the 13th to the 21st. Rain on 13 days.

January, 1860.—On the 3d 0.255, on the 15th 0.320, on the 20th 0.370, on the 21st 0.250, on the 27th 0.340 inch; and on 6 other days above a tenth of an inch. Rain on 21 days.

February, 1860.—On the 20th 0.310 inch. Rain on 17 days, the amounts small.

March, 1860.—On the 3d 0.264, 21st 0,380, 31st 0.220 inch, and on five other days above a tenth of an inch. Rain on 24 days.

April, 1860.—On 3 days above a tenth of an inch, the largest amount being 0.410 inch. Rain on 12 days. Scarcely any **rain except on the 2d, 9th, 10th, and 22d.**

May, 1860.—On the 11th 0.360, on the 13th 0.605, on the 15th 0.530, on the 17th, 0.210, on the 18th 0.460, on the 26th 02.10, and on the 31st 0.552 inch; on two other days about a tenth of an inch. No rain till the 8th. Rain on 17 days.

June, 1860 (to the 17th).—On the 2d 0.447, on the 3d 0.600, and on the 12th 0.220 inch; on 4 other days above a tenth of an inch. **On 13 days (out of 17) rain.**

THE WEATHER OF 1859—60.

January, 1859.—Misty on 3d, 5th, 6th, and 9th; **hail** on 10th, snow on 13th; from 20th to 26th very windy; on the 18th thunder clouds, with violent W. wind; on the 21st gale at night from S.; on the 23d violent S. gale from 6 A.M. to 6 P.M., the direction changing at 5 P.M. to W.N.W.; on the 25th from 6 P.M. violent S.W. gale, becoming W. at 6 P.M., and lasting till the afternoon of the 26th.

February, 1859.—1st and 2d slight snow, 4th lightning, on **9th aurora borealis, 14th hail, 15th to 18th very windy, 23d,** 24th, and 25th, aurora borealis, 15th W. gale, 16th W. gale, 17th W. gale, 18th W. gale, on 23d a large meteor.

March, 1859.—On 7th violent wind with snow and sleet, on 11th S.W. gale with clouds of dust, on 12th gale from W., on 13th gale from W., on 14th violent wind from N.E., and after 4 A.M. S.E.; on 15th W. gale, on 16th and 17th S.W. gales, on 18th and 19th thunder clouds, on 21st a thunder storm, which passed N.W. current, and at 2.35 P.M., heavy hail, and [illegible] thunder; 25th windy, 26th aurora borealis, 27th, 28th, 29th thunder clouds, 30th showers of [illegible], the largest [illegible] nearly half the size of the [illegible] fruit trees (since Dec. 15) much [illegible] the crop of Apricots, Peaches, Nectarines, and Plums destroyed, as well as many hardy flowers, such as the Laburnum, Lilac, Syringa, &c.

April, 1859.—On 1st an intense frost, none so severe since November 4th, the only days during the winter as severe as 2d, 3d, and 4th of November; **Rhubarb, Peas,** [illegible] on 4th and 5th gale, on 4th and 5th thousands of [illegible], the hottest day ever recorded in April, on [illegible] thunder clouds and aurora borealis, [illegible] thunder storm with loud thunder and hail between [illegible] P.M., on 21st N.W. gale, and from 5½ till 9 A.M. a [illegible], with occasional showers of snow and hail; [illegible] and 7.45 P.M., on 17th [illegible] Peach blossoms on the 17th, 18th, 19th, [illegible] Asparagus out to the ground, [illegible] the first aurora borealis very [illegible], and aurora borealis, 24th E. gale, on 25th and 26th [illegible] E. wind, 27th and 28th gale from E., 30th aurora borealis.

May, 1859.—On 1st a singular solar phenomenon, 4th windy, 12th aurora borealis, 25th dense fog from 5 till 7 A.M., 28th thunder, 29th thunder storm, at 6.55 P.M. great hail storm, large stones an inch in length, and very few less than half an inch, their shape being very extraordinary; in the evening lightning. 30th thunder and lightning.

June, 1859.—On 1st thunder, on 4th great rain storm with thunder in evening, nearly an inch fell, the storm moved in a E.N.E. current: 7th thunder, 9th rough N.N.E. wind, 2 P.M. thunder storm at 8 P.M., moving in S.W. current; 27th lightning.

July, 1859.—On 2d lightning, on 6th a pillar of light, 18th thunder storm in S.W. current at 6 P.M., 20th thunder storm in S.W. current, 21st lightning, 22d thunder storm in S.W. current, 25th lightning, 30th rough S. wind, lightning, 31st rough S.W. wind.

August, 1859.—**4th lightning, 5th rough W.S.W. wind, 12th** aurora borealis, **28th and 29th brilliant aurora borealis, 30th** lightning.

September, 1859.—3d and 4th aurora borealis, 4th lightning, 6th a thunder storm in W. current, 9th W.S.W. gale, 21st lightning, 24th, 25th, 29th and 31st aurora borealis; 24th and 25th very hot.

October, 1859.—**1st and 2d aurora borealis, 3d** very hot, 7th to 9th misty, 12th splendid aurora borealis, 13th misty, 15th and 16th aurora borealis, 21st and 22d and 23d and 25th lightning, 23d hail and snow, 23d, 25d, 24th, and 25th intense frost, 26th E. gale violent, 31st aurora borealis.

November, 1859.—1st W. gale, 5th gale at first S., then W.; 4th and 5th lightning, 6th and 7th gales, 10th the range of barometer during the last 10 days has exceeded 2½ inches, 12th remarkable "mare's tails," 13th lightning and aurora borealis, 14th and 15th misty, 21st, 22d, and 23d dense fog, 29th sleet and snow, 30th heavy snow.

December, 1859.—4th and 5th S.W. gales, 4th snow, 13th to 14th aurora borealis and snow, from 14th to 20th intense frost, on 16th much ice floating on the Trent, 17th Trent frozen over and persons crossing it, 19th the coldest day ever recorded in December, the temperature on Grass descending 0°.3 below zero; 20th and 21st gales from S.W., 22d violent W. wind, 23d, 24th, and 25th foggy, 29th much lightning, 30th thunder storm moving in W.N.W. current, hail; 31st gale from W.

January, 1860.—1st S. gale, the hottest day ever recorded here in January; 2d S.W. gale, becoming W.; 3d S. and S.S.W. gale, 4th brisk wind, 10th dense fog all day, with frost; 14th snow, 15th gale from S. by E., 16th (from 8 till 9 P.M.) increasing to lightning in N., 21st S. gale, becoming S.W.; 22d gale W.S.W., 23d and 24th lightning, 24th S.W. gale, 25th snow, 28th aurora borealis and snow.

February, 1860.—2d snow showers, 5th W.S.W. gale, becoming W.N.W., 6th N.W. gale, heavy snow; 8th snow, 9th snow, 11th snow, 12th snow and aurora borealis, 13th snow, 17th snow, 19th W. gale, 2 P.M. a hurricane (20 lbs. on square foot) with snow and hail; 26th snow, 21st aurora borealis, 25th rough wind, 26th thunder and lightning, 27th and 28th W. gales (between noon and 2 P.M. of 28th thousands upon thousands large trees blown down in Nottinghamshire).

March, 1860.—4th thunder storm, 7th snow and hail, 8th snow, 9th snow, 10th snow, 11th dense fog, 12th aurora borealis, **18th very windy and aurora borealis, 19th and 20th windy, 21st hail, snow, and aurora borealis; 23d windy, 24th W. gale, 25th** aurora borealis.

April, 1860.—2d hail, 3d hail and aurora borealis, 4th snow, hail, aurora borealis, and lightning; **13th hail,** 14th hail, hail, aurora borealis, 19th hail, 20th hail and snow, 21st hail and snow, 22d hail, snow, and thunder, and aurora borealis, hail and snow, 24th hail and snow, 27th aurora borealis, very intense frost.

May, 1860.—4th hot, 15th thunder storm, 18th lightning, 23d thunder, 26th thunder storm, and W. gale, 28th W. gale (trees blown down).

June, 1860.—1st hail, 7th thunder, 8th thunder, 10th thunder storm, 13th gale all day from S., 15th hail, 16th thunder storm at 6 till 7 P.M., with very large hail stones (from ½ inch to [illegible] in diameter), ground white over and much thunder and lightning.

The unequal distribution of the temperature of the air throughout great distances has been the cause of this extraordinary weather, and this has produced great **gales and thunder storms at unusual seasons.** The southern hemisphere seems to have received a portion **of the heat that under ordinary circumstances should** have been enjoyed by England, and which would have changed our seasons from that rigour from which we are now suffering to that of an ordinary season. Should the present weather continue much longer the corn crop will be very deficient, as it shows unmistakable signs that it cannot withstand this cold wet weather for any lengthy period. *E. J. Lowe.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

A WEEKLY Council was held on Wednesday, June 20, Mr. T. Raymond Barker, V.P., in the chair. Present: Marquis Camden, Earl of Powis, Lord Leigh, Hon. Col. Hood, Hon. W. G. Cavendish, M.P., Hon. H. Vernon, Sir E. C. Kerrison, Bart., M.P., Mr. J. D. Dent, M.P., Mr. Dashwood, Mr. Frere, Mr. Brandreth Gibbs, Mr. Majendie, Major Munn, Mr. Murton, Mr. Neame, Mr. Simpson, Mr. Wightwick, and Professor Wilson.

PRIZE ESSAYS.—The Chairman of the Journal Committee reported the following awards from the Judges of Essays:—

To Henry Evershed, Gosfield, Halsted, Essex, the prize of 10*l.* for the best Essay on the proper office of Soil on the Farm.

To Professor Tanner, Queen's College, Birmingham, the prize of 10*l.* for the best Essay on the conditions Seed best suited to the various agricultural regions.

Some well-grown Wheat brought from Tasmania was exhibited by Mr. Ashhurst Magendie, of Hedingham Castle, Essex.

The Council then adjourned to its weekly meeting on the 27th inst.

OILCAKES.

The following is a report of the lecture given by Professor Voelcker at the meeting last week of the Society:—

I shall endeavour to treat the subject in a practical manner as I can, divested as much as possible of technical expressions, and of language which is not generally intelligible. You will allow me likewise to begin at once with the subject, without any further introduction as to the **quantity of cake annually imported into England, and of great importance to the feeder, or introducing similar** [illegible]

It is not my object, in giving a practical turn to the

to-day, to record any experiments of my own, or in any way to presume to teach the feeder of stock in what way he may best expend his money in the purchase of food, but I shall endeavour simply to give to the practical man some indications whereby I hope he will be enabled to form for himself a trustworthy opinion respecting the relative value of different cakes, and likewise what is perhaps of more importance to him, to introduce some remarks which will enable him to distinguish a good from a bad cake; and in conclusion, shall allude briefly to the various substances with which oil-cakes are at the present time often largely adulterated.

FAT IN FOOD.—Let me first point out to you some peculiarities in the composition of oil-cakes. A reference to their composition is necessary to the understanding the remarks which will follow. I would then observe, that what characterises oil-cakes, distinguishing them from all other articles of food pre-eminently, is the large amount of oil that is left in the cakes, obtained by expression of the oil seeds. If you glance at the diagrams (see tables at the end, A,B,C), you will find that they contain a considerable quantity of oil—from 6 to 12 per cent.; and in some instances, as in the decorticated Cotton-cake, even 16 per cent. of oil. I may observe at once that the value of oil-cake in a very great measure depends upon the amount of oil which is left in the cake. And I may further say, that the tendency of the manufacturer at the present day is to produce an inferior description of cake, inasmuch as improved machinery enables him to squeeze out more oil than formerly, and thus to render the refuse less fattening, less valuable to the feeder of stock. I am very much inclined to believe that the oil is by far the most valuable constituent of all oil-cakes. I am aware that it was the fashion not many years ago to measure the feeding properties and even the fattening qualities of articles of food by the amount of nitrogenous or flesh-forming matters; but these views are not supported by any practical experiments, nor, indeed, by the everyday experience that we have respecting not only human but cattle food. We pay more for food rich in starch, mucilage, and matters capable of producing fat, than we pay for food, which, like Bean-meal, is extremely rich in nitrogenous matter, but which does not produce so much butcher's meat. It is a matter of much importance to the farmer to know how much he gets back for the money he expends in the purchase of food. I have no hesitation in saying that more money is made by the purchase of food rich in oil, starch, or sugar, than in the purchase of food which contains an excess of nitrogenous matters.

FLESH IN FOOD.—Still, we ought not to leave unnoticed that the flesh-forming matters are very important indeed and that oil cakes are peculiarly rich in them. In one sense they are perhaps most essential—perhaps even more essentially necessary than the other constituents of food which produce fat, or are employed in the animal economy to keep up the animal heat. They are more important in this sense: whereas the animal organisation has the power to make fat from gum, sugar, mucilage, and even from young cellulose or young vegetable fibre, it has not the power of making a particle of flesh. Unless, therefore, food is given to animals which contains ready-made flesh an animal cannot grow, and the other constituents of food remain unavailable. It is in this sense that the nitrogenous matters of food are extremely valuable. But in a purely practical sense they are not so valuable as the oil, starch, or sugar of food, because by spending a certain amount of money in food we do not get so great a return in the shape of butchers' meat by purchasing these flesh-forming matters as by purchasing feeding substances, rich in oil or starch. However, in speaking of the relative value of the various constituents, especially the oily and the flesh-forming constituents, we are not to overlook that the quantity of nitrogenous matter which is not applied for the formation of flesh passes through the animal, and is obtained again in the dung, with the exception of a small quantity that escapes by evaporation through the skin, or through the lungs. A certain quantity of nitrogenous food evaporates through the skin, or with the perspiration; but by far the largest proportion, according to some experimenters, nine-twentieths of the flesh-forming or nitrogenous matters of food are found again in the dung; according to others the amount is seven-eighths. But, speaking in round numbers, I think we are not far wrong in saying that we may fairly expect three fourths of the nitrogenised matters of oil-cake back again in the manure; and perhaps we are safe likewise in asserting that fully one half of the money value of Rape and the best Cotton-cakes, is obtained back again in the manure. So we must not put down these constituents, which are called nitrogenous, as useless, because they alone do not produce much butchers' meat; nor must we estimate the value of oil-cake entirely by the increase in the live weight of cattle fed upon the cake; but also, and chiefly, I believe, by the increased value of the manure which is produced through the instrumentality of oil-cake.

BONE IN FOOD.—I will now direct attention to the inorganic matters or ash of oil cakes. These inorganic matters may be called bone material; for the ash of oil cakes is particularly rich in phosphates of lime or the material of which the greater part of the bone is composed of. Now, the large proportion of oil, next the large proportion of flesh forming matters, and third a considerable proportion of bone material, are characteristics that confer a particular value upon oil cake, either directly as food or indirectly as useful material for increasing the value of farmyard manure. For let me observe, that oily matters and substances that make butchers' meat are the most valuable constituents in all feeding-materials, and therefore also in an oil-cake. On the other hand the flesh-forming constituents and the bone-forming materials—in other words, the nitrogen and the phosphates of the cake—are the two most valuable fertilising constituents. We have thus in oil-cakes in a concentrated state materials that produce butchers' meat, and at the same time yield the most valuable fertilising constituents. There is no other description of food which unites these useful properties.

OIL-CAKES.—Having briefly alluded to the various uses to which oil cakes are applied, and spoken of their relative advantages, let me, in the next place, direct your attention to some of the more important descriptions of oil-cake. I shall endeavour to confine myself to an hour in the delivery of this lecture; and must therefore leave unnoticed many descriptions of cake that occur occasionally in trade, and some of which you will find placed on the table. You have here, for instance, a specimen of the Camelina or Gold of Pleasure cake, which is not so valuable as Linseed or Rape cake, but may still be usefully employed. Here is also a specimen of the Sesamum cake—a useful cake, which occasionally can be had at a cheap rate; and there is the Sunflower-seed cake and Cocoa-nut cake. There are also several other specimens on the table, and many others that I left at home, which I shall be happy to show to any members of the society who will do me the honour of visiting my little food museum at the Royal Agricultural College, Cirencester. Here is a specimen of an excellent cake, a Nut cake. It is extremely sweet, and made of an African Nut that has lately come into commerce. The Nut tastes as sweet as an Almond, and may be eaten; indeed, it is used as a dessert Nut occasionally. There are many other cakes of a similar description, more or less important to the practical agriculturist, but I shall confine myself, with your permission, chiefly to the chemistry of Linseed-cake, Cotton-cake, and Rape-cake.

LINSEED CAKE.—You are all aware we distinguish chiefly the following kinds of Linseed-cake, English cake, American cake, and foreign cakes. Amongst foreign cakes there are various descriptions. There is the Baltic, the Marseilles, the Naples cake, and various others. We have here an excellent specimen of good English cake. The English cake is made now of two qualities, thick and thin cake; the latter is made in imitation of the American barrel cake, of which specimens are before you. You observe how closely the thin English cake resembles the American barrel cake. The latter has gained much favour, and therefore the manufacturers in England have found it to their advantage to imitate the form in which it is sold. In the first place, notice that the American cake occasionally is as bad as English and foreign cakes. It is not every description of American cake which is good, but generally speaking, as it comes into the market, especially the barrel cake, it is of a very superior character. But the question whether it is generally superior to the English cake or not is one which is not very readily decided; you may get English cake, quite as good, if not better, than the American cake.

Some years ago it was the fashion to buy the English cake in preference to any other, but it is now the fashion to buy the American barrel cake. I can only account for this by the fact that the English cake, being produced in good quality, was rapidly consumed; the American cake was usually sent in a very damaged condition to this country; coming as it did in bags, our sharp American friends very soon found that they must sent their cake here in a good condition. They dried it previously to sending it over, and imported it in barrels, and this improved condition of the American cake greatly increased its reputation, which has been kept up; so that at the present time in most markets American cake, especially the barrel cake, fetches a higher price than the English. But a reference to the diagram will show you that there is no essential difference between good English cake and good American; indeed, if anything, the advantage is in favour of the specimens of English cake. The difference is extremely small. There is the same quantity of oil in both cases. The proportion of flesh-forming matters is rather larger in the English than in the American. There is the same amount of ash in both. The proportion of sand hardly amounts to one per cent. in the English cake, and in the American it is only a half per cent. These differences are extremely small and unimportant, so that you may get, and often do get, as good English cake as American. And occasionally also you get bad American cakes; but, on the whole, the exporters of American cake are very jealous as to the kind of article they send to this country, especially if they go to the expense of packing it in barrels.

So much with respect to the relative value of English and American cake.

In the next place, I have to notice some peculiarities in the constitution of foreign cake. I observe that most of the foreign cakes which come from the South of France and from the Baltic are very inferior. It is difficult indeed to get a good foreign cake; and a great deal of mischief is done by these bad cakes. Animals do not get on well when fed upon them, and frequently they suffer injury—injury which can only be ascribed to deleterious seeds, with which almost invariably the foreign cakes are mixed. We know but little of the physiological effects which many of the weed seeds have on the animal constitution: but we know at least that several of the weeds occurring in foreign cakes are violent purgatives. Many English weeds also possess this property; for instance, the Linum catharticum. If you examine closely the foreign cake, you will find in it, as in the case of the specimen I hold in my hand, a considerable quantity of seeds that are evidently not Linseed. Moreover, it is another characteristic property of foreign cakes that they are often very hard pressed, they are frequently ground over and pressed again, before they are sent in this country. Several of the foreign cakes are badly pressed in the country where they are made, and are recrushed in this country, being mixed at the same time with the sweepings of warehouses, with Charlock, with Rape seed, and refuse seed containing a little oil, and the whole mess is then sold as cake, to the great injury of those who feed it. I know for a fact that occasionally oily refuse seeds, which would have no great value in an expressed state in the market, are pressed with foreign cakes. Here is a sample of Marseilles cake, in which you can see the foreign seeds very plainly. That the foreign cakes are often recrushed appears to me to be proved by the almost complete destruction of the shape of the Linseed. In this case you cannot possibly ascertain from what description of seed it is made. It is so finely ground that you can hardly recognise the structure. This of course is not the case with every foreign cake, but many of the cakes are so finely ground and hard pressed that it is impossible to say what kind of cake they are, unless you examine them very carefully.

ADULTERATION.—While speaking of Linseed, I would allude to the various adulterations of Linseed-cake. The first and by far the most common one is adulteration with the seeds of weeds, the sweepings of warehouses, refuse oil seeds of various kinds. In the second place, an adulteration by no means uncommon is that of bran. The bran is added with a view of getting an additional quantity of oil out of the cake by re-pressing it. This spring I have had more than a dozen, if not more cakes sent to me, which were adulterated with bran; and cakes mixed with seeds of weeds have been sent to me, I am sorry to say, in a very much larger proportion than pure unmixed Linseed cake. Thirdly, Linseed-cake is sometimes mixed with Rape-cake. A sample of such cake was sent to me lately by Mr. Hudson, of Castle Acre. Examined by the microscope Rape cake is seen unmistakeably in the cake. This adulteration, perhaps, is not so objectionable as many of the others which I have noticed, but still as Rape-cake sells at a much lower price than the American or English Linseed-cake, I would advise all who like to try the mixture to buy the two cakes separately. Then, again, chaff and the seeds of Cereals occur in cakes, especially in Linseed cakes. Even an unpractised eye will easily recognise in the cake which I hold in my hand the seeds of Cereals, refuse Barley, and Grass seeds; these are all mixed up with the cake, and the whole is pressed together. A very injurious adulteration which occasionally occurs is that of Castor-oil Beans. A member of this Society some time ago lost a valuable animal by giving it Marseilles cake, in which I detected these Castor-oil Beans. Another very injurious adulteration is that which occurs—not very frequently, but I have seen it—in the adulteration of a cake which is occasionally sold as pure Linseed cake under the name of Nut cake. It is produced by expressed oil from the Castor Beans, a very drastic seed which came from the Cape de Verde Islands. Only a few months ago a large cargo of these Beans came into Bristol, and a bag of them was given away. Accident. A number of street boys roasted and ate them, and finding them very sweet partook of them freely, and some of them had to be carried half an hour's journey home. They are violently drastic Beans. They have an unpleasant, sweet taste, but are very poisonous. These are some of the more important adulterations that have come under my notice.

COTTON-CAKE.—We distinguish now principally two kinds of this cake—the one made of the whole seed and the other of the decorticated or shelled seed. The difference in their qualities will become intelligible by an examination of the raw materials from which the cakes are made. The decorticated or shelled cake is made of the kernel of the Cotton seed; the whole cake, in which we recognise an abundance of the husk, is made of the entire seed; and inasmuch as the husk, is made of the entire seed; and inasmuch as the Cotton seed contains full half its weight, and some descriptions contain as much as 60 per cent. of the hard husk, we must not expect that the cake made of the whole seed should be so valuable as the decorticated cake. There are several specimens of Cotton-cake on the table. There is very little value in the husk itself; the difference in the two kinds of Cotton cake then arises from the different mode in which they are made. The one, the decorticated cake, is made from the kernel, the other kind is made from the whole seed. The difference in the composition of the two kinds of cake is very great. The decorticated Cotton-cake contains 16 per cent. of oil (more than any other description of cake), while the whole-seed cake contains only 6 per cent. The proportion of albuminous or flesh forming matters in the decorticated cake amounts to 41 per cent.; in the whole-seed cake it is only 23 per cent., or just one-half. So with respect to the other constituents, the proportion of woody fibre is very much larger in the whole-seed cake than in the other. The husk in the whole-seed cake for a long time was a great impediment to the general use to which Cotton-cake is now applied in this country. I remember when the first cargoes of Cotton-cake came into England before the decorticated Cotton-cake was known, trials were made of it, which proved quite unsuccessful. People did not like it at all, and I believe the Cotton-cake would never have been extensively used if it had not been for the invention of a very useful machine patented in America, by means of which the hard husks can be removed from the kernel. The use of this machine gives us a superior oil and a superior cake. The Cotton-seed oil made from the kernel alone is a very useful article, and so is the cake, whereas the oil expressed from the whole seed is dark brown in colour, and cannot be used except for the commonest purposes for which oil is employed. The difference in the value of the two descriptions of cake is so great that I almost think 2 tons of the oil cake made of the whole seed do not go further than 1 ton of the best decorticated Cotton seed cake. Moreover there is a certain danger in using the whole-seed cake. Several cases of so called poisoning have been brought under my notice within the last year or two. Animals that have freely partaken of the whole-seed cake have died suddenly, and people have imagined that there was something injurious in the husk; but examination has shown that the effect produced is very much like that which is occasionally produced in the case of boys who die from inflammation of the bowels in countries where Cherries are very abundant. Being very greedy, and eating the Cherries with the stones, they get a stoppage of the bowels and so die from inflammation. There is nothing poisonous in the husk of the Cotton seed, and when given judiciously, no injury will result; but if animals are supplied with an unlimited quantity of dry food with the whole seed, there is indeed a danger. The hard husk is indigestible, and may roll together in such large masses that inflammation of the bowels will ensue. There is no such danger however in the use of decorticated Cotton-cake. The decorticated cake occurs of various degrees of quality. And allow me to observe with respect to all kinds of cake, that not only the composition, but, even in a higher degree, the condition of the cake determines in a great measure its value. I have here a specimen which you would hardly recognise as of the same description as another specimen also on the table of a very beautiful character; it is the same kind of cake, only it is in a bad condition. I say then the condition of a cake determines everything.

CONDITION OF CAKE.—Some time ago I was very gratified in finding what great care Mr. Stratton of Broad Hinton, a celebrated Short-horn breeder, takes in selecting the very best of American barrel-cake for his stock. We often forget that animals have appetites as we have, and that they like food in a good condition better than food in a bad one. The composition of two samples of the same food may not vary much; yet the practical effect produced by them may very exceedingly. There is nothing remarkable in this, for we know that if we get good wholesome bread which is one or two days old we do well upon it; but if it remains in a damp cellar and gets mouldy, stale, and moist, it loses its fine flavour, and in this condition may do us harm. So it is with stale mouldy cakes. Animals never do well on very old cakes. In examining, therefore, the different cakes, we ought to examine particularly their condition. I allude especially to the examination of Cotton-cake, because every person has the means of examining its condition with very little trouble. It is not so easy to examine the condition of Linseed; it presupposes an extensive acquaintance with various descriptions of Linseed-cake. You must have seen a great many samples of cake before you can give a trustworthy opinion. Not so with decorticated Cotton-cake. In this the colour affords an excellent criterion as to its freshness. The freshest Cotton-cake is as yellow as Mustard. I hold a piece of cake in my hand, the exterior of which is brown; but if I cut away a portion you will observe that the interior is bright yellow—very different from the part that has been exposed to the air. This was an excellent cake when we first got it for feeding purposes, and we are feeding it extensively in our farm at Cirencester. When we first had it it was of a bright yellow colour; but you observe how it has since changed. From this we may learn a very useful lesson—that we may take the colour as a guide to the condition and age of the cakes. If we are presented with a cake which is as brown as the specimen before me, and if you find on cutting it that the brown colour has penetrated deep into the interior, we may at once conclude that it is a stale old cake. The deeper it has penetrated, the older the cake, and the more it has suffered by bad keeping. If it is kept in a damp place its colour and condition are rapidly deteriorated.

RAPE-CAKE.—I now speak briefly of Rape-cake. The best Rape-cake, which, however, is rather scarce in commerce, is green German Rape. I believe it is as good as Linseed cake for store cattle. It may not be perhaps quite so useful for cattle that you want to bring up for the Smithfield Show—rather tasty in their appetites; but for store cattle I believe the German Rape cake is in every respect as good as Linseed-cake. The difference in their composition is very trifling. As you see by the diagram, the proportion of oil is nearly the same; and in many samples of Rape cake you find a larger proportion of oil than in the specimen from which this analysis was made. Unfortunately, however, Rape cake is frequently made of very dirty seed. Some foreign cake, especially Indian cake, is often made of seed which is full of Mustard. Several cases of poisoning have occurred from its use. Not long ago Mr. Greenall lost four cows by the use of Rape cake. It has been maintained that all Indian Rape cakes are pungent. That is the case to a certain extent, but it does not follow that every description of Indian Rape cake is poisonous or so pungent as to produce injury. I find by a more extended examination of cakes made from Indian Rape seed that some are very pungent, and others but slightly so, while others are devoid of pungency. But I must say that pale or yellow Rape seed, which I find in my cake, is pungent; but when Rape seed, which is often full of Mustard, it may produce injurious effects. [illegible] I have [illegible] and got a large proportion of Mustard [illegible] the Indian Rape cake made. [illegible] the money that may be produced by using Indian Rape cake, I have [illegible] and water [illegible] and [illegible]. You will have no difficulty in smelling the Mustard. I have also [illegible] some of the essential oil which I have extracted from the cake, the smell of which is of course still more powerful. It produces blisters on the hands, and the effects of a Mustard poultice applied inside may be readily imagined.

TO TEST CAKES.—Let me point out how you may examine cake, so as to be able to form some opinion as to its qualities. An excellent way of examining all descriptions of cake is to reduce them to powder. I should recommend for the purpose a common kitchen grater. You should grate it till you have about half an ounce of powder. It is better to powder it in the way I have mentioned than to reduce it in a mortar to a fine powder, for in that case you would be likely to destroy the character of the seeds of weeds, and reduce the bran, if there is any present, into a condition too fine for examination. The powder should be mixed with about 5 ounces of water. With good American cake the mixture is transparent, light-coloured; it produces a stiff jelly, which is very agreeable to the smell and the taste. The cake is so nice that one might almost eat it with pleasure. If, however, you examine foreign cakes, which in nine cases out of 10 contain other descriptions of oily seeds besides Linseed, you will find the jelly to have a very disagreeable smell, often very much like a canary bird-cage; it smells like the refuse of canary bird seed. This peculiar smell arises chiefly from the Camelina seed in such cakes. Then I would also observe that the colour is quite different in good clean or bad cake. The latter has a dirty grey colour, and if you examine it with the pocket microscope you discover readily the particles that are not Linseed. By diluting the thick paste with water and stirring it up you can recognise the sand, which then subsides better. Then above the sand generally floats the bran, which can be recognised by its structure. Indeed by the simplest solution, or rather suspension in water, you can recognise a great many foreign matters in cake, and to some extent likewise recognise its condition. Then in addition to this examination, I would observe that in the case of Rape-cake you ought to take half an ounce of the powder and mix it with 6 ounces of cold water, keeping the mixture in a stoppered bottle, and then examine it after the lapse of 24 hours; not before. It is a singular fact that Rape-cake, even when containing a very large proportion of Mustard, has no smell whatever, nor is the smell developed immediately on mixing with water. The fact that the smell of Mustard does not appear within an hour, or even two or three hours, does not prove the absence of Mustard. But if you place the bottle in a tolerably warm room, or even in a common sitting-room, and do not find a strong smell after the lapse of 24 hours, you may safely conclude that there is not an injurious quantity of Mustard present. If the smell is very strong, more particularly if the taste is strong, Mustard is present in injurious quantities. I lay particular stress upon the last remark, if the taste is strong, because all Rape-cake is to a certain extent pungent; indeed all the seeds belonging the Brassica species develop a strong smell, but you do not get anything like that pungent taste in the specimens I have sent round. It bites you on the tongue, and Rape-seed never does that. Of course there are occasions when a more perfect examination is required; and there are other tests of a more chemical character which I might have noticed, but as they are more difficult of manipulation I thought it best to remain silent respecting them, pointing out only the simple test which I have given, one that is really very useful and can be handled by every man. I have given you a brief outline of the method which, after all, I am myself frequently obliged to follow, in addition to the chemical examination to which I submit the cakes when sent to me for that purpose.

A.—COMPOSITION OF LINSEED AND OF OILCAKES.

	Linseed.	Linseed-cake.	Rape-cake.	Mustard-cake.	Cotton-seed-cake (made of whole seed).	Poppy-seed cake.
Water	7.50	12.44	10.68	11.90	11.19	11.63
Oil	34.00	12.79	11.10	6.69	9.08	5.75
Flesh-forming matters	24.44	27.69	29.53	23.48	25.16	31.46
Heat-giving constituents	30.73	40.95	40.90	52.14	48.93	38.18
Inorganic matters (ash)	3.33	6.13	7.79	5.79	5.64	12.98
	100.00	100.00	100.00	100.00	100.00	100.00

B.—COMPOSITION OF LINSEED-CAKE.

	English.	American.
Water	13.20	11.64
Oil	10.30	10.48
Woody fibre	12.90	14.26
Albuminous compounds (Flesh-forming substances)	29.75	24.01
Mucilage, gum, &c. (Respiratory compounds)	28.23	34.44
Ash	5.62	5.22
	100.00	100.00
Containing phosphate of lime and magnesia (bone-earth)	2.78	2.90
Alkaline salts	1.86	1.90
Sand and soluble silica	.98	.42

C.—COMPOSITION OF

	Cotton-seed cake		Bean meal.	Bran.
	Decorticated.	Whole seeds.		
Water	8.29	11.34	14.80	12.86
Oil	16.05	6.18	..	5.56
*Albuminous compounds, flesh-forming matters ..	41.25	23.72	23.30	13.80
Gum, mucilage, sugar, &c. (heat-producing substances	17.44	30.98	48.50	50.17
Woody fibre	8.92	21.24	10.0	11.50
Mineral matter (ash) ..	8.05	6.54	3.4	6.11
	100.00	100.00	100.00	100.00
*Containing nitrogen ..	6.58	3.79	3.73	2.20

Notices to Correspondents.

AUSTRALIAN GRASSES: *H S Y.* Mr. J. K. Archer, having had six years' experience in Australia, says he found Rye-grass seed mixed with White Dutch Clover the very best for pasture. This is almost universally used throughout the whole of the colonies. The yield is about 20 bushels (20 lbs. per bushel) per acre, for a fair crop, but of course much depends upon housing it safely, as the hot scorching sun often renders it difficult to secure. The price usually ranges from 8s. to 12s.

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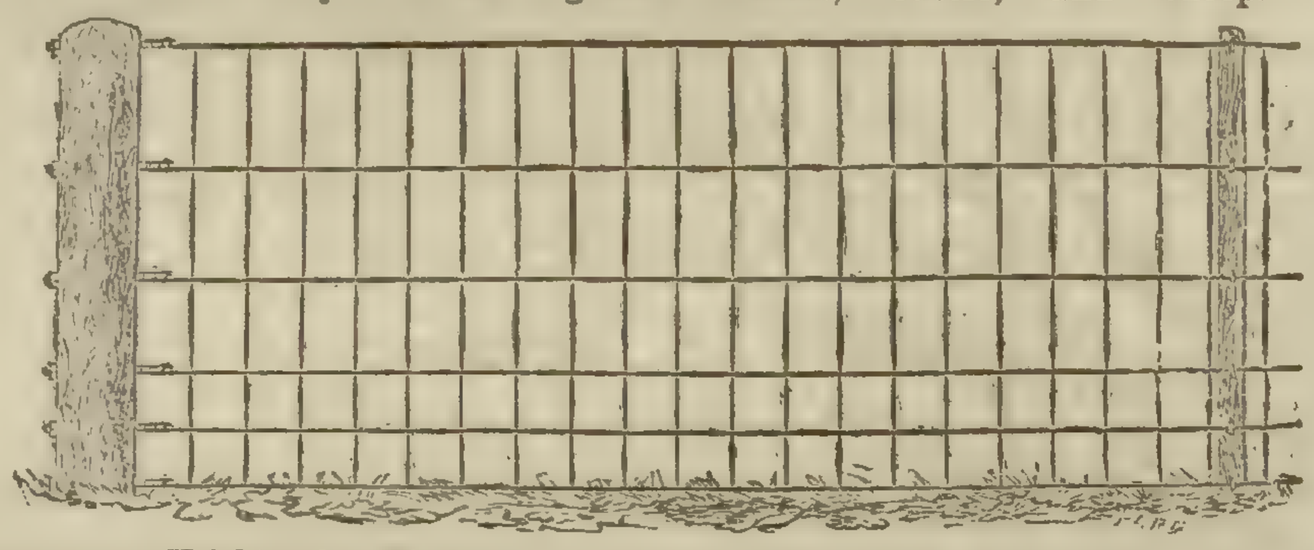

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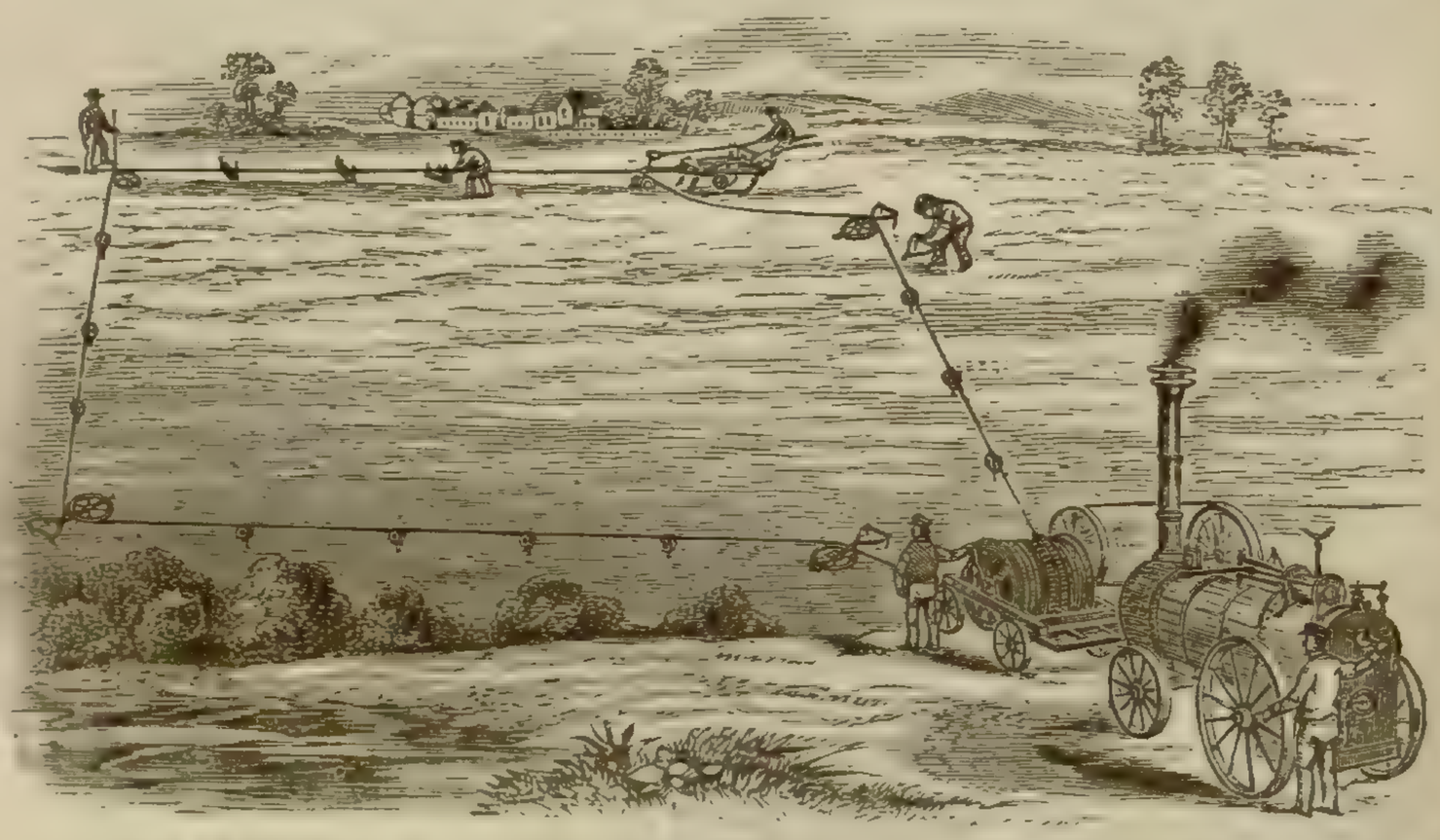

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12 inches diameter	1s. 3d.	20 inches diameter	3s. 3d.
14 ,,	1 9	22 ,,	3 9
16 ,,	2 3	24 ,,	4 6
18 ,,	2 9	26 ,,	5 6

LACTOMETERS, FOR TESTING THE QUALITY OF MILK.
Four Tubes .. .. 4s. 6d. | Six Tubes .. .. 6s. 6d.
With Stands complete.

Wasp Traps, 3s. 6d. per dozen. Glass Tiles, Glass Slates, Propagating Glasses, Bee Glasses.

JAMES PHILLIPS AND CO.,

180, Bishopsgate St. Without, London, E.C.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2d. to 3d. per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 35, Soho Square, London, W.
See *Gardeners' Chronicle* of June 2.

CAUTION.—DRAY'S CHAMPION REAPER.
SOLE PATENTEE.

GEO. THOMASON AND CO., 80, Upper Thames Street, E.C. Any one infringing the patent rights will be summarily punished. Price of the Champion Reaper, 25*l*.

GARDEN BORDER EDGING TILES.

ROSHER AND CO. beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.

Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.

N.B. Sketches of the patterns will be forwarded by post on application. Ornamental Flower Boxes kept in stock.

ORNAMENTAL PAVING TILES FOR CONSERVATORIES, HALLS, CORRIDORS, BALCONIES, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs. Also WHITE TILES, highly glazed, for Lining Walls of Baths, Dairies, Kitchen-ranges, Larders, &c. To be obtained of ROSHER & Co., at their premises as above.

INDELIBLE GARDEN TALLIES. — Mark your Tallies of wood, parchment, or zinc for the greenhouse or garden, with DUNN'S PATENT SOLID MARKING INK PENCIL. Retail at Messrs. BUTLER & MCCULLOCH'S and Messrs. HOOPER & Co., Covent Garden, W.C.; J. CARTER & Co., 237, High Holborn, W.C.; T. BRIGDEN, Railway Arcade, London Bridge, S.E.; and all Nurserymen and Seedsmen, Chemists, Stationers, &c. With screw-holder, complete, 1s. 6d. each; will refill for 1s.; by post for 19 penny stamps. Wholesale by J. Lusher, 19, Holborn Hill, E.C.; Barclay & Sons, Farringdon Street, E.C.; or any other wholesale house; and Crowhurst, 7, Fownes Street, Dublin. Further information obtained by addressing ARTHUR DUNN, the Patentee, at the Manufactory, 1, Durham Place, Dalston Green, London, N.E.

N.B. These Pencils are unequalled for marking indelibly on Linen, &c., for which purpose a much finer point is made, at same price, than that contained in the Gardener's Pencil, but this is well adapted for all coarse woven fabrics.

TO AMATEUR GARDENERS, NURSERYMEN, AGRICULTURISTS, ETC.

VULCANIZED INDIA RUBBER TUBING AND GUTTA PERCHA TUBING FOR WATERING GARDENS.—Brass Hand-branches with Stop-cocks and Roses, and every description of Garden Tubing Fittings, sold wholesale and retail by W. R. WOOD, 94, Goswell Road, near the Angel, Islington, London, E.C. Price Lists may be had on application. Please to notice the address, 94, Goswell Road, London, E.C.
N.B. Speaking Tubes fitted up.

GUTTA PERCHA TUBING FOR WATERING GARDENS.

THE GUTTA PERCHA COMPANY have the pleasure to acknowledge the receipt of the following

Testimonial from Mr. J. FARRAH, *Gr. to* BOSWELL MIDDLETON JALLAND, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider this tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

Manufactured by the Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their Wholesale Dealers in town and country.

FLEMING'S SALTING MACHINE FOR DESTROYING WEEDS ON GRAVEL WALKS, &c.—This most useful Machine has given the greatest satisfaction wherever it has been introduced, and it is the only effectual means of keeping Drives and Walks completely clear of Weeds.

Extract from Article "Trentham," in *Gardeners' Chronicle* of January 22, 1859.

"And I would observe in passing from these grounds that the whole of the Grass and Gravel are kept in the most perfect order by the aid of machinery; the former by a Horse Machine wherever it can be worked, a small hand instrument being used in places of difficult access; the latter is kept in order by a Salting Machine, the invention of Mr. Fleming, and judging from the beautiful condition of the Gravel in every direction, I should say that it was altogether most efficient."

The Mowing Machines here referred to are SHANKS'.

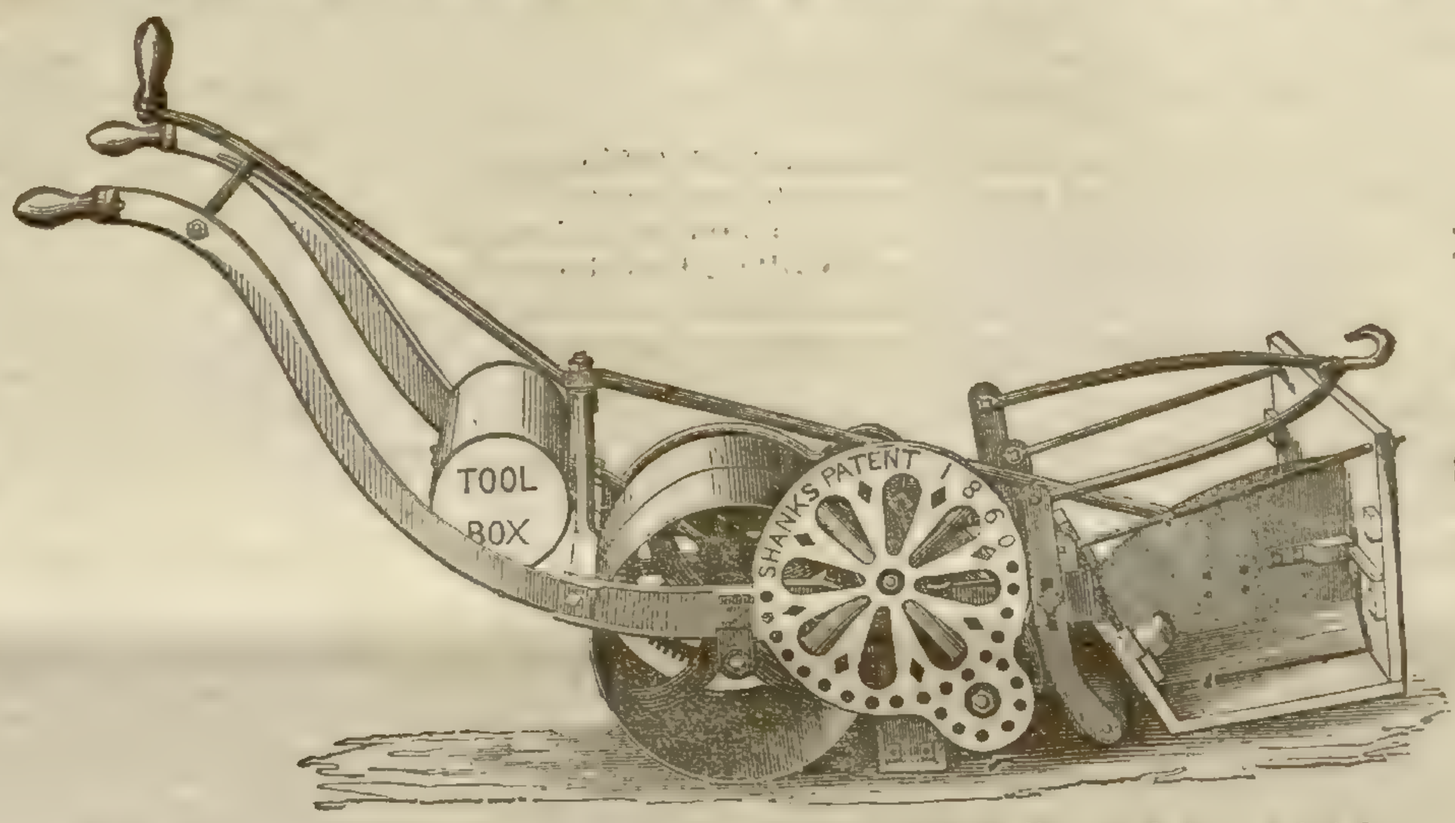
From *The Field* of April 2, 1859

"The Salting Machine will effectually destroy the Weeds on Gravel Walks and Drives."

Testimonials with full particulars and prices may be had on application to ALEXANDER SHANKS & SON, Deptford Iron Works, Arbroath, Patentees of Improved Mowing, Rolling, Collecting, and Delivering Machine for Lawns, Hot-Water Apparatus Manufacturers, &c.

SHANKS' NEW PATENT LAWN MOWING, ROLLING, COLLLECTING, AND DELIVERING MACHINE FOR 1860

MOWS THE GRASS WET OR DRY, ON LAWNS UNEVEN OR OTHERWISE, IN A MUCH NEATER MANNER THAN THE SCYTHE, AND AT HALF THE EXPENSE.



NEW PATENT PONY MACHINE FOR 1860.

PRICES.

SHANKS' NEW PATENT HORSE MACHINE.

Including Box of Tools for Sharpening, &c., and Directions.

Width of Cutter.		
No. 1.—48-inch Machine	£28 0 0	*Drawn by a Horse.*
No. 2.—42-inch Machine	26 0 0	
No. 3.—36-inch Machine ...	£22 0 0	*Drawn by a Horse.*
No. 4.—30-inch Machine ...	19 0 0	*Drawn by a Horse or a strong Pony.*

SHANKS' PATENT PONY AND DONKEY MACHINES.

Including Box of Tools for Sharpening, &c., and Directions.

No. 5.—30-inch Machine . £15 15 *Drawn by a Pony* | No. 6.—28-inch Machine . £14 10 *Drawn by a Pony* | No. 7.—25-inch Machine, £12 10 *Drawn by a Donkey*

SHANKS' NEW PATENT HAND MACHINES, FOR PUSHING OR DRAWING SEPARATELY OR TOGETHER.

Including Box of Tools for Sharpening, &c., and Directions.

No. 8.—24-inch Machine	£8 17 6	*Easily worked by Two Men*
No. 9.—22-inch Machine	8 7 6	
No. 10.—19-inch Machine... ...	£7 12 6	*Easily worked by a Man and Boy*
No. 11.—16-inch Machine... ...	6 17 6	*Easily worked by a Man*
No. 12.—13-inch Machine...	£6 2 6	*Easily worked by a Boy*

The Patent Delivering Apparatus if attached to the Hand Machines, and they are strongly recommended to be so, 20s. extra.

SHANKS' PATENT HAND MACHINE, FOR DRAWING ONLY.

Including Box of Tools for Sharpening, &c., and Directions.

No. 13.—22-inch Machine ... £7 5 0 *Easily worked by a Man and Boy* | No. 14.—19-inch Machine ... £6 15 0 *Easily worked by a Man and Boy*

No. 15.—16-inch Machine ... ... £6 5 0 *Easily worked by a Man*

***** The Machines are warranted to give ample satisfaction, and if not approved of they may be at once returned.**

The Prices include delivery at most of the Railway Stations throughout the Kingdom.

TESTIMONIALS:—

From the Hon. M. F. T. BERKELEY, *Berkeley Castle, January* 21, 1860.

"I have found your Mowing Machine answer perfectly. It does its work well, cutting closer and more evenly than the scythe: collects and delivers the Grass, thereby saving much time and labour."

From Mr. J. RICHARDSON, *Gardener to* JOSEPH PEASE, ESQ., *Southend Gardens, near Darlington, January* 21, 1860.

"Your Lawn Mowing Machine is the best of any I have yet used, doing the work speedily and well. The Delivering Apparatus is a decided improvement, and the best recommendation it can have is its own simplicity."

From Mr. J. MOIR, *Gardener to the* Right Hon. LORD LOVAT, *Beaufort Castle, Beauly, January* 23, 1860.

"I am happy to have it in my power to add my testimony to the utility of your improved Grass-Cutting Machines. The Delivering Apparatus works admirably and is a great saving of time. I think no one having a Lawn to keep should be without a Mowing Machine with your improvements."

SOLE AGENTS FOR LONDON

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

ST. PANCRAS IRON WORKS,

OLD ST. PANCRAS ROAD, N.W.

IRON HURDLES, FENCING, AND GATES.

THE PROPRIETORS OF THE ST. PANCRAS IRON WORKS, OLD ST. PANCRAS ROAD, LONDON,

WERE AWARDED THE

SILVER MEDAL of the Royal Agricultural Society for their IRON HURDLES & GATES,

which, by their peculiar construction, are more than twice as strong and durable as those in ordinary use.

Lists per post on application. **Gates from 30*s.* to 500*l.***

The Hurdles can be seen in process of Manufacture at the Works.

GAME WIRE NETTING.

Professor Varnell's Enamelled and Wrought-iron Stable Fittings.

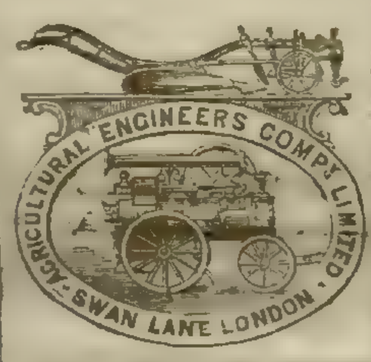
These Patent Mangers and Stable Fittings obtained the Commendation and the Silver Medal of the Royal Agricultural Society of England and the Royal Agricultural Society of Ireland, are adopted by the Royal Veterinary College, and Professor Spooner of that Institution states that they should be used by all who value the health and comfort of their horses. They can be had plain, galvanised, or enamelled.

A Show Room is devoted entirely to every description of Stable Furniture, and full-sized stalls and loose boxes are erected for inspection at St. Pancras Iron Works.

ADDRESS—THE MANAGERS

ST. PANCRAS IRON WORKS, OLD ST. PANCRAS ROAD, LONDON, N.W.,

OPPOSITE OLD ST PANCRAS CHURCH.



LAWN MOWERS, ROLLERS, WATER ENGINES, CHAIRS, TABLES, and every description of Garden requisites.

HURDLES, GATES, WIRE FENCING, &c.

CARTS, MOWERS, HAYMAKERS, HORSE RAKES, DRILLS, PLOUGHS, &c.

STEAM ENGINES, THRESHING MACHINES, HORSE WORKS, MILLS, CHAFF CUTTERS, &c

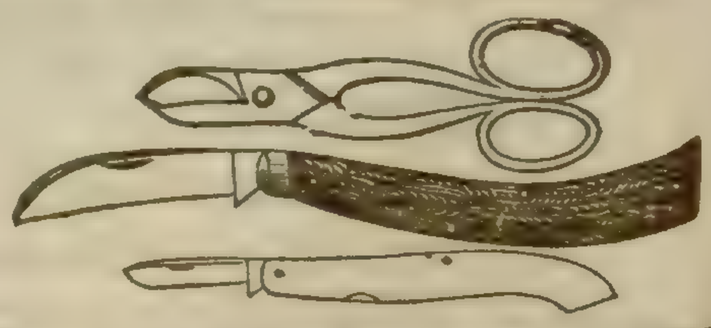
PUMPS, CHURNS, MANGLES, BINS, &c.

Price Lists free upon application to

THE AGRICULTURAL ENGINEERS' CO. LIMITED,

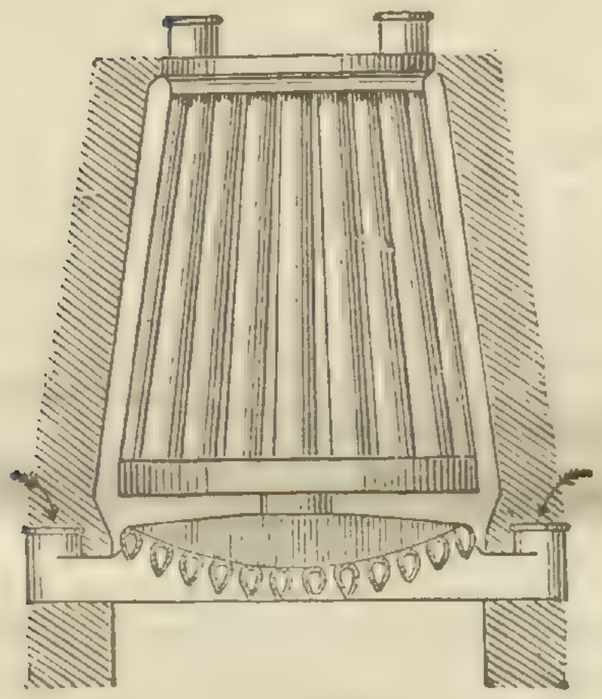
SWAN LANE, UPPER THAMES STREET, LONDON, E.C.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.

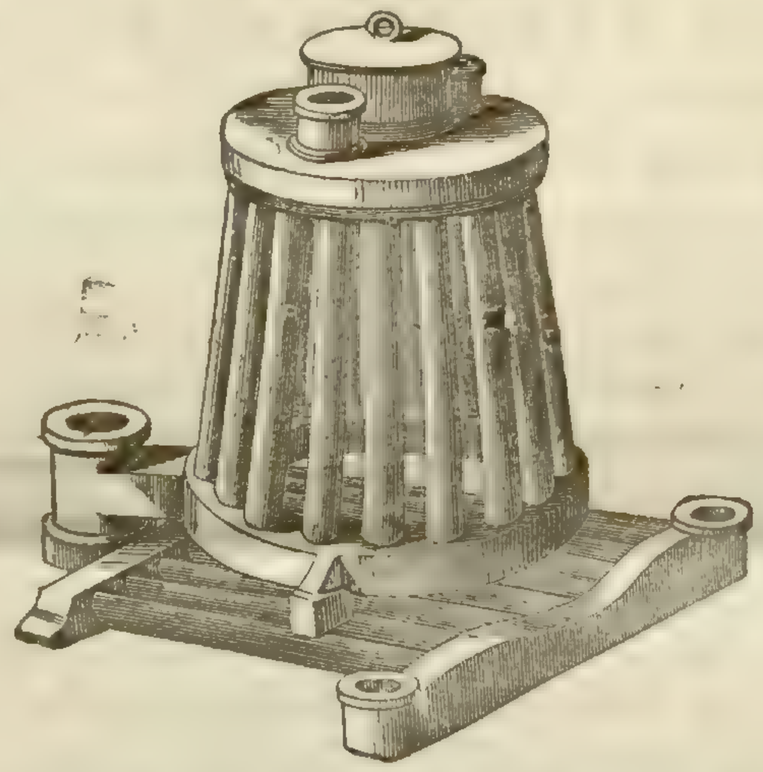


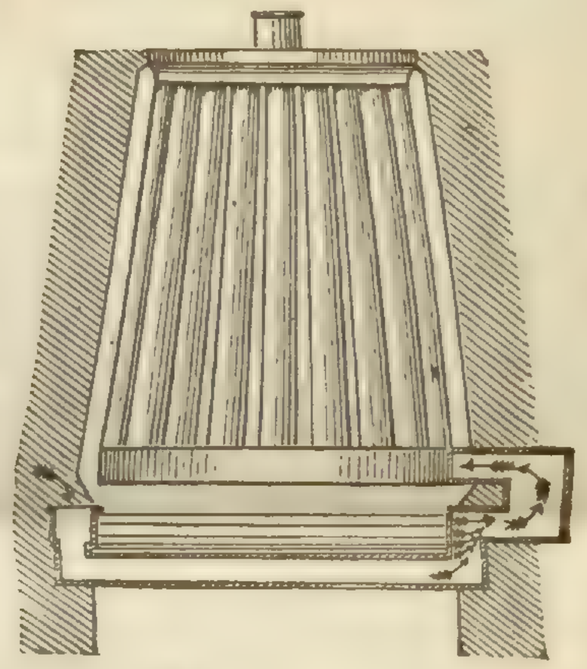
SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

BY HER MAJESTY'S ROYAL LETTERS PATENT.



SECTION.





SECTION.

ORMSON'S PATENT JOINTLESS TUBULAR BOILER

is now allowed to be the best ever invented, and possesses immense advantages over **all other Upright Tubular Boilers,** in the fact of there **not** being a single **Joint** exposed to the action of the fire. H. O. will undertake to heat the largest Establishments on the most approved and scientific principles by **ONE** of his **PATENT JOINTLESS BOILERS,**

THE ONE-BOILER SYSTEM.

"SIR,—I feel much pleasure in bearing testimony to the efficiency of your **PATENT JOINTLESS TUBULAR BOILER.** The long winter just past has been severe enough to test the merits of any heating apparatus, and I am pleased to assure you that the one you fixed for Sir Charles Knightley, Bart., in October last, has surpassed my most sanguine expectations. and reflects the highest credit on you as the Patentee of so unrivalled an invention. There are at this time 16 houses heated by **ONE** of your **BOILERS,** the heat of each being regulated with the greatest simplicity and facility. **ONE** fire now does the work of eight as formerly required. Independent of the saving of fuel, I must not omit the very great economy in labour. The fire in the most severe frost may be left for **TWELVE HOURS** without any attention, whereas according to the old system a man was obliged to be up the greater part of the night. I have never seen or heard of any **BOILER** which would bear the slightest comparison with it, and wherever it may be used it cannot fail, in my opinion, to give the most perfect satisfaction.

"Mr. Ormson, June 12. "Yours respectfully, "JOHN BROWN, Gardener to Sir C. Knightley, Bart., Fawsley Park, Daventry."

Horticultural Buildings of all sizes and descriptions Manufactured by Steam-Power Machinery. Lowest prices and best materials. Plans, Specifications, and Estimates free on application.

HENRY ORMSON, Horticultural Builder and Hot-Water Apparatus Manufacturer,

STANLEY BRIDGE, KING'S ROAD, CHELSEA, S.W.

PATENT LAWN MOWING AND ROLLING MACHINES.

30-inch wide PONY POWER MACHINE, made also of Smaller Sizes for Hand Power.

B. SAMUELSON'S LAWN MOWERS,

WITH BOYD'S PATENT IMPROVEMENTS,

CAN BE USED IN WET AS WELL AS DRY WEATHER.

LAST YEAR'S SALES WERE NEARLY A THOUSAND, EVERY ONE OF WHICH GAVE THE GREATEST SATISFACTION.

TESTIMONIALS expressing such satisfaction have been kindly sent by some hundreds of the purchasers to the Manufacturer, who will be glad to forward a copy with description and prices of Machines post free on receipt of application.

London Warehouse: 76, Cannon Street, West, E.C. Manufactory: Britannia Works, Banbury.

TO BE HAD OF DEANE & CO., LONDON BRIDGE, E.C., AND ALL IRONMONGERS.

SEED BUSINESS ESTABLISHED UPWARDS OF 100 YEARS.

BUTLER AND McCULLOCH,

COVENT GARDEN MARKET, LONDON, W.C.

CALCEOLARIA, for exhibition purposes.

Seed saved from flowers, large, beautifully spotted, and remarkable for their fine shape, rich and varied colours; habit of the plants unusually fine, carrying large heads of bloom. **Per packet, 1s. 6d., 2s. 6d., and 3s. 6d., all one quality.**

Agents for Dobson & Son's splendid hybridised variety, per packet, 1s. 6d., 2s. 6d., 3s. 6d., and 5s.

Agents for F. & A. Smith's hybridised, splendid large flowers, per packet, 1s. 6d., 2s. 6d., and 3s. 6d.

CINERARIA, from choicest flowers, per packet, 1s., 1s. 6d., and 2s. 6d. **Agents for F. & A. Smith's splendid varieties, 1s. 6d. and 2s. 6d.**

PRIMULA, from splendid flowers, per packet, 1s. and 1s. 6d. Agents for F. & A. Smith's, 1s. 6d. and 2s. 6d.

ERICA, collected from the choicest Cape species, per packet, 1s., 1s. 6d., and 2s. 6d.

Strong Plants of SPERGULA PILIFERA, from the Original Stock,

For Rockwork, Edgings to Flower Beds, Fountains, Sloping Banks, Terraces, and Lawns. It requires no mowing, and when well established is very superior to Turf.

8s., 15s, and 20s. per 100. Seed, 1s., 1s. 6d., and 2s. 6d. per packet.

PELARGONIUM.

The great desire manifested by amateurs for raising new and improved varieties of this splendid class of plants has induced our Sardinian Correspondent to give this matter hi especial attention. He has, therefore, collected seed only from flowers of the highest merit; thus affording a chance of raising varieties equal to any at present in cultivation. The dried specimens exhibited at the Crystal Palace may be seen at our Establishment.

A collection saved from 12 English varieties each containing 10 seeds .. .. 7s. 6d.													Choice mixed, saved from finest English varieties, per packet .. .. 2s. 6d.										
ditto	ditto	12 French	ditto	ditto	..	..	7	6					ditto	ditto	ditto	French	ditto	,,	..	..	2	6	
ditto	ditto	12 Fancy	ditto	ditto	..	..	7	6					ditto	ditto	ditto	Fancy	ditto	,,	..	..	2	6	

SPLENDID DOUBLE ITALIAN-SAVED CARNATION AND PICOTEE SEED,

IN SEALED PACKETS, FROM ONE OF THE CHOICEST COLLECTIONS IN EUROPE.

The following Carnations and Picotees have been saved with the greatest care by our Sardinian Correspondent, a most successful and distinguished Amateur, and only from the most perfect flowers of the newest and handsomest of the English stage varieties, or seedlings from them; they can be confidently recommended to the lovers of this exquisitely beautiful class of plants, as certain to produce at least 80 per cent. of fine double flowers, and with a fair chance of obtaining varieties of the greatest value. The Perpetual or Tree varieties bloom beautifully in the open ground, during the whole of the Autumn months; and, if grown in pots, are highly ornamental for Conservatory or Greenhouse decoration in Winter and Spring.

A collection of 12 varieties, each containing 10 seeds .. .. 6s. 0d.													A collection of 12 varieties Fancy, each containing 10 seeds .. .. 6s. 0d.										
,,	12	ditto	ditto	5 seeds	..	..	3s.	6d.					12	ditto	Fancy	ditto	5 seeds	..	..	3s.	6d.																																	
A collection of 12 varieties (Perpetual), each containing 10 seeds 6s. 0d.													A collection of 12 varieties (Perpetual), each containing 5 seeds 3s. 6d.										
A collection of 12 varieties, each containing 10 seeds .. 7s. 0d.													A collection of 12 varieties, each containing 5 seeds .. 4s. 0d.										
A collection of 12 varieties (Perpetual), each containing 10 seeds 6s. 0d.													A collection of 12 varieties (Perpetual), each containing 5 seeds 3s. 6d.										

Choice mixed, per packet .. 2s. 6d.																							
Choice mixed, per packet 2s. 6d.																							
Choice mixed, per packet .. 2s. 6d.																							
Choice mixed, per packet 2s. 6d.																							

BEAUTIFUL BIENNIALS AND PERENNIALS.

D Collection contains 25 packets in 25 varieties for 5s.; E Collection contains 18 packets in 18 varieties for 3s. 6d.; F Collection contains 15 packets in 15 varieties for 2s. 6d.

Agents for GISHURST COMPOUND in boxes, 1s., 3s., and 10s. 6d.: do. BRITTAIN'S GARDEN NETTING for protecting Fruit Trees or shading, Nos. 1, 2, and 3, 5d., 6d., and 8d per yard, 55 inches wide, 10-yard pieces; do. TIFFANY for shading, 3d. per yard, 10, 20, and 30-yard pieces; SHAW'S TIFFANY at advertised prices.

DUNN'S SOLID MARKING-INK PENCILS for writing indelibly on garden labels.—Every Amateur and Gardener should purchase this Pencil, sent post paid on receipt of 13 postage stamps.

EARLY TURNIPS

FOR FEEDING OFF PREVIOUS TO SOWING WHEAT.

SUTTON'S EARLY SIX WEEKS, 1s. per lb., 45s. p. bush.
POMERANIAN WHITE GLOBE, 1s. ,, 45s. ,,
SUTTON'S LINCOLNSHIRE RED, 1s. ,, 45s. ,,
(The heaviest cropper known.)

SUTTON & SONS confidently recommend the above as the best Turnips for present sowing. The seed is new and genuine. Goods delivered carriage free, and 5 per cent. allowed for cash payment. A remittance or reference is requested with orders from unknown correspondents.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

SEEDS FOR THE SEASON.

MESSRS. E. G. HENDERSON & SON,

ST. JOHN'S WOOD, LONDON, N.W.

Respectfully call attention to the present month as the most suitable period to sow for Stock the following

DECORATIVE PLANTS

FOR THE GREENHOUSE, CONSERVATORY, AND FLOWER GARDEN,

To insure their respective bloom in the ensuing Winter, Spring, and Summer Months of 1860–61.

CINERARIA and PRIMULA SINENSIS FIMBRIATA, finest quality, 2s. 6d. per packet.
AURICULA, 1s. 6d. per packet.
CARNATION, first quality, 2s. 6d. PICOTEES, 2s. 6d.
YELLOW CARNATIONS, 2s. 6d.
TREE, or Winter flowering, do. 2s. 6d. PINKS, 1s. 6d.
CYCLAMEN, 4s.; 6 varieties, do., 3s.
ALSTRŒMERIA CHILIENSIS, 6d.
HOLLYHOCKS, first quality, 1s. 6d.; 12 good varieties, do., 2s. 6d.
PANSIES, 12 good varieties, 5s. POLYANTHUS, 1s.
TRITOMA UVARIA, 1s., 1s. 6d., and 2s. 6d.
HUMEA ELEGANS, 6d., 1s.
AQUILEGIAS, 6d. and 1s., mixed.

CALENDRINA UMBELLATA, 6d. and 1s. MIMULUS, 1s.
ŒNOTHERA MACROCARPA, 6d. and 1s.
CANTERBURY BELLS, four Varieties, 1s. 6d.
PYRETHRUM, new Varieties, figured in the Illustrated Bouquet, 1s. each, or 8 varieties mixed, 2s 6d.
SWEET WILLIAM, four Select Varieties, 1s. 6d
,, ,, New Auricula-flowered, the most beautiful, 1s, 1s. 6d., and 2s. 6d.
(See Seed Catalogue)
CALCEOLARIA (for Conservatory decoration), the large flowered section, now in bloom. New Seed will be forwarded when ripe to those now ordering.
STOCKS, Scarlet intermediate, or London variety.

Wellington Nursery, St. John's Wood, London, N.W.

PLANTS OF CABBAGE, SAVOY, KALE, BROCCOLI, CAULIFLOWER, AND CELERY.

JOHN CATTELL begs respectfully to inform the public that he has a plentiful supply of Plants of the above superior true sorts, which he will forward to order on receipt of postage stamps or Post-office Order, made payable here, at the following prices, package included:—All the sorts of Early Cabbage, Savoy and Kale, including Brussels Sprouts, 6d. per 100; 4s 6d. per 1000. All the sorts of Autumn and Spring Broccoli, 8d. per 100; 5s. 6d. per 1000. Early and Late Cauliflower and Red Pickling Cabbage, 10d. per 100. Bedded Celery, 8d. per 100; 5s. 6d. per 1000. Drumhead or Cattle Cabbage, **3s. 6d. per 1000. Packages containing plants to the value of 1l. and upwards will be delivered carriage free to London, Croydon, and the Edenbridge Station of the South-Eastern Railway.**

Seed of Cattell's Reliance Cabbage may be had free by post **at 1s. per packet, containing** half an ounce.

Nursery and Seed Establishment, Westerham, Kent.

NEW SEED NOW READY.

DOBSON'S Splendid HYBRIDISED CALCEOLARIA SEED has now stood the test several years, and has attained a world-wide celebrity. The strain is acknowledged by those who have grown them to be the most beautiful and varied that has ever been offered to the public, and we have no hesitation in saying that it is second to none. Amateurs or the Trade desirous of producing a really splendid collection should purchase a packet of this Seed, which is warranted to please. We are now sending out New Seed of 1860, in sealed packets, at 1s. 6d., 2s 6d., 3s. 6d., and 5s. each, all one quality. The Seed may also be obtained in the packets of our Agents, the following principal Nurserymen and Seedsmen:—

Messrs Butler & M'Culloch, Covent Garden, London, W.C.
Mr. John Bell, 10 and 11, Exchange Street, Norwich
Mr. F. Boshell, 83, High Street, Borough, S.E.
Messrs. Dickson, Hogg, & Robertson, 28, Mary Street, Dublin
,, Fisher, Holmes, & Co., Handsworth Nursery, Sheffield
,, Fraser, Richardson, & Gould, 82, Bishopsgate Street Within, London, E.C.
,, Fraser, Lea Bridge Road, Essex, N.E.
,, Garraway, Mayes, & Co., Durdham Down Nursery, near Bristol
Mr. G. Glenny, Horticultural Agent, Fulham, W.
Messrs Hurst & M'Minden, 6, Leadenhall Street, London, E.C.
,, Moore & Son, Perry Barr Nursery, near Birmingham
,, Rollisson & Sons, Tooting Nursery, Tooting, Surrey, S.
Mr. J. Scott, Merrett Nurseries, Crewkerne
Mr C. Turner, Royal Nursery, Slough.

☞ **We beg to request that when ordering, "Dobson's Hybridised Calceolaria" may be distinctly asked for, every packet of which is sealed in two places with red wax, and stamped with our name and address, without which none is true.**

JOHN DOBSON & SONS, Seedsmen, Woodlands Nursery, Isleworth.

EXHIBITION OF AMERICAN PLANTS.

JOHN WATERER has the pleasure to announce that his Collection of HARDY SCARLET and other CHOICE RHODODENDRONS is now on view at the ROYAL BOTANIC GARDENS, Regent's Park, London, N.W.

☞ To those Gentlemen or their Gardeners who contemplate planting American Plants we beg to say this Exhibition will afford every facility for making selections. Orders of admission are granted gratuitously by Fellows of the Society, or by application to JOHN WATERER, American Nursery, Bagshot, Surrey, near Sunningdale, South-Western Railway.

The Plants at the Nursery are now in fine perfection.

NEW ROSES FOR 1860.—Plants are now ready at 5s. each. Trade price 36s. per dozen. A DESCRIPTIVE LIST may be had on application to BENJAMIN R. CANT, St. John Street Nursery, Colchester.

THE BEST ROSES (NEW AND OLD).—The finest ROSES of 1860 and the best selection of former years are now ready for planting out. Those who wish for a fine display during the summer and autumn should lose no time. CATALOGUES may be had on application. All perpetual flowering.

CHARLES NOBLE, Bagshot.

NEW AND CHOICE PLANTS.

JOHN STANDISH, in offering the following Plants can assure his customers that they are now in fine condition for sending out:—

MYOSOTIDIUM NOBILE, or Antarctic Forget-Me-Not, each 31s. 6d.—This plant, from the Chatham Islands, is one of the most remarkable that has been introduced for some years, being totally distinct from all others. It has large thick leaves, 8 or 9 inches across, of a dark glossy green, and sends up magnificent trusses of bloom of the most beautiful blue and white, similar to a Forget-me-not, but of a giant form. A Drawing of it is published in Curtis's "Botanical Magazine" for September. A description taken from the above is also published in the *Gardeners' Chronicle* of Sept. 17, 1859, wherein Dr. Lindley says:—"This is the handsome perennial provisionally named Cynoglossum nobile by Dr. Hooker in our last year's Volume, page 240. It is quite deserving all the encomiums that have been passed upon it."

RHODODENDRON NUTTALII.—The largest flower of all yet known, having 11 flowers in a truss, each flower being 6¼ inches across. Seedling plants, 3 inches high, 7s. 6d. each; 60s. per dozen; or 20l. per 100.

PHLOX MRS. STANDISH.—The purest white, with a large red eye, 5s. each. Also a large collection of the finest kinds which J. S. has shown during the last summer and in every case received the First Prize. Plants from 1s. to 2s. 6d. each.

A CATALOGUE containing a full description of the best Hardy Plants in cultivation will be forwarded on application to The Royal Nursery, Bagshot.

ROYAL BOTANIC SHOW,
REGENT'S PARK, N.W., June 20th.

Small Silver Medal (Extra, omitted in first report of Prizes), to Mr. J. Embry, Gardener to A. Moss, Esq., The Mills, Chadwell Heath, for a dish of Muscat Grapes.

The Gardeners' Chronicle.

SATURDAY, JUNE 30, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	July 2—Entomological		8 P.M.
WEDNESDAY,	— 4—Royal Botanic		2 P.M.
THURSDAY,	— 5—Pomological		2 P.M.

THE process of decomposition which takes place in wood occasionally wetted with water, or in contact with damp air, is beyond doubt greatly accelerated by heat, and consequently though there is no reason to believe that the whole mischief which took place in the Portsmouth gunboats arose from their being drawn up into the slips—a notion which is at once disproved by the condition of the Chatham boats, which have not been similarly treated—there is probably some truth in the view which has been entertained by some good authorities that the evil was really aggravated by their lying high and dry, and exposed at times to a considerable temperature for several months before the planking was torn off.

An idea prevails in some quarters that decay will still go on though the original active cause has been removed. But whether the chemical condition of the partly decayed timbers can still progressively be changed, the balance having once been disturbed, is perhaps beyond the power of any one to assert upon sufficient experience.

One remarkable fact still remains to be recorded, though we can speak of it only on the report of others, viz., that if the ribs are constructed of two kinds of wood applied end to end, as, for instance, Oak to Malabar Teak, or Lignum Vitæ, the harder of the two will decay at the point of juncture. If this be really true, it is a matter of great importance, and its truth should be established or overthrown by careful experiment. It looks as if this was a case of chemical change induced by something like galvanic action.

It is time however that we should turn to the other important agent in producing dry rot, viz., the growth of Fungi.

Now almost the same conditions which favour the kind of chemical decomposition which is so common in ships even where no Fungi make their appearance, are conducive to the growth of Fungi on wood which is subject to their development. Timber perfectly seasoned, the occasional admission of water, or the presence of damp air without proper ventilation are all important circumstances, and either of the two latter is sufficient, where due provision has been made against the first. If, however, in addition to these the admission of timber into the structure, without the previous removal of the sapwood, which is often already tainted with fungous growth, be allowed, the mischief will be extensive long before the structure is finished.

The action of Fungi on vegetable cells varies greatly under different circumstances, and with different species. The slightest contact of the threads of which their spawn is composed with living tissues is in some instances followed by immediate decomposition which spreads rapidly to the neighbouring parts, as in the Fungus of the Potato-Murrain, the Grape-mildew, the little Fusisporium which was lately described in this journal as destroying *Agrostis pulchella*, or the mould which was destructive to valuable Conifers and other plants in one of our most important nurseries, the ravages of which were fully detailed two or three years since.

In other cases the spawn of Fungi may traverse the cells for some time without producing much apparent mischief, as in the case of many truly parasitic Fungi, till the time comes for their development, and even then the parasite may run its course without inducing positive decay, though it may modify the general appearance of the mother plant.

In a third set of instances, so long as the tissues are endowed with vitality the spawn may be present without mischief, but when they are dead, though it may lie dormant for a time, it at length increases, with greater or less rapidity, purely at their expense.

This third case comprises that of dry rot; for it is quite certain that it does not always commence on the surface. A beam may look sound externally, which when tried with the auger is found to be impregnated with spawn, and no sooner is the air admitted than the spawn makes its way towards the aperture and oozes out like yeast from a barrel. We have seen something like this in wood received from India, where *Irtex fluvus* has oozed out from a worm hole, and precisely the same circumstance has occurred in the wood of a kind of Gum tree from Australia where *Polyporus portentosus* has been developed, as was supposed by the sender from some larva, but in reality from internal spawn.

When the dry-rot Fungus has once appeared on the surface of an Oak beam, for we are at present speaking of Oak, nothing can exceed the rapidity with which it spreads. A specimen for instance stripped from the side of a vessel in a state of active vegetation, when wrapped in coarse paper and left accidentally in a situation favourable to its development, has in a few days been found to have spread beyond the paper on every side, so as to conceal entirely its envelope. Sometimes it wears the appearance of stalactites, but more frequently it sends out strings composed of multitudes of threads which radiate in every direction and penetrate the smallest crevices. Where it is confined between two planks it forms thick leathery masses, often 2 or 3 feet in length and several inches broad, without showing the slightest trace of fructification. The Prince Regent at Portsmouth, and the Arethusa at Chatham, which we had an opportunity of examining very shortly after they were stripped, did not yield the smallest particle in a state of fruit, and it was only in the gunboat Caroline on a horizontal beam above the screw that we were able to detect perfect specimens from which we might ascertain the species. From this it appears that the dry-rot Fungus, so far as it relates to Oak, which has been known for many years under the name of *Xylostroma giganteum*, though, in the state in which it is commonly found, a mere mycelium or spawn which might belong to various species of some genera of Fungi, is really a Polyporus, and none other than the species figured years ago by SOWERBY under the name of *Boletus hybridus*. One of our specimens so exactly resembles the plant of SOWERBY that his figure might have been taken from it.

The species is truly resupinate, without the slightest tendency to reflect its pileus, as might be supposed from the figure, except so far as such an appearance may be induced from the facility with which the Fungus when dry separates from its matrix. The doubtful reference of FRIES therefore to *Polyporus fragilis* (a species, by the way, peculiar to Fir wood) must be wholly erased, and the species must stand upon its own merits as *Polyporus hybridus*. There is not the slightest trace, as might be supposed, of such species as are almost universal on sap wood, and of which myriads of specimens are to be seen on timber in the dock-yards before it is cut up, viz., *Polyporus versicolor* and *Stereum hirsutum*. The spawn of the dry rot, similar as it is in certain conditions to that which is occasionally found on Oak in woods both in England and British America, belongs evidently to a single species, and that one which at present has never occurred on other than fabricated wood. We can speak on this matter with confidence, as we have from FRIES himself almost every European species, and our collection from North America is no less extensive than our European series of species.

Nor indeed can we with the slightest probability point out any species peculiar to Oak of which it may be a form. The species which comes the nearest to it is *Polyporus vitreus*, which agrees with it in the great development of the stratum beneath the pores, but if our only British specimen is identical with that of FRIES, it is very different. Of the two which most commonly occur on Oak, *Polyporus vaporarius* is too different in the character of the pores, and *P. vulgaris* is remarkable when freely developed for the almost total absence of mycelium, though there is not the same discrepancy in the pores to make the identity impossible. *Polyporus Vaillantii* produces the same stringy spawn when freely developed, but the pores at once distinguish the two.

No one in the present day is inclined to attribute such growths to equivocal or spontaneous generation. It is sufficient, therefore, to acknowledge the difficulty and to recommend its solution to future investigation. Could its identity with *P. vulgaris* be estabished on reasonable grounds, there would then be spores enough in every Oak wood which could be taken up by the roots and penetrate into the tissues.

Thus much however is clear, and it is precisely what SOWERBY stated more than 40 years ago when he examined the Royal Charlotte, which was confessedly built in part of unseasoned timber; viz., that the Fungus which produces dry rot in Oak is totally different from those which produce the same effect in Deal, and more especially from that which is so prevalent in domestic dry rot.

Not the slightest trace of *Merulius lacrymans* is to be found in ships where Oak alone is used, nor have we seen a particle of *Thelephora puteana* or of the one or two allied species which are very destructive in domestic structures.

Polyporus hybridus, whether fully or only imperfectly developed, does not appear to be remarkably hygrometric like the two species just mentioned, which in a growing state are always studded with drops of water—a circumstance from whence *Merulius lacrymans* derives its name. On the continent *Polyporus destructor*, which is not uncommon in this country at the base of felled Larches, is said to be one of the most prevalent Fungi in buildings built of Deal, but we have seen no specimens from decayed structures in this country. In greenhouses built of Oak, *Dædalea quercina* and *Polyporus versicolor* are sometimes destructive, but in these cases the Fungi which make their appearance are mere resupinate forms at once referrible to their true species.

Indeed we were surprised at the almost total absence of other Fungi than *Polyporus hybridus* from the Portsmouth gunboats, which might have been supposed to have been likely to afford a rich harvest of species. Though every accessible part had been dubbed, to remove not only Fungi but affected wood, there was still enough sapwood left in parts to have afforded species, had any been present. We found however simply a single specimen of *Paxillus panuoides* near to the fertile patches of *Polyporus hybridus*, and some imperfect *Helminthosporium*, which sent down its black mycelium conspicuously into the wood for some depth. These occurred in the Caroline at Portsmouth; but in the Prince Regent and Arethusa not a trace of anything was found save the *Polyporus*.

It was observable in the Arethusa, built we believe about 1818, that the only part materially affected with dry rot was the stern, notoriously the weakest part of the vessel, and most liable to admit water through shaky timbers. It was curious to observe the complete barrier which the felt formed to the spreading of the dry rot where the parts beneath the felt were not affected. In no case could we find an instance in which the spawn had worked its way through the felt.

Opportunity was at the same time afforded of inspecting the Teak vessel Bombay, built in India about 1832. Though the timbers were in parts slightly decayed from the penetration of water, there were not the slightest traces of Fungus anywhere. Every part had been originally washed with sesquioxide of iron, as is, we believe, a common practice in India; but with what precise view is not

apparent. Notwithstanding all the pains we take to caulk our ships, the Indian mode of caulking with Cotton and chunam seems far more efficient for the exclusion of moisture than our own method.

ALTHOUGH the art of distinguishing the cultivated varieties of PLUM the one from the other is not so difficult as to know at sight the sorts of Pears and Apples, or Peaches and Nectarines, yet especially to the inexperienced, every aid which renders their distinction more easy is useful. A method of effecting this object, proposed by a Monsieur LIEGEL, in the Transactions of the Horticultural Society of Paris, seems to deserve publication here. This gentleman insists upon the great importance of attending to the form, &c., of the stone in judging Plums. And when we consider how extremely dissimilar are the stones of the Bullace, the Damson, the Orleans Plum, and the Quetches, all varieties apparently descended from the Sloe, and in one way or another the parents more or less remote of our cultivated varieties, the suggestion deserves attention.

According to Monsieur LIEGEL the following points are to be attended to in pursuing this kind of examination.

1. The upper and lower edge of the stone is to be observed for the purpose of ascertaining whether the point is placed in the middle or one side, is long or short, blunt or pointed, prominent, and so on.

2. On the dorsal side are three angles, one median, two lateral. Sometimes they are clearly separated, sometimes slightly elevated; in some varieties close together, in others as prominent and wide apart as in an Apricot. The median angle is generally prominent, blunt or sharp, often broader towards the base. By the side of the two outer angles are two furrows of varying depth which are sometimes characteristic.

3. On the opposite or ventral edge are two salient angles, sometimes open, sometimes half closed, forming between them a furrow in some instances narrow, in others broad, and of variable depth. The dorsal and ventral angles sometimes bend away near the top, or the bottom, or the middle.

4. The sides of the stone are either smooth or rough, convex or plane, or irregular in various ways; they often have several projecting angles at their base.

5. As to its general form the stone may be round, oval, ovate, oblong, or lanceolate, nearly straight or much curved or often widened. Its longest diameter may be next the top, the middle, or the base.

6. Finally its size must be compared with that of the fruit; for we often find large Plums with small stones and the contrary. Hence the relative portions of the two become important.

Such are Monsieur LIEGEL'S instructions. A few weeks will enable us to begin to test their value. The Jaune hâtive or White Primordian ought to be ripe in July.

ENTOMOLOGY.

THE COQUILLA NUT BEETLE.

THERE is an extensive family of beetles, the species of which, in their preparatory states, reside within the seeds of various plants, the interior of which is consumed by the larvæ, which when full grown gnaw a passage to the surface of the seed, biting a circular notch nearly through the envelope, so that when the perfect insect is developed, it has only to push this cap off and make its escape. As may be supposed the perfect insects are for the most part of small size, their colours are very obscure, and their specific investigation very difficult, as several of their distinctions rest upon the markings produced by coloured scales on the upper surface of the body, which are easily abraded either by the ordinary motions of the insect, or by the rough handling of the collector. It is of course either upon the surface of or within the seed when very young and tender that the egg is deposited by the female beetle. These insects compose the family Bruchidæ, named after the typical genus Bruchus of Linnæus, and the common Pea beetle, Bruchus Pisi, is one of the best known of the species; others feed on the seeds of Lentils and other wild papilionaceous plants.

It is not however on these tender species of plants that the insects of this family only subsist since some of the tropical species attack the seeds of the Gleditschia, Mimosa, Theobroma, Acacia, and the fruits of various Palm trees, after which various species are named Bruchus Theobromæ, Linn.; B. Gleditschiæ, L.; B. Pandani, (*Blanchard Hist. Ins.* 1845, *t.* 2, *pl. x., fig.* 7.) One of the largest of the species is named by Linnæus (in his Centuria Insectorum, *Am. acad.*, 1763, *p.* 392) Br. Bactris, after an American Palm of the genus Bactris, in the nuts of which it resides, and which is figured by Jacquin in his History of Select American Plants, pl. 170. According to Schönherr (*Gen. Curcul. i., p.* 92, *and v., p.* 126), this species and an allied one, B. nucleorum, of Fabricius, are at once distinguished by a very unusual character amongst Coleopterous insects, namely, an oblong impression on the upper side of the intermediate joints of the antennæ. In the Proceedings of the Entomological Society of London of the 4th Sept., 1854 (*new Series iii., Journ. of Proc., p.* 25), it is stated that some of the seeds of the Copernicia cerifera, the Wax Palm of the Brazils, which yields the Carnahuba wax, were exhibited by Geo. F. Wilson, Esq. (of Price's Patent Candle Company, Vauxhall), together with several specimens of a large Bruchus by which they were infested, and which appears to me to differ in no respect from Br. Bactris. At the sale of the Entomological Society's Collection I purchased the specimens of these insects then exhibited with the Wax seed, and they are now deposited in the Hopean collection at Oxford. The nut is about 1¼ inch in diameter.

Another large species closely allied to B. Bactris was described and figured by Latreille in Humboldt's great work (*Voyage de Humboldt and Bonpland, Obs. de Zoologie*, p. 158, pl. 16, f. 5) under the name of Bruchus curvipes, which was obtained by M. Bonpland from the fruit of a Palm near Serullo, in New Spain. Every nut which he brought to Europe (and which when collected appeared sound) was found on arriving in France to contain one of these large insects. Latreille's species is described as black clothed with a reddish ashy pubescence, the elytra with rows of deep punctures, the hind thighs serrated beneath and armed with a strong spine, the hind tibiæ curved, the antennæ entirely black and serrated. It is unfortunate that the precise species of Palm which Br. curvipes attacks was not recorded.

The transformations of another allied species are described and figured by Germar (*Magazin der Entomologie*, iii., p. 1, pl. 1) under the name Bruchus ruficornis, which infests Cocoa-nuts brought to Europe

the fruit apparently of a species of Bactris, probably Bactris minor. The beetle is described as having the posterior thighs ovate, serrated, and armed with a strong tooth; the general colour black, clothed with grey pubescence, and with the antennæ and fore legs red, the elytra with rows of punctures. Schönherr gives this species as identical with that described by Latreille. Judging, however, from their respective descriptions, the two insects scarcely appear to me to be identical. Whether, indeed, this may not be the real insect first described by Jacquin we have no precise means of determining.

Some time ago Sir William Hooker was kind enough to send me a larva of one of these large species of Bruchidæ, which had been found in the interior of the seed of a Palm (a species of Astrocaryum from Bahia) received at the Royal Gardens, Kew. I was not, however, able to rear the insect to the perfect state. The larvæ differed in no respect from that described below.

The Coquilla Nut is another species which is infested by one of the species of these large Bruchi. This Nut is the seed of Attalea funifera, a native of the forests in the maritime provinces of Brazil, where it is called Piacaba by the natives, who regard it as one of the most useful gifts which the bountiful hand of Nature has conferred on man. The best cordage in America for naval purposes is manufactured from the fibres of the leaf-stalks. The tree does not grow more than from 20 to 30 feet high. Its Nuts when full grown are about the size of an ostrich's egg, and have a hard shell like that of a Cocoa-nut. Some specimens of this Nut, employed for turning into various small articles, were exhibited by Dr. Wallace at the December meeting (1859) of the Entomological Society. They were about the size of large Lemons, which on being sawn through the centre exhibited two cavities in the centre, the shell itself being very thick and hard. One of these cells was occupied by the large fleshy white maggot represented in the accompanying woodcut. The head is very small, the jaws short but very powerful, the legs reduced to mere rudiments attached in pairs to the first three segments following the head. There are nine small spiracles on each side, the second and third segments being destitute of these breathing pores. The larva previous to attaining the pupa state gnaws a circular burrow to the outside of the Nut, and then returns to the interior of the cell to undergo its transformations, the perfect insect escaping by the way prepared for its exit by the larva. With a specimen of this Nut and its larva preserved in the Physiological Museum at Christ Church College, Oxford, is preserved a specimen of the perfect insect, represented in the accompanying figure, and which seems to agree sufficiently with Bruchus ruficornis of Germar so as to preclude the necessity of giving a distinct specific name to it until a more detailed examination of the allied species can be made. *J. O. W.*

STRAWBERRY FORCING.

THE preparation of Strawberries for forcing has for some years past fallen into a kind of routine, for though Mr. McEwen gave us the result of his experiments, his experience was found not to differ in any material point from those who had gone before him; and thus we find pots and the usual routine of layering, potting, &c., the only method followed. But is that the best plan—the plan by which with the least trouble the best result can be attained? In these utilitarian days to "buy in the cheapest market" is the general rule, and if it can be shown that Strawberries can be grown better and more cheaply than by the ordinary plan, why then it may be inferred that a little progress has been made, and something beyond mere slavish adherence to preconceived notions and customs attained. In the autumn of 1857, having a desire to prepare some Strawberries for forcing the foliowing year, and finding roots exceeding bad and dead, I determined to try the experiment of growing them in boxes. Unfortunately I had no seasoned timber to work with, but making the best I could of fresh cut, I set the carpenter to work to make a pattern box, and taking that as a sample, set my garden labourers to make the remainder. Each of these boxes were 5 feet long, 6 inches wide, and 7 inches deep, the bottoms being battened or stripped to give good drainage, and thus each box contained about 8 feet super of ¾-inch board. A man will rough-plane and make up six to eight of these boxes in a day, and thus, allowing for good seasoned timber and two coats of anti-corrosion paint, the expense ought not to exceed 2*s.* 6*d.* each box. How long they will last depends upon the care that is taken of them, but I think seven years may be taken as a fair average. Now in each of these 5 feet boxes I put in the first season nine plants, but that I found much too thick, and now I find seven plants of the weak and six of the strong growing kinds quite sufficient. In point of cultivation I find the least troublesome plan is to bed out a sufficient number of suitable varieties in the autumn, and then in the following March prepare a piece of ground, by first treading it quite firm, then placing upon it a layer 4 inches thick of good rotten dung, and over that sufficient soil to cover the roots of the plants. The plants may be put out in rows 1 foot apart, and from 6 to 8 inches apart in the row. In this situation they will grow very luxuriantly, and the only attention they will require will be to keep them quite clear of weeds and runners, and to give them in dry weather an abundant supply of water, occasionally after the roots get through the soil adding some soot to the water.

From the middle to the end of July will be found the right time to put the plants in the boxes, it being necessary to get them in early so that the roots may have time to ramify and thoroughly fill the boxes. Before however we begin to box the plants it will be necessary to prepare proper soil. A good sound loam of medium consistency with about one-third of rotten dung is the best that can be used, the object being to get a sound sturdy growth and not any over-luxuriance. Each box will require to be drained with potsherds, oyster shells, or charred rubbish; then put in the prepared soil, make it quite firm, and with a sharp spade carefully cut out the plants, preserving with each a good ball; place the plants at the proper distances, and fill up with soil, taking care to make it firm, and to keep the crown of the plants well above its surface. The plants will require shading for a few days until they take root, but afterwards the more they are exposed to the sun the better. Each box should stand upon two bricks so as to admit of ample drainage, and the plants should be sprinkled every night just as the sun is leaving them. Water at the root will not be required, except in very dry sultry weather, more than twice in the week, and indeed after the middle of September they should be kept rather dry than otherwise, so as to get the growth thoroughly matured. Do not misunderstand me: the plants must not flag or they will get full of red spider, but the attempt must be made to bring them into a state of well-matured rest before the winter sets in. Weak manure water may be used through the autumn, and that prepared from soot and cowdung will be found the best. Of course all runners will be removed as fast as they are produced, and through the growing season the surface of the soil must be occasionally stirred up to keep it free from weeds. Managed, as thus directed, the plants will get unusually strong, sufficiently so to throw up 10 or 12 trusses of bloom each.

Before the heavy rains of October set in the plants must be removed to some sheltered situation, such as a

cold pit, Peach or orchard house, or they may be packed closely together, and have some temporary waterproof covering thrown over them. It is particularly necessary, in fact indispensable, that the boxes be kept dry, for should they become saturated with the cold rains of winter, they will neither bloom so well, nor will they set so freely when they do bloom as under more auspicious circumstances.

For the earliest crop, to come in in March, I have found Black Prince the best, that kind producing fruit in boxes as large as good-sized Walnuts. Patterson's Nonpareil is also a good early kind, but requires the brisk heat of a Pine stove to get it to set well. It is large and handsome, but does not pack or keep well. Take them for all in all perhaps there are no Strawberries equal for general usefulness to Keens' Seedling and British Queen; the latter requires some pains to get it sufficiently strong for forcing, but by taking plants of the previous season no difficulty will be found on that point. Ingram's Prince of Wales, Trollope's Victoria, and Carolina Superb force successfully, but Sir Harry with me has always been a failure. *A. P. H.*

THE RAIN.

So much attention is now fixed on the continued wet weather that I believe the following table, showing the relative fall of rain during the present month in some of the most widely separated parts of England, will be of general interest.

I ought perhaps to mention that the stations whence the annexed observations have been kindly forwarded are by no means remarkable for heavy falls; I should not be at all surprised to hear of a fall of 30 or 40 inches in the lake district of Cumberland, or even in some parts of South Devon.

The diminution of rain as we pass from S.W. to N.E. (Little Bridy to North Shields) is as marked as usual.

The amount of water precipitated over England during the present month must be something enormous, but I have not at present sufficient data to form a satisfactory estimate of the total quantity.

Between January 1 and June 23 there has fallen at Camden Town 14.405 inches; at Manchester, 16.229 inches; and at North Shields, 13.500 inches.

The rainfall here during the first six months of the last four years has shown a gradual increase, the quantities being—in 1857, 8.273 inches; 1858, 9.938 inches; 1859, 10.995 inches; and in 1860, 15.165 inches (to 9 A.M., 26th).

I am, Sir, your obedient servant,
G. J. SYMONS.

129, Camden Road Villas, N.W., June 26.

RAINFALL IN ENGLAND, JUNE 1 TO 23, 1860.—DEPTH OF RAIN UP TO 9 A.M. ON EACH DAY.

Date.	Little Bridy (Dorset).	Camden Town (London).	Oundle (Northamptonshire).	Old Trafford* (Manchester).	North Shields.*
June.	Inches.	Inches.	Inches.	Inches.	Inches.
1 ..	0.752	0.050	0.287	0.428	0.177
2 ..	0.435	0.043	0.020	0.135	0.680
3 ..	1.050	0.866	0.813	0.492	0.170
4 ..	0.060	0.058	0.025	0.389	0.055
5 ..	0.023	0.246	0.040	0.040	0.166
6 ..	0.561	0.366	0.070	..	0.030
7 ..	0.220	0.078	0.138	0.224	0.094
8 ..	0.093	0.108	0.076	0.306	..
9 ..	0.066	0.082	0.150	0.180	0.255
10 ..	0.172	0.226	0.200	0.920	0.003
11 ..	..	0.011	0.205	0.020	..
12 ..	0.984	0.064	0.030	0.090	0.450
13 ..	0.032	0.372	0.408	0.402	..
14 ..	..	..	0.040	0.018	0.012
15 ..	0.266	0.066	0.002	0.115	0.001
16 ..	..	0.104	0.080	0.050	0.001
17 ..	0.361	0.473	0.099	0.170	..
18 ..	0.017	0.381	0.240	..	..
19 ..	0.060	0.008	0.003	..	..
20 ..	0.478	0.360	0.205	0.022	..
21 ..	..	0.146	0.090	0.154	0.085
22 ..	0.017	0.156	0.180	..	0.060
23 ..	0.280	0.050	0.167	0.176	0.017
Totals..	5.927	4.294	3.568	4.331	2.259

* I am not certain that the hour of reading is the same at these stations as at the others.

From the Times.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE Seventeenth Anniversary Festival of this Institution was held on Wednesday, at the London Tavern, under the presidency of the Earl of Carnarvon. It was numerously attended, and the proceedings passed off in the most satisfactory manner. The tables were magnificently decorated with choice plants and cut flowers—a "bank" of brilliant Geraniums, &c, gracing the end of the room behind the noble Chairman. For this particular display the charity was indebted to Mr. Turner, of Slough, whilst other flowers, cut and in pots, were kindly sent by Mr. Henderson, of Pine-apple Place; Mr. Henderson, of Wellington Road; Mr. Lee, of Hammersmith, &c.

The noble Chairman, in opening the proceedings, gave the toast which, he said, of all others, was most gratifying at an English dinner, "The Queen." Wherever that toast was given, or whatever the occasion, it was ever welcome, for there was scarcely anything of importance in which her Majesty did not take some particular interest and evince about it some particular solicitude. Was it painting? They knew how great a patron of the art her Majesty was. Was it sculpture? Precisely the same was found. Was it charity and benevolence? They knew her hand was never tired of being stretched out in help, nor her ear tired of listening to tales of woe. And as to Gardening her Majesty took in that art the highest interest in all its forms. Within the last two years he had had the pleasure of walking through the grounds of the Queen at Windsor, and he could truly say they were a perfect model in point of management, of order, and of practical workmanship for every country gentleman through the length and breadth of the land. He had therefore much pleasure in proposing the health of the Queen.

His lordship next gave the Prince Consort, the Prince of Wales, and the rest of the Royal Family, in complimentary terms, adverting to the esteem, affection, and loyalty with which their names were ever received.

The Chairman next gave the Army and Navy. After speaking in warm terms of the former, his lordship alluded in marked terms to the new force which had lately sprung up—the Volunteer Force—which had started into existence, as it were, just at the time it was wanted, and of which it might be said in commercial phraseology that the supply was equal to the demand. After speaking in the most eulogistic terms of a force which he deemed an honour to the country, and which was composed of all grades from the highest to the lowest—Members of Parliament, bankers, tradesmen, mechanics—men, in short, of every grade and distinction, his lordship urged that it might be said of them most truthfully that they were engaged in noble emulation in the great cause of loyalty and patriotism. In earlier times Sheridan had complained of a volunteer force on account of their love of finery; but could Sheridan have witnessed that magnificent display of Saturday last, he thought he would have been inclined to tell a very different story. If any one point was more satisfactory than another, he should say it was that they had given plenty of evidence of their sound good sense and high bearing. Having spoken at some further length in the most complimentary terms of the volunteer force, his lordship said there was little doubt that their drill was so excellent that they would ere long be fit to stand by the regular forces of the Queen, and he was certain would at all times present such a front as would render it highly dangerous for any power to attempt to menace the fair shores of England. He would couple with the toast the name of Lieut.-Colonel Hicks, who had served 28 years in India under Sir Hugh Rose.

Lieut.-Colonel Hicks returned thanks in a few words.

Sir Charles Fox then gave the health of the President of the Society, the Earl of Carlisle. He was not accustomed to making speeches, and he very much doubted whether they could find an engineer in London who was. However, he was not sorry that he had been called upon to propose the toast, nevertheless, for he was desirous, although but in a simple manner, to give utterance to his high estimate of his lordship's noble character. His lordship was one of those good men who studied more the happiness of others than of himself. He believed that if ever there was a good man in the world it was the Earl of Carlisle, and if ever there was a happy man it was he, for every happiness he conferred on others was a sort of reflecting surface, casting back its joys upon himself. He had much pleasure in proposing his health.

The Earl of Carnarvon then rose and said he remembered two old lines which he dare say were familiar to them, and which seemed to apply to himself at that moment—

"So comes the reckoning when the banquet's o'er:
The dreaded reckoning, and men smile no more!"

He really felt as though the time of reckoning had come with him, for he had a toast to propose which placed him somewhat in a difficulty lest he should not be able to find language in which to do justice to it. It was certainly one which deserved great care and attention at his hands, for it was no less a one than "Success to the Gardeners' Benevolent Institution." It was but a short time ago that he came across an account of a florists' banquet a century and a half ago at Bethnal Green, in the days of the first George. The various gardeners who attended brought also such flowers as they had been successful in cultivating, and no doubt the accounts were correct which said that it was a very brilliant affair. But he could not help thinking that if those who then took part in the display could have looked upon the scene upon which he had been permitted to gaze that day, and could have beheld the magnificent galaxy of flowers which graced the end of the room behind him, they could not but have considered it as a monument of horticultural skill and industry, order, and arrangement. Could any of those who were so engaged in those days have seen the endless array of flowers and fruit which he had the opportunity of enjoying, they would have admitted that, whatever might be the shortcomings of these days in other respects, at any rate the study of horticulture had made rapid strides indeed in this country. With what venerable and historical associations was not horticulture in its study in this country connected. Who could forget that it was Almighty God who planted the first garden? In the words of the poet—

"God the first garden made, and man the town."

They would remember reading how in ancient days—in the earliest times—there were gardens described as of great beauty and extent—such as that of Ahasuerus, with its splendid Lilies and Pomegranates, and of the gardens of the Kings of Judah, the fragrance of whose flowers and spices were blown about by every wind. The great garden of Damascus, again, existed as long ago as 3000 years. And then there was that garden, sacred and consecrated, and which would ever live in the mind of every soul in Christendom, to which the Saviour himself gave the name. So, as time rolled on, they found in every age and amongst almost every people gardens were cultivated. Every nation that boasted civilisation, elegance, refinement, taste, had shown ever a love for gardens and for gardening. Look at the Greek nation, for instance, with its garden of Adonis, still a household world even in the 19th century. But the Greek nation was not our nation; for there the Violet and the Lily grew beside the Onion and the Leek. But they might gather a useful lesson even from that—how it might be treated allegorically that good and evil were often found together in this world, but how the perfume of the good almost invariably overcame the odour of the bad. It taught them another practical lesson. He for one protested against the practice of separating the kitchen garden from the other, and placing it at a distance, as though it had no connection with it. His notion was that they should work together—hand in hand with each other, as it were—the one affording beauty and the other usefulness. It was the truest poetry of life when beauty and usefulness were mingled in equal proportions. Then let them glance at what the Roman gardens were. They could even see them now, with their flower beds edged with Box, their terraces, their sloping banks trailed over with evergreens and creepers, their hedges cut into all forms, shapes, and devices, in many an English gentleman's garden. Perhaps, then, they had caught some of the spirit of those to whose notions of gardening our own bore so strong a resemblance. His lordship then proceeded to glance at gardening, as it was practised as an art through the several periods of English history, particularly adverting to the times of the first Edwards, and directing attention to the beautiful garden at Conway Castle. He also pointed to instances in which Dutch taste had found its way into this country, and marked for especial notice the two noble gardens of Hampton Court and Kew. Having come down to our own times, his lordship proceeded to say that not a year passed over but every country in the world was searched and ransacked in order that new plants and flowers and seeds might be brought to this country. The warm shores of the Mediterranean sent us their productions. Our colonies were laid under loyal contribution to supply us. The Indies and the Himalayas—thanks, by the way, to the indefatigable skill and perseverance of Sir W. Hooker—sent many a rare and valuable specimen. California, China, Japan, and innumerable other countries had sent us their rich treasures, and thus it was that we were able to congratulate ourselves on the advanced state of our gardening in these days. They ought then, ever to feel grateful for the science, the skill, the enterprise, and the knowledge which had all been brought to bear in order to produce these splendid effects, and to arrive at the present high position which horticulture enjoyed. After some brief comments on the delights and health attending the cultivation of the art of gardening, with however the drawback of the frequent exposure of gardeners to sudden transitions from heat to cold, from the hothouse to the open air, his lordship again called renewed attention to the Gardeners' Benevolent Institution, whose anniversary they were met to celebrate, and through whose aid pensions of 16*l.* to men and 12*l.* to women were distributed. There were now 49 on the list—41 men and 8 women. The present might truly be called an age of Societies, and this particular one deserved a distinguished place amongst them, for there was not one more valuable or did more good according to its means. He therefore begged heartily to recommend it to support, hoping that the Secretary would shortly be able to read a list which should prove that he had not recommended it in vain.

J. E. C. Koch, Esq., next proposed, in brief but eulogistic terms, the health of their noble Chairman, whom he hoped often to see amongst them, trusting that his efforts on the behalf of the Institution would be warmly followed up by every exertion of their own. He begged to propose the health of the noble Earl, wishing him every happiness and prosperity, and thanking him for the valuable services he had rendered to the Institution.

His lordship replied briefly, expressing the difficulty he felt in finding words in which to express his sense of the kindness they had shown towards him. He was not unlike the Latin poet who wished he had a hundred voices and a tongue of brass wherewith to acknowledge their kindness. Still he would rather, could such a thing be, have the "language of flowers" and make them the exponents of what he felt. Instead, however, of their thanking him, he thought he ought rather to thank them for permitting him to be present on that occasion. He would again allude to their valuable Society, and had much pleasure in proposing the health of its Treasurer, Mr. Wrench.

Mr. Wrench replied in a few words, wishing that instead of having to write 50 cheques for the pensioners the funds would enable him to write 100.

His lordship next gave the health of the Secretary, Mr. Cutler, who in returning thanks, expressed his happiness that the result of the subscriptions he was about to read to them exceeded his most sanguine expectations. He found they amounted to upwards of 300*l.*

His lordship then gave "The Horticultural and Botanical Societies of London," coupling with the toast the name of Mr. Spencer, so well known as being associated not only with these societies but with the noble and venerable Lord Lansdowne, who had done so much for the advancement of the science of horticulture.

Mr. Spencer having briefly replied, his lordship rose and announced that he regretted he was compelled to leave them, and desired Mr. Koch to succeed him in the chair.

The proceedings were kept up to a late hour.

Home Correspondence.

Education of Gardeners.—It will be readily admitted that it is quite necessary that gardeners should possess most of the qualifications proposed by "Linager," but I think that more is expected of gardeners than of any other class of men. Let us suppose that a gardener has a son whom he wishes to educate for a gardener, and that he makes self-denials in order that his son may have an education sufficient to enable him to acquit himself respectably and honourably in the several examinations proposed by "Linager." In the first place he would probably be obliged to send him a considerable distance from home to some first-class gardener, the expense of which (together with premium, books, and materials requisite for study and improvement) would in all probability be very heavy, and it is also equally probable that the youth whilst in the situation just mentioned would receive wages wholly inadequate to maintain him in his position with that respectability which would reasonably be expected of him, and after struggling with many difficulties for some years in his endeavours to obtain what information he could in the various branches of his profession, let us further suppose that he at last arrives at an age and possesses an amount of experience when he may justly expect a situation and remuneration commensurate with the trouble and expense he has been at to prepare himself for it. Does he get it? Oh, no! He must first go into the cow-yard to understand the details of management there, the rearing and treatment of pigs, and here we might suppose that his professional education might end; but no, he must next pay a visit to the stables, harness-room, and coach-house, and coax the coachman to give him the necessary information to be able to manage a pony and chaise. and then, when that climax is reached, if he looks out he will very likely soon see an advertisement for such an accomplished man, and really if he is clever and can produce testimonials to that effect, together with being married and having no incumbrance, he may be fortunate enough to realise a salary of 18*s.* per week or perhaps 1*l.* I am glad to find such honourable mention made of the present race of gardeners. I will venture to affirm that as a body they can challenge any other class of men for intelligence, good members of society, and for being as highly respected by their employers as others. But now the educational reform of gardeners has begun, I hope that "Linager" will suggest an improvement in other quarters so that young men may have some inducement to apply themselves to their studies, and if there is a prospect of corresponding remuneration young gardeners will not be found backward in applying themselves with diligence and ardour in order that they may be competent to fill first-class situations. *A Constant Reader, Derby.*

[Such a person as is here spoken of, managing pigs, and cows, and so forth, is merely a labourer; and on that class our views as to education are hardly directed. They are extremely useful men, in their own state of life, but not persons from whom much knowledge is expected.]

——There is now scarcely a garden in this country of sufficient size to require proper superintendence whose proprietor does not expect from the gardener not only ordinary routine duties, but also a knowledge of those branches of science more immediately connected with the objects of his care, so as to enable him to explain the various phenomena so frequently presented to his notice. His knowledge of science need not be very deep or learned, or occupy

more time or attention than can be spared by all well conducted young men employed in private or public horticultural establishments, but some acquaintance with it is necessary. You however justly remark, "How is this knowledge to be obtained?" Situations in which young gardeners are employed are often miles from a town, frequently a long distance from a village, and seldom more than one or two, except in large places, require education; the rest are mere labourers. A considerable amount of courage is therefore necessary "to battle with the elements within and without," in order to attend scientific lectures even when within reach. I fear therefore that many a worthy young man would have to toil hard and long ere he passed an examination for honours such as "Linager" (see p. 528) proposes, without the means of obtaining so desirable an end being put within his reach. Let me however offer an idea or two. First the parents of young gardeners should do all that they can to keep them to school in youth; and after they are placed in charge of nurserymen, in or near large towns, they should commence acquiring that knowledge of their profession which in after life is to procure for them a respectable existence. Here then I am of opinion that education and training which we are so anxious for them to procure really begins, viz., "Practical skill in cultivation," "Botany," "Vegetable Physiology," "Geography in its relation to climate and the distribution of plants," "Pomology," &c. I am quite aware that nurserymen have little time to spare apart from business; but what a stimulus it would give to young men employed in their establishments if they could obtain an occasional overhaul, a monthly or quarterly test of their proficiency and fitness for the "next move" by the principal or foreman. A small room supplied with books and periodicals connected with the business might be set apart for their use, and for its proper maintenance a fraction would be cheerfully contributed weekly by the *employés*. Gentlemen might be solicited also to aid this by donations. I am sure that if young men were only convinced that the most persevering and best informed received the best appointments, we should have no lack of steady intelligent men to fill important and trustworthy situations. Secondly, I think it very desirable that head gardeners (highly intelligent and thoughtful men as many of them are), should, when taking young men under their practical tuition, be induced to lend a helping hand in providing the means of their acquiring the particular kind of information they seek. This they might do by means of their own libraries however small, by their conversation at seasonable times, and by representing the matter properly to the proprietor of the establishment. I do not think now-a-days that any nobleman or gentleman, feeling their own interest advanced by the growing intelligence of their servants, would deny their aid, or object to set apart some place under the superintendence of the gardener for so desirable a purpose. I think "Linager" has given a fair standard of excellence; but unless all aspirants had equal opportunity of study, the few near the metropolis and other large towns would soon usurp our best places, and we country lads, far removed from such sources of knowledge, would be obliged to plod on uncared for and unknown. *W. G. A., Hartham Park, Corsham, Wilts.*

Mule Tares. — I have sent you a specimen of Tares, a cross from a Tare on a White Pea—it was a seedling last year. We think it an improvement on the Common Tare. *James Woods, Ruxley Lodge, Esher.* [This is no mule, but one of the old varieties of Vicia sativa; probably what is called by botanists Vicia globosa. Although a very strong-growing sort it is not more so than the Nepal Tare, another form of Vicia sativa.]

The Beech Tree. — I read in Matthew on "Naval Timber," the following statement:—"The planter of Beech should procure the kind with yellow-coloured wood, termed by joiners Yellow Beech, in opposition to the kind with white wood, called White Beech. The Yellow grows faster and straighter, and is cleaner and freer of black knots, and also more pleasantly worked than the White, but it corrupts much sooner in the bark when cut down. This variety of Beech, when properly trained, is probably the most profitable hard wood that we can raise; when planked it bends pleasantly under the shipwright to the curvature of the vessel's side. The tree is also much superior in size and grace of outline to the White." Can any correspondent give further information on this point? How are the two sorts to be known from each other? Will they come true from the mast? What nurseryman residing in either England or Scotland sells them separately? *Alresford.*

Cat attacked by a Finch.—A curious incident in Natural History having occurred lately in our garden, I cannot resist sending it to you, thinking it not unlikely to interest some of your readers. A fortnight or three weeks ago a pair of Finches had a nest full of half-fledged young ones, when a fine large dark tortoise-shell Persian cat, the terror of all the feathered tribe, found his way to the nest and helped himself to one of the young ones; after devouring which he proceeded to demolish the others. The poor parents stood by distracted, chattering vociferously, but to no purpose. Next day catching sight of the murderer, they recommenced their chattering, and alas! one was caught and killed by the cat but not eaten. Now comes the remarkable part: ever since, the poor bereaved bird seems to be imbued with a spirit of revenge, and to be determined if possible to punish the destroyer of her family (the gardener tells us it is the hen that is left). She may always be seen perched in some conspicuous place, either the top of a small shrub or the bough of a neighbouring tree near to wherever the cat is at the time, wagging her tail and chattering in the most indignant manner, every now and then swooping down and darting at the cat's head whenever he is looking another way. This has now continued so long that the tables are quite turned, and instead of the bird being the one to be frightened, the cat winces each time he hears and feels the bird near his head and hides himself under some thick shrub where he cannot be seen. This has created so much astonishment and amusement that we have carefully searched Yarrell for an account of the brave little bird, and we find that she answers to the description of the Hawfinch in everything but that of being extremely shy and retiring. *B.*

Gardeners' Benevolent Institution.—All gardeners who are subscribers to this charity must be highly pleased with the information you conveyed to them in your last Number, viz., that the Committee had at length seen the necessity of doing that which had so often been pressed upon them, namely, to put no candidate upon the list for a pension who had not contributed to the fund from which he was seeking relief. The obstinate adherence to the placing of persons on the funds who had never contributed one farthing, and the constant exertion of party influence in electing such persons in preference to the candidate who had subscribed, made gardeners look upon the Institution with indifference. Indeed numbers of them withdrew their names in consequence, even after they had subscribed for 10 years. They saw clearly that the Committee ignored a prior claim; scarcely an election passed in which that fact was not apparent. In short, there are so many instances of the truth of what I state that the different committees would now, I make no doubt, feel a little ashamed of their mismanagement. I am one of the very few working gardeners who met more than 20 years ago at the Turk's Head Hotel in the Strand, to lay the foundation of this Institution. *Subscriber, June 28.*

Rainfall.—In your Number of June 23 you say that every one is talking of our unusually wet spring; and after giving the rainfall at the Horticultural Gardens as 9 inches to the end of May, and 12.26 to the 17th of June, you say "that after all we are not much more than an inch above the average, and that the months of February, March, and April were less wet than generally supposed." Now you must recollect that the observations taken in the gardens of the Horticultural Society form only one instance, and that complaints of the unusually wet spring may come from places where the rainfall has been greatly larger. As a proof of this I send you the observations taken from a rain gauge at a spot situate about 35 miles S. from the Horticultural Gardens and 18 miles N. of Brighton. It is situate on the Forest Ridge surrounded by woods and about 400 feet above the level of the sea. The figures represent the actual quantities of water taken from the gauge, nothing being added for evaporation:—January, 5.08; February, 1.18; March, 2.92; April, 2.48; May, 3.49. The rainfall in June has been so extraordinary that I send you the figures in detail.—

June	1	..	.92	Brought forward..			4.89
,,	2	..	—	June	14	..	—
,,	3	..	1.43	,,	15	..	.5
,,	4	..	.5	,,	16	..	.6
,,	5	..	—	,,	17	..	.79
,,	6	..	.34	,,	18	..	.17
,,	7	..	.41	,,	19	..	—
,,	8	..	.17	,,	20	..	.26
,,	9	..	.47	,,	21	..	—
,,	10	..	.10	,,	22	..	—
,,	11	..	.20	,,	23	..	.16
,,	12	..	—	,,	24	..	—
,,	13	..	.80	,,	25	..	.63
				,,	26	..	.43
	Carried forward	..	4.89			Total	7.44

This makes a total to June 26 this year of 22.89 inch. I should be glad if some of your readers in different parts of the country will say whether they have experienced anything equal to this. *A Constant Subscriber.*

Mr. Prestoe's mode of Striking Cuttings.—In your Paper of the 12th of May is a notice by Mr. Prestoe of Hackwood Park of a new method of striking cuttings. Not having seen any further account of it, I beg to request Mr. Prestoe to be so obliging as to give a more detailed report of his method. I have no doubt that many gardeners besides myself will be grateful to him for information upon the subject. *Mary, Ryton-on-Dunsmore.*

Shreds.—I beg to inform your correspondent, "A Gardener," that I have used for several years the common brown calico at 2½*d.* per yard for shreds, and I find it much better for the purpose than tailors' clippings. It does not harbour insects, and lasts very well one season, and occasionally two; the expense is trifling, as one yard will cut into a great many shreds. *Mary.*

Golden Hamburgh Grape.—Like your correspondent "Vitis," I never could exactly make out how the raiser of the Golden Hamburgh knew that he had effected his cross. The blossom of the Grape Vine is an exceedingly difficult one to manipulate upon. The only trustworthy way is to detach with a penknife the calyx, which is what is called operculate, and may by delicate handling be picked off, carrying with it the anthers, and leaving the berry and pistil uninjured. The anthers must then be examined by a magnifier to see if they be not burst, which will sometimes be found to be the case in warm bright weather. Mr. Busby would oblige those who really want information on the subject, and clear up the matter generally by stating in your columns whether he worked the thing as I have above described, or by describing accurately the method he pursued. I have twice crossed the Vine, and as many times had the misfortune to lose the ripened fruit excepting one solitary berry from which I have a seedling (Chasselas Musqué by Black Hamburgh). I allowed but six berries on the bunch, and every one swelled and ripened. During the flowering season of the Vine the air is saturated with pollen, and in all probability multitudes of berries are fertilised by alien pollen which will account for the fact that most of the modern seedlings from Vineries have proved good, for my experience has convinced me that by far the greater number of good seedlings, both of flowers and fruits, are produced by accidental intercrossings; and that self seedlings from intercrossed plants, such as Geraniums and the like, are generally inferior reproductions of the parent, or tend to revert towards some of the wild originals from whence they were derived. Breeders should observe as well as operate, and carefully record their observations, which when strictly made are invaluable to those who may happen to follow them. *R. T. C.*

British Queen Strawberry.—Will any of your correspondents favour me with the reason why the British Queen prize Strawberry of 1851 assumes a perfectly different form from the original which I obtained from Mr. Beach, of Isleworth, the exhibitor at the old Crystal Palace? Out of 300 pots which I forced this season only 20 were of the same shape as when first planted, the remainder being round, not so rich in flavour, and rather earlier. *John Stovild.*

Chantin's Caladiums.—The new sorts of Caladium just sent out by Mr. Chantin demand some explanation from that gentleman, as I find it pretty generally considered that two of them are old plants with new names. Caladium tripedestrum of Chantin is nothing but the old C. marmoratum; and C. Baraguinii nothing but the old C. bicolor, or some of its varieties; both which plants can be purchased for 3*s.* 6*d.* each, but for which the public is charged the exorbitant price of 22*s.* each. May I ask why the collection was never produced at any of our London exhibitions. Perhaps it was that the plants would not take with the public; but Mr. Chantin will have the chance of stating his reason. I have received a beautiful plant from Siberia under the name Lindilofia spectabilis; is it new? *Ebor.* [We know nothing of it.]

Hybrid Cheiranthus.—I have a delightful little hybrid plant just now in bloom. It was the produce of the wild English Wallflower by the pollen of Cheiranthus alpinus. The colour is much the same as in the female parent, but larger, and a little fringed at the edges. The habit is bushy and prostrate, like that of the male parent; the flowering is profuse and successional; one set of spikes succeeding the other and becoming as large as the first; the fragrance is exquisite, surpassing that of either parent. Here is an instance of the truth of Herbert's accurate and truthful observations, viz., that cross-bred plants often surpassed both parents. I mean to send it to my good friend Mr. A. Henderson, who will propagate and distribute it should it stand the test of another season. I may add in conclusion that it is evidently swelling a few seed pods. *R. T. C.*

New Strawberries.—I am glad that at length Mr. Robertson has thought it behoved him to advert to my letter inserted in your columns last February. I then stated that I had purchased in 1858 from one of the most respectable nurserymen in the South of England a Wizard of the North, and comparing it with plants purchased through one of his accredited agents (Mr. Watkinson), the two are identical. Mr. Robertson acknowledges his obligations to the Pomological Society for noticing his Wizard, but craves an extension of time for exhibiting it. Surely he who could show it with such *éclat* at Paisley in 1857 must be in a condition to repeat it in 1860, and I would respectfully submit to Mr. Robertson that he is bound promptly to show in reality to his purchasers what he is growing. It does not meet the case to offer various prizes in 1861 for the best dishes of what may prove a worthless article; the money paid for it may be something, but it is as nothing compared with the time, loss of ground, and ultimate disappointment in the result. Let Mr. Robertson once show before a recognised authority that his renowned (on paper) Wizard is worthy of cultivation, and whatever may be the failure of others he has cleared himself. Should it be any further incentive for Mr. Robertson, either from his own or another's productions (whenever they are ready), I will add three guineas to the amount offered by the Pomological or Horticultural Society, provided he will place the same amount (five guineas) to be paid over to the Gardeners' Benevolent Institution in the event of his failing to obtain their certificate. I am glad to find Mr. Reeve purposes to show his Eclipse, and hope it may verify all his expectations. *Richard S. Yates, Sale, Cheshire.*

Societies.

HORTICULTURAL.—An Ordinary Meeting of this Society, for the election of Fellows and Ballot for Plants, was held on June 26, at the Museum of Science and Art, South Kensington, by permission of the Lord President of the Privy Council, The Earl of Ducie, V.P., in the chair, when the following Ladies and Gentlemen were elected, viz.:—Miss Bridge, Miss M. Bridge, R. Catheart, Esq., J. J. Chalk, Esq., Rev. V. K. Child, S. Churchill, Esq., Miss M. Courtoy, Miss E. Courtoy, T. Dalton, Esq., Madame E. Faure, W. Garnier, Esq., W. Gillow, Esq., the Lady Mary Nisbet Hamilton, R. A. Hussey, Esq, M. Marsh, Esq., M.P., Miss A. Prater, Miss M. J. Renny, Miss E. Renny, the Earl of Shrewsbury and Talbot, M. T. Smith, Esq., M.P.; and and O. Wallis, Esq. The ballot for plants was then proceeded with. The list of those selected for distribution on this occasion comprised 19 sorts—chiefly greenhouse and hardy ornamental shrubs (see p. 551), which will be forwarded to the successful applicants soon after the Ballot on the 24th July, along with any other plants they may have gained.

Floral Committee, June 28.—Several Seedling Pelargoniums were contributed on this occasion in excellent condition by Mr. Turner, of Slough. To two of these, Perdita (Foster) and Arabella Goddard, first-class Certificates were awarded; both have already been described by us in former reports. Modesty (Beck) was commended. It is white with a crimson blotch on the upper petals and very pretty. The same exhibitor also sent a very handsome heavy-edged Pink for which a first-class Certificate was awarded. Other Plants consisted of the orange-veined Dracæna indivisa from Mr. Standish, and a handsome variety of Athyrium Filix-fœmina called plumosum from Messrs. Stansfield. To both of these First Class Certificates were awarded. From Messrs. Carter came a white variety of Gilia achilleæfolia, from Mr. Barnes a large pale rosy Azalea called Magnet, and from Mr. Geo. Smith Verbena Fairest of the Fair, and a clear yellow Calceolaria called canariensis. These all received labels of commendation. Mr. Butler, of Woolwich, sent the rare Brasavola Digbyana and Phalænopsis rosea, and from Messrs. Milne & Co., came some very pretty varieties of erect growing Gloxinias.

AMERICAN ACADEMY OF ARTS AND SCIENCES, *Jan.* 11, 1859.—THE FLORA OF JAPAN.—Professor Gray gave a series of illustrations of the Botany of Japan in its relations to that of Central and Northern Asia, Europe, and North America, the communication being a portion of one of the papers presented by him at the last preceding meeting. He showed that the relations of the Flora of Japan with that of the United States east of the Mississippi were peculiarly intimate, as evinced by the great number of congeneric, of closely representative, and of identical species in the two floras, noting especially that most of the more striking points of similarity were presented in species or in types which are absent from the flora of Europe. Also, that although there is a considerable number of species common to the western side of the American continent and to Japan, yet that the likeness was less strong between their floras than between those of Eastern North America and of Japan, although the latter are geographically separated by about 140 degrees of longitude. Also, that far more Eastern American species or types are represented in Eastern Asia than of Western American in Europe, or even in Asia;—thus pointing to a remarkable interchange between the floras of Eastern North America and Eastern Asia; or to a former homogeneousness of the temperate American and East-Asian floras, to a degree equal, perhaps, to that of the Arctic or the sub-Arctic flora at the present time. Comparisons formerly instituted by Professor Gray between the flora of the Northern United States and that of other parts of the northern temperate zone had already suggested to others, as well as to himself, the inference that the interchange between these floras had taken place mainly *viâ* Asia, and not *viâ* Europe; and it would be seen that our now largely increased knowledge of the botany of the Japanese and of the Himalayan regions strengthened this inference. In presenting the subject, Professor Gray could hardly avoid using the words "interchange" and "dispersion of species." He had used them only in drawing his conclusions from the facts, and wished to do so without prejudging the question involved. But he was free to say that the present investigation had confirmed his impression that such terms were properly employed. For although some of these facts would at first seem most readily explicable upon the supposition of the double origin of those species whose present geographical areas are widely dissevered, yet, in his opinion, they would be found, on considering the whole case, far more conformable to the hypothesis of a single local origin for each species at an early time. And in his opinion the actual question now is,—whether each species originated in one local area, whence it has spread, as circumstances permitted, over more or less broad tracts, in some cases becoming discontinuous in area through changes in climate or other physical conditions operating during a long period of time; or, whether each species originated where it now occurs, probably in as great a number of individuals occupying as large an area, and generally the same area, or even the same discontinuous areas, as at the present time. The latter is understood to be the view of Professor Agassiz. To this view Professor Gray objected:—1. That it offers no scientific explanation of the present distribution of species over the globe; but simply supersedes explanation, by affirming, that as things now are, so they were at the beginning; whereas the facts of the case—often very peculiar—appear to demand from science something more than a direct reference of the phenomena as they are to the Divine will. 2. That the idea of the descent of all similar or conspecific individuals from a common stock is so natural, and so inevitably suggested by common observation, that it must needs be first tried upon the problem; and if the trial be satisfactory, its adoption would follow as a matter of course. 3. That, since it is conceded that the present era of the world is of extremely long duration, and since it is most probable, not to say certain, that the existing species of plants of the regions in question, or a part of them, are of high antiquity, dating back to the post-tertiary, or even to the later tertiary epoch,—and therefore must have been subject to great climatic changes, accompanied or caused by no inconsiderable changes in the relative extent and configuration of the land—the objections formerly raised against such wide dispersion of species lose most of their force. And the explanation of such anomalies in the actual distribution of species is to be sought in the vicissitudes to which the species must have been subject in their earlier days. Professor Gray proceeded briefly to intimate, that, if the present flora of the northern hemisphere preceded the glacial period, or even immediately succeeded it, the actual distribution of species, and the interchange between this continent and Eastern Asia under similar parallels of latitude, could be readily accounted for on the ordinary view; or at least would offer no greater difficulty than the Arctic flora now does,—the general homogeneousness of which round the world has never been thought difficult of explanation. He proposed to illustrate his views upon this part of the subject at a future meeting. Professor Agassiz remarked, that the animal kingdom presented a resemblance between its representatives of Eastern North America and Eastern Asia similar to that mentioned by Dr. Gray in the flora, and that he has especially pointed out this correspondence in detail in the order of Testudinata, in his Contributions to the Natural History of North America. He acknowledged the correctness of the views ascribed to him by Dr. Gray, and would defend them on the ground that, connecting the present state of things with that which prevailed in earlier geological periods, it could be shown that the present distribution of animals was linked with that of earlier periods in a manner which excluded the assumption of extensive migrations, or of a shifting of the floræ and faunæ from one area to another. He viewed the similarity between the fauna of North-eastern America and that of North-eastern Asia, not as the result of climatic changes over an area primitively more homogeneous in its organic productions and modified by climatic changes, but as a primitive adaptation of organic types to similar corresponding physical features, which have remained respectively unchanged since the first introduction upon earth of these organisms. Admitting with Dr. Gray the immensely long duration of even the present period, he did not think that the regular order and organic connection which everywhere exists between the different types of animals and plants upon the whole surface of our globe, could have been established by physical changes, or even essentially modified by them. With reference to the single origin of conspecific individuals, he thought that the warfare which so many species wage upon others was in itself an insuperable objection to the assumption that any one species could have originated in a single pair. The President remarked, that the appearance of the same species on different or opposite parts of the globe admitted of explanation by supposing that originally a zone, or isothermal belt, which existed in each climate, contained all the species capable of flourishing in that climate so long as the climate remained stationary; and that in the lapse of ages a great portion of these plants had disappeared or died out, under the casualties to which plants are liable, some having disappeared altogether and others remaining only in localities, defined by longitudes, in different parts of the same zone; so that at the present day, while the general character of the vegetation is different in different hemispheres and countries, still a sufficient number of species might be extant in, and common to, both hemispheres, to represent a part of the original growth. This explanation appeared to him more probable than the supposition that these plants had more recently migrated from any one country to its antipodes, passing over the intermediate regions. Professor Gray rejoined, that his views would in a good degree harmonise with those of the President, with the important exception that he regarded any former more homogeneous state of the temperate flora as itself a resulting, not an original condition. Still less, therefore, could he coincide with Professor Agassiz in regarding the actually present distribution, with all its dislocations, as a primitive state. Whether a much larger number of species than now were ever common to Japan and to New England, and whether these at any one time inhabited the whole intermediate ground, appeared to him uncertain, and was unnecessary to suppose; but he had no idea that recent migration had anything to do in accounting for the present existence of the same species in such widely separated stations.

Notices of Books.

Metaphysics, or the Philosophy of Consciousness. By Henry Longueville Mansel, B.D. Pp. 398. Adam and Charles Black, Edinburgh.

What a wonderful power is that "by which the mind turns its attention inwards, upon its own operations," yet how few Englishmen in the present day of bustle and activity have time to study Locke, Reid, and Dugald Stewart. They don't care whether the propositions "I know" and "I know that I know" are distinct (as some great authorities assert), or are only logically distinct but really identical, as Mr. Mansel maintains.

Time was when the Aristotelian philosophy was held in such repute that no university degree could be obtained without a competent acquaintance with the writings of "*the* philosopher," as by common consent the Stagyrite was called. His works guided the course of metaphysical inquiry for nearly 20 centuries, and still they are looked upon as a grand specimen of what the human intellect is capable of accomplishing. But modes of thought have greatly changed now, and Mr. M. tells us "Aristotle's philosophy has little in common with an inductive science of the human mind, and his speculations will probably appear to a modern reader sufficiently vague and barren."

Mr. Mansel's book of course contains much that has an interest for a certain class of minds, and appears to be well arranged; but as for expecting our readers to follow him into the distinction between psychology and ontology, we more than suspect they would side with that Pope who issued a bull against such dangerous speculations; or perhaps indorse in its application to mind the opinion of an eminent physician, "that his patient had no business to know that he had heart, liver, stomach, or any other vital organ."

We have often laughed at Molière's inimitable representation of a character greatly elated with the discovery that he had been speaking *actual prose* all his life long. So too, in spite of ourselves, we can't help being to some extent psychologists; nay the "philosophy of consciousness" meets us even in our nursery tales. Who does not recollect the little maid that fell asleep upon the king's highway, when some wicked wight came and cut her petticoats all round about; in which distressing predicament, so contrary to all former experience of self, she doubts her own identity?

"Sure this can't be I."

Alas! poor maid, the painful consciousness of self was not to be thus got rid of—

"She began to shiver and she began to shake."

It may be safely assumed that every true ontologist will admire her ingenious solution of the problem:—

"If it be I, as I suppose it be,
I've got a little dog at home, and *he* knows me."

Under the title of *Seemann's British Ferns at one view*, (Van Voorst), we have a map showing by means of small well selected specimens the differences which exist between all the genera and all the species of our wild Ferns. The drawings are by Mr. Fitch. To the lovers of Ferns or to botanical students this little contribution must be extremely acceptable.

Garden Memoranda.

MESSRS. WATERER AND GODFREY'S NURSERY, KNAP HILL, NEAR WOKING.—Few nurseries within an hour's journey from London by rail afford more real interest or instruction than this. It contains, as most people now know, acres of Rhododendrons, and among them are some of the largest standards in England. These consist chiefly of Waterereanum, a rosy lilac kind, one of the earliest hybrids from Catawbiense. Of this great quantities are still in full bloom notwithstanding the unfavourable weather to which they have been subjected, and owing to their large size they form conspicuous objects even at a distance; their great bushy heads, being well borne up on sturdy stems, showing to good advantage above the masses of smaller plants with which they are associated. Of brighter colour and equally plentiful though scarcely so large in size was roseum elegans, a variety which forms the very best of standards, though of course not so glowing or striking as some of the brilliant crimson kinds that through judicious hybridisation have been more recently brought into existence. Of the latter one of the very best either for dwarfs or standards is Brayanum, a late kind, which for effect is as yet unsurpassed. Truss conical and beautifully formed. Boscaanum is likewise an excellent crimson scarlet sort, which, together with many other high-coloured kinds well deserves attention.

Among new varieties, Miss Combe is one of the best. It is pure white with a little spotting in the upper petals, well formed, and of good substance; this must be regarded as a great acquisition. Alarm is also a beautiful kind, with white throat deeply edged with crimson. Duc de Brabant too is well worth attention; it is white, richly spotted in the upper petals, distinct and handsome. We likewise noticed a number of unnamed seedlings, some with blooms, remarkable for large size, and others for the deep black blotches

which nearly cover their upper petals. To the latter class of Rhododendrons Messrs. Waterer have lately paid considerable attention, and from it something good may be expected to spring. At present we have little in that way except the charming Lady Eleanor Cathcart, which is admired by all who see it.

Into Azaleas, too, is being infused new blood. By means of crossing the hardy kinds with the bright orange yellow Chinese sort some fine seedlings have been obtained, with blooms of large size and possessing great richness and variety of colour. They also have the good property of being late bloomers. Though among them orange and flame-coloured tints prevail, yet one we remarked had a crimson top petal and the rest rose; equally remarkable combinations of colour were also to be met with in other sorts.

Broad-leaved Kalmias of very large size are even now in full bloom here. Of this Messrs Waterer possess a variety having flowers of a richer and much deeper colour than those of the ordinary sort, and a mixture of the two forms an agreable contrast.

Of the effects of the frost of October last unmistakable evidence exists in this nursery in the shape of dead standard Rhododendrons, and it is now clear that nurserymen must not work standards any longer on ponticum. All, or nearly all on that stock, have either been killed outright or suffered severely. Messrs. Waterer recommend Watereranum for placing the higher coloured kinds on, it being a more vigorous grower than Catawbiense, and equally hardy.

In addition to American plants, another remarkable feature of this nursery is its Conifers. Of these Abies Pinsapo and nobilis have attained sufficient size to bear cones, and of these, together with Nordmanniana and other choice kinds, we remarked great quantities of plants from 3 to 6 feet in height in the most robust health, the light, sandy soil of this nursery evidently suiting them perfectly. Cupressus Lawsoniana, Thuja gigantea, Deodars and Araucarias too grow with unusual vigour, and also Wellingtonia. Of the last a plant was stated to have attained a height of 7 feet 3 inches in 27 months. Of the charming Thuja aurea, bushes exist here 7 feet in height and as much as 20 feet in circumference; and of Golden Yews we noticed great numbers. The employment of the latter in ornamental gardening we believe to be yet in its infancy; when judiciously intermixed with other Conifers, as it is here, the effect it produces is beautiful in the extreme; it gives to the shrubbery in autumn nearly as great an amount of brilliancy the Double Furze does in May, while in individual appearance it is much handsomer, and it may be induced to assume any form that may be desirable. A conical mass of it in Mr. Waterer's private garden showed how well it associated even with gay flowering bedding plants, and worked on the tops of clipped Yew hedges at intervals, to form standards; and on Irish Yews the effect was equally good.

When we state that this nursery occupies about 120 acres of ground, some idea of the extent to which Rhododendrons and other ornamental plants are grown may be gleaned. A large amount of that space is, however, devoted to the growth of fruit stocks for the trade and forest trees.

Miscellaneous.

Butterfly Killing Justifiable.—I think few will deny that man enjoys a vested right to make use of any of the inferior animals, even to the taking of their life, if the so doing ministers to his own well-being or pleasure, and practically every one assumes this right in one way or another. Game animals are shot down (and they assuredly do feel pain), not as necessaries of life, but confessedly as luxuries. Fish are hooked, crabs, lobsters, shrimps perish by thousands, victims to our fancies. Unscrupulously we destroy every insect whose presence displeases us, harmless as they may be to our own persons. The aphides on our flowers, the moths in our furs, the "beetles" in our kitchens—all die by thousands at our pleasure. Then, if all this be right, are we not also justified in appropriating a little butterfly life to ourselves, and does not the mental feast that their after-death beauty affords us at least furnish an equal excuse for their sacrifice with any that can be urged in favour of any animal slaughter, just to tickle the palate or minister to our grosser appetites? To this query there can be, I think, but one fair answer, so we may return with a better face to the question, "How to kill a butterfly." The legs of a caterpillar are usually 16 in number, and composed of two distinct kinds, viz., of six true legs, answering to those of the perfect insect, and placed on the foremost segments of the body; and of 10 others, called "prolegs," temporary legs, used principally for strengthening the creature's hold upon leaf or branch. *British Butterflies, by W. S. Coleman.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—If there are sickly or badly rooted specimens here they must be frequently examined for red spider, or they may become a nursery for that pest, and it will soon spread to adjoining plants. See that young stock is not allowed to suffer from want of pot room, and attend carefully to watering, giving weak liquid manure, as recommended last week, to all plants in free growth that are likely to be benefited by it. Such stove plants as may have been removed to this house while in bloom should be placed in heat again as soon as their beauty is over, in order to permit the young wood to get ripened before short days set in. During the present wet, cloudy weather Orchids must be permitted to have as much light as possible. Keep the foliage clear of insects and dust by means of frequent syringings or spongings, as may be necessary.

FORCING DEPARTMENT.

PINERIES.—Air should now be given liberally to young stock in dung pits, in order to secure strong stocky growth. The plants should not, however, be exposed to draughts, for these would not serve the end in view; a moderate circulation should however be secured at night, giving no more during the day than may be necessary to prevent the temperature getting too high. This, with careful attention to the state of the roots, keeping the bottom heat regular, the soil in a nice healthy state as to moisture, and giving a liberal supply of manure water to such as are well rooted, will be found much more conducive to growth than exposing the plants too freely, which would probably check and throw them into fruit prematurely. Use every means to afford plants swelling their fruit a thoroughly moist atmosphere, sprinkling passages, &c., frequently, and shutting up early, giving a gentle dewing with the syringe, and saturating the atmosphere by sprinkling every available surface; also give plenty of clear strong manure water at the root until the fruit begins to change colour, when the soil should be kept rather dry, which will improve the flavour.

VINERIES.—Attend to former directions as to thinning the fruit in houses intended to furnish a late supply, and see that the bunches are severely thinned, and also that the crop left is not too heavy in proportion to the strength of the Vines. Where the fruit is swelling, be careful to maintain a moist state of the atmosphere, and give every possible attention to the roots, keeping the border in a healthy state as to moisture, and if watering is found necessary, use good strong manure water. Give abundance of air where the fruit is colouring, and do not allow plants in pots to remain in the house to cause damp, which despite every care in ventilating, is apt to settle on the berries and spoil the bloom. Where the fruit is ripe and expected to hang for some time, the atmosphere of the house should be kept as cool as possible; but a little fire-heat will probably be necessary occasionally in order to keep the atmosphere dry during this damp weather.

FLOWER GARDEN AND SHRUBBERIES.

Trimming, staking, and pegging down must be well followed up at this period where neatness and order are essential. See that sufficiently strong stakes are applied to plants with heavy foliage and gross habits, such as Dahlias, Hollyhocks, Larkspurs, Phloxes, and tall-growing Asters. Keep Roses as much as possible free from insects, and if time can be spared dead blooms should be removed from Rhododendrons. Let Carnations and Picotees be layered as soon as the shoots are in a proper state for that purpose. They make exceedingly useful border flowers, and are much prized in a cut state. See therefore that plenty of them are secured for next season.

HARDY FRUIT AND KITCHEN GARDEN.

Tomatoes must be regularly attended to, keeping the shoots thin and stopping them above a cluster of fruit. Shallots must be taken up as soon as they are ripe, for if left in the ground they are apt to mildew; spread them out in any airy place to dry before storing. The harvesting of these and Onions will, in most places, be late this season. Herbs as they come in flower should be cut and dried for winter use. They can either be hung up in bags to keep them clean or rubbed out and bottled. Where a sufficient breadth of Celery is not yet planted out this must be attended to as speedily as possible. Earth up former plantings and encourage rapid growth by means of occasional waterings with liquid manure.

COTTAGERS' GARDEN.

Early Potatoes are backward this year; but as soon as they are up plant the ground with early Ulm Savoy. They may be allowed to stand a foot apart each way. A little Spinach to stand the winter may also soon be put in. The destruction of weeds will require considerable attention; the weather being so wet they grow with great rapidity.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending June 28, 1860, as observed at the Horticultural Gardens

June.	Hour's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 22	3	29.961	29.906	69	50	59.5	60	57	S.W.	.04
Satur. 23	4	29.978	29.874	71	49	60.0	60	57	S.W.	.08
Sunday 24	5	29.47	29.876	73	50	61.5	60½	57½	W.	.11
Mon. 25	6	29.815	29.691	67	48	57.5	61	58	S.W.	.56
Tues. 26	7	29.961	29.812	68	36	52.0	61	58	S.W.	.01
Wed. 27	8	29.883	29.695	64	48	56.5	60½	57½	S.W.	.04
Thurs. 28	9	29.759	29.703	67	45	56.0	61	57	S.W.	.18
Average..		29.895	29.794	68.3	46.5	57.4	60.5	57.4		1.02

June 22—Fine, densely overcast at night, rain.
— 23—Overcast, cloudy and fine; shower in forenoon; fine, rain.
— 24—Overcast and mild; cloudy and fine; comet seen in the evening.
— 25—Constant heavy rain, overcast, cloudy; heavy rain at night.
— 26—Fine; cloudy, occasionally sultry; overcast
— 27—Overcast, cloudy with brisk cold wind; boisterous and showery.
— 28—Fine; very low white clouds; overcast; rain; boisterous.
Mean temperature of the week, 4½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending July 7, 1860.

July.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 1..	71.9	51.9	61.9	16	1.18 in.	1	5	5	—	4	10	5	3
Mon. 2..	73.2	52.0	62.6	12	0.22	2	5	3	—	5	10	7	3
Tues. 3	74.4	51.8	63.0	15	0.78	1	6	2	1	3	12	8	1
Wed. 4..	76.3	51.3	63.8	11	0.33	1	4	2	1	2	14	8	2
Thurs. 5.	77.6	51.3	64.4	13	0.59	1	2	4	1	5	11	10	—
Friday 6..	76.5	51.5	64.0	14	0.45	—	3	1	4	5	12	7	2
Satur. 7	73.7	52.3	63.0	18	0.34	2	1	5	2	6	10	6	3

The highest temperature during the above period occurred on the 5th, 1852—therm. 97 deg.; and the lowest on the 4th, 1851 and 1855—therm. 37 deg.

Notices to Correspondents.

BEETLES: *Sub.* Chase's Beetle Poison advertised in our columns will be found to clear your kitchen of these pests.†

BOOKS: *Lyndhurst.* The title of Mathew's book is "On Naval Timber and Arboriculture: with critical notes on authors who have recently treated the subject of Planting. By Patrick Mathew. Adam Black, Edinburgh; Longman, Rees, Orme, Browne, & Green, London, 1831." It is so little known that we were not aware of its existence till quite lately. It is full of practical information, along with which are speculations on "What a British Gentleman should be; The apparent use of the infinite seedling varieties of plants; On Hereditary Nobility and Entail; Use of the Selfish Passions," &c. This may account for a really valuable book having been passed by with little notice. It contains plenty of sound knowledge and common-sense criticism of writers on planting. His condemnation of the experiments by Barlow and others on the strength of timber are well worth perusal; they will be found to coincide with our own as expressed some years ago while discussing the quality of British Oak Timber.—*W W C.*—Brown's Forester, and Mathew on Naval Timber.

DEODAR: *S R.* Do not cut away the dead leading shoot of your tree at present; but tie up to it one of the strongest of the young laterals immediately below it. In time the latter will stand erect and take the lead; the dead shoot may then be removed.†

DISEASED PEACH TREES: *C H.* We have not seen anything like the state of Peach trees since the year 1813. There is no reasonable doubt that their ruined health is traceable to the sudden frost of last October, the effects of which were not seen till young wood and fruit required supplies of food which the damaged roots and branches could not supply.

DOWNTON SEEDLING STRAWBERRY: *A Subscriber* will feel obliged by any of our correspondents informing him where plants of the TRUE Downton Seedling can be obtained.

DRY ROT: *R.* What you propose is probably more difficult than you imagine. It is not always possible to produce dry rot at pleasure. You will find a great deal of information in the Quarterly Review for April 1833, p. 131. A damp warm cellar, which is tolerably air tight, will answer your purpose. You had better try Oak or Deal, both well seasoned, and as raw as possible. But take care to make your comparative experiments with specimens from the same log, and as nearly in the same condition as possible. If they are made on a large scale, you must remember that you will have a considerable development of carbonic acid, which may render an incautious entrance into your Fungus pit unwholesome. *M J B.*

FLORISTS' FLOWERS: *J G & Co.* We must positively decline expressing any opinion respecting florists' flowers. The proper tribunal is the Floral Committee of the Horticultural Society, and to that Committee they must be submitted, if any faith is to be placed by the public in the judgment passed.

FOUNTAINS. Mr. William Hood, of 68, Upper Thames Street, supplies these at all prices between 30*s.* and 2300*l.* Some of his designs are beautiful, and all are well adapted to the ornamentation of gardens. Plans and elevations may be seen on application at the place above mentioned.

FUNGI: *J D.* The Fungus which is destroying your Periwinckles is Uredo Vincæ. *M J B.*

INSECTS: *D M.* The insects on your Crinum amabile are the young of a small species of Thrips (not Aphis), and must be attacked in the manner usually adopted against the common Thrips.—*W L D.* The Pear leaves scarcely seem to have been attacked by insects. The little hopping things you mention appear later in the year, and are named Psylla Pyri. They must be attacked in the same manner as aphides. *W.*

JUDGES OF FRUIT: *Amateur.* In judging fruits and vegetables judges must be allowed to cut any of the productions they choose, if necessary in order to arrive at a proper conclusion in awarding prizes.

KERRIA: *Diss.* It is probably owing to the continual wet weather that the double flowers of this plant are growing into branches, as happens in Roses. We have not remarked Cladoptosis in Evergreen Oaks near London; but there is plenty of it among common Oaks.

NAMES OF PLANTS: *G Scutt.* Rhodoleia Championi, a plant to be treated like a Camellia. The specimens in cultivation are too young to flower yet; Dendrobium moschatum.—*M G R S.* Xanthorhiza apiifolia. It is probably poisonous. Your Cucumbers are suffering from wet and cold *in some way.*—*J K.* Elæagnus angustifolia.—*M R.* Lithospermum officinale.—*R H.* You speak of three plants; we only find two. No. 2 is the plant named by Paxton Kennedya splendens, now called Camptosema rubicundum; 3. Leucolæna rotundifolia.—*J S.* 1. Sutherlandia frutescens; 2 Some Trifolium near incarnatum, probably from the South of Europe; 3. Stellaria graminea.—*H R.* Corydalis lutea.—*A C.* 1, a Sedum; 2, an Astragalus; 3, an Artemisia. The specific names of such uncommon plants cannot be given without *very good* fresh specimens being furnished. Those received are mere morsels which would puzzle Œdipus himself.

PEACH TREES: If a *Constant Reader* is really a constant reader he must be aware that he asks a question that has been repeatedly asked and answered within the last few weeks. We really cannot say anything further on the subject.

SILVER FIRS: *C D.* The stems of the young Silver Firs are coated with the white secretions of a coccus and its young in vast numbers, the latter recently hatched, and which if not strenuously attacked will do incalculable mischief. Surely some application of gas-tar water or thick soap-suds and lime by means of a brush fastened at the end of a long handle might be adopted. The parts of the stems within reach might be brushed with a hard dry brush. *W.*

SPERGULAS. *A Subscriber.* S. pilifera is the only one worth even attempting to grow for lawns. What you send is the common weed Sagina procumbens.

THE EDUCATION OF GARDENERS.—We have letters on this subject from *Senex* and others, who we are sure will be content to know that instead of printing them separately we shall specially advert to them hereafter when the discussion shall have advanced further.

VINE LEAVES: *C Magie.* Your leaves are covered on the under sides with little green excrescences which do no harm, and are dying off. They, however, indicate that your house is very close and damp, and not sufficiently ventilated.

ERRATUM.—In the prize list published by the Crystal Palace Company (see p. 500), a mistake has crept in. Instead of 2d prize to Mr. Tegg for three bunches of Black Grapes, Class B, *read* to Mr. Frost, Preston Hall, near Maidstone.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analysesof Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—
SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.
They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.
The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
,, SUPERPHOSPHATE OF LIME	6	6
,, MINERAL	5	5
LAWES'S BARLEY MANURE..	8	0
,, MANGEL MANURE	8	0
,, GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents.
Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemica Manures.
American Cakes at market prices.
Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C, and Liffey Buildings, Eden Quay, Dublin.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.
CONCENTRATED TURNIP MANURE, equal in value to the preceding.
Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."
Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

NORTH HANTS SEED ESTABLISHMENT.
HENRY JESSE begs to thank his friends for the support he has received for many years, and to inform them, that in addition to his CORN AND SEED BUSINESS, he has now added the MANURE, CAKE, AND TURNIP-SEED TRADE. The latter he has devoted his particular attention to, having made arrangements with a first-class House; and trusts by keeping articles of the best quality, to supply his customers on such terms as will give satisfaction and ensure their future orders.—Railway Stores, Basingstoke; and 100, Seed Market, Mark Lane, London, E.C.

TO SCAVENGERS AND OTHERS.
THE MARKETS IMPROVEMENT COMMITTEE will meet at Guildhall, on WEDNESDAY, July 4, at 1 o'clock precisely, to receive TENDERS from parties willing to TAKE AWAY the MANURE and SOIL from the Market Place at the Metropolitan Cattle Market, and to Sweep and Cleanse the Roadways and Footways therein and surrounding the same; and also to Purchase the Manure made in the lairs at the said Market for a period of One Year from July 15 next. Conditions may be seen, and further particulars obtained by applying personally at the Architect's Office, Guildhall, E.C.
WOODTHORPE.

TO PIG, POULTRY, AND GAME FEEDERS.
JUPP'S RICE FOOD FOR POULTRY AND GAME.—RICE SWEEPINGS, 8s. 6d. per cwt., in 1½ cwt. bags; SCREENED RICE, 12s. per cwt., in 1¾ cwt. bags; DOG BISCUITS, 14s. per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6s.6d.and 8s. 6d. per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

KERRY CATTLE.—Bulls, Cows, and Heifers, of the purest blood and most fashionable colour, can be supplied and delivered at Cork by the Owner and Breeder, RICHARD G. CAMPION, Esq., Holly Hill, Rathcormac, Co. Cork.

ON SALE, by private treaty, the following SHORT-HORNED BULLS, the property of his Grace the Duke of Devonshire, Holker Hall. 8th Duke of Oxford (15039), red and white, c. Feb. 14, 1858; got by Cambridge Barrington 2d (14224), dam Oxford 15th by 4th Duke of York (10167), &c. 9th Duke of Oxford, roan, c. Jan. 19, 1859; got by Prince Imperial (15095), d. Oxford 15th by 4th Duke of York (10167), &c. 10th Duke of Oxford, red and white, c. Jan. 21, 1859; got by Cambridge Barrington 2d (14224), d. Countess of Oxford by Earl of Warwick (11412), &c. Knightley, roan, c. March 30, 1859; got by Prince Imperial (15095), d. Aloyse 2d, by Duke of Cambridge (12742), &c. Charming Boy, red, c. April 1, 1860; got by Mameluke (13289), d. Coral by Cardinal (11246), &c. Ossian, roan, c May 20, 1860; got by 8th Duke of Oxford (15939), d. Dustie by The Buck (13836), &c. Holker is 1 mile from the Cork Station on the Ulverston and Lancaster Railway. For further particulars, apply to Mr. DREWY, Holker, Newton-in-Cartmel.

OIL PAINT NO LONGER NECESSARY.
HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.
Sold in casks of about 30 gallons each at 1s. 6d. per gallon at the manufactory, or 1s. 8d. per gallon paid to any station in the kingdom.—Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, from whom only it can be obtained.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
CANTERBURY MEETING, STAND 38.
READ'S IMPLEMENTS.—PATENT FIRE and GARDEN ENGINES, which for power, portability, and simplicity of action, surpass anything of the kind hitherto invented.
PATENT VETERINARY INJECTING INSTRUMENTS. Improved HOLLOW PROBANGS, for relieving Hoven or Choked Bullocks, Calves, Sheep, &c.
Garden Engines, Machines, and Syringes, of every description, upon the most improved principle.
Manufactured only by the Patentee, RICHARD READ, 35, Regent Circus, Piccadilly, London, W.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

AGRICULTURAL AND GENERAL MACHINERY—As PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C.

LAWN-MOWING MACHINES—BURGESS AND KEY'S
MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6l.; 19 in., 6l. 10s.; 22 in., 7l.; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and — Collier, Esq., of Dartford.
PROTECTION FROM THE COLD WINDS & MORNING FROSTS
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.
Two yards wide .. .. 1s. 6d. per yard run.
Four yards wide .. .. 3s. per yard.
An improved make, 3 yards wide, 2s. 6d. per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1s.4d. per yard run.
ELISHA THOMAS ARCHER. Whole and Sole Manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."
"East Keal, Spilsby, Lincolnshire, April 30, 1858.
"Sir,—I will thank you to send 12 yards (at 1s. 8d. per yard) of your 'Frigi Domo,' from King's Cross Station, to be left at he Firsby Station, Spilsby, Lincolnshire. After using it (since last got it of you some four years ago). I affirm it to be, incomparably, the best and most lasting thing of the kind ever hitherto manufactured.—I am, yours, &c., Rev. J. SPENCE."

LAND DRAINAGE.
WORKS OF DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.
Repayment may be made by the Landowner as successive portions of the works are completed; or the actual expenditure, with a commission thereon, may be charged on the property improved, by way of rentcharge on the estate created for various terms of years so as to adapt the rate per cent. of annual charge to the circumstances of the tenants.
No investigation of title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.
Works of Irrigation, Enclosing, Wood Grubbing, Road Making, and Farm Buildings are executed in a similar manner.
Landowners desirous to execute any of the Improvements by their own Agents, and charge the outlay and expenses on the Estate, may obtain Loans for the purpose.
Applications to be made to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.
The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

ROYAL AGRICULTURAL COLLEGE CLUB.—The ANNUAL DINNER will be on THURSDAY, July 12, at 6 P.M., at the Freemasons' Hotel, Canterbury. Tickets, 5s. Apply to JOHN COLEMAN, Hon. Sec.
Royal Agricultural College, Cirencester.

YORKSHIRE AGRICULTURAL SOCIETY.—PONTEFRACT MEETING, AUGUST 1 and 2.
The entry closes on the 18th of July. For Prize Lists and Forms of Entry apply to JOHN HANNAM, Secretary.
Kirk Deighton, Wetherby.

THE BIRMINGHAM CATTLE AND POULTRY SHOW, 1860.—The TWELFTH GREAT ANNUAL EXHIBITION OF CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, AND ROOTS, will be held in Bingley Hall, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, December 3, 4, 5, and 6; when PRIZES, CUPS, or other articles of Silver Plate, and GOLD and SILVER MEDALS, to the amount of 1236l., will be awarded.
Prize Lists and Certificates of Entry may be obtained from the Secretary. The ENTRIES close the 1st of November next.
JOHN B. LYTHALL, Secretary.
Offices, Unity Buildings, Temple Street, Birmingham.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.—CANTERBURY, 1860.
PROGRAMME.
WEDNESDAY, July 4; THURSDAY, 5; FRIDAY, 6; SATURDAY, 7.—Trial Yard open on Wednesday, at Noon; and three following days, at 9 o'clock in the Forenoon, when the Public will be admitted on each day at 5s. for each person, to view the Trials of the Threshing Machines, Chaff Cutters, Mills, Oilcake Breakers, and Turnip Cutters. This payment has special reference to the Trial Yard only: the Implement Show Yard not being open on these days.
MONDAY, July 9.—The Implement Yard open from 7 o'clock in the morning till 6 o'clock in the evening, at an admission charge of 2s. 6d. for each person. Machinery will be exhibited at work on this day. The Judges to inspect the Live Stock, and to award the Prizes.
At 1 o'clock (or as soon after as all the Judges shall have delivered in their awards, of which Notice will be given) the Public will be admitted into the Cattle Yard on the separate payment of 5s. each person, at the Special Entrances; Members of Council and Governors of the Society being admitted by Tickets to be purchased at the Finance Department of the Society at the Show Yard; and Exhibitors of Live Stock on producing their Exhibitor's Ticket. Arrangements have been made for distinguishing the animals that have won the Prizes immediately the Judges have made their awards. At 8 o'clock in the evening the Cattle Yard will be closed.
TUESDAY, July 10.—The General Show Yard of Cattle, Horses, Sheep, Pigs, and Implements open to the Public from 6 o'clock in the morning till 6 in the evening; admission 2s. 6d. each person.
Public Dinner at 6 P.M. Tickets, 10s. each, to be obtained of the Secretary.
WEDNESDAY, July 11.—The General Show Yard open to the Public from 6 o'clock in the morning till 6 in the evening; admission 1s. each person.
Public working of the Steam Cultivators, on land in the neighbourhood of the city, during such hours as the Stewards may determine.
THURSDAY, July 12.—The General Show Yard open to the Public from 6 o'clock in the morning till 6 in the evening; Admission 1s. each person. General Meeting of the Members in the Town Hall, at 10 o'clock in the forenoon.
By Order of the Council, H. HALL DARE, Secretary.

CRYSTAL PALACE, SUMMER POULTRY SHOW.—The Summer Show of POULTRY, PIGEONS, and RABBITS will be held on SATURDAY, MONDAY, TUESDAY, and WEDNESDAY, August 25, 27, 28, and 29. Schedules of Prizes can be had on application to Mr. W. HOUGHTON, Secretary to the Show, Crystal Palace. The ENTRIES close on SATURDAY, July 28.

The Agricultural Gazette.
SATURDAY, JUNE 30, 1860.

MEETINGS FOR THE FOLLOWING WEEK.
WEDNESDAY, July 4 { Suffolk Agricultural Society at Framlingham. / Implement Trials commence at Canterbury.

—— AT the adjourned meeting of the Smithfield Club last week, after a somewhat stormy discussion, further proceedings were again adjourned till the 19th of July. Those who oppose the intended arrangement with the Agricultural Hall Company, by which the future shows of the Club would be held at Islington, wished to postpone a decision until December. The promoters of this arrangement overruled them; and it is likely that the meeting which they thus call next month will be large enough to commit the Club to some final decision on the subject.

—— The Agricultural Benevolent Association held its first festival last Tuesday. A public dinner inaugurating the course of benevolence and charity, on which it has now been fairly launched, was worthily presided over by Mr. WREN HOSKYNS; and some 200 gentlemen joined him in good wishes for the useful future of the institution.

There are now ample funds in hand for the commencement of its proceedings on a sufficiently large scale. The idea of erecting a building is for the present abandoned, and its means will be, therefore, devoted wholly to the relief at their own houses of the annuitants who may be elected by the subscribers. Mr. ALDERMAN MECHI may be congratulated on the flourishing condition in which the affairs of an institution due to his enterprise, perseverance, and benevolence now stand, and in which he hands it over to a management more directly representing the agricultural body.

—— Mr. JOHN FOWLER'S draining plough, worked by EDDINGTON'S patent windlass, has been engaged during the past week on Wimbledon Common. Mr. THOMAS SCOTT, of 18, Parliament Street, having undertaken the earth works and other preparations needed for the rifle competition there next week, finds, as the day approaches, that the common, generally scorched and dry enough at Midsummer time, is so soaked and water-logged that some temporary drainage is required. To take the water out of 200 or 300 acres in about three days' time is not an easy task; but steam power and the mole plough, aided by 300 pairs of hands and grafting tools, will accomplish it. The sand and gravel of Wimbledon Common is not a good subsoil for the mole plough; tunnels, however, made by it just below the rootlets of the Grass and Whin will last a month at least, and that is all one wants in the present case.

A drain is thus made some 12 or 18 inches deep every 10 or 12 yards, and occasional mains provided with large pipes receive the drainage water and remove it. The land now soaking, will, when thus drained by machinery, tread firm in 48 hours, and if this condition can be maintained 10 days that is all the contract contemplates. For this rapid work the mole plough seems admirably adapted. When permanent drainage is desired of course a chain of pipes is drawn in behind the "mole," and there is the experience now of many years to prove that on land of even texture and of even slope, Mr. FOWLER's drainage plough may be trusted.

THE leading article in the current number of the *Quarterly Review* discusses the condition of our labouring population and the subject of cottage architecture in a very practical instructive and manner. The town dwellings of the poor, the efforts of Labourers' Friend Societies for their improvement, and the closely related statistics of disease and death are first referred to, but the main purpose of the essay is to draw attention to the houses in which agricultural labourers live, and the means for their improvement. We are glad therefore to transfer to our columns some of the engravings by which it is illustrated, and several explanatory passages from the text.

The present condition of country cottages is thus described:—

"Off the high-roads, or far away from the landlord's eye, and indeed in whole villages where moral and physical stagnation have settled side by side, there are dwellings to be found which in the wretchedness of their accommodation almost equal the worst in our town courts. It may be feared that the majority of cottages have only a single bedroom. Hardly any but modern ones have three. * * * The view taken by the landlord class, till of late years, has unfortunately been through the short-sighted spectacles of stewards and agents, who could urge any amount of outlay on farm buildings, except for those on whose inhabitants all the work of the farm depended. While houses, extravagant in size and character, have been built for the tenants, and barns and sheds for every kind of stock, and every conceivable use connected with them, have been erected by their side in pretentious ranges, the cottages for the shepherd, or the waggoner, or the ploughman, were not allowed to enter into the calculations of farm improvement. Not only were the horses and oxen literally far better housed than those who looked after them, but the true remunerative policy was held to be, to pull down every labourer's dwelling as it fell vacant; nor was the vacancy always waited for. In those which are called 'close parishes,' where the whole belongs to one proprietor, and where therefore it was possible to stop any demand, however urgent, for the erection of new cottages when old ones had been demolished, the work of destruction was often systematically carried out, till only one or two houses were left for private convenience, perhaps for picturesqueness, or at a wife's entreaty. Nor was this so much cruelty to the dispossessed as dishonesty towards the neighbouring parishes, on whom the outcasts were thrown."

The demand for agricultural labourers and the greater value of labour, untaxed by a morning and evening walk of three or four miles to the scene of it, is now awakening men's minds to the importance of more abundant accommodation of the right kind for our farm labourers and their families. Agricultural societies have offered prizes for plans on which adequate accommodation may be best provided—and the reviewer discusses their merits and demerits in detail. The first prize-plan (1849) of the Royal Agricultural Society is condemned as "full of errors." "A second prize, given by the same Society in 1856 to Mr. ISAAC (Royal Agricultural Society's Journal, No. XXXVII.) is a considerable advance on their first plan. The arrangement is compact and good, but the fireplace in the corner of the living room may be objected to, and there is space lost in the construction of the staircase. The elevation would be improved by making the windows broader and lower, and the panelled front door and knocker might be dispensed with. The plainer elevation is far superior to the gabled or ornate one. The estimated cost of the former is 170*l*. These estimates are too low for the work. The Duke of BEDFORD's design for three cottages, two with three bedrooms and one with two bedrooms, has many points to recommend it." Its plans and elevations will be found in No. XXIII. of the Royal Agricultural Society's Journal.

The plans of the "Cottage Improvement Society" are thus referred to:—"We should have severely criticised the two first, did we not understand that in the reorganisation which the Society is now undergoing they are likely to be withdrawn. We prefer a third plan of the Society's, only partially circulated, where, by placing one of the bedrooms on the ground, two other sufficient rooms are gained on the upper story. It would seem an improvement on this plan if the pantry or north end of the lean-to were continued, so as to be flush with the back wall, giving room for a porch at the south or front end, with a side entrance into the living-room. The offices in this design—which is Mr. SLATER's, and of which the details are here given—are rightly kept separate, and the whole aspect is that of a thoroughly English cottage."

The figures 1, 2, 3, give the elevation, ground-plan, and bedroom floor of Mr. SLATER's cottage.

"In 1858 Mr. BENTLEY, of Rotherham, offered prizes of 20*l*. for the best and 5*l*. for the second best design for a pair of cottages (which might also be built singly), the expense not to exceed 110*l*. for the single cottage or 200*l*. for the pair. The conditions were very well considered, except perhaps the requirement that the plan should equally apply to a single and a double tenement. Seventy-six plans were sent in, and exhibited at the show of the Yorkshire Agricultural Society at Northallerton. Mr. C. W. STRICKLAND, in the most practical pamphlet on 'Cottage Architecture'* which we have seen, gives an account of the competition, and ably analyses the respective merits of 15 selected designs."

Figures 4, 5, and 6, give the ground plan, bedroom floor, and elevation of Mr. STRICKLAND's own design, which is characterised as by far the best yet offered to the public:—

"It is an acknowledged rule, that the nearer a building approaches to a cube the greater will be the economy of construction. All cottage designers have therefore endeavoured to avoid projections and recesses of any kind, and to bring their ground-plans within a square or a parallelogram; but Mr. STRICKLAND rightly remarks that this arrangement has been found almost universally fatal to the obtaining three good bed rooms above without loss of space below. In his own plan he departs from this rule, thereby entailing some extra complication and, probably, expense in the construction of the roof, but his whole arrangement is so excellent that this slight increase of cost should not deter the proprietor from adopting so perfect a model, especially as much picturesqueness is gained to the building by the break in the side-wall. We give the ground† and bedroom plans of a pair, to which we would add nothing but a small fire-place in the scullery. It will be observed that this design has every convenience which has ever been called for in this class of building; an entrance giving separate access to the living room, the staircase, and the pantry; the scullery communicating with the living-room, and having a back-door of its own; the best room, above and below, is to the

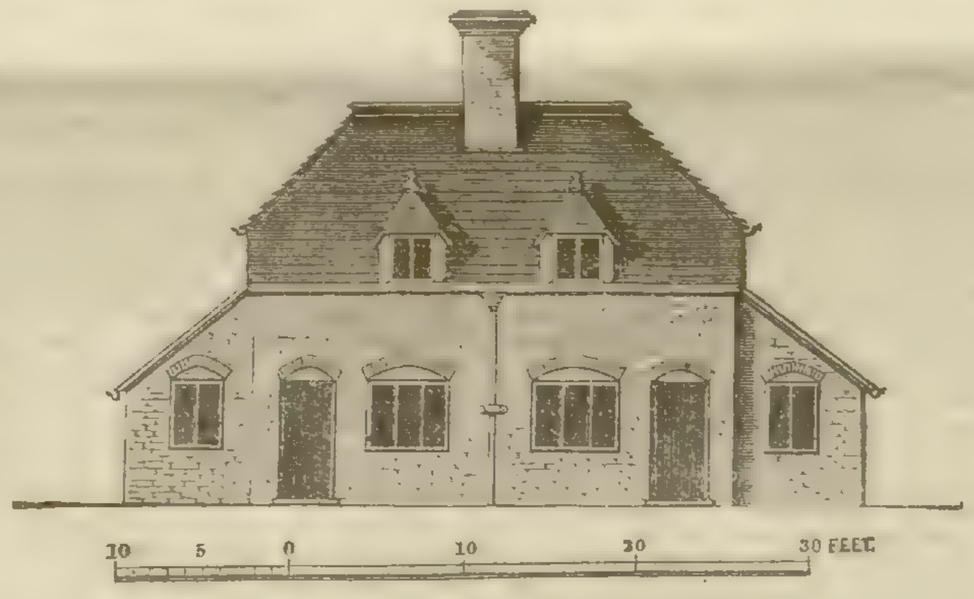


FIG. 1.

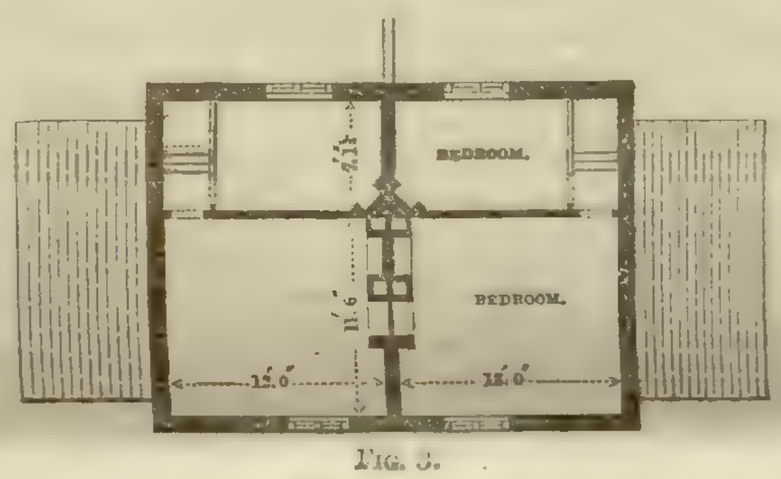


FIG. 3.

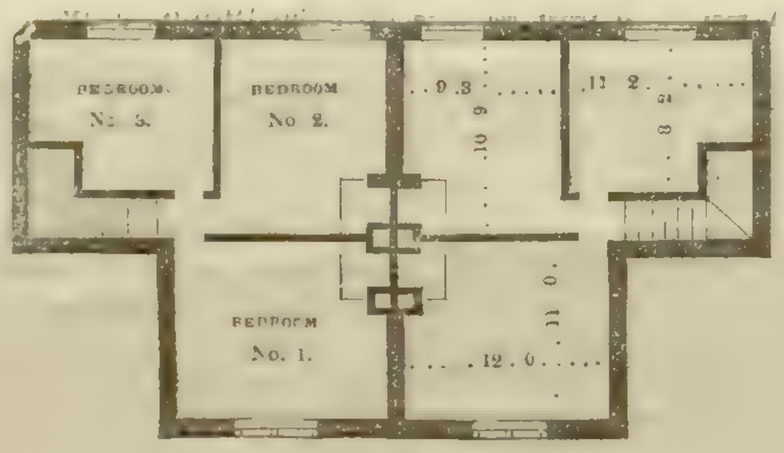


FIG. 5.

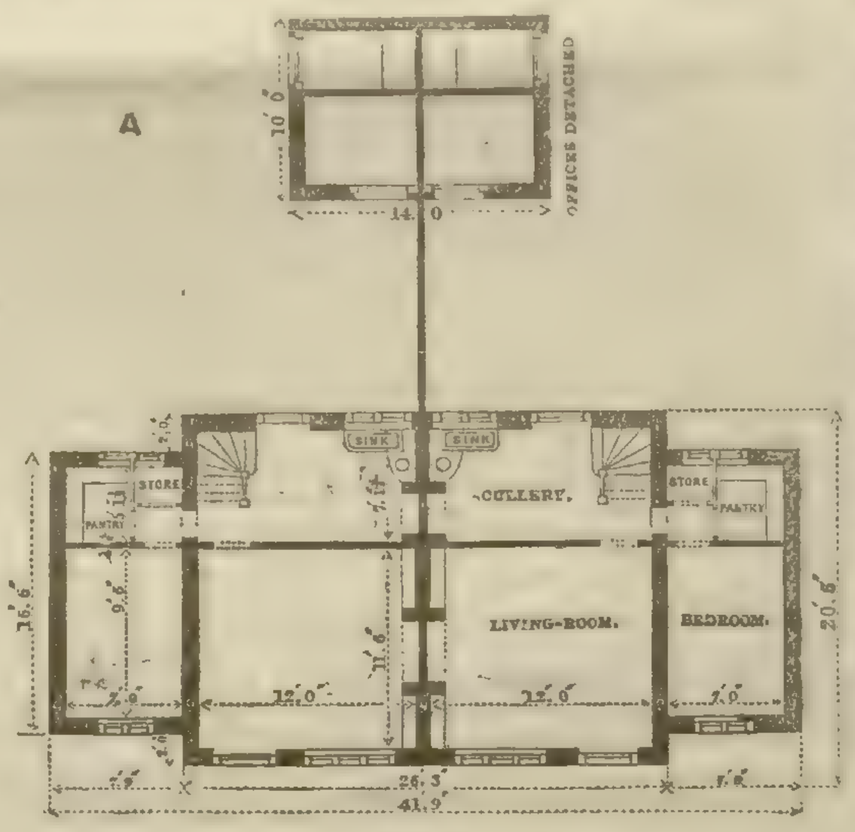


FIG. 2.

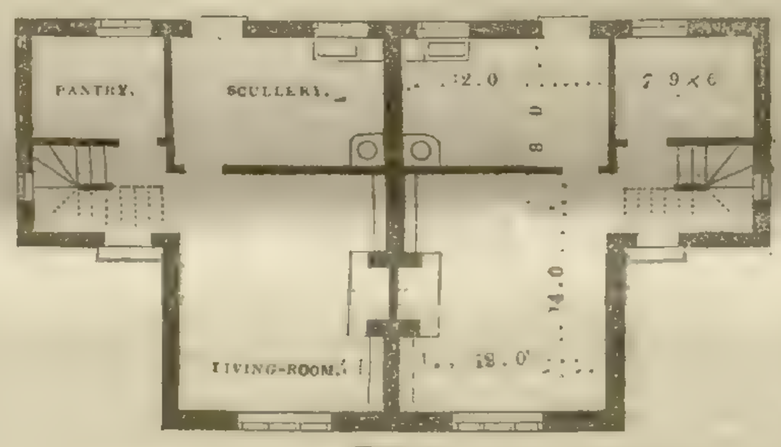


FIG. 4.

FIG. 6.

FIG. 7.—9-inch wall.

FIG. 8.—11-inch wall.

* Cottage Architecture: Plans, &c. By C. W. STRICKLAND, Esq. York, 1859.

† In this and the preceding plan we have shown the outer walls 11 inches thick.

front, as is also the entrance-door; of the three bedrooms two have fire-places, and all are of fair size, with windows and bed-site well placed. The actual and relative proportions of the living-room, scullery, and pantry are very good, and, granting that the cottage faces south, the pantry has a north aspect. The chimneys are all in the centre of the house and carried up into one stack. The dust-bin, office, &c., are supposed to be detached. The whole contrivance is so good that, by placing a kitchen-range in the scullery, and making the scullery-door, open as it might, into the lobby, any lady with one servant might comfortably live in the cottage and miss no point in arrangement which the best class of houses offer, while nothing is sacrificed to take away from the more hand-to-mouth conveniences and homely comforts of a working man's large family. It is equally good as 'a cottage of gentility' and as a labourer's dwelling. No elevation accompanies Mr. STRICKLAND'S excellent plan; but Mr. SLATER, whose attention has been for some time given to cottage-building, has kindly supplied the annexed design, (Fig. 6) which embodies the simplest, and, as we conceive, the most pleasing type of an English cottage, real and unpretentious, but well proportioned, and linked to the national associations of a labourer's life. It might, perhaps, be still further improved by an angular porch over the front-door, or by a lean-to passage, closed or open, its entrance ranging with the front-wall of the house."

The following details are quoted as completing the reference to Mr. STRICKLAND'S plan:—

"A dry and gravelly site is of course the first desideratum, but cottagers cannot always be choosers, and therefore freedom from damp should be secured by foundations not less than 18 inches deep, with space under the wooden floors of 12 inches, or, where tile-flooring is used, the same depth of rubble, brickends, and concrete. Close under the floor-line a course of slates embedded in cement, or a layer of asphalt, should be laid in the walls. As slate is impervious to damp, it stops the rise of the moisture which the bricks suck up from the soil. No outlay pays so well for keeping the walls dry; and this precaution is imperative. The thinness of the outer walls in most cottages is the disadvantage which the poor almost universally set against the gains of modern improvement. Nine inches is the ordinary thickness allowed; and this, as in the Bedford cottages, where the walls are hollow partially hollow, and where many cottages are joined together, may be sufficient; but for a single cottage, with ordinary brick-work and second-rate bricks, it is often cruelly starving. The best walls are those which either in the bricks themselves, or in the mode of working them, are partially hollow, as in the two annexed specimens of 9 inches and 11 inches walling. (Figs. 7 & 8). The habits of the poor vary much in different places as to the occupation of their house; but in the midland and southern districts it is quite useless to provide a living-room independent of the kitchen. One family room, where the meals are cooked and eaten, and where the party gathers round the fire on a winter's evening, with a smaller scullery or wash-house at the back, and a pantry or larder with opening window, best meets the requirements of the ordinary labourer. * * * When the scullery or back room is the larger, and the chief fireplace is placed there, the family will almost invariably crowd into this room, reserving the front room in its musty finery for company at fair or feast tide. The relative sizes of the two rooms should prevent this silly arrangement, as in Mr. STRICKLAND'S proportions, which may be well adopted.

	Area not less than		Area not less than
Living-room	168 ft.	For bed-rooms, No. 1	150 ft.
Scullery	80	„ „ „ 2	90
Pantry	25	„ „ „ 3	60

The height of all rooms to be 8 ft.

The scullery should have a back door, and the chief entrance by all means be in front, always supposing the house to have a southward aspect."

One further extract from this very instructive paper and we have done. It describes the proceedings and success of the Hastings Cottage Improvement Society, whose plan of operations might be generally adopted with great advantage:—

"Hitherto it is chiefly the large proprietors by whom any adequate exertions have been made to increase or improve the cottage-property of their estates; but several local associations have been successfully formed on the general ground of public benefit. In striking contrast to the unremunerative outlay of the metropolitan associations are the returns made by the Hastings Cottage Improvement Society. Its five half-yearly reports should be consulted by all purposing to carry out a like benevolent object. Their system is, not to build new cottages, but to buy up old ones and improve them. The remarkable features in their scheme are the small sums spent on repairs and on law expenses. Beginning with a capital of 850*l.*, which is now increased to 6750*l.*, they have regularly paid interest at the rate of 6*l.* per cent., and have now a reserve fund of 120*l.* Such shares as these would naturally be at a premium; but by the rules of the society, the premiums accrue to the reserve-fund, though in other respects the whole business is conducted on ordinary commercial principles. A benevolent fund has been set on foot for the occasional assistance of sick, poor, or unemployed tenants, but its sphere is perfectly distinct from the working of the society. There are visitors, and a lending-library, and a penny bank, also established in connection with the tenantry, but not interfering with the legitimate freedom of the occupiers, or with the fair and even strict enforcement of the capitalists' rights of profit. The people generally appreciate the good will of their landlords, and now with one exception pay weekly in advance. There are few old arrears, and but 8*s.* 4*d.* in bad debts. Thrice only the society has had to sue for rent in the county courts, and in each case the tenant refused from obstinacy, not from inability to pay. The secret of the rare success of this society has been in the heartiness, honesty, and sound sense of its promoters—perhaps most in their heartiness; for they have not deputed the work to others, but done it themselves, whereby they have avoided all jobbery, ostentation, and machinery. According to Mr. RUSKIN'S formula, they knew what they had to do and they did it. Other societies have been stranded by the ambition of having something to show for their money; and have made their main object the erection of new and complete buildings. The Hastings Society has, according to its title, entirely confined itself to improving existing buildings, buying up stacks and rows of ill-drained, ill-ventilated, and ill-lighted houses, and giving them dryness, air, and sunshine. They do not affect model perfection, but substantial improvement; and the result is physical and moral amelioration, walking step by step with material reform and commercial success."

—— THE high price of meat is creating angry protest on the part of consumers, and public meetings of the operatives of Bristol and Sheffield have been held to denounce "jobbers," time "contracts," and the slaughter of lambs and calves. It is plain that angry protest, and denunciation of any lawful thing in trade which it is the trader's interest to do, will only aggravate the mischief complained of. The high prices of food lead to economy in its use, and the only serviceable denunciation to which they should incite is that of *waste*.

Among the resolutions adopted at these meetings is one to abstain from the consumption of butchers' meat until its price is lower. This is the only way in which consumers can influence price, and it is one which in the aggregate does largely influence prices and check their rapid rise. There is quite enough in the scarcity of store stock last autumn, in the great loss of cattle food since, and in the activity of trade and consequent large consumption, to account for the high price of meat, without condemning jobbers and butchers for conducting their business to the best of their ability and with a view to their personal interests. And as to the slaughter of lambs and calves, it is plain that those whose business it is to turn Grass and roots into meat may be safely left to the guidance of their own interests and their own experience as to whether they shall convert it into lamb and veal and pork, or into beef and mutton and bacon. So long as it is all consumed, one or other of these products will be derived from it; and their relative price is the best possible indication of their relative scarcity.

—— Our reporter gives in another column an account of Mr. BOLDEN'S herd at Springfield Hall, near Lancaster, which is to be disposed of by Mr. STRAFFORD on Thursday next. The whole of the "Waterloo" tribe, one of the products of Kirkleavington, will be sold; and so much of its history as is known will be found stated in the article referred to. We may refer here too to an advertisement of well-bred stock for private sale at Holker, near Milnthorpe, in the same county, where Mr. DREWRY, for the Duke of DEVONSHIRE, has 8th and 9th Dukes of Oxford, from Oxford 15th," one of the high-priced Tortworth cows, and others of the very best strains of Short-horn blood to dispose of.

—— One of the points on which a recent discussion before the London Farmers' Club turned was the advantage of starting joint stock companies for introducing the steam plough into general use. Probably the prevalent impression was against it; large farmers need one apiece, and are not likely to wait for a share in its services with a neighbour. Nevertheless there are many districts of small farms of clay land which would undoubtedly benefit by steam cultivation, but whose only chance lies in combination for this purpose. And we are glad to announce the establishment of a steam plough company in Gloucestershire under the provisional direction of some of the first names among the landowners of that county, and under the management of J. THORNHILL HARRISON, Esq., C.E., of Frocester Court, who combines in his experience as an engineer, as farmer, and as man of business, just those qualities needed for the post he has undertaken. The following is an extract from the prospectus. We give it as suggestive of similar movements in other counties:—

"This Company is established for the purpose of bringing steam power, for the cultivation of land, into general use in the county of Gloucester, and the surrounding districts.

"The steam engine, when applied to the cultivation of land, possesses immense powers and advantages, which may be thus shortly stated:—

"That steam ploughing is far superior to any other ploughing in quality. That in quantity from 5 acres to 7, and, in some cases, 8 acres a day can be ploughed by the steam engine. That the work can be done at times when the land would not bear the treading of horses. That all injurious pressure of the land is avoided. That steam power will overcome the main difficulties of cultivating clay soils. And that all these advantages can be obtained at an expense below the cost of horse power.

"But the steam engine and apparatus adapted for the cultivation of land is too costly for any moderate sized farm, and capable of doing more work than any one farm usually requires.

"This Company proposes to purchase and let out steam engines and ploughing apparatus, and thus to give these advantages to the cultivator of the land on such terms as shall answer his purpose, and at the same time secure ample remuneration to the shareholders.

"That a steam plough in full work, possessing the advantages enumerated, will earn a large income cannot be doubted; and that the engines of a company, composed of persons all deeply interested in employing them, will be fully worked, is also beyond doubt.

"But in order to ensure constant work for the engines, it is proposed to employ them at seasons when not required for ploughing, cultivating, and breaking up land, for other purposes connected with the farm to which they are applicable.

"The profits of hiring out machinery are large, and the shareholders may expect an ample return on their capital invested, beyond the necessary reserves for replacing the stock.

AN AGRICULTURAL PILGRIMAGE.—No. VII.

SPRINGFIELD HALL, NEAR LANCASTER.—Mr. Bolden, both here and at a small farm his property in this neighbourhood, has a very remarkable herd of Short-horns, containing more perhaps of exclusively Kirkleavington blood than any other herd in the kingdom. He and Captain Gunter are the owners of, we believe, almost all the direct descendants in the female line of Mr. C. Colling's Duchess 1st, now in this country, and some of the most extraordinary instances of the high value attached to animals of that descent have occurred in his experience.

Thus Grand Duke 10284, the seventh in descent from that cow through Duchesses 55th, 38th, 33d, 19th, 12th, and 4th—and second Grand Duke, son of Duchess 64th, which was a daughter of Duchess 55th by second Duke of Oxford 9046,—both therefore of pure "Duchess" blood, were sold by him for 1000 guineas each. The former was bought by Mr. Hay of Aberdeen at Mr. Bates's sale for 205 guineas, and after being used 18 months was sold to Mr. Bolden. Many of the Springfield herd are descended from him, and ultimately he was parted with for this enormous price. Duchess 55, his dam, was sold at Lord Ducie's sale at a merely speculative price, as it was extremely doubtful if she would breed again. The dam of second Grand Duke again was sold for 600 guineas at the Tortworth sale, and her sister for 700 guineas. Such are among the enormous sums fetched by animals of this breed. On the origin of this family of Short-horns the following remarks are made by Mr. Willoughby Wood:—

"The Duchess family would appear to have been bred with care at a period considerably antecedent to that usually assigned as the origin of the improved Short-horns. More is known of its origin than is the case with most others, even of the most celebrated examples of the race. We find that Mr. Colling purchased his foundation of this family at a period long [illegible] Belvidere.* Indeed, the very considerable price which Mr. Bates paid for the Duchess would be [illegible] Mr. Colling's care. For is a strong presumption that she can have been no ordinary heifer. Of course, in speaking of events which occurred long before my own recollection, I am dependent upon the evidence of others. Subject to this proviso, then, I may state that I have it upon the authority of one who well knew the Duchesses in early days, that as a family they always possessed the high quality which characterises them at the present day. My informant, however, adds that the cross with Belvidere [illegible] to impart to the progeny of the cow, strongly exemplified in the Duke of Northumberland, which now seems as peculiarly to distinguish the milk as refinement does the cows. At all events, this, like every other important cross to which Mr. Colling resorted, [illegible] with the blood of the Mr. Bates may [illegible] with the ap-

* It is generally understood that the Duchesses were not [illegible] Mr. Bates [illegible] of introducing the Duchesses from the north [illegible]. Hearing of his existence, and of [illegible] the property of Mr. J. Stephenson, he went to Warlaby to [illegible] at once, and, as we have heard [illegible] the purchase of Belvidere being [illegible] Mr. J. Stephenson from home, he [illegible] first the discovery of him, [illegible] in the way, and the bull proved not [illegible] he wanted, he [illegible] to have exclaimed Eureka! Eureka! Having ultimately succeeded, as we have said in obtaining him from Mr. J. Stephenson, from [illegible] stock the fame of the Duchesses *Dunelmensis*, in *Mark Lane Express*, [illegible] 1858.

proval of the public. Not only have both bulls and cows of the Duchess family realised prices, which taken one with another, may be termed unprecedented; but other animals have, by means of a few crosses of this blood, in spite of short pedigrees, been sold for more money than best blood of other families was apt to command. Thus, at Mr. Tanqueray's sale in 1855, three cows and a bull of the Oxford family (descendants of the Matchem cow) realised 1100 guineas. Yet the pedigree of this family is not traced further back than Young Wynyard (2859). Is this preference for Mr. Bates's blood, and especially that of the Duchess tribe, a mere caprice on the part of the public, or is it founded on reason? As far as I am competent to form an opinion, I certainly think the Duchess tribe possess in an eminent degree those qualities which are desirable in improved cattle. Indeed, when the buyers of the world are congregated together, it will generally be found that their judgment is right. The question then arises, wherein the peculiar merit of Mr. Bates's stock consists? Mr. Bates required a Short-horn to present a union of good qualities, instead of, like too many breeders, developing one or two points out of all proportion, while sacrificing others equally valuable. Beginning with the Duchess heifer, he endeavoured to establish a family, every member of which should as nearly as possible approach the type of a true Short-horn. That they possessed both symmetry and early maturity is attested by the numerous premiums which they won at the meetings of the Royal and other agricultural societies. The Rev. H. Berry mentions the Duchess tribe along with that of Daisy, as remarkable for their milking powers. Mr. Bates, however, soon arrived at the conviction that the degree of forcing which is necessary to command success in the show-yard is highly prejudicial to a breeding herd; and he consequently discontinued the public exhibition of his stock. It is possible that the fine quality for which his herd and its descendants are remarkable may be in part owing to his judicious treatment, in keeping his stock generously without forcing it unduly. Since his death, and its consequent dispersion, its value has rather increased than otherwise, as witness the marvellous Tortworth sale, and that of Mr. Tanqueray. In public competition, too, this blood has been eminently successful, whether in conjunction with other blood, like Mr. Ambler's Grand Turk, or unalloyed like Lord Feversham's Duke of Oxford."

Of this celebrated tribe Mr. Bolden now owns about a dozen individuals. He was the purchaser at the Kirkleavington sale of Duchess 51, and afterwards of Grand Duke, through Mr. Hay, as already referred to; and from this cow are descended the members of that family now in his possession. And animals of remarkable size, symmetry, and touch they certainly are. A great deal of influence is often attributed to fashion and caprice, but it is not improbable that if all the best stock in England were gathered for exhibition, and judges were appointed to select those displaying the best qualities of good dairy stock, individuals with this descent, either of the First Duchess or of the Oxford tribe, would in all probability be chosen.

The herd at Springfield includes more than one family; besides the Duchesses there are five or six animals of Mr. R. Booth's blood, and six or seven of the Cherry tribe, descended from Colonel Craddock's herd, together with a few descended from the Wiseton herd, besides a score of the Waterloo tribe, another of Mr. Bates's breeding.

The land in Mr. Bolden's occupation is overstocked at present, and as he does not care to increase the extent of his farm he is about to sell a portion of his herd. In order to avoid the imputation of selling only a selection of them he has resolved to sell a whole tribe, besides two or three outlying members of the herd not related to any of the main families. The Waterloo tribe accordingly are to be disposed of on July 5th by Mr. Strafford. There are 17 cows and heifers and heifer calves and two bulls of this family, and five other cows and heifers, and four other bulls and bull calves to be sold, among which is "Prince Imperial," now four years old, got by second Grand Duke, dam Bridecake by Crown Prince 10087, g. d. Bridget by Baron Warlaby, bred by Mr. R. Booth.

The Waterloo tribe, of which Nos. 12, 13, 15, 16, and 18 to 30, are thus to be sold, are descended from "Waterloo Cow," owned by Mr. Bates, of which the "Herdbook" only says she was got by Waterloo 2816, and her dam was also by the same bull, an animal of first-rate descent. She was calved in 1829, her calf Waterloo 3d was sold to Rev. T. Cator, and from her and her sisters are descended the females now in Mr. Bolden's possession.

Of Waterloo, the grandsire of all this tribe, the following history may be given: he was bred by Sir H. Vane Tempest, and sold to Mr. Stephenson of Woolviston. He was calved in 1819, being out of Angelina by Young Wynyard 2839. "Angelina" was bred by Sir H. V. Tempest, and was by Phenomenon 491, out of "Anna Boleyne," a cow by Favourite 252 out of "Princess" (also by "Favourite"), whose dam was by "Favourite" also, so that here was an unusual instance of breeding in-and-in. "Princess" was bred by Mr. R. Colling, calved in 1800, and sold to Sir H. V. Tempest. She had her calf Anna Boleyne in 1803, and Angelina, the dam of Waterloo, was dropped in 1810. Anna Boleyne according to her descent was 7-8ths Favourite, and being put to Phenomenon, which was got by Favourite, her produce (Angelina) was 11-16ths Favourite blood. Her calf Angelina by Phenomenon was the dam of Waterloo 2816, by Young Wynyard 2835, and in tracing the descent of *this* bull we come immediately upon the same pedigree again. Thus his dam was Princess,* the grandam of Angelina. She was put to Favourite 252 in 1803, and got Anna Boleyne the dam of Angelina, and she was afterwards put to Wellington 680, and got Young Wynward 2835. Princess was three-fourths Favourite blood, and Wellington 680 (being by Comet out of Wildair, both of which are by Favourite, and the dam of the former by Favourite also) was 5-8ths Favourite blood. Their produce, Young Wynyard, was therefore 11-16ths Favourite blood, and being put to Angelina, also 11-16ths by Favourite, Waterloo was of pure Favourite blood in the proportion of 11 to 16; or, which is saying the same thing, Favourite appears three times among his eight progenitors in the third generation from him, besides four times in the fourth generation, and twice in the fifth generation. Well! this bull, the produce of such remarkable in-and-in breeding, was put to a cow in Mr. Bates' herd, of which nothing more is told us, and he was afterwards put to her calf by him, and their produce is the Waterloo Cow, from which all the Waterloos of Mr. Bolden's herd are descended. Six of her descendants were in Mr. Bates's herd at the Kirkleavington sale in 1850, and they sold for 357*l*. Of these, two have since come into the hands of Mr. Bolden, and are to be resold next month with their produce—viz., other 13 of the 19 Waterloos then to be disposed of. The remaining 4 are descendants from Waterloo 9th, which was purchased at the Kirkleavington sale by Mr. Ashton, of Bury Lane. In tracing back the descent of these animals up to Mr. Bates's Waterloo Cow, from which they are separated by four, five, and six generations, we come upon the following bulls: 3d Duke of York 10166; 3d Duke of Oxford 9047; 2d Cleveland Lad 3408; Norfolk 2377; Duke of Northumberland 1940; Grand Duke 10284; Grand Duke 3d 16182, &c., almost all of them of Mr. Bates's breeding—from which, therefore, may be inferred the statement already made, that the Waterloo tribe, as it at present exists with the Duchesses at Springfield Hall, maintains the Kirkleavington character of the herd.

The Waterloo family at Bates's sale stood third in the order of merit, both the Duchess and the Oxford tribes standing before it in the average prices reached. But if the prices to be given next month at Lancaster for these Waterloos shall exceed those of the Kirkleavington sale in the same proportion as the prices of the Duchesses and the Oxfords at that sale have been since exceeded, Mr. Bolden will have no reason for dissatisfaction. The stock when I saw them the other day were in excellent condition; the accommodation for them roomy, clean, and well ventilated. The land on which they were grazing is some of the best meadow I suppose in the county, and lying, as it does, some 50 acres park-like around the house, it and the "horned cattle" on it are much more ornamental than the usual park and deer of the "mansion-house" generally are. *J. C. M.*

* Of this remarkable cow, from which has descended one of the most notable families of the Short-horn blood, we have the following account by a writer, "Dunelmensis," last year in the *Mark Lane Express*:—"The pedigrees given of Princess are not only various, but conflicting. At the sale of Sir H. V. Tempest's herd in 1813, she is said to have been by Favourite, her dam by Favourite. The same pedigree is given in the 1st volume of the Herd Book published in 1822. The 2d volume of the same book, published in 1836, gives her pedigree, as being by Favourite, dam by Favourite, g. d. by Hubback, gr. g. d. by Snowdon's bull—by Waistell's bull—by Masterman's bull—by the Studley bull. This is to be found in the pedigree of her grandson St. Alban's (1412). Again, where the pedigree of the bull Belvedere (1706) is given in the same volume of the Herd Book, she is said to have been by Favourite, dam by Favourite, g. d. by Hubback, gr. g. d. by Snowdon's bull—by Masterman's bull—by Harrison's bull—bought by Mr. Hall, of Sedgefield, of Mr Pickering. Princess was, as we have always heard, an extraordinarily fine cow, and the late Sir H. V. Tempest, of Wynyard, in the county of Durham, who was an admirable judge of the points and excellences of the whole animal kingdom, from a race-horse or Short-horn down to a game cock, resolved, it seems, on being her owner at any price. It was never known what he gave Mr. R. Colling for her, secrecy on that head appearing to have been part of the bargain: but it has been said to have been as much as 700 guineas. Princess and her numerous descendants were sold in 1813, after Sir Henry's death. The late Mr. J. Wood, of Kimblesworth, bought one of her daughters, Nell Gwynne, then in calf to Wynyard, and she afterwards produced St. Alban's. We believe the pedigree of St. Alban's, and consequently of Princess above alluded to, to have been furnished by that gentleman, and we are sure, from our thorough knowledge of him, with the most perfect good faith. We cannot but suspect, however, that an error has crept into it, from a confusion of the pedigrees of sires with those of dams — Waistell's bull having been by Masterman's bull, Masterman's bull by the Studley bull. At this sale Angelina, the daughter of Anna Boleyn, another daughter of Princess, was reserved; and at a subsequent sale a daughter of Angelina was bought by Mr. J. Stephenson, of White House, Wolviston, a neighbouring tenant farmer. From her descended Belvedere, who became the property of Mr. T. Bates, by whom, we believe, the pedigree of Belvedere, and consequently of Princess, was furnished. We have heard Mr. Bates say, speaking of the pedigree of Princess, that such it certainly was, because her dam was own sister to Mr. R. Colling's white bull. Yet, according to the pedigree of that bull, given in the Herd Book, he would have been own brother to Princess. Who shall decide when such doctors disagree? We feel, however, justified in assuming that Princess belonged to the class of those descended of cows belonging to the Collings', which had a pedigree before they obtained them, whether her first recorded ancestress was 'bought by Mr Pickering of Mr. Hall, of Sedgefield,' or was by the 'Studley bull.' Of whom they obtained her, it is not we believe known. Nell Gwynne, Mr. J. Wood's purchase, became, as we have said, the mother of the well-known St. Alban's: and Mr. Mason, of Chilton, having obtained of him St. Albans' services for some time, he became thus, as we have seen, the sire of No. 13 at the Chilton sale, the ancestress of Lord Spencer's Old Roguery, and her numerous progeny of Z.'s. Nell Gwynne had but one heifer-calf having descendants: this was by Layton (366). Mr. Wood sold it to Mr. Troutbeck, of Blencoe, in Cumberland, who had been his pupil. By Mr. Troutbeck this heifer was christened 2nd Nell Gwynne. Of Nell Gwynne the 2nd many descendants in a right line of females have of late years appeared in the market, and not a few have attained show yard honours. At one time, however, a notion existed that Mr. Troutbeck had not been very select in the choice of some of his bulls. From Angelina, the granddaughter of Princess, descended Belvedere, obtained, as we have seen, by Mr. Bates, from Mr. J. Stephenson, and to this cross with his Duchesses Mr. Bates always attributed the greatest advantages. Those who knew his worth knew also his strong prejudices, one of which was against the "alloy;" and a strong suspicion exists that Lawnsleeves ought to have had a place in the pedigree of Belvedere; but a belief having existed that, according to the Herd Book Pedigree, Lawnsleeves had the alloy in it, he was accidentally omitted. Some years ago the writer, when on a visit at Elmore, the well-known residence of the late George Baker, Esq., the owner of Lawnsleeves, discovered, on reference to dates, that Lawnsleeves' dam could not have been the daughter of the "alloy" George, but probably by Mr. Mason's George, who was much nearer at hand, that gentleman, moreover, being well known to Mr. Baker. Had this been but sooner known, the discussion need not have occurred. Mr. J. Stephenson still has right line descendants through females of Angelina, though he is not easily persuaded to part with them. Those which we have mentioned were considered for many years the only right line female descendants of Princess, but recently a new family has appeared from Northamptonshire, claiming so to be, as to which we are not prepared to speak authoritatively."

STEAM POWER IN AGRICULTURE.

(*Continued from* p. 584.)

THE DRAIN PLOUGH.

THE next subject I propose for consideration in conjunction with steam is the pipe or tile draining plough; and no doubt, if this could have been brought into general use, it would have superseded more manual labour than all other appliances of steam to agricultural purposes. Those who have witnessed its operations must have been pleased with the ingenuity and perseverance of its spirited introducer; and on strong land of an undulating character I saw, in Cleveland, several years ago, some apparently good work, though I have since learned that it has proved far from perfect. I was, however, at that time induced to ask Mr. Fowler to inspect the estate in the neighbourhood where I reside, for the purpose of ascertaining whether a contract mutually advantageous could be entered into for its drainage. Three difficulties, however, arose; first, the flatness of the surface, which would have caused considerable manual labour in preparing the land for the plough; secondly, the draining of the lands in summer, entailing a loss to the occupier of a year's rent; and, lastly the actual cost per rod or chain by manual labour for laying the pipes 3 feet 6 inches in depth was less than Mr. Fowler could undertake to contract for. The drainage-plough was likewise tried on a strong-landed estate a few miles from me, and with no better success; the great drawback at that time seemed to be, as in my case, the inability of laying an even-bottomed drain over an uneven surface. I believe some further improvements were afterwards effected, but it certainly has not acted generally in a manner to supersede manual labour, and as such I can claim no advantage for the farmer by its introduction.

STEAM-PLOUGHING AND CULTIVATING.

Personally, I have no experience in this matter, though I possess the advantage of having within a few miles of me two of Smith's cultivators and one of Fowler's ploughs, frequently at work; the opinion I express will, therefore, be what I have derived from my neighbours Mr. Saltmarshe, Mr. Robertson, and Mr. Coulson. The great controversy at present seems to be whether the cultivator or the plough is to be esteemed most beneficial. In working arable land I incline to the opinion that from the first commencement of spring operations to the breaking up of the stubble, the cultivator is the best implement, and that for winter laying the turn-over or ridging should be adopted. Fowler's plough, as used on Mr. Saltmarshe's estate, appears to me perfect in its operation as a turn-over plough, and, no doubt, would be equally so as a cultivator; but the machinery and engine are more costly and heavy, which, I think, will militate against its coming into general use except on the principle of hire. Neither Fowler's nor Smith's reduces the amount of manual labour. The average cost of work done by Fowler's plough last autumn, as stated by Mr. Saltmarshe of Saltmarshe, at the Houden Farmers' Club, was 170 acres, at a cost of—for coals, manual labour, and sundry out-payments—68*l*. 3*s*. 7*d*., or an average of 8*s*. per acre; but this did not include wear and tear, Mr. Fowler having agreed to keep the engine and implements connected therewith in good working order up to that time. No farmer could desire better work than what was performed on the last occasion of my seeing it, and I do not hesitate to say that upon strong clay land ploughed 9 inches deep, if I were the occupier, I should think the plough invaluable. No comparison can be made as to relative value with horse-power, for the latter could not effect such work. Every practical agriculturist knows that it would be impossible to get four horses to turn over strong clay soil from 6 to 9 inches deep and leave a level sole, independently of having it done without the pressure of a hoof, which, on such soil in wet weather, is injurious to the highest degree. Mr. Saltmarshe's machinery was drawn by a 10-horse power engine, with self-moving and reversing gear. The engine was put in motion by attaching a pair of horses to it, and went well until it came to where it had to cross a headland 100 yards in length to another field; here, for want of power of the self-moving process, it became stationary; with the aid of half-a-dozen men and four good horses, after an hour's delay, the difficulty was surmounted. Mr. Saltmarshe considers that by the introduction of this plough he will be able to work his farm of 450 acres of arable land with 10 horses less. Mr. Saltmarshe has a fixed steam-engine for threshing, chaff-cutting, and grinding; so that the reasons assigned by

Mr. Mechi for not having introduced steam-ploughing at Tiptree Farm have not deterred his northern neighbour from adopting the valuable implement, the merits of which I need not go further into, after the many practical examples which have already been published in the Royal Society's Journal. I will only detain you with a few remarks on the cultivation of the soil on the Woolston principle (as carried on by Mr. Coulson and Mr. Robertson; the former gentleman having only used it partially for three years, I shall confine myself to the description given by the latter). Mr. Robertson, in the spring of 1859, entered on two farms—one consisting of about equal portions of strong and convertible land, and which had been previously creditably farmed; the other cold strong clay, undrained, poor, and wretchedly out of condition; the two together comprise about 380 acres. Mr. Robertson, since his entrance, has cultivated equal to 800 acres, at a cost of 3*s.* 4*d.* per acre in manual labour, and 4*s.* per acre for the wear and tear; having never had during the 12 months he has been there more than four pairs of horses, he is enabled to tell pretty accurately the difference in cost of cultivation. He is now working for hire adjacent lands at 8*s.* per acre, exclusive of fuel. These sums nearly correspond with the reports published detailing the experience of other gentlemen who have tried this mode of cultivation, excepting wear and tear. In the report on Woolston farming, Mr. Smith calculates the latter at 1*s.* 6*d.* per acre. Mr. Randall, of Chadbury, who speaks highly of the system, puts down for the wear and tear of the rope alone 1*s.* per acre; whilst Mr. Robertson, after executing 800 acres of work, informs me he requires a new rope, which, at 60*l.*, would by itself be the total sum stated by Mr. Smith to be the wear and tear; the old rope is certainly useable for fencing and ought to have a little allowed for it, but that will leave too small a margin for everything else.

ACCURATE COST OF THE STEAM PLOUGH.

I proceed to consider to what extent steam culture will displace manual labour and horse-power. First, as regards manual labour; Mr. Fowler's plough averages, on 200 working days, 16*s.* 7½*d.* per day; the work performed, at 4½ acres per day on 200 working days, is 900 acres per plough per annum of soil turned over, or 3*s.* 8*d.* per acre. Mr. Smith's cultivator averages 17*s.* 4*d.*, or 3*s.* 10*d.* per acre. Now on strong clay land, it will take one man at 2*s.* and one boy at 1*s.* to plough with four horses an acre of land as deep as the animals can draw the plough, to move steadily, and which will not exceed 6 inches on the first ploughing, costing, in manual labour, 3*s.* per acre; whilst on light soils one man at 2*s.* per day, with one pair of good half-bred horses, will plough from 6 to 9 inches deep an acre and a half per diem, costing in manual labour 1*s.* 4*d.* per acre.* It is, therefore, very evident that in neither case is there any displacement of manual labour by the introduction of steam cultivation. Secondly, as regards horse power, I believe it is universally admitted that to work arable land well it requires, on the average, two pairs of horses, costing 60*l.* apiece for every 100 acres, where steam has not been introduced. Now Mr. Robertson cultivates his farm of 385 acres by Smith's cultivator, with only eight horses; and Mr. Saltmarshe by Fowler's, with nearly 500 acres, proposes to reduce his number from 25 to 15. Mr. Redman, of Overton, on 410 acres arable land, has dispensed with three teams of oxen and one of horses. Mr. Holland, M.P., in his speech at the East Gloucestershire Society, stated that, "instead of 20 horses, he only now keeps 12." Mr. Richard Burniston, of Henley-on-Thames, on 1000 acres, calculates to spare 10 horses; and Mr. Pike, of Stevington, who uses Smith's, says, "I have reduced my horses from 15 to 11, and flatter myself I can do with 9." It is, therefore, a fair basis for calculation to presume that the introduction of a steam plough or cultivator will displace eight horses. The capital required for a 10-horse engine, a Fowler's plough, &c., would be 720*l.*, though Mr. Fowler put it at 750*l.*

The average cost of labour and expenses required to work it is 1*l.* 9*s.* 10*d.* per day, or for 200 working days 298*l.* 6*s.* 3*d.* per annum, and the average annual cost of wear and tear 138*l.* 6*s.* 9*d.*; making the yearly expenditure required for the effectual working and renewal of Fowler's machinery amounts to 436*l.* 13*s.* The capital required for Smith's cultivators, comprising an 8-horse engine, windlass anchors, steel rope, No. 3 B implement, subsoil and trenching ploughs, No. 4 cultivator, and expenses, is 520*l.*; the average cost of labour and expenses to work the above advantageously is 1*l.* 9*s.* per day, or for 200 working days 290*l.*, and the average annual wear and tear 107*l.* 2*s.*, together 397*l.* 2*s.* On the other hand the capital required for eight horses, implements and gearing, would be 280*l.*; their annual maintenance, saddler, farrier, and blacksmith, depreciation and interest, 30*l.* each. or 240*l.*; four ploughs, two pair harrows, one drag, swingletrees, and gearing for eight horses, interest, repairing and renewing at 25 per cent., 10*l.*; the labour of two men and two boys for 200 days 65*l.*, and one man 113 days 11*l.* 6*s.*,—together 326*l.* 6*s.* Consequently by horse power the annual expenditure would be 71*l.* per annum less than by the use of Smith's cultivator, and 100*l.* per annum less than by Fowler's plough.

* In both of these cases Mr. Wells has under-estimated the manual cost of ploughing. One acre a day of stony land and 1½ acre of light land, are much beyond the average amount of a day's work.

IS STEAM CULTIVATION PROFITABLE?

I think there cannot be a doubt as to its profitable introduction on cold, strong, and tenacious land; the experience of every cultivator of the soil tells him that deep dry cultivation is what nature requires to nourish and bring to perfect maturity the seed committed to her care. It is not a question of a few shillings per acre betwixt the shallow ploughing and treading of the soil during the operation by the slow heavy draught horse, which on strong lands the farmer is compelled to use. The consideration of the beneficial effects produced by deep cultivation is alone sufficient for an evening's discussion; as such I will not further advert to it, but turn to another description of land, viz., light landed farms, and under this head I class sand, wold, warp, loamy, and peat soils. It is upon land of this description that the practical benefit to be derived by steam power has not yet to me been satisfactorily proved. I have already stated, in treating on the expenditure of manual labour, that light soils may be ploughed from 6 in. to 9 in. in depth, at an average rate of 1½ acre per day, with one pair of horses; and here I must join issue with the calculations of our friend Mr. Smith, on the cost of horse power on light soils. I quite agree with that gentleman, and others who have arrived at similar conclusions, that valuers will allow the prices put down for the work performed at the rates stated by Mr. Smith in his recent letter—addressed to Mr. Disraeli—on steam cultivation; but these prices are expected to remunerate the occupier for the work performed. In arriving at a correct conclusion we must confine ourselves to the actual cost if we can, and if not, as near an estimate as possible. I have already fixed, from the best sources I could command, coupled with my own experience, 30*l.* as sufficient to cover every expense connected with the maintenance, depreciation, and interest on a farm horse for one year. Taking, therefore, the cost of eight horses, manual labour, depreciation, and repairs of implements connected therewith at 326*l.* we arrive at an average of 81*l.* 10*s.* per pair of horses, which on 200 working days, gives about 8*s.* 1*d.* per day. From this it is evident that no steam plough, as at present worked, can compete generally with horses on light soil, though I think if I could hire on fair remuuerative terms a steam cultivator, and a competent staff to work it, to break up the stubbles as soon as cleared, it would be advantageous, that being a period when all regular hands are employed with harvest operations.

PROPER SIZE OF STEAM-CULTIVATED FARMS.

To make steam cultivation a sufficiently payable adventure for a farmer to expend the necessary capital, I have shown that in my opinion he must be the occupier of a strong landed farm, and that its introduction should be equivalent to the work of eight horses. I have also shown that the farmer occuping 200 acres of land requires four pairs of horses to carry on the farm under the ordinary mode of culture; and that the saving effected by the introduction of steam power is, or ought to be, equivalent to the same number. The carting of manure, drilling of corn, harvesting of crops, and marketing of produce, will still have to be performed by horse power, so that upon a holding of the area I have named six horses must be retained to carry on these operations at their respective seasons. The idea suggested by some parties to meet this difficulty is to purchase extra horses at certain seasons, and resell them when not required; this is too theoretical to need further comment. I have, therefore, arrived at the conclusion that 350 acres should be the area, but certainly not less than 300 acres, as the limit for the profitable introduction of steam cultivation, excepting on the principle of hire; and upon this principle, allowing a fair remuneration to the letter-out, I am equally satisfied that the occupiers of strong land under the area named will find steam cultivation advantageous; and when we consider that 100,000 farmers' holdings are not half the area I have named, and further that the smallest holdings are generally of the most tenacious description of soil, it is evident to my mind, that unless a system of letting out be adopted on a similar principle as is now practised for threshing, but still better if with a regular working staff, steam cultivation will for a lengthened period be the exception of the rule. Before concluding I must not omit to refer to one great advantage the farmer derives from the aid of steam power; I allude to the opportunity it gives him of embracing any sudden movement of an upward tendency in preparing his produce for market, or, in any peculiar season, the soil for the reception of the seed, in case he can command a sufficient working staff independently of what is necessary for the regularly working of the farm.

FARM ECONOMICS.—No. III.

THE CONSUMPTION OF ROOT CROPS BY LIVE STOCKS.

BELIEVING that unprofitable mistakes are commonly committed, I beg to offer a few remarks that may correct them. The question appears to hinge upon what proportion water should bear to the dry food consumed. Turnips contain 90 to 92 per cent. of water; Mangel, 88 per cent.; Grass, 75 per cent. If we wish to keep a horse in good condition we give him 20 to 25 lbs. of dry food, and 40 to 50 lbs. of water daily; but if we feed our sheep or bullocks entirely on Turnips we compel them to take 9 lbs. or pints of water with every pound or pint of dry food; or, as a sheep will consume 20 lbs. of roots daily, we compel it to take nearly 2 gallons of water with its 2 lbs. of dry food. A bullock consuming 150 lbs. of Turnips daily would be compelled to take 13½ gallons of water with 15 lbs. of dry food. The consequence of this treatment is to tax very unduly the urinary organs, and prevent the accumulation of fat and muscle. This is bad enough in mild weather with a tolerably high temperature, but with such a winter as we have passed through, with Turnips at a freezing or very low temperature, let us imagine what an absorption of caloric must be taken from the stomach and system of the sheep which has to raise to the digestive temperature, or in fact to warm 2 gallons of cold water or ice, some 40° or 50°. Can we wonder at the laxative scouring of sheep or bullocks, and the consequent inflammation or death? And can farmers not now understand why my live stock losses are so small compared with theirs when I avoid such treatment? Need we be surprised that our stock thrive so much better as the spring advances, when the temperature of the atmosphere and of the roots is so considerably raised, and when the latter have lost a large per centage of their moisture? What would be the condition of our carriage horses, and what would the groom say, if we compelled each horse to drink 18 gallons of water with his 20 lbs. of hay and Oats?—and yet this is how we treat our sheep and beasts when they have only Turnips. Our cannie friends in the north give plenty of straw to their bullocks, and yet, for want of carrying fine cut straw, chaff, and Rape-cake to their hill sheep during the past severe winter, thousands of them have perished that might have been cheaply saved. [Does Mr. Mechi know the price of straw in the north last winter? There was no "want" of carrying every bit of food that could be seraped together.] It is a great mistake not to give to hill sheep Rape-cake. At present prices it would pay in the mutton, independently of the profit gained by fertilised and improved pasturage. Let us see what a lesson nature teaches us in this matter.

Grass during the vernal and growing season contains 25 per cent. of dry matter, and the 75 per cent. of water it contains is at a temperature which I can imagine to be considerably raised by the rays of a May or June sun. Farmers have a saying that sheep thrive much better on roast meat than boiled, meaning that the diminished per centage of moisture and increased temperature of the food in the hot months abstract little caloric from the internal animal system, whilst the exterior surface of their bodies being surrounded by a summer temperature makes no demand upon their food to keep up the natural animal warmth. Farmers know quite well that there is diminished quality in Grass when the summer has departed and there is an absence of heat and light, and most people know the evil result when animals consume green food with the hoar frost upon it or when very wet from rains. Nature has indicated that we should make hay while the sun shines, as a provision for winter, and that the Grass having lost 65 per cent. of water by drying, we must make up for the deficiency by providing our animals with drink. Nature has taught them the proper quantity to take, and a wise farmer would in cold weather take care that the temperature of the water should be warm, and thus our live stock would fatten with a smaller quantity of food. Farm or other horses would much less often die from gripes and inflammation, if when they came in heated from their work they were allowed to drink warm water instead of being walked into a horse-pond, or allowed to drink water many degrees below the temperature of their stomachs. Our London brewers understand this. A small steam-pipe passes through their water-tanks, keeping the water always at a proper warmth. The horses drink when they please without risk of injury. Bullocks ought to be treated in the same way. The pulping of roots and mixing them with cut straw has soon come into favour with farmers, because it diminishes the disproportionate quantity of water which the animals are compelled to take in their roots when they have no dry food. Sheep should always have 1 lb. of Clover Grass-hay, or some cut straw, and 1 lb. of Rape-cake when on Turnips in cold or wet weather; this would diminish the consumption of Turnips and restore a proper equilibrium between the dry food and water, and would add fertility to the soil. This would bring a better price for the Turnips consumed. If no hay is given fine-cut straw will answer admirably, and you will find that your straw thus applied will realise a much better price that when merely used as bedding. It is interesting to see how well the animals discriminate in their use of straw or hay-chaff. A wet or cold day will cause them to eat it in larger quantities. When Grasses are saturated with rain a little dry food is most acceptable to animals, and they will thrive much better upon it.

In conclusion, a wise farmer will so limit his consumption of roots by each animal that the water contained in them should approximate to the quantity he would give to an animal eating dry food. Four gallons or 40 lbs. of water per day would be a full allowance for a bullock, and this quantity would be contained in 45 lbs. of roots. Probably a bushel of roots weighing 50 lbs. would be a fair average quantity for a full-sized bullock, and a proportionate quantity for sheep. Great objection and considerable disbelief have been expressed by my farming friends at my small annual loss of stock,

estimated at 1*s.* per acre; but if they carry out the principles laid down in this communication, with the addition of good winter and summer shelter for stock, they will find my allowance for loss very ample. It is really fearful and melancholy to witness the losses arising from ignorance or mismanagement. I see it around me too constantly. A sudden and full supply of succulent Mangel, young and watery Tares, or a draught of cold water to a heated animal produce laxity, or flatulence, constipation, inflammation, or death. It is highly desirable that the root-cutting house should have a high temperature. As my horses consume many Mangel, the roots are piled in the stable a few hours, and thus during the winter season attain a temperature more suitable to the stomach of the animal. The cut roots for the bullocks are mixed with the warm steamed chaff. A wise farmer will never forget this golden maxim—that 1 lb. of coal, which costs less than half a farthing, contains more carbon than many times its value in food. Therefore he will use coal instead of food to give animal heat and lay on fat cheaply. The time will come when all our bullockries will be heated with warm water or steam pipes in cold weather. See how particular our groom is to keep his horses warmly clad in cold weather, and how nicely he regulates the ventilation and temperature. Should not this show us the right way? I often think so when I see on a bleak winter's day unsheltered animals eating Grass or Turnips, the air and the food being at a temperature scarcely above the freezing point. Surely the farmer who permits this can know nothing of the heat-forming theory, or he would not waste his food in creating an artificial furnace with so costly a combustive element as provender. *J. J. Mechi, Tiptree.*

THE VALE OF STRATHMORE.

(Continued from p. 561.)

IN the improvements already spoken of, by the reclamation of waste land, and the very spirited outlay on artificial manures, it must not be inferred that the greatest of all improvements—draining—is forgotten. Government money, as well as landlords' and tenants' capital, has been freely sunk in this direction. And though less draining is now carried on than in former years, the reason is that draining is less urgently needed than before. Prices run much the same as with us in Warwickshire, viz., from 1*s.* 10*d.* to 2*s.* 4*d.* per chain, for digging, laying the pipes, and filling in, on stiffish clay soils. Fences seem in general to come heavier on the Strathmore farmer than would be much relished in the south. Stone dykes there are, in plenty, on many farms; but even then subdivisions are frequently required—while on other farms the common paling fence (put up by the tenant) constitutes nearly the whole both of divisions and subdivisions. The comparative absence of hedges, which give such a warm and genial aspect to a district, is rather noticeable, although there are many other parts of Scotland worse off in this respect. Some good Beech hedges are to be seen, but this is long in coming to be an impenetrable fence. Hence the temporary fencing is no light item in the course of a 19 years' tenancy. One farmer told us that his farm, which is 4 miles long, betwixt the two extreme ends, required to be nearly all gone over, in the course of five years, either by renewal or removal of the usual paling divisions. Hence, too, a sawing bench, with circular saw driven from the threshing-mill wheel, is a frequent adjunct on a farm, where at all practicable or desirable. Where Scots Fir is converted and sold for this purpose, it is worth about 2*s.* 8*d.* per 100 running feet of single rail; and the posts, 4 feet 8 inches long, are worth 1½*d.* each. But Larch, although more costly in the outset, is probably more economical in the end: the like length of Larch being worth 4*s.* 6*d.*, and posts 2½*d.* each. For horses and cattle we usually see two or three rails in the fence, as the case may be; and for sheep either four or five rails—the latter being suitable for lambs.

One thing which strikes a stranger in visiting the north, in the spring months, is the forward state of field operations. Independent of the lack of autumn fallowing, of which the backward climate and later harvest do not generally admit, you find that all is ready for Swede-sowing by the middle of May, or even earlier. What with Potato setting in April, as well as the later Barley sowing to be attended to, lots of cross-ploughing to be done, and dung to be carted from the yards, or else from the dunghills to the ridges, also the splitting and closing of the ridges, we again repeat that there is good management somewhere, to keep up to the mark at all. The universal pair-horse work has much to do with it; then the hours they work—from 6 to 6, with a couple of hours off at midday—the brisk pace at which they generally step, and sundry customs of the country, which are probably more influential still, all tend to produce the result referred to. Besides which, we saw many fields ridged in a condition that, for lack of cleanliness, would not be tolerated by the average of English farmers. There is probably a reason for this. The opportunity for thoroughly cleansing the land, throughout the summer, is much greater than with us. Wide ridges of from 27 to 30 inches, and horse-hoeings repeated almost weekly till the leaves meet across the rows, as well as a fair amount of hand-hoeing, all tend to check the weeds from making headway, if not of eradicating them altogether. Just the same it appears to be with the Potato crop. They are put in still earlier, and thus afford less time for preparatory operations. But no sooner are the Potatoes planted, and work sufficiently forward to admit of it, than the circular harrows and the single-row horse-hoe are set to work—the former to torment the weeds on the ridges and the latter the intervening spaces. If there is anything worth the gathering it is carefully handpicked, and the ridges again formed with the double mould plough. A similar process is renewed—at least in the Potato-growing districts on the west coast—as often as time permits; and when the Potatoes are above ground the ridges are of course hand-hoed. It will readily be admitted that a double benefit is thus gained; the land is not only well cleaned of weeds, but the surface is kept in a beautifully fresh and pulverised condition—almost as fresh, in fact, as in a well-kept garden, and the growth of the plant is proportionately vigorous. Instead of this, how often, with us, is it the case that the surface is allowed to get set, and become stale and unkind, while the struggling stems have to find their way upwards as best they may?

The fallows usually receive a fair amount of hand-picking, after each cross-ploughing and harrowing, and the newly-formed ridges are also gathered where needful. Indeed, the large heaps of Couch and rubbish to be seen in many a corner of a field on even well-managed farms tell a tale of female outworkers having been gathering or picking for days if not weeks before. But then the whole of the weeds are almost religiously preserved, and burning is out of the question. Professor Voelcker's clearly drawn deductions from analyses of the Couch plant would not go down at all; and we met with none who would consider burning other than a very wasteful operation, to be avoided by every economical manager. With regard to autumn fallowing, it has already been noticed that the lateness of the harvest, and the pressure of Wheat sowing, seemed to prevent its general adoption. Yet there are undoubtedly seasons when some little might be done thus to facilitate the labours of spring. One gentleman, a most intelligent farmer, had tried it a year or two ago, "but could not make it answer at all." On inquiry it appeared that he ploughed and worked the ground immediately on the removal of the grain crop; but could in no satisfactory degree get the weeds into a free pickable condition. Would not the case have been very different had he left the plough at home and run the land over a couple of times with a good grubber or cultivator, then to follow with the harrows and keep all the rubbish at top? An affirmative answer may safely be given, and the spread of the Woolston "smasher," with an 8-horse power of Clayton & Shuttleworth's on one side of the field, will soon make autumn cleaning available in any corner of the British isles. In Forfarshire, where team work is an important item, a material gain would be bound to show itself. A pair of horses, tilling on an average from 50 to 60 imperial acres, are reckoned to stand the farmer 100*l.* a year, including the ploughman. Various calculations have been made on this point; we subjoin a Scotch one made nearly half a century ago. It bears a truthful aspect, although the items are comparatively high. Alongside we may compare the present cost on an English home farm, where the horses are pretty closely worked in heavy haulages, when not engaged in the field:—

1812.	£	*s.*	*d.*
17½ bolls of Oats per horse at 25*s.* ..	21	17	6
100 stones of hay at 10*d*	4	3	4
Peas and Bean straw	3	0	0
¾ ac. Clover and Tares	6	0	0
	£85	0	10
Interest and wear and tear	7	10	0
For one horse ..	£42	10	10
Ditto	42	10	10
A pair of horses	£85	1	8

1860.	£	*s.*	*d.*
52 bush. Oats at 4*s.*...	10	8	0
52 bush. Beans at 6*s.*	15	12	0
78 cwt. hay, or equivalent in Grass and Clover, at 4*s.* ..	15	12	0
	£41	12	0
Interest and tear and wear	7	10	0
One horse ..	£49	2	0
Ditto	49	2	0
A pair of horses ..	£98	4	0

To the above must be added shoeing and harness accounts, and the wages of the ploughman, amounting to another 30*l.* in the Scotch case, or 135*l.* 1*s.* 8*d.* in all; and to about 45*l.* in the other instance, or 143*l.* 4*s.* in all. But at the present time a pair of horses, kept for purely agricultural purposes, in the north, will stand the occupier very little out or in of 100*l.* a year: and hence it need not be matter of wonder that the most is endeavoured to be made out of them. *T. Bowick.*

(To be continued.)

THE HEREFORD BREED.

(Continued from page 562).

Lord Berwick's Herd.—During the last summer we had an opportunity of visiting the herd of Lord Berwick, at Cronkhill, near Shrewsbury, Shropshire; and in connection with Herefords, some acount of it may be of interest to our readers. His lordship commenced his herd in 1844, by the purchase of 14 or 15 heifers at Mr. Salway's sales at Ashley Moor, Herefordshire. The animals were of the blood of Mr. T. A. Knight, of Downton Castle, previously mentioned in this article; and since, by purchases made from Jeffries', Hewer's, and other blood, to get points, he has increased the value of his herd. He has now three Royal Society's first-prize bulls, and has the reputation of drawing more Royal prizes than any other Hereford man in England. From 1849 to 1857, with a total of 33 animals only exhibited, and these bred by himself, he obtained 27 Royal prizes and four "High Commendations." His bull Walford bore off the first prize of 1000 francs and gold medal at Paris in 1855, as the best bull of any age or breed; while, at the same time, his Napoleon III. won the bronze medal and high commendation, as no exhibitor was allowed to take more than one prize in this class. Walford won the Great Challenge Sweepstakes, open to all England, at Ludlow, in 1850; and two of his steers won the Challenge Cup, open to all England. It is specially worthy of note that this breeder, who has attained such splendid success, founded his entire herd upon the surest basis, viz., that of a few animals only, and those of surpassing excellence, undoubted origin, and the nearest possible blood consistent with the laws of consanguinity. This principle, faithfully carried out, has given him a herd of great uniformity, remarkable quality, and beauty of appearance. Lord Berwick claims that Herefords are the best for farmers on moderate pastures, because they will thrive better on such land than the Short-horns, and will make good beef animals at two years old. The Short-horns he acknowledges have better frames, and oftentimes a better hind-quarter; but the Herefords are better in girth, as a general thing, and in shoulder-points. It is quite noticeable that the crops are usually much better filled in the latter than the former breed, and their quality is, to say the least, as good. He had at the time of our visit 175 females, including calves, and about 50 males. The preceding season he had 65 calves dropped.

Adaptability to America.—Our experience of last summer has convinced us that, for certain districts of our country, it would be much more profitable to raise Herefords than any other breed. As good animals, whether we consider quality, form, or constitution, can be purchased of Lord Berwick for 120*l.*, as, if Short-horns, would cost five times that sum; and for all the prairie country of the West, for Texas and California, they would equal, and perhaps excel, their costly rivals. In looking carefully through Lord Berwick's herd, we think that we saw as large, as symmetrical, and promising animals as in any other herd of any breed, if we except Samuel Thorne's, which probably is without an equal in any country. A short time prior to our visit, a stock-grower from Australia had purchased Herefords of Lord B., to try upon the plains of that country; he giving as his reason for the purchase that the Devons, turned loose on the Pampas, became so fleet of foot as to outrun all but their very fleetest horses. The Herefords, he thought, from their great size, and their thrifty growth on coarse herbage, would do better for them than either Devons or Short-horns, for, while they would not have the objectionable fleetness of the former, they would thrive better without care than the latter.

Importance of a Herd-Book.—Perhaps one reason why Herefords have given place to Short-horns to so considerable an extent is, that there had been no herd-book published, until the task was undertaken by Mr. T. C. Eyton, near Wellington, Salop. His first volume was issued in 1846, but even the necessity for such a register was so poorly appreciated that, after another volume was issued, in 1853, he gave it up in despair. It then passed into the hands of Mr. Powell, of Hinton Court, near Hereford; but he died after bringing out one number. Breeders now began to see the value of the work, for they found every purchaser from beyond the confines of their county demanding of them the pedigree of their animals. A dim conception of the fact that purity of blood on both sides could only be proved by a printed register, entered their minds, and spurred on by the pecuniary profits of herd-book registry, they have begun to give more patronage to the undertaking. Lord Berwick and other leading breeders have made most strenuous efforts to keep the thing agoing, and at present it may be expected that success will attend their efforts. The third volume has recently been issued by Mr. Duckham under the auspices of the Hereford Agricultural Society. The number of bulls recorded in the first two volumes is 901; in the third, 1477.

Mr Corning's Place.—Fifteen years ago, Mr. Erastus Corning commenced his career as a Hereford breeder, by the purchase of about 20 animals from Mr. Sotham, and entered into an arrangement with him to superintend and manage the herd. This connection continued for two or three years, when the direction of affairs was confined to Mr. Corning's son, Erastus, who has since continued in charge of the herd. At various times importations have been made, of nine cows in calf, and two bulls, one of which latter, "Cardinal Wiseman," was bred by the Rev. Mr. Smithies, Leominster, Herts. Mr. Corning's farm, comprising 300 acres, lies on the banks of the Hudson, three miles below the city of Albany. Like all the land in that vicinity, his farm is mainly hilly; the soil of fair quality. There are 25 acres of pasture, 80 meadow, 15 corn, 32 Oats, and the balance in roots, woods, orchards, &c. In almost any direction within three miles of the city, land is worth, on an average, 20*l.* per acre, the price decreasing as the farm is more and more removed from market. Mr. Corning has had much difficulty from the washing of his side-hills, but thinks he has found an effectual remedy in tile-drainage. Seventy acres of tile have been laid, on an average, 4½ feet deep, and usually 14 to 15 yards apart. We were shown adjoining lots—one thorough-drained, the other not—both laid down to

pasture. On one the sod was smooth, even, and unbroken, the crop luxuriant and healthy; on the other could be seen, here and there, large masses that had been undermined by currents of rain-water, and washed away, so as to leave their former resting-places denuded of verdure. Mr. Corning was about commencing to drain this lot and purposes extending the system over the entire farm. Mr. Corning says that he has given faithful trials, side by side, to Short-horns and Herefords, and has convinced himself of the superiority of the latter, for withstanding our cold northern climate, for making flesh on less food, and for activity as workers. He has had at times 20 or 30 of each breed in his stables, and the result is that he has chosen what he thinks is the "good part that cannot be taken from" him. His animals are not kept up and fed to get them in high condition, for he has bred not for the butcher but for the breeder. The cow stalls are separated by partitions carried up quite to the ceiling, which seems to us an unnecessary waste of material, and as having a tendency to obstruct ventilation. The liquid manure is collected in tanks, and after being diluted with water, is carted out by means of a hogshead on a cart frame, and distributed over the land through a perforated pipe, extended across the tail of the cart and connected with the hogshead, the whole apparatus being nothing other than the street sprinklers in common use in this and other cities. Mr. Corning's herd usually comprises 20 head of stock, but he has not so many at present. The price of first-class females in England is about 65*l*., and the charges of importation (which include 15*l*. for passage, the house on deck, hay, straw, and feed) are 20*l*. to 25*l*. more, the whole making the animal cost, delivered at Albany, within 100*l*. The bull Cardinal Wiseman, bred by Mr. Smithies, and now 10 years old, has been a fine animal in his time. He has a good frame, but it shows too plainly just now, for he is very thin and gaunt. A calf by Defiance, out of Victoria 2d, by Cambria 387, was bred by Mr. Humphries, of Lorain County, Ohio, and promises to make a superior animal. His sire and himself were exhibited at Syracuse, at the State Fair, and the calf seemed so full of promise that Mr. Corning purchased him. He is very smooth, his upper and lower lines good, crops well filled, and drops well in the flank. Grace, an aged cow of Lord Berwick's breeding, is deep and roomy, and has a good flank. She is by Tom Thumb (243), dam Wood-Pigeon by the Count (251). Her dam was the winner as the best cow at Shrewsbury in 1856, and The Count has sired some of Lord B.'s best heifers. Victoria 4th, coming seven years' old, by Cardinal Wiseman, out of Victoria 1st, is an imported cow. She is very heavy, and in high condition. She is said to have had throughout the winter only 2 quarts of ship stuff, with hay and stalks, but is really in too high flesh. She is very lengthy and deep, and must weigh 1300 lbs. Lady Goddard, another imported cow, Cora, and Princess, with a calf by her side by Cardinal Wiseman, are worthy of notice, and the young stock is quite creditable. We cannot conclude our notice of Herefords more appropriately than by quoting the language used by Mr. R. Smith in his last report to the Royal Agricultural Society of England:—

"In our present day we see recorded in the Society's Journal an increasing number of competitors from different parts of the kingdom. This proves that the value of the breed is becoming more appreciated. A few years since they were almost exclusively in the hands of the tenant farmers of their native county. They now form the principal breed of the counties of Monmouth, Radnor, Brecon, Salop, and parts of the counties of Gloucester, Worcester, Warwick, Stafford, Wilts, Herts, Dorset, Somerset, and Cornwall. There are also some good herds in North Wales and Scotland, for which districts their hardiness of constitution, thick but mellow hides, wavy, soft, and moderately long hair, render them peculiarly adapted."

At the Chester Show of the Royal Society we saw the representatives of this breed. The entries were of aged bulls, 9; young bulls, 13; bull calves, 14; cows in calf or milk, 8; heifers in calf or milk, 8; and yearling heifers, 14 entries. The prize bull, the property of Mr. Price, girthed 8 feet 7 inches. Another highly commended bull, shown by Lord Bateman, girthed 8 feet 9 inches. These exceeded in girth the first prize old bull in the Short-horn class by 8 inches—his girth being 8 feet 1 inch. The show of Herefords was said to have outnumbered any previous one, with the exception of that at Shrewsbury (a few miles from Lord Berwick's farm), and to have been of excellent quality. It certainly was far ahead of anything we have seen exhibited in this country as yet; but we trust the day is not distant when on some one of the show-grounds of Western Agricultural Societies as respectable a congress of these valuable animals may be assembled.

DORSET COTTAGE IMPROVEMENT.

I AM glad to see the attention of the members of the Blandford Farmers' Club has been directed to the subject of the agricultural labourer by Mr. Robert Fowler, of Whitchurch, the perusal of whose lecture gave me much pleasure. The real state of the labourers' wages in this county will be better understood, and the public made aware that the air of Dorsetshire has not the petrifying effect upon the farmers' hearts as has hitherto been supposed, but that they are as kind and tender towards their men as those of other counties, and that the labourers of our uplands (at least) are on equal terms as to wages with those of the midland counties; thus a stigma will be removed which has hitherto made us a bye-word of reproach. If cases of low wages occur in other parts of our county, I hope they will be dragged to light and undergo the ordeal of public investigation. The value of beer should not be included in Mr. Fowler's calculation, as it is given for extra work when the labour extends beyond the usual hour, as at haymaking and harvest, or when it is unusually hard, as at steam-threshing, drilling, &c.

Mr. Fowler's remarks, however, on the subject of labourers' cottages require a reply from me, as they tend to the supposition that the wholesale destruction of cottages at Whitchurch has had a prejudicial effect upon its population. I trust the following remarks will satisfy your readers that the diminution of marriages (which Mr. Fowler supposes to be an unexceptional index of a healthy social state) has not arisen from any increased difficulty young couples experience in obtaining houses (for that is the case everywhere), but from various causes, one of which is the strict surveillance exercised over the cottager, within the last six years, as to the admission of families without consent. Unless close and constant attention is paid to this point, a state of things involving immorality and vice, which I have overcome with much difficulty, would soon reappear.

Another cause is the increased and increasing self-respect on the part of the young people, the result of a superior education, aided by access to comforts which, until recently, have been beyond their reach. In fact the young men are beginning to find out what the upper classes have long ago discovered—that it is advisable to delay marriage until they have secured a little money with which to set up house. Several leave home for a season and engage themselves in situations beyond the narrow sphere of their parish. I must plead guilty to having obtained situations for several young men within the last eight years, all of whom are doing far better than if they had remained at home. I have also got out three men (married), as woodmen on large estates, who are earning capital wages. Another has just engaged himself in a distant part of the country without my assistance. The withdrawal of this class of labourer is owing to an alteration in the management of the neighbouring woods, their skill in the use of the hook and axe affords them ready employment where the labour market is less overstocked. I cannot attach any blame to myself in this respect. It is our instinct to get on in the world, and I never refuse a helping hand to any one who solicits my assistance. Surely no one would hinder the voluntary extradition of any villager from his native place where improvement of condition and wealth are open to him. If the views of a gentleman are correct who discussed this part of the subject after the termination of the lecture, I cannot understands any one crossing the boundaries of his own county and taking a farm in another. A demand is always succeeded by a supply. Nature hates a vacuum. As soon as the labourer is assured that he will receive similar wages to those given by Mr. Fowler and Mr. Fookes, there will be no difficulty in attracting him to the vacuum.

One man only has been turned out of the parish since the year 1852, not on account of the destruction of his cottage but at the request of his neighbours for misconduct. I have only two cottages under my control inadequate for the convenience of the inmates (they have recently fallen into hand and will be re-adjusted in the course of the summer); one is occupied by a labourer of Mr. Fowler, the other by a widow of a carpenter lately in his employ. I also furnish another of his labourers with a large cottage; all of these pay rent, but not at the rate of 4*l*. per annum. In a conversation with a farmer of the parish about one of four supernumerary Whitchurch men, whom he had recently discharged, employed by Mrs. Michel during the winter, he assigned as his reason for so doing that "several young men were coming on," and, at his request, I provided a cottage which the man now occupies. This does not look as if there is either a paucity of labour or cottage room. If, however, there is any eccentricity in the normal orbit of our social sphere I must claim exemption from blame, or share it with Mr. Fowler and Mr. Fookes, who have control over, at least, half of the parish; the deaths, births, and marriages, therefore, of that moiety cannot be affected by the Vandal act complained of. I deny that derangement (if any exists) is attributable to domineering influence, but to causes perfectly natural. If I am not mistaken I have told Mr. Fowler that arrangements are being made for the immediate erection of twenty cottages on the Whatcombe estate. Whitchurch, however, is to have a very small proportion of that number, as I consider the cottages on Mrs. Michel's side of the parish to be sufficient. I am aware a schoolmaster's, relieving officer's, and policeman's house are required, but these do not come under the category of labourers' cottages. Previous to the wholesale demolition I provided thirteen families with commodious and good cottages, to which Mr. Fowler will, I am sure, bear testimony. At this distance I can enumerate, off-hand, no less than eight Whitchurch young men in Mrs. Michel's employment between the ages of 20 and 30, and several under 20. I am unfortunately away from home and have no means of refreshing my memory, but I beg to remind Mr. Fowler the parish register is not the only document to consult as to marriages; many are solemnised at the Union. Young men, and women too, do not confine themselves to their own villages for partners. The mistress told me, about six months ago, the infant school had never been so full during her six years' residence at Whitchurch as it was at that time. During the last eight years Mrs. Michel has built 22 cottages on her estate; every tenant will bear testimony to her endeavours to meet their various claims in the way of improvements, including the erection of labourers' cottages. Mr. Joseph Fowler, the lecturer's brother, had three cottages built for him last year on a site selected by himself, and contiguous to extensive farm buildings also recently erected. I frequently meet Mr. Robert Fowler—we are near neighbours—he has had opportunities out of number of speaking to me on the subject. Had he done so he would have found me, as I hope he always finds me, accessible, and I would have most willingly rectified the evil as soon as he had satisfied me of its existence. His remarks on Saturday were the first intimation I have received of his dissatisfaction. I can only add if the Whitchurch population is decreasing (which I very much doubt), it arises, not from the destruction of cottages, but because young people are more frugal, and find other and more agreeable channels for their labour than working on the Whitchurch or Whatcombe farms. In successfully carrying out my views with regard to ameliorating the condition of the poor I must claim freedom of action. The subject is a comprehensive one and must not be viewed from the limited horizon of half a parish; it requires time to complete, and I venture to say, it is most closely and earnestly attended to on the Whatcombe estate. *John Clavell Mansel, in Dorset County Chronicle.*

Home Correspondence.

Seed and Weeds.—We are extremely indebted to you for the publication of the result of the examination of Grass seeds by Mr. Buckman and Mr. Bigge; the facts brought to our knowledge are extraordinary. It would, I think, be desirable we should know the estimated number of cultivated Grass seeds in a bushel as well as the number of the seeds of weeds. When we hear of there being nearly four millions of weed seeds in a bushel of White Clover, and that even a greater quantity has been seen, we become anxious to know what proportion this bears to the Clover. It would also, I think, be useful if the proportions of the Clover or Grass seeds, as well as the seeds of weeds that show sufficient vitality to grow, were ascertained. Perhaps it might be found advantageous to some farmers to grow some Grasses themselves for seed. Can you state how far north the different Grasses could be ripened? The most extraordinary piece of Grass that can be found is that in Hyde Park; there is not a Plantain, Dandelion, Nettle, or any other weed in it. If permission were given under certain restrictions for the seeds of this Grass to be gathered, the country at large would ere long derive great advantage from it. The practice of sowing what are called "hay seeds" is very objectionable. *H. V.* [See a "Notice."]

Breton Cows.—I see by the list of prizes awarded at the Dorchester meeting, that two cows from Brittany were exhibited. I have not yet seen any of this breed; but I should be glad to see a few experiments made with them by competent judges, as should they be found worth attention by any they must be more particularly useful to occupiers of small farms. Many who now cannot keep cows might be able to do so if they could obtain a few of this breed; for gentlemen's use they would seem to promise to be of great value—how convenient it would be to be able to kill one's own beef, as well as mutton. Perhaps a cross with a small West Highlander would be of benefit as regards feeding qualities?—but I only seek information on the subject. If hardy, would they not be sought after by shipowners to supply milk on board ship? I should suppose there would be a great difference in the expense of keep. *Inquirer.* [There are considerable imports of Breton cows, see *Times* advertisement columns. The Breton cow resembles the Shetland cow.]

Wool, and the Manner of Weighing it.—There is no uniformity amongst buyers of wool, at least in the county of Essex. It should be an understood principle with buyers and sellers of wool in what manner it is weighed. With some buyers both the price and the manner of weighing are made public; with others it is not so, the price only is mentioned; and when the wool is brought to the scales the manner of weighing give rise to disagreeable feelings when it is found the buyer weighs it only by the tod of 28 lbs., which causes a deficiency to the seller of from 2 to 3 per cent. to what it would realise if weighed by the bag of 112 lbs. By the turn of the scale for instance, say in a lot of 500 fleeces all weighed by the 28 lbs., the difference would be 2 to 3 tods less than if weighed by the bag of 112 lbs each. *Fairplay.*

A hardy variety of Barley.—I was much surprised the other day to observe the contrast of the American Barley with the Chevalier kind; the difference is almost as great as between Wheat and Barley. It was sown on the same day and on the same kind of land and prepared precisely alike, that is, it had a summer's fallow and manured in the autumn with farm yard dung, and was sown in March—the soil a calcareous marl. The two kinds are only divided by a ridge, but the contrast is great; the American is two or three shades of a darker green and a much greater vigour of habit than the

Chevalier. I am acquainted with the growth and sale of this American Barley; last season its market value was 2*s.* less per quarter than the Chevalier of the same quality. It proves that there is a great mistake in growing the Chevalier kind upon cold soils, and the risk of a miserable season like the present; upon cold soils the finer and more delicate habit of the Chevalier is unmistakable, and there is a much better chance of a crop in these of the American variety. *Gilston.*

Crops in Yorkshire.—Since my last letter we have had continued gloomy and wet weather. We have scarcely had any sunshine in all this month, and the earth from being saturated with moisture is much colder than the thermometer represents the air. For the last eight days neither Grass, nor corn, nor Turnips, even upon good land, have grown at all. Wheat is still, even that most forward, apparently a week from shooting, and on bad land crops have a very disheartening appearance. Markets are steadily advancing in price, Red Wheat having reached 66*s.* per quarter here, and 10*s.* per stone of 14 lbs. being readily given by butchers for nice heifers of moderate weights. *H. J. Turner, Richmond, Yorkshire.*

Want of Hands in Lancashire.—When our friends in the North call upon us to supply them with men by the thousand, and in addition to the men food—for the consumption of food increases with high wages—they have set us as producers no easy task to perform, for with fewer men to do the work we are called upon to produce more food. The first step to be taken with a view of obtaining this object should be to produce fewer weeds in the fields, and less vice in the minds of the people. We clean our fields before we apply the manure, or the manure would have the effect of increasing the growth of the weeds; and to obtain better service from a smaller number of men, we should train them up to good honest industrious habits, or their education may have the same effect upon them as the manure would have upon the weeds. There should be more intercourse amongst us all; we should be ready on all occasions to impart our experience to those about us, which would have the effect of giving them an interest. Supply and demand will rule the price of labour, and none of us like to pay a high price for an inferior article; then let us try and improve the quality of the article; there is room for improvement—the inefficiency of those who serve us arises in a great measure from the want of a closer social and kindly intercourse, for we are all of us influenced to a great extent by the treatment we meet with from those we serve in early life. Let us not be satisfied to keep the most ignorant and dependent portion of the labouring class to perform our work, but rather let us offer such advantages as will induce the best and most intelligent to remain with us. *B. Ransley, Perryfield Farm, Oxted, Surrey.*

Lois-Weedon Husbandry.—On the 7th inst. I was on my way from London by the North-Western Railway, changing at Bletchley Junction for Blackley, on the Banbury line, about 68 miles from the metropolis, and within 8 miles of Lois-Weedon. From thence I proceeded by a fly from the Wheatsheaf Inn to my destination, and back to sleep the same evening, where I received good accommodation at the Inn, through several rural villages comprising chiefly old fashioned clump stoned walled and thatched cottages, with very neat and well managed stone fenced gardens—to Mr. Smith's neat residence, the garden of which I must say would not disgrace a palace, though situated in one of the most retired neighbourhoods I had met with since leaving home. Mr. Smith's crops I found fully to meet my sanguine expectations, and as to my own opinion of the quality of the land generally at Lois-Weedon and its neighbourhood, I differ much from the hasty opinions of the deputation from the London Central Farmers' Club. I can say with confidence that all throughout Essex most lands are much better adapted for Wheat growing than at Weedon and its immediate vicinity, and that in no part on my way to Northampton, more than 100 miles, did I see crops so good as at home, and in my own neighbourhood, save Mr. Smith's, although all were suffering, and looking too sickly from continued wet and cold winds. I can boast of three very large fields of Wheat opposite my dwelling, (not my own crops) being the best by far I saw on my whole jaunt. 1st. Mr. Smith's 4-acre piece of Wheat of 11 years self-supporting I found not falsely described, and I estimate the produce this year at 40 bushels per moiety of each acre. 2d. In course, and in the same field are his Winter Beans, a broken plant from October frosts, single rows at 5 feet apart. A row of spring Beans are introduced close to the broken rows (this year only) to make up for the deficiency of plant. The tops already nearly meet, and will no doubt in a few days shake hands. Looking sideiways over the field it appears as one entire crop. Estmated a full average crop of other people's, at 8 rows on the same space, covered with weeds, which impoverish the land more than the crops themselves, a point to observe of vast importance though thought too little of. 3d. His light land acre pieces which Mr. Smith himself considers not adapted for Wheat and Beans by self-support, consequently are sown with other crops, and slightly artificially manured with gypsum or guano. His root crops also are well supplied with his farm yard manure, liquid manure, &c.; excepting 1 acre of Wheat, which is without manure of any kind —all however, with the crops sown upon his principle, only on one moiety of the land. The first in rotation of these crops is 1 acre of Oats, the second year's trial, one moiety, estimated by myself at 9 qrs. Last year's moiety was 9 qrs. as stated by Mr. Smith himself. Then 1 acre of Barley alike planted, the variety, best Chevalier, equally as promising, but the first year's trial; trusted to prove a great acquisition, if the last operation, namely "moulding the outside rows up," will prevent its falling too heavily over the fallowed spaces. Next are White Belgian Carrots, 2 rows at 1 foot apart, then 3 feet fallow, and so on alternately. Estimated at a full crop, on less than one moiety; alternated every year. Then comes the said 1 acre of Wheat, on the same plan as on the 4-acre clay subsoil; sixth crop and self-supporting. This is on light and stony subsoil, and is grown by way of experiment, and not recommended in Mr. Smith's pamphlet "Word in Season." Estimated by myself at 3 qrs. per acre, viz., on one moiety; last year there were 2½ qrs. Wurzels are sown as the Carrots, 2 rows at 1 foot apart, with 3 feet fallow, dunged. Estimated at full average crop, off one moiety or rather less; alternated yearly. Lastly, Lucerne, in single rows, 2 feet apart, no fallow, transplanted with top roots cut off, highly manured every year. First cut, a full and extraordinary strong crop; is cut three times each season. Mr. Smith' sows his Lucerne on his nursery bed in rows, but he ought, I observed to him, to sow it evenly and broadcasted. The headlands and sides of the fields are not sown with corn, nor roots, but a beautiful Grass plot is laid down about 12 feet wide at the ends of the lands and rows, and about 4 feet at the sides for a footpath. No waste, all is turned to profit, being often mown and used with Lucerne and chaff for pigs and Mr. Smith's carriage horses, as there appears to be no pasturage. Gypsum or guano I presume is applied when necessary to the Grass. Those two carriage horses do all the work singly at leisure hours that is needed on the farm, which consists chiefly in broadsharing, harrowing, moulding, and subsoiling, the rest being done by manual labour with the spade. The last operation to be performed on the corn crops, Wheat, Barley, and Oats, before harvest (which I had not the opportunity of witnessing) is done just as it is piping, say next week; if dry, is moulding it up, to prevent its falling. The implement for this purpose consists of an angular moulding board, drawn by one horse, exactly in the centre of the fallowed space, and followed by a well contrived subsoiler, as preparatory for the next year's three rows of corn. I hesitate not to advocate the adoption of all Mr. Smith's plans, on a large scale, if any scheme can be invented to do them equally as well, or in any way approaching to it, without the manual labour of trenching the fallowed spaces in winter. In a subsequent paper I propose to explain how I think it may be done effectually and satisfactorily by steam power, and which I trust will shortly effect this. There is no question about its paying either way, if it can and is accomplished. Would that the tenure of my leases did not prohibit my growing "two white straw crops, &c., in succession," enabling me to carry the Lois-Weedon plan into effect, or that my landlords would place implicit confidence in me to lend me sufficient capital, at a fair rate of interest, to follow in the steps of our invaluable friend the Rev. S. Smith; they would be perfectly welcome from me to their 45*s.* per acre, or even 50*s.*, which I do now pay for the best of my land. As Mr. Smith wished me to find all the faults I could, and to point them out, I objected to two points, viz., his sowing too much seed, 3 pecks on a moiety of an acre, and also his sowing it by dibble in rows, dropping two to ten or more grains promiscuously in each hole, and as I know by respeated experiments that so many grains, if it is only two, will not produce so much in proportion as a single grain planted by itself, though ever so thickly, I recommended him and others at least to try some, scattered evenly or uniformly by some means or other all over their cropped moiety of lands, still keeping, be it understood, the straight sides, and in every other respect similarly treated as before, and I venture to affirm that still greater would be the advantages. *Abraham Hardy, Maldon, Essex.*

Potato Disease.—I need not inform you what is the matter with the inclosed leaves of Ash-leafed Potatoes. It is, however, the first and only instance under my notice this year—sufficient that I dare not venture a good opinion of the forthcoming Potato crop, though I had fondly hoped that the violent winds, frosts, &c., of late would have cleared off the impurities of the atmophere, so as to have resuscitated this invaluable esculent. Your opinion of the fate of the corn crops, as per leading article of last week's *Gazette*, combined with many other of your correspondents' notices, differs very much from ours. Although they are backward and thin from severe and early and late frosts, drenched by cold rains, and beaten by fierce winds, causing them to appear dreadfully sickly and past recovery, yet I still believe that the corn, with one month's fine and warm weather, now that the sun has its greatest powerful influence on all vegetation, will result in a more standing up crop, better quality, and moreover a greater average yield than even last year [last year's crop was much under average], not such an abundance of straw but still more corn, and abundant crop under trees and high hedges, and on light and poor soils, where scarcely any crop is realised in ordinary seasons. In fact my own crops, as well as my neighbours', especially Wheat, are decidedly better than for several years past. Were it not an important subject I would not have troubled you again after your kind publication of my last report, which I trust you will excuse. Seeds, however, are decidedly a complete failure, from the late early frosts in October and November and cold continual rains and boisterous winds in spring destroying the young plants intended for seeding. This circumstance is very much to be regretted, and must be attended with great loss. The memorable summer of 1816 was much more wet and cold than the latter part of this is likely to be, and consequently more unpropitious—as have been many autumns in my remembrance. In that year much corn was not cut in Suffolk till after Michaelmas, and Barley and Beans were abroad on the 5th of November; and one morning in August Wheat could not be cut before breakfast, as it was frozen to the ground where it was lodged. *A. Hardy, Maldon, Essex.*

Pleuro-pneumonia.—Being desirous of correcting a very extraordinary and erroneous impression that has gone forth respecting the much-to-be-dreaded disease, pleuro-pneumonia, may I beg a little space in your valuable publication for a few remarks upon the subject? The prevalence of the disease in some of the dairy districts is too well known to most of your readers to require any further allusion to it here; but the imaginary effects produced by its infliction are so extraordinary and ridiculous that I cannot pass it by unnoticed. It has been asserted that many dairy farmers have turned their losses from pleuro to good account, in consequence of the high price of hay and straw during the spring months which they were enabled to sell, and that instead of being losers by its visitation they have actually been gainers; therefore they have received from their professing friends something approaching to congratulations on the loss of their cattle, instead of those kind sympathies which (although of no intrinsic value) are at least soothing and pleasing to the feelings in times of severe distress. In allusion to the foregoing I will only mention one case amongst several which has come under my own observation. A friend of mine who had a very valuable dairy stock had the misfortune to lose upwards of 30 head of his cattle, and in consequence had not the means of consuming the whole of his hay and straw upon the premises; he, therefore, thought it advisable to sell a portion of it as some remuneration towards his losses in preference to purchasing fresh cattle during the prevalence of the disease in his neighbourhood, and he has handed me the following statement, the correctness of which I can vouch for:—

"The policy of continuing the clauses in farm agreements to prevent tenants selling hay and other agricultural produce, when there is more than can be consumed to advantage, is, I think, very questionable, especially in these days of portable manures which almost every good farmer makes use of to a considerable extent, and I think would be a good subject for discussion by the Central Farmers' Club.

Calves of 40 cows taken with pleuro, at 15*l.* per head				£600	0 0
6 recovered but were much deteriorated in value, 10*l.* each				60	0 0
				540	0 0
Loss of 40 calves				40	0 0
Ditto in offal from dairy, including butter and whey for pigs				35	0 0
Farriers' bills, &c.				9	0 0
Cash received for diseased cattle ..	146	11	8		
For hay at from 4*l.* 10*s.* per ton to 6*l.* 10*s.*	82	8	2		
For straw at from 2*s.* to 3*s.* 3*d.* per cwt.	31	10	5		
				624	0 0
Balance ..	363	9	9		
To which should be added the cost of cattle purchased in the spring consisting chiefly of heifers, to say nothing of sheep	268	0	0		
	£631	9	9"		

—*S. T.*

Swede Sowing.—The late long succession of rains has no doubt greatly deferred, if not wholly prevented, the sowing of Swedes where the ground is heavy, the preparation of it slow, and the sowing late, even under ordinary circumstances. I have myself sown Swedes as late as the present date, and obtained as fine a crop from them as from seed sown a month earlier. But the present year I have my main crop still unsown. I should like to learn from yourself or one of your intelligent correspondents what is the latest known time on the west coast half-way up our island and on clay land at which Swedes have been sown, and subsequently yielded a good crop? I am inclined to think it possible that the sowing season being so anomalously delayed, the growing season may be proportionably prolonged, and that those persons who, not wanting their land for Wheat, are able to let their Swedes remain in the ground till late into November, may yet see a fairly developed bulb even though they should only commence sowing now. *Exile, June* 26. [We have seen Swedes sown successfully about July 10 in Gloucestershire.]

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

AT a Weekly Council, Lord Walsingham, President, in the Chair. Present: Earl of Powis, Lord Bridport, the Hon. Col. Hood, the Hon. A. Vernon, Mr. Raymond Barker, Mr. Denman, Mr. Frere, Mr. Brandreth Gibbs,

Mr. Maddison, Mr. Slaney, M.P., Prof. Simonds, Prof. Spooner, Mr. H. Wilson and Prof. Wilson,

The names of Candidates for admission were read.

The following correspondence relative to Dates and Carob Beans as articles of cattle food was read:—

"Office of Committee of Privy Council for Trade, Whitehall,
"23d June, 1860.

"Sir,—I am directed by the Lords of the Committee of Privy Council for Trade to transmit to you, to be laid before the Committee of the Royal Agricultural Society of the United Kingdom, the enclosed information which has been received through the Foreign Department from her Majesty's Consuls-General at Tangier, Tunis, and Tripoli, in reply to some inquiries emanating from Professor Lindley relative to the price, quality, and quantity of Dates procurable in those countries suitable for the purpose of feeding cattle.—I am, sir, your obedient servant,
"J. EMERSON TENNENT.

"The Secretary of the Royal Agricultural Society of the United Kingdom."

TUNIS.

"The most inferior quality of Dates used for cattle food is produced at Gabes (on the eastern coast of this Regency), and may be obtained at from 4*l*. 15*s*. to 5*l*. per ton free on board. The quantity to be obtained of course depends upon the crop. The above quality is also used for human food, and there is besides another inferior quality produced at Nyfyanah (in the interior of the Regency), but the charges of transport are much heavier than its first cost. The quantity produced cannot be given. Prices would probably rise much in the face of a large demand. It is impossible to form any idea to what extent, but it is most certain it will rise in proportion to the demand. The rate of freight to England at from 25*s*. to 30*s*. per ton."

TRIPOLI.

"The common price of Dates of inferior quality fit for cattle food varies from 3*l*. to 3*l*. 10*s*. per ton of 2240 lbs., but when in demand at Malta, as is often the case, prices increase in ratio to the consumption, and frequently reach to 5*l*. and 7*l*., to which must be added 16 per cent. for export duty and all other expenses free on board. In good crops the exportation is calculated from 10 to 15 vessels of 80 tons burthen at a small reduction from the above, the quality being the same. Prices would rise in face of and in proportion to the demand. There being no direct trade with England it would be impossible to state the freight; but from 12*s*. to 15*s*. per ton for Malta. With the exception of Barley and Carobs the country produces no other cattle food for exportation on a large scale. The prices of Barley are regulated by the markets of Europe; a few cargoes of Carobs have been sold this year for exportation at the rate of 1*l*. 8*s*. and 1*l*. 10*s*. per ton, expenses not included."

TANGIER.

Tangier is not a port where Dates are sent for exportation in any large quantities, as the Date tree does not grow in the Northern Province of Morocco. Though I believe at Zsafilitt and other parts of the interior of this country, Dates could be obtained in large quantities and at a low price, yet I fear that the cost of transport would be so great that the price of that fruit would be found too high by British agriculturists for the purpose of feeding cattle."

A conversation ensued respecting the value of the Date to feeders of stock, in which the probability of the Carob Bean being the El Charob, translated "husks" of the parable of the "Prodigal Son" was advanced.

Mr. Frere exhibited specimens of the Yellow and Blue Lupines, with which he was making an experiment on some light blowing sandy land resting on a subsoil of chalk, and reported that whether from the wetness of the season or from some other cause, the crop so far did not exhibit a promising aspect. He observed if this crop had really suffered from excess of wet it was the only agricultural plant within his knowledge that on such land could suffer from rainfall.

MARDEN, KENT: *Two-horse* v. *Four-horse Ploughs*—An effort was made here the other day to bring to a practical issue this much-disputed question. While admitting that the work performed by the iron plough was even and sightly to the eye, the advocates of the old system maintained that it neither turned the furrow over so completely as the four-horse Kent plough, nor so effectually destroyed the weeds; and its employment, therefore, with a view to save expense, was after all only false economy. Mr. Tapson (of Goudhurst), who has taken an active part in the controversy, recently paid a visit to Bedford, saw the Messrs. Howard, and personally gave them instructions as to the sort of plough the Weald farmers required. Upon these instructions an implement was constructed, and forwarded to Mr. Tapson, who, acting in conjunction with Mr. Lansdell, arranged for a trial of ploughs. This took place in a large field on Reed Court Farm, the use of which was granted by Mr. Kennard. The notice being short, there were but 10 ploughs in the field. Each class of implement, however, was represented—there being a four-horse foot plough sent by Mr. Kennard; a four-horse wheel plough, Mr. E. Lansdell; a two-horse iron plough (Howards'), Mr. Tapson; a two-horse iron plough, Mr. Lansdell; two two-horse iron ploughs (one manufactured by Hornsby), Mr. Whibley; an iron plough, Mr. J. M. Parsons; ditto, Mr. O. Foreman; ditto (Ransome's), Mr. W. Hawkins; ditto, Mr. Moren. The soil was a loam of moderate density, though not so stiff as many parts of the Weald, and the recent rains had made it in excellent condition for ploughing; nevertheless, with one or two exceptions, the work was scarcely equal to the average, probably owing, in some degree, to the men not being accustomed to the use of the iron plough. Howards' new implement was regarded with great interest, and its work conclusively proved than an iron plough can be constructed so as to turn the earth upside down in the most effectual manner. The only drawback to its complete success was that it did not leave a sufficient seam for the reception of the seed, but this can easily be remedied by the introduction of a "wrist" similar to that now employed with the old Kent plough. Had it not been for this defect, Messrs. Howards' plough would have taken the first prize. This honour was awarded to the implement sent by Mr. Moren—an iron plough manufactured by Ransome, but to which some important additions had been made by the owner. The dynamometer was not employed on this occasion. The ploughing was from 6 to 7 inches deep, and in the last one or two furrows Messrs. Howards' plough penetrated the earth to the depth of a foot. In the course of the day Mr. Tassell, one of the judges, observed: For some years past he had been of opinion that farmers were in error in employing four-horse ploughs. Every implement formerly used by the agriculturist had either been superseded or improved, with the exception of the old Kent plough, and that remained unaltered. It was his firm belief that a great portion of the land in this country might be ploughed with a two-horse implement quite as efficiently as with a four-horse plough. He did not mean to say that some very stiff land would not require greater horse-power; but even such, if it were thoroughly drained, he believed might be ploughed with two horses. After what they had seen that day, it certainly could not be said that the iron plough did not turn over the soil—on the contrary, the only fault in the work done by Messrs. Howards' plough was that the furrow was turned over too flat, and that alone prevented the judges from awarding it the first prize. One great disadvantage of the present system was, that the ploughman and his mate combined to impose upon their masters, and got the horses under their care into such a condition that they did not even like them to do a proper day's work. But with two-horse ploughs the men would be separated, and double the amount of work performed with the same labour. When he first introduced one of Howards' ploughs on to his farm, the first thing his man said was that it would kill the horses; but after he had been at work with it some time he admitted that it went as easily as the old four-horse plough. Economy was now the order of the day, and they must adopt some less expensive mode of cultivation. The two-horse system had been already introduced with advantage in many districts, and he saw no reason why it should not be adopted in Kent. He wished the Chancellor of the Exchequer would take the duty off Hops and put it on four-horse ploughs! *Abridged from the Maidstone Journal.*

DUBLIN CHEMICAL: *Deep Land Culture.*—Mr. Bowles, of Cloughranhudart, said:—I have for some 20 years been in the practice of what I then called deep ploughing, namely, going 2 or 3 inches deeper than my neighbours. My ploughman would tell me I was turning up virgin soil that never was stirred before when he was going not more than 11 or 12 inches deep. I have sometimes worked two ploughs in the same furrow, calling it subsoiling, at a depth, perhaps, of 13 to 14 inches. By this practice I generally had good crops. But it was not until the year 1856 that the subject of deep ploughing was fairly presented to my mind, on receiving a visit from that really deep cultivator, George Henry Pentland, who came from Black Hall to see my Potato-digging machine at work. In walking over my land, he noticed how shallow I was having it ploughed, and very fully explained the advantages of stirring the soil to a much greater depth than I had thought of attempting. He gave me an outline of what he saw at the Marquis of Tweeddale's, and kindly invited me to see his deep ploughing at Black Hall. Subsequently, a trial of his Tweeddale plough was offered on my own land, which I gladly accepted. I invited several of my neighbours to see its working; they generally approved of it for me, but all except two declined to have a trial of it on their own farms, one of whom, James D. Penrose, who has a large farm adjoining mine, was so pleased with it that he asked me to order one for him with my own. He has since used it with very good results, chiefly in preparing land for green crops. We were quite surprised with what ease it turned a sod 18 or 20 inches deep [?], drawn by four bullocks, while on a farm almost adjoining a plough of the ordinary shape was at work, drawn by six bullocks; but they could not go nearly so deep, and their power was severely taxed. I then offered a trial of the Tweeddale plough to this gentleman; but he was so pleased with his own, which he had fixed to his mind, that he would not try it. By advocating deep ploughing I do not mean to encourage bringing large quantities of subsoil to the top suddenly: only to loosen it as deep as possible, to allow the chemical action of the atmosphere on it, to let the water sink down; the roots of plants will then follow, and by incorporating it in small quantities with the upper soil at each ploughing, a greatly increased depth of active soil will be formed. I need not tell you when the plough enters a little lower than the usual limit, it meets the hardened crust caused by the tramping of horses for ages. Break through this—allow the powerful agencies of air and the frosts of winter to act for you, and the increased productiveness of your land will be found abundantly to repay the labour. After one deep ploughing—say 17 inches at the side of the ridge, and 20 inches towards the middle—I nearly doubled the amount of corn previously raised, and the succeeding green crops were very good. Indeed, I have not had such Potatoes since 1846 until I used the Tweeddale plough, and last year my Turnips and meadows did not suffer from drought, as those in my neighbourhood did, which were not so treated. I have not used the subsoil plough after the Tweeddale, as I have been disappointed in a plan of traction to draw it by steam power, which has been made, but not forwarded, it requiring some alterations. Deep ploughing by animal power is only the precursor of the more perfect system of cultivation which will be effected by the steam engine at about half the cost of horse work. It was a very good thing to subsoil land, as at Marino, with the spade, at a cost of 8*l*. per acre; it is better to do the same, as at Black Hall, at 4*l*. with the Tweeddale ploughs; but how infinitely superior will it be to effect it without distressing man or beast at half the lesser sum named. I may be thought too sanguine when I say that I hope to have a steam plough that will finish the remainder of my deep tillage at Cloughranhudart, and expect to commence with it before the present year shall pass away, if spared in health. As all naturally rich soils are deep, and have their constituents intimately blended, it must be obviously our interest to try and obtain those conditions by deep and perfect tillage which will much improve the poorest and thinnest soil, and render the best land more fruitful. The Tweeddale plough will go as deep with four horses as others will with six, and leave the soil in a better state to be acted on by the atmosphere; it brings up but a very small portion of the subsoil at each ploughing of 18 or 20 inches; they are more extensively used each year. I have circulated mine everywhere I could prevail on any one to use it, and several new ploughs have been ordered by those who have tried it. They are now in the counties of Wexford, Kildare, Louth, and Dublin, where I have no doubt they will do good service. At Black Hall the subsoil trench-plough has been used to follow the Tweeddale plough to the depth of 24 inches each, drawn by six horses or bullocks. The Marquis of Tweeddale only used four in each; but the soil of Black Hall, as you saw by the sample exhibited at our last meeting, is a poor, tenacious, yellow clay, which caused the increased draught. Prior to its being drained and subsoiled, it yielded about 8 barrels of Wheat per acre, and after these operations, it gave 13 or 14 barrels. This increase in the first crop more than repaid the whole cost incurred, which did not in the most difficult field exceed 4*l*. per acre, and was generally done for about 3*l*. per Irish acre, although several men were occasionally required to remove the large stones to the surface.—In further detail Mr. Pentland mentioned having taken up a field from a defaulting tenant, containing 12 Irish acres, which, with comfortable house, let at 18*l*. per annum, exclusive of taxes; it was drained, subsoiled 24 inches deep, all large stones removed, and green-cropped in 1857, grown with hand-manures, then sown with Wheat, 10 stone per acre, with a drill machine; it yielded 133 barrels of good Wheat in 1858; last year it was mown, and the hay sold by auction, which produced net 97*l*. 17*s*. 2*d*.; and this spring, with another field same size, it has kept 80 ewes and their lambs, nearly half of which were sold, when he wrote to me last month, at 26*s*. each; this field he says he never knew to feed three animals any one year previously. His land thus treated has become more fine and friable, the exposure to the air changing the soil from stiff, lumpy, yellow clay to a darker colour and fine texture; his aim being to get his land into good pasture, this being in his estimation the real criterion of permanent improvement, and what is longest laid down seems to warrant this expectation. Now that chemistry has come to aid the farmer, and has shown him the inexhaustible stores of fertilising matters contained in the atmosphere, it is evident, says the *East Lothian Agriculturist*, that he who cultivates his land 2 feet deep has four times more of these principles available to nourish and develope his crops than he who only tills 6 inches deep; it makes a ready descent for moisture in wet seasons, and for its ascent in dry ones, and keeps the soil at a higher and more equal temperature; it gives plants freedom for their roots in the deepened soil to find their nourishment, and permits a great amount of water, heat, and air to be absorbed and circulated, and by mingling the deepened soil with the top they act upon each other, and are acted on by the atmosphere, and thereby acquiring new properties, are made more valuable by being pulverised; this will amply repay the toil, for nothing can be more grateful than a thoroughly cultivated field, and capital can never be more securely and profitably lodged.

Notices of Books.

The Gardeners' and Farmers' Reason Why. Houlston & Wright.

This is the performance of a most industrious pen to which more than a dozen works of the same or a similar kind are attributed, whose sale has been enormous. Take for instance a book with the following title:—"Enquire Within upon Everything," of which the 135th thousand is now being advertised! No wonder that the author of such a book as that should feel able to give the "Reason Why" to every question that can be asked by a farmer or a gardener.

We must confess that our confidence in a teacher is not increased by finding that he has an exact and definite reply to every question put to him by the learner or inquirer. The man whose knowledge leads him occasionally to confess his doubts or even ignorance is none the less trustworthy for that. We do not believe

that the "Reason Why" to every question by the farmer or the gardener can be given in a paragraph; indeed to many a question of the kind we doubt if a full explanatory answer can yet be given at all.

Let the student of agriculture pursue his studies rather through the systematic works on its several departments by the labourers in each than by reading a set of passages extracted from these books, as answers to a corresponding set of arbitrary questions by one who has read them merely for the purpose of making a catechism of their contents.

Calendar of Operations.

JUNE.

EAST LOTHIAN: *June* 25.—Winter Wheat promises a fair average bulk, though a portion of it is rather thin on the ground, and fields are to be seen palish in colour. It is getting into ear; on one farm heads were observed to have burst the hoe on the 21st, which is a fortnight later than last year, but from the moisture in the ground and the coldness of the weather harvest will probably be at least three weeks or a month behind last season. Spring Wheat occupies a restricted area, but what there is of it is very fine. The extent of ground under Barley is larger than usual, and is remarkably promising, particularly in the lower district; near the Lammermuir ridge it is supposed the nights have been rather cold for this crop. Oats are excellent everywhere, and the Bean crop will have much more straw than for several years past. Potatoes have brairded well and are generally luxuriant. A very large breadth is under this root. The culture of Mangel Wurzel has also increased. The season hitherto has been cold for it, and it is not making much progress. Turnips are more promising. Pastures are generally very bare, and from the want of Clover plants the hay crop must be a light one.

GLOUCESTERSHIRE.—Wheat on the Cotswold district decidedly 25 per cent. under average: in the Vale average plant, but on the clay becoming yellow and sickly—in both cases very late. Barley, an excellent plant, but sick from a glut of wet and cold. Oats ditto. Beans and Peas promising, but late. Mangel, various. Swedes, a good plant. Seeds, light. Grass, average. *John F. Peacey, Winchcomb, Cheltenham.*

THE FENS: *June* 26.—We do not feel so despondingly on the prospect of harvest as some of your correspondents, for it does not necessarily follow that a late one should be a deficient one. It is true that many acres of Wheat and Barley will be thin in this neighbourhood, but the bulk of growing corn has much improved, and though Wheat will be unusually short in the straw yet the plant is of a good colour, and the ear has made its appearance in a clean and healthy state, and in many instances begins already to look bold; in any year the weather during the flowering period is of the greatest importance, more so now that we require above the average of sunshine and warmth for the next two months. Owing to the shortness of the stalk Wheat looks thinner than farmers like to see it, but there is at all events less risk of its being laid, and we know the produce of standing crop seldom disappoints the grower. Barley has improved also, and we shall have some good crops, though at no great distance complaints are made of the ravages of the wireworm and otherwise scanty plant. Oats look as if we should have a full average. Potatoes are variable, some grow strong and well as any one could wish; others are weak and spiry, giving little hope of a crop. Beans flower well, and the dashing rains have kept the insects under. Turnips come up quickly, and will soon be out of the way of the fly. Mangels grow fast, and are a full plant. Clover will cut well if we can but get it dry. Much of the Grass is extremely heavy; on high land it is thinner than was expected. In the Washes great loss will be sustained from the high and continued floods. *J. Whitwell, Peterborough.*

Notices to Correspondents.

BRETON COWS. There is a paragraph elsewhere about them They are liked as they become better known. Perhaps some one will relate his experience.

NAMES OF PLANTS: *Enquirer.* The following are the names of the sorts of weeds numbered according to your specimens:—1, Geranium molle; 2, Potentilla anserina; 3, Anthemis arvensis; 4, Gnaphalium germanicum; 5, Sherardia arvensis; 6, Prunella vulgaris; 7, Fumaria officinalis; 8, Veronica hederifolia; 9, Convolvulus arvensis.

PERMANENT GRASS: *Agricola.* Your light sandy soil after Turnips, if any portion of them have been fed on the land, does not want any manure before sowing Grass seeds. If the soil is at all too rich or the Barley likely to be laid, then the Grass seeds had better be sown by themselves without a light Barley crop.

SEEDS: *W K.* Your Clover seed is exceedingly pure, and if the bulk be equal to the sample it is an evidence that seed may be obtained almost, if not absolutely free from weeds. *B.* [Your letter refers to many practical points of great importance which we have not entirely overlooked, thus in our impression for October 31, 1857, will be found the following calculation of the number of weeds which six samples would have sown per square yard:—

1. Broad Clover	21
2. ditto	22
3. Cow-Grass Clover	17
4. ditto ditto	82
5. White Dutch Clover	66
6. ditto ditto	174

It must be remembered that weeds are mischievous, not merely from the proportion sown when compared with the crop-seed, but from the fact that so many of the weeds of "seeds" are annual; and thus by ripening in the Barley a stock is sown which in too many cases destroys all hope of a good crop of the "seeds." As regards the vitality of seed samples we would again direct attention to Mr. Bigge's experiments in germination. These were performed on the plan recommended by the Messrs. Sutton, of Reading, and it is due to these gentlemen to state not only that they personally investigate the samples submitted to them in the manner they so clearly explained to Mr. Bigge, but that they have at all times given most ready assistance in the carrying out of our analyses of seeds. We would remark in reference to the growing of Grass seeds, that all the agricultural Grasses of value may be grown anywhere in the British Isles; but this is a subject we may take an opportunity of more fully inquiring into.]

SOOT: *Oxon.* If it be compared with guano on the score of ammonia only—the guano is worth only about 12 to 16 times its weight of soot. If guano costs 13*s.* a cwt., then soot may be worth 1*s.* a cwt. It generally sells for more. Sometimes however in place of containing only 1½ per cent of ammonia, it contains as much as 4 per cent; and its greater price than guano in average samples would give it is then perfectly justifiable. Dr. Voelcker has said, that an average sample of soot contains about 1000 lbs. of organic matter, 20 lbs. of sal-ammoniac, 80 lbs. of sulphate of ammonia, 247 lbs. of gypsum, besides other mineral matter, and 237 lbs. of moisture in every ton. Soot weighs as much as 40 lbs. a bushel.

FOR SALE, FOUR PITS, heated with hot-water, about 70 feet long each; Sashes 7 feet by 3 feet; may be taken as they are, or any portion of them. Also a handsome CONSERVATORY and 2 GREENHOUSES. Can all be seen at Granby Nursery, Mornington Place, Hampstead Road, corner of Granby Street, N.W.

WANTED, a Second-hand LAWN MOWING MACHINE, in exchange for a fine Orange Tree in Fruit and Flower. The Mowing Machine must be by a good maker, in sound working order, and not less than 16 inches long in the cutting knives. If an exchange is not considered desirable state price for machine.—Apply by letter to A. B. C., 37, Great Queen Street, Lincoln's Inn Fields, W.C.

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(formed of Twisted Wires like a rope or cable), the strongest cheapest, and neatest fence in use, will resist the largest cattle and will not bend or get out of form by trespassing upon or over. Price, with five lines of the Galvanised Strand, iron main posts, and pronged Standards, 1*s.* 2½*d.* per yard.

This fence is far cheaper than posts and rails, or any kind of iron fencing; and possesses four times the strength of solid bars. Will not rust nor corrode. Upwards of 1200 miles of this Fencing supplied.

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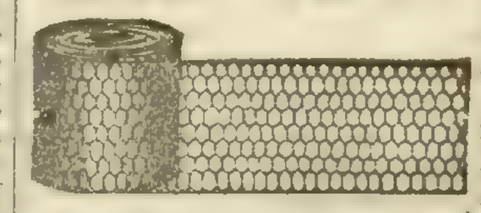


Galvanised, 24 ins. wide 2-inch mesh, 5½*d.*, 7½*d.*, and 9½*d.* per yard.

Galvanised, 24 ins. wide, 3-inch mesh, 4*d.*, 5*d.*, and 7*d.* per yard. The Netting made any width, and with openings of any size.

GALVANISED IRON CHAIN CAMP STOOLS & CHAIRS, POULTRY FOUNTAINS & FEEDERS, PRONGED DAHLIA RODS AND ROSE STAKES, &c.

Strong CATTLE HURDLES from 2*s.* per yard.

PATENT IMPROVED GAS WORKS,

of all sizes, for the use of Private Houses, Mansions, Railway Stations, Mills, Collieries, Mines, Villages, &c. Works from 10 to 500 lights estimated for The works can be entrusted to an ordinary labourer.—Apply to

HENRY J. MORTON & Co. 2, Basinghall Buildings, Leeds.

BARNARD, BISHOP, AND BARNARDS, NORWICH.

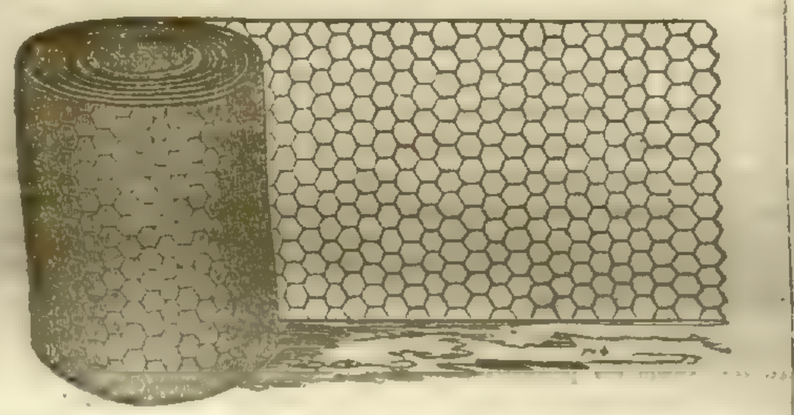
Reduced Prices of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 10*d.* per yard.

The same with Galvanised Wire Rope, 1*s.* per yard.

Illustrated Catalogues with prices of every variety of Wire Fencing and Wire Netting forwarded free on application.

MACHINE MADE GALVANISED WIRE NETTING.



BARNARD, BISHOP, AND BARNARDS, in consequence of improvements in their machinery for the manufacture of the above article, have been enabled to make a great reduction in the prices.

		Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide		5*d.* per yd.	4*d.* per yd.
2-inch ,, strong do.		6 ,,	4½ ,,
2-inch ,, intermediate, do. ..		7 ,,	5½ ,,
2-inch ,, extra strong, do. ..		9½ ,,	7½ ,,
1⅝-inch ,, 24 inches wide		5½ ,,	4½ ,,
1⅝-inch ,, strong, do.		6½ ,,	5½ ,,
1⅝-inch ,, intermediate, do. ..		7½ ,,	6 ,,
1⅝-inch ,, extra strong, do. ..		10 ,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 8½*d.* per yard, 3 feet wide Galvanised Sparrow-proof Netting for Pheasantries, 2½*d.* per square foot. Wire Netting of every mesh from half an inch to 6 inches.

Wire Fencing and Netting delivered Carriage Free to all the principal Railway Stations.

GARDEN ENGINES AND SYRINGES.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

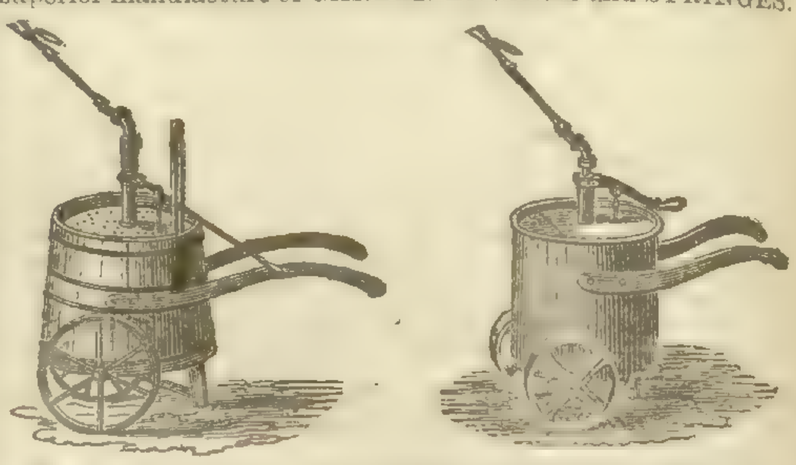


Fig. 598. J. TYLOR & SONS' BARROW GARDEN ENGINE in best well painted Oak tub, fitted with J. TYLOR & SONS' Improved Brass Pump, Universal Joint, and Registered Spreader, which answers the purpose of the separate rose, fan, and jet.

CONTENTS OF TUB:—

15 gallons .. £5 10 | 28 gallons .. £6 18

Fig. 599. Ditto TINNED IRON TUB.

CONTENTS OF TUB:—

8 gallons	12 gallons	16 gallons	24 gallons	30 gallon
£2 15	£3 5	£4	£5	£5 18

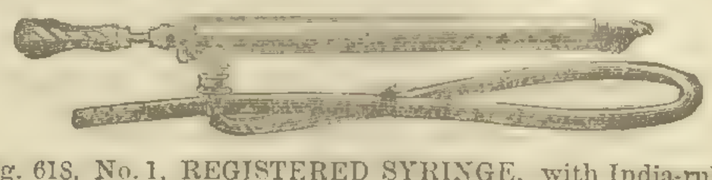


Fig. 618. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. .. £1 5 each.
No. 2. Ditto ditto 1 1 ,,
Telescope Branch Pipe for ditto .. .. 0 10 ,,

Fig. 619. GARDEN SYRINGE, with one rose and jet, 12*s.* 6*d.* each.
,, 620. Ditto ditto 11 6 ,,
,, 621. Ditto ditto 10 6 ,,
,, 622. LADIES' GARDEN SYRINGE, with do. 8 0 ,,

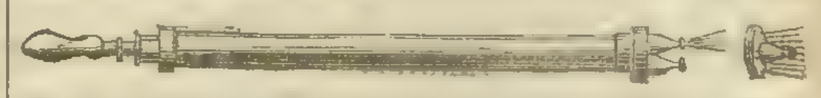
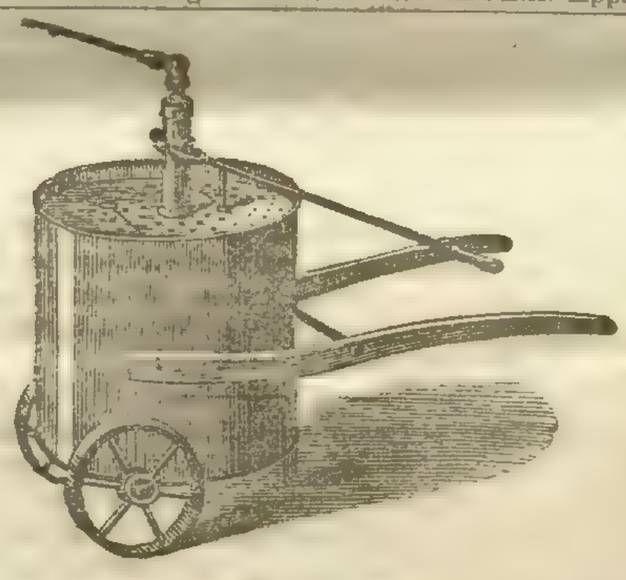


Fig. 623. READ'S SYRINGE, with two roses and one jet, 18*s.* 6*d.*
,, 624. READ'S SYRINGE, with one rose and jet .. 16 6
,, 625. Improved ditto ditto .. 14 6
,, 626. Ditto ditto ditto .. 13 0

Manufacturers of Pumps and Well Engines (for shallow or deep Wells), Plumbers' Brass Foundry of every description, High Pressure Cocks and Closets, Copper and Tinned-iron Baths, Garden and Fire Engines, Lamps of every description, Copper Goods, &c. Estimates given for Hot-water and Bath Apparatus.



No. 554½.

GALVANISED IRON TUB GARDEN ENGINE, with WARNER'S registered Spreader, is strongly recommended for durability and low price, viz.:—

10 gallons .. £2 15*s.* 0*d.* | 16 gallons .. £3 15*s.* 0*d.*
24 gallons .. .. .. £5 0*s.* 0*d.*

Larger sizes in either Wood or Iron.

BRASS SYRINGES, from 9*s.* to 21*s.*

May be obtained of any Ironmonger at the above prices, or of JOHN WARNER AND SONS, 8, CRESCENT, CRIPPLEGATE, E.C.

CONSERVATORY FOR SALE.

TO BE SOLD CHEAP, a CONSERVATORY 28 feet long by 18 feet wide, and 11 feet high to the spring of rafter. Span roof; glass at both ends and front; of elegant design, and first-class materials and workmanship. May be seen here, and any further information had, on application to JAMES GRAY, Horticultural Works, Danvers Street, Chelsea, S.W.

WARNER'S PATENT VIBRATING STANDARD PUMPS.

PATENT CAST-IRON PUMPS fitted with J. W. & Son's Patent Buckets and Suckers, which cannot clog in action, for Farms, Cottages, and Wells not exceeding 25 feet.

Diameter of Barrel.	Height.		£.	*s.*	*d.*
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1	1	0
2½ ,,	long 3 ,, 3 ,,	gutta percha	1	10	0
3 ,,	ditto 3 ,, 6 ,,	or cast iron	2	4	0
3½ ,,	ditto 3 ,, 6 ,,	flanged pipe	2	9	0
4 ,,	ditto 3 ,, 6 ,,	as required.	2	18	0
2½ ,,	short, with 15 feet of Lead Pipe attached, ready for fixing		2	0	0
2½ in.	long ditto ditto ditto		2	14	0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

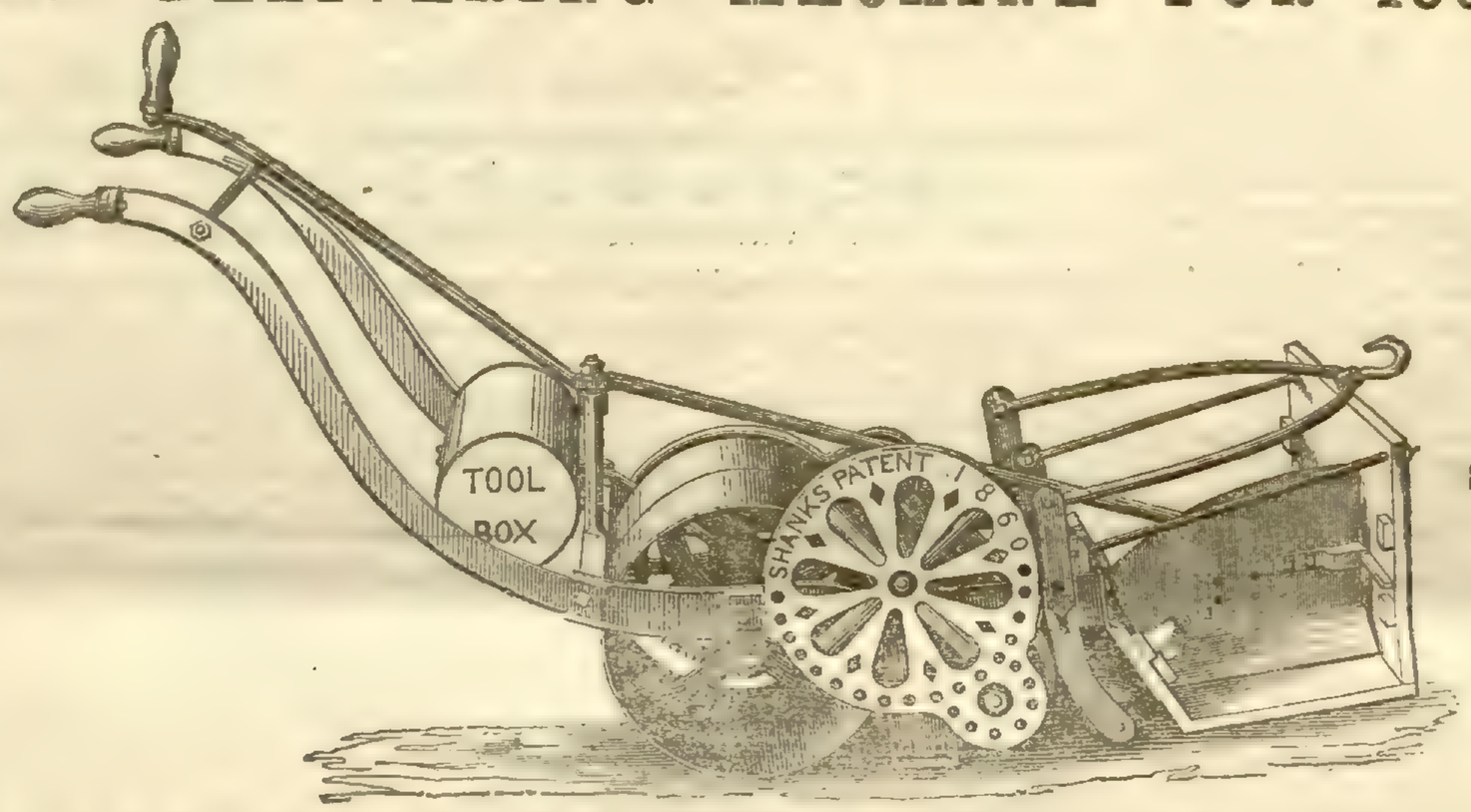
May be obtained of any Ironmonger or Plumber in Town or country, at the above prices, or of the Patentees and Manufacturers.

JOHN WARNER & SONS, 8, Crescent, Jewin Street, London, E.C.

Every description of Machinery for Raising Water by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. &c.—Engravings sent on application.

SHANKS' NEW PATENT LAWN MOWING, ROLLING, COLLECTING, AND DELIVERING MACHINE FOR 1860

MOWS THE GRASS WET OR DRY, ON LAWNS UNEVEN OR OTHERWISE, IN A MUCH NEATER MANNER THAN THE SCYTHE, AND AT HALF THE EXPENSE.



NEW PATENT PONY MACHINE FOR 1860.

PRICES.

SHANKS' NEW PATENT HORSE MACHINE.

Including Box of Tools for Sharpening, &c., and Directions.

Width of Cutter.		
No. 1.—48-inch Machine	£28 0 0	*Drawn by a Horse.*
No. 2.—42-inch Machine	26 0 0	
Width of Cutter.		
No. 3.—36-inch Machine	£22 0 0	*Drawn by a Horse.*
No. 4.—30-inch Machine	19 0 0	*Drawn by a Horse or a strong Pony.*

SHANKS' PATENT PONY AND DONKEY MACHINES.

Including Box of Tools for Sharpening, &c., and Directions.

No. 5.—30-inch Machine . £15 15 *Drawn by a Pony* | No. 6.—28-inch Machine . £14 10 *Drawn by a Pony* | No. 7.—25-inch Machine, £12 10 *Drawn by a Donkey*

SHANKS' NEW PATENT HAND MACHINES, FOR PUSHING OR DRAWING SEPARATELY OR TOGETHER.

Including Box of Tools for Sharpening, &c., and Directions.

No. 8.—24-inch Machine	£8 17 6	*Easily worked by Two Men*
No. 9.—22-inch Machine	8 7 6	
No. 10.—19-inch Machine	£7 12 6	*Easily worked by a Man and Boy*
No. 11.—16-inch Machine	6 17 6	*Easily worked by a Man*
No. 12.—13-inch Machine	£6 2 6	*Easily worked by a Boy*

The Patent Delivering Apparatus if attached to the Hand Machines, and they are strongly recommended to be so, 20s. extra.

SHANKS' PATENT HAND MACHINE, FOR DRAWING ONLY.

Including Box of Tools for Sharpening, &c., and Directions.

No. 13.—22-inch Machine £7 5 0 *Easily worked by a Man and Boy* | No. 14.—19-inch Machine £6 15 0 *Easily worked by a Man and Boy*
No. 15.—16-inch Machine £6 5 0 *Easily worked by a Man*

☞ The SHANKS' NEW PATENT MACHINE FOR 1860 has just been awarded the FIRST PRIZE SILVER MEDAL of the Royal Dublin Society at their Exhibition of Horticultural Implements, &c., held at Dublin last month.

*** The Machines are warranted to give ample satisfaction, and if not approved of they may be at once returned.

The Prices include delivery at most of the Railway Stations throughout the Kingdom.

SOLE AGENTS FOR LONDON

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

TO GARDENERS.

HORTICULTURE EXTRAORDINARY.

J. WEEKS AND CO. respectfully invite the above Gentlemen when visiting the Metropolis to an inspection of the numerous and striking novelties exhibited at their Horticultural Works and Fruit Forcing Show Establishment.

Horticultural Buildings in choice variety; Patent One-Boiler System of Heating, in efficient working perfection; their wonder-working Upright Tubular Boilers of manifold sizes; an entirely original Ventilating Apparatus, the most perfect ever invented. An exuberance of magnificent Pines in all stages and splendid condition, grown on various systems. The Grape Vines, Peach, Nectarine, and other Fruit Trees have proved to be the admiration of all visitors. The numerous Horticultural Works in course of construction throughout the various workshops, showing the superiority of Workmanship by Steam Power, are well worthy of notice.

JOHN WEEKS & Co., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, S.W.

HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.

KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they Erect all kinds of Conservatories, Vineries, Greenhouses, &c., combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & Son have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

HENRY J. MORTON AND CO.

2, Basinghall Buildings, Leeds.

GALVANISED IRON WATER CISTERNS

for Cottage Houses, &c., to contain 50 gallons, 25s.; 80 gallons, 30s. each; and 140 gallons, 36s., and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

GALVANISED IRON PUMPS

for Liquid Manure or Domestic Use, 3 inches diameter, 30s. and 32s. 6d. each; Tail Pipe for same at from 10d. per foot.

GALVANISED IRON SWING WATER BARROWS

for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32s. 6d. each.

WILLIAM HEALY

(Late Burbridge & Healy),

118, Dorset Street, Fleet Street, London, E.C.

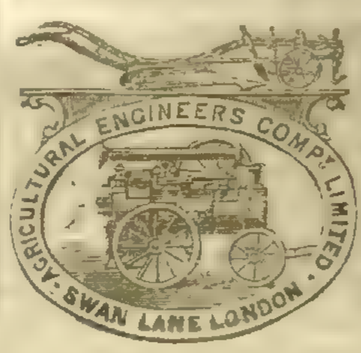
HOT-WATER APPARATUS MANUFACTURER.

HOT-WATER APPARATUS.

J. JONES begs to offer a complete HOT-WATER APPARATUS FOR GREENHOUSES, at the following prices, delivered free to any Railway Station in England:—

Size of House.	With Cylinder Boiler.	With Saddle Boiler
20 feet by 10 feet	£8 10 0	£9 0 0
25 ,, by 12 ,,	10 0 0	10 10 0
30 ,, by 12 ,,	11 10 0	12 0 0
30 ,, by 15 ,,	13 10 0	14 10 0
40 ,, by 15 ,,	16 10 0	17 10 0
50 ,, by 15 ,,	18 10 0	20 0 0

The above prices include Boiler, strong Furnace Doors, Bars, Soot Doors, Cistern, Damper, Hot-water Pipes and Connections, Air Pipes, &c., all ready for fixing, and of the best quality. Further particulars will be sent on application. Parties ordering must send plans, showing doorways, position of boiler, &c.—J. JONES, Hot-water Apparatus Manufacturer, 6, Bankside, Southwark, London, S.E.



LAWN MOWERS, ROLLERS, WATER ENGINES, CHAIRS, TABLES, and every description of Garden requisites.

HURDLES, GATES, WIRE FENCING, &c

CARTS, MOWERS, HAY-MAKERS, HORSE RAKES, DRILLS, PLOUGHS, &c.

STEAM ENGINES, THRESHING MACHINES, HORSE WORKS, MILLS, CHAFF CUTTERS, &c

PUMPS, CHURNS, MANGLES, BINS, &c.

Price Lists free upon application to

THE AGRICULTURAL ENGINEERS' CO. LIMITED,
SWAN LANE, UPPER THAMES STREET, LONDON, E.C.

GLENFIELD PATENT STARCH, used in the royal laundry, and pronounced by her Majesty's laundress to be the Finest Starch she ever used. Sold by all chandlers, grocers, &c., &c.

WOTHERSPOON & Co., Glasgow and London.

FOUNTAINS IN CAST IRON, from 30s. each
VASES, PORTABLE IRON CONSERVATORIES,
STATUES, FLOWER STANDS,
PORTABLE HEATING APPARATUS, with TRUSS'S JOINT
DRINKING FOUNTAINS.

Please address in full, WILLIAM HOOD Horticultural Engineer and Founder, 65, Upper Thames Street, London, E.C.

MECHI AND BAZIN'S DESPATCH BOX WRITING CASES in Russia and Morocco leather are made in 20 different forms and sizes, fitted with real Bramah and Chubb Locks. Also others of a cheaper description. Prices vary from 1*l.* to 50*l.* Portable writing and dressing cases, brush cases, courier bags, picnic cases, wicker luncheon baskets, sporting knives, wine and spirit flasks, &c.—112, Regent Street, W., and 4, Leadenhall Street, E.C.

NEW FERNS.

MESSRS. VEITCH AND SON have the pleasure to offer plants of the two following interesting new Ferns:—

ATHYRIUM FILIX-FŒMINA, VAR. MULTICEPS (MOORE).

A distinct, tasselled variety of Lady Fern, found in the neighbourhood of Truro, in Cornwall, quite hardy, and one of the most beautiful varieties yet obtained. The fronds and pinnæ are multifid-crisped on same general plan as those of *multifidum*, but they combine with the symmetrical fronds of this form the singular lacerate tassels of *depauperatum*. The fronds are vigorous, with a corymbosely tufted terminal tassel, and the pinnæ are also tasselled, forming a border to the frond. It is a most charming variety. A plant exhibited before the Floral Committee of the Horticultural Society on August 11, 1859, was awarded a FIRST-CLASS CERTIFICATE OF MERIT, as a new ornamental hardy Fern. Price, strong young plants from spores, 7*s.* 6*d.* each; smaller ditto, 5*s.* each.

LOMARIA BANKSII (HOOKER FIL.)

A new dwarf Fern from New Zealand. The fronds grow 6 inches or more in length, and are narrow, pinnate, dark green, spreading, with dark-coloured ribs and stalks. The pinnæ are broadly roundish oblong, smaller at the base. The fertile fronds are short, erect, and grow in the centre of the tuft. It is a pretty little tufted plant for ornamental rock-work, or for Fern-cases, quite distinct in character, and nearly or quite hardy. Price, strongest size, 10*s.* 6*d.*; smaller ditto, 7*s.* 6*d.* each.

Exotic Nurseries, Chelsea and Exeter.—July 7.

NEW TREE FERN.

THE HORTICULTURAL ESTABLISHMENT OF H. LAURENTIUS, Leipsic, Saxony, begs to offer Plants of the following beautiful and highly interesting New TREE FERN.

ASPLENIUM GLABERRIMUM (METT.).—Truncus erectus, paleis lanceolatis, acuminato-setosis, rigidis, nigris, densè onutis; petiolus 4-6″ longus; lamina 1-1½′ longa, coriacea, glaberrima, supra nitida, lanceolata-oblong, acuminata, pinnatisecta, apice pinnatifida; segmenta lateralia multijuga, petiolata 3-4″ longa, 4-6‴ lata. *Java.*

Price, strong plants from spurs, three years old, 2*l.* 5*s.* each.

Agent: Mr. W. LORBERG, 34, St. Mary-at-Hill, London, E.C.

Leipsic.—July 7.

TO THE TRADE.

JOHN KEARSLEY begs to offer as under:—

	Per doz.—*s. d.*		Per doz.—*s. d.*
Caladium Chantinii	60 0	Phlox General Radetzky, Criterion, &c.	3 0
,, argyrites	60 0	Solanum capsicastrum	3 0
,, marmoratum	12 0	Lobelia speciosa	2 0
Farfugium grande	9 0	Geraniums Flower of the Day, Golden Chain, Perfection, Brilliant, Bijou, &c.	4 0
Maranta alba lineata	18 0	Verbenas Snowflake, Purple King, &c.	2 0
Begonia Marshallii	18 0	Hoya variegata	18 0
Pittosporum variegatum	9 0		
Isolepis gracilis	3 0		
Cineraria maritima	3 0		
Eugenia Ugni	4 0		

The Nurseries, Woodhouse Hill, near Leeds; and Seed Establishment, 44, Vicar Lane, Leeds.

PLANTS OF CABBAGE, SAVOY, KALE, BROCCOLI, CAULIFLOWER, AND CELERY.

JOHN CATTELL begs respectfully to inform the public that he has a plentiful supply of Plants of the above superior true sorts, which he will forward to order on receipt of postage stamps or Post-office Order, made payable here, at the following prices, package included:—All the sorts of Early Cabbage, Savoy and Kale, including Brussels Sprouts, 6*d.* per 100; 4*s.* 6*d.* per 1000. All the sorts of Autumn and Spring Broccoli, 8*d.* per 100; 5*s.* 6*d.* per 1000. Early and Late Cauliflower and Red Pickling Cabbage, 10*d.* per 100. Bedded Celery, 8*d.* per 100; 5*s.* 6*d.* per 1000. Drumhead or Cattle Cabbage, 3*s.* 6*d.* per 1000. Packages containing plants to the value of 1*l.* and upwards will be delivered carriage free to London, Croydon, and the Edenbridge Station of the South-Eastern Railway.

Seed of Cattell's Reliance Cabbage may be had free by post at 1*s.* per packet, containing half an ounce.

Nursery and Seed Establishment, Westerham, Kent.

70 FINEST NEW VERBENAS OF 1860 AT 6*s.* per dozen, or 30*s.* the set entire. Discount to Trade.

Dr. Sankey	Nestor	Electra
Fair Star	Mavourneen	Miss Dolby
Thetis	The Bride	Star
Flora	Conqueror	Diadem
Mrs. Moore	Mrs. Spencer	Volunteer
Weiss	Apollo	

The above Mr. Turner's set.

Odorata superba	Julia	Delicata
Lilacina	King of the Verbenas	Lizzy
Clara	Harry Law	James Stamps
Constancy	Oculata	Great Eastern

The above Messrs. Moore & Son's set.

Mrs Ward	Reine des Fleurs	Captivation
Purple Prince	Grandis	Lady Adair
Violacea superba	Reine Blanche	Flixtonensis
		Nobilissima

The above Messrs. Bowler & Ward's set.

Concordia	Garibaldi	Ocean Pearl
Diana	Ida	Aurora
Undine	Duc de Grammont	Kenilworth
Morning Star	Merrie Monarch	Titian
Saladin	Claudia	Prince Arthur
Fascination	Victorine	Cupid
Invincible	Enchantress	Jupiter
Welcome	Earl of Shaftesbury	Belvidere
Negro	Edith	Gustavus
Angelique	Fanny Stracy	

The above Messrs. E. G. Henderson & Son's set.

Lady Middleton	Striata perfecta

All the above fine plants well hardened.

HENRY MAY, The Hope Nurseries, near Bedale, Yorkshire.

NEW SEED NOW READY.

DOBSON'S Splendid HYBRIDISED CALCEOLARIA SEED has now stood the test several years, and has attained a world-wide celebrity. The strain is acknowledged by those who have grown them to be the most beautiful and varied that has ever been offered to the public, and we have no hesitation in saying that it is second to none. Amateurs or the Trade desirous of producing a really splendid collection should purchase a packet of this Seed, which is warranted to please. We are now sending out New Seed of 1860, in sealed packets, at 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each, all one quality. The seed may also be obtained in the packets of our Agents, the principal Nurserymen and Seedsmen.

☞ We beg to request that when ordering, "Dobson's Hybridised Calceolaria" may be distinctly asked for, every packet of which is sealed in two places with red wax, and stamped with our name and address, without which none is true.

JOHN DOBSON & SONS, Seedsmen, Woodlands Nursery, Isleworth.

SEEDS FOR THE SEASON.

MESSRS. E. G. HENDERSON & SON,

ST. JOHN'S WOOD, LONDON, N.W.,

Respectfully call attention to the present month as the most suitable period to sow for Stock the following

D E Ç O R A T I V E P L A N T S

FOR THE GREENHOUSE, CONSERVATORY, AND FLOWER GARDEN,

To insure their respective bloom in the ensuing Winter, Spring, and Summer Months of 1860—61.

CINERARIA and PRIMULA SINENSIS FIMBRIATA, finest quality, 2*s.* 6*d.* per packet.
AURICULA, 1*s.* 6*d.* per packet.
CARNATION, first quality, 2*s.* 6*d.* PICOTEES, 2*s.* 6*d.*
YELLOW CARNATIONS, 2*s.* 6*d.*
TREE, or Winter-flowering, do. 2*s.* 6*d.* PINKS, 1*s.* 6*d.*
CYCLAMEN, 1*s.*; 6 varieties, do., 3*s*
ALSTRŒMERIA CHILIENSIS, 6*d.*
HOLLYHOCKS, first quality, 1*s.* 6*d.*; 12 good varieties, do., 2*s.* 6*d.*
PANSIES, 12 good varieties, 5*s.* POLYANTHUS, 1*s.*
TRITOMA UVARIA, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.*
HUMEA ELEGANS, 6*d.*, 1*s.*
AQUILEGIAS, 6*d.* and 1*s.*, mixed.

CALENDRINA UMBELLATA, 6*d.* and 1*s.* MIMULUS, 1*s*
ŒNOTHERA MACROCARPA, 6*d.* and 1*s.*
CANTERBURY BELLS, four Varieties, 1*s.* 6*d.*
PYRETHRUM, new Varieties, figured in the Illustrated Bouquet, 1*s.* each, or 8 varieties mixed, 2*s.* 6*d.*
SWEET WILLIAM, four Select Varieties, 1*s.* 6*d.*
New Auricula-flowered, the most beautiful, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.*
(See Seed Catalogue.)
CALCEOLARIA (for Conservatory decoration), the large-flowered section, now in bloom. New Seed will be forwarded when ripe to those now ordering.
STOCKS, Scarlet intermediate, or London variety.

Wellington Nursery, St. John's Wood, London, N.W.

EARLY TURNIPS

FOR FEEDING OFF PREVIOUS TO SOWING WHEAT.

SUTTON'S EARLY SIX WEEKS, 1*s.* per lb., 48*s.* p. bush.
POMERANIAN WHITE GLOBE, 1*s.* ,, 48*s.* ,,
SUTTON'S LINCOLNSHIRE RED, 1*s.* ,, 48*s.* ,,
(The heaviest cropper known.)

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THE FINEST STOCK OF THE ABOVE IN THE NORTH OF ENGLAND.

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EDMUND P. DIXON, NURSERYMAN, HULL,

takes this opportunity of offering a splendid healthy stock in vigorous plants, well feathered to the ground, and fully acclimatised to the northern counties. The whole are in splendid condition and well worthy of inspection. E. P. D. having so large a stock can offer on very liberal terms. PRICE LISTS on application either at

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Abies, Whitmanniana, 1 to 2 ft.
,, orientalis, 1 to 2 feet
Araucaria Bidwilli, seedlings, 2 feet
,, Cooki, 1 to 3 feet
,, Cunninghami, a fine specimen in a tub, 5 to 6 feet high, very handsome, 12*s.*
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,, Ditto, 21*s.* to 42*s.*
Arthrotaxus Doniana, a splendid plant, 18 inches high, 63*s.*
,, selaginoides, 24 ins., 84*s.*
,, Ditto, small, 10*s.* 6*d.*
Biota cupressiformis, 6 inches to 2 feet
,, dumosa, 6 inches to 1 ft.
,, frenelloides, very distinct, 6 inches to 1 foot
,, glauca, 6 inches to 5 feet
,, Meldensis, 9 to 18 inches
Biota monstrosa, small
Cephalotaxus Fortunimas., 3 to 6 feet, strong seedlings
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Chamæcyparis glauca
,, compacta, 6 ins., 2*s.* 6*d.*
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Cupressus Bregeoni, 9 ins. to 2 feet
,, Corneyana, 6 ins. to 5 ft.
,, Lawsoniana; a splendid stock of fine handsome plants of this truly beautiful species, 6 ins. to 5 feet
,, M'Nabiana, 1 to 2 feet
,, torulosa compacta, 6 ins. to 2 feet
,, thujæfolia
Dacrydium Franklini, 6 to 18 inches
Juniperus Bedfordiana
,, hibernica compressa
,, fragrans
Juniperus glauca
,, japonica
,, Langoldiana
,, tamaracifolia
,, thurifera
Libocedrus chilensis
,, Donniana
Picea appolinus
,, amabilis
,, bracteata, one magnificent specimen, 8 feet high, in first-rate condition, 21*0s.*
,, grandis, from seed, 9 ins. to 2 feet
,, lasiocarpa, 1 to 2 feet
,, nobilis, 6 inches to 3 feet
,, Nordmanniana, 1 to 4 ft.
,, Pinsapo, 6 inches to 2 ft.
Pinus Bungeana, 5 feet
,, Fremontiana, 2 feet
,, macrocarpa
,, parvifolia
,, padufia
Podocarpus andina, 1 to 5 ft.
Podocarpus nubigena
,, saligna
Retinospora ericoides
Taxodium sempervirens
Taxus adpressa
,, canadensis
,, Dovastoni
,, ericoides
,, japonica
Thuja aurea
,, Craigiana
,, caucasica, 6 ins. to 18 ins.
,, gigantea, 6 ins. to 6 ft.
,, intermedia
,, Lobbi, 6 ins. to 8 ft.
,, microcarpa
Thujopsis borealis, 6 ins. to 7 ft.
,, dolobrata, small, 21*s.*
Torreya grandis
,, myristica, 6 ins. to 5 ft.
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,, taxifolia
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A. STANSFIELD AND SON, Vale Nursery, Todmorden, have great pleasure in announcing that they are now prepared to send out good strong plants of the following new and rare BRITISH FILICES.

ATHYRIUM FILIX-FŒMINA PLUMOSUM.—Mr. Moore characterises this as "the most remarkable and most beautiful Fern ever discovered in the British Isles." A First Class Certificate of Merit was awarded to it at a Meeting of the Floral Committee of the London Horticultural Society held on the 28th June last, 21*s.* See figure and description in Vol. 2 of Moore's octavo edition of "Nature-printed British Ferns."

Athyrium f.f. apnæforme, 7*s.* 6*d.* | Athyrium f.f. flexuosum, 5*s.*

Athyrium f.f. irregulare				7*s.* 6*d.*
Blechnum spicant caudatum				10 6
Do.	do.	lancifolium		10 6
Do.	do.	strictum		10 6
Do.	do.	subserratum		7 6

The usual discount to the Trade.

A. S. & Son's FERN CATALOGUE, with Supplement, containing the above and other rare and interesting Ferns, British and Exotic, in all about 600 species and varieties, may be had on application.—Vale Nursery, Todmorden, July 7.

CALADIUM CHANTINII.

MESSRS. PARKER AND WILLIAMS beg to state that they can supply fine Plants of the above (the finest species in cultivation) at 10*s.* 6*d.* each. — Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

NEW DWARF PELARGONIUMS.

MESSRS. VEITCH AND SON beg to offer plants of the undermentioned new and distinct variety of PELARGONIUM, which they feel assured will give satisfaction.

PELARGONIUM MRS. PONSONBY MOORE (VEITCH).

A dwarf-habited free-blooming and *very attractive variety* of Pelargonium admirably adapted for decorative purposes. The flowers are of a bright rich rosy crimson, the two upper petals marked with moderate-sized blotches of intense black, and the lower petals blotched with smaller spots of the same, producing a rich and effective contrast. This variety was much admired at the exhibition at the Crystal Palace on June 8th; and also at the Royal Botanic Society on June 15th, 1859; at both of which it obtained the highest award given to this class of plants. No collection should be without this charming variety. Price 10*s.* 6*d.* each.

Exotic Nurseries, Exeter and Chelsea.—July 7.

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SAVED FROM THE
CHOICEST PRIZE SORTS.

LUCOMBE, PINCE, AND CO. have now ready for sending out SEEDS of very superior CINERARIAS, which have been carefully saved from fine selected flowers of all the best new varieties.

The great satisfaction which their Cineraria Seed has given for several successive years, has induced them to pay even greater attention to the quality, which enables L., P., & Co. confidently to recommend the Seed of this present season's saving, as being vastly superior to any previously sent out by them.

Packets sealed and warranted at 2s. 6d. each, free by post.

The present is an excellent time for sowing, and as their stock owing to its select quality is limited, early orders are respectfully solicited.

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	P. packet—s.	d.
BROCCOLI, Penzance White (Mitchinson's) ..	1	6
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CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
" Moor Park, extra fine..	1	0
MELONS, all the best varieties	1	0
TOMATO, Early Red (Powell's)	1	6
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed ..	2	6
CINERARIA, from finest named varieties ..	2	6
" maritima	0	6
CELOSIA aurea pyramidalis	1	6
" crimson-feathered variety	1	6
COCKSCOMB, dwarf, extra fine	1	0
DIANTHUS Heddewiggi	1	0
LOBELIA erinus speciosa (true)	1	0
PANSY, from named varieties	1	0
PERILLA Nankinensis	0	6
PRIMULA sinensis fimbriata	1	6
SOLANUM capsicastrum	1	0
" pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

An inspection and comparison with the prices of several Firms advertising Seeds carriage free is respectfully solicited.

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A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY
BEING ABOUT TO RESUME THE
IMPORTATION OF SEEDS AND PLANTS

by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, JULY 7, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	July 10	Horticultural (Fruit Committee) at St. Martin's Place	Noon
THURSDAY,	— 12	National Rose, at Crystal Palace	10 A.M.
		Horticultural (Floral Committee) at St. Martin's Place	Noon

WHATEVER difference of opinion may exist as to the various methods which have been proposed or adopted with a view to the prevention of decay in vessels, there is one, viz., proper seasoning, respecting which no question is attempted to be raised. People have disputed and still dispute respecting the comparative merits of winter and spring-felled timber, in either case their conclusions resting mainly on uncertain data, but this question really resolves itself into one of time, the result depending mainly upon the comparative rapidity with which the water can be eliminated from the wood. The actual quantity of fermentible matter, or of matter calculated to promote fungous growth, independent of the water, is probably very slightly different in either case, though its condition may be dissimilar.

We may consider it as a point beyond dispute that the presence of water in wood, where there is no admission of water from without or where damp air is not pent up, is the main disposer to decay; and when it is considered that the best Oak loses one-third of its weight in the process of seasoning, mainly from the elimination of water, the immense importance of the process will at once be evident.

Where there is a free current of air and wood has been properly seasoned, good Oak appears to be almost indestructible. The roof of Westminster Hall, of Bushmead Priory, in Bedfordshire, the shingle-built church at Greenford, in Essex, &c., are cases in point. In some instances the sap-wood has never been removed and is still sound, equally free from insects and natural decay. There is no evidence to show at what period it was customary to fell the timber for such purposes. There is indeed an Act of the 2d of JAMES I., permitting winter felling of Oak for the purposes of domestic buildings, ships, mills, &c., and absolutely prohibiting its being felled for other purposes when bark was at a certain price, except between the first day of April and the last day of June, which should seem to imply that the popular notion was in favour of winter felling. And it is perhaps principally on this account that it has been assumed that the Sovereign of the Seas and the Royal William, which were free from dry rot after the lapse of many decades, were built with winter-felled timber. The Montagu, which was most certainly so built, as a matter of experiment, required extensive repairs in 10 years, though she had little service at sea; and the experience of our dockyards is at the present day against the practice, though a higher price is still given for such timber.

Seasoning consists in getting rid as completely as possible of such principles in the wood as are favourable to decay, and at the same time preserving its strength and tenacity. The injecting materials which may induce a different chemical condition belong obviously to another category. The methods employed may be reduced to three—1, boiling or steaming; 2, the application of heat without moisture; and 3, gradual desiccation.

1. Boiling is practised on a large scale for the purpose of making wood flexible, so as to adapt it to the curvature of the ships' sides. In some kinds of Oak the new form given to the wood is permanent; in others, it is retained only for a certain period. It is obvious that the process of boiling, if continued for a sufficient time, will destroy any spawn that may be present in the wood, and it is asserted that if a log of wood is divided into two, and half left in its natural condition and the other boiled, the one when placed in a situation favourable to the growth of Fungi will soon be covered with spawn while the latter will never produce the smallest Fungus. Whether this be true or not we cannot assert from our own experience. The boiling will doubtless get rid of much soluble matter from the wood, and will promote the coagulation of any vegetable albumen which may exist in the cells, but we doubt greatly whether the wood so treated would be hostile to the growth of Fungi which had spread from neighbouring timber.

2. As regards the application of heat without moisture, it must be remembered that irreparable mischief may be done to timber by too rapid drying, from which fearful cracking may be apprehended, if no other evil arises. Charring is undoubtedly an antiseptic process, but the heat can scarcely be expected to penetrate the heart of the log, and as regards the growth of Fungi, it is well known to every Fungologist that few conditions of timber are more favourable to the growth of Fungi, especially in warm countries, than partial charring. It would be easy to mention at least a dozen species which abound in such localities, and at Rome it is the practice to char partially stumps of Hazel with a view to promote the growth of a species of Polyporus, which is largely consumed as an article of food in that neighbourhood. The burnt soil of wood, especially where mixed with vegetable matter, is the source of many a curious species.

Mr. LUKIN many years ago proposed a method of seasoning which was tried at Woolwich, but which ended in a signal failure. A green Oak log was covered with pulverised charcoal and placed in a hot stove. When the process was completed, the log, though it had lost much weight, appeared close and compact externally, but when divided it was found to be a loose network of fibres without any consistency.

3. In gradual drying we know of nothing to impair the strength of the timber, provided the process be conducted properly. The usual method with Elm and Oak, is to begin by exposing the trees to the weather for a limited time, till in the one case the bark separates, and in the other the sap-wood is destroyed. We feel confident, from our own experience, that if Elm is exposed beyond the first season mischief is likely to ensue from the penetration of Fungus spawn into the wood. There is however some difficulty about the matter, as Elm is so apt to split and warp if cut up too soon. With Oak we believe that the process is harmless in ninety-nine cases out of a hundred. *Polyporus versicolor* and *Stereum hirsutum* soon destroy the sap-wood, and when that is dubbed off the heart-wood is in general perfectly sound. We have scarcely seen more than one instance to the contrary, and that in the case of a very coarse loose piece of timber entirely unfit for shipbuilding. We have seen instances in which a large tree has for years been exposed to the weather without any material injury, except a tendency to crack from the circumference towards the centre, the wood itself remaining as free from decay as the day on which it was felled. Such a system is not however to be recommended in general, and when the logs are at once sawn up they cannot be placed too soon under cover, care being taken to secure a thorough draught through the stack. Where wood has been cut up green and stacked in the open air, decay will sometimes take place in the centre though the outer surface may be perfectly dry. This was the case in some experiments instituted by Mr. SOWERBY when examining the Royal Charlotte, where almost every log after six years' exposure became decayed internally, doubtless from the moisture being pent up from the rapid desiccation of the surface. The effect was exactly like that which we have mentioned as arising from the covering green wood with a coat of paint. Under the system at present adopted in the dockyards, we believe that so long as there is no fresh admission of moisture from without not a single log fails. And a comparison of the duration of timber so prepared with that submitted to the various methods which have been proposed for the prevention of decay, is so decided in its results that at present perfect seasoning is considered as the most likely method to secure exemption from decay, so far as it can be secured in structures where it is so difficult to exclude moisture and to establish a proper ventilation.

AMONG the good things sent from China by Mr. FORTUNE were several ROSES with entirely new features, the value of which in gardening is hardly yet sufficiently appreciated. Among them was a kind which, since it wanted the fanciful properties that Rose amateurs are pleased to insist on, has to this day remained almost unknown. It was deficient in colour and size, and would "do no good" in an exhibition tent; so said those who had the care of it. Its merits indeed were of but an humble nature; it was merely hardy, very early, evergreen, pretty, and a prodigious rambler, ready to contend in a race with any Ayrshire or Musk Rose in creation. As for its flowers they were white it is true, tinged with pink on the outside, sweet-scented, and grew in endless profusion in small clusters; but then the petals would not stand well up, and the flowers were no bigger than some Noisette: smaller even than those of Joan of Arc. So, after the Horticultural Society had given away a few plants the original was nailed to a wall, left there, and forgotten.

At last, on the 20th of July, 1859, we received from Mr. ROGERS, of River Hill, near Seven Oaks, one of the most enthusiastic as he is one of the most skilful amateur gardeners in the United Kingdom, the following letter referring to an answer to his inquiry as to what a Rose was of which he had forwarded specimens for examination—

"Thanks for your memorandum about the Rose. Although it may not please *Rose fanciers* it is a very fine and remarkable climbing Rose, growing 10 to 12 feet in a season, flowering *earlier* than any other I know, and continuing longer in bloom. Those I sent you were late and imperfect blooms, for it had been in flower nearly a month. It is both good in form and sweet-scented, and a profuse flowerer—flowering both in clusters at the ends and all along its shoots, thus partaking both of the habit of a Noisette and of a Hybrid China. It is perfectly hardy, and I should say was worth distributing by the Horticultural Society as a very *distinct and hardy climbing Rose*. It is by far the most hardy of all those which FORTUNE sent over, and I know no Rose which has much resemblance to it. If hybridised it would give rise to a distinct class of climbing Roses."

Upon receipt of this Mr. FORTUNE was asked for the history of his importation, when he replied as follows:—"The white climbing Rose to which your correspondent Mr. ROGERS alludes is well known to me. It is cultivated in gardens about Ningpo and Shanghae, and is held in high esteem by the Chinese; indeed it is one of the best white kinds which I have met with in China. It is frequently seen of a large size covering trellis work formed into alcoves or built over garden walks. For this purpose it is well suited, as it is a luxuriant grower, and it blooms profusely and early. This Rose was amongst my first importations to the Horticultural Society, and is no doubt well worth cultivation in English gardens. It may not please in every respect Rose-fanciers, but it is very beautiful nevertheless, and it has some advantages peculiar to its kind, which are pointed out by your correspondent."

We now hope that this beautiful thing will meet with the favour it eminently deserves. As a pillar Rose it is invaluable.

We call it the SPRING ROSE OF SHANGHAE. It seems to be a mule between the common China and Rosa multiflora, but whether the result of one intermixture or some third or fourth cross, is

probably as unknown to the Chinese as it is to us. The fringed stipules reveal its relation to Rosa multiflora, as its scent and the peculiar gloss and texture of its leaves disclose its kindred with Rosa indica. Mr. MOORE should look to it for his Floral Magazine.

And now that we are upon the subject of Roses, one word may be said about ISABELLA GRAY, that "worthless American cross-bred, which will only flower under glass." It is known to our readers that we have never placed our faith in the fair lady's detractors, her first ancestor, *Rosa rubifolia*, having nothing tender in his nature. All that it appeared to us to demand was good soil, a roasting south wall, and exemption from the favours of the pruning knife. This evil spring has confirmed our opinion, such a Rose in such a place having bloomed in the greatest profusion during the whole month of June. The flowers were perfect in size and colour, and many opened well. Others, indeed, rotted on their stalks before they were half expanded; but the same fate befel such hardy Roses as the Queen and Coupe d'Hébé. Had Isabella Gray been screened by a penthouse, or had the weather been better, the plant would have been a Rose grower's envy: for the half expanded flowers are most beautiful.

We may add that a Cloth of Gold in a similar situation, equally warm and sheltered, was so damaged by October's frost that its main branches died back, and there is no sign at present of Roses for this year, although it is now pushing most vigorously, and will soon recover its lost ground.

WE hear that the rare Winter's Bark shrub, DRYMIS WINTERI, is now flowering in the open air in the Earl of ILCHESTER'S garden at Abbotsbury. This we believe is the first instance in Europe. In the same favoured locality Chamærops humilis is also blossoming finely in spite of the wet.

MYCOLOGY.—No. XXII.

GEASTRUM LIMBATUM, *Fr.*—The beautiful Fungus which forms the subject of our present illustration is one of a small group very nearly allied to the Puffballs, and, like most of the species of the genus, far from common—at least in Great Britain. Though accustomed to keep a sharp look-out for such matters for the last 40 years, we have met with three species only in any abundance, and of these one alone has appeared for several successive seasons.

They are at once distinguished from Lycoperdon by the extraordinary development of the outer coat or peridium, and its perfect distinctness, or, as the Germans would say, differentiation from the inner sac which incloses the spores and threads which are so prominent a feature in the organisation of Puffballs. This coat is usually composed of two or more distinct layers, which are sometimes entirely separable except at the tips of the lobes into which the outer peridium is always divided at an earlier or later period, and when the upper coat of the two after the expansion of the peridium separates from the lower, it becomes inflated and lifts up the inner peridium with it, which is more or less globose and head-shaped, and the whole distantly resembles one of the legless balancing figures which are sent over with other similar fancies from Holland for the amusement of children. The older herbalists, who were always on the look-out for such resemblances, which they fancied indicative of medical virtues, have not hesitated to add the features of a man to the inner peridium, and to designate the whole "Anthropomorphus" or Mannikin.

We know not however that it has any especial virtue. Such as it has, it possesses in common with ordinary Puffballs, and is probably as available an anæsthetic where it occurs in sufficient abundance.

The present species is closely allied to the Mannikin, but the outer peridium does not separate into two coats, and the orifices by which the spores are ultimately discharged is not folded like a plaited frill, but simply fringed. The species is very uncommon, though it occurs here and there at distant periods in small quantities.

The application of moisture to these plants is sometimes singularly different in its effect. In some of them the natural disposition of the outer coat, when dry, is to remain expanded, but in others, as in G. hygrometricum, which is one of our rarer species, though perhaps the most widely diffused of any in continental Europe, especially in the warmer parts, the rays of the outer coat contract with extreme firmness and rigidity on the inner, so as frequently to burst the thinner spore-bearing sac. In this condition, like the Rose of Jericho or the capsules of Mesembryanthemum, they are blown about everywhere by the winds as dark ugly deformities; but the first shower causes them to expand and attract notice by their pretty stellate form.

When young their structure is precisely that of Puff-balls; but even were they more abundant their tough outer coat, soiled with mould, would forbid their culinary use. *M. J. B.*

GEASTRUM LIMBATUM.
(Copied by permission from Greville's Scottish Cryptogamic Flora)

THE HORTICULTURE OF SOUTH AUSTRALIA.

DURING the last years our kitchen gardens have been by the introduction of improved varieties of culinary vegetables enriched to such an extent, that our assortment in point of value can bear comparison to that of England.

The climate is admirably adapted for all European vegetables, from the old Scotch Kail to the delicious Melon, the latter surpassing those of English growth in flavour and tenderness. Yet the climate is not without drawbacks to the culture of vegetables at certain seasons, such as long-continued droughts with severe hot winds during the summer, or as heavy rain during the winter, when culinary crops suffer most severely in untrenched and undrained soils. But our spring and autumn are so congenial to growth, that amazing crops are produced even with the most simple modes of treatment.

The soils used for growing vegetables vary from the stiff adhesive clay to the sterile sandy soils, the worst of which produce crops to advantage at some season, when properly managed; but the most productive of all are either the deep brown loamy or black vegetable soils, well pulverised and free of stagnant water.

The best situations are low banks, sloping to the rivers or creeks, and low flats, if not subject to floods, with almost any exposure, the north being the least favourable. Where the site is on a declivity, the upper portion is selected for crops of winter growth, and the lower portion generally for crops of summer growth.

A few remarks on some of the leading crops will assist in giving some idea of the culinary vegetable resources of this colony.

Cabbage.—Good supplies can be had daily all the year, as far as the growth of this wholesome and nutritious vegetable is dependent on climate. But the aphides have become so destructive during the last four years that crops can only be brought to perfection by great skill and attention; the chief remedies seem to be a perpetual examination of the plants, and frequent liquid stimulant applications, principally of guano, to the young growing crops; and it is worthy of remark that, in localities with cold underground, the ravages of the aphis are more readily subdued than elsewhere.

Cauliflower.—The principal crops are fit for use in June and July, and from October to January. To this as well as to all other Brassicas, the aphides have become so very destructive that it is now comparatively little grown; but it was previously cultivated extensively, and under favourable circumstances produced very large heads of superior quality.

Peas.—Supplies can be had daily all the year round, but are sparingly to be got in very wet winters. The chief crops are available from October to January, then less abundantly obtained till March, and largely again till June. Although all English varieties are productive, dwarf sorts preferable.

Broad Beans are generally less esteemed, because of the wet winters, which cause them to produce only haulm and flowers, and the dry summers, which exhaust their fruit-bearing properties. They are only successively productive from October to December.

Kidney Beans are excellent summer crops, withstanding hot winds well, and forming an excellent substitute for Peas, when the latter become scarce in midsummer. The supplies are available from November till May. Seeds ripen freely.

Onions.—Young green Onions may be had daily; but the principal crops of those intended for keeping ripen only from November to February. They are cropped extensively, and their production is large and fine. Seeds generally mature well.

Carrots.—Daily supplies can be had without any difficulty. The chief crops are ready in January, and the winter storing crops two months later. They are extensively cultivated, and in size and flavour they are superior to those of England. Seeds generally mature well.

Parsnips, although long neglected, are now very requisite and esteemed. The main crop is ready in January, and continues on till July in deep good soils; they grow exceedingly large, and are very superior in quality.

Turnip.—Spring, summer, and autumn crops can be with difficulty obtained on account of the prevailing destructiveness of the aphis, and the dry hot nature of the climate.

Potatoes.—Three crops may be produced in one twelvemonth; one in May, the leading one on early soils in October and November, and another on late soils in January and February. They are, as may be imagined, extensively grown, producing heavy crops of fine quality, but their keeping properties are shortened on account of the mild winters.

Asparagus, Rhubarb, and Seakale bear very abundantly in their seasons. The former may be regarded as quite equal to any grown in England. Rhubarb produces good stalks in spring, gets rather exhausted and dormant in midsummer, and again grows freely in autumn. Seeds of the former only mature well.

Cucumbers and Vegetable Marrows.—On tolerably good soils there is no more trouble or care bestowed in the sowing and growing of these crops than there is with any common vegetable, they being simply sown during October in patches, each 5 to 7 feet apart, and if they are not destroyed in their infancy through cold winds, they are allowed to grow to run over the ground until they cover it. At this stage the plants furnish an abundance of beautiful tender fruit, some of the finest of the Cucumbers measuring 20 to 24 inches, and even more. Supplies are obtainable from December to the end of May.

Melons.—The Rock and English Green and Yellow-fleshed varieties being more of a rich heavy nature, although not quite so much appreciated as others, are grown in very large quantities. These commence ripening their fruit about the end of January. The crops generally are very heavy, the plants having 6 to 8 fruits each, weighing from 4 to 10 lbs.

Tomatoes are sown in October, and ripen their fruits very profusely from January onwards.

The above remarks apply more particularly to the gardens in the environs of Melbourne.

The Chinese Yam has recently been cultivated, and promises to become an additional table vegetable of the colony. The Long-podded Chinese Bean, Vigna chinensis, is found to be hardy in Victoria, and would unquestionably luxuriate in the northern districts.

THE ORCHARD PRODUCTS.

Perhaps there is not a more favoured land upon earth than Victoria for producing, in abundance and perfection, a variety of the finest fruits, whether these are considered as a mere article of luxury, or as constituting one of the necessaries of life adapted to the wants of man in this hot climate, or as likely to become one of the staple articles of our commercial exports at no distant period. Nearly all the fruits that can be cultivated in any of the temperate latitudes can be produced here in the briefest space of time with the most certain success. However sterile and unpromising the land may appear, the simple act of breaking up the earth, and of introducing drainage when necessary, appear to act as magic on the newly planted ground, converting the barren-looking wilderness into the fruitful garden.

It is astonishing to observe how very rapidly and how vigorously the trees grow, when placed in favourable situations, under good treatment. But horticulture has to contend with the long parching droughts of the summer months, experienced particularly in low open districts, and occasionally with fierce burning winds, which, in some years, have had the effect of destroying the crops of fruit on the trees. A hot wind, however, seldom continues for more than two or three days at a time, and is almost certain to end in a good fall of rain, which soon rallies up the exhausted powers of vegetation.

Fruit realised this season the following average prices:—Apples, 1*d.* to 8*d.* per lb.; Pears, 2*d.* to 1*s.*; Plums, 3*d.* to 6*d.*; Cherries, 6*d.* to 1*s.* and 1*s.* 6*d.*; Apricots, 6*d.* to 1*s.* per dozen; Peaches, 2*d.* to 1*s.* 6*d.* per dozen; Walnuts, 3*d.* to 6*d.* per dozen. This may suffice to show that fruit is freely available for all classes, both for dessert and cooking purposes; and the community will no doubt soon be placed in a position to provide for the preservation of fruit on an extensive scale. The reason why, comparatively speaking, but little land is as yet devoted to this lucrative and pleasant branch of industry, may be sought in the slow return for the capital expended, as long as the price of labour and the outlay for garden land continued so unusually high.

An eastern aspect, having a gentle declivity, is here

the most eligible for fruit gardens; the trees are there least exposed to the inclemencies of the climate, such as late spring frosts, hot winds, and heavy rains. It is invariably found that upon naturally sandy poor soils fine fruitful orchards can be established under good management, when the choice, loamy, deep soils are not available. The deep alluvial cool soils along the river banks are very suitable for all kinds of stone fruits, and rich gravelly bottoms of the hill sides for Apple, Pear, Quince, Mulberry, &c.

None of the small English fruits, such as the Gooseberry, Currant, Raspberry, or Strawberry, succeed well, except in cooler valleys or mountainous elevations, where they always attain the highest perfection for quality and productiveness.

A few remarks on the leading kinds of fruits will assist in judging of their comparative value in the colony.

The Loquat Trees delight on warm gentle slopes of hills on good soils, where they produce in some seasons very good crops of fine, large, well-flavoured fruit.

The Quince Trees grow and bear to perfection, the banks of the rivers along the margins of orchards being often thickly bedded with them; they also succeed admirably well on higher grounds.

The Walnut Tree is here highly prized for its stately grandeur of appearance, as well as for its abundant fruit; but to develop the tree to perfection a cool, deep, loamy soil is needed.

The Sweet Chesnut is perhaps improperly placed here, but as it is invariably found in the orchard we have classed it accordingly. When planted in a cool, deep, loamy, porous soil, in sheltered localities, it grows well enough.

The Apple Trees succeed here admirably well, especially when planted in a good, well-prepared situation, and properly treated after the first five years' planting. The fruit of this season was very fine, and yielded generally a good crop. Six Apples of the Custard variety, grown on the banks of the river Plenty, produced 7 lbs. weight. American blight is very destructive in many orchards, chiefly after being established 8 or 10 years. We are very deficient in all those newly imported varieties now cultivated in England.

The Pear Tree also succeeds remarkably well, attaining to perfection both in point of flavour and amount of produce. Some varieties of Pears are not unfrequently found to weigh from 1½ lb. each up to 2½ lbs.

Peach, Nectarine, and Apricot.—Perhaps there are no fruit trees which are more prolific here than these, whether as regards their vigorous growth or the ample crops of fruit.

The Cherry and the Plum grow vigorously and produce heavy crops of beautiful flavoured fruit, equal, if not superior to those of English orchards, both in size and quality.

The Fig Trees grow to perfection, some varieties bearing their two crops in the year freely. The leading varieties are Green and White Provence, Green and Brown Ischia, and Smyrna. It may be expected that dried colonial Figs will eventually supersede those imported.

The Black Mulberry Trees are reared with ease. Their compact habit renders them very ornamental, whilst they prove bearers of very superior fruit.

Oranges and Lemon Trees.—Although there are some few Orangeries in favourite spots around the vicinity of Melbourne, yet they are generally planted in smaller quantities in the warm places of orchards, or in clumps on lawns more for the sake of ornament and variety than for profitable purposes. The most suitable situations for them are on warm declivities, having a good deep, friable, dry, porous soil, in which they will attain the height of 15 feet, and form fine, compact, bushy heads. Single trees are known to have produced in one season upwards of 200 fine-sized, well-ripened Oranges; such a crop, however, is considered as yet an exceptional one. Hitherto the cultivation of Oranges has not been remunerative in this colony, since Oranges are largely and cheaply imported from New South Wales. In cold situations the Orange and Lemon trees are here neither healthy nor productive, but they prosper in the northern districts.

The Vine.—Amongst the branches of husbandry yet to be extensively developed, the cultivation of the Vine will be one of the most important in this colony, the climate throughout the greater part of our territory being exquisitely adapted for the prolific growth of Vines, although the severity of hot winds and long-continued droughts occasion sometimes rather severe losses of fruit, and cold winds and early spring frosts are detrimental to the expanding flowers of Vines planted in low and damp localities. The blight has, during showery seasons, in some localities affected the Vines.

The Vineyards hitherto established in various parts of Victoria compromise approximately an area of 600 acres. It seems, however, that their extent is annually increasing without a corresponding increase in wine manufacture, and thus, notwithstanding some failures of Grapes through the long lasting drought of this season, the Melbourne market is more plentifully supplied than ever with table Grapes, prices ranging from 1½*d.* to 6*d.* per lb. There have been instances even this season of an average weight of 25 lbs. of fruit on Vines three or four years old, bunches attaining a weight of upwards of 2½ lbs.; and it may be expected that whenever the training of the Vines is regulated more generally according to the particular climate of the locality in which they are established, with due reference to the varieties chosen, and by a more general adoption of the training on espaliers, that not only a considerable increase in the productiveness of some of our Vineyards might be secured, but also often a fruit of superior quality. Instances are recorded that this season in the vicinity of Melbourne the return of Grapes obtained by trellis training proved 2 tons per acre from Vines two years old, whilst of several varieties, including the Muscat, Frontignac, Chasselas, &c., the produce obtained on adjoining land from plants of the same age, grown on the low stool and Gooseberry bush fashion, was limited from 5 to 8 cwt. per acre.

The space assigned to this document permits not to enter into details on the prospect of yield which the respective varieties of the Grape hold out in the various localities of this country, and under varied climatic influences. The observations, moreover, on well-established varieties in different parts of the colony are as yet much scattered, whilst some important sorts have been only very recently introduced. Many of the northern parts of Victoria, however, bear so close a resemblance in point of climate with the territory of our western neighbours, that even the tender varieties, such as the Roussillon, will in all probability be luxuriantly developed. Wine made of the Scyras Grape sold wholesale in South Australia at 20*s.* per gallon, and that prepared of the Mataro at 12*s.* per gallon; both of these Grapes being well adapted to certain localities of that country.

The rapidity of growth of the Vine in these latitudes is most encouraging for their culture. An experienced Vine grower compares our plants at the age of three years to those of seven years' growth on the Rhine.

If the best varieties of raisin Grapes were chosen for our Vineyards, we cannot for a moment doubt that raisins of unsurpassed qualities may be produced, at least in the milder and drier parts of the colony.

We may be permitted to introduce here a list of those varieties of Vines which Mr. Alfred Seidel, near Geelong, has proved by many years' experience to be particularly adapted to the southern parts of the colony:—

The varieties of Grape which are, up to the present time, known to yield the best produce in the Vineyards near Geelong are as follows:—

Black Grapes.—Hermitage, Black Cluster, Black Burgundy, Black Esparte, Carignan, La Gloire (Liverdun).

White Grapes.—Madeira, Verdeilho, Riesling, Chasselas, Gouais, Pineau Blanc, Pineau Gris.

The best of the red wines have been made from the Hermitage. This wine will keep very long, and will arrive at its prime after being about five years old.

Black Cluster and Black Esparte together yield a splendid wine, approaching in flavour to a strong Burgundy wine.

Black Burgundy is, with respect to quality, superior to Black Cluster, but inferior in bearing.

Carignan approaches in quality the Esparte; is a prolific bearer, but is subject to blight.

La Gloire (Liverdun) yields a light wine, of not very great value, but its bearing capabilities are very prominent.

Madeira yields a strong, well-keeping, excellent wine.

Verdeilho of equal excellence.

Riesling ditto.

Chasselas yields an agreeable, soon drinkable wine.

Gouais yields a wine similar to Sauterne, but stronger, and is a prolific bearer.

Pineau Gris and Blanc yield excellent, fiery wines, but not in large quantity; nor do these wines keep well.

One acre of Vines well laid out and well kept will give an average yield in this colony of from 300 to 400 gallons of wine; but there are particular varieties of Grapes which would yield double that quantity, though it should be kept in mind, that the general rule puts the more prolific bearers among those of less excellent qualities.

Mr. Smith, of Melbourne, in Mueller's Report on the Resources of Victoria.

Home Correspondence.

The Preservation of Timber.—At a time when the decay of our recently-built gunboats forms a prominent subject of discussion, it may be worth while to inquire how far the patented processes which were to render our inferior timber almost indestructible have succeeded where they have been applied. Among these Boucherie's Patent, so strongly recommended by the "Permanent Way Company," is the most recent. It has been used extensively by the railway companies in the west, but though I have made many inquiries I have not succeeded in getting any satisfactory information respecting it. Three years ago a large quantity of telegraph posts was prepared at the Westbury Station. The process consists in expelling the sap from the trees by pneumatic pressure, and replacing it by a solution of sulphate of copper. Whether sulphate of copper is the best preventive of decay in the vegetable tissue, experience, or those more learned in chemistry than myself must decide, but it appears quite clear that the effect, if not the cause of decay, is attributable to fungoid formations, and therefore a prevention, if not a remedy, must be sought in some substance that will prevent the growth of the Fungus in the first instance. Lime is well known to be inimical to the growth of Funguses of all kinds, and on many estates gates and post-rails, in fact rough scantling of all kinds, are placed for a time in lime-water tanks to pickle before they are used. That wood so treated is rendered more durable is quite certain, but it is much more difficult to work, especially by plane. The process of Boucherie, as I was enabled to judge of it, seemed so far as the impregnation of the timber was concerned to be complete, and the carpenters showed me how much more difficult it was to work, the tools losing their edge very quickly. The French Government give a very good account of this process, especially as used on the French railways, and a gentleman near Wells who had used the process on his own estate (long before it was patented by Boucherie), assured me 12 months back that he had gate-posts of soft wood which had been in use nine years, and were still perfectly sound. This is unusual, and shows that the process is worthy the attention of landowners. With reference to the rotting of the above planking in the gunboats, I have reason to know that much timber is in a state of decay before it goes into the dockyards. I have taken down within the last three years a large number of Elm trees, some of which have been purchased for shipbuilding purposes, and though of the standard size the majority of them were diseased before they were taken down; indeed I find the Elm, both large and small, is failing fast, for I rarely take one down but I find the tap root decayed, and no tree can be healthy under such circumstances. I shall be much deceived if within the next 10 years it is not found that a large proportion of the fine old English Elms in the West are in a decaying state. When the trees are butted and neatly trimmed for market (and Government buyers employ most expert hands for this work) there is not much to be seen that exception can be taken at; but if the dockyard authorities wish to purchase nothing but really sound timber, they will find it to their interest to employ a trustworthy inspector to examine the timber before it is prepared for market. Whether the patent process can be applied to trees of large size I do not know, but as fungoid formations appear to be the root of the present evil, certainly some means ought to be devised to render the wood unsuitable for their growth. *W. P. Ayres.* [We take this opportunity of saying that *naked* laths of Beech supplied by the Permanent Way Company used as labels for plants, and therefore driven a third of their length into the ground, have been employed for some years in the Garden of the Horticultural Society at Chiswick, and are just as sound now as when they were first put down.]

May Queen Strawberry.—On looking over our Strawberries to-day (July 2) to my surprise I found ripe fruit on this variety, two or three to a small plant, whilst Black Prince, Keens' Seedling, and others will not have a ripe fruit on them for some time. "May Queen" appears to me to be an exceedingly early kind and a heavy cropper; of its flavour I could not judge fairly, as the weather has been so very much against Strawberries here. *William Dean, Bradford Nursery, Yorkshire.*

Education of Gardeners.—As bearing upon this subject, I should like to say a few words upon the way in which young gardeners are treated by those above them. Too many head gardeners treat the men under them as if they were mere machines to be driven to work, with an authoritative shout, often accompanied by swearing and abusive language, and although the men wince under such treatment, and mock their master behind his back for the way in which he acts, yet many of them when they get head gardeners' places for themselves, think that they are in duty bound to adopt the same course of conduct, and thus the evil example is perpetuated from master to man. No man was ever yet made better by scolding and abusive language, and it would make it much more pleasant for both parties if gardeners would speak to their men in a civil manner, give them some credit for common sense, encourage them by words of approbation when they show any signs of cleverness, and impart to them all the knowledge of their business that they can. There is another subject that produces a good deal of ill-feeling, and that is the payment of premiums by journeymen gardeners. I should like to hear what can be advanced in defence of the practice. Journeymen gardeners' wages are certainly small enough without having to pay a shilling a week to their employers, or 5*l.* or 10*l.* at once, as the case may be. A man in receipt of a good salary ought to be ashamed to take it. What would be thought of a housekeeper or butler in a large establishment if they pocketed a shilling a week from every servant under them? I was engaged as journeyman gardener in a place in the north of England at 11*s.* per week. When pay day came I got 12*s.* 6*d.* and was told by the gardener to give him back 1*s.* a week, but he would prefer having it half-yearly. I offered it to him at the half-year's end; he said he would take it at another time. I suppose he thought I was too long in giving him another offer of it, for he said one night "that it was a fashion of the place for the gardener to get a shilling a week off his men, and that those who did not like it could hook it." Of course I had no reason to complain, as I was still sixpence a week better than I was engaged for, but if it was a legitimate source of income, why all the ceremony attached to the matter unless, as he said himself, it was to prevent disputes? The whole system of premium-paying seems to be like a bribe which fetters a man in the discharge of his duty. For instance, a gardener once had occasion to find fault with his apprentice; the latter took off his coat to fight him, and bragged to his neighbours afterwards that his master was afraid

to say a word to him, as his time was nearly out and the half of his premium was still to pay. *An Angus Lad.*

Lomaria chilensis.—If you refer to your second Number of this year, page 25, you will observe that you give an account of this Fern, but I cannot find it in either Smith's or Sim's Catalogue; will you therefore give me the proper name of it? It would I think be much better if authors and nurserymen were to adopt one name to a plant and not have half a dozen, as you may go to one nurseryman and buy a Fern and from the catalogue of another order the same sort under another name. This causes great confusion. *A. F.* [As in other departments of botany, so among Ferns, the names adopted depend upon the peculiar views of individuals. Even supposing them to be intelligently employed with a knowledge of their correct application, which is not always the case, there is still much room for diversity of usage owing to conflicting opinions as to what constitutes a specific difference. Thus, for instance, Sir W. Hooker unites with this very L. chilensis some half-score of plants which others have regarded as distinct, and for which one name (properly the oldest) is used. Probably cultivators would not agree in this, as it often happens that plants different enough for all garden purposes present very slight distinction in a scientific point of view. It would of course be very desirable if all persons would adopt the same nomenclature, but with existing and avowed differences of opinion on this subject, we fear such unanimity is not to be looked for. As regards L. chilensis, if you had carefully examined Sim's Catalogue you would have found it described at p. 18, in its proper place amongst hardy species. You will thus see that the "proper name" is a matter of opinion: we use chilensis.]

Perfumes.—Mr. Rimmel's interesting paper on perfumes wants a little touching up in the botanical part; the qualities of plants have not been half tested in regard of odours or tastes. Why is it that some new wines have such a taste of Saffron?—that some most diverse vegetables have the smell of Musk? Such questions might be multiplied *ad infinitum*, but to ask how would be more to the purpose than why. *I.*

Cultivation of Willows in Scotland.—I understand that in many parts of England basket Willows are extensively grown in marshy ground that is not well adapted for any other crop; and that these yield a very profitable return. Although good Willows are sufficiently appreciated in Scotland and fetch a high price, they are very little cultivated here. I therefore feel assured that as well as being of importance to myself, a communication from some of your intelligent correspondents on the culture of basket Willows will be received and read on this side the Tweed with the greatest possible interest. I contemplate rather an extensive plantation, but I am anxious to benefit by the advice of those who have had practical experience of the soils, the preparation of the ground, the nature of the plant, whether with or without roots, the distance apart, the degree of drainage or immersion, and the time that might be necessary to await any remuneration. These and other necessary hints which might occur to those who have a more thorough knowledge of the subject would be very gratefully received. *A. P. Gordon Cumming, Altyre, Forres, N.B.*

Silver Fir Bug.—I have seen a good deal of the white bug which attacks the Silver Fir, as described by your correspondent. I believe that in soil which suits the tree, and where it grows vigorously, it is rarely killed by the bug; the tree is much injured and checked in its growth, but after three or four years the bark becomes thicker and harder, and live specimens of the bug begin to be found only in the cracks of the bark, and after that the tree gradually recovers and at last grows as vigorously as ever. Mr. Selby says in his book on forest trees that he has known large trees killed by it; but I have seen trees of all sizes attacked by it, and I do not remember ever seeing one quite killed by it. But an insect exactly similar to this has within the last few years completely killed many of the largest Beech trees in Yorkshire—some in this neighbourhood, and some very large ones at Mr. Winn's place, Nostell Priory, near Wakefield. I never could ascertain that the trees attacked were before unhealthy. In the case of some of the Silver Firs at Boynton I am almost certain that they were very vigorous and healthy at the time. *C. W. Strickland, Hildenley.*

Lindelofia.—The plant referred to by your correspondent "Ebor" is, I presume, the Lindelofia spectabilis, Lehmann, a pretty blue hardy perennial Borage wort, of which I inclose a specimen. I have cultivated it about six years, and it will be found in my own and most of the seed catalogues of the few previous seasons, so that it can hardly be called a new plant, though perhaps not common. May I, in turn, venture to ask what claims Macromeria viridiflora, D.C., has as an ornamental plant? *W. Thompson, Ipswich.* [There is no such name as Lindelofia to be found in botanical indexes. Macromeria viridiflora is said to have tubular flowers 2 inches long; we never saw it. No doubt it is a fine looking thing *in an herbarium*; all the Macromerias are so.]——Lindelofia spectabilis (see p. 602) is not a new plant, but it is a very good species and a fine plant for the flower garden. It was named and described by the late Professor Lehmann, of Hamburgh, in the *Hamburger Gartenzeitung*, 1850, p. 352, and in the "Index Seminum" of the Botanic Garden, Hamburgh, 1850. You doubtless know the plant very well by the name of Cynoglossum longiflorum, A. D.C., Prodr. X., p. 138, or Lindl. Bot. Reg., 1840, t. 50. *Edward Otto, Botanic Garden, Hamburgh, July* 4. [The name appears to have been missed by every systematical writer or compiler.]

Old Double Yellow Rose.—Herewith I have sent a yellow Rose gathered from a tree that has been growing in its present situation against a south wall upwards of 100 years. I should be glad to know the name of it, and if it is in general cultivation; if so how it can be propagated, so that it will bloom. Budding has been tried by many, but none ever came into flower that I know of, although the buds grew very well. *J. G. B.* [This is the true old double yellow Rose, represented in the flower pictures of Van Huysum. No one knows why it so generally refuses either to open its beautiful flowers in this country or to form them. The late hot summers have probably helped it. It is usually propagated by layers. If budded you must take the Austrian Briar as the stock.]

Rain.—The following is the fall at Epping to the end of June. Epping is 365 feet above the level of the sea, and surrounded with miles of woods and forests:—

1860.	Inches.
January	2.23
February	1.48
March	1.64
April	1.08
May	3.27
June	7.60
Total	17.30

Henry Doubleday, July 3.

Bee Hives.—I have an old straw hive which I am afraid will come to pieces during next winter. I have plenty of boxes, but don't know when (this month or any other, and morn, noon, or evening) to move them, and whether to give them back their honey or take it. I lost most of my bees last winter, I think, from giving too much ventilation; they were scoured to death in the spring, leaving plenty of honey. Will any of your correspondents oblige me by some information on the subject? *Richard Bach*, 13, *Broad Street, Islington.*

Societies.

Royal Botanic, Regent's Park: *July* 4.—The Society's concluding exhibition for the year took place on this occasion. The display both of fruits and flowers was good for the season and the attendance of visitors large.

Mr. Whitbread, gr. to H. Collyer, Esq., showed as usual a beautiful collection of 16 Stove and Greenhouse Plants, all large, and for the most part well flowered. Among them were Rondeletia speciosa, Dracophyllum gracile, Phænocoma proliferum, an immense bush of Ixora javanica, in admirable condition both as regards growth and bloom; Dipladenia crassinoda, a huge Azalea variegata, Everlastings of different kinds, the beautiful Ericas Massoni and obbata, and the blue Leschenaultia, the last finely in flower. Mr. May, gr. to J. Spode, Esq., again showed a charming group of 16 plants, some of which had, however, this time suffered a little from travelling; nevertheless others, as Ixora salicifolia, blue Leschenaultia, Dipladenia splendens and crassinoda, Phœnocoma proliferum, some Everlastings and Cape Heaths, were all that could be desired. The same cultivator also sent excellent examples of Erica Parmentieri rosea and Statice imbricata, the last well flowered, showy, and effective. Among plants from Mr. Peed, who also showed in this class, were Cyrtoceras reflexum, Ixora Lobbii, not large but in beautiful condition, Dracophyllum gracile, Franciscea confertiflora, Polygalas, Epacrises, and Cape Heaths. Among the last was an immense specimen of elegans still in great beauty, though it has been in flower ever since the beginning of May. In a group of 16 from Mr. Rhodes, chiefly small plants, were pretty specimens of Ixora javanica, Crowea saligna, and Aphelexis grandiflora macrantha.

Collections of 10 Stove and Greenhouse Plants were furnished by Messrs. Green, Baxendine, Carson, and Kail. These consisted chiefly of Kalosanthes, blue Leschenaultias, Allamandas, Polygalas, Pleroma elegans, than which a handsomer autumn-blooming plant does not exist; the large-flowered Erica obbata, Mussænda frondosa, a medium-sized greenhouse shrub, remarkable for its large showy white bracts, the small yellow flowers which they surround being comparatively unattractive; Franciscеas, the glowing Azalea Apollo, still finely in flower; Stephanotis floribunda, Everlastings, Rhynchospermum jasminoides, and Statice Holfordi. Mr. Tegg showed a good group of six plants.

In a group of 12 Stove and Greenhouse Plants shown by Messrs. Fraser, of Lea Bridge, was the bright yellow flowered Relhania squarrosa, a plant seldom seen except in autumn exhibitions.

Of plants remarkable for the beauty of their foliage collections came from Messrs. Parker & Williams, Jackson, of Kingston; Young, Bunney, Blunt, Nicholson, and Hutt. Among them were Palms, Maranta capitata, fasciata, regalis, and other kinds; Crotons, Rhopalas, Ferns, among which was the white-striped Pteris argyræa; Dieffenbachias, Caladium Chantinii and others, Aspidistra lurida variegata, a glorious example of the variegated Coltsfoot (Farfugium grande), Cyanophyllum magnificum, Aralia Sieboldi, with deeply cut palmate leaves; Begonias of different kinds, and Ficus Leopoldi, the last a handsome plant with large bright green obovate leaves quite 15 inches in length and a foot across.

Cape Heaths were shown in admirable condition and in tolerable abundance. Among them there was nothing new. We observed, however, beautiful plants of obbata, the better varieties of ventricosa, mutabilis, Parmentieri rosea, a high-coloured handsome Heath; Cavendishi, and depressa.

Orchids were again well flowered, fresh, and beautiful. Mr. Bullen, gr. to Dr. Butler, of Woolwich, had the best collection of 20 plants, among which were the mauve-coloured Calanthe Masuca, Cattleya Aclandiæ, a handsome dwarf-grown kind; various Saccolabiums, the rare Brasavola Digbyana, with large white fringed lip; a small example of the delicate Phalænopsis rosea, the handsome Lælia purpurata, and the robust-growing Cattleya Leopoldi. R. Warner, Esq., had Lælia Brysiana, a kind closely related to if not identical with L. purpurata; Odontoglossum Warezewiczii, a variety resembling but by not means so ornamental as grande; some large Aerides, and the yellow Tulip-like Angulos Clowesii. From Mr. Gedney, gr. to the Rev. Mr. Ellis, came the extremely handsome Cattleya superba, Barkeria spectabilis, a large Sobralia macrantha, Odontoglossum citrosmum, and different kinds of Cypripediums, Saccolabiums and Aerides. Mr. Woolley sent a nice collection of 16 plants.

Various collections of 12 Orchids were produced, the best of which came from Mr. Stone, gr. to J. Day, Esq., of Tottenham. This contained the same magnificent White Butterfly Plant which was shown here in June last, still in good condition; also two of the best varieties of Bearded Lady's Slipper, Aerides maculosum, Saccolabium præmorsum, and Barkeria spectabilis. From Mr. Carson came a small example of the pale green-tailed Dendrochilum filiforme, a luxuriant Saccolabium guttatum, the white Calanthe veratrifolia, and Aerides odoratum. Mr. Page sent Miltonia spectabilis, Oncidium ampliatum majus, Brassia verrucosa, the rare Lacæna bicolor, with a fine spike of watery cream-coloured flowers blotched with deep chocolate; and a beautiful Cattleya Leopoldi. Phaius grandifolius and other plants came from Mr. Peed. In smaller collections Mr. Bunney furnished a fine Cattleya Mossiæ, Vanda suavis, and a White Butterfly Plant. From Messrs. Jackson, of Kingston, was a magnificent specimen of Lælia purpurata, with great flowers of the purest white, with the exception of the lip, which was rich deep purplish crimson, fresh and beautiful. From the same firm also came Cattleya Wageneri, white with yellow-stained lip, and a showy C. Mossiæ. Aerides crispum from Mr. Green was perhaps the most conspicuous plant in his group, and among Mr. Chilman's Orchids was a a good Cattleya crispa.

Of New Plants, Messrs. Veitch sent Caladium Veitchii and Wightii, both handsome additions to that ornamental class of plants; Vaccinium rugosum, described by us in a former Number, and two beautiful Gloxinias, named Apollo and Jupiter. From Mr. Ingram, gr. to J. J. Blandy, Esq., came Hæmanthus puniceus, not new, but rarely seen in such beautiful condition as it was on this occasion, its large scarlet balls of flowers attracting numerous admirers. Mr. Woolley had a yellow-flowered Dendrobium apparently new, and Messrs. Parker & Williams Anthurium rubronervium and Tydæa insignis, the first a fine-foliaged plant, and the last a pretty variety in its class. A fleshy-leaved plant labelled Senecio, from New Zealand, came from Mr. Standish, of Bagshot; and Messrs. Low had a variously-coloured Petunia and other plants described by us in former reports. From Messrs. E. G. Henderson also came some handsome Petunias, remarkable for the singularity of their colours. Statice profusa was shown by Messrs. Parker and Williams, a variegated Calla and Agathea by Messrs. Backhouse, and the handsome Pteris tricolor and other plants by M. Linden of Brussels. Messrs. E. G. Henderson and Messrs. Milne and Co. had some beautiful new Gloxinias; among them Reuben, Lady Willoughby, and Mrs. Shepherd were really all that could be desired in that class of plants. We also noticed Orchis foliosa again shown in beautiful condition, the showy Gazania splendens, Dianthus Heddewigii, and one or two dwarf Tropæolums and Phloxes.

The display of Cut Roses, considering the season, was excellent. Among them were examples of most of the leading kinds, of which by far the best collection came from Mr. Mitchell, of Piltdown, near Brighton. These were wonderfully fine, and showed how favourable the climate of Sussex must be to the growth of the Rose. Next in point of excellence was the collection from Messrs. Paul, and Mr. Turner and Mr. Francis also had a good exhibition. In the Amateurs' Class Mr. Terry and others likewise showed fine blooms. Among Mr. Mitchell's flowers were good specimens of the following new varieties, viz., Senateur Vaisse, a very fine Rose of the most brilliant crimson scarlet, something in the style of General Jacqueminot; Madame Boll, another fine variety in the way of that fine hybrid China Rose, Charles Lawson; Victor Verdier and M. Eugene Verdier, also both promising kinds, which we hope to see again. The first is a shaded deep rose, with very large petals; the second is in the way of Auguste Mie In other collections were good blooms of Comtesse

Cecile de Chabrillan, a variety like Wm. Griffith, but with foliage more like that of Duchess of Sutherland. Of the dark Rose Cardinal Patrizzi we noticed some good blooms, and Mr. Standish's Eugene Appert still maintains the good character which it has acquired, a boxful of blooms of it being shown on this occasion in excellent condition. In Messrs. Paul's collection were fine blooms of President, and an interesting boxful of Moss Roses was also shown by that firm. The most conspicuous among them was Baronne de Wassenaer, a large clustered Rose of good form. From Mr. Turner came the best box of single blooms, among which the most conspicuous were Cloth of Gold, General Jacqueminot, Souvenir d'Elise, Lord Raglan, and Paul Ricaut. In only one instance did we see Cloth of Gold true to colour, and that was in a collection from Mr. Hollingworth, who had also M. Bravy and M. Willermoz, large and fine. Souvenir d'un Ami, Souvenir de Malmaison, Gloire de Dijon, and other favourite sorts were plentiful. Mr. Laing, of Twickenham, showed a boxful of handsome blooms.

While speaking of cut flowers we may mention that a charming box of Ixia blooms and those of other bulbous plants was shown by Messrs. Carter, of Holborn. These received, as they justly deserved, a large amount of attention. They were shown in considerable numbers, and exhibited great variety of colour. Let us hope that contributions like this may have the effect of bringing this beautiful class of plants into more general cultivation than it has hitherto received.

Ferns, in most instances large and well grown, occupied the shady nooks and recesses on the side of the tent next the conservatory. A beautiful collection came from Mr. Day, of Tottenham, in which were magnificent specimens of Gleichenia flabellata and dichotoma, Todea barbara, Lomaria discolor, the great Stag's Horn Fern, Platycerium grande; Cyathea Smithii, and Lygodium polystichum. The last is a handsome climbing variety, well deserving of attention. From Mr. Baillie, gr. to J. Carbonell, Esq., also came fine plants, among which were Todea hymenophylloides, some beautiful specimens of Gleichenias, Pteris scaberula, and Lygodium polymorphum. Messrs. Bunney, Woolley, Jackson, and others also showed well-grown plants, both hardy and tender, and we also noticed a nice collection from Miss Clarkson.

Pelargoniums were as usual in excellent condition, and formed an important feature of the show. The varieties did not differ materially from those shown on the 20th ult. Of seedlings several were shown; but these we hope to notice fully hereafter. Among Fuchsias and Calceolarias little novelty was observable.

Fruit was plentiful, and most of it good. Of Pine-Apples at least 50 specimens were shown. In lots of four the best fruit came from Mr. Young, gr. to C. Bailey, Esq., and Mr. Barnes, of Bicton. Others came from Mr. Young, of Dulwich, and Mr. Bailey, gr., Shardeloes. The best Providence was furnished by Mr. Young, gr. to C. Bailey, Esq., and the next by Mr. Ruffett, gr. to Lord Palmerston. Mr. Allen and Mr. Whittaker also showed good Providences. One fruit of this variety weighed 12 lbs.; but it had a very large cock's-comb crown. Beautiful specimens of Queens came from Messrs. Young, Williamson, Rattray, and others. Their weights varied from 3½ lbs. to 5 lbs. 5 oz. A Black Prince weighed 6 lbs. 7 oz., an Enville 6 lbs, and one or two Cayennes from 4 lbs. to 5½ lbs. each. Mr. Floud showed some good fruits, but none so large as we have seen them.

In the class of three dishes of Grapes, Mr. Frost, gr. to E. L. Betts, Esq., sent remarkably fine bunches of Bowood Muscat, Black Hamburgh, and Muscadine. From Mr. Drewitt also came beautiful specimens of Black Hamburgh and White and Black Frontignan; the last two especially were very finely grown. Mr. Allport sent compact good bunches of Golden Hamburgh, West's St. Peter's, and Muscat, and Messrs. Rockford and Embry also showed good fruit in this class. Of single dishes of Black Hamburgh, the best were furnished by Messrs. Henderson, Maker, Bartlett, Hill, and Frost. The best Black Prince came from Mr. Hill—magnificent bunches, largely shouldered, and well coloured. They were stated to have been cut from a Vine grafted on Black Hamburgh. Mr. Allport had excellent examples of West's St. Peter's. Muscats were far from being ripe; in some instances indeed they were quite green. The best were shown by Messrs. Embry, Little, Ingram, Turnbull, and Henderson. Among these were some beautiful bunches, especially of the Bowood variety, a fine kind which appears to be coming rapidly into general cultivation. Of Muscat Hamburgh we noticed three bunches; but they were not in sufficiently good condition to fairly illustrate the true character of that Grape. Of Frontignans, Chasselas Musqué, and Muscadines good exhibitions were contributed by Messrs. Bones, Frost, Chilman, Allen, and Little. In Chasselas Musqué we observed no cracking of the berries, the only fault which belongs to this fine Grape; it may however be prevented by skilful cultivation. Some fine bunches of Grizzly Frontignan were contributed by Mr. Gold, gr. to Sir A. Dixie, Bart.; and from Mr. Allen, gr. to J. B. Glegg, Esq., came Purple Constantia, a Grape now seldom seen at exhibitions. Baskets of fruit 12 lbs. each came from Messrs. Henderson and Bailey. The first sent Black Hamburgh and the last White Muscadine.

Of Peaches and Nectarines there were some good collections. The best came from Messrs. Miller, Snow, Strachan, Parsons, Little, Dawson, Allen, and Judd. The Peaches consisted of Royal George, Gallande, Violet Hâtive, Grosse Mignonne, and Noblesse; and the Nectarines Violet Hâtive, Elruge, Pitmaston, Downton, Red Roman, and Hants Tawny. A boxful of Nectarines highly coloured, and otherwise fine fruit, was shown by Mr. Henderson, gr. to Sir G. Beaumont, Bart.

Figs were scarce. The best were exhibited by Mr. Snow and Mr. Ruffett. The sorts were Lee's Perpetual and Brown Turkey.

Cherries were also scarce and by no means remarkable for fine growth. The best came from Messrs. Smith, Bartlett, and Snow. Among them were Bigarreau, Elton, Black Circassian, and Mayduke.

Of Plums, the best dishes were exhibited by Mr. Tillyard, gr. to J. Kelk, Esq., and Mr. Ingram, gr. to J. J. Blandy, Esq. Among the varieties were Green Gage, Victoria, and Washington.

Of Strawberries good dishes were contributed by Messrs. Widdowson, Turner, and Kaile. Among the sorts were Omar Pacha, Sir Harry, the fine new variety called Oscar, Prince of Wales, a very productive kind, Sir Charles Napier, Sir Colin Campbell, Keens' Seedling, and British Queen. Mr. Cuthill showed two seedlings named Highland Mary and Richard the Second, both promising kinds; but owing to the unfavourable weather we have experienced, not in a condition to admit of their merits being fairly tested.

Melons were plentiful, but for the most part indifferent in flavour. The best came from Mr. Allen and Mr. Tegg, gr. to Baron Hambro. The last was a small round red-fleshed kind, apparently Scarlet Gem, and the former a variety of Hoosainee.

Of Miscellaneous collections of fruit three were exhibited. The best was furnished by Mr. Ruffett, gr. to Lord Palmerston. It contained well grown Black Hamburgh and Muscat Grapes, British Queen Strawberries, White Ischia Figs, a good Providence Pine-apple, Gallande Peaches and Elruge Nectarines, and Mayduke Cherries. The next in point of merit came from Mr. Dawson. It consisted of a Queen Pine-apple, good Peaches and Nectarines, Black Hamburgh and Chasselas Musqué Grapes, the last plump and sound; Elton Cherries, Sir Harry Strawberries, a Melon, and dish of Figs. Mr. Turnbull, who was third, had good Violet Figs, Black Hamburgh and Muscat Grapes, two Queen Pines, Royal George Peaches and Elruge Nectarines, Nimrod Strawberries, and Mayduke and Bigarreau Cherries. A large collection to which no prize seemed to be awarded came from Mr. Miller, gr., Eardiston. It contained some good dishes of Oranges and Citrons, Black Hamburgh and White Tokay Grapes, the last unripe; Peaches and Nectarines in good condition, some Strawberries, Figs, and Cherries, and a very very small Queen Pine Apple. This last was a sad blemish in an otherwise good collection.

Linnean: *June* 21.—The President in the chair. The Rev. Hamlet Clark, M.A., was elected a Fellow. G. Maw, Esq., exhibited samples of colouring matter producing by macerating the dried plant of Mercurialis perennis. One of these was of a blue colour, which colour was stated to be produced in a few minutes, but not to be permanent. The other was coloured red, and this colour, which is assumed on the third day or immediately on the application of heat, was stated to form a permanent dye. The following papers were read:—1. "On the Mutual Relations of the Cold-blooded Vertebratæ." By Prof. Greene, of Queen's College, Cork.—2. "Observations on the Neuration of the Hind Wings of Hymenoptera and on the Hooks which unite the Wings together in flight." By Miss E. Staveley.—3. "Catalogue of Dipterous Insects collected at Dorey, New Guinea." By F. Walker, Esq.—4. "Florula of Aden; being a systematic account of all the flowering plants hitherto found at Aden." By Thomas Anderson, M.D.—5. "On Arctic Vegetation."—6. "On the Plants collected by Dr. Walker during Sir L. McClintock's Voyage of the Arctic Searching Yacht 'Fox.'"—7. "Præcursores ad Floram Indicam: Cruciferæ."—8. "New Genera of plants from Borneo and the Malayan Peninsula," all by J. D. Hooker, M.D., F.R.S.—9. "Notes and descriptions of Orchidaceous plants from Trinidad." By E. Bradford, Esq. These notes were made from the living plants, during the years 1845-6, and referred to 87 species, of which a considerable proportion was described as new.—"On some new species of Musci and Hepaticæ from Tropical Africa." By W. Mitten, Esq.

Notices of Books.

Mr. Henry Bradbury's *Nature-printed British Seaweeds* is now completed by the appearance of the fourth volume. The authors have added sketches of the history of British Seaweeds, of their geographical distribution, of their structure, and of their uses. There are also chapters on arranging Algæ for the Herbarium, on the families and genera, on the species, and on the bibliography of the subject, the whole concluding with a glossary of scientific terms, and a complete Index. The whole work now forms 4 volumes unsurpassed for beauty even in the rich field of Natural History.

The 4th number of *Harvey's Thesaurus Capensis*, which has just appeared, completes the first volume of that important work. Among the 25 rare species now figured are several very curious terrestrial Orchids; Dombeya Dregeana, a bush from Caffraria, "bearing a profusion of white or rosy blossoms as large as wild Roses and much more durable;" Gomphocarpus campanulatus, with nodding flowers as big as egg-cups, from Natal; and Ixianthes retzioides, from the Worcester and Tulbagh districts, a handsome shrub, well worth introducing to England.

The following foreign botanical works have reached us; *Miquel's Flora Indiæ Batavæ*, vol. I., fasc. 6, entirely occupied by Laurels and other Monochlamydeous plants. *Walpers' Annales Botanices systematicæ*, vol. V., fasc. v., contains among other things Andersson's characters of North American Willows. *Sertum Benguelense* (Vienna), a description of a small collection of plants obtained on the coast of Benguela by Wawra and Peyritsch. Van Houtte's *Flore des Serres* for July, 1858, gives figures of Chantin's Caladiums, about which so much has been said.

Garden Memoranda.

Horticultural Society's Garden, Turnham Green.—This great trial ground for the proving of Fruit, Flowers and Vegetables is every day acquiring additional interest. So-called novelties of every description are here fairly tested and stand or fall according to their merits. Under glass we noticed numbers of new Fuchsias, Achimenes, Gloxinias, Begonias, of which we have now so many remarkable for the beauty of their leaves, and other plants which when sufficiently forward will be carefully compared, proved, and reported on. Among Achimenes a white kind with yellow spotted throat called Gloxiniæflora was conspicuous, as were also A. aurora, Meteor, and Dazzle. The last two, though comparatively small-flowered kinds, possess crimson scarlet colours of the most vivid description, and therefore even in a small state are extremely effective. Among Pelargoniums we noticed in open pits some very dwarf well-grown plants which promise to yield an abundance of bloom. These, though only cuttings in March last, now worthily occupy 11-inch pots. From that time to the present they have received three shifts; very little heat has been given them, and for some time past the lights have been off them night and day.

To the proving of bedding plants considerable space has been devoted. Among these are Geraniums, both hybrid and variegated, Verbenas, Calceolarias, and Lobelias. Among the last the Crystal Palace dwarf blue (which appears to be a variety of Erinus) seems to be the best at present, and trigonocaulis, a pale blue, is perhaps the next most effective kind. These will prove invaluable for edgings to beds filled with other kinds of plants. Of tall Phloxes a collection has also been put out in consecutive beds, and of China Asters there are no fewer than 159 sorts, consisting of the fine continental and other varieties which have recently justly claimed so much attention. When these come to be in bloom they cannot fail to form a feature of the greatest possible interest. At present Carter's Tom Thumb Tropæolum and the yellow variety of that kind are very attractive. Both are very dwarf, free flowering, and showy, and well suited for the ornamentation of either beds or small borders. While speaking of borders we may mention that those on either side of the long straight walk leading from the school gate towards the kitchen garden and orchard are planted in the ribbon style, and at present give to that part of the garden quite a dressy appearance. They are planted as follows:—first, a row of the greyish white Cerastium tomentosum, then a broad band of Crystal Palace dwarf blue Lobelia, succeeded by rows of Flower of the Day, Tom Thumb, and Punch Geraniums, Yellow Calceolarias, the blue Ageratum mexicanum, and last or next the wall a row of Hollyhocks. This kind of arrangement, backed up as it is by wall and standard Roses, makes a very handsome border.

In a little fruit house filled with Peaches and Nectarines trained chiefly in the umbrella fashion, there is a good crop. Among Nectarines, Fairchild's Early ripens at least a month or six weeks before any other sort; its earliness is, however, its only good property, for it is very small and comparatively flavourless. In the orchard house there is a full crop on most of the trees; even Pears lifted out of the border last autumn, pruned and potted, have a tolerable sprinkling of fruit on them. On open walls Pears are also bearing good crops, but not so Peaches, which were covered with tiffany and other protecting materials in spring. Here as in most places the trees have suffered from the unprecedentedly long, cold winter we have experienced. Though the wood is not killed as in many places, yet the foliage is contracted and curled, and there is an utter want of that vigorous, luxuriant, healthy appearance which Peach trees here have for many years presented. On standards, pyramids, and dwarfs, both Apples and Pears, plenty of fruit has been left for a crop though unusually large quantities have dropped. Strawberries have also suffered from the wetness of the weather and the low temperature which has accompanied it, for it must be remembered that the thermometer stood only a few degrees above freezing at night, even in the Midsummer week, and this has been the wettest June that has occurred during these last 30 years. Under these circumstances, though trusses have been produced

abundantly, many of the blooms have come blind, and if the present few days of bright weather do not last, the crop will necessarily be deficient. Among the different sorts planted here, British Queen still holds the leading place as to flavour, and on Keens' Seedling the greatest dependence must still be placed as a general cropper; Cuthill's Princess Royal is, however, a good bearer, and unobjectionable as to flavour. In their present condition no opinion can be formed as to the merits of new varieties.

Grapes are largely grown; some in pots in pits are nearly ripe, and there are some fine young Vines coming forward for next year. In the great conservatory there is a superb crop. On Barbarossa some of the bunches promise to be unusually large, and on Golden Hamburgh there are also some excellent bunches. Nothing could exceed the health of the Vines generally, which now reach the top of the house on both sides, and when the fruit is ripe such a sight will be presented as nobody within reach and having the opportunity should miss seeing.

In the kitchen garden Peas at present form the chief subject of interest. Of these nearly 120 sorts have been sown; the late ones are as yet only in bloom, but of early kinds several are fit for use. Among the very earliest may be named Dillistone's Early Prolific, Daniel O'Rourke, Sangster's No. 1, Carter's Earliest, Isherwood Railway, Sutton's Early Champion, and Early Washington. On the distinctness of these kinds we offer no opinion; that is a point which will occupy the attention of the Vegetable Committee. Some dwarf-growing kinds from Mr. Turner, of Slough, looked as if they might be valuable acquisitions, especially in gardens where space was an object. On these and others, however, we hope to report more fully hereafter. Ridge Cucumbers even though protected by tiffany do not appear very healthy; but considering the weather this is only what might be expected. Some Celery has just been planted out by way of experiment on Mr. Wilkins's system, by which it can be watered underground. This plan has been fully described by us in a former volume.

Of Cucumbers for trial nearly 140 so-called varieties have been planted, and occupy a large range of pits. All of them have grown most luxuriantly, and promise to fruit well. The Fruit Committee's report on them will therefore be looked forward to with interest. It cannot fail to be highly useful. Let us hope that unsparing criticism will be brought to bear upon this preposterously overgrown class of plants.

Miscellaneous.

Instinct of the Female Butterfly.—Prompted by a most remarkable instinct, and one that could not have originated in any experience of personal advantage, the female butterfly, when seeking a depository for her eggs, selects with unerring certainty the very plant which, of all others, is best fitted for the support of her offspring, who, when hatched, find themselves surrounded with an abundant store of their proper food. Many a young botanist would be puzzled at first sight to tell a Sloe-bush from a Buckthorn-bush. Not so, however, with our Brimstone Butterfly: passing by all the juicy hedge-plants, which look quite as suitable, one would think, she, with botanical acumen, fixes upon the Buckthorn; either the common one, or, if that is not at hand, upon another species of Rhamnus—the berry-bearing Alder—which, though a very different-looking plant, is of the same genus, and shares the same properties. She evidently works out the natural system of botany, and might have been a pupil of Jussieu, had she not been tutored by a far higher Authority. This display of instinct would seem far less wonderful did the mother butterfly herself feed on the plant she commits her eggs to. In that case, her choice might have appeared as the result of personal experience of some peculiar benefit or pleasure derived from the plant, and then this sentiment might have become hereditary; just as, for example, the acquired taste for game is hereditary with sporting dogs. Whereas the fact is, that a butterfly only occasionally, and as a matter of accident rather than rule, derives her own nectareous food from the flowers of the plant whose leaves nourish her caterpillar progeny. So that this, as well as numberless other phenomena of instinct, remains a mystery to be admired, but not explained by any ordinary rule of cause and effect. *British Butterflies, by W. S. Coleman.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—This house should now be kept as gay as circumstances will permit. It is not desirable, however, to crowd it with flowering plants; the aim should rather be to have a moderate number of handsome specimens effectively arranged, which will yield more solid interest and pleasure than a greater amount of floral display from plants of no individual merit. We have also always recommended a thin arrangement of the pot plants on account of the permanent occupants of the beds or borders, which at this season should be allowed plenty of space, in order to secure strong and well ripened wood, without which they need not be expected to bloom finely. Use every means to keep down insects, and let order and neatness be strictly observed. Such stove plants as are intended for the decoration of the conservatory in autumn should now be carefully looked over, shifting such as are likely to want more pot room, with a view of getting the pots well filled with roots before they are required to be in flower. Keep also the shoots tied out rather thinly, and expose the plants to as much sunshine as they will bear without scorching their foliage, in order to keep them low and bushy. Give clear weak manure-water to young growing specimens, and repot any that are intended to have another shift this season, so as to have the pots well filled with roots before winter. Maintain a moist growing atmosphere, and syringe vigorously any plant at all infested with red spider. Growing Orchids should be encouraged with plenty of heat and moisture while that can be done safely. See that plants on blocks and in baskets are properly supplied with moisture at the root; to prevent any mistake in this matter, carefully examine every plant at least once a week, and immerse any found to be dry in tepid water until the material about the roots shall have become well soaked. Syringe lightly morning and evening, and sprinkle floors, &c., in order to keep the atmosphere thoroughly moist.

FORCING DEPARTMENT.

PINERY.—Attend carefully to growing stock, keeping the bottom-heat regular and the atmosphere warm and moist, and use every means to secure rapid vigorous growth. This will not be obtained, however, unless all is right at the root; therefore attend well to watering, and never allow any of the plants to become pot-bound. Give air moderately to young stock, and shut up early in the afternoon, giving the plants a gentle wipe with the syringe, and the house a good steaming by wetting every available surface. Continue to pot a few suckers as they can be obtained of sufficient strength, and do not allow too many to be produced by one plant, as they weaken each other. Indeed we never allow a sucker to grow to any size that is not likely to be wanted for stock, and, unless in the case of any scarce sort, never more than two on a plant. Plants growing in beds of soil must be very carefully attended to with water, giving enough at each application to moisten the whole body of soil; for unless this is attended to, the bottom of the bed will sometimes get quite dry, while the surface is moist.

VINERIES.—The inside borders of houses intended to furnish late supply of Grapes should be well soaked with manure water as soon as convenient, so as to allow of their becoming dry before the damp cloudy days of autumn set in, for damp will be most injurious then, and anything likely to cause it should be avoided. Muscats beginning to ripen should be assisted with fire heat, for it is hardly possible to ripen these properly at any season without artificial heat; and those for late use should be pushed on, so as to get them right by the end of next month at the latest; for those ripened later in the season are seldom of good quality, and we have always found them to hang better when ripened early in autumn than those that were ripened later in the season.

FIGS.—The second crop on the earliest trees will be fast advancing towards maturity; as soon as the fruit begins to ripen the atmosphere should be kept dry and rather cool, giving air freely every fine day, and using a little fire on wet cloudy days, to prevent damp and allow of a gentle circulation of air. Use every care to keep the foliage clean and healthy, and clear of insects, and do not crowd the young shoots.

MELONS.—Plants on which the fruit is ripening should be kept dry at the root, and freely exposed to air on fine days, avoiding moisture in the atmosphere as far as can be done without injury to the other plants. Do not allow the bottom heat to decline where the fruit is setting, which is a frequent cause of the young fruit dropping off. Keep a watchful eye on the foliage, and guard against red spider, which, if once allowed to establish itself, can hardly be removed without greatly injuring the tender foliage.

FLOWER GARDEN AND SHRUBBERIES.

Strong shoots of Chrysanthemums may now be layered in pots to produce dwarf compact bushes. Those in pots may soon receive their final shift. Carnations and Picotees will now be in bloom; let plants in pots be moved under an awning. Here they may be arranged on a raised platform or not according to taste. Picotees may be grouped on one side and Carnations on the other, taking care that the tallest plants are behind, and at the same time contrasting the colours as much as possible. Pipings may be put in on a gentle hot-bed. Layering may also now or very soon be proceeded with. Much of next year's success depends on this matter. All seedlings should be marked, noticing their various properties as to form, colour, and substance, &c. Bedding plants must now be carefully attended to; they are beginning to make a vigorous push. Go over the beds frequently and keep the young shoots of Verbenas, &c., nicely regulated and pegged down until the ground is fairly covered, after which the shoots may be allowed to grow more at liberty. Water Dahlias with weak liquid manure.

HARDY FRUIT AND KITCHEN GARDEN.

Keep up succession beds of Horn Carrots. Let a good breadth of ground be prepared for Winter Spinach; trench it thoroughly, and let it be heavily manured. It generally succeeds best in beds slightly raised. Continue getting out Cape and other Broccoli, and also some late Cauliflowers. An autumn Mushroom bed may now be made; throw the dung together to ferment for a few days; when half dry, mix one-third of loamy soil with it to keep in check any further fermentation, and tread or beat hard while making the bed, forming the spawn holes immediately it is finished to assist in keeping down the heat. Strawberry runners should be procured for new plantations without delay. Those who cannot spare ground for a new plantation may prick them out in prepared beds about 6 inches apart, and remove them with balls in October or in the early part of February.

COTTAGERS' GARDEN.

If not already done take advantage of showery weather to plant out all kinds of Winter Greens, stir the soil frequently among growing crops, and keep down weeds. Pelargoniums, if any, for window decoration may be cut down when done flowering, and cuttings made of their tops. They strike freely without bottom-heat.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending July 5, 1860, as observed at the Horticultural Gardens:

June and July.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 29	10	29.884	29.790	67	42	54.5	61	58	W.	0.22
Satur. 30	11	30.193	30.081	63	38	50.5	60½	57	N.	0.00
Sunday 1	12	30.278	30.209	74	47	60.5	59½	57	N.W.	0.00
Mon. 2	13	30.329	30.315	74	52	63.0	59½	57	N.W.	0.00
Tues. 3	○	30.343	30.193	75	44	59.5	62	56½	N.W.	0.00
Wed. 4	15	30.204	30.096	75	37	56.0	62	57½	N.W.	0.00
Thurs. 5	16	30.241	30.081	77	48	62.5	60	58	N.W.	0.00
Average..		30.210	30.109	72.1	44.0	58.0	60.6	57.3		0.22

June 29—Rain; thunder showers; overcast; showery.
— 30—Densely overcast; cloudy; fine at night.
July 1—Fine; cloudy and fine throughout.
— 2—Fine; very fine, overcast and cold at night.
— 3—Uniform haze; very fine, clear.
— 4—Very fine, overcast; cloudy; clear and cold at night.
— 5—Fine; very dry air; clear and fine.

Mean temperature of the week, 4½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending July 14, 1860.

July.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 8..	73.8	50.4	62.1	18	0.18 in.	1	1	5	3	5	9	5	5
Mon. 9..	74.0	50.2	62.1	15	0.82	4	1	2	—	3	8	10	6
Tues. 10..	74.5	51.5	63.0	13	0.48	2	2	1	1	3	13	3	7
Wed. 11..	74.9	51.7	63.3	9	1.07	4	—	3	1	3	7	7	5
Thurs. 12..	75.3	51.0	63.2	11	1.10	1	2	4	—	4	11	10	2
Friday 13..	75.7	51.8	63.7	12	0.92	—	2	5	—	1	21	4	1
Satur. 14..	76.2	51.8	64.0	13	0.64	—	2	3	2	5	11	6	1

The highest temperature during the above period occurred on the 14th, 1847—therm. 93½ deg.; and the lowest on the 9th, 1836—therm. 37 deg.

Notices to Correspondents.

*** Correspondents are requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

APPLES IN NEW ZEALAND: *C F.* They will certainly thrive there. As to the management of the trees all books of any importance on practical gardening give the necessary information. G. Lindley's Guide to the Orchard and Kitchen Garden may be recommended.

BOOKS: *S B Jones.* Such subjects have no sort of relation to gardening or farming, and we cannot advise you.

CROCUS SEED: *S R.* Sow it now in shallow pans of light soil, and place them in a cold frame. When the plants are sufficiently large to handle prick them out in rows in a sheltered corner of an open border.‡

INSECTS: *W W.* The petals of your Strawberry plants have been eaten by Elater pectinicornis, one of the Elateridæ, but which is not regarded as one of the injurious species of wireworm, the circumstance which you have observed being certainly an exceptional one.—*B S.* We believe the shrivelled and dried up objects you have sent are the eggs of a snail.—*W E F.* The excrescence on the young twig of the Spruce Fir is the gall formed by a species of Aphidæ (Chermes Abietis). It is described in one of our entomological articles in a former volume. We know no means so effectual in checking it as to pick off the galls before the young enclosed in the cells escape. *W.*

LEGAL QUESTIONS: *T R.* Pray consult your solicitor; had you done so when you took your premises you would not have been in your present mess. It is to be feared that you are *wholly* at the mercy of your landlord.

MARANTHA SABEINA: *A Constant Subscriber.* If by this name is intended Maranta zebrina, then no difficulty attends its cultivation. Pot in a mixture of half loam and half peat and sand, or for the loam substitute burnt clay in powder, and for the peat any vegetable mould such as perfectly decayed leaves. Take care that it is skilfully drained. Grow it in a damp stove, and water it well every evening. Nothing more is needed.

MELONS: *J S.* Your enemies are want of bottom heat, want of top heat, and want of well-managed ventilation. Re-arrange all that and you will not want sulphur, which cannot possibly be of the smallest use in the present state of your crop.

NAMES OF PLANTS: *H Dy.* The Rubus seems to be a state of R. carpinifolius.—*Arvenae.* 1, Ornithopus perpusillus; 2, Veronica officinalis.—*G Toll.* What you call Cattleya Rangellii (who could have given it the name?) is nothing but C. superba.—*A J.* Muscari monstrosum, a monster of the Starch Hyacinth.—*S W K.* It is a Peloria, that is to say monster, of Linaria vulgaris.—*J Hood.* Philadelphus grandiflorus.

NEW ROSE: *R H P.* By all means send it to the Floral Committee, with directions to have it forwarded immediately afterwards to Dr. Lindley. According to your description it must be a *very* curious thing.

POKEBERRIES: *E K.* These are produced by Phytolacca decandra, and are emetic. The Judas tree is propagated by seed—not by layers or cuttings.

STEPHANOTIS: *J C L.* It is by no means unusual for this plant to produce fruit in England. The fruit is poisonous.

TEA PLANTATIONS IN INDIA: *A H F C.* The Deyra Doon is a very nice station for India, and perhaps the best you can select, unless you go to the Nilgherries and pitch your tent at Ootacamund. In the North you may grow Tea, in the South Coffee. Both are considered to be paying speculations. But what capital, &c., you would require we do not know. Consult the Transactions of the Agri-horticultural Society of India, Ball on the Cultivation and Manufacture of Tea, Royle on the Productive Resources of India, Porter's Tropical Agriculturist, and Simmonds on the Commercial Products of the Vegetable Kingdom.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.

Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY (ESTABLISHED 1840),

Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.

116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
,, SUPERPHOSPHATE OF LIME	6	6
,, MINERAL	5	5
LAWES'S BARLEY MANURE..	8	0
,, MANGEL MANURE	8	0
,, GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES'S Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES'S Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemica Manures.

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

NORTH HANTS SEED ESTABLISHMENT.

HENRY JESSE begs to thank his friends for the support he has received for many years, and to inform them, that in addition to his CORN AND SEED BUSINESS, he has now added the MANURE, CAKE, AND TURNIP-SEED TRADE. The latter he has devoted his particular attention to, having made arrangements with a first-class House; and trusts by keeping articles of the best quality, to supply his customers on such terms as will give satisfaction and ensure their future orders.—Railway Stores, Basingstoke; and 100, Seed Market, Mark Lane, London, E.C.

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD FOR POULTRY AND GAME.—RICE SWEEPINGS, 8s. 6d. per cwt., in 1½ cwt. bags; SCREENED RICE, 12s. per cwt., in 1¼ cwt. bags; DOG BISCUITS, 14s. per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6s. 6d. and 8s. 6d. per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

KERRY CATTLE.—Bulls, Cows, and Heifers, of the purest blood and most fashionable colour, can be supplied and delivered at Cork by the Owner and Breeder, RICHARD G. CAMPION, Esq., Holly Hill, Rathcormac, Co. Cork.

ON SALE, by private treaty, the following SHORT-HORNED BULLS, the property of his Grace the Duke of Devonshire, Holker Hall. 8th Duke of Oxford (15939), red and white, c. Feb. 14, 1858; got by Cambridge Barrington 2d (14224), dam Oxford 15th by 4th Duke of York (10167), &c. 9th Duke of Oxford, roan, c. Jan. 19, 1859; got by Prince Imperial (15095), d. Oxford 15th by 4th Duke of York (10167), &c. 10th Duke of Oxford, red and white, c. Jan. 21, 1859; got by Cambridge Barrington 2d (14224), d. Countess of Oxford by Earl of Warwick (11412), &c. Knightley, roan, c. March 30, 1859; got by Prince Imperial (15095), d. Aloyse 2d, by Duke of Cambridge (12742), &c. Charming Boy, red, c April 1, 1860; got by Mameluke (13289), d. Coral by Cardinal (11246), &c. Ossian, roan, c May 20, 1860; got by 8th Duke of Oxford (15939), d. Dustie by The Buck (13836), &c. Holker is 1 mile from the Cork Station on the Ulverston and Lancaster Railway. For further particulars, apply to Mr. DREWY, Holker, Newton-in-Cartmel.

CANTERBURY SHOW, 1860.

PETER LAWSON AND SON, THE QUEEN'S SEEDSMEN, 27, GREAT GEORGE STREET, WESTMINSTER, LONDON, S.W., and at EDINBURGH, beg to intimate that they will exhibit, at the ensuing Meeting of the Royal Agricultural Society of England, in addition to their extensive collection of GRAIN, ROOTS, SEEDS, &c, some fine specimens of NEW and RARE CONIFEROUS PLANTS; including all those of recent introduction.

Detailed Descriptive Catalogues may be had in the Show Yard.

PETER LAWSON & SON'S Stand (No. 211) is on the right hand as the Visitor enters the Show Yard, immediately adjoining the Entrance and Exit Gates.

27, Great George Street, Westminster, London, S W.—July 7.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
CANTERBURY MEETING, STAND 38.

READ'S IMPLEMENTS.—PATENT FIRE and GARDEN ENGINES, which for power, portability, and simplicity of action, surpass anything of the kind hitherto invented.

PATENT VETERINARY INJECTING INSTRUMENTS. Improved HOLLOW PROBANGS, for relieving Hoven or Choked Bullocks, Calves, Sheep, &c.

Garden Engines, Machines, and Syringes, of every description, upon the most improved principle.

Manufactured only by the Patentee, RICHARD READ, 35, Regent Circus, Piccadilly, London, W.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

CAUTION.—DRAY'S CHAMPION REAPER.
SOLE PATENTEE.

GEO. THOMASON AND CO., 80, Upper Thames Street, E C. Any one infringing the patent rights will be summarily punished. Price of the Champion Reaper, 25*l*.

PARKES' STEEL DIGGING FORKS.

BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

AGRICULTURAL AND GENERAL MACHINERY—AS PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C.

LAWN-MOWING MACHINES—BURGESS AND KEY'S

MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6*l*.; 19 in., 6*l*. 10*s*.; 22 in., 7*l*.; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

SLATE WORKS, ISLEWORTH, MIDDLESEX, W.

EDWARD BECK MANUFACTURES in SLATE a variety of articles for Horticultural purposes, all of which may be seen in use at Worton Cottage, on application to the Gardener, Sundays excepted. PRICED LISTS of PLANT TUBS and BOXES forwarded on application.

TO AMATEUR GARDENERS, NURSERYMEN, AGRICULTURISTS, ETC.

VULCANIZED INDIA RUBBER TUBING AND GUTTA PERCHA TUBING FOR WATERING GARDENS.—Brass Hand branches with Stop-cocks and Roses, and every description of Garden Tubing Fittings, sold wholesale and retail by W. R. WOOD, 94, Goswell Road, near the Angel, Islington, London, E.C. Price Lists may be had on application. Please to notice the address, 94, Goswell Road, London, E.C.

N.B. Speaking Tubes fitted up.

GUTTA PERCHA TUBING FOR WATERING GARDENS.

THE GUTTA PERCHA COMPANY have the pleasure to acknowledge the receipt of the following

Testimonial from MR. J. FARRAH, *Gr. to* BOSWELL MIDDLETON JAILAND, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider this tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

Manufactured by the Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their Wholesale Dealers in town and country.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and — Collier, Esq., of Dartford.

PROTECTION FROM THE COLD WINDS & MORNING FROSTS "FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s*. 6*d*. per yard run.
Four yards wide	3*s*. per yard.

An improved make, 3 yards wide, 2*s*. 6*d*. per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s*. 4*d*. per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

"East Keal, Spilsby, Lincolnshire, April 30, 1858.

"Sir,—I will thank you to send 12 yards (at 1*s*. 8*d*. per yard) of your 'Frigi Domo,' from King's Cross Station, to be left at the Firsby Station, Spilsby, Lincolnshire. After using it (since I last got it of you some four years ago) I affirm it to be, incomparably, the best and most lasting thing of the kind ever hitherto manufactured.—I am, yours, &c., Rev. J. SPENCE."

MANCHESTER AND LIVERPOOL AGRICULTURAL SOCIETY.—The ANNUAL SHOW of LIVE STOCK (including POULTRY), IMPLEMENTS, &c, will take place at Bolton on September 12 and 13. Entries close on August 15. A large amount is offered in Special or Extra Prizes on this occasion, and the competition generally is open to the United Kingdom. Prize Lists and Forms of entry may be obtained from T B. RYDER, Secretary.

2, Elliot Street, Clayton Square, Liverpool.—July 7.

YORKSHIRE AGRICULTURAL SOCIETY.—PONTEFRACT MEETING, AUGUST 1 and 2.

The entry closes on the 18th of July. For Prize Lists and Forms of Entry apply to JOHN HANNAM, Secretary.

Kirk Deighton, Wetherby.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.—CANTERBURY, 1860.

PROGRAMME.

WEDNESDAY, July 4; THURSDAY, 5; FRIDAY, 6; SATURDAY, 7.—Trial Yard open on Wednesday, at Noon; and three following days, at 9 o'clock in the Forenoon, when the Public will be admitted on each day at 5*s*. for each person, to view the Trials of the Threshing Machines, Chaff Cutters, Mills, Oilcake Breakers, and Turnip Cutters. This payment has special reference to the Trial Yard only: the Implement Show Yard not being open on these days.

MONDAY, July 9.—The Implement Yard open from 7 o'clock in the morning till 6 o'clock in the evening, at an admission charge of 2*s*. 6*d* for each person. Machinery will be exhibited at work on this day. The Judges to inspect the Live Stock, and to award the Prizes.

At 1 o'clock (or as soon after as all the Judges shall have delivered in their awards, of which Notice will be given) the Public will be admitted into the Cattle Yard on the separate payment of 5*s*. each person, at the Special Entrances; Members of Council and Governors of the Society being admitted by Tickets to be purchased at the Finance Department of the Society at the Show Yard; and Exhibitors of Live Stock on producing their Exhibitor's Ticket. Arrangements have been made for distinguishing the animals that have won the Prizes immediately the Judges have made their awards. At 8 o'clock in the evening the Cattle Yard will be closed.

TUESDAY, July 10.—The General Show Yard of Cattle, Horses, Sheep, Pigs, and Implements open to the Public from 6 o'clock in the morning till 6 in the evening; admission 2*s*. 6*d*. each person.

Public Dinner at 6 P.M. Tickets, 10*s*. each, to be obtained of the Secretary.

WEDNESDAY, July 11.—The General Show Yard open to the Public from 6 o'clock in the morning till 6 in the evening; admission 1*s*. each person.

Public working of the Steam Cultivators, on land in the neighbourhood of the city, during such hours as the Stewards may determine.

THURSDAY, July 12.—The General Show Yard open to the Public from 6 o'clock in the morning till 6 in the evening; Admission 1*s*. each person. General Meeting of the Members in the Town Hall, at 10 o'clock in the forenoon.

By Order of the Council, H. HALL DARE, Secretary.

ROYAL AGRICULTURAL COLLEGE CLUB.—The CANTERBURY DINNER will take place on WEDNESDAY the 11th instead of THURSDAY the 12th inst.

July 7. JOHN COLEMAN, Hon. Sec.

The Agricultural Gazette.

SATURDAY, JULY 7, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

MONDAY,	July	9	Agricultural Society's Meeting begins at Canterbury. Cattle Yard open at 1 P.M. 5*s*. admission.
TUESDAY,	—	10	Yards open at 2*s*. 6*d*. Public Dinner at 6. P.M.
WEDNESDAY,	—	11	Yards open at 1*s*. Kentish Ploughing Match.
THURSDAY,	—	12	Yards open at 1*s*. General Meeting at 10 A.M.

—— OUR readers will find in another page a reference to the sale of the "Waterloo" tribe of Short-horns at Lancaster, last Thursday. They formed but a portion of Mr. BOLDEN'S herd at Springfield Hall, but their sale will no doubt prove to have realised the highest prices of the season. Twenty-nine animals fetched 2548*l*. 17*s*., or close upon 88*l*. a-piece!

—— A recent tour through several of the midland and south-eastern counties enables us to speak of the present appearance of the crops in those districts as exceedingly various. On the drier soils of the oolitic district in Northamptonshire and Oxfordshire, as well as in the chalk country, Wheat looks exceedingly well though generally very late. Barley, on the other hand, is generally extremely unpromising. Beans are very various; where the land is good and dry they never promised better, while in Kent for many miles along the South-Eastern railway the crop is miserable. Land is generally fouler than usual. Turnips are in many places not yet sown. We saw them up and singled in some parts of Northamptonshire, where the country is looking perfectly beautiful. In Kent the only appearance of a green crop yet is in the few ill-cleaned Mangel fields which here and there one passes. Certainly the prevalence of a special cultivation in that county, if you judge as a spectator from a South-Eastern train, does not appear to promote good farming. Whether it be between the Hop kilns and the general farmery, or between the Hop-ground and the Bean or Wheat field alongside of each other, the contrast is equally great. The Hop plant looks vigorous; while the Wheat stunted, starved, and patchy; and the Beans in many cases will hardly yield the seed again.

No doubt the contrast between good and bad management is more striking in a year like this, but it is plain that land which will grow such

Hops need not grow such Wheat and Beans. Good cultivation and liberal treatment will produce a more even result on different crops than is seen in the fields between Tunbridge and Ashford.

IN a large seaport town in the South of England a week or two since a quantity of guano was offered for sale by public auction stated to be genuine Peruvian guano, but damaged from the barge having been sunk in the Thames. The guano was forwarded from London by railway, and was packed in Peruvian guano bags and sold by the truck load to various respectable farmers at from 4*l.* to 5*l.* per ton. It had the smell of damaged Peruvian guano and was very wet, containing between 30 and 40 per cent. of moisture. Water however was not its only fault, as on submitting a sample to analysis it was found to contain 28 per cent. of sand, that is, about 27 per cent. more than it ought, also from 10 to 12 per cent. of carbonate of lime or *chalk*. How it was composed we cannot pretend to say, not being acquainted with the analysis of the soil which formed its principal component. It would however not be difficult to compound a similar article at a very small cost.

THE meeting of the Royal Agricultural Society is so much earlier in the week this year that we are already able to report some of its performances, although the public exhibition does not begin until Monday. On that day and on Tuesday the yards will be open with a charge for admittance of half-a-crown; on Wednesday and Thursday, after which the exhibition ceases, the admission will be one shilling; and before the end of the week the removal of the whole will have been completed. Hitherto, Tuesday and Wednesday and Thursday have been half-crown days, and the first show of the cattle has been on the Wednesday afternoon. This year the cattle yard is to be open Monday afternoon on payment of five shillings. That which many regard as the principal section of the Show will thus exercise its useful influence for one day longer than hitherto; and the objects of the Society, the convenience of the exhibitors, and the interests of the spectators are thus all better served.

The relative importance of the two divisions of the Show has been this year affected not only by the greater convenience afforded to both exhibitors and spectators of live stock, but also by the defection of so many of our leading exhibitors of implements. We shall not here enter into any discussion of the points in dispute between the Society and the principal manufacturers, except to declare that it was certainly possible to meet the reasonable wishes of the latter for a more accurate definition of the terms under which they were to compete. If for instance a prize be offered for a combined threshing and dressing machine, some description or enumeration of parts should be given of the machines desired. Are blower sallowed in the case of the simple thresher, or is the difference between the simple and the combined machine to be merely the absence in the former of an arrangement for dividing the grain into its several qualities, all the apparatus for separating weeds and chaff being present? Certainly these questions should have been definitely answered months before the July meeting. And no instructions for the guidance of the makers having been issued, it is not to be wondered at that many of them have declined to undergo the enormous expense of preparation for the meeting at Canterbury. This cannot fail to injure the Show both as an illustration of the present state of agricultural mechanism among us, and as a great market for the disposal of machinery; but in both cases the mischief is to some extent made up by the agency of the many middlemen who now deal in machines between the manufacturers and their customers —the handiwork of many dissentient firms is thus upon the ground in spite of them, and we have many of the advantages of a full exhibition.

Among the facts already apparent from the trials—long since however proved in the field more perfectly than is possible at this short public illustration of it—is the efficiency of the mower and the reaper: BURGESS & KEY'S, CRANSTOUN (WOOD'S), CUTHBERT'S, and DRAY'S all made good work among the Rye—a poor crop—and the twe former made excellent work among the Grass and Clover. Nothing is now more perfectly certain than the availability of machinery for cutting Grass. The road to the show-yard lies through a Grass field from which a heavy crop of hay has just been gathered. It has been mown by scythe, and the quality of its performance when compared with that of WOOD'S mower is obviously very inferior. The stubble is left of uneven length, and a great deal of it much too long where the mowing has been done by hand; where done by the horse-drawn mower the stubble is of perfectly even length, and no scythe could remove anything more, worth saving.

The trial of the reapers too, though on a light crop of Rye, brought out to some extent their relative efficiency, and more satisfactorily still the actual excellence of many of them. A clean and well cut stubble was left, the corn was laid in a fair swathe or in neat and handy bundles, and whether light or heavy, standing or flat (for a portion of it was rolled down for the purpose of experiment), a very fair result was achieved.

The trials of steam ploughs have not yet been finished; they will be prolonged over several days and over as difficult ground as the light land neighbourhood of Canterbury permits. Four exhibitors are present. FOWLER, EDDINGTON, and BEARD, and another show their several methods of turning over the soil.

No better ploughing was ever done than is accomplished by the powerful engines and compact arrangement of pulleys and windlass which Mr. FOWLER exhibits, but the land is such that in no case has work been shown which horses could not have performed. SMITH'S grubber does not appear. COLEMAN'S oscillating cultivator did some good work, and was the only illustration given of what professed to be completed tillage; unless indeed we admit the very clever work of Mr. HANCOCK'S pulveriser plough with its triple share and mouldboard. It was drawn several times up and down the field by steam-power, and buried the surface well even where covered with long Grass, and cut and sliced the earth it turned over in a very effectual manner so as doubtless to greatly facilitate further tillage operations, if it did not altogether dispense with the need of them.

We are not yet acquainted with the contents of the yard and cannot speak of the novelties which may be present it it; but it is plain that whimsical ingenuity will never cease to try impossibilities. At the Oxford meeting, the first annual show of the Society, a travelling blast furnace was shown, intended to direct a hot flame upon the land it traversed and so to scorch the weeds. Twenty years afterwards another attempt of a similar kind is made. A row of teeth removes the Couch and filth of 3 inches deep of soil; revolving harrows shake them free of earth, an endless canvass lifts the rubbish up and lets it fall into the feed box of a blast furnace through which it passes, and out of which its ashes are scattered over the ground on which it was a few seconds previously green and flourishing! And the whole process is to be completed at the ordinary rate of movement of the horse which draws the whole along. The exhibitor made the first trial and realised as might have been expected the first failure of his idea on the public trial ground of the Society.

We shall next week give a fuller report of the results of the trials of such field implements—reapers, mowers, steam ploughs, as are exhibited, as well as of the special class of farm machines—threshers, winnowers, chaff-cutters, corn-crushers, which come this year within the Society's programme. The ploughing match for the local prizes will be held on Monday next—the public dinner of the Society on the Tuesday evening—and the general meeting on Thursday morning. A wet June has left the land in much better condition for the plough and other tillage implements than it generally exhibits at the Society's meeting; and the local interest in the Kentish turnwrest plough will render the Wednesday's trials more than usually interesting. Some further remarks on the trials, so far as they have yet proceeded, are given in another page.

THE OXFORD EXPERIMENTAL GROUND.

[The following is a lecture by Professor Charles Daubeny on the experimental researches which may be carried on in the plot of ground which he has lately made over to the University for the use of the Professor of Rural Economy for the time being. Delivered June 13.]

I INTENDED on the present occasion, had the weather permitted, to select for the delivery of this lecture the experimental ground, which I have now handed over to the University for the benefit of my successors in the chair which I have the honour to occupy. The ground itself, consisting of about an acre and a half, has been purchased of Magdalen College with the view of enabling the professor for the time being to institute such experiments as he may think desirable, for the purpose either of making clear to others the truths already ascertained with respect to the cultivation of plants, or of extending the boundaries of knowledge by experiments on points still remaining undetermined.

When first appointed to the chair of Rural Economy, I felt strongly the want of these appliances, and was obliged to institute such experiments as I wished to undertake in a small corner of the Botanic Garden itself, but ill adapted for such a purpose, both from its contiguity to water and also from its being itself chiefly composed of made soil. Subsequently even this resource was cut off rom me, for when the new conservatories facing the river were built, it became necessary to throw that portion of the garden on which the experiments were carried on, entirely open, and to apply it, as it is at present, to ornamental purposes. Nevertheless before this had taken place, I had succeeded in carrying out some researches connected with vegetable physiology and of rural economy, which it may perhaps be worth while briefly to allude to, as examples of the sort of subjects which may admit of elucidation from the appropriation of such a piece of ground as that in which we are now standing, for the purpose of scientific investigation. I will not indeed dwell upon the experiments connected with the action of different coloured light upon plants, and those on the influence which the latter exert on the purification of the atmosphere, which were published in the Philosophical Transactions for 1833; because I am aware that these were of a nature to be carried on without the advantage of such a piece of ground as I am now in possession of. I will only mention that one novel fact established by these experiments was the evolution of nitrogen by plants during sunshine, owing to the action of light upon them, which has since been confirmed by Dr. Draper, of New York; and that by operating on a larger scale than had before been attempted, I showed that in the course of a given time the quantity of oxygen evolved by a healthy plant in the light so much exceeded that of the carbonic acid yielded during the hours of darkness, as to establish the principle first suggested by Priestley, but disputed by Ellis, that the evolution of oxygen by plants really appears to be the appointed means of restoring its original purity to the atmosphere, vitiated by the processes of animal respiration and combustion. But the more purely agricultural experiments which I prosecuted would require of course a piece of ground expressly set apart for such purposes.

Of this nature even those, which for 10 years consecutively I instituted upon the rotation of crops, by setting apart a number of plots of ground uniform as to the quality and richness of the soil, adding no manure to any of them during the time the experiments were going on, and planting one-half of the number year after year with one particular description of crop, and the other half with the same crops, succeeding one another in such a manner, that no one plot should receive the same twice during the period of the continuance of these experiments.

In this manner, I hoped, by weighing the produce of each plot reduced to the same uniform condition of dryness, to obtain data for computing how much of the diminution which might be expected to occur from repeated cropping could be referred to the exhaustion of the ground, and how much to those excretions from the roots, which, according to the view taken by the celebrated Decandolle, exerted an injurious influence upon the succeeding crop, if of the same nature with the foregoing one.

Upon comparing the quantities obtained from what I may designate the shifting and the permanent crops, it appeared that the former in almost every instance had the advantage, a result not only in harmony with the received doctrine on this subject, but apparently corroborative of Decandolle's hypothesis.

Further investigations however led me to conclude, that except in a very few cases, Decandolle's explanation would not hold good, and that the advantage of intercalating leguminous plants with the cereals arises, not owing to any root excretions from the latter being absorbed by the succeeding crop, and thereby rendered innocuous, but owing to the influence which the organic matter left by the preceding crop of legumes might have in promoting the growth of the cereal crop which followed, by accelerating the development of its parts, and thus enabling it to extract more inorganic matter from the soil.

In all cases, however, whether the crop was a shifting or a permanent one, a gradual deterioration took place in the amount of produce from year to year down to a certain point, at which it would seem to maintain itself with no greater oscillations afterwards than might be readily accounted for by the variations of seasons.

Hence it would seem to follow that the soil had not been entirely exhausted by having its inorganic matters drawn from it during 10 years' cropping; and to prove this to be the case, I made an analysis of it after the expiration of 10 years from the period of the commencement of the experiments, during the whole of which time no manure had been applied. From this it appeared, that although the soil which had been so drawn upon still contained a considerable amount of phosphoric acid, of alkalies, and of all the substances necessary for the food of plants, it held the greater part of these ingredients in a condition in which they were but sparingly soluble, and hence afforded them in quantities too small for an abundant crop; whereas in a soil recently manured, or allowed to remain fallow, the same ingredients existed in a condition of easy solubility, and therefore were freely absorbed.

This led me to distingnish the ingredients of the soil into active or efficient, and dormant or passive, thus affording a clue to the explanation of many of the operations of agriculture, the use of fallowing, and the power of obtaining for a long, and as it seems to us, an indefinite period, a certain though limited amount of

produce from the same field even without the application of manure.

Another set of experiments which occupied me for some time had relation to the question whether a plant is capable of substituting one ingredient for another as a part of its living fabric, as for instance of assimilating soda in lieu of potass as a constituent of its tissues. The conclusions to which I was led with reference to this interesting question rather militate against those deduced by Saussure and others, inasmuch as they seem to show, that a certain limit exists to the power which soda has of replacing potass, the utmost increase of this alkali in the crop of Barley by the most liberal application of soda salts to the soil, in lieu of those of potassa, never appearing to exceed 8 per cent., so that I was led to conjecture that the latter alkali merely circulates through the tissues of the plant without forming part of its solid texture, and thus, although it may, as Liebig conjectures, be subservient to the purpose of fixing the carbonic acid which plants require for their nutrition, yet that it does not enter as a constituent into their living organisation.

The question however was far from being exhausted by the experiments instituted by myself, and I am glad to find it taken up by Mr. Lawes and Dr. Gilbert in a late number of the Royal Agricultural Journal in a report of experiments with different manures on permanent meadow land, in which it is shown that the proportion of potass in a crop of Grass was increased by the addition of salts of potass from 20 to 28 or 29 per cent., whilst that of soda was diminished from 8, the normal quantity without manure, to 4 when a manure containing much potass was employed; when, however, ammoniacal salts without potass were administered, the proportion of soda increased from 8 to 10, and that of potass sunk from 20 to 17 per cent.

Plots:

Manured with:	yielded: altogether:		of:		in 100 parts of the alkaline residuum.	
	lbs.			lbs.	Potash.	Soda.
Carbonate of potash	average of the 2 crops 71½	viz.	grain,	13½	84.50	15.50
			straw,	58	79.50	20.50
Carbonate of soda ..	,, ,, 71	viz.	grain,	13½	76.50	23.50
			straw,	57½	72.75	27.25
Chloride of sodium ..	,, ,, 78	viz.	grain,	14½	76.50	23.50
			straw,	63¾	76.50	23.50
Unmanured	Produce of the bed .. 63	viz.	grain,	11	82.50	17.50
			straw,	52	79.50	20.50

Dr. Gilbert does not appear to have estimated the amount of soda in the crop when manured with nitrate of soda; but his general conclusions seem to confirm my own, as showing that the mineral ingredients of a crop are nearly constant, varying scarcely 1 per cent., but that where potass was deficient the falling off is supplied partly by soda, but in a greater degree by other earths, as for instance by lime in one instance, and by silica in another.

Of course no exact determination of these points can be arrived at until we have succeeded in separating the different parts one from the other, and making a distinct analysis of each, for it is easy to see that the excess of silica must be owing to the increase in the stem beyond that of the flower and fruit. Still, the direction in which these researches, in common with my own, appears to point, is, that the constitution of the ingredients of a plant either varies not at all, or only within very narrow limits indeed. If this be the case, the variation in the mineral composition of a crop under different treatments must depend upon the relative degree of development of its several principles, and not on a difference of composition induced in any one.

But further experiments are still wanting on this subject, and I must leave them as a legacy to my successors, who I hope by varying the conditions of the problem, and operating upon a much greater variety of substances, may be at length led to results which will more justly deserve the confidence of the public.

A third set of inquiries had more of a theoretical character, from its bearings upon the speculations of geologists. It is well known that the authorities in that science are divided as to the question, whether or not the lowest strata of sedimentary origin which have been yet reached were deposited before organic bearings had been called into existence. In North Wales for example we observe a deep and extensive formation of roofing slates which lie at the bottom of all the other rocks of the neighbourhood, themselves belonging to the so-called Cambrian system, the oldest fossiliferous rocks yet observed, and in which not a trace of any fossil has yet been discovered.

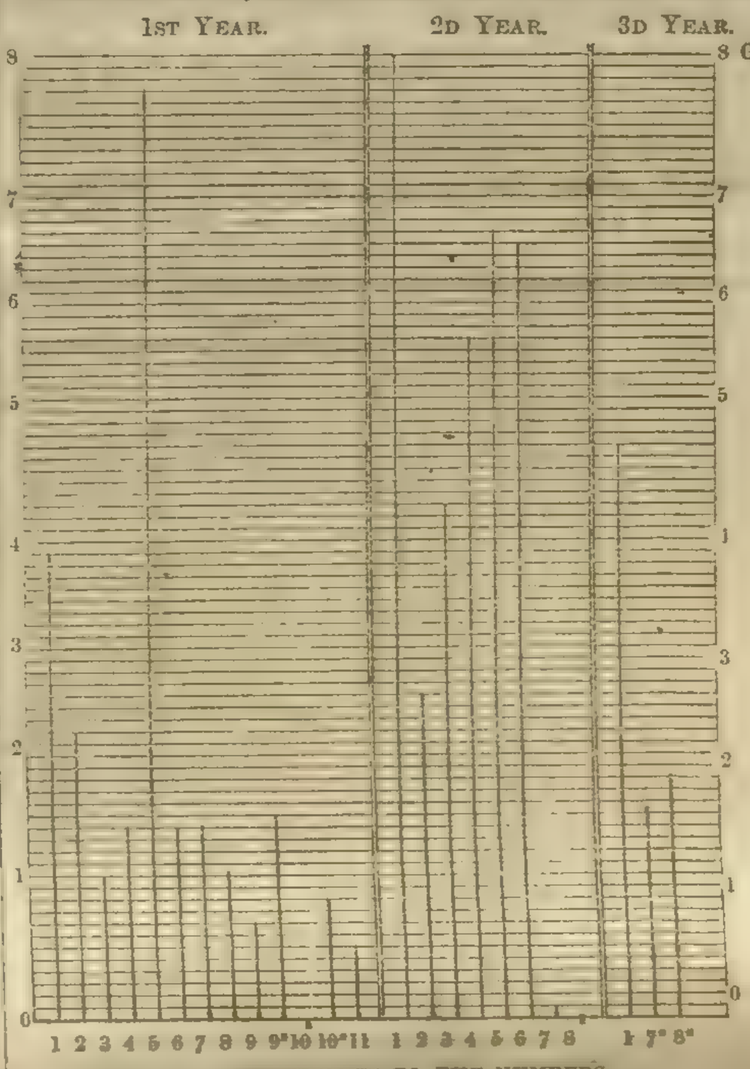
This fact, all the more remarkable from the enormous extent to which these slates have been developed in the Pennant and Llanberris quarries, is referred by the Uniformitarians to the obliteration of the fossils supposed to have been once present in them, by metamorphic action, and the only reason they can assign why, as a general rule, the oldest rocks are more often destitute of organic remains than the newer ones, is the greater chance of their having been affected by heat and other influences during the larger period that had elapsed since their deposition. It appeared to me that there was one way in which the truth of this hypothesis might be tested.

It is admitted on all hands that every species of organic being, whether of an animal or a vegetable nature, contains essentially a certain per-centage of phosphoric acid. There would seem to be some necessary, though mysterious, connection between that principle and life in all its grades, so much so that when the former is entirely absent, organic beings cease to exist. Now phosphoric acid, combined, as it usually is, with lime, or with magnesia, cannot be dissipated by any degree of heat with which we are acquainted, and consequently must remain to the end of time associated with the other materials of the rock along with which it had been originally deposited.

If any marine animals, then, existed in the sea at the bottom of which the materials now constituting the Bangor slates had in the course of time been deposited, they would have left behind them when they decayed the phosphoric acid which entered as a constituent into their organisation, and the rock would ever after retain it as an evidence of their existence; not, of course, that it followed that phosphoric acid might not exist in a rock in which organic remains were wanting, but only that where the principle in question was entirely absent, no organic beings could possibly have been present. It is, however, extremely difficult by chemical means to detect very minute quantities of phosphoric acid, diffused through the mass of a rock, and hence an analysis, however carefully conducted, could hardly afford us a full assurance that phosphoric acid might not exist in small quantities.

An indirect method, however, of ascertaining the same point occurred to me of easy execution. This was, after properly preparing the rock to afford ingress to the roots of the plant by reducing it to a coarse powder, to introduce into it the seeds of some plant which contained a notable quantity of phosphate of lime, and to ascertain whether the ashes derived from the resulting crop contained more of that ingredient than had been present in the grain sown. Whatever excess there might be must of course have been owing to the presence of the mineral in the earth itself. Now it is remarkable that out of 10 different samples taken from rocks of various ages, namely, from the chalk, the calcareous grit, the great oolite, the new red sandstone, the dolomite or magnesian limestone, and the clay-slates from Dolgelly, from the foot of Skiddaw, from the quarries at Nant Francon, and from those of Llanberris, near Bangor, the only ones which yielded nothing beyond the minutest trace of phosphoric acid to the Barley sown in it were the four last, which lie at the base of the rock formations of this country, and which from the entire absence of organic remains are considered by one school of geologists as azoic or destitute of all traces of life.

Table.—Showing the relation between the amount of phosphoric acid present in the Barley sown, and in the crop obtained from it, in the several soils below-mentioned:—



References to the numbers.

1. Botanic Garden Soil.
2. Chalk of Brighton.
3. Oolite, Cirencester.
4. Sand, Headington.
5. Sandstone, Ledbury.
6. Dolomite, Roche Abbey.
7. Clay Slate, Dolgelly.
7*. Ditto, manured.
8. Clay Slate, Skiddaw.
8*. Ditto, manured.
9. Clay Slate, Bangor.
9*. Ditto, manured.
10. Clay Slate, Llanberris.
10*. Ditto, manured
11. Mica Schist, Glasgow.

I must refer for the details of this investigation to my Paper which was published in the Quarterly Journal of the Chemical Society, vol. 7, p. 289, 1855, and will only further remark that although the facts may not be numerous enough to justify any certain conclusion being arrived at, they nevertheless may serve to point to a line of inquiry, which, if followed out in other cases, might lead at length to the determination of the interesting problem referred to.

Such then are a few of the inquiries connected with agricultural chemistry which I have at various times been engaged in carrying out. [The second part of this lecture, devoted to the indication of future trains of investigation, will be given hereafter.]

THE "BONDAGER" OR THE "BOTHY."

On the majority of the extensive farms of south-eastern Scotland to build a separate residence for the female field labourers, which may be attached to, or detached from, the farmer's residence, is the only remedy I can suggest for the evils inseparably connected with the bondage form of agreement between the farmers and hinds.

The hinds are as firmly engaged to the farmer for 12 months' service as a private soldier is to the Queen. The bondagers are in the same way servants to the hinds and their wives, but they are only day labourers to the farmers.

I have known a good many bondagers, each of whom had to get up a little after 4 o'clock to prepare the breakfast, milk the cow, and do other household work previous to commencing her day's work to the farmer at 6 o'clock.

The bondagers work 10 hours per day to the farmer, with the exception of the winter quarter, and a great many have to milk their master's (the hind's) cow three times a day.

There is nothing degrading to the female character connected with field labour; but I consider the being a poor servant's servant has a degrading tendency. And any one may imagine how she would like to be domineered over by a master and mistress whose income cannot be regarded as exceeding 10*s*. per week throughout the year.

There are indeed some women who are so fortunate as to engage themselves to men and women possessed of Christian principle, and have a better example set them than in their own homes, but in general the bondager's fate is a hard one.

But I contend that this is no necessary part of the agricultural system even in the districts where it occurs. What need is there for a ploughman to contract to supply his master with a female labourer? A farmer or his steward could hire or engage the requisite number of labourers himself? All anomalies and difficulties would thus be obviated. But how is a farmer to engage his labourers himself, since he has not sufficient domestic accommodation for field labourers in his own house? He must build a residence for them attached to his own residence.

The term "bothy" has acquired an opprobrium, but it is merely an appellation applied to a residence for garden and farm labourers, and what objections can be brought against suitable domestic accommodation being provided for single ploughmen, as well as married ones, at a convenient nearness to the farmsteading? The nearness of a body of female labourers properly cared for and presided over need not be a nuisance to the farmer's family.

The wives of farmers who have confidence in their domestics do not prohibit their children from going into the kitchen occasionally. There are women who are respected by rich and poor who have to toil in the fields and factories for a livelihood. My own sister thought she had reached as advanced a point as a labourer when she could take her part in spreading manure and hoeing Turnips, as when she could undertake the duties of housemaid in a gentleman's service. In short, it is self-evident that unmarried male and female farm labourers must be lodged somehow, whatever name may be attached to the home. How is it in the mansion-house, where a full establishment of servants is kept? The butler, cook, housekeeper, and head groom each has apartments for his or her subordinates. The servants' hall, the room where the housemaids sit, the groom's sitting room in the stables, and the under gardener's room or rooms, generally part of a shed built against the north side of the garden wall, may all be termed bothies. Is a room or rooms for the accommodation of single ploughmen not as indispensable an appendage to a farm steading as a room is in a garden for an under gardener? Little reference is made in public prints to these—the garden bothies. Thus a paper was read at a conference held at Liverpool, from which I quote the following:—

"An unsound theory has been put forth in regard to the possible improvement of bothies. The system cannot be improved. It is essentially wrong. Anything that makes the family system impossible can only lead to evil, and that continually. The bothy system, therefore, must be extirpated, and ploughmen allowed to marry, and this, we are persuaded, will require the strong hand of law. Besides, many of the proprietors of Scotland hold their estates under a strict entail, and by a recent decision of the Court of Session in the case of Mrs. Murray Dunlop, it has been found that building houses for working men does not constitute a permanent improvement for which an estate can be burdened. Dog-kennels may be built, and if a house is necessary for a man to look after the dogs, it may be provided, but not houses for ploughmen. Some legislative enactment is therefore necessary, and would go far to remedy the evil in question if either bothies were at once prohibited, or if, as Hugh Miller suggested, a heavy tax were laid upon them.

The answer to this may be given by Mr. Hope, of Fenton Barns, East Lothian, who wrote thus to the *Morning Post*:—

"In East Lothian the hinds and ordinary workmen live in separate cottages with their families. A cottage and garden forms part of their wages, which likewise consists of specified quantities of the different kinds of grain and Potatoes, or a piece of land wrought and manured for the growth of the latter. Each of them has a cow, which is their own property, grazed

and kept on the farm; they are thus enabled to keep a pig. The possession of a valuable cow and pig not only enables them to rear their families comfortably, but it is a guarantee for their moral and social respectability. It is seldom that you hear of a man who owns a cow becoming a poacher, or being guilty of any of the minor offences against law and order. I have been in many of the counties of England as well as Scotland, and I have never seen a more intelligent, active, sober, honest, and trustworthy class of labourers than the hinds of East Lothian. They are sent to market with grain, and sell it to as great advantage as the master could do; they receive the money, return home, and make out a neatly written note of the expenses incurred and the amount obtained. I have 16 yearly servants on this farm, and there is not one of them that I cannot trust in this manner. And to show that they are not an 'ever-changing population,' I may mention that six of them have been employed here from 34 to 45 years; several of the others were born on the farm, and only one has been with me for the short period of two years; but his grandfather, now too old for work, and not included in the above 16, has been on the farm for upwards of 40 years. On many of the farms around me a similar state of matters prevails. The bondage system, I confess, still prevails on many farms, though it has been given up on the larger proportion. The compelling the hind to furnish a stout boy or girl during the summer months to work on the fields is undoubtedly a hardship, when he has not a member of his own family suitable for the purpose. It breaks up the domesticity of his family circle; but I cannot see there is anything leading to immorality in it. The great demand for hands during summer has arisen from Turnips and Potatoes being grown on land which, within my recollection, was bare fallowed; and though additional houses may be built, and people got to live in them, the question remains, how are they to subsist during winter? However, this bondage system, which was universal some years ago, is being generally abandoned, and what is incorrectly styled the bothy plan adopted in its stead—that is, on most farms one or two cottages are fitted up with beds, &c., and young women from Ireland, the Highlands of Scotland, Skye, and the Western Isles, come in summer, live in them, clean the crops, assist at harvest, and, after the Potato crop is secured, return to their own homes."

To show what humbug is submitted to the public by men who move in the upper and middle ranks of life, meddling with what they know nothing or comparatively little about, allow me to quote the following from the passage on the bondage system from the paper which was read at Liverpool:—

"The system, in short, is as near an approximation to the slave system as the laws of this country allow. The main difference is that the men are not bought and sold and even this is (apart from theoretical considerations) a questionable advantage."

No one will attempt to deny that much remains to be done in rural districts; but it would require little effort on the part of practical agriculturists to show that it requires a knowledge of details to justify any man to meddle with such topics. *A Labourer.*

FARMING ECONOMICS,—No. IV.

MANGEL WURZEL.—There is no difficulty in growing a heavy crop on a stiff clay soil provided it is deeply drained, very deeply cultivated, and the land well filled with good manure. When too busy to cart on the manure I have grown excellent crops with 4 cwt. of guano, and 2 to 3 cwt. of salt, mixed together, and sown broadcast, then scarified or ploughed in. The Mangel seed I mix with wet sand for a few days until it chips, and then drill it, drying it sufficiently so as not to stick to the cups of the drill. I never miss a plant. I have now (July) a good supply of sound roots having lost none by frost, the roots having been thrown into the carts as they were pulled, and at once clamped and covered with straw. It is more easy to grow a crop of Mangel than to preserve them. The more moist the land when they are pulled the better, because the fibres have then attached to them some adhesive earth, which is most material for their preservation. They are in the worst possible condition for keeping when they come up dry, clean, and free from earth. They then in the spring appear to dry rot. It is very undesirable to let them lie on the field when pulled. The fibres and earth attached to them dry and when thrown into the cart the earth leaves the fibres. Although more difficult to cart off in wet weather they will keep much better, and probably I shall irrigate mine just before pulling in order that they may keep the earth attached to be them, if not otherwise sufficiently damp. Although very desirable to protect them from frost they ought not to be finally shut in with earth until the heat has evaporated, and it is desirable to have draining pipes, placed vertically along the roof or ridge of the clamp.

I find that by trench-ploughing for Mangel I mix with the surface soil a portion of the tenacious aluminous subsoil. The Mangel multiply their fibres in this, and as we now take them out of the clamp they are fresh and firm, having masses of this moist clay attached to them by a network of fine fibres which they have pushed into it. I thatch my clamps and then earth over the thatch. A large and successful farming friend of mine not only does this, but thatches over the earth in order to prevent its getting wet and freezing. One of the advantages of this plan is I think to prevent the heat of the sun acting on the earth in the spring and summer, for we all know that in sunshine the earth attains a heat some 30 to 50 degrees above that of the air. The glassy thatch being a non-conductor acts the reverse of this, and thus keeps the Mangel cool enough to retard vegetation. If you do not thatch over the earth place the clamp on the shade of some fence or sun screen. Sowing Italian Rye-grass or other seeds on the earth outside the clamp may probably have the effect of preventing too much sun-heat on the surface. *J. J. Mechi, Tiptree.*

INSTANCES OF TULLIAN EXPERIENCE.

TABLE I.

	Experimenters' Names.	Acreage.	DESCRIPTION OF SOIL.	Rent per acre.	Date.	No. of years embraced in the Experiment.	Acreable Produce in bushels of Wheat.
			1.—WITH THE PLOUGH.	£. d.			
1	Jethro Tull ..	120 (?)	A thin chalk	10 0	From 1712 to 1735	13	24
2	Mr. Dean ..	(?)	"Soil of a very stiff obdurate tending quality, and difficult to keep in good tilth"	15 0	1744 to 1764	20	27
3	Rev. W. Close ..	5	"Not what is termed good Turnip land, but a mixed loamy soil rather springy"	20 0	1782 to 1785 1790 to 1794	3 4	24 21¾
4	Mr. Budd ..	(?)	(?) dark-coloured loam upon a marl and clay		1816 to 1822	6	23
5	Mr. Beaman ..	(?)	"A stiff" bottom"		1825 to 1832	8	27¾
6	Mr. Box ..	1	Land of average quality			2	26½
7	Mr. Clarke ..	10	"Soil and Subsoil, a strong alluvial loam, not well drained, but sandy earth at considerable depth"	40 0	1857 to 1858		
8	Rev. Mr. Smith ..	1	A good Wheat Clay Soil	32 0	1846 to 1858	4) 134	33.2
9	Mr. Jones ..	4	A clayed gravelly Soil	32 0	1851 to 1858		
10	Rev. Sir G. Robinson ..	4½	"Soil and Subsoil, a gravelly loam, the gravel preponderating"	35 0	1850 to 1858		
11			"Soil, a mixed sandy clay—subsoil a stiff clay"		1819 to 1858	7) 1734	24.3
			2.—WITH THE SPADE OR FORK.				
			Average per acre			11	35
			Average per acre			3	34
			Average per acre			8	36½
			Average per acre			8	28½
			Average per acre			10	28½

Table II. shows the acreable produce of each successive year in those instances where the particulars are recorded:—

| No. | | Previous Common Husbandry. | TULLIAN HUSBANDRY. *Bushels per acre.* | | | |

a holiday in a town that citizens take in enjoying a holiday in a secluded retreat with those whose tastes are congenial.

Were I an employer of labour instead of an *employé*, I should prefer and make a point to engage a servant privately; nevertheless it will take some time for the country to prepare itself for such a radical change as the abolishing of hiring markets would be at present. The term "labourer" is applied indiscriminately in some districts to men who are employed regularly by farmers at work which reqnires horse-power, and also to those who do work connected with the executing of permanent improvements. Ploughmen who are engaged for a twelvemonth's service are "servants," and are as firmly engaged as a private soldier. Watching with a jealous eye anything which is connected with the labouring classes, I see no substitute in the shape of a holiday suggested for the hiring markets, which are regarded by so many as a curse and the source of immorality. The present state of things must of necessity remain unchangeable until the majority of the landowners, tenant farmers, and rural clergy severally perform the duties which devolve upon them; and I venture to state that if the majority of the three classes were to perform their duties, the majority of the labourers would not lag behind in performing their duties.

My father was employed three years on a farm, the steading of which is three miles from the parish church. There was no library on that farm, no Sabbath school under the control of any office-bearer in the church, and I never saw the minister of the parish. The ploughmen met once a week for devotional exercises, and it gives me pleasure to look back 20 years ago to the scenes of my early boyhood to recall such pleasing associations.

I was grieved a few years ago to hear a man, who is respected and esteemed by rich and poor, speaking of the culpable negligence of the Presbyterian ministers. I heard that man state that the minister of whose congregation his brother was a member passed that ploughman's cottage once every six weeks during six consecutive years, and although the minister baptised several of that ploughman's children, he never entered the ploughman's cottage when passing it on his way to dine with the ploughman's master, who was a member of a different section of the Presbyterian Church.

Now, were you a ploughman and your minister to pass your door so frequently and never call to speak to you and your wife, I think you would, like myself, regard such a class of men incompetent to meddle with gentlemen and tenant farmers' system of management. I admit that ministers of the gospel and the aristocracy have good grounds for interference; but are such men competent to take the place of practical agriculturists?

My late father's master was not responsible for his servants having to live and die in hovels, but the landed proprietor was and still is. The minister of the parish in which I emerged from boyhood to manhood was chargeable with a culpable neglect of duty in not making an effort to induce the young lads in his parish to follow up the education they had received at the parish school; and I want to know who ought to be at the expense of purchasing a few educational and other works for the young men in each parish. Each individual of every class of men has ample scope for his own sphere of labour without attempting to throw his own work aside and dictate to an intelligent class of men who are quite competent to manage their own affairs.

Sir John Pakington and Lord Kinnaird have devoted their attention to the subject; but it would be much better were practical farmers of reputed respectability appointed to suggest remedies for the existing state of things. Although the reading the *Agricultural Gazette* is all my acquaintance with Mr. Wilson, of Edington Mains, I venture to state that Mr. Wilson would be as much at ease and at home in detailing all the causes which give so much annoyance to a certain class of men in Scotland, as he is in discussing anything connected with the ordinary routine, or with the higher branches of agriculture.

For instance, Mr. Wilson states respecting hiring markets (see *Agricultural Gazette*. p. 297):—

"He thought when it was stated for instance that these markets were looked upon in many quarters as the cause of the drunkenness and immorality that they complained of, that this was a mistaken view, and that these markets were rather the occasion than the cause of these evils.

"The evil that existed was seen probably in a more offensive way at these markets than at other times; but he very much doubted of these markets being the cause of the evil. And that whole matter, in fact, of dealing with hiring markets, with the view of remedying the evils that were known to exist amongst that class of the community, appeared to him to be very much akin to what medical men called 'treating the symptoms;' it was not going to the root of the evil.

"They might get quit of these hiring markets, but unless something far more important be done than that, the evils would exist and would find vent in other forms. He did not think that these markets were the cause of the evils complained of; they certainly afforded facilities for much evil, but they could not, on that ground, get quit of such things."

Since Mr. Wilson does not state what are the "marked peculiarities (which the Rev. Dr. Begg stated at Liverpool) come out in connection with the rural districts of Scotland," I shall also leave the subject to those who think there is an inherent demoralising influence inseparably connected with the modern system of agriculture in 1000-acre farms. *A Labourer*. [The topics referred to in this article, which has been much condensed, were recently discussed before the Highland and Agricultural Society of Scotland, as reported in a recent Number of this Journal.]

THE VALE OF STRATHMORE.

(*Continued from* p. 610.)

POLLED ANGUS CATTLE.

We now turn to another, and, if anything, more interesting branch of Strathmore husbandry. The Scotch polled beasts are well known throughout the kingdom, and find their way, when killed, from the table of royalty to that of the humblest of her Majesty's subjects. In appearance they may not carry so jaunty an air as their aristocratic west Highland brethren, nor may they be so much sought after for park ornamentation as either them or the graceful Devons; but for producing good roasting meat on the right places and plenty of it—joined with coming early to the butcher—we question if many breeds excel them. Of course reference is here made to well-bred specimens of this, or any other breed, and not to mongrel beasts, of which there are but too many of any class. In Scotland there are several recognised families of polled stock, all claiming to share the honours of primogeniture. Southwards you have the Galloways, then the Fifeshire beasts, then the Angus, the Aberdeen, and the Banffshire stock. The latter three are very closely allied, and from the exchanges both of males and females, may be regarded as practically forming one class. Like other breeds, the Angus have of late years had much attention paid to their improvement, and first-class bulls are quoted at figures of which not even the Short-horns need be ashamed. Among those who have done most for this breed, we may enumerate the late Lord Panmure, and the present Earl of Southesk; Mr. Watson, of Keillor; Mr. Bowie, Mains of Kelly; Mr. M'Combie, Tillyfour; and Mr. Walker, Portlethen, both of Aberdeenshire; Mr. Collie, of Ardgay, Morayshire; Mr. Brown, Westerton; the late Mr. Scott, Balwyllo; Messrs. Lyall, Fullarton, Ruxton, and many others. Nor have their labours been in vain. Take the local quotations of beasts bred in the district, at the first Brechin spring tryst or fair, and you find the prices equal or superior to what most of our English fairs would then show. We notice that many prime lots of steers are given at from 22*l*. to 27*l*. per head; and store beasts (fit for feeding off on Grass), that had been wintered in yards, at from 14*l*. to 18*l*. per head. At a farm in the occupancy of Mr. Lyall, factor on the Kinnaird property, we saw an open yard of steers, just turned two years old, for which 22*l*. per head was refused. It is but just to add that they must evidently die well, in order to make that money to the butcher; for their size was not greater than would have warranted laying out 20*l*. upon a moderate well-bred Short-horn of equal apparent bulk. The north country beasts are of heavier make, but slower feeders, and decidedly less symmetrical: possessing more of the horses'-collar style, "narrow at top, and wide at bottom." These make good working oxen, and when used to the plough till six years old should probably be worth from 50*l*. to 60*l*. the pair. Mr. Vallentine, of Bogmuir, in the Mearns, invariably keeps one or more teams, working them in pairs, and we saw them being driven and also unharnessed as quietly as if they had been a team of well-trained Suffolk Punches. Strange to say, they are reported to fatten better at such ages, with a moderate share of work, than if tied up and stall fed, but we must pass on to the

KINNAIRD CASTLE HERD.

Immediately after crossing the range of hills which separates the basin of Lunnan Water from the valley of the Southesk, on the line of the Scottish North-Eastern Railway, the towers and turrets of the Earl of Southesk's mansion come prominently into view, on the left. A fine tract of rich alluvial land stretches away to the eastward, following the course of the Esk, which shortly loses itself in the Basin of Montrose—a large tidal lake which is twice filled and emptied in the 24 hours. On the opposite side the river a beautifully sloping hill side, in a fine state of cultivation, shields the lower land in some measure from the wintry blast; while at a distance of 8 or 10 miles more "the British Alps" (the Grampians) rear their blue summits to the skies—the highest in this part of the range, Mount Battock, being 3465 feet above the level of the sea. Bridge-of-Dun forms the most convenient station for reaching Kinnaird, which is not more than a mile and a half distant, along a winding footpath by the south bank of the river. Right ahead the Round Tower and Cathedral church of Brechin are before you, carrying also pleasant recollections of the "Den Nursery"—one of the happiest retreats for a summer afternoon which could well be thought of, and which Mr. Henderson has most freely opened for the service of the public, for many years bygone. But for the openness of the country, the higher surrounding hills, and the comparative absence of Grass land, the tract of bottom land referred to would well pass for some of the more fertile meadows along the banks of the Avon. A great part of the castle, now in the Earl's own hand—is of this nature. The cows are kept at a set of capital byres still nearer the mansion, but screened from view by an intervening plantation. Before adjourning to the cows, we had, by the courtesy of Mr. Peter, the farm manager, an opportunity of seeing several matters of interest connected with the Haughs farm. Fortunately it is a species of interest which is now less rare in Scotland than it once was. In the controversy on what is known as "the bothy system," those on this farm played a not inconspicuous part. Every one who attacked the prevalent system was sure to have a fling at the notorious bothies here. Their being remarkable for badness cannot be attributed to the landlord, as he could neither compel the tenant to supply better accommodation, to keep fewer inmates in the bothies, nor yet could he erect other domiciles without arrangement with the occupier. Suffice it to say, the thing was not done, and, at the present, matters wear something of a transition aspect. As to the policy of herding colonies of either men or women together in bothies, it is not in the province of the writer to enter. Whether it adds to the refinement or the moral and intellectual improvement of the occupants; or whether there may not be a close relationship betwixt this state of matters and the prevalent illegitimacy among the humbler classes in the north, he leaves for the judgment of the reader to decide. But he remembers well having spent a winter in charge of a flock of sheep a good many years ago, under circumstances where a berth in a bothy, with nearly a dozen others, would have been his lot, had he not preferred paying for lodging with a cottager, instead of accepting the freedom of the mess room. Some of these bothies are, or were, detestable affairs, reminding us of Click-Clack's commentary on one of them, as given in Hugh Miller's "My Schools and Schoolmasters." "That a dwelling for human creatures!" he said. "If I was to put my horse in til't, poor beast! the very hoofs would rot off him in less than a week." However, "man wants but little here below," and on looking into the hut temporarily inhabited by a part of the 10 female out-workers employed on this farm, it did not strike us that woman's wants can under certain circumstances be very great either. A circular house of one apartment about 12 feet in diameter, the fireplace facing the door, the wall little over a man's height, and the sole window a pane of glass in the room of one of the slates of the roof; this formed the accommodation in which these stalwart Highland women were spending their dinner hour. In the late tenant's time, this domicile formed the men's bothy, the sleeping apartment being over the stable. And such a bedroom for half a dozen men in a Christian land! The entrance is on the second floor, to be gained by climbing a ladder placed perpendicularly against the wall. A loose rope tied in knots, for the sake of giving a better hold, offers its aid to the inexperienced explorer. The dimensions of the bedroom were 18 feet long by 12 feet wide, and 5 feet 9 inches high. At this height a well-grown man could not stand upright. The press-beds looked admirable for confining a dog or a litter of puppies, and to them the stench from the horses below would not be unbearable. To the credit of the noble owner this bedroom was at once disused on his obtaining the land in his own hand; the other bothies, too, are materially amended, and we were glad to see the foundations cast for a cottage or two adjoining the homestead. The farm is in a good state of cultivation, and possesses a fair amount of the newer class of implements, including a Reeves's broad-cast manure distributor, which Mr. Lyall picked up at one of the late meetings of the English Society. We saw, too, a Grantham plough lying by the hedge-side that had been freely used throughout the spring. It was not, however, of the orthodox Warwick make, but we suppose Messrs. Hornsby's simplified and improved plough, as adapted for Scottish tastes. It does its work well, and is liked by the men after a little experience with it. A Suffolk drill, unused for years, had also been put in action by Mr. Peter, and a field of 20 acres, drilled in one day, was finished in a style which would pass muster even in Bedfordshire.

But we must now turn to the Angus "doddies."

T. Bowick.

(*To be continued.*)

Home Correspondence.

Bretonne or Brittany Cattle, from the Province of Bretagne in France.—With reference to a paragraph in your last week's Paper, dated June 30, under the head of "Breton Cows," the following particulars may be interesting to your correspondent "Enquirer," as well as to others who have noticed this breed of cattle. The first time of their being brought under public notice in this country occurred nearly two years ago, when the *Illustrated London News* published an account of the importation of a herd of Bretonne cows by the Messrs. Baker of Chelsea, and gave a drawing of a group of them in the same Number. I have been informed that Messrs. Baker, were induced to try this experiment from having seen some specimens of the breed in the possession either of the ex-Queen of France at Claremont, or the Duc d'Aumale at Twickenham; I forget which. Since that time Messrs. Baker have regularly imported them, and constantly announced their arrivals in the advertisement columns of the *Times*. The herds thus imported are said to be selected by Mr. Baker himself in their native country, and I suppose are shipped by him from St. Malo to Weymouth. In the *Times* of Thursday last there appeared an advertisement of "pure Brittany cows" and a "Brittany bull," imported by Mr. John Prentice, to be sold by auction at Birmingham on the 29th June. Until I saw that advertisement I was under the impression that Messrs. Baker of Chelsea were the sole, as they certainly were the first, importers. At the recent

National and General Agricultural Exhibition at Paris there were no fewer than 114 entries of Bretonne cattle; and these were reported to be an excellent show. Your correspondent suggests a cross between the Bretonne and the West Highlander, with a view to "feeding qualities." I am told that even the pure-blooded Bretonne ox, like the Shetland, will attain a size and weight that would be scarcely credited by anybody who has seen only the Lilliputian cows and still more Lilliputian bulls of this breed. The Bretonne cattle are remarkably hardy, and will thrive upon the coarsest and worst kind of pasture. In fact, in this country, it would not be easy for them to find any pasture that is not superior to that of their own native hills. Their strong constitutions, coarse propensities in feeding, and remarkable docility, would make the Bretonne cow admirably fitted to be a poor man's cow, to be turned out to pasture in lanes or upon commons and waste lands. There would be no fear of their straying or breaking through fences, but their price is far beyond the poor man's reach at present. As to their milking properties, speaking from my own experience as well as that of several of my friends who have tried them, I cannot say much in their favour with regard either to quality or quantity. The quality of their milk is certainly very inferior to that of the Channel Islands cow; and the quantity is not in proportion to the food consumed as compared with either the Alderney or the Short-horn. With a view to improve the milking properties, I am trying a cross between the Bretonne cow and the Alderney bull. The Bretonne cattle on the mainland are said to be descended from the same stock as the neighbouring breed in the Channel Islands, to which they bear a strong resemblance in form, though not in size or colour. The bleakness and barrenness of the country to which they belong is thought to account for their having degenerated to their present diminutive size, like the cattle of the Shetland Isles, and like the sheep and ponies of Wales, with which last-named country the inhabitants of Bretagne claim the connection of a common origin and a kindred language. *Needwood Forest, Staffordshire.*

Kerry versus *Breton Cows.*—I have seen some of the Breton cows your correspondents inquire about, and think them delicate for this country, as it is natural they should be, coming from a more southern climate. If small hardy cows are wanted for villa residents, Kerries would be by far the most suitable, and if a demand was to spring up could be supplied in London at three and four years old, ready to calve, at about 10*l.* a head; they could be kept on one-third of the keep of an ordinary cow, nor is hay or a house necessary to them in winter. I have known one, not much taller than a goat, give 24 quarts of milk a day; but with their first calf might be fairly estimated to give 12 quarts. There is one 47 inches high in a stable in town, which gave that when first put up, and now, fed upon hay, gives 8 quarts. *Answerer.*

Cheshire and Shropshire.—When will the preservation of game be reduced within reasonable limits? In the north-western counties of England this practice is carried out at a great sacrifice to rural morality. Shropshire is a great game-preserving and coursing county, while Cheshire is noted for its game-preserving and fox-hunting gentry. The north-west is not alone in this matter, nor do our observations bear out that the gentlemen of the north-west are all strict game preservers. But in behalf of agricultural progress and success, and in the name of those who promote the well-being of their humble fellow creatures by the force of example as well as precept, we protest against that strict preservation of game, which offers so many temptations to peasants, which is so expensive and so destructive. This is one of the most important seasons of the year to the gamekeeper. At one place we observe that hares, leverets, and rabbits are thick; and almost everywhere chapters of lamentations are cited in respect to the badness of the weather for young pheasants and partridges. Now, a keeper has "strict orders to look after the birds;" and then another has "strict orders about the hares." So it goes on till bailiffs or men are complained of to their employers for scaring rooks and wood-pigeons off Potatoes, Barley, Peas, or Cabbage.—In these north-western provinces where much of the labour is devoted to cheese, there has also been much breath and ink expended for some time past on the immorality of cheesemaking on the Sabbath. It may be a work of necessity, or it may not. The dairy farmers, who ought to know their own business best, say that it is at this time of the year. On some estates however, cheesemaking on a Sunday is forbidden by a special clause in leases. In many of the local agricultural societies prizes are given for cheese only to those farmers who do not make cheese on a Sunday, or special prizes are volunteered by Sabbath cheesemaking abolitionists, for the farmers who confine their practice to six days in the week. No one can raise a voice against making the Sabbath as much a day of perfect rest as the order of Nature will allow. But before the speechifying and letter-writing by these landlords can have any influence of an impressive order, they must show that there is a necessity for practising in the art of game preserving on a Sunday. Cows want milking on a Sunday, as much as coops of young pheasants and partridges want feeding on that day. Pheasant food would not rot if thrown down on Saturday night, but milk will turn sour before Monday morning, or otherwise become unmanageable without a double set of hands, utensils, and presses for the express purpose. It is questionable too whether the Sabbath cannot be better observed by rising early for the purpose of making cheese, than by making it necessary to drive till midnight preceding, and to rise at about the same hour following that day. These observations are given without any feeling besides that of improving the social, moral, and physical character of those humbler persons who neither make speeches nor write. *W. G.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

A Monthly Council was held on the 4th inst., Lord Walsingham, President, in the chair. Present: the Earl of Powis, Lord Portman, Lord Tredegar, Sir E. Hulse, Bart., the Hon. Col. Hood, the Hon. W. G. Cavendish, M.P., Mr. T. Raymond Barker, Mr. Bramston, M.P., Mr. Brandreth, Col. Challoner, Mr. Poley, M.P., Mr. Frere, Mr. Fisher Hobbs, Mr. Humberstone, M.P., Mr. Milward, Mr. Torr, and Mr. Wightwick, Mayor of Canterbury.

The following new members were elected:—

Earl of Winchilsea, Eastwell Park, Ashford
Earl Grosvenor, M.P., 25, Princes Gate
Sir John Montague Burgoyne, Bart., Sutton, Potton, Beds.
Sir Walter Charles James, Bart., Betteshanger, Sandwich
Mrs Cadogan, Brenkburn Priory, Morpeth
Philip Halse, Molland, South Molton
Joseph Ruston, Lincoln
Major Deedes, Hillhurst Farm, Hythe
Thomas Phillpotts, Risca, Newport, Monmouthshire
Edward C. Tompson, Dronenagh, Iver, Bucks
William Robinson, Heatley, Lymm, Cheshire
Mark Taylor, Cleeve, Goring, Reading
Gerard Barton, Fundenhall, Norfolk
Lieut.-Colonel T. Arthur, Misterton Hall, Lutterworth
Thomas Kibble, Green Trees, Tunbridge
E. H. Lyon Winder, Vaenor Park, Berrica, Shrewsbury
Douglas Brown, 15, Hertford Street, May Fair, London
Charles Frederick Clements, Hasmond's Lodge, East Hoathly
Michael Lewis Brown, Cliff Ville, Stoke-on-Trent
Thomas Bostock, 9, Hill Farm, Burslem
Thomas Wood, Littleton, Chertsey.

The names of Candidates for election were then read.

Finances.—The Hon. Colonel Nelson Hood presented the report of the Finance Committee, from which it appeared that the current cash balance in the hands of the bankers on June 30th was 3647*l.* 6*s.* 10*d.* The Secretary's receipts had been duly examined by Messrs. Quilter, Ball & Co., and were found correct. Messrs. Hammond & Co., of Canterbury, had consented to act as bankers to the Society during the period of the forthcoming show.

Veterinary.—Mr. Thomas Raymond Barker, V.P., presented the report of the Veterinary Committee:—

The Committee report that they consider the arrangement for the visits of the Veterinary Inspector to be capable of material improvement, as the members generally do not avail themselves of the advantages of advice as now offered to them by the Society.

It appears to the Committee that the present regulations lead to unnecessary delay in obtaining the assistance of the Veterinary Inspector, and that it further appears to the Committee that if a fixed scale of fees for the Inspector's visits and consultations could be arranged, it would be far more satisfactory. The system to be based on the same principle as that now existing in reference to the Consulting Chemist of the Society.

A letter was read from Mr. Brandreth Gibbs, Hon. Director of the Show, reporting the completion of the Show-yard at Canterbury, with more than the ordinary attractions to visitors.

A request having been made by the Smithsonian Institution, of New York, for the back numbers of the Society's Journal, with a view of placing them in the library of that Institution, the same was granted.

The Council then adjourned to its Weekly Meeting on the 25th inst.

ROYAL AGRICULTURAL MEETING AT CANTERBURY.

Thursday, July 5.—The absence of the principal machine makers from the meeting is to some extent compensated by the exhibition of their machinery through the general agents, who occupy so large a portion of the yard. It is however obvious in an unusually quiet condition of the trial ground where steam engines, threshing machines, chaff-cutters, &c., are being tried. And it is in these classes of implements that the principal interest of this year's competition is concentrated.

The manufacture of Reapers and Mowers is in the hands of a few who make them alone, and excepting Crosskill's (Bell's) machine the absence of the more general implement-makers does not affect the exhibition so far as these are concerned. There is accordingly a very fair representation of the present state of our reaping machinery. Messrs. Burgess & Key, Cranstoun, Cuthbert, Hellard, Dray, and others exhibit. Cuthbert's and Dray's deliver by hand, the others are self-acting. Burgess & Key adopt the well-known screw delivery, which lays the cut corn in a swathe. Hellard aims at the same result through a horizontal web, with a revolving piece next the knives, tending more effectually to lay the corn, as it is cut, on to this web. And there is moreover a strap embracing the web and extending beyond it by which the head of the corn is carried further than the cut end, so that it is thus laid in swathe at right angles to the line in which it lies. The machine did not however make good work. The four best machines in the corn-field are Burgess & Key's and Cranstoun (Wood's) delivering of themselves the corn in swathe and in sheaf respectively, and Cuthbert's and Dray's delivering by hand in bundles. In the Grass field again Cranstoun and Burgess & Key are the best, and the former will take precedence of the latter here, in the general estimation, just as it follows the latter according to the general judgment of their relative merits in the corn-field. As a combined mower and reaper it is probably yet unrivalled.

Let me here correct an impression which your Paris report may have left upon your readers that the reaper and mower to which the French jury awarded their principal prize was not Cranstoun's (Wood's) machine. On the contrary, it was in every respect the same as the American machine sold by Cranstoun, excepting that wheels had been added by its French exhibitor for the more easy removal of the tool from place to place; and this addition, which perhaps fitted it more perfectly to the circumstances of French agriculture, induced its preference over the machine without wheels, which was however in every other respect identical with it.

The addition of a self-acting delivery to this machine is the greatest novelty in reapers which there is to report. It is very simply effected: the quadrangular board, on which the corn falls as it is cut, has pulleys at its four corners, and around these pulleys a chain revolves worked by simple means from the interior of the driving-wheel of the machine. At the corner next the standing corn and farthest from the cutters, beyond indeed the receiving-board, there is a slot, through which a long, slender wooden rod passes loosely; the other end of this rod is fastened to the chain surrounding this receiving-board; and at *this* fastened end it is furnished with the fingers of a hand. As the chain revolves, this rod it is plain traverses the whole upper surface of the board as the hand goes round its edge, sweeping whatever may be lying on it off at that corner farthest from the standing corn and nearest to the track of horses. This it does effectually, whatever the shortness or the length of the corn may be, and the rapidity of its movement being adapted to a heavy crop the driver has the power of stopping its work, and letting it go again as he pleases, so as to allow a sheaf to accumulate on the board when the crop is light. The apparatus delivered its sheaves very well on the light Rye crop where it was tried.

A poor thin standing crop of Rye is however not the best adapted for testing the powers of a reaping machine, and the judges had a roller up to flatten it and puzzle the reapers if possible with difficult work. This they succeeded in doing in some of the cases. A fuller account of these trials and machines will be given next week. Meanwhile, it may suffice to say that Burgess & Key, Cranstoun, or Cuthbert, and Dray in the corn field—and Cranstoun and Burgess & Key in the Grass and Clover—are the only machines which require special naming. What the report of the judges will be is not yet known.

Steam Ploughs.—The only other field implements on trial are the steam ploughs. Eddington's somewhat cumbrous arrangement of windlass carrying an ordinary engine at either end of the furrow, and dragging a Fowler's plough to and fro—Beard's very compendious and neatly packed combined engine and windlass, with pulleys at the four corners of its work—Fowler's powerful engine and well arranged combined windlass with travelling anchors at the further end—and another to which reference will be made next week, are the only representatives of steam cultivation present. Smith's grubber is not here; and there is no attempt at rotary cultivation; although the circumstances of the soil would have been favourable to its success. The steam-drawn ploughs have all been at work to-day on a sloping field of easy soil. On future days they are to be tried on a more uneven surface and rather heavier land. So far as good ploughing is concerned, Fowler's machinery is now amply proved to be perfectly successful; and the Woolston farm with many others in the country prove the equal success of Smith's common engine, windlass, and grubber.

— The trials of barn and other machinery are in progress within the trial yard to-day, and will be reported on when finished. Mr. Amos and his dynamometer, which after all is the only adequate judge of the performance, are busily engaged in determining their merits, so far as quantity of power and time employed and quantity of work accomplished are concerned. Mr. Druce and others of agricultural experience are taking account of the *quality* of the work done, and between them some safe index will be obtained for the guidance of purchasers.

These are the only classes of machines yet in the hands of the judges, and the mowing and reaping trials alone have as yet approached completion. The mowers have been much more severely tested than the reapers, but the efficiency of both in the order already given may be considered proved.

— Among the novelties on the ground to-day are a combined cultivator and weed burner, which proposed to scarify the ground, remove the filth, burn it, and distribute its ashes! The exhibitor had not tried his machine before it came on the ground, and no one was surprised at its failure.—A drilling machine, the invention of M. Pruneau, a French agriculturist (Yonne), exhibiting great but, as we think, unnecessary ingenuity, was exhibited at work. Its delivery of seed may be altered in quantity at will, and may be distributed among two or three furrows at any interval

or confined to one. It is effected by clock-work, which is obviously a less satisfactory plan than the ordinary method of making it dependent on the driving wheel of the machine, and thus independent of the rate at which the draught horses walk. An application of the same principle to a hand-drill delivering seed as the sower walks along the furrow is much more likely to be useful; and this the exhibitor offers for sale at a price likely to command custom.

The general arrangements for the Show seem to be unusually perfect. The yard is conveniently near the town and the trial grounds are close by. Refreshment rooms, left luggage office, post-office and writing room, telegraph office, and the railway *close* at hand for the delivery of stock and cattle, leave nothing to be desired. The opportunities of seeing are unusually abundant. The implement yard open four days of the week—the cattle yard for three and a half, and two of the days for a shilling entrance fee—a general dinner, though on a small scale—and the general meeting one day earlier in the week—are all improvements on the past. Whether in so outlying a town as Canterbury anything like the success of the last two years can be achieved remains to be proved. It can hardly be expected. But the usefulness of the Society may be even greater in those districts where comparative difficulty of access leads to a narrower and more limited agriculture, than where greater facility of intercourse, with other favouring circumstances, have already conferred a high agricultural rank.

The Society of Arts.—At the recent anniversary meeting Mr. Disraeli, M.P., referred thus to the history of this Society:—Gentlemen, it is more than 100 years ago since the Society which is now assembled under this roof was established. A century is no mean period even in the life of a nation. A hundred years ago and the French Revolution had not only not occurred, but was not even contemplated by philosophers. England 100 years ago had not conquered India; and Australia, it may be said, was not even discovered. The application of steam power to the practical purposes of life a hundred years ago, and all those inventions of science that have aided and animated the industry of man, did not exist. We should remember these circumstances; we should not forget these things when we attempt to appreciate the position of those men who 100 years ago associated themselves together to form a Society to encourage Arts, Manufactures, and Commerce. That association was soon successful. It soon exercised an influence upon opinion, though in those days it was limited in its range. It soon exercised a beneficial effect upon the industry and invention of the country. As years rolled on, those influences became more extensive, those effects became more considerable. But as time advanced this Society declined; having declined, it decayed, and only 14 or 15 years ago, a very small section in the history of an institution that has flourished so long, even its existence was a question. But just at that moment, when all seemed dark and desperate, this Society revived in an extraordinary manner, affected public opinion at a period and in an age when public opinion was omnipotent, conceived and carried out a great enterprise, which still commands the admiration and the fond recollection of the world.

Now, gentlemen, what was the cause of your decay? What was the principle of your revival? It appears to me that upon this, I believe, the 106th anniversary of your existence, instead of exchanging mutual compliments and congratulations, it would not be unwise, or inexpedient, to endeavour to ascertain what was the cause of your decline—what was the principle that gave you revival and success. I remember some years ago finding myself in what I have always considered the most forlorn position which humanity can occupy—that is passing a rainy day in a country inn, and the only resource I found, on that occasion, happened to be an odd volume of the Transactions of your Society. It was a volume which described the proceedings of your Society at nearly the commencement of the present century, when half the period of your existence had passed, when perhaps the influence of the Society was probably the most considerable, and when no doubt it exercised a very beneficial effect upon the industry of this country. And at that time, in the earliest part of the present century, the efforts of this Society were very important. It offered numerous prizes, of considerable amount, for the encouragement of the various objects which engaged its attention. These were divided into sections, so as to embrace all those objects which it was the wish of the Society to encourage and to develope; and I remember that this was about the proportion in which the energies and the resources of the Society were then applied. There were, I think, 51 heads relating to planting and husbandry; about 25 to the fine arts; something like 20 for the encouragement of chemistry and mineralogy; about 10 or 12 for mechanical inventions; and six for manufactures. There is no doubt that that disposition of the resources of your Society, some fifty or sixty years ago, was extremely advantageous to this country. There is no doubt, though that is forgotten in the present day, that the agriculture of England is much indebted to this Society. There is no doubt that at that time, all those arrangements for the application of your resources were wise and satisfactory. But great changes have occurred since that period: take husbandry and farming for example. There is hardly any language that can express the colossal advances which have been made by agriculture as a science during the last 25 years in England; and agriculture is a jealous mistress, and requires the devotion of those who attempt to encourage her efforts and to guide her fortunes. Agriculture has now in this country a Society entirely devoted to her development and improvement. It has its own exhibitions. It publishes its Transactions, which for information and criticism are not inferior in any point to the transactions of any learned society ever made public. So it is with the various branches of science. Your predecessors 50 or 60 years ago, at the culminating point of your success, did a great deal in encouraging chemistry and mineralogy; but science in all time has opened up new branches, has developed itself in new forms, and requires for each of these classes its own institution, its own means of illustration, and it will not be satisfied with the partial assistance and favour which may be granted to it by a society which from its very origin and title is of a miscellaneous and almost universal character. I can easily understand that under these circumstances, the position of affairs being so changed from the time when you were first formed and when you first flourished, there should have been a great decline, and subsequently a great decay in your fortunes. But happily, gentlemen, there was one subject which, while others were appreciated by the country and obtained the patronage of special associations, was not thus taken up, and which this Society for the Encouragement of Arts, Manufactures, and Commerce, had the quickness of perception to see was neglected; although inferior to none in importance, and that it must, if properly developed, exercise a very great effect upon the fortunes of this country. That was a subject which was least thought of 50 or 60 years ago, namely, the manufactures of this country. That was the subject to which, 50 or 60 years ago, this Society only devoted half-a-dozen premiums, and with the utmost desire to assist and patronise the efforts of that industry, it could only find six sections under which it could apportion its rewards. Fourteen or fifteen years ago, when you were on the eve of your extinction, you fortunately recognised this great truth: you found out that this Society had a mission to fulfil, and that mission was to educate the artisan of England. It was then you discovered that in educating the artisan of England, you improved the manufactures of England; and that in improving the manufactures of England, you were rapidly stimulating and strengthening, diffusing and increasing the commerce of England; and it was from that period that your prosperity revived. From the moment that you recognised that there was one great mission to fulfil which no society had accepted—the moment that you made up your minds to fulfil that mission—the moment that you felt that in increasing the knowledge, refining the taste, and advancing the skill of the English artisan, you were in fact improving the manufactures of your country, and by thus improving its manufactures, increasing its commerce—from that moment, you occupied a position which enabled you to influence public opinion, and if you adhere to that principle, it will still greatly advance the fortunes of this Society.

MR. BOLDEN'S SALE AT SPRINGFIELD HALL, LANCASTER.

Thursday, July 5.—Mr. Strafford this day disposed of the selection from Mr. Bolden's herd of which an account was given last week at page 607. A large and distinguished company were present; and high prices was realised, the purchases going to Cumberland, Monmouthshire, Yorkshire, Sussex, Essex, Kent, Oxfordshire, &c., as well as to the Netherlands and Australia. Fourteen cows and heifers realised 1340*l.*, or upwards of 97*l.* a-piece. Nine heifer calves and yearlings fetched 605*l.* 14*s.*, or 67*l.* each.

Of the bulls, "Prince Imperial," 4 years old, was sold to Mr. Logan for 168*l.* A yearling bull "Cannon" fetched 85*l.* 1*s.* Four bull calves fetched 289*l.* 16*s.*, or 72*l.* 9*s.* a-piece, one of them, 6 months old, bought by Mr. Bailey, Cirencester, realising no less than 136*l.* 10*s.* The highest prices among the cows and heifers were 173*l.* 5*s.* for "Waterloo 20th," bought by Mr. Lampson of Sussex; 141*l.* 15*s.* for "Waterloo 21st," bought by Mr. Harrison; 131*l.* 5*s.* for a yearling heifer, "Waterloo 24th," bought by Mr. M'Intosh; and, considering its age, 50 guineas for "Waterloo 31st," one month old. The stock was in capital condition, and the older cows, which have proved such prolific breeders, fetched good prices. And so we have another illustration of the estimation in which Kirkleavington blood is held.

Mr. Bolden's "Duchesses," nine in number, for which we understand he has refused 3000 guineas, were exhibited near the ground, the noble nucleus of a future herd.

Reviews.

An Essay on the Advantages of the Application of Steam Power to the Cultivation of Land. Gloucester: Power & Son.

The author of this useful little tract deserves well of the farming community. If no practical farmer himself, Mr. Helps, like Falstaff, may be the cause of good farming in others, or if complimented on his proficiency as a scholar in the art, may retort with Lingo, "Scholar! I am a master of scholars!" and well will it be if his scholars are wise enough to avail themselves of the hints given them by such a master. Boys, ponder well such sentences as this:—

"On our stiff clays, in many seasons, it is not the increase of crop, it is a question of crop or no crop, for in many instances the application of steam power will enable the farmer to cultivate his land and get a Wheat crop, which he could not by any other power obtain."

Mr. Helps seems to be just fresh from the perusal of "The Chronicles of a Clay Farm," the following passage from which will be read with very different feelings by those who have been taught to regard the plough as the very sheet anchor of British agriculture, and any departure from the poet's injunction,

"Ye generous Britons, venerate the plough,"

as a formidable and dangerous heresy:—

"I say the plough has sentence of death written upon it, because it is essentially imperfect. What it does, is little towards the work of cultivation, but that little is tainted by a radical imperfection—damage to the subsoil, which is pressed and hardened by the share, in an exact ratio with the weight of soil lifted, *plus* that of the force required to effect the cleavage, and the weight of the instrument itself.

"Were there no other reason for saying it than this, this alone would entitle the philosophic machinist to say, and see, that the plough was never meant to be immortal. The mere invention of the subsoiler is a standing commentary on the mischief done by the plough.—Rank heresy, says our neighbour Practical.—Flat burglary as ever was committed! roars out the village Dogberry. Do away with the plough indeed! Stuff and nonsense! Is not 'the plough, the shuttle, and the flail' one of our standing toasts at all shows and sheep shearings? Why, the world would stand still without 'em.

"Appalling enough, to be sure; and yet more unlikely things have come to pass without any such dreadful result. What's become of the shuttle? Ask the power-loom weaver. Who uses a flail that can buy, hire, or borrow a threshing machine?

"So much for two-thirds of your favourite toast, and the remaining third, the plough, will soon follow, or I am the more mistaken. All three are superseded by Steam, that mighty power, which, at an enormous diminution of cost, has multiplied our national resources to an extent far beyond my powers of calculation."

"Apply steam," says Mr. Helps, "to the cultivation of land, and you bring the most powerful, the most controllable, the most accurate, and at the same time the most economical servant to the noblest work, and the advancement of the most necessary and useful science known to man, a science on which the very existence of man depends."

Neither in this passage, nor in any other part of his useful little essay, does the writer enter on more than the general question of steam cultivation. He does not lay before us any particular method of applying the power, but contents himself with a general recommendation of a trial *in re* Steam *versus* Horse-power. Now our excellent friend the Chronicler of the Clay Farm, as we have already shown, goes much beyond this. Equally sanguine with Mr. Helps as to the advantages of steam, he is no friend to ploughing by steam. It is with him a waste of power: "Whenever it is applied to till the earth, it will antiquate every instrument that cultivates by traction, because traction is not only not necessary to cultivation, but is inherently mischievous on other grounds, apart from the clumsiness, inaccuracy, and incompleteness of the work it turns out." And further, "Again and again be it repeated, that it is not ploughing neither is it digging that we want. These are only means, what we want is the end: we care not for the process. Give me a seed-bed: show me the soil comminuted, aerated, and inverted 6 or 8 inches deep, and I will not ask you how it came so. What does that matter?" * * * "If the farmer or the gardener could only have his seed-bed made ready for him as fine as a new mole heap, or to any other coarser texture according as he wants, do you think he would care whether the soil had been first cut into longitudinal strips plough fashion, or into square cubes spade fashion, before it was finally granulated for his use?" * * * "It is a solecism in art as well as science to attempt to yoke steam on to a plough. There is no affinity between them, any more than between a horse and a spade. I have found it inexpressibly difficult to get this leading postulate clearly, and once for all understood. Till it is so it is hopeless to attempt to proceed. The idea of an instrument to be dragged through the soil as a plough is from one end of a field to another, poisons more or less, not every, but nearly every effort towards steam cultivation I have seen. How difficult it is to unlearn!"

We need not extend these quotations. Those who have read the "Chronicles"—as who has not?—are aware that the author pins his faith not on traction but on circular motion, as the one thing needful to carry out the principle of steam cultivation. In bringing these two writers into juxtaposition, our only object has been the better elucidation of a subject of growing importance to the agricultural community, and we hope this motive will justify us in the opinion of both gentlemen. *S. T.*

Calendar of Operations.

JUNE.

NORTH SHROPSHIRE: *June* 28.—*Mr. Punch's* paternal sympathy for schoolboys might have an agricultural interpretation given to it:—

"Fruit—don't you wish that you may get
With all this precious cold and wet—
Wind, thunder, lightning, hail, and rain?
Oh, when will it be fine again?"

After passing through many miles of country in the north-west of England and the borders of Wales, I can add my testimony to the unpromising state of agricultural crops from the rain of the last seven weeks, and a sky so generally cloudy that it is a matter for special comment when the sun shines. Here we are at the end of June, and the earth cold and sopped, with the sky still darkened by clouds and torrents of rain falling. Tuesday was the only summer-like day I have had a taste of, but this was partial, it appears, for reports say that at Shrewsbury, Oswestry, and on the Welsh side the strong wind was accompanied with heavy rains. Yesterday (Wednesday) was more like a general rain. In Shropshire and Cheshire it rained hard for six hours, washing previously galled roads still more, and adding to the depôt of "wash-sand" and mud between Turnip and Mangel ridges. On all kinds of heavy or undrained lands, as may be judged, the crops have a most dejected appearance. Wheat has not "tillered" at all, and the cold earth or rank weeds may be seen between rows, or (where thin) patches, and although the season has so far advanced in these districts there is not the appearance of even an enlargement for an ear, so that let whatever weather follow, the third week of August may be safely reckoned as the time when Wheat on heavy lands can be fit for the harvestman. This applies to the north of Shropshire, the south of Denbighshire, and the same of Cheshire. For it is said that on the tidal banks of the Dee vegetation is usually a fortnight or; three weeks forwarder, than more inland and southern districts and towards Shrewsbury where Wheat and Barley were sown early on light soil, ears are slowly making an appearance. By chance a piece of Wheat may be seen half or three-quarters "out," and Barley shows much of the whole length of its head. These instances are however only exceptional. Shropshire may be termed a Barley county, and it may be said, as a whole, to look well, and if too great a change in the weather should not follow, a good quantity and quality may be expected. Here, too, Mangels and Turnips surpass neighbouring and more northern and eastern districts. Mangels are fit for singling (late, too, for the end of June), and some Swedes are fit for the hoe. Caution, however, need be observed in this operation, and it may be advisable to defer singling Turnips, and to provide a few ducks to the acre for clearing grubs off, as they come to a distinctive size No doubt they will appear to a greater or less extent, and to single plants at once is a dangerous practice. My favourite counter-agents are ducks. The shows for hay on light soils are certainly heavy; they are good too on the sandstone where the pastures or fields are not low and flat Some cases of flooding have occurred on very low lands, but not to a serious extent, for the rain generally has been continous rather than stormy. It is to be hoped a fair July will come for us, when the face of things would be much altered. Perhaps the coming comet may create a diversion, and cause rain clouds to disperse.

Notices to Correspondents.

CHICORY FOR GRAZING: *G R A.* The soil should be prepared by thorough cleaning early in spring, and a good coat of rotten dung applied. Drill 4 lbs. of seed per acre in March in rows 9 inches apart. Single them out when 5 inches high to 6 inches apart. The crop will continue luxuriant under good management for six or eight years. After full growth is obtained cut it down before flowering and carry it to stock in the house. It may also be depastured with sheep, but the other is the more productive use of it.

EMIGRATION: *Migratory.* We are unable to answer your question. You had better acquire experience on the spot before investing your capital: and we should recommend avoiding any partnership except one made there after experience both of the work and of one another under it.

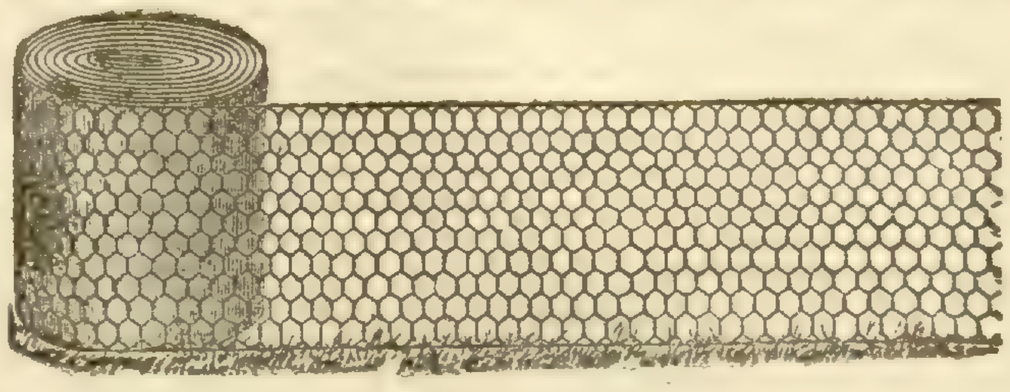
GREEN MANURING: *A Subscriber.* There is nothing of more rapid growth for the purpose than Mustard. It will be ready for that purpose—*i.e.*, just before it breaks into bloom—about seven weeks after sowing in good weather.

TO COVER BOARDS: *Dutch Barn.* Croggon's or McNeill's felt is usually placed over boards, and, occasionally dressed, makes a good and permanent roof.

TROTTEL PLANT: *G J S.* says:—"Twenty-five years since I planted roots given me by that name in good land, having seen sheep, cattle, and pigs stall-fed upon the leaves in summer in Ireland, and I was told (and as it appeared) successfully. I was also told that donkeys (which are very numerous in that country) were very partial to them. Nothing would touch them on my farm in Yorkshire, and they have ever since defied all attempts to be eradicated. It is the Symphytum tuberosum, a Comfrey."

TURKEYS: *J Richmond, Quarry House.* Your turkeys have the gapes: they arise from impure water, from want of condition, or from neglect. The cure is to take a tail feather, to strip it within an inch of the end, and having dipped it in turpentine to put it down the windpipe of the sufferer until it is stopped. The disease derives its name from the act or habit of gaping, and this is caused by the constant endeavour of the patient to rid itself of numerous small red worms that have taken up their abode in its windpipe. They cause that which human beings call "tickling in the throat." The feather being introduced till it meets resistance kills the worms by the turpentine, and thereby heals the disorder. If no turpentine be at hand, use the feather without it, and when it has reached the end twirl it sharply round several times and withdraw it quickly, the worms will be found entangled in the feather. Care must be taken to insert the feather in the windpipe, not the gullet, as the latter is far easier than the former. Rain or stagnant water will cause them. Strong birds shake the disorder off, but if they are sickly it lays hold on them Salt mixed with their food is an excellent thing. The disorder is one to which chickens only are subject, and if they can bear up against it for a certain time they overcome it. For this reason stimulants are often very profitably used, and none is more efficacious or more prompt in its action than strong beer, good old strong ale, in which bread is steeped and then thrown to the turkeys. If care be taken at the same time to substitute good fresh spring water for that which has been stagnant, and if the bread and ale be frequently given, most of your young turkeys will rally Another year you may not have to struggle against such trying weather, but you will always have to guard against the maternal stupidity of the parent bird—she drags them to death. She should be kept under a large rip or an empty china crate till the young are six weeks old, and then confined in it every night, and till in the morning the sun has got power and the earth is dry. At daybreak a hen turkey will drag her poults through heavy dew and white frosts till it requires no knowledge to discover they are doomed.

IMPROVED PREMIUM WIRE NETTING.



PRICES PER LINEAL YARD, 24 INCHES HIGH:—

Size of mesh.	Mostly used for	Light.		Medium.		Strong.		Extra strong.	
		Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.
2½ inch	Hares, Dogs, Poultry	3½d.	4½d.	4¼d.	5½d.	5d.	6½d.	6d.	8d.
2 inch	Game Netting	4d.	5d.	4¾d.	6d.	5½d.	7d.	7½d.	9½d.
1⅝ inch	Small Rabbits, Hares, &c.	4½d.	5½d.	5¼d.	6½d.	6d.	7½d.	8d.	10d.
1½ inch	Smallest Rabbits	6d.	7½d.	7½d.	9d.	9d.	11d.	11d.	13d.

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland or Ireland.
Any width of Netting under 8 feet made at proportionate prices.

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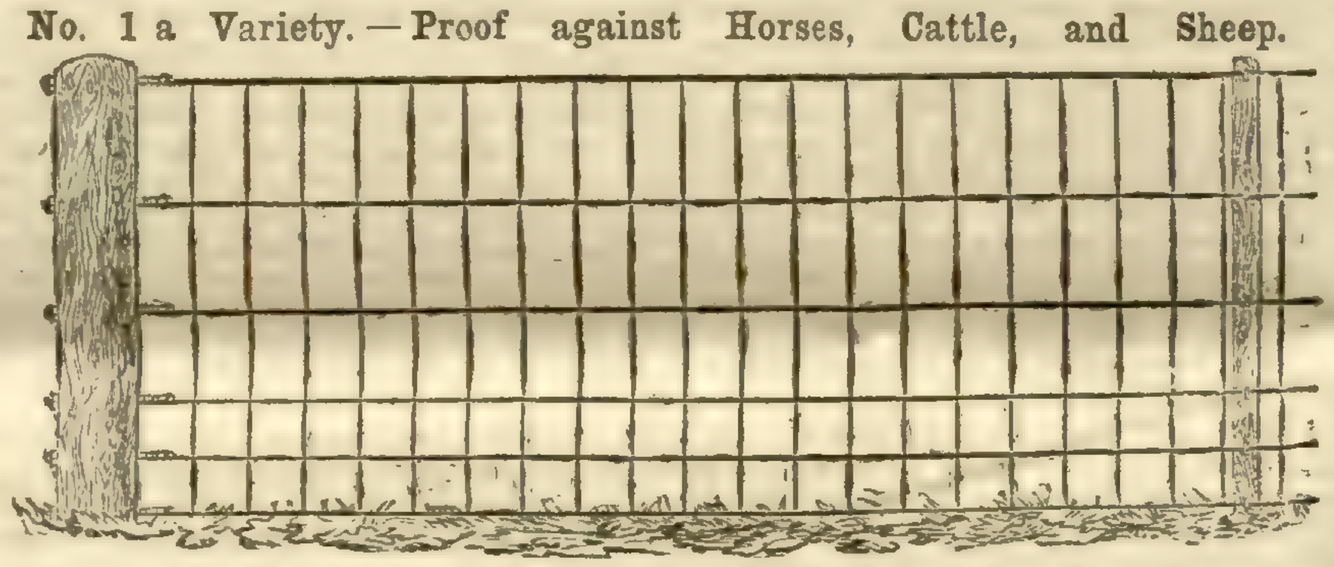

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"A very great improvement in the make of Wire Fences, by which they are rendered perfectly moveable—*a very great desideratum.*"—*Judges' Report, South Lancashire Agricultural Show*, 1855.

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HORTICULTURAL TOOLS.

GARDEN ENGINES, Galvanised Iron. Price 55*s.*, 65*s.*, 78*s.*, 90*s.*, 100*s.*, 110*s.*

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FLOWER STANDS, 4*s.* 6*d.* each.

CAST IRON ORNAMENTAL FLOWER STANDS, to hold seven Vases, 27*s.*

DEANE'S MOWING MACHINES, with Boyd's Patented Improvements, 4*l.* 17*s.* 6*d.*, 6*l.* 6*s.*, 6*l.* 17*s.* 6*d.*, 7*l.* 7*s.*

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GARDEN STOOLS, 4*s.* 6*d.*

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Every Implement for Garden use on the Lowest Terms.

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HORTICULTURAL SOCIETY.—Notice is hereby given, that the next Ordinary Meeting of the Horticultural Society, for the Election of Fellows, will be held at the Museum of Science and Art, South Kensington, by permission of the Lord President of the Privy Council, on TUESDAY, July 24; the Chair to be taken at 1 o'clock P.M. On this occasion a Ballot for Plants will also take place.

LIST OF PLANTS FOR BALLOT.

1. CUPRESSUS MACNABIANA. One of the finest of the new hardy Californian Cypresses.
2. ABIES SMITHIANA. A hardy coniferous tree.
3. ABIES MENZIESII. A hardy coniferous tree.
4. POMADERRIS PHILLYREÆFOLIA. A greenhouse shrub from Australia.
5. SCLEROTHAMNUS DIFFUSUS. A greenhouse shrub from Australia.
6. LEPTOSPERMUM LANIGERUM. A greenhouse shrub from Australia.
7. EURYBIA LYRATA. A greenhouse shrub.
8. NERGALI, or Hill Bamboo of the Punjaub. A hardy Bamboo.
9. CALLISTEMON GLAUCESCENS. A greenhouse shrub.
10. BRIDGESIA SPICATA. A handsome Creeper from Mexico.
11. SYRINGA PINNATIFIDA. From the Amoor river.
12. UROSKINNERA SPECTABILIS. A stove shrub.
13. GOLDFUSSIA ISOPHYLLA. A stove shrub.
14. SENECIO TAGETES. A stove plant from Mexico.
15. THYRSACANTHUS RUTILANS. A beautiful stove plant.
16. STATICE BRASSICÆFOLIA. From the Canary Islands.
17. ERANTHEMUM PULCHELLUM. A stove shrub, from India.
18. BEGONIA MINIATA. A stove herbaceous plant.
19. BEGONIA *fuchsioides, crossed by acuminata*. A hybrid Begonia.

Fellows of the Society desirous of obtaining any of the plants to be balloted for, are requested, if life members of 40 guineas, or subscribers of 4 guineas a year, to name the FOUR sorts they would prefer; or, if life members of 20 guineas, or subscribers of 2 guineas a year, to name the TWO sorts they would prefer. Should there be more applications for any particular plant than the number available for distribution, a Ballot will then take place to determine which applicants are to be supplied.

The arrangements for conducting the Ballot render it necessary that the names or numbers prefixed to the plants to be drawn for should be sent to the office of the Society, 8, ST. MARTIN'S PLACE, W.C., on or before SATURDAY, JULY 21st, AFTER WHICH DATE NO APPLICATIONS CAN BE ATTENDED TO.

W. B. BOOTH, Assistant Secretary.

HORTICULTURAL SOCIETY.—FRUIT COMMITTEE.

A Special Meeting of the Committee will be held at the Rooms, 8, St. Martin's Place, Trafalgar Square, W.C., on TUESDAY, July 31, at 12 o'clock noon precisely, when the following Prizes are offered:—

		1st.	2d.
CLASS A.	PEACH.—The best new early variety	20*s.*	
B.	NECTARINE.—The best new early variety	20	
C.	APRICOT.—The best new early variety	20	
D.	PLUM.—The best new early variety	20	
E.	PEAR.—The best new early variety	20	
F.	APPLE.—The best new early variety	20	
G.	RED RASPBERRIES.—The best collections, to be exhibited in the clusters, and to be accompanied by a fruit-bearing cane of full length [The cane may be cut in lengths for convenience of carriage.]	20*s.*	10*s.*
H	WHITE RASPBERRIES.—The best collections exhibited as in Class G	20	10
I.	RED CURRANTS.—The best collections, one dish of each variety, accompanied by a shoot of the same, bearing leaves	20	10
K.	WHITE CURRANTS.—The best collections, exhibited as in Class I.	20	10
L.	GOOSEBERRIES.—The best dish of any variety, combining size and flavour, to be accompanied by a shoot of the same, bearing leaves		10

The meeting is also open for the reception of any other varieties of Fruits that may be in season, and which, if new, will be open to compete for either of the following Prizes:—

Two Prizes of FIVE GUINEAS each, offered by C. WENTWORTH DILKE, Esq., Vice-President of the Society, and One Prize of FIVE GUINEAS offered by W. WILSON SAUNDERS, Esq., the Treasurer, will be awarded at the first meeting of the Fruit Committee in April, 1861, to the three best Seedling Fruits possessing superior merit of any of the following kinds which shall have been exhibited at any meeting between May 1, 1860, and March 31, 1861, viz.:—Grapes, Peaches, Nectarines, Apricots, Plums, Cherries, Apples, Pears, and Strawberries.

*** Should varieties be exhibited which shall not be considered of sufficient excellence to merit these awards, the prizes will be carried over till the following season.

Fruit and Vegetables for exhibition must be at the rooms by 11 o'clock on the day of meeting; and all packages and communications are to be addressed to

ROBERT HOGG, Secretary to the Committee.

HORTICULTURAL SOCIETY OF LONDON.—FLORAL COMMITTEE.

LIST OF AWARDS JULY 12, 1860.

FIRST-CLASS CERTIFICATE.

Caladium Wightii, from Messrs. Osborn & Sons, Fulham
Gleichenia "furcata," from Mr. R. Sim, Footscray
Gleichenia rupestris, from Mr. R. Sim
Gleichenia semivestita, from Mr. R. Sim
Polystichum sp., Jamaica, from Mr. R. Sim
Pink Beautiful, from Mr. C. Turner, Slough

COMMENDED.

Delphinium Beauty, from Messrs. Fraser, Lea Bridge Road
Gloxinia Lady Willoughby, from Messrs. Milne & Co., Vauxhall
Gloxinia Cygna, from Messrs. J. & C. Lee, Hammersmith
Cypripedium Dayii, from Mr. Stone, Tottenham
Verbena Grand Eastern, from Messrs. Woods & Son, Woodbridge
Scarlet Pelargonium Princess of Prussia, from Mrs. Conway, Brompton
Nephrodium molle, var. polydactylum, from Mr. R. Sim
Lastrea deltoidea, from Mr. R. Sim
Petunia Eclipse, from Mr. G. Smith, Hornsey Road
Verbena Cruor, from Mr. G. Smith

The next Ordinary Meeting for the Exhibition of New Plants and Seedlings will take place on July 26.

THOMAS MOORE, Secretary to the Committee.

NOTICE.

WM. JAMES NICHOLSON begs to inform his friends that his Second Edition of the CATALOGUE of STRAWBERRIES (very much enlarged) cannot be ready before September. The season being about three weeks later than usual prevents the proper observations being made from plants grown by himself for the above season. When ready proper notice will be given. Plants of nearly every known sort can be supplied from the latter end of August; some of the early kinds before that time.

WM. JAS. NICHOLSON, Egglescliffe, near Yarm Yorkshire.

JAMES CARTER & CO.

BEG LEAVE TO OFFER THE FOLLOWING

CHOICE SEEDS FOR PRESENT SOWING.

CARNATION,	12 choicest varieties,		3*s.*	6*d.*	
	BIZARRE,	10 seeds of each	4	0	
	Do. do. FAMEUSE,	do.	4	0	
	Do. do. FLAKE,	do.	3	6	
	Do. do. YELLOW BIZARRE and SELF,	do.	4	0	
	Do. do. YELLOW FLAKE	do.	4	0	
PICOTEES,	12 choicest vars., WHITE GROUNDS,	do.	3	0	
,,	,, YELLOW GROUNDS,	do.	4	0	
,,	,, WHITE MARGINED,	do.	3	6	
PERPETUAL CARNATIONS,		do. FANCY, do.	3	6	
,,	,,	do. FLAKE, do.	3	6	
,,	,,	do. BIZARRE, do.	3	6	
,,	PICOTEES	do. do.	3	6	
CARNATION,	extra fine, mixed		2	6	
,,	PERPETUAL, do.		2	6	
PICOTEE,	extra fine mixed		2*s.*	6*d.*	
,,	PERPETUAL		2	6	
HOLLYHOCK,	12 choice prize varieties		5	0	
,,	splendid mixed		1	0	
PERENNIAL PHLOX,	12 newest varieties		3	6	
,,	finest mixed		1	0	
WALLFLOWER,	12 double German varieties		2	6	
,,	double German mixed		1	0	
HEARTSEASE,	extra choice		1	0	
PELARGONIUM,	extra choice show and fancy vars.		1	0	
ANTIRRHINUM,	finest mixed		0	6	
PENTSTEMON,	finest mixed		0	6	
CALCEOLARIA,	extra choice, spotted and blotched		1	0	
CINERARIA,	large flowered, brilliant colours, and great variety		1	0	
PRIMULA,	finest fringed		1	0	

☞ For other Perennials for present sowing, and directions for cultivation of the same, see **CARTER'S "GARDENERS' VADE MECUM,"** which will be forwarded post free on application to

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, London, W.C.

CORDYLINE (DRACÆNA) INDIVISA.

MESSRS. JOHN AND CHARLES LEE

Have the pleasure to announce that on the 1st of August they intend to send out the magnifient

CORDYLINE INDIVISA FROM NEW ZEALAND,

AN ACCOUNT OF WHICH WAS GIVEN BY DR. LINDLEY IN THE *GARDENERS' CHRONICLE*, OCT. 29, 1859, Pp. 868.

IT is impossible to give an adequate description of this wonder of Nature, which should be seen in its native grandeur to be thoroughly appreciated. Specimens can, however, be seen at this establishment which already prove the accounts received of its merits to be quite reliable. Being found at a high elevation it will be a very hardy Conservatory Plant, and will probably bear total exposure in the West of England and in Ireland.

CORDYLINE INDIVISA attains a height of from 10 to 20 feet, in an erect and undivided trunk on which the foliage is retained with vigour almost to the ground. The leaves are set on to the greatest advantage, and measure from 5 to 6 feet in length, and from 6 to 9 inches in breadth. Their colour is of the richest description: a broad and prominent midrib of crimson brown runs through the entire length, and numerous red and white lines run parallel to the midrib: the whole surface is overlaid with a rich golden bronze producing an elegant effect. The under side of the leaves is glaucous. The whole tree is unsurpassed in its truly noble and unique beauty.

Nursery and Seed Establishment, Hammersmith, London, W.

NEW SEED NOW READY.

DOBSON'S Splendid HYBRIDISED CALCEOLARIA SEED has now stood the test several years, and has attained a world-wide celebrity, and we have no hesitation in saying that it is second to none. Amateurs or the Trade desirous of producing a really splendid collection should purchase a packet of this Seed, which is warranted to please. We are now sending out New Seed of 1860, in sealed packets, at 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each, all one quality. The seed may also be obtained in the packets of our Agents, the principal Nurserymen and Seedsmen.

JOHN DOBSON & SONS, Seedsmen, Woodlands Nursery, Isleworth.

FERN CATALOGUE.

ROBERT SIM'S DESCRIPTIVE AND PRICED CATALOGUE, No. 6 (62 pages) of his COLLECTION of BRITISH AND EXOTIC FERNS, can be had, post free, for 8 stamps. Gratis to all previous purchasers of Ferns.

Nursery, Foot's Cray, Kent, S.E.

NEW TREE FERN.

THE HORTICULTURAL ESTABLISHMENT OF H. LAURENTIUS, Leipsic, Saxony, begs to offer Plants of the following beautiful and highly interesting New TREE FERN.

ASPLENIUM GLABERRIMUM (METT.).—Truncus erectus, paleis lanceolatis, acuminato-setosis, rigidis, nigris, densè onustis; petiolus 4-6" longus; lamina 1-1½' longa, coriacea, glaberrima, supra nitida, lanceolata-oblonga, acuminata, pinnatisecta, apice pinnatifida; segmenta lateralia multijuga, petiolata 3-4" longa, 4-6"' lata. *Java.*

Price, strong plants from spores, three years old, 2*l.* 5*s.* each.

Agent: Mr. W. LORBERG, 34, St. Mary-at-Hill, London, E.C.

NEW AND EXTRAORDINARY FERNS.

A. STANSFIELD AND SON, Vale Nursery, Todmorden, have great pleasure in announcing that they are now prepared to send out good strong plants of the following new and rare BRITISH FILICES.

ATHYRIUM FILIX-FŒMINA PLUMOSUM.—Mr. Moore characterises this as "the most remarkable and most beautiful Fern ever discovered in the British Isles." A First Class Certificate of Merit was awarded to it at a Meeting of the Floral Committee of the London Horticultural Society held on the 28th June last, 21*s.* See figure and description in Vol. 2 of Moore's octavo edition of "Nature-printed British Ferns."

Athyrium f f. apnæforme, 7*s.* 6*d.* | Athyrium f.f. flexuosum, 5*s.*

Athyrium f.f. irregulare	7*s.*	6*d.*
Blechnum spicant caudatum	10	6
Do. do. lancifolium	10	6
Do. do. strictum	10	6
Do. do. subserratum	7	6

The usual discount to the Trade.

A. S. & SON'S FERN CATALOGUE, with Supplement, containing the above and other rare and interesting Ferns, British and Exotic, in all about 600 species and varieties, may be had on application.—Vale Nursery, Todmorden, July 14.

SELECT VARIEGATED PLANTS AND FERNS.—The Subscriber has a collection of nice healthy plants of the following, at the prices affixed:—

Begonia Rex, 1*s.*; do. Reichenheim, 1*s.*; Dieffenbachia maculata, 2*s.* 6*d.*; Aphelandra Leopoldi, 1*s.*; Croton variegatum, 1*s.* 6*d.* to 3*s.* 6*d.*; do. pictum, 1*s.* 6*d.* to 3*s.* 6*d.*; do. angustifolium, 1*s.* 6*d.*; Dracæna ferræa, 1*s.* 6*d.*; do. terminalis, 1*s.* 6*d.*; Dioscorea marmorea, 1*s.*; do. discolor variegata, 1*s.*; Graptophyllum pictum, 1*s.*; Aspidistra lurida variegata, 1*s.*; Echites nutans, 1*s.* 6*d.*; Caladium bicolor, 1*s.*; do. bicolor picturata, 1*s.* 6*d.*; do. pictum, 1*s.* 6*d.*

FERNS.—Adiantum coccineum, 2*s.* 6*d.*; do. caudatum, 2*s.* 6*d.*; Asplenium Bedo. villosum, 2*s.* 6*d.*; do. formosum, 1*s.* 6*d.*; do. cicutarium, 1*s.* 6*d.*; langeri, 1*s.* 6*d.*; do. bulbiferum, 1*s.*; Nothochlæna do. viviparum, 1*s.* 6*d.*; Davallia elegans, 1*s.* 6*d.*; do. trichomanoides, chrysophylla, 2*s.* 6*d.*; do. nivea, 1*s.* 6*d.*; Pteris aspericaulis, 1*s.* 6*d.*; do. semi-pinnata, 1*s.* 6*d.* 2*s.* 6*d.*; do. longifolia, 1*s.*; Platyloma calomelanos, 1*s.* 6*d.*; to 2*s.* 6*d.*; do. rotundifolia, 1*s.*; Nephrolepis davallioides, 1*s.* 6*d.*; Litibrochia aurita, 1*s.*; Pleopeltis irioides, 2*s.* 6*d.*; Dennstædtia davallioides, 2*s.*

P. KELLY, Horwich, Bolton-le-Moors, Lancashire. Post-office Orders payable at Horwich.

CALADIUM CHANTINII.

MESSRS. PARKER AND WILLIAMS beg to state that they can supply fine Plants of the above (the finest species in cultivation) at 7*s.* 6*d.* each.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

The Gardeners' Chronicle.

SATURDAY, JULY 14, 1860.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, July 18 } Rose Show at the Floral Hall, Covent
THURSDAY, — 19 } Garden..... Noon.

WHEN dry rot some 50 years ago attracted so much attention from the miserable failures which had taken place not only in vessels built for Government in private yards, but even in our own dockyards, people came forward by scores to propose remedies, each of which was pronounced infallible, with as much confidence as the fashionable though ephemeral panaceas which promise for a year or two to cure every disorder and to make death all but impossible. Some of these rested on partial experiments, but most of them were mere empirical surmises unsupported by a single fact. The greater part were accordingly at once rejected, while a few of the more promising were submitted to the test of experiment. It was, however, seldom borne in mind that decay from Fungi might be arrested by one treatment, while chemical decay might be fostered by the very means which were used to destroy the Fungi. Immersion in salt water or a solution of alum, impregnation with lime water or gallic acid, steeping in oil, with various other plans, were accordingly tried with more or less success, but none bore the test of long experience, and all were in turn abandoned.

Amongst other plans, however, the use of different metallic salts and silicates was proposed, and some of these, which at first were supposed to promise certain success, are still adopted with but little diminished confidence at the present time. One great objection to metallic salts and more especially to injecting with silicates, was the difficulty of working timber so prepared, but this was clearly not of such paramount importance as to offer an insurmountable objection provided really antiseptic properties were secured, setting aside the use of sulphate of iron, acetate of lead and arsenic.

The principal methods were impregnation with corrosive sublimate (chloride of mercury) which is generally known under the name of Kyanising; injection of sulphate of copper, or MARGARY'S process; injection of chloride of zinc, or Sir WILLIAM BURNETT'S process; and the method used by PAYNE, consisting of a double decomposition, as

the injection of a solution of sulphate of iron, and then of carbonate of soda, forming an oxide of iron in the pores of the wood. BOUCHERIE's system, of which an account will be found in this journal for 1856 (p. 756), consisted rather in his peculiar mode of forcing different substances into the wood than in the substances so introduced, and it is that which has been perhaps the most largely practised on the continent, and has been extensively employed in this country by the Permanent Way Company. Of the four methods mentioned above the three first alone seem to have survived, and perhaps the corrosive sublimate and blue vitriol are at present the most extensively used as metallic antiseptics.

There is a very interesting article on "Kyanising" in the Quarterly Review for April, 1833. Nothing could be more promising than FARADAY's report of the experiments carried on in the dockyard at Woolwich. So far as the efficacy of the plan was presumed to rest on its extinguishing the vital principle in the cells, a notion conceived by many, though not by FARADAY, and arising from crude theories of spontaneous generation, it was without any just foundation. It is not death in organic matter which makes it unfit for supporting life, but a chemical combination with some poison, whether of organic or inorganic origin, which is inimical to vegetation. If therefore in the process of time this new combination is removed by its natural solubility, or materially modified by any other cause, the wood though once exempt may again become subject to decay.

In the discussion which followed Mr. BURNELL's lecture before the Society of Arts last May, it was stated by Mr. BURT, who has had immense practical experience, that on the Buckinghamshire Railway "between 30,000 and 40,000 sleepers were prepared by KYAN's process, and about the same number respectively by Sir W. BURNETT's and MARGARY's process, and that in less than four years a large portion of the sleepers prepared by the process of sulphate of copper or (by) KYAN's process, were obliged to be removed, while those which were treated with chloride of zinc or Sir W. BURNETT's patent were more durable, which he thought arose more from the timber being of a better description than from any actual merit in the process." It is undoubtedly true that these plans are for a time preservative. The naked laths of Beech for instance, as stated last week, prepared with sulphate of copper, and supplied by the Permanent Way Company to the Horticultural Society, and used as markers, a very powerful test, have lasted for some years without decay. We can ourselves answer for the good effected in domestic structures by washing beams affected with dry rot, with a strong solution of corrosive sublimate; after the lapse of 16 years, in a cellar which was fast giving way under the influence of dry rot, the main injury has been thoroughly arrested, though this very season a cask accidentally left in the cellar, which was of course untouched by the solution, was completely destroyed. A few fibres of the dry rot Fungus (Merulius lacrymans), have indeed occasionally appeared on the walls and woodwork whether of Oak or Deal, but the Fungus has never flourished, though it just contrived to exist, and so was ready to contaminate any fresh wood which might be introduced.

The principal reason we believe why the process of kyanising in the dockyards was discontinued apart from considerations of expense was, that well-seasoned timber when properly ventilated resisted dry rot as well as the kyanised timber near it, and that after a time the doctored timber was not exempt. We lately had the opportunity of examining some logs of Oak and Deal, each of which had been divided into two equal portions, one of which was left in its original condition and the other kyanised, and both put into the Fungus pit at Chatham. The experiment dated from 1836, and the logs were only recently removed. All were dubbed with an adze in our presence, and both the kyanised and unkyanised were equally sound. There was not indeed a shade of difference except in the Deal, and there decay was strictly confined to the sap-wood.

It is indeed one of the peculiarities of decay in timber that it is not always possible to produce it at will. Timber may occasionally be placed in circumstances most likely as it should seem to produce decay, as in the case just mentioned, and may be kept under those conditions for years, and yet no change may take place. No general conclusions, indeed, can be drawn from a few isolated experiments.

In the extensive experiments made on the Buckinghamshire Railway, one process was attended with far better success than any of the methods mentioned above, viz., that of creosoting, or Mr. BETHELL's process, and it is to this category that some of the plans originally adopted, of which we have not yet spoken, must be referred. In all alike the benefit arises from the coagulation of the vegetable albumen contained in the cells of the wood or in their walls, whether by means of the creosote contained in the tar, petroleum, gas tar, &c., with which the wood is impregnated, whether by the same principle combined with heat in the process of charring, or simply by heat alone, where the wood is submitted to a temperature high enough to produce coagulation, but not to induce chemical change or combustion.

Experiments were made at Woolwich in 1812, with a view indeed rather to seasoning and the prevention of the separation of the component fibres, than supplying an antiseptic principle, by placing large quantities of timber in a close kiln, and introducing fumes from a retort filled with Pine sawdust to supply the place of the moisture driven off with an oleaginous substance. "The oily matter distilled from the sawdust in passing along the iron pipes dripped through holes on the wood beneath and was immediately absorbed."

This plan would probably have been attended by far more success than was anticipated by authorities at the time, as the oily matter doubtless contained a considerable quantity of creosote, but a most disastrous accident arose from the bursting of the stove, which was on so large a scale as to be capable of containing 200 or 300 loads of timber.

"Before the process was completed," we quote from the Quarterly of October, 1814, "an unfortunate explosion took place which killed 6 men and wounded 14 others; two of whom died afterwards of their wounds. Three of the former and most of the others were struck at the distance of 60 feet from the seasoning house. The explosion was like the shock of an earthquake. It threw down 72 feet in length of the dockyard wall of three bricks thick, a part of which was driven to the distance of 250 feet into an adjoining field. In the same field it threw down a house. An iron door weighing 280 lbs. was thrown to a distance of 230 feet, another of the same weight in its passage through the air knocked down a chimney and fell at 190 feet distance; the bricks and sticks of the building were hurled in every direction to the distance of 300 feet." This melancholy accident was supposed to be owing to the flame making its way at the part where the flue entered the building and setting fire to the mixture of hydrogen and oxygen gases contained in it. It is hardly necessary to add that this fatal experiment has not been repeated.

It was long the practice in our dockyards to inject the crevices of a ship with coal tar, but the practice is, we believe, now discontinued. Whether it checked the appearance of dry rot for a time we cannot say, but we have seen ships, as the Prince Regent, in which the plan was adopted, overrun with dry rot. We believe however that like the felt so much used at present, it will prevent dry rot from communicating from a decayed plank to a sound one adjacent to it covered with a coating of tar. At least we have thick sheets of the dry rot Fungus which have oozed out between two planks coated on either side with coal tar, which it does not seem to have penetrated.

The process of creosoting appears to afford more prospect of relief from decay than any other which has been proposed. It is not however sufficient to steep the wood for a short time in a weak solution. Means must be taken of making it enter deeply into the pores, and to such a degree that from 8 to 10 lbs. should be absorbed per cubic foot, which is done under a pressure of 150 lbs. to the square inch. It is said moreover to be a protection against the ship-worm, but the testimonies at present are conflicting, though the impression seems to be that the exemption is proportionate to the quantity of creosote absorbed and the depth of penetration. Pyrolignite of iron is sometimes substituted for creosote, and is one of the substances recommended by BOUCHERIE, but it appears to be very inferior in its results.

There are some other substances which promise well, as permanganate of potash, which is so invaluable a deodoriser in hospitals, and pieric acid, especially the former, which has been suggested to us by a scientific friend as well as by Mr. WENTWORTH SCOTT before the Society of Arts. These, however, it should seem, have not at present been tried on a sufficiently large scale to justify any very strong expression as to their respective merits. At the same time we are strongly of opinion that where timber has become affected with dry rot to such an extent that mere dubbing is considered sufficient without actual removal and replacing them with new timbers, it would be good practice to pay the whole surface with a strong solution of corrosive sublimate or sulphate of copper. This would at least effectually destroy the fungous spawn as far as the solution penetrates, and gain time if it did not prove an effectual remedy. Even where the best seasoned timber is used, it is not expected that after the expiration of some years a ship will be entirely free from dry rot, but where the Fungus has once been established it must surely be a good practice to adopt such measures as are known to be fatal to fungous growth. Let the timbers be cleansed as they may from dry rot, if the spawn be once in a growing state it is sure to spread as soon as the planking is replaced, unless proper measures be taken, and as these mineral salts are at once destructive, we can conceive no sufficient reason why they should not be used in such a case, however good the practice may be in the first instance of trusting to good seasoning and careful selection.

In domestic buildings, where there is far less chance of the accession of moisture from without, we are inclined to place great faith in the use of metallic salts, which have at least the merit of communicating no unpleasant smell, while it seems quite certain that those which are commonly employed are not in the slightest degree injurious to health, whereas it is undoubtedly true, that where timber is exposed to decay without such appliances, the generation of carbonic acid during the process is often productive of mischief.

MR. MOORE, the able Curator of the Glasnevin Botanic Garden, has brought to our notice the singular beauty of a little known hardy shrub called ABELIA TRIFLORA.

"I consider it," he writes, "one of the very finest of our hardy free flowering shrubs, and coming in at this late period when most of the others are past enhances its value. The plant I cut the branches from which I herewith inclose is nearly 12 feet high, with a proportionate diameter, and is covered with blossoms from the base to the apex. At first when the plant was young the flowers were rather sparsely produced, but last year and this they are in great abundance and very sweet. It was raised here about 10 years ago, from seeds sent by the late Major MADDEN, who collected them near Simla."

No one who saw branches of this shrub, as sent by Mr. MOORE, completely loaded with clusters of fragrant—most fragrant—tubular flowers, white, tinged with rose colour, could entertain any other opinion than this. Undoubtedly it is without a rival, at this season, except among Roses and Honeysuckles; the latter its first cousins, from which indeed it may be thought to have borrowed its sweetness. What a pity that it should be so little known! As we usually see it, stunted and tortured in a garden pot, it is passed by with little notice: but in the state described by our correspondent it is glorious. Let it not however be thought to demand the climate of Dublin. On the contrary, we have received it this year from several correspondents, who have wondered what unexpected treasure they have found among the rejected of the gardener. All that it seems to want is age, which it now has gained, a tolerable climate, and plenty of room in which to grow. In the West of England it would be as handsome as the handsomest pale Ixora, the manner of its flowering being much the same.

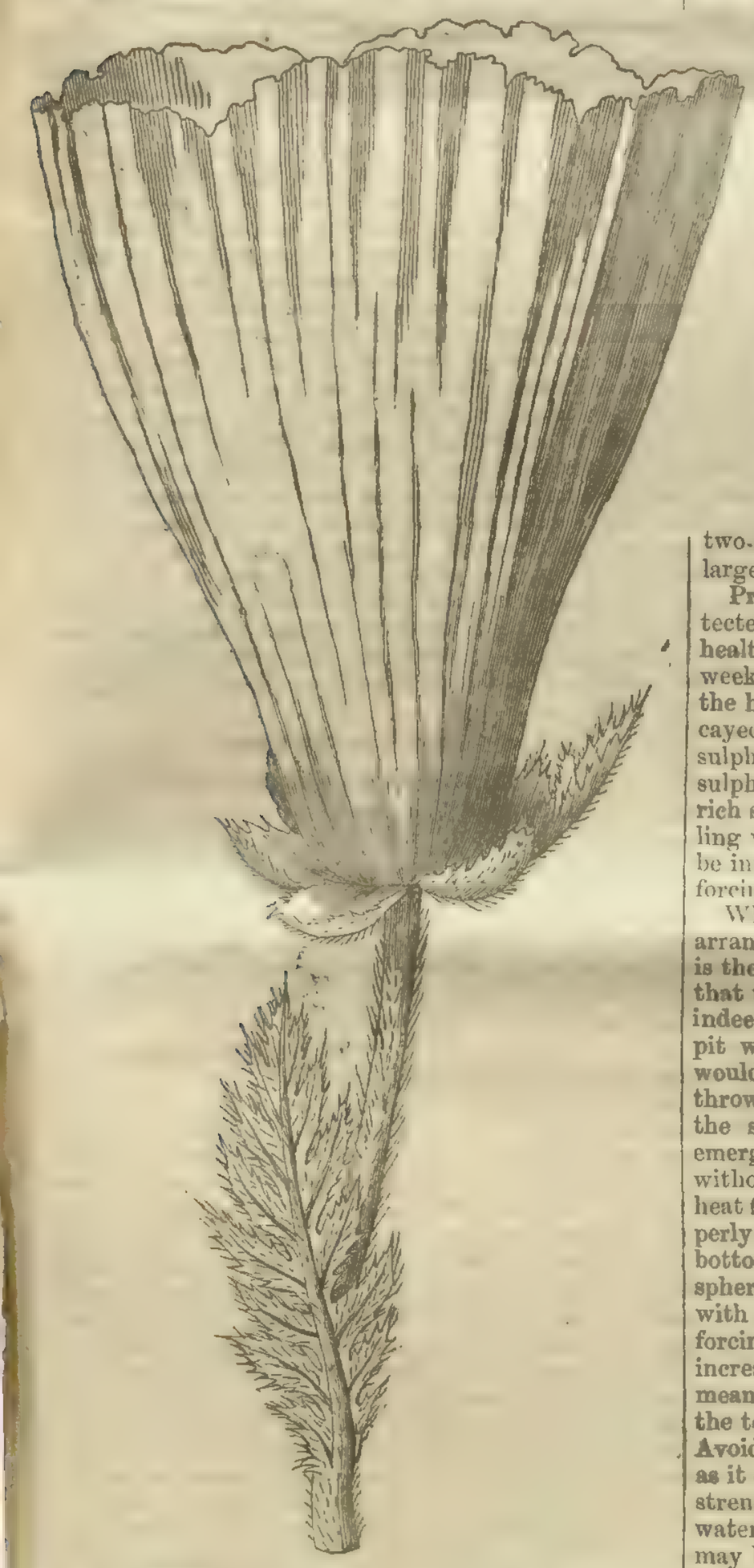
The plant was first made known by Dr. WALLICH in his *Plantæ Asiaticæ rariores*, when to a very poor figure he added the statement that it had been found by his plant collector, BLINKWORTH, "on the highest mountains of northern and western Kumaon, towards the Himalaya," where it "grows to a *middling-sized tree*, with flowers delightfully fragrant like those of Jasminum revolutum."

There is many another stranger plant in our gardens, "now neglected and forlorn," which would most richly repay the intelligent gardener who would expend upon it the care that is given to a Rose. Look for example at *Lonicera fragrantissima*, *Viburnum macrocephalum*, *Spiræa callosa* and *canescens*, *Exochorda racemosa*, all as hardy as a Furze bush, but scarcely thought about. If gardeners would only turn out of their pots the hardy novelties that the country is yearly receiving, instead of starving them in circles of baked clay; if they would but give them plenty of

good soil, plenty of free air, shelter from N.E. winds, and full sunlight for a few years after their arrival, they would be much surprised at the result.

Surely this should be a horticultural axiom: if you grow a plant at all apply to it all the care and skill which you possess. When a man buys a plant and neglects it he throws away not ouly his money but his reputation.

There is a well-known state of the great scarlet Oriental Poppy called by botanists *Papaver bracteatum*. We learn from the Revue Horticole that they cultivate in France a very extraordinary permanent monster of this gorgeous species, of which the annexed is a representation.



According to M. Grönland there is an old plant which forms every year flowers with all the petals united into a gigantic cup. It does not appear however that every flower is in this state; sometimes only two petals grow together, sometimes they join only near the base; but flowers like the annexed are always to be found.

We recommend this case to the attention of Mr. Darwin.

STRAWBERRY FORCING.

I concluded my last notice on this subject (p. 600), with an enumeration of the varieties most suitable for forcing. I omitted, however, to name Sir C. Napier, which answers exceedingly well for a second or late crop, and the same may be said of Nicholson's Ruby; indeed I have had this variety as good as could be desired in March. It is large and handsome, and of good flavour. Oscar (recently sent out by Mr. Turner) is highly recommended by some friends of mine who have tried it as being free, large, handsome, a good setter, and fine flavoured. Some years back I used to force the Swainstone Seedling with great success, but latterly have not been able to procure it true. Those who like the flavour of the Hautboy will find the old Prolific the most suitable for indoor cultivation.

Of new kinds Princess Frederick William is much recommended, and Mr. Nicholson has sent me Triomphe, an American variety, as a good forcing kind. At present it appears shy in producing runners, and looks like a cross with the Hautboy.

Although for the main crop I consider planting in boxes the best and most economical plan, yet for very early work to commence forcing in November, or even in time to get ripe fruit at Christmas, pots are more convenient, inasmuch as blooming irregularly each plant or pot can be moved to that part of the house most suitable to its requirements as to heat, air, or moisture. In fact by a little management in ventilation the temperature may be so adjusted as to render the same house suitable for growth, blooming, final maturation, and if necessary the subsequent keeping of the ripe fruit. Strawberries for very early work ripen irregularly; hence pots are a convenience at that time but quite unnecessary at a later season. I should, therefore, provide pot plants for such as I intended to force before Christmas, but after that period boxes as before directed will be found the most suitable.

I am not sure, however, that boxes of a smaller size than those previously recommended would not be suitable for the crop put in to force in January, and should be strongly disposed, were I making new ones, to have a few dozens 5 instead of 6 inches square inside, but for the principal crops the size previously recommended is not too large. Ripe Strawberries before the middle of March are rarely worth the trouble and expense of procuring; they are like the Yorkshireman's horse—"difficult to catch, and good for nothing when they are caught." They may pass muster with the confectioner or cook for ices or creams, but they are rarely very tempting as dessert fruits. Christmas week to the middle of January is quite soon enough to begin where the object is crop and quality; but if you commence in October or November you may generally calculate that from one-half to two-thirds of the plants will be fruitless, and hence a large quantity must be provided to make up for the loss.

Premising that the plants have been properly protected through the winter, and that the roots are in a healthy condition, forcing may commence the first week in January. Previous to taking the plants into the house they should be thoroughly cleansed of decayed leaves, remove the surface soil, and then with a sulphurator dust the under side of the foliage with sulphur vivum. Top dress the pots or boxes with good rich soil, make it quite firm, and give a gentle sprinkling with tepid water. The plants are then ready to be introduced into the forcing house, and of course the forcing must commence at a very low temperature.

Where it can be had a low pit with a stage so arranged that the plants can be kept close to the glass is the best, and with the heating apparatus so arranged that the heat acts directly upon the bottom of the pots; indeed supposing the pit to be a Cucumber or Melon pit with an arrangement for top and bottom-heat, I would uncover the bottom pipes so that they could throw all their heat into the atmosphere of the pit, place the stage over, and only use the surface pipes in case of emergency, that is, when sufficient heat could not be got without them. Some cultivators advocate direct bottom-heat from tan or dung linings, but if the plants are properly wintered and the roots are in a healthy state, any bottom-heat beyond what may be got from the atmosphere is quite unnecessary, and indeed if not used with great caution, positively injurious. Commence forcing with a low temperature, say 45° to 56°, and increase four to five degrees each week by artificial means until you get to 60°, but if the days are bright the temperature may run up 10° higher with advantage. Avoid however a high night temperature at all times, as it only tends to produce etiolation and diminishes the strength of the plant. Syringe the plants with clear water on bright days, and as the days lengthen they may be syringed twice a day with advantage, increasing the quantity as the light increases. Increase the temperature to 65° by day as the plants begin to throw up the bloom trusses, but still avoid a high night temperature. Syringe and shut up warm to draw the flower-stems well above the foliage, but directly the flowers begin to expand give as much air as you can until the plant is set, taking care to prevent cold draughts. When fairly set and swelling go over them and remove all deformed fruit, and at the same time so thin them out that each plant may just have all it can swell to a proper size but no more; for you may depend upon it when people talk of taking 50 fruit from a plant two-thirds of them are useless, and the best inferior to what they would have been had the fruits been thinned at the proper time. It may be assumed as a fact in cultivation that every plant under proper treatment is capable of maturing a given weight of fruit, and whether that weight is to be concentrated in a dozen good fruits, or spread over three or four dozen, is a matter entirely for the consideration of the cultivator. My own practice with strong plants in boxes is to leave upon each plant from 12 to 24 specimens, according to its strength, and directly I have that number of properly formed fruit all the remaining flowers are cut clean away. Supposing the plants throw up a number of trusses of bloom, then with a little forethought in thinning the fruit they may be so arranged that the specimens on each branch may be ripe at the same time; and being gathered with the long flower stalk they can be arranged very artistically on the dessert dishes.

As light increases water must be increased, also taking care never to allow the plants to know the want of it. Syringe copiously and shut up the forcing pits warm while the fruit is swelling; but directly it begins to colour the supply of water must be decreased. Plants in boxes rarely require water more than once a week, then give them a good soaking, letting it be manure water prepared from sheeps' dung and soot after the fruit is swelling. With this treatment I have not had a red spider on my Strawberry plants for the last two years.

Successional crops require to be introduced every three weeks, and in this way it is easy to keep up a supply of good fruit. When the crop is gathered I set the plants out and cut away the old leaves; they soon make new ones, and sometimes I take the best of the plants and repot them for a second year's forcing. If not required for that purpose I plant them out for an open border crop, and they generally give a good supply. *A. P. W.* *** In my last article, p. 600, l. 18, for "roots exceedingly bad," &c., read "pots exceedingly bad and dear."

BOTANICAL LECTURES TO THE ROYAL FAMILY.

For the following Syllabus of Lectures lately delivered to the younger branches of the Royal Family by the Rev. Prof. Henslow, we are indebted to the courtesy of a correspondent:—

Lecture I.

Structural Botany.—Popular misapprehensions respecting the "Organs" of plants. Ex. *Subterranean Stems* (Coltsfoot, Creeping Wheat), Tubers (Potato, Rerusalem Artichoke), Bulbs (Lily, Hyacinth), miscalled foots. *Flat Branches* (Ruscus, Xylophylla) mistaken (or Leaves. *Stipules* (Yellow Pea) and *Phyllodes* many Acacias) regarded as ordinary Leaves. Coloured Bracts (some Euphorbias; Poinsettia) regarded as Flowers. *Inflorescence in Heads* (Daisy, Dahlia, Chrysanthemum) not distinguished from Flowers. *Pericarps* (Strawberry, Hemp) miscalled Seeds; and *Seeds* (Brazil Nuts) considered as Pericarps (seed-vessels). General resemblance between Chesnuts (pericarps) and Horse Chesnuts (seeds). Superficial resemblance between Strawberry, Raspberry, and Mulberry.

Leaf-buds in the "axils" of leaves, develop into branches with leaves. Otherwise, modified as "Flower-buds," they form "Flower-stalks" terminated by, or reduced to "Floral Receptacles," on which the "Floral Whorls" are arranged.

Flowering Plants examined at three stages of growth, viz.: 1. The "*Embryo*" state, in the ripe seed. Its Radicle (root), Caulicle (stem), Cotyledons (leaves), and Plumule (terminal leaf-bud). 2. With the "*Nutritive Organs*" perfected, and variously modified. 3. With the "*Reproductive Organs*" completed. Transition from Leaves to Bracts, to Sepals, to Petals, to Stamens, to Carpels; sometimes gradual (Victoria Regia), most frequently abrupt. Ovary with ovules, ripens into Pericarp with Seeds.

All Flowers referred to a Type, variously modified by 1. The "*Number*" of parts in each Floral whorl. 2. "*Cohesion*" between similar parts. 3. "*Adhesion*" between dissimilar parts. 4. "*Arrest*" (partial or total) of some parts. Ex. (1) Crassula coccinea; (2) Mallow, Heath: (3) Strawberry, Fuchsia: (4) Lamium, Wallflower. Compare Geranium, Erodium, and Pelargonium.

Schedule for Botanical Exercises on the structure of Flowers.

Selection and Preparation of Herbarium specimens, for a general, local, or economic collection.

Lecture II.

Systematic Botany.—Advantages of a Generic and Specific name for every Plant. Ex. *Genus* Ranunculus, and *Species* Bulbous, Creeping, Meadow, Hairy, &c. The scientific idea of a Species includes many diversities in form. Ex. Common Primrose embraces the "Races," Primrose, Oxlip, Cowslip, Polyanthus, each possessing numerous "Varieties" and "Variations," several of which are beautiful floricultural "Monstrosities."

Genera grouped into "Orders" or "Families." The study of "Types" and "Sub-Types," judiciously selected, confers sufficient "Botanical Power," for referring vast numbers of plants to their Natural Orders. Ex. For British Botany (consult Bentham's Hand Book) select "Bulbous Ranunculus" as a Type of the Family; and for Sub-types, a species of Clematis, Anemone, Helebore, Pæony, and Baneberry.

Orders grouped into two Classes, viz.:—*Class* 1. Dicotyledons, Embryo with two or more Cotyledons; seeming exceptions in Dodder, Brazil Nut, &c. *Class* 2. Monocotyledons, Embryo with one Cotyledon; seeming exceptions from obscurity of organisation.

N.B. Obscurities disappear on germination and subsequent growth.

Empirical Rules for *conjecturing* the Class of a plant before a sufficient number of Types have been examined and committed to memory. 1. *Stem.* Dicotyledons have Pith, Medullary-rays, Woody-layers, Bark. Monocotyledons, with dispersed vascular bundles *Mem.* European Trees and Shrubs are Dicotyledons. But observe Ruscus, and the Dwarf Palm, as somewhat woody Monocotyledons. 2. *Leaf.* In *most* Dicotyledons the "Limb" is formed, and is "net-veined." Among British exceptions notice Bupleurve, Plantain, &c. In *many* Monocotyledons the limb is not formed.

The veining is most frequently parallel. Among British exceptions notice Arum, Arrowhead, &c. 3. *Flower.* Among Dicotyledons, prevalence of 5, or some multiple of 5, as the *normal* condition of the parts in one or more of the floral whorls. But observe a binary arrangement in Poppy, a ternary in Barberry, &c. Among Monocotyledons, prevalence of 3, or some multiple of 3, among the floral whorls. But observe a binary arrangement in Pondweed. &c. N.B. An example of 5 stamens (by arrest of one) in Strelitzia regina! But no British Monocotyledon has 5 parts in *any* floral whorl.

Educational convenience of artificially dividing Dicotyledons into five Groups, and Monocotyledons into three; as illustrated on the nine Botanical Diagrams prepared for the Government Department of Science and Art: thus

			Groups
Class I. Dicotyledons	Division 1. *Angiospermous*	Sect. 1. Thalamifloral	I.
		— 2. Calycifloral ..	II.
		— 3. Corollifloral .	III.
		— 4. Incomplete ..	IV.
	Division 2. *Gymnospermous*	.. ..	V.
Class II. Monocotyledons.	Division 1. *Petaloid*	Sect. 1. Superior	VI.
		— 2. Inferior	VII.
	Division 2. *Glumaceous*	.. ..	VIII.

Linnean System: its exposition *educationally* valuable; its application *occasionally* serviceable.

LECTURE III.

Physiological Botany.—Vegetable Anatomy reveals the "Elementary Organs," Cells, Ducts, Spiral Vessels (Ex. Amaryllis, Agave, Nelumbium). Intercellular passages. Woody-fibre (Ex. Flax from Egyptian Catacombs) distinguished from Elongated Cells (Ex. Cotton from Peruvian Tombs). Microscopic preparations of Epidermis, Pubescence, &c.

All Vegetable and Animal life is sustained by Organic compounds prepared by Plants.—1. Non-nitrogenous (Ex. Starch, Dextrine, Sugar) of Carbon, Oxygen, and Hydrogen. 2. Nitrogenous (Ex. Albumen, Fibrin, Casein, Gluten) of Carbon, Oxygen, Hydrogen, and Nitrogen. Comparison between the Organic compounds in 1 lb. of Potatoes and 1 lb. of Flesh; and their properties as Flesh-formers, and Heat-givers.

Exogenous growth, in Dicotyledons, reveals the age of Trees; preserves all blemishes introduced by pruning; and enables the wood of the Stock and Graft to retain their peculiar characters. *Endogenous* growth, in Monocotyledons, exhibits concentric layers in certain old trees.

Nutrition of Flowering Parasites depends (1) on ascending sap (Ex. Mistletoe, Misodendron, Rattle); or (2) on the descending sap (Ex. Dodder, Orobanche).

LECTURE IV.

Economic Botany.—Prevalence of some peculiar principle in many plants of the same Natural Order. Ex. Acrid in Ranunculanths (Bikh from Aconite). Ex. Narcotic in Papaveranths (Opium from Poppy). Ex. Aromatic in Labiates (Volatile Oils of Lavender, &c.).

Diversity of products obtained from some Natural Orders. Ex. Palms. Applications of various parts. *Wood*, in carpentry; Rattans; Guiana Blow-pipe. *Leaves*, for Tablets, Plaiting, Piacaba fibre, &c. *Pericarp.* Its mesocarp as fruit, in Date, Doum; for fibre, in Cocoa-nut; its endocarp, for turnery, in Coquilla. *Seed.* The Albumen, as fruit in Cocoa-nut; Betel, for turnery, in Ivory-nut Palm, and Palmetto.

Various Organic products. *Sago* (Metroxylon Rumphii); *Wax* (Ceroxylon, Canaüba; *Oil* (Oil-Palm, Cocoa-nut). Separation of Glycerine from Stearic, Margaric, and Oleic acids, in Stearine, Margarine, and Oleine respectively.

Some Orders universally wholesome. Ex. Crucifers, eminently antiscorbutic; contain many Potherbs, as Cabbage, Turnip, Radish. Oil from Seeds of Mustard, Rape, &c. Ex. Grasses, many as fodder; Seeds abound in Albumen, appropriated by man in the Cereals; Sugar-cane; Bamboo attains 60 feet in 4 months in the Kew Gardens.

Some Orders contain both wholesome and poisonous species. Ex. Umbellifers. Wholesome: Carrots, Parsnips, Chervil, &c.—Poisonous: Hemlock, Cicuta, &c. Ex. Solananths. Wholesome: Potato Tubers, and Tomato berries.—Poisonous: Belladonna berries and Datura seeds; Henbane plant; deadly Oil distilled from Tobacco, injurious to immoderate smokers.

SPERGULA PILIFERA.

How is it we hear so little of this horticultural wonder, this imitation of swan's-down in bright and lasting verdure? Are the folks who have grown it thus far afraid to speak? If it has proved a dead failure anywhere why do we not hear of the circumstances? and where it is a proved success why do not the possessors of the swan's-down flooring let us know, that we may take heart and go on planting it as an item of garden luxury? I am so thoroughly satisfied with the growth of my piece this spring that I begin for the first time in my life to regard Grass turf as a second or third-rate excellency; and whatever I have said against the Spergula I here unsay, and am prepared for its vindication. The most that I have said against it perhaps was a word as to its colour at the turn of the season, when it did look yellow, and sour, and shabby. But what a winter for a plant that had been severely tried from the first and not so well dealt with as it might have been had I known what I now know respecting it. Not long since, at the kind invitation of Mr. Mongredien, I saw the original lawn at Forest Hill, and learnt from Mr. Summers, "Spergula Summers," the *rationale* of treatment. There is nothing in the way of garden elegancies to beat that piece of Spergula lawn; to talk of Turkey carpets is to use a poor figure; no carpet was ever made by man that took the footfall so softly, gently, soothingly as that, for the foot sinks into it with a springy, elastic feeling without touching the soil at all, for the plant is matted into a thick felt, layer upon layer of successive seasonal growths, and I can imagine no comparison to it but a palliasse of swan's-down.

To obtain such a surfacing must be a work of time, and it is not to be expected that a plant of this kind should show forth all its merits until some few years have elapsed from the date of its being submitted to the public. This sample lawn is on a stubborn clay, on a steep slope, faces the north, and gives its glorious verdure and softness to a spot where Grass turf would probably grow coarse and cause a vast deal of trouble to keep it decent. I did wrong in the first instance to use a lot of prime Hyacinth compost for my circle; the clay which we have here for a subsoil would have been the very thing for it. Then I did wrong to complain of its colour in the first winter from seedling plants, because being thin and far apart, the water lodged between them, the frost made ice of the water and punished the plant unduly because it was not thick enough to comfort itself. These spring rains, however, have set the piece growing at a tremendous rate, and after the roller has been over, it lies as close and smooth as pile velvet. But there is another reason why it was most unreasonable of me to complain. In December last I moved the Roses from the 13 feet circular bed in the centre of the Spergula, took out the stuff 18 inches deep, carted in peat from Wanstead, and planted the bed with Rhododendron species. I put down planks, and made a speech on the inviolability of Spergula pilifera, yet in spite of me the fellows trampled it in some places almost to a paste, and had it been a miffy sort of thing it would have vanished altogether. Yet in spite of the crushing of feet and wheelbarrows during a drenching December week, every scrap that was crushed has started up again like so many vegetable Phœnixes, and every mite of a seedling from self-sown seeds last autumn has survived the winter—and what a winter!—and is now spreading, and the bare earth is scarcely visible between them. Last year's seedling patches are now a foot across, and by July the whole circle will be densely turfed, and then—what then? Why, it will begin to live on itself like a true Moss, and the days of its swan-down luxury will begin. I saw by a piece of the Spergula, which Mr. Summers cut with his knife, that the stuff makes a fibrous felt by the decay of its procumbent stems while a fresh growth goes on above. Thus the felt holds moisture in the dryest and hottest weather, and when pressed by the foot sinks with just enough resistance to be pleasant, and make a tired man forget for the time the weight of his body.

To have brought my piece to perfection quickly I should have used established tufts instead of seeds, and it should have had plenty of water the first season. If, I am satisfied after having given it it so severe a trial, I suppose others will be who are inclined to pet and humour it, and it deserves humouring as much as any plant in cultivation.

I can understand why some hard things have been said about it. The sample at Messrs. Henderson's is no credit to them, and cannot benefit the fame of the plant much. This is not to their discredit, for at nurseries time can not be given to make a special feature of such a thing, especially if it has to be done on a sudden. Besides, Messrs. Henderson grow it for sale, and the sample is perpetually being cut at, and how can it show its beauties under such circumstances? Mr. Cutbush has a good piece round his fine plant of Wellingtonia gigantea, and some day the Crystal Palace Gardens will show it in sufficient perfection to set people crazy after it.

From 18 months' constant observation, and having taken the care of my piece into my own hands, prohibiting any other hand from touching it, I can safely say that in one season it will prove itself to be a right good thing; and after that it will begin to assume its high character, as it does at Forest Hill after a growth of six or seven years. This too is just the proper time to plant or sow. Self-sown plants of last July in my piece are now good tufts, therefore seed sown now, pricked out, and left in the kitchen garden on a reserve plot will be fine for the making of a lawn next spring. It grows quickest in a loose soil; but to make a lasting turf is best on clay, and the more rolling and trampling the better. Tufts put in now and kept safe in case of drought will have the benefit of all the autumn rains, and get their roots deep before the winter comes. But let no one imagine that a perfect lawn can be obtained the first season. Like good claret or Scotch ale it acquires nobility with age, and if I stay here till I am grey-headed I suppose I may sleep in the summer time on my sample of emerald swan's-down. Let those who doubt all this go first to Forest Hill and see what has been done by the master of Spergula, Mr. Summers. Then let them get a pinch of seed or a single tuft of plant and grow it in a pot or in a nook of a rockery and wait. Its continuous lateral growth and exquisite freshness of colour will convince them that here is a plant that may be put to 50 different uses and be good and profitable in all.

If I were laying-out a geometric garden, and especially if in sunk panels, the groundwork should be Spergula. If I wanted a close verge to run away in soft lines, neat and close, and easily kept to its proper boundary, I would not have Grass if Spergula cost a shilling an inch. To surface the ground in a rootery or a rockery, or on a turf terrace, Spergula and patience, and then no fear of summer drought to spoil the greenness, for it sends its roots down as if it knew the shortest route to New Zealand through the centre of the earth, and if you take up a year-old tuft you may dig deep to find the lowest of its spongioles. Where the roots of Mr. Mongredien's piece are gone to might help us to some conclusions respecting the internal heat of the earth.

But here comes a question. Is Spergula pilifera the only plant that will do it? What is that little thing that comes in tufts in old peat beds and very often in pots containing peat or peaty mixtures where the drainage is a little wrong? Is it not Sagina procumbens, that we root out and fling on the muck heap in ignorance of its capabilities? That makes charming tufts on a bank, and some day it may prove to be a lawn plant for sour soils and worn-out peat, as Spergula pilifera is for the stubborn clay. Then in my piece I can find several tufts of Spergula subulata, and I have on a rockery a tuft of Spergula nodosa, which is of another tint of green to pilifera, and for all I know as good a thing if as largely dealt with. How many such plants are there? Will Dr. Lindley come to the rescue with a handful of botanical distinctions, and will the Horticultural Society take all these promising turfing plants in hand and settle their values *inter se*, and as to their several adaptabilities for this or that soil, and this or that climate? Meanwhile let those who dream about Spergula pilifera substitute action for dreaming, and instead of new patent lawn mowers, let ingenious inventors turn their attention to the production of brooms light as ostrich feathers to sweep the soft surface of the emerald swan's-down. *Shirley Hibberd, Stoke Newington.*

Home Correspondence.

Education of Gardeners.—In a former letter which I sent you on this subject I said, "Give better wages, and you will get better men." For instance, what is there to induce a young man to go through all the examinations, &c., proposed by your correspondents? Suppose he succeeds, and gets his diploma, what follows? 12*s.* per week in a nursery, and 20*s.* or 25*s.* a week in a gentleman's garden, will be the reward of years of study and self-denial. I should like to have Dr. Lindley's opinion on this subject; he has conducted a good many examinations at Chiswick, and could tell us better than any man living of what value they are. Only a very few, I believe, of the prize men retained a situation. After passing the most brilliant examination one was returned to Chiswick, his master telling one of the officers of the Garden that he did not know even how to tie a Lettuce up. *Non Diploma.* [A fiction]. In regard to premiums I do not altogether agree with "An Angus Lad," who says "that the whole system of premium paying seems to be a kind of bribe which fetters a man in the discharge of his duty." I think it is quite reasonable that every young gardener should be required to pay a moderate premium, according to the wages he receives; say 10 per cent. of what he may earn for about three years. But to demand 1*s.* 6*d.* or 2*s.* per week for an indefinite length of time is certainly unjust. That such is often exacted I have reason to know. I served an apprenticeship of five years, for my parents being poor I was compelled to begin to "scratch" when only 13 years of age. After that I went to a place in Yorkshire as "improver," served three years as pleasure-ground man, received 11*s.* per week, and paid 1*s.* 6*d.*, and then three years as stove-man, when I had 12*s.* per week and paid 2*s.* per week to the gardener, besides a premium of 3*l.* The evils arising out of this system of weekly payment are numerous. Young men cannot afford to buy books for instruction, and the first place which offers itself is accepted. Thus the country is overstocked with gardeners (?) who are inefficient and inexperienced. They get low salaries, but quite as much as they are worth. In short the supply is increased while the quality is deteriorated, an evil which is to be attributed chiefly to the "stop weeks." *Crostonian.*—I very much approve of the remarks made by "An Angus Lad" respecting the treatment which some head gardeners give those under them, and if they would but act something in accordance with his suggestions, they would be more attended to and much more respected, and instead of taking, as the old adage is, "all the gardener's time to watch his men and half of their time to watch him," they would be able to give orders in confidence that they would be carried out to the best of the operator's ability. Respect and esteem are mighty in their effects, and produce the best results. I am aware that there are exceptions; all that can be done or said to some men will not move them, and they will watch every opportunity to take advantage of you, but the best plan with such men is to quietly dismiss them, which might perhaps bring them to their senses.

As regards premiums I think that some reasonable defence might be set up in their behalf. Where, for instance, will you find a professional man or tradesman who will take an apprentice without some remuneration for his trouble, and generally much more than is paid to gardeners, even in the best places in the kingdom? Do they consider premiums in the light of bribery, or that they fetter them in the discharge of their duty? Nurserymen, too, who engage young men at 1*s.*, 2*s.*, and 3*s.* per week less than other men, according to their experience, are quite as bad as gardeners who take premiums. Again, a gardener leaves his situation; his means compel him to apply to a nurseryman for employment until such time as he can procure another place. Does he get paid the same as many of the other men, some of which are but labourers? Not at all, but shillings per week less, and do gardeners complain of this? I never heard of any who did; on the contrary, they are glad to avail themselves of the opportunity of working while they wait for a situation. But if the system is "bribery," in one case it is "bribery" in all others, and the sooner the legislature makes the act punishable by fine or imprisonment the better. "An Angus Lad" endeavours to prove that the plan is wrong by referring to butlers and housekeepers, but the comparison is at fault; where is the anxiety and trouble, the expense, the education? The difference is great. Your "Angus Lad" would have the gardener devote night after night to giving lessons to young men under him, and imparting all the knowledge of his profession, such as is laid down in your columns, at considerable expense and inconvenience without the smallest remuneration, and if, as he says, the subject is one which produces a great deal of ill feeling, I hope that those who feel aggrieved will speak out, so that if the system is really bad it may be done away with by common consent. *J. D. U.*

The Shamrock.—Having observed some inquiries in back numbers of your journal as to what is the true Irish Shamrock, I beg to enclose a plant in seed and blossom. It is evidently a Clover. In March when collected on or about St. Patrick's Day 17th, its growth and appearance were quite different. Instead of long trailing branches, it had a very much greater number of short tufted stems, and the foliage exactly resembled the typical shamrock so well known in artistic representations. The specimen now sent has lost all its characteristic neatness, but is in a better state for botanical examination. It is the plant invariably used in the province of Munster as Shamrock and is abundant in every pasture field, as well as on commons, earthen fences, and roadsides. I do not think the Wood Sorrel could ever have been so used, as it isan exceedingly rare plant in this country, *J. Bradford, Cork.* [But it is asserted that the Shamrock was once eaten. Did the old Irish live on Clover? The plant sent is the kind of Clover called by botanists Trifolium minus.]

Rainfall at Arle-Bury, Alresford.—The following is our measurement of rain during the last six months. The amount in June seems incredible, but it was carefully taken, and we had a succession of thunderstorms:—

1860.	Inches.
January	3.92
February	1.24
March	2.23
April	1.34
May	2.93
June	9.77
Total	41.51

Urban.

Fishponds.—What is the best period of the year to stock a pond with perch, and where is the best place to obtain the young fish or their spawn from? *E. C.*

The Sacred Bo-Tree (Ficus) of Ceylon.—This would appear, from the memoranda given in Sir E. Tennent's Ceylon (Vol. II. p. 613, &c.), to be the oldest tree known, of which an authentic history can be given to establish its age. See also Vol. I. p. 341. It was planted by the Buddhist emigrants from the Indian continent 288 years before Christ, and a succession of historical notices identify it with the individual now existing. There is probably not the same evidence for the age of any other tree. *G.* [The following are extracts from Sir Emerson Tennent's account of this extraordinary tree:—The Bo-tree of Anarajapoora is, in all probability, the oldest historical tree in the world. It was planted 288 years before Christ, and hence it is now 2147 years old. Ages varying from one to five thousand years have been assigned to the Baobabs of Senegal, the Eucalyptus of Tasmania, the Dragon-tree of Orotava, the Wellingtonia of California, and the Chesnut of Mount Etna. But all these estimates are matters of conjecture, and such calculations, however ingenious, must be purely inferential; whereas the age of the Bo-tree is matter of record, its conservancy has been an object of solicitude to successive dynasties, and the story of its vicissitudes has been preserved in a series of continuous chronicles amongst the most authentic that have been handed down by mankind. Compared with it the Oak of Ellerslie is but a sapling; and the Conqueror's Oak, in Windsor Forest, barely numbers half its years. The Yew-trees of Fountains Abbey are believed to have flourished there 1200 years ago; the Olives in the Garden of Gethsemane were full grown when the Saracens were expelled from Jerusalem; and the Cypress of Soma, in Lombardy, is said to have been a tree in the time of Julius Cæsar; yet the Bo-tree is older than the oldest of these by a century, and would almost seem to verify the prophecy pronounced when it was planted, that it would "flourish and be green for ever." The degree of sanctity with which this extraordinary tree has been invested in the imagination of the Buddhists may be compared to the feeling of veneration with which Christians would regard the attested wood of the cross. * * * Nor is this superstitious anxiety a feeling of recent growth. It can be traced to the remotest periods of Buddhism; and the same homage which is paid to the tree at the present day was wont to be manifested 2000 years ago. Age after age the sacred annals record the works which successive sovereigns erected for the preservation of the Bo-tree: the walls which they built around it, the carvings with which they adorned them, and the stone steps which they constructed to lead to the sacred enclosure. The latter were raised by a king, A.D. 182; and in 223 a stone ledge was added to the enclosing wall. Century after century, repairs or additions to the buildings are recorded in the Singhalese annals. King Abhaya, A.D. 240, placed "a cornice on the parapet, a porch at the southern entrance, four hexagonal pillars of stone at the corners, and a statue of Buddha at each entrance." His successor, Mahassen, caused "two statues of bronze to be cast and erected in the hall of the great Bo-tree;" and mention is made in the sacred annals, nearly two thousand years later, of the celebration of a festival, which, "from the period when the supreme Bo-tree was planted, the rulers of Lanka held every twelfth year, for the purpose of watering it." * * * The author of the Mahawanso, who wrote between the years 459 and 478 A.D., after relating the ceremonial which had been observed nearly 800 years before at the planting of the venerated tree by Mahindo, concludes by saying: "Thus this monarch of the forest, endowed with miraculous powers, has stood for ages in the delightful Maha-mego garden, in Lanka, promoting the spiritual welfare of its inhabitants and the propagation of true religion." In A.D. 804 the reigning king "caused a hall to be built in honour of and near to the Bo-tree, at Anuradha poora-neuera;" and in A.D., 1153, Brakrama-Bahu "made a house around Jaya-maha Bodhim-Wohanse, *i.e.* the Bo-tree." It will be observed that throughout these notices (and they are but a few out of a multitude) the object of veneration is always alluded to as "the" Bo-tree, no doubt having ever been suggested as to its identity; and the Rajavali, a still later authority than those already quoted, speaking of Wijayo-Bahu (who recovered the southern division of Ceylon from the Malabars, A.D. 1240) says he was a "descendant of the family who had brought the Bo-tree yet existing to Ceylon." Regarded with so much idolatry, tended with attention so unremitting, resorted to from all lands in which the name of Buddha is held in veneration, and its vicissitudes recorded in the sacred history of an island the inhabitants of which considered themselves blessed by the possession of so heavenly a treasure; the conjecture (had it ever been hazarded) that the original tree might have died and its place been supplied by one secretly substituted, may fairly be regarded as an hypothetical impossibility. Such an event as the death of the great Bo-tree of Anarajapoora would have spread consternation, not only throughout Ceylon, but over Siam and China. It would have been regarded as a visitation too portentous to be contemplated with equanimity, and recorded with a becoming sense of the calamity, in the annals of every Buddhist nation in Asia.]

Societies.

HORTICULTURAL: *July* 10. *Fruit Committee.*—J. Graham, Esq., in the chair. A very fine collection of Strawberries, to which a prize was awarded, was exhibited by Mr. Turner, of Slough. It consisted of Filbert, Elton, Sir Charles Napier, Myatt's and Rivers's Eliza, Admiral Dundas, Black Prince, Sir Harry, Carolina superba, and Ingram's Prince of Wales. Among these the best flavoured were Filbert, Myatt's Eliza, and Carolina superba, all of which, considering the season, were good. Of newer sorts, Mr. Turner sent Oscar, a large and fine variety; Adair; Jeyes' Wonderful, a very promising Strawberry; May Queen, and Wizard of the North. The last was small, but not bad in flavour. Some large plants of it loaded with fruit in an early stage of growth were shown by Mr. Robertson. Good fruit of this variety may therefore yet be expected to be shown this season. Adair, we may mention, did not seem to be the same as Myatt's Admiral Dundas, with which it has been pronounced by some to be identical. A very fine seedling named Blackbird, large and showy, was contributed by Mr. Ingram, of the Royal Gardens, Frogmore, and another of Mr. Ingram's seedlings called Prince Arthur was shown by Mr. Small, of Colnbrook. To both of these prizes were awarded. A Black Muscat Grape called Ayres sent a hybrid Cashmere Melon which bore considerable resemblance to the Beechwood both in appearance and flavour.

BRITISH ASSOCIATION AT OXFORD.—"On the occurence of Poisonous Metals in Cheese," by Prof. Voelcker.—The author stated that he had detected both copper and zinc in cheese. In some specimens copper, in others zinc, and in some both copper and zinc were found. The description of cheese in which these poisonous metals were found was double-Gloucester cheese. Skimmed-milk cheese, which was likewise examined for copper and zinc, did not contain any metallic impurity. Stilton, and other varieties of cheese, have not as yet been examined; it must not therefore be inferred that cheese made in other districts than Gloucestershire contains poisonous metals. Inquiry in the dairy districts of Gloucestershire and Wiltshire has led to the discovery that in many dairies in these counties sulphate of copper, and sometimes sulphate of zinc, are employed in the making of cheese. The reasons for which these prejudicial salts are added to the cheese are variously stated. Some persons added sulphate of zinc with a view of giving new cheese the taste of old—others employed sulphate of copper for the purpose of preventing the heaving of cheese. Dr. Voelcker also stated that he had found alum in Gloucester cheese, and mentioned that he had learnt that in some dairies alum was employed to effect a more complete separation of the caseine from the whey.

"On the Final Causes of the Sexuality of Plants, with particular Reference to Mr. Darwin's Work 'On the Origin of Species by Natural Selection,'" by Dr. Daubeny.—Dr. Daubeny began by pointing out the identity between the two modes by which the multiplication of plants is brought about, the very same properties being imparted to the bud or to the graft as to the seed produced by the ordinary process of fecundation, and a new individual being in either instance equally produced. We are, therefore, led to speculate as to the final cause of the existence of sexual organs in plants, as well as in those lower animals which can be propagated by cuttings. One use, no doubt, may be the dissemination of the species; for many plants, if propagated by buds alone, would be in a manner confined to a single spot. Another secondary use is the production of fruits which afford nourishment to animals. A third may be to minister to the gratification of the senses of man by the beauty of their forms and colours. But as these ends are only answered in a small proportion of cases, we must seek further for the uses of the organs in question; and hence the author suggested that they might have been provided, in order to prevent that uniformity in the aspect of Nature, which would have prevailed if plants had been multiplied exclusively by buds. It is well known that a bud is a mere counterpart of the stock from whence it springs, so that we are always sure of obtaining the very same description of fruit by merely grafting a bud or cutting of a Pear or Apple tree upon another plant of the same species. On the other hand, the seed never produces an individual exactly like the plant from which it sprang; and hence, by the union of the sexes in plants, some variation from the primitive type is sure to result. Dr. Daubeny remarked that if we adopt in any degree the views of Mr. Darwin with respect to the origin of species by natural selection, the creation of sexual organs in plants might be regarded as intended to promote this specific object. Whilst, however, he gave his assent to the Darwinian hypothesis, as likely to aid us in reducing the number of existing species, he wished not to be considered as advocating it to the extent to which the author seems disposed to carry it. He rather desired to recommend to naturalists the necessity of further inquiries, in order to fix the limits within which the doctrine proposed by Mr. Darwin may assist us in distinguishing varieties from species.

Prof. Huxley, having been called on by the Chairman, deprecated any discussion on the general question of the truth of Mr. Darwin's theory. He felt that a general audience, in which sentiment would unduly interfere with intellect, was not the public before which such a discussion should be carried on. Dr. Daubeny had brought forth nothing new to demand or require remark.—Mr. R. Dowden, of Cork, mentioned two instances in which plants had been disseminated by seeds, which could not be effected by buds; first, in the introduction of Senecio squalidus, by the late Rev. W. Hincks; and, second, in the diffusion of Chicory, in the vicinity of Cork, by the agency of its winged seeds. He related several anecdotes of a monkey, to show that however highly organised the Quadrumana might be, they were very inferior in intellectual qualities to the dog, the elephant, and other animals. He particularly referred to his monkey being fond of playing with a hammer; but although he liked oysters as food, he never could teach him to break the oysters with his hammer as a means of indulging his appetite.—Dr. Wright stated that a friend of his, who had gone out to report on the habits of the gorilla—the highest form of monkey—had observed that the female gorilla took its young to the sea-shore for the purpose of feeding them on oysters, which they broke with great facility.—Prof. Owen wished to approach this subject in the spirit of the philosopher, and expressed his conviction that there were facts by which the public could come to some conclusion with regard to the probabilities of the truth of Mr. Darwin's theory. Whilst giving all praise to

Mr. Darwin for the courage with which he had put forth his theory, he felt it must be tested by facts. As a contribution to the facts by which the theory must be tested, he would refer to the structure of the highest Quadrumana as compared with man. Taking the brain of the gorilla, it presented more differences, as compared with the brain of man, than it did when compared with the brains of the very lowest and most problematical form of the Quadrumaua. The deficiencies in cerebral structure between the gorilla and man were immense. The posterior lobes of the cerebrum in man presented parts which were wholly absent in the gorilla. The same remarkable differences of structure were seen in other parts of the body; yet he would especially refer to the structure of the great toe in man, which was constructed to enable him to assume the upright position; whilst in the lower monkeys it was impossible, from the structure of their feet, that they should do so. He concluded by urging on the physiologist the necessity of experiment. The chemist, when in doubt, decided his questions by experiment; and this was what was needed by the physiologist.—Prof. Huxley begged to be permitted to reply to Prof. Owen. *He denied altogether* that the difference between the brain of the gorilla and man was so great as represented by Prof. Owen, and appealed to the published dissections of Tiedemann and others. From the study of the structure of the brain of the Quadrumana, he maintained that the difference between man and the highest monkey was not so great as between the highest and the lowest monkey. He maintained also, with regard to limbs, that there was more difference between the toeless monkeys and the gorilla than between the latter and man. He believed that the great feature which distinguished man from the monkey was the gift of speech.

"Report on Experiments in the Growth of Plants," by Prof. Buckman.—The author reported that he had about 200 plots of ground occupied with various experimental crops, a full account of which must be delayed, from the backwardness of the season on the one hand, and the early period of meeting of the Association on the other. In this case only a few of the subjects of experiment were explained by the author, from which we select the following:—Poa (Glyceria) aquatica had been the subject of fresh experiments, and two specimens were shown to the Section, one from the garden of the Royal Agricultural College, and another from the Messrs. Sutton, of Reading; these were identical in all their details, but the point of interest consists in the great amount of difference between the induced forms and the Poa aquatica, whose seeds had been used. The new specimens, indeed, had the external aspect of large examples of Poa trivialis, but still with very different botanical details from that species, and is in fact held by the author to be as distinct from Poa aquatica as from any other species of Poa whatever; still it is really a Poa, so that the name Glyceria, as applied to it, is inadmissible. The Carduus arvensis had been the subject of experiment, and its growth from seeds was traced, and its method of increase by rhizomata explained by means of drawings of growth at different periods. The interest of this subject consisted in the fact that it had been denied that this plant was developed from seed at all, but the author showed that one stem of the plant may produce as many as 20 heads, each having 170 seeds; thus, 170 + 20 = 3400 seeds, which may be produced by a moiety of this Thistle: so that it becomes important that roadsides and waste places should be looked to, to prevent the flowering and seeding of what may become a most pernicious pest, spreading from a seeding centre to incredible distances all around.—Col. Munro, after having examined the specimens produced, expressed his surprise that the two Grasses exhibited by Mr. Buckman should have been produced from the same seeds. He regarded one as the Glyceria fluitans, and the other as a form of Poa trivialis, or perhaps P. pratensis.—Mr. C. C. Babington felt sure, from the great difference between the two forms of Grasses exhibited, that some error had crept in during the experiment. *From the Athenæum.*

ENTOMOLOGICAL.—The June meeting of this Society was very fully attended, the President, J.W. Douglas, Esq., being in the chair. Mr. Stevens exhibited a specimen of Callidium luridum, lately taken in a play-ground at Blackheath, and two individuals of the grand butterfly, Papilio Antenor, captured by Mr. Layard in Madagascar, who had only been able to procure them by shooting at them with a gun, the lofty flight of the insects rendering all other modes of capture ineffectual. Mr. Bond exhibited two specimens of the very rare Deilephila lineata, taken at Brighton on the 12th and 14th of the preceding month; also two chrysalids of the Convolvulus Sphinx, remarkable for the length of the case of the proboscis extending in a curve over the breast, which were dug out of a Potato field near Canterbury last autumn; also a monstrous cocoon of Eriogaster lanestris, the small egger moth, formed by three of the caterpillars working in concert. Mr. MacLachlan exhibited some specimens of a minute midge (Cecidomyia sp.), reared from galls formed upon the buds of the Common Broom. Mr. Janson exhibited Sphærites glabratus, Rhinomacer Attelaboides, and other rare varieties from Perthshire; and Mr. Gorham specimens of Dinarda dentata, taken in nests of Formica fusca, Haploglossa ruppennis, and other rare species from the neighbourhood of London. Mr. Stainton exhibited Lithocolletis Helianthemi, bred from larvæ received from Ratisbon, and Aspidisca splenderiferella, bred from the larva on Cratægus tomentosa, sent from America; Mr. Moore a living specimen of the moth reared from the Eria silkworm, fed upon the Castor-oil plant; and Mr. Stainton specimens of Deilephila lineata, taken at Torquay and Lewisham.

Mr. Tegetmeier gave an account of a remarkable family of the honey bee which he had reared, there being no queen in the hive, her place being usurped by certain of the workers differing from the rest in shape, which (although unimpregnated by the males, of which none had made their appearance) had laid eggs in the cells, in an irregular manner, there being sometimes as many as five or six placed in a single cell. Mr. Westwood exhibited some leaves of the Beech, which had been greatly injured by the larvæ of a small weevil of Orchestes Fagi, which burrow between the two surfaces of the leaf, forming large blotches. They had been forwarded to him from Ireland by Professor Harvey, who had informed him that the trees for a wide extent in the south of Ireland had been blighted in the manner shown by the leaves forwarded to Mr. Westwood. Mr. Stevens exhibited a large species of Tabanus or gad fly, from the Gold Coast of Africa, which is very obnoxious to horses in the interior of the Continent, attacking them fiercely and sucking them in the same manner as the common English cleg, but to a far greater extent, so that the horses die from their attacks in the course of six or eight weeks from exhaustion and irritation. It was questioned whether this fly might not be the true Tsetse of Dr. Livingstone. Mr. Baly read a memoir on the family Sagridæ (beetles remarkable for the large size of the hind legs), and Mr. F. Smith gave a notice of the Cynips quercicola, a gall fly which is now committing much damage to the young Oak throughout the country, and of which Mr. Smith had reared not fewer than 12,000 individuals, all of which had proved to be females, whence, as well as from observations made upon other species of the genus, he is led to believe that there are no males in the genus in question. He also read descriptions of some new Hymenopterous insects from New Holland and New Zealand; and Dr. Wallace read some remarks on the question of the indigenousness of certain Lepidoptera, especially Sphingidæ, occasionally taken in this country.

EXHIBITION AT MANCHESTER.—The second and last exhibition of the season of plants, fruits, and flowers, was held at the Botanical Gardens, Old Trafford, on Wednesday and Thursday, the 27th and 28th ult. The show of plants was good, but small, and the same remarks apply to both flowers and fruits. The weather was unfavourable, rain falling almost in torrents throughout the whole afternoon.

Eight Stove and Greenhouse plants from Mr. Cole took the first prize in that class. In this group was a remarkably fine Ixora javanica, also Pimelea Hendersoni. The second prize in this class was awarded to Mr. Fallows, whose finest plants were Ixora Oxoniæ (?) and Dipladenia crassinoda. The third prize was given to H. Micholls, Esq., who had a fine Rhynchospermum jasminoides, and a beautiful plant of Allamanda cathartica.

In collections of four Stove and Greenhouse Plants Mr. Cole again took the first prize. His plants were of neat growth and well bloomed, the best in the group being Erica tricolor Wilsoni. A second prize was awarded to T. Kendall, Esq., whose group contained the new Ixora Amboinensis, which promises to be one of the finest of its kind, owing to its free-blooming properties, its rich colours, and compact habit.

For the best eight Orchids the first prize was awarded to J. A. Turner, Esq., M.P. His group contained among other rare plants Barkeria spectabilis, with eight spikes of bloom; also Cattleya Wageneri, which is one of the finest species of the kind in cultivation. (?) In short the *tout ensemble* of the group was truly a model one, and reflects infinite credit upon Toll, the gardener. Mr. Yates obtained the second prize. His group had in it a fine specimen of Cattleya lobata and Aerides odoratum purpurascens. The latter had upon it six spikes of beautiful bloom.

Mr. J. A. Turner's Aerides odoratum majus took the premier prize for the best single Orchid.

To Mr. Cole was awarded a first prize for the best 12 ornamental plants. In this group we noticed Aralia pulchra, which for decorative properties is perhaps without a rival. A Theophrasta imperialis in this group was a fine plant. Its foliage looked extremely beautiful and healthy; we may add that one advantage of this class of plants is that they are alike attractive in season and out of season. A second prize was awarded to H. Micholls, Esq., and a third to Captain Withington, whose group contained a remarkable specimen of Cyanophyllum magnificum, one of the most stately plants of modern introduction.

A first prize for Fuchsias was awarded to Mr. S. Roebuck, and another for Ferns to J. Renshawe, Esq.

The best eight Achimenes came from S. Roebuck, Esq., who had Meteor, with brilliant crimson blossoms, which were the theme of general admiration.

Pelargoniums were furnished by S. Roebuck, Esq.

Cut Roses, considering the unfavourable season for them, and the great lack of sun, were very good.

Fruit was scarce. The first prize for a Pine (Montserrat) was awarded to A. Henry, Esq.; and a second to the Earl of Ellesmere for Prince Alfred. Grapes only numbered a few dishes, but they were very fine, and the black ones were well coloured. The first prize for the best dish of Peaches was awarded to the Earl of Ellesmere for a dish of Gallande. Melons, Cucumbers, Strawberries, &c., were few in quantity, but good in quality. *Abridged from the Manchester Weekly Advertiser.*

NATIONAL ROSE SHOW.—This took place at the Crystal Palace on Thursday last, and was in all respects highly successful, there being more blooms shown on this than on any previous occasion, and most of the exhibitions were in admirable condition. There was a large attendance of visitors. A full report, together with lists of the leading varieties shown, will be given in next week's Number.

Notices of Books.

The Rifle; and How to Use It. By Hans Busk. Seventh edition. Routledge. 12mo.

Since the appearance of the first edition of this little work so many great and important additions have been made by the writer that a repurchase of it has become indispensable to the rifleman; and it still continues "the book" on Rifle-shooting as it is. Upon turning over its pages the reader will not fail to remark how entirely our own often-expressed opinion of the superiority of Lancaster's elliptic rifles is supported by the author, and the cautious tone in which Whitworth's are spoken of. Mr. Busk repeats that "the result of the trial (in Chatham marshes in 1858) again proved most conclusively the superior accuracy of the Lancaster over the Enfield rifle." And again at a subsequent trial, "the Lancaster evinced its superiority from the first and maintained it through the trial." Such being the case, and it being notorious to all acquainted with these arms that while the Enfield fouls rapidly the Lancaster does not foul at all, it does appear incomprehensible that Government should still go on manufacturing Enfields exclusively. As to Whitworth's Mr. Busk says: "*if* it can always be made to exhibit such a superiority over that arm (the Enfield) as was displayed during a trial of the two at Hythe, the Government would be amply justified in securing the future services of such an implement," &c. We suspect that those who saw the firing at Wimbledon last week will also pause before they acquiesce in the present rage for Whitworths, and will applaud the determination of Government to decline purchasing Mr. Whitworth's patent. The difficulty of loading, the awkwardness and we presume expensive nature of the ammunition, to say nothing of the tendency to foul, must be fatal to its use as a military weapon. For target practice, when a man may take any convenient time to load, it is doubtless a beautiful tool—we had almost written toy; but for the real work of war it seems to us to be in its present state altogether unsuited. When it shall be associated with a safe breech-loading apparatus it will be time enough to reconsider its true practical value as an arm for troops. Even then it will have to stand a comparison with Lancaster's breech-loading carbine, the only breech-loader we have seen that we should like to take into action. In both contrivances the great object is to destroy windage; and, as far as we can judge, that is as completely effected by Lancaster's breech-loader as by a Whitworth barrel even when fitted to a Westley Richards's breech.

But omitting breech-loaders, it is to be hoped that the summer will not pass without the three inventions being brought into direct comparison, not by mere "target" practice, but by the "individual firing" of such soldiers as our present instructors in musketry. If a match were made between Enfield, Lancaster, and Whitworth's muzzle-loaders at 400 yards from the shoulder, or at 500 yards from the knee, each having previously fired 20 rounds and being immediately used without cleaning, half-minute firing time being allowed, we should be much surprised to find a Whitworth the winner. And this seems to us to be the only fair way of testing the value of these arms in actual service.

We have a reprint in a separate pocket volume of *Mr. Ramsay's Dissertation on the old Glaciers of Switzerland and North Wales* (Longmans), which first appeared in "Peaks, Passes, and Glaciers," contributed by members of the Alpine Club. The manner in which traces of the glacial period near Snowdon are made out is highly interesting, and renders this little volume indispensable to all travellers of intelligence in North Wales. Take for instance Prof. Ramsay's graphic account of the Llyn Llydaw:—

"Of all the valleys that lie in the heart of Snowdon, the largest and most magnificent is that of Llyn Llydaw. It is easily reached from Llanberis over the summit of Snowdon, or by Cwm-glas over the ridge of Crib-goch; but both for the lovers of scenery and for those who specially care to observe its glacial phenomena, it is better to go up the Pass of Llanberis to Gorphwysfa, and so strike into the valley; or, if there be time, to cross the broken ground to the right of Nant Gwynant, and from thence ascend Cwm Dyli

(correctly, *Dylif*, meaning 'the rush of waters.' It may be translated 'Cataract Valley') by the cataract of Llyn Llydaw. This route is most instructive, especially if the sides of the Pass have been explored before; for then, up to the watershed of Gorphwysfa, the eye readily comprehends all the combined signs of an old glacier of the largest size in Wales, especially when habit has accustomed the explorer to detect in every stage of decay the signs left by the glacier. As already mentioned, for hundreds of feet up the sides of the valley, all the striations run north-westerly *along* the hills; except in tributary valleys, or occasionally at great heights, where they sometimes converge a little towards the Pass, as in the higher part of the hollow above Pont-y-gromlech, that leads up to Y Glyderfawr; or on the hillside about half a mile due west of Gorphwysfa; and again on the watershed directly west of Llyn-Cwm-ffynnon, where they run both towards the Pass and Nant-y-Gwryd.

"Close by Gorphwysfa the striæ run across the watershed, as if at its culminating point the piled-up snow and ice had flowed in two directions, on one side down the Pass, and on the other towards Nant Gwynant, just as it now does at the snowshed of the upper glacier of the Aar. At the corner of the road at Bwlch-y-gwyddel (Irishman's Gap), some of the striations run east and west, as if part of the radiating mass turned down Nant-y-gwyrd, where the grooves run about E.N.E. towards Capel Curig. On the Snowdon side of the brook that runs from Gorphwysfa to Nant Gwynant, they strike E. and S.E. with the run of that branch valley; but on a lower level, at the mouth of Cwm-dyli on both sides of the waterfall, they run nearly due east over the top of the cliffy ground, showing that a glacier once passed through this opening into Nant Gwynant. Further south, opposite Gwastad Agnes (Agnes' Plain or Flat), and on the northern part of the ridge of Gallt-y-wenallt (White Hill, literally 'White Hill-hill'), the grooves on the rounded rocks strike S.E. and S.S.E., and finally curving round to the S. and S.W. they strike fairly down the valley on the western side of Llyn Gwynant, and right across the mouth of Cwm-y-Llan.

"The meaning of the direction of the striæ at the mouth of the Cwm-dyli is this:—A glacier, about three miles in length, flowed eastward from below the peak of Snowdon, through the valley of Llyn Llydaw and Cwm-dyli, and united with a stream of ice, that, when the glaciers of Wales were at their largest, descended from the direction of the top of the pass of Llanberis and Pen-y-gwryd, where the ice was then of very great thickness, representing the accumulated snow drainage of a large part of the broad mountain slopes that lie between the eastern peak of Crib-goch and the southern side of Y Glyder-fawr. I consider that the result of this was to produce a mass of ice not less than 500 feet thick, just above the present watershed at Gorphwysfa, for without this I cannot account for the longitudinal glacier striations running *along* the sides of the Pass of Llanberis 1300 feet above its bottom. If this hypothesis be correct, then it follows that in the opposite direction the mass flowed down towards Nant Gwynant, being so thick at Gorphwysfa, that its surface was higher than the broken ground between Llyn Teyrn (*Teyrn*, a tyrant or supreme ruler. *Llyn Teyrn*, 'King's Pool'), and the upper part of the Llyn Gwynant. On this ridge, overlooking the bottom of Cwm-dyli by the waterfall, the striations strike south-easterly, as if the greater glacier had quite overridden the mouth of this valley on its northern side, while on the opposite side the striæ indicate that the tributary glacier filled Cwm Elydaw so high, that it overflowed its southern bank on Gallt-y-wenallt, where the ice rolled over the ridge south-easterly, and then curved round to the south, to swell the great glacier of Nant Gwynant. Whether under these circumstances, in the depths of Cwm-dyli by the waterfall, an undercurrent of ice might have flowed easterly beneath the great mass that covered the mountain, I cannot determine; but it is needless to have recourse to it, since the striæ by the waterfall might subsequently have been produced by a diminished glacier, that in the latter days of the ice flowed through Cwm-dyli.

"By the waterfall of Cwm-dyli there are symptoms of a small terminal moraine, and further up all through the valley there are numerous moraine mounds, sometimes running up the valley in rude lines, some of the blocks on which are 10 or 12 yards in diameter. Half a mile further, north-west of Llyn Teyrn, the rocks have been polished by ice, and the great bosses of greenstone, that rise in the midst of the valley like the hill behind the Grimsel Hotel, are nothing but huge *roches moutonnées*, dotted with felspathic blocks resting on their sides and summits. When largest, the glacier overflowed these (just as in old times the Aar glacier overflowed the hill behind the Hotel of the Grimsel), but as it declined, there are signs that seem to indicate that it branched and wound between the islands of greenstone rock, and, decreasing still further, deposited its moraines in lines, where separate tongues of ice protruded from among them.

"Approaching Llyn Llydaw, the full grandeur of this wonderful valley bursts on the beholder. A lake rather more than a mile in length and of a green colour (about 1800 feet above the sea), like some of the lakes of Switzerland, obliquely crosses the valley. Around it rise the cliffs of Lliwedd, Crib-goch, and Pen Wyddfa, seamed with veins of white quartz that gleam like streaks of snow on the tall black rocks circling the vast amphitheatre, the scarred sides and ragged outlines of which, sharply defined against the sky, may well seem, till attempted, hopelessly inaccessible to the unpractised climber. In every season and phase of weather, there is a charm in this valley to the lover of the mountains. In quiet sunshine, when the rocks, and perhaps a lazy ferry-boat, are reflected in the still water; or while the wanderer scales the crags amid seething with mists; or when the pitiless rain, or hail, or snow, comes driving down the valley; but best of all, in a threatening evening, when the gathered clouds, like the roof of a vast cavern, hang heavily from side to side on the edges of hills; and a streak of light caught from the setting sun shows redly behind the dim peak of Snowdon, grimly reflected in the sombre waters of the lake.

"The signs of a glacier are so evident in Cwm Llydaw that it is needless to describe all the details. At the outflow of the lake there are moraine-like mounds, formed of earthy matter, stones, and angular and subangular blocks, which even now partly dam up the lake, and when I first knew it, raised it to a still higher level, ere the channel of the brook was sacrilegiously deepened to lower the water, for the sake of saving a few pounds in the construction of an ugly causeway. Close to the outflow, the once beautiful little islets of rock, feathered with Heath and Grasses, are now united to the mainland, and a broad ugly black rim round the lake marks alike the extent of the drainage, and the barbarism of the perpetrators of this unhappy outrage on the most beautiful scene in North Wales."

BOOKS RECEIVED.—*Boissier, Diagnoses Plantarum novarum*, Nos. 4 and 6 of the second series (No. 5 appeared some time since), completing the third volume.—*Ure's Dictionary of Arts, Manufactures, and Mines*, Part IX., containing among other matters, articles on Iron, Lamps, Lead, Leather, Lens, Linen, Lucifer matches.—*Moore's Floral Magazine, No.* 3, contains figures of the Volunteer Auricula, Rhododendron Lobbianum, a fine yellow kind, much like R. Brookeanum; two hybrid Tydæas, and a crimson Camellia of a singularly brilliant rich colour.—*Routledge's Illustrated Natural History*, Part XVII, commences a second volume, and contains the history of vultures and eagles.

Garden Memoranda.

ROYAL NURSERY, SLOUGH.—All who are in the habit of visiting our great exhibitions have frequent opportunities of admiring the produce of this nursery in the shape of magnificent specimen Pelargoniums; but compared with the masses of plants, all in the highest degree interesting to lovers of gardens, which may from time to time be seen in bloom here, these form but a small portion of the contents of an establishment, now justly celebrated for its collection of florists' flowers. Among the more modern kinds of Pelargoniums remarkable for their beauty, Lord Clyde, scarlet; Ariel, Bridesmaid, Desdemona, and Prince of Prussia, fine whites; Angelina, light coloured; Leviathan, purple; Czar, dark; Prince of Wales, the same; Eastern Beauty, rose with black spot; and Lady Canning, rose, were still in fine bloom, and conspicuous showy varieties. Osiris, Peacock, and Picnic are exquisitely spotted kinds. Among older sorts, Viola, Sanspareil, Symmetry, Etna, Empress Eugenie, Monarch, Jessica, Sir Colin Campbell, the Belle, Carlos, Festus, and Candidate were particularly fine, very varied in colour, large, and effective. Fancy varieties were equally well flowered and interesting. Among these Captivator, Marchioness of Tweeddale, modestum, Beauty, Countess of Craven, Omega, Sarah Turner, Musjid, Arabella Goddard, Rosabella, Marionette, and Acme were of the most perfect forms, fine colours, and like most fancies, very free flowerers. The distinguished success which has long attended the growth of this class of plants at Slough leads many to imagine that that locality is peculiarly favourable to the operations of the cultivator; but this is a mistake. The secret, if any, lies in the unusual amount of skill and care bestowed on their cultivation. The houses in which they grow are light, dry, and well ventilated, and the plants are never overcrowded.

The last 10 days of bright weather have pushed forward bedding plants wonderfully. Calceolarias are now finely in bloom; the sorts used here are aurea floribunda, Prince of Orange, and Yellow Prince of Orange; these furnishing as they do three different shades of colour, varying from brown to pale yellow, make very effective masses. Bedding Geraniums are grown here in great variety, the object being not only present effect, but opportunities of testing the comparative merits of each kind. Attraction appeared to be by far the best dwarf scarlet; Punch, though good, is a very strong grower; Wonderful, with its beautiful horse-shoe foliage, is also very good. Among pink and rose kinds Christiana, M. Paul Lobbe, M. Martin, and Madame Chardine were excellent; Countess is a promising new kind of very dwarf habit. Variegated Geraniums now begin to make a fine display—Bijou, Alma, Julia, Annie, and Jane were the most effective of the old kinds, Flower of Spring, Reine d'Or, and Lord Althorp, are all favourite new varieties; the two last have golden variegations. Tropæolum elegans, Double Feverfew, Lobelias, and some dwarf Heliotropes formed pretty beds; Verbenas and the various kinds of bedding Dahlias come in at a later period.

Pinks are now at their best, and we have seldom seen them in better condition; all seem this season to be well laced, and above the average size—a good dressing of rotten manure and a little road sand are the only additions the natural soil has received, yet their growth has been most satisfactory. Propagation of the various kinds is now being pushed forward. The following are a few of the best, viz.:—Charles Turner, dark purple; Eleanor, rose; Beautiful, reddish purple; Annie, red, extra fine; Bonny Jean, red; Clara, red; James Hogg, dark; John Ball, dark; Mrs. Turner, rosy purple; Winsome, reddish purple; Mrs. Norman, rosy purple; and Miss Nightingale, red.

Of Verbenas those in pots were the only ones well in flower. The following are the names of a few kinds excellent for cutting from, but we reserve our opinion of them as bedders:—Apollo, blush; Conqueror, crimson; Diadem, scarlet, large; Dr. Sankey, puce, lemon eye, very large and fine; Electra, bright scarlet, white eye; Mrs. Moore, blue, clear white eye; Nestor, dark purple, white eye; Star, deep rosy crimson, large lemon eye; and Garibaldi, light blue, white eye.

Roses are grown here extensively. They are clean and vigorous, and produce very fine large flowers; both soil and climate seem to suit them admirably. The only ones destroyed here during the late severe winter were varieties on the Manetti stock, and such as were very tender, Those on Briars escaped.

Although not in bloom Chinese Azaleas deserve a word or two. They are for the most part large fine plants in robust health, and perfect in form. They have only to be seen to be admired. A very large stock of Carnations and Picotees is grown here, chiefly in pots; all promise to be finely in bloom about the last week of this month. Dahlias occupy a large amount of ground; they are late, but are encouraged to hasten their blooming season by stirring the soil about the roots, and syringing the plants over head in the latter part of the day. Phloxes, a class of late-flowering plants of great beauty, are grown in great variety, and together with Hollyhocks will be well worth inspection early next month. Fuchsias are now fully in bloom, and produce a fine effect; among these little improvement has taken place lately, some kinds with white corollas excepted. Achimenes and Gloxinias fill a long house, and are flowering in great profusion. We also noticed a pit full of the popular Dianthus Heddewigii, one of the most showy plants of recent introduction.

Out of doors were some fine coniferous plants; Abies Nordmanniana, Wellingtonia gigantea, Cupressus Lawsoniana, and Thuja gigantea each occupy large quarters and are growing luxuriantly; as are also other hardy and popular kinds. Fruit trees, of which there are several acres in all stages, were also particularly clean and healthy, the late heavy rains having kept insects and blight greatly in check. Nor are culinary products here neglected; we observed a large quarter of Peas put out for trial. These consisted of kinds raised by Dr. Maclean of Colchester; among them one appeared to be very dwarf, early, and prolific, and to possess qualities similar to that of the best late Marrows. Several of them have been sent to the Garden of the Horticultural Society for trial, and will doubtless soon be reported on.

Among Strawberries, by far the best ripe on the occasion of our visit was Oscar. This has fruit of large size, and is evidently a heavy cropper and a great favourite. Sir Charles Napier, Prince of Wales, Wonderful, Omar Pasha, Filbert Pine, Carolina superba, and Crimson Queen (the latter very large), had not begun to ripen. The Crimson Queen has the good property of coming in after most other sorts are over; it is therefore valuable for its lateness.

Miscellaneous.

Canada.—We find the following in Dr. Leifchild's address to the Horticultural and Electoral Division Society of Kingston (Canada):—It has been recently remarked by the President of the Board of Agriculture that every agriculturist ought to some extent to be a horticulturist. Indeed, there can be no doubt if agriculturists would but devote more of their time and attention to horticulture they would materially advance their own interests and add to the value of their properties. Happily in this "Canada of ours" the farmer is generally the proprietor of the land he cultivates. The trees upon his farm are no unimportant items in the value of his property. It is important for him to plant in a suitable situation his orchard of fruit trees, his clump of sugar Maples, and his bushes of Currants, Gooseberries, Raspberries; and it is pleasant to see the lowliest shanty as well as the most substantial farm house planted and decorated with shade trees, and fruit trees, and shrubs, and flowers. In the early settlement of a country the farmer's attention is necessarily directed to clearing his land, to building a hut for his family and shelter for his cattle, to raising his crops, and to battling with the stern realities of life. As time progresses he finds himself in a more favourable position, and as by the Canadian system of common school education the children of the farmer will be taught to appreciate and enjoy more elevating influences, so we may reasonably hope that the rough shanties and denuded homesteads will give place to trim-built comfortable cottages and

farm-houses, with gardens, shrubberies, and orchards. Canada is now in this transition state, and to aid the agriculturist in his effort of improvement Parliament has legislated, and the state has confided to societies, such as our own Electoral Division Society, funds for encouraging improvements; and it will behove the committee to see that the funds so delegated, together with the subscriptions of the members, are properly applied.

Duration of the Chrysalis Stage of the Butterfly, &c.—The duration of the chrysalis stage, like that of the egg, is extremely variable, and dependent on difference of temperature. As an instance of this, one of our common butterflies has been known to pass only seven or eight days in the chrysalis state; this would be in the heat of summer. Then, in the spring, the change occupies a fortnight; but when the caterpillar enters the chrysalis state in the autumn, the butterfly does not make its appearance till the following spring. Furthermore, it has been proved by experiment, that if the condition of perpetual winter be kept up by keeping the chrysalis in an icehouse, its development may be retarded for two or three years beyond its proper time; while, on the other hand, if in the middle of winter the chrysalis be removed to a hothouse, the enclosed butterfly, mistaking the vivifying warmth for returning summer, makes its *début* in 10 days or a fortnight. The compound eye of a butterfly, wonderful as its structure is, does not greatly differ from that of many other insects, being like them composed of an immense number of little lenses set together to form a hemisphere large in comparison with the insect's head. A portion of one of these eyes forms a pretty and interesting object for the microscope, presenting a honey-comb appearance, the hexagonal lines that mark the division of the lenses being most beautifully geometrical and regular in their arrangement. More than 1700 of these lenses have been counted in a single eye, and each of these is considered to possess the qualities of a complete and independent eye. If this be true, the butterfly may be said to be endowed with at least 34,000 eyes. *British Butterflies, by W. S. Coleman.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &C.—See that sickly or badly-rooted specimens, if any, are kept free from red spider; also that young stock is not allowed to suffer from want of pot room, and during bright weather attend carefully to watering, giving weak liquid manure to all plants in free growth that are likely to be benefited by it. Such stove plants as may have been removed to this house while in bloom should be replaced in heat as soon as their beauty is over, in order to permit their young wood to get ripened before short days set in. Orchids must be carefully shaded during sunny days, but when the weather is at all cloudy allow them as much light as they will bear without injury. Keep the foliage clear of insects and dust by frequent syringings or spongings, as may be necessary.

FORCING DEPARTMENT.

PINERIES.—Air should now be given liberally to young stock in dung pits, in order to secure robust growth. The plants should not, however, be exposed to drying winds by giving back and front air liberally on drying days, for this would not serve the end in view; but a moderate circulation should be secured at night, giving no more during the day than may be necessary to prevent the temperature getting too high. This, with careful attention to the state of the roots, keeping the bottom heat regular, the soil in a nice healthy state as to moisture, and giving a liberal supply of manure water to such as are well rooted, will be found much more conducive to strong stocky growth than exposing the plants too freely to hot drying winds, which would probably check and throw them into fruit prematurely. Use every means to afford plants swelling their fruit a thoroughly moist atmosphere, sprinkling passages, &c., frequently, and shutting up early on the afternoons of bright days, giving a gentle dewing with the syringe, and saturating the atmosphere by sprinkling every available surface; also give these plenty of clear strong manure water at the root until the fruit begins to change colour, when the soil should be kept rather dry, which will improve the flavour.

VINERIES.—Attend to former directions as to thinning the fruit in houses intended to furnish a late supply, and see that the bunches are severely thinned, and also that the crop left is not too heavy in proportion to the strength of the Vines. Where the fruit is swelling, be careful to maintain a moist state of the atmosphere, and give every possible attention to the roots, keeping the border in a healthy state as to moisture, and if watering is found necessary, use good strong manure water. Give abundance of air where the fruit is colouring, and do not allow plants in pots to remain in the house to cause damp, which, despite every care in ventilating, is apt to settle on the berries and spoil the bloom. Where the fruit is ripe and expected to hang for some time, the atmosphere of the house should be kept as cool as possible; but a little fire heat will probably be necessary occasionally in order to keep the atmosphere dry.

FLOWER GARDEN AND SHRUBBERIES.

Trimming, staking, and pegging down must be well followed up at this period where neatness and order are essential. See that sufficiently strong stakes are applied to plants with heavy foliage and gross habits, such as Dahlias, Hollyhocks, Larkspurs, Phloxes, and tall growing Asters. Keep Roses as much as possible free from insects, and if time can be spared dead blooms should be removed. Budding may soon be proceeded with. Let Carnations and Picotees be layered; they make exceedingly useful border flowers. See therefore that plenty of them are secured for next season.

HARDY FRUIT AND KITCHEN GARDEN.

Attend to previous directions in regard to the thinning and stopping the young shoots of all trained fruit trees, and now make the final thinning of Peaches and Nectarines, of course leaving the heaviest crop on the most vigorous trees and strongest branches. As a general rule, no two fruit should be left together. Plums of the large kinds, as well as the finer sorts of Pears, should also be thinned if the crop is too heavy. Young Peach and Apricot trees, when making over-vigorous leaders, should have the points of the branches shortened, to encourage them to make other shoots less vigorous, and of a fruitful character; this will obviate the necessity of shortening them back at the winter pruning. Strawberries will require frequent waterings during dry weather should it happen to set in. Place netting over the plants, to protect them from birds, which will also be very beneficial in partially shading the fruit from the midday sun. Layer the runners intended for pot culture, as well as those required for making new plantations. All spare runners may be cut away, and keep the plants free from weeds. Thin and stop shoots of Figs as soon as they have made a growth of about 6 inches, and remove all useless growth from Vines. Keep the fruit close to the wall, and shaded by the foliage from the sun. Tomatoes must be regularly attended to, keeping the shoots thin and stopping them above a cluster of fruit. Shallots if left in the ground after they are ripe are apt to mildew; they should therefore be taken up as soon as the tops begin to decay, and spread out in an airy place to dry, before storing. Herbs in flower should be cut and dried for winter use. They can either be hung up in bags to keep them clean or rubbed out and bottled. Where a sufficient breath of Celery is not yet planted out this must be attended to as speedily as possible. Earth up former plantings and encourage rapid growth by means of occasional waterings with liquid manure.

COTTAGERS' GARDEN.

Plant early Ulm Savoy and other winter greens on spare ground. The Savoys may be allowed to stand a foot apart each way. A little Spinach to stand the winter may also soon be put in.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending July 12, 1860, as observed at the Horticultural Gardens.

July.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain.
Friday 6	17	30.169	30.113	69	39	54.0	62	59	N.E.	.00
Satur. 7	18	30.269	30.194	69	36	52.5	61	58½	N.E.	.00
Sunday 8	19	30.214	30.110	71	49	60.0	60½	58	N.E.	.00
Mon. 9	20	30.141	29.993	70	48	59.0	59½	58	E.	.00
Tues. 10	21	30.029	29.951	65	49	57.0	60	58	E.	.00
Wed. 11	0	29.985	29.930	73	44	58.5	60	58	E.	.00
Thurs. 12	23	29.972	29.883	74	41	57.5	60	58	E.	.00
Average..		30.111	30.025	70.1	43.7	56.9	60.4	58.2		.00

July 6—Overcast; cloudy and fine; clear at night.
— 7—Fine; very fine; clear and cold.
— 8—Overcast; very fine; overcast at night.
— 9—Overcast; fine; overcast, with cold wind.
— 10—Overcast; fine; cloudy.
— 11—Cloudy; hazy; overcast; cold at night.
— 12—Hazy; very fine; slightly overcast.
Mean temperature of the week, 6 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending July 21, 1860.

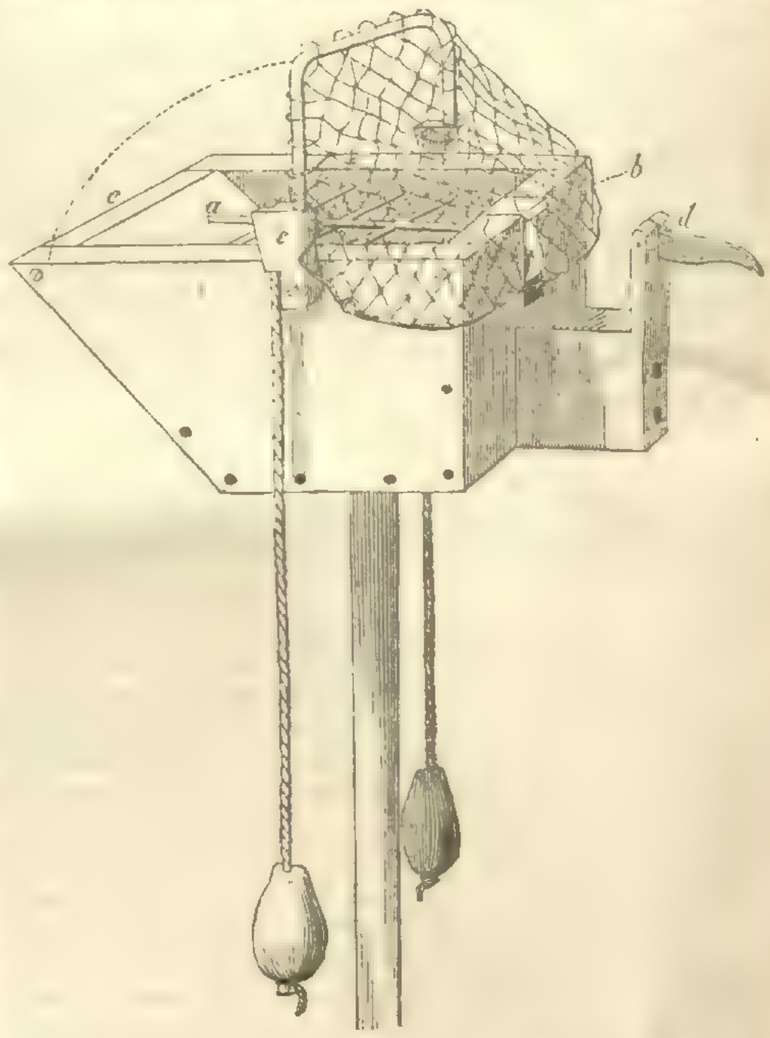
July.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 15..	76.1	50.5	63.3	17	1.46 in.	1	3	3	1	4	16	5	1
Mon. 16..	76.7	50.6	63.6	13	1.60	2	3	3	—	2	16	7	1
Tues. 17..	76.1	52.3	64.1	12	0.56	2	—	2	2	4	14	7	3
Wed. 18..	74.8	51.2	63.0	17	1.22	—	—	1	—	5	16	8	4
Thurs. 19..	72.9	51.1	62.0	19	0.60	2	1	1	1	7	12	8	2
Friday 20..	72.3	51.3	61.8	20	0.72	1	1	3	—	1	16	10	2
Satur. 21..	73.3	51.1	62.2	14	0.54	2	—	2	1	3	12	10	4

The highest temperature during the above period occurred on the 15th, 1859—therm. 91 deg.; and the lowest on the 18th, 1851—therm. 39 deg.

Notices to Correspondents.

ANTS: *R G G.* Put guano in their runs, or strew over them rags dipped in oil of turpentine.

BIRD TRAP: Some inquirers about the most ready means of trapping small birds will find the following plan, invented by the late Mr. Andrew Knight, as effectual as any. We reproduce it from our volume for 1841, p. 409, with Mr. Knight's description:—"I enclose in the Titmouse trap which I promised to send you the following directions how to use it:—Two weights (I use pieces of stone), each of about 3 lbs., are to be slung in the strings, which cause the net to be thrown over the bird when that touches the bait or toiler. I bait in the summer with an open pod of Peas, fixed as you will find one in the trap you receive; and in the winter I put some Oats into the box, which the Titmice soon find; but I do not set the traps to catch till many birds have been attracted by the Oats. Two kinds only of Titmice, Parus major and P. cæruleus, ever break the pods of Peas, and I therefore never kill any others. I never suffer the traps to remain set at night, nor when I, or the gardener, cannot attend to them; because I do not like the poor birds to suffer a lingering death (they will not, however, generally live more than two hours); but Robins will often be caught and when they are entangled in a net the Titmice will kill and eat them. One cause of the abundant number of this species, or rather these species, for the remark applies only to two, is, that in cold seasons, when the small birds become weak through want of food, these attack and destroy them, inflicting I fear, great torment upon their victims: they have therefore but little claim to compassion. The trap is usually fixed to stand upon the kind of spike enclosed in the box, and that spike is usually fixed in the top of a stake. It is, I think, totally impossible, without efficient traps of some kind, to save a crop of Peas of my large late varieties in any country garden, where other gardens, to divide the attention of the Titmice, do not exist. I killed in the last summer and winter more than four hundred Titmice in and around my garden, and I think they are rather less abundant than they were; but I doubt whether the preservation of my late crops of Peas will not cost a hundred victims. The trap, when



properly set, never fails to take." The accompanying cut represents this trap in the act of springing up. It consists of a wooden box open on the upper side, and placed upon a staff about 3 feet high. A strong wire is carried across it from *e*, and is so contrived as to move freely from *b* to *c*; to one side of this wire is attached a net which is secured on the other side to the back of the box. Connected with the ends of the wire is a piece of line to which weights are attached (brickbats or stones do very well); the object of these is to pull the wire forward to the front of the trap the moment it is sprung, and so to enclose the bird in the net. When set, the wire is drawn back to the space between *b* and *d*; the catch *d* is turned over the edge of the wire and applied to a notch in a moveable block at *b*; the block communicates with the tiller *a*, on which the bait is placed; the pressure upwards of the wire upon the catch, in consequence of the weight of the stones attached to it, keeps it firmly applied to the notch *b* until the tiller is disturbed; but the moment a bird touches the point *a*, the apparatus is disarranged, *b* and *d* separate, and the wire is instantly brought over to *c*, in the direction of the dotted line, thus taking the bird prisoner.

CINERARIAS: *M M G.* Your flower head is not double, but proliferous; exactly like what men call the Hen and Chickens Daisy.

CRICKETS: *Sub.* Trap them by means of wide mouthed pickle bottles baited with a little treacle and water; the bottles being so sunk or placed that the crickets can get into them. Penny's paste has also been used for destroying them with complete success. See p. 154 of our volume for 1856. ‡

DISEASED HAWTHORN: *W H C.* Your tree is attacked by the Fungus called Æcidium laceratum, the cause of whose appearance is unknown. Cut off all the diseased twigs and *burn* them immediately. The pest *may* spread to your Apples, Pears, and Medlars.

DISEASED ROSE LEAVES: *X Y Z, Coventry.* These are nearly dead on the upper but alive on the lower surface. They look as if they had been unskilfully sulphured in order to kill Red Spider.

DOUBLE LARKSPURS: *F L.* Yes. All the race has a great tendency to become double.

GRAPES: *A G.* A badly ventilated house is bad, but will not of itself cause shanking. Your cold border has done the mischief. Possibly it would not have occurred had the heat of the house by day been less; but the low temperature and probably wetness of the soil in which the roots lie is the main cause. Look at the roots and see if they are not half dead.

JAPANESE BAMBOO: *L H W.* Most certainly your inquiry has never reached us. The plant is perfectly hardy, and may be had of the great nurserymen under the name of Bambusa Metaki, or some such queer title, describing it at the same time.

NAMES OF PLANTS: *P Y G.* 1, Valeriana dioica; 2, Platanthera bifolia, the Butterfly Orchis.—*G G.* Saxifraga cotyledon and Nepeta Mussini.—*H C D.* 1, Sedum Forsterianum; 2, a form of Saxifraga Aizoon; 3, Rhodiola rosea; 4, fragments of some Valerian, quite indeterminable.—*Heron.* Sedum Aizoon and Forsterianum; Oxyura chrysanthemoides. *Henry.* Rhus Cotinus.—*B W S.* Anacharis alsinastrum, the formidable new water weed.—*G W.* We do not know, but will inquire and reply next week.

NORMANDY PIPPINS: *Leicester.* There must be some secret. Two inquiries have failed. A third is in progress with we hope a better result. The subject will not sleep.

OLD DOUBLE YELLOW ROSE: A letter for *J G B* is lying at our office.

SPECIMENS OF WOOD: *F S.* We should be surprised to learn that any nurseryman would allow you to "cross-cut" his trees in order to furnish yourself with Cabinet specimens of wood. You should apply to the country timber merchants.

STRAWBERRIES: *J C.* By no means destroy your Strawberry plants, which have made most vigorous growth but no fruit. The rains and cold nights have prevented the flowers setting; you had better wait patiently till next year.

VINE MILDEW: *W T.* Thoroughly cover the parts affected with flowers of sulphur; before doing so, however, they should be wetted, in order to make the sulphur adhere to them.

WOODLICE: *G R.* Trap them by means of flower pots laid on their sides baited with a cold boiled Potato covered with dry Moss. A toad or two put into your frames will also tend to thin their numbers, as will also watering round the sides inside with boiling water. In the latter case, however, care must be taken not to injure the plants. ‡

MISC.: *W W S* The *Gardeners' Chronicle* was commenced in January 1841.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.
The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemica Analyses and Assaying, will find ample facility and accommodation at the College.

LAND DRAINAGE.
WORKS OF DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.
Repayment may be made by the Landowner as successive portions of the works are completed; or the actual expenditure, with a commission thereon, may be charged on the property improved, by way of rentcharge on the estate created for various terms of years so as to adapt the rate per cent. of annual charge to the circumstances of the tenants.
No investigation of title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.
Works of Irrigation, Enclosing, Wood Grubbing, Road Making, and Farm Buildings are executed in a similar manner.
Landowners desirous to execute any of the Improvements by their own Agents, and charge the outlay and expenses on the Estate, may obtain Loans for the purpose.
Applications to be made to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W.

ROYAL AGRICULTURAL SOCIETY OF IRELAND.—PROGRAMME OF THE NATIONAL CATTLE SHOW, AND EXHIBITION OF STOCK, HORSES, SHEEP, SWINE, POULTRY, DAIRY PRODUCE, FLAX, IMPLEMENTS, &c., open for General Competition, to be held at CORK on WEDNESDAY, THURSDAY, and FRIDAY, July 25, 26, and 27.
His Excellency the LORD LIEUTENANT has signified his intention to attend the Show.
Implements will be received into the Show Yard upon Thursday, July 19, and until Monday, the 23d, on each day from 8 o'clock in the morning until 8 o'clock in the evening.
The Judges appointed to inspect the Implements entered to compete for *The Farmers' Gazette* Challenge Cup will commence their examination on Tuesday, July 24, at 10 A.M., and resume the following morning at 6 o'clock, when Exhibitors must be in attendance.
The Show Yard will be open for receiving Cattle and other articles entered (except Horses) from Monday morning until 6 o'clock on Tuesday evening, July 24, after which latter hour no Stock will be admitted.
Special Meetings of the Council will be held on Wednesday and Thursday, each day at 2 o'clock P.M., in the Secretary's Office, Show Yard.
The Members of the Society, Stewards, Judges, &c., will dine together on Tuesday, at 7 o'clock P.M. Names to be sent in to the Local Secretaries, of whom Tickets can be had before 12 o'clock noon.
WEDNESDAY, JULY 25.
The Judges will enter the Show Yard at 6 o'clock A.M., and commence their examination of the Stock, &c.
Horses will be received into the Show Yard from 6 until 8 o'clock A.M., after which latter hour none will be admitted.
The Implement Yard will be open to the Public at 9 o'clock A.M., and the general Show Yard from 2 o'clock until 7 o'clock P.M. Admission, 2s. 6d.; children under 14 years of age, half price.
Tickets for Admission will be issued at the Gate, available for the day, to Exhibitors of Stock and Agricultural Produce, for 2s. on Wednesday, and 1s. on Thursday.
The BANQUET DINNER of the Society will take place at the Corn Exchange, at half-past 6 o'clock P.M. Tickets 10s. each, including wine, to be had of the Local Secretaries, at their Office in the Show Yard.
THURSDAY, JULY 26.
The General Show Yard open to the public from 9 o'clock in the morning until 7 o'clock in the evening. Admission 1s.
FRIDAY, JULY 27.
Trial of Implements at Blarney, where Fowler's Steam Plough and Smith's Steam Cultivator can be seen, with Reapers, Mowers, &c., in full operation.
The General Show Yard open to the Public at 9 o'clock A.M. Admission 6d. An Auction in the Show Yard at 12 o'clock noon.
Nothing exhibited can be removed from the Yard till after 6 o'clock P.M.
A Ball and Supper at the Athenæum. Tickets: Ladies', 10s.; Gentlemen's, 12s. 6d. each; Family Tickets to admit three, 1l. 10s; four, 2l.
Director of the Show Yard—THOMAS R. HARDY, Esq.
The following favourable arrangements have been made with the respective Railway and Steamboat Companies for the conveyance of Stock, &c., to the Show:—
On the Great Southern and Western Line, Live Stock (except Entire Horses and Poultry) free to the Show, and any unsold returned free. Entire Horses charged to the Show, and any unsold returned free. Implements charged to the Show, any unsold returned free.
The Limerick and Waterford Line, Live Stock (except Entire Horses and Poultry) free to the Show, and any unsold returned free. Entire Horses charged to the Show, and any unsold returned free. Implements charged to the Show, and any unsold returned free.
The Cork Steam Ship Company will convey Stock and Implements from Liverpool, London, Bristol, Plymouth, and South Wales, free to and from the Show, except those sold, which will be subject to freight.
The Cork and Milford Steam Packet Company will convey Stock and Implements to and from the Show free.
The Cork and Glasgow Steam Ship Company will convey Stock and Implements to and from the Show free.
All Stock and Implements reshipped for free transit must be the property of those in whose names they were exhibited, otherwise they will be subject to the usual freight.
By Order, J. B. THORNHILL, Secretary.
Society's Rooms, 42, Upper Sackville Street, Dublin.—July 14.

CHEAPEST AND BEST.
JUPP'S NEW HORSE AND CATTLE FOOD, 35s. per cwt., 19s. per ½ cwt., 10s. per ¼ cwt., in 1 cwt. barrels for shipment, 40s. per cwt., delivered carriage free to any Railway Station or Port in the United Kingdom. Analysed by Dr. Letheby, and containing upwards of 80 per cent. of pure and concentrated food. Cash, or a London reference required from unknown correspondents. Agents wanted in large towns.
W. & R. JUPP & Co., 6, Cross Lane, Eastcheap, E.C.

Copy of Testimonial from S. S. ALFORD, Esq.
"25, Haverstock Hill, N.W., June 22, 1860.
"DEAR SIR,—Your Food for Horses, mixed occasionally with the ordinary food, suits my horse; it gives him vigour, acts on the kidneys, assists his digestion, improves his coat, and satisfies him. Less food is required, and no bran or Beans while taking it. Please send me some more.—Yours faithfully,
"Messrs. W. & R. Jupp & Co. "STEPHEN S. ALFORD."

TO PIG, POULTRY, AND GAME FEEDERS.
JUPP'S RICE FOOD FOR POULTRY AND GAME.—RICE SWEEPINGS, 8s. 6d. per cwt., in 1½ cwt. bags; SCREENED RICE, 12s. per cwt., in 1¾ cwt. bags; DOG BISCUITS, 14s. per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6s. 6d. and 8s. 6d. per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

PURE-BRED SHORT-HORNS FOR SALE BY PRIVATE CONTRACT. ONE COW AND EIGHT CHOICE HEIFERS.
1. JESSONDA, Roan, Calved April 28th, 1855. See Herd Book, Vol. 13, p. 511.
2. VIXEN, White, Calved Sept. 2d, 1857, got by Sir Thomas (13,749), dam Victoria, &c. Herd Book, Vol. 12, p. 647.
3. WITCH, Roan, Calved March 24th, 1858, got by Usurer (9763), dam Wild Eyes, &c. Herd Book, Vol. 13, p. 782.
4. CONSTANCY, Roan, Calved March 26th, 1858, got by Cicero (14,276), dam Changeling by Royal Hart (10,753), Crescent by Brownlow (9997). Herd Book, Vol. 9, p. 314.
5. MARMOSET, White, Calved May 16th, 1858, got by Usurer (9763), dam Milkmaid by the Yeoman (12,220), &c.
6. LOVEBIRD, Rich Roan, Calved Oct. 18th, 1858, got by Camphine (14,225), dam Foundling, &c. Herd Book, Vol. 11, p. 461.
7. POMONA, Red, Calved Dec. 4th, 1858, got by Usurer (9763), dam Cecilia, &c. Herd Book, Vol. 13, p. 371.
8. LADY STANHOPE, Roan, Calved May 8th, 1859, got by Lord Thoresby, dam Lady Stanhope by Earl Stanhope (5966), &c.
9. ROSALBA, Red and White, Calved May 30th, 1859, got by Roseberry (15,183), dam Rosette by Masterman Danby (14,931), &c.
The above have been bulled as far as No. 5, by Sir Colin (16,955), and Pioneer (16,698).
For price and particulars apply to WILLOUGHBY WOOD, Esq., Holly Bank, Burton-on-Trent, where the Stock may be seen.

TWO thorough-bred ALDERNEY COWS for Sale, in calf with their second and third calves. To be seen at Bulphan Rectory, near Brentwood, Essex.—Apply to the Groom.

KERRY CATTLE.—Bulls, Cows, and Heifers, of the purest blood and most fashionable colour, can be supplied and delivered at Cork by the Owner and Breeder, RICHARD G. CAMPION, Esq., Holly Hill, Rathcormac, Co. Cork.

The Agricultural Gazette.

SATURDAY, JULY 14, 1860.

THE CANTERBURY MEETING has unquestionably been a failure, if success be measured by the numbers present at it. It must be pronounced a failure if the magnitude and value of the show of implements be allowed to determine for us. Some classes of the live stock, too, have been decidedly below the usual standard of excellence. A very poor collection in the horse classes and nothing very remarkable in the pig classes has been exhibited. For the rest, we have had one of the best shows that were ever gathered of the three leading classes of cattle—Short-horns, Herefords, and Devons—and a splendid exhibition in many of the classes of sheep.

The success or failure of these annual gatherings cannot however be measured in this way. It depends mainly on the influence which they have exerted in the several localities visited, and can only be *estimated*, until the lapse of years shall have shown results. Certainly the Canterbury meeting thus considered ought to prove as successful as any of its predecessors. It is held in a county whose special cultivation—that of Hops—seems over a large part of its surface to have engaged the whole attention of its cultivators, so that little has been left for the maintenance of good management, excepting in the Hop grounds; certainly poorer crops of Wheat and Barley, Oats and Beans, were never seen than thousands have this week looked at from the South-Eastern Railway between Tunbridge and Ashford. It is held too where local terms and local usages indicate the strength of local prejudice, and the influence of isolation. We have this week seen the "nidget" by which the wonderful cultivation of the Hop gardens is effected; and we find our ordinary drill horse-hoes are generally its superior. We have seen the far-famed Kentish turn-wrest plough too—and a completer failure than its work—on land of considerable difficulty, no doubt, but chosen for it we presume by the Local Committee who know its capabilities—was never witnessed. The Kentish breed of sheep too has been courageously exhibited alongside of our Cotswolds; and Romney Marsh will doubtless benefit in the future by the introduction to Gloucestershire and Oxfordshire, which the national Agricultural Society has thus afforded it. Herein will lie the success of the Canterbury meeting. The faith of local agriculturists in the force of local circumstances has probably been shaken by it, and they will be induced by what they have seen at Canterbury to try implements and stock whose superiority has been manifested. Sometimes the Society takes its members to localities which can teach them, and Lincoln is an example—sometimes to central positions, as to Warwick and Northampton, where they can meet to teach each other—sometimes, as to Canterbury, where their influence will help to break up local prejudice or stimulate the activity of the district. It is useful if efficient in any of these ways—most useful in the last. And the Canterbury meeting will, therefore, we do not doubt, prove to have been a great success.

The absence of our chief agricultural machine-makers has certainly, however, diminished one of the principal attractions of the exhibition. To say that the 10 or 12 leading firms who thus protest against the management of the English Society have hitherto exhibited nearly one-half the value of the implements annually shown does not by any means indicate the loss sustained by their absence, for it is the substantial and strictly agricultural half which is thus for the most part lost. They are the principal makers of ploughs and harrows and sowing machines, of steam engines and threshing machines and barn machinery who have thus seceded; and though we have implements of all these classes exhibited and at work, yet there is but a meagre collection of them compared with what there would have been. What sort of a competition in threshing machines for instance would there have been, had HORNSBY, and GARRETT, and SHUTTLEWORTH, and BARRETT, and RANSOME, and TUXFORD, sent the latest results of their ingenuity, and perseverance, and capital? Those exhibited may be good and sufficient implements, but everybody knows that the leading and most successful makers have not competed; and though the authorities of the Society affect to ignore their absence and betray no consciousness of the injury thus sustained, yet it would be folly in others, either agricultural students or agricultural customers (and all the spectators belong to one or other of these classes), not to lament it.

Here is the completest collection of skill and judgment and experience which the national society can bring together, and the most ingenious apparatus to determine power employed and work accomplished that has been yet devised for their assistance; and the whole is brought to bear on the inferior half—for so the general public will regard it—of the implements of agriculture! Infinite pains are taken to determine the exact relative position of *x*, *y*, and *z*; but *a*, *b*, and *c*, to whom every one naturally in the first place looks, do not present themselves for examination and comparison! The official report of this year's implement trials cannot honestly ignore this fact, however it may have suited the authorities hitherto to do so. In the meantime the deficiency is obvious enough to spectators in the yard, where the sheds are taken up with articles rather of domestic than of agricultural interest, and more pages of the catalogue are filled with flowerstands, and ornamental seats and tables, with garden implements, with stoves and troughs, with washing machines and petty sundries, than with the substantial implements of English cultivation.

In the trial fields perhaps the contrast with former years is not so obvious. We have a good show of mowing and reaping machines, and a good show of the implements of steam cultivation, notwithstanding the absence of all traction-engines and all rotary cultivators, as well as of the Woolston grubber. Both mowing and steam ploughing have been well illustrated. Better ploughing was never done than FOWLER'S engine accomplished under circumstances worse than where the Kentish four-horse turn-wrest plough completely failed. Better mowing was never done than WOOD'S mower and that of BURGESS & KEY exhibited in the Grass fields near the show-yard. Both steam cultivation and horse mowing are unquestionably accomplished facts in English agriculture, and will come into general use wherever there is capital enough employed upon the land. Many other implements of cultivation are also well illustrated—HANCOCK'S pulveriser plough, SNOWDEN'S paring plough, HOWARDS' two-furrow plough, did excellent work in the field; and FOWLER'S cultivator, his plough with the mould-boards off, did some admirable grubbing. Most of these implements are again referred to in other columns; and readers will also find elsewhere a reference made to the better performance of the Kentish

ploughmen on easier land, which was turned over in good style, presenting a great contrast in many cases to the entire and universal failure on the field first tried.

The greatest attraction at Canterbury undoubtedly was the show of cattle and sheep. The very large classes of Short-horn cattle, and of Leicester, and South Down, and Shropshire and other short-woolled sheep are not only of high average merit, but contain animals of extraordinary excellence. The bull exhibited by Colonel TOWNELEY, "Royal Butterfly," for which with two heifers its owner has refused 2000 guineas, certainly is a wonderfully fine animal — of extraordinary size for its age and of first-rate quality and perfect symmetry and beautiful colour. The heifers (twins!) exhibited by Captain GUNTER, and taking the first and second prizes in their class are marvels of beauty—first class specimens of the Duchess family, probably the best strain of Short-horn blood we have. The Herefords and Devons, present in considerable numbers considering their distance from home, are well illustrated; the former in their weight and early maturity, and the latter in the beauty of form and colour characteristic of the breed. Among other breeds exhibited was the little Brittany cow, about which so much more is now said than its real value deserves. The several classes both of cattle and horses are referred to in some detail elsewhere.

Of the sheep we shall only say here that Leicesters were shown from the flocks of Lieut.-Colonel INGE and Messrs. SANDAY, BORTON, SPENCER, WILEY, G. TURNER, CRESSWELL, and KINGDON, and that Mr. SANDAY has carried off all the prizes for rams and the first prize for shearling ewes; while in the South Down classes, JONAS WEBB has in like manner carried off all the prizes for rams; those for ewes, for which he did not compete, going to Messrs. HEASMAN, Lord WALSINGHAM, and the Duke of RICHMOND. Several high lettings from the Babraham flock were effected at the show—four or five of the rams exhibited being parted with for the year for 60 guineas each. We must refer to other columns for detailed descriptions of the other classes of sheep and pigs. There has been no lack of interest in the live stock classes of the Show, and the Society has been fortunate in falling upon the first fine fortnight of this extraordinary summer for its annual exhibition of them.

The main faults of the meeting have arisen out of absence of the leading agricultural implement makers, and the prejudices, as we suppose they must be called, of the local committee, which have hindered any direct competition of our common plough with those of local character. If to the same side we add an extremely dull and stupid "pavilion" dinner; and then consider on the other hand the great success of other departments of the exhibition and their ultimate influence on the somewhat old-fashioned agriculture of the district, we shall find a large balance of credit and advantage arising out of this the 22d annual gathering of our great national Agricultural Society.

THE GREAT AGRICULTURAL MEETING.

THE old and venerable town of Canterbury has this week been the scene of an excitement and mighty gathering of people, such as her time-worn walls have not witnessed since the almost forgotten time when the shrine of her murdered Archbishop attracted from all parts of Christendom crowds of pious pilgrims. This week has witnessed another pilgrimage to a shrine of a different sort, but which the stern necessities of modern civilisation have endowed with a character of almost religious earnestness and importance. The general character of the Kentish agriculture, as exhibited to the travellers of the past week, shows that if the Royal Agricultural Society of England might have selected a place more likely to benefit her finances or increase the *éclat* of her successful career, she could scarcely have alighted upon a more worthy stage whereon to exert her progressive influence, and bestow the benefit of her instructive examples. The counties where the Society had hitherto held her annual assizes have contributed to the Show all those points of local importance for which, from their peculiar circumstances of soil, climate, or markets, they are particularly renowned; and in almost every exhibition on record a liberal array of local prizes brought out in conspicuous relief their native points of excellence or celebrity. This indeed may be considered as one of the most interesting and useful features of the Society's exhibitions. We consider it therefore an important section of our task to examine those things which the county of Kent has contributed to the Canterbury Show, that our readers may form an estimate of the importance of that Show, so far as it relates to the benefits likely to accrue to the locality where it was held.

There are four things which the Society ought to expect from the local agriculture: 1st. Attendance of the people; 2d, Implements; 3d, Animals; 4th, Produce. As these points are noticed at length in the course of this report, we will merely say that in respect to the attendance of visitors, the Canterbury Show will be henceforth famous for their paucity, and the consequent loss this serious deficiency will cause to the Society. During the two first days, scarcely a man of Kent was to be seen; it was only on the third day, which was to witness the display of the alleged merits of their highly boasted native plough, that they swarmed into the show-yard with a right good earnestness, which went far to dispel the unpleasant impression caused by their previous absence. In the implement department the county of Kent has exhibited hardly more than the old Kentish plough, the boast of her agricultural skill. As to animals, all that the county could furnish was the Romney Marsh breed of sheep, of which we will content ourselves with saying that, like the Kentish plough, it may be possibly justified by the circumstances of the locality. The fourth point of local interest was one in which we are glad to say the county of Kent has at length an object of legitimate pride, in which it stands unrivalled. The production of Hops is indeed the staple production of Kentish agriculture, and this peculiarity leaving so little room for that variety of crops resulting from a more complicated system of rotation, the comparative exclusiveness of its cultivation may be assigned to a certain extent as the cause of that neglect in which the breeding of horses and cattle has fallen with the Kentish farmers.

With the exception of Hops then, and of these but a meagre show appeared, we regret to express the opinion that Kentish agriculture has been imperfectly represented. The citizens of the old city manifested every desire to do honour to the occasion, and although grumbling Englishmen might observe that the accommodation offered by no means corresponded with the price demanded, yet we must not forget that this is by no means an extraordinary incident of the Royal Agricultural Society's exhibitions. The decoration of the quaint old streets, the outward cleanliness everywhere perceptible, and above all the delightful promenade of Dane John, the old towers and gates, the feudal architecture of which is so suggestive of contrast when brought near to the essentially modern occasion that caused them to be decked again with flags and banners as of old, and lastly the grand old cathedral, that ancient history of England written on stones, standing amidst its ruined cloisters and abbey, its stirring memories and pious associations;—all these circumstances and the variety of local interest contributed to make Canterbury a centre of great attention to strangers. But as regards the agriculturists of Kent, we cannot say that they evinced any great anxiety to see what the other counties of England had brought down with great trouble and expense to excite their interest if not their admiration. Generally on the first day the cattle-yard is opened immediately after the award of the judges, the receipts from visitors amount to about 1100*l*. On Monday last very little more than 200*l*. was realised from the same source. On the Tuesday, although the attendance was vastly more numerous, yet it fell far short of what it has been in other places. The attendance on the Monday was only 1272 visitors; Tuesday, 5866; Wednesday, 20,879. If Thursday be assumed as equally productive, then the Show-yard receipts at Canterbury will have been about 300*l*. less than one-half what they were at Chester, and little more than half of what they were at Warwick.

But notwithstanding this falling off in the attendance, and the other shortcomings of the Kentish Show, such as the much reduced number of entries in the cattle and implement classes, the inferior stamp of the horse department, and the breaking down of the Kentish plough, it would be both an error of judgment and an injustice to conclude that the Canterbury Show was a failure. There are indeed to be noticed many valuable features which will rank it amongst the most successful as to results of progress if not of finance, that was ever held since the Society started into existence, and we have only to point out to the trials of mowing machines, which have at last determined in the first place that the problem of replacing the scythe by machinery is at last satisfactorily solved, and in an unmistakable manner indicated to the farmer which is the best and most efficient machine he must select for his practical use. Then there was the steam ploughing, which resulted again in firmly establishing Fowler's system in the proud and well-deserved position to which the former trials of Chester and Warwick had raised it. We may point out also to the exhibition of Short-horns, Herefords, and Southdown sheep, which in point of general excellence have never been surpassed it ever equalled. We may allude also to the final and decisive defeat of old routine and prejudice in its very stronghold by the utter breaking down of an old-fashioned implement, which had become, as it were, the very symbol and material expression of that obstinate clinging to traditionary usages and things which has even been the greatest obstacle to progress and civilisation in every interest of society, and particularly in agriculture. It is to be hoped that the powerful influence of this Exhibition—let its shortcomings be what they may—will be energetically exerted upon the rather backward *status* of the agriculture of the county of Kent, which, especially in the tract followed by the South-Eastern Railway, gives to wondering foreigners coming to admire our progress so disappointing an idea of our boasted agricultural excellence. If such a result can be realised, the Royal Society, notwithstanding its sacrifice of money and perhaps *prestige*, will nevertheless have claims to the congratulations of its supporters and friends.

Besides the unhappy selection of East Kent as the seat of its exhibition, the Society has had to contend against another difficulty, the peculiar bearings of which it is a somewhat puzzling matter to comprehend and consequently to explain. We mean the defection of the great implement makers. It had been reported some time ago that this defection had produced no sensible effect as to the number of entries in the implement classes. This impression was evidently a mistaken one, for nothing could be more obvious than the absence of those great stands, teeming with the celebrated produce of gigantic works, which formed so conspicuous a feature in former shows. The implement sheds at Canterbury were well filled, it is true; the trial yard was teeming with life and active bustle; those firms who had not joined the "league," and had persisted in exhibiting; deserved every credit for their efforts and the excellent workmanship of their implements; and yet the eye of old and constant visitors at the Society's Shows missed something that plainly told of a serious falling off. Not only was there a shorter length of sheddings, but even those that were erected were more scantily filled than at former exhibitions, the implements exhibited being fewer and farther between.

It is plain on the one hand that the Society cannot do without the support of the great firms, if it has still at heart the furtherance of agricultural progress, of which mechanical skill is so important an element, especially now that hand-labour threatens to fail us altogether; and on the other hand it is equally certain that should they persist in their secession, the great implement makers would pursue a suicidal course which cannot fail sooner or later to shake their position to its very foundation, both by a falling off of their trade and by giving to new men a golden opportunity of starting in opposition to them, of which many enterprising individuals will not be slow to avail themselves.

We have already remarked that there were several points of the Canterbury Show that stamped it amongst the most successful ever held in point of excellence. Nearly all the principal breeders of the country had sent specimens of their herds and flocks, and if we except the horses, which were a very discreditable show, and the native breed of Romney Marsh sheep, which cut a very poor figure, notwithstanding some greatly improved animals shown by Mr. Murton, of Smeeth, near Ashford, every class was conspicuous for the very beautiful animals it contained. Among the Short-horns there was Col. Towneley's Royal Butterfly, the most perfect animal we remember having ever seen; there was Mr. R. Eastwood's cow Rosette, Captain Gunter's twin Duchess heifers, and his Duchess 77th, scarcely second to Mr. Ambler's splendid heifer, Wood Rose. There was also Mr. R. Booth's beautiful cow, Queen Mab; Mr. Stewart Marjoribanks' extraordinary bull calf, Harkaway, and many other equally meritorious animals, which by their general excellence must have not a little puzzled the judges. We cannot better express our opinion of that class than by saying that among the 155 entries which it comprised, there was scarcely one that was not a really good animal.

In the Sheep classes the feature of the Show was the sweeping triumph of Jonas Webb for the Southdown tups, and Mr. Sanday's for the Leicester rams and pens of ewes—a singular honour that was also the lot of Mr. Murton for the native breed of sheep. After this there can be no question about the position which those breeders have attained.

We have spoken disparagingly of the Horse exhibition. Our judgment is unfortunately borne out, not only by the outward appearance of the inferior animals exhibited, but also by the report of the veterinary professors to the stewards of the yard, a report which went to show that a large number of these horses were tainted with diseases and blemishes having a most serious hereditary tendency. Now, this reveals a state of things calculated to excite in this country a most serious apprehension. It is a well-known and most lamentable fact, that good horses are now the exception everywhere instead of being the rule, and if it be true that most of the stallions that "travel" in this country are unsound, and imbued with stains of a constitutional character which they fatally transmit to their progeniture, the calamitous scarcity of sound horses, now so universally lamented, is no longer a mystery; and if this is really the cause of that great evil, the sooner it is remedied by a careful and official inspection of the stallions, the better it will be for the maintenance of the high position of our breeds of horses. This is a most important subject, to which we shall return hereafter.

There was a public dinner at Canterbury, notwithstanding former resolutions passed by the Council of the Society against it. It was not, it is true, one of those glorious pavilion dinners on the very ground where the Show was held, with spacious tables around which a thousand agricultural guests joyously sat, where genuine oratory excited their tumultuous applause, where no distinction was made as to places, and where

the lord and the plebeian, the landlord and the tenant, the employer and the employed, sat side by side in amicable and fraternal proximity; where we used to compliment foreign visitors whom those grand prandial displays so eminently English filled with wondering admiration. The Canterbury dinner had none of these happy characteristics. It was formal and stiff in its arrangements, the "top" table was lined with an aristocratic array of peers and noblemen alone, the only exception being the Mayor, most dazzlingly adorned with the massive gold chain of his dignity. The fare was poor in the extreme and was only equalled by the scandalous deficiency of the attendance. As to the post-prandial oratory, which was nearly monopolised by the noblemen of the raised table, it was stale and flat; and had it not been for a good speech from the Dean of Canterbury on "the Labourers," delivered though it was in a tone that made it hardly audible, and a pointed address from Mr. Dyke Ackland, that part of the proceedings might be dismissed with saying that it was one of the most tedious inflictions to which it has ever been our misfortune to submit.

THE CATTLE YARD.

THE LIVE STOCK DEPARTMENT of the Show is this year decidedly its better half. It does not fall very far short of previous years as to number exhibited, and the quality of many whole classes, certainly of many individual animals, was never exceeded. This remark does not, however, apply to the first of the classes to which we direct our attention.

THE HORSES.

It could hardly have been expected that in a locality so near the extreme south-east, and in a district famous rather for its Hop gardens than its legitimate agriculture, the horse stock (which is supposed to illustrate the pride of the farmers, but in many localities materially adds to their profits) can be of that superlative quality of which some localities can boast. Thus we find that the Canterbury meeting, so good in some respects, cannot boast of its show of horses; and if the truth must be told, the best animals came for the most part from a distance.

The 1st class, viz., that for Agricultural Stallions over 2 years old, was, as usual, the best filled, there being 27 entries, a few of which, however, were not taken up. Thus, Mr. Badham's Suffolk horse Havelock, now five years old, was absent as well as another Suffolk, No. 266, and several others. Enough, however, remained as to numbers if they had all been good to have excited considerable competition, but unfortunately we must write against nearly a half "under average," and against a few "considerably under average;" the latter we should hope for the sake of posterity will speedily be reduced to the neuter gender. Curiously enough the first prize was given to the same description of horse as gained first honours last year, viz., the large and rather coarse-legged midland counties bay horse. We must give, however, the precedence to the Warwick horse, although, barring the white and hairy legs of the present winner, he was a very useful and powerful animal. He belonged to a gentleman from North Hampshire, the Rev. Mr. Terrey. It was stated that although he had three white legs, neither parent for two preceding generations had legs of a similar colour. All England having been duly represented, and its honour satisfied by the prize horse, the second and third prizes were yielded to the Suffolks, the second prize being bestowed on the same horse as won it last year, viz., Mr. Samuel Clayden's five-year-old, No. 276, who certainly, in our opinion, if he deserved the prize in 1859, was still more worthy of it in 1860, having furnished no little during the past year. He is now very nearly if not quite a first-rate horse. Mr. Jonas Webb's Suffolk (275) followed at a greater distance, whilst Mr. Lawes's (268) five-year-old Suffolk was highly commended, and we think trod closely on the heels of the third prize horse. Mr. Frost's four-year-old, also Suffolk, son of Old Duke, was very properly commended. We certainly expected to see a similar compliment paid to the next horse, No. 271, belonging to Mr. Barnes, a very compact symmetrical Suffolk horse. We understand some question was raised as to the age of this horse, stated to be 4 years and 3 months, but whose teeth exhibited the appearances usually found in a young 5-year-old mouth. As this horse won a prize as a 2-year-old at Bury two years ago, and as the most respectable witnesses can establish the truth of the statement in the entry, this certainly should outweigh the somewhat anomalous appearance of the teeth. We observe in the prize sheet it is stated that "several good-looking animals in this class were rejected for unsoundness." The policy of this statement is we think open to some question. It certainly shields the judges from some public criticism; but at the same time it casts suspicion on every horse of any pretension in the class which did not succeed in getting honours. Query: is not the bane considerably greater than the benefit? Would it not be better to let the judges run the gauntlet of public opinion rather than expose the owners of horses to that injury which is surely inflicted by the shade of suspicion being cast on their animals? We observed a noble animal, No. 283, Suffolk, that must certainly have got a prize had it not been for the intervention of some unfortunate "but." Mr. James Cristy's 5-year old Suffolk, son of the renowned Duke, we also thought a very nice horse. Although we have seen the Suffolks better at previous Shows, yet as they were less than half the number in this class and succeeded in getting two prizes and all the commendations, they came pretty well up to the mark. There was a very good specimen of a Cleveland, which we should have liked to have seen commended, that is, if his action were equal to his appearance.

Class 2, for 2-year old Agricultural Stallions, is generally an interesting class, and often embraces the *élite* of the Show. Even at the present time, although the class was decidedly inferior to the Shows of the last two years, yet we are inclined to the opinion that one animal was the A 1 of the yard. We refer to Mr. Barthropp's chesnut colt, No. 311, a very superior animal indeed, got by the celebrated Hero, the prize horse at the late Suffolk Show, and whom perhaps some of the visitors of the Salisbury Show might remember as a 4-year old red chesnut that seemed to have put himself beyond the pale of commendation by his violent and vicious disposition which had by irritation injured his appearance. This horse has been submitted to Mr. Rarey's tuition, and partly from the lesson but still more from the continuance of gentle and judicious treatment he is now much more manageable than he used to be. It is worthy of note that both this colt and the prize filly, also by the Hero, are both gentle and betray no disposition to vice. A vicious or violent temper is no doubt a serious objection, and a point against a breeding animal, seeing that it is so often hereditary; at the same time it more frequently follows the mare than the horse, the former having the most influence on the nervous system. In support of this we may instance a case of a kicking mare breeding a number of colts and fillies, all of which became kickers, whilst Hero's stock do not betray the Topsy-like propensities of the sire. The second prize in this class was given to Mr. William Wells for his chesnut colt, No. 292, a nice animal, but a long way off the first prize. Mr. Sanday's, No. 295, was highly commended, and deserved it; and Mr. Foster's black roan, 298, commended. We liked No. 301, a colt by the grey prize horse Glengarry—a Clydesdale grey horse, and we expect to see this colt again, and not in a bad place. There were some inferior animals in this class, and several other good ones; amongst the latter we may mention Mr. Crisp, Mr. Wilson's, and Mr. Ward's, and also Mr. Terry's of the same blood as the prize horse in the previous class, and equal to him as regards the carcass.

Class 3, Mares and Foals, only contained seven entries, all of whom were Suffolks. No. 315 belonging to Mr. Rist was the winner of the first, and Mr. Carter's, 218, the second. None were commended, but we thought several approached the prize animals somewhat closely in merit. One of the latter was by no means ribbed up as a prize mare should be.

Class 4, for two-year-old Fillies, was a tolerably good class. Both prize animals were good, the first, No. 332, Mr. Barthropp's, by his horse the Hero, was a superior animal possessing a good barrel and good limbs, with a rich colour. The second prize filly, 328, belonged to Mr. John Clayden, of Littlebury, and is likely to prove a promising mare; at present she will well bear looking into. Mr. Wrench's filly (324) was commended, and deserved it. Mr. Wotton's (326), and also Mr. Ward's (331), were both considered worthy of commendation.

The next division of animals was the Dray Horses, for which prizes were offered in four classes, in the 3d and 4th of which—the female classes—there were no entries. The object of having a dray horse class is of course in the first place to encourage the breeding of a very profitable description of animal which can be conveniently bred in certain favourable localities, and also to serve as a convenient place for the exhibition of certain horses that may be considered too large or too heavy for general agricultural purposes. Advantage is of course taken of this circumstance to enter horses either in the one class or the other according to the chance of meeting with less competition or otherwise. Thus we find the Prize horse in Class 1, No. 334, belonging to Mr. Edmund Olding, is far more of an agricultural than a dray horse, and if shown in the former class would certainly have deserved a prize. He is a powerful and compact 3-year old horse, with good legs, and a capital back and loins, none the better for having white legs, but atoning for this by other good qualities. The second prize was given to Mr. George Brown, for his 4-year old red roan horse, a good and powerful animal, thus both prizes going into one county, Wiltshire. We thought favourably of a fine black 3-year-old Staffordshire horse, a very favourable specimen of the breed of horses belonging to that county and free from the defect of light carcase which too generally prevails amongst them. No. 335, a fine brown 8-year-old, was a very useful horse and true in his character of dray horse. There were also a few large ugly horses in this class not worthy of praise.

The second class for 2-year-olds was badly filled, and thus for want of better competition the first prize was given to a promising bay Warwickshire colt belonging to Mr. Root; and then at some little distance in point of merit came the second prize horse, a red roan, belonging to Mr. John Brown, near Newbury.

The Thorough-bred Stallions for getting Class I. contained only seven entries. The prize horse Dagobert, belonging to Mr. Marjoribanks, was considerably the best horse, and with suitable mares is likely to get valuable hunters; his legs were very fair, and he had considerable substance. The second prize horse did not come up to our notions as a getter of weight-carrying hunters. The class of hunters those who breed for money of course always try to get. He was a neat lively 4-year old horse. 351, a 5-year-old horse by Surplice, we liked much better, and still better a very dark brown horse with capital legs and a good deal of substance, belonging to Mr. Sutley, of Somersetshire. No. 355 was a half-bred roan, with a capital back and loin, but disqualified of course by the absurd restriction confining the class to thorough-breds. Either this should be remedied or another class for horses not thorough-breds should be opened. There are hundreds of well-bred mares throughout the country, that with the ordinary travelling thorough-bred stallion would breed weeds, but with a good three parts bred horse would breed valuable animals for cavalry and artillery, or saddle or harness purposes, and as utility is the professed object of the Society, such ought to be encouraged. It should not be forgotten that all the prizes the Society have bestowed or may in future bestow will not cause one additional or improved thorough-bred horse to be bred.

The Brood Mares for Breeding Hunters were a bad class, and so was that for breeding Hackneys. The prize list informs us there were two judges for Ponies. Their labours could not have been very arduous, as they had only eight animals to judge in the two classes of special prizes which demanded their judgments. The two prizes were deservedly given to the only two animals shown, and the prizes for mare ponies, for which there was rather more competition, were given respectively to a very nice bay galloway, and a pretty grey pony of a smaller kind.

We take this opportunity of observing that the arrangements on the newly opened East Kent line, so far as passengers are concerned, were exceedingly bad, and caused considerable detention to many persons.

The following were the judges of the horses:—

Riding Horses.—The Hon. Colonel Cotton.
Ponies.—J. E. Welby, H. Thurnell.
Horses.—J. Atkinson, W. Bartholomew, E. Greene.

And the following is a list of their awards:—

AGRICULTURAL HORSES GENERALLY.

CLASS I. Stallions for Agricultural Purposes, foaled before January 1, 1858.—1st prize, 25*l.*, Rev. S. Terry, of Dummer, Basingstoke, Hants; 2d, 15*l.*, S. Clayden, of Little Linton, Cambridge; 3d, 5*l.*, Jonas Webb, of Babraham, Cambridge. Highly Commended: Wm. Laws. Commended: C. Frost.

CLASS II. Stallions for Agricultural Purposes, foaled in 1858.—1st prize, 20*l.*, N. G. Barthropp, of Cretingham Rookery, Wickham Market; 2d, 10*l.*, W. Wells, of Redleaf, Penshurst. Highly Commended: W. Sanday. Commended: J. Foster.

CLASS III. Mares and Foals for Agricultural Purposes.—1st prize, 20*l.*, I. Rist, of Tattingstone, Ipswich; 2d, 10*l.*, G. Carter, Danbury, Chelmsford.

CLASS IV. Two-year-old Fillies for Agricultural Purposes.—1st prize, 15*l.*, N. G. Barthropp; 2d, 10*l.*, J. Clayden, of Littlebury. Highly Commended: C. Frost. Commended: S. Wrinch.

Several good-looking animals in this division were rejected for unsoundness.

DRAY HORSES.

CLASS I. Stallions foaled on or before January 1, 1858.—1st prize, 25*l.*, E. Olding, of Ratfin, Amesbury, Wilts; 2d, 10*l.*, G. Brown, of Little Hinton, Shrivenham, Wilts. Commended: J. Shepherd, Stoginsey, Bridgwater.

CLASS II. Stallions foaled in the year 1858.—1st prize, 15*l.*, W. Root, of Chipping Warden, Banbury; 2d, 5*l.*, J. Brown, of Compton, Newbury.

CLASS III. Mares with Foals at their feet.—No entry.

CLASS IV. Fillies foaled in the year 1858.—No entry.

OTHER HORSES.

CLASS I. Thorough-bred Stallions for getting Hunters.—1st prize, 25*l.*, E. Marjoribanks, of Greenlands, Henley-on-Thames; 2d, 15*l.*, G. Trumper, of Horton, Slough.

CLASS II. Brood Mares, with Foal at foot, or in Foal, for breeding Hunters.—1st prize, 20*l.*, J. Denchfield, of Aston Abbotts, Aylesbury, Bucks; 2d, 10*l.*, R. Ruse, of Jealotte Hall, Warfield, Bracknell, Berks.

CLASS III. Brood Mares, for breeding Hackneys.—1st prize, 15*l.*, W. J. Burch, of Campsey Ash, Wickham Market; 2d, 5*l.*, withheld.

THE CATTLE.

THE SHORT-HORN CLASSES include individuals from most of the principal herds of the kingdom. We have Bates, by his present chief representative Captain Gunter, and Booth, and Towneley; Pennant, Ambler, Fawkes, Hales, Dickenson, and Eastwood, Shepherd, Tempest, Peel, Jonas Webb, Edward Bowly and Marjoribanks, Richard Stratton, Lady Pigott, Lord Hill, Earl of Radnor, and H.R.H. the Prince Consort among the exhibitors. The contest of perseverance, judgment, and wealth which in so many of these names are all combined, cannot but result in mutual improvement, and excepting that the rivalry leads to pampering breeding stock to an injurious fatness, the competition would be wholly useful. So great is the injury thus sustained, however, that it may be fairly disputed whether by successfully exhibiting a man does *himself* any good whatever. Mr. Bolden, lately the possessor of the Waterloos and many of the Duchesses, never exhibited: he found his herd extraordinarily productive from year to year—rapidly increasing in numbers, probably owing to some extent to the absence of all unnatural treatment, and he did not find that the want of that sort of reputation obtainable at shows at all interfered with the prices achieved at his late sale. Let us hope that the Duchesses in Captain Gunter's hands will not suffer by the practice of exhibiting, which his success at Warwick and his still greater success at the present meeting will probably lead him to continue.

The class of old Bulls is an extraordinarily fine one, including 18 entries. Colonel Towneley's Royal Butterfly, first in his class last year at Warwick, first at

the Lancashire show, and winner of the 30 guinea cup at Hull, is the easy winner of the first prize here His owner has refused 2000 guineas for him with two heifers. Though only 2½-years old he is of wonderful size, of great length and girth, and admirable symmetry. The second prize goes to Mr. Dickenson, for Prince of Prussia, a 3-year old roan bull who won at Liverpool last year, of remarkably straight and even growth. The third prize is won for Lord Feversham by Prince Imperial, a 4-year old roan bull, whose good proportions were well contrasted with a very inferior animal close beside him. In the class of yearling bulls, including no fewer than 28 entries, the first prize was won for Mr. Peel, of Clitheroe, by Malachite, a dark roan bull descended from Bates's herd, and presenting in its beautiful touch and extraordinary coat that combination of quality and vigour which somehow or other Mr. Bates managed to impress on his stock in spite of (or by means of) his close breeding. Mr. Fawkes's red bull Reformer is placed second at the head of this large class; and the third prize goes to Prince Frederick, a roan of great width between the fore legs and beautiful colour and hair, standing awkwardly however, so as to present an appearance of coarseness in the shoulder.

Colonel Towneley sends a large number of calves to the third class, and carries off the second prize with Romulus Butterfly, a roan of nearly 12 months old; his twin brother Remus stands beside him. The first prize in this class is taken by Harkaway, a red roan, son of the Great Mogul, a remarkably thick and well-grown yearling. There is considerable variety of size and quality in the animals of this class.

Among Short-horn cows the first prize is won by Mr. Eastwood's Rosette—second at Warwick—an animal of extraordinary size, 2 feet 8 inches wide across the hips, somewhat deficient in a drooping back towards the tail. In this point Queen Mab, Mr. Booth's cow winning the second prize, is probably her superior. She is an animal of great length, perfect roundness of barrel, but excessive fatness.

The Heifer class is a very fine one, though not very numerous. There are 16 entries. Captain Gunter takes the second prize with Duchess 77th, a calf of Duchess 70, who was bought a calf at Lord Ducie's sale for 310 guineas. She is a beautiful handler, of a dark roan colour, and a splendid coat. She is heavy in calf and perhaps does not show her proportions perfectly on that account. Mr. Ambler's heifer, Wood Rose, which takes the first place, stands beside her, and to decide between the two might well puzzle a good judge.

In the wonderful class of yearling heifers there are 34 entries, and Captain Gunter here takes the 1st and 2d prizes with Duchesses 78 and 79, the twin daughters of Duchess 67, by the 6th Duke of Oxford. Their dam was bought of Mr. Tanqueray for 500 guineas when a few months old; he having paid 400 guineas for her at the Tortworth sale. She is a white cow; one of her daughters is white, the other roan. She already counts for 9 on Captain Gunter's herd-book. We shall hereafter give a history of the Duchess tribe in England, and must postpone till then remarks on their fortunes in the hands of Captain Gunter. Meanwhile it is plain that the success of these two prize twin heifers is among the events of the Show. Seventeen heifer calves are shown; Colonel Pennant takes the prize with Jessamine, and others receive commendation as will be seen in the prize list below.

THE HEREFORD CLASSES include 11 bulls, 10 yearlings, and five bull calves; a single cow, six heifers and five yearlings, and six heifer calves. They include animals of great weight and in the old classes, and of great merit throughout. The old bulls were generally commended by the judges, and the heifers and heifer calves were also highly commended. The only cow shown received the first prize though there was no competition, indicating the opinion of her excellence entertained by the judges.

THE DEVON CLASSES include 40 animals; Messrs. Palmer, Turner, Quartly, Hole, Halse, and Pope carried off the prizes, and they are believed to have been generally properly awarded. Perhaps the only exception may be made in reference to the heifer class, where Mr. Turner is placed first, Mr. Mildon second, Mr. Quartly third; and the fourth animal exhibited by H.R.H. Prince Albert was passed over without notice, though in many particulars she is superior to some of those beside her.

The other breeds demand no particular notice. They attract it however; but rather by the extraordinary discrepancies of size and colour amongst the competing animals than by any particular average merit which they exhibit. Several good Norfolk polled animals, and one or two of the large and somewhat coarse Sussex breed are exhibited; and several of the little black and white or red and white Bretonne cows stand beside them.

The following are the judges of cattle and their awards:—

JUDGES.

Short-horns.—C. Barnett, J. Parkinson, G. Atkinson.
Herefords.—E. L. Franklin, G. W. Baker, —— Higgins.
Devons.—J. Anstey, T. Potter.
Other Breeds.—W. Ladds.
Sussex.—A. Denman, B. Swaffield.

The following is the list of their awards:—

SHORT-HORNED CATTLE.

CLASS I. Bulls 2 to 6 years old.—1st prize, 30*l.*, Lieut.-Col. Towneley, of Towneley, Burnley, for "Royal Butterfly;" 2d, 15*l.*, J. Dickinson, of Balcony Farmhouse, Upholland, Wigan, for "Prince of Prussia;" 3d, 5*l.*, Lord Feversham, of Duncombe Park, Helmsley, for "Prince Imperial." Highly Commended: J. H. Bradburne, of Pipe Place, Lichfield, Staffordshire; H. Ambler, of Watkinson Hall, Halifax. Commended: Hon. Col. Pennant, M.P., of Penrhyn Castle; J. Lynn, of Church Farm, Stroxton, Grantham; J. T. Noakes, of Brockley House, Lewisham.

CLASS II. Yearling Bull.—1st prize, 25*l.*, J. Peel, of Knowlmere Manor, Clitheroe, for "Malachite;" 2d, 15*l.*, F. H. Fawkes, of Farnley Hall, Otley, for "Reformer;" 3d, 5*l.*, Sir C. Tempest, Bart., of Broughton Hall, Skipton, for "Prince Frederick." Highly Commended: H. Ambler and F. H. Fawkes. Commended: F. H. Fawkes; J. Dickinson, of Wigan, and Lieut.-Col. Towneley.

CLASS III. Bull Calves.—1st prize, 10*l.*, S. Marjoribanks, of Bushey Grove, Watford, for "Harkaway;" 2d, 5*l.*, Lieut.-Col. Towneley, of Towneley, for "Romulus Butterfly." Highly Commended: J. Webb and Lieut.-Col. Towneley. Commended: J. Robinson, of Clifton Pastures, Newport Pagnell.

CLASS IV. Cows in Milk or in Calf, above 3 years old.—1st prize, 20*l.*, R. Eastwood, of Swinshawe House, Burnley; 2d, 10*l.*, R. Booth, of Warlaby; 3d, 5*l.*, Lady Pigot, of Branches Park, Newmarket. Highly Commended: W. Wells, Penshurst; S. Marjoribanks, of Bushey Grove; F. Fowler, of Henlow, Biggleswade; J. Price, of Featherstone, Wolverhampton. Commended: E. Bowly, of Siddington House, Cirencester; H. Ambler, of Watkinson Hall.

CLASS V. Heifers in Milk or in Calf under 3 years old.—1st prize, 15*l.*, H. Ambler, of Watkinson Hall; 2d, 10*l.*, Capt. Gunter, of The Grange, Wetherby; 3d, 5*l.*, Lady Pigot. Highly Commended: J. Grundy, Rev. T. H. Noel Hill, Lady Pigot, Duke of Montrose, J. Price. Commended: R. Booth, Hon Col. Pennant, E. Bowly, Duke of Montrose, J. Price.

CLASS VI. Yearling Heifers.—1st prize, 15*l.*, Capt. Gunter, of The Grange; 2d, 10*l.*, Capt. Gunter, of The Grange; 3d, 5*l.*, J. Robinson, of Clifton Pastures, Newport Pagnell. Highly Commended: The Hon and Rev. T. H. Noel Hill, S. Marjoribanks, J. Webb. Commended: R. Booth, J. Webb, R. Stratton.

CLASS VII. Heifer Calves.—The prize of 10*l.*, Hon. Col. Pennant, M.P. Highly Commended: S. Marjoribanks, Lieut.-Col. Towneley. Commended: J. Pain, Hon. Col. Pennant, M.P., E. Ladd Betts.

HEREFORD CATTLE.

CLASS I. Bulls over 2 and under 6 years old.—1st prize, 30*l.*, T. Edwards, of Wintercott, Leominster, for "Leominster;" 2d, 15*l.*, J. Williams, of St. Mary's, Kingsland, Leominster, for "Sir Colin;" 3d, 5*l.*, T. Rea, of Westonbury, Pembridge, Hereford, for "Silvius." Highly Commended: Lord Berwick and the Class generally.

CLASS II. Yearling Bulls.—1st prize, 25*l.*, W. Perry, of Cholstrey, Leominster, for "Cowarn;" 2d, 15*l.*, T. Rea, of Westonbury, for "Sir Richard;" 3d, 5*l.*, Lord Berwick, of Cronkhill, Shrewsbury, for "Thickset." Highly Commended: Lord Bateman. Commended: William Taylor.

CLASS III. Bull Calves.—1st prize, 10*l.*, J. Monkhouse, of The Stowe, Hereford, for "Nicholas;" 2d, 5*l.*, T. Edwards, of Wintercott, Leominster, for "Leominster 2d."

CLASS IV. Cows in Milk or in Calf, above 3 years old.—1st prize, 20*l.*, J. Taylor, of Stretford Court, Leominster; no competition.

CLASS V. Heifers in Milk or in Calf, under 3 years old.—1st prize, 15*l.*, J. Rea, of Monaughty, Knighton, Radnor; 2d, 10*l.*, J. Williams, of St. Mary's, Kingsland; 3d, 5*l.*, Lord Berwick, of Cronkhill. Highly Commended: J. Williams and the Class generally.

CLASS VI. Yearling Heifers.—1st prize, 15*l.*, Lord Bateman, of Shobdon Court; 2d, 10*l.*, E. Wright, of Halston Hall, Oswestry; 3d, 5*l.*, P. Turner, of Leen, Pembridge.

CLASS VII. Heifer Calves.—The prize, 10*l.*, J. Williams, of St. Mary's, Kingsland, Hereford. The Class generally Commended.

DEVON CATTLE.

CLASS I. Bulls over 2 and under 6 years old.—1st prize, 30*l.*, T. and J. Palmer, of Norton Stoke Climsland, Callington, Cornwall; 2d, 15*l.*, G. Turner, of Barton, near Exeter; 3d, 5*l.*, J. Bodley, of Stockley Pomeroy, Crediton, Devon.

CLASS II. Yearling Bulls.—1st prize, 25*l.*, J. Quartly, of Molland House, South Molton, Devon; 2d, 15*l.*, J. Quartly; 3d, 5*l.*, George Turner, of Barton. Commended: William Hole, of Hannaford, Barnstaple.

CLASS III. Bull Calves.—1st prize, 10*l.*, G. Turner, of Barton; 2d, 5*l.*, W. Hole, of Hannaford.

CLASS IV. Cows in Milk or in Calf, above 3 years old.—1st prize, 20*l.*, J. Quartly, of Molland House; 2d, 10*l.*, G. Turner, of Barton; 3d, 5*l.*, G. Turner, of Barton. Commended: W. Farthing, of Stowey Court, Bridgwater; J. Quartly, of Champson Molland.

CLASS V. Heifers in Milk or in Calf, not exceeding 3 years old.—1st prize, 15*l.*, G. Turner, of Barton, near Exeter; 2d, 10*l.*, J. Mildon, of Woodington Farm, Witheridge, Devon; 3d, 5*l.*, J. Quartly, of Champson Molland.

CLASS VI. Yearling Heifers.—1st prize, 15*l.*, P. Halse, of Molland, South Molton; 2d, 10*l.*, P. Halse; 3d, 5*l.*, E. Pope, of Great Toller.

CLASS VII. Heifer Calves.—The prize, 10*l.*, G. Turner, of Barton, near Exeter.

OTHER ESTABLISHED BREEDS,

Not including the Short horn, Hereford, or Devon breed.

CLASS I. Bull over 2 and under 6 years old.—The prize, 10*l.*, E. Cane, of Berwick Court, Berwick, Lewes.

CLASS II. Yearling Bull.—The prize, 10*l.*, Lord Sondes, of Elmham Hall, Thetford, Norfolk.

CLASS III. Cow in Milk or in Calf, above 3 years old.—The prize, 10*l.*, E. Cane, of Berwick Court.

CLASS IV. Heifers in Milk or in Calf, not exceeding 3 years old.—The prize, 10*l.*, Lord Sondes, of Elmham Hall.

CLASS V. Yearling Heifers.—The prize, 5*l.*, Lord Sondes, of Elmham Hall.

THE SHEEP.

IN LEICESTERS there are 29 shearling rams, 24 older rams, 6 pens of 5 shearling ewes. The prizes for the most part go to Mr. Sanday, as the Prize List shows. It is a very admirable exhibition; we hope to refer to it in greater detail next week.

THE SOUTH DOWNS include 44 shearling rams, 22 older rams, and 10 pens of five shearling ewes. The prizes almost wholly go to Jonas Webb, who exhibits a number of wonderfully fine sheep.

THE ROMNEY MARSH SHEEP include 24 entries but display rather the defects than the merits of the breed, the latter consisting rather in hardiness and adaptation to locality than in the symmetry and quality of the individual animals.

THE LONGWOOLLED SHEEP contain 64 entries, and constitute a remarkably fine show, chiefly of the Cotswold breed, which, considering the distance of Canterbury from their home, is well represented.

THE SHROPSHIRE SHEEP include 68 entries, a still more remarkable collection of hitherto a local breed. The first prize ram in the older class was declared to have been bought by Mr. Hollond for 120 guineas.

THE OTHER SHORT-WOOLLED BREEDS were represented by Oxfordshire, Hampshire, and Wiltshire sheep, and Mr. Humfreys, of Wantage, was as usual very successful.

The following are the judges of sheep.—

Leicesters.—R. Hewitt, T. Harris, R. B. Aylmer.
Long-wools.—T. Brown.
Kentish Breed.—J. Abbot, H. Beevor.
South Downs.—H. Lugar, J. Homer, P. Purves.
Short-wools.—J. Rawlence, G. Brown, H. Beauford.
Shropshire Sheep.—C. Randall, W. K. Bourne, E. Trump.

And the following are their awards:—

LEICESTERS.

CLASS I. Shearling Rams.—1st prize, 20*l.*, W. Sanday, of Holme Pierrepont, Notts; 2d, 10*l.*, W. Sanday; 3d, 5*l.*, W. Sanday. Highly Commended: Lieut.-Col. Inge, of Thorpe Constantine, Tamworth, Staffs.

CLASS II. Old Rams.—1st prize, 20*l.*, W. Sanday; 2d, 10*l.*, W. Sanday; 3d, 5*l.*, W. Sanday. Highly Commended: W. Sanday. Commended: J. Borton, of Barton House, Malton, York; T. Bird, of Bilton, Rugby, Warwick.

CLASS III. Pens of 5 Shearling Ewes of the same flock.—1st prize, 20*l.*, W. Sanday; 2d, 10*l.*, Lieut.-Col. Inge, of Thorpe Constantine; 3d, 5*l.*, G. Turner, of Barton.

SOUTH DOWNS.

CLASS I. Shearling Rams.—1st prize, 20*l.*, J. Webb, of Babraham, Cambridge; 2d, 10*l.*, J. Webb; 3d, 5*l.*, J. Webb. Highly Commended: J. Webb. Commended: J. Webb, J. Webb, J. Webb. The Class generally commended.

CLASS II. Old Rams.—1st prize, 20*l.*, J. Webb; 2d, 10*l.*, J. Webb; 3d, 5*l.*, J. Webb. Highly Commended: J. Webb, J. Webb. Commended: Lord Walsingham, J. Webb, J. Webb.

CLASS III Pens of 5 Shearling Ewes, of the same flock.—1st prize, 20*l.*, J. and A. Heasman, of Angmering, Arundel, Sussex; 2d, 10*l.*, Lord Walsingham; 3d, 5*l.*, Duke of Richmond. Highly Commended: the Duke of Richmond. Commended: William Rigdon, of Hove, Brighton, Sussex; the Earl of Radnor, of Coleshill House.

KENTISH OR ROMNEY MARSH BREED OF SHEEP.

CLASS I. To the owner of the best Shearling Ram.—1st prize, 15*l.*, F. Murton, of Smeeth, Ashford, Kent; 2d, 5*l.*, F. Murton; 3d, 5*l.*, F. Murton.

CLASS II. Old Rams.—1st prize, 15*l.*, F. Murton; 2d, 5*l.*, F. Murton; 3d, 5*l.*, F. Murton. Commended: W. Gascoyne, T. Blake.

CLASS III. Pens of 5 Shearling Ewes, of the same flock.—1st prize, 15*l.*, W. Gascoyne, of Bapchild, Sittingbourne, Kent; 2d, 5*l.*, C. Neve, of Shepway Court, Maidstone; 3d, 5*l.*, added by the Local Committee, F. Murton.

LONG-WOOLLED SHEEP,

Not qualified to compete as Leicesters, or Kentish and Romney Marsh Breeds.

CLASS I. Shearling Rams.—1st prize, 20*l.*, J. Walker, of Northleach, Gloucestershire; 2d, 10*l.*, R. Garne, of Aldsworth, Northleach; 3d, 5*l.*, R. Garne. Highly Commended: G. Fletcher, of Shipton Sollars, Cheltenham; W. Lane, of Broadfield Farm, Northleach; W. Lane; W. Lane; G. Fletcher, Robert Garne, T. Porter, E. Handy. Commended: J. K. Tombs, of Langford, Lechdale, Gloucestershire; G. Fletcher, T. Porter, of Baunton, Cirencester; E. Handy, of Sierford, Cheltenham; W. Lane, W. Lane; and the Class generally.

CLASS II. Old Rams.—1st prize, 20*l.*, R. Garne; 2d, 10*l.* R. Garne; 3d, 5*l.*, G. Fletcher. Highly Commended: T. Porter; T. Porter; W. Lane; W. Lane. Commended: E. Handy, W. Lane, and the Class generally.

CLASS III. Pens of 5 Shearling Ewes, of the same Flock.—1st prize, 20*l.*, W. Lane; 2d, 10*l.*, W. Lane; 3d, 5*l.*, W. Lane. Highly Commended: J. K. Tombs, of Lang ford, Lechdale; J. K. Tombs. Commended: T. B. Browne, of Salperton Park, Andoversford, Cheltenham; T. B. Browne.

SHROPSHIRE SHEEP.

CLASS I. Shearling Rams.—1st prize, 15*l.*, T. Horton, of Harnage Grange, Shrewsbury; 2d, 5*l.*, J. and E. Crane, of Shrawardine, Shrewsbury. Highly Commended: J. and E. Crane. Commended: J. and E. Crane.

CLASS II. Old Rams.—1st prize, 15*l.*, S. Byrd, of Lees Farm, Stafford; 2d, 5*l.*, T. Horton, of Harnage Grange, Shrewsbury. Highly Commended: E. Holland, of Dumbleton Hall, Evesham; C. R. Keeling, of Yew Tree Farm, Penkridge, Staffordshire; W. G. Preece, of Shrewsbury. Commended: H. J. Sheldon of Brailes, Shipston-on-Stour; T. Mansell, of Adcott Hall Shrewsbury.

CLASS III. Pens of 5 Shearling Ewes, of the same flock.—1st prize, 15*l.*, J. and E. Crane; 2d, 5*l.*, J. and E. Crane. Highly Commended: E. Holland Commended: the Earl of Dartmouth, of Patshull, Albrighton; J. Evans, of Uppington, Shrewsbury; H. Matthews, of Montford, Shrewsbury; H. Smith, of Sutton Maddock, Shiffnall.

SHORT-WOOLLED SHEEP.

Not qualified to compete as South Downs or Shropshire Sheep.

CLASS I. Shearling Rams.—1st prize, 20*l.*, S. King, of Old Hayward Farm, Hungerford, Berks; 2d, 10*l.*, W. Humfrey, of Oak Ash, Chaddleworth, Wantage, Berks; 3d, 5*l.*, W. Humfrey. Highly Commended: C. Howard, of Biddenham, near Bedford; J. Bryan, of Southleigh, Witney, Oxfordshire; J. Bryan; J. Druce, of Eynsham, Oxford; W. Humfrey. Commended: S. King, of Old Hayward Farm, Hungerford; C. Howard.

CLASS II. Old Rams.—1st prize, 20*l.*, W. Humfrey; 2d, 10*l.*, W. Humfrey; 3d, 5*l.*, W. Humfrey. Highly commended: W. F. Bennett, J. Bryan, J. Bryan, the Duke of Marlborough, W. Humfrey. Commended: the Duke of Marlborough.

CLASS III. Pens of 5 Shearling Ewes, of the same flock.—1st prize, 20*l.*, W. Browne Canning, of Chisledon, Swindon, Wilts; 2d, S. King, of Old Hayward Farm, Hungerford; 3d, 5*l.*, W. F. Bennett, of Chilmark, Salisbury. Highly Commended: J. W. Brown.

THE PIGS.

The pigs are divided into large breeds of any colour, and small breeds of black and of white colour respectively. There is a large number exhibited, and some wonderfully fine animals among them, to which reference will be made next week. Perhaps one of the finest pens in the yard is that in which Mr. Sexton, of Sudbury, shows a "small" black sow and 13 pigs of remarkable quality; the owner sold them readily at 10*l.* apiece. The prize list is below.

The judges of Pigs were Rev. E. Elmhurst and Messrs. J. Unthank and W. Cottle; and the following are their awards:—

PIGS.

CLASS I. Boars of a large breed, of any colour.—1st prize, 10*l.*, J. Harrison, jun., of Heaton Norris, Stockport; 2d, 5*l.*, J. Dyson, of Adelphi Hotel, Dock Street, Leeds. Commended: W. B. Wainman, of Carhead, Cross Hills, Yorkshire.

CLASS II. Boars of a small white breed.—1st prize, 10*l.*, J.

Harrison, jun.: 2d, 5*l.*, G. Mangles, of Givendale, Ripon. Highly Commended: J. Hindson, of Barton House, Everton, Liverpool.

CLASS III. Boars of a small black breed.—1st prize, 10*l.*, T. Crisp, of Butley Abbey, Wickham Market, Suffolk; 2d, 5*l.*, T. Crisp. Commended: T. Crisp.

CLASS IV. Boars of a breed not eligible for the preceding classes.—1st prize, 10*l.*, W. B. Wainman, of Carhead, Cross Hills, Yorkshire; 2d, [illegible] H. Endeacott, of Norfolk Street, Hunslett Lane, Leeds. Commended: G. B. Morland.

CLASS V. Breeding Sows of a large breed, of any colour.—1st prize, 10*l.*, James Clayton, of Midway Farm, Poynton, near Stockport, Cheshire; 2d, 5*l.*, W. B. Wainman. Highly Commended: J. K. Tomb; Michael Gavins, of Fox Inn, Woodhouse, Carr, near Leeds. Commended; W. Hewer, of Sevenhampton, Highworth.

CLASS VI. Breeding Sows of a small white breed.—1st prize, 10*l.* W. Hatton, of Addingham, near Leeds; 2d, 5*l.*, E. L. Betts. Highly Commended: W. Hatton. Commended: G. Mangles, of Givendale, Ripon.

CLASS VII. Breeding Sows of a small black breed.—1st prize, 10*l.*, G. M. Sexton, of Earls Hall, Cockfield, Sudbury; 2d, 5*l.*, T. Crisp, of Butley Abbey. Highly Commended: T. Crisp. Commended: G. Turner, of Barton.

CLASS VIII. Breeding Sows of a breed not eligible for the preceding classes.—1st prize, 10*l.*, J. Harrison, jun., of Heaton Norris; 2d, 5*l.*, G. Mangles, of Givendale. Commended: W. B. Wainman, of Carhead.

CLASS IX. Pens of 3 Breeding Sow Pigs, of any colour, of the same litter, 4 to 8 months old.—1st prize, 10*l.*, W. Hewer, Highworth; 2*l.*, W. Hewer. Commended: W. J. Sadler, of Bentham Court, Cricklade.

CLASS X. Pens of 3 Breeding Sow Pigs, of a small white breed, 4 to 8 months old.—1st prize, 10*l.*, T. Crisp; 2d, 5*l.*, S. Wiley, of Brandsby, York. Highly Commended: S. Wiley.

CLASS XI. Pens of 3 Breeding Sow Pigs, of a small black breed, 4 to 8 months old.—1st prize, 10*l.*, G. M. Sexton, of Earl's Hall, Cockfield, Sudbury, Suffolk; 2d, 5*l.*, T. Crisp. Highly Commended: G. B. Morland, of Chilton Farm, Harwell, Berkshire.

CLASS XII. Pens of 3 Breeding Sow Pigs, of a breed not eligible for the preceding classes of the same litter, 4 to 8 months old.—1st prize, 10*l.*, E. L. Betts, of Preston Hall, near Maidstone, Kent; 2d, 5*l.*, E. Davies, jun., of Harrington, Shiffnal, Shropshire.

In Cattle, Sheep, and Horses there was an additional competition excited by the offer of prizes by the Local Committee, to which we shall hereafter direct attention. Meanwhile we give a list of prizes:—

SPECIAL PRIZES.

[Offered by the Canterbury Local Committee.]

SUSSEX CATTLE

CLASS I. To the owner of the best Bull, from 2 to 6 years old.—1st prize, 30*l.*, W. Botting, of Westmeston Place, Hurstperpoint; 2d, 15*l.*, G. Buss, of Boughton Aluph, Ashford; 3d, 6*l.*, S. Hart, of Aldington Court, Hythe, Kent.

CLASS II. Yearling Bull.—1st prize, 25*l.*, W. Dunk, of Horton Priory, Hythe; 2d, 15*l.*, T. Smith, of Beckley, Staplehurst, Sussex; 3d, 5*l.*, no competition.

CLASS III. No entry.

CLASS IV. Cows in Milk or in Calf, above 3 years old.—1st prize, 20*l.*, T. Smith, of Beckley, Staplehurst, Sussex; 2d, 10*l.*, G. Jenner, of Parsonage House, Udimore, Rye; 3d, 5*l.*, T. H. Gregson, of Woodsden, Hawkhurst, Kent.

CLASS V. Heifers in Milk or in Calf, not exceeding 3 years old.—1st prize, 15*l.*, J. and A. Heasman, of Angmering, Arundel; 2d, 10*l.*, T. H. Gregson, of Woodsden, Hawkhurst; 3d, 5*l.*, P. Gorringe, of Tilton, Selmeston, Lewes.

CLASS VI. Yearling Heifers.—1st prize, 15*l.*, R. Neame, of Fairbrook, Faversham; 2d, 10*l.*, J. and A. Heasman; 3d, 5*l.*, P. Gorringe.

CLASS VII. Heifer Calves.—The 10*l.* prize, R. Neame, of Fairbrook, Faversham, Kent.

PONIES OF ANY BREED.

CLASS I. Stallion Ponies, not exceeding 14 hands high.—1st prize, 20*l.*, G. K. Cooper, of Euston, Thetford, Norfolk. Second prize withheld.

CLASS II. Mare Ponies, not exceeding 14 hands high.—1st prize, 15*l.*, T. Neve, of Benenden, Staplehurst, Kent; 2d, 5*l.*, Rev. W. H. Beevor, of Cowbridge, Glamorganshire.

SHEEP.—KENTISH OR ROMNEY MARSH SHEEP.

CLASS I. Pens of 5 2-year-old Ewes.—1st prize, 10*l.*, F. Murton, of Smeeth, Ashford, Kent; 2d, 5*l.*, E. Kingsnorth, of Orlestone, Ham Street, Kent.

CLASS II. Pens of 5 3-year-old Ewes.—1st prize, 10*l.*, C. Collard, of Wickhambreux Court, Wingham, Kent; 2d, 5*l.*, F. Murton, of Smeeth, Ashford, Kent.

THE IMPLEMENT SHOW-YARD.

It is impossible to go in detail through any considerable number of the implements exhibited. They reach close on 4000 in number, and are distributed over 212 stands. But before describing some of the principal classes of machines on the ground there are one or two novelties to which reference can be made. Thus at Stand 147, W. Gerrans, of Tregony, near Grampound, Cornwall, there is a very clever horse rake, in which the driver rides behind the horse and by the action of a pedal connects at will one of the driving wheels with a toothed wheel upon a shaft, which thus makes one revolution, and so lifts all the teeth and detaches their load. The rake tob folds together, and rides conveniently between the wheels, so that it goes easily through gates or along the public road. It costs 8*l.* 10s., and rakes 11 feet wide.

A patent grain separator, an American invention, is exhibited by Messrs. Howard & Riches, of Norwich. The fan is fed with air through a shallow, wide, long, and vertical chest, and being driven rapidly and regularly produces a strong and uniform current of air up this channel. One of its sides is glass, and, the grain as it leaves the riddle falling evenly distributed through this chest, you can see the operation of the current upon every particle of it. The heavy seeds fall down, the light ones immediately rise and fall over through another exit, but you can often trace a doubtful seed or heavy chaff-enveloped grain suspended for a long time before the division is arrived at which separates it from its companions. It is apparently a very perfect machine, and though very costly will no doubt find use in the corn mills of the country.

There is at these stands too an exceedingly ingenious broadcast sower, in which the grain, half a bushel in a bag suspended from the neck finds its exit, regulated by a sliding door, through a mouthpiece at the conical metallic sheathing in which the bag terminates. At this point, however, it falls through a trumpet-shaped mouth-piece, looking in the same direction as the man who uses it. This mouth-piece has radiating projecting edges standing up upon its inner surface, and a toothed wheel and pinion worked by hand—one revolution for every footstep as you walk gives it rapid rotation. The consequence is that the grain is caught and sent centrifugally with immense force and perfect impartiality in all directions across the line in which you walk, and if the air be motionless the seed will fall most regularly distributed on a bed from 10 to 15 feet in width. It costs 30*s.*

In Turnip-cutting Machines, the trustees of Messrs. Crosskill of Beverley exhibit a novel, not praiseworthy, apparatus. Those of our readers who are acquainted with the tubular drain-tile making machine will be able to form an idea of the principle of the machine. Let the reader imagine an oblong box in the central part of which two horizontal pistons work to and fro, having reverse motions, that is, while one is moving outwards the other is moving inwards. The ends of the box are made up, the one with barred work, one end being divided into squares, the other into long narrow strips the whole depth of the box, these being bisected by a transverse bar. The roots to be cut are placed into the two receptacles or boxes, and as the pistons advance towards the barred openings they are forced through them, passing from one end in small pieces fitted for sheep, from the other in narrow and long strips fitted for cattle. The inner edges of the bars making up the ends of the boxes are sharpened to act as knives, while still further to facilitate the action of the cutting knives, the outer ends of the reciprocating pistons are not left plain, but are provided with a series of cutting faces. The roots, as they are pressed up against the outside cutting bars, are at the same time subjected to the cutting as well as pressing force of the horizontal pistons or plungers.

Messrs. Richmond & Chandler—represented by Mr. Norton—the well-known manufacturers, have introduced a very simple and effective improvement in their straw and hay cutters. This consists of an arrangement by which the delay consequent upon the use of change wheels is obviated; two wheels of different diameters are keyed upon the spiked-roller shaft—parallel to this lies a shaft which receives motion by bevil gearing from the fly-wheel shaft; this shaft is provided with a sliding clutch carrying two pinions, one of which can be made to engage with the large wheel in the roller shaft, the other with the small. This change of wheel can be made instantaneously by means of a lever connected with the sliding clutch. By putting two sets of wheels in gear the straw is cut into ¾-inch lengths, by putting the other set the length is divided or made three-fourths of an inch in length. The hardened steel mouth introduced by the manufacturers is applied to the form of machine we have now described, which is, we need scarcely say, distinguished by the highness of mechanical finish and accuracy of detail which has for long been characteristic of the firm. Another feature worthy of notice in these exporting days is the facility with which the whole machine can be taken to pieces, and the remarkably small space into which it can be packed when so reduced to its component parts.

The same firm exhibit the Patent Disintegrator, which in a short space of time has taken a high position as a useful adjunct to the farm in reducing hard granulated lumps of manure, superphosphate, or the like, to a highly pulverised condition. This machine consists of a series of cylindrical cages made up of wires revolving round one central axis. This is made hollow, so as to admit of a second shaft revolving round it; by an arrangement of pulleys and cross belts the series of cages have reverse motions. By this arrangement the material to be operated upon, and which is delivered to the centre of the cages, is driven by the centrifugal force outwards, where it meets the outside bars of the revolving cages and receives a rapid succession of shocks or blows by which it is pulverised. Still further to aid this action a fixed knife or cutting blade is attached to a pillar cast with the carrying frame in such a way that its blade extends into the interior of the innermost cage; the duty of this knife being to arrest and cut such pieces as are too large to pass through the bars of the revolving cages. The extent to which the substance operated upon is pulverised is regulated by the rate of speed at which the cages are driven. The machine acting upon phosphate and driven at a rate of 350 revolutions per minute, does as much work and of a superior quality as three men can do in the ordinary way of screening.

Messrs. Hancock exhibited along with their pulveriser ploughs specimens of their butter-making apparatus. This, which is well spoken of by competent judges, is intended to obviate many of the difficulties which attend the making of butter in warm weather, and by dairy-maids whose hands are warm. Our readers doubtless have remarked that peculiarity amongst dairy-maids that where one could manage the butter well at all times, another would manipulate so that it would stick to her fingers as if it were more like bird-lime than butter. Messrs. Hancock claim for this apparatus of theirs a capability of superseding the necessity of employing hand-labour, so that any dairy-maid will be able to cool the butter, and make it pure and well tasted, free from all traces of whey and buttermilk even in the hottest weather. We confess to a belief that no mechanical action will ever excel that of the dairy-maid's hands in the operation of preparing and salting butter ready for market; nevertheless many competent authorities speak highly of this apparatus. It consists of a cylinder of white metal, having a number of small orifices at and about the bottom. To this cylinder a piston is provided, and is acted upon a vertical screw passing through a nut placed in the centre of a cross-bar stretching across the top of the cylinder. This cross-bar is firmly fixed while in operation by the ends being passed into slots made in the side of the cylinder; at the same time it is easily removable, to enable the butter to be operated upon to be passed into the interior of the cylinder. As the piston is depressed by the screw—acted upon by a cross handle—the butter is forced through the small apertures near and in the bottom of the cylinder, and is delivered in the form of small flakes into a receptacle containing cold water placed beneath.

In the department of dairy articles, Mr. Cornes, of High Street, Bow, London, exhibited what he denominates a cradle or concussion churn. It consists of a rectangular box, having a central pivot between two upright standards; so that by means of one of the handles provided at the ends, the whole of the apparatus with its contents can be made to oscillate on the central pivot. There is no doubt of the completeness of the concussion obtained by this arrangement—an arrangement obviously applicable to washing machines, to which, by the way, Mr. Cornes also applies it. We believe that if the box was suspended by links from points placed above the line, so that it could be swung to-and-fro, much greater results could be obtained. Indeed we are inclined to think that for quick butter-making properties this arrangement in practice would show itself as the best possible. We know of an instance where a swing-churn—as it may be called—was worked so easily that a man could, while smoking his pipe or reading his paper, churn the milk of a considerably large dairy. The swing principle is not our own, it owes its origin to no less a mechanical genius than William Horrocks, the inventor of the steam power-loom. One advantage possessed by the swing principle is the working power which is obtained at small cost by the return action or momentum; another is that the concussive action tends to consolidate or knead the butter as it is being churned. This same advantage is said to be obtained in Mr. Ferryman's self-kneading lever churn exhibited at the Show. In this the body of the churn is wider at bottom than at the top, so as to admit of the swinging to-and-fro play of a beater which works inside, and is suspended from a shaft working in centres at the upper and narrowest part of the box. The lateral motion of the beater forces the cream from side to side and kneads the butter against the sides of the churn. The beater is not solid but perforated with apertures.

Messrs. Hughes & Son, of Great Dover Street, London, exhibited a patent smut machine for cleaning grain. A series of conical scrubbers are placed in the central space of a vertical frame, and worked by a shaft receiving motion from the prime mover by means of a pulley. The conical upper portion of the scrubber is covered with flutes or ridges, and is provided with a fan inside; the conical part works inside, and at some distance from the inner surface of a corresponding cone rubber. The grain passing between these surfaces is cleaned from the smut, which with the dust is removed by means of the fans. The fans, in order to prevent them from damaging the grain by giving direct blows to it, are made with square laced wove wire. The wire thus arranged acts at once as a scrubber, and also allows air to pass through from fans which carries dust, &c., through the interstices of the wire cylinder composing the body of the scrubbers. The grain is finally delivered by a spout into a box, in which, spreading itself, it is subjected to the action of an exhaust fan, which draws off all the remaining dust.

We now give separate reports of certain classes of implements:—

THE STEAM PLOUGH.

The trials of the four sets of machinery exhibited on the "light-land" field brought out the subjoined results. A Busby plough, turning a furrow of 10 inches wide by 7 inches deep, and fairly tried in different parts of the ground, showed a draught of "fully 6 cwt.;" and from this datum the price of the work can be calculated. The author of the paper On the Cost of Horse-power in the Royal Agricultural Society of England's Journal, shows clearly from innumerable facts and the best statistics, that by horse-labour (on an average of management and other circumstances) 1 cwt. is drawn 2½ miles for 6*d.*, including every possible item of expense and maintenance of the working force of the farm teams. As horses walk at least 10 miles in ploughing an acre, we allow therefore 2*s.* for each cwt. of draught—that is, 12*s.* per acre is the cost of horse-ploughing in this case. Now, from what we have to detail, it will appear that *none of the steam work cost more* than horse work, but three of the performances was at a very much cheaper rate. In fact, Mr. Beard ploughed (and all the exhibitors were required to work at equal depth) at the rate of 12*s.* per acre, just the cost of horse ploughing; Messrs. Robey and Co., with Chandler and Oliver's apparatus, ploughed at the rate of 8*s.* 4*d.* per acre; Messrs. Eddington ploughed at the rate of 7*s.* 8*d.* per acre; and

Mr. Fowler at the rate of 5*s.* 2*d.* per acre, every source of outlay being included in all the cases.

Mr. Thomas Beard, of Stowe, near Buckingham, is an ingenious farmer who exhibits the same apparatus which has been working on his own occupation. The system is somewhat similar to the Woolston one; the rope, however, being laid out in a rectangular form, with moveable anchored snatch-blocks at the corners at the ends of the work; a double-furrow plough is used in ploughing a ridge or stetch, the rope being unhooked at each end, and the implement run across to the other side by the ploughman or anchor-hole man, with the aid of a little portable windlass, but any implement may be hauled instead. The engine is stationary at one corner of the plot to be cultivated, and a portable windlass with two winding-drums is attached to the end of the engine, and driven by an endless pitch-chain from the crank-shaft. This is an arrangement patented some time ago by Mr. Williams. The ropes are guided in their coiling by a backward and forward screw motion, similar to the one patented by Mr. Massey. There is ingenuity in the contrivances shown; but though a light and low-priced set of machinery, there is a want of mechanical excellence in the construction, the ropes being wound on drums of no more than 2 feet diameter, the snatch-block sheaves are only 18 inches diameter, and the engine driven by means of a 6½-inch pinion and a pitch-chain. The 8-horse double-cylinder engine, manufactured by Mr. Rickett, of Buckingham, was evidently out of order; the small consumption of coal and the small amount of work done indicating this. The ploughing for 1 hour and 28 minutes was at the rate of 3¼ acres in a day of 10 hours, with 5½ cwt. of coal, and taking coal at 1*s.* per cwt., the wages of 4 men and 2 boys, the water-carting, oil, removal, &c., come to 32*s.* per day, or 9*s.* 10*d.* per acre. Adding 20 per cent. on the cost price (with 900 yards of steel rope) 356*l.*, for 200 days in a year, or 7*s.* per day, the total is 39*s.* per day, or 12*s.* per acre.

Chandler and Oliver's machinery consists of a 10-horse double cylinder engine, manufactured by Robey & Co., having two winding drums on the hind wheel axle, one on each side the bridge; the rope passes round six anchored pulleys, and the implement was a 3-furrow balance frame plough. The weight of the engine is 6½ tons without the water or the rope. For travelling it is self-locomotive, with a horse to steer. The ploughing for 2¼ hours was at the rate of 5¼ acres per day, with about 9 cwt. of coal. The expenses, with 4 men and 2 boys, are about 36*s.* per day, or 6*s.* 3*d.* per acre. Add the 20 per centage on the prime cost (with 1200 yards of steel rope) 606*l.*, or 12*s.*, and the total is 48*s.* a day, or 8*s.* 4*d.* per acre.

Mr. Eddington's apparatus consists of two winding windlasses, upon which are mounted bodily two portable engines without any alteration or attachment being required. Two implements are worked, either meeting half-way and returning, or else passing each other midway, and traversing from end to end of the field. Two 3-furrow Fowler's ploughs were used, but excepting for ploughing a land or stetch there is no saving of rope. In one-way ploughing however, if the implements travel from end to end, only half the length of rope is out at once, as compared with that required by Mr. Fowler; but time is lost in shifting the ploughs to another breadth of ground when one work has overtaken the other. The windlasses with their engines are self-locomotive, without horses. Unfortunately Mr. Eddington had to work with two 8-horse single cylinder engines, as his new double cylinder engines did not arrive in time, so that the results in his case are much below the point they would otherwise have attained. The trial in the "light-land" field, for 1 hour and 8 minutes, gave 1 acre 26 perches as the area ploughed, with 201 lbs. of coal; that is, at the rate of 10 acres per day with 5¼ cwt. of coal. The expenses, with 6 men and 2 boys, are about 54*s.* per day, or 5*s.* 5*d.* per acre; add the 20 per centage on the cost of machinery, 1200*l.*, or 23*s.*, and the total cost of the work is 77*s.* per day, or 7*s.* 8*d.* per acre.

Mr. Fowler's 12-horse double cylinder engine, manufactured by Kitson & Hewitson, of Leeds, has alterations since last year in the simpler parts; the toothed gear for the onward motion, new screw-cams for the clutches, a 5-feet drum in two V grooves, two 4-feet sheaves, india-rubber springs for holding up the slack rope, and thus preventing any slipping of the rope on the drum with all the force of this powerful engine; the large travelling wheels with 16-inch broad felloes able to travel farm roads with a horse for steering, though the weight exceeds 8 tons. The balance 4-furrow plough has only one drum for taking up the slack; a self-acting bent lever underneath throws out the left rope into the proper track for the return course, and the ploughs can be set to any width of furrow from 9½ to 12½ inches wide; the rope-porters for the return rope are mounted upon 3 wheels. The engine is constructed for running at 70 lbs. pressure per square inch; but can be safely worked up to a much higher pressure; and during these trials (when the other engines also were made to do their utmost), the pressure and revolutions per minute, as well as the 205 lbs. of coal burnt per hour, indicated that an effective force of more than 30 horses is given out by this engine; which is in accordance with the duty generally performed by the best portable engines, being always fully double the nominal horse-power. The ploughing for 40 minutes was at the rate of 11 acres in a day of 10 hours, with 18 cwt. of coal; the expenses, with 2 men and 2 boys and an extra man for various purposes, are 42*s.* per day, or 3*s.* 10*d.* per acre; add 20 per centage on the prime cost, with 800 yards of steel rope, 780*l.*, or 15*s.* a day, and the total outlay is 57*s.* a day, or 5*s.* 2*d.* an acre.

We include the wear and tear and interest in the sum of 20 per cent. for 200 days in a year; and thus 5*s.* 2*d.* per acre is what it would cost to plough by contract work worth 12*s.* per acre. But the farmer must not reckon anything for wear and tear, &c., because he will have at least half a dozen fewer horses to maintain in efficiency, and thus the saving of 180*l.* a year will meet all that the engine can demand for repairs, interest of capital, &c.; and thus the ploughing is really performed for 3*s.* 10*d.* per acre, while by horses it would cost 12*s.*

On the tremendously difficult "heavy-land" field, where the average draught of a Busby plough, turning a furrow 10 inches by 7, was no less than 12 cwt., and the steam-ploughs had to ascend and descend a long gradient of a steepness ascertained by a surveyor's level to be 1 in 4½, Mr. Fowler ploughed 1⅝ acre at the rate of 11-16ths of an acre per hour, or 6¾ acres per day. Allowing a little extra coal, and for an additional man on the implement, the day's expenses are 44*s.*, or 6*s.* 6*d.* per acre; add the 20 per centage or 15*s.*, and the total cost is 59*s.* per day, or 8*s.* 9*d.* per acre. Farmers present differed in their estimate of the value of the work, some setting it at 24*s.*, others as high as 36*s.*, seeing that 6 horses would be required to do ½ to ⅓ of an acre per day. But taking Mr. Morton's datum of 6*d.* per cwt., we get 24*s.* as the cost of turning four 12 cwt. furrows by horse-power; but the price ought to be set higher than this, because the 6*d.* per cwt. refers to 2 or 3 horse ploughing, whereas a team of 6 horses cannot be yoked to work with such advantage, and 30*s.* per acre is probably nearer to the true value of this heavy work. The steam plough did it for 8*s.* 9*d.*, and though in the farmers' and labourers' hands of course a less acreage would be accomplished per day than at a racing trial, the price must still be less than half the cost by horse labour.

As far as hauling power is concerned, it is clear then that the steam engine is universally superior to animal power, and that the assertions of those who have hitherto denied the possibility of working ploughs economically and profitably by steam power, are utterly groundless and false. As to quality of the work, we have never seen the steam ploughs, either of Fowler or Chandler, make such good work before; Fowler's, indeed, was as straight and well laid as first-class horse work. Then the grubbing with the plough-shares and short prong-breasts in place of the mould-boards was superb; and Chandler's also broke up the ground in beautiful style. Mr. Fowler also trenches with a Cotgreave plough to any reasonable depth desired, making work equal to that of the spade; and he also attaches to his ordinary plough ridge or drill ploughs, throwing the soil up into ridges for winter weathering, or for Turnip or Potato planting.

The amount of work performed by Mr. Chandler's apparatus on this strong land field fell very short, partly owing to the giving way of the anchors, rope &c. Mr. Eddington accomplished the herculean and extremely dangerous task of hauling one of his engines riding a windlass up to the summit of the field; but no value can be attached to a feat which no practical farmer would ever dream of attempting.

In the show-yard is a model by Mr. D. L. Banks of a modification of Mr. Halkett's guide-way system of steam culture, a travelling platform extending a considerable breadth, the guideways being trenches with Grass edges instead of rails. The scheme is impracticable, though perhaps an idea may be gleaned from it for applying Mr. Halkett's advantages without his great permanent outlay.

Mr. Romaine exhibits a model of his rotary steam-cultivator now being manufactured by Messrs. Brown & Way, and a model of his endless railway, which provides a far greater bearing surface for the wheel than Boydell's did, and obviates the difficulties which have hitherto been objections to the use of the endless rail. In a few weeks we may expect the new machine to make its *début*, carrying its own roadway with it and neutralising the effect of its weight on heavy land while performing tillage unsurpassed in efficiency and value.

The work done by Fowler's and Chandler's ploughs on the good lea ground during the week has been of excellent merit, and thousands of visitors on Wednesday and Thursday inspected the performances of these and the other steam-tillage machines, with the greatest interest.

Let us add to the above remarks, that in taking 6*d.* per cwt. drawn 2½ miles as the cost of horse-labour, in order to compare the expense of steam cultivation with that of ordinary ploughing, we do an injustice to the steam-plough in every case but that of ordinary or even light land farming. On clay farms the cost of horse-labour is greater per unit of work done than it is on lighter lands, because whether the number of horses on the former or the latter be the greater in proportion to the work accomplished, yet their individual cost is undoubtedly heavier on the clays. The expense of assurance against accident or death is greater; there is more of awkward work, and the expense of keeping the stock of horses "good" must be heavier. For clay land farmers, therefore, the relative advantage of steam cultivation as regards cost is greater than we have put it, and its relative advantage as regards quality of work is also undoubtedly more obvious and unquestionable.

THE REAPER AND THE MOWER.

The result of the abortive trials on the absurdly light Rye crop is a very wise postponement of the competition until the Wheat crops are ready for the scythe and sickle; and the judges have seen enough to make a selection of three machines for this final contest, which, it must be remarked, is a local affair, and not part of the Society's programme. The three machines are Burgess & Key's M'Cormick, with screw-platform side-delivery in swath; Dray and Co.'s recent improvement of the Champion Hussey, in which the cutters and platform are placed further back, and the platform curved, so that the rake-man can more easily deliver the cut corn in bunches behind the track of the horses out of the way of the next course; and the one-horse machine of Messrs. Cuthbert, of Newton-le-Willows, Yorkshire.

Cuthbert's reaping machine is worked in the same way as Dray's, and the cutters and platform are backward, and a curved piece can be added at pleasure to the back of the platform for side-delivery; so that the rakeman can with ease deliver either behind or by the side as desired. The cutters with 3-inch throw have a slower motion than some, but the triangular knives are more acute in form; the fingers are of peculiar shape, having sharp points, flat vertical sides against which the corn staiks are firmly pressed by the knives; and the slots through which the knives vibrate are wider open backward than at the point, so that the self-clearing from weed, Grass, or straw is effected as efficiently as if the knife were hollowed. The cutters are hung at the connecting rod end, upon an oscillating sling, which saves friction and very much lessens the draught of the machine. The dividing iron is also more elongated than in other reapers. This is certainly a remarkably efficient and yet low-priced machine, and its performances in heavy and lodged crops are highly attested by long use and extensive harvesting.

Mr. Cranston's Wood's reaper is well known. The manner of raking off by hand is well arranged; the lever movement for raising or depressing the frame is ready to hand, and the cutting very complete and clean. The knives are 3 inches long, 4 inches apart, have a 3¼ inch range of vibration, and the crank makes 5 revolutions or 10 cuts in every foot of advance. Cranston's new machine has the addition of a most ingenious self-raking-off mechanism for delivering in sheaf-bundles out of the way of the horses' next round. We say "mechanism," but the contrivance, like so many transatlantic notions, is as remarkable for simplicity as for cleverness. A slit is made round all four sides of the platform, and in or under this lies an endless pitch-chain, extended round four little wheels below the platform. By a very simple arrangement of small mitre-wheels, &c., one of the chain-wheels is driven very directly from the main driving wheel, without complication of parts; and as the machine advances the chain of course keeps running round the platform, though out of sight in its groove. One end of a long rake-bar is connected by a bolt on to this chain, while the other end is passed through an eye in a swivel-pin supported behind the machine at one side on a bracket for the purpose. The motion of the chain causes the rake to sweep across the platform from side to side, draw back the bunch so collected, and deposit it on the ground behind. The bunches we saw made in the light crop experimented upon were very neat and square, but some further improvement is needed before a heavy and tangled crop can be successfully dealt with. There is a small lever which the driver can press with his knees for throwing the automaton rake instantaneously in or out of gear.

The Victoria side-delivery reaper of Mr. Hellard, of Taunton, has two sets of knives, the bottom set fixed, the other vibrating above them with a 3-inch throw—the "creeper" finger guards project with inclines rising backward from their points so as to get under and prise up prostrate straws, while a revolving "wing-roller" immediately behind them still further tends to lift a fallen crop, ready to be delivered by the endless web. There is a moveable stop of compound lever action, for allowing to the corn to collect upon the web in bunches, which are intermittently released for delivery by means of a lever worked by a cam on the main driving wheel. Prentice & Co.'s Harwood reaper has an endless-belt side-delivery; the cutters have a 4-inch throw, the crank making two to three revolutions or four to six cuts for each front advance—the quicker speed being for Grass mowing. One peculiarity is that the cutters are driven by a belt, so that breakages are less liable to arise from choking; there is a "rollicking" wheel following and supporting the machine behind and underneath the middle of the sloping platform; and by a screw motion upon the shafts the frame and cutters are raised or lowered at either end so as to suit ridge and furrow land.

The GRASS MOWER attracted more attention than almost any other class of machines exhibited. The old idea that the cutter-bar must have wheels to support it off the ground is quite exploded; and it having been found how closely the cutters may work to the very

roots of the Grass, and still scape over all ordinary impediments of surface by means of the finger-guards, &c., the problem required solving how to provide for the perfect freedom of movement in the cutter-bar necessary for its accommodating itself to all slopes of surface, whether at right angles to the direction of the machine's progress or in the same line of advance, and yet not interfere with the mechanical movements which transmit motion to the knives. The working of a reaper which will also cut heavy crops of meadow Grass closely is hardly yet brought out; there are several of the reaping-machines able to mow Clover and upstanding hay; so that at present we must be content to buy two machines for the two harvests of a year;* but for a large occupancy of meadow land the price of the Grass-mower is quickly repaid in the extra quantity of hay cut and the other advantages of a perfection of working utterly unattainable by the scythe. The mechanical requirements of which we have spoken are met in Cranston's mower by having a flexible steel cutter-bar attached to the main frame, so as to keep close down upon the surface of the land, as if by the pressure of a spring, whatever may be the position (within certain limits) of the frame, which rides upon two iron driving-wheels of equal size. The pole draws direct from the axle, and the frame is raised or depressed by a lever perfectly independent of the position of the pole, which is continually fluctuating with the motion of the horses in walking. Ratchet boxes enable the machine to be backed without giving motion to the cutters, and either one or both wheels are used for driving. The machine is light and simple in construction, and performed admirably in the field. The price also is low, which is a great recommendation.

Messrs. Burgess and Key exhibit two Grass-mowing machines, and believing one of them to be the best that has yet been produced, while both are in our opinion able to cope with all the various difficulties likely to encounter them in the field, we devote a few lines to a description of their peculiarities. In Wood's machine we see the cutters in a forward position, situated so as to be constantly under the eye of the operator, who can thus observe how the work is going on; but in Burgess and Key's Allen's machine this point is passed over as of little advantage in comparison with another point involved in this question of the position of the cutters. If the knives and fingers come in contact with an obstacle to their progress, what provision is made for their self-relief by rising over the impediment? When the cutters are situated in advance of the main wheel upon the axis of which the frame is balanced, or has its play up and down, there is a downward thrust from the axle, tending to force the cutters upon the ground; and in case of catching an obstacle, they are liable to dig into the land, suddenly arrest the progress of the machine and cause an accident, not the least one being the pitching headlong of the driver from his seat. But when the cutters are situated backward of the main wheel, axis, or fulcrum on which the vertical play of the frame is supported, there is an upward draught of the cutters towards the axle, tending to lift them over opposing obstacles. Consequently, Burgess & Key place their cutting part backward, and if the driver has to watch his work by turning his head, he can the better look out from his forward position for dangers, for hills and holes, and prevent coming in contact with obstructions, by raising the cutters with a lever-movement for the purpose. There is another lever and ratchet motion for backing in order to get an impetus for a fresh start after a stoppage. The driving wheel is of large diameter, 3½ feet, and the whole frame and mechanism is high above the ground; which is found to be necessary in a solid crop, and is of greater importance than having the crank low down for the sake of working in a more direct line with the cutters it has to vibrate. The pole is at perfect liberty vertically, so that the frame of the machine can adapt its position longitudinally to the undulations travelled over. The driving-wheel being in the centre of the frame, an additional wheel is necessary for preserving the equilibrium of the machine; but as over an uneven surface three points (namely, the peripheries of the travelling-wheel and of the main driving-wheel, and the outer end of the cutter-bar) cannot be kept in constant contact with the ground passed over, the near side travelling-wheel is attached to the frame by a spring bracket, which permits it to follow inequalities of ground, and at the same time to exert a slight pressure upon the cutter-bar by tending to urge the frame over toward that side. The driver sits upon a broad box, and by simply changing his position from one side to the other, can give more or less pressure upon the cutters, according to the weight required to keep them down to their work in different crops and circumstances. The triangular knives are peculiarly formed, with a hollow underneath for the purpose of receiving any Grass, hard tough Bents, or other matter liable to cause choking, and thus prevent a jamming between the knife and the finger; it is found that any Grass or weed admitted into the cell under the knife is gradually cut and rubbed to pieces and so expelled. We have seen that Cuthbert secures the same object by slightly opening the slot in the finger backwards, so that any weed or straw drawn into the slot by the knife-blade gradually works backward along the slot, which it finds getting wider and more easily traversed until it finally escapes behind.

In Burgess & Key's new machine, brought out at the present meeting, but only after prolonged and careful trial in the field, a bold stroke has been made, and the cutters entirely delivered from their dependence upon the posture of the frame. For as a meadow must be cut level to the very half-inch, it will not do to allow the driving-wheel to lift the cutter-bar by rolling over eminences some distance out of the course or track of the cutting. The frame is mounted upon a pair of equal-sized travelling wheels; and the cutter-bar is attached by a hinge-joint on a bracket behind, so that lying out at right angles to the advance of the machine it has free play vertically, and follows the incessantly changing transverse slope of the ground without any regard to what may be the relative posture of the main frame. To allow of a tipping or balancing movement of the frame on the carriage-wheel axle, so that the hinge-joint end of the cutter-bar may also have free play up and down, the pole is at liberty vertically, as in the former machine. The travelling or carriage wheels which support the frame may dip into hollows or jump over hills, one may be on a ridge the other in a furrow, but both ends of the cutter-bar lie close to the ground, undisturbed and uninfluenced by any position of the frame of the machine, the action being, in fact, that of a universal joint motion; and any difference in the length of Grass stubble left uncut can arise only from the slight curve of ground in a 1½-feet breadth shaved by a straight knife. Driving the crank from one main wheel has been found to render the cutter liable to stoppage when the wheel passes over hollows, and there are difficulties in the way of gearing from two travelling wheels, so that Burgess & Key have adopted in this new machine a singular mode of obtaining the motion of their cutters (making about 2½ revolutions, or 4½ cuts per front advance, the stroke 5 inches). In addition to the two travelling-wheels, a 3½ feet driving-wheel with broad-ribbed felloe is hung in an inner frame, which can play up and down like a drill coulter, attached by a hinge-joint at its foremost end to the main frame of the machine. Thus the wheel can rise and drop according to the undulations of ground it rolls over, always preserving the same pressure upon the ground and so never slipping. An internal toothed wheel contained within this driving-wheel gears with a pinion, the axis of which coincides with the centre of the hinge joint or fulcrum of the loose inner frame in which this driving-wheel is hung, and by other wheels give motion to the crank. To give the necessary weight for insuring a bite, without slipping, the seat for the operator is erected upon this inner frame, while a steel-yard and weight are added behind, wherever hard cutting renders it necessary. To pack up for travelling, it is simply requisite to raise the inner frame with its driving-wheel, and lift up the cutter-bar. Perhaps this clever machine might be constructed with a less massive framing and lighter working parts; but of course this is a matter to be best ascertained by practical working in the field. The price is the same as that of the former machine.

* This is now the prevalent judgment, but we may state that there is known to us an which 100 acres of Grass have been mowed and 50 acres of corn have been reaped satisfactorily by Cranston's combined mower and reaper, without any expense for repairs during the two years in which this has been done.

THRESHING-MACHINES, CHAFF-CUTTERS, &c.

The trials were committed to the following judges:—

Threshing Machines.—Messrs. John Druce and Brassnett.

Chaff cutters and Mills (hand-power).—Messrs. Hicken and Hopwel.

Chaff-cutters and Mills (power).—Messrs. Fielder, King, and Whittle.

Miscellaneous.—Messrs. John Clarke and W. Tindall.

We add also the list of judges in other departments:

Steam-ploughs and Cultivators.—Mr. Owen (civil engineer), Prof. Wilson, Mr. Owen Willis.

Local Prizes, &c., Reapers, Mowers, Hop Cultivators, &c.—Messrs. T. Aveling, T. Rumball, F. Matthew, H. G. Austen.

Consulting Engineers.—Messrs. Easton & Amos.

The following tables indicate the results of work and power obtained under their inspection;—

OIL-CAKE CRUSHERS BY HAND.

	lb.	Power.
Pick-sley's	..	17,280
Bentall	27	1,000
Smith (Thrapston)	71	9,500
Johnson & Co.	32	1,000

OIL-CAKE CRUSHERS WITH STEAM-POWER.

Conditions—to crush 100 cwt. of cake.

	M. S.	Power.
Bentall	2 4	86,855
Nicholson	1 42	24,470
Smith (Thrapston)	0 50	25,137

TURNIP-CUTTERS WITH STEAM POWER.

Conditions, to cut 200 lbs. of roots in a given time, and with a given power. Tested by the Dynamometer.

	Seconds.	Power.
Barrard & Co.	59	1,000
Picksley & Co.	68	1,000
Goulding	94	1,000
Bentall	96	1,000
Woods	99	1,000
Lambert	126	1,000

CHAFF CUTTERS BY HAND.

Five minutes cutting.

	lbs.		lbs.
Carson	14	Johnson	10
Gardner	Choked	Richmond & Chandler	13
Page & Co.	14½	Picksley & Co.	15

CHAFF CUTTERS BY STEAM POWER.

These machines were tried by three minutes mechanical time of the engine.

	lb.		lb.
Bentall	85½	Richmond & Chandler	61½
Picksley	90	Carson	63½
Gardner	49	Cornes & Sons	51
Plenty & Pain	choked	Ashby & Co.	40
Page	53	Hill & Smith	stopped
Allcock	36½	Cornes, James	45

The trials were conducted in the usual way, the judges taking note of quantities and qualities, special judges recording time and power; and both combining to decide upon the make, durability, and efficiency. We must however delay until next week our detailed report. The space remaining suffices only for notes of the Ploughing Match. The following are the awards for implements as far as known:—

APPLICATION OF STEAM-POWER TO CULTIVATION OF THE SOIL.—1. For applications of steam power to the cultivation of the soil, 100*l*: John Fowler, jun (12-horse set of steam cultivating apparatus), 90*l*.; Robey & Co. (a complete set of patent steam ploughing tackle), 10*l*.

THRESHING-MACHINES.—2. For portable threshing machines to be worked by horse-power, not exceeding that of 6 horses, 20*l*: Wallis & Haslam (4-horse power threshing machine). 3. For portable threshing machines, not exceeding 8-horse power, to be worked by steam power, including any variety that does not profess to do more than prepare the corn for the finishing dressing machine, 60*l*.: P. and H. P. Gibbons, 30*l*.; Edward Humphries, 20*l*.; James Savory, 10*l*.

CHAFF CUTTERS.—4. Chaff-cutters to be worked by steam or horse-power, 10*l*.: Hugh Carson. 5. Chaff-cutters to be worked by hand-power, 10*l*.: James Cornes, 5*l*.; E. H. Bentall, 3*l*.; Richmond & Chandler, 2*l*.

MILLS.—6. For grinding mills and stone grinders, 10*l*.: T. W. Ashby & Co., 5*l*.; J. Tye, 5*l*. 7. For grinding mills with steel grinders, 8*l*.: Hunt & Pickering. 8. For grinding mills with steel grinders by hand-power, 5*l*.: No award. 9. For grinding mills with stone or steel grinders by hand-power, 7*l*.: No award.

CRUSHERS.—10. For Linseed and corn-crushers by steam or horse-power, 5*l*.: E. R. & F. Turner. 11. For Linseed and corn-crushers by hand-power, 5*l*.: E. H. Bentall, 3*l*.; E. R. & F. Turner, 2*l*.

OIL-CAKE BREAKERS.—12. For oil-cake breakers for large and small cake, to be worked by steam or horse-power, 10*l*.: E. H. Bentall, 7*l*.; Dray, Taylor, & Co., 3*l*. 13. For the class of oil-cake-breakers for common cake, for hand-power, 5*l*.: E. H. Bentall, 3*l*.; Hunt & Pickering, 2*l*.

BONE MILLS.—14. For bone mills, 10*l*.: The trustees of Wm. Crosskill, 5*l*.; Do., 5*l*. 15. For bone dust mills, 10*l*.: The trustees of Wm. Crosskill.

TURNIP CUTTERS.—16. For Turnip and root cutters, 10*l*.: Picksley, Sims, & Co., 4*l*.; E. H. Bentall, 4*l*.; Hugh Carson, 2*l*. 17. For root pulpers, 10*l*.: E. H. Bentall, 4*l*.; Barnard, Bishop, & Co., 2*l*.; E. H. Bentall, 2*l*.—10*l*.; Hunt & Pickering, 1*l*.—10*l*.

HAND TOOLS.—18. For hand tools used in Hop grounds and hand tillage, 5*l*.: Spear and Jackson.

FIELD GATES.—19. For field gates, not to exceed 1*l*. 5*s*. in value, 5*l*.: Lord Leigh.

SILVER MEDALS.—E. R. and F. Turner, steam-power portable threshing machine; W. Weeks, apparatus adapted for drying Hops.

HIGHLY COMMENDED.—Busby Agricultural Implement Company, field gate; Hill and Smith, iron vermin proof rick stand; George Foord, Rusthall school desk; the trustees of W. Crosskill, carts and waggons, general collection; J. Warner & Sons, hydraulic pump, &c.; Page & Co., chaff cutter for hand-power; Ashby & Co., oil-cake breaker for hand-power; Picksley, Sims, & Co., 1-horse bone dust mill.

COMMENDED.—Barnard, Bishop, & Barnard, root pulper for hand-power; E. H. Bentall, root slicer for hand power; Hugh Carson chaff-cutter for hand-power; W. M. Cranston, Wood's improved Grass-mowing machine; Thomas Beards, steam engine with windlass attached in a simple and effective manner; Kennan & Son, wire strainer; St. Pancras Iron Works, stable fittings; Cottam & Co., stable fittings; R. H. Crisp, Gutta Percha and India Rubber straps: Thomas Bradford, washing machine; Oldham & Booth, 6-horse power bone mill; Ditto, 4-horse power bone dust mill; Howard, Riches, & Co., patent American washing machines.

THE PLOUGHING MATCH.

The plough trials, which took place on Wednesday, were looked forward to with great interest by many as likely to afford some results by which comparative deductions could be drawn as to the superiority or otherwise of the Kentish turn-wrest or turn-rise plough over that in ordinary use in other parts of the kingdom. But this comparative trial need not have been expected at all, for the wording of the prize conditions expressly excluded all ploughs which did not turn the furrow slice according to the Kentish system of ploughing. The following is the condition:—"For the plough on the turn-rise principle or otherwise, best adapted to turn the furrow-slice according to the Kentish system of ploughing; the depth of the furrow not to be less than 8 inches, 30*l*., 20*l*., and 10*l*." There is little doubt that in order to insure a local interest the Society may have been perfectly justified in thus limiting the nature of the trial; but on the other hand there can be less doubt that had a competitive trial been instituted between this, the Kentish, and other forms of plough, not only would the local but a widely general interest have been secured to the trials. As it is, expectation has been raised only to be disappointed, and rightly or wrongly an impression has gone and is going abroad that this disappointment has arisen through mistake made by the Society—a mistake which will, seeing how many now-a-days are disposed to pick holes in the Society's garments—doubtless be attributed to carelessness of the interests of the agricultural public. Certainly a highly favourable opportunity of instituting comparative observations as to the merits of the two great classes of ploughs has been given, and we regret to add has been unfortunately lost.

But to return to the trials—such as they were—which did take place: the Kentish principle of ploughing is essentially different from that of the swing or wheel plough. As our readers well know, the distinguishing

feature of the plough, as we are accustomed to call that form which is used throughout the kingdom elsewhere than in Kent, is that the furrow-slice is laid up or over at an angle generally of 45°, and presents when thus laid a section representing an oblong, the breadth of which is often 10, and its depth 6 to 7½ inches. The slice thus laid up is moreover unbroken. This unbroken character, however, is obviously greatly modified by the nature of the soil on which the plough operates, but in certain soils ploughed with our crack instruments, as those of Howard, Hornsby, or of Ransome, the furrow-slice is laid over as full, smooth, and unbroken as if cut out and smoothed off on its surface by a knife, or rather as if like a drain tube it were forced through a die. Now in the Kentish plough, the furrow-slice is taken up and lifted completely over, inverting the upper surface and leaving it broken up, forming a partially pulverised surface. The furrow slices turned over by the ordinary plough present an alternate series of sharp angular projections divided by angular hollows, the apices of these angles being reversed; the series of furrow slices made by the Kentish plough, present on the contrary lines of rounded projections, something like—as has been said—a hare's back. But this is not all: in the ordinary mode of ploughing the furrow slices do not lie all in one direction, one series lying in one, the other in contrary directions; whereas in the Kentish system they lie all in one direction, although if necessary the Kentish plough can turn the furrows in different directions also.

The Kentish turn-rise or turn-wrest plough, which thus introduces a novel mode of treating the furrow slices, in its normal or ordinary condition looks to the eye of the observer, accustomed to the trim handy ploughs of our best makers, a peculiarly heavy not to say clumsy and unworkmanlike implement. True, in recent makes, iron has been introduced with marked effect in lessening the weight and improving the workmanlike capabilities of the plough. But in all, the principle involves an outlay of material, which must add to the working expense from the mere force required to give it locomotion independent of that required to turn the furrow. Not prejudiced—or at least not desiring to be prejudiced—either way, we think that a glance at a Howard or a Hornsby's, and on the other side at the best form of a Kentish turn-wrest plough, must convey the idea that for lightness and a general satisfactory look of business the former will bear away the palm. This, however, does not touch the comparative merits of each kind, for the advocates of the Kentish plough stoutly maintain that the agricultural advantages are in far higher ratio than any mechanical loss, indeed, any Kentish man will admit that this loss exists. It is an unfortunate phase which matters have assumed that the practical test required to put these conflicting claims has not been made when so rare an opportunity for doing so presented itself.

The Kentish plough works with two wheels, but these are not connected with the beam in the usual way; one end of the beam rests in a rounded hollow made in a block placed in the upper and central part of the wheel carriage, and the two are maintained in position by draught chains extending from the wheel carriage to the beam a little beyond the coulter. By lengthening or shortening these chains the wheels can be brought nearer to or placed further from the handles as desired. The beam from a point a little before the stilts or handles generally rises at a considerable angle, so that a peculiar and unmistakable appearance is given to the plough. The share is very peculiar, flat, and shaped like a fish-tail, or rather like a mole-catcher's spud; it is connected with the sole or sock of the plough, which presents in outline a rounded or semi-circular appearance; it is small in diameter near the point where the share is attached, but gradually increases in diameter, and it is not placed level, but gradually rises as it approaches the handles; it is made of iron bent, or cast, round and hollow, and is polished or smoothed on the surface. The office of the share and rounded sole is to raise up and pass along the furrow slice to the turn furrow or mould-board as it may be termed. This consists of a narrow board—it is sometimes of iron—narrower at the end nearest the share than at the other; the narrow end is placed close against the side of the sole, or sock, not far from the share, the other being supported by a rod or bar, the end of which passes into a hole in the body of the plough. The board is at a considerable distance at this point from the body, so that it assumes the form of a projecting side wing rising at a considerable angle from the share to the handles, and forming also horizontally a considerable angle with the furrow-side, so to speak, of the plough.

In the ordinary plough — swing or wheel — the mould-board or turn-furrow is a fixture; in the Kentish turn-wrest plough it is moveable, and is in fact removed at the end of each bout; thus on reaching the headland the plough is turned round, the mould-board is taken off and fixed on the opposite side of the plough to that in which it was placed in turning the furrow last made. The plough then works immediately alongside of the last turned furrow, but in a contrary direction, and the furrow made is turned over in the same direction as the last formed one. The mould-board has to be changed then from one side to the opposite at the end of each furrow. Those acquainted with the ordinary mode of setting out a field in ordinary ploughing will at once see the difference between it and the method now explained. This changing of the mould-board at each furrow is obviated in some cases by having two wings or turn-furrows to the plough; these are hinged or jointed at the narrow end near the share, and the wide ends are connected by a bar which passes through a hole in the body; while one is extended and turning over the slice, the other is lying flat against the side of the plough. At the end of the furrow all that is to be done is to push in the one last used, which thus projects the other. This contrivance was exemplified in the field in the plough exhibited by William Henry Eley, of Frondsbury, near Rochester, Kent. The coulter of the Kentish plough is capable of being pointed to either side of the sole, and is kept in its place by a wooden lever. In the plough invented by Mr. G. E. Toomer, and manufactured by Messrs. Drury & Bigglestone, of Canterbury, this adjustment of the coulter is effected by a screw movement, worked by a handle placed within the reach of the ploughman. The same plough exemplifies an improvement in the method of adjusting the rise and fall of the wheels, and in consequence the depth to which the plough works; from the central part of the wheel-carriage two standards rise; they are united at top and bear a central stud or nut through which a vertical screw works; the lower part takes into a nut sliding up and down between the standards according as it is raised or depressed by the screw. This nut has a central aperture, through which the end of the plough beam passes and by which it is carried.

So much for the principal features of the Kentish turn-wrest plough as compared with the ordinary swing or wheel plough.

The field set aside for the trials of the Kentish ploughs (26 in all we believe competed) was in every way unfitted for the occasion. This was anticipated before the trial came off, and the result of the operations on Wednesday morning justified the opinion formed of it. The simple statement is just this:—The whole affair was a complete failure, and nothing, perhaps, can convey a notion of what took place than the graphic words of Stephen in Dickens's "Hard Times," "It wur a' a muddle;" and a "muddle" it assuredly was. The wonder indeed is how the Royal Society, with all the practical talent which it can at any time command, and the wide experience which it has had, should so manage matters as to bring about so discreditable a turn-out, for trial it is folly to call it, as took place on Wednesday morning. The results were positively nothing, the progress nowhere. So complete indeed was the failure, that it was determined to have another series of trials in a field adjoining, and thither, followed by a motley, dusty, thirsty-looking crowd, the various competitors with their implements wound their way. Here matters were a little better conducted, although the trials were not conducted according to our standard. The result, so far as we saw, did not tend in any way to convince us that it would be for the benefit of the agriculturists of other districts to put aside their own form of plough and adopt that of the Kentish men. The following took the prizes: F. B. Elvey, Bowhill, Yalding, first prize of 30*l.*; Isaac Wildash, Darington, second prize of 20*l.*; and Joseph Simmons, Rainham, third prize of 10*l.*

Some lessons of utility may be learnt by the Society from the result of this trial if it pleases to read them aright. Mistakes, if not wilfully, at least unfortunately, have been made of late by those intrusted with its management. If the red-tape fever is contageous it should be remembered that the grumbling eruption is also so; indeed it seems this now hot summer weather time of ours to be breaking out with marvellous rapidity over all the body of the agricultural public, and may ultimately bring about a state of matters anything but favourable to the well-being of the Society. No one would deplore this more than ourselves; we are well aware of the great benefits which the Society has conferred upon agriculturists; indeed it is our high estimate of these which makes us all the more regret that those engaged in directing its councils should seem determined to enter upon and maintain a course which will ultimately lessen its utility and narrow the field of its influence.

It is fitting that the last words of this report should condemn the management of so splendid an opportunity for illustrating to the agriculturists of the locality the performance of our best ploughs alongside of the falure of their own. While we write a paper is put into our hand describing work done at the other end of the island at the meeting of the Royal Cornwall Society, where Howard's ploughs added to their well-known reputation in successfully turning over an old lea of much the same description as that on which the Kentish turn-wrest has failed at Canterbury.

Notices to Correspondents.

ADDRESS: *J J Stewart.* Your letter has been forwarded to Mr. Burcham, but we do not know Mr. Dawes' address.

GRASS LAND: *Subscriber and Landowner.* The Sorrel or Dock enclosed does not necessarily indicate poor land. You had better give it a dressing of lime compost as it is, *i.e.*, without ploughing it up.

THE WATERLOOS: *Correspondent.* We regret our inability to give this week a detailed report of Mr. Bolden's sale, of which a notice was given in our last, prepared just as we were going to press. Meanwhile we correct a typographical error by which the name of Mr. Bowly, of Siddington, near Cirencester, who purchased the highest priced bull sold at Lancaster, was misprinted.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—
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Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."
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LAWES'S PATENT TURNIP MANURE	..	..	..	£6	6
,, SUPERPHOSPHATE OF LIME				6	6
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LAWES'S BARLEY MANURE..	..	..	..	8	0
,, MANGEL MANURE	..	..	..	8	0
,, GRASS MANURE ..	..	..	..	8	0

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Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemica Manures.
American Cakes at market prices.
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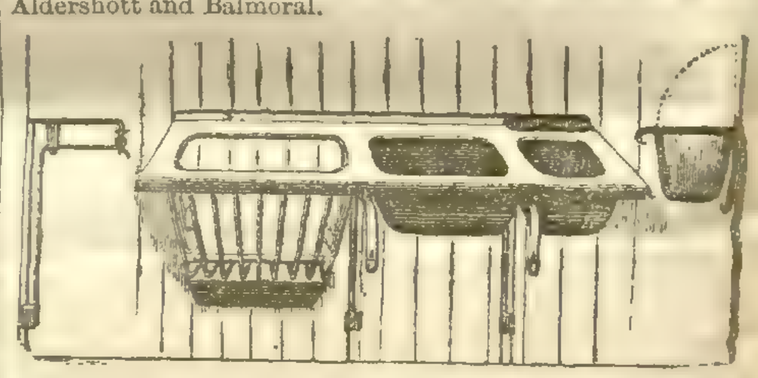

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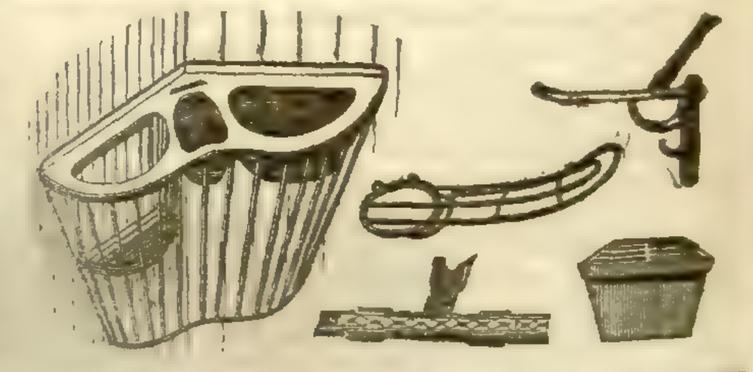

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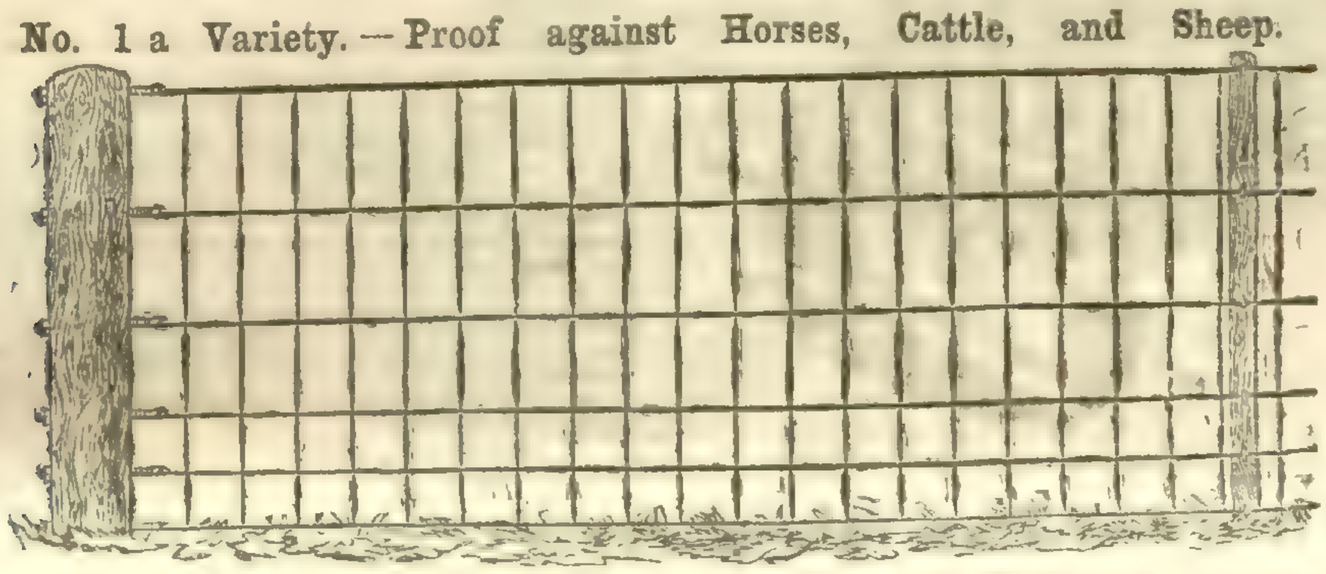

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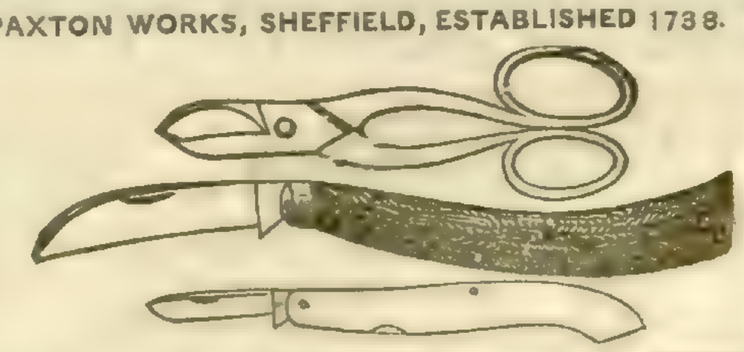

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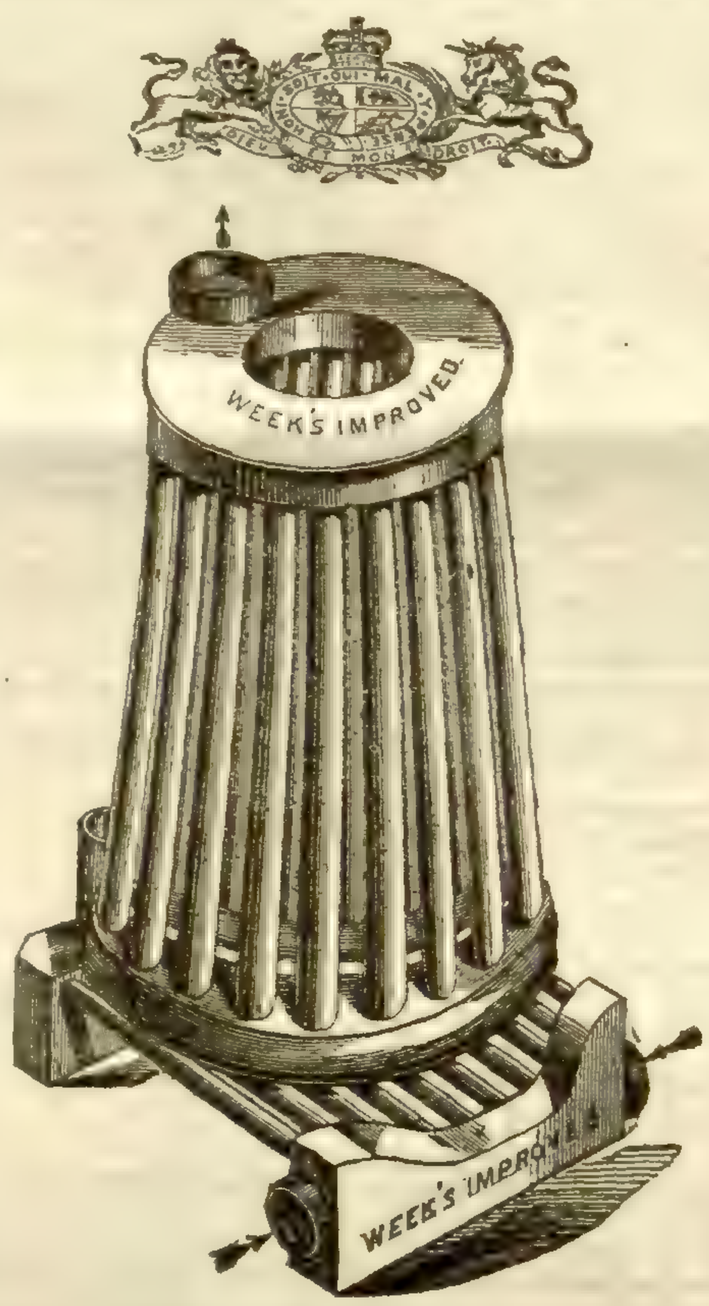
W. C. Boden, Esq., Ruddington, Notts..	3,500

And many others equal in extent; also Mansions, Churches, Chapels, Schools, Drying Rooms, Warehouses, a List of which may be had on application.

J. W. & Co. also manufacture smaller and less expensive Boilers upon the same principle as the ONE-BOILER SYSTEM, ranging in size from Nos. 1 to 6, at prices from 4*l.* and upwards.

J. WEEKS & COMPANY have also the honour of stating that their Fruit Forcing Show Establishment, Chelsea, contains all the most modern improvements of the day in the science of Horticultural Building, Ventilation, and Decoration. Numerous structures of great variety are there erected to facilitate the selection of the Nobility and Gentry who may kindly honour them with their much esteemed patronage.

In many of the above structures is a grand display of splendid Forced Fruits, consisting of PINES, GRAPES, PEACHES, and other delicacies, fully proving the great advantages derived from superior construction and efficient ventilation.



Mark the following TESTIMONIALS:—

From Professor LINDLEY, Ph.D., F.R.S., F.L.S., *Acton Green.*

"SIR,—I accept your tender, dated this day, for fixing your Hot-water Apparatus for me at my residence here. I may add, that everything you have hitherto done, either for myself, or others upon my recommendation, has been so entirely satisfactory in all respects, that I look with perfect confidence to the efficiency of the arrangements now about to be effected."

From Messrs. E. G. HENDERSON & SON, *Wellington Nursery, St. John's Wood.*

"DEAR SIR,—We have great pleasure in testifying to the extreme efficaciousness and economy of the Hot-water Apparatus erected by you in our Houses during the year 1852, and should recommend the same to the notice of any one requiring such."

From CHARLES PAGET, Esq., M.P., *Ruddington, near Nottingham*

"GENTLEMEN,—Your Hot-water Apparatus is working very satisfactorily. Although the Boiler is placed 200 feet from my dwelling-house, it effectually warms the hall and some of the principal apartments, as well as a Conservatory, two Vineries, and a Forcing House. Its consumption of coal is moderate, and economy of labour is very great. It is always quite master ofits work."

From Mr. JOHN SANDERS, *Tedworth, Gardener to* T. ASSHETON SMITH, Esq., *Author of the well-known Book on the Vine.*

[*Extract from a letter in the* Cottage Gardener, *March* 13, 1857.]

"I have had ample opportunity of practically proving the value and capabilities of WEEKS' One-Boiler System, and I unhesitatingly admit that, throughout my experience in the business, I have never met with any Boiler that will approach Messrs. WEEKS & Co.'s in all its various merits. Strongly as it had been recommended to me, it considerably exceeds my expectations, now that I see it in full operation. During the late very severe weather we have been enabled to maintain any degree of heat we required in either or all our 14 houses, containing upwards of 4000 feet of 4-inch pipe, with a most economical supply of fuel and a very inconsiderable amount of labour and attention."

JOHN WEEKS & COMPANY,

Horticultural Builders, Hot-water Apparatus Manufacturers, Engineers, and Ironfounders,

KING'S ROAD, CHELSEA, S.W.

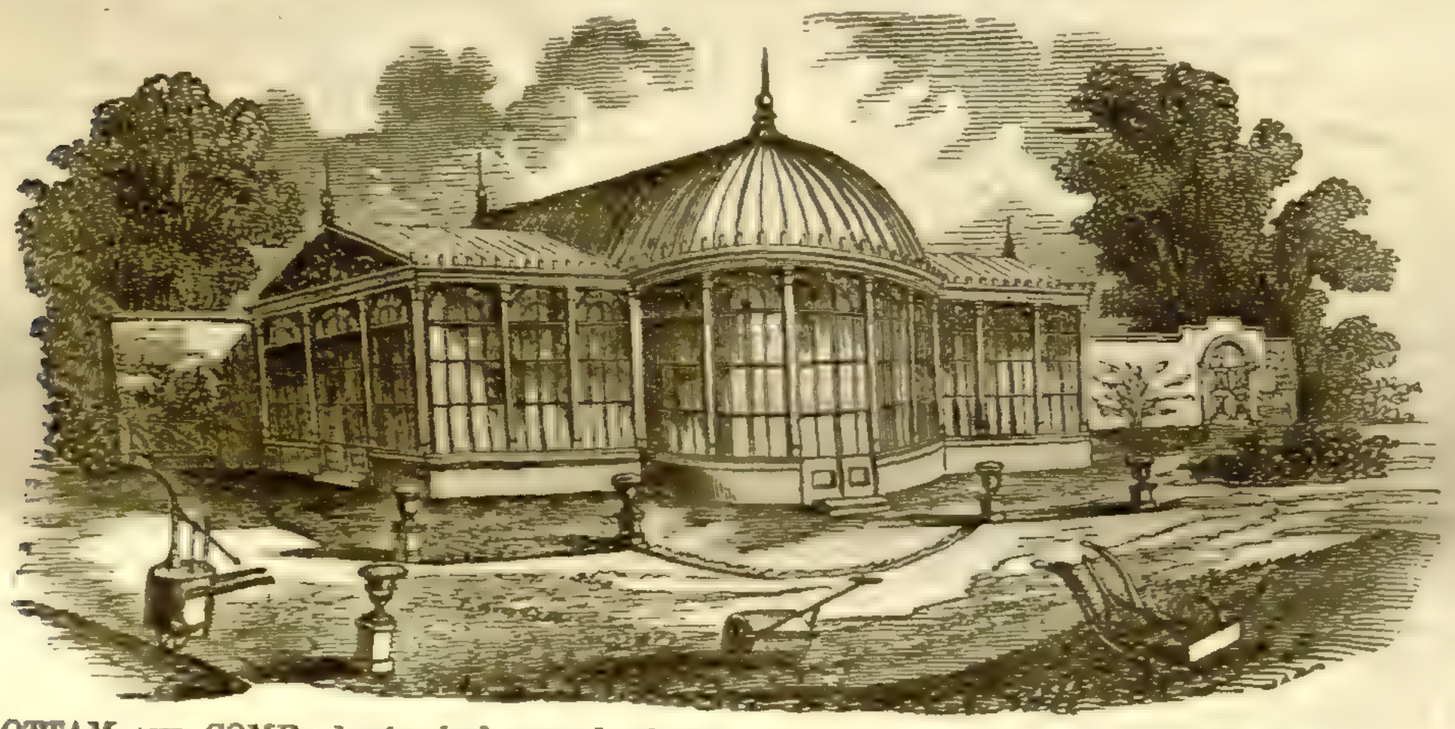
PLANS, ESTIMATES, AND PAMPHLETS FREE ON APPLICATION.

COTTAM & COMPY., Engineers, Founders, &c.,

2, WINSLEY STREET, LONDON, W.

☞ **A SHOW ROOM DEVOTED ENTIRELY TO ARTICLES OF HORTICULTURE.**

THE NEW ILLUSTRATED CATALOGUE UPON APPLICATION.



COTTAM AND COMPY. having had upwards of 40 years' experience in the arrangement and construction of every description HORTICULTURAL BUILDINGS AND HEATING BY THE CIRCULATION OF HOT WATER, and well qualified to guarantee the perfect execution of any works intrusted to them in the erection of

Conservatories	Summer Temples	Orchid Houses	Apricot and Peach Houses
Conservatory or Glass Walls for the protection of plants or ripening wall fruit	Arbours, &c.	Conservatories for Window or Balcony Gardening	Tropical Fruit Houses
	Greenhouses	Vineries	Forcing Pits and Frames
	Orangeries		Cucumber and Melon Houses

☞ *Drawing and Estimates free upon application.*

EXHIBITION PRIZE MEDAL GATES AND STABLE FITTINGS.

Iron Hurdles, Strained Wire Fencing, Game Netting, &c.

Every description of Plain, Ornamental, Cast and Wrought Iron, and Wire Work

SEE SEPARATE LISTS UPON APPLICATION.

COTTAM & COMPY., Iron Works, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon).

WEST OF ENGLAND, IRELAND, AND WALES.

VINCENT SKINNER (*late Partner with* J. Weeks & Co.), erects CONSERVATORIES, HOT-HOUSES, and HOT-WATER APPARATUS to warm Churches, Hothouses, &c., and has foremen from London to superintend their construction. Upright Pipe Boilers, Plans, and Estimates.—V. SKINNER, Bridewell Street, Bristol.

BY ROYAL LETTERS PATENT.

T. G. MESSENGER, HORTICULTURAL BUILDER, PATENT HOT-WATER APPARATUS MANUFACTURER, &c., Loughborough, begs respectfully to call the attention of the Nobility, Gentry, Nurserymen, &c., to his Patented Divisionless Horticultural Erections and Mode for Ventilating same. A Model Erection, showing these as well as many other improvements, sent carriage free to any gentleman requiring the same. Also an Illustrated Price List of his Garden Engine, which is cheaper than any other. T. G. MESSENGER'S Boiler is now at work at many gentlemen's seats in the country, giving the utmost satisfaction.

T. G. M.'s perfect and simple Hot-water Valve, 4 in., 22*s.*; 3 in., 18*s.* 6*d.* Plans, Estimates, &c., sent upon application.

HOT-WATER APPARATUS.

J. JONES begs to offer a complete HOT-WATER APPARATUS FOR GREENHOUSES, at the following prices, delivered ree to any Railway Station in England:—

Size of House.	With Cylinder Boiler.	With Saddle Boiler
20 feet by 10 feet ..	£8 10 0 ..	£9 0 0
25 ,, by 12 ,, ..	10 0 0 ..	10 10 0
30 ,, by 12 ,, ..	11 10 0 ..	12 0 0
30 ,, by 15 ,, ..	13 10 0 ..	14 10 0
40 ,, by 15 ,, ..	16 10 0 ..	17 10 0
50 ,, by 15 ,, ..	18 10 0 ..	20 0 0

The above prices include Boiler, strong Furnace Doors, Bars, Soot Doors, Cistern, Damper, Hot-water Pipes and Connections, Air Pipes, &c., all ready for fixing, and of the best quality. Further particulars will be sent on application. Parties ordering must send plans, showing doorways, position of boiler, &c.—J. JONES, Hot-water Apparatus Manufacturer, 6, Bankside, Southwark, London, S.E.

GREENHOUSES.

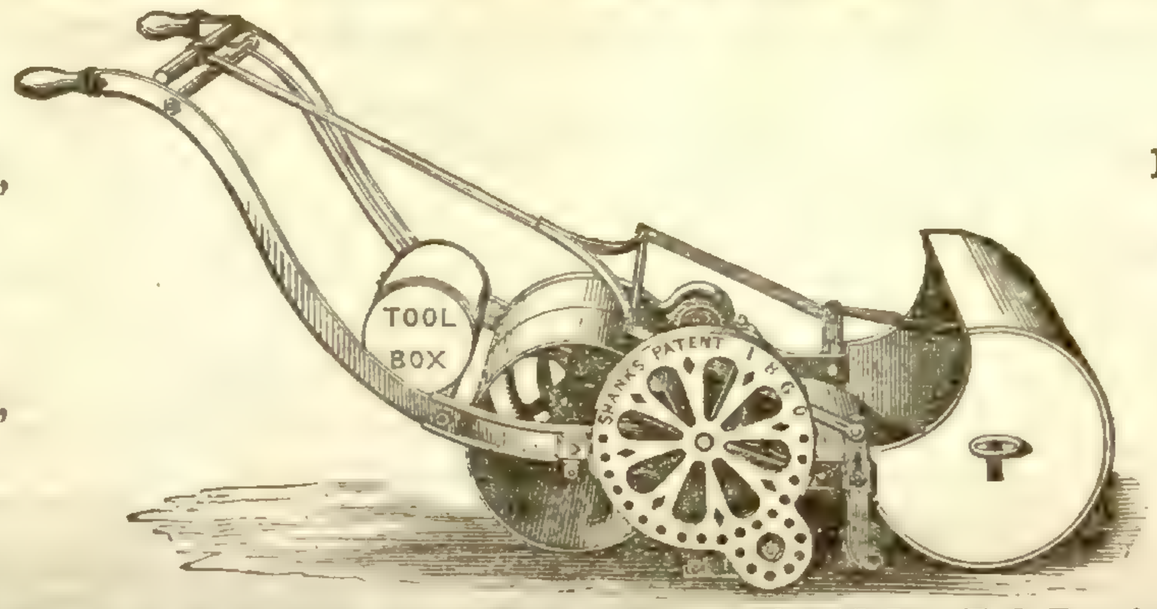
HENRY FREEMAN, HOTHOUSE BUILDER and HOT-WATER APPARATUS MANUFACTURER, Triangle, Hackney, N.E., Established 20 years. Good substantially-built Greenhouses, fixed in any part of the Kingdom, for cash, 42 feet long by 13 feet, 90*l.*; 21 feet by 13 feet, 50*l.*; 12½ feet by 10 feet, 30*l.* A first-rate Conservatory, 30 feet by 16 feet, 130*l.* A large assortment kept.

SHANKS' NEW PATENT LAWN MOWING, ROLLING, COLLECTING, AND DELIVERING MACHINE FOR 1860

MOWS the GRASS WET or DRY,

ON

LAWNS UNEVEN or OTHERWISE,



In a MUCH NEATER MANNER

than the SCYTHE,

and at HALF the EXPENSE.

NEW PATENT HAND MACHINE FOR 1860

PRICES.

SHANKS' NEW PATENT HORSE MACHINE.

Including Box of Tools for Sharpening, &c., and Directions.

Width of Cutter.		
No. 1.—48-inch Machine	£28 0 0	*Drawn by a Horse.*
No. 2.—42-inch Machine	26 0 0	
No. 3.—36-inch Machine ...	£22 0 0	*Drawn by a Horse.*
No. 4.—30-inch Machine ...	19 0 0	*Drawn by a Horse or a strong Pony*

SHANKS' PATENT PONY AND DONKEY MACHINES.

Including Box of Tools for Sharpening, &c., and Directions.

No. 5.—30-inch Machine . £15 15 *Drawn by a Pony* | No. 6.—28-inch Machine . £14 10 *Drawn by a Pony* | No. 7.—25-inch Machine, £12 10 *Drawn by a Donkey*

SHANKS' NEW PATENT HAND MACHINES, FOR PUSHING OR DRAWING SEPARATELY OR TOGETHER.

Including Box of Tools for Sharpening, &c., and Directions.

No. 8.—24-inch Machine	£8 17 6	*Easily worked by Two Men*
No. 9.—22-inch Machine	8 7 6	
No. 10.—19-inch Machine... ...	£7 12 6	*Easily worked by a Man and Boy*
No. 11.—16-inch Machine... ...	6 17 6	*Easily worked by a Man*
No. 12.—13-inch Machine...	£6 2 6	*Easily worked by a Boy*

The Patent Delivering Apparatus if attached to the Hand Machines, and they are strongly recommended to be so, 20s. extra.

SHANKS' PATENT HAND MACHINE, FOR DRAWING ONLY.

Including Box of Tools for Sharpening, &c., and Directions.

No. 13.—22-inch Machine ... £7 5 0 *Easily worked by a Man and Boy* | No. 14.—19-inch Machine ... £6 15 0 *Easily worked by a Man and Boy*

No. 15.—16-inch Machine ... ... £6 5 0 *Easily worked by a Man*

☞ The SHANKS' NEW PATENT MACHINE FOR 1860 has just been awarded the FIRST PRIZE SILVER MEDAL of the Royal Dublin Society at their Exhibition of Horticultural Implements, &c., held at Dublin last month.

***** The Machines are warranted to give ample satisfaction, and if not approved of they may be at once returned.**

The Prices include delivery at most of the Railway Stations throughout the Kingdom.

SOLE AGENTS FOR LONDON

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

PATENT LAWN MOWING AND ROLLING MACHINES.

30-inch wide PONY POWER MACHINE, made also of Smaller Sizes for Hand Power.

B. SAMUELSON'S LAWN MOWERS,

WITH BOYD'S PATENT IMPROVEMENTS,

CAN BE USED IN WET AS WELL AS DRY WEATHER.

LAST YEAR'S SALES WERE NEARLY A THOUSAND, EVERY ONE OF WHICH GAVE THE GREATEST SATISFACTION.

TESTIMONIALS expressing such satisfaction have been kindly sent by some hundreds of the purchasers to the Manufacturer, who will be glad to forward a copy with description and prices of Machines post free on receipt of application.

London Warehouse: 76, Cannon Street, West, E.C. Manufactory: Britannia Works, Banbury.

TO BE HAD OF DEANE & CO., LONDON BRIDGE, E.C., AND ALL IRONMONGERS.

JOHN BELL'S COMPOSITION FOR DESTROYING MILDEW ON VINES, PEACH, AND NECTARINE TREES, and every other plant subject to this pest.

Sold in Bottles, 1s. 6d., 2s. 6d., and 5s. each. A 1s. 6d. Bottle is sufficient to make 10 gallons. 2s. 6d. do. 20 gallons, and 5s. do. 50 gallons fit for use.—10 & 11, Exchange Street, Norwich.

NURSERYMEN supplied with the best genuine TOBACCO PAPER at 4d. per Cwt., 2L per Half Cwt. Any quantity less than Half a Cwt., 10d. per lb. The above article is warranted genuine. Terms Cash.—Address, TOM BRYANT, Wm. Jackson & Sons, Tobacco Manufacturers, Leeds.

KEEP YOUR PREMISES FREE FROM MICE AND SPARROWS.

BARBER'S POISONED WHEAT kills them (only) on the spot. In 1d., 2d., 4d., and 8d. packets.—W. SUTTON & Co., 10, Bow Churchyard, London, E.C. Agents. Sold by all Druggists, &c., throughout the Kingdom. Works: Ipswich.

PAGE'S COMPOSITION FOR THE DESTRUCTION OF BLIGHT upon Roses, Wall-fruit Trees, Cucumbers, Melons, Vines, Stove and Greenhouse Plants, has stood the test of eight years' public trial, and its great success has led to numerous imitations. Dr. Lindley, in his leading article of October 25, 1856, reported 182 cases in its favour—sufficient to convince the most sceptical.

4s. per gallon, (sufficient to make four fit for use).
10 gallons and upwards, Carriage paid to London.

LONDON AGENTS:—
Henderson & Co., Pine-apple Place, W.
Hooper & Co., Covent Garden, W.C.
Mr. Veitch, King's Road, Chelsea, S.W.
Mr. Clark, Streatham Place, Brixton Hill, S.
Mr. Barnes, Camden Nursery, Camberwell, S.
Mr. Hopgood, Shepherd's Bush, W.
Cutbush & Sons, Highgate Nursery, N.

and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

GISHURST COMPOUND,
PATENTED,
FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN
AMERICAN BLIGHT	ANTS	FLY

BED BUGS, &c.,
And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens
Messrs. Rollisson & Sons, Tooting, S.
F. & A. Dickson & Sons, Chester.

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1s. for first trials and small uses, such as destroying bed bugs; 3s. for not large gardens; 10s. 6d. for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch Gentlemen desirous of receiving instruction in Chemica Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
LAWES'S BARLEY MANURE..	8	0
" MANGEL MANURE	8	0
" GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemica Manures.

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

NEW SEEDS OF
CHOICE CALCEOLARIA, CINERARIA,
and fine-fringed CHINESE PRIMULA.

SUTTON & SONS

are now ready to supply new Seed of the above in packets of 1s., 2s. 6d., and 5s. each, all equally fine.

SUTTON & SONS, ROYAL BERKS ESTABLISHMENT, READING.

JAMES CARTER & CO.

BEG LEAVE TO OFFER THE FOLLOWING

CHOICE SEEDS FOR PRESENT SOWING.

CARNATION, 12 choicest varieties, BIZARRE, 10 seeds of each	3s.	6d.	PICOTEE, extra fine, mixed	2s.	6d.
Do. do. FAMEUSE, do.	4	0	" PERPETUAL	2	6
Do. do. FLAKE, do.	3	6	HOLLYHOCK, 12 choice prize varieties	5	0
Do. do. YELLOW BIZARRE and SELF, do.	4	0	" splendid mixed	1	0
Do. do. YELLOW FLAKE do. ..	4	0	PERENNIAL PHLOX, 12 newest varieties	3	6
PICOTEES, 12 choicest vars., WHITE GROUNDS, do.	3	0	" finest mixed	1	0
" " YELLOW GROUNDS, do.	4	0	WALLFLOWER, 12 double German varieties	2	6
" " WHITE MARGINED, do.	3	6	" double German mixed	1	0
PERPETUAL CARNATIONS, do. FANCY, do. ..	3	6	HEARTSEASE, extra choice	1	0
" " do. FLAKE, do. ..	3	6	PELARGONIUM, extra choice show and fancy vars.	1	0
" " do. BIZARRE, do. ..	3	6	ANTIRRHINUM, finest mixed	0	6
" PICOTEES do. do. ..	3	6	PENTSTEMON, finest mixed	0	6
CARNATION, extra fine, mixed	2	6	CALCEOLARIA, extra choice, spotted and blotched ..	1	0
" PERPETUAL, do.	2	6	CINERARIA, large flowered, brilliant colours, and great variety	1	0
			PRIMULA, finest fringed	1	0

☞ For other Perennials for present sowing, and directions for cultivation of the same, see CARTER'S "GARDENERS' VADE MECUM," which will be forwarded post free on application to

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, London, W.C.

PARMENTER'S PATENT PREPARATION
For Destroying Mealy Bug, Red Spider, Thrip, Scale, Aphis, and other Insects, also Mildew on Vines, Fruit Trees, and Plants of all descriptions.

JAMES CARTER & CO.,

IN offering the above Preparation, are fully aware that they are fulfilling a duty of considerable importance both to themselves and the Public, as it is well known that many preparations have been previously offered and recommended as sure and safe remedies against the above-mentioned pests, and have on impartial trial proved either totally ineffective, or destructive to the lives of many valuable Plants.

Although J. C. & Co. have had incontestable evidence of the efficacy of Parmenter's Patent Preparation, yet they did not on their own experience alone feel justified in recommending to the Public, but desired still more convincing proof. In the furtherance of this object J. C. & Co. sent some of the Preparation to several of the leading Nurserymen and largest private establishments in the United Kingdom, requesting at the same time a searching, thorough, and impartial trial, the results of which will be duly published. The following is the report of a series of careful and elaborate experiments by the eminent Nursery Firm of Messrs. E. G. Henderson & Son:—

PARMENTER'S PREPARATION.—We find this Compound effectual for the destruction of *White Bug* and *Scale* on leaves of a Laurel-like texture, such as *Daphne, Nerium, Jasmine, Enkianthus, Rhododendrons, Thibaudias*, &c., in the greenhouse, and such as *Ixora, Croton, Franciscea, Gardenia, Jasmine, Magnolia, Portlandia, Stephanotis*, &c., in the hothouse, when dipped in a thin paste-like liquid, and applied with a brush into the inward axillary joints: after thus remaining on the plant 48 hours, it is thoroughly cleansed off by a vigorous syringing. When applied to plants within a cool genial greenhouse temperature, *it emits no offensive odour* (as in the Gishurst Compound), and is efficacious without injury to the plants. On plants of *Jasminum grandiflorum*, recently imported from the Continent, and completely covered with *Scale*, and on *Ardisia crenulata*, much infested with the *White Bug*, THE PREPARATION AS DESCRIBED WAS VERY SATISFACTORY. It also appears effectual in destroying and checking the *Red Spider* and *Thrip*, by immersing the branches once or twice in a thinner solution of the Preparation.

On plants with leaves of a less leathery and more porous texture and thin and pulpless, the Preparation cannot be applied sufficiently strong *at one immersion* to destroy the White Bug or Scale (the most difficult of all plant insects to destroy) without injury to the plants; therefore it should be made in a weaker solution, and applied with a soft brush or sponge to the infected parts, remaining on 24 or 48 hours as before. For the continual cleanliness of the plants, a solution of the Preparation in pure water for occasional syringing will be found very beneficial and act as a *check and preventative*. In the destruction of the *White Bug* and *Brown Scale* upon the class of plants first referred to, *Parmenter's Preparation* was found *more effectual* than the *Gishurst Compound*. In its application the following directions may be deemed safe:—

1st. The strength of the application, without injury, will be in proportion to the thick coriaceous or leathery texture of the leaves, their dormant condition or rest from growth, and *vice versâ*.

2nd. The injury arising from its undue application will be in proportion to its action on the soft and delicate cellular tissue of the plants, whether in a growing condition or not, but most injurious in the former.

3rd. As a general rule, plants of the strongest and most robust growth will require it to be applied of the consistency of thin paste-like liquid.

4th. Plants of the soft-stemmed class, whether heavy or smooth, will require its application by immersion in a mixture proportionately diluted to suit the texture of the plants.

Extract from a letter received from Mr. THOMAS RIVERS, *Author of "The Orchard House," the Nurseries, Sawbridgeworth, Herts.*

"ONE APPLICATION OF THE COMPOSITION UNDILUTED TO SOME ORANGE TREES INFESTED WITH THE BROWN SCALE EFFECTUALLY DESTROYED IT; *a small painters' brush was used in applying it.*"

Extract from a letter received from Mr. SUMMERS, *Gardener to A. Mongredien, Esq., Sydenham, "the raiser of Spergula pilifera:"*—

"WITH RESPECT TO THE DESTRUCTION OF INSECT LIFE, ESPECIALLY OF THE SPECIES AND VARIETIES OF COCCUS, WE THINK IT FAR SUPERIOR TO THE GISHURST COMPOUND, AND IT LACKS THE VERY DISAGREEABLE SMELL OF THE LATTER."

Price 2s. and 3s. 6d. per Bottle; Stone Jars, 10s. 6d. each.

To be had of all the principal Nurserymen and Seedsmen throughout the United Kingdom, and Wholesale and Retail from

JAMES CARTER & CO. (Sole Proprietors), 237 and 238, High Holborn, W.C.

PLANTS OF CABBAGE, SAVOY, KALE, BROCCOLI, CAULIFLOWER, AND CELERY.

JOHN CATTELL begs respectfully to inform the public that he has a plentiful supply of Plants of the above superior true sorts, which he will forward to order on receipt of postage stamps or Post-office Order, made payable here, at the following prices, package included:—All the sorts of Early Cabbage, Savoy and Kale, including Brussels Sprouts, 6*d.* per 100; 4*s.* 6*d.* per 1000. All the sorts of Autumn and Spring Broccoli, 8*d.* per 100; 5*s.* 6*d.* per 1000. Early and Late Cauliflower and Red Pickling Cabbage, 10*d.* per 100. Bedded Celery, 8*d.* per 100; 5*s.* 6*d.* per 1000. Drumhead or Cattle Cabbage, 3*s.* 6*d.* per 1000. Packages containing plants to the value of 1*l.* and upwards will be delivered carriage free to London, Croydon, and the Edenbridge Station of the South-Eastern Railway.

Seed of Cattell's Reliance Cabbage may be had free by post at 1*s.* per packet, containing half an ounce.

Nursery and Seed Establishment, Westerham, Kent.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY

BEING ABOUT TO RESUME THE

IMPORTATION OF SEEDS AND PLANTS

by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

The Gardeners' Chronicle.

SATURDAY, JULY 21, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	July	24	Horticultural (Election of Fellows and Ballot for Plants) South Kensington	1 P.M.
THURSDAY,	—	26	Horticultural (Floral Committee) at St. Martin's Place	Noon

THE two main supplies of timber to our dockyards are from the different species of Oak and Indian Teak, though there are others, as Green Heart, African Teak, Mahogany, &c., which are of great importance, especially the first, which is every day gaining a higher reputation and more extensive use. Our own forests supply only a small proportion of the wood consumed for the purposes of the navy; probably not more than one-tenth, and after all that can be contributed by different species of Oak from the countries on the Baltic, Italy, and America, a very large margin is still left for other kinds of wood, without taking into consideration the various materials which cannot be considered as entering into the framework of the ship, or into those parts on which the stability of the structure depends.

The supply from our own forests of Oak trees, especially crooks adapted for shipbuilding, is daily diminishing. The Government forests under a better system of management might have done much; but so long as the system of lopping and snagging was prevalent, and the different offices were considered as rewards for political services, what could be expected beyond what would have been a complete "work of waste and ruin" in any private estate?

But little of the first-class Baltic Oak which used to be so much in fashion from its excellent qualities for wainscoting and other work which required the finest materials, is now imported into this country. The Memel Oak resembles very much in quality and rapidity of growth that of *Quercus sessiliflora*, and is possibly supplied by the same species. The Italian Oak is of first-rate quality, and is, we believe, supplied principally by *Quercus æsculus*. At least, all the Oaks which sprang under our own observation from a large collection of Acorns sent from different Oak-growing districts of Italy appeared referrible to this species, though there was considerable difference in the foliage. Many of these Oaks have been planted out in the neighbouring woods, but they are too tender for the cold clays of the Midland counties. A few specimens of about 18 years' growth remain in the nursery, and are healthy, but it does not seem probable that they can ever be thoroughly acclimated in this country, so as to replace the supply from Italy, except possibly in favourable soils in the southern counties. This matter is of the greater importance as we have heard that there has been some proposition for planting Italian acorns on a large scale in some of our forests, of the result of which we are very doubtful.

Of the American Oaks, the White Oak and Live Oak are the only species which seem of much importance, and the former is so liable to warp or split that its value is much impaired. Many ships, however, are built of the two in America, the White Oak being used principally in the lower parts, and the Live Oak in the upper. The Turkey Oak, which is of rapid growth, and sometimes forms large trees in this country, is in some respects useful, but it is so impatient of damp that its merits for shipbuilding are not of a high order.

All the Oaks are subject to the growth of Fungi, and require good seasoning, perfect caulking, and reasonable ventilation to secure the wood from dry rot and decay. From their great compactness they are not so readily injected with chemical fluids as the softer woods, but if the necessary conditions are secured for the prevention of decay, the employment in the first instance of antiseptics may be reasonably dispensed with.

Oak is occasionally attacked by large larvæ which eat into the heart, but not to such an extent as to make the matter of much importance. Now and then a tree will be found cupped or shaky, a condition which cannot always be determined till the logs are sawed up. There is moreover a tendency in the process of seasoning to split from the centre to the circumference, but this is seldom of much practical inconvenience as the general tenacity is not seriously impaired. If, however, water gains admission, doubtless the consequent evils are much increased by the penetration of the fluid into the heart of the log, encouraging the growth of Fungi; or decomposition, which is almost as fatal. There is however no help for this; and the main point, therefore, is to render all as watertight as possible.

The second timber which we mentioned as of primary importance is Indian Teak, which has the great merit of being almost free from Fungi, even if water is accidentally admitted.

The Bombay for example, which was built in 1832, and is now at Chatham, for the purpose of being converted into a steamer, has not a trace of Fungus, so far as we could see, where the planking had been removed. It is not indeed to be supposed that all Teak is equally free. We have, for example, seen Moulmein Teak in one of the gunboats sound on the outside but affected with dry rot and decay within. This, however, is not common, though the Moulmein Teak is by no means equal in quality to that of Malabar, of which the Bombay was constructed.

The importance of encouraging the increase of Teak-built ships was recognised as much as 50 years ago, though there was serious opposition arising from interested parties on the ground of impolicy in employing Indian built ships in the trade of the East Indian Company. In the "Quarterly Review," of October, 1813, it is stated expressly: "Our immediate reliance for relief must rest chiefly on the Teak of India," and the real value of the supply has been duly appreciated ever since, though unfortunately all has not been done that might have been effected towards securing a permanent supply. The most valid objection to the use of Teak is its tendency to splinter in action, and the virulent character of the wounds caused by the splinters. Authorities, however, are not agreed upon this tendency, and it has been suggested to us by a scientific friend that, supposing it to exist, it might be greatly modified by the use of a Gutta Percha lining instead of felt.

Whether this plan, however, is practicable or not, the wisdom of encouraging the growth of Teak is so evident, especially in the Indian Peninsula, where its quality far surpasses that of Moulmein or the neighbouring districts that a few notes on the subject will not be considered out of place. "Teak is a tree of rapid growth when placed in a favourable soil. The first year the seedling attains the height of 12 inches, throwing out two large leaves. The second year it springs up to the height of 3 or 4 feet, after which it goes on increasing rapidly, and bears seed in the eighth year of its growth when it has attained a height of 25 feet or upwards. It is for the first four or five years, while the plants are liable to suffocation from long Grass and Bamboos, that cultivation is most requisite till they have secured possession of the ground. After that, all that is necessary is to protect the forest from fire and the unlicensed use of the axe. Where no accidents occur Teak will attain its full size in about 50 years. There is however, a difference in different countries. In Malabar about 60 years are requisite."

The reckless way in which the Teak forests of Moulmein were devastated by injudicious cutting, and the sacrifice of thousands of loads of valuable timber up to 1848, at length attracted the attention of the Indian Government, and a system of duties was established with a view to check the increasing evil. The Moulmein forests were indeed on the eve of exhaustion, therefore little good could be effected by the code of regulations, which was proposed too late for any effectual purposes, though 27 years before a system had been suggested for the conservancy of other Teak provinces. The importance of the Teak districts of Pegu fixed itself on the notice of the Government, and it was accordingly proposed to place them under the same regulations with those adopted for Moulmein in 1848; and with a view to render them more effective, Dr. MACCLELLAND was appointed as officiating Superintendent of the Forests of Pegu, with instructions to obtain every possible information. Captain PHAYRE, the Commissioner of Pegu, was instructed to be guided by the general principles under which the Travancore forests are cut and replenished by nurseries; the investigation therefore necessarily comprised an inquiry into the habits of the Teak and the possibility of its culture. The results of Dr. MACCLELLAND's inquiries are comprised in two long reports, one on the Southern Forests of Pegu, the other on the Sitang and other Teak forests of that country; and the latter contains a detailed account not only of other kinds of timber produced by the forests but of plants producing fibres, spices, gums, gum-resin, oil, and dyes, whether native or cultivated, added to which are lists of plants cultivated for food and other purposes.

The Teak in the Pegu forests, as in those of Travancore, grows either scattered or in groups, but never forms large continuous forests, or forests in which it is the predominating wood. The seedlings though they attain a height of a foot the first year are easily smothered, which accounts for their rarity in certain localities, as the seeds germinate very readily, but when they have got over the first four or five years they grow so rapidly that nothing materially injures them. They grow mostly in deep grey sandy soil, forming a deep deposit 10 feet in thickness resting on laterite, an unstratified deposit of uncertain depth or thickness lying on slate-clay and sandstones filling up depressions and folding round the base of the higher hills, forming an undulating dry hilly tract of country some miles in breadth, extending round the foot of the mountains, and always covered with tree jungle. The lower lands, extending along the course of the creeks and rivers, consist of rich plains and valleys composed of river deposits resting on laterite. It is here alone that water is procurable in the dry season, and where the chief population of the country is assembled. The water is obtained from wells penetrating down through the alluvial deposits to the laterite, and is generally of a whitish colour derived from the fine soluble white clay of which the upper bed of laterite chiefly consists, but is, notwithstanding the colour, quite wholesome.

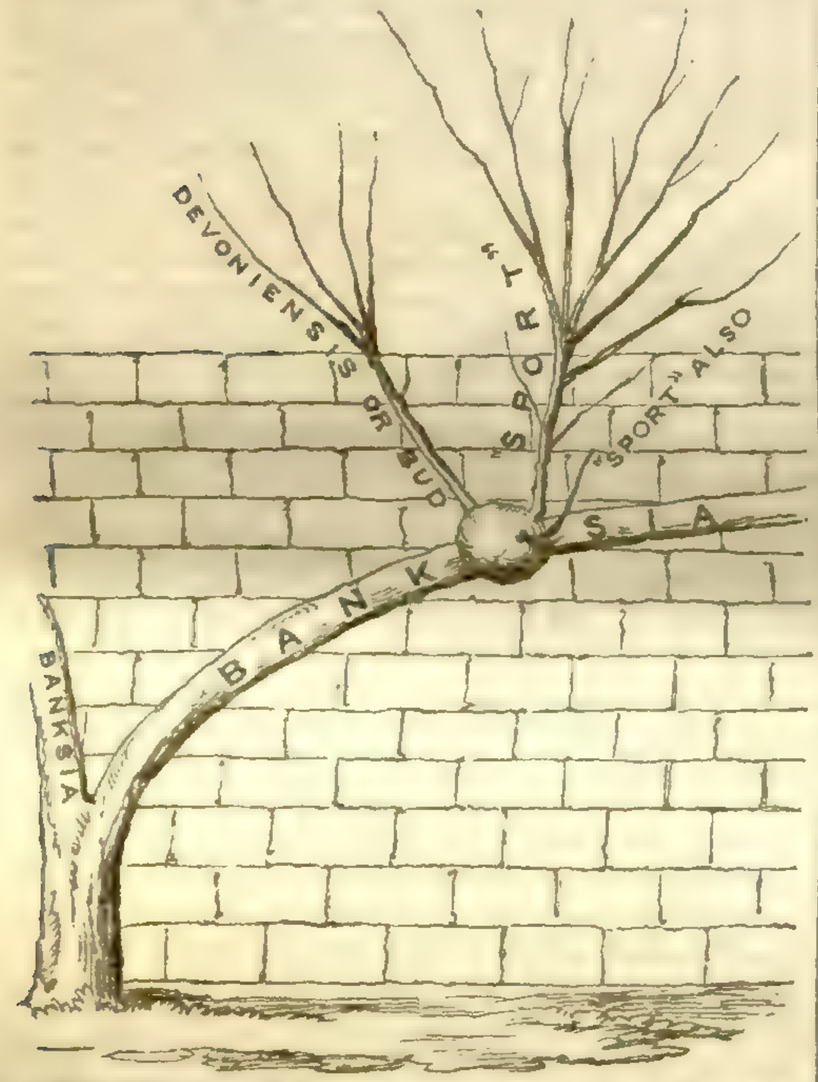
The Teak districts are thinly peopled, and are completely without roads. They are intersected however in every direction with ravines, which in the rainy season contain as many torrents down which the trees can be floated. A mode of cultivation is employed in the hill districts which is extremely injurious to the Teak forests. This is known in Pegu and other provinces under the name of Toungyas, which, according to Dr. MACCLELLAND, signified that the same ground cannot be cultivated twice in the same generation. A portion of the forest is cleared to the extent of 40 or 50 acres; sometimes much more. The timber, being felled indiscriminately in the early part of the dry season, lies exposed to a scorching sun, until the approach of the succeeding rains, when it is set fire to, producing a conflagration which is not confined to the Toungyas, but spreads over the dry and at this season parched forests, reducing the finest timber to ashes. The ground being thus cleared, and the soil at the same time enriched with ashes, all that is necessary is to await the first fall of rain, and then to sow Rice on the burnt surface without any further preparation. It requires no transplanting or further care, but the same land will not afford another crop, so that the same process must be repeated every year in a new place. Sometimes a little Cotton is sown with the Rice. It is obvious that such a system must be ruinous to the native Teak forest, though it is possible that as the great obstacle to the growth of Teak is the rapid growth of Bamboo and other plants, wherever the forest is cleared, this mode of cultivation might be available for raising extensive Teak forests amongst their native hills, a little care only being required to repress the growth of the jungle for the first two or three years till the young trees are thoroughly established.

We are glad to find in any public document put forth by Government something of that appreciation of science which forms a marked feature in American Blue-books and reports. It is however mortifying both to the readers and writers of public documents when no care is taken to secure something like correct spelling of scientific names. Nothing can well be worse than that in the report

of the Southern provinces. More pains seem to have been taken in the second and larger report, which is not however without faults. As the reports were printed at Calcutta there could have been no difficulty in obtaining some competent person to run the eye over the few pages which required such a supervision.

We are glad, too, to see that the Indian Government, by printing that part of the larger report which relates to the native trees and the objects of cultivation, acknowledge the importance of such observations. We could not however help being struck most forcibly with the shortsightedness which induced them to refuse their support to the Indian Flora of Drs. HOOKER and THOMSON, which would have supplied such information for the whole of India, and which might without any difficulty have entered into details of any required minuteness had they been called for by the Government. One great point which makes the production of such a work imperatively necessary is the desirableness of being able at once to ascertain with accuracy what the natural products of any especial part of India may be—a matter, be it observed, which it is impossible for any ordinary botanist to attain even on the spot with all the requisite correctness without the possession of some such work as that commenced, and so admirably, by Drs. HOOKER and THOMSON. One effect, we trust, of the change in the Government of India will be the support of thoroughly useful works; works which should pass into the hands of every one employed under the Government who has the means of extending and throwing light on its resources, and not simply the patronage of handsome folios which may form appropriate ornaments of directors' drawing-rooms. A due appreciation of the benefits of science and its bearing on the important questions which arise every day is much wanted in every department of Government; and to a want of such appreciation in the education of our senators may be attributed many of the misfortunes against which we have to struggle, and from which all alike have to suffer.

WE lately received from Mr. ROBERT H. POYNTER, of Taunton, an account of one of those rare sports of which physiologists find it difficult to give a satisfactory explanation. It appears that some years since a gentleman in the neighbourhood budded "Rosa Devoniensis" on a white Banksian, and from the junction issued a branch —the sport in question—which is neither Banksian or Devoniensis, but partakes of the character of both, the flowers (of the sport) being like but considered better than "Lamarque" with somewhat of a Tea scent, while the growth is very similar to that of Banksiæ, and quite so the small spurs and any long robust non-flowering shoots, but (except on the small spurs) with the addition of prickles. The flowers appear in very large clusters, and are perpetual. The following sketch illustrates this:—



We understand Rose growers to admit that the Banksian stock will affect Roses worked upon it; and we believe that the Floral Committee of the Horticultural Society, when Mr. POYNTER's specimens were submitted to them, expressed an opinion that the present is a case of the kind. It appears to us however that we have in this instance a repetition of the striking effect of working the little purple Cytisus on a Laburnum and thus producing the changeable Cytisus Adami as it is called. In that case, as is well known, the blood, if we may so say, of the Laburnum became contaminated by the purple Cytisus to such a degree as every now and then to throw out branches of the pure purple Cytisus, or flowers whose colour was of the same dirty tint as is produced when yellow is mixed with purple on the artist's palette, the general mass of the flowers always however remaining those of the pure Laburnum. The old case of a variegated-leaved Jasmine having tainted the whole plant on which it was worked, causing the latter to become variegated although the variegated scion was eventually cut away, is a further example of well-marked effects being produced by grafts on their stock. That this is in some way due to the action of the diffused sap of the scion would seem clear; and if so we have a proof of the existence in the mere fluid of a plant of a mysterious vital principle, which under favourable circumstances produces its effect, independently of the organised tissues through which it passes.

From what we saw of Mr. POYNTER's Roses after their examination by the Floral Committee, we scarcely doubt that the supposed sport had really been produced by mingling the sap of R. Banksiæ and some Rose like R. Devoniensis; for while it was very greatly increased in vigour and in the size of all the parts, the leaves were also halfway between a Banksian and Tea-scented kind.

MYCOLOGY.—No. XXIII.

AGARICUS GAMBOSUS, *Fr.*—The confusion of synonyms connected with this species is almost incredible, partly from Sowerby giving the name of *A. Georgii* to the common Horse Mushroom, and partly from Dr. Badham persisting in calling it *A. prunulus*, though it has not the slightest affinity with the species described under that name by authors. Happily the circumstances attending it and the characters by which it is distinguished are so certain, that with common attention all difficulty vanishes.

Towards the end of April or beginning of May, according to the season when the first heavy spring rains thoroughly soak the ground, an Agaric is common in our pastures, and extremely conspicuous from its ivory-white colour, shining aspect, and its constantly growing in rings. Far more rarely about the same time a few scattered specimens occur on the naked soil in woods, differing in no material character from those of the Grass fields. A succession of specimens takes place till the beginning of June, or as in the present wet season, even to the beginning of July, and then no more appear. The smell is strong, and resembles that of the common Sap-ball (Polyporus squamosus), and is certainly not inviting in the first instance, but if properly prepared there is no species which exceeds it in quality, not even the true Mushroom or the aromatic Champignon.

The plants often grown in tufts, but not uniformly; the pileus is very thick and fleshy, with the margin strongly and for the most part permanently involute. The stem is stout and blunt, and never quite smooth, much less polished. There is no ring. The gills are moderately broad, white, or slightly yellow, and just before they are attached to the stem, they are, as it were, notched out, or in botanical parlance emarginate. The colour is often a pure cream-white, but occasionally the upper part of the pileus is tinged with rufous, and not unfrequently cracked or spotted. The margin is sometimes waved, and if, as is often the case, the surface becomes shining and polished, the whole bears a very close resemblance to a cracknel. If the characters and early time of growth are considered, there will be no difficulty in recognising this excellent species, which is the more welcome as it makes its appearance before other esculent species, excepting the Morel, are plentiful.

It is undoubtedly the St. George's Mushroom of the old authors, especially Clusius, and derives its name from its appearing about St. George's Day, the 23d April, and inasmuch as its merits have been recognised for centuries on the continent, where it is one of the species most commonly used as food, it is most curious that till Dr. Badham recognised its identity with the highly valued Prugnuoli or Spinaroli of Italy, which in its turn is the same with or closely allied to the Mouceron of France, it was we believe never used as an article of food in Great Britain.

No species is more valued at Rome, where it commands a great price, viz. 15*d.* per lb., and is sent as presents wherever it is desirable to gain favour and affection. It is not only used when fresh, but is divided into four, strung upon a thread and hung up to dry, and in that condition readily commands from 12 to 16 francs a pound.

We trust entirely to Dr. Badham for the identity of the Italian and British species. It is however to be observed that there are several closely allied species, of which one or two occur in England, but none so commonly as *A. gambosus*.

Various methods are recommended of dressing this species. A large specimen gathered yesterday was prepared with a minute quantity of Tarragon and Chives, and nicely *fricassé*, and was certainly as tender, delicate, and delicious as the very finest Mushroom. It may also enter into the composition of a *vol au vent*, or be eaten with the white Mustard formerly described; and where it grows abundantly it may be used for the production of a delicate ketchup.

No species perhaps forms larger fairy rings than this, or is more instructive as regards their formation. When it occurs on lawns, attempts have been made to destroy it with hot water, which succeed apparently for a time. But in a year or two the deep-seated spawn which has been beyond the influence of the boiling fluid spreads in a centrifugal direction, and the ring is re-established as perfectly as before. *M. J. B.*

AGARICUS GAMBOSUS, *Fr.*—From an original drawing.

Home Correspondence.

Education of Gardeners.—Having carefully read over the letters of those correspondents who have written upon this subject, I have a few words to say myself. In the first place, I thought "Linager's" proposals high enough, and plenty of them; but your next correspondent (I have forgotten his name) proposed a scheme for educating gardeners, which is impracticable. I should like to know what class of men he thinks are going to be brought up as gardeners, for only the sons of middle-class men could ever afford the time and money to be educated as he proposes, and they will hardly go through all the high degrees mentioned in order to enter even a nobleman's garden at wages varying from 50*l.* to 100*l.* per annum, when they can clear above 1000*l.* per annum in trade with less education than he insists on their possessing. And then the scornful way in which he speaks of them growing a big Balsam, and several other things which I have forgotten, is far from treating us gardeners as we

ought to be treated, considering the slender opportunities some of us have had (myself included) of ever going to any school at all. Even I should not now have been able to write this letter if it had not been for the wise instruction of a good and kind father; for I never went to school one day in my life. I could also speak of others who have laboured under the same disadvantages, yet they are holding places that well-educated men would be glad to fill. It may be asked: How is that? The answer is plain: it is because they are men of energy and perseverance, men with a fixedness of purpose, men who are determined to get on in the world. They love their profession, and King Solomon has said: "A man diligent in his business shall stand before kings." Surely this has come to pass in the present day; for instance, look at Sir J. Paxton and many others—was it high education that raised them to the proud positions in life they now occupy? Was it not rather their determination to get on? Recollect, I have not been speaking against a good sound education; no one advocates that more than myself, for I think that a gardener ought to be well but judiciously educated. I have often sadly felt the want of learning myself and it has been a source of great regret to me that I am not a better scholar than I am. I however think that a great many of your correspondent's items ought to be struck out of his scheme altogether as a useless waste of time and a practical impossibility for men of our standing in life. *William Prestidge, Gardener, near Birmingham.* —— That gardeners should be well educated no one will deny, and the attainment of that object in the most economical manner will indeed be a great boon. In consequence however of the parent stock of the embryo gardener generally being so weak in financial affairs as not to be able to support the young shoots until they are fully developed in educational matters, the result is, they are severed from the stock and obliged in a great measure to support themselves. Now it is at this period that real useful instruction for young gardeners ought to commence, namely when they are engaged as apprentices. I will assume that the village schoolmaster has laid the foundation; it now falls to the apprentice's master to apply himself by giving instructions to his young pupil in the following matters—writing, arithmetic, geography, grammar, geometry, and trigonometry; the two last are most essential. He ought also to take his young pupils to the flower garden and show them how to measure figures, and then with compasses and square to describe them on paper according to a scale. If the place is too extensive for the head gardener to have time for this, then it should devolve upon his foreman, who ought to be competent to take the office of head gardener in this respect, and who for a little remuneration (part of the apprentice fee) would gladly do so. Still the gardener must not think that he is to be entirely set free by this last proposition, for then I would have him to examine occasionally the progress made by the pupils, which would be a great stimulus to the accomplishment of the end in view. There are many other things that could be taught in the same way, such as botany. A very interesting way of acquiring an acquaintance with it is for the head gardener and his staff (except those required to look after fires, &c.) to set out on what is termed botanising excursions, for the purpose of collecting native plants, naming and classifying them properly: and thus, it may be, superintending the formation of herbariums which would be the pride of the young men, and a lasting source of gratification to the master as he witnessed the pupils in the course of events occupying and discharging efficiently the duties of some trustworthy situation. This I am led to think if practised would of itself form a very good test for gardeners, and gentlemen whose premises require assistants should make inquiry appertaining to the above when they engage their gardener, signifying at the same time that they would expect such a system to be carried into effect, and the same thing should be done by head gardeners when engaging foremen, thus making in a great measure gardeners their own examiners. *G. G. S.*

Melons.—Speaking of Melons, your report of the last meeting of the Royal Botanic Society says, "Melons were plentiful, but for the most part indifferent in flavour." This remark is quite applicable to the red-fleshed varieties but not to the green-fleshed class. The fact that the judges gave seven prizes to green-fleshed Melons, although only two were offered by the Society, proves that this class was better than common. That which obtained the first prize was a noble fruit, called Exton Hybrid, a sort which I recommend to the notice of all Melon growers. There were also several excellent green-fleshed Melons at the previous show, but in that case also the other class was very indifferent. I have heard some persons express surprise at Melons being so well flavoured in such a moist and sunless season. I am inclined to think, however, that this superior flavour might be the consequence of the dullness and dampness of the atmosphere, and for this reason: Melons, like other fruits, cannot acquire their highest degree of excellence if the foliage is unhealthy, and the chief cause of sickly leaves on a Melon plant is red spider. This insect revels in a hot dry atmosphere, and as the present season has been the reverse of hot and dry, the leaves have retained a more healthy condition, and therefore the fruit has been better flavoured than common. Another reason might be that owing to want of sun the plants have needed less watering than usual. *One of the Judges.*

Sap in Oak Timber.—Is there not some extraordinary mistake about sap in the Oak timber of the faulty gunboats? When a tree is felled it is generally hewn on four sides, and a considerable part of the sap is thus entirely removed. The other portions are comparatively small; from whence then could the builders of the boats in question procure so large a quantity of sap timber? I believe that if any builder were to advertise for the sap of Oak he could by no means obtain enough to build a gun-boat even if he searched the country through, and yet one would suppose that some of the boats were nearly all sapwood. *T. H.*

Rainfall in Essex.—The following is the amount gauged at Springfield, near Chelmsford, during the last six months, together with the corresponding quantities for last year:—

Month.	1859.	1860.
	Inches.	Inches.
January	0.74	1.97
February	0.64	1.04
March	1.05	1.60
April	2.20	1.51
May	1.28	3.84
June	1.87	4.79
Total .. .	7.78	14.75

On the evening and night of May 12, 1860, 1.54 inch fell in the space of about 17 hours, and produced higher floods than any known in this neighbourhood for many years. Rain fell on 21 days in June last; the average for that month in this neighbourhood during the six years previous to 1858 was 2.124 inches, and for the first six months of the year 9.873 inches. *J. C. H.*

Badges of Scottish Clans.—A list of the clans and their badges is given in "Haydn's Dictionary of Dates." In this the Myrtle is named as the badge of the clan Campbell. I believe this to be a mistake, and that the true badge of that clan is Myrica gale, or Dutch Myrtle. Can any of your correspondents corroborate my belief? I also find the Laurel is given to the clan Graham. Can any correspondent tell me if this be the true Laurel or Bay (Laurus nobilis), the Portugal Laurel, the Common Laurel, the Spurge Laurel, or the Alexandrian Laurel (Ruscus racemosus)? I was under the impression that all the badges of the clans were indigenous plants, and of all the Laurels, commonly so called, I believe the Spurge Laurel only has any claims (and those claims are doubtful) to be called a native of Scotland. I also wish to know the botanical names of the following plants, which are given in Haydn as badges of the clans set opposite to each respectively:—

Clan.	Badge.	Clan.	Badge.
Cumming ..	Common Sallow	McKay ..	Bullrush. ? Typha latifolia, or Scirpus lacustris?
Ferguson .	Poplar. ? species	McKenzie	Deer Grass
Grant ..	Cranberry Heath	McLean ..	Blackberry Heath
McAllister.	Five-leav'd Heath	McNab ..	Rose Blackberries
McDonald ..	Bell Heath	McRae ..	Fir Club Moss
McDouell ..	Mountain Heath	McNeil ..	Sea Ware
McDougal ..	Cypress. ? species		

Diss.

New Cos Lettuce.—Permit us to send you specimens of a new Lettuce (Carter's Champion), which we intend bringing out this autumn. We have proved it to be larger, sweeter, crisper, and of quicker growth than the following that are growing in the same field, viz.:—Paris White Cos, Paris Green Cos, Bath Cos, Black-seeded Bath Cos, Drumhead, Hammersmith, Grand Admiral, Brown Dutch, White Cabbage. The above varieties sown on the same day have run to seed, and are now from 2 to 3 feet high, while the new Lettuce has scarcely commenced to run, although it has grown too long to be fit for table. The specimens sent will show that what we have stated is correct in reference to size, and also as to its turning in like a Sugar-loaf Cabbage, but of course as they have commenced to run their flavour is completely altered. They have not been grown for exhibition, but for the purpose of seed saving. *James Carter & Co.*, 237 and 238, *High Holborn.* [Six Lettuces sent weighed respectively 4 lbs., 3 lbs. 12 oz., 3 lbs., 2 lbs. 15 oz., 2 lbs. 12 oz., and 2 lbs. 12 oz. They were of the Cos breed, large, handsome, and apparently sound, but on cutting them open they were found to have just commenced to run to seed.]

Bulbiferous Yarrow.—On the 5th of August last I sent you a specimen of what I then supposed, and you afterwards pronounced (see 1859, p. 672) to be entitled to the above appellation. Afterwards finding another specimen I sent it to another expert, who pronounced it a Gall. I looked anxiously for a third specimen but found it not all last year. To-day I find one, and send it without delay, at the same time moving for a new trial. *Diss.* [Our judgment stands. If the body in question were a Gall it would contain the larva of an insect, or a cavity would show where a larva had been. We find no larva, no cavity, no aperture by which egress might have been effected. Therefore, &c. &c.]

Crassula coccinea: a Narcotic Poison?—Is it known to those who have studied the medical properties of plants that the flowers of the Crassula coccinea contain matter of a narcotic or poisonous character? To me such a quality was wholly unexpected, until the facts which I am going to relate and to which I solicit your attention came a few days since under my knowledge. A friend having a specimen of this plant flowering in great beauty caused it to be placed in a conservatory adjoining his dining room on the occasion of a dinner party. After dinner he and his guests visited the conservatory, admired the Crassula, and inhaled the perfume of its flowers. Shortly after they were all of them seized with symptoms more or less severe of ordinary poisoning—headache, sickness, affection of the bowels. Not knowing to what cause to attribute so extraordinary an attack, the aid of a chemical friend was called in, who kindly undertook to investigate the mystery. I inclose a copy of his report. If it be admitted that the flowers of the Crassula coccinea exhale poisonous properties, it is high time that the fact was commonly known, in order that we should be cautious how we invite our guests to admire them, and above all that cottagers should cease to cultivate them in their small and confined apartments. *Derwent.*

"July 13th, 1860. I have been prevented by absence from home from communicating to you the result of my investigations in the mysterious poisoning case. Firstly, as might have been expected, the wine was perfectly free from any noxious matter whatever. The flowers produced the following effects. My chemical assistant, who was more or less exposed to their influence for some little time, was seized with precisely the same symptoms which were observed in your guests, and continued to suffer from their effects for two days. A kitten confined in a glass vessel of large dimensions for three hours had to be removed to prevent its death from what seemed to be the narcotic powers of the plant. A small rat left over night in the same jar was found dead the next morning. To these pretty conclusive facts I may add that Mrs. B.'s maid was attacked similarly to others on Monday, and on inquiry it was found that she had been inhaling the dangerous perfume of the basket containing the flowers. Mr. P, you will have heard, has been very unwell since Sunday, when he also had been in their vicinity. I am very sorry to hear that your husband continues still to feel the effects of his exposure to this strange and what seems to be very powerful poison. I have however little doubt that a few days will remove all traces from his system. I remain, dear Mrs. ——, yours faithfully, *J. L. Bell.*" [We never before heard or read of such plants as Crassulas being narcotic. Some of them are acrid, but nothing more is recorded of them. The experiments with a kitten and a rat are unsatisfactory: these animals may have suffered from the carbonic acid thrown off from their own lungs.]

Large Cucumbers.—Herewith we beg to hand you a brace of Cucumbers which measure 20 inches in length, thick and straight; they are a cross from Carter's Champion, and are quite as prolific as that sort, and at the same time are double the length. We find that it is a good variety both for early and general use. We propose calling it "Carter's Improved Champion," and shall do away with Champion. *James Carter & Co.*, 237 and 238, *High Holborn.* [These were very handsome fruit of the Smyrna breed, straight, and with a particularly short neck. But they were too old for any other purpose than stewing.]

Premium Paying.—I am utterly at a loss to discern what similarity "J. D. U." perceives between the payment of a premium in a private establishment and a gardener working in a nursery for 12*s.* per week. Does he consider that on account of his receiving these low wages he pays so much per week to the nurseryman for the situation he expects to obtain from him? If such be his views I believe them to be at total variance with the opinions other gardeners entertain. The low rate of wages paid enables the nurseryman to give employment to a greater number of men who may unfortunately be out of work. I consider the system of premium paying to be bad, and a practice justly and rapidly falling into disuse. To say that it is equally as just in the case of gardeners as that of young mechanics is, to say the least of it, a fallacy; for no sooner have mechanics passed their term of apprenticeship than as journeymen they receive as good wages as probably they will ever get through life, but with gardeners the case is different. He often passes 10 or 12 years before he is adequately remunerated. *X. Y. Z.*

The Shamrock.—One of your correspondents states that the Wood Sorrel could not have been used as Shamrock, as it is "an exceedingly rare plant in this country (Ireland)." I beg to say however that it is very abundant in this neighbourhood (Clonmel), and I have no reason to think that it is not so in many other parts of Ireland. It is the general opinion that this island was thickly wooded in former times, increasing the probability that Wood Sorrel (Oxalis acetosella) was far more abundant at that period than any species of Clover; the name in the Irish language for Wood Sorrel bears a strong resemblance to the word Shamrock. *A. J. Grubb, Clonmel, Ireland.*

Societies.

National Rose Exhibition.—As was stated last week (see p. 650) this was one of the best displays of the kind that have yet taken place under the auspices of this Association. Not only were the exhibitions unusually numerous; but the blooms were for the most part large and fine. In the Nurserymen's Class the best collection of 100 trusses each, consisting of three blooms, came from Mr. Mitchell, of Piltdown, Maresfield, Sussex, who sent beautiful examples of—

Hybrid Perpetuals.—Abbé Feytal, deep rose, fine form; Alexandrine Bachmeteff, bright red, large and fine; Anathalie Chautrier, pale rose, very beautiful; Altesse Impériale, crimson shaded and beautifully

cupped; Armide, rosy salmon, distinct and good; Anna Alexieff, bright rose, large and beautiful; Ardoisée de Lyon, shaded large crimson; Berceau Impérial, delicate pink, large and full; Baronne Larray, rich pink, large and double; Baronne Prévost, bright rose, very large; Belle de Bourg-la-Reine, a new and promising kind; Caroline de Sansal, large pale flesh; Cardinal Patrizzi, dark and very beautiful; Col. de Rougemont, very large but coarse; Comte de Nanteuil, pale rose; Comtesse Cécile de Chabrillan, pink, beautifully cupped, a really fine Rose; Comtesse d'Orléans, blush, large and full; Docteur Ruschpler, rosy pink; Duc d'Ossuna, bright rosy carmine; Duchess of Norfolk, by no means a bad Rose; Duchess of Sutherland, Duchesse d'Orleans, fine lavender blush; Duchesse de Polignac, rosy lilac, very large; Ernest Bergemann, pale rose, large and beautiful; Evêque de Nîmes, bright purplish red, compact, and very beautiful; Géant des Batailles; General Jacqueminot, in very fine condition; General Pélissier, lilac rose, cupped, and distinct; Gustave Coraux, shaded crimson; Impératrice des Français, pale flesh; Jacques Lafitte, shaded crimson; Jules Margottin, large and full, a magnificent Rose; Lord Raglan, glowing scarlet; La Reine; Léon des Combats, dark crimson, beautiful; Louis Chaix, bright red, shaded with crimson, but not in first-rate condition; Louise Odier, fine bright rose; L'Enfant du Mont Carmel, shaded crimson; Mignard, shaded rose, very beautiful; Madame Rivers, blush, a splendid variety; Madame Ducher, rosy pink, very compact; Madame Domage, very beautiful, glossy rose; Madame Place, bright pink; Madame Vidot, a fine variety, very like M. Rivers; Madame Masson, deep crimson; Madame Schmidt, rosy pink, large and beautiful; Madame Hector Jacquin, deep rose; Madame Knorr, rosy pink, a fine variety; Madame Van Houtte, beautiful rosy pink; Mathurin Regnier, lilac rose, fine in form; Monsieur de Montigny, rosy carmine; Noémi, glossy pink; Nouvel Etendard du grand Homme, a salmon-coloured promising kind; Paul Dupuy; Pauline Lansezeur, crimson shaded with violet, a fine variety; Prince Léon, cherry red, fine form; Queen Victoria, white shaded with peach, very beautiful; Stephanie Beauharnais, delicate flesh; Souvenir de la Reine d'Angleterre, bright rose; Souvenir de Leveson Gower, dark red, large and full; Thomas Rivers, bright rose; Triomphe de l'Exposition, beautiful crimson; Tower Malakhoff, dark crimson; William Griffith, bright lilac rose, fine in form; William Jesse.

Bourbons:—Adelaide Bougère, dark velvety crimson; Dupetit Thouars, beautiful bright crimson, still a useful Rose; La Quintinie, bright shaded crimson; Réveil, rich velvety crimson; Souvenir de Malmaison, blush, a magnificent variety.

Noisettes:—Lamarque, white; Narcisse, primrose yellow, very beautiful; Triomphe de Rennes, yellow.

Tea-Scented Chinas:—Auguste Vacher, yellow, shaded with copper colour; amabilis, rosy blush, large; Bougère, bronze; Comte de Paris, a fine old variety; Devoniensis; Gloire de Dijon, yellow, shaded with salmon, magnificent; Goubalt, rosy buff, large and fine; Duc de Magenta, a new kind which we hope to see again; Joséphine Malton, creamy white, large; Louise de Savoie, sulphur; Madame Lartay, yellow, shaded with salmon; Niphetos, pale lemon, very large and beautiful; Souvenir d'un Ami, salmon and rose shaded, large and fine; Souvenir d'Elise, a splendid Rose; Silène, rosy salmon; Vicomtesse Decazes, bright yellow.

Moss:—Baron de Wassenaer, rose; Crested, rose with crested buds; Gloire des Mousseuses, pale rose, large.

Provins:—White, still a good old Rose.

Hybrid Chinas:—Chenêdolé, vivid crimson, large and fine; Charles Lawson, bright rose, large and full; Paul Ricaut, bright crimson, fine in form.

French:—Boule de Nanteuil, violet purple, a good old Rose; Duchess of Buccleugh, dark rose, shaded with blush; Latour d'Auvergne, shaded rosy crimson; and Napoléon, brilliant crimson.

Other collections of 100 trusses came from Messrs. Paul, Hollamby, and Cranston. Among these were fine blooms of Louis Odier, Madame Boll, rosy pink and fine in form; Transon Goubalt, Mathurin Regnier, La Ville de Bruxelles, Moss Lanei, Crested Moss, Latour d'Auvergne, large and showy; Madame de Cambacères, Prince Regent, General Jacqueminot, Madame Knorr, one of the best autumn Roses we possess; Duchess of Orleans, Alexandrine Bachmeteff, Madame Vidot, La Ville de St. Denis, large and fine; White Bath Moss, Duchess of Norfolk, Anna Alexieff, Evêque de Nîmes, Jules Margottin, Wm. Griffiths, Madame Domage, large, but loose; Cardinal Patrizzi, a very dark kind; General Castellane, Lord Raglan, Prince Leon, Coupe d'Hébé, Souvenir de Malmaison, Duke of Cambridge, Chénêdolé, Pauline Lansezeur, a fine lilac variety; Charles Lawson, Comtesse Chabrillan, a compact fine Rose, beautiful in the bud; Princess Royal, a good Moss; Col. de Rougemont, in the way of Baronne Prevost, but coarser; Gloire de Dijon, bronzy yellow, rich and good; Common Moss, Robin Hood, still a good Rose; Madame Willermoz, in beautiful condition; Louis Chaix, not near so fine as we have seen it; Triomphe de Beaux Arts, a very dark velvety rose; General Simpson, Acidalie, an old but fine variety; Prince Imperial, large, but coarse; Géant des Batailles, Louis Peyronny, the yellow Vicomtesse Decazes, Alice Leroy, Souvenir d'Elise, Paul Perras, Baronne Prevost, Pauline Labonté, salmon; Laura Raymond, Niphetos, large and fine; and Auguste Vacher, fine yellow.

In the class of 50 varieties, Messrs. Cant, Hollamby, Tiley, and Turner had the best collections. Among these we remarked beautiful blooms of Anna de Diesbach, Bacchus, glowing crimson, scarlet; M. Hector Jacquin, fine in the bud state; Madame Rivers, a charming variety; Charles Lawson, a fine large useful Rose, and General Castellane; the last is perhaps one of the most fragrant of Roses.

Collections of 24 varieties were numerous. By far the best came from Mr. Keynes of Salisbury, whose blooms were large, fine in colour, and universally admitted to constitute one of the most important features of the whole exhibition. The varieties were Juno, Madame Phelip, Boule de Nanteuil, Charles Lawson, Comtesse de Chabrillan, Duchesse d'Orleans, Evêque de Nîmes, General Jacqueminot, Géant des Batailles, Gloire de Vitry, Lord Raglan, La Ville de St. Denis, Madame Knorr, Madame Rivers, Madame Vidot, Mathurin Regnier, Pauline Lansezeur, Prince Léon, Stephanie Beauharnais, William Griffith, Léon des Combats, Souvenir de Malmaison, Enfant du Mont Carmel. Mr. Laing, of Twickenham, Messrs. Paul and Mr. Clarke, of Brixton Hill, also showed well in this class. From these came glorious blooms of General Jacqueminot, the most showy of Roses, and one which appeared in every stand; Gloire de Vitry, a bright rosy kind, Lady Stuart, a variety in the way of Madame Rivers, La Reine, Duchess of Orleans, large pale lilac and one of the best late Roses we possess; Lord Raglan, one of the most brilliant of comparatively recent introductions, Comte de Nanteuil, Caroline de Sansal, a fine variety, but this year small in size; Narcisse, Sulphur, one of the very hardiest of Tea Roses; and Souvenir de Malmaison, the last very large and fine.

In the class for amateurs who kept a gardener, the best collections of 48 varieties came from J. T. Hedge, Esq., of Colchester, the Rev. S. R. Hole, of Caunton Manor, Notts; C. M. Worthington, Esq., of Caversham Priory, Reading, and C. J. Newdigate, Esq., Arbury, Nuneaton, Warwickshire. Among these we observed magnificent blooms of most of the leading kinds, whose names are recorded above; and we may also mention that those from Mr. Hedge especially were staged with unusual care and taste, the Moss employed to surface the boxes being beautifully green and short, a point which did not fail to attract attention.

Of 24 varieties shown by the class of exhibitors last named the best again came from Mr. Hedge, whose blooms were Charles Lawson, Paul's Queen Victoria, a fine large light kind; Shakspeare, Madame Bravy, Gloire de Vitry, Caroline de Sansal, Queen, Madame Knorr, M. Cambacères, Gloire de Dijon, Alexandrine Bachmeteff, Cloth of Gold, Souvenir d'un Ami, Paul Ricaut, Louise Magnan, Adèle Prevost, Auguste Mie, Aurora, Devoniensis, Lord Raglan, William Griffith, and Niphetos. Among other groups the best came from C. J. Newdigate, Esq.; F. Barchard, Esq. Uckfield; and W. Mercer, Esq. of Hunton, Staplehurst.

Of 12 varieties shown by amateurs keeping gardeners, the best were furnished by the Rev. T. M. Wetherall, Newnham, Gloucestershire, C. M. Worthington, Esq., Rev. S. R. Hole, and C. G. Puller, Esq., M.P., Youngsbury, Herts. Among these we noticed some very fine blooms of General Jacqueminot, Gloire de Dijon, Anna Alexieff, a very good variety; Smith's yellow Noisette, a charming variety when caught in good condition, as this was; Duke of Cambridge, bright rose; Jules Margottin, which is universally admitted to be one of the very best of its class; and Léon des Combats, also a good Rose. We also observed Emperor Napoleon, a very dark kind; but it was small, thin, and bad in shape. Empereur de Maroc also belongs to the same class, but is perhaps a trifle better in form.

In the class for amateurs not keeping a gardener, the best boxes of 24 sorts were contributed by Mr. T. Mallet, St. Mary's Gate, Notts; Mr. Fryer, Chatteris; Mr. Walker, Oxford; and Mr. Laxton, Stamford. Among these the most conspicuous varieties were Lord Raglan, General Jacqueminot, Gloire de Dijon, Safranot, Souvenir de Malmaison, Souvenir de Leveson Gower, a beautiful Rose; and one or two other well-known sorts.

Of 12 varieties in the class last named, the best came from Mr. Fryer, who sent grandissima, Caroline de Sansal, Lord Raglan, Baronne Prevost, Vandal, M. Vidot, one of the best of the light varieties; Emperor Napoleon, La Reine, General Pelissier, Julie d'Etanges, Boule de Nanteuil, still a good old Rose; and Prince Regent. Among other exhibitors the most successful were Mr. Morris, Caunton, Notts; Mr. Mallet, and Mr. Laxton. From these came fine blooms in beautiful condition, clean and fresh in appearance and neatly staged. In these and other collections, for the names of the flowers in which we cannot spare room, we observed very fine trusses of the following varieties, viz., *Hybrid Perpetuals*:—Madame Vidot, Duchess of Norfolk, Madame Herand, Madame Hector Jacquin, Victor Trouillard, Madame Masson, Duchesse d'Orleans, Comte de Nanteuil, Cardinal Patrizzi, Madame Place, Lady Stuart, Gloire de Vitry, Madame Knorr, General Simpson, General Castellane, Gloire de Parthenay, Panachée d'Orleans, Madame de Cambacères, Prince Leon, Géant des Batailles, Mathurin Regnier, Lord Raglan, Caroline de Sansal, William Griffiths, Noëmi, Jules Margottin, Madame Rivers, Triomphe de l'Exposition, Louis Peyronny, Auguste Mie, Baronne Prevost, Léon des Combats, General Pelissier, General Jacqueminot, and Joan of Arc. *Gallica*:—Transon Goubault, Cynthie, Boule de Nanteuil, Colonel Coombes, Latour d'Auvergne, Prince Regent, Dido, Ohl, Kean. *Bourbon*:—Acidalie, Souvenir de Malmaison, Coupe d'Hébé. *Hybrid China*:—Brennus, Chénêdolé, Victor Hugo, Madeleine, Paul Perras, Madame Rameau. *Tea*: Souvenir d'un Ami, Narcisse, Gloire de Dijon, Madame Willermoz, Bougère, Devoniensis.

The following list contains some of the very finest varieties selected from the whole exhibition. *Blush*:—Madame Vidot, Madame Rivers, Duchess of Orleans, Auguste Mie (deep blush), Caroline de Sansal, and Mathurin Regnier. *Scarlet or Dark Crimson*:—Lord Raglan, Gen. Jacqueminot, Léon des Combats, Gen. Castellane, Prince Léon, Paul Ricaut, and Sir J. Franklin. *Rose*:—Col. Rougemont, Madame Hector Jacquin, Jules Margottin, William Griffith, Gloire de Vitry, Prince Imperial, coarse but showy; Coupe d'Hébé, and Paul Perras. *Yellows*:—Cloth of Gold, some extremely fine blooms of which were exhibited; Decazes, and Persian Yellow. Of *Whites* there is still a deficiency. The best are Dr. Henon, Princess Clementine, the old white Provins, Louise Magnan, and Beauté de Melan. *Stripes* were not good. Among them we noticed Panachée d'Orleans and Œillet Parfait. Among Moss Roses we have little to recommend beyond the usual well-known kinds. There were, however, some good blooms of the white Bath.

Of New Roses, Messrs. Fraser, of Lea Bridge, showed Louis the XIV., shaded deep velvety crimson; Mademoiselle Bonnaire, French white; Armide, Anna de Diesbach, large showy Rose; Victor Verdier, large rosy lilac, but coarse; Triomphe de Lyon, a kind in the way of Léon des Combats, and Admiral Nelson. From Mr. Standish, of Bagshot, also came a box of new varieties, the best of which were Noisette Celine Forestier, bright yellow, a very promising Rose, and so hardy that it stood the frosts of last winter without injury; Comte de Falloux, bright crimson, and stated to be an excellent sort for pot culture; Madame Standish, rose; and François Arago. The last is a very dark kind belonging to the class of Eugène Appert, of which a boxful of beautiful blooms was also shown by Mr. Standish. This fine Rose has proved itself to be a vigorous grower, a free bloomer, and very hardy.

Among Miscellaneous exhibitions was a boxful of magnificent blooms of Cloth of Gold from Mr. Cant, of Colchester. These were, as they deserved to be, the admiration of all who saw them. Of Roses in pots several collections were shown; but they wanted the freshness and beauty which characterise such exhibitions earlier in the season. They however served to give variety to the tables, which were also tastefully decorated with other plants.

FLORAL HALL, COVENT GARDEN.—Another show of Roses took place here on Wednesday and Thursday last. One side of the room was wholly devoted to the "Queen of Flowers;" an opposite side to miscellaneous collections of stove and greenhouse plants; and the centre to Fuchsias, to plants remarkable for fine foliage, and to a stand or two of dwarf Cacti, altogether producing a very good effect. At one end against the wall was a conical stage filled with yellow Calceolarias and Scarlet Verbenas, arranged so as to form bands of these two colours running from top to bottom; in front of this was a stage full of Roses crowned with fine specimens of shrubby Calceolarias, and in the centre of all was a circular bed 22 feet in diameter entirely occupied by Roses in a cut state.

Most of the Rose growers named above again showed beautiful collections on this occasion; Mr. Keynes in particular was very successful. In his stand were very fine blooms of the following, viz., La Fontaine, purplish rose; Madame Knorr, Lord Raglan, Madame Rivers, Prince Leon, M. Vidot, Evêque de Nîmes, and François Arago, the last a new kind very dark in colour.

Of Roses shown as new, Mr. Keynes had Eugène Appert in excellent condition; and Virginal, a white hybrid Perpetual, which bids fair to become a favourite. Comtesse de Chabrillant was reproduced on this occasion, and fully maintained the good character it has received, as did also Celine Forestier, which promises to be a gem in its class.

Among Miscellaneous articles were some extremely pretty glass Mosaic Jardinieres, filled with Ferns and other plants. These consist of gold and richly coloured glass set in pure white cement hardened and polished to a glistening surface. They were shown by Mr. Stevens, of 56, Great Queen Street, Lincoln's Inn, and form handsome drawing-room decorations.

HORTICULTURAL: *July* 12: *Floral Committee.*—There were several interesting plants exhibited on this occasion. Among them were several fine Gleichenias from Mr. R. Sim, Foot's Cray, three of which, namely G. furcata, rupestris, and semivestita, received First Class Certificates. The G. rupestris was a noble specimen. Caladium Wightii, a pretty sort with the leaves dotted with red and white in distinct spots, exhibited by Messrs. Osborn & Son, Fulham, also obtained a First Class Certificate; as did a West Indian Polystichum, somewhat in the way of P. triangulum, but more lax and divided. A new Bornean Cypripedium called Dayanum, from Mr. Stone, gr. to J. Day, Esq., Tottenham, was com-

mended; it had very distinctly spotted leaves and purplish flowers. A similar award was made to Lastrea deltoidea, a very distinct West Indian Fern; and to Nephrodium molle v. polydactylum, a fingered variety raised by Mr. Sim, by whom both these were exhibited. Mr. Sim showed several other Ferns; and a variety of Cypripedium purpurascens was sent by Mr. Stone. There were several Begonias from Mr. Squibbs, gr. to Mrs. Turner, Rooksnest, but they were not thought sufficiently distinct. Among florists' flowers a First Class Certificate was given to a Pink called Beautiful, from Mr. Turner, Slough; and Commendations to Verbena Cruor, and Petunia Eclipse, from Mr. G. Smith; to a Horse-shoe Pelargonium named Princess of Prussia, a compactum kind of flower, from Mrs. Conway, Earl's Court; to a very fine rose-coloured Verbena, Grand Eastern, from Messrs. J. Wood & Son, Woodbridge; to Delphinum Beauty, from Messrs. Fraser, Lea Bridge Road, intense blue, with very pure white centre; and to Gloxinia Lady Willoughby, a large white and rose coloured, erect flowered variety from Messrs. Milne & Co., Vauxhall. Mr. Cole, of St. Alban's, had several fine yellow shrubby Calceolarias, but they were not considered sufficiently distinct from some others already distributed. Messrs. Lee, Hammersmith, had two showy Fuchsias, named Jessie Douglas and Crinoline; and some Pelargoniums came from Mr. Beck and Mr. Turner. Some Roses mentioned in another page were also exhibited.

Notices of Books.

Two Months in the Highlands, Orcadia, and Skye. By C. R. Weld. 8vo. Longmans. Pp. 404.

Again have we to thank Mr. Weld for a most agreeable summer volume, which to travellers thinking of Scotland for their autumn tour will prove one of the most useful, as it is one of the most pleasant, of guides. The author's volumes on Ireland and the Western Pyrenees are so well known that his skilful manner of intermingling with personal incidents charming descriptions of scenery and instructive information upon subjects which ordinary travellers cannot see, is familiar to every reader who can appreciate science and acute observation cleverly concealed among traveller's gossip.

Mr. Weld's line of march was down Tweedside to Peebles, on to Perth, and thence to Aberdeen. Leaving this old city of granite he took his passage for the coast of Caithness, and landing at dirty Wick spent some days in studying the details of the herring fishery for which the place is celebrated. From Wick he proceeded by way of Loch Watten, a good fishing station, and the river Thurso, renowned for salmon, to Brawl Castle, where he fixed his residence for some weeks. Of this edifice we have a graphic account:—

"Brawl Castle is a high-sounding name it must be confessed, and certainly very far removed from all relationship to the pictured lodge in the wilderness. But of all structures your modern castle is frequently the most deceptive. For we are so apt to associate a grand building with the word 'castle' that when we find ourselves put off with an abortion bearing an imposing name, we are at once disappointed and disgusted.

"Now it is my bounden duty as a veracious traveller to tell the reader that the Brawl Castle in which I lived for three weeks is not as grand as Taymouth or Dunrobin, nor indeed of any structure justly entitled to the rank of castle. Great things were evidently intended, for there are thick basement walls 100 feet long, divided into six vaults, and pierced with loop-holes; but the superstructure is simply a square and by no means large stone house, made to look ridiculously absurd by having pepper-box turrets fastened to each corner.

"Is this the Brawl Castle, you will ask, that figures in the history of Scotland, and where, according to tradition, the proud Harolds and Sinclairs, descendants of the Orcadian earls, kept high state? Not at all. Permit me to be your cicerone, and I will show you the ancient pile. See, just behind the modern structure a crumbling ruin—that is the Brawl Castle of old. It is not extensive, but what remains is grand and massive; walls 12 feet thick, within which are small rooms, varying in size from 10 to 6 feet square. Below, dungeons of course (what chieftain of old was happy without these snuggeries for his unhappy prisoners?) and winding uncomfortable stairs—be sure the chieftain's ladies wore no crinoline; chambers and stairs lighted by narrow windows; in short, a good old genuine castle, set round with a fosse and other means of defence.

"You can discern at a glance how grievously it has been spoiled. Originally it was, doubtless, very much larger. During many years it served the purposes of a convenient quarry of ready-hewn stones; and so little respect has been shown to ancient ruins in this remote part of Scotland, that the stone chair of St. Thomas, described as having been of exquisite workmanship, and which was long preserved in a chapel at Sinnett, was appropriated a few years ago by a barbarous farmer, ruthlessly broken, and used to make a fence. Alas! there was no Ecclesiological Society in those days.

"There are ugly stories told about Brawl. Among others, it is related that when the castle was occupied by a certain Earl of Caithness—a dare-devil hero of battle and rapine—he adopted the course of boiling a bishop and destroying his palace, which was at the opposite side of the river, in retaliation of the bishop's fulminations against him for not paying tithes.

"Thus, if we are not going to live in an ancient castle, we have the satisfaction of seeing one from our rooms, which, believe me, are far more comfortable than the dismal chambers in the thick walls. They have, moreover, the advantage of not being so liable to be haunted. For old Brawl is, as Burns would have said, a 'ghaist-alluring edifice;' and I do not think that any consideration would tempt the rustic to pass the midnight hours in its deserted halls."

Brawl Castle is not merely an autumn station for an ardent sportsman, but it has a garden, and something in it:—

"But the glory of Brawl consists in the garden and adjacent grove of real trees, both wonders in almost treeless Caithness. [Indeed how scarce wood has been in this country appears by the following passage from a work on the agricultural state of Caithness, published in 1812. After noticing the remarkable absence of trees, the author says, 'The only tree that could be considered as extraordinary in Caithness was an Ash in the garden at Brawl Castle, called 'The Ladies' Tree.' It was from 30 to 40 feet high, and at nine feet from the ground was 3 feet in diameter. It was blown down by a gale of wind some years ago, but owing to its uncommon size, the proprietor allowed it to remain on the ground as a specimen of Caithness timber.'] The garden is so remarkable a feature that it is especially noticed in county histories. These state that it is the most ancient and by far the most notable garden in Caithness. Southrons may think it strange that so much praise should be accorded to a garden; but fruit of any description is a rare luxury in that county. Anywhere the Brawl Gardens would be admired for their great extent and fruit-bearing qualities, and here, in the latitude of 58° 15', it was really remarkable to see the heavy crops of fruit, and how well they ripened. As may be supposed, the produce of these gardens was not included in the agreement among the articles to be enjoyed by my friends; and as the fruit was in great demand throughout the country, farmers sending long distances for it, we made a compact with the gardener to rent certain fruit trees. All through August we had Strawberries, Gooseberries, and Raspberries, the latter of great size and excellence. The bushes are not certainly quite as stupendous as those at Walton Hall, described by Waterton as being so high that a step-ladder was necessary to reach the fruit, but they are of a very convenient altitude, and were starred with amber and scarlet berries.

"I mention these facts in case any one of my readers may fancy to become an inmate of Brawl during some shooting season, and I assure him if he makes a friend of Sandy the gardener, the garden produce will be found a very pleasant addition to the commissariat.

"The grove surrounding the garden is a favourite haunt of hundreds of birds, who find it a perfect paradise. It was always interesting to watch them; and although they fed sumptuously daily on our fruit, we did not grudge the toll that they exacted from us."

After excursions to Thurso Bay and Strathmore Brawl is left at the end of three weeks for the Orkneys. A long pedestrian lonely journey, the incidents of which we recommend to tender-footed Southerners, then takes the traveller to Barrock House, "an oasis in the desert:"—

"Barrock is indeed, in many respects, an oasis in the desert; for while the country generally is almost in a state of nature, Sir John Sinclair has not only reclaimed but made many hundreds of broad acres around his house smile with plenty and prosperity. Lakes and swamps have been drained, thousands of trees planted, extensive farm buildings erected, and a powerful steam-engine is made to do as much agricultural work as possible.

"Nowhere will you have a better opportunity of seeing how scientific agriculture may be made to triumph over sloughs of despond than here. Nor should it be forgotten that, while the land ministers to the wants of man, the peasant is advanced in civilisation. Look at the old Caithness hovel, a mere mud structure with often only two openings; the door, and a hole in the roof to allow the smoke to escape.

"While shooting one day, Captain Sinclair introduced me to one of these primitive dwellings. Raising the latch we entered a room opaque with peat smoke, which, baffled in its attempts to pass out of a hole in the roof, was rolling in dense masses through the interior. The fire from which it proceeded was in the centre of the hovel, backed by a low wall, but there was no attempt at a chimney. Two ancient crones were crooked on their hams in front of the fire, one of whom was crooning a strange-sounding song, while the other was coaxing a noseless teapot to stand upright in the heap of hot peat ashes. Two small open recesses in the wall contained the crockery of the establishment; and a bench, two chairs on their last legs, and a couple of box beds grimed with soot and smoke, completed the furniture. Now, you will doubtless imagine that this dismal hole belonged to a pauper. By no means. The proprietor was a prosperous blacksmith, who was at the time of our visit exercising his calling at a neighbouring hamlet, and the cabin was precisely in the condition that he had inherited it from his father."

From Barrock he pushed on to John of Groat's House, a building that belongs to the past alone:—

"Following a path on the edge of the cliff, dipping occasionally into charming little bays paved with silver sand, we came to one of rather large dimensions. At the head of this stood John o' Groat's house. This site is marked by four small grassy hillocks, the sole vestiges of the celebrated structure.

"If we may judge by the album kept at the Houna Inn, pilgrims to this far north point of our island believe John o' Groat's house to be a substantial edifice. The pages teem with expressions of disappointment, outpoured generally in bad prose and worse verse. Here is a specimen:—

"'I went in a boat
To see John o'Groat,
The place where his house doth lie;
But when I got there
The hill was bare,
And the devil a stone saw I.'

The lines have, however, the merit of being perfectly truthful, for the hillocks are destitute of a single stone, and you have to draw largely on your imagination to believe that any house ever stood on the spot."

The author crossed the Pentland Firth, in what reads very like a heavy gale:—

"But I had faith in the steamer and her weather-worn skipper, and my enjoyment was complete. How could it be otherwise?—above, grand masses of cloud, sweeping across the deep blue, casting their shadows like dark isles on sea and cliff. Below, huge waves, rolling onward in ever-increasing majesty, until in the fulness of their pride and might they broke in thunder tones against the cliffs, belting the rocks with creamy foam contrasting exquisitely with the deep blue of the sea, while the tawny sandstone precipices glowed under the rays of the sun, now sinking in the rich heart of the west.

"That man must indeed be ill at ease, physically or mentally, who would not be joyous amidst this glorious combination of sea, sky, and cliff. In its presence, hearing the great sea voice, it was not difficult to understand how the young Orcadian who from her cradle had lived in the contemplation of the eternally heaving ocean, thought when she went to Scotland that nothing was so dead and lifeless as the dark green woods. Scott tells the story, rendered more impressive by Wordsworth, who was paying him a visit at Abbotsford, breaking forth on a breezy day, as the trees were swayed to and fro, and the branches tossed about, 'What life there is in trees!' Indeed, so disappointed was the young lady, that Scott adds, 'she went back, and I believe nothing will ever tempt her from the wind-swept Orcades again.'

"Though generally presenting a mighty wall face, the Hoy cliffs assume in many places fantastic shapes. The most remarkable of these is an enormous pinnacle 400 feet high, very like a ruined column, standing in the sea about 200 yards from the cliff. This is the Old Man of Hoy, well described by the Orcadian poet:—

"'See Hoy's Old Man, whose summit bare
Pierces the dark blue fields of air:
Based in the sea, his fearful form
Glooms like the spirit of the storm.'

"This remarkable natural pillar consists of a base of irruptive porphyry rock, supporting an isolated column of sandstone, which is scarred into strange fantastic shapes. A little to the north of the 'Old Man' the cliffs attain their highest elevation, forming titanic barriers to the strength of a mighty ocean lashed to fury by gales from the west. Off these grim precipices we encountered the roughest sea, amidst which the little steamer was tossed so rudely that holding on became extremely difficult, while deep moans and groans from below certified the *crescendo* kind of agony suffered by those in the narrow little cabin. But this uneasy state of things did not last long. Rounding Hoy Head, we steamed into a channel dividing Hoy from Pomona, and skirting the sweet green isle of Græmsay, glided into the tranquil and almost land-locked Bay of Stromness. A fleet of small brigs and schooners lay at anchor in the bay, and numerous boats painted light green were moored off Stromness."

After looking up the striking geological features of the neighbourhood, Mr. Weld proceeded to Kirkwall, of Scandinavian origin, a foreign-looking town, with courtyards shaded "by actual trees, thick with leaves." At this point of the narrative we have an interesting description of the ruined palaces of the Earls and Bishops of Orkney, where the great King Haco died.

Kirkwall was our traveller's most northern point. His return was by way of Thurso to Sutherlandshire, which, with the adjoining counties, was examined from Cape Wrath down to Inverness. From this point the Caledonian canal took him to Oban, whence he again returned northwards by the Sound of Mull to Skye, of which we have a grand and picturesque account. Quitting Skye, a row up Loch Duich and a journey over the mountains took him to Invergarry, by way of Loch Garry; thence he passed down the Caledonian canal, and finally by the Pass of Glencoe reached Loch Lomond, where the excursion may be said to have ended. And a glorious excursion it was for a man with health, strength, and resolution to bear him up. Ye men of law, and you ye weary citizens, put aside your drilling, but keep your rifles in order; take up Mr. Weld's brilliant pages, and follow in his track if ye wish for clear heads and vigorous limbs fit to endure another nine months' London campaign.

"It was July—the July of 1859, and the fierce mid-

summer sun, which had been for weeks parching, broiling, and blistering all London, had set—when, while I was sitting with doors and windows wide open, a familiar friend entered the room. As usual at this time of the year, my thoughts had been running on a holiday ramble, and visions of unvisited continental cities and lands were before me, when my friend gave a new current to my ideas, by announcing that the purpose of his visit was to ask me to join a shooting and fishing party in the Highlands."

At the end of two months he had "plunged into the busy world of Glasgow, fit prelude to that of London." We wish we had room for other extracts from his charming pages.

The *Linnean Society* has issued a Zoological Supplement to the 4th volume of their Proceedings, containing 1, Descriptions of new Hymenopterous insects collected by Wallace in Celebes; by Mr. Frederick Smith; 2, Descriptions of insects of the same order, collected by Wallace in New Guinea; by the same; 3, Catalogue of Dipterous insects, collected in Amboyna by Wallace; by Mr. Francis Walker. The second of them is illustrated by a plate.

Miscellaneous.

Swarming of Bees.—An unusual and extraordinary occurrence took place on Sunday last at the Camp on the Curragh of Kildare. A private of the 20th Regiment, named Martin Ryan, about 12 o'clock took a can and a piece of iron, with which he commenced beating the can for the purpose of causing some bees flying about the camp to swarm. This he succeeded in more effectually than he desired, for shortly after he commenced the rattling noise the bees gathered upon one side of his face, extending in a thick cluster, numbering thousands, from the top of his head to half down his arm, between the shoulder and elbow. In this dilemma he called out for assistance, and he was shortly afterwards placed sitting in a chair, when a hive was obtained, which was held over his head, covered with a sheet, with a view of endeavouring to get them to enter the hive, but up to the hour of 3 o'clock, when our correspondent saw him, there was little prospect of their removing, and, the day being extremely hot, it was conjectured the little but busy tribe would not take to the quarters which were provided for them sooner than 6 or 7 o'clock in the evening. The soldier was removed to the guard-room, out of the air, for the purpose of preventing any other assailants gathering about him, and to give him shelter from the overpowering rays of the sun, from which he was suffering greatly in consequence of the weak state to which the sudden and dangerous assemblage upon him had reduced him. *Freeman's Journal.*

The Black Fly.—A deadly enemy to the whole race of caterpillars is ever on the alert, winging about in the shape of a small black fly, in search of an exposed and defenceless caterpillar. Having selected her victim, she pierces his body with a sharp cutting instrument she is armed with, and in the wound deposits an egg; the caterpillar winces a little at this treatment, but seems to attach little importance to it. Meanwhile his enemy repeats her thrusts till some 30 or 40 eggs, germs of the destroyers, are safely lodged in his body, and his doom is certain beyond hope. The eggs quickly hatch into grubs, who begin to gnaw away at the unhappy creature's flesh, thus reducing him gradually, but by a profound instinct keeping clear of all the vital organs, as if knowing full well that the creature must keep on feeding and digesting too, or their own supply would speedily fail; as usurers, while draining a client, keep up his credit with the world as long as they can. Weaker grows the caterpillar as the gnawing worms within grow stronger and nearer maturity. Sometimes he dies a caterpillar, sometimes he has strength left to take the chrysalis shape, but out of this he never comes a butterfly—the consuming grubs now finish vitals and all, turn to pupæ in his empty skin, and come out soon, black flies like their parent. *British Butterflies, by W. S. Coleman.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Let shading be used with caution during the present comparatively sunless weather. As plants should now, or soon, be ripening their young wood, they want as much light and even moderate sunshine as possible. In the case of Orchids this is especially necessary, in order that the young leaves and pseudo-bulbs may be thoroughly matured. Plants already in this condition, or nearly so, should be removed forthwith to a cool house, and care taken not to induce them at present to push again, as a fresh start would interfere with their flowering next year. Dendrobium nobile and others of that class sufficiently advanced in growth should also be moved to a house where they could have a moderate and steady temperature, abundance of air, and little water till their stems are ripe and their flower buds formed. Those Orchids which are still in a growing state should be placed in the most favourable positions and encouraged by a nice growing temperature, while the weather continues favourable for ripening and hardening any growths which they may yet make. Afterwards let them be put gradually to rest.

FORCING DEPARTMENT.

PINERY.—Attend carefully to growing stock, keeping the bottom-heat regular, and the atmosphere warm and moist, and use every means to secure rapid vigorous growth. This will not be obtained, however, unless all is right at the root, therefore attend well to watering, and never allow any of the plants to become pot-bound. Give air moderately to young stock, and shut up early in the afternoon, giving the plants a gentle dewing with the syringe, and the house a good steaming by wetting every available surface, Continue to pot a few suckers, as they can be obtained of sufficient strength, and do not allow too many to be produced by one plant, as they weaken each other. Indeed, no sucker should be allowed to grow to any size that is not likely to be wanted for stock, and unless in the case of any scarce sort, never more than two on a plant. Plants growing in beds of soil must be very carefully attended to with water, giving enough at each application to moisten the whole body of soil; for unless this is attended to the bottom of the bed will sometimes get quite dry, while the surface is moist.

VINERIES.—The inside borders of houses intended to furnish a late supply of Grapes should be well soaked with manure water as soon as convenient, so as to allow of their becoming dry before continued damp cloudy days set in, for damp will be most injurious then, and anything likely to cause it should be avoided. Muscats beginning to ripen should be assisted with fire-heat, for it is hardly possible to ripen these properly at any season without artificial heat; and those for late use should be pushed on so as to get them ripe by the end of next month at the latest; for those ripened later in the season are seldom of good quality, and we have always found them to hang better when ripened early in autumn than those that are ripened later in the season.

FIGS.—The second crop on the earliest trees will be fast advancing towards maturity; as soon as the fruit begins to ripen the atmosphere should be kept dry and rather cool, giving air freely every fine day, and using a little fire on wet cloudy days, to prevent damp and allow of a gentle circulation of air. Use every care to keep the foliage clean and healthy, and clear of insects, and do not crowd the young shoots.

MELONS.—Plants on which the fruit is ripening should be kept dry at the root, and freely exposed to air on fine days.

FLOWER GARDEN AND SHRUBBERIES.

Cuttings of Roses may now be taken, and planted in a close cold frame in a northern aspect. In about a month they will have shown a disposition to strike root, when they may be taken up carefully, potted, and plunged in a slight bottom heat. Treated thus they make nice plants in a short time, and if kept under slight protection during winter will fill their pots with roots and be ready for planting out next May. Pink pipings put in early will now be ready for transplanting, and if so this should be done at once, as they will require time to fully establish themselves, so as to prevent frost from injuring them. If the situation ultimately intended for them is vacant they may be planted there at once; but if occupied at present by something else, let the young Pinks be planted 4 inches apart on reserved beds in an open situation, the soil of which should consist chiefly of light loam, to which may be added some charcoal-dust or charred refuse. The rotten manure from an old Mushroom bed answers very well for Pinks, as it encourages a mass of fibres, and produces a healthy but not over gross development of top. For a list of a few select varieties see our Number for last week, p. 651. As regards bedding plants some memoranda respecting their arrangement next season should now be made. Of the flower garden a rough plan should be made, the beds on which should be numbered and correspond with an accompanying list of plants with which it may be intended to fill them, and along with this should be the quantity required for each bed. In this way accurate information is at once obtained of the quantity of plants which must be propagated by cuttings, and both by these and seed in spring. Disappointment is thus prevented on the one hand, and waste of time and labour on the other. Whilst half hardy plants are in full beauty, a tasteful eye will easily discover the weak and improvable points, and by closely observing the more satisfactory part, will readily perceive the most desirable future arrangement.

HARDY FRUIT AND KITCHEN GARDEN.

The main breadth of Spinach for furnishing the winter supply should now or soon be sown; also prepare ground for winter Onions. Get a good breadth of Lettuce and Endive planted out for the autumn supply, and sow some hardy sort of Lettuce for planting out against south walls, or in frames, to come in after the frost cuts off the out-door supply. Dig down exhausted plantations of early Strawberries, and get the ground planted with winter Greens, if there is not already sufficient of these planted; and make a further sowing of Turnips, if these are likely to be scarce before the winter is over. Attend to cutting and drying herbs as they are ready. Get a good breadth of Cabbage planted thickly in rich ground for early winter use.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending July 19, 1860, as observed at the Horticultural Gardens.

July.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 13	24	29 901	29.788	75	50	62.5	60½	58	N.E.	.00
Satur. 14	25	29.800	29.768	75	48	61.5	62	58	S.W.	.00
Sunday 15	26	29.840	29.791	71	47	59.0	62½	58½	S.W.	.01
Mon. 16	27	29.910	29.816	65	50	57.5	62	58½	E.	.14
Tues. 17	28	29.862	29.814	75	45	60.0	62	59	S.W.	.00
Wed. 18	●	29.827	29.764	75	50	62.5	62½	59	S.W	.07
Thurs. 19	1	29.680	29.636	70	49	59.5	63	59½	S.W.	.01
Average..		29.831	29.768	72.3	48.4	60.3	62.1	58.5		0.23

July 13—Slight haze; very fine; densely overcast.
— 14—Overcast; fine; densely overcast at night.
— 15—Fine; showery; overcast.
— 16—Overcast; rain; densely overcast.
— 17—Fine throughout; overcast at night.
— 18—Cloudy and fine; cloudy, with occasionally clear intervals so that the eclipse of the sun could be distinctly se en evening dull, with chilly coolness.
— 19—Rain; fine; very fine; densely overcast; slight drizzle.
Mean temperature of the week, 3 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending July 28, 1860.

July.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 22..	73.5	52.3	62.9	18	1.37 in.	3	3	2	1	1	14	6	1
Mon. 23	74.6	53.3	63 9	16	0.40	1	4	5	2	3	9	5	5
Tues. 24..	72.8	52.5	62.7	11	1.16	1	7	4	2	3	12	3	2
Wed. 25..	74.2	50.2	62.2	9	0.36	2	6	3	—	2	9	11	1
Thurs. 26..	73.3	51.7	62.5	16	1.22	2	1	4	2	4	13	6	2
Friday 27..	74.7	52.3	63.5	18	0.96	1	3	5	2	3	11	6	3
Satur. 28..	76.1	52.6	64.4	17	0.33	2	2	3	1	1	11	8	4

The highest temperature during the above period occurred on the 25th, 1844—therm. 92 deg.; and the lowest on the 25th, 1857—therm. 37 deg.

Notices to Correspondents.

*** Correspondents are requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

CUCUMBERS: *M F W.* It is impossible for a person not on the spot to answer your inquiry. In all probability the roots are either too wet or too dry—perhaps the latter.—*C D.* Examine the roots and see whether the soil is not dried by the hot-water pipes. At all events give a great deal more air. The Cucumbers are gumming from want of sufficient perspiration.

DISEASED HAWTHORN: *J C.* It is infested by Æcidium laceratum. See last week, page 652.

FELLING TREES: *Bascot.* Trees should only be felled in the winter—never before the beginning of December—if the timber is to be of real value.

FLORISTS' FLOWERS: *W C, Horncastle.* We must positively decline expressing any opinion respecting florists' flowers. The proper tribunal is the Floral Committee of the Horticultural Society, and to that Committee they must be submitted, if any faith is to be placed by the public in the judgment passed.

FUNGI: *Mary.* You will find an account of your Fungus under *Æthalium septicum* in our Number for May 5, 1860, and the information you require. *M J B.*

GARDENERS: *Z.* A gardener has not any right to claim as his own plants that he has raised in his master's hothouses or greenhouses from cuttings or seeds or offsets, &c., given to him by other gardeners, or from such things *bought* by him, unless there is some special agreement on the subject.

INSECTS: *J C.* The Gall on the Rhododendron is new to us. Can you send more specimens in a small tin box to Mr. Westwood, Oxford?—*F J H.* Your Onions are infested with the grub-like larvæ of Anthomyia Ceparum. We know no better remedy than carefully plucking up and burning the young plants as soon as they show the least sign of the presence of the enemy. This will prevent fresh broods, which at this season of the year succeed each other rapidly. *W.*

LANCASHIRE CLUB OF NATURALISTS: *Diss.* The notice of this Association appeared on the 5th of May last. It is an entirely new body. With the name of its secretary we are unacquainted. If you address your inquiries to the Secretary, &c., under cover to J. A. Turner, Esq., M.P., Manchester, it will probably find him.

NAMES OF PLANTS: *J F.* 1, Festuca Myurus; 2, Aira cæspitosa.—*Brislington.* The Iris is a monster, changing the form and position of all the parts of its flowers. Therefore no opinion can be formed about it. It looks like Iris flexuosa.—*A Reader.* 1, Juncus Bufonius; 2 and 3 are Mosses, which we do not undertake to name. The Rose is attacked by a Fungus called Æcidium Rosæ.—*M B D.* Sisymbrium officinale.

PEACHES: *A Gardener* would be greatly obliged by any of our readers informing him if any cases have come under their notice of the Walberton Admirable Peach having been successfully forced in a Peach-house where the fruit was not required to be ripe earlier than Midsummer.

PLANS OF GARDENS: *Ashtead.* We cannot furnish plans. You had better consult Mr. Lovell's, published in the *Gardeners' Chronicle* in the early part of 1859.

SPRUCE FIRS: *G W.* They are terribly sickly. Surely the soil or the roots must be to blame.

STRAWBERRIES.—We have received from Mr. *Daniel Robertson*, of Paisley, a letter, occupying six closely written foolscap pages (!!) upon the subject of his *Wizard of the North*, and Mr. Yates's comments thereon. For such lengthy communications, having merely a private interest, it would be impossible to find room, even if it were desirable to do so. Nor do we see that Mr. Robertson meets the case of his critic. Mr. Yates urges him to exhibit the produce of his Strawberry in London, saying that as he took a prize with it at Paisley in 1857, surely good fruit of it might be shown in 1860. The Pomological Society has offered a prize of 2*l.* for the best dish of it, and to this Mr. Y. will add 3*l.*, making 5*l.* to be paid over to the Gardeners' Benevolent Institution in the event of the Wizard failing to obtain a Certificate. Mr. Y. purchased plants of it in 1858 of a London nurseryman, and the fruit of these he considered worthless. Mr. Robertson, however, states that the plants Mr. Y. fruited were not his Wizard, which only got into the hands of the trade on the 10th of August last, but a spurious sort which had been sold for it; and he declines Mr. Yates's challenge upon the double ground that the opinion of the local judges who were "first class practical gardeners" ought to be sufficient, and that Strawberries after travelling 420 miles from Paisley to London would be unfit for competition. Whether Paisley judges are as likely to form as sound an opinion as the experienced London censors we leave others to determine. But the difficulty concerning transit is surely not insuperable. We hear that Mr. Robertson has sent plants of his Wizard to be fruited in the Garden of the Horticultural Society; the merits or demerits of the Wizard will therefore now be really ascertained, which can never be the result of a wordy war leading to nothing: and which must cease so far as our columns are concerned.—*J B.* It appears to be a coarse imitation of the British Queen, without its merit. Whenever Strawberry fruit is packed in cotton wool without protection its flavour is destroyed. Strawberries sent to a distance should always be separately wrapped in tissue paper before being guarded with wool.

ROYAL AGRICULTURAL COLLEGE, GEOLOGY, BOTANY, AND RURAL ECONOMY.
Professor BUCKMAN has VACANCIES for TWO PUPILS at his private residence in Cirencester, who, besides attending the Scientific Lectures and Practical Farming, at the College, may have the advantages of instruction in Geology, Natural History, and Rural Economy.
Apply to Professor BUCKMAN, Cirencester.

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Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

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LOANS may be obtained under the General Land Drainage and Improvement Company's Act for the full amount required by the Owners of settled Estates, Incumbents, Trustees, Bodies Corporate, &c. for the erection of Farm Houses, Farm Buildings, and Labourers' Cottages designed by their own Agents and sanctioned by the Inclosure Commissioners.
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Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

TO PIG, POULTRY, AND GAME FEEDERS.
JUPP'S RICE FOOD FOR POULTRY AND GAME.—RICE SWEEPINGS, 8s. 6d. per cwt., in 1¼ cwt. bags; SCREENED RICE, 12s. per cwt., in 1¾ cwt. bags; DOG BISCUITS, 14s. per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6s. 6d. and 8s. 6d. per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 6, Cross Lane, Eastcheap, E.C.

MANCHESTER AND LIVERPOOL AGRICULTURAL SOCIETY.—The ANNUAL SHOW of LIVE STOCK (including POULTRY), IMPLEMENTS, &c., will take place at Bolton on September 12 and 13. Entries close on August 15. A large amount is offered in Special or Extra Prizes on this occasion, and the competition generally is open to the United Kingdom. Prize Lists and Forms of entry may be obtained from T. B. RYDER, Secretary.
2, Elliot Street, Clayton Square. Liverpool.—July 21.

CRYSTAL PALACE, SUMMER POULTRY SHOW.—The Summer Show of POULTRY, PIGEONS, and RABBITS will be held on SATURDAY, MONDAY, TUESDAY, and WEDNESDAY, August 25, 27, 28, and 29. Schedules of Prizes can be had on application to Mr. W. HOUGHTON, Secretary to the Show, Crystal Palace. The ENTRIES close on SATURDAY, July 28.

The Agricultural Gazette.
SATURDAY, JULY 21, 1860.

MEETINGS FOR THE FOLLOWING WEEK.
WEDNESDAY, July 25 } Royal Agricultural Improvement Society
THURSDAY, — 26 } of Ireland at Cork.
FRIDAY, — 27 }

MR. CAIRD did a useful thing the other night by his suggestion to the Poor-law Board that they should publish with their monthly returns the current rate of agricultural wages in the various unions in England and Wales. Mr. VILLIERS, the President of the Board, replied that the information could be obtained, and with the permission of the House would be published. He also intimated that the law of removal, now under discussion before a committee of the House, would next year become the subject of deliberate consideration, with a view to such alteration as may allow of a more free circulation of labour throughout the country.

—— *The Irish Farmers' Gazette* reports a Dublin police case recently sent for trial, in which Messes. CREAGH, manure merchants, are prosecuted by the Crown for frauds in the guano trade. The following are passages from the address of Mr. BARRY, Q.C., stating the case before Mr. O'DONNOR, the magistrate:—

"On the 18th of May, 1859, two loads of guano, or of something resembling it, left CREAGH'S stores, and were delivered at the terminus of the Great Southern and Western Railway, where they were put into the waggon, and carried to Maryborough. On the 20th of May, 1859, a mule and cart left Green Street, loaded with the stuff, and it was sent on to Mountrath. On the same day another lot was sent in a float belonging to one HUGHES, who, it seems, was intimately acquainted with the establishment; that load was also consigned to a party in Mountrath. On the 26th May, HUGHES, with a mule and cart, went with another load to the railway station, when it was put in a waggon and directed to JAMES CONNOR, Athy. Some two or three days after, the same bags of guano were seen in the same waggon at Athy, and delivered into CREAGH'S store. On the 30th, a purchase was made by a man of a portion of this guano, which was sold as pure Peruvian by the defendant's representative, CONNOR, who said he was agent for some one in Liverpool. He gave a receipt for the money, 3*l.* 10*s.*, the price of 5 cwt. and 14 stone, and signed it 'J. CONNOR, for B. CREAGH.' Now, this guano had been submitted to Professor APJOHN, and the result is, that it has been pronounced a most spurious compound—not pure guano, or anything like it. The various samples examined present, of course, different degrees of adulteration, some of them having very little of the real article contained in them, and the very best of these samples being pronounced not worth more than 5*l.* or 6*l.* a ton, while the market price of the genuine article was 14*l.* or 15*l.*"

The question then arises—Is the article thus described an adulterated or an accidentally injured guano? And Mr. BARRY thus answers it:—

"It was ascertained that in Mylestown, in the county Kildare, there was a man living named GERAGHTY. On this man's land there was a certain sort of clay which resembled guano, and which was obtained by these parties for the purpose of adulteration, and selling the spurious article as pure Peruvian guano. This clay was traced to the stores of the defendants, as well as quantities of gypsum. He (counsel) did not know whether the defendant was engaged in the trade also, but it would be shown that gypsum was not an ingredient of the genuine guano, and also that it was used for the purpose of adulterating it. It was also a remarkable fact that a machine, somewhat like a large coffee mill, was seen going into CREAGH'S store, and that the noise of something grinding was often heard there, though it was well known that the pure guano was never in a state which required to be ground."

The evidence is given in full in the columns of the Dublin papers. We extract the following passage from that of JAMES MORAN:—

"He was in the employment of Mr. CREAGH from February to July, 1859; he was paid more than any of the other men who used to work in the stores; he often saw cart loads of gray and yellow marl, gypsum, ochre, and burnt oyster shells brought to the stores, and it was his business to see the different materials broken and mixed together; he acted always under the direction of Mr. CREAGH or Mr. GUMLEY, who told him the proportions in which the different kinds of stuff should be mixed together; when the mixture was made, it was put through pure guano, and the whole mass was made as like the colour of guano as possible; a large quantity of burnt oyster shells was brought to the stores by Mr. CREAGH'S cart; the oyster shells were put in a stuff called 'patent manure,' which was different from the guano; the patent manure was made of oyster shells, yellow marl, salt, and ochre, with a small quantity of guano added to it; the mixture which had the name of guano consisted of the composition of gray marl, ochre, and gypsum, added to about an equal quantity of pure guano; some of the oyster shell was occasionally added to this, but very little; when they wanted to 'rise a smell' they used to put about half a shovelful of oyster shells into the bag of guano; the gray and the yellow marl were mixed together; the greatest quantity of pure guano he ever saw put into the mixture was one-half, and the smallest proportion of guano used was about two parts of guano to three parts of the marl and gypsum mixture."

Again:—

"JOHN GERTY was called, and deposed that he lived at Mylestown, and that there was a large bank of yellow marl upon his lands; he had occasionally sent loads of this marl up to Dublin, to persons named GAFFNEY, and GOODMAN, and M'CANN; within the past two years had sent up three loads—two of 50 tons and one of 40 tons—to Mr. M'CANN. Saw Mr. CREAGH about two years ago; he looked at the marl, and said he would find customers for witness; the marl was sold at 6*d.* per ton, and he was also paid for the labour of digging and carting the stuff from the canal to the boat; last October loads were sent up by the canal to GAFFNEY, who was one of the customers whom Mr. CREAGH procured for him."

In cross examination it is brought out that few complaints have been made of the quality of the "guano" sold by Messrs. CREAGH, and that this marl is a useful topdressing to land. Dr. APJOHN, on being examined, proves the composition of the adulterated guano and its poverty as compared with genuine guano from Peru.

The magistrate has sent the case for trial; and we refer to it before the verdict of a jury has been given, to congratulate our readers in the sister island on the activity of the law officers of the Crown in a matter so closely affecting the agricultural interest.

IT is a thousand pities that an institution of the great influence over agricultural welfare which the English Agricultural Society has shown itself to wield should have any of its power jeopardised by schism or secession. We hear of active and therefore mischievous jealousies in its governing body, arising either out of different habits of thought, as when practical men and scientific men come into collision; or arising out of difference of social *status*, as when men of leisure and of liberal education unworthily suspect the motives which actuate the manufacturer or tradesman, or are themselves unworthily suspected of letting personal and family relations overrule the public interest, in their appointments. If such jealousies and the want of mutual confidence which produce them do necessarily arise out of the existing membership of the Council—if they be the unavoidable fruit of its present constitution—then the sooner that this is altered the better will it be for the interests of the Society. But if mere misunderstandings, possibly aggravated by over strict adherence to routine, be at the bottom of the existing dissatisfaction, surely it will be wise in all parties rather to seek reconciliation than to provoke angrier feeling by recrimination. There could not be, we therefore believe, a more ill advised address in connection with this subject than that of Major MUNN at the General Meeting of the Society last Thursday.

There cannot be a doubt that the implement manufacturers have had ample ground for dissatisfaction with the relations which this Society has latterly maintained towards them. It is also certain that their part in the exhibitions of the Society are among the chief attractions of these annual gatherings. It is unquestionable moreover that the Society has been of the greatest service to the manufacturers; no better advertisement was ever offered, no better mart ever opened than the annual Show-yard of the Society affords them. And every unprejudiced person, again, believes that the agricultural machine-makers, as much as any other section of the Society or its Council, are a public-spirited body, anxious for the improvement of English agriculture, and willing to contribute their services for its good.

Under these circumstances Major MUNN, a Kentish man, who came up to the May General Meeting, and, in reference to the relations between the machine-makers and the Council, then expressed his fear that this "cuckoo bantling" might turn upon the parent bird for its destruction—now declares the absence of the protesting body to be an insult to his county, alleges that the reasons for their absence are trivial and ridiculous, that those who made them can and will unmake them, that their motives, fears, and good faith may all be fairly estimated by the fact that though their goods were not exhibited they were present personally, and by circular and agents doing their best to avoid the mischievous results of their blunder.

It is not too much to say that the gallant Major did as much mischief to the Society by this ill-judged speech, as his influence and his time allowed him. If it were our object, as it seemed to be his, to widen the breach which has been made, it would be easy to show that the protesting manufacturers acted on sufficient reason and were actuated by right motives.

The indefiniteness of the prize list was complained of, and it resulted in one machine at Canterbury being rejected by the judges *because it was too good!* The short examination by the judges, was also complained of, and it resulted in one machine being declared to take 12 times the power needed by another of the same make and doing the same work! It is plain that the whole subject of implement trials needs and must obtain an entire revision before long. If in spite of protest on these grounds, the machines of some of the manufacturers were on the ground, it is certain that they were exhibited not by personal agents of the several firms, but by the general dealers in agricultural machinery, and notwithstanding instructions to the contrary.

It is not however our wish to dwell on past causes of dissatisfaction. Let us hope that the next year's gathering at Leeds, while as good as that just past in those particulars where it excelled, may be as great a success as this has been a failure in the other great branches of the exhibition. This it will no doubt be, if the governing body shall call the implement makers cordially to their councils, and concert with them the best means both of illustrating the present condition of English agricultural machinery and of encouraging its further improvement.

THE ENGLISH AGRICULTURAL SOCIETY.

CANTERBURY: *Thursday, July* 12.—At the annual meeting of members held this morning, Lord Walsingham in the chair, Earl Powis moved a vote of thanks to the Mayor and Corporation of Canterbury, for the reception given to the Royal Society. The Hon. Col. Hood seconded the resolution, which was unanimously agreed to, and the Mayor of Canterbury responded.

On the motion of Mr. Barnett, seconded by Mr. Milward, a vote of thanks was awarded to the railway companies for the facilities afforded for the conveyance of implements, stock, and visitors to the show. A vote of thanks was also awarded to the local committee.

The President said, the next business was one of a peculiarly agreeable character, being the presentation of a testimonial to Mr. Brandreth Gibbs for his services as honorary director of the country meetings of the Royal Society. The members of the Society were all aware of the valuable services rendered by Mr. Gibbs when discharging the duties of honorary secretary, and on his undertaking the office of honorary director, a strong feeling was evinced in favour of presenting him with some testimonial. Mr. Gibbs, however, declined to receive a present in money or any other valuable consideration. The Council consequently passed a vote of thanks to Mr. Gibbs, which was inscribed in a book he (the President) held in his hand, and directed that the gold medal of the Society should be inserted in the cover. It was his pleasing duty to present the testimonial to Mr. Gibbs.

The testimonial consisted of a handsomely bound and elegantly mounted portfolio, with the Society's Gold Medal inserted on one side, and on the other the following inscription:—"The Council of the Royal Agricultural Society of England, on the 1st of February, 1860, unanimously passed a vote of thanks to B. T. Brandreth Gibbs, Esq., for his valuable services to the Society as honorary secretary, and also as honorary director at the annual country meetings. (Signed) WALSINGHAM, President."

Mr. B. Gibbs said he felt great difficulty in acknow-

ledging the honour conferred upon him, especially as it was a mark of distinction rarely granted by the Society. The success which had attended his services in the joint offices of honorary secretary and director had more than compensated him for any trouble or difficulty he had encountered. It was very gratifying that, after working 21 years in connection with the showyard of the Society, his services should be acknowledged by the Council in so handsome a manner.

Major Munn adverted to the misunderstanding between some of the leading implement makers and the Council of the Royal Society. While these "discontented" implement makers had withdrawn from the exhibition of the Society, they had been very careful, at the same time, to solicit a continuance of support from their customers, by being present themselves, and having their agents in the yard. He had made some inquiries into the grounds of the grievances urged, and the only complaint he had heard was, that the implement makers did not like to be under the necessity of entering the showyard by a certain gate, and to go out by another. All must admit, however, that, without stringent regulations, no great undertaking could possibly be carried out successfully. Something had also been said about the trial of ploughs being a violation of an engagement on the part of the Society, but this objection was as absurd as the one he had just mentioned. He understood that these discontented implement makers had put forth a pamphlet in justification of the course they had pursued. As a man of Kent, and an independent country gentleman, he begged to tell the discontented implement makers that a large number of the country gentlemen, farmers, and yeomen in that part of the county had determined, in consequence of their not exhibiting at the Canterbury meeting, to mark their disapproval of such conduct by transferring their orders to other parties, and to see whether they could not help some of the second-class makers to attain a position equal to that which the "discontented" makers had attained, through their connection with the Society.

On the speaker resuming his seat no sign of approval was given by his auditors. A vote of thanks to Lord Walsingham closed the proceedings.

THE IMPLEMENT SHOW.

We continue our report of the implement Exhibition. In common with all our contemporaries we again express our regret at the absence of many of our leading firms engaged in the manufacture of agricultural implements and machinery from the Canterbury Show. It is not for us to enter fully into the question of difference between these absentees and the Implement Committee of the Society, but we may be permitted to make one or two remarks. We are convinced upon one point at least, viz., that they have good grounds of complaint as a body, and we also believe that each individual has a special cause of complaint against this (to the agriculturists) highly responsible committee. This is to be deeply lamented. This committee, who take the initiative in all matters relative to the implement exhibition, both in prizes and trials, ought to be as explicit in their definitions and as open to suggestions as possible. But fancy a body of implement makers waiting upon them with just grounds of complaint without being listened to, or at most being left to the discretionary judgment of their consulting engineer. Courtesy from gentlemen is at all times expected.

On the other hand it should be remembered that the course of all societies is very liable to great changes, depending as it does upon the votes of its members. As such is the fact, we think implement makers should not so hardly condemn departures from certain arrangements said to be decided upon —quadrennial trials for instance. We think such fixtures are highly censurable, but if bad they should abide the time; and we also think it wrong to ask the makers to compete for machines which are to be supplied upon doubtful data. What could be easier than to define the conditions of the late trial for threshing machines, merely adding, "the grain not to be separated into qualities?" We should have heard no more of that complaint. The undefined length of strap for driving the machines is another complaint. The short- and unsatisfactory character of the trials is complained of. Their results cannot be conclusive. Take for instance that of Bentall's and Picksley & Sims' cake-crushers, the first needing 1000-power, the latter, 12,580; yet both made alike. It was manifest something was wrong, but no additional trial could be allowed; perhaps the adjustment of a screw would have set all right. Some machines were worked at this meeting only 50 seconds — can that be satisfactory? What is chiefly required is a committee of independent engineers, machinists, and agriculturists to inquire into the whole subject, including the best mode of offering prizes, the rate of prizes, of conducting the trials, and the like; the Society binding itself for a given time to abide by their decisions. We make these remarks with the best intention, and we trust some laudable effort will at once be made to restore the breach which has, we would truly believe, been unintentionally made. We now pass on to the present exhibition, just stopping for a moment to pay a just compliment to the inhabitants of the good old city for the cordial and attractive manner in which they have welcomed the Society. Canterbury never surely was so gay; such a display of triumphal arches, flags, banners, &c., as the Society has seldom met with in its peregrinations. The High Street from end to end was one continued display of arches of evergreens, flags, and flowers everywhere. The Merton Lane was really a splendid effort in appropriate decoration. The entrance was flanked by highly adorned houses, with Hops and corn sheaves to give effect. The lane itself was one profusion of festoons of evergreens on either side, set off by wreaths, crowns, garlands, bouquets, &c., all of splendid and beautiful colours and designs.

The stewards of the Society kindly gave the exhibitors of miscellaneous articles till Thursday evening to get in their implements, and although this was the case the judges of the class found many unpacked even on the Saturday. However ultimately a very attractive and interesting show was exhibited, the particulars of which we give in the following table:—

Articles Exhibited.	Lincoln, 1854.	Carlisle, 1855.	Chelmsford, 1856	Salisbury, 1857.	Chester, 1858.	Warwick, 1859.	Canterbury, 1860.
No. of Exhibitors, and in Articles as below ..	130	118	147	154	193	234	204
24. Steam-ploughs or cultivators (*i.e.*, draining-ploughs)	1	4	6	8	13	16	14
25. Steam-engines	24	18	31	28	43	121	82
26. Steam-traction engines	—	1	1	4	2	5	—
11. Drills	30	14	18	23	47	108	58
18. Manure distributors ..	9	3	5	13	11	7	4
14. Horse-hoes	21	10	24	26	34	67	46
13. Hay machines	4	6	10	11	12	16	14
15. Horse-rakes	14	8	17	22	24	44	36
21. Reaping and mowing machines	12	9	5	12	17	15	66
2. Carts (34) and waggons (13)	28	14	33	34	28	72	47
20. Ploughs	27	—	—	—	—	225	127
27. Subsoilers	17	8	10	8	12	32	7
8. Cultivators, &c. ..	25	23	28	20	15	92	37
6. Clodcrushers and rollers	24	17	25	18	24	115	38
15. Harrows	16	9	17	19	32	108	72
10. Draining tools, and in sets	4	1	8	7	8	43	19
28. Threshing machines	26	21	33	31	87	73	63
7. Corn-dressing machines	24	18	31	31	29	61	53
5. Chaff-cutters	38	22	46	37	53	168	48
17. Linseed-crushers, or mills	20	14	25	15	22	41	62
Turnip-cutters, &c. ..	18	20	32	30	27	58	35
23. Oilcake-breakers ..	20	12	23	16	32	54	31
9. Churns	12	7	10	10	20	92	67
1. Brick and tile-machines	11	7	9	5	6	25	—
19. Mills	—	—	—	—	—	40	56
1. Bone-mills	2	—	2	—	7	9	10
3. Cheese-making apparatus	—	—	—	—	5	16	18
4. Cheese-presses	4	5	5	—	22	22	
22. Root-pulpers	—	—	—	—	28	63	42
Screening machines ..	3	—	—	—	16	15	22
12. Gates (46) and field-gates (56)	..	..	..	..	..	..	102
16. Horse powers	..	..	..	..	..	..	20
24. Washing machines ..	..	..	..	..	..	..	85
34. Water-casks, tanks, &c.	..	..	..	..	..	..	18

The following are notes of some of the trials of farm machinery:—

Cake Crushers. — Cake of certain qualities could not be found for the cake crushers, hence certain complaints arose that large machines could not be fully tested. The small or hand machines were first tried, and with singular results, one of which we have already alluded to. The results of some will be found in the tables given last week. Messrs. Turner of Ipswich, Dray, Taylor, & Co., Picksley & Sons, T. W. Ashby & Co., Hunt & Pickering, Bentall, Smith Brothers, Johnson & Whitaker were the competitors. Dray, Taylor, & Co. have an internal cog wheel driving a moveable roller, by which an arrangement is effected to break the cake in more varied sizes; Turner breaks for beasts and sheep according as it is turned; Picksley & Co. break it into four sizes, and have screen boxes to separate and receive the cake and dust; Bentall makes six sizes; Johnson & Whittaker make also four sizes by a simple reversion of the handle. They worked five minutes each, their products being carefully examined by the judge.

The Power Cake-breakers were exhibited by Messrs. Smith Brothers, E. C. Bentall, and Dray, Taylor, & Co. (Smith, of Thrapstons). These were tried with 1 cwt. of oilcake each. Mr. Bentall takes first prize, 7*l.*; Dray & Co., second prize, 3*l.*

The Power Corn and Linseed-crushers were those of Turner & Co., Amies & Barford, Bentall, and Woods & Son, &c. The honour was awarded to Messrs. Turner & Co., Ipswich.

The Hand Root-pulpers were next tried. In this trial 108 lbs. of roots were given to each pulper. Barnard, Bishop, & Barnards profess that the cutting parts, which are cast-iron rasps, will sharpen themselves. Hunt & Pickering's is a disc pulper; Picksley, Sims, & Co. have knives fixed on a disc; Mellards is a curious arrangement, something like Gardner's, but the roots go inside and are cut by knives from the outer side; Bentall is as usual; Woods & Son show Phillips's Pulper. Johnson & Whittaker's are toothed rollers worked like a screw in principle. Next we have the root cutters and slicers, in which class compete Messrs. Barnard, Bishop, & Co., Carson on Moody's principle, Picksley, Sims & Co., Bentall, Mellard, Johnson & Whittaker, and Crosskill's Trustees. Picksley & Co. have a peculiar knife, sickle-shaped, and the arrangement for preventing the roots from lodging is an improvement, Bentall's machine has the means to separate the dirt from the cuttings.

The Power machines were allowed three minutes each. The Pulpers in competition were from the firms of Messrs. Barnard, Bishop, & Barnard; Trustees of Mr. Crosskill, Hunt & Pickering, Picksley & Sims, Bentall, and Woods & Son. The prize list last week shows the honours taken.

The Chaff-cutters were also allowed three minutes each, and were exhibited respectively by the firms of Messrs. Picksley, Sims, & Co., Page & Son, J. Cornes, Hill & Smith, Bentall, Alcock. J. Cornes & Sons, Johnson & Whittrker, Plenty & Pain, Ashby & Co., Gardner, Richmond, Chandler & Norton, and Carson; a class of capital machines, which it will give us great pleasure to remark upon hereafter. For the honours we again refer to the prize list.

The Hand-Power Chaff-cutters were tried with Barley straw as an additional test of efficiency, particularly of the knives. The exhibitors were Messrs. J. Gardner, H. Carson, Richmond, Chandler & Norton, E. Page & Co., Picksley, Sims, & Co., Johnson & Whittaker, Bentall, Ashby & Co., James Cornes, T. Alcock, Snowdon, Cornes & Sons, &c. For the prizes, see list, given last week.

Threshing Machines.—It has been the practice of the Royal Agricultural Society to withhold encouragement to doubtful orders of machinery, but we have this year prizes for horse-power threshing machines; however but few were brought forward, and these were tried with a given quantity of Barley and Wheat. Only four competed, belonging respectively to Messrs. Haslam & Wallis, Hensman, Woods & Son, and Tasker. Messrs. Wallis and Haslam carried off the prize of 20*l.*

The Steam-power Threshing Machines had a more important trial, but we cannot again refrain from sincerely wishing it had never come on; it was satisfactory for neither the exhibitors nor the judges; as it was, they had to disqualify one for doing its work too well. It was wholly indefinite, a complete gamble upon the judgment and predilections of the judges, and for no adequate benefit. Who is to decide when corn is just fit for the finishing dressing machine? That is a matter for every farmer's own ideas of good dressing. Surely such pertinacity will never more discredit our prize sheet. We incline to think the judges could not of themselves disqualify any machine "that did not profess to do more than prepare the corn," &c.; for who is to set the bounds of that preparation? Neither merchant or miller will complain of its being too well dressed. Well, the trials proceeded and the competition was between the firms of Foster, Nalder, Tasker, Ellis, Cambridge, Ruston, Proctor & Co., Plenty & Pain, Wilkinson, Wright & Co., Wedlake & Co., Kirby, Ashby, Turner, Savory, Holmes, Humphries Gibbons, Gilbert, &c. 100 sheaves of Wheat and 50 sheaves of Barley were appropriated for the trial of each machine. The trials were carefully conducted and the result was the award of 30*l.* to Messrs. H. & H. T. Gibbons, of 20*l.* to E. Humphries, and the third prize of 10*l.* to James Savory.

Amongst the miscellaneous articles exhibited were some extraordinary freaks of mechanical ingenuity. One exhibitor brings forward the model of a portable suspension railway cultivator or plough. The two engine houses, engines, railway, lines of suspension ploughs, draughts of ploughs, tackle—all resting on wheels to be moved along in grooves as the ploughing proceeds. Another exhibits a machine actually made and tried by the judges in the field. The object is to rake or pick up the Twitch or refuse from the field, take it up by revolving spiked wheels to an endless armed web, to be again taken up and deposited in a furnace through which is carried a blast. In this furnace it is to be burnt and then thrown out upon the soil as manure as the horses proceed. Another, a French exhibitor, exhibits an ingenious drill, the seed being deposited by clock-work machinery with the utmost regularity, supposing the horse agrees to the pace. A horizontal pump working in a trough was also exhibited, having a valve at either end so as to emit two streams of water at one operation. As usual all sorts of machines, &c., came for exhibition, as agricultural implements and machines. We were given to understand that the judges in this department were not to mark anything with honours that was at all likely to come into competition within the periods limited by the Society as the quaternial year, consequently but few honours were given in the miscellaneous departments. Even new implements were not taken into account, as not coming within the rule.

LOCAL PRIZES OFFERED BY THE CANTERBURY LOCAL COMMITTEE.

24. For the implement best adapted for the general cultivation of Hop lands, 10*l.* Not sufficient merit. 25. For the machine best adapted for mowing Grass and Clover for agricultural purposes, 20*l.*: Burgess & Key (Grass-mowing machine) 20*l.* 26. For the machine best adapted for reaping agricultural crops, 10*l.* [The final trial of reaping machines is deferred until harvest time, when the prizes will be awarded.] 27. For the machine best adapted for pressing Hops (in cloth) for the home market, 10*l.*: William Weeks (Kent patter Hop-pressing machine), 20*l.* 28. For the design for the most economical building the best adapted for drying Hops, to be illustrated either by plans or models, accompanied with a specification and estimate in detail of the cost, 30*l.* Not sufficient merit. 29. For the apparatus best adapted for drying Hops, 20*l.* Not sufficient merit.

THE COMPETITION FOR HOPS.

This department of the Show excited a great deal of interest; but it was a small collection of specimens.

GOLDING HOPS (13 exhibitors).—1st prize, 10*l.*, was awarde

to Mr. Robert Berriman, Langrish Manor Farm, Petersfield, Hants; and 2d, 5*l.*, to Earl Darnely, Thong, near Gravesend. (The crops varied from 9 to 18 cwt. per acre, and the age of the plantations from 4 to 80 years.)

HOPS OF ANY OTHER KIND (3 exhibitors).—The 1st prize, 10*l.*, Matthew Bell, Esq., of Bourne Park, near this city; and the 2d, 5*l.*, Mr. George Eley, Tong, near Sittingbourne.

FOR THE BEST MANAGED SAMPLE OF GOLDING HOPS (12 competitors).—Mr. T. W. Collard, of Canterbury, Mr. Robt. Berriman, and Mr. Hope Theobalds, of Godmersham, were first, second and third.

FOR THE BEST MANAGED SAMPLE OF ANY OTHER KIND OF HOPS (2 exhibitors).—Mr. Geo. Eley, of Tong, 1st; Mr. Matthew Bell, 2d; for "Jones's" and "Golden Grape" respectively.

THE COMPETITION IN WOOL.

QUALITY AND QUANTITY OF ONE YEAR'S GROWTH (9 entries).—A prize of 10*l.* was awarded for six Kent fleeces to Mr. Chas. Collard, of Wickham Court, Wingham; the fleeces entered by Mr. George Neve, of Sissinghurst Castle, Staplehurst, being highly commended.

FOR THE SIX MOST VALUABLE LONG-WOOL FLEECES, KENT OR OTHERWISE; COMBINING QUALITY AND QUANTITY (2 entries).—The prize of 10*l.* being awarded to Mr. Frederick Murton, of Smeeth.

FOR THE SIX MOST VALUABLE SHORT-WOOL FLEECES, COMBINING QUALITY AND QUANTITY.—The prize of 10*l.*, Lord Walsingham, Merton Hall, Thetford, Norfolk.

QUALITY OF GRASS SEEDS.

IN April last one of our customers sent you samples of mixed permanent Grass and Clover seeds for analysis, under the initials "J. S," your report of which we give below, see No. 1. We have not the Paper by us in which this appeared, to refer to the date, but this can easily be seen by referring to the April Numbers. On reading this analysis the gentleman (Mr. Scarth) who had long been an excellent customer, and had always expressed himself highly pleased with our Grass seeds, naturally felt annoyed, and wrote us an angry letter. We at once wrote asking him to forward us immediately a pint each of the Clover and Grass seeds from one of the sacks (which he did after some delay in consequence of absence from home), in order that we might examine them, and afterwards send them again for analysis under a different name. This we did and beg to refer you to copy of report, see No. 2, given to our relative Mr. A. Howden, Herefordshire, under the initials "A. H., Herefordshire," in a recent edition (16th June we believe). Now it can be clearly proved that these two lots of samples sent for analysis were taken from the same bulk and were in every respect the same. The Rib-grass was purposely introduced amongst the Clovers at the rate of 1 lb. in 11 lbs. as a valuable herbage plant. It is, therefore, as clear as noonday that there is something very far wrong, and as such reports and analyses, unless conducted with the greatest possible care and nicety, are calculated seriously and unjustly to injure respectable firms, we are determined to probe the matter to the bottom. It is not less clear that the party who thus reports is, 1st, either totally ignorant of what he takes in hand, or careless; or 2d, that he is a partisan, and does not deal out impartial justice. We have therefore to request your early explanation upon the subject, otherwise we shall in self-defence take an opportunity of drawing the attention of the public to the value of your analyses. We never grudge pains or expense to procure the highest class of samples in every article, and we can prove that the Grasses and Clovers in the mixture sent to Mr. Scarth were not only ordinarily good, but extraordinarily fine, the Grasses in particular, and that a purer or cleaner lot of Grass seeds was never sent out by any house in Britain. No house feels more earnestly desirous than we do to see fraud exposed, and the seed trade established upon a different footing; but truly this does not appear to us to be the way to arrive at an object so devoutly to be wished by all high-minded, honest dealers, amongst whom we conscientiously flatter ourselves we may be numbered. If these analyses are to be continued, and we sincerely hope they may if fairly and honestly conducted by those who understand the matter thoroughly, some standard of excellence should be established, so that justice may be fairly meted out, and the public not misled. *Francis & Arthur Dickson & Sons, Chester.*

No. 1. Copy of report to "J.S.," April .—"The sample of Grass seeds is estimated to contain as many as 102,400 weeds in the bushel, besides a tolerable admixture of Bromus mollis (Lop), Triticum repens (Couch.) It may be pronounced as quite an inferior sample. The Clover seed by which this was accompanied contained in a pint 24,960 weeds, mostly Plantain; this latter was estimated at a little more than 7 per cent. of the whole."

No. 2. Copy of report to "A. H. Hertfordshire."—"Clover for permanent pasture, very good but intermixed with Plantain to the extent of 17,700 of this plant per pint; this has in all probability been added as a desirable pasture plant. The Grasses with this may be pronounced as a better mixture than usual for good meadow land; it contains a little Holcus, but much less than is generally the case."

[We are glad to publish our correspondents' letter, first, because it is an admission that the seed trade requires to be established on a different footing, though we are not so unjust to the trade in general as to intimate that our correspondent is the only honest member of that fraternity; and secondly, because the result of the little trick that has been practised upon us clearly shows the correctness of our principle of analysis.

With respect to the Clover, it must strike any one that there is a wonderful agreement in the two cases as quoted by our correspondent, bearing in mind the fact that in one case about 1 ounce of seed was sent, and in the other half a pint. In all these cases our decision is founded upon what is sent to us, as we have not the opportunity of selecting our own samples for investigation, and our reports therefore must be upon the samples only, and no one ought to know better than our correspondent that there would be a difference in mixed Clover seed in different parts of the measure after the slightest shaking. How near to the truth was our analysis must be apparent when it is admitted that Rib-grass was purposely introduced amongst the Clovers at the rate of in 1 lb. in 11 lbs. as a valuable herbage plant. We have at least not over-estimated the amount of Plantain which we hold to be little better than a weed.

These remarks apply equally to the Grasses. It is easy to see how the proportion of any objectionable Grass may be altered in a small sample of any bulk by cautiously taking a portion from the top; indeed with the larger samples themselves we distinctly recollect these observations occurring when we put them into some glass specimen jars to await examination. As in Grasses the smaller weeds get to the bottom, while in Clovers the heavier admixtures so descend. In the Grasses before us the latter report states the sample to be "a better mixture than usual for good meadow land." This observation applies to the species that had been put together, not to the quality of the seed; which, though consisting of good sorts and in good proportions, might yet not be of first-rate quality.] Of course, everybody must know that the best seeds are seldom used for mixing, indeed as rarely so as a publican would employ "20 Port" for negus. This we say without in the least alleging any mixture in the case before us. We are at present at some distance from our notes upon these matters, but we are quite content to allow our correspondents' letter to speak for itself with regard to our position in this matter. Let us repeat that our report was upon the samples sent to us, and the difference in the two lots is not so great as it might unwittingly have been made.]

THE TURNIP FLEA.

MY attention to this subject is attracted by some remarks of a correspondent in a recent *Gazette* in which he expresses his disappointment that M'Dougall's disinfecting powder will not destroy the fleas. Supposing that he means that it will not check the ravages of H. nigrum or the springing beetle, I think it is not too much to say that this object will never be obtained, nor the wholesale destruction of any other insect, by the action of a mere poison. It certainly is known to naturalists who have studied the habits as well as forms of living creatures that any poison sufficiently strong to destroy insect life on the leaves of plants will inevitably ruin the plant as well; seeing that this fact is pretty generally known among mere book naturalists as well as observers, it is somewhat curious to see undoubtedly earnest men pursuing that line of inquiry, and neglecting means directed to prevent the creature indulging in its bad habits rather than at any attempt to poison it. Now I am sure that many persevering experimentalists have satisfied themselves that the ravages of the enemy in question may be arrested, but I do not know of one aware of the tenacity of life possessed by the beetle tribe who believes that it can be done by the administration of poisonous substances, although some of the ingredients occasionally recommended may well lead to that conclusion. But now as to these said habits: the flea is particularly cleanly in its selection of a nidus; hence it springs off the ground on to the leaf, choosing if it can for this purpose the tender and juicy cotylodons, though by no means shunning the true or rough leaves if the plant is advanced in growth. The way in which the plant is destroyed is this (if I may be pardoned for repeating an oft-told story):—the mother beetle deposits its eggs upon the under-surface of the leaf, and in a few days they become hungry maggots too small to be well seen with the naked eye but not too small to feed. In process of time (that is on the second day of its existence), it will have eaten the interior green matter from a spot near where it was deposited, which appears as a perforation in the leaf; sometimes two larvæ are at work so close together as to form one hole, and as several eggs are deposited in one seed leaf it can be readily understood how quick the entire destruction ensues. Now we have observed that this beetle has a distaste to dirt, or I might more correctly say to deposit its eggs in it; hence dirtying the plants highly offends her—to make an uncomfortable nest for the parent, and to render the food unpalatable to the young. To this end fine road sand to the quantity sufficient to well cover every plant on the plot, whether garden or field, must be obtained; wanting road sand, other suitably fine rough grit mixed with 8 or 10 bushels of soot sifted through a fine mortar sieve to take out the lumps and rubbish, and about 10 lbs. of powdered sulphur to the acre. The sand, as before suggested, makes an uncleanly bed for the parent, and the soot and sulphur is unpalatable to the young. Now it will take about 10 guano bags of this mixture to sow over an acre, if it is done broadcast; but if you will employ boys to do it and give each a coarse hair canvas sieve, letting him walk along each row and shake the sieve gently over it, the work is much more effectually and better done, if under efficient masterly superintendence. It is tedious, but it does save the plant. Now the beetle may renew his attack once or even twice, for I have seen the leaves pierced when a month old; it does not destroy it truly at that age, but it lessens its vigour. Now, I say, fight him again and preserve your plant in the utmost state of luxuriance that the state of the soil and the season will admit of. Much of this was said last year by Mr. Fisher Hobbs, but I for one did not learn it from him, for my trials date much farther back. Indeed some old gardening publication hinted the use of these materials as long ago as 1810 or thereabouts, which happens to be before I was born, but we need not go back to that, for soot and dust are recommended with some confidence in an early number of "Johnston's Gardeners' Almanack" perhaps the 3d or 4th number—I write entirely from memory. Let me say to those who object to this application on a large scale, that I applied it to about 40 acres last year. This year I have again verified its certainty. And is not the Turnip and Swede crop worth this trouble? I confess to believing that it is. *East Middlesex, June 22.*

THE OXFORD EXPERIMENTAL GROUND.

[The former part of this lecture was published at page 630. We ask readers who preserve their papers to make the following corrections in that page:—For "even" in the 41st line of col. *c* read "were." The table in col. *a* of page 631 relates to experiments by Dr. Daubeny, and should have been placed under the first paragraph in that column. For "bearings" in the 21st line from the bottom of that column read "beings."]

I WILL next point to some other trains of investigation, which, by the aid of the plot of ground now rendered available for the uses of the professor of Rural Economy, may hereafter admit of being prosecuted by myself or by my successors. One of them, which I am now about commencing, relates to the effect of poisonous or abnormal ingredients, when brought into contact with the roots of plants. On this subject various questions suggest themselves:—

1st. If poisonous substances are held in solution in the soil in which the roots of a growing plant are immersed, will they be taken up; or will they be rejected by the spongioles, which absorb the water in contact with them?

2dly. If absorbed, will these substances be retained in the living organism, or will they be afterwards excreted?

3dly. If retained, will they, if existing in small quantities in the plant, destroy its vitality, or interfere materially with its healthy functions?

On each one of these points the evidence as yet brought together is somewhat conflicting.

In the first place the structure of the spongioles of the roots, which is highly elaborate, would seem to indicate that they fulfill certain definite purposes in the vegetable organisation, and do not merely serve as the passive medium for transmitting what is presented to them, to the other parts.

Secondly, it is the opinion of certain great physiologists, as, for instance, Baron Liebig, that the roots must possess some power of co-operating with the water present in the soil, in the act of extracting from the latter the mineral matters which are detained in it, and which are absorbed by the plant.

This he infers from the fact, that a soil by its chemical or adhesive affinity separates salts of potass and of ammonia, together with ~~phosphoric~~ acid, from sewerage, and detains them, in spite of the solvent action of the water which filters through the soil, until the rootlet of a plant comes into contact with it, when a portion of these matters is dissolved and taken up.

Thirdly, some experiments which I myself instituted many years ago in watering plants with nitrate of strontian seemed to show, that this salt can be exhibited to the roots without damaging the plant, and yet that none of the earth, or at least a bare trace of it, could be detected in its ashes; so that from this likewise it might be inferred, that the roots do possess a certain power of rejecting substances unsuitable or abnormal. On the other hand, experiments made by Saussure seem to prove, that salts of copper are taken up by the roots, and may be detected in the stem and branches, and I have frequently satisfied myself of the same fact with respect to iron, by immersing one set of roots in a ferruginous solution, and another in one of ferrocyanate of potass, when I found that the blue tint arising from the production of Prussian blue pervaded generally the stem and branches of the plant, owing to the intermixture of the two solutions, both of which were therefore absorbed by the roots.

Dr. Edmund Davy, in a late paper, has added still further to our doubts upon the question, by asserting that he watered Peas every second or third day with a saturated solution of arsenious acid for more than a week, and that although the plants were not injured by the application, arsenic was readily detected in their composition. He also states that he detected arsenic in Cabbages and Turnips which had been manured with a solution of superphosphate of lime, which he maintains is impregnated with arsenic derived from the sulphuric acid employed in its manufacture.

Mr. Horsley, a chemist of Cheltenham, has also stated that he arrived at similar conclusions from some experiments which he had himself carried on.

Mr. Ogsden, on the other hand, contradicts these statements; but it does not appear clear whether he allowed the arsenical solution to come into contact with the roots, or applied it to the cut surfaces of the stem.

The latter at least was the proceeding adopted by

Marcet and others, in which case no doubt need be entertained as to the result of the experiment, for the researches of Boutigny, Hyett, and others have already shown, that any kind of solution will be taken up by a plant, when brought into connection with the ascending sap in its stem or branches.

It seemed therefore worth while to try on rather a larger scale than had been hitherto attempted, what would happen when such solutions as those of arsenious acid and nitrate of barytes, which are believed to be poisonous, or such as nitrate of strontian, which is abnormal, though innocuous, are presented to the absorbing surfaces of the roots of plants in such quantities as not to destroy their vitality; for in the cases cited on the authority of Saussure or my own, where salts of copper or iron were absorbed and the death of the plant ensued, it may be said, that the vitality of the spongioles was first destroyed by contact with the poisonous matter, and that the latter was afterwards taken up, as would happen in a dead substance, by the mere force of capillary attraction.

With this view I have set apart three of the beds in the experimental ground for Barley, and three for Turnips, and have marked off certain strips of each to be watered at intervals with a solution either of arsenious acid, of nitrate of strontian, or of nitrate of barytes, of different known strengths, the remaining portions being left untouched for the sake of comparison. Should any of the crops survive the application, they will be burnt, their ashes collected, and the presence of the ingredients administered to it will be carefully tested. The strontian salt, being innocuous, will be more freely applied than the others, in order to determine whether any of this earth will take the place of lime, and enter into the organism of the growing plant.

As each experiment of an agricultural nature takes at least a year to complete, I cannot, at my time of life, look forwards with any confidence to carrying out many more such trains of research. I will, however, indicate a few which involve questions of importance, both with reference to vegetable physiology and also to the cultivation of the land.

One of the most important practical inquiries, especially in the present condition of Great Britain, would be to determine the amount of labour, and the length of time, requisite for bringing back to a fertile condition, without the help of manure, a soil that has once become thoroughly exhausted by repeated cropping. The amount of labour and of time will of course be liable to vary in every particular instance; but each person who determines the question with reference to his own land will have contributed his quota towards its solution.

When we reflect upon the vast amount of nutritious principles daily emptied into the Thames by the gigantic sewerage system of our metropolis, and on the uncertainty of our being able to obtain from foreign lands for any length of time the means of replacing them, it certainly becomes a question of national importance to ascertain, whether, in the event of the latter falling off, we could hope to maintain the fertility of our land unimpaired by those agricultural expedients, by which the dormant ingredients of the soil are rendered available, and by which the subsoil may be made, as fast as is required, to render up those principles which the crops have removed from the surface soil.

For these experiments several years would be required, for we must first reduce the land to its most impoverished state by a series of exhausting crops, and afterwards try various methods of stirring it up and exposing it to the action of the elements, as well as of bringing up to the surface the rock from a certain depth below by the processes of subsoiling in use amongst agriculturists.

Having, however, in a lecture on sewerage which was delivered lately, dwelt so fully on this subject, I will pass on to certain other investigations for which the present plot of ground may hereafter be rendered available.

Supposing then two soils to be equally provided with the mineral ingredients necessary for the development of a particular crop, may not an advantage be obtained in the one over the other by the application to it of certain other fertilisers not of a mineral description?

The experiments of Lawes and Gilbert seem to me to favour, if not to establish, this position, since the addition of ammoniacal salts brought about, in many instances, an increased power of assimilating the mineral ingredients present in the soil, and consequently of producing a more abundant crop.

It is not, however, fully proved, whether land duly provided with mineral matters may not be brought into such a condition by tillage, as to dispense with ammoniacal manures altogether, seeing that many plants have the power of absorbing from the atmosphere so large an amount of ammonia, as would seem to render them independent of animal manures, and to enable them to derive all their ingredients, except their mineral ones, from the atmosphere. Such at least is the opinion of Liebig, and as this is one of the points of difference between him and certain other agricultural authorities, I do not see that the land could be better applied than to the carrying out of a set of experiments expressly dedicated to this specific purpose.

Another point of great interest would be to determine the cause of the failure which generally awaits the Clover crop after several years of cultivation on the same land. Seeing that it appears independent of unfavourable seasons, deficiency or excess of manure, and any of the more obvious causes that suggest themselves to agriculturists, its cause has long baffled inquiry, although the most probable conjecture perhaps is the one lately put forth by Mr. Berkeley, viz., that the roots of the former crops of Clover being left in the ground generate Fungi, which fasten upon the fresh crop and damage or destroy it.

A carefully conducted series of experiments, which would eliminate one by one the various causes assigned for the failure, might in the end enable us to arrive at the true solution of this problem.

Another question of importance relates to the manner in which gypsum operates in fertilising a soil. Upon this point the first authorities appear to be divided, as will be seen by stating the explanations of its action severally given by Davy, by Liebig, by Johnston, and by Boussingault.

Thus Davy attributed its efficacy to the presence of sulphate of lime in all plants of the leguminous order, alleging that it was to these principally that its application proved of service, and therefore that its use depended on supplying them with this necessary ingredient.

Liebig, on the other hand, supposes it to be of service by absorbing the ammonia of the atmosphere; appealing to the fact, that when introduced into stables, or other places impregnated with ammoniacal fumes, it fixes the alkali, a double decomposition taking place, by which carbonate of lime and sulphate of ammonia are produced.

Professor Johnston, on the other hand, ascribes its efficacy to the sulphuric acid which is one of its ingredients, supposing this body to be decomposed by the plant, and thus to furnish sulphur, which, as being a necessary ingredient in all proteine compounds, may favour the growth of plants containing much legumine.

Lastly, Boussingault regards it only useful by virtue of the lime it contains, and therefore would limit its application to soils in which this earth is deficient.

Here, then, are four hypotheses, each supported by men eminent in science, and therefore worthy of some consideration.

Of all these, that of Boussingault, I confess, seems the least satisfactory, as it offers no explanation of the peculiar applicability of gypsum to leguminous plants, or of the preference which practical men assign to its use over lime, when the latter is so much more accessible, and consequently beyond all comparison cheaper.

It is based upon a series of experiments tending to show, that Clover treated with gypsum contained, not only more sulphate of lime than before, but also a larger quantity of the same earth otherwise combined, an effect very intelligible in my opinion, if we suppose the absorption of gypsum by the plant to invigorate its organs, and thus enable it to draw more largely from the soil.

The converse hypothesis expressed by the late Professor Johnston leaves unexplained the fact, that leguminous plants are more benefited by its application than cereals, since the latter contain, according to Boussingault, as large an amount of sulphur as the former.

With regard to the two remaining hypotheses propounded by Sir H. Davy and Baron Liebig, it is probable that both may be called in to explain the virtues of gypsum.

All authorities, for instance, concur in asserting, that those crops which contain the largest amount of sulphate of lime are likely to be most benefited by the application of gypsum, and thus Sir H. Davy's theory must to a certain extent be admitted.

But there is one mode of applying gypsum much in use on the continent, which seems only explicable on Liebig's principle.

This is the practice of scattering it in fine powder over the leaves of the crops when just rising above the ground, which can hardly act beneficially in any other way than by enabling them to absorb ammonia from the atmosphere.

Boussingault indeed controverts this view, by calculating that on his farm the quantity of Clover covering an acre of land had gained by this application as much nitrogen, as it would have required 134 lbs. of carbonate of ammonia to provide. Now this, he remarks, is far more than could have been furnished by the average amount of rain which falls in Alsace during the year.

But it is easy to see, that according to Liebig's hypothesis the gypsum would absorb, not only the ammonia brought down by the rain, but also that always present in the air, and at the same time that much larger quantity which is exhaled from the ground in consequence of the putrefaction of the animal matters contained in it.

The practice therefore of sprinkling the Clover leaves with gypsum may have its use by arresting the ammonia, and bringing it into immediate contact with the absorbing surfaces of the plant.

It is evident, however, that all this is merely conjectural, and that there is yet room for experiments framed to ascertain more fully what plants are chiefly benefited by gypsum, and also under what conditions of the soil its application is in general most efficacious.

It is curious that phosphoric acid is almost invariably accompanied in nature by the fluoric, and that our most common vegetables therefore usually contain a certain per-centage of the latter. Yet in the common method of producing superphosphate of lime the fluoric acid is dissipated, and in this respect at least a difference must exist between the effect of bones administered in their unaltered form, and that of the superphosphate produced by the addition of sulphuric acid to them.

Does this difference produce any corresponding change in the quality or quantity of the crop? Is the presence or absence of fluoric acid a matter wholly of indifference? In the bone itself I have conjectured that it may act favourably by diminishing the tendency to crystallisation in the phosphate, and thus rendering it more amenable to the laws of organisation.* In the plant its use, if any, is undiscovered, except that it may supply to the animal which feeds upon it that quantity which is necessary for its healthy growth. Upon this subject also experiments are still wanting.

The examples of agricultural researches which I have hitherto given are chiefly connected with chemistry; I will now mention one or two in which vegetable physiology is more directly and immediately concerned.

One of these is to ascertain, by continuing to sow seeds year after year in the same or in different soils, the variations which plants are susceptible of, and the degree in which our supposed species are liable to glide into others. Here, however, I have been anticipated by Professor Buckman, of the Agricultural College, near Cirencester, who has already communicated some interesting facts on this subject, tending to identify many of our Grasses and other familiar plants hitherto regarded as distinct species, and also to confirm the observations of M. Fabre on the change of Ægilops ovata into Wheat through the intermediate forms of Ægilops triticoides and triaristata. (See *Gardeners' Chronicle*, July, 1852.)

The causes which favour the growth of Fungi on our ordinary crops would also furnish abundant matter for experiment, whether, for instance, those which make their appearance in diseased Potatoes and in other plants are to be regarded as the cause or the effect of the malady present; how it is that the Berberry induces Fungi in the plants near it; and many other questions of this nature.

But I have already said enough, I hope, to explain my motives for assigning to the future occupiers of the Chair, which I have the honour to fill, the use of a piece of land, in which they may, if they please, carry out the views of the founder of the professorship, Dr. Sibthorp, who, at a time when agricultural researches were little thought of, anticipated the wants of a future age, by attaching a foundation of Rural Economy to the botanical Appointment which he filled with so much credit to himself and the University.

It has been my earnest endeavour through life to follow, though at a humble distance, in his footsteps; first by my lectures on the Husbandry of the Ancients, in which I have carried on in some degree the investigations which he had commenced for the purposes of identifying the plants of Dioscorides, and, secondly, by those agricultural researches of which I have just given a brief account, and which, if they bore no other fruit, were the means at least of convincing me, that the objects which my enlightened predecessor had in view in assigning a certain annual sum to the foundation of a professorship on this subject, would not be fully attained, until the holder of it was enabled, not only to retail the information he might obtain from books, but also to illustrate it by experiment, and to verify, as well as extend, the knowledge he might have derived from others, through original investigations of his own.

INTERNATIONAL STATISTICAL CONGRESS.

[The following programme, prepared by Mr. Caird, M.P., was adopted on Thursday last by the International Congress now sitting.]

FOOD being the first necessity of life, it behoves nations, in their collective capacity, quite as much as individuals in the interest of their families, to ascertain the sources and extent of the probable supply; and as, in our northern latitudes, Wheat, the staff of life, yields a crop only once a year, if the season should prove unfruitful, there is no help for it in nature till another year comes round. The difference between the produce of a good and a bad year may be as much as 50 per cent. even in our temperate climate, though the average variation from year to year in the British Islands probably does not exceed 5 per cent.

But other kinds of food, much in use in Northern Europe, are likewise subject to the variation of seasons. Beyond them all in this respect is the Potato, which only 15 years ago formed the staple food of millions of our countrymen in Ireland, and of millions also on the Continent. The famine and its dire results, in 1847 and 1848, which followed the failure of the Potato crop in these years, seemed for a time to have shaken all confidence in this root as a principal article of food. But the gradual return of healthy crops is unhappily restoring this treacherous root to the too easy confidence of the poorer peasantry in this and other countries.

With the increased wages now received by the working classes, a greatly increased consumption and consequent demand for animal food has sprung up-

* "On the Occurrence of Fluorine in Recent as well as Fossil Bones."—*Memoirs of the Chemical Society*, 1845.

The high prices paid for meat of all kinds, and the increasing scarcity and high price of wool, are giving a new direction to agriculture within the British Islands. Stock farming is more profitable, and less costly in labour, than corn; and the extent to which the surface of the country is being changed, from one kind of crop to the other, can only be ascertained by correct returns, in the absence of which an alteration of the most important nature may be going on, of which the nation collectively is altogether ignorant. If one farmer finds it more profitable to lay one-fourth of his farm to Grass instead of corn, partly from the increasing profit of live stock, and partly from the scarcity of labourers, the probabilities are that other farmers, impelled by the same causes, are following the same course. But how vast may be the result of a change seemingly so simple! If we assume one-fourth of the corn crop of these islands at 10 million quarters, we may be suddenly thrown on the markets of the world for this enormous supply; every corn market in Europe and North America would be agitated, an export of bullion and derangement of the monetary affairs of the country would follow, all interests would be affected, and disastrous consequences ensue.

But a change like this, which is perfectly natural, would be accompanied by no such evils if the fact of its being about to take place were ascertained beforehand, and the requisite remedy thus opportunely provided. On the contrary, such an increased demand for the produce of other countries would, in that case, stimulate a legitimate interchange between nations, and promote the best interests of all.

A remarkable example of such a change is shown by the agricultural statistics of Ireland. Between 1849 and 1859, the change in the agricultural management of that country has involved a diminution of one-fifth of the land yielding corn, and an increase of nearly one-half in the number of live stock.

The advantage of agricultural statistics is acknowledged more or less by all civilised communities. But statistics being statements of fact, there has always been found, in regard to those of agriculture, a difficulty in the necessity that was generally felt of supplying, along with the ascertained extent of land under various crops, an estimate of the probable yield. In publishing such returns, therefore, a distinction should be observed between that which is fact and that which is estimate. Nor is there any practical difficulty in this, for, while the facts (viz., the ascertained acreage) should be given as a reliable basis for estimating the yield of crops, an estimate of that yield ought also to be afterwards supplied, which, being an estimate merely, will be accepted only in so far as it may accord with each man's private judgment.

The estimated yield of the crops is, fortunately, the only branch of agricultural statistics which cannot be accurately ascertained. The extent of land under the various crops, and the numbers of the several kinds of live stock, are simple questions of fact which may be learned with as much certainty as the census of the population.

The success and accuracy of the inquiry being mainly dependent on the willing assistance of the farmers, the greatest care should be taken that no annoyance be given by introducing subjects of a comparatively unimportant character, which, however useful, are not of such national importance as the simple question of the supply of food.

1. FACTS TO BE OBSERVED.

1. The extent of land annually devoted to each separate crop.

2. The number of the various kinds of domestic animals, usually termed agricultural live stock; viz., horses, cattle, sheep, and pigs.

2. PERIODS AT WHICH RETURNS SHOULD BE MADE.

There cannot be a doubt that annual returns are most desirable. But there are two considerations, viz. the cost, and the apprehension caused by the inquiry (quite as common abroad as in this country), which must be taken into account.

It has been justly said that nearly all the elaborate statistical tables of trade compiled by the public revenue departments are obtained without cost, as they are recorded by the revenue officers with a view to the collection of the duties payable upon them. The statistics of agriculture, on the other hand, can only be procured by a special organisation, and unless that can be made as little costly as possible, its continuance will be objected to on the ground of expense. Moreover, that branch of the inquiry which is most variable is less disliked by the farmer than the other. The extent of land under the several crops varies very much from year to year; but the annual fluctuation in the numbers of live stock is less considerable. It may, therefore, be recommended that—

1. There should be an annual return of the area under each crop.

2. A return of the live stock should be obtained not less frequently than once in every five years, and if possible every year.

Should it be found in practice that the farmers become less opposed to give an account of their live stock, then both returns should be taken annually, as they can both be made at the same time and with little additional cost. In Ireland, the farmers not only do not now object to make returns of their live stock every year, but they attach great value to these returns.

3. MODE OF CONDUCTING INQUIRY.

On this point no rule can be laid down, as each country will best judge of the machinery most appropriate to its own case. The general principles are, that it should be such as, by recommending itself to the good will of the farmers, will secure the greatest accuracy through their friendly co-operation, and that some existing official organisation should be charged with this duty, both to save expense and obtain uniformity of action.

In Ireland this inquiry has for many years been successfully and cheaply conducted by the Registrar-General through the constabulary, as appears by the statement annexed by that officer; and, as a similar organisation is now formed in Great Britain, an uniform system for the United Kingdom might at once be adopted.

In countries possessing an uniform survey of the entire surface, the extent of the various crops might be ascertained from the map, by merely noting the particular crop growing on each field.

The period at which the facts may be best observed is between seed-time and harvest. The month of June is adopted in Ireland. There is, then, sufficient time left to tabulate and prepare the returns, so as to be published in September. The estimate of the produce may be taken in November, and be ready for publication by January.

In conclusion, the Congress desire to impress upon the various governments the vast national importance of this subject. An early and accurate knowledge of the supply of food at the command of their people, from year to year, is the very basis of political and commercial prosperity. The loss occasioned by a single unnecessary food panic is more than the whole cost of the inquiry would be for a century. And the facilities of international communication are now so great, that the natural or accidental deficiencies of the harvest of one country may be repaired from the abundance of others. *James Caird.*

THE NEIGHBOURHOOD OF CIRENCESTER.

[The following remarks are extracted from an essay by Mr. John Pickering, a student of the Agricultural College.]

Land Drainage.—We may take for granted that the oolite will be sufficiently drained by its own porous nature, hence we have only to descant upon the drainage of the impervious beds, which is generally effected as follows. The drains are sometimes laid parallel to each other, with main drains at right angles upon the fall of the land, to carry away the water collected by the former; or in case of springs bursting forth, an intercepting channel is taken at right angles or obliquely just above the spot where the water oozes out. The depth of the drains must depend upon local circumstances, but as an invariable rule so deep that the bottom of the drain shall be below the bed in which the water collects. Where the field consists of a mixture of heavy and light soil composed of clay and brash, by far the most effective and economical method is to run your drain or as many drains as requisite at the appropriate depth and distance through the clay until the oolite is reached beyond, when the water will percolate through that porous stratum and take its departure without further assistance. From not regarding these simple agronomical laws, a field belonging to Earl Bathurst, hard by the farm buildings, was drained to the depth of 3 or 3½ feet on the parallel system with great and superfluous expense; all the drains were very diligently carried in the direction of the fall terminating in the main channels running at right angles, which in their turn terminated at trenches sufficient to convey away large volumes of liquid, but never a drop since their formation has reached the hollowed ground, inasmuch as all that is collected in the heavy soil flows onward towards the brash, where it finds numerous channels through which to percolate into rock beneath. The cost of this comparatively useless piece of engineering was about 6*l.* per acre, whereas 1*l.* per acre with proper management would have covered all expenses. The drains for the most part are formed of the stone dug out during the excavation. Two stones are placed perpendicularly as a support to the flat coping stone, and the whole is then covered in with the earth. Where the clay is deep and no stone can be obtained close at hand, tiles will make a much more tidy drain at a less expense; they likewise offer great advantage in their lightness of cartage. An example of the drainage of heavy soil is afforded by the operations which have been carried on this year in No. 29. Parallel channels running down the fall of the land meet the main drain at right angles, which continuing upon a slight incline terminated in the oolite at the extremity of the field, and for fear at any time too large a supply of water should be forced down and not be able readily enough to soak into the rubbly stratum, a vent was constructed into the adjoining copse. From the respective qualifications and position of these rocks, we may readily drain a heavy soil which lying in a hollow is lower than any part of the surrounding land, by merely making a large hole through the impervious bed, and going a short distance into the porous bed, leading all the drains to this central point; fill up the cavity with stones or other porous material.

Irrigation.—In the valley of the Cheem new life is given to vegetation along the banks by the irrigation of the neighbouring water meadows. Its influence on vegetation and its resuscitating powers are perfectly surprising, for the Buttercups, Daisies, Plaintains, and sour Grasses which formerly clothed it so poorly are exchanged for the finer species and more nutritive descriptions of herbage. Before irrigation we find the bad Grasses are to the good as 20 to 5. After irrigation we have bad Grasses to the good as 3 to 30. The general system is to irrigate the land at the end of the winter or beginning of spring, so that the pasture may be in condition for the ewes and lambs before entering upon the seeds. After they have cropped the Grass closely the water is again turned on to refreshen it. and give it a stimulus for the production of hay, which is cut and off the ground about the middle of June or beginning of July, when the meadows are flooded for the third time in order to ensure a suitable aftermath, which in favourable seasons will bear stocking until Christmas.

Sainfoin.—Upon the slopes of the Cotswold hills whose very bleakness and thinness of soil render them unfruitful, and where the land, if appropriated to arable purposes, must be cultivated at a vast expense, with the liability of growing more infertile with continued cropping, the Sainfoin comes to the assistance of the farmer, answering his every desire. The peculiar feature of the Sainfoin is its restriction to certain districts, whose soil is of a shallower and poorer description, but which at the same time are replete with calcareous ingredients; hence upon the chalk hills of Wiltshire, Hampshire, and Berkshire we find it cultivated to a great extent, and the Cotswolds may be ranked as one of the chief theatres of its cultivation. The common Sainfoin, Onobrychis sativa, which is indigenous, belongs to the order Leguminosæ; the leaves are pinnate, and the flowers, which have a crimson hue and papilionaceous form, are succeeded by roundish, oblong pods containing light grey seeds with a greenish interior. Upon the Cotswold and chalk hills the Sainfoin is generally left in the ley for five or six years successively, and this occurs in the order of cultivation about once in every twenty years, but in the eastern counties and in Bedfordshire taking it in alternation with Clover has been successfully adopted; in which case two years is the general period of the ley. The chief value of this plant is to allow the land a beneficial cessation from cereals and other exhausting crops, and at the same time to assist in making a deeper soil by the property which it possesses of extracting its mineral matters from the solid rock beneath. Sainfoin is especially suited for sheep, and makes a substantial fodder for cattle and horses, especially in the spring time, being substituted in many instances for Vetches and Rye, add to which its effects upon animals are exceedingly healthy and beneficial. The average amount of hay ranges from 1 to 1½ ton per acre, and although the total quantity may be small, it is partially atoned for by the quality of the production. A larger variety of Sainfoin—*Sainfoin à deux coupes*, imported from France, and which comes to maturity the first year—has in many instances been cultivated with success. The general method of cultivation is that of drilling the Sainfoin at right angles to a corn crop; the drills being about 6 inches apart, and the average amount of seed from 4 to 5 bushels of rough seed per acre. Hop Trefoil is then sown, in order to help out the Sainfoin during its first year's growth. The seed of the Sainfoin is of no further value than for the reproduction of the plant. When the ley is broken up, paring and burning are the usual operations, which effectually clean the land from all weeds that may have collected during the past years. This process also renders the insoluble silicates and other salts soluble and prevents the too great collection of vegetable matter which would make these thin soils of too peaty a nature, and provides a valuable amount of ashes for dressing the following crop, which is generally Turnips or other roots.

The subjoined Analysis, of Sainfoin were made by Dr. Voelcker, and are extracted from Morton's Encyclopædia.

	In a natural state.	In a dry state.
Water	77.32	..
Sugar, gum, albumen, and other organic substances soluble in water	8.00	35.28
Inorganic soluble salts	1.20	5.29
Impure vegetable fibre	12.95	57.09
Insoluble inorganic salts	.53	2.34
	100 00	100.00

The general composition may be represented as follows:—

	In a natural state.	In a dry state.
Nitrogenised organic matters capable of forming flesh	3.512	15.50
Substances not containing nitrogen, fitted to support respiration and to lay on fat	17.438	76.87
Inorganic salts	1.730	7.63
Water	77.320	..
	100 000	100 00

The fresh plant was found to contain .562 per cent. of nitrogen; in a dry state Sainfoin accordingly yields 2.48 per cent. of nitrogen.

Weeds.—The False Burnet, a weed peculiar to dry soils, and one which readily perishes when grown upon a wet clay; it is found to occupy spaces which ought otherwise to be covered with Sainfoin or other nutritive plant. It may

readily be distinguished from the Sainfoin by the notches of its leaflets, which are more of a rounded form than those of the Sainfoin, which are ovate and smooth. The False Burnet may be considered a weed of that class which is not injurious in itself, but which occupies those patches of soil which ought to be covered with the plant or plants to which the field is devoted. In many parts the True Burnet, Poterium sanguisorba officinalis, is cultivated in alternation with Clover (*e. g.* on Salisbury Plain), but sheep will not readily eat it unless very closely cropped, and cattle prefer most other plants.—The Garlics are found in large quantities the Hog Garlic, principally infesting the pasture lands, whilst the Crow Garlic, is chiefly met with on the uplands when under arable cultivation. The former, which grows very freely at Sapperton, may be distinguished by its Lily-like leaves and white six-parted flowers situated upon a stem rising from the centre of the leaves. Butter is frequently tainted with an Oniony flavour owing to cows being grazed upon land which is studded with the Garlic, or from their being fed upon fresh hay which contains the same obnoxious edible. The Crow Garlic, like the former, is a perennial, and more closely resembles the Onion; the flower stem is of considerable height and crowned with a round head of small purplish flowers. The means of eradicating these agricultural banes is by carefully and perseveringly removing their numerous bulbs or parts of bulbs, whether they be great or small, by picking over the land with manual labour.—Of the annual weeds or those which spring up from seed, and in their turn ripen and produce seed the same year, the Chickweed and Charlock are the most prevalent in the neighbourhood. The Charlock (Sinapis arvensis) bears a great resemblance to the Mustard, of which family it is a member. It may be distinguished by having the "upper leaves lanceolate, erect, and toothed;" its flowers are of a brilliant yellow, and the seeds which are held in pods, are of a brown colour. The weed mostly prevails upon arable soils and possesses a pungent taste. —Chickweed, Stellaria media, composed of "prostrate stems" with small roundish leaves, and bearing small white flowers, frequents the arable land, from which it is difficult to be eradicated, on account of the innumerable seeds which are brought to maturity during the season. Seeds sown in the autumn spring up and grow whenever the temperature is above 32° Fahr. In March the plant takes its spring growth, and rapidly progressing flowers and seeds at the beginning of April, which seeds being disseminated spring up and produce their harvest during the summer. The only method of satisfactorily ridding the land of Chickweed is by constant hand-hoeing at a proper season, *i. e.*, before each successive crop comes to perfection.—The two varieties of the Plantain very generally met with are the Plantago media and lanceolata. The former species has broader leaves and of a darker green than those of the latter, which are more strongly ribbed and lanceolate. On poor soils the Plantago lanceolata is frequently cultivated as a fodder plant with seeds, but as a rule both species must be considered as weeds occupying those spaces of ground which ought to be appropriated to a more worthy plant, and extracting nutritive matters from the soil which ought to go towards the formation of a more feeding herbage. The latter remarks are equally appropriate to the common Dock, Rumex obtusifolius, and to the Burdock, Arctium Lappa. The tap root of the common Dock penetrates the soil to a great depth, and if any portion be broken off in the soil when attempts are made to eradicate them, that portion, however small, will of itself be sufficient to produce a new plant. The secret of effectually clearing the land is to destroy the plant by thoroughly forking or drawing and preventing it from seeding. The Burdock (Arctium Lappa), unlike the Dock, is a biennial weed, covering a wide space of ground with its large coarse leaves. It is peculiar to moderately deep good soil, and is produced from seed. It may be extirpated with facility by spudding before the plant flowers, otherwise the seed will spread over the ground, and around the parent a numerous offspring will arise.—One of the greatest pests to the agriculturist, both in this district and elsewhere, is the Carduus arvensis or Corn-thistle. From the depth to which its roots penetrate, from the rhizomes extending from the main root, and from the multitude of seeds which are produced upon one stem, the Thistle is extremely difficult to be removed from the soil. The seed which is of a downy nature, being wafted by the wind and spread over the neighbouring country, germinates, and a minute plant springs up which continues to be diminutive during its first year's growth; this dies away at top before the winter's cold, but its rhizomes come up the following spring, prepared to furnish the world upon maturing with an abundant stock of seed. The only method of killing the Thistle is by continuously cutting the green part or lungs of the plant, which in due time will produce baneful results upon the roots; and being careful never to let a Thistle run to seed.—The Couch (Triticum repens) and the Squitch Grass (Poa compressa), which are so well known to every one from their prevalence throughout the kingdom, need not be described.—Of those plants which are weeds on account of their poisonous properties, the Colchicum autumnale or Meadow Saffron graces the neighbourhood in vast quantities with its purplish coloured flowers towards the fall of the year. Cattle will seldom touch the Saffron, but if any from a distance unwittingly partake of it they suffer from its poisonous properties. Extract of Colchicum used in medicine as a specific for gout, rheumatism, &c., is prepared from the corn or bulbous root. Herding horses at spring time in those fields where the Saffron occurs, so that they may injure the tender leaves which are then put forth, is one of the best recipes for the destruction of the plant.

Crops and Cultivation.—Upon the heavier soils the Mangel Wurzel furnishes useful provender for winter; and to have a wholesome mixture of this plant with the Turnip is generally one of the farm regulations. On the inferior oolite at Sapperton and on light sandy soils the Mangel is quite the exception; these soils are exclusively confined to the various species of Turnip. When the land is of a deep loamy nature, Carrots are grown for home consumption, and only in those localities where the soil is deep and the particles are minute and freely exposed to the action of the atmosphere, so that the tap root may have easy access to the under soil, and its rootlets may readily run through the mould to obtain the sustenance required for the well-being of the plant. Beans and Peas are only cultivated to a moderate extent upon the clays; the latter are used for corning sheep upon the Turnips. Roots are mostly fed off upon the land; but in cases where the soil is of too heavy a nature they are drawn off and consumed at the homestead or stored for spring consumption.

Sheep, both of the Down and Gloucester breeds, invariably comprise the principal live stock of the district, whether they be kept for breeding or for feeding; and as a rule the farmer has an eye to both purposes. The tegs are fattened upon the Turnips during the winter and sold either shorn or unshorn in the spring. The ewes with lamb are folded in yards hard by the Turnip field, as the lambing season commences, being allowed to run upon the roots during the day, and being supplied with hay, &c., in their fold by night. Seeds which luxuriate as a rule upon these moderately heavy though often thin soils, being well supplied with alkaline and other mineral matters in a state subservient to the assimilating functions of the plant, afford fodder for the ewes and lambs during the latter days of spring as well as through the summer. Dairying, from the low per centage of Grass land in comparison with the arable, is little followed; only a sufficient number of cows being kept to supply the wants of the house, and give suckle to the calves upon those farms where breeding is adopted. The Short-horn breed is that chiefly patronised by farmers in the district. Cattle are in some instances used for working, and a certain number upon each farm are fed in boxes, stalls, or yards during the winter, in order not only to fatten and consume the provided food, but to make a short, well-rooted, and rich manure for the land in spring.

The four-course rotation of crops is generally followed upon the lighter land, viz.:—

1st year, Swede or Turnip	3d year, Seeds mown or fed
2d year, Barley and seeds	4th year, Wheat

And a course extending over 6 or 8 years upon the heavy clays—

1st year, Fallow	5th year, Roots
2d year, Wheat	6th year, Barley and seeds
3d year, Beans	7th year, Seeds mown or fed
4th year, Wheat	8th year, Wheat

or,

1st year, Fallow	4th year, Wheat
2d year, Wheat and seeds	5th year, Beans
3d year, Seeds mown or fed	6th year, Wheat

Manual labour is cheap, and the men sluggish in comparison with the labourers of the midland counties. The average wages of able-bodied men without beer varies from 9*s.* to 11*s.* per week, and that of the women, who are much employed upon the farms, from 7*d.* to 8*d.* per day.

THE VALE OF STRATHMORE.

POLLED ANGUS CATTLE.—KINNAIRD CASTLE STOCK.

(*Continued from p.* 633.)

ON the banks of the Esk, as elsewhere, high pressure feeding for exhibition purposes is not found to answer well with breeding animals. Take the case of the Earl of Southesk's heifer Dorothea, the first of her class at Warwick, beating the Elmham Hall Norfolks by an easy headway. We saw her in a pasture along with seven other 2-year-old in-calf heifers, and she was decidedly the farthest back of her age, having apparently undergone a lowering process to bring her into a good breeding state. A couple of Balwyllo-bred heifers were among the lot, fine mellow handlers, with prime loin and twist; and for all the world of a regular Short-horn build. Divest them of their black coats, or rather exchange for coloured vestments, getting at the same time a set of good horns added and fixed according to the most approved Ayrshire fashion, and you have a Durham beast of the best water. Indeed, rumour, with her hundred tongues, has it that into at least one family of Angus-polled, Short-horn blood at one time found its way. At all events it is rumoured still further that a prime Angus heifer which was sold at a very handsome figure, brought a white-horned calf as her first present, and was killed fat with a similar compliment on the way. But the noble Earl's stock abjures such relationships. The old Kinnaird cows have remained pure and uncontaminated from time immemorial; and even so late as fifty years ago the female part of the herd were allowed to wander about in comparative freedom among the woods and policies adjacent to the Castle. Barbara, a wide roomy cow, with an udder equal in size to a moderate milk pail, is one of the grandmammas of the herd; while Old Bell and Lady Anne also for long, long years impressed their milking characteristic on the stock. Kathleen is a great square cow, equal to 10 scores per quarter in weight any day; and with Emily or Rebecca may dispute the present honours in point of attraction. Some of the best milkers give as much as 12 Scots pints per day for the first three months after calving. Reckoning the Scotch pint at 104.2 cubic inches, a yield of close on five imperial gallons per day shows itself; but appearances are deceptive if one-tenth of the pure bred Angus cows would exceed the 4 gallons which we count on seeing all round from a good Short-horn dairy.

Although this herd has had considerable attention paid to it for probably the greater part of the present century, its fresh start only dates from Mr. Lyall's purchase of the bull "Cupbearer," at the Highland Society's Perth show in 1852. This bull, bred by Mr. Bowie, Mains of Kelly, was sold by the breeder to Mr. Walker, of Portlethen, for 40*l.* He had however greatly taken Mr. Lyall's fancy; so much so that he induced the Earl to agree to a purchase from the Aberdonian owner, and Mr. Walker accordingly made 20*l.* more by letting him go to Kinnaird. There he has imprinted his family likeness so thoroughly that all the best stock since that date has a direct descent through him. Since then nearly 300*l.*, besides medals innumerable, have found their way to Kinnaird; and those who have attended the meetings of the Royal Agricultural Society of England of late years could rarely miss an acquaintance with the herd. At Chester they were represented by Druid (1st prize), a son of Cupbearer; Raven, got by Druid; by Dulcinea, in milk and in calf (1st prize), sire Cupbearer; by Oriana, a 2-year-old in-calf heifer (1st prize), got by Cupbearer; and also by the yearling heifer Vanilla, a grand-daughter of the same bull. Windsor, highly commended at Warwick, was got by a bull of Mr. M'Combie's breeding, but which likewise goes back to the Mains of Kelly stock; and he duly gained the honours of his class at Edinburgh, reversing the places which he and a Balwyllo bull held at Dundee. Oriana, in-calf and in-milk, took the honours of her cow class, on the Warwick race-course; and the yearling heifer Dorothea, as already remarked, occupied the like position among the juniors. Another fortunate purchase—that of the cow Dora—was made three years earlier, from Mr. Watson's, of Keillor, before Cupbearer saw the Kinnaird pastures. The old dame was calved in 1848, and still looks almost as youthful as ever.

Notwithstanding that the bulls are in frequent service, and all of them have hitherto proved sure stock-getters, they are kept in capital condition; and Windsor had nearly as much flesh as when we made his acquaintance at the last July meeting. A 14 months' old bull, too, Osiris, was as fleshy and promising as could be desired. The whole of the stock—about 80 in number, including calves—are in excellent keeping, coats sleek, and dispositions gentle—speaking much for the attention of the herdsman. But William Innes served a good apprenticeship in the like capacity at Tillyfour, and as he has been much about the country, both at French, English, and Scottish shows, it need hardly be wondered at that he should come to be considered a good judge of what a polled beast should be, as well as to know what their requirements are, in order that they may show to the best advantage. And expense has evidently been a secondary object here: the improvement of the breed, and the honours of the show-yard being more looked to. But for the present year it is arranged that quietness will reign in the herd, so that Lord Soudes may be expected to take the polled honours at Canterbury, leaving the other northern breeders to do the best they can with one formidable opponent fewer at the Highland Society's meeting.

The cow-house arrangements are particularly snug and tasteful, and all in good keeping, down even to the rustic chair with its sideboard wings, and towels and glasses all ready for partaking of a draught from the produce of the herd. It is even such a place as a party from the drawing room might be likely to take a turn to, in order to whet the appetite for dinner. The house referred to has accommodation for a dozen favourites of the herd, and these have their names all printed in bold Roman characters before their separate standings. Being 48 feet long, a space of 4 feet is afforded to each cows, *minus* the thickness of the stone slabs that serve for separate divisions. Transversely, the cows have 9 feet allowed them, then a gutter 15 inches wide, and a passage of 6 feet more brings you to the front wall. The mangers are low, and a sparred rack for the fodder is at a moderate height. Gas forms an excellent addition for a winter's night or morning, and the cool green blinds are no less pleasing for a hot summer afternoon. The walls and roof are whitewashed once a year, and the floors flushed with water (which is on the premises) daily. An end house contains a furnace for scalding the milk vessels, and also a nicely furnished set of lock-up bins for cake, bran, meal, &c.—commodities that are undoubtedly in frequent requisition. A root store and hay-house had not been forgotten, while in the former were Swedes yet fresh and good, showing that the northern districts afford roots of this class of much better keeping qualities than we can get in our readily mildewed fields further south. The calf pens in an

adjacent building were about as complete as could well be and, what is more, they were filled with hearty thriving occupants. They are never allowed to suck the cows, but are at once removed and placed in loose boxes, 4 feet by 5½ feet each, forming one side of the house; the divisions of these compartments are 3½ feet high. When a little older they are shifted to the other side, and tied up, so as to leave room for the fresh comers in the loose boxes.

One word as to the Herd-book of the establishment, and we must pass onward. There has yet been no recognised herd-book for the polled breeds, but various breeders have seen the necessity of establishing the genealogy of their best stock, and have accordingly arranged with Mr. Ravenscroft, of Edinburgh, to fill up the blank. He has the confidence of all concerned, and from his well-known abilities may be expected to form the commencement of a standard work, which will be filled up as time rolls on. But at Kinnaird a private herd-book is kept, on a very excellent system. Each page contains five columns, viz., for date, sex, name, sire, and remarks; each cow has a separate page for herself, and her name is given at the top, her descendants following in the columns referred to. The cow is readily got at by the letters of a ledger index, and in order to simplify matters, the Earl (who names all the stock himself) selects the names alphabetically, so that each bull or cow calf follows the initial letter of its mother's name. Thus, on opening the page allotted to "Ada," we find Admiral, Adamant, Aldebarran, &c. (her progeny), following in the wake. A richly-finished duplicate volume is kept for the Castle use.

MAINS OF KELLY HERD AND GENERAL MANAGEMENT.

This farm—its stock and its whole arrangements—is well worth going all the way from Warwickshire to see; and Mr. Bowie, the intelligent occupier, has so much of real Scottish kind-heartedness in his disposition, that we are sure no visitor has ever gone without receiving a courteous welcome. You will not see, it is true, either a steam plough or cultivator, nor yet a system of pipes for liquid manure distribution, nor a wild and wasteful outlay in any one direction; but you find a first-class farm, under first-class management—and so many matters of detail to be seen that all may learn something. Arbroath, formerly Aberbrothick, is the more convenient station for leaving the railway, and a drive of three miles or so, along the turnpike road towards Dundee, brings you to Mr. Bowie's farm. On the left as you leave Arbroath, and but a few hundred yards off at most, the German Ocean rolls in with full force on the rocky or sandy beach. Passing vessels and the boats of the fishermen, or an Aberdeen or Inverness steamer further out, lend animation to the scene. And just in the distance where water and sky seem to meet, about 12 miles off, a solid immoveable speck rears its head over the waters. There it has stood, 100 feet high, for the past 50 years, much to the joy of the passing mariner. An outlay of 60,000*l.* gave to the Bell Rock a lighthouse, whose efficiency must contrast strangely with that of the floating bell, which "Sir Ralph the Rover" in his wanton mirth so wickedly destroyed. Southey well expresses the historical tradition:—

> "His eye was on the bell and float:
> Quoth he, 'My men, put out the boat,
> And row me to the Inchcape Rock.
> And I'll plague the priest of Aberbrothock.'
>
> "The boat is lower'd, the boatmen row,
> And to the Inchcape Rock they go;
> Sir Ralph bent over from the boat,
> And cut the warning bell from the float!"

But by and bye, Sir Ralph returns filled with spoil to his native shores:—

> "They hear no sound, the swell is strong,
> Though the wind has fallen, they drift along,
> Till the vessel strikes with a shivering shock—
> Alas! It is the Inchcape Rock!"

At night this light is clearly seen S.S.E. from Mains of Kelly, and the light on the Isle of May, beyond the "East Nook of Fife," to the S.S.W. The noble estuary of the Tay stretches away to the right with a large extent of sandy links adjacent to the shore, and the Barry Hills and Dundee "Law" forming the background. Over the water the sweet hills and dales of Fifeshire are plainly visible; and far beyond may, on a clear day, be seen East Lothian and the summits of the Lammermuir range.

Mains of Kelly Farm is on the Panmure property, and extends to some 300 or more Scotch acres of arable land. It has been long in Mr. Bowie's family, his father having come from Cockpen, in East Lothian, when a young man, to enter the occupation. A considerable part of the land is of the highest natural fertility, and equal to carrying any of the usually cultivated crops. The remainder is of an indifferent hungry character, and but for the fact of all the land being choke-full of manure, this part would soon be the ruin of any man. Being, however, close to a town, the tenant keeps drawing manure whenever opportunity presents—and as he has a conscientious dislike to sending a team into a field when the land is not in a seasonable condition, such opportunities occur oftener than might readily be supposed. Having a sea frontage, again, many hundreds, if not thousands, of cartloads of "wrack" are secured and formed into the most unctuous-looking composts which could well be desired. As many as from 5000 to 10,000 cartloads of sea-weed have been known to lie temptingly along this frontage alone. A portion thereof would be gladly secured; but a high tide would again send the bulk on its watery pilgrimage. A 6 or 7 years' rotation is usually followed:—1. Oats; 2. Potatoes or Beans; 3. Wheat; 4. Turnips; 5. Barley, sown down; 6. (or 6 and 7) Clovers and Rye-grass.

In this course three liberal manurings are given, viz., a dozen loads to the Potatoes or Beans, full as much to the Wheat, and another dozen to the Barley. The Turnips are grown with nearly 1*l.* per Scotch acre in value of a mixture of several of the most approved artificials—combined with a home-made preparation to be yet referred to. Hence, if the Clover roots are to be regarded as food for the Oats, we have a special deposit made to the bank (mother earth) for every cheque that is drawn. Under such treatment, we should, in the better class of Warwickshire soils, expect to see scarcely a single upright stem of Barley at harvest; the straw would be abundant, but the yield of corn deficient in quantity and light in quality—while the "seeds" would be literally nowhere. Mr. Bowie's doctrine is that lodging is symptomatic of weakness arising from a lack of food in the soil; and hence he takes the best mode, or at least the most successful, to prevent it. But as already remarked, his land is of a varied character—brown loam incumbent on gravel; clay and sandy gravel (drained where required); clay incumbent on clay, drained at 5½ yards distances; and blackish loam on sand—part resting on drained moor-pan. Such soils will naturally stand heavier dressings of manure than clay loam resting on the new red sandstone formation. But we must also look at the fact that he has got an ample supply of saline ingredients to the soil, which will, as is well known, strengthen the straw. This supply comes from proximity to the German Ocean, and the driving showers thence received; also from the thousands upon thousands of loads of sea-weed which he has at one time or another applied, whereas we, on the banks of the Avon, are as far from the action of either the one or the other as we could well be in any part of the British Islands. At all events, at Mains of Kelly, lodged corn is almost unknown, and a Burgess & Key's reaper finds few obstacles from the beginning to the close of harvest. *T. Bowick.*

(To be continued.)

RICHNESS OF MILK.

[The following is an abstract of a paper read before the Dublin Chemical Society on this subject by Dr. H. Minchin.]

WHEN we consider that milk enters, in some form or other, into the composition of the food of almost every member of the community, and constitutes the principal, and in many instances the sole, support of the very young, it is of importance that we should be in possession of some means of ascertaining the comparative purity of a fluid holding the essential place which this does as a dietetic substance. Probably but few articles of food are more frequently subject to fraudulent adulteration than the fluid in question. But, although many substances are supposed to have been employed for the purpose of imparting colour or consistence to milk which has been previously diluted, the evidence of very numerous experiments is in favour of the belief, that perhaps, in most instances, the pump is the chief or only contributor; the dealers being quite aware of the fact that, while chalk, starch, flour, and colouring matters can be detected with tolerable facility, the admixture of water will admit of being practised pretty largely, and yet fail to be exposed by the tests ordinarily employed.

To determine with accuracy the quantities of the proper constituents of a given specimen of milk will, of course, require that it be submitted to a chemical analysis, for which purpose an expensive apparatus is necessary, while the process is of necessity both tedious and laborious, and not at all adapted to the requirements of ordinary cases, in which a daily examination must be made.* It therefore became necessary that some more simple method should be devised of estimating approximatively the qualities of this fluid. The several modes of milk-testing which have been suggested are well known, the principal being, 1st, the lactometer, or cream-test of Sir Joseph Banks; 2d, the hydrometer, or specific gravity test; 3d, the lactoscope of M. Donné; and 4th, the microscope.

It may be necessary to make a few remarks on the use of these several instruments, and first, of the lactometer.

A glass tube of about 11 inches long, and half an inch in diameter, is filled with milk to within a short distance of the top, the surface of the fluid being made to coincide with a transverse line drawn on the tube, and marked zero; the capacity of the tube from this line downwards is divided into 100 equal parts or degrees. When the tube thus filled has been suffered to remain undisturbed for a definite time, say 12 hours, or 24 hours, the quantity of cream which shall have separated spontaneously during that time is ascertained by an inspection of the instrument held in a proper light, as the inferior limit of the stratum of cream is generally defined with sufficient clearness to enable one to read off accurately the per centage of this ingredient which has become separated from the milk within the time specified. In using this instrument, it is necessary to observe certain precautions: the milk should be quite fresh, but the tube should not be filled till the milk has cooled down to the temperature of the place where it is destined to remain while at rest; the entire mass of milk should always be well stirred up immediately before the sample to be tested is taken out; the lactometer when filled should be left undisturbed for about 12 hours if the weather be warm, for 24 if it be cold.

Milk which has been thus tested is said to show a certain per centage of cream, and the higher the number of degrees indicated by the lower edge of the cream-stratum, the more of this ingredient is the milk supposed to possess. As far as this goes, nothing can be more simple and satisfactory, if it were only true, but it can be shown that the indications of the instrument in question are fallacious, and calculated to lead to the most erroneous conclusions, especially in the case of those milks in regard to which it is most important that the information supplied by this test should be as accurate as possible—for example, in those cases in which milk is supplied by contract in large quantities to public institutions. The fact is unquestionable that contractors are in the habit of supplying a liquor which they call milk, at a price so excessively low that they must either add a large proportion of water, or sustain a serious loss; and the managers of large institutions are often satisfied to accept this so-called milk at the price agreed upon, provided the lactometer shows a certain per centage of cream. In reference to the effect which the addition of water to milk exercises on the indications of the lactometer, Dr. Hassall, who has made the analysis of very numerous specimens of milk, makes the following remarks:—

"It is stated," he says, "that the addition of a small quantity of warm water to milk increases the amount of cream: the belief in the accuracy of this statement is entirely erroneous—the addition of water to milk does not increase the quantity of cream; it merely facilitates and hastens, in a most remarkable manner, its formation and separation, as is shown by what follows:—

"Six lactometers were filled, one with pure milk, the remainder with the same milk diluted respectively with 10, 20, 30, 40, and 50 per centages of water.

"In 20 minutes, the lactometer containing pure milk showed but half a degree of cream; in 40 minutes it showed 4°; and at the end of 12 hours it showed 9°.

"The instrument containing 50 per cent. of water showed in 20 minutes 6° of cream; in 40 minutes 6½°; and at the end of 12 hours 5°.

"The rapidity with which the cream was thrown up on the other 4 tubes, viz., those containing 10, 20, 30, and 40 per-centage of water, was proportionally great; the two extreme cases have been quoted merely in order to exhibit more prominently the results which were obtained.

"It thus appears," continues Dr. Hassall, "that the addition of a large quantity of water to milk occasions an almost immediate formation of cream, but does not augment the amount; of this fact, in some cases, it would be an advantage to dairymen to avail themselves. The addition of water to milk of course lessens its specific gravity, and so facilitates the ascension of the cream."†

Now, it would appear from this experiment that we are warranted in deriving a conclusion quite opposed to that just quoted. Here we have 100 parts of pure milk exhibiting 9° of cream; while 50 parts of the same milk mixed with 50 of water, are found to yield 6½ of cream. But the relative proportion of cream existing in the pure and diluted milk is as 2 to 1; while the proportion separable from the two fluids respectively is shown by the lactometer to be as 1.385 to 1 (9 to 6½). It is plain, therefore, that the per-centage announced by this instrument is not a true index of the richness of the fluid examined.

With regard to the hydrometer, or specific gravity instrument, it is almost unnecessary to say that experience has long since shown it to be quite inapplicable as a means of ascertaining the purity of milk. The normal density of milk has been variously stated by writers, some placing the average density at about 1029, others at 1038, others, again, at some intermediate number. But, whatever may have been the original density of a given sample of the fluid, it is capable of being lowered by the fraudulent admixture of warm water, and raised again to the former figure by the abstraction of a portion of the cream; for the latter will separate rapidly, owing to the previous addition of warm water, and thus the double deception is capable of being carried into

* The principal constituents of milk are—cream, or oily matter, casein, or cheese, sugar, saline matters, and water. The proportion of each is variable in different milks; but however the relations of the first four may vary amongst themselves, it may be stated as a general rule, that milk which presents more than 87 per cent. of water is of inferior quality. On taking the average proportion of this ingredient according to the analyses of Simon, Herberzer, Lecanu, Boussingault and Le Bel, Chevalier and Henri, and Haidlen, it is found to be 86.8 per cent.; and, when it is known that the principal, and in many cases the only fraud practised by dealers in milk, consists in the admixture of water, the first object of the analyst should be to ascertain the per centage of this ingredient. If 87 be assumed as the standard, a very simple process will in many cases be sufficient to detect the degree of dilution to which the sample has been subjected. Evaporate 100 grains to dryness; ascertain the loss, from which deduct 87; the difference then, multiplied by 100, and divided by 13, will give the per centage of added water, thus: suppose 100 grains to lose on evaporation 89.6 grains, then 89.6—87=2.6, and 260 divided by 13 gives 20 per cent. of water added.

† "Food and its Adulterations," p. 329.

effect within a very short period after the milk has been first drawn, and will of course fail to be detected by the hydrometer. It has, therefore, been suggested that the lactometer should always be used in combination with the hydrometer, one being supposed to serve as a check upon the indications of the other.

A very ingenious mode of determining the richness of milk was devised some years since by M. Donné. The instrument which he employed, called a latoscope, is constructed on a different principle altogether from either of the foregoing, and professes to enable one to judge of the richness of a sample of milk, by measuring the thickness of a film of this fluid through which a luminous body, placed at a certain distance, can be discovered; the more dilute the milk, the thicker will be the film through which the light will be transmitted, and the measure of the thickness is provided for by a scale attached to the instrument.

The chief objections to the employment of the lactoscope, at least for ordinary every-day use, would appear to be not only its high price, but the difficulty of keeping it in good working order, owing to the delicacy of its construction. It requires to be taken asunder every time it is used, and if not thoroughly cleansed and dried in every part, the screw becomes clogged and its action embarrassed; in fact, if it gets into careless or unskilful hands it will not fail to become, in a short time, unserviceable.

Lastly, of the microscope. With the aid of this valuable instrument the number, size, and shape, of the oil, or cream-particles can be easily recognised by any one who has become expert in its manipulation, and in this way may be formed a tolerably fair estimate of the quality of any given sample of milk; it must be admitted, however, that few, comparatively speaking, have attained to the requisite degree of skill and experience to enable them to pronounce at once a decisive opinion from the use of this instrument without some collateral aid. The expense of a good microscope is also a serious impediment to its general adoption as a lactoscopic instrument.

It will appear, therefore, from what has been stated in the foregoing remarks, that an instrument which, in the hands of ordinary observers, will supply the means of determining approximately, or in a rough way, without much trouble, and in a short time, the comparative richness of milk, is still a desideratum. The practical difficulty which has attended the employment of the several methods of milk-testing hitherto in use, is to be attributed in some measure to the fact that upon any scale that can be devised, upon any principle whatever, there is not one point to which we can refer as a standard of purity. The nearest approach we can make to the establishment of such a standard is to ascertain, by experimenting on several specimens of average quality and known purity, whether we can seize upon some physical property which admits of sufficiently accurate measurement for the purpose; then, it has been ascertained that an inferior quality is indicated when the specific gravity is below a certain range—but this can be raised artificially by the abstraction of some of the cream; an inferior quality is also indicated when the per centage of cream is less than a certain number; but the instrument employed for exhibiting this per centage is found to be fallacious, inasmuch as it only shows how much cream has floated to the surface in a given time, and experiment has proved that the richer the milk the less is the cream disposed to float. Many persons are able to judge pretty accurately as to the quality of milk, by carefully observing the transparency which the fluid exhibited when poured in a thin film from one vessel to another; and it would appear that this property, which has already suggested the instrument of M. Donné, might be again turned to account in the construction of a more simple instrument, which would indicate definitely, and enable us to register numerically the degree of transparency possessed by a given sample; and we should be thus in possession of a very efficient means of estimating the degree to which the milk had been diluted, or how far it fell short of the average quality.

Such an instrument has lately been invented; the principle of its construction is extremely simple, and the experiments instituted with a view of testing its performance, several series of which have been repeated, appear to have been attended with the most satisfactory and encouraging results. The instrument is made of brass, in the form of a shallow, oblong vessel, capable of containing about an ounce of fluid; the depth of the vessel is made to increase gradually, by means of a slab of white enamel fixed in a gentle slope from one end to the other; this slab is graduated throughout its entire length. Upon this the milk is poured till the vessel is filled, and a cover of plate glass is then put on—this should be done by giving it a sliding motion, to exclude air bubbles. When the vessel full of milk is thus covered, the degree of dilution possessed by the sample under examination is estimated by the number of degrees on the enamel which can be read through the glass cover; for, the glass being in contact with the edge of the enamel plate at one end, and separated from it by a gradually increasing interval towards the other, the intervening stratum of milk is made to assume the form of a thin wedge. If the fluid under examination be of a rich quality, abounding in oily and caseous particles, it will possess such an amount of opacity that only a few degrees can be discovered on the subjacent enamel when the instrument is held opposite to the light; if, on the contrary, the specimen be of inferior quality, whether from innate poverty, or the admixture of water, the diminution of opacity thence resulting will be evinced by the enamel scale becoming visible through a deeper part of the fluid, or at a greater distance from the commencement of the scale; the degree of translucency, therefore, can be measured by the number of lines visible through the fluid.

Home Correspondence.

Steam Power.—We cannot over-estimate the value of steam power. Its employment has done more to promote our advancement than anything else, and if we can employ it to perform our heavy labour, we shall by its use prolong the lives of men and horses, by relieving them from that portion of hard labour which tends to bring on premature decay and to shorten their time of usefulness. The labouring man then should hail the introduction of steam with a hearty welcome, and do all he can to assist others in promoting its usefulness. I venture to suggest an addition to the steam plough. I witnessed its successful operations at Canterbury last week, yet I think that we should be employing steam power to better advantage if a plough could be constructed with subsoil shares to follow the others. We should not plough the manure down too deeply, 8 inches is sufficient; and we should constantly stir the subsoil 10 inches in addition, and both these operations should be performed at the same time. *B. Ransley, Perrysfield Farm, Oxted, Surrey.*

Harvest Time in Successive Years.—I annex a tabular statement of the time during the last six years when the cereals of my farm have come into ear, flowered, and been harvested, which, with the dates of when they have come into ear and flowered this year, may be interesting, as forming some guide to when the harvest will probably commence.

	In Ear.			In Flower.	Began Harvest.			Finished Harvest.	Remarks.
	Wheat.	Barley.	Oats.	Wheat.	Wheat.	Barley.	Oats.		
1854	June 20	June 23	June 20	June 25	Aug. 21	Aug. 18	Aug. 21	Sept. 4	
1855	June 23	June 30	June 27	June 30	Aug. 14	Aug. 23	Aug. 13	Sept. 8	
1856	June 22	June 28	June 28	June 29	Aug. 14	Aug. 27	Aug. 7	Sept. 6	
1857	June 10	June 22	June 22	June 18	July 30	Aug. 20	July 29	Aug. 25	
1858	June 10	June 17	June 17	June 14	Aug. 2	Aug. 9	July 23	Aug. 23	From the present appearances we may reckon that the harvest will be at least three weeks later than last year.
1859	June 12	June 12	June 11	June 19	Aug. 8	July 28	July 27	Aug. 20	
1860	June 24	June 24	July 2	July 5	..	..	..	..	

—*Charles M. Caldecott, Holbrook Grange, near Rugby, July* 16.

Societies.

REAPING MACHINE COMPETITION AT PARIS.—We beg to announce that on Monday, July 23 and three following days, an international reaping machine trial will be held at Fouilleuse, near Saint Cloud, five miles from Paris, when medals and prizes will be awarded.

INVERNESS SHEEP AND WOOL FAIR.—The extraordinary loss of lambs, which may be safely set down at 50 per cent. of a deficiency, caused the demand for them to begin early, and at extreme rates. Some of the best Sutherland lots fetched from 17*s.* 6*d.* to 16*s.*, and had there been twice the number to dispose of at these prices they would have been readily bought. It is the intention, we understand, of many farmers to retain the better part of them, to increase if possible the crop of lambs in 1851, and to dispose of those they may wish to part with at Falkirk, or some other stock market. There can be little doubt of good prices for this description of stock during the whole season, as their numbers are to be so limited. Those that are sold have brought a considerable advance on last year—in one instance as much as 5*s.* per head. Wedders being less diminished in numbers by the winter's storms, and in excellent condition now, from the great abundance of this summer's pasture on the hills, have been sold with confidence, and brought an average advance of about 2*s.* In wool the transactions up to a late hour have not been numerous, but those clips which have been sold bear no trace in their price of any deterioration in quality from the year's severity. In several instances wool buyers have either personally or by their agents visited the farms, and coupling the few quotations of this market with those of recent auction sales, we have very fair proof that, after making allowance for the high rates everywhere prevailing, the produce of our Highland sheep is good this year. But there can be no doubt that, as was remarked at the ordinary, the force of circumstances, the vastly increased means of traffic, the success of the wool sales, and the satisfaction given by the commission agents in disposing of stocks, are beginning to tell upon the amount of transactions at Inverness. Things were very different some 10 years ago. Then, as a rule, every hill farmer to the North returned from the fair with his year's sales completed, and his year's purchases made; while to-day we are safe to say that not one-fourth of the wool has been bargained about here, and that relying on the experience of their services, not a few arrangements have been made with commission agents with reference to stock as well. Of course the new system is approved or it would not continue; but we trust the graft will not in the end kill the parent tree. The mere annual re-union at Inverness of a body so much isolated from each other as individuals, but having every interest in common, and without any rivalry, is of great importance. Experiences are compared frankly and universally—prevailing sentiments are strengthened or rejected as they are found worthy by general consent—and matters of importance to the whole agricultural and commercial communities of the North are nowhere better introduced to attention than at our annual fair. *Inverness Courier.*

HIGHLAND AND AGRICULTURAL.—At the late half-yearly general meeting of this Society 51 new members were elected.

Dumfries Show.—Mr. Hall Maxwell, in the absence of Mr. Wardlaw Ramsay, the Chairman of the Committee on General Shows, reported that the arrangements for the Dumfries Show may be said to be completed, and that there is every appearance of a satisfactory and successful meeting. A comparison between the entries and those in 1845, when the Society last met at Dumfries, affords a gratifying result. They are as follows:—

	1845.	1860.
Cattle	297	303
Horses	75	159
Sheep	537	539
Swine	62	50
Poultry	101	216
Dairy produce	88	198
Implements	143	802
	1303	2667

The Secretary intimated that arrangements were now in progress for the Perth Show in 1861 and for the Kelso Show in 1862.

Report on the Chemical Department.—Dr. Anderson reported that great activity had prevailed during the past six months in the chemical department of the Society. The number of analyses made for members of the Society had been much larger than usual, and it had embraced a very large amount of work of different kinds, and several problems of very great importance had been submitted to him (Dr. Anderson) by the members of the Society. In regard to the work done for members of the Society, he might observe that there had been this year a very considerable increase in the number of applications for advice on various matters. In regard to the investigations in progress in the department, the forthcoming number of the Journal contained the conclusion of the investigation into the Turnip crop, the first part of which was published in March. There were also investigations at present being made into various oil-seeds, and other matters; and experiments were being made on the Wheat crop in the same manner as those on the Turnip crop of last year. They were also engaged in an investigation of the chemical composition of the different kinds of straw in relation to their feeding properties; and in an investigation of the properties of oilcake, and several other minor matters.

Mr. Milne Home said he might perhaps be permitted to revert to the very great importance of the Chemical Department of the Highland Society, and to ask a question from Dr. Anderson, which was suggested to him during a visit he had paid in East Lothian. It was well known that farmers were under great apprehensions of the Turnip fly, and he was not aware that any remedy had been provided against the ravages of that destructive insect, which last year—and he believed the year before likewise—cost thousands of pounds of loss. A few days ago, when he was in East Lothian, it was mentioned to him by a gentleman that the Turnip fly had not been on his farm, although it had been committing ravages in other farms; and he attributed his exemption to the application of a large quantity of common salt on his Turnip land, and his neighbours

had not resorted to anything of the kind. Perhaps Dr. Anderson might be able to say whether common salt or anything else was known to him as a remedy for the Turnip fly.

Dr. Anderson said the statement made by Mr. Milne Home was new to him.

Mr. Wilson, Edington Mains, was afraid that the opinion that salt was efficacious as a remedy for the Turnip-fly was totally unfounded. He had tried 2 cwt. of salt to every acre; and like the rest of the country he had had an almost entire exemption from the Turnip-fly, but the fly appeared in one of the fields which had been treated as the others in regard to the application of the salt. He was afraid therefore that the exemption this year was due not to the salt, but to something in the season. In Berwickshire, he believed that whole fields had been re-sown; but all the fields that required re-sowing were sown before the 16th May, all sown subsequent to that time having been exempt from attacks of the fly.

Mr. Bethune, of Blebo, said he had been repeatedly informed by Mr. Hutchison, of Carnock, that he had got a certain specific, which would rather startle them, for the cure of the Turnip-fly; and it was salt applied in another way—the method being to steep the Turnip-seed in salt and water previous to sowing. He had used, in the common way, 2 or 3 cwt. of salt per acre, and never saw any particular benefit from it in that way.

Mr. Scot Skirving said he supposed the East-Lothian gentlemen would agree that they never remembered a year when the Turnip-fly did so little damage. He believed that in 99 cases out of 100 no damage had been done this year by the Turnip-fly. With regard to salt, he tried it on the scale generally given in England —6 cwt. per imperial acre—for Mangel, and he found it completely killed his crop—so completely that he ploughed it down and sowed it with Turnips, and it killed the Turnip after that. He asked Mr. Hope of Fentonbarns, and he said he had observed the same thing, that it killed his Cabbage.

Report on Hiring Markets.—Mr. F. L. Maitland Heriot read the report by the committee appointed to "consider and report as to the various methods in use for procuring the engagement of farm labourers, male and female, and whether it may not be possible to dispense with hiring markets." Taking the information supplied by correspondence, the committee reported that the methods in use for procuring the engagements of farm labourers appeared to be the following:—1. By private hiring, which seemed a very common method of hiring, and in many districts almost the only one. 2. By private hiring in combination with hiring markets, some farmers using the hiring markets only as a last resort. 3. By advertisement, a mode which was sometimes used with good effect. 4. By private hiring along with monthly or short engagements. 5. By registers, which seemed to exist in a good many places, but were mostly of recent origin, and were not very extensively used. 6. By hiring markets, which is the method at present most extensively used. It seemed to be the general opinion from the returns that hiring markets are not in a satisfactory state, but there was very considerable difference of opinion as to what was to be done with reference to them. Among the suggested improvement of hiring markets were—the drinking-booths should be abolished, and refreshments provided on a large scale on temperance principles; that only men should be engaged at the markets, and the women privately; that the market should close early in the afternoon; that they should be retained along with registers; and that farmers should employ married men as much as possible, as in Berwickshire and Roxburghshire. The committee, after having carefully considered the whole subject, had come to the following conclusions:—

1. That while hiring markets, as at present conducted, seem to be very generally condemned, any practical measures to be adopted by the Highland and Agricultural Society on the subject of re engagement of farm labourers must be a gradual work, depending to a large extent on the progress of public opinion. 2. That the practical measures which your committee have to recommend are accordingly suggested with the view, not of coming at present to any definite or final conclusion on the subject, but of keeping it before the public attention for some time, so that the public may have an opportunity of considering it fully and in all its bearings, and of arriving at mature and sound conclusions. 3. That your committee have accordingly to recommend to the Directors and to the Society that the prizes be offered by the Society with reference to the subjects specified. 4. That while your committee propose in this way to keep the matter under public attention, they would strongly recommend Local Agricultural Societies, Farmers' Clubs, and individual farmers to proceed at once to make experiments of the different modes of hiring suggested in the returns, with the view of ascertaining for themselves, and of giving the Society the advantage of a larger and more extensive experience than they now possess. 5. That while your committee believe the above conclusions are all that the present information justified them in arriving at, they think they are also justified in saying that as the returns show a very wide-spread dissatisfaction with hiring markets, it is incumbent on employers in their several spheres to foster and encourage the growth of mutual respect and regard between them and their servants, and to take a kindly interest in the welfare, prosperity, and happiness of those in their employment, your committee being assured that on such farms and in those districts where such feelings largely prevail, the tone of society is higher, changes are less frequent, and hiring markets are less frequented.

The prizes in the appendix to the report are as follows:

1. A prize of 25*l.* for an approved report on the best designed, the best managed, and the most useful register for farm labourers in operation during the years 1861, 1862, and 1863. The report shall specify the books used, the rules and regulations in force, the reference made to character, the names of masters and servants entered respectively as deserving servants or situations, and the number of masters and servants supplied during each of the above years, &c. The reports shall be lodged with the Secretary by 1st March, 1864. 2. A prize of 50*l.* for an approved report on the practical steps most successfully carried into operation for the regulation and improvement of any hiring market held during the years 1861, 1862, and 1863, taking into account the hours of opening and closing, the hours of arrival and departure of railway trains, the arrangements of the market, including the order and method and locality of hiring, the nature of the registers in use, the extent to which they are employed, the facilities afforded by them for reference to character, the substitutes for drinking, the providing of temperance refreshments, the getting up and regulation of proper amusements for the people, &c.—the effect of the whole on the sobriety and morality of the people, and on lengthening the duration of service. The report shall be lodged with the Secretary by 1st March, 1864.

Notices of Books.

The Smithfield Club, from 1798 *to* 1860, *with a Map, &c.* Joseph Clayton, Bouverie Street, Fleet Street.

This pamphlet gives the history of the Club, and explains its present position with reference to the "Agricultural Hall Company." It has been issued apparently in the interest of that Company, and as a rejoinder to Sir John Shelley's protest against removing the annual show from Baker Street to Islington. If so, last Tuesday's meeting proves it to have been a timely and successful publication, for on that day Sir John's opposition was overruled by a majority of 39 to 10; and the agreement of the Club with the Agricultural Hall Company, by which after 1861 their show is to be removed to the new premises at Islington, was ratified.

Calendar of Operations.

JULY.

ISLE OF ELY: *July* 4.—After rain more or less on many successive days we have at length had three days fine and dry; but this afternoon has again been damp. The temperature during these 50 days has generally been low, hence vegetation is very backward. On the 29th June at noon the thermometer stood at 50°, on the 31st December last it stood at 54°—a startling fact! Hay-making, the great business of June in these Fen districts, has been a wretched affair. In some fields three and in others four weeks have elapsed between mowing and stacking. We need make no comment upon this; enough has been said to indicate what the quality of such hay or seeds must be, for we call all hay here, whether seeds or permanent pasture. Where mowing was delayed for a fortnight, the crop has been ingathered during the last two days without having sustained any serious injury. We have ourselves stacked 50 acres during these two days in good condition, and but slightly damaged by the drenching rains. Much is yet abroad, and even some to cut; a continuance of fine weather is therefore very desirable. Our Wheats on the high lands and also on the gravelly Fen lands are getting well into ear, and some of the earliest are getting nicely into bloom. But very little is laid, although on some of the best and best-farmed lands the crop is good. On weak and badly-farmed soils the crop in many instances is light. We see no reason however at present to change our opinion, or alter our report, with reference to this crop. In this neighbourhood we think the bulk of straw will be rather light, but there is the prospect of an average yield of grain, and with suitable weather from now to harvest of a good quality of corn. On our black Fen lands the Wheat is very backward, and much is not yet in the ear, and indeed will be several days before it will be fully out. Oats are a very various crop. Some are as good as could be desired, others are very bad. Wet, wireworms, and a low temperature, have together occasioned serious losses in this crop, especially on poor weak soils. Beans and Peas on well-drained soils are promising and are full of blossom. Mangels are not uniformly good. There are more failing than was at one time expected. The wireworm has been very busy, and the storm at the end of May did much mischief, rendering it necessary in many instances to re-sow. We have also had far too much rain and too little warmth for this crop: a favourable change may probably stimulate a more active and vigorous growth. Fallows on the high land are in a deplorable state; in some instances for six weeks no horses could go upon them except to do mischief. On Fen lands things are not quite so bad. These have been difficult to clean, but there have been intervals when they could be worked. Early sown Coleseeds look very healthy and promising. Potatoes are thinly planted on strong soils, and on lighter lands are not generally good. The old tale—"too much wet"—requires to be oft-told and repeated. Grass is plentiful, and stock are thriving well. The corn trade is again languid. Foreign supplies limit the demand for English Wheats, and less money is paid for them. Wool continues a good price, hogget fleeces making about 50*s.* a tod. Beef continues dear, and not very plentiful. Mutton realises a high price, and the supplies are not heavy. Pork is becoming scarcer, and prices point upwards. *Your Fen Reporter.*

Notices to Correspondents.

ANNUAL RAM LETTING AT HOLME PIERREPONT: *Correspondent.* Twenty shearlings let for 551 guineas, the highest being 111 guineas, and the average about 29*l.*; 14 two-shear sheep were let for 319 guineas, the highest being 81 guineas, and the average about 24*l.*; four 3-shear sheep were let for 62 guineas, 16*l.* each; two 4-shears for 80 guineas, 42*l.* each; and one 5-shear sheep let for 10 guineas. In all 41 sheep were let on an average at 26*l.* 2*s.* 6*d.* each.

AYRSHIRE COWS: *A Subscriber.* You must commission some one in the habit of attending Ayrshire markets, or possibly this notice of your want may bring forth an offer.

COTTAGE ECONOMY: *A B.* You probably refer to a pamphlet by Rev. H. Moule, published by Messrs. Bradbury & Evans.

COTTAGES: *F W, Battle.* It was published in York a year or two ago. We do not know the publishers.

CRUSHED BRICKS AND MORTAR: *R J.* The value of old mortar as a dressing will vary with the cost of lime in the locality. We would not give a shilling a load for it. Others might find it their interest to give more. It would be a good dressing for peaty soil.

GUANO ON POTATOES: *A Subscriber.* It is possible that the 5 cwt. per acre of guano in patches on your Potatoes may be the occasion if not the direct cause of the disease, through the excessive luxuriance of leaf which it may have occasioned.

INCLOSURE INSPECTORSHIPS: *Cornish Corngrower.* We do not know how the appointments are conferred. Acquaintanceship with the Commissioners would doubtless help you.

ERRATUM.—At page 612, Table in col. *c*, instead of *calves* of 40 cows taken with pleuro, read *value* of 40 cows, &c.

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No. CCXV., is published THIS DAY.
CONTENTS:—
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CONTENTS OF THE VOLUME.

ABSORPTION of manure
Acetates
Acetic acid
Acetic fermentation
Acids
Acids, organic
Acids, tests for
Action of plants on the air
Active principles
Adulterated guano
Affinity, chemical
After-damp in mines
Air
Air contains ammonia
Air contains carbonic acid
Air contains water
Air, inflammable
Air necessary to life
Air, composition of
Air resists compression
Air, weight of
Alabaster
Albumen
Albumen, vegetable
Alcohol
Ale
Alkali, test for
Alkali, volatile
Alkalies
Alkalies, vegetable
Alloys
Almonds
Alum
Alumina
Alumina absorbs ammonia
Alumina in soil, use of
Alumina, phosphate of
Alumina, silicate of
Alumina, sulphate of
Aluminum
Aluminum, oxide of
Ammonia
Ammonia absorbed by alumina
Ammonia absorbed by charcoal, &c.
Ammonia, carbonate of
Ammonia, fixing of
Ammonia in air
Ammonia in rain-water
Ammonia, loss of
Ammonia, muriate
Ammonia, phosphate
Ammonia, salts of
Ammonia, sulphate
Ammonia, urate of
Analysis
Animal heat
Animal manures
Animal principles, proximate
Animal substances
Animals, breathing of
Animals, fattening of
Annotta
Apple jelly
Aqua-fortis
Argol
Arrack
Arrow root
Arteries
Artichoke, Jerusalem
Ashes
Atom
Attraction
Azote
BALLOONS
Bamboo
Barilla
Barley
Barley-straw
Barley-sugar
Barm
Barometer
Base
Basting-meat
Batatas
Bay salt
Bean, field
Bean straw
Beans, kidney
Beech ashes
Beech nuts
Beer
Beer, Bavarian
Beet
Beet-root sugar
Bell metal
Bile
Binary compounds
Biphosphate of lime
Bitartrate of potash
Bittern
Black Currant jelly
Bleaching by chlorine
Bleaching by sulphur
Blende
Blood
Blubber
Bones
Bran
Brandy
Brass
Bread
Bricks
Brimstone
British gum
Bromide of magnesium
Bromides
Bromine
Brown stout
Buckwheat
Buds
Burning
Burning lime
Burning of plants
Burnt clay
Burnt sugar
Butter
Butter, clarified
Butter, how coloured
Butter, melted
Butter, salt
Butyric acid
CABBAGE
Cabbage, red
Calamine
Calcium
Calcium, chloride of
Calomel
Camphor
Candles
Candles, burning of
Cane
Cane, sugar
Caoutchouc
Caramel
Carbon
Carbon in plants
Carbonate of ammonia
Carbonate of iron
Carbonate of lead
Carbonate of lime
Carbonate of magnesia
Carbonate of potash
Carbonate of soda
Carbonates decomposed by acids
Carbonic acid gas
Carbonic acid gas necessary to plants
Carbonic acid gas, decomposition of
Carbonic oxide
Carburetted hydrogen
Carcases
Carrot
Caseine
Caseine, vegetable
Castor oil
Caustic potash
Cellars, foul air in
Cellulose
Chalk
Chamomile
Changes, chemical
Charcoal
Charcoal absorbs ammonia
Charcoal, burning of
Charcoal, disinfecting powers of
Charring
Cheddar Cheese
Cheese
Cheltenham salts
Cherry-tree gum
Cheshire cheese
Chestnuts
Chlorides
Chlorine
Churning
Chyle
Chyme
Cider
Cinnabar
Circulation of the
Citric acid
Clay
Clay, burnt
Clay, iron ore
Climate, differences of
Clover
Coagulation of albumen
Coal ashes
Coal-gas
Coal-tar, naphtha
Cocoa-nut oil
Cognac brandy
Cohesion
Coke
Colophony
Colour of soils
Colours, changing of
Colours, vegetable
Colza
Combination
Combination, changes produced by
Combining weights
Combining numbers
Combustion
Combustion, results of
Common salt
Composition of animal matter
Composition of organic matter
Composition of plants
Composition of soils
Composition of stones
Compounds
Contagion
Contagious matter
Cookery
Copper
Copper in plants
Copper, oxide
Copper, pyrites
Copper, salts of
Copper, sulphate of
Copperas
Coprolites
Corn
Corrosive sublimate
Cotton
Couching
Cream
Cream cheese
Cream of tartar
Crops, rotation of
Cubic nitre
Cultivated land
Curd of milk
Currants
DAGUERREOTYPE
Dahlia
Death of plants
Decay
Decay, influence of lime
Decay, like burning
Decay of humus
Decay of plants
Decay, results of
Decay, under water
Decomposition
Decomposition, induced
Decomposition of rocks
Decomposition, spontaneous
Deliquescence
Dew
Dextrine
Diamond
Diastase
Digestion
Digestion, derangement of
Diseases of plants
Distillation
Ditch scrapings
Double salts
Dough
Drainage water
Draining
Dunder
Dung
Dutch rushes
Dyeing
EARTH
Earth nut
Earths
Earths, alkaline
Earthy matter in the air
Earthy silicates
Earthy substances in plants
Effervescence
Egg, white of
Elaine
Electricity, influence on plants
Elements
Embryo
Epsom salts
Equivalent
Excrement
Excrements of sea-fowl
Exhaustion of soils
Expansion
Explosion of fire-damp
FAINTS, distiller's
Fallowing
Farm-yard dung
Fat
Fat of animals
Feathers
Feeding off with sheep
Ferment
Fermentation
Fertility
Fibre, woody
Fibrin, animal
Fibrin, vegetable
Finings
Fir-ashes
Fire
Fire-damp
Fish refuse
Fixed oil
Fixing ammonia
Flame
Flax
Flesh
Flint
Flooring malt
Flour
Flour, damaged
Flowers
Flowers, their effect on the air
Fluorides
Fluorine
Food of animals
Food, chemical use of
Food of plants
Formation of seed
Formation of soils
Foul smells
Freezing, effects of
Freezing of water
Fruit
Fruit, ripening of
Fuel
Fumigating by chlorine
Fumigation by sulphur
Fungi
Fur from water
GALVANISED iron
Game, preserving
Gas
Gas coal
Gas, inflammable
Gas, manufacture of
Gas liquor
Gas liquor, strength of
Gas tar
Gastric juice
Gelatine
Geneva
Germination
Germination accelerated
Gin
Glass
Glauber's salts
Gliadine
Gloucester cheese
Glue
Glue refuse
Gluten
Glycerine
Gold
Gold, chloride of
Gold of Pleasure
Gold, mosaic
Gooseberries
Grain of Wheat
Grains, spent
Grape sugar
Grapes
Grass
Gravity
Gravity, specific
Greaves
Green manures
Green vitriol
Growth of plants
Guano
Gum
Gum Arabic
Gum British
Gum, cherry-tree
Gum, formation of
Gum resins
Gun cotton
Gunpowder
Gutta percha
Gyletun
Gypsum
HAIR
Hard water
Hartshorn
Hay
Heat
Hedges, foul
Hemp-seed
Hollands
Honey
Hoofs
Hops
Hordein
Horn
Humates
Humic acid
Humus
Hydrogen
Hydrogen, carburetted
Hydrogen, lightness of
Hydrogen, sulphuretted
Ice
Iceland moss
Indian corn
Indian rubber
Indigo
Inflammable air
Inorganic matter in plants.
Inorganic manures
Inulin
Iodides
Iodine
Iodine in sea water
Iron
Irrigation
Isinglass
Ivory
JUNIPER
KELP
Kidneys
Kiln-drying
Kirschwasser
LACTIC acid
Latent heat
Lead
Leather
Leaven
Leaves
Leaves, fall of the
Leaves, office of
Lees of wine
Legumine
Lemons
Lentils
Lettuce
Light, effects of
Light, influence on plants
Lighting a fire
Liguin
Lime
Lime, action on soil
Lime and salt
Lime, biphosphate of
Lime, burning
Lime, carbonate
Lime, caustic
Lime, citrate
Lime, hydrate of
Lime in plants
Lime, muriate of
Lime, nitrate of
Lime, oxalate of
Lime, phosphate of
Lime, silicate of
Lime, slaking
Limestone
Limestone, magnesian
Lime, sulphate of
Lime, superphosphate of
Lime, when useful
Lime, when not to be used
Limes, juice of
Linen
Linseed
Liqueurs
Liquid manure
Liquid manure tanks
Litharge
Liver
Loss of manure
Lucerne
Lungs of animals
MACARONI
Magnesia
Magnesia, carbonate of
Magnesia in plants
Magnesia, muriate of
Magnesia, phosphate of
Magnesia, silicate of
Magnesia, sulphate of
Magnesian limestone
Magnesium
Magnesium, chloride of
Magnesium, oxide of
Maize
Malic acid
Malt
Malting
Manganese
Manganese in plants
Manganese in soils
Manganese, oxide of
Mangold Wurzel
Manures
Maple sugar
Maraschino
Marble
Margarine
Mark of Grapes
Marl
Mashing
Mead
Meat boiling
Meat roasting
Medicines, action of
Mercury
Mercury, chlorides
Mercury, oxides of
Mercury, sulphuret
Metallic alloys
Metallic oxides
Metallic salts
Metals
Milk
Millet
Minium
Mixture
Mixture of soils
Molasses
Mordaunts
Mortar
Mosaic gold
Mould
Mouldering
Mouldiness
Mucilage
Muriate of ammonia
Muriate of lime
Muriate of magnesia
Muriate of soda
Muriates
Muriatic acid
Murk
Muscle
Muscovado sugar
Must
Mustard
NAPHTHA
Nascent state
Natural vegetation
Nightsoil
Nightsoil disinfected
Nitrate of lime
Nitrate of potash
Nitrate of soda
Nitrate of silver
Nitrates
Nitrates in plants
Nitre
Nitre beds
Nitre, cubic
Nitric acid
Nitric acid in manure
Nitrogen
Noyeau
Nutrition of plants
Nutrition of animals
OAK ashes
Oats
Odours of plants
Oil
Oilcake
Oil, castor
Oil of cloves
Oil, cocoa-nut
Oil, dregs
Oil, drying
Oil, fat
Oil, fixed
Oil, linseed
Oil, mustard
Oil of lavender
Oil of lemons
Oil of turpentine
Oil of vitriol
Oil, olive
Oil, poppy
Oil, rape
Oil, rock
Oil seeds
Oil, volatile
Oleine
Opodeldoc
Ores, roasting of
Organic acids
Organic manures
Organic matter
Organic substances in soils
Organic transformations
Organised matter
Oxalate of lime in plants
Oxalic acid
Oxalis
Oxide, carbonic
Oxide of copper
Oxide of iron
Oxide of lead
Oxide of manganese
Oxide of mercury
Oxide of silver
Oxide of tin
Oxides, metallic
Oxygen
PAINT, white
Palm juice
Paper bleached by chlorine
Paring
Parmesan cheese
Parsnip
Paste
Pearlash
Peas
Peat ashes
Pectine
Per-oxides
Perry
Persalts
Petre
Petre, salt
Pewter
Phosphates
Phosphoric acid
Phosphoric acid in plants
Phosphoric acid in bone
Phosphoric acid in water
Phosphorus
Pickling cabbage
Pine-apples
Pipes, bursting of
Pitch
Plants, composition of
Plants, death of
Plants, decay of
Plants decompose carbonic acid
Plants, effect of, on air
Plants, elements of
Plants, food of
Plants, growth of
Plaster of Paris
Plaster stone
Plough, subsoil
Plums
Polenta
Pond mud
Poppy seed
Porter
Potash
Potash, binoxalate of
Potash, bitartrate of
Potash, carbonate of
Potash, caustic
Potash in plants
Potash in the soil
Potash, muriate of
Potash, nitrate of
Potash, salts of
Potash, silicate of
Potash, sulphate of
Potashes
Potassium
Potassium, chloride of
Potato
Potato haulm
Potato spirit
Potato starch
Potato, sweet
Pottery
Principles, active
Proportions
Protein
Proto-salts
Protoxides
Proximate animal principles
Pruning
Putrefaction
Putrefaction, influence of lime in
Putrefying animal matter
Putrid fermentation
Putrid urine
Putty powder
Pyrites
Pyrites, copper
Pyroligneous acid
Pyrolignites
Pyroxylic spirit
QUARTZ
Quaternary compounds
Quicklime
Quicksilver
RAIN water
Raisins
Rape seed
Rape vine
Red cabbage
Red lead
Refuse of gas works
Rennet
Resins
Respiration
Results of combustion
Results of putrefaction
Rhubarb
Rice
Ripening of fruit
River mud
River water
Road drift
Rock salt
Rocket
Rocks, disintegration of
Roman vitriol
Roots
Rotation of crops
Ruby
Rum
Rushes, Dutch
Rust of iron
Rye
Rye straw
SACCHARINE matter
Safety-lamp
Sago
Sainfoin
Sal-ammoniac
Saline compounds
Saline draughts
Saline manures
Salt
Salt and lime
Salt, bay
Salt, common
Salt in sea water
Salt, rock
Salt, spirit of
Salt, sea water
Salt, solution of, in water
Saltpetre
Salts
Sand
Sapphire
Sawdust
Schiedam
Sea-fowl, excrements of
Sea-water
Sea-weed
Seed
Seed, formation of
Seeds, germination
Seeds, steeping
Seidlitz powders
Selection by roots of plants
Semolina
Shell sand
Shells
Silex
Silica
Silica in plants
Silica in soil, use of
Silicate of alumina
Silicate of lime
Silicate of magnesia
Silicate of potash
Silicate of soda
Silicates
Silicic acid
Silicon
Silk dyeing
Silver
Silver, chloride of
Silver, nitrate of
Silver, oxide of
Silver, salts of
Silver, sulphuret of
Size
Size, resin
Skimmed milk
Skin
Slag
Slaking of lime
Smells, foul
Smoke
Straw ashes
Straw of barley
Straw of buckwheat
Straw of lentils
Straw of maize
Straw of oats
Straw of rye
Straw of vetch
Straw of wheat
Strong manures
Sub-salts
Subsoil
Subsoil ploughing
Substratum
Suffocation from charcoal
Sugar
Sugar, barley
Sugar candy
Sugar, formation of
Sugar of lead
Sugar of milk
Sugar, refining
Sugar refiners' waste
Sulphates
Sulphur
Sulphur in plants
Sulphuret of iron
Sulphuret of lead
Sulphuret of silver
Sulphurets
Smelting
Soap
Soap-boiling
Soap, decomposition of
Soap, soft
Soap, transparent
Soap, yellow
Soapmakers' ash
Soda
Soda, carbonate of
Soda in rocks
Soda in plants
Soda in soils
Soda, muriate of
Soda, nitrate of
Soda, silicate of
Soda, sulphate of
Sodium
Sodium, chloride of
Soft water
Soil
Soils, analysis of
Soils, colour of
Soils, composition of
Soils, exhaustion of
Soils, formation of
Soils, mixture of
Soils, nature of
Solder
Soot
Sorrel
Soup
Specific gravity
Spices
Spirit proof
Spirit, pyroxylic
Spirit of salt
Spirit of wine
Sponge
Spring water
Springs
Stall feeding
Starch
Steam
Stearic acid
Stearine
Still
Stilton cheese
Sulphuret of tin
Sulphuretted hydrogen
Sulphuric acid
Sulphurous acid
Sulphurous acid checks fermentation
Sunflower
Sunflower seed
Super-salts
Super-phosphate of lime
Super-tartrate of potash
Swedes
TARRASHERS
Tannin
Tanning
Tapioca
Tar
Tarnish on silver
Tartar
Tartaric acid
Tartrates
Teeth
Ternary compounds
Tests, vegetable
Thermometer
Thunderbolt
Tiles
Tin
Tin, oxide of
Tin plate
Tin, sulphuret
Toast
Toasted cheese
Tobacco
Toddy
Treacle
Tropical countries
Tubers
Turf-ashes
Turmeric
Turnips
Turpentine
Turpentine, oil of
URATE of ammonia
Urea
Uric acid
Urine
Use of leaves
Use of plants
Usquebaugh
VAPOUR condensed by cold
Vapour in the air
Vegetable alkalies
Vegetable manure
Vegetable, boiling
Veins
Vermillion
Vetch
Vinegar
Vinegar distilled
Vinous fermentation
Vitriol, blue
Vitriol, green
Vitriol, oil of
Vitriol, white
Volatile, alkali
Volatile oil
WALNUTS
Wash, distillers'
Water
Water, action on lead
Water, air in
Water, composition of
Water, freezing of
Water, hard
Water, impurities in
Water, mineral
Water necessary to plants
Water, New River
Water, phosphoric acid in
Water, pure
Water, rain
Water, sea
Water, soft
Water, spring
Water, Thames
Water, well
Wax
Weed-ash
Weeds
Weeds, burning of
Weeds, putrefaction
Weeds, spread of
Wheat grain
Wheat straw
Wheat starch
Whey
Whiskey
Whitelead
White of egg
Wine
Wine, brandy
Wine, domestic
Wine, fermentation of
Wine, fining of
Wine, pricked
Wine, ripening of
Wine, vinegar
Wood ashes
Wood spirit
Woody fibre
Wool
Wool, dyeing
Wool, mill refuse
Wool rags
Wool soap
Wort
Wort, foxiness of
XYLOIDINE
YEAST
Yeast as manure
Yeast, artificial
Yeast, bad
Yeast, dry
ZINC
Zinc, chloride of
Zinc, oxide of
Zinc, sulphate of

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,, New Hybrid Giant Cape, 5 var., 1*s.* 6*d.* and 2*s.* 6*d.*; mixed, 1*s.*
,, Brompton German, 12 var., 2*s.* and 3*s.* 6*d.*; mixed, 1*s.*
,, New large flowering Emperor, perpetual flowering, 6 var., 2*s.* and 3*s.* 6*d.*; mixed, 1*s.*
HUNT'S SUPERB SWEET WILLIAM, undoubtedly the best in cultivation, both as regards shape, marking, and colour, a large portion being what is termed Auricula flowered, 1*s.*
PINK, saved from the most beautiful prize flowers and are warranted to give the greatest satisfaction, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.*
PANSY, saved from the best and newest named flowers, 1*s.* 6*d.* and 2*s.* 6*d.* per packet.

GERANIUM, Scarlet section, 10 varieties, 3*s.* 6*d.*, mixed 6*d.*
PELARGONIUM, French spotted varieties, extra fine, 1*s.* and 2*s.* 6*d.*
,, Fancy varieties, extra fine, 1*s.* and 2*s.* 6*d.*
,, Large flowered English varieties, extra fine, 1*s.* and 2*s* 6*d.*
HELIOTROPE, 10 splendid varieties, 3*s.* 6*d.*; mixed, 6*d.*
LANTANA, 12 splendid varieties. 3*s.*; mixed, 4*d.*
LILIUM LANCIFOLIUM, 4 splendid varieties, 2*s.* 6*d.*; mixed, 1*s.*
CYCLAMEN, 6 beautiful varieties, 3*s.*; africanum variety, 1*s.*
MIMULUS, fine, 6*d.* MYOSOTIS AZORICA, true, 6*d.*
CALANDRINIA UMBELLATA, 4*d.*
WALLFLOWER, double German, mixed, 1*s.*
ANTERRHINUM, 8 varieties, 1*s.* 6*d.* and 2*s.* 6*d.*; mixed, 4*d.*
CHRYSANTHEMUM INDICUM, large flowered section, 1*s.*
,, ,, NANUM, large flowered section, 1*s.*
CHOICE AQUILEGIA, CAMPANULA, CANTERBURY BELLS, DELPHINIUM, DIANTHUS, DIGITALIS, GAILLARDIA, GAURA, LUPINUS, ŒNOTHERA, IBERIS, HUMEA, POTENTILLA, &c., &c., 3*d.* to 6*d.* per packet. (SEE SPRING CATALOGUE)

SPLENDID DOUBLE ITALIAN-SAVED CARNATION AND PICOTEE SEEDS.

The following Carnations and Picotees have been saved with unusually great care by our Sardinian Correspondent, and are warranted to produce at least 80 per cent. of fine double flowers. The Perpetual Tree, or winter-flowering varieties (a comparatively new section) merit special attention.

☞ *To meet the greatly increased taste for this splendid and easily cultivated class of flowers, we have so considerably reduced our prices as to bring them within the reach of every lover of the Carnation and Picotee.*

CARNATION, 12 vars. of selfs, 10 seeds of each .. 4*s.* 0*d.*	CARNATION 12 varieties, fancy, 10 seeds of each .. 4*s.* 0*d.*	CARNATION, 12 varieties, fancy, 10 selfs of each .. 4*s.* 0*d.*
,, ,, 5 ,, .. 2 6	,, ,, ,, 5 ,, .. 2 6	,, ,, ,, 5 ,, .. 2 6
,, ,, Flakes 10 ,, .. 4 0	,, ,, Yellow selfs, 10 seeds of each .. 5 0	,, ,, Perpetual selfs 10 ,, .. 4 0
,, ,, ,, 5 ,, .. 2 6	,, ,, ,, 5 ,, ,, .. 3 0	,, ,, ,, 5 ,, .. 2 6
,, ,, Bizarre 10 ,, .. 4 0	,, ,, Flakes 10 ,, ,, .. 5 0	,, ,, Flakes 10 ,, .. 4 0
,, ,, ,, 5 ,, .. 2 6	,, ,, ,, 5 ,, ,, .. 3 0	,, ,, ,, ,, 5 ,, .. 2 6

CARNATION, choice mixed, 2*s.* 6*d.*; Ditto ditto Perpetual, 2*s.* 6*d.* | PICOTEE, choice mixed, 2*s.* 6*d.*; Ditto ditto perpetual, 2*s.* 6*d.*

JAMES CARTER & CO.

BEG LEAVE TO OFFER THE FOLLOWING

CHOICE SEEDS FOR PRESENT SOWING.

CARNATION, 12 choicest varieties, BIZARRE, 10 seeds of each	3*s.*	6*d.*	
Do. do. FAMEUSE, do.	4	0	
Do. do. FLAKE, do.	3	6	
Do. do. YELLOW BIZARRE and SELF, do.	4	0	
Do. do. YELLOW FLAKE do. ..	4	0	
PICOTEES, 12 choicest vars., WHITE GROUNDS, do.	3	0	
,, ,, YELLOW GROUNDS, do.	4	0	
,, ,, WHITE MARGINED, do.	3	6	
PERPETUAL CARNATIONS, do. FANCY, do. ..	3	6	
,, ,, do. FLAKE, do. ..	3	6	
,, ,, do. BIZARRE, do. ..	3	6	
,, PICOTEES do. do. ..	3	6	
CARNATION, extra fine, mixed	2	6	
,, PERPETUAL, do.	2	6	
PICOTEE, extra fine, mixed	2*s.*	6*d.*	
,, PERPETUAL	2	6	
HOLLYHOCK, 12 choice prize varieties	5	0	
,, splendid mixed	1	0	
PERENNIAL PHLOX, 12 newest varieties .. .	3	6	
,, finest mixed	1	0	
WALLFLOWER, 12 double German varieties	2	6	
,, double German mixed	1	0	
HEARTSEASE, extra choice	1	0	
PELARGONIUM, extra choice show and fancy vars.	1	0	
ANTIRRHINUM, finest mixed	0	6	
PENTSTEMON, finest mixed	0	6	
CALCEOLARIA, extra choice, spotted and blotched ..	1	0	
CINERARIA, large flowered, brilliant colours, and great variety	1	0	
PRIMULA, finest fringed	1	0	

☞ For other Perennials for present sowing, and directions for cultivation of the same, see **CARTER'S "GARDENERS' VADE MECUM,"** which will be forwarded post free on application to

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, London, W.C.

NEW SEEDS OF CHOICE CALCEOLARIA, CINERARIA, and fine-fringed CHINESE PRIMULA.

SUTTON & SONS

are now ready to supply new Seed of the above in packets of **1s., 2s. 6d.,** and **5s.** each, all equally fine.

SUTTON & SONS, ROYAL BERKS ESTABLISHMENT, READING.

CORDYLINE (DRACÆNA) INDIVISA.

MESSRS. JOHN AND CHARLES LEE

Have the pleasure to announce that on the 1st of August they intend to send out the magnificent

CORDYLINE INDIVISA FROM NEW ZEALAND,

AN ACCOUNT OF WHICH WAS GIVEN BY DR. LINDLEY IN THE *GARDENERS' CHRONICLE*, OCT. 29, 1859, Pp. 868.

It is impossible to give an adequate description of this wonder of Nature, which should be seen in its native grandeur to be thoroughly appreciated. Specimens can, however, be seen at this establishment which already prove the accounts received of its merits to be quite reliable. Being found at a high elevation it will be a very hardy Conservatory Plant, and will probably bear total exposure in the West of England and in Ireland.

CORDYLINE INDIVISA attains a height of from 10 to 20 feet, in an erect and undivided trunk on which the foliage is retained with vigour almost to the ground. The leaves are set on to the greatest advantage, and measure from 5 to 6 feet in length, and from 6 to 9 inches in breadth. Their colour is of the richest description: a broad and prominent midrib of crimson brown runs through the entire length, and numerous red and white lines run parallel to the midrib: the whole surface is overlaid with a rich golden bronze producing an elegant effect. The under side of the leaves is glaucous. The whole tree is unsurpassed in its truly noble and unique beauty.

Nursery and Seed Establishment, Hammersmith, London, W.

STRAWBERRIES.

CHARLES TURNER having during the last two years been awarded, both by the Pomological and Horticultural Societies, their First Prizes for the best Collection of this fruit, is now prepared to receive orders for strong plants of all the leading kinds, to be supplied during August, and thus insure a crop next season.

For a trifling addition to the charge, the most choice kinds can be supplied, established in small pots.

A DESCRIPTIVE LIST may be had on application.

The Royal Nurseries, Slough, adjacent to Eton and Windsor, and also at Salt Hill.

CUTHILL'S STRAWBERRY PLANTS will be sent out on and after August 20. Strong fine plants for bearing next year:—

HIGHLAND MARY, 1*l.* per 100; 12*s.* for 50; 8*s.* for 25.

IMPROVED BLACK PRINCE, OR RICHARD II., same price. Both great bearers and good forcers.

PRINCESS ROYAL OF ENGLAND, 7*s.* 6*d.* per 100; selected, 10*s.*

PRINCE OF WALES, 7*s.* 6*d.* per 100; selected, 10*s.*

BLACK PRINCE, 5*s.* per 100; selected, 7*s.* 6*d.*

The two first named have been severely tested on my ground these last three years by hundreds of people, and highly spoken of in the *Gardeners' Chronicle* two years ago. They are early and late, on account of the numerous trusses continually coming up. **Mr. A. Henderson, Pine-apple Place, writes:—"The Improved Black Prince, or Richard II., is particularly** fine, being twice the size of the old sort, fruit large, round, and heavy, of an excellent colour, with brisk high flavour. **Highland Mary is more tapering, after the shape of the British Queen, but fruit more regular and of a more beautiful shape,** of a good size, with a very sweet and rich flavour. The Improved Black Prince will be most valuable for preserving, the flavour being so brisk and sharp." Dr. Lindley told me himself, that he never could depend upon having a Strawberry until he had my breed.

Cuthill on the Strawberry, showing how to obtain early and large crops off a small piece of ground.

Pamphlet on the Potato, with 20 more Articles, 2*s.*

On Market Gardening round London, &c., 1*s.* 6*d.* [&c., 1*s.*

On the Cultivation of the Mushroom, Killing of Woodlice,

On the better Cultivation of the Vine, 1*s.*

Vegetable Meeting Paper, gratis.

Payable to JAMES CUTHILL, Camberwell, London, S.

CHOICE SELECTED SEEDS

FOR PRESENT SOWING.

CALCEOLARIA, splendid hybridised, in sealed packets, with directions for sowing 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*.. and	5	0
CINERARIA, from new and prize flowers .. 1*s.* and	2	6
DELPHINIUM FORMOSUM, fine	0	6
HOLLYHOCK, 100 seeds	1	0
PANSEY, from the best named flowers .. .. 1*s.* and	2	6
INTERMEDIATE STOCK, scarlet, fine	0	6
PERPETUAL ,, white, very double	0	6

The above are strongly recommended to amateurs desirous of producing a choice collection. All Post Free.

JOHN DOBSON & SONS, Seedsmen, Isleworth, W.

The Gardeners' Chronicle.

SATURDAY, JULY 28, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, July 31 { Horticultural (Fruit Committee) at St. Martin's Place ..... Noon

WE have still some observations to make on two very important kinds of wood which are now used to a very considerable extent in ship-building, namely African Oak or Teak and Greenheart, the latter of which, though of comparatively modern introduction, bids fair to take a very prominent place in our dockyards.

The African Teak, though somewhat resembling Indian Teak as regards the wood in outward appearance, is far below it in general value, and, botanically speaking, bears no affinity to it. The

best account of it is to be found in HOOKER's "Journal of Botany," vol. 2, p. 183, from whence it appears that the plant which produces it belongs in all probability to the natural order of Spurgeworts, being, as is believed, the *Oldfieldia africana* of BENTHAM and HOOKER. No competent botanist, indeed, has proved the matter, nor does it appear that any competent observer has himself gathered the plant which yields the wood. OLDFIELD's plant is, however, the same as VOGEL's single leaf, and there is therefore little room for doubt.

The value of this timber was first ascertained about the year 1819, and though too heavy for general use, being from one to two-fifths heavier than seasoned Oak, it is much used in particular parts of the vessel and is very durable, provided it is not confined, in which case it decays rapidly.

It is particularly calculated for steamboats, as it will stand a great degree of heat in the wake of fires, where there is a free current of air, and as the logs are frequently of a large size it is available for many purposes where length as well as strength is requisite. In point of strength, indeed, it exceeds by one-third either English Oak or Malabar Teak, though in turn it is exceeded one-third by Greenheart. The sapwood, however, is very subject to decay, and requires to be carefully removed; we have seen numbers of logs in which it has been converted, like the sapwood of Oak exposed to the weather, into touchwood, though the decay does not penetrate into the heartwood; we have, not however, found any perfectly developed Fungi upon it, though the surface of the logs is often covered with an Alga closely allied to *Scytonema byssoideum*. It is also subject to the attacks of large larvæ, and both the heartwood and sapwood, as in a specimen before us, are sometimes perforated in every direction with worm holes, as if eaten out by some teredo.

Greenheart, the produce of *Nectandra Rodiæi*, is a plant which occurs abundantly in Demerara, and belongs to the natural order of Laurels, and as might be supposed from its affinities contains a great deal of oil which is doubtless a preservative against many Fungi, though, as we shall see presently, it is by no means completely exempt. Before we had an opportunity of examining it on a large scale, a gentleman of high standing at LLOYD's was so kind as to send us the following information, which we give in his own words:—

"Greenheart is at present much used for shipbuilding in this country, and has an excellent reputation for strength and durability. It is to be had in long lengths, and is therefore chiefly employed for beams, shelf-pieces, planking, and similar purposes. I have known the wood well for a long time, and have examined many specimens partially decayed after having been used for a more or less extended period. This decay, as far as I know, extends only to the sapwood, and here perhaps is the only cause of objection against Greenheart, for the sapwood is so similar in colour to the heart, generally a shade darker, that it requires a practised eye to know where one commences and the other ends, yet when decay of the sap sets in the line of demarkation is very evident. Dry rot I have never observed in Greenheart. We class this wood at LLOYD's in the 1re or 12-year class, in which will be found our best Oak, Teak, &c."

We have had no opportunity ourselves of examining Greenheart which has been used in the construction of vessels and subjected to the wear and tear of long voyages, but we have seen a very large assortment of logs, both in their state as imported and as worked up, which have afforded some matters for observation. It appears from these that Greenheart is by no means free from the attacks of Fungi, or from some decay similar to the eremacausis or chemical decay of Oak even in the heartwood. We have for instance in the middle of the finest planks, far distant from the sap, obtained specimens where not a trace of Fungi existed, in which the texture of the wood was quite destroyed, and the whole turned into a pulverulent mass, which gave way between the fingers on the slightest pressure. We have seen moreover logs in which the heartwood was penetrated in every direction with brown strings of mycelium resembling what is commonly called *Xylostroma* except in colour, and showing that under favourable circumstances it may become the prey of Fungi, like our own Oak. It is however to be remembered that many of the tropical Fungi are as impatient of cold as any phænogamous plant, while on the contrary heat accompanied by damp is an actual stimulant of growth to many of our northern species, so that as regards fungous dry rot the balance will always be in favour of tropical woods.

Greenheart is by no means exempt from the attacks of larvæ. Large wormholes not unfrequently occur in the centre of logs, where there is nothing externally to indicate their presence. The most remarkable case however which we have seen is that of a very large and extensive cavity in the heart of a log, completely closed on every side, produced originally by ants, and we have seen a case precisely similar in a large log of Mahogany.

It has been asserted that the different species of shipworm will not attack Greenheart, but this unfortunately proves a mistake.

One great advantage of most of the exotic woods, an advantage which was still greater when iron bolts were in fashion, is that they do not corrode iron like Oak from the comparative or complete absence of gallic acid. Copper bolts are now found to be so economical that they are used almost to the exclusion of iron, especially since the discovery of a trick which was often played, viz. the skimming of the cream as it were of the copper, on the presence of which a good deal of the tenacity and durability of the metal depended. This practice can however no longer be practised with impunity.

For naval purposes it is feared that Greenheart will be too much inclined to splinter under fire, and that the splinters will produce dangerous wounds, but of this at present there has not been sufficient, if any, experience.

One important circumstance attending these superior foreign woods is that they do not really cost so much as the best Oak, when the long seasoning is taken into consideration.

Many other kinds of wood enter into the composition of a ship, but we have spoken of those only which are of the most importance, with the exception of the different kinds of Pine, especially Larch, of which vessels are sometimes entirely composed. We have not, however, had any opportunity of examining the dry rot of such vessels, and the wood is too well known to need much comment. Mahogany is now largely used for planking and other purposes, and is daily obtaining more favour.

A wood known in India by the name of Angelee, and said to be produced by *Artocarpus hirsuta*, has lately been much praised and thought to be inferior only to Malabar Teak. Dr. CLEGHORN, according to the Madras *Overland Athenæum*, June 9, 1860, reports that considerable exports can easily be made from the Malabar coast, and there is reason to believe from Indian experience of its utility that it is likely to prove a valuable acquisition.

We venture, in concluding this long series of articles on timber and the causes of decay to which it is subject, to make a few remarks which have forced themselves upon us during its consideration.

To whatever causes the faulty construction of such vessels as the gunboats or similar errors may be due, they arise neither from ignorance on the part of the authorities in our dockyards, nor on that of subordinate parties in our public offices through whom the orders may be given. An intimate knowledge of the subject, a wish to obtain the most accurate and recent information, and an absence of all desire to conceal faults, characterised every one with whom we came in contact during the course of our inquiries. Political pressure has doubtless in many cases been productive of mischief in higher quarters, but far more, if we mistake not, the absence of proper information on scientific matters connected with the department over which the actual moving authorities preside. So long as appointments are made from political motives only, and not on account of superior qualification for each particular post, the evil must remain in a greater or less degree, especially when there is no proper appreciation of scientific merit on the part of our rulers. Till ignorance on such subjects is considered as disgraceful as bad spelling or false quantities, we can expect but little improvement. But a few years since a taste for science was considered in some quarters as rather low and grovelling, and in one of our legations we know that such a taste was pursued under a cloud of secrecy, from an impression that it would at once be scouted by the principal as below the dignity of an *attaché*. Such times we trust are past; and if so, we may at last hope, when scientific matters shall be considered a fair subject of examination for every applicant for public employment, that our rulers, while they duly appreciate their real merit, will themselves be so far imbued with practical information, that their energies will be exerted in a right direction, so that the resources of the country may be properly developed, and ruinous mistakes avoided.*

"I SEE nothing particular in HEREMAN'S PORTABLE HOTHOUSES," writes a correspondent; "they seem very like any other such houses." We agree with him in the second proposition, and disagree in the first. One man is very like another man; only that the one possesses much intelligence, and the other very little. One spade is like another spade; but some spades will do their work far better than others. One pen is very like another; yet you can write with one, and the other only enables you to scratch. So it is with these Heremans; they are similar in appearance to others; but they have merits of their own. These merits consist in good construction, good arrangement, easy portability, and cheapness.

Without any pretence to high finish or elaborate workmanship, which in such structures represent a mere waste of money, they are perfectly well made.

Their arrangement is as simple as ingenuity can render them. No rafters obscure the light and make them cumbrous. No sashes have to be pushed up or let down by ever-breaking lines and weights or by expensive mechanical contrivances; and yet all the ventilation requisite in such buildings is as perfectly secured. This is effected by narrow doors, fixed where rafters are usually found, and opening by lateral hinges for either half or all their length at the will of the gardener. When fixed the roof may be adjusted to any angle that is desirable. Having no side walls they may be set down on the level ground or on the edges of banks thrown up for the purpose. When removed they pack up as readily as a lady's fan. Therefore if it is necessary to shift their position in a garden they may be lifted from place to place as easily as a wooden Cucumber box. By excavating the ground beneath them they may be made to have sufficient head-room even when the sashes are only 8 feet long.

It is their perfect portability that must give them a peculiar value in the eyes of the public. If we hire a house for two or three years, and are enthusiastic enough to fix up a greenhouse, it remains the absolute property of the landlord at the end of the term. But if instead of fixing up we drop down one of these Heremans we can pack it up and remove it along with the watering-cans, wheelbarrows, and other implements. No landlord can touch it—a most important consideration for all who have not the happiness to live on their own freehold. Literally with a Hereman one may "take up his tent and walk."

As to cheapness, we may refer to the advertisements. A span roof, with 8-foot lights and 40 feet long, costs only 40 guineas. Even 100 feet long with 12-foot lights, a very large house, costs only 150*l.*; prices which nothing else that we know of, with similar excellent construction, comes near. Therefore for 40*l.* or 50*l.* anybody may have a nice efficient portable orchard house, which in winter might be also used as one for shelter, were the sashes covered with thatched frames. That these contrivances make capital orchard houses is evident from the state of the fruit trees now growing in them, which for health and crop cannot be surpassed.

In our eyes they want one thing only, and that is a portable heating apparatus for those who would not use them as cold houses only. Hot-water apparatus as now constructed is as much a fixture as the building it warms. It must be left behind for the landlord when a tenant quits possession. All the portable heating contrivances which have hitherto been proposed in this country are more or less unsatisfactory; even the best gas stoves, like those of THOMSON, are open to serious objection. And how few gardens are lighted by gas or are within cheap reach of it?

Whether HEREMAN'S portable greenhouses or the ordinary fixed ones are preferred, this question of cheap heating, or rather warming, is one of as much importance as ever. The whole race of German stoves, American stoves, or Arnott's stoves are unsuited to vegetation. Manufacturers

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* It is scarcely necessary to make any remark upon a paragraph which appeared in our Journal last week respecting sapwood. It may be true that in some districts Oak timber is commonly squared, and that some timber enters both private and public yards in this condition, but even then there will be a large patch of sapwood at the four corners. Far more Oak timber, however, enters into the yards without any squaring, as our correspondent could at once ascertain by ocular evidence in any of our dockyards, as for example at Chatham. As the sapwood bears only a small proportion to the heartwood in a large tree, a great quantity cannot enter into the construction of any vessel; but even a small quantity attached to each rib or plank is sufficient to produce rapid decay from contagion.

should look in a new direction if they are to produce what shall be fit for the purposes of the multitudes who have or would have their little plant houses. Will they pardon us for suggesting that the common French earthenware *poële* or stove for wood fuel should be taken as their guide? In that simple contrivance heat is extremely lasting; and there is neither possibility of burning the air nor risk of explosions of gas. No stokehole is wanted, no dirty ash-pit, nothing but what is admissible to a bedroom. It is fed by wood, the burning ashes of which accumulate in the interior and slowly part with their heat. Although wood must be used when first lighted, yet afterwards any *dry* rubbish may be employed; we should think dry sawdust mixed with sticks and chips or similar materials. Possibly even sun-dried bricks, made of clay and sawdust, no more of the former being employed than would hold together the latter, would answer very well.

Strangely enough such articles are not procurable in England; but they might be made extremely cheap. In France they may be had of the commonest kind for 30 or 40 francs; a handsome white glazed cylindrical one, complete in all its parts, and 18 inches in diameter, may be imported from Paris and fixed in London for 10*l*., all charges of every kind included. But as they travel badly, owing to their weight and the softness of their material, it would be much better to buy them here in pieces, which a handy bricklayer could put together, than to import them entire. Nor in their French form are these *poëles* exactly what is wanted for a greenhouse. They always have a perpendicular chimney or *colonne:* for a greenhouse the chimney should be horizontal, in order to secure a proper distribution of heat. If any ingenious potter were to contrive an efficient apparatus of this kind we think he might calculate upon a little fortune growing out of it if he were prudent enough to obtain legal security for the quiet enjoyment of his invention.

—— SOME time ago it was mentioned in our columns that the important duty of obtaining for India a supply of seed of the CINCHONA TREES OF PERU had been entrusted to a Mr. CLEMENT MARKHAM (see *Gardeners' Chronicle*, 1859, p. 464). We did not feel justified at that time in adverting to the rumour that this was something worse than a questionable appointment; no one being able to ascertain what qualifications the gentleman possessed for an operation "demanding not only great energy but a very considerable amount of practical knowledge of gardening, as well as much botanical experience." Our own inquiries into the matter had failed to produce any information upon the subject; but then the Earl of ELLENBOROUGH was understood to have been in some way a party to the appointment, and it was difficult to believe that the noble lord would advise so very important a mission to be intrusted to incompetent hands. After a time we found that a gardener had been provided to act as an assistant under Mr. MARKHAM'S directions; a rather suspicious circumstance, seeming to indicate doubts in high quarters of the perfect fitness of the chief of the expedition for the difficult task he had undertaken.

We now learn, upon what we believe to be good authority, that Mr. MARKHAM is on his way home *re infectâ;* that he has accomplished nothing beyond drawing a certain amount of pay for his distinguished services, and that the whole business has to begin again. Thus, it appears that in the hands of the British Government it has been impossible for Englishmen to do what has long since been effected by Dutch and French.

Will no member of Parliament move for papers relating to this discreditable business?

—— On the night of Wednesday last, or more probably early in the morning of Thursday, the thermometer in the Garden of the Horticultural Society at Chiswick sank to 34° Fahr.! In the same place a radiating thermometer marked 30°!! Have we any authenticated parallel to this in the dog-days?

New Plants.

235. CYPRIPEDIUM SPECTABILE, *Rehb. in Allg. Gart. Zeit., Oct.* 11, '56; *var.* Dayanum.

C. foliis oblongis nebulosis tridentatis, scapo et flore extùs hirsutis, bracteâ ovario triplò breviore, petalis elongatis ciliatis margine superiore glanduloso, labello oblongo extùs lævi intùs piloso circa ostium glanduloso, stamine sterili semicirculari pubescente angulis rotundatis margine postico fisso antico obtuse mucronato.

Under the name of *C. Dayi* this was shown at the last meeting of the Floral Committee of the Horticultural Society as a native of Borneo. We, however, see nothing to distinguish it from the C. spectabile of Java, except colour. In that species the petals are white spotted with dark crimson; here they are of one uniform dull wine red. It is a very fine plant, with larger flowers than any of the leathery-leaved species. The leaves are like those of C. venustum, but distinctly 3-toothed at the point, like a Lepanthes: a peculiarity which occurs elsewhere in this genus. The sepals are white, delicately striped with green. The lip has the same dull wine colour as the sepals, but is marked by deeper-coloured veins.

BEDDING PLANTS IN MOSS.

IT is now I think some 14 or 15 years since Mr. Ferguson, of Stowe, first promulgated his penny plant scheme, the secret of his plan consisting in sending the plants out growing in Moss instead of pots. Like many other original thinkers, Mr. Ferguson reaped a harvest of ridicule, and in some instances anything but measured abuse for his propositions; but still there is merit in the plan, and in these days when bedding plants are wanted by the thousand, economy of expenditure as well as convenience of stowage renders the scheme exceedingly interesting and desirable. In the autumn of last year the frost of October overtook me, even before I had thought of getting my autumn-struck bedding Geraniums under cover, and the consequence was a large majority of the plants were killed to the ground. I had no choice but to make the best of a bad bargain, and the consequence was the young plants were taken up, had the destroyed parts cut away, and were "laid-in" in some light sandy soil on the border of an early forcing Vinery. Here they remained looking most deplorable, some rotting, others throwing a shoot or two from the dormant buds at the base of the cuttings. Heat was applied to the house the end of November, and being gradually increased, by the new year I had a stock of young plants which were daily asking for more room. What was to be done with them? To pot them was quite out of the question, for I had no room for such an array of baked clay as they would have required, and hence I was driven to the Mossing plan. When pots are placed to touch each other it will be found that just 100 3-inch pots will stand in each square yard; but of the larger size, that generally used for bedding plants, only 64 pots will stand in the same space. To prepare pots and soil, pot and put away 500 plants per day, is not bad work for two men; but the Moss being gathered I find a man and boy or woman will Moss and put away 800 to 1000 plants per day with ease. With pots each requires a daily examination if not watering. With plants in Moss a watering once a week is quite sufficient, as being bedded in light soil the roots have a much wider pasture to roam through than if each plant was confined in a small pot. Of the space required by Mossed plants of course much will depend upon the quantity of soil used to each plant; but as a general rule it may be assumed that at the least one-half more, and frequently double the quantity of plants will stand in the room which would be required if the plants were in pots, while the care and attention required by the Mossed plants will not be a tithe of what would be necessary if the plants were in pots.

Given then a quantity of stove plants in pots or boxes to Moss off, the first thing to consider will be the place to put them in after they are Mossed. Generally pots or frames, with a slight bottom heat from leaves or tan, will be the best for free-growing things; but those who have Vineries or other forcing houses may make use of any vacant space for the bedding plants. I cram my inside borders, even under Cucumbers and Melons, full of them without the slightest injury to the principal crop. The place being provided, prepare a quantity of light soil, such as leaf-mould and loam or old Mushroom dung and loam in equal quantities. Put this through a half-inch sieve, and place it in the house ready for use.

Next prepare a quantity of Moss; this, if matted together, will be better of being prepared by beating the same as plasterers prepare hair for hair mortar. All being ready, shake out and divide the plants, then place a small portion of Moss on the palm of the left hand, over that some soil, then the plant; cover the roots with more soil, and then double the Moss up and tie securely. For tying, matting or string may be used, but a much more expeditious and safe plan is to use thin iron wire. This may be purchased at 4*d*. to 6*d*. per lb., and a lb. of wire will tie from 400 to 700 plants, according to its strength and the size of the balls of the plants. It is not necessary to have the wire galvanised, as by the time the wire decays the roots will have taken such hold of the Moss as to prevent its falling apart. As the plants are Mossed let your assistant begin to lay them in the light soil previously spoken of. The distance at which they are placed apart will depend upon the size of the plants, but generally in the row the balls may be placed so as to touch each other, and have a little breathing space allowed between the rows. In this the first station the plants will stand until they have rooted in the new soil, been stopped, and made new shoots; and if stock is wanted it may be necessary to stop them a second time. After they have made the second growth the plants are fit to remove to a cooler place, for I suppose that so far they are in a forcing-house. At the time of removal to a cooler house the soil should be dry rather than otherwise, so that after they are replanted, packed with fresh compost and watered, they will feel little of the check. This shift I suppose to be into a cool greenhouse Vinery or pit, and here the plants will remain until April, at which time they may again be removed into a cold pit, with temporary covering, or what is now so much recommended, a Tiffany house. No doubt a house of this kind would be found exceedingly useful in every establishment, not only for protecting bedding plants, but also for Fuchsias, Camellias, Azaleas, &c., at the present time, and especially in a season like this, when it has been almost impossible to trust a plant of value to the drenching rains we have lately had. Mr. Standish tells us of the frost-resisting power of this Tiffany covering, but the frost-resisting qualities will depend more upon the size of the house than the material it is covered with. Thus, for illustration, if a house contained a volume of say 5500 cubic feet of air, it might, if it was tolerably air proof and was shut up warm the preceding day, contain sufficient caloric to resist a frost of 6° or 8° below the freezing point, but if it contained 500 feet only, then it would be frozen through and through. This is the reason why glass walls failed in protecting plants though orchard houses succeeded, and this is the reason why my lord's conservatory may pass unscathed through a cold night without fire, while in the small house at the rectory the plants are all frosted. It is not the heat-preserving property of the covering, but the quantity of heat stored up in the atmosphere, which is the real protecting power.

After the middle of April many temporary experiments for protecting plants may be resorted to, such as earth pits, turf pits, straw pits, and I have kept thousand of plants with a skeleton framework, supporting Fir branches and a few old mats, or a tarpauling, while the nursery cradle, with good mats, is for bedding plants a real good covering. It is essential to get bedding plants thoroughly hardened before planting them out, but when they are put into the last place before removing them to the flower beds, the compost should be tolerably rich and strong. I am inclined to think these frequent removals by checking the growth of the plants have a tendency to promote a short, sturdy, and healthy growth, and at the same time ensure a floriferous habit, while the facility with which a large quantity of plants may be bedded-out is a real gain to the gardener. In bedding-out one man plants, leaving the soil about the ball and roots quite loose; a second follows, and gives each plant a thorough soaking of manure water; while a third shortly afterwards follows, firms the soil, and cleans off the beds, leaving the surface quite loose for an inch or two in depth. In this way the plants rarely require a second watering, but if they do, the hoe follows the watering pot. A great saving of labour is effected in having no pots to pick up and store away. *A. P. H.*

ASCENT OF CLARENCE PEAK, FERNANDO PO.

THE following extracts from a letter I received this week from Mr. Gustav Mann will no doubt be of interest to your readers. Mr. Mann, it will be recollected, is the successor of poor Barter, the botanist to the Niger Expedition, whose untimely death was recorded in your pages. From the disturbed state of the native tribes, and from ill health, Mann has been unable to join the expedition, which is some distance up the river. He has therefore devoted himself to the botany of Fernando Po. He is the second European* who has ascended Clarence Peak, a mountain more than 10,000 feet high, occupying nearly the centre of that island.

"I promised before leaving Kew, that as the plants I should collect would be placed under your charge, I would give you some information about their native habitats, but I have not hitherto been able to do so. I will endeavour now to give you some idea about those which I sent by the last mail. I only wrote a short note then because I was so weak, and all my failing energy was required to pack my dried collections and living plants for Kew. I think I rather overworked myself; I had another attack of fever, but I am now recovered. That note informed you that I had succeeded in ascending the mountain. It was a great pleasure to me but fraught with many difficulties, for as but one person had preceded me I could obtain no information which could be of service. I started from here (Port Clarence) on March 23d, and by the close of the first day had attained an attitude of 1300 feet. Here I found a little hut which the Boobees (a native tribe) had erected during the dry season; this protected me a little from the rain. The vegetation even here was quite different from that I had left behind; all the trees were covered with Orchids, Begonias, and Ferns; Mosses a foot long or more hung from the branches overhead. I collected as many as I could of your favourites the Ferns. The large Trichomanes which I sent in the Wardian case grew in the soil, the smaller species on the trunks of trees. Here also I found the large Acrostichum and a new species of Dracæna. On the 27th I reached the height of about 5000 feet, and found on the way some splendid plants of Cyathea, the fine Calanthe, and the Liliaceæ, of which I send six bulbs. These last were growing on rocks in a little stream; when they are in flower they will make quite a

* Capt. Beecroft was the first.

feature in your Cactus house. The large leaved Antrophyum grows on trees here like Platycerium stemmaria in the tropical part of the island; you will be very proud of these if they reach Kew alive. On the 28th I reached 6000 feet, and on the following day 8500. Here the plants were principally herbaceous, and I was rather too late in the season; most of them were out of flower, but some of them were in seed. I stopped at this altitude six days, for I was obliged to send one of the negroes back for more provisions. There was not much of what is generally called comfort during this time, for every day we had heavy rains often accompanied by thunder, and only a little shed to shelter us, 4 feet high in the centre and open at the sides, and this with the thermometer down to 40° at night. I reached the top of the mountain about half-past two in the afternoon of the 3d of April; the temperature at that time was 54°. Much of the pleasure of seeing the whole island below me was destroyed by heavy and incessant rains; but I was more unfortunate still to find that nearly all the vegetation here had been burnt by the natives. At the top there is a crater 40 or 50 feet deep, and some smaller ones lower down; a few of these had been filled by the rain and so converted into lakes. The minimum temperature at night was 39°. Vegetation grows to within about 500 feet of the summit, and I was fortunate enough to find a splendid Erica, 10 feet high, in full blossom. A fine species of Hypericum forms the greater part of the bush.

"I descended on the 4th of April to 5000 feet, and the following day to 1300 feet. Here I remained six days, making excursions in various directions and collecting living plants. On the day previous to my return to Clarence I obtained some Tree Ferns; it was very hard work, and I shall be truly sorry if they do not reach Kew alive. I arrived at Port Clarence on the 13th of April, very much fatigued, and suffering from the heat after this taste of cold weather. I still feel somewhat weak.

"Sir William J. Hooker, yourself, and others caution me to be more careful of my health—it is very kind of you; but if one intends to collect the Flora of such a district as this it is no easy task. There is necessarily a great deal of exposure; but I am as careful as I can be under the circumstances. There would not be many plants collected if I were afraid of a little rain. The Consul, Mr. Hutchinson, and his lady, have been extremely kind to me; during my attacks of fever they nursed me as though I were one of their own family."

There is no date to this letter; but it was probably written at Port Clarence about the middle of April. *C. W. Crocker, Propagator, Royal Botanic Gardens, Kew.* [For this interesting communication we are indebted to Mr. Crocker, one of the most skilful and intelligent practical gardeners employed in our great national establishment.]

Home Correspondence.

Naval Timber.—Can you tell me what Oak the Virginian Oak is? Some cargoes are now being received in the dockyards and the description of timber is new to the officers. It is described to be grown about seven miles from the sea, which locality is said (I know not with what truth) to be more favourable for the growth of durable timber than inland situations. It is heavier than Teak, and sinks in salt water; but lighter than Sabicu. It is said to be distinct from both Live Oak and the common American White Oak, and to be very superior to the latter; very durable and free from heart-shake; (the examination of the timber at the sawpits hardly bears out this). It is very long and straight, the straightness being a quality not what is wanted; the great want being compass, or curved timber, for the frames of ships—large ships especially. The parties who supply this Oak speak of the Delaware forest producing some of the best. It is grown, you will see, in a hot climate, and in its appearance differs little from ordinary Oak timber. Some of it is very large. Can you also give me the reason why the sapwood in Elm is as durable as the heartwood? The fact is so, and long experience has proved it in the dockyards, where the sap is never cut away from Elm. In addition to the instance cited by you in a former Number, I can give you that of one of the shafts of the main keel of the Cæsar, 90, which became decayed while building and had to be taken out and renewed before she was launched, and this although it was never exposed to wet and dry, the ship being built under a shed. Your correspondent who asks how sapwood can be left in squared timber, may see that though the sapwood may be removed from the sides of the squares, it may be left at the angles of the trees if the trees are small. It is perhaps not generally known that the sapwood of young small Oak timber differs in appearance so little from the heartwood, that any one but a very experienced person is very likely to be deceived by it. The general impression in her Majesty's service is that Teak does *not* splinter, and I believe the Minden built of it when in the action at Algiers under Lord Exmouth made this good, and the Asia at Navarino. *T. S. P.* [1. We have no means of ascertaining what is meant by "Virginian" Oak. Not being "Live" Oak, it may possibly be the "Willow" Oak, or the "Rock Chesnut" Oak. But this is mere guess. May we hope that some of our scientific friends in the United States will favour us with the information? 2. Whatever may be the reason, certain it is that the sap of Elm wood does not rot when kept from the air. The old Elm water-pipes that are occasionally taken up in the streets of London even now are quite as sound outside as inside. 3. We doubt whether Teak splinters more than Oak: it is too stubborn a timber to be easily shattered.]

Rainfall at Broughton, West Riding, Yorkshire, January 1st to July 1st, 1860.—

	Inches.
January	4.94
February	1.72
March	3.50
April	1.32
May	3.20
June	5.31
Total	19.99

P. Daniels.

Education of Gardeners.—Permit me to bear testimony to the truth of the statements made by "Crostonian," see p. 648; also allow me to go a step further, and give the name of the place in which the system of extortion of which he speaks is carried on. The place in question is * * * *, the seat of Sir * * *, who I think cannot be cognisant of the facts I here beg to substantiate. At this place are kept a head gardener, several under-gardeners, and many labourers. The wages received by the under-gardeners are, as "Crostonian" states, 11*s.* per week for those employed on the grounds, and 12*s.* for those in the houses. Out of these small sums the former have to pay 1*s.* 6*d.* and the latter 2*s.* per week, besides a premium of 3*l.* on entering the houses. A goodly sum, certainly, is left on which to live, procure books of instruction, and keep up a respectable appearance! This, too, is done by a man who, in a pecuniary point of view, holds one of the best situations in the country. From what I have seen of young gardeners I fully believe them to be both willing and capable of receiving instruction whenever it is afforded them. The material is as good as ever it has been but it is spoilt in the making, and when we take in consideration the deductions and tyrannical usage to which they are at many places subjected, is it a matter of surprise that so many do that which stocks the market to overflowing by taking the first place that offers, oftentimes before their gardening education is well begun? I am aware that the point now in question is the education of gardeners, and not a question of wages, but if we want better educated men, employers must give their under gardeners better wages and take care to see that they have them; they must have more liberal treatment from head gardeners, and last though not least, as a reward for years of privation and study, a better prospect to which they can look forward. It is not advisable to fix the educational standard too high. What is more desirable is to endeavour to awaken a greater love for the profession itself, independent of its being a means of support, and this can never be done while young gardeners are degraded to the level of labourers. Success in gardening is made up of small things, and if we aim too high we shall be apt to neglect the small things at our feet, and be like the philosopher who being so intent on watching the heavenly bodies, did not see the well into which he stumbled, and proved his ruin. * * *—— I have had a good deal to do with and among gardeners during the last quarter of a century, and it seems to me that the whole body may be divided into three classes:—1. Gardeners who have charge of first-rate establishments, and do not work. 2. Gardeners who have a man or several men under them, but are expected to take an active part in whatever is going on. 3. Men who take single-handed places and work hard. For the first class men of high attainments are required, though it would not be difficult to point out many such gardeners whose original education was very defective, who, from great perseverance, superior ability, and strict integrity, have won for themselves most deservedly the confidence and high regard of their employers. To prepare a man for such a situation a sound education is indispensable—but that is not enough: he must have a practical knowledge of his business, which can only be gained by long experience and close observation. For the second class a similar preparation is needed, as it ought to be from this class that the possessors of the prizes in class first should be taken. The third class generally consists of men unfit for larger places or unable to obtain them. Many of those persons to my certain knowledge are men of rare industry and possessed of much practical and varied information. Now a few words on the points obtaining so much notice just now in your pages. It seems to me that many of your correspondents quite forget that a gardener is simply a kind of servant, that his time is really the property of his employers, and were a man filling one of the best appointments I have named to spend his time hunting after plants with his young men, I think he would very soon have to seek for another place himself. There never yet was a man of much eminence in his profession who did not owe his success very largely to his own efforts, and thus it will always be with gardeners also. Where there is a young man of talent and observation who zealously sets about gathering knowledge and improving his mind, such a man is certain to meet with persons able and willing to help him, and in the end, though it may not be so soon as he could wish, he is certain of promotion. Such men will always outstrip gardeners who are merely such by rule. *Roaldus, Preston.*

May Queen Strawberry.—I have purposely avoided expressing any further opinion on the merits of this Strawberry till other persons interested in the culture of this delightful fruit have had time and opportunity to record their experience. My silence however must not be construed into an admission of its inferiority; on the contrary I am enabled to speak with increased confidence of its valuable properties. The question of earliness indeed may now be regarded as settled. The orchard house and open ground culture of the present season both testify to this fact, and I can echo with truth every word advanced by the Rev. W. A. Leighton some three or four weeks ago as to its behaviour under glass and its greater freedom from aphis blight than any other variety. I do not wish to make any invidious comparisons, but I may simply state that I grew the May Queen in the orchard house, side by side with all the well-known earliest varieties, and it ripened its fruit fully a week before the earliest of them, and a fortnight before most of them; and in the open ground the difference is quite as evident. This most remarkable late season I had ripe fruit in an orchard house with a west exposure without fire heat by the 4th June in good quantity, and I have no doubt that although it has lost its name this year, it will in an ordinary season ripen its fruit by the middle of May in an orchard house without fire heat. The size this year is with me larger than I have seen it, most of the berries being as large as the usual size of Keens' Seedling, and in flavour it is decidedly superior to any very early variety with which I am acquainted. I am happy also to speak in the highest terms of two kinds not yet generally cultivated, plants of which were obligingly sent me by Mr. Doubleday, viz., Crimson Queen, and another of Myatt's Seedlings, which for the sake of distinction (two of the three having been named Filbert Pine and Crimson Queen) I will call Myatt's No. 3 (Doubleday). Crimson Queen is an immensely large fruit on my soil, irregular in shape, sometimes cockscomb, sometimes roundish, nevertheless very handsome, of a deep crimson colour all through when fully ripe, very juicy, and rich in flavour. The No. 3 is more allied in flavour to Filbert Pine, perhaps rather paler in colour than that variety, and more flattened in shape. I like the flavour of this much. They are both excellent, and where the soil suits as mine does, will be immense bearers of fine heavy fruits. The latter quite deserves and will doubtless soon attain a special name. Oscar too proves a very good sort, and has not been over-rated by Mr. Turner. It is very early and a good successor to May Queen, very handsome in shape and size, dark red in colour, remarkably firm in texture, and very juicy. On the whole I think this variety a decided acquisition. *W. Roden, M.D., The Grange, Kidderminster, July* 11.

Crotalaria Cunninghamii, or Hack's Pea.—I am induced to inquire through the medium of your pages if any of your readers have received dried specimens or drawings of this new species, which is described as one of the most gorgeous flowers yet discovered in Australia. I find by the horticultural report of an exhibition held in Adelaide on February 29, 1860, in "The Farm and Garden," that "a blossom of Crotalaria Cunninghamii or Hack's Pea, singular, magnificent, and new," was produced. "Concerning this rare plant," writes the reporter, "bloomed by Mr. M'Ewing of Glen Ewing, Mr. Francis in a letter to that gentleman says:—You are before me in flowering Hack's Pea; I send you the true name. It has been known for some years as growing in the central part of this continent, that is, on the Sydney or eastern side. It differs very materially from a Clianthus, in having a round, hard, smooth seed-vessel; whereas the seed-vessel of the Sturt's Pea is leathery or coriaceous rather than brittle, and curled inwards at its two edges, not round. The name "New Sturt's Pea" is a sad error, for besides its not being a Clianthus either in its flower, leaf, or seed-vessel, Mr. Sturt had nothing to do with it. I think were it hereafter known as Hack's Pea, it would be a proper designation." I received seeds of this plant from two South Australian friends last year, which were gathered, I believe, in the newly-discovered northern district, known as "Stuart's Country," with a description that induces me to believe it to be a plant of rare beauty. Unfortunately, however, it is very difficult to cultivate; and with one exception all my seedlings are dead; and I understand that in some large nursery establishments a similar fate has befallen the plants. My remaining specimen is thriving in a warm Melon pit, which leads me to imagine it wants more heat; probably a dry stove would keep it growing through the winter, and lead to a flowering condition. *A Devonian.*

Societies.

Horticultural: *July 24.*—An ordinary meeting for the election of Fellows and ballot for Plants was held on Tuesday last at the Museum of Science and Art, South Kensington, by permission of the Lord President of the Privy Council, C. Wentworth Dilke, Esq., V.P., in the chair, when the following ladies and gentlemen were elected Fellows, viz.:—The Hon. Mary Trefusis, the Hon. Adela Trefusis, Shirley Hibberd, Esq., James M. Venning, Esq., the Hon. Mary C. Abercromby, Lady Macdonald, Pryse Loveden, Esq., Miss Cox, and Sir W.C. James, Bart. A ballot for Plants,

the third and last for the season, then took place, after which the meeting separated.

Floral Committee, July 26.—Several interesting plants were exhibited on this occasion. From Messrs. Veitch came a variety of Dracæna stricta, called erythrorachis, a tall, Reed-like plant, with long orange-red veined leaves; to this was awarded a first-class certificate. A similar award was made to a pretty variety of Polystichum aculeatum, called corymbiferum, from Miss Thompson. Three Fuchsias raised by Mr. Banks, of Deal, obtained first-class certificates; and another named Garibaldi was commended; the last was pink with slate-coloured corolla, large and handsome; the others were also improvements in their respective classes; they were Prince Leopold, a fine-looking flower with bright crimson top and purple corolla; Lord Elcho, another useful kind, resembling that just named, but darker; and Minnie, a charming light sort with white tube and sepals and rosy pink corolla. A Fuchsia named Negro from Mr. Smith, of Hornsey, was also commended; it was a pretty dark kind, and good in habit. Pelargonium Meteor, from Messrs. Parker & Williams, was commended; it appeared to be a useful addition to the variegated dwarf scarlet class. Verbena Lucy Tait, from the gardens of the Bishop of London, was also commended; it was a handsome sort with a good dwarf habit. Tachiadenus carinatus, a pretty purple-flowered plant from Messrs. Veitch, was likewise commended, as was also a very dwarf variety of Clarkia pulchella called Tom Thumb, from Messrs. Carter of Holborn. The last named firm likewise showed Linaria macroura splendens, to which a label of commendation was awarded; it had pretty spikes of purplish violet flowers, not very large, but for their size very showy and beautiful. From Mr. Bragg, of Slough, came Pelargonium Madame Csillag, a small rosy lilac sort, which was commended, and a boxful of Sweet Williams possessing all the variety and beauty of the High Wycombe breed, to which they belonged. Among flowers to which no award was made we noticed cut specimens of the extremely pretty mule Pink raised a year or two ago by Captain Trevor Clarke, and mentioned by us in a former volume. It has rich purplish crimson flowers which last long in beauty in a cut state, and in the garden it is very ornamental, being constantly in bloom nearly the whole of the summer months. It is a plant well worth the attention of cultivators of hardy flowers. A pretty Carnation-striped Petunia, Caladium Wightii, and an orange scarlet Scutellaria came from Messrs. Veitch; a handsome Convolvulus named tricolor monstrosus was also shown by Messrs. Carter, of Holborn.

HORTICULTURAL SHOW AT KINGSTON, CANADA.—Kingston lies at the lower or eastern end of Lake Ontario, in Upper Canada. The first show of the season was held on the 29th of June. Notwithstanding the severe winter of Canada, exotic plants are cultivated to some extent, and the display would have been creditable to any English town of the same size. Autumn is, however, the most attractive time for a flower show in Canada, where annuals are necessarily the chief ornamental plants in flower gardens. On this occasion the hall was tastefully decorated with Coniferous evergreens, and a fountain occupied its centre, the basin of which was lined with green Moss, among which large species of Mnium and the elegant Climacium americanum were conspicuous. The waters of the fountain showered down upon numerous side-saddle flowers (Sarracenia purpurea) and elegant Moccasin flowers (Cypripedium spectabile), all blooming, fresh from the forest swamps. These were contributed by Mr. Thibodo.

For the best collection of Greenhouse Plants the prize was gained by Mr. G. Baxter, who also obtained first prizes for Roses in pots, Moss, Perpetual and Hardy garden Roses, Pæonies, Verbenas, Fuchsias, double Petunias, Pansies, Phloxes, Balsams, Delphiniums (perennial), and Pinks. These embraced most of the sorts usually seen on competition stands in England, except in the case of Pansies, which were inferior, being mostly seedlings. Many of the Roses were of the newer kinds and very fine. Balsams grow very well in the open air, and are usually taken up and potted when in flower for exhibition. Second prizes were voted to Mr. Baxter for Geraniums and several other subjects. Mr. J. Lawrence, from Brockville, obtained first prizes for Fuchsias, Geraniums, bedding plants, specimen plants, and Stocks, with second premiums for Greenhouse plants, Vase and Hand Bouquets, and a Floral Design. Mr. M. Flanagan obtained two second prizes for Roses, seconds also for Pansies and Phloxes. Mrs. Flanagan carried off first prizes for tastefully arranged Vase and Hand Bouquets. For Single Petunias, Mrs. Briggs obtained no fewer than four prizes, two firsts and two seconds. The varieties were good and the plants well grown. The best specimen plants grown in a cottage window were produced by Mrs. B., to whom two prizes were awarded, and another first prize for an elegant wreath of flowers. The prize for Antirrhinums was assigned to Mr. Sibbald, who also exhibited Larkspurs and Phlox Drummondi. The first prizes for Ranunculuses and Anemones were both awarded to Professor Lawson, who also exhibited a stand of French Marigolds, including striped, edged, and mottled varieties. Mr. Oliver exhibited a seedling Stock, which received "special mention." For the best display of Sweet Williams, the prize was gained by Miss Wilson, who exhibited a stand of fine showy trusses of single varieties, and a second premium was voted to Professor Williamson for a selection containing some fine double sorts. The prize for the best Cactus was gained by Mr. Wilkinson. For the best Floral Design the prize was awarded to Mrs. Litchfield. A basket of trailing plants (for suspending), such as are now common in England, was exhibited by Miss Wilson, a basket of flowers by Miss Baxter, and a neat shade containing interesting exotic and Canadian Ferns, by Dr. Litchfield. Mr. Benedict showed a Caper, and Mrs. S. Smith, a neatly trained plant of Common Ivy (Hedera Helix), which in Canada requires to be treated as a greenhouse plant. Mr. Baxter showed a fine Datura, and there were several other items in the floral department. The new Dianthus chinensis Heddewigii has flowered here and given great satisfaction, but the blossoms were not quite expanded on the day of the show.

In the Fruit department, there were good Strawberries, for which two premiums were awarded to Mr. Briggs. A discretionary prize was voted to Mr. Skinner, sen., for house Strawberries, and to Mr. M'Vicar for beautiful Cherries, brought from the United States. The prize for Cherries (Canadian) was gained by Mr. Thomas Wilson, and a second premium was voted to Mr. Wadsworth. Gooseberries and Currants were unripe, yet prizes were awarded to them, respectively to Mr. Wilson and Mr. Flanagan, with second premiums to Mr. Briggs and Mr. Deacon. Most of the Gooseberries produced were white sorts of very large size. The Grape Currant seemed to be the favourite show variety.

In vegetables the display was very good indeed. Cucumbers were of large size, but of coarser kinds than those usually shown in England. The first prize fell to Mr. Baiden and the second to Mr. Lawrence. In green Peas, Mr. G. Berry obtained the first prize and Mr. J. Stacey the second. Among the unsuccessful lots were some of the early kinds most highly valued in England, such as Sangster's No. 1, Early Emperor, and Early Washington. The season was not sufficiently advanced for Cabbages, but prizes were gained by Mr. Whitehead and Mr. Bajus. In early Potatoes there was quite a spirited competition, at least a dozen entries being made, and all the lots were unusually fine for the early time of year. The first prize was awarded to the Potatoes from Professor Lawson's garden, which were of the variety called Victoria, originally brought from the United States by Dr. Sampson, and now much cultivated about Kingston. Besides being early it keeps well, and may be used at table 365 days a year. (!) The second prize was assigned to the Rev. H. Mulkins, for some very fine specimens of Ash-leaved Kidney. For Radishes the first prize was gained by Mr. Boice, with fine specimens of a long red variety raised, we believe, from the Shakers' seed, and a second premium was assigned to Mr. Wadsworth. For Turnip Radishes two prizes were given to Dr. Barker; and for Lettuces, which were very numerous and very large (chiefly Cabbage sorts), the first to Mr. Stacey, and the second to Mr. Berry. Kidney Beans, very early, first, Mr. Lawrence; second, Mr. Berry. For root Onions (which are well adapted to the Canadian climate), the prize was gained by Mr. Wadsworth; and a second award was assigned to Mr. Bajus. For Onions from seed, Mr. Whitehead and Mr. Mulkins; table Squash, Mr. Lawrence; Parsnips, Mr. Berry and Mr. Leckie: Carrots, Mr. Baiden and Mr. Bajus (there were numerous good lots of Early Horn); Beet, Mr. Bajus and Mr. Leckie; Rhubarb (very large), Mr. Wadsworth, Mr. George, and Mr. Lawrence; Asparagus, Mr. Lawrence; basket of vegetables, Mr. Leckie and Mr. George, and a basket of herbs, Mr. Baiden.

There were numerous birds from Mr. Dumble and others, several sewing machines in operation, and other works of art. *From our own Correspondent.*

Notices of Books.

The Glaciers of the Alps: being a Narrative of Excursions and Ascents, an Account of the Origin and Phenomena of Glaciers and an Exposition of the physical principles to which they are related. By John Tyndall, F.R.S. Murray, 8vo., p. 444.

There are not many men who for the sole purpose of setting at rest a few doubtful points in physical science would go twice up Mont Blanc, twice up Monte Rosa, cross the Strableck, ascend the Finsteraarhorn and visit Chamouni in mid-winter. There are still fewer men who are both physically capable of such things and are also possessed of sufficient knowledge and skill to observe what is before them and to interpret what they observe. A few such persons, however, there are, and Professor Tyndall is one of the enviable few. The work before us is an account of his efforts to unravel the glacier mysteries, to explain the laws of glacier motion, and to determine the causes of the veined structure of glacial ice. The work is divided into two parts, one chiefly narrative, and the other chiefly scientific. The first contains a highly interesting account of what the author did and saw, whilst the second is by far the most valuable essay on glaciers with which we have any acquaintance.

The following extract, showing what befel the author after he had succeeded in ascending Monte Rosa alone, without a single guide or companion, is a fair sample of the manner in which the author alludes to the dangers and difficulties which he encountered in the pursuit of the objects he had in view.

"I thought of my position; it was the first time that a man had stood alone upon that wild peak, and were the imagination let loose amid the surrounding agencies, and permitted to dwell upon the perils which separated the climber from his kind, I dare say curious feelings might have been engendered. But I was prompt to quell all thoughts which might lessen my strength or interfere with the application of it. Once indeed an accident made me shudder. While taking the cork from a bottle which is deposited on the top, and which contains the names of those who have ascended the mountain, my axe slipped out of my hand and slid some 30 feet away from me. The thought of losing it made my flesh creep, for without it descent would be utterly impossible. I regained it and looked upon it with an affection which might be bestowed upon a living thing, for it was literally my staff of life under the circumstances. One look more over the cloud-capped mountains of Italy, and I then turned my back upon them and commenced the descent.

"The brown crags seemed to look at me with a friendly recognition, and with a surer and firmer feeling than I possessed on ascending I swung myself from crag to crag and from ledge to ledge with a velocity which surprised myself. I reached the summit of the Kamm and saw the party which I had passed an hour and a half before emerging from one of the hollows of the mountain. They had escaped the ledge which now lay between them and me. The thought of the possible loss of my axe at the summit was here forcibly revived, for without it I dared not take a single step. My first care was to anchor it firmly in the snow, so as to enable it to bear at times nearly the whole weight of my body. In some places, however, the anchor had but a loose hold. The 'cornice' to which I have already referred became granular, and the handle of the axe went through it up to the head; still, however, remaining loose. Some amount of trust had thus to be withdrawn from the staff and placed upon the limbs. A curious mixture of carelessness and anxiety sometimes fills the mind on such occasions. I often caught myself humming a verse of a frivolous song; but this was mechanical, and the substratum of a man's feelings under such circumstances is real earnestness. The precipice to my left was a continual preacher of caution, and the slope to my right was hardly less impressive. I looked down the former but rarely, and sometimes descended for a considerable time without looking beyond my own footsteps. The power of a thought was illustrated on one of these occasions. I had descended with extreme slowness and caution for some time, when looking over the edge of the cornice I saw a row of pointed rocks at some distance below me: these I felt must receive me if I slipped over, and I thought how before reaching them I might so break my fall as to arrive at them unkilled. This thought enabled me to double my speed, and as long as the spiky barriers remained parallel to my track, I held my staff in one hand and contented myself with a slight pressure upon it. I came at last to a place where the edge was solid ice, which rose to the level of the cornice, the latter appearing as if merely stuck against it. A groove ran between the ice and snow, and along this groove I marched until the cornice became unsafe and I had to betake myself to the ice. The place was really perilous, but encouraging myself by the reflection that it would not last long I carefully and deliberately hewed steps, causing them to dip a little inward so as to afford a purchase for the heel of my boot, never forsaking one until the next was ready, and never wielding my hatchet till my balance was secured. I was soon at the bottom of the Kamm, fairly out of danger, and full of glad vigour I bore swiftly down on the party in advance of me. It was an easy task to fuse myself amongst them as if I had been an old acquaintance, and we joyfully slid, and galloped, and rolled together down the residue of the mountain."

One of the most extraordinary phenomena witnessed by the author in his Alpine expeditions was the luminous appearance of dark bodies projected against the sky. The appearance is thus described by Professor Necker in a letter quoted by Professor Tyndall:—

"You must conceive the observer placed at the foot of the hill interposed between him and the place where the sun is rising, and thus entirely in the shade; the upper margin of the mountain is covered with wood or detailed trees and shrubs, which are projected as dark objects on a very bright and clear sky, except at the very place where the sun is just going to rise, for there all the trees and shrubs bordering the margin are entirely—branches, leaves, stem and all—of a pure and brilliant white, appearing extremely bright and luminous, although projected on a most brilliant and luminous sky, as that part of it which surrounds the sun always is. All the minutest details, leaves, twigs, &c., are most delicately preserved, and you would fancy you saw these trees and forests made of the purest silver, with all the skill of the most expert workman. The swallows and other birds flying in those particular spots appear like sparks of the most brilliant white."

From such a work as this, interesting and instructive extracts might be made without limit; but our space compels us to forbear, and we must refer our readers to the book itself for the information it contains on the

subject with which it deals. We can only add that its value to an intelligent tourist is only surpassed by its value to the student of glacial phenomena.

Report of the Royal Rifle Match on Wimbledon Common. By John Scoffern, M.B. Ward & Lock, London. A Pamphlet.

The National Rifle Association will, we suppose, some time or other make their official report on the result of the late gathering at Wimbledon. Since, however, nearly three weeks have elapsed without a sign having been made, we are glad to find a good independent judge already in the field. The very able author of a most valuable work on projectiles, a deer-stalker at thirteen, a man of science now, and who has the skill to speak plainly with the courage to speak boldly, is no mean authority on subjects like that of rifle-shooting; and whatever comes from his pen, even though half in earnest half in banter, is sure to deserve attention. We only regret that Dr. Scoffern was not retained by the National Association to prepare their formal account of the proceedings.

In the lively sketch before us the author first considers the political aspect of the Volunteer movement, their past records, the quality and bores of small arms, the nature of ammunition, the shape and construction of bullets, the individual merits of certain muzzle-loaders — Whitworths, Lancasters, Enfields, Swiss. Under all these heads will be found much useful information, not the least so being that which relates to lubricants. Dr. Scoffern entertains much the same opinion of Whitworth's rifles as we do, and steps forward as another witness on the side of Lancaster's oval-bored arms. As to breech-loaders he speaks with reserve; but points out one fault which must of necessity be common to them all; viz., their inevitable fouling more or less. "True, the bullet of a breech-loader *must* come out when the charge behind it is fired; but coming out is a different matter from going truly."

Volunteers should study as well as read this little essay.

TRADE LIST RECEIVED.—Van Houtte (Ghent), Catalogue of bulbs and other flowering roots; 114 pages, *with an index!* an excellent idea.—This is one of the first bulb lists that has reached us, and very rich and complete it is. Buyers of bulbs should remember that their orders should be given in the month of August if they wish to be well supplied.

Miscellaneous.

Wonderful Caterpillars.—Oak trees in the French forests have been attacked this year by a strange disease. They are covered from the top branches to the roots with caterpillars, which form a coating some inches thick. In some localities the municipal authorities have published a notice forbidding children to enter the woods. These insects, at the approach of a human being, cover the face, neck, and body. Their sting has in many instances produced fever. *Paris Correspondent of the Times.*

The Caterpillar Changing his Coat.—For some time previous to changing his dress, even eating is nearly or quite suspended—the caterpillar becomes sluggish and shy, creeping away into some more secluded spot, and there remaining till his time of trouble is over. Various twitchings and contortions of the body now testify to the *mal-aise* of the creature in his old coat, which, though formed of a material capable of a moderate amount of stretching, soon becomes outgrown, and most uncomfortable tight-fitting, with such a quick-growing person inside it: so off it must come; but it being unprovided with buttons, there's the rub. However, with a great deal of fidgeting and shoulder-shrugging, he manages to tear his coat down the back, and lastly, by patient efforts, shuffles off the old rag; when, lo! underneath is a lustrous new garment, somewhat similar, but not exactly a copy of the last, for our beau has his peculiar dress for each epoch of his life—the most splendid being often reserved for the last. This change of dress ("moulting," it is sometimes called) is repeated thrice at least in the creature's life, but more generally five or six times. Not only does the outer husk come off at these times, but, wonderful to relate! the lining membrane of all the digestive passages, and of the larger breathing tubes, is cast off and renewed also. *British Butterflies, by W. S. Coleman.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Attention must now be paid to late growing plants in borders; for while in active growth they require a good deal of water, and insects are more troublesome than in the case of plants at rest. Give Luculias especially plenty of water at the root, and an occasional supply of clear weak manure-water to old plants that may not be growing freely until they have made sufficient wood to ensure a good display of flower. As has been previously stated, however, manure water must not be given to young specimens in vigorous health, as in that case it would only induce too gross a growth, a condition in which they seldom flower profusely. In order to secure fine heads of bloom from this plant it should be allowed a few weeks of comparative rest, after, say about the middle of next month, keeping the roots rather dry, and exposing the plants as freely to air as can be done without injury to the foliage or the health of their neighbours. Brugmansia sanguinea is also a useful plant for winter and early spring flowering when managed so as to have it pruned, rested, and started into growth about this time. See that large specimens of Camellias are not allowed to get too dry at the root after they have set their buds, for shedding of the latter is often due to this cause. Young and vigorous plants however frequently require to be watered rather sparingly at this period to prevent their making a second growth. Cinerarias for early flowering should now be growing freely, and should be shifted when necessary, for if they are to form large specimens for flowering in winter they must not be permitted to sustain any check. Remove suckers whenever they can be obtained, and pot them for spring flowering. Calceolarias will now be beginning to demand attention. Get cuttings of favourite sorts rooted. Seed may also now be sown in pans placed on a gentle hot-bed.

FORCING DEPARTMENT.

PINERIES.—Those who intend commencing the culture of Pines on the open bed system cannot begin at a more favourable season than the present. The bed should be from 18 inches to 2 feet deep, and should consist principally of good rich mellow turfy loam, well broken up and carefully intermixed with a liberal sprinkling of clean sand, and a small proportion of leaf soil or good rich fibry peat; for when rough turfy soil is used, and the bed is ever from any cause allowed to get thoroughly dry, it is very difficult to moisten it again, as the water passes off through the lumps without penetrating them. But if the loam is well broken up and mixed with some leaf soil, or peat and sand, it will be found to take water freely enough, and the roots will be almost as much under command as when the plants are grown in pots. Persons commencing this method of growing Pines should also endeavour to avoid planting pot-bound plants, as these, whether young or old, seldom strike freely into the fresh soil, and are very apt to fruit prematurely; but if such plants must be turned out, then care should be used to make the soil firm about the balls, so as to prevent the water passing off without moistening the balls.

VINERIES.—Every possible attention must be afforded young Vines planted this spring where strong rods are expected. Let a vigorous root action be secured, and endeavour to get the wood well ripened. Give air freely and early on fine days, so as to avoid any risk of scorching the foliage, but shut up early in the afternoon, sprinkling the floors, &c., so as to cause a genial moisture in the atmosphere, which will be of great service in strengthening the Vines. If plants are grown in the house, see that they are not infested with black thrips, and on no account be induced to regulate the temperature, &c., of the house for the plants, but remove these to other quarters, or make them succumb to the treatment most suitable for the Vines. Keep a sharp look-out for the appearance of red spider in houses where the fruit is ripening, and coat the pipes or flues with sulphur on the first appearance of this enemy. Indeed it is well to do this occasionally by way of a preventive, which, in this case as in most others, is vastly preferable to a cure. Vines in pots intended for early forcing will now require attention.

FLOWER GARDEN AND SHRUBBERIES.

Propagation of stock for next season must soon be commenced and carried on with expedition so as to secure strong well established plants before winter and without the necessity of keeping them so close or warm as to induce weakly and watery growth. It cannot be too often repeated that to be able to winter bedding stock safely with ordinary care, the cuttings should be put in sufficiently early in the autumn to allow of having them well established and fit to be exposed to the open air by the middle of September. Begin with such as are found to be the most tedious to propagate and prepare for winter. Hollyhocks are general favourites, but they do not afford cuttings freely, and are in general not over plentiful about most places. These should therefore be examined often in search of any cuttings which they may afford, as those rooted about this time will make strong plants for next season. Attend to the tying up of these and Dahlias, and go over the masses of Verbenas, &c., frequently for the purpose of regulating the growth, so as to keep it orderly and neat.

HARDY FRUIT AND KITCHEN GARDEN.

Winter Onions may soon be sown; also Cauliflowers for the early crop next season, a small bed of pickling Cabbage, Brown Cos, and some hardier sorts of Lettuce to stand the winter. The tops of the early crops of Onions had better be laid down if they are inclined to be too rank, going over the bed with a wooden-headed rake and pressing the tops down sufficiently to check further growth. Plant out a good breadth of Endive on well enriched soil of a light dry nature. Also see to providing a good supply of Lettuce for autumn use. Attend to Celery, keeping it well supplied with water in dry weather, giving it as much manure water as can be spared for it, and keep the early crop rather closely earthed up. Vacant ground, or that which can be cleared of early crops, may be still planted with winter greens, first giving it a good dressing of manure and a good deep digging. Stir the surface of the soil among growing crops. This has a highly beneficial effect. Cut Box, and keep every corner clean and neat.

COTTAGERS' GARDEN.

Let Scarlet Runners be topped once more, if not already done. A few Cabbage plants got in now will be found useful. Green Kale may still be got in where blanks exist, and a few Dutch Turnips might yet be sown; also a little of the Bath Cos Lettuce, some American Cress, and a few Turnip Radishes.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending July 26, 1860, as observed at the Horticultural Gardens

July.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 20	2	29.819	29.779	72	47	59.5	61½	59½	S.W.	.10
Satur. 21	3	29.746	29.577	70	47	58.5	61½	59½	S.	.26
Sunday 22	4	29.771	29.601	70	42	56.0	62½	59½	N.W.	.17
Mon. 23	5	29.801	29.603	62	42	52.0	61	60	S.W	.56
Tues. 24	6	29.854	29.525	64	39	51.5	61	59	N.W.	.01
Wed. 25	7	29.963	29.914	65	34	49.5	60½	58½	N.W.	.00
Thurs. 26	8	29.969	29.818	66	42	54.0	60	58½	N.W.	.00
Average..		29.846	29.688	67.0	41.8	54.4	61.3	59.2		1.10

July 20—Overcast; very fine; showery at night.
— 21—Rain; heavy rain in forenoon; densely overcast.
— 22—Low clouds; showery; thunder and lightning; very clear at night.
— 23—Overcast; constant heavy cold rain; fine.
— 24—Cloudy; showers; cloudy; clear and cold.
— 25—Clear; very fine; clear and very cold at night.
— 26—Clear; fine; cloudy; very clear at night, and cold.
Mean temperature of the week, 8¾ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Aug. 4, 1860.

July and August.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 29..	75.5	50.9	63.2	14	1.31 in.	2	4	4	1	3	12	5	3
Mon. 30	74.8	51.5	63.1	17	0.88	3	3	3	1	2	9	9	4
Tues. 31..	75.1	51.0	63.1	13	0.66	2	4	2	1	4	11	8	2
Wed. 1..	76.0	51.3	63.7	16	1.23	1	3	6	2	3	11	7	1
Thurs. 2..	75.9	52.6	64.3	15	1.03	1	4	3	—	7	11	5	3
Friday 3..	74.9	51.4	63.2	17	0.50	3	4	3	2	4	13	4	1
Satur. 4..	75.7	51.7	63.7	16	0.84	2	3	4	3	3	14	4	1

The highest temperature during the above period occurred on the 1st, 1846, and 2d, 1856—therm. 92 deg.; and the lowest on the 28th, 1838—therm. 33 deg.

Notices to Correspondents.

DISEASED HAWTHORN: *C W S.* It is infested by Æcidium laceratum. See p. 652.

DRY-ROT FUNGUS: *F S P.* What you have sent is a fine specimen of the real dry rot in the Xylostromoid state. Seasoned wood is little affected by dry rot if the water does not obtain access, which accounts for the superior efficacy of felt when dry. Felt certainly seems to prevent in some measure the spreading of the evil. Probably Gutta Percha will be better than felt, tarred paper, or any other substance. *M J B.*

EDUCATION OF GARDENERS: *J D U.* Enough has been said on this subject. Money taken from young men furtively without the sanction of the master is one thing, but taken in return for instruction imparted, and with the permission of the master, is quite another matter. We insert elsewhere a note from a known correspondent on the subject, but there the matter must drop. We have no right to stigmatise individuals for adopting a vicious system; which, after all, does not bear much upon the question of education. It is upon that point only that we want to elicit the wishes and opinions of those who are competent to express them, and none are so competent as gardeners themselves. When we find the subject sufficiently ventilated, we shall take the liberty of offering our own opinion on this important matter.

EVERLASTINGS: *J W.* Why would you spoil their beauty by the silly practice of dyeing them? If you must do so use a strong solution of hot sulphate of iron for green, and hot red ink of the best quality for red. The specimens must remain in the liquid till they are soaked through.

INVESTMENTS: *A very old Surrey Subscriber* is advised to invest his hard-earned money in a Government annuity which, at his time of life, will afford him a competence for the remainder of his days. Any country banker will order the purchase to be made for him.

LEAVES: *T G.* Whether the leaf sent us is suffering from an insect or a Fungus we are unable to say. Probably neither.

LEMON SEEDS: *F J.* There is nothing uncommon in the pips (not pippins) or seeds of the Lemon germinating in the pulp that surrounds them. They will grow there as well as in any other place when the time has arrived and conditions are favourable. In the wild state this must be a very common occurrence.

MUSA CAVENDISHI: *Northampton.* It is admissible as a stove or greenhouse plant for exhibition, it being a tropical fruit.

NAMES OF FRUITS: *U C.* Your Apple No. 1 is the Easter Pippin or French Crab; the other, too much decayed, is not known. ‖

NAMES OF PLANTS: *R H.* 1, some Acacia; specimen not sufficient for naming; it looks like the A. Julibrissin; 2, Gesnera tubiflora; 3, Tamus communis.—*W W S.* A miserable specimen of some Festuca not in a state for determination.—*T P.* Prunus Padus, the common Bird Cherry.—*P F.* Cratægus orientalis. Double Eschscholtzia flowers are not at all uncommon.—*H M B.* Epilobium montanum.—*J H M.* Your Cypress is no doubt C. Uhdeana.—*A B.* It is a monster with the calyx changed into leaves.—*G D.* We decline all inquiries about the names of mere leaves. Plants sent for name must be in proper condition.—*Perseverer.* 1, Buddlea globosa; 2, Lythrum salicaria; 3, Pedicularis palustris; 4, Lychnis Flos Cuculi. Pray look at the notice constantly given, in which it is stated that not more than four plants for names should be furnished at one time. You have sent thirteen!—*W E.* Brachypodium pinnatum.—*J W G.* Lastrea dilatata.

NEW FLORISTS' FLOWERS, NEW FRUITS, NEW ESCULENTS. We must request the raisers to send their specimens to the Committees of the Horticultural Society. Perfectly competent and trustworthy tribunals are now provided by the Society, before which all raisers of novelties should go and receive judgment. *J J & W J Pike* will be so good as receive this memorandum as an answer to their communications.

PLANTS FROM CENTRAL INDIA: *B A M.* All from such a country require the warmth of a stove. We know nothing of their names.

PORTLANDIAS: *Cultivator.* We do not find any figure of Portlandia coccinea; and Portlandia rosea we know nothing about.

STRAWBERRIES: *F G.* We are unable to say "when, where, and by whom" Trollope's Victoria was raised. ‡

THE SPRING ROSE OF SHANGHAE: *C S T.* This may be procured through Fellows of the Horticultural Society.

VINES: *W G., Limerick.* Cold at roots no doubt. A full reply next week.

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11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 .. 11	2ds.	18s.	2¼
12 .. 9	12½ .. 10½	14½ .. 10½	13 .. 11		1sts.	21s. 6d.	2¾
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16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16s.	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19s. 8d.	2½
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Such as Iron, Wood, Stone, Brick, Compo, Cement, &c., and has been proved, after a practical test of 70 years, to surpass any other Paint; *and being peculiarly adapted for Conservatories, Hothouses, and Frames of all descriptions, is constantly used by Noblemen, Gentlemen, as also many eminent Horticulturists, for such purposes.* It is much lower in price, and lasts twice as long as the best White Lead, and can be easily applied by any Labourer, being sent in various Colours, requiring simply to be mixed (no grinding is needed). The Anti-Corrosion is a powder, and will keep any length of time.

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THE MARKETS' IMPROVEMENT COMMITTEE will meet at Guildhall on TUESDAY, July 31, at 1 o'clock precisely, to receive TENDERS from parties willing to TAKE AWAY the MANURE and SOIL from the Market Place at the Metropolitan Cattle Market, and to sweep and cleanse the roadways and footways therein and surrounding the same; and also to Purchase the Manure made in the layers at the said Market for a period of one year.—Conditions may be seen and further particulars obtained by applying personally at the Architect's Office, Guildhall, E.C. The Committee do not bind themselves to accept any tender. WOODTHORPE.

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YORKSHIRE AGRICULTURAL SOCIETY.—PONTEFRACT MEETING, AUGUST 1 and 2.

PROGRAMME:—

TUESDAY, JULY 31.—Trial of STEAM PLOUGHS, REAPERS, and MOWERS in the Field.
WEDNESDAY, AUG. 1.—IMPLEMENT and CATTLE YARD, open at 10 o'clock, A.M. Admission 2s. 6d.
THURSDAY, AUG. 2.—GREAT SHOW DAY. Admission 1s.
For cheap Trains see Railway Bills.

By Order,
JOHN HANNAM, Sec.

The Agricultural Gazette.

SATURDAY, JULY 28, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

TUESDAY, Aug. 1 } Highland Society at Dumfries.
WEDNESDAY, — 2 }
THURSDAY, — 3 } Yorkshire Society at Pontefract.

—— THE sale of Short-horns at Kingsfort, county Meath, on Wednesday the 18th of July, has been another remarkable tribute to the value of the breed, and to the estimation in which the "BOOTH" strain is held! Mr. CHALLONER'S herd, consisting of 16 cows, 7 heifer calves, and 18 yearling, two-year-old, and three-year-old heifers, together with 8 bulls and bull calves, were sold on that day by Mr. STRAFFORD, and realised 4147*l.* 10*s.*, or rather more than 80 guineas each.

Among them, if indeed every animal was really parted with, were the following extraordinary figures:—Miss Warlaby, eight-year-old, bought by Mr. WALDO for 372*l.* 15*s.*; Bonny Lass, six-year-old; and Bon Bon 3d, two-year-old, bought by Mr. MALONE for 300 and 270 guineas respectively. Sheet Anchor, also a 15-months-old bull, was bought by Mr. J. P. TYNTE for 330 guineas. The following is a tabular statement of the results of the sale:—

	Realised.	Averaged.
16 cows	£1621 4	£101 6
7 heifers	678 6	96 18
11 yearling heifers	690 18	62 16
7 heifer calves	541 16	77 8
3 bulls	455 14	151 18
5 bull calves	159 12	31 18

May Queen, a calf two months old, from Miss Warlaby, named above, was purchased by Mr. BARNES for 200 guineas.

The following notes on the sale are from the *Irish Farmers' Gazette*:—"Throughout the entire catalogue the greater the number of "BOOTH" crosses which the pedigrees exhibited, by so much was the respective values of the animals enhanced. This was shown especially in the case of Miss Warlaby, her yearling son Sheet Anchor, and her nine-weeks'-old calf May Queen; the prices paid for the three amounting to 929*l.* 5*s.*; although Miss Warlaby completed on the day of sale her eighth year. High as those prices may appear to some, we consider them as being still under the value of the animals, and certainly either Miss Warlaby or Sheet Anchor would have been a decided bargain, to those who understand what to do with such first-raters, even if another 100 guineas had been added to each of their respective prices. Warlaby itself cannot turn out purer BOOTH, and with 250*l.* as the annual hire of a Warlaby bull, 346*l.* 10*s.* as the price of a yearling bull of RICHARD BOOTH's unsullied and best blood cannot be considered as its real value. As for May Queen, Mr. BARNES was bound to have her, cost what she might. He bred her dam Miss Warlaby, and she belongs to a tribe which has been and is the glory of Westland. May Queen has, therefore, only gone home, and we are glad that Mr. BARNES was allowed to get her at the money—a fact we scarcely expected until the actual moment where the last run sands in Mr. STRAFFORD's glass decided the matter.

"It is satisfactory to find that the principal lots, and by far the largest proportion of the Kingsfort Short-horns, have been secured by Irish breeders. *We don't grudge our friends some of our good things; but really in such a case as this it is of the utmost consequence to the future prosperity of Short-horn breeding in Ireland that the herd should be retained as much as possible in the country.*

DURING the past and present months there have been held in the South of England two of those monster agricultural meetings which are at once the illustration and the stimulant of our Agricultural Progress. These meetings were remarkable, not more for the vast assemblage of costly machinery and valuable stock thus congregated, than by the fact that all these results have been accomplished by the unaided efforts of those interested in the culture of the soil. Without government assistance or legislative enactments or pecuniary grants, a large sum was annually expended in prizes, and a still larger in the expenses of collecting and exhibiting so vast a display. It is the self-supporting character of our institutions which makes us so justly proud of them. The kindred exhibitions of many other countries owe their success to the assistance of their governments, and if the props by which they are supported are removed they fall a dead body to the ground. Ours, on the other hand, planted firmly in the hearts and feelings of agriculturists, and upheld by thousands of staunch supporters, possess a vitality which no local injury or temporary disaster can destroy or seriously injure. Thus, the late meeting of the Bath and West of England Society at Dorchester, although the elements seemed in array against it, both by deluge and by hurricane, was yet in spite of difficulties regarded a success; and that at Canterbury, though in many particulars deficient, was in others unprecedentedly good.

Having been present at both of these meetings it may serve some good purpose to contrast them and indicate their points of difference and resemblance. The tempestuous weather of the Dorchester Show was rendered still more detrimental by the low position of the spot on which the meeting was held. The Canterbury meeting on the other hand was held on a most convenient and well chosen spot, and was blessed with weather dry and cool, which during the history of the Society has never yet been exceeded. Dismissing however those circumstances over which we have no control, let us endeavour to compare the two meetings fairly. To begin with the stock, we may easily imagine that from the much greater amount of the prizes, and the larger field embraced by its operations, but particularly from the former cause, the show of stock at Canterbury was considerably the better of the two. The Short-horns, good at Dorchester, were even excelled at Canterbury; in fact there probably never was a better show of Short-horns in the world than was lately brought together in Kent, and perhaps never better animals exhibited than Royal Butterfly, Queen Mab, and the Duchesses. The Devons and the Herefords were as good at the Bath as at the National Show. In sheep, the Leicesters, the Southdowns, and the Shropshires were considerably better at the latter meeting, whilst as regards the Cotswold and the other short-wools the difference was not so great. The Romney Marsh sheep were numerous at the late show, but were inferior to the Devon-Notts of the West and much inferior to the Improved Cotswold, from which we recommend a cross to be obtained with all convenient speed. The pigs were better and more numerous at the Canterbury Show, and with one exception this was also the case with the horses. In the latter classes the agricultural stallions form one of the most attractive as well as the most important objects of the exhibition, and this class, except for two-year-old colts, is altogether omitted at the meetings of the Bath and West of England. We strongly recommend this evil to be remedied at the next year's meeting. The exception we have alluded to is that of the ponies, which although not so good at Dorchester as at Barnstaple or Cardiff, were yet a considerably better class there than at Canterbury. Indeed the latter with regard to numbers were altogether a failure. The horse classes, although on the whole much superior to those of the Dorchester meeting, were yet very far below those shown at Warwick, Chester, Chelmsford, or Salisbury. There was no show of poultry at Canterbury, whilst at Dorchester there was one of the best exhibitions ever seen.

Out of the yard the mowers and reapers were better displayed and were more successful at Canterbury, to which result the weather no doubt materially contributed, whilst the steam ploughing was executed on a much larger scale, and was perhaps on the whole one of the most successful features of the late meeting, notwithstanding the absence of HOWARDS' SMITH's apparatus, which did its work so well at Dorchester, where the soil of the surrounding district was not so favourable for its advantageous display as in Kent.

We have mentioned the various points of superiority which the Royal Agricultural meeting possessed, but what was there throughout the large amount of shedding at Canterbury that could at all compare with the noble display of implements at Dorchester? What was there to compare with that noble line of steam machinery which greeted the eye at Dorchester on first entering the yard, and described by one of the speakers as "drawn up in battle array; prepared, however, to execute their mighty powers in the interest of peace—whose mission was not to thrash our enemies but to thresh our corn and prepare our daily food?" Nothing at Canterbury could compensate for the paucity or the absence of such a display, nor for the void created by the temporary secession of the well-known firms who have occupied such a leading position in the agricultural world during the last quarter of a century. It is true the Society may say, "They have grown with our growth and strengthened with our strength;" but it should not be forgotten they have become part and parcel of British agriculture.

Amongst the many attractive features of the Dorchester Show may be mentioned the very successful display in the Arts Department, the unrivalled splendour of the show of flowers, and the assistance of a military band, which no doubt attracted many that would not otherwise have paid their entrance fees. Amongst its novelties may be mentioned the prizes bestowed for the shoeing of horses. It should also not be forgotten that there are various privileges afforded to members of this Society—a wise and proselytising policy which the Royal Agricultural Society altogether ignore.

We must not forget to mention the extraordinary ploughing matches which the Kentish Show produced, and the mighty weapons used in the friendly contest. We have already ventured to recommend a cross for the Kentish sheep, and we are also bold enough to advise a still stronger cross for the Kentish plough. Suffolk or Bedford will no doubt be most happy to afford some suitable types for the purpose.

The arrangements with regard to refreshments were very good at both shows, but particularly so at Canterbury. The large dinner, however, was far more spirited at Dorchester than at Canterbury. Both Societies were fortunate in having energetic directors of the yard. If that of Canterbury, backed by the long sway and the strong purse of the wealthier Society, is like the master of 20 legions, somewhat despotic and exclusive, that of Dorchester, GARIBALDI-like, knows how to apply the resources at its command to the utmost advantage, and is supported by a band of willing hearts with whom it is at once a pleasure and advantage to co-operate. It is to this friendly feeling and active though voluntary effort that much of the success of the Bath and West of England Society is due; and we think if the Royal Agricultural Society of England were to enlist more energetically in its behalf the sympathies of its members generally, a still greater amount of success would attend its career.

SCAB IN SHEEP.

I WOULD wish to bring under your notice some communications I have received on another disease of sheep, viz., the scab, which shows the effects of ignorance and prejudice to a great extent both in England and also in Iceland. In October last, I received a letter and some other papers from Mr. Lambert, of Manchester, father of three of my pupils, giving me an account of a curious case which had taken place at Lincoln. "A lot of 29 sheep were sent to the market, nine of them were bad ones, some of them scabbed, the other 20 very clean, and 48*s.* per head was refused for them. The policeman took the nine from the man having charge of them in the market. The person in charge immediately started for home with the 20 sound ones. When he had gone a distance on the road, the constable overtook him on the highway, and seizing the 20 sheep, for which 48*l.* had been refused, they were all destroyed. The owner, Mr. Copland, was fined 20*l.* and could get no redress." He was summoned before three of the magistrates of Lincoln, and condemned under the Act for the prevention of the spread of the sheep-pox (variola ovina) in 1848, but which was not intended to apply to scabbed sheep. The only Act which has ever been passed respecting the scab in sheep is the 38th George III., cap. 65, which does not prevent, and was never intended to prevent, the sale of scabbed sheep, but merely attaches penalties to knowingly and wilfully stocking commons, and other open and unenclosed places, with scabbed sheep, and so spreading the disease. Mr. Copland consulted Professor Symonds as to the non-identity of the scab and small-pox in sheep, and the following is his opinion in answer to the questions put to him:—

1. Do you happen to know whether it was intended by the legislature that the Act in question (11 and 12 Vict., cap. 107) should or should not extend to sheep affected with the scab?

Ans. The Act was not intended to apply to any disease save and except the small-pox in sheep. In the passing of the Act, the words, "or any disorder of the like nature," "oxen, bulls, cows, calves," "either of such disorders as aforesaid," &c., &c., were omitted to be struck through. Small-pox is a disease specially belonging to sheep, and not affecting other animals. Small-pox ceased entirely in England about three years after the passing of the Act, and it has had no existence in this country since that time.

2. Is the scab in sheep "a disorder of the like nature" with the disorder known or described as the sheep-pox, or the variola ovina, mentioned in the act? and if not, in what respect and to what extent does it differ?

Ans. Scab in sheep is not of the like nature as the sheep-pox, nor does it bear any resemblance to that disease; it is a disease which depends upon the presence of acari or mites on the skin, is entirely local, and, although it produces loss of condition in the animal affected, does not otherwise deteriorate the quality of the flesh; scab sheep are, consequently, fit for food. Small-pox is a constitutional disease highly infectious, very destructive to life, and renders the flesh of the animal unfit for food.—(With reference to the symptoms, both constitutional and local, of the sheep-pox, see Symonds On Variola Ovina.)

3. Is not the scab frequently met with in sheep, and does it not admit of a perfect and ready cure?

Ans. Scab is a disease of frequent occurrence among sheep. Animals having been badly kept, and exposed to wet and changeable weather, particularly if long-woolled sheep, are thereby rendered more susceptible of the infection; its communication from one animal to another depends upon the acari travelling from sheep to sheep. It admits both of a perfect and ready cure; the longer the disease has existed, the more difficult it is to eradicate.

4. Are sheep slightly affected with scab considered unfit for food?—(See replies to second question).

Professor Symonds further remarks, as follows:—

Had small-pox existed in this country, and supposing the animals in question to have been affected therewith, then the order by the magistrates for their destruction being accompanied by a power to dispose of the skins, would have been an effectual means of extending the disease to other sheep—the virus of that disease being located in the skin. No two diseases affecting the same animal can differ more from each other than scab and small-pox, and never was it intended by the legislature that the Act should apply to any other disease save and except the small-pox, or diseases of the like nature, supposing they had existence; there are none, in fact.

The opinion of counsel was taken, and it proved to be so much in favour of the Act of 1848 including within

its provisions scabbed sheep, that Mr. Copland is left without a remedy for the injury done him. It is clear from what Mr. Symonds says, that the legislature did not intend to include scab. It therefore appears to me that the Society ought to look into this Act and get it amended, otherwise it may happen that some other parties may have sheep seized and destroyed in far greater numbers on some future occasion; and as I agree with Mr. Symonds that the flesh is not injured by scab farther than that the sheep are prevented from thriving, owing to the irritation it produces, and as the disease can readily be cured, such wholesale destruction ought not to take place. If ignorance, prejudice, and fanaticism were allowed to proceed, as has been the case in Iceland, wholesale, we might soon have our hill-stocks thinned, and our supply of mutton materially abridged. I may here give you an account of what took place nearly two years ago in Iceland, from communications I have had from R. M. Smith, Esq., regarding this disease, during 1857-8:—

A disease had existed among the sheep throughout that country for some years, caused very probably by pasturing too many on the scanty herbage, increased, no doubt, by the long winter of 1856-7, and the want thereby of sufficient food; but the wise men of Iceland thought otherwise, being of opinion that it was a disease imported into the island, not only incurable, but so contagious that when any disease was found in a flock, the whole must of necessity become diseased.

At a meeting of the Althing, or parliament, held every two years at Reykjavik, the capital, in June 1857, there being 25 representatives present, it was moved by one of the members, and put to the assembly—that wherever throughout the country the disease showed itself among the sheep, the whole flock should be shot down. After several days of hot debate, this extraordinary proposition was carried by a majority of 21 to 4. In vain the minority protested, and the governor, the inspector of physicians, and one or two others, desired that the usual appeal should be made to the King of Denmark, maintaining that the disease was curable. It was ruled that this was a matter for home legislation and immediate action, and therefore the order for extermination was given. The Sub-Governor of the North, fired with zeal for the cause, had already commenced the work of destruction. The Sub-Governor of the West, only a little less tardy, willingly lent his aid; and even in the south and east of the island, the people, by a mad infatuation, joined in the crusade, and a number, estimated by some at not less than 40,000, and by others even at 60,000, were destroyed. The result of numerous inquiries as to the number of actually diseased sheep among the number thus shot down gives an estimate not exceeding 9000 to 10,000.

The number of sheep in Iceland, calculated from the returns of a small tax levied on the proprietors, is 400,000; but the number is supposed to be somewhat larger.

The number of inhabitants is about 70,000.

The nature of the disease having been fully explained to you by the veterinary doctors who were sent out from Copenhagen by the Government early this year, I need say nothing on that subject. I met these gentlemen in different parts of Iceland, labouring to overcome the mad frenzy of the people, by getting them under their directions to cure the sheep. In this they have succeeded to a great extent.

From the physician inspector at Reykjavik, I have just received a letter, in which he says—"The sickness amongst the sheep has lessened very much, and the cured sheep are stronger than before. I have, therefore, won my battle. The Veterinary Council at Copenhagen has declared that I was quite right, and that the governors of the north and west of Iceland were quite wrong."

It is an open question whether, by curing the disease, and keeping the same number of sheep on the scanty pasture, or by killing sound and diseased alike, and thus reducing the number, the disease would have been more permanently eradicated, and one for you to determine. There can be no doubt of this, that the number might have been reduced with gain, not loss, to the country. Take the 40,000 sheep destroyed, and left necessarily where they fell, at 2*s.* 6*d.* a head, is 5000*l.*; or 30,000 apparently sound sheep at 5*s.* a head, or 7500*l.* which is a low estimate of the value, as freight could be had to Scotland for 3*s.* to 5*s.*, the latter by steamer, including hay.—Yours truly, R. M. Smith, January 5th, 1859.

From the conversation I had with two veterinary doctors who visited me, after arriving at Leith on their route back to Denmark, I learnt that the disease with which the sheep had been affected was the scab, and that they found it curable by the ordinary remedies. It is very probable, as Mr. Smith suggests, that the remote cause of the disease was weakness from the want of proper nourishment. At the same time, there is no doubt it is contagious, as it depends on acari, which readily escape from one sheep to another; but these are readily destroyed by the ordinary and well-known dressings, and a cure effected; hence the absurdity of such wholesale destruction.—*Professor Dick, in Transactions of Highland and Agricultural Society.*

Home Correspondence.

Agricultural Botany.—Can any of your correspondents (Gloucestershire men would, I think, be most likely) inform me what are the true botanical names of the weeds known in that county as Woodwax, Moon, Fire-leaves? The writer of an essay which is printed in the Journal of the R. A. Society, vol. V. pp. 429—443, encloses "a few specimens of different plants with the names attached, at least the names by which we know them in the country." The R. A. S. prints these names in their Journal; what they have done with the specimens does not appear. Had they sent them to you I have no doubt you would have kindly given them the correct names, which they might have printed in their Journal, and spared me the trouble of endeavouring (perhaps in vain) to understand, at this distance of time, what Mr. Arkell meant. [If the secretary had been fit for his office he would have known the names of common weeds without our assistance.] The Society has now, besides its secretary, a paid editor of its Journal, a consulting chemist, a veterinary inspector, and a consulting engineer; there ought to be a consulting botanist. The charter of the Society defines some of its objects to be: "Fourth, to encourage men of science in their attention to the eradication of weeds; fifth, to promote the discovery of new varieties of grain and other vegetables useful to man or for the food of domestic animals; sixth, to collect information with regard to the management of woods, plantations, and fences." The date of the charter is March 26, 1840, and the Society therefore has been for upwards of 20 years professedly engaged in the promotion of the above objects; let her now retain the services of one of our leading botanists (the hope that she was about to place Henfrey in that position was cut short by his early death); and when once it is understood by the members that the importance of the botany of agriculture is duly estimated by the Council, and that questions referring thereto will receive fair and proper consideration, there will be no lack of opportunities for the interchange of ideas between the practical and the scientific to the advantage of both. *Publicola.*

Breton Cows.—As much interest is taken in the Bretonne cows imported by Messrs. Baker, of Chelsea, and some correspondents of the *Agricultural Gazette* have recently referred to them, will you permit me to say a few words on the subject? I have endeavoured to get at the truth regarding these miniature cows, and have just obtained one. It stands 3 feet high, will calve shortly, and promises to have a "bag" of milk nearly, if not quite, equal to an Alderney. She is two years only. My man speaks of her most highly as a promising cow, and two several dairymen close at hand have pronounced judgment upon her to the effect that she is a perfect little wonder and will be likely to give 8 quarts of milk a day with her first calf. I shall be satisfied and gratified with less, as these animals are just suited for gentlemen's families. They are of diminutive size, hardy, and little eaters, and furnish pure milk for a family's consumption. Before I decided upon having one, I put very searching interrogations to Messrs. Baker, who I must say did not over-colour their statements, and furnished me with the perusal of many letters from purchasers, one of whom writes that his Bretonne cows give with their first calf 4 to 5 lbs. of butter per week; another is so pleased that he has got rid of his Alderneys and has taken to the Bretonne cows; while a third says, "I find them as good, if not better, than the Alderney;" while a fourth observes that his give great quantities of excellent milk, and "if you want to recommend them send your friends here and see specimens." Judging from the little that my cow consumes, the expense of keeping one even with hay at the present price is very trifling. Nothing can surpass the gentleness and docility of mine. I am glad to find that one of your correspondents purposes crossing a Bretonne cow with an Alderney bull. They are no doubt allied. "Answerer" speaks in high praise of the Kerry breed, but surely he outrageously exaggerates when he says, "I have known one not much taller than a goat give 24 quarts of milk a day." The very best goats will give 3 quarts of milk per day, and these are not the English breed. *A Suburbanite.*

Guano to Potatoes.—I should feel obliged if you or any correspondent could inform me what is the largest quantity of Peruvian guano, supposing it to be pure and good, that could be applied per acre to Potatoes with advantage, or perhaps I should rather say without hurting them. I ask this question because in my Potato crop this year all the patches that were dressed with guano appear to be failing. They looked well up to about a fortnight ago; as soon as the dry weather came they began to droop, and now appear to have given up growth altogether. The neighbouring patches intermixed that had no guano appear strong and in full health. I ordered it to be applied at the time of planting at the rate of about 3 cwt. per acre. I find that by mistake my labourer applied considerably more, not exceeding however 5 or 6 cwt. The soil is a gravelly clay, well drained and trenched; it was a wet meadow, but now dry and very fairly productive. Would 6 cwt. of guano damage a crop on such land under ordinary conditions? Would the damage not show itself till so late, and then so suddenly? Again, would not the extraordinary wet season admit of a greater quantity of guano passing harmless into the soil than would a dry one such as that of last year? My gardener can think of no other reason for the failure than the superabundance of this manure, and I shall be thankful for any opinion from you on the subject for my own guidance and that of others. *A Subscriber, Newbury.* [See notice last week.—Perhaps "S." of Invernes may be able to give experience on this subject.]

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

At a Weekly Council held on the 25th July, Mr. Thos. Raymond Barker, V.P., in the chair,

The names of candidates for admission were read.

Prize Essays.—The following awards were announced from the Judges of Essays:—

I. Philip Debell Tuckett, 25, Gresham Street, E.C., the prize of 20*l.* for the best Report on the Modifications of the Four-course Rotation which modern improvements have rendered advisable.

II. Professor Tanner, Queen's College, Birmingham, for an approved Essay on the best period of the Rotation, and the best time of year for applying the Manure of the Farm.

In Class III, the essays are not considered worthy of the prize.

The Council then adjourned to its Monthly Meeting on the 1st August.

ROYAL IRISH AGRICULTURAL.

The anniversary meeting of the National Agricultural Society of Ireland has just been held in the fair city of Cork, the capital of the south of Ireland. The Show opened on Wednesday under the most favourable auspices and under the most favourable state of the atmosphere. Taken as a whole there has not been in Ireland a more successful or creditable show. It has brought out more perhaps than any previous Irish exhibition the peculiar elements of Irish agriculture. Held in the capital of the province in which there is a large body of intelligent tenant farmers, wealthy, intelligent, and active gentry, and a spirited and intelligent local committee, it presents, as it ought to present, those various features which we delight to see, which should be harmonised at all our national shows. We went to the Show with high expectations, and we are bound to say we have not been disappointed. In some respects the exhibition cannot boast of any eminent success; but viewed as a whole it has been successful. There might have been and ought to have been a larger entry of first-class animals. The entries of well-bred Short-horns, for instance, fell short of what the Society and the friends of agricultural progress had a right to expect. But it must be remembered that the Royal Dublin Society's Spring Show militates against the Royal National Show in Ireland. The Royal Dublin holds its Show always in the same place, the capital of the country and the starting point of her lines of railway; the season of the year is favourable to the stock owner, the farmer, and the implement manufacturer; and the consequence has been that a slightly interrupted success has crowned its exhibitions of late years. The Dublin thus has precedence in the order of time of the National. It often plucks the gems of the Irish exhibition animals. Purchases are more freely made than at the provincial gathering. It is, then, no great wonder that the collection of Short-horns at Cork should in number and quality fall infinitely short of the April muster on Leinster Lawn.

There are many redeeming features in the present Show, however, that make some amends for the drawback in the Short-horn classes. Thus the several sections appropriated to sheep are represented in a manner unusually creditable. The Leicester breed has been brought to a very high degree of excellence in Ireland. Mr. Owen, Mr. Thunder, and others have, year after year, brought forward admirable specimens; and this year as the reader will perceive in our prize list, others who have had an eye to business and to the progress going on around them, have stepped into the ring and deservedly carried off the principal prizes.

And so, again, the horses and sheep, though not very numerous, include very fine animals that bear creditable comparison with our own Royal Shows.

The section of the Show that has proved most successful however and most instructive to the tenant farmer of Ireland is the Implement department. It has been pretty well arranged, has been on an extensive scale, and though there is some of the repetition of the same implements on different "stands," yet it has proved a choice collection of useful farm machines and implements. In the Catalogue we were glad to find many of those leading men and leading firms who declined contributing to the Canterbury meeting. We have the rival ploughs of Howard and Hornsby, the rival hoes of Hornsby and Garrett; the steam engines of the great firms of Clayton, Shuttleworth, & Co., of Garrett, Ransome, Hornsby, Barrett, Exall & Andrews, of Turner, &c.; so that we have the leading implements of the leading makers.

We should have great pleasure in giving a somewhat detailed account of our examinations of those implements which in our opinion are best adapted to the circumstances of Irish farming, did space permit us. But we cannot indulge in such a duty; and must, therefore, content ourselves with a few cursory remarks on a few things.

In this Journal favourable mention was some years ago made of the ingenious contrivance of a working man—Alexander Macpherson, Carstairs, Lanarkshire—for making portable fencing for cattle and sheep. Macpherson's machine is exceedingly ingenious, and entitles him to the support of those who have occasion to buy such an article as he makes. The price of the machine he exhibited on this occasion is 30*l.*; at the time of our visit he was dexterously working with the assistance of a man to give it motion. He was making a sheep wire fence, with wooden cross or upright bars, at the rate of 40 yards per hour, every 100 yards having 400 cross bars. Of course metal can be substituted for wood in those cross bars. The mode in which several slender wires are coiled into one stout wove twist is no less ingenious and simple.

When first Mr. Macpherson tried his hand at this work he employed Flax or Hemp instead of wire; and a specimen of fence so made, that had been in use four years, afforded us proof that it is not as perishable as might be expected. The price of the wire we saw made is 6*d.* per lineal yard; and in the words of the manufacturer it "is composed of 5 lines of black wire, finely

twisted on sawn Larch uprights, 3 feet 4 inches long, about 1 inch square, but sawn diagonally."

In saddlery we noticed some commendable articles The farm harness of Mr. Dunlop, of Haddington, both for design and finish deserves a passing word. The pad of the saddle is so connected with the frame by means of a "ball and socket" that it so moves as to merit the appellation "self-adjusting." For this invention Mr. Dunlop has received several commendations from the Highland and Royal English Societies. We should be glad to have the experience of those who have tried it. The expanding collar is also interesting. The expansive principle consists of two joints, one at the base and the other at the top section; and the expansion is produced by sliding up or down (according as we want to cause contraction or expansion) the two arms that project upwards like the upper part of a hames. [Here we are compelled, for want of space, to cut short the remarks of our correspondent to make way for his condensed Prize List.]

SHORT-HORNS.

Section I. Bulls calved on or after January 1, 1855, and previous to January 1, 1858.—1st prize, 15*l.*, to W. Tod, Tranent, East Lothian, for Statesman, an animal of good quality, with some points deficient. 2d prize, 5*l.*, Richard Chute, Trala, Kerry, for Duke of Leinster, possessing a good outline, is deficient in hair. In this section we noticed Sir Colin, the property of Mr. Barcroft, with which the reader is familiar. On this occasion Sir Colin was in no wise complimented. Comet, a very fine bull belonging to Captain Bunbury, M.P., was also passed over without even commendation.

Section II. Bulls calved in 1858.—1st prize, 15*l.*, Lord Talbot de Malahide, for the fine bull Clydesdale, of whose success we wrote some time ago. 2d prize, Mr. Jackson, near Midleton, County Cork, for Narcissus, bred by Mr. Coppinger.

Section III. Bulls calved on and after January 1, 1859.—1st prize, 15*l.*, Mr. Coppinger, Carrigtwo Hill, for Soubador, which also wins for Mr. Coppinger the Gold Medal; the 2d prize, value 5*l.*, in this class, has also been awarded to Mr. Coppinger, for Little Wonder, which at the time of our inspection was too listless and exhausted to stand. In this section we noticed a large number of very inferior beasts, some of which are not true Short-horns.

Section IV. Cows of any age in Calf or in Milk.—1st prize, 10*l.*, R. Eastwood, Lancashire, for Rosette, the well-known prize-taking cow. This animal also gets the Purcell Challenge Cup. We have often written of her points. 2d prize, 5*l.*, J. Christy, Fort Union, Adare, for Queen Beauty the 2d, a good cow. Captain Ball was commended in this class for Fidelity, a very nice cow. Lord Waterford was highly commended for Queen of Trumps, an animal that reminds us of the late John Turner. Hopeful, also belonging to St. John Jeffrey, was also commended.

Section V. Heifers calved in 1857, in Calf or in Milk.—1st price, 10*l.*, Sir Edward Macdonnell, Louth, Co. Dublin, for The Twin, which has a wretched thigh, but is in other respects a good animal; 2d, Lord Carbery, Castle Freke, Co. Cork, for Magnolia, an average white heifer.

Section VI. Heifers in Calf or in Milk calved in 1858.—1st prize, 10*l.*, Lord Waterford, for Antonia; 2d prize, 5*l.*, fell also to the Marquis of Waterford, for Young Gaudy. Both have Guy Faux blood in their veins; and it is to be hoped that his lordship's success on this occasion will induce him to persevere in a course that has been so successful. In this section there were a few other very good animals, and one or two very indifferent ones.

Section VII. Heifers calved on or after January 1, 1859.—1st prize, 15*l.*, Captain Thomas Ball, for Recherche, got by Monk; 2d prize, 10*l.*, W. T. Crosbie, Tralee, for Golden Vein, got by Lamp of Lothian; 3d prize, R. Welsted, Co. Cork, for Chaplet, got by Orator; Captain Ball was highly commended in this class for Nightingale, got by Monk. We may mention that the gallant captain on this occasion gains the Waterford Cup, value 100*l.*, for the three best breeding horned animals. As on former occasions we find some little difficulty in comprehending the motives which induced the owners to send for exhibition some famished beasts that appeared in this class. The remaining cattle shown we pass over with a few remarks. They were under an average. The Ayrshires, for instance, were few and indifferent, and unworthy the race. In the Devon classes competition can be scarcely said to have existed. The Kerry breed made a better show. Young Rory, the 1st prize-taker and the property of Lord Charlemont, and Desmond, the property of the Commissioners of Education, to which the 2d place was awarded, are very fair representatives of this primitive race.

Is it not a reflection on Irish agriculturists when we say that in Herefords there was not a single animal? Lord Talbot de Malahide, as usual, brought forward his well selected polled Angus stock. A novel feature in the prize list of the Local Committee was the offering of prizes for Dutch cattle, a race of which there are a great many in the South of Ireland, and which prove excellent milkers.

The Horse show, as already hinted, was not a very large one; but it included select animals:—

Section I. Stallions of any breed for Agricultural Purposes—1st prize, 25*l.*, Lord Shannon, for a good Suffolk bred by Mr. Laws; 2d prize, Messrs. Moore, brothers, Cabury, Co. Dublin, for the well-known Sir William Wallace.

Section II. Stallions for Agricultural Purposes, foaled on or after January 1, 1857.—1st prize, J. Christy, Adare, for a Suffolk; 2d prize, Lord Shannon.

Section III. Draught Mare in Calf or in Foal.—1st prize, A. Smyth, Tipperary, for an English mare; 2d prize, Lord Shannon, for a Suffolk.

The Croker Challenge Cup, value 50*l.*, with 25*l.* offered by Local Committee, for the best weight-carrying thorough-bred Stallion, was awarded to A. Harris, for Planet, bred by the late George Bentick, and got by Bay Middleton.

LEICESTER SHEEP.

Section I. Shear Ram Class.—1st prize, 10*l.*, to Mr. Longfield, Cloyne, Co. Cork; 2d prize, to G. Thunder, Navan.

Section II. Rams of any age.—1st prize, 10*l.*, to W. Owen, Blissinton; 2d prize, 5*l.*, to T. Garde, Co. Cork; 3d prize, 3*l.*, Mr. Longfield, as above.

Section III. Pens of 5 Shearling Rams.—1st prize, 10*l.*, Mr. Longfield; 2d, 5*l.*, Mr. Thunder.

Section IV. Pens of 5 Ewes, not exceeding five years old, that have reared Lambs up to June 1, 1860.—1st prize, 10*l.*, Mr. Longfield; 2d, 5*l.*, representatives of the late J. H. Smyth Barry, Co. Cork.

Section V. Pens of 5 Ewe Lambs.—The prize was awarded to Mr. Longfield.

In the Long-woolled breeds, Mr. Thomas Beale Brown, as usual, carried off a number of prizes. Irish breeders would, however, seem to be giving him quick chase.

In Shropshire sheep, Mr. C. W. Hamilton occupied a leading place.

PIGS.—LARGE BREEDS.

Section I. Boars under 18 months.—1st prize, Lord Waterford; 2d prize, W. Joyce, Waterford.

Section II. Boars between 18 and 36 months.—1st prize, Lord Waterford; 2d prize, F. H. Broderick, Coachford.

Section III. Sows under 18 months.—1st prize, W. Fryer, as above; 2d prize, T. Blandford, Cork.

Section IV. Sows over 18 months.—1st prize, J. P. Tynte, Co. Wicklow; 2d prize, W. Joyce.

SMALL BREEDS.

Section V. Boars under 18 months.—1st prize, Commissioners of Education; 2d, W. H. Massy, Macurno.

Section VI. Boars between 18 and 36 months.—1st prize, Commissioners of Education.

Section VII.—No awards.

Section VIII. Sows over 18 months.—1st prize, Commissioners of Education.

NORTH LINCOLNSHIRE AGRICULTURAL: *Horncastle, Thursday, July* 26.—This flourishing county Society has held a most successful meeting. The weather has been cool and dry; the attractions both in implements and live stock, and among the latter, especially in Short-horn cattle and horses, have been ample, and there have been crowds of spectators. The previous day was wet, and some of the implement trials suffered accordingly. The mowing machines, Cranstoun's and Allens, both made inferior work; the latter, exhibited by Burgess & Key, was perhaps the better of the two, but no award has yet been made. The prize list for implements is a very long one, and the judges had a laborious task. The ploughing brought out considerable competition, the deep work being well done by Ransome's, Cooke's, and Hornsby's plough; we did not see Howards' in the field. The prizes were given to the work done by Hornsby's and Cooke's; the former being shown by Mr. Lyall.

The following is the prize list of implements:—

Portable Threshing Machine ..	£10	W. Foster, Lincoln
Plough for light land	3	T. Lyall
Second do.	1	Do.
Plough for heavy land	3	Do.
Second do.	1	J. Cooke, Lincolnshire
Subsoil Plough	2	E. H. Bentall, Weybridge
Cultivator	3	W. Barton, Boston
Second do.	1	W. Hunter
Stubble Parer	3	E H. Bentall
Second do.	1	M. Toynbee
Drill for general purposes ..	5	T. Lyall
Second do.	2	J. Coultass
Ridge Drill	2	J. Clarke
Second do.	1	T. Brooke
Liquid manure, do. ..	2	W. Watkinson
Second do.	1	Do.
Horse Hoe for Corn ..	2	J. Spight, Brigg
Horse Hoe for Turnips ..	1	W. Barton, Boston
Grubber	2	A. Thompson
Second do.	1	W. Ashton, Horncastle
Harrows (light land) ..	2	Amies & Barford, Peterborough
Second do.	1	W. Ashton
Harrows (heavy land) ..	2	W. Hunter
Second do.	2	E. H. Bentall
Chain Harrows	2	J. Woodroffe, Horncastle
Waggon	3	J. West
Second do.	1	T. Gell
2-horse Cart	2	T. Butters
1-horse Cart	2	J. Cooke, Lincoln
Clod Crusher	2	Amies & Barford
Roller	2	
Dressing Machines ..	3	Hy. Grantham
Second do.	1	Robt. Marshall
Corn Blower	2	Simpson & Co., Lincoln
Chaff-cutter	3	Ashby & Co., Stamford
Second do.	1	E. H. Bentall
Turnip-cutter	2	B. Samuelson
Cake Breaker	1	Amies and Barford
General Mill	3	Do.
Second do.	1	W. Barton
Steaming Apparatus ..	3	Amies & Barford
Second do.	1	Simpson & Co.
Waggon Harness	2	E. Sharp, Horncastle

The Live Stock included 56 entries in the Short-horn Classes, 46 entries in Leicester Sheep, no fewer than 105 entries in horses, and about three dozen entries in the Pig classes. There was also a small show of Poultry. The Short-horns and the Horses were much the most interesting part of the exhibition. And the event of the meeting was the great success of Mr. Dudding, of Panton, near Wragby, whose herd is shortly to be disposed of by Mr. Strafford. He took the prize for the best bull in the yard with the Lord of the Manor, bred by himself, and beating there Prince Alfred, shown by himself but bred by Mr. Booth; and he took the first prize in the class of old bulls with this Prince Alfred, which had been beaten in the general class. He took the second prize for yearling bulls with Lord Alexis; the first and second prizes for yearling heifers, and the first and second prizes for heifer calves, both classes being extremely good. He took honours in almost every class in which he showed, beating a number of first-class breeders, as Lady Pigott, Mr. Banks Stanhope, Mr. Heneage, and others. Amongst other prize-takers are Mr. Syme, of Stroxton, second for old bulls; Mr. Kirkham, of Audleby, the only exhibitor of a 2-year old bull who received the prize for him in that class; Mr. Marshall, of Elsham, who took the first prize for yearling bulls; Mr. Smith, of West Raven, and Mr. Heneage, M.P., first and second for bull calves, and again first and second for 2-year old heifers; and Mr. Clarke, of Lincoln, and Mr. Stanhope, M.P. first and second for cows.

There was a very good show of the Lincoln sheep, the prizes being confined to that breed; and Mr. Charles Clarke, of Scopwich, taking nearly all the prizes for rams; Mr. Dennis, of Greetham; Mr. Griffin, of West Ashby; and Mr. Grantham, of Sturton, dividing among them nearly all the prizes for ewes and ewe lambs.

The pigs were not a very good show; but the horses were both numerous and excellent.

The interest of these local and one-day shows is greatly increased by witnessing the process of judging, and the crowds around the circle into which the several classes of horses were successively brought before the judges showed how much interest was taken in the exhibition. The whole affair was over by 3 P.M., and the stock was nearly all at once removed, the judges of horses having such a laborious task that most of the other stock had gone before the decisions on the last of the horse classes had been made.

In the evening the members of the Society dined together under the chairmanship of Mr. Banks Stanhope, and a testimonial—a handsome silver candelabrum—was presented to Mr. Owston, the honorary secretary, for a long period of useful service.

This Society presents liberal rewards to servants and labourers for length of service with one master—for large families reared without parish help—for skill as shepherds, &c.; and there was in the present case a large number of claimants.

ROYAL AGRICULTURAL COLLEGE CLUB.—The second annual dinner of the above Club took place at the Freemason's Hotel, Canterbury, on Wednesday, the 11th ult., Dr. Voelcker, President, in the chair. The object of the Society, which was inaugurated at Warwick last year, is to afford the present and past students of the College an opportunity for a social meeting and the interchange of experience from year to year; and as the annual Shows of the R. A. Society present a very general rallying point, it was determined to meet at the Show wherever that might be held. Besides members the Club was honoured by the attendance of Messrs. E. Bowley, J. Niblett, Thomas Arkell, and Scott Burn, whose name is familiar as an agricultural writer.

On the removal of the cloth the Chairman gave the Queen, Prince Albert, the Prince of Wales, and the rest of the Royal family, both which toasts were received with loyal enthusiasm.

MR. E. BOWLEY, in rising to propose the toast of the R. A. College, alluded in feeling terms to the noble, disinterested, and philanthropic conduct of his friend Mr. E. Holland (unfortunately unable to attend on account of Parliamentary duties), who at a time when the affairs of the Institution were in a most critical, he might even say ruinous condition, came forward and advanced at great personal risk a large sum of money, which together with improved management was the means of raising the College to its present satisfactory condition; and it was with heartfelt satisfaction that he could tell them as an eye-witness that it was prospering. He had lately inspected the farm and considered it well cultivated, and offering an excellent opportunity for studying economical practice, whilst the educational department was, he might say, guaranteed by the staff of professors, at the head of which staff stood the world known name of Dr. Voelcker, whose name he begged to couple with the toast.

DR. VOELCKER in replying thanked the last speaker for the flattering manner in which he had mentioned his name in connection with the College. It might be thought be instructive to learn the steps by which he came to occupy that position of which he felt justly proud. It was a common delusion to imagine that genius was necessary to success. Now he was thankful to say he never was a genius, neither could he boast of more than average abilities. If genius was not however essential he would tell them what was—the constant striving to excel, whatever position we may be called upon to fill, endeavouring manfully to do the very best. The discipline necessary for such efforts is invaluable. In a humorous speech the doctor detailed his early school struggles, his chemical apprenticeship both in Germany and as Professor Johnston's assistant, showing that his present position and success was attributable under Providence to a constant determination to do thoroughly whatever he attempted.

MR. THOMAS ARKELL, who in earlier days was for some time manager of the College farm, proposed the toast of the evening, "Success to the R. A. College Club." He felt, he said, much pleasure in being intrusted with this toast, because he thought that the Society was one likely to afford much profit as well as pleasure to its members. It must prove very agreeable to meet old friends and renew friendships formed in earlier days, but he trusted that the efforts of the members would not rest at this point, but that they would strive to make these annual gatherings opportunities for the interchange of practical experience. Successful practice depended much upon correct observation and sound judgment, and if we aim as we ought, to be a little in advance—just out of the crowd, so to say—we must keep eyes and ears open, and comparing our own observations with the experience of others, learn to draw sound conclusions. Mr. Arkell said he wished all success to the Club, and would couple the name of Mr. Carnegie with the toast.

The Hon. C. CARNEGIE, M.P., briefly responded, and before concluding proposed the health of the Chairman, to whom the meeting was greatly indebted for his kindness in presiding, and for the constant interest he manifested in the success of the Club. He called upon the company to do honour to the toast by giving musical honours—a call which it is needless to say was most heartily responded to.

The CHAIRMAN expressed his gratification at the kind hearty manner in which his health had been proposed and received; whilst taking the greatest interest in the success of the Club his numerous duties prevented him from taking an active share in the management. The work had devolved principally upon the Secretary. He quite agreed with his friend Mr. Arkell as to the great advantage of eliciting information on matters of practice that may have come under the notice of members residing in different parts of the country. Dr. Voelcker then alluded to the various opinions as to the feeding value of Cotton-cake, and called upon Mr. Schwann to give the meeting the benefit of his experience.

Mr. SCHWANN, of Stockbridge, Hants, stated that he had largely used and with excellent effect decorticated Cotton-cake both for sheep and cattle. Lately, however, he had lost several lambs which were receiving ½ lb. each per day. On referring the matter to Dr. Voelcker he learnt that the Cotton-cake was of superior character, and that the mischief was probably due to the large quantity of albuminous matter in Cotton cake, rendering this description of cake, when given in such quantities, too rich for such young lambs.

Mr. COLEMAN confirmed this opinion, and stated he had used it with perfect success, but never exceeded ½ lb. per day for full-grown sheep.

Mr. F. LOCOCK, in rising to propose the health of the Secretary, Mr. Colman, thought he could not do better than follow the advice of Mr. Arkell and give them the result of his obser-

vations on Scotch and English farming. He had, as most were aware, first resided at Cirencester, and latterly in the East Lothians. He thought that good farming was more universal in the Lothians than in any one part of England, though there were quite as good specimens here as there. He had never seen more than two horses to a plough, except in the case of subsoiling, whether the ploughing was deep or shallow, and the management of manual labour—possibly on account of the greater value of the article—was better understood certainly than in the South of England. In the matter of implements, especially alluding to the use of drilling machines, horse-hoes, and the double mould-board plough, he considered our practice very superior. The more he saw of other management the higher was his opinion of the system pursued on the College farm, which he considered offered every advantage to the student. The toast was drunk with honours.

The SECRETARY expressed his best thanks for the kind manner in which the toast had been proposed by his friend Mr. Locock and responded to by the company. He would first lay before the meeting the annual report. He was glad to tell them that the names of about 50 members were enrolled, and he hoped that number would be doubled before the next meeting. Meagre as was the accommodation provided, compared to what he trusted eventually to see, it had not been secured without much trouble and anxiety, in great measure owing to the difficulty of making arrangements so far from the spot. He would draw their attention to a proposition from an absent member, as to electing a local committee, who should be empowered to make the necessary arrangements for the next meeting. He regretted that the efforts to obtain permission to erect a tent in the showyard had been unsuccessful. He trusted however that after formal application the Council of the Royal Agricultural Society would grant their request, and that members would find at the Leeds meeting show-yard accommodation. In reference to the very flattering comparisons Mr. Locock had made, he felt unworthy of such commendation, more especially as he must own to occasionally using three horses in a line, according to the old custom, believing that there were seasons and soils when such an apparent waste of horse labour was a really economical practice. He was happy to tell them that the farm was paying a fair rate of interest, and that it was worked in an economical manner with a view to profit and not show. He begged in conclusion again to thank the meeting for their kindness.

Mr. WEDGWOOD proposed the committee in a humorous speech, thanking them for their exertions, which he must say, judging by the excellent dinner they had enjoyed, were most successful. The Club in relation to the great Agricultural Society might be compared to a satellite revolving round one of the planets, and he really thought that in reference to this dinner the smaller luminary had eclipsed the larger. He begged to couple the toast with the name of Mr. Jacob Wilson, one of the most active members of that committee

Mr. JACOB WILSON stated that he had come 400 miles to be present on that occasion, and he regretted that others who had not the same difficulties as to distance had not made a greater effort to be present. Still he felt satisfied their shortness of numbers was attributable not to any falling off in spirit, but to the position of the show being inconvenient, and the peculiar nature of the season causing pressing home duties. He quite agreed with the proposition for a local committee, and felt sure that very satisfactory arrangements could be made for the Leeds meeting; he trusted the Royal Agricultural Society would comply with their request, and indeed recognise the existence of the Club, which would be the means of augmenting its own ranks. Mr Wilson then entered on various topics connected with the rules and management of the Club. A Local Committee of the following gentlemen to act for the meeting of 1861 was then appointed—Jacob Wilson, Esq.; W. T. Horton, Esq.; H. J. Marshall, and Lonsdale Bradley. The health of the visitors, proposed by the Chairman and responded to by Messrs. Bowley and Niblett, concluded the evening.

Calendar of Operations.

JULY.

WEST SUSSEX: *July* 23.—Since our last report we have had all sorts of weather. The first half of the month was all that we could wish, and a great quantity of hay was secured in good condition during that time, but a good deal of the Clover was cut some time before that, and suffered from the wet, and the past week has been very rough and stormy, and there is at present a good deal of meadow hay lying out, which will be very much injured, so that we cannot report favourably on either the quantity or quality of the hay crop; the bulk per acre was good, but there has been fewer acres cut, feed having been so scarce in the early part of the season. The Wheat, which stood well till the past week, is now very much down, but not to injure it much as regards the crop, but it will be more difficult to cut. Respecting its general appearance there is not much to complain of; it has improved very much during this month, and upon our low, rich, land we expect a fair crop. Barley, which has grown long and rather weakly, is very much down, and we may expect that it will not be of the best quality. Oats are a good crop; but also much down. Mangel is very various in appearance, but generally late; during May and June it made little progress, and much of it is in a very foul state, so that without a change for the better we must not look for a very heavy crop. Swedes are also backward and very foul; and Turnips are now being put in with the land in a very stiff damp state. We shall not have harvest so late as we expected at one time; I think it will commence about the second week in August. We have plenty of feed for the cattle in the fields; but they do not do at all well, and the consequence is that our market is supplied with beef and mutton only half fat, and such will be the case I fear through the season, as few will keep back anything saleable with present prices. The supply of corn to our market is rather above the average quantity at this season, but I do not think there is so much to thresh as usual. And there is no chance of prices falling till the harvest is got in. Potatoes are again affected by the disease, but they are a good crop. Work is still behind and harvest will come upon us rather before we are ready. *G. S.*

Notices to Correspondents.

READING MACHINE: *J Probert.* Burgess and Key's is probably the best reaping machine. Cuthbert's (Bedale), a smaller machine, is efficient anywhere and suitable for smaller occupations. Cranstoun's is the only combined mower and reaper, and as such is unrivalled, Burgess and Key's mower has been pronounced the best at Canterbury and elsewhere. Cranstoun's address is 58, King William Street, London Bridge.

SHEEP IN TASMANIA: *A Friend* says: "Your correspondent *Grazier* will find the Leicester rams the most profitable for Australia. They (imported rams) are often sold at very extravagant prices if good. Southdown rams many persons think very highly of, but for a profitable investment he would prefer the former. The object is to improve the carcase, not the fleece; it would be difficult to import sheep that would improve the wool of the Merinos, which are the sort most general, in fact almost the only sort in Australasia."

WARNER'S PATENT VIBRATING STANDARD PUMPS.

PATENT CAST-IRON PUMPS fitted with J. W. & SON'S Patent Buckets and Suckers, which cannot clog in action, for Farms, Cottages, and Wells not exceeding 25 feet.

Diameter of Barrel.	Height.		£.	s.	d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1	1	0
2½ ,,	long 3 ,, 3 ,,	gutta percha	1	10	0
3 ,,	ditto 3 ,, 6 ,,	or cast iron	2	4	0
3½ ,,	ditto 3 ,, 6 ,,	flanged pipe	2	9	0
4 ,,	ditto 3 ,, 6 ,,	as required.	2	18	0

2½ ,, short, with 15 feet of Lead Pipe attached, ready for fixing 2 0 0

2½ in. long ditto ditto ditto 2 14 0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

May be obtained of any Ironmonger or Plumber in Town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER & SONS, 8, Crescent, Jewin Street, London, E.C.

Every description of Machinery for Raising Water by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. &c.—Engravings sent on application.

PRICES REDUCED.

H. J. MORTON AND CO., Galvanised Iron Works 2, Basinghall Buildings, Leeds.

GALVANISED IRON ROOFING

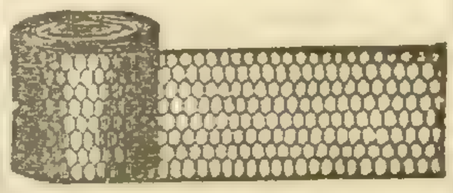
for Farm Buildings and other Roofs; the cheapest, most durable, and neatest Roofing in use; also Spouting at 10½d. per yard.

WIRE STRAND CABLE FENCING.

(formed of Twisted Wires like a rope or cable), the strongest cheapest, and neatest fence in use, will resist the largest cattle and will not bend or get out of form by trespassing upon or over. Price, with five lines of the Galvanised Strand, iron main posts, and pronged Standards, 1s. 2½d. per yard.

This fence is far cheaper than posts and rails, or any kind of iron fencing; and possesses four times the strength of solid bars. Will not rust nor corrode. Upwards of 1200 miles of this Fencing supplied.

GALVANISED GAME AND POULTRY NETTING.



Galvanised, 24 ins. wide 2-inch mesh, 5½d., 7½d., and 9½d. per yard.

Galvanised, 24 ins. wide, 3 inch mesh, 4d., 5d., and 7d. per yard. The Netting made any width, and with openings of any size.

GALVANISED IRON CHAIN CAMP STOOLS & CHAIRS, POULTRY FOUNTAINS & FEEDERS, PRONGED DAHLIA RODS AND ROSE STAKES, &c.

Strong CATTLE HURDLES from 9s. per yard.

PATENT IMPROVED GAS WORKS,

of all sizes, for the use of Private Houses, Mansions, Railway Stations, Mills, Collieries, Mines, Villages, &c. Works from 10 to 500 lights estimated for. The works can be entrusted to an ordinary labourer.—Apply to HENRY J. MORTON & Co. 2, Basinghall Buildings, Leeds.

BARNARD, BISHOP, AND BARNARDS, NORWICH.

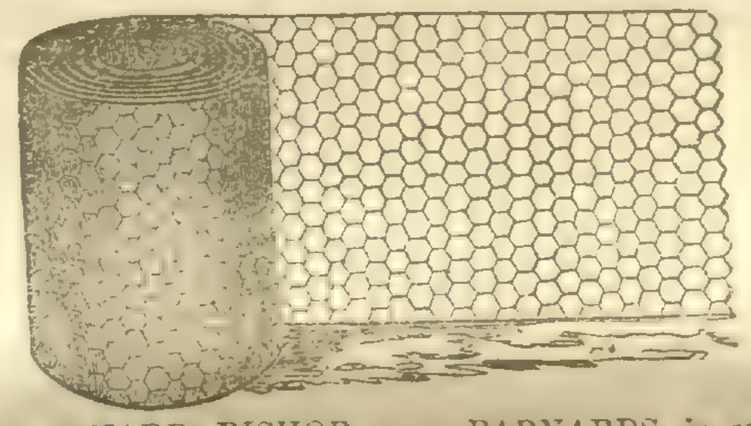
Reduced Prices of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 10d. per yard.

The same with Galvanised Wire Rope, 1s. per yard.

Illustrated Catalogues with prices of every variety of Wire Fencing and Wire Netting forwarded free on application.

MACHINE MADE GALVANISED WIRE NETTING.



BARNARD, BISHOP, AND BARNARDS, in consequence of improvements in their machinery for the manufacture of the above article, have been enabled to make a great reduction in the prices.

		Galvanised.	Japanned Iron.
2-inch mesh,	24 inches wide	5d. per yd.	4d. per yd.
2-inch ,,	strong do.	6 ,,	4½ ,,
2-inch ,,	intermediate, do. ..	7 ,,	5½ ,,
2-inch ,,	extra strong, do. ..	9½ ,,	7½ ,,
1⅝-inch ,,	24 inches wide	5½ ,,	4½ ,,
1⅝-inch ,,	strong, do.	6½ ,,	5½ ,,
1⅝-inch ,,	intermediate, do. ..	7½ ,,	6 ,,
1⅝-inch ,,	extra strong, do. ..	10 ,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 8½d. per yard, 3 feet wide

Galvanised Sparrow proof Netting for Pheasantries, 2½d. per square foot. Wire Netting of every mesh from half an inch to 6 inches.

Wire Fencing and Netting delivered Carriage Free to all the principal Railway Stations.

GLASS CUCUMBER TUBES.—

24 inches long	..	2s. 0d.	16 inches long	..	1s. 4d.
22 ,,	..	1 10	14 ,,	..	1 2
20 ,,	..	1 8	12 ,,	..	1 0
18 ,,	..	1 6	Made to any length.		

HAND GLASSES.

12 inches	.. ..	6s. 0d. each	18 inches	.. ..	9s. 0d. each
14 ,,	.. ..	7 0 ,,	20 ,,	.. ..	10 0 ,,
16 ,,	.. ..	8 0 ,,	24 ,,	.. ..	12 0 ,,

Painted and glazed with 16 oz. Sheet Glass.
If open at top, 1s. extra.

GLASS MILK PANS.

12 inches diameter	..	1s. 3d.	20 inches diameter	..	3s. 3d.
14 ,,	..	1 9	22 ,,	..	3 9
16 ,,	..	2 3	24 ,,	..	4 6
18 ,,	..	2 9	26 ,,	..	5 6

LACTOMETERS, FOR TESTING THE QUALITY OF MILK.
Four Tubes .. .. 4s. 6d. | Six Tubes .. .. 6s. 6d.

With Stands complete.

Wasp Traps, 3s. 6d. per dozen. Glass Tiles, Glass Slates, Propagating Glasses, Bee Glasses.

JAMES PHILLIPS AND CO.,

180, Bishopsgate St. Without, London, E.C.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2d. to 3d. per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 35, Soho Square, London, W.

See *Gardeners' Chronicle* of July 9.

FLEMING'S SALTING MACHINE FOR DESTROYING WEEDS ON GRAVEL WALKS, &c.—This most useful Machine has given the greatest satisfaction wherever it has been introduced, and it is the only effectual means of keeping Drives and Walks completely clear of Weeds.

Extract from Article "Trentham," in *Gardeners' Chronicle* of January 22, 1859.

"And I would observe in passing from these grounds that the whole of the Grass and Gravel are kept in the most perfect order by the aid of machinery; the former by a Horse Machine wherever it can be worked, a small hand instrument being used in places of difficult access; the latter is kept in order by a Salting Machine, the invention of Mr. Fleming, and judging from the beautiful condition of the Gravel in every direction, I should say that it was altogether most efficient."

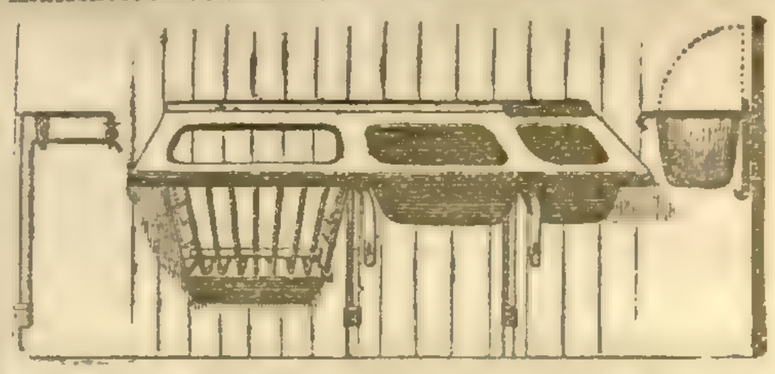
The Mowing Machines here referred to are SHANKS'.

From *The Field* of April 2, 1859.

"The Salting Machine will effectually destroy the Weeds on Gravel Walks and Drives."

Testimonials with full particulars and prices may be had on application to ALEXANDER SHANKS & SON, Dens Iron Works, Arbroath, Patentees of Improved Mowing, Rolling, Collecting, and Delivering Machine for Lawns, Hot-Water Apparatus Manufacturers, &c.

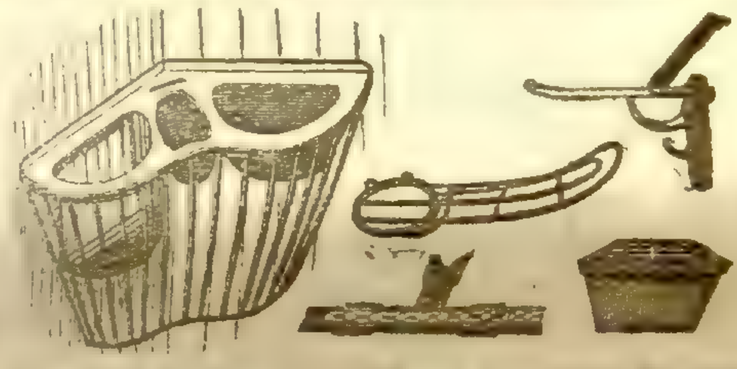
COTTAM'S PATENT INVENTIONS FOR STABLE REQUISITES, awarded a Prize at the Paris Exhibition, patronised by the English and French Governments, as well as by the principal Nobility, Gentry, and Hunting Establishments in the kingdom. In use at her Majesty's Stables, Aldershott and Balmoral.



COTTAM AND COMPANY, Winsley Street, W., are the original inventors of the PATENT ENAMELLED MANGER, Water Trough, and Wrought Iron Rack, united to an iron top-plate, and forming one complete and useful fixture, having COTTAM'S patent noiseless halter guide and collar rein attached, which is taken to the back of the manger, and works with ease and reedom up or down the guide bar.

COTTAM'S NEW PATENT SEED-BOX, an important addition to the above fittings, being simple in construction, light, and durable, promotes cleanliness, and is economical in its results.

COTTAM'S PATENT PERMANENT ATTACHED DROP COVER, for the above, is a most essential addition to their fittings; it is never in the way; can be placed and replaced in an instant; while its cheapness, simplicity, and utility in keeping the contents of the troughs clean, and regulating the quantity to be taken, is quite sufficient to insure its use.



COTTAM'S PATENT SADDLE and HARNESS BRACKET combined, can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

COTTAM'S IMPROVED WROUGHT IRON VENTILATING BRACKET preserves the shape and allows a free admission of air to the under parts of the saddle.

COTTAM'S IMPROVED SURFACE CUTTER, with perforated moveable cover, the use of which prevents accidents, and can be easily cleaned out.

COTTAM'S CAST-IRON SANITARY TRAP, from its improved construction, gives a full water passage, and does not allow any smell to ascend from the drain.

PATENT LOOSE-BOX FITTINGS, and every article for the harness room and stable, kept in stock, plain, galvanised, and enamelled. Iron gates, fencing, hurdles, &c.

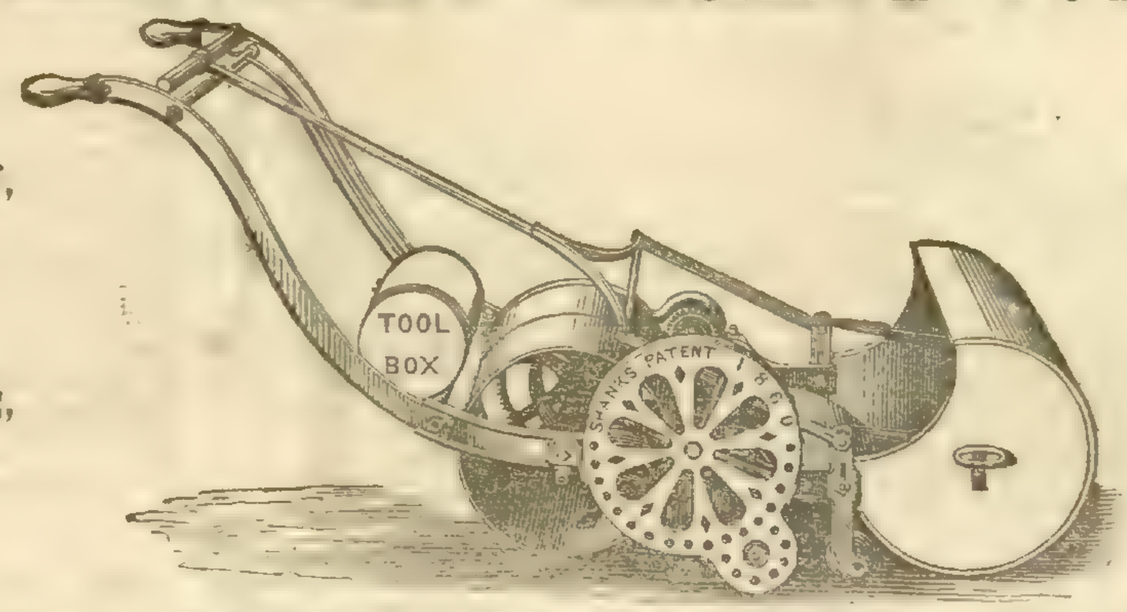
The New Illustrated Catalogue and Estimates, gratis, upon application to COTTAM and COMPANY, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon).

SHANKS' NEW PATENT LAWN MOWING, ROLLING, COLLECTING, AND DELIVERING MACHINE FOR 1860

MOWS the GRASS WET or DRY,

ON

LAWNS UNEVEN or OTHERWISE,



In a MUCH NEATER MANNER

than the SCYTHE,

and at HALF the EXPENSE.

NEW PATENT HAND MACHINE FOR 1860

PRICES.

SHANKS' NEW PATENT HORSE MACHINE.

Including Box of Tools for Sharpening, &c., and Directions.

Width of Cutter.			
No. 1.—48-inch Machine	£28 0 0	*Drawn by a Horse.*	
No. 2.—42-inch Machine	26 0 0		
Width of Cutter.			
No. 3.—36-inch Machine ...	£22 0 0	*Drawn by a Horse.*	
No. 4.—30-inch Machine ...	19 0 0	*Drawn by a Horse or a strong Pony*	

SHANKS' PATENT PONY AND DONKEY MACHINES.

Including Box of Tools for Sharpening, &c., and Directions.

No. 5.—30-inch Machine . £15 15 *Drawn by a Pony* | No. 6.—28-inch Machine . £14 10 *Drawn by a Pony* | No. 7.—25-inch Machine, £12 10 *Drawn by a Donkey*

SHANKS' NEW PATENT HAND MACHINES, FOR PUSHING OR DRAWING SEPARATELY OR TOGETHER.

Including Box of Tools for Sharpening, &c., and Directions.

No. 8.—24-inch Machine	£8 17 6	*Easily worked by Two Men*	
No. 9.—22-inch Machine	8 7 6		
No. 10.—19-inch Machine... ...	£7 12 6	*Easily worked by a Man and Boy*	
No. 11.—16-inch Machine... ...	6 17 6	*Easily worked by a Man*	
No. 12.—13-inch Machine...	£6 2 6	*Easily worked by a Boy*	

The Patent Delivering Apparatus if attached to the Hand Machines, and they are strongly recommended to be so, 20s. extra.

SHANKS' PATENT HAND MACHINE, FOR DRAWING ONLY.

Including Box of Tools for Sharpening, &c., and Directions.

No. 13.—22-inch Machine ... £7 5 0 *Easily worked by a Man and Boy* | No. 14.—19-inch Machine ... £6 15 0 *Easily worked by a Man and Boy*

No. 15.—16-inch Machine ... ... £6 5 0 *Easily worked by a Man*

☞ The SHANKS' NEW PATENT MACHINE FOR 1860 has just been awarded the FIRST PRIZE SILVER MEDAL of the Royal Dublin Society at their Exhibition of Horticultural Implements, &c., held at Dublin last month.

***** The Machines are warranted to give ample satisfaction, and if not approved of they may be at once returned.**

The Prices include delivery at most of the Railway Stations throughout the Kingdom.

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J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

PATENT LAWN MOWING AND ROLLING MACHINES.

30-inch wide PONY POWER MACHINE, made also of Smaller Sizes for Hand Power.

B. SAMUELSON'S LAWN MOWERS,

WITH BOYD'S PATENT IMPROVEMENTS,

CAN BE USED IN WET AS WELL AS DRY WEATHER.

LAST YEAR'S SALES WERE NEARLY A THOUSAND, EVERY ONE OF WHICH GAVE THE GREATEST SATISFACTION.

TESTIMONIALS expressing such satisfaction have been kindly sent by some hundreds of the purchasers to the Manufacturer, who will be glad to forward a copy with description and prices of Machines post free on receipt of application.

London Warehouse: 76, Cannon Street, West, E.C. Manufactory: Britannia Works, Banbury.

TO BE HAD OF DEANE & CO., LONDON BRIDGE, E.C., AND ALL IRONMONGERS.

SEEDS FOR PRESENT SOWING.

BUTLER AND McCULLOCH,

COVENT GARDEN MARKET, LONDON, W.C.

SENT POST PAID AT THE FOLLOWING PRICES, PER PACKET:—

CALCEOLARIA, large flowered section, extra fine, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.*
" shrubby, cluster flowered section, extra fine, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.*
" agents for Dobson's and Smith's, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.*
CINERARIA, extra fine, 1*s.* and 1*s.* 6*d.*; agents for Smith's, 1*s.* 6*d.* and 2*s.* 6*d.*
PRIMULA, extra fine 1*s.* and 1*s.* 6*d.*; agents for Smith's, 1*s.* 6*d.* and 2*s.* 6*d.*
STOCK INTERMEDIATE, Covent Garden Market variety, two-thirds may be depended upon flowering double, 1*s.*
" New Hybrid Giant Cape, 5 var., 1*s.* 6*d.* and 2*s.* 6*d.*; mixed, 1*s.*
" Brompton German, 12 var., 2*s.* and 3*s.* 6*d.*; mixed, 1*s.*
" New large flowering Emperor, perpetual flowering, 6 var., 2*s.* and 3*s.* 6*d.*: mixed, 1*s.*
HUNT'S SUPERB SWEET WILLIAM, undoubtedly the best in cultivation, both as regards shape, marking, and colour, a large portion being what is termed Auricula flowered, 1*s.*
PINK, saved from the most beautiful prize flowers and are warranted to give the greatest satisfaction, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.*
PANSY, saved from the best and newest named flowers, 1*s.* 6*d.* and 2*s.* 6*d.* per packet.
GERANIUM, Scarlet section, 10 varieties, 3*s.* 6*d.*, mixed 6*d.*
PELARGONIUM, French spotted varieties, extra fine, 1*s.* and 2*s.* 6*d.*
" Fancy varieties, extra fine, 1*s.* and 2*s.* 6*d.*
" Large flowered English varieties, extra fine, 1*s.* and 2*s.* 6*d.*
HELIOTROPE, 10 splendid varieties, 3*s.* 6*d.*; mixed, 6*d.*
LANTANA, 12 splendid varieties, 3*s.*; mixed, 4*d.*
LILIUM LANCIFOLIUM, 4 splendid varieties, 2*s.* 6*d.*; mixed, 1*s.*
CYCLAMEN, 6 beautiful varieties, 3*s.*; africanum variety, 1*s.*
MIMULUS, fine, 6*d.* MYOSOTIS AZORICA, true, 6*d.*
CALANDRINIA UMBELLATA, 4*d.*
WALLFLOWER, double German, mixed, 1*s.*
ANTERRHINUM, 8 varieties, 1*s.* 6*d.* and 2*s.* 6*d.*; mixed, 4*d.*
CHRYSANTHEMUM INDICUM, large flowered section, 1*s.*
" NANUM, large flowered section, 1*s.*
CHOICE AQUILEGIA, CAMPANULA, CANTERBURY BELLS, DELPHINIUM, DIANTHUS, DIGITALIS, GAILLARDIA, GAURA, LUPINUS, ŒNOTHERA, IBERIS HUMEA, POTENTILLA, &c., &c., 3*d.* to 6*d.* per packet. (SEE SPRING CATALOGUE.)

SAPONARIA OCYMOIDES, rose pink, one of the most beautiful spring flowering plants for rockwork, baskets, small beds, edgings, &c., 6*d.* and 1*s.* per packet.

SPLENDID DOUBLE ITALIAN-SAVED CARNATION AND PICOTEE SEEDS.

The following Carnations and Picotees have been saved with unusually great care by our Sardinian Correspondent, and are warranted to produce at least 80 per cent. of fine double flowers. The Perpetual Tree, or winter-flowering varieties (a comparatively new section) merit special attention.

☞ *To meet the greatly increased taste for this splendid and easily cultivated class of flowers, we have so considerably reduced our prices as to bring them within the reach of every lover of the Carnation and Picotee.*

CARNATION, 12 vars. of selfs, 10 seeds of each	4*s.* 0*d.*	CARNATION 12 varieties, fancy, 10 seeds of each	4*s.* 0*d.*	CARNATION, 12 varieties, fancy, 10 selfs of each	4*s.* 0*d.*
" " 5 "	2 6	" " 5 "	2 6	" " 5 "	2 6
" " Flakes 10 "	4 0	" " Yellow selfs, 10 seeds of each	5 0	" " Perpetual selfs 10 "	4 0
" " 5 "	2 6	" " 5 " "	3 0	" " 5 "	2 6
" " Bizarre 10 "	4 0	" " Flakes 10 " "	5 0	" " Flakes 10 "	4 0
" " 5 "	2 6	" " 5 " "	3 0	" " 5 "	2 6

CARNATION, choice mixed, 2*s.* 6*d.*; Ditto ditto Perpetual, 2*s.* 6*d.* | PICOTEE, choice mixed, 2*s.* 6*d.*; Ditto ditto perpetual, 2*s.* 6*d.*

CORDYLINE (DRACÆNA) INDIVISA.

MESSRS. JOHN AND CHARLES LEE

Have the pleasure to announce that on the 1st of August they intend to send out the magnificent

CORDYLINE INDIVISA FROM NEW ZEALAND,

AN ACCOUNT OF WHICH WAS GIVEN BY DR. LINDLEY IN THE *GARDENERS' CHRONICLE, OCT. 29, 1859, Pp. 868.*

It is impossible to give an adequate description of this wonder of Nature, which should be seen in its native grandeur to be thoroughly appreciated. Specimens can, however, be seen at this establishment which already prove the accounts received of its merits to be quite reliable. Being found at a high elevation it will be a very hardy Conservatory Plant, and will probably bear total exposure in the West of England and in Ireland.

CORDYLINE INDIVISA attains a height of from 10 to 20 feet, in an erect and undivided trunk on which the foliage is retained with vigour almost to the ground. The leaves are set on to the greatest advantage, and measure from 5 to 6 feet in length, and from 6 to 9 inches in breadth. Their colour is of the richest description: a broad and prominent midrib of crimson brown runs through the entire length, and numerous red and white lines run parallel to the midrib: the whole surface is overlaid with a rich golden bronze producing an elegant effect. The under side of the leaves is glaucous. The whole tree is unsurpassed in its truly noble and unique beauty.

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having secured a large breadth from the most careful growers in this district—where better crops are produced than in any part of England—offer it at the above low rate for cash. Price to the Trade per post.

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SUTTON AND SONS can now supply new seed of the Italian Crimson Clover (Trifolium incarnatum), which should be sown as early as convenient. Present price 4½*d.* per lb., or cheaper by the cwt. Also New Italian Rye Grass seed for Early Spring Feed.

The Gardeners' Chronicle.

SATURDAY, AUGUST 4, 1860.

MEETINGS FOR THE ENSUING WEEK.

THURSDAY, August 9 { Horticultural (Floral Committee) at St. Martin's Place ..... Noon

LETTERS from correspondents all over the country furnish abundant proofs that in this season many kinds of crops are not succeeding well. Grapes rot; seeds will not grow; Gourds cast their fruit; Cucumbers gum and curl up; the earlier flowers of Tomatoes, which usually yield the best, drop off without setting; French Beans make but little progress, and show a yellow sickly foliage; the more tender Strawberries set imperfectly; Peach and Nectarine trees in many instances died after blossoming, and the survivors seem inclined to follow them. Trees that never before dropped their fruit have done so almost entirely. To crown all Grapes are shanking. Ills like these can only be owing to the condition of the soil as regards temperature, or to that of the atmosphere, or to both combined. The Vine no doubt is liable to be affected under conditions wholly unconnected with the soil; but it more frequently than otherwise is found that when every precaution has been taken inside a house to secure a healthy growth, failure nevertheless occurs from without. The best managed Vinery in the world will do nothing when the soil for the roots is cooled down too low.

Not being on the spot it is impossible for us to say with certainty what ails the Grapes of which English, Welsh, Scotch and Irish correspondents complain. But we may point out some of the causes which are likely to affect Vines injuriously, especially in a season like the present.

The Vine is naturally a very long-lived plant; under favourable conditions it exists for hundreds of years. Taking all things into consideration, few exotic plants, if any, are more enduring under vicissitudes of climate; and in addition the Vine has too often to suffer great injuries from unskilful pruning. It requires plenty of moisture whilst growing, but it dislikes soil that is at any time saturated with water. A morass does not suit it. We do not mean to say that it was ever planted in

a natural one, yet artificial compositions have been formed and placed in a position to acquire the nature of a morass, the principal character of which is water combined with humus. Instead of good turfy maiden loam the soil for Vine borders has been composed of rich humus earth with a large proportion of manure, which ultimately turns to humus. This is very like the substance of a morass; one essential element only being wanting, namely, water. Dig a pit, 3 feet deep, and throw such a composition into it. Water will naturally find its way into the hole, and then we have a very tolerable imitation of a morass. In the same composition freed from stagnant moisture the roots of Vines would exist, if it had been raised, for instance, above the general level of the surrounding surface; but when sunk below this the roots perish. Vines will thrive in almost any soil if it be raised in form of a terrace, and by so doing much expense in making Vine borders might be saved, with more successful results than is obtained by the excavating system. Some may urge that although their borders are deep, yet they have drainage still deeper, and therefore saturation cannot take place. This may be true; but if water do not lodge, cold air will do so more than in a terrace. It might not, however, be possible to raise a border in front of Vineries already erected. But something like an area could be formed in many cases, like that round dwelling houses, and it should be quite as low as the bottom of the border. Into this area the cold air, owing to its greater density, would descend from amongst the particles of soil in the terrace, and would be replaced by warmer. The adoption of the terrace principle will doubtless become general, and it will tend greatly to diminish the numerous complaints about the shanking and shrivelling of Grapes.

Vines, however, may be well conditioned at the root and yet rendered weak by unskilful pruning, performed in ignorance of the functions of the leaves. On these not only the formation of wood, but even that of roots depend. A Vine may produce a good crop of fruit with rather a limited amount of foliage for one season, but it will be weakened in consequence, for the growth of fresh roots will be prevented in proportion to the undue privation of foliage. Sometimes Grapes are sour, and this may be owing to the foliage being removed in order that the Grapes may be better exposed to the light. We have seen Gooseberry bushes entirely stripped of their foliage by caterpillars: the fruit was large; but although exposed to the sun's rays without being shaded by a single leaf, it never ripened, and the berries were as sour as vinegar. The same thing occurs if a Vine is entirely deprived of its foliage, which is therefore essential to the ripening of the fruit. Success or the contrary depends on its healthy or unhealthy state. Its extent should be encouraged as far as it can be properly exposed to light; and on the extent of healthy foliage in one year, the crop of the next greatly depends.

It will however be found that during the present uncongenial season the Vine has been suffering, in common with other plants, from a circumstance to which it is impossible to draw attention too frequently: we mean the temperature of the soil. Look for an instant at the following comparison:—

Temperature of the Soil at 1 foot deep in

	January.	February.	March.	April.	May.	June.	July.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
1859	44.09	45.21	48.57	49.67	53.95	63.95	67.22
1860	43.69	40.36	43.41	46.95	54.46	58.45	59.99
Difference ..	0.40	4.85	5.16	3.72	+0.51	5.50	7.23

From this it appears that the ground has been much colder than last year, except in May, when we had a heavy fall of rain from the south-west. But newly raised plants in the open ground, or others having their roots near the surface, must have had them often affected by a much greater degree of cold than that indicated at a foot deep, for in May the temperature on 16 nights was below 40°; on five nights it was at or below freezing; and on the 9th it was as low as 27°. In June the temperature at night was frequently below 40°; on the 14th it was 34°. Even so lately as the 25th of July it was also 34°; the radiating thermometer at the same time indicating 2° below freezing, a most unusual occurrence in the dog-days. Rain did not fall in gentle showers or heat-bearing storms; on the contrary it has been for the most part associated with violent currents of cold air, so that the ground has been saturated with moisture from newly melted hail and sleet. Owing to this, and the frosty air at nights, the roots of plants near the surface must have been frequently cooled almost down to freezing. The unthriving condition of such plants as are not very hardy, is therefore not to be wondered at. Under such circumstances no exotic seeds could be expected to germinate freely, if at all.

With regard to the unfavourable state of some kinds of fruit trees, the cause must be traced from last summer. In July 1859 the temperature of the ground at 1 foot deep was between 69° and 70°, a hot bed; and in the middle of October it was still quite as warm as it is at the present time. Previous to September growth was checked from dryness; but in that month abundance of rain fell; roots were then in moist bottom-heat, the weather continued warm, and vegetation commenced a rapid growth. But whilst it was in this remarkably excited state, the thermometer fell on the 21st of October to 23°, and to 21° on the 22d; but the night of the 23d was most fatal, the temperature being then 15° below freezing, whilst the instrument cut off from the influence of heat from the earth indicated as low as 21° below freezing. In consequence of this sudden check of vigorous growth the constitutions of many trees were seriously injured. Hundreds of young Apricot trees in the open quarters died in the course of last spring from this cause, although such withstood 21° of greater cold in 1838; but that occurred in January, when the plants were in a condition of rest and not liable to be affected. From this it is evident that the effects of low temperature on plants depend not so much on the actual degree of cold as on the disparity between that and the degree of heat in which the plants are growing at the time. Beyond the sudden destruction of the foliage, the effects of the frost in last October on the Apricot, Peach, &c., were not apparent at the time; and it was only when vegetation recommenced in spring that the weakened constitution of these trees became evident. The weather up to the present time has been ungenial for their recovery. Notwithstanding the lateness of the spring and consequent retardation of growth till it might have been supposed it could proceed without interruption, still, after growth commenced, frosty nights frequently occurred to give repeated checks to the struggling vegetation; and it is only by careful attention to summer pruning and training that we can hope to restore the vigour of the trees. If warm weather should set in, and especially warm nights, a healthier foliage will be produced; but then great care must be taken of it. If strong shoots are likely to be produced in some parts of the trees, they must not be allowed to monopolise nearly all the sap of the trees, then be designated robbers and destroyed. Why allow the sap to take such a course when there are ways and means of distributing it equally, or nearly so, among the branches that have to bear the fruit in the following season? If this is done the trees may be reinvigorated; but treated otherwise they might as well have perished at once from the causes we have endeavoured to point out.

"Not a drop of water should be allowed to touch the foliage." So says "J. W. L." in another column, teaching the way of keeping Begonia grandis in fine condition. Excellent advice, seldom given, more seldom taken. Applicable to hundreds of plants with the soft skin and plump but tender organisation of a Begonia. Did the reader ever place a drop of ether on his hand in a bright warm sun? If he has done so let him call to mind the sharp cold that attended the experiment. A bit of ice would not have been more sensibly felt. The cold that struck him was owing to the rapid evaporation of the spirit; but he disregarded it, partly because there was so little of it, and partly because the skin of his hand has no great sensibility. Had he plunged the whole arm in ether under a hot sun he would not have forgotten the effect.

But the skin of plants like Begonias is very thin, and very sensitive. Small differences in temperature affect it greatly. Whether this is owing to the low vitality of vegetable bodies, or to their excessive excitability, or to any other unsuspected cause, the fact remains unquestionable. Animals of high organisation are indifferent to a reduction of temperature that kills a plant. A negro fresh from the Gold Coast is no great sufferer in a frosty day; Lascars, as we see, lie on the London pavements and in the London Docks in mid-winter, looking for charity, and little harm comes of it. But the Palm tree of his native country which yields the oil that lubricates his greasy skin is in the throes of death when the thermometer marks 40°. It is only excessive cold that seriously affects men who are natives of the tropics; anything less acts but locally, producing frost-bites and similar injuries. In plants a small matter will rapidly cause local injury. Water—a drop perhaps—falls on a tender leaf, and rapidly evaporates in the highly heated atmosphere of a plant stove. Cold is immediately produced at the spot where water rested; then dies the tissue acted on; or perhaps the vital fluid of the plant, more sensitive than the skin, receives a serious shock; its action is paralysed, and although death may not ensue at the time, all the functions of the plant become torpid, with the inevitable accompaniment of ruined health, if death itself does not ensue. Ask Vines rapidly forced early in a damp house, if this is so. Their leaves may furnish a reply. If blotches disfigure them, they are the mute witnesses of what the gardener has done.

Such a matter as this is for all to think upon. The facts are indisputable. Is the inference wrong? Let gardeners judge.

—— We have before us a very singular Monster of a Carnation raised by Mr. William Clark, in which the place of the ovary is occupied by a second flower, complete. As the sender says, there is a pod within a pod. In this instance the accessory flower is no lateral or axillary production, but a direct termination of the axis. The stamens are much increased in number, and are all in the form of deformed and distorted petals bearing pollen cells on their margin, and, strange to say, one of the lobes of the calyx of the inner flower bears a long filament below its point *on the outside!!* We remember no similar case. There was however no change in the pistil, all the parts of which were normal.

SOUND AND UNSOUND TIMBER.

In a leading article of the 14th inst., the various experiments which have been made for the preservation of timber are clearly brought under review, and the evidence appears to be there impartially deduced from the facts stated. When this is summed up, it seems, however, that very little real advantage is likely to be derived from the adoption of any of the preventives hitherto employed in this important affair. Some are too expensive and impracticable on a large scale; others are of doubtful efficacy; whilst some prove injurious after a few years; and none of them, it may be safely affirmed, can render bad timber equal to that which is in every respect sound and well-conditioned.

It is, however, in many cases a difficult matter to know good timber from bad, judging from appearance. It is so in one of the most important, that of ship-timber. In this, it is true, the discovery is frequently made after a brief period, little more than sufficient to admit of the timber being worked into the vessel, but then too late. Hence we must conclude that its defects may escape previous detection although inspected by the most experienced eye. Probably, by means of powerful microscopic observations and chemical analyses it may yet be found quite possible and usefully practical to detect differences between good and bad timber, which the naked eye fails to do.

There is one circumstance, which, as regards Oak timber, appears to me of greater importance than any other, I would even say than all others put together, and that is the period of the season in which the trees are felled. Let there be two Oak trees of the same age and magnitude, and both fairly grown under the same circumstances. Let one of them be felled in autumn, and the other when the bark runs easily in spring. When squared and seasoned both may appear equally sound; but without seeing either in this state I should without hesitation pronounce the autumn-felled timber good, and the spring-felled comparatively bad, especially for ship-building purposes. I venture to make this assertion from the results of experiments which I have had an opportunity of making with several kinds of wood, not indeed with Oak, but with other kinds in which the analogy of the Oak as regards the destructive effects of spring felling is but too well confirmed.

In order to ascertain the relative effects of autumn and spring felling, I had a limb cut off a Pear tree in autumn, when the bark was firmly set; and another similar limb from the same tree in spring, when the sap was flowing abundantly, and the bark could be easily peeled off. By exposure to the air the spring-cut portion soon became as dry as that which had been cut several months previously. Both pieces were then placed on the rubbish formed by the rotten twigs of faggot wood, and covered with a quantity of the latter. These circumstances were peculiarly favourable for inducing decay. In two years the spring cut portion had less tenacity than a loaf of bread, and could easily be crumbled to dust; the autumn cut was a little discoloured in consequence of the bad situation in which it was placed, but it still retained its integrity of fibre, and when dried proved hard and strong; and although a considerable part of it could only be termed sap-wood, yet that was also hard. In the spring-felled portion both heart and sap-

wood were equally rotten and worm eaten. Occasionally under less trying circumstances, the sap-wood only of spring-felled timber exhibits symptoms of decay, whilst the heart appears sound; but in the latter there is still the latent disposition ready to manifest itself when the timber is placed in a situation favourable for the absorption of moisture. The sap-wood of many kinds of trees, when they are felled in autumn, becomes extremely hard; and in some cases, where toughness is required, it is even superior to heart-wood; but all depends on the season. "Few persons at all conversant with timber are ignorant that the alburnum or sap-wood of trees which are felled in the autumn or winter, is much superior to that of other trees of the same species which are suffered to stand till the spring or summer; it is at once more firm and tenacious in its texture, and more durable."—"Knight's Papers on Vegetable Physiology," p. 110.

At whatever period of the year a healthy tree is cut, whether in autumn or in spring, it is always found to be what is termed full of sap. It cannot, therefore, be the quantity but the quality of the sap at the respective seasons which occasions the difference in the timber. When vegetation becomes active in spring, the sap acquires a saccharine principle, which renders it fit for the nourishment of the young buds, if the tree be left standing; but when the tree is cut down this saccharine matter affords a ready element of fermentation, putrefaction, and decay. We have the authority of Mr. Knight in proof of the change which takes place in the nature of the sap in spring:—"It appears probable," says that great physiologist, "that the true sap undergoes a considerable change on its mixture with the ascending aqueous sap; for this fluid in the Sycamore has been proved to become more sensibly sweet in its progress from the roots in the spring, and the liquid which flows from the wounded bark of the same tree is also sweet; but I have never been able to detect the slightest degree of sweetness in the Sycamore wood in winter."

When the sap is in full flow in spring before the leaves expand, it is exceedingly apt to go into a state of putrefaction if suddenly checked. Vigorous trees that had withstood very severe frosts in winter have been completely killed by a sudden frost just before the buds were ready to burst, and after some unusually hot weather for the period of the season. Everywhere under the bark, from the extremities of the branches to the roots, the natural colour was changed to brown by the arrested sap, which on the bark being stripped emitted a sour putrid smell. Such also is the case in many instances when a portion of a limb is cut off late in spring; by the consequent interruption to the flow of sap the latter becomes putrid and kills the inner bark for a considerable distance below the wound, and a dead stump is the result of the untimely amputation. But the effect is not confined to the portion actually killed, for it may be traced from the branch down the trunk to the roots, the wood being discoloured where the vessels are more immediately connected with the root and amputated branch. Often, however, more than discolouration is produced, for along the trunk a portion having a sectional area fully equal to that of the branch becomes dead. Occasionally this portion is overgrown with fresh wood, within which the dead part decays, and ultimately leaves a cavity containing only the humus of what was once sound wood.

From what has been stated it will, I think, be admitted that in spring the sap of timber trees is in a condition to enter readily into a state of fermentation or putrefaction, and that it then acts very injuriously on the woody fibre is evident from the facts adduced. How it does so I cannot pretend to say. Its action on woody fibre is perhaps somewhat analogous to that of yeast on flour. In fact, between the elements of the latter and those of woody fibre there is chemically but little difference.

It may be urged that sap, however objectionable its presence is, may be completely got rid of by good seasoning; and although it pervades the tree throughout, yet the timber can be entirely deprived of moisture. This is perfectly true as regards the watery portion of the sap, but it by no means follows that a portion of other substance contained in the sap may not remain in an inspissated state in the tissues, ready to become soluble on the first accession of moisture, and to recommence its injurious action on the substance of the wood—just as yeast may be dried in cakes and kept for any length of time till moistened for use.

Under favourable circumstances spring-felled timber may remain for a long period without exhibiting any symptoms of decay, and thus doubts may arise as to its inferiority compared with that which is autumn felled. I should not, however, be inclined to give even the semblance of a doubt in its favour, especially in the case of Oak timber for ship-building. Evidence ought to be received with extreme caution. For example, I have heard of an old barn which was taken down after it had stood several hundred years. The timbers were of barked Oak, with one exception, and we may therefore, presume that they were spring-felled. Yet the circumstance of their lasting so long might be adduced in favour of spring-felling. They were, however, all in a much decayed state, with the one exception above alluded to, and that timber had the bark on, and was quite sound. It was considered by a good judge of timber to have been felled in autumn or winter when the bark would not run; and hence after centuries, and after the decay of the others, its sound condition.

Miller, in his "Gardeners' Dictionary," 8th edition, 1768, the last which he himself wrote, has some very judicious remarks under the head of *Quercus*; and as they may prove interesting to many who have not an opportunity of perusing that scarce edition, the following extract will perhaps be acceptable:—

"Before I quit this subject I must beg leave to take notice of another great evil, which is of so much consequence to the public as to deserve their utmost attention, which is that of cutting down the Oaks in the spring of the year at the time when the sap is flowing. This is done for the sake of the bark, which will then easily peel off; and for the sake of this I think there is a law whereby people are obliged to cut down their timber at this season. But by so doing the timber is not half so durable as that which is fallen in the winter, so that those ships which have been built of this spring-cut timber have decayed more in seven or eight years than others which were built with timber cut in winter have done in 20 or 30. And this our neighbours the French have experienced, and therefore have wisely ordered that the bark should be taken off the trees standing at the proper time, but the trees are left till the next, and sometimes until the second winter, before they are cut down; and the timber of these are found to be more durable and better for use than that of any trees which have not been peeled."

I may remark that when the above was written by Miller, the celebrated Duhamel, probably the best vegetable physiologist of the period, was Inspecteur Général de la Marine; and perhaps to this circumstance is to be attributed the superiority of the French ships of war as regards duration, compared with English ships. *Cepurus.*

MYCOLOGY.—No. XXIV.

Agaricus retirugis, *Batsch.*—Few species are more common than this in rich pastures amongst the Grass itself, or on dung. At a distance it is a very unattractive species, though few will better repay an attentive examination.

The pileus when young varies from subglobose to ovate, and when expanded is sometimes hemispherical, but more frequently campanulate, and of a pallid cinereous hue. The surface varies greatly in the same group. Sometimes it is perfectly smooth and shining and minutely cracked into little rectangular patches, but never positively viscid; sometimes on the contrary it is netted with minute pits or wrinkles, visible to the naked eye, and very beautiful when examined under the lens, and in this condition alone it answers to its name. The stem is hollow, rufous within, between rufous and cinereous or purplish without and minutely

Agaricus retirugis. From an original drawing.

pruinose through its whole length. It is tall and rather slender, but tolerably firm and nearly equal except at the very base, where it is often slightly thickened. The gills are ventricose, ascending, attached to the stem and of a blackish grey colour, mottled with the dark nearly black spores. The border of the pileus when young has white fragments of the veil adhering to it, which are often perforated in the centre, so that the whole looks like a little lace-edging to the pileus. It is distinguished from *A. fimiputris*, which it closely resembles by its pruinose not smooth stem, and the absence of any viscid coating on the pileus.

This species belongs to the division Coprinarii, distinguished by the deep hue of the spores, in which particular the species which it comprises resemble the Coprini, differing from them principally in not having the gills deliquescent, and in the barren cells, or as they are often called antheridia, though without sufficient cause, not being so largely developed.

A. retirugis resembles very closely *A. corrugis* in external appearance, but that species has differently coloured spores. It is frequently gathered by the persons who supply the ketchup dealers under the name of Champignons; but it has no other merit than that of producing a dark brown fluid which may be mixed off with more genuine ketchup. It is sometimes stewed with other species, but whether accidents ever arise from its use we have had no means of ascertaining.

This and some other allied species are very apt to come up in Mushroom beds, especially those which are made without artificial spawn. If so they should be carefully removed as soon as they appear, and by no means be allowed to shed their spores, which are probably very rapid in their development, and may prove a troublesome weed in the Mushroom bed.

In a damp cold season like the present, with little direct sun-light, it is very probable that in many small gardens where everything is trusted to the manure of which the hot-bed was originally made without any fresh linings, many Melons, and the more tender Cucumbers, may have failed. In this case it is a good plan to inoculate the bed with a little good nursery spawn, and there is great probability, if the bed is neither too dry nor drowned with moisture, that there will be a useful crop of Mushrooms during September and October, which will amply repay the loss of the Cucumbers and Melons. *M. J. B.*

FLOWER CRICKETS.

[Dr. Asa Fitch thus describes the habits of a singular cricket which lives among flowers and not on the ground. Although we believe unknown in this country the curious account of its habits given in the third annual report of our learned friend upon the noxious insects found in the State of New York cannot fail to be read with interest.]

The genus Œcanthus, to which this insect pertains, was founded by Serville upon a species common in the south of Europe, named pellucens by Scopoli, for specimens of which, with many other European Orthoptera, I am indebted to M. Brisout de Barneville. Congeneric with this European insect we have three species in the United States, which are but little known, although they were named and described by Degeer nearly a century ago, and two of them are so common in the State of New York that their song is often heard upon the Vines and bushes in our yards, night after night, through the latter part of summer.

In their habits they differ remarkably from other crickets. The observation of Latreille that they dwell upon plants and are pleased with flowers, applies with considerable exactness to our American species, which may be met with in autumn quite common upon the flowers of the Golden Rod (Solidago), and in August I have noticed them on Rose bushes, several individuals being sometimes seen on one bush. It was from this statement of Latreille that Serville gave the generic name Œcanthus to these insects, this name being formed from two Greek words, implying "I dwell in flowers." But any situation where the foliage is dense, furnishing them a cool shady hiding-place, appear to be what they particularly desire, as they occur quite frequently on Grape Vines, on young Oaks and other bushes, where no flowers are near them. All other crickets it will be recollected reside upon the ground, in holes under stones, and similar situations. And it has been noticed of these insects and their kindred, that a peculiarity in the structure of their feet appeared to be essential to adapt them for the situations in which they reside—the catydids and other insects which dwell upon shrubbery having soft flat cushion-like soles to their feet, to enable them to cling to the stalks and leaves of plants, whilst in the crickets and other insects which reside upon the ground no such structure exists (Westwood, Introd. i., 441.) The flower crickets, however, appear to present an exception to this rule. They always reside upon plants, elevated from the ground, and yet the under sides of their feet are simple and merely covered densely with bristles, like those of other crickets. But perhaps this is no just exception to the rule stated. Though they dwell on plants, they do not travel about upon them, but remain stationary, each one in his own chosen abode, day after day. So I infer, from having noticed the song of one of these insects proceeding from the same spot upon a mass of Vines or upon a particular limb of a tree, upon each evening for a number of nights in succession. And it is quite probable therefore that the simple structure of their feet incapacitates them for clinging and leaping about from one leaf to another.

In the southern part of our State the song of the

flower cricket begins to be heard as early as the 1st of August, but it is a week later before it commences in the vicinity of Albany, and later still in the more northern parts of the State. Perched among the thick foliage of a Grape Vine or other shrubbery, some feet up from the ground, and as already stated, remaining in the same spot day after day, its song begins soon after sunset and before the duskiness of twilight arrives. It is distinctly heard at a distance of several rods, and the songster is always farther off than it is supposed. Though dozens of other crickets and catydids are shrilling on every side at the same time, the peculiar note of this cricket is at once distinguished from all the rest, consisting of repetitions of a single syllable, slowly uttered, in a monotonous melancholy tone, with a slight pause between. The children regard this cricket as no votary of the temperance cause; they understand its song to consist of the words *treat—treat—treat—treat*, which words, slowly uttered, do so closely resemble its notes that they will at once recall them to the recollection of almost every reader. And this song is thus continued without the slightest variation and without any cessation, I think, the whole night through. I however have sometimes heard it at the first commencement of its evening serenade uttering three syllables resembling the words *treat, treat, two; treat, treat, two*—as though the songster was supplicating a libation for his voiceless female mate as well as himself—a longer pause following each third note. This prelude is properly performed in limbering or otherwise adjusting his organs, preparatory to performing the regular carol, which is struck into in a few moments.

Many persons have noticed the catydid when singing, so far as to see that it is by rubbing its hind legs against the outer sides of its wing covers that its stridulation is produced. In the cricket, however, the hind legs are much shorter, and here we find that it is not by them but by raising its wing covers slightly so as to rub the under surface of one of them against the inner edge of the other that its song is caused. As the flower crickets have long slender hind legs similar to those of the catydids, we might suspect their note to be produced in the same manner. We however find that in this as in so many other points they are related to the crickets. And when we come to examine their wing covers, we are able to discover the very curious apparatus by which their stridulation is produced; and we find a peculiarity in its structure which at once explains why it is that the song of this insect consists of a single note always followed by a full pause or total cessation of the sound, instead of being continous or nearly so as it is in other crickets.

In the males the wing covers are flat and placed horizontally upon the back, with their outer third turned perpendicularly downwards and covering the sides. They are very thin and transparent, like clear glass, and may be compared to a window, with the veins like the sash dividing them into a number of panes or cells of various sizes or shapes. The four largest of these cells are placed in the disc or middle part of the wing, and are divided from each other by three straight veins, crossing the wing obliquely, the two hind ones parallel with each other, the forward meeting these at a right angle and forming with them the likeness of a very full-faced letter V impressed transversely. They thus resemble stout braces so placed in the wing as to keep the ribs and other longitudinal veins pressed asunder, hereby putting on the stretch the delicate membrane which forms the panes between the several veins. Thus each of these panes is like the head of a little drum or tabor, and when played upon, all vibrating at the same instant produce the one shrill note which this insect utters. And to augment the sound still more, it may be observed that the membrane forming each one of these panes is not a simple smooth surface, but is striated with numerous little elevated lines.

It now remains for us to describe the curiously constructed instrument by which all these little tabrets are excited into vibration. On the inner margin of the wing cover, at the anterior end of the V-like mark above described, will be seen a small thickened or callous-like spot from the fore part of which four veins extend to the base of the wing. The inner or hindmost one of these is the most thick and stout, and when particularly inspected it is found to be in several respects different from all the rest of the veins. It first runs straight inwards, almost transversely, and then abruptly turning extends with a curve to the base of the wing, this curved portion being more slender. On the upper or back side of the wing this vein is pressed strongly downwards, whereby a furrow is formed in the surface above it. On the under side it stands out from the surface in bold relief, forming an elevated ridge. Now it is this prominent ridge which is applied to the inner edge of the opposite wing cover, and as it runs transversely it will at once be seen that when the wing covers are slightly spread apart and closed again, the motion will draw this ridge up and down against the edge to which it is applied, precisely like the bow of a violin playing upon the strings. This vein may therefore appropriately be named the fiddle-bow, M. Goureau, the only one who has particularly described these parts in the common cricket, having given to it the corresponding French term *archet*. But if this vein were smooth like the other veins it obviously could produce no vibration. It would be like a fiddle-bow when greased. On examining it therefore with a magnifying glass in a strong light, an appearance like that of very fine transverse lines may be discovered. And on being placed in a microscope the real structure of this part may plainly be seen. What at first appeared like fine transverse lines is found to be a regular row of little flat cogs or teeth, resembling the front teeth of man, but rather more broad than high and slightly narrowed into a neck at their bases. They are inserted at short distances apart, somewhat as the nails of the fingers appear when the end of one finger is placed upon the top of another in a row. It is but a short portion of the most projecting part of the vein that is occupied by these teeth—little more than the 20th of an inch in length; and in that short distance 21 teeth are inserted, with intervals between which are more than double the length of the teeth. The teeth do not stand perpendicular to the surface, but incline towards the inner margin of the wing cover, and that portion of the vein which is studded with them is about the 10th of an inch from the inner edge. We shall now be able to understand the cause of the several peculiarities in the stridulation of this insect. It will readily be perceived that its fiddle-bow being drawn against the edge of the opposite wing cover, and the teeth with which it is furnished grating thereon will cause such a jar in the sash or frame work of both wing covers as will impart a brisk vibration to all the little tabrets or membraneous cells which are placed in this frame work. And the shrillness of the note of this insect is due to the extreme thinness of the membranes and the violent vibrations into which they are thrown by the sharp grating which these projecting teeth of the fiddle-bow with the little intervals between them produce. As the teeth incline inwards they act only when the wing covers are shutting together; when they are opening apart no grating can occur. It hence results from this peculiar mechanism that as the wing covers are successively opened and closed notes and intervals of about equal length are alternately produced. The row of teeth moreover being so short, they can cause a vibration of only a moment's duration, and it is not in the power of the insect to produce a continuous sound or a prolonged note. The reason of the several differences between the song of this and of the common cricket, whose stridulation has been described with so much exactness by M. Goureau (Annals Soc. Ent. vol. vi., p. 34), are all readily explained by the differences which we find in the structure of the wing covers in these two insects. In the common crickets both of Europe and of this country, the fiddle-bow instead of projecting teeth is merely furnished with elevated transverse ridges or ribs, and these occupy its whole length. Hence its note is more prolonged and far less loud and shrill than that of the flower cricket. M. Goureau was able in the dead insect to so move its wing covers whilst they were still pliant, as to produce the same sound which it utters when alive; and by merely scratching with a pin a similar effect was obtained.

THE RASPBERRY JAM TREE,

OR STINKING ACACIA (OF CENTRAL AND WESTERN AUSTRALIA) AND THE GUM WATTLE OR FRAGRANT ACACIA OF SOUTH AUSTRALIA.

In my journey into Central Australia (starting from Adelaide), I noticed a species of Acacia growing in the dry stony beds of some of the creeks (lat. 31° South and long. 141° East), the blossom of which yielded such a putrescent odour that it has received the name of the "stinking Acacia."

The leaves yielded no sensible smell when fresh, but having cut down a few small branches and placed them in the shade, I noticed that in 48 hours they gave out a strong unpleasant odour, something like rotten Cabbage. I had some branches in my tent, in which the temperature varied from 100° to 110° Fahr., and as at the same time the air was intensely dry it would appear that the odour is not easily eliminated.

A singular contrast was, however, exhibited in the wood, which, instead of partaking of the unpleasant smell of the blossoms or the leaves, was agreeably fragrant.

On my return to the settlements I found that this species of Acacia, though unknown in South Australia, Melbourne, or N. S. Wales, was known in Western Australia as the "Raspberry Jam Acacia," from some supposed resemblance in the fragrance of the wood to the odour of that well-known preserve. The wood has obtained the colonial name of "Raspberry Jam Wood," and the specimens from the Swan were very superior in fragrance to those from Central Australia. It is of a dark colour, very similar in appearance to Rosewood, very heavy and sunk in water like a stone, and so hard when dry as to turn the edge of a saw or chisel.

The odour is probably due to the presence of a small portion of oil as is the case with Sandal-wood, only not so *recherché*, and it remains yet to be seen if it can be turned to profitable account by the perfumer. Let us suppose that essential oil of "Raspberry Jam Wood" or some other extract could be obtained, it would not be a particularly pleasant perfume, but that does not militate against it, for the same may be said of musk, ambergris, and many others when pure.

The contrast between the odour of the blossom of the Raspberry Jam Acacia and the blossom of the well-known Gum Wattle (Acacia decurrens) is very remarkable. The former is sickly and about as fragrant as an old Cabbage stump; the latter is most agreeable and delicious—yes it is most sweet. Many of the valleys to the South of Adelaide every year as the season of blossoming returns are redolent with the exquisite fragrance. This fragrance is, however, entirely in the blossoms, for the wood and leaves are scentless.

The Wattle or Fragrant Acacia has been destroyed in nearly all the settled districts for the sake of the bark. That it might be profitably cultivated is beyond a doubt. 1st. It yields gall berries of great utility in many branches of commerce. 2d. A most valuable perfume. 3d. A gum similar to gum Arabic. 4th. The bark is much valued by the tanner. 5th. It might be cultivated on land which also could be used for pasturage. 6th. The seed might be turned to some account. The seed is in pods similar to Peas. Cockatoos are very fond of them. I noticed flocks of the beautiful rose-breasted cockatoos feeding off the seeds of the Raspberry Jam Acacia in Central Australia, and the white cockatoos in South Australia used to come in great numbers as regular as the season and gorge themselves with the seeds of the Gum Wattle. I used to vary my dinner, which from there being no fresh meat to be had was chiefly of salt pork, with a roast of these fellows, but I cannot say much in their favour, even with the recommendation of an Australian appetite.

The gum of the Fragant Acacia is used as an article of food by the Aborigines. I have used it myself and advised its use by others when hard pressed, and found it extremely nutritious. It requires some little cooking and bolting to get it down, for otherwise you might get as hungry while eating as if eating Walnuts. The natives would eat 2 to 3 lbs. at a sitting.

The gum is the most valuable product considered as an article of commerce. Some that I sent to England as a speculation realised 60*l*. per ton and a portion 63*l*. per ton. The bark realised 15*l*. per ton. My agent, however, advised me that those prices could not be maintained. As the gum is four times the value of the bark and is yielded annually, while the bark can only be obtained once (for the tree dies), it reminds one of the fable of killing the goose. A party of men and boys out "barking" would destroy a belt of Wattles a mile in length in a week, and they make no distinction as to whether they are growing on Crown or purchased land so long as the owner is not located on it.

The gum is used by manufacturers to give an apparent thickness and superior quality to their goods; also by confectioners and many others. A wholesale stay maker told me that it cost him 150*l*. per annum for gum arabic (which after all is chiefly obtained from Africa) merely to thicken and finish ladies' stays. The Australian savage eats the gum fresh and pure. Young England consumes it as a varnish or polish on his gingerbread and buns. *Louis Piesse, Calcutta, April 26.*

Home Correspondence.

Mr. Markham's Expedition to Peru.—My attention has been called to an article in your Paper of July 28, containing various false statements respecting my mission to Peru, to obtain plants of the quinine yielding Cinchona trees for introduction into India. I shall not notice the temper in which the article in question is written, but merely beg that you will correct the statements which are absolutely untrue. 1. Lord Ellenborough had nothing whatever to do with my appointment; nor has he probably ever heard either of me or of the service on which I am employed. 2. A practical gardener accompanied me on the expedition, not because there was any doubt as to my fitness; but to assist in establishing the plants in the Wardian cases, and to act for me in the event of illness or accident. 3. It is false that I was on the way home on July 28, having accomplished nothing beyond drawing a certain amount of pay. On that day I arrived in Southampton with a large supply of plants of the most valuable species of Cinchona (Calisaya, var. α and β) in good condition; which will be forwarded to their destination in India by the first steamer. 4. It is untrue that a similar enterprise has been successfully undertaken by the French Government. As to my "incompetence," and to the affair being "discreditable," I trust your readers will attach as little faith to such statements as to those which I have already shown to be wholly devoid of foundation. *Clements Markham, Union Club, Trafalgar Square, August* 1. [We have also been favoured with a copy of an official report made by Mr. Markham to the India Board, which, in justice to that gentleman, we shall fully notice next week.]

Mock Rainbow and Thunderstorm.—About 5 o'clock on the morning of the 28th of July, I observed in the east a remarkable appearance in the sky, which I cannot account for. Perhaps those of your readers who are in the habit of giving explanations respecting natural phenomena may throw some light on the subject. What I saw looked as if part of a primary rainbow, as far as the colouring was concerned, had been placed in a perpendicular manner among the clouds, not opposite the sun like the rainbow, but about the same altitude and in the same easterly direction as the sun. How long it had appeared before I saw it I cannot tell, but it remained for some time after I saw it. During the early part of the day the weather was still and warm; about half-past 12 a sudden change took place in the east, the clouds were pouring down rain in such a manner that for a short time part of the

sky appeared to be covered with extensive cascades falling upon the easterly parts of the Ochils, the Vale of Devon, and the Saline hills, and to the observer who was standing high and dry it had a beautiful appearance. About 3 o'clock in the afternoon, in the same direction of the sky, another change took place; there were thunder, rain, and hail, the hailstones being of large size, some of them transparent, resembling ice; it is reported that in some places considerable damage is done to the leaves of Turnips and other plants having broad foliage. A fragment of a rainbow is frequently seen, and is looked upon by some persons as a kind of weather-gauge; those who have studied the rainbow, the halos, parhelia, mirage, the colours of the atmosphere, and coloured shadows, may be able to tell whether the coloured appearance in the east on the morning of the 28th of July had any connection with the sudden and varied changes which took place in the atmosphere during the day. *P. Mackenzie, Plean, Stirling.*

Glazing.—I have lately had occasion to repair and enlarge my greenhouse, and have substituted for the old-fashioned description of roof one of squares of 32-oz. glass, measuring 2 feet by 3 feet, laying flat at an inclination of 21°. Several of my friends tell me that it runs great risk of breakage by hail and atmospheric causes. Can any of your readers give an opinion as to this, as from observation I notice the Crystal Palace and many other modern glass houses present an angular instead of a flat surface to the atmosphere? *F., Thetford.* [We don't think 32-oz. glass will break: but unless very efficient ventilation is provided, such large squares will be found productive of injury in another way.]

Education of Gardeners.—I did not anticipate when this discussion began that it would have partaken of a mercenary tone. That in my opinion should have been avoided and the subject of education strictly adhered to. I have always been a staunch advocate for young gardeners subjecting themselves to a course of examination in such branches of science as were connected with gardening; their acquitting themselves well in these would entitle them to a certificate of competency. No one denies that industry combined with perseverance independent of every other qualification will enable a man to surmount difficulties and possibly to obtain a first-class position; but does it not make a man more useful if his mind is carefully furnished with the kind of information his daily avocations require. Some affect to treat gardening literature with contempt, and sneer at those who may happen now and then to contribute their mite of information. I have heard such men boast that they never sought assistance either from books or papers, and yet they would eagerly read reports of flower shows or descriptions of new plants in which they were interested. By what means, let me ask, could we acquire a knowledge of the past but by books? We should not only look upon our profession as a means of subsistence, but also as one of enjoyment, and this is only to be done by making ourselves acquainted with the causes which produce effects, and thus enable us to assign a reason for performing even the simplest operation; besides, as regards plants, a twofold delight would be realised by possessing a knowledge not only of their cultivation but of their structure and the geographical position of the countries from which they came, the means by which they were introduced, whether possessing nutritious or medicinal qualities, or only grown for ornamental purposes. To an intelligent mind such information would be a source of delightful contemplation. It is for this that enterprising botanists cheerfully undergo severe privations in travelling over wild plains, ascending bleak hills, and wading through marshy valleys; they thus aid civilisation by contributing to the mental and physical comforts of mankind. Let me advise young gardeners if they wish to expand their intellectual faculties not to murmur at their scanty income, as an excuse for not obtaining books, &c., but to deny themselves needless luxuries, such as Tobacco and the intoxicating draught; these only tend to bewilder, and men would find at the end of the year that the aggregate sum so expended, if saved, would purchase many useful and valuable books, which to the possessor would be property, beside affording a fund of knowledge. It has been stated by one of your correspondents that Sir Joseph Paxton owes his present position to perseverance and industry; true, but if he had never added to his gardening education a knowledge of drawing, it is possible we should never have heard of the Crystal Palace; yet how many hundreds of gardeners overlook that most important branch of their profession. To acquire a perfect acquaintance with any science requires constant and studious application—this the mind is capable of when young, it not being then fettered with domestic duties and the responsibilities of after life. If we would but embrace the opportunity afforded us when young we would be proud of our labours in after years. In the absence of the existence of an Educational Institution, there are various ways by which we might mutually impart knowledge, as for instance, circulating book societies; a microscope might also be purchased which would afford at intervals during the winter evenings an endless source of profitable amusement. Listen not then to those who would decry such pursuits as theoretical; remember that all original ideas may be classed as theory in the first instance, and afterwards reduced to practice—be not dissatisfied with your present condition, but let your motto be upwards and onwards. *John F. M'Elroy, Gr. to W. J. Lancaster, Esq., Stamford Hill.*

Begonia grandis.—Of the many fine varieties of this genus which of late years have become common in our stoves I consider this the most aptly named. True, some may excel it in delicacy of tracing, such as B. Thwaitesii, B. Marshallii, and others, some in their noble bunches of rosy bloom at a dull season of the year; and many favourites might be mentioned, each with a distinctive peculiarity demanding attention; but grandis is certainly the finest I have ever grown, and we are much indebted to Messrs. Rollisson for sending out such a good addition to ornamental-foliaged plants. To do it justice in its cultivation I find that it requires plenty of heat, moisture, pot room, and head room, careful shading, and *not a drop of water should be allowed to touch the foliage.* It delights in a rich porous soil, enriched occasionally with weak manure water. This fine variety is of quick growth; the leaves are very large and showy, and if when in perfection the plant is so placed that the afternoon sun can play through and amongst the young half-grown foliage, the effect is at once as novel as it is striking, almost rivalling the rich tints of a glorious sunset. It should form a conspicuous feature in every good collection. *J. W. L.*

Shamrock.—With reference to the discussion as to what is Shamrock, I would call the notice of your correspondents to the following extracts from "Wade's Catalogus systematicus plantarum indigenarum in comitatu Dublinensi inventarum," Dublin, 1794, p. 123:—"Oxalis acetosella: Anglis, common Wood Sorrel, &c.; Hibernis Seamsog, Samha fearna. Inveni in sylvis, et ad arborum radices, Luttrellstown, Santry, Phœnix Park, et alibi; et in ericetis umbrosis passim." P. 201:—"Trifolium repens: Anglis, creeping white Trefoil, Dutch Trefoil, &c., Hibernis, Seamair bhan, Seamrog. Inveni in pratis et pascuis ubique." I will not answer for Dr. Wade's correctness as a botanist or as a scholar in Latin or Irish, but if he be correct in his Irish, of which I am no judge, his evidence would be in favour of Dutch Clover being Shamrock, though that is not the Trefoil I have generally heard called by that name. The word Shamrock does not appear in Dr. Wade's book. The Wood Sorrel is as abundant in the woods of the Co. Wexford (at the least of the northern part of it) as the Dutch Clover is in the fields, and inasmuch as when Irish was the vernacular of that district the woods were more extensive than the fields, the probability is that Wood Sorrel was the commoner plant. *W. X.*

Spergula pilifera.—I cannot boast of any very extensive acquaintance with this plant, "this little horticultural wonder, this imitation of swan's-down in bright and lasting verdure" (*vide* Mr. Hibberd's report, p. 648); but in reply to his inquiries, I will give him the result of my experience, such as it is. Having in the early part of last year sown several pans of seed of it in a cool frame, I was soon gratified by the production of a quantity of heathy-looking plants, which I carefully transplanted on a border of good mellow-working garden soil; in spite however of constant attention in the way of watering and shading, these made very poor progress, a fact which I attributed in a great measure to the hot scorching weather which then prevailed. Other seeds which I placed simply under the protection of a hand-glass also grew up, soon entangling themselves so as to form a perfect web; of these I entertained great hopes; this little pet was really about to oppose our venerable English Grass lawns! aye, and absolutely to supersede them, so some people said. My employer now looked on smilingly, he having first directed my attention to it, and being anxious for it to succeed. I cut it tenderly (early in August) into small tufts, and planted them on a terrace in the shape of a verge, where they had a considerable depth of good soil. Their progress there, although slow, appeared satisfactory, as they well established themselves in the way of roots, but on the approach of winter they began to wear a sear and yellow aspect; as spring advanced again and genial weather arrived I certainly expected them to resume their healthy verdure, but no; on the contrary they began to produce myriads of insignificant white blossoms. Now, if the plant is, as I naturally infer, liable to an annual recurrence of these flowers, I say, that a Grass lawn smothered with Daisies is for the time being equally effective and ornamental. No doubt there are sheltered nooks and corners where a more vigorous habit might be induced as well as less inclination to flower, and where a greener tinge might be obtained throughout winter; but if its general characteristics in open, sunny situations are the same as here, with a good selection of fine Grasses it can certainly bear no comparison. Should it hereafter be proved that I have done the plant injustice, I shall feel most happy to retract what I have said; meanwhile, however (unlike Mr. Hibberd), I would say let not ingenious inventors of lawnmowers feel discouraged, for I anticipate, the dawn is far distant beyond the horizon, when their valuable aid may be dispensed with. True the little lawn at Forest Hill is reported to be all that could be desired, and I do not doubt the correctness of the statement; but it must have been produced with unusual care, and a similar result has not attended other attempts to establish the plant. *John Couldrey, Primley Hill, Paignton.*

Societies.

HORTICULTURAL: *Fruit Committee, July* 31.—A seedling Strawberry called Frogmore Late Pine was contributed on this occasion by Mr. Ingram; it was stated to be of a strong robust habit, to ripen at the same time as the Elton, and to possess the good property of remaining long in a bearing state; it was awarded a First-class Certificate. From Mr. Cuthill came Highland Mary, Richard the 2d, Prince of Wales, Black Prince and Princess Royal, all varieties of Strawberry of which favourable mention has been made on previous occasions; these were not sent for competition; but merely as an example of what may be obtained off the same soil year after year by means of skilful cultivation. Mr. Culverwell, of Thorp Perrow, near Bedale, sent a Seedling Strawberry named Sanspareil, to which a First-class Certificate was awarded; it is of medium size, fine shape, and of good flavour. Mr. Standish, of Bagshot, again sent examples of Ingram's Hardy Prolific Grape, a new black kind, with a pleasant Muscat flavour, and favourably mentioned in our last report; it was awarded a First-class Certificate. From Messrs. Ivery, of Dorking, came a beautiful bunch of Buckland Sweetwater Grape, a variety which, when better known, cannot fail to be a favourite; the bunch is of good size, well shouldered and handsome, and the flavour good; this variety is, however, as yet scarce—not more than two specimens of it in a fruit-bearing state being at present in the country, one at the Deepdene, near Dorking, and the other in Messrs. Ivery's nursery. Other subjects of exhibition consisted of Gooseberries, Raspberries, and Cucumbers. Among the last were two specimens of Turner's Favourite or Manchester Prize, a useful variety, 23 inches or so in length, handsome and well flavoured; these came from Mr. Turner of Slough.

BRITISH ASSOCIATION AT OXFORD.—Dr. Collingwood read a paper "On Recurrent Animal Form and its Significance in Systematic Zoology."—The object of this paper was to call attention to the frequent recurrence of similar forms in widely-separated groups of the animal kingdom; similarities, therefore, which were unaccompanied by homologies of internal structure. These analogies of form had greatly influenced the progress of classification, by attracting the attention of systematisers, while as yet structural homologies were imperfectly understood; and, as a consequence, many groups of animals had been temporarily located in a false position, such as bats and whales by the ancients, and the Polyzoa and Foraminifera in more modern times. These resemblances in form were illustrated generally by the classes of Vertebrata, and more especially by the various orders of Mammalia—the Invertebrata affording, however, many remarkable examples. Since no principle of gradation of form would sufficiently account for these analogies, the author had endeavoured to discover some other explanation, and had come to the conclusion that the fact of deviations from typical form being accompanied by modifications of typical habits, afforded the desired clue. Examples of this were given, and the principle educed, that agreement of habit and economy in widely-separated groups is accompanied by similarity of form. This position was argued through simple cases to the more complex, and the conclusion arrived at that, where habits were known, the explanation sufficed; and it was only in the case of animals of low organisation and obscure or unknown habits, that any serious difficulty arose in its application; so that our appreciation of the *rationale* of their similarity of form was in direct ratio to our knowledge of their habits and modes of life. In conclusion, by a comparison of the Polyzoa with the Polyps, it was shown that the economy of both was nearly identical, although they possessed scarcely anything in common except superficial characters; and this identity of habit was regarded as the explanation of their remarkable similarity of form.

"On the Intellectual Development of Europe, considered with Reference to the Views of Mr. Darwin and others, that the Progression of Organisms is determined by Law,' by Prof. Draper, M.D., of New York.—The object of this paper was to show that the advancement of man in civilisation does not occur accidentally or in a fortuitous manner, but is determined by immutable law. The author introduced his subject by recalling proofs of the dominion of law in the three great lines of the manifestation of life. First, in the successive stages of development of every individual, from the earliest rudiment to maturity; secondly, in the numberless organic forms now living contemporaneously with us, and constituting the animal series; thirdly, in the orderly appearance of that grand succession which in the slow lapse of geological time has emerged, constituting the life of the Earth, showing therefrom not only the evidences, but also proofs of the dominion of law over the world of life. In those three lines of life he established that the general principle is, to differentiate instinct from automatism, and then to differentiate intelligence from instinct. In man himself three distinct instrumental nervous mechanisms exist, and three distinct modes of life are perceptible, the automatic, the instinctive, the intelligent. They occur in an epochal order, from infancy through childhood to the more perfect state. Such holding good for the

individual, it was then affirmed that it is physiologically impossible to separate the individual from the race, and that what holds good for the one holds good for the other too; and hence that man is the archetype of society, and individual development the model of social progress, and that both are under the control of immutable law: that a parallel exists between individual and national life in this, that the production, life, and death of an organic particle in the person answers to the production, life, and death of a person in the nation. Turning from these purely physiological considerations to historical proof, and selecting the only European nation which thus far has offered a complete and completed intellectual life, Prof. Draper showed, that the characteristics of Greek mental development answer perfectly to those of individual life, presenting philosophically five well-marked ages or periods,—the first being closed by the opening of Egypt to the Ionians; the second, including the Ionian, Pythagorean, and Eleatic philosophies, was ended by the criticisms of the Sophists; the third, embracing the Socratic and Platonic philosophies, was ended by the doubts of the Sceptics; the fourth, ushered in by the Macedonian expedition and adorned by the splendid achievements of the Alexandrian school, degenerated into Neoplatonism and imbecility in the fifth, to which the hand of Rome put an end. From the solutions of the four great problems of Greek philosophy, given in each of these five stages of its life, he showed that it is possible to determine the law of the variation of Greek opinion, and to establish its analogy with that of the variations of opinion in individual life. Next, passing to the consideration of Europe in the aggregate, Prof. Draper showed that it has already in part repeated these phases in its intellectual life. Its first period closes with the spread of the power of Republican Rome, the second with the foundation of Constantinople, the third with the Turkish invasion of Europe: we are living in the fourth. Detailed proofs of the correspondence of these periods to those of Greek life, and through them to those of individual life, are given in a work now printing on this subject, by the author, in America. Having established this conclusion, Prof. Draper next briefly alluded to many collateral problems or inquiries. He showed that the advances of men are due to external and not to interior influences, and that in this respect a nation is like a seed, which can only develope when the conditions are favourable, and then only in a definite way; that the time for psychical change corresponds with that for physical, and that a nation cannot advance except its material condition be touched,—this having been the case throughout all Europe, as is manifested by the diminution of the blue-eyed races thereof; that all organisms and even man are dependent for their characteristics, continuance, and life on the physical conditions under which they live; that the existing apparent invariability presented by the world of organisation is the direct consequence of the physical equilibrium, but that if that should suffer modification, in an instant the fanciful doctrine of the immutability of species would be brought to its proper value. The organic world appears to be in repose because natural influences have reached an equilibrium. A marble may remain motionless for ever on a level table, but let the table be a little inclined, and the marble will quickly run off: and so it is with organisms in the world. From his work on Physiology, published in 1856, he gave his views in support of the doctrine of the transmutation of species: the transitional forms of the animal and also the human type; the production of new ethnical elements, or nations; and the laws of their origin, duration, and death.—The announcement of this paper attracted an immense audience to the Section, which met this morning in the Library of the New Museum. The discussion was commenced by the Rev. Mr. Cresswell, who denied that any parallel could be drawn between the intellectual progress of man and the physical development of the lower animals. So far from the author being correct with regard to the history of Greece, its masterpieces in literature—the Iliad and Odyssey—were produced during its national infancy. The theory of intellectual development proposed was directly opposed to the known facts of the history of man.—Sir B. Brodie stated, he could not subscribe to the hypothesis of Mr. Darwin. His primordial germ had not been demonstrated to have existed. Man had a power of self-consciousness—a principle differing from anything found in the material world, and he did not see how this could originate in lower organisms. This power of man was identical with the Divine Intelligence: and to suppose that this could originate with matter, involved the absurdity of supposing the source of Divine power dependent on the arrangement of matter.—The Bishop of Oxford stated that the Darwinian theory, when tried by the principles of inductive science, broke down. The facts brought forward did not warrant the theory. The permanence of specific forms was a fact confirmed by all observation. The remains of animals, plants, and man found in those earliest records of the human race—the Egyptian catacombs—all spoke of their identity with existing forms, and of the irresistible tendency of organised beings to assume an unalterable character. The line between man and the lower animals was distinct: there was no tendency on the part of the lower animals to become the self-conscious intelligent being, man; or in man to degenerate and lose the high characteristics of his mind and intelligence. All experiments had failed to show any tendency in one animal to assume the form of the other. In the great case of the pigeons quoted by Mr. Darwin, he admitted that no sooner were these animals set free than they returned to their primitive type. Everywhere sterility attended hybridism, as was seen in the closely allied forms of the horse and the ass. Mr. Darwin's conclusions were an hypothesis, raised most unphilosophically to the dignity of a causal theory. He was glad to know that the greatest names in science were opposed to this theory, which he believed to be opposed to the interests of science and humanity—Prof. Huxley defended Mr. Darwin's theory from the charge of its being merely an hypothesis. He said, it was an explanation of phenomena in Natural History, as the undulating theory was of the phenomena of light. No one objected to that theory because an undulation of light had never been arrested and measured. Darwin's theory was an explanation of facts; and his book was full of new facts, all bearing on his theory. Without asserting that every part of the theory had been confirmed, he maintained that it was the best explanation of the origin of species which had yet been offered. With regard to the psychological distinction between man and animals; man himself was once a monad—a mere atom, and nobody could say at what moment in the history of his development he became consciously intelligent. The question was not so much one of a transmutation or transition of species, as of the production of forms which became permanent. Thus the short-legged sheep of America were not produced gradually, but originated in the birth of an original parent of the whole stock, which had been kept up by a rigid system of artificial selection.—Admiral Fitzroy regretted the publication of Mr. Darwin's book, and denied Prof. Huxley's statement, that it was a logical arrangement of facts.—Dr. Beale pointed out some of the difficulties with which the Darwinian theory had to deal, more especially those vital tendencies of allied species which seemed independent of all external agents. — Mr. Lubbock expressed his willingness to accept the Darwinian hypothesis in the absence of any better. He would, however, express his conviction, that time was not an essential element in these changes. Time alone produced no change.—Dr. Hooker, being called upon by the President to state his views of the botanical aspect of the question, observed, that the Bishop of Oxford having asserted that all men of science were hostile to Mr. Darwin's hypothesis—whereas he himself was favourable to it—he could not presume to address the audience as a scientific authority. As, however, he had been asked for his opinion, he would briefly give it. In the first place, his lordship, in his eloquent address, had, as it appeared to him, completely misunderstood Mr. Darwin's hypothesis: his lordship intimated that it maintained the doctrine of the transmutation of existing species one into another, and had confounded this with that of the successive development of species by variation and natural selection. The first of these doctrines was so wholly opposed to the facts, reasonings, and results of Mr. Darwin's work, that he could not conceive how any one who had read it could make such a mistake—the whole book, indeed, being a protest against that doctrine. Then, again, with regard to the general phenomena of species, he understood his lordship to affirm that these did not present characters that should lead careful and philosophical naturalists to favour Mr. Darwin's views. To this assertion Dr. Hooker's experience of the Vegetable Kingdom was diametrically opposed. He considered that at least one half of the known kinds of plants were disposable in groups, of which the species were connected by varying characters common to all in that group, and sensibly differing in some individuals only of each species; so much so that, if each group be likened to a cobweb, and one species be supposed to stand in the centre of that web, its varying characters might be compared to the radiating and concentric threads, when the other species would be represented by the points of union of these; in short, that the general characteristics of orders, genera, and species amongst plants differed in degrees only from those of varieties, and afforded the strongest countenance to Mr. Darwin's hypothesis. As regarded his own acceptation of Mr. Darwin's views, he expressly disavowed having adopted them as a creed. He knew no creeds in scientific matters. He had early begun the study of natural science under the idea that species were original creations; and it should be steadily kept in view that this was merely another hypothesis, which in the abstract was neither more nor less entitled to acceptance than Mr. Darwin's: neither was, in the present state of science, capable of demonstration, and each must be tested by its power of explaining the mutual dependence of the phenomena of life. For many years he had held to the old hypothesis, having no better established one to adopt, though the progress of botany had, in the interim, developed no new facts that favoured it, but a host of most suggestive objections to it. On the other hand, having fifteen years ago been privately made acquainted with Mr. Darwin's views, he had during that period applied these to botanical investigations of all kinds in the most distant parts of the globe, as well as to the study of some of the largest and most different Floras at home. Now, then, that Mr. Darwin had published it, he had no hesitation in publicly adopting his hypothesis, as that which offers by far the most probable explanation of all the phenomena presented by the classification, distribution, structure, and development of plants in a state of nature and under cultivation; and he should, therefore, continue to use his hypothesis as the best weapon for future research, holding himself ready to lay it down should a better be forthcoming, or should the now abandoned doctrine of original creations regain all it had lost in his experience.

Dr. Daubeny gave an account of some experiments he had performed on the subject of Equivocal Generation. He described the apparatus he had employed, and stated that, after passing air through sulphuric acid, he found in the distilled water into which it was introduced, indications of organic life.—Dr. Bowerbank pointed out two sources of error in the experiments: first, that the bottles used were corked, and, second, that they were covered with Linseed-meal.—Dr. Ogilvie had performed a series of experiments of the same kind, but obtained no indications of life. At a subsequent meeting Dr. Daubeny stated that Dr. Bowerbank and other gentlemen had examined the jars in which he had performed his experiments on Equivocal Generation. No animal life was to be found, and only a few filaments of Fungi. These were probably derived from the source of error pointed out by Dr. Bowerbank, in the cork and Linseed-meal.

Mr. Westwood read a communication from Prof. Verloren, "On the Effect of Temperature and Time on the Development of certain Lepidoptera."—A table was exhibited showing the period at which the larvæ of the *Sphinx Ligustri* were hatched. From these tables it appeared that the great proportion of the insects were hatched in the middle of June.

Mr. P. L. Sclater read a paper "The Geographical Distribution of Animals."—The reading of this paper led to another discussion on the origin of species.—Mr. Westwood exhibited a series of specimens of butterflies, showing the close relationship between the forms of Australia and South America.—Prof. Huxley stated that much stress had been laid upon the statement, that animals changed by domestication returned to their primitive type when they were allowed to run wild. He did not think it was the case; and it was an assumption that the wild horses of the Pampas of America were identical in form with the original wild horse.—Mr. J. Clarke stated that cultivated tulips had a tendency to run back into the common form of the wild tulip.—Dr. Wright stated that he had tried experiments on the cultivated Cabbage, and, although it degenerated, it never assumed the form of the genuine wild plant, *Brassica oleracea*.

Mr. T. M. Masters read a paper "On the Morphology of some Monstrous Forms of Plants."—The paper was illustrated by a large number of recent and dried forms of monstrous plants and parts of plants.

The Rev. Prof. Henslow made some remarks on the growth of Wheat obtained from mummies. He introduced his observations by reading a letter from Prof. Wartmann, of Geneva, who had recently found that seeds might be exposed to a temperature of 198° below zero of Fahrenheit's scale without losing the power of germination. Prof. Henslow had himself exposed seeds to the temperature of boiling water, and they germinated. The question of how long seeds would retain their vitality was one of great interest; and a Committee of this Association had reported on the subject, but they had not succeeded in making seeds grow which had been kept more than two centuries. He then showed that all experiments recorded on the growth of mummy Wheat were fallacious, and especially noticed the case which had been relied on so much, of the growth of mummy Wheat by the Rev. Mr. Tupper from seeds supplied him by Sir Gardner Wilkinson. The mummy Wheat in this case was known to have been removed in jars that had been used for storing recent Wheat. He then alluded to the Raspberry seeds from the stomach of a warrior, found in the neighbourhood of Corfe Castle, and stated that the old seeds were actually exhibited at the Horticultural Society on the same table with recent ones, so that they might easily have been mixed. [This is quite a mistake.] A discussion ensued, in which numerous cases of the supposed antiquity of seeds were given, but no case which could be said to afford experimental proof.

Entomological: *July* 2.—J. W. Douglas, Esq., President, in the chair. Mr. Stevens exhibited a portfolio containing a portion of a collection of European Lepidoptera, formed by transferring the scales from the wings of the insects to paper by a process unknown, and by which the form and markings of the species were beautifully preserved; it was stated that the collection had been formed in Germany by the labour of a lifetime, and had been forwarded to this country for sale. Mr. Jansen exhibited some Scottish Coleoptera, including Otiorhynchus septentrionis, Scolytus Ratzeburgii, Magdalinus carbonarius, &c., lately found in Perthshire. Mr. McLachlan exhibited a beautiful example of Chrosis Audouiana, from Darenth Wood, Kent. Mr. Douglas exhibited some Coleoptera found in the exuding sap of trees infested by the larva of Cossus ligniperda, including Tachinus bipustulatus, Omalium planum, Homalota cinnamomea, H. hospita, &c.; he also exhibited Conopalpus testaceus bred from rotten Oak branches during the present spring. Mr. Rye exhibited some examples of Laccophilus variegatus,

lately found by the Rev. H. Clarke, near Pevensey, Sussex. Mr. Lewis exhibited Thiasophila inquilina found in a nest of Formica fuliginosa, near Charlton. Mr. Jansen exhibited a specimen of Homalota subterranea, a species hitherto only detected in France, which he had found in a nest of Formica flava at Mickleham, on the 23d ult. The Secretary read a communication from R. L. Guppy, Esq., Port of Spain, Trinidad, on the habits of a species of Ranatra, resembling the R. linearis of Europe, found in a stream in that island.

Notices of Books.

A Guide to the Isle of Wight. By the Rev. E. Venables, M.A. 12mo. Stanford. Pp 526.

In this thick little volume the author undertakes to furnish the reader with "a faithful picture of every part of the island," and "such information respecting the history, antiquities, and architecture of the island, as well [as] the natural treasures it contains, as may satisfy every taste, and aid the tourist in the pursuit of his favourite science, whatever it may be." This, it must be confessed, is a dainty dish. Our favourite science being the Botany of the island, let us say how it is provided by Mr. A. G. More, of Bembridge, who contributes that subject with the assistance of good local observers. He divides the whole Flora into regions, the Sea-side, Northern Tertiary, Central Chalk (here we find "Calcareophilous," a word to shudder at), Greensand Valley, and Undercliff with the Downs above it; while Ferns, Mosses, Lichens, Seaweeds and Fungi, are separately dealt with. Each region is divided with considerable minuteness into localities, which is precisely what is wanted in a Guide-Book. As to the species enumerated we are glad to see so many of the questionable, or "critical," or as most botanists think them bad, species introduced; for it calls the tourist's attention to their presence, and gives him an opportunity of studying the value of the characters upon which their distinction is said to depend. All this is extremely well done, and renders the volume a treasure to the traveller interested in the vegetation of the island. We only wonder that Mr. More should have omitted all mention of Arum italicum, one of the rarest of British plants, perfectly distinct from A. maculatum with which Bromfield confounded it, and which most certainly grows at Steephill, the only locality that we know of. In justice to Mr. More we must quote his opening chapter:—

"Owing to the varied nature of its soil, and the endless diversity of its landscape, the Isle of Wight offers to the botanist a field of the highest interest. Its position, too, at the extreme south of England, and midway between the eastern and western Floras, give it, with an extended coast line, peculiar advantages; and now that the vegetation of the island has been so thoroughly explored by so accomplished a botanist as Dr. Bromfield, through whose labours its soil may be almost said to have become classic ground, there is perhaps no better opportunity for studying indigenous plants than is afforded by a short stay in this favoured locality.

"From its vicinity to the main land the Flora of the Isle of Wight does not evince in any marked degree an insular character, and differs but little from that of Hampshire. It is the somewhat larger proportion of species belonging to the 'Atlantic Type' of Watson, and the comparatively smaller number of 'Germanic' plants, which distinguish the botany of the Isle of Wight from that of the county; and it will be remembered that the 'Atlantic' or west-country Flora is of a decidedly more maritime character than the 'Germanic' (or that of the east side and south-east corner of England).

"Those who have rambled upon the chalk hills of the mainland will miss not only the familiar groves of Beech, with the two lovely white Helleborines, (Cephalanthera ensifolia cannot with certainty be included in the island Flora), and the Monotropa, their sure attendants (here among the rarest of plants), but strange to say, Paris quadrifolia, Phyteuma orbiculare, Daphne Mezereon, the Convallariæ, Hordeum sylvaticum, Dipsacus pilosus, Helleborus viridis, and even Taxus baccata, are altogether wanting on this side of the Solent, though it is hardly to the absence of chalk or of localities apparently suitable that this deficiency is to be attributed.

"The paucity of aquatic plants is another remarkable circumstance, though less unexpected in a district too small to give rise to any considerable streams."

Let us add that the other branches of Natural History are also prepared with care, and in detail enough to afford a satisfactory guide to tourists of all pursuits.

Flora of the Southern United States, containing abridged descriptions of the Flowering Plants and Ferns of Tennessee, North and South Carolina, Georgia, Alabama, Mississippi and Florida. By A. W. Chapman, M.D. 8vo. New York, Ivison & Co. Pp. 621.

A worthy companion to Asa Gray's Manual of the Botany of the Northern United States, and written upon the plan of that model Flora. It commences with—1, a Sketch of the Elements of Botany in the form of Aphorisms; 2, a Glossary of Terms; 3, Abbreviations of the names of Authors; 4, Explanation of Signs; 5, Directions to the Student; and 6, an Artificial Analysis of the Natural Orders. These subjects form xxxviii pages of prefatory matter. The remainder of the volume, consisting of 621 closely printed pages, contains a systematical description of the Southern Flora and an excellent Index. To European as well as North American Botanists, it is difficult to overstate the value of this work, for, with the exception of Elliott's *Botany of South Carolina and Georgia*, a book now obsolete and almost unprocurable, there was no general account of the remarkable vegetation of the vast regions either washed by the waves of the Gulf of Mexico, or rendered quasi-tropical by the heated Gulf Stream. A country where Tillandsias and Epidendrums grow upon the trees, Yams and Zamias in swamps, Palms and Yuccas in the plains and along the coast, while the forests contain Pines, Firs, Arbor-vitæs, Hazel Nuts, Sweet Chesnuts, Oaks, and other northern forms, yields in interest to no other region in the world. In placing on record the species it contains, Dr. Chapman would have rendered science a real service, even had his task been performed less skilfully and conscientiously than it has been. We, however, bear glad testimony to its excellence in both these respects. The work has placed him among the foremost ranks of systematical botanists.

A good many new species are introduced into his pages, and one new genus, *Leitneria* among Myricaceæ, a shrub from the salt marshes of Florida. There appears to be a wise exclusion of the crowds of bad species conjured up into a fugitive existence in the gardens of England, France, and Germany. But we miss Maclura and the Epidendrum tampense sent from Tampa Bay, in Florida, by Torrey. These, however, are all the omissions that occur to us in hastily running over Dr. Chapman's pages.

Reminiscences of an Old Sportsman. By Col. J. P. Hamilton, K.H. 2 vols. 8vo. Longmans.

When an author tells us that he has been blind for upwards of 20 years, and that his pages are only the fond remembrances of what happened when he was young, criticism is disarmed. Were it otherwise it would be ungracious to treat the genial gossip of a fine old sportsman like the studied sentences of a practised litterateur. Let us therefore be content with saying that the perusal of these volumes has given us much pleasure, and that we cordially recommend them to all who love every kind of field sport except the present kid-glove system of "slaughtering game by wholesale, as is the modern practice of battues."

Now that youngsters are about to try their hands at a little shooting, they may be glad to hear the advice of one who well knows what a beginner should attend to.

"The great fault of young sportsmen is shooting under their birds; to obviate this Joe Manton, many years ago, made his guns with elevated sights. In taking aim at an object, either flying or running, it is of essential consequence to keep the arm in constant motion; although this may not be acquired when you first begin to shoot, after a few months' practice you will be sure to move the arm spontaneously, and very likely become a first-rate shot; this is a *sine qua non*.

"Should you be shooting in a champaign country, and have not a marker with you, one very essential point is to observe the spot where the covey alights; therefore, when you have killed your bird, you should not run to pick it up, or employ yourself in making the dogs bring it, but keep your eye fixed on the covey until you see them flip their wings and settle, or as far as your sight can extend. If you should be unable to ascertain the exact spot where they have alighted, yet you may have a tolerably good guess where they are to be found, more especially if there should be any Turnips, Cole-seed, or rough furzy ground, in that direction. A good marker contributes greatly to the success of the day's sport, and I have known several ladies, who, after some practice performed this as well as a gamekeeper. If two or three persons are shooting together, and a covey disperse on rising each should keep his eye steadily on the birds which fly to the right or left, or in a straight line, and, if the marking down is well performed, some good shooting may be anticipated, for, as I before said, when birds are dispersed, they lie generally close.

"When a covey has sometimes risen 40 or 50 yards off, I have fired both barrels at them, in the hope of making them disperse; this sometimes succeeds.

"In Norfolk and Suffolk, where partridges are very numerous, they frequently begin to pack early in November, and in the neighbourhood of Swaffham I have seen 40 or 50 birds rise together in a field; you have then no chance of getting within shot of them, as they are wild as hawks. Should you be much in want of birds, and able to guess where to find them, load each barrel with Eley's cartridges No. 4 shot, and conceal yourself under the hedge of the field, in which you expect to find the pack; then let a person enter the ground, walking in the direction where you lie concealed; you will then stand a fair chance, as they cross the hedge where you are, of saluting them with both barrels, and, if you have any luck, you may probably bag four or five birds, or perhaps more. A friend of mine, in Essex, who has a great many red-legged partridges on his property, adopts this manœuvre."

In this way the Colonel deals with partridges, grouse, ptarmigan, capercailzie, hares, rabbits, woodcocks, quails, bustards, ortolans, swans, bitterns, wild ducks, eagles, foxes, otters, deer, wolves, and wild boars, to say nothing of "small deer" and vermin, or of sporting in France and Sardinia. In the latter country the author resided long enough to see something of wild boar hunting; and we have the following account of what strikes us as rather more interesting than shooting flocks of unresisting pheasants in a preserve:—

"As Mr. Hill had been informed that in a wide extensive plain intersected with Wild Myrtle, Arbutus, and other brushwood, about 10 miles from the capital, several wild boars had been seen, he decided that we should have a grand hunt on horseback, with our guns and a leash of his large rough greyhounds. Early next morning we mustered a strong party, having been joined by some Piedmontese noblemen, and all in the highest spirits in the anticipation of a good boar hunt, and we soon arrived at the *champ de bataille*. Being all drawn up in a straight line about 20 yards apart, they commenced beating, and half an hour had scarcely elapsed before a wild boar was started from his lair. As soon as the greyhounds got sight of him, away we all went helter-skelter like madmen, hooting and hallooing. For a short time the boar ran with such extraordinary speed that he fairly outstripped the greyhounds; but his wind at last failing him, they came up with their prey, and a fierce conflict took place between the greyhounds and the boar. Those horsemen who arrived first watched a favourable opportunity to fire at the boar without wounding the dogs. This I also did, taking aim at his head, but one of the greyhounds having seized him by the ear, I unfortunately knocked out the eye-tooth of one of Mr. Hill's best greyhounds, but at the same time I wounded the animal in the head. I felt exceedingly annoyed at this accident, but Mr. Hill, with his usual good nature, received kindly my apologies, saying only that he was sorry it had happened to his favourite dog, who was always so fierce and resolute in his attack on wild boars. In the course of the day we found another boar, but we did not derive much sport, for soon after he was started he was shot by one of the party. We returned to Cagliari highly satisfied with our day's diversion. As well as I can recollect, we had subsequently two more days' boar hunting, and never a blank day."

Let us add that Falconry is not overlooked, and that a good deal of information is given concerning that difficult amusement.

Garden Memoranda.

Messrs. Paul's Nursery, Cheshunt.—The fine collection of Roses for which this nursery has long been justly established is still in full bloom, and well worth inspection; for although most of the varieties cultivated here were fairly represented both at the Crystal Palace and Floral Hall last week, yet there is a freshness and beauty about them when seen on the trees in a growing state and in quantity, which no cut blooms can possibly possess. Here are acres filled with all the leading kinds, both in the shape of standards and dwarfs, together with a fine collection of coniferous and hardy trees, fruit trees, and other things usually found in first-class nurseries. Young Vines in pots are likewise largely grown in low span-roofed houses well adapted for the purpose. Other glass houses were gay with Fuchsias, Geraniums, and snowy flowering plants. Roses are however at present the principal feature.

The stock of these in pots is large, and in the most vigorous and healthy condition. Among new kinds which are considered of more than average merit, the following appeared to be the best:—

Tea-scented.—America, flowers large, pale yellow, something in the way of Devoniensis, petals of great substance, growth vigorous, and the foliage particularly handsome; Cornelia Koch, another yellow, but more nearly approaching to the Yellow Noisette in habit and appearance. *Bourbon.*—Baron de Gonella, flowers rosy purple, large, and of good form. *Hybrid Perpetual.*—Adolphe Bossange, red shaded with slate colour, very large and full; Alexandrine de Belfroy, rose shaded with white, a large, full, and somewhat flat Rose; Admiral Nelson, brilliant red large, full, and of good outline; Belle de Bourg-la-Reine, pale rose, large, full, and of the habit of growth of Prince Leon; Buffon, brilliant velvety red, not very large, but of good shape and vigorous growth; Celine Touvais, bright glossy rose, very large and full; Gloire de Santenay, dark purplish red, large, full, and of good form, one of the numerous seedlings recently raised from General Jacqueminot; Leonice Moïse, fiery crimson, large and full; L'Elegante, rosy blush, of fair size and good shape, and an abundant bloomer; Louis Gurlino, red and purple shaded, distinct and good; Louis XIV., crimson, large, full and very effective, another seedling from General Jacqueminot; Madame Bell, bright rose, blush edges, very large and full, an excellent and distinct kind; Madame Eugene Verdier, bright rose, large and full; Mademoiselle Bonnaire, white rosy centre, large and full; Marie Duvesse, clear purplish rose, large and good; Triomphe de Lyon, dark velvety crimson, large, and of stout habit; Victor Verdier, rose shaded with carmine, very large and showy, likely to prove a very attractive Rose in the garden, being unmistakeably of a hardy nature and vigorous growth.

These nurseries are about to experience a change of management. The partnership as arranged by the late Mr. Adam Paul being about to expire will not be renewed. The ground of the original nurseries and stock will be equally divided between the present partners. Mr. Wm. Paul has also obtained 30 acres of fresh

ground with an entrance from the platform of the Waltham Station, and this nursery is already in an advanced state. The principal feature is an avenue extending in a straight line from the turnpike road to the railway about half-a-mile in length; the centre is Grass with a gravel walk on each side; Conifers and various hardy evergreens are already planted and established there, and Roses, Hollyhocks, American plants, hardy Climbers and perennials are intended to be conspicuous features of this avenue. The soil appears well suited for nursery purposes, being of a good staple but not too rich, and the situation is admirable. Of Roses and fruit trees especially there is a good stock. Several glass structures and seed warehouses are in course of erection on the new ground.

Miscellaneous.

Musical Insects.—Whilst residing in the remote and almost inaccessible village of Taganana (towards Point Anaga), in the north of Teneriffe, during the spring of 1859, my attention was called to a peculiarity in a beautiful species of Acalles (I believe the A. argillosus, Schönh.), which I do not remember to have seen recorded concerning any other Coleopterous insect whatsoever. It was on the 22nd of May that my Portuguese servant (whom I had sent out to collect) brought me home 11 specimens of a large Acalles which he had captured within the dried and hollow stems of a plant growing on the rocky slopes towards the sea, and which I have but little doubt (from his description) was the Kleinia neriifolia, DC., so common throughout the islands of the Canarian archipelago. I had been accustomed to find such a number of insects in the dead branches of the various Euphorbias, that my attendant also had discovered, from time to time, the *locus quo* of many a rarity by imitating my method of research; and, to use his own expression, he was about, in this instance, to throw away these rotten stems as worthless, when he was arrested by a loud grating, or almost chirping, noise, as of many creatures in concert; and on looking closer for the mysterious cause, he detected a specimen of Acalles, from which it was quite evident that a portion of the noise proceeded. On shaking the hollow stem, so as to arouse its inmates, and putting his ear alongside it, the whole plant appeared musical, as though enchanted; and it was evident to him, therefore, that there were more of the performers within,—a conjecture which proved to be correct, for, on breaking open the branches, he captured nearly a dozen of them. So pleased was I with the accomplishments of these anomalous musicians, when brought to me, that I felt quite a reluctance (even though an entomologist) to put them to death. I therefore made a compromise with my feelings, and killed only eight of them. The remaining three I kept alive for several weeks, and even took them to Madeira—where, however, they unfortunately died (as I imagine, from hunger) just before embarking for England. So long as they lived, however, it was a constant source of amusement to make these creatures stridulate, or "sing," as it was usually called, which they would invariably do, for almost any length of time, when alarmed,—as for instance, when held between the finger and thumb, and slightly pinched. In this manner I have had four of them chirping at a time; and so loud was the noise produced that it might be heard at the distance of many yards. Whether all the Acalles have this remarkable power, I will not undertake to pronounce; but so far as the numerous representatives from the Atlantic islands are concerned, I have but little hesitation, from the general appearance of the constricted apical region of their elytra, in believing that they have. And, indeed, this conjecture has been absolutely verified in five of the Madeiran ones by the direct and careful observations of Mr. Bewicke, from whom I have received some very interesting remarks concerning them. On my arrival at Funchal, from Teneriffe, in June 1859, I exhibited my specimens (then in a lively state) of the A. argillosus to Mr. Bewicke, and requested him to listen attentively to the Madeiran species, whenever he chanced to meet with them, during the following summer, in order to ascertain whether or not they had a similar stridulating propensity; and I have since been assured by him that he has heard the music constantly in the A. dispar, nodiferus, terminalis, and ornatus; and that "it was distinctly audible" in even the minute A. Wollastoni. *Wollaston in Annals of Natural History for July* 1860; where a description of these creatures' curious musical instruments is also given.

An Ice Shower.—As described by Capt. Blakiston, R.A.—"On the 14th of January, 1860, when two days out from the Cape of Good Hope, about 300 miles S.S.E. of it, in lat. 38° 53′ S., long. 20° 45′ E., we encountered a heavy squall with rain at 10 A.M., lasting one hour, the wind shifting suddenly from east to north (true). During the squall there were three vivid flashes of lightning, one of which was very close to the ship; and, at the same time, a shower of ice fell which lasted about three minutes. It was not hail, but irregular shaped pieces of solid ice, of different dimensions, up to the size of half a brick. The squall was so heavy that the topsails were let go. There appears to have been no previous indication of this squall, for the barometer at 6 P.M., on the two previous days had been at 30·00, therm. 70°; at 8 A.M. on the 14th, 29·82, therm. 70°; at 10 A.M. (time of squall), 29·86, therm. 70°; and at 1 P.M., when the weather had cleared, wind north (true), 29.76, therm. 69°; after which it fell slowly and steadily during the remainder of the day and following night. As to the size of the pieces of ice which fell, two which were weighed, after having melted considerably, were 3½ and 5 ounces respectively; while I had one piece given me, a good quarter of an hour after the squall, which would only just go into an ordinary tumbler. And one or two persons depose to having seen pieces the size of a brick. On examination of the ship's sails afterwards, they were found to be perforated in numerous places with small holes. A very thick glass cover to one of the compasses was broken. Although several persons were struck, and some knocked down on the deck, no one was seriously injured." *Proceedings of Royal Society.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—All kinds of soil used in potting and shifting should now be laid in without delay except in cases where it is very wet and unfit for storing. Store them up neatly in narrow ridges so as to be safe from wet and yet exposed as much as possible to the action of the air; and as success in plant growing very much depends upon having suitable soil for potting, no trouble or expense that may be necessary to procure this should be spared where well grown specimens are expected. Loam of moderately good quality may be obtained in most neighbourhoods, but good peat is not so easily got; this is absolutely necessary, however, for the growth of choice hard-wooded plants, and should be procured at the proper season so as to have it in a fit state for use at the right time. Stove plants flowering in the conservatory will require attention, especially Achimenes and things of that sort, which should be gone over every day in cloudy weather, carefully picking off decayed flowers, &c. Any of the twiners on the roof which have done flowering may be thinned out, so as to prevent their shading the house too much, for after this season permanent shade should be avoided. Young stock in cold pits intended to flower next season should be exposed as much as possible in order to ripen the wood.

FORCING DEPARTMENT.

PINERIES.—Those who intend commencing the culture of Pines on the planting out system cannot begin at a more favourable season than the present. The bed should be from 18 inches to 2 feet deep, and should consist principally of good rich mellow turfy loam, well broken up, and carefully intermixed with a liberal sprinkling of clean sand, and a small proportion of leaf soil or good rich fibry peat; for when rough turfy soil is used and the bed is ever, from any cause, allowed to get thoroughly dry, it is very difficult to moisten it again, as the water passes off through the lumps without penetrating them. But if the loam is well broken up and mixed with some leaf soil or peat and sand, it will be found to take water freely enough, and the roots will be as much under command as when the plants are grown in pots. Persons commencing this method of growing Pines should also endeavour to avoid planting out pot-bound plants, for these, whether young or old, seldom strike freely into the fresh soil, and are apt to fruit prematurely; but if such plants must be turned out, then care should be used to make the soil firm about the balls, so as to prevent the water passing off without moistening the balls.

VINERIES.—Every possible attention must be afforded young Vines planted this spring where strong rods are expected. Let a vigorous root action be secured and endeavour to get the wood well ripened.

CUCUMBERS.—The present season being so unfavourable to the growth of these in the open air, renders it important that more than the usual attention should be given to those under glass at this season of the year; therefore the linings should be renewed, to maintain a steady bottom heat. Stop and thin the shoots, so that they do not get matted together; top dress with rich soil those that have been some time in bearing; water freely and close the frames early in the afternoon; plant out those sown last month, and sow more towards the end of this month, for the winter supply. Keep the plants hardy by giving plenty of air.

MELONS.—These require plenty of air and moisture while the fruit is swelling, and in hot weather the sashes may be drawn off altogether through the day with advantage. Keep the plants free from all useless growth; when the fruit approaches maturity less moisture is needed. If woodlice are troublesome place the fruit on bricks over a shallow pan of water.

FLOWER GARDEN AND SHRUBBERIES.

Go over the flower beds frequently and remedy any defects that may be perceptible without loss of time, for the bedding-out plants are enjoyed but for a comparatively short season; and now that they are in beauty every means should be used to render them as effective as possible by maintaining the most perfect order and neatness. Where the stock is clean and growing vigorously this will involve considerable labour, and it will be necessary to go over the beds, frequently pegging down where necessary, and cutting back such of the shoots as may incline to encroach upon the edging of the beds. Take advantage of liesure hours to put in cuttings, and use every possible dispatch with this work until there is a good stock in a fair way for rooting of such things as are known to be difficult to winter except in the shape of well established plants. Keep gravel walks perfectly clean and smooth by weeding, sweeping, and rolling as may be necessary. Keep climbers on walls within due limits.

HARDY FRUIT AND KITCHEN GARDEN.

It may be advisable to go over such trees as are overluxuriant, and stop about half the shoots, beginning of course with the strongest, for a general stopping at this time would probably be of little further service than to induce the production of a mass of useless spray, whereas stopping the stronger shoots or those which incline to grossness will divert the sap into the weaker ones, which will be strengthened while the buds on the shoots that have been stopped will become full and pump without starting into growth. Should it be found that the roots after stopping incline to start into growth, it will be advisable as soon as the fruit is gathered to open a trench at a moderate distance from the stem of the tree, cutting the stronger roots. This will be of the greatest service in checking growth, and will probably do more towards securing ripe wood than anything else that could be adopted. Get the Strawberry plantation intended to stand for next season trimmed as soon as convenient, cutting off and clearing away the runners so as to afford the leaves plenty of room. Attend to providing plenty of Lettuce, Endive, &c., for winter salads; also see that there is a good bed of Parsley secured in some sheltered spot where it can be readily protected in severe weather.

COTTAGERS' GARDEN.

A few Cabbage plants got in now will be found useful. Green Kale may still be got in where blanks exist, and a few Dutch Turnips might yet be sown. If a cow is kept, Rye or winter Vetches may be sown on spare ground intended for green crops next year. This at cutting will leave a fibre in the ground almost amounting to turf, and moreover will help in a great measure to keep down weeds.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending August 2, 1860, as observed at the Horticultural Gardens

July and August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain.
Friday 27	9	29·821	29.673	71	49	60.0	61	58	W.	0.00
Satur. 28	10	29.721	29.694	74	43	58.5	61	59	W.	1.39
Sunday 29	11	29,980	29.789	75	51	63.0	60½	58½	N.	0.00
Mon. 30	12	30.122	30.044	74	46	60.0	61½	59	N.	0·00
Tues. 31	13	30.015	29·964	68	51	59.5	62	59½	S.W	0.00
Wed. 1	○	30.045	29.939	71	51	61.0	61½	59	W.	0.02
Thurs. 2	15	29.892	29·810	70	48	59.0	63	59	S.W.	0.01
Average..		29.942	29.847	71.8	48.4	60.1	61.3	58.7		1.42

July 27—Overcast; very fine: densely overcast.
— 28—Uniformly overcast; very fine; severe thunder-storm 5—7 P.M., with rain and hail.
— 29—Fine; cloudy throughout.
— 30—Very fine, densely overcast at night.
— 31—Overcast and calm; very fine.
August 1—Overcast; cloudy; overcast; drizzly.
— 2—Overcast; cloudy; densely overcast and mild; slight drizzle.
Mean temperature of the week, 3½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Aug. 11, 1860.

August.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 5..	69.7	47.1	58.4	16	0.88 in.	1	4	4	2	4	12	4	3
Mon. 6..	69.7	45·8	57.8	15	0.58	—	6	3	1	5	9	8	2
Tues. 7..	69.5	47·7	58.6	11	0.57	1	4	3	—	5	19	2	—
Wed. 8..	68.7	47·5	58.1	13	0.50	2	5	2	—	4	16	5	—
Thurs. 9..	68.7	48.7	58.7	13	0.40	1	7	1	—	5	13	7	—
Friday 10..	69.7	46.9	58.3	17	1.06	1	5	2	1	2	14	7	2
Satur. 11..	68.4	45.5	56.9	16	0.78	1	1	3	1	5	14	8	1

The highest temperature during the above period occurred on the 11th, 1835—therm. 92 deg.; and the lowest on the 6th, 1833—therm. 36 deg.

Notices to Correspondents.

*** Correspondents are requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

FARFUGIUM GRANDE: *A R.* This is hardy in all ordinary winters, but it was killed in many places last October.

INSECTS: *Z L.* Your garden is infested to a great extent with the snake millepedes (Iulus pulchellus and allies). We know no better plan to destroy them than to fix decoys, such as slices of Potatoes, &c., under ground, and which should be examined daily. The insects (which will congregate upon them) must be destroyed.—*W E.* The insect which makes a spiral case of Rose leaves is one of the Sawflies, Lyda sylvatica. Its history, with figures, has been given in a previous volume of the *Gardeners' Chronicle.*—*R S.* Your Swedes are attacked by the black or nigger Caterpillars of the Sawfly Athalia Centifoliæ. Turn a brood or two of young ducks into the field.—*Old Sub.* The Pear leaves are infested with the slimy grub of the Sawfly (Selandria æthiops). Lime water syringed on the leaves will destroy them.—*D.* The grub found under ground is the larva of the green rose beetle Cetonia aurata; it is common.—*B F.* Your insect like a hornet but with a horny tail is the female Sirex Gigas. We have received it from numerous localities this summer.—*J E.* The little shining beetles which have attacked your Water Cress beds are the common Chrysomela Vitellinæ; would it not be possible to sweep them off into a gauze net? *W.*

NAMES OF PLANTS: *Orchid.* Saccolabium Blumei.—*A R.* 1, Abutilon striatum; 2, Tacsonia pinnatistipula; 3, Siphocampylus bicolor.—*J S.* Not a Spergula at all, but Sagina procumbens; worthless.—*C W S.* The plant from Natal is some Hypoxis, but we are unacquainted with the species.—*X Y.* Spiræa cuneifolia; propagated easily by layers. Sometimes produces seed.—*J P.* A Physalis of some kind, not ascertainable from the specimen sent. As to Strawberries, plant Keens' Seedling, Cuthill's Princess Royal, British Queen, and Alpine; the latter for a late crop.—*A W H.* Collomia grandiflora. No care you can bestow upon it will induce it to flower differently from the state in which you have sent it.—*J S.* We have received the plant; but where are the flowers?

NURSERIES: *A W M.* The nursery of Mr. Masters at Canterbury still flourishes, and we hope will long continue to do so.

VINE BORDERS: *T T.* Your Vines are poisoned by the garbage you have put into the border. We have too often been obliged to point out the danger of so disgusting a practice as putting lumps of flesh into Vine borders.

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10½ .. 8½	13 .. 9	13½ .. 10½	12 .. 11		3ds.	14*s.* 3*d.*	1¾
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 . 11	2ds.	18*s.*	2¼
12 .. 9	12½ .. 10½	14½ .. 10½	13 .. 11		1sts	21*s.* 6*d.*	2¾
5 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13*s.* 6*d.*	1¾*d.*
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16*s.*	2
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The Agricultural Gazette.

SATURDAY, AUGUST 4, 1860.

THE Yorkshire Agricultural Society have had a capital meeting at Pontefract during the past week. Trials of steam ploughs, mowing machines, hay-makers, horse rakes, root pulpers, machines for drilling seed and manures, carts, waggons, &c.; a good show of horses; a fair show of short-horns, which, though short in number, included some of the very best cattle in the world; excellent classes of Leicester sheep; a good show of the large white Yorkshire pig—and, as a novelty at agricultural meetings, but one exciting the very highest interest in the locality, a first rate competition in Fox-hounds!—have been among the many attractions of the meeting. And the old town of Pontefract has decked itself out in flags and decorations of all kinds in honour of the large numbers of spectators who have been thus attracted.

The district too, independently of the meeting of the County Society, possesses an agricultural interest of its own. It is a principal locality of the Liquorice cultivation:—the so-called Pomfret *cakes* are liquorice lozenges. And the luxuriant lupine-like growth and energetic drill culture of the plant are among the distinguishing features of the immediate neighbourhood.

What however is of much more general importance than Liquorice growing, is the prevalence in this part of Yorkshire of one of the most rigid systems of tenant right that obtains anywhere in the island. A "taking" sometimes involves the payment of 10*l.* per acre to the outgoing tenant. This is for merely agricultural tenant right. A valuer of the neighbourhood informed us that he had lately valued the tenant right between the outgoing and incoming tenants of a Liquorice field at considerably over 100*l.* per acre! But in the case of ordinary farming the payments are very heavy, and the receipts being so large there is thus every encouragement to an outgoing tenant to maintain the fertility of the soil till the end of his lease; for it is not the labour that is valued to his successor, but the actual promise of the next crop, so that it is not by a mere enumeration of the ploughings, &c. that he has done, but by their result on the crop upon the land, that the outgoing tenant is repaid. The manure which he has applied is, however, repaid to him whatever its effect may be. He therefore receives in early spring, when tenancies determine, the full value of all manures applied to Turnips, deducting 3*l.* to 4*l.* per acre if the crop has been removed. He also receives half the cost of dressings applied to the last year's corn crop, two-thirds of bones, one-third of superphosphate, and half of lime: the guano,

Rape-dust, and superphosphate applied to the previous Wheat are, however, supposed to be exhausted. In addition to all this the incoming tenant pays for all straw, whether in rick or in manure, and of course for the seed and cultivation of the growing crops. It is plain from this that a very large sum must change hands with every change of tenancy; and this no doubt must check competition for land at the same time that it maintains fertility.

But we must return to the Show. The trials of steam-ploughs suffered from the land being of too easy a description, and also from the absence in the case of one of the plans exemplified of a representative of the manufacturer to take proper charge of it. The judges acted simply on the specimens of work before them, and only the first prize was awarded —*50l.* to FOWLER'S apparatus; the second prize, *25l.*, was not awarded, the other cultivator not not having succeeded in doing its work at less cost than that at which, in the judgment of the valuers present, men and horses could have accomplished it.

The following are the details of the steam cultivation trials:—Fowler's 4-furrow plough turned over, in the best possible style, 1 acre and 7 perches of land, 7½ inches deep, in one hour's time, using 1 cwt. and 79 lbs. of coal; the work was valued at from 8*s.* to 9*s.* per acre as performed by horses. The average period lost in turning on the headlands was rather under 20 seconds, and there were 17 such turnings: there was a little more than one minute lost in stoppages to wind out "slack," &c.

The cost of a day's work was estimated as follows:—

Labour—	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
Engineer	4	0				
2 men at plough	5	0				
Anchor boy	1	0				
Boy for porterage of chain ..	1	0				
			11	0		
Oil	1	3				
Water (1 horse and man)	4	6				
			5	9	16	9
Half the cost of one removal (viz., 2 hours of all the above items = 3*s.* 4*d.*)			1	8		
Coals, 1910 lbs., at 14*s.* a ton, delivered on the ground			11	8		
Cost of getting up steam (= 1 hour's consumption of coals)			1	2		
Share of cost of repairs and interest on 780*l.* = $\frac{1}{200}$ of 1371*l.* 10*s.** ..			13	0		
			45	0		

One-tenth of this is 4*s.* 6*d.*, and rather more than an acre was done, costing, therefore, one half of what the same work would have cost by horse-power.

The other system—using a cultivator and a double windlass and wire rope going round pullies at the four corners of the work to be done—the whole driven by an ordinary farm locomotive engine—was not exhibited in a manner which would have been satisfactory to its originator. It accomplished 140 perches of grubbing, barely 7 inches deep, in one hour's time, using 103 lbs. of coal.

The work was valued at less than 3*s.* 6*d.* an acre. A similar grubber with 6 horses and 2 men would have done 6 acres a day, and the quality of the work "once grubbed" was not good. The average period lost in turning on the headlands was more than half a minute, and there were nine such turnings. No less than seven minutes were lost in stoppages owing to imperfect anchorage.

The cost of a day's work was estimated as follows:—

Labour:—	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
Engineer	4	0				
2 anchor men	4	0				
One man at cultivator	2	6				
2 boys	2	0				
			12	6		
Oil	1	0				
Water (man and horse)	4	6				
			5	6		
					18	0
Half the cost of one removal (viz. 2 hours of all the above items, 3*s.* 7*d.* + the same time of 3 additional horses, 1*s.* 6*d.* = 5*s.* 1*d.*)					2	6½
Coals 1030 lbs. at 14*s.* a ton ..					6	5
Cost of getting up steam (1 hour's consumption of coals)					0	7½
Share of cost of repairs and interest on 520*l.*, viz., 1-200th of 107*l.* 2*s.*					10	8
					38	3

One-tenth of this is 3*s.* 9*d.* and only 7-8ths of an acre was done for this sum, so that it cost more by steam-power than by horses.

Now let it be distinctly understood, that these figures are not to be taken as descriptive of the two machines under ordinary experience. They are to be taken as true simply of the time and place and circumstances of the Pontefract trial.

The judges had no alternative but to decide according to the records they had themselves taken, and the result in our opinion proves as much against judgments of short trials on a Show day as it does against the method of steam-culture with which Mr. FOWLER here competed.

There was a good trial of mowing machines, and CRANSTON received the first prize, BURGESS & KEY the second; the former being cheaper, lighter, simpler, and doing the work at least as well as the other. The land was well adapted to the trial of mowing machines, and also to the haymakers. Of these, the machines by ASHBY, of Stamford, and KEARSLEY, of Ripon, did very good work—being very like each other in construction; and to the former as the older maker, justly claiming therefore most of the credit, the prize was awarded.

Sixteen horse rakes were tried on the green Grass just tedded out by the haymakers—work evidently unfitted for ordinary rakes—and which was done well only by those on which the workman could act by means of a pressure bar. Mr. COULTAS, jun., of Grantham, was the best of the three which had these pressure bars, and to him the prize was given.

The result of the examination of other machines is given in a prize list elsewhere. And a reference is elsewhere made to the live stock department of the Show—the judgments in which, reversing as they did many of those at Canterbury, produced a deal of excitement.

Mr. HANNAM the energetic Secretary, and the other office bearers of the Society, may be congratulated on one of the most successful meetings which they can remember.

THE French International trial of reaping machines took place on Monday last at Fouilleuse. There were 14 or 15 machines competing. Those exhibited by English manufacturers were—1st, BURGESS & KEY'S "M'CORMICK;" 2d, BELL'S; 3d, CUTHBERT'S; 4th, CRANSTON'S "WOOD." The French exhibitions were by MAZIER, LEGENDRE, LAURENT, ROBIN, COURNIER, GANNERON.

The trial ground was divided into portions, some of which were badly laid, and the corn was still unripe and altogether unfit for cutting. BURGESS & KEY'S machine cut admirably, and it was evident from the commencement that it had nothing to fear from its rivals. BELL'S was a failure; the horses, unable to work it, broke down. At about half-past 3 in the afternoon the EMPEROR came, and several machines were tried before him, but only two succeeded in accomplishing their task before he left, viz., BURGESS & KEY'S and MAZIER'S. The EMPEROR conversed some considerable time with Mr. MACKENZIE, BURGESS & KEY'S representative, and appeared to take a great interest in the proceedings. The result of the trial is as follows:—Foreign machines—1st prize and Grand Medal of Honour as the best of all the machines tried, BURGESS & KEY; 2d prize, CUTHBERT; 3d prize, WOOD. French machines—1st prize, Dr. MAZIER; no 2d prize awarded; 3d, LEGENDRE.

Wednesday was the day of public trial and exhibition.

—— A SHORT report of the Highland Society's meeting at Dumfries is given in another page. Among other points of interest at the meeting are the fortunes of Capt. GUNTER'S twin "Duchesses" in the class of yearling Short-horn heifers. It will be seen that they are placed 2d and 3d at Dumfries, having been 1st and 2d at Canterbury. They are beaten here by Mr. DOUGLAS'S heifer *Clarionet*.

THERE will be a very large number of reaping machines introduced into the fields this season for the first time. Any of our readers who have had them in use in previous seasons, and who may have made a point of observing the number of hands *necessary* to tie up and place the corn immediately after the machine, would do real service to those who are without that experience, and who will need such information in the course of another fortnight, by communicating the result of their observations through the *Agricultural Gazette*.

Moving about the country during the last harvest, we saw in some cases an entire field of Wheat cut by the machine and not a sheaf tied up; others in various stages of tying and stooking after the machine; but doubtless one great advantage of its use must be the expedition with which the corn is not merely severed but ready to stack; and it is plain that the tying and setting up should keep pace with the machine to derive the full advantage of its use.

Now, assuming one of BURGESS & KEY'S reapers to be used, not as in a match, or for a prize, to see how many acres could be cut in a day, but doing a steady moderate day's work to be maintained from day to day, the question is what number of men or of women, or of both, ought to keep pace with the machine to tie up and stook the sheaves as in ordinary reaping? The same with BELL'S or CUTHBERT'S or WOOD'S reaper. When this has been clearly ascertained, the fair market value or price per acre would be readily ascertained by reference to the weekly rate of wages in the particular district; and that would apply in every case, whether the tying kept up with the machine or was followed at less speed for want of sufficient hands. *L.*

AN AGRICULTURAL PILGRIMAGE.—No. VIII.

LOIS-WEEDON.—Having lately revisited the glebe which has been for so many years cultivated by the Rev. S. Smith on that modification of Jethro Tull's method to which the name of this parish has been given, I send you this report of its present condition.

All agricultural readers know that for 15 or 16 years, commencing at a time when the position of the British agriculturist seemed almost desperate, the clergyman of this parish has annually urged upon farmers the possibility of growing Wheat more constantly and therefore more abundantly and more profitably on all "Wheat lands," by a more thorough tillage of the soil and subsoil during its growth than under ordinary circumstances it receives. This he did at the first as a public-spirited contribution to the necessities of the times, and this he has continued to do, notwithstanding the annoyance of publicity, urged by an annually increasing conviction of the soundness of his doctrine and his practice, and an increasing confidence in the fitness of both to the circumstances of the ordinary Wheat-growing soils of the country.

It is a marvellous thing that notwithstanding the extraordinary productiveness of his land under "Lois-Weedon" management, so few attempts have been made to realise his experience elsewhere, and more wonderful still it seems to me that notwithstanding the clear instructions annually published for carrying out his practice, any of those who have attempted to imitate it should have failed to copy his methods, and then have been surprised at not experiencing his results. Most astonishing of all, perhaps, it is that Wheat growers should declare Lois-Weedon to illustrate no principle of any value to English agriculture! Yet this was done at a recent meeting of the Central Farmers' Club by a gentleman who is I believe an agriculturist, and who said that what they had seen at Lois-Weedon was of no service to them as cultivators of the soil.

Consider what the facts are. Here is a field which in 1843 was in Grass no better than the rest of the parish, now let at about 30*s.* an acre; that turf was pared 1 or 2 inches deep and carried bodily away; the soil was then ploughed 5 inches deep and sown with Oats succeeded by Vetches, both crops being carried wholly away; the field was then set out and sown with Wheat in triple rows 1 foot apart, with 3-feet intervals cultivated during the growth of the crop as the seed-bed of next year's triple rows of Wheat, *their* 3-feet intervals being the cultivated stubble of this year's crop. And so, annually, since that time, has a crop of Wheat been grown without manure and been carried wholly from the land without return. The land has been bearing under this robbery, beginning with 1847 up till 1857—34 bushels of grain per acre; in 1857, it bore 36; in 1858, it bore more than 40; in 1859, it bore 2 bushels and 5 quarters of good Wheat per acre. And one practical farmer who has just visited the field (1860), after 17 years of treatment such as this, says:—"There is no better Wheat soil in the country." And another practical farmer gets up and says virtually:—"Gentlemen, it seems to me that there is nothing in the practice here, no principle involved, of any use to us as practical farmers"

The principle involved is that on which he and every other practical farmer in the country is dependent, whether he thinks it or not.

The bread of this country depends more on the principle which is so efficient on Mr. Smith's well-cultivated field than it does on any other thing whatever!

To what else is the vegetable fertility of this earth owing? The seeds of plants are lying scattered over or just under that surface which separates or commingles earth and air, all over this round ball the world. The young plants spread their roots throughout the former, and their branches and their leaves throughout the latter, and bathed alternately in sunshine and in shower they draw their nourishment from both.

On the depth of soil and the quantity of internal superficies it thus presents depends its wealth as a store-room, both of atmospheric food and of properly digested mineral food. On the quantity of sunshine and of freely moving air among the leaves of plants depends their ability to draw food thence. Now what does Mr. Smith exhibit to the agriculturist at Lois-Weedon but an illustration of the way in which

* This item is taken from an average of reports by experienced men in Mr. WELL'S paper before the Central Farmers' Club.

both of these principles, on which all agriculture hinges, receive extraordinary development and so produce extraordinary fruit? He cultivates deeply the soil close by the growing plant, and on this deeply cultivated soil he sows the next year's crop. And the spaces which he thus leaves blank for cultivation are at the same time so many gangways for the thoroughfare of air and sunshine amongst the stems and leaves of his growing crop. The principle involved is that on which the natural fertility of the wilderness depends—still more is it that on which agriculture everywhere depends—and it is "of use to us as farmers" just in proportion as our produce exceeds that of unassisted nature. For the fact that the crop is wholly removed from the soil at Lois-Weedon does not take Mr. Smith's experience out of the course of ordinary agricultural history. That fact, or rather the crop he gets in spite of it, is the measure of the force which he depends upon exclusively, and therefore invokes to its very utmost; on which however other men depend more perhaps than they imagine, and which they also industriously invoke by all the operations of the plough and cultivator. The value of his experience consists in this—that the sufficiency of that force, even when unassisted, is proved by it on all ordinary clay soils if full scope be given for its action. It may be extraordinary that the natural relations of mineral and air artificially commingled should result in such constant and perennial fertility on a single clay field annually robbed of its vegetable produce, but this is not more extraordinary than the corresponding fact which is dependent on the very same causes, that this island as a whole bears without injury, and even annually increases in fertility, notwithstanding the enormous waste of fertilising material which its rainfall washes from its soil, and which its rivers carry out to sea.

That Mr. Smith does not attempt impossibilities is shown by the results which he has obtained; and that he does not *teach* impossibilities is known to every reader of his books. The soil must contain the mineral food of the plant; if it be not in that sense a Wheat soil it will not grow Wheat either on the Lois-Weedon or on any other plan. This is what he says:—"I suppose at the outset the land intended for Wheat to be Wheat land, that is loamy or clay land, containing naturally the mineral substances necessary for the growth of Wheat. Land which does not contain these substances must be supplied from without. I grow Wheat on both descriptions of land; and to my light gravelly soil, instead of the special manure I recommend to others I apply what is tantamount, dressings of clay. My heavy clay land is furnished already. For I apprehend I am fully justified in my belief that all clays of fair quality contain within an accessible depth a store of mineral food for the Wheat plant, varying, indeed, in amount and composition according to the nature of the rock from which they were disintegrated and derived, but still in such abundance as to take centuries of cropping to exhaust it. I do not mean that the time it will last is infinite, but merely so distant as to be indefinite when the supply will cease."

I shall not quote at any greater length, but will recommend agriculturists to read the book on Lois-Weedon cultivation,* and to satisfy themselves, as they may easily do, both of the reasonableness of the explanation which has been offered of it, and of the accuracy of the account which has been given of it.

It only remains for me to say regarding the Wheat on the undunged deeply cultivated clay soil at Lois-Weedon, that when I saw it, just before the Canterbury meeting, it was a healthy, vigorous, upstanding crop, promising a full, return, which according to the past three or four years may be expected to be from 36 to 40 bushels an acre. Compared with a neighbouring field of Wheat it was of a much more uniform character; there were fewer undersized ears and dwindled stems. The outer rows of the triple sets were perhaps a shade better than the inner, indicating the value of the agencies on which Lois-Weedon success depends, but the whole plant was vigorous, and looking at what was growing on it, might well be pronounced first-rate notwithstanding its 17 years' ignorance of the dung cart. If I do not at present speak of the Bean crop and Lucerne on the same clay field, and of the Oats and Barley and Wheat on the gravelly field which receives a dressing of clay for the provision of those mineral elements in which it is naturally deficient, and which has at length been withdrawn from public exhibition for experiments with other dressings, it is not because they are deficient in promise or in interest, or because the results which they display in any way diminish the force of Mr. Smith's experience in Wheat-growing on the clay, but simply because I have already occupied what space you can afford me.

Let me however conclude with an additional extract from the "Word in Season" on the original character of the land:—"There are some few favoured spots in England, rich that they produce without any dressing a constant succession of heavy Wheat crops. If my land were like that, it would even then be surprising that 40 bushels of Wheat should ever be reaped from the moiety of the acre. But my clay piece is really nothing but the ordinary heavy Wheat land of the oolitic formation; and I have this year kept open from end to end a deep trench alongside the outer row of Wheat, for the satisfaction of the curious in this matter. Thousands and ten thousands of acres of the same quality extend across the country from the coast of Dorset to the Humber; and the rent of such land is under 30*s*., being lower by 20*s*. at least than the red land of the county. In truth were there anything peculiar in its powers of production, I should think it idle to take up the subject at all for the purpose of bringing it before the public." *J. C. M.*

* "A Word in Season to the Farmer; or, How to grow Wheat with Profit," 17th Edition. Ridgway, 169, Piccadilly.

Home Correspondence.

Royal Agricultural Society's Collections.—The following tabulated account of the Society's collections at their shows during the last 17 years will be read with interest:—

184′	Southampton ..	£2432	
1845	Shrewsbury ..	1682	
1846	Newcastle ..	2168	
1847	Northampton ..	2473	
1848	York	2514	
1849	Norwich	2360	
1850	Exeter	2493	
1851	Windsor	3297	
1852	Lewes	£1184	
1853	Gloucester	2734	
1854	Lincoln	3378	
1855	Carlisle	3260	
1856	Chelmsford ..	2989	
1857	Chester	6187	
1858	Salisbury	3447	
1859	Warwick	5459	
1860	Canterbury ..	2689	

Fowls and Pigs Fed on Flesh.—The result of Dr. Duchesne's observations is embodied in the following conclusions:—1. Fowls and pigs may be fed on sound flesh, raw and cooked; on flesh, raw and cooked, of animals affected with contagious diseases, as glanders, malignant pustule, hydrophobia, &c.; and even on flesh, raw or cooked, in a very advanced state of putrefaction, without any alteration in their health. 2. Chickens are reared with difficulty, if their food be restricted to flesh, raw or cooked, even when sound; and a larger number of them perish than when fed on ordinary kinds of food. 3. The eggs of fowls thus nourished are as palatable as the eggs of fowls nourished in the common way. The shell however is thinner and more easily broken. 4. The flesh of fowls and pigs nourished on flesh, raw or cooked, is softer, more difficult to preserve, and the fat is yellow and more diffluent. 5. The doctor has still doubts as to the absolute wholesomeness of fowls and pigs fed on animals dying of glanders, &c., and recommends that the use of the flesh of such animals should be prohibited for the rearing of fowls and pigs. 6. The use of flesh in a state of putrefaction, for similar purposes, should be absolutely prohibited as unwholesome. 7. Fowls should not be fed too long or too abundantly on worms, caterpillars, beetles, &c., as such food communicates a strong taste to the flesh. 8. The continued use of flesh, otherwise healthy, and either raw or cooked, ultimately injures the growth of the fowls, and the quality of their flesh. 9. The best method of rearing undoubtedly is, to give flesh but once a day, and to finish with a meal of grain. 10. For market use, the use of flesh should be stopped, and the fowls restricted for some time to the use of a vegetable diet. *Veterinarian.*

The Reaping Machine known to our Celtic Forefathers!—I read as follows in the *Builder*. "Truly, there is 'nothing new under the sun.' A correspondent of the *Gloucester Chronicle* thus writes as to reaping machines:—It may perhaps be interesting to you and to your readers to learn that those 'utter barbarians,' as our British ancestors have been wont to be called, were before us in many of those inventions which are supposed to be the result of modern ingenuity. I am not prepared to say that they had the steam plough, but that they had *reaping machines* there can be no doubt in the minds of those who read the following much-overlooked passage of Pliny, who wrote between the years 60 and 70 of the Christian era:—

'De Messe et Tritico.'

'Messis ipsius ratio varia: Gallharum latifundiis, valli prægrandes dentibus in margine infestis duabus rotis per segetem impelluntur, jumento in contrarium juncto, ita dreptæ in vallum cadunt spicæ.'

'Of reaping itself there are various methods: in the broad plains of the Gauls, enormous machines with teeth set in a row, placed on two wheels, are driven through the standing corn, a horse being attached to it [them] in a contrary way to the usual mode of attaching horses. Thus the corn, being cut off, falls into the furrow.'—*Pliny's Natural History, Book* 18, *chap.* 30.

Some question may arise whether we should translate *vallum* as it occurs in the latter part of this sentence differently from the sense given that word at the beginning, *vallus* being a van or machine (see Ainsworth's Dictionary), and *vallum* being a trench or furrow. If we adopt the latter translation, then it follows that our ancestors had already attained that excellence in their machine which was with such difficulty effected in those of modern construction. If, on the other hand, we translate it as the machine itself, then they had accomplished that which our modern inventors have not yet succeeded in, for they must have made the machine not only to reap, but to carry away the corn." I prefer Mr. Riley's translation, "The mode of getting in the harvest varies considerably. In the vast domains of the provinces of Gaul, a large hollow frame armed with teeth and supported on two wheels is driven through the standing corn, the beasts being yoked behind it; the result being that the ears are torn off and fall within the frame." To this the following note is added by Riley: "Palladius gives a long description of this contrivance, which seems to have been pushed forward by the ox; the teeth, which were sharp at the edge and fine at the point, catching the ears and tearing them off." The description here alluded to shows I think plainly enough what sort of a machine this was. It consisted, according to Palladius, of a square frame on two low wheels with a pair of boards sloping outwards, and lowest in front where the teeth were. It appears to have been capable of being lowered or raised in front at the will of the driver, and to have passed over the land backwards and forwards till all the ears were torn off; the straw being disregarded. In fact it would seem to have been a trough swinging on a couple of pinions, and furnished with teeth, like an inverted rake, on the front edge, which was lowest. To us it seems clear then that the *vallus* in question was really a trough, and had nothing to do with a furrow as the correspondent of the *Builder* conjectures. Has not some machine like this been employed on the plains of Australasia? *Linager.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

Monthly Council: *Wednesday, Aug.* 1.—Present the Earl of Powis, President, in the Chair; the Earl of Macclesfield, Lord Ashburton, Sir J. V. Shelley, Bart., M.P.; Hon. A. Vernon, Mr. Amos, Mr. Raymond Barker, Mr. Barnett, Colonel Challoner, Mr. Frere, Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Howard, Mr. Humberston, M.P.; Mr. Milward, Mr. Shuttleworth, Mr. H. Wilson (of Stowlangtoft), and Professor Wilson.

The following new members were elected:—

Radford, H. B., Stanton House, Burton-on-Trent
King, Stephen, Old Hayward, Hungerford
Bromley, —., near Lancaster
Camp, J. W. del Campo, North Wootton, King's Lynn
Filmer, Sir E., Bart., M.P., East Sutton Park, Maidstone
Halliday, Thomas C., Red Hall, Burston, Horley, Surrey
Wedgwood, George Arthur, Batt's Farm, Warlingham, Croydon
Brown, Thomas J., The Moor, Hereford
Fielden, Joshua, Stansfield Hall, Todmorden
Hardwick, Alfred, Hangleton Portslade
Moor, James, 11, Upper Berkeley St., Portman Sq., London

Finances.—Mr. Barnett, Chairman of the Finance Committee, presented the report, from which it appeared that the current cash balance in the hands of the bankers was 2487*l*. 7*s*. 8*d*. and at Canterbury 3012*l*. 13*s*. 10*d*. The Secretary's receipts during the past month were examined and found correct.

General Leeds Committee.—The President read the report recommending a visit to the trial grounds, a spot selected for the show yard by a deputation from the Council. It was unanimously resolved that the name of Mr. J. Dent Dent, M.P. be added to the list of the committee. It was resolved that Mr. Manning be appointed contractor for the Leeds show yard. The seal of the Society was affixed to the agreement which had been already signed and sealed by the Mayor of Leeds. On the motion of Mr. Brandreth Gibbs, it was resolved "that the Press be allowed catalogues of implements as soon as the trial yard is open; these to be delivered on the representative producing his press order from the Secretary." At the request of the Chairman of the Journal Committee the consideration of Mr. Brandreth Gibb's motion, "that in order to avoid the complaints which are annually made as to the late period at which the Reports on the Implements exhibited at the Society's country meetings are published—in future, the report as soon as ready shall be set up in the type in which it will eventually appear in the Journal; and that copies of it be at once issued (under the usual regulations) to the Exhibitors, and to the agricultural newspapers, which are in the habit of publishing the ordinary proceedings of the Society," was postponed until the next meeting of Council.

The following list of prizes for Essays and Reports for 1861 was agreed to:—

I. Special Prize of 50*l*. offered by the President, the Earl of Powis, for the best Report on the Improvement in the Farming of Yorkshire, since the last report in Vol. IX. of the Journal
II. 50*l*. for the best Report on the Farming of Hampshire.
III. 10*l*. for the best Report on the results of Drainage at different depths on different soils, as tested by the wet season of 1860, including the effect of laying down drained land flat or in ridges.
IV. 10*l*. for the best Essay on the best mode of Wintering Dairy Cattle.
V. 10*l*. for the best Essay on the general principles and results involved in the Cross Breeding of Cattle.
VI. 10*l*. for the best Essay on the Rearing of Calves.
VII. 10*l*. for the best Essay on the best Mode of Harvesting and Threshing Corn.
VIII. 10*l*. for any other agricultural subject.

The usual vacation was then granted to the Secretary and Clerks of the Society, and the Council adjourned over the autumn recess to Wednesday, November 7.

Yorkshire Agricultural: *Pontefract, Wednesday, August* 2.—A tolerably full account of the implement trials is given in a leading article elsewhere. The following is a short statement of some of the decisions in the cattle classes, with a list of the awards of the judges of implements.

The judges in the Short-horn classes were Messrs. Drury, Maynard, and Dand. They have had seven old bulls to place—and *Royal Butterfly*, 1st at Canterbury, a roan of magnificent proportions, great length, depth, and symmetry, is again placed 1st here; the 2d prize has gone to *Prince Talleyrand*, bred by Mr. Ambler.

In yearling bulls Sir C. Tempest's *Prince Frederick* 3d at Canterbury, is placed 1st—his colour, quality, and size being in his favour; and Mr. Fawkes' *Re-*

former, before him at Canterbury, is under him at Pomfret.

Among 10 bull calves, *Harkaway*, a young roan with wonderfully thick and deep twist and wide and prominent bosom, taking 1st prize at Canterbury, is again 1st here. He already, at 11 months old, girths over 6 feet. Colonel Towneley's *Royal Butterfly* 4th; a red calf is placed 2d. Three cows competed in their class: Booth's *Queen Mab*, beaten at Canterbury by Eastwood's *Rosetta*, is placed 1st; Rosetta is not present to compete with her. *Pearl*, a red cow, is placed 2d; *Rosebud*, bred by Mr. Middleborough, the third, dropped twin calves about an hour before the judges came round. One of them is living.

A short class of 3-year old cows had Lady Pigott's *Duchess of Gloster*, bred by Jonas Webb, placed 1st, and Col. Towneley's *Fidelity* 2d.

The class of 2-year old heifers was first-rate, both in number and quality, containing Mr. Ambler's *Woodrose*, and Captain Gunter's *Duchess* (1st and 2d at Canterbury). That decision is here reversed; *Duchess* being 1st, *Queen of the Vale* by Mr. Booth 2d, and *Woodrose* not decorated at all. The award hinges on qualities which need an educated eye. For *Woodrose*, as regards outward form, is the most symmetrical animal in her class; the *Duchess*, however, in quality (indicated by the touch), in vigour and constitution, indicated by her coat and general bearing, has carried the day over her.

The prizes in other classes must be given next week, and we are able to report only in a few classes further of the sheep.

The horse prizes will not be announced till late on Thursday.

LEICESTER SHEEP.

Shearling Rams (24 entries).—Mr. Wiley, Brandsby, 1st; Mr. Borton, Malton, 2d.
Old Rams (18 entries).—Mr. Borton, 1st and 2d.
Pens of Five Ewes (2 entries).—Mr. Lovel, Driffield, 1st; Mr. Simpson, Wetherby, 2d.
Pens of Gimmers (6 entries).—Mr. Wiley, Brandsby, 1st and 2d.

SHORT-WOOLLED SHEEP.

Rams.—Lord Walsingham, 1st and 2d.
Pens of Shearling Gimmers.—Duke of Devonshire, 1st; and Mr. Thompson, 2d.

PIGS.

Boars, Large Breed.—Mr. Dyson, 1st; Mr. Saltmarshe, 2d.
Sows, Large Breed.—Mr. Gledhill, 1st.
Boars, Small Breed.—Mr. Harrison, 1st; Mr. Endeacott, 2d.
Sows, Small Breed.—Mr. Hatton, 1st and 2d.
Boars of any Breed.—Mr. Richardson, 1st; Mr. Wainman, 2d.
Sows of any Breed.—Mr. Wainman, 1st; Mr. Walton, 2d.
Three Store Pigs.—Sir G. Wombwell, 1st; Lord Wenlock, 2d.
Young Boar, Large Breed.—Mr. Pygott.
Young Sow, Large Breed.—Mr. Gavins.
Young Boar, Small.—Mr. Wainman.
Young Sow, Small.—Mr. Gavins.

In Yearling Heifers Sir C. Tempest received the 1st prize for *Harmless*, and Mr. R. Booth the 2d for the Soldier's Bride.

In Heifer Calves Mr. Lascelles had *Cracilis* 1st, and Col. Towneley Frederick's Giant Daughter, 2d.

The following are the awards of the judges of implements, Messrs. Outhwaite, Wells, J. Clarke, and J. C. Morton:—

First Steam Plough	£50	Mr. Fowler
Second do.	25	Not awarded
First Mower	10	Mr. Cranston
Second do.	5	Burgess & Key
Haymaker	10	Nicholson
Horse Rake	5	J. Coultas, jun.
Corn and Seed Drills	5	J. Coultas, jun.
Turnip Pulper	5	Bentall
Waggon	10	Trustees of Crosskill
Cart	10	Busby, Company

The other awards will be enumerated next week.

GREAT AGRICULTURAL MEETING AT DUMFRIES.

DUMFRIES: *Tuesday, July* 31.—Everything bids fair to make this meeting, if not the most successful, at least to render it as fairly so as any of the Highland Society's meetings. The entries are nearly double the number of those brought forward at the last meeting of the Society at Dumfries held in 1845. The following is a more detailed statement of the result of entries of the two Shows:—

	1845	1860
Cattle	297	303
Horses	75	159
Sheep	537	539
Swine	62	50
Poultry	101	216
Dairy Produce	88	109
Implements	143	302
Total number of entries	1303	2267

The Show-yard is situated upon the Stewartry side of the Nith, and is connected with the Castle-Douglas Railway by a siding which is made use of in forwarding implements, &c. direct to the Show-yard.

The trial-field is in the immediate vicinity of the Show-yard, and although the soil is rather lighter than could be desired, it is in other respects well adapted for the purpose.

Summarising the details of the prizes offered, we find that in the Stock Department 1022*l.* is offered for first and second prizes, 106 Bronze, 37 Silver, and 4 Gold Medals. In the Implement Department, 257*l.* for first, and 83 Bronze Medals for second prizes—in all, 1279*l.* in money, and 230 medals; a list of inducements, surely, well calculated to bring out a full list of competitors, and we hope a host of visitors, to witness the results of their endeavours to carry off the prizes offered them. Everything while we write bids fair to induce the belief that this host of visitors will be forthcoming in due course.

The trial of implements was inaugurated this afternoon with a wetting shower of rain. The field some time after this displayed a satisfactory appearance so far as visitors went. The ploughs under trial did generally excellent work; although in some points we noticed a looseness of management, such as the lack of dynamometers and of judges or others to make sustained observations and references.

The judges in the Show-yard were engaged in the afternoon in trying the grain crushers, oil-cake breakers, threshing machines, &c. As usual at nearly all the Shows, the trials we conceive were little better than trials in name. The trials of the present time may be relatively valuable, inasmuch as all implements and machines are tried under the same circumstances.

At half-past 8, Dr. Anderson, chemist to the Society, delivered a lecture in the Court Room to an audience all too scanty, on "Manures;" and many easily remembered truths or rules were given and all of them singularly free from the abstruse calculations and intricate language which too often characterise chemical prelections. The lecturer, in showing the importance of the subject, gave some interesting details as to the yearly value of manures expended by the farmers of Great Britain. The summary of these showing a total of 4,000,000*l.* sterling. He afterwards adverted to this as showing the immense saving effected yearly by having good analyses and ready methods of correctly estimating the value of manures. After a few remarks on farm-yard manure, and how in great measure the farmer was able to estimate its value, he showed that the case was very different when such complex substances as artificial manures were employed. Hence arose the dependence of the farmer on the chemist, and on the accuracy and simplicity of statement of his analysis. The following is an analysis which Dr. Anderson gave as one divested of all unnecessary intricacy:—

Water	13.73
Organic matter and ammoniacal salts	53.16
Phosphates	23 48
Alkaline salts	7.97
Sand	1.66
	100.00
Ammonia	17.00
Phosphoric acid in the alkaline salts = to 5.42 phosphate of lime	2.50

The lecturer confined his remarks chiefly to an exposition of the qualities, or rather what should be the qualities of guano and superphosphates. These, in point of fact, constituting nine-tenths of the artificial manures now used.

The farmer should be careful to see that the percentage of ammonia is *distinctly stated*. No analysis should be taken in which the ammonia is stated as being equivalent to so many parts of sulphate of ammonia. Let the percentage of ammonia be very clearly expressed. Again, in taking samples to analyse, let a sample for this purpose be made up of quantities taken from a number of bags—a fair average sample will thus be obtained. Space compels us to omit notice of many important points adverted to by the lecturer; these however will be presented shortly in a complete form to our readers.

Wednesday, August 1.—The day is anything but auspicious. From an early hour this morning the sky got gradually overcast, till in the forenoon it began to rain. A short interval of fair weather allowed many to get up to our yard. We shall give a complete prize list next week, meanwhile of the more important departments we give the prizes. Of steam power portable threshing machines, Robey & Co., of Lincoln, have taken the 1st prize; Wilkinson, Wright, & Co., of Boston, the 2d. Of threshing machines for horse power, John Drummond, of Cumnock, Ayrshire, has taken the 1st; Williamson, of Kendal, the 2d. Of two-horse ploughs, for general purposes, John Gray & Co., of Uddingston, Glasgow, have taken the 1st; James Halliday, Dumfries, the 2d. In Trench ploughs, Wm. M'Cormick, of Dumfries, has taken the 1st; R. Law, of Shettleston, the 2d. Of two-horse grubbers or cultivators, T. Halliday has the 1st; Calden & M'Kinnel, of Dumfries, the 2d. Of consolidating land rollers, James Kirkwood, of Tranent, has taken the 1st; and Robert Wight, of Seton, the 2d. Of land pressers for preparing seed-bed for grain, Robinson, of Barton-on-Humber, the 1st; and Smith Brothers & Co., of Glasgow, the 2d. Of ribbing machines, the 1st has been taken by James Kirkwood, Tranent; the 2d, by Mr. Shireff, of Dunbar. Of harrows for light land, the 1st, by E. H. Bentall; 2d, by Kemp, Murray, & Nicholson, of Stirling. Broadcast sowing machines, 1st, Mr. Shireff, Dunbar. Drill sowing machines, the 1st, by Mr. Shireff; 2d, by Kemp, Murray, & Nicholson. Sowing machines for Grass seeds, 1st, by Kemp, Murray, & Nicholson; 2d, by John Burnie, Castle Douglas. Sowing machines for Turnips, 1st, by J. & T. Young, Ayr; 2d, by Mr. Shireff. Messrs. Reeves, of Brutton, Westbury, Wilts, has taken the 1st prizes for machines for distributing guano in drills or broadcast. Liquid-manure distributing machines, trustees of Crosskill, 1st; James, of Cheltenham, 2d. Of fanners for winnowing grain, the 1st prize has been taken by Richardson, of Carhill. Kemp, Murray, & Nicholson have taken the 1st prize for one-horse carts with harvest frames. And the prize offered by the Right Hon. Lord Ashburton, has been gained by Thomas M'Cririck, of Cumnock.

A Grass-mowing machine was tried this morning on the grounds of Mr. Coomblands, Loughside, and with satisfactory results. The machine is that introduced by Mr. Samuelson, of Banbury. It is an American invention, and gained the first prize at the National Meeting at Syracuse, United States.

The following is the award in the principal classes of Cattle, Sheep, and Horses.

CLASS I.—CATTLE.

SHORTHORN.

Bulls calved before 1st Jan, 1858.—1st prize, 20*l.*, William Lambert, Haydon Bridge; 2d, 10*l.*, and 3d, Viscount Strathallan.

Bull calved after 1st Jan. 1858.—1st prize, 20*l.*, David Ainslie, Blackshield; 2d, 10*l.*; and 3d, Lord Kinnaird.

Bull calved after 1st Jan. 1859.—1st prize, 10*l.*, John Atkinson, Newcastle-on-Tyne; 2d, 5*l.*, Messrs. Turnbull, Dumbarton; 3d, Bronze Medal, James Hozier, of Carluke.

Best Cow.—1st prize, 15*l.*, James Douglas, Athelstaneford; 2d, 8*l.*, Thomas Atherton, Speke; 3d, Bronze Medal, Viscount Strathallan.

Best Heifer.—1st prize, 10*l.*, James Douglas; 2d, 5*l.*; and 3d, Capt. Robert Gunter.

Best Yearling Heifer.—1st prize, 8*l.*, J. Douglas; 2d, 4*l.*; 3d, Bronze Medal.

CLASS II.—HORSES.

FOR AGRICULTURAL PURPOSES.

Old Stallion.—1st prize, 30*l.*, D. Riddell; 2d, 15*l.*, W. Kerr; 3d, Bronze Medal, J. Barr.

Three-year-old Colt.—1st prize, 20*l.*, Andrew Logan; 2d, 10*l.*, J. Frazer; 3d, R. Lochhead.

Two-year-old Colt.—1st prize, 15*l.*, James Salmon; 2d, 8*l.*, Peter Crawford, Strathblane; 3d, J. Buchanan.

Yearling Colt.—1st prize, 10*l.*, Matthew Kerr; 2d, 5*l.*, James Proudfoot; 3d, Alex. M'Lachlan.

Old Mare with Foal at foot.—1st prize, 20*l.*, James Douglas; 2d, 10*l.*, Robert Morton; 3d, James Salmon.

Three-year-old Mare in Foal.—1st prize, 15*l.*, William Rigg; 2d, 8*l.*, John Watson; 3d, James Beattie.

Three-year-old Filly.—1st prize, 10*l.*, John Anderson; 2d, 5*l.*, John Muir; 3d, William Little.

Two-year-old Filly.—1st prize, 8*l.*, Wm. Aikenhead; 2d, 4*l.*, John Kerr; 3d, Jas. Walker.

Yearling Filly.—1st prize, 6*l.*, Wm. Kerr; 2d, 3*l.*, George Henderson; 3d, John Frazer.

CLASS III.—SHEEP.

CHEVIOT.

Old Tup.—1st prize, 10*l.*, James Brydon; 2d, 5*l.*, ditto; 3d, Thomas Brydon.

Shearling Tup.—1st prize, 10*l.*, Robert Borland; 2d, 5*l.*, Thomas Brydon; 3d, James Brydon.

Five Ewes.—1st prize, 8*l.*, Thomas Brydon; 2d, 4*l.*, Thomas C. Borthwick; 3d, Robert Borland.

Five Shearling Ewes or Gimmers.—1st prize, 8*l.*, James Brydon; 2d, 4*l.*, Thomas Welsh; 3d, Thomas C. Borthwick.

LEICESTER.

Old Tup.—1st prize, 10*l.*, James Beattie; 2d, 5*l.*, Thomas Cockburn; 3d, James Beattie.

Shearling Tup.—1st prize, 10*l.*, James Beattie; 2d, 5*l.*, Thomas Cockburn; 3d, ditto.

Five Ewes.—1st prize, 8*l.*, John Callie.

Shearling Ewes.—1st prize, 8*l.*, George Simson; 2d, 4*l.*, George Simson; 3d, Medal, James Melvin.

LONG-WOOLLED OTHER THAN LEICESTER.

Old Tup.—1st prize, 10*l.*, Edward Handy; 2d, 5*l.*, John Gibson; 3d, Lord Kinnaird.

Shearling Tup.—1st prize, 10*l.*, Edward Handy; 2d, 5*l.*, 3d, Lord Kinnaird.

Five Ewes.—1st prize, 8*l.*, Robert Robison; 2d, 4*l.*, John Gibson: 3d, Lord Kinnaird.

Shearling Ewes.—1st prize, 8*l.*, Robert Scot Skirving; 2d, 4*l.*, Lord Kinnaird; 3d, John Muir.

SOUTHDOWN.

Old Tup.—1st prize, 10*l.*, the Duke of Richmond; 2d, 5*l.*, ditto.; 3d, R. S. Skirving.

Shearling Tup.—1st prize, 10*l.*, the Duke of Richmond; 2d, 5*l.*, R. Skirving, Camptoun; 3d, The Duke of Richmond.

Ewes.—1st prize, 8*l.*, Robert Lyall; 2d, 4*l.*, R. S. Skirving.

Shearling Ewes.—1st prize, 8*l.*, Duke of Richmond; 2d, 4*l.*, R. S. Skirving.

CLASS IV.—SWINE.

Boar, small breed.—1st prize, 8*l.*, George Mangles; 2d, 4*l.*, Joseph Hindson; 3d, Miss Bell, Woodhouselees.

Sow, large breed.—1st prize, 6*l.*, William Duff; 2d, 3*l.*, Miss Bell; 3d, do.

Sow, small breed.—1st prize, 6*l.*, John Mackay; 2d, 3*l.*, George Mangles; 3d, do.

Three Pigs.—1st prize, 4*l.*, George Mangles; 2d, 2*l.*, Earl of Wemyss and March.

EAST LOTHIAN AGRICULTURAL CLUB, *July* 13.—*Homœopathic Treatment of Cattle under Disease.*—Mr. Sydserff, of Ruchlaw, said: The immense amount of capital represented by live stock, the vast losses sustained by epidemics, casualties, and unsuccessful medical treatment, render it a most interesting inquiry to the agriculturist, whether the rate of mortality among live stock may not be greatly reduced below its present standard. We have no tables of mortality to quote with reference to the lower animals, and we have no statistical information to communicate with reference to deaths amongst stock; but all farmers know, and all novices find out, that, in estimating the profits of a farm, a large margin must be left for casualties amongst farm stock. It has been deemed sufficiently important to attract the attention of several insurance companies who undertake to insure stock against losses by death; but the terms of these insurance companies form one of the strongest inducements to undertake the present inquiry, for unless we are prepared to resign all profit in order to protect ourselves from loss, I think we cannot avail ourselves of insurance with any of the existing offices. We are favourably situated with respect to veterinary surgeons in this county, and I am glad to say that I have always found the greatest attention, and seen some instances of very skilful treatment in my own stock. Still, much may and must be done in the way of home treatment. Simple disorders will too often invite simple treatment, and many of the animals on a farm are not of sufficient value to justify the attendance of a professional veterinarian. In many instances, too, immediate treatment alone gives any hope of recovery,

to neglect which is to sacrifice perhaps a valuable animal, while injudicious treatment or improper remedies will render abortive the most skilful treatment of the veterinary surgeon when he arrives. In the hope that the treatment of sheep and cattle will be taken up more fully by some more efficient hand, I shall confine my observations more particularly to the treatment of horses, having had more experience in losing them, and having therefore directed my attention more to that branch of the subject.

The horse labour in most parts of the county is very severe; to keep the horses up to the mark, and be able to overtake the labour in good season, they must be highly fed. High feeding and hard work involve a delicacy of many of the internal organs, particularly a liability to indigestion and inflammatory complaints. A change of fodder, more particularly from white to Bean straw, a long journey, or a hard day's ploughing in an exposed situation during cold windy weather, is frequently followed by an attack of indigestion, spasmodic or flatulent colic, which, if not checked, runs its course, and ends in inflammation of the bowels. Inflammation of the lungs is not uncommon, and cuts off some horses. A considerable number used to sink under influenza, but since the veterinary profession have set their face against bleeding, the mortality is greatly lessened—the farmers' own fleams also being no doubt more seldom used. Indigestion or colic, however, sometimes passes into inflammation of the lungs, and sometimes influenza supervenes, when a tedious case of obstruction of the bowels has yielded to the remedies employed; and this is a case too likely to end fatally. I believe we may safely say that the deaths of nine-tenths of the horses lost in this county have been caused through colic and obstruction of the bowels. In most cases, I believe the animal sinks, after the original disease has been overcome, under prostration of the vital powers, caused by the strong medicines employed, and necessary to overcome the disease under the system usually and all but universally followed by the profession. But however treated, under what I call the old system, the horse has to get better of the medicine after he has got the better of the disease, and we have seen that nature often sinks under the effort. The great object of medical treatment must be to economise the vital powers while the disease is combated. If the sources of the nervous power become depressed beyond the rallying point, every function of life is imperfectly performed, nature sinks, and the animal dies from exhaustion of the vital powers. Being strongly impressed with the conviction that harm is done by the employment of large doses of powerful medicine, I resolved on investigating, as far as a non professional person can do, the claims of another system of medicine. The principle of homœopathy has nothing whatever to do with globules, or the size of the dose, or the strength of the medicines. Every practitioner, or every individual who cannot persuade his veterinary surgeon to adopt this system, can please himself as to the dose; and if he does not hit the mark at once, he will arrive at a rule for himself, perhaps without any direct fatal result, if he does not deal in strong tinctures. Every book on homœopathy recommends, and every practitioner employs doses and dilutions differing from one another; and it is a curious fact, that as experience begets confidence in the powers of the medicines higher dilutions are more frequently employed. If any professional gentlemen are now present, I am sure they will understand that my wish is not to depreciate their services, but to see another powerful weapon put into their hands for the public good. I submitted my views to my own veterinary surgeon, in whose skill and knowledge of his profession I have the highest confidence. Having received his disapproval of the system, I had no alternative but to adopt it myself, and to grope my way in the dark with such assistance as I could derive from the small library which I had already collected upon the subject. I had not to wait long for subjects to experiment with. I have had as many cases of sickness as formerly, and where not involving surgical aid, every case on the farm has been treated homœopathically for the last two and a half years. In the only two instances in which I have departed from it, I have seen reason to regret doing so. It is not to be expected that I am to report a great variety of cases. The cases coming under my treatment have however been sufficiently formidable to prove interesting to all who seek to obtain new light on the treatment of such cases. They are comprised under the heads of common colds, influenza, spasmodic and flatulent colic, stoppage of the bowels, and acute founder, and they have all been successfully checked before passing into the later stages of these diseases. The fleams, the blister, and the physic ball have been banished from my premises, to the infinite advantage of the patients who have been under treatment, and except in the case of those tedious colds which perplex us so much when they come into a large stable, every case but one was completely cured, and the horse ready for work in a few hours, and the case excepted was thoroughly cured in 14 hours. Every drug has the power to produce morbid symptoms on the healthy body, and every drug has its own distinct and specific train of symptoms. These have been made the subject of experiment, singly and on healthy subjects, by Hahnemann and his followers, and have been carefully collected and recorded for the benefit of the profession and of humanity. The principle on which we proceed is, that the drug which produces certain symptoms will cure similar symptoms when present as a morbid state of the body. On the truth of this principle, homœopathy stands or falls, and the size of the dose has nothing whatever to do with it. When it is remembered that the medicine selected to allay fever is that which produces feverishness—that nux vomica which produces such fearful spasms—or arsenic, which produces such internal agony, are selected to cure violent colic, it must appear reasonable to reduce the dose to such dimensions as will reduce the likelihood of violently aggravating the disease under treatment. In practice it is found that the medicine may be diluted, and the dose reduced to a point, at which the aggravation entirely disappears. Beyond this point it is found that the dose may be still greatly reduced without impairing its curative action. The diseased organ, which in health would be utterly insensible to a small quantity of medicinal substance, responds promptly to the thousandth part of a drop of the medicine, is homœopathic to its present diseased condition. This is an immense advantage, for sometimes the system is found to be unusually sensitive to the action of the medicine, and were we confined to the lower, that is the stronger dilutions, or the mother tinctures, very painful aggravations would often result from their uses before the curative action of the medicine was apparent. For these reasons I advise every novice not to disregard altogether the experience of others, and I would advise him not even to admit into his medicine case such dangerous medicines as the mother tinctures of aconite, arsenicum, nux vomica, &c. The first centessimal dilution of these medicines is the strongest tincture he should employ, at least till he has become familiar with the powers of his medicines. The lower animals are not nearly so sensitive to the action of medicine as man. The usual dose for a horse or cow is 10 drops. To cattle I give it in a wineglassful of pure water. In the case of horses I put a little flour in a horn spoon, drop the medicine upon it, add a few drops of water and make it into a thin paste; go quietly up beside the animal if he is standing, or go down on your knees beside him if he is laying out, draw out his tongue with one hand, wipe the spoon upon it with the other and let go. You have only to see this done, and contrast it with the process of giving a drench either with a horn or a glass bottle, to prepossess you in favour of any system which can accomplish its end in this way. So much for the administration of the medicine. When a horse is observed ill of colic, he should, if practicable, be placed as soon as possible in an airy loose box and clothed, for the surface soon loses its heat, and the cure is a little more tedious when the horse gets cold. Every particle of food must be taken from him, and a clyster of plain tepid water thrown up. I would prefer the funnel enema recommended by Professor Gamgee, as far better than the old syringe. If it will not act it would be dangerous to apply force by means of the syringe, as, if there is any difficulty, another operation amihar to all must first be performed. Plain tepid water, and in moderate quantity, forms the best clyster. The longer it remains on the better, as more of it is taken up by the intestines. If necessary repeat it in an hour. Meantime, give a dose of aconite, to be repeated twice at intervals of 15 or 20 minutes. Sometimes the second dose is all that is needed. The aconite keeps down fever and inflammation, and unless you are very positive of the absence of all tendency in that direction, you should always commence the treatment as above. After the aconite give nux vomica, if it is the food which causes the attack, and particularly if the abdomen is full and swelled. If the agony is very great, and the belly tucked up rather than swelled, arsenicum is the appropriate remedy; bryonia, if the attack can be traced to exposure to cold; colocynth, if to green food; cantharides, if to spasm of the bladder. With these remedies I have had the satisfaction of seeing every case yield to my treatment, and some of them presented a sufficiently alarming appearance during their progress. I had one smart case of acute founder, all traces of which had completely disappeared the following morning, without bleeding or purging, or any other than the homœopathic treatment. I know that statements like these are usually met by the Faculty with the answer, "Oh, these cases would have recovered any way—they got better just because they got nothing." If you should be told that such cases recover better when let alone, than when treated according to the established rules of medical colleges, dispute it not, but accept the information and save both your pockets and your beasts Such is not my position. My argument is—if I, without any medical skill or knowledge, have accomplished these results by dint of observation and diligent reading only, how much good would be done by our thoroughly equipped and skilful veterinary surgeons, if they would adopt this rational system, instead of the comparatively barbarous weapons with which they are now too often compelled to wage unequal war with the diseases of our live stock. I have found that young calves are very sensitive to the action of medicine, as much so as man; and I find that the sixth dilution—the same dose, in fact, as I administer to a child—is sufficient for a young calf or foal. The first case I ever tried was a calf, and I think that I hastened its exit from the world by too liberal doses of the No. 1 dilution. Since then I have had the satisfaction of seeing one recover under No. 6, after orders had been given at night for skinning it next morning; and many others less seriously afflicted have promptly recovered under the same treatment. In the treatment of cows, I trust to nothing else than homœopathic treatment, and with the most valuable thorough-bred cows in the highest possible condition at time of calving, I trust to that alone to ward off fever and inflammation, both in summer and winter. From my experience of the power of homœopathic medicine to cure disease, and the highly satisfactory results of the imperfect application of it by myself, I feel a strong convictiction that it alone presents the means with which to combat that deadly disease the pleuro-pneumonia, which has hitherto baffled medical skill. If a few of our members will take up the subject, and pursue still further the experiments I have begun, patiently, impartially, and zealously, with a pure desire to elicit truth, I am convinced that before all your present tacks are out, you will not have to grope in the dark when you wish to treat your stock according to this system, for you will have the best veterinary surgeons that Scotland can produce flinging themselves heart and soul into the practice of this, the only system which provides potent remedies for every disease, without torturing the enfeebled frame with painful applications and nauseous drugs which leave their sting behind them, and without depriving nature of one drop of that generous blood which, under this gentle system, may be safely reserved to carry her patient through the crisis of life with the prospect of rapid convalescence.

Mr. Scott, Skirving, Campton, entirely agreed with Mr. Sydserff in thinking that to make horses take laudanum, could only be justified on the ground of the disease amounting to agony; and he was perfectly right in saying that it retarded the cure of the horse, because it dulled all the vital energies. As to homœopathy, he would not venture to give any opinion, but he might remark this, that the first case of pleuro-pneumonia he had seen under treatment was a bullock of his own. Professor Henderson of Edinburgh happened to hear of the case, and volunteered to give it medicine at a time when it was very far gone. The animal lived, but it became a mere wreck, and was utterly useless, and never fattened afterwards. This, however, was 15 years ago, and since that time homœopathic treatment might have altered.

Mr. Knox, V.S., in answer to some calls, said he had never had any practice in homœopathy, believing it to be wrong. If a cow took ill with constipation in the bowels, she might get a lb. of salts in Linseed oil and ginger, as it would take all that to operate on a well-fed animal. Were the animal treated on the homœopathic principle, she would get nux vomica, but the only effect it would have would be that of a slight sedative. As to bleeding and blistering horses for colic, that theory was now entirely done away with. In cases of colic give nitrous ether with Linseed oil, and perhaps next morning a slight physic ball; and it would be found no bad thing to give the animal a good smart rubbing with turpentine and mustard. One of the most frequent complaints was cold If this occurred in the stable, three-fourths of the animals took the same disease. The best plan was to put them into a loose box before they got into the stable; give them plenty of ventilation, and clothe them well; but as to bleeding, or anything of the kind, in cases of influenza, this was very wrong. In cases of puerperal, or, as it was commonly called, milk fever, the disease, now a very prevalent and very fatal one, was brought on by the animals being in too high condition; and the fat should therefore be taken off the cow before calving, and bran mash should be given.

Reviews.

The Journal of Agriculture, No. 69, July, 1860. Blackwood & Sons.

The current Number contains, among other papers, a review of Darwin's book on the Origin of Species, Notes by Mr. Burn on the Agriculture of Belgium, a paper on Arterial Drainage by an Old Norfolk Farmer, essays on the Management and Diseases of Cattle and Dr. Anderson's report of proceedings in the laboratory. As it is a topic which if the wet weather should continue will doubtless again acquire considerable importance, we make the following extract from the Old Norfolk Farmer's paper on the need of Arterial Drainage His chief illustration is derived from the experience of 1852, and he himself quotes from the paper read by Mr. Algernon Clarke before the London Farmers' Club some months ago:—

"In the autumn and winter of 1852, and the spring and summer of 1853 especially, when the fall of rain was greater perhaps than had been known for 40 years, the injury sustained in property of all descriptions, and to human and animal life, was incalculable and appalling. Thousands of acres of hay were destroyed in the summer of 1853, and thousands of sheep, lambs, and cattle drowned. As you travelled, all the low lands looked like extensive lakes or estuaries; and so saturated was the land in the autumn and winter of 1852, that it was found impossible to sow the Wheat, and an extraordinary breadth of land was omitted to be sown with that grain. It was, in fact, only on those lands which were thorough drained and had a good outfall that the seed could be got in at all; and so seriously was the produce reduced by the wetness of the season, that, but for a large stock of old English, and an equally large importation of foreign wheat, both of which were consumed before the following harvest, a famine must have ensued. The deficiency that season amounted to 11 million quarters, and it was met by a stock of 6 millions of old corn, and 6 millions of imported, leaving only a stock of 1 million quarters at the harvest of 1854.

"Had a system of arterial drainage been carried out previous to that disastrous season, the land would have cleared itself of water as fast as it fell; and not only would much of the damage sustained have been averted, but the seed Wheat would have been more generally put in, and the crop would have sustained less injury. It may fairly be estimated that the damage sustained that year alone, for want of a proper outfall for the water, would have purchased all the mill power of the kingdom twice over at a fair estimation. That this is no exaggeration, the following extract from Mr. Clarke's paper will show:—

"'In February 1852 the Severn and Wye rose to an alarming height; the former river, at Gloucester and Tewkesbury, rising in one hour 18 inches upon the meadows. The lower part of the city of Hereford was so flooded by the Wye, that the inhabitants were driven to their upper rooms, and ferry-boats were established in the streets. In September of the same year the counties of Worcester, Gloucester, and Hereford were visited by a tremendous tempest, in consequence of which the Severn rose at Worcester, in one night, from its low summer level so much that its banks were overflowed, and its surface covered with uprooted trees and crops, furniture, and drowned animals. In the valley of the Teme, which river came down with a "head" similar to the "bore," or tidal phenomenon, on the Severn, the number of sheep washed away in the parish of Powick alone was 2000, and some carcasses of the cattle were drifted into the Bristol Channel. Great damage was done to the grain and meal in the various mills. At Henwick Mill, a rick of hay of about 12 tons was bodily moved by the flood. The Hop yards which abound in the Teme valley suffered greatly. At one Hop-yard, near Shelsby, poles and Hops were washed into the stream; several houses and many gardens were destroyed; and at Stonesbridge the Leigh Brook, rising 20 feet above its ordinary level, demolished a house, drowning its inmates, and scattering it in fragments over the neighbourhood. The river Froome overflowed its banks at many points; and numerous smaller streams, accumulating into rivers, broke their embankments, flooding hundreds of acres, and the Hereford and Gloucester mail, together with one of the passengers, was lost in the Froome near Dormington. All the vale of Gloucester, comprising a vast flat district on each side of the Severn, was one wide spreading sea, the water covering the fences, leaving only the tops of the trees visible The parishes of Sandhurst, Lougney, Elmore, and other villages near the river, were completely deserted, the inhabitants having fled to more elevated country. In some localities the houses were completely submerged, only the chimneys remaining visible. At Gloucester, the dock warehouses, and even one of the churches, were inundated, and the city was three nights in darkness, owing to the flooding of the gas works. At Tewkesbury, boats were employed to rescue the inhabitants. At Shrewsbury, the Abbey Church and nearly 800 houses were under water, and the deluge extended over several miles of the surrounding country. In December the Severn, hardly subsided, again rose, the houses in Shrewsbury again suffered, and the meadows for many miles were flooded to the depth of several feet; so that in many places along the Shrewsbury and Chester, and also on the Shropshire Union and Shrewsbury and Birmingham Railways, as far as the eye could reach, the land was completely drowned, to the vast damage of seeds and plants in the ground. The almost unprecedented fall of rain during the latter end of 1852 produced similar disasters in the south-west counties. At Bath the river Avon overflowed, the water reaching 10 feet above the ordinary level, and inundating a great many houses, the inhabitants taking refuge in their upper apartments, and receiving supplies of food by boats. In the neighbourhood of Bristol an immense amount of property was destroyed. The central basin of Somersetshire, or the marshes and moors about the rivers Parret, Axe, and Brue, between Bridgewater, Wells, and Glastonbury, were completely under water, rendering all traffic wholly impossible. The meadows around Taunton were flooded; and at Langport and upon Sedgmoor the water accumulated to a disastrous depth and extent, to the heavy loss of the graziers and farmers of that rich pasturing district. In Devonshire the rivers Lemau and Teign, at Newton Abbot, and other places, and in Cornwall the river Carnel, near Bodmin, flooded their contiguous lands, with great damage Few districts are more afflicted with inundations than the valley of the Thames. In 1846 all the low lands for miles above and below Windsor Bridge were flooded several feet in depth, and a great portion of the Home Park of the castle was completely under water. Again in 1847, and again in 1848, many thousands of acres in the same neighbourhood were overflowed by the Thames and the Kennett. In July 1852 similar floodings occurred, the hay-fields between Swindon and Chippenham being indicated only by the appearance of scattered hay-making machines and other implements. In November and December of the same year the valley from Vauxhall to Windsor was a vast lake. Oxford was standing in a sea of water, the Cherwell and Isis being miles in width, a vast amount of cattle and agricultural produce being carried away from the vicinity, and several lives lost. It was computed that 6000 acres on the Oxfordshire side of the Thames were under water from September 1852 to February 1853. At Maidenhead, Reading, Ealing, Uxbridge, and many other places, the principal corn-fields were overspread with several feet of water, and the number of houses inundated was

enormous. At Farringdon the sheet of water was of amazing extent, and at Cricklade, Lochdale, and other places, the farms were under water, heavy losses inflicted, and great numbers of families reduced to starvation. The Thames is in so choked a condition, that there have been seventeen floods in twelve months, and a third of the hay harvest of 1853 was washed away. Much land in Epsom, Dartford, Lewisham, and Charlton, was overflowed in 1852. On the North Kent Railway, the valley of the Medway and the marshes along the Thames were one expanse of water for miles. Parts of Chatham, Rochester, and Stroud were also flooded. The damage to property and to health in the neighbourhood of the metropolis was beyond estimation. After the excessive rains of July 1853, the low lands on the South Western Railway were overspread with water, and thousands of floating haycocks. At Guildford, Chertsey, Woking, and Battersea, the flood was several feet deep. Windsor and Reading suffered as usual. At Newbury, Sonning, Burghfield, Oxford, &c., many hundreds of acres were cleared of their hay. Wheat, Barley, and Oat crops were flattened and spoiled; and at Banbury, for miles on the eastern side, the country was entirely deluged,' &c.

"The foregoing is a sample of what occurred in every part of the country in those disastrous seasons, from 1847 to 1854, during which it is not too much to say that, of property to the amount of many millions which was destroyed, a large portion would have been saved had a general system of arterial drainage been previously carried into effect."

American Glimpses of Agriculture in Great Britain. By Luther H. Tucker, of "The Country Gentleman," &c. Albany.

We have lately had the pleasure and advantage of reading this very instructive pamphlet on the peculiarities or characteristics of our English agriculture as they appeared to a well educated American eye. While Mr. Tucker's references to the state of society among ourselves, and to the interest taken in our agriculture by foreigners and by our own great men will be read with satisfaction, it is perhaps chiefly his description of special farms to which the greatest value attaches; and extracts from some of these reports we shall hereafter give in our columns.

The condition of the farm labourer—the statistics of rent and produce—detailed descriptions of selected farms—the character and history of our breeds of cattle and sheep—the permanent improvement of our soils by drainage, thorough tillage, &c.; and a reference to the implements of agriculture as illustrated at our great annual shows make up the contents of Mr. Tucker's pamphlet. The comparison between English and American agriculture, with which he concludes, is couched in the following words:—

"Give the same knowledge of our climatic and other peculiarities that he already possesses of his own, to such an English farmer as those I had the good fortune to visit in Norfolk, in Lincolnshire, in Kent, and elsewhere, and let him apply himself and his capital to farming here, just as earnestly as he does at home, and no more, and it seems to me almost beyond the region of doubt that the balance sheet he would annually prepare so carefully would show, with every allowance for probable contingencies, a return considerably greater in any of our moderately favourable farming districts, than it possibly can, higher prices and all in view, after the rent has been deducted for the English landlord, the taxes for the English crown, and the tithes for the English church—or for anybody that happens to have inherited the right of levying them.

"This opinion, of course, should be received as it is given; it appears to me to be warranted by a general view of the agriculture of the two countries, while, at the same time, I cannot pretend to support it with statistics—the definite record of ascertained facts—for there are none of our own agriculture, and few that are available here of theirs. The conclusion to which I was forced to come is this: that the improved English agriculture of our day—with that measure of perfect success it has achieved, and that measure of certainty that now attends its successes—has been merely a gradual and natural growth, some of the causes and features of which I have been attempting to indicate, out of a confusion far greater than that which now overhangs our own efforts after advancement; that, even throwing aside entirely the advantages we have been deriving for 20 or 30 years from the mechanical skill of our inventors, the average character of our farming is now quite as intelligent and satisfactory as theirs was at a period not very remote—bearing in mind, however, that England has possessed for half a century or more the same advantages (although not in a degree so great) which she now possesses, in her far greater wealth, her aristocratic predilections for country life, and her compact population, over the present condition of American agriculture.

"So that it would be unfair to pronounce ourselves a score or two of years behind the farmers of Great Britain, without qualifying the verdict by adding that our backwardness, whatever it may be, is largely owing to the natural circumstances of our country, including, as I have before said, that lack of capital from which we have suffered in all pursuits, the distance of our markets and the low prices they have sometimes afforded, a sparsely populated territory, and a too general anxiety to get away from the farm, and live by trading or by our wits.

"So that, moreover, there is room to derive encouragement and base new hopes upon the comparison, no matter how far in the rear we voluntarily rank ourselves at present, provided only we know that we are once fairly in the right road to equal or greater development; and, if at length we should overtake and outstrip the mother country in the management and culture of our farms, it will not be the first time that we have schooled ourselves under her instruction, until the pupil—although it is perhaps scarcely becoming in him to say so—has actually excelled the instructor."

Our Farm Crops. Part X. Blackie & Co.

Professor Wilson's 10th Part contains an elaborate essay on the cultivation and management of the Flax crop, including its history, its botany, its management in Belgium, its ordinary cultivation here, the various processes for separating the fibre, and the value as food of the seed, and of the cake which remains after the oil has been expunged. The following is a passage descriptive of the various methods of separating the fibre from the bark and gum which surround and cement them in the stem:—

"These various processes—which, as has already been observed, differ widely both in principles and in their practical details—may be all classed under two heads: the mechanical, in which the operations are conducted in a dry state, and the chemical, in which moisture and temperature are more or less necessary. In the first, the object is obtained by the different parts being mechanically separated from each other without any changes being effected; in the latter the plant itself is disintegrated, either by the action of fermentation, which destroys, or of some solvent which merely abstracts the cementing matter by which the several parts of the straw are held together. Of the first but little need be said, as, except for rough goods not requiring to be bleached—as canvas, rick-covers, rope-yarns, &c.—it cannot be advantageously made use of. However, as it costs as much to steep bad straw as good, and the expenses in some such cases frequently exceed the value of the produce, it would appear that the mechanical or dry process may be beneficially tried where the raw material is of inferior quality, where there is a difficulty in steeping it properly, or where coarse fibre only is required.

"The second, the chemical or wet process, is effected in three very different ways, and must be considered under three distinct heads, as in each a different principle is involved. The first is that where the separation is effected by simple fermentation, known as 'steeping;' the second, where it is due to the abstraction of the nitrogenised extractive compound by the agency of chemical solvents; the third, where simply water, either heated or in the shape of steam, is made use of for the same purpose.

"In the first a destructive fermentation is carried on, either slowly or rapidly according to the temperature of the water in which it is steeped, at the expense of the extractive matter of the plant, and offensive and noxious gases are generated; in the second this matter is removed by the aid of chemical ingredients, which are costly, and never altogether efficient in their action; while by the third the separation may be effected without any chemical changes taking place in the composition of the plant, and all its several parts be left in an available condition.

"Of these different processes the first, that of 'steeping,' is the oldest, and still may be termed the universal method by which Flax fibre is prepared in every country in which it is grown, the only improvements that have taken place since our earliest records having been of quite recent date. The only advance modern times have made is in the substitution of an increased and regular temperature for the lower and irregular temperature of the pools or rivers in which the steeping is commonly carried on. This system, introduced by Schenk in 1846, was a great improvement upon the old, as we are now able to effect the operation at any and all periods of the year, in a 1-10th part of the time formerly required, with far more certainty as to the results, and, in most cases, with increased returns from the straw operated upon."

The description of the modes by steeping and dew-retting is then given in detail, and Schenck's and other methods for the same purpose are afterwards enumerated:—

"The merits of practically employing heated water for this purpose is due to Schenck, who took out a patent for it in 1846, though the principle was not at all new, and had indeed been partially applied for a long time past. The first 'rettery' on this principle was established in Mayo in 1848; now there are some 20 to 30 at work in different parts of Ireland, besides several in this country, operating upon from 40,000 to 50,000 tons of straw annually. In this the principle of fermentation is the same as in the old process, but is now totally independent of external temperature, being placed under the control of the operator, who can easily regulate the action of the steep according to the quantity of Flax operated upon, or the quality of the article he wishes to produce. An important saving in time is effected, from 72 hours for the finer qualities to 96 hours for the coarser only being required, instead of from two to three weeks. The work, too, can be carried on all the year round, instead of only during the summer months, and a more regular and certain fibre is obtained. The size and number of the steeping tanks are regulated by the general working arrangements of the 'rettery,' and these again are mainly determined by the local circumstances of supply and sale. The temperature of the 'steep' is kept up between 80° and 90°, and controlled at will by the operator. Here, however, we have the same destructive fermentation at work as in the ordinary steeping, under a certain control, it is true, but generating, as the decomposition proceeds, the same foul and offensive gases. These gaseous exhalations, which far and near stamp the unpleasant proximity of a 'rettery,' have been examined by various chemists, and have been found to consist chiefly of carbonic acid and hydrogen in nearly equal parts, with combinations of both sulphur and phosphorus with hydrogen. The fermentation appears to be of a peculiar character, merely traces of acetic acid being found, while butyric acid is gennrated in large quantities. In fact, the fragrant butyric ether, so extensively used now as a flavouring substance, especially in the preparation of 'Pine-apple rum,' might readily be collected in considerable quantities from the stinking water of the foul and offensive steeping tanks or pools.

"The great advantages which this hot-water process offered over the ordinary system of steeping were disputed by some of the old steepers, so that in order to bring the question to a fair issue, the Irish 'Flax Improvement Society' undertook, in 1850, a series of comparative experiments, in which the following doubts as to the hot-water system were specially investigated and reported upon:—

"1. That the yield of fibre would be less than by the ordinary method of steeping.

"2. That fibre so prepared would be weakened.

"3. That linen made from the fibre would not bleach properly.

"In reference to the first objection, the committee reported that the experiments* showed that the uniformity of temperature had the effect of increasing the yield of fibre. As regards the second objection, the results were equally favourable. In the first experiment, the Flax steeped in the ordinary way spun to 96 lea yarn, and that by the hot-water system spun to 101 lea yarn. In the second experiment, the cold-steeped fibre gave 60 lea, and the hot-steeped gave 70 lea. The third objection was submitted to an extensive bleaching firm, whose evidence in favour of the hot-water process was very decided. The committee concluded their report by stating their belief that all reasonable objections had been fairly and reasonably met."

Veterinary Homœopathy. Illustrated by 125 *Cases.* James Moore, V.S., M.R.C.V.S., &c. T. Sanderson, 77, Fleet Street, E.C.

We have here a pamphlet of the kind to which Mr. Sydserff would have drawn the attention of the Haddington Farmers' Club, had he known of its existence. Mr. Moore has been 25 years in his profession, and during the past 10 has been engaged in the use of homœopathic remedies, and is thus entitled to speak with some degree of authority of the comparative merits and advantages of the two courses of treatment. A large number of cases of pleuro-pneumonia, and of milk fever, among other diseases are described. Mr. Moore concludes with the following enumeration of the advantages of homœopathy:—"1, it cures disease. To cure means to heal. The means of cure attack the disease and not the patient's constitution. The means are harmless in themselves and do not add to the danger and suffering which already exist. * * * 2, its increased success. It cures more cases than allopathy. Such is my own experience and that of others who have tried both plans. * * * 3, its humanity. Every one knows how horribly cruel all allopathic measures are. Firing, blistering, and over-drugging a poor brute, as sensitive to pain as man, and already suffering acutely, are instruments of torture from which the mind recoils in disgust. Supposing that homœopathy were the universal and accredited system, and that some one introduced allopathy, with what indignation would every man receive the proposal to perpetrate its cruelties on his horse, cow, or dog! Custom, however, makes cruelty familiar, and familiarity breeds indifference. * * * 4, the single remedy. In homœopathy only one drug is given at a time; its action is not interfered with by being mixed with different and incongruous substances. [This, however, is not entirely consistent with the account of Mr. Moore's own practice given in some of the cases he has previously described.] 5, the giving of small doses. Allopathy gives monstrous doses of poisonous substances to excite poisonous effects, such as purging, sweating, &c. * * * 6, it economises strength. Whatever lowers strength, robs the body of its power to resist the weak-

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* "In one experiment, conducted at Lisburn by Mr. Dickson, 112 lbs. of Flax straw, after being steeped and dried in the usual way, gave 20 lbs. of scutched fibre: while 112 lbs. of the same straw steeped by the hot-water process gave 24 lbs. In another trial, 112 lbs. of cold-steeped straw gave 17 lbs. of dressed fibre; whereas the same quantity of straw [illegible] by the hot-water process 17 lbs. 11¼ oz. Other experiments on a larger scale confirm these results. In 10 comparative trials made with nine different sorts of Flax, it resulted that the average produce of 1200 lbs. of Flax straw gave 144 lbs. dressed fibre in the hot-water steep, and only 11[illegible] steeped in the ordinary way.

"Dr. Hodges, in a paper read at the meeting of the [illegible] Association at Belfast (1852), gave a statement, extracted from the working returns of the Cregagh rettery (Schenck's), of the changes which 100 tons undergo when treated by the process —

"100 tons of dry Flax on the average yield—

"1. By seeding, 33 tons of seed and husk, leaving [illegible] straw 67 tons.

"2. By steeping, the 67 tons of Flax straw yield [illegible] straw 39.5 tons.

"3. By scutching, the 39.5 tons of steeped straw [illegible] 5.9 tons of dressed fibre, and of tow and [illegible] 1.47 ton."

ening effects of disease. * * * Homœopathy does nothing to squander, but everything to preserve vital energy. * * * Allopathy, by a few heavy blows, prostrates the animal, and then, alarmed at the result, attempts to support it, when sinking. * * * 7, it is economical in a pecuniary sense. Fewer cases die, so that the value of the animal is saved. The duration of illness is greatly abridged, so that the expenses of treatment, keep, and the loss from inability to work are proportionately curtailed. Of course as the animals are sooner cured, and require no turning out to Grass, &c., they are soon able to resume work. And even after the most severe illness, they are unimpaired in value or working capacity. Contrast this with what happens in allopathy."

These extracts are of course shortened from their respective paragraphs in the pamphlet. Mr. Moore is a vigorous advocate of his system; and we conclude with the following passage relating to the 125 cases he has described: only adding that we are assured by the writer that these cases are "average specimens of the ordinary run of diseases. They fairly represent the features of daily practice, and are not mere selections published for the purpose of exhibiting the mode of treatment in a light unusually favourable. * * * I shall be curious to learn what figments will be invented to explain these recoveries by those who will not, or who cannot conveniently admit the only conclusion to which they point. They will be found rather more difficult to dispose of than similar recoveries in the human subject. The opponents of homœopathy must however, to save their own credit, explain them away somehow or other. What have 'faith,' 'imagination,' 'dieting,' 'regimen,' 'sisters of charity,' 'wholesome hospitals,' 'globules,' and all the rest of it done here? 'Nature,' their forlorn hope on desperate occasions, will no doubt be called into play. On this they will make their stand. If they assert that these recoveries were solely due to nature, I shall require to know—1. What is meant by unaided nature curing the highly fatal diseases of animals. 2. Why this supposed curative power, influence, or agent, has never been discovered till now. 3. Why nature is never prated about except when it is expedient to account for the recoveries which happen in homœopathic practice. 4. Whether it is probable that the patients would have recovered as they did, had they been left entirely to nature or to chance. 5. Why in every instance of recovery the disease began to subside coincidentally with the administration of homœopathic remedies. 6. Why nature did not cure, or show any signs of curing, until that particular juncture. 7. Why nature, even when allied with allopathy, failed to cure until homœopathy kindly turned the scales. 8. Why allopathists never trust to nature alone. 9. Why bleeding, blistering, and so on, are resorted to, if nature be sufficient to cure. 10. Which treatment is the more likely to place the fewest obstructions in the way of any restorative tendency that may exist. 11. Why, even granting that these recoveries are entirely attributable to nature and not to homœopathy, nature should not hereafter supersede allopathy, especially as there would be more success, less expense, and no pain. And 12. Why 125 cases are not forthcoming to prove that when similar diseases are left to themselves (*i. e.* nature) the same results follow."

Journal of the Bath and West of England Agricultural Society. Vol. VIII. Part 2. Ridgway.

The editor completes his work at the beginning of each half year—the first part appearing in January and the second in July. The latter half of this year's volume contains a great number and variety of short articles collected under the heading "Note Book"—which, while of comparatively little use to the volume as a work of reference—for most of it is extract matter—yet adds greatly to its current value as a readable and interesting work. Thus, Wool, Sheep, Devon Cattle, Swine, Ergot, Lois Weedon, Beetroot, Forces used in Agriculture, Arsenic, Artificial Manures, and Linseed-cake, Fish Manure, Oak Galls, Whichwood Forest, Weeds, Example, Freedom for Land, Notes from New Books, Mr. Acland's experiments at Killerton, Meteorology, Statistics, occupy 100 pages. Another hundred are filled with papers on Farm Labourers and on Cattle Foods, by Professor Tanner; on the Turnip Crop, a capital essay by Mr. Spooner; and on Steam-power, by Mr. Clarke, taken from the Journal of the Agricultural Society.

Mr. Poole, of Bridgewater, writes thus on the report of the Committee appointed by the Council of the Bath and West of England Society about Agricultural Customs:—

"The resolutions of the committee primarily affirm two propositions:—1. That the landlord ought to have security for the good management of his estate. 2. That the tenant ought to have security that he shall have time to obtain a fair remuneration for his capital, or that he shall be paid the value of what he leaves for his successor. And then they proceed to lay down some general rules for guidance in the carrying out of these propositions. These rules, however, do not touch two very important questions: viz. that of the time for the commencement and termination of tenancies, and that of the cultivation clauses to be inserted in leases. * * * With the view, therefore, of commencing a discussion of these two questions, I beg to offer the following suggestions on them, and on two others which spring out of them:—I. As to the time for the commencement and termination of tenancies. In considering this and all similar questions, the object to be kept in view should be the reduction to a minimum of all subjects for valuation between the outgoing and incoming tenant at the end of the former's tenancy. Bearing this in mind, I suggest that in mixed farms of arable, meadow, pasture, and orchard land (which is the constitution of most farms in the West of England), it is desirable that the tenancy of the farm should not terminate at any one time; and that it is preferable that the tenancy of the arable land, of a portion of the earliest Grass land, of a stable for a team of horses, and of one of the cottages, should terminate at Michaelmas—that of the bulk of the Grass land and of the orchards at Christmas—and that of the farm-house, yards, bartons, the rest of the cottages, and a home-field or two, at Lady-day. The advantages of this arrangement are:—1. That all claims by the outgoing tenant for acts of husbandry are reduced to two: viz. the value of brushing in the seeds with the Barley, and the preparation of the Turnip crop. 2. That all claims for reimbursement of outlay in seed and manure are reduced to two: viz. the cost of providing the seeds to brush in with the barley, and the cost of providing seed and manure for the Turnip crop. 3. That there can be no claim for an offgoing crop. 4. That the incoming tenant can give his arable land the benefit of autumn cultivation. 5. That there will be Grass for his stock immediately on his entering at Lady-day. 6. That the only other subject for valuation will be the spending value of the straw grown in the last year of the tenancy. * * * II. As to the cultivation clauses, which shall give security to the landlord for the good cultivation of his farm, and yet '*not needlessly restrict the tenant as to the succession of his crops.*' I have marked with italics the wise recommendation contained in the Report of the Committee. The complaints made by farmers of the restrictions usually found even in the best drawn leases are great and well-founded. * * * But without them, how can the landlord secure himself against injury to his farm? With them, how can the tenant have freedom of choice in the succession of his crops? In this matter simplicity is one of the objects to be aimed at, for the complicated covenants usually found in leases have long been deservedly condemned, though no satisfactory substitute has yet been found for them which has come into general use. Let us then examine some of the most approved systems of husbandry, and see whether we cannot extract some general principle from them which will suffice for our guidance. * * * I need not encumber this letter with statements of many courses of husbandry recommended by good farmers in different districts. The same principle pervades them all, examples: viz. that of cropping half the arable land in each year with corn, and the other half with green crops to be consumed on the farm. Does this principle then meet the requirements of the case? Does it give the landlord security for the good management of his estate? And does it give the tenant freedom of choice as to the course of cropping? If half the farm is cropped with green crops every year, and the same are consumed thereon, material deterioration in the quality of the farm would seem to be almost impossible; and if there be no stipulation whatever as to the course in which the crops shall be grown, surely the tenant cannot complain of being shackled by any unnecessary restrictions on his course of cultivation. The tenant of course must covenant to keep his crops clean, and to use good husbandry. If this principle does meet the requirements of the case, the only cultivation clauses that need to be inserted in a lease will be:—1. That the tenant shall crop half his arable land in each year with green crops. 2. That he shall not seed such green crops without licence from the landlord, in writing, and shall consume them on the farm. 3. That he shall keep his crops clean, and use good husbandry. * * * III.—The mode in which the outgoing tenant shall be remunerated for acts of husbandry, seed and manure left on the land, and straw. By the arrangements proposed by me in this letter, the claims of the outgoing tenant will be limited to the following matters:—1. The cost of the seeds sown with the Barley in the last year of the term, and the cost of brushing them in. This involves no difficulty, and, in case the outgoing and incoming tenants are unable to agree, the amount to be paid should be settled by arbitration. 2. The spending value of the straw grown in the last year of the term, which the outgoing tenant will be unable to consume, and the amount of which must be settled in case the outgoing and the incoming tenant cannot agree by arbitration. This involves no difficulty. 3. The value of the Turnip seed, and of the acts of husbandry and manure employed in raising the Turnip crop. This is the only important and difficult subject for valuation. * * * The rule I should lay down would be, that no claim for unexhausted manure should be made where a corn crop has been taken since its application. Where coarse bones are used, they are supposed to remain in the soil beyond one crop, but, as a tenant knows generally two years beforehand when he is going to quit, he needs not to use them; and I do not think it necessary to make any provision in leases for the reimbursement of the cost of any manure where a corn crop has been taken from the land since it was dressed with it. I have therefore assumed that there shall be no claim except for the 25 per cent. of Turnip crop. With regard however to the 25 per cent. of land which shall have a Turnip crop on it at the end of the tenancy, the outgoing tenant should have ample remuneration for his outlay upon it. There are three modes of doing this:—1. By requiring the bills for seed and for artificial manure to be produced. By estimating the value of the manure made on the farm and employed on the Turnip crop, and by estimating the value of the acts of husbandry employed upon it, and adding to the amount so ascertained a year's rent, rates, and taxes of the land. 2. By estimating the produce of the crop in quantity, and the value of the same in money. 3. By estimating the produce of the crop in quantity, and settling the value at certain prices per ton, to be fixed by the lease at the commencement of the tenancy. Adhering to the rule of reducing the subjects for valuation at the end of a tenancy to a minimum, I give my preference to the third of these modes. * * * The quantity having been settled, the next question is the price per ton. This, as I have before suggested, had better be settled by the lease. The price usually awarded on valuations of Turnip crops between outgoing and incoming tenants is (I believe) 8*s.* per ton for Swedes and Mangels, and 5*s.* per ton for common Turnips. * * * IV.—Permanent Improvements.—The discretion as to such outlay cannot possibly be left to the tenant, for the landlord may have only a limited interest in the estate. The amount also may be large. That of draining alone frequently amounts to 5*l.* per acre, which may be two or three years' rent of the land. Few landlords are in a position to increase their investments in land to the amount of two years' income, however much they may be able to improve their land by so doing. In my own case, and as agent for other landlords (wherever I am able to do so), I pay the whole cost of buildings or draining, except the cost of hauling materials, and I charge 5 per cent. on the outlay on draining during the residue of the tenant's term. The outlay on buildings is generally under special circumstances which do not justify a charge for interest. When the lease is renewed, I charge whatever rent the improved value of the farm will justify."

The Resources of Reclaimable Land. By James Sanderson, Land Agent, &c., 13A, Cannon Row, Westminster. Effingham Wilson, Royal Exchange.

The author argues the advantage of reclaiming the large tracts of reclaimable land which still remain waste, and proves its profitableness in a number of recited instances, some of which we have quoted for the instruction of our readers.

Farm Memoranda.

Reclaimed Land in Selkirkshire.—The district is one in which the writer farms, and the farms noticed are chiefly in the northern division of Selkirkshire, and partly in the counties of Midlothian and Roxburgh. All the farms lie contiguously, and form a district at the point where these three counties converge. For the sake of distinctness, I designate the farms by numbers, withholding their names.

No. 1 is a farm which, 20 years ago, was partly in the possession of the proprietor, and partly in the occupation of a non-resident tenant. The part in possession of the landlord contained 300 acres, lying in pasture, and divided into fields, varying from 10 to 30 acres. These fields had been previously cultivated, and having been sown out in a wet and poor condition, yielded very inferior pastures. They were annually let for summer grazings, and realized low rents, compared with those generally obtained for Grass parks. The portion of the farm under lease was a pastoral hill, containing upwards of 700 acres, having no enclosures, and lying in close contiguity with the Grass parks. On the expiry of the lease of the pastoral hill 18 years ago, both divisions—Grass parks and hill—were let to an enterprising tenant, who, in the beginning of his occupancy of the farm, commenced to plough, drain, and lime the sterile Grass parks. In a few years these parks presented a wonderful change. All of them had undergone a thorough system of cultivation, and, instead of producing only coarse Grasses, yielded luxuriant grain and green crops. Simultaneously with these improvements, extensive operations were being executed on the hill—ploughing up the rugged natural lea, picking and removing stones from the surface, draining, liming, and erecting substantial stone dykes, 5 feet high, which formed enclosures varying in size from 20 to 60 acres, so that what had recently been a pastoral hill was in a few years transformed into a large arable farm, wholly cultivated, with the exception of nearly 100 acres on its rocky summit. The results obtained from these improvements will be apparent to all, by taking a glance at the increased products of the farm. Previous to its being cultivated, it kept a regular stock of 500 Cheviot sheep, and the 300 acres of summer grazings maintained for four months from 60 to 70 cattle. Now the combined farms keep a regular stock of 600 sheep, and the hardy but small-boned Cheviots have been supplanted by the larger-framed and more easily fattened Leicesters. Before the occupancy of the present tenant, the whole produce of the farm consisted of 20 acres of Oats and Barley, and two or three acres of Turnips and Potatoes. Now it annually raises upwards of 200 acres of cereal crops, produces Turnips which fatten between 50 and 60 cattle, and upwards of 400 sheep, and supply eight

weeks' food in spring for the regular sheep stock which the farm maintains, as well as partially furnishes food for 150 store cattle during winter. Formerly only eight individuals were engaged on and supported by the farm: now it employs and supports upwards of 70 resident persons.

No. 2 was five years ago wholly a pastoral farm of 600 acres, and leased by a non-resident tenant. On the expiry of the lease at that time, the farm was offered for public competition, and let for a 19 years' lease to the present tenant. From part of the farm having been at a remote period cultivated, traces of serpentine ridges were still visible, and bore ample testimony to the bad farming of bygone days. The practice towards the end of the last century, of ploughing isolated patches, and leaving these when exhausted for nature to cover with wild embryo plants, was to those who adopted it the most ruinous imaginable, and entailed on coming generations the most adverse consequences. Barren pastures, an impoverished soil, and a secluded district, are some of its fruits. This farm had undergone the system referred to, and previous to its cultivation bore ample evidence of the evils resulting from such a system. The whole farm previous to its being brought under tillage presented a very barren aspect; stagnant morasses in its valleys, covered with the luxuriant but harsh foliage of the common Reed-grasses, seared and stinted pastures, isolated Whin-bushes, and gnarled Hawthorn trees—remains of former fences—were some of its more prominent features. The morasses have been removed by a large main drain of 20 feet deep; and where formerly stood these stagnant waters is now a rich loamy soil. The farm is already nearly all cultivated, and divided into large enclosures, which yield abundant crops. Formerly it only grazed 450 sheep, and their shepherd was its only inhabitant. It now maintains a more numerous and a better flock, fattens 30 head of cattle, and five yoke of horses are to be seen scaling its steep and undulating surface. A new homestead has been erected by the proprietor, and the dense volumes of smoke that may be seen issuing from one of its chimneys indicates the important change which has been so rapidly effected on the farm. It might have been interesting to have given, in detail, the increased value of the store sheep upon the farm, the number of sheep annually fattened, the number of store cattle maintained, and the bulky crops of cereals and weighty crops of Turnips produced; but, as these may be in some measure gathered from the above outline, I shall only say that a new colony is established, employed and supported on the farm, and that the annual produce, which is sold for the purpose of supporting the general population, has increased in value 2000*l*. *Mr. Saunderson on the Resources of Reclaimable Land.*

Calendar of Operations.

JULY.

WESTER ROSS, *July* 23.—The month of June was so invariably cold and wet throughout that, from the beginning to the end of it, we had not one thoroughly warm day, consequently the crops made very little progress Since the beginning of July, however, the temperature has been much higher, and as we have had abundance of rain the crops have been making rapid progress. Turnip sowing was completed in good time and in excellent condition, and as there were no blanks, and no Turnip devourers of any sort, we had no second sowings; and so rapid has been their growth that on many farms the singling or first hoeing has been completed. Never perhaps have we seen the Swedes and earlier sown Turnips more speedily close over the drills than they have done this year. Unless something unusually untoward happen, the Turnip crop will now be very abundant. Nor will the straw be less abundant. Within these few weeks the crops have stretched wonderfully. Wheat, although thin nearly everywhere, has lengthened out greatly, and the straw being stout as well as long will be of considerable bulk. This crop stands much in danger of rust from the continued cloudy and damp weather. Barley, although not yet at its full length, has become so heavy that much of it is already laid, and from such only an inferior sample can be had. Oats are unusually promising, abundant in straw, and rich apparently in grain If well harvested this crop will help to make up for the sad deficiency of last year. Potatoes on dry, friable soils are looking particularly well; on stiff damp clays they are thinly planted, and are progressing slowly. Beans and Peas are not largely grown in this district, but when sown are very promising. The hay crop occupies a smaller breadth than usual, is by no means heavy, and has been overtaken by an unseasonable harvest time. The pastures are now more abundant than they have been, and store cattle have considerably increased in price. As the harvest must now be late, we are desirous to have manure carted, and everything done to admit of autumn Wheat being sown immediately after the crop is secured.

Notices to Correspondents.

ARTIFICIAL MANURE: *Jamaica Planter.* A pamphlet by Mr. Moule describes the manufacture of an inodorous fertiliser from clay and night soil (Bradbury & Evans). As to the other substances named—10 of bones, 5 of sulphuric acid mixed in a heap, and the result mingled with 15 of any waste flesh or night soil, and then thrown together and repeatedly mixed and turned over, with 70 or more of moist but friable clay soil, will make the very best of compost, to be used as a dressing at the rate of 10 to 20 cwt. per acre.

DAIRY MANAGEMENT: *Agricola.* Read the "Handbook of Dairy Management" (1*s*. 6*d*.) published by Longmans. Dairy produce is disposed of if on a small scale to neighbours, or on a large scale to Newgate Market or Leadenhall Market salesmen. It is hardly likely that taking as an entire novelty to dairy farming you will succeed, unless you have already had the management of labourers, and know how to choose and retain the services of competent hands. Pleuro-pneumonia and the distemper may well deter any one who has not capital to fall back upon from entering into dairy husbandry

PARMENTER'S PATENT PREPARATION

For Destroying Mealy Bug, Red Spider, Thrip, Scale, Aphis, and other Insects, also Mildew on Vines, Fruit Trees, and Plants of all descriptions.

JAMES CARTER & CO.,

IN offering the above Preparation, are fully aware that they are fulfilling a duty of considerable importance both to themselves and the Public, as it is well known that many preparations have been previously offered and recommended as sure and safe remedies against the above-mentioned pests, and have on impartial trial proved either totally ineffective, or destructive to the lives of many valuable Plants.

Although J. C. & Co. have had incontestable evidence of the efficacy of Parmenter's Patent Preparation, yet they did not on their own experience alone feel justified in recommending to the Public, but desired still more convincing proof. In the furtherance of this object J. C. & Co. sent some of the Preparation to several of the leading Nurserymen and largest private establishments in the United Kingdom, requesting at the same time a searching, thorough, and impartial trial, the results of which will be duly published. The following is the report of a series of careful and elaborate experiments by the eminent Nursery Firm of Messrs. E. G. Henderson & Son:—

PARMENTER'S PREPARATION.—We find this Compound effectual for the destruction of *White Bug* and *Scale* on leaves of a Laurel-like texture, such as *Daphne, Nerium, Jasmine, Enkianthus, Rhododendrons, Thibaudias, &c.*, in the greenhouse, and such as *Ixora, Croton, Franciscea, Gardenia, Jasmine, Magnolia, Portlandia, Stephanotis, &c.*, in the hothouse, when dipped in a thin paste-like liquid, and applied with a brush into the inward axillary joints: after thus remaining on the plant 48 hours, it is thoroughly cleansed off by a vigorous syringing. When applied to plants within a cool genial greenhouse temperature, *it emits no offensive odour* (as in the Gishurst Compound), and is efficacious without injury to the plants. On plants of *Jasminum grandiflorum*, recently imported from the Continent, and completely covered with *Scale*, and on *Ardisia crenulata*, much infested with the *White Bug*, THE PREPARATION AS DESCRIBED WAS VERY SATISFACTORY. It also appears effectual in destroying and checking the *Red Spider* and *Thrip*, by immersing the branches once or twice in a thinner solution of the Preparation.

On plants with leaves of a less leathery and more porous texture and thin and pulpless, the Preparation cannot be applied sufficiently strong *at one immersion* to destroy the White Bug or Scale (the most difficult of all plant insects to destroy) without injury to the plants; therefore it should be made in a weaker solution, and applied with a soft brush or sponge to the infected parts, remaining on 24 or 48 hours as before. For the continual cleanliness of the plants, a solution of the Preparation in pure water for occasional syringing will be found very beneficial and act as a *check and preventative.* In the destruction of the *White Bug* and *Brown Scale* upon the class of plants first referred to, *Parmenter's Preparation* was found *more effectual* than the *Gishurst Compound.* In its application the following directions may be deemed safe:—

1st. The strength of the application, without injury, will be in proportion to the thick coriaceous or leathery texture of the leaves, their dormant condition or rest from growth, and *vice versâ.*

2nd. The injury arising from its undue application will be in proportion to its action on the soft and delicate cellular tissue of the plants, whether in a growing condition or not, but most injurious in the former.

3rd. As a general rule, plants of the strongest and most robust growth will require it to be applied of the consistency of thin paste-like liquid.

4th. Plants of the soft-stemmed class, whether heavy or smooth, will require its application by immersion in a mixture proportionately diluted to suit the texture of the plants.

Extract from a letter received from Mr. THOMAS RIVERS, *Author of "The Orchard House," the Nurseries, Sawbridgeworth, Herts.*

"ONE APPLICATION OF THE COMPOSITION UNDILUTED TO SOME ORANGE TREES INFESTED WITH THE BROWN SCALE EFFECTUALLY DESTROYED IT; *a small painters' brush was used in applying it.*"

Extract from a letter received from Mr. SUMMERS, *Gardener to A. Mongredien, Esq., Sydenham, "the raiser of Spergula pilifera:"*—

"WITH RESPECT TO THE DESTRUCTION OF INSECT LIFE, ESPECIALLY OF THE SPECIES AND VARIETIES OF COCCUS, WE THINK IT FAR SUPERIOR TO THE GISHURST COMPOUND, AND IT LACKS THE VERY DISAGREEABLE SMELL OF THE LATTER."

Price 2s. and 3s. 6d. per Bottle; Stone Jars, 10s. 6d. each.

To be had of all the principal Nurserymen and Seedsmen throughout the United Kingdom, and Wholesale and Retail from

JAMES CARTER & CO. (Sole Proprietors), 237 and 238, High Holborn, W.C.

JOHN BELL'S COMPOSITION FOR DESTROYING MILDEW ON VINES, PEACH, AND NECTARINE TREES, and every other plant subject to this pest.

Sold in Bottles, 1*s*. 6*d*., 2*s* 6*d*., and 5*s*. each. A 1*s*. 6*d*. Bottle is sufficient to make 10 gallons, 2*s*. 6*d*. do. 20 gallons, and 5*s*. do. 50 gallons fit for use.—10 & 11, Exchange Street, Norwich.

PAGE'S COMPOSITION FOR THE DESTRUCTION OF BLIGHT upon Roses, Wall-fruit Trees, Cucumbers, Melons, Vines, Stove and Greenhouse Plants, has stood the test of eight years' public trial, and its great success has led to numerous imitations. Dr. Lindley, in his leading article of October 25, 1856, reported 182 cases in its favour—sufficient to convince the most sceptical.

4*s*. per gallon, (sufficient to make four fit for use).
10 gallons and upwards, Carriage paid to London.

LONDON AGENTS:—
Henderson & Co., Pine-apple Place, W.
Hooper & Co., Covent Garden, W.C.
Mr. Veitch, King's Road, Chelsea, S.W.
Mr. Clark, Streatham Place, Brixton Hill, S.
Mr. Barnes, Camden Nursery, Camberwell, S.
Mr. Hopgood, Shepherd's Bush, W.
Cutbush & Sons, Highgate Nursery, N.

and the leading provincial houses in the Trade, and of the Inventors and Manufacturers, PAGE & TOOGOOD, Royal South Hants Seed Establishment, Southampton.

GISHURST COMPOUND,
PATENTED,
FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN
AMERICAN BLIGHT	ANTS	FLY

BED BUGS, &c.,

And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens
Messrs. Rollisson & Sons, Tooting, S.
F. & A. Dickson & Sons, Chester.

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1*s*. for first trials and small uses, such as destroying bed bugs; 3*s*. for not large gardens; 10*s*. 6*d*. for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

KEEP YOUR PREMISES FREE FROM MICE AND SPARROWS.

BARBER'S POISONED WHEAT kills them (only) on the spot. In 1*d*., 2*d*., 4*d*., and 8*d*. packets.—W. SUTTON & Co., 10, Bow Churchyard, London, E.C. Agents. Sold by all Druggists, &c., throughout the Kingdom. Works: Ipswich.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—
SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE.
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

They would call particular attention to the article Dissolved Bones, as being one of the most certain Manures for the Root Crop, and in which they guarantee every portion, both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE or SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	..	..	..	£6 6
,, SUPERPHOSPHATE OF LIME				6 6
,, MINERAL	..	..	..	5 5
LAWES'S BARLEY MANURE..	..	..	..	8 0
,, MANGEL MANURE	..	..	..	8 0
,, GRASS MANURE	..	..	..	8 0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

NEW SEED OF FIRST-CLASS

CALCEOLARIAS, CINERARIAS, AND FINEST FRINGED CHINESE PRIMULA.

JAMES CARTER & CO.

are now ready to supply SEED of the above in three-sized Packets, all of the same quality,

1s., 2s. 6d., and 5s.

JAMES CARTER & CO., Seedsmen, 237 and 28, High Holborn, W.C.

NEW HARDY PERENNIAL.

JAMES CARTER & CO.

HAVE MUCH PLEASURE IN OFFERING

Seed of AQUILEGIA CARYOPHYLLOIDES, fl. pl.,

which has been COMMENDED by the Floral Committee of the Horticultural Society, who describe it as follows:—

"This is a very pretty double-flowered variety of the common Columbine. The flowers are white, variously striped with reddish crimson, and here and there with reddish purple, producing an effective variegation. The variety was considered distinct and handsome, and was commended."

SEED SOWN DURING THE PRESENT MONTH *will produce Flowers next Spring.* Price 1s. per packet.

JAMES CARTER & CO., SEEDSMEN, 237 and 238, HIGH HOLBORN, W.C.

JAMES CARTER & CO.

BEG LEAVE TO OFFER THE FOLLOWING

CHOICE SEEDS FOR PRESENT SOWING.

CARNATION, 12 choicest varieties, BIZARRE, 10 seeds of each	3s.	6d.	PICOTEE, extra fine, mixed	2s.	6d.
Do. do. FAMEUSE, do.	4	0	,, PERPETUAL	2	6
Do. do. FLAKE, do.	3	6	HOLLYHOCK, 12 choice prize varieties	5	0
Do. do. YELLOW BIZARRE and SELF, do.	4	0	,, splendid mixed	1	0
Do. do. YELLOW FLAKE do.	4	0	PERENNIAL PHLOX, 12 newest varieties	3	6
PICOTEES, 12 choicest vars., WHITE GROUNDS, do.	3	0	,, finest mixed	1	0
,, ,, YELLOW GROUNDS, do.	4	0	WALLFLOWER, 12 double German varieties	2	6
,, ,, WHITE MARGINED, do.	3	6	,, double German mixed	1	0
PERPETUAL CARNATIONS, do. FANCY, do.	3	6	HEARTSEASE, extra choice	1	0
,, ,, do. FLAKE, do.	3	6	PELARGONIUM, extra choice show and fancy vars.	1	0
,, ,, do. BIZARRE, do.	3	6	ANTIRRHINUM, finest mixed	0	6
,, PICOTEES do. do.	3	6	PENTSTEMON, finest mixed	0	6
CARNATION, extra fine, mixed	2	6	CALCEOLARIA, extra choice, spotted and blotched	1	0
,, PERPETUAL, do.	2	6	CINERARIA, large flowered, brilliant colours, and great variety	1	0
			PRIMULA, finest fringed	1	0

☞ For other Perennials for present sowing, and directions for cultivation of the same, see **CARTER'S "GARDENERS' VADE MECUM,"** which will be forwarded post free on application to

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, London, W.C.

NEW SEEDS OF CHOICE CALCEOLARIA, CINERARIA, and fine-fringed CHINESE PRIMULA.

SUTTON & SONS

are now ready to supply new Seed of the above in packets of **1s., 2s. 6d., and 5s.** each, all equally fine.

SUTTON & SONS, ROYAL BERKS ESTABLISHMENT, READING.

TRIFOLIUM INCARNATUM

(present price) 4d. per lb.,

with "Practical Hints on its Successful Cultivation," showing how 2 to 3 tons per acre of the most nutritious Hay may be secured, the advantages of sowing it where broad Clover is thin, and its superiority to Tares as green food.

PAGE & TOOGOOD

having secured a large breadth from the most careful growers in this district—where better crops are produced than in any part of England—offer it at the above low rate for cash. Price to the Trade per post.

NEW TURNIP SEED ...	per lb.	1s. 0d.	**ITALIAN RYE-GRASS**, per bush., 5s. to 7s.		
NEW RAPE	,,	0 4	**MUSTARD**	per lb, 2d. to 5d.	

WINTER VETCHES and WINTER OATS as soon as harvested.

PERMANENT PASTURE GRASSES AND CLOVERS.

NEW CRIMSON, PURPLE, AND WHITE CHINESE RADISHES.

These new varieties, introduced by us from China, are perfectly hardy, and if sown in August or September will yield a supply of delicious flavour (equal to Spring Radishes) throughout the winter, in the open ground, **2s. 6d. and 1s. per packet.**

CALCEOLARIA and CINERARIA in packets of 2s. 6d. to 1s., saved from one of the finest collections in Europe, and Seeds for exportation to all parts of the world.

Royal South Hants Seed Establishment, Southampton.

STRAWBERRIES.

CHARLES TURNER can supply strong plants of the following select varieties:— Per 100.—s. d.

Admiral Dundas (Myatt), large and heavy cropper, second class in flavour	5 0
Black Prince (Cathill), early, small, but good cropper	2 6
Bicton Pine (Barnes), white, novel, medium flavour	5 0
British Queen (Myatt), fine flavour	5 0
Carolina superba (Kitley), fine flavour	5 0
Crimson Queen (Myatt), very large, great cropper, and fine late variety	7 6
Elton Pine (Knight), late	3 6
Eliza (Rivers), excellent cropper	3 6
Eliza (Myatt), good flavour; syn. "Omar Pacha"	3 6
Eleanor (Myatt), very late, large	3 6
Filbert Pine (Myatt), extra fine flavour and heavy cropper	3 6
Keen's Seedling, early	2 6
Nimrod (Pince)	3 6
Oscar—This valuable variety has maintained the high opinion expressed of its merits last season, having obtained prizes at the Crystal Palace, Royal Botanic, Pomological, and Fruit Committee of the Horticultural Society. Fruit large, handsome and firm, of good flavour, early, hardy, and great cropper. One of the best for early forcing	7 6
Prince of Wales (Ingram), fine flavour, and handsome fruit	3 6
Princess Alice Maud, early, and handsome	2 6
Sir C. Napier (Smith), large, very heavy cropper, good for general purposes	7 6
Sir Harry (Underhill) large	3 6
Stirling Castle, great cropper, small fruit	2 6
Victoria (Trollope), great cropper, second class in flavour	2 6
Wonderful (Jeyes), remarkably heavy cropper, good	5 0

The principal kinds may be had established in pots at a small advance in price, thereby insuring a crop of fruit the next season.

CHARLES TURNER has been awarded the First Prizes given for collections of Strawberries in London during the last two seasons.

The Royal Nurseries, Slough (adjacent to Eton and Windsor), and also at Salt Hill.

INGRAM'S PRINCE ARTHUR STRAWBERRY.

J. AND E. SMALL are prepared to receive orders for this excellent new Strawberry. Strong plants in pots for Forcing will be ready for sending out early in September at 40s. per 100, and 30s. per 100 for ordinary plants.

This Strawberry is a seedling raised at the Royal Gardens, Frogmore, where it is now extensively grown for Forcing as well as other purposes.

It was submitted to the Fruit Committee of the Horticultural Society June 12, 1860, and the Prize awarded for the best seedling Strawberry. It was again brought before the Committee July 10, at which time it obtained a first-class Certificate of Merit. Mr. Marnock, of the Royal Botanic, Regent's Park, writes:—The Strawberry Prince Arthur "beyond all doubt is one of the best in cultivation." Mr. Glenny also writes "fine full flavoured Strawberry, different from anything I have ever seen."—Agents: Mr. C. TURNER, of the Royal Nursery, Slough; Mr. DODDS, Epsom Nursery, Surrey; and NUTTING & SON, Seed Merchants, Barbican, London, E.C.

Colnbrook Nursery, Slough, Bucks.

THE QUICKEST TURNIP KNOWN.

SUTTON'S EARLY SIX WEEKS TURNIP may be sown until the end of August with certainty of a good crop Price 1s. per lb. or 48s. per bushel, CARRIAGE FREE. Discount for cash with order 5 per cent.

Royal Berkshire Seed Establishment, Reading.

NEW GRASS SEEDS FOR PERMANENT PASTURE.

SUTTON AND SONS have a fresh stock of PERMANENT GRASS SEEDS, Of the most suitable kinds for laying down and for improving Pastures.

The new crops being good, prices will be reduced.

Also, NEW ITALIAN RYE-GRASS SEED.

Royal Berks Seed Establishment, Reading.

NEW TRIFOLIUM INCARNATUM SEED.

ROYAL BERKS SEED ESTABLISHMENT.

SUTTON AND SONS can now supply new seed of the Italian Crimson Clover (Trifolium incarnatum), which should be sown as early as convenient. Present price 4½d. per lb., or cheaper by the cwt. Also New Italian Rye Grass seed for Early Spring Feed.

The Gardeners' Chronicle.

SATURDAY, AUGUST 11, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, Aug. 14 { Horticultural (Fruit Committee) at St. Martin's Place ..... Noon

IT has long been known that the forests in Peru and Bolivia from which Europe draws her supplies of FEVER BARK, or CINCHONA, one of the most valuable of all drugs, were becoming exhausted in consequence of the supineness of the governments of those countries. Four thousand quintals a year of Calisaya bark exported from Bolivia alone cannot fail to render the acquisition of this precious commodity more and more difficul

every year in that country, where the best is found. It was therefore represented long ago to European governments that they should seek to establish the Cinchona trees in their own possessions if their colonies contained a climate suitable for the purpose. Acting upon such suggestions the French authorities commissioned Dr. WEDDELL, one of the most resolute and skilful of botanical travellers, when in the Cinchona countries to procure seeds; a commission which he successfully executed. At a later period the Governor of the Dutch East Indies, M. PAHUD, sent HASSKARL a very experienced gardener to S. America for the same purpose, and was rewarded by supplies which reached Java in 1853, by which the Cinchona was securely established in that great island, where it is said to find itself at home.

All this time the East India Company did nothing of which we have any record. But the success of the French and Dutch having arrested the attention of the authorities in Leadenhall Street, Dr. ROYLE was at last instructed to organise an expedition to Peru; and he had advanced in his work so far as to have found a promising collector, when his lamented death put an end to the operation. At length in 1859 it became known that the India Board had again determined to make a serious attempt to obtain this precious tree, and that they had commissioned a gentleman entirely unheard of as either a botanist, gardener, or man of science to undertake the task. Considering how necessary it was that the collector should know how to distinguish the various kinds of Cinchona trees from each other, for many produce bark no better than that of a Willow, in what state to collect their seeds, and how to pack them so that their vitality might be preserved, this appointment caused no little surprise among those who knew the peculiar difficulty of the enterprize; and it was naturally classed among the jobs which seem to be inseparable from all governments. When therefore, a short time since, news arrived that Mr. MARKHAM'S attempt had ended in total failure, a ready credence was given to the report, and some comments, certainly not complimentary, were made upon the event. An official paper, however, which reached us the other day, and the inquiries that we have instituted, having placed the matter in a somewhat different light, wholly exonerating this gentleman from the charge of want of energy in carrying out his mission, we must in justice to him and also to our informant make known the real facts of the case.

Mr. CLEMENTS R. MARKHAM is, it appears, a junior clerk in the India Office. He was selected on account of his knowledge of the country to be visited, of the language of the native Indians, and of his natural energy and zeal. Beyond these qualifications we hear of nothing except that having been appointed several months before starting he did his best to prepare himself for the undertaking. In a report made by him to the India Board in June last, he gave an account of his proceedings, from which the following are extracts:—On the 12th March of the present year he left Arequipa, a town in Southern Peru, with Mr. WEIR, a gardener, and travelling inland arrived at the city of Puño, on the banks of Lake Titicaca, on the 27th, a very painful journey, over snowy heights 15,500 feet above the level of the sea, in the worst season of the year, the rigours of which were increased by the debility brought on by an illness from which he had suffered at Arequipa, and by the *sorochi*, or violent headaches and sickness, occasioned by the great elevation of this region above the sea. The loftiest part of the road is several hundred feet above Mont Blanc. This route was taken with a view to entering from the north the republic of Bolivia, the head-quarters of that sort of Cinchona called Calisaya; a project which was prevented by weather and the unsettled state of the country. Moreover, he heard that the Government and people were so jealous of preserving a monopoly of the bark trade as to render it impossible for him to make a collection personally. These obstacles, be it observed, were no hindrance to either WEDDELL or HASSKARL. Foiled in his attempt to get into Bolivia Mr. MARKHAM struck across the country to a place called Sandia, on the eastern slope of the Cordillera, within the Peruvian frontier, which seems to have been his temporary head-quarters. Of the *agrémens* of his journey we have such accounts as the following.

"On the road from Puño to Caravaya there were four broad and very rapid rivers to cross on *balsas*, or long bundles of reed stitched together, while the mules swam. The plains and mountain ranges over which the way passed averaged a height of 12,000 to 13,000 feet above the level of the sea, and one snowy pass attained a height of nearly 17,000 feet. The season was one of violent storms, with hail and snow and constant rains."

"Beyond the river Challuma, a tributary of the Tambopata, and the extreme point reached by Dr. WEDDELL, there is no path of any kind, the trees are of great height, and the ground is entirely choked up with creepers, fallen masses of trees and bushes, and tangled bamboos. In many places, the way led along the verge of a precipice overhanging the river, which boiled and surged many hundreds of feet below. Our encampments were made each night on any stony beach we could find where there was space to light a fire and pitch the tent, and all day we toiled and struggled through the closely-woven jungle."

"On the 4th, I made a toilsome and dangerous forest journey, along the most giddy precipices, overhanging the river, with no foot-hold but decaying leaves, nothing to grasp but rotten branches, every motion a drenching bath from the wet branches, every other step a painful and dangerous slip or fall."

"Since leaving Sandia on April 24th up to May 15th we had walked over 174 miles, which may not, at first sight, appear very much; but when it is considered that it was chiefly not walking, but scrambling on hands and knees up precipices or through dense forests, and that there was not one day given up to rest, while the supply of food was exceedingly small and precarious, I think it will be considered tolerably good work."

"On the 17th of May, I left Sandia, with one Indian and two mules carrying the plants, and halted under a splendid range of frowning black cliffs, near the summit of the snowy Caravaya range. On the 18th I reached the summit of the range, and commenced the journey over vast grass-covered plains covered with stiff white frost. After being 11 hours in the saddle, I stopped at an abandoned shepherd's hut built of loose stones. The plants, well covered with the tent and blankets, were placed by my side during the night with the thermometer between us, which, at 6 A.M., was at 20°. The days and nights bitterly cold, but very fine, and generally cloudless. On the 19th I was 10 hours in the saddle, and passed the night again in an abandoned hut with the plants beside me, where the minimum of the thermometer was 30°. Two more journeys of similar length, when the minimum during the night of the 21st was 21°, and of the 22d 16°, brought me to Vilque, where I procured an arriero and mules to convey me to Arequipa. The sufferings during my six days' journey over the lofty plains from Sandia to Vilque were very great. The cold was intense, the work I had with the vicious unmanageable mules was a constant source of anxiety, and I had no food whatever beyond a little parched Maize. Each day I was upwards of 10 hours in the saddle."

This sort of work shows that if Mr. MARKHAM'S expedition was unsuccessful it was not from want of energy. But was it unsuccessful? It is stated that by incredible labour and hourly danger, 529 plants of Cinchonas of one sort or other, chiefly Calisayas, had been brought down to the port of Islay, of which 73 had perished from cold, or been broken or lost. Of the remaining 456, some were "large rooted plants without foliage," the remainder we suppose to have been seedlings. The whole were packed in 15 Wardian cases, which cases have reached Southampton on their way to India, where it would seem, from a hint in the paper before us, they are to be established in the Nilgherry hills. But how many reached Southampton alive? How many will reach Bombay or Calicut, or whatever other port in India may be their destination after a passage down the Red Sea? We may hope for the best, but fear the worst.

It would be very ungenerous, after this explanation to deny Messrs. MARKHAM and WEIR the merit of perseverance and intrepid hardihood, and if those qualities alone could have sufficed, success would have been certain. But we cannot conscientiously award them higher praise: and we must regard the result as being very like a failure. Not a seed has been obtained. Yet the true object of the expedition should have been seeds—and seeds only. Nothing was to be gained by scrambling at the imminent risk of death after a few seedlings or suckers to be carried to Europe with little prospect of getting them there alive and no important advantage from doing so. Dr. WEDDELL'S seeds grew as well as if they had been fresh gathered; thus showing that they would keep perfectly. A few bags of such small light seeds as those of Cinchona slung over a mule's shoulder would have yielded thousands of young plants at Ootacamund, or Calcutta, or Saharunpur, or Peradenia, or Singapore, in every one of which places attempts should have been made to raise them, to say nothing of Sikkim, probably the best district of all, if means could be found there of trying the experiment. But not one seed has come. The reason assigned for this is that the season for collecting seed had not arrived, and that the opposition of the Government would have made the attempt worse than useless. Yet others, not perhaps attracting so much attention as Mr. MARKHAM in his wild and unwise expedition, have succeeded, and with prudent caution will succeed again. There are charms no doubt in a dashing adventure: but it is wisdom and forethought alone that lead to success.

There appears to us to have been a great want of skill in planning this expedition. To pounce at once upon Bolivia, although with the view of obtaining the best of the Cinchonas, was a mistake. The physical difficulties of that country and S. Peru were perfectly well known; and as to political obstacles we cannot but believe that Mr. WILTHEW, Her Majesty's Consul at Islay, could have pointed them out, and saved the adventurers from the annoyance of being literally hunted out of the country. The true ground to begin with was not Bolivia, but that much more northern region comprising the provinces of Huamalies and Huanuco, whence the fine barks, second only to Calisaya, reach us. Seeds of these having been procured and sent home, it would then have been soon enough to plunge into the midst of Bolivian difficulties. Instead of beginning thus himself, Mr. MARKHAM, apparently satiated with the charms of collecting Calisaya, commissioned a Mr. PRITCHETT to look for Cinchona seeds to the northward, and he trusts that by September he will have been enabled to obtain a good supply of seeds. We trust so too: but we cannot imagine why Mr. PRITCHETT should not have received his instructions from Cannon Row instead of Lima.

Nor can we understand the wisdom of bringing live plants of Cinchonas in 15 Wardian cases from Islay to Panama, thence across the isthmus, then by way of the West Indies to Southampton, there to remain for some weeks, next to ship them for India across the Egyptian desert, down the burning climate of the Red Sea, till they can reach some port on the West of India. It looks as if the great purpose of Mr. MARKHAM was to secure the greatest possible number of obstacles to success. To persons of a less heroic temperament it would have seemed more simple to have chartered a vessel from Islay to Bengal, by which a congenial climate would have been secured through the whole passage. And this we believe is what the phlegmatic and successful Dutchman did. To forward live plants to India by way of Panama is something like sending them to Madeira by way of the Danube and Black Sea.

While we have thus endeavoured to do justice to Mr. MARKHAM'S personal energy, we think we have also confirmed our correspondent's report that his expedition has been a great failure, if not a complete one. Let us at the same time set him right upon a matter of fact. In the letter from this gentleman published in our last week's columns, he says "*it is untrue* that a similar enterprize (to his own) has been successfully undertaken by the French Government." Nobody said so. It was asserted that the French had been successful, but no mention was made of the French *government*. That the French have succeeded is we submit proved by the following little facts:—1. Dr. WEDDELL, who went out in French employment, brought to Paris seeds of the Calisaya. 2. Some of these seeds were raised in the Garden of Plants; others in that of the Horticultural Society in the year 1848. 3. Many of these plants were given away. 4. One of them flowered in the Garden of the Horticultural Society, and a coloured figure of it was published in the year 1853, in PAXTON'S Magazine of Botany. An account of it was also published in the Journal of the Horticultural Society, Vol. VII., p. 272. 5. On the 16th December, 1852, a fine healthy plant was packed in a Wardian case and presented to the East India Company for transmission to India: we believe it was taken out by Mr. FORTUNE, with others from Kew, but perished after its arrival. It will therefore be seen that Mr. MARKHAM'S allegation is by no means supported by facts, although he ought to have been informed of all such circumstances before he went on his Quixotic enterprize.

CUTTINGS IN MOSS, VARIEGATED GERANIUMS, &c.

AMONG the many plants considered almost indispensable for bedding purposes, perhaps the Golden Chain Geranium is not the least desirable, and although it has been pretty widely distributed for some years past, it is at the present time by no means so generally cultivated in quantity as its merits decoratively considered entitle it to be. What does this arise from? Is it that it is more difficult to cultivate than other Geraniums, or is it that being a little delicate it has been nursed and nursed into a state of constitutional debility from which nothing but strong measures will reclaim it? This I think is the true explanation, and for this falling off in its constitutional vigour no person is more to blame than the person who arrogated to himself the office of sponsor at the time the plant was first brought into notice. Then and to the present time nothing short of "Peat and sand, the same soil you would use for Heaths or Epacrises," will do for Golden Chain. This is the secret of its growth we are told, while I on the contrary am convinced it requires no Peat at all, and that nothing more than a good Geranium soil is necessary to grow it in its best form. Time was, and that not many years ago, when the Cape species of Pelargonium and such delicate hybrid kinds as Moore's Victory and the Quercifolium could only be grown in Peat and sand. But what say the present race of cultivators? they scarcely use Peat or leaf mould at all, but use soils of a more substantial nature to produce the magnificent specimens which occasionally grace our exhibition tables. The fact is too frequently we cultivate without thinking, and because plants of almost all descriptions are known to grow in Peat, we look to it as their natural aliment, rather than as a means of growing soft-wooded plants, which should only be resorted to when other soils have failed.

In the cultivation of plants of all kinds two things are aimed at—first, growth or constitutional vigour; and second, fruitfulness. That treatment which will induce a vigorous development of the plant is generally inimical to the production of flowers, but if we get a robust and healthy formation of plant, then by a proper maturation of that growth we obtain a profuse efflorescence of the most beautifully formed and highly coloured flowers; but neglect the ripening or maturing process, by forcing the plants either by manuring or fresh potting at the time the ripening ought to commence, and you get scarcely any flowers at all, but a gross and useless plant. Plants, however, at the present time are grown for their foliage as well as for their flowers, and many for their foliage only. Among these the Golden Chain Geranium and allies are the most useful; and when the foliage only is wanted then a system of management, such as I have indicated above, should be followed, and a vigorous growth be encouraged.

Taken as a class variegated plants are more difficult to strike or increase by cuttings than plants which assume a natural hue, and the difficulty of striking them increases just in proportion as the want of colour predominates. Thus, for example, a white cutting, such as is sometimes produced on variegated plants, will not strike at all, from the simple fact that it is the green part of the plant only which contains or has the power of forming that highly elaborated sap or organisable matter from which roots under favourable conditions are produced, and just in proportion as the green parts are absent, either naturally or by the removal of foliage, will be the difficulty of inducing the cutting to produce roots. A cutting of a variegated Geranium now laying before me contains in five leaves about 12 inches super. of foliage, but the proportion of green does not exceed 4 inches, so that in reality a variegated cutting contains only one-third of the organisable or root-forming element which a green cutting would contain. Hence the necessity for the preservation of the foliage of such cuttings, and hence also the desirability of retaining as many fully matured leaves as possible. Nor is it only necessary that the foliage only should be preserved; it is very desirable that the cutting should not expend its substance in new growth until roots are formed, for if the true sap or organisable matter is expended in growth, it will be almost impossible that it can form roots. Nothing is more common than for persons who do not understand the principles of propagation, to take cuttings at the present season from the open air, place them on a nice bottom heat, with a close moist atmospheric temperature. They grow and do beautifully for a time in the eyes of the uninitiated, but just when they ought to be fit to pot off they are examined, and it is found that no roots have been formed. How is this? It is just an example of what I have previously stated; the organisable part of the cutting has been used at the wrong end, viz., in adding to the stature of the cutting instead of in the formation of roots.

For the formation of cuttings various directions are given; one man says, take them off with a heel of the parent branch; a second directs to cut just below a joint; while a third will lay great stress upon the direction in which this sectional cut is made. For my own part I pay but little attention to any of these directions, for I once knew a gardener who, when he cut his Pelargoniums down in the autumn, would set a boy to place the ends evenly and the branches together in bundles, and then with a long sharp knife (he used a billhook) he would cut the bundles into lengths of 3 or 4 inches each, and thus the cuttings were formed. This may be called the rough-and-ready system, but still it is near enough for common things and where plants, as for market purposes, are required by the thousand. Now if I were pressed I should say there is only one secret in connection with cutting making, especially of Geraniums. All propagators are aware that the great enemy to successful striking is stagnant moisture either on the cutting or in the atmosphere surrounding it, and yet at the same time it is indispensible that the atmosphere be kept so moist as to prevent the juices of the plant being carried off. How is this to be managed? If you syringe too much, the water hangs about the cutting and it quickly rots, and if you do not syringe, the cuttings flag for the want of moisture. Now if you take a cutting fresh from the plant and hold it vertically in your hand, you will see that at the base of each leaf-stalk, especially the most recently formed ones, are two little bracts, no doubt intended by nature to collect the moisture and hold it in contact with the most growing part of the plant; for you will find that as the branch assumes its full development, these bracts being no longer necessary wither and fall off. These bracts in the cutting perform their functions as well as in the plant, but unfortunately in the cutting they become organs of destructiveness; for holding the moisture around the cutting they quickly cause it to rot; but remove these bracts and likewise the most vertical leaf, and then you will see that it is impossible for moisture to remain upon the cutting sufficiently long for it to do any harm; therefore in preparing your cuttings remove these bracts, and at the same time you remove the receptacles of stagnant moisture. With the cuttings so prepared you may syringe daily without any fear of doing injury, and indeed of the most delicate fancy Pelargoniums thus prepared I rarely lose a cutting. With reference to cutting to a joint that is not of the slightest consequence; I like strong cuttings when I can get them, but if a quantity of a scarce kind is required, a leaf with the accompanying bud and the internode below it is sufficient for my purpose. Thus in cases of necessity every leaf with the bud at its base will make a plant. I have recommended that with the bracts the most vertical leaf should be taken off. This only applies to cuttings of the most terminal part of the branch, and I think, in addition to removing the receptacle for stagnant moisture, it also for a time, by arresting further growth, prevents the sap being used in a wrong direction.

To return to the Golden Chain Geranium. In the autumn of last year a friend was so kind as to send me after the October frost some old plants of that variety. When received they presented a rather forlorn appearance, but the decayed portions were removed, and the plants were potted in small pots and plunged in a gentle bottom heat, the soil used being ordinary Geranium soil, with an extra quantity of sand to induce root action. As the roots began to protrude through the soil, the branches also gave evidence of growth, and with the assistance of a little weak manure-water and the temperature of a cool Cucumber house I had by February a goodly display of cuttings. On the 17th of that month the plants were cut down, and when prepared it was found that we had 619 cuttings. In preparing them the leaf bracts and leaders were carefully removed, and each cutting was surrounded with light sandy soil and tied up in Moss as a separate parcel, taking care to keep the leaves as clear of the Moss as possible. All being in readiness the parcels were plunged in tan over a hot-water tank, the bottom-heat being kept rather in excess of that of the atmosphere of the house. The 600 cuttings occupied rather less than 2 square yards of surface, and on the 17th March we had the satisfaction of taking out upwards of 600 well-rooted plants. So much for the difficulty of increasing Golden Chain.

When the plants were taken from the tan or cutting bed they were planted thinly in shallow boxes in a compost consisting of loam liberally intermixed with old Mushroom dung and cow dung. In this, being kept in heat, they grew vigorously, and when hardened off and planted out they were the best plants of the kind I ever saw. In planting, each plant was surrounded with a double handful of the compost previously mentioned, and at the present time many of the plants are 18 inches through and form at the present time two remarkably fine rows of this elegant ribbon plant. Thus I think it is quite clear the best way to manage Golden Chain is to pot it in its entirety when taken from the flower garden in the autumn, to grow it in heat through the winter, and to strike the cuttings in Moss in the following spring. Treated in this way Golden Chain will quickly become as common as Tom Thumb, but nurse it with Peat and sand and it will remain what it always has been, a sickly and delicate thing.

One remark more, and for the present I have done. When plants are difficult to root, it is always essential to preserve the roots after they are formed. This in potting off in the ordinary manner is a difficult matter, but strike your cuttings in Moss and these difficulties vanish. *A. P. H.*

VEGETATION IN NEW ZEALAND.

THE frequent notice you have taken of matters connected with the colonies induces me to send you the following letter received from a friend residing in New Zealand, about 70 miles from Auckland, on "Bush" land acquired in March, 1859, under the "free grant" system:—

"Maunga Karamea, March 10, 1860.

"Since I wrote to you I have been, as usual, working hard on my land at all manner of operations, digging Fern roots, felling timber, &c., and have never ceased during the whole of the summer, but have continued working on during the hottest of the weather with the thermometer standing at 80° in the shade, and it is surprising that here one is able to do this without feeling greatly distressed; there are some few days on which one feels the heat more than others, and on these I have frequently had to change my shirt three times a day, for I can tell you that to cut down a tree or two 2 feet thick in the blazing sun is no joke. I have cut down two acres of timber in two months, besides other work. It is now just 12 months since I arrived out here, and I have been trying to sum up what I have done. I arrived here on the 16th of March, and this is now the 10th of March of the following year. In that time I have got possession of my land, and am the owner of 100 acres of freehold estate in all the wildness of Nature's cultivation. I have a roof over my head without any charge for rent or taxes, and everything I have attempted in the way of cultivation has succeeded far beyond anybody else for miles round in similar circumstances; and my success in this respect excites the wonder of every one, although of course it is only yet upon a small scale. I wish you could see my Cucumbers, Pumpkins, and Melons, especially the Apple Melons, used here for puddings; some are already 18 inches long and 9 inches in diameter; the Pumpkins, a very important crop here, are very different from those at home, and make excellent food for man or beast. Some of the Radishes I saved for seed were, without the slightest exaggeration, the size of moderate-sized Beetroots. They say here that seeds brought from England seldom grow, but all mine have come up first-rate, Windsor, French, and Scarlet Beans excepted; these, I am sorry to say, have been failures. Potatoes may be planted nearly all the year round.

Bees are most plentiful here and the honey superbly good. Bees' nests are to be found in old trees in every part of the woods, and as many as 200 lbs. of honey have been taken from a single tree; 100 lbs. is a small quantity. A Mr. ————, living about five miles from me, has captured seven swarms during the last six weeks, and now has them in boxes round his house I wish you could see me taking my cow and heifer to their feeding ground, where I usually tie them; sometimes I find a lot of what is called here cutting Grass, and with good reason, for the edges of it are literally quite as sharp and cut as severely as any razor; I have been cut by it several times. If you were to take a blade of it and draw it through your hands edgeways it would cut you to the bone; notwithstanding this cows and horses eat it without risk, they take a firm hold of it on the flat side, and, by a steady pull drag it out of the socket; it grows 8 or 10 feet high in bunches, sometimes as much or more than I could carry in each bunch. When I cannot find cutting Grass I fell for the cattle a tree (called here the Karaka); it carries a very beautiful dark green leaf, larger and of a richer colour than the leaf of the Laurel, and cattle of all descriptions are very fond of it.

"We have some curious birds here; it is now past 10 o'clock at night and I can hear one fellow, a sort of owl I believe, shouting out 'More pork' as plainly and as loudly as you or I could speak it; indeed if you were here, and not aware of there being such a bird, you would wonder who it was singing out for 'More pork.' Another sings out 'Wait a bit, wait a bit,' though how they learn English I don't know.

"None of the birds here sing in the manner we are accustomed to hear them at home, and in the daytime you scarcely hear a note from any of them; in the morning however, about 4 o'clock, just at daybreak, every bird in the woods appears to utter his own peculiar note, and the effect is very pleasing; this may continue perhaps, and I think except on wet mornings always does, for about half an hour, and then ceases altogether; the sound produced is much more like the tinkling of a vast number of very musical bells than the song of birds. I received the four numbers of the *Gardeners' Chronicle* which are a great treat."

The writer of the above also speaks in the highest terms of the climate of New Zealand, especially as to its being admirably well adapted to English constitution; but as I find the letter already occupies more space than I had anticipated I will not trespass farther on your indulgence upon the present occasion. *John James, 27, Laurence Pountney Lane, Cannon St., E.C.*

Home Correspondence.

Trees and Gas Pipes.—Situated in an angle formed by the dwelling-house, 40 feet high on the west, 20 feet high on the north, and about 20 feet from either wall, stands what was a very fine specimen of the Populus suaveolens, with two trunks, the diameters of which at 3 feet from the ground are 13 inches and 6 inches; the one 40 feet high, the other about 15 feet. Both trunks touch each other, but are not united for about 4 feet from the ground. Now the largest or main part of the tree is drooping and apparently dying; the leaves are almost all yellow. It promised to flower very freely this season, but the blossom went off very quickly, and though

in previous seasons it used to have such beautiful clusters of fruit, this season there is none except on the smallest stem, which looks healthy, and is showing no symptoms of following the other; a gas pipe passes about 15 feet from the tree, would that have any effect or influence on it? There has been no smell of gas or anything to indicate that there is or has been a leakage. I may state that the soil is light, resting on a bed of wet tilly gravel at a depth of 2 feet from the surface. *P. Long, Gardener, Clarence.* [Although we are not learned enough to know such a plant as Populus suaveolens bearing "beautiful clusters of fruit," yet we venture to affirm, without seeing it, that in all probability it is dying from the poisonous leakage from the gas pipe.]

Stirling Castle Peach.—Many of your readers will recollect that this Peach was, a year or two ago, very very favourably reported on by the Pomological Society, but believing that the public generally knows little of its merits, I take the liberty of stating what I have seen, and the opinion I formed of it when I visited Dunmore Gardens, in the middle of June last. The tree is one of two in a lean-to Peach house, 30 feet long by 12 feet wide, and covers a space on the trellis of 15 feet by 17 feet. Mr. Carmichael the gardener informed me that he had previously picked 12 dozen fruit from it, and that the whole crop amounted to 40 dozen. He singled out one square foot where there was a cluster of 9 beautiful Peaches. The best proof of the quality of this Peach is that it was, on the 11th June last, realising 21*s.* per dozen in the market. The fruit is large, high coloured, and brisk in flavour. One of the principal fruiterers in London gives it as his opinion that the Stirling Castle is "certainly the finest specimen he ever saw," and says that there is nothing to beat it. I was informed by Mr. Carmichael that the tree was raised from a stove more than 20 years ago, and that ever since it attained to a bearing state the crops have always been about the same weight as this year. The tree looks as healthy as if there had not been more than a score of fruit on it. It is on its own roots, but Mr. Carmichael has budded it on the Royal George, the Barrington, and other Peaches on the open wall, where it is growing vigorously. It is to be regretted that so valuable a Peach should not have been given to the public long ago, as I feel convinced we are not in possession of a variety that, in all respects, is so fine as the Stirling Castle, and that it is destined to take the same place among Peaches that the Black Hamburgh has so long occupied among black Grapes. I may mention that amongst other things with which I was much interested at Dunmore are Weeping Silver Firs. There are about 100 specimens of these from 15 feet to 40 feet in height. I am not aware that this tree is known in this country, except to a limited extent. Those to which I refer were had from Mr. Booth, late nurseryman at *Falkirk*, along with a quantity of the common Silver Fir, and were planted together on a boggy soil. The Weeping Silver Fir is as distinct in its habit of growth from the common, as the Cedrus deodara is from the most rigid growing Cedar of Lebanon, and the outline presented by it viewed at a distance is almost the same as that of an Irish Yew, so much does it weep. I measured one of these, across the branches at the base, 12 feet in diameter, and it rises to the height of not less than 35 feet, terminating by a gradual taper to a point at the top. The very youngest growth partakes as much of the weeping habit as the oldest, and altogether the tree is an exceedingly pretty and graceful one. *David Thomson, Archerfield Gardens, Drem, N.B.*

Education of Gardeners.—

"Hear with charitable heart the reasons of an honest judgment."—M. F. TUPPER.

I have been curiously interested and amused whilst reading the various opinions propounded on this question—interested by the real merits of the subject; amused at the wide manner in which some aimed at it; strangely exemplified in the alliterative old proverb, "Many men, many minds." Amongst the conflicting and almost bewildering opinions advanced, however, I find none applicable to a numerically and influentially strong body of men in the gardening profession who cannot boast having ever received a diploma, graduated in the Horticultural Society's Gardens, or received initiation into the secrets of gardening at some ducal establishment; many of these have, from that inexplicable love for flowers which our Creator gives some men, entered the profession late in life—at least, in manhood—yet with that invincible, dogged perseverance so justly lauded by Prestidge the other week, have learnt from experience, "line upon line, precept upon precept, here a little, and there a little," those stern, practical lessons of gardening wisdom, which have fitted them to fill situations of trust, with honour and credit to themselves, and satisfaction to their employers. As an humble representative of this class, I ask, what and how shall this class study, in order to achieve greater success and advancement? I am too well aware (because I have been made to feel it) that aristocratical gardeners—gardeners who can exhibit an almost interminable list of lordly names as references—look down upon such as myself, and consider us upstarts, and by something more than hints, convey to us what an impassable gulf lies between us. "Stand by, for I am holier than thou." Through life I have been connected with amateur florists and gardeners in small places, in the manufacturing districts, and I feel proud in being a member of their body. I never have a richer enjoyment than when in their company; one of them will enthusiastically enlarge upon the merits of a favourite Rose another upon those of a Pink, a third upon those of a Dahlia, &c. I envy not then the most dignified gardener his list of titled friends. Most of the schemes proposed are only applicable to the instruction of men who are ultimately to design and superintend large establishments. Now, we cannot all be head gardeners, with 20 or more men under us, however much we may sigh for so blissful a position. The majority of places at the present day are—a gardener and a boy, or perhaps one, two, or three men, and where the most particular work has to be done with the gardener's own hands. To argue that one fixed, immutable plan must be framed for the education of all gardeners is most absurd; it would be about as reasonable to say that we should all wear broadcloth, and eat our dinners with a silver fork; therefore, like "Roaldus," I propose that they be divided into classes; but as my experience is but limited, I refer their arrangement to the horticultural Sanhedrim, merely suggesting that a scale of studies be planned beginning with the most simple, and ending with the most elaborate; for, in the case of the head gardener, there must be more of the artist element in his education; whilst with the other, primarily, and above all things else, he must have thorough, practical, manipulative skill, or the best education and infallible theories will avail him but little. Crude and undigested these ideas confessedly are, but I have endeavoured to bring before your readers the claims of a seemingly tabooed class of men. May I hope that I have not written in vain. *Paul.*——I am of opinion; 1st, that a good sound education is necessary for any young man who intends to be a gardener; 2d, that young men are generally placed under a head gardener at too early an age without being able to read, write, or spell well; 3d, that they generally add little or nothing to their education from the time of their entering the garden to that of their leaving it as head gardener. I think that a boy that is to be a gardener should be sent to school as early as possible, so that he can at the age of 12, read, write, and spell well, and have a good knowledge of common arithmetic. The next two years let him learn mensuration, including land surveying, Lindley's School Botany, and grammar. Let us presume that he now leaves school. Let him have a certificate of merit given him by the inspector, stating that he has undergone his examination with credit, and if it be possible give him a Bible, which will convince him and others that he has behaved himself well. I wish it to be understood that the inspector shall show no partiality nor give him a certificate unless he deserves one. Our boy will now be 14 years of age, and I propose that he be placed under a good gardener, who during his working hours will point out to him any little thing he seems not to understand, treating him kindly, and never charging him with a fault unless it can be proved to be one; and endeavouring always to make him industrious, sober, and honest, by setting him a good example, chastising him when he deserves it, and encouraging him when he merits it. At nights, let him learn geography, and, if possible, Latin, and lend him Lindley's Theory of Horticulture, Lindley's Introduction to Botany, and Natural System of Botany. I would let these suffice for the next four years, when he will be 18. Previous to his leaving this situation, he should pass an examination at the vicarage, for I wish it to be understood that the vicar or rector, &c., has instructed our boy in Geography and Latin; also let him have a recommendation from the gardener, and the certificate of the worthy and rev. gentleman above alluded to. He leaves and enters one of our first-class establishments for three years or until he shall be able to pass an examination on the following subjects; viz., 1, Arithmetic; 2, Mensuration (including Land Surveying, Trigonometry, and Levelling, the drawing of Geometrical figures, and the making of Ground Plans; 3, Physical Geography; 4, Systematical and Structural Botany and the naming of British Plants at sight; 5, Vegetable Physiology in its relation to Horticulture; 6, Entomology, in its relation to Horticulture; 7, the Art of Horticulture. Let the gardener instruct him and note what progress he has made at least once a week on the above subjects, and also allow him to assist at all alterations and improvements about the place, giving him half a day's holiday occasionally to visit other gardens and for botanical excursions. As for the examination I would let the first four rest with the Society of Arts, and the three remaining with the Horticultural Society; but I may be asked how a young man is to get to London to be examined? To this I answer, have branches from the main stem, say one at Edinburgh, another at Dublin, &c., or, in fact, where the Society of Arts hold their examinations let there be a horticultural branch. We will suppose that our hero has now passed his examination and received a certificate of the first class, or second class, or it may be of the third class. If the first, let him have a first class situation with not less than 85*l.* per annum, the second, a second class place with not more than six men under him, and from 65*l.* to 85*l.* per annum wages; third class, a single-handed place, and 52*l.* per annum, and all of them good houses to live in. It would be well if he now spent four years more in a botanic garden nursery, and assisted at the laying out of new gardens under a first-rate landscape gardener and architect before he undertook a situation. *George Abbey, Horton Hall, Bradford.*

Isabella Grey Rose.—I forward three flowers of this Rose taken from a plant growing against my dwelling-house on a west aspect. It was budded two years ago on a strong succulent shoot of a Rose I have under the name of "Queen of the Prairies." I have not seen Miss Grey at any time or at any place in finer condition than I have here this season. It appears to me to require planting in a warm sheltered situation, and to be worked on a good free stock. *George Fry, Manor Nursery, Lee, Kent.* [The flowers were very fine samples of this handsome Rose.]

Vicat's Insect Powder.—When my occupation allowed of my residing a few miles from town, I dwelt in the midst of an acre of trees, and I rejoiced in the wholesome pastime of a garden; now business compels me to elect domicile in the midst of an "Acre" of houses yclept "Long," and a morning stroll through Covent Garden on market days, is for the most part the only opportunity afforded me of renewing acquaintance with my favourite Flora. I also occasionally improve a leisure hour by the perusal of your Paper, and I was thus pleasingly engaged the other day when, in the Number of the 21st ult., I came across an article on the ravages of the "Turnip Flea." I could but have deplored the existence of this destructive insect, and my inability to prescribe a means for its destruction, and so far the said article would have passed comparatively unnoticed, for I pretend to no wisdom in agriculture; but it happened that a day or so previously I had had occasion to read in a kindred French publication, "La Maison de Campagne," a Report of the Imperial Society of Agriculture, Natural History, and the Useful Arts, which I think deserves publicity, as it expatiates on the merits of a certain powder which appears to me to afford a remedy for the evil complained of. I therefore beg to forward you the following translation of the Report:—

Report of the Imperial Society of Agriculture, Natural History, and the Useful Arts on the Insecticide-Vicat Powder, June 11, 1854.

"The Commission, composed of MM. Jandard, M.D.; Sauzet, Court Councillor; Lecoq, Director of the Veterinary School; Bouchard-Jambon, and Vezu, Pharmaceutist, Reporter, with the view of examining the destructive action exercised by M. Vicat's powder on most insects, have made, both individually and collectively, trials from which it results that in blowing this powder on to diverse insects the effect is not long in becoming manifest. Gnats, flies, lice, bugs, fleas, ants, Melon and Lettuce locusts (Sauterelles), moths, and certain spiders, die almost instantaneously. Cockchafers, maybugs, weevils, &c., die in an hour or two. Grubs, Vine-fretters, green and lanigerous flies remain a day or two in a state of lethargy and then die, after having abandoned the stalk or leaf on which they had fixed themselves. Certain species of caterpillars and spiders appear at first not to be affected by the action of this powder, but after a day or two they die like the others. In a preceding meeting I told you, gentlemen, that this powder offered no danger in its application, and had no hurtful effect on vertebrated animals. To-day I once more confirm this innocuousness From what precedes it is evident this powder is destined to render numerous services. The Society of Agriculture, in approving the use of M. Vicat's Insecticide, will be doing him an act of justice. Signed Vezu, Reporter. The conclusions of this report were put to the vote and adopted. Signed Jourdan, President; Tisserant, Secretary." [This powder, we believe, may be obtained at No. 33, Greek Street, Soho.] I trust the above may not be unworthy of notice. *D. A. Gettliffe*, 26, *Long Acre.*

False Novelties.—Observing in your Number for July 28 a statement, that a so-called variety of Linaria macroura had been brought under the notice of the Floral Committee of the Horticultural Society, I take the liberty of forwarding for your inspection specimens of the common Linaria bipartita or speciosa, raised from seeds labelled L. macroura. These seeds having been procured from the firm by whom the specimens were sent to the Committee, you will not think me rash in assuming that the variety exhibited was but one of the numerous shades into which the L. bipartita sports. The assumption is indeed a conviction on my part, as I have good reason for believing that Linaria macroura is not in cultivation in this country, and from a pretty extensive acquaintance with foreign seed lists, I doubt if it is in the hands of any seedsman whatever. I also enclose you specimens of the well-known Silene pendula, sent out this spring as a novelty, under the name of S. barbata. Surely such blunders in naming as this demand some notice on your part, that a check may be given to the manufacture of mis-called novelties. I could add other instances if I were challenged to do so, in support of my statement, but the above may perhaps suffice for the present. *Iota.* [The Linaria is undoubtedly L. bipartita, and not in the least like L. macroura which has great yellow flowers. As to the Silene it is equally certain that it is only the common S. pendula.]

Ligurian Bees.—It may perhaps interest some of your readers to be informed that I have, after many discouragements, succeeded in obtaining a thriving and populous stock of Ligurian bees (the Apis Ligustica of Spinola, A. Ligurienne of Latreille). I shall feel much

pleasure in showing them to any bee-keeper who will forward me a note expressing his desire to see them. *W. B. Tegetmeier, Muswell Hill, N.*

Societies.

HORTICULTURAL: *August 9. Floral Committee.*—A first-class certificate was awarded on this occasion to Gleichenia pubescens, a handsome species contributed by Messrs. Veitch. Similar awards were also made to a scarlet flaked Carnation, from Mr. Bragg, of Slough; to a light rose-edged Picotee from Mr. Turner; to a scarlet Verbena named Nemesis, from Mr. Smith, of Hornsey; and to a variegated scarlet Pelargonium, from the last named raiser. The following received labels of commendation, viz., Verbena, Pink Perfection, a pretty rosy pink sort with a lemon eye, from Mr. Smith; Picotee, Empress of India, a yellow light-edged kind, and Garibaldi a yellow fancy sort, from Mr. Bragg; Picotee, Countess of Derby, a pinkish purple variety, and Queen of Picotees white with very light rose edge, from Mr. Keynes, of Salisbury; a heavy purple edged Picotee named Favourite, from Mr. Turner, of Slough; a yellow hybrid variety of Honeysuckle from Mr. Ingram, and a seedling Spiræa named Nobleana from Mr. Noble, of Bagshot. The last is supposed to be a hybrid raised between Callosa and Douglasii, and is an exceedingly handsome rosy purple variety which promises to be a striking improvement on both parents.

Notices of Books.

The Discovery and Geognosy of the Gold Deposits in Australia, &c. By Simpson Davison. 8vo. Longmans. Pp. 484.

Nothing less than the importance of the subject to which this volume refers could have induced us to wade through the *indigesta moles* of its pages, which remind us of a Parliamentary Blue Book published on private account. The matter consists of a long introduction narrating the history of the author from his youth up to his return from California to England after an absence of 14 years; and this, although prolix, is a very readable part of the volume; for it throws light upon the life of an Australian colonist, shows the difficulties he must encounter and the risks which attend, or in Mr. Davison's case formerly attended his attempts to carve a fortune out of sheep-walks and cattle runs. The remainder, consisting of about 100 pages, relates partly to a personal question between the author and Mr. Hargraves, to whom the Legislative Council of Australia have awarded some 20,000*l.* which Mr. Davison thinks ought at least to have been shared with himself, Mr. Hargraves having, we are told, learned what he knew of gold indications from Mr. Davison. In this subject the public has no interest. The other part of the volume is occupied by a discussion of the theory of gold formations; and here Mr. Davison's great experience and acute observation demand the attention of men of science.

In the narrative portion of the work we have graphic descriptions of Californian gold adventures, which, as has been observed, are really interesting. Let this be taken as an example—

"We took a passage in a small schooner for the head of navigation on the San Joachim River, where the rising city of Stockton had lately been established. This city occupies a convenient place as an entrepot for the southern diggings. Upwards of a week was passed on board this miserable craft, crowded with diggers, on a voyage which steamers now perform regularly in six hours. The San Joachim is a fine large river flowing through a marshy country overgrown with gigantic rushes called 'Tules,' until nearing Stockton, where the banks are elevated and fertile, with Oak trees and green sward on each side. At Stockton we found plenty of teams, both of mules and of oxen, ready for hire to convey miners with their outfits or merchandise to the various diggings. A bargain was soon concluded with a teamster, one Mr. Reynolds, a 'Hoosier,' as he described himself, to transport our luggage and supplies to the gold-diggings on Wood's Creek, in consideration of a payment of 16 cents. (1*s.* 6*d.*) per lb. avoirdupois. Another teamster, one Mr. Wolf, 'a full-blooded Buckeye,' as he boasted to be when asked from what State he came, being a particular friend of the driver and owner of the team which we had engaged, agreed to travel in company with him, so that whenever any extra strength might be required in crossing creeks, or after the waggons getting bogged, the two ox teams might, as is customary in such cases, yoke on to one waggon and so pull each other through the difficulty. The first day's travel lay through an open Oak forest, over the nearly level valley of the River San Joachim, and we encamped the first night near a public house called 'Dancing Bill's.' It rained during the night, and we now first experienced the benefit of the tent, which had been made on our passage up the river. On the following morning the rain continued to pour down, the ground had become saturated, and the oxen dragged the waggon along with great difficulty about six miles further. Here we encamped again. The rain poured down incessantly all night, and when morning appeared it was declared impracticable to proceed. We were now in the midst of a rolling prairie entirely destitute of timber. This rolling prairie, or open downs as we should have termed it in Australia, is lightly covered with Grass, and situate between the valley of the San Joachim and the wooded uplands of the gold-diggings which gradually rise towards the Sierra Nevada. In this difficulty the Buckeye and the Hoosier put their heads together, and the result was an agreement between themselves that the two teams should be yoked to one waggon to be dragged all the distance through to the diggings, and that the remaining waggon with all it contained should be left behind for a future undertaking. The waggon in Mr. Wolf's charge was conveying a New York Company with their supplies to the diggings, and to them the first preference was given, on the ground of their having a sick comrade. We expostulated and protested against this proceeding. We required to be drawn to the timber only five miles further, so that we might be placed near firewood before the double team continued its journey of uncertain duration in an attempt to reach the gold-diggings, for the task of its accomplishment now began to appear doubtful, since the periodical rains had set in so prematurely. Our entreaties were in vain. We were left without the power of moving, and the rain continuing unabated rendered it quite impossible for any of us to proceed separately on foot without an extra tent and supplies. We had now began to acquire American habits, and therefore divided ourselves into committees. First a wood committee was appointed, then a foraging committee, and thirdly a cooking and home committee. I fortunately possessed an excellent double-barrelled fowling-piece, and consequently I got myself placed upon the foraging committee. We had previously elected our officers. Mr. Hargraves was appointed president, and I was chosen treasurer, Mr. Lawrence Potts became secretary, and with the doctor we made a special arrangement for medical services. We remained 10 days in this miserable condition. On the second day a solitary tree was discovered, which supplied us scantily with fuel. In my foraging capacity, however, I enjoyed rare sport, and never perhaps had sportsman a better field. Game was abundant, and consisted chiefly of deer, antelopes, hares, rabbits, ground squirrels, geese, ducks, and the large Californian quails. Mr. Potts and another young man was associated with me in shooting, and our schemes for surrounding the timid antelopes in the valleys or following the larger deer afforded us all those exhilarating delights which hunters only know. My tierces of beef I had left in Stockton as not being worthy of carriage, and I may here state that they remained there until unfit for use, and so were a total loss, but I had brought on the biscuits, and eventually they proved quite a lucky adventure. On the road we met some of our steerage passengers, who had been to the gold-diggings and were returning quite disheartened. They assured us that all the mining ground was already occupied. I have since met many so-called unfortunate gold-diggers of this helpless and desponding order. Since the rains had set in thousands of gold-diggers came tramping down to spend the winter in San Francisco."

This will serve to show adventurers what sort of life is "prospecting." On one occasion Mr. Davison visited the little known Navigators Islands, of which he gives a most favourable account:—

"The group in the Pacific known as the Samoa, or Navigator Islands, was discovered by the French navigator De Bougainville. They may be considered as constituting a subdivision of the Friendly Islands of Captain Cook. The Samoa group consists of four principal islands—namely, Manua, Tutuilla, Upola, and Savai. The 'Orpheus' first cast anchor at Manua, and of course we landed as soon as possible. The natives here we found were all Christians, with books printed upon a phonetic system, in Roman characters, and yet, singularly enough, there were no white men on the island, the people having all been taught by native teachers from Tahiti. There is not perhaps a more triumphant result than this fact in the annals of missionary enterprise. The loveliness of these islands has never been too highly coloured, for it exceeds in truth all poetic description. Their natural beauty is surely the nearest approach that can be to paradise upon earth. All that my youthful imagination had ever pictured, all that Cook's voyages had ever impressed upon my boyish fancy, and all the glowing ideas which I had ever gathered from descriptive books, had never surpassed the glorious reality. I have generally found the contrary to be the case in other countries, but here the tropical vegetation, the genial climate, the smooth sea, the engaging people, were all most charming and romantic. After spending an agreeable week at Manua, we coasted along Tutuilla, and then entered Apia harbour in Upola. Here we remained upwards of another week. We took excursions into the interior and visited the farm of Mr. Pritchard, the Consul, and thence went to view a remarkable waterfall seven miles inland. We sought for gold on this occasion, but found no indications. Amongst the vegetable curiosities of these islands wild Nutmegs and wild Oranges were the most remarkable, besides an abundance of the ordinary edibles, such as Bananas, Breadfruit, Cocoanuts, Yams, Taro, &c. &c. Leaving Upola the 'Orpheus' stood off and on, near the large island of Savai. Innumerable canoes filled with natives visited us on every occasion. Our long stay at this group was occasioned by the captain of our vessel, who, intending to call again on his return from Australia, to take in a cargo of pigs and fowls for the market of San Francisco, had now to arrange with the native chiefs to collect them. I did not by any means regret this delay. The natives are a most interesting people, and a very superior race to either the New Hollanders or the Californian Indians. If a fine climate, simple wants, light labour, and beautiful scenery can produce happiness, then the islanders of the South Sea must possess that blessing most completely. The traveller can scarcely look upon their condition without indulging a desire to forego the boasted benefits of civilisation, and it really may be doubted whether average happiness of man in the civilised state equals that of these favoured people."

As to the origin of what is called placer gold, he opposes most resolutely the theory that it is derived from the breaking down of granitic or slate rocks. On the contrary he produces what he regards conclusive evidence as to the gold having flowed in a molten state over rocky beds. The form of his theory is thus stated by himself:—

"The theory I advanced then was—that alluvial or placer deposit gold has been distributed and deposited horizontally by means of an igneous liquid or perishable lava, and that quartz-veins as well as some other dykes traversing constants had been the fissures of discharge—the only unchanged existing solid remains of the ejected matter being gold, quartz, and some few other minerals, besides clays and ferruginous earths—because

"1. Alluvial or placer deposit gold has often a fused appearance, and metallic grains frequently present ragged and irregular surfaces, such as must have been destroyed by abrasion.

"2. It is found upon slaty and schistose bedding rocks in such shape and position that no merely mechanical force could possibly have so placed it.

"3. It is found abundantly deposited along present rivers, creeks, and watercourses, and its deposition in these places indicates the configuration of the bedding rock beneath the auriferous drift to have been nearly the same at the time of its deposit as at the present day.

"4. It is found richly deposited in the neighbourhood of ancient volcanic disturbance, and where quartz-veins and trap-dykes transverse certain slates, schists, and granites called constants.

"5. Gold is also found encased and enveloped within a stony matrix of quartz in veins, and quartz-veins are admitted by high geological authorities to have been filled from below by mineral matter in a fluid or vaporous state." And again—

"1. Alluvial or placer-deposit gold has been thrown to the bottom in an overflowing volcanic liquid.

"2. The liquid has cooled into solidity, and for the most part has since disappeared by decay and slight denuding forces, or possibly it may then partly have disappeared as a saline liquid, or even in vapour, without ever assuming the solid form. I have termed the substance a perishable lava in any of these cases.

"3. The metal has often been apparently melted into its bed, as is well known to every gold-digger experienced in working gold-deposits upon hard slates.

"4. The relation of gold to chlorine and oxygen is suggestive of a particular agent, which may have been connected with its original deposit, as well as why the noble metal alone has since remained a pure metal, while other contemporary metals have oxidised and frequently disappeared entirely.

"5. The ocean is the grand reservoir into which the perished substances have been received, and the quantity of salt in its waters indicates what their nature may have been.

"6. All the phenomena are referable to analogies in chemistry and physics, and compatible with a theory of volcanic eruptions already proposed by eminent geologists.

"7. Auriferous quartz veins and other dykes have probably been fissures of discharge."

This is a question to be settled by geologists, to whom we refer it; with an expression of regret that a purely scientific matter should have been treated in a tone of asperity which is perfectly uncalled for. Mr. Davison has offered them a digging, from which by patient washing they will probably extract ore enough to repay them for their trouble.

The *Floral Magazine*, Part IV., contains figures of the double Hemerocallis disticha; the President Azalea, a Chinese sort; two superb single Hyacinths, Lina, red, and Argus, blue; and Acineta densa.

There is a capital figure in the *Florist* of the new Rose (H. P.), called Comtesse Cecile de Chabrillant, concerning which so much interest was manifested at the Grand National Rose Show of this year.

Mrs. Lankester has added another to the little books on British Ferns under the name of *A Plain and Easy Account* of them (12mo, Harkwicke). It is pleasantly written, and illustrated with small coloured figures of each species.

A second edition of *Half-hours with the Microscope* (12mo, Hardwicke) has appeared, with some additions and alterations by Dr. Lankester, who now avows himself the author. The drawings of microscopical objects by Mr. Tuffen West, of which there are 250, are very nice specimens of neatness and exactitude. This is the best book on the microscope which can be put into the hands of beginners.

Garden Memoranda.

Messrs. Henderson's Nursery, Pine-Apple Place.—The show house here is at present gay with flowering plants intermixed with Caladiums and other things remarkable for the beauty of their foliage; here were also some fine specimen Tropæolums in pots growing for winter decoration, for which they are well adapted; they consisted of the more showy and large flowered varieties of Tropæolum, and when in bloom will doubtless make a grand display. Another house contained an excellent collection of Gloxinias both erect and ordinary sorts, most of which are still in full bloom and well worth inspection; nothing in their way can possibly exceed the beauty of some of these plants, more especially the upright flowering kinds in the way of the old Fyfeana, which modern improvements have thrown completely into the shade Ferns are grown here in great abundance and variety; among them we observed the beautiful variegated Pteris tricolor, which has recently been brought prominently into notice at our great metropolitan exhibitions by Mr. Linden of Brussels. It must certainly be regarded as a grand addition to the class to which it belongs, and a worthy associate of the handsome Pteris argyræa introduced by Messrs. Veitch. Against the inside end of a Heath-house was trained a fine plant of the charming Lapageria rosea, a half hardy climber, which considering its great beauty is not half so extensively grown as it ought to be. Some experience considerable difficulty in blooming it, but here it flowers year after year in the greatest possible profusion, and even with the most ordinary attention; all that has been done here has been to make it a good border to grow in; this is about 3 feet in width and 2 feet deep or so, and consists of peat, leaf-mould, and loam, well mixed together, and kept very light and porous. Thus situated it succeeds admirably; last year it began to bloom on the 24th June, and was never out of flower from that time till the middle of last March; it is now beginning to blossom again, and by the middle of next month may be expected to be very gay. It is increased here by layers, which also bloom freely even in a small state. When growing it requires plenty of water.

One house here is wholly occupied with Snow's Muscat Hamburgh Grape, an excellent kind, whose merits are now universally recognised. Two of the strongest Vines are at present bearing fine bunches of ripe fruit; visitors have therefore an opportunity of seing what it is. A prize was offered for specimens of it by the Pomological Society at its last meeting, but none were produced; we understand that another prize of eight guineas will be offered for it at the Crystal Palace show in September next. Let us hope that some good samples of it may be exhibited.

Greenhouse plants are at present out of doors, where they will remain for a month or so longer, should the weather prove favourable. Before they were fully exposed, however, they were placed under a Tiffany-house which has been erected here, to harden for about six weeks; thus managed their leaves receive no injury, which they are otherwise apt to do, especially in bright seasons. This year there has, however, been no sun to hurt them. The Tiffany-house now forms a shelter for Camellias and plants of that description.

Out of doors were some fine beds of Carnations, among which were some pretty Clove kinds; of the latter, the most striking were Cuthill's Prince of Denmark, a rich dark kind, and very fragrant; Brilliant, a bright scarlet sort; Purity, a clear white variety, together with carnation-striped and other kinds; all well worth inspection. Associated with them was a bed of Dianthus Heddewigii, one of the most showy and useful bedding-plants that has been introduced for years. The flowers are produced in great profusion, and they are individually large and striking in colour; the latter is rich velvety maroon, enlivened by a bright rosy blotch on each petal. Other varieties are also cultivated, but this is by far the best; and in a cut state it will be found to be as much prized as even the Carnation itself. The yellow Calceolaria aurea floribunda made an effective bed, as did also the new Annual, Acroclinium roseum, an Everlasting in the way of Rhodanthe Manglesii, but handsomer. In a cut state the flowers are very pretty, and keep their colour well; but when first cut their heads should be allowed to hang down for some time till the stalk stiffens, otherwise they are apt to droop. It may be worth mentioning that Tropæolum elegans proves to be a better bedder than Stamfordianum, which was intended to displace it; the latter though somewhat brighter in colour is a bad grower and at present ineffective, while the former is full of bloom and very showy. Among Geraniums Kinghorn's Christiana is a fine kind, dwarf and compact; its flowers are rosy pink and very pretty. The large orange-blossomed Gazania splendens will be found to make a showy border plant.

Some handsome vases were effectively arranged as follows; in the centre were yellow Calceolarias and Scarlet Geraniums surrounded by Lobelia speciosa and Nasturtiums, the latter gracefully drooping over the sides of the vase.

It may be worthy of notice that one of Messrs. Weeks' large tubular boilers is being set up to heat several houses on the one boiler system; it is intended to do the ordinary work of six boilers. A wooden tank lined with zinc is also being provided for striking cuttings on. It is not to be covered with slates; but is to be filled up with rough drainage through which the water is to circulate. Over that the plunging material is to be placed.

Miscellaneous.

Moreton Bay Water Lilies.—As our present issue is "homeward bound," we take the opportunity of inserting here a description of botanical specimens furnished during the week by Mr. Hill, of the Botanical Gardens. These were two beautiful specimens of the Flora of Northern Australia. One is the "Nelumbium Leichhardtii, or "Sacred Bean of N.E. Australia." It is a large flower, of a delicate cerise hue, and has a curious seed vessel, in shape like an inverted cone, with cavities at the top containing the beans, and suggesting, on the whole, the idea of a child's rattle. The second is the "Nymphæa gigantea," or "Gigantic Lotus of N.E. Australia,"—this is, if anything; a more beautiful specimen than the other. The petals are of a graduated violet tint, the calyx being externally green, mottled with black. The stamens form a bright yellow tuft on a scarlet base, and the various contrasted colours form a rare *tout ensemble*. The plant is of the Water Lily tribe, and its flower measures 1 foot over. Its leaves, which are 2 feet across, have the property of resisting saturation, and making the water upon them appear like mercury. This curious appearance is a striking feature of one of the ponds in the Botanical Gardens, on the surface of which may be seen the beautiful plant described. *Moreton Bay Courier, June* 2, 1860.

Cricket Match.—We understand that the first match between the employés of the well known West End firms of Minier, Nash & Nash, and Thomas Gibbs & Co. will take place by the kind permission of Mr. Gibson, at the reserved ground in Battersea Park.

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

Conservatory, &c.—No time should now be lost in completing any repairs that may be required by houses devoted to the growth of plants, for if such wet weather as we are at present experiencing continues, the sooner the latter are put under the protection of glass the better. Continue to keep the conservatory gay by a selection from the reserve houses of the showiest plants in bloom; carefully tie out the different varieties of Lilium lancifolium before they come into flower; two other good autumn-flowering plants should likewise have similar attention, viz., Crowea saligna and Plumbago capensis; these are invaluable at this season. Attend to the proper regulation of climbers, and give weak liquid manure to plants in bloom, to maintain them in vigorous health, and assist the late flower-buds to open. After greenhouse plants have been placed under protection, whether of a permanent or merely temporary character, an unlimited supply of air must be given them day and night. Finish the potting of Chrysanthemums, and stake them securely as they advance. The stock of autumn and winter flowering plants should not be stopped after this, but have every encouragement to assist in ripening their wood early, that no difficulty may arise in getting them into bloom at the time wanted. Daphnes, Oranges (of different kinds), Myrtles, and Gardenias intended for forcing should be removed to a cool airy house to rest.

FORCING DEPARTMENT.

Vinery.—Ripe Grapes should be occasionally looked over, to remove decaying berries. Wasps are sometimes troublesome, and, to prevent their entrance, tack hexagonal or other netting on slight frames, and place them over the sliding sashes and ventilators; all late growths should be stopped back, but preserve the principal leaves untouched, until they die naturally.

Pinery.—Finish potting, both of the fruiting and succession plants, as soon as circumstances permit, that time may be allowed them to finish their growth before the dull days of winter. In re-plunging them allow plenty of room between the plants for their growth during the next three months, and keep them as near the glass as the form of the pit or house will permit. Keep up a steady bottom heat at 80°, to facilitate a quicker growth of the root after potting; it may gradually decline a few degrees as the plants advance. Syringing should be discontinued (unless in dry airy houses) as the days shorten, except in the case of plants swelling their fruit, which will require a moist atmosphere. Air should be freely given on all favourable occasions; but the plants will enjoy being closed up early in the afternoon at a temperature of 85° or 90° for three or four hours, giving as much air afterwards as will produce a gentle circulation during the night. Water fruiting plants with liquid manure when dry; where the fruit is cut from those kinds which do not produce suckers freely, the stools should be shaken out of their pots and repotted in deep and less-sized pots, plunging them in a brisk bottom heat; this will generally induce them to produce a supply.

FLOWER GARDEN AND SHRUBBERIES.

Cuttings of choice herbaceous plants, Carnations, Picotees, &c., put in early, should be pricked out or potted immediately they are struck, to get established. Early struck Pansies may be planted out for autumn blooming. Young seedling Wallflowers, Brompton Stocks, Sweet Williams, and other biennials, should either be planted out into reserve beds, or where they are to flower. Commence in earnest the propagation of bedding out plants, making notes of desirable new things. The present will prove a favourable time to propagate by cuttings most kinds of Roses. Choose the ends of the shoots for the purpose with the bottom part partly ripened. Noisettes, Bourbons, Chinas, and many Perpetuals will strike freely in sandy soil if selected as just directed. Now, if the weather continues moist, and during the whole of September and October, is the best season for transplanting evergreens.

HARDY FRUIT AND KITCHEN GARDEN.

Potatoes everywhere are reported to be becoming badly diseased; those on wet soils should be taken up wherever the haulm is at all decayed, to prevent the sound ones from rotting. Where the tops are still growing the crop may remain for a time, to stand the chance of becoming better ripened. Store the sound part of the crop in small quantities in sheds, lofts, &c., to dry, before attempting to pit them; for probably many will still turn diseased. Dalmahogs, which had a great reputation last year for resisting the evil, are this season in some places greatly affected; after Ash leaves which are ripe, Fortyfolds have stood the best. If not already sown, lose no time in getting in Cauliflowers, Lettuce, &c. A bed of Onions may likewise soon be sown thickly, to stand the winter. A crop of dwarf French Beans should be sown under a south wall, for the chance of a late supply; and an empty Melon pit may be planted at the same time, keeping the sashes off till frosty nights come on. Prune off superfluous shoots from Tomatoes against walls, that they may not shade the ripening fruit. The leading shoots may be pinched out when sufficient fruit is set, which will assist to ripen the crop. Chilies, in pots or frames, should be kept free from green-fly; a little manure water will help those in pots.

COTTAGERS' GARDEN.

Where a row or two of Celery has been planted let it be earthed up when the plants are dry. A few Cabbages may still be planted 9 inches apart, every alternate one to be drawn for greens, the rest to stand through the winter. If a little Parsley has been sown during summer let it be thinned out so as to afford what remains strength to stand the winter. Fruit, if any, should be stored in a cool dry airy place, and be handled as little and tenderly as possible. It should not be laid on either hay, straw, or Moss, all of which spoil its flavour; on a clean, dry wooden shelf is best.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON, For the Week ending August 9, 1860, as observed at the Horticultural Gardens

August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 3	16	29.721	29.557	70	48	59.0	62	59½	S.W.	.04
Satur. 4	17	29.565	29.512	72	38	55.0	62	60	W.	.00
Sunday 5	18	29.662	29.532	69	50	59.5	61½	60	W	.19
Mon. 6	19	29.471	29.353	67	41	54.0	62	59	S.W.	.08
Tues. 7	20	29.789	29.758	68	40	54.0	61½	59	W.	.00
Wed. 8	21	29.818	29.562	60	48	54.0	61	59	S.	.36
Thurs. 9	D	29.726	29.601	65	39	52.0	61	58½	N.W.	.00
Average..		29.650	29.553	67.3	43.4	55.3	61.5	59.3		.67

August 3—Densely clouded; overcast; very fine; rain.
— 4—Cloudy; clear and fine at night; cold.
— 5—Very fine; cloudy; showery at night.
— 6—Cloudy; densely clouded; rather boisterous, with rain.
— 7—Clear; cloudy; densely clouded; very fine at night.
— 8—Overcast; rain during the day; densely overcast.
— 9—Overcast; very fine; densely overcast.
Mean temperature of the week, 3¾ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending Aug. 18, 1860.

August.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 12..	75.0	50.9	63.0	12	0.47 in.	—	2	2	1	1	6	12	6	4
Mon. 13..	74.1	50.4	62.2	16	1.14	—	1	3	2	3	5	13	2	5
Tues. 14..	72.1	51.0	61.5	13	0.79	—	—	9	4	1	2	11	5	2
Wed. 15..	72.8	49.9	61.3	13	0.61	—	4	5	4	1	3	7	5	5
Thurs. 16..	73.7	51.9	62.8	14	0.58	—	—	3	4	2	4	9	3	4
Friday 17..	73.5	50.9	62.2	18	1.12	—	4	2	1	2	5	5	13	2
Satur. 18..	73.8	52.0	62.9	12	0.38	—	1	6	4	3	5	7	7	1

The highest temperature during the above period occurred on the 15th and 18th, 1842—therm. 92 deg.; and the lowest on the 13th, 1830—therm. 32 deg.

Notices to Correspondents.

Education of Gardeners: *Un jeune jardinier.* As there does not at present exist any examining board, so there are no subjects that can be named as required in an examination. Don't you see, from the letters continually appearing in these columns, that the subject is still in embryo?

Monsters: *W A L.* Now that attention has been drawn to this instructive class of malformations it is not at all unusual to find the sepals of the Fuchsia changing into leaves.

Names of Plants: *Arcanum.* Torilis Anthriscus.—*Jos. S. Gray.* It is the beautiful crimson Spiræa palmata, now seldom seen.—*A Reader.* We do not at all recognise the plant. What sort of flowers has it? Be so good as to send a much larger specimen with the youngest berries you can find.—*R D.* Astrantia major.—*Jno F.* 1, Molinia cœrulea; 2, Avena flavescens.—*P. No.* 1, Cardoons; 2, neither Sweet Marjoram nor Pot Marjoram but common Marjoram, to be gathered on any chalk hill.

Oaks: *F. Z.* They are galls formed by an insect out of the buds of the Oak. You will find a little chamber in the middle of each gall, and in every chamber a little grub. See the *Gardeners' Chronicle*, 1860, p. 72.

Potato Disease: *A Constant Reader* will find in former volumes much statement respecting the effect of pulling up or cutting off the haulm of diseased Potatoes. Opinions differ as to the effect of the operation; our own belief is that it does more good than harm. But it is by no means free from objection.

Roses: *A B W and H L K.* Such instances of the centre of a Rose flower lengthening and carrying along with it all the parts changed more or less into leaves have been often observed. They are admirable evidences of the truth of Morphological theory. We have seen none this year about London and are surprised to hear that they are common with you.

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11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 . 11	2ds.	18s.	2¼
12 .. 9	12¼ .. 10¼	14¼ .. 10¼	13 .. 11		1sts.	21s. 6d.	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13s. 6d.	1¾d.
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16s.	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19s. 8d.	2½
18 .. 11	18 .. 12	23 .. 13	24 .. 15	.. ..	1sts.	24s.	3
18 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 12	22 .. 14	22 .. 16	.. ..			

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6 ,, ,,	0	8 ,,	16 ,, ,,	3	6 ,,
7 ,, ,,	0	10 ,,	17 ,, ,,	4	0 ,,
8 ,, ,,	1	0 ,,	18 ,, ,,	5	0 ,,
9 ,, ,,	1	2 ,,	19 ,, ,,	6	0 ,,
10 ,, ,,	1	4 ,,	20 ,, ,,	7	0 ,,
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See *Gardeners' Chronicle* of August 4.

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The Agricultural Gazette.

SATURDAY, AUGUST 11, 1860.

THE harvest of a cold and rainy summer rarely proves so good on threshing as it promised to be. This must be borne in mind by any one who looks on the bulky crops at present on the ground. The traveller through those eastern and midland counties of England which are traversed by the Great Northern, the Great Western, and the Manchester and Lincolnshire lines of railway, will otherwise have an undue impression of the excellence of the coming crops. Barley and Wheat are in some districts a good deal knocked about and laid, and the latter is elsewhere thinner on the ground than usual; the former however generally promises an unusually large yield, though of inferior quality. Peas and Beans, too, are gene-

rally clear of blight, with a heavy crop of straw, well podded. Over the wold district of Lincolnshire the corn crops look well; and almost everywhere it is a most promising year for all green crops. There were never bulkier crops of Grass, and though the greater part of it has been badly won, or is still to make, a great deal of good hay has been saved.

Corn crops are everywhere unusually late. Harvest, which began in the middle of July last year in Berkshire, is not now so forward as it was then; and our crop returns which were gathered in during last month in 1859, though a fortnight or three weeks later this year, are no doubt everywhere a good deal earlier in the season. We hope to publish them next week. They will unfortunately announce in many places the reappearance of the Potato disease. It has come with unusual abruptness on the Potato crops in Gloucestershire, which, with very little previous ripening of the leaf, are being blackened in rapidly extending patches, more seriously than in any year since those in which they were first destroyed in this way.

A Correspondent "Publicola," at p. 699, is desirous of knowing the botanical names of "Woodwax," "Moon-flower," and "Fire-leaves." Let us therefore offer the following notes upon the plants referred to:—

1st. *Woadwaxen* (Genista tinctoria) sometimes called Dyer's green-weed, is a very general plant, especially in poor "hungry clays," as the tertiary clays in the east of England, the Oxford and Kimmeridge clays of Wilts and Oxon, and the Lias clays of Gloucestershire. It is always an evidence of poverty, and the pastures in which it occurs abundantly may generally be pronounced to be as nearly in the state of waste as any we possess—its haymaking power seldom attaining to so much as 15 cwt. to the acre.

2d. *Moon-flower.*—In the weed catalogue of the gardener (Chrysanthemum segetum) Corn Marigold is referred to under the name of Moon; and by the farmer also where it occurs plentifully; otherwise the white species (Chrysanthemum leucanthemum), Ox-eye Daisy, will often get the name, but it is the yellow one only that is usually so called by the old herbalists. Both of these will be found occasionally in shifting crops in great abundance, and in such cases they are no doubt sown with the crop seeds. In fact, the yellow one was introduced to this country in this way, for there is reason to think that it is not an aboriginal plant, and plentiful as it is sometimes found to be, it is still confined to agrarian circumstances. The white species is more common in poor pastures than elsewhere. It is the pest of the U. States, where pastures (!) too often are composed of little else.

3d. *Fire-leaves.*—In Gloucestershire the name is given to the leaves of Plantains, more especially to the Plantago media; and we have heard it in Herefordshire used for the *Scabiosa succisa* (Devil's bit), which is very prevalent on the flats of the Wye. Both are named fire-leaves on the same principle, for we have seen the farmer of Gloucestershire with a Plantain leaf, and he of Herefordshire with a Scabious leaf, select specimens, and violently twist them to ascertain if any water could be squeezed out of them. If so, this moisture is said to induce fermentation in newly carried hay sufficient to *fire* the rick. Both are mischievous in pasture, because such thick leaved plants take longer in drying than the Grasses, and many a crop of hay which otherwise might have been saved in good condition has had to wait, and so been rained upon, thus causing not only delay and its consequent expenses, but serious injury to quality.

In nine seasons out of ten a pamphlet On Haymaking published in the month of August would be out of date for the agriculturists of most English counties. There is, however, this year, still a good deal of hay to make, even so far south as Middlesex, and everywhere farther north the mowers and hay tedders have not yet nearly finished their task. Mr. Baldwin has therefore done well to publish his prize essay on saving hay;* though it be six weeks past the summer solstice.

If every blade of Grass could be exposed as soon as cut to a temperature somewhat under that of boiling water until perfectly dry, and then packed away under a waterproof roof, the hay would be as good as such Grass *could* yield. The whole nutriment which the Grass contained would be present in the hay, undiminished by washing or by fermentation. For the best hay there is needed the best Grass, cut when containing the greatest quantity of nutriment, and dried rapidly and perfectly. To this end the Grass fields of Herts, Middlesex, and Surrey, where the best hay is made, are cut soon after they are in flower, and perpetually tedded and shaken out until as dry as possible. The hay, certainly with a little loss of colour, is thus simply dry green Grass. It hardly at all heats when heaped together, and so far as the food is concerned that was in the field, it is all and undiminished in the rick. Just in proportion as haymaking resembles this is it good.

Mr. Baldwin discusses in his essay the best period of mowing—the best method of haymaking—the best plan of saving hay—and the losses sustained by the present defective mode of managing the hay crop. Each of these sections is discussed in detail, and the following are extracts giving some of the author's conclusions—

(1). *Best time to Cut Grass.*—As all Grasses do not flower at the same time, we have to offer the following rules:—

1. In the case of Italian Rye-grass, always mow on the appearance of the flowers, as this Grass is such a fast grower that, if cut at this stage, a second cutting is obtained equal to the first, and, on good land, a third and fourth very little inferior.

2. Ordinary Rye-grass may be allowed to produce the flowers.

3. Clover is best cut when the heads are in full blossom.

4. Mixed meadows should be mown when the bulk of the herbage is in full flower, or when the seeds of the earliest Grasses are fully formed, such as Sweet-scented Vernal Grass (Anthoxanthum odoratum), Meadow Foxtail (Alopecurus pratensis); and the late Grasses, as Crested Dog's-tail (Cynosurus cristatus), and Meadow Fescue (Festuca pratensis) are just beginning to produce the floral organs. With us, Timothy (Phleum pratense), Italian Rye-grass (Lolium italicum), Perennial Rye-grass (Lolium perenne), and Cock's-foot (Dactylis glomerata) flower during the latter half of June, which, as these grasses constitute the great bulk of good meadow land, is our mowing season.

(2). *Cost of Cutting Grass.*—We find the cost of mowing hay per acre to be—

1. By manual labour, say		4s. 6d.
2. By mowing-machine—		
Manual labour	3½d.	1s. 6½d.
Horse labour	6d.	
Per centage per acre ..	9d.	

This gives a gain of 3s. per statute acre. If we assume the saving effected by the machine at 2s. per acre (and any calculation on the subject is only approximate), we find that the introduction of this machine on all the meadow land of Ireland (supposing the ground sufficiently even for the purpose) would effect a national saving of 150,000*l.* annually!

(3). *Loss by Exposure in the Field.*—That a considerable quantity of hay is lost annually, by being allowed to remain too long in cocks in the field, is a fact patent to anybody who has travelled much through the country. Within the last three or four years we have made agricultural tours through 25 of the 32 counties of Ireland; and from careful consideration of the subject, and having in some instances used a tape-line and weighing-machine to assist our judgment, we have come to the conclusion that one-twentieth of the hay crop of Ireland is permitted to rot in field cocks. The portion on the ground, as well as that on the outside of the cocks, is too often only fit for manure. And the loss of aftermath, and of the subsequent year's crop (if hay or pasture), suffers to the extent of from 6*d.* to 1*s.* per acre. If we unite all these sources, the loss sustained annually in this country is something serious to contemplate. On an average for all Ireland, it is not under 20 per cent., or a fifth of the actual value of the crop. We have about 1,500,000 acres under meadow in Ireland, the average produce of which, last year, was 2 tons per acre. The total hay produced was 3,000,000 tons; the value of which, at the current rate, would be, at least, 12,000,000*l.*; one-fifth of which = 2,400,000*l.*, is, as we have shown, lost by mismanagement to the Irish farmer.

* "On the most Approved Methods of Saving the Hay Crop." A Prize Essay, by J. Baldwin, Glasnevin, Dublin.

AN AGRICULTURAL PILGRIMAGE.—No. IX.

Panton House, near Wragby.—This farm lies on that tract of clay-loam land between the "cliff" and the "wold," in North Lincolnshire, which is fertile and productive or otherwise, according as it is drained and well farmed. The road to it from the Bardney station on the Peterborough and Lincoln line lies first through the edge of the fen, then through a country of stiff clay, in Grass and small fields, and at length through a better farmed district where large enclosures, heavy crops of Grass, well-fed pastures, bulky crops of Beans and Wheat, and promising fields of Mangels and of Cabbages, attest the quality of the well managed clay loam through which it lies. Seven miles from Bardney we pass through Panton House farm, which has been in the occupation of Mr. R. Dudding and his father before him for a great many years. Two or three miles in the same direction further will bring us to the chalk hills and the celebrated Lincolnshire wolds, so much of which, the property of the Earl of Yarborough, is cultivated by one of the wealthiest and most intelligent bodies of tenantry in the world. During a ride of a few miles you thus have pass before you in review all the characteristic features of Lincolnshire agriculture. The old districts of wild heath, of fenny waste, of rush-growing clay, of poverty-stricken wold, have all by art and energy, and industry and capital, been brought from comparative worthlessness to high productiveness within two generations of cultivators; and there is no better farming in the island than are here and there along this line, and generally at either end of it, exhibited.

It is with one of the farms upon the clay land district that we have now to do. And it is not the cultivation of it, but the stock upon it that has brought us here. The cultivation nevertheless is vigorous and intelligent: government drainage 4 feet deep in the old furrows answers well upon the clay land, and fair crops of Wheat and Oats and heavy crops of Beans are promising extremely well. Mangel Wurzel and Cabbages are largely cultivated. The former looks very well and the latter is quite a notable feature of the district. The land being cultivated, manured, and ridged, is let to a nurseryman to plant, and replant if necessary for about 25*s.* an acre; a man will plant 7000 Cabbages a day, 10,000 are needed for an acre, and they are sold at 2*s.* a thousand. Half the farm or more is pasture. The stock includes a first class flock of Lincoln sheep. Mr. Dudding is well known as a ram breeder, and many of those best known for their Lincoln flocks, hire of him. I saw a number of his older sheep extraordinary for size and weight and shape and fleece. In one instance during the past season a single sheep has grown 49*s.* worth of wool.

But the point which most distinguishes Mr. Dudding in a district where excellence is general, is his herd of Cattle. There is here one of the oldest and best established herds of pure bred short-horn stock in the country. Mr. Dudding's father, a contemporary of the Collings, was well known for his herd in days before a herd-book was kept. One large family in the present herd is descended (some of them through eight or nine *recorded* generations, and previously through many unrecorded ones, where however equal care was taken) directly from his stock; and the bulls used upon them as well as upon the other progenitors of the herd include all the first names in the history of the herd: Mason, Bates, Lord Spencer, Lord Feversham, Towneley, Knightley, Fawkes, Wilkinson, Stephenson, and latterly Booth. And of many of them histories could be given which constitute the very romance of cattle breeding. For instance a bull named Prince Alfred, one of the best probably which ever left Warlaby, and for the use of which Mr. Dudding is now paying Mr. Booth 200 guineas a year, was hired by H.R.H. the Prince Consort for use at the Flemish farm near Windsor; after two years' service there he went to the Emperor's herd near Paris, and after getting a lot of calves there he has returned homewards, and is now at Panton—suffering the other day by the way a defeat at Horncastle, where the Lord of the Manor, bred by Mr. Dudding himself, was placed over him by the judges of the Lincolnshire Agricultural Society.

Mr. Dudding's herd is now to be disposed of, owing to its owner retiring from business, and Mr. Strafford will on the 7th of next September, offer the whole of it by auction. Nearly 100 animals will then be sold, and it is therefore a matter of public interest to make known beforehand the character of the herd and the descent of its several families. The present quality of the stock was well illustrated the other day at Horncastle, when the best bull in the yard and the best in the old bull class, the second best yearling bull, the best and second best in two of the most remarkable classes which have been shown for many a day, viz. the yearling heifers and heifer calves, were all exhibited by Mr. Dudding. The animals throughout the herd are in admirable condition, and will no doubt take the eye as well as the judgment of the company next month. Let us go through one or two of the families of which it consists.

Among the animals sold at Robert Colling's sale in 1818 was "Cowslip;" she was by Wellington (680), dam by Punch (531); she was bought by Mr. Leighton, and her daughter "Young Cowslip" by Ratify (2481), was bought by Mr. Dudding many years ago at Mr. Leighton's sale. On her and her descendants there have been used the following bulls:—Childers, Plenipo, &c.; the first bought by Mr. Dudding in 1829 at the Chilton sale; the second bred by Mr. Maynard. On her daughters Plenipo, Childers, Speculation, Duke of York, and General Washington were used: General Washington was by Duke of Northumberland, a celebrated bull of Mr. Bates' breeding. On her granddaughters Fitz Harry, Master Charley, Lambton, and Leonidas, the latter of them from Mr. R. Booth's herd were employed. On the next generation, Earl Stanhope (5968), Leonidas, Belvidere 4th, Lemnos, Childers, Sir Samuel, Superior, and Vanguard were used, several of them of Booth's breeding—Earl Stanhope being however a Bates, and a prize taker at the York meeting of the English Agricultural Society, and Lemnos being bought a calf at Sir C. Knightley's sale. With these exceptions the bulls employed were wholly from Warlaby. On Young Cowslip's gr.-gr.-gr.-daughters, in four instances, Lemnos, Sir C. Knightley's bull, and Duke of York (6947), and Baron Warlaby, a

Booth, were used. On the next generation there were used in two instances Stamboul and Sugar-plum, the former a Knightly, the latter out of Lord Spencer's Bon-Bon by Usurer, the 400-guinea bull bought at his lordship's sale by the late Earl of Ducie. No. 46 in Mr. Dudding's catalogue, "Lady Sale," by General Sale 2d, is one generation further still from Young Cowslip; as also is Landscape, whose son, "Lord Lincoln," a bull calf, is by the Lord of the Manor, the prize taker at Horncastle, whose gr.-gr.-g.d. was Sylph by Sir Walter, the cow from which the "Charmer" tribe descended, which fetched such prices at Mr. Adkins' sale.

The following then are young Cowslip's descendants. I place them in successive columns of which she was dam, gr.-d., gr.-gr.-d., &c., and I have marked by italics those which are dead or parted with, by ordinary type the females in the herd, and by capitals the bulls. The number in the catalogue, and the date of birth of all the names now for sale are also given.

DESCENDANTS OF YOUNG COWSLIP.

Dam.	Gr. D.	Gr. Gr. D.	Gr. Gr. Gr. D.	Gr. Gr. Gr. Gr. D.	Gr. Gr. Gr. Gr. Gr. D.
Columbine, by Childers	*Corianda*, by Plenipo	*Cowslip*, by Fitz-Harry	3 Cecilia, 1857		
			9 Coriander, 1858	29 Calycle, 1856	
				48 Canny Lass, 1858	
	Jemima, by Speculation	*Walldover*, by Master Charley	*Wizard*, by Belvidere 4th	*Witchcraft*, by Baron Warlaby	33 Wistful 1857.
Cranberry, by Plenipo	*Carnation*, by Duke of York	7 Canary, 1853	23 Crinoline, 1856		
			44 China Aster, 1858		
			67 Charity, 1859		
	Cactus, by General Washington	*Columbine*, by Lambton	54 Cherry, 1858		
		Camilla, by Leonidas	8 Col. Collings, 1859		
Miss Leighton, by Umpire	*Lady Sarah*, by Childers	*Lady Jane*, by Plenipo	*Lady Jane 2d*, by Fitz-Harry	*Lady Sarah*, by Duke of York	*Lady Like*, by Sugar-plum

Lady-like's daughter is 46 Lady Sale, 1858, and her sister by Earl of Salisbury has a grandson 10, Lord Lincoln, 1859.

This then is the family descending through the female side direct from Robert Colling's herd. Probably there is not an animal in the herd which has not, through the sires employed, Collings' blood in it, but the families are more easily traced by the female side, and we shall, therefore, take another family in the same way, which includes no fewer than 22 individuals in the herd.

Albina was a cow by Miracle, her dam, bought by Mr. Dudding many years ago at the sale of Mr. Bower's stock at Moorgate House, near Retford, Notts. She was put to bulls of Lord Feversham and Sir C. Knightley's breeding, and on her descendants have been used bulls of Mr. Bates's blood, as Earl Stanhope, son of Duke of Northumberland; and of Sir C. Knightley's, Lord Spencer's, and Mr. Booth's—ultimately the latter exclusively; and many of them have two crosses, some of them three by Sir Samuel and Baron Warlaby, &c., from that herd. The following are the descendants of *Albina* in Mr. Dudding's herd:—

DESCENDANTS OF ALBINA.

Dam.	Gr. Dam.	Gr. Gr. Dam.	Gr. Gr. Gr. Dam.
Augusta, by True Blue	1 Adora, 1848	15 Admiration, 1855	—75 Autumn Rose, 1859
		59 Amelia, 1859	
		80 Anna, 1859	
	Amy, by Earl Stanhope	*Agamemnon*	— 5 Archduke, 1859
		19 Ambrosia, 1855	— 4 Actor, 1859
		26 Angerona, 1856	—70 Avalanche, 1859
		Arithobia, by Baron Warlaby	39 Avice, 1857
			64 Anenome, 1859
		5 Augustus, 1859	
	Anna, by British Boy	— 2 Admiral, 1859	
Alice, by Master Charley	4 Alcesta, 1851	—40 Actress, 1858	
	8 Alicia, 1853	37 Alpha, 1857	
		11 Alexander, 1859	
	11 Agenoria, 1854		
	Amelie, by Earl Stanhope	— *Arabella*, by Leander	—28 Aleona, 1859

And "Aleona" has a heifer calf—68 Alboni, 1859.

Of these—75 Autumn Rose took the 2d prize in the calf class at Horncastle and Agamemnon, took the calf prize two years ago at Grantham, and was there sold. Of the cows named here of course most of the produce has been parted with. Some have had bull calves, which have been sold or let, and others are dead.

There is a smaller family in which no doubt great interest will be taken at the forthcoming sale, owing to its descent from Sylph, a celebrated cow by Sir Walter, bred by Mr. Arbuthnot, and of which the history is given in a past number of this Journal, where Mr. Adkins's herd of Charmers is described. "Lady Bountiful," a calf by "Usurer," out of a daughter of Sylph's by Ranunculus (2479), was bought a calf by Mr. Dudding at the Wiseton sale, and she has the following descendants in his herd:—

Dam.	Gr. Dam.
13 Lady Mary Bountiful 1854, by Baron Warlaby	— 60 Lady Louisa Bountiful, 1859, by Sir Samuel
Lady Isabella Bountiful, by Vanguard (dead)	— 1 Lord of the Manor, 1856, by Lemnos

Of these No. 60 took the first prize at the Horncastle Show, in the yearling heifer class, beating there Lady Pigott's heifers, who lately took 1st and 2d prizes at a Kent show; and Lord of the Manor took the 1st prize as the best bull in the yard, beating Booth's celebrated bull Prince Alfred. This family is also related to "Bonny Lass" and "Bon-Bon 3d," which fetched such enormous prices, 300 and 270 guineas respectively, at Mr. Chaloner's sale lately. Bon-Bon was out of Sylph, she was sold at the Wiseton sale, Mr. Dudding bidding up to 100 guineas for her.

There are several other smaller families in the herd; descendants of "Eastthorpe Rose," bought at Mr. Botterill's sale, on which bulls of Bates and Knightley have been used; of "Alice Hawthorn," bought at Mr. Parkinson's sale (at Leyfields of "Lady Salisbury," bred by Mr. Salisbury, a Lincolnshire breeder, whose descendants have now several crosses of Booth; of "Miss Spooncer," a cow bought of Mr. Spearman, of Newton; of "Laura," bought at Mr. Cartwright's sale; of Jacynth, whose grand-dam was bought of Mr. Rogerson; of Belvederia, bought at Lord Brownlow's sale; and of Woodbine, by Noble, bought of Mr. Wood, whose daughter and granddaughter are here; also several of the same family as the "Woodbine," sold by Mr. Dudding to Mr. Ambler, whose daughter Woodrose took the first prize in her class at Canterbury, beating there Duchess 77.

There are, however, two principal families yet to specify and enumerate as follows:—

"Perpetua" was a cow bred by Mr. Dudding—her descent for six previous generations being recorded in the herd-book. The following are her descendants:—

DESCENDANTS OF PERPETUA.

Dam.	Gr. Dam.	Gr. Gr. Dam.
2. Philippa, 1850	12 Pellonia, 1854	62 Prudence, 1858
		81 Plumbless II., 1859
	45 Priscilla, 1858	
	73 Phoebe, 1859	
Priscilla, by Earl Stanhope	96 Pretty Maid, 1855	—82 Pearl, 1856
	Priestess, by Leonidas	38 Princess Alice, 1857
		57 Princess Augusta, 1858
		78 Princess Caroline, 1859

The younger descendants of Perpetua have two crosses of Booth's bulls in them, and the earlier names are by Bates's bull Earl Stanhope.

Yet another family are the descendants of Fancy 2d, a cow by Young Frederick; the mother, *Fancy*, was bought at Mr. Leighton's sale:—

DESCENDANTS OF FANCY 2.

Dam.	Gr. Dam.	Gr. Gr. Dam.	Gr. Gr. Gr. Dam.
Fancy 4th, by True Blue	14 Fancy 12, 1855		
	Faith, by Earl Standhope	58 Fame, 1858	
		Fidelia, by Leonidas	24 Feronia, 1856
			70 Flora, 1859
	Fancy 8, by Leonidas	74 Fancy Lady, 1859	
		Another daughter	
Fancy 5, by Master Charley	*Fancy* 9, by Leonidas	42 Fancy 2, 1857	
		7 Fancy King, 1852	
	Fancy 10, by Leonidas	—12 Fancy Boy, 1859	
Fancy 3d, by General Washington	*Fraulein*, by Regent	*Felicia*, by Baron Warlaby	47 Fair Maid, 1858
			63 Fawn, 1859

And in addition to these there is 66, Faith, a daughter of 24 Feronia. The daughter of Fancy 8, referred to above, was sold to Captain Ball some years ago and made a great price at his sale: her half-sister, Fancy Lady, 74, got by Vanguard, took the 1st calf prize at Horncastle.

I have thus gone through all the families in the herd sufficiently to enable any one to judge, with the help of the herd-book, of the descent and quality of the stock. The present condition of the animals is first-rate, their style may be gathered from their success at recent shows, and may be anticipated from the great cost—200 guineas a year, to which Mr. Dudding has annually gone in hiring a first-class bull from Warlaby. There are thus 12 of the animals in the herd by "Superior," 13 by Sir Samuel, 12 by Baron Warlaby, 16 by Vanguard, 4 by Leonidas and most of the cows are in calf by Prince Alfred and Welcome Guest; some also by the Lord of the Manor and Lord Alexis.

"Lemnos," bred by Sir C. Knightley, and bought a calf has 7. "The Squire," of Colonel Towneley's breed and sire of Towneley rose, a well-known prize-taker, has 7. "Kalafat," a Sir C. Knightley bull, for which he was offered 200 guineas before his sale, has 7. There are also several heifer and bull calves by Booth's Sir Roger, which have fallen since the catalogue was printed.

The colours are good; out of 97 animals, 50 are roan, 22 red, 13 white, 10 red and white. There can be no doubt that the descent, quality, appearance, and performances of the herd will attract a large gathering of Short-horn breeders next month. And agriculturists generally, though not specially interested in the Short-horn breed may well make the sale the excuse of a journey. They will see a well-farmed district, a well-cultivated farm in the vale, and another also in Mr. Dudding's hands in capital order on the wold. They will see good stock of other kinds, a first-class flock of Lincoln sheep, from which 100 rams are annually let at good prices; and, in the district generally, they will see a prosperous tenantry and contented labourers. Better cottages are nowhere to be seen, nor generally better wages given than are the rule all over the estate.

Returning to the herd, the learner can by inspection appreciate the influence of particular animals on their produce. Among the Booth's bulls used, "Leonidas" has given great size and quality with quantity of loin beef to his produce. "Baron Warlaby" again has conferred neatness, width, and prominence of rump ends, accompanied perhaps, if anything, by rather a shrinking in the loin.

Being in this neighbourhood visitors will find it to be their interest to examine the agriculture of the celebrated Wold district, and there will be little difficulty in obtaining liberty to inspect the many other celebrated herds of Short-horn stock in North Lincolnshire and in Yorkshire. *J. C. M.*

Home Correspondence.

Guano to Potatoes.—An experiment which I made two years ago may afford some information to your Newbury inquirer. I have for many years past been in the habit of using Peruvian guano as my only manure for Potatoes. The quantity used is about 2½ to 3 cwt. per acre dusted by hand into the drills, before the tubers are put in. The year before last I had the curiosity to try the Peruvian plan of a second dressing, when the plants were earthed up, which was applied to two rows through a field. The exact quantity was not ascertained, but it was probably at the rate of 2½ to 3 cwt. per acre. The result in foliage was that those two rows could be distinguished some hundred yards off, the plants being twice as large as the rest of the field, and they retained their green colour for weeks after the rest began to ripen. The result in roots was not half that of the other rows; the Potatoes were numerous, small, and unripe when taken up. In short, the plants never came to maturity, though in a favourable summer, and the produce was worthless. The following year the field was Oats, and a broad green stripe of luxuriant vegetation marked the place where these Potatoes had been. So much for the assertion frequently made that guano only lasts one season. The field was on a steep hill-side, facing south, perfectly drained, and the soil the stone shattery chert or opaque ferruginous flint, which overlies the lower greensand. It was clear to me that in the damp climate of south-eastern England one dressing of about 3 cwt. of guano is enough for the Potato. *J. R., Sevenoaks.*

Societies.

Royal Agricultural of Ireland at Cork.—At the recent agricultural meeting here the Lord Lieutenant spoke on the agricultural statistics of Ireland. Agriculture in Ireland is the most important of all subjects connected with her material prosperty. Agriculture employs, as appears from the census of the year 1851, more than 53 per cent. of the whole population; while those occupied in trade and manufacture, some of them again pertaining themselves to agriculture, only amounted to 24 per cent. It may be mentioned however that this proportion is diminished, and that the number represented in 1851 by 53 per cent. stood as high in 1841 as 64 per cent. But it cannot be doubted that various occupations are advantageous to the full development of the talents and faculties of an advancing people. In sight of this noble harbour and those beautiful waters, I need not remind you that it is not one branch of industry or one kind of element which should engross the industry and enterprise of an alert and quick-witted race. Our business however to-night is specially connected with agriculture. The crops and produce of any country must depend mainly upon her soil, position, and climate; not but that the law of the market, as well as the law of the seasons, will have a considerable influence upon the degree in which it may be advantageous to grow one kind of production over another, often sometimes at greater cost or under greater comparative difficulties. Now, with reference to the climate of Ireland, perhaps some of you may remember a very beautiful passage in which the late lamented Lord Macaulay speaks of the unrivalled beauty of the scenery in the neighbouring county of Kerry. He says, in his history—"The south-western district of Kerry is now well known as the most beautiful tract in the British isles. The beauties of that country, indeed, are too often hidden in the mist and rain which the west winds bring up from a boundless ocean; but on the rare days when the sun shines out in all his glory, the landscape has a freshness and warmth of colouring seldom found in our latitude. The Myrtle loves the soil, the Arbutus thrives better than even on the sunny shore of Calabria, the turf is of a livelier hue than elsewhere, the hills glow with a richer purple, the varnish of the Holly and Ivy is more glossy, and berries of a brighter red peep through foliage of a brighter green." Those laws of moisture operate upon a wider area than upon the gleaming lakes and fairy shores of Killarney. The heat of the land of Europe exceeding that of the ocean through a great portion of the year, draws towards it the western sea breeze; and the atmosphere, thus charged with humidity, breaks upon the surface of Ireland, which through more than three-quarters of its extent, consisting mainly of limestone, does not rise above 500 feet over the surface of the sea, and yet it is fringed by mountains ready to condense the vapour suspended in the air, which necessarily produces a large allowance of rain, without great mixtures of extreme heat and cold. Here we find in the soil and the climate the conditions best suited for pasture—a pasture frequently of too rich a kind to be good for several species of sheep, which (I say it in the face of the splendid show of sheep in the show-yard hard by) will often be found to browse better upon such hilly uplands as Scotland abounds in. Hence it appears that cattle, above all things, seem to be rendered, by the conditions of soil and climate, the most appropriate stock for Ireland; and the laws of the market to which I have before adverted co-operate in recommending this source of supply. Corn, you all know, can be brought from one country to another from a great distance at comparatively small freights. It is not so with cattle. Hence the great hives of industry in England and Scotland across the channel can draw their frequent supplies of corn from more southern and drier climates, but they must have a constant dependance upon Ireland for an abundant supply of meat. Now, the precise test of a very few figures will be found to confirm these general remarks.

In the year 1859—I compare Scotland and Ireland—the number of head of cattle in Scotland was 974,437; in Ireland they were 3,630,954. This shows the immense preponderance of cattle. With sheep, as I have said before, it is the reverse. Scotland produces 5,683,068 sheep; Ireland only 3,452,952; but it appears that, whether for cattle or for sheep, nearly one half of the whole surface of Ireland is devoted to pasture. Now, it is obvious that with this immense amount of your capital vested in the production of live stock, too much caution and vigilance cannot be taken in providing against the recurrence of occasional bad seasons, such as that, in a great measure, through which we have lately passed, and which I fear will be found to have inflicted very serious injury, especially upon the small class of farmers. Now, the moral of what I am now drawing your attention to is this—that a country ought not to be covered with stock merely according to the measure of the food which may naturally be produced in one or two very favourable seasons. For instance, you ought not to calculate on the abundance of one year very favourable to the growth of hay at the risk of its being succeeded by another year, which may prove to be very short in the hay crop, whether from drought or over much rain. To show how difficult it is to calculate upon the same sort of seasons, I may just mention that in 1859 the rain fall in May was less than the third of the average of that month; in June it was below the average; whereas in the present year, 1860, the rain fall in May was five times as much as the average, and in June more than twice as much. Hence arises the necessity for those who give their attention to the production and rearing of stock of being always provided with a sufficient supply of green crops, and with due provision for stall-feeding. Arthur Young, who wrote upon the agriculture of the United Kingdom and foreign countries in 1776, said he had seen four men in a field hoeing Turnips in Ireland, and it gave him as much pleasure as if he had seen four emperors. Now, we are very much in advance of that era; but still it is very essential to note that the growth of Turnips and of other green crops does not seem to be increasing as much as it ought. In 1859 there were 22,000 fewer acres of Turnips and 130,000 of Mangels than in the preceding year. Vetches, Cabbage, and Carrots showed a proportionate diminution. Now, this was but scant provision for the very cold and unfavourable winter and spring through which we have just passed; and I think it cannot be too much inculcated on all who have the interests of Irish agriculture and of Irish stock at heart, to pay due attention to the encouragement of Turnips and green crops; for I fear it will be found when the annual returns of the Registrar-General shall have been made up that serious loss will have been sustained in those particulars. The fine old Irish crop—Oats, which was at one time considered the staple of Ireland, still maintains its old pre-eminence, it being still the largest tilled crop in Ireland; Potatoes holding second place. It is satisfactory to know that the large extent of Potatoes, which used to be grown in much the greatest proportion upon very small and inadequate holdings, is now generally grown by farmers who can better sustain the loss to which that very delicate crop is subject. With respect more especially to the agriculture of the county Cork, in which we are now met together, I am happy to find that there is reason to congratulate the inhabitants of this large and important county upon the general results of the agricultural returns. Within 20 years there has been an increase in the county Cork of 100,000 acres of land producing food crops of one kind or another. The corn crops have diminished since 1847 by 55,000 acres, but the green crops have increased by above 70,000 acres. Horses and sheep have slightly increased, pigs have somewhat decreased; but cattle, to which I call your attention, as being the most appropriate stock for Ireland at large—in the county Cork, within 20 years, cattle have more than doubled. Twenty years ago there were 152,000, now there are 333,000 head; and the estimated value of the whole live stock—taking it at prices estimated in 1847, which would be an inadequate way of measuring, because quality as well as quantity has improved since. The value has increased above a million. It would be unnatural to speak of agricultural statistics in the county and city of Cork without one word about butter. I find that the number of firkins of butter exported as short a time back as 1847 amounted to 253,000, in 1858 they amounted to 420,000, or nearly double, and the exported butter amounts in annual value to about a million of money.

With reference to the general concerns of Ireland, I feel that I am justified in speaking to you, upon the whole, in tones of congratulation and hopefulness. The number of persons relieved by the poor rate in Ireland—I do not assume this as an absolute measure of the number needing relief, but I do assume it as a pretty accurate return of the wholly destitute—the number of persons relieved in Ireland form only 1 per cent. of the whole of the population. In England they form 4½ per cent. In Scotland 4 per cent. The expenditure for the relief of the poor in England on the whole population is 6*s.* per head. In Scotland it is 4*s.* In Ireland it is 1*s.* 6*d.* Then, with respect to those mud cabins which were formerly the great opprobrium of the country, and which excited the censure and condemnation of all travellers, and also the regret of all those public-spirited inhabitants who mourned over a state of things which they were not enabled, at all events at once, to relieve—the mud cabins of Ireland amounted in 1841, not 20 years ago, to 491,000; they have now diminished to 125,000. The number of emigrants, which had been gradually decreasing for some years, has somewhat increased in the last and present years, and they are frequently drawn now from a superior class in life to those who formed the bulk of former emigrations. They now often comprise many young people of both sexes who have been comparatively well educated, and hope to find in a less crowded community a better market for their industry and a more adequate demand for their natural and acquired intelligence. But I conceive that this is not a symptom, with whatever immediate and local inconvenience it may be attended, at which, viewed at large, we ought to repine. The success of those who go out will prove a stimulus both to those who are induced to follow them beneath other skies, and also to those who cling to their native soil and to their accustomed homes. Wages in Ireland incline to look up. This is a most hopeful and agreeable sign of the times; they have generally and considerably improved, and frequently now rate three times as much as what they were when many of us were young. Education has been much more widely extended, and is improved both in quantity and quality; and we can gather from official returns, from the addresses and charges of judges, and from the experience of every one of you at your own doors, that with increasing knowledge we have decreasing crime. I do not pretend to say, my lords and gentlemen, that there are no drawbacks to this improving picture—no scattered clouds amidst these brightening skies; but I do tell all the ill-wishers to the country's progress, and all the disturbers of the country's peace, that we have better hopes and better omens.

Farm Memoranda.

(*Concluded from* p. 724.)

Reclaimed Land in Selkirkshire.—No. 3 was let to its present occupant in 1849. At that time it was, with the exception of a few small fields, all pastoral, and contained upwards of 1000 acres of mixed Heaths and Grasses. During the occupancy of the present tenant nearly 400 acres have been reclaimed and enclosed. The greater portion of the soil on the farm was, previous to its being brought under tillage, wet and stony, therefore a large expenditure was incurred in reclaiming it. The land is chiefly of a moorish character, and yields in its natural state only inferior Grasses. One part of the farm is especially worthy of notice. This was, before being reclaimed, a plain moor, covered with the coarsest Grasses, and as a run for sheep was comparatively valueless: when turned up by the plough, the soil was seen to consist of a thin layer of sand, interposing a moorish retentive subsoil, and a shallow surface of a mossy character. These varieties of soil, when thoroughly mixed and limed, produce for several years excellent crops of Oats and Turnips. The largest crop of Oats I witnessed last season was in a field on this moor. The yield would not be short of 66 bushels per imperial acre. The produce of this farm has also greatly increased. Previous to the occupancy of the present tenant, it maintained only a regular stock of 700 Cheviot sheep, and 10 store cattle; now it maintains a regular stock of as many Cheviot sheep, besides 200 half Leicesters; produces Turnips which fatten 30 head of cattle, and several scores of sheep, and winters 100 store cattle. The altitude of the cultivated land on the farm varies from 700 to 950 feet.

No. 4.—The altitude of the improved land on this farm varies from 700 to 1100 feet. The highest cultivated field was cropped with Turnips, and sown out with Grasses for permanent pasture, without a cereal crop. Notwithstanding the high elevation of this farm, it has undergone great improvements. During the currency of the present lease, nearly 300 acres have been reclaimed — ploughed, trenched, drained, limed and enclosed; excellent roads have been made to its several fields, and although its slopes are steep and stony, yet the whole management of the farm is so excellent that it has quite the appearance of a low-lying farm. Previous to the occupancy of the present tenant, the farm—which contains from 1200 to 1400 acres—was almost wholly pastoral, and presented the most dreary portion of a dreary and infertile district. Now a large stackyard may be annually seen near the now commodious steading, while the stock of cattle and sheep it maintains has greatly increased, and is likewise greatly improved.

No. 5 was let to the present tenant in 1853, and contains 700 acres; nearly 300 acres were under tillage during the previous lease, and regularly cropped. The greater portion of this area, however, was considerably out of order for want of drainage, although it produced fair cereal crops. The present tenant has already closely drained the whole farm, and added 300 acres to its cultivated area. This newly-reclaimed portion has likewise been enclosed and limed by the present tenant, and is producing most luxuriant crops. The cereal crops it produced last year were, on the whole, the bulkiest I saw in any district in Scotland, while one of its fields of Turnips (of crop '58) yielded 30 tons per imperial acre. The soil on this farm is rich in vegetable matter, mixed with clay, and is of better quality than that of any of the other farms which I have enumerated. The increase of the stock and produce of the farm corresponds with its improvements.

No. 6. The present tenant of this farm entered upon an improving lease in 1847. It then contained 250 arable and 550 pastoral acres. The arable land occupied the lowest parts of the farm, and the pastoral land rose somewhat abruptly from 600 to nearly 1300 feet. During the present lease one half of the pastoral hill has been reclaimed and enclosed. From the nature of the soil, the different branches of improvements were necessarily very expensive, as the large stones it contained not only impeded drainage operations, but were in some spots so plentiful that the expensive operation of hand-trenching was requisite. Draining was effected by government money, which has proved a wise outlay and remunerative to the tenant, as the farm is now yielding very large returns from its varied products.

No. 7, eight years ago, consisted of 150 arable acres, and 1850 pastoral; since that period the arable area has been extended to 500 acres, and if the tenant continues improving at his present ratio, the arable area on this extensive farm will preponderate. The improvements are wholly effected by the tenant.

I might go on in a similar strain to No. 20, and show similar improvements and similar results to those I have described. I might tell of the produce of No. 8 having been recently quadrupled; of the stock of sheep on No. 9 having through the reclamation of land been improved from inferior Cheviots to the best of Leicesters; of the coarse and infertile Grasses of No. 10 having been supplanted by the richest and most luxuriant pastures; of excellent Turnips having been grown last year on No. 11 at an elevation of 1100 feet; and of an arable farm of 600 acres, contiguous with those, upon which are annually fattened from 60 to 70 cattle of the finest quality, and a great number of sheep, and where the regular herd of breeding ewes has been recently doubled in number, through the improved manurial condition of the soil, in consequence of a sum equal to the rental having been annually expended on artificial food. But as this would extend my remarks beyond the limits which I have assigned to myself, I shall only say that on 20 farms lying contiguously, nearly 6000 acres have been recently reclaimed. *Mr. Sanderson on the Resources of Reclaimable Land.* Effingham Wilson, Royal Exchange.

Notices to Correspondents.

Barley: *Correspondent.* We have received five ears of a two-rowed, four-rowed, and six-rowed Barley; but have unfortunately mislaid the inquiry relating to them.

Implement Awards at Pontefract: *R.* We add here the full list of awards for Implements at Pomfret. For the best application of steam power to the cultivation of the soil, &c.

to Mr. J. Fowler, jun., Cornhill, London. The second prize was not awarded. For the best grass mower, 10*l.*, to Mr. W. Cranston, London, for Mr. Wood's American machine; 2nd ditto 5*l.* to Mr. Clay for Messrs. Burgess and Key's machine. For the best hay making machine, 10*l.* to Messrs. Ashby and Co., Stamford. For the best horse rake, 5*l.* to Mr. J. Coultas, jun. Mr. Bentall, 5*l.* for root pulper; the Trustees of Mr. W. Crosskill, 10*l.*, for waggon; Busby Agricultural Implement Company, 10*l.* for cart; Mr. James Coultas, 5*l.*, for corn drill with artificial manure, and 5*l.* for small seed drill; Mr. J. Barker, 5*l.*, for two ridge drill for Turnip or Mangel seed; Mr. W. Atkinson, 5*l.* for water drill; Messrs. R. and J. Reeves, 5*l.*, for manure distributor; Messrs. Maggs and Hindley, 1*l.*, for straw thatching machine; Messrs. Puckering and Houlgate, 1*l.* for waggonette and other carriages; Mr. R. Mason, 1*l.* for weighing machines; Mr. W. Pike, 2*l.*, for cylinder pump; Messrs. Mitton and Co., 1*l.*, for improved revolving corn screen, and 1*l.*, for meal safes; Mr. Sawney, 2*l.* for Boby's improved screen; Mr. T. L. Hancock, 1*l.*, for butter machine; Mr. H. Inman, 1*l.* for garden house and rustic seats; Mr. T. Radford, 1*l.*, for washing machine; St. Pancras Works, 2*l.* for stable fittings; Messrs. H. J. Morton and Co., 1*l.*, for strained wire fencing; Mr. F. Morton, 2*l.*, for ditto and fittings; Mr. Barstow, 10*s.*, for sheep shears and bull rings; and the silver medal to Messrs. Bradley and Craven, for brick moulding and pressing machine.

IMPORTS IN THE SIX MONTHS ENDING JUNE 30, 1859 AND 1860. *R.*

Articles.	Quantities imported. 1859	1860
1ST, ARTICLES FREE OF DUTY.		
Animals, living—Oxen, bulls, & cows. No.	14,453	17,193
Calves	7,619	7,965
Sheep and lambs	57,830	76,415
Swine and hogs	1,119	2,492
Bones, burnt or not, or as animal charcoal tons	30,496	24,508
Flax (dressed and undressed), and tow or codilla of Flax—		
From Russia and Prussia	256,843	253,019
Holland	51,237	99,971
Belgium	49,895	75,707
Other countries	57,885	31,301
Total	415,860	459,998
Guano	39,750	67,448
Hemp (dressed and undressed) and Tow cwts.	260,888	123,275
Jute and other vegetable substances of the nature of hemp tons	481,457	370,040
Oil seed cakes cwts.	85,277	48,660
Potatoes	442,348	76,142
Provisions—Bacon and hams	54,001	191,562
Beef, salt	121,980	178,656
Pork, salt	66,142	110,076
Lard	41,399	141,801
Saltpetre	168,186	147,165
Cubic nitre	218,673	453,578
Seeds—Clover	71,765	180,403
Flaxseed and Linseed qrs.	449,399	497,024
Rape	151,054	89,675
Wool, sheep and lambs'—From Hanse Towns and other parts of Europe lbs.	12,811,693	12,839,460
British Possessions in South Africa	4,855,227	6,326,037
British East Indies	3,802,764	7,228,115
Australia	27,640,265	33 509,520
Other countries	4,691,039	5,374,485
Total	53,770,988	65,277,617
Wool, Alpaca and the Llama tribe	1,361,278	1,283,724
Yeast, dried	39,479	36,596
2D, ARTICLES PAYING DUTY.		
Corn—Wheat—From Russia qrs.	259,610	272,006
Prussia	290,724	434,252
Denmark	128,277	155,056
Mecklenburg	79,883	110,914
Hanse Towns	88,924	63,908
France	843,888	94,679
Turkey and Wallachia and Moldavia	37,667	74,467
Egypt	340,580	34,651
United States	3,228	103,852
Other countries	176,005	50,647
Total	2,203,736	1,394,432
Barley	788,642	1,032,812
Oats	567,008	832,180
Peas	34,638	97,929
Beans	138,843	197,675
Indian Corn, or Maize	419,788	742,125
Wheatmeal and flour—		
From Hanse Towns cwts.	120,479	152,190
France	2,133,792	874,429
United States	23,209	319,387
Other countries	40,722	83,530
Total	2,318,202	1,429,536
Indian Corn-meal	1,370	2,182
Hops	1,328	491
Provisions—Butter	196,206	321,404
Cheese	144,413	165,015
Eggs No.	89,158,600	93,183,600

EXPORTS IN THE SIX MONTHS ENDED JUNE 30, 1859 AND 1860.

	1859	1860
Cheese cwts.	4,101	3,040
Do., home made	14,861	13,234
Corn—Wheat qrs.	8,448	2,902
Wheatmeal or flour cwts.	8,840	4,117
Guano tons	8,246	16,007
Hops cwts.	202	56
Saltpetre	56,461	12,511
Seed—Flax and Linseed qrs.	54,061	84,938
Rape	79,192	70,678
Wool, sheep and lambs', produce of British Possessions—To Hanse Towns lbs.	262,542	220,925
Belgium	1,936,214	2,308,467
France	5,798,692	7,953,858
Other countries	935,432	1,458,799
Sheep and lambs', Foreign—To Hanse Towns	550,043	102,390
Belgium	707,624	715,431
France	182,139	115,395
Other countries	3,906,587	1,170,153
Total sheep and lambs' wool	14,279,273	14,045,419
Alpaca and the Llama tribe	66,092	21,365

WHEAT: *P M.* It is probably the so-called April Wheat, and an awned spring Wheat.

WARNER'S PATENT VIBRATING STANDARD PUMPS.

PATENT CAST-IRON PUMPS fitted with J. W. & SON'S Patent Buckets and Suckers, which cannot clog in action, for Farms, Cottages, and Wells not exceeding 25 feet.

Diameter of Barrel.	Height.		£.	s.	d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1	1	0
2½ ,,	long 3 ,, 3 ,,	gutta percha	1	10	0
3 ,,	ditto 3 ,, 6 ,,	or cast iron	2	4	0
3½ ,,	ditto 3 ,, 6 ,,	flanged pipe	2	9	0
4 ,,	ditto 3 ,, 6 ,,	as required.	2	18	0
2½ ,,	short, with 15 feet of Lead Pipe attached, ready for fixing		2	0	0
2½ in.	long ditto ditto	ditto	2	14	0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

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for Farm Buildings and other Roofs; the cheapest, most durable, and neatest Roofing in use; also Spouting at 10½*d.* per yard.

WIRE STRAND CABLE FENCING.

(formed of Twisted Wires like a rope or cable), the strongest, cheapest, and neatest fence in use, will resist the largest cattle, and will not bend or get out of form by trespassing upon or over. Price, with five lines of the Galvanised Strand, iron main posts, and pronged Standards, 1*s.* 2½*d.* per yard.

This fence is far cheaper than posts and rails, or any kind of iron fencing; and possesses four times the strength of solid bars. Will not rust nor corrode. Upwards of 1200 miles of this Fencing supplied.

GALVANISED GAME AND POULTRY NETTING.

Galvanised, 24 ins. wide 2-inch mesh, 5½*d.*, 7½*d.*, and 9½*d.* per yard.

Galvanised, 24 ins. wide, 3-inch mesh, 4*d.*, 5*d.*, and 7*d.* per yard. The Netting made any width, and with openings of any size.

GALVANISED IRON CHAIN CAMP STOOLS & CHAIRS, POULTRY FOUNTAINS & FEEDERS, PRONGED DAHLIA RODS AND ROSE STAKES, &c.

Strong CATTLE HURDLES from 9*s.* per yard.

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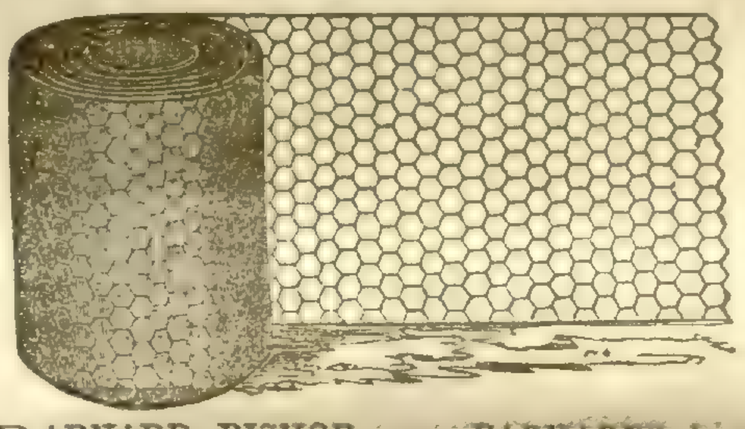
Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 10*d.* per yard.

The same with Galvanised Wire Rope, 1*s.* per yard.

Illustrated Catalogues with prices of every variety of Wire Fencing and Wire Netting forwarded free on application.

MACHINE MADE GALVANISED WIRE NETTING.



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		Galvanised.	Japanned Iron.
2-inch mesh,	24 inches wide	5*d.* per yd.	4*d.* per yd.
2-inch ,,	strong do.	6 ,,	4½ ,,
2-inch ,,	intermediate, do.	7 ,,	5½ ,,
2-inch ,,	extra strong, do.	9½ ,,	7½ ,,
1⅝-inch ,,	24 inches wide	5½ ,,	4½ ,,
1⅝-inch ,,	strong, do.	6½ ,,	5½ ,,
1⅝-inch ,,	intermediate, do.	7½ ,,	6 ,,
1⅝-inch ,,	extra strong, do.	10 ,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

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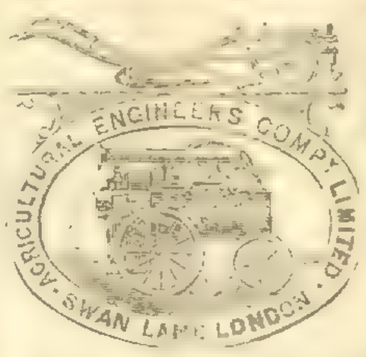

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STEAM ENGINES, THRESHING MACHINES, HORSE WORKS, MILLS, CHAFF CUTTERS, &c.

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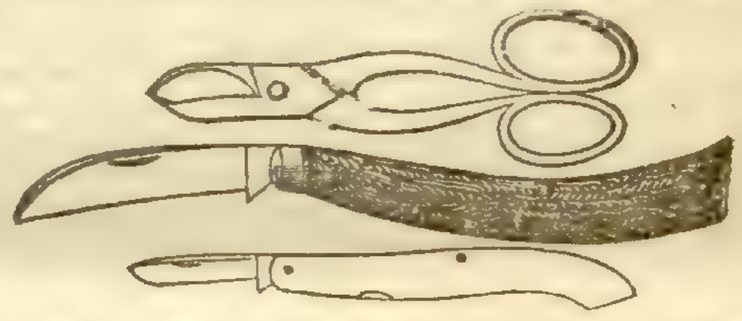

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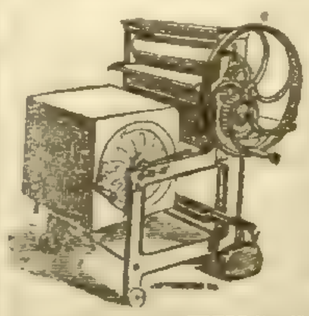
BRADFORD'S PATENT WASHING MACHINE SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations." — THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

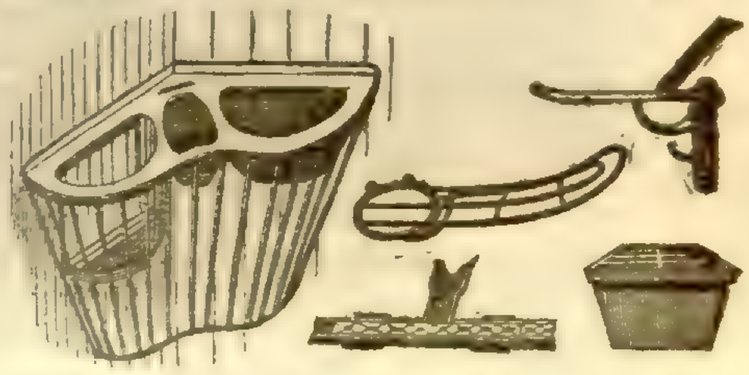
N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

COTTAM'S PATENT INVENTIONS FOR STABLE REQUISITES, awarded a Prize at the Paris Exhibition, patronised by the English and French Governments, as well as by the principal Nobility, Gentry, and Hunting Establishments in the kingdom. In use at her Majesty's Stables, Aldershott and Balmoral.

COTTAM AND COMPANY, Winsley Street, W., are the original inventors of the PATENT ENAMELLED MANGER, Water Trough, and Wrought Iron Rack, united to an iron top-plate, and forming one complete and useful fixture, having COTTAM'S patent noiseless halter guide and collar rein attached, which is taken to the back of the manger, and works with ease and reedom up or down the guide bar.

COTTAM'S NEW PATENT SEED-BOX, an important addition to the above fittings, being simple in construction, light, and durable, promotes cleanliness, and is economical in its results.

COTTAM'S PATENT PERMANENT ATTACHED DROP COVER, for the above, is a most essential addition to their fittings; it is never in the way; can be placed and replaced in an instant; while its cheapness, simplicity, and utility in keeping the contents of the troughs clean, and regulating the quantity to be taken, is quite sufficient to insure its use.



COTTAM'S PATENT SADDLE and HARNESS BRACKET combined, can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

COTTAM'S IMPROVED WROUGHT IRON VENTILATING BRACKET preserves the shape and allows a free admission of air to the under parts of the saddle.

COTTAM'S IMPROVED SURFACE CUTTER, with perforated moveable cover, the use of which prevents accidents, and can be easily cleaned out.

COTTAM'S CAST-IRON SANITARY TRAP, from its improved construction, gives a full water passage, and does not allow any smell to ascend from the drain.

PATENT LOOSE-BOX FITTINGS, and every article for the harness-room and stable, kept in stock, plain, galvanised, and enamelled. Iron gates, fencing, hurdles, &c.

The New Illustrated Catalogue and Estimates, gratis, upon application to COTTAM and COMPANY, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon).

PRIZE MEDAL, PARIS EXHIBITION 1855.

METCALFE, BINGLEY, AND CO.'S New Pattern and Penetrating Tooth Brushes, Penetrating unbleached Hair Brushes, Improved Flesh and Clothes Brushes, and genuine Smyrna Sponges; and every description of Brush, Comb, and Perfumery for the Toilet. The Tooth Brushes search thoroughly between the divisions of the Teeth and clean them most effectually—the hairs never come loose. M., B., & Co.'s new and delicious perfumes the Fairy Bouquet and the Oxford and Cambridge Bouquet, in bottles 2*s.*, 3*s.* 6*d.*, and 5*s.* METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box.—Sole Establishment, 130B and 131, Oxford Street, 2d and 3d doors west from Holles Street, London, W.

JOHN WEEKS & COMPANY,

SOLE INVENTORS AND MANUFACTURERS OF THE

ONE-BOILER SYSTEM OF HEATING BY HOT WATER.

Mark the following STATISTICS:—

THE repeated extensions of Apparatus where WEEKS' "ONE BOILER" is adopted render it truly difficult to define the limitation of its incredible power. The wonder-working Apparatus of Messrs. E. G. Henderson & Son, which the Nobility and Gentry are specially invited to inspect, has been so repeatedly augmented that the present Boiler is now most efficiently Heating the enormous length of houses as follows:—1 range 200 feet long, 2 ranges 160 feet long, 2 ranges 200 feet long, 4 ranges 600 feet long, 1 range 120 feet long, 2 ranges 80 feet long, 1 range 30 feet long, 1 range 50 feet long, and 4 ranges 280 feet long, making a total length of Hothouses and Pits, with sundry Warehouses, Seed Shops, &c., exceeding a quarter of a mile, and the total length of Pipe for Heating same exceeds 7900 feet. Also at the undermentioned Establishments:—

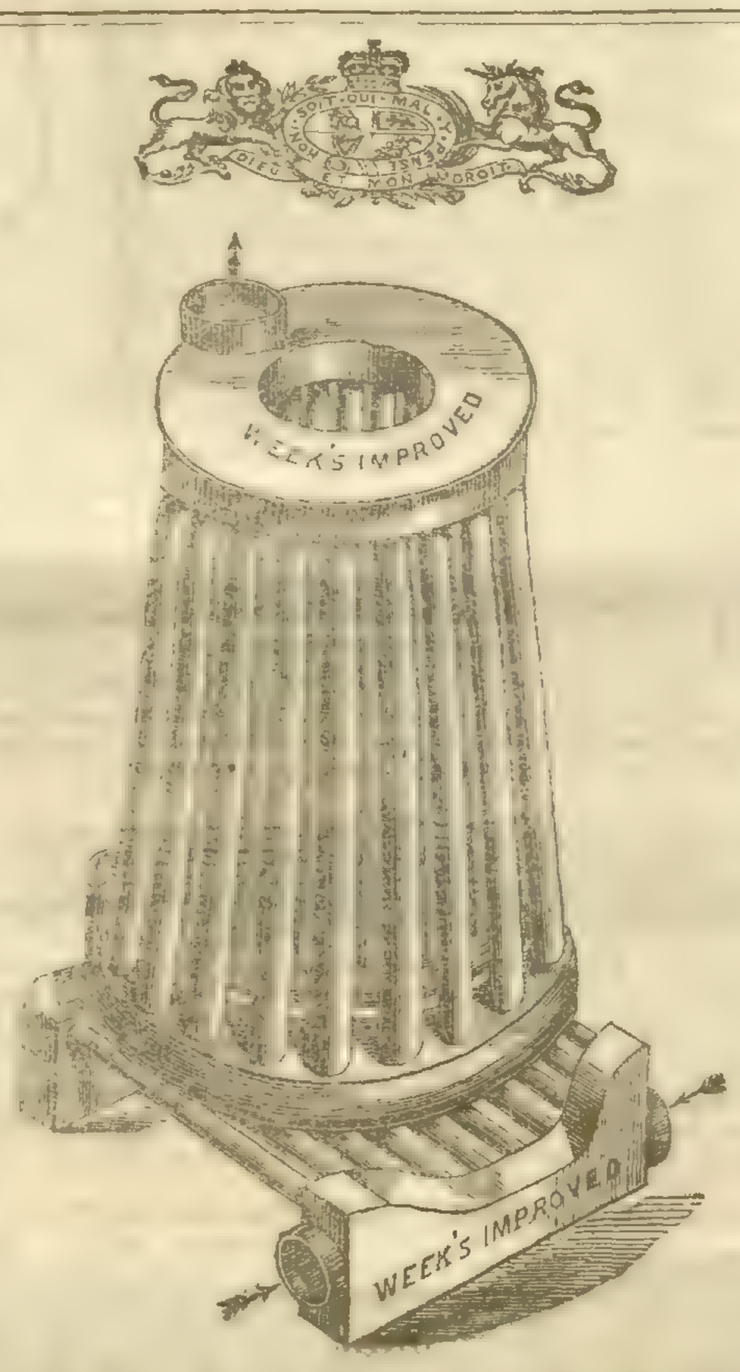
Messrs. F. & A. Smith, Dulwich Nursery	10,000
Mrs. Woodroffe, Harrow Road, Paddington	4,000
Mons. Louis Van Houtte, Ghent, Belgium	13,000
T. A. Smith, Esq, Tedworth, Wilts	5,100
W. Pearson, Esq., East Bergholt, Suffolk	4,500
Josiah Spode, Esq., Rugeley, Staffordshire	2,300
W. Leaf, Esq., Norwood	1,980
C. Paget, Esq., M.P., Ruddington, Notts	1,850
W. C. Boden, Esq., Ruddington, Notts..	3,500

And many others equal in extent; also Mansions, Churches, Chapels, Schools, Drying Rooms, Warehouses, a List of which may be had on application.

J. W. & Co. also manufacture smaller and less expensive Boilers upon the same principle as the ONE-BOILER SYSTEM, ranging in size from Nos. 1 to 6, at prices from 4*l.* and upwards.

J. WEEKS & COMPANY have also the honour of stating that their Fruit Forcing Show Establishment, Chelsea, contains all the most modern improvements of the day in the science of Horticultural Building, Ventilation, and Decoration. Numerous structures of great variety are there erected to facilitate the selection of the Nobility and Gentry who may kindly honour them with their much esteemed patronage.

In many of the above structures is a grand display of splendid Forced Fruits, consisting of PINES, GRAPES, PEACHES, and other delicacies, fully proving the great advantages derived from superior construction and efficient ventilation.



Mark the following TESTIMONIALS:—

From Professor LINDLEY, Ph.D., F.R.S., F.L.S., *Acton Green.*

"SIR,—I accept your tender, dated this day, for fixing your Hot-water Apparatus for me at my residence here. I may add, that everything you have hitherto done, either for myself, or others upon my recommendation, has been so entirely satisfactory in all respects, that I look with perfect confidence to the efficiency of the arrangements now about to be effected."

From Messrs. E. G. HENDERSON & SON, *Wellington Nursery, St. John's Wood.*

"DEAR SIR,—We have great pleasure in testifying to the extreme efficaciousness and economy of the Hot-water Apparatus erected by you in our Houses during the year 1852, and should recommend the same to the notice of any one requiring such."

From CHARLES PAGET, Esq., M.P., *Ruddington, near Nottingham*

"GENTLEMEN,—Your Hot-water Apparatus is working very satisfactorily. Although the Boiler is placed 200 feet from my dwelling-house, it effectually warms the hall and some of the principal apartments, as well as a Conservatory, two Vineries, and a Forcing House. Its consumption of coal is moderate, and economy of labour is very great. It is always quite master of its work."

From Mr. JOHN SANDERS, *Tedworth, Gardener to* T. ASSHETON SMITH, Esq., *Author of the well-known Book on the Vine.*

[*Extract from a letter in the* Cottage Gardener, *March 13, 1857.*]

"I have had ample opportunity of practically proving the value and capabilities of WEEKS' One-Boiler System, and I unhesitatingly admit that, throughout my experience in the business, I have never met with any Boiler that will approach Messrs. WEEKS & Co.'s in all its various merits. Strongly as it had been recommended to me, it considerably exceeds my expectations, now that I see it in full operation. During the late very severe weather we have been enabled to maintain any degree of heat we required in either or all our 14 houses, containing upwards of 4000 feet of 4-inch pipe, with a most economical supply of fuel and a very inconsiderable amount of labour and attention."

JOHN WEEKS & COMPANY,

Horticultural Builders, Hot-water Apparatus Manufacturers, Engineers, and Ironfounders,

KING'S ROAD, CHELSEA, S.W.

PLANS, ESTIMATES, AND PAMPHLETS FREE ON APPLICATION.

PATENT LAWN MOWING AND ROLLING MACHINES.

30-inch wide PONY POWER MACHINE, made also of Smaller Sizes for Hand Power.

B. SAMUELSON'S LAWN MOWERS,

WITH BOYD'S PATENT IMPROVEMENTS,

CAN BE USED IN WET AS WELL AS DRY WEATHER.

LAST YEAR'S SALES WERE NEARLY A THOUSAND, EVERY ONE OF WHICH GAVE THE GREATEST SATISFACTION

TESTIMONIALS expressing such satisfaction have been kindly sent by some hundreds of the purchasers to the Manufacturer, who will be glad to forward a copy with description and prices of Machines post free on receipt of application.

London Warehouse: 76, Cannon Street, West, E.C. Manufactory: Britannia Works, Banbury.

TO BE HAD OF DEANE & CO., LONDON BRIDGE, E.C., AND ALL IRONMONGERS.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

SMITH'S STEAM CULTIVATOR.—Steam Cultivators are now known to be invaluable for Autumn cultivation and for breaking up ley ground on strong land in the summer

J. & F. HOWARD have now made more than 80 sets of this apparatus, and having a number ordered for delivery between now and the close of harvest, they would recommend those who intend to avail themselves of Steam Cultivation at the most useful period, to give their orders without delay.

TO MILLERS.

BOVILL'S PATENT FOR GRINDING CORN.—The great advantages effected by Bovill's Patent for grinding Corn are acknowledged by all who have used the invention. The saving to the Miller is very great, and all dust is avoided, The registered Mortgagees are the only persons to grant Licenses, which they now offer with the concurrence of all other Claimants.—For terms, apply to Mr. G. W SWAYNE, 19, Abchurch Lane, London, E.C., Agent for the Mortgagees.

PARKES' STEEL DIGGING FORKS.

BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

HENRY J. MORTON AND CO.,
2, Basinghall Buildings, Leeds.

GALVANISED IRON WATER CISTERNS

for Cottage Houses, &c., to contain 50 gallons, 25*s.*; 80 gallons, 30*s.* each; and 140 gallons, 36*s.*, and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

GALVANISED IRON PUMPS

for Liquid Manure or Domestic Use, 3 inches diameter, 30*s.* and 32*s.* 6*d.* each; Tail Pipe for same at from 10*d.* per foot.

GALVANISED IRON SWING WATER BARROWS

for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32*s.* 6*d.* each.

TO AMATEUR GARDENERS, NURSERYMEN, AGRICULTURISTS, ETC.

VULCANIZED INDIA RUBBER TUBING AND GUTTA PERCHA TUBING FOR WATERING GARDENS.—Brass Hand-branches with Stop-cocks and Roses, and every description of Garden Tubing Fittings, sold wholesale and retail by W. R. WOOD, 94, Goswell Road, near the Angel, Islington, London, E.C. Price Lists may be had on application. Please to notice the address, 94, Goswell Road London, E.C.

N.B. Speaking Tubes fitted up.

GUTTA PERCHA TUBING FOR WATERING GARDENS

THE GUTTA PERCHA COMPANY have the pleasure to acknowledge the receipt of the following

Testimonial from Mr. J. FARRAH, *Gr. to* BOSWELL MIDDLETON JALLAND, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider this tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

Manufactured by the Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their Wholesale Dealers in town and country.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and — Collier, Esq., of Dartford.

PROTECTION FROM THE COLD WINDS & MORNING FROSTS

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 6*d.* per yard run.
Four yards wide	3*s.* per yard.

An improved make, 3 yards wide, 2*s.* 6*d.* per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 4*d.* per yard run

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

"East Keal, Spilsby, Lincolnshire, April 30, 1858.

"Sir,—I will thank you to send 12 yards (at 1*s.* 8*d.* per yard) of your 'Frigi Domo,' from King's Cross Station, to be left at the Firsby Station, Spilsby, Lincolnshire. After using it (since I last got it of you some four years ago). I affirm it to be, incomparably, the best and most lasting thing of the kind ever hitherto manufactured.—I am, yours, &c., Rev. J SPENCE."

FLEMING'S SALTING MACHINE FOR DESTROYING WEEDS ON GRAVEL WALKS, &c.—This most useful Machine has given the greatest satisfaction wherever it has been introduced, and it is the only effectual means of keeping Drives and Walks completely clear of Weeds.

Extract from Article "Trentham," in *Gardeners' Chronicle* of January 22, 1859.

"And I would observe in passing from these grounds that the whole of the Grass and Gravel are kept in the most perfect order by the aid of machinery; the former by a Horse Machine wherever it can be worked, a small hand instrument being used in places of difficult access; the latter is kept in order by a Salting Machine, the invention of Mr. Fleming, and judging from the beautiful condition of the Gravel in every direction, I should say that it was altogether most efficient."

The Mowing Machines here referred to are SHANKS'.

From *The Field* of April 2, 1859.

"The Salting Machine will effectually destroy the Weeds on Gravel Walks and Drives."

Testimonials with full particulars and prices may be had on application to ALEXANDER SHANKS & SON, Dens Iron Works. Arbroath, Patentees of Improved Mowing, Rolling, Collecting, and Delivering Machine for Lawns, Hot-Water Apparatus Manufacturers, &c.

GLASS WAREHOUSE.—ESTABLISHED 1750.

THOMAS MILLINGTON,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

Reduced Tariff for Horticulture, Pictures, and Dwellings.

ORCHARD-HOUSE SIZES.

In. by In.		16 oz.	21 oz.
20 .. 12	Common, per 100 feet,	13*s.* 6*d.*	18*s.*
20 .. 13	Common, per 100 feet,	13*s.* 6*d.*	18*s.*
20 .. 14	Super ,,	16*s.*	23*s.*
20 .. 15	Super ,,	16*s.*	23*s.*

SMALL SQUARES.

Supplied to Mr. Rivers and many Others.

In. by In.	In. by In.	Per 100 feet.	Per foot.
6 .. 4	8 .. 6	Common	1½*d.*
6½ .. 4½	8½ .. 6½	11*s.* 6*d.*	
7 .. 5	9 .. 7	Super.	1¾*d.*
7½ .. 5½	9½ .. 7½	12*s.* 6*d.*	

Squares in 100 and 200 Feet Boxes.

Inches by Inches.	Inches by Inches	Inches by Inches.	Inches by inches.	Inches by inches.		P. 100 feet.	P. foot.
10 .. 8	12½ .. 9½	13 .. 10	15 .. 10	13½ .. 11½	4ths.	12*s.* 6*d.*	1½*d.*
10½ .. 8½	13 .. 9	13½ .. 10½	12 .. 11		3ds.	14*s.* 3*d.*	1¾
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 . 11	2ds.	18*s.*	2¼
12 .. 9	12½ .. 10½	14½ .. 10½	13 .. 11		1sts.	21*s.* 6*d.*	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13*s.* 6*d.*	1½*d.*
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16*s.*	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19*s.* 8*d.*	2½
18 .. 11	18 .. 12	23 .. 13	24 .. 15	.. ..	1sts.	24*s.*	3
13 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 12	22 .. 14	22 .. 16	.. ..			

If less quantity than 100 feet is taken, a moderate charge made for package.

GLASS CUT TO ANY GIVEN SIZES NOT ON LIST.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2½*d.* per foot.
,, 3ds, 2½*d.*, 2¾*d.*, and 3*d.* per foot.

21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot.
,, 3ds, 3½*d.*, 4*d.*, and 4½*d.* per foot.

HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Not accountable for breakage.

GENUINE WHITE LEAD	32*s.* 0*d.* per cwt.	LINSEED OIL	2*s.* 4*d.* per gall.
ANTI-CORROSION PAINT	34 0 ,,	BOILED ,, ...	2 9
LINSEED-OIL PUTTY	8 0 ,,	TURPENTINE	3 3

BLACK, GREEN, and all other kinds of PAINTS, VARNISHES, BRUSHES, &c.

WARNER'S IMPROVED LIQUID MANURE OR GENERAL PORTABLE PUMP.

These Pumps are fitted with WARNER'S Patent Bucket and Valve, and cannot clog in action. The barrel is made of galvanised iron, not likely to corrode, and can be raised or lowered at pleasure on the stand, the legs of which fold together, and may be carried with ease by one man to tank or pond.

	£	*s.*	*d.*
Stand and Pump, with screwed tail pipe, fitted with strong brass union for suction pipe	2	15	0
If fitted with barrel of planished copper	3	17	0
Stand and Pump, with plain tail pipe, for tying on suction pipe	2	9	0
2-inch India rubber and canvas flexible suction pipe, on wires, either 10, 12, or 15 ft., per foot	0	2	5

May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, J. WARNER & SONS, 8, Crescent, Jewin St., London, E.C.

Every description of Machinery for raising Water, by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. Engravings sent on application.

FOUNTAINS IN CAST IRON, from 30*s.* each.

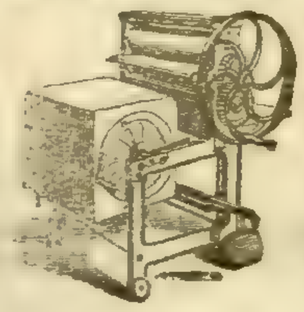
VASES, PORTABLE IRON CONSERVATORIES,
STATUES, FLOWER STANDS,
PORTABLE HEATING APPARATUS, with TRUSS'S JOINT.

DRINKING FOUNTAINS.

Please address in full, WILLIAM HOOD, Horticultural Engineer and Founder, 68, Upper Thames Street, London, E.C.

BRADFORD'S PATENT WASHING MACHINE

SIMPLICITY AND WONDERFUL EFFICIENCY.



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N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

GLASS PRESERVE JARS.—

	Without Lids.	With Lids.
3 inches diameter	0*s.* 4½*d.* ..	0*s.* 6½*d.* each.
4 ,, ,, ...	0 6 ..	0 9 ,,
5 ,, ,, ...	0 8 ..	0 11 ,,
6 ,, ,, ...	0 10 ..	1 2 ,,
7 ,, ,, ...	1 0 ..	1 4 ,,
8 ,, ,, ...	1 4 ..	1 8 ,,
9 ,, ,, ...	1 8 ..	2 2 ,,
10 ,, ,, ...	2 0 ..	2 8 ,,

Intermediate Sizes in proportion.

PROPAGATING GLASSES.

	s.	*d.*		*s.*	*d.*	
2 ins. diameter	0	3½	each	12 ins. diameter	1	9	each
3 ,, ,,	0	4½	,,	13 ,, ,,	2	0	,,
4 ,, ,,	0	5½	,,	14 ,, ,,	2	6	,,
5 ,, ,,	0	6½	,,	15 ,, ,,	3	0	,,
6 ,, ,,	0	8	,,	16 ,, ,,	3	6	,,
7 ,, ,,	0	10	,,	17 ,, ,,	4	0	,,
8 ,, ,,	1	0	,,	18 ,, ,,	5	0	,,
9 ,, ,,	1	2	,,	19 ,, ,,	6	0	,,
10 ,, ,,	1	4	,,	20 ,, ,,	7	0	,,
11 ,, ,,	1	6	,,				

JAMES PHILLIPS & CO., HORTICULTURAL GLASS MERCHANTS.

180, Bishopsgate St. Without, London, E.C.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2*d.* to 3*d.* per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 35, Soho Square, London, W.

See *Gardeners' Chronicle* of August 4.

CONSERVATORY FOR SALE, price 50*l.*, quite new; 30 feet long, 16 feet wide, span roof and ornamental. Apply to HY. FREEMAN, Mare Street, Hackney, N.E.

GREENHOUSE WANTED, SECOND HAND, about 18 or 20 feet long.—State lowest price, and where it may be seen, to A. B., Mr. Fisher's, 188, Strand, W.C

THE FINEST FRUITS IN ENGLAND.

HAYTHORN'S HEXAGON AND CHISWICK GARDEN NETS are guaranteed to protect all kinds of Fruit from Wasps, Birds, Flies, &c. They are used and recommended by all the principal Gardeners. — For testimonials, patterns, and prices, gratis, by post, please direct to Mr. HAYTHORN, Nottingham.

GALVANISED GAME AND POULTRY NETTING—By improved machinery at reduced prices. 2-inch Hexagon Mesh, 24-inch wide, light, 5*d.*; Medium, 6*d.*; Strong, 7*d.*; Extra strong, 9½*d.* per yard. Any other width, strength, or mesh, from ½ to 6 inches, at proportionate rates. Every description of Wire-work by THOS. P. HAWKINS, Manufacturer, 27, Dale End, Birmingham.

POULTRY, RABBIT, SHEEP, AND CAT FENCING. HARE OR RABBIT NETS, on Cords, for Covert Shooting, 12 mesh over, 4 feet wide, 2*d.* per yard. 18 mesh over, 6 feet wide, 3*d.* per yard. 24 mesh over, 8 feet wide, 4*d.* per yard. Each Edge Corded, ½*d.* per yard extra. Extra Stout ditto, 18 mesh wide, 4*d.* per yard, suitable for Poultry Fencing Square mesh Cricketing Net, fix its full width and length. made of stout cord, 3*d.* to 4*d.* per square yard.

NETTING FOR SHEEP FOLDS, made of Cocoa Nut Fibre; a material known to possess the most extraordinary durability when exposed to the alternations of weather. It will wear out several sets of tarred Hemp netting, and is so light that a herdsman may with ease carry 200 yards of it.

Sold in Nets of 50 and 100 yards long, 48 inches high, by the Manufacturer, W. CULLINGFORD, 1, Edmund Terrace, Ball's Pond Road, London, N.

NEW HARDY PERENNIAL.

JAMES CARTER & CO.

HAVE MUCH PLEASURE IN OFFERING

Seed of AQUILEGIA CARYOPHYLLOIDES, fl. pl.,

which has been COMMENDED by the Floral Committee of the Horticultural Society, who describe it as follows:—

"This is a very pretty double flowered variety of the common Columbine. The flowers are white, variously striped with reddish crimson, and here and there with reddish purple, producing an effective variegation. The variety was considered distinct and handsome, and was commended."

SEED SOWN DURING THE PRESENT MONTH *will produce Flowers next Spring.* Price 1s. per packet.

JAMES CARTER & CO., SEEDSMEN, 237 and 238, HIGH HOLBORN, W.C.

JAMES CARTER & CO.

BEG LEAVE TO OFFER THE FOLLOWING

CHOICE SEEDS FOR PRESENT SOWING.

		s.	d.
CARNATION, 12 choicest varieties,			
	BIZARRE, 10 seeds of each	3	0
	Do. do. FAMEUSE, do.	4	0
	Do. do. FLAKE, do.	3	6
	Do. do. YELLOW BIZARRE and SELF, do.	4	0
	Do. do. YELLOW FLAKE do.	4	0
PICOTEES, 12 choicest vars.,	WHITE GROUNDS, do.	3	0
	YELLOW GROUNDS, do.	4	0
" "	WHITE MARGINED, do.	3	6
PERPETUAL CARNATIONS,	do. FANCY, do.	3	6
	do. FLAKE, do.	3	6
" "	do. BIZARRE, do.	3	6
" PICOTEES	do. do.	3	6
CARNATION, extra fine, mixed		2	6
" PERPETUAL, do.		2	6
PICOTEE, extra fine, mixed		2	6
" PERPETUAL		2	6
HOLLYHOCK, 12 choice prize varieties		5	0
" splendid mixed		1	0
PERENNIAL PHLOX, 12 newest varieties		3	6
" finest mixed		1	0
WALLFLOWER, 12 double German varieties		2	6
" double German mixed		1	0
HEARTSEASE, extra choice		1	0
PELARGONIUM, extra choice show and fancy vars.		1	0
ANTIRRHINUM, finest mixed		0	6
PENTSTEMON, finest mixed		0	6
CALCEOLARIA, extra choice, spotted and blotched		1	0
CINERARIA, large flowered, brilliant colours, and great variety		1	0
PRIMULA, finest fringed		1	0

☞ For other Perennials for present sowing, and directions for cultivation of the same, see **CARTER'S "GARDENERS' VADE MECUM,"** which will be forwarded post free on application to

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, London, W.C.

LAWNS WITHOUT MOWING.

SPERGULA PILIFERA.

THE merits of this little Plant for the above purpose being now fully recognised, and having stood the test of six successive seasons, we have great pleasure in recommending it to the notice of our customers. Mr. Summers, its original raiser at the Crystal Palace Nursery, Sydenham, having made over to us the entire Stock of new Seed for the present season; we now offer it in packets of

6d., 1s., 2s. 6d., 5s., and 21s. Or per Ounce.

We beg to subjoin a few remarks upon the culture of Spergula, as practised by Mr. Summers, premising that seedlings sown last August and September present now a full twelvemonth's growth in advance of seed sown last spring.

INSTRUCTIONS FOR RAISING SPERGULA.

Choose an open situation for the seed bed, dig the ground in shape of a ridge (to throw off the water in winter), and make the surface firm with rake, roller, &c.; spread the seed thinly over the bed, and with a rake gently stir the surface, after which give a good watering through a fine rose. The bed should then be hooped over and shaded with a mat or piece of Tiffany doubled, the object in shading being to prevent the too rapid evaporation of moisture; indeed from the time of sowing until the plants make their appearance, the bed should not be allowed to become dry. When the plants are well above ground they should be gradually hardened, but if during the first month the weather should be warm and dry they will require attention in shading and watering. Towards the end of March following they may be either planted out to form turf in the reserve garden or put in thickly on the intended lawn. Full particulars of this final planting will be given in our New Seed Catalogue for 1861.

For further information respecting the elegant, mossy, and carpet like appearance of this plant, we beg to refer to Mr. Shirley Hibberd's notice in *Gardeners' Chronicle*, and to that of Mr. Beaton in the *Cottage Gardener*. Mr. Summers will at any time be pleased to show the capabilities of the Spergula, or give information to parties desirous of forming a lawn, upon application to him at his Nursery.

J. C. & Co. would beg leave to caution the public against purchasing seeds of various Saginas, &c. (which are only *Annuals*, large quantities of which have been offered to their notice this season, and represented as being seed of the *true* Spergula pilifera, (the seed being very similar), *but as the whole stock of* NEW *seed will pass through their hands they can warrant none other than that obtained from their Establishment.*

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

NEW SEEDS.

THE QUEEN'S SEEDSMEN,

PETER LAWSON & SON,

27, GREAT GEORGE STREET, WESTMINSTER, S.W.

ARE NOW SUPPLYING NEW SEEDS FOR AUTUMN SOWING.

The very finest qualities of TRIFOLIUM INCARNATUM, ITALIAN RYE-GRASS, SIX WEEKS STUBBLE TURNIP, ALSIKE CLOVER, DWARF BROAD-LEAVED RAPE, MUSTARD, PERMANENT GRASS SEEDS, all carefully selected, and delivered Carriage paid at moderate rates.

FRESH IMPORTED DUTCH BULBS

SUTTON AND SONS are daily expecting the arrival from Haarlem of one of the most extensive and rare Collections of

BULBOUS FLOWER ROOTS

ever imported into this country. Prices very moderate, as see List.

Royal Berkshire Seed Establishment, Reading.

SUTTON'S EARLY IMPERIAL AND LARGE DRUMHEAD CABBAGE SEED.—CABBAGE SEEDS SHOULD NOW BE SOWN for transplanting in October and in the Spring.

SUTTON & SONS have fresh Seed now ready. Also choice Cauliflower, Lettuce, Black Spanish, China, and Olive Radish Seed for Autumn Sowing.

Royal Berkshire Seed Establishment, Reading.

THE QUICKEST TURNIP KNOWN.

SUTTON'S EARLY SIX WEEKS TURNIP may be sown until the end of August with certainty of a good crop Price 1s. per lb. or 48s. per bushel, CARRIAGE FREE. Discount for cash with order 5 per cent.

Royal Berkshire Seed Establishment, Reading.

NEW GRASS SEEDS FOR PERMANENT PASTURE.

SUTTON AND SONS have a fresh stock of

PERMANENT GRASS SEEDS,

Of the most suitable kinds for laying down and for improving Pastures.

The new crops being good, prices will be reduced.

Also,

NEW ITALIAN RYE-GRASS SEED.

Royal Berks Seed Establishment, Reading.

TRIFOLIUM INCARNATUM (present price) 4d. per lb, with "Practical Hints on its Successful Cultivation," showing how 2 to 3 tons per acre of the most nutritious Hay may be secured, the advantages of sowing it where broad Clover is thin, and its superiority to Tares as green food.

PAGE & TOGOOD having secured a large breadth from the most careful growers in this district—where better crops are produced than in any part of England—offer it at the above low rate for cash. Price to the Trade per post.

NEW TURNIP SEED	per lb.	1s. 0d.
NEW RAPE	,,	0 4
ITALIAN RYE-GRASS, per bush.,		5s. to 7s
MUSTARD	per lb.,	4d. to 5d.

Winter Vetches and Winter Oats as soon as harvested.

Permanent Pasture Grasses and Clovers.

New Crimson, Purple, and White Chinese Radishes.—These new varieties, introduced by us from China, are perfectly hardy, and if sown in August or September will yield a supply of delicious flavour (equal to Spring Radishes) throughout the winter, in the open ground, 2s. 6d. and 1s. per packet.

Calceolaria and Cineraria in packets of 2s. 6d. to 1s., saved from one of the finest collections in Europe, and Seeds for exportation to all parts of the world.

Royal South Hants Seed Establishment, Southampton.

NEW PANSIES, 1860-61.

DICKSONS AND CO. will be prepared to offer the following NEW PANSIES on and after October 1, all of which they can with confidence recommend, having been bloomed in 1859, and again fully proved during the past Spring and Summer:—

ATTRACTION.—Straw and dark purple. This is a large flower, in the style of Laing's "Colonel Wyndham," but a decided improvement on that variety; an excellent show flower. 5s.

BRUCE.—Fine yellow ground, with broad belt, and top petals of very dark maroon; a large bold flower of fine quality, and very constant. 5s.

CAROLINE.—Pure white ground, with rich deep violet-purple belt and top petals, very constant, and a first rate show flower; undoubtedly one of the finest in this class. 5s.

CHANCELLOR.—Gold and rich bronze-crimson, medium belt; a large bold flower of fine quality. 5s.

FIRE-KING.—Fine yellow with narrow belt and top petals of bright reddish-crimson, smooth and fine form, the nearest approach to a Red Pansy yet seen; very novel and attractive. 5s.

GOLDSMITH.—A rich deep yellow self, with large dense blotch; a decided improvement in this scarce class. 5s.

MILTON.—Yellow and rich dark maroon belt and top petals, colours clear and well defined; a fine flower. 5s

NARCISSA.—White and light bluish-purple, medium belt, fine blotch; a fine flower in every respect. 5s.

PLINY.—Yellow and bronze-purple, large, constant, and fine. 5s.

PLUTO.—A dark purple self, fine eye, form and texture first-rate. 5s.

PRINCE OF PRUSSIA.—A very dark purple self, great substance, and one of the finest dark Pansies yet raised. 5s.

RANDOLPH.—Fine yellow ground, with narrow belt and top petals of dark maroon, for competition purposes, in Spring; this will be found by far the finest flower in its class. 5s.

VOLUNTEER.—Yellow and rich glossy maroon, not large, but an exceedingly effective flower, fine blotch. 5s.

WALLACE.—A large yellow ground flower, with bronze purple belt and top petals; fine form and substance. 5s.

Usual Discount to the Trade.

1, Waterloo Place, Edinburgh.—August 18.

NEW TRIFOLIUM INCARNATUM SEED.

ROYAL BERKS SEED ESTABLISHMENT.

SUTTON AND SONS can now supply new Seed of the Italian Crimson Clover (Trifolium incarnatum), which should be sown as early as convenient. Instructions on Cultivation enclosed with the Seed. Present price 4½*d.* per lb., or cheaper by the cwt.

Also NEW MUSTARD and RAPE SEED at moderate prices.

BUCKLAND SWEETWATER GRAPE.

J. IVERY AND SON feel great pleasure in introducing this fine early White variety to the notice of all Grape Growers, as they feel assured it will give entire satisfaction. In appearance (except in colour) of Bunch and Berry, it resembles the Black Hamburgh, but growing still larger than this old favourite under the same treatment, it is also a free setter and of vigorous habit. A fine bunch was exhibited before the Fruit Committee of the Horticultural Society, on July 31st ult., which was highly spoken of by them, and is again most favourably noticed by all the leading Journals. *See* Report below. Strong plants 10*s.* 6*d.* and 21*s.* each.

Copied from *Gardeners' Chronicle*, August 4, 1860.

"From Messrs Ivery & Son, of Dorking, came a beautiful bunch of Buckland Sweetwater Grape, a variety which, when better known, cannot fail to be a favourite: the bunch is of good size, well shouldered and handsome, and the flavour good. This variety is, however, yet scarce—not more than two specimens of it in a fruit-bearing state being at present in the country, one at the Deepdene, Dorking (from which this bunch was cut), and the other in Messrs. Ivery's Nursery," (which they will feel great pleasure in showing any one who may favour them with a visit).

Dorking Nursery, Aug. 18.

GRAPE VINES FROM EYES IN POTS.

LUCOMBE, PINCE, AND CO. have now a remarkably fine healthy stock of strong Vines, from 6 to 10 feet high, of all the choicest sorts, fit for immediate planting, propagated from eyes, taken from their own experimental Vinery, which enables them to warrant each kind true to name.

LISTS of sorts and prices may be had on application to them.

Exeter Nursery, Exeter.

The Gardeners' Chronicle.

SATURDAY, AUGUST 18, 1860.

MEETINGS FOR THE ENSUING WEEK.

THURSDAY, August 23 { Horticultural (Floral Committee) at St. Martin's Place ..... Noon

AT a late meeting of the Floral Committee of the Horticultural Society, Mr. NOBLE of Bagshot produced three of the handsomest HARDY FLOWERING SHRUBS in cultivation, namely, *Spiræa callosa*, *Douglasii*, and *Nobleana*, each loaded with masses of deep rose-coloured blossoms. To the first we drew attention some time ago (see *Gardeners' Chronicle*, 1857, p. 521). The second is well known as a plant very near the old *Spiræa tomentosa*. It is of the third that we would now say a word or two.

The first that we learned of *Spiræa Nobleana* was from a coloured figure and description published last year in the "Botanical Magazine," t. 5169, from which the following is an extract:—"In the summer of 1859, Mr. CHAS. NOBLE sent us numerous fine specimens of three Spiræas, *S. callosa*, *S. Douglasii*, and the present, with the following remarks:—'The third must, I believe, be a hybrid between the two above named. The history of it is this. I had *callosa* and *Douglasii* growing side by side. I raised young plants from the seed of *S. Douglasii*, supposing them to be true; but their growth and flower appear to be exactly intermediate between the two; and what appears remarkable is that the whole of the bed, containing several hundreds, are quite the same.' A careful examination of the specimens seemed in many respects to confirm Mr. NOBLE's view, the supposed hybrid having the leaves precisely intermediate, approaching *Douglasii* in shape and pubescence, but *callosa* in toothing and green under surface; the inflorescence is intermediate between the long thyrsus of *Douglasii*, and broad cyme of *callosa*. The calyx has the patent lobes of *callosa* and glabrous tube inside of *Douglasii*; and the flowers have the evident ring of glands of *callosa*, but the colour and stamens of *Douglasii*. On referring to our herbarium, however, we find the wild specimens from WILLIAM LOBB of the supposed hybrid from the mountains of California, where *S. callosa* (a native of Japan) has never been found; and what is more remarkable, the specimens bear the same number (501) as LOBB has attached to *S. Douglasii*. The question hence arises, may not the seeds of both have arrived in one packet, and been sown, and their differences not having been observed, those of the present alone may have been collected and raised."

We understand, however, that Mr. NOBLE reports his crop to have been raised from English seed of *Douglasii*, and therefore it could not have had a Californian origin; and that a correspondent who also had *S. Douglasii* and *callosa* growing near each other also obtained from *Douglasii* three or four plants of the *Nobleana* form, while the rest of his crop was true to the parent.

Under these circumstances it is difficult to doubt that *Nobleana* is really the hybrid it is said to be. And most assuredly its appearance is so exactly intermediate between its two alleged parents as to lead to that conclusion. One circumstance we have remarked in the specimens sent us, which deserves to be mentioned. The *Nobleana* sent to Kew had the calyx hairless inside its tube as is the case in *S. Douglasii*; but in that examined by ourselves the calyx-cup was in precisely the same state as that of *callosa*, that is to say clothed with silky hairs. It therefore seems that in minute characters *Nobleana* points first one way and then another, a more likely thing to happen in a new production with characters still unstable than in an old species the minutest peculiarities of which have been fixed by time.

At all events this *S. Nobleana*, whether natural or non-natural, is a most beautiful acquisition for the flower-garden in autumn.

SOME time ago a correspondent signing himself "Ebor" questioned the value of certain CALADIUMS sent into the trade by M. CHANTIN. To the criticism of this gentleman M. VAN HOUTTE has replied in the last number of his *Flore des Serres*, and it is only just to so distinguished a cultivator to let him be heard.

"Ebor" said that *Caladium Barraquinii* is nothing but *bicolor* or some other variety of that old species decorated with a new name. This M. V. HOUTTE peremptorily denies. He affirms that it has nothing to do with *bicolor*, the leaf-stalks of which are green, while they are almost black in *Barraquinii*. The veins of the leaves in the latter are also quite different; and then what a beautiful rose colour it has, set as it were in a rich deep green frame. Neither is the Caladium called *splendens* a variety of *C. bicolor*, but a perfectly distinct sort. If these plants must be combined then *C. splendens* should be compared to *C. Barraquinii*, and yet how different they are. As to *C. thripedestrum* ("a name spoiled by the English who have converted it into *tripedestrum*," with the meaning of which name we are unacquainted), it is admitted that it is the same as *C. marmoratum*.

M. VAN HOUTTE also complains of no notice having been taken of *C. Bellegmei*, a magnificent sort with leaves marvellously powdered and spotted with pure white. Nor of *C. Troubetskoyi*, a sort that will grow larger after some cultivation, whose leaves are all marked with pure white hieroglyphics. As to *C. Perrierii*, M. VAN HOUTTE inquires what sort that is like? *Neumannii* which agrees in nothing except the fantastic markings of rose? the leaves of *C. Perrierii* are of a clear dead green with a dark blackish stalk, while those of *C. Neumannii* are deep shining green with green stalks. "There is nothing in common between them."

Now that the subject of Caladiums is before us, we borrow from a description of these modern fashionables by M. VAN HOUTTE the following statement of their comparative heights, a piece of information that will doubtless be welcome to their cultivators whether *in esse* or *in posse*.

	Inches.		Inches.
Caladium argyrites ...	10	Caladium Chantinii ...	32
„ hastatum ...	16	„ discolor ...	
„ antiquorum ...		„ Houlletii ...	
„ picturatum ...	20	„ Bellegmei ...	31
„ „ Troubetskoyi ...		„ Perrierii ...	
„ argyrospilon ...		„ Neumannii ...	36
„ bicolor	24	„ Brongniartii ...	39
„ splendens ...	28	„ Verschaffeltii ...	
„ marmoratum (thripedestrum)	30	„ pictum ...	47
„ Barraquinii ...		„ metallicum ...	49
„ pœcile		„ esculentum ...	69

To this let us add, that all these Caladiums are marsh plants, which, to be seen in their whole beauty, require to be grown in the shade.

WE extract from a recent report upon the BOTANICAL CLASS IN THE UNIVERSITY OF EDINBURGH the following interesting facts. In the season of 1860 just closed, the number of pupils (paying from 3*l.* 3*s.* to 1*l.* 1*s.* each) was 247; of these 207 were medical, and 40 general students. Number of Lectures, 61; Practical and Histological Demonstrations, 60; Monthly Competitive Examinations, 3; Weekly Examinations, 11; Weekly Excursions, 11.

The number of species collected during the Excursions was:—Phanerogamous Plants, 630; Ferns and their allies, 40; other Cryptogamous Plants, 130: total 800. The number of miles travelled by railway, steamboats, and walking was about 640; the largest number of students at an excursion, 160; the smallest, 25. The greatest distance travelled in one day's excursion (Callander and Ben Ledi) was 120 miles. The longest walk in a day, 23 miles. The total expenses of the trips, 23*s.* 10*d.* each student.

In addition to other rewards the following subjects received prizes:—An Essay on the Spontaneous Movements which take place in Plants; Dissections of 10 named Varieties of Cultivated Barley; Specimens and Dissections illustrating the Structure of 10 named Species of Grasses; A Collection of British Marine Algæ, with Essay on their Properties; A Series of Dried Specimens illustrating the Inflorescence of Plants; A Series of 24 Microscopical Preparations illustrating the Minute Structure of various parts of Plants, prepared by Pupils of the Histological Class.

IN this country one of the most indispensable qualities of a public servant is to bear criticism with equanimity. Such at least was the opinion of one of the wisest and most experienced of modern statesmen. Mr. CLEMENTS MARKHAM should think of that, and endeavour to draw an inference from it. This irascible gentleman is however so discontented with the account which his own public letter to Government has enabled us to give of his Peruvian expedition that he has condescended to prepare for insertion in our columns a long epistle to prove that "in spite of all evidence to the contrary" we are determined to believe that his proceedings have ended in failure. Instead of complaining of unfairness on our part, Mr. MARKHAM should be grateful to us for not having shown from his own statements that he is wholly destitute of scientific knowledge, the first requisite in an adventure like his. Perhaps he will find some Botanical friend good-natured enough to enlighten him on that point. Judging from the display he has made of his acquirements in his printed report, we doubt whether there is any security that what he calls Calisaya trees are not something else.

We have no intention of inflicting on our readers the supercilious communication we have received; it is sufficient to advert to one or two points in it. Mr. MARKHAM informs us that the Dutch gardener HASSKARL obtained his acquisitions, not personally, but through the agency of one HENRIQUEZ, who was imprisoned in Bolivia for having supplied them. That may be so, and the friends of Mr. HENRIQUEZ may have cause to regret his fate; but as Mr. MARKHAM adds that HASSKARL obtained 100 Calisaya plants with which he sailed for Java, we do not see what we have to do with his agent. We are also informed that HASSKARL was two years and a half in Peru. Very likely. No doubt he stayed till he obtained what he wanted, and we humbly presume to ask why Mr. MARKHAM did not also stay till his mission was accomplished. Had he been on military duty people would have been apt to say that he deserted his post.

We are assured that out of his 529 Cinchona plants 216 are now throwing out shoots and are healthy, while upwards of 60 more retain life. Gardeners know enough of what "retaining life" signifies, and would hesitate to take any account of these 60 moribund plants. We here however find the rather important admission that only about two-fifths of the collection have reached Southampton in safety. For this we are far from blaming Mr. MARKHAM; on the contrary, his gardener has done extremely well: but so large a loss having been already sustained, we may be excused for doubting whether many will reach India alive.

The reasons given for sending the results of the expedition to India by the extraordinary route of Panama, Southampton, the Mediterranean, and the Red Sea, is a curious one. It seems that there was no available steamer in the Pacific; that is to say, the great Indian Government which has had this question before it for years, is so utterly powerless as to be unable to send a small steamer from India to Peru on any special service however important. We are sorry to hear it. In conclusion, we are informed that "with the measure of success achieved" the Secretary of State for India in Council and others whose opinions are at least as valuable as that of the Editor of the *Gardeners' Chronicle* are perfectly satisfied." Let that console our traveller, who no doubt has done his best. But before dismissing the subject he must permit us to add the following extract from a letter now before us, the writer of which is perfectly well acquainted with the country that was

the scene of Mr. MARKHAM's operations, and with the Cinchona districts which he did not visit.

"I have read with much interest the article in the *Gardeners' Chronicle* of Saturday on the Cinchona research expedition. The writer of the article on Mr. MARKHAM's mission has struck the right nail on the head by showing the folly of carrying young semi-tropical plants across the Andes, when we know that it is perfectly needless to do so. I am at a loss to understand the sufferings described in Mr. MARKHAM's report, for I myself travelled through the same Andean regions in the cold season, and although not particularly fond of roughing it, when I can do otherwise, experienced none of the sufferings from cold and hunger which appear to be very graphically pointed out in the document alluded to. Had Mr. MARKHAM consulted either Dr. WEDDELL or Mr. PENTLAND they would have told him instead of diving into the forests of Carabaya, to proceed to the Yungas of Pelechuco and Apolobamba, or to those nearer to La Paz, where I cannot apprehend he would have experienced much difficulty from the bark collectors, or, personal danger from climate, wild beasts, or precipices."

MYCOLOGY.—No. XXV.

LACTARIUS INSULSUS, *Fr.*—The genus Lactarius is not separated from Agaricus, merely on account of its containing a milky juice. Several true Agarics agree with it in this character, as indeed undoubted Lactarii occur in which the juice is watery instead of milky. The technical character which distinguishes it, together with Russula from other genera of the gill-bearing tribe, consists in the substance which constitutes the centre of the gill lying between its two fruit-bearing surfaces, and technically called the trama, being formed of sub-globose cells and not of filaments, a character which is moreover common to it in general with the substance of the pileus.

The milky Agarics or Lactarii are, at first sight, divisible into two sets, with acrid and mild milk, but on closer inquiry it will be found that there are a few exceptions of species which from natural affinity might be supposed to be mild, though they possess in reality a greater or less degree of pungency. Indeed *Lactarius rufus*, one of the most acrid, is closely allied to some of the milder species.

Individual species therefore must be tested by experience, as in the closely allied genus *Russula*, before they can be pronounced mild and free from danger.

Lactarius insulsus is one of those whose evil properties will not be contested, for it is as little inviting in outward appearance as any of the tribe. The pileus is more or less slimy, of a dingy pallid ochre, marked with darker zones, strongly depressed in the centre, and sometimes funnel-shaped, with the border waved and arched, and the margin naked; the stem is short and blunt, at first stuffed then hollow, and sometimes marked with tear-like spots or depressions; the gills are moderately broad and distant, often forked, and of a dull ochre like the pileus; the spores are of a pale yellow. The milk is white, unchangeable and very acrid. The pileus varies much in size, sometimes attaining a diameter of some inches. The species is far from uncommon on the borders of woods, but is seldom regular in growth, and is liable to be eaten by slugs.

With the exception of *Lactarius deliciosus* and *L. volemum*, few species if any are ever used as articles of food in England. In Russia on the contrary such species as *L. piperitus*, &c., notwithstanding their extreme acridity, are largely consumed when preserved in vinegar. Indeed, little discrimination seems to be exercised in the choice of species. *L. piperitus* is so constantly used that it has been supposed impossible that the Russian species can be the same with ours. There is, however, little doubt on the subject, and perhaps the vinegar in which the Fungi are preserved neutralises the poisonous properties of the alkali, which seems to form the deleterious principle in these vegetables. It is very possible, indeed, that many cases of death occur which pass by unnoticed, as is certainly to be said of all countries in which Fungi constitute a main article in the food of the peasantry; still the same species which proves a poison to one, seems not unfrequently to be consumed with perfect impunity by others. The recklessness with which they are eaten in some districts on the continent of Europe is illustrated by a circumstance which happened to Dr. Loudon in Poland. Being on one occasion a prisoner in a fortified town, he amused himself by collecting and drying every species which occurred on the Boulevards, but whether supposed by him to be wholesome or dangerous, all equally vanished, being at once appropriated as food by the Russian or Polish troops. A similar circumstance happened in the case of the Fungi which formed the subjects of the magnificent work of Krombholz, insomuch that Corda who designed all the species was unable to preserve the specimens he had figured.

This might seem almost incredible to a person who has witnessed the tortures of a dog who in mere playfulness has worried a specimen of *Lactarius vellerens*. Indeed, so acrid are its spores, that on one occasion Dr. Badham having tasted a few was seriously inconvenienced in consequence for some hours afterwards. Heat may possibly dissipate some of the evil properties, but we are inclined to attribute more to the condiments with which the species are prepared; but in any case we should not recommend English stomachs to make an experiment on such very doubtful subjects as the acrid-milked Lactarii.

It should, however, be remarked that in Sweden *Lactarius torminosus*, one of the most acrid of the tribe, is frequently mistaken for the truly excellent species *Lactarius deliciosus*, and though possessing none of its good qualities, it is eaten, according to Fries, without any serious consequences. *M. J. B.*

LACTARIUS INSULSUS, *Fr.* From an original drawing.

PLANTS AND PLANT-HOUSES.

THE time is now approaching when cultivators will be making preparations for getting their tender plants into winter quarters; and as, even among practical men, much diversity of opinion exists as to what constitutes good practice in the management of plant-houses, I suspect a few remarks at this season on the subject will not prove unacceptable. As has been remarked of flower garden plants, most of the plant collections throughout the country require a severe weeding, whereby they would be cleared of many hundreds of plants which now encumber them, much to the advantage of those which might be left. Fortunately, however, all plant lovers begin to see the advantage of growing selections as distinguished from collections, and the recognition of the principle, that good things well managed are capable of affording more real pleasure than great quantities of ill-managed, ugly, gawky plants, is now becoming pretty general. This of itself will do much good, as the more both gardeners and amateurs enter into the spirit of specimen-plant growing, the more will they see the necessity of giving house-room to such plants only as are really worthy of it, while the thousands of comparatively worthless plants which now crowd the lists of nurserymen will be thrown on the rubbish heap. I do not say that all these plants are unworthy of cultivation, as many persons may consider them very beautiful; but when it is known that, without either greater trouble or expense, better and far more beautiful things can be grown, why not grow them?

Of what use can it be to grow two or three hundred varieties of Camellia which some of the continental nurserymen profess to sell, when we know there are not 50 really first-rate kinds among them? Would it not bespeak better taste to grow the good kinds only, and, if a number of plants are required, duplicate with two or three of the best variety. Again, of Ericas, though in plant catalogues upwards of 500 species are enumerated, and the nurserymen have almost as many varieties, who would think of growing that quantity for the sake of saying, "I have every known kind," when we are aware that 100 kinds would take the cream of the whole collection, and that with 50 more there would be very few left that a cultivator would care about giving pot-room to. If, however, selection is so much required among hard-wooded plants, still more is it needed among soft-wooded ones, such as Pelargoniums, Fuchsias, Calceolarias, Cinerarias, and the like. The varieties of these plants are almost innumerable, and except to those who are always among them, almost undistinguishable.

Let us however hope the time is coming when the importance of growing good plants only will be generally acted upon, and then we have no doubt the importance of growing specimens, as distinguished from the poor miserable wretches we too often see, will be generally recognised, and not be confined almost to a few localities as at the present time. These remarks are offered in connection with the management of plants and plant-houses, for the purpose of directing attention to the indispensable necessity of giving ample room to every plant; for, without this, success in plant cultivation is impossible. We all know that if we plant a crop of Cabbages too thick, or sow Peas without allowing sufficient room between the rows to admit the sun and air freely among them, that we neither get fine Cabbages nor yet good Peas, because the plants being crowded together, do not get sufficient light and air to elaborate the juices properly, and consequently they are not only deficient in flavour but also in those nutritive and life-sustaining qualities for which these vegetables are so much admired. Now, plants cultivated in pots or under glass, though they may not produce edible fruits, obey the same laws of nature, and to bring them to perfection they must have an abundant supply of both light and air, and that not by fits and starts, but, if first-class cultivation is aimed at, regularly day by day. Hence specimen plants, whether indoor or out, should never be allowed to touch each other; neither should they be so placed, especially during the winter months, that they do not get a good share of light on all sides.

With reference to the influence of light as connected with plant cultivation, it would appear that the theory of its importance is not borne out by practice, inasmuch as no decided improvement has resulted from its use; but, on the contrary, we know some of the best practical gardeners in the country are decidedly opposed to the use of sheet glass. So far as our own experience enables us to judge we have no great affection for it, and except for its superior appearance and economy in repairs we should not care much about using it. Singular as it may appear, it is not more singular than true, that nearly all the best specimens of both fruits and plants sent to the London exhibitions are grown under common glass and very frequently in heavy houses, seemingly ill adapted for first class cultivation. We have been growing plants under sheet glass of the best quality for some time past, and we find that houses so glazed require much closer attention in changeable weather, and are very liable to scorch the plants if neglected.

Where houses are glazed with sheet glass in large

squares they should be freely ventilated very early in the morning, especially in the early part of the season And they should not be shut up too early in the afternoon as is customary with the common greenhouses. The ventilation of horticultural buildings is a subject of great interest at the present time, and promises to occupy a good share of public attention. Those who have gleaned their information on this subject from their daily practice, know as their fathers knew before them, how necessary it is to the well-being of plants that there should be a constant interchange or renewal of the air in plant and forcing structures, not only during the day but also during the night, and good gardeners take care to have a thorough circulation of it at all times, and at all seasons when it is possible to admit it. The disciples of the theory promulgated by Mr. Ward, in whose air-tight glass cases plants such as Cacti, Orchids, Ferns, and other Cryptogams, managed to drag out an enfeebled existence for many months, ran away with the idea some years back that because these plants lived other plants must grow, and consequently ventilation became a very secondary consideration among scientific men; indeed, we recollect a range of houses, the top sashes of which were all screwed down, and the result was the Black Hamburgh Grapes became red ones in succeeding years, and the gardener lost his situation. To these houses air was admitted by holes cut midway between the glass and the footpath of the back wall; but these holes were never opened except to lower the temperature of the house. Horticultural architects, who too frequently know nothing of practical gardening, soon took up the idea because it was fashionable; and hence it would be easy to point to iron-roofed houses built about that time, which were so badly ventilated as to render it impossible, without shading in sunny weather, to prevent the plants being scorched to death. This was one of the reasons why metallic-roofed houses became so unpopular, and were so much dreaded by gardeners.

We have always laid it down as a rule that plant and forcing-houses should never be closed during either night or day except in the most severe weather, but that "from night to morn, from morn to dewy eve," there should be a constant and perpetual interchange of the external and internal atmospheres. While, however, we would do everything in our power to secure this interchange, there are one or two things which must be carefully guarded against. We all know how very injurious it is to the animal frame to be placed in a current or draught, and that a current of air admitted through a broken window will lay the foundation of diseases which will quickly gather a strong man to his fathers. Scarcely less injurious are currents of air to plants, no matter whether they be warm or cold; and there are certain greenhouse plants, as, for illustration, Boronia serrulata and pinnata, Crowea saligna, the whole tribe of Gompholobiums, and many other Swan River and New Holland plants, which, if placed in a current, will not only refuse to grow but will positively die. Even Heaths hate a draught, such as is admitted by the small opening of a sash, but they delight in a free circulation of air admitted in a volume so as to act upon the whole plant at the same time. No greater proof can be given of the injurious tendency of currents of air to plants, than the fact that a draught of frosty air admitted through a broken square will kill a plant in a greenhouse, the temperature of which shall never be below the freezing point, while the same plant, though frozen quite hard but protected from a current, would be uninjured. This fact we proved several times during the last severe winter, and so satisfactory was it to us, that while we admit all the air we can to our plant-houses, we always take care to guard against strong currents.

From the preceding remarks it will be seen that the ventilation of plant-houses is an operation which requires careful management, and is a point in cultivation which it is necessary should be well studied. In congenial weather, of course, air can be admitted at any and every part of the house, but in severe weather it is necessary to exercise great caution. Of all the plans which have come under our observation for winter ventilation, that of admitting cold air by means of drains passing from the outside of the back wall under the house to the heating apparatus, and escaping upwards among the hotwater pipes, is the best, and if some wire gauze or perforated zinc be placed along every alternate light at the top of the house, the ventilation can be regulated with very great nicety, and without any fear of doing injury, so long as the heating apparatus is kept warm. The cold air drains under the house should be of considerable size, not less than 9 inches square, so that, in the case of ripening forced fruits a large volume of fresh air can be constantly rushing in, and as the quantity of air admitted will be governed by the escape at the top of the house, no fear need be entertained of cold currents, so long as the back ventilators are properly regulated. Of houses thus arranged we have never closed the cold air drains at any time during the last three years, and by strangers the atmosphere has always been admired for its fresh and wholesome feel. In these houses the lower pipe of the heating apparatus is laid in a tank, so that the air receives a necessary supply of moisture, before it passes among the plants; and when we require a very moist atmosphere, it also passes through a coarse, moist woollen net, which makes it all that can be desired for plant cultivation. Of course this system of ventilation causes a waste of heat and an increased consumption of fuel; but that we do not care for so long as we are sure we are benefiting our plants by the additional expense.

Some modification of this plan we should recommend to every one who is desirous of excelling as a plant cultivator, and we would particularly impress upon amateurs the importance of guarding against currents in their plant-houses, especially during the winter season. Taking the precautions previously pointed out and guarding against over excitement as to temperature, with due attention to watering and allowing each plant plenty of room and thorough cleanliness both in the plants, pots, stages, and houses, success is certain; but neglect one of these points and you will most assuredly and deservedly pay the penalty of your indiscretion before another summer dawns upon us. *A.*

Home Correspondence.

A Head Gardener's Views respecting Education.—Do you not think, Mr. Editor, that it is time for the upper 10,000 to have a say in the matter of educating embryo gardeners? Some young gardeners, writing to their credit very good Queen's English, have by your permission been allowed to detail their grievances, and murmur their complaints against the treatment they meet with from head gardeners, in the matter of exacting premiums, deducting from wages, and the use of strong language to enforce discipline, neglect of proper teaching, and so on. Without apologising for these things, let us on the other hand be just and examine whether these embryo gardeners, taken in the aggregate, are so very immaculate as to be fairly entitled to the consideration which they claim, and which, although in many deserving cases accorded to them, is I fear in too many instances expected, and indeed insisted upon, without the shadow of a claim. Let us see whether young gardeners should not look at home before they begin carping at actions which they are ready not only to imitate but to justify, as soon as opportunity offers. The education necessary for gardeners may be classed into physical, mental, artistical and moral. With regard to the three first, so much has lately appeared in your pages that it would be presumptuous in me to endeavour to improve upon the very excellent remarks therein set forth; but of the latter, viz., the moral education of gardeners, I do not perceive that any writer takes it into account, and yet it is the one on which the whole and entire value of the other three depends. A man may by energy and application become very clever, skilful, and accomplished; but if his moral character is tainted, or even looked upon as of secondary importance, he is to all intents and purposes a very unfit person to be placed in any situation of trust and confidence. This is especially applicable to gardeners, who are often called upon to fill situations in which to be worthy of trust and confidence is a *sine quâ non*. The value of gardeners it is true is very variously estimated by different employers: one may be a valued servant because he possesses a dogged, hard working perseverance which achieves great results, because he concentrates all his energy upon the physical part of his duty, yet if he was questioned on those results it is a great chance if he could give an intelligent answer; nor is he required to do so, his strength and honest labour is all that is required of him, and this he gives, often cheerfully, sometimes grumblingly. Yet as far as he goes he is a valuable servant, but to be truly so he must at the bottom possess a strong feeling as to his moral obligation, which teaches him that it is incumbent on him to do his duty in whatever station he is placed; if he fails in this he will not long continue in well-doing. Another again may be looked upon as a valuable man by many of our mercantile employers, who, seeking value for value with a keenness which often overreaches itself, require an active, energetic, ubiquitous man, able and willing to extract as much as possible, even to the very last iota, from the thews and sinews of labouring men; paying them tolerably well it is true, but too often casting them aside when thews and sinews are out of order, on the principle of no work no money. There is not much morality here, nor did I ever know it to stand for long the test of the great unpopularity which follows upon the carrying out of such slavish principles. It is well that such men are valuable only to their compeers; their tone of morality is low, and therefore they are the willing instruments of tyrannical masters. Advancing higher in the scale we shall find that a vast majority of the gardeners of the present day are valued by their employers for their acquirements, not only in their profession but in many other things which do not properly belong to gardening; yet all contribute towards making them intelligent expositors of the principles on which their operations are conducted, and at the same time conscientious servants in whom their employers may place implicit trust and confidence. And what is the ground-work of all this but a high tone of moral character? If that is wanting, it will ooze out somewhere, and then, no longer trusted, no longer esteemed, they sink down to their level among the grumblers who are ever setting themselves forth as the ill-used, the unappreciated. It is not always want of skill that is the cause of many gardeners so frequently changing their places; on the contrary, it is too often the result of a discontented, expectant disposition, and from their insensibly acquiring depraved and bad habits, thus forfeiting the esteem and confidence of their employers. Does not all this show that the moral education of young gardeners should be a primary consideration? If they would but take this as the foundation on which to raise the superstructure of their future efficiency, their actions would be guided by a higher principle altogether, and we should hear less of the constant bickerings which appear to embitter the existence of so many of them; and they would ask themselves before entering on any engagement, if they are honestly able to fulfil what is required of them, and if not, whether they are sufficiently humble-minded to learn, and inclined to be grateful for teaching. I am sorry to say that my experience, which has been extensive, would lead me to infer that this is not the case with a great number of the candidates for subordinate situations in large gardens; the first question they appear to ask is, will this place suit me? not, am I qualified to fill this place with credit to myself and satisfaction to those who employ me? Nay, some would even lead you to infer that they are conferring a favour on a head gardener by consenting to serve under him, because, forsooth, they have been through this or that great place, where everything is carried on in first-rate style. On this principle they act as though places ought to be accommodated to them, but for them to accommodate themselves to the place is out of the question; I had one young gentleman of this kind who positively refused to carry manure water to apply to some Orange trees, on the ground that it was labourer's work. It is consoling, however to reflect that there are many brilliant exceptions to this rule; men who possess that true humility which is the characteristic of a gentleman, and whose object is to extract all the good they can from each probationary move they make, and at the same time yield honest and faithful service in return for the opportunities of learning their profession which are placed before them. In conclusion I would urge them to depend more on their own exertions, and not indulge in a habit of grumbling, because those who are put in authority over them do not spend all their spare time in catechising them, and drumming into their heads that knowledge which, with all the facilities a little self-denial would place at their command, they ought to be ashamed to owe to anything but their own energy. *Audi alteram partem.*

Podophyllum Emodi.—Is the fruit of this plant wholesome? A small plant here in the open air, about 9 inches high, has five tempting fruit, the two largest of which measure 3 inches in length and 4½ in girth—no bad crop if it be of any use. In taste it is slightly acid and not very disagreeable, and it is eaten readily by blackbirds. Although its associates have all something *du louche* about them, it is stated that the small berries of Podophyllum peltatum are made use of in the United States under the name of Wild Lemon. *S., Fife.* [Beware of Podophyllums. The leaf of P. peltatum is poisonous, the root is a powerful cathartic. The fruit however is said to be eaten by pigs and boys (*A. Gray*); and Hooker and Thomson say that that of P. Emodi may also be eaten.]

Love of Flowers on the Continent.—Having lately had an opportunity of observing the great taste displayed for horticulture throughout Germany and many of the towns bordering on the Rhine, I would wish to ask, why it is in a country such as ours, where such noble specimens of household plants and flowers are constantly brought under our notice at our exhibitions and flower shows, that we do not see that (I might almost say) national respect for the science as we do in those towns and cities of which I am about to speak. For instance, in Coblentz, in the midst of the range of public buildings, there is to be seen a perfect garden of Roses. Certainly it is in proximity to the palace; but still there is no paling to exclude the humblest person from inhaling the sweet scent of these lovely Standard Roses. Then look at the environs of "Frankfort-on-the Maine"—such profusion of flowers of all sorts! No restriction, any one who pleases may walk in these parterres; the poorest peasant, the most wealthy citizen, the wearied traveller, any one, every one, finds rest and is refreshed by a saunter through those charming grounds. Then I might speak in glowing terms of the neighbouring town of Homburg, but every English tourist is acquainted with the charms of this garden, and, like the others, it is free to all who feel disposed to enjoy a walk in the early morning, a lounge in the midday sun, or a cheerful promenade in the summer evening. Baden Baden is also rich in horticultural taste; every villa has its pretty garden laid out so neatly, displaying such a variety of colour, and at the same time so much taste in the arrangement of the various trees; such pretty hanging baskets filled with Petunias, Geraniums, Verbenas. No space is unfilled; everywhere one turns is to be seen flowers; then along the public park overhung by the noble range of the Black Forest is to be noticed on every side groups of flowering plants either in vases or in beds. I have made it my study for some time to take notes of the various public collections of plants, and I must certainly, in justice to these towns, attest to their superiority in the floral department. There seems to be an inherent taste among the people for horticulture; everywhere you turn, from the tastefully arranged salon of your hotel to the homely cottage of the artisan, is to be noticed a collection of neatly grown and

pretty plants. Of course *our* large cities can never aim at such refinement. No; we must in them devote the space we can spare to matters more remunerative. But would it not serve to exalt the ideas, to refine the tastes of our rising generation, were they permitted to see such a display in the open streets; and were they taught to respect these flowers as our continental neighbours do? A friend observed to me whilst enlarging upon the charms of those tastefully laid-out public flower grounds, those avenues of standard Roses, "Now, were these in our land, there would not be a blossom to be seen in a week." I hope such is not the case. Could we but make the experiment; could each village and hamlet devote a certain annual sum to be laid out upon the "maintenance and clothing" of the "mall" or public street, I trust our sturdy labourers, our village school, our homely dame, would all respect the effort to make their flowers the pride and glory of their district. Such seems to be the view taken by our foreign friends. Were it not so, of course we should not have observed so rich a display of blossoms as those I have tried to bring under the observation of my friends "at home." No doubt in England, and Ireland as well, there is a rapid stride in this favourite science, but I should be glad if we could make it still more progressive; and in no way can that be more effectually accomplished than by making horticulture a national taste, a national pride, and in this we cannot err if we follow the example of these few towns I have brought under notice. *E. A. M.*

Diseased Araucarias. — The decaying Araucaria imbricata, lately noticed in your columns, is no isolated case; a whole avenue of Araucarias was affected here much the same as the one spoken of by your correspondent. This fine avenue forms as it were a link between the mansion and deer park in connection with a new terrace garden now in course of formation, and my employers were desirous that the trees should present as healthy an appearance as possible. To attain this object it was decided to lift and replant the whole of the trees, for it was clear that no surfacing would renovate them, as the roots were in a subsoil unsuitable to the Araucaria, although other trees grow well on each side of the avenue. To make the case more perplexing, the same kind of tree thrives admirably in another part of the grounds. One in particular, 40 feet high, is the most perfect specimen of the kind to be seen anywhere. After carefully ascertaining all that could be learnt of the natural character of the Araucaria on the Chilian Andes, as well as the soil and situation on which the best trees at home are growing, the following plan of operations was adopted:—Stones and all sorts of rubbish within reach were carted to raise the ground about 2½ feet above the natural level; on this the trees were replanted, a few cart-loads of good fresh earth and leaf-mould being added to each tree as it was planted. All was well watered and again turfed over, and nothing could be more encouraging than the improvement which the trees now exhibit. Besides the raising of the ground, a trench was cut and cleared out on the upper side of the avenue, in order to prevent all underground wet from accumulating from higher ground in winter. This trench runs parallel with the avenue at 40 feet distance from the line of trees, and is sunk under the pan to a rocky bottom, at an average depth of 5 feet. Evergreens screen the trench from view, so that although open it is no eyesore. The Araucaria imbricata will nowhere prosper where the roots touch a pan, or where there is much underground wet. Nothing could be more instructive than the carrying out the operations just referred to; on the open strata was the healthy green tree mentioned above, while on the pan was as uniformly to be found the brown and spotted branches. So constant was this that in lifting the trees before the ground was opened the situation of the roots could be accurately described. No argument is therefore required to show the importance of affording the Araucaria an open bottom, free of winter-locked water where a good tree is expected. No care will bring it to any size without exhibiting the detestable brown spots and rings complained of if depth of soil and thorough drainage are not at first provided. *Charles M'Donald, Woodstock Park, Inistioge.*

Horticultural Exhibition at St. Paul, Minnesota, U.S. —In this far north-western country we have been able to form a Horticultural Society, and have had our first exhibition under many difficulties. The season of the year was not favourable for a good show; it was too early generally, but the 4th of July being a holiday we took advantage of that and have been most successful. Upwards of 1000 people visited the exhibition and every one was more surprised than another. I exhibited some good Pinks, for which I obtained only a second prize; mine having been much destroyed by a heavy thunder shower the previous evening, whilst those to which first prizes were given were under glass and safe. I had some very fine seedling Petunias, both of the large and small shrubby varieties, and also one very fine double one; but it was greatly injured by carriage. I have been very successful in raising Petunias from seed, and have now four very fine full double flowers, one measuring 4 inches across, besides very fine single ones. My Black Naples Currants measured some from 7-8ths to 15-16ths of an inch; Red Cherry, nearly as large; White Grape, very fine; but none of them quite ripe on the 4th of July. For Black Naples I only got the second prize; mine were in bunches. The first prize lot consisted of picked single berries. This is a great country for such fruits as will stand the severity of our winters, as currants will; all my bushes are loaded and breaking down under the weight of fruit. Strawberries are nearly over; I have almost all of the finest English, and many French varieties, such as Trollope's Victoria, Triomphe de Gand, and others; but they do not do so well as American seedlings generally do. I have never protected mine from frost, and the snow never lies very deep here. Raspberries do well, but generally need to be laid down and covered with earth. Grapes also succeed; but require some protection. Apples, Plums, or Pears will not endure the severe frosts at night and the clear, bright, warm sun during day, but we will raise seedlings by and by that will. May Duke and some other Cherries will do. I am simply an amateur; but an enthusiast in flowers, and the wild flowers of Minnesota surpass all I have ever seen for quantity and beauty. Our September show will be very fine, as our Melons, Pumpkins, Squashes, and vegetables will be in full order then, and I think no country can excel us in these, or in Potatoes, Onions, Beets, or other roots. The crops this season are truly splendid, and although it is only about 10 years since the country began to be settled, we will this year export hundreds of thousands of bushels of Wheat, Oats, Corn, and Potatoes. Our Wheat harvest will be general in 10 days. Our winters are severe during the night; but always clear and bright during day, and never too cold to work out of doors. The summers are remarkably fine, and it is a curious fact that in nine cases out of ten the rain falls during the night—seldom if ever in daytime. Why it is I cannot tell, yet it is so. *A. B., July* 12. 1860.

Pear-leaf Miner.—My fruit trees on walls are yearly injured by insects lodging in the leaves. They begin their depredations about the middle or end of June; the mischief is first seen in the shape of small brown spots on the leaves. These spots extend their size in a few weeks, and ultimately spread nearly over all the leaf, which droops and hangs seemingly lifeless. The fruit becomes poor in size and flavour. In opening these black blotches in July a small worm-looking creature is found. I have changed the surface soil and replaced it with fresh earth; this, if done in winter, gives us healthy leaves for a year or two. Trees not on walls keep free from injury, and I find that moving the trees into a glass house, or into pots under glass, has the effect of staying the disease. I enclose a few leaves on which the spot has only extended over a small part of each leaf. *C. K., Scotland.* [The blotches on the Pear leaves are caused by the mining larvæ of a pretty little moth. These when full grown form their cocoons upon the surface of the leaves, so that the best plan for the destruction of the insect is to pick off and burn the infected leaves. Also in winter to collect and burn the leaves fallen beneath the trees. *W.*]

Diagonal Training of Peach Trees.—Now that the solar system has been proved to be migratory, and that the sun declines to rise as well as to set over Britannia's domains, indoor culture becomes of importance, and I wish to make known some excellent results, arising from the diagonal training of Peaches on the back wall of the orchard house. Of course the house is a lean-to, which is the warmest of all, and on this back wall, 33 feet by 12, I have Peach trees trained with three leaders each, on the diagonal cordon plan, the main stems of each tree being planted 3 feet from each other. In this way the wall is clothed in four years, all the leaders being at an angle of 45°. These leaders are therefore 12 inches from each other, and are full of fruitful spurs 6 inches long (including forerights), reduced by successive pinchings in the summer of three to two, and then one leaf. The average crop is 2½ Peaches per square foot; and on this wall, when the trees are fully grown, I hope to have 500 or 600 fine fruit alone. This does not prevent my having three rows of trees in pots, chiefly from Mr. Rivers, all heavily laden; so that about 1000 fruits of all kinds may be hoped for in a year or two. An orchard house, 100 feet long and 15 feet high at the back, ought to produce, on the triple diagonal system described, 2000 Nectarines on the back wall and 2000 Peaches, Apricots, and Plums on the potted trees. The care with which a tree can be managed, the rapidity with which a wall can be covered, and the variety and number of the fruits obtained by this method, which is somewhat analogous to the cordon oblique of the French, has induced me to describe it. I have some hundreds of trees out of doors, also trained in this way, promising good results. *T. C. B., Guernsey.*

Timber.—Your articles on the decay of timber will, I hope, induce persons to give more attention to this important subject than it has hitherto received, and lead those who are practically conversant to give the results of their experience. Will any doubt the advantages of removing from timber as quickly as possible by either chemical or mechanical means the sap—that fermenting, putrefactive and decaying principle—then injecting substances to act on the cellular tissue or any soluble matter remaining in the capillary vessels, as being of no importance to those who grow as well as those who use timber? I have had some experience, and have tried several plans for getting rid of the nitrogenous sappy matter from timber—that of Dr. Boucherie's process, noticed in your Paper on November 23d, 1857, is a simple means to obtain my object; but operating on large trees of Elm, Beech, Larch, or Fir, I employ a good garden engine to force fluids out and chemicals in, and I believe I more than double its durability, prevent dry rot, make it fit for immediate use, and less liable to warp or get out of place. I use it for building orchard houses, forcing pits, making gates, posts, and railings, and consider I am amply compensated for the little trouble I take in doing it. *J. W., W.* [We hope this has been read aright; but the MS. was very difficult to decipher. May we ask for information as to the *quomodo* of injecting and expelling fluids by means of a garden engine?]

Education of Gardeners. — Having followed the profession of a gardener for more than a quarter of a century, perhaps you will kindly allow me to make a few observations on the subject of education. In the first place it appears to me that some of your correspondents are inclined to place the standard of educational qualification much too high for men in the position of practical gardeners. One writer recommends head gardeners to occasionally roam the country at the head of their staff in quest of native plants to form herbaria, &c. This may look very pleasant in theory, but I am much afraid that but few employers of gardeners would like to have the system put in practice in their own establishments. I think however that it might be of great service to young gardeners to have pointed out to them the kind of acquirements that are likely to be of most use to them in after life. And although human knowledge may, like virtue, be considered to be its own reward, still I think that it behoves men in the position of young gardeners to give a preference to those branches, which are almost sure to be useful to them, over those which they may or they may not require. My own experience on the subject is as follows. When young I strove hard to quality myself for a first class situation; whether I succeeded in doing so, or whether I ever succeeded in obtaining such a situation, can matter *little* to the readers of this communication. But while I now write, my eye can rest on a rather bulky "Hortus Siccus," properly arranged and in tolerable preservation, and in the collecting of the specimens of which it is composed I have "wandered many a weary foot," and since then I have lugged it about with me many a mile. And now I cannot say that it has ever been of any real service to me. By dint of great economy, I may almost say privation, I managed to attend courses of lectures on botany, chemistry, mathematics, natural philosophy, &c., and I also paid for instructions in architectural and mechanical drawing, mapping, &c. My slight acquirements in botany and chemistry, particularly the latter, have been of very little practical value to me. But I have frequently been required to execute ground work, to measure land, &c., and to furnish plans for horticultural buildings of various sorts, gardens, &c., which, without some little knowledge of mathematics, I would hardly have been able to have done. I have said nothing of keeping accounts, as of course every young man who aspires to be a gardener ought most certainly to be able to do that. The practice of some head gardeners exacting premiums from young men who have already served an apprenticeship and paid a premium, I entirely disapprove of; but surely young gardeners have the remedy in their own hands. Why do they take employment in establishments where such a practice is in force? But, on the other hand, if young gardeners agree to pay to a head gardener a certain stipulated sum for instructions and facilities afforded them by him, for acquiring knowledge in their profession, if he act up to his agreement I really cannot see what cause they have to complain. Some young gardeners have complained of the harsh treatment received by them at the hands of the head gardeners. When such is the case it is much to be deplored, and would no doubt be highly disapproved of by their employers if known to them; but let me advise young gardeners to take a lively interest in their employment, and in a majority of instances this will be appreciated and acknowledged by the head gardeners, who have too often much to irritate and annoy them. And a too frequent cause of irritation and annoyance is the carelessness and inattention of those who ought to be their assistants. *A Gardener and Constant Reader.*—I cannot conscientiously agree with "Crostonian" and "Roaldus" about education. I think they ought not to have made use of such words as extortion. What nobleman or gentleman, may I ask, engages a gardener under the impression that he is to instruct young men? Servants gardeners are, we know, but we cannot set it down as a rule that they are bound to serve their assistants in improving their education, and qualify them for gardeners, which we all know is no small matter. I am of opinion that few employers would like to take upon themselves such an amount of domestic duties as to see that their under gardeners get their wages every week. "Roaldus" seems to speak as if we were not in a land of liberty; young men are present at their engagements, and if they do not receive what they agree to get, it is their own fault. For my part, I consider paying a shilling or two a week a lenient and advantageous system of remuneration for instruction. I firmly believe that in many cases some of the most promising and energetic young men are fettered and crippled from getting into large establishments, through the system of paying down at once the sum required for their apprenticeship or education, and not only that

they are bound to serve their time or suffer the loss; matters like these in many cases may be very inconvenient. It frequently happens that the parents are not in a position to pay down the sum required, and the young men seldom are themselves; consequently they must remain in the rear. Such difficulties as these create what you may call the half and half men which over stock the market, injuring themselves and the profession. There are very few anxious young men who would not most gladly give the gardener an adequate remuneration for all pains taken in his instruction. Evenings' leisure may be called the young gardener's golden hours. Show me a young man who will spend such hours in nonsense and idle pastime, and I will show you a novice at his business. I do not hesitate to say that young gardeners may profit more through the evenings of one winter with a good share of sound practical instruction from a good gardener, and with the assistance of books, than they will in seven years from their own practical method, knowing little more than just about the temperature of the different houses, or perhaps may get a tolerably good knowledge of training a wall tree and such like. Among gardeners, as among other professions, there are both good and bad, but the former are in many instances spoilt in making; success is made up of very small things, but requires very great combination, commencing with a good education, proceeding with patience, perseverance, ability, and strict integrity. Success will be sure to follow. *Charles P., Mr. Meredeth's Hothouse Engineer, Vine Cottage, Garston, Liverpool.*

Orchard Houses.—In No. 56 of "All the Year Round" for 1860, it is suggested that a few trips to Sawbridgeworth should be made by small market gardeners and cottagers, "as it is not enough to tell them what may be done with orchard houses, they must be shown what is done." I can only say that poor or rich, or those neither one nor the other—in short all who wish to benefit by what they see and hear, if they will make their way to the Harlow Station on the Eastern Counties Railway, thence to my Nursery, may see houses of all kinds approaching to 40 in number, and have all their questions answered.—*Thomas Rivers.*

Societies.

Horticultural: *Fruit Committee, August* 14.—On this occasion Mr. Cuthill showed a collection of Strawberries, of which some account will be found in another column. From Mr. Ferguson, of Stowe, came various dishes of Peaches and Nectarines. Of the former he had Royal George, Grosse Mignonne, Bellegarde, Acton Scott, Early Admirable, Barrington, and Gallande; his Nectarines were Elruge, Violette Hâtive, Red Roman, Newington, and four unnamed kinds. They were all fine fruit, the produce of well managed trees in an old-fashioned lean-to house.

Notices of Books.

The Philosophy of Nature: a Systematic Treatise on the Causes and Laws of Natural Phenomena. By Henry S. Boase, M.D., F.R.S. 8vo. Longmans. Pp. 358.

"Philosophy," says Dr. Boase, "is the subject of the following pages, and it may be well to state here the sense in which this term is understood. Philosophy is the science of the sciences, the *summum genus* of systematic knowledge;—a synthesis of the diversity into unity;—the universal from which by analysis all particulars may be developed and demonstrated. It is the pole-star of knowledge on which the eye of science should ever be fixed in all its wanderings; and which alone can ultimately guide man to the attainment of the ardently desired object of his curiosity—a knowledge of the Reason in Nature."

The work, however, "is not metaphysical, that is, mystical and visionary, in the ordinary bad sense of the term: on the contrary, it rests solely on the knowledge of natural phenomena. In it the physical sciences are referred to the fundamental principles of realities; and not only so, but even the abstract sciences, which are commonly ascribed to the *à priori* ideas of intellectual intuition, are based on the direct interpretation of the rational forms of nature."

Let us test this statement by some of the author's definitions. All knowledge is of a dualistic character, "which it necessarily must be as the interpretation of nature; and we cannot express this more simply than by the logical idea of correlation, which is a dualism of correlatives. A correlation can only exist in the union of its correlatives; which are indissolubly co-existent and antithetically co-efficient; so that the occurrence of one of them necessarily implies the existence of the other; and it is impossible to conceive of either, except in their relationship."

The following is proposed "as the universal archetype of all dualisms:—

1st Correlative + 2nd Correlative = Correlation,

which may also be symbolised by the formula

$$A + B = AB.$$

"And since the expression of this equation is, in fact, a definition or identical proposition, its conversion may be effected, but such an operation communicates no additional knowledge; but if we change the plus sign, and also convert the equation, we can then express either correlative.

$$\text{Thus, } AB - B = A.$$
$$\text{or } AB - A = B.$$

"For instance, substitute a concrete for this abstract illustration:—

Body + soul = man.
Man − soul = a corpse.
Man − body = a disembodied spirit.

"So likewise, Attraction + repulsion = matter.
Matter − repulsion = attraction.
Matter − attraction = repulsion."

* * * "The constitution of natural bodies is very uniform in one respect,—one power, simple or compound, forms the basis or body of the dualism, and another its species or type; it is the latter power which alters its relations to the former by various accessions or diminutions of energy; it is the qualitative power, whilst the quantitative or basic power remains stationary." * * * "In attempting to comprehend the nature of vital force, (which may in the same individual, as in the highest developed organism, man, produce such diversified operations,) it is requisite to divest ourselves of the ordinary notion concerning force. What we understand by force, is any influence which is efficient in producing some kind of change; but the more common notion concerning force is that which gives dynamical impulse to bodies, imparting some kind of motion, and called accordingly physical force. Many of the changes which organisms undergo are purely physical, variously modified by their peculiar structures; but all subordinated to the vital principle: thus, various capillary attractions and osmotic diffusions, also muscular and nervous motions, are mechanically performed according to physical laws: and yet are so directed, in subjection to the creature's vital principle, as to operate in opposition to the law of gravity. In short, vital force is not a principle, whose effects can be weighed and measured; though it is associated with a material body as its correlative power, which possesses physical properties: but it is a self-directing and superintending principle, which controls the physical and chemical forces of its body, turning them to account for its own purposes; thereby working out and performing the functions of its body, according to pre-determined intelligent designs. It is not, therefore, surprising, that a force which can act with such authority should be capable of developing a body of even considerable magnitude from a microscopic germ-cell: its successively increasing size and strength do not immediately depend on the continual accession of energy by the conversion of physical force into its own essence; but by its domination over accumulated material forces, whose efficiencies are made subservient to its enlarged requirements."

In conclusion, Dr. Boase repudiates "positivism, and the identity of forces; maintaining that all natural bodies are dualisms of powers; and that each power is a reason-directed force."

Such is the style of this learned volume, our extracts from which will inform the reader whether or not it is one with which he desires to make acquaintance.

The Emigrant to S. Australia will find a useful guide to the management of a farm or garden in that country at the office of the *Victorian Gazette*, in Melbourne, where it has been published under the title of the *Colonial Handbook for farmers and gardeners.*

Lieut.-Col. Alexander, C.B., of the Royal Marine Artillery, in his pamphlet *The Command of the Channel and the Safety of our Shores* (Bradbury & Evans), advocates the formation of a steam flotilla expressly for defensive purposes, to be manned by a force to be called the "Maritime Militia," for which purpose 11,000 men would be sufficient.

"The expense of the proposed fortifications is estimated at about 12,000,000*l.*; the cost of 20 ships, such as are here proposed, would be less than half that sum. In the one case, England would be only able to resist invasion, in the other she would be able to prevent it. It has been urged as an argument in favour of fortifications that ships wear out and become useless; truly, then, we ought to have no navy! But fortifications also become useless, when, as they often do, they cease to answer the purpose for which they were erected. It may be thought desirable to spend millions in strengthening our inner defences, but it should be borne in mind that unless the country is equally prepared to strengthen her 'outer lines of defence,' those millions will be wasted."

Ure's Dictionary of Arts, Manufactures, and Mines, Part X., contains articles on Madder, Mahogany, Malting, Manure, Minerals, and Mines. Valuable as many of these articles are we must continue to protest against the slovenly manner in which some of those relating to vegetable products are prepared. Mace, for instance, is stated to "form the envelope of the shell of the fruit of the Myristica moschata, the Nutmeg." It does no such thing.

A Guide to the Wild Plants found in Suffolk (*Flora of Suffolk*, Simpkin & Marshall) has been drawn up by the Rev. Prof. Henslow and Mr. Skepper of Bury St. Edmunds. It forms a little pocket volume, which will be acceptable to local Botanists and to Visiters at the Suffolk watering places. It has been very carefully prepared, and might be advantageously taken as the model of similar guides to every great county or large district in these islands. Tourists would gladly welcome such assistants.

The fourth part of Mr. Howard's superb work on Cinchonas (*Illustrations of the Nueva Quinologia of Pavon*, fol., L. Reeve), which has just been issued, includes the following subjects. *Cinchona magnifolia* (a plant of the sub-genus Ladenbergia), of which there is an elaborate critical account occupying nine folio pages, showing among other things that it and its allies either do not produce the alkaloids which are so valuable in medicine, or yield them in very minute quantity, instead of which they form the substance called kinovic acid. To this is appended a translation of Karsten's Anatomical observations on the true and false barks. A second subject is *C. purpurea*, the Huamalies bark of trade. A third is *C. pubescens* without a plate, and a fourth is *C. erythrantha*, the bark of which is unknown.

Trade Lists Received.—A Catalogue of Hyacinths and other Bulbous roots imported and grown by Messrs. Parker & Williams, Paradise Nursery, Hornsey Road.—William Cutbush & Son's (of Highgate) Descriptive Bulb Catalogue for 1860.

Garden Memoranda.

Mr. Cuthill's, Denmark Hill, Camberwell.—Strawberries have been comparatively good here this season, but late. The first dish was gathered on the 7th of June, and ever since then they have continued to produce abundance of fruit even up to the present time, making about nine weeks in which they have been in bearing. This could only have been accomplished with very early and late kinds, both of which Mr. Cuthill possesses; the first being the Black Prince and the last the Prince of Wales. The Black Prince suffered to some extent from the long continued severe winter and spring, but still bore a fair crop; Cuthill's Princess Royal proved hardier, and bore abundantly. It is a favourite with all who have grown it, being of good size and flavour, and a useful kind for forcing; it deserves to be better known than it is. Prince of Wales however is the variety on which Mr. Cuthill most depends; it suffered less than any other sort this year, and as a proof of its productiveness we may mention that several hundred lbs. weight of fruit were gathered off it in one day.

Of seedlings, Mr. Cuthill has two, both of which promise to deserve cultivation. It is true they have not been so fine this season as it was expected they would have proved; but it must be remembered that this is a year in which the British Queen itself has been comparatively flavourless. With a drier season and more sun we imagine little fault will be found with the seedlings in question. Of one which he calls Highland Mary a favourable account appeared in our volume for 1858; Richard the Second is the name given to the second sort. It may be said to be an improved Black Prince, being twice the size of that useful sort, rich in colour, and brisk and agreeable in flavour; like the Black Prince it is a great bearer, and hardier than that kind.

As regards cultivation, Mr. Cuthill's plan of surface manuring in spring has proved of great service this season. In March his ground resembles, as he truly says, a large manure heap, every inch being covered with plants, over which is put a layer of half-rotten horse-dung to the depth of from 1 to 2 inches; through this the plants gradually force their way, and it helps to keep weeds down, while during every shower of rain that falls it enriches the ground and feeds the plants at a time when they most want support. This plan is greatly superior to the old system of putting clean straw or Grass between the rows, and it is more easily carried out, the straw being troublesome to apply after the plants have grown, besides, it is a bad conductor of heat. Grass is equally objectionable, and it gives a musty flavour to the fruit. The dung even during the heaviest storms effectually prevents grit from spoiling the fruit. Several hundred plants put out in April last year grew remarkably well and bore fruit; these were planted with a trowel. Mr. C. never uses the dibble, which crams the roots into a small hole thereby preventing the plants from pushing vigorously. His plan of making strong runners quickly is worth attention. As soon as the crop is gathered and the runners begin to meet between the rows, he throws a quantity of light mould over them; into this they strike root immediately, and make fine plants in a very short time. His plants have to furnish him with both runners and fruit.

In bright, warm seasons, when out-door Cucumbers are good and plentiful, frame ones are little sought after but in a year like the present, which is unfavourable to their growth in the open air, some account of Mr. Cuthill's plan of treating them in-doors may not be without interest. He attributes failures generally to the application of too much both of top and bottom heat, during the dark months of winter and early spring. He states that he finds a 4-inch hot-water pipe for top heat and a 3-inch one for bottom-heat all that is required. These kept all safe during many a cold and stormy night when he grew Cucumbers for Covent Garden Market. Often in the morning his thermometer stood at 50°; but still the plants did well. He also finds that short Cucumbers, and plenty of them, pay him better than long ones which take longer time to grow; he therefore cultivates exclusively his Black Spine, whose fruit

is about 1 foot in length, and his more recent kinds, the White Spine and Highland Mary, which also belong to the same breed. Of the latter, 300 Cucumbers are stated by Mr. Cuthill to have been cut from a 12-light pit in 15 days, and that without any artificial heat whatever. He therefore uses at all times as little of the latter as possible. In the case of early Cucumbers the plants are planted out into the soil over a slight bottom-heat, four being put under each light; a short time suffices to show which of these is likely to take the lead, when the weaker ones are removed. A stick thrust into the soil serves to conduct the young plants to a trellis which is placed about 3 feet above them. Mr. Cuthill grows wholly on trellises, which he says answers better than any other plan. As soon as the plants reach the trellis their points are nipped off, which causes them to branch and cover its surface, after which little more artificial management is required. Liquid manure is freely applied when the plants are in active growth and in full bearing, and woodlice are kept down by watering round the walls of the pit inside with boiling water. In this way excellent crops of fine fruit are secured, wholly free from speck or blemish.

For the destruction of Green-fly, Thrips, and Red Spider an experiment has been tried here, but imperfectly, with brown paper prepared as follows:—It was first steeped in a strong solution of saltpetre, and while still wet there was spread all over it a good coat or sprinkling of Cayenne pepper; some powdered dry shag tobacco was then applied to it, and it was set a-light under some leaves of Cucumbers infested with Red Spider, &c., but far enough off not to injure them; the paper burned slowly and produced such a suffocating smoke that the pests just mentioned seemed ill at ease, but the pit in which the trial was made allowed the smoke to escape too freely, and therefore sufficient of it was never enclosed at one time to produce death. The result was on that account unsatisfactory; but the experiment might perhaps be worth repeating by those who have an opportunity of doing so efficiently. Great care is exercised here to keep Red Spider in check, but still it does make its appearance, more especially this season when little water could be applied to the roots for fear of creating too much damp, and thereby inducing disease.

In the growth of Mushrooms Mr. Cuthill is very successful. He has two old Vineries 45 feet in length, with a pathway along the centre, and beds on each side 4 feet wide, and about 16 inches deep. These are made up of dung and surfaced with mould. He has also a low span roofed house with beds on each side, in which manure is laid to the same depth. In this he manages to keep the beds long in bearing during summer, by putting a covering of straw over the roof, which is of glass. During hot weather the straw is well watered every night, which helps to keep the inside comparatively cool, and in this way beautiful Mushrooms are obtained all summer, and singularly free from blemishes. His mode of culture has been well described in a little 1*s.* pamphlet which he has published on the subject.

We noticed two rows of Asparagus grown by way of experiment. For this the ground was merely trenched and the manure dug in afterwards. The plants stood 1 foot apart in the rows, and the latter were 4 feet asunder, with a row of Seakale in the centre. Both Asparagus and Seakale received good soakings of manure-water in spring and summer. Plenty of salt was put on in March, and with a hoe soil was drawn up so as to cover the Asparagus to the depth of about 4 inches. The Seakale was also covered with mould, which is all that was done. This of course is for late Seakale, but Mr. C. is of opinion that large plantations of both these esculents might be made and managed cheaply enough on this plan to bring them within the reach of everybody. While Asparagus and Seakale beds are made as they usually are with enormous quantities of rich material to a great depth, the produce must of necessity remain dear.

Concerning the fine Clove Carnation called Cuthill's Prince of Denmark, mentioned in our report of Messrs. Henderson's nursery last week, we inadvertently made a mistake. It is not a dark Clove, as is there stated; but a bright scarlet one, striking and effective, with a strong Clove scent. Cut blooms of it have also a brilliant appearance under gas light. It is therefore a great favourite with the public. Mr. Cuthill's plants of it were all killed by the great hailstorm of 1846, which, it will be remembered, did so much damage in the neighbourhood of London.

Miscellaneous.

Capture of Whales by means of Prussic Acid.—A very interesting paper has just been published by Professor Christison, the result of some experiments suggested as long as 1831 by Messrs. W. and G. Young, of Leith, for the capture of whales by means of poison, the agent being hydrocyanic, or prussic acid. This poison was contained in glass tubes, in quantity about two ounces. Among other difficulties, one was to discharge the poison from the glass tubes at the right time. After various trials, the plan fixed upon was to attach firmly to each side of the harpoon, near the blade, one end of a strong copper wire, the other end of which passed obliquely over the tube, thereby securing it in its place, then through an oblique hole in the shaft, close to the upper end of the tube, and, finally, to a bight in the rope, where it was firmly secured. By these means the rope could not be drawn tight, as it would when the harpoon attached to it struck the whale, without crushing the tubes; the poison would then enter the whale, and death ensue. The Messrs. Young accordingly sent a quantity of tubes charged with the poison by one of their ships engaged in the Greenland fishery, and on meeting with a fine whale the harpoon was skilfully and deeply buried in its body; the whale immediately "sounded," or dived perpendicularly downwards, but in a very short time the rope relaxed, and the whale rose to the surface quite dead; but the men were so appalled by the terrific effect of the poisoned harpoon, that they declined to use any more of them. Subsequent experiments tend to convince the learned professor that success will be established in this method of capturing whales.—*Pharmaceutical Journal.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

Conservatory, &c.—It is now time to provide and encourage an assortment of flowers adapted for blooming late in autumn and early winter. Camellias, if forced into wood, will be tolerably forward. They should be kept out of doors in a good place on cool flags or cool ashes to prevent worms from deranging the drainage. Chrysanthemums should now receive their last shift if possible, using chiefly good fibrous loam for the purpose with plenty of charcoal. This is the best way to keep them stiff in habit and to preserve their lower leaves. Any necessary amount of strength may be imparted to them when the flower buds are formed by good liquid manure. Successions of Brugmansias, Clerodendrons, Euphorbias, Poinsettias, &c., should receive a last shift in order that they may produce a rich display in the conservatory. Climbers on ornamental trellises should be occasionally cut back with the view of having a succession late in the season when flowers become scarce. A batch of such things as Thunbergias, Ipomœas, Jasmines, Stephanotis, Passifloras, &c., should be got up ornamental trellises without delay; Clematis bicolor and C. azurea grandiflora force well in early spring; rest them behind a shady wall in June and July, and they will flower again in October and November. These latter plants although perfectly hardy are well adapted for conservatory trellises. Keep late growing Orchids at the warmest end of the house. Give air liberally in the early part of the day.

FORCING DEPARTMENT.

Pineries.—Plants growing in dung pits must be freely supplied with air to prevent their getting drawn, and they should also be kept near the glass and not allowed to stand too closely together, for strong robust plants need hardly be expected unless this is attended to, and weakly drawn ones seldom or never yield fine fruit. Give careful attention to such as are swelling; afford them plenty of warmth and moisture, and as much manure-water at the root as the soil will bear. Remove useless suckers and gills as soon as they are perceived, which, if left, only rob the fruit and weaken the sucker which it may be necessary to leave on the plant for keeping up the stock. Do not allow young stock in free growth in the succession pits to stand too closely together, nor to sustain any check through neglect in watering, or the want of pot room. Plants growing in beds of soil must also be carefully attended to with water, keeping the soil in a nice moist state. Where rapid growth is required keep as warm and moist as can be done without drawing the foliage, and give plenty of strong clear manure water at the root, and the plants will make rapid progress for the next two months.

Vineries.—See that Vines from which the fruit has just been cut are free from insects, giving the foliage an occasional washing with the engine if red spider is at all troublesome; and use every precaution to keep the leaves in health as long as possible. Prevent the growth of laterals, which only shade and injure the principal foliage. Late Grapes colouring should be assisted with slight fires during the present wet and cloudy weather, especially Muscats, which, after this season, where they are not already all but ripe, will require gentle fires, unless the weather should prove bright and sunny.

FLOWER GARDEN AND SHRUBBERIES.

In some neighbourhoods green fly has been troublesome to Verbenas, &c. Where such is the case tobacco-water and soap-suds may be used with advantage. The strength of the mixture should be tested by dipping some of the shoots worst affected into it and using it sufficiently strong to kill the insects, but not so much so as to injure the leaves. It should be applied in the evening when there is a prospect of a dry night, using a fine syringe or finely rosed watering-pot, and giving enough to moisten the whole of the foliage. Go over the beds frequently and remedy any defect that may be perceptible without loss of time, for bedding plants are enjoyed only for a comparatively short season, and now that they are in beauty every means should be used to render them as attractive as possible by maintaining the most perfect order and neatness. Where the stock is clean and growing vigorously this will involve considerable attention, and it will be necessary to go over the beds frequently, pegging down where necessary, removing decayed flowers, and cutting back such of the shoots as may incline to encroach upon the edging of the beds. Keep herbaceous plants neatly tied up, and cut off the flower stems of any that are becoming unsightly. Take advantage of leisure hours to put in cuttings, and use every possible despatch with this work until there is a good stock in a fair way for rooting of such things as are known to be difficult to winter, except in the shape of well-established plants. Keep gravel walks perfectly smooth and neat by weeding, sweeping, and rolling, as may be necessary. Keep climbers on walls within due limits.

HARDY FRUIT AND KITCHEN GARDEN.

It may still be advisable to go over such trees as are over luxuriant and stop about half the shoots, beginning of course with the strongest; for a general stopping at this time would probably be of little farther service than to induce the production of a mass of useless spray, whereas stopping the stronger shoots or those which incline to grossness will divert the sap into the weaker ones, which will be strengthened, while the buds on the shoots that have been stopped will become full and plump without starting into growth. The only effectual method, however, of curing a gross habit of growth when this is the case in ordinary seasons is root pruning, or keeping the roots within proper limits by means of shallow, well drained borders. Should it be found that the shoots after stopping incline to start into growth, it will be advisable as soon as the fruit is gathered to open a trench at a moderate distance from the stem of the tree, cutting the stronger roots. This will be of the greatest service in checking growth and will probably do more towards securing ripe wood than anything else that could be adopted. Get Strawberry plantations intended to stand for next season trimmed as soon as convenient, cutting off and clearing away the runners so as to afford the leaves plenty of room. Attend to providing plenty of Lettuce, Endive, &c., for winter salads; also see that there is a good bed of Parsley provided in some sheltered spot, where it can be readily protected in severe weather.

COTTAGERS' GARDEN.

As observed in former Calendars, let all spare ground from Potatoes or otherwise be followed up with winter crops of some kind. Amongst the most valuable stand the old Green Kale and Cottagers' Kale. The early Ulm Savoy is also very useful, provided it is got in sufficiently early and on well manured ground. A sloping bank may also be sown with winter Spinach.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending August 16, 1860, as observed at the Horticultural Gardens

August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep	2 feet deep.	Wind	Rain
Friday 10	23	29.839	29.765	64	47	55.5	61	58½	S.W	.72
Satur. 11	24	29.550	29.500	76	49	62.5	61	58½	W.	.04
Sunday 12	25	29.745	29.632	65	49	57.0	61	58½	W.	.02
Mon. 13	26	29.717	29.638	68	50	59.0	61	58½	S.W	.00
Tues. 14	27	29.666	29.634	71	46	58.5	61	59	S.E.	.14
Wed. 15	28	29.680	29.624	69	53	61.0	61	59	S.	.10
Thurs. 16	●	29.351	29.277	65	46	55.5	61½	59	S.W.	.03
Average..		29.649	29.565	68.3	48.5	58.4	61.1	58.7		1.05

August 10—Overcast; cloudy; rain; constant heavy rain at night.
— 11—Rain; thunder 12—1 P.M.; heavy clouds and showers.
— 12—Cloudy; overcast; slight showers.
— 13—Densely and uniformly overcast; cloudy.
— 14—Foggy, fine; overcast; rain at night.
— 15—Cloudy, densely clouded; showery; rain at night.
— 16—Cloudy; heavy clouds; showery.

Mean temperature of the week, 2½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Aug 25, 1860.

August.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 19..	73.2	52.2	62.7	16	0.42 in.	2	4	2	2	1	10	10	3
Mon. 20	72.7	51.7	62.2	15	0.45	2	2	2	1	5	8	11	5
Tues. 21..	72.4	50.1	61.2	12	0.62	3	2	1	1	8	7	9	3
Wed. 22..	71.5	50.4	61.0	12	0.67	2	2	3	—	4	11	10	2
Thurs. 23..	71.9	49.4	60.6	17	0.95	2	3	3	1	3	10	10	2
Friday 24..	71.8	48.2	60.0	15	0.23	1	7	3	—	5	8	7	3
Satur. 25..	71.6	50.9	61.2	14	0.62	2	2	1	1	6	13	5	4

The highest temperature during the above period occurred on the 15th 1859—therm. 89 deg.; and the lowest on the 21st, 1850—therm. 32 deg.

Notices to Correspondents.

*** Correspondents are requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

Gardeners: *J H.* We cannot undertake the task of finding gardeners. You will easily perceive who are disengaged by consulting our weekly advertising columns.

Insects: *A A.* The grubs found in the young Oak trees are the caterpillars of the Goat Moth, a very destructive species which you must if possible get rid off. Whiffs of tobacco smoke blown into the burrows of the larvæ (the outlets of which must be carefully sought for) will dislodge them, when they must be destroyed.—*W H B.* Your insect is not an Ichneumon. It is a female of the wood-boring Sirex gigas.—*Somerset.* Your insects do not belong to the same family as the parents of the wire-worm; the latter are Elateridæ—yours are a species of Telephorus.—*C B.* We do not believe the minute snails found at the root of Potatoes are the cause of the Potato disease. *W.*

Leaves: *T C.* They have been syringed either by water much charged with lime, or with Gishurst compound not properly washed off.

Names of Plants: *J B.* Aconitum ochroleucum; A. Lycoctonum; Gladiolus byzantinus; and Epilobium hirsutum.—*C H.* Your leaf appears to belong to Elæagnus ferruginea. The beautiful stars on the underside of the leaves are a kind of hair called by botanists *lepis*. We do not believe that they consist of silex.—*Gainsford.* Common Hemp.

Roses: *G K D.* It is impossible for us to answer letters privately. Plant Coupe d'Hébé. Any respectable man will supply it. We cannot and ought not to recommend tradesmen.

Strawberries: *T.* Good strong runners are 50 times better than old plants, which are never worth planting. See Cuthill's way of growing them in another column.

Tritoma Uvaria: *T.* Keep your seeds of this in a dry airy place, away from frost. In the spring treat them as if tender annuals. When strong enough plant them out.

NEW VETERINARY COLLEGE, EDINBURGH.—WINTER SESSION, 1860-61.—Professor JOHN GAMGEE will deliver the INTRODUCTORY LECTURE in the above Institution, on WEDNESDAY, October 31, at 2 o'clock.

Further particulars in future Advertisements, and to be had on applying to Professor GAMGEE, New Veterinary College, Edinburgh.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

The Agricultural Gazette.

SATURDAY, AUGUST 18, 1860.

WHEN the soil is adapted to the practice, the most complete mode of utilising all the elements of farmyard manure is to plough it into the ground in a recent or fresh state. In this way there is in loamy soils no loss by putrefaction; but there may on light soils be a loss by rain washing out of the soil the elements of fertility as they are generated. On clay soils the practice seems safe, as the decomposition of the recent manure renders them more friable, while they absorb the ammonia, &c., produced. It is more desirable for some crops than others; thus, for Carrots and Parsnips it has been often recommended, as they do best when the manure is, at the time of sowing the seed, thoroughly incorporated with the soil. For light soils finely decomposed manure is best adapted. Turnips also require well rotten manure, which has a forcing effect on the plants when young; but a little artificial manure applied along with undecomposed farmyard manure would have the same effect.

It appears, then, that for certain soils and certain crops we must have well-decomposed dung. The ploughing in of recent manure, too, could not, at all times, be conveniently attended to as it is produced, inasmuch as other occupations and operations may be too pressing. On the other hand, the occasional ploughing in of such manure economises labour by distributing it more evenly over a long period. But this object is, perhaps, on the whole, more satisfactorily secured by carting out the manure to three or four heaps situated in central points, or to the fields intended for green crops. The great advantage of this arrangement is, that the manure can be carted out in slack working seasons, and so in spring there is not that overwhelming throng of work which often compels the farmer to employ hired labour. There is against this a minor disadvantage, that in the double loading—viz., at the farmyard and at the field heap in spring—there is not only more manual labour required, but a waste of horse labour.

Mr. LAWRENCE, of Cirencester, describes an excellent method of preparing these field heaps, which, with some modifications, is as follows:—The sites selected are excavated about 1 foot deep, and 5 or 6 inches of earth are laid on the bottom to absorb the moisture. The manure is evenly spread as it is deposited from the carts, which are made to go over the heap. This consolidates the manure. The heap is raised about a foot above the ground level, to allow for sinking; and then it is gradually gathered in, until completed, in the form of an ordinary steep roof, slightly rounded at the top by the final treading. Within a day or two after the heap, or a part of it, is finished, a coat of earth, say 4 inches thick, in a moist state, should be plastered over the entire surface;* and if you have sufficient earth at command a little should be occasionally spread among the dung as the heap is in process of formation. The width and height of such heaps should not, for convenience' sake, exceed 10 feet and 6 feet respectively.

In the practice of applying farmyard manure great mistakes are frequently made. It is no uncommon thing to see it lying in the drills in summer time for days before it is covered in; the consequence is, that it is bleached and drenched by wind and rain. And sometimes it is allowed to lie bleaching in the sun for weeks. If the perpetrators of such blunders be right, science is at fault, analysis a delusion, and ammonia and all its kindred a host of impostors. The practice in Syria of making the dung of animals into cakes, and sticking them upon the walls of the houses to dry in the sun, preparatory to their ultimate destination as fuel, is not much more wasteful than spreading out farmyard manure to the wind and sun for months together during summer time.*

* "Road scrapings are better than common soil, as they are in a very minute state of subdivision." Care should, however, be taken that such scrapings contain no seeds of weeds.

OUR annual harvest-report is given elsewhere. It is, as might have been expected from the weather, of a very different complexion from those of several previous years. There can be little doubt that the Wheat crop generally is considerably injured. Of 140 reports received from as many correspondents in England and Scotland no fewer than 93 declare the crop to be below an average; and if the chief Wheat-growing districts be selected it will be found that the proportion of unfavourable returns is quite as large. Thus five out of six reports from Lincolnshire, three out of five from Norfolk and Suffolk, and all from the counties of Oxford, Gloucester, Wilts, Hants, and Kent, report unfavourably.

Of Barley again there are everywhere good reports from Scotland; and only 22 per cent. of English reports speak of the crop as inferior. Oats are reported in 31 instances as inferior, in 93 instances as fair, and in 11 instances as excellent. Of 115 reports of Beans, 75 speak of the crop as good, 27 as very good, and a few as bad.

Peas generally promise well, though latterly, like everything else, they have suffered from the rain. Of Grass there has been abundance, and about one-half of a heavy hay crop seems to have been secured in fair condition. The rest is either much injured or is still to make.

The Potato crop is everywhere attacked by the disease, and generally with much greater severity than usual. Of 140 returns to our inquiry, all from the Southern and Midland English counties speak of the ravages of the disease, which seems to be progressing rapidly everywhere south of Lincolnshire on the one side, and of Salop on the other.

In Ireland Oats, which are the chief grain crop, are generally spoken of as promising under average; Grass is abundant, and much good hay has been made—and the Potato disease is generally making its appearance.

The harvest is everywhere from three to four weeks later than usual.

The following figures relate to the reports from England and Scotland only:—

REPORTS OF CROPS—1860.

Crops.	Under Average.	Average.	Over Average.	Total.
Wheat	93	46	1	140
Barley	28	100	14	137
Oats	31	93	11	135
Beans	13	75	27	115
Peas	13	62	14	89

THE economy of food will always be a first-class agricultural topic. Steam power and horse power will never wholly displace, indeed they will give fresh occasion for the use of, hand power; and the most economical maintenance of strength by food will thus never cease to be an important subject for the consideration of agricultural labourers. Mr. LAWRENCE, of Cirencester, has chosen the best time of the year for calling their attention to it. Hand power is now worth more than it is during any other month in the year. Reaping machines must be amazingly multiplied before the hook is taken out of the hand of the reaper; and till then harvest time will remain the best possible season for discussing "the real sources" of bodily strength.† This is accordingly the seasonable subject of Mr. LAWRENCE's pamphlet. It is addressed to the labourer, and he says:—

"I have often tried to convince you of the loss you sustain in various ways by spending too much of your money upon beer. I have adopted the plan of paying you entirely in wages, instead of giving part in money and a certain allowance of beer, in order to discourage expenditure in beer, so far as rested with me, and to give those who might have sense enough to see how much more usefully the money might be employed for other purposes, the opportunity of so using it.

"I have heard labourers talk about the *liberality* of a master who induces them to labour on at extra hours at night by plying them with beer. This the men suppose gives them additional strength, equal to the extra labour required. Now, you cannot labour under a greater mistake than this, nor one more injurious to yourselves. This extra quantity of beer is really a source of *weakness* in the end, instead of giving you *real strength*, as I hope to show you by and by. Your flesh or muscle is the real source of your strength. That is not increased in any sensible degree by the beer you have been putting into your stomach in the course of the day. The *spirit* which that contains affects your *spirit*; that is to say, it inflames your blood, and makes that run faster, which affects your brains, and induces you to make at the moment greater exertions than you ought to make in the course of the day. It is the *permanent nourishment of the body*, not the passing *influence of spirit*, that is the true source of *enduring strength*. It is the bread, the meat, Oatmeal, Peas, Beans, and such like articles, which build up the real strength of the body for each day's labour. Beer contains a very small portion of that material, but an amount of spirit which, when taken in quantity, tends only to the improvident waste of that strength, which is your main dependence."

All this is illustrated by analyses of different foods; and it is probably the first time that the teachings of the chemist have been directly urged upon the agricultural labourer. Mr. LAWRENCE quotes the experience of BENJAMIN FRANKLIN on this subject, and he might have urged that of many other less distinguished men, of equal value however for his purpose. In his own county there are instances enough of farmers and their labourers using coffee and tea instead of strong beer in the harvest fields to their mutual advantage; and we shall be glad to publish their experience and that of any of our readers on this subject in our columns.

Meanwhile, it would be a service done by them if they should help the general circulation of Mr. LAWRENCE's tract; and take care to explain it when necessary to any of the men whom they employ. It is not solely of food that the author speaks; he gives good general advice as follows:—

"We wish to see amongst labourers a more earnest desire for improvement, and to mend their condition by becoming, thereby, more generally useful. You must strive to keep pace with the improving practice of agriculture,—to handle and manage improved tools, implements, and machinery of expensive character, and requiring greater care and skill in the use, and therefore more valuable labour. Each man seems to be content to go on, month after month, and year after year, in the same sort of work to which chance may have first led him. One man can't mow,—another can't make a rick,—another can't drill,—another can't safely be entrusted with a horse-hoe,—another can't thatch. Now there is not one of those actions, nor any other required on a farm, that every man on it might not put his hand to, and do very well, if he gave his mind to it, and determined to do it; a little practice with attention is all that is required. The wages which a labourer is entitled to claim, will ever mainly depend on the variety of work which he is able to perform perfectly."

* See art. Manure in MORTON's Cyclopædia of Agriculture.

† On the Economy of Food and the Real Sources of Bodily Strength, with some Suggestions for their Improvement. By CHARLES LAWRENCE. LONGMANS.

WE referred last year at this season to the varieties of Trifolium introduced by Messrs. VILMORIN, of Paris*; and an inquiry by a correspondent about early spring food brings the subject before us again. The fault of the ordinary Trifolium incarnatum is that it remains at its best for so short a time; and that when past its bloom it makes such very coarse hay. A small patch is thus all that on a large farm is usually sown—enough for a fortnight or three weeks' forage for the stable. The sorts now introduced, viz., 1, *Trèfle incarnat ordinaire;* 2, *Trèfle incarnat tardif;* 3, *Trèfle incarnat tardif à fleur rouge*, overcome this difficulty by presenting the same or nearly the same plant coming to maturity in succession, though sown and cultivated alike, so that the supply, may be kept up for thrice as slong a time.

The advertisement is illustrated with figures of these different varieties cut the same day, and exhibiting three different stages of maturity, so that while the common Trifolium incarnatum has already passed its bloom the second variety is just at its best, and the third has not come completely into flower.

We have thus a capital addition to the merits of a most useful and easily cultivated plant. Sown broadcast in October (20 lbs. per acre) over any clean Wheat stubble after a shower of rain and well harrowed in, it will germinate abundantly, and if the land be in ordinarily good heart the plant will find the circumstances under which it thrives most satisfactorily; and a large quantity of most useful provender is thus provided early in the season at very little expense. If the plot allotted for this culture be divided into three divisions, and these three varieties be sown one in each, then the crop will continue in perfection for many weeks, instead of being available for little more than a fortnight.

* VILMORIN, ANDRIEUX, ET CIE., Quai de la Mégisserie, 30, Paris.

APPEARANCE OF THE CROPS.

FROM OUR SPECIAL CORRESPONDENTS.

COUNTIES.	WHEAT.	BARLEY.	OATS.	BEANS.	PEAS.	POTATOES.	GRASS.	ROOT CROPS.	HARVEST GENERAL.	NAME AND ADDRESS.
SCOTLAND.										
CAITHNESS	Good	Good.	Good	....	....	Fair	Fair	Very good	Sept.	J. S. MacIvor, Wick
INVERNESS	Average	Over average	Under average	....	....	Vigorous; late	Short	Promising	Sept. 1	A. Simpson, Beauly
	Light	Fair	Light	Light	....	Good	Good	Very good	Sept. 15	J. Mackenzie, M.D., Eilenach
	....	Over average	Good	....	....	Very good	Good; bulky	Promising	Sept. 11	H. Ainslie, Fort William
BANFF	Average	Average	Average	....	....	Average	Very short	Very good	Middle Sept.	J. Barclay, Braes of Enzie
ABERDEEN	Fair	Fair	Good; late	....	....	Healthy	Very bad	Promising	Middle Sept.	——, Turriff
	....	Light	Good	Good	....	Good	Scarce	First-rate	Middle Sept.	J. Laing, Peterhead
PERTH	Average	Most abundant	Light	Strawy	....	Very good	Very fair	Very good	Later	P. Graham, Keir, Dunblane
FORFAR	Late; poor	Full average	Full average	Good	....	Good	Average	Good	Middle Sept.	W. Smith, Brechin
	Under average	Over average	Over average	Over average	Over average	Average	Under average	Over average	Sept. 1	R. Colvill, Arbroath
FIFE	Near average	Full average	Average	Bulky; late	....	Promising	Bare	Very fine	Sept. 1	W. Veitch, Kinghorn
	Thin; but average	Over average	Good	Bulky; poor	....	Not good	Bad	Good	2d week Sept	——, St. Andrew's
	Average; inferior	Over average	Hardly average	Full average	Full average	Indifferent	Various	Turnips good	Sept. 1	J. Pitcairn, Kinnaird
	Heavy	Splendid	Heavy	Very heavy	Good	Fair	Light	Good	Sept. 1	D. Barclay, Newbridge
ARGYLE	Heavy; late	Average	Variable	Full average	....	Splendid but tainted	Superior	Fine	Sept. 1	D. Stewart, Campbelton
STIRLING	Good	Good	Variable	Excellent	....	Very good	Middling	Very fine	Sept. 1	A. Buchanan, Whitehouse
	Over average	Good	Average	Bulky	....	Below average	Not good	Generally good	2d week Sept.	——, Stirling
MID-LOTHIAN	Late, but average	Average	Average	Bulky	....	May be good	Average	Various	Sept. 1	——, Slateford
	Not average	Full average	Nearly average	Luxuriant	....	Healthy	Light	Good	Sept. 1	J. Morton, Dalkeith
	Late; one-third thin, two-thirds good	Full crop	Full crop	Very bulky	Bulky; late	Unequal; healthy	Not full crop	Very promising	Sept. 1	J. Melvin, Ratho
HADDINGTON	Good	Very good	Good	Good	Average	Pretty good	Injured	Good	End of August	J. Steel, N. Berwick
AYR	Average	....	Good	Very good	....	Good	Very good	Very good	Sept. 15	W. Orr, Beith
PEEBLES	....	Good; heavy	Over average	Good	....	Good; healthy	Excellent	Excellent	Sept.	J. Lyle, Inverleithen
ROXBURGH	Near average	Average	Below average	Average	Below average	Bare average	Below average	Above average	Sept. 3	J. Thompson, St. Boswells
	Poor; thin	Good	Not average	Very good	Good	Look well	Spoiled	Average	Sept. 1	W. Herriot, Jedburgh
	Under average	Average	Under average	Bulky	Bulky; not average	Under average	Under average	Over average	Sept. 3	P. Brodie, Charilaw, Selkirk
DUMFRIES	Bare average	Over average	Average	Average	....	Bare average	Not average	Average	Sept. 1	W. Watts, Craigs
	Under average	Good	Various	....	....	Bare average	Bare	Good	Sept. 10	J. Little, Langholm
WIGTOWN	Bulky; not healthy	Good	Excellent	Good	Good	Very good	Good	Very good	Sept. 1	J. C., Baldon
	Average; late	....	Good	....	....	Look well	Deficient	Look well	Sept. 1	A. H. M'Clean, Auchneal
WALES.										
CAERNARVON	Average	Good	Good	....	....	Good	Good	Good	Middle Sept.	J. Williams, Llandudno
CAERMARTHEN	Under average	Good	Good	....	Fair	Good, but diseased	Late	Various	Sept. 1	J. Muscott, jun., Laugharna
ENGLAND.										
NORTHUMBERLAND	Light	Average	Average	Good	Good	Promising	Good	Good	Sept.	J. Grey, Dilston
	Light	Average	Average	Good	Good	Promising	Good	Good	Middle Sept.	T. P. Dods, Hexham
	Not average	Average	Middling; average	Average	Ful	Various; average	Abundant	Very good	Sept.	W. Glover, Newcastle
	Good	Good	Thin	Good	Good	Good	Middling	Good	Middle Sept.	J. Laing, Coldstream
	About average	Good	Light	Good	Fair	Good	Not good	Excellent	Sept. 1	Thos Donald, Linstock
CUMBERLAND	Thin; late	Fair crop	Average	....		Average	Good	Very good	Sept.	T. Gibbons, Longtown
	Average	Over average	Average	Over average	Over average	Symptoms of disease	Average	Never so good	2d week in Sept.	
	Under average	Over average	Under average	....	.. .	Good	Bad	Good	Sept.	J. Rigg, Wigton
	Average	Average	Average	....	.... .	Average	Very good	Promising	Sept.	T. Wilson, Ulleswater
	Not average	Average	Not average	....	....	Average	Under average	Various	Middle Sept.	G. Smith, Penrith
DURHAM	Various	Various	Various	Pretty good	Pretty good	Promising	Good	Healthy; good	Middle Sept.	R. B. Dixon, Darlington
	Average	Average	Under average	....	Very good	Well	Hay spoiled	Good	Middle Sept.	——, Durham
WESTMORELAND	Under average	Good	Good	....	....	Look well	Over average	Good	Sept. 25	J. Robinson, Warcop
	Thin; healthy	Good	Very light	Good	....	Good as yet	Good	Promising	Sept.	W. Key, K. Lonsdale
	Under average	Full crop	Under average	....	....	Very good	Heavy	Excellent	Sept. 10	J. Crosby, K Thure
YORKSHIRE	Under average	Average	Under average	Average	Average	Promising	Average	Promising	Sept. 1	H J. Turner, Richmond
	Not average	Various; laid	Fair average	Good	....	Not promising	Abundant; half good	Good	Sept. 1	J. Hannam, Wetherby
	Thin; improved	Fair	Fair	Good	....	Not promising	Good; badly won	Injured	Sept.	P. Stevenson, Thirsk
	Average; late	Good; late	Good; late	Very good	....	Good as yet	Good	Good	Mid Sept.	H. Briggs, Wakefield
	Mostly bad	Good	Good	Capital	Capital	Moderate	Spoiled	Good	Sept. 20	T. Parrington, Middlesboro
LANCASHIRE	Under average	Average	About average	Above average	....	Under average	Under average	Promising	2d week Sept.	F. Twining, Wigan
	Not average	Good	Various	Good	....	Good	Good; well got	Very good	Sept. 1	G. Drury, Holker
	Various	Fair	Fair	Good	....	Sound	Spoiled	Near average	Sept.	G. W. Fowler, Liverpool
	Late and thin	Quite average	Average	Over average	....	Average	Full crop	Heavy	Very late	R. Robinson, Garstang
CHESHIRE	Looks well; late	Full average	Very good	Average	....	Look well	Very short	Promising	Middle Sept.	H. Tipping, Northwich
	Various; bare average; late	Not average	Not average	Full	....	Good, but diseased	Luxuriant	Good	Sept. 1.	W. Palin, Chester.
DERBYSHIRE	Very thin	Average	Average	Looks well	Strawy	Going bad	Good	Well	Middle Sept.	J. Parkin, Idridgehay
	....	. ..	Bad state	....	....	Good	Various	Various	End of Sept.	B. Swaffield, Hartington
NOTTS	Not average	Average	Not average	Good	Average	Good; diseased	Average	Under average	Sept. 1.	J. Young, Newark
	Under average	Average	Average	Average	Average	Good; diseased	Good	Good	End of August	C. Walton, Newark
LINCOLNSHIRE	Under average	Average	Average	....	....	Diseased	Good	Good	Sept. 3	E. Darby, Horncastle
	Hardly average	Average; laid	Good, except on clays	Full average	Generally good	Diseased	Bulky; hurt	Good	Sept. 1	——, Wragby
	Under average	Good	Average	Good	....	Diseased	Heavy	Promising	End of August	F. Sowerby, Aylesby
	Not average	Light	Light	Good	....	Diseased	Heavy	Good	Sept. 1	C. Sharpley, Louth
	Thin; late	Poor	Average	....	....	....	Good	Good; late	Sept. 10	W. Wingate, Ludford
	Doubtful	....	First rate	Bulky	Bare average	Very bad	Good	Late	Aug. 24	T. Aitken, Deeping, St. Michael
	Full crop; late	Bulky	Good	Bulky	Fine	Full crop; late	Plentiful	Fair	Sept. 1	J. Clarke, Long Sutton
SHROPSHIRE	Not average	Average	Average	....	....	Diseased	Good; but hurt	Promising	Sept.	E. Bowen, Ludlow
STAFFORDSHIRE	Not average	Average	Average	Average	Not average	Bad	Not average	Late; indifferent	Sept. 1	——, Penkridge
RUTLAND	Average	Average	Good	Good	Good	Slightly hurt	As usual	Good	Aug. 29	W. Fancourt, Empingham
NORFOLK	Average	Under average	Good	Not well podded	Not good	Badly diseased	Good; hurt	Fair	Aug. 20	W. Taylor, Wymondham
	Average	Average	Various	Not good	Good	Never worse	Good	Various; late	End of Aug.	W. Cubitt, N. Walsham
SUFFOLK	Not average	Not average	Average	Good	Fair	Much diseased	Heavy	Promising	End of Aug.	T. Brown, Downham
	Not average	Various	Short; good	Very good	Injured	Universally bad	Large crop; half injured	Late	End of Aug.	H. Edwards, Woodbridge
	Average	Three quarters of average	....	One-eighth over average	Average	Much diseased	Good; hurt	May reach average	Aug. 21	G. Edwards, Framlingham
	Laid; not average	Average	Good	Very heavy	Very good	Rotting	Heavy; one-third well secured	Various	Aug. 20	C. Welton, W. Market.
CAMBRIDGESHIRE	Bulky; but blighted	....	Generally good	Bulky	Various	Hurt	Abundant	Good	Aug. 25	A. S. Ruston, Chatteris.
HUNTINGDON	Good	Generally bad	Good	Very good	Various	Good; hurt	Good	Good	Aug. 27	P. Purves, Brampton
	Average	Two-thirds of a crop	Not average	Various	Average	Average; hurt	Plentiful	Late	Aug. 27	R. Beart, Godmanchest
NORTHAMPTON	Full average	Fair	Average	Good	Good	Good; diseased	Good; hurt	Bad; late	Sept. 1	J. B. Smeaton, Welford
	Average; blighted	Average	Full average	Full average	Tolerable	Fair; diseased	Bulky; hurt	Good	Aug. 20	J. Whitwell, Peterborough
WARWICKSHIRE	Improved, but thin and late	Good on dry soils; a failure on wet clays	....	Bulky	Various	Bulky, but much diseased	Luxuriant	Late	End of Aug.	J. C. Adkins, Milcote
	Bare average	1-5th under average	Quite average	¼ over average	Half a crop	Doubtful	Light	Uncertain	Aug. 27	J. F. Tulloch, Wroxhall
	Much under average	Average	Average	Average	Various	Diseased	Average	Late	Sept. 1	J. H. Burbery, Kenilworth
	Various	Full average	Good	Good	Various	Diseased	1-3d bad	Late	Aug. 24	W. Aitcheson, Berkeswell
	Fair	Average	Over average	Strawy	Various	Going fast	1-3d bad	Late	Aug. 24	T. Bowick, Kenilworth
	Not average	Good	Very good	Very good	Indifferent	Fearfully diseased	Very short	Promising	Sept. 1	J. Ford, Newbold Pacey

APPEARANCE OF THE CROPS—Continued.

COUNTIES.	WHEAT.	BARLEY.	OATS.	BEANS.	PEAS.	POTATOES.	GRASS.	ROOT CROPS.	HARVEST GENERAL.	NAME AND ADDRESS.
ENGLAND.										
WORCESTERSH...	Rather below average	Good	Average	Average	Below average	Bad	Crop good; 1-4th hurt	Good	Aug. 27	C. Randell, Evesham
	Average	Heavy on good land	Full crop	Various	Variable	Blighted	Good	Improving	Aug. 24	H. Hudson, Pershore
HEREFORD	Under average	Laid; average	Average	Various	Bare average	Tainted	Average; hurt	Late	End Aug.	P. N. Edwards, Brinsop Court
	Thin	Good	Good	Average	Average	Good	Thin; hurt	Late	Aug. 22	J. Mathews, Blakemore
	Not average	Heavy; laid	....	Pretty good	Good	Average, but hurt	Scarcely Average	Not promising	End Aug.	W. Price, Ross
MONMOUTH	Full average	Light	Average	Very good	Good	Two-thirds bad	Good	Various	Aug. 25	T. Beckingham, May Hill
	Late; hurt.	Good	Good	Bad	....	Diseased	Much hurt	Looks well	End Aug.	W. H. Little, Abergavenny
	Not average	Average	Average	Not average	....	Blighted	Average	Very late	Sept. 1	H. Pride, Monmouth
GLOUCESTERSHIRE	Not average	Hurt; various	Not average	Looks well	Various	Diseased	Average	Good	End Aug.	G. Edmonds, Lechlade
	One-fifth under average	Average	Average	One-fourth over average	Very good	Good; hurt	Abundant	Promising	Sept. 1	J. F. Peacey, Winchcomb
	Bare average	Variable	Good	Variable	Fair	Good till lately	Plentiful	Late	Sept. 1	S. Rich, Didmarton
	Not average	Average	Good	Pretty good	Good	Bad	Good	Good	Sept. 1	G. N. Hulbert, Bagendon
	Worst on record	On the whole good	Generally bad	Well	Well	Quite average	Good crops	Very promising	End Aug.	T. B. Browne, Andoversford
OXFORD	Not quite average	Average	Not average	Complaints	Average	Complaints	Good	Good	End Aug.	R. Page, North Newington
HERTS	Thin; late	Good; laid	Good	Average	Average	Diseased	Tolerable	Very late	Aug. 21	——, St. Alban's
	Average	Average	Average	....	Very good	....	Good; hurt	Good; late	Aug. 25	G. Webb, Beaumont Hall
ESSEX	Hurt; not average	Various	Average	Average	Good	Very bad	Plentiful	Good	Aug. 20	W. F. Hobbs, Colchester
	Good	Fair	Near average	Good	Various	Never worse	Large	Various	Aug. 25	G. Wilkins, Wix
	Average	Two-thirds of average	Average	Large	Good	Very bad	Large	Not good	Aug. 20	W. Hutley, Witham
	Not average	Not average	Very inferior	Over average	Full average	Much hurt	Abundant; hurt	Good; late	Aug. 20	J. J. Mechi, Tiptree
BEDFORD	Very fair	Improved	Pretty good	Very promising	Promising	Doubtful	Abundant	Promising	Aug. 25	Hy. Trethewy, Silsoe
BUCKS	Bulky; defective	Heavy; laid	Fair	Good	....	Middling	Good	Very good; late	End Aug.	Edw. Evans, Windsor
	Various	Weak	Weak	Good; late	Good	....	Average	Late; good	Aug. 27	W. Smith, Woolston
	Average	Not average	Not average	Promising	....	Good till lately	Abundant	Late; thin	Aug. 26	W. G. Duncan, Bradwell
BERKS	Good	Good	Good	Good	Good	Badly diseased	Good	Promising	Aug. 20	J. Williams, Abingdon
	Average	Good	Good	Very good	Very good	Much hurt	Injured	Late; good	Sept. 1	T. Fordham, Newbury
	Variable	Bulky	Never better	Very good	Very good	Never worse	Fair	Never better	Aug. 15	T. Owen, Hungerford
	Late; not average	Average	Late; average	Good	Good	Very bad	Much hurt	Variable	Sept. 1	J. Adnams, Thatcham
	Late; hurt	Very good	Very good	Good	Good	Injured	Heavy; hurt	Generally good	Aug. 25	E. J. Lance, Reading
SOMERSET	Good	Average	Under average	Good	Good	Half crop	Half spoilt	Good; late	Sept. 8	C. P. Collyer, Dulverton
	Average	Average	....	....	....	Very bad	Various	Various	Sept. 1	J. W. Eastment, Wincanton
WILTS	Bare average	Fair	Good	Various	Good	Diseased	Fair	Late	End of Aug.	J. Stratton, Pewsey
	Thin; bare average	Various	Very good	Very good	Very good	Much hurt	Abundant; bad	Various	Aug. 27	T. Chandler, Aldbourne
	Under average	....	Good	Bad	Not good	Diseased	Good	Late	Sept.	T. H. Redman, Swindon
	Under average	Fair	Good	Good	Fair	Blighted	Fair; hurt	Late; promising	End of Aug.	T. Arkell, Penhill
	Thin; not average	Good	Good	Good	Good	Good; hurt	Good	Late	End of Aug.	G. Brown, Avebury
MIDDLESEX	Not average	Not average	Generally good	Over average	Over average	Diseased	Good	Good	Now	C. Webster, Uxbridge
SUSSEX	Under average	Much under average	Average	Under average	Not half a crop	Very much diseased	Large crops	Good	Aug. 15	H. S. Hayward, Folkinton
	Under average	Under average	Short	Partly blighted	Severely hurt	Much blighted	Over average	Late; doubtful	Aug. 27	J. Brotherton, Robertsbridge
KENT	Average; late	Good	Quite average	Very good	Large crop	Good; hurt	Much hurt	Good; late	Aug. 27	M. Sandford & Son, Dover
	Laid; under average	Over average	Very good	Over average	Average	Much diseased	A third cut	Very good	Aug. 22	W. Manser, Ramsgate
HANTS	Under average	Average	Over average	Over average	Over average	Bad crop and diseased	Abundant	Under average	Aug. 27	J. Blundell, Bursledon
	Not average	Much laid	Good	....	Average	Very bad	Average	Late	Aug. 20	J. T. Twynam, Winchester
	Average; laid	Average	Full average	Various	Very large	Good crop; badly hurt	Abundant; hurt	Good	Aug. 25	J. W. Clark, Romsey
	Three-quarters good; one-quarter bad	Average	Good	Good	Good	Diseased	Half hurt	Late	Aug. 27	H. Raynbird, Basingstoke
DORSETSHIRE ..	One-fifth under average	Over average	Good	....	Average	Very bad	Hurt	Good	End of August	W. J. Voss, Corfe Castle
	Much under average	Over average	Over average	Blighted	Over average	Much blighted	....	Very good	Aug. 27	R. Damen, Dorchester
	Thin; late	Good	Good	Good	Bad	Never worse	Heavy; bad	Not good	Sept. 1	J. Furmedge, Langdon
	Under average	Good	Fair	Good	Very good	Very diseased	Abundant; hurt	Improving	Aug. 25	W. J. Pope, Bridport
DEVON.....	Below average	Average	Average	.....	....	Much diseased	Abundant	Late	Sept. 10	J. Benson, Tavistock
	Under average	One-third under average	Good	....	....	Very bad	Abundant	Very good	End of August	S. Cornish, Kingsbridge
	Average	One-third under average	Over average	....	....	Very bad	Various	Good	Aug. 27	R. W. Clark, Plymouth
	Good	Inferior	Good	....	....	Much hurt	Abundant	Late	Sept. 1	——, Totnes
CORNWALL	Under average	Under average	Over average	....	....	Much diseased	Good	Good	Aug. 23	J. Michell, Truro
	Average	Average	Below average	....	....	Very bad	Not good	Late	Aug. 23	J. Wills, Launceston
IRELAND.										
DONEGAL	Good	Pretty good; little sown	Not good	Good	....	Very good; blight appearing	Not good	Fair average	Middle Sept.	Thos. J. Atkinson, Ballyshannon
LONDONDERRY..	Good	Average	Short	....	....	Indifferent	Abundant	Various	Sept.	S. Orr, Coleraine
	Good	Good	Not average	....	....	Not good	Good	Bad	Sept. 10	C. Pollock, Magherafelt
ANTRIM	Good	....	Poor	Various	Average	Various	Good	Good	Sept. 15	J. Burniston, Randalstown
DOWN	Short produce	Pretty fair	Not average	Short; late	Short	Diseased	Good	Not average	Sept. 10	W. M'Cleary, Portaferry
ARMAGH	Good	Good	Not average	Good	....	Bad; late; hurt	Very good	Good	Sept. 10	W. Boyd, Armagh
	Very good	....	Fair	....	....	Not good	Very good	Fair	Sept.	R. B. Hardy, Tanderagee
CAVAN	Luxuriant	....	Thin; short	....	....	Good hitherto	Various	Various	Mid Sept.	J. A. Nesbitt, Belturbet
	....	....	Average	....	....	Not so good	Heavy	Fair	Mid. Sept.	T. Chambers, Baillieboro'
MAYO	Good	Fair	Average	....	....	No blight	Very good	Late	Sept. 18	G. Hildebrand, Westport
LONGFORD	Light crop	....	Good; average	....	....	Slight disease; crop deficient	Over average	Good	End of Sept.	E. Morgan, Edgworthstown
	....	....	Good	....	....	Good	Good	Bad	Sept. 20	J. Smith, Castleblaney
MONAGHAN	Good	...	Not average	Good	....	Blight	Very good	Bad	Sept. 15	A. Mair, Brookeboro'
FERMANAGH	....	Fair	Various	....	....	Tainted	Good	Various	Sept. 1	G. Lamb, Mountbellew
GALWAY.....	....	....	Not average	....	....	Not average	Bad till July	Destroyed	Sept. 8	D. Boyd, Carrick-a-Shannon
ROSCOMMON	Good	Good	Light	....	....	Diseased	Good	Good	Sept. 10	J. Kelly, Brook Lodge
	Middling	Fair	Average	....	....	Bad	Good	Late	Sept. 10	W. Newburn, Mullingar
WESTMEATH	Very good	Tolerable	Rather light	....	....	Good, but blighted	Good	Various	Middle Sept.	W. M'Culloch, Dundalk
LOUTH	Full average	Average	Average	....	....	Very bad, and badly blighted	Good	Late and bad	Sept. 5	E. Bennett, Newmarket-on-Fergus
CLARE.....	Not good	Splendid	Good	....	....	Much diseased	Very good	Various	Very late	J. De Renzy, Clonegal
CARLOW	Good	Average	Very good	....	....	Good; but blighting	Very good	Very good	Aug. 20	G. Glasscott, J.P., Camolin
WEXFORD	Good	Average	Average	....	....	Good; but blighted	Good	Average	Sept. 1	D. A. Milward, Tullogher
KILKENNY	Average	....	Average	....	....	Blighted	Very good	Good	Sept. 1	R. D. B. Massy, Ballywire
TIPPERARY	Very good	Good	Very fine	....	....	Blighted; and small	Various	Very good	Sept. 8	J. O Sullivan, P. P. and V. G, Kenmare
KERRY.....	Very good	Good	Middling	....	....	Late	Good	Middling	Sept 8	J. Creagh, Tarbert
	Average	Fair	Good	....	....	Slightly blighted	Good	Good	Sept. 1	H. Longfield, Doneraile
CORK	Good	Good	Good	....	....	Blighting	Good	Good		D. Clanchy, Charleville
	Average; but doubtful	Moderate	Good	Fair	Fair	Average, but tainted	Good	Fair	Aug. 25	J. Byron, Shanballymore
	Good	Good	Fair	....	....	Small & tainted	Very good	Good	Sept.	S. Piddell, Kildorrery
	Very good	Very good	Good; short	....	....	Good		Indifferent	Sept.	——, Baltina

BURGESS AND KEY'S REAPER.

As I bought a Burgess and Key's reaper two years ago and have used it with great ease, comfort, and success during two harvests (in the course of each of which I mowed from 150 to 200 acres of Wheat, Barley, or Oats with it), I accept your challenge in last week's Number of the *Gazette* to send your readers some particulars about the quantity of labour it requires to gather, bind, and stook, after it. But in the first place let me advise those of your readers who have had no personal experience of this machine to keep your suggestion in mind, not to expect in ordinary practice the extent and kind of work which, under very special circumstances, it may really succeed in performing. Thus it professes to go round a field in a constantly narrowing circle or square, cutting all straight before it. On a nice level field, without hollows, ridges or furrows, with an evenly-grown crop, strong and upright, which no prevailing wind has swayed in any one special direction, and no storm materially laid, this kind of work may be, as it doubtless frequently has been, accomplished. Even where the conditions are not quite so favourable under the skilful management of an experienced manager from Messrs. Burgess & Key's, the same work might also probably be done and done well. But under the prevailing circumstances of a British harvest with thick and thin crops, level and uneven ground, laid or wind swayed, and upright straw, skilful and unskilful driving and management, steady and unsteady horse working, I am persuaded it will generally be a waste of time, a trial of temper, and a disappointment to all engaged in the work, to attempt it. It is particularly necessary, in introducing a new machine into a neighbourhood, not to task it beyond its powers, or beyond your own powers to use it. There are so many unwilling labourers about, so many captious and incredulous observers, that it is better to start moderately and be successful in what you attempt, and then proceed by degrees with your trials, than to commence with a failure that puts everybody in the field out of humour, or out of heart, and raises a laugh among fools against all new things, and all machinery and experiments.

The first day, now just two years ago, on which we tried the reaper, after spending several hours in trying to put it together (in which we were but partially successful, for we had no mechanical head among us), Messrs. Burgess and Key's man arrived on the ground, and in a few minutes completed the arrangements. The horses being put in he then mounted the box, amidst a more serious and anxiously expecting knot of persons than I ever saw on an ordinary harvest field. He commenced according to programme. The first difficulty was in getting the machine into the field (in which in fact we ought to have put it together at first) through the foolishly narrow gate. This accomplished, the round began, the men having previously prepared horse-room with the scythe. Now the field had been laid down in ridges of 2 yards wide, according to the inveterate habit of this part of the country the most foolish habit (where land is drained), that could be persevered in. These ridges ran up and down the field, so that the poor machine's first progress was across the extremities of these stupid ridges and furrows. Up and down it went, bump, bump, bump; every one expecting it each moment to go to pieces from the severity of the process. It held its ground, however, manfully, proving, as I have since had ample reason to know, the strength of its construction, and its ability to stand an immense amount of hard usage.

Now, not only were there these ridges and furrows in the way of the machine, but the crop itself on the headland was very thin, and far from perfectly ripe. The consequence was that there was a great deal of ill-cut stubble after two rounds, and the worst part being near the road (a frequent providential provision, I have observed, for the cure or mortification of agricultural vanity), I saw three or four old farmers ride off shaking their heads and jeering at the failure of the new-fangled machine, and probably at its owner. My bailiff, who had always been "against" it, evinced a grim and sulky pleasure at the disappointment, and the success of his own prophecy; and seeing from this circumstance and his subsequent ill humour when the thing began to work well that he was too weak t wish to learn or improve, I happily soon after parted with him. As the little knot of labourers and spectators were retiring (for it was now past six o'clock in the evening) I walked over the new stubble and examined it carefully. Over some of it the reaper had passed so ineffectually as scarcely to take the heads off; some of it was very high and rough, but down one side of the field the work was done superbly. I pointed this out to a faithful old man in my employ, whom I had brought with me from my own house in the morning to witness the experiment, and who had been cruelly disappointed by the general result, and he admitted its excellence, but feared that the grain was a good deal shed. This we found upon careful inspection was not the case, and I have since observed that far less grain is shed with the reaper than with the sickle, the ears being much less, and much less forcibly, knocked together than by the careless hand of the human reaper. By the next morning, after some conversation with the man who was to follow and take care of the reaper, I had made up my mind how to set it to work. I rode over a little before the time the work was to begin and directed the reaper to be driven only one way, that in which I had found the work to be so well done, which was down the ridge (not across it), and also in the direction of the inclination of the head of the Wheat, so as to meet as it were the bowing head, and take it under the van. This answering, as before, capitally, I desired the man to throw the reaper out of gear for the return journey; and although we have often since with a promising crop and on land well laid down and without ridges tried to work, all round the crop, we have never succeeded satisfactorily; it almost always happening that the wind has given a particular inclination to the crop, against which it is desirable to cut, but with which the reaper is apt to pass almost over the head of any part of the crop that may be a little flattened. Be this as it may with others, I can certainly say that according to my two years' experience, and after many experiments, I have found it in every way best to be content with cutting one way, and throwing the machine out of gear the other.

But it will be argued this is a great loss of time. Not so great, if any, as might at first be supposed. In the first place there is the very rapid, complete, and satisfactory way in which what is cut, is cut; not only leaving a more even stubble than any ordinary reaping or even mowing can effect, and yielding you a considerably greater bulk of straw, but also laying the crop in such a regular swath as to enable the gatherers and binders to do their work much more quickly and perfectly, and leaving much finer raking. In the second place, the horses have alternate rests, which occasions them to tread much more briskly when the machine is in action, a circumstance of great importance, as rapidity of step greatly conduces to the efficient working of the machine; and thirdly, which brings me at last to the point on which you especially desire information, if the machine works only one way you can at once arrange your binders at proper distances, which, in a tolerably equi-lateral field, they may be able to preserve the whole day, each man having his own beat as it were allotted to him, and being obliged to occupy it and fulfil its duties, all laggards being caught up and detected by the periodic return of the reaper, which comes like inevitable fate at the appointed time, and without respect of persons. And while it is pleasant to see the lazy worker at once detected, it is no less pleasant to see the active man stand erect, straightening his back, and resting himself with his work finished before him for a minute or two between each return of the reaper; and my experience teaches me that with the reaper and the kind of discipline it introduces into a field, all the workers become active, for all who are otherwise cease to be well affected towards the new timekeeper and disappear from the field.

Being really interested in the subject and truly grateful to Messrs. Burgess and Key for the introduction of such a valuable (I should rather say, such an invaluable) implement, I have allowed myself to indulge in a most unpardonable prolixity; but if you think it will be of use to any of your readers who, like myself, may have to try the reaper as quite a new thing in their county, I will finish this detailed account of my employment of it next week. In the meantime allow me to say that, under the plan above described, I have had a field of Wheat of 10 acres all standing at 7 o'clock in the morning, and all reaped, gathered, bound, and set up in stooks by 7 o'clock in the evening of the same day, only 10 men being employed in all. *Exile.*

ON THE CULTURE AND COMMERCE OF CHICORY.

The cultivation and use of Chicory have now attained a very great importance, not only on the Continent but also in the United Kingdom. Dating its extended use chiefly from the system pursued by the first Napoleon to substitute home-grown for colonial products, it has gradually become approved and popularised for a beverage, either used alone or mixed with coffee, in numerous countries, where it can be sold far under the price of even the lowest-class coffee. The manufacture of a factitious coffee from the roasted root of the Cichorium Intybus would seem to have originated in Holland, where it has been used for more than a century. It remained a secret until 1801, when it was introduced into France by M. Orban, of Liège, and M. Giraud, of Homing, a short distance from Valenciennes.

Introduction and Culture in England.—On the first introduction of Chicory into Great Britain a nominal duty of 20 per cent. was levied upon it, which, owing to the representations of the trade, was afterwards increased to the same rate as that then payable on British plantation coffee. The high duty thus placed on foreign-grown Chicory soon led to its cultivation at home; but so little was the plant known in England that the farmers required the rent to be paid in advance for the use of their land. In the autumn of 1853 we find it grown in Kent, Surrey, and Essex, where the article was prepared, and met with a great sale. Finding there was an increasing demand for the root, its culture spread to Bedford, Norfolk, Suffolk, Cambridgeshire, Leicestershire, Cheshire, and Yorkshire. The extent of the home production has never been accurately ascertained. In 1850 there were 3000 acres under crop with it within a circuit of 10 miles of the city of York; and in other districts there were 7000 or 8000 more. At first the price realised was as high as 50*l.* per ton ground and 20*l.* per ton in the root. But as the growth extended the price receded. The admission, duty free, of foreign-grown Chicory in 1854 led to the abandonment of much of the home culture; and if we are to believe Mr. Gladstone, there are not now 500 acres under culture with Chicory in Great Britain.

In 1842 Mr. M'Culloch assumed the growth and consumption of Chicory in the United Kingdom to be 6,720,000 lbs.; and in a little handbook on "Coffee as it is and as it ought to be," which I published in 1850, I estimated from careful inquiries the consumption of Chicory in this country then to have reached more than double that quantity. But Mr. Braithwaite Poole, in his "Statistics of British Commerce," published in 1852, rated the actual production of Chicory root made into powder in England and Guernsey, then as high as 14,000 tons, worth, at 22*l.* per ton, 308,000*l.* Besides which, it will be seen the foreign imports average upwards of 5000 tons per annum. The gradual increase of foreign-grown doubtless now replaces much formerly produced at home.

It was not till the trade returns of 1856 that Chicory became a distinctively mentioned article in the imports. Since then the imports have been as follows:—

Years.	Quantity.	Average price.	Value.
	cwts.	*s.* *d.*	£
1856 ..	.. 81,721 ..	.. 10 6 ..	.. 42,903
1857 ..	.. 93,469 ..	.. 10 7 ..	.. 49,461
1858 ..	.. 127,553 ..	.. 9 6 ..	.. 61,120

The detailed returns for 1859 are not published yet. The largest quantity received comes from Belgium, the next from Holland, and a little from Hamburgh and other quarters.

Mr. George Phillips, when giving evidence before Mr. Scholefield's Committee, in 1855, stated that prior to the year 1832 little was heard of the use of Chicory in this country, but in the subsequent three years its use had gradually so increased that the Board of Inland Revenue was obliged to take steps against the sale. "I have no doubt (he adds), from my own experience, that a very large bulk of the public prefer the mixture. That, however, is a question of taste. The trade contend that good Coffee, mixed with one-eighth part of Chicory and sold at a moderate price, makes a better beverage than ordinary Coffee would do at the same price, and the great mass of the public prefer it. Chicory sold as Coffee yields a certain profit, but probably it equalises itself in the general competition of trade. There is a large quantity of Chicory sold by itself and drunk as a beverage in the neighbourhood of Manchester and Liverpool. I believe the price of a pound of the cheapest kind of Coffee, purchased by the bulk of the poor people, and a pound of the mixture, is about the same. The trade say, where we use a portion of Chicory we use a better coffee. I do not know the fact of my own knowledge. Whether the coffee sold in mixtures is of a superior quality to that sold as a pure article would be very difficult to ascertain; it depends upon the question of taste and aroma. The Chicory itself is not always pure."

Cultivation.—There are many varieties of the Chicory plant, the greater part of which have blue flowers; some are white, and others red. In Brunswick they only grow the broad-leaved or native kind, or the small-leaved which has long roots, and is a native of Magdeburg. The former is, however, preferred on account of its being the richest. In Altona they grow a medium variety, which has neither very narrow nor very broad leaves. The plant thrives in all soils that will grow Carrots; indeed, the mode of cultivating one is much like that of the other. The roots seem to grow best upon a loamy soil, with a clayey subsoil, dry, deep, and rich. It very seldom thrives in heavy clay land, and never in sand or wet land. It requires much manure. In preparing the land, deep ploughing is recommended; but unless the soil is very deep it is probable that subsoil ploughing will answer better. The surface must be well worked; indeed, it cannot be reduced to too fine a mould. As the plants are a long time in coming up, generally five or six weeks from the time of sowing the seed, it is necessary that the land should be very clean, or the weeds (particularly Chickweed) are liable to overtop and smother the young plants. The time of sowing varies in different districts; in the midland and eastern counties the second or third week in May is considered best, for if sown earlier many of the plants will run to seed, in which case they are called "runners" or "trumpeters," and must be carefully dug out and destroyed when the time for taking up has arrived; because if allowed to become mixed with the bulk they will spoil the sample. The best crops have been obtained when the seed has been sown broadcast; but the preference is usually given to drilling, the crop being more easily hoed and cleansed. The rows are generally from 9 to 12 inches apart, and about 3 to 4 lbs. of seed per acre is the quantity used. Most of the cultivators of Chicory single out the plants so as to leave spaces between them in the rows, each about 6 or 8 inches long; but there are many who do not do this, fancying that four or five small plants produce more weight of root than one large plant; the expediency of this, however, is very questionable, as it does not allow of the land being nearly so well cleaned as when the practice of singling is adopted.

Harvesting the Crop.—In October or November,

the work of taking up the roots may be commenced, and continued during the winter (if the crop cannot be previously secured), until it is finished. Although the roots penetrate a long way downwards, they become too thin below 14 or 15 inches to be useful, and the utmost care is also required in order to get up that portion of the root which will prove profitable. In some cases, Chicory has been ploughed up, about 12 inches deep, with a strong cast-iron plough drawn by six horses; having men to fork each furrow to pieces, with common Potato forks, before a second furrow is ploughed upon it; and women and children following to pick up the roots and cut off the tops. But the best method is found to be that of digging up the roots with double-pronged, strongly made iron forks, the blades being about 14 inches in length, and each fork, with shaft and handle complete, weighing about 8 lbs. The plan of ploughing is liable to bring too much of the subsoil to the surface, and costs quite as much, if not more, than digging. The advantage which is looked for in ploughing is to ensure getting the roots up from a greater depth than can be done by digging, as a great number break off about 8 or 9 inches long, unless a boy is employed to assist the diggers, and is very careful to pull the top at the precise time that the man presses the root upward with his fork. When dug, the tops should be neatly cut off, and the roots conveyed to the washing-house to be cleaned. Sometimes they are earthed in pits, but, generally speaking, they are taken to the washing-house immediately after being dug up. In the former case, on the Continent, the roots with the leaves cut off are thrown in heaps of from 4 to 6 feet in length, width, and height, on the surface of the ground; some straw and then some earth are put around. But generally, the growers deliver the roots to the manufacturers from the latter end of August to November, by whom they are immediately dried. The root is from 2 to 4 inches thick, 3 to 7 inches long, and occasionally, in a good soil, 3 lbs. in weight. In Brunswick they obtain from 4 to 6 tons of root per Brunswick acre.

The weight of the crop depends entirely upon the richness or poverty of the soil, the tillage and manure it has received, and other circumstances. The fault in England is the striving to grow as heavy a crop as possible, to the very great detriment of the quality of the root for powder. In Brunswick the price of the root in the original state varies from 20*s.* to 40*s.* per ton, according as the crops have been good or bad, and an acre will realise 5*l.* to 7*l.* The cost for cultivation is from 3*l.* 15*s.* to 4*l.* 10*s.*; 1½ to 2 tons is about an average crop. Mr. Wm. Stuckney, who has grown and prepared Chicory for the manufacturer to a very great extent on a large farm near Hull, estimates the expense of the cultivation of Chicory there at 4*l.* 5*s.* 6*d.* per acre, and if we add to this 2*l.* 10*s.* for rent, manure, &c., it gives 6*l.* 15*s.* 6*d.* The produce on suitable land he states to be from 8 to 12 tons per acre, and it requires 4 tons of green root to make 1 ton of dried. In the dried state the root is worth from 12*l.* to 24*l.* per ton. Take 10 tons per acre, at 2*l.* 10*s.* per ton, and this would leave a profit per acre of 18*l.* 4*s.* 6*d.* Another competent agricultural authority states that the price of 2¼ tons of dry root for the acre, at 12*l.* per ton, would be 27*l.*; deducting 7*l.* for rent, labour, and other expenses, this would leave a profit of 20*l.* per acre.

PREPARATION FOR MARKET.—The roots are cut into small pieces of about ½-inch or ¾-inch lengths by a Turnip-cutter, or by hand, the object being to have the pieces of as uniform a size as possible. The slices are then dried in a kiln; this process wasting the Chicory from 75 to 80 per cent. It is then marketable, and is usually sold to the drysalters and grocers, who roast and grind it as they do Coffee. 2 lbs. of lard or common butter is used with each cwt., to prevent it from burning in the roaster and to impart lustre. The root wastes in roasting 25 to 30 per cent. or more. In the ground state it may be kept for years, but it soon cakes. The roasted root is emptied into iron vessels, and, after cooling, is crushed in vertical stone mills, or between iron cylinders. It is then sifted, and during this operation a small quantity of some red colouring substance is added to assimilate it more in appearance to Coffee. The product is then weighed off, and sold in packets or canisters.

The root by torrefaction attains a disagreeable bitter, and an aroma something like caramelized sugar. Roasted and reduced to powder, Chicory is the most universal substitute for Coffee in the chief continental countries, especially in France, Switzerland, Germany, Belgium, Holland, Denmark, Russia, and the other northern States. In Germany the ground Chicory is made up into cakes and sold in that form. This root is not superior to many others which possess sweet and mucous principles, but of all the plants which have been proposed as substitutes for Coffee, and which when washed and steeped in boiling water yield an infusion resembling the berry, it is the only one which has maintained its ground.

CONTINENTAL CONSUMPTION.—The quantity of the dried root consumed in France is about 16,000,000 lbs. a year. Formerly, they were able to export some, but now scarcely enough is produced for home consumption. In 1835, 1,250,000 lbs. were exported. In some parts of Germany the women are becoming regular Chicory tipplers, making of it an important part of their daily sustenance. Till within a few years the cultivation was carried on principally near Valenciennes; but lately manufactories have sprung up in several localities, especially at Arras, Cambray, Lille, Paris, Senlis, in Normandy, Brittany, &c. Not satisfied with Chicory, the French have recently introduced Acorn coffee and roasted Beetroot. The Beet, it is asserted, besides communicating its hygienic qualities, also helps to sweeten the beverage. The new coffee is called *café de betterave*, as the old was called *café chicorée*. These distinctions will become as puzzling as that in America, which led the Irish waiter to ask if the gentleman would have coffee-tay, or tay-tay.

EXPORTS OF CHICORY FROM BELGIUM.

Years.	Quantity. Kilogrammes.	Value. Francs.
1850	670,624	134,125
1851	975,162	195,032
1852	1,550,064	310,013
1853	1,310,478	262,096
1854	1,500,022	300,024
1855	2,978,508	595,702

In 1858 the quantity of Chicory root imported into Hamburgh was 24,592 cwts., and of ground Chicory and other Coffee substitutes 13,000 cwts.

The Chicory entered for home consumption in Denmark and the duchies was, in

	lbs.		lbs.
1849	1,601,032	1851	2,187,985
1850	2,228,295	1852	2,949,553

Simmonds in Pharmaceutical Journal.

FARMING ECONOMICS,—No. V.

IRRIGATED ITALIAN RYE-GRASS.—The great aim of the farmer should be to make one acre produce as much as five—thus diminishing, by four-fifths, his rent, rates, tithes, horse-labour, seed and other expenses—such as distance of carting, gates, hedges, head-lands, &c. Of course this cannot be done with corn crops, but with Italian Rye-grass it can be done; and, to some extent, also with root, Grass, and leguminous crops. I have an 8-acre field of Italian Rye-grass, which, from its first cutting, yields 190 lbs. per rod—being more than 13½ tons per acre; or, if made into hay, about 4 tons 17 cwt. Italian Rye-grass contains, when green, 75 per cent. of water; when made into hay, about 16 per cent. I do not think it would be safe to reckon upon the whole produce stated above, because the crop may somewhat vary in places. I have reason, however, to believe that the first cut from the Edinburgh Meadows, on which the town sewage flows, will be, this spring, quite 20 tons the Scotch—or 16 tons the English—acre, and I can easily understand how Mr. Telfer produced 80 tons per Scotch acre of Italian Rye-grass—equal to nearly 25 tons of hay. I would recommend, before my farming friends express their doubt and disbelief, that they will try the same means on some small portions of their own land, and then come armed with their results. I will now state how the field was treated on which my Rye-grass is growing:—

1856—Mangel. A heavy crop.
1857—Wheat. Ditto.
1858—Beans. 6 qrs. per acre.
1859—Wheat. Nearly 7 qrs. per acre.

The Italian Rye-grass was purchased of Mr. Dickinson, as usual, sown with the seed barrow at the rate of 3 bushels per acre on the growing Wheat, in the spring of 1859, and hoed-in at the last hoeing. When the Wheat was harvested it was scarcely visible—being as fine as needles; but having lost its oppressor—the Wheat—it soon grew, and gave good autumn feed. I did not irrigate it, being desirous to keep it backward, having another forward field. This spring I sowed upon it 2 cwt. Peruvian guano, mixed with 1 cwt. of fishery salt, and washed it in with an abundance of diluted liquid from my great tank, at the rate of 20,000 gallons per acre. The effect was almost magical. In a fortnight it branched, thickened, and lengthened, until last week, I cut from 1 square pole or rod 190 lbs. weight.

On six lands I omitted the guano; the result, although irrigated, like the rest, showed a deficiency of nearly one half as compared with that which had been guanoed. I have treated another field the same way for sheep and cow feeding, and the result has been extraordinary. The fact is, the guano pays admirably, and I shall never irrigate without previously sowing it; and after every cutting I did this in 1855, and kept 100 sheep constantly on 6 acres, from April to October. That field has since carried a Pea and Turnip crop, a Wheat crop, two Barley crops, and a white Clover crop for seed, which produced last year 10 guineas per acre, and now there is a fine crop of Tares for seed. The fact is, when you Rye-grass a field for two years, and produce, by irrigation and high manuring, such an enormous growth, the subterranean roots are correspondingly multiplied, and the soil and sub-soil deeply fertilised by the filtration through them of such abundant supplies of manure—the roots running down abundantly into the sub-soil, which has been enriched and aërated. Of course the land must be deeply drained. See how small a space will supply a farm horse daily. 100 lbs. of green Italian Rye-grass will contain 25 lbs. of dry matter, and he probably will not be able to consume more than 112 lbs. in the 24 hours. Mine have no corn, and are in first-rate condition with this quantity.

I assume, of course, that you do not allow your horseman to waste it under the horses' feet, but that it is all eaten. I hope that we shall soon hear no more of farm horses consuming, annually, the produce of *five acres*—eating up, in fact, nearly one-fourth of the farmer's acreage. On this plan *one* acre will be nearer than five, for a horse cannot consume more than one rod per day—or 160 days on one acre, for the first cut. I think I see some of my friends on the poor, stiff, undrained clays opening their eyes rather wide at this statement, with another indignant disbelief of that Mr. Mechi; but facts are stubborn things, and I must admit that it must be hard for the farmers of poor worn-out, coarse pastures to believe in such things. I intend to go in for much larger results, by washing in 4 or 5 cwts. of guano after each cutting (mixed, of course, with salt). The principal difficulty with this crop is to cope with the seasons, and adapt consumption to production. Heavy supplies of rain, such as we have recently had, cause such a flush, especially of the first cut, that I must at once cut 6 acres and make it into hay; although I have 150 sheep, 20 bullocks, 3 cows, 20 small calves, and 6 farm horses all consuming it. I grow this year 15 acres, and average about 10 acres. If the hay is to be palatable and nutritious, we must take care to cut it early, and cart it rather green. If full seeded it will lose quality, and become hard and strawy. It will bear stacking in a more crude state than ordinary Grass. There is a peculiarity about Italian Rye grass. It will never scour any animal, however green or wet it may be; and in this respect compares most favourably with Tares. It has excellent fattening properties. Where you can irrigate, it is truly beneficial, but without irrigation you have no chance after the first spring cut. Broad-leaf plants succeed admirably after it—such as Beans on heavy land, Peas on light land; or you may take Rape before the Wheat. It is desirable to break it up the second year in September, or early in October. If you take Wheat immediately after it you should plough in 5 cwt. of Rape cake, which will kill all the wire worm, and prevent the destruction of your crop. If farmers would bring all their drainage and buildings' water into one great reservoir they might get water enough to irrigate a few acres of this Grass, which would be most useful and profitable to them. Bullocks will fatten well upon the Italian Rye-grass without any other food, although I always prefer adding Rape cake, for obvious reasons.

In conclusion, if our clays and other lands, when drained and improved, can be made to produce even 30 to 40 tons of this Grass per acre, what an immense increase of meat and manure we might make. If Mangel is worth for consumption 10*s.* per ton, Italian Rye-grass is certainly worth 20*s.* per ton in its green state, seeing that it contains 25 per cent. of dry matter, while Mangel only contains 12 per cent. Is it not worth while (as Mr. Telfer did) to put on a ton of guano, at four dressings annually, to produce 10*l.* or 50*l.* worth of food and manure? Let the landlords and tenants of the millions of acres of miserable, worn-out, unimproved, rough Grass lands ponder well on this statement, and draw their own conclusions; and let our Boards of Health and Sanitary Reformers weigh the individual and national benefit which would result to the country if the town sewage were applied to this crop. I need hardly say that if I had access to town sewage, like Lord Essex, I should save the cost of guano. I hear that several of the Scotch meadows were let this spring by public auction at 35*l.* to 44*l.* rent for one year's Grass on one imperial acre! Professor Way's analysis gives in 100 parts dried at 212°:—

10.19	Albuminous, or flesh-forming principles.
3.27	Fatty matters.
57.82	Heat-forming principles (starch, gum, sugar, &c.)
19.76	Woody fibre.
9.05	Mineral matters, or ash.
100.00	

I presume the "irrigated" Italian would (like the irrigated meadow Grasses) give even more favourable results.—See Way on "Nutritive Matter of Grasses," *Royal Agricultural Society's Journal*, vol. 14, p. 180.

I need not dilate upon the necessity for procuring the best and heaviest clean seed, when we see, by Professor Buckman's examination at the Royal Agricultural College, Cirencester, that it is no uncommon thing to get from 500,000 to 1,100,000 weed seeds in a bushel of seed weighing 14 to 18 lbs. Clean good seed should weigh 18 lbs. Very deep cultivation, and ample manure deeply buried, are excellent preparatives for Italian Rye-grass. I almost always sow mine upon a growing Wheat crop. *J. J. Mechi, Tiptree, July* 23.

P.S.—My second crop of Italian Rye-grass, which is now being mowed for home consumption, is quite a yard long, and must be certainly, 13 to 14 tons per acre. My greatest difficulty in irrigation has been with the 200 yards of moveable or flexible hose. Gutta-percha (which is still the best) is apt to knuckle, and also to melt, if left empty on a hot day. I paint it white to prevent this. I have tried for a year, a sandwich of strong canvas between two layers of vulcanised India rubber. This promised to be most durable, and perfectly successful; but, after a time (owing, I presume, to some chemical action), the liquid found its way through to the canvas, rendered it rotten, and thus destroyed the pipes. I hope shortly to try Jaloureaux & Co.'s paper pipes.

The powers of irrigation are, I think, by no means sufficiently appreciated. Our chemists give us the value of all the elements of manure, but omit to state the great fact that without water they are worthless as

food for plants. Vain is the application of guano, without a shower, natural or artificial, to wash it into the soil and subsoil. What value, then, will chemistry put upon a jet-fall or artificial shower equal to a rain-fall of 1 inch, which would be 100 tons of water per acre, deposited at the right time? The effect of a heavy shower in the warm days of May or June is like magic on the growth of plants: no manure, however strong or costly, would effect this without water. Water is, in fact, the only carrier of heat downwards. The hot soil is robbed of its heat by the rain-fall, which, percolating on drained soil through the cold subsoil, imparts to it its heat, and is thus robbed of its caloric *en passant*.

The natural heat of the subsoil is, at 4 feet deep, only 46°; while the surface, on a hot summer's day, attains a temperature of 120° to 130°. The amount of increased heat thus imparted to the subsoil has its hot-bed like influence on the growth of plants. Besides this, water performs many and various good offices and chemical agencies in the subsoil. The enormous rain-falls of the Tropics (often 111 inches per annum), combined with great solar heat, produce rapidly-grown and astonishing masses of vegetation.

Home Correspondence.

Clover Dodder.—Have you ever turned your attention to the annual increase of the Clover Dodder in our Clover Leas—it is injurious enough to pay for decided efforts to destroy it. Our Beans have within the last few days become affected with mildew, as you see by the specimens enclosed. *J. W. Clark, Lockesley*

Crops in Lancashire.—The accounts of the progress in the crops in this county during the last two months is not so cheering as I wish it were in my power to give. In June last there were 20 days more or less wet, with occasionally very heavy thunder storms. This prevented the proper working of fallows and caused Turnips to be sown late, and on strong lands none have been sown at all. The Grass certainly did improve, but contrary to custom hardly a crop of hay was secured in that month. All corn came on slowly, and with the exception of Beans continued to look yellow and sickly. July however commenced more favourably; 16 fine days secured a great deal of the Clover hay, almost all of which was got in first rate condition, but the stacks are by no means large. A considerable extent of old meadow is now cut and all abroad, and that which stands is spoiling. The Wheat has shot full three weeks later than last year. The ears are fine, but generally the crops are very light and will not exceed an average of 20 bushels of 70 lbs. the statute acre. Oats and Barley are quite an average and Beans above, but are very dirty, there being no time at the proper season to have them cleaned. Potatoes, Turnips, and Mangels, have generally suffered from the excessive wet; they are an even plant and may yet be good crops. Early Potatoes in a few instances are rotting; however at the time I am writing they are selling 1*s.* per 21 pounds, which is a remunerative price. The general cry is for sun and hot weather to forward crops. Harvest under the most favourable circumstances will not commence before three weeks from this date, and a short supply of hands for harvesting is feared; some of the most energetic farmers have ordered reaping machines, which will be most useful this year, as expedition will be of great consequence. From the opinion which can be formed at present, I should say the crops promise as follows. Hay under an average, ⅔ of which will be well got. Wheat a half crop of both corn and straw; Oats and Barley not exceeding an average; Beans, an average, or rather above. Nothing can be said with certainty of the green crops at the present time. Stock has not done well on account of the wet season, and the pasture lands look starved. New hay is thus early in the market and has been sold at from 6*l.* to 7*l.* per ton. of 2400 lbs. Straw will be high as many will have to thresh out to thatch their corn stacks, and there seems every reason to suppose that all stock during the winter will have to be kept at a great cost. *Francis Twining, Parbold Hall, near Wigan. Aug.* 11.

Increase in the Consumption of Food.—The labouring class of people being well employed at good wages has a wholesome effect upon their minds and bodies, and the effect it has in increasing the consumption and raising the price of food, is a source of advantage to the producers, but more especially to those who have been at great expense in putting their farms into good order, for now they have the prospect of being repaid, and they also have the satisfaction of being in a position to benefit all classes of the community as well as themselves, by largely contributing to the supply of the provision market; and although we have the opportunity of drawing largely our supply from our neighbours abroad, our great object should be to increase the productions of our own soil, for by so doing we increase the value of our own property, and circulate the money here to the advantage of our own people. There are great advantages to be derived from the employment of the steam plough, the chief of which is deep culture, for the expense of stirring the subsoil by horse labour has no doubt deterred many from its employment. Expedition is also of great importance in ploughing and subsoiling in active farming; and it is the constant application of the subsoil plough, with a liberal supply of farmyard manure, thin seeding and drilling-in all the crops at wide intervals, also by keeping all the crops constantly stirred with the horse and hand hoes, allowing no opportunity for the weeds to grow—it is this combined system of culture that will insure a great increase in the productions of the soil without materially increasing the expense of culture; and it must be a better principle to employ the labour at an earlier period, so as to prevent the growth of weeds, than wait till the autumn to destroy them, after they have lived at our expense and shed their seed, that no means but the open fallow can be employed to destroy them. Where no weeds are allowed to grow, less manure will be required to produce our corn crops, and we shall have more for our root crops and pastures, an important consideration in the present state of the meat market. *B. Ransley, Perrysfield Farm, Oxted, Surrey, Aug.* 1.

Societies.

Highland Society at Dumfries: The following are extracts from Dr. Anderson's lecture referred to last week:—

A very few years ago the farmer relied exclusively, or at least almost exclusively, on farmyard manure, and so long as he did so, the matters he had to consider were comparatively simple. Long experience has taught the best method of preparing and applying it. In fact almost all the precautions required for this purpose were known from a remote period. It must be admitted, however, that although these precautions were well known to the good and skilful farmer, they were often but little attended to in practice, and over large districts of country carelessness and waste were the rule, and the proper management of manure the exception. The last 15 or 20 years, however, has produced a change in this respect which amounts almost to a revolution, and the consumption of foreign and manufactured manures, which during that period has risen from nothing until it has attained its present extraordinary magnitude, has brought home to the farmer with a force which it never before possessed, the question of the money value of manures.

It may be of some interest if I endeavour now to form some kind of estimate of the sum which is at present expended in this country on the purchase of artificial manures. It is not possible to do this with absolute accuracy, but an approximation may be made which cannot be far from the truth. I find, on referring to the Board of Trade returns for 1858, that the value of the guano imported and retained for home consumption amounted to 3,857,424*l.* This sum, however, appears to be above the average of 1859, which was much below this; but, on the whole, it appears that we were consuming every year somewhere about 2,500,000*l.* in value of guano. Every year there are imported nearly 26,000 tons of nitrate of soda, and making a liberal allowance for the quantity consumed for other purposes, we will say that 15,000 tons are consumed for agricultural purposes, which will make an annual value of 225,000*l.* Of bones there are imported every year 84,000 tons, besides the quantity collected in this country. Of these, 80,000 tons are employed for agricultural purposes; one-half of it is bones, and the other half is converted into superphosphate. We find that the value of 40,000 tons of bones at 6*l.* a ton is 240,000*l.*, and that the value of 40,000 tons of superphosphate at 7*l.* a ton is 420,000*l.* The consumption of coprolites annually cannot be very accurately estimated, but I understand it is about 50,000 tons, which yield 75,000 tons of superphosphate; this at 5*l.* per ton makes 375,000*l.* The value of the consumption of sulphate of ammonia is 150,000*l.* a year; and allowing for other articles a sum of 100,000*l.*, we have for the total value of artificial and imported manures annually consumed in this country a sum of 4,010,000*l.* It would be very interesting if it were possible to ascertain what relation this large sum bears to the value of the farmyard manure annually consumed throughout the country; but on this point it is impossible to obtain any reliable information. A kind of vague estimate might perhaps be obtained from the number of acres of land under cultivation. It is said that the land under tillage on the British Islands exceeds 24,000,000 acres, and though this is probably above the mark, it may be adopted without much error. If now we assume that one-fourth of this is annually manured to the extent of 10 tons per acre with farmyard manure, the annual consumption must be 60,000,000 tons, worth about 20,000,000*l.* It is probable that this estimate is too high, but it shows that at least one-fifth of all the manures now used is artificial, and chiefly derived from foreign sources.

The introduction of these new and important elements of fertility has not only altered the whole system of cultivation, but has placed the farmer in an entirely new position. Farm-yard manure can always be recognised, but with all other manures the external appearance is no criterion of their quality, and it is possible to imitate their character so nicely that the worst appears equal to the best. To avoid the difficulties by which he is thus beset, the farmer is compelled to invoke the assistance of the chemist in order to ascertain that the manure he purchases really is what it is represented to be. At the outset it must be laid down as a rule that the more simply the analysis of a manure can be expressed the better. The object of the analysis being to enable the farmer to effect a comparison between different samples and ascertain which is the best, it ought to be framed with this view.

Guano.—Directing our attention then, in the first instance, to Peruvian guano, the most extensively used variety of its class, we find that in its analysis the results are expressed in the following manner:—

Water	13.73
Organic matter and ammoniacal salts	53.16
Phosphates	23.48
Alkaline salts	7.97
Sand	1.66
	100.00
Ammonia	17.00
Phosphoric acid in alkaline salts equal to 5.42 phosphate of lime	2.50

It is to be noticed, in the first place, that a guano, like any other manure, is a mixture of valuable and worthless matters. Water and sand, of course, have no value, and they only merit consideration in those cases in which they are so abundant as to reduce the proportion of other matters. The quantity of water is so far of importance that it indicates the condition of the manure, shows that it has not been damaged, and enables us to see that it is sufficiently pulverulent to admit of its easy application. Provided, however, the valuable matters are not below the average, the quantity of water and sand is a matter of comparatively little moment. Looking to the valuable matters, we see that in a genuine Peruvian guano, more than half its weight consists of organic matter and ammoniacal salts containing 17 per cent. of ammonia; somewhat less than ¼ is composed of phosphates insoluble in water, and in a form similar to that in which they exist in bones. One-tenth is alkaline salts, containing 2.5 per cent. of phosphoric acid, which is soluble in water, and in a condition analogous to that in which it is found in the soluble phosphates of a superphosphate. If then any other constituents appear in the analysis besides those just enumerated, and if the sand is larger, the guano is certainly not genuine. Three quarters of the value of a Peruvian guano are due to ammonia, ⅛ to phosphates, ⅛ to phosphoric acid in the alkaline salts, 1-50th to organic matter, and only about 1-130th to alkaline salts. The reduction in value caused by the ammonia being 1 per cent. under the average, could only be counterbalanced by an excess of 8 per cent. of phosphates, and by a proportionate quantity of other constituents; although it is commonly supposed that the variations are so slight, that provided it be ascertained to be genuine its analysis is unimportant. No doubt the importers encourage this view by charging the same price for all cargoes of guano altogether irrespective of analysis; but nevertheless there are very material differences, especially in the amount of ammonia, and I have known samples containing as little as 15, and others as much as 19 per cent. of that element, involving a difference in value amounting to nearly 2*l.* 10*s.* per ton. Such differences, of course, can only be detected by complete analysis; but if it is merely desired to ascertain whether or not a sample is genuine without determining its exact quality, it is possible to arrive at this information without a complete analysis, and it has been customary to rely on such simple tests, or even to omit altogether any means of ascertaining its purity. Hitherto the general run of Peruvian guanos, though varying considerably in quality, have all been remarkably free from sand and other foreign matters; and when directly imported, analysis has been less important than with other manures, the more especially as differences in quality are not recognised as modifying the price.

Superphosphate.—It will be understood that the term superphosphate was originally applied to a mixture of common bones and sulphuric acid. The introduction of coprolites, and more recently of apatite and various other phosphates, has rendered the wider designation necessary. The use of these substances has also entailed further differences in the mode of manufacture, sulphate of ammonia, flesh, fish, offal, and various other animal substances being used to supply the nitrogen in which these materials are deficient. The consequence of this is that the greatest possible differences exist in the composition of this manure. In order to render the analysis of a superphosphate intelligible, it is necessary to explain that in the bones and all other similar substances the phosphoric acid is in combination with lime, and the combination is entirely insoluble in water. But there exists another compound of these substances, containing only the third of the lime, which is exceedingly soluble in water, and which is commonly known by the name of biphosphate of lime. When, therefore, two-thirds of the lime is removed from the former, it is converted into the latter, and this is effected by means of sulphuric acid, which, by its superior attraction for lime, withdraws it from the phosphoric acid and forms with it a quantity of sulphate of lime or gypsum. We find also by actual experiment that 100 parts of the ordinary bone phosphate of lime contain 46 of phosphoric acid, and by removal of the lime it is converted into 64 parts of biphosphate of lime, still containing all the phosphoric acid, the difference in weight being due to the abstraction of the valueless lime, which along with sulphuric acid has produced 110 parts of gypsum. By the addition of a proper proportion of acid to bones or any other raw material, the whole of the phosphates might be converted into this compound, but practically great difficulties are encountered in doing so, and in the case of raw bones it cannot be accomplished. It will be understood from what has been said, that in the act of making the phosphoric acid soluble a quantity of sulphate of lime is produced, and it is important to notice this point, because it is very commonly believed by farmers that the sulphate of lime which forms so large a constituent of all superphosphates is deliberately added to them by the manufacturer. This, however, is a mistake. I believe sulphate of lime is very rarely added to a superphosphate, and that the efforts of the manufacturer are devoted to keeping it down as much as possible, because it is well known that a large proportion of it excites suspicion and distrust on the part of the farmer. It has been already said that it is impossible to obtain any great quantity of superphosphate of lime without at the same time producing one and a half times as much gypsum, but in practice the proportion is generally much larger than this, because almost all the

raw materials employed in the manufacture contain a considerable quantity of carbonate of lime or chalk, which by the action of the acid is also converted into sulphate. This is particularly the case with coprolites, and the consequence is that it is far from uncommon to find the gypsum two or three times as large as the biphosphate.

Valuation of Manures.—The commercial value of different substances is not estimated solely by considerations of composition. Thus a coprolite containing about 60 per cent. of phosphates sells for 3*l.* 10*s.* a ton, while a purely phosphatic guano containing the same quantity brings from 6*l.* to 7*l.*; in other words, the phosphates in such a guano bring nearly twice the price they would do in coprolites. In the same way if our inquiry was the price of bone ash, we find the value of the phosphates intermediate between that of coprolites and guano. Another element which must also be considered is the state of division of the substance, the extent to which its different constituents are available to the plant, the facility with which it can be applied to the soil, &c. In purchasing a manure the substances which are of actual value are ammonia, insoluble phosphates, soluble phosphates, sulphate of lime, nitric acid (as nitrate of soda), potash, soda, and organic matter. Ammonia and the phosphates, soluble and insoluble, are costly. Potash also sells at a high price, but it is rarely found in manufactured manures sufficient to influence their price. The alkali most commonly found in artificial manures is soda. In order to obtain a fair value for each of these substances, it is necessary to ascertain the commercial prices of each separately. This however cannot be done in all cases, and it is necessary sometimes to arrive at it by an indirect process, in the manner which will be afterwards explained. The question we have to solve is the price actually paid for a ton of each of these substances in a pure state, and we shall consider each in succession. Insoluble phosphates are purchased in several different forms. Coprolites ground to a fine powder and containing 58 per cent. of phosphates sell at 2*l.* 12*s.* per ton, and a ton of pure phosphates is consequently sold for 4*l.* 8*s.* In this state however the price is extremely low, because it is alleged that the phosphates are in so compact a condition that the plant cannot avail itself of them, and they are only used as a raw material for the manufacture of superphosphates. Bone ash, containing 70 per cent. of phosphates, costs 4*l.* 10*l.* per ton, and pure phosphates in this form are therefore sold at 6*l.* 8*s.* A similar course may be adopted with phosphatic guanos, and we then find that a ton of insoluble phosphates is worth in

Coprolites	£1	10*s.*
Fossil bones	5	5
Bones	7	5
Phosphatized guanos	10	0

This difference is to be attributed to the higher state of division in which they exist in the guano, and their consequent accessibility to the plant. We are bound then to estimate the value of phosphates in such guanos at this price, although as ammoniacal guano, such as Peruvian, they are sold at a lower rate, but for all other mixtures of which lime and bone ash form the basis, 7*l.* per ton may be taken as a fair rate. Ammonia is found in commerce in the shape of sulphate of ammonia, which at present sells at from 15*l.* to 15*l.* 10*s.* per ton, and making allowance for the ordinary amount of impurity (5 or 6 per cent.) the price of ammonia in this form is about 63*l.* per ton. By calculating from the price of other substances it appears that the following are the values of ammonia per ton:—

In sulphate of ammonia	£63
In bones	61
In Peruvian guano	57

the general average being 60*l.* per ton, which is the price usually adopted. Sulphate of lime sells for about 1*l.* per ton, and this value is accordingly always adopted. Organic matters in manures at from 10*s.* to 1*l.* per ton, and I should adopt the lower estimate. Alkaline salts, consisting chiefly of soda, are taken at 1*l.* per ton; and potash, at from 20*l.* to 30*l.*, the former being the price at which it can be procured in Kelp. Nitrate of soda is at present sold at about 14*l.* per ton, and allowing for its high ammoniacal properties, the price of the pure salt is about 13*l.* Considerable difficulty attends the estimation of the value of soluble phosphates. I find that, taking the good soluble phosphates only, their average composition during the present year has been:—

Water	10 71
Organic matter	5 35
Sulphate of lime, equivalent to 19 43 soluble phosphates	12 45
Insoluble phosphates	14 78
Sulphates of lime	46 24
Alkaline salts	2.11
Sand	8 36
	100 00
Ammonia	1 71

The average price is about 8*l.*, and if so, soluble phosphates are sold at 27*l.* 19*s.* per ton. If the inferior samples had been included so as to give one general average the price would have been still higher. The value at which they are estimated is 30*l.* per ton, and 6*l.* 16*s.* for biphosphate of lime, although commercially the former has been reckoned as low as 25*l.* with a corresponding rate for the latter. It is unnecessary to point out that the values of the different substances contained in manures being a matter of calculation, considerable differences must exist in the values attached to them by different individuals, and we therefore give a table showing the values per ton as adopted by different analysts:—

	Way.		Voelcker.		Nesbitt.		Hodges.		Anderson.	
	£	*s.*	£	*s.*	£	*s.*	£	*s.*	£	*s.*
Ammonia	58	0	60	0	60	0	56	0	60	0
Insoluble phosphates	7	0	10	0	8	0	7	0	7	0
Ditto in phosphatic guanos	7	0	10	0	8	0	7	0	10	0
Soluble phosphates	32	13	30	0	24	0	25	0	30	0
Biphosphate of lime	50	3	46	16	37	8	39	0	46	16
Alkaline salts	1	0	1	5	1	0	1	0	1	0
Sulphate of lime	1	0	1	5	1	0	1	0	1	0
Potash	0	16	—		—		20	0	20	0
Nitrate of soda	—		20	0	—		—		13	0
Organic matter	1	0	1	0	1	0	1	10	0	10

The practical application of these values is very simple, and will be readily understood by a few examples. Let us suppose a sample of superphosphates to contain—

Water	12.59
Organic matter	14.11
Bisphosphate of lime equivalent to 14.88 soluble phosphates	9.58
Insoluble phosphates	15.13
Sulphate of lime	39.42
Alkaline salts	3 82
Sand	5 60
	100.00
Ammonia	2.10

It is obvious that the percentages must represent the number of tons of each constituent in 100 tons of the manure, and the value is calculated in the following manner:—

14 11	Tons of	organic matter at 10*s* per ton	£7
14 88	,,	soluble phosphates at 30*l.* do.	446
15 13	,,	insoluble phosphates at 7*l.* do.	105
39.42	,,	sulphate of lime at 1*l.* do.	39
3.82	,,	alkaline salts at 1*l.* per do.	4
2.10	,,	ammonia at 60*l.* per do.	126
			£727

Consequently the value of 1 ton is 7*l.* 5*s.* An average Peruvian guano calculated in the same manner gives—

2.15	Tons of	organic matter, at 10*s* per ton	£ 0
2.18	,,	insoluble phosphates at 7*l.* do.	14
5.90	,,	phosphate of lime and the alkaline salts, at 1*l.* per do.	5
7.07	,,	alkaline salts at 1*l.* per do.	7
17.00	,,	ammonia, at 60*l.* per do.	102
		Value of 100 tons	£128

or at the rate of 13*l.* 18*s* per ton. It appears, therefore, that, as compared with other manures, Peruvian guano is a cheap manure. It must be understood, however, that this system of valuation gives only an approximation to the price, and in estimating it exactly many other matters must be taken into consideration, more especially in the case of manufactured manures. Among these the condition of the manure is of the highest importance. A damp, ill reduced manure must not be valued at the same rate as a carefully manufactured sample, which has been brought into a high state of division, and the valuator must exercise his judgment in this matter, and diminish or add to the value to such an extent as he may consider right under the circumstances. In the same way the proper adjustment of the relative quantities of the different constituents must be taken into account. Thus, for example, if there be two samples of superphosphate having the following composition—

	I	II
Water	12.59	11.83
Organic matter	5.67	7.82
Bisphosphate of lime	10.77	11.20
Equivalent to soluble phosphates	(13.82)	(33 41)
Insoluble phosphates	12.33	9 9
Sulphate of lime	45.50	34 12
Alkaline salts	2.11	2 00
Sand	4.43	3 15
	100.00	100.00
Ammonia	1.71	1.61

if the values of these two manures be calculated according to the plan just laid down, No. 1 is found worth 7*l.* per ton, and No. 2 11*l.*, but probably too value of the last is in no means so high, because it is found that the conversion of the whole of the phosphates into a soluble form is not attended with as many advantages in a practical point of view, but that the best results are obtained when a reasonable proportion is left insoluble. In point of fact a manure like No. 2 is sold at from 8*l.* to 8*l.* 10*s.*, which may be considered as its proper value. The sum of what I would impress upon this meeting is,—In the first place the most important matter for you to attend to in purchasing manure is to see that the seller supplies the farmer with an analysis of the manure, stating exactly what its composition is. The farmer, then, after examining this manure and calculating its value, according to the system which I have been explaining, should require a warrant for its purity, according to the analysis which was given him. He has next to ascertain whether the manure has the composition which the seller professes it has. Now, no reliance can be placed upon the uniformity of manures. In the produce of various manufacturers great differences are observed, and the reason is very obvious and very simple. Manure is a cheap article which will not admit of that amount of expenditure in the shape of labour which insures uniformity. The manufacturer must use a rough-and-ready process, and the consequence is he cannot ensure an absolute and complete uniformity. Even if you take four or five specimens of the same manure by the same manufacturer you will find that it differs very much in its composition; but if you take a small quantity from different bags and mix them all together, you get a general average which, being the make of a good manufacturer, will turn out to be tolerably uniform. A sample, therefore, should always be selected from a few different bags, properly mixed together, and also the composition should be determined. Further, the farmer is to ascertain that the analysis he receives is properly made. The data which I have given you as to the extraordinary consumption of these artificial manures, and the extent to which we are dependent upon them, will show how much the farmers may be misled if they do not take care to use the proper means of arriving at their composition. A reduction, for instance, of 10*l.* per cent. in the value of these manures is equivalent to a sum of 100,000*l.*; and you may also readily understand how easy it would be to adulterate an article some 10 or 20 per cent., and the difference never be observed.

Reviews.

The Pig. By W. Youatt. Enlarged and re-written by Samuel Sidney, editor of the "Illustrated edition of Rarey's Horse Taming," &c. Routledge.

This, though with an old title, is a new book, and thoroughly substantial and complete upon its subject. Its topic is one which more than any other will interest all classes of agriculturists, the farmer of an allotment as much as he of 1000 acres, and Mr. Sidney will thus, no doubt, secure troops of readers for his pages. He says in his preface:—"It is scarcely an exaggeration to assert, that since Mr. Youatt's death, the breeds of pigs in this country have been almost reconstructed; many have been extinguished; the best have been widely spread; all worth notice have been materially improved. The breeding of 'stud' pigs is no longer confined to amateurs, but has been taken up by farmers bent on profit. When, therefore, I undertook the task of preparing a new edition of 'Youatt's Pig,' I began by addressing a series of questions to my numerous friends among the members of the Central Farmers' Club and the Royal Agricultural Society, and to all the principal pig breeders of England. The result was a long correspondence and a mass of information from farmers actually engaged in breeding and feeding swine, which it has been my endeavour to condense and present, under suitable heads, as much as possible in the original words of the writers. I have divided the work into two parts: in Part I., containing twelve chapters, scarcely six pages have been retained of the original edition; **Part II., containing the Ancient History and Natural History of the Hog, and chapters on Veterinary Art, has been abridged from the first edition, with very slight additions.**"

The work is well illustrated. "The new illustrations are taken from the best specimens that could be obtained of the breeds worth cultivating; if they are not entirely satisfactory, it is hoped that allowance will be made for the difficulties in the way of photographing a pig. 'My boar,' writes an enthusiastic breeder, 'seems to have no regard for his personal appearance and will neither lie nor stand when required.' The illustrations retained from the first edition show what the breeds were at that time."

One of the best features in the book is its full and abundant collection of the reports of Mr. Sidney's practical correspondents. We take one or two extracts from their reports on Pig feeding.

"A Yorkshire breeder and feeder writes:—'I am a farmer, and I keep pigs for profit, and I have no stock that pays like them; but I have found a surprising difference in the feeding qualities of the different breeds, and I am not astonished at farmers saying pigs will not pay. I expect in a few years to see a great change in the breeds, as it will not pay in these times to keep an unprofitable animal at any breed. I have been selling some York Counties, 20 score of 14 lbs. at 6*d.* the pound without offal, and 7*s.* 6*d.* with offal, for porkers, and I have sold some large Yorks of nearly 50 score and at 6*s.* with the offal. I think the medium size pay better than the large breed hogs; and I very much doubt whether either the large Yorkshire or the Berkshire can be fed to a profit.' (This is a breeder of small Yorks.)

"'I know that it is the general opinion that pigs are fed at a loss. I have heard this year (1860) that bacon stood the feeder in the stone of 14 lbs. But for 11 years I have kept an account of all my pigs cost, and what I sell, and at the years end I know the truth, for I charge my pigs the corn grown on the farm at the market price. My balances are actually balances, not 'estimates,' like those of some fancy farmers. Mine is a farm of about 280 acres, half in plough, and half in grass. I spend sometimes 700*l.* on purchased food but little on any manure, except lime and salt. I make all I can, and make it good. I calculate I get my pig manure free, but not my cattle manure.'

"A Berkshire breeder and dairy farmer writes:—'My stores, farrowed in March, are fatted off by December, making from 10 to 12 score, although I have often had them much heavier. Pigs this weight are always saleable in the London Newgate Market at

6*d.* or a 1*s.* per score more than heavier ones. I have grown a pig of the Berkshire breed over 40 score. Second litters, coming in about December, at three months, will do for pork. The sow will then be in again in March or April. The whey runs from my dairy into a vault near the piggery, in which I have large bins to mix the meal and whey together, allowing it to ferment for three days before using it. If I am well off for roots, I have a good quantity pressed, steamed, and minced with whey and Barleymeal. In the winter, a few Beans or Lentils, ground. If convenient, give warm food. Have not more than six pigs together. Warm sties, clean, and the pigs well groomed with brush and Linseed oil, which will cleanse the skin and kill the lice with which they are often annoyed.'

"'Cooking pigs' food pays well,' says a Yorkshireman. 'A bushel of Barley will go much further cooked than raw.' On the other hand, a great Cheshire dairyman writes:—'We did once cook our roots, and made Indian cornmeal porridge. Since we have given the meal dry, before turning the whey or water into the troughs, the pigs have grown and fattened much better. We made the change on the advice of an experienced feeder: it has answered beyond our expectations. We now only use the boiler for the bones and flesh of dead animals.'" On this point it is a pity that a full history is not given of the circumstances under which such varying experience was realised.

On the value of Wheat as food for pigs a Yorkshire farmer writes:—"We are now using ground Wheat, purchased from the mill about 1*d.* per lb., which, as large bacon pigs are selling at 7*s.* per stone (14 lbs)., leaves a handsome profit for fattening, even at the present high price of stores. The farmer who is wise will keep both these profits in his own hands. He will rear his stores, and grind up his own (inferior) grain for feeding them. His pig sties will not have to carry the profits and expenses of railway, corn-factors, and millers. If he wants pigs to pay, he does not starve them for 12 or 18 months, leaving them to roam about the fields, robbing his own corn-stacks as well as his neighbours' while the pig-boy plays truant; consuming as much food among 20 as would feed 30, rooting and turning over a fold-yard dungheap; but he feeds with the corn that will only cost him in money half its feeding value, and gets the manure into the bargain. A well-managed pig-feeding establishment near any great town ought to pay in times of low-priced grain. Unlike beef and mutton, every inch of a pig is in demand, and the offals are sold prices as dainty bits."

Mr. Sidney has given us not only a useful but a most readable book. His chapters are not only full of substantial instruction but they are garnished with racy anecdote, and with well selected passages from writers both ancient and modern. The volume concludes with Mr. Youatt's recipes and instructions for the treatment of the diseases to which pigs are liable.

Miscellaneous.

Is the hot-air bath a cure for Pleuro-Pneumonia in Cattle? The results we have arrived at are as follows:—That in three cattle baths erected in the neighbourhood of Cork, 25 cows in all were subjected to treatment. Of these one was suffering merely from rheumatism, and recovered, and five were sold to the butcher, at prices varying from 6*l.* 7*s.* 6*d.* to 10*l.* 10*s.*, and before the bath had been sufficiently tested on them; thus reducing the number to 19. The result of the experiments on the 19 were as follows:—

Recovered	10
Died under treatment	2
Died after the closing of the bath	4
Disputed	3
Total	19

Of the 10 stated to have recovered, one is disputed on the ground that she is not recovered; but, as it is admitted that she is in milk, and grazing with the healthy stock, we must give the owner credit for common prudence, and look upon the admission as conclusive. With regard to the four cows that died after the bath closed, it is to be observed that bath No. 2 was closed in consequence of its having gone out of repair; and in the interval of time that elapsed before bath No. 3 was ready for use, one of the two cows that were then under treatment died, and the other relapsed, was afterwards treated in bath No. 3, and died after its closing. This is the cow mentioned in the report of committee appointed by the Royal Agricultural Society, case No. 4. Of the three cases disputed, No. 1 is disputed on the grounds that the animal was not suffering from distemper, it being asserted by one party that she was merely pining—by the other, that she was grinding her teeth, and a plain case of lung disease. She is now in milk, and grazing among the healthy stock. No. 2 is disputed on the ground that she was suffering from disease other than lung distemper, and is the case mentioned in committee's report, No. 6—she died. No. 3 is disputed on the grounds that her owner bled her largely while she was under treatment, and that she died when actually under the operation. It is remarkable that while baths No. 1 and 2 were eminently successful, bath No. 3 seems to have been a failure. This may be accounted for by supposing that the cases treated in the latter were of a more virulent character, or not taken in time, or else that the animals were not properly treated. This latter opinion is in some measure substantiated by the report of the Royal Agricultural Society's committee, where it is stated that out of six cases shown to them two had been bled, and another was dying and had been neglected, and one cow was on the eve of recovery. On the whole, we are of opinion that there are strong grounds for further giving the hot-air bath a fair trial. It is not pretended that this, or any other mode, is a certain specific for the disease; but if taken in time it may, and we trust will, be productive of good. A gentleman writes last week that he is losing three head of cattle per day. Surely, under such distressing circumstances, a remedy, emanating from such a highly respectable source, is entitled to a full and fair trial. *Dublin Farmers' Gazette.*

Ram Sales.—"O" stands for Oxfordshire Downs, and "C" for Cotswolds; "W" for Wiltshire Downs.

Name.	Ram Lambs.	Shearlings.	Average Prices.	Highest Price.
			£ s. d.	£ s. d.
Mr. J. Roberts, Caswell, O..	..	40	7 2 2	11 11 0
Mr. C. Gillett, Bampton, O	..	28	11 15 10	23 2 6
Mr. L. Lord, Stanton Harcourt, C	..	42	11 7 9	17 17 0
Mr. W. Gillett, Southleigh, C	40	..	6 9 6	10 15 0
Duke of Marlborough, O ..	..	13	....	16 16 0
H. L. Gaskell, Esq., O ..	..	8	6 11 3	....
G. H. Barnett, Esq., O ..	..	20	7 1 3	12 1 6
Mr. Hewer, Bradwell, C ..	..	..	7 14 0	....
Mr. J. Gillett, Fawler, C ..	..	..	7 16 9	10 16 0
Mr. Hobbs, Kencott, — ..	10	..	6 8 1	....
Mr. C. Howse ,, — ..	..	..	5 5 2	....
Mr. Osborne ,, — ..	16	...	5 2 6	....
Messrs. Druce ,, O ..	..	..	8 9 4	....
Mr. Hobbs ,, O ..	..	20	7 0 0	....
Mr. Hitcham ,, O ..	..	..	5 13 0	....
Mr. Ruck ,, C ..	..	56	8 2 9	....
Mr Rawlence ,, W ..	100	12	8 9 6	21 0 0
Mr. Aylmer, Westacre, — ..	80	..	9 4 0	17 0 0
Mr. Aylmer, Westacre, — ..	..	20	6 18 3	10 0 0
Mr. J. Godwin, Troy Farm, C	..	25	8 19 10	28 7 0
Mr. Rowland, Islip, O ..	..	17	8 4 10	15 4 6

Most of these sales were at Oxford and Bicester.

Duration of Pregnancy in Domestic Animals.—On the duration of pregnancy, and the periods of premature and protracted labour, Baumeister furnishes the following table:—

Species.	Premature Labour.	Regular Labour.	Protracted Labour.
Mare	11 months or 330 days.	11½ months or 340 days.	14 months or 420 days.
Cow	8 months or 240 days.	9½ months or 285 days.	11 months or 330 days.
Sheep and Goat..	4½ months or 135 days.	4⅘ months or 144 days.	5½ months or 160 days.
Sow	3⅔ months or 110 days.	4 months or 120 days.	4½ months or 130 days.
Bitch	1⅘ months or 55 days.	2 months or 60 days.	2⅓ months or 70 days.
Cat..	1⅔ months or 50 days.	1⅘ months or 55 days.	2 months or 60 days.

Edinburgh Veterinary Review.

Calendar of Operations.

AUGUST.

Berwickshire Merse Farm: *Aug.* 6.—The second month of summer is past and gone, and yet we have experienced but little of what is looked for as summer weather. Rains, persistent and often heavy, and a cloudy sky, uncovered at night sometimes, have combined to keep the temperature much below the usual point. The already developed consequences of this are, a damaged hay crop, a late harvest, a great breadth of late-sown Turnips, and an unusual prevalence of weeds among root crops in general. The Potato disease, as usual, first appears after such weather, but not until we have had some scorching sun will the result be apparent. Swedes having been sown in good season will soon cover the ground. White Turnips are mostly thinner, but at that stage, seem to do badly with much wet. The vigorous growth of the earlier sowings has exceeded the force of hand-labour available for proper cleaning, and where the Couch Grass is only covered, not killed, we fear it will yet revive to give much trouble throughout the rotation Beans are very strong, but not corny. Winter Wheat is thin in the ground, but standing well up it will be of fine quality. Barley is a good crop, and some of the earliest just beginning to change colour. Oats are nothing extraordinary. There will be very little corn cut this month, harvest being three weeks later than last year; rather a serious matter in our late climate. The heavy showers of the past month have laid some pieces of Barley and Talavera Wheat; but an increasing necessity for reaping machines forces farmers to select the stiffest strawed varieties of Wheat especially, while Oats seem not at all inclined to go down. Since the beginning of July there has been no haymaking weather, and the greater part of the crop is still a-field in no good plight. Pastures, having passed the Rye grass season, are being well filled up with White Clover, which affords a fine clean bite for lambs Few cattle are grazing, on account of the want of Grass in spring, and (worse still) of the money to buy them with; for the high prices of meat have left nothing in the feeder's pockets. Butchers say they are ruined, and consumers form leagues of total abstinence from beef and mutton. Thus we see the universal loss caused by a bad season. Our low country lambs have shown a deficit of one-fourth in numbers, and an increase of 4*s.* a head over last year's price, which is equal to a rise of 6*s.* for last year's quality. Wool has weighed very light, price 2*d.* per lb. less from last year. The wind is N.E. again, and while I write it pours a very torrent. *J. T.*

Notices to Correspondents.

Comfrey, &c.: *Small Farm.* The common Comfrey is S. officinalis. We do not recommend you to try the Prickly Comfrey. Vetches, Rye, Trifolium incarnatum, are far preferable. See remarks elsewhere.

Crop Returns: *To Correspondents.* Several reports received too late will appear next week, but copies of this week's paper as containing the great majority of the returns will be sent to all our correspondents.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.

Principal—J. C. Nesbit, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

THE LANDS IMPROVEMENT COMPANY.—Incorporated by Special Act of Parliament in 1853.

2, Old Palace Yard, Westminster, S.W.

To Landowners, the Clergy, Estate Agents, Surveyors &c. in England and Wales and in Scotland.

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable William Napier, Managing Director, 2, Old Palace Yard, Westminster, S.W.

FARM BUILDINGS.

LOANS may be obtained under the General Land Drainage and Improvement Company's Act for the full amount required by the Owners of settled Estates, Incumbents, Trustees, Bodies Corporate, &c. for the erection of Farm Houses, Farm Buildings, and Labourers' Cottages designed by their own Agents and sanctioned by the Inclosure Commissioners.

The loans are repaid by a Rent Charge on the estate for any term the Landowner may fix, not exceeding 31 years.

No investigation of title being required or notices given to Reversioners or Mortgagees, no legal expenses are incurred

The Company furnish designs of every description, and undertake the entire responsibility of the works wherever desired by Landowners.

No profit whatever is taken by the Company on any works they execute, the actual expenditure only approved by the Inclosure Commissioners, with a commission thereon, being charged in all cases.

Applications to be addressed to William Clifford, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economica and efficient preparation, by applying to J. C. Nesbit, F.G.S. &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

TO BE SOLD, a thorough-bred ALDERNEY BULL, in excellent condition, 14 months old.—Inquire of Mr. Cooling, Clarence, Roehampton-

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD FOR POULTRY AND GAME.—RICE SWEEPINGS, 8*s.* 6*d.* per cwt., in 1½ cwt. bags; SCREENED RICE, 12*s.* per cwt., in 1¾ cwt. bags; DOG BISCUITS, 14*s.* per cwt.; OIL-CAKE, per ton only; RICE MEAL for PIGS, 6*s.* 6*d.* and 8*s.* 6*d.* per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. Jupp, 6, Cross Lane, Eastcheap, E.C.

AN EXTRA SIX QUARTS of RICH MILK DAILY (equal to London Cream), through using Two Pennyworth of THORLEY'S CONDIMENT.

"Steamship Great Eastern, now at New York, July 27, 1860.

"I have much pleasure in stating that the cows belonging to the Great Eastern have much improved since partaking of Thorley's Food for Cattle. They are more lively, and give a much larger and superior quality of milk.

"G. H. Allen, Chief Steward."

"Undermount, Bonchurch, Isle of Wight, Feb. 8, 1860.

"Sir,—I have every reason to be highly satisfied with your Food for Cattle. I had a cow in very low condition, not thriving, hide-bound, rough and penny in her coat, no appetite. From the first day, a little of the Food appeared to change her whole system; in a month she was sleek and soft in the skin, filled up in flesh, and gave three times the quantity of milk, and much richer, and has continued to thrive for more than 12 months. All attempts to underrate the Food are absurd."

"John Pringle, Bart."

A Pamphlet post free.—Steam Mills and Manufactory, Caledonian Road, King's Cross, London, N. Agents required in every Town where none are already appointed. Depôt for the United States of America, 21, Broadway, New York.

AGRICULTURAL AND GENERAL MACHINERY.—As PRIZEHOLDERS for the best Articles manufactured, Messrs. Burgess & Key, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

REAPING MACHINE—PRIZE REAPER, And the best in the world, is manufactured by Burgess & Key, 95, Newgate Street, London, E.C.

LAWN-MOWING MACHINES—BURGESS AND KEY'S

Machines are the most simple and effective yet introduced the public, and at a lower price—16 in., 6*l.*; 19 in., 6*l.* 10*s.*, 23 in., 7*l.*; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

NEW SEED OF FIRST-CLASS

CALCEOLARIAS, CINERARIAS, AND FINEST FRINGED CHINESE PRIMULA.

JAMES CARTER & CO.

are now ready to supply SEED of the above in three-sized Packets, all of the same quality,

1s., 2s. 6d., and 5s.

JAMES CARTER & CO., SEEDSMEN, 237 and 238, HIGH HOLBORN, W.C.

LAWNS WITHOUT MOWING.

SPERGULA PILIFERA.

THE merits of this little Plant for the above purpose being now fully recognised, and having stood the test of six successive seasons, we have great pleasure in recommending it to the notice of our customers. Mr. Summers, its original raiser at the Crystal Palace Nursery, Sydenham, having made over to us the entire Stock of new Seed for the present season, we now offer it in packets of

6d., 1s., 2s. 6d., 5s., and 21s. Or per Ounce.

We beg to subjoin a few remarks upon the culture of Spergula, as practised by Mr. Summers, premising that seedlings sown last August and September present now a full twelvemonth's growth in advance of seed sown last spring.

INSTRUCTIONS FOR RAISING SPERGULA.

Choose an open situation for the seed bed, dig the ground in shape of a ridge (to throw off the water in winter), and make the surface firm with rake, roller, &c.; spread the seed thinly over the bed, and with a rake gently stir the surface, after which give a good watering through a fine rose. The bed should then be hooped over and shaded with a mat or piece of Tiffany doubled, the object in shading being to prevent the too rapid evaporation of moisture; indeed from the time of sowing until the plants make their appearance, the bed should not be allowed to become dry. When the plants are well above ground they should be gradually hardened, but if during the first month the weather should be warm and dry they will require attention in shading and watering. Towards the end of March following they may be either planted out to form turf in the reserve garden or put in thickly on the intended lawn. Full particulars of this final planting will be given in our New Seed Catalogue for 1861.

For further information respecting the elegant, mossy, and carpet like appearance of this plant, we beg to refer to Mr. Shirley Hibberd's notice in *Gardeners' Chronicle*, and to that of Mr. Beaton in the *Cottage Gardener*. Mr. Summers will at any time be pleased to show the capabilities of the Spergula, or give information to parties desirous of forming a lawn, upon application to him at his Nursery.

J. C. & Co. would beg leave to caution the public against purchasing seeds of various Saginas, &c. (which are only *Annuals*), large quantities of which have been offered to their notice this season, and represented as being seed of the *true* Spergula pilifera, (the seed being very similar), *but as the whole stock of* NEW *seed will pass through their hands they can warrant none other than that obtained from their Establishment.*

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

THE TRUE SPERGULA PILIFERA,

FROM THE CRYSTAL PALACE NURSERY.

SUTTON & SONS

HAVE the satisfaction of announcing that they have secured a considerable portion of Mr. Summers's stock of Spergula Pilifera Seed of the present year's saving. Mr. Summers having offered his entire stock of Seed to Messrs. Carter and Messrs. SUTTON on the same day, and Messrs. Carter having purchased it, have accommodated Messrs SUTTON with a portion of the stock, which can be warranted genuine, as saved from the Lawns so much admired at Mr. Summers's Nursery.

Spergula Seed should now be sown for transplanting into Lawns next spring. SUTTON & SONS have New Seed now ready in packets **6d., 1s., 2s. 6d., 5s.,** and **10s. each.** Post free, with instructions on cultivation.

Also free by post, packets of extra fine CALCEOLARIA, CINERARIA, PRIMULA, SINENSIS FIMBRIATA, and GYNERIUM ARGENTEUM, or PAMPAS GRASS, for present sowing, 1*s.* and 2*s.* 6*d.* each.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

FRESH IMPORTED DUTCH BULBS.

SUTTON AND SONS are daily expecting the arrival from Haarlem of one of the most extensive and rare Collections of

BULBOUS FLOWER ROOTS

ever imported into this country.

Prices very moderate, as see List.

Royal Berkshire Seed Establishment, Reading.

NEW GRASS SEEDS FOR PERMANENT PASTURE.

SUTTON AND SONS have a fresh stock of

PERMANENT GRASS SEEDS,

Of the most suitable kinds for laying down and for improving Pastures.

The new crops being good, prices will be reduced.

Also,

NEW ITALIAN RYE-GRASS SEED.

Royal Berks Seed Establishment, Reading.

CORDYLINE (DRACÆNA) INDIVISA.

MESSRS. JOHN AND CHARLES LEE

Have the pleasure to announce that on the 1st of August they intend to send out the magnificent

CORDYLINE INDIVISA FROM NEW ZEALAND,

AN ACCOUNT OF WHICH WAS GIVEN BY DR. LINDLEY IN THE *GARDENERS' CHRONICLE*, OCT. 20, 1859, Pp. 868.

It is impossible to give an adequate description of this wonder of Nature, which should be seen in its native grandeur to be thoroughly appreciated. Specimens can, however, be seen at this establishment which already prove the accounts received of its merits to be quite reliable. Being found at a high elevation it will be a very hardy Conservatory Plant, and will probably bear total exposure in the West of England and in Ireland.

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Vide *Agricultural Gazette*, August 18, 1860.

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The Gardeners' Chronicle.

SATURDAY, AUGUST 25, 1860.

MEETINGS FOR THE ENSUING WEEK.

FRIDAY,	Aug. 31	National Dahlia at Leeds.
SATURDAY,	Sept. 1	
SATURDAY,	Sept. 1	National Hollyhock, at the Crystal
MONDAY,	— 3	Palace.

THE espalier mode of TRAINING FRUIT TREES is one of the oldest employed in this country, and although still adopted, notwithstanding the introduction of various new modes, would certainly have continued to be more general had it not received a bad character, which, as we shall endeavour to prove, it does not deserve. Men say that trees grown as espaliers are in many instances unproductive, that they produce nothing but wood, that by so doing they exhaust themselves, the branches becoming naked and dying off, without perhaps having borne any fruit during the whole period of their existence. These are the usual reasons therefore for authoritatively pronouncing the espalier mode of training a bad one. True enough the bad condition of espalier trees cannot be exaggerated in some cases; but whose is the fault? We protest against its being assignable to the system of training; the competency of the manager ought to be first inquired into.

Whatever may have been alleged against espalier training, nobody can deny that it possesses some important advantages if properly conducted; and it requires no very great horticultural practice to see that its ascribed demerits are owing to gross mismanagement, arising from ignorance of the operations of a few simple laws of vegetation, which are so obvious indeed that it is a matter of astonishment that they are not more generally known.

Espalier training is performed in perpendicular and horizontal lines; hence trees that are trained in this manner are very suitable for gardens where straight lines are prevalent. They harmonise with walls, and adjacent straight lines of walks. They occupy little ground, for with the exception of wall trees they have less base than trees having an equal extent of branches managed in any other way; a mere strip 6 or 8 inches wide is sufficient for them, leaving the rest of the ground free to be cropped with vegetables. Yet, although occupying so little ground, the leaves have abundance of light and air; and the operation of training is so simple that any labourer can perform it without risk of erring, for he has only to fix the central leader in an upright position and the lateral branches in an horizontal one. In all these respects the espalier mode of training is superior to any other.

Pruning so as to obtain horizontal branches at equal distances apart ought to be better understood than it is. A few words on the subject may therefore not be unacceptable.

The distance between the horizontal tiers should be from 9 to 12 inches, according to the nature of

the soil. Let a maiden tree be cut back, after planting in Autumn, to 12 inches from the ground or as near that as three eligible buds can be found; one of the buds, the uppermost, will push and furnish a fresh upright leader, and from the bud on each side the first pair of horizontal branches will be obtained. The points at which these spring from the upright will be less than a foot from the ground, but the branches should be allowed to incline upwards till they reach the horizontal line a foot high. Here it may be observed, that, supposing the branches are to be a foot apart, the first three tiers should originate a little below the respective horizontal lines at 1, 2, or 3 feet from the ground; for the lower branches are the most liable to be weak, and by allowing them to start according to their natural inclination for some distance before constraining them to the horizontal position, they grow stronger than they otherwise would do; on the other hand, as the upper tiers of branches are apt to grow too strongly, they should be brought out horizontally direct from the stem. A tendency to equalise the vigour of the branches is thus obtained which could not be so readily effected by any other means. Let us now suppose that by shortening the upright leader every year to three eligible buds for a fresh leader and two horizontals, the tree is formed to the intended height, and that it consists of, say six tiers of horizontals. A central upright shoot will, of course, be no longer required. The tree will have been six years planted; its side branches may have been allowed to extend on either side, and been subjected to the usual summer and winter pruning; yet perhaps no fruit has been produced. The tree is, however, but young; therefore we shall leave it for the present and advert to one that has been similarly managed, for say 12 years. The oldest horizontal branches of this tree, *i.e.*, those constituting the lowest tier, are *twelve years old*; the upper ones being only *six*. Now, one would naturally expect the *oldest* to be the *thickest*; but in 9 cases out of 10, nay, we might venture to say 99 out of 100, it will be found that the reverse is the fact, and that the upper or youngest tier of horizontals are of greater circumference and far more vigorous than the lower or oldest branches. This shows that the sap has not been equally distributed among the branches, for if it had they would have exhibited an equality of growth in proportion to their respective ages. An equal distribution of the sap can only be the result of skilful management. Where the distribution, as proved by the dimensions of the branches, has been unequal, it is a sure indication that a proper system of pruning has not been followed; the trees consequently bear irregularly or not at all; but the fault is ascribed to the system of espalier training itself, instead of to mismanagement.

All who have had the charge of fruit trees must have observed that the sap has a strong tendency to flow with greatest force into the upper parts of the tree, and into the buds that point upwards. The consequence is that the highest buds, and especially those on the upper sides of the branches, push much stronger than those that are situated on the lower branches. It was formerly the opinion that where over-luxuriant shoots appeared there was a superabundance of sap, and that the best way of exhausting it was to let these shoots grow and to even encourage their growth. Hence the cause of many trees being too strong in some parts and too weak in others; for it is a mistake to suppose that luxuriant shoots will exhaust the flow of sap towards them. On the contrary, the more they grow the greater will be the supply; branches thicken in proportion to the quantity of healthy foliage which they bear. If a branch therefore has a number of vigorous shoots and ample foliage, a thick layer of young wood will be deposited in the course of the growing season. But on the contrary, a branch that is furnished with weak shoots and scanty foliage will acquire a comparatively thin layer of young wood; and if measured in autumn its increase in thickness will be found to have been very little. But the disparity in the present season's growth between branches that are furnished with much foliage and those that have but few leaves will become still greater in the next, for the thick layer of young wood contains many more channels for the ascent of sap than the thin, and it is chiefly through the young wood that the sap rises. The strong branch has therefore established for itself the means of becoming still more strong. To illustrate our case better, however, let us take the upper tier of branches of an espalier tree. All, or nearly all of the buds on the upper sides of these branches push vigorous shoots. Allow them to grow without check during the first summer. They may be cut back to 3 or 4 inches in autumn in the following spring; the buds left will mostly push strong shoots which will take an upright direction, and will appear like a hedge all along the upper branches of the espalier. Some of the strongest of these upright shoots if not interfered with would actually form stems; still however the two horizontal branches from which they sprung will increase in thickness in proportion to the quantity of foliage produced on themselves and on all the vigorous uprights in connection with them; and in a few years they would increase to a greater extent than all the other branches of the espalier put together, for the sap would not readily flow into the lower horizontals when it had the means of ascending into the upper ones; and it is this evil which has to be watched and checked by skilful pruning. A ligature will not prevent the sap from rising to the upper buds, although by that means the elaborated sap from the leaves may be prevented from returning to the roots.

From what has been stated it will be evident that the growth of any part depends on the quantity of foliage in connection with it. We can therefore regulate the growth of the respective branches if we can that of the foliage. To this attention must accordingly be directed, in order that an equal distribution of sap may be effected, or there will be little fruit.

When the tree has pushed shoots several inches in length in the early part of summer, let the points of the most forward on the upper branches be pinched off; and throughout the whole season let all shoots on these branches be kept in check, so that there may be no more leaves connected with them than there are on the lower branches. If the latter are weak, permit shoots to grow on them with little check or shortening. We shall not trouble the operator with such niceties as stopping the shoots invariably at this or that particular joint; all we ask at present is to *maintain an equal amount of foliage on the respective branches*. If there is already a superabundance on any branch, let such be reduced by thinning out the shoots which bear it; if the shortened shoots have several leaves on them, let them be still further shortened. On the contrary where branches are weak let shoots grow upon them, and encourage as much foliage as can be well exposed to light. The same principle must be acted upon as regards trees that have been badly managed. These cannot be recovered in one season, but by pursuing the plan we have endeavoured to explain, great improvement will doubtless take place.

It will thus be seen that the fault of espaliers not being productive does not belong to that mode of training; but to mismanagement.

HOTHOUSES FOR THE MILLION.

On several occasions within the last 10 years I have directed attention to glazed promenades as opposed to garden walls for the purposes of fruit cultivation, and it now strikes me that a little additional ventilation of the subject may not be out of place. From the pertinacity with which designers of gardens stick to bricks and mortar as a boundary fence for a kitchen garden, one would really think there was something attractive, or at any rate indispensable, in their prison-like appearance, instead of their being means to a certain end, that end being the protection of certain fruits which either are, or are supposed to be, too tender for cultivation in this fickle and ever alternating climate. That some fruits, such as Peaches, Apricots, &c., require the protection of a wall is quite true, but that they would be much more at home and sure of producing a crop under glass is equally certain. The majority of fruits grown on walls, as Pears, Plums, Cherries, &c., where they will ripen at all, are much finer in quality from standard trees, at least so my experience teaches me, and I have ever found such Pears as Glou Morceau, Winter Nelis, Napoleon, Beurré Rance, &c., much richer in flavour from properly managed standards than from wall-trained trees. This is not the opinion of a day, a week, or of a year, but dates back nearly a quarter of a century, and I have no doubt that Mr. Rivers and others of similar experience could and would give similar evidence. Such being the fact, where is the necessity for walled gardens? You may say walls are necessary for the purpose of protection. I answer, an evergreen hedge, a wall of glass houses, or a neat iron palisade backed up on the north, north-east, and north-west sides, by a good belt of evergreens is equally secure, for if a person is inclined to rob a garden, neither walls, nor locks, nor fences of any kind will be sufficient to deter him from doing so, while in point of shelter I contend that a good evergreen hedge or belt of trees is superior to a wall. In Yorkshire I have seen half-grown Cabbage in a walled garden with 10 feet walls blown clean out of the ground during the equinoctial gales, but I never saw much injury done under the shelter of a good fence, the reason being that in one case the wind is sifted through the plants and deprived of its force, but with a wall the current passes up one side and down the other, its velocity scarcely being checked at all.

Now in general garden arrangements I believe those are the most telling where striking features are episodal. Thus, after leaving the artistic part of the garden as connected with the architecture of the mansion, it is well that you should pass to the rosery, the herbaceous garden, the fernery, the pinetum and why not the fructetum? Here I would concentrate all the glass houses necessary for the production of fruit, forced as well as natural, and I see no reason why such an arrangement might not be made as would be highly attractive and interesting. In France and Belgium we hear of the beauty of the fruit trees trained in all kinds of fancy forms, pyramids, arches, goblets, balloons, tables, espaliers, &c. Thus great variety might be obtained, and a garden of great interest and beauty be formed; indeed the fruit garden might become a much more interesting feature in garden scenery than it ever yet has been in this country. As for the style of planting, it might be geometrical with arches spanning the walks, or gardenesque groups of the various tribes; and if in groups the protection of the trees either from frost or birds would be simple and inexpensive. There is, however, a wide field for ingenuity in cultivation and training, as well as in the general adaptibility of certain plants for certain situations.

An arrangement of this kind pushes the vegetable garden altogether outside the dressed ground. Few will regret this, as it is quite certain vegetables are much finer in quality grown in the open fields than in any other situation. True, they may not be quite so early, but let it be remembered we shall be working with the same conveniences as the market-gardeners, and it is not usual for them to be much behind in their early crops. A proposition of this kind is sure to be voted new fangled and impracticable by those who are wedded to mediæval customs and practices, while many of our landscape gardeners, being almost destitute of cultural knowledge, more especially as relates to the fruit and vegetable garden, will be at a loss how to treat such an innovation upon their stereotyped notions; but if any gentleman contemplating the formation of a new garden will favour me with a line through the editor of the *Gardeners' Chronicle* I shall be glad to arrange such a plan for him, either for a fruit garden separately, or for one in connection with the pleasure grounds.

Now, in connection with hothouses for the million, I think it begins to be generally acknowledged that the make-shift erections recommended some years back are neither cheap nor economical. At least I hear complaints on all sides, while even with Mr. Rivers himself we find felt walls, and Yew, and Hornbeam hedges for the same purpose have given way to more substantial erections.

How different are the houses prepared by Mr. Hereman under Sir Joseph Paxton's patent. These are not only of the best material but are manufactured in the most substantial manner, while the facility with which they may be moved about, put up and taken down, offer advantages which cannot be secured by any other plan. This season I had two short ranges of these houses, which before ordering I calculated at a certain weight for carriage, but upon receiving them I found each weighed nearly 30 cwt. more than I had anticipated. This will give an idea of the strength of the materials employed, and it also shows there is no scamping in their construction. The fact is they are plain good substantial houses, such as at the end of half a century, with proper attention in painting, will be as good as they are at the present time. I am aware that houses may be built more cheaply, but not possessing the same advantages as to strength and construction, and therefore Hereman's are strongly to be recommended to all persons requiring a really serviceable building. From different parts of the country, I hear that several long and substantial ranges of both forcing and cold houses have been put up, and I doubt not, as the simplicity of their construction becomes more known, the demand for them will be still greater.

In conclusion, I would in the strongest manner enter my protest against walled gardens; they ought in all modern arrangements to be numbered among the things of a past generation, for with cheap glass their necessity as a means of protection for tender fruit has passed away. Of the adaptibility of portable houses for other purposes as well as protecting fruit I may speak on some future occasion. *W. P. Ayres, August* 22.

MYCOLOGY,—No. XXVI.

Geoglossum difforme, *Fr.*—Most of our readers will have observed about September or October on close-shaved lawns, or open exposed pastures, especially where mossy, a multitude of dark club-shaped fungi, from one to two inches high, either scattered about without order, or collected in little tufts and varying in colour from purple or olive to deep black. Some of them have a regular head with a cylindrical stem, while others are gradually thickened upwards so as to present no prominent distinction between head and stem, and in either case the head may be well formed with rounded outlines,

or distorted and deeply grooved or flattened. Some are perfectly smooth and dry, others are covered with a short pile of velvety hairs, others again are viscid, or have little transverse viscid scales or prominences upon the stem. If the observer's attention be turned to woods and their borders rather than to meadows, he may find there another species, distinguished by its metallic green tint like that of verdigris, though he will not be fortunate enough to see this interesting production very frequently. These plants belong to the genus *Geoglossum* or Earth tongue, of which we have chosen the commonest of all, though not the neatest or most interesting, for our present illustration.

The genus *Geoglossum* in outward appearance resembles very closely some of the *Clavariæ*, with which it has generally been arranged by authors; but if any weight is to be given to essential structure they must be very widely separate. *Clavaria* has its re-

Geoglossum difforme, *Fr.* From an original drawing.

productive bodies or spores seated on little spicules, generally four in number, at the top of certain of the vertical cells of which the outer surface is composed, while in *Geoglossum* they are contained eight together in elongated sacs. In the dark coloured species these bodies are brown or nearly black, very much elongated, and have many transverse partitions, and present a very interesting object for the microscope, both from their structure and the beautiful manner in which they are packed in the mother tubes; in the green and purple kinds the sporidia are hyaline and nearly colourless, but never brown or inclined to black, and at the same time they differ materially in being far more minute, elliptic, and destitute of partitions. The resemblance, in fact, of *Geoglossum* to *Clavaria* is merely external, and in our next illustration we shall have a further instance of a fungus very similar in form, but with a very different structure. Indeed the naturalist will not proceed far in any direction without meeting with multitudes of such cases of analogy, and many of the mistakes which occur in careless hands arise from this especial source of error, or in more technical phrase from mistaking analogy for affinity. So universal are these cases of representation, that we find in divisions of natural science which have no immediate connection with one another the most extraordinary instances of outward resemblance, in so much that animal productions are constantly referred to the vegetable kingdom by the ignorant and indeed by those who profess to teach. Even diseased structures in trees and herbaceous plants, whether produced by insects, as galls, or by other agents, are constantly referred to Fungi, a particular condition of the external cells in leaves having given rise to the spurious genus *Erineum*, to which especial volumes have been dedicated, and of which more than 100 kinds have been figured and described.

We are not aware that any of the species of *Geoglossum* are adapted for economical purposes. They are however so small and unimportant that they seem to have been completely passed over, though it is possible that some of them may be quite as good for food as the *Clavariæ* with which they so frequently grow. *M. J. B.*

ON THE FINAL CAUSES OF THE SEXUALITY OF PLANTS.

By Charles Daubeny, M.D., F.R.S.,
Professor of Botany in the University of Oxford.

[At the late Meeting of the British Association at Oxford a paper was read on this subject, with especial reference to Mr. Darwin's work on the origin of species. The substance having just appeared in the form of a pamphlet (Parker, Oxford: Bohn, London), we lay before our readers a few extracts from the more striking passages in it.]

If we were asked to specify the greatest step which has ever been made towards obtaining an insight into the secrets of the vegetable organisation, there would, I conceive, be no hesitation in pointing to the discovery of the Sexuality of Plants as the one best entitled to that pre-eminence. * * * Not only does it enable us to assign an use to organs, which were before contemplated as objects merely of vague curiosity, or admired for the gracefulness of their forms and the brilliancy of their colours, and thus to trace an analogy running through all descriptions of flowering plants, but it also establishes a before unlooked-for relation between the animal and vegetable, and thus indicates an unity of design pervading all parts of the two organic kingdoms of nature. * * * Since plants possess sexual organs analogous at least in function to those of animals, and since the most complicated and most highly organised class of the latter was naturally taken as the type of the remainder, it was concluded, that inasmuch as the process of reproduction was carried on in the latter only through the instrumentality of the specific organs which nature has furnished for the purpose, the same must hold good likewise in the case of plants similarly provided. As however no one could deny that the latter may in general be propagated without any such interference, or indeed that many species are found to extend themselves mainly in other ways, it was arbitrarily laid down, that all plants resulting from a multiplication of parts which had taken place without the co-operation of the stamens and pistils, should be regarded as belonging to one original stock, and as continuations merely of the same individual organism. Thus, according to the view taken, all the Weeping Willows now spread over Europe, all the samples of the Anacharis alsinastrum which obstruct the ponds and rivulets of this country, would be nothing more than an extension of the one individual brought in the first case from the East, and in the second from America. This mode of considering the subject led likewise to a most mistaken view of the relation of parts to each other, in all plants at least of more than one year's growth. If followed out to its legitimate consequences, it would oblige us to regard a tree as an individual, like an animal, differing only in the possession of indefinite powers of growth, sending forth indeed a progeny in the form of seeds, by which its kind might be reproduced, as in the case of an animal by eggs, but still maintaining its own individuality, whether its parts continued in connection with the root from which they originally sprung, or were carried hundreds of miles away to multiply the species elsewhere, in the form of grafts or cuttings. Hence originated the whimsical theory of Knight, that a graft possessed only a limited term of existence, regulated by the longevity of the stock from which it had been itself derived. * * * With respect to final causes it is always best to speak with diffidence, and it often perplexes us to distinguish between structures which may be regarded as existing merely as the result of that unity of plan pervading creation which we see exemplified in what are called rudimentary organs, of no use to the plant or animal in which they occur, and those which are seen to be necessary for the performance of some specific function, of importance to the individual or to the species. Those who adopt Mr. Darwin's views with respect to the origin of species may recognise in the existence of sexual organs in the lower grades of creation a far-sighted provision for the gradual development of that elaborate machinery which would become indispensable for the perpetuation of the species, when the higher races of animals were called into existence. If, as Mr. Darwin and others contend, rudimentary parts continue after their functions have ceased, one does not see why organs may not have been produced in living beings to which they were not serviceable, in anticipation of the wants of others for which they would be hereafter required. * * * Let us then consider, whether we cannot suggest certain other purposes which this mode of propagation by means of specific organs of reproduction might be intended to answer. It must be evident that although perennial plants might multiply without the aid of floral organs, they require the latter nevertheless for their dissemination, since, except in the case of aquatic tribes, in that of plants provided with zoospores (assuming, with the majority of botanists, the latter to be homologous to buds and not to seeds), or lastly, in the case of such as the Ferns, which are furnished with spores light enough to be wafted to great distances, and capable of disseminating their species without any previous contact with the male organs, a plant would in a manner be chained to the spot where it was first produced, were it not provided with other means of propagation than with leaf-buds, unless indeed through the casual intervention of human agency, as we see exemplified in the Weeping Willow and the Anacharis. Thus, whilst annuals would have become extinct the very first year of their birth, perennials could hardly have survived long, if left to their own unassisted efforts, and exposed to all the accidents of unfavourable seasons and external foes, without any means of repairing the injuries thereby occasioned. Hence the sexual organs of plants are really essential to their propagation, although in rather a different sense from that which is generally supposed, inasmuch as their seeds multiply indefinitely the chances in favour of the continuation of the species, by hoarding up as it were, until the conditions became favourable, that vital principle, which would otherwise have been extinguished at the outset. But as this explanation could not be extended to the case of animals possessing ready powers of locomotion, it may be satisfactory to point out other ends fulfilled by the existence of sexual organs, in cases where the reproduction of the species may take place without their intervention, and which would be equally required in the case of animals as of plants. And here I have only to allude to facts familiar to every one, as the well-known method of perpetuating favourite varieties of many of our well-known fruits by graftings and cuttings is founded upon the principle which I am about to bring forward. It is notorious that whilst a bud, a cutting, or a bulb produces by its development an organism which is in general the exact counterpart of the stock from whence it was itself derived, the seed of a plant, or the egg of an animal, generates a being possessing only a general resemblance to its progenitor. No one individual animal or vegetable produced from the egg or from the seed was ever in all respects like either of its parents—in all cases some divergence from the primitive type is brought about by the influence of the male organ upon the embryo of the female. Thus, without venturing at all into speculation, it may at least be perceived that in consequence of this mode of multiplying individuals, a dull unvarying repetition of the primitive types created has been provided against, and accordingly we find, that in those parts of the creation where sexual union is the ordinary or exclusive mode by which a species is multiplied, there the varieties are most numerous, and most remarkable for their divergent character. Variations in external conditions will indeed, as in the case of Ferns, produce very considerable diversities in the external form, but it must be recollected that terrestrial plants could hardly have been conveyed to great distances, so as to have become amenable to these influences, without the aid of spores, so that here the same principle comes into play. In aquatic plants, such as the Algæ, the variations from one type are not very striking, notwithstanding their wide extension, and the Sargassum, which by mere cellular multiplication extends over so many miles of ocean, exhibits, I believe, but few differences in its structure and organisation, in comparison with those displayed in the higher orders of plants which spring from fecundated seeds. In the existence then of floral organs in plants, no less than in that of a distinction of sexes in the lower animals, which nevertheless propagate their kind, even indefinitely, for aught we know, without any sexual union having occurred, we may at least perceive a provision against too great uniformity in the aspect of Nature, and an expedient for increasing the number of originally created forms by means of the varieties in this manner introduced. And this end seems to be promoted by an arrangement which Mr. Darwin himself has pointed out, namely by contriving that the fecundation of the ovule shall take place most certainly, and most effectually, through the agency of pollen brought from a distinct flower, and therefore likely to possess some slight difference in its organisation. * * * For my own part, I am unwilling to be set down as yielding an entire and unqualified assent to this doctrine (that all animals as well as plants have sprung from not more than four or five progenitors), when pushed to its extreme consequences; for although I must leave it to naturalists more equal to the task than myself, to enter the lists against an antagonist furnished with so vast an armoury of facts, and gifted with so singular a power of applying them to the purposes of his theory, I must demur at considering the distinctive faculties of the beings that stand in the higher ranks of the creation as mere developments of those which exist in the lower. I can hardly bring myself to believe, that the activity, the quick perceptions, the various instincts, which we observe in the vertebrate, can have been elaborated out of the dull vegetative faculties of the invertebral class; and still less that the reason, the imagination, the moral sense of man, can have been owing to a mere expansion of the brain of the Gorilla. It may indeed be said that we find individuals in all nations, and even whole races in some, whose intellects and moral instincts are of so low a standard that they appear to constitute a kind of link between the man and the brute. Perhaps, however,

even in the most abject of these, some trace of faculties which exist in the higher orders of man, some rudimentary form of these endowments which are developed in the true type of the species, might be found discernible; but waving this, a distinction must at least be drawn between the loss of faculties by degeneration, and the acquirement of them by progressive advancement. The former truth is abundantly established by daily experience, the latter rests upon no evidence, and is directly discountenanced by the fact that the earliest type of humanity of which we have any knowledge, either from history or tradition, appears to have been one of the highest; and that whilst there are abundant examples of civilised man sinking into barbarism, nay even of a sort of tendency that way manifesting itself amongst the higher races, we have none of a savage by his own unassisted efforts acquiring the habits and the ideas of civilisation.

In thus expressing my dissent from the Darwinian hypothesis in the full extent to which the author would seem disposed to carry it, I am far from wishing to represent that any higher considerations than those of pure science need enter into the field of discussion. I do not, for instance, conceive that the cause of natural Theology would suffer were the doctrine in question fully substantiated; for if those comparatively small and superficial modifications, which are produced in our domestic animals, have been brought about only by a long and intelligent succession of trials, all directed to a common object by the constant interposition of man, it would seem to follow, that those much wider deviations from the original type, which must be supposed, if distinct species, and even genera, are to be regarded as mere varieties induced by natural selection, could only have been effected under the watchful superintendence of an intelligent Cause, and not by the blind efforts of chance.

Home Correspondence.

Education of Gardeners.—To afford a supply of men such as Mr. Ayres requires, a liberal school education is necessary. I am glad to say that there are some who have had that advantage, but I am sorry to add, such men are rarely inquired for. The great pre-requisites of young gardeners are honesty, sobriety, and industry. For the sake of the "craft," however, let mental qualifications be also encouraged. One who can measure land, timber, &c., take the altitude of trees, and the distances of places, one who is acquainted with the grammatical construction of his own language, who is acquainted with botany, entomology, and other useful sciences, will doubtless always have a good chance of getting on in the world. Let such young men be inquired for, and if at present few are in the market plenty will soon be found. As regards Botany, if they are "Nature's own," they will not require their master to wander over hill and dale, wearing out his already too much taxed frame for their individul interest; no, they will bring hill and dale to him in the shape of plants, butterflies, moths, and other things, such as the district affords. This much young men could do without aid. Committees are formed for the singling out of good fruits and flowers; would there be any reasonable objection against the forming of a committee for the examination of young men? Let none be afraid that examinations will place all on one level. Few, comparatively few, will excel and obtain first class places. Others, like water, will find their own level. *A Hard-working Gardener.*——Let me ask what is the position in society of even our best gardeners, or what are the emoluments belonging to the office of a gardener? Are they such as to justify a man in giving a liberal education to his son to bring him up to such a calling? I say decidedly not; and after all the soul and substance of the matter turns on this point. The real position of a gardener from beginning to end seems to be overlooked; in whatever way the higher grade of gardeners may classify themselves or stand aloof from their less fortunate brethren, they cannot divest their situation of its menial attributes or even elevate their order in the eyes of society to the social status of even a petty-fogging lawyer or a village doctor; it is not possible to do so, for the profession will not admit of it, and the better a man is educated the more keenly he feels his position. True we find many very intelligent men, and men of sterling common sense among gardeners, and here and there we hear of one getting elevated by something like a miracle to places of trust above gardening, but very few have the opportunity of making a fortune, or of even acquiring wealth proportionate with what we see among men following mechanical or mercantile pursuits; for, however industrious a gardener may be, or however great may be his educational or scientific attainments, nothing is added to his fixed income or assists to raise him from a dependent state to that of an independent one. As regards examinations, I think I can clearly show that they have no practical effect in the way desired. Take any of the professions in which examinations succeed, for instance that of a clergyman; when he once settles down in his snug rectory, while his moral character is good, nobody can remove him, not even his diocesan. But it is very different with a gardener! Take again an attorney or a surgeon; they go through their respective examinations before admitted to practice, and their practice is not confined to the caprice and power of a single client or supporter, but to many, so that a kind of compensating balance is kept up in the ramifications of both professions for their protection. Now, what would the result be were examinations for gardeners in existence to-morrow. Take the case of a successful candidate and say he gets a situation; he suddenly finds that he is at the mercy of a single individual, who has a perfect knowledge that the gardener must be obedient in all things or take a month's warning or less than that, to fall back on out-door relief in some London or other nursery, with the fact before him that to have a dairymaid for a wife to look after the poultry or take a turn at the mangle is vastly more appreciated by some gentlemen than the store of scientific knowledge which stood by him during his examination. Such are my views of gardening, and my advice to all who can afford to educate their sons is, bring them up to something better than a mere out-door servant. *Cotton Twist.*——With "Audi alteram Partem's" views I am well pleased; I trust they will receive the attention which they deserve from young gardeners, and also from some of older years who may not be the worse for a careful study of the principles he advocates. There is unfortunately a want of moral tone in the character of some even clever gardeners; and it appears to me that they are not aware of the hold which it has taken of them. As an example, I have had inquiries in something like the following terms:—"I am engaged in laying out the grounds of —— Park, and shall want a large quantity of your kind of stock; be kind enough to send me your lowest prices, and the amount of discount you will give me." A list was sent, but the amount of discount was not enough, and the master had to put up with the cheap stock and larger per centage of some other man. Now this is not a fictitious case; it occurred; and should the writer see himself nailed to the cross, let him be more honest for the future. It is astonishing to what a length this discount question has reached. I do not however blame servants alone. I blame traders for tempting them; but then a man turns round and says, "If I like to give 10 per cent. while you only give 5 per cent. discount, is not that my affair." True it is; therefore the only thing I can see at all calculated to lessen so dishonest a practice is to hope for higher moral training among young gardeners. Hence it is that I hail with pleasure the letter of "Audi alteram Partem." *Ackland.*

Street Gardening.—I was much pleased with the article by "E. A. M." on the love of flowers on the continent. If the experiment suggested by her can be adopted in any place or places in this country, I will gladly assist the project. If "E. A. M." will start the thing fairly and have the ground well prepared, I will give her 100 Roses to begin with. *Ackland.*

New British Plant!—I inclose specimens of a new British plant, Lathyrus tuberosus, found at Fyfield, New Ongar, Essex, growing in vast profusion in almost every corn field and hedge-row in that parish, and also in the adjoining one of Willingate Spain. Old farmers remember it for 60 years back. They call it Tine Tare, it is a very elegant plant, with something of the fragrance of L. odoratus, and well deserves a place in the garden. Its large tuberous roots are edible when boiled, and render its extirpation very difficult if not impossible. How it can have escaped notice so long I cannot imagine, as it is very conspicuous in the fields along the road-side. I call it the Fyfield Pea. *Thomas Cordor, Kimpston, Bedford.* [This is certainly Lathyrus tuberosus. Cannot it have escaped from some garden where it is occasionally cultivated under the name of Dutch Mice?]

Peach Buds Producing Fruit.—In a Peach house here two trees cover a back wall, viz., Barrington and Admirable, both of which are growing very vigorously. In August last six Peach buds were taken from a small tree of the Champion Peach and inserted in the Admirable; four of those pushed shoots which grew rapidly; the remaining two produced flowers, one of which was accidentally rubbed off; the other set and furnished a fruit which is now considerably in advance of its neighbours, namely, the Admirable, although the latter are very fine. The fruit alluded to is round and lighter in colour than its associates, with red on the top; it also promises to be much earlier and larger than the Admirable. The buds in question were put into the branches where it was intended to cut the latter back to next spring. This plan of budding might therefore be of use on a small scale, where it might be desirable to have a few fruits of rare or new sorts without loss of time. I may add that the shoots from which the buds were taken consisted of ripe or firm wood. *P. Fry, Gardener to J. W. Stratford, Esq., Addington Place, Kent.*

Scirpus lacustris.—I think I sent you two or three years ago a Juncus with which they bind Vines and fruit trees in the north of France; you called it J. sylvaticus. I now send you a rush used for the same purpose in the west of France, which I take to be Scirpus lacustris. [Yes.] Why are not these used in England? *I.* [They are used for making rush-bottomed chairs.]

Cure for Toothache.—I shall be much obliged by your naming the enclosed piece of root. It has been rather extensively used amongst my friends as a remedy for toothache, and has rarely been known to fail after an hour or two's trial, even in the most severe cases. The method of using it is slicing a few pieces and laying them in the mouth between the cheek and gum near the tooth. I believe that it was brought over from France. *T. M.* [It is Anacyclus Pyrethrum, or Pellitory of Spain.]

Societies.

Horticultural: *Floral Committee, August* 23.—First class certificates were awarded on this occasion to Dahlia Andrew Dodds, a rich, deep maroon-coloured kind, shaded with Violet, and to a yellow variety called Mrs. Dodds. The first came from Mr. Keynes, the last from Mr. Dodds, both of Salisbury. Lobelia purple standard, from Mr. Kinghorn, of Richmond, also received a first-class certificate, and a similar award was made to the charming greenhouse shrub Epigynium leucobotrys from Messrs. E. G. Henderson. This was beautifully ornamented with clusters of round, waxy, snow-white berries, on the tip of each of which was a little black ring surrounded with five spots of the same colour. A pale variety of Saponaria calabrica from Messrs. Carter was commended, as was also a fine double variety of pot Marigold from Mr. Whiting, of the Deepdene. From Mr. Kendall came a useful, dark-coloured Fuchsia, named pyramidalis. Mr. Dean sent Achimenes Deaniana; and there were some pretty Carnations and Picotees from Mr. Keynes. One or two new Annuals were shown, but not in a condition to judge fairly of their merits.

Notices of Books.

Gatherings of a Naturalist in Australasia: being Observations principally on the Animal and Vegetable Productions of New South Wales, New Zealand, and some of the Austral Islands. By George Bennett, M.D. Van Voorst. 8vo., pp. 456.

This is not a book of travels. It is a record of observations made from time to time during residences in the Southern world. Dr. Bennett's attention seems to have been steadily directed towards collecting facts relating to the animals and plants of the remote regions that came under his notice, more especially to the Zoology, which forms the principal part of his volume. Of plants his notices are slighter, but by no means destitute of interest; especially those relating to useful species or cultivated crops. He writes agreeably, and his pages will be perused with satisfaction by all who are interested in our most distant colony, the mineral wealth of which "has been as yet by no means adequately explored." But he does not think that attention should be too exclusively directed to metals whether precious or base, or even to coal and other buried treasures:—

"In a region so extensive, every diversity of climate necessarily occurs, suitable for the cultivation of the vegetable productions, and the acclimatisation of the valuable and useful animals of all other parts of the world, which thrive there most luxuriantly. The sunny climes of Spain and Italy do not produce Oranges, and other fruits of the Citron tribe, in greater perfection than the northern parts of the Australian continent. The Tea-plant of China, the Cotton-tree, Coffee-tree, Sugar-cane, and other tropical productions, the Firs of Canada, and the English Oak, thrive equally well, mingled with the trees of America and the vegetable products of India."

In describing the habits of birds and animals the author is especially strong: and his accounts of their habits while alive are precious contributions to the knowledge of nonperipatetic naturalists. The strange Ornithorhynchus, or water mole, which might be better named duck mole, alone occupies above 50 pages. Dr. Bennett had some live individuals for a long time under his observation, and thus acquired an intimate knowledge of their ways of life. His account of his young family is amusing:—

"I arrived with my little family of Ornithorhynchi safe at Sydney, and as they survived for some time, an opportunity was afforded me of observing their habits. The little animals appeared often to dream of swimming, for I have frequently seen their fore paws in movement as if in the act. If I placed them on the ground during the day, they ran about, seeking some dark corner for repose; and when put in a dark place, or in a box, they huddled themselves up as soon as they became a little reconciled to the locality, and went to sleep. I found that they would sleep on a table, sofa, or indeed anywhere; but, if permitted, would always resort to that spot in which they had previously been accustomed to repose. Although for days together they would sleep in the bed made up for them, yet on a sudden, from some unaccountable caprice, they would shift their resting-place, and seek repose behind a box, or in some dark retirement, in preference to their former habitation. They usually reposed side by side, looking like a pair of furred balls, and surly little growls issued from them when disturbed; nevertheless, when very sound asleep, they might be handled and examined without evincing any signs of annoyance. One evening both the little pets came out about dusk, went as usual and ate food from the saucer, and then commenced playing, like two puppies, attacking each other with their mandibles, raising their fore paws, and tumbling one over the other. In the struggle one

would get thrust down; and at the moment when the spectator would expect it to rise again and renew the combat, it would commence scratching itself, its antagonist looking on and waiting for the sport to be renewed. When running, they were exceedingly animated, their little eyes glistened, and the orifices of their ears contracted and dilated with rapidity; if taken into the hands at this time for examination, they struggled violently to escape, and their loose integuments rendered it difficult to retain them. Their eyes being placed so high on the head, they do not see objects well in a straight line, and consequently run against every thing in the room during their perambulations, spreading confusion among all the light and easily overturnable articles. I have occasionally seen them elevate the head, as if to regard objects above or around them. Sometimes I have been able to enter into play with them, by scratching and tickling them with my finger; they seemed to be delighted, opening their mandibles, biting playfully at my finger, and moving about like puppies indulged with similar treatment. Besides combing their fur to clean it when wet, I have seen them preen it with their beak (if the term may be allowed) as a duck would clean its feathers. It is, indeed, interesting to watch them engaged in the operations of the toilet, by which their coats acquire an increased bright and glossy appearance. When I placed them in a pan of deep water, they were eager to get out after being there only a short time; but when the water was shallow, with a turf of Grass placed in one corner, they enjoyed it exceedingly. They would sport together, attacking one another with their mandibles, and rolling over in the water in the midst of their gambols; and afterwards, when tired, get on to the turf, where they would lie combing themselves, until the fur was quite smooth and shining. It was most ludicrous to observe these uncouth-looking little creatures, running about, overturning and seizing one another with their mandibles, and then, in the midst of their fun and frolic, coolly inclining to one side and scratching themselves in the gentlest manner imaginable." This description is accompanied by a clever coloured plate.

During his voyage out the author studied the cause of luminous oceanic appearances, of which he gives a full account. In Sydney harbour he found it caused by the presence of *Salpæ*, *Cleodora*, and others—

"In many species of *Salpæ*, only a solitary gleaming spot of light is visible; but on the slightest agitation numerous luminous dots rapidly show themselves, and play about the surface of the body. Any disturbance is capable of reproducing the effect, until, by repeating the excitement, exhaustion is produced, and, the phosphorescence becoming weaker, little or no luminosity is afterwards seen. I have no doubt there is some special organ or organs to which the secretion of this peculiar light can be referred, and that it will vary at different seasons, or in certain states of excitement of the animal."

Luminosity, however, is not confined to low forms of mollusks; it also occurs among sharks in the species called *Squalus fulgens*, which while swimming gives out a brilliant phosphoric light, "and since it is highly predaceous, and evidently of nocturnal habits, we may perhaps indulge in the hypothesis that the phosphorescent power it possesses is of use to attract its prey, upon the same principle as the Polynesian islanders and others employ torches in night-fishing."

Nor does luminosity occur in the sea alone. "This luminous property is also found existing in the vegetable kingdom among some of the fungoid plants. There is one, a species of the genus *Agaricus*, which has been observed to be vividly luminous. It is very common in the Australian woods in the vicinity of Sydney, about the localities of the South Head Road, and among the scrubs and forests on the approach to the headlands of Botany Bay, and emits a light sufficiently powerful to enable the time on a watch to be seen by it. The effect produced by it upon the traveller, when on a dark night he comes suddenly upon it glowing in the woods, is startling; for to a person unacquainted with this phenomenon of the vegetable kingdom, the pale, livid, and deadly light emanating from it conveys to him an impression of something supernatural, and often causes no little degree of terror in weak minds, or in those willing to believe in supernatural agencies. I have frequently gathered this Fungus, and on placing it in a dark room found that it has retained the luminous power for two successive nights; the phosphorescence, becoming fainter on the second, disappears entirely by the third night."

Turning from the animal kingdom we find much information concerning Australian plants that will interest the reader. Dr. Bennett describes among other remarkable species the Australian Boabab, one of the ugliest of trees, of which he gives a clever sketch by Fitch from an original drawing in the Kew Museum; and the Tree Nettle (*Laportea gigas*) growing 120 feet high, rising from its base "by a series of buttresses of singularly regular outline," and bearing leaves 13 inches broad stinging most virulently. He also speaks of the noble Dammars now growing in the Sydney Botanic Garden under the assiduous care of Mr. C. Moore; of the beautiful *Ceratopetalum gummiferum* (here figured), called by the colonists the Christmas Tree, because its gay flowers are used in Australia as the Holly bush is here, and of a great variety of other plants.

The account given of Australian Orange cultivation, of which nothing is known in this country, deserves as long a notice as we can possibly find room for. It seems indeed probable that this fruit and the Vine have attained an excellence fully equal to that of any other portion of the globe. The greatest of the N. S. Wales Orange growers there is Mr. Richard Hill, whose grounds Dr. Bennett visited, and has carefully described.

"After an agreeable drive of about nine miles, I arrived at the Orangery. On entering the grounds the scene was beautiful; and it is impossible to describe the effect produced by the mass of bright green foliage, studded in all directions with golden, luscious fruits, and redolent with the perfume of the flowers. The situation of the grounds is good, having a north-east aspect, well sheltered from injurious winds; the land gradually slopes down to a well-watered creek, and on the opposite side of this gradually rises again; on the brows of these sheltered hills the rows of Orange trees are planted. At the entrance of the garden I remarked some fine Lemon trees, forming an agreeable contrast by the lighter green of their leaves and delicate hue of the pendulous clusters of fruit, with the darker tints of the Orange trees in their vicinity; the branches of these fine Lemon trees were so loaded with ripe fruit as to require the support of props to prevent them from breaking down. The fragrance of the blossoms attracted multitudes of insects, butterflies of various bright tints, and innumerable bees, the latter imbibing the nectar from the flowers to convey to their hives, kept upon the grounds of this plantation. What a combination of beauty this scene displayed! what gratification it afforded to the senses! The air we breathed was filled with delicious odour, and the trees around were loaded with ripe and ripening fruit.

"The Mandarin Orange trees are readily distinguished by the smaller leaf; and I observed that the fruit on the upper branches had obtained a large size, whilst that on the lower branches of the same tree was much smaller. The trees (numbering 800 or 900) surprised me by their healthy luxuriant appearance; and the absence of weeds evinced the great labour and care that had been bestowed upon them. The multitude of bones strewed about pointed out the manure used, which was the refuse from the boiling-down establishments, and was found to be a good fertilising agent for Orange trees. It was applied in the following manner:—A layer of the bones was placed in the trenched ground, then a layer of earth, and lastly the liquid from the boiling-down establishment was poured over the whole. This manure was applied every five years, and the bones left unbroken to decay and nourish the trees. It was generally found that the tree was coarser just after being manured, but soon improved, both in its general healthy appearance and quality of the fruit. Powdered charcoal mixed with the soil at the roots of the trees also increases their health and vigour; and the blood of animals or slaughter-house refuse, used with moderation is considered valuable. It has been suggested as an improvement to mix superphosphate of lime with the latter. Every two years the earth was dug around the trees, which, by admitting air to the roots, materially benefited their growth and productiveness. The trenching was carried from 20 inches to 2 feet in depth, which was always found amply sufficient. Bone-manure is considered effective on sandy and clayey soils, and the benefit is felt for many years. On humid and calcareous soils they are of little use, but on Grass-lands are very beneficial. Bones may be used ground into dust, or else broken into pieces, small or large, according as the effect is intended to be immediate, or gradual and prolonged: the bones may be buried entire.

"The produce of the different varieties of Orange varies. The Mandarin Orange tree, several of which in this grove were 20 feet high and 40 feet in the circumference of their leafy branches, have yielded annually 350 dozen each tree, and the more common varieties have produced 280 dozen.

The Navel Orange (a fine, large, and luscious fruit) is devoid of seeds, or has, at most, a solitary one, which is always abortive. This is a highly valued variety, but is usually regarded as a precarious and shy-bearing tree. 'A very shy bearer is that tree; we can't depend upon the crops from it,' said Murray, the experienced gardener and propagator of the Orangery; and each tree usually bears only about 100 dozen.

"The crop of Navel Oranges in this country is very uncertain, the blossoms not being able to endure the hot winds so well as other varieties, and a large proportion is often destroyed. Nevertheless, from their extended cultivation, a great number of these delicious Oranges are sold during the season; and as they obtain a higher price in the market than others (being from 3*s.* to 4*s.* the dozen), this compensates the grower for their more limited production. The extent of ground planted with Oranges at this place was 22 acres—the trees being about 23 feet apart; many of them were from 18 to 25 feet high (the latter with a circumference of branches of 54 feet). The view from an elevated spot was charming; the light of a bright sunny day was playing over the Orangery with a brilliancy that must have aroused the most apathetic to admiration of the luxuriant scene.

"It is usual among the fruit-dealers of Australia to purchase the whole of the produce of a plantation, and gather the fruit as required for exportation, or for sale in the colony. From 50*l.* to 1800*l.* are realised by the proprietors as annual incomes from the produce of their Orange groves, according to the extent of fruit-bearing trees and choice varieties; some of the dealers paying for the whole of the produce immediately, whilst others purchase from the growers, paying from 6*d.* to 2*s.* the dozen, according as they consist of the rarer or more common varieties; they are retailed at the rate of from 1*s.* to 3*s.* or 4*s.* the dozen. Mr. R. Hill has already, during this year (1858), gathered, and sold for exportation and home consumption, 40,000 dozen oranges, leaving about 20,000 dozen unculled."

We suspect that the delicious though shrivelled Australian Oranges shown a year or two ago at one of the Horticultural Society's exhibitions at St. James's Hall were derived from some New South Wales Orange garden, and not from Adelaide, as the exhibitor had been informed.

But we must pause. And in doing so express our great regret that a volume so full of interesting details, which would render it quite a work of reference, should have been rendered almost useless in consequence of the entire omission of an Index. If ever a book stood in absolute need of one—and a very full one—it is this.

Garden Memoranda.

Temple Gardens.—Although the Chrysanthemum may be justly said to be the flower for which these gardens are most celebrated, yet during the whole of the spring and summer months, Mr. Broome contrives to keep up an amount of floral decoration of another kind of which he may well be proud; for in few places have we seen a better display of annuals than he has had this season, and his bedding plants also bid fair to do him equal credit. As a winter flower the Christmas Rose blooms well in these gardens, and later in the spring Snowdrops flower freely. Next follow Crocuses of different colours, which bloom remarkably well, and intermixed with common Primroses make a fine display. As soon as these are over, their places are occupied by purple and white Virginian Stock, which together with other annuals of different kinds keep up, for a town garden, a striking amount of floral beauty until the usual kinds of bedding plants come into blossom. In ordinary seasons these succeed admirably; but this year the comparatively low temperature and drenching rains to which they have been subjected have here, as elsewhere, considerably impaired their beauty. In their present condition, however, they are still worth inspection.

Conspicuous among them was a pretty bed consisting of Scarlet Geraniums, blue Ageratum, China Asters of different colours, yellow Calceolarias, and white Verbena, the whole edged with the little blue trailing Lobelia. This kind of mixture had an excellent effect, and similar combinations elsewhere were generally striking and beautiful. Clove and scarlet flaked Carnations succeed remarkably well here, and are, as they deserve to be, great favourites; Stocks have also bloomed freely from May up to the present time; Dahlias pegged down close to the ground flower well and make a good bed; but Hollyhocks do not seem to succeed; at least they have been a failure this season. Heliotropes do well, as do also Scarlet Geraniums and shrubby Calceolarias. The last two flower all the summer and are very gay. Cuttings of them struck now soon get well established, and are wintered here in a cold frame, from which frost is kept by means of a thick covering of mats and hay. Stocks are sown in September under a hand glass; when sufficiently large to handle they are pricked out three or four together into a 6-inch pot in a compost of loam and a little well-rotted dung, still keeping them out of doors and taking care not to let them have too much water. In November they are placed in cold frames for the winter, during which period they are never watered except they show symptoms of flagging. In the end of February they are planted out into beds in which they are intended to bloom; a little frost does them no harm. Of Scarlet Geranium some are wintered in cold frames and some in a house; but as they are liable to damp off all are kept in as dry a state as possible. To make sure of his stock from year to year, Mr. Broome plunges them all in the ground in pots, a practice which in some measure checks their growth, and induces them to bloom more freely. At taking up time the old plants are well cut in and kept for another year. Of Ageratums and things of that sort cuttings are put in even as late as October, and wintered in a cold frame. Verbenas require to be struck about this time, so as to get well established, or they are apt to die off in winter.

Chrysanthemums here promise to bloom finely this year. They have been well watered with rain water, which is what they like, and no mulching has been required to keep their surface fibres from being burned by the sun. Manure water is however given them occasionally so soon as they show the bud, until the flower buds begin to open, when it is discontinued. The pinching off of the laterals or side shoots at present requires great attention, for if large blooms are wanted, a considerable amount of thinning is necessary. In this operation, however, great care must be taken; for the crown buds are apt to snap off. The work must, therefore, be performed with a light and steady hand.

An object of interest in these gardens is an old Sycamore tree, under which it is reported Johnson and Oliver Goldsmith were wont to sit. This is fenced in with iron railing, and is held together by means of hoops. It is dead, however, and has been so for these

last 15 years; and were it not for the evident care bestowed upon it to keep it from harm and an Ivy bush which has considerately thrown its green mantle over its dilapidated trunk, its present appearance would attract but little notice.

Miscellaneous.

Pyramidal Fruit Trees for Ornamental Planting in Villa Gardens.—I agree with your correspondent "Malus" that fruit trees in shrubberies ought to be more abundant than they are, for they are quite as ornamental as most of our deciduous trees and shrubs at present in use, both in spring when in bloom and in autumn when laden with fruit; for who is there who does not admire either Apples or Pears, whether planted as standards, espaliers, or pyramids—whether in gardens, orchards, or anywhere else; besides, the value of the crop must be taken into account. For villa, and small gardens in general, I know of nothing to equal either Apples or Pears for ornamental planting, either as pyramids or bushes, intermixed with a few evergreens, to give the garden a furnished appearance in winter. Plums also look well as pyramids, and produce a nice effect in autumn, when the fruit is ripe, particularly the large and high-coloured varieties. Pears are, however, in my opinion, most striking, but they must not be neglected; if they are wanted to look well and be productive they must be removed every two years or so, and have a little fresh soil added if the ground is poor; avoid over stimulant manures; if the trees grow too strongly without fruiting they require to be lifted annually and their strongest roots cut back, carefully preserving all the small fibres; as the trees get old they will not require lifting so often, and will produce a good crop of fruit in most seasons; when young and growing they require watching, so as to stop all strong shoots, tying them wherever they are wanted, to maintain a perfect shape. A fruit tree, well managed, does as much credit to its owner as a pot plant on an exhibition stage, and is equally beautiful on a lawn as in a shrubbery. Any one who does not care about the trouble of training them can buy large trees fit for immediate effect at most nursery establishments, and at reasonable prices. By using fruit trees for ornamental purposes people with small means may in most seasons enjoy a good Pear or Apple for dessert during the greater part of the year, merely by taking care to make a judicious selection of sorts. The last place I lived at we had upwards of 70 Pears and Apples in the shape of pyramids and bushes, planted in a small space of ground, and a most beautiful effect they made, and were admired by every one who saw them. On trees 5 and 6 feet high I had Pears as large and of as good shape and flavour as ever I obtained from a large tree, and that not one kind only but 20 or more sorts—growing on a stiff clay on the north slope of a hill, four miles north of London from the General Post-office. This therefore should encourage others to try the experiment. *J. R. B., in Turner & Spencer's Florist, Fruitist, and Garden Miscellany.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

Conservatory, &c.—Preparations must soon be made for getting tender plants out of doors under cover. Where there is proper accommodation for them under glass there can be no utility in keeping them out of doors late this autumn, but in cases where they have to be wintered in Vineries it is often necessary to make every possible shift to keep them out of doors until the state of the Vines, &c., allows of managing the houses with something like regard to the well-being of the plants. And with the aid of Tiffany houses or skeleton frames or pits, constructed so that they will ward off a few degrees of frost, and a waterproof cloth, old sashes, or anything for covering that will throw off heavy rains, most greenhouse plants may be kept safely enough for some time yet, unless the weather should prove more unfavourable even than it has been, and will be found to do much better under such shelter than crowded too thickly together in houses where fire-heat must be used. Indeed, where plants have to be wintered under make-shift circumstances, as in forcing-houses, &c., which cannot always be had in a fit state for their reception at the proper time, some temporary shelter is indispensable to save the plants from drenching rains and cold winds in autumn; and a very suitable one would cost but little and would be found useful at most seasons. Luculias and other winter flowering things growing in the border of the conservatory must be freely exposed to light and air, in order to get the growth well ripened and insure a fine display of bloom. Also see that all plants are clear of thrips, for this pest is particularly active at this season wherever it is allowed to gain a footing, especially on Luculias and such things as are in a growing state. Where there is but one stove for the accommodation of tropical plants, considerable care and attention are necessary to properly manage these at this season, as some having completed their season's growth require to be kept cool and rather dry, in order to ripen the wood, while others in free growth require to be encouraged with warmth and moisture. If there is no convenience for removing to a cooler house such things as have made their growth, these should be placed together at one end of the house, keeping them sparingly supplied with water at the root, and giving air rather freely, which will generally serve to prevent any attempt at a second growth; those requiring to be kept warm and moist should also be placed together at the opposite end of the house, where very little air should be given, using every care to keep the atmosphere about them moist, &c. Allamandas, Clerodendrons, &c., which have done blooming, may be removed to a Vinery where Grapes are ripe or ripening, for as these will require very little water, they will not do much mischief in the way of causing damp, and their room will be found very useful for other things. See that everything is free from insects, and keep the foliage of such plants as Ixoras, &c., clean by washing with a sponge and soapy water when necessary.

FORCING DEPARTMENT.

Pineries.—Continue to encourage free growth where this is desirable, giving the plants a liberal supply of water at the root, using manure water for such as are moderately well rooted, and keeping the atmosphere warm and moist. Shading will of course be dispensed with by this time—at least it should be, as growing plants will require exposure to all the light possible, in order to induce fine strong foliage and a dwarf stocky habit. See that the succession stock is properly supplied with water at the root, as any neglect in this respect might be liable to cause some of the plants to fruit prematurely. Also keep the atmosphere moist by frequently sprinkling the paths, &c.; syringe lightly over-head, and shut up early in the afternoon, so as to husband what sun heat we have as much as possible; be careful, however, in syringing to spare plants in flower, as syringing these over-head would probably cause deformed fruit. Give plants swelling their fruit plenty of clear strong manure water, and young plants growing in open beds will enjoy an occasional soaking of the same.

Vineries.—Ripe fruit expected to hang for a considerable time must be kept cool, for although quality may be rather improved by warmth, &c., some sorts soon lose their fresh plump appearance. Give air freely, and keep the house as dry as circumstances will admit. Stop laterals in the late house, and keep the foliage regularly exposed to light, so as to have it as healthy and vigorous as possible. Fruit beginning to colour should be encouraged with plenty of warmth and air. Keep thrips in check where at all troublesome by repeated fumigations, and use every means to preserve the foliage from red spider.

Peaches.—Give every attention to ripening the wood, for upon this being properly effected next year's success will largely depend. Keep the foliage clear of insects, and endeavour to preserve it in health as long as possible. Give air abundantly, both day and night, and keep the borders as dry as can conveniently be done; therefore do not leave the sashes down when there is a prospect of a wet night. Any gross shoots should be stopped, as these, when allowed to grow as long as they will, induce a flow of sap to them and keep up a tendency to growth longer than would otherwise be the case. Loosen the surface of the inside border, in order to expose the roots as much as possible to the influence of the atmosphere; also in case of a continuance of heavy rains, cover the outside border with something to prevent its getting soaked, which would greatly retard the ripening of the wood.

FLOWER GARDEN AND SHRUBBERIES.

That from this time to the end of next month is a favourable period for transplanting evergreens is seldom disputed; nevertheless it annually happens that a great amount of this kind of work is put off until so late that the plants have no chance of pushing a few fresh roots to enable them to resist the cold drying winds of March; we would therefore strongly advise all who intend transplanting to commence as soon as circumstances will admit, and they will find that shrubs shifted during this month will require but little attention in the way of watering next spring and summer, compared with others transplanted in winter and spring. Also get ground intended to be planted with young stock from the nursery turned up as soon as possible, especially in the case of strong adhesive soils, which are quite unfit for planting until they have been some considerable time exposed to mellowing influences. Give diligent attention to the propagation of bedding out stock, and get cuttings that are sufficiently rooted potted off at once, keeping them close and moist until they become established. Those that have been potted off and have got established in their pots should be gradually inured to exposure to the open air, stopping the shoots to keep them dwarf. But plants that are not very strong should be shaded for a few hours in the middle of the day, or placed in a shady situation out of doors.

HARDY FRUIT AND KITCHEN GARDEN.

Any of the Peach or Nectarine trees which are observed to be growing too freely should be gone over, stopping all the stronger shoots; and those that were treated in this way a few weeks ago should also be looked over again, stopping a further portion of the shoots if this appears necessary, to prevent the formation of gross strong wood. Pear, and indeed all trained fruit trees should also be gone over, removing all superfluous wood, so as to expose the trees to sun and air as fully as possible, which will be of service towards getting the fruit spurs and bearing wood ripened before winter.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON

For the Week ending August 23, 1860, as observed at the Horticultural Gardens

August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 17	1	29.548	29.415	67	45	56.0	61½	59	S.W.	.04
Satur. 18	2	29.593	29.525	64	51	57.5	61½	58½	S.W.	.39
Sunday 19	3	29.786	29.705	66	55	60.5	60	58	S.W.	.06
Mon. 20	4	29.789	29.778	68	50	59.0	61½	58½	W.	.00
Tues. 21	5	29.901	29.815	69	50	59.5	61	58½	W.	.36
Wed. 22	6	29.619	29.430	65	42	53.5	61	58½	S.W.	.03
Thurs. 23	7	29.839	29.681	65	44	54.5	61	58½	W.	.45
Average..		29.725	29.628	66.3	48.1	57.2	61.1	58.5		1.23

August 17—Fine; clear and cold at night; rain.
— 18—Rain; cloudy; boisterous with rain at night.
— 19—Lightly overcast; showery; overcast.
— 20—Cloudy; fine throughout.
— 21—Fine; cloudy; densely overcast, heavy rain at night.
— 22—Rain; variable winds; cloudy; clear and cold; slight rain.
— 23—Clear, quite cloudless sky; cloudy with very clear intervals; very heavy rain.

Mean temperature of the week, 4½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Sept. 1, 1860.

August and Sept.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 26..	72.6	48.8	60.7	10	0.51 in.	2	2	3	—	6	9	7	4
Mon. 27..	72.9	50.1	61.5	10	1.32	1	2	4	—	1	10	7	9
Tues. 28..	72.7	50.0	61.3	15	0.20	2	6	3	—	5	8	7	3
Wed. 29..	71.5	48.2	59.9	13	0.58	4	4	4	1	2	11	5	3
Thurs. 30..	71.9	48.4	60.1	8	0.92	2	5	3	—	5	8	8	3
Friday 31..	70.8	48.3	59.6	15	1.31	2	6	3	2	2	7	7	5
Satur. 1..	70.2	47.8	59.0	17	1.50	2	4	3	4	3	11	3	4

The highest temperature during the above period occurred on the 1st, 1843—therm. 85 deg. and the lowest on the 29th, 1850—therm. 32 deg.

Notices to Correspondents.

A Bag of Herbs: *Onoma.* There is no Savin; but fragments of Rue, Cocksfoot, Yarrow or Milfoil, and some other similar plant.

Books: *Ambition.* Study Kemp's How to lay out a Garden; it has plenty of plans, and is a capital gardeners' book.—*J N P.* Lindley's Flora Medica, or Pereira's Materia Medica.

Dissected Leaves: *Maidstone.* We really cannot be made a medium for procuring materials for preparations of this kind. They must be sought either by personal inquiry or by public advertisement.

Emigrants: *J W F.* We cannot assume the responsibility of advising you. In any British colony not within the tropics, industry and good conduct are sure to succeed.

Greenhouses: *Omagh.* We should use Hartley's rough plate, provided you can be certain of procuring the best quality. Some glass which comes into the market under this name is very brittle. As to a stove for a small conservatory, that is the great desideratum. Gas stoves are the most convenient, but are very objectionable; and, indeed, unsafe in the hands of careless or unskilful servants. Hot water if you can manage to work it is the best. Or if the locality suits, a common brick flue.

Late Rhododendron: *M.* We imagine the specimen to belong to some variety of Rhododendron ponticum, flowering thus late in consequence of the constant dampness and low temperature. Several of our own are still flowering.

Melons: *X Y Z.* From what you state we should imagine that your plants are burned at the root; but whether that is really so or not can only be ascertained with certainty on the spot; your manure bed has possibly been too hot. Your only remedy now is to try to recover them by means of kind treatment.

Monstrous Rhododendron: *R H.* Very curious. All such cases, that of the Nasturtium included, prove to the understanding of the humblest capacity that flowers and their parts are merely leaves in a metamorphosed state.

Names of Plants: *Eliza.* Chrysanthemum coronarium double; Melissa officinalis, variegated; Pelargonium capitatum.—*E Bisset.* 1, Pelargonium zonale; 2, P. acetosum; 3, P. caucalifolium; 4, P. odoratissimum.—*Calebs.* A, Oxalis reptatrix; B, O. caprina; C, Acer saccharinum; D, Tilia laxiflora.—*E Beert.* Hibiscus Sabdariffa.—*A S.* Not a Campanula, but Anagallis tenella.—*X Y Z.* Ervum hirsutum, and some remains of Galeobdolon luteum.—*Sub.* 1. Polypodium vulgare, v. cambricum; 2, Adiantum formosum; 3, Adiantum pubescens; 4, One of the varieties of Scolopendrium vulgare, apparently digitatum, but perhaps a badly developed ramosum.—*W H.* 1, Helichrysum bracteatum; 4, Eupatorium cannabinum; 9, Achillea Ptarmica; 8, Coronilla varia. You quite forget the condition on which we name plants.

Nectarines: *R B.* We presume that you have watched for the enemy who gnaws your Nectarines, and have not found him. He is probably some night feeder, and you must look for him by candle-light. If a Curculio, then place a white cloth under the trees and brush them, when the insects may be swept up and treated to a little boiling water. The flower is that of a very bad Carnation.

The Cinchona Expedition. We extract from a new letter of Mr. Markham the following passages:—"1. With regard to M. Hasskarl, the whole point of my statement respecting him was that he obtained no Calisaya seeds and fewer plants than I did; yet you give him the credit of a measure of success which you deny to me. *2. I lay no claim to scientific knowledge,* as you are well aware from reading my report; and therefore I feel no gratitude to you for not proving that I do not possess what *I never pretended to possess;* and *I deny that this knowledge was 'the first requisite for the adventure.'* What I do lay claim to is an intimate knowledge of the different species of Cinchonæ, both from personal observation and from study, an acquaintance with the Spanish and Quichua languages—with the country and the people. These were 'the first requisites,' and these I lay claim to. 3. In order to throw a doubt on the truth of my statements respecting the climate and scarcity of food in the region between Sandia and Vilque by the 'despoblado,' for that was the route I was forced to take, you insert part of a letter from a person who states that he is acquainted with that region. If it is true that he has traversed the same route, he assuredly did experience the same cold, though he may have been better supplied with provisions; but I think his memory has failed him. As to his statement that it is needless to cross the Andes in conveying plants [the statement was exactly the contrary *Ed.*] from the montañas of Peru or Bolivia to the coast, *any schoolboy could have told him better*[!!] Finally, I did consult Dr. Weddell, and he recommended me to go to Caravaya, in preference to the Yungas of Pelechuco or any other part of Bolivia; because from the latter country 'I should have more difficulty *in exporting live plants.*' [Of course.] There were several good reasons for preferring Caravaya to Bolivia." The italics are our own; comment is superfluous. The opinion we expressed respecting Mr. Markham's adventure was one that we had a right to form of a public act, in Government service; what he says confirms its justice—and something more. He now informs us that he is about to leave England in a few days; we can only wish him a pleasant as well as successful voyage.

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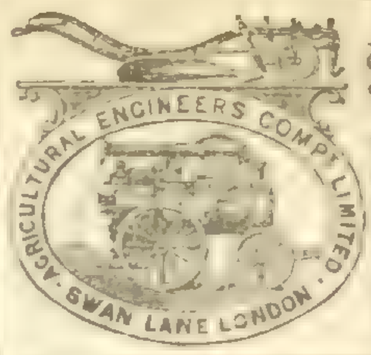

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2, Old Palace Yard, Westminster, S.W.
To Landowners, the Clergy, Estate Agents, Surveyors &c. in England and Wales and in Scotland.

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable William Napier, Managing Director, 2, Old Palace Yard, Westminster, S.W.

LAND DRAINAGE.

WORKS OF DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.

Repayment may be made by the Landowner as successive portions of the works are completed; or the actual expenditure, with a commission thereon, may be charged on the property improved, by way of rentcharge on the estate created for various terms of years so as to adapt the rate per cent. of annual charge to the circumstances of the tenants.

No investigation of title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.

Works of Irrigation, Enclosing, Wood Grubbing, Road Making, and Farm Buildings are executed in a similar manner.

Landowners desirous to execute any of the Improvements by their own Agents, and charge the outlay and expenses on the Estate, may obtain Loans for the purpose.

Applications to be made to William Clifford, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W.

NEW VETERINARY COLLEGE, EDINBURGH.—WINTER SESSION, 1860–61.—Professor John Gamgee will deliver the INTRODUCTORY LECTURE in the above Institution, on WEDNESDAY, October 31, at 2 o'clock.

Further particulars in future Advertisements, and to be had on applying to Professor Gamgee, New Veterinary College, Edinburgh.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor Buckman, Dollar Ward, Cirencester.

The Agricultural Gazette.

SATURDAY, AUGUST 25, 1860.

All people engaged in practical agriculture must at some time or other have been pestered with a "plague of Thistles." Whether on plough lands or in pastures Thistles are sure to obstruct our path. In distant colonies the English farmer is still followed by the Thistle. Our Antipodes are overrun with it, and the settler asks, almost in despair, how he is to get rid of it. Sinclair, indeed, considered these plants as a necessity of agriculture, and looked upon them as a beneficent gift to ensure labour and exertion. In the present day, however, we look on them as enemies to be got rid of; and as the best way to compass this desirable end is to study their modes of growth and habits, we make no apology for the following notice of *Carduus arvensis*, the Corn

Thistle, which may be viewed as the worst of the tribe, infesting as it does, all parts of the farm, and not only taking up room but living on the very fat of the land.

Carduus arvensis is described by Bentham as "the commonest of European and Asiatic *Thistles*, accompanying cultivation to all parts of the world; extending far to the north, though perhaps not quite to the Arctic circle." It has a "rootstock, perennial and creeping, with erect annual stems 3 or 4 feet high;" and these peculiarities of the annually increasing stems and the still further creeping *rhizomata*, coupled with some peculiarities in the growth and progress of the young plants, have contributed to a wide-spread belief that the plant is wholly indebted to its creeping habit for its development. Farmers, indeed, universally believe that it is not produced from seed—a belief so general that it has tended to increase the plant to the extent to which we now find it, for as the farmer deemed its seed to be incapable of germinating he did not sufficiently direct his attention to the destruction of the flower stems as a means of preventing the after-seeding by which the pest is scattered far and wide. Now in order to test the powers of germination of Thistle seeds we sowed, on the 2d of September of last year (1859), 10 seeds which we had a few days previously collected. By the 21st of the month the whole had not only come up, but had advanced in growth to the condition represented in figure 1. In this state the plants were left without further observation. For some time however previous to the advent of cold weather the secondary leaves had advanced so far as to show indications of the characteristic prickly foliage of the order.

At the first frost the whole of the plants had apparently died, and so they were left to their fate; as spring came on, however, we observed that young buds were just appearing above the ground, which induced us to take up some of them for examination, and the figures 2 *a* and *b* will show the process by which in the apparent death of these seedling plants preparation is after all being made for carrying on the increased life which belongs to its rhizomatous condition. Here then so far we cannot wonder that the farmer has never observed a seedling of this Thistle, seeing that its life in this condition is so short that the young plant is scarcely developed in a state to enable the casual observer to distinguish it from other seedlings before it succumbs to winter and apparently dies.

In diagram 2 *a* and *b*, we may observe the buds *b b*, which are destined to be the growing points of the plant, through whose exertions (if we may so express it) the advance of the specimen is to be secured, and its spread and multiplication by means of the secondary buds *a a*, is to be brought about.

The rate at which this second year's growth is carried on may be seen from diagram 3, which represents one of the plants as it had advanced in the period between February 17th and June 8th, the time when the last drawing was made. In this the secondary bud had grown up to a large prickly but abortive bud, while preparation was made in the tertiary buds—fig. 3, *a a a*, for a complete plantation of Thistles, which will in the third year advance some of these very buds to the flowering state.

In this last condition it is that the farmer attacks them by cutting them down; and to repeat in our pages an old rhyme, it will be seen, under such conditions, that little or no injury results to the plant from the process:—

"Thistles cut in April
Will come up in a little while;
If in May
They grow the next day;
If in June
They'll grow again soon;
If in July
They'll hardly die;
If in August
Die they must."

These words, uncouth as they are, are meant to express some important facts in the natural history of the plant. It may be observed that with such a preparation of underground buds there can be no wonder at the quick re-appearance of the plant on early cutting; at the same time, if we consider that the whole of the above-ground parts of the plants would naturally die at the first approach of cold, we may conclude that the decree of

"If in August
Die they must."

is more apparent than real. For while the tertiary buds are advancing to flower they are also active in providing a still newer growth of rhizomata and buds to perpetuate the growth of the plant; and hence we have no hesitation in saying that never can this Thistle be destroyed by late cutting of its above-ground stems. However, even at this time much good may be done in keeping down the reproduction of this plant, for by the August mowing seeding is usually prevented, though even for this object we should prefer an earlier cutting.

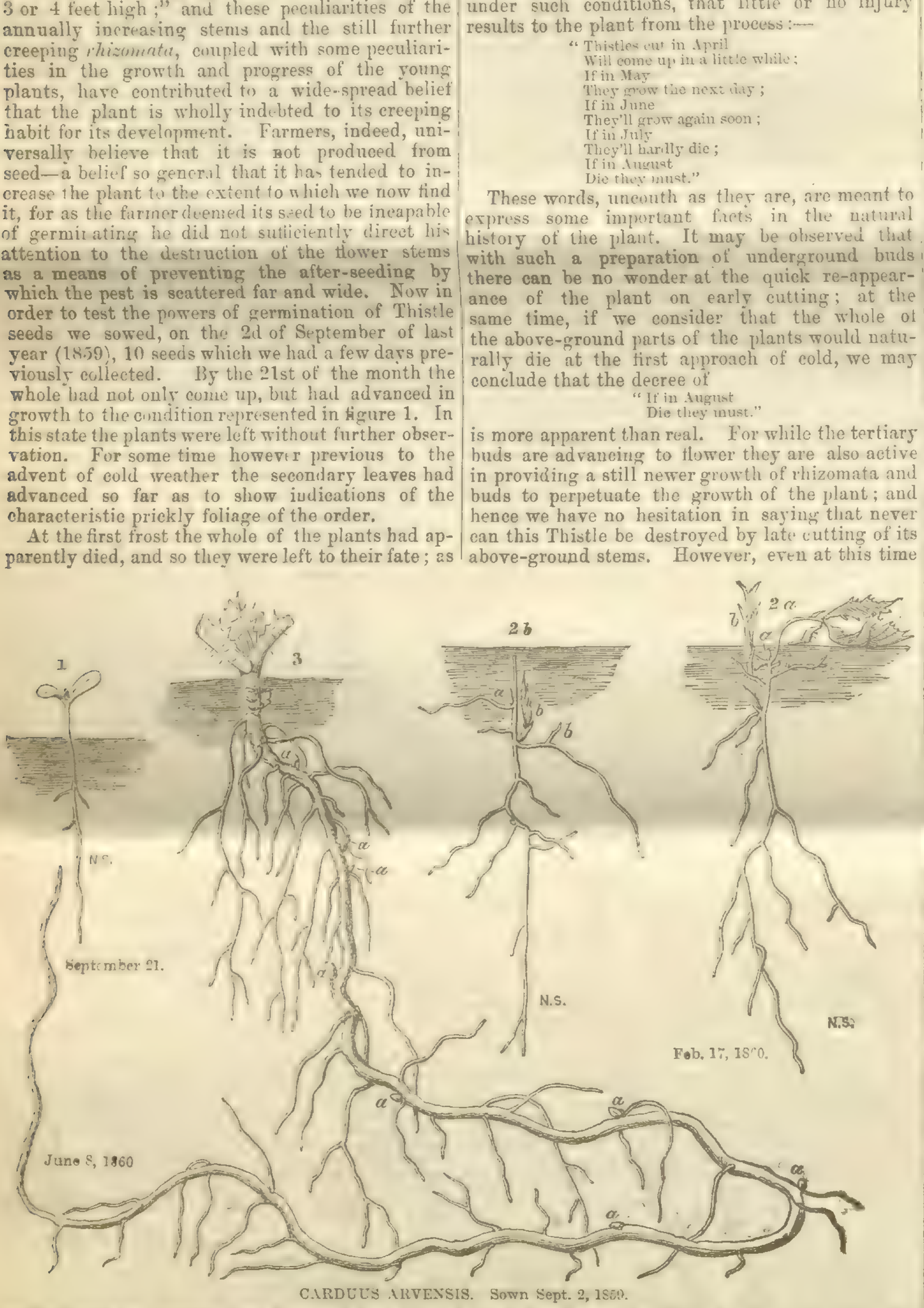
If we review this history we shall find that Thistle seeds may germinate every autumn; no sooner are they ripe than the wind carries them away far and near, and each seed may thus be the centre of a thriving colony, and all brought about so quietly that its very growth from seed is hardly suspected. If we further observe the quantity of seeds that may be produced by even a single one of its composite flowers, we shall find that a single tertiary bud may in one season produce as many as 150 seeds, and if we have 10 flowers to each bud, the plant figured (No. 3) having eight buds may present us with the following sum—$150 \times 10 \times 8 = 12{,}000$ seeds as the possible seed production for the third year of growth of this individual Thistle. It is not to be wondered at that such elements should occasionally operate to cause a sudden and unexpected irruption of Thistles, nor that the getting rid of those which have taken possession of the ground is a matter of no small difficulty. These, however, in spite of the rhyme we have quoted, we should attack not by clean cutting but by bruising them, and that as early as possible; and thus close depasturing in early spring with horses, oxen, or sheep, aids greatly in diminishing the pest. Forking in the corn field is no bad method of attack. The plough only divides the root-stock into sets and so multiplies the evil at a prodigious rate; and it is the single plants thus produced which one so often pulls up to ascertain whether the individual be a seedling or no.

It is thus quite clear from our observations that the Thistle not only seeds, but, as we fully expected, that its seeds have as large a germinating power as others; at the same time we would remark, that much of Thistle seed both of this and other species is destroyed by weevils, which eat it out before it scatters, a fact which may have led the farmer to the conclusion that Thistles produce only abortive seeds. Again, birds, especially the finches, are very active agents in keeping down seed of Thistles; the very method, however, in which birds feed tends to make a portion of seeds fly away to a distance, and we have seen with what possible result.

From these remarks, then, it may be gathered that the most effectual way of dealing with Thistles, as with other weeds, is not to let them seed. They should every where be cut down before they are in bloom, before indeed the flower head is observed to be quite out, for by that time the first flower head will most probably be in seed, and so a plant whose head we have put by to die may scatter with the first breeze as many as 150 seeds.

And it is not sufficient that this should be done merely on the farm; the way-sides and waste places should be especially attended to in this matter. If there be no proper person to look after the roads in this particular, we strongly urge upon farmers the necessity of each attending to his own portion of road; and as all will not do this, and the careful man may suffer from the careless acts of others, we should combine with Mr. Donnelly to obtain some enactment, making it compulsory to keep way-sides and waste places free from weed mischief, or at any rate from Thistles. Hedge rows are too often most prolific sources of Thistle growth, and the common practice should be universal by which the Wheat fields have the weeds cut between the grain crop and the hedges. It is a plan which cannot be too highly commended, as it not only keeps the weeds from seeding, but it prevents the Wheat around the margins of fields from being choked up, and besides clears a space beneath the hedges along which the bird-keeper may freely walk.

From the foregoing remarks, then, we may see that Thistles have a history like all other plants, and we may therefore gather that if we are to cope with those plants which we call weeds we must study what they do and how they do it. From not knowing this in the matter of Thistles much error has arisen, and indeed we are justified in concluding that the vast masses of this plant which one occasionally may daily meet with are the result as much of ignorance as of carelessness. Let it therefore be understood for the future that Thistles do grow most readily from seed, and if we are wise we shall in future prevent as many Thistles from seeding as possible.



CARDUUS ARVENSIS. Sown Sept. 2, 1859.

The additional harvest returns in another page corroborate those which were published last week. Of 30 reports of the Wheat crop in Scotland and England, 19 estimate it as under average. Of 33 reports of the Barley crop, 23 declare it to be average, and seven put it as very good or over average. Of 32 reports of Oats, four are under average, 22 are average, and six are over average. Both Peas and Beans in these supplementary returns are generally reported as being superior crops.

The weather which has befallen us since the date of these returns must however be remembered by any one who would derive from them his opinion of the present harvest. In several instances, as from Suffolk, Essex, Cambridgeshire, and elsewhere, we have had intimation of the serious injury done; and though a few only of our correspondents have sent to correct their reports, both of the probable harvest time and of the probable yield, yet everywhere we know the ripening of the grain is being delayed, and both its quality and its quantity are being injured by the constant cold and wet.

This weather, too, is general; the *Times* reports it to be as mischievous in France, in Holland, in Holstein, and in Germany as it is in England. In

districts earlier than our own the question is—How is the harvest to be got in if we are to have a continual alternation of rain and sunshine.

"The Wheat in the districts to the south-east of Paris, where the crop has been gathered in, is more or less injured by the damp, and the new Wheat offered for sale in those markets is unfit for millers' use. The Wheat in the northern and western departments of France, where the harvest is being commenced, will be more or less injured should the weather not change for the better. Even in the south of France it has been found difficult to thresh out the corn. The rain penetrated the stacks, which were not made for such unseasonable weather, and the new Wheat brought to market is unfit for storing. It will be long before the Wheat now being reaped will be sufficiently dry. The accounts from Germany are not more satisfactory. It rains in Holland, it rains in Holstein, and the Wheat harvest is retarded. Rye and Barley have suffered. Accounts from Berlin state that the Potato crop is diseased, and that the Rye and Barley on the ground are in danger of perishing."

APPEARANCE OF THE CROPS.

FROM OUR SPECIAL CORRESPONDENTS.

(Continued from Last Week.)

COUNTIES.	WHEAT.	BARLEY.	OATS.	BEANS.	PEAS.	POTATOES.	GRASS.	ROOT CROPS.	HARVEST GENERAL.	NAME AND ADDRESS.
SCOTLAND.										
ABERDEEN	Good; late	Full average	Full average	....	....	Moderately good	Bare throughout the season	Turnips excellent	Sept. 20	W. Hay, Ellon
ELGIN	.... Under average Under average	Good Full average Full average	Very good Average Average	....	....	Healthy as yet Remarkably well	Pretty fair Not plentiful Not plentiful	Good average Never better Very promising	Sept. 20 3 weeks 3 weeks	J. M'Donald, Huntley ——, Forres ——, Forres
PERTH	Not average Probably average on the whole	Very fine Full average excepting clays	Very good Not so good as promised	.... Bulky	.... Bulky	Very promising; Not so luxuriant as general	Not very good Light	Very fine Almost universally good	Beging. Sept. 1st week Sept.	J. Hamilton, Forres ——, Strathearn
FORFAR	Thin; not average	Good generally	Very good	Good	....	Good	Hay light; pasture well eaten	Turnips promise well	Very backward weather	Alex. Bell, Ferryden Farm
FIFE	About average; late	Over average	Good; average	Bulky enough	....	Irregular	Rather under average	Very promising	1st week Sept.	G. Edie, King's Kettle
MID-LOTHIAN	Under average	Over average	Over average	Over average	....	Full average	Pretty good	Much over average	1st week Sept.	J. Hislop, Midcalder
EAST LOTHIAN ..	Full average; late	Over average; bulky	Unequal	Bulky	....	Average; healthy	Very poor	Very fine	End Aug.	G. Hope, Drem
RENFREW	Under average	Rather over average	Scarcely average	....	....	About average	Good now	Late	Middle Sept.	J. Gardiner, Neilston
	Under average	Average	Bulky	Full average	....	Under average	Good	Healthy and good	Sept. 11	Geo. Boyd, Renfrew
LANARK	Scarcely average	Good	Good	Very good	Good	Good	Average	Scarcely average	2d week Sept.	David Gairdner, Hamilton
SELKIRK	Below average	Full average	Below average	Scarcely grown	Scarcely grown	Looking very well	Greatly improved	Above average	Sept. 10	J. Stalker, Galashiels
AYR	Under average	Good	Fair average	Very promising	Good	Various	Now very good	Promising	Sept.	W. M'Jannet, Irvine
BERWICK	Under average Small breadth Much improved; well headed; late	Average Large breadth Very good	Average	Average	Average	Average	Average	Average	1st week Sept.	G. Logan, Stitchell
			Average	Good	....	....	Good; disease has appeared	Pasturage good; much hay spoiled	Aug. 27	J. Wilson, Chirnside
ENGLAND.										
DURHAM	Very bad	Good	Bad	Good	Good	Poor	Hay all spoiled	Good	Sept. 15	W. Bell, Durham
NOTTS	Under average	Under average	Average	Very luxuriant	Very luxuriant	Very much diseased	Abundant	Very backward	Sept. 10	John Buckley, Normanton Hill
NORTHAMPTON..	Good crop	Very good on light dry soils	Over average	Abundant	About average	Productive: not diseased	One third badly saved	Late; but promising	End Aug.	P. Love, Sheep Street
	Average	Below average	Average	Average	Average	Good crop; symptoms of disease	Plenty	Various	Cannot say	William Gray, Courteen hall
LEICESTER	Average	Good	Good	Over average	Good	Luxuriant	Hay: mostly out in wet	Very good	Sept. 1	Thomas Spencer, Knopington
WARWICK	Under average	Average	....	Good at present	Various	Early kinds diseased	Good	Good plants; late	August 27	W. Gibbs, Stratford
GLOUCESTERSHIRE	Quite average	Short straw; well headed	Average	Fair	Bad	Early, very bad; late, looks well	Never better	Wonderfully well	Uncertain; a deluge	C. L. Denton, St. Briavel
OXFORD	Fair	Middling	Fair	Good	Good	Good; but much diseased	Good; but hurt	Fair	End of August	S. Druce, Eynsham
BUCKS	Average bulk, but late and uncertain	Good on Barley soils	Promising	Bulky, but not very well corned	....	Productive, but diseased	Moderate	Promising, but late	End of August	Alexander Fraser, Steeple Claydon
MONMOUTH	Below average in quantity and quality	Better than Wheat	Generally light	....	....	Promises well	Good hay; well secured	Late: but promising	Sept. 3	J. R. G. Relph, Usk
SUFFOLK	Below average	Few good	Middling	Pretty good	Pretty good	Much diseased	Spoiled	Indifferent	August 23	L. O. Cottingham, Saxmundham
BEDFORD	Not average	Good on light soils	Good	Good	Good	Very much blighted	Damaged	Good	Third week in August	W. Lavender, Biddenham
ESSEX	Under average	Average	Good	Good	Bad	Bad: much blighted	Good; but hay much damaged	Bad	Aug. 20	Collinson Hall, Romford
	Good	Moderate	Average	Promising	Variable	Generally being dressed	Good	Pretty good	August 27	A. Barfield, Dunmow
	Good; full average	Good	Short; but upright	Good; late	Not good: many lost	Extremely bad	Abundant; but spoiled	Good	August 22	A. Hardy, Maldon
KENT	Nearly average	Average	Very good	Very good but late	Very great	Great crop; leaf diseased	Greatest crop known; but hay spoiled	Exceedingly good	August 27	R. Matson, Wingham
				....	Fair	Much diseased	Abundant	Various	August 27	G. Turner, Exeter
DEVON	Thin, but well filled ear	Average on all friable soils	Good on dry land							
IRELAND.										
DOWN	Autumn sown nearly an average; spring sown one-fourth under average	Probably an average	Much improved, but in clay lands very inferior	A good promise; the haulm very abundant	....	Inferior, even should the disease not progress much; it is now apparent generally	A tolerably abundant hay crop	Promising; but very late	1st week of Sept., if then	John Andrews, Comber
MONAGHAN	....	....	Average	....	....	Pretty good	Good in general	Average	Beginning of Sept.	Rev. Thos. Middlemiss, Castleblaney
WESTMEATH	Good	Good	Short	....	....	Going	Good	Late	About Sept. 10	George Bagnall, Milton Pass
CARLOW	Good; but backward	Middling	Good; but late	Good	..	Greatly damaged	Very good	Middling	August 27	P. W. Mosse, Rutland House
CLARE	Average	Fair	Very fine	....	....	Blight appearing	Good	Partial	Sept. 7	W. Digan, Killaloe
LONGFORD	Good	....	Average	....	....	Very fine	Heavy	Middling	Sept.	J. M. Goodliff, Granard
LEITRIM	....	....	Good	....	....	Good; perfect	Good on early meadows	Healthy	Sept. 10	J. Lindsay, Manor Hamilton
TYRONE	Not average	Deficient	One-third deficient	....	....	Fair	Deficient	Good; but late	Sept. 10	W. Paterson, Pebble Lodge
LIMERICK	Not so good as last year	Very good	Better than for years	....	....	Fair; but stalks now blighted	Very good	Good; but not extensively grown	September	Evans H. Gubbins, Miltown Bruff
KILKENNY	Good	Good	Average	....	....	Holding on well	Good	Fair	September 1	Patrick Grace, Freshford
WEXFORD	Average	Very good	Average	....	....	Not good, and diseased	Good	Promises well	August 25	Alex. Preston, Ennscarthy
TIPPERARY	Good	Good	Good	....	....	Doubtful	Good	Good	Sept. 5	W. Ryall, Cashel
CORK	Good; little grown	Good	Average	....	....	Slightly blighted	Short	Underaverage	Sept. 10	Francis Alex. Twinamo, Kanturk

BURGESS AND KEY'S REAPER.

I will, with your permission, continue the narrative of my use of Burgess & Key's reaper from the point at which my former letter (see page 760), which you did me the favour to publish in the last Number of the *Gazette*, left my experiments.

All difficulties of any importance vanished in the course of the first whole day of our use of the reaper, on the plan which I then adopted and which I detailed in my previous letter. Everything certainly was favourable to the success of the trial except the total inexperience of myself and all my men. For the day was fine, the bulk of the crop was of fair weight, and well up on its roots; the straw was dry and crisp, the ground hard and firm, the reaper itself unclogged, newly oiled and sharp. It is of great importance to have a start under favourable circumstances. You are not discouraged; you are laying up skill and practice to prepare you for the difficulties when they come, and have had already such proofs of the usefulness and availability of

your new friend, as to make you more ready to trust him, when clouds come on or appearances are rather against him. The one thing which I have found to militate most against the perfect success of the operation of the reaper, has been a soft and yielding condition in the ground when damped by recent rain. The machine has then a tendency to clog, the draught is more difficult and irregular, the work done is less, and the stubble does not present such an even mown, nay rather (to come nearer to a true description of its work when in perfection) shaven appearance. If too the crop is low and light, such as a thin crop of Oats, and a little damped by rain or heavy dew, the work of course is less satisfactory. If there be in addition decided inequalities in the surface, such as deep furrows or hollows, the reaper will have a tendency to dip and dig into the earth, when it must be stopped instantly and helped out of its troubles. For this reason and many others I have always found it desirable to have a man regularly following the machine. It professes, indeed, in its perfection to deliver the swath itself—but sometimes the straw will be six or more feet long, and will require a little urging and helping off; sometimes there will be some jerk or stoppage which should be immediately attended to. A constant communication too can be kept up between the driver and the tender; the latter being able to observe how the work is done and to counsel the driver accordingly, who may sometimes be going too fast or (more frequently) too slow. He watches also the arrangement of the ground and the furrows, and at the turn may arrange if necessary some deviation dictated by circumstances from the usual course. A sudden "gee" or "haw" from the tender behind too will help the driver, keeping him, directly he deviates from it, nearer the crop, if he be driving at all too wide of it; and taking him off if he is driving too far into it, or stopping the team at once if there be any rocks or shoals ahead. For such reasons I would always have a man following the machine, not to interfere with it, but as medical gentlemen say, "to assist nature." And even when all goes on smoothly, there is a pleasant sense of security as you watch the steady, rapid tread, the brisk, satisfied look, the bright vigilant eye of your tender, knowing that though his office seems for the moment or the hour something of a sinecure, he will prove, like William of Deloraine, "good at need," and may even exercise something in the meantime of the functions of an overlooker, dropping a word as he passes to the binders or the raker, and certainly being more careful at the turns. You can do nothing better, therefore, when you get a reaper, than choose the most active, intelligent, open-eyed man among your labourers, especially giving the preference to one who has a "bit of a notion" of machinery, and who has a fancy for new lights. If you have such a man, or can get such a man, or (if the worst comes to the worst, and this you must do sometimes), make such a man, place the machine at once "under his protection" and care. He will be proud of it, and think and work day and night to make it answer. In time he will get to understand it thoroughly, and take the same pride and pleasure in it that a sailor will in his own tight little boat or schooner. Since, in order to keep up a brisk fire of work, you should change your horses (two of which are required for the reaper) once in the morning, and once in the afternoon, so as not to let the same team continue at work above 2½ or 3 hours together, one of your carters will be probably at liberty, and if he is a fit man, he might manage the tending of the machine. But it is better to have a man who can be whole to his work and not one who has horses to take care of or anything else to do, least of all, your bailiff, who, if you have much land, will have his hands and his head full with regulating the work, helping at the stooking or pitching in one place while the reaping is going on in another.

For similar reasons it is best to keep the same driver. He becomes master of the work and of the team, and if treated with confidence and put upon his honour, will drive on the work and not mind a little exertion to keep everything moving, and if he does his duty, at the close of the harvest he should find himself richer than his wages by half a sovereign or half a sovereign's worth; and in the same way your tender, or as they are rather fond of calling themselves your "engineer," should be made to look bright at a bright sovereign. The driver, tender, machine and horses being thus arranged, I must describe how we managed the rest of the work. At first the binders followed the work loosely, taking up the swath where they could, after wasting a great deal of time in treading upon or following each other, or arriving two or three at a time at the same bit of swath. The binding under this system will never keep up with the reaping, and the full amount of work will never be done. Yourself, or your bailiff, or whoever is arranging the work, must first of all step the length of the field or the swath, and divide the distance into equal parts, if all be men, giving a smaller portion to any women or boys. But in a Wheat crop it is best to have all men, the work requiring strength, but with Oats and Barley active women or boys will do well enough. Suppose the field to measure about 35 rods, or about 200 yards, along the course of the reaper; divide this into eight parts, leaving about 25 yards each to eight men. Set a branch or stick to mark the limits of each man's beat, and keep him to that exclusively. He can gather, bind, and stook this portion between each return of the machine on such a field with a moderate crop of 4 quarters. If the field be double the length you must allow a little for there being fewer turnings and the consequently quicker return of the machine. If again your crop is very heavy you must allow something more. Perhaps under these circumstances one or even two more men may be required to keep up with the machine. But it is obvious that these things cannot be regulated with absolute nicety, from the shape of fields, the varieties in the crops, and the varieties in the men, who will in one part of Great Britain do one third more work in a day than in another part. Where, however, to the best of your power you have divided the allotments, you must insist upon the work being done in the right time, for if you once let it flag and get behind the machine you will never recover yourself; part of the crop will be left at night in the swath, part of your men will be wanted to bind and stook that the next day, and all your work will be disarranged. It would be better, if at any time the work seems hopelessly behind the machine, to stop it for a few minutes, and let everything start fresh, than to keep dragging on at (you may rely upon it) a greater and greater distance from the machine. But generally there will be a kind of head man in the field, who will do his own work and give a lift to anyone who is a little behind. The man who is following the reaper, as he goes up with it on its return journeys, and when it is out of gear, will take up a couple of sheaves under his arms in passing and stook them, or it will do no harm if even your honourable self will act as a supernumerary, and give a helping hand where you see it wanted. From the above data I conclude that the reaper, worked as I have described, will with every allowance manage 8 acres a day, and if eight men can gather, bind, and stook after it, then it follows that should you be obliged at any time to reap without being able to bind, &c., or should you be able to reap all round the field, you may set the gathering, binding, and stooking at an allowance of one acre a day per man. As I said in my previous letter, I have done myself 10 acres in a day, with eight binders and two men with the reaper; but then the place for the horses to walk was already prepared with the scythe, the machine worked all day in the same field without having to be removed, the crop was of moderate weight and in a good condition for cutting. In the mode of reaping which I have practised, I find it necessary to let the reaper take its return and out-of-gear journeys outside the work, and some little distance from the standing corn, so as to allow plenty of room for the men to bind and stook uninterruptedly; but of course fresh spaces for the return journey are perpetually preparing between the stooks, so that the reaper never need be above 20 yards from the crop.

The greatest trouble and delay is in changing the field, when the machine has to be entirely or partially taken to pieces, carted, and put to pieces again. When this has to be done you will often lose a couple of hours. But this need only take place in case of considerable distances, rough roads, or narrow gates. I have all my new field gates now made a good 9 feet wide, and with this width you have only to take off the cone, which the tender will carry on his back, and you can easily pass through. With narrow gates of 6½ or 7 feet width, the delay and annoyance of getting through are considerable. It is almost better in such cases to remove the gate and one of the posts, and put them up again of a more convenient size at your leisure, than waste the precious hours of harvest and the strength and time of your horses and men in lifting, and turning, and pulling the unhappy reaper out of the little 4-acre field into another through a gate that was never meant to admit much more than a donkey-cart.

I need scarcely enlarge on the saving in wages and in the value of the crop effected by the reaper; this must be obvious to every one; I know it from experience. Three harvests ago I had to pay as much as 1*l.* an acre for reaping and binding, and 15*s.* is a very common price. Even then the work is slowly done, or not done perhaps at the right time, and the fine weather perhaps is passing, and the grain is beginning to shed, and the men you hire see your necessity and become intolerably exacting and perhaps impudent. But with the machines you get your work done at the right time, with a third part of the number of men you would otherwise require, and at a third part of the expense it would otherwise be to you. Need I add anything about comfort and independence? With us a man usually reaps and binds one-third of an acre; a 10 acre field then would require 30 men. I have done it by the help of the reaper with 10. After perhaps hunting for men to reap all over the country, it would cost me 15*s.* or more an acre. With men and horses all paid for, it costs me on an average with the reaper 5*s.* 6*d.* an acre. I have (I know it from my books) saved 50*l.* (the full cost of the reaper with carriage, duplicates, &c.) in wages each harvest, and in value and amount of grain and straw nearly as much more. Two harvest men came one day to look at my reaper at work, and I asked them how they liked it? Their reply was "not at all." I asked why? They replied "Because it is taking the bread out of our mouths." I said on the contrary it was putting the bread into their mouths, for it was securing the harvest in better condition and making Wheat more abundant; and while everybody had as much work as they could possibly do during harvest time, it left money in the farmer's pocket to employ more people in winter when work was scarce. The curiosity and interest excited by my machine wherever it was working near a public road have been extreme. For days I never saw a pedestrian, a horse-man, a cart, a waggon, or a private carriage pass by that did not pull up to watch the machine—which indeed is a remarkable looking object in a field, as the van moves round, and the grain bows down before it—reminding one of Milton's words in the Samson Agonistes, but applied by him, I am sorry to say, to a lady—

"——What thing of earth or air
Comes hither sailing?"

Mine was then the only one, I believe, at work in some three or four adjoining counties. The Hon. Mr.—— came to see it at work; he was expecting one on his own land, but told me I had got the start of him by a week.

I would say, before closing, never be without two or three scythes and a few sickles on the field. The scythes will always be wanted from time to time when you begin a new field, to prepare a way for the horses, and they will also be very useful in mowing down awkward corners, or parts of the field which may be laid, and over which when thus mown the machine as it arrives upon them should simply pass out of gear. If, too, the machine should by any accident "come to grief" for a time, you can then set your men to work and be doing something, instead of allowing them to stand by, jeering and idling, and waiting the arrival of the village blacksmith, whose verdict is waited for, or whose skill is tested with the same anxiety as a doctor's. In truth, however, now my men would not reap with the hand if they could avoid it. They all like working with the machine, and would think it as much slavery to reap with the hook as to thresh with the flail.

I do not allow my harvest men any beer. When they do not get their meals at the farm they are allowed 1*s.* a day extra for their food, and have in the afternoon ten minutes' rest and their drinking given them of milk, tea, butter milk, or more commonly of the following compound, which they much like. Half a pint of Treacle in 12 or 14 quarts of water, with a little grated nutmeg and ginger. Our day is from 7 to 7, with one hour for dinner, and ten minutes in the afternoon. This is much better than beginning early in the morning and leaving off earlier in the evening; because the men have time to get their breakfast or come from a distance before work, and the dew is more off the corn and the ground. And because often the evening hour is the most favourable of the day, from the coolness and the momentum which belong to it, for getting on with work. On a push my men will stay longer to carry, but then I always pay them accordingly. *Exile.*

Home Correspondence.

Valuation of Manures.—In the continued report of Dr. Anderson's excellent lecture to the members of the Highland Society, relating to the valuation of manures, which appeared in the last *Agricultural Gazette*, I observe that whilst the raw materials are valued at the lowest rate at which such articles can be purchased in cargoes, consisting of hundreds of tons, and for money payment, the manufactured article (superphosphate) is reckoned at the highest rate at which it is sold, packed in bags, and delivered free at railway stations. Now as the data for arriving at the proper estimate of the component parts of the manure are derived partly from the one mode, and partly from the other, they must evidently be erroneous. In order to meet the various expenses incurred between the first purchase of the raw material and the final realisation of the manufactured article, embracing the several items of one year's interest of cost, crushing, preparing, manufacturer's profit, bags, freight, railway carriage, and merchant's profit, including also risk of bad debts, &c., a margin of something like 20 or 25 per cent. is required. If this be correct then, to the valuation of the phosphate of lime, &c., in the raw materials, 20 or 25 per cent. ought to be added. This I believe is sound logic, for it must be evident that we have no more right to value the different substances of a manufactured article in the consumer's hands at the sum at which such article might have cost the manufacturer wholesale, than we have to estimate the value of guano in this country at its cost in Peru. *W. C. S.*

Calendar of Operations.

AUGUST.

West Sussex.—We are still in the middle of very wet weather, stormy and comparatively cold, and nothing makes much progress towards maturity; but Wheat harvest will in some places begin this week. It is, where heavy laid, in a very entangled state, and a machine would be but of little use among it, and such will always be a serious obstacle to the introduction of the reaping machine in the rich land along the coast, which is par excellence a Wheat growing district; and it will not do to have them for use one year, and be obliged to lay them aside next; in that case many extra hands would be wanted to cut the heavy crops, and they would not be forthcoming, as they have a strong aversion to the reaping machines, and will avoid those who use them as long as possible. This is a reason with many for not adopting them, but I think this difficulty might be got over by contracting with a party to cut the corn, and hire the use of the reaper with men and horses to keep it going at so much per acre, if they choose to employ it; and if the terms are a little advantageous for them there is no doubt they will soon adopt it. Though much of the corn is laid, yet there is not so much as one would expect with so much rough weather, and I fear its tops are not so heavy as we could wish them, as they rise so readily after the

rain. Barley is more laid than Wheat, and the Clover is growing up through it very much, and unless the harvest is fine much of it will be hurt, being so full of Clover that it must have some time to remain in the field after being cut; the crop is good. Oats are heavy, much down, and laid in appearance. Peas are a very good crop, but they have refused to ripen; we have cut them quite green in the tops while the bottom part of the haulm is dead and nearly rotten, and many of the Peas fall out, having already sprouted in the pod, and I have no doubt but we have already lost 3 or 4 bushels per acre in this way. Beans are a fair crop in most places, though now and then a little blight shows itself. Swedes and Turnips, where sown in good time and not destroyed by the fly or (what has this year been a greater pest) the slugs, are good but very foul, and at present we must put them down on the whole as deficient. Mangel Wurzel, as we have said before, is very various; I never saw it more so. Some say they have them better than usual, and others have them very bad. Potatoes are very much diseased, more so than any one remembers having seen them; there is not a green top to be seen, and the tubers are in some cases already half affected, but as the crop is good, an average quantity may still be preserved. We have still abundance of cattle feed, but no stock does well upon it, and nothing is brought to market in the condition it ought to be. There is no doubt that hands will be much wanted for the next month for both harvesting and Turnip hoeing. *G. S.*

Isle of Ely.—We have to commence our present as we closed our last report, viz., by an allusion to the continued and unwonted wet and cold of the season. Few of the younger race of farmers can call to mind a summer in which there has been so much cloud, wind, rain, and cold, and so little sunshine and genial warmth as we have experienced this year. On several occasions we have only just escaped frost, the thermometer falling more than once as low as 40°, and on several nights it has ranged as low as 45° and 46°, a temperature more resembling that of April than that of July. May and June too were extremely wet months, and July has been continuously showery, although the amount of rainfall has not been equal to that of the two preceding months. We took an opportunity the other day when viewing the middle level works to inspect the register of the sluice keeper at the Outwell sluice to ascertain the amount of rain which had fallen in that locality during the months of May and June, as shown by his rain-gauge. We also referred to the same two months of the two previous years to learn how much the fall this year had been in excess of former years. As these particulars may be interesting to some of our readers we append them, viz.:—

	1858.	1859.	1860.
	Inches.	Inches.	Inches.
May	2.55	3.08	5.85
June..	1.82	2.77	5.32
Total	4.37	5.85	11.17

We believe the average fall of the rain for the year is about 26 inches; it will therefore be seen that these two months have given us nearly half a year's supply of rain. The effect of this, with the continued cold and absence of sun, has been injurious to some of the cereal crops, more especially to the Wheat. This crop is far less promising than when we last wrote. Blight prevails to a fearful extent, more particularly upon the lands sown after Clover or Grass seeds, but it is not confined to these; on the black lands, where the crop is more bulky and laid a good deal, there is a prevalence of mildew which threatens materially to affect both quality and quantity. On some of the high lands, and also on the gravelly fen soils where the crop is not so much laid, the prospect is better and a fair yield and quality are anticipated. There can be but little Wheat cut before the 25th, and harvest will scarcely be general before the 25th or 27th. The Oat crop is generally good; in some instances heavy and much laid, but appears to ripen kindly. Poland Oats are getting fit to reap; some are quite ready, awaiting suitable weather for cutting them. Many will be fit, and with fair days, cut next week. Peas are a good crop in the Fens, are well podded, and yield an abundance of straw, although on the wet high lands around us they are almost worthless, and in some instances have been mown and used for fodder. The early varieties are now being cut. The wetness and lateness of the season have filled the land with weeds until the crop has become well-nigh lost. The Bean crop is bulky and looks healthy, and in some instances is well podded, but in many cases it is otherwise. Where sown thick and followed by a vigorous growth the crop will yield far better to straw than corn. Fen Beans generally are a very deficient crop. Potatoes, where sown early and approaching maturity, are sadly diseased. The later crops are scarcely forward enough to manifest those symptoms yet. The present threatens to be the worst season we have yet known for disease in this crop; the land is so saturated with wet and the temperature low; indeed, there is everything calculated to increase its virulence. Mangels are now growing well, and where well planted promise to yield an abundant crop. It has certainly this year been a difficult and expensive one to clean. Coleseeds were not planted uniformly well this season. The early sown are the best, and are growing rapidly. Grass reaping is abundant; we never remember so fruitful a season. Store stock consequently realise high prices, and meat is no cheaper. The corn trade is scarcely worth a reference, as nearly all our farmers have finished selling, and many are impatiently waiting to commence with the new crop, for which, with a fair quality, we may anticipate remunerative prices. *Your Fen Reporter.*

Notices to Correspondents.

Gas Lime: *W. Picton.* About 2 or 3 tons per acre may be spread, after lying in compost for a few months with mould, road scrapings, &c., and being turned there once or twice. Its causticity is not due to what ammonia may be present in it.

Growth of Flax in Ireland, 1860: *R.* 156,282 acres; being a decrease of 8042 acres on last year's crop, but an increase of 26,594 acres on the extent grown in 1858.

Temperature of the Present Summer: *R.* According to Mr. Lowe's letter to the *Times* the greatest heat in June, July, and August has been 72½°, 77°, and 73°, respectively being 6°, 12½°, and 13°, respectively lower than the greatest heat of those months in 1859. In 1859 the temperature reached 70° on 29 days; in 1860 that heat was reached on only seven days. In July 1859, 80° was reached on 14 days; in 1860 it was not reached at all. In August 1859, 80° was reached on six days; in 1860, 70° has been reached on only two days! The temperature in 1860 fell to within 2.5° of the freezing point in June, to within 4.5° in July, and to within 9.0° in August on the Grass. In June, 1860, the amount of rain was about the average, in July half an inch in excess; and in August already nearly an inch beyond the average for the whole month. In the last 40 days 35 have been rainy.

Tumours inside the Teats of Cows: *Cor.* These are not warts but generally proceed from inflammation of the udder. The following may be rubbed in with advantage daily, but when one or more quarters of the udder become permanently indurated, a question arises whether the cow should not be prepared for the butcher. Iodide of potassium, 2 drams; Camphor powdered, 2 scruples; Lard, 2 ounces. To be made into an ointment. *W C S.*

GLASS FOR GREENHOUSES, &c.

Sheet Glass, in Crates.

	16 oz.	21 oz.	26 oz.	32 oz.	36 oz.
Best ..	5½d. ..	7¼d. ..	9¼d. ..	1s. 0d. ..	1s. 0½d.
Seconds.	3¾ ..	5 ..	6¼ ..	0 9¼ ..	1 0
Thirds ..	2½ ..	3½ ..	5¼ ..	0 7¼ ..	0 10¼
Fourths.	2¾ ..	3¼			

Glass cut to any given sizes not on the List.

16 oz.—4ths, 1¾d., 2d., and 2¼d. per foot
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21 oz.—4ths, 2¾d., 3d., and 3½d. per foot
,, 3rds, 3½d., 4d., and 4½d. per foot

Glass for Orchard Houses,

As supplied by us to Mr. Rivers.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in.	Common	13s. 6d. ..	£1 1s.
20 in. by 14 in. / 20 in. by 15 in.	Superior do.	16 0 ..	1 3
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In 100 feet Boxes.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 ,, 10, 13 ,, 10, 14 ,, 10, 15 ,, 10 ..	14s. 0d.	12s. 6d.
13 ,, 11, 14 ,, 11, 15 ,, 11, 16 ,, 11 .. / 14 ,, 12, 15 ,, 12, 16 ,, 12, 17 ,, 12 .. / 18 ,, 12, 19 ,, 12, 20 ,, 12 .. .. / 16 ,, 13, 17 ,, 13, 18 ,, 13 .. .. / 19 ,, 13, 20 ,, 13, 21 ,, 13 .. .. / 16 ,, 14, 17 ,, 14, 18 ,, 14 .. .. / 19 ,, 14, 20 ,, 14, 21 ,, 14 .. .	16s. 0d. per 100 feet.	13s. 6d.

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In. by In.	In. by In.	In. by In.	Per 100 feet.	Per foot.
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	6½ .. 4½	8½ .. 6½	11s. 6d.	
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10½ .. 8½	13 .. 9	13½ .. 10½	12 .. 11		3ds.	14s. 3d.	1¾
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 . 11	2ds.	18s.	2¼
12 .. 9	12[illegible] .. 10[illegible]	14[illegible] .. 10[illegible]	13 .. 11		1sts.	21s. 6d	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13s. 6d.	1¾d.
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16s.	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19s. 8d.	2½
18 .. 11	18 .. 12	23 .. 13	24 .. 15	.. ..	1sts.	24s.	3
13 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 12	22 .. 14	22 .. 16	.. ..			

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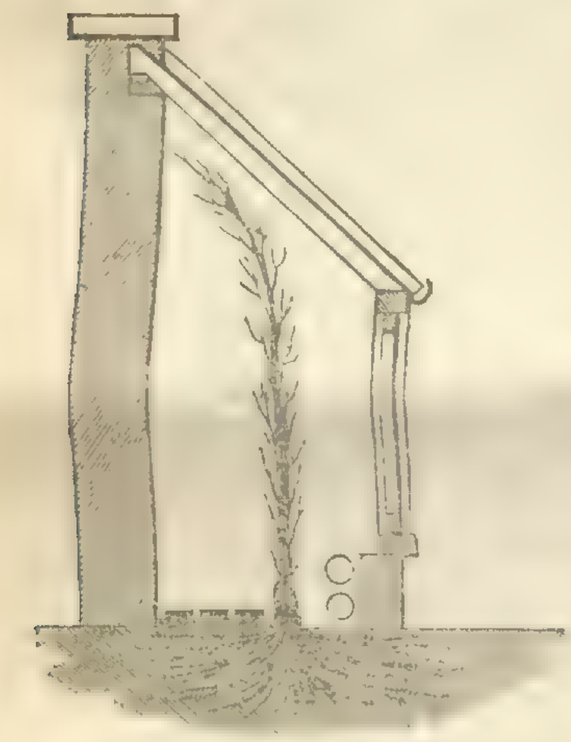
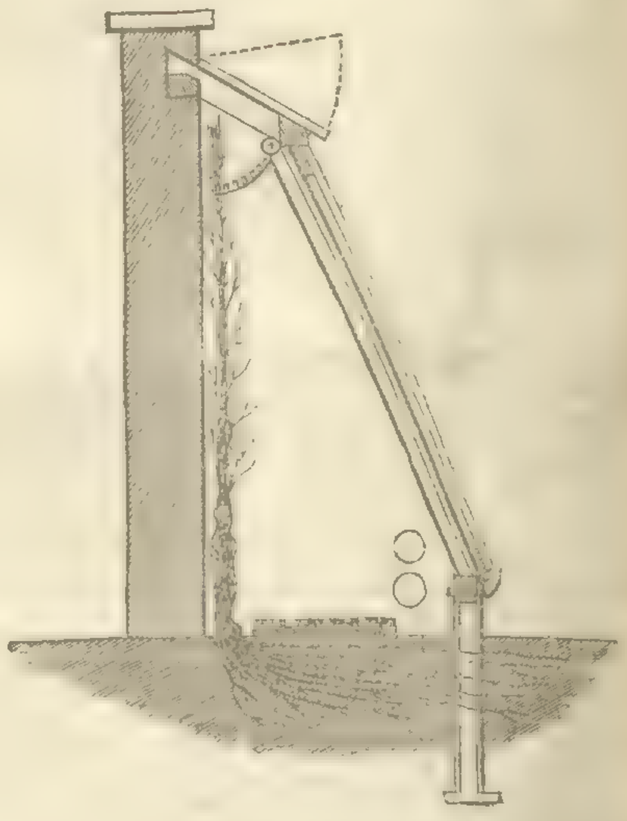
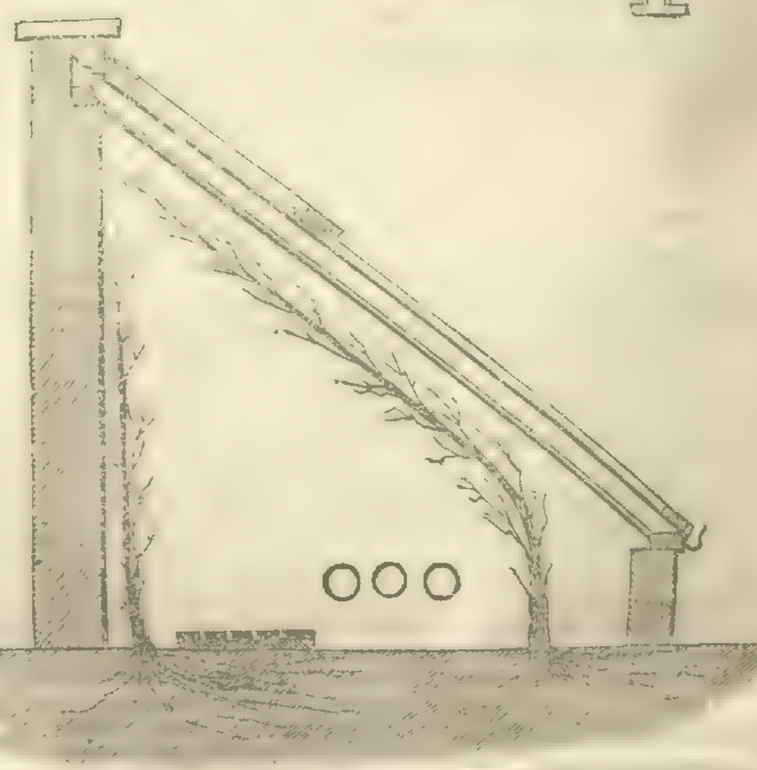
SOLE INVENTORS AND MANUFACTURERS OF THE

ONE-BOILER SYSTEM OF HEATING BY HOT WATER.







J. WEEKS' IMPROVED PATENT is the only ONE BOILER SYSTEM for saving and economising FUEL, LABOUR, and COST in Warming and Ventilating GREENHOUSES, HOTHOUSES, CONSERVATORIES, MANSIONS, CHURCHES, CHAPELS, SCHOOLS, WAREHOUSES, PUBLIC and PRIVATE BUILDINGS, and they refer with much pride to the numerous flattering testimonials received from many of the NOBILITY, GENTRY, HORTICULTURISTS, and GARDENERS in every part of Great Britain. In many instances where from 8 to 15 old Boilers and Furnaces have been removed and WEEKS' ONE-BOILER substituted, the proprietors have announced that a saving of 70 PER CENT. in fuel has been effected and 100 PER CENT. in labour. These statistics, emanating from experienced and influential practitioners, cannot fail to recommend WEEKS' ONE-BOILER SYSTEM as worthy the adoption of all requiring Hot-water Apparatus.

WEEKS' IMPROVED economical method of constructing PEACH HOUSES has met with the highest approval and patronage as being specially adapted for COVERING TREES WHEN IN FULL GROWTH, without incurring the least risk of damaging either the Tree or the Crop.

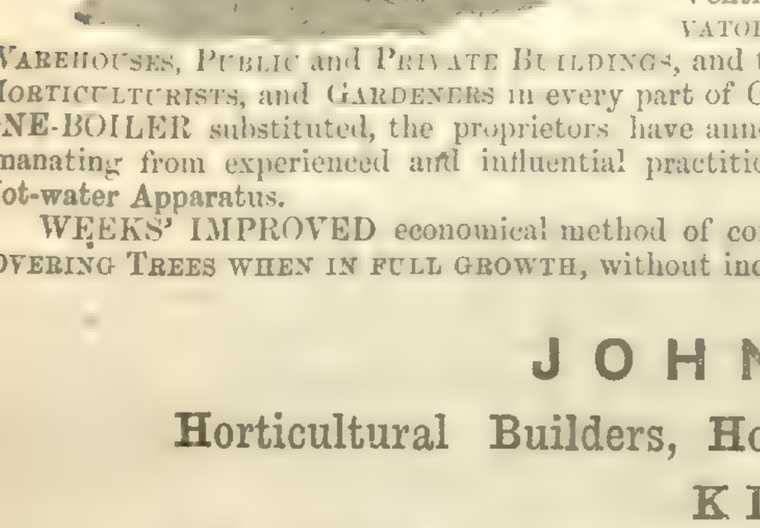
JOHN WEEKS & COMPANY,

Horticultural Builders, Hot-water Apparatus Manufacturers, Engineers, and Ironfounders,

KING'S ROAD, CHELSEA, S.W.

PLANS, ESTIMATES, AND PAMPHLETS FREE ON APPLICATION.

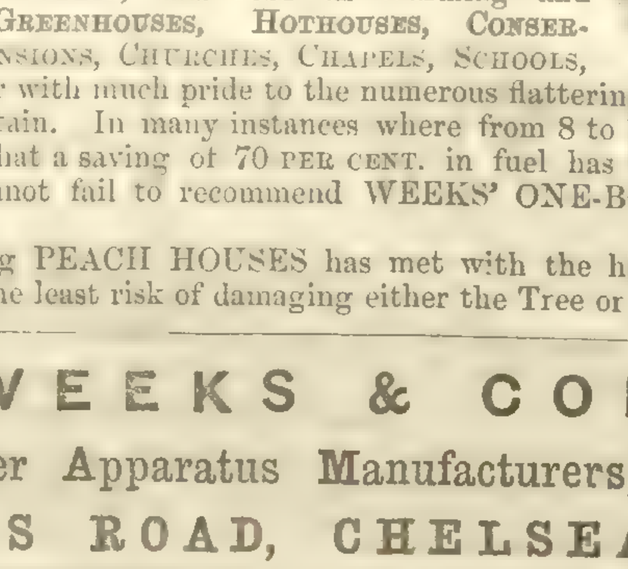
MONRO'S CANNON BOILERS.



MUCH has of late been said about BOILERS FOR HEATING BY HOT WATER, but these Boilers have now proved themselves to be the best at present invented. They are adapted for Heating every description of Building, and are made of various sizes. The price of the

24-inch Cast Iron is	..	..	.. £5 10s.	each.
24-inch Wrought Iron is	..	..	.. 6 10	,,
36-inch Wrought Iron is	..	..	.. 8 10	,,
48-inch Wrought Iron is	..	..	.. 12 0	,,

References to Gentlemen and Nurserymen where these Boilers are now at work. The Cannon Boilers are now kept in stock, and are to be had only of J. JONES, 6, Bankside, S.E. Also, every description of Saddle and Cylinder Boilers. Hot-water Pipes and Connections at prices lower than those of any other house in London. Estimates for Hot-water Apparatus erected complete in any part of the country, and an Illustrated Catalogue on application to J. JONES, 6, Bankside, Southwark, London, S.E.



No. 5742.

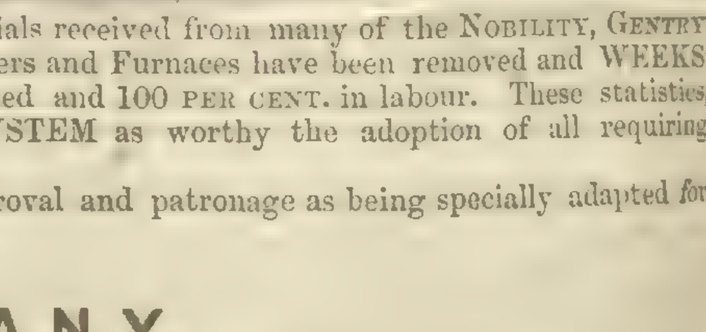
WARNER'S GALVANISED IRON TUB GARDEN ENGINE, with registered Spreader, is strongly recommended for durability and low price, viz.:—

10 gallons .. £2 15s. 0d. | 16 gallons .. £3 15s. 0d.
24 gallons .. .. .. £5 0s. 0d.

Larger sizes in either Wood or Iron.
BRASS SYRINGES, from 9s. to 21s.
May be obtained of any Ironmonger at the above prices, or of JOHN WARNER AND SONS, 8, CRESCENT, CRIPPLEGATE, E.C.

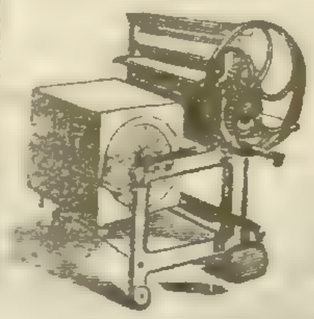
LIVE FISH FOR STOCKING PONDS, AQUARIUMS, &c.—Carp, Tench, Roach, Dace, Perch, Chub, Gudgeon, Minnows, Gold and Silver Fish, Eels, &c. To be had at CHARLES WRIGHT'S, Fishing Tackle Manufactory, 376, Strand, W.C. Aquariums sold.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1794.



SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

BRADFORD'S PATENT WASHING MACHINE SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations."—THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

CUTHILL'S STRAWBERRY PLANTS.—
HIGHLAND MARY, 1*l.* per 100; 12*s.* for 50; 8*s.* for 25.
IMPROVED BLACK PRINCE, OR RICHARD II., same price. Both great bearers and good forcers.
PRINCESS ROYAL OF ENGLAND, 7*s.* 6*d.* per 100 selected, 10*s.*, fine forcer.
PRINCE OF WALES, 7*s.* 6*d.* per 100; selected, 10*s.*
BLACK PRINCE, 5*s.* per 100; selected, 7*s.* 6*d.*

The two first named have been severely tested on my ground these last three years by hundreds of people. They are early and late, on account of the numerous trusses continually coming up. Dr. Lindley told me himself, that he never could depend upon having a Strawberry until he had my breed.

Cuthill on the Strawberry, showing how to obtain early and large crops off a small piece of ground. 1*s.*
Pamphlet on the Potato, with 20 more Articles, 2*s.*
On Market Gardening round London, &c., 1*s.* 6*d.* [&c., 1*s*
On the Cultivation of the Mushroom, Killing of Woodlice,
On the better Cultivation of the Vine, 1*s.*
Vegetable Meeting Paper, gratis.

Payable to JAMES CUTHILL, Camberwell, London, S.

SPLENDID NEW STRAWBERRY,
"CULVERWELL'S SANSPAREIL."

HENRY MAY has great pleasure in informing his friends and the public in general that he has purchased the entire stock of the above fine Strawberry of Mr. Culverwell, gardener to Mark Milbank, Esq., Thorp Perrow, near Bedale. The habit of the plant is strong and thoroughly hardy. the fruit is cone shaped, extremely handsome, of a rich dark colour, of medium size, and wonderfully prolific. In flavour it is what its name represents, without an equal in ripening. It succeeds Keens' Seedling and other varieties. A first class certificate was awarded to the fruit after ripening under a sunless sky (see *Gardeners' Chronicle*, page 713, for the report of the Fruit Committee of the Horticultural Society).

HENRY MAY, the Hope Nurseries, near Bedale, Yorkshire.

INGRAM'S PRINCE ARTHUR STRAWBERRY.

J. AND E. SMALL are prepared to receive orders for this excellent new Strawberry. Strong plants in pots for Forcing will be ready for sending out early in September at 40*s.* per 100, and 30*s.* per 100 for ordinary plants.

This Strawberry is a seedling raised at the Royal Gardens Frogmore, where it is now extensively grown for Forcing as well as other purposes.

It was submitted to the Fruit Committee of the Horticultural Society June 12, 1860, and the Prize awarded for the best seedling Strawberry. It was again brought before the Committee July 10, at which time it obtained a first-class Certificate of Merit. Mr. Marnock, of the Royal Botanic, Regent's Park, writes:—The Strawberry Prince Arthur "beyond all doubt is one of the best in cultivation." Mr. Glenny also writes "fine full flavoured Strawberry, different from anything I have ever seen."—Agents: Mr. C. TURNER, of the Royal Nursery, Slough; Mr. DODDS, Epsom Nursery, Surrey; and NUTTING & SON, Seed Merchants, Barbican, London, E.C.

Colnbrook Nursery, Slough Bucks.

BUCKLAND SWEETWATER GRAPE.

J. IVERY AND SON feel great pleasure in introducing this fine early White variety to the notice of all Grape Growers, as they feel assured it will give entire satisfaction. In appearance (except in colour) of Bunch and Berry, it resembles the Black Hamburgh, but growing still larger than this old favourite under the same treatment, it is also a free setter and of vigorous habit. A fine bunch was exhibited before the Fruit Committee of the Horticultural Society, on July 31st ult., which was highly spoken of by them, and is again most favourably noticed by all the leading Journals. *See* Report below. Strong plants 10*s.* 6*d.* and 21*s.* each.

Copied from *Gardeners' Chronicle*, August 4, 1860.

"From Messrs Ivery & Son, of Dorking, came a beautiful bunch of Buckland Sweetwater Grape, a variety which, when better known, cannot fail to be a favourite; the bunch is of good size, well shouldered and handsome, and the flavour good. This variety is, however, yet scarce—not more than two specimens of it in a fruit-bearing state being at present in the country, one at the Deepdene, Dorking (from which this bunch was cut), and the other in Messrs. Ivery's Nursery," (which they will feel great pleasure in showing any one who may favour them with a visit).

Dorking Nursery, Sept. 1.

HEADLEY'S ADONIS BYBLŒMEN TULIP.

GEORGE LIGHTBODY, Falkirk, respectfully intimates to Tulip cultivators that he is authorised by Richard Headley, Esq., of Stapleford, the raiser of this first-class Tulip, to offer 50 bulbs, on condition that subscribers are obtained for the same before the 1st of October next at 42*s.* per bulb. Should the list of subscribers be then complete, the bulbs will be sent by post on or before the 10th of the same month. All the bulbs to be sent out are warranted to be in the finest feathered strain, all the inferior strains having been destroyed in my presence. This Tulip is without exception one of the finest show flowers ever offered, being perfection for shape, purity, substance, and accuracy of marking. As a pan flower it is indispensable to all competitors, having been the leading flower in stands shown by Mr. Headley at the Royal National, Cambridge Horticultural, and London Amateur Society. It was the Premier of the exhibition of the Royal National Society's Show held at Slough in 1859.

N.B. A small lot of fine show Tulips that have got mixed, among which are some new and valuable sorts, will be disposed of at 20*s.* per 100 bulbs

PINUS LOPHOSPERMA.

PINUS LOPHOSPERMA.—The following is the description of this very beautiful new Californian Pine, as given by Dr. Lindley, in the *Gardeners Chronicle*, January 21, 1860, pp. 46, under the head of "New Plants." The Subscribers have pleasure in introducing so fine a species, and are now prepared to offer fine healthy plants raised from seeds at undermentioned prices:—

Per Plant .. .. 7*s.* 6*d.* | Per dozen Plants .. 60*s.*

This acquisition has been obtained by Messrs. Low & Co. of Clapton, through Mr. William Lobb, who found it in Lower California, and speaks of it as a new species which, for beauty of foliage is unsurpassed by any other kind he had yet seen. The leaves are from 6 to 10 inches long. It is indeed a fine thing, and perfectly distinct from all the species hitherto described. Its young wood is very strong, and covered with the glaucous bloom of a resin. The leaves are stout, stiff, and not unlike those of a Pinaster, but its most remarkable characters are to be found in the cones and seeds. The cones resemble in form those of a Stone Pine, but are larger, and the apophyses (ends of the scales) are more erect, and distinctly two-edged. The seeds are like those of P. Lambertiana, &c., but they are furnished with a thick-rounded comb or crest, of a blackish colour, from which proceeds a very narrow wing. Both crest and wing come away together, in the form of a horse collar. The species is therefore intermediate as it were between Endlicher's sections Pinaster and Pinea.

A LIST will shortly be published of other novelties received from Mr. William Lobb. This List will be sent to all applicants.

HENRY LOW & Co., Clapton Nursery, London, N.E.

GERANIUMS, HERBACEOUS AND ALPINE PLANTS. ORCHIDS, CHRYSANTHEMUMS, HARDY VARIEGATED PLANTS, &c.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their new priced and descriptive CATALOGUE of the above, to which are added supplemental Lists of Fuchsias, Stove, Greenhouse, and Hardy Plants, Ferns, Ornamental Foliage and Variegated Plants, Fruit Trees, &c. (which include the best new plants of the season, is now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:— P. packet—*s. d.*

CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation	1	6
CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
" Moor Park, extra fine	1	0
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed	2	6
CINERARIA, from finest named varieties	2	6
DIANTHUS Heddewiggi	1	0
PANSY, from named varieties	1	0
PRIMULA sinensis fimbriata	1	6
SOLANUM capsicastrum	1	0
" pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

JEAN VERSCHAFFELT, NURSERYMAN, Ghent, Belgium, begs to announce that his NEW CATALOGUE for 1860-61 is now ready and may be had on application to Mr. L. SILBERRAD, 5, Harp Lane, Great Tower Street, London, E.C.

JEAN VERSCHAFFELT, NURSERYMAN, Ghent, Belgium, begs respectfully to offer the following plants, viz:

Camellias, fine plants, well set with flower buds, per 100, 6*l.*
do. larger plants, per 100, 10*l.* to 15*l.* and upwards.
Indian Azaleas, choice varieties, with flower buds, per 100, 4*l.*
do. do. stronger plants, 6*l.*
do. do. standards, with fine heads, 10*l.*
do. do. his seven new varieties, including three double ones, viz.:

Blanc de neige
Reine des doubles
Pelargoniiflora nova
Vicomte de Nieuport
Roseflora plena
Prince Impérial
Triomphe de Gand

} with flower buds, at the set, 1*l.* 10*s.*

Rhododendron Jean Verschaffelt, the finest sort in cultivation, healthy plants with one shoot, 10*s.*
Bylsianum, extra fine novelty, fine plants with flower buds, each, 10*s.*
Bylsianum, larger plants, each, 15*s.*
Jasminum grandiflorum, per dozen, 12*s.*

J. V. invites all persons to address their orders directly to JEAN VERSCHAFFELT, Rue de la Caverne 43, Ghent, Belgium.

NOTICE TO THE TRADE, ETC.

STOCK OF THE LATE MR. ROBERT MACKAY, EDEN NURSERY, STOKE NEWINGTON ROAD, LONDON, N.

FOR SALE, fine large AZALEAS, CAMELLIAS, chiefly double Whites (these Camellias and Azaleas have been cultivated for cutting for market, and are well adapted for that purpose), MULBERRY TREES, various sizes, STOOLS, &c., a few FRUIT TREES, and about half an acre of RHUBARB PLANTS—VICTORIA, ALBERT, and IMPROVED VICTORIA (WATT'S SEEDLING). All in healthy condition. Application to be made at the Nursery.

NOTICE.—In consequence of the death of Mr. THOMAS HANDASYDE, NURSERYMAN and SEEDSMAN, Glen Nurseries, Musselburgh, Mrs. HANDASYDE, his Widow, respectfully intimates to the Friends of her late husband and the public in general that she intends to carry on the business of her late husband in all its branches, for the benefit of herself and numerous young family, in which she will be aided by the superintendence of a well-qualified person, and hopes to secure a continuance of the favours bestowed upon her late husband.

The present Stock consists of FRUIT, FOREST, and ORNAMENTAL TREES. Also a large collection of Evergreen and Flowering SHRUBS, with the more rare and interesting CONIFERÆ, and is well worthy the inspection of those intending to plant.

MRS. HANDYSIDE takes leave to intimate that her Clerk, DAVID M. WEBSTER, has been empowered to solicit orders on her behalf, and to collect the Accounts due to the late Mr Handasyde, and it will oblige if the same are now settled with him.

Those having claims against the late Mr. Handasyde are requested to lodge the same, with Vouchers and Affidavits, with Mrs. HANDASYDE, or with Messrs. SCOTT, RYMER, & BRUCE, W.S., 38, Frederick Street, Edinburgh

Glen Nurseries, Musselburgh.—Sept. 1.

NORTH HANTS SEED ESTABLISHMENT.

HENRY JESSE returns his sincere thanks to his Agricultural friends for the very increased patronage he is receiving in the SEED, CORN, AND MANURE TRADES.

H. J. is fully aware of the great importance which attaches to supplying Seeds and Manures of the best quality, and assures his friends that no exertion shall be spared to supply such articles only as may be confidently relied on.—Railway Stores, Basingstoke; and 100, Seed Market, Mark Lane, London, E.C.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

TO PIG, POULTRY, AND GAME FEEDERS.

JUPP'S RICE FOOD FOR POULTRY AND GAME.—RICE SWEEPINGS. 9*s.* 6*d.* per cwt., in 1½ cwt. bags; SCREENED RICE, 13*s.* per cwt., in 1½ cwt. bags; best DOG BISCUITS, 15*s.* 6*d.* per cwt.; OIL CAKE, per ton only; RICE MEAL for PIGS, 6*s.* 6*d.* and 10*s.* 6*d.* per cwt., in 1 cwt. bags, at the mill. Orders must be accompanied by a remittance to insure delivery.—W. & R. JUPP, 5, Cross Lane, Eastcheap, E.C.

KEEP YOUR PREMISES FREE FROM MICE AND SPARROWS.

BARBER'S POISONED WHEAT kills them (only) on the spot. In 1*d.*, 2*d.*, 4*d.*, and 8*d.* packets.—W. SUTTON & Co., 10, Bow Churchyard, London, E.C. Agents. Sold by all Druggists, &c., throughout the Kingdom. Works: Ipswich.

GISHURST COMPOUND,
PATENTED,
FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN FLY
AMERICAN BLIGHT	ANTS	

BED BUGS, &c.,
And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens
Messrs. Rollisson & Sons, Tooting, S.
F. & A. Dickson & Sons, Chester.

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1*s.* for first trials and small uses, such as destroying bed bugs; 3*s.* for not large gardens; 10*s.* 6*d.* for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

PARKES' STEEL DIGGING FORKS.

BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

GLASS FOR CONSERVATORIES, GREENHOUSES, PIT FRAMES, ETC.

HETLEY AND CO. are supplying 16-oz. Sheet Glass of British Manufacture, packed in boxes, containing 100 square feet each, at the following REDUCED PRICES for cash. A reduction made on 1000 feet.

Sizes.—Inches		Inches.		Per foot.		Per 10 feet.
	Under	6 by 4	at	1½*d.*	is	£0 12 6
From 6 by 4	,,	7 ,, 5	,,	2*d.*	,,	0 16 8
,, 7 ,, 5	,,	8 ,, 6	,,	2½*d.*	,,	0 18 9
,, 8 ,, 6	,,	10 ,, 8	,,	2½*d.*	,,	1 0 10
,, 10 ,, 8	,,	12 ,, 9	,,	2¾*d.*	,,	1 2 11

Larger sizes, not exceeding 40 inches long.
16 oz. from 3*d.* to 3½*d.* per square foot, according to size.
21 oz. ,, 3½*d.* to 5*d.* ,, ,, ,,
26 oz. ,, 3½*d.* to 7½*d.* ,, ,, ,,

PATENT ROUGH PLATE, THICK CROWN GLASS, and PATENT PLATE GLASS, for Horticultural purposes, at reduced prices, by the 100 square feet.

GLASS TILES AND SLATES made to any size or pattern, either in Sheet or Rough Plate Glass.

Propagating Glasses, Beehive Glasses, Cucumber Tubes, Glass Milk Pans, Glass Water Pipes, and various other articles not hitherto manufactured in Glass.

PATENT PLATE GLASS.—The present extremely moderate price of this superior article should cause it to supersede all other inferior win low glass in a gentleman's residence. No alteration connected with the sash is required.

GLASS SHADES, as ornamental to, and for the preservation of every description of goods susceptible of injury by exposure. Prices, since the removal of the excise duty, reduced one-half. List of Prices and Estimates forwarded on application to

JAMES HETLEY & Co., 35, Soho Square, London, W.

HENRY J. MORTON AND CO.,
2, Basinghall Buildings, Leeds.

GALVANISED IRON WATER CISTERNS

for Cottage Houses, &c., to contain 50 gallons, 25*s.*; 80 gallons, 30*s.* each; and 140 gallons, 36*s.*, and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

GALVANISED IRON PUMPS

for Liquid Manure or Domestic Use, 3 inches diameter, 30*s.* and 32*s.* 6*d.* each; Tail Pipe for same at from 10*d.* per foot.

GALVANISED IRON SWING WATER BARROWS

for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32*s.* 6*d.* each.

GUTTA PERCHA TUBING FOR WATERING GARDENS.

THE GUTTA PERCHA COMPANY have the pleasure to acknowledge the receipt of the following

Testimonial from MR. J. FARRAH, *Gr. to* BOSWELL MIDDLETON JALLAND, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider it is going to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

Manufactured by the Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their Wholesale Dealers in town and country.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and — Collier, Esq., of Dartford.

PROTECTION FROM THE COLD WINDS & MORNING FROSTS

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied a level temperature. It is adapted for all horticultural and ornamental purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 6*d.* per yard run.
Four yards wide	3*s.* per yard.

An improved make, 3 yards wide, 2*s.* 6*d.* per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1*s* 4*d.* per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

CORDYLINE (DRACÆNA) INDIVISA.

MESSRS. JOHN AND CHARLES LEE

Have the pleasure to announce that on the 1st of August they intend to send out the magnificent

CORDYLINE INDIVISA FROM NEW ZEALAND,

AN ACCOUNT OF WHICH WAS GIVEN BY DR. LINDLEY IN THE *GARDENERS' CHRONICLE*, OCT. 29, 1859, Pp. 868.

It is impossible to give an adequate description of this wonder of Nature, which should be seen in its native grandeur to be thoroughly appreciated. Specimens can, however, be seen at this establishment which already prove the accounts received of its merits to be quite reliable. Being found at a high elevation it will be a very hardy Conservatory Plant, and will probably bear total exposure in the West of England and in Ireland.

CORDYLINE INDIVISA attains a height of from 10 to 20 feet, in an erect and undivided trunk on which the foliage is retained with vigour almost to the ground. The leaves are set on to the greatest advantage, and measure from 5 to 6 feet in length, and from 6 to 9 inches in breadth. Their colour is of the richest description: a broad and prominent midrib of crimson brown runs through the entire length, and numerous red and white lines run parallel to the midrib: the whole surface is overlaid with a rich golden bronze producing an elegant effect. The under side of the leaves is glaucous. The whole tree is unsurpassed in its truly noble and unique beauty.

Nursery and Seed Establishment, Hammersmith London, W.

CARTER'S 40s. COLLECTION OF BULBS

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"ALL FIRST SIZED AND PICKED ROOTS."

2 dozen extra fine HYACINTHS, in 12 sorts	1 dozen	TULIPS, DUC VAN THOL,	scarlet
2 dozen POLYANTHUS NARCISSUS, in 9 sorts	1 dozen	do. do.	rose
2 dozen single sweet-scented JONQUILS	1 dozen	do. do.	yellow
150 newest Seedling CROCUS, in 50 sorts	1 dozen	do. VERMILION BRILLIANT	
1 dozen TULIPS, DUC VAN THOL, red and yellow	1 dozen	do. REX RUBRORUM	
	1 dozen	do. TOURNESOL	

Half the above Collection, 20s.

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

THE AUTUMN SUPPLEMENT TO

CARTER'S GARDENERS' VADE MECUM

(25th ANNUAL SERIES)

WILL BE PUBLISHED ON SATURDAY, SEPTEMBER 8.

It will contain a List of all the best varieties of DUTCH AND CAPE BULBS *suitable for Greenhouse and out-door planting, with carefully written articles as to the best mode of cultivating the same.*

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PETER LAWSON & SON,

27, GREAT GEORGE STREET, WESTMINSTER, S.W.

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FROM THE CRYSTAL PALACE NURSERY.

SUTTON & SONS

HAVE the satisfaction of announcing that they have secured a considerable portion of Mr. Summers's stock of Spergula Pilifera Seed of the present year's saving. Mr. Summers having offered his entire stock of Seed to Messrs. Carter and Messrs. SUTTON on the same day, and Messrs. Carter having purchased it, have accommodated Messrs. SUTTON with a portion of the stock, which can be warranted genuine, as saved from the Lawns so much admired at Mr. Summers's Nursery.

Spergula Seed should now be sown for transplanting into Lawns next spring. SUTTON & SONS have New Seed now ready in packets **6d., 1s., 2s. 6d., 5s., and 10s. each.** Post free, with instructions on cultivation.

Also free by post, packets of extra fine CALCEOLARIA, CINERARIA, PRIMULA, SINENSIS FIMBRIATA, and GYNERIUM ARGENTEUM, or PAMPAS GRASS, for present sowing, 1*s.* and 2*s.* 6*d.* each.

N.B. A piece of land in Messrs. SUTTON's Nursery sown with Spergula Seed last April soon formed a close crop, and continues a most brilliant green velvet-like lawn.

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SUTTON AND SONS have a fresh stock of

PERMANENT GRASS SEEDS,

Of the most suitable kinds for laying down and for improving Pastures.

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ROYAL BERKS SEED ESTABLISHMENT.

SUTTON AND SONS can supply the NEW KINDS of TRIFOLIUM as soon as they receive their supply from Messrs. Vilmorin & Co.

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For the main crop Messrs. SUTTON recommend the Common Trifolium incarnatum (Trèfle incarnat hâtif) of which they have a fine stock of new Seed now ready, price 4½*d.* per lb. or cheaper by the cwt. The prices of the new kinds are not yet fixed. Early orders will be desirable. INSTRUCTIONS ON THE CULTIVATION SENT WITH THE SEED.

TRIFOLIUM INCARNATUM TARDIF.

Vide *Agricultural Gazette*, August 16, 1860.

PAGE AND TOOGOOD can supply this direct from

MESSRS. VILMORIN,

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TRIFOLIUM INCARNATUM (present price) 4*d.* per lb., with "Practical Hints on its Successful Cultivation," showing how 2 to 3 tons per acre of the most nutritious Hay may be secured, the advantages of sowing it where broad Clover is thin, and its superiority to Tares as green food.

PAGE & TOOGOOD having secured a large breadth from the most careful growers in this district—where better crops are produced than in any part of England—offer it at the above low rate for cash. Price to the Trade per post.

NEW TURNIP SEED .. per lb. 1*s.* 0*d.*
NEW RAPE .. .. ,, 0 4
ITALIAN RYE-GRASS, per bush., 4*s.* to 7*s.*
MUSTARD .. .. per lb., 4*d.* to 5*d.*

Winter Vetches and Winter Oats as soon as harvested.

Permanent Pasture Grasses and Clovers.

New Crimson, Purple, and White Chinese Radishes.—These new varieties, introduced by us from China, are perfectly hardy, and if sown in August or September will yield a supply of delicious flavour (equal to Spring Radishes) throughout the winter, in the open ground, 2*s.* 6*d.* and 1*s.* per packet.

Calceolaria and Cineraria in packets of 2*s.* 6*d.* to 1*s.*, saved from one of the finest collections in Europe, and Seeds for exportation to all parts of the world.

Royal South Hants Seed Establishment, Southampton.

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DOBSON AND SONS' Splendid Hybridised CALCEOLARIA SEED, which is grown extensively by thousands of the Nobility, Clergy, and Gentry, and the leading Nurserymen and Florists in nearly all parts of the Globe. For Testimonials, see last week's *Gardeners' Chronicle*.

Sent out only in sealed packets, at 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each; all one quality, with directions for sowing.

Woodlands Nursery, Isleworth, W.

NEW CALCEOLARIAS, EX. EX.

STEPHEN BROWN (late BASS & BROWN) has received his new supply. The seed is annually obtained from a private grower for many years renowned for his first-rate Calceolarias. The flowers are splendid in colours, of excellent form, and large. Packets 1*s.* and 2*s.* 6*d.* each.

WOOD'S SPLENDID POLYANTHUS.

New seed of this very superior stock now ready, packets, 6*d.*, 1*s.*, and 2*s.* 6*d.* each.

PRIMULA FIMBRIATA, EX. EX.

New seed just received of the usual first-rate stock as before supplied, packets, rose colour, 1*s.* each; white, 1*s.* each.

GERANIUM, Ex. show varieties, per packet, 1*s.* 6*d.* and 2*s.* 6*d.*
,, Ex. French, per packet, 2*s.* 6*d.*
,, finest rose and white horse-shoe, 1*s.*
,, extra fancy, 1*s.*; scarlet, 6*d.*
HOLLYHOCK, 30 varieties, first-rate, separately named, 8*s.*
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,, 14 varieties, separate colours, without names, fine, 3*s.*
SPERGULA PILIFERA, true, packets, 6*d.*, 1*s.*, 2*s.* 6*d.* and 5*s.* each. Also a large stock of this excellent lawn plant in large plants for dividing into tufts, very cheap.

A List of Seeds for present and autumn sowing supplied on application. Also the New Bulb Catalogue.

STEPHEN BROWN, Seed and Nursery Establishment, Sudbury, Suffolk.

SNOW'S MUSCAT HAMBURGH GRAPE.

MESSRS. ARTHUR HENDERSON AND Co. beg to remind their Patrons and Friends that the Prize of Five and Three Guineas offered by them for the first and second Prize Dish of the above celebrated Grape, will take place at the Crystal Palace Show of the 19th & 20th September.

N.B. The Grape can be seen in great perfection at the Nursery, Pine apple Place. An inspection of the large bunches and berries is earnestly solicited by Grape Growers and Gentlemen who are fond of fine fruit.

Pine-apple Place, Edgware Road, London, N.W.—Sept. 1.

DUTCH FLOWER ROOTS.

JAMES VEITCH, JUN., ROYAL EXOTIC NURSERY, Chelsea, S.W., begs to announce that he has received his annual supply of BULBOUS ROOTS from Holland, and is pleased to say that they are PARTICULARLY FINE and in EXCELLENT CONDITION. CATALOGUES are now ready and will be forwarded on application.

J. V., Jun., desires to impress upon those who patronise him the great advantage of giving him their ORDERS EARLY, as the successful cultivation of Bulbs depends in a great measure upon their BEING PLANTED EARLY IN THE SEASON.

The Gardeners' Chronicle.

SATURDAY, SEPTEMBER 1, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, Sept. 4 { Horticultural (Election of Fellows and new Member of Council) at St. Martin's Place ..... 1 P.M.

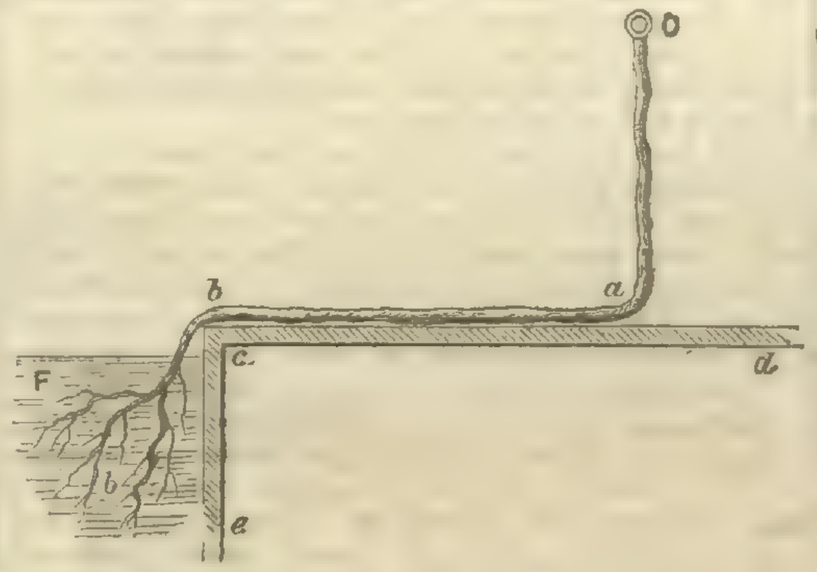
THE cause of the DIRECTION TAKEN BY THE ROOTS OF PLANTS is far from being a mere scientific question. On the contrary it is one that should engage the thoughts of the most humble gardener. Why do roots seek out as it were bits of bone or charcoal, or burnt brick, or other substances occurring in the soil? Why will roots of potted plants invariably direct themselves to the outside of the pot? Why will the rootlets of seeds always plunge perpendicularly into the earth? Why do they find out as it were a chink in a badly made drain-pipe, or a loose joint in an old wall, and forthwith bury themselves therein with an almost irresistible tenacity of purpose? These are curious questions, often answered, but seldom if ever satisfactorily.

One philosopher says these are cases of attraction, or gravity; another that absence of light is necessary to the development of roots, which therefore seek dark places, such as the earth. Another that they are found in the direction of supplies of their proper food, which they follow as far as it goes. A learned French philosopher tried to reconcile the phænomenon with his theory of endosmose and exosmose. By another of no mean eminence among ourselves it was supposed that the matter which forms roots is heavier (more dense) than other parts, and hence their downward direction. And by others, oddly enough, it has been maintained that the course taken by roots is that in which they experience least resistance, if it be not wholly accidental.

No one tolerably well acquainted with the habits of plants can fail to perceive how unsatisfactory are these explanations, as men are vain enough to call them, of an astonishing phænomenon. Well might Prof. MOHL term it and others like it, most wonderful and little understood. We look at it with careless eyes because it is always in our presence. Were it but the display of a mountebank the world would be struck with amazement.

That it is little understood is true in a certain sense; that is to say it cannot be explained with reference to any class of material causes, such as light, darkness, gravitation, attraction, dryness, moisture, chemical action, and other agencies of like nature. It must be referred to a far higher power,—to that power of life—or vital force—the nature of which is wholly unknown and never can be known except by its results. To say so is highly unphilosophical, as those think who require the explanation of every event in nature to stand upon some tangible physical base. Be it so. Let us be unphilosophical so long as we are rational. No phænomena of life can be fully explained without reference to a great first cause, mysterious, unfathomable, controlling the actions of the humblest weed as well as the proudest of mankind. That cause it is which has given to the root of a plant the power to search for its food, and to find it, although destitute of what we call the organs of perception.

A circumstance came under our observation lately which we think may be regarded as conclusive on this subject. Among the interesting collections of Mr. WILSON SAUNDERS, in his charming residence at Redhill, there is a small span-roof hot damp shady stove, occupied for the most part by species of *Piper*, Ferns, and Arads of the genera *Pothos*, *Monstera*, *Anthurium*, and the like. Some of the plants are secured to the roof and uprights of the house, many of the Arads scrambling over each other below the ridge, and all growing in the wildest luxuriance. In the very middle of this house stands a small square water tank (F in the annexed cut), connected with which at either end is a stout, *white*, painted, wooden shelf or flat stage (*c*, *d*). Many plants suspended at O some 4 or 5 feet over the shelf, throw out stout roots, which interlace but pass down perpendicularly without branching till they reach the shelf *c*, *d*. Others direct them laterally towards *b*. *None direct them* towards *d*. As soon as a perpendicular root touches the shelf at *a* it creeps horizontally still without branching as far as *b*, which is the edge of the tank; when it bends over, advances to the surface of the water, and finally plunges into it, branching rapidly as at F *b*. Here the question arises, why do the roots take this course and no other? Why do they refuse to creep from *a* to *d*, as well as from *a* to *b*? There is no appreciable difference in the light at one



O. Point of departure of root. O *a b b*. Root.
c d. Wooden shelf. *c e*. Side of Tank. F. Water.

point or the other, nor in the moisture of the shelf *c d*, which is equally dry at each end, nor in that of the atmosphere, for the air throughout must be in a state of saturation with moisture. In short the roots form under circumstances equal in all directions; nevertheless they insist upon creeping into the water, and will not direct their course away from it, shunning even the damp and darker stratum of air below the level of the shelf. To our apprehension these roots are the clearest possible manifestation of a power inherent in themselves of travelling in search of food. Then, if the roots of Arads have a natural power of this kind, it would be unphilosophical to deny the same power to the roots of other plants. And we entertain a perfect conviction that such a power is universal. We have often ventured to say that life in plants is the same power as in animals, although different in its manifestations, and that gardeners should never forget that the objects of their charge have been furnished by the Almighty with a living force analogous to that which pervades their own bodies. The recognition of this fact is the keystone of sound vegetable physiology.

As regards the travelling and searching power of roots, it seems thus demonstrated that if food is within their reach they will find it; and that a gardener is under no obligation to place them in direct contact with the solid materials out of which they are to extract nutrition. On the contrary it is better to place it at some distance from them in the soil. And this is consistent with the experience of all well-informed cultivators.

WE read as follows in a private letter from Graham's-town of June 13. "It is much colder in the winter in this part of the colony than in the western districts. On one morning the tent of the waggon was covered with ice. I think if some of the cultivators of plants were to see them growing in their natural state, they would make some alteration in their treatment of them." It may possibly be necessary to explain that this Graham's-town is not the Scotch village with a similar name, but a large town south of the Great Fish River, in Albany, a county of the Cape of Good Hope, the native country of *Hermannias*, *Polygalas*, *Zamias*, *Aloes*, *Stapelias*, *Pelargoniums*, and all sorts of *Bulbs*. The opinion moreover is that of a practical gardener. Be it remembered however that the month of June is midwinter at the Cape of Good Hope.

This is quite a parallel case with another mentioned in these columns some years ago, and more fully gone into in the Journal of the Horticultural Society. When Sir THOMAS MITCHELL, the late Surveyor General of New South Wales, was on his expedition of discovery in tropical Australia, he observed that at the end of April (our October), in latitude 82° S., within 4½° of the tropic, at an insignificant elevation, the thermometer stood at 26° at sunrise, and was as low as 43° at 9 P.M.; nevertheless, the country produced wild Indigo, Mimosas, Casuarinas, arborescent Myrtleblooms, and Loranths. A degree nearer the tropic in May (our November), the thermometer at sunrise marked 20°, 19°, 18°, 17°, 16°, 12°, and on two separate days, even 11°! On the 22d of May the *river was frozen*, and yet herbage was luxuriant, and the country produced Mimosas, Eucalypti, Acacias, the tropical Bottle-tree (Delabechea), a Calandrinia, and even a Loranth. On the 23rd of May, the thermometer at sunrise marking 12°, Acacia conferta was coming into flower; and Eucalypti, with the usual Australian vegetation, were abundant. On the 30th of May, at the elevation of 1118 feet, the almost tropical Delabechea was found growing with the temperature at sunrise 22° and at 9 P.M. 31°, so that it must have been exposed to a night's frost gradually increasing through 12°. And this was evidently the rule during the months of May, June, and July (our November, December, and January); in latitude 28° S. among Tristanias, Phebaliums, Zamias, Hoveas, Myoporums, and Acacias, the evening temperature was observed to be 29°, 22°, 37°, 29°, 25°, falling during the night to 26°, 21°, 12°, 14°, 20°; in latitude 25° S. the tents were frozen into boards at the elevation of 1421 feet, the thermometer, July 5, sunk during the night from 38° to 16°, and there grew Cryptandras, Acacias, Bursarias, Boronias, Stenochiles, and the like. Cymbidium canaliculatum, the only Orchidaceous epiphyte observed, was in flower under a night temperature of 33° and 34°; that by day not exceeding 86°. About these temperatures there is no doubt; the writer of the present observations being in possession of the original meteorological observations made daily during the Expedition.

But although gardeners should be aware of these curious facts, they should also remember that both at the Cape of Good Hope and in Australia the summer temperature is so high as to roast the vegetation. The effect of which is to harden all the permanent parts of plants, to render the wood even of a Mallow bony, and to expel every drop of superfluous moisture; the retention of which in this cold damp region is the great cause of plants being impatient of frost.

While therefore we adduce this new example to show once more the great importance of keeping down the night temperature in winter, it must be observed that with us plants will bear no such very cold weather as they support without danger in their native country, and that gardeners must not flatter themselves that Cape plants may be frozen with impunity. All that we contend for is that they should be kept so cold as to be unable to grow in the winter time. These remarks are the more noteworthy just now that Cape plants are beginning to re-establish themselves in the public favour, and that very large and important importations may be expected in a few months.

ON THE SPECIES OF CORDYLINE NOW IN CULTIVATION FROM NEW ZEALAND AND AUSTRALIA.

BY JOS. D. HOOKER, M.D., F.R.S.

THE arrival in this country of additional materials towards clearing up the history of the New Zealand genus *Cordyline* (which was left in an unsatisfactory state in the New Zealand Flora), and especially of good dried specimens of flowers and leaves, accompanied with young live plants of two kinds, all imported by Mr. Standish of Bagshot, has enabled me to offer the following important identifications.

It will be seen by the synonymy, that neither Endlicher, Kunth, Sims, nor Allan Cunningham, were right in the references of their species of Forster to the plants they supposed; that in the New Zealand Flora I have been equally at fault; and that the nomenclature of the genus requires an entire reconstruction. In doing this I shall as far as possible avoid more change of name than is absolutely necessary.

The genus *Cordyline* may be easily known from *Dracæna* by the inflorescence, bracts, and numerous ovules. The flowers are always solitary, the bracts are two in number, but composed of three; one at the base of the pedicel, where it joins the peduncle, is simple, ovate or lanceolate, generally acute; the other, opposite to it, and consequently placed in the axil of the pedicel and peduncle, is much broader, shorter, and is double, being either bifid or bipartite, always having two nerves. There are hence normally one bract, and alternating with it two opposite lateral bracteoles, more or less connate in the side next the axis of the peduncle, thus representing the inner palea of Grapes. In *Dracæna* the flowers are generally binate, ternate,

or fascicled in the axil of a single bract, and the inner or lateral bracteæ (bracteoles) are free. The following are the Australian and New Zealand species of Cordyline.

1. Cordyline *australis*, Hook. fil. (Dracæna australis, Forst. Prodr. n. 151, et Ic. in Mus. Brit.). Stem arboreous, 10—40 feet high, branched; leaves ensiform, about 2 feet long, and 1¼—1½ feet broad, scarcely contracted above the broad base, striated with numerous parallel veins, of which none are more prominent than the others, midrib obscure; flowers crowded, sweet-scented, white; bracts membranous, large, from one-half as long to as long as the flower immediately before expansion. C. australis, Hook. fil. Flor. Nov. Zeland. ; A. Richard, Flor. Nov. Zeland. 149 (non Endlicher nec Hooker nec Kunth).

HABITAT. Northern island of New Zealand, and northern parts of middle island.

This species is distinguished from the following by its larger size, shorter leaves not contracted at the base without distinct nerves, and especially by the large bracts. There are no specimens in Forster's Herb. at the British or Paris museums. We have at Kew a live young plant, and full-sized dried panicle from Mr. Standish, of Bagshot, as Dracæna No. 2.

2. Cordyline *Banksii*, Hook. fil. Stem subarboreous, 5—10 feet high, simple or sparingly branched; leaves very long, linear-lanceolate, 5—6 feet long by 1½—2 feet broad, gradually contracted into a petiole 1—2 feet long, closely striate and also having 6 to 8 very evident veins on each side the prominent midrib; flowers loose, white, bracts very much smaller than the flower, not ⅓th part as long as it is at expansion.

HAB. Northern and middle islands of New Zealand.

A smaller plant than the foregoing, with very much longer leaves that are narrowed into a distinct long petiole, and have evident slender ribs amongst the striæ on each side the midrib. The flowers are much more lax, rather longer, and the bracts and bracteoles very small indeed. In the British Museum collection there is a very imperfect specimen of this plant, collected by Banks and Solander, but without date or locality, and not alluded to in their drawings and MSS.; it is called *Anthericoides stricta*, MSS., and I have quoted it under my *Cordyline stricta*, which is a very different plant, hereafter to be described (as *C. Pumilis*). This we have received young plants of at Kew as *Dracæna* No. 1 from Mr. Standish, with a full-sized flowering panicle dried, which has enabled me to identify it satisfactorily.

3. Cordyline *indivisa* (Kunth Synops. v. 30, nob. in Flor. Nov. Zel. i. 258. Dracæna indivisa, Forst. Prodr. n. 150; Pl. loc. No. 33; A. Rich. Flor. Nov. Zel. 148). Trunk simple, arboreous, 2—5 feet high; leaves very thick and coriaceous, 2—3 feet long by 4—5 broad, scarcely contracted at the base, with a stout midrib and numerous stout parallel veins, glaucous beneath, inflorescence a drooping almost panicle raceme; flowers pedicelled, most densely crowded, causing the branches of the panicle to be as thick as the thumb; bracts nearly as long as the flower and pedicel.

HAB. Southern parts of the middle and mountainous parts of the northern island.

This splendid plant differs widely from any of its New Zealand congeners in the very stout texture of its very broad leaves, which are glaucous below, and in the branches of the drooping panicle being so densely crowded with pedicelled flowers as to be ½ to 1 inch in diameter, with the rachis quite hidden by the flowers. It is well figured in Forster's drawings; but there are no specimens of it in his herbarium at the British Museum or Paris. We have a very young plant apparently of this species, and under the same name, from Mr. Lee.

4. Cordyline *Baueri*, Hook. fil. C. australis, Endl. Prodr. Fl. Ins. Norf. p 29, et Hort. Dracæna australis, Hook. Bot. Mag. t. 2833, non Forst. D. obtecta, Graham in Ed. Phil. Journ. 1827, p. 175). Trunk arboreous, simple, 4—10 feet high; leaves lanceolate, ensiform, somewhat contracted above the base, 1½—2 feet long, 2—2½ inches broad, with a broad midrib and numerous striate nerves, none more conspicuous than the rest; flowers remote, white, very shortly pedicelled, bract very small, shorter than the small bracteoles.

HAB. Norfolk Island.

Authentic specimens of the *Cordyline australis* of Endlicher collected at Norfolk Island by Bauer himself, enable me to identify this fine plant with the *Dracæna australis* of the Botanical Magazine and of our gardens (not of Forster). It is at once distinguished from all the preceding by its broad short leaves and distant flowers, with very small bracts and bractlets. It is not uncommon in gardens. A fragment of this plant exists in Allan Cunningham's Herbarium, kindly lent me by Mr. Heward; it is apparently from a specimen imported to the Sydney Garden by Frazer.

5. Cordyline *stricta*, Endl. Synops. Flor. Ins. Ocean. Austr. in Ann. Wien. Mus., i. 162 (Kunth Syn. v. p. 33 in part), non Cuming nec nob. in Flor. Nov. Zeland. *C. spectabilis*, Kth. & Boucher, Nov. Icon. Hort. Berol. 1818; Kth. Syn. v. 30. C. congesta, Endlicher, Gen. 151; Kunth En l. c. C. angustifolia, Kunth, l. c. Dracæna stricta, Sims' Bot. Mag. 2575; Lindl. Bot. Reg. t. 965. Charlwoodia stricta, Sweet's Flor. Australas. fol. 18 (C. congesta, t. 18). Trunk slender, simple, 6—10 feet high; leaves linear-lanceolate or narrowly ensiform, contracted for some way above the bases, 1½—2½ feet long, 1—1½ inch broad, with slightly roughened margins, indistinct midrib, striated with numerous parallel nerves of which none are more prominent than others; flowers rather crowded, light blue, pedicelled, bracts and bracteoles as long as the pedicels, outer lobes of perianth considerably shorter than the inner.

HAB. Moreton Bay, Australia.

Specimens of this gathered by Mr. Frazer, at Moreton Bay, enable me to give the native country of *Cordyline stricta* of Endlicher (Dracæna stricta, Sims). Endlicher, it must be remarked, never saw this plant, and only changed Sims' name of *Dracæna* to *Cordyline*, which it must now retain. This plant may be known at once from the other arboreous kinds by the slender stem, narrow short foliage, small bracts and bracteoles, and lilac blue flowers of which the outer segments of the perianth are much shorter than the inner. It is not uncommon in gardens, frequently flowering.

6. Cordyline *Pumilis*, Hf. C. stricta nob. in Flor. Nov. Zel. i. 257, non Endl. nec Sims. A small plant. Trunk short, slender or none, as thick as the finger; leaves often from the ground, very narrow, linear and Grass-like, 1—2 feet long, ¼ to ⅓ inch broad, with a stout prominent midrib, and a few slender veins on each side of it; panicle very lax, spreading, 2 feet long, with slender branches and few scattered white pedicelled flowers, bracts subulate, half as long as the flower and twice as long as the bracteoles.

HAB. Northern parts of the northern island.

A small low growing plant, with a short often prostrate stem, or none, and long narrow grassy leaves that have a very prominent midrib. The panicle is very slender, with spreading branches and few distant small flowers that have minute bracts and bracteoles. It is common in woods at the Bay of Islands. A. Cunningham regarded this as a young state of *C. australis*. I am not aware that it is in cultivation.

The other species of *Cordyline* known to me are—

7. C. *terminalis*, Kunth (Asparagus terminalis, L.; Dracæna terminalis, Rich.), to which I suspect the following garden species are closely allied if not all referable. *C. Jacquinii*, Kth.; *Eschscholziana*, Mart.; *heliconiæfolia*, Otto; *rubra*, Hugel.

A native of Ceylon, the Malayan and Pacific Islands, also extensively cultivated in all tropical countries.

8. C. *Sieberi*, Kth., distinguished from *C. terminalis* by the much longer pedicels of the flowers. I have seen specimens from Borneo and Trinidad only; no doubt cultivated in the latter locality.

9. C. *Sellowiana*, Kunth, a species resembling *C. stricta* in most points, but with a tubular perianth, entire to nearly the top, and its lobes nearly equal. The only specimen I have seen is from Guyana (Martin, No. 1156). Kunth says it is a native of South Brazil, but perhaps introduced.

10. Imperfect specimens of a very small-flowered, petioled species from New Ireland.

11, 12, 13. Three species from Bourbon and Mauritius, including probably some of the *Dracæna* of Kunth, described from those countries.

14. C. *cannæfolia*, Br., of tropical and sub-tropical Eastern Australia (not in cultivation).

Kew, Aug. 1860.

MYCOLOGY.—No. XXVII.

CORDICEPS OPHIOGLOSSOIDES, *Fr.*—In our last mycological notice we remarked that similarity of form does not necessarily imply natural affinity. Accordingly if the present subject is compared with *Geoglossum difforme*, it will be found, that though the form of the head in both is clavate, there is an essential difference of structure. In the former the whole fructifying surface is composed of a uniform stratum of close packed fertile cells or asci, mixed with slender barren threads or paraphyses, the tips of which are perfectly on the same level so as to form an even hymenium, while in the latter, on the contrary, the surface is studded with little warts, each of which consists of a cellular sac slightly narrowed above, and pierced with a distinct dot-like orifice, while the cavity is lined with a gelatinous stratum of asci and paraphyses, agreeing perfectly in character with those of the *Geoglossum*. The *Geoglossum*, therefore, if we suppose the whole plant to be drawn in from the tip like the horn of a snail, so as to form a hollow sac coated with the barren stem, contracted above and leaving a punctiform terminal aperture, would form a structure exactly comparable with one of the little warts which render the surface of the *Cordiceps* rough and uneven. It is clear then that the *Cordiceps* is a compound plant, and possesses only a distant relationship to *Geoglossum*, though more nearly related to that genus than to *Clavaria* (No. IX., p. 216), with which, again, it has an analogy of form.

Cordiceps ophioglossoides has several points of interest, which are worthy of remark. First, it is one of the highest forms of which the plants comprised by the older authors under the genus *Sphæria* are capable of attaining, the simpler species consisting of nothing more than a single wart or perithecium such as we have described above. Secondly, it is remarkable for the great development of the spawn or mycelium, which is repeatedly branched and of a firm substance and string-like form, the upper part passing gradually into the stem. Thirdly, it is worthy of notice, together with a nearly allied species, for being always parasitic on some species of *Elaphomyces*, a genus which we hope some day to illustrate, agreeing in general habit with the underground puff-balls, though in reality more closely allied to the Truffles.

The mycelium originates, we believe, always in the inner part of the false truffle, and is of pale yellowish olive. This bursts through the coat at various points, several portions gradually becoming confluent, and at length forming a stem which rises perpendicularly through the earth, swelling upwards into a club-shaped head which is at first fawn-coloured, and then gradually acquires a dark brown olive tint approaching to black. The surface in the young plant is even, and then as the club increased it is minutely dotted, each dot indicating the position of one of the perithecia with which it is ultimately studded. The asci which are contained in the perithecia are extremely long, and the sporidia which they contain thread-shaped and resembling little necklaces, and ultimately breaking up by transverse partitions into an indefinite multitude of little reproductive granules. Occasionally these are seen escaping from the terminal aperture in the shape of small white mealy specks.

The plant occurs in woods amongst Ferns where the soil is formed of decayed vegetable matter, approaching in character to peat. It is certainly not very common, but probably it is not so rare as may at first be imagined, as it is easily overlooked from its dingy colour, which differs little from that of the soil in which

CORDICEPS OPHIOGLOSSOIDES, *Fr.*—From an original drawing.

it takes its origin. It differs greatly in size and height, according to the vigour of the false truffle which supports it, and the depth to which it is sunk in the earth. Sometimes only a single strong head is produced, sometimes several as in our plate.

The allied species *Cordiceps capitata* is far more rare, and is calculated to draw attention more rapidly, from its thick, juicy, yellow stem, and brighter coloured head. This, we believe, grows uniformly on a different species of *Elaphomyces*, but we have never found it ourselves, and have had two opportunities only of examining recent specimens.

A good deal of controversy has existed about the generic name, but the word, according to information sent us by letter from Fries, and spelt as above according to his own etymology, is derived from the Latin words *cor*, a heart, and *caput*, a head, and intimates that the head of the Fungus or club is that which constitutes the reproductive part.

We know of no peculiar medical or economical properties connected with these plants, though one species of the genus which grows on caterpillars is considered as a useful medicine in China, while one of the black and almost corky Fungi of a closely allied genus is eaten when young on the borders of Thibet. *M. J. B.*

A PEAR ORCHARD IN THE UNITED STATES.

THE past week we visited a very extensive Pear orchard in this county, perhaps the largest in Western New York, planted by Messrs. Starks and Mattison, embracing 45 acres, on which is growing over 4800 young standard Pear trees, all healthy and making good growth, and many of them bearing fruit. So well pleased were we with the appearance of the orchard, that we made a rather careful examination and gained some facts, which may be of interest and profit to our readers. These trees were from three to five years old when planted, which was done during the winter of 1857-8. The winter being unusually mild, plant-

ing, which commenced in December, was continued through January, February, March and April. Occasionally, freezing weather would put a stop to the work for a few days. No difference is apparent in the growth of the trees between those which were planted in the fall, spring or winter, and not a dozen out of the number died. The varieties are as follows:

Flemish Beauty ..	224	Dearborn's Seedling ..	58
Rostiezer	112	Gansel's Bergamot ..	50
Louise Bonne de Jersey	231	Columbia	58
Bartlett	1000	Beurré Diel	294
Doyenne Gris d'Hiver	27	Winter Nelis	58
Seckel	270	Lawrence	511
Virgalieu	1346	Glout Morceau	116
Onondaga	58	Vicar Winkfield ..	373
Sheldon	151	Easter Beurré	70

The soil is a clay loam, or as the proprietor expressed it, a "limestone loam" for 8 to 10 inches or more, subsoil clay, though not very stiff, having an admixture of loam, with a little sand, the whole resting upon fossil lime rock. The ground was prepared by subsoiling, about 18 inches deep, and the trees planted 20 feet apart each way. In setting them out the roots were covered with earth to the depth of about 1 inch, over which was spread something like 2 inches of stable manure. The remaining portion of the opening was then filled with earth to grade. The planting being completed the upper portions of the roots were about 1 inch below the average grade of the soil. About one half a bushel of earth was placed at the foot of each tree, in a conical form, immediately after planting, which was allowed to remain until the middle of May, and was then levelled and the earth spaded as deep as practicable without interrupting the roots, for a space of 6 feet in diameter. In the fall of 1858 a mulching of about 2 bushels of manure was given to each tree, over which was placed earth in pyramidal form to the depth of 1 foot, to protect from mice and severity of winter. This was allowed to remain until the 1st of May last, when all was made level, and spaded as before over an area 7 feet in diameter.

The trunk of every tree, from the ground to the branches, is covered with a bag made of cotton cloth, sufficiently large to admit of three or four years' growth, the cloth being fastened to the lower branches, and fastened to the ground. This the proprietors believe protects the trunks from the sun, and from sudden changes of temperature, and in a great measure prevents blight and other evils, such as the hardening of the bark, the contraction of the pores, thus preventing the free flow of sap, necessary exhalation, &c. Two Cedar stakes are driven by each tree, to which it is fastened, preventing swaying by the wind, in any direction.

The rows run east and west for about three-fourths of a mile, and are as true as it is possible to plant trees. At the western extremity is planted a belt of Norway Spruce, across the entire orchard, consisting of two rows 10 feet apart, and the trees in the rows 20 feet apart, those in one row being opposite the open space in the other, leaving the trees 10 feet apart. Two similar belts are planted through the orchard, at about equal distances, though the highest points of land are selected for the purpose, and these it is thought will afford all necessary protection from the wind, as the trees are made to head low.

Now for the result thus far. The trees are healthy and vigorous, and making a fine growth, many having already made shoots from 3 to 4 feet in length. Although having had but one season's growth since planting previous to the present, many of the trees are bearing fruit. On one Seckel we counted 131 specimens, and on the Bartlett, Flemish Beauty, &c., fully as many as the trees should be allowed to bear. On removing the cloth from the trees we found the bark glossy, smooth, and soft to the touch, yielding under the pressure of the finger. No blight has ever been seen in the orchard, and this exemption the proprietors think is mainly attributable to the protection afforded the trunks by the cloth.

The proprietors are entitled to great credit for their enterprise, and we hope to see them amply remunerated, as we have no doubt they will be before many years. Mr. Mattison is an experienced nurseryman, who knows how trees should be grown and cultivated, and practises himself the thorough course that he recommends to others, of which this orchard gives abundant proof. Nearly every tree he has grown from the seed; and here we may say that Mr. M. claims an improved method of cultivating Pear seedlings, by root-pruning during growth, thereby securing a larger number of fibrous roots, which, to some extent, prevents leaf blight, and ensures greater safety in the removal of trees, even when large.

This orchard, if well cared for for a few years longer, must yield a princely revenue. *Moore's Rural New Yorker.*

Home Correspondence.

Education of Gardeners.—I fear that amid such a diversity of opinion as has lately been made public on this matter, the young gardener will be puzzled. One lays down a programme of the various branches of science connected with his profession. Another advocates the very opposite—when doctors differ who is to decide? Much that has been written is valuable, even if it effected nothing beyond showing that gardeners generally are men of good attainments; exceptions there are I grant, but I fear that even after all the discussion that has taken place, the question of education will remain just the same as it was. We are not all alike; it will ever be a fact patent to close observers, that one will shine in a certain department, whilst another differently constituted will distinguish himself in another. All cannot have the knowledge possessed by a Lindley a Paxton, or other great men. You may place some young men in the first establishments in Europe, and under the most skilful gardeners, but even all this may fail to make them good men or ornaments to their profession; if their whole hearts are not in the matter all will be unavailing. A kind of intuitive knowledge is absolutely requisite in all men who purpose pursuing the profession of a gardener. But what is knowledge without a good moral character? Let a man's other qualifications be ever so brilliant, if he does not possess good moral conduct when weighed in the balance he will be found wanting in the most essential requirement. A gardener with a good moral character untainted, will sooner or later assuredly be successful; the two are inseparable. *John Edlington, Winch House, Seacombe, Birkenhead.*

Diagonal Training.—Perhaps your Correspondent T. C. B., Guernsey, will be kind enough to give some further explanation of his Diagonal cordon mode of training the Peach tree, such as the distance apart he trains the fruit-bearing shoots for spurs; the number of spurs on each shoot; whether or not all the fruit and bearing shoots are trained upwards at the same angle as the leaders or principal shoots; to what extent he knife prunes in the winter. And if after the spurs have fruited they are entirely cut away to make room for a new shoot to take its place, as on the long rod Vine system. Perhaps he will also further state whether or not it be intended that the shoots 6 inches long (including foreright) should be finally pinched to one leaf to form the fruiting spur, or be left the whole of that length, viz. 6 inches, to form a quantity of fruiting spurs. It is presumed the latter. And are the leaders, in order to cover the wall quickly, allowed to grow the whole season without being shortened. I think there were some diagrams on this or a similar system in your pages some time since—can you refer me to them? *A Young Gardener.* [The diagrams to which you allude will be found in our volume for 1853, pp. 36 and 101.]

Size of Trees.—The following list of measurements of the circumference of trees growing at Rossana, in the county of Wicklow, may prove interesting, and I cannot help thinking that it would be very much so if the example was followed in other localities. All the measurements were taken at 4 feet high except Yew, which was measured near the ground:—

Size.	Feet.	In.	Planted.
Oak	22	7¼	1690
Spanish Chesnut	21	8	1718
Ash	17	3	
Horse Chesnut	12	8	
Lime	10	9	
Beech	16	0½	1718
Cedar	8	4	1794
Elm	14	7	
Evergreen Oak	10	0	
Scotch Fir	9	11½	
Yew	12	3½	
Walnut	12	9	

F. T.

The Season in Lincolnshire.—The present season has been a most extraordinary one indeed. As regards agricultural produce, all farmers here say if the weather is propitious they are right—if not soon, as a matter of course they will be wrong. They stand as it were upon a pivot. Turnips and Mangels are good. As respects garden produce Grapes are very much shanked; but how could they be otherwise with the temperature of the earth only 57° at 1 foot under the surface, while in other years it ranged between 75° and 80° in August. For these two months past the thermometer never rose above 62°, and that was only once. About 5 o'clock, A.M. I have generally found it about 47° and 52°. As to rain, we have had it every 24 hours without exception till yesterday. With me Strawberries and Currants have been a good crop; Pears and Apples are not half their usual size. In flavour they are also deficient; for no sun no sugar! But that is not the worst; there is next year to look to—no sun no ripening of the wood, and therefore little or no fruit. Apricots are ripening very slowly, and as for Peaches I do not think that they will ripen at all. Tomatoes are a blank; Kidney Beans the same; Vegetable Marrows very poor; Cucumbers on ridge useless; Peas and Beans unusually tall; Potatoes a failure, owing to the disease, which is worse than it has been for years. Flower gardening, as far as Verbenas are concerned, is a failure—for 17 years I have had a blaze of flower which has been the admiration of all who have seen it; but this year the display is poor indeed. Grass has grown so strongly that it defies our Shanks' machine. I am greatly afraid that after such a severe winter and drenching rains the soil will be of little use till it is thrown up to the winter's frost; it is quite inert. I used, when working, to be burdened with even shirt and trowsers; but this year we have been able to wear our winter clothing all the season through. On August the 3d the temperature of the earth, 1 foot under the surface, was 57½°; August 27th, the same; while in other seasons, as has been stated, it has been 77° and 80°. I have never left off firing houses. One morning about 5 o'clock the thermometer stood at 42°. I have found it often at 45°, 50°, and 53°, seldom higher. *E. R., —— Garden, Lincolnshire.* [We are surprised to hear that the temperature of the ground was so high in 1859. Near London, at 1 foot deep, the thermometer reached 69½° on July 30, but went no higher.]

Elder v. *Rabbits.*—Finding that Elder is the only tree that rabbits do not bark, I am anxious to raise more of it than I have, and shall be obliged by your saying what is the best way of raising it. Our Nurseryman does not seem to keep it. It strikes readily, I believe. *H. P., South Lincolnshire.* [You may strike it in any quantity by means of cuttings put in in the month of March in a warm sunny place. If you can strike them under hand glasses they will root so much the quicker. No plant is more willing to grow in this manner except Osiers.]

Street Gardening.—I cannot permit the kind offer made by "Ackland" (see p. 774) to pass unnoticed. I should feel much pride in being able to accept his liberal donation of 100 Roses, which, with his permission, I shall keep in abeyance until I can consult some friends, whose influence may carry more weight in the forwarding of the desired end than mine could be expected to do. Should I be successful, "Ackland" will be reminded of his liberality through your columns. *E. A. M., August* 28.

Preservation of Timber.—Complying with your request for information as to my mode of using a garden engine with fluids, to save trouble I will refer you to the plan adopted by the Permanent Way Company, which was given in one of your former volumes. Having a short piece of pipe (letter *a* in the woodcut referred to) ready for use, to this I add a stop-cock and strong India-rubber bag for an air vessel that may hold two or more gallons of fluid, and then connecting a small force pump used as a garden engine, giving a power of about 50 lbs. to the square inch, I can effectually empty the sap vessels and force chemical fluids in more easily than by any other process I am acquainted with. One advantage in this process by the force pump is, you can operate on large trees where they are thrown, as I have done with an Elm of nearly 100 feet in it, giving an hour's attention for two or three days, and the tree throughout was effectually saturated with the solution of sulphate of copper I then used. For a tree of a foot diameter, I sometimes use a vulcanised India-rubber cap secured to the end of the tree, having a tube to connect the pump-pipe and stop-cock to it. I have also tried a plan of fixing a piece of wood by screws to the end of a tree, but the joint is not easily made watertight. *J. W.* [The woodcuts illustrating the mode of operation here referred to, together with further explanatory matter on the subject, will be found at p. 756 of our volume for 1856.]

Tom Thumb Lettuce.—This is certainly a good and useful Lettuce, and for frame purposes very desirable, as it occupies little space. I have it planted in a bed 7 inches apart; a more compact Lettuce is not to be found. *G. Bond.*

Dianthus Chinensis Heddewigii.—No flower garden ought to be without this charming plant; had the season been fine there would have been few things to compare with it for variety and brilliancy of colour. It may be freely propagated by means of cuttings like the Pink. *G. Bond.*

Plums.—I forward for your inspection specimens of Kirke's Plum, grown on a south wall covered with glass—a kind of glazed promenade of which we hear so much now-o-days. I think you will agree with me that the flavour is far superior to out-door grown fruit, and in all respects surpassing what we can accomplish out-doors, especially in such a season as we have experienced this year, thus to some extent showing the necessity in this our fickle climate of something more than a bare brick wall. *John Edlington, Winch House, Seacombe, Birkenhead.* [These are of quite unusual excellence for Kirke's.]

Societies.

ENTOMOLOGICAL: *August 6th.*, J. W. Douglas, Esq. President, in the Chair.—The President exhibited specimens of the rare moth Stathmopoda pedella, showing the remarkable manner in which the legs are porrected when at rest, taken at Lewisham among Alders, also the rare beetle Phloiotrya rufipes from rotten Oak wood at Leatherhead. Mr. F. Bond exhibited specimens of a new British Trochilium taken at Torquay by Mr. King, agreeing with specimens of Tr. Philanthiforme received from Spain by J. R. Hind, Esq. Mr. Westwood exhibited some specimens of the larvæ and pupæ of Papilio Machaon, received from Dr. Verloren, proving that the diversity of colour of the pupa is in no wise connected with the difference of sex as had been asserted. Mr. Janson exhibited several new and rare British Coleoptera collected in Perthshire by Mr. Turner; various new and distinct species of British Coleoptera, heretofore confounded with other species, were also exhibited by Mr. G. R. Waterhouse. Mr. Waring exhibited Acidalia rubricata and Lithostega nivearia from Brandon, Norfolk, collected by Mr. Dunning, and Mr. Scott exhibited various rare Lepidoptera and Coleoptera from different localities. Other new and rare moths (chiefly Tineidæ), were exhibited by Messrs. Mitford and Miller. Mr. Walker exhibited a remarkable variety of Hipparchia Megæra captured in Guernsey. Mr. Tegetmeier announced that

he had succeeded in obtaining a brood of the Ligurian hive bee (Apis ligustica), and exhibited a living worker. He also stated that he had made some experiments which tended to prove that strict interbreeding does not occur in the common hive bee, and consequently showing that the hive bee did not afford an instance of the pure breed being preserved without cross-breeding from other communities. Having found that the male bees will freely enter into any hive at the mouth of which they are placed, he powdered a number of the males as they left one hive with flour, and observed that at least one third of these whitened individuals on returning from their flight entered other hives. Mr. Scott read descriptions of several new British species of Coleoptera, a genus of case-bearing moths, and Mr. Westwood read a memoir by Dr. Verloren on the effect of periodicity in the development of insects, especially Sphinx Ligustri, as contrasted with temperature, the result being similar to that obtained by M. Vilmorin in his experiments on plants published in the Comptes Rendus for 1859.

BOTANICAL OF EDINBURGH: *July* 12. — Prof. Balfour, V.P., in the chair. The following communications were submitted to the meeting:—I. "Vegetable Morphology. its general principles," by the Rev. Dr. M'Vicar.—II. "Observations on some Bisexual Cones occurring in the Spruce Fir," by Alex. Dickson, Esq. The author described some abnormal spruce cones which he had picked in Peebles-shire. In these, the lower part was covered with stamens, whilst the terminal portion produced bracts and scales, like an ordinary female cone. The stamens of the lower portion were serially continuous with the bracts above. Some of the lower scales of the female portion were in the axils of the uppermost stamens, which last were somewhat modified, the anther cells being diminished, whilst the scale-like crest had become more elongated and pointed—in fact, more or less resembling the bracts. The author, reasoning from this abnormality, as well as from a consideration of the normal morphology of our ordinary Coniferæ, came to the conclusion that the male cone (as consisting of simple stamens developed on one common axis) must be regarded as a single male flower. With regarded to the female cone, Mr. Dickson was inclined to hold with Schleiden, that the scales (as being simple axillary structures) are flattened shoots, comparable to those of Ruscus, &c. The author accordingly could not but call in question the statements of Professor Lindley—1st, that each male amentum "consists of a number of monandrous naked male flowers, collected about a common axis;" and 2d, that "each anther is formed of a partially converted scale, analogous to the indurated carpellary scale of the females." III. "*On the Movements in the Cells of Anacharis and Vallisneria.*" By S. J. Meintjes, jun., Esq. The author stated that the cells of this plant are brick-shaped, and formed of a single wall. The marginal cells contain less granular matter than those nearer the midrib. These granules when in motion line the circumference of the cell, never actually touching the wall. When in a favourable state the granules move regularly round the cells—some in one direction, others in an opposite one. The movement is a slow, rolling motion along the sides of the cell; when the angles of the cells are acute the granules are jerked across, and on regaining the opposite side, resume their steady progressive movement. Sometimes a granule is sent out with a jerk from the true course, but it immediately returns, and continues its course. All these phenomena are seen under a power of about 300. When a higher power (650) is used, a thin wave-like line is seen lining the whole of the cell, and in actual contact with the granules when present. This at first seemed an optical delusion, but repeated examinations plainly showed this line to be the free margin of a row of cilia. F. Branson, in a paper published in one of the numbers of the Microscopical Journal, pointed out this some time ago, and without being at the time aware of Mr. Branson's paper, Mr. M. verified all his statements. The conclusion he arrived at is that the motion of the granules is due to the presence of cilia. The way in which these cilia act is peculiar. Being set at an angle to the cell wall, their action takes place in the direction of their angle; when set in motion they create a strong eddy in the cell. This eddy, by its centrifugal force, drives the granules to the side of the cell, and, coming under the influence of the cilia, they are carried along the side. Owing to the shape of some of the cells, a secondary current is produced in the acute angles, and, when the granules come under the influence of the two currents, they are thus rapidly conveyed across the angle—hence the observed jerk. Another effect of the irregularity of the shape in the cells is that the eddy can never be perfectly circular, and, this being the case, its force cannot be equally distributed. This inequality causes the outer edge of the eddy to act with greater force on some parts of the cell than on others, and the lighter granules being sent with a greater force against those parts, rebound. The elasticity of the cilia increases the repulsive power, and increases the force of the rebound caused by the action of the eddy. — IV. "Account of Professor Balfour's Botanical Trip, with Pupils, to Moncreiffe and Kinnoull Hills in Perthshire." By Mr. J. Sadler. The extraordinary number of about 160 botanical students left Edinburgh on the morning of the 16th June last for Bridge of Earn, where they partook of breakfast, thence walked by Monerieffe, Kinfauns, and Kinnoull to Perth.—V. "On the Structure and Development of Botrydium granulatum." By G. Lawson, Ph.D., Professor of Chemistry and Natural History in Queen's College, Kingston, Canada.—VI. "On the Effects of Lightning on an Ash tree." By D. J. A. Smith. Mr. Smith remarked: "I send a splinter and piece of bark of an Ash tree, which may perhaps be considered worthy of a place in the Botanical Museum. The tree was demolished by lightning on Saturday, the 16th June. I examined the tree and found it had been about 2 feet in diameter at the base, and formed one of a long row of old trees of a similar kind (none of which were injured except itself) on the farm of Hollydean, in the parish of Bowden, Roxburghshire. It had been struck apparently at the upper part of the trunk (the branches not being stripped of their bark), and the tree was cloven in two to the very root, two stumps only remaining in the ground, and these were shattered again in a lateral direction, as if the bolt had exploded in the tree and blown the trunk into numerous fragments, some of the pieces being picked up at the distance of 50 yards or more. The wood of the tree seemed quite sound, and the fragments when examined were apparently perfectly dry and sapless. Could the sap of the tree (for it was just coming into full leaf, and therefore full of sap), by its rapid conversion into vapour by the electric fluid, have any share in splitting the tree so effectually into fragments? The tree was cloven to the ground, one-half of the root itself being raised out of the earth, and the ground was ploughed up in a straight line for 10 paces to the north, and the same distance to the south of the riven stump of the tree. This adds another instance to the list of Ash trees struck by lightning. No doubt the Ash is a common hedge-row tree, still it seems to have rather a dangerous attraction for the electric fluid."—VII. "Notice of some Plants, specially Orchids, found in Kent," by G. C. Oxenden, Esq. Mr. Oxenden says:—"I have seen some very fine sights this May and June—viz., vast tracts of steep picturesque Grass hills extending for some miles, and throughout their whole length decked and garnished with one or other of the following plants:—Ophrys aranifera and mucifera, Orchis ustulata, a lovely Orchid, and Habenaria bifolia—all this vast range of hill slopes to the south and south-west. The east side of the same range is all forest ground, and it affords in abundance every variety of Orchis fusca, from a dull white to a very deep mulberry colour, and in size over 20 inches. These same woody banks yield a few specimens of the strange Lathræa squamaria, and more to the eastward I find the truly curious Monotropa Hypopitys. Near the place from which I write (Broome Park, near Canterbury), grows the monarch of Orchids, Orchis hircina, the Lizard Orchid; and within 50 yards of my house I have one growing, which at this moment (25th June, 1860) is 29½ inches high, and with nearly 50 "Lizards" upon it. Next month (July) will afford me very fine specimens of Ophrys arachnites, and if you have never seen the wonderful varieties of this Orchid, they will astonish you. Some of the varieties of the Bee Orchis are also exceedingly curious. In August we get Herminium monorchis in abundance, very minute, very fragrant, and under the microscope the most beautiful object imaginable. In July and August we have Epipactis latifolia, and E. purpurata in tolerable abundance.—VIII. "On the Stem or Axis as the Fundamental Organ of the Vegetable Structure." By C. Dresser. —Mr. Scot Skirving sent specimens of Grass which had been observed by Dr. Scott, of her Majesty's 79th Regiment, when in the Crimea, to withstand the utmost rigour of the severe winter there. He states that cattle ate it, and fattened on it. The seeds had been sown in East Lothian, and had produced an abundant crop. The plant was Bromus maximus. Dr. Rorie, of the Dundee Asylum, sent specimens of Cabbage leaves, exhibiting peculiar hollow pitcher-like appendages at their extremities.

HUDDERSFIELD FLORAL AND HORTICULTURAL: *Aug.* 25. -This took place on the parade ground of the Rifle Corps, and proved entirely successful. Considering the lateness of the season and the dark wet weather we have had for some time back, the articles exhibited were very good. Among stove and greenhouse plants were some fine specimens of Dipladenias, Stephanotis, Allamanda, Crassula, Pleroma, Meyenia, and Ericas. Among variegated and fine-foliaged plants were some beautiful examples, including several nice plants of Cyanophyllum magnificum, splendid specimens of Cissus and Dioscorea, Begonias and Caladiums. Of Orchids some few specimens were shown. An Aerides odoratum, with about 20 spikes of bloom on it, and a good variety of Odontoglossum grande, were furnished by Mr. Smith, gr. to J. W. Crosland, Esq. Saccolabium Blumei, with two spikes, was contributed by G. W. Binns, Esq.; and several plants of Oncidium flexuosum were shown by other exhibitors. Some fine specimens of Ferns were exhibited, both British and Exotic. Among British kinds were Scolopendrium crispum, Athyrium filix-fœmina var., Lastrea filix mas cristata, Polypodium Dryopteris, and many others. Of exotics a collection of 12 was exhibited by Mr. Barraclough, gr. to J. Whitacre, Esq., containing admirably grown Adiantums tenerum and cuneatum, Asplenium diversifolium, Selaginella Willdenovii, a plant 2 feet across; and other specimens including a magnificent one of the beautiful Nephrolepis davallioides, with fronds 3 feet long, the plant itself being 4 feet across. Other kinds exhibited were Polypodium effusum, Lygodium scandens, &c. Perhaps the finest specimens were in a miscellaneous collection of 16 plants contributed by G. W. Binns, Esq., and which contained lovely examples of Trichomanes speciosum, and Todea pellucida, each over 2 feet across; Hymenophyllums crispatum and Tunbridgense, Lastrea hispida, Dicksonias antarctica and culcita, Cyanophyllum, Pandanus, Saccolabium, Gleichenia flabellata, Dracæna, Caladium argyrites, Pteris argyræa and a lovely little example of Pteris tricolor. The rarest plant however in this collection was Trichomanes scandens. It was growing on a young living Alsophila, and had on it about 15 fronds from 9 to 12 inches long, and the base was surrounded by a new Hymenophyllum. The same exhibitor obtained the prize for the best Wardian case of Ferns, not exceeding 14 inches in diameter. The kinds were beautiful specimens of Trichomanes crispum, Hymenophyllums demissum and hirtellum, Todea pellucida, and a Moss-like Hymenophyllum. Vegetables, fruits, and cut blooms were excellently shown, considering the weather we have had. Some very good Grapes were exhibited, and a few Pines. Of Apricots, Peaches, &c., there were hardly any; but abundance of Strawberries, Pears, and Apples. Cucumbers were very good, the best being a brace from Mr. Fraser, Gr. to Capt. T. P. Crosland. It was a kind called the Kirklees Hall Defiance, raised by Mr. Ramsden, gr. to H. W. Wickham, Esq., of Kirklees Park. Of Dahlias, in the shape of cut blooms, there were very few; Hollyhocks still scarcer; Asters, Stocks, and Marigolds very good. Verbenas in pots were well shown. A yellow seedling Dahlia was exhibited by Mr. Gill, of Mirfield, and was awarded a first-class certificate.

Notices of Books.

Fragmenta Phytographiæ Australiæ; by Ferd. Mueller. M.D. Vol. I., 8vo. Melbourne. Pp. 252.

In this volume Dr. Mueller, the learned Botanist to the colony of Victoria, describes in scientific language a considerable number of Australian plants, new or rare, which have come under his observation in his official capacity. The language is worthy of the best days of systematical science, the critical remarks are those of an experienced naturalist, and the lithographic plates (of which there are 10) are equal to some of the best in Europe. Perhaps some of the new genera and species may not prove upon further examination to be previously undescribed; and we must object to such a name as *Newcastelia*, which we would suggest might have better been *Novocastellia*; but the accuracy of the observations will render even errors in synonymy valuable, as giving a full description of what may have been previously insufficiently described. A second volume has commenced, and its completion will be anxiously looked for. In the meanwhile we cannot but express our admiration of the singular industry of Dr. Mueller in bringing out works of this kind in the midst of a multitude of other official occupations.

Why the Shoe Pinches (Edmonston & Douglas, Edinburgh; Hamilton & Adams, London) is a translation by Mr. Stirling Craig of a German dissertation by Dr. Meyer, of Zurich, on the evil consequences of wearing badly-made shoes, and on the Proper Shape of those articles of dress. The views of the learned anatomist are illustrated by wood engravings; and we say with Peter Camper, "All horse doctors and horse fanciers are interested in the shoeing of their horses, numerous papers appear thereon, and shall we not concern ourselves about the foot-gear of man?"

Index Generum Algarum, or a Systematic Catalogue of the Genera of Algæ, marine and freshwater, with an Alphabetic Key to all the Names and Synonyms; by W. H. Harvey, M.D., F.R.S. London, 1860. 8vo. pp. 22 & 8.

So much uncertainty prevails about the genera of Algæ, from the carelessness with which new names have been applied to genera already described, and the recklessness with which species have been separated under distinct names without a single good character to justify the separation, and sometimes indeed where there has not even been distinction of species, that few things can be more useful to the algologist than a systematic view of what really appear to be tenable genera, accompanied by a list of synonyms. This accordingly has been supplied by the little unpretending work whose title is given above, and which may be had from the publisher Van Voorst, at the cost of 25 postage stamps. Dr. Harvey has arranged all the genera under three series, the Melanospermeæ, Rhodospermeæ, Chlorospermeæ, in 32 families, of which the distinctive characters are given. And under these appear first the names of genera, which he conceives to be well founded, and then in italics mere synonyms, or such genera as have been advisedly separated from the mother genus, without any sufficient reason. Dr. Harvey's judgment in this respect is so universally acknowledged that it is almost needless to state that this

matter has been carried out with admirable effect, while he has shown not the slightest indication of neglecting or despising such characters as really depend on essential difference of structure or fructification.

He has not, however, relied on his own judgment only, but has been kindly assisted by Sonder and Lenormand, and he is indebted to Brebisson, Prof. Walker Arnott, and Mr. W. Archer, for revising the list of the *Desmidiaceæ* and *Diatomaceæ*, to which he has paid himself less attention than to other families.

The work is printed on one side only, so that it can be cut up for labels, while a separate copy will serve as an index to the Algological department of the herbarium.

Guide to Corfe Castle (Longmans) is an intelligent companion to the Traveller in Dorsetshire, and "is specially devoted to the illustration of the most ancient town and fortress in Great Britain. The author presents it to the public with confidence that it will meet with a favourable reception, because, although he is conscious it is marked by many defects, he feels he has done his utmost to prepare a really useful handbook, in strict accordance with the principles that should guide the composition of such works. Nothing but the facts of history is drawn from extraneous sources; everything that could be ascertained by personal inspection and careful research has been so investigated, and these pages are thus in great part the transcript of careful notes made whilst viewing the scenes they describe. To one feature of this volume he begs to invite the attention of the public more especially. The venerable Palace Fortress of Corfe has never before been described with fulness, nor even with tolerable correctness. The author has here brought his practical professional pursuits to bear in the illustration of perhaps the most interesting and valuable example of British stronghold in the empire, and he trusts that the detailed descriptions in the body of the work, and the referenced plan and glossary, will enable the most unacquainted with architectural and engineering questions to understand and enjoy the exquisite features of Corfe, and aid the learned to a more perfect and rapid review of them." Although this is the author's statement we adopt it, because it seems to us a perfectly fair description of the manner in which Mr. Brannon has fulfilled his task. The little volume contains clever views of the ruins as they are, and a ground plan of the castle as it was, restored by the author, whose experience as an architect may be supposed to have rendered him an authority in such a matter.

The Tweeddale Prize Essay on the Rainfall, by T. F. Jamieson (Blackwoods), is a pamphlet of 51 pages, forming the prize essay offered by the Marquess of Tweeddale for the best reply to the question—"Whether the amount of Rainfall in the Western parts of Europe, and more particularly in Scotland, is less now than it formerly was." Mr. Jamieson's inquiries lead him to reply in the negative, after consulting such registers of weather as he has been able to examine. To a question put so loosely, Mr. Jamieson's reply is sufficient, if the meaning of the word "formerly" is "within the last century." If it has a wider signification, then a much larger range of inquiry should have been instituted. Upon turning over the pages we observed that a chapter was devoted to *Causes of Variations in the Climate*, but we confess to disappointment when we found this great question dismissed in three pages, one-half of which forms the following quotation:—

"Geology teaches us that wonderful changes have taken place in the earth's climate. In Greenland, Scoresby found coal strata showing impressions of tropical plants; and here, in our own country, we find Britain to have been at one time a land of Palms and Cocoa-nuts, with monkeys climbing amongst the branches; at another, the seat of giant glaciers and perpetual snow, where no living sound might have been heard but the hoarse baying of the reindeer, or the growl of the northern bear. The passage from one extreme to the other was doubtless very gradual; indeed, we have proof that the rigorous climate of the drift period came on by degrees, and did not at once attain its full severity; ages, we have reason to believe, passed away, and whole tribes of animals flourished and decayed. The cause of these mighty changes is still wrapped in obscurity, but seems to have had some connection with the relative distribution of land and water. Whole continents have risen and sunk, mountain-ranges have been lifted up within the snow-line, and have subsided again, until their summits alone remained as a set of islands in the midst of the sea.

"The changes that have taken place since the dawn of history are, however, slight, and confined within narrow limits. Indeed, it is still doubtful whether any perceptible difference has been established. The same plants are still characteristic of the countries that produced them in the days of Moses. The geographical limits of the Olive, the Vine, and the Palm tree, seem to be the same as they were 3000 years ago; and as even a slight alteration would affect the ripening of their fruits, we cannot suppose much change to have occurred. Seedtime and harvest have remained the same, so far as we can discover, neither has the vintage varied. All things point to very similar climatic conditions in the early days of our race. And this is not to be wondered at, for the great world-clock moves slowly and deliberately, but inevitably; and in the long record of the earth's history, the whole human period, so far as it has yet run, counts but as yesterday. The law, however, seems to be motion and progress,—what has been is not to be. Climates and creations grow old and pass away; they are but the garment of the Eternal, and as a vesture does He change them."

Garden Memoranda.

ARCHERFIELD AND DIRLETON CASTLE GARDENS.—These are situated on the coast of the Firth of Forth, within a mile or two of North Berwick, in the east nook of East Lothian or Haddingtonshire, about 24 miles from Edinburgh, a locality which may be said to be the Devon of Scotland, very early and fertile. These gardens, together with a valuable estate surrounding them, belong to the Hon. Lady Mary C. Nesbit Hamilton, who with great generosity throws them open to the public once or twice a week, and judging from the number of visitors (nearly 500) one day last week, we think that this kindness is duly appreciated.

Dirleton Castle, which has long been in ruins, is said to have been destroyed by Cromwell, and never to have been repaired since. A great deal of it is still lofty and mantled with Ivy. The larger of two flower gardens adjoining these magnificent ruins is seen to great advantage from the eminence on which they stand. The larger one is in Box—the smaller in Grass. Let us first notice the larger one, which is bounded on one side by a wall covered with Myrtles, Magnolias, Camellias, Jasmines, and Fuchsias, and one Glycine sinensis running along the top of the wall just under the coping for 60 yards. On the other side of the garden is a high Hornbeam hedge. The promenade round it is 7 feet wide; the walks between the beds are 5 feet; a light-coloured sea gravel is used for the walks. The massive and prodigiously large beds strike the visitor the moment he enters. Some are 60 yards in circumference, some 30 yards, most of them about 50. Last year some were planted with Verbenas along, and took 1000 plants. This year every bed has three kinds of plants and colours, and one uniform system is carried out—viz., a centre, a stripe, and a border. The border is 3 feet wide, the stripe 1 foot or thereabouts, and of course the width of centre depends on the size and shape of the bed.

In the centre stands an ornamental shrub, to give relief and repose to the eye and contrast to the whole. Entering by the north door the following are the contents of each bed in succession:—

1. "Brilliant" Geranium for centre, stripe of Purple King Verbena, bordered with Alyssum and Cerastium tomentosum.

2. Centre well filled with Golden Chain Geranium with all its flowers taken off; stripe Baron Hugel Geranium, with Lobelia speciosa for a border. A charming bed.

3. This is 58 yards in circumference, with Geranium "Glendinning's Seedling" in centre; Cineraria maritima for stripe or band; and a new Verbena, "The Duchess of Buccleuch," for border. Glendinning's Seedling is an enormous trusser, and bright scarlet.

4. This is 60 yards in circumference, and most gorgeous—Yellow Calceolaria in centre, banded with Perilla Nankinensis, and bordered with Tom Thumb Geranium.

5. One of the central beds, containing three kinds of dwarf Dahlias, and bordered with Flower of the Day Geranium and Verbena venosa, mixed.

6. Heliotrope, Perilla, and Mignonette.

7. Verbena venosa, Geranium "Shrubland Superb," and white Mint. This Geranium is a good one.

8. Trentham Rose Geranium, Verbena venosa, bordered with Tropæolum Stanfordianum. Tropæolums answer for variety, not for brilliant effect.

9. Calceolaria (aurea floribunda), Geranium Brilliant, and Lobelia speciosa. A splendid bed.

10. Mangles' Variegated Geranium, Purple King and Miss Trotter Verbenas. A most beautiful bed.

11. Mrs. Holford Verbena, Geranium Cerise Unique, and Verbena venosa.

12. Ageratum, Cineraria maritima, and Geranium "Commander-in-Chief."

13. Geranium Shrubland Superb, Mangles' Variegated, and Lobelia speciosa.

14. Perilla, Yellow Calceolaria, and Verbena St. Margaret.

15. This bed is 50 yards round, and is filled with Verbena Lord Raglan and venosa, bordered with Mangles' Variegated Geranium.

16. Calceolaria (aurantia multiflora), Brilliant, and Alyssum. A very showy bed, 42 yards round.

17. Flower of the Day, Purple King, and Tropæolum.

18. Verbena venosa, Alyssum, and Miss Trotter Verbena. Perhaps the most chaste and pretty bed in the garden.

19. Alyssum for centre, Miss Trotter, and Lobelia speciosa. This bed we consider second best; but wherever Miss Trotter Verbena and Lobelia speciosa are used the effect is good. We have no Verbena equal to Miss Trotter. It likes a very rich soil, which, if it gets it, will disappoint no one. We saw it on the same day at Dalkeith Park, where it is used extensively, and with striking effect.

20 Crimson Stocks, very fine; Alyssum and Miss Trotter, a very good bed.

21. Verbena Defiance, Purple King, and Golden Chain Geranium.

22. Dahlia Zelinda, Cineraria maritima, and Prince of Orange Calceolaria.

On a border against the wall was the new panel style of bedding. It was this panelling especially last year which took people by surprise.

The first border, 200 feet long, has at its back a row of Glendinning's Seedling Geranium. Another row of Flower of the Day, with its flowers, and next comes the ground-work, 6 or 7 feet wide, of Purple King Verbena, running the whole length of border, and in front of this is a row of dwarf plants of Flower of the Day in bloom. The panels are inserted or indented as it were in the ground-work, and consist of Yellow Calceolaria and Geranium Brilliant, alternately, about 5 feet apart, with a nice Irish Yew in the centre of each panel. This makes a charming picture. But the other border is even better. Of this Lobelia speciosa forms the ground-work, and Mangles' Variegated Geranium figures largely in the panels. As a whole the effect of this arrangement is excellent. Behind the Hornbeam hedge lies a fine bowling green, and to the right of that a splendid flower garden in Grass, with some very fine plants of Araucaria, Deodor, Cupressus, Yews, &c. The beds here are much raised and very large, and number about 20, with 10 vases, all in good condition.

The 9 or 10 beds on the north side were like the 9 or 10 on the south side; with this difference, that Bijou Geranium took, on the north, the place which Mangles' took on the south. 1. Alyssum and Lobelia speciosa. On either side of this was a bed filled with Punch Geranium and aurea floribunda Calceolaria. Next central bed is filled with aurea floribunda and Geranium Brilliant. 5 and 6 were full of Mangles' Geranium, and Lobelia speciosa. These make a first-rate bed, but for chasteness Bijou is better. Variegated Geraniums and Lobelias go well together. 7. Trentham Rose Geranium and Alyssum. 8. Golden Chain and Baron Hugel Geraniums. 9 and 10. Purple King and Cerastium tomentosum. For effect these two beds would be hard to beat.

Archerfield House and kitchen gardens are about 1 mile distant from Dirleton. The house is large but plain-looking; the kitchen gardens are extensive and productive. Facing the hothouses are three broad borders; on these we have the Panel style again. The central border is 17 feet wide. The back row consisted of Hollyhocks; next Zelinda Dahlias, another row of Cineraria maritima, and then comes the ground work of Tom Thumb Geraniums, 10 feet wide, and Mangles' Geranium for front row. The panels are in circles here, and consist of a plant of Humea elegans in centre, next Yellow Calceolaria and Purple King Verbena. Between the panels is a parallelogram of Flower of the Day.

The two borders on each side of this are 12 feet wide; the back row consists of Hollyhocks, second row Zelinda Dahlia, next Venosa Verbena. The ground-work is Alyssum, the panels Geranium Brilliant and Purple King Verbena alternately; and the front row is Lobelia speciosa. These borders alone are worth going a great distance to see.

Stepping into the range of hothouses at the west door we find that Mr. Thomson's energies are not all expended out-doors. The first house is 65 feet long and planted with Vines from eyes last year, some now in bearing. The Vines that are to bear permanently are not allowed to fruit this year; but between these were planted some which are now in fruit and will be removed when the crop is cut. The Vines to remain here are Lady Downe's Seedling and West St. Peter's. The second house, which is to be a Peach-house, has at present pot Vines in it; third, Vinery for Hamburgh and Rivers' Sweet Water. Those in bearing to be removed. *A. P.*

Miscellaneous.

Musical Fishes.—In Sir Emerson Tennent's "Ceylon" I find the following notice of the musical sounds heard in Chilka Lake, a salt-water creek close by Batticolos, on the eastern shores of Ceylon:—"I distinctly heard the sounds in question. They came up from the water like the gentle thrills of a musical chord, or the faint vibrations of a wine glass when its rim is rubbed by a wet finger. It was not one sustained note, but a multitude of tiny sounds, each clear and distinct in itself; the sweetest treble mingling with the lowest bass. On applying the ear to the wood-work of the boat the vibration was greatly increased in volume by conduction. The sounds varied considerably at different points, as we moved across the lake, as if the number of the animals from which they proceeded was greatest in particular spots; and occasionally we rowed out of hearing of them altogether, until, on returning to the original locality, the sounds were at once renewed." Will your readers oblige me by comparing this with the following note I published, of Musical Fishes in a salt-water creek near Bombay, in the *Bombay Times* of January, 1847:—"A party lately crossing from the promontory in Salsette called the 'Neat's Tongue,' to near Sewree, were, about sunset, struck by hearing long distinct sounds like the protracted booming of a distant bell, the dying cadence of an Æolian harp, the note of a pitch-pipe or pitch-fork, or any other long-drawn musical note. It was, at first,

supposed to be music from Parell floating at interval on the breeze; then it was perceived to come from all directions, almost in equal strength, and to arise from the surface of the water all around the vessel. The boatmen at once intimated that the sounds were produced by fish, abounding in the muddy creeks and shoals around Bombay and Salsette; they were perfectly well known, and very often heard. Accordingly, on inclining the ear towards the surface of the water, or, better still, by placing it close to the planks of the vessel, the notes appeared loud and distinct, and followed each other in constant succession. The boatmen next day produced specimens of the fish—a creature closely resembling in size and shape the freshwater perch of the north of Europe—and spoke of them as plentiful and perfectly well known. It is hoped they may be procured alive, and the means afforded of determining how the musical sounds are produced and emitted, with other particulars of interest supposed new in Ichthyology. We shall be thankful to receive from our readers any information they can give us in regard to a phenomenon which does not appear to have been heretofore noticed, and which cannot fail to attract the attention of the naturalist. Of the perfect accuracy with which the singular facts above related have been given, no doubt will be entertained when it is mentioned that the writer was one of a party of five intelligent persons, by all of whom they were most carefully observed, and the impressions of all of whom in regard to them were uniform. It is supposed that the fish are confined to particular localities—shallows, estuaries, and muddy creeks, rarely visited by Europeans; and that this is the reason why hitherto no mention, so far as we know, has been made of the peculiarity in any work on Natural History." Now, it was nearly impossible for Sir Emerson Tennent to have seen this, as it was altogether impossible for me to have known in 1847 anything about his visit to the Chilka Lake the following year; and both descriptions, which, so far as the sounds of the fish are concerned, are in perfect harmony, are those of independent observers speaking of the same phenomenon, which I doubt not in both cases admits of the same solution. In 1858, the present Governor of Ceylon visited Chilka Lake; he was obviously not aware of what Sir E. Tennent had heard or seen 10 years before; his book was not published till 1859. He gives the following account of the music in the water, which is as nearly as possible the same as had been previously given. Mr. Ward being once more a perfectly independent witness:—"I ought not to take my leave of Batticaloa, which I may not have an opportunity of revisiting, without mentioning the natural phenomenon for which its lake is remarkable—the singing fish. I was too ill during my stay in 1857 to expose myself in the night air upon the water; and I confess that, in spite of the impression then made upon my fellow travellers, amongst whom were Major-Gen. Lockyer and Capt. Gosset, I went out upon the present occasion with a considerable amount of incredulity, and was the last to believe the evidence of my own senses, Dr. Johnston being satisfied as to the existence of a sound apparently proceeding from the water long before I could realize it. But after changing the position of the boat once or twice, there could be no doubt about the matter. The sound rose and swelled, and absolutely vibrated about us in a manner that left no question as to the fact, whatever may be the causes. Its character is indescribable. It is not like any other sound. It is only heard at night. It has nothing harmonious or musical about it. There are no modulations, no variety of notes, except what the increase and decrease in strength produced. As to its origin, nobody knows anything. It may be the fish, to whom it is popularly attributed. It may be the rush of air through rocks partially hollowed. There is nothing but conjecture to guide us in this respect. The results all can vouch for. And these results are certainly most distinct within a limited distance from the shore, though heard occasionally in deep water. I am no naturalist. I can only state what I personally saw and experienced. Others must explain it. Something similar, it is said, occurs in the Bay of Naples. It is strange that between Naples and Batticaloa there should be this one point of resemblance." Sir Emerson Tennent describes the same thing as heard by him at the same place in 1848; but he doubts if the sounds proceeded from fish, and ascribes them to shell-fish. The following is an extract from a letter (Feb. 1849) I received a few weeks after the first notice had been published:—"Musical Fish.—Sir,—In a late number of the *Times* I noticed some remarks respecting the musical fish, as they have been rather aptly termed; and it may be interesting to the readers of the *Times* to be informed that the existence of a similar phenomenon has been long known to the residents at Vizagapatam. I have heard the musical sounds, like prolonged notes on a harp, when rowing on the back water at that station; and they were generally supposed to proceed from the fish coming in contact with the sides of the boat. To the best of my recollection, the sounds were never heard at a distance from it."—*Bombay Times*, Feb. 13. Vizagapatam, on the Coromandel coast, is 498 miles north of Madras, the shores abounding with shallow salt-water creeks, like those on the eastern side of Ceylon, and all along the Malabar coast. I think that I have very clearly made out that musical fishes do exist in abundance; and as it is very difficult to conceive in what way the sounds are made under water, it would be well to have the subject more minutely inquired into. *Dr. Buist in the Athenæum.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &C.—The bad growth and comparatively poor effect of out-door summer flowering plants this season will point out the necessity of looking more closely to those which are intended to supply a floral display under glass during the autumn and winter. Let the stock of Begonias have another shift if not already in pots sufficiently large. Keep the plants thin that their foliage may be kept from injury. Crowea saligna and Plumbago capensis are both valuable autumn-blooming plants, and the latter is almost indispensable for cut flowers. Attend to Chrysanthemums, water freely with liquid manure; good specimens should be aimed at rather than a few fine blooms. The earliest winter flowering Heaths and Epacrises should now be placed under glass, as it will forward their blooming; give air, however, freely. The potting of Hyacinths, Narcissus, &c., for forcing, must soon occupy attention; about equal portions of good soft loam and decayed leaf-mould with silver sand will be the best soil for them if for forcing, but well-decomposed cow-dung must be substituted for the leaf-soil when the bulbs are intended for late flowering. After potting place them on a dry bottom and cover the pots 2 or 3 inches deep with old tan or ashes, preserving them at the same time as much as possible from heavy rains; under this treatment they will fill their pots with roots, and will be in readiness for forcing when wanted.

FORCING DEPARTMENT.

PINERIES.—A rather dry state of the soil about the roots and also of the atmosphere is essential during the ripening of the fruit where high flavour is an object, therefore be careful not to over-water plants on which the fruit is approaching maturity, and it will be advisable to use slight fires during the present dull rainy weather, so as to allow of giving sufficient air to prevent a stagnant state of the atmosphere, for fruit of first-rate quality cannot be expected from plants growing in a sodden soil or a damp unhealthy atmosphere. Endeavour to afford growing stock a steady bottom-heat of about 85°, and keep it well supplied with manure-water at the root, but avoid getting the soil too wet. As fire-heat will soon be necessary to a considerably larger extent than has been the case during the summer, care must be exercised to secure a properly moist state of the atmosphere, keeping the evaporating pans or troughs regularly supplied with water, and moistening the floors, &c., frequently, as any sudden change from a moist to a dry state of the atmosphere would be most injurious to growing stock, and also to plants swelling their fruit. Be as sparing of fire-heat, however, as circumstances will allow, and shut up early on the afternoons of bright days. Where young stock is grown in dung-pits care must be exercised after this season not to get the plants weakly through keeping them too close and warm, giving air freely on every favourable opportunity, and sufficient command of warmth should be secured from the linings to allow of giving a little air at night and on warm cloudy days.

VINERY.—Inspect ripe Grapes and remove all decayed or unhealthy berries; keep the house well aired and free from moisture. Maintain a moist growing temperature in the late house; if mildew appears, dust sulphur over both fruit and shoots, it may afterwards be washed off without injury; but perhaps the best preventive of this pest is heat and moisture regularly maintained from the time the fruit is set till it begins to ripen. Encourage the growth of Vines in pots by frequent waterings with liquid manure; stop them as soon as they have attained the desired length, and cut out all lateral shoots as the wood ripens. When the crop is cleared from early Vineries, the wood ripe, and the leaves beginning to decay, the sashes may be removed altogether.

FLOWER GARDEN AND SHRUBBERIES.

As the season is now considerably advanced, it cannot be too often repeated that the propagation of all the more important bedding-out plants should be pushed on as quickly as possible; late struck cuttings are bad to keep through the winter through having an insufficient amount of roots and ill-matured wood. Let Scarlet and other Geraniums struck in the open ground be taken up and potted immediately they have made roots; they will require a close frame for a week or two, when they should be placed on a dry bottom in a southern exposure to harden them for the winter. For the same purpose Verbenas, Petunias, &c., struck in pans and intended to be kept in them through the winter, should be placed in a similar situation, at the same time stopping the points of the shoots. It should in fact be a point to keep them as hardy as possible by fully exposing them, until they are placed in their winter quarters. Mignonette for winter and spring flowering may yet be sown. Phloxes and other herbaceous plants will now be making a tolerably good show, and should have care bestowed on them. Let the borders be cleaned and neatly raked over, filling up vacant places with spare Chrysanthemums, spring struck Pansies, or spring flowering bulbs. As recommended last week let all evergreens in unsuitable situations be moved as soon as possible; where transplantation is intended the present is the best time of the year for the operation. Deciduous shrubs and trees, as a matter of course, should not be transplanted until they have shed their leaves. The roots may, however, now or soon be cut round preparatory to removal.

HARDY FRUIT AND KITCHEN GARDEN.

The earliest Apples and Pears should be gathered as they ripen. Early fruit more particularly is the better for being gathered a few days before it ripens on the tree, as in the latter case it usually turns mealy directly. Protect Peaches, Nectarines, Plums, and Figs from wasps. Peaches and Nectarines should likewise be gathered a day or so before they are quite ripe. Earth up Celery as it advances in growth; plant out Cabbage sown last month for Coleworts. Brown Cos and hardy Cabbage Lettuces should be sown for spring use, and prepare a rich piece of ground in a sheltered situation, and plant out those sown last month. If the season is not too severe they will be useful through the early part of the winter. Finish planting Broccoli and all winter Greens. Sow Chervil, American Cress, and Parsley in a sheltered situation; it is a good plan to make a sowing under trees, which will be a slight protection through the winter. Sow Early Horn Carrot to remain in the ground for winter use. Cut herbs, if not already done, and when dry keep the hoe moving among all growing crops.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON

For the Week ending August 30, 1860, as observed at the Horticultural Gardens

August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 24	8	29.774	29.578	59	52	55.5	59	58	S.W	.24
Satur. 25	9	29.687	29.605	63	48	55.5	61	58	S.W.	.48
Sunday 26	10	29.759	29.746	69	49	59.0	62	58½	W.	.20
Mon 27	11	29.810	29.698	69	45	57.0	62	58½	W	.01
Tues. 28	12	29.819	29.613	68	49	58.5	60	58	S.W.	.22
Wed. 29	13	29.497	29.429	69	50	59.5	60½	58	W.	.03
Thurs. 30	14	29.397	29.278	68	49	58.5	61	58½	S.W.	.00
Average..		29.677	29.561	66.4	48.8	57.6	60.8	58.2		1.18

August 24—Partially overcast; constant rain; boisterous at night.
" 25—Densely overcast; heavy rain; boisterous with heavy showers.
" 26—Clear; cloudy and fine; rain at night.
" 27—Overcast; low white clouds; slight rain.
" 28—Fine; rain; densely overcast; heavy rain.
" 29—Densely clouded; fine; showery; fine at night.
" 30—Clear and windy; flying clouds with clear intervals; fine.
Mean temperature of the week, 3 1-10 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Sept 8, 1860.

September.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 2..	70.3	47.6	58.9	13	0.44 in.	1	3	2	1	2	7	8	2
Mon. 3	70.3	48.0	59.2	13	0.49	2	1	3	1	5	7	6	3
Tues. 4..	70.2	46.9	58.5	15	0.58	5	1	4	1	4	6	3	4
Wed. 5..	69.7	47.1	58.4	15	0.30	3	6	9	—	3	5	4	2
Thurs. 6..	69.7	45.8	57.8	15	0.70	1	9	4	—	1	12	6	1
Friday 7..	69.5	47.7	58.6	17	0.55	1	5	5	2	4	13	3	1
Satur. 8	68.7	47.5	58.1	14	0.65	3	6	2	2	3	12	3	3

The highest temperature during the above period occurred on the 3d, 1835, 5th, 1848, and 7th, 1843 and 1846—therm. 83 deg; and the lowest on the 7th, 1855—therm. 28 deg.

Notices to Correspondents.

*** Correspondents are requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

BOOKS: *F H.* Donn's Hortus Cantabrigiensis.

EXCHANGES: *J M.* We will consider your suggestion; but how is *S* to send anything to *J M?* Letters and parcels will not find their owners if directed with initials only.

EXCRESCENCES: *W.* The appearances are not due to the formation of a gall, but to the presence of the fungus called Æcidium laceratum.

FUNGI: *J D* The Fungus which spreads over your lime boards is a Mycelium known under the name of *Ozonium auricomum.* It is not exactly ascertained to what perfect plant this Mycelium belongs. The Alga is *Oscillatoria Friesii*, under which name you will find it described in "Harvey's Manual," and in "Hooker's British Flora." *M J B.*

GRAPE MILDEW: *Learner.* All you can do is to thoroughly cover the parts affected with flowers of sulphur, and when pruned for the winter to clean the rods as much as possible, and then paint them all over with a mixture of clay, soft soap, and sulphur in a sufficiently thick state to stick to the wood. As to books, Sanders on the Vine will possibly suit you best.‡

NAMES OF FRUITS: *C S C.* Your Plum appears to be the Mirabelle Petite.‖

NAMES OF PLANTS: *R.* Echinops sphærocephalus, the Globe Thistle.—*J H.* Stevia fastigiata, a greenhouse plant.—*T E C* Habrothamnus roseus.—*Guernsey.* Scrophularia Scorodonia and Armeria maritima.—*E K* It is some kind of Bignonia (not Tecoma); but the specimen does not enable us to determine the species.—*X Y Z* The Oncidium cannot be named from a single withered flower. The Cattleya is unknown to us; it seems to be a very fine variety of C. superba.—*X Y Z* You are right; it is Galeopsis Tetrahit. The first specimen was not properly determinable.—*C F.* 1, Valerianella olitoria; 2, Aponogeton distachyon; 3, Coronopus Ruellii.—*W. Milne* Fuchsia fulgens has no resemblance to F. corymbiflora.—*Emo.* Tilia alba.—*A S W.* Francoa appendiculata.—*S F H* It is the Venetian Sumach, or Rhus Cotinus; sometimes called the Wig tree.

NEAPOLITAN VIOLETS: *Lady J. W.* They should be divided in May and planted out on a cool border, where they may remain till October; they should then be carefully lifted with a trowel and placed in a frame set on a foot or two of leaves, or on a spent hotbed. While out of doors they must be carefully attended to with water if the weather is dry, and similar attention must also be paid to them in the frame. Thus managed they will flower freely all through the winter and spring. For further information on the subject see p. 99 of our last year's volume.‡

SPEARMINT: *Esper.* No wonder your Mint should be so fine this year in the midst of clouds and drizzle. It should always be grown in a shady wet place, unless you want it very early.

THE TOOTHACHE: *Sufferer.* The root of Anacyclus Pyrethrum is sold by druggists under the name of Pellitory of Spain. It will not hurt you, unless you swallow it.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

THE LONDON MANURE COMPANY (ESTABLISHED 1840),
Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES.
CONCENTRATED URATE
MANGEL MANURE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR SPRING TOPDRESSING.

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Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
LAWES'S BARLEY MANURE..	8	0
" MANGEL MANURE	8	0
" GRASS MANURE	8	0

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Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

MANURE.—Contracts for the removal of Manure and Spent Hops from a London Brewhouse.—For particulars, apply by letter, post paid, to H. R., 2, Villiers Street, Strand, W.

THE GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY.
Offices, 52, Parliament Street, S.W.

Directors.

HENRY KER SEYMER, Esq., M.P., *Chairman.*
SIR JOHN VILLIERS SHELLEY, Bart., M.P., *Deputy-Chairman.*

George Thomas Clark, Esq. — Edward John Hutchins, Esq
John Chevallier Cobbold, Esq., M.P. — Sir Samuel Morton Peto, Bart., M.P.
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Under this Company's Act Landowners may effect the following Improvements on their Estates, and charge the Outlay and expenses thereon, to be paid by Half-yearly Instalments, viz.:—

I. All works of Drainage, Irrigation, Warping, and Embankment.
II. The erection of Farm Houses, Cottages for Agricultural Labourers, and all kinds of Farm buildings.
III. The construction of Roads.
IV. The Grubbing and cleaning of old Woodlands, Enclosing, Fencing, and Reclaiming Land.

The Landowners by whom any of these Improvements may be executed, are—Tenants for Life, Trustees, Mortgagees in Possession, Guardians, Committees of Incompetent Persons, Married Women, Beneficial Lessees for Lives or for a term exceeding 14 years, Corporations, Ecclesiastical or Municipal, Incumbents, Sequestrators, Charitable Trustees, &c.

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The term of years for the Rent Charge is fixed by the Landowner, so as to adapt the amount of annual payment to the circumstances of the Tenants, the term for Building Works being limited to 31 years, but for all other Improvements being capable of extension to 50 years.

No investigation of Title being required, and the charge not being affected by Incumbrances, no legal expenses are incurred.

The arrangements for carrying into effect Improvements are threefold—

No. I. The Works may be designed and executed entirely by the Landowner's Agent, and the Company employed only to supply the Loan and conduct the matter through all the official forms for charging the outlay on the Estate.

No. II. The Company will supply Plans, Specifications, and Estimates for any Improvement to be executed by the Landowner's Agent, as under No. I. In each of these cases the Landowner will be solely under the control of the Inclosure Commissioners.

No. III. The Company will undertake the entire responsibility of the Improvement, prepare the Plans, execute the Works, and finally charge on the Estate the actual amount expended with their Commission approved by the Inclosure Commissioners.

Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.

Works of Drainage and other Improvements are also executed on Commission for Landowners who merely require the skill and experience of the Company's Officers and a Staff in constant practice.

Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W., London.

THE LANDS IMPROVEMENT COMPANY.—Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.

To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS &c. IN ENGLAND AND WALES AND IN SCOTLAND

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

MANCHESTER AND LIVERPOOL AGRICULTURAL SOCIETY.—The THIRTEENTH ANNUAL SHOW of Horned Cattle, Horses, Sheep, Pigs, Poultry, Vegetables, Seeds, Roots, Cheese, Butter, Cottagers' Produce, Implements and Machinery, &c. &c., will take place at Bolton on WEDNESDAY the 12th, and THURSDAY, the 13th of September. Premiums amounting to nearly 1000*l*., (including considerable Special Prizes) will be competed for on this occasion. (Entries of Stock, &c., closed on the 15th instant.) The show yard will be open to the public by Tickets on WEDNESDAY, the 12th September, from Ten to Six at 2*s*. 6*d*. each, and on THURSDAY, the 13th, from Eight to Four (when the Show will finally close), at 1*s*. The PUBLIC DINNER will take place on the first day of the Show, near the Show Yard, at 2.30 P.M. Lord Newport will preside. Tickets, 3*s*. 6*d*. each, may be had from Mr. John Brandwood, of the Commercial Hotel, Bolton. T. B. RYDER, Secretary.
2, Elliot Street, Liverpool, September 1.

The Agricultural Gazette.

SATURDAY, SEPTEMBER 1, 1860.

WE have to announce that "C. D." has placed **in the hands of Dr. LINDLEY the Fifteen Pounds offered by him for essays on the cultivation of small farms** (see *Gard. Chron.*, August 11, 1860).

—— WE remind our readers of two important sales of pure bred Shorthorns to take place on Friday and Saturday of next week (Sept. 7th and 8th). Mr. STRAFFORD will on the first day dispose of the herd of Mr. R. DUDDING, at Panton, near Wragby; and on the second day of the herd of Mr. DIXON, of Caistor, North Lincolnshire. Mr. DUDDING's herd was referred to some weeks ago in this Journal; Mr. DIXON's is described in another page.

"HOW ARE YOUR WHEATS?" is the salutation which the farmer is now or has been meeting everywhere from anxious inquirers with great coats or umbrellas; and the reply is of a gloomy character,—the crop is undoubtedly deficient, and great loss and even total ruin (in some districts) is all contingent upon the behaviour during the next few days of the rain and storm and the thick canopy of cold clouds which shut out the rays of a ripening sun.

In order to see what may be the probable result of the harvest, even if fine weather come for its in-gathering, the experience of our present extraordinary season may be considered as akin to Wheat-growing in a wet and chilly climate, and there is abundant evidence to show how **Wheat always fares in such circumstances.** Wheat and Barley are acclimatised exotics, probably natives of Palestine and Syria; they have been spread over the temperate regions of Europe as far north as rigour of the climate will permit, and our country is situated toward the northern boundary of the cereal zone. There is no other part of Europe where the Wheat crop is subjected to so low a summer temperature; the summer temperature of the British Isles varying from 54° to 64°, while in Lombardy, where Wheat grows with greatest perfection, it is 73°, and in Sicily, "the granary of ancient Rome," 77°. Our summer heat of 54° to 64°, according to locality, includes both a climate well adapted to bring the Wheat crop to full perfection, and also a condition of temperature insufficient to ripen this grain; so that we have large districts where only Oats and inferior kinds of Barley are grown. Much of our land, particularly in Scotland, is thus on the very verge of the profitable cultivation of Wheat. The amount of summer heat is of paramount importance to the crop, and the present cold season has brought all the great Wheat-growing districts of England into circumstances of climate nearly resembling those of localities naturally unsuited for this grain. That this is really the case, is shown by the records of past harvests. The mean summer temperature for 65 years up to 1836 was 61°; and Mr. WHITLEY, in his essay on the "Climate of the British Islands in its effect on Cultivation" (Royal Agricultural Society of England Journal, vol. xi.), gives a tabular history of the harvests of peculiar abundance or deficiency during that period, from which we extract the following information:—

Year.	Variation of the Summer Temperature from the Mean of 65 years. Above.	Below.	State of the Wheat Crop.
	Deg.	Deg.	
1775	1.2	..	Plentiful harvest.
1779	2.3	..	Season of great fertility; the crop one-fourth above a medium.
1789	..	2.6	Very deficient crop.
1791	..	0.5	Abundant crop
1792	..	1.6	Inferior harvest; much injured by wet.
1795	..	2.2	Very defective crop, followed by a dearth, in which many of the poor perished.
1799	..	2.3	Wet, cold summer; much grain injured and destroyed.
1800	0.7	..	Bad crop, partly saved in England. In Scotland much corn did not ripen; destitution and famine followed. Much rain.
1809	..	1.3	Deficient crop: the rain set in in July, and continued till October; Wheat suffered from mildew and sprouting.
1810	..	8.7	Bad, scanty crop, but well got in.
1811	..	1.7	Five-eighths of an average crop. High winds at blossoming time, and little sun and heat at harvest.
1812	..	3.8	Defective and bad crop. A famine year.
1816	..	4.8	Great deficiency in quantity and quality. Heavy rain and stormy winds in July, until harvest. The crops on the Continent also very bad. A famine year at Paris.
1818	4.3	..	A remarkably dry hot summer; no rain for four months, from middle of May. Wheat an average crop in the eastern counties; very heavy and abundant in the west. Hay came from New York, and Barley from Constantinople.
1822	2.2	..	Full average produce; quality universally good.
1825	2.0	..	Unusually early and promising harvest.
1826	4.0	..	Remarkably early harvest; crop and condition very good. Very dry in the west, and crop excellent.
1834	2.5	..	A most productive harvest.
1835	2.6	..	Great bulk of straw; much laid by rain in June. On the whole good crop.
1836	0.3	..	Medium crop in England. In Scotland very cold, with rain in July and August. Crops remarkably backward; a portion never ripened.

From this Table we infer that the summer temperature of the British Islands is, on a whole, within a very few degrees of the minimum temperature required for the perfection of Wheat; a deficiency of 2° or 3° of heat places the whole crop in the utmost jeopardy, there being almost invariably a great falling off in quantity and quality, which is most severely felt in Scotland, the north of Ireland, and in the west of England. Those years in which the summer temperature has been in excess are noted for the abundance of the Wheat crop, and the perfection of the grain. An occasional high wind during the flowering time, or a sudden change of weather at harvest, may sometimes do injury, but generally the height of the thermometer has been a good indication of the productiveness of the harvest. We seldom suffer from an excess of heat; and even after the drought of 1818, though the straw was remarkably scanty in the eastern districts, the ear was crowded with grain. An average amount of heat occasionally produces a good crop, as in 1791; but then it must be accompanied by a dry season. In 1840, the summer temperature in the west of England was a trifle below the mean, but there was not much more than half the usual quantity of rain fell; and so a finer harvest has scarcely ever occurred there, the Wheat crop being above an average, and the yield excellent. Scotland, however, is extremely sensitive to the least depression of summer heat; as shown by the summers of 1800 and 1836, when the Wheat was saved in tolerable condition in England, while a large portion of the

crop was completely lost in Scotland. A cold wet summer is followed, as we see from the table, by the most lamentable consequences; a deficiency of only 2° of heat falls with a withering influence on the harvest prospects, while a summer temperature 3° or 4° below the mean, brings dearth and famine. Those summers which have been more than usually cold have generally been accompanied by a large fall of rain; the rain, in fact, being rather the cause than the effect of the low state of the thermometer. And such a season has always tended to produce a large amount of straw, which, in a continuance of damp weather, is peculiarly liable to be attacked by disease; hence in the wet years of 1809, 1810, and 1811, much damage was done by mildew. Cold wet summers are much rarer than unusually hot ones; as in the 65 years included in the table, the summer temperature fell seven times below the mean 2° or 3°, and only three times did it fall more than 3° below the mean; but, in the same period, the summer heat rose eight times from 2° to 3° above the mean, and five times exceeded 3° above it.

Mr. WHITLEY states, from long acquaintance with the west of England, that Wheat in general fails to come to that perfection which justifies cultivation, at a height of 600 feet above the sea; and as the average summer temperature there is 60°, the allowance for altitude shows that 58° is the lowest heat adapted for perfecting this grain. In confirmation of which it is found that a deficiency of 2° in summer heat (that is, a temperature of 58°) is followed by a great deficiency of crop on the lower lands. On the eastern plain of England, our great corn-growing district, when the summer temperature has fallen to 58°, the crop has been invariably defective; in the year 1812 it fell to 57.2, and the nation was on the verge of famine. In West Lothian Wheat has been successfully cultivated, though the average summer heat of 26 years is somewhat below 58°. The crop has been pushed so far to the north of Scotland, that the mean heat of the season is only 56°. But then it is only in warm sheltered vales where the harvest can be relied on. Thus the minimum amount of heat necessary for the ripening process under our cloudy skies, is in Scotland from 56½° to 57°; and in the south of England, where the summer days are shorter, and, other things being equal, the amount of solar heat in the same time is less, 58° are requisite.

Now in estimating, from these data, the corn-ripening qualities of the present season, we will take one great Wheat-growing district, the South Lincolnshire level, in which the mean summer heat (of many years' average) is 62°.

During the present summer, observations have shown the mean temperature to be as follows,—for the week ending June 9th, 52½°; for the week ending June 16th, 51½°; week ending June 23d, 54°; week ending July 14th, 57°; week ending July 21st, 60°; week ending July 28th, 54½°; week ending August 4th, 58°; week ending August 11th, 55°; week ending August 18th, 56°; the average temperature throughout the summer being 55½°; no less than 6½° below the mean summer heat of a number of years, *and 2½° below the minimum necessary for the ripening of Wheat.* The thermometer has been and is at a considerably lower mean than any of those in the foregoing table which produced such deplorable results; and if past experience be worth anything at all, we can look only for a very great loss of yield and general failure of the Wheat crop, which will be but partially averted even should the sun at once burst forth with wonted power upon the cold and saturated harvest fields.

And the low mean temperature has not been mitigated and relieved by any short gleams of extremely hot sunshine; the highest temperature of June was 73½°, or 3½ below the two hitherto lowest years, 1843 and 1852; in July it was 77°, the same maximum as in 1843; and in August it has reached only 73° as yet, being 13 colder than last year, or 1½° under 1845, hitherto the lowest year for this month. In June the temperature fell to within 2½° of freezing point; in July, to within 4½°; and in the present month to within 9° of the freezing point.

Still further, there have been very few days of the greatest heat, low as it was; in June, the heat attained to 70° for only 7 days, instead of 20 as last year; in July, it rose to 75° on 6 days, instead of 28 as last year; in August, it has risen to 70° on 2 days, instead of 25 days as last year. An unprecedentedly low temperature would be less injurious had the weather been less inclement in other respects. But the number of rainy days and the amount of cloud has been most excessive, and as far as we may expect from the above Table, exceedingly damaging and alarming. Of the days from July 15th to the 21st of the present month, 27 have been rainy days; and the quantity of rain fallen has also been large; in June, about the average; in July, half an inch in excess; and in the present month already a much larger amount in excess of the usual fall.

Examining the crops themselves we find every appearance to confirm the experience recorded in our table. Throughout the entire flat district of fen and marsh land, the Wheats have become seriously and mischievously affected during the last six weeks; though up to that time this district considered itself favoured with heavy and healthy crops, bidding fair, indeed, to yield almost the only good harvest in England. But the continued absence of the solar rays has left the lodged and storm-broken Wheat and Oats still green and juicy, while the flag has decayed, and the soft kernels refusing to harden into solid seeds of starchy flour must be left to dry and shrivel in the cut sheaves. Field after field lies a prey to the insidious mildew; a vast extent of Wheat being by this disaster reduced, to all appearance, one half in value. Blight and red rust, and other enemies active against a sickly Wheat crop are also rife in all quarters; and the heavy rains and rough winds having prostrated almost every tolerable piece of corn, the incessantly pouring showers have caused sprouting on a very great scale, and the Wheat may be seen "growing by handfuls" before it is reaped. The Oat crop is in a very sad plight; beaten down flat, and kept constantly wet, it has become "thorough-grown" to an extent hardly ever known before, a young crop of green stems already in "shog," growing above the original Oats, so that mowing or reaping is troublesome work. Farmers, despairing of a ripening-time, are beginning to cut the corn greener than usual, but harvesting will only be general next week (the first in September), which is three weeks behind the usual time. Peas are cut and well corned: but owing to the wet are considerably damaged, and will suffer great loss unless fine weather at once supervene for carting. Beans are a fair crop, but not well podded. Potatoes are blackening and rotting more rapidly and extensively than ever.

As far as the wide locality in question is concerned, there is no doubt that the hopes inspired by an exceedingly fine and well-grown Wheat crop, will be utterly disappointed, and the result of the thrashing will, in most cases, confirm the prediction of deficiency in produce and inferiority in quality involved in a summer thermometer many degrees lower than its average standard, and several degrees under the minimum temperature necessary for successful Wheat culture. *I. A. C.*

[We must add that while in the earlier districts of the country the above gloomy picture will be generally recognised as true; it will be found by the reports in other columns that there are large districts in the country which have not hitherto been seriously injured, but may yet yield fair crops of good corn. The whole, however, is now in a very critical state, and another week of inclement weather would be generally disastrous.]

INTERNATIONAL TRIAL OF REAPING MACHINES OF THE ROYAL AGRICULTURAL SOCIETY OF THE NETHERLANDS.

PURSUANT to the notice already published in this Journal, a competitive trial of reaping machines took place in the Wilhelmina Polder, near Goes, in the province of Zealand on the 10th of this month.

Some disappointment was occasioned, in consequence of no steam plough being entered to compete for the prize of 1200 florins (100*l.*), offered for the best machine of that description, as well as by the unfavourable state of the weather.

The 10th however turning out dry, the machines worked in the morning before the public, whilst the competition before the judges and the members of the society took place in a field of Wheat at 2.30 in the afternoon.

Only three machines took part in the competition; one of Dr. Mazier's invention, exhibited by Peignat, of Amsterdam, having got out of order after arrival on the ground; while a fifth, Hussey's reaper with Dray's improvements, already in use for the three last years in the Wilhelmina Polder, did not compete. Several others which were entered did not come,

The competing machines were:—

1. A one-horse machine, with a labourer to gather up the sheaves; exhibited and worked by Cuthbert, of the firm of R. Cuthbert & Co., of Newton-le-Willows, Bedale, in Yorkshire. This machine is an improvement on Hussey's.

2. M'Cormick's reaping machine, improved by Burgess & Key, attended by one of the servants of the firm.

3. Wood's American machine, exhibited by Cranstone of London, with a labourer to put off the sheaves—a machine which had previously obtained a prize as a mowing machine at Loosduinen, in the province of Holland.

4. Dr. Mazier's machine, a French reaper, already mentioned.

For comparing the merits of the competing machines, the judges in the first place directed their attention to the cost of working them—

	No. 1. Cuthbert.	No. 2. Burgess & Key.	No. 3. Wood.
The price of each delivered in London is	£ 22 0 0	£ 42 10 0	£ 35 0 0
Twenty per cent. allowed for wear and tear, or for replacing the machines after six years	4 8 0	8 10 0	7 0 0
The machines may be used for 40 days in the year, so that the daily cost on account of wear and tear, &c., is	0 2 2½	0 4 3	0 3 6
Cuthbert's and Wood's require each two labourers, relieving one another in time to gather up the grain; the labour on the former being heavier than on the latter, at per day	0 5 0	..	0 4 2
Burgess & Key's requires an attendant, at per day	..	0 2 6	..
Drivers per day	0 2 6	0 2 6	0 2 6
The average power exerted by the horses measured by a dynamometer of Becker's (of Arnhem) is equivalent to in imperial stones	cwt. st. lbs. 1 7 10	cwt. st. lb. 6 0 10	cwt. st. lb. 6 0 10
The horse in Cuthbert's machine working in shafts, the total power could not be ascertained by the dynamometer: it was estimated at	2 7 8	..	..
A horse working ten hours a day cannot exert a force equivalent to more than 1½ cwt., so that relays will be required for each day's work, and the horse power needed will cost, at 1s. 8d. a day for a horse	£ s. d. 0 6 8	£ s. d. 0 13 4	£ s. d. 0 13 4
The total of these sums accordingly make an outlay per day of	0 16 4½	1 2 7	1 3 6
Twenty Netherland roods (⅘ an acre nearly) marked off for each competitor were cut in	minutes 46	minutes 40	minutes 44
Calculating 10 hours' work per day, the cost of reaping one acre is for each machine	£ s. d. 0 2 2	£ s. d. 0 3 0	£ s. d. 0 3 5
But since at each time one side only of the grain was cut, that which was laid being passed over, the cost will be about one half this amount, therefore	0 1 1	0 1 6	0 1 8½
And on an average the actual cost will be	0 1 7	0 2 3	0 2 7½
In the first case there would be cut in acres per day	acres. 6½	acres. 7½	acres. 6⅘
In the second case, do.	13	15	13⅗
And on an average, as most likely will be the ordinary case	8¾	11¼	10⅕
The machine of Burgess & Key, and of Wood have "boards" to bring the grain to the cutter bar; Cuthbert's has none. B & K. has besides three Archimedean screws for the side delivery of the cut grain.			
The weights of the machines is	cwt. st. lbs. 6 7 1	cwt. st. lbs. 14 0 1	cwt. st. lb. 9 2 12
The breadth of the entire machine	ft. in. 8 3	ft. in. 9 10	ft. in. 9 8
The reapers cut the 20 roods (⅘ acre) each in *turns*	turns. 15	turns. 12	turns. 14

The two first put the knives out of gear with ease by a lever; it is more difficult in Wood's.

The raising of the cutters is effected in Cuthbert's by a screw on the shaft; in Burgess & Key's by a lever on the outside, and a screw on the inside; in Wood's, by a lever on the inside with equal facility in each case.

Burgess and Key's makes its turns more easily by setting in motion the little wheel on the outside by the lever.

The teeth of the knives are jagged in Burgess & Key's, with a clean cut in the other two.

These peculiarities, however, are not of such a nature as to give a preference to any one of these machines much over either of the others.

The height of the stubble left was equal in each case, and was as low as was possible for the sickle to leave it. Where there were furrows in the field, or corn laid, the stubble was somewhat longer, and all the machines overcame difficulties occasioned by the state of the corn in a similar manner.

There was, however, much difference in the way in

* In this report, as received from Wilhelminadorp, for which our best thanks are due, the money weights and measures of the country are used. We have here reduced them to English terms.

which the grain, when cut, was laid on the ground. With Burgess & Key's the grain was laid with the greatest regularity in one swathe without any of the stalks remaining in the stubble. Two binders were able to bind 354 sheaves of uniform size, the produce of the 20 roods (½ acre) in 2 hours 24 minutes.

With Cuthbert's on the other hand the sheaves were unequally formed and thrown across one another, while many stalks remained scattered in the stubble, and were accordingly not bound. This defect in an equal, if not greater degree was observed in Wood's. For Cuthbert's two binders bound 390 irregular sheaves in 2 hours 14 minutes; for Wood's, 273 large, very irregular sheaves, in 1 hour 45 minutes.

The laying of the corn when cut was so much better performed by Burgess & Key's as, in the opinion of the judges, fully to compensate for the greater cost of working that machine than Cuthbert's.

Assuming that the other two machines lay down the grain equally well, the lower cost of working Cuthbert's decides the preference in its favour. Hence it resulted that the judges proposed to award:—

The 1st prize of 500 fl. to Burgess & Key's machine.
The 2d, a Gold Medal, to Cuthbert's.
The 3d, a Silver Medal, to Wood's.

This report was laid before a meeting of the Society held at Goes, the next day. The President, Mr. Gevers van Endegeest, opened the business of the meeting with an address explaining the object and tendency of the association; remarking how the constantly increasing demand for labour rendered the use of machinery more and more indispensable, while in the long run it was impossible to carry on competition with foreigners without the saving of time and money effected by such means. On the other hand experience proved that there need be no apprehension that the demand for labour would be less than the supply. The use of reaping machines in England, America, and elsewhere, he maintained was regularly increasing, and proved that they supplied a real want. The report was then read and agreed to, and after thanks were given to the managers of the trial, the members of the Society went to a place out of the town, where an exhibition of agricultural machinery and implements took place, and where the prize reapers were decorated by ladies.

The first prize machine of Burgess & Key was bought by Mr. Van den Bosch, for use of the Wilhelmina Polder.

At 4 o'clock in the afternoon there was a very animated dinner of the members of the Royal and of other agricultural societies, which terminated the proceedings.

AN AGRICULTURAL PILGRIMAGE.

No. X. CAISTOR.—On Saturday the 8th of September Mr. Strafford is to sell by auction the entire herd of Short-horned cattle belonging to J. G. Dixon, Esq., of this town and neighbourhood. This gentleman and his family have long been known in North Lincolnshire as energetic agriculturists. His brother, Mr. Dixon, of Holton—one of the largest farmers in England—occupies between 3000 and 4000 acres of his own land, which, lying below and on the edge of the Wolds, exhibits every variety of soil—chalk and sand, and clay. No man has had longer or more successful experience as an improver of poor sandy soil. Thirty years ago, we are told by Mr. Caird, when he came into possession of the estate there were 600 acres of rabbit warren on it which the tenant refused to rent at 50*l.* a-year. Mr. Dixon took it into his own hands, and improving it by covering it with clay and by under draining it, he now considers the same land worth 16*s.* an acre, or 400*l.* a year. Further from the hills the land is a strong clayey Wheat and Bean soil, suitable also for Mangels and Cabbages. Two hundred acres are this year in Mangels alone. A flock of many thousand sheep is kept, and everything is on a correspondingly extensive scale.

Mr. Dixon's father, the former owner of most of this estate, was one of the most public spirited of men. Long before such institutions were common he had established Sunday schools in all the parishes in his neighbourhood; and long before the necessity of the new Poor-law had been generally realised he had successfully used his influence in order to carry out the permissive Act which enabled parishes to unite for the management of their poor. Forty years ago he published "Reports of the several Institutions of the Society of Industry" which he had established at Caistor in 1800 for the better relief and employment of the poor and to save the parish money."* And the three volumes of which the work consists relate a long experience of Sunday schools, of mutual friendly societies, of houses of industry, of savings banks, of adult schools, of classes for teaching psalmody, and of parochial benevolence generally, half a century before this present time, when at length such words are familiar.

Mr. J. G. Dixon, to whom on the death of his father the maintenance of all these benevolent institutions had been committed and bequeathed, inherits the public spirit and philanthropy by which they had been established; and as chairman of his union, and as visitor of its schools, he has exerted himself successfully for their continuance and improvement; and besides their general influence for good, many an instance every now and then occurs in which poor children of his neighbourhood have, through the advantages thus open to them, gained intelligence and wealth and station in their manhood.

* C. & J. Rivington, London.

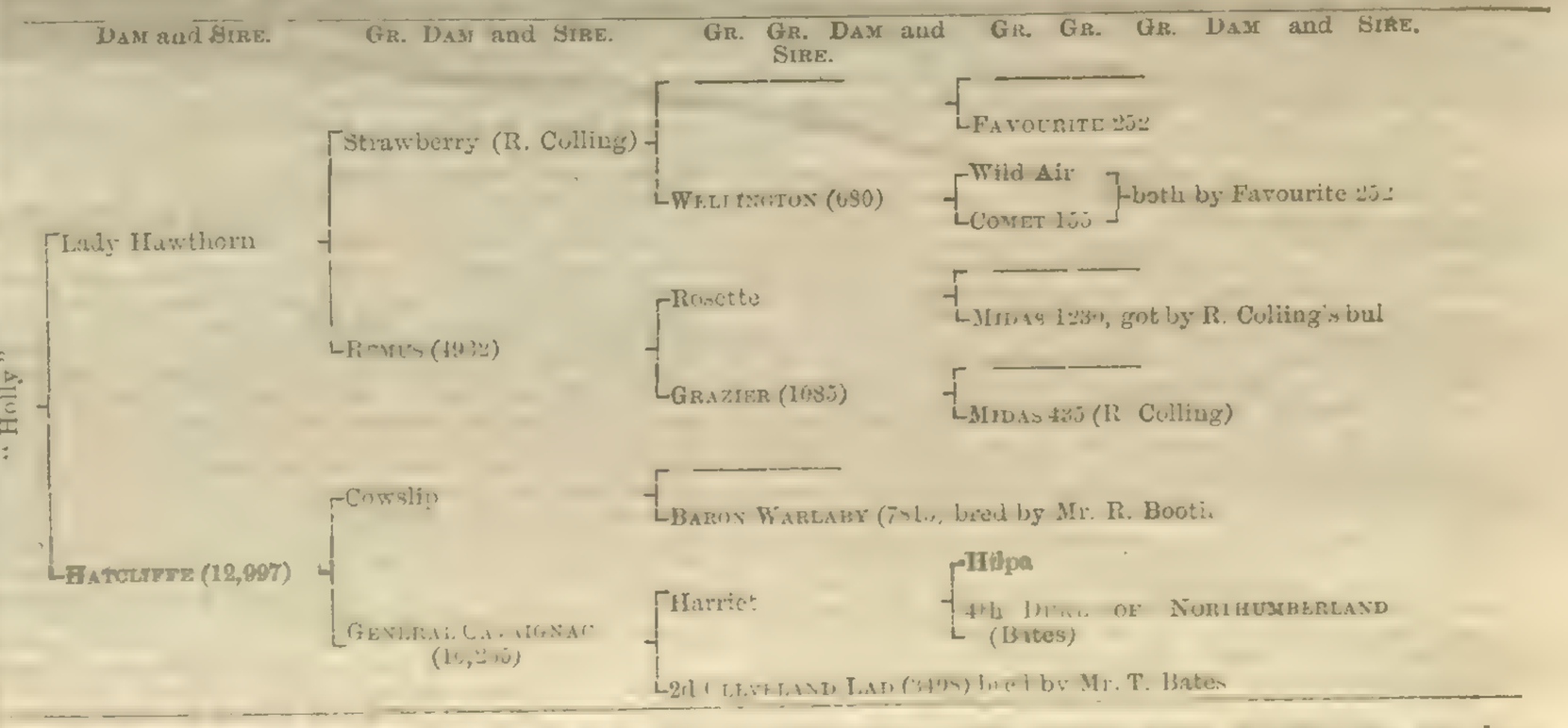
Besides the enjoyment of the success which he has thus achieved, he has lately been gratified by a splendid testimonial to the esteem in which he is held. Some months ago a committee, representing the inhabitants of Caistor and its neighbourhood came to him with several hundreds of pounds which they had collected as an expression of the gratitude which was due from them. By his own disinterested suggestion this sum has been expended in the erection of the noble schoolrooms for the market town of Caistor which have just been opened. I make no apology for occupying your columns with this account of the unselfish, laborious, and benevolent career of an English yeoman, for whether it be a strictly agricultural subject or not, it well deserves agricultural publication.

It is in the large schoolroom just referred to that Mr. Dixon will next week entertain those who may be present on the occasion of his sale. And it is to the herd which will attract them that I must now direct the attention of your readers.

The herd is of many years' standing. Mr. Dixon was a purchaser at Robert Colling's sale in 1820, and large numbers of his cattle are descended directly from "Strawberry" and "Pomona" which he bought then and there. He has also purchased cows of other well-known breeders since that time. From Mr. Watson of Walkeringham he purchased "Marion," who has 9 descendants in the catalogue, and "Mary Braham" who has one; from Mr. Watson of Waldby, he bought "Moss Rose," having 5 descendants for sale next week; from Mr. Hutton of Gate Burton, he had "Buttercup," which with her two descendants is in the catalogue. Mr. Smith's (of West Rasen) "Rosette," has 7 descendants, and Mr. Skipworth's "White Charity," 4 descendants in the herd. These with 18 descendants of "Strawberry" and 3 of "Pomona," the two Colling's cows, make up nearly all upon the list for sale next Saturday. On these cows and their descendants bulls have been used bred from Mr. Colling's stock, and from that of Mr. Cropper, who used the following bulls, Barmpton, 54; Rob Roy, 157; Roseberry, 567; Old Major, 397; Prince of Waterloo, 528; May Duke, by Old Favourite, 252; and Midas, the sire of Rosette. Many other bulls of first-rate breeding have also been used, as "St. Leonard" (8521) and "Fairfax Royal" (6987) bred by W. Torr, Esq., from Booth's blood, "Lincoln" (10,422), bred by Mr. Stanhope; "Hatcliffe" (12,997), by Mr. J. Grantham; "Gen. Cavaignac," of Bates's blood; "Effinell" (14,489), bred by Sir C. Knightley; and "Rembrandt" (13,587) and "Precursor" (16,706), bred by Colonel Towneley. Besides these, several bulls of his own breeding, by their use upon the cows just named, have also been employed in the herd; and particularly a tribe to which the capital name of "Orthodox" had been given, of which Nos. 1, 5, 8, 14, and 10, have been used, numbered respectively 4624, 13,435 and 8, and 16,661 and 8 in the herd book.

The herd which thus through upwards of 40 years has been formed by Mr. Dixon, has been treated no better as to food and accommodation than any ordinary cattle. Indeed the Wold farm on which they have been reared has given no opportunity for pampering; and the consequence has been that annually, for many years, about 20 young bulls have been let out from this herd, uniting first-class pedigree with unequalled constitution. They are hired by farmers all over North Lincolnshire, who, keeping cows for dairy purposes, and for breeding cattle to sell as steers for grazing elsewhere or as in-calf heifers at 2 and 3 years old, find that an increase of 2*l.* to 3*l.* a-piece in their value at that age can be obtained by employing a well-bred sire; and this pays well over 30 or 40 cows for the hire of a thorough-bred Short-horn bull at such prices as those for which Mr. Dixon has annually let them. The cows, good milkers, are in a fine healthy breeding condition, but not forced for sale, having been chiefly straw fed during the winters, which has tended to the production of a hardy constitution, and it has not interfered with the production of as symmetrical a growth and perfect form as well-bred Short-horns can exhibit. The young bulls, for example, Orthodox 23, 24, 25, 26, and 28—the three last by Orthodox 14 (16,662), and the two first by Rembrandt, a bull bred by Col. Towneley—are a remarkably handsome set of yearlings, and good as to size as well as in respect of quality and colour.

The point in which Mr. Dixon's herd, or at least the largest family it contains—is distinguished from perhaps any other in the kingdom, is its nearness to animals of Charles and Robert Colling's breed. There is a four-year-old cow to be sold next Saturday whose grand dam "Strawberry" was bought in 1820 at Robert Colling's sale; a thing which probably cannot anywhere be paralleled. Her dam, "Lady Hawthorn," out of Strawberry, by Remus, died at 27 years of age, and was a rare specimen of a profitable cow both for the dairy and for breeding. "Young Strawberry," also out of Strawberry, by Rex (whose grand dam "Countess," sold for 400 guineas at C. Colling's sale), has many descendants in Mr. Dixon's herd. She was calved in 1827, and was shown in 1843 at the North Lincolnshire Agricultural Society's Show at Caistor, when she received a prize in the extra stock class—one of the judges, well acquainted with the herds of the Messrs. Colling, recognising their type in her, and declaring that he could have believed her to have just walked out of their yards. She died at 23 years of age, having had 15 or 16 calves. To illustrate the nearness of some of these cattle to the very originals of the Short-horn breed, I give here the pedigree of "Holly," the last of Lady Hawthorn's calves, and now a 4-year-old cow.



This is the pedigree doubtless of one of the nearest of the descendants of any of Robert Colling's cows now living. There are no fewer than 18 in the herd of various affinities to her, as the following table of her descendants will exhibit, those of which she was dam, grand dam, &c., being placed in successive columns—those which are dead being printed in italics, and bulls in capital letters; and the date of birth being also given.

DESCENDANTS OF STRAWBERRY BOUGHT AT THE BARMPTON SALE, 1820.

DAM.	GR. DAM.	GR. GR. DAM.	GR. GR. GR. DAM.
		4 Hyacinth, 1853	— 25 Hepatica, 1858
			28 Ruby, 1859
	Young Lady Hawthorn, by Protection	12 Sweet Briar, 1857	42 Ruth, 1860
		27 Halcyon, 1858	
		30 Heartsease, 1859	
Lady Hawthorn, by Remus	*Hazel*, by Lincoln	— 10 Broom, 1855	— 1 ORTHODOX 23, 1859
	Harebell	— 36 Gem, 1859	
	11 Holly, 1856	— 6 ORTHODOX 26, 1859	
		Patty, by St. Leonard	— 20 Lucy, 1857
Young Strawberry, by Rex	— *Moss Rose*, by Frederick		21 Rosa 3d, 1857
		Rosa, by Princess	*Matilda*, by Protection

In addition to these (21) Rosa 2d has (32) Rosamond, 1859, and (5) ORTHODOX 25, 1859, and *Matilda* has 23 Clara, 1859, and 26 Peony, 1858. Their colours are for the most part white or roan, 5 out of the 18 being red or red and white. The three handsome roan yearling bulls are by Rembrandt, a Towneley bull; and of the

others (cows and heifers) Rembrandt has two; "Lincoln," bred by Mr. Banks Stanhope, two; "Hatcliffe," bred by Grantham, of Hetley, has two, "Effinell," Sir C. Knightley's bull, has three; "Protection," bred by Mr. Smith, of West Rasen, has one; and "Orthodox 14 and 20," have five. Any one in search of the old Colling's type of Short-horn will find in this family animals nearer to the great originals of the breed than he will find elsewhere.

The cow "Pomona," bought along with "Strawberry" at the Barmpton sale, has only three descendants in the herd—a 5-year-old and a 3-year-old cow and a yearling bull.

Another considerable family, descended from "Marion," bought by Mr. Dixon of Mr. Watson, of Walkeringham, goes back to the herd of Charles Colling, whose cow "Cathalene," calved in 1802, had a calf "Maria" when it was 14 years old, by Windsor (698), from which "Marion" was the third generation. The following are her descendants:—

DESCENDANTS OF MARION.

Dam.	Gr. Dam.	Gr. Gr. Dam.
1 Myrtle, 1846	— 6 Mary, 1854	— 8 Orthodox 28, 1859
Lizzy, by St. Leonard	7 Beauty, 1854	41 Diamond, 1860
		2 Orthodox 22, 1858
Fanny, by Protection		15 Agnes, 1856
		22 Frolic, 1857

And 15 Agnes has a yearling heifer calf, 37 Venus, also in this sale.

All of these are of the best colours, 7 out of the 9 being roans. Yet another family may be mentioned descended from Rosette, bought of Mr. Smith of West Rasen in 1829, and bred by Cropper of Laceby. She was the grand-dam of two cows, "Virginia" and "Moggy," from which there are 7 descendants in the catalogue of next Saturday's sale.

DESCENDANTS OF ROSETTE.

Gr. Dam.	Gr. Gr. Dam.	Gr. Gr. Gr. Dam.	Gr. Gr. Gr. Gr. Dam.
Virginia, by Frederick	Rose, by Protection	Rose of Sharon, by Hatcliffe	—13 Petunia, 1856
		38 Lily, 1859	
	Susan, by Protection	*Rennet*, by Hatcliffe	—30 Blush Rose, 1859
		Rosy Gem, by Lincoln	—14 Fuschia, 1856
		35 Red Rose, 1859	
Moggy, by Thornton	—*Laurel*, by Protection	—34 Jane, 1859	

And beside these (14) Fuschia has a calf, 31 White Rose, 1859.

I need not pursue the classification further. The particulars given illustrate sufficiently the descent of the stock, and its nearness to animals of Robert and Charles Colling's herds, from which it is separated by generations in which bulls bred by Messrs. Bates, Fawkes, Grantham, Smith of West Rasen, Torr and Colonel Towneley have been used. The cows and heifers are chiefly served by Colonel Towneley's Precursor 16,706; Orthodox 20, 16,668; and Rubens, 16878.

The sale of Mr. Dudding's stock, of which an account was given at page 739, will take place on Friday of next week. On the following day at Caistor within a few miles of Panton, this herd of Mr. Dixon's will be disposed of. No doubt the two sales will combine to attract a large number of purchasers, and thus help each other. *J. C. M.*

THE WEATHER AND THE CROPS.

BERKSHIRE: *Newbury, Aug.* 27.—Harvest prospects here are very gloomy. The incessant rain keeps the corn from ripening; it is much laid and beginning to sprout; scarcely a field is cut. A considerable quantity of hay is yet out and very much damaged. Never would fine weather be more acceptable to the anxious farmer than at the present time. *John Adnams.*

BUCKINGHAMSHIRE: *Stony Stratford, August* 27.—I do not think the weather has done any injury to the generality of the crops in this neighbourhood. Some few fields that are lodged are affected to a certain degree. All that we seem to want is dry weather with sun; the ears of Wheat, Barley and Oats are very fine generally. I never remember Mangel so small, the temperature of the ground has not been high enough to make them swell—up to Saturday night there were very few acres of Oats or Wheat cut hereabouts. To-day is so genial that I dare say farmers will begin. Labour is very abundant as you may suppose. *W. G. Duncan.*

CAMBRIDGESHIRE: *Chatteris, August* 28.—The continued wet and cold weather has had an injurious effect upon the Wheat crop, causing blight and mildew to a considerable extent, especially where the crop was bulky, and consequently laid a good deal. The injury sustained would doubtless have been far more serious had we not been favoured with a low temperature and strong gales of wind These combined have checked the grain sprouting, except in some cases where the crop was so near the ground and grown through with weeds, that the ears lying upon the ground were unable to benefit by the searching winds, and consequently began to vegetate. I have seen some Peas sprouted after they were cut when they were thick upon the ground, and the wind could not get well at them The last two days have been finer, and we have been stacking Oats in good condition, but somewhat decoloured by the frequent rains Fine weather would now be of great service, both to ripen and to enable us to gather in the crop. Wind and sun would tend materially to brighten up the late Wheats as they ripen, but we fear many are too much mildewed to yield anything but an inferior quality and a deficient quantity of grain. To-night we have indications of a return to rain The barometer is falling and the wind has drawn back to the south, and the clouds betoken a quick return to bad weather. *Alfred S Ruston.*

CHESHIRE: *Tarvin, August* 28.—Constant wet weather for the last three weeks has had the effect of laying the green crops to a serious extent, and we fear has increased the mildew in Wheat; the yield too will be diminished considerably, and its ripening retarded a week or nine days, therefore we cannot calculate upon the Wheat harvest becoming general before the week commencing the 10th September. *William Palin.*

DEVONSHIRE: *Tavistock, Aug* 28. The harvest prospects of this immediate neighbourhood are not materially altered since my report; being influenced considerably by the proximity of Dartmoor we are always later than the country 10 or 12 miles north, south, and south-west of us; and I imagine that in these earlier districts much damage must already have arisen from the continued rains. Hereabouts there will be a commencement of harvest about the end of this or beginning of next week, weather permitting; but my report including a considerable district adjoining the Moor, I do not think it will be earlier than I stated in my report as a general work. Should the weather now take up I do not think that I should alter my report, though as yet we have a continuance of wet weather and much damage must arise unless we have a speedy alteration. Hay in all the higher district is sadly spoiled, much still out; but that must be rotting at bottom Green crops make no progress and are very foul from the impossibility of getting on the land. On the whole I consider the prospect very gloomy for the winter, and think that consequently store stock must come down in price. *John Benson.*

EAST NORFOLK: *August* 27.—The weather has not in this part of the country yet seriously affected the crops, save here and there a field beaten down by storms. Peas are the only crop which have really yet been much injured. Wheat cutting will generally commence this week; the corn is not fully ripe, and should the weather speedily settle we still hope to secure an average crop in fair condition. The Barleys will be the most troublesome to harvest, the Clover and other Grasses being so extremely forward. Yesterday (the 26th) was fine and dry; this morning we had light rain, but it cleared before noon, with a drying breeze from W.S.W.; the sky still looks showery, but the temperature is warmer, and we trust better weather is at hand. *W. Cubitt.*

ESSEX: *Tiptree Hall, Aug.* 28.—In reply to your inquiry I consider this a very disastrous season for the poor, cold, stiff, unimproved clays, full of stagnated water. With a low temperature and absence of sunshine the crops have struggled for a bare existence, and are late, light, and full of weeds. Hand-hoeing has been very expensive and ineffective; and horses standing still in the stables, it being impossible to make a summer fallow. With increased expenses and diminished returns, and a protracted period of harvesting and threshing, I feel that the farmers on such poor, stiff, undrained soils, are in an unpleasant and an unprofitable condition. The prospect of getting in seed for the future Wheat crop is by no means promising. The light and friable and well farmed lands have this year the best of it, and on mellow good soils the crops are abundant; but the weather is entirely against harvesting, and scarcely any thing is carted, while there is an immense breadth waiting to be cut. On forward lands the Wheat in sheaf has sprouted considerably, and even where dead ripe and not cut it is said to have grown as it stood. Peas are much injured by the swelling or rotting, or shelling out of the crop, where it is pressed down close to the ground. The Clover in Barley grows so strong that it is mastering the Barley, and will require much making. Beans are a very heavy crop, but want dry weather, the lower pods bursting. Much hay has been spoiled, and white Clover seed must be ruined by the continued rain. Oats and Barley, which looked badly in the spring, very much improved later in the season on the lighter lands, and even on the heavy lands where drained and deeply cultivated. Mangel on very stiff unimproved clays are a failure compared with last year's crop. Potatoes very bad. My own crops are generally good for the season, but my Wheat, Barley, and Oats will be certainly one quarter or more less than last year, and my Mangel will not be equal to last year's. I got up my Clover and hay in good order without rain during the fine fortnight, and my Garrett's horse hoe, vigorously applied during the dry intervals, have kept my farm clean for the season. I have only 16 acres of Wheat cut at present, and the ground is too wet to use the reaper. Much loss must have arisen to undrained heavy land farmers by the washing away of their manures, and soakings to their exposed dung heaps. *J. J. Mechi.*

GLOUCESTERSHIRE: *Cirencester, Aug.* 26.—The almost constant wet weather during the last fortnight, together with the very low temperature for the time of year, has much retarded the ripening of the corn, and the Wheat is very generally affected by blight; and though this has appeared too late to be very injurious, yet sufficient mischief is done to prevent a weighing, yielding crop, even when the plant is good, which is rather the exception than the rule on the Cotswold hills. The early Barley on the light land is fully ripe; the late sown fields are not going off kind, and the quality will be less good than was expected. A continuance of wet will be most injurious, as, especially if the weather be warm, the corn must grow out where it is ripe. We should recommend cutting with all despatch on the first opportunity, as the Wheat will rapidly become dead ripe, and owing to the blight the ears will be likely to snap off; this has already been noticed in some instances. We have Oats still lying in swath as left by the reaping machine cut a fortnight to-morrow, and Peas that have been cut as long, both crops much injured; but owing to commencing when quite green they are less damaged than would have been expected. At present our district has suffered less than many that are in a forwarder state; and should the weather improve from this date we may hope that little if any corn would be actually spoilt. The value of the reaping machine will be especially felt in this almost unprecedented season. The crops generally stand up pretty well, which is another point in our favour. The remarks of your correspondent "Exile." in reference to the use of the reaper, appear to be applicable only to laid corn; for though the stubble is always left better when the machine meets the corn, yet if up-standing and sufficiently stout very fair work is made all round the field; and in this way we cut 150 acres most satisfactorily last season, tying up, stooking, and raking the ground for the sum of 4*s* 6*d*. an acre, at which price the hands got good harvest wages; about 12 to 14 hands, men, women, and boys, tied up 10 acres a day, we of course finding horses and a driver. *John Coleman.*

HAMPSHIRE: *Winchester, August* 28.—I am sorry to say that independent of continued rain, and its certain consequences, our Wheat crops are looking worse than at the last report. Most of the fine qualities are exhibiting symptoms of blight, and complaints of lightness of Sheaf are made of the more hardy sorts, where cutting has commenced. In my capacity of agricultural valuer I have been through many acres within the last ten days, and I have no hesitation in positively stating that the Wheat in Hampshire is full six bushels per acre under an average yield; there is as yet, no injury from rain since cutting, but very soon will be if the wet continues The early Barley, which is good in sample, will very soon be receiving injury. The Oats are good, and will be considerably over an average if the backward sown, of which there are many, should ripen well, but of this there is much doubt. Potatoes worse and worse, and the root crops much damaged for want of hoeing. *J. T. Twynam.*

KENT: *Dover, August* 27.—I do not think the wet weather has done any serious damage to the corn crops in our neighbourhood; they are all much driven, but they are not flat on the ground as we often see them. The Peas, I fear, must be at the lowest calculation half-spoiled, and Potatoes continue to get worse, but I hope if the weather clears we should still the corn quite an average; but the harvest must be even later than was anticipated. I should say if the weather prove favourable, Wheat cutting cannot become general in less than a week or 10 days. *M. Sandford, Jun.*

LANCASHIRE: *Wigan, Aug.* 27.—A great quantity of hay is out, and so much injured as to be of little value. Cutting corn commenced near Liverpool last week, but the unsettled weather prevented progress. I do not think that the crops are injured by the storms beyond being a good deal blown about. Fine weather alone is wanted to secure the grain, without which the loss to the country will be very great. *Francis Twining.*

NORTHUMBERLAND: *Hexham, August* 27.—So far the rain has done the crops in this district no further harm than tangling and laying them very much, whereves the crop is bulky. We had a few fine days last week and got a start with Barley cutting. To-day is again wet, and work stopped. Should we however be favoured with fine weather now, except being from three to four weeks later the crops will not be otherwise injured. *Thos. P. Dods*

NORTH LANCASHIRE: *Newton-in-Cartmel, Aug.* 28.—We do not appear to have sun sufficient to ripen the Wheat; a great deal of it is turning brown and rusty, but it does not appear riper than it was a month ago. Oats and Barley are ripening very well and are a good colour; we shall finish cutting them before any Wheat is ready. If we had good weather a great deal would be cut this week. Turnips are doing well. Mangels want sun. Potatoes are pretty good, though I hear some reports of disease. *Geo. Drury.*

NORTH LINCOLNSHIRE: *Aylesbury, August* 28.—We have not had so much rain in North Lincolnshire the past week as there has been in many parts of the kingdom; with the exception of Wednesday which was a very wet day, the week was tolerably fine. Our heavy crops of Wheat, which are the exception, are very much laid, and have been for some time; the sample upon those must be very small and coarse, the lighter crops certainly appear filling better than we could think under such unfavourable circumstances as we have had for some time. The wet dull cold weather has retarded the ripening of crops very much; we shall not get well started harvest before the 1st of September in this neighbourhood. I still hope and trust, should the weather be favourable from this time, of which I think there is a reasonable prospect, the crops may not have sustained the amount of damage we might suppose. I spent the greater part of last week in the county of Durham, they will not begin Wheat harvest upon the cold clays for a month. *F. Sowerby.*

NORTH WILTS: *Aug.* 28.—From the 14th July until the 25th August inclusive, we have had 33 days in which rain has fallen sufficient for measurement in the rain guage. Although we had not much rain in July, 1·375 inches, the latter part of the month was stormy and very cloudy 12 days out of the 18. In August we have had 21 rainy days out of the first 25, with a fall of 4.31 inches of rain; 1·73 falling on the 22d, 23d, 24th, and 25th, which has caused another high flood on the Thames. Since then we have had three fine days, until this evening when rain has again commenced, and is now raining steadily. Reaping commenced in several instances last week, and is now become general. The early Wheat and Barley has stood the weather much better than any one could have expected, and has come to a very fine berry and ripened tolerably kind, but in the later Wheat, especially on moory and some other soils that have a tendency to blight there is a great change for the worse since my return on the 11th inst.; in fact I have seen some, and have heard of more that will hardly be worth the harvesting and threshing from being mildewed and blighted; caused I suspect by the four days nearly continuous rain before mentioned. Altogether harvest prospects appeared in a very critical state up to the 25th inst., but with a continuance of such weather as the last three days, which I hope and trust we shall have, there may be sufficient corn with the help of considerable importations to carry us on until another harvest. *T. A.*

QUEEN'S COUNTY: *Ballymanus, August* 26.—Wheat greatly injured since the beginning of the month. Barley good, but injured; Oats bad and much injured; Potatoes now certainly bad; hay—much lost entirely with floods, and much injured by bad weather; root crops good. Harvest general, Sept. 1. *Michael Dunne.*

SOMERSET: *Brendon Hill Iron Works, Aug.* 29.—The harvest in this part of the country was last year finished in the month of August, and now it is but partially commenced, and is at least five weeks later, owing to the humid state of the atmosphere and the want of solar heat. Not only has grain suffered, but fruits of all kinds, from the same cause, and will not attain to their usual size and flavour. The Wheat crop though very backward and in some places lodged by the late heavy storms, will, should the weather now break up and become fine for harvest, prove an average crop; the same may be said of Barley, but Oats will be under an average, for although well topped they are thin. Peas and Beans have not suffered as might have been expected, but the Potatoes except the early planted are very bad, and will not average half a crop. Turnips are a good plant but very late, and like all other produce, want sun and dry weather; with this, should the winter not set in so early as last year, a full average may yet be expected. The hay crop two-thirds spoilt. Mangel, like the Turnip, late and in want of heat to bring it to maturity. Cider will not be so plentiful as at one time imagined: the Apples are very small and will not prove so juicy as in good seasons. The harvest though partially commenced will not be general for another ten days. I have observed that the swallow and martin has not proved so plentiful by nearly half their usual numbers this season. May not this in years to come be a guide to prepare against a wet summer, and consequently a backward harvest? I have not seen any remark of this, but should others in different localities find that it is so with them, it will be worth investigating. *West Somerset.*

SUFFOLK: *Framlingham, August* 27.—Some of my neighbours began their Wheat last week; but with rain every day, I have deferred it. There is no time lost, looking to its state of maturity, although every one has some ready to begin upon, and the remainder will all be ready in succession. Barley will also be mature to follow the Wheats, few or none reaped at present—we have that course half with seeds and half without; those in Clover are beaten by it in growth and will

be a small crop of corn, but fine fodder if well harvested. The Beans are taking harm by the continued rains, some of the pods are rotting on the stem and the Beans within them turning black. Of Peas some have been cut this fortnight and are rotting on the ground. Some second math Clover is cut and taking much harm—no great damage in corn has taken place at present, but every one is very anxious for fine weather. *George Edwards.*

WARWICKSHIRE: *August* 27.—It is no easy matter to give a correct reply as to "How the weather is affecting harvest prospects in our neighbourhood?" At the time we write hope is certainly in the ascendant, for we have had more sunshine and fewer showers than for a week past. The clouds also look higher, the swallows are not skimming so close to the ground, and the wind is thoroughly drying from the S.W.; but we have yet a low range of the barometer, and we can only express a hopeful, though not a confident belief in brighter days to come. The cutting of Oats and Barley is well forward, for both these cereals have ripened while Wheat has been standing still. Farmers are mostly timid as having the Lent corn lying about loose on account of the unsettled state of the weather, and hence a large proportion of the Barley is being tied in sheaves, as well as the Oats. A few shillings per acre extra is money well expended for such an operation. We must express the opinion formerly given, that Oats and Barley are both good though considerably lodged, and the straw not so sweet as usual. Wheat we yet hold to promise a "fair average," if we are favoured with fair weather to get it in. Reaping has begun to-day, in a few places, and will be more common before the close of the week. Lodged crops are not very general, at least in the central districts of Warwickshire; but rust and mildew both show themselves in thin crops. Very few Peas are yet carried; they have lain on the ground so long that sprouting and shedding have gone on largely. A few winter Beans have been cut—a middling crop; but spring varieties are yet luxuriant as ever. Root crops are mending. *T. B.*

THE SEED TRADE.

ABSENCE from home has prevented our replying sooner to your remarks on the "Quality of Grass Seeds," inserted in your impression of 21st July, page 679, to which we ask your readers to refer. Taking your remarks in the order in which they occur, we beg to say that we did not attempt to arrogate to ourselves the position of being the "only honest members of the seed trade," as you would insinuate, but we are proud to know that there are as many high-minded honourable men in the seed trade as in any trade or profession in the country, and all we claimed for ourselves was to be included amongst this number. What you are pleased to term the "little trick" practised by us, we hold to have been a "*ruse de guerre*" perfectly fair under the circumstances. It was the only means we had of showing what we have done, that, on your own admission (*vide* 2d analysis), your first analysis was an incorrect one. We know from the superior quality of the seeds used in the mixture sent by "J. S." that your report upon them must be incorrect, and we should have been very much to blame had we passively borne the reproach you cast upon us by condemning the seeds, in the unqualified manner you did, without putting your analysis to the test, for which purpose the duplicate samples were sent you by "A. H." at our request. Before going further allow us to say that the permanent seeds in question consisted of 30 lbs. Natural Grasses and 11 lbs. Clovers (in all 41 lbs.) per acre. Let us in the first place then, compare your reports upon the Clovers:—

1st Report to "J. S."—"The Clover seeds contain in a pint 24,960 weeds, mostly Plantain."

2d Report to "A. H."—"Clovers very good, but intermixed with Plantain to the extent of 17,709 of this plant per pint. This has in all probability been added as a desirable pasture plant."

As we stated in our former letter we introduced 1 lb. Rib Grass amongst the 11 lbs. Clovers (= 1 lb. in 41 lbs. of the whole seeding). Knowing as we did that it was suitable to the soil in question, and although you still hold it to be little better than a weed, we still hold it to be a valuable pasture plant on certain soils. We will not concede either that the difference between 24,960 and 17,000 Plantain seeds (the former a third more than the latter) estimated to a pint, might be accounted for by the "shaking" you refer to; but, waiving this point altogether, you will perhaps explain why in the first report to J. S. you designate it a "weed," and in your report to A. H. refer to it as having "in all probability been introduced as a 'desirable pasture plant.'" Weed or no weed, we maintain that the two reports convey a directly opposite impression, and are thus calculated to mislead your correspondents and do serious and unjustifiable mischief. In the second place let us compare your reports upon the mixed Grasses.

1st Report to J. S.—"The sample of Grass seeds is estimated to contain as many as 102,400 weeds to the bushel, besides a tolerable admixture of Bromus mollis and Triticum repens. It may be pronounced as quite an inferior sample."

2d Report to A. M.—"The Grasses with this may be pronounced as a better mixture than usual for good meadow land. It contains a little Holcus, but much less than is generally the case."

These Grasses (like the Clovers) were thoroughly and carefully mixed before they were sent to "J. S.," and we can prove that both samples analysed were taken indiscriminately from the bulk, and were not "cautiously taken from the top," as plausibly suggested by you as the cause of the discrepancy in the two analyses. Again, any one who knows anything of natural Grasses must admit that when such are once mixed and packed tightly into sacks for the convenience of carriage it is impossible that any amount of shaking could cause the objectionable Grasses named in your first report to sink to the bottom or so alter the sample as to account for the difference in your analyses. It is exceedingly easy to propound a theory of this kind to suit your own purpose. In the first sample you report a "tolerable admixture of Bromus mollis and Triticum repens." May we ask what became of these in the second sample, in which a "little Holcus" was the only objectionable Grass? Probably the shaking in question had converted these seeds into Holcus! Please also explain how you reconcile the fact that you pronounced the first sample as "quite an inferior one," and the second sample "a better mixture than usual for good meadow land?" Two more opposite opinions could not be conceived—the first making the seeds out to be very inferior, the second very superior. Using your own argument we should further wish to be informed why your first analysis was made with reference to the quality and cleanliness of the seeds of which the mixture was composed, and the second analysis with respect to the "species put together" only. Analyses to be of the least value should be conducted in one uniform manner, and with one definite object in view, and not in a loose off-hand style (which can be varied at pleasure), regardless of the serious and unjustifiable injury which hasty or careless analyses of minute seeds must inevitably involve. The sweeping and scandalous assertion with which you conclude, viz., that "the best seeds are as seldom used for mixing as a publican would use 1820 port for negus," is we consider a direct libel on all the respectable seed trade, in whose name, as well as our own, we give it the fullest and most unqualified denial, and will comfort ourselves and them with a knowledge of the fact that there are many of these gentlemen whose integrity and honour are too well known to be affected by such contemptible insinuations. *Francis & Arthur Dickson & Sons, Chester.* [We publish this communication at once, without waiting for any further explanation which may yet be offered of the particular analyses which Messrs. Dickson thus condemn. Meanwhile it is plain that the two reports upon the Clover seeds which convey to their mind "directly opposite impressions," are as nearly identical as two handsful of seed taken out of the same bag before and after a journey are likely to be. And as to the reports upon the Grass seeds, between which there is unquestionably considerable discrepancy, it must be remembered—1st, that an opinion must, either purposely or unconsciously, always, to some extent, be given relatively to the research which may be occupying the mind of the analyst at the time; and it is quite possible that a mixture which, when discussing the proper combination of species in good Grass seed, he has pronounced "better than usual," might at another time, when his attention was directed to the quantity of dead and worthless admixture present, be declared "an inferior sample." Surely there is such a thing as an "inferior sample" of even good Grass seeds; 2d, it must be recollected that the sample sent by "J. S." is not the same as that afterwards examined for "A. M," though both are alleged to have been taken indiscriminately from the same bulk; and 3d, all these samples came *anonymously* before the reporter, whose sole object it has been to arrive at the truth regarding the seeds supplied to farmers; and there is no opportunity whatever given for the operation of any possible bias. The "scandalous assertion" to which our correspondents refer would be more properly described as the assertion of a scandalous truth, and it can no more be called a libel on respectable seedsmen than the verdict against a criminal can be described as condemning honest men. Messrs. Dickson, of whose integrity we have no manner of doubt, will consult their reputation more by joining us in trying by exposure to defeat the rogueries which do exist, than by angry protest, as if when condemning these we were attacking them.]

THE GLOUCESTERSHIRE STEAM-PLOUGH COMPANY.

IT appears desirable that those interested in the improvement of agriculture should have the objects and prospects of the Steam-Plough Company pretty clearly laid before them. The object aimed at in the formation of the Steam-Plough Company, I believe to be a thoroughly sound and desirable one. I feel convinced that it originated with the patriotic hope that it would prove of immense importance as a spur to agriculture, apart from the mere selfish view of its promising to be a profitable investment of capital. I am further satisfied that those gentlemen who took the initiative in the formation of the company did so with the simple desire of benefiting the agriculturist. As a farmer of a small quantity of arable land in the Vale of Gloucester I hailed the prospect of being able, by means of this company, to obtain the aid of steam for the cultivation of my land, for with my small occupation I should not, under any circumstances, have been justified in purchasing a steam-plough; I might have waited long before private individuals would have ventured on letting them out to me, and very many are situated as I am. The first point we want to have clearly demonstrated is that steam cultivation is advantageous, and how it is so. It is superior to horse-power.

1st.—Because the work can be done at a cheaper rate per acre even on light land. 2nd.—Because the work is more efficiently executed, resulting from the absence of treading, and the greater speed (nearly double) at which the steam-plough travels, thus thoroughly shaking and disintegrating the soil as it is turned over. 3rdly.—Because work can be executed by it which it is impossible to effect by horse-power. 4thly.—Because the land ploughed by steam does not retain the water on the surface, as is well known to clay-land farmers, it is hardly possible to avoid its doing under ordinary management in some seasons. On this point the following statement of Mr. R. Stratton, of Broad Hinton, is most important:—"I may mention one field in particular, which is of a remarkably wet and unkind nature; so wet is it, that whenever it has been put to Wheat, it has been thrown up into ridges with a furrow every 5 yards, and even then, after anything like a wet time, water invariably stood in the furrows, sometimes for months together, which, of course, seriously injured the crop. This year it is again in Wheat, after being ploughed by steam, and although we have had such a wet season, water has not been seen to stand upon it for a single day, and the Wheat there looks as well as any we have on the farm." This fact, recorded by one so well known and esteemed, will tell home to many a heavy land vale farmer as of immense value.

It is also of advantage—5thly.—Because it enables the farmer to apply all his resources immediately after harvest to the cleansing of his land. This, I am certain, is most important. The autumn cleaning of his stubbles saves the farmer a great deal of labour and perplexity in the spring, and when he can feel assured of having his land ploughed by steam before Christmas, or even later, during moderately dry weather, he may concentrate his energies on the cleansing of the land in the autumn, and look forward to getting in his green crop seed in good time, and with little labour in the spring. On this point, Mr. Burmiston, of Henley-on-Thames, says:—"The greater portion of our root crops this year will be grown upon land only once ploughed for the crop, and that will be the system generally adopted when steam-ploughs are more thoroughly patronised."

The introduction of steam cultivation will affect individuals very variously. On large arable farms the saving of horses will tell immediately on the expenses of the farm; for instance, Mr. Redman, since using steam on his farm of 680 acres, 410 of them arable, has dispensed with three teams of oxen and a pair of horses, and now works his farm with 10 horses. Mr. Saltmarshe proposed to reduce his horses from 25 to 15. Mr. Stratton, of Broad Hinton, considers that by the steam-plough his work is in better place than if he had had 10 teams of oxen instead of it. Mr. Holland finds he can dispense with eight out of 20 horses. Mr. Burmiston, working a farm of 1000 acres, says he will be able to dispense with 10 out of 24 horses. It seems to me that the employment of steam will not in every case enable the farmer so to reduce his stock of horses. I do not anticipate being able to do so at all. I find that by the employment of horses in mowing, tedding, horse-raking, and hauling, I have the greatest demand for horses during the hay harvest. I cannot therefore calculate on much saving from this source. The benefit I shall derive from steam cultivation (and I mention the case because I think it is similar to that of many dairy farmers) will be in the more thorough cultivation of the land, and the facilities it will afford for early sowing my root crops. These advantages may appear to some problematical when there is no saving of horses, but I feel the greatest confidence that the result of a trial will convince the most sceptical, especially on the heavy lands of the vale of Gloucester.

How does the comparison stand as to the cost of ploughing between steam and horse-power, and what margin is there for mutual benefit to the shareholders of the company and the farmers? The first item to determine is the cost of ploughing by horses. We may fairly put the expense of keeping a horse, the incidental expenses, and diminution of its value, at 30*l.* a year, or 2*s.* a day, upon 300 days in the year. This is hardly, however, a fair basis to estimate the cost of horse-power per day upon. It is evident that it depends entirely upon how many days in the year the horse is employed, just as much as the constant expenses of the steam-plough must be divided among the number of days it is actually at work. And, judging by the evidence of the gentlemen given above, it would appear probable that as the remaining work of the farm is accomplished by the very reduced number of horses, those dispensed with were, excepting during the ploughing season, comparatively idle. If this were fairly estimated the cost would be what is usually allowed, viz., 4*s.* per day per horse, including the ploughman. It is generally admitted that our ordinary 2-horse ploughing may be taken at 8*s.* per acre, reckoning one acre to be ploughed per day; the 3-horse ploughing, reckoning about ¾ of an acre as a day's work, at 14*s.*; and the 4-horse ploughing at 1*l.* an acre.

Now, apart from the superiority of the work, at what rate could these operations be performed by steam? We have tolerably accurate data to lead us to a fair estimate. The constant occasional expenses of a steam plough and tackle may be estimated as under:—

Engineman	£54
Plo[illegible]	4[illegible]
One new rope per annum	7[illegible]
Maintenance of windlass and tackle ..	25
Maintenance of steam engine	1[illegible]
Contingencies	24
Interest on 800*l.* at 7 per cent.	56
	£[illegible]

This sum divided among the number of days the plough

is actually at work during the year, and again by the number of acres ploughed on any particular day, will give the fair proportion of cost per acre done that day. It is evident that the greater number of days the steam-plough is actually at work the less will this charge amount to per day, and that a plough let out to hire and well supported by the farmers is more likely to be fully employed than one worked by an individual, except he farms very largely. It has been estimated that there will be employment for steam-ploughs for 200 days in the year.

This gives as the daily expense from this constant source the sum of	1	9	0
Besides this there would be one man extra per day, at 2*s*.	0	2	0
Three boys at 1*s*.	0	3	0
Oil	0	1	0
Coal for 12-horse Engine—18 cwt. consumed in 10 hours at Canterbury, say at 15*s*. per ton	0	14	0
Water-cart, boy, and horse	0	5	0
Removal	0	4	0
	2	18	0

Now, Mr. Fowler's engine (which by the way was incomparably the best exhibited at Canterbury) ploughed light land seven inches deep at the rate of 11 acres in 10 hours, or, according to the above, at a cost of about 5*s*. per acre. This work would have taken three horses, costing 14*s*. per acre. Again, it ploughed heavy land the same depth at the rate of 6¾ acres per 10 hours, which, according to the above, would cost about 8*s*. 6*d*. per acre, and as the draught was double that of the former it would require at least six horses to do it, at a cost of from 24*s*. to 30*s*. per acre. These comparisons are barely reliable for steady everyday work. I might, however, adduce abundant evidence besides to show that ploughing can be done by steam more cheaply than by horses. This, however, seems sufficient to prove that there is a broad margin for profit both to the shareholders of the company and to the farmers and the probability is the prices of ploughing would range from 7*s*. 6*d*. to 15*s*. an acre at ordinary depths and under ordinary circumstances. It will be to the advantage of the company to work as cheaply as possible so as to encourage employment, and it will be very desirable that the farmers should go hand in hand with the company, and endeavour to give as much work to their ploughs as lies in their power.

One point is well deserving of the farmers' attention. They are the people who should become the shareholders in the company, and thus ensure to themselves all the benefit to be derived from the introduction of steam, either as shareholders or employers. About one-fifth of the capital is subscribed, and it is desirable that the whole amount should be subscribed for soon, though it may be a few years before it is all called up, as the engines should only be purchased as profitable employment could be found for them. In order to enable you to form some idea of the extent of land upon which a steam-plough could find employment I may mention, that taking only one-third of the land as arable, a space of 3½ miles square would supply 1200 acres to be ploughed, supposing only one-half of the arable land to be steam-ploughed, and at six acres a day would find employment for it for 200 days in the year, and the ploughing could be done at a moderate rate to the farmer, and so as to pay the company a fair amount of interest. *John Thornhill Harrison, Frocester Court, July 19th, 1860, in the Gloucestershire Chronicle.*

Home Correspondence.

Burgess & Key's Reaper.—As you have invited information respecting the number of hands necessary to take up the corn immediately after a reaping machine, I send you the result of an experience of two years on this important subject. I use a Burgess & Key's reaper, which during the last two seasons has cut from 600 to 700 acres at an average of 13½ acres per day, though in some exceptional cases I have cut 19 acres. My corn is all sheafed by long-toothed rakes, which is much easier for the labourers than having to stoop and lift the sheaf with their hands, besides leaving a much cleaner stubble, and doing a greater quantity per day. My staff of hands consists of my usual farm staff, viz., 27 persons—nine boys or girls, nine women and nine men, besides the man and boy with the machine. These work in gangs of three, and are arranged in systematic order, as follows:—1, a boy or girl to make bands; 2, a woman to sheaf the corn; 3, a man to bind and stook. By this means nine swathes are taken up at once, and as the machine generally works around the field, they also go around, but in the opposite direction. In a nicely delivered crop of Wheat it is a beautiful sight to see how cheerfully the work goes on, and the large quantity that can be done in a day. I have watched this latter point narrowly, and have found that a gang (a boy, a woman, and a man,) can sheaf and stook—when nicely laid—2 acres per day; there are instances of course where in an entangled and heavy crop which has not been evenly delivered, that not more than 1 acre can be satisfactorily done; but I am perfectly prepared to say that my staff take up on average an acre and a half per day each, or 13 acres per day together. I could give many instances of large quantities being taken up, but one will suffice, where on an afternoon during the harvest of 1858, I myself cut 9 acres of Wheat (4½ quarters per acre) from half-past 12 at noon to 5 o'clock in the evening, which was all stooked by half-past 5 on the same evening, by the staff I have mentioned. I find the above number of hands most suitable for the system of taking up corn which I pursue; but my south country friends may fancy that my band-makers are unnecessary, and that each sheafer should make his or her own band, but in that case there would be a loss of time both to the sheafer and binder, and consequently a waste of money. A woman with a sheafing-rake can make a sheaf quite as quickly as the child can make the band, which is laid at the stubble-end of the swathe, immediately opposite where the intended sheaf is to be placed, and the sheaf by a clean lift of the rake and an artful elevation of the foot is neatly deposited on the band—the binder being close at hand soon ties and stooks it, and the process is complete. I am fully aware that the women in my country (Northumberland) work much more on farms than they do in the south; and perhaps it will not be out of place here to mention how we always have a constant supply of woman labour. Our ploughmen are hired once a year at about 15*s*. per week, with a house found on the farm, but bound to find a "woman-worker" at 10*d*. per day for common work, and 1*s*. 6*d*. for harvest; by this means, therefore, we have a host of labourers within ourselves, and always able at important seasons like harvest, to get our work done in a more satisfactory manner and at a cheaper rate by our own "happy family," than when obliged to employ those interlopers from the "Emerald Isle." At the rate of wages which I have mentioned, and allowing a child 1*s*. per day, I find that the taking up of my corn—exclusive of cutting—costs me on an average 4*s*. per acre. I trust that this information, though meagre, may be of service to you, and tend to solve the difficulty which at present exists on the subject to which it specially refers. *M. R. A. C.* [Many thanks.]

Harvest time in Rutland.—The following table exhibits the beginning and finishing of harvest on my farm of Empingham, Rutland, during the last 41 years:

	Beginning.	Finishing.
1819	August 5	August 27
1820	August 5	September 11
1821	August 22	September 29
1822	July 27	August 29
1823	August 22	September 23
1824	August 29	September 25
1825	August 8	September 6
1826	July 25	August 15
1827	July 30	August 30
1828	August 2	September 8
1829	August 11	September 28
1830	August 16	October 11
1831	August 5	August 30
1832	August 8	September 25
1833	August 5	September 13
1834	July 28	August 26
1835	August 6	September 7
1836	August 11	September 3
1837	August 16	September 23
1838	August 23	October 8
1839	August 22	October 8
1840	August 10	September 15
1841	August 16	September 17
1842	August 9	September 13
1843	August 18	September 21
1844	August 10	September 21
1845	August 23	October 27
1846	July 21	August 27
1847	August 9	September 9
1848	August 7	September 19
1849	August 21	September 22
1850	August 15	September 17
1851	August 15	September 17
1852	August 6	September 14
1853	August 18	September 30
1854	August 17	September 16
1855	August 20	September 20
1856	August 11	September 16
1857	July 27	August 31
1858	July 26	August 27
1859	August 1	September 1

W. F., Empingham, Aug. 8.

Slugs.—I see that the Clover crops have been destroyed by slugs and fly. Why not use my manure, which has kept my fields and garden quite free for more than 15 years:—

1 part salt	£1	0	0
2 parts lime	0	14	0
3 parts riddled ashes	0	9	0
Expenses	0	7	0
For 6 ton	£2	10	0

It must be well mixed under cover for some months. I sometimes put it on twice, at ¼ of a ton each time. I have, I know, put down too much for the ashes and expenses. *H. B. J.* [Blackbirds must be shot or scared.]

Trifolium incarnatum (time of sowing).—In your article on Trifolium in the *Gazette* of Saturday last (p. 757) you recommend sowing in October, which we think a mistake; and as the article is so judicious in other respects, we are anxious your readers should not be misled as to the time of sowing. Having for many years grown the common Trifolium incarnatum, and last year some of Messrs. Vilmorin's new white-flowered, we have found invariably that August and September are the best months for sowing, and that if a plant is obtained by sowing after this time it almost invariably is destroyed by slugs and frosts. If harrowed into a clean Wheat stubble as soon as the corn is carried it very rarely if ever fails, and we have known it sown with great success on Barley as well as Wheat stubble while the corn was standing, the treading during harvest work being sufficient to ensure its germination. The harvest being late this year renders this mode worthy of further trial. Messrs. Vilmorin's new sorts being later, the seed cannot be procured quite so early as the common kind, but we expect to receive a supply from them in a week or two. *Sutton & Sons' Royal Berks Seed Establishment, Reading.*

The New Varieties of Trifolium incarnatum.—We beg to present you our best thanks for the mention you had the kindness to make in the last Number of your interesting Paper concerning the new varieties of Trifolium incarnatum we have advertised. We think it useful to call attention to a mistake owing most probably to the printer of your article which mentioned three sorts, viz., 1st, Trèfle incarnat ordinaire; 2d, Trèfle incarnat tardif; 3d, Trèfle incarnat tardif à fleur rouge. While our advertisement mentioned the 3 vars. as follows:—1st, Trèfle incarnat ordinaire (ou hâtif); 2d, Trèfle incarnat tardif (à fleur rouge, ou si vous aimez mieux à fleur incarnat); 3d, Trèfle incarnat tardif a fleur blanche. Strange as it may appear to some people that there should exist a white flowering crimson Clover (Trèf. incarn. flore albo), the thing is nevertheless quite correct. We have thought it well to point out to you the mistake. *Vilmorin, Andrieux & Co., Paris.*

Carduus arvensis (Boar Thistle), Creeping Thistle.—In 1849 when I went from London to reside in the country, there was a meadow divided from another meadow belonging to a different owner by a ditch or drain about 9 feet in width; on either side of this ditch there was an abundance of the Creeping Thistle. At first, about the month of May, a lad was set to work to cut each Thistle stem off at an inch beneath the surface of the ground, and then to put a pinch of common salt taken with the thumb and two fingers on to each cut stem; the rhizomes put up fresh shoots, and these were similarly cut off and salt used about the end of September. In 1850, Thistles (but much diminished in quantity and strength) again appeared, and in that year as soon as the Thistles showed bud—and after rain to soften the ground—each stem was so moved as to open the surface whence it grew about an inch; then the Thistle was pulled up with a steady pull, with about 4 to 6 inches of root attached, and the salt, doubled in quantity, put into the opening whence the Thistle was drawn. The same process was adopted in autumn. In 1851 scarcely a Thistle appeared, but whenever observed was treated as in 1850. For the last seven or eight years not a Thistle has been seen on the side of the ditch thus treated, and the opposite side belonging to a different owner still shows a most luxuriant crop. *J. C. X.*

On the Growth and Storing of Mangel.—The practice of leaving Mangel late before pulling and storing it last year occasioned serious loss from the frosts of the 23d, 24th, and 25th of October. In 1848, commencing in August, I ascertained the growth of Mangel by measuring the circumference weekly, and found that after the 4th of October it made no increase, whilst Swedes grew the same year up to the 11th November; it therefore appears desirable that Mangel should be stored in September or very early in October, both as securing from frost, and that they may be stacked when perfectly dry. Between the 20th and 27th of September of the same year, a cold week, it did not grow at all. The experience of the last autumn will not be soon forgotten, yet it may not be generally known, that as a rule, Mangel grows nothing in size after September. *Thomas C. Brown, Cirencester.*

Dray's Reaping Machine.—In your Number of August 4, a request is made to any of your readers who have had experience in reaping machines to communicate such knowledge as they have acquired through the columns of your Paper, for the benefit of many who are starting with machines this year. Having had two years' full working of one upon my farm, cutting 100 acres of corn each year, I am in a position to express an opinion upon the subject. I made it a rule to tie up and stook the corn as we went along, and as my machine (Dean & Dray's) has only a back delivery, it was compulsory to remove the corn each time round even if not tied up. Only this removing is done by many in this neighbourhood, but I consider it a mistake. Complete your work as you cut your corn, and in this opinion one of my most intelligent neighbours, who has used a side delivery for three years past, coincided last season; he took his side delivery off and would only use the back delivery and finish as he went along. My machine on an average cut for me 6 acres per day through the harvest, requiring a pair of horses, a driver, a man to sit on the machine to put off the corn, and four sets of gatherers and binders, each set consisting of a boy or girl 8 to 12 years of age, to make and lay the bands, a woman with a rake to gather the corn between the rake and left foot, canting it on to the band laid by the boy or girl, and a man to bind up after the woman. These, with a man to stook, are all that is required even if the machine can cut four sides of the field; if only three sides of the field can be cut, from being laid or other causes, the same number of hands will be kept employed by the increased bulk and difficulty of gathering it. The next question is that of expense. Now I do not consider that we ought to charge for horses; we have them on the farm in 99 cases doing nothing at this season of the year, the men being engaged hoeing Turnips until harvest commences, when of course they are required and not the horses, and therefore I consider if the horses, in place of eating their Grass for nothing, can assist in cutting the corn it is so much the better. We give seven men 3*s*. per day, four women 2*s*. each, four boys or girls 1*s*. each; total, 33*s*. for 6 acres, or 5*s*. 6*d*. per acre without the

horses. I have made inquiries amongst my neighbours who have used other machines, and our experience agrees upon 5*s.* 6*d.* to 6*s.* per acre as the working expense of reaping machines in Cleveland. I have used one of Samuelson's mowing machines this season upon Clover and Grass; it has answered admirably; cutting with one man to drive and another to open out—cut corners, &c., with a scythe—from 5 to 7 acres per day. *E. B. H.*

Societies.

CHEMICO-AGRICULTURAL, ULSTER.

At the last monthly meeting of the Society, Mr. Miller directed the attention of the meeting to the report of some observations made at the police courts, on the trial of certain persons accused of selling buttermilk diluted with water. He had lately made a series of examinations of buttermilk, as prepared on his own farm, and also of samples to which he had added known quanties of water. He gave the meeting an account of his experiments, from which he concluded that the magistrates were entirely in error in concluding that because a sample of milk showed in the tubes used by the market inspector 40 per cent. of water, that it was of bad quality and shamefully adulterated, as he had found genuine buttermilk to show, when examined in a similar manner, so much as 50 per cent. of water. The inspector should get Dr. Hodges to show him how to examine milk.

Dr. Hodges said that the remarks which he had made on a late occasion, in reply to the inquiry of Mr. Miller, were intended to show that serious mistakes might be made, and innocent persons falsely accused of fraud, by relying upon the indications of the tube lactometer. Some years ago he had made a number of chemical examinations of samples of buttermilk prepared in his own house, and also of samples furnished by a member of council, Mr. John Andrews, and of specimens from the Albert Farm, Dublin; the normal amount of water present he found to average about 90 per cent. As examined after standing at rest in the lactometer, some of these samples showed only 4 degrees of clear liquid, but after a longer period the clear liquid had increased to 30 degrees. The composition of the sample supplied by Mr. Andrews and of that prepared by Dr. Hodges was as follows in the 100 parts:—

	Mr. Andrews' sample.	Dr. Hodges' sample.
Water	91.235	90:415
Caseine (curd), butter, &c. ..	8.151	8.848
Salts	0.614	0.737
	100.000	100.000

Dr. Hodges repeated his former statement, that without a proper knowledge of the various circumstances which influenced the subsidence of the curdy matter and the qualities of the milk, the ordinary method of examination was liable to serious objections.

Concretion found in the Stomach of a Horse.—Dr. Hodges exhibited to the meeting a large concretion which had been taken from the stomach of a horse belonging to Messrs. Andrews, of Comber. It had a round shape, with a somewhat undulated surface, and weighed more than 1 lb. On being cut across, it presented a number of concentric rings, and appeared as if composed of a fine granular matter. Messrs. Andrews, Dr. Hodges stated, had lost three horses from the formation of concretions of a similar kind. The appearance of sections of the ball under the microscope was exhibited to the meeting. It appeared to be made up of fragments of the husk of beans, portions of the fine hairs of the Oat husk, and a crystalline matter and particles of sand. Dr. H. said that the horses had been fed on bran, bruised Oats, and Bean meal. The chemical examination of the crystals proved them to consist of the phosphate of magnesia and ammonia, which is a frequent material in intestinal concretions. The horses had suffered much agony, and were observed crouching down upon the hind legs. Purgatives, Linseed oil, &c., had been administered without any benefit. One of these concretions was found to possess the following composition in the 100 parts:—

Water	35.85
Organic matters	30.93
Sulphate of lime	0.93
Phosphate of magnesia	14.37
Soluble silica	7.32
Insoluble silicious matters and oxide of iron ..	11.60
	100.00

Manures of the present year.—Dr. Hodges reported that, in the present year, 86 samples of guano and artificial manures had been submitted to chemical examination in his laboratory. Of these he had found only three samples adulterated. Four samples of super-phosphates were of inferior value, and had evidently been prepared by persons unacquainted with the precautions requisite to obtain a compound containing a proper amount of phosphates in a soluble form. He had much satisfaction in reporting a decided improvement in the quality of the manures offered for sale in the present season.

CRYSTAL PALACE POULTRY SHOW.—Six or seven hundred pens of young birds have been exhibited during the past week in the North Gallery, comprising small classes of Spanish, a good show of Cochins, an admirable collection of Dorkings, and good classes of Game and Hamburghs. A large show of Pigeons, and capital specimens of Rabbits were among the attractions. The following are the names of the first prizes taken:—

SPANISH, Class 1.—1st, J. H. Craigie, Woodlands, Chigwell, Class 2: 1st, C. Atkins, Thames Bank, Pimlico. Cocks: 1st. C. Atkins.

DORKING (Coloured).—1st, W. Bromley, Acock's Green. Pullets: 1st, C. H. Wakefield, Malvern Wells.

DORKING (White).—1st, Capt. J. Beardmore, H.A., Fareham.

DORKING COCKS (Coloured and White).—1st, Mrs. F. Blair Balthayock, Inchture, N.B.

COCHIN CHINA (Cinnamon and Buff).—1st, T. Stretch, Marsh Lane, Bootle.

COCHIN CHINA (Brown and Partridge-feathered).—1st, P. Cartwright, Oswestry. (White): 1st, W. Dawson, Hopton, Mirfield. (Coloured and White): 1st, T. Stretch.

GAME (White and Piles); 1st, T. Whitaker, Melton Mowbray. (Black-breasted and other Reds): 1st, W. H. Swann, Farnsfield, Southwell. (Duckwings and other Greys and Blues): 1st, S. Matthew, Chilton Hall, Stowmarket. Cocks: 1st, E. Archer, Malvern.

HAMBURGH (Gold-pencilled).—1st, R. R. Clayton, Hedgerley Park, Slough. (Silver-pencilled): 1st, R. Oxley, Windsor, Berks. Cocks (Gold-spangled): 1st, G. Brook, East Parade, Huddersfield. (Silver-spangled): 1st, J. Robinson, Vale House, near Garstang. (Gold or Silver-spangled): 1st, H. Carter, Upperthong, near Holmfirth.

POLISH FOWL (Black with White Crests).—1st, G. Ray, Minestead, Lyndhurst, Hants. (Silver): 1st, G. C. Adkins. Cocks: 1st, G. C. Adkins.

NORTHUMBERLAND.—At the recent annual meeting of the Society, his Grace the Duke of Northumberland, K.G., Patron of the Society, occupied the Chair, and proposed the toast of the evening, "Success to the Northumberland Agricultural Society." He said: 'I must congratulate you on the splendid show which we have seen to-day; no exhibition of short-horned stock has ever been superior to the one we have seen to-day. I must congratulate you on the steady progress of this Agricultural Society. It began in the year 1836, and during each succeeding 10 years it doubled the number of its members, and nothing can be more satisfactory as showing the interest taken by the Northumberland farmers in the society. The county may be separated into two distinct divisions, the moors and the cultivated land,—or in other words, the pastoral and agricultural divisions of the county, of both of which the society has taken charge. Very little need be said of the improvement of the pastoral part of the county, since the exhibition we saw to-day is a proof of its improvement; and for the agricultural portion we have yet to do much. The whole value of the agricultural produce of the arable land is about two millions and a half a year, and of the grain crops about a million and a quarter; therefore, it becomes a very important point to consider how we can increase this value. The very great improvements which have taken place have been in draining, and this particularly in the last ten years. It is reckoned that during that period 170,000 acres have been drained at an expense of 5*l.* an acre, which is about one-fourth of the whole of the arable land of the county. With the addition of other permanent improvements, such as follow upon draining, and which will probably double the amount, there will have been 800,000*l.* or more spent within the ten years upon draining, and probably as much, or nearly as much, upon other improvements, such as, for instance, those that are necessary after draining. The result has been a larger produce, more cattle to be fed, larger farm buildings, and other permanent things; so that I think this county may be well satisfied with the improvement, so far as it goes, that has been made during the last ten years. I might go far back beyond ten years; but I think the present moment is the one which is most interesting to us. There are other improvements still going on in the county, and very important improvements they are, although they are on one side rather, and do not so much concern those who cultivate the land. One is the very great improvement of the farm houses, the hinds, and other farm labourers. There has been an increase in their wages of something like 18 per cent. within ten years. There has been a general improvement in their cottages; there has been also a very considerable increase in all the—I may call them—luxuries of life, because, from the peculiar manner of paying the hinds and farm servants in this county, they get, besides their wages, all the necessaries of life; therefore, what there is beyond their ten, and coffee, and sugar, and soap, and candles, and dresses, and a variety of other things, may be called the luxuries of life. I think, then, that the position of the hinds and farm servants in this county has much improved within the last 10 years. I ought not to omit to say that in schools, and certainly in religious attendance, chapels included, they have also had the advantage of great improvement; but, then, I must mention that there is another side to look at. If the farm servants have additional wages, these are paid by their employers, and, therefore, the expenses of cultivation have increased, and it is now the problem which is to be solved—it is one of the difficulties connected with the cultivation of the soil—how can the productions of the agriculturist be more economically raised, the land be preserved in its present good state, and everything kept up to the level in which it is at present? We Englishmen possess always the energy and the determination to do what is necessary; and I have no doubt that means will be produced, either by steam or by horses, or by some other means, for cultivating the land; and I can only say that there is one sentiment which I am sure all will feel, not only in this room, but everywhere in the county—a sentiment which is, that whatever happens, May God speed the plough.

Reviews.

The History and Properties of the different Varieties of Natural Guanos. By J. C. Nesbit, F.G.S., C.S., &c. Rogerson & Tuxford, 246, Strand.

WE have here in a shilling pamphlet a great mass of information on a very important subject collected during many years of a useful professional life as agricultural chemist, analyst, and lecturer. Mr. Nesbit describes the composition of plants, the relations of manures to vegetable growth, and the rules for calculating the value of a manure founded on its composition as declared by analysis and on the value of its several ingredients in the market. He then in successive chapters enumerates the different kinds of guano, gives many of the analyses of each which he has himself conducted, and estimates by the rule already given the intrinsic as compared with the commercial value of the articles thus analysed.

He classifies guanos under three heads:—

"1st. Those which have suffered little by atmospheric action, and which retain nearly the whole of their original constituents, such as the Angamos and Peruvian guanos.

"2d. Those which have lost a considerable portion of their soluble ingredients; of this class are the Ichaboe, Bolivian, and Chilian guanos. They contain a sufficient quantity of nitrogen to distinguish them from the third series.

"3d. Those which have lost nearly all their ammonia, and contain but little more than the earthy phosphates of the animal deposit. Many of these are largely contaminated with sand."

The greater part of the pamphlet is occupied with a description of these several imported manures—with a list of analyses of each—and with instances illustrative of their liability to adulteration. The following paragraph contrasts Peruvian guano with various home manures:—

"The following table contains analyses of various manures made by Boussingault and other well-known chemists, and also an analysis of an ordinary sample of Peruvian guano—

ANALYSES OF FARM-YARD DUNG, &c.

	Farm-yard Dung.	Horse Dung.	Cow Dung.	Pig Dung.	Mixed liquid and solid excrement of man.*	Peruvian Guano.*
Moisture	79.30	76.17	88.44	82.00	94.24	18.35
Organic matter ..	14.03	19.70	11.20	14.29	4.72	51.25
Inorganic matter ..	6.67	4.13	2.36	3.71	1.04	30.40
	100.00	100.00	100.00	100.00	100.00	100.00
Nitrogen (equalto) ..	0.41	0.65	0.36	0.61	0.94	13.88
Ammonia .. .	0.49	0.78	0.43	0.74	1.14	16.85

Boussingault, Payen, and many others of our leading practical Agricultural Chemists, have come to the conclusion that the value of different manures varies nearly in proportion to the amount of nitrogen they contain. There may be cases to which this rule is not exactly applicable; but in many natural manures, an increase of nitrogen is accompanied by an increase in the phosphate of lime, and every other valuable manuring element. In the above table, for instance, the 13.88 of nitrogen in the guano is accompanied by 30.40 parts of inorganic matter, of which 23.60 parts (or more than two-thirds) is phosphate of lime.

"If we take the per-centage of nitrogen, then, as a correct indication of manuring value, we shall find that one ton of ordinary Peruvian guano is equal to 33½ tons of farm-yard dung, 21 tons of horse dung, 38½ tons of cow dung, 22½ tons of pig dung, and 14½ tons of mixed human excrements.

"Let those who farm in hilly countries, and other places where carriage is expensive, ponder well the above facts.

"Though a good farmer will produce as much manure as he conveniently can, yet even farm-yard dung may be bought too dear; and it is certain that on numbers of farms the cartage of dung is so expensive an item of management, that the introduction of guano, for those parts at the greatest distance from the homestead, would be productive of the same fertility at a considerable saving of expense.

"Instructions are given for the application of this valuable fertiliser to the various crops. The following paragraph relates to the preliminary preparation of the manure for drilling.

"For drilling, it must first be mixed with four to six times its weight of the ashes† of wood, turf, or coal, or with the same quantity of well-sifted mould. Charcoal,

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* These analyses were made in the Laboratories of the College.

† Some varieties of wood ashes, which contain a considerable amount of free alkali, are not suitable for mixing with guano, as they liberate the ammonia. This may easily be shown by mixing a shovel full of the ashes with the same quantity of guano. If a strong ammoniacal odour be immediately perceived, the ashes are not fit to be mixed with guano. The mode of preparation here described should be used, with slight variations, according to circumstances, for all varieties of crops.—J. C. N.

in powder, either from peat or wood, is also a most excellent article to be mixed with the guano, in the proportions indicated. Its great porosity allows it to retain the volatile ammonia, and dry weather to absorb considerable moisture from the air. This is of material benefit to plants in their early growth.

"Before mixing, the guano must be finely pulverised, which may easily be done with a common garden roller upon the floor of a barn or shed, or even by beating it with a common shovel. A layer of the ashes, &c., is then spread evenly upon the floor, and a quantity of the fine guano sifted over it. This is followed by another layer of mould or ashes, and another of guano, until the requisite quantity of both is used. The whole must then be repeatedly turned with the shovel until thoroughly mixed, If time will permit, it is now preferable to leave the mixture for eight or 10 days. It must then be again sifted, when it will be ready for use.

"In using guano with the drill, care must be taken that the mixture falls below the seed, and that an inch or so of soil intervenes between them, otherwise the strength of the guano will kill the seed. Garrett's, Hornsby's, and other modern drills, are well adapted for depositing guano and other concentrated manures.

"The above mixture is generally sufficiently damp to fall exactly where the hand directs it. When this is not the case, a small quantity of water should be added; the field must be sown with the mixture in the ordinary manner, and the manure harrowed in; the seed is then drilled as usual.

"Perhaps the preferable mode would be to broadcast two-thirds of the guano applied, and to drill one-third with the seed. The young plants would then have enough manure under the drills to serve the early stages of growth, while the guano sown broadcast would supply the wants of the plants in a more mature state, when the roots would have spread in every direction in the soil.

Mr. Nesbit also refers in general terms to the adulteration of guano:—

"The demand of the farmer for cheap manure, acting upon the trade through the medium of the unscrupulous dealer, has given rise to a fraudulent and hitherto successful business.

"A most extensive and profitable trade is at present carried on by parties who practise the compounding of specious-looking articles to mix with guano; these they supply to dealers in that manure.

"The materials used to sophisticate guano are numerous. Sand, marl, clay, chalk, limestone, bricks, tiles, gypsum—ground, when necessary, to a fine powder—constitute the materials for which the farmer is destined to pay 8*l.* or 10*l.* per ton. These, mixed in proportions to counterfeit the colour of guano, are sold to roguish dealers in town and country, who introduce a *little* genuine guano to give the necessary odour. Some recent actions brought against parties who have sold adulterated guano, in which heavy damages were obtained, have contributed some little to arrest this nefarious traffic. One remedy lies with the farmer, who ought to prosecute vigorously those who impose upon him.

"Another system of deception is often practised by men whose consciences are perhaps too tender to sell as first-class guanos those they know to have been manufactured in England: these parties, however, have no objection to sell as first-class guanos importations of very inferior quality. What they sell is no doubt guano, but it is not the guano the buyer wishes to purchase. All purchasers should therefore require the invoice to expressly declare on its face the name and quality of the guano bought, such as Peruvian, Bolivian, &c. The parties will thus render themselves liable to severe punishment in case of fraud.

"Though numerous unprincipled dealers exist in the manure trade, yet there are certainly many others, honest men, upon whose fair fame there has never yet been a breath of suspicion.

"We advise the farmer, therefore, to purchase his manures from men of established reputation, who have a character to lose, and who will not demand from him more than a fair and reasonable profit.

"The best safeguard, however, against fraudulent dealers is never to use a manure of any kind without having a sample analysed by a competent authority. Indeed men of real intelligence and business habits now regularly call to their assistance the science of the analytical chemist to ascertain the real agricultural value of artificial manures."

Notices to Correspondents.

BOOKS: *J G H.* Morton's Cyclopedia of Agriculture (Martin) published six or seven years ago; and Stephens' Book of the Farm, of which a second edition was published about the same time.

DESTRUCTION OF WEEDS: *R.* A bill has been brought into the House of Commons by Sir William Somerville and Mr Bellew, to provide for the destruction of certain weeds in Ireland. The weeds specified are Thistles, Docks, and Rag-weeds, and it authorises the occupier of land to serve notice on the occupant of any adjoining field, or in any adjoining cemetery, or upon the sides of any adjoining railway or canal, requiring him to cause such weeds to be cut down and destroyed. And in case of neglect to cause such weeds to be cut down within 14 days, a penalty (not exceeding 5*l.*; and if not then cut down, a second notice may recover a second penalty of double the first.

DEVON HERD BOOK: *An Eight Years' Sub.* Captain Davy is we believe the editor of it, and we presume that any bookseller can procure it for you.

HARVEST WORK: *R W.* Make small sheaves, and if the Wheat is not actually wet nor actually green put them up at once in small "pucks"—i.e., mows of one sheaf radius, the ears inwards.

GLASS FOR GREENHOUSES, &c.

Sheet Glass, in Crates.

	16 oz.	21 oz.	26 oz.	32 oz.	36 oz.
Best ..	5½*d.* ..	7½*d.* ..	9¼*d.* ..	1*s.* 0*d.* ..	1*s.* 0½*d.*
Seconds .	3¾ ..	5 ..	6¼ ..	0 9¼ ..	1 0
Thirds ..	2½ ..	3½ ..	5¼ ..	0 7¼ ..	0 10¼
Fourths .	2¼ ..	3¼ ..			

Glass cut to any given sizes not on the List.

16 oz.—4ths, 1¾*l.*, 2*d.*, and 2½*d.* per foot
" 3rds, 2½*l.*, 2½*d.*, and 3*d.* per foot
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot
" 3rds, 3½*d.*, 4*d.*, and 4½*d.* per foot

Glass for Orchard Houses,

As supplied by us to Mr. Rivers.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in.	Common	13*s.* 6*l.* ..	£1 1*s.*
20 in. by 14 in. / 20 in. by 15 in.	Superior do. ..	16 0 ..	1 3
	English Glass ..	18 0 ..	1 9

The above prices include the Boxes, with but few exceptions. When Packages are charged, full price is allowed when returned.

Sheet Glass, Stock Sizes, 16 oz.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 " 10, 13 " 10, 14 " 10, 15 " 10 ..	14*s.* 0*l.*	12*s.* 6*d.*
13 " 11, 14 " 11, 15 " 11, 16 " 11 .. / 14 " 12, 15 " 12, 16 " 12, 17 " 12 ..		
18 " 12, 19 " 12, 20 " 12	16*s.* 0*d.*	18*s.* 6*d.*
16 " 13, 17 " 13, 18 " 13 .. .. / 19 " 13, 20 " 13, 21 " 13	per 100 feet.	
16 " 14, 17 " 14, 18 " 14 .. .. / 19 " 14, 20 " 14, 21 " 14 .. .	Boxes included	

ENGLISH GLASS of the above sizes 18*s.* per 100 feet.

Small Sheet Squares, in 100 feet Boxes.

6 by 4	6½ by 4½	7 by 5	7½ by 5½	11*s. d.*
8 " 6	8½ " 6⅜	9 " 7	9½ " 7½	12 6
		10 " 8	10½ " 8½	

Boxes 2*s.* each, returnable at full price.

Patent Plate and Polished Plate Glass.
Ornamental and Coloured Glass.
Perforated Glass for Ventilation.

LONDON AGENTS FOR HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.

MILK PANS, PROPAGATING GLASSES, and every description of GLASS for Horticultural purposes.

JAMES PHILLIPS & CO., 180, Bishopsgate Street Without, London, E.C.

GLASS WAREHOUSE.—ESTABLISHED 1750.

THOMAS MILLINGTON,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

Reduced Tariff for Horticulture, Pictures, and Dwellings.

ORCHARD-HOUSE SIZES. **SMALL SQUARES.**

Supplied to Mr. Rivers and many Others.

In. by In.		16 oz.	21 oz.
20 .. 12 / 20 .. 13	Common, per 100 feet,	13*s.* 6*d.*	18*s.*
20 .. 14 / 20 .. 15	Super "	16*s.*	23*s.*

In. by In.	In. by In.	In. by In.	Per 100 feet.	Per foot.
6 .. 4	8 .. 6	Common	11*s.* 6*d.*	1½*d.*
6½ .. 4½	8½ .. 6½			
7 .. 5	9 .. 7	Super.	12*s.* 6*d.*	1¾*d.*
7½ .. 5½	9½ .. 7½			

Squares in 100 and 200 Feet Boxes.

Inches by Inches.	Inches by Inches	Inches by Inches.	Inches by inches.	Inches by inches.		P. 100 feet.	P. foot.
10 .. 8.	12½ .. 9½	13 .. 10	15 .. 10	13½ .. 11½	4ths.	12*s.* 6*d.*	1½*d.*
10½ .. 8½	13 .. 9	13½ .. 10½	12 .. 11		3ds.	14*s.* 3*d.*	1¾
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 . 11	2ds.	18*s.*	2¼
12 .. 9	12¼ .. 10¼	14¼ .. 10¼	13 .. 11		1sts	21*s.* 6*d.*	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13*s.* 6*d.*	1¾*d.*
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16*s.*	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19*s.* 3*d.*	2½
18 .. 11	18 .. 12	23 .. 13	24 .. 15	.. ..	1sts.	24*s.*	3
13 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 12	22 .. 14	22 .. 16	.. ..			

If less quantity than 100 feet is taken, a moderate charge made for package.

GLASS CUT TO ANY GIVEN SIZES NOT ON LIST.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2½*d.* per foot.
" 3ds, 2½*d.*, 2½*d.*, and 3*d.* per foot.
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot.
" 3ds, 3½*d.*, 4*d.*, and 4½*d.* per foot.

HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Not accountable for breakage.

GENUINE WHITE LEAD	32*s.* 0*d.* per cwt.	LINSEED OIL	2*s.* 4*d.* per gall.
ANTI-CORROSION PAINT	34 0 "	BOILED "	2 9
LINSEED-OIL PUTTY	8 0 "	TURPENTINE	3 3

BLACK, GREEN, and all other kinds of PAINTS, VARNISHES, BRUSHES, &c.

ST. PANCRAS IRON WORKS,

OLD ST. PANCRAS ROAD, N.W.

IRON HURDLES, FENCING, AND GATES.

THE PROPRIETORS OF THE ST. PANCRAS IRON WORKS, OLD ST. PANCRAS ROAD, LONDON,

WERE AWARDED THE

SILVER MEDAL of the Royal Agricultural Society for their IRON HURDLES & GATES,

which, by their peculiar construction, are more than twice as strong and durable as those in ordinary use.

Lists per post on application. Gates from 30*s.* to 500*l.*

The Hurdles can be seen in process of Manufacture at the Works.

GAME WIRE NETTING.

Professor Varnell's Enamelled and Wrought-iron Stable Fittings.

These Patent Mangers and Stable Fittings obtained the Commendation and the Silver Medal of the Royal Agricultural Society of England and the Royal Agricultural Society of Ireland, are adopted by the Royal Veterinary College, and Professor Spooner of that Institution states that they should be used by all who value the health and comfort of their horses. They can be had plain, galvanised, or enamelled.

A Show Room is devoted entirely to every description of Stable Furniture, and full-sized stalls and loose boxes are erected for inspection at St. Pancras Iron Works.

ADDRESS—THE MANAGERS
ST. PANCRAS IRON WORKS, OLD ST. PANCRAS ROAD, LONDON, N.W.,
OPPOSITE OLD ST. PANCRAS CHURCH.

CARTER'S 40s. COLLECTION OF BULBS

FOR FORCING.

"ALL FIRST SIZED AND PICKED ROOTS."

2 dozen extra fine HYACINTHS, in 12 sorts	1 dozen TULIPS, DUC VAN THOL, scarlet
2 dozen POLYANTHUS NARCISSUS, in 9 sorts	1 dozen do. do. rose
2 dozen single sweet-scented JONQUILS	1 dozen do. do. yellow
150 newest Seedling CROCUS, in 50 sorts	1 dozen do. VERMILION BRILLIANT
1 dozen TULIPS, DUC VAN THOL, red and yellow	1 dozen do. REX RUBRORUM
	1 dozen do. TOURNESOL

Half the above Collection, 20s.

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

LAWNS WITHOUT MOWING.

SPERGULA PILIFERA.

THE merits of this little Plant for the above purpose being now fully recognised, and having stood the test of six successive seasons, we have great pleasure in recommending it to the notice of our customers. Mr. Summers, its original raiser at the Crystal Palace Nursery, Sydenham, having made over to us the entire Stock of new Seed for the present season, we now offer it in packets of

6d., 1s., 2s. 6d., 5s., and 21s. Or per Ounce.

We beg to subjoin a few remarks upon the culture of Spergula, as practised by Mr. Summers, premising that seedlings sown last August and September present now a full twelvemonth's growth in advance of seed sown last spring.

INSTRUCTIONS FOR RAISING SPERGULA.

Choose an open situation for the seed bed, dig the ground in shape of a ridge (to throw off the water in winter), and make the surface firm with rake, roller, &c.; spread the seed thinly over the bed, and with a rake gently stir the surface, after which give a good watering through a fine rose. The bed should then be hooped over and shaded with a mat or piece of Tiffany doubled, the object in shading being to prevent the too rapid evaporation of moisture; indeed from the time of sowing until the plants make their appearance, the bed should not be allowed to become dry. When the plants are well above ground they should be gradually hardened, but if during the first month the weather should be warm and dry they will require attention in shading and watering. Towards the end of March following they may be either planted out to form turf in the reserve garden or put in thickly on the intended lawn. Full particulars of this final planting will be given in our New Seed Catalogue for 1861.

For further information respecting the elegant, mossy, and carpet like appearance of this plant, we beg to refer to Mr. Shirley Hibberd's notice in *Gardeners' Chronicle*, and to that of Mr. Beaton in the *Cottage Gardener*. Mr. Summers will at any time be pleased to show the capabilities of the Spergula, or give information to parties desirous of forming a lawn, upon application to him at his Nursery.

J. C. & Co. would beg leave to caution the public against purchasing seeds of various Saginas, &c. (which are only *Annuals*), large quantities of which have been offered to their notice this season, and represented as being seed of the *true* Spergula pilifera, (the seed being very similar), *but as the whole stock of* NEW *seed will pass through their hands they can warrant none other than that obtained from their Establishment.*

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, London, W.C.

NEW SEEDS.

THE QUEEN'S SEEDSMEN,

PETER LAWSON & SON,

27, GREAT GEORGE STREET, WESTMINSTER, S.W.

ARE NOW SUPPLYING NEW SEEDS FOR AUTUMN SOWING.

The very finest qualities of TRIFOLIUM INCARNATUM, ITALIAN RYE-GRASS, SIX WEEKS STUBBLE TURNIP, ALSIKE CLOVER, DWARF BROAD-LEAVED RAPE, MUSTARD, PERMANENT GRASS SEEDS, all carefully selected, and delivered Carriage paid at moderate rates.

CORDYLINE (DRACÆNA) INDIVISA.

MESSRS. JOHN AND CHARLES LEE

Have the pleasure to announce that they have now ready to send out the magnificent

CORDYLINE INDIVISA FROM NEW ZEALAND,

AN ACCOUNT OF WHICH WAS GIVEN BY DR. LINDLEY IN THE *GARDENERS' CHRONICLE*, OCT. 29, 1859, Pp. 868.

It is impossible to give an adequate description of this wonder of Nature, which should be seen in its native grandeur to be thoroughly appreciated. Specimens can, however, be seen at this establishment which already prove the accounts received of its merits to be quite reliable. Being found at a high elevation it will be a very hardy Conservatory Plant, and will probably bear total exposure in the West of England and in Ireland.

CORDYLINE INDIVISA attains a height of from 10 to 20 feet, in an erect and undivided trunk on which the foliage is retained with vigour almost to the ground. The leaves are set on to the greatest advantage, and measure from 5 to 6 feet in length, and from 6 to 9 inches in breadth. Their colour is of the richest description: a broad and prominent midrib of crimson brown runs through the entire length, and numerous red and white lines run parallel to the midrib: the whole surface is overlaid with a rich golden bronze producing an elegant effect. The under side of the leaves is glaucous. The whole tree is unsurpassed in its truly noble and unique beauty.

Nursery and Seed Establishment, Hammersmith, London, W.

DUTCH FLOWER ROOTS.

JAMES VEITCH, JUN., ROYAL EXOTIC NURSERY, Chelsea, S.W., begs to announce that he has received his annual supply of BULBOUS ROOTS from Holland, and is pleased to say that they are PARTICULARLY FINE and in EXCELLENT CONDITION. CATALOGUES are now ready and will be forwarded on application.

J. V., Jun., desires to impress upon those who patronise him the great advantage of giving him their ORDERS EARLY, as the successful cultivation of Bulbs depends in a great measure upon their BEING PLANTED EARLY IN THE SEASON.

GERANIUMS, HERBACEOUS AND ALPINE PLANTS, ORCHIDS, CHRYSANTHEMUMS, HARDY VARIEGATED PLANTS, &c.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their new priced and descriptive CATALOGUE of the above, to which are added supplemental Lists of Fuchsias, Stove, Greenhouse, and Hardy Plants, Ferns, Ornamental Foliage and Variegated Plants, Fruit Trees, &c. (which include the best new plants of the season, is now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

ROYAL PAVILION, BRIGHTON.

THE BRIGHTON AND SUSSEX FLORICULTURAL AND HORTICULTURAL SOCIETY'S GRAND AUTUMN EXHIBITION, will be held on WEDNESDAY and THURSDAY, September 12 and 13. Prizes to the amount of 350*l.* are offered for Plants, Fruits, and Cut Flowers, including the Railway Cup, value 10 guineas, offered for the best 50 Roses, particulars of which may be seen in the Schedule of Prizes, which can be had on application to the Secretary, 96, St. James's Street; or of E. SPARY, General Superintendent of the Exhibition, Queen's Graperies, Brighton.

CONVEYANCE OF PLANTS, &c.—Through the liberality of the Directors of the South Coast Railway, the Committee have the pleasure to announce to Exhibitors—that Plants, &c., for Exhibition, will be conveyed to Brighton from all Stations and back whence they came, free of charge.

The Plants, &c., from London must be delivered at Bricklayers' Arms Station, Willow Walk, Bermondsey, not later than 8 P.M., on the day preceding the Show, to be delivered to the Exhibitors early on the following morning at the Brighton Station.

Where Plants are loaded in the owners' vans and carriages, trucks will be required; of which notice should be given to the Superintendent at London Bridge or Bricklayers' Arms, at least 24 hours before, to prevent disappointment.

No van for transit on a carriage-truck, must be loaded more than 9 feet from the ground.

N.B.—Vans will be in readiness at the Brighton Station on the morning of the Show, to convey plants, &c., to the Pavilion.

Exhibitors accompanying their boxes from London Bridge and Pimlico must have them booked previous to their departure for Brighton. EDWARD CARPENTER, Sec.

BRACKLEY, NORTHAMPTONSHIRE.

A GRAND FLORAL AND HORTICULTURAL SHOW, open to all England, without any entrance payment, will be held at Brackley, on FRIDAY, September 21. Prizes to the amount of 120*l.* are offered for the best specimens of FLOWERS, FRUIT, VEGETABLES, and MODELS of HORTICULTURAL BUILDINGS. The last day for entry is FRIDAY, September 14.

THE FOLLOWING PRIZES ARE OPEN TO ALL CLASSES:—

	1st Prize.	2d Prize.
	£ s.	£ s.
For the best collection of 24 Dahlias, self-coloured, in varieties	5 0	2 10
For the best collection of 12 Fancy ditto, in varieties	3 0	1 10
For the best 50 Roses, in varieties, three trusses of each	5 0	2 10
For the best 24 ditto, ditto	3 0	1 10
For best 24 Verbenas, five trusses of each	2 0	1 0
For best 12 Stove or Greenhouse Plants	3 0	2 0
For the best 12 Ornamental Plants	2 0	1 0
For the best 6 Fuchsias	1 0	0 10
For the best 24 German Asters	1 0	0 10
For the best 12 Spikes of Hollyhocks	1 0	0 10
For the best 8 varieties of Phlox Drummondii, in pots	1 0	0 10
For the best 12 Perennial Phloxes, cut blooms, in varieties	0 10	0 5
For the best Model Garden	2 0	1 0
For the best Model of any Horticultural Building	4 0	2 0
For the best Bouquet of Wax Flowers (for ladies only)	1 0	0 10

The ANNUAL MEETING of the NORTHAMPTONSHIRE AGRICULTURAL SOCIETY will be held at Brackley on September 21.

Brackley has a first-class Station on the Buckinghamshire Railway. — Further particulars and Schedules may be obtained of R. J. RUSSEL, Manor House, Brackley.

The Gardeners' Chronicle.

SATURDAY, SEPTEMBER 8, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, Sept.	11	Horticultural (Fruit Committee) at St. Martin's Place	Noon
THURSDAY, —	13	Horticultural (Floral Committee) at St. Martin's Place	Noon

Two or three years ago a plant of one of the arborescent Aloes, whose leaves were blistered with dark red spots, was introduced from a great public garden into a private collection of succulent plants. Though the stranger was not perfectly healthy, it was admitted without the slightest apprehension, but after a short time, to the surprise of the cultivator, other Aloes in the collection, especially those related to *A. arborescens*, were similarly affected, and the disease is still spreading. Succulent plants, however, of other genera are not attacked, and those in neighbouring houses are in perfect health.

The progress of the disease, as far as we can ascertain from the specimens transmitted, without a personal inspection of the houses in which it has occurred, seems to be as follows: The upper surface of the leaves is sprinkled with minute red

specks, some of which gradually increase in size till they form flattish raised pustules from one to two lines in diameter. In this condition a few of the external cells only are affected, the contents of which are of a bright vinous red, as are also the walls in a slighter degree, the discoloration extending even to the minutely granulated membrane or true cuticle, with which the epidermal layer is covered. Proceeding from the surface towards the centre, the granular contents of the cells first show an inclination to collect in little strings, and ultimately to be coagulated; and if iodine and sulphuric acid be applied, the tint which they receive accords almost exactly with that of the contents of the more highly affected cells. In some cases these intercellular passages are enlarged and filled with red matter.

In this condition the malady is confined very much to the surface, but after a time the pustules lose their convexity and collapse, and then if a slice is examined, not only are the contents found to be affected down to the pulpy tissue which forms the centre of the leaves, but the walls themselves exhibit that brown tinge which seems almost the universal concomitant of decay in the vegetable world, arising from a chemical change which takes place in the constituents of the cellulose of which they are composed.

At this stage the edge of the leaves, even where there are no pustules, acquires a pink tinge; dark depressed spots appear on the under side, accompanied by white dead patches with a dark annular border, and it is at once evident that the vital energies of the leaves are nearly exhausted, and that death must soon ensue.

Had the disease originated in the house, we should at once have been inclined to attribute it to some defect in the cultivation or to some ungenial condition of the atmosphere, which might be very difficult of control even if discovered. But it appears so plainly from the history of the case, that the plants must have been affected by contagion, that we are constrained to form some surmise how it may have been communicated.

Now it appears on a minute examination of the cuticle of the diseased plants, that the disease commences in the stomates. When all the neighbouring cells are perfectly healthy, the granular contents of the two cells of which the stomates are composed are frequently of a vinous red, and from thence, if we mistake not, the evil spreads to the surrounding cells, so that at first a little patch appears consisting of a very few cells only with the stomate in the centre. These cells are soon elevated above the rest, and as the affection spreads the full-sized pustules are completely developed. If this be a correct view of their origin, it appears very possible that on the decay of the leaves in the plant originally diseased, some of the diseased contents of the cells may have been set free and admitted by the aperture of the stomates, and that these acting as a slow ferment, the first effect was simply to induce a bright tint in the contents of the cells, similar to that which occurs in the autumnal tinting of leaves. To this succeeds a stimulation of the vital energies of the cells, inducing increased growth; and then, as the condition of their contents and of those of the intercellular passages becomes altered, in turn reaction takes place, the cell walls become diseased, and then death ensues.

The case is clearly one of much interest, especially if the view we have taken be correct. In such a case it is not possible to suggest any remedy except the isolation of every diseased plant. A useful lesson however may be derived from it, namely, that we should never introduce into a healthy stock any plant which exhibits marked indications of disease. This would be obvious enough if the malady arose from parasitic Fungi, but there is no such pretence in the instance before us. It is clear however from what has been stated that even where the tissues are affected by intrinsic disease, there may be danger; and it is possible that the introduction of a single diseased Orchid or Pine into a house, may immediately affect every one of its neighbours. *M. J. B.*

WHENEVER the question of increasing the supply and improving the quality of INDIAN COTTON has been discussed in these columns, we have insisted upon the absolute necessity of the manufacturing interest seconding the efforts of the Indian Government, instead of quarrelling with it. There is no doubt in the mind of those who are capable of forming an opinion, that India is capable of producing Cotton of as good quality as that of the U. States. Whenever experiments have been tried judiciously, this has been shown conclusively. But the Indian farmers require to be stimulated by the presence of capital, and the supervision of active intelligent agents among them. It is this which it has been no part of the duty of Government to supply.

At last our Lancashire friends have roused themselves. They now perceive the soundness of the advice which has been so repeatedly given them. Mr. BAZLEY has convened a meeting of spinners, merchants, and capitalists, for the purpose of discussing the propriety of forming a Joint Stock Company, Limited, the chief object of which shall be to buy Cotton in India of an improved quality, and ship it to this country. It is, moreover, recommended that a Model Farm shall be established in the East Indies for the cultivation of superior Cotton for coarse spinning; and another Model Farm in Australia, where all Cottons of the Brazil, Egyptian, and Sea Island qualities can be produced. The Mayor of Manchester has offered the use of the Town Hall for a meeting on this important question, to be held on Friday, the 14th inst., at 11 A.M.

The proposed Company is to raise a capital of 100,000*l.* in 100*l.* shares. Of this capital nine tenths are to be applied to the East Indies, and one tenth to Australia—a wise resolution. For although success in India is certain, it must be a question whether Australian prospects are so favourable. Of the capability of Australia to produce excellent Cotton of the long stapled and fine classes, equal to Brazils, Egyptians, and Sea Islands, there is no doubt, but it is by no means clear that it can do so profitably. Colonial workmen are costly, Australian natives are lazy, so that unless some new supply of cheap labour can be found, it is to be feared that the Cotton districts of N. Holland may be unremunerative. We look to the result of the proposed meeting with deep interest, for the question to be decided is nothing less than Imperial.

WE find it stated by Mr. PRINCE, of Flushing, in *Moore's Rural New Yorker*, an American Horticultural newspaper, that we know nothing in this country about the progress that has been made in improving the breed of Currants; and that 27 years after three new sorts, very little better than the Red Dutch, had been raised by the late Mr. KNIGHT, only one new variety, the Victoria, had been produced in England. On the other hand Mr. PRINCE mentions the names of 60 sorts known in the Gardens of the United States, 20 of which have been obtained by the French, and 3 in the United States.

Undoubtedly many names are to be found in Catalogues of what are called Currants, especially if the mawkish varieties of *R. floridum* and *aureum* are included. But in this country we reject all such plants from the class of eatables, and confine ourselves to varieties of *Ribes nigrum* and *rubrum*; and we suspect a critical examination of the subject would show that as many really valuable sorts of Currants are to be found in England as in any other country.

In one or two points we may take the liberty of setting Mr. PRINCE right. He states that the want of progress in obtaining new varieties of Currant arose from the circumstance that Mr. KNIGHT and the Horticultural Society had remained quite ignorant of the existence in France of very superior varieties, of which Mr. KNIGHT should have availed himself when commencing his operations. But Mr. PRINCE forgets that when Mr. KNIGHT set about improving the breed of Currants he had only the Black, Red, White, and Champagne to work upon, with a sort called the *Perlée*; so that we do not quite see how he is to be blamed for not having availed himself of what had no existence in France or elsewhere.

Even now, in 1860, the Bon Jardinier mentions only eight sorts, exclusive of Black, viz. *Blanche de Hollande*, or White Dutch. Fruit of excellent quality, transparent, and as large as that of the *Cerise* or Cherry Currant. The latter is described as having large berries, but the bunches are short.—*Groseille à fruits roses.* This is the Champagne Currant, and well-known in England.—*Gondouin à fruits blancs.* Earlier and more productive than the Common White; berries rather small and acid.—*Gondouin à fruits rouges.* A late variety, with long bunches; but the berries, though more numerous, are smaller than those of the Common Red.—*Hâtive de Bertin.* A very early variety raised by M. BERTIN. Bunches well formed; berries deep red, very transparent, and very sweet.—*Queen Victoria.* Bunches loose, but remarkably long; berries red, large and of good quality.—*Rouge de Hollande*, Red Dutch. Bunches long and thick; berries delicious, bright red, very large. A vigorous productive variety, and the latest.—*Versaillaise.* A very fine variety, raised by M. BERTIN; bunches long and well filled up; berries large, light red.

These are all that the French recognise even now; and out of the 9, three are old sorts, and 2 only of any particular merit occur among the more recent acquisitions, viz. the Victoria, raised in England, and the Versaillaise in France, both of which have been for years in the Garden of the Horticultural Society. The great stride in Currant breeding which Mr. PRINCE thinks the French have made, amounts in reality to having obtained four new sorts, three of which, the Gondouins and Cherry, are of doubtful merit.

Mr. PRINCE mentions, indeed, several others of French origin, viz., the Chasselas, Attrocar, La Caucase, Imperial Rouge, Imperial Jaune, Fertile de Palluau, Blanche Transparente, White Provence, Red Provence, Gloire des Sablons, Belle de Fontenay, Belle de St. Gilles, Cerise à longues Grappes, and Fertile d'Angers.

But we submit that English gardeners may be excused for not knowing anything about their names, seeing that they are unrecognised in the Bon Jardinier, the only French authority in the matter. Mr. PRINCE says they are "estimable." We shall see. A good many varieties called new, have been this year added to the collection at Chiswick, and will be reported upon in due time. Should any prove to have real merit, Mr. PRINCE may be assured that we are not so blind to our own interests as to neglect them.

ON SMALL VINERIES.

IN the present season, so remarkably cold, wet, and sunless, good dessert fruit can scarcely be obtained from out of doors; and in ordinary seasons the supply, without the aid of glass, is precarious. The owners of small gardens have not unfrequently to send to a considerable distance before they can procure a dessert for any particular occasion. To many who have experienced this inconvenience some observations as to how a good dessert fruit may be produced in a small garden so as to furnish, not an occasional, but a daily supply for a considerable period, may prove acceptable.

Presuming that a small glass structure can be erected, the question to be decided in the first place is the species that can be most easily grown in it to most advantage as regards supplying the dessert. Of all others the Vine is certainly to be preferred; its fruit, well ripened, is always acceptable; it affords a long supply, for from the same Vine ripe bunches may be cut for many weeks, whereas from a Peach or Nectarine tree the produce is over in a few days. Pine Apples are easily grown, and may be had in succession, but they require much fuel, and their cultivation would consequently be too expensive for the owners of small gardens. The Vine, on the contrary, will ripen its fruit under glass by the sun's rays, with the occasional assistance of a little fire-heat, and the management is not difficult, provided some essential principles are known and acted upon, and if such be done the quantity of produce will be in every season very satisfactory. In short the Vine may be considered to yield in a limited space a more valuable produce, taking into account its quantity, quality, and prolonged supply, than can be obtained from any other plant under an equal extent of glass. In a small Vinery 20 or 24 feet long and 12 wide, there might be produced annually 100 lbs. of Grapes, such as the owner could not purchase for less than 4*s.* per pound.

The expense of erecting substantially enough a small Vinery may be estimated at a sum not exceeding 50*l.*; it may be done for less. The first cost having been calculated upon, future economy becomes the next consideration. It will be affected by the form in which the house is constructed, chiefly as regards the article of fuel; for much more of this will be required for a span-roofed house than for one with an equal surface of glass in the lean-to form. It does not appear that any experiments have been made to bear directly on this point; but it is certain that a house with, say 200 square feet of glass facing the south, and 200 facing the north, requires much more fuel to maintain a certain temperature than would be necessary to keep at the same temperature a house with 400 square feet of glass all facing the south; besides in precarious states of the weather a span-roofed house requires more attention than a lean-to one; for, supposing the day is hot and no fire is thought necessary, but in the course of the night or towards morning a sudden frost occurs, vegetation in certain stages would be more or less injured in the span-roofed house, but comparatively safe in the lean-to, owing to the radiation of heat from the back wall. Supposing that in a lean-to the heat of the back wall is 60°, that of the air of the house 50°, whilst the temperature outside the glass is 40°; then, if the air of the house loses 10° from contact with a medium so many degrees colder than itself on the one side, it gains 10° from a surface so much warmer on the other. In the back wall of a lean-to we have a source of heat which greatly counteracts the effects of radiation

by the glass. But the case is very different as regards a span roof. With glass so cold as 40° on both sides, and no comparatively hot wall from which heat could be derived, the internal air would soon be cooled down to nearly 40°, or nearly equal to the temperature of the external air, however low that might be. It may be observed that the back wall of lean-to facing the south will acquire the mean temperature of the internal air, less the amount of radiation from the outer or north side of the back wall. That amount will be very little if there is a close shed or other building at the back. Such there should always be where circumstances will permit, or otherwise it would be well to build the wall hollow, or employ other means to prevent, as far as possible, radiation of heat from its external surface; and if this be done its temperature may even be raised higher than the mean of the air of the house, in consequence of its absorbing heat from the sun's rays. The heat absorbed from this or from any other source is retained by the wall till such time as the air of the house becomes colder; then, as it is the property of all warm bodies to radiate heat to the adjoining colder, the heat stored up in the wall is given out to the air of the house, thereby rendering the use of fuel unnecessary in many instances when otherwise it would be absolutely essential.

From what has been stated it appears that a lean-to roof is the most economical as regards fuel, and at the same time it counteracts to a very great extent those vicissitudes of cold to which Vines or other plants under span roofs are liable, unless placed under more special management than could generally be afforded to one small Vinery. For one of this description the lean-to form is therefore to be preferred.

The dimensions of the structure must be determined according to circumstances; the width should not be less than 10 feet, otherwise the Vines would have too little scope for their growth. However, that width by 20 feet long would answer tolerably well; but 12 feet by 24 would be much more desirable; for although by adopting the latter dimensions the first cost might be increased, perhaps about 10 per cent., yet the advantage to be derived from the additional surface of glass would be equal to 38 per cent., and this not for one year only, but for as many years as the Vinery would stand.

The site should be chosen so as to command a southern aspect. The structure may face due south, or to the sun at any point most convenient between 11 A.M., and 1 P.M. If the whole of the southern portion of the sky can be seen as low as the horizon, so much the better; but this can rarely be the case. Vines cannot have too much light. If the sun's rays can reach them over the tops of trees or walls, the height of these is of no consequence so long as the sun shines; but when this is not the case, and the action of light is dependent on the diffused rays, then the effects are diminished in proportion to the extent of sky that is obscured by trees or other objects. Mr. Knight found by his experiments, that the formation of alburnum, or layer of young wood, diminished in proportion as he shaded the leaves; therefore, in the absence of the direct rays of the sun the leaves of the Vine will elaborate the sap in proportion to the amount of diffused light, and that this amount depends greatly on the extent of sky to which they are exposed may be proved by a familiar example. If before dusk a person is in a room with the window blind so far down that he can only see a limited portion of the sky, he may nevertheless just see to read; and when he can only do so with difficulty, by drawing up the blind and exposing a larger portion of sky, he can again see distinctly. This shows that the greater the extent of sky to which an object is exposed, the more light such object receives; and with regard to the Vine, the more light it has the better it will succeed, for although some plants are adapted for thriving in the shade, the Vine is not one of those. A Vine should therefore be placed where it will have as full an exposure to the sky as the nature of the situation will admit. ||

(To be continued.)

MYCOLOGY.—No. XXVIII.

AGARICUS LONGIPES, *Bull.*—Few objects in Nature are possessed of more beauty than the subject of our present illustration, though till a very recent period it has not been strictly distinguished from *Agaricus radicatus*, the subject of a former notice, from which though nearly related, it is clearly distinguished by a multitude of characteristic marks.†

The pileus is from 1½ to 2 inches across, or very rarely of larger dimensions, and by no means as a general rule attaining the size of *A. radicatus*. It is convex and often inclined to be conical. As it advances in growth it is rarely flattened and expanded, nor has it always a decided umbo, though the boss is sometimes very strongly marked. The cuticle is dry and even, not gelatinous and wrinkled, and sparingly sprinkled or obscurely velvety with short stiff bristles, which are of a more or less tawny hue, as is also the pileus. The border is occasionally slightly grooved or striate. The flesh is soft, yielding, and of a pure white. The stem varies extremely in length and is attached to fallen sticks or living roots more or less buried in the earth, sometimes to the depth of 1 or 2 feet, from which it springs in little fascicles or solitary. More rarely it grows on exposed stumps, rooting into them deeply like *A. radicatus*. The surface is densely velvety and at length striate, while the bark is quite distinct from the subjacent substance. The gills are pure white, distant, and rounded behind, sometimes remote from the top of the stem, which is sunk into the substance of the pileus (Ag. collariatus, Corda), but sometimes, where the transition is more gradual, they reach the stem, and are slightly adnexed, but not in the slightest degree decurrent.

The dry and hispid pileus and velvety stem are the prominent distinctions between this and *A. radicatus*, and there are moreover minute differences in the intimate structure of the gills, which were first pointed out to us by Corda.

The cartilaginous coating of the stem in this and several allied species is the distinctive mark, in conjunction with the absolute or comparative freedom of the gills, on which Fries founds his sub-genus Collybia, though a few Agarics are associated with them from habit and vegetation, in which the substance of the stem is softer.

A. longipes is not sufficiently common anywhere to make it matter of inquiry whether it be wholesome or not. Its principal merits reside in its intrinsic beauty, and no admirer of nature can gather it without a certain amount of pleasure. *M. J. B.*

AGARICUS LONGIPES.—From an original drawing.

Home Correspondence.

The Tomato.—Bushels of this are annually imported into our markets, and it is scarcely possible to find another fruit which can be used in so many ways. A few years ago it was principally grown for making sauce; we find it now employed in many culinary dishes, forming a most delicious auxiliary. My late employer used it extensively in salads—some eat it raw like an Apple. In America it is universally eaten so. A gentleman who resided some years in the States informs me that the best way to eat Tomatoes is raw, with a little pepper and salt. Another method frequently employed is to stew them gently and serve up like any other vegetable. Ripe Tomatoes may be had at table nearly every month in the year. Of course such results can only be accomplished under glass by means of judicious management, and where plenty of heat is at command. I gathered ripe Tomatoes early in June from a plant grown in a 32-sized pot wintered in a moderate temperature near the glass in a Vinery. The seeds were sown about this time of the year, thus securing good sturdy plants, which, with means at command, may furnish ripe fruit as early as April, or, at the latest, May. A most important point in the cultivation of the Tomato is the stopping process, otherwise the plant will never set its fruit freely, producing nothing but strong shoots. I stop at the first joint above the fruit, never allowing laterals to make any progress. The Tomato requires a tolerably rich compost. In ordinary seasons there is no difficulty in ripening it out of doors in England, but reports in your columns from time to time indicate it to be a failure to a large extent this season. In this corner of Cheshire, which is probably as early and as fertile as any other, we generally succeed well with such things, but this season the Tomato looks sickly. Nevertheless, I saw ripe fruit on a south wall the other day. I have for some years grown the Tomato successfully in two Peach-houses in any vacant place, either on the front or back trellis, planting one, two, or three, according to the space at command. I keep them closely pinched in; they occupy little room, and I thus secure first-rate crops of well-ripened fruit. *John Edlington, Winch House, Seacombe, Birkenhead.*

Education of Gardeners.—I consider the remarks of "Cotton Twist" to be the most sensible that have yet appeared upon this question. Much that has been written appears to me absurd, unless we can strike at the root of the evil and eradicate it, which I greatly fear can never be done. I am not one who undervalues education; but unless educated gardeners can be assured a better appreciation of their talents, a higher remuneration for their services, and have accorded to them a higher "social status" than they now enjoy, I fear that it will be impossible to bring about a better state of things. If employers are desirous of having better educated men, let them prove such to be the fact by holding forth suitable inducements to intelligence, and educated men will ere long be found. As it is gardeners may strive to elevate themselves; but they will ever find it up-hill work, for those who meet with a due appreciation of their talents are few and far between. If you educate a man possessed of good morals you elevate his mind, his ideas, and render him more sensitive to slights and injustice; and woe to him who becomes so, for he will often be made to feel keenly and deeply. Such, indeed, has been my case, and I write from long experience. A gardener often meets with less consideration than a footman or a groom, and in fact, is more likely to lose his situation from some trivial circumstance or other than either of the two persons just mentioned. I confess to having held different views in my years of probation, and plodded on hard at my studies, thinking that reward would assuredly follow; but no, I find too often that the best informed are equally subject to the whim or caprice of their employers, with the most ignorant of labourers, or even more so, and that he is even less secure in his situation. That I have not been unsuccessful in the practice of my profession may be made apparent by the fact that during the last eight years of my servitude I was awarded at the London and Provincial Shows between 200 and 300 prizes; yet I never made showing a primary object, and I had to labour under considerable difficulties, having an extensive place to manage, with a very insufficient amount of labour at command. I effected many improvements, and made the garden partly self-maintaining, being only allowed a limited sum per annum to keep up the place. Yet I found at last that neither my knowledge nor my exertions availed me anything, and my dismissal was most unjust, as I could easily show, were this the place to enter into explanations. When I left my situation, I left it in disgust, and the profession at the same time. I now serve the public, and I find it much more agreeable to serve many masters than I previously found it to serve one. If I had a dozen sons I should be sorry to see one of them become a gentleman's gardener. To show how some gentlemen estimate the value of gardeners, I may mention that before I left my last situation I advertised myself as a first-class gardener, fully competent to undertake the formation of new gardens, the renovation of old ones, the erection of horticultural buildings on the most approved principles, and act as steward if required. I had two replies to my advertisement. One gentleman put me to the expense of going to London, and never gave me one farthing to help to defray expenses. I could not in justice to myself accept his situation, and it was, to say the least of it, unfair for him to write to me at all. The other gentleman wrote for my character to my employer and found it fully satisfactory; after nearly two months had expired and everything had been settled except terms, which I stated at what I considered much too low a figure, his agent wrote me word that the gentleman did not intend giving more than 50*l.* a year. Whether he blushed when he offered it I know not, but I even now almost blush as I write it. *An Ex-Gardener.*

Streptocarpus Polyanthus.—The two plants of this, No. 1 & 2 enclosed, were raised from seed produced by one and the same plant, sown in February last, and have been growing together in a large pan ever since. No. 1 has been in flower for two months, the other has not yet produced a blossom. Three weeks ago a second leaf made its appearance on No. 1, which induced me to think that your correspondent at Kew, who a few weeks ago, communicated the result of an experiment with the seed whilst vegetating under the microscope, was not quite correct in saying that seeds of the said plant when sown, produced a pair of cotyledons; one of which remained dormant or perished, and the other became foliaceous. If you will be good enough to inform me whether or not I am right in thinking the seeds will produce a superior and an inferior cotyledon, both becoming under favourable circumstances foliaceous

as in No. 1, and whether it is not likely that No. 2 is a plant or part of one from an inferior cotyledon, the superior having by some means been destroyed, it will greatly oblige. No. 3 is a second leaf with flower stalks on it taken from another plant. *Luna.* [Questions like this can only be answered satisfactorily by watching the development of parts. It is too late to ascertain whether the second leaf is a second cotyledon developing at last. It may be, or it may be a new leaf.]

Grapes.—In August, 1859, I sent you a few remarks on a crop of Muscat Grapes; I now take the liberty of troubling you again with a few observations on the same house of Muscats, grown by Mr. Beddard, at Tehidy Park, the seat of J. F. Bassett, Esq. Last year I stated that the crop was the best I had ever seen. I had the pleasure of calling yesterday on my annual visit, and was delighted to find (if possible) a superior crop, both as regards number of bunches and size of berries. Mr. Beddard thinks the weather this season the worst for ripening Grapes he ever recollects. I was much pleased to find the Vine border covered with glass, which I think a move in the right direction; if that had not been done this season, the roots would have been chilled by the late extraordinary rains that we have experienced. In my remarks on Tehidy Gardens last year I mentioned a house of Cannon Hall and Bowood Muscats which I expected to have seen this season. Mr. Beddard found, as other gardeners have before, that to grow Grapes and Pines together to perfection is not possible. I remarked a house and full crop of West's St. Peter's, which is one of the best late black Grapes; yesterday I tasted the Muscat Hamburgh Grapes, beautifully coloured black, and fine Muscat flavour; and a few days ago I tasted the Golden Hamburgh, both of which I think are first-rate kinds. I find the Barbarossa Grape not much liked. I am sorry that none of your readers have answered my inquiry about a Vine sent to me by the name of "Abie," which I cultivate, but have not seen the fruit. These remarks relate to the west of Cornwall. *Alexander Pontey, Plymouth.*

Orchard Houses.—As I live in a district where orchard houses are decidedly the rage, and where consequently I have continually the opportunity of watching them under the management and treatment of other people as well as my own, I have thought a few stray notes of their condition at this season might be acceptable. There has been generally a great deal of blight, both aphis and red spider, which has in some cases crippled the present crop, and damaged the next season's wood. Notwithstanding, there is now on the trees, both in pots and on trellis or walls, a good crop as regards number both of Peaches and Nectarines, but the size is universally deficient, and the flavour inferior. It is needless to speak of the cause. There has not been sufficient sun to develope the saccharine juices. In one of my houses I have kept a large stove burning each night for three weeks past, and improved the flavour immensely. Some gardeners complain of the fruit dropping before it is quite ripe. I have had some few instances, but owing, I think, to the woodlice and ants eating the fruit where it joins on to the stalk, and thus causing a premature decay of that part. Apricots are rather scarce. I have, however, a fair crop of small size, and should doubtless have had more if they had been kept drier when stoning; at that season they dropped very fast. Plums are very abundant, and promise to be very fine. Pears in some cases a failure, in others a heavy crop. I have observed that the trees which accidentally or otherwise were exposed in the open air to the severe frosts of last October have more or less failed to give fruit this season. *H. M., Alton.* [We venture to ask whose fault it is that aphis, red spider, woodlice, and ants have injured this crop. Surely not the fault of the house.]

Effects of the Weather near Cirencester.—All garden produce has become much blighted within the last two or three weeks; the foliage of Roses, Apples, Pears, Currants, &c., has become almost black. Flowers everywhere are scarce; Asters, Stocks, and nearly all annuals are a failure, and show the effects of a late spring. The nights are cold with a north wind, producing frost. Some young Larch plants growing freely are quite brown at the points. Evergreens are getting firm in the young shoots, and will transplant well, establishing themselves before winter. *W. J. D.*

Foreign Correspondence.

PEAR GROWING IN THE UNITED STATES.—During a late tour in America I spent two weeks in Rochester, Western New York, and visited the surrounding neighbourhood; from what I have seen I think I can safely say that this is the garden of America; the soil being naturally fertile. Vegetation of all kinds is most luxuriant; owing to the proximity to Lake Ontario, and the many cataracts on the Gunsee River, which flows through this city, the atmosphere is always more humid, and the climate much milder than that of other localities of the same latitude. There is no place in the States where a greater variety of fruits can be successfully grown than in the neighbourhood of Rochester. These great natural advantages do not pass unimproved, for here, where but 75 or 80 years ago the panther, bear, and other wild beasts of the forest maintained uninterrupted possession, we now find upon an area of 15 miles diameter upwards of 5000 acres of land compactly covered with nursery stock. Almost every variety of tree, Vine, plant, &c., which is contained in the old and long established nurseries of Europe is grown here in the greatest perfection. I am informed too that the demand is equal to the supply, and that trade generally is gradually increasing.

Whilst visiting the grounds of Messrs. Starks & Mattison I noticed that these cultivators were particularly successful in the management of standard Pear trees. In an orchard of 45 acres, containing about 4800 standard trees, I did not discover even a blighted branch. This is the third season since they were planted, and most of the trees are in fruit, and many of them even promise to produce half a bushel each. Such an early and abundant yield is generally supposed to exhaust the tree; but owing to the skilful cultivation pursued, even the trees now loaded with fruit are at the same time making vigorous and healthy growth. That Mr. Mattison is a clever cultivator will be seen by the article you have published from *Moore's Rural New Yorker* last week.

Of seedling Pear-plants grown by Mr. Mattison, I send you specimens. Some of them, as you will see, have been cultivated in the usual manner, others on a different plan. The latter are root-pruned during the first season's growth, but not transplanted. You will at once perceive that the root-pruned trees have, comparatively speaking, plenty of fibres, while others not so treated have only the tap root during the last spring. Mr. Mattison planted an extensive standard Pear orchard at Jefferson city, the capital of the State of Missouri, nearly 1000 miles south-west from Rochester. Choice varieties of Pears at Rochester usually command from 9 to 12 dollars per barrel for shipping to New York, Boston, Philadelphia, Montreal, &c. At this rate, therefore, the possessor of an extensive Pear orchard has sufficient remuneration to make him satisfied with his labour. *James E. Ashley, 15, Ampthill Square, London, N.W.* [The operation of cutting the roots of Pear-seedlings in early summer is a dodge we cannot comprehend. We only know that if we "operated" on young seedling Pears we must have a hot-bed to make them recover from the shock to their systems. Seedling Pears in English nurseries do not make those long tap roots, but in France in the valley of the Loire they do. If it answers in the U. States it is a good practice there.]

Societies.

HORTICULTURAL.—A Special General Meeting was held at 8, St. Martin's Place, Trafalgar Square, on Tuesday last, C. Wentworth Dilke, Esq., V.P., in the chair, for the purpose of electing a new member of Council in the room of the late Rev. L. Vernon Harcourt; and also for the election of various candidates who had been proposed as Fellows. The Right Rev. the Lord Bishop of Winchester, who had been recommended to the Fellows by the Council to fill up the vacancy, was balloted for, and unanimously elected a member of Council. The following candidates were afterwards balloted for, and elected Fellows of the Society, viz., Mr. W. Baxter, Mrs. J. A. Beaumont, Mr. T. Castle, Rev. J. Cook, Mr. J. Cuthill, Lord John Manners, M.P.; Mrs. Moffatt, Lady Adeliza Norman, C. Rickards, Esq.; his Grace the Duke of Rutland; C. J. Selwyn, Esq., M.P., Q.C.; Earl Somers, and Lady Louisa Wells.

Notices of Books.

Salmon Fishing in Canada, by a Resident; edited by Col. Sir Jas. Alexander. 8vo. Longmans, pp. 350.

This volume, which the gallant editor assures us comes from a very experienced hand, who otherwise appears to be an Irish gentleman, is written in a seriocomic style, and illustrated after the manner of *Punch*. The author begins by some account of himself, and how he became a fisherman. After a preliminary education in fly-fishing in the waters of Wicklow, he passed over to Wales, where he succeeded in losing his first salmon and incurring the indignation of his companions, a disgrace speedily wiped out by the capture of another, "a fine fresh salmon weighing 10 pounds."

From Wales we are suddenly transported to Canada, where the writer was fishing for 17 years, a period long enough to enable him to declare whether or not there is salmon-fishing in that part of the world. The answer is of course in the affirmative, or there would have been no need of the assistance of Sir Jas. Alexander in making the public acquainted with the author's adventures. He, however, complains that in the St. Lawrence, as well as in other noble streams, the fish are disappearing owing to the supineness of Governments.

"It is a melancholy fact that the extermination of this noble fish has been commensurate with the civilisation and settlement of the country. A very few years back every stream on both sides of the St. Lawrence from Gaspé and Labrador to the Falls of Niagara abounded with salmon; and it is no small reflection upon the legislators of the country, that they have suffered such a valuable article of commerce to be so wantonly and recklessly destroyed. The spear of the Indian would never have accomplished this; the gill net of the settler would never have effected it; the fly of the angler would have revolted from such an outrage; the whole evil has arisen from neglect in the formation of mill dams. No man in his senses will say that in a young country any obstruction should be thrown in the way of the erection of mills; but every man of reflection will grant that where they are built the rivers should not be so completely blocked up as to prevent a single salmon from ascending them."

Having premised thus much the reader is introduced to the main purpose of the volume. The flies that must be used, the rivers to be fished, and how we are to reach these rivers, occupy a large proportion of the volume; to which is added a chapter on whale fishing in the St. Lawrence, the whole being closed by an appendix of miscellaneous matters related to salmoning. We select a whale story as an example of the author's style. He is describing the chase of a whale in the St. Lawrence.

"For a considerable time the chase was continued before either of the boats could approach sufficiently near to the leviathan to enable the harpooner to deliver his deadly weapon. Never did I experience more tremulous anxiety than during the time that the whale appeared to be coquetting and alternately alluring and disappointing his pursuers; sometimes displaying his unwieldy bulk on the surface of the water, lying apparently in a state of insensibility, then diving out of sight, leaving the blue waters foaming white behind him.

"The instant he descended into the water both boats' crews rowed with all their might towards the spot where they deemed it probable he would again rise to take breath. This occurred several times, till at last, upon his rising from his dive, which he did within a few feet of the boat nearest to our yacht, he received the harpoon deep into his flesh. Then arose a shout into the skies, and the stern cry of 'Back all' from the successful boat, was answered by a chant from the other,

> "'Laugh at fear!
> Plunge it deep, the barbed spear!
> Strike the lance in swift career!
> Give him line! Give him line!
> Down he goes through the foaming brine.'

The instantaneous rush of the infuriated and wounded fish, tearing the little boat freighted with human life through the hissing waters, was terribly sublime. Such was the velocity with which it flew that it literally cleaved out for itself a channel through the deep, 'a wall of waters on the right hand and on the left,' which was sufficiently high to conceal the adventurous fishermen completely from our view till they had attained a distance from us of, I should say, about two miles, when the huge fish beginning to become exhausted, commenced to move in a circle and so to return towards us.

"At this period we perceived that, beside the whale in which the harpoon was fixed, there was another of a much larger size which accompanied every motion of the former; this we subsequently learned was the old or cow whale, whose disposition is said to be mild and inoffensive, except when its young is attacked, when it is as bold as a lion and manifests an affection which is truly interesting. On this occasion the old whale continued to swim round the young one, to roll over in the water as if to allure it from its pursuers, evincing the tenderest maternal solicitude. Then as if aware of the impending peril of her inexperienced offspring, as the boat drew near she would swim round her calf in decreasing circles, showing the utmost anxiety to draw it seaward, failing in which she would lash the blue waters into foam with repeated blows of the tremendous flukes of her powerful tail, causing reverberations like a thousand thunders; and to my astonishment, for I had never heard or read that the whale had any such ability, jumping as high out of the water in proportion to her size, as I have ever seen a lively salmon or a spotted trout.

"Before taking out all the line from the boat's crew, the young whale, in which the harpoon was firmly fixed, began to ascend towards the surface, and the line was then hauled in by the men and coiled away in the tub kept for the purpose by the steersman. The moment the whale came up so as to be enabled to breathe and blow, 'he went smoking off like a locomotive with an express.' The men held on manfully to the line, and with oars peaked ready to be seized in a moment, away again they dashed in the track of the whale. Had they been yoked to a team of wild horses travelling over glassy ice, their rate of travelling could not have been quicker. As they flew along at the tail of the monster, they could see nothing but a white bank of foam, which rolled up before them higher than the bow of the boat, threatening each moment to overflow them.

"At length the unfortunate fish slackened his speed, when the men hauled up to him and the harpooner adroitly darted his lance, a pointed weapon as sharp as a needle, deep into his flesh; again the poor animal made a desperate but short race, at the end of which he was met by the second boat, which had kept as near as possible during the chase, and from which he received another wound with the piercing lance. Weakened with loss of blood, which was now spouted forth from his huge nostrils in torrents, the subdued monster soon became passive, and his captors lay off at safe distance to wait the last struggle. This was soon over, for after a few moments of convulsive writhing, there came the final spasm which was terrible to see. The surrounding waters were lashed into foam, and all previous exhibitions of the huge fish's power were as nothing compared with the incredible strength put forth in the last

'flurry,' which however gradually subsided till the dying monster wearily elevated his monstrous head considerably above the waves, uttered a groan loud beyond conception, and lay a lifeless mass upon the waters, which were deeply tinged with his blood."

Lovers of fishing, proceeding to Canada, will not fail to pack the volume among their piscatory memoranda.

The Uses of Animals in Relation to the Industry of Man. By E. Lankester, M.D., F.R.S. First Course. Small 8vo. Hardwicke. Pp. 165.

A very entertaining and instructive book, consisting of clever familiar Lectures on various matters, delivered at the South Kensington Museum. The object was to teach uninformed persons the nature and application of common things; and extremely well it has been executed. The subjects embraced in the little volume before us are Silk, Wool, Leather, Bone, Soap, and Waste. The manner in which the subjects are treated may be explained by taking a case. We will say Leather. Firstly, the nature of skin in general is explained; then the structure of certain peculiar kinds of skin; next we have its chemical condition; and an account of the processes that convert it into leather. To explain this the operation called tanning is illustrated, and the plants which furnish the astringent substances called tannic and gallic acid employed in the process. (Here, by the way, a figure of the Sumach tree, or Rhus Coriaria, is by a typographical error made to apply to Rhus Cotinus). Then comes an account of the sorts of skins—skins, kips, and hides—and the purposes to which they are applied. Let us quote one of Dr. Lankester's pages, in order to show how he manages his materials.

"A tree is used for tanning in the United States known as the Hemlock Spruce (Abies canadensis). It belongs to the Pine tribe of plants, and is an excellent substitute for our Oak-bark; but I fancy it colours the leather. The Larch, another plant of the Pine tribe, grows abundantly in Scotland, and is used in tanning; but the leather is a second-rate leather. I may here remark, that it is always worth the while of a manufacturer to make a second-rate article, provided he does not obtain by deception a first-rate prize. Willow-bark, Ash-bark, and the bark of many other British forest trees, contain tannic acid, and have been employed for converting hides into leather. There is a bark brought from Australia, the Mimosa or Wattle bark (Acacia), which also contains tannic acid. These are very important facts for people to know in this country; for you know that we are none of us going to live the whole of our lives in England. We all contemplate one day emigrating; if the Reform Bill is not passed, or the paper duties repealed, or something else not done as we like, we make up our minds to emigrate, and large numbers of us do emigrate; and therefore it is of the very greatest consequence that we should take with us a knowledge of the arts and sciences, and the great principles on which our manufactures are founded, to our colonies. If we had done so at first, we should have earlier found gold and copper in Australia, and gutta percha in Hindostan; and many more colonial manufactures would have been established, and the trade products of our colonies would be much more numerous than they are now. Then, I say, let us educate our boys now, so that when they go out and see a thing likely to be useful, they may not pass by it as if they possessed no more sense or intelligence than the wild animals of the region. By the diffusion of a knowledge of such facts as these amongst our population, we shall contribute alike to the welfare of the colonist and the wealth of the mother country."

But perhaps the Lecture on WASTE will be the most interesting to the general reader. Hear for example what is said about Wool. After describing the way in which the "flock" is prepared for the manufacture of flock paper-hangings, Dr. L. adds:—

"I would here say one word with regard to the colouring matters of flock-papers, as it is a matter of importance. They should not be mixed with poisonous substances. The greens are mostly made with arsenite of copper; and instances have not been rare of persons living in rooms where these green flock-papers have been used; and the consequence has been, that when the paper has been brushed, the particles of arsenite of copper have got into the air, have been taken into the lungs, and produced injurious effects on the system. I do not know that it is so deadly a thing as represented, but it seems an imprudent thing for people to live in rooms covered with these green papers. Wherever these flock-papers are used, they accumulate a greater quantity of dust than other papers, and consequently require to be brushed oftener. It is undoubtedly much the most wise and prudent plan in the case of paint, and in the case of all substances employed in rooms where persons live, that they should not contain poison.

"This arsenite of copper has been the source of a variety of suffering in many directions. It is sometimes used to colour confectionery, and I have known children killed by it. The green fields and green trees looking so pretty, with the white sheep feeding on the top of twelfth-cakes, have been known to contain arsenite of copper. I recollect a case of a number of people being poisoned at a dinner-party by eating some nice green *blanc mange*, which had been coloured with arsenite of copper. With yellow orpiment, a sulphide of arsenic, some boys were recently poisoned by eating Bath buns made yellow by this substance."

He next proceeds to the article called "shoddy," a substance employed for low-priced woollen cloth. "A material is produced under the name of 'shoddy,' which is extensively used in the manufacture of clothing of common quality, such as pilot-coats, ladies' mantles, druggets, and the cheaper kinds of carpeting. This material is not made of new wool, but of wool that has been worn and afterwards torn to pieces by machinery. This shoddy has various prices in the market, according to the substances from which it comes, and you will find the specimens of the material under various names, such as 'black and grey army clippings.' I suppose they are the torn-up clothes of soldiers, who, probably, have been in the field of battle, and having come back, have sold their clothes second-hand. Then we have 'seamed middle white.' I do not know what kind of cloth that has been. Then 'scarlet cloth.' Then there is 'Hamburgh blue-stocking shoddy,' and shoddy from 'black stuffs,' from 'brown stuffs,' from 'white serge,' from 'druggets,' and 'carpets.' I mention these names to show you what a variety of substances are thus torn up, and made again into new cloth. Some forms of this shoddy are called 'mungo.' Thus we have 'blue mungo,' 'brown mungo,' 'grey mungo,' 'claret and white mungos;' and there are now shoddy markets, just as there are woollen markets, and the shoddy markets are increasing every day. One principal seat of this manufacture is Dewsbury, in Yorkshire. It has, however, found its way into Leeds, Wakefield, and to all the large woollen-manufacturing towns. Those who are skilled in the knowledge of real woollen cloth can easily distinguish between it and shoddy. This trade has been sometimes objected to on account of its appearing to produce an article of a superior kind with an inferior raw material; but, after all, you will find that these shoddies are not sold at the price of superfine cloths, and are good substitutes for them. The cheap clothing of late years has depended upon the introduction of this shoddy, and, provided the price is not larger than gives the fair profit to the manufacturer, we cannot object to it, as it enables many a man to put on, at least once a week, a decent-looking coat, who otherwise would not have a cloth coat at all; and if the wear only answers to the price given, I do not think any one can find fault. However, I have heard a gentleman say he objected to stockings of shoddy, which he could not put on without putting his feet through them, and to coats that split up the first time they were put on. In this case the purchaser must judge for himself, for there is no attempt to sell them a superfine cloth—they are sold as shoddy."

Thus we see that shoddy has a worse reputation than it deserves. Now can there be a doubt from what we have said that the treatises before us form an uncommonly good shilling's worth?

TRADE LISTS RECEIVED.—Louis Van Houtte, *Prix Courant*, &c., No. 82 (Price list of Stove Plants), Ghent.—Parker & Williams' (Holloway) Catalogue of Orchids, Show, Fancy, and Spotted Pelargoniums, Herbaceous and Alpine Plants, &c. &c.—Vilmorin, Andrieux, & Co. (Paris), *Catalogue des Ognons*, &c. [List of Flower Bulbs and Strawberry Plants now for sale; the latter to be in delivery after October 15.] Also Catalogue of Flower Seeds to be sown in September.—Hooper & Co's (Covent Garden) Autumn Catalogue of Dutch, Cape, and other flowering Bulbs.

Garden Memoranda.

BERRY HILL, TAPLOW, NEAR MAIDENHEAD, THE SEAT OF JOHN NOBLE, ESQ.—This affords a good example of successful transplanting and furnishing a place in a short time. Four years ago the gardens here had little pretensions to distinction, their extent being little more than 3 acres, and as regards glass that was confined to one or two McPhail pits. The grounds now consist, however, of upwards of 15 acres, beautifully laid out, and contain as fine specimens of Pines and other favourite trees and shrubs as can be found in places that have been established for centuries.

The house is situated on level ground about half way up Taplow Hill, and is set off to good advantage by means of fine plants studded about in vases, boxes, baskets, &c. On the south-west side is a verandah covered with Roses; on the arches are hung baskets of all shapes and sizes. A glass corridor forming the entrance from the road, and the entrance hall itself, are both kept full of beautiful specimens of Æschynanthus, Woodwardia, Tuberose, Fuchsias, Humeas, Geraniums, and other seasonable plants.

The general appearance of the new grounds, viewed from the south side of the house, is very pleasing, advantage having been taken of a fine meadow in front on the south-west side, to continue the pleasure grounds all round, beginning with a lake of 4 acres. The soil removed in the formation of the latter was used to undulate the opposite part, and to raise the ground where necessary to block out any unsightly objects from view. Near the house are various beds well filled with the usual kinds of bedding plants; in the head of two S beds forming supports to a shell cluster of beds, we saw Gazania splendens, in beautiful condition; also some of Centaurea argentea, a fine thing but a little coarse. Next came a neat rockery planted with English Ferns, to be covered in with glass, after the fashion of that of Mr. Veitch, at Chelsea. Lower down near the lake is another rockery of larger dimensions made of artificial stone, some 12 or 13 feet in height. On this are Ferns, Potentillas, Roses, Spergula pilifera, Variegated Vine, Cotoneaster, Magnolia, Tropæolums, Cupressus, and other Conifers, with here and there water flowing over the rocks in quite a rush. From among the rocks a column of water also rises some 20 feet in height, giving life and beauty to this department. The walks are led along the banks so as to catch here and there views of the water and house. On the undulations beyond are planted fine specimens of Conifers, Ailantus, Holly, and evergreens, mostly of large size. These have been transplanted at all times of the year, and without the slightest traces of having been shifted. Masses of Yucca gloriosa, with fine columns of bloom, formed conspicuous objects near the water. An Araucaria which cost 80*l*. is to be planted here in a few days. The grounds generally are neatly managed as far as effect is concerned, and the excellent state in which they are kept does credit to Mr. Rogers, the gardener.

The kitchen garden lies up above the house, and forms to all appearance a portion of the pleasure grounds which surround it; over the intersections of the walks are trellis work and wire arches, covered with creepers. The centre walk is bordered with Spergula pilifera on each side; then comes a border of Roses festooned to standards, and a border of low flowers, with dwarf Pear and Apple trees behind them, thus hiding the vegetable cropping from view. The Spergula had been sown in July, 1859, and planted out in September. The ground was not well covered; it appeared to have suffered from the wet, but hopes were entertained that it would ultimately cover the ground and be effective. At the end of this walk is a fine range of houses raised on a terrace, with a broad walk in front of them and a wavy border of Verbenas, Calceolarias, Cinerarias, Martynia, Ageratum, &c. The range is 150 feet long, and is shaped something like the letter E, the two ends being span-roofed. The east end is devoted to plants such as Heaths, Azaleas, &c., flowering plants and climbers. Here were some fine Grapes; Muscats in particular were good, but here, as elsewhere, not ripe, owing to the dull weather we have experienced. Other houses contained Black Hamburghs, West's St. Peter's, Peaches, &c; the west-end span was devoted to Plums and Apricots. There are arrangements for a double front in all the Vineries; the Vines can therefore be stored in this in winter, and the houses used for plants; behind is another long range of low stoves for the cultivation of Melons, Cucumbers, Pines, &c. The latter are turned out into the beds and looked well. The Melons were planted in Seakale pans on the top of the beds, to prevent them from damping. Both garden and pleasure grounds are well furnished with water-pipes, with taps, at convenient distances, for hoses to reach. *F.*

ARCHERFIELD AND DIRLETON CASTLE GARDENS.—It was omitted to be mentioned in last notice of these Gardens that the fourth hothouse from the west end in the kitchen garden was planted last year with "eyes" of Muscats forced on a little in pots and then planted into the border. These young Vines grew prodigiously strong; some of the canes measuring 3 inches in circumference, and now there are on them bunches that would not be a disgrace to the best exhibition in England. One Vine of a Bowood Muscat, 4 feet long, showed 60 bunches. The Bowood Muscat is a great favourite of Mr. Thomson's; such promising Vines as those under notice are certainly seldom seen—not one house only, but a long range. The bunches and berries are large, and the colour of both white and black sorts excellent. The borders which Mr. Thomson has made consist principally of rough fibry loam, with one-fifth of half-decayed leaves, a large quantity of inch unboiled bones, and a little mortar rubbish. The borders of the early Vineries are wisely made inside. To be as brief as possible, let us say that this range of seven Vineries, three Peach houses, and a greenhouse in the centre, is very full of promise, indicating energy and skill in the management of it. From Pine pits there are produced annually about 120 fruit. Taken as a whole the Pines are perhaps unsurpassed for excellence. Many of the fruit of Queens and Black Jamaicas will weigh from 3 lbs. to 5 lbs., and the smooth Cayennes from 5 lbs. to 7 lbs. A new kind of Pine, "the Hurst House Seedling," is grown here. It is dwarf in habit and is reported to produce very large fruit from small plants. Mr. Thomson is endeavouring to fruit some 12 of this sort, which he has lately bought with a view to get a stock of it. *A. P.*

Miscellaneous.

Death of Mr. Robert Errington.—We have to record with regret the death, after a lingering illness, of this excellent gardener, which took place on the 27th ult., at Oulton Park, near Tarporley, the seat of Sir Philip de Malpas Grey Egerton, Bart., M.P., whom he faithfully served for 32 years. To other good qualities Mr. Errington added that of a sensible and clever writer on most subjects connected with practical gardening; horticultural literature, therefore, not less than a wide circle of private friends, has sustained a severe loss by his death.

Coffee Blight in Arabia.—If it will afford any comfort to those in Ceylon who are suffering from the

ravages of the bug, white or black, we can assure them that in Arabia the effects of the "blight" have been still more disastrous. From a Report on the Trade of Aden for 1859-60, which is generally of a satisfactory character, we gather that the Coffee trade has been almost annihilated. The value fell from more than 100,000*l.* to 6000*l.* Captain Playfair thus records the fact and traces the cause:—"In 1858 59, there was a falling off of upwards of 10 lacs in the value of Coffee exported and imported, and during the year now under review, there has been a further decrease. This is in consequence of a blight which attacked the plants, just as the berry approached maturity. This disease is not confined to the Coffee plant; the Vines and other fruit trees are similarly affected." Periodical blights in articles of large cultivation seem inevitable. Sulphur, saltpetre, or lime dusted over the trees and tar buried at their roots seem to be the best remedies. But the application of each—save in the case of the tar—is very expensive. *Ceylon Overland Observer.*

Textile Materials.—The collection of fibres prepared by Mr. Duncan, Director of the Botanical Gardens, captivated the serious attention of the public. Several were remarked for their strength, and what must be most encouraging to those who would be inclined to direct their attention to that branch of industry is, that the richest fibrous matter is yielded by these very plants which are most common and thrive in the poorest soils. Then the Aloe, the Pine Apple, the numerous species of Sida or Mallows, vulgarly known as *herbe à balai, herbe à panier, faux thé*, &c., which grow in a wild state in every part of the island, even in the streets of the town, are the plants which would yield the best fibres and could be easily procured. The *Bananier graines*, which attains such an enormous size, is according to Mr. Duncan, the kind which yields the strongest fibre. We have already communicated to the Society the results of experiments made, we believe in 1854 or 1855, by Mr. Nathaniel Wilson, Director of the Botanical Gardens of Bath, in Jamaica, to ascertain the quantity of fibres which could be raised on a given extent of land planted with Bananas. Now that the subject appears to have excited more interest we think it sufficiently interesting to refer to them again.

According to Mr. Wilson an acre of land planted with Bananas at 10 feet apart will contain 435 plants yielding the first year as many branches of fruit worth 6*d.* each, or	£10 17 6
Each stem would also yield 1 lb. of fibre, worth 6*d.* ..	10 17 6
Total for the year	£21 15 0

We may, says the author, during that year plant between the rows of Bananas, Yams, Maize, Peas, Sweet Potatos, &c., worth at least 20*l.*, which would raise the produce at the first year to 41*l.* 15*s.* The second year each stem will produce fresh shoots which will double and even treble the crop of fibre. It is said that the quality of the fibre is much finer if the Banana is cut down before it has borne fruit. These estimates appear to us rather exaggerated, for Mauritius at least. Perhaps the Aloe, which may be planted much nearer than the Banana, would yield on the same extent of land, a larger quantity of fibres. And we are of opinion that plantations of Aloes and Pine Apples would be most easily made and most likely reach to the attainment of the desired result. The Aloe grows in dry arid places, where other plants would only be reared with great care and plenty of manure. It is not the same with the Banana, which requires a rich soil and moisture. It has also been remarked, that far from impoverishing the soil, the Aloe improves it considerably, and were it not for the difficulty of extirpating it, would form an excellent rotary crop previous to replanting Sugar Cane. As to the fibre, the samples exhibited last year by Mr. Desperles and this year by Mr. Duncan prove the excellence of its quality, which however has long been known. It only remains to be ascertained, and that experience alone can show, if labour is not so expensive, and if the prices obtained in England would leave a remunerative profit. According to our correspondent in London, Mr. J. Morris, it is worth 50*l.* the ton. On the other hand the fibre of the China Grass (Boehmeria nivea) which grows vigorously at Pamplemousses Garden, is estimated to be worth in London from 80*l.* to 120*l.* the ton. *Transactions of the Royal Society of the Mauritius.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Hyacinths and other Dutch bulbs should be procured and potted for early forcing, and even, as we have before stated, where that is not intended there will be a better chance of getting good bulbs now than later when all the best shall have been selected by early purchasers. Small Orange trees in pots for forcing for winter decoration should now be fully exposed in order to get their wood well ripened. The Mandarin being a free grower with a dwarf bushy habit and small foliage, and a most abundant bloomer, is probably the best for this purpose; but any of the varieties flower profusely provided the wood is thoroughly ripened in autumn. These and Daphnes should be grown largely wherever sweet scented flowers are in demand in winter. Take care also to have plenty of Salvia splendens, which is an exceedingly gay plant and very useful for mixing among Chrysanthemums in the show house. Should mildew appear on any of the soft-wooded, Heaths dust at once with the flowers of sulphur. These, however, will yet be mostly out of doors where mildew is seldom troublesome, but they must be guarded against getting too wet at the root. Get Azaleas that have set their buds tied into form, in order to give them a neat appearance. Attend also to staking and training of other things as leisure can be found for that purpose. Look carefully after red spider, or anything found to be liable to its attacks, and see that it is eradicated before the plants get disfigured. It is easily got rid of by laying the affected plant on its side and well washing the under sides of the leaves with the engine, applying the water with as much force as the foliage will bear. Shake out and repot Pelargoniums that are sufficiently advanced after having been cut back, keeping them rather close and moist until they strike into the fresh soil. Plants however that are fairly established after repotting can hardly be too freely exposed to air or kept too cool. Let Cinerarias also be kept cool and moist, and attend to repotting such as may require it. Primulas must also be carefully attended to, in order to encourage them to make rapid growth, particularly the double varieties.

FORCING DEPARTMENT.

PINERIES.—Any of the stock in pots which may appear to require repotting should be examined and shifted at once, if that is found necessary, in order that the roots may get hold of the fresh soil before short days and long nights set in, when it will not be safe to encourage growth. And any necessary re-arrangement of plants growing in the open bed should also be effected as soon as possible, as with a little care this can be done at present with very little risk of checking the plants, so as to throw them into fruit, and there is also plenty of time to get them well established after removal before the dormant season. Encourage plants expected to show fruit next January to make vigorous growth, for these should be sufficiently advanced by the middle or end of October to allow of keeping them rather cool and dry through November and December, so as to check and thoroughly ripen their growth, as unless this is attended to there will be considerable risk about getting them to show fruit at that season. Plants which have been prepared for fruiting, and which it is desired to get up at once, should be encouraged with a moist warm atmosphere, keeping the soil about their roots in a healthy state as to moisture. Some dislike to apply water at the root in the case of plants that have been kept dry for a time to check growth, and withhold it until the fruit is perceptible; but this is a mistake, causing loss of time as well as injuring the plants, as unless root action is encouraged, plants cannot be expected to start freely. If artificial treatment must be resorted to in order to get the plants to fruit at the desired time, there is no method so certain or so little injurious to the plants as keeping them cool and dry for a month, exposing them to as much sunshine as the foliage will bear without scorching, and then affording them a moist warm temperature and a brisk bottom heat, giving sufficient water at the root to properly moisten the soil. Take off and pot, or plant out suckers at short intervals, as they can be obtained of sufficient strength, for having a regular succession of plants is the most likely way to secure a regular supply of fruit.

VINERIES.—Take advantage of the present comparatively dry weather to give air freely in houses where the ripening of the wood is the object aimed at, and if a little fire-heat is used, with air, this will be much more efficacious now than later in the season.

FLOWER GARDEN AND SHRUBBERIES.

If it is found that anything in the way of cuttings is insufficient for the demand likely to be made upon it, not a day should be lost in getting in more cuttings of it. If however there is a reserve stock of strong plants in pots, which is safe practice where a large quantity of bedding material is required, and where there is proper convenience for growing and propagating in spring, these will furnish a large quantity of cuttings next March, which will form equally good plants by turning-out time as cuttings put in now. In the case of such things as Ageratums, Heliotropes, and dwarf Lobelias it is useless wintering young stock, as these grow so freely in heat, and are so easily propagated from soft cuttings that a few good sized old plants which require but little room or attention in winter will furnish a very large quantity by turning-out time. See however where there are not plants to furnish spring cuttings that, as has just been stated, plenty are got in at once, so as to provide while it can be done against the risk of being short of stock at planting-out time.

HARDY FRUIT AND KITCHEN GARDEN.

Take advantage of dry days to get Celery earthed up, first thoroughly soaking the rows with manure water; also apply quicklime where slugs are troublesome. On heavy soils it is sometimes necessary to surround the plants with sand or sifted ashes to prevent their rotting off in winter, which they are apt to do if surrounded with soil that holds much water. Where anything of this kind is necessary it will be advisable to defer earthing up till late in the season, as frequent soilings of this sort would be very troublesome. Also pull up Onions where ripe, and get them thoroughly dried. Thin young crops of Turnips, Spinach, &c., before they become weakly and drawn through standing too closely together. Stir the surface of the soil deeply among growing crops to admit air to the roots, and keep down weeds. Recently planted Strawberries will be benefited by occasional applications of manure water. Get spare ground manured and dug or trenched for another crop whenever time can be spared for that kind of work.

COTTAGERS' GARDEN.

High cultivation amongst all green crops will amply repay any extra labour it may require. Hoeing or even forking amongst growing crops, provided the roots are not injured, is highly beneficial to the plants and will prove a sort of fallow for successive crops. As has been before recommended, sow every spare bit of ground with Rye and Vetches, which, where a cow is kept, will be found useful.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON

For the Week ending Sept. 6, 1860, as observed at the Horticultural Gardens

August. and Sept	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep	2 feet deep.	Wind	Rain.
Friday 31	○	29.541	29.482	69	40	54.5	61	58	S.W.	.00
Satur. 1	15	29.764	29.727	71	37	54.0	60	58	W.	.10
Sunday 2	16	29.920	29.842	71	42	56.5	60	58	N.W.	.00
Mon. 3	17	30.052	30.031	71	44	57.5	60½	58	N.	.00
Tues. 4	18	30.157	30.135	69	38	53.5	60½	58½	N.W.	.00
Wed. 5	19	30.199	30.175	70	53	61.5	60	58½	W.	.00
Thurs. 6	20	30.348	30.301	63	37	50.0	61	58½	N.E.	.00
Average..			29.956	69.1	41.5	55.3	60.4	58.2		.10

August 31—Fine; very fine throughout.
Sept. 1—Heavy dew fine; clear and cold.
— 2—Clear; quite cloudless; fine; cloudy; lightning at night.
— 3—Fine; very fine; clear.
— 4—Lightly overcast; very fine; cold at night.
— 5—Fine; cloudy and calm; overcast.
— 6—Uniformly overcast; fine; slightly overcast; cold.
Mean temperature of the week, 3½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Sept. 15, 1860.

September.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 9..	68.7	48.7	58.7	15	1.09 in.	—	—	5	2	3	5	10	7
Mon. 10	69.7	46.9	58.3	18	1·27	—	—	4	4	1	6	8	9
Tues. 11..	68.4	45.5	56.9	10	0.68	2	5	1	3	4	6	9	4
Wed. 12..	68.7	45.3	57.0	14	0.49	4	5	1	4	1	7	11	1
Thurs. 13..	67.7	45.9	56.8	15	0.40	2	3	7	2	2	6	8	4
Friday 14..	66.7	46.4	56.5	17	0.84	1	5	6	4	3	6	6	3
Satur. 15..	67.1	46.5	56.8	16	0.63	1	5	5	2	7	4	5	5

The highest temperature during the above period occurred on the 12th, 1858—therm. 86 deg.; and the lowest on the 9th, 1851, 11th, 1854, and 12th, 1848—therm 31 deg.

Notices to Correspondents.

CHERRY LEAVES: *S H.* They have all the appearance of having been grown in some heavy wet undrained or ill drained land. The insects are male aphides, which have done no harm.

FUCHSIAS: *W J G.* Next week.

FUNGI: *S C O.* Your Fungi are so withered and so completely incorporated with the cotton that they are almost beyond recognition. One of them, however, seems to be *Agaricus disseminatus*, a species which springs from deeply buried wood. The full heat of the boiling water would penetrate only a small way into the ground, and after 2 or 3 inches would be so moderated as to act rather as a stimulant than a preventive. *M J B.*

GLADIOLUS BRENCHLEYENSIS.—We have received from Messrs. Youell & Co., of Great Yarmouth, some specimens of this plant, the gorgeous appearance of which cannot be spoken of in terms of exaggeration. The tall robust habit, and intensely bright scarlet flowers, place it at the head of all the hardy flowers of the autumn.

GLADIOLI: *T.* Some species are hardy, some greenhouse, none stove plants.

HEATING: *Ryde.* We do not comprehend your description of the plan you propose to adopt. Any small boiler will do; buy the cheapest; and use 4-inch pipe. Mind that the boiler, whatever you use, is thoroughly well set.

ICE-HOUSES: *Country Sub.* You will find three excellent plans at p. 6 of our volume for 1857. We will go into the subject next week.

LATE STRAWBERRIES: *Peterborough.* Cuthill's Prince of Wales may perhaps answer your purpose. It produces heavy crops and is a very late kind. Dr. Roden of Kidderminster (a great Strawberry grower), states, "I have gathered fruit of Cuthill's Prince of Wales to-day (Sept. 1); it is the latest I have." ‡

NAMES OF PLANTS: *J Bryon.* Potamogeton natans.—*Socrates.* Hemlock—Conium maculatum.—*G O G.* Asplenium Ruta-muraria.—*N L.* 1, Lastrea spinulosa; 2 and 7, Lastrea cristata; 3, Lastrea dilatata; 4, Lastrea Filix-mas; 5, Pteris aquilina; 6, Athyrium Filix-fœmina. — *A C.* Cattleya amethystoglossa, and Polychilus Cornu cervi, a plant we never saw alive before.—*S Devon.* 1, a morsel of Lychnis dioica; 2, Geranium Robertianum; 3, Prunella vulgaris; 4, Scolopendrium officinarum.—*Nora.* 1, some Nepeta, undeterminable without leaves; 2, Cerastium incanum; 3, Atriplex hortensis. We should procure Andromedas, Pernettyas, Vacciniums, Cephalotaxus drupacea, Gaultheria Shallon, Aucuba japonica, Daphne cneorum, Daphne pontica.

PINUS BENTHAMIANA: *C P.* As your plant is young, you may certainly replace the leader by gradually and carefully drawing upwards the strongest lateral that is to be found next the dead leader. Both Laurus Sassafras and Magnolia macrophylla are perfectly hardy in the neighbourhood of London; and will doubtless be equally so in your county.

THE PRINCESS FREDERICK WILLIAM STRAWBERRY (Nevin's) is said by Mr. Thomas Shortt to be the best early Strawberry in cultivation and earliest, and an extraordinary bearer. This corresponds with the statement in Vilmorin & Co.'s new Catalogue, where it is recommended for early forcing.

VINE MILDEW: *A. M.* Last year your Vines are stated to have been mildewed, and are this year as badly as ever, notwithstanding your having applied, in spring, Gishurst's Compound, 1 pound, 4 ounces to the gallon; and you say they have had sulphur. The latter is an infallible remedy if properly applied, that is in good time, and in repeated doses. The evil is done for this season. But when your Vines are pruned, wash them with a solution of soft soap and sulphur, and powder them all over with flowers of sulphur as soon as the buds begin to break, and subsequently. Do not wait till the mildew makes its appearance; you must prevent that.

WOODLICE: *Welwyn.* Mr. Cuthill states that in Mushroom-houses he finds boiling water to be the best cure for these. It must, however, only be applied round the sides between the bed and the wall or it will kill the Mushrooms, and the bed should be rounded a little in the middle so as to prevent it running on to them. ‡

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840,)

Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES, AND BONE MANURE FOR PASTURES.
CONCENTRATED URATE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR AUTUMN SOWING.

They would call particular attention to the article DISSOLVED BONES, in which they guarantee every portion both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.

116, Fenchurch Street, E.C. EDW PURSER, Secretary.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
LAWES'S BARLEY MANURE..	8	0
" MANGEL MANURE	8	0
" GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents.

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

NORTH HANTS SEED ESTABLISHMENT.

HENRY JESSE returns his sincere thanks to his Agricultural friends for the very increased patronage he is receiving in the SEED, CORN, AND MANURE TRADES.

H. J. is fully aware of the great importance which attaches to supplying Seeds and Manures of the best quality, and assures his friends that no exertion shall be spared to supply such articles only as may be confidently relied on.—Railway Stores, Basingstoke; and 100, Seed Market, Mark Lane, London, E.C.

CHEAPEST AND BEST.

JUPP'S NEW HORSE AND CATTLE FOOD.—Quality guaranteed by Dr. Letheby's Analysis, in bags, 35s. per cwt., or 1d. per feed of half a pint. Also,

JUPP'S NEW PIG and POULTRY FOOD, 16s. per cwt., or 1d. per feed of one pint, in sacks of 2½ cwts. each.

Both the above delivered Carriage Free to any Railway Station in the kingdom. *Original Testimonials to be seen at the Office*, and copies sent free on application to

W. & R. JUPP & Co., 6, Cross Lane, Eastcheap, London, E.C.

GENUINE TOBACCO PAPER FOR FUMIGATING.

H. APPLEBY (Foreman to Messrs. Ivery & Son, Dorking) takes this opportunity of informing his Patrons and the Public that he has now a FRESH SUPPLY of the above on hand in packets 4 lbs. each, at 1s. 3d. per lb. A liberal discount allowed to the Trade. Testimonials that will guarantee its quality may be had on application.

Sheet Iron Pots for fumigating, 3s. 6d. each.

N.B. All orders to be accompanied with a Post Office Order payable to HENRY APPLEBY, Dorking, Surrey.

GISHURST COMPOUND, PATENTED,

FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN FLY
AMERICAN BLIGHT	ANTS	

BED BUGS, &c.,

And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr Judd, of Althorp Gardens
Mr Rivers, of Sawbridgeworth
Mr Edmonds, of Chiswick House Gardens
Mr Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr Spencer, of Bowood Gardens
Messrs. Rollisson & Sons, Tooting, S.
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The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1s. for first trials and small uses, such as destroying bed bugs; 3s. for not large gardens; 10s 6d for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

AGRICULTURAL AND GENERAL MACHINERY.—AS PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C.

LAWN-MOWING MACHINES—BURGESS AND KEY'S

MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6l.; 19 in., 6l. 10s.; 22 in., 7l.; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

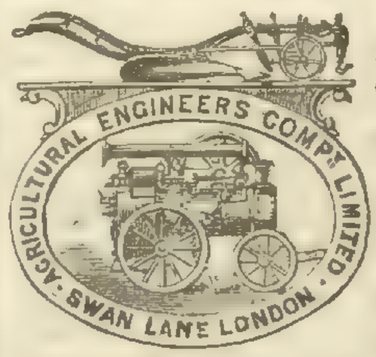
RANSOME AND SIMS, Ipswich, continue to give their best attention to the manufacture of the most Modern and Improved AGRICULTURAL MACHINERY. R. & S have long been celebrated for combining in their Agricultural Machinery the utmost simplicity, durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture. ILLUSTRATED CATALOGUES post free, on application to the Orwell Works; or to their London Agent, SHEPPARD RANSOME, 31, Essex St., Strand, W.C.

TRANSPLANTING MACHINES.

WANTED, by the HORTICULTURAL SOCIETY OF LONDON, a TRANSPLANTING MACHINE, that will carry 10 tons; also a smaller one that will carry 6 tons.

Address, stating price and particulars, to Mr. GEO. EYLES, Kensington Gore, W.

N.B. Second-hand Machines, if in good condition, preferred.



LAWN MOWERS, ROLLERS, WATER ENGINES, CHAIRS, TABLES, and every description of Garden requisites.

HURDLES, GATES, WIRE FENCING, &c.

CARTS, MOWERS, HAYMAKERS, HORSE RAKES, DRILLS, PLOUGHS, &c.

STEAM ENGINES, THRESHING MACHINES, HORSE WORKS, MILLS, CHAFF CUTTERS, &c.

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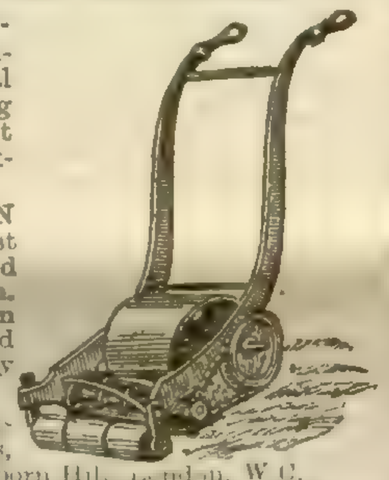
Price Lists free upon application to
THE AGRICULTURAL ENGINEERS' CO. LIMITED,
SWAN LANE, UPPER THAMES STREET, LONDON, E.C.

GREEN'S PATENT PARVUM MIRACULUM, delivered free at all the principal Railway Stations and Shipping Ports in England. Price to cut 12 inches, 4l. 10s., including packing case.

GREEN'S PATENT LAWN MOWERS have proved the best in all cases of competition, and have carried off all Prizes given. See previous Advertisements in the *Gardeners' Chronicle* and "Cottage Gardener" the early part of the year.

For Illustrated and Price List apply to Smithfield Iron Works, Leeds; or 2, Victoria Street, Holborn Hill, London, W.C.



LAND DRAINAGE.

WORKS OF DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.

Repayment may be made by the Landowner as successive portions of the works are completed; or the actual expenditure, with a commission thereon, may be charged on the property improved, by way of rentcharge on the estate created for various terms of years so as to adapt the rate per cent. of annual charge to the circumstances of the tenants.

No investigation of title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.

Works of Irrigation, Enclosing, Wood Grubbing, Road Making, and Farm Buildings are executed in a similar manner.

Landowners desirous to execute any of the Improvements by their own Agents, and charge the outlay and expenses on the Estate, may obtain Loans for the purpose.

Applications to be made to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W.

THE LANDS IMPROVEMENT COMPANY.—Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.

To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS &c. IN ENGLAND AND WALES AND IN SCOTLAND.

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

TO ARCHITECTS.

YORKSHIRE AGRICULTURAL SOCIETY, 1860.—The Council of the Yorkshire Agricultural Society offer the following PRIZES for DESIGNS and PLANS of COTTAGES and FARM BUILDINGS:—

COTTAGES.	£	s.	d.
1. For the best Plan of a Double Cottage, containing not less than 3 Bedrooms in each; the cost not to exceed 220l. the pair	25	0	0
2 For the best Plan of a Double Cottage, containing 2 or 3 Bedrooms in each; the cost not to exceed 180l. the pair	25	0	0
3. For the best Plan of a Single Cottage; the cost not to exceed 120l.	25	0	0
4. The best Plan of a Pair of Cottages, of irregular design; the cost not to exceed 210l.	10	0	0
For the second best ditto	5	0	0

Plans to be sent in to the Secretary on or before NOVEMBER 15.

FARM BUILDINGS.	£	s.	d.
1. For the best Plan of Farm Buildings, adapted for a Farm of not less than 500 acres.. .. .. N.B.—The prize in this class will not be given to any plan which does not provide for the use of steam power.	50	0	0
2. For the best Plan of Farm Buildings, adapted for a Farm of 200 acres	25	0	0

Plans to be sent in to the Secretary on or before DECEMBER 1.

For particulars and conditions of competition, apply to
JOHN HANNAM, Secretary.

Kirk Deighton, Wetherby, Sept 8.

MANCHESTER AND LIVERPOOL AGRICULTURAL SOCIETY.—The THIRTEENTH ANNUAL SHOW of Horned Cattle, Horses, Sheep, Pigs, Poultry, Vegetables, Seeds, Roots, Cheese, Butter, Cottagers' Produce, Implements and Machinery, &c. &c., will take place at Bolton on WEDNESDAY the 12th, and THURSDAY, the 13th of September. Premiums amounting to nearly 1000l., (including considerable Special Prizes) will be competed for on this occasion. (Entries of Stock, &c., closed on the 15th instant.) The show yard will be open to the public by Tickets on WEDNESDAY, the 12th September, from Ten to Six at 2s. 6d. each, and on THURSDAY, the 13th, from Eight to Four (when the Show will finally close), at 1s. The PUBLIC DINNER will take place on the first day of the Show, near the Show Yard, at 2 30 P.M. Lord Newport will preside. Tickets, 3s. 6d. each, may be had from Mr. John Brandwood, of the Commercial Hotel, Bolton. T. B. RYDER, Secretary.

2, Elliot Street, Liverpool, September 8.

THE BIRMINGHAM CATTLE AND POULTRY SHOW, 1860.—The TWELFTH GREAT ANNUAL EXHIBITION OF CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, AND ROOTS, will be held in Bingley Hall, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, December 3, 4, 5, and 6; when PRIZES, CUPS, or other articles of Silver Plate, and GOLD and SILVER MEDALS, to the amount of 1236l., will be awarded.

Prize Lists and Certificates of Entry may be obtained from the Secretary. The ENTRIES close the 1st of November next.
JOHN B. LYTHALL, Secretary.

Offices, 14, Upper Temple Street, Birmingham.

SMITHFIELD CLUB CATTLE SHOW, 1860.—THE ANNUAL SHOW OF FAT CATTLE, SHEEP, AND PIGS will take place on December 11, 12, 13, and 14, at the Bazaar, King Street, Portman Square, W.

The LAST DAY for Certificates for both Stock and Implements to be received by the Honorary Secretary is THURSDAY, November 1.

The following forms of Certificates are now ready, and intending Exhibitors in applying for them need only quote the letters and state how many of each letter they require:—

CATTLE.	SHEEP.
Form A.—Ox or Steer	Form D.—Pen of three Wethers
" B.—Cow or Heifer	" E.—One Wether or Ewe in extra stock
" C.—Ox, Cow, or Heifer in extra stock	PIGS.
	Form F.—Pen of three Pigs
	" G.—One Pig in extra stock

Prize Sheets, with Rules and Regulations, and Forms of Certificates as above, may be obtained of
B. T. BRANDRETH GIBBS, Hon. Sec.,
Corner of Half Moon Street, Piccadilly, London, W.

N.B.—All communications on the Club's business should have the words "SMITHFIELD CLUB" outside, to distinguish them from private letters.

The Agricultural Gazette.

SATURDAY, SEPTEMBER 8, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

WEDNESDAY, Sept. 12—Manchester and Liverpool at Bolton.

—— Ten days of fine weather have done a great deal towards ripening the crops in the north and saving them in the south. The reports given in another page are for the most part one week old, and were written, therefore, while we were all looking gloomily on soaked and sprouting fields. We give them, nevertheless, just as they reached us, both because the opinions which they express of the condition of things a week ago are

still of some value directly, while indirectly they may correct a tendency to over-estimate our good fortune, to which we are prone in good harvest weather, just as much as we are liable to exaggeration of misfortunes under other circumstances. The reports tabulated a fortnight ago are, we believe, as trustworthy as estimates can be. They put the Wheat crop at considerably under an average—Oats and Barley bulky, and generally abundant, though good qualities of the latter will not be common—Beans a heavy crop—Peas good, but spoiled by the weather in harvesting—Potatoes almost universally diseased.

THE new number of the English Agricultural Society's Journal has at length appeared. It contains two descriptive articles—accounts of Berkshire Agriculture and of Whittlesea Mere; and several more definite papers—contributions on the Chemical Properties of Soils, on the Condition of Soil best fitted for the Germination and the Growth of Seeds, on Dairy Practice, on the Agricultural Uses of Straw, on Stock Feeding, on the Moveable Steam-engine, on the Four-course Rotation, on Kohl Rabi, and on Mangel Pulp. There is also a paper on the Composition of the Blood by Professor SIMONDS.

There is thus quite as much variety of topic as the volume usually exhibits, and the subjects cover as wide a surface of the agricultural field. We do not see, indeed, that the new editorship has resulted in any alteration whatever of the work as it has been hitherto conducted. And as most of its contents were provided early in the spring by the prize essays of the previous year, there seems no reason why the whole should not have been in the hands of the members months ago.

If, however, it be as full as usual, it is also as deficient in matters of timely interest. The Canterbury show for instance is not once referred to in the body of the volume; and there are no reports of the implements or of the live stock exhibited at a meeting held so long ago as early in July! The mere awards, indeed, of prizes, but not always in a recognisable form, are given in the Appendix.—But apart from what may be called the agricultural news of the year, which the reader will look for in vain, what is there in this number to tell us what our agricultural leaders are about? Where is there any account of recent experience with the reaping machine, for example, which might have been of use had the Journal appeared at midsummer; or with the steam-plough, which would have been of service now. By and by everybody will know what has been done in the steam cultivation of the soil, without the help of the Society and their editor; and it will be too late then for any purpose of guidance or of warning to collect an account of it for the instruction of the members.

Last year too we had an unprecedented failure of Mangel Wurzel and Turnips, and cattle and sheep were on short-commons, to the great injury of the country—why has not so extraordinary an experience as that of last winter on a subject of such great importance been gathered together and presented for our instruction now? There is, indeed, a detailed account—an extremely detailed account—of his own cattle feeding by Mr. FRERE; but considering that it relates both very extraordinary treatment and very limited illustrations of it, and considering too, we are bound to add, that no one in the agricultural world ever heard of this gentleman before, we imagine that he might have selected and described an experience better worth reciting, and more likely to command attention.

At the close of the essay, it is declared that the object of the paper had been to establish the following points:—

"1st. That bullocks purchased lean for the purpose of fatting leave a greater deficit in the balance sheet than the worth of the manure made will compensate, when corn is at present prices.

"2d. That bullocks may be steadily and economically reared and fed so as to avoid a loss, and gain the benefit of the manure.

"3d. That a ewe flock leaves a good profit when well managed, with a liberal allowance made for keep at received rates.

"4th. That a dry flock may be kept without loss, or with a moderate profit, according to the season, if the Turnips consumed be valued at 6*s*. 8*d*. per ton."

We venture to assert that none of these propositions can be "established" by the limited experience described—that the truth or untruth of the first hinges altogether upon circumstances to which no reference is made—and that the 2d, 3d, and 4th are propositions of which no one wants any proof whatever, much less one elaborated * over 40 demy-octavo pages of small pica type.

An instructive essay on the feeding of stock would have been of the greatest service at this season; but it should have described a larger experience of more recent practice in the various ways now used of economising food, of turning it to good account, and of adapting it to the quality of the feeding animal. And it would not have been necessary in the course of it to commend the use of THORLEY's food, to sneer at Professor VOELCKER's opinions, or to cover so much space with the working-out of simple arithmetical calculation.

There are many other essays in the Journal which will be read with interest and advantage. To Dr. VOELCKER's elaborate paper on the chemical properties of the soil, and to Mr. LAWES' and Dr. GILBERT's full and excellent account of their researches on the growth of Red Clover, we shall hereafter direct attention.

Notwithstanding the comments just made, the faults of the number certainly are not, generally speaking, those of inefficient or too ambitious authorship. The papers for the most part are evidently written by men of authority and experience.

THE WEATHER AND THE CROPS.

BERKSHIRE: *Newbury, Sept.* 4.—The splendid alteration in the weather has done wonders to the crops in this neighbourhood. The Wheat here, heavy and excellent, began to look a little dark; but the sun having glistened over our cereals has dispelled the gloom that was fast gathering upon the farmer. Now the fields are gay with active reapers, and should it continue a few weeks the ingathering will not be so bad as was generally thought. The Barley has suffered most, the constant storms of heavy rain laid many acres; the greatest part spoilt for all purposes except grinding. Oats look remarkably well, and bid fair to be a good crop. Beans within this last week have dropped some of their luxuriant foliage, admitting the sun's rays to ripen the crop, which is well podded. Peas will not be so good a sample as we could wish; but if a little field room and attention is paid them, will still be very useful. Mangels are much mending, the absence of warm weather tells greatly upon this useful plant; having six or eight weeks still to grow may swell many tons yet per acre. Swedes and Turnips, where the weeds have been kept down, are doing well, and that useful crop, Carrots, never did better. One neighbour made a Wheat-rick yesterday, another to-day, and before the week is out most farmers in this locality will show in their yards new ricks. *Thomas Fordham, Sulsmore.*

CUMBERLAND: *Linstock, Aug.* 29.—I have, I am sorry to say, only an unfavourable report to make. The general character of the weather in Cumberland, during the whole of the summer—with the exception of the two first weeks of July, which were very fine and warm—has been showery and wet, with a low temperature, but it would appear from reports that it has not been anything like so wet as in the south of England. Notwithstanding the long continuance of wet weather there were no thorough drenching rains, so little so that the ditches never get fairly to running, nor was there any discharge from drains that were not fed by springs. Indeed the weather could not be said to be decidedly bad until these last two or three days. Saturday the 25th inst. was a very fine day, and hopes were raised that the weather was about to settle. But before night unfavourable appearances were to be seen, and rain fell during the night. The next day was showery, but with Monday morning came a set-in rain, and near mid-day a tremendous thunder storm passed over the neighbourhood of Carlisle, accompanied by a deluge of rain. Again yesterday morning there was thunder and much rain, which continued all the forenoon, and the weather wears the worst appearance it has done this season. The crops must necessarily take more or less harm according to the continuance of such weather. Wheat was much of it thin and late, but not much laid until lately. On rich loamy soils it has been considerably beaten down by the recent rains, and when it is so, it is beginning to wear a dingy grey-green colour, with thinner standing patches in the same field, beginning to wear a yellow healthy hue. But, as none of it is yet so near being ripe as to be in danger of sprouting, should the weather take a favourable turn, there would not be so much harm done as present circumstances would lead one to fear: but this depends entirely on the weather during the coming month, and the result will be a good or bad harvest accordingly. Oats are a very fair crop on good loamy soils, the crop will be a full average, and appears like yielding well; on cold stiff soils the straw is short and thin, but it all has a corny appearance, and looks like being productive of grain. Barley on dry soils is a good crop, on colder soils it will be deficient. A month's fine weather will be the harbinger of plenty; but if bad, as the last few days, I am unwilling to guess at the consequences. There is not much complaint yet of disease amongst the Potatoes; this may perhaps be owing to their being late, and not having reached that stage of their growth when they are liable to be attacked with disease. *T. Donald.*

DERBYSHIRE: *Harlington, Aug.* 29.—The extreme wet weather is seriously affecting this neighbourhood; we have heavy rains nearly every day, with scarcely an hour's sunshine at any time. About one fourth of the hay is secured in bad condition; the remainder nearly all mown and totally rotten. The Turnips from the continual drenching are beginning to look extremely unhealthy, Potatoes showing the disease. Oats and the principal grain crops here full on the ground, many root shot, and under the most favourable circumstances cannot be ripe before the middle of October. *Benjamin Streifield.*

DORSETSHIRE: *Corfe Castle, Aug.* 29.—The weather has very much retarded the harvest in this neighbourhood, but I do not think any serious damage is done yet; the Wheat is generally fit to cut, and a considerable portion cut, both Wheat and Barley are much laid where the straw is heavy. *W. J. Voss.*

ESSEX: *Keivedon, Aug.* 29.—More rain, and the drains in our yellow plastic clays still running. Between the showers we bag our Wheat, the clay sticking to the men's boots as though it were winter. The straw still greenish, although the head is sufficiently forward for cutting. Beans will be ready for cutting in a few days; they are a heavy crop. Unless we get a change, carting the corn off our stiff various clays will be no easy matter. Close drainage has the advantage this year. Italian Rye-grass is rather improved than otherwise by so much rain. Its masses of roots appear quick to appropriate it, but more sunshine would be still further beneficial. The constant saturation of our clay even on our drained land goes far, this year, to prove Baron Liebig's words,—"Common potter's clay forms generally very sterile soils, although it contains within itself the conditions for the luxuriant growth of plants; but the mere presence of these constituents does not suffice to render them useful to vegetation. The soil must be accessible to air, oxygen, and carbonic acid, for these are the principal conditions to favour the development of the roots." This is distinctly proved in the same field, where on the tenacious tile earth, Mangels are at a stand-still, while, on the less tenacious brick earth, they look more flourishing. Farmyard manure, by its mechanical subdividing action, has this year an advantage over guano, by admitting more air to the soil, with a more free passage for water. We pay 5*l*. 10*s*. per man harvest wages for seeing on the stack 10 acres of corn, being at the rate of 11*s*. per acre. Last year the cost was 1*s*. 3*d*. per acre more. *J. J. Mechi.*

GLOUCESTERSHIRE: *Cirencester.*—The last few days having been more sunny the farmers are reaping Wheat, which is a pretty good crop and not much injured if weather keeps fine and sunny. The Barley is also an average crop, but bad in patches. Oats fair. Apples and Pears in the cider districts are plentiful, but very small, and fruit generally has not its usual sweetness. Potatoes are being generally dug, but much diseased, to the extent of at least half; Flukes appear less infected than any others. *W. J. B.* [Our correspondent also gives the effect of the weather on garden produce in another column.]

HAMPSHIRE: *Southampton, Aug.* 30.—The Wheat uncut is considerably beaten down and of course injured. About one-fourth to one-third of the Wheat is cut, and some of it grown. The crop I consider is about, or rather more than, three-fourths of an average. Barley and Oats a good crop, but the former very much injured by the weather. Peas a good crop, but much injured. Beans good. Turnips good, though late, on light lands; bad on heavy lands. Mangel very much retarded by rain, low temperature, and weeds. *W. C. S.*

LINCOLNSHIRE: *Grantham, Aug.* 30.—The great amount of rain which has fallen in this neighbourhood has done considerable damage to the growing crops; the Wheat crops are below an average, and in many instances are mildewed, and where the crops are heavy are very much laid, and in some cases are rotting on the ground. Barley and Oats are average crops; but the rain and winds have beaten them about in all directions. Mangels and Turnips grow very slowly on account of the cold and wet weather, but are looking well generally speaking. Potatoes are very bad and small, the disease having attacked them earlier than usual. Hay and seeds almost entirely spoiled by the rain. Store cattle and sheep are falling in value. On account of the cold unseasonable weather, harvest will not be general here until about September 10. *Edward Darby.*

LINCOLNSHIRE FENS: *Spalding, Aug.* 29.—I am sorry to say that since I sent you my report of the growing crops, that owing to the cold wet weather the present prospect of harvest is not nearly so favourable. In the first place general harvest is fully eight days later than I stated, and the Wheats on light Fen soils will be very much injured by blight and mildew—it is more especially the case where it follows seeds or coleseed; on the heavier Fen soils where the Peat is all worn off it will be a fair crop. The heaviest crops of Oats have been so constantly wet that the straw is very much injured, and the corn will be much lighter than we expected. Beans are promising well. Potatoes very bad, never knew them so much injured. *Thos. Aitkin.*

NORFOLK: *Wymondham, Aug.* 29.—In reply to yours of 25th I beg to say that as far as I can judge there will be great complaint this year on account of the Wheat being tough in skin and flour weak. The wet weather is causing the White Wheats to turn dark at the *knife*, some almost fit to start. I apprehend there will be deficiency in the weight as well as quality. What will become of the Barley so over housed with the Clover layer I know not, as they will require long groundage, which there will be but little time for. Owing to the blight Oats are not yielding so well as was expected, the rains causing them to weigh light and to be discoloured. Peas will be an indifferent sample, there being so many green ones when cut, and the rains are beginning to swell and to discolour them. Beans I cannot say anything of at present, save that they ripen very slowly. The root crop is doing better than might have been expected. I fear there will be more corn spoiled on the stack than in the field, through the impatience of the farmer. It is stated that a gentleman in this neighbourhood has been offered 6*l*. for 1 acre of seed Wheat, and has refused the offer. *W. H. Taylor.*

WARWICKSHIRE: *Wellesbourne, Aug.* 28.—There can be no doubt now as to the disastrous effects of this long continued succession of wet weather. The anxious hope that ere now a change would have taken place had led one to believe that matters were not so serious as others stated them to be: and the advent of a new moon, ushered in between those magic hours which are said to be pregnant with sunny days and blue skies, had inspired us with the belief that all our forebodings were at an end, and our harvest labours were really about to commence. But how little do we know of the decrees of Providence, and how futile and short-sighted are the calculations of scientific men. [Scientific men have nothing to do with 'astro meteorology."] Rain—rain—rain: nothing else is seen or talked of but rain. And no wonder either, when we find the corn actually sprouting before it is cut down. We have seen this in several fields, and the consequence is that farmers are cutting their Wheat before it is ripe; in fact no one can remember seeing it cut in such an unfit state. The question naturally arises—when will such corn be fit for the market? to say nothing as to the pecuniary loss which such a forced proceeding entails both upon the farmer and the community. Reaping is now becoming

* Those who had hoped at length to read good and lucid English in the pages of the Journal cannot congratulate the new editor on his first essay on agricultural literature. Take the following sentences from the two first pages of his "leading article:"—"The object which I have in view in the following article is to speak of those modifications in the management of stock which the experience of the last eight years, in connection with the changes of the times and the gleams of light cast upon the subject by scientific research, has induced me to adopt, reserving for a future occasion an account of those changes in the culture and cropping of the land which were in unison with, if not a necessary consequence of the system adopted.

"*Stock.*—I give the precedence to this branch of farm management, because of late years it has been the surest staff on which the farmer could lean, because rotations and cultivation must accommodate themselves to this object, and because though all are conscious that we can no longer rely as heretofore on the corn-crops for paying the rent, perhaps none of us have been able sufficiently to throw off the trammels of custom and association, which led him to look for profit first to the stack rather than to the stall; a view which the unreasonable custom of taxing the Turnip-crop with the duty of doing all the scavenger's work for the whole rotation, besides leaving a dressing of manure behind without any allowance made, tended greatly to foster."

very general, and there is no lack of hands. There appears to be a full average of straw, and though the yield cannot possibly be a good one, it promises better now than it did a month ago. There is a large breadth of Barley cut down, with very little prospect of any being harvested. Both that which is cut and uncut are much damaged by the rains, and a fine sample of Barley fit for the Burton ales will be a "rara avis" indeed. The Oats and Peas are partially housed, but in very poor condition; and the Bean crop is as yet untouched. The root crops are both very small and very backward. There has been such a thorough absence of solar heat this summer that these roots could not progress, and the consequence is a very deficient crop. From all we can hear and see, we are satisfied it will be a most disastrous and unfruitful harvest.

YORKSHIRE: *Richmond, Aug.* 30.—Since I wrote to you for your general report on the crops of this year the weather has been unusually gloomy and wet; the consequence to corn has been shown in its having made much less progress in ripening than I had expected, and harvest will not be general in this district before the 10th September. The grain is in many places much beaten down, but I do not think it has otherwise suffered from the wet weather. During the last two weeks I have been over a great portion of England, and my former opinion has by a close inspection and after much discussion with farmers in various localities, been confirmed, that the general crop of Wheat is below an average. In the southern counties I found the harvest this week general—the weather very unsettled and hindering the work, but I do not the crop much injured by the rain. *H. J. Turner.*—*Wetherby, Aug.* 29.—Since I sent you my report a few weeks ago of the state of our crops, our prospects have become much more gloomy. Violent storms of rain have beat down the crops, and frequent showers have kept them wet for the last three weeks. The quality of grain is unquestionably deteriorated, and should the showery weather continue another week the whole crop will be irretrievably injured. Mildew and rust are prevalent enough, and in many instances the laid Wheat and Barley is much sprouted. The standing corn will no doubt shortly begin to sprout in the ear. *J. Hannam.*

WEXFORD: *Aug.* 29.—The hay crop, after Grass, and pasture land generally, have been luxuriant; the hay in some instances, however, has been harvested with difficulty, and in a few cases damaged. The indolent habit of waiting for the harvesting of late meadows, in order to collect the early and late hay crops in one rick, results throughout Ireland, it is said, in a loss of at least 5*l.* in the 100*l.* The surface under hay cocks left on the field, often during many weeks, is rendered unproductive, and the surface of hay withered into innutritious straw by long exposure must also occasion much loss. Autumn-sown Oats, though partially laid, and harvested during frequent interruptions from rain, are excellent in quality and above the average in quantity. On the whole Oats will prove an abundant and remunerating crop. Barley will possibly be a very full crop; the prime malting samples may be scarce. The proportion of land under Wheat in this district is not considerable. The low temperature has been very unfavourable to this crop. There is neither smut nor mildew, however, and the straw stands up well; the ear is large and full. A dry fortnight would leave us little to complain of with regard to any crops excepting Potatoes. About the 20th of July the appearance of the drills was highly promising, though the plague spots had been seen. In two days afterwards every field had both the full appearance and the smell of the disease. Of the two sorts usually cultivated here those called Primroses and Scotch Downs, the former (the earlier variety) have been the more severely smitten; the latter, though with decomposing foliage, have many sound tubers; yet many of these now apparently untainted ones will decay long before the spring. In wet and cold clay soils the yield is very trifling, and it is to be feared that of the whole crop one-half will have failed, and the remainder will be of bad quality. During March and April Beans had a miserable appearance. The rains in May and June served them surprisingly, and they grew apace. I have rarely seen them so high and yet fully podded as they now are; with sunshine to ripen them they will give a large return; but they are now quite green. I have yet to notice the most flourishing of our crops. Weeds seem to have established themselves on the fixity of tenure principle more decidedly than ever before. *Martin Doyle.*

THE VALE OF STRATHMORE.

POLLED ANGUS CATTLE.—MAINS OF KELLY HERD AND GENERAL MANAGEMENT.

(*Continued from p.* 683)

IN regard to manure management, and the culture of root-crops, Mr. Bowie holds a position second to none. He has, for several years past, carried off the first prize of the Angus Agricultural Association for Turnip growing, in the southern district of Forfarshire; while his reports to the Society have proved alike interesting and instructive. Last report, in particular, is worthy of far better treatment than a simple epitome in passing. Some of the ideas are singularly at variance with nine-tenths of Scottish practice, and more nearly accord with the tastes of some of our best English farmers. "Under a six-course of cropping experience yearly teaches me that the less the plough is used in spring the better; and were the land so free from weeds as even to dispense with the use of the grubber, I am not clear but the better would be the braird and the better the crop of Turnips—always of course bargaining for the deep and dry autumn stubble furrow. When we look back to old methods, repeated ploughings, it is difficult to state reasons why an opposite course may now be the better one. I will hazard a few, which may be taken for what they are worth. May not one fault of the modern six-course be that the land gets little or no rest? May not repeated ploughings in April or May to lands manurially rich not only cause the loss of moisture but also of ammonia? May the pulverised surface soil that has come under the action of the winter frosts, and the spring drought and warmth, not be the most suitable in which to deposit the Turnip seed? May not the autumn stubble soil turned down by the plough be the exhausted soil of the previous Wheat crop, and unsuitable for stimulating the young Turnip plant? May not the soil then turned up be the one enriched by the rains of winter washing down a goodly proportion of the better properties of the manure applied to, and not required by, the Wheat crop? Moreover, may stubbles not be better placed below, and left to decompose and act as a manure to the Turnip root as it goes down in search of food?"

His crusade against the guano monopoly, as shown in the economising of home resources and the manufacture of a "special mixture" partly therewith, we also prefer giving in the words of his report. It is worth the copying by any farmer on either side of the Tweed. "The home-made heap consisted of household ashes, the manure for a year of 10 to 12 dozen fowls, night soil, stale urine and bone dust, in the proportion of about 1½ cwt. of the last, mixed with 3 cwt. of the other materials—the bones of course being the chief cost of the whole; these added, and the mixture turned the first time about the middle of March, and after receiving two more turnings at intervals up to the period of Swede sowing, great heat was superinduced. It was then riddled through a ¾-inch sieve, and was in excellent condition for mixing with, and damping to a proper extent the dry Peruvian guano, and making the mixture suitable for distribution by hand over the drills. Every time the heap—in form like a Potato pit—was turned, great care was taken to consolidate and smooth down closely its surface, in order to prevent escape of ammonia. The materials collected on the farm had been previously turned before applying the bone-dust, but without creating much heat. No sooner however were the bones turned in than in a few days intense heat was created, and timeous and copious supplies of urine prevented the heap from becoming too dry—thereby rendering it rich and friable—care being taken in the urine appliance to have the whole in a proper state of dampness for mixing with the guano. It is thus I have been practically led to approve of bone-dust, partially dissolved, in preference to dissolved bones proper. And were the use of guano lessened, or discontinued altogether, I would recommend the home-heap to be mixed three or four months before being required." But there is no great fear, as far as his example goes, that Peruvian guano will speedily be a drug in the market; for we saw in his manure house—an old earth floored barn, 42 feet by 16 feet, which had been transformed from its original purpose—piles on piles of guano bags, as well as other fertilisers. Some 8 or 10 tons of the genuine article annually enters this domicile. At the time of our visit a couple of men were actively engaged riddling and mixing the home-made heaps, with Somerville's and the Glasterlaw artificials — the allowance for each field being put in separate heaps on the floor. As to the aforesaid heap, we could not help being struck with its evident value; and a shrewd Forfarshire farmer who was with us said that "he would rather have that heap on his farm than a hundred pounds." Nor is less attention paid to the other manurial resources; but into these we cannot now enter. Hedges are neatly trimmed, and a nice Gorse hedge or two show themselves around those fields nearest to the sea, where the Thorn or Beech could hardly be reared.

A nice plant of seeds and Clovers in several fields go a long way towards making amends for the total lack of permanent pasture. The roads, too, are excellent; the buildings, plain and old-fashioned, but spouted and in good condition; the horse-mill-course snugly thatched with Carse of Gowrie Reeds; and everything, down to the old cur looking out of his kennel, wearing an aspect of peace and plenty. *T. Bowick.*

THE SHORT-HORNS AT PONTEFRACT.

WHATEVER may have been the origin of the bovine species, it is a fact that something very different from "natural selection" produced our present improved Short-horns, the most profitable for their early maturity, superior meat, and fine milking property. The "Britishers," whom Cæsar found so addicted to beef and new milk, did not possess a Short-horn among their wild or domesticated cattle; and there is no decisive evidence whether the breed was at first imported from the western shores of Europe in the 17th century, the era at which so many good things for field and garden found their way to us, or whether the Dukes of Northumberland had bred and improved them a full century before. It is clear that the red, red and white, and roan-coloured cattle were, at the close of last century, better on the fat pastures of the Tees than anywhere else; that the brothers Colling were practically the founders of the breed; and that all our best Short-horns claim descent from their "Hubback," a bull purchased for 8*l.* out of a bye-lane, just as our best horses on the turf boast the blood of the Godolphin Arabian. The genealogy exists in an unbroken line; and, though at times the breeding has been very close in blood-relationship, it does not appear that this "in-and-in" system has any tendency to induce degeneracy or disease, provided mongrel and cross-bred animals are avoided. The union of "nobody's son with everybody's daughter," is not a satisfactory basis on which to found a family of cattle; but pedigree has proved itself to be of the highest importance—the ability of a bull or cow to transmit valuable characteristics depending, in a great measure, upon it having inherited these properties through a long line of ancestry. Foljambe, grandson of Hubback, the father of Short-horns, begat both sire and dam of Favourite; and, again, this produce of half-brother and sister begat both Comet and Comet's dam; and from these are descended, as from an Adamic stock, the more than 500 herds now in Britain; and some 7000 head of these pure-bred animals are registered every other year in Mr. Strafford's Herd-book—the "Peerage and Baronetage" of hoof and horn. Independently of their own intrinsic excellence and profitable qualities, the Short-horns have the grand merit of improving every breed their blood may mix with; and thus they are sought by the breeders of France, Belgium, Italy, Prussia, Russia—indeed, of all Europe, and are exported on a great scale to America and to our colonies of Canada, New Brunswick, New Zealand, and Australia. We sell 50,000*l.* worth every year by public auction, and an enormously greater amount by private transactions—the almost fabulous fancy prices obtained by our crack breeders being seconded by a regular commercial market at handsome figures. Short-horns can boast of celebrated sales, such as that of Charles Colling's, in 1810, when the animals averaged 152*l.* per head; of Robert Colling's, in 1817, when the average was 129*l.* per head. At the revival of the rage for good breeding came Earl Spencer's sale in 1846, where 123 animals made 69*l.* each; then Mr. Bates's sale, in 1850, at an average of 67*l.*; and Earl Ducie's, in 1852, when 62 animals realised 151*l.* per head. For long prices of single animals we have Charles Colling's Comet, sold 50 years ago, at 1000 guineas; his world-famed "Durham ox," refused for 2000*l.*; Earl Spencer's Exquisite, sold for 370 guineas; Mr. Bates's Duchess 59th, at 350 guineas; Earl Ducie's Duchess 66th, at 700 guineas; and Colonel Towneley's Master Butterfly, at 1200 guineas.

A Short-horn is not only a Short-horn, but it is also of a certain tribe or family, or derives its meritorious qualities through some particular strain of one of these families, claiming peculiar virtues of aristocratic descent, as a "Duchess," an "Oxford," a "Butterfly," and so on. Yorkshire is the very centre of the northern district in which these *élite* of the pure breed have been perpetuated. After the celebrated herd of Mr. Bates, of Kirkleavington, had given to the world the best Short-horns it had ever seen, the Booths, of Killerby and Warlaby, began their brilliant career with the herd which they had been long forming under the shelter of the Hambleton Hills. Of honours from the Royal and the Yorkshire Agricultural Societies they have won an unparalleled number, since the illustrious twins Bracelet and Necklace, with others, carried off hosts of prizes nearly 20 years ago. Mr. Booth does not sell, but lets out his bulls on hire at 100 to 300 guineas the season; and the merit of possessing "Booth blood" always runs up the price of other breeders' Short-horns at the public sales. At the present show Mr. Booth's cow, Queen Mab, takes the first prize in her class, and the silver cup given by the Earl of Harewood for the best Short-horn cow in the show. She was second at Canterbury to Mr. Eastwood's Rosetta, of Mr. Wetherell's breed, this cow being now absent at the Royal Irish meeting at Cork, where she has taken the gold medal and Challenge Cup. Mr. Booth's 2-year old heifer and yearling heifer also got second prizes.

Captain Gunter perpetuates on the banks of the Wharfe the glories of Mr. Bates's Duchesses and Oxfords, under the guiding skill of his steward, Mr. Knowles, formerly Earl Ducie's herdsman, and it was with some of the Duchess tribe from Earl Ducie, and from Mr. Tanqueray, of Hendon, that the Captain commenced his herd. The splendid twin yearling heifers which won such honours at Canterbury are not here, having gone to the Highland show, but the beautiful Duchess 77th, justly carries off the first prize in the class of 2-year old heifers.

Mr. Marjoribanks, who wins the first prize here, as he did at Canterbury, for bull calves, with a son of his celebrated Great Mogul, and exhibits heifer calves of rare merit, began Short-horn breeding about 17 years ago on his farm at Bushey Grove, Herts, and his Great Mogul, only seven months old, was bought in at his sale for 400 guineas. Mr. Ambler, one of our most successful breeders, commenced his herd near Halifax about 20 years ago; and, though he has exhibited comparatively few animals at the Royal shows, he has carried off many prizes, and can display a splendid group of cups and medals. His second prize aged bull here is remarkably good; his yearling bull also ran the prize animals very close in that class; and his most beautiful two-year-old heifer Wood Rose is so meritorious that some very heavy bets were depending on her competition with Captain Gunter's, which takes the first prize; and certainly it is a general opinion that she should have had the second prize, instead of being beaten, according to the strange decision of the judge, by Mr. Booth's Queen of the Vale. Mr. Fawkes, of Farnley, another great breeder, at whose periodical bull sales the average price is commonly 80*l.* per head, takes the second prize for yearling bulls, as he did at Canterbury. Sir Charles Tempest wins the first prize with his beautiful yearling heifer. Lady Pigot shows some very fine animals. The Towneley herd, now so famous, is an example of what may be accomplished by a liberal master and manager of the highest skill, judgment, and energy; as little more than ten years have sufficed for Mr. Eastwood and Mr. Culshaw (agent and bailiff) to place Colonel Towneley at the head of short-horn breeders. The prize silver cups, timepieces, and gold and silver medals in the Towneley plate chest are a sight to be seen; and most of these replendent honours have been won by the Butterfly tribe, Butterfly, daughter of Buttercup, being descended,

through Bampton Rose, direct from Comet. The world-famed Master Butterfly, sold for 1200 guineas, was her second calf, by Frederick, a magnificent bull, never shown, but which is the sire of almost all the Colonel's prize-takers. Royal Butterfly, the present hero of Short-horn circles, is Butterfly's fifth calf, by Frederick, and the Colonel has refused for him a bid of 1200 guineas, which sufficed to purchase the brother. For a portrait and biography of this perfect bull, one of those noble specimens of the breed which are rarely produced, we may refer to the present month's *Farmer's Magazine*. Several of the Canterbury decisions are reversed, as in the yearling-bull class, where the Royal third prize bull is here placed first, and the Royal first in the same class is here put out of the list of prizes altogether; but, of course, Royal Butterfly maintains his kingly rank, and has now further laurels left to strive for. Ten animals of this herd are shown in five classes, taking two first and four second prizes, the second-prize bull calf being Royal Butterfly's son. As an additional proof of the superiority of the tribe, it turns out that the prize yearling-bull at the Highland Society's Dumfries Show, this week, is a son of Frederick, and therefore half-brother to Royal Butterfly; so that this grand old bull's progeny win at the three great meetings of the Royal, Yorkshire, and the Scotch Societies.

Frederick's Fidelity, the white cow which gained first prize at Warwick two years ago, is here second to Lady Pigot's fine first prize cow, mainly owing to her having become reduced in flesh by being such a good milker. Pearl, a magnificent cow, most beautiful in form and proportions, and possessing every requisite in quality and delicacy of handling, has been placed second to Queen Mab, a cow 13 months older—an award which is very generally criticised as erroneous. The final contest for the silver cup lay between Queen Mab (the winner), and Colonel Towneley's Emma, which took the prize in the extra stock class, and an additional judge was called in to determine the adjudication, but a considerable diversity of opinion exists as to its correctness. In the heifer-calf class, again, nobody can understand why it is that Mr. Lascelles should have the first prize, while at least four others—namely, Colonel Towneley's, two of Mr. Marjoribanks', and one of Mr. Jolly's are considered to be better animals. It is perhaps difficult to find really good judges of any breed of cattle, who are perfectly free from predilections in favour of certain strains of blood in that breed. *Times.*

Home Correspondence.

Carduus arvensis.—All your readers will thank you for the interesting article upon this plant in No. 34 of your paper. It gives us all some most useful hints how to eradicate this pest to farmers. When a boy it used to puzzle me what could be the use of Nettles and Thistles, the first of which used to punish my fingers and the other prick my legs. As I grew older I became reconciled to the Nettles as being the means of painting our landscape with the beautiful tortoiseshell and peacock butterflies, as well as feeding many a poor man's pigs and cows. At Criccieth this spring I saw innumerable ducks almost reared upon the two chopped with the smallest possible amount of meal, and any cottager knows that by careful feeding you may rear turkeys to a certainty upon Nettles and Docks chopped. But it is to Thistles that I mean to draw your attention. Some 30 years or more ago I observed the cottagers and small farmers in Carnarvonshire feeding their cows upon Gorse; and remarking how sleek they looked and how well they milked I adopted it for my own, and have ever since found it the best winter and spring food for cows and horses. This year I was visiting a farmer in the same county, when he was called out, and on his return said "You will be amused, sir, at what a man has been to me to purchase. I have two fields with a good many Thistles in them, and he has come to buy them for his horses." This certainly was quite a new idea to me in farming, and I determined to examine into it. I found all the farmers and cottagers about regularly feeding their horses upon chopped Thistles, and I never saw animals look better or more up to their work. At a farm where they kept six large horses, I saw the servant girls coming home with long deep baskets at their backs very much like those the Swiss women use, filled with Thistles, which they cut in the corn fields with a little hooked knife at the end of a stick. These they took to the stable, where they were chopped, and the horses ate them greedily. When I got home I walked round my small farm hoping to find a crop of this useful plant, but could not discover any—I however afterwards found some in an orchard and had them mowed. The looks of my carter's face when I sent them in a wheelbarrow and told him they were for his horses, were inimitable. He evidently set me down as a fool. However I saw them chopped and had them given to five horses, all of whom were upon excellent Tares and Oats. They would not touch the latter till they had finished every bit of the Thistles—and then the broad grin of the same carter was as amusing as his former looks. I have now my eye upon a bed of Thistles some miles off which I mean to fetch, and have another trial of them now they are old and in seed, and will send you the result. I have no doubt that in stiff lands where Thistles grow abundantly they will prove a very useful food for horses—and this has brought to my mind that any farmer must have observed that cows eat the withered Thistles when mown in a pasture greedily—so no doubt they are a good food for them also. *W. D. Fox.*

Cost and Quantity of Work with Burgess & Key's Reaper.—I have read with interest the contributions of your various correspondents in last week's *Agricultural Gazette* to the settlement of the above question, perhaps with not the less interest because, from various parts of the country, and under varying management and circumstance, they appear to confirm the statement I made to you in the last Number of the *Agricultural Gazette*, that the cost of reaping, binding, and stooking with a Burgess & Key's was 5*s.* 6*d.* per acre, including every expense; and that one man would gather, bind, and stook an acre in a day. Thus your correspondent "M. R. A. C." says, "the taking up of my corn—exclusive of cutting—costs me on an average 4*s.* per acre." Now allow 8*s.* for the wages and keep of two men—driver and attendant—in harvest time (and with me it would be often 10*s.*), and 8*s.* more for four horses (which would certainly be required to cut down 13½ acres a day), and you have a total cost of a little more than 5*s.* 2*d.* per acre. As few people, I fear, can manage so well and so much as "M. R. A. C.," the average cost would prove to most the full 5*s.* 6*d.* As to the quantity which can be done by one man in a day, "M. R. A. C.'s" experience may be considered as more exactly confirming mine, as with him one man, one woman, and one boy, "can sheaf and stook, when nicely laid, 2 acres per day," which, taking the woman and boy to be equal to one man, would give us 1 acre per man a day. In like manner your correspondent "E. B. H." calculates the expense at 5*s.* 6*d.* an acre, but without the horses, and only cutting an average of 6 acres a day, with Dean & Dray's. But this is a very low average of work. With Burgess & Key's reaper you would do more, and thus pay for your horses, which surely you ought to do. At least I know horse-labour with me is very precious at harvest time, and is much wanted for finishing the work on the half (bastard) fallows, and ploughing (the earlier the better) for the Wheat. Except when pushed I keep my deep plough or harrow, or cultivator, at work all harvest time. But mine is heavy land and requires early cultivation and sowing, and perhaps "E. B. H.'s" is light, and therefore he may be able to afford his horses a little holiday in this, to me, precious season. Mr. Coleman reports from Cirencester that he "cut 150 acres most satisfactorily last season, tying up, stooking, and raking the ground for the sum of 4*s.* 6*d.* an acre." In this Mr. Coleman does not include "horses and driver," which we may therefore reckon at 1*s.* an acre more, bringing up the total cost again to 5*s.* 6*d.* His experience seems also to confirm my estimate that a man (or the equivalent of a man in cost and worth) should gather, bind and stook an acre a day; for he says, "12 to 14 hands, men, women, and boys, tied up 10 acres a day." I think, therefore, that as nearly as varying circumstances will allow us to get at a common result, your question in the *Agricultural Gazette* of the 4th August is answered—every man, or the equivalent of a man, should bind and stook an acre a day, and the cost of harvesting per acre with a Burgess & Key's will be one man's wage per acre, and the expense of horsing and working the machine. I am glad to find so many of your correspondents can work the machine round the field. Mr. Coleman thinks that my mode of working (only one way) must be in consequence of my crops being laid. It is not exactly so; but living as I do near the coast, and exposed to a prevalence of north-west winds, my crops usually, by harvest time, have so decided a leaning in one direction, that while it makes good reaping easier against that leaning, it makes it impossible with it. *Exile.*

Societies.

NEWCASTLE: *Choice of a Breed.*—At the last monthly meeting of this Club Mr. Hedley read a paper on cattle, from which we make the following extract:—"We now arrive at the third part of our subject, namely, what kind of animals to select to be most remunerative to the graziers of this country? In my close identification with fat cattle for several years I have always found that the best animals have the most massive heads, most capacious chests, and strongest spines. I have, therefore, evolved a few rules to go by in the purchase of lean ones, and scarcely with one exception I have found them to be applicable. The head of any of our bovine races ought to have the first consideration; that is the true index to the vital acumen, and even bodily construction; and will be found to foreshadow all of good or bad that may be accomplished. Thus an animal possessed of a broad, full, spacious skull and strong evenly-bent deflective horns will be found to have a thick neck at the base, wide thorax, and strong nervous system; while one with long, narrow, contracted skull, and puny, abruptly bent horns, will be characterised by weakness, wildness, and slowness to fatten; a small, dull, sunken eye betokens hardness of touch and inaptitude to fatten; and a bright, large, open soft eye, *vice versâ*; a starting, dark, fiery eye often accompanies a small forehead and hereditary wildness, and when combined with small drooping horns, and a chin with no loose skin hanging from it, is a very despicable animal indeed, weak in constitution, predisposed to lung disease, and sterile in fattening propensities. Animals with weakly-formed hands, have always small appetites, often narrow shoulders, and small loins, and the width of these parts will always be found in an exact ratio with the strength of the head. The nose, instead of being long and fine, as Virgil, Aristotle, and several other naturalists recommend it, ought to be in my opinion thick, strong, and near the ear as possible, if only in proportion to the size of the frame. Thickness of nose and thickness of chest are often twins, and so are thin, meagre, irregular noses and consumption. Small, snipy noses oft sniff the air into frames of small capacities, and are joined to mouths that can crop but very small morsels at a time. These observations I have found to be applicable to any of the kinds of cattle shown at Newcastle market, but besides the shapes of animals, the age and class must always have especial consideration, and be adapted according to food and situation; otherwise, the realization of remunerative profits will be uncertain. In warm sheltry valleys, abounding with rich fine succulent herbage, I do not think there is any class of animals whatever can equal the Shorthorns for growing and making pay, and most assuredly not any for Turnips in folds in winter. I would choose for Grass in spring heifers or steers quite filled up with lean flesh, and not less than two and a half or three years old; and for Turnips in winter, the same class of animals as regards freshness, but from three to four years old, or otherwise large stirks possessing all their calf life; such stirks are decidedly preferable to small slender two-year-olds for Turnips, and do infinitely better for the grazier on the same amount of food. For seven-eighths of the summer pasturage of England, however, the Shorthorns are found to be too good, and when judiciously alloyed with the Irish and Galloways the produce has been found for several years to supersede the Shorthorns in their purity. The half Irish breed excels the half Galloway on altitudes dry and arid, and the latter the former in marshes low and humid. The Irish ox is the truest type of the old breed, the stripe along the back not having yet disappeared. The Galloways are the hardiest race known, and the only one that appears quite invulnerable to lung diseases, and when well crossed with soft-backed Shorthorns are better for Turnips than the half Irish, and nearly equal to the Shorthorns themselves; but the half Irish as a body quite excel the half Galloways for Grass, being often of more suitable ages, and hence easier fattened. As there is little surplus, however, of the Galloways in those districts where they are bred, we generally have few on offer, and these often too young and high in price, so that the attention of graziers has been chiefly turned to the half Irish. And I do not know how the rapidly increasing demand for beef in England could possibly be satiated if it were not for the vast ranges of gross marsh-land, and the fine undulating sweeps of endless green hills in Ireland, held by its people at nearly nominal rents—thus enabling them to rear cattle, and bring them here at from two-and-a-half to four-years-old ages, when their dispositions are positively to become obese, at half the prices we could afford on the poorest of our lands to rear them, or any other kinds, to the same ages. It is marvellous to contemplate the rapid increase in the importations of this kind of cattle within the last 70 years. In 1790, I perceive from statistics, the heads of cattle brought to England and Scotland were 19,460; in 1826 about 58,000; in 1835, 98,000; and if the increase up to 1860 has been upon the same ratio as between the last two periods, our importations this year will amount to about 209,000—a stupendous item in the supply of the staple food of this country. Amongst the many advantages bequeathed thereby there are, however, some drawbacks and disadvantages to contend with, the most formidable and deleterious of which are the immense prevalence of calves, and the devastating epidemic called pleuro-pneumonia. The latter, however, may in a great measure be avoided by a strict observance of the anatomy and healthful appearance of the animals you buy; but the former, being totally hidden in its earliest stages, and if manifest at all only to allure in the improved gloss of the skins, I shall endeavour in this the fourth and last part of my subject to suggest a few of the means which have occurred to me as calculated to obviate the calamity to some extent. It is, however, necessary to form a synopsis of the evil complained of before prescribing for its cure, and I trust it may appear of sufficient importance to engage the attention of the gentlemen present, and also that of graziers generally; and should any one be kind enough to suggest a more efficient remedy I shall feel it as an obligation, and be happy to co-operate with all the means in my power to get it properly applied. Assuming the preponderance of heifers and cows over steers in 209,000 (the total number calculated to be imported this year) to be 20 to one, the quantity of female animals will be 198,550, and in that number we may expect to be quite within when we say the half turns out in calf. This will make 99,275 calvers, and as many calves. Supposing, then, these calvers by lack of flesh and price per stone, on account of the lateness, to make 3*l.* 10*s.* a-piece less for the graziers, and 2*l.* 10*s.* a-piece in worth of flesh less to the consumers, after deducting the value of the calves dead and alive at 25*s.* a-piece for veal, there is a clear loss to graziers of 2*l.* 5*s.* a-head, or an aggregate of 223,369*l.*, and to the consumers 124,093*l.*, equal to 360,000 stones of beef when at 7*s.*

per stone. Surely, then, it is worth while to endeavour to devise some stimulus to the breeders of, and dealers in, these cattle, to try to bring us them free from calves. The only way that occurs to me likely to be in any way effectual is for the Clubs of the provincial towns of England to offer good prizes at their principal fairs to the persons who will bring the first, second, and third best lots of 20 two-and-a-half or three-year-old unbulled heifers for sale, the prizes to be 20*l*., 15*l*., and 10*l*., and not to be awarded until the lots are proven quite barren, the entries of competitors to be made one full day before the fairs by paying a small amount. The lots for competition might be set off at one side, and the sales might go on simultaneously with the adjudications. Adjudications to the six best lots might be made, and, failing those to whom the prizes were adjudged, to go to the other three; but, failing them, to revert back to the funds. The funds I think would be easily raised by small subscriptions from graziers, members and non-members, and it would also be found, as I have shown by calculation, to the interest of all classes of the community to subscribe, as a means of cheapening their food by a greater supply of it, and also equalising the prices by regulating the quantities brought to market."

Notices to Correspondents.

ARTIFICIAL MANURE: *T Bence*. A pamphlet by Mr. Moule describes the manufacture of an inodorous fertiliser from clay and night soil (Bradbury & Evans). As to the other substances named – 10 of bones, 5 of sulphuric acid mixed in a heap, and the result mingled with 15 of any waste flesh or night soil, and then thrown together and repeatedly mixed and turned over, with 70 or more of moist but friable clay soil, will make the very best of compost, to be used as a dressing at the rate of 10 to 20 cwt. per acre.

IMPORTATIONS DURING SEVEN MONTHS, ENDING AUG. 1: *R.*:—

ARTICLES.		IMPORTATIONS. 1859	1860
Animals, living—Oxen, bulls, & cows.	No.	10,051	23,838
Calves		11,590	9,845
Sheep and lambs		89,924	98,073
Swine and hogs		2,103	4,631
Bones (whether burnt or not, or as animal charcoal	tons	38,848	31,064
Corn:—Wheat, from Russia	qrs.	313,651	328,436
Prussia		375,764	649,984
Denmark		139,656	184,618
Mecklenburgh		93,731	127,668
Hanse Towns		43,529	79,114
France		1,029,788	111,853
Turkey and Wallachia and Moldavia		43,341	96,343
Egypt		342,631	43,448
United States		3,228	260,227
Other countries		195,362	83,099
Total		2,580,681	1,903,790
Barley		688,598	1,262,800
Oats		701,438	1,333,522
Peas		42,433	158,515
Beans		160,307	224,974
Indian Corn, or Maize		489,878	1,028,686
Wheatmeal and Flour—			
From Hanse Towns	cwts.	135,290	176,381
France		2,409,087	936,110
Spain		..	..
United States		24,863	534,195
Other countries		53,851	250,509
Total		2,623,091	1,897,195
Indian Corn-meal		1,384	2,630
Flax, dressed and undressed—			
Russia and Prussia		377,629	388,734
Holland		54,853	107,406
Belgium		52,773	82,165
Other countries		60,231	34,458
Total		545,486	612,763
Guano	tons	52,516	75,076
Hemp, dressed and undressed—			
Russia	cwts.	160,615	62,866
Austrian Italy		93,356	57,369
British East Indies		20,602	14,250
Philippine Islands		112,06	37,405
Other countries		20,453	4,730
Total		407,089	176,620
Jute and other vegetable substances of the nature of hemp		599,241	453,481
Hops		1,418	543
Oil seed cakes	tons	43,951	53,715
Potatoes	cwts.	468,613	125,629
Provisions—Bacon and hams		66,439	222,115
Beef, salt		153,051	206,506
Pork, salt		99,442	120,849
Butter		230,803	388,205
Cheese		183,478	221,312
Eggs	No.	102,892,200	110,651,400
Lard	cwts.	53,484	159,714
Rice, not in the husk		375,054	488,865
Saltpetre		219,328	174,266
Cubic Nitre		287,743	518,083
Seeds—Clover		73,565	184,166
Flaxseed and Linseed	qrs.	530,630	606,799
Rape		184,431	109,396
Wool, sheep and lambs'—From Hanse Towns and other parts of Europe	lbs.	16,917,813	16,327,230
British Possessions in South Africa		6,056,665	7,167,988
British East Indies		5,488,975	8,212,580
Australia		39,103,280	42,210,517
Other countries		5,997,238	6,286,839
Total		73,563,971	80,205,154
Wool, Alpaca and the Llama tribe		1,661,314	1,556,133

SALE OF DEVON STOCK AND LEICESTER SHEEP: *M J C.* We direct attention to the advertisement in another column of the sale of Mr. Turner's stock at Barton, near Exeter. We shall refer to it at greater length next week. The prizes which have been taken at national, metropolitan, provincial, and local shows, are proof that the herd stands at the very top of the scale of merit in its own particular breed.

GLASS FOR GREENHOUSES, &c.

Sheet Glass, in Crates.

	16 oz.	21 oz.	26 oz.	32 oz.	36 oz.
Best	5½*d.*	7½*d.*	9½*d.*	1*s.* 0*d.*	1*s.* 0½*d.*
Seconds	3¾	5	6½	0 9¼	1 0
Thirds	2½	3½	5¼	0 7¼	0 10¼
Fourths	2¼	3¼			

Glass cut to any given sizes not on the List.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2¼*d.* per foot
" 3rds, 2¼*d.*, 2½*d.*, and 3*d.* per foot
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3¼*d.* per foot
" 3rds, 3½*d.*, 4*d.*, and 4½*d.* per foot

Glass for Orchard Houses,

As supplied by us to Mr. Rivers.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in.	Common	13*s.* 6*d.*	£1 1*s.*
20 in. by 14 in. / 20 in. by 15 in.	Superior do.	16 0	1 3
	English Glass	18 0	1 9

The above prices include the Boxes, with but few exceptions. When Packages are charged, full price is allowed when returned.

Sheet Glass, Stock Sizes, 16 oz.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 " 10, 13 " 10, 14 " 10, 15 " 10 ..	14*s.* 0*d.*	12*s.* 6*d.*
13 " 11, 14 " 11, 15 " 11, 16 " 11 .. / 14 " 12, 15 " 12, 16 " 12, 17 " 12 .. / 18 " 12, 19 " 12, 20 " 12 .. .. / 16 " 13, 17 " 13, 18 " 13 .. .. / 19 " 13, 20 " 13, 21 " 13 .. .. / 16 " 14, 17 " 14, 18 " 14 .. .. / 19 " 14, 20 " 14, 21 " 14 .. .	16*s.* 0*d.* per 100 feet.	13*s.* 6*d.*

Boxes included

ENGLISH GLASS of the above sizes 18*s.* per 100 feet.

Small Sheet Squares, in 100 feet Boxes.

6 by 4 / 8 " 6	6½ by 4½ / 8½ " 6⅜	7 by 5 / 9 " 7 / 10 " 8	7½ by 5½ / 9½ " 7½ / 10½ " 8½	11*s.* 6*d.* / 12 6

Boxes 2*s.* each, returnable at full price.

Patent Plate and Polished Plate Glass.
Ornamental and Coloured Glass.
Perforated Glass for Ventilation.

LONDON AGENTS FOR HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.

MILK PANS, PROPAGATING GLASSES, and every description of GLASS for Horticultural purposes.

JAMES PHILLIPS & CO., 180, Bishopsgate Street Without, London, E.C.

GLASS WAREHOUSE.—ESTABLISHED 1750.

THOMAS MILLINGTON,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

Reduced Tariff for Horticulture, Pictures, and Dwellings.

ORCHARD-HOUSE SIZES.

Supplied to Mr. Rivers and many Others.

In. by In.		16 oz.	21 oz.
20 .. 12 / 20 .. 13 / 20 .. 14 / 20 .. 15	Common, per 100 feet,	13*s.* 6*d.*	18*s.*
	Super "	16*s.*	23*s.*

SMALL SQUARES.

In. by In.		In. by In.		In. by In.	Per 100 feet.	Per foot.
6 .. 4		8 .. 6	Common		11*s.* 6*d.*	1½*d.*
6½ .. 4½		8½ .. 6½	Super.		12*s.* 6*d.*	1¾*d.*
7 .. 5		9 .. 7				
7½ .. 5½		9½ .. 7½				

Squares in 100 and 200 Feet Boxes.

Inches by Inches.	Inches by Inches	Inches by Inches.	Inches by inches.	Inches by inches.		P. 100 feet.	P. foot.
10 .. 8	13¼ .. 9½	13 .. 10	15 .. 10	13½ .. 11½	4ths.	12*s.* 6*d.*	1½*d.*
10½ .. 8½	13 .. 9	13½ .. 10½	12 .. 11		3ds.	14*s.* 3*d.*	1¾
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 . 11	2ds.	18*s.*	2¼
12 .. 9	12¾ .. 10¾	14 .. 10¾	13 .. 11		1sts.	21*s.* 6*d*	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13*s.* 6*d.*	1¾*d.*
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16*s.*	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19*s.* 8*d.*	2½
18 .. 11	18 .. 12	23 .. 13	24 .. 15	. ..	1sts.	24*s.*	3
13 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 13	22 .. 14	22 .. 16	.. ..			

If less quantity than 100 feet is taken, a moderate charge made for package.

GLASS CUT TO ANY GIVEN SIZES NOT ON LIST.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2¼*d.* per foot.
" 3ds, 2½*d.*, 2¾*d.*, and 3*d.* per foot.
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot.
" 3ds, 3½*d.*, 4*d.*, and 4½*d.* per foot.

HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Not accountable for breakage.

GENUINE WHITE LEAD	32*s.* 0*d.* per cwt.	LINSEED OIL	2*s.* 4*d.* per gall.
ANTI-CORROSION PAINT	34 0 "	BOILED "	2 9
LINSEED-OIL PUTTY	8 0 "	TURPENTINE	3 3

BLACK, GREEN, and all other kinds of PAINTS, VARNISHES, BRUSHES, &c.

CARSON'S
ORIGINAL ANTI-CORROSION PAINT,

PATRONISED BY

THE BRITISH GOVERNMENT
THE FRENCH GOVERNMENT
THE RUSSIAN GOVERNMENT

H.R.H. THE PRINCE CONSORT
MOST OF THE NOBILITY AND GENTRY
THE DOCK COMPANIES

RAILWAY AND CANAL COMPANIES
THE PRINCIPAL COLLIERIES
MILL OWNERS, IRON MASTERS, &c.

The ANTI-CORROSION PAINT is now used extensively for all kinds of

OUT-DOOR WORK,

Such as Iron, Wood, Stone, Brick, Compo, Cement, &c., and has been proved, after a practical test of 70 years, to surpass any other Paint; *and being peculiarly adapted for Conservatories, Hothouses, and Frames of all descriptions, is constantly used by Noblemen, Gentlemen, as also many eminent Horticulturists, for such purposes.* It is much lower in price, and lasts twice as long as the best White Lead, and can be easily applied by any Labourer, being sent in various Colours, requiring simply to be mixed (no grinding is needed). The Anti-Corrosion is a powder, and will keep any length of time.

COLOURS:—

White Stone	34*s.* per cwt.	Light and Dark Lead	28*s.* per cwt.
Light Stone	32*s.* "	Light and Dark Chocolate	
Drab or Portland		Bright Red	
Bath or Portland		Dark Red (or Brick Colour)	
Light and Dark Yellow Portland		Black	
Copper	30*s.* "	Invisible Green	42*s.* "
Light and Dark Oak		Bright and Deep Green	56*s.* "
		Blue (for Carts and Waggons)	50*s.* "

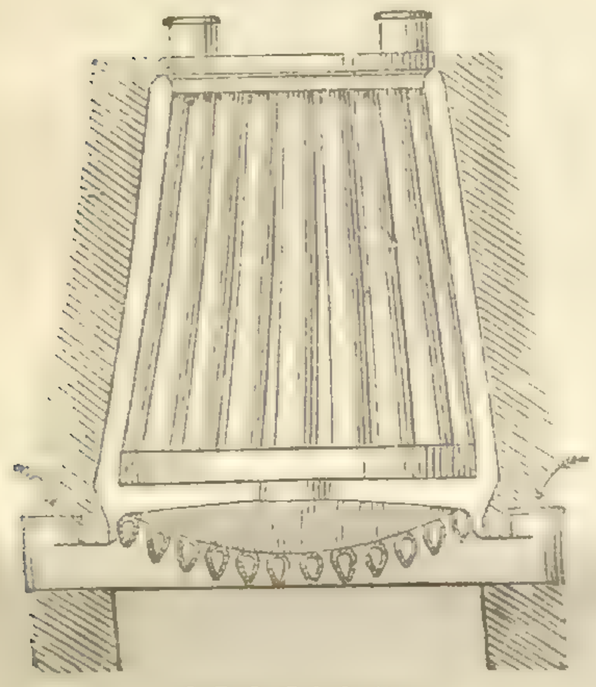
OIL, TURPENTINE AND BRUSHES.

A COPY OF TESTIMONIALS (700) WILL BE SENT UPON APPLICATION TO

WALTER CARSON & SONS (Successors to the Inventors),
9, Great Winchester Street (near the Royal Exchange), London, E.C.

NO AGENTS THROUGHOUT THE UNITED KINGDOM.

BY HER MAJESTY'S ROYAL LETTERS PATENT.



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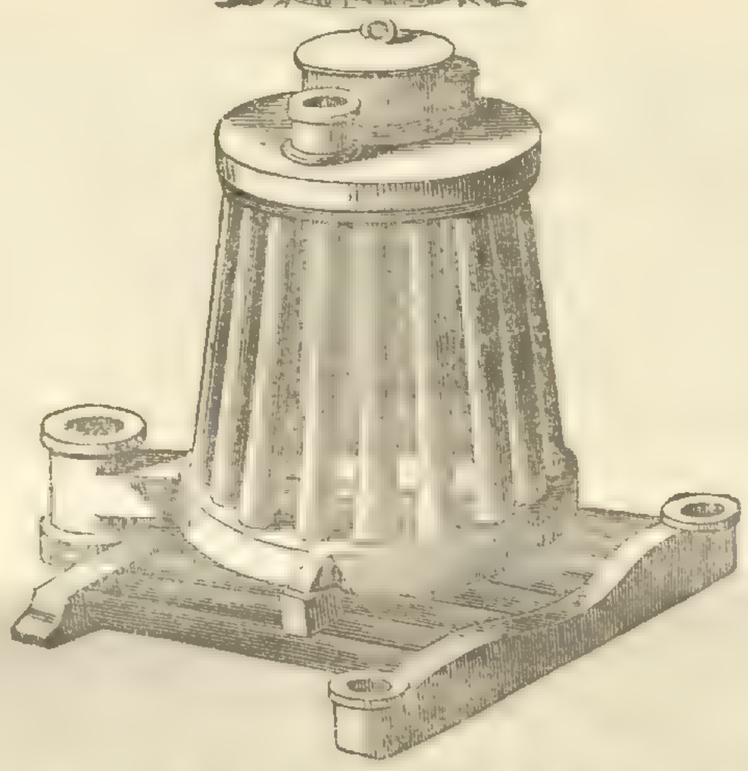
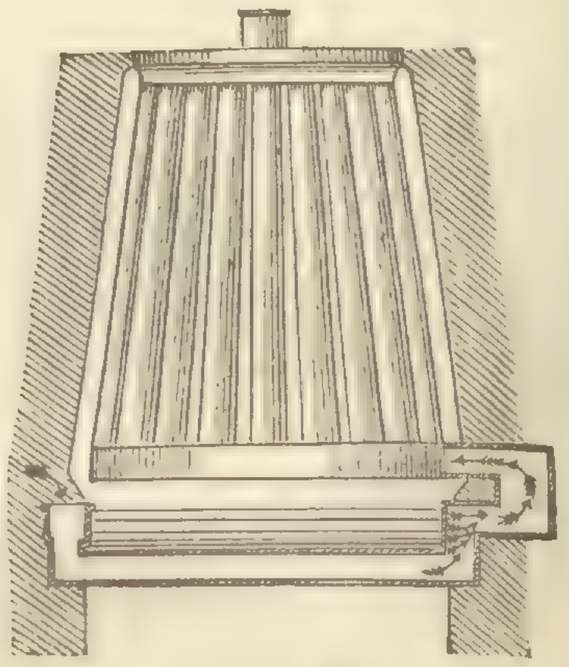




SECTION.

ORMSON'S PATENT JOINTLESS TUBULAR BOILER

is now allowed to be the best ever invented, and is the **only Upright Tubular Boiler protected by Patent Law. All others** may be manufactured by **any person.**

The **One-Boiler System** carried out to the fullest extent on the most scientific principles, and with **greater security** than can be done by any other Boiler.

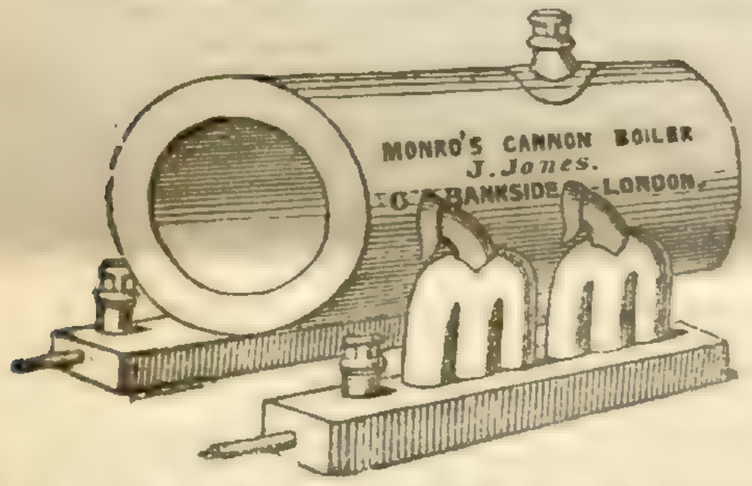
The **largest** Establishments Heated by **One Boiler. Conservatories, Winter Gardens, Vineries, Pineries, Orchard Houses, and Horticultural Buildings of every description manufactured by Steam-power Machinery.** Best materials and lowest possible charges.

Peach Walls covered with Glass at a very small cost. **Ventilation** on the best known principles. **Entire Fronts and Roofs opened by Machinery**

PLANS, SPECIFICATIONS, AND ESTIMATES FREE ON APPLICATION.

HENRY ORMSON, Horticultural Builder and Hot-Water Apparatus Manufacturer,
STANLEY BRIDGE, KING'S ROAD, CHELSEA, LONDON, S.W.

MONRO'S CANNON BOILERS.



MUCH has of late been said about BOILERS FOR HEATING BY HOT WATER, but these Boilers have now proved themselves to be the best at present invented. They are adapted for Heating every description of Building, and are made of various sizes. The price of the

24-inch Cast Iron is	..	..	.. £5 10s.	each.
24-inch Wrought Iron is	..	..	.. 6 10	,,
36-inch Wrought Iron is	..	..	.. 8 10	,,
48-inch Wrought Iron is	..	..	.. 12 0	,,

References to Gentlemen and Nurserymen where these Boilers are now at work. The Cannon Boilers are now kept in stock, and are to be had only of J. JONES, 6, Bankside, S.E. Also, every description of Saddle and Cylinder Boilers. Hot-water Pipes and Connections at prices lower than those of any other house in London. Estimates for Hot-water Apparatus erected complete in any part of the country, and an Illustrated Catalogue on application to J. JONES, 6, Bankside, Southwark, London, S.E.

RUSTIC WORKS (established 30 years) for durable, Ornamental, and Portable RUSTIC SUMMER-HOUSES, GARDEN SEATS, FANCY TABLES, &c. Carriage free. Go to TROTMAN'S, Upper Holloway, London, N. Sketch and price on application, ready for delivery.

WARNER'S PATENT VIBRATING STANDARD PUMPS.

PATENT CAST IRON PUMPS fitted with J. W. & Son's Patent Buckets and Suckers, which cannot clog in action, for Farms, Cottages, and Wells not exceeding 25 feet.

Diameter of Barrel.	Height.		£.	s.	d.
2½ in.	short 1 ft. 7 in.	Fitted for lead, gutta percha or cast iron flanged pipe as required.	1	1	0
2½ ,,	long 3 ,, 3 ,,		1	10	0
3 ,,	ditto 3 ,, 6 ,,		2	4	0
3½ ,,	ditto 3 ,, 6 ,,		2	9	0
4 ,,	ditto 3 ,, 6 ,,		2	18	0
2½ ,,	**short, with 15 feet of Lead Pipe** attached, ready for fixing		2	0	0
2½ in.	long ditto	ditto ditto	2	14	0

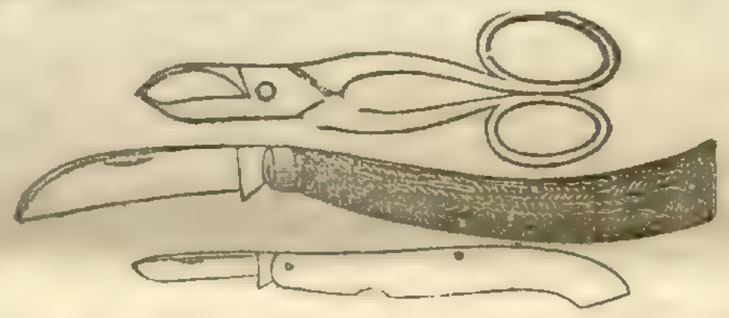
The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

May be obtained of any Ironmonger or Plumber in Town or country, at the above prices, or of the Patentees and Manufacturers,

JOHN WARNER & SONS, 8, Crescent, Jewin Street, London, E.C.

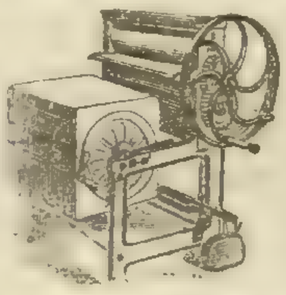
Every description of Machinery for Raising Water by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. &c.—Engravings sent on application.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.



SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

BRADFORD'S PATENT WASHING MACHINE. SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations." — THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

PRICES REDUCED.

H. J. MORTON AND CO., Galvanised Iron Works, 2, Basinghall Buildings, Leeds.

GALVANISED IRON ROOFING

for Farm Buildings and other Roofs; the cheapest, most durable, and neatest Roofing in use; also Spouting at 10½*d.* per yard.

WIRE STRAND CABLE FENCING.

(formed of Twisted Wires like a rope or cable), the strongest, cheapest, and neatest fence in use, will resist the largest cattle, and will not bend or get out of form by trespassing upon or over. Price, with five lines of the Galvanised Strand, iron main posts, and pronged Standards, 1*s.* 2½*d.* per yard.

This fence is far cheaper than posts and rails, or any kind of iron fencing; and possesses four times the strength of solid bars. Will not rust nor corrode. Upwards of 1200 miles of this Fencing supplied.

GALVANISED GAME AND POULTRY NETTING.

Galvanised, 24 ins. wide 2-inch mesh, 5½*d.*, 7½*d.*, and 9*d.* per yard.

Galvanised, 24 ins. wide, 3-inch mesh, 4*d.*, 5*d.*, and 7*d.* per yard. The Netting made any width, and with openings of any size.

GALVANISED IRON CHAIN CAMP STOOLS & CHAIRS, POULTRY FOUNTAINS & FEEDERS, PRONGED DAHLIA RODS AND ROSE STAKES, &c.

Strong CATTLE HURDLES from 2*s.* per yard.

PATENT IMPROVED GAS WORKS,

of all sizes, for the use of Private Houses, Mansions, Railway Stations, Mills, Collieries, Mines, Villages, &c. Works from 10 to 500 lights estimated for. The works can be entrusted to an ordinary labourer.—Apply to

HENRY J. MORTON & Co. 2, Basinghall Buildings, Leeds.

BARNARD, BISHOP, AND BARNARDS, NORWICH.

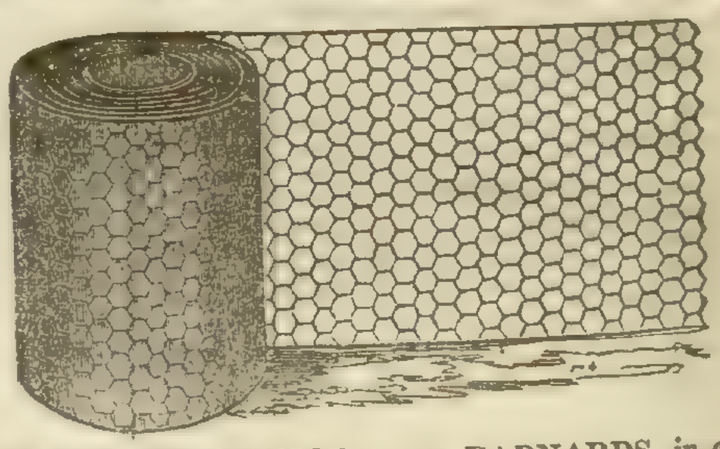
Reduced Prices of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 10*d.* per yard

The same with Galvanised Wire Rope, 1*s.* per yard.

Illustrated Catalogues with prices of every variety of Wire Fencing and Wire Netting forwarded free on application.

MACHINE MADE GALVANISED WIRE NETTING.



BARNARD, BISHOP, AND BARNARDS, in consequence of improvements in their machinery for the manufacture of the above article, have been enabled to make a great reduction in the prices.

		Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide ..	..	5*d.* per yd.	4*d.* per yd.
2-inch ,, strong do. ..	..	6 ,,	4½ ,,
2-inch ,, intermediate, do.	..	7 ,,	5½ ,,
2-inch ,, extra strong, do.	..	9½ ,,	7½ ,,
1⅝-inch ,, 24 inches wide ..	..	5½ ,,	4½ ,,
1⅝-inch ,, strong, do. ..	..	6½ ,,	5½ ,,
1⅝-inch ,, intermediate, do.	..	7½ ,,	6 ,,
1⅝-inch ,, extra strong, do.	..	10 ,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 8¼*d.* per yard, 3 feet wide Galvanised Sparrow-proof Netting for Pheasantries, 2½*d.* per square foot. Wire Netting of every mesh from half an inch to 6 inches.

Wire Fencing and Netting delivered Carriage Free to all the principal Railway Stations.

VISITORS TO THE SEASIDE, TOURISTS, AND TRAVELLERS will find the application of ROWLANDS' KALYDOR, both cooling and refreshing to the face and skin, allaying all heat and irritability, removing eruptions, sunburn, freckles, and tan, and rendering the skin soft, clear and healthy. Price 4*s.* 6*d.* and 8*s.* 6*d.* per bottle. The heat of summer also induces a dryness of the hair, and a tendency to its falling off, which may be completely obviated by the use of ROWLANDS' MACASSAR OIL, an invigorator and beautifier of the hair beyond all precedent. Price 3*s.* 6*d.*; 7*s.*; family bottles (equal to four small), 10*s.* 6*d.*; and double that size, 21*s.* ROWLANDS' ODONTO, OR PEARL DENTIFRICE, compounded of oriental ingredients, is of inestimable value in improving and beautifying the teeth, imparting a pearl-like whiteness, strengthening the gums, and in rendering the breath sweet and pure. Price 2*s.* 9*d.* per box. Sold by A. ROWLAND & SONS, 20, Hatton Garden, London, E.C., and by Chemists and Perfumers. Beware of spurious imitations.

CUTHILL'S STRAWBERRY PLANTS.—
HIGHLAND MARY, 1*l.* per 100; 12*s.* for 50; 8*s.* for 25.
IMPROVED BLACK PRINCE, OR RICHARD II., same price. Both great bearers and good forcers.
PRINCESS ROYAL OF ENGLAND, 7*s.* 6*d.* per 100; selected, 10*s.*, fine forcer.
PRINCE OF WALES, 7*s.* 6*d.* per 100; selected, 10*s.*
BLACK PRINCE, 5*s.* per 100; selected, 7*s.* 6*d.*

The two first named have been severely tested on my ground these last three years by hundreds of people. They are early and late, on account of the numerous trusses continually coming up. Dr. Lindley told me himself, that he never could depend upon having a Strawberry until he had my breed.

Cuthill on the Strawberry, showing how to obtain early and large crops off a small piece of ground. 1*s.*
Pamphlet on the Potato, with 20 more Articles, 2*s.*
On Market Gardening round London, &c., 1*s.* 6*d.* [&c., 1*s.*
On the Cultivation of the Mushroom, Killing of Woodlice,
On the better Cultivation of the Vine, 1*s.*
Vegetable Meeting Paper, gratis.

Payable to JAMES CUTHILL, Camberwell, London, S.

SPLENDID NEW STRAWBERRY,
"CULVERWELL'S SANSPAREIL."

HENRY MAY has great pleasure in informing his friends and the public in general that he has purchased the entire stock of the above fine Strawberry of Mr. Culverwell, gardener to Mark Milbank, Esq., Thorp Perrow, near Bedale. The habit of the plant is strong and thoroughly hardy, the fruit is cone-shaped, extremely handsome, of a rich dark colour, of medium size, and wonderfully prolific. In flavour it is what its name represents, without an equal in ripening. It succeeds Keens' Seedling and other varieties. A first class certificate was awarded to the fruit after ripening under a sunless sky (see *Gardeners' Chronicle*, page 713, for the report of the Fruit Committee of the Horticultural Society).

HENRY MAY, the Hope Nurseries, near Bedale, Yorkshire.

INGRAM'S PRINCE ARTHUR STRAWBERRY.

J. AND E. SMALL are prepared to receive orders for this excellent new Strawberry. Strong plants in pots for Forcing will be ready for sending out early in September at 40*s.* per 100, and 30*s.* per 100 for ordinary plants

This Strawberry is a seedling raised at the Royal Gardens, Frogmore, where it is now extensively grown for Forcing as well as other purposes.

It was submitted to the Fruit Committee of the Horticultural Society June 12, 1860, and the Prize awarded for the best seedling Strawberry. It was again brought before the Committee July 10, at which time it obtained a first-class Certificate of Merit. Mr. Marnock, of the Royal Botanic, Regent's Park, writes:—The Strawberry Prince Arthur "beyond all doubt is one of the best in cultivation." Mr. Glenny also writes "fine full flavoured Strawberry, different from anything I have ever seen."—Agents: Mr. C. TURNER, of the Royal Nursery, Slough; Mr. DODDS, Epsom Nursery, Surrey; and NUTTING & SON, Seed Merchants, Barbican, London, E.C.

Colnbrook Nursery, Slough, Bucks.

STRAWBERRY PLANTS.—Now ready for sending out, fine strong healthy Plants of all the newest and most approved varieties in cultivation. The plants are such as will give every satisfaction to all purchasers, including the following well known varieties.

GENERAL HAVELOCK.—The finest early Strawberry grown. To a grower for market this Strawberry is invaluable; it comes in before any other known early variety, the berry of good form, large size, a splendid cropper, first rate for early forcing, and not to be surpassed for preserving, being of a beautiful red colour throughout. It is the hardiest known variety grown, having stood the severity of last winter without failing in a plant, or the slightest injury to its early fruiting. 10*s.* per 100.

RIVAL QUEEN.—The finest flavoured of any variety, 5*s.* per 100.

WIZARD OF THE NORTH (Robertson), true, a first-rate late variety, 10*s.* per 100.

	Per 100—*s.*	*d.*		Per 100—*s.*	*d.*
Oscar (Turner)	7	6	Victoria	3	6
Cremont's Perpetual ..	4	0	Prolific	3	6
Admiral Dundas ..	5	0	Bicton Pine	4	0
Magnum Bonum ..	4	0	Myatt's Eliza	3	6
Prince of Wales	3	6	British Queen	4	0
Carolina Superba ..	4	0	Black Prince	3	0
Omar Pacha	4	0	Filbert Pine	4	0
Keens' Seedling ..	3	6	Elton Pine	3	6
Sir C. Napier	7	6	Sir Harry	3	6
Fertilised Hautboy ..	3	6	Myatt's Surprise ..	3	6
Eleanor	3	6			

And all other varieties worthy of cultivation at equally reasonable prices.

LORD KENYON'S FAVOURITE CUCUMBER.—The finest grown for early forcing or winter culture; 1*s.* per packet.

HOLLYHOCK SEED from all named varieties; 1*s.* p packet.

The true old BATH COS LETTUCE SEED, the best ever cultivated, 1*s.* per packet.

GRIFFIN'S ALMA LETTUCE stands the winter well; requires no tying; 1*s.* per packet.

A remittance is expected to accompany all orders from unknown correspondents.

EDWARD TILEY, NURSERYMAN, SEEDSMAN, and FLORIST, 14, Abbey Church-yard, Bath.

CATALOGUE.

YOUELL AND CO.'S GENERAL AND DESCRIPTIVE PRICED CATALOGUE for this season is now ready, and will be sent free on application.

It contains detailed Lists of Greenhouse Plants, Conifers, Shrubs, as well as all the newest introductions in Soft-wooded Plants.—Royal Nursery, Great Yarmouth.

TO PLANTERS OF CONIFERS.

YOUELL AND CO. can supply 50 species of RARE AND HARDY CONIFERS in good plants for 5*l.*, package included, and carriage paid to Liverpool, Manchester, Newcastle-on-Tyne, Hull, London, Peterborough, or to any Railway Station within 150 miles of the Nursery.

A LIST of the above can be had on application.

Royal Nursery, Great Yarmouth.

GLADIOLUS BRENCHLEYENSIS.

YOUELL AND CO. beg to inform the Trade they are in a position to supply strong flowering BULBS of the above variety, unequalled by any other for the brilliancy of its colour. See report by Dr. Lindley in *Gardeners' Chronicle* of Sept. 8, page 116. Price per 100 or 1000 on application.

Royal Nursery, Great Yarmouth, Norfolk.

TO POTATO GROWERS.

WANTED TO PURCHASE, for Cash, from 1 to 3 Tons of each of the following sorts of POTATOES, true to name and free from disease:—

Ashleaf Kidney	Fortyfold	Shaw's
Fluke Kidney	Red Ashleaf Kidney	Soden's Early Oxford
Flourball	Early Frame	York Regents

Address by letter, stating price per ton, delivered free to any of the London Railway Stations, to Mr. W. BROWN, 10, Florence Road, New Cross, S.E.

CONIFERÆ.—A fine Stock of very handsomely grown Plants of various heights—see AUTUMN CATALOGUE, just published, sent free.

50 fine CONIFERÆ, of good size, for .. £5 0 0
25 fine do. do. for .. 2 10 0

The names and heights of either lot may be had. Early planting is recommended. If 20*s.* and upwards, free to all stations in London.

STEPHEN BROWN, late Bass & Brown, Seed and Nursery Establishment, Sudbury, Suffolk.

NEW HORSE-SHOE-LEAVED GERANIUM "HILLSIDE BEAUTY" (STUART).—This variety is a sport from the Countess of Warwick, has been grown here for two years, and proved to come true. It has the most superbly marked foliage of any in its class, and has been seen and admired by the most eminent florists. The trusses of bloom are large and abundant, and altogether it will from its distinctiveness, prove a welcome addition among fine foliaged plants for Greenhouse or Conservatory decoration. Small plants, 5*s.* each; larger sized, 10*s.* 6*d.*

JOHN MACK, Hillside Cottage, Chirnside, N.B.

TRADE NOTICE.

P. EDWARDS (20 years' Foreman of Barnes' Nursery, Merrion, near Dublin, begs to inform his friends and the Trade generally that he has left that Establishment and removed to Newtown Park, Black Rock, where he intends doing business on his own account. His Thorn Quicks and Forest Seedlings are very fine this season. Price, &c., on application to P. EDWARDS, Park Nursery, Newtown Park, Black Rock, near Dublin.

WINTER BLOOMING PLANTS.—Purchasers are respectfully invited to inspect the very large stock of the Subscribers. CAMELLIAS, AZALEAS, ERICAS, EPACRIS, CYTISUS, and ACACIAS, can be seen in thousands.

Fine grafted Jasminum grandiflorum, well set with flower. Otaheite Oranges in fruit, &c.

HUGH LOW & Co., Clapton Nursery, N.E.

WANTED, a large quantity of young ORNAMENTAL TREES, EVERGREEN AND DECIDUOUS SHRUBS; also a few FRUIT TREES, all excellent of their kind.—Particulars of size, age, and price Carriage free to a Railway Station in London, to be sent to Mr. ANDREWS, Isleworth, Middlesex, W.

CONSERVATORY PLANTS, &c., WANTED.—ORANGE and ACACIA TREES from 4 to 6 feet high, also a few SUCCESSION PINE-APPLE PLANTS. Any gentleman being overstocked with the above can meet with a purchaser at moderate prices by addressing Mr. COOPER, Alpha House, Coburg Road, Old Kent Road, S.E.

TRANSPLANTING MACHINES.

WANTED, by the HORTICULTURAL SOCIETY OF LONDON, a TRANSPLANTING MACHINE, that will carry 10 tons; also a smaller one that will carry 6 tons.

Address, stating price and particulars, to Mr. GEO. EYLES, Kensington Gore, W.

N.B. Second-hand Machines, if in good condition, preferred.

GUTTA PERCHA TUBING FOR WATERING GARDENS.

THE GUTTA PERCHA COMPANY have the pleasure to acknowledge the receipt of the following

Testimonial from Mr. J. FARRAH, *Gr. to* BOSWELL MIDDLETON JALLAND, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing, in lengths of 100 feet each, with union joint, in use for the last 12 months for watering these gardens, and I find it to answer better than anything I have ever yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the tubing. I consider this tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour required."

Manufactured by the Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their Wholesale Dealers in town and country.

KEEP YOUR PREMISES FREE FROM MICE AND SPARROWS.

BARBER'S POISONED WHEAT kills them (only) on the spot. In 1*d.*, 2*d.*, 4*d.*, and 8*d.* packets.—W. SUTTON & Co., 10, Bow Churchyard, London, E.C. Agents Sold by all Druggists, &c., throughout the Kingdom. Works: Ipswich.

GISHURST COMPOUND,
PATENTED,
FOR PREVENTING AND DESTROYING

RED SPIDER	MEALY BUG	MILDEW
THRIPS	SCALE	GREEN and BROWN
AMERICAN BLIGHT	ANTS	FLY

BED BUGS, &c.,
And useful in winter dressing.
Contains no deleterious ingredient.

Has received the sanction of the Gardening Press, see *Gardeners' Chronicle* of 9th April and 16th July, 1859, and "Cottage Gardener," 12th July, and has been favourably reported on, and is used by eminent gardening authorities, among whom are—

Mr. Judd, of Althorp Gardens
Mr. Rivers, of Sawbridgeworth
Mr. Edmonds, of Chiswick House Gardens
Mr. Collinson, of Eaton Hall Gardens
Messrs. A. Henderson & Co., Edgeware Road
Mr. Jas. Veitch, jun., Chelsea
Mr. Spencer, of Bowood Gardens
Messrs. Rollisson & Sons, Tooting, S.
F. & A. Dickson & Sons, Chester.

The principal Nurserymen and Seedsmen throughout England, Scotland, and Ireland use it, have taken in supplies, and are now prepared to sell single boxes—price 1*s.* for first trials and small uses, such as destroying bed bugs; 3*s.* for not large gardens; 10*s.* 6*d.* for large gardens, with testimonials and full descriptions for use.

Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2*d.* to 3*d* per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 85, Soho Square, London, W.

See *Gardeners' Chronicle* of September 1.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs. Lawrence of Ealing Park, and — Collier, Esq., of Dartford.

PROTECTION FROM THE COLD WINDS & MORNING FROSTS.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 6*d.* per yard run.
Four yards wide	3*s.* per yard.

An improved make, 8 yards wide, 2*s.* 6*d.* per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 4*d.* per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

CORDYLINE (DRACÆNA) INDIVISA.

MESSRS. JOHN AND CHARLES LEE

Have the pleasure to announce that they have now ready to send out the magnificent

CORDYLINE INDIVISA FROM NEW ZEALAND,

AN ACCOUNT OF WHICH WAS GIVEN BY DR. LINDLEY IN THE *GARDENERS' CHRONICLE*, OCT. 29, 1859, Pp. 868

IT is impossible to give an adequate description of this wonder of Nature, which should be seen in its native grandeur to be thoroughly appreciated. Specimens can, however, be seen at this establishment which already prove the accounts received of its merits to be quite reliable. Being found at a high elevation it will be a very hardy Conservatory Plant, and will probably bear total exposure in the West of England and in Ireland.

CORDYLINE INDIVISA attains a height of from 10 to 20 feet, in an erect and undivided trunk on which the foliage is retained with vigour almost to the ground. The leaves are set on to the greatest advantage, and measure from 5 to 6 feet in length, and from 6 to 9 inches in breadth. Their colour is of the richest description: a broad and prominent midrib of crimson brown runs through the entire length, and numerous red and white lines run parallel to the midrib; the whole surface is overlaid with a rich golden bronze producing an elegant effect. The under side of the leaves is glaucous. The whole tree is unsurpassed in its truly noble and unique beauty.

Nursery and Seed Establishment, Hammersmith London, W.

THE FOLLOWING ARE SOME OF THE MOST APPROVED IMPLEMENTS
MANUFACTURED BY

JAMES AND FREDK. HOWARD,

BRITANNIA IRON WORKS, BEDFORD.

1860.

PLOUGHS.

D PLOUGH, FOR A PONY	£2	5	0
D D PLOUGH, FOR ONE HORSE	3	5	0
H PLOUGH, FOR TWO HORSES	4	2	6
H H PLOUGH, FOR GENERAL PURPOSES ..	4	7	6
D D RIDGING PLOUGH, FOR LIGHT WORK ..	3	15	0
P RIDGING PLOUGH, FOR GENERAL PURPOSES	4	5	0

HORSE RAKES.

7½ FEET WIDE, MARKED H, WITH IRON TEETH	7	10	0
7½ FEET WIDE, MARKED H, WITH STEEL TEETH	8	0	0
8½ FEET WIDE, MARKED H H, WITH IRON TEETH	8	0	0
8½ FEET WIDE, MARKED H H, WITH STEEL TEETH	8	10	0

HARROWS.

LIGHT SEED HARROWS	£2	17	6
SEED HARROWS	3	3	0
GENERAL PURPOSE HARROWS	3	10	0
THREE-HORSE HARROWS	4	0	0
HEAVY HARROWS	5	0	0
DRAG HARROWS	6	6	0

STEAM CULTIVATORS.

A COMPLETE SET OF
SMITH'S PATENT STEAM CULTIVATING APPARATUS,
EXCLUSIVE OF ENGINE .. £250

CATALOGUES, with full particulars of the above and other Implements manufactured by J. & F. H., sent free on application.

FRESH IMPORTED DUTCH BULBS.

SUTTON AND SONS have just received from Haarlem one of the most extensive and rare Collections of

BULBOUS FLOWER ROOTS

ever imported into this country.

Prices very moderate, as see List, which may be had post free.

Royal Berkshire Seed Establishment, Reading.

TRIFOLIUM INCARNATUM SEED CHEAP.

SUTTON AND SONS can supply NEW SEED VERY CHEAP in large quantities, the crop being large this season.

Lowest cash price (according to quantity required), may be had on application.

Royal Berks Seed Establishment, Reading

TRIFOLIUM TARDIF A FLEUR BLANCHE

" " " ROUGE

(much recommended for succession by Vilmorin of Paris).

COMMON or INCARNATUM, 3*l.* to 4*l.* per lb., with practical Hints on its successful cultivation.

ITALIAN RYE-GRASS, per bush., *5s.* to *7s.*

COW CABBAGE, *3s. 6d.* per lb.

WINTER VETCHES, WINTER OATS, AND RYE.

PERMANENT PASTURE GRASSES AND CLOVERS.

SEEDS FOR EXPORTATION, specially selected and packed to arrive in good condition.

GUERNSEY & BELLADONNA LILIES, Blooming Bulbs, *4s.* per dozen.

Just imported, a fine collection of DUTCH BULBS.

PAGE & TOOGOOD, Southampton.

SNOW'S MUSCAT HAMBURGH GRAPE.

MESSRS. ARTHUR HENDERSON AND Co. beg to remind their Patrons and Friends that the Prize of Five and Three Guineas offered by them for the first and second Prize Dish of the above celebrated Grape, will take place at the Crystal Palace Show of the 19th & 20th September.

N.B. The Grape can be seen in great perfection at the Nursery, Pine-apple Place. An inspection of the large bunches and berries is earnestly solicited by Grape Growers and Gentlemen who are fond of fine fruit.

Pine-apple Place, Edgware Road, London, N.W.—Sept. 15.

SPLENDID GRAPE VINES.

WILLIAM BARNES has much pleasure in announcing that he has some very fine Grape Vines in pots, now ready to send out, of the following kinds, viz. :

White Muscadine	White Frontignac	Bowood Muscat
Black Hamburgh	Black Do	Golden Drop
White Sweetwater	Grizzly Do.	Muscat Hamburgh
Black Prince	Mill Hill Hamburg	Lady Downe's Seedling
Black Tripoli	Royal Muscadine	Sweetwater
Black Barbarossa	Champion Hamburgh	Buckland Sweetwater
Muscat of Alexandria	Purple Constantine	White Tokay
Cannon Hall Muscat	Golden Hamburgh	Trentham Black
West's St. Peter's		Muscat Muscadine

Most of the canes average from 8 to 10 feet long, are very strong, and the wood well ripened, eyes plump, and would bring a fine crop next year in pots.

There are also several of the varieties prepared for Orchard House Culture, being formed into nice bushes with spurs upon each side. Prices can be obtained upon application.—Camden Nursery, Camberwell, S., Sept 15.

BUCKLAND SWEETWATER GRAPE.

IVERY AND SON feel great pleasure in introducing this fine early White variety to the notice of all Grape Growers, as they feel assured it will give entire satisfaction. In appearance (except in colour) of Bunch and Berry, it resembles the Black Hamburgh, but growing still larger than this old favourite under the same treatment, it is also a free setter and of vigorous habit. A fine bunch was exhibited before the Fruit Committee of the Horticultural Society, on July 31st ult., which was highly spoken of by them, and is again most favourably noticed by all the leading Journals. *See* Report below. Strong plants 10*s.* 6*d.* and 21*s.* each.

Copied from *Gardeners' Chronicle*, August 4, 1860.

"From Messrs Ivery & Son, of Dorking, came a beautiful bunch of Buckland Sweetwater Grape, a variety which, when better known, cannot fail to be a favourite; the bunch is of good size, well shouldered and handsome, and the flavour good. This variety is, however, yet scarce—not more than two specimens of it in a fruit-bearing state being at present in the country, one at the Deepdene, Dorking (from which this bunch was cut), and the other in Messrs. Ivery's Nursery," (which they will feel great pleasure in showing any one who may favour them with a visit).

Dorking Nursery, Sept. 15.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended :—

	P. packet—*s.* *d.*
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation	1 6
CUCUMBERS, all the best varieties	1 0
LETTUCE, Alma (Griffin's)	1 0
" Moor Park, extra fine	1 0
FLOWER SEEDS.	
CALCEOLARIA, herbaceous, finest mixed	2 6
CINERARIA, from finest named varieties	2 6
DIANTHUS Heddewiggi	1 0
PANSY, from named varieties	1 0
PRIMULA sinensis fimbriata	1 6
SOLANUM capsicastrum	1 0
" pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1 0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

THE AUTUMN SUPPLEMENT TO

CARTER'S GARDENERS' VADE MECUM

(25th ANNUAL SERIES)

IS JUST PUBLISHED.

It contains a List of all the best varieties of DUTCH AND CAPE BULBS *suitable for Greenhouse and out-door planting, with carefully written articles as to the best mode of cultivating the same.*

*** FORWARDED POST FREE ON APPLICATION TO

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

CARTER'S 40s. COLLECTION OF BULBS

FOR FORCING.

"ALL FIRST SIZED AND PICKED ROOTS."

2 dozen extra fine HYACINTHS, in 12 sorts		1 dozen TULIPS, DUC VAN THOL,	scarlet
2 dozen POLYANTHUS NARCISSUS, in 9 sorts		1 dozen	do. do. rose
2 dozen single sweet-scented JONQUILS		1 dozen	do. do. yellow
150 newest Seedling CROCUS, in 50 sorts		1 dozen	do. VERMILION BRILLIANT
1 dozen TULIPS, DUC VAN THOL, red and yellow		1 dozen	do. REX RUBRORUM
		1 dozen	do. TOURNESOL

Half the above Collection, 20*s.*

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

LAWNS WITHOUT MOWING.

SPERGULA PILIFERA.

THE merits of this little Plant for the above purpose being now fully recognised, and having stood the test of six successive seasons, we have great pleasure in recommending it to the notice of our customers. Mr. Summers, its original raiser at the Crystal Palace Nursery, Sydenham, having made over to us the entire Stock of new Seed for the present season, we now offer it in packets of

6d., 1s., 2s. 6d., 5s., and 21s. Or per Ounce.

We beg to subjoin a few remarks upon the culture of Spergula, as practised by Mr. Summers, premising that seedlings sown last August and September present now a full twelvemonth's growth in advance of seed sown last spring.

INSTRUCTIONS FOR RAISING SPERGULA.

Choose an open situation for the seed bed, dig the ground in shape of a ridge (to throw off the water in winter), and make the surface firm with rake, roller, &c.; spread the seed thinly over the bed, and with a rake gently stir the surface, after which give a good watering through a fine rose. The bed should then be hooped over and shaded with a mat or piece of Tiffany doubled, the object in shading being to prevent the too rapid evaporation of moisture; indeed from the time of sowing until the plants make their appearance, the bed should not be allowed to become dry. When the plants are well above ground they should be gradually hardened, but if during the first month the weather should be warm and dry they will require attention in shading and watering. Towards the end of March following they may be either planted out to form turf in the reserve garden or put in thickly on the intended lawn. Full particulars of this final planting will be given in our New Seed Catalogue for 1861.

For further information respecting the elegant, mossy, and carpet like appearance of this plant, we beg to refer to Mr. Shirley Hibberd's notice in *Gardeners' Chronicle*, and to that of Mr. Beaton in the *Cottage Gardener*. Mr. Summers will at any time be pleased to show the capabilities of the Spergula, or give information to parties desirous of forming a lawn, upon application to him at his Nursery.

J. C. & Co. would beg leave to caution the public against purchasing seeds of various Saginas, &c. (which are only *Annuals*), large quantities of which have been offered to their notice this season, and represented as being seed of the *true* Spergula pilifera, (the seed being very similar), *but as the whole stock of* NEW *seed will pass through their hands they can warrant none other than that obtained from their Establishment.*

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, London, W.C.

NEW SEEDS.

THE QUEEN'S SEEDSMEN,

PETER LAWSON & SON,

27, GREAT GEORGE STREET, WESTMINSTER, S.W.

ARE NOW SUPPLYING NEW SEEDS FOR AUTUMN SOWING.

The very finest qualities of TRIFOLIUM INCARNATUM, ITALIAN RYE-GRASS, SIX WEEKS STUBBLE TURNIP, ALSIKE CLOVER, DWARF BROAD-LEAVED RAPE, MUSTARD, PERMANENT GRASS SEEDS, all carefully selected, and delivered Carriage paid at moderate rates.

CHOICE BULBS.

STEPHEN BROWN'S CATALOGUE (late BASS & BROWN) supplied free on application. It contains one of the finest collections of DUTCH, CAPE, and other BULBS. The cultural and descriptive matter is this year greatly enlarged, and prices are very moderate.

Finest named Hyacinths, 6s., 9s. and 12s per doz.

Fine, in colours, without names, 3s. per dozen.

Assorted Collections of Bulbs, either greenhouse or hardy, at 10s. 6d., 21s., 42s., 63s., 84s., and 100s.

If 20s. and upwards, free to all stations in London.

Seed and Nursery Establishment, Sudbury, Suffolk.

DUTCH FLOWER ROOTS.

CHARLES TURNER, THE ROYAL NURSERIES, Slough, has just received his usual large consignments from Holland, and is gratified in being able to state that the bulbs are very fine, and in the best condition. The ANNUAL CATALOGUE is just issued, and will be sent free to any address.

As successful cultivation depends in no inconsiderable degree upon early planting, the great advantage of giving immediate orders is obvious.—The Royal Nurseries, Slough; adjacent to Eton and Windsor, and also at Salt Hill.

DUTCH FLOWER ROOTS.

JAMES VEITCH, JUN., ROYAL EXOTIC NURSERY, Chelsea, S.W., begs to announce that he has received his annual supply of BULBOUS ROOTS from Holland, and is pleased to say that they are PARTICULARLY FINE and in EXCELLENT CONDITION. CATALOGUES are now ready and will be forwarded on application.

J. V., Jun., desires to impress upon those who patronise him the great advantage of giving him their ORDERS EARLY, as the successful cultivation of Bulbs depends in a great measure upon their BEING PLANTED EARLY IN THE SEASON.

SEDUM FABARIA VAR RUBRA.

J. CARTER AND CO., have much pleasure in offering this handsome and free flowering Sedum to the trade. The following report of its merits is from the "Proceedings of the Horticultural Society" for November 1859:—

Sedum Fabaria var. rubra, a rosy lilac flowered kind, nearly related to the British S. Telephium, and a very useful autumn flowering plant for greenhouse decoration, producing large heads of its star-shaped flowers, EMULATING THE SHOWINESS OF THE WELL-KNOWN HYDRANGEA.

Price per dozen, 12s.; per 100 upon application.

JAMES CARTER & Co., Seedsmen, 237 and 238, High Holborn, W.C.

The Gardeners' Chronicle.

SATURDAY, SEPTEMBER 15, 1860.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, Sept. 19 } Crystal Palace Dahlia and Fruit
THURSDAY, — 20 } Show.

AMONG the Colonial Possessions of the British Crown there is one of which little is known in Europe, and which nevertheless holds out so fair a prospect to men who understand gardening and farming that we are glad to be able to give a perfectly accurate account of what it is, founded upon unquestionable authority. Those who from time to time consult us as to the BEST COUNTRY FOR EMIGRANTS can now judge for themselves as to whether VANCOUVER'S ISLAND suits them. Of this young colony the town of Victoria is the capital. Official returns show that the imports for the last quarter amount to the large sum of 594,543 dollars, and that the amount steadily increases. This gives some idea of the quantity of business done there; but, it is material to observe that it largely consists of an export trade to Puget Sound and other American possessions, and to British Columbia. The consumption in Vancouver Island alone amounts to about one-third of the sum above given. The reason for this large export trade exists in the fact that Victoria and Esquimalt its grand harbour are free ports. This circumstance alone will most assuredly render Victoria a large commercial emporium, destined to grow more or less rapidly according as the American possessions and British Columbia fill up more or less quickly; and there can be no doubt that, sooner or later, Vancouver will export rich produce not only to the north and south, including San Francisco, but also to places in the east, to China, Japan, and the Russian settlements at the mouth of the river Amoor.

In looking over the details of the statistics of the present trade one is startled by the immense amount of eatables and drinkables imported; such as live stock, poultry, together with timber in the form of lumber and shingles, slates, and numerous other articles. This state of things is accounted for by the smallness of the agricultural population, their want of capital, and what is worse, of energy. No doubt there are exceptions, but the rule is certainly as we have stated it.

In taking rides in Vancouver Island, it is found that agriculture is for the most part confined to what are termed Victoria, Esquimalt, Melchosio, Saske, Lake, and Saanitch Districts, and the extent of these districts may be, in some measure, calculated, when it is known that in three days an equestrian may visit, not only the districts, but nearly every farm in them. Victoria district is most cultivated—next, Esquimalt; there are, it is true, several very good farms, but these are held either by the Puget Sound Company, in the latter, or by the Hudson's Bay Company or their officers, either past or present, in the former. In reality Vancouver Island, although possessing beautiful meadow land, good soil, a splendid climate, and magnificent scenery, is pretty much in the same state as before colonisation took place, and the productions of farmers would not anything like support even the inhabitants. About 80,000 acres of land are said to have been sold, but we have reason to know that hardly 2000 acres of this are cultivated—the land, for the most part, being held by speculators, who, not cultivating the soil themselves, only await an improvement in prices.

Another strange fact is, that although this island abounds in wood of the finest description for spars or lumber, only one saw mill exists, and that one even cannot turn out more than 5000 feet per diem. This accounts for the large amount of lumber imported from Puget Sound, and of redwood from California. Before the gold excitement two mills existed, but one having been burned down, has never been replaced, so that in this respect Vancouver Island has been retrograding. There is said to be a small mill in British Columbia. Slate is found in abundance, but slates are imported. Limestone abounds, yet lime is sold at a dollar and a quarter, about 5s., per barrel, but none is exported. Sandstone of the best quality for building purposes exists, but no notice is taken of it. Coal may be had at various places, but only one mine is worked. Fish of all kinds abound, but no more are caught than are consumed here. There is not a single manufactory, but there is one foundry, and at what are called CRAIG'S Flour Mills, Oatmeal and pearl Barley are made. Cement stones and fire clay are to be had with little trouble, but are entirely neglected.

This picture does not say much for the wisdom of the Home Government; but it shows how large a field there is for industry, skill, and capital—especially for the two first: for here, as in Canada W., the best capital a man can possess is health, strength, and a knowledge of rural economy. If we ask how this state of affairs has been brought about in one of our most important colonies, we are assured that neither the Vancouver Executive which merely obeys the orders of the Secretary of the Colonies, nor the Legislative Assembly which possesses little power, is to be blamed, and that the evil undoubtedly arises out of the pernicious land system of the Home Government, whereby no one can settle, excepting he first purchase the land. The natural effect of this system has been to keep down an agricultural population, which the distance of Vancouver from England and the places whence emigration takes place would effect under the wisest management. It is understood however that the land system is on the eve of a change, and then, there will be no place under the sun that holds out such seductive prospects as Vancouver Island. Even now, with all its disadvantages, any one with the smallest energy and capital can do well; the natural productions of the Island are abundant and untouched, yet home consumption, in the shape of food, is obliged to be supplied from foreign ports. With capital, fortunes will be made from the coal, lumber, lime, and building materials alone.

Since writing the above a volume on the subject of Vancouver and British Columbia, from the pen of the Surveyor-General of the former colony, has reached us, which we shall notice next week.

THE SOCIETY OF ARTS has issued its annual programme of the Examinations for the year 1861. Now that the subject of Gardeners' Education is exciting so much discussion, it will be useful to our distant friends to know something more of the plan adopted by the Society for extending the advantage of Examinations to country districts.

Any institution, or union of institutions, desirous of entering into union with the Society of Arts, must fill up, sign, and return to the Secretary, a printed form of declaration, accompanied with a copy of its rules. When this form has been approved by the Council, the institution is taken into the union. The subscription is two guineas annually, and may be paid in either of the two following ways: the President, or any other analogous officer of the institution, may be elected a member of the Society of Arts; or, the institution or provincial union may contribute from its own funds the payment of two guineas. In the former case the gentleman so selected will enjoy all the privileges of a member, and will, at the same time, give to his own institution, so long as he continues to hold the same office in it, the advantages of the union. In the latter case, the institution itself will receive the advantages of the union, but no individual member of the institution will enjoy the full privileges of a member of the Society of Arts.

The managers of village libraries, village reading rooms, village lectures, &c. (not being fully constituted institutions), in connection with any provincial union that is in union with the Society of Arts, may obtain the existing advantages of union with this Society in consideration of the payment of 2*l.* 2*s.* from the provincial unions, but the Society relies on the officers of the provincial unions for a careful discrimination of those bodies which ought, from those which ought not, to be expected to subscribe separately for the advantages of the union with the Society of Arts, and the Council reserve the power of re-considering the arrangements, if it should be found that bodies not contemplated herein are enabled to avail themselves of what is proposed.

Examinations will next year be held in the following subjects by the Examiners whose names are added. (We only enumerate those which specially apply to our own class of readers.)

1. Arithmetic	Rev. Alexander Wilson.
2. Book-keeping	John Ball, Esq.
4. Geometry	Rev. B. M. Cowie, one of H. M. Inspectors of Schools.
5. Mensuration	J. Sykes, Esq., Assistant Secretary to the Committee of Privy Council on Education.
9. Principles of Mechanics	Rev. Jonathan Bates, M.A., Vice-Principal of the Diocesan Training College, Chester.
10. Practical Mechanics	T. M. Goodeve, Esq., Professor of Mechanics at the Royal Military Academy, Woolwich.
13. Chemistry	A. W. Williamson, Esq., Professor of Chemistry, University College, London.
14. Animal Physiology (in relation to Health)	John Marshall, Esq., Lecturer on Anatomy in the Government Department of Science and Art.
15. Botany	Dr. Lindley.
16. Agriculture	J. C. Morton, Esq.
19. Domestic Economy	The Very Rev. Richard Dawes, Dean of Hereford.
20. Geography	Wm. Hughes, Esq., Professor of Geography in Queen's College, London.
25. French	Alphonse Mariette, Esq., Professor of French, King's College, London.
26. German	Dr. Bernays, Professor of German, King's College, London.
27. Freehand Drawing	F. S. Cary, Esq.
28. Mechanical Drawing	Thomas Bradley, Esq., Professor of Geometrical Drawing in King's College, London.

The terms of admission to the Examinations are extremely easy, as appears from the following regulations:—

Candidates must be admitted through a Local Educational Board connected with the Society of Arts, and must be at least 16 years of age.

(*A.*) Students of classes in Institutions in direct union with the Society of Arts	Free.
(*B.*) Students of classes in "Small Institutions" only in indirect union with the Society, pay a fee of	2*s.* 6*d.*
(*C.*) In districts where there are no Institutions, or only small ones, Local Boards paying one guinea a year to the Society, may admit candidates on payment of a fee of	2*s.* 6*d.*
(*D.*) Persons of a higher class of society, pay a fee of	10*s.* 6*d.*

It will be seen that, in any locality, whether there be an institution in union with the Society or not, the first thing to be done in order to enable any person to take advantage of the examinations, is the formation of a Local Board.

"The final Examinations must be held *simultaneously on the days, and at the hours specified in the following Time-table,* at those places where Local Boards are established:—

Tuesday, the 30th April, From 6 30 to 9 30 P.M.	Wednesday, the 1st May From 6 30 to 9 30 P.M.	Thursday, the 2d May From 6 30 to 9 30 P.M.	Friday the 3d May From 6 30 to 9 30 P.M.
Arithmetic.	Book-keeping.	Practical Mechanics.	Geometry.
Agriculture.	Chemistry.	Physiology.	Mensuration.
Mechanical Drawing.	Domestic Economy.	French.	Principles of Mechanics.
		German.	Botany.
			Geography.
			Freehand Drawing.

Further details are given in the Society's Official Programme, which may be obtained upon applica-

tion to the Society of Arts, Adelphi, London. We most strongly recommend its perusal to all who are interested in this important question.

IT appears from a recent official report to the Royal Society of the Mauritius that the authorities of the island are alarmed at the streams which were once so copious gradually drying up. "We have," says the Secretary, "at different periods in the course of our labours called the attention of the authorities to that important fact. We will not here raise the question so often discussed as to whether the cause is in the destruction of the forests; we will merely state the fact, for instance, that the river which supplies the town with water and was formerly so abundant, is now often deficient. In some places it is checked with the Grass, which has overrun it, and in others it is completely dried up at certain seasons of the year. What can be the cause of such a state of things? Is there a remedy? and if there is, why is it not applied? The question is of sufficient importance to occupy the attention of the members of the Society as well as of the whole community. At the same time that the water in the rivers has diminished, the forests have been thinned to a considerable extent, and we will now put the question as to whether in the view of public utility the functions of Guardian of Woods and Forests should not be converted into those of an officer charged with replanting trees to replace those that have disappeared, and keeping the rivers sufficiently clear to enable the water to flow freely. Let us cast our eyes on the barren and naked mountains which surround the town of Port Louis, and when the sun reflects its burning rays in the depth of summer, and let us at the same moment picture to ourselves those mountains covered, as they were formerly, with trees spreading shade and coolness at certain seasons of the year. The coast as well as the mountains is entirely denuded of trees, and the Conservator of Woods and Forests has very judiciously suggested the idea of replanting that part of the coast known as the 'pas géométriques,' and occupying a considerable space of ground around the island. This measure, in our opinion, would be more rational than keeping up a numerous establishment to look after a few acres of forests constituting the Crown lands, and wherein the Creoles and vagabond Indians each day add to the number of trees destroyed."

If the island should in time become barren, instead of remaining one of the most fertile in the waters of Africa, it will only undergo the fate which universally attends the destruction or absence of forests in countries exposed to great solar heat.

MYCOLOGY, No. XXIX.

AGARICUS DRYINUS, *Pers.*—The trunks of living trees yield a rich harvest of Fungi, and those which do not grow upon the dead or decayed portions of the bark, are mostly distinguished either by the absence of any stem at all, or if present, it is for the most part, if not quite, rudimentary, lateral or excentric.

In our present subject, which in this country is more common on Ash or Willow, than upon the Oak from which it derives its name, the stem is more central than in most allied species, and is sometimes furnished with a distinct ring, though, as in the specimens figured, it is often very fugacious, and traces of it merely are seen when the pileus is expanded on its margin.

The pileus is about 3 inches across, seldom larger, convex at first, but soon flattened, with the border depressed and more or less involute. The surface is dirty white or greyish, either villous or broken up into concentric brown adpressed scales, which as usual are more marked in the centre. The flesh is white and tolerably firm, confluent with the stem, and apt to assume a yellowish tinge when cut or bruised. The stem varies extremely in length, and when growing from a hollow tree is sometimes much elongated; it is solid, coloured externally like the pileus, and either minutely tomentose or scaly. The gills vary in width, are very decurrent and arched, being strongly attenuated in front, at first of a pure white, but changing as the plant grows older to a pale dull yellow. The taste is like that of the common Mushroom, almost a sure indication that the plant is wholesome, though it is in general so uncommon as not to afford opportunities of making experiments.

Some of the trunk-borne white-gilled Agarics are undoubtedly wholesome, though none perhaps will reckon as first class articles of food, and caution is requisite, as *A. euosmos*, was nearly proving fatal, being mistaken for *A. ostreatus*. As a general rule much will depend upon the rapidity of growth. In dry seasons, the substance is so tough as to be scarcely digestible, and the species of *Panus*, which differ principally in their coriaceous texture, in consequence of which they dry up without becoming putrescent, must be cautiously distinguished from similar species of Agaricus, or indigestion if not something worse will be the consequence.

A. dryinus, when well grown, is an elegant species, and is sure to command some degree of respect from the practised Mycologist, independent of its comparative infrequency, from its presenting one of the rare instances in which species of the sub-genus Pleurotus

AGARICUS DRYINUS, *Pers.* From an original drawing.

are furnished with a distinct veil. Its white spores alone will prevent its being confounded with *A. euosmos*, in which they are of a delicate rose colour, independent of a host of other characters. Should it occur plentifully to any of our friends, we should certainly recommend a fair trial of its qualities, and we are rather sanguine as to the result. *M. J. B.*

CULTIVATION OF THE HYACINTH.

In glasses.—Nearly all Hyacinths are suitable more or less for cultivating in glasses, though, in making a selection for that purpose, a larger number of single varieties should be chosen, as the certainty of success is much greater with them than with the double kinds. In ordering, special care should therefore be taken to state for what purposes the bulbs may be required, that proper varieties may be selected. The selection being always made by persons who well understand them, if such care be taken and the directions stated below followed out, there need be no fear as to the successful result. It is the natural tendency of all roots to grow downwards, avoiding the light, consequently dark coloured glasses are preferable for the growth of Hyacinths. Let the bulbs be obtained as early as possible after their importation, though the time of putting them to the water may range from the middle of September to the end of November, the earlier however the better. Fill up the glasses with soft clean water till it barely touches the bottom of the bulb. Then stand them in a dark cool cupboard or cellar for at least a month, to encourage the roots to form plentifully before the bloom buds appear. Examine them occasionally whilst in the dark, and carefully remove any part that may be decaying, at the same time not injuring the young roots. Should the water become foul change it, but not otherwise. When the buds and leaves have made a little growth, they should be brought into the full light of a window; if in a room where a fire is kept, let them stand in the window farthest from the fire; a cool place is best for them. Never under any circumstances allow them to stand on the mantel piece, a practice often followed, but highly improper. As the flower head rises, a support should be applied; these should invariably be ordered with the glasses, in order that they may be at hand as soon as required—they may be had from 2*s.* per dozen upwards. When coming into flower, a little stimulant may be added to the water with advantage. Sulphate of ammonia will be found to add considerably to the intensity of colour in the flower, and also to the vigour of the plant—a small pinch between the thumb and finger just dropped into the water will be sufficient.

In pots.—The soil used should be rich, and not over light; good loam and leaf-mould, with about one-fourth of well-rotted manure, and a liberal addition of sea, river, or silver sand, would be a good compost. For one bulb, pots 5 inches in diameter at the top should be used; three or five bulbs may be planted in one large pot or pan together with good effect. Let the pots be well drained, and the soil and bulb placed in firmly, but the bulb not quite covered. When potted give a good watering, and plunge them in any out of the way place out of doors, covering them with a layer of spent tanner's bark or coal ashes to the depth of 3 or 4 inches above the top of the pots. Here they may remain till they are required, bringing them into warmth and light according to the time they are intended to flower—the less forcing they have, however, the finer the flower is likely to be. When brought into a room let them be stood in the window. All Hyacinths succeed well, and come to their greatest perfection, when grown in pots.

In beds.—The soil for this purpose should be rich, light, and deep, and above all well drained. Excavate to the depth of 15 inches, level the bottom, and place on it a layer of 2 inches of small stones, or any similar material that will serve to ensure good drainage. On this lay a thin covering of well-decayed manure, and then fill in with the prepared compost, making the bed 4 or 5 inches above the surrounding soil to allow for settling. Arrange the colours according to taste, and plant the bulbs 9 inches apart, and 3 inches deep from the crown. The time of planting may range from the beginning of October to the middle of November. It will be found advisable, as very severe weather approaches, to cover the bed with a layer of any protecting material. *Hooper & Co.'s Catalogue.*

ON SMALL VINERIES.

(*Continued from p.* 812)

IN a previous article the size, form, and situation of a Vinery were taken into consideration. A lean-to form was recommended on account of its being most economical as regards fuel and management. A situation from which as much as possible of the southern portion of the sky could be seen was considered the best, as ensuring for the Vines the greatest amount of light obtainable in a lean-to structure. But it may be argued, that if light is so essential to the successful cultivation of the Vine as it was stated to be at the above reference, it might be better to forego the advantages attributed to the back wall, and adopt the span roof, under which the Vines would have light from two sides instead of from one; and moreover the fact may be adduced, that many kinds of plants can be better grown in a span roofed house than in a lean-to one, and it might be concluded by inference, the Vine likewise. Some explanations with regard to these points are necessary.

Light acts chiefly on the upper surface of leaves, and that surface generally faces the sky. If a greenhouse plant, for example, is so situated as to have light only on one side, the leaves thrive on that side, but not well on the other, and the plant consequently grows one-sided; but if light falls equally upon it on both sides its growth is equal, and what is termed a well-balanced plant is the result, and to obtain it a span-roofed house is required. The Vine is by no means an exception to other plants as regards the disposition of its foliage towards the light, for if it were trained to an upright pole in the centre of a glass dome, with light and heat equal on all sides, its horizontal growths would be equally good in all directions; and if the object of its cultivation were to grow it so as to represent a low column, or a pyramid, the forms being regulated by a little pruning and training, then a span-roofed house would be as preferable for it as for other plants.

But supposing a Vine were trained upright in the centre of a house with a span roof, its foliage, except near the top, would be too far from the glass to admit of the rays of light from any side being sufficiently effective; and when this is the case good fruit cannot be expected. Besides, the Vine being trained upright, the buds on the lower part would not readily break, and so, partly from this cause and partly from being too distant from the glass, the Vine would exhibit ultimately only a naked stem up to nearly the top. Such mode of training is therefore not suitable for the Vine.

It is well known that when light falls on a surface of glass a portion of the rays is reflected; and those that are transmitted are refracted, and do not proceed in the direction of the same straight lines that they followed before entering the glass. Owing to these circumstances the rays of light in passing through glass are paralysed to a considerable extent as regards their action on vegetation, and their beneficial effects become weak in proportion to the distance which they have to traverse before they reach the foliage after passing through the glass. Hence the necessity of training the Vine so that all its leaves may be as near the glass as possible, without being so close as to touch it. This can only be done by training the Vine rods parallel to the slope of the roof; and whilst this arrangement insures equal proximity to the glass, the inclined

position of the rods favours the development of the lower buds, which is apt not to take place if the Vine is trained upright.

It will have been observed, that when Vines are trained against a wall, the upper surfaces of the leaves are turned away from it. If in nailing up a shoot some leaves happen to be turned so as to face the wall, they will again turn their upper surfaces to the light. On inspecting a Vine shoot of the present summer's growth, trained under glass in the usual way, it will be seen that leaves push from points on all sides of that shoot, and that the petioles of the leaves elongate directly towards the glass; but it will also be observed that the petioles of the leaves which originate on the opposite side of the shoot turn either to the right or left so as to present the upper surface of the leaves to the glass. When the Vine branch is older and spurred, and the leaves in a given space more crowded than on a single shoot, they do not all turn to the glass, owing to the latter being obscured by the intervention of other leaves; but in general the leaves of Vines face more or less directly the glass nearest to which they are trained, whether that has a north or south aspect; consequently, in a span-roofed house with these aspects, half the most efficient leaves face the south and half the north. When the Vines grow up so as to fully occupy the south side they form a screen which intercepts most of the rays of light, and those that do pass through openings of the foliage are so weak on reaching the opposite side, after being refracted in passing through the glass, that the Vines on that side prefer turning their leaves to the nearer light, although that is towards the northern portion of the sky. The question now is whether it would be better to have half the foliage to face the north and half the south, as in a span roof; or the whole to face the south as in a lean-to, the total area of glass employed being equal in both cases; in other words, whether half the quantity of leaves, and fruit it may be added, should be against the shaded side, and half against the sunny side, or all against the latter. Certainly that next the sun is to be preferred; and consequently a lean-to with a southern aspect is better than a span-roof with half the surface of glass facing the north. When the latter is adopted, it must also be recollected, that half the number of Vines must have their roots in a north border, cold and shaded; and this is an insuperable objection to that form of Vinery.

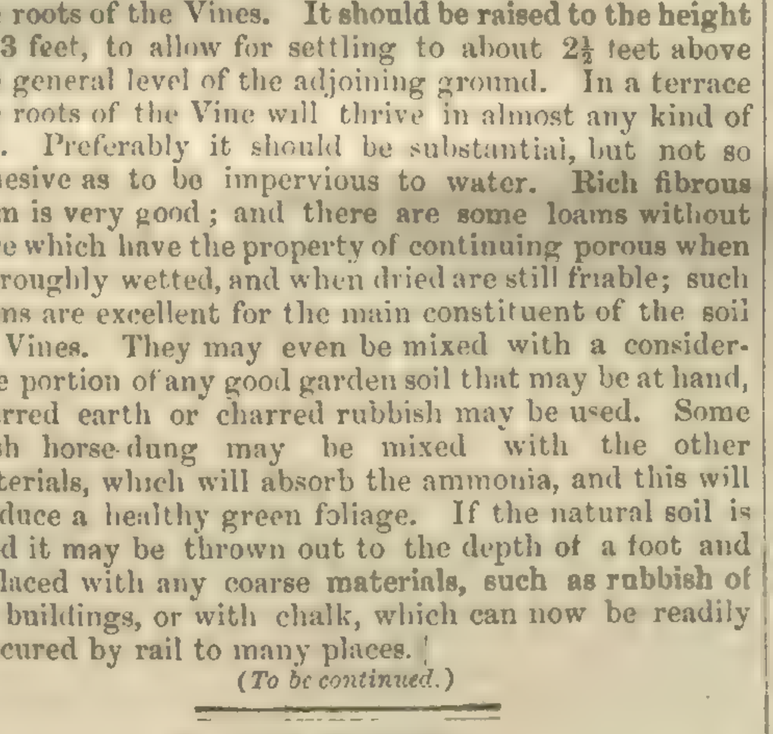
In front of the Vinery 10 or 12 feet should be allowed for the border, or rather for the base of a terrace for the roots of the Vines. It should be raised to the height of 3 feet, to allow for settling to about 2½ feet above the general level of the adjoining ground. In a terrace the roots of the Vine will thrive in almost any kind of soil. Preferably it should be substantial, but not so adhesive as to be impervious to water. Rich fibrous loam is very good; and there are some loams without fibre which have the property of continuing porous when thoroughly wetted, and when dried are still friable; such loams are excellent for the main constituent of the soil for Vines. They may even be mixed with a considerable portion of any good garden soil that may be at hand, charred earth or charred rubbish may be used. Some fresh horse-dung may be mixed with the other materials, which will absorb the ammonia, and this will produce a healthy green foliage. If the natural soil is good it may be thrown out to the depth of a foot and replaced with any coarse materials, such as rubbish of old buildings, or with chalk, which can now be readily procured by rail to many places.

(To be continued.)

ICE-HOUSES.

SEVERAL correspondents having made inquiries of us as to the best mode of constructing ice-houses, we reproduce the following plans from former volumes. One thing must be borne in mind, whatever plan is employed; the water formed by the melted ice must be made to drain away without the possibility of air entering at the drain hole. The best way of securing this is to use a bent pipe as at C in the first figure.

In the first plan, A is a well 8 or 10 feet



deep, by the side of a ditch deeper than the well; B are faggots at the bottom of the well; C is a curved lead pipe 5 or 6 feet long and 1½ inch in diameter; D, earth from the well to make it higher. A particular point in the construction of this house is the curved pipe, which is always air tight. The sides of the well should be lined with dry Barley straw, and the ice firmly packed.

Other plans of ice-houses, of which the following are representations, have also been published in our columns, chiefly in those of our volume for 1844.—In Fig. 1, A B is a conical hole in the ground, C B are stones or rubble 18 inches deep to act as

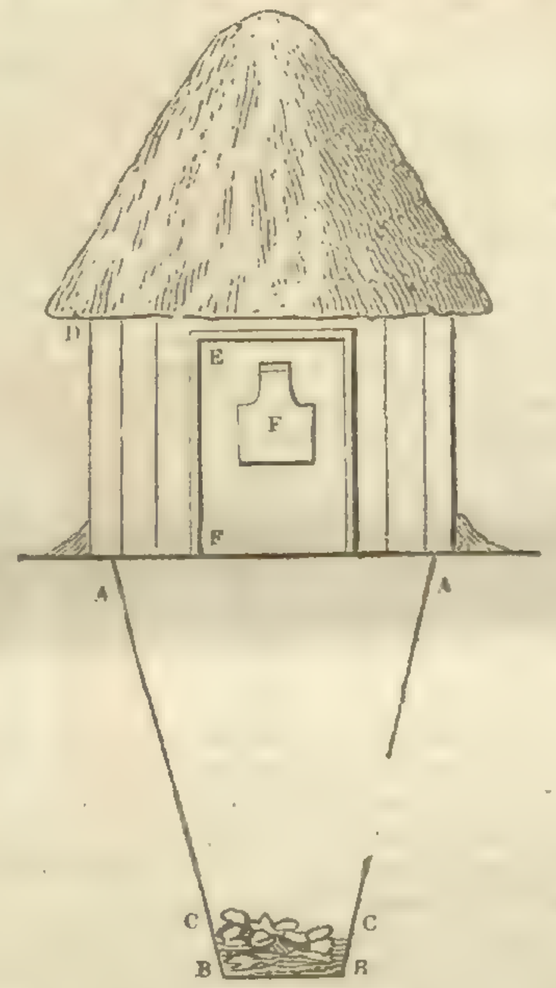


FIG. 1.

a drain; A D are slabs 4 feet high above the surface; E is the door; F is a trap door to answer a similar one on the opposite side, to be opened in a dry air, and carefully closed when the circumambient

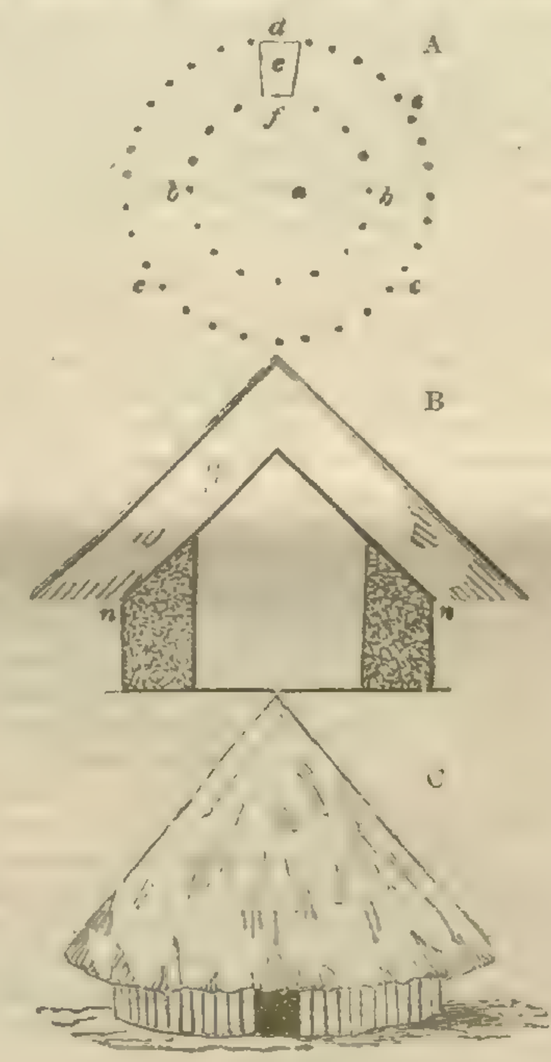


FIG. 2.

atmosphere is damp. This plan is stated to be at once cheap and efficacious.—Fig. 2 is a house of another description. In this case *a* (Fig. A) is the centre of a circle 10 feet in diameter. At this point a post is put up,

FIG. 3.

which stands 15 feet above the level of the ground. *b b* are fifteen posts 9 feet high and about 2 feet apart; *c c c* are 54 posts, 5 feet high. The space between these two rows of posts is about 4 feet, and forms a wall of straw; *e* is a passage through this wall, *d* is the outside door of the passage, *f* being that of the inside. Make the straw walls very close, so that if the wall were cut across as at *n n* in section B, the ends of the straw would present a compact face. The roof (C) is covered with clean well prepared Wheat or Rye straw, 4 feet thick.—Fig. 3 is a section of another contrivance for preserving ice. In this A is the ice, B a wall of Fern from 3 to 4 feet in thickness, and C the thatch. The walls are built up in the first instance, and then shored up and secured by hurdles. A little clean straw is first strewn over the top; Fern 18 inches in thickness follows, and after that it is made waterproof by means of straw thatch. This kind of house is found to answer perfectly when placed on an incline so that water may naturally drain away.

It should be remarked that excavations for ice-houses should be made in dry soil, and where, if possible, the shade of overhanging trees can be obtained. An open drain should also surround the house to carry off surface water.

Home Correspondence.

Bougainvillæas.—I was much pleased to see by late numbers of your Paper that the beautiful Bougainvillæa spectabilis has been so successfully flowered in England. Here it grows and flowers in the greatest luxuriance and beauty. I received a plant of it about 10 years ago. It was planted in the open ground and has never been trained, but allowed to grow in its natural shape; it has now become very much of the form of a dwarf round hay stack, about 15 feet in diameter, and about the same number of feet in height. It throws up from near the root every year during the hot season, a number of strong shoots; they grow to about 25 or 30 feet in length; owing to their own weight, and having no support, they take a curved form, bending down over the shoots of previous years, until their points reach the ground. At the commencement of our cold season they nearly stop growing for a time, until the weather begins to get hotter, when they throw out lateral shoots on each side nearly their whole length, and these lateral growths are soon covered with charming mauve coloured bracts, which continue in beauty about three months. Nothing can well surpass the appearance of such a mound of agreeable colours. I have been often asked by parties visiting these Gardens to send plants of it to their friends in England, and could with difficulty persuade them that plants could be had there at very moderate prices. I have distributed between 300 and 400 plants amongst the inhabitants here, so that the plant is by no means rare in this island. But however beautiful Bougainvillæa may be in a climate like this, where it can have plenty of room, I do not consider it to be the best species for growing in hothouses in England. My principal object in addressing you is to draw attention to another species, equally beautiful, and which I think will not be found difficult to flower even in England. Between two and three years ago I received from South America two plants of Bougainvillæas; one was named Bougainvillæa splendens, and the other B. Brasiliensis. The latter is a strong growing plant, in habit very like B. spectabilis; the bracts are dark red, and the flower very pale, nearly white. The former (B. splendens), which is the species I would beg to draw attention to, is a slender growing plant with small glabrous leaves; its bracts are nearly of the same colour as those of B. spectabilis, but larger, and each leaflet of the bract is of a more round form, and what adds so much to its other merits is that it appears to flower throughout the whole year. As an instance of its free-flowering habit, I may mention that I have a plant growing in a 48 pot that flowered lately without any particular care having been bestowed upon it. The mother plant was planted against a trellis in front of my house soon after I received it, but being in a very sickly state, it made but little progress during the first year; as it began to grow it was trained to the trellis, and now covers a space of about 8 feet by 10 feet. About 12 months back it began to flower, and has continued flowering ever since. It has been the admiration of every person who has seen it, and has consequently become the favourite species, even here; and I think there can be no question that it would be the best for growing in hothouses in England. Certainly a more beautiful plant it would be difficult to discover. I find the Bougainvillæas grow well in any kind of soil, provided it is of an open porous nature, and rather dry than otherwise. The temperature here is very rarely lower than 68° Fahr. in the cold season, and seldom higher than 90° Fahr. in the hot season. During the hot season there is but little variation of temperature between the day and night. I have two Madagascar Orchids beautifully in flower at the present moment, viz., Angræcum superbum and Angræcum sesquipedale; of the latter I have two varieties. I have also two fine plants about 10 feet high each of Mr. Fortune's Azalea papyrifera in flower; the immense numbers of globular white flowers that cover the top of the plant make it very ornamental. *James Duncan, Royal Botanic Garden, Mauritius.*

Dunn's Marking Ink Pencil.—I have made such great improvement in the texture of my Gardeners' Pencil that I am induced to send you one for trial. It is so much harder than the one you formerly had, and writes so much better upon zinc, that I think you will find it all that can be desired. I find that for

wooden canes nothing is better than just damping the surface with the finger wet with the tongue; thus treated the writing penetrates further into the wood than where soda is used; the only precaution necessary is to expose the labels to light to fix the marks before rain falls on them, and not to make the surface wet but only damp; indeed merely breathing on the surface is almost sufficient. The marks on wood with this hard pencil are not quite so black as with the softer one, simply because so much does not rub off, but they are much more durable and stand such an amount of rough usage that I find the hard pencil generally preferred. It also writes well on unglazed porcelain, parchment, &c. and it will write very fairly on any dry ordinary paper. *Arthur Dunn, Dalston.* [We confirm all that Mr. Dunn states in this letter. His pencil is really much improved, by being harder, without losing its marking power.]

Acorus Calamus, a Cure for Ague.—In Norfolk, where it is plentiful, this is called "Sweet Seg" (Sedge), and was formerly much esteemed as a remedy for ague. Dr. A. T. Thomson (London Dispensatory, 10th edition, 1844), speaks of it as a valuable remedy, and as "too seldom prescribed." Within these last 18 months there has been much ague in this parish (where no case had previously occurred for 20 years), and in East Norfolk generally. I have given the Acorus with great success. I make an infusion of 1 oz. of the fresh rhizome in a pint of boiling water, add seven grains of quinine, and give a wineglassful every six hours. In no case has more than one fit occurred after taking this prescription, while I have given two and even three scruples of quinine, without Acorus, unsuccessfully. Although I have known the plant 18 years I have never seen it in flower, nor has the promise of a shilling to marshmen in places where it is abundant, for a flower of it, procured me one, though many of them say they have seen it in flower, and one has described it pretty well in accordance with the figure in Sowerby's English Botany, in which, by the bye, the leaf is not well drawn. As it is said to grow wild in the Levant, I have thought that perhaps forcing in a hothouse might induce it to flower. Do you think this likely? What was done with the large quantities of Acorus formerly sent to London from Norfolk? A chemist and druggist tells me he has sent up a ton weight in a year. He found that the gatherers, either fraudulently or ignorantly, sent roots of Iris Pseud-Acorus with those of the real Acorus. This may account for its falling into disuse as a medicine; or perhaps it may lose its virtues when kept too long. Dr. Thomson (art. Leech) says that "this plant, the Acorus Calamus, is supposed to yield nutriment to leeches," and refers to Horn's Archiv. für medizinische, &c., Jan. 1826. Is there any foundation for this statement? I should have thought that leeches lived entirely on animal food. *E. G. Runham Vicarage.* [It flowers abundantly on the banks of the Thames. It was used to perfume hair powder.]

Gishurst Compound.—In "Notices to Correspondents" in last week's Paper, it is said that Vines treated in spring with Gishurst Compound, 4 ounces to the gallon, and "which had sulphur," were still mildewed. Will you allow me to call attention to the fact that the printed directions as to the use of Gishurst, give "at least 8 ounces to the gallon" for the dressing of trees at rest. Several Vines in an old fashioned greenhouse on Wandsworth Common had for the two last years, in spite of sulphur anointing of the hot water pipes, almost all their bunches made worthless by mildew. At my suggestion the gardener first rubbed the loose bark off, then thoroughly washed stems and shoots with 8 ounce solution of Gishurst, and finally smeared them with a composition made of sulphur, lime, and Gishurst made into a paste. This year, in spite of the unfavourable season, the Grapes are perfectly healthy. It might be expected that, supposing sulphur be the remedy against mildew, that the soluble state in which it exists in Gishurst, should make the action on the wood and pests more certain than when the sulphur is only administered mechanically as a powder. This opinion has been confirmed by some recent trials by Mr. Judd, of Althorp Gardens. I was not long back in communication with Mr. Errington, whose lamented death is announced in last week's *Gardeners' Chronicle*, with a view to settle the question whether the substitution of Gishurst Compound for the soft soap be not in all cases an important improvement in winter and spring-dressing compositions. *The Inventor of Gishurst.*

Huyshe's Victoria Pear.—"At Hill's Court Nursery, Exeter, there is now in full bearing a very fine tree of the famed Huyshe Victoria Pear. The beautiful growth of this tree is much admired by lovers of horticulture. Mr. John Knott will have much pleasure in showing it to any party that may favour him with a visit." The above has appeared in the Exeter papers. The tree in question has upwards of 150 fruit on it, more than 50 having been taken off. Mr. Huyshe saw it yesterday, and pronounced it the finest in England. Any of your subscribers visiting Devonshire would be glad, I am sure, to see this tree, which is well worthy of inspection. *John Knott.*

Orchard Houses.—The letter on this subject in your last Number shows how few people who possess these contrivances know how to manage them, even in a district where they are the rage. The red spider ought to be an unknown thing in such a house, and I think I can point out the reason why it is not. The plants, I doubt not, are well and regularly syringed, but how many drops of water get to the under side of the leaf? If amateurs or gardeners would have a syringe with a crooked nose, or a moveable joint, and bring it close under the tree which they syringe, so as to drive the leaves upwards with the force of the stream, such notice to quit would always be effectual as regards the red spider. But so obstinate are some men, that unless the master makes a particular point of this, and often sees it done, the gardener will shirk it. The Golden Hamburgh Grape has been mentioned several times by your correspondents—may I ask them how it bears with them? I have not yet fruited it in my house, though I have some fine canes which promise well for next year. But I have grown it in pots and in heat side by side with Black Hamburgh and Sweetwater; and whilst these latter have broken so thickly that I have had 40 or 50 bunches to fling away, the whole crop of the Golden Hamburgh has amounted to three or four, and only one of these a good bunch. Have others been more fortunate, or is this fine Grape a shy bearer? *An Early Friend of Orchard-house Culture.* [The Golden Hamburgh has fruited beautifully this year at Chiswick. See report in another column.]—My Orchard houses have been most successful. The trees have borne abundantly, and as fine fruit as I ever gathered from a wall. The difference in the appearance of my trees under glass and not under glass has been and is most striking. I do not allow my trees to root through into the border, but confine them to the pots and boxes, following in a great measure the excellent directions given by "Sigma" in your paper about three years ago. I think it very important to repot the trees immediately the fruit is gathered. I feel no doubt that in a few years all our best fruits, with the exception perhaps of Pears, will be grown under glass, and very probably planted only, without pots or boxes, which I am much disposed to think are not required, as the size of the trees may be regulated by root pruning. I see one of your correspondents complains of aphis, red spider, &c., but under glass a gardener has power to keep these pests down, and if he fails he has himself to blame. *W. C.*

Edgings.—When at Versailles in June last I saw that the walls of the terrace were surrounded with edgings, some about 4 feet through, and the smaller terraces about 3 feet through. I brought a sprig of each plant, which I enclose you; the smaller leaf formed the edging of the small terraces, the larger that of the higher. I have shown them to two or three Nurserymen, who cannot tell me what they are. I wish to plant one kind or the other around a terrace garden wall. Will you be pleased to inform me where those plants are to be obtained, their names, and if you think they are suitable for our climate for the purpose required. *T. H.* [One is Tree Box, the other Dwarf Box.]

Societies.

HORTICULTURAL: *Fruit Committee, September* 11.—A few good Peaches were shown on this occasion by Mr. Ferguson of Stowe, and a seedling variety of Peach came from Mr. Salter of Hammersmith. From Mr. Thompson, gr. to Lord Stamford, at Enville, came specimens of the singular looking Bean called Tow-cock (Dolichos sinensis), the pods of which could not measure less than 2 feet in length; they grow in pairs, and in appearance are transparent and tender. Their native country is the hottest part of China, and therefore they cannot be usefully cultivated out of doors in England. In great gardens, however, like that at Enville, they might be grown under glass as a rarity. The specimens in question are the produce of Chinese seeds which it will be remembered were sold at Stevens' this spring.

Sept. 13, *Floral Committee.*—A handsome new Gymnogramma called Wetenhalliana, was exhibited at this meeting by Mr. Kelly, gr. to Mrs. Redway of Bolton-le-Moors, and was awarded a first class certificate; a similar award was also made to Dahlia Marquis of Bowmont, from Mr. Dodds, of Salisbury; it was rosy lilac in colour, large and excellent in shape; a rosy purple Dahlia called Masterpiece from Mr. Keynes was commended, as were also Dahlias Nora Creina and Elegance, from Mr. Turner, of the Royal Nurseries, Slough. These were both pretty varieties; the first orange and yellow tipped with whitish lilac; the last white tipped with lilac and flaked with dark crimson. Dr. Sankey contributed a white Phlox with a rosy eye, which received a label of commendation. A Rose named John Hopper (H.P.) was shown by Mr. Ward, of Ipswich; Messrs. E. G. Henderson furnished a Bouvardia called Hogarth, with small rosy flowers, and we also noticed several plants of Dianthus Heddewigii, Balsams, and Fuchsias. From Mr. Crowder, of Horncastle, came three pyramidal examples of Yew, which were stated to be more compact and upright in growth than the common kind, of which it was said to be a variety.

Notices of Books.

The Eagle's Nest in the Valley of Sixt; a Summer Home among the Alps: together with some Excursions among the great Glaciers. By Alfred Wills. 8vo. Longmans. Pp. 327.

The Valley of the Sixt? Where is that? From the volume before us we learn that it lies between Bonneville and Martigny. "From Geneva it is easier of access than the valley of Chamouni; it may be reached in one day from Chamouni or from the valley of the Rhone, and its attractions are second to those of no Alpine valley I have seen. I had always heard it spoken of as a place where there were a great many waterfalls,—a sort of faint praise which seemed to imply that there was not much else to recommend it. It was therefore with something of the pleasant surprise of a new discovery, that when chance took me into the valley, I found it so beautiful that thenceforward I hardly knew how to keep away from it."—"The little village of Sixt, from which the valley takes its name, lies at the base of the northern spurs of the Buet. It is nearly due north of Chamouni, and across two ranges of mountains, the Bréven and the next chain behind the Bréven, the Chaîne des Fys, a mountain chain of great wildness and rugged grandeur, of which the extreme point to the west is familiar to every traveller to the valley of Chamouni as the Aiguille de Varens, the precipitous peak towering just above St. Martin. Sixt may be approached from Chamouni by a straight cut over these intervening ridges, practicable only for pedestrians, or by a mule-path which leaves the high road half-way between Chamouni and Sallenches. From Genèva there is an excellent carriage-road, passing through Bonneville, where it diverges from the road to Chamouni. The Chamouni road crosses the River Arve, the road to Sixt keeps along its right bank. Everyone who has been from Bonneville to Cluses, will remember that between those two places the Arve flows in a valley often several miles wide, inclosed between two parallel ranges of mountains; those on the right of the traveller to Chamouni being steep and lofty, those on the opposite or eastern side of the valley being lower, more cultivated, and in many parts luxuriantly wooded. The valley of Sixt lies behind this eastern boundary of the valley of the Arve, and the road from Bonneville to Sixt crosses the range nearly opposite to Cluses."

In the year 1857 Mr. Wills first saw this romantic spot, in 1858 when he returned, it had lost none of its fascinations; on the contrary the charms of the district eventually induced him to purchase ground for an "eyrie" at 4300 feet above the sea,—nearly the height of the top of Ben Nevis—which received the name of "the Eagle's Nest." A graceful view from it, executed from a sketch by his accomplished companion and wife, now alas no more, is one of many charming pictures of Swiss scenery, with which this very pleasant volume is enriched.

The lover of Alpine adventure will find interest in every page, whether Mr. Wills describes the scenery, or the dangers of ascents, or the manners and appearance of the people, of whom, in the valley of Sixt, he speaks in enthusiastic terms. There had been some difficulty in obtaining permission to purchase land in the valley, and considerable opposition to the proposal. But matters having been satisfactorily arranged, Mr. Wills returned to Sixt in the autumn of 1858. "I wrote to Balmat to meet me at Sixt on the 15th of August, but took no other steps to announce my arrival. Indeed, knowing the dissensions to which my proposal had given rise, I felt inclined rather to sneak in unobserved than to proclaim my coming beforehand. We reached Samoëns, about two hours' walk from Sixt, between three and four o'clock in the afternoon of the 15th of August; and as my friends were not less struck than I had formerly been with the beauty of the place, we determined to sleep there and go on the next morning. Before dinner could be served, I was told that a deputation from Sixt wished to see me; and I found three or four of the councilmen waiting to assure me, in the name of the commune, that a hearty welcome would be given to us by all parties, and that I need not fear the slightest unpleasantness in consequence of what had taken place. The most resolute of my antagonists, they said, had opposed me on public grounds, and because they thought it would be better for the valley that I should not establish myself there; but now the matter was once decided, their only wish was to receive us as friends, and to offer us every facility for carrying on our operations. They had come from Sixt to seek me, and to offer to my wife and myself the expression of their goodwill. Such assurances were very pleasant, and afforded no little relief to my wife, who did not much fancy settling amongst a population to whom we might be objects of dislike. This was not all, however; that evening, to our great surprise, as we sat in the balcony, we were serenaded by an excellent band, composed of pretty nearly all the gentry of Samoëns and the neighbourhood. My friend, Monsieur Pasquier, played the trombone, and the brother of the Syndic of Samoëns—one of the wealthiest proprietors of the district—was the leader. I found, upon my thanking these gentlemen for the honour they did us, that our arrival was viewed as a matter of deep interest, inasmuch as it marked the triumph of liberal views over exclusive and antiquated prejudices. The serenade was followed by a salute of cannon, and by a very pretty display of fireworks. The next morning we found that our friends from Sixt had quite correctly represented the feeling of the people towards us. We were met half way from Samoëns by a deputation consisting indifferently of supporters and opponents, and welcomed again, as we crossed the boundary of the commune, in the most kind and gratifying manner, while the rocks at the curious passage of Les Tines rang and rang again with the

grand echoes of another salute. Similar honours awaited us as we passed through the market place at Sixt, and an excellent lunch was provided for us by our hospitable friends."

The charms of this "happy valley" are by no means confined to magnificent views of terrific scenery; on the contrary it is described as having a vegetation scarcely alpine, owing to the unusually small proportion of Fir trees on the mountain sides. "Generally amongst the Alps there is such a predominance of the Fir tribe, that one often thinks of an Alpine wood as a synonym for a Pine forest, but throughout this district it is far otherwise. The Beech, the Birch, the Elm, the Walnut, the Ash, freely mingle their foliage with the darker green of the Fir, or the fresh emerald of the Larch. In this particular spot the fine growth of the trees is as remarkable as the picturesque and varied aspect of the wood. When I passed through it I was accompanied by my friend Auguste Balmat, who, like myself, visited it for the first time, and he told me then he thought he had seen nothing like it among the Alps; every stem was so tall and straight, and well grown on every side. I remember particularly his admiration of the young Fir trees, which he thought would make alpen-stocks of matchless quality. Above the top of the fall we came upon orchards, and upon arable and pasture land of excellent quality and great extent. There was an ample stock of fruit trees laden with autumnal produce; cows and goats were feeding about, and all the signs of agricultural industry displayed. We got glimpses of pastoral valleys leading high up towards the mountain tops, and offering scenes of great beauty, which it would be well worth while thoroughly to explore. The quantities of wild fruit, Strawberries, Raspberries, Blackberries, and Bilberries, that were growing on the mountain side were astonishing. We could pick them at every step; and M. Pellet's son, who was with us, bought a large basketful, containing two or three quarts of fruit, some of which embellished the array of my evening meal, for four sous. He made no secret of the price, and I found no notice of the addition to my tea in the bill. Elsewhere, I should never have heard what was paid for them, but I should certainly have found out that they were not to be had for nothing at an inn."

This is surely a very enticing picture.

Elementary Examples in Practical Mechanics. By the Rev. John F. Twisden, M.A., Professor of Mathematics in the Staff College. 8vo, pp. 319. Longmans.

Numerous as are our works on mechanics, the want of a good elementary introduction to the study of applied mechanics has long been felt, as well by teachers as by students. This want appears to be well supplied by the present volume. Professor Twisden assumes the student to be acquainted with the elements of geometry, algebra, and plane trigonometry; and those who, having sufficient knowledge of these subjects, wish to study the principles and practice of mechanics will find the Professor's work extremely useful. His examples are numerous and well selected, and the principles on which their solution depends are neatly stated and demonstrated.

Dr. Birkbeck Nevins has printed an essay *on the Phytotype or Archetype of the Flowering Division of the Vegetable Kingdom*, read last December before the Literary and Philosophical Society of Liverpool. The conclusion drawn by the author is—

"That the *Archetype or Phytotype of a flowering plant consists of a spiral vessel surrounded by cells*—the *spiral* being *simple* or *multiplied* and *branching*; and the cells being of various forms and strength, according to the purpose they have to serve.

"Thus in the soft, rounded, and succulent leaf of the Sedum the cells are circular and delicate in structure, and surround a slightly ramified spiral vessel; whilst in the germinating Acorn the cells are dense and elongated, hard and woody, and already show that the insignificant plumule and radicle are eventually to become British Oak. In the delicate tapering staminoid organ in the stork's bill, the spiral is single and unbranched, and the cells are also tapering and slender; whilst in the various leaves which have passed under examination the spiral has been simple or branched, and the cells delicate or strong, according to the stage of growth and the habits of the plant. But in all these parts, as well as in the stem of the Dodder, and the delicate organs of a flower, we find the same essential character, viz., '*the spiral vessel surrounded by cells.*'"

We do not ourselves perceive the value of this idea, which it must be owned is obscure enough to satisfy the most ardent lover of speculative science. Some rude sketches, borrowed from various sources, accompany the letter press.

Henderson's Illustrated Bouquet, Part IX., has figures of a purple Clematis viticella, called venosa, with very large flowers; a fine variegated climbing plant, called Sphærostema marmoratum, introduced by Mr. Low from Borneo; four varieties of Tydæa: igneseens, Lurline, Volunteer, and Countess of Ilchester; the old Stokesia cyanea, a hardy North American perennial, long lost, and now reintroduced, useful for its blue flowers the size of those of a China Aster; and Portlandia platanthæ, a stove shrub with large ivory white flowers, resembling Portlandia grandiflora.

We have to announce the appearance of the 11th and 12th parts of Sir Wm. Hooker's very important *Species Filicum* (Pamplin), completing the third volume, which now gives a complete history of Lomaria, Blechnum, Sadleria, Woodwardia, Doodia, Asplenium, Allantodia, and Actiniopteris, and of the swarm of new genera which recent writers on Ferns have thought it desirable to separate from those we have named. The present volume is enriched with 70 capital plates; and another is announced as likely to be soon commenced.

The *Floral Magazine*, No. V. (Lovell Reeve), contains figures of the Double Carnation striped Columbine; the Amilcar Rhododendron, a dark purple hybrid Catawbiense; Gazania splendens, very handsome and invaluable for indoor decoration; a new Cactus in the way of speciosissimus, called Cereus Claudiana [us].

Ure's Dictionary of Arts, &c. Part XI. (Longmans), has reached the article Ores. Among its contents are good reports upon Mortar, Nails, Naphtha, Nitre, Nutrition. Oils, each of which concerns matters of deep economical interest.

Of *Routledge's Illustrated Natural History*, the part for September comprehends Owls, Goat-suckers, and Swallows.

Mr. Murray has added to the list of his invaluable Handbooks one for *Travellers in South Wales* and its borders, including the river Wye. It forms a small volume of 140 pages, has a good map, and is as rich as possible in authentic information concerning the matters about which travellers want information.

A 5th volume of *Mr. Stainton's* very elaborate work on the *Natural History of the Moths called Tineina* is before us. It contains 24 species of the curious leaf-miners called *Coleophora*, of which the 4th volume also contained 24. The plates continue to give faithful representations of the transformations of these curious little insects, of which the world in general knows nothing except the mischief they commit upon the leaves and branches that become victims of their attacks.

TRADE LISTS RECEIVED.—Transon-Forteau & Sons' (Orleans, France) Trade List for 1860-61.—Jean Verschaffelt (Ghent), *Prix Courant pour l'Automne* 1860, *et le Printemps et l'Été* 1861.—Butler & McCulloch's (Covent Garden) Autumn Catalogue of Dutch and Cape Flowering Bulbs; also of choice varieties of Carnations, Picotees, and Pinks.—Catalogue of Dutch Bulbs imported by Samuel Yates, 16, Old Millgate, Manchester.

Garden Memoranda.

HORTICULTURAL SOCIETY'S GARDEN, TURNHAM GREEN.—To Grape growers, the importance of paying a visit to the great conservatory at this place at the present time, can hardly be overrated. It will be remembered that some time ago the ornamental plants which it contained were removed, and that it was planted with Vines; the latter are now for the most part in full bearing, and the crops, which on most of them are ripe or nearly so, are unusually fine. Some of the Black Hamburghs especially are large, both in bunch and berry, and beautifully coloured; on the Barbarossa are some enormous bunches; and the beauty and size of the Golden Hamburgh fully bear out all that has ever been said or written in its favour.

Of varieties in a good bearing state which this house contains, the following is an enumeration:—

Black Hamburgh.—Branches moderate in size, shouldered; berries roundish-oval; colour black with a fine bloom; skin thin; flesh tender, melting, and rich. This is what is called the true old Black Hamburgh, and though smaller both in bunch and berry than other varieties, it is stated to be the best in quality. Warner's Hamburgh, the Hampton Court, and the Richmond Villa Hamburgh are synonymous kinds.

Dutch Hamburgh.—This is found to be the same as Wilmot's Black Hamburgh. Bunches medium-sized, compact, not much shouldered; berries large, roundish-oblate, indented as if hammered on the surface, and often so much so as to appear misshapen, black, covered with a thin bloom; skin thick, adhering closely to the flesh, which is somewhat coarse. This differs from the Black Hamburgh in having larger berries, more decidedly round, and marked like a hammered bullet; the flesh is much firmer, but not so juicy nor so sugary; the leaves are also less pubescent.

Mill Hill Hamburgh.—This is reported to be the same as Dutch Hamburgh.

Frankenthal.—To this the Fruit Committee have referred the Pope and Victoria Hamburghs, and the Black Tripoli of Welbeck. Bunches large, strongly shouldered; berries roundish, frequently oblate, and rarely roundish oval, somewhat indented or hammered-like, but less so than the Dutch Hamburgh, black, covered with a thin bloom; skin thick. This is a fine looking Grape of vigorous growth, but less rich and highly flavoured than the true Black Hamburgh, though superior in these respects to the Dutch Hamburgh.

Pope Hamburgh.—Same as Frankenthal.

Victoria Hamburgh.—Ditto.

Burchardt's Amber Cluster.—This resembles the Muscadines in quality, but has oval berries like the Clusters. Berries middle-sized, decidedly oval, amber-coloured, or yellowish-white; skin moderately thin; flesh sugary and rich. It is stated to be earlier than the Royal Muscadine, and this, combined with good quality, will render it a first-rate early white Grape.

Œillade Précoce.—Bunch small, longish, loose; berries about the size of those of the Royal Muscadine, roundish, or but slightly oval, rose-coloured.

Savignon Blanc.—Bunches and berries about the size of those of the White Frontignan; berries oval, yellowish white; skin thick; flesh sweet, but not so rich as that of the White Muscadine. A wine Grape.

Ward's Early Muscadine.—Bunch long, rather loose; berries round, about the size of those of the Royal Muscadine, and of the same colour and flavour.

Bidwill's Seedling.—Bunches and berries nearly as large as those of the Black Prince; berries small, round, bluish black with a fine bloom; skin rather thin; flesh tender, melting and juicy, but somewhat acid.

Burchardt's Prince.—Bunches long, tapering, about a foot in length, larger than those of the Black Prince, which in their long, tapering, slightly shouldered form they resemble; berries round, scarcely so large as those of the Black Hamburgh, compared with which it is later, roundish-oval, black with a thick bloom; flesh firm, juicy, melting, rich and vinous. A good hanging variety, but requires a good deal of heat.

Queen Muscatel.—Like the White Nice.

Trebbiana.—Bunches shouldered, long and tapering, but loose; a showy white kind, but coarse.

Golden Hamburgh.—Bunches large and well shouldered; berries large, oval, or sometimes roundish-oval; pale yellow, or when highly ripened, pale amber; skin thin; flesh tender and melting, very juicy, rich and sugary. This, as has been stated, fully maintains the high character it has received, and is in all respects a first-class Grape.

Fleming's Prince.—Bunch large, loose, long, slightly shouldered; berries oval, larger than those of the Black Prince, to which they bear considerable resemblance; skin very thin, bluish-black, with a copious bloom; flesh tender, juicy, remarkably rich, and sugary. An excellent Grape.

Morocco Prince.—A seedling between Black Prince and Black Morocco. Bunches about the size and form of those of Black Prince; berries also similar in size, oval, but with a thinner skin, which is tough, reddish black, with a slight bloom; flesh firm, juicy, melting, and sugary. A useful late Grape.

Panse Jaune.—Berries large, oval, or somewhat ovate, pale yellow in colour, like a well ripened Muscat of Alexandria; flesh rather firm, sweet but not rich.

Gros Rouge de Provence.—Bunch long, tapering, loose; berries small, slightly oval, black; skin thin; flesh juicy with a Frontignan flavour.

Muscat Noir de Jura.—Bunch long and tapering, slightly shouldered, larger than that of the Black Frontignan grown under the same circumstances; berries about the size of those of the Black Prince, slightly oval, black; flavour resembling that of the Violet Frontignan, being only slightly musky. Later than the common Muscat Noir or Black Frontignan.

Alicante Preta.—Like the Large Black Ferral, and not suitable for a conservatory temperature.

Black Barbarossa.—Bunch very large and strongly shouldered; berries large, roundish oval. A valuable late Grape, some of the bunches of which at the present time measure at least 18 inches in length.

Malaga.—Like a White Muscadine.

Sideritis.—Bunches very large; berries of the largest size, oval, reddish black, unequally coloured; deficient in juice and flavour. A strong grower.

Black Monukka.—Bunch nearly the size of that of the Black Prince; berries rather small, of a peculiar oblong-ovate shape, stoneless; skin black, thick; flesh sweet, but not rich. This will probably prove a valuable Grape for purposes of commerce.

Précoce Malingre.—Bunches small; white.

Blussard Noir tardif.—Bunch small and rather loose; berries middle sized, slightly oval; skin black, tolerably thin; flesh juicy, and sweet. A strong grower; and rather earlier than the Black Hamburgh, but a bad bearer. The Blussard Noir is said by the committee to be very similar to, if not identical with, Black Hamburgh.

Catalanesia Nera—A late kind, not unlike Black Prince both in form of bunch and berry.

Oldaker's St. Peter's.—One of the best of the finer kinds of late Grapes.

Sahibee.—Bunches large; berries white, with a rosy tinge on the exposed side. Of this a full account will be found in the Journal of the Horticultural Society. It is the same as Ahlbee, the variety about which Mr. Pontey inquires at p. 814 of our last week's Number.

Grorend Sweetwater.—A fine white variety; not yet ripe.

Prune de Hernault.—Bunch about the size of that of the Violet Frontignan; berries about the same size, somewhat oval, bluish black, with a fine bloom; skin adhering closely to the flesh, which is firm and richly flavoured.

Rouge de Rolle.—A small, black, sweet Wine Grape, too small to be admitted into vinery culture.

White Nice.—Bunches large, and showy, but like those of the Syrian, somewhat coarse.

Chasselas Musqué.—One of the best of the smaller kinds of White Grapes; but in this instance somewhat cracked. This was ripe about the middle of last month.

Muscat of Alexandria.—Not yet nearly ripe.

Verdal.—A white variety resembling Sweetwater.

Keinshejmer.—Bunches 5 to 6 inches long, cylindri-

cal, and rather compact; flavour like that of a Muscadine; not yet, however, quite ripe.

Muscatel.—Not yet nearly ripe; requires apparently more heat than that of a greenhouse to bring it to perfection.

Red Muscat of Alexandria.—Bunches large; berries oval, but not yet half ripe. Seems to require more heat than that of a conservatory to bring it to perfection.

Chasselas de Fontainbleau.—This proves to be a good variety of Royal Muscadine.

Cabral.—Not ripe; bunches large berries oval, like those of Cannon Hall Muscat.

Chasselas Vibert.—Juicy and tolerably rich, but not musky; skin thin and transparent, does not crack; bunches 5 to 6 inches long.

Raisin de Calabre.—Bunches large and handsome; but deficient in flavour. A good kind for hanging long, without shrivelling after becoming ripe.

Yellow Cabul. Bunches and berries small; the latter ovate, juicy, and sweet, but a little watery.

Violet Frontignan.—Like the Black Frontignan; but unlike that fine kind deficient in Muscat flavour.

These Vines were started in March last, and had fire-heat applied to them till about the middle of June, when it was discontinued till about the end of July, when a little was given them when they were colouring, and again at the present time when they are ripening. They may, however, be said to have been treated very much on the cool system. They are growing partly in an outside, and partly in an inside border. The largest of them, which are chiefly those in the outside border, were planted in August, 1857, so that they have had but three seasons' growth. Many of those which were planted in the inside at the same time, were replaced by more suitable varieties, during the autumn of 1858, and spring of 1859.

The outside border was prepared in the end of July, 1857. It is 4 feet wide and about 2 feet deep, including drainage, the latter consisting of several inches deep of brickbats and rubbish, so that the depth of prepared soil is about 18 or 20 inches; it consists of Wimbledon loam, and chopped turf, obtained from the surface of the van-ground, a little charred earth, and a small quantity of manure. These outside borders have had no water, except the rain which fell on them. The inside ones, being very shallow, required the earthen pipes placed at intervals along them to be filled occasionally with water and also with manure water; and throughout the summer months, and until the Grapes began to colour, the whole of the inside area was watered daily, the evaporation from which contributed to moisten the air of the house.

It may be proper to mention that the conservatory here is elevated on a terrace about 2 feet above the general level, and the outside borders are of course on this elevated surface. This arrangement, which entirely prevents the accumulation of superfluous moisture in the soil, is one to be highly recommended in the formation of Vine borders, more especially in such a season as the present. The curvilinear span-roof and exposed position of the house, both favourable to the free admission of light, have also no doubt had an influence on the excellence of the crop. The treatment throughout has been that of an ordinary Vinery.

To the orchard house at present considerable interest is also attached. Of Apples, Pears, and Plums there are abundant crops even on trees potted last March. Peaches and Nectarines, both of which were good, have been gathered. The trees are in excellent health, and bid fair to bear equally well next year.

Peaches and Nectarines on the open wall have been tolerably good, considering the comparatively bad condition in which the trees were in spring, owing to the frosts which they experienced in October last. Acton Scott and some of the earlier sorts have already been gathered.

Crops of Pears on walls, and orchard fruit in general, are good. Even young standard pyramidal trees transplanted last spring are ripening fair crops. The following varieties of Pears and Apples have already been gathered, viz.—Pears: Jolivet, Citron des Carmes, Muscat Robert, Jargonelle, Franc Real d'Eté, Summer St. Germain, Bloodgood, French Jargonelle, Summer Rose. Apples: Summer Golden Pippin, White and Red Juneatings, White Astrachan, Summer Thorle, Oslin, Red Quarrenden, and Early Harvest.

Among out-of-door flowers the collection of China Asters, now in full bloom, is perhaps what will attract most attention. The Chrysanthemum flowered sorts, especially, having blossoms unusually large for the size of the plants, are very showy, and the Bouquet kinds are equally pretty. That great improvement has been made in Asters of late years is fully exemplified, not only by these two fine kinds, but also by others with which they are associated.

Of Verbenas, perhaps the most showy were Annie Grey, violet with white eye; Fair Star, bluish purple with white eye; Il Trovatore, scarlet with white eye; Leviathan, purplish violet with white eye; and Cynthie, rosy purple. Of older kinds Géant des Batailles and General Simpson are still among the best and most effective.

Among Variegated Geraniums Countess of Warwick appeared to be most attractive; it is a horseshoe kind with leaves edged with white and brilliant scarlet flowers.

The new Dianthus Heddewigii and varieties are not in good condition, owing to the unfavourable weather to which they have been subjected. Than Gazania splendens, which is favourably alluded to in our "Notices to Correspondents" to-day, no better bedding or border plant has been introduced for years. For borders Burridge's three coloured varieties of single Chrysanthemum are very pretty; but grow too tall for beds.

Among Tropæolums, the Crystal Palace and Carter's Tom Thumb varieties, both orange, scarlet and yellow, have proved the best for outdoor cultivation.

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Where valuable stove plants have to be kept here in bloom they will require careful management to prevent their being injured by damp, and they must not be over-watered at the root, as stove plants are soon injured in a low temperature if kept too wet underground. Give air freely on bright days, but if the house contains many stove plants it will be advisable to shut up rather early in the afternoon, so as to retain a little warmth for the night, and in the event of wet cloudy weather setting in again it will probably be found necessary to use a little fire heat to dispel damp and preserve the blossoms of tender things; and this should be seen to before handsome specimens get disfigured or ruined for the season, for these in bloom are not over plentiful about most places at this season of the year, and are therefore worth caring for. Keep everything in this house as clean and neat as possible, removing decayed flowers and leaves, &c., immediately they are perceived, and examine pot specimens frequently, particularly such as may not occupy the most suitable places, turning them partly round in order to expose all their sides equally to light and air.

FORCING DEPARTMENT.

PINERIES.—As has been before stated, a rather dry condition of the soil about the roots and also of the atmosphere is essential during the ripening of the fruit where high flavour is an object, therefore be careful not to over-water plants on which the fruit is approaching maturity, and it will be advisable to use slight fires on dull days, so as to allow of giving sufficient air to prevent a stagnant state of the atmosphere, for fruit of first-rate quality cannot be expected from plants growing in a sodden soil or a damp unhealthy atmosphere. Endeavour to afford growing stock a steady bottom-heat of about 85°, and keep it well supplied with manure-water at the root, but avoid getting the soil too wet. As fire-heat will now be necessary to a considerably larger extent than has been the case during the summer, care must be exercised to secure a properly moist state of the atmosphere, keeping the evaporating pans or troughs regularly supplied with water, and moistening the floors, &c., frequently, as any sudden change from a moist to a dry state of the atmosphere would be most injurious to growing stock, and also to plants swelling their fruit. Be as sparing of fire-heat, however, as circumstances will allow, and shut up early on the afternoons of bright days, so as to husband the sun's influences as much as possible. Where young stock is grown in dung-pits, care must be exercised after this season not to get the plants weakly through keeping too close and warm, giving air freely on every favourable opportunity, and sufficient command of warmth should be secured from the linings to allow of giving a little air at night and on cloudy days.

FLOWER GARDEN AND SHRUBBERIES.

Where cuttings of Verbenas and such like things have yet to be put in, they should be inserted rather thinly in deep pans or shallow pots in which they can be wintered, as they will be got established sooner in this way than would be the case if they were to be potted off before winter, and we have frequently found late cuttings managed in this way to winter fully as well as stronger plants; and except plants intended to furnish cuttings in spring it is very immaterial how small bedding plants are before winter, provided they are well rooted without having been got up in a close warm atmosphere to render them sappy and tender. Many through anxiety to secure large plants keep bedding-out stock close and moist until late in autumn, and frequently in frames on dung beds, where size is soon obtained; but plants treated in this way are necessarily so soft and tender that it is almost impossible to carry them over the winter without serious loss. Therefore avoid keeping such things too warm after this season, and if they are placed in bottom-heat give air whenever it can be done without the cuttings suffering, so as to prevent weakly growth. The frosts of the last few nights have impaired in some places the beauty of Dahlias and other tender plants.

HARDY FRUIT AND KITCHEN GARDEN.

Look frequently over any varieties of Pears ripening, and gather those that are fit; for if allowed to hang after they are ripe, birds are sure to find them and will attack the fruit before it is fit for gathering, so that the crop will probably be spoiled unless it can be netted up. Where Currants are covered with mats—which by the bye are very inferior to close nets for this purpose and much more expensive—the trees should be uncovered occasionally on fine dry days so as to expose the fruit thoroughly to the air in order to prevent it being injured by damp, &c. Trim and dress Strawberry plantations, and be careful to injure the leaves of the plants as little as possible, and avoid deep digging between the rows, which is of no further use than to injure the roots, as the Strawberry rather prefers a somewhat firm soil.

COTTAGERS' GARDEN.

Follow up cleanly cultivation, and stir the soil among all growing crops. Employ leisure time in collecting materials for manure; remember that all decaying vegetable refuse is valuable in this respect, especially after having been well watered with the contents of the cesspool.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON
For the Week ending Sept 13, 1860, as observed at the Horticultural Gardens

Sept.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep	Of the Earth 2 feet deep	Wind	Rain.
Friday 7	21	30.428	30.126	68	40	54.0	60	58	N.E.	.00
Satur. 8		30.312	29.977	72	47	59.5	60	58	N.E.	.01
Sunday 9	23	30.084	30.052	60	31	45.5	60½	58	N.E.	.00
Mon 10	24	30.072	30.035	58	32	45.0	59	57½	N.E.	.00
Tues. 11	25	30.267	30.161	64	28	46.0	59	57½	N.E.	.00
Wed. 12	26	30.315	30.113	66	28	47.0	57	57½	S.E.	.00
Thurs. 13	27	29.985	29.766	70	38	54.0	57	56	S.	.02
Average..		30.153	30.033	65.4	34.8	50.1	58.9	57.5		.03

Sept. 7—Light clouds and fine; very fine; overcast; hazy.
— 8—Hazy; very fine; overcast; slight rain
— 9—Overcast, cold N.E. wind; overcast; slight frost.
— 10—Fine; low white clouds, clear and cold at night.
— 11—Fine, cold and dry; clear and cold; frosty.
— 12—Slight haze; fine; very clear and cold; frosty.
— 13—Fine; very fine, clear; slight rain at night
Mean temperature of the week, 7¼ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending Sept 22, 1860.

Sept.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 16..	68.5	48.2	58.3	14	0.50 in.	3	6	5	1	9	3	6	1
Mon. 17	69.0	46.6	57.8	13	0.90	1	5	6	2	2	11	4	3
Tues. 18	66.6	45.0	55.8	15	0.75	2	7	2	1	2	9	6	5
Wed. 19..	66.6	45.6	56.1	16	0.60	4	8	3	1	3	6	4	3
Thurs. 20..	66.8	44.2	55.5	15	0.45	3	6	3	3	3	6	6	4
Friday 21..	66.7	45.1	55.9	17	0.50	2	4	6	2	6	6	6	2
Satur. 22	67.1	46.2	56.6	16	0.40	—	3	9	2	5	9	5	2

The highest temperature during the above period occurred on the 17th, 1843—therm. 84 deg; and the lowest on the 20th, 1856—therm 29 deg.

Notices to Correspondents.

*** Correspondents are requested to address all letters, whether to Editor or Publisher, 41, Wellington Street, Covent Garden, London, W.C.

CABBAGES: *R B.* It is nothing more than a Pomeranian with the side buds started—probably in consequence of the long continued wet.

CUCUMBERS: We have received from Messrs. Sutton, two fruit of their Berkshire Champion, weighing together 4¾ lbs.; each 2 feet 2 inches long, and from 6½ to 7 inches in circumference at the neck. These were still fit for the table. It is a very handsome white-spined sort, with narrow angles, and a rather long neck.

GLADIOLUS BOWIENSIS: *T. Barnes, Stowmarket.* It is very like Brenchleyensis, but is rather more salmon-coloured.

GLASS COVERED GARDEN: *Enthusiast.* It is scarcely possible to answer your questions wholly. The form and magnitude depend upon convenience, taste, and the surrounding architecture—and also upon the length of your purse. The external form of the greenhouse figured in Macintosh (fig. 547), is what we should select; but the interior arrangements would not suit you. We should lay out such an interior in beds as if it were out of doors, planting nothing in the ground but keeping everything in pots for the convenience of shifting With glass to the ground you might have a narrow shelf all round: but a stage would be in the way. Heat it with hot water, with Ormson's ventilators. Grow in it plants that just require shelter from frost: but have no stove plants, unless occasionally introduced from some other place. That is the way to have it enjoyable. If you can lay on water passing through pierced horizontal pipes furnished with a stopcock, so much the better for the health of the plants and your own convenience.

KUMQUAT.—This plant is mis described in Stevens' Catalogue of next Tuesday's sale. It is not an Orange, but a very acid Lime, used largely for preserving in sugar. It will only stand when worked upon Limonia trifoliata; so that ordinary Orange stocks are quite unsuitable.

MONSTROUS ROSE: *J Daniels.* It is in the state which botanists call fasciated; a rare circumstance among Roses, and probably brought about by the wet summer.

MUMMY OATS: *Plumpton.* They are what are commonly called Animal Oats, and are produced by a well-known plant. Avena sterilis Their apparently spontaneous movements are due to the hygrometrical property of the beards.

NAMES OF PLANTS: *Exeter* Gladiolus psittacinus. You should grow the sorts called Gandavensis if you want brilliant effect.—*J C.* Stenomessou breviflorum; a very great rarity. —*L H., Manchester.* Comptonia asplenifolia —*Heptarch.* The plant of which your gardener has lost the name is Gazania splendens, an excellent bedding-out plant, even in this cold summer. Its great firm golden flowers close in the absence of sun, but when they do open they are resplendent; and when cut for indoor bouquets they form a charming contrast with other flowers used for the same purpose.—*A H.* There must be some mistake about your specimens No. 17 is certainly Asplenium fragrans, not known, that we are aware of, as a native of New Zealand, though you say all yours are from the northern island of New Zealand. Nos. 15, 16, and 18, are some of the many puzzling intermediate forms between Asplenium bulbiferum and A. flaccidum, which without the fructifications, and even hardly with them, it is difficult to refer confidently to their respective species. We should take No 15 to belong to flaccidum; and Nos. 16 and 18 to belong to bulbiferum; the latter being the var. gracile of some writers. Send them again when more advanced —*J B* Rubus odoratus and Cattleya granulata —*P B.* It appears to be a white variety of Acroclinium roseum —*A S.* Angelica sylvestris, not Cicuta virosa.—*Norwood.* 1. Spergula saginoides; 2 Sagina procumbens.

SAUROMATUM FEROX: *W B S* This plant requires a stove.

STRAWBERRIES: *A Constant Reader.* We do not perceive the interest you find in the account you have sent us of the Strawberry. The statements are partly blunders, and partly, if at all true, inapplicable to this country. Don't imagine everything to be science which dubs itself scientific.

TRADE MEMORANDUM: *A P H.* Your correspondent has the reputation of being a swindler; and we believe he deserves his reputation.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840,)
Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES, AND BONE MANURE FOR PASTURES.
CONCENTRATED URATE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR AUTUMN SOWING.

They would call particular attention to the article DISSOLVED BONES, in which they guarantee every portion both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E C. EDW PURSER, Secretary.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

LAWES'S MANURES.—The Manures manufactured by Mr. LAWES for the present season, 1860, are now ready for delivery at his Factories at the following prices:—

LAWES'S PATENT TURNIP MANURE	£6	6
" SUPERPHOSPHATE OF LIME	6	6
" MINERAL	5	5
LAWES'S BARLEY MANURE..	8	0
" MANGEL MANURE	8	0
" GRASS MANURE	8	0

These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents

Genuine Peruvian Guano direct from Messrs. Gibbs; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures

American Cakes at market prices.

Address, J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

CHEMICAL MANURE WORKS.—An opening (owing to continued ill health) offers itself to an active party of moderate means, about 60 miles from London. Principals, with real name and address, may apply to A. A., Mr. Blackwell's, 9, Cranbourne Street, Leicester Square, W.C.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

AGRICULTURAL AND GENERAL MACHINERY.—As PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C.

LAWN-MOWING MACHINES—BURGESS AND KEY'S
MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6*l.*; 19 in., 6*l.* 10*s.*; 22 in., 7*l.*; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

RANSOME AND SIMS, Ipswich, continue to give their best attention to the manufacture of the most Modern and Improved AGRICULTURAL MACHINERY. R. & S. have long been celebrated for combining in their Agricultural Machinery the utmost simplicity, durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture. ILLUSTRATED CATALOGUES post free, on application to the Orwell Works; or to their London Agent, SHEPPARD RANSOME, 31, Essex St., Strand, W.C.

HENRY J. MORTON AND CO.,
2, Basinghall Buildings, Leeds.
GALVANISED IRON WATER CISTERNS
for Cottage Houses, &c., to contain 50 gallons, 25*s.*; 80 gallons, 30*s.* each; and 140 gallons, 36*s.*, and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.
GALVANISED IRON PUMPS
for Liquid Manure or Domestic Use, 3 inches diameter, 30*s.* and 32*s.* 6*d.* each; Tail Pipe for same at from 10*d.* per foot.
GALVANISED IRON SWING WATER BARROWS
for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 32*s.* 6*d.* each.

PARKES' STEEL DIGGING FORKS.
BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

FARM BUILDINGS.
LOANS may be obtained under the General Land Drainage and Improvement Company's Act for the full amount required by the Owners of settled Estates, Incumbents Trustees, Bodies Corporate, &c. for the erection of Farm Houses, Farm Buildings, and Labourers' Cottages designed by their own Agents and sanctioned by the Inclosure Commissioners.

The loans are repaid by a Rent Charge on the estate for any term the Landowner may fix, not exceeding 31 years.

No investigation of title being required or notices given to Reversioners or Mortgagees, no legal expenses are incurred.

The Company furnish designs of every description, and undertake the entire responsibility of the works wherever desired by Landowners.

No profit whatever is taken by the Company on any works they execute, the actual expenditure only approved by the Inclosure Commissioners, with a commission thereon, being charged in all cases.

Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

THE LANDS IMPROVEMENT COMPANY.—
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS &C. IN ENGLAND AND WALES AND IN SCOTLAND.

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard Westminster S W

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

SMITHFIELD CLUB CATTLE SHOW, 1860.—THE ANNUAL SHOW OF FAT CATTLE, SHEEP, AND PIGS will take place on December 11, 12, 13, and 14, at the Bazaar, King Street Portman Square, W.

The LAST DAY for Certificates for both Stock and Implements to be received by the Honorary Secretary is THURSDAY, November 1.

The following forms of Certificates are now ready, and intending Exhibitors in applying for them need only quote the letters and state how many of each letter they require:—

CATTLE.
Form A.—Ox or Steer
" B.—Cow or Heifer
" C.—Ox, Cow, or Heifer in extra stock

SHEEP.
Form D.—Pen of three Wethers
" E.—One Wether or Ewe in extra stock

PIGS.
Form F.—Pen of three Pigs
" G.—One Pig in extra stock

Prize Sheets, with Rules and Regulations, and Forms of Certificates as above, may be obtained of
B T BRANDRETH GIBBS, Hon Sec.,
Corner of Half Moon Street, Piccadilly, London, W.

N.B.—All communications on the Club's business should have the words "SMITHFIELD CLUB" outside, to distinguish them from private letters.

The Agricultural Gazette.

SATURDAY, SEPTEMBER 15, 1860.

THE adjourned trials of reaping machines in competition for prizes offered by the Royal Agricultural Societies of England and of Scotland, and by the Yorkshire and the North Lincolnshire Agricultural Societies, have all taken place within the last few days.

At Canterbury several of our best known machines were tried—and ultimately one of each class, namely BURGESS & KEY'S M'Cormick, CUTHBERT'S, and DRAY'S Hussey, were selected. The third broke down, and the question was then one of precedence between BURGESS and CUTHBERT; and ultimately, after trials in Wheat, and in Barley with a good deal of Cover, which was very difficult to deliver by the screw apparatus which Messrs. BURGESS adopt, the one-horse Bedale machine by CUTHBERT was placed first, and BURGESS second.

At Dumfries the trials included (1) Lord KINNAIRD'S BELL'S reaper, (2) CRANSTOUN'S WOOD'S self-delivering reaper, in which a rake periodically traverses the platform on which the corn falls; and (3 to 7) five hand-delivering machines shown respectively by BRIGHAM & BICKERSTON of Berwick, GARDNER & LINDSAY of Stirling, JACK & SON of Maybole, TROTTER of Newcastle, and CRANSTOUN of London—the four last being combined reapers and mowers. The competition resulted in the award of the prize for self-delivering machines to Lord KINNAIRD'S BELL'S reaper, and the first and second prizes for hand-delivering machines to Messrs. GARDNER & LINDSAY, and Messrs. JACK & SON. Mr. CRANSTOUN'S machine cut well; but the sheaves were not well laid.

At the North Lincolnshire trial, near Horncastle, CUTHBERT'S WOOD, SPENCER'S of Doncaster; and BURGESS & KEY'S reapers competed, cutting 1½ acre of Wheat each, and afterwards a land of Barley apiece. The Wheat was cut pretty evenly together as to time; but the quality of the performance, both there and in the Barley, led the judges to place CUTHBERT'S machine first.

At Pontefract last Monday, no fewer than 11 reapers made their appearance upon a large field of Wheat, partly laid, on the farm of Mr. TAYLOR, of Darrington.

The following is the list:—

1. SPENCER'S, of Doncaster, costing 22*l.* without tipping board, or 27*l.* with DRAY'S tipping board, with HUSSEY'S cutter 5 feet long in 20 teeth, driven by WRAY'S patent worm motion.

2. R. CUTHBERT'S, of Newton-le-Willows, near Bedale, 1 *or* 2-horse machine, costing 22*l.*, with or without a side delivering attachment, with HUSSEY'S cutter 5 feet long, in 20 equilateral teeth, driven by multiplying wheels, and making about 20 oscillations in 9 feet forward motion, the knife hung at its near end in an oscillating sling.

3. J. & T. CUTHBERT'S, of Bedale, costing 20*l.* without any extras, with HUSSEY'S knives 5 feet long, in 20 equilateral teeth, cutting against the upper edge of the finger guards, worked by multiplying wheels, and making about 16 revolutions per 9 feet forward.

4. CRANSTOUN'S WOOD'S combined mower and reaper, costing 35*l.*, with revolving fans and HUSSEY'S cutter 4 feet 10 inches long, in 16 teeth sharper than equilateral, worked by multiplying wheels, and making 20 oscillations per 9 feet.

5. KEARSLEY'S, of Ripon, costing 22*l.*, with HUSSEY'S knives 5 feet long, in 20 rectangular teeth, worked by WRAY'S patent worm motion; the knife hung in an oscillating sling, which is driven on KEARSLEY'S patent from a point nearer to the attachment of the sling, so that a smaller crank motion makes an equal oscillation.

6. BAMLETT'S, of Richmond, costing 23*l.* as a reaper, and 33*l.* as a combined reaper and mower, with HUSSEY'S knives 5 feet long in 20 equilateral teeth, worked by multiplying wheels. Its dividing shield, by which the cut corn was separated from the standing corn, ultimately brought it to a stand by gathering uncut straws.

7. COATE'S, of Middleham, costing 18*l.* 15*s.*, with HUSSEY'S knives 5 feet long, in 19 (sharper than equilateral) teeth, worked by multiplying wheels making 20 oscillations per 9 feet.

8 BECKWITH'S, of Ripon, costing 19*l.*, with HUSSEY'S cutter 4 feet 8 inches long, in 19 (sharper than equilateral) teeth, and making above 20 oscillations per 9 feet forward.

8. WRAY'S, costing 22*l.*, with HUSSEY'S knives 5 feet long, in 19 rectangular teeth, and making about 16 oscillations per 9 feet forward—worked by his own patent worm motion.

9. R. CUTHBERT'S two-horse reaper, the same as No. 2, but costing 24*l.*, and furnished with a right-handed cutter.

10. HEUGH'S of Newton-le-Willows, costing 25*l.*, with HUSSEY'S cutters 5 feet long, in 20 teeth, and oscillating nearly 20 times per 9 feet of motion.

11. BURGESS & KEY'S, costing 42*l.*, with M'CORMICK'S serrated knife, 5 feet 8 inches long, cutting in 17 intervals, making about 16 oscillations per 9 feet forward and furnished with revolving fans, with self-delivering screw rollers, with conical divider for separating the cut corn from the standing crop, and with many means of adjustment to varying work.

All of these, excepting No. 7, provide brasses for all the bearings of fast motions, that is for all, excepting the bearings of the driving-wheel shaft; three of them, it will be seen, get up their oscillations directly by WRAY'S patent, in which a toothed wheel on the driving-wheel shaft works into a worm on the shaft which carries the knife crank—a plan which, whatever its simplicity and its *quietness* compared with the rattle

of the multiplying wheels—is exceedingly wasteful of the power employed, and requires constant and liberal oiling to make it efficient, and moreover generally necessitates a less number of oscillations than is desirable in a given forward motion. The obvious result in the case of WRAY's own machine, No. 8, was that the corn being both light and standing where it worked, and so permitting it, the horses were driven at a trot to get up the speed of oscillation which was desirable.

The machines were all tried upon laid corn, while pieces were cut out by scythe for the subsequent time trials; and this preliminary test ended in the withdrawal of Nos. 6, 3, and 2. The first became choked and could not proceed; the third, though doing fair work, cutting however with about half the width of its knife, was not believed to present sufficient distinction of construction from the machines of older makers with which it competed; and No. 2 and No. 9 being both exhibited by one maker, the latter was chosen by the judges as the better of the two.

The remaining nine machines were then set to work in plots of about three-quarters of an acre each, and most of them accomplished their work in about 40 minutes. The plots differed a good deal in the condition of the corn.

WRAY & COATES were fortunate in their plots; CUTHBERT, CRANSTOUN, BURGESS & KEY, KEARSLEY, SPENCER, and BECKWITH, were less fortunate—though of these CUTHBERT's was decidedly the easiest. They were desired to cut these lands as they pleased—CUTHBERT's cut round and round and did it well, the others all tried it and most of them continued to do it, but they all made extremely bad work on the return journey, *i.e.*, where the corn was bent from them.

Mr. CRANSTOUN wisely resolved after the first trial to cut only one way, doing as he would have done had the Wheat been his own, and he made accordingly good work, taking however 1 hour and 26 minutes to accomplish it. BURGESS & KEY's reaper worked round and round, and one half of the stubble was accordingly left in a disgraceful condition, one which no farmer would have tolerated; and this was the case, though we are bound to say not so much so, with most of the others.

CUTHBERT's, COATE's, WRAY's, and HEUGH's, were chosen afterwards to try their skill on some Wheat laid as badly as it could be laid, close by BECKWITH's lot, which had already been cut continuously round and round in a very workmanlike manner, and CUTHBERT's made good work. Its performance was such that we have no hesitation in saying that, working it slowly and taking little at a time wherever the corn was in a specially tangled state, we would undertake with it to cut any corn we ever saw, without the aid of the reaping hook or scythe.

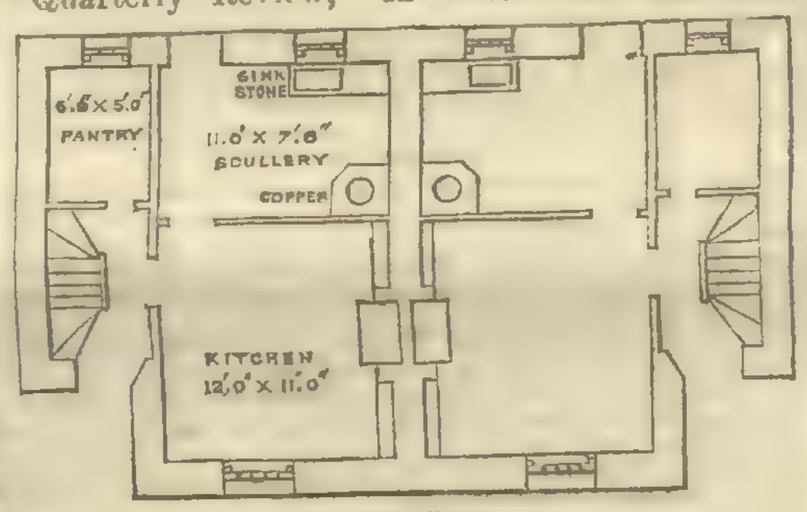
In the end CUTHBERT's, WRAY's, BECKWITH's, and BURGESS's reapers were taken into the Barley field, and excepting WRAY's, they all made unexceptionable work. The judges awarded the first prize to CUTHBERT's, the second to BECKWITH's; they highly commended the performance of BURGESS & KEY's machine in the Barley field, and they commended the *performance** of COATE's machine in the Wheat field.

It is fair to add that while the Wheat lay all one way, the trial lands lay *hardly* parallel with that direction, and right-handed cutting machines thus had slightly the advantage of the left-handed machines, which in cutting round and round had to contend with ears which slightly over-hung, and so aggravated their difficult side, while they hung away from the difficult side of CUTHBERT's and of BECKWITH's implements. Nevertheless the first prize was, we believe, unquestionably earned by CUTHBERT's machine, on the score both of simplicity of construction and of cheapness as well as by the excellence of its performance; and considering that judges are bound to determine, not by the known results of previous trials, nor by the reputation and *past* performances of any machine, but by the actual work of the actual implement before them, they could hardly have done otherwise than give the second prize to BECKWITH's implement—one of the cheapest on the ground, and one of the most efficient under the difficult circumstances in which it was placed.

The general result of the trials of reaping machines this summer has been to increase the reputation of the cheaper class of implements on HUSSEY's principle; and CUTHBERT's two-horse cutter, to which a side delivery by hand is attachable, stands now probably as high as any for work both in the Wheat and in the Barley field. In the former we would not use the side delivery, but gather the sheaves up at once and stook it out of the way of the returning machine; in the latter the side delivery is best, as in all cases of corn containing Clover or other green stuff, when it may be well to let it lie unbound for a while.

* COATE's machine was the cheapest on the ground—but while its performance where tried was good, its noise indicating the wear of its parts was unbearable—and not being supplied with brasses it could not be recommended on the ground of its construction.

SOME weeks ago we gave in these pages, by the kind permission of the publisher, several illustrations of cottages from a recent number of the "Quarterly Review," in which the labours of

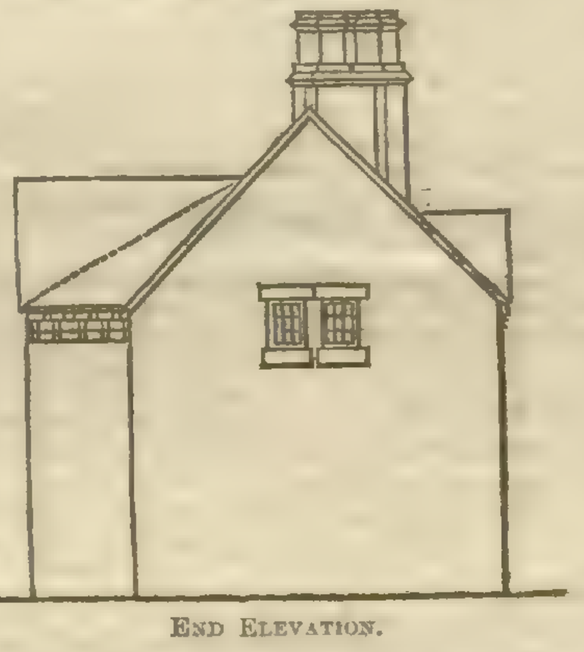


GROUND PLAN.

Mr. STRICKLAND, of Hildenley, near York, in connection with the subject, were especially eulogised. We have now the pleasure of laying before our

FRONT ELEVATION.

readers some additional illustrations of the same subject, drawn by that gentleman, and accompanied by the following explanatory letter:—



END ELEVATION.

"I enclose a tracing of the plans of a pair of labourers' cottages, nearly the same as that referred to in the

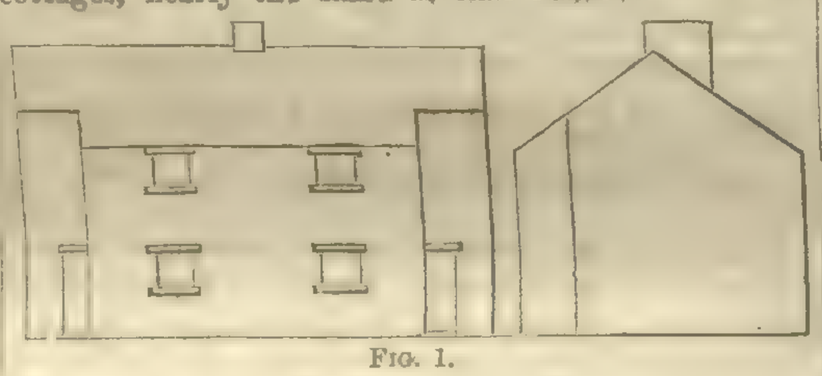


FIG. 1.

"Quarterly Review." I think that the accompanying plan has all the advantages of that one; but the cot-

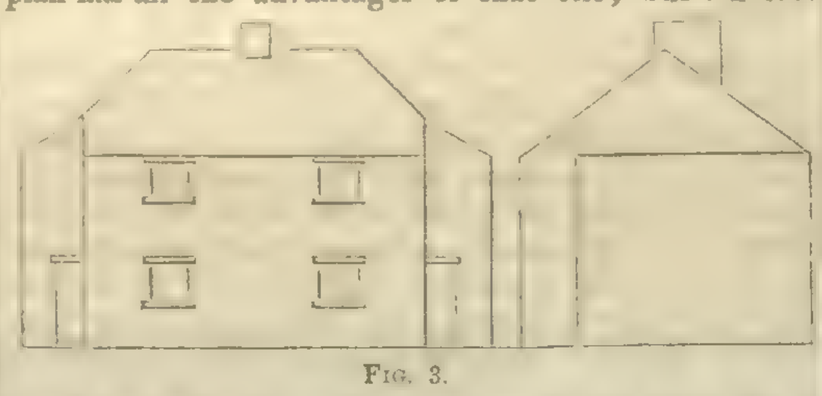
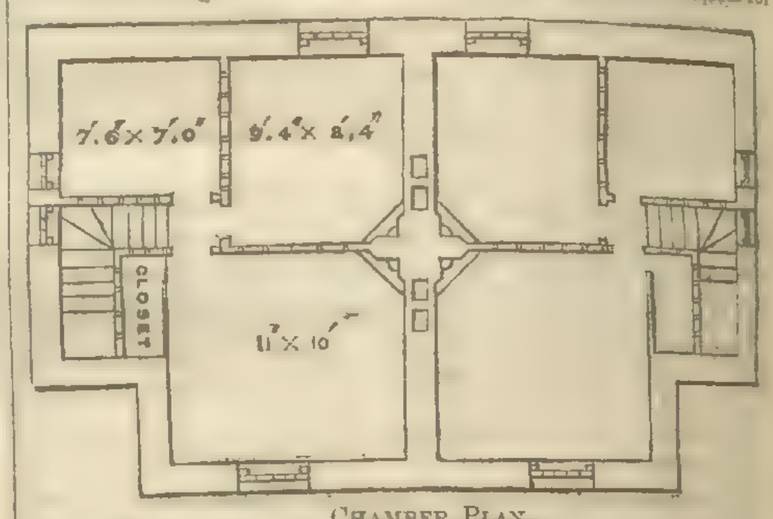


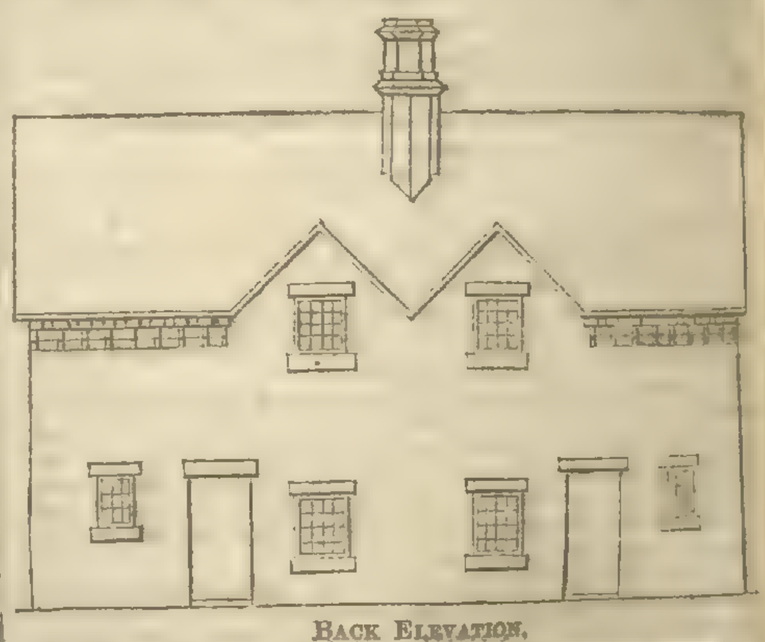
FIG. 3.

tages are rather smaller, and could be built for a moderate price. [See the named figures, viz. ground plan, chamber plan, front elevation, back elevation, end elevation.] At Yorkshire prices I estimate the cost at not more than 170*l.* the pair. The present plan was drawn out for the purpose of being built near Scarborough, and is therefore designed for stone walls; but it will be seen that it may be built with 14 inch or 9 inch brick walls, without in the least altering the arrangement. I believe this cottage to be quite large enough for one family in any part of the country where coal is not very cheap. Wherever coal is dear a labourer will not thank you for giving him too large a room to keep warm; but this plan can be altered to the extent of adding 2 or 3 feet to the length or breadth, or both, of the kitchen, without very materially altering the whole design. In the report on the plans of cottages which were shown two years ago at the meeting of the Yorkshire Agricultural Society, I gave no elevation for



CHAMBER PLAN.

the plan which I attached to it, because my remarks in that report were entirely confined to the question of what was the best arrangement of the two floors and



BACK ELEVATION.

the staircase, and my plan was only meant to refer to plans on the scale of those reported on and to illustrate those remarks. The elevation sent herewith is for a stone-wall cottage. The chimney stack has four flues set square, and one at each end set diamondwise, as accompanying woodcut. The corbels supporting the spouting are formed of bevelled or rounded bricks at a very trifling expense, but they add considerably to the look of the cottages. The roof of this cottage has about 4 feet of flat lead gutter, which is objectionable (this may however be partly avoided by roofing between the front gables, in the direction indicated by the dotted lines), but besides this manner of roofing, I enclose four other modes of roofing the same pair of cottages, Figs. 1, 2, 3, and 4, all simple enough. No. 1 is the simplest, but there is something rather awkward in its appearance. In a stone cottage a break in the wall by two or three courses of brick between the windows and the roof, adds much to the appearance without much adding to the cost. Still more so does a plinth 2 or 3 feet high, finished with a course of bevelled bricks. Cottages built with 9 inch walls ought always to have such a plinth of 14 inch walls. There is plenty of

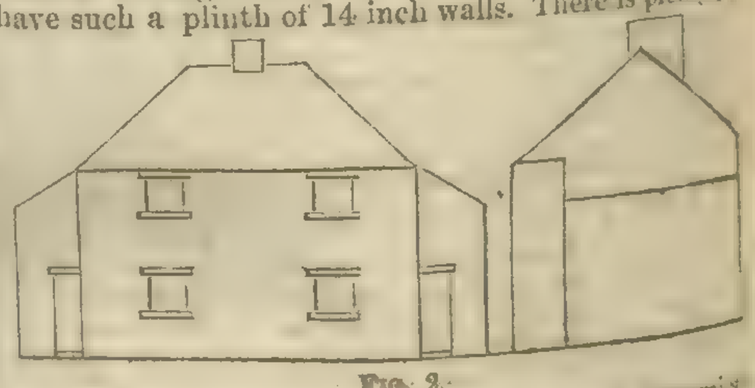


FIG. 2.

to be learned in the art of building a good, economical and handsome cottage, and I am happy to say that

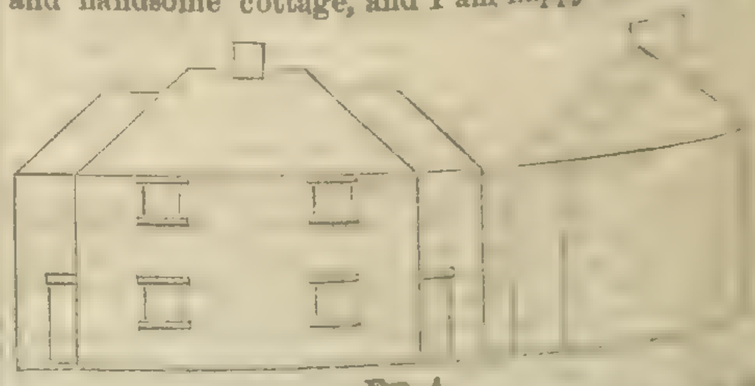


FIG. 4.

Yorkshire Society has allotted 71*l.* to be given in prizes for plans of cottages of different construction

rom those which were the subject of Mr. Bentley's prize, and which will, I hope, produce a show of plans next year at Leeds, as interesting and instructive as that which Mr. Bentley's prize produced. *C. W. Strickland, Hildenley, Aug.* 8.

We add that a first-rate competition may be expected in Cottage plans at the great Leeds meeting next year. The following is the list of the prizes that have been offered :—

	£	*s.*	*d.*
1. For the best plan of a double cottage, containing not less than 3 bedrooms in each; the cost not to exceed 220*l.* the pair	25	0	0
2. For the best plan of a double cottage, containing 2 or 3 bedrooms in each; the cost not to exceed 180*l.* the pair ...	25	0	0
3. For the best plan of a single cottage; the cost not to exceed 120*l.*	25	0	0
4. The best plan of a pair of cottages, of irregular design; the cost not to exceed 210*l.*	10	0	0
For the second best do.	5	0	0

N.B. The Prizes of 10*l.* and 5*l.* for the best and second best design for cottages of irregular plan, are given by C. W. Strickland and R. J. Bentley, Esqrs., jointly, and refer to pairs of cottages of any kind of plan not included in the above—such, for instance, as a pair of cottages with 3 bedrooms in the one and 2 in the other; or a bedroom or a parlour on the ground floor of the one and an upstairs bedroom in the other; or to cottages with one of the bedrooms over a pantry sunk in the ground, and entered part way up.

CONDITIONS OF COMPETITION.—It is intended that the plans and estimates will be made for cottages to be built of bricks of the ordinary size used in Yorkshire. Cheapness of construction will be a material element in awarding the prize; the price fixed being the maximum price allowed It is hoped that the estimated cost of construction will be considerably below the maximum prices named. The cost specified does not include building ground or garden. A separate specification for each kind of cottage will be required. The specification to include fixtures and a separate privy to each house A list of quantities and schedule of prices of each kind of work to be done must be furnished with the specification. Bricks to be calculated at 24*s.* per 1000—delivered. The position and extra cost of a pigstye to be shown, in case such should be thought a desirable addition. An elevation of each of the four sides must be furnished. Various elevations for the same ground-plan may be shown at the option of the architect. All plans, elevations, and sections must be on the scale of ⅛ of an inch to the foot. The plans must be sent to the Secretary on or before the 15th of November, 1860.

—— ON Friday and Saturday of last week the sales of Mr. DUDDING's and of Mr. DIXON's Shorthorn herds were presided over—the one at Panton and the other at Caistor—by Mr. STRAFFORD. The former quite ranks with our first-class illustrations of the value of the breed. Among the prizes realised were 120 guineas for "Lady Mary Bountiful," bought by Mr. TORR; 270 guineas for "Lady Louisa Bountiful," bought by Mr. CHALONER; and 90 guineas for "Lord of the Manor," bought by Mr. T. GREETHAM. These are all of one family, descended, like the "Charmers" of Milcote, from "Sylph by Sir Walter;" having in addition to this merit several crosses latterly of Booth's blood in them; and having moreover since the Milcote sale proved the public estimation of their value in an extraordinary way at Mr. CHALONER's sale in Ireland. Independently of these, however, there was a very high average price maintained throughout the day; the 80 females and the 14 bulls both selling for as nearly as possible 50 guineas apiece.

On the following day Mr. DIXON's herd was brought to the hammer, and 53 animals realised the average price of as nearly as possible 30*l.* apiece. "Holly," the 4 year old cow mentioned in our former account of the herd as being the nearest to Colling's blood of any in the country, making the top price of 70 guineas given by Mr. TOPHAM.

—— WE remind our readers of the sale of Mr. TURNER's celebrated breed of North Devon cattle, as well as of his almost equally distinguished flock of Leicester sheep, which is to take place at Barton, near Exeter, on Tuesday, the 18th September. The herd has during the past few years won 60 prizes from the Royal Agricultural Society, 35 from the Bath and West of England Society, 3 this year from the Irish Society, besides 10 at the Paris show, 20 from Smithfield and Birmingham Clubs, and more than 100 from local societies. This is as good a testimony to the quality of the stock as any stranger could desire; but there are few who have not long known Mr. TURNER's name as distinguished on the list of our chief breeders of Devon cattle.

Among the prize animals for sale is the heifer "Beeswing," which took the first prize at Dorchester, and Canterbury, and Cork; also the bull "Prince Frederick I." which was first at Dorchester, and 2d at Canterbury. The Devons are probably the oldest breed, *i.e.*, as having a traceable and authentic history, in the island; and for their quality as producers of the best quality of beef they are unrivalled.

—— ANOTHER fine week has facilitated harvest operations greatly, and everywhere along a circuitous route of several hundred miles by the Great Northern, North-Eastern, Lancashire, and North-Western Railways, we have seen the work of carrying corn satisfactorily proceeding. The general opinion among valuers in Yorkshire is that Wheat has been considerably injured, and must have suffered from the exceedingly late and cold summer, while Oats and Barley are generally believed to be great crops. Considering the actual crop on the ground, and the process of harvesting it, as two different things, the report must stand as it was originally given some weeks ago by our correspondents—that the Wheat is on the whole a somewhat inferior crop, in great risk at the end of August of being harvested in wretched condition, which risk, however, it has happily escaped—that Barley is a bulky crop, much laid and grown through by the Clover, and otherwise certain to yield coarse and poor samples—and that Oats and Beans are above the average.

THE VALE OF STRATHMORE.

(*Concluded from* p. 819.)

ONE or two notes more respecting Mr. Bowie's farm. Being near a town Potatoes—chiefly second early varieties, such as Dalmahoys or Regents—are found to be a paying crop, as well as a good preparation for Wheat. These are grown in 29-inch ridges and a foot betwixt the sets. A breadth of about 40 imperial acres looked in the highest state of cleanliness, and by receiving the constant working to which we referred in a former article, the land had a garden-like freshness about it. Of course their planting and culture demands some amount of manual labour, and accordingly we observed a company of 10 female outworkers fully employed in one of the fallow fields, receiving 1*s.* each per day. This is 2*d.* per day above the Kinnaird outworkers; but the latter receive one choppin daily of new milk, and the freedom of the bothy into the bargain. No Mangels have hitherto been grown by Mr. Bowie, but we had much pleasure in early spring in obtaining for him sufficient seed for five Scotch acres, the variety being of the truest English grown Orange Globe. With the genuine caution of his countrymen he would not take any one's word, not even Mr. Scott Skirving's in his Gold Medal Essay, as to the proper depth for depositing the seed in his special case. But in the garden, by a sheltered wall, he had tried three experimental rows, with equal quantities of seed, but deposited at ½ inch, 1 inch, and 1½ inch respectively. When we saw them the first lot were a fine full plant, the second equally full but a trifle stronger, and the third a long way behind, both as regards the numbers and strength of the plants. "Hence," said he, "I sow next week at 1 inch in depth." The field where they were to be sown was as fine a kind of tilth as you could wish to see, the Wheat stubble having been only once ploughed with a deep autumn furrow. Before the Wheat was a crop of Potatoes sold at 22*l.* per acre clear on the ground. Of Wheat, about 3½ bushels is usually sown per Scotch acre, a pair horse drill presser being almost invariably used for consolidating the seed-bed; and for the lighter land, as he well remarked, "the presser is the life of it." In one field where the Beans were grown on ridges 24 inches wide, and 3 bushels of seed used per Scotch acre, there was also a bushel of Tares sown at the same time, so that in the event of "blight," which is not uncommon on the poorer sandy clay, some produce might be available. Both Beans and Tares looked promising so far. All the Grass fields, especially those of the first year, showed a fine full bottom, and free from weedy admixture. The seeding costs 16*s.* per Scotch acre, or thereby, viz., 8 lbs. Red Clover, 3 lbs. White Clover, and 1 bushel of finest Ayrshire Rye-grass; and as the spring was backward all had received a stimulating dose of 2 cwt. per acre of Peruvian guano, which was telling well notwithstanding the dryness of the weather.

All the implements looked of a useful character, and included a horse-rake of the newest construction; an East Lothian horse-hoe, specially intended for the eradication of Wild Mustard in the grain crops; a Grass seed sowing machine, 18 feet long; rick stands well finished, and thatched to save them from the weather; field gates, costing one guinea each, and moving well on their engines; a fixed horse power threshing machine; although a portable machine and engine are hired when straw is wanted for thatching, on account of the unbroken delivery which is obtained from the English machines. A good supply of water is in nearly every field an acquisition which many, both in England and Scotland, would gladly hail. A couple of cottages, both very complete, have been erected by the tenant at an expense of 200*l.* The cottages of the remainder of the regular labourers are also upon the farm, but at a greater distance from the homestead.

To the late Lord Panmure, who well and worthily carried out his "Live and let live" motto—the Angus breed in general, and perhaps Mr. Bowie's herd in particular, are indebted for some of the best blood by the male side. Mr. Bowie's famous old cow, "Queen," bred by Mr. Fullarton (now of Ardestie), was got by the Highland Society's Dundee prize bull, "Old Panmure," in 1844. This bull, exhibited by the noble lord above named, was believed to be one of the finest polled beasts which had then seen the daylight. He has left his impress very strongly on his descendants, and from his blood the Mains of Kelly herd has sent forth almost an unlimited supply of prizetakers. So much so that Mr. Bowie's breeder's medals are a study in themselves. He has been repeatedly beaten with stock of his own breeding—a fact which speaks instructively as to the difference between rearing the purest blood and getting the same up into the highest show order, so as to attract the attention of judges and visitors. But he has no special reason to complain, for at Paris, as well as nearer home, he has obtained a full share of showyard honours. By the way, the "Angus doddies" took the tastes of the Parisian sightseers amazingly. "*Sans* horns! *Sans* horns!" said a French lady, while she lovingly and playfully poked Mr. M'Combie's bull in the head with her parasol. But horns or no horns, the docile beast did not relish such attentions, and a rush of the bull, with a scream from the lady, formed a sufficient "beware" for other passers by.

The present number of the herd, including all ages, is about 70; of these 30 are cows, or cows and in-calf heifers. All are in a beautifully natural and healthy condition—many of each separate class being as like their fellows as are Peas in a bushel. The calves were a fine lot as could well be, all nearly in butcher's order; and few of them but what already showed a few white hairs in the middle of the tail (a distinctive feature which is duly recognised as "Bowie's coat of arms"). A white tick inside the hock also appeared to prevail. The heifers come down in calf at 3 years old, and the calves are of course reared at whatever season they may come. This season heifer calves largely preponderated, only about three out of each 15 being bull calves. There is something singularly attractive in the carriage of these jet black, well-bred animals. As a whole they are particularly good in the thighs and twist, fore-quarters fine and full, setting on of the shoulders pretty much akin to those of a Leicester sheep, chine excellent, and girth equal to a well-barrelled Devon. In short, they have very much of the *multum in parvo* cut of the Devon about them. In some cases there is a tendency to coarseness at the setting in of the tail, and the pelvis bones not so well up as is desirable.

Mr. Bowie is now using "Young Panmure," got by Mr. McCombie's prize bull "Hauton," and there are also a pair of spare young bulls to fall back upon if required. But "Young Panmure," notwithstanding that he is in capital training for the Highland Society's Dumfries Meeting of the present year—where he will prove a tough customer for all comers—is as active as a yearling, and a sure stock-getter. He is nearly three years old, and girths 7 feet 8 inches; the length from the shoulder-joint to the setting on of the tail being 5 feet 10 inches. In condition he would pass as "prime fat," in spite of plenty of work and short rations—"straw and water he is fed on." "Eh! then there must be something particularly rich in the Mains of Kelly water," jocularly retorted an Angus breeder who was looking him over at the same time as ourselves. *T. Bowick.*

N.B. Since these remarks were penned "Young Panmure" has taken the chief bull prize at the Forfar meeting of the Angus Agricultural Association. He was also adjudged to be the best beast of either sex in the yard. He appears to be of a most gentle and docile temperament. He has got some of the best blood in his veins, tracing back, in a few generations, to Mr. Watson's famous bull "Old Jock," which stands No. 1 in the Polled Herd Book. "Young Pam" was bred by Mr. M'Combie, of Tillyfour, in 1857, his sire being "Hauton" (228) bred by Mr. Bowie; grandsire "Pat" (29) which was got by No. 1 above referred to. Thus we see that the purest blood, and the longest prices are pretty closely associated, as well in this as in other breeds. And the Keillor herd has probably been noted among the Polled Angus, for pure blood, longer than any other. Mr. Watson has the credit of having sold, nearly 30 years ago, a bull for 100 guineas, and a lot of breeding heifers for some 10*l.* each. At a clearing sale on a farm of which Mr. Bowie was giving up possession, in the early part of 1857, the cows ranged from 10*l.* to 67*l.* per head, and the bull "Standard Bearer" (229) was bought for the Tillyfour herd, at one sovereign out of 90*l.* At the Highland Society's Berwick Show in 1854, a half brother of this bull realised 100 guineas. Since then the range of prices has ruled high, but we "guess" that promising bull calves may be picked up from any of the leading herds, at rates varying from 25 to 40 pounds. One word more with respect to Mr. Bowie's bull "Young Panmure"—which will in all likelihood have carried the Dumfries honours ere these notes issue from the press—and we return from this digression. His girth when we saw him was 7 feet 8 inches, and length from the point of the shoulder blade to the setting on of the tail 5 feet 10 inches. For a bull in regular use under three years old the dimensions are striking. The head we thought was hardly so masculine in appearance as might be wished; but the full thighs and twist, the level back (broad at top almost to a fault) and prime mellow touch—these are points that mark him as a specimen of the bovine

race that will be hard to beat wherever he shows his face.

On the female side we also find his bull going back to Mr. Watson's "Jock" tribe. His dam Crinoline (204), formerly "White Legs," bred at Tillyfour, was got by Victor 3d (47). He again was got by Monarch (44), which was bred by Mr. Fullarton of Ardestie, out of Julia, by the noted old bull "Panmure." Here we fail to trace the connection farther back; but if you take Young Panmure's grand dam Charlotte (203) you very speedily find your way to the Keillor pastures. Thus Charlotte (203), dam Lola Montes (208), sire Angus (45); Angus (45) bred by Mr. Watson, Keillor, sire Jock 2d (2).

We should not have troubled the reader with these details, but for the interest appertaining to those animals which appear to give a marked impress to a herd or breed. And we would wish, too, very respectfully to urge on breeders of polled stock the value which a well arranged herd-book necessarily imparts. The proof sheets of Mr. Ravenscroft's Vol. I. are now before us, and we would add a few remarks thereon; but reserve the same until we are favoured with the perusal of a perfect copy. We regret to have learned that the apathy and indifference of many breeders, and the tardiness with which needful information has been imparted, have tended much to enhance the laborious work which has been needed in its compilation. Had it not been for the zeal of a few, including the Earl of Southesk, Sir John Stuart Forbes, Mr. Bowie, and Mr. M'Combie, the work would not have been so far advanced as it is.

Meantime, having finished our journey to the land of the Angus "doddies," we must thank those who have thus far accompanied us, and bid all good bye for the present. *T. Bowick, Stoneleigh Abbey Farm, Kenilworth.*

HOW TO FORETELL WEATHER.

THE following manual of the barometer has been compiled by Rear-Admiral Fitzroy, and published by the Board of Trade:—

"Familiar as the practical use of weather-glasses is, at sea as well as on land, only those who have long watched their indications and compared them carefully are really able to conclude more than that the rising glass * usually foretells less wind or rain, a falling barometer more rain or wind, or both; a high one fine weather, and a low the contrary. But useful as these general conclusions are in most cases, they are sometimes erroneous, and then remarks may be rather hastily made, tending to discourage the inexperienced.

"By attention to the following observations (the results of many years' practice and many persons' experience) any one not accustomed to use a barometer may do so without difficulty.

"The barometer shows whether the air is getting lighter or heavier, or is remaining in the same state. The quicksilver falls as the air becomes lighter, rises as it becomes heavier, and remains at rest in the glass tube while the air is unchanged in weight. Air presses on everything within about 40 miles of the world's surface like a much lighter ocean, at the bottom of which we live, not feeling its weight because our bodies are full of air, † but feeling its currents, the winds. Towards any place from which the air has been drawn by suction, ‡ air presses with a force or weight of nearly 15 lbs. on a square inch of surface. Such a pressure holds the limpet to the rock when, by contracting itself, the fish has made a place without air § under its shell. Another familiar instance is that of the fly, which walks on the ceiling with feet that stick. The barometer tube, emptied of air, and filled with pure mercury is turned down into a cup or cistern containing the same fluid, which, feeling the weight of air, is so pressed by it as to balance a column of about 30 inches (more or less) in the tube, where no air presses on the top of the column.

"The words on scales of barometers should not be so much regarded for weather indications as the rising or falling of the mercury, for if it stand at 'changeable' and then rise towards 'fair' it presages a change of wind or weather, though not so great as if the mercury had risen higher; and, on the contrary, if the mercury stand above 'fair' and then fall, it presages a change, though not to so great a degree as if it had stood lower; besides which, the direction and force of wind are not in any way noticed. It is not from the point at which the mercury may stand that we are alone to form a judgment of the state of the weather, but from its rising or falling, and from the movements of immediately preceding days as well as hours, keeping in mind effects of change of direction and dryness or moisture, as well as alteration of force or strength of wind.

"By a thermometer the weight of air is not shown. No air is within the tube. None can get in. But the bulb of the tube is full of mercury, which contracts by cold and swells by heat, according to which effect the thread of metal in the small tube is drawn down or pushed up so many degrees, and thus shows the temperature ||

"If a thermometer have a piece of linen round the bulb, wetted enough to keep it damp by a thread or wick dipping into a cup of water, it will show less heat than a dry one, in proportion to the dryness of the air and quickness of drying ¶. In very damp weather, with or before rain, fog, or dew, two such thermometers will be nearly alike.

"For ascertaining the dryness or moisture of air the readiest and surest method is the comparison of two thermometers, one dry the other just moistened and kept so. Cooled by evaporation as much as the state of the air admits, the moist (or wet) bulb thermometer shows a temperature nearly equal to that of the other one when the atmosphere is extremely damp or moist; but lower at other times, in proportion to the dryness of air and consequent evaporation—as far as 1° or 15° in this climate, 20° or even more elsewhere. From 4° to 8° of difference is usual in England, and about 7° is considered healthy for inhabited rooms.

"Briefly, the barometer shows weight or pressure of the air; the thermometer, heat and cold, or temperature; and the wet thermometer, compared with a dry one, the degree of moisture or dampness **

"* Glass barometer, column, mercury, quicksilver, or hand.

"† Or atmosphere, or the atmospheric fluid which we breathe.

"§ A vacuum.

"‡ Or exhaustion.

"|| Thirty-two degrees is the point at which water begins to freeze, or ice to thaw.

"¶ Evaporation.

"** The two thus combined making a hygrometer: for which some kinds of hair, Grass, or Seaweed may be a makeshift.

"It should always be remembered that the state of the air foretells coming weather, rather than shows the weather that is present—an invaluable fact too often overlooked; that the longer the time between the signs and the change foretold by them, the longer such altered weather will last; and, on the contrary, the less the time between a warning and a change, the shorter will be the continuance of such foretold weather.

"To know the state of the air, not only barometer and thermometers should be watched, but the appearances of the sky should be vigilantly noticed.

"If the barometer has been about its ordinary height, say near 30 inches (at the sea level), * and is steady, or rising, while the thermometer falls, and dampness becomes less, north-westerly, northerly, or north easterly wind, or less wind, less rain or snow may be expected.

"On the contrary, if a fall takes place with a rising thermometer and increased dampness, wind and rain may be expected from the south-eastward, southward, or south westward.

"A fall with a low thermometer foretells snow.

"Exceptions to these rules occur when a north-easterly wind, with wet (rain, hail, or snow) is impending, before which the barometer often rises (on account of the direction of the coming wind alone) and deceives persons who from that sign only (the rising) expect fair weather.

"When the barometer is rather below its ordinary height, say down to near 29½ inches (at the sea level), a rise foretells less wind, or a change in its direction towards the northward, or less wet; but when it has been very low, about 29 inches, the first rising usually precedes or indicates strong wind; at times heavy squalls from the north-westward, northward, or north-eastward,—after which violence a gradually rising glass foretells improving weather if the thermometer falls; but, if the warmth continue, probably the wind will back (shift against the sun's course), and more southerly, or south-westerly wind will follow, especially if the barometer rise is sudden.

"The most dangerous shifts of wind, or the heaviest northerly gales, happen soon after the barometer first rises from a very low point; or, if the wind veers gradually, at some time afterwards.

"Indications of approaching changes of weather and the direction and force of winds are shown less by the height of the barometer than by its falling or rising. Nevertheless, a height of more than thirty (30·0) inches (at the level of the sea) is indicative of fine weather and moderate winds; except from east to north, occasionally.

"The barometer is said to be falling when the mercury in the tube is sinking, at which time its upper surface is sometimes concave or hollow; or when the hand moves to the left. The barometer is rising when the mercurial column is lengthening; its upper surface being convex or rounded, or when the hand moves to the right.

"A rapid rise of the barometer indicates unsettled weather; a slow movement the contrary; as likewise a steady barometer, which, when continued, and with dryness, foretells very fine weather.

"A rapid and considerable fall is a sign of stormy weather and rain (or snow). Alternate rising and sinking indicates unsettled and threatening weather.

"The greatest depressions of the barometer are with gales from S.E., S., or S.W.; the greatest elevations, with wind from N.W., N., or N.E., or with calm.

"Though the barometer generally falls with a southerly and rises with a northerly wind, the contrary sometimes occurs; in which cases, the southerly wind is usually dry with fine weather, or the northerly wind is violent and accompanied by rain, snow, or hail; perhaps with lightning.

"When the barometer sinks considerably, much wind, rain (perhaps with hail), or snow will follow; with or without lightning. The wind will be from the northward, if the thermometer is low (for the season)—from the southward, if the thermometer is high. Occasionally a low glass is followed or attended by lightning only, while a storm is beyond the horizon.

"A sudden fall of the barometer, with a westerly wind, is sometimes followed by a violent storm from N.W., or N., or N.E.

"If a gale sets in from E. or S.E., and the wind veers by the S., the barometer will continue falling until the wind is near a marked change, when a lull may occur; after which the gale will soon be renewed, perhaps suddenly and violently, and the veering of the wind towards the N.W., N., or N.E. will be indicated by a rising of the barometer with a fall of the thermometer.

"Three causes (at least)† appear to affect a barometer:—

"1. The direction of the wind—the north-east wind tending to raise it most—the south-west to lower it the most, and wind from points of the compass between them proportionally as they are nearer one or the other extreme point.

"N.E. and S.W. may therefore be called the wind's extreme bearings (rather than poles).

"The range or difference of height shown, due to change of direction only, from one of these bearings to the other (supposing strength or force, and moisture to remain the same), amounts in these latitudes to about half an inch (as read off).

"2. The amount—taken by itself—of vapour, moisture, wet, rain, or snow in the wind, or current of air (direction and strength of wind remaining the same), seems to cause a change amounting in an extreme case to about half an inch.

"3. The strength or force alone of wind, from any quarter (moisture and direction being unchanged), is preceded or foretold by a fall or rise, according as the strength will be greater or less, ranging in an extreme case to more than 2 inches.

"Hence, supposing three causes to act together—in extreme cases—the height would vary from near 31 inches (30.9) to about 27 inches (27·0), which has happened, though rarely (and even in tropical latitudes).

"In general, the three causes act much less strongly, and are less in accord; so that ordinary varieties of weather occur much more frequently than extreme changes.

"Another general rule requires attention; which is, that the wind usually appears to veer, shift, or go round with the sun (right-handed, or from left to right) ‡ and that when it does not do so, or backs, more wind or bad weather may be expected instead of improvement.

"It is not by any means intended to discourage attention to what is usually called 'weather wisdom.' On the contrary, every prudent person will combine observation of the elements with such indications as he may obtain from instruments; and will find that the more accurately the two sources of foreknowledge are compared and combined, the more satisfactory their results will prove.

"A barometer begins to rise considerably before the conclusion of a gale, sometimes even at its commencement. Although it falls lowest before high winds it frequently sinks very much before heavy rain. The barometer falls, but not always, on the approach of thunder and lightning §. Before and during the earlier part of settled weather it usually stands high and is stationary, the air being dry.

"Instances of fine weather, with a low glass, occur, however rarely, but they are always preludes to a duration of wind or rain, if not both.

"After very warm and calm weather, a storm or squall, with rain, may follow; likewise at any time when the atmosphere is heated much above the usual temperature of the season.

"Allowance should invariably be made for the previous state of the glasses during some days, as well as some hours, because their indications may be affected by distant causes, or by changes close at hand. Some of these changes may occur at a greater or less distance, influencing neighbouring regions, but not visible to each observer whose barometer feels their effect.

"There may be heavy rains or violent winds beyond the horizon, and the view of an observer, by which his instruments may be affected considerably, though no particular change of weather occurs in his immediate locality.

"It may be repeated that the longer a change of wind or weather is foretold before it takes place, the longer the presaged weather will last, and, conversely, the shorter the warning the less time, whatever causes the warning, whether wind or a fall of rain or snow, will continue.

"Sometimes severe weather from the southward, not lasting long, may cause no great fall, because followed by a duration of wind from the northward, and at times the barometer may fall with northerly winds and fine weather, apparently against these rules, because a continuance of southerly wind is about to follow. By such changes as these one may be misled, and calamity may be the consequence, if not duly forewarned.

"A few of the more marked signs of weather, useful alike to seaman, farmer, and gardener, are the following:—

"Whether clear or cloudy—a rosy sky at sunset presages fine weather; a red sky in the morning bad weather, or much wind (perhaps rain); a gray sky in the morning, fine weather; a high dawn, wind; a low dawn, fair weather *

"Soft looking or delicate clouds foretell fine weather, with moderate or light breezes; hard edged, oily looking clouds wind. A dark, gloomy, blue sky is windy; but a light, bright blue sky indicates fine weather. Generally, the softer clouds look the less wind (but, perhaps, more rain) may be expected; and the harder, more 'greasy,' rolled, tufted, or ragged, the stronger the coming wind will prove. Also, a bright yellow sky at sunset presages wind; a pale yellow, wet:—and thus by the prevalence of red, yellow, or gray tints, the coming weather may be foretold very nearly, indeed, if aided by instruments, almost exactly.

"Small inky-looking clouds foretell rain:—light scud clouds driving across heavy masses show wind and rain; but, if alone, may indicate wind only.

"High upper clouds crossing the sun, moon, or stars, in a direction different from that of the lower clouds, or the wind then felt below, foretell a change of wind.

"After fine clear weather, the first signs in the sky of a coming change are usually light streaks, curls, wisps, or mottled patches of white distant cloud, which increase, and are followed by an overcasting of murky vapour that grows into cloudiness. This appearance, more or less oily, or watery, as wind or rain will prevail, is an infallible sign.

"Usually the higher and more distant such clouds seem to be,—the more gradual, but general, the coming change of weather will prove.

"Light, delicate, quiet tints or colours, with soft, undefined forms of clouds, indicate and accompany fine weather; but gaudy or unusual hues, with hard, definitely outlined clouds foretell rain, and probably strong wind.

"Misty clouds forming or hanging on heights show wind and rain coming—if they remain, increase or descend. If they rise or disperse the weather will improve or become fine.

"When sea birds fly out early, and far to seaward, moderate wind and fair weather may be expected; when they hang about the land, or over it, sometimes flying inland, expect a strong wind with stormy weather. As many creatures besides birds are affected by the approach of rain or wind, such indications should not be slighted by an observer who wishes to foresee weather.

"There are other signs of a coming change in the weather known less generally than may be desirable, and therefore worth notice; such as when birds of long flight, rooks, swallows, or others, hang about home, and fly up and down or low—rain or wind may be expected. Also when animals seek sheltered places, instead of spreading over their usual range; when pigs carry straw to their sties; when smoke from chimneys does not ascend readily (or straight upwards during calm), an unfavourable change is probable.

"Dew is an indication of fine weather; so is fog. Neither of these two formations occurs under an overcast sky, or when there is much wind. One sees fog occasionally rolled away, as it were, by wind—but seldom or never formed while it is blowing.

"Remarkable clearness of atmosphere near the horizon, distant objects, such as hills, unusually visible, or raised (by refraction), and what is called 'a good hearing day,' may be mentioned among the signs of wet, if not wind, to be expected.

"More than usual twinkling of the stars, indistinctness or apparent multiplication of the moon's horns, halos, 'wind dogs,' † and the rainbow, are more or less significant of increasing wind, if not approaching rain, with or without wind.

"Near land, in sheltered harbours, in valleys, or over low ground, there is usually a marked diminution of wind, during part of the night, and a dispersion of clouds. At such times an eye on an overlooking height may see an extended body of vapour below (rendered visible by the cooling of night) which seems to check the wind.

"Lastly, the dryness, or dampness of the air, and its temperature (for the season) should always be considered, with other indications of change, or continuance of wind or weather."

"* It differs, or stands lower, about a tenth of an inch for each 100 feet of height directly upwards, or vertically, above the sea; its average height being 29·94 inches at the mean sea level in England. Allowances must, therefore, be made for barometers on high land or in buildings.

"† Electrical effects are yet uncertain.

"‡ With watch hands in the northern hemisphere; but the contrary in south latitude. This, however, is only apparent; the wind is actually circulating in the contrary direction.

"§ Thunder clouds rising from north eastward, against the wind, do not usually cause a fall of the barometer.

"* A 'high dawn' is when the first indications of light are seen above a bank of clouds. A 'low dawn' is when the day breaks on or near the horizon, the first streaks of light being very low down.

"† Fragments or pieces (as it were) of rainbows (sometimes called 'wind-galls') seen on detached clouds.

Home Correspondence.

Field Management of Wheat in a wet Harvest.—I know few things more perplexing than a run of bad weather during harvest, especially if the crops be otherwise good both as to quality and quantity. Many of your correspondents have adverted to that of 1816 as bearing a strong resemblance to our present season. I can confirm this from my own experience, the chief difference being that then the rain was mostly from the East, whereas now it is generally from the West or S. West; the barometer in the former case standing unusually high, to the astonishment of all who do not take into account the effect of an easterly wind, even in a rainy season, in keeping up the mercury: at least such is the opinion my observation has led me to form on the question. But be this as it may, my present object is to point out what I consider one mode of

making the best of a bad job. In this same harvest of 1816, I happened to have a 20-acre field of Wheat in shock, during the wettest part of the harvest. From the general dryness of the climate, the practice of hooding or capping the sheaves in the field, is but seldom resorted to in the eastern districts; so in the event of a rainy season, we suffer, as perhaps we ought, for running so great a risk as to leave our shocks uncovered. In my case the outside ears soon showed symptoms of swelling, then of sprouting, and finally the change to my great annoyance became visible enough, showing in an unmistakable manner the mischief which was going on. Tired, and, to say truth, somewhat ashamed of this state of things, indicating a rapid progress from bad to worse, I resolved on making an experiment, which, to say the least of it, was a bold one, and I believe, in the eyes of my men was regarded as little short of insanity. I got up a load, wet as it was, to the barn, put the horses to the threshing machine, and found to my no small surprise and delight, that in spite of its soddened condition, the grain left the ear pretty freely; and more than that, the after operation of separating the chaff from the corn was far more effective than I had expected. Altogether it was about as queer a job as ever I was concerned with: but it succeeded; and if in one load why not in all? The field was soon cleared, the crop threshed and dressed; the only point now left being how it could best and quickest be dried for sale or keeping. Fortunately the neighbouring malt kilns were disengaged, and in a very few days back came my Wheat, I do not think much the worse in quantity, and as to quality perfectly safe for any length of time. On passing it again through the dressing machine, the longest of the sprouted grains were easily separated from the bulk, and, with a small proportion of Barley malt, found the family in table beer the whole winter. To give an idea of the relative value of sound and damaged Wheat at that time (for the kiln-dried could not be reckoned otherwise than damaged), I sold the part harvested dry for 142*s*., the kiln-dried for 90*s*. per quarter. *Samuel Taylor, Worcester, August* 29.

Deficiency of the Root Crops.—The present wet cold season will have the effect of greatly diminishing the root crop; the hay being also a good deal damaged it will be desirable to feed a portion of the roots with the hay to keep the young stock in an advancing state of condition; but the greatest difficulty will be felt in the early part of the spring, previous to the growth of the spring feed for sheep. Then with the view of economising the consumption of roots, I should suggest laying up some portion of our pastures from the present time. A dressing of good manure applied now would increase the quantity and improve the quality of a good useful milk-producing food for ewes after lambing. *B. Bassey, Perrinfield Farm, Oxted, Surrey.*

Need of a General Drainage Act.—The *Agricultural Gazette* being now so fairly established as a medium for affording valuable information to all who desire to derive profit or amusement from the cultivation of their estates, that it may almost be considered one of our "institutions," allow me, as a landowner as well as a farmer, to solicit your powerful aid in urging upon the Government the necessity of preparing before next session a General Drainage Bill for the United Kingdom. Most unfortunate it is this step was not taken before the five millions were lent for drainage and the Drainage Act passed, large sums would then probably not have been wasted. Estates have been and are still attempted to be drained, without reference to the land above or below them, instead of in districts, the large outfalls being cut first and the works carried upwards, and the fall adapted to the whole area capable of being drained. Independently of the want of union amongst landowners, a circumstance deeply to be regretted, the country is destroyed by local Acts, one of which I send you as a specimen; this is an Act passed in the reign of Parliament of George III. for drainage and navigation, **as if the two could be combined, in a flat district.** The owners in the locality are hampered by the Act at every turn, and if they try to avoid this **Scylla they fall into Charybdis, another Act in force** above by; **thus the whole district is, at present, incapable of being drained, though thousands have been laid out** in vain. In asking for your co-operation, however, I must confine myself **to a consideration of the evils** arising from these two Acts **alone**; I speak of England only. I have examined many crops of corn this year, and have invariably found that where the drainage is good and the cultivation deep, they are much better than could be expected, but where **there is little** or no drainage **the result is miserable indeed; an enormous** quantity will thus be **lost this year from the want of** drainage we might have had. "*There belongs more than existing to going to plough.*"

Harvest in Essex.—A change has come over the harvest prospect. From wind, storm, and rain, we have passed to the finest harvest weather, which permits an immense breadth of corn to be cut and carted, and must have a favourable influence on our markets. I am, however, the more confirmed in my opinion, that on the extensive **breadth of undrained and unimproved stiff, cold** land there will be, **as compared with last year, a great** deficiency of grain crop, and an almost total failure of Beans. **The only redeeming point is with Beans,** which promise to be above average. **A neighbouring** farmer said to me "**On my 100 acres the corn crops will produce less by 150***l*. than last year." And yet prices are 50 per cent. higher this year. The difference between drainage and non-drainage is this year painfully apparent; the crops continuing green and exhibiting an unequal ripening, and certainly delaying harvest 14 days, perhaps more with an irregular sample. The removal of the crops has caused the land to dry rapidly and very hard, and it shows ample evidence of having been thoroughly washed and impoverished by the frequent heavy storms. On hilly fields much of the fine surface has been washed away. *J. J. Mechi, Tiptree Hall, Sept.* 3.

Potato Disease.—H. B. J. feels quite certain that the lime, salt, and ashes have prevented his Potatoes being as bad as his neighbours'. Many about him laid out 40*s*. per acre on their hay land. He had fully as good a crop with 8*s*., (it does not cost him as much). He also thinks it prevents corn laying so much as is often seen, and strengthens the straw.——

Burgess and Key's Reaper.—Myself and no doubt other farmers who have used Burgess & Key's reaper for the first time this season, are greatly indebted to your correspondent "Exile" and others who have responded to my invitation to such communications as have since appeared in the *Agricultural Gazette*. We have had no call upon us for that patience and perseverance under temporary embarrassments of which "Exile" forewarned us. On the contrary, we have cut all our Wheat and Barley without any let, or hindrance, or accident. Where the corn was laid in patches (for it generally stood very well), a man preceded it on those occasions with the handle of a rake, and raised the corn a little off the ground, and the machine then made clean work of it. As the land in Barley was wet and soft, and the Clover half way up the corn, we used three good horses, and changed them twice in the day, for the work was unusually severe under those circumstances. We put a boy on the first horse, and drove the two behind with reins. To enable me to offer some contribution to the information given in the *Agricultural Gazette* on this matter, I had an exact account kept in respect of one field in which the work was carried straight forward, and which was as follows:—The field was Wheat, and measured 10½ acres. The work comprised mowing round the field a path for the horses, the cutting, tying, and stooking the sheaves. The hands mentioned comprise the driver and boy, with the horses. The time occupied was seven hours:—

8 men, at 4*s*. per day	£1	12	0
4 women at 2*s*.	0	8	0
3 lads, at 2*s*. 6*d*.	0	7	6
2 boys, at 1*s*. 3*d*.	0	2	6
	£2	10	0

The hands provide their own beer.

—*L., Sept.* 12.

Wheat, to raise a variety suitable for Cold Seasons and Late Situations.—The very peculiarly wet and cold season with little sun, which we have had, offers great opportunities to search the crops of corn, particularly Wheat, for plants showing greater maturity in the grain; in fact, such as would be the especial variety for cold land and late situations. The plants grown from seed sown at the same time, grown under the same circumstances, and yet evincing, in spite of the unfavourable season, a disposition to perfect its grain and produce a straw which can stand, must be of a variety which has suffered less from the low state of atmospheric warmth than the others in the same field. These being collected, should be sown by themselves, when next year the same process of selection will need to be applied. This season, however, being so comparatively sunless, and so below the average warmth, offers every opportunity to observe any plant which has struggled best to fulfil its destiny, and the favourable chance should not be permitted to pass unprofitably. *W. Wooler.*

Small Sheaves of Corn.—The plan suggested in the *Agricultural Gazette* lately, of drying corn in sheaves more rapidly by dividing them into smaller portions, is **I find, during a rapid run through Belgium, in common** practice, the sheaves being often not half the size of our ordinary ones. The process of drying is moreover quickened by arranging the sheaves apart from each other. This is chiefly done in the Hop districts, the Hop poles being fixed horizontally, at about the distance of 3 feet from the ground, by means of cross sticks **placed at each end, and the sheaves are made to rest against the long pole facing each other in pairs. In one place I saw a very ingenious manner of fixing six** sheaves in an open block, but could not detect how they were secured. *J. O. Westwood.*

Berkshire: The Harvest of 1860.—**Great fears are expressed for the harvest of this year. As I have lived** in one of the most fertile corn-growing districts of the midland counties for 30 years, and as I have from habit and inclination **watched the phases of every harvest during that period, I venture to give an opinion as to the present agricultural prospect. First as to hay and root crops. The cold and backward spring reduced the** stock of old hay to a *minimum*. The heavy rains of May and June forced an unusual crop of upland, meadow, and artificial Grasses, which were, as a general rule, remarkably well got in in the unusually fine July; the **wet August forced a second crop, and established the root crop where the activity of the farmer enabled him to take advantage of the alternations of the weather. To what extent the meat market would have gone up in the ensuing winter but for this timely supply of** food for cattle it would be hard to imagine. It is true that very much hay was destroyed in the valley of the Thames and its tributaries; suffice it to say, that the state of the Thames as a main outfall and carrier for the drainage of a large part of Midland England is a disgrace to a civilized country. The farmers in the valley of the Thames tried to beat out the sediment of the floods by passing their hay through a thrashing-machine, and they may have to repeat the experiment, if the landowners will not combine to improve the waterway of the father of English rivers. Now as to the corn harvest. My own observation, and such information as I can gain from others, lead to the conclusion that there is no deficiency in any grain crop. The Wheat was thin in the spring; a piece which I condemned to be ploughed up will yield nearly, or quite, 4 quarters per acre. The Barley and Oats were sown under very favourable circumstances; the time was favourable for the Wheat blossom. The ears are full, and all that was wanted was fair weather. If the weather had been hot, as far as we can judge, the corn would have ripened short of its maturity; as it is, though slow, the maturity is satisfactory. As yet, hereabouts nothing has been spoilt. Last year early in August the Wheat and the Barley had sprouted, the latter especially; up to the present time nothing of the sort has been seen; and, comparing the two years, on my own small farm, composed of soils varying from light gravel to clay, the value of the corn crop is at least 10 per cent. in favour of 1860. Here, at least, we have neither cause for fear or complaint. The quantity of rain has been, month by month, about equal to 1852, the wettest year I ever remember. Heavy rains just now would give an excess not to be expected. Wheat, Barley, and Oat ricks are springing up to-day in this parish, and, with the blessing of a fortnight's fine weather the harvest of 1860 will be abundant and well secured. *J. C. C., in the Times, Abingdon, Sept.* 1.

The effect of a want of Rain in causing the Abortion in Barley.—Some year ago I observed a piece of standing Barley growing upon light sandy land had mostly only matured its lower grains in each head. This year I grew a few Barley plants in pots in the greenhouse so as to have entire control over them for the purpose of noticing the effect of want of water upon their producing proper seed, and just as the heads were shooting I abstained completely to give water. The result is seen in the enclosed specimens, which show that whilst a few of the grains at nearly the bottom of the heads were matured, yet those of the top portion are abortions. It will be remarked in one there are two grains like the whole of the top so imperfect as to merely have a shrivelled skin with the awn, whilst alternating with these two are two filled grains not much inferior to those more at the bottom. **The imperfect seeds will be seen to be almost only so by the non-development of the flour, for the skins and beards are not greatly diminished in size in** comparison with those which are filled. It will also be observed that the very bottom grains on both sides of the heads are abortive. I had intended to have examined if the want of water at the peculiar epoch of the growth of the plant had caused the non-development of the pollen cells and thus prevented fertilisation, but unfortunately being engaged neglected doing so. However I suspect, from the power the plants had to so far perfect the skin and beard, that the non-fruiting may result from the non-production or otherwise of immature pollen cells. *W. Wooler.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

Sept. 4.—The following is a copy of the award of the judges of reaping machines at the late trial at Canterbury, which was deferred until after the meeting in July, at that city:—

"September 4, 1860.

"We the undersigned award the prize, No. 26, given by the Local Committee of the Royal Agricultural Society's Show, at Canterbury, to Article 792, exhibited by Robert Cuthbert & Co., Bedale, Yorkshire, **as the best reaper.** At the same time we consider the reaper exhibited by Burgess & Key worthy of high commendation

(Signed)

"P. S Pusnett, "Thos. Rammell,
"Thos Abbott, "H. P. Austin."
"Fred. Murton,

ROYAL AGRICULTURAL IMPROVEMENT.

At the last council meeting, Lord Talbot de Malahide in the chair, Messrs. Shekleton, of Dundalk, and Gray of Belfast, lodged objections against the award of the *Farmers' Gazette* Challenge Cup to Mr. Gray, of Uddingston, Glasgow, "for the best collection of agricultural implements suited to the agriculture of Ireland, and manufactured by exhibitor." The condition for competition was, "that all articles shall be *bonâ fide* the manufacture of the exhibitor." The exhibitors were, Mr. Gray, of Belfast; Mr. Gray, of Uddingston—to whom they awarded the cup; Mr. Shekleton, of Dundalk; and Messrs. Perrott & Co., of Cork. The stewards of the yard brought before the notice of all the exhibitors the clause specifying that the articles should be their own manufacture, and they required that each exhibitor should hand them a written list, which the secretary had, of the implements which he proposed to use in competition for the challenge cup, taking out the other articles. Perhaps they would

find 20 or 30 articles on a stand, not in the written list, but the written list contained the articles entered for the challenge cup. With the exception of Mr. Gray, of Uddingston, the lists were correct. There was a plough on his stand, and one person took a knife and scraped off the paint on the top of the beam, and there was another name on it.

The Secretary read the following letter from Mr. W. Uniacke Townsend:—

"Mr. Townsend's recollection of the circumstances that occurred connected with the charge of Mr. Shekleton and Mr Robert Gray, of Belfast, against Mr. John Gray, of Glasgow, on Tuesday, the 24th July, 1860.

"On the morning of Tuesday, the 24th July, I went round to the several exhibitors of implements who intended competing for the challenge cup, and requested each to have a list of the several implements they intended for competition ready for me at 3 o'clock. About this hour I called and received a list from all, with the exception of Mr John Gray, of Glasgow; his list was not handed in until the day after and subsequent to the judges' examination

"After the judges and stewards had inspected Mr. Robert Gray's implements, they went to inspect Mr John Gray's, of Glasgow. Professor Murphy and I, however, returned (before we saw Mr. John Gray), for the purpose of asking Mr Robert Gray if all the implements he exhibited were of his own manufacture. He said, 'They are; but I wish to show you a letter I received,' handing us Mr. Barrowman's note, containing the charges against Mr. John Gray

"We then went after the judges and the other steward, but before we spoke to Mr John Gray we looked at the suspected ploughs, and Professor Murphy scratched the beam of the double mould-board plough, to see the name of Wilkie, as alleged. I also scratched, but we did not find it. We then walked towards the rest of the party, who were coming towards us. At this time Mr John Gray had not seen us scratching the plough

"As they approached I asked Mr. John Gray if all these (pointing to the ploughs) were his manufacture. He said, 'Yes.' I then said, 'Are you sure? Is this yours?' (pointing to the plough we suspected). Professor Murphy at the same time said something about taking care, and being cautious, as we had the proofs in our possession. He said, 'With respect to that, I wish to say that this portion of the plough (pointing to the centre of the beam) was made by Wilkie.'

"At this time Mr Trench was scratching the beam of the plough before us all, and I stooped down and scratched with my penknife also. The name of Wilkie then became apparent, after Mr Gray had stated as above. The name of his firm was painted on the beam immediately before where Wilkie's name appeared, after the paint was scratched off; the latter appeared to be deeply cut.

"As to Barrowman's plough, one was exhibited bearing Barrowman's name clearly marked on it.

"WM. UNIACKE TOWNSEND,
"Spahill, Kilfinane.

"Aug. 28, 1860."

The following are a few of the remarks which ensued in the course of the conversation on the subject:—

Mr. Fetherston: I distinctly assert, because I saw the plough, that it bore the name of Wilkie; it was indistinct, but you could easily see that it was a much longer name than that of Gray.—Lord Clancarty: The question is, whether you can consider that plough as coming under the head of improvement—one on which Mr Gray has effected an improvement. If so, there is no fraud.—Mr Wade: He has got this beam among other articles, and used it, the rest of the plough being his own manufacture. I would be sorry to disqualify him.—Mr. C. G. Gray said the merits of the plough did not consist in having the beam, but consisted of it being a "turnwrest" plough. They would find that no implement manufacturer had everything made in his own yard. Mr. Gray of Belfast, himself, he would be bound to say, contracted for a great deal of his materials. A man bought a beam and make a "turnwrest" plough, and the "turnwrest" plough was his.—Mr. Boyd: We have it on his own admission that the forged parts of this implement belonged to another maker I think that is quite sufficient.—Mr. Trench: The words of our list are complete; the cup is presented by the Messrs. Purdon "for the best collection of implements manufactured by exhibitor."—Lord Clancarty suggested a resolution to the effect that the council was of opinion that the article was not manufactured by exhibitor.—The Chairman asked if the judges had considered the next best lot?—The Secretary said that Mr. Gray, of Belfast, was highly commended; but he stood exactly in the same position—all the articles were not his own manufacture.—Mr. Fetherston said that Gray's of Belfast were, in their opinion, good articles, and highly finished; but the collection was not sufficiently varied.—Mr. C. G. Gray was not satisfied with the decision of the council. He believed that Mr. Gray had made a bad case out in his letter; but he did not believe that he ever came deliberately into the yard to deceive the judges; and if the judges had done, as they did once before, gone round one by one and asked him how much of each article was his own manufacture, he would have told them.—Lord Clancarty did not believe that Mr Gray wilfully intended to deceive; and if that were the question at issue, he should certainly have given Mr Gray the credit of not having so intended. He thought the facts brought before them were sufficient to warrant them in that belief; but, at the same time, considering the conditions for competition, he could not bring himself to believe, nor would the trade believe, that they were properly dealing with the case if they were to confirm the award He would, therefore, say that as the Messrs. Gray did not comply with the conditions, they were disqualified.—Mr. Fetherston agreed with the noble lord on one point—namely, that Mr Gray did not willingly intend to deceive: and if that was the case he was entitled to the cup He would say that if he stood alone.—Chairman: If we award the cup on this occasion for the future we can never insist on an implement being made by the exhibitor.—Mr Gray thought it a pity they ever should.—Lord Cancarty moved and Lord Chesterton seconded a resolution to the effect "that Messrs Gray & Co have not complied with the conditions, and are, therefore, disqualified for the award of the *Farmers' Gazette* Challenge Cup."—Mr. Fetherston: My lord, I rise, if I stand alone, to move an amendment to that resolution, because I conceive that a person exhibiting so many implements of so varied a character and so well manufactured should not be charged with fraud. I, therefore, move as an amendment "that Mr. Gray get the cup."—Mr. C. G. Gray seconded the amendment.—The Chairman put the amendment, which was negatived.—The original resolution was then put and carried.—It was then resolved "that the award of the judges of the *Farmers' Gazette* Challenge Cup to Mr. Gray, of Uddingston, not having been confirmed by the council, on the ground of disqualification, the council are of opinion that the cup shall be considered to have lapsed to the society for this year."

MANCHESTER AND LIVERPOOL: *Bolton, Sept.* 12.—The confusion and disaster of last year's annual gathering of this Society are amply atoned for by the completeness of the arrangements this year and by their entire success. Most of the different departments of the show are about as well filled as to number this year as at Liverpool. Some of them were an improvement on the Liverpool meeting; and as a whole the show is said to be the best which the Society has ever had. The 10-acre field in which the gathering has been held was crowded with spectators, and the weather was perfect. At the dinner, in proposing the toast of the evening, Lord Stanley thus gave the history of the Association:—The first meeting of the united Society in 1847, was held at Manchester, in a space of about half an acre, which would not have accommodated one-twentieth part of the spectators and stock which we have seen on the ground to-day. In that first year of our existence the amount of money taken at the exhibition was 140*l.*, and the attendance was 2000 persons. The average receipts during the last two years have exceeded 700*l.*; and I am told that, judging by the result of this first day, they will not fall far short of 1000*l.* this year. The return of to-day is 450*l.* During the last two years the attendance at the exhibition has been computed at not less than 20,000. When there is an increase of 10 to 1, or 1000 per cent. in the attendance, and an increase of 20 to 1, or 2000 per cent. in the site which the exhibition occupies, I think those figures sufficiently show you what is the progress which this Association has made.

The Society offers prizes for an immense number of objects—between 200 and 300 being given annually—14 prizes in 7 or 8 classes for bulls, 16 for cows and heifers, about 30 for horses, upwards of a dozen for sheep, 8 or 9 for pigs, 30 for poultry, 8 for vegetables. And in addition to these there are an immense number offered by the local committee for cattle, horses, pigs, cheese, butter, seeds, and roots. These latter lists include very respectable entries in the cattle classes, and very large entries of horses. There was also a fair show of butter; a poor one of cheese; a good show of roots. Some extraordinarily fine specimens, shown by Mr. Palin, of Tarvin, easily took the first prize.

The implement show was a very good one—Messrs. Richmond & Chandler, of Salford; Croskill, of Beverley; Ashby & Co., of Stamford; Pecksley & Sons, of Leigh, and other makers in the counties around, had large and well filled stands.

Mr. Thorley too was there with his pictures of country life as it was, and as, by the aid of his "food," it now is!

In the evening there was a good dinner, and a capital speech from Lord Stanley, who concluded by saying, "We cannot all of us afford costly machinery, or afford what is the most expensive of all things—to try new experiments; but there are some things which I believe every farmer who is worth his salt can have, whether he is a large or small farmer, and these are—straight fences, clean crops, thorough draining, and plenty of manure. And, I take it, if a man has these four things upon his farm he will be able, for the present at least, to hold his own against any competition, native or foreign, with which he is likely to have to struggle."

In the show yard the cattle classes were not particularly well filled; though the well known names of Ambler, Peel, Atherton, and others were among the exhibitors. The horses—including both the local and the general classes—contained upwards of 200 animals. There was a very poor show of sheep—but many good animals in the pig classes. The best boar of a small breed there, shown by Mr. Harrison, of Stockport, is probably the best boar in England, having taken the first prize at Canterbury and many other meetings. The prize list would fill several columns of our Paper, and we are therefore unable to find room for it. The secretary and office-bearers may be congratulated on a very successful gathering.

Farm Memoranda.

MR. HORSFALL'S FARM NEAR OTLEY.—The farm includes not quite 60 acres along the bank of a pretty little stream, either the Wharfe itself, or flowing into it, I am not certain which. Forty-three acres, or fully three-fourths of the whole, are in Grass. The stock upon the place, at one time and another during the season, had been as follows:—

Heifers and bullocks.. ..	21	Two tups and 62 ewes ..	64
Milch cows	20	Lambs	106

Likewise four pigs, two horses, and a pony.

Making a total of small cattle and large, numbering 218 head—a tolerably heavy stock for 60 acres to carry. The land not in Grass was employed as follows:—

Wheat, 2½ acres	Oats, 3½ acres
Kohl Rabi, 1 acre	Mangels and Swedes, 3½ acres

Beans, 3 acres—1 acre of Winter Beans, and 2 of a long-podded garden variety.

The Winter Beans sown in October were then, Aug. 17, just harvested, and had turned out apparently a good crop. It is one of which Mr. H. is quite fond; it is out of the way sooner than Spring Beans, so that the ground may be more readily prepared for a succeeding crop of Wheat. This is sown without manure, the land being already so rich that it is difficult to give the straw stiffness enough to stand up till harvest. On the Wheat field of this year (2½ acres), 15 cwt. of salt were sown in the spring upon those parts where the grain was most liable to lodge; the amount of seed sown upon the whole was only 2½ bushels, and the yield had been 200 stooks of sheaves—then not threshed, so that I have no other data for estimating the product obtained. After the Wheat a Rape crop for spring feeding would be likely to follow, and then Oats, perhaps followed by Wheat again, and then roots or Beans. This would be a rotation of six or seven years, but it is not adhered to with any particular care. Wheat which was to be used for seed, Mr. H. did not house as soon as the rest, in order to allow it to dry and mature more thoroughly.

The particular interest of the place centres more in its live stock and Grass fields than in its crops, however, and of these we will begin with the sheep, so as to defer the cattle and dairy matters for our conclusion. Mr. H. generally pays in the vicinity of 45*s.* sterling, say 11.25 dollars per head for ewes in October, to the number of 60 or thereabouts. Fifty-nine of the number purchased in the autumn of 1858 had brought him the 106 lambs he had to dispose of in 1859. They come mostly from the north, and are probably a cross of the Cheviot male upon Leicester ewes. He made a bargain with the butcher for his lambs this year in one lot at 24*s.* (six dollars each) fatted, a few beginning to go off as early as May, when only four to six weeks old, and the purchaser being allowed in the bargain to draw from the number according to his wants—the whole to be taken before the end of July. What were left on hand at the end of June were at that time weaned. The ewes themselves are fattened, and sold along during August, September, and October—fetching from 12 to 12.50 dollars per head; so that the sheep account shows, for not quite a year's keeping of each ewe (1) a profit of from 75 cents. to 1.25 dollar in the difference between the price paid for her and the price received; (2) the fleece sheared from her in the spring, which is quite an item; and (3) the lambs which she has produced and reared—a return which it requires no argument and little arithmetic to show must be considerably beyond the labour of caring for her, and the cost of what she has eaten.

Turning now to the cattle, we find that Mr. Horsfall buys the bullocks he fattens in April or May, grazes them through the summer, finishes them up in the stables, and sells in November; milch kine being found to pay better for winter care. It is the custom, Mr. H. remarked, with the London dairymen to buy in fresh cows as fast as others run dry and are sold, or whenever they need to increase the quantity of milk for sale. It is his system, as I remember what he told me, to keep about 20 cows constantly in milk. He generally buys about the time the first or second calf comes in; but if he finds the right sort of animal, say at three, or still more frequently at four years old, he did not seem so particular as to the season of the year in which she came his way; milking them for two or three years—the latter period only when the cow's extraordinarily good milking qualities seem to justify it. They go dry from two to three months in the year, and by a little skill in selection, they average about 20 quarts per day when fresh. Mr. H. appeared, like some of our best dairy farmers, to prefer a cross breed to a pure; he said that what he always chose when possible was a kind of cross half Short-horn and half Highland Scots, of which sort, in that part of Yorkshire, there are generally some to be found. As an illustration of the value of such cows as he would select in that part of England, I may mention that the week previously he had purchased three head of these Yorkshire Short-horns for 45*l.*—say 225 dollars apiece.

These milking cows he keeps constantly in good order, and maintains that much of his success in milk-producing has been due to this fact—that it must indeed be ranked as one "leading feature of his practice." Accordingly, when the cow runs dry in her sixth year she has been gradually getting fatter and fatter for some time back, and a month's "finishing" in the stall is all that is necessary to make her the best of beef. He does not breed any to raise himself, but by this method some farther particulars of which I am about to give, accomplishes the double object, as one might almost say, of getting both the milkman's and the stall-feeder's profit out of the same animal.

As we go out now to look over the pastures and meadow lands, we shall obtain a little insight into Mr. Horsfall's out-door management, and then an examination of his stables will lead to that part of his operations connected with feeding, while a subsequent glimpse of his dairy will enlighten us as to the manipulation of what it is the business of the rest of the establishment to produce.

We saw 14 acres of meadow, then, which carried 20 cows and 24 sheep, from the time the Grass is up until the middle of October, with very little assistance from other sources. Another lot of 20 acres, close at yard and foot of which is such that the cattle are fed off it, has usually supported, Mr. Horsfall told me, a bullock and one and a half head of sheep with the lambs, to each acre. To these pastures the cattle and sheep are generally admitted about May 16 in all to that time grazing upon the hay and meadow lands and thus allowing the pastures to have a good start, the best possible security, Mr. H. thinks, against being by subsequent drought. The meadow is then left to close early in the season, but by the end of July cut 2½ tons of hay per acre, and generally yields a second crop and an aftermath. From this latter meadow I saw a fine stack, and I am inclined to think referred, I think, to that peculiarity of the soil which every traveller notices at once—the strength of the grain and Grass, so that these heavy crops constructed and beautifully thatched evidences of skill form a most prominent feature about the farmstead—a stack cut this season from the field measuring 33 feet in length, 20 feet in breadth

14 feet in height, and supposed to contain at least 30 tons. Mr. H. estimated the weight of ordinary hay at 16 stone (14 lbs. each, I suppose) per cubic yard, or 224 lbs.; but his early cut hay he said, was exceedingly compact in the stack, so closely packed indeed that he had repeatedly found it by actual trial to weigh 28 stone per cubic yard, or 392 lbs. This is remarkably heavy. He finds great advantage, he thinks, in early cutting, never letting the Grass get into full flower.

The best pasture is a deep alluvial loam, but the meadow, which is irrigated, is naturally a thin soil and a strong clay. The irrigation comes from a little brook into which the sewage of the village of Burley flows, and is simply performed by being admitted at the highest point, a gentle knoll, whence furrows having a very gradual descent carry it over the whole, the water then turned on trickling out from these channels through the Grass. It is allowed to run through the winter until March, when, as I have already mentioned, the meadow is grazed until May, and then another irrigation ensues to give a start to the hay-crop, and after mowing a third flowing takes place.

(To be concluded next week.)

Reviews.

Journal of the English Agricultural Society. J. Murray.

Before giving a detailed report of any of the papers in this number, it may be well just to characterise them in succession, and give a few illustrative passages. Mr. Spearing, a most intelligent Berkshire farmer, opens the number with an account of the agriculture of his county, describing its climate, its geology, its soils, its tillage lands and Grass lands, its principal farms and farm buildings—its stock, machinery, and labourers. On this last point he is especially fitted to give an opinion, for no man takes more benevolent interest in the fortunes of those whom he employs, and the following is the conclusion to which he is led by the details which he quotes:—

"From all the facts, which I have felt it my duty to give, many may infer that the general condition of the labourer is so satisfactory that ere long we may look for extraordinary results. I should be sorry to create such an erroneous impression, and distinctly state that I anticipate nothing of the kind until the moral tone of that class immediately above them has reached a higher standard. Where that bond of sympathy and friendship which should unite the employer and employed does not exist, or only in a very small degree, we often find that farmers do not scruple to discharge their labourers when work is scarce, and they can do without them; and, as a matter of course, in the summer, when the labourers feel that they are of importance to the farmers, they either strike for higher pay or take their labour to a dearer market. Surely remedies may be found for this state of things. In my humble opinion, the first is to provide constant employment for a regular staff of labourers, and, by a judicious introduction of machinery, so to equalise the work on the farm as not to require extra hands in the summer season; next, to let the labourers feel that they are not looked upon as mere machines, who are only valued for the amount of work they can perform, but that they are trusted, treated kindly, helped and respected, in proportion as they help and respect themselves. We shall then find that our interest will be theirs, and that the facilities now afforded them for improvement, decent living, and the formation of industrious habits, will be more appreciated and more productive of good results."

In the course of this essay Mr. Spearing refers to a practice which prevails of sowing Peas and Beans together, on which the editor remarks, "I consider this very slovenly farming." He might as well have condemned the growth of Peas altogether, for it is certainly the cleanest way of growing *that* crop that exists. The mistake, we presume, has arisen from his supposing that the Beans and Peas are sown together broadcast. Where *drilled* together the Peas are supported, and the horse-hoe can work between the rows till a late period of the season.

A full and instructive prize report is given by Mr. Hunter, on the condition in which the soil should be when the seed is committed to it. We extract a passage relating to the growth of winter Beans, to which attention should be at once directed:—

"In the growth of Winter Beans the same objects should be aimed at. The ploughing of the land should be finished by the middle of September, and a month allowed for the ground to settle. The seed should be sown as near the middle of October as possible, after due care has been taken to get the ground firm. It is fear of firmness in the soil, and late sowing of Winter Beans, that have prejudiced the minds of many against their more extended growth. A firm seed-bed is as important for the stability of the Bean as we have seen it to be for the Wheat crop, but this point is frequently overlooked. In sowing this variety of Bean, the wider intervals are eventually necessary for the purpose of horse-hoeing."

Two special essays follow on Dairy practice, to which we shall hereafter call attention. They describe recent improvements in dairy practice, including the use of Harris's cheesemaker, Strutt's cheese-turner, the aceto-saccharometer, Cooley's cheese apparatus, &c. The illustrations to these papers are extremely defective, and a greater absurdity was never seen than the figure, of about the size of a capital letter, which is presented in page 88 of a shovel curd breaker.

Dr. Voelcker next reports on the value of Mangel Wurzel and of Mangel pulp. The conclusions to which he is led by his analyses are:—

"1. That weight for weight, pulp similar to that analysed by me cannot possibly have the same feeding value as good Mangel Wurzels.

"2. That such pulp, however, is a refuse material which possesses high feeding properties.

"To prove that the pulp examined by me is not equal in nutritive value to the good Mangels, I need only state that the latter were found to contain nearly 3½ per cent. more dry matter than the pulp. In materials containing so much water as exists in Mangels or pulp, this difference alone is sufficient to settle the question, whether a ton of pulp is as nutritious as a ton of Mangels. The average percentage of dry matter in the two Mangels examined by me is 12.05. A ton of Mangels therefore contains 270 lbs. of dry substance in round numbers. On the other hand, the mean of the water determinations in the two specimens of pulp is 91.31, which leaves 8.69 of solid matter in 100 parts of pulp. A ton of pulp accordingly contains 194½ lbs. of solid matter. In 1 ton of Mangels there were thus 76½ lbs. more of solid feeding-matter, or more than one-third more feeding-matter, than in 1 ton of pulp. Unless therefore the dry matters which compose the pulp are greatly superior in feeding properties, Mangels must have a decided advantage over the pulp which I analysed.

"It is not difficult to prove that this is not the case. I have just pointed out that Mangels contain 2½ times as much sugar, gum, and soluble pectinous compounds. In the perfectly dry root we have 38 per cent. more of these substances than in the pulp. The latter indeed hardly contains any sugar; and I question much whether the soluble non-nitrogenised substances in the pulp have the same practical feeding value as the sugar and other soluble non-nitrogenised substances in the root itself. However, leaving the question as to the comparative value of the soluble non-nitrogenised matters of the pulp and of Mangels undecided, we have at all events 38 per cent. of fattening and very readily-digestible materials in favour of the roots. But against this must be placed the 7 per cent. albuminous compounds, and the 30 per cent. of crude fibre, which the pulp contains more than the roots. The question, therefore, would appear to resolve itself simply to this: Is 7 per cent. of albuminous compounds, and 30 per cent. of crude pulp-fibre, as valuable as 38 per cent. of sugar? But it is not really quite so simple; for, in comparing the crude fibre of the root with that of the pulp, we have assumed that both have the same feeding value; which is not the case in reality. Of the crude fibre contained in the Mangel, a much smaller portion is woody indigestible fibre than in that of the pulp; for it includes insoluble pectinous compounds, which, under the action of sulphuric acid, employed in Beet-root distilleries, are readily transformed into sugar, and thus rendered soluble. The fibre of the pulp, after deducting the insoluble albuminous compounds which remain attached to it, consists almost entirely of woody fibre. Weight for weight, therefore, the crude fibre of Mangels is more valuable than the crude fibre of the pulp. But even supposing the crude fibre of the pulp to be equally nutritious with the crude fibre of the root, I am not the less convinced that this 38 per cent. of soluble non-nitrogenous matters (consisting chiefly of sugar) contained in the latter will go farther in producing butcher's-meat than the 7 per cent. of albuminous compounds, together with 30 per cent. of fibre found in the former; and for this reason—because we have already seen that the Mangel in its natural state contains more than a sufficient quantity of flesh-forming or albuminous substances to meet the requirements of the animal system.

"It is for these reasons that I consider Mangels more nutritious than pulp. We shall presently see how far these speculations are borne out by actual experience. I may however be permitted to combat in this place the opinion, which appears to be pretty generally entertained by French writers, that little or no feeding value is to be ascribed to sugar, and that, chiefly on this account, the pulp may be considered to be as nutritious as an equal weight of roots. In my opinion the sugar is by far the most important constituent in our root crops; and those farmers who judge of the quality of their Swedes or Mangels by the more or less sweet taste which they possess, may be satisfied that instinctively they rely on a trustworthy test."

We extract further the account which he gives of actual trials of this food in sheep feeding, by which the laboratory results are fully borne out:—

"I shall now describe the experiments which I instituted with a view of testing practically the relative feeding value of Mangel and of pulp, the latter being the refuse of a distillery in which Leplay's system was adopted.

"Eight Cotswold sheep were divided into two lots. Before the experiment began, one lot was kept for 10 days upon Mangel Wurzel, Clover-hay, and a little Linseed-cake; the second lot was fed for the same period upon Mangel pulp, Clover-hay, and a little Linseed-cake. This preliminary trial was made to accustom the sheep gradually to their diet. After 10 days the sheep were accurately weighed. The sheep in Lot I., fed with pulp, weighed—

Sheep No. 1	.. ..	124 lbs.
,, 2	.. ..	151 ,,
,, 3	.. ..	146 ,,
,, 4	.. ..	137 ,,
Total weight	.. ..	558

"The sheep in Lot II., fed upon Mangels, weighed—

Sheep No. 1	.. ..	153 lbs.
,, 2	.. ..	134 ,,
,, 3	.. ..	170 ,,
,, 4	.. ..	136 ,,
Total weight	.. ..	593

"The experiment began on the 22d of March, and terminated on the 10th of May, when no more pulp could be obtained, the distillery having stopped its operations.

"The first lot received per day 1 lb. of Linseed-cake, 4 lbs. of Clover-hay-chaff, or ¼ lb. of cake, and 1 lb. of hay per sheep, and as much pulp as the sheep felt inclined to eat. The second lot received per day the same allowance of Linseed-cake and Clover-hay chaff as the first, with as much of sliced Mangels as the sheep could consume. Both lots were fed three times a day. At 7 o'clock in the morning Lot I. got pulp mixed with 2 lbs. of Clover-hay chaff; Lot II. got sliced Mangels and 2 lbs. of Clover-hay chaff. At 12 o'clock each lot received 1 lb. of crushed Linseed-cake—Lot I. mixed with pulp, Lot II. with sliced roots. The sheep were again fed at 5 o'clock in the evening; Lot I. with 2 lbs. of Clover-hay mixed up with pulp; Lot II. with 2 lbs. of Clover-hay mixed with sliced Mangels. In mixing the Clover-chaff with pulp, sliced roots, and cake, a limited quantity of pulp and roots were used, in order to insure the entire consumption of the hay and cake; care, however, was taken to keep the feeding-troughs constantly supplied with pulp and sliced roots respectively, so that the sheep could help themselves at all times to as much pulp and roots as they liked. The pulp and Mangel which were given to the sheep were of course weighed.

"The following quantities of food were consumed during the whole experimental period of 7 weeks:—

"Lot I., 4 sheep fed upon pulp, consumed 196 lbs. of Clover-hay chaff, 49 lbs. of Linseed-cake, 34 cwt. 2 qrs. 21 lbs. of Mangel pulp.

"Lot II., 4 sheep fed upon Mangels, consumed 196 lbs. of Clover-hay chaff, 49 lbs. of Linseed-cake, 33 cwts. 1 qr. 19 lbs of Mangels.

"It will be observed that the sheep in the first lot consumed 1 cwt. 30 lbs. more pulp than the quantity of roots eaten by the sheep in the second lot. Each sheep was weighed on the 12th of April, 26th of April, and May 10th. The weight of each sheep at these periods, and their final increase, is given in the subjoined table:—

TABLE *showing the Weight of each Sheep in lbs. at beginning of Experiment and at different times of Experimental period, and Final Increase.*

LOT I.—*Four Sheep fed upon Mangel-pulp.*

	Put up on March 22.	April 12.	April 26.	May 10.	Increase
	lbs.	lbs.	lbs.	lbs.	lbs.
Sheep No. 1 weighed ..	124	130½	133	138½	14½
,, 2 ,, ..	151	142	139½	148	−3
,, 3 ,, ..	146	152	154½	162½	16½
,, 4 ,, ..	137	147	143	150	13
Total	558	571½	570	599	41

LOT II.—*Four Sheep fed upon Mangels.*

	Put up on March 22.	April 12.	April 26.	May 10.	Increase.
	lbs.	lbs.	lbs.	lbs.	lbs.
Sheep No. 1 weighed ..	153	1[illegible]	164	170½	17½
,, 2 ,, ..	134	136½	145½	151½	17½
,, 3 ,, ..	170	171	181½	1[illegible]	17½
,, 4 ,, ..	136	140	148½	1[illegible]	19
Total	593	602	639½	6[illegible]	71½

"It appears thus that the 4 sheep fed upon Mangel gained 30½ lbs. more in weight than the 4 sheep fed upon pulp, although the latter consumed 1 cwt. 30 lbs. more of pulp. One of the sheep in the first lot, it will be noticed, lost 3 lbs. in weight. This is due to the sheep having been affected with scouring after it had been fed for some time upon pulp. The pulp, which is very acid, is apt to produce this disorder. It ought therefore always to be given with a good deal of dry food.

"These experiments, though deficient in some respects, I think still confirm sufficiently the theoretical opinion to which I have been led by the analysis of the pulp and of Mangel Wurzel."

We shall return on another occasion to the other papers in this Part of the Journal.

Miscellaneous.

The Breed of Horses.—The horses are often the weakest class in the shows of the society. It was greatly to be regretted that too little attention was paid to the breeding of horses—an absence of correct principles too frequently prevails. He well remem-

bered, a few years since, when officiating in the same capacity as he had filled that week, at a great agricultural meeting in Ireland, the judges, on taking a preliminary survey, observed in the class for "agricultural stallions" one animal, the lightness of whose crest and general docile appearance, awakened the suspicion, which on examination proved to be the case, that in certain essentials to the discharge of his avocation he was deficient. On turning to the Irishman in attendance on the horse, with that look of severity so becoming in judges, they asked how he could think of attempting so barefaced an imposition? The Irishman, not in the slightest degree abashed by their frowns, replied with all the coolness in the world, "Och, your honours, he was such a nice-un we thought you would overlook it." (Great laughter.) He mentioned that anecdote not merely for the purpose of raising a merry laugh, laughable as the incident may be. Whenever the lame, the old, and the infirm, instead of the young and the healthy, are devoted to the stud merely because they are unfit for any other purposes, or when a farmer possesses a valuable mare which he wishes to breed from, and accepts the services of the first weedy or faulty brute who may chance to look over the farm gate, in such cases as these the owners act on the principle of the Irishman, and fancy that nature will kindly overlook it. (Laughter.) Nature, however, never overlooks — never forgets; it was equally true in physiology, as it was in morals, that the faults of the parents should be visited on the children "down to the third and fourth generation."—*Mr. Spooner, at the Dorchester Meeting.*

Calendar of Operations.

SEPTEMBER.

WESTER ROSS, *September* 8.—The weather up till the 2nd inst., continued unusually wet and cloudy, and the crops consequently made very little progress. The rainfall for the month was 3.40 inches. The heavier crops, particularly Barley, have been much laid. Since the beginning of the month, however, the weather has much improved, being greatly warmer and drier, and the crops have improved correspondingly. Wheat, which presented a dark unpromising colour, has greatly brightened up, and with a continuance of good ripening and harvesting weather might yet cheer the farmer with a plentiful yield of grain of fair quality. From the unusual length of ear we do believe that the return will be abundant, but from the prevalence of wet, and the presence of rust and blight, we do not expect the quality to be first-rate, whilst we anticipate an unusually large proportion of dressings. Barley is ripening well, is a full average crop, and where not prematurely laid, and where safely ingathered, will be of good quality. Oats are ripening slowly and unequally, but with patient waiting they will prove a very abundant crop. Not long ago, in company with a brother farmer, we inspected a field of Oats, and brought therefrom three stalks, each of them peculiar in its way. On the first there were upwards of 300 grains of Oats; the second was 6 feet 2 inches long, and the third had two ears. As we had never heard of, or seen before any stalks with two ears, we learned upon inquiry that they are now and then, but rarely, to be found, and are the result of some peculiarity in the season. We do not think that the second ear from its lateness in presenting itself, would come to maturity in time to save the first from being shaken and lost. Peas are of great luxuriance, but being yet in bloom, are in danger of being overtaken by frost. Turnips are progressing satisfactorily, and promise to be an abundant crop. Potatoes are abundant also, and as yet are scarcely touched with disease. Harvest has been commenced on many farms in this neighbourhood, and next week will be quite general. A month of sunny, breezy weather, would be a national and invaluable blessing.

Notices to Correspondents.

MANGEL WURZEL: *A Constant Reader* says "I changed my local seedsman this year for a London one, and I now find that I have a great many more runners in my Mangel crop than I ever had before. Can you inform me what you think can be the cause of them running to seed causing such a loss in the crop?"—The simple answer to this is Degeneracy! The seed in question is from a degenerate stock which was perhaps badly grown in the first place, and then seeded without due selection of good examples for the purpose. We have in our own garden a patch of Beet, more than half of which has run to seed, and this tendency is accompanied with fingered and toed and otherwise malformed roots. This seed was probably grown by putting all the Beet roots which did not sell (and of course the best are chosen for sale) into the soil for seeding, and we know from experience that in plants as in animals the progeny has a decided tendency to be like the parents; this we have satisfied ourselves about from observation, but this spring we selected some ugly roots of Swedes and Parsnips, and having taken their portraits we planted them for seeding in order to test the nature of the crop, and we have no doubt that in the main the next year's production from this will be even more malformed than the seeded stock. Running to seed however is not always accompanied by root malformations, though this part of the plant is seldom fully developed when this propensity occurs, but neckiness and a multiplicity of buds in the root will usually result in this defect in the next generation, and hence this evil should be avoided in choosing seeding examples.

POLYGONUM: *Lord Berners.* The two species of Polygonum, viz., *P. Persicaria* and *P. Pennsylvanicum* (*P. amphibium*), to which your lordship refers, may perhaps be pronounced as harmless if they should be cut up with the Bean stalks and steamed as proposed; at the same time it should not be forgotten that they both possess decidedly astringent properties, and hence the early exhibition of food in which they are mixed should be watched.

SMALL FARMS: *B ginner.* If you want a continuous supply of green food throughout the year, then, after having put half an acre in Lucerne, of your remaining five acres let one-sixth be in Vetches, sown in May; one-sixth in Rape, sown in May; one-fourth in Turnips, sown in June; one-sixth in Swedes, sown in June; one-fourth in Mangold Wurzel, transplanted in June after; one-fourth Rye, sown in September; one-fourth Vetches sown in September before the Turnips; one-sixth Italian Rye-grass, sown in September, before Swedes; besides this, you will have half an acre which may be in early Cabbage, transplanted in September, and late Cabbage to follow. If you need straw, you must either purchase it, or you must diminish the extent of your green crop by the quantity of land put to Wheat. You will probably make 14 tons of green food per month by the above plan.

GLASS FOR GREENHOUSES, &c.

Sheet Glass, in Crates.

	16 oz.	21 oz.	26 oz.	32 oz.	36 oz.
Best ..	5½d. ..	7¼ l. ..	9¼d. ..	1s. 0d. ..	1s. 0½d.
Seconds .	3¾ ..	5 ..	6¼ ..	0 9¼ ..	1 0
Thirds ..	2½ ..	3½ ..	5¼ ..	0 7¼ ..	0 10¼
Fourths .	2¼ ..	3¼			

Glass cut to any given sizes not on the List.

16 oz.—4ths, 1¾ l., 2d., and 2½d. per foot
,, 3rds, 2¼d., 2½d., and 3d. per foot
21 oz.—4ths, 2¾d., 3d., and 3½d. per foot
,, 3rds, 3½d., 4d., and 4½d. per foot

Glass for Orchard Houses,

As supplied by us to Mr. Rivers.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in.	Common	13s. 6d. ..	£1 1s.
20 in. by 14 in. / 20 in. by 15 in.	Superior do.	16 0 ..	1 3
	English Glass	18 0 ..	1 9

The above prices include the Boxes. with but few exceptions. When Packages are charged, full price is allowed when returned.

Sheet Glass, Stock Sizes, 16 oz.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 ,, 10, 13 ,, 10, 14 ,, 10, 15 ,, 10 ..	14s. 0d.	12s. 6d.
13 ,, 11, 14 ,, 11, 15 ,, 11, 16 ,, 11 .. / 14 ,, 12, 15 ,, 12, 16 ,, 12, 17 ,, 12 .. / 18 ,, 12, 19 ,, 12, 20 ,, 12 .. .. / 16 ,, 13, 17 ,, 13, 18 ,, 13 .. .. / 19 ,, 13, 20 ,, 13, 21 ,, 13 .. .. / 16 ,, 14, 17 ,, 14, 18 ,, 14 .. .. / 19 ,, 14, 20 ,, 14, 21 ,, 14 .. .	16s. 0d. per 100 feet.	13s. 6d.

Boxes included.

ENGLISH GLASS of the above sizes 18s. per 100 feet.

Small Sheet Squares, in 100 feet Boxes.

6 by 4	6½ by 4½	7 by 5	7½ by 5½	11s. 6d.
8 ,, 6	8½ ,, 6⅜	9 ,, 7	9½ ,, 7½	
		10 ,, 8	10½ ,, 8½	12 6

Boxes 2s. each, returnable at full price.

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In. by In.		16 oz.	21 oz.
20 .. 12 / 20 .. 13 / 20 .. 14 / 20 .. 15	Common, per 100 feet,	13s. 6d.	18s.
	Super ,,	16s.	23s.

In. by In.	In. by In.	Per 100 feet.	Per foot.
6 .. 4	8 .. 6	Common 11s. 6d.	1½d.
6½ .. 4½	8½ .. 6½		
7 .. 5	9 .. 7	Super. 12s. 6d.	1¾d.
7½ .. 5½	9½ .. 7½		

Squares in 100 and 200 Feet Boxes.

Inches by Inches.	Inches by Inches.	Inches by Inches.	Inches by inches.	Inches by inches.		P. 100 feet.	P. foot.
10 .. 8	12½ .. 9½	13 .. 10	15 .. 10	13½ .. 11½	4ths.	12s. 6d.	1½
10½ .. 8½	13 .. 9	13½ .. 10½	12 .. 11		3ds.	14s. 3d.	1¾
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 . 11	2ds.	18s.	2¼
12 .. 9	12½ .. 10½	14½ .. 10½	13 .. 11		1sts.	21s. 6d.	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13s. 6d.	1⅝
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16s.	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19s. 8d.	2½
18 .. 11	18 .. 12	23 .. 13	24 .. 15	.. ..	1sts.	24s.	3
13 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 12	22 .. 14	22 .. 16	.. ..			

If less quantity than 100 feet is taken, a moderate charge made for package.

GLASS CUT TO ANY GIVEN SIZES NOT ON LIST.

16 oz.—4ths, 1¾d., 2d., and 2½d. per foot.
,, 3ds, 2¼d., 2½d., and 3d. per foot.
21 oz.—4ths, 2¾d., 3d., and 3½d. per foot.
,, 3ds, 3½d., 4d., and 4½d. per foot.

HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Not accountable for breakage.

GENUINE WHITE LEAD	32s. 0d. per cwt.	LINSEED OIL	2s 4d. per gall.
ANTI-CORROSION PAINT	34 0 ,,	BOILED ,, ...	2 9
LINSEED-OIL PUTTY	8 0 ,,	TURPENTINE	3 3

BLACK, GREEN, and all other kinds of PAINTS, VARNISHES, BRUSHES, &c.

ST. PANCRAS IRON WORKS,

OLD ST. PANCRAS ROAD, N.W.

IRON HURDLES, FENCING, AND GATES.

THE PROPRIETORS OF THE ST. PANCRAS IRON WORKS, OLD ST. PANCRAS ROAD, LONDON,

WERE AWARDED THE

SILVER MEDAL of the Royal Agricultural Society for their IRON HURDLES & GATES

which, by their peculiar construction, are more than twice as strong and durable as those in ordinary use.

Lists per post on application. Gates from 30s. to 500l.

The Hurdles can be seen in process of Manufacture at the Works.

GAME WIRE NETTING.

Professor Varnell's Enamelled and Wrought-iron Stable Fittings

These Patent Mangers and Stable Fittings obtained the Commendation and the Silver Medal of the Royal Agricultural Society of England and the Royal Agricultural Society of Ireland, are adopted by the Royal Veterinary College, and Professor Spooner of that Institution states that they should be used by all who value the health and comfort of their horses. They can be had plain, galvanised, or enamelled.

A Show Room is devoted entirely to every description of Stable Furniture, and full-sized stalls and loose boxes are erected for inspection at St. Pancras Iron Works.

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OPPOSITE OLD ST. PANCRAS CHURCH.

CARTER'S 40s. COLLECTION OF BULBS
FOR FORCING.
"ALL FIRST SIZED AND PICKED ROOTS."

2 dozen extra fine HYACINTHS, in 12 sorts
2 dozen POLYANTHUS NARCISSUS, in 9 sorts
2 dozen single sweet-scented JONQUILS
150 newest Seedling CROCUS, in 50 sorts
1 dozen TULIPS, DUC VAN THOL, red and yellow

1 dozen TULIPS, DUC VAN THOL, scarlet
1 dozen do. do. rose
1 dozen do. do. yellow
1 dozen do. VERMILION BRILLIANT
1 dozen do. REX RUBRORUM
1 dozen do. TOURNESOL

Half the above Collection, 20s.

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

THE AUTUMN SUPPLEMENT TO
CARTER'S GARDENERS' VADE MECUM
(25th ANNUAL SERIES)
IS JUST PUBLISHED.

It contains a List of all the best varieties of DUTCH AND CAPE BULBS *suitable for Greenhouse and out-door planting, with carefully written articles as to the best mode of cultivating the same.*

*** FORWARDED POST FREE ON APPLICATION TO
JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

NEW SEEDS.
THE QUEEN'S SEEDSMEN,
PETER LAWSON & SON,
27, GREAT GEORGE STREET, WESTMINSTER, S.W.
ARE NOW SUPPLYING NEW SEEDS FOR AUTUMN SOWING.

The very finest qualities of TRIFOLIUM INCARNATUM, ITALIAN RYE-GRASS, SIX WEEKS STUBBLE TURNIP, ALSIKE CLOVER, DWARF BROAD-LEAVED RAPE, MUSTARD, PERMANENT GRASS SEEDS, all carefully selected, and delivered Carriage paid at moderate rates.

BULBS FOR THE SEASON.
MESSRS. E. G. HENDERSON & SON
RESPECTFULLY INFORM THEIR PATRONS THAT THEIR
ANNUAL BULB CATALOGUE
Will be duly forwarded to Amateurs on application.

A Guide to the Selection of Miscellaneous Ornamental Flower Bulbs and Tubers
WILL BE READY BY THE END OF SEPTEMBER,
and will be sent in a separate form on the receipt of 13 postage stamps; and on the enclosure of 12 more a Coloured Lithographed Plate of the WELLINGTON NURSERY will be included.

First class quality of CALCEOLARIA, CINERARIA, AND PRIMULA SEEDS, each 2*s.* 6*d.* per packet.
SPERGULA PILIFERA, 6*d*, 1*s*., and 2*s.* 6*d* per packet; and clumps for immediate planting, 8*s.* and 10*s.* per 100.
HUNT'S superb SWEET WILLIAM SEED, 1*s.* and 2*s.* 6*d*. per packet.

WELLINGTON NURSERY, ST. JOHN'S WOOD, LONDON, N.W.

CORDYLINE (DRACÆNA) INDIVISA.
MESSRS. JOHN AND CHARLES LEE
Have the pleasure to announce that they have now ready to send out the magnificent
CORDYLINE INDIVISA FROM NEW ZEALAND,
AN ACCOUNT OF WHICH WAS GIVEN BY DR. LINDLEY IN THE *GARDENERS' CHRONICLE*, OCT. 20, 1859, Pp. 868.

It is impossible to give an adequate description of this wonder of Nature, which should be seen in its native grandeur to be thoroughly appreciated. Specimens can, however, be seen at this establishment which already prove the accounts received of its merits to be quite reliable. Being found at a high elevation it will be a very hardy Conservatory Plant, and will probably bear total exposure in the West of England and in Ireland.

CORDYLINE INDIVISA attains a height of from 10 to 20 feet, in an erect and undivided trunk on which the foliage is retained with vigour almost to the ground. The leaves are set on to the greatest advantage, and measure from 5 to 6 feet in length, and from 6 to 9 inches in breadth. Their colour is of the richest description: a broad and prominent midrib of crimson brown runs through the entire length, and numerous red and white lines run parallel to the midrib: the whole surface is overlaid with a rich golden bronze producing an elegant effect. The under side of the leaves is glaucous. The whole tree is unsurpassed in its truly noble and unique beauty.

Nursery and Seed Establishment, Hammersmith London, W.

DUTCH FLOWER ROOTS.

CHARLES TURNER, THE ROYAL NURSERIES, Slough, has just received his usual large consignments from Holland, and is gratified in being able to state that the bulbs are very fine, and in the best condition. The ANNUAL CATALOGUE is just issued, and will be sent free to any address

As successful cultivation depends in no inconsiderable degree upon early planting, the great advantage of giving immediate orders is obvious.—The Royal Nurseries, Slough: adjacent to Eton and Windsor, and also at Salt Hill.

DUTCH FLOWER ROOTS.

JAMES VEITCH, JUN., ROYAL EXOTIC NURSERY, Chelsea, S.W., begs to announce that he has received his annual supply of BULBOUS ROOTS from Holland, and is pleased to say that they are PARTICULARLY FINE and in EXCELLENT CONDITION. CATALOGUES are now ready and will be forwarded on application.

J. V., Jun., desires to impress upon those who patronise him the great advantage of giving him their ORDERS EARLY, as the successful cultivation of Bulbs depends in a great measure upon their BEING PLANTED EARLY IN THE SEASON.

TRIFOLIUM TARDIF A FLEUR BLANCHE
" " ROUGE
(much recommended for succession by Vilmorin of Paris).
COMMON OR INCARNATUM, 3*d.* to 4*d.* per lb., with practical Hints on its successful cultivation.
ITALIAN RYE-GRASS, per bush., 5*s.* to 7*s.*
COW CABBAGE, 3*s.* 6*d.* per lb.
WINTER VETCHES, WINTER OATS, AND RYE.
PERMANENT PASTURE GRASSES AND CLOVERS.
SEEDS FOR EXPORTATION, specially selected and packed to arrive in good condition.
GUERNSEY & BELLADONNA LILIES, Blooming Bulbs, 4*s.* per dozen.
Just imported, a fine collection of DUTCH BULBS.
PAGE & TOOGOOD, Southampton.

TRIFOLIUM INCARNATUM SEED
CHEAP.

SUTTON AND SONS can supply NEW SEED VERY CHEAP in large quantities, the crop being large this season.

Lowest cash price (according to quantity required), may be had on application.

Royal Berks Seed Establishment, Reading

THE TRUE SPERGULA PILIFERA,
FROM THE CRYSTAL PALACE NURSERY.

SUTTON AND SONS have New Seed now ready, saved from the Lawns at Mr. Summers' Nursery, in packets, 6*d.*, 1*s.*, 2*s.* 6*d.*, 5*s.*, and 10*s.* each, *Post free, with instructions on cultivation.*

Also free by post, packets of extra fine CALCEOLARIA, CINERARIA, PRIMULA SINENSIS FIMBRIATA.

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EARLY SPRING FEED.

ITALIAN RYE-GRASS SHOULD NOW BE SOWN.

SUTTON'S IMPROVED ITALIAN RYE-GRASS.

New Seed now ready, 7*s.* per bushel, or cheaper in large quantities.

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NEW GRASS SEEDS FOR PERMANENT PASTURE.

SUTTON AND SONS have a fresh stock of PERMANENT GRASS SEEDS, Of the most suitable kinds for laying down and for improving Pastures.

The new crops being good, prices will be reduced.

Also, NEW ITALIAN RYE-GRASS SEED.

Royal Berks Seed Establishment, Reading

The Gardeners' Chronicle.
SATURDAY, SEPTEMBER 22, 1860.

MEETINGS FOR THE ENSUING WEEK.

THURSDAY, Sept. 27 { Horticultural (Floral Committee) at St. Martin's Place ..... Noon

WHATEVER may be the success which is destined to attend the attempts at producing green Roses, we can at least congratulate our friends upon the appearance of an entirely new and extremely beautiful race of florist's flowers, not likely to yield

to either Dahlias or China Asters, and certain to become rivals of the best of the latter, even when brought up at Erfurth.

It is well known that the common purple ZINNIA does occasionally produce flower-heads larger than ordinary, and even semidouble; but that no permanence has been secured to such sports. Growers have in vain attempted to fix the changing habit, and a purple Zinnia remains a purple Zinnia still: all that has proved noticeable being a greater disposition than formerly to break into other colours. This greater disposition than formerly has, however, proved in Zinnia precisely what it has proved in so many other cases, the turning point between wild nature and domestication. By degrees a greater and greater tendency to vary has come over the constitution of Zinnia, till at last she has broken out in an entirely new array.

A box from Paris reached us the other day filled with what at first sight appeared to be a new race of Double Dahlias. Upon being unpacked, however, the box displayed a collection of Double Zinnias of the most beautiful form and colour. Four-and-twenty flower-heads were there, some nearly double, the greater part as completely so as the best Pompone Chrysanthemums; mostly 3 inches in diameter, some 2½ inches, a few but 2 inches. Purple, deep rose, light rose, rose striped, red, orange red, orange, buff, and various shades of these colours formed a bouquet of singular beauty, especially when illuminated by a ray of that sunshine which has been so rare this week. The metallic surface of the Zinnia then displayed a brilliancy which none of our autumn flowers can equal.

The specimens were forwarded by Messrs. VILMORIN & Co. of Paris, who, by patient watching for several years, have succeeded in so far fixing the new condition of Zinnia that it comes as true from seed as China Asters, the different colours separate, and the double forms still double.

That the florist is thus provided with an entirely new field in which to exhibit his skill in transmutation is certain. The first step has been taken by Messrs. VILMORIN; the refractory flower is thoroughly broken in, and it remains for others to improve it further still. We do not entertain the smallest doubt about its flower-heads becoming as large and as double as China Asters of the first class, even as those beauties called Dwarf Chrysanthemum-flowered. And with this introduction to the public we for the present rest content.

We should add that the same box brought us a tuft of a very pretty Lobelia, looking like Clintonia, with azure blue corolla white in the centre. It is to be called *Lobelia marmorata*; but it seems to be a new garden form of *L. ramosa*.

CAN beauty be added to the Rose? Can its colours be rendered richer or more delicate, or its fragrance be increased? Can it be so changed in aspect as to look no longer like a Rose? In short, has the power of transmutation reached its utmost limit in this glorious flower? We do not ask the question with reference to the small variations in colour and form that are incessantly rewarding the raisers of Roses. We all know what is happening in that direction. The question now put may be reduced to the simple inquiry, can an entirely new race be expected as different from those we now have as a China Rose from a Noisette. Who can tell? The word impossible has long ago disappeared from the Gardener's Vocabulary. And it is quite possible that some fortunate experimentalist may become the founder of a new regal family of flowers. At all events the child is borne which may be the progenitor of such a princely race. It is true that the child has as yet a very plebeian appearance, but the noblest families of England have sprung from a Norman rabble.

There is to be found in French Rose Catalogues a certain *R. Bengale verte*, which we seek in vain in those of England. In the *Prix Courant* for 1857 of GUILLOT Père & CLEMENT, of Lyons, mention is made of a certain Rosa Viridiflora, "à fleurs vertes, fl. moy., vert foncé, couleur du feuillage," first introduced into the world in the autumn of 1856, price 2 francs. Some thought this an apocryphal announcement; most believers formed an opinion of the new comer by no means complimentary; a very few resolved to judge for themselves. At last the infant has shown its face in various places between Ross-shire and London, and a very strange face it proves to be. Conceive a China Rose with every part bright green, deep on the outside, pallid in the middle. The calyx wholly unchanged; the five natural petals transformed into five small broad green leaves, and all the rest of the centre consisting of pale green straps of various degrees of narrowness, spreading evenly round the middle and forming a green star with innumerable points. Such is the Rose Bengale verte. Scent it has none, nor does it show even the feeblest inclination to exchange its verdure for a rosy hue. It is however quite regular in its form and greenness, no change having been remarked in it since the year of its birth. It is now a well-established 5-year-old with a fixed habit.

It must be owned that a green-eyed monster like this is not inviting. Nobody except the lovers of curiosities would think of nursing it. Nevertheless it is a really important question whether out of such a beginning something beautiful may not one day spring. That event is by no means improbable. Although misshapen, Bengale verte is not hopelessly barren. Upon turning over the folds of its flower we found in one instance two or three perfect ovaries with their style and stigma in a natural condition. Suppose some Rose with glowing colours could be persuaded to fertilize it. Seeds thus obtained would certainly exhibit some departure from its primitive features — maybe a great departure. And then, by the ordinary methods of breeding it may be expected that a new race would be secured. The experiment would cost nothing; and if successful would secure a rich reward. Will no fair gardener try? It is ladies' work, and to those lovers of all that is new we commend it. How delightful it would be to find a young Rose with double flowers streaked with red and white and delicate green. If such a flower is to be found this Bengale verte points the way to it.

CURRANTS.

MR. PRINCE, Flushing, United States, has quite a talent for cataloguing, if we may judge from his catalogue of Strawberries, which contains the names of 158 select varieties besides some fourscore "rejected varieties," among which are "Myatt's Eliza and all his other seedlings." Poor Mr. Myatt! Mr. Prince's catalogue of Grapes rivals his Strawberry catalogue in the number of varieties described. I flattered myself that I had been for some years rather energetic in collecting and proving varieties of Currants; but if, as you state in Number 36, Mr. Prince enumerates 60 varieties, I am as compared with him slow, very slow. The catalogues of the large French Nurserymen for the year 1859, enumerate about 20 sorts, exclusive of three or four kinds of Black Currants. I am therefore quite at a loss to account for the fact of my transatlantic cousin having got together such a collection of Currant names. Some of your readers may not know that although Currants do not differ much in their nature—for they are nearly all too sour—they do in their names, and so I will venture to give a list of varieties, all of which have borne fruit here:—

RED CURRANTS.
1. Red Dutch
2. Long-bunched Red Dutch
3. Long-bunched Red
4. Red Grape
5. Wilmot's Red Grape
6. Victoria, or Raby Castle
7. Prince Albert
8. Knight's Sweet Red
9. Knight's Early Red
10. Knight's Large Red
11. Champagne
12. Striped-fruited
13. Fertile de Palluau
14. Fertile d'Angers
15. Red Gondouin
16. La Hâtive
17. La Versaillaise
18. La Fertile
19. Cerise, or Cherry
20. Imperial Red
21. Napoleon Red
22. Cerise à longues Grappes, or long-bunched Cherry
23. Gloire de Sablons

WHITE CURRANTS.
24. White Dutch
25. White Grape
26. Transparent White (Blanche Transparente)
27. Imperial Jaune
28. Napoleon White
29. Attractor
30. Cerise Blanche
31. White Gondouin

BLACK CURRANTS.
32. Black Naples
33. Ogden's Black
34. Black Bang-up
35. Yellow Fruited
36. Caucasian (La Caucase)*
37. Common Black

Mr. Prince beats me by 23 sorts. I should like much to see his list, and I hope you will publish it in your columns so that we may dissect it. I could, I think, make up a list of 60 names, for I have about 250 seedlings, raised from the Transparent White, some of which have produced red fruit, and others white and yellowish fruit of varied characters. I might have named some 20 or 30 of these, and thus have beaten Mr. Prince, but I prefer to be slow.

As we are reproached for having produced so few sorts of Currants, it is perhaps quite proper that a few words should be devoted to the above list, to point out the origin and qualities of some of the varieties enumerated, and particularly to show Mr. Prince that he knows but little about English Currants.

No. 1 is probably of Dutch origin, as I have received it from Belgium under the name of Rouge de Hollande and Rouge d'Anvers. This is probably the best sort known, as it is (for a Currant) very full flavoured when cooked, and a most abundant bearer.

Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 are all English varieties, more or less remarkable. Nos. 2, 3, 4, and 5, produce large berries and remarkably long bunches; they are very ornamental, but on the whole too acid. It is probable that the bright skies of America may improve them.

No. 6 is now a well known variety, rather late in ripening, and valuable as succeeding the Red Dutch. No. 7 is a sort with no particular flavour or quality, except being much like No. 6.

No. 8 deserves much more attention than it has ever received. It is not sweet, but its acid is much less powerful than that of other Red Currants, and this quality may probably be more fully developed if seedlings are raised from it. A Red Currant, sugary and yet piquant, would set our cooks raving.

No. 9 begins to colour and become fit for use some 8 or 10 days before No. 1, and about the same time as No. 16, which is larger in its berries but more acid. No. 10 is a fine large sort, giving bunches and berries nearly equal to No. 17.

About 30 years since the Horticultural Society distributed cuttings of the Striped-fruited Currant; this is No. 12, which gives pretty but small worthless fruit. No. 21 is either the same or a seedling from it, and was sent out at rather a high price by Monsieur Gloède, a nurseryman at Sablons, France, three or four years ago, and is also worthless. Nos. 13 and 14 are most abundant bearers, but intolerably sour. No. 15 is a remarkable sort, its leaves are so large and its habit so peculiarly robust; it would serve as a stock on which to graft the more weak-growing sorts, as half standards; it gives abundance of fruit, which are late, and so sour that the thought of eating a bunch forces one to make a wry face.

Nos. 16, 17, and 18 are varieties raised from No. 19 by M. Bertin, of Versailles. No. 17 is a most robust grower, and gives very long bunches and large berries. If it were less acid and like No. 1 in quality, it would be the finest Currant known. It is however quite worthy of culture. No. 18 deserves its name, for it is a prodigious bearer, but like its congeners and its parent, No. 19, is too acid. Nos. 19 and 22 are both alike; they give short bunches and very large berries, which are very acid. Nos. 20 and 21 are alike; they give bunches and berries of moderate dimensions, and are not worthy of much notice.

Of the White Currants, No. 24 is one of the best; 25 sometimes produces larger berries, which are paler in colour; the tree is more horizontal in its growth than No. 24. No. 26 seems to be a seedling raised from No. 24; when highly cultivated it gives bunches and berries of a very large size, but under ordinary culture it cannot be distinguished from it. Nos. 27 and 28 are the same as No. 24. No. 29 is a curious variety with deeply cut leaves, which I presume are the attraction, for its small bunches and small berries are not so. No. 30, which should rival its red namesake No. 19, is a worthless variety, giving berries of the smallest size, and No. 31 comes under the same category.

Of the Black Currants No. 32 is by far the sweetest and best flavoured; it is not however a good bearer, and seems to require a warm soil and climate; in this respect No. 33 is greatly its superior. Nos. 35 and 36 are names that tell in a list, for they count for two varieties. No. 35 gives berries of a dull yellowish green scarcely eatable; a man must be in a dry hot hungry place to enjoy them, and those of No. 36 could not be eaten by any "human" even under such circumstances. I have written this (I fear too long) article to disabuse your readers of the impression Mr. Prince might give them, that we English have raised but few varieties of Currants, and know but little about them. It will be seen on referring to my list that we have originated as many (or even more) varieties of Currants as our neighbours the French, if we reckon, as we should do, Nos. 13 and 14, 19 and 22, 20 and 21, 27 and 28 to be the same kinds under different names.

Thomas Rivers.

* I have this moment been told by an American friend that the sort known in America as La Caucase is not this kind, but the same as La Versaillaise.

ON SMALL VINERIES.

(*Concluded from p.* 833).

THE quantity of materials necessary for raising a terrace 12 feet wide and 3 feet high in front of a Vinery 24 feet long, will be about 32 cubic yards. If means are at command for obtaining the whole at once, it will be as well to do so; but should that not be the case, one-half, or 6 feet wide from the front of the Vinery, may be raised, say in this year, and the full width completed in the next. The terrace should be made with only a little slope outwards; for when Vine borders were made with a steep slope, the summer rains, all but the most gentle, ran off by the surface, and the soil had to be moistened artificially, frequently with water of a lower temperature than that of the rain which was allowed to escape, and for which, consequently, a bad substitute was made. In many cases the artificial supply was unequal to the wants of the Vines. This, in June and July, is more than the quantity of rain which usually falls in these months in this climate on any given area. On that a border 24 feet by 12, it is about 300 gallons per month; but if the season is hot and dry, 500, or 600 gallons would not be too much if the Vines are grown up so as to fully occupy the house. This is double more than had been generally calculated upon, and that it was not supplied there have been proofs in abundant in the consequent ravages of insects, and the red spider more especially. The slope of the terrace should, therefore, be very slight in

that the rain may sink in when it is desirable that it should do so. It should be just enough to allow the water to run off by any covering that may be put over the surface, when the absorption of cold rains would prove injurious.

Some that have a good command of drainage may object to the formation of a terrace, on the ground that with a drain as low as three feet below the surface level of the adjoining ground all superfluous moisture would be thereby carried off as effectually as if the soil had been raised to that height. It must be admitted that such drainage will prevent stagnant water in the soil, whilst the drainage remains perfect. But drains are liable to be stopped from various causes. The roots of plants are not easily kept out; even those of the Vines are apt to insinuate themselves by such crevices as are necessary for the water to pass into the drains, and once a root gets in, a mass of fibres commences to be formed, which ultimately chokes the drain. Nothing of this sort can possibly happen if the terrace system be adopted. Moreover, the soil of a terrace is comparatively free from the mechanical effects of temporary saturation to which the soil of a border is liable. The latter is in contact with other soil, which prevents it from expanding horizontally when pressure from saturation takes place; and this on a height of 3 feet is very considerable. Suppose a certain level area were enclosed with a wall extending to the depth of 3 feet. Let the soil be filled in close to the wall inside, but entirely removed from the outside, so that externally it may have no support. When the soil inside is only moist it will almost rest on its own base, and consequently the wall will have but little pressure to resist; but the moment complete saturation takes place the enclosing wall has the pressure due to 3 feet of water, that is 62½ lbs. per square foot for every foot in height. On a portion of the wall 1 foot by 3 deep, the average pressure in round numbers, omitting the fractional ½ lb., will be as follows:—

				lbs.
On the 1st foot, reckoning from the top			$\frac{0+62}{2}$ =	31
On the 2nd	do.	do.	$\frac{62+124}{2}$ =	93
On the 3rd	do.	do.	$\frac{124+186}{2}$ =	155
			Total pressure on 1 foot run of wall =	279

That in front of a border, 24 feet long, would be about 3 tons.

This outward pressure being resisted by the wall, if precautions have been taken to build it strong enough, it is evident there must be an equal amount of compression on the mass inside. On every particle of substance of which it is composed, the pressure in proportion to the bulk of the particle and the depth it is from the surface, is the same as that against the wall. The roots of the Vines must of course bear their share of it. If there had been no wall, still the adjoining ground, equally saturated, would have offered a similar resistance, and the soil of the border would have been subjected to the same degree of pressure. But the sides of a terrace offer no resistance, and consequently no horizontal pressure can take place, even if the soil should at any time become saturated, which indeed, is not likely to occur. The soil of the terrace being at liberty to swell outwards, it is always more open than the same kind of soil would be if confined. If soil is so stiff that when level Turnips will scarcely succeed, yet if the same soil is put up in ridges, which are easily pressed outwards, good crops of these roots are obtained. The soil in ridges or raised drills is not compressed horizontally, and is consequently much more easily penetrated by the roots of plants; and so it is with the soil in a terrace.

From what has been stated it will be seen that the terrace should not be enclosed by a wall, however desirable that might be in some cases; at all events if a wall is built it should be formed of perforated bricks. Nothing is perhaps so good as turf for the sides of the terrace, which may be sloped at an angle of 45°.

With regard to the construction of the house, the width being 12 feet, the back wall may be raised 7 feet above the front. The pitch of the roof will then be a little more than 30°. If the back wall is 8 feet higher than the front the angle of elevation will be 33° 41′, and the length of the rafter about 14 feet 5 inches. The front wall, in order to save materials, may be formed on arches; or it will be still more economical to build piers, one under the end of each rafter, for the support of the wall-plate.

It must be admitted that the terrace system occasions more outlay in brickwork, as the whole basement has to be raised 3 feet higher than would otherwise be the case. This elevation however has many permanent advantages, as already pointed out. In confined situations it is more especially important. For example, a small Vinery might be erected where a boundary wall 9 feet high is only 30 feet distant; then by raising the front wall of the Vinery 3 feet the same effect is produced with regard to exposure to light as if the boundary wall in front had been lowered to 6 feet.

Having thus stated the essential points which should be attended to in the construction of small Vineries, it will be seen that such structures may be erected at small expense; and if the principles which have been explained are properly carried out, it may be safely affirmed that the results will be satisfactory, as regards the quantity as well as the quality of the produce, provided a rational course of management be adopted for the Vines themselves. ||

HITCHAM LABOURERS' AND MECHANICS' HORTICULTURAL SOCIETY.

SECOND SHOW FOR 1860, POSTPONED FROM SEPT. 19 TO OCT. 3, ON ACCOUNT OF THE LATENESS OF THE HARVEST.

8 to 10 A.M. Specimens received on the Rectory lawn.

12. Marquee museum ready for inspection. Lectures as opportunity offers later in the day. Among additions since the July Show, observe:—

1. Photographs of highly magnified objects of natural history; among which are a fly's tongue and eye, parasites (lice) of man and ox, spider's claws, saws of a saw fly, fossil Foraminifera. N.B. The chalk (in round numbers, 1000 miles in length, 500 in breadth, and 1000 feet thick), has been mainly produced by these microscopic creatures! Section of Pine-wood with circular disks on the cells. 2. Magnified representations of 151 forms of snow crystals. 3. Case containing living specimens of our smallest British mammal, the harvest mouse. 4. Pearls from four British mollusks, viz. oyster, periwinkle, pearl-muscle, freshwater clam. 5. For the sake of children, young and old: A case containing a "heap" of shells and corals; also, under a glass shade, a new device from the last horticultural show in "Fairy-land."

1 P.M. Show booth ready for inspection.

Prizes to village botanists of the first class, for (1) Wild fruit posies, (2) Dried Grass posies. N.B. The species to be named in each case. (3) Herbarium specimens. School report. Allotment report. Prizes distributed for (1) Superior culture, (2) Hatcher sweepstakes, (3) Specimens exhibited at this Show. Thanks to the judges, donors of prizes, and all others aiding and abetting our proceedings. Begin to remove specimens from the booth. Not to forget to restore cheque and prize tickets to the stewards. Ready for tea. Ticketless babies (0 to 2 years old), and ticketed ditto (2 to 4 years) admitted as heretofore.

God Save the Queen. Good night. May the occasion prove a blessing, without a single instance of offence against the laws of God or man.

Home Correspondence.

Eucharidiums.—Herewith I take the liberty of sending for your inspection two new varieties that I have raised from "Eucharidium grandiflorum;" they are more profuse bloomers, more compact in habit, and quite distinct in colour from the old variety. I shall esteem it a great favour to have your opinion upon them, also perhaps you would kindly name them. *W. J. H. Dunnett, East House Farm, Dedham, Essex.* [One of them is white, or nearly so; the other is stained with pale rose. They are pretty and distinct; but we cannot undertake to name them.]

Guide to the Isle of Wight.—My attention has been called to a notice of the recently published "Guide to the Isle of Wight" which bears my name, that appeared in your Paper of August 4. While I beg to thank you for the generally favourable opinion you have passed on the work, especially for that portion for which I am indebted to the pen of my able friend Mr. A. G. More, I must request that you will relieve him from the charge of having neglected to mention perhaps the most important member of our Island Flora. The omission of the Arum Italicum by so excellent a botanist, and one so intimately acquainted with the vegetation of the Isle of Wight as Mr. More, would indeed have been a matter of astonishment. But the fact is that it stands recorded no less than three several times; p. 495, and twice on p. 498; once in connection with Steephill, which you mention as the only locality known to you where it is to be found; and once in connection with the cliffs near Niton, "in the shaded recesses of the more wooded parts" of which, Mr. More truly states, that this rare plant so often confounded with Arum maculatum grows. It is to Mr. Albert Hambrough, of Steephill Castle, that this remarkable addition to the Flora of the Isle of Wight is due. *Edmund Venables.* [*Peccavimus.* We had missed the places referred to; but we must add in our justification that the Arum is not mentioned in any of the lists in Mr. Venables' Guide, and we hope to be excused for not having read every sentence in his volume.]

Irritability of Drosera.—In Lindley's Vegetable Kingdom (p. 433) it is stated that the leaves of Drosera lunata "close upon flies and other insects that happen to alight upon them." Can you refer me to any published account of the movement of the viscid hairs or leaves of this Indian Drosera? *C. R. Darwin, Down, Sept.* 15. [Dr. Royle is the authority for the statement in question. In his Illustrations of Himalayan Botany there is the following passage:—"D. lunata occurs in the mountains from Silhet to the Sutlej. This I have found in the small valleys enclosed within the different lateral projections of the Mussooree range, where the ground is rather flat, and the soil moist. In such situations it springs up and flowers in considerable quantities, but only during the rainy season, when the thermometer has a range of not more than 10°, between 60° and 70°, and the hygrometer always indicates a degree of moisture approaching that of saturation. This species, which in my MSS. Catalogue I had named D. muscipula, from the glandular ciliæ of its viscous leaves closing upon flies and other insects which happen to light upon them, is remarkable, as in this respect resembling Dionæa muscipula, which is placed in the same natural family."]

New Fruit and Flower Gatherers.—I send you the following novelties in garden implements:—1. The Flower Gatherer.—This has a hollow tube handle about 2 feet long, by means of which a flower can be gathered on the top shelves of a conservatory without climbing or injuring other plants; after the flower is cut it is held by the spring until it is released by the hand. 2. The Peach Gatherer.—This holds the fruit without disturbing the bloom or injuring it in any way until released by pressing the spring at the bottom of the handle. This handle can be increased in length if required. 3. The Fruit Gatherer, with or without the net.—This is fixed on a long handle, and fruit can be gathered from a tall tree without trouble or injury to the fruits; it is very light; none of them are liable to get out of repair. *William Riddell, 42, De Beauvoir Square, Kingsland.* [These little contrivances are neat, and will probably be acceptable to ladies or the owners of small gardens.]

Sagacity of the Humble Bee.—To be equal to the exigencies of new and trying circumstances is a proof of the possession of capabilities of no common order. If this be conceded in the case of man, endowed with reason, and gifted with a capable and an expanding intellect, we may claim for any manifestation of independent action under novel circumstances in the lower orders of creation, at least singular instinctive sagacity. An instance of the instinctive capability of bees has this year been very noticeable. The cold and wet season we have experienced has retarded the development of flowers out of doors, and in consequence our more choice exotic plants collected in greenhouses have been more than commonly frequented by hungry bees. Humble bees have been unusually pertinacious in their pursuit of food; and in the case of Achimenes longiflora, grandiflora, and others, which presented a difficulty in the lengthened tube of their flowers, the coveted nectar of the flowers being unattainable from the mouth of the flowers, the bees have cleverly taken the Alexandrian way of solving a difficulty, and have cut through the tube of the flower just above its stored riches of sweetness, so that the attainment of their food is easy. I claim then for our English bees the triumph of overcoming a difficulty, for surely the parent bees, a few years back, never saw these bright South American flowers. *W. I., Belvoir.* [Referred to the consideration of Mr. Darwin.]

Yucca Gloriosa.—In May or June 1859 an inquiry was made as to the best means of preventing a Yucca from flowering, so as to save the plant then showing bloom. The advice then was let it alone, as after flowering it would throw out plenty of young plants. The history of a Yucca in my garden may be suggestive of some experiments. When my plant was just approaching full flower, with a spike 9 feet high, and many hundreds of flowers open and others at the top in progress, an unknown enemy cut it down a little above the base of the flower spike, leaving only two small side spikelets with a few blooms on each, thus at once disappointing many visitors who wished to share the delight that hundreds had enjoyed on the preceding days in viewing it. The remaining flowers were of course allowed to be on the plant till they withered, and they were then cut off, together with the base of the flower spike. In the spring of this year I was pleased to see two off-shoots from the base of the old flower spike, one towards the side, the other almost straight up; the former when fit for a cutting was cut off; the centre shoot now remains, and the whole plant is nearly in the same condition as before, except that there are some eight or nine suckers at the base which shall be removed shortly. Now does not this suggest the propriety of cutting down the flower stem just before it had exhausted all its resources? This is a step which doubtless many will be unwilling to take; still, if they would thereby preserve their plant for the sake of its foliage it might be worth the trial. *D. U.* [It is perfectly unnecessary to do so.]

Stocks for Apricots.—On talking with a clever experimental and experienced gardener at Cambridge, about Apricots and the best manner of growing them, he informed me that if it is desired to cultivate the Moor Park successfully, to secure large and good fruit, and to avoid the frequent vexation of seeing dead branches, the tree must be grafted or budded upon the Almond and not upon the Plum Stock. I shall be glad to know whether there be any truth in the assertion, or whether there is really any great good to be gained by going to the expense of changing my trees for those worked upon the Almond stock. *F. R.* [The Almond is a better stock than the Plum, but it will only answer in warm calcareous soils. A better stock still is the Apricot itself (seedling) provided the border is not too cold for it.]

Diagonal Peach Training.—Fear of obtruding on your space will prevent my giving "A Young Gardener" the information he seeks. The diagram at page 36, vol. for 1853, while suggestive, gives but a meagre idea of the system which I am practising, and it is only a representation of the character of the tree at one

stage of the proceeding. Having studied it on the spot with the author, I may be allowed to say that he is aware of this fact. The trees which were in my gardens trained in this way bore well, but the system was susceptible of much improvement, and after many experiments I have decided on adopting three leaders on the same space as the one shown. The laterals, instead of being 12 inches or 14 inches in length, I reduce by summer pinchings of three leaves, two leaves, and one leaf, on the lower sides, and of two leaves and one leaf on the upper sides of the leaders, to 6 inches in total length by the winter. There are two shoots on each spur; one is left about 5 inches long for fruiting, and during the ensuing summer is pinched back just as much as will nourish the fruit, and, after bearing, it is at once cut back to two buds. The other shoot on the spur is cut short to two buds, and these also in the ensuing summer, develop two more shoots also pinched in, also cut back—one long for fruit, one short for wood. In this way, wood of the second year is produced in abundance, and having this alternate bearing and rest, no shoot has the duty of making both extension and fructification at one time. The trees trained on the diagonal method just described, bore, on the back wall of the orchard house, at the rate of two or three Peaches per square foot. Some Peaches were 9 inches in circumference, and the trees promise quite as well for next year. I have spiral and vertical cordons on this same plan, equally fine. As to the advantages of the diagonal leaders, they are—rapidity of clothing a given wall, simplicity of pruning, immense crops, as great variety as in potted trees, ease in detaching the whole tree (like a Vine) from the wall for cleansing the back, &c. Try Stanwick Nectarines and Pavie Peaches on this method; these were the finest of all. I shall be happy to reply to any inquiry. Address *Rev. T. C. Bréhaut, Richmond House, Guernsey.*

Abies Douglasii at Dropmore.—The magnificent specimen of this tree which we have here was raised from seed early in 1828, and was planted out the following year. In the year after that it was taken up and replanted. Its present height is 78 feet; girth of trunk, 3 feet from the ground, 7 feet 10 inches; diameter of branches, 56 feet 3 inches; the soil in which it grows is poor, subsoil pure gravel. I have occasionally top-dressed it with the rakings and cleanings of the flower garden, when sufficiently decomposed, which has very much assisted growth. Our fine Araucaria imbricata is now 42 feet in height; there are two trees here as near as possible of the same height—the largest is producing cones. *P. Frost.*

Societies.

CRYSTAL PALACE HORTICULTURAL EXHIBITION.—A Dahlia and Fruit Show was held here on Wednesday and Thursday last, and was tolerably well attended. The display of both was large; but some of the fruit, owing to the unfavourable season which we have experienced, was not in good condition. Grapes, especially black sorts, were, however, all that could be desired.

Of Miscellaneous Collections of 8 dishes the best came from Mr. Bailey, gr. to T. T. Drake, Esq., Shardeloes, Bucks, who had good examples of Bowood Muscat and Black Hamburgh Grapes, a Providence Pine, weighing 8 lbs. 1 oz., Red Roman Nectarines, Noblesse Peaches, Moorpark Apricots, Washington Plums, and a Melon. Mr. Henderson, gr. to the Duke of Sutherland, at Trentham, sent beautiful specimens of Black Hamburgh and Muscat of Alexandria Grapes, Trentham Green-fleshed Melon, a large oval kind; a good Queen Pine Apple, Barrington Peaches and Violet Hâtive Nectarines, and a nice dish of Morello Cherries. From Mr. Dawson, gr. to Earl Cooper, Panshanger, Herts, came very fine Black Hamburgh Grapes, Violet Hâtive Nectarines, Moorpark Apricots, Kirke's Plum, and some good Peaches.

In the class of six dishes Mr. Henderson, gr. at Trentham, gained the first prize with fine examples of White Tokay and Black Hamburgh Grapes, two Queen Pine Apples, Chancellor and Barrington Peaches, and Trentham Hybrid Melon. Mr. Bailey sent Bowood Muscat and Black Hamburgh Grapes, Moorpark Apricot, Red Magdalen Peach, and a good Prickly Cayenne Pine Apple. From Mr. Frost, gr. to E. L. Betts, Esq., Preston Hall, Maidstone, came beautiful Black Hamburgh and Muscat Grapes, a Queen Pine Apple, and Moorpark Apricots.

Of Pine Apples the best Smooth Cayenne came from Mr. Cameron, gr. to the Duke of Richmond, at Goodwood; the second best a Jamaica from Mr. Surmon, gr. to H. W. Dobell, Eltham; the third from Messrs Weeks, Chelsea. The best Queen in the opinion of the judges, came from Mr. Solomon of Peckham Rye, but it was thought by many, that that which was placed second, should have been first. The last was shown by Mr. Austin, gr. to Hon. R. Curzon, Tooting. Mr. Spivey, gr. to J. A. Houblon, Esq., showed a good Ripley Queen.

Of Grapes, the best baskets of 12 lbs. Black Hamburgh came from Mr. G. B. Shoulls, Finchley; Mr. Harrison, Weybridge; Mr. Hill, gr. to R. Sneyd, Esq., Keele Hall, Staffordshire; Mr. Frost; Mr. Kay, Finchley; Mr. Solomon, Peckham Rye; Mr. Munro, Rabley, near Barnet; Mr. W. J. Childe; and Mr. H. Payne, gr. to J. Bedall, Esq., Broomfield Lodge, Chelmsford.

In the class of two dishes of Grapes the best came from Mr. Hill, Keele Hall, who contributed very fine bunches of Black Prince and Black Hamburgh; Mr. Little, Stoke Court, and Mr. E. Sage, gr., Atherstone, also had good exhibitions.

Of White Grapes, which were as a whole not ripe, the best came from Mr. Frost, who showed six beautiful bunches of Muscat; Mr. Roberts, gr. to the Hon. Capt. Burry; Mr. Little, Stoke; and Mr. Reid, Sydenham, also showed Muscats.

For the largest bunch of Grapes the 1st prize was awarded to Mr. Payne, gr. to J. B. Bedall, Esq., Chelmsford. This was a Black Hamburgh and weighed 8 lbs. 14 oz.; it was, however, not one bunch, but four, all springing from one eye.

Among comparatively new Grapes were beautiful examples of Muscat Hamburgh from Mr. Bristow, Broadwater, Sussex; these were large, both in bunch and berry, and finely coloured. Mr. Spary had some good bunches of Marchioness of Hastings, but unripe; and from Messrs. Ivery came fine fruit of Buckland Sweetwater. Messrs. Lee showed Escholata superba.

Of Peaches and Nectarines there were a great many exhibitions; both were tolerably good, but small, especially the Nectarines. In the class of four dishes, the best came from Mr. Robinson, gr. to R. Benyon, Esq., M.P., Reading; Mr. Morris, gr. to J. White, Esq., Weatherfield, sent Royal George and Barrington Peaches, and Newington and Elruge Nectarines. From Mr. Kaile, gr. to Lord Lovelace, came Barrington and Noblesse Peaches, and Pitmaston Orange and Elruge Nectarines. Two very fine dishes were furnished by Mr. Dwerrihouse, gr. to Viscount Eversley, at Heckfield; the sorts were Violet Hâtive Nectarines and Noblesse Peaches; equally good dishes also came from Mr. Smith, gr. to C. Child, Esq., Bromley, who had Elruge Nectarines and Red Magdalen Peaches; Mr. Solomons sent two nice dishes, as did also Mr. Little, Stoke Court; from the last came Miller's Mignonne Peach and Elruge Nectarines. Mr. Ingram, gr. to J. J. Blandy, Esq., sent Violet Hâtive Nectarines, and the same named variety of Peach; and from Mr. Reid, gr. to J. Hunt, Esq., Sydenham, came Barrington Peaches and Elruge Nectarines.

Of Melons there were several fine fruit, especially from Mr. Bailey of Shardeloes; Mr. Potter, of Woodbridge, and Mr. Elliott, of Lee. Among the best were Scarlet Gem, Egyptian Green-fleshed Orion and Bromham Hall.

Some remarkably fine Figs were shown, chiefly of the Brown Turkey and Brunswick varieties. These came from Mr. Robinson. We also noticed fruit of the White Marseilles from Mr. Spivey.

Cherries, large and fine, came from Messrs. Dawson and Snow; the kinds were Florence and Morello. Mr. Spivey likewise had good dishes, as had also Mr. Henderson, gr. to the Duke of Sutherland, at Trentham. From the last came Morello and Elton.

Plums were plentiful and good. The best came from Mr. Snow, who had fine fruit of Jefferson, Kirke's, and Greengage. From Mr. Smith, Bromley, came Goliath. White Egg, and Washington; and from Mr. Kaile Magnum Bonum, Goliath, and Washington.

Apples, both dessert and kitchen sorts, were shown in great numbers. Of dessert kinds the best came from Mr. Frost, Preston Hall, whose varieties were Cox's Orange Pippin, Duchess of Oldenburgh, Kerry Pippin, Scarlet Nonpareil, Devonshire Quarrenden and Oslin. Mr. Holder, Reading, had Braddick's Nonpareil, Victoria, Ribston, Small's Golden Pippin, and Scarlet Nonpareil. From Mr. Spivey, came Golden Reinnette, Gravenstein, Downton Nonpareil, Kerry Pippin, Red Astrachan, and King of the Pippins.

In the class of Kitchen Apples the best came from Messrs. Heather, Dwerrihouse, and Mortimore. Among the kinds were Golden Noble, Celina, Gloria Mundi, Hoary Morning, Codlin, Flower of Kent, Hawthornden, Alfriston, Hollandbury, Bedfordshire Foundling, and Yorkshire Greening.

Of Pears, Mr. Harrison, of Oatlands, Weybridge, sent as he always does magnificent fruit, consisting of Marie Louise, Gansel's Bergamot, Gratioli, Duchesse d'Angoulême, Hacon's Incomparable, and Louise Bonne of Jersey. From Messrs. Hally, Holder, Rattray, and Frost also came fine fruit, consisting chiefly of Williams' Bon-Chrétien, Chaumontel, Marie Louise, Passe Colmar, Beurré Diel, and Duchesse d'Angoulême. The best flavoured fruit was Louise Bonne of Jersey, from Mr. Hawes, Oxon.

Among Miscellaneous articles were some fruit trees in pots from Mr. Kaile, gr. to Lord Lovelace, and we also noticed a nice exhibition of Orange trees in pots.

Of Dahlias there was a large display, and the blooms generally were in beautiful condition; those from Messrs. Turner & Keynes especially were very fine.

In the Class of 50 dissimilar varieties, Mr. Turner, of Slough, was first with Lilac Queen, Pluto, Seedling, Deutche, Norah Creina, Seedling, Dr. Gully, Mr. Stockin, Harlequin, Sir G. Douglas, Duke of Wellington (Turner), Chairman, Warrior, John Dory, Earl of Shaftesbury, Hon. Mrs. Trotter, Lord Palmerston, Jenny Austin, Lord Cardigan, Golden Drop, Commander, Seedling, Pre-eminent, Miss Pressly, Pioneer, Mrs. Pigott, Lord Taunton, Bravo, Cherub, Sidney Herbert, Miss Watts, Triomphe de Pecq, Mrs. Church, Midnight, Heroine, Grand Master, Lady Popham, Madge Wildfire, Seedling, George Elliott, Seedling, Mrs. C. Waters, Village Gem, two Seedlings, Princess of Prussia, Etona, Hon. Mrs. Lindsay, Dinorah, and a Seedling. Mr. Keynes sent Golden Drop, Pioneer, Cherub, Sidney Herbert, D'Israeli, Miss Pressly, Duke of Roxburgh, Miss Watts, Wallace, Lord Palmerston, Lilac Queen, Sir G. Douglas, Commander, Royal Lilac, George Brown, Lady Popham, Lady Franklin, Lord Clyde, Mrs. Pigott, Rosebud, Chairman, Earl of Shaftesbury, Mauve, Grand Master, William Dodds, Pandora, Mrs. Vyse, Lady Douglas Pennant, Masterpiece, Seedling, Jenny Austin, Midnight, Dr. Gully, Malvina, Seedling, Rosa Bonheur, Touchstone, Hon. Mrs. Trotter, Lord Cardigan, Mrs. Critchett, Mrs. Church, Lollipop, Triomphe de Pecq, Tippy Bob, Compacta, Seedling, and four others. Messrs. Harrison, Edwards, and Legge also showed in this class.

In stands of 24 blooms Mr. Turner again obtained the first prize with Mr. Stockin, Chairman, Earl of Shaftesbury, Hon. Mrs. Trotter, Warrior, Seedling, Lilac Queen, Pioneer, George Elliott, Village Gem, Mrs. C. Waters, Lady Popham, Lord Palmerston, Miss Pressly, Princess of Prussia, Seedling, Golden Drop, Pluto, Rosebud, Duke of Wellington, Heroine, Jenny Austin, Seedling, and Dinorah. 2d. Mr. Keynes, with Golden Drop, Royal Lilac, Duke of Roxburgh, Jenny Austin, Rosebud, Lizzie Herbert, Pioneer, Cherub, Masterpiece, Mr. Critchett, Lady Douglas Pennant, Mrs. Vyse, Mr. Boshell, Mauve, Seedling, Chairman, William Dodds, Andrew Dodds, Earl of Shaftesbury, Lilac Queen, Mrs. Pigott, George Brown, Seedling, and Mrs. C. Waters.

In Class 3, 12 Fancies, Mr. Turner took the first prize with Harlequin, Lady Paxton, Empéreur de Maroc, Queen Mab, Seedling, Elegans, Elizabeth, Norah Creina, Countess of Bective, Pluto, Gloire de Kain, and a Seedling. 2d, Mr. Keynes, with a Seedling, Souter Johnny, Lady Paxton, Seedling, Harlequin, Seedling, Fairy Queen, Jessie, Queen Mab, William Corp, Pigeon, and Alice.

AMATEURS' CLASS.—In stands of 24 blooms, the first prize was awarded to Mr. Dodds, of Salisbury, for Marquis of Bowmont, Golden Drop, Mrs. W. Fawcett, Chairman, Lollipop, Mr. Eckford, George Brown, Seedling, Mrs. W. Pigott, Seedling, Lady Popham, Seedling, Jenny Austin, Rosebud, Mrs. Church, Duke of Roxburgh, William Dodds, Seedling, Lady Douglas Pennant, Seedling, Cherub, Royal Lilac, Pioneer, a Seedling, and two others; 2d, Mr. Cook, Notting Hill.

In 12 Blooms (Amateurs), Mr. W. Corp, Salisbury, was first with Chairman, Lord Palmerston, Golden Drop, Jenny Austin, Lady Douglas Pennant, Warrior, Cherub, Hon. Mrs. Trotter, Triomphe de Pecq, Lilac Queen, Mrs. Pigott and Sir G. Douglas.

In Class 6, 12 Fancies (Amateurs), Mr. W. Dodds was first with Highland Mary, Lady Popham, Cleopatra, Souter Johnny, Mary Lauder, Garibaldi, Seedling, Leopard, Seedling, the Flirt, and two Seedlings. 2nd, Mr. C. J. Perry, Birmingham.

As regards Seedling Dahlias a Certificate of Merit was awarded to Beauty of Hilperton, crimson edged with lilac, a large bold flower. This came from Mr. T. Dickenson, gr. to B. J. Edwards, Esq., Hilperton, Trowbridge. Ditto to Joy, pale lilac, heavily tipped with purple: a small flower of good form, and very novel. This was shown by Mr. George Rawlings, Globe Road, Bethnal Green. Ditto, to Marquis of Bowmont, a large bold lilac flower from Mr. Dodds, of Salisbury. Ditto, to Masterpiece, crimson, with lilac tips: a small, compact, well-formed flower, close high centre, and novel, from Mr. J. Keynes, of Salisbury. Ditto, to Andrew Dodds, a crimson flower from Mr. J. Keynes. Ditto, to Princess of Prussia from Mr. Turner, of the Royal Nursery, Slough.

Exhibitions of Asters were numerous and extremely interesting, and there were likewise some good single blooms of Hollyhocks; but these should be shown in spikes to be able to judge correctly respecting their merits. Verbenas were also plentiful.

Of Roses, Messrs. Paul, Keynes, Francis, and others sent boxfulls, in which were blooms of Souvenir de Malmaison, Prince Leon, Baronne Prevost, Madame Masson, Auguste Mie, Jules Margottin, Pius the Ninth, Duchesse d'Orleans, Géant des Batailles, Safranot, La Reine, Solfaterre, Duchess of Norfolk, Gloire de Dijon, Odier, Mdme Cambacères, General Jacqueminot, Wm. Griffith, General Castellaine, Niphetos, and Devoniensis.

Beautiful Bouquets of Gladioli were shown by Messrs. Youell, Standish and others, and being arranged in lines on both sides of the tables they made a fine display. The sort was chiefly Brenchleyensis, which it will be remembered was favourably noticed in our columns at p. 816.

Notices of Books.

Facts and Figures relating to Vancouver Island and British Columbia, showing what to expect and how to get there. By J. Despard Pemberton, Surveyor-General. 8vo, Longmans. Pp. 171.

At last we have an authentic account of the youngest and most distant, but very far from the least important of our Colonial possessions. Situated at the most northern part of the north-western coast of North America, in a climate altogether British, soon to be accessible by land from Canada West, on the western frontier of the United States, and overlooking the northern Pacific, Vancouver must become a great and flourishing part of the empire, both on account of its geographical position and its immense political importance. As soon as a direct communication with

Europe shall have been opened it will be the highway from Europe to India through British possessions. In the meanwhile its natural resources, exclusive of the gold of British Columbia, must, under a wise Government, render it one of the most thriving stations in the New World. In a notice of it in the *Gardeners' Chronicle* of last week, while we drew attention to its present value to emigrants acquainted with cultivation, the drawbacks that just now retard its progress were pointed out; and we find our information wholly confirmed in all essential points by the valuable work before us.

Mr. Pemberton's position as Surveyor-General of Vancouver has brought him acquainted with everything connected with land, and, although his official obligations must operate as some restraint upon saying all that he could say, yet an attentive perusal of his volume convinces us that it is a faithful statement of what an emigrant has to expect. He describes the country in considerable detail, points out its mineral and other riches, criticizes its legislative actions, and shows how the impediments to its advance with the speed of an American State may be remedied by a better appreciation by Government of the wants of settlers. In an Appendix he has given some interesting reports upon surveying excursions in the country, to which are added the laws of land sales in the colony, and four excellent maps of the island itself and the adjacent continent, showing how roads and eventually railroads may be carried from the mouth of the Frazer River to Montreal.

The immense importance of Vancouver to navigators is shown by the striking fact, that between San Francisco and the fine harbours of the island, a coast-line 600 miles long, there is not a single respectable port. The mouth of the river Columbia and Humboldt are the only two harbours, and both of them are guarded by an extremely dangerous surf. As to the rest they are mere open roadsteads.

"In area British Columbia, as the boundaries are at present arranged, is about three and a half times as large as Great Britain, and Vancouver Island about half the size of Ireland. With a coast-line of 500 miles, and 400 miles in width, varying in elevation from nothing to 16,000 feet above the sea, and composed, as this country is, of lake and mountain, forest, marsh, and prairie, frequently alternating; in these colonies, as might be expected, the greatest diversity of soil and climate is met with. As the latter has been justly termed the decisive condition on which the future of a country must mainly depend, I shall have occasion to discuss it pretty fully in another place; it may therefore be sufficient here to say, that in the southern portion of Vancouver Island, and in parts of valleys of the Frazer, Lillooette, Columbia, and Thomson rivers, a climate quite as mild as that of Devonshire is indicated by birds of bright plumage, humming birds, Cactuses growing in the open air, &c,

"Of the land in either colony, the portion occupied (some thousands of acres out of 150 millions), is so small compared with the whole, that a considerable time must elapse before settlers arriving shall find it difficult to obtain farm sites containing a sufficient quantity of open land. In addition to this an ample supply of timber for building, fencing, &c., is indispensable in a farm; and the quantity required for fuel only is surprising. Of Vancouver Island the southern portion only has been examined, and it is found to contain 100,000 acres of valuable farming land in the immediate vicinity of Victoria, extending to Cowichan, which again is found to contain about the same quantity of open land, which adjoins some 30,000 acres of open land at Nanaimo, and plains at intervals are found extending to Cape Mudge; that is to say, for 150 miles measured along the coast Vancouver Island has been explored, and the capability of this portion of the island to support in affluence a large population is admitted, while a conclusion the very opposite to this is arrived at with regard to other portions of the island which have not been explored.

"The soil, where it is richest, in the river deltas, the valleys, and the plains, usually consists of black vegetable mould, 6 inches to 3 feet in depth, overlying a deep substratum of clay, gravel, or sand; it is generally covered with a luxuriant crop of Fern, which is very difficult to kill and tedious to eradicate. The native Grasses of the country are of a poor Alpine character, springing up early in April and dying away in September; swamp Grass excepted, which supports the stock of the country in winter, but which is too coarse and woody in the fibre to fatten them. This deficiency is, however, to a great extent counterbalanced by native Tares, Clover, and Vetches, which are, in most localities, abundant."

Such is the account given by Mr. Pemberton of what cultivators have to expect, and private information enables us to endorse his testimony. That the country is first rate for gardening and farming is incontestable, nor can prices fail to be high for a long time to come. Now and for many years there must be a very large unsettled population connected with the great gold fields of British Columbia, which are found to be richer and richer as they are explored, and already rival those of California. But miners, while they are large consumers of food, and willing to pay highly for it, produce absolutely nothing. Farmers and gardeners are the people to feed them. Supplies of food may indeed be imported, that is to say flour and salt provisions—but fresh provisions must be grown on the spot. Cattle, poultry, vegetables, forage, requisite local rearing, and for this no country is better suited, or can hold out stronger inducements to agricultural settlers. The great obstacle in the way of that greatest and most necessary of all classes has been the law which regulates the acquisition of land. Mr. Pemberton assures us that the fertility of the soil in the neighbourhood of gold-bearing rocks is very remarkable; and these rocks would seem to exist everywhere. A purist the following statement takes us by surprise; although true enough in an account of California. "Turnips as large as hassocks, Radishes as large as Beets or Mangels, and bushels of Potatoes to a single stalk, are nothing astonishing. At the house of an ex-consul at San Francisco I have seen Oregon Pears, to demolish one of which required the united efforts of five guests; the Apples being large in proportion. Orchards in the colonies will be very remunerative. Those in Oregon have the disadvantage of being situated in the centre of the state, and fruit has to be carried to the Williamette River, and thence by steamers from Portland. An acre of land planted with 200 Apple trees would, at the end of three years, on a minute calculation, cost a proprietor 30*l.* to 40*l.*, and the lowest selling price on the coast of an acre of Apple trees of that age is 200*l.* The intermediate trees are chopped out with an axe as the orchard becomes too crowded. Hops grow well in the country, and a brewery on a large scale would pay well, as any one interested may satisfy himself, by noticing the cargoes of bottled ale and stout sent from England to that coast. The profits arising from the cultivation of grain crops and Grasses are far from inconsiderable. The cost of clearing an acre of timbered land may be taken at 8*l.*; of the other descriptions less, varying with the locality. An acre of land produces from 20 to 40 bushels of Wheat, or a corresponding quantity of Oats or Barley, and continues to do so for some years without manure before it is exhausted; hitherto, Wheat has sold in the colony at 8*s.* the bushel, Oats at 6*s.* Hay pays remarkably well, varying in price during the year from 8*l.* to 16*l.*, or more, per ton."

The law of land sales which paralyzes the agricultural industry required to develope in Vancouver such great resources is about to be altered. In future, "any British subject may acquire 160 acres of unoccupied land, in anticipation of survey, in any part of British Columbia: excepting only such portions as are reserved by Government for public purposes, such as town sites, Indian reserves, or as may be required for mining. To acquire a good, inalienable claim to a perfect title, it is only necessary for the claimant to take possession as soon as he makes his selection, reporting the fact in writing to the nearest magistrate, with a description of the boundaries. On taking possession, he pays nothing for the land, but has to pay a small fee for recording the claim. When the land shall have been surveyed by the Government, the claimant or his heirs acquire a title from Government, on payment of a sum not to exceed 10*s.* per acre, but which it is expected will be reduced to 5*s.* per acre. This will of course depend on the decision of the Imperial Government. With a view to encourage improvement, a person in possession can sell his land as soon as he shall have effected improvements to the value of 10*s.* per acre; this condition complied with, he can pass a good title to the purchaser. The claimant can, in addition to the 160 acres so acquired, purchase at any time any additional quantity of land he pleases, at a price not exceeding 10*s.* an acre, of which 5*s.* per acre is paid down, and the rest at the time of survey, if demanded. As a considerable time must elapse before these lands can be surveyed, persons taking up land promptly, may be years in possession before they are called upon for payment. Land so taken up and afterwards abandoned, may be claimed and taken up by any other person on the original terms, even if improved by the first occupant. Persons so occupying land have the same legal remedies of action of ejectment and trespass against intruders, as if they had paid for the land and obtained an indenture. Questions of boundaries or disputes with neighbours, are referred to the nearest magistrate to be disposed of in a summary way, but with an appeal to the higher courts."

It is most important that these facts should be known; for they appear to offer every inducement to emigrants, and we entertain no doubt that those who study Mr. Pemberton's book will rise from its perusal with a conviction that a magnificent field of enterprise is open before them. But not for all. "All the professions are overstocked; this, of course, includes the bar, the church, engineers and surveyors, &c. Private tutors, governesses, and anybody that can teach any thing would do remarkably well in the country. I am not aware of there being any ladies' school in the island,—a want much felt."

As to capitalists we have only to add, that "money in Vancouver Island can be lent on good security, at rates ranging from 25 to 30 per cent. per annum; and the opportunities for investment are so varied, and the field so immense, that I should altogether exceed limits allotted in attempting to specify."

The Contessa di San Giorgio (Lady Anne Harley) has announced *A Polyglot Catalogue of Plants*. The work does not aspire to the character of a scientific treatise. It is a simple nomenclature drawn up in ordinary language, in the hope that it may be found of practical use. The plants designated under their Latin botanical names, will be arranged in alphabetical order, followed by their English, French, Italian, Spanish, and German names. To this will be added a special alphabetical index, in each of the above mentioned languages. The work being intended for the use of young persons, the Authoress has drawn it up with the most scrupulous care; and as it contains information gathered from sources unfamiliar to ordinary readers, it is hoped it may also be appreciated by the general public. The work will be published by subscription. Price to subscribers 10*s.* Subscriptions to be paid to Messrs. Herries and Farquhar, 16, St. James's Street, London, to the account of Countess di San Giorgio.

Mr. Lovell Reeve announces the speedy publication of a new work by the Rev. M. J. Berkeley, under the title of *Outlines of Fungology*. It is to be an octavo volume of 480 pages, containing characters of above a thousand species of Fungi, and a complete list of all that have been described as natives of the British Isles. The plates, 24 in number, are crowded with original coloured figures, with dissections, and, where necessary, magnified portions of about 150 species, all drawn at Kew by Mr. Fitch during the past year (which on account of the continued wet has been especially favourable to the growth of Fungi) from specimens supplied to him by the author and his various mycological friends.

Mr. Murray has issued another of his excellent *Handbooks—for Berkshire, Buckinghamshire, and Oxfordshire*, in which the tourist will find a capital description and map of Oxford, in addition to a carefully drawn travelling map.

Miscellaneous.

The Wet Season of 1860.—Having anxiously noticed the quarter from which the wind blew from the 20th to the 26th of last March, at the end of that month I stated to several persons in this town my anticipations that for the following six months the weather would be generally wet, stormy, and ungenial. Some of my friends, in order to test their correctness by the issue, made a special note of these "forebodings," as they termed them, which have, unfortunately, been too well verified. The wind during the seven days above named was, for the most part, south and south-west, with occasional showers—a condition which almost invariably indicates excess of rain for the following half-year. Your readers will have an opportunity of judging for themselves respecting the truth of this rule, if it may be so called, by marking the point from which the wind blows from the 20th to the 26th of the present month. Should it be from the south or south-west, a continuance of the late weather may be expected. If, on the other hand, the direction should be any point from the north, a dry autumn and bracing cheerful winter may be looked for. It is not meant to be affirmed that in either case the season will be altogether wet or fine, but that it will be so characteristically. The rule as to the direction of the wind about the time of the equinox was laid down by some acute observer long, I believe, before I was born; but having for more than 30 years kept a journal of the weather, and having marked its general correctness, I may be allowed to speak of it with some little confidence. May I add, that probably we are entering upon a series of years characterised by more than usual moisture? It has been observed that for a cycle of seven years the winds have chiefly been westerly, with more or less rainy seasons and indifferent harvests, and for an equal period easterly, with dry seasons and good harvests. It may be remembered that many years since, during the discussions in Parliament on the Corn Laws, the late Sir Robert Peel adverted to this as an established law in connection with some statistics, embracing a period of, I think, more than a hundred years, published by the late Mr. Tooke, showing the prices of Wheat as high or low, and as accurately corresponding with the character of these cycles. *R. H., Cheltenham, Sept.* 17.—*Times.*

Habits of the Kite.—The Kite may be known, even on the wing, from all other British birds of prey, by its beautifully easy flight, and the long forked tail. Indeed, while flying, the Kite bears no small resemblance to a very large swallow, excepting that the flight is more gliding, and the wings are seldom flapped. Despite the ill savour into which the name of the Kite has fallen, it is really a magnificent specimen of the Falconidæ, and deserves its specific title of "regalis," or regal, quite as much for its own merits as from the fact that it had once the very great honour to be chased by royalty. It seems that the later kings of France were in the habit of marking the Kite as the quarry which was specially suitable to their regal state, and were accustomed to fly their hawks at Kites, instead of herons, as was usually the mode of procedure in the noble sport of falconry. The Kite is therefore termed regal, not on account of any innate royalty in the bird, but simply because royal personages chose to pursue it. The Kite was in former days one of the commonest of the British birds, swarming in every forest, building its nest near every village, and being the greatest pest of the farmer and poultry-keeper, on account of its voracity, craft, and swiftness. Even the metropolis was filled with these birds, who acted the same part that is played by vultures in more eastern lands, and

were accustomed to haunt the streets for the purpose of eating the offal which was so liberally flung out of doors in the good old times, and which, but for the providential instincts of the Kites, would have been permitted to decompose in the open streets of our obtusely-scented ancestors. In consequence of the services which they rendered, the Kites were protected by common consent, and were therefore extremely familiar, not to say importunate, in their habits, settling on the butcher's blocks, and bearing off pieces of meat almost within reach of his hand. In the northern parts of Africa, where they absolutely swarm, the Kite bears the same character for cool audacity, having been often known to sweep suddenly down, snatch a piece of meat from a man's hand, and disappear with its booty before he could recover from his surprise. In the present day, however, the Kite is comparatively seldom seen in England, and when observed, is of sufficient rarity to be mentioned in the floating records of natural history. A correspondent of the "Zoologist" states that one of these birds was seen flying over London on June 24th, 1859. The bird passed over Piccadilly at a supposed elevation of 100 yards, and flew with perfect steadiness over the vast expanse of smoke and chimney-pots, which must have presented a strange contrast with the green fields and leafy forests of its country home. Advancing civilisation has done its work with the Kite, as with all other destructive animals, and driven it far away from human habitations. Man chooses to be the only destructive animal within his own domains, and, eagle-like, permits no inferior to poach on his territory. The trap of the farmer, and the ready gun of the gamekeeper, have gradually expelled the Kite from farm and preserve, and it is now to be found only in the wide wooded district where it can remain comparatively free from persecution. The flight of this bird is peculiarly easy and graceful, as the wings are seldom flapped, and the Kite sails through the air as by the mere power of volition. From the gliding movements of the Kite when on the wing, it has derived the name of Gled, from the old Saxon word *glida*. When in pursuit of prey, the Kite sails in circles at a considerable height from the ground, watching with its penetrating gaze the ground beneath, and sweeping with unerring aim upon any bird, quadruped, or reptile that may take its fancy. Should it pass over a farm-yard, the whole establishment is in an uproar, quite inexplicable to any one who did not observe a certain little black speck sailing about in the heights of air. As soon as one of the smaller birds sees a Kite, it crouches to the ground and lies there motionless, as if transformed into a stone or a clod of earth. This instinctive movement is of great service, as it affords the only means of escaping the keen eye of the rapacious foe, who hovers above the spot, and is sure to notice any object that gives the least sign of life. Taking advantage of this habit, the fowlers make use of trained Kites or falcons to aid them in securing their prey. When they have marked down a covey of birds, they loose one of their trained hawks, who flies over the spot where the birds are lying, and causes them to crouch to the earth, heedless of anything but the foe above. While their attention is thus occupied, the fowlers come up with their nets, and easily secure the whole covey. Even in ordinary sporting, where the birds are very wild, a common paper kite is employed with great success, and in a very simple manner. The kite is raised in the air, and allowed to take out 100 or 200 yards of string; a boy then takes charge of the kite, and walks over the land where the partridges are known to be. The birds mistake the paper kite for some soaring bird of prey, and permit the sportsmen to come within gunshot before they rise. Sometimes in making its stoop upon the poultry, it avoids their gaze by making a detour close to the ground, gliding suddenly over the wall or hedge, pouncing upon a chicken, and disappearing almost before its presence has been discovered. These raids, however, are not invariably successful, for the Kite has been often foiled in his stoop by the watchful care of the mother bird, who has seen the enemy coming, and valiantly waged successful battle in defence of her young family. *Routledge's Illustrated Natural History.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Whatever watering may be necessary here should be done early in the day so as to allow of getting the superfluous moisture dried up before night, for there is much more danger from damp among plants in flower at this season than from a rather low temperature, and on cold dull cloudy days it will be advisable to use a little fire-heat with air during the day so as to secure a moderately dry state of the atmosphere before night. Use fire-heat very sparingly, however, and only when it may be necessary to prevent injury from damp, or to prevent the temperature falling below 40°, or where things are brought from warmer houses it will hardly be safe to allow the night temperature to average below 45°; but in houses containing a mixed collection of plants there is more danger to be apprehended from a high night temperature than from keeping it somewhat lower than may be suitable for some of the inmates. Azaleas which have ceased growing and which have set well for bloom, should now be kept as cool and hardy as possible.

FORCING DEPARTMENT.

PINERIES.—Plants swelling their fruit must be assisted with a warm moist atmosphere, for it is difficult to get Pines to swell properly after this season under any circumstances, and unless the atmosphere can be kept warm and moist they will make but little progress. Therefore use sufficient fire-heat to secure a night temperature of at least from 65° to 70°, and 75° by day, allowing it to rise considerably with sunshine, and admit a little fresh air during the day when the weather is mild, using sufficient fire-heat to allow of doing this without lowering the temperature; and if there is the means of admitting fresh air so as to bring it into contact with the pipes on its entrance into the house, a little may be admitted with advantage in all states of the weather, and in the case of houses which have to be kept warm in winter there should always be some contrivance for admitting fresh air under or against the heating apparatus so that it may get warmed before coming into contact with the plants, and with proper arrangements a moderate supply may be admitted constantly without requiring any extra amount of fuel to keep up the temperature. Also endeavour to secure a steady bottom-heat of about 85°, and endeavour to keep the soil about the roots in a properly moist state, giving clear, rather strong, manure-water when necessary; but if the atmosphere is kept properly moist the soil will not require much water for some time. It is very difficult however to get Queen Pines to swell properly after this season, and any plants of this variety showing now should, unless in cases where ripe Pines of any size or quality will be valuable early next spring, be kept cool and dry as soon as they have done flowering, until the middle or end of January, and then be afforded a brisk moist temperature; and treated in this way, we have often found them to swell off exceedingly well, and where ripe Pines in winter are in demand Cayennes, Black Jamaica, and Montserrats should be grown to furnish the supply from November to April, for those not only swell better in winter than Queens, and the larger sorts of blacks, but are also less liable to be hard and inferior in quality. Fruit approaching maturity must also be kept warm, but the atmosphere should be kept rather dry, admitting fresh air freely on every favourable opportunity, for anything like moderately well-flavoured fruit will not be obtained at this season without a liberal use of fire-heat. If any of the young stock in pots appear to want shifting examine these at once, and shift such as are found to be at all pot-bound, for young plants if kept short of pot room through the winter will be apt to start into fruit instead of growth in spring. But in repotting at this season be careful to have the balls and soil to be used in a healthy state as to moisture, and place the soil where it will get warmed before using it so as to avoid checking the roots.

VINERIES.—Use gentle fires when the weather is damp in houses where the fruit is ripe; but only just sufficient to keep the atmosphere dry. Use brisk fires in houses where the fruit is not yet ripe, giving air freely, and be careful to guard the foliage from insects, particularly where the fruit has to be kept for any length of time after it is ripe.

PEACHES.—As the trees will now be freely exposed to the air day and night, very little attention will be required here for the present. The foliage should, however, be kept clear of red spider, by an occasional washing with the engine where necessary, so as to preserve it in health until it has performed its functions and decays naturally.

FLOWER GARDEN AND SHRUBBERIES.

Tender plants which it may be intended to winter for use next season, must soon be taken up and placed in safe quarters. Plants, however, which are still in good condition, may be left for some weeks longer; variegated Geraniums will not bear much frost, and where the plants have to be wintered in situations which are not very suitable for them they should be taken up before they are at all injured, as they will be much more liable to damp and die back in winter if the wood is at all touched by frost. Unless where there is a sufficient stock of these they should not be cut back, as is usually done with the old Scarlets, but should be kept over the winter just as they are lifted from the beds, and cut back early in spring after starting them into growth, when the cuttings will root very freely in heat, and in the case of Flower of the Day, or other free growers, will make useful sized plants by turning out time, and even the strongest growers of these do not cover a bed very quickly unless planted thick, and the plants should therefore be wintered in as large a state as the accommodation will permit. The autumn rooted stock of Verbenas, &c., must be well attended to, keeping them perfectly clear of greenfly, and exposing them freely to the air on every favourable opportunity, so as to prevent anything like growth after this season, and keep the plants hard, in which state they will be much less liable to fog off under a week or two's confinement in winter than if they were kept in a growing soft state until overtaken by severe weather. Things which are not sufficiently established must, however, be treated somewhat more kindly, for there is but little chance of carrying such things over a severe winter unless they are at least well rooted, and these might with advantage be placed upon a gentle bottom-heat to encourage the roots, but do not keep the atmosphere close and moist, for growth should not be encouraged after this season.

HARDY FRUIT AND KITCHEN GARDEN.

Look frequently over any varieties of Pears ripening, and gather those that are fit for storing. Where Currants are closely netted up the trees should be uncovered occasionally on fine dry days, so as to expose the fruits thoroughly to the air, in order to prevent their being injured by damp. Trim and dress Strawberry plantations, and be careful to injure the leaves of the plants as little as possible, and avoid deep digging between the rows. Take advantage of dry days, when the ground is in working order, to take up and store Carrots, Beet, Parsnips, &c., and stack them in sand in a cool place where they will be conveniently got at when wanted for use.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON
For the Week ending Sept. 20, 1860, as observed at the Horticultural Gardens.

Sept.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Friday 14	28	29.605	29.494	67	46	56.5	57	56	S.W.	.04
Satur. 15	●	29.493	29.485	65	47	56.0	57	56	S.	.01
Sunday 16	1	29.662	29.582	65	54	59.5	58	56	S.W.	.19
Mon. 17	2	29.625	29.505	62	51	56.5	59	57½	S.W.	.40
Tues. 18	3	29.457	29.417	60	37	48.5	59	56½	N.	.01
Wed. 19	4	29.537	29.398	62	38	50.0	58	56½	N.E.	.02
Thurs. 20	5	29.795	29.708	67	48	57.5	58	56	W.	.33
Average..		29.596	29.513	64.0	45.8	54.9	58.0	56.3		.81

Sept. 14—Flying clouds; fine; very clear at night; rain.
— 15—Cloudy; overcast; showery.
— 16—Fine; rain; boisterous at night.
— 17—Densely overcast; rain; heavy rain at night.
— 18—Drizzly; hazy; overcast.
— 19—Foggy; overcast; very clear and cold at night.
— 20—Overcast; very fine; overcast; rain at night.
Mean temperature of the week, 1 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending Sept. 29, 1860.

Sept.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 23..	66.6	46.9	56.7	16	1.21 in.	—	6	7	2	6	7	5	1
Mon. 24..	66.0	45.4	55.7	15	0.75	2	7	2	1	5	10	5	2
Tues. 25..	66.0	44.6	55.3	15	0.30	2	4	3	2	6	10	6	1
Wed. 26..	65.4	45.1	55.2	17	1.68	—	5	6	1	8	10	1	3
Thurs. 27..	65.1	45.3	55.2	20	0.63	—	2	4	2	6	10	7	3
Friday 28..	64.8	44.4	54.6	17	0.80	—	4	4	1	10	8	4	3
Satur. 29..	65.2	45.1	55.2	22	0.46	1	3	3	3	7	12	3	2

The highest temperature during the above period occurred on the 25th, 1832—therm. 82 deg.; and the lowest on the 27th, 1828—therm 24 deg.

Notices to Correspondents.

BOOKS: *Liverpool.* Asa Gray's First Lessons in Botany and Botanical Text Book. Lindley's School Botany and Descriptive Botany, and the same Author's *Vegetable Kingdom.* —*C C C.* Bee books are too learned for the poor. There is an old book by Wildman (on bees) which might suit them, or you may try Wood on Bees (Routledge) which costs a shilling—but the best adviser of an ignorant cottager is one who understands the matter.

DOUBLE CUCUMBERS: *J D.* It is very fine, certainly; but many such twins reach us. The two fruit must have touched each other when very young and never after separated. This shows how attached one Cucumber may be to another.

GRAPES: *Curate.* The Joslin's St. Alban's Grape is the same as the Chasselas Musqué. It is excellent, but apt to crack.—*T N E.* Nothing better than Black Hamburgh and White Sweetwater for out-of-doors. The Miller's Burgundy, Black Cluster, Précoce de Malingre, and Muscat d'Août are earlier, but the bunches are very small.

HOT WATER: *Dido.* The water is forced out of your air pipes because the apparatus is too full. Let it run over till no more flows, and it will not do so again. For so much work as you have to do we advise some tubular boiler, like Weeks' —if you are dissatisfied with your saddle boiler.

NAMES OF FRUITS: *J L A.* Your Peach, having reniform glands on the leaves, is certainly not the Bellegarde. The fruit was decayed. The Plum resembles the Wine-sour.—*J N.* 1, Oshn; the others are worthless. No. 4 is a wild Apple, watery at the core like some of the crabs. ||

NAMES OF PLANTS: *A Subscriber from the Beginning.* 1, Cyrtomium falcatum; 2, Asplenium Belangeri or Veitchianum, as it has also been called. The frond appears to have been infested by thrips, which may be destroyed by repeated fumigations with tobacco. There are several sorts of Pomegranate, single red, double red, yellow flowered, &c. They seldom fruit in this country; when they do they are roasted by a fierce sun in the autumn and forced rapidly in a bright damp stove when they make their early growth. They set their flowers without artificial assistance. But they must be very freely ventilated.—*A B.* Rhipsalis cassythoides.—*Another A B.* Plants cannot be named from leaves alone.—*A S.* 1, Scirpus maritimus; 2, Carex elongata.—*Roland.* Sagina procumbens.—*A Constant Reader.* Platanus orientalis.—*Another Constant Reader.* Acer hybridum.—*T S P.* Erica tetralix and Statice auriculæfolia. E. vagans has stamens projecting beyond the mouth of the corolla.—*O P.* Probably Gloxinia tubiflora.—*M C.* 1, Nephrodium molle; 2. Blechnum occidentale; 3. Pleopeltis (or Drynaria) pustulata.

SEED ADULTERATIONS: *X X X.* Such things are beneath contempt. Whenever a man has recourse to abuse his case is so desperate that he virtually confesses his guilt —*Egrotus.* We have seen the doggrel which you mention, and if the gentlemen who circulate it think it worthy of their character we have nothing to object.

TOMATOES: *Ericson.* None can ripen this year in the open air but plenty may be had in the shops, where they find their way from Algeria. The Spanish way of cooking them is to rub them through a sieve so as to reduce them to pulp. Then to beat the pulp up with eggs, to add butter, pepper, and salt, and to heat in a saucepan.

VINERIES: *J Q* Concrete your Vine border; and place from 18 inches to 2 feet of good loamy soil upon it. Crushed bones and soft bits of charcoal, as much as you like. Your burnt limestone mixed with gravel will do for making the concrete, which should be put over the present surface, so that the Vine border may lie on the top of it. The smaller the laps of glass the better. Don't putty the laps, but leave space enough for condensed water to run through them, or the glass will be broken in winter. If you putty the laps, take care that it is done thoroughly. Of all things look to skilful ventilation.

MISC: *A Y.* We cannot solve riddles. Possibly the meaning may be "a song of the sorrow of Gleim and Hasedorn and Weisse."

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CONCENTRATED TURNIP MANURE, equal in value to the preceding.

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Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK & Co., Sutton Road, Plymouth.

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,, SUPERPHOSPHATE OF LIME	6	6
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,, MANGEL MANURE	8	0
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These Manures can be obtained of Mr. LAWES, or his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Dr. Voelcker and Professor Way have sampled from a bulk of 7000 tons Turnip Manure at Mr. LAWES's Factories, and their report with analysis are given in full in circular, to be obtained on application at the Offices, or of any of Mr. LAWES's Agents.

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"PRACTICE WITH SCIENCE" is the golden motto of the Royal Agricultural Society of England, and this is just the kind of testimony now being received in favour of THORLEY'S FOOD FOR CATTLE; for Agriculturists and other owners of Stock are, by the successful use of this Condiment, beginning to experience that the value of food depends upon how it is digested. Chemically, its constituent elements may be of the highest value, but if imperfectly digested, what is its value to the animal which eats it? The testimony just referred to proves that hay and straw properly seasoned with this Condiment is more nourishing than unseasoned food, although the latter may contain a much greater amount of alimentary matter. Write for a pamphlet, which is sent post free.—Address 77, Newgate Street, London, E.C.

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THRIPS	SCALE	GREEN and BROWN FLY
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BED BUGS, &c.,

And useful in winter dressing.
Contains no deleterious ingredient.

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Mr. Edmonds, of Chiswick House Gardens
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Messrs. A. Henderson & Co., Edgeware Road
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Nurserymen and Seedsmen supplied by
PRICE'S PATENT CANDLE COMPANY, Limited, London.

SHIRREFF'S RED WHEAT.—The Subscriber, in calling attention to the First of a Series of Improved WHEATS, which he has long been engaged in propagating, reminds Agriculturists that the Mungoswells and Hopetoun varieties originated with him. The former, after having been cultivated in its native county for upwards of 30 years and passing under various names, is now the fashionable Wheat of East-Lothian, having lately eclipsed Fenton Wheat in public favour. But whatever may be the properties of his early productions, he flatters himself that his more recent attempts have given rise to Wheats still more worthy of cultivation. For two years past, practical farmers have selected the grains of these Wheats as the finest in a collection containing nearly 100 kinds, and during the present summer they have pronounced the crops superior to old varieties growing contiguous under a parity of circumstances. Having been selected and manipled by himself, sown in spring and autumn on various kinds of soil and in different localities, and having been tested by the wet harvest of 1857, and the rigours of the past winter, they are warranted congenial to the climate of Britain. The advent of these Wheats may encounter the envy, cupidity, and prejudice of interested parties, but time will allay and ultimately overcome all opposition.

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The crop of the present year is secured in the stack in a dry state, and may be expected to be in fine sowing condition by the middle of October. Intending purchasers may have an ear of this Wheat transmitted by post on remitting 5*s.* which will be deducted from the amount of all orders of half a quarter and upwards. Also if desired, an ear of the most beautiful of British white Wheats, which will be sold in 1861, will accompany the red ear. Price delivered at Dunbar Station of the North British Railway, 100*s.* per quarter, single bushels 15*s.* Bags 1*s.* 6*d.* each. Orders to be accompanied by a remittance, or by a reference to a person in Edinburgh.

Haddington, Sept. 22. PATRICK SHIRREFF.

N.B.—Grain purchased on Commission in the Stock Markets of the neighbourhood.

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WORKS OF DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.

Repayment may be made by the Landowner as successive portions of the works are completed; or the actual expenditure, with a commission thereon, may be charged on the property improved, by way of rentcharge on the estate created for various terms of years so as to adapt the rate per cent. of annual charge to the circumstances of the tenants.

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The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

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3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
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Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

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The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

SMITHFIELD CLUB CATTLE SHOW, 1860.—THE ANNUAL SHOW OF FAT CATTLE, SHEEP, AND PIGS will take place on December 11, 12, 13, and 14, at the Bazaar, King Street, Portman Square, W.

The LAST DAY for Certificates for both Stock and Implements to be received by the Honorary Secretary is THURSDAY, November 1.

The following forms of Certificates are now ready, and intending Exhibitors in applying for them need only quote the letters and state how many of each letter they require:—

CATTLE.	SHEEP.
Form A.—Ox or Steer	Form D.—Pen of three Wethers
,, B.—Cow or Heifer	,, E.—One Wether or Ewe in extra stock
,, C.—Ox, Cow, or Heifer in extra stock	PIGS.
	Form F.—Pen of three Pigs
	,, G.—One Pig in extra stock

Prize Sheets, with Rules and Regulations, and Forms of Certificates as above, may be obtained of

B. T. BRANDRETH GIBBS, Hon. Sec.,
Corner of Half Moon Street, Piccadilly, London, W.

N.B.—All communications on the Club's business should have the words "SMITHFIELD CLUB" outside, to distinguish them from private letters.

The Agricultural Gazette.

SATURDAY, SEPTEMBER 22, 1860.

AN interesting correspondence has lately been published between Messrs. A. GIBBS & SONS, agents of the Peruvian Government for the sale of guano in England, and the representatives of the Ayrshire Agricultural Society.

It appears according to Mr. M'MURTRIE, the

Secretary of the Association, that a great m jority of the farmers of that county have used Peruv an guano extensively since its in roduction amongst them. They preferred it on account of its supposed uniformity of quality. This season, however, their experience has been different. A part of the cargo of the "Alice Counce," which was brought from the Clyde to Ayr, and sold to the farmers of the district, has been proved to be of very inferior quality. The directors of the Ayrshire Agricultural Association were memorialised on the subject, and they found that merchants in Ayr purchased from Messrs. CROSS, Glasgow, ab ut 270 tons of the cargo of the "Alice Counce," when that vessel had just reached Port Glasgow direct from Peru; that the 270 tons of guano were transhipped at Port Glasgow, and conveyed in lighters to Ayr about the end of January last; that the guano was delivered to farmers from that time till the end of February, partly at first from the side of the vessel, and afterwards entirely from a store in Ayr. A careful examination led to the conclusion that the merchants in Glasgow and in Ayr had acted in good faith. A number of analyses of samples of this cargo made by Profess r ANDERSON for country gentlemen and farmers in the county, showed the guano to contain from 10 to nearly 14 per cent. of ammonia, and from 9 to nearly 18 per cent. of sand. Additional samples were then drawn in the most careful manner. Each was taken from portions of several bags; they were sealed up in tin on the spot; and duplicates of the samples were taken to be ready for sending to different chemists, if it should appear desirable to do so. Four of the samples were sent to Professor ANDERSON, Glasgow, and the following are his analyses of them:—

	No. 1	No. 2.	No. 3.	No. 4.
Water	13.42	13.99	12.42	11.98
Organic matter and ammoniacal salts	41 16	42.66	47 51	37 77
Phosphates..	21.62	23 03	18.86	19 87
Alkaline salts and	10.37	8 53	13.98	12.31
	13.43	19.88	7.23	18 07
	100.00	100 00	100 00	100 00
Ammonia	12.67	12.97	14 46	10.88
Phosphoric acid in alkaline salts	2.77	2 42	4 34	2 48
Equal to phosphate of lime	6.01	5. 2	9.40	5.37

Dr. ANDERSON says:—"In reporting upon these samples, it is scarcely necessary for me to remark that they are all inferior to the average of good Peruvian guano, as they all contain a quantity of sand sufficient to produce a material diminution of their value. No. 3 is the best of the four, and it is within 1*l.* per ton of the quality of average Peruvian. Nos. 1 and 2 are so similar that they might almost have been taken from the same bag, and they would have been still closer had not No. 1 contained some small stones about the size of a Bean, which have raised the proportion of sand. Their value is from 2*l.* to 2*l.* 5*s.* under the average. No. 4. again is very inferior, as it contains 18 per cent. of sand, and less than 11 of ammonia, so that it must be estimated as worth fully 3*l.* 10*s.* less than the average."

Towards the end of his letter Dr. ANDERSON reports his opinion that this is an inferior Peruvian guano, imported with the sand in it, and, should this opinion be confirmed, it will prove a matter of much importance to the farmer. He adds that the practice is to sell Peruvian guano without analysis, on the ground that its composition is so uniform as to render it unnecessary; but that the facts now brought out will cause some alteration in this opinion.

Mr. M'MURTRIE, in reporting the whole case to Messrs. A. GIBBS & SONS, states that the inevitable conclusion of the examination is that the cargo of the "Alice Counce" has been greatly inferior to what has long been regarded as the average quality of Peruvian guano. And it is a serious reflection to the agricultural community that such inferior guano may have at other times come into their hands without its quality having been tested by analysis. Messrs. GIBBS reply as follows:—

"We have been made quite aware, by our correspondence with the buyers of the cargo of guano ex 'Alice Counce,' that a part of it was inferior, and we have no doubt whatever that no adulteration was practised, the inferiority having originated in carelessness at the time of shipment, in not setting aside, or in shipping after setting aside, certain portions of the surface guano, which, as its name indicates, is exposed to the deteriorating influences of the weather, in addition to the larger per centage of sand it is usually found to contain. The quantity of surface guano is, of necessity, very limited as compared with the remainder, and great care has, generally speaking, been taken at the islands to prevent its shipment. When such accidentally does occur, we ought to be informed of the fact to enable us to send the ship to one of our depots, where similar guano of an inferior description is landed apart from the usual imports, and kept on one side to be treated afterwards on its own merits as to value. With this explanation before you as to the exceptional nature of the inferior portion of the cargo ex 'Alice Counce,' you cannot fail to see that there is nothing to shake the confidence of the agriculturist in the general uniformity of Peruvian guano, which is what you appear to apprehend."

The conclusion of the whole matter is that 30*s.* per ton have been repaid to all the purchasers of guano out of the "Alice Counce;" and the committee of the Association, to whom the subject had been remitted, express through Mr. DRENNAN, their convener, their conviction that, "this case should convince farmers of the propriety of obtaining the assistance of the chemist more frequently than they have hitherto done. With all the circumspection of Messrs. GIBBS, it seems that they may be deceived. We believe that the facts brought to light by this investigation will lead to greater care in future; and the honourable manner in which Messrs. GIBBS and their correspondents have acted, must enhance, in the estimation of the agricultural public, their previously high reputation for rectitude of conduct. But in such a vast business as the annual importation and sale of about 300,000 tons of Peruvian guano, the utmost vigilance and the firmest integrity may not be able at all times to guard against mistakes. Science affords a cheap, ready, and effective security to farmers in making their purchases. The real safeguard of the purchaser must consist in obtaining analyses from respectable chemists."

—— WE hear from many quarters that the season has not been warm enough to bring the new Sweet Sorghum to maturity. It needs a summer like that of 1859 to ensure its reaching either quantity or quality of produce. The juice of the plant is bitter while the shoots are young; but when ripened they are sweet: Dr. VOELCKER found no sugar in it during August, while a month afterwards he found nearly 6 per cent. of sugar in its stems. It needs a summer of more than average temperature to develop the valuable qualities which in a warm climate it exhibits.

Thus a correspondent writes as follows:—"I have for three or four years had fine crops of this new forage plant, and began to hope its reputation was established as very valuable for feeding stock in August and September, for my horses annually fattened on it, although, strange to say, horses belonging to some of my neighbours, who cultivated it expressly for them, would scarcely eat it, and an old pony here actually and truly always turned up his nose at it, grinning with disgust.

"I observed last summer, during the cool, moist weather we had in August, that it looked unhappy, as if it did not like such weather, and so I half suspected that it would fail us in a wet, cold season. It seems to have done so this summer. I sowed my seed in some well prepared soil, adjoining some which has hitherto produced very large crops, on the 20th of May; for many, many weeks I paid 'a visit,' but could not find a plant. At last, early in July, a few stragglers made their appearance, which are now looking yellow and sickly, and are about 6 inches high. It is, I hear, almost an equal failure on the Continent, where it has hitherto been cultivated extensively."

—— THE avoidance of unnecessary work on Sundays is a great advantage, as well as duty. It is, however, difficult of accomplishment on farms, and there is a difficulty, especially in dairy districts, in making sufficient distinction between the first and the other days of the week. That the thing may be done, however, we have the assurance of our correspondent, Mr. PALIN, of Stapleford Hall, Tarvin, Cheshire, who is well known as a leading practical farmer in his county. The following is the routine of operations in his dairy from Saturday until Monday:—

"The cows as usual are milked at 5 A.M. on Saturday, and the milk is put into vessels to remain until the evening, and the milk of Friday evening also having been kept in a cool place remains in the tin pans undisturbed until it is wanted. It is added to the former with the Saturday's evening produce, thus making three meals in one. During the day the dairy servants are employed in turning cheese, cleaning the dairy offices, and making everywhere comfortable for the Sunday. Milking is commenced an hour earlier on Saturday afternoon, say 4 o'clock, and the milk is all prepared by half-past 5 o'clock, when the process of cheese-making commences. By 11 P.M. the business of the day is over, the utensils being all in their places and the dairy kitchen washed down. On Sunday morning the cows are milked at the usual time, and the milkers generally have a little assistance from the team men, and others who have no particular occupation on that day; after milking, the cheese of the previous evening and any others which may require it are turned in the vats, when the business of the day ceases until milking in the evening: the servants breakfast at 8 o'clock, and the comfort of the Sabbath day is enjoyed as it is (or ought to be) in other houses where cheese is not made at all. On Mondays the business of the day is precisely the same as on the four following ones, only that there is one meal's milk more to be made into cheese than the ordinary quantity; thus the ordinary Sunday's labour in cheese-making establishments is divided between Saturday evening and Monday morning."

He adds: "With regard to the avoidance of Sunday cheese-making, I can truly say that having dispensed with it for 25 years, nothing could induce me to resort to the practice again. Formerly there was scarcely any difference in a farm-house between the six working days and the Sabbath day; now there is as much comfort to the servants and the rest of the household as there is in other houses not connected with cheese making. The business of the Saturday evening is over by 11 o'clock, and the servants rising as usual on Sunday morning to milk the cows, have every opportunity of attending a place of worship twice a day."

NOTES ON SUSSEX.

By PROFESSOR J. BUCKMAN.

IN my notes on the agriculture of the Sussex coast I took occasion to describe the kinds and condition of prevailing crops. I purpose now, however, to look into a set of matters and objects which may be said to occupy an intermediate position between cultivated and wild nature, between the true aboriginal denizens of the soil and those which the farmer grows for profit; and hence as partaking of this class we may have a little to say of hedge-row fences and their weed concomitants, as well as of field weeds in general. Firstly, then, as regards hedge-rows; in no district have I seen better or worse hedges, a fact accounted for from the circumstance that the soil is admirably adapted for the growth of the usual plant employed for this purpose, namely, the White-thorn (Cratægus oxyacantha), which when newly planted quickly takes root, and in a few years a vigorous young fence results; they are here, too, planted with more than usual care, and closer than is generally done, and this with the view of keeping up an impermeable fence by constant clipping, which is often done twice a year, without that system of plashing which is elsewhere so general.

Still, good as are young hedges in a district where wild vegetation is so rife, and especially of hedge-row weeds, they do not long retain their best characteristics, but Briars and Brambles soon make their appearance, at first only here and there, and confined to the hedge-row, but gradually sending out shoots which take possession of the hedge bank, and not content with that cross the ditch, and there entangling Blackthorn, Woodbine, Maple, and weeds, meet over the ditch and form a broad-topped hedge oftentimes yards across—and it is most remarkable, that while the greatest pains are taken to clip all this to a level topped mass large enough and thick enough to bear a bed on the top, yet no care seems to have been taken at any period to keep out the rubbish, but rather to cut it into shape as though it were wished to be retained; and so the want of repellant properties in the hedge, which if such stuff was kept within due and proper bounds it would possess, is made up by breadth, so that in truth a formidable barrier is presented by even a bad hedge on either side of a deep ditch, which is not an unfrequent occurrence in the district under review.

In a botanical point of view it is curious to mark in this tertiary valley, with its admixture of clays and sands of the subsoil with the drift, pebbles, and alluvium by which it is so much covered up, the entire absence of the hedge-row plants of limestone district, as thus the following plants were not at all observed, and if present, must be very scarce:—

Rhamnus catharticus, Buckthorn.
Euonymus europæus, Spindle Tree.
Viburnum Lantana, Mealy Guelder Rose.
,, opulus, Common do.
Clematis Vitalba, Traveller's Joy.

Their places are supplied by scrubby remnants probably of hedge-row timber trees, in which, of course, the Elm greatly prevails; Blackthorn. Briars, and Brambles, festooned, as we have seen nowhere else, with complete masses of

Bryonia dioica, White Bryony
Tamus communis, Black do.
Convolvulus sepium, Great Bindweed.

Beneath the hedges grow the usual mass of weeds of every description—Thistles, Docks, Wild Carrots, Couch, and others, but to do the Sussex farmer justice, in no part of the country have we seen these pests more sytematically kept from any great amount of seeding, for in the period which usually occurs between the hay and corn harvest, the whole hedges are clipped with great care, and not satisfied with this the space between the hedge and the crop is carefully cleared of all its filth, and a clear passage thus made all round the field. It is on this account, united with the circumstance that an absence of lime may always be marked by a smaller

list of wild plants, that the weeds of the arable are certainly not so troublesome as in most districts. Mangels and Turnips are seldom smothered in their early start by Chickweeds, Chenopods, Polygonums, Mustards, and the like annual weeds, to say nothing of the perennial Rhizomatous Grasses, as Couch, Florin, and creeping Poas. The Thistles, Hardheads, Coltsfoot, and Docks, though a little disturbed by the ploughing, still leave enough behind to tease every farmer on the limestones and chalks; but it is not so, however, to anything like this extent in Sussex; and hence the roots which are on the flat can easily be hoed and regulated at one, or at most two operations; whilst the farmer of calcareous soils has to be constant with the horse-hoe; and then the notion that his fields are "clean as a flower garden" is after all a fiction, meant to express how he would have it if he could. But even here the careless farmer hangs out his banner, which on the sandy soils is particularly conspicuous in the blazon of Red Poppies (Papaver Rhœas) that will be found in every crop; these are the result either of the plants seeding in the soil from want of efficient weeding, or else of refuse and dirt finding its way to the farm from the dung heap; but in either case they have been allowed a seed time on the farm only to be still kept up in consequence; not that this view is at all believed in, for with the wild Poppies of Sussex as with the Charlock of the Cotteswolds, we are told that it is "natural to the land," a theory which will go far to present convincing evidence of its truth as long as it is so earnestly entertained.

Still the arable part of a farm in the Sussex flats, as everywhere else, always presents a sufficient quantity of what may be termed agrarian weeds, or such as track cultivation almost everywhere. These do so because shifting crops are necessarily cultivated from seed; and hence where cultivation upon the system of courses prevails, there will be found to be a wonderful agreement in the kinds of weeds. Thus our American cousins, with a widely different aboriginal flora, have yet our own agrarian weeds, a fact which can doubtless be well recognised in most of our colonies; this can only be accounted for from the fact that they are sent over different parts of the world with the crop seed, and thus it is that Couch Grasses, the various varieties of Lop—Bromus mollis and its congeners, Ranunculus, Selfheal, Bastard Alkanet, Sandworts, Daisy, and Plantains, are looked upon as natural to "seeds." So universal indeed is the Daisy as to be called the "White man's foot," whilst Plantains, which are so common in fields in New York and Pennsylvania, are stated by Beck in his Botany of the United States, to have been introduced from Europe. Now as regards the Ribwort Plantain, Plantago lanceolata, we are quite aware that it is not unfrequently viewed as a valuable fodder plant, but be this as it may, if we pay for Clover seed we do not like a mixture of Plantain therein, for in this way we have seen a field become all Plantain, and so Clover be quite a secondary matter; in such cases it is true the sheep will eat it, as what will they not eat rather than starve? At the same time, both in its effects upon the crop with which it occurs either by accident or design, as also upon the animals which exclusively feed upon it, we have seen sufficient of its deleterious nature to convince us that it is one of the most mischievous weeds of seeds, and ought never designedly to be mixed with Clovers, and still less should Clover be seeded in which it occurs plentifully, which is too often the case, "because it is the most profitable way of dealing with it."

In some seeds in the neighbourhood of Chichester we noticed enough for a crop of Gnaphalium Germanicum (Cudweed varieties), which though seldom entirely separated from any sample of seeds, would yet not be seeded for sale as the Plantains, as its seeds are too light, and it would not pay. Plantain seeds however are heavy, and so weigh well; they are comparatively large, and so fill up the measure. It is a seed, too, grown more easily and with greater certainty; and hence, then, we view either way of sending it out with Clover, whether as harvested with Clovers, or as purposely mixed with them, as a highly reprehensible, if not too frequently a dishonest act. But of all the plants which are spreading through the medium of seed, none at present have the interest of the two parasites of Clover, namely, Dodder and Broomrape; both these are gradually but surely spreading amidst the Clovers, especially the red kinds, in Sussex.

The Dodder of Clover, some of our readers will well know, is a parasite whose wire-like tendril-formed stems twist around the plant which is to be its foster parent, and there by constriction become attached to the cellular system thereof, and indeed so closely united therewith, that from that time the cellular tissue of the parasite is supplied with nutrition through the cellular tissue of the Clover to the destruction of large patches of the crop, for if Clover can hold its own with so much difficulty as in some soils scarcely to be capable of cultivation, how much must those difficulties be increased by having such a tyrant as the Dodder to feed.

We have little doubt of the introduction of Dodder in the Clover seed, as we have traced it in several samples; and though it is a disputed point whether the agrarian Dodder, the Cuscuta trifolii of Babington, is truly wild in England, yet there can be no doubt of the fact of its being new to some districts within our own time, and that of late years it has spread wider and wider. A correspondent to the *Agricultural Gazette* in August, 1860, asks: "Have you ever turned your attention to the annual increase of Clover Dodder in our Clover leas; it is injurious enough to pay for decided methods to destroy it." We are quite of the same opinion, and the best means to this end will be pure seed. We observed this pest in a few Clover leas in Sussex; at Pagham, both this and the next plant to be described, were found in the same field.

The Broomrape (Orobanche species), like Dodder, is rapidly progressing throughout English farming, but no where have we seen it in so many fields as in Sussex, though in Wilts, Berks, and Gloucester we have occasionally met with larger masses in a single field. We have lately seen a quantity of O. minor in some Alsike Clover, in which case every root of Clover it had settled upon was completely killed. We have lately been informed that most of the farmers at Reading market knew the plant, but they consider it wild, and it would also appear that they "take no account of it." Now, that it is occasionally wild in England is certain, but then its appearance all over a field in a shifting crop, where it was never seen before, can only be accounted for on the supposition of its having been brought with the seed; if so it could scarcely be detected by the most curious observer, as they are scarcely so large as the dot to an i in the print of this article, and so numerous that probably more than 1000 are contained in a single capsule; and as some specimens before us contain an average of 20 capsules, we may thus make the following sum for a single flower stalk of Broomrape:—1000 × 20 = 20,000. How these seeds germinate, and how they get attached to the roots of the Broomrape, is a subject upon which we are now experimenting with the hope of getting some interesting matter, to which end specimens in seed of all the species are most earnestly solicited. No doubt their enormous fecundity is on purpose to meet the difficulties of attaching themselves to their future nurse; still circumstances will in such instances be not unfrequent where these difficulties are removed, and then we have such an alarming accession of an evil as it would appear is necessary to convince some people that the evil exists at all.

As regards its injurious tendency we shall have more to say at another time; we need only now remark that as it kills the plant on which it feeds, and is itself a plant of strong medicinal properties which cannot act as food for cattle, we cannot help thinking that it is injurious in proportion to its quantity.

We now conclude our notes on the limited district we proposed to comment upon, and in conclusion we can only hope that although we have not touched upon what may be termed the economics of farming, yet that our remarks upon agrarian botany have not been without interest. *Cirencester, Sept.* 15.

Home Correspondence.

Harvesting Wheat in Wet Weather.—On the three days, August 30, 31, and September 1, expecting the wet weather to continue, I had 30 acres of Wheat reaped and placed under cover in barns, hovels, cattle and implement sheds, &c.,—in fact, in everything that had a roof to it,—setting each sheaf upright on the ground, thus exposing the whole of it to the action of the air. Each acre of sheaves occupied an area of 400 superficial feet. The Wheat was cut when dry and carried immediately; it is now in excellent order, and my people commence thrashing it to-morrow. Had the wet weather continued, the whole might have been removed in a few days, and stacked either out of doors or under the same roofs, making room in the former case for 30 acres, and in the latter case for at least 20 acres more. To show that in the extreme case of the weather not permitting the Wheat to be cut dry it might still be saved, I may mention that two waggon loads of sheaves standing in the field throughout the wet week ending the 25th of August were carried on that day in the pouring rain and placed under cover. They were then soaked throughout, and are now, September 10, fit to thrash. I had one field of 10 acres dried in the straw on three kilns in a malthouse, each of which was 25 feet square, and contained upwards of an acre of sheaves. *Frederick F. Hallett, the Manor House, Brighton, Sept.* 10. [We extract the above from the *Times* of Sept. 12.]

The Harvest, 1860.—A large quantity of Wheat has been secured in good condition; the continuance of fine weather for more than a fortnight has somewhat abated the hurry and alarm that two or three weeks since seized some of our oldest farmers. The commencement of cutting being fully 3 weeks later than usual, seems to have impressed many persons with the idea that corn ought to be ripe, and forthwith they made havoc of it, some because it was laid, some because it was blighted, some because they thought hands would be scarce, and some because they did not know what to do with those they had engaged for harvest work; the end is that very much corn has been cut a week or ten days too soon, drying of a green colour, and considerably less in bulk and weight than it would have been if allowed to stand longer. We regret to say that blight and mildew has extended more than was anticipated, so that some of the best crops, looking bright and upright, have nevertheless a considerable proportion of thin and deseased kernels in the sample; but of the laid and unripe crops, which have been not only reaped too soon, but thrashed too soon, in some instance great difficulty has been experienced in effecting sales, and only at very reduced prices. Eighteen-stone Wheat will not be the rule this year, and though upon the whole it will be more productive and of better quality than last year, yet the fen Wheats will barely reach an average. Barley is heavy but discoloured, and where secured in good condition will doubtless make very tolerable malt; it will be an average crop. Oats yield well and weigh well, and will be more than an average crop. *J. W., Peterborough.*

Societies.

ROYAL NORTH LANCASHIRE.—The 14th annual meeting of this Society took place last week at Burnley. In all there were about 937 entries of implements, cattle, &c., and premiums and silver medals, amounting to about 500*l.*, awarded.

The trial of Implements included ploughs, harrows, Turnip hoes, churns, &c. The following account is given in the *Preston Herald* of the reaping machine competition.

The machines at work were—Messrs. Crosskill's of Beverley; M'Cormick's, with Burgess & Key's patent platform; Messrs. Gardner & Lindsay's, of Stirling (shown by Mr. R. Atkinson, of Lane House, Ulverston); and three of Wood's reaping and mowing machines, shown respectively by Mr. Billington, Preston, Mr. Farrar, of Thornholm, and Messrs. Richmond & Chandler; and Mr. A. C. Bamlett's steel mowing and reaping machines combined. Wood's, Bamlett's, Gardner & Lindsay's, were the machines that appeared to be the favourites with the spectators, as they appeared to be the least liable to become choked or impeded in action. And Wood's prize combined reaping and mowing machine, shown by Messrs. Richmond & Chandler, of Manchester, obtained the Society's prize of 20*l.* and silver medal. Better and clearer work we could not wish to see done, though, we believe, the judges had some little difficulty in deciding between it and Bamlett's to which they awarded a silver medal.

The trial of Churns concluded this part of the programme, which took place about 4 o'clock, in front of the "Lord's Farm," adjoining the field on which the implements had been tested, each, irrespective of size, being supplied with 16 quarts of cream. A tolerable number of spectators were in attendance, who appeared to take much interest in the matter. There were only four churns in competition, viz.:—Williamson's barrel churn, shown by Mr. James Hartley, Ighton Hill Park, Burnley, which produced 12¾ lbs. of butter in 14 minutes; Mr. Thomas Standing's four gallons sun and planet churn (Preston), which produced butter in 37 minutes, weighing 11½ lbs.; Mr. James Eastwood's 16 gallons churn (Blackburn), which obtained 11 lbs. 13 ozs. in 14 minutes; and Messrs. Summerscales & Son's churn (Keighley), which produced butter in 26 minutes, weighing 12½ lbs. Of course the first mentioned apparatus having produced the greatest quantity as well as quality, it received the prize—a silver medal or 2*l.* By some it was thought that if all the churns had been of one size the trial would have given more satisfaction, those who had larger churns, owing to the small quantity of milk with which they were supplied, labouring under some disadvantage; but upon the whole they were highly commended.

Discussion on Manures.—After the trial of the implements, the Council proceeded to the Bull Hotel, where lunch had been prepared. After partaking of the refreshments, a conversation took place on manures and their applications to crops.

MR. HARTLEY said the subject was of immense importance. The best manure he had found yet, considering its benefit and adaptation, was the night soil they derived from Burnley. There was a great expense incurred in carting it, and at the same time an objection on the part of the men to be engaged in accumulating it. It was very desirable, especially in the present state of the labour market, to have a manure of a less bulk, and at the same time, of a less price, and with the same benefits. He had tried bones, and he had tried phosphate, and on two occasions they succeeded remarkably well. This year, however, he considered phosphate almost a failure, but he believed that was to a great extent owing to the wetness of the season. He could find this year that there was an advantage to be derived from guano, in comparison with bones and superphosphate. Another year perhaps this might be reversed: therefore, under the present circumstances, he thought the society should, by experiment, obtain information and publish it to the country.

Mr. BAXTER gave it as his opinion that night-soil ought to be taken in boxes from the places where it was deposited without ashes. Boxes ought to be adopted in all towns, both for dwelling-houses and mills. It ought to be conveyed without being mixed with ashes, and they should use either Macdougal's or some other disinfectant. Night-soil, so collected, was, in his opinion, one of the best manures, but, as Mr. Hartley had observed, the expense of removing it with the extra bulk of ashes and cinders mixed with it, prevented it being beneficial for farmers to use. He found that if it was laid in heaps and mixed with ashes after collecting, and then had to be carted four or five miles, it comparatively destroyed the benefit of using night-soil. There was another thing he had observed in his practice as to night soil, and that was that if it remained in heaps mixed with ashes for a few months it became almost worthless—the cinders ate up the fertilising properties, and the deterioration was very great. But if used immediately after being collected from houses and mills it was a ready and excellent manure for Grass, or roots, or any other crop. As to other artificial manures, he had used bone-dust to the amount of about 8 tons last season, and he found that the present effect from it was very considerable, and it was an unquestionable fact that bone-dust was a manure which lasted a considerable number of years. He had tried Kooria Mooria guano; he had tried salt, and Peruvian guano, but it was his impression that the cheapest manure was night-soil, and if they paid the same attention to it in the shape of cost in preparing it as they did to guano and bone dust, for the former of which they paid 13*l.* 12*s.* or 14*l.* per ton, and bone-dust at not less than 8*l.* per

ton, that was for half-inch bones—it would amply repay them. He had made some experiments during the last year or two in gas lime, and he was perfectly satisfied with the results of the trials. He used last season about 85 tons, which he brought down to his farm from Bradford, at a cost on being delivered at the station at his farm of 4*s.* 4*d.* per ton. The way he used it was, he had put a man into the railway truck, and he there crushed out the lumps as fine as he could. It was then loaded into the cart and another man spread it upon the farm at the rate of three or four tons per acre. He had tried it both in his meadow and pasture lands. He tried some at the latter end of April or the beginning of May, on meadow land last year—which year would be remembered by all agriculturists for some time to come with respect to its results to meadow land—and he had the best Grass, with the exception of that to which liquid manure was applied from the farmstead, than any other he had. If it was used at a greater rate than from three to four tons per acre—he should prefer under four to over—he did not think the benefit would be so great. He had not tried it on ploughed land in any way so as to give an opinion of its effects, though in regard to other lands he had had some little chance of proving the merits of it, for he had used 84 tons last year, and he could only say that in his meadows it had given him the best Grass he had had this year. The after Grass was particularly good, and any gentleman who understood the colour of Grass or its quality need only to see it to be convinced of the utility of this manure. He laid it on from October to the latter end of April, fresh from the works and smoking hot. The greatest objection made to using gas lime was that it destroyed the Grass for the time, whether laid on in winter and summer, but after it began to operate the Grasses came up dark green and luxuriant. The Grass had been eaten better off the soil by the cattle where gas lime was used than it had been for the last 20 years. The land, too, was wet and very rushy, but anything was picked up where the lime was laid and where it was not rushy, and it was astonishing how the cattle and sheep eat it up. There was a great variety of land on his farm, but the principal part laid on a kind of mongrel, stiff, tenacious clay subsoil, betwixt limestone and grit. It appeared to answer best on deep, strong, loamy land, and it was his impression that where land was in a high state of cultivation it would pay far the most for being used there. But it answers equally, and above his expectations on strong and wet land. He had tried it on land not worth more than 10*s.* to 17*s.* per acre.

Mr. TALLANT said he knew a farmer who put gas lime on his land in greater strength than that named by Mr. Baxter, but it destroyed the vegetation for three successive seasons. He put on at least 8 tons per acre.

Mr. HARTLEY said he had used a large quantity of ashes from Burnley—hundreds and hundreds of tons—and he considered that when they could be had, as labour was before this last year or two, it was the best manure he could get, especially for clay lands. On one portion he used nothing more than ashes and night soil, and planted cabbages there, and he could have shown the judges the effect of that six years after. He had the best crop of Clover also from it, but whether it had generally a good effect on crops of that nature he could not explain.

Mr. HOWARD said there was an objection to ashes, for in the course of a few years they got worked into layers or beds. He had seen such manure used on strong soil with the expectation that it would tend to make the soil more open and porous, but after three years' time they had to plough it up three times in one season, and to engage a number of boys to pick the ashes off the land.

The CHAIRMAN: What size were the ashes?

Mr. HOWARD: The ordinary size. Cinders he would not apply to any land he had, though fine ashes might be serviceable.

A short desultory conversation took place on this point, after which Mr. HOWARD said he had a field of about a dozen statute acres, which was well manured with ashes and night soil, well worked in with the plough. It had since been well laid down and thoroughly drained, and any manure put upon it would scarcely make any return; and when they dug into the soil about 3 or 4 inches below the surface, they found a bed of ashes. But what were generally termed ashes here he looked upon as cinders, and there was a great deal of difference between ashes and cinders. The ashes he agreed with the use of were really ashes, but cinders he would not allow to be brought upon his land upon any account. If he could have them crushed in a mill he should have no objection to them.

Mr. BAXTER said—His opinion was that cinders were injurious, and he still adhered to the argument he had advanced, that if night soil could be got clear from cinders, it was one of the best manures they could get, and he was decidedly of opinion that where cinders were used with it the land would become impoverished unless some other manure was employed, and if it was Grass land, in a few years it would become very poor. Night soil was what they wanted, but he really believed that if they could have it without cinders it would be much better. Fine ashes he did not object to.

Mr. UNTHANK said he had used ashes on a small scale himself, and he differed with some of those gentlemen who had spoken, for he thought that when ashes were applied either for growing Turnips—and he meant ashes—or as a top-dressing for Grass land, they were very beneficial. That had been his experience. He need not say a word about cinders, for all were agreed upon that subject, that they were injurious, place them as they liked. He was inclined to think that no manure would produce a better crop of Grass than ashes not mixed with anything, but just as it came from the fire. That was so far as he had had experience, and especially so in bringing forward the growth of White Clover. He only considered that that manure lasted for a year, and if they had to fetch it a distance of 4, 5, or 6 miles it was a consideration whether it would pay them to lead it that distance. He was at that distance from ashes, and he doubted whether they would pay him to fetch them. Allusion had been made to gas lime, and he had had a little experience in that also for the last three or four years, but his mode of applying that had been rather different from that of the gentleman who introduced the subject. He made his into a compost in the autumn. He had two parts of soil or clay mixed with one portion of gas lime, and he used it at the rate of about 1½ ton per acre. He did try the experiment of using more—something like 3 or 4 tons—but as he observed that when he put it upon the Grass even in winter, when the Grass was in a dead state, he could see that it injured it then and for a considerable time afterwards. If he were to give preference to any manure it was to the sulphate of ammonia, which he applied at the rate of less than two cwt. per acre. He would not wish for a better topdressing than that, which would produce as much as any other compost or any other manure that he had tried, and he had used guano, and bones, and various other manures. This was the first year he had tried sulphate of ammonia, and from the good effects he had seen from it, he should try it on a larger scale next year, for he was fully convinced that it was a very valuable manure for the topdressing of Grass land. When his servant man sowed it, it was in such a small quantity that he said if that did any good, they might as well sow it with snuff; but now the man said he could by the crop tell to an inch where he had sowed that manure. They tried it in three places, and it had the same good effect in each.

The CHAIRMAN said there was a difference of opinion as to the superiority of raw and boiled bones. Some differed, and he knew gentlemen who stuck to raw bones, and he knew equally celebrated men who stuck to boiled bones. There was very little difference, so far as he could see in his experience, between the two, but he thought it was in favour of boiled bones. During the past few years he had seen very different results from the preparations of boiled bones, but he felt justified in saying that a return of capital would be seen next season after the application of this bone dust. He would bring before them at once the mode of preparation, and he would wish to evoke discussion. The bones in this preparation were boiled first until all fat, grease, and gelatine were completely out of them; they were then thoroughly soaked in sulphuric acid. They must be thoroughly soaked and put out to dry, and then they are very easily pulverised—they are put under a mill and ground to a very fine powder, until it would crumble to dust under their fingers. This could be sown at the rate of 2 or 3 cwt. to the acre, and it had been found that the very next season this application of bones produced a complete return of the capital expended. It seemed to him that by this mode the bones were immediately reduced to that condition that the plants could immediately feed upon it; but if they put on bones not so pulverised, they would find it the same year after year.

Mr. UNTHANK said he should say that all farmers ought to dissolve their bones, for it was more for a landlord than a tenant to apply them unboiled and uncrushed. It was a very slow process to get the benefit out of them when sown unground, but he had no doubt that in the end the result would be the same, for they would last a generation if sown in the pure state. His mode had been to dissolve them with sulphuric acid. He was only occupying his own land at the time, and therefore he did not expect to be turned off in a year or two, and he thought that if he did not get so good a result at the commencement, he might live to see the benefit of it another year, and therefore he did not go to the same extent in preparing his bones as he had alluded to.

The Cattle, Horses, Sheep, and Pigs.—In the live stock, the exhibition was most excellent in almost every class. The Short-horns comprised upwards of 100 entries. Lieut.-Colonel Towneley's Royal Butterfly got the first prize for the best two year old or upwards, and Bow Bearer got the second prize. Mr. Thomas Atherton, Liverpool, showed some capital stock—his roan cow, Moss Rose, sire Sixth Duke of Oxford, which got the first prize for the best cow in calf or milk, was a splendid animal, as also was red heifer Red Blossom, by the same sire, and the one shown by the Rev. Mr. Wood, of Singleton Lodge, Kirkham, in the same class, which carried away the second prize. The following comparative statement will show, at a glance, the sum obtained for admission to the grounds, and the amount of subscriptions and donations received each year since the formation of the Society:—

Year.	Places of Admission.	Receipts for Admission.	Amount of Subscriptions and Donations.
1847..	.. Lancaster ..	£ 63 18 0 ..	£525 11 0
1848..	.. Preston ..	..140 14 6 ..	..540 17 3
1849..	.. Lytham ..	.. 91 8 6 :	..537 8 6
1850..	.. Burnley ..	..209 18 0 ..	..489 18 6
1851..	.. Lancaster ..	..111 16 7 ..	..613 10 0
1852..	.. Preston ..	..140 11 6 ..	..493 12 6
1853..	.. Blackburn	..141 15 6 ..	..380 9 0
1854..	.. Burnley ..	..128 2 10 ..	..528 7 2
1855..	.. Lancaster ..	..112 11 10 ..	..365 9 0
1856..	.. Preston ..	.. 95 13 8 ..	..513 13 0
1857..	.. Lytham ..	..138 0 0 ..	..398 16 0
1858..	.. Ulverston ..	..239 4 8 ..	..397 9 6
1859..	.. Blackburn ..	..253 4 3 ..	..523 1 6
1860..	.. Burnley ..	..307 9 0 ..	..

MUCH WENLOCK AGRICULTURAL READING SOCIETY, *Aug.* 22.—Lieut.-Colonel Sir Herbert Benjamin Edwardes delivered an Address to the Olympian Class on the occasion of their annual meeting for athletic sports. He said:—"It is a great pleasure to see such a gathering as this for making a holiday. There's a great deal too much work in the world—too much work for our profit, I mean; for of working for others—of self-sacrifice and self-devotion—there is never too much. Men are too much slaves to their occupation now-a-days. There is a perfect idolatry of labour, which leaves no margin for home, or holiday, or the inner life. I rejoice, therefore, to see this thorough determination of the good folks at Wenlock to have a regular game of play once a year at any rate. This Olympian Class is a great idea, and it does honour to your public-spirited townsman, Mr. Brookes. Long may you live to enjoy these games! And long may he live to have the satisfaction of seeing you enjoy them. I find that this Class is one branch only of a larger institution, the Wenlock Agricultural Reading Society, which has a lending library, a drawing class, a music class, a class for chemistry and botany; collects photographs, autographs of distinguished men, and fossils; and has a working men's branch besides. Looking through the Olympian Class for this year, I find prizes offered for no less than 12 manly sports, to which are added prizes for six different exercises of the mind; and lastly, two prizes for womanly industry in plain sewing and knitting. Now it is impossible to read this list of objects promoted by the Wenlock Agricultural Reading Society without at once according it our hearty approval, and saying "Here is a society really doing good. Here, in the heart of a midland county, out of reach of the great centres of learning, arts, politics, and fashion, in a quiet nook of Old England, here is a little knot of English men and women banded together to do good to themselves and others, and help as much as in them lies, not only to make Old England what she is, but better than she is." It improves the mind, strengthens the body, invigorates the race, affords innocent amusements, and so keeps men from bad ones, for amusements men must have; keeps men out of beer-shops, and from lounging about doing nothing, and drags them out into the fresh clear air of heaven to get health and fun together; it tends to make men sober, and adds to the general happiness and morality of the town and neighbourhood; and, lastly, it draws all classes, rich and poor, together in true English fashion. This is a thorough English society; and Wenlock may well be proud of it; and I rejoice to hear that the other leading towns of Shropshire are desiring to extend the circle of its influence. The annual expense of these games is very great. Let the cost and the enjoyment go round the county! I would venture, if you will allow me, to suggest the selection of another name for this particular class. The name "Olympian" is a good name in one respect, it classically expresses that union of mental and physical training, and mental and physical competition, which is your object, and which was the characteristic of the renowned games of Greece. But why should England adopt a heathen and a foreign name. Let me advise you then to call this thoroughly English class by a thoroughly English name. Call it the Shropshire Class of British Work and Play, or anything else you will; but let it tell of English men and women, English boys and girls, English labours and English holydays, English earnest and English fun. Again, I see among your sports the practice of the bow. Now let no Englishman speak slightingly of the "cloth-yard shaft," which ere now has measured the length of many an enemy on foreign soil. But there is a time for all things, and the time for archery as a martial exercise has gone by for ever. We live in days when the whole art of war has been revolutionised by the rifle. It is impossible then that the arrow can ever fly again in a foughten field. And if unfit for real war, does it not become unfit for athletic sport? Does it not lose its interest as an exercise for men? To them the very charm and life of any sport is its imagery of earnest; and the earnest has gone out of archery. For the future, then, I would say to the men of Wenlock, "Resign your bow and quiver into gentler hands; trust these innocent weapons to the fair, who, when they aim at human hearts, mean them no harm." For the stern men of England henceforward the national weapon is the rifle. And I am glad to see that this year you have for the first time introduced rifle shooting among your Wenlock games. This is giving it its true place. The Volunteer movement will never be safe till rifle-shooting has become the national game of our day, as the popinjay and archery of yore. It is a more reasonable and intelligent weapon, less dependent on brute force, but not on that account less manly, for its practice requires great discipline of all the manly qualities. It develops individual intelligence, self-reliance, patience, thoughtfulness, and sobriety, for no drunkard will ever do anything with the rifle. The rifle is only domesticated in countries renowned for national liberty and individual independence. If, men of Wenlock, you wish to bring about this result in your own town, I would counsel you to apply to some one of your many tried and liberal friends among the landed gentry to rent you a piece of meadow land to be the playground of your town. It does not do to be always borrowing a field. Rent one, and be independent; so that any day of the week, except Sunday, you may be able to practise your rifles, or have a game of cricket or foot-ball. And now, my friends, I wish you a good day. May your Wenlock games long flourish. May they extend all over Shropshire, and make Shropshire men still better and stouter than they are."

Calendar of Operations.

SEPTEMBER.

ISLE OF ELY: *Sept.* 12. We commence our report by a reference to the glorious change which has taken place in the weather since our last was written. We were then apprehensive of danger to the corn crops from the continued rains; and we were doubtless on the eve of a fearful calamity. A few days longer continuance of such unpropitious weather would have occasioned the corn to sprout, whether cut or uncut, and rendered it unfit for immediate use. But a gracious Providence has interposed, and when our fears had well-nigh overwhelmed us deliverance came. For two weeks we have had the weather as favourable for harvest operations as could be desired. Wind and sun with a low temperature have enabled our farmers to make rapid progress, and several are just finishing the in-gathering of all their white corn crops. Labour has been plentiful, and the low temperature has occasioned the crops to ripen very slowly; we have therefore experienced no difficulty in getting the corn cut as fast as it became fit. The last two nights have been intensely cold, the thermometer on the former falling as low as 37° in a sheltered situation, and last night as low as 37½. These frosts indicate an early return to winter. Whilst we are writing we can see the rime laying upon some old seed and stubble; we therefore fear the backward corn will be prematurely ripened, and will consequently be considerably injured. We have not yet seen many samples of new Wheat, but the few we have seen have been very inferior, especially those grown on black fen lands. Indeed we never remember to have seen such wretched quality. Two samples we saw, although very dry and hard, weighed we believe under 15 stone per coomb. Whether these are to be regarded as fair and average specimens from these soils for the year we can scarcely tell. If they are, our prospect is a mournful one, and we have too much reason to fear it will prove so. On our high and stronger lands the sample is much better, but by no means fine. We conceive there will be a difference of 16*s.* per quarter in the prices this year between our best high land and worst blighted fen land Wheats. The Oat crop has cut up well, and promises a good yield. The few samples which have appeared have been favourably reported of. Beans are still unfit to cut: probably these frosty mornings may hasten them. Potatoes are as bad as they can be in nearly every instance. A few on the driest and best soils may have to some extent escaped: but on the majority of lands the disease is extremely virulent. Mangels are small, and the late sown and those resown look unpromising, and complaints are now heard daily that these will be but very small bulbs, especially should the present cold weather continue. Grass keeping is plentiful, and stock of all kinds thrive well. Coleseeds are not uniformly good: on cold wet lands the plant looks sickly, and the late-sown crops grow slowly. Some of the earlier sown on dry lands are very fine. Meat is lower but with bad Mangels, inferior Coleseeds, deficient Turnip crops, and ill-gotten hay we cannot anticipate low prices another winter and spring. The corn trade is unsettled, and great irregularity in prices prevails. Doubtless, as the new crop comes more largely upon the market, and its flour-producing properties are ascertained, we shall have a more regular trade and more settled prices; what those prices will be, we venture not to predict, but for good qualities they cannot be very low. *Your Fen Reporter.*

SOUTH ESSEX: *Sept.* 10. Strange to write, Mangels, and many other growing crops, since the rain ceased are apparently suffering from cold nights, and are as if in want of a shower, the

surface of the land being capped, or completely plastered, hard and dry, so as not to admit sufficient atmospheric air for the rootlets to breathe; there may not be a crop; but there is abundance of provender and Beans, good, bad, and indifferent, to eke out and spare the root crops. I still contend that corn, where proper and necessary precautions were put in practice to meet the emergencies, such as "deep cultivation," the first and most important point; secondly, "early and rational seeding: thirdly, "timely weeding, rolling, and harrowing the crops;" and fourthly, "their being only judiciously manured;"—that notwithstanding all the sudden, unexpected, and repeated casualties of cold, wet, and wind, they have had to encounter at the time, and from the period the corn was sown till it should be fit for the sickle; yet I repeat, where all the necessary provisions for the worst events had been circumspectly watched over, and put into practice, whether on our own lands or on others, and moreover whether on drained or undrained land, corn is good; and where imperfect tillage has been the rule—unavoidable I admit for want of means in many cases, and not from sheer neglect—crops deficient in quantity and quality are the exception, but yet, in the main, there will be an average crop. Some Wheat, in truth, is not only good, but superlatively fine, compared with crops in ordinary years, and if it pleases God fine weather should continue, better samples will be sent to market than in the last preceding years, when corn was prematurely ripened before the usual time for harvest, and more deteriorated by wet during harvest time, than in the present season. I fear however that for want of patience and fear of further derangement in harvest operations, much has been incautiously cut too early; also unnecessarily and hurriedly carried to the garner in a condition not sufficiently dry. Many other crops, however, not indigenous or inured to our latitude, and which are considered of but little consequence by consumers and disinterested persons, though they are in reality of the greatest importance to those who have to produce them, are decidedly lost; such are various tender fruits, flowers. seeds, Peas, and especially Potatoes; some of the former are fully half spoiled, and the latterthree-fourths, and in many cases are becoming totally extinct. Fruit, as I observed on a former occasion, especially Apples, are a partial crop, but in some districts are very good; and what is better, winter fruits are excellent and freer from blight and insects (though at present small) than they have been for many years past; hence, if a fine autumn intervenes between this and the olden time for gathering fruit, viz., the end of October, their keeping qualities will be unusually good, and must consequently be too cheap for the producer (and will it not be the same with corn? seeing the matter of a deficient harvest here has been so much exaggerated to foreigners, whose exports now and at all times rule our markets, whether our productions be good or bad). Allowance will have to be made for lateness of the season, and many winter eating fruits will not be ripened this year till November; hence we have had Jennetings or June-eating Apples in July, Lammas Pears or August-eating in September, &c. This will also be the case with many other autumn crops. Mangels for instance must not be expected to be fully grown and fit for storing and keeping as they were last year by Michaelmas; and as to the probability of such sudden and severe October frosts visiting us as in 1859, to injure them, there are 50 chances to one if such an occurrence of early, sudden, and severe frosts, will happen again for a long time to come. As we have no records of the like in years past, it will be better in my humble opinion to cast off those apprehensions, as though such an occurrence had never happened. Slight autumnal frosts have seldom hurt such things only in a small degree, from which they have quickly renovated on return of warmth, being inured to cold by frequent exposures, and only slight attacks, though nipping frosts have frequently occurred in my remembrance from September to Guy Fawkes'-day; but notwithstanding this I have known Apples, Turnips, and even Potatoes unscathed, and up to that time in full growth. *Abraham Hardy, Maldon.*

WARWICKSHIRE: *Sept.* 10.—Thus far, the month has brought fine weather, and harvest operations have progressed apace. Peas were carried by the 5th, and Oats finished in the following day or two. A goodly portion of the Barley crop is also in the rick, although being full of Clover it has not stored readily. We may be excused making a digression, to remark that on one field of Barley, we have (by reaping the cereal above the Clover, and mowing the remainder) managed to get fully a ton per acre of prime Clover hay, mixed, of course, with the Barley stubble. Little of the Barley has got its usual plumpness, or fine colour, and a considerable proportion must pass as grinding samples. Wheat is well forward in cutting, and some of it has come under the sickle in a very green state. A portion is also carried, but not in prime condition; and what is already in the rickyard will have to see the month of May, ere it is fit for the miller. There may be exceptions, but not in the neighbourhood whence we write. And the grain, even after being a week in the shock, still handles soft and milky, where we had expected to see it dry and firm. Hence, we suspect that shrivelled corn will be a common sample in our local corn markets. Some little quantity of old is still on hand, but the millers are not buying so readily as a few weeks back. Cattle and sheep are doing better than during the wet weather. Grass is abundant, and green crops are also growing apace. Potatoes, in the general run, are sadly diseased; Flukes and other late varieties alone being comparatively safe. *T. B.*

Notices to Correspondents.

GUANO: *An Old Subscriber.* We understand that Messrs. Gibbs retain the agency of the Peruvian Government, so far as regards the sale of guano in England.

POULTRY: *M J N.* Your bird is either suffering much from moulting, or else he has picked up something that has interfered with the functions of the gizzard. I would recommend a dose of one tablespoonful of castor oil given at night; and that instead of any whole corn he should be fed on wetted bread or meal mixed slackly with water. The castor oil and diet to be continued until a change takes place. If the bird does not improve, wet the bread and meal with a little good beer, and give a few grains of bruised Hemp seed with it, still avoiding all whole corn; and be particular that he does not always have water by him. The bird should be shut up from the other fowls in a shed or a coop with an earthen floor, not bricked or paved He should be well supplied with rough gritty gravel, and fed in small quantities many times in the day. As he improves, the dry scurf may be washed from his comb, which may be rubbed with a little sweet oil. Should he, as is constantly the case with fowls when out of condition, be infested with vermin, three or four drops of sweet oil put under the feathers between his shoulders will have a very good effect.

THE CROPS IN UNITED STATES: *R* The following is from the *New York Herald*—"No one can tell within 50,000,000 bushels how much Wheat is produced in the United States, or within 200,000,000 bushels how much corn. People talk of a *maximum* crop of 200,000,000 bushels of Wheat, and 700,000,000 bushels of corn; but these are mere rough guesses. It is, however, pretty certain by this time that the crops of 1860, whatever may be the aggregate amount of each, will, without exception, be the largest ever raised in the country. Lands which in 1858 yielded 5 bushels Wheat to the acre will this year yield 20; and land which in the same year gave 15 to 20 bushels of corn will this year give 45 to 60. We believe that, as a general rule, Potatoes, hay, and Rye will be a full average. The beef and pork crop will be considerably above an average."

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:— P. packet—*s. d.*

CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation	1	6
CUCUMBERS, all the best varieties	1	0
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CALCEOLARIA, herbaceous, finest mixed	2	6
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A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London N.

PINUS LOPHOSPERMA.

PINUS LOPHOSPERMA.—The following is the description of this very beautiful new Californian Pine, as given by Dr. Lindley, in the *Gardeners Chronicle*, January 21, 1860, pp 46, under the head of "New Plants." The Subscribers have pleasure in introducing so fine a species, and are now prepared to offer fine healthy plants raised from seeds at undermentioned prices:—

Per Plant .. .. 7*s.* 6*d.* | Per dozen Plants .. 60*s.*

This acquisition has been obtained by Messrs. Low & Co. of Clapton, through Mr. William Lobb, who found it in Lower California, and speaks of it as a new species which, for beauty of foliage is unsurpassed by any other kind he had yet seen. The leaves are from 8 to 10 inches long. It is indeed a fine thing, and perfectly distinct from all the species hitherto described. Its young wood is very strong, and covered with the glaucous bloom of a raisin. The leaves are stout, stiff, and not unlike those of a Pinaster, but its most remarkable characters are to be found in the cones and seeds. The cones resemble in form those of a Stone Pine, but are larger, and the resemble in form those of a Stone Pine, but are larger, and the apophyses (ends of the scales) are more erect, and distinctly two-edged. The seeds are like those of P. Lambertiana, &c., but they are furnished with a thick-rounded comb or crest, of a blackish colour, from which proceeds a very narrow wing. Both crest and wing come away together, in the form of a horse collar. The species is therefore intermediate as it were between Endlicher's sections Pinaster and Pinea.

A LIST will shortly be published of other novelties received from Mr. William Lobb. This List will be sent to all applicants.

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GEORGE SMITH begs to inform his friends and the public that he is now prepared to send out the two following SEEDLING GERANIUMS. G. S has the greatest confidence that they will prove First Class Varieties, viz.:—

GERANIUM ARGUS (SMITH).—A robust growing variety, similar in habit to Countess of Warwick, foliage medium size, centre green, surrounded with a dark zone, margined with pink, and edged with white; trusses large, on strong foot-stalks, well above the foliage, very abundant bloomer; flowers vermilion scarlet, with white eye, fine form For large beds, vases, and other decorative purposes, this will prove a valuable acquisition, being superior to all varieties of its class hitherto sent out. Plants exhibited before the Floral Committee of the Horticultural Society, in August last, were awarded a First Class Certificate. 10*s.* 6*d.*

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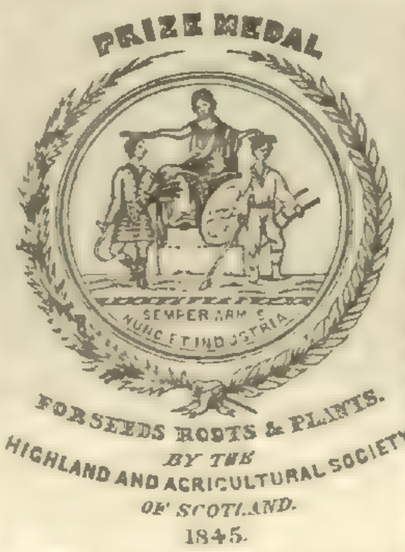

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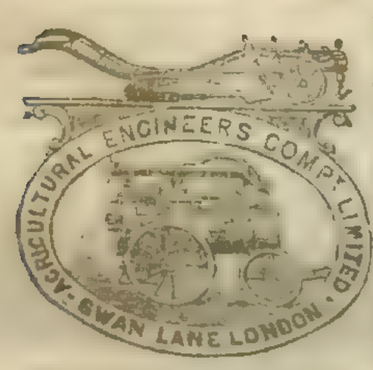

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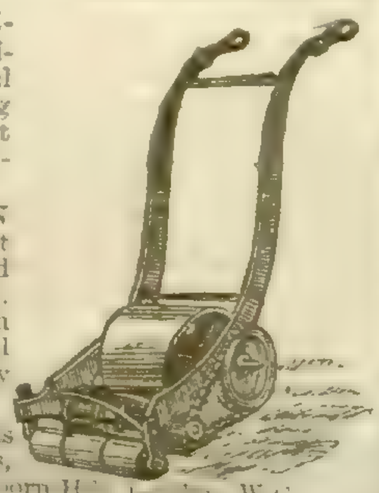

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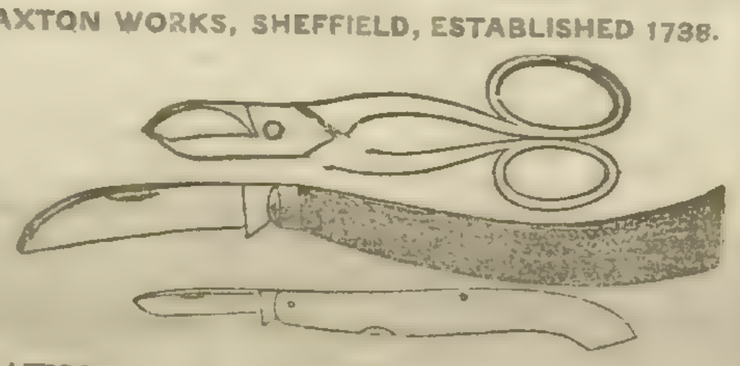

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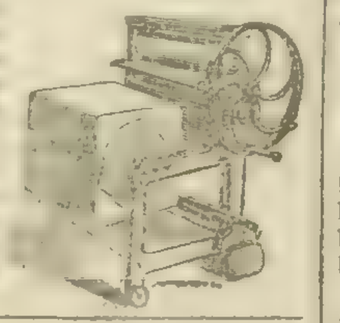

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PATENT CAST-IRON PUMPS fitted with J. W. & Son's Patent Buckets and Suckers, which cannot clog in action, for Farms, Cottages, and Wells not exceeding 25 feet.

Diameter of Barrel.	Height.		£. s. d.
2½ in.	short	1 ft. 7 in.	Fitted for lead, gutta percha or cast iron flanged pipe as required. 1 1 0
2½ „	long	3 „ 3 „	1 10 0
3 „	ditto	3 „ 6 „	2 4 „
3½ „	ditto	3 „ 6 „	2 9 „
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2½ „ short, with 15 feet of Lead Pipe attached, ready for fixing 2 0 0
2½ in. long ditto ditto ditto 2 14 0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in Wash-houses with soft water from underground tanks, or in Hot, Forcing, and Plant Houses; they may be fixed, when desired, under the stage.

May be obtained of any Ironmonger or Plumber in Town or country, at the above prices, of the Patentees and Manufacturers, JOHN WARNER & SONS, 8, Crescent, Jewin Street, London, E.C.

Every description of Machinery for Raising Water by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c. &c.—Engravings sent on application

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GALVANISED IRON ROOFING for Farm Buildings and other Roofs; the cheapest, most durable, and neatest Roofing in use; also Spouting at 10½*d.* per yard.

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(formed of Twisted Wires like a rope or cable), the strongest, cheapest, and neatest fence in use, will resist the largest cattle, and will not bend or get out of ferm by trespassing upon or over. Price, with five lines of the Galvanised Strand, iron main posts, and pronged Standards, 1*s.* 2½*d.* per yard.

This fence is far cheaper than posts and rails, or any kind of iron fencing; and possesses four times the strength of solid bars. Will not rust nor corrode. Upwards of 1200 miles of this Fencing supplied.

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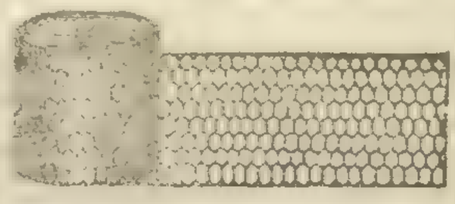

Galvanised, 24 ins. wide, 2-inch mesh, 5½*d.*, 7½*d.*, and 9½*d.* per yard.

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Strong CATTLE HURDLES from 2*s.* per yard.

PATENT IMPROVED GAS WORKS,

of all sizes, for the use of Private Houses, Mansions, Railway Stations, Mills, Collieries, Mines, Villages, &c. Works from 10 to 500 lights estimated for. The works can be entrusted to an ordinary labourer.—Apply to

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Reduced Prices of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 10*d.* per yard.

The same with Galvanised Wire Rope. 1*s.* per yard.

Illustrated Catalogues with prices of every variety of Wire Fencing and Wire Netting forwarded free on application.

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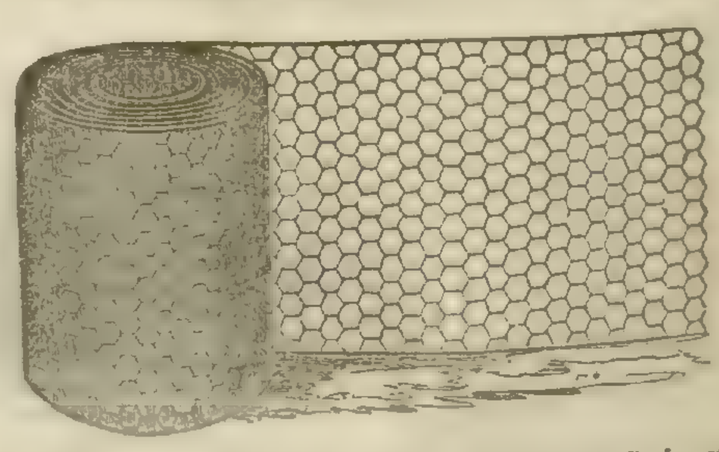

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	Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide	5d. per yd.	4d. per yd.
2-inch „ strong do.	6 „	4½ „
2-inch „ intermediate, do. ..	7 „	5½ „
2-inch „ extra strong, do. ..	9½ „	7½ „
1⅝-inch „ 24 inches wide	5½ „	4½ „
1⅝-inch „ strong, do.	6½ „	5½ „
1⅝-inch „ intermediate, do. ..	7½ „	6 „
1⅝-inch „ extra strong, do. ..	10 „	8 „

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper halfts of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 6½*d.* per yard, 3 feet wide. Galvanised Sparrow-proof Netting for Pheasantries, 2½*d.* per square foot. Wire Netting of every mesh from half an inch to 3 inches.

Wire Fencing and Netting delivered Carriage Free to the principal Railway Stations.

CARTER'S 40s. COLLECTION OF BULBS
FOR FORCING.
"ALL FIRST SIZED AND PICKED ROOTS."

2 dozen extra fine HYACINTHS, in 12 sorts	1 dozen TULIPS, DUC VAN THOL, scarlet
2 dozen POLYANTHUS NARCISSUS, in 9 sorts	1 dozen do. do. rose
2 dozen single sweet-scented JONQUILS	1 dozen do. do. yellow
150 newest Seedling CROCUS, in 50 sorts	1 dozen do. VERMILION BRILLIANT
1 dozen TULIPS, DUC VAN THOL, red and yellow	1 dozen do. REX RUBRORUM
	1 dozen do. TOURNESOL

Half the above Collection, 20s.

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

THE AUTUMN SUPPLEMENT TO
CARTER'S GARDENERS' VADE MECUM
(25th ANNUAL SERIES)
IS JUST PUBLISHED.

It contains a List of all the best varieties of DUTCH AND CAPE BULBS *suitable for Greenhouse and out-door planting, with carefully written articles as to the best mode of cultivating the same.*

*** FORWARDED POST FREE ON APPLICATION TO
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EARLY FLOWERING BEDDING TULIPS.

THE FINEST COLLECTION OF THE ABOVE ARE DESCRIBED AND PRICED IN
E. G. HENDERSON & SON'S
BULB CIRCULAR,
which may be had on application (postage free), also notices of the following:—

CROCUS ALETTA WILHELMINE.—The largest and most beautiful variety known.

LILIUM GIGANTEUM.—The most stately of all Lilies for the conservatory.

" " CORDIFOLIUM.—Similar in style, but blooming in later succession.

" SPECIOSUM (LANCIFOLIUM) GRANDIFLORA.—By far the most splendid variety in its section.

AMARYLLIS. —A splendid collection of this magnificent Lily-like tribe.

CYCLAMEN —The finest collection of this charming winter and spring plant for forcing in Europe.

SCILLA SIBIRICA.—The most brilliant blue early spring-flowering bulb known.

A PRICED LIST OF Alpine and Garden Plants with silvery foliage.
" " " " with variegated foliage.
" " " " with ornamental do.
" " very early Spring-flowering Alpine and Garden Plants.
" " New French blotched Pansies.

GYNERIUM ARGENTEUM, per 100 or 1000.

LADY EMILY PEEL. (Surpassing Shrubland Rose, Marquis de la Ferté, and Countess of Ellesmere).—A beautiful bedding variety, with blossoms of a rich violet-rose ground colour, with a clear white centre. The individual flowers are even in their expansion and perfect in form, having a Convolvulus-like outline. Its dwarf, compact and free growth throughout the summer, with a long succession of its brilliant blossoms, will prove its adaptation for flower-garden decoration, and also for pot-culture in the cool conservatory, promenade, or on terrace verges. Plants 3s. 6d. each.

ANNIE KIEN. The greatest novelty of the season in Petunias. It produces numerous well-formed blossoms of a rich purple ground colour, with a double white centre, whilst the large even surfaced dark outer guard-petals are also belted or margined with white. Its habit of growth is free, dwarf, and compact, of a rich green leaf-verdure. It is a profuse bloomer, and is admirably adapted for greenhouse and conservatory decoration by pot culture during the early spring and summer months. 3s. 6d. each.

NEW VARIEGATED GERANIUMS.

CLOTH OF GOLD.—A most beautiful variety, with large and handsome foliage, each leaf becoming (with the exception of about one-fourth of the centre), a rich golden yellow.

GOLDEN FLEECE.—In this variety the leaf is entirely yellow during the summer, without centre or marking of any other colour. It will, therefore, be most valuable for beds, masses, &c.

The above Summer Bedding Geraniums have proved to be the finest of all varieties in their section—surpassing the Golden Chain and others in their close and dense habit, richness of leaf-tint, and picturesque effect, presenting a more even and unbroken surface of golden verdure than any other known plants.

CAMELLIA TRICOLOR IMBRICATA PLENA.

Figured in Part VII. of "THE ILLUSTRATED BOUQUET."
Plants are now ready, at 21s., 31s. 6d., and 63s. each.

WELLINGTON NURSERY, ST. JOHN'S WOOD, LONDON, N.W.

NOTICE.—The subscribers, DAVID AND GEORGE LAIRD, NURSERYMEN and SEEDSMEN, Cupar, Fife, N.B., have on hand a very fine stock of the following to spare to the Trade, viz.:—1 and 2-years Transplanted LAUREL BAYS, 1 and 2-years Cuttings of ditto, 2-years Transplanted EVERGREEN PRIVET, 1 and 2-years Transplanted LARCH.
Cupar, Fife, Sept 29.

CHOICE BULBS.

STEPHEN BROWN'S CATALOGUE (late BASS & BROWN) supplied free on application. It contains one of the finest collections of DUTCH, CAPE, and other BULBS. The cultural and descriptive matter is this year greatly enlarged, and prices are very moderate.
Finest named Hyacinths, 6s., 9s. and 12s. per doz.
Fine, in colours, without names, 3s. per dozen.
Assorted Collections of Bulbs, either greenhouse or hardy, at 10s. 6d., 21s., 42s., 63s., 84s., and 105s.
If 20s. and upwards, free to all stations in London.
Seed and Nursery Establishment, Sudbury, Suffolk.

DUTCH BULBS, an immense quantity.—Mixed CROCUS, 12s. per 1000, 1s 3d. per 100; SNOWDROPS, 1s 6d per 100; HYACINTHS, 3s. and 4s. per dozen: finest named sorts, 6s. per dozen; and all other Bulbs equally cheap.
ORANGE TREES, full of fruit, 2s 6d. to 7s. 6d. each.
CAMELLIAS and AZALEAS, handsome plants, 18s., 21s., and 24s. per dozen.
R. GREEN, 154 Kingsland Road, N.E. (55 doors from Shoreditch Church).

DUTCH AND OTHER FLOWERING BULBS.

JOHN CATTELL'S CATALOGUE of the above may be had on application. His first importation of BULBS has arrived in excellent condition. Among the Bulbs of his own growing will be found some good useful articles, such for instance as Lilium lancifolium in several varieties; Lilium giganteum, and several other species. Gladiolus of sorts including a magnificent collection of Hybrids raised from Gandavensis, of almost every shade of colour. A splendid collection of Hybrid Amaryllis, Double Yellow Daffodils, Crocuses, Winter Aconites, and Scilla Sibirica, may be had by the 1000 and very reasonable in price, as are also the Dutch Bulbs. Early orders are respectfully solicited. — JOHN CATTELL, Nurseries, Westerham, Kent.

DUTCH FLOWER ROOTS.

JAMES VEITCH, JUN., ROYAL EXOTIC NURSERY, Chelsea, S.W., begs to announce that he has received his annual supply of BULBOUS ROOTS from Holland, and is pleased to say that they are PARTICULARLY FINE and in EXCELLENT CONDITION. CATALOGUES are now ready and will be forwarded on application.

J. V., Jun., desires to impress upon those who patronise him the great advantage of giving him their ORDERS EARLY, as the successful cultivation of Bulbs depends in a great measure upon their BEING PLANTED EARLY IN THE SEASON.

DUTCH FLOWER ROOTS.

CHARLES TURNER, THE ROYAL NURSERIES, Slough, has just received his usual large consignments from Holland, and is gratified in being able to state that the bulbs are very fine, and in the best condition. The ANNUAL CATALOGUE is just issued, and will be sent free to any address.

As successful cultivation depends in no inconsiderable degree upon early planting, the great advantage of giving immediate orders is obvious.—The Royal Nurseries, Slough; adjacent to Eton and Windsor, and also at Salt Hill.

HYACINTHS FOR BEDS,
Good and very cheap.

Single Blue,	per doz.	2s.	0d.	Double Blue	per doz.	2s.	0d.
" Red	"	2	6	" Red	"	2	6
" White	"	2	6	" White	"	2	6
" of all colours	"	3	0	" of all colours	"	3	0

12 good named Hyacinths for 4s.

And many thousands of other choice Dutch, French, and English Flower Roots, at least 20 per cent. less than London prices.

CATALOGUES gratis on application to WILLIAM BARRATT, Seedsman to the Yorkshire Agricultural Society by Special Appointment, Wakefield.

SOW AT ONCE FOR FINE BLOOM

DOBSON AND SONS' Splendid Prize CALCEOLARIA SEED; 1s. 6d., 2s. 6d., 3s. 6d, and 5s. per packet sealed.—Woodlands Nursery, Isleworth, W.

CINERARIAS.—The best kinds only in strong plants. CATALOGUES post free on application.
JOHN DOBSON & SONS, Woodlands Nursery, Isleworth, W.

PELARGONIUMS.

JOHN DOBSON AND SONS beg to invite the attention of intending purchasers of the above, who will be liberally dealt with. A choice selection sent at a moderate price. NEW CATALOGUES now ready, post free.
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NEW FUCHSIAS and CHRYSANTHEMUMS of 1860.—12 New CHRYSANTHEMUMS for 9s.; or 50 vars. for 1l. 5s.
12 New FUCHSIAS for 9s.: or 25 varieties for 16s.
CATALOGUE may be had on application.—JOSEPH COURCHA, Wellington Row, Hart Lane, Bethnal Green Road, London, E.

WINTER BLOOMING PLANTS.—Purchasers are respectfully invited to inspect the very large stock of the Subscribers. CAMELLIAS, AZALEAS, ERICAS, EPACRIS, CYTISUS, and ACACIAS, can be seen in thousands. Fine grafted Jasminum grandiflorum, well set with flower. Otaheite Oranges in fruit, &c.
HUGH LOW & Co., Clapton Nursery, N.E.

NEW GOLDEN STRIPED ARBOR-VITÆ.
(THUJA VERVAENEANA.)

A. VAN GEERT, NURSERYMAN, Ghent, Belgium, begs to announce he is now ready to send out the above very showy novelty, of which he has purchased the entire stock of the obtainer, M. Vervaene, of Ghent.
Price 7s. 6d. each; one over for every three taken.

CATALOGUE.

YOUELL AND CO.'S GENERAL AND DESCRIPTIVE PRICED CATALOGUE for this season is now ready, and will be sent free on application.
It contains detailed Lists of Greenhouse Plants, Conifers, Shrubs, as well as all the newest introductions in Soft-wooded Plants.—Royal Nursery, Great Yarmouth.

TO PLANTERS OF CONIFERS.

YOUELL AND CO. can supply 50 species of RARE AND HARDY CONIFERS in good plants for 3l., package included, and carriage paid to Liverpool, Manchester, Newcastle-on-Tyne, Hull, London, Peterborough, or to any Railway Station within 150 miles of the Nursery.
A LIST of the above can be had on application.
Royal Nursery, Great Yarmouth.

GLADIOLUS BRENCHLEYENSIS.

YOUELL AND CO. beg to inform the Trade they are in a position to supply strong flowering BULBS of the above variety, unequalled by any other for the brilliancy of its colour. See report by Dr. Lindley in *Gardeners' Chronicle* of Sept. 8, page 816. Price per 100 or 1000 on application.
Royal Nursery, Great Yarmouth, Norfolk.

ONE YEAR SEEDLING LARCH.

EDWARD SANG AND SONS, Kirkcaldy, beg to offer a few hundred thousands of really good one year-ing LARCH, thin sown, and grown without stimulants. Price 3s. per 1000; in large quantities by special bargain.

GRAPE VINES FROM EYES IN POTS.

LUCOMBE, PINCE, AND CO. have now a remarkably fine healthy stock of strong Vines, from 6 to 10 feet high, of all the choicest sorts, fit for immediate planting, propagated from eyes, taken from their own experimental Vinery which enables them to warrant each kind true to name.
LISTS of sorts and prices may be had on application to them.
Exeter Nursery, Exeter.

SEDUM FABARIA VAR. RUBRA.

J. CARTER AND CO., have much pleasure in offering this handsome and free flowering Sedum to the trade. The following report of its merits is from the "Proceedings of the Horticultural Society" for November 1859:—
Sedum Fabaria var. rubra, a rosy lilac flowered kind, nearly related to the British S. Telephium, and a very useful autumn flowering plant for greenhouse decoration, producing large heads of its star-shaped flowers, EMULATING THE SHOWINESS OF THE WELL KNOWN HYDRANGEA.
Price per dozen, 12s.; per 100 upon application.
JAMES CARTER & Co., Seedsmen, 237 and 238, High Holborn, W.C.

The Gardeners' Chronicle.
SATURDAY, SEPTEMBER 29, 1860.

WE have to announce that at a Special Meeting of Council of the HORTICULTURAL SOCIETY, held yesterday, it was resolved that the NEW GARDEN AT KENSINGTON shall be formally opened in May next. The day selected is the Wednesday that shall intervene between the great meetings at Epsom and Ascot. A schedule of prizes offered for fruit and flowers on this grand occasion will appear in the course of October.

"WHAT is the temperature, Mr. D., of that Vine border of yours?" inquired a horticultural visitor of one of the greatest Grape-growers of England, pointing to a chimney pot plunged in the border up to its neck and containing a thermometer. This was at 5 o'clock in the afternoon of a rainy day, and the Vine border was 600 feet above the sea in one of our southern counties. The thermometer is drawn out of its subterranean chamber and marks 75°. Seventy-five degrees on the top of a high hill, while a thermometer 2 feet deep in the valley of the Thames could rise no higher than 56°—a difference of nineteen degrees—about the difference between Algiers and Lancashire in the summer time.

"Now, Mr. D., will you have the goodness to let me look at your Grapes?" The inquisitive visitor is introduced into the Vinery. And what does he

find on the hilltop after this inclement summer? Muscats green, shrivelling, and shanking? or ripe and insipid? Quite the contrary. Not a blemish can be detected in the beautiful bunches. Berries the colour of amber and deliciously sweet, such as are found in those Southern Vine gardens where luscious Muscatel raisins are cured by a Mediterranean sun — such are the Grapes in the Hill-garden at * * *. As for the Black Hamburghs they are scarcely less sweet than the Muscats.

It will of course be asked how this has been brought about. Not by any wonderful materials put into the border; for it is of a very moderate composition resting on a bed of concrete. Not by the method of pruning; for although excellent it is no better than may be found in many another Vinery. Not by some new device in hothouse building; for although constructed skilfully, others are built as well without any remarkable success having been achieved. The secret lies in the warm border under which hot-water pipes are carried in a hollow chamber—not however in warmth alone, but in warmth accompanied by the management of a capital cultivator. The Muscats at * * * are obtained in the same way as were Hutchison's famous Black Hamburghs at Castle Malgwyn, which weighed between 5 lbs. and 6 lbs. a bunch.

Experience thus confirms the views that have been expressed in the *Gardeners' Chronicle* for these 20 years past, that the great point in fine Grape growing is to secure a warm border, as, on the other hand, the constant cause of bad, colourless, shanking Grapes is a cold one. We hope to see the time when a heating contrivance for the border shall be regarded as indispensable as a glass roof—perhaps more so. It is certainly more important than a heating apparatus inside the house, unless Grapes are wanted early.

A COLD wet cloudy season like the present, deficient alike in heat and light and overcharged with moisture, may naturally be supposed likely to produce some peculiar forms of disease. A very curious case has just come under our notice which deserves attention as a striking example of the dropsical condition which sometimes takes place in plants during wet seasons, described under the title ANASARCA in No. 110 of the series of articles on Vegetable Pathology in this Journal. *The case occurred in a single branch of a Ribstone Pippin, in which the leaves were not altered, but* in which the fruit presented that transparent waterlogged condition which is so common in Fungi, and which is known in that tribe of plants under the name of "hygrophanous."

The Apples in fact exhibit in part their usual appearance, sometimes marked with those little discolored depressions so frequent in this variety of Apples, as also in some others, and which are described under the article CARIES in No. 98 of the series just mentioned. The rest of the surface has a transparent waxy appearance, resembling that of a frozen Apple, and when pressed is found to be exceedingly hard. A section exhibits flesh of the ordinary type, affected here and there with caries, accompanied by transparent patches of a totally different aspect. Under the miscroscope there is not the slightest difference of structure in the sound and affected parts; the cell walls are not more folded in the one case than in the other; there is not the slightest trace of fungous threads, nor is there any difference in the comparative number of starch granules in either case, the granules being in both instances almost entirely confined to the cells nearest to the cuticle. The only point of difference which is apparent, is the comparative absence of air in the dropsical portions, to which circumstance doubtless is attributable the increase of weight and density, for the walls of the cells are not thicker in one case than in the other, nor is there such difference in their grumous contents as to add anything appreciable in the respects just mentioned.

It is quite certain that the additional portion of moisture is not owing to water introduced through any lesion of the cuticle. It is due apparently to a peculiar congestion, induced by the almost total cessation of evaporation in consequence of the long continued moisture of the atmosphere. The flavour exactly resembles that of Apples which have been lying a long time on the ground exposed to rain, being wholly deficient in aroma, but on the contrary vapid, and approaching the flavour of individuals which have been bletted.

We believe that the affection is entirely attributable to the peculiarities of the season. We have seen no other instances however of the same condition, but it is highly probable that the greater part of the fruit of the present year will never ripen perfectly, and will decay very shortly after it is stored. The only chance is to spread it as thinly as possible, and to cover it simply with sheets of thin paper.

Though we could trace no mycelium in the cells, it may not be amiss to state that two of the specimens were studded with a very pretty species of *Fusisporium* which we have not before observed, remarkable for the contrast between the snow white mycelium and the pallid tawny spores. The parts of the Apples where this appeared were deeply affected, and the tissue much decomposed, but the mycelium did not traverse the whole of the fruit as in ordinary decay. The occurrence of this parasite, though possibly favoured by the peculiar weather, is evidently independent of the dropsical condition of parts of the tissue, as it is equally developed on the dropsical and non-dropsical parts. It may on the contrary be worth inquiry whether it has anything to do with the Caries above mentioned, and to this we purpose directing particular attention ourselves, while we recommend the subject to the notice of more intelligent correspondents. *M. J. B.*

FLOWER GARDENING.

THE season of 1860 now drawing to a close will perhaps in a decorative point of view be the most remarkable which has occurred since the introduction of the grouping system of flower gardening, for look where you will, east or west, north or south, anything like a decent approximation to the usual completeness in flower gardens is quite out of the question. You may see here and there a fair bed of some particular plant, as for example Calceolaria amplexicaulis and Dahlia Zelinda at Kew, but a group of beds, large or small, all equally good and complete, is not to be found in any garden that I can hear of. That it should be so is not surprising when we consider the extraordinary season we have passed through, sunless to a degree which has prevented all out-door fruits from attaining their proper flavour, and so damp and cold that strong plants of delicate things turned out in May are in many cases positively less at the present moment than they were at the time they were planted out, while even among comparatively hardy plants there has been nothing like the usual vigour; even Tom Thumb has failed, while Harkaway and similar delicate varieties look as if they had had the small-pock. True we hear of the fine foliaged Begonias growing vigorously planted out even in Yorkshire, but we see them looking miserable under greenhouse protection in the south of England, and therefore I feel disposed to act upon the good old axiom, and to believe what I see rather than what I hear. Begonias may under peculiar circumstances of warmth and shelter make bedding plants, but I must confess I have little hope of seeing them suitable for the flower garden. Years ago I saw in Yorkshire Hedychium Gardnerianum bloom in the open garden, but it was an exceptional case, and the seasons will be exceptional, such as that of 1859, when our tender stove plants bloom or grow well in the open garden in this dull and fickle climate.

Judging by the present season, we require to look for plants suitable for our cold climate rather than for plants which may under favourable circumstances become passable in the flower garden, and if a correspondent or two in each county would give a list of those plants which have succeeded the best in his locality, stating the peculiarities of soil, subsoil, and climatic influences, I have no doubt good would result from it. It would also be desirable to know what herbaceous plants have been the most continuous bloomers, or indeed to have the names of all plants which have been found valuable for decorative purposes in this unusual season.

Roses generally are said to have bloomed superbly; with me they have not been so good as in 1859, but then I was enabled to water freely, while this season I think the plants have had more moisture naturally than was conducive to their well-being, and the result has been strong rampant growth rather than a profusion of regular well formed and finely coloured flowers. I am aware there have been many noble exceptions to the verdict I am obliged to pronounce upon the season; but I imagine they have occurred in places not remarkable as Rose soils rather than in situations generally regarded as the most suitable for the growth of the "Queen of flowers." This surmise is borne out by the fact that fortune has not smiled upon her usual favourites among the trade growers: Mr. Keynes, of Salisbury, an outsider, having carried off all the principal prizes, while Mr. Cranston, of Hereford, who a year or two back was considered invincible, had at the National show some difficulty in getting placed at all. As I did not see the blooms I can only consider the cause to be attributable to what I have before stated, viz., too much rain for the Rose soils properly so called, and just sufficient for soils of a light and sandy nature, such as Mr. Keynes (if I mistake not) has to grow upon. While, however, the weather has been suitable for the more hardy kinds of Roses, so much cannot be said for the Tea and Bourbon varieties. Tea Roses have not been fine anywhere that I have heard of, while Souvenir de Malmaison wherever I have seen it has been worse than I ever remember to have observed it during my whole experience. True I have seen some beautiful individual flowers, but not a quantity upon a plant all equally good and striking. It would be interesting to know how the Manetti stock has answered this season. At Sawbridgeworth the other day I saw the quarters of stools were growing with wonderful vigour, but had not the curiosity to ask Mr. Rivers whether this dripping season had been favourable for the Roses worked upon it, and the few I have are insufficient for me to pronounce an opinion, especially as that opinion from my limited experience would be adverse to its cultivation. I have, however, found its shoots soft and watery, and certainly less disposed to produce flowers than the same varieties budded on the Dog-rose, or on their own roots. Report says Mr. Keynes' beautiful flowers have been produced from plants on their own roots, and if so, it is a strong argument against the growth of standards.

Dahlias though late are good, the damp season having kept them clear of thrips and red spider. The beds of the old Zelinda at Kew the other day were most brilliant, but to render this kind really effective it should be planted in masses of several hundreds together, and then, for a few weeks, it is a sight worth seeing. The scarlet and white Zelindas are not so effective as the old kind; but Mr. Dodd's alba multiflora is said to be a really good thing. I mention these varieties only to show their suitability for ribbon purposes, the four enumerated above would make a good ribbon of themselves, thus—Zelinda White, Zelinda Scarlet, Alba floribunda, and Zelinda Purple. Put a row of orange Calceolarias in the front, and dark Sweet Peas or branching Larkspurs at the back, and you would have a most effective arrangement. The great drawback on Dahlias is their liability to be cut off by early frosts. When, as is the case in some seasons, they stand until November, they are really useful and desirable plants; but considering the trouble we have with them throughout the spring and summer, to have them cut off in the end of September or early in October is quite disheartening. Hollyhocks generally have been fine this season, though I fancy not quite so double as usual. The improvement in form is not so marked as a year or two back, but still superb kinds have been added to our stock; the prevalence of the disease, a sort of blight or murrain, renders their cultivation impossible in some places. I know a garden where for four years it has been found impossible to get a plant to grow, and now the attempt has been abandoned in despair. In point of cultivation a little seed sown in heat in March, the plants grown on and planted out in May, come in very usefully for blooming in September; and, indeed, a few late plants of the most brilliant kinds grown in pots are not objectionable for mixing with Chrysanthemums in the conservatory early in winter.

Of new bedding plants the season has been too cold for their real merits to be brought out, and from the materials in the Horticultural Gardens I should imagine the Floral Committee will experience some difficulty in making a report. Taken generally, I thought the experimental plants very poor, and a large proportion of them certainly not worth growing; the most striking plant certainly was Gazania splendens, while in Lancashire I have seen a very nice bed or two of the Variegated Tussilago. The Crystal Palace Nasturtium is better than I could have expected in such a dripping season, but certainly the most chaste and beautiful edging that has come under my notice was the Cerastium tomentosum at Kew. This is really a superb plant for ribbon work, and cannot be too much praised. Perilla Nankinensis combined with Cineraria maritima or other light foliaged or variegated plants is a very effective plant. Some may consider it too dark, but strong contrasts are in some cases desirable, and then Perilla and Sea Ragwort are useful. In Cheshire the Crimson Linum grandiflorum had done well sown in the open ground. A wet season appears to be desirable for this plant, and if it could always be depended upon it would make a most valuable ribbon plant. Here is another proof of the injury done to new plants by over-nursing. When first introduced the seeds were to be soaked in manure water before sowing, and other equally absurd and unnecessary directions were given for its management; but here we find it flourishing as was to be expected under the most natural circumstances, so natural that another season I should not be surprised to hear it had grown from self-sown seed. Depend upon it more plants are killed by over-nursing on their first introduction than by any other cause whatever.

Among Scarlet Geraniums the great novelty according to a contemporary appears to be the Crystal Palace Scarlet; the origin of this said plant being about as modern as the Crystal Palace Dahlia, which turned out to be as old as the hills. Of course this plant (like all good things!) was raised at Shrubland, though its parentage was usurped by the Trentham folks under the name of "Trentham Scarlet." Among a collection of bedding plants sent me some years back by Mr. Tillyard, from Heckfield, was one called "Beaton's Seedling," which I immediately recognised, as I had done several things from the same locality before, as an

old friend under a new name; the plants were put out and resulted in proving to be a kind which had been grown in Kent under the name of Prizefighter. It is more pubescent in the foliage than Tom Thumb, produces numerous small trusses of flowers, and might not inappropriately be called an upright-growing variety of Tom Thumb. Thousands of plants of it have been sent out by the London trade for Tom Thumb, and I have reason to know that Mr. * * *, failing in the necessary supply of the real thing, sent out some hundreds of this Prizefighter. Nor did he do much wrong, for if not superior it is certainly quite equal to Tom himself, while in constitution it is much stronger, and not so liable to become diseased or yellow in the winter. I first received this variety from Mr. Fry, of Lee, and it so happened that in the first season of planting out at the Crystal Palace application was made to the writer to send a few hundreds of blooming Scarlets for "Sir Joseph's garden." This he did, a proportion of them being Prizefighter, from which no doubt the present stock at the Crystal Palace originated. Poor Tom Thumb has this season soon fallen into the "sere and yellow leaf;" the ground has been too cold for it, and it has in consequence suffered much from the spot. A few seasons more like the present, and Tom will cease to be the universal favourite it has hitherto been; still for general usefulness, for forming a specimen as well as filling a bed, perhaps it will be difficult to find a plant superior to Tom Thumb.

Of variegated kinds Alma threatens to displace Flower of the Day, while Jane, Perfection, and Bijou are pushing hard at Alma. All these are exceedingly useful, but perhaps not more so than Brilliant. It is singular that this kind has retained its variegation more this year than usual. One would have expected this damp season to have increased its disposition to become green, but such is not the case. Manglesii still holds its place, and Golden Chain and Lady Cottenham when properly grown are not likely to decrease in public estimation, but as they are so generally seen they certainly cease to be worthy of a place in the flower garden. If, however, gardeners will give up the coddling system, Golden Chain will really become worthy of its name.

Of Verbenas I would recommend Lord Elgin as a most distinct and desirable variety. The colour is deep purple maroon, the truss large, and it stands the wet weather well. Lady Palmerston in the way of Leviathan I have also found very useful. The want of growth in bedding plants of all kinds this season is most remarkable; Defiance not more than a foot high when it usually gets 3 feet, and other kinds in the like proportion. Even manure has made no difference, and to speculate what to do for another season is quite out of the question. All that we can hope for is that another season may be more favourable, and that the ground may attain something like its wonted temperature. The want of bottom-heat has been the great drawback this year; we have neither had heat for growth nor light to produce flowers, and the consequence has been a general failure in our floral display. *A. P. W.*

HOW TO DESTROY SCALE ON PINES.

THIS pest is one of the greatest the gardener has to contend with, and when once established in a collection, the usual recommendation is to commit the plants to the flames, the total eradication of the mischief being considered an impossibility. It was my misfortune, a few years ago, to make an exchange, and on the arrival of the plants I received they were examined, and believed to be perfectly clean; a few weeks, however, sufficed to prove that such was not the case, and although the newly-acquired plants were thrown away, and every care taken to prevent the scale from spreading, the whole of my stock eventually became fearfully infested.

Various experiments have been tried during the present year to eradicate the nuisance, and with what success the following report will testify:—

Early in February, before my fruiting plants were started, I requested my foreman to prepare a strong solution of Gishurst Compound, say about 6 oz. to a gallon of water, and give the plants a thorough cleaning, thinking, from reports that have appeared from time to time in your columns, that it would prove a perfect antidote for the evil.

My hopes, however, were illusory, for while the whole of the lower leaves were destroyed from the effects of the Compound, the enemy soon again appeared, and that too in numbers as formidable as before; subsequently a few plants were immersed for a short time in Page's composition with no better result.

Feeling disgusted, and perhaps, I may as well confess, ashamed of my stock, and having been informed that it was bruited about the county that the Pines at Stoke Edith were lousy, I determined to eradicate the pest, even at the risk of sacrificing my stock. I allude to succession plants, and in this I very nearly succeeded.

Gishurst Compound and Page's composition having failed, I next resorted to hot water, and immersed a quantity of plants at 125° for 10 minutes, in the early part of June. The scale and plants were alike cooked; experiment Number 3 was consequently a teazer. I was somewhat perplexed, and did not know where to find a practical *Punaise* doctor.

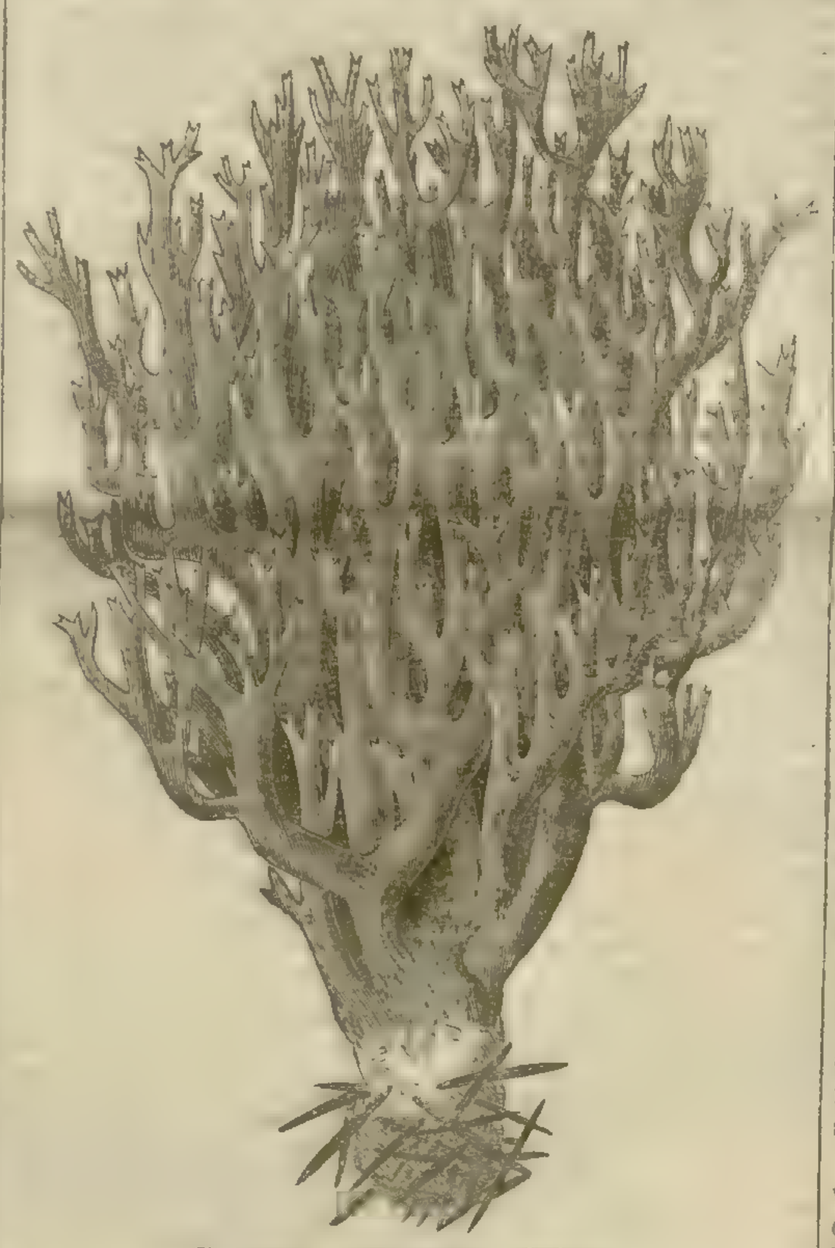
A short time afterwards I received an intimation that a cold solution of soft soap and sulphur would have the desired effect; a quantity was at once prepared, and my few remaining plants were submerged in the liquid for about eight minutes. This also proved unsatisfactory, for at the end of a fortnight scale was again visible on every plant.

On the 31st of July a further mixture was made in the following proportions; viz., 8 lbs. of soft soap and 4 lbs. flowers of sulphur were incorporated together; 16 gallons of boiling water were added. When the temperature had receded to 112°, by which time the soap had dissolved, the plants were immersed for a quarter of an hour, and afterwards placed in a sunny position to dry. They are now perfectly clean, and considering the ordeal to which they had been subjected, tolerably healthy; they should be potted the following day.

To those who are placed in a similar disagreeable position, the foregoing information, I trust, will be of some utility. If the advice given is implicitly followed I can vouch for the result, and where plants are infested I recommend its early adoption and candid publicity of subsequent results. *R. Robertson, Stoke Edith Park, Ledbury.*

MYCOLOGY, No. XXX.

CLAVARIA ABIETINA, *Schum.*—The species of *Clavaria* are often very difficult of determination, in consequence of the vagueness of the characters on which their specific distinction depends. Indeed, without attention to the colour of the spores, species which are naturally remote from each other, though strictly analogous, cannot be safely determined. The best way perhaps of ascertaining the point is to place a fresh specimen under a bellglass, allowing it to rest on a piece of paper half of which is black and half white. Multitudes of spores will be deposited in a few hours, and the colour on a comparison of them as deposited on the black and white ground, satisfactorily ascertained. The use of the two grounds will be found of some importance in difficult cases amongst the dark spored Agarics, as the tint will sometimes vary a little



CLAVARIA ABIETINA, *Schum.*

Copied by permission from Greville's Cryptogamic Flora.

according to the ground which is used. This being premised there will be no difficulty in the determination of *Clavaria abietina*, though it varies a good deal in different localities. It grows amongst loose fallen Fir leaves, and where it occurs at all, it is usually abundant, though it is not an universally distributed species. When of a large size and well developed it is one of the most beautiful of our Fungi. A little white cottony matter sometimes running into branched strings forms the mycelium or spawn from which arises a thickish trunk clothed with white down at the base and divided above into a few principal branches, which are again divided and subdivided into numerous crowded straight branchlets whose tips are forked and rather acute. The branches, when dry, are longitudinally wrinkled. The colour is a yellow ochre, and in some specimens, especially in an early stage of growth, when bruised the wounded portions assume a greenish tint, but this is by no means universal. The only species with which it is liable to be confounded, is *Clavaria flaccida*, but that is a much more slender species, and the mycelium is more decidedly developed into string-like processes, though this perhaps is not a decisive character.

The white-spored Clavariæ are, we believe, all excellent articles of food. Whether any of the yellow-spored are as good we are unable to say. From the evidence of authors it should seem that they have not the same excellent qualities as the true *Clavaria flava*, with which they are frequently confounded. The present species at least may be pronounced doubtful, its unpleasant taste indicating qualities which it should seem would make it unacceptable to the palate. It should however be remarked that Vittadini says of his *Clavaria flava*, which he assigns to the ochre-spored series, though it is clear, from his referring *C. Botrytis* to the same series, that he is not to be trusted implicitly in this respect, that notwithstanding its ill savour when raw, it acquires a delicate taste when cooked, and is then quite equal to *Clavaria Botrytis*, so that even *C. abietina* is not quite beyond hope. *M. J. B.*

ORCHARD TREES IN BELGIUM.

ON AUGUST 25TH, 1860.

IN the gardens of Brussels and its vicinity, as well as in other parts of Belgium which we have just visited, the standard fruit trees are everywhere bearing abundantly. The fruit is generally best in soil which is rather dry than moist or strong, and in situations where the aspect is somewhat westerly. From the 10th to the 15th of May the observer might see masses of fruit set on the trees. Since that time the fruit of the hardier varieties has retained its hold on and swelled where the trees have been moderately pruned and kept clean. The less hardy varieties when badly pruned, or in a manner unsuitable to their mode of growth, or when planted without previous preparation in a soil which is cold, stiff, or moist, or lastly, if left a prey to the ravages of insects and caterpillars, have dropped, if not all, at least a great part of the fruit which they had set. The following are the conclusions at which we everywhere arrived on visiting at least 30 more or less extensive collections of fruit trees.

The question may probably be asked—to what causes do you attribute the large crops borne by well-managed trees after a spring and summer of such an unfavourable character as those of the present year?

There are several causes which may have a more or less immediate connection with this result. The continuous drought in the years 1857–1859 having prevented an excessive degree of vigour being developed in full-grown trees, these were in consequence naturally disposed to fruitfulness, and this is generally admitted by practical men as one of the causes of an abundant crop.

When the sap was solidifying towards the end of last September, and from that time till March, the barometer indicated at the wane of each moon, rain, wind, heavy rain, or stormy weather, especially in autumn and winter. The fall of the barometer was succeeded by an abundance of rain, or snow fell, penetrating the soil and subsoil to a great depth, and thoroughly moistening the roots of the trees. This had never taken place to the same extent in the preceding three years, and the consequence was that the cellular tissue having become filled with sap, the partially formed organs of fructification swelled even during the autumn and winter. Thus in the beginning of March, notwithstanding the frost, the appearance of the trees was extremely promising, and the fruit buds were very large. Another and more immediate cause of the excellence of the crop was the unusual duration of the winter, which prevented the flowers from expanding till the occurrence, between the 20th of April and 10th of May, of such fine weather as we have not enjoyed since. Further, about the latter period, and subsequently we have experienced high winds which have prevented insects from going about and depositing their eggs in the flowers and young fruit, and especially the moth of a very destructive caterpillar, to which in 1859 a great portion of the crop fell a prey.

These, then, are in our opinion the different causes to which, taken in combination, we owe the enormous quantity of fruit seen on our trees in the middle of May. The swelling of these must likewise be attributed in some measure to the alternations of rain and wind, with occasionally, though rarely, days of bright sunshine. An observant practical gardener, in watching since the 10th of May the fluctuations of the barometer, which has never remained steady at Fine for the last four months; the thermometer, which sometimes during the night fell as low as 39°, 44°, 46°, 48° Fah., although it might rise to 55°, 59°, 77° in the day; and the direction of the wind, which, with the exception of three days and four nights, has constantly blown for the last four months from the south or south-west, cannot but have felt uneasiness at times as to the perfect swelling of the fruit; indeed, in the case of Apples and Pears this did not take place till the last fortnight in July.

The roots having a moist medium to grow in, and the supply of sap being consequently plentiful, the fruit of full-grown and young bearing trees has attained a high degree of perfection; and at the present time Apples, Pears, and Plums (and it has been the same with Cherries) are in as great abundance as the trees can nourish. If no hail-storms or high winds occur before the end of September, and if we have a few days of bright sunshine, the crops of fruit will be extremely abundant both here and without doubt in similar climates.

As regards the Pear, which is generally looked upon here as the king of fruit trees for standard culture, the more I study its numerous varieties the more I am convinced that it is absolutely necessary, when the

actual worth of any of these has to be determined, to take into consideration not merely the qualities of the fruit but other properties as well. In my opinion it is only in trees from 15 to 20 years old that these properties are sufficiently marked to be determined with certainty. On seeing a tree of this age bearing from 200 to 300 fruit, or more, and another of the same age, but of a different variety, with a crop averaging for five or six years not more than 10, 15, or 20 Pears, to which of these varieties would the preference be given? Undoubtedly to the more productive one, even should the fruit not come up to the other in point of flavour. In fact, the profit attached to the latter would be like that of Lafitte wine, whilst the return of the former would be like that of Medoc, which is not less remunerative when of good quality. This observation, which is likewise applicable to other species of fruit trees besides the Pear, concerns the productiveness of the tree.

The healthiness, hardiness, and the fine but not excessively vigorous habit of growth are the other properties which, we imagine, constitute the real merit of every variety of fruit tree, the fruit being of course possessed of beauty, sufficient size, and other indispensable qualities.

It is at the foot of a full-grown tree in the bearing season, that these properties can alone be finally settled; it is there that the sort of soil in which the tree is planted can be considered, as well as the more or less favourable nature of the situation, and the mode of pruning and training which has been adopted for a succession of years. There, too, it may be seen whether the variety bears its fruit in preference on the spurs with which the principal branches are studded, or on the laterals, which have been subjected to pinching or breaking for two, three, or four successive years. Does the fruit present a uniformity of shape and size? Does the skin remain smooth, or does it crack without any cause existing in the stock, or in the soil being of too cold, close, or moist a nature? Does the fruit in proportion to its size withstand the wind well before ripening? Before all these points can be determined it must be evident to any one that several years of close observation are necessary.

In dry soils, in the present season, Pears and Apples hang better on the tree than in the preceding three years, because the rain has soaked deeply into the ground, and the roots have therefore been kept in a moist medium. The fruit which fell without being shaken down by the wind, was, for the most part, previously damaged in some way.

Having observed that in 1857, 1858, and 1859, several fruits of the Bezi Mai were blown down by the wind, I thought I ought to mention that peculiarity in the account of the variety given in the *Gardeners' Chronicle* of February 11, 1860; but this year the number of fruit was reduced in the middle of June to 50, by thinning out more than 180 of those which had set, and since then not a single one has fallen up to the present time, although the tree has been violently shaken. I have, therefore, thought it my duty to correct, on the first opportunity, my previous statement on this point.

Some degree of doubt may be felt as to whether the crop will ripen, and whether long-keeping winter fruits will acquire their full size and flavour. The solution of these questions will depend on our having ten or a dozen days of bright sunshine, and we trust that we shall enjoy this advantage in the course of this month.

With regard to other descriptions of fruit, Strawberries have been very fine, of good flavour, and abundant from the 10th of June to the 20th of July. Out of a collection of more than 60 sorts La Constante has, during the last four years, proved the best on account of the abundance, beauty, and flavour of the berries. It is not only an excellent dessert kind but also one which is well adapted for the market, and as such a large plantation of it may safely be made.

Raspberries and Currants have succeeded extremely well; and so have Cherries. Among the varieties of the latter La Transparente still holds a place in the first rank. It is highly to be recommended on account of its great productiveness both on the Wild Cherry and Mahaleb stocks, as well as for the beauty and flavour of its fruit.

Some kinds of Gages and other Plums crack and decay on the tree, others are uninjured. Early Pears and Apples, although they have attained their full size, are late in ripening.

Tourists who may visit the markets of Brussels, that of St. Gery, the principal wholesale one, at daybreak, and that of La Madeleine between 9 A.M. and 4 P.M., will be convinced that the capital of Belgium is a great centre of fruit production, and that its population consumes a large quantity of fruit. *J. De Jonghe, Brussels, Sept.* 3.

MEETING OF PROPOSED COTTON COMPANY AT THE TOWN HALL, MANCHESTER.

THE Meeting on this subject, which we announced lately, took place in the Manchester Town Hall, on Friday, Sept. 14. Amongst the gentlemen present were Mr. Hugh Mason (Mayor of Ashton under-Lyne), Mr Thomas Clegg, Mr. J. D. Crewdson, Mr. Wright Turner, Mr. Harold Littledale (Liverpool), Mr. Higginbottom, Mr. Makant, Mr. R. A. Barlow, Mr. Robert Rumney, Dr Forbes (India), Mr. Rossaerts (French Consul) Mr. John Fleming (Bombay), Mr. G. R. Haywood, Mr. W. Cross Mr. J. Warren (Birmingham), Mr. A. C. Brice (London), Mr Price (London), Mr. L. W. Brown, Mr. Stephen Bourne (London), Mr. Burn, Mr. David Chadwick (Secretary pro tem.), &c. &c.

THOS. BAZLEY, Esq., M.P. was elected to preside. On taking the Chair, Mr. BAZLEY said—Gentlemen, I would not have presumed to summon this meeting if I had not been urgently pressed by influential friends to invite Cotton spinners, and those interested in the great staple trade of Lancashire and the North of England, to consider the question of Cotton supply, and how best to encourage its growth. I come among you, therefore, rather as representing the trade than myself. I confess my regret that, having sent out about 1000 circulars, there are not more gentlemen present representing the large spinning and manufacturing establishments of this city. But there are many gentlemen from a distance here, who come among us sympathising with our object, and whatever may be the result of our deliberation and action this day, I feel that those with whom I have the honour of being associated now are performing an important public and commercial duty. Perhaps you will permit me to glance momentarily at the origin of this important industry in which Lancashire is engaged. It is singular enough that precisely a century ago the ladies and women of Lancashire were engaged as spinsters, producing Cotton yarn by the aid of the distaff and spindle. Machinery at that time as connected with the Cotton trade was unknown; and it was only in the year 1767 that Hargreaves was enabled to complete the first invention that was essayed to produce yarn, that machine being known by the name of the "jenny." About the same time Arkwright was engaged in endeavouring to produce another machine called the "water frame," and now generally known as the "throstle." These two machines were brought out almost simultaneously, about the years 1767 and 1769. In 1775 Crompton happily invented the "mule," which, as we know well, is simply the combination of the two previous machines, the "jenny" and the "throstle." But it took him 10 years to mature that important machine; and in 1785 the "mule" was completed. What was the extent of the population of Manchester at that time, say a century ago? I believe there were not 30,000 people located in this important city and immediate neighbourhood; now we number in the same district not fewer than 500,000, so vast has been the increase consequent upon the introduction of this important manufacture into Lancashire. (Hear.) In 1784 a few sample bags of Cotton came from the United States of America; and, as if inspired by some prophetic necessity, during the period to which I have referred, Watt was engaged in maturing, improving, and developing the resources of vapour, and applying that vapour to the steam engine. About that time, 1784, the steam engine was matured. Well may it be said that such a century of inventions never before adorned the history of trade and commerce as the period from 1760 to 1860. (Applause). Well, if we look at the extent of Cotton consumed by human hands, we find that at the commencement of the last century probably one million pounds weight might be consumed. But in 1800, which was only the dawn of the mechanical Cotton trade, the consumption had risen to 50,000,000 lbs. In 1859, when the trade was known to be urgently requiring Cotton, the import amounted in round numbers to 1,200,000,000 lbs. The early supplies of Cotton which were used in this country came from the British West Indies, from the French and Spanish colonies, the Dutch and Portuguese colonies, and Smyrna and Turkey. These early sources of supply are completely exhausted. America at that period did not send us any Cotton at all; and now we are almost exclusively dependent upon the United States for our great consumption of this necessary article Protection to sugar, I believe, expelled the cultivation of Cotton from the British West Indies and the British colonies. Protection, the root of commercial evil, has much to answer for, and I deliberately attribute to the mistaken policy of our Government, at that time, the great dependence that we now owe to America for the supply of Cotton. The Cotton cultivator has had many disheartening causes of complaint, for when Cotton was first needed, the prices of it were exorbitantly high, but now they are brought down to very moderate rates indeed. Just for the purpose of refreshing our memories, I will refer to the course prices have taken from 1807, the time of the most authentic records, up to the present moment. In 1807 the American Cottons had essentially displaced all others, and Boweds and Orleans in that year were worth 20*d.* per lb. We have no record of the price of East India Cotton, known by the name of Surat. In 1808, the price of Boweds and Orleans had risen to 30*d.*, or 2*s.* 6*d.* per lb. In that year, I believe there were political influences at work—the French navy and other causes rendering imports difficult—to make the price unusually high. In the same year, Surat was at 24*d.*, or 2*s.* per lb. From 1820 to 1824, the prices ranged from 12*d.* for American, to 9*d* for Surat. In 1825, a year of great excitement and great speculation, the price of American Cotton was 20*d.*, whilst Surat stood at 16*d.* In 1827 the price of American was 8*d.*, Surat 6*d.*; 1837, American 10*d.*, Surat 7*d.*; 1847, American 9*d.*, Surat, 6*d.*; 1857, American 8*d.*, Surat 6*d.*; 1859, American 7½*d.*, Surat 5½*d.* per lb Of course these prices are approximate, because there were fluctuations in the respective years that might be quoted to disprove these figures; but, I believe, they have been fairly selected. But during the latter few years there have been extraordinary fluctuations. At some periods American Cotton of fair good quality has been sold as low as 3½*d.* to 4*d* per lb., while Surat has been at 3*d.*, or even under. Now with these extreme difficulties, I believe that the Cotton planter has not had legitimate encouragement, and that a steadier rate of prices might have impelled him to proceed in the cultivation of this important article. Still, we have had an increase; but, depending as we have been on one or two sources of supply, I believe that the irregularities in price are to be attributed to that very limitation. (Hear) But coming to the consumption of Cotton during the last year, we find that America supplied us weekly with 36,625, the Brazils with 2046, and Egypt with 1800 bags, making our foreign supplies into 40,531 bags. Last year we used weekly of our Indian Cotton 3504 bags, and of West Indian only 132 bags weekly, making of British supply 3636 bags weekly; showing a total weekly consumption of 44,167 bags, or in the whole year a consumption of 2,296,700 bags; the total weight being in round numbers 1,000,000,000 lbs. Of this quantity four-fifths, consisting of 800,000,000 lbs., came from the United States of America; from other foreign places 120,000,000 lbs.; whilst, from the colonies and dependencies of Great Britain, we only received 8 per cent. of our consumption, or 80,000,000 lbs. Now the Cotton industry is of amazing pecuniary importance to this country. The aggregate amount of productiveness from the labour, capital, and material embarked in it, is at the rate of upwards of 70,000,000*l.* sterling per annum The commercial return exceeded that last year, and, I have no doubt, it will exceed it this year It is not a little remarkable that the industry of the Cotton trade, with its vast return, precisely indicates the amount of taxation to which the people of this country are subjected, our public revenue being a little in excess at the present time of 70,000,000*l.* sterling. Therefore, when people talk of the amount of our taxation, they will easily remember that our great Cotton industry just indicates its extent. (Hear.) But the trade is of wonderful extent in the employment it affords to the people of this particular district. I compute that in the spinning, weaving, mechanical, and other factories, including bleach works, printing works, and all the auxiliary trades that have immediate connection or sympathy with the Cotton trade, we are employing in this country not fewer probably than one million persons, men, women, and children: and that four or five million of persons have direct or indirect interest in this industry. We have in fact a number of people in this country dependent upon the Cotton industry equal to the population of the kingdom of Belgium. (Hear.) Well, indeed, may the Americans say that "Cotton is king," for we have in this country a little kingdom employed in the production of articles of necessity and of usefulness from the fibres of Cotton. Well, from having some hundred years ago no mechanical agency whatever, we find that at the present time we employ probably not fewer than 33,000,000 spindles in the production of Cotton yarn, while the looms are of corresponding extent. We have an industry employing, in fixed and floating investments, and in all the ramifications where capital can be applied, connected directly and indirectly with this industry—a sum probably of not less than 150,000,000*l.* Now, with a trade of this magnitude; with a trade that has risen from not having had an existence at all a century ago to the present moment, when we find that we have four or five millions of people depending upon it, with 150,000,000*l.* of capital embarked in this important industry, I ask is it safe, is it discreet for a commercial country to depend mainly on one source of supply—and that a foreign source—for the chief part of its raw material? (Hear, hear) If, unhappily, some great calamity should arise; if disease should attack the black population of the United States of America; if a revolt should occur there; if tempest should destroy a crop, what recrimination should we hear on the part of statesmen and merchants, traders, manufacturers, and spinners, about the negligence and culpability of some one who had not, by provident regulation, arranged for a more regular and less dependent supply of this great raw material! (Loud Applause) Then the question arises, what is the duty of the trade under such circumstances? What ought to be done? Your Chamber of Commerce has often endeavoured to provide a remedy. The Cotton Supply Association has been called into existence, and has been most indefatigable in spreading and sowing seeds for future supplies; but the efforts up to this time have been inadequate to the exigency of the position in which we are placed. And now I submit, the time has arrived for more active efforts. It has often been suggested that the Cotton spinning interest of Lancashire should, by its example, become directly the grower, or the encourager of the grower of Cotton. Ministers of State have often said, when deputations have proceeded from Lancashire to complain about the apparent lethargy of the Indian Department of our Government, "Why don't you take an estate in India, and cultivate Cotton, and show that good Cotton can be produced, and that you are prepared to receive such supplies as that country can afford?" I fear that on many occasions the quality of the Cotton that we have received from the East Indies has been very unjustly depreciated From my own knowledge very excellent Cotton can be had from the East Indies I know that as good Cotton can be had from the East Indies as from the United States of America. (Hear.) Only a few days ago I saw at a meeting of the Cotton Supply Association a very beautiful specimen of Cotton quite equal to the class most largely consumed of the New Orleans production; and this very morning the Secretary of the Cotton Supply Association has brought into the room a very beautiful specimen of East Indian Cotton The thing only wants grappling with. We have more land in the British possessions capable of yielding an abundant supply of Cotton than any other country possesses. The United States of America, where Cotton is grown, do not yield that Cotton because it is indigenous to the soil. The United States did not produce that Cotton from Anglo-Saxon or European labour, but they have imported African labour, by which they give us the immense supply of Cotton that we now receive. The Americans, by their extraordinary energy, will probably receive in the coming year not less than 50,000,000*l.* sterling for the industry which has originated in so extraordinary a manner from seed planted in a new soil, and cultivated by imported labour. Surely Great Britain and the sons of England can do what their friends and relatives have done across the Atlantic. There has been too much supineness on this question. I believe that the spinners and manufacturers of this country can supply themselves with Cotton abundantly from other parts of the world at as cheap a rate, and of as good a quality, as they can obtain from America, or any foreign source whatever. (Applause.) At all times I express the obligations which this country is under to the United States of America for the supply of the raw material that we have so abundantly received; for without that supply of the raw material, and seeing the apathy that has prevailed in English laws and regulations, we should not have had this vast and profitable industry that it is the fortune of this country to possess. I am glad to find that in Jamaica there is a disposition to revive the growth of Cotton. There is a gentleman present who is trying to form a company for the growth of Cotton in Jamaica; and it is very remarkable that during the present week the Cotton Supply Association have received an important communication from a gentleman of the name of Fletcher, a missionary, who has addressed Mr. Haywood, the Secretary of the Jamaica Cotton Supply Association, in the following terms:—

"I have, since my arrival here last month, been bringing the subject of Cotton growing before the attention of our small native farmers, and I am happy to state that they seem deeply interested in it. Application is made from day to day for Cotton seed. The people have no doubt at all as to the *growing* of Cotton, but they are somewhat doubtful as to what to do with it after they have grown it. I have learned from them that they have again and again been disappointed by parties who urged them to grow Cotton, for which they never got a farthing. The people have never had a regular market for Cotton, nor gins, &c., for preparing it for the market, and in not a few cases their whole labour has been in vain; and it will take a little time to nurse their full confidence in our scheme. Let me have two gins as soon as you can, that the people may see that we are ready for their Cotton, yea, impatiently waiting for it. I have the utmost assurance in great success, if we only take the right. Certainly I cannot blame the people for not growing Cotton, for they have not had any encouragement to do it until now; and, as with Cotton growing so with many other things in Jamaica. Much, very much, remains to be done for the emancipated people of the West Indies, so as to bring their energies to influence, exercise, and to develop the resources of these golden islands We know well that the West India Islands could supply us with much more Cotton than this country requires, or that the whole world requires; for, as I have had occasion to remind you formerly, the county of York, if in a suitable climate and of suitable soil, could produce more Cotton than we need in Great Britain; and surely there are hundreds of such spots in British territory; yet we are in the miserably dependant position that I have stated. (Hear.) We have hopes connected with Africa, but it is not my intention to bring the claims of Africa before your attention this morning. I must leave Africa in the hands of my good friend Mr. Clegg, whose presence here this morning is very cheering to us. With the aid of the missionaries there, I hope that good progress will be made, and that at some distant day the African labourers will be emancipated from that degradation to which they are unfortunately subject. Africa has grown Palm oil and forests a new trade within the last thirty years, and I see no reason why Africa should not contribute largely to the consumption of the Cotton of the world, therefore I say to my friend, Mr. Clegg, that I wish him all success. (Hear, hear) India must be the great field of cultivation. There are such ample resources there, that if roads be formed if navigation be improved, if irrigation be had recourse to, and if there be a fair land tenure, and the employment of reasonable capital, with the exercise of some energy and industry, there is no doubt but great success, triumphant success must result from cultivating Cotton in India. (Applause.) From the report connected with the intended improvement of the river Godavery

we learn that on the banks of that river excellent Cotton can be bought from the natives at the moderate price of only one penny per pound. We learn from Mr. Mackey's "Tour in India" that in the Mahratta country, Cotton can also be had at the low price of one penny per pound. Colonel Grant, of the Bombay Engineers, says that from Ahmedabad, Kaira, Broach, and Surat, Cotton may be laid down in Bombay at 2½*d.* to 2¾*d.* per lb.; and from Kandeish, Belgaum, and Dharwar at 1½*d.* to 2*d.* Dr. White states that Cotton can be landed in Liverpool at 3½*d.* per lb. We have other eminent authorities who confirm this statement. I am glad to see Dr. Forbes here this morning, for he can personally confirm the statements I have made, as well as other gentlemen. Mr. Shaw, who has written and spoken very eloquently and very effectually upon this subject, confirms the statements that I am making. Spinners and manufacturers no doubt feel surprised that good Cotton can be had from the cultivation in India at the low price of from 1*d.* to 2½*d.* to 3*d* per lb. There can be no question that the native cultivators have to combat serious difficulties in having to contend with native dealers, who are exceedingly extortionate; with bankers, who take securities upon their crops, and who inflict upon them extravagant rates of interest, from 10 to 30 or even 50 per cent. sometimes. There is an immense amount of the present price of Cotton absorbed by what may be called the Indian extortioners—the middlemen. (Hear, hear.) It will be the object of such an association as this I am now advocating to go to the planter, and to say—"If you will grow for us good Cotton, we offer to take it, and pay you a good market price for it." They might thus be encouraged to grow Cotton as good as New Orleans or Boweds, which they may do, and we should offer the price that we can buy those kinds at, allowing a fair charge for transports, and the yielding of a fair remuneration on so large a capital as 100,000*l.* The question, I repeat, only wants grappling with, and if by some energetic regulations, and by an efficient executive, the natives are informed that there is a good market for Cotton, they will be stimulated to produce it. I believe they will welcome the introduction of our improved cleaning machinery, our improved gins, and that the Cotton will come in as perfect a condition from India as it has ever come from the United States of America. (Hear.) I am exceedingly glad to learn that upon the whole Cotton is now coming in as good condition from British India as it comes from the United States; and I grieve that the Americans have so far fallen from their high rank as a commercial people, as to commit the frauds that they have done in adulterating their Cotton so largely with sand as to depreciate its value 25 or even 30 per cent. (Hear) But remonstrance will set all these things right. Connected with the trade of this country there really has been a degree of apathy that is not creditable to us as a commercial people. (Hear.) Our exports to India are very large; we send an immense quantity of Cotton yarns and manufactures there; and if we can only stimulate the people to grow more Cotton, they will receive from us much larger quantities of our manufactured productions, and we shall have a more legitimate, and I believe a more extensive trade from India than we can obtain from any other country. The few millions of slaves who exist in America are not the great consumers of British manufactures. We can never expect a slave population to be great consumers of the comforts and elegancies of life; we must look to free men in free countries for an extensive and an extending trade. (Hear, hear) Therefore I do look cheeringly upon the prospects of our increase of commerce with India. I was glad to see my friend Mr. Littledale, of Liverpool, enter the room just now; it shows that the sympathy of some of the Liverpool merchants is with us; and I hope that the sympathy of all the trade will be with us in the objects which we are now humbly advocating. Singularly, last evening I received a most important communication from a gentleman with whom I have the pleasure and privilege of being acquainted, Sir George Bowen, the Governor of Queensland, Australia. He wrote me a long letter upon this subject, but he has marked it "private," otherwise I would have read to you some very interesting portions of it; but I can tell you that it is full of the greatest possible encouragement. On the 2nd May, Sir Geo. Bowen, in addressing his Legislative Council in a most enlightened speech, makes use of this very important remark:—"The land question is at once the most comprehensive and important with which you have to deal. Queensland embraces a territory blest with a salubrious climate and a fertile soil, equivalent, at the lowest estimation, to nearly three times the area of France, and nearly ten times the area of England and Wales Along the sea coast and banks of the rivers you pass millions of acres, which bear the same relation to the Cotton and sugar which the great pastoral districts of the interior hold to the woollen manufactures of the mother country." He said, "Queensland embraces a territorial area more in extent than two of the principal monarchies of Europe. This great portion of the earth begins its political life with the noble principles of freedom, order, and prosperity." (Hear.) This recollect, is only one of our Australian colonies, more than the size of two of the largest monarchies of Europe! I learn with infinite pleasure that the colonists are interesting themselves exceedingly in the cultivation of Cotton. Sir Geo. Bowen was kind enough to send me a copy of the *Wide Bay and Burnett Times*, published June 12th, in which I find in a leading article—"The period is quickly approaching when, as we a short time ago prognosticated, our town must become a hive of industry, and our wharves busy scenes of commerce—the home of the enterprise from every clime, the *entrepôt* of the world. Glorious in the annals of young Queensland will be that day when our first shipment of Cotton is despatched to Old England from the fertile banks of our beautiful river Mary; to our mind, proudly must the vessel beat its precious burden that has the honour of ploughing the ocean to a distant clime with the first fruits of the Maryborough and Wide Bay Cotton Growing Association Plantation" Conjointly with our present exports of wool, tallow, and hides, a happy future awaits this district, for upon our successful working out of the problem of Cotton growing depends our great position as a commercial community; and as far as has been apparent, there is not the slightest shadow of a doubt of the probable success of this undertaking. (Hear, hear.) We know that one-third of England's commerce is dependent upon Cotton, and that Cotton, next to corn, is her greatest necessity. In the preliminary report of the "Wide Bay Cotton Growing Company," it is stated that the directors ordered a boat to be built, in order to reach the plantation, which is eight and a half miles distant by water, and more by land; and "Mr. King assures the board that although he was put in possession of the land much later than he calculated, we may rely on having 50 acres of Cotton planted during the ensuing season, giving a shipment of 50 bales of clean cotton for next year." (Applause) I am glad to see that our friends in Australia are not merely talking upon the subject as we are, but actively engaged in the work of producing Cotton. They appear to me to be proceeding in a most rational manner. They have purchased an estate of about 300 acres, and they are conducting their first experiment in the way I have described to you; and the result I have no doubt will be all that we anticipate. From information I have obtained, I believe that the land in Australia is capable, at the present prices of cotton, of yielding an agricultural return of certainly not less than 3*l.* per statute acre, and probably of not less than 4*l.* Therefore, there is no occupation in Australia so profitable as Cotton growing will prove, not even their gold gathering. (Hear.) But they wait for encouragement to some extent from this country, because many of the colonists are not rich people. They are people of enterprise, who have left their own country to seek their fortune. They are willing to engage in a new industry, but they want—what all great industries must have—some capital to commence with. Therefore they are appealing to this country for support, though, so far as their small company extends at the present time, I believe they are essentially finding funds for themselves. Perhaps if we should be able to form an association this morning, we could not do better than take a number of shares in that company, because they could conduct an experimental farm for us. In the prospectus which was forwarded to every gentleman to whom my circular was addressed it was stated that it might be desirable to establish a model farm in India, and another in Australia. In India the great bulk of the useful Cottons can be grown; and if the natives were shown the best manner of cultivating Cotton, cleaning the fibre, and irrigating the land, no doubt they would follow the example when they saw that such imitation would be productive of great profit. In Australia, there are resources for the supply of the better qualities of Cotton to an indefinite extent. Sir George Bowen has said to me that in his own immediate neighbourhood he has a piece of ground much larger than France that he knows can grow excellent Cotton, but there is no cultivator to till it; there are no capitalists to embark in the cultivation upon a large scale, and the resources of the country remain dormant. Now I would ask, when we see the princely fortunes that have been made by this great industry of cotton manufacture, whether there are not many individuals who feel disposed to emancipate the trade from that unfortunate degradation that is associated with it in the stained production of much of the Cotton, coming, as it does, from slave labour? Should not, in the spirit of gratitude, a number of the enriched capitalists of Lancashire, and of the Cotton trade, come manfully forward and say—"This trade shall be less subject than it has been to serious exigencies; we will put it out of danger; we will encourage the sending tons of cotton from all the resources whence supplies can be obtained, irrespective of country." (Hear, hear.) Though I am at the present time enforcing the necessity of paying attention to the British colonies, I by no means am disposed to say that I am not prepared to welcome Cotton from every field where it can be grown. Therefore, I do hope that the spinning, manufacturing, and mercantile classes of this country will seriously deliberate upon the position in which the trade is placed, and that they will join in some great act of emancipation for labour, for capital, and for industry. The trade is going on extending and increasing in every possible direction, and looking at the mills we see in the course of erection at the present time, I may venture to assert that there is a possibility of the consumption of Cotton in the course of a few years, amounting to 50,000 bags per week. I hope I shall not be misrepresented on this occasion. When I stated a few years ago that the consumption of Cotton was approaching to 40,000 bags per week, I was accused of a gross exaggeration, but I waited patiently the arrival of the fact, when I was justified. I do not say that the consumption of Cotton is now 50,000, but, from certain indications, I believe that it will be at some no distant day 50,000 bags per week. Therefore, I say we should make efforts commensurate with this increase for the supply of our raw material. I must do justice on the present occasion to the efforts of many individuals who have during the last few years endeavoured to promote the cultivation of Cotton in many new fields. I see some gentlemen present this morning connected with the British Cotton Growing Company. They have, in a very generous and confident spirit, stated that they are willing to be absorbed in this newly proposed Cotton Growing Company. Probably, some of their directors will join the board that is proposed to be constituted, should the new company be called into existence. We are much obliged to those gentlemen for their services, and for their willingness to be associated with us; and, if we can form a great and strong company, I believe that success will be the result of our labours. There is ample room for 20 such companies as this we are proposing. (Hear.) There is no reason why Liverpool should not originate a company, and London, Glasgow, Paisley, and other manufacturing towns as well, especially as those individuals who are connected with West India property, which at the present time is unproductive (Hear, hear.) There is no reason why such places and individuals should not form Cotton growing companies. There is a wide field open, and instead of the price of the slave being continually increased from the increasing demand for Cotton, perhaps a more healthy state of things would prevail in the United States of America, and that preparation would be made for the ultimate freedom of the negro, instead of preparation being made for his continued degradation. I have great diffidence in commending a new project to my friends in business, because, on many occasions, Cotton spinners have replied to me on this question of growing Cotton, that it is their business to consume it, and not to cultivate it. But when we see this great industry placed in the very questionable position that it occupies with respect to the supply of its raw material, and when we recollect that the capitalists of this country, yes, and Cotton spinners too, have investments in foreign railways, in foreign sugar plantations, in the cultivation of Indigo, of many dyewoods, and much foreign produce, I ask, shall not a few capitalists be found among us who will at once remove from the trade the stigma under which, I confess that in my opinion it rests at the present time? (Hear.) With a discreet and economical directory, I believe that reasonable profits may be obtained Statements have been placed before me that would show that in some cases profits to the amount of 40 or 50 per cent. might be obtained. Of course, what I regard as exaggerations I am not disposed to advocate, or to commend to your notice; but, I believe that there is a reasonable probability of the profits from the buying and the indirect encouragement of the cultivation of Cotton ultimately yielding fair profits of from 10 to 25, or even 30 per cent If your directors are supported as they ought to be, and if they manage their duties economically as they ought to do, I anticipate that the results of the company will be all that we could wish. I have to apologise to you, gentlemen, for the great length of time that I have been speaking this morning. (No, no.) I have simply felt that we have a duty to perform among ourselves, and, if we fail after the attempt, we shall at all events have the consolation of feeling that we have endeavoured to serve our age and generation to the greatest extent of our humble ability. (Applause.)

The CHAIRMAN said—I have the pleasure of being supported by my excellent friend the Mayor of Ashton, and I beg to call upon him to move the first resolution. (Hear.)

The MAYOR of ASHTON UNDER-LYNE (Hugh Mason, Esq.), said—Mr Chairman and gentlemen, I beg to move—

"That the draft prospectus now submitted for the formation of a Joint Stock Company (limited) be approved, and that the company be considered as formed when one half of the proposed capital of 100,000*l.* shall have been subscribed, and that the following gentlemen be requested to act as provisional directors, and they are hereby empowered to carry out in every respect the objects of the proposed company:—Thos. Bazley, Esq., M.P.; Mr. John Pender, Mr. Thos. Mosley, Mr. Jas. M'Connell, and Mr. Richd. Birley, Manchester; W. H. Hornby, Esq., M.P., Blackburn; Mr Hugh Mason, Ashton-under-Lyne; Mr. Josiah Radcliffe, and Mr. T. Emmott, Oldham; Mr J. Marshall, Stockport; Mr. R. Platt, Stalybridge; Mr. J. Mayall, Mossley; Mr. J. Walker, Bury; Mr. T. Barnes, Farnworth."

I have great pleasure in moving that resolution; and as our excellent member Mr. Bazley has, I think, almost exhausted the whole subject, I shall occupy your time only for a moment or two. Perhaps it ought to be stated that even Cotton spinners are not indifferent to the attractions, at this particular time of the year, of grouse shooting, Doncaster races, and the seaside, and probably that may be some reason why we have not a larger number of Cotton spinners present. (Hear, and laughter.) My reason for coming forward on this occasion and identifying myself with this movement, which I do most cordially, is, that having from the commencement been a member of the Executive of the Cotton Supply Association, I have often felt that we have been put in a position of very great difficulty indeed in the course of our experience as a Cotton Supply Association. We have been waited upon and consulted by many gentlemen from various parts of the world, requesting that we would afford them all the aid we possibly could in carrying out the objects which our association had in view, viz., increased and improved supplies of the raw material which keeps this great district of ours in operation. Well, I think the Cotton Supply Association have pursued a very wise course in declining to be absolutely identified with any particular company for the promotion of the growth of Cotton; at the same time I, as an individual Cotton consumer, have felt that we were hardly going so far as we ought to do. (Hear.) We see a to have stopped at this particular point. Gentlemen have waited upon us, and have said, "We are willing to supply a certain amount of money and to go to the Cotton fields to do what we can to improve the quality of Cotton and increase the supplies." We have listened to their statements—we have just said to them, in point of fact, "Be thou clothed, be thou fed, be thou housed," and there, gentlemen, we have stopped. When they have asked us to put our hands into our pockets and to bring out our money, and to risk our capital in the carrying out of these ideas that we have so often preached about, we have said, "No, gentlemen, thus far we have gone, and no farther will we go." (Hear.) Our excellent friend Mr. Bazley, in common with other gentlemen connected with that association, have seen the difficulty that we have been placed in; and though I most cordially approve of the course that the Cotton Supply Association have pursued as a Cotton Supply Association, I still think that those who are friends of that movement are bound to go somewhat further. (Applause.) I, as an individual, am prepared to go further than the Cotton Supply Association can go. Hear, hear.) Now gentlemen, I am sure I have no need to say a single word on behalf of joint stock companies. We have not many joint stock companies in this part of the country engaged in Cotton Spinning and manufacturing, but I would ask you where should we be as a country but for joint stock companies? (Hear.) Where should we be for our water supply, our gas supply, our great railroads, our great trans-Atlantic steamers, and a great many other things, but for having brought into active and successful operation the principle of combination? (Hear, hear.) In fact, gentlemen, I would ask, at this very moment where would India have been but for a joint stock company? (Hear.) Very well, gentlemen, I am sure you will agree with me that this is a fair and legitimate thing for a joint stock company to take up. (Hear.) We have heard a great deal within the past 12 months of our enormous crop of Cotton from the United States of America. It has been no doubt an unprecedented crop in quantity, and as a consumer, along with a great many other consumers, I know that it has also been unprecedented in its adulterations. (Hear.) I believe, gentlemen, that if we got one or two other strings to our bow, and increase the competition in the supply of this great raw material, we shall by that means alone, put a stop to the very extensive adulteration which has taken place during the last two years, in the Cotton sent from the United States. (Hear) But, gentlemen, do not let us plume ourselves too much upon the great Cotton crop of the past 12 months. We know that one very large crop has been succeeded by a diminished crop, and, for anything we know, everything in connection with this crop being a matter that is looming in the distance, the forthcoming crop, which at this moment appears favourable and promises to be very extensive, may be really one of the smallest that has been grown for several years past. I find from looking at the Brokers' circulars that on the 29th of June last, the stock in the port of Liverpool was 1,300,000 bags. Since that date, up to the 31st of August we have imported about 300,000 bags. At the beginning of the present month, our stock in Liverpool was about 1,000,000 bags. The Cotton trade, continued Mr. Mason, took, in July and August last, 430,000 bags; and Liverpool exported to the continent of Europe 130,000 bags, making a total of 560,000 bags. On the 1st of the present month, the stock in Liverpool was a little over 1,000,000 bags. Some time since Mr. Bazley made a statement to the effect that, ere long, the consumption of Cotton would be 40,000 bags per week, and he had seen that fulfilled. He had since stated his belief that it would soon approach to 50,000 bags per week, and he (Mr. Mason) was prepared to endorse that statement. The average quantity taken by the trade from Liverpool in 1859 was 42,000 bags per week; and the quantity taken this year was on an average of 47,000 bags per week. Then they had the people themselves turning joint stock manufacturers; and no one knew what quantity of machinery was being made by the machinists. One had told him that he was turning out 27,000 spindles per week, which were sufficient for a decent sized factory; and another was turning out 18,000 new spindles per week. When they saw what was going on in the increase of Cotton factories—if these new factories were to be brought into operation, and the present ones continued—they would find Mr. Bazley's prophecy of 50,000 bales per week fully verified. (Hear.) There was what would appear to be a large stock of Cotton at Liverpool, but how much of it was downright rubbish they could hardly tell; but they knew that a large portion of it was absolutely unusable by a great portion of the trade. It would be the object of the company to turn its attention to the great continent of India, first, because it was a part of our own great empire, and secondly, because there was no slavery in India. (Hear, hear) All productions were the result of free labour. Although India was increasing the home taxes yet, he thought they would not like to dispossess themselves of India. He thought the reason of its being a tax was the want of proper and good government; but now that the attention of Lancashire was turned to the question, they had a right to expect that good results would ensue. It had been urged as one reason why more Cotton was not produced in India, that when America produced a large supply, India was thrown overboard and neglected. That was a fair ground for complaint; but the reason was, that India did not compete with America in the quality of the raw material; but he believed it was capable of being brought to compete with it in the material. Mr. Haywood, the excellent Secretary of the Cotton Supply Association, had shown him a sample, recently received from India (ginned in the room) grown from Egyptian seed, and he (Mr. Mason) would be glad to give 1*s.d.* per lb. for any quantity of it. (Hear.) It had been grown, he was told without any particular assistance, and that India could produce a considerable quantity of that class of Cotton. He then read extracts from a letter received from Mr. Heugh, at Etawah, between Lucknow and Agra, in the Presidency of Bengal. The letter stated the want of merchants to purchase the Cotton which could be produced. He suggested that there ought to be persons of responsibility to purchase, and that superior machinery for cleaning and packing the Cotton should be employed. If they wanted better Cotton to be grown there he (the writer) would recommend the Cotton consumers to put their shoulders to the wheel, and cease memorialising Government. Now in that he (Mr. Mason) fully concurred. He did not think that private enterprise would meet the difficulty, and they were bound, as consumers, to do

all they could to ascertain the cause of this deficiency. They had had accounts of the increase of Cotton spinning in India, and they could not advert to the new tariff which was to be brought about in India without feelings of melancholy and regret that the eminent man whom they had not long ago heard in that room, Mr Wilson, was now no more. Whatever their opinion as to his acts in India, there could not be but deep regret respecting his removal He (Mr. Mason) looked upon it as a settled fact that the obnoxious Indian tariff must be repealed; and he must express his regret and surprise that Manchester had done so exceedingly little respecting that protective scheme. If Manchester had set its shoulder to the wheel, the measure could not have gone so far. The Cotton trade with India could not be sustained if that tariff were maintained. It was a fact that the Parsees and joint-stock companies in India were prepared to go to America and purchase Cotton. How could the English Cotton manufacturers carry on their trade against a protection of 15 or 20 per cent on native industry? It was utterly un-English, and contrary to the spirit of the legislation of late years; and if the Chamber of Commerce remained apathetic on the subject he hoped the trade generally would take the matter into their own hands, and insist upon the tariff being repealed. If mills had been called into existence in India by prohibitory duties, they would go out of existence when those obnoxious duties were withdrawn. They could not forget the 70,000,000*l* of taxation imposed, and it behoved them to bestir themselves to make their voice heard. He firmly believed that the proposed company would pay most handsomely, and he did not think the 25 per cent. named was by any means an exaggeration; but if they could prove to Manchester capitalists and Cotton spinners that it would pay 1 per cent., the money would be forthcoming to the utmost extent that would be required. He begged to offer his thanks to Mr. Bazley for calling them together; they all knew that nothing could have influenced him in the matter but motives of pure philanthropy and patriotism. (Loud applause.) He had great pleasure in moving the resolution.

Mr. HAROLD LITTLEDALE, of Liverpool, was called upon to second the motion, and in doing so he expressed the great interest he felt in the object of their meeting He had been in the Cotton trade about 40 years. Some 20 years ago, he wrote to Sir Robert Peel, and told him that at some time a Cotton famine would come, and that it would be as bad as a corn famine. (Hear.) He was very much struck with the feasibility of the plan sketched in the prospectus for their operations in India, as well as the formation of model farms. Being a bit of a farmer himself, he could testify to the advantages of good example. (Hear.) Everything would depend upon the management. If they could rely upon the people of India, he was quite sure that it was one of the finest fields in the world for successful Cotton growing, and the labours of the philanthropist. The example of their model farm would be copied, and they would soon find the natives producing Cotton of the best kinds (Hear.) Example was all-powerful, and such a company would be a new era in the history of India. It was impossible to predict the extent to which Cotton would be required China and Japan were opening to us, and if their inhabitants wanted only a cotton nightcap apiece, the consumption would greatly exceed 30,000 bags a week. (Hear, and laughter) It was to their own interest to move in this matter, and if they put their shoulders to the wheel with energy, the company would be sure to progress satisfactorily If there should be a bad crop in America this year, let them calculate what they would have to pay (Hear He was certain that with competition between America, India, and Australia, the bread stuffs we required would be more than paid for by the low price we should pay America for her Cotton. (Hear.) He wished every success to the company, and very much regretted that Liverpool should be so apathetic in the matter. It behoved every man who would do good to his country, and who wished to see India flourish, to aid this movement. (Applause.)

The CHAIRMAN:—I have, since coming into the room, received a letter from my friend the late member for South Lancashire, Mr. Cheetham, which I will read—

"I regret my absence from home will prevent me being present at your meeting to-morrow and taking a part in its proceedings. I fully sympathise, however, in the object you have in view, and shall be glad to join as a shareholder in the formation of the proposed company, for the purchase and promotion of the growth of a superior quality of Cotton in India. The quality of Cotton now received from that country is so inferior, as materially to limit its consumption here, and to prevent its entering into competition with Cotton grown in the United States of America. To remedy this state of things, by improving the quality and extending its consumption, is an object of the highest importance to the manufacturing interests of this country. The information obtained by the Cotton Supply Association shows that a quality of Cotton fully equal to that grown in the United States may be grown in India; but that, to promote its growth, a more direct intercourse with the Indian ryot or cultivator than now exists is requisite. I know of no agency by which this can be effected other than by the action of a joint-stock company such as you propose to be formed. I hope the response to your proposal will be general on the part of those interested, and that the attainment of an object we have so long desired may be achieved."

I have also a letter from Mr Dunlop, of Glasgow, who expresses great sympathy with the object of the meeting. (Hear)

The motion was put, and carried unanimously.

Mr BAZLEY having vacated the Chair, it was taken, on the motion of Mr. D. CHADWICK, by Mr. THOMAS CLEGG.

Mr. WRIGHT TURNER moved, and Mr. MARRANT seconded, a vote of thanks to Mr BAZLEY for presiding.

Mr. CLEGG said he could not put the resolution to the meeting without stating how cordially he rejoiced in the movement. He thought it would be the fault of the directors and those connected with it if they did not make this into a second East India Company, under more favourable auspices, for the regeneration of that country and the benefit of ours. (Hear, hear) It was just the thing that India wanted; but he thought it would be a great mistake if they became Cotton cultivators on a large scale; they might have a model farm or so, and otherwise set an example to the natives But when they considered the price Cotton sold for on the spot, it must prove unremunerative if there were heavy charges for management. In India and Africa it was impossible for Europeans to compete with native labour, but it would be like a great banking company. Some thought that he was a man of one idea, and that Africa was his crotchet, but he was not for Africa alone, he was for the whole world, and for getting Cotton wherever it would grow He was a great believer in averages, and as Indian Cotton ranged at a lower figure in the market, they must not expect their Indian samples to be such as those from Australia, which produced Cotton superior to that of any other part of the world He did not wish to disparage the movement: it was his full belief that it was their duty to go forward, and that if properly managed, the scheme would be highly profitable So far from Mr. Bazley discouraging Cotton growing in Africa, he had been his (Mr Clegg's) best friend, and he trusted that Mr. Bazley's exertions in this matter would be crowned with success. (Hear, hear.)

The vote having been unanimously accorded, Mr Bazley expressed his thanks to the meeting, and the proceedings terminated. We learn that the following gentlemen have already expressed their desire to be placed on the List of Shareholders for the sums appended to their names:—Thomas Bazley, Esq., M.P., 1000*l*.; John Cheetham, Esq., 1000*l*.; Hugh Mason, Esq., 1000*l*.; John Pender, Esq., 1000*l*.; Thomas Emmott, Esq., 1000*l*.; John Platt, Esq., 1000*l*.

Home Correspondence.

Fibre from Hollyhocks.—Since Malvaceæ contain a great deal of useful fibre, a trial of the fibre of Hollyhock would be of some interest. The plant is so easily cultivated and propagated in this climate, and the length so considerable that a great produce might be raised, and the present season, when Hollyhocks will soon be cut down, would be a convenient time for the experiment. They will not be too dry this year, and green fibre is I believe, best for production of strong thread. Perhaps the hint may be useful. *I.*

Cucumbers.—I intend erecting a span-roofed house 30 feet long and 12 feet wide for Cucumbers. I wish to have it heated on the very best principle yet known. Will some of your correspondents therefore inform me which, in their opinion, is the best plan, and where I can go to see it in operation? *Old Subscriber, Burnham, Windsor.*

Almond Tree in Fruit.—There is now here, at an elevation of 500 feet above the level of the sea, an Almond tree in full bearing. Is this usual in England or Wales? *C. C.* [Not very uncommon.]

Beech Trees never struck by Lightning.—During an excursion in the north of England, I was informed by a person of great experience in such matters, that although he had seen many trees struck by lightning, he had never known an instance of a Beech tree being a sufferer. Has this been observed by others? And has any reason been discovered why Beech trees are thus free from the attacks of lightning? *C. T.*

Education of Gardeners.—I am of opinion that some of your correspondents have departed rather far from the subject that was first commenced under this head; from education it has taken the form of pounds, shillings, and pence. I quite agree that on the whole gardeners are badly paid for the duties required of them; and that it is unwise for any man to educate his sons well in order to make gardeners of them, for if he can afford to give them a superior education they would be sure to find far more remuneration in other professions, such as law or medicine. But to take gardening as it stands, the majority of gardeners are the sons of poor labouring men, who could not afford to pay high premiums for a trade or profession; to these gardening is a promotion in life and circumstances. It may not be well to discourage these young men too much, for there must be gardeners, and many if they were not gardeners would be worse off. Would it not be better to encourage young gardeners of the present day to make themselves proficient in the knowledge of their business and all branches of education connected therewith; then, if they see an opening in something more remunerative, their education will be found very serviceable, and they will derive great pleasure in knowing that it is something they have acquired by their own industry. But I think the majority of gardeners have no wish to leave their profession, notwithstanding all its difficulties; and to encourage these to aim at a higher stand, both moral and intellectual, would in my opinion be the noblest deed that could be performed in their favour. Perhaps it may not be well to fix too high a standard of education, for many young gardeners possess great advantages over others in procuring knowledge, but encourage them to pursue knowledge, and as a natural consequence the more they know the more they will want to know. *A Young Gardener.*

Gishurst Compound.—I know this from experience to be a perfect cure for the Grape and Rose mildew. During the heavy rains and low night temperature which prevailed about six weeks ago mildew made its appearance on some Vines in a low span-roofed house here just as the berries were finishing stoning, and it began to spread with such rapidity over the berries, foot-stalks, and even leaves, that I became apprehensive that if not checked it would soon spread over the whole house, and ultimately destroy the crop, or render it unfit for table. I therefore dissolved about 6 ounces of Gishurst in a gallon of boiling rain water, and after allowing it to cool down to a tepid state, towards the afternoon, when I could shut up the house with safety, I syringed thoroughly each Vine affected with the pest, and after allowing them to remain in that state for 24 hours, I found on examination that the Oidium had turned quite black, and had dried up. I then gave the Vines a good syringing with clean tepid water, at the same time raising the temperature, and keeping up a constant supply of fresh air night and day by leaving the lights at top and bottom open a few inches, and I am happy to say that up to this moment the evil has not reappeared. The berries though checked in growth are colouring and progressing favourably, and I entertain a hope that in the end all will prove satisfactory. I have also dipped some Roses affected with mildew in the composition, and with the same result. *Geo. Kerr, The Gardens, Sulhamstead House, near Reading.*

Bees.—Your correspondent "W. I." mentions, at p. 853, a remarkable instance of sagacity in the humble bee. And such it truly is, but I have for some years thought it to be the common practice of our English bee to pierce the tube of flowers in order to reach the honey within, in cases where the tube is not large enough to admit the body of the insect. I know that they pursue this plan in the case of some of our most common out-door flowers, which I think your correspondent may prove by referring to his rows of French Beans (Runners). My attention has often been arrested on observing the bees fastening themselves to the base of the flower tube of Scarlet Beans, instead of entering, or attempting to enter the tube in the usual way, and I find on just now examining the flowers of some here that nearly all are pierced in the manner spoken of. I conclude, therefore, that the practice is not peculiar to one particular season, or confined to hothouse flowers. *G. E., Ford Abbey, Chard.* [No. But the question is how Bees know that they can obtain from exotic flowers which they never saw before, what they obtain from such as they are familiar with.]

Bougainvillæa.—Mr. Duncan's laudatory remarks on Bougainvillæa splendens, in a late Number, induces me to state that we have a plant of it in flower here, which was treated as follows:—In April last it was potted into a 6-inch pot, in a compost of turfy loam, turfy peat, leaf-mould, and a little silver sand; and again in June it was shifted into a 10-inch pot. After it had made 10 shoots, from 3 to 5 feet in length, it was removed into an intermediate house, and exposed more to sun and air; it soon began to show flower; from thence it was removed to the conservatory, and will last in bloom for a considerable length of time. This noble-looking plant is not near so much cultivated as it should be; when in full bloom it ranks foremost amongst Stove plants, both on account of its glossy light green foliage, and beautiful light-red coloured bracts; it is easily propagated by cuttings of half-ripened wood. *J. T., Holkham Gardens.*

Societies.

HORTICULTURAL: *Sept.* 27, (FLORAL COMMITTEE.)—At this meeting Messrs. Vilmorin & Co. of Paris, and Messrs. Carter of Holborn, showed specimens of the beautiful double Zinnias mentioned by us last week. Messrs. Carter state that their Zinnias "were raised from seed received from a Correspondent in the East Indies." They were less double than Messrs. Vilmorin's. To both were awarded first class certificates. A similar award was also made to Mr. Crowder, of Horncastle, for an upright, pyramidal growing variety of Taxus baccata, mentioned by us on a former occasion. A first-class certificate was likewise given to a fine bold purple Dahlia called Beauty of Hilperton from Mr. Edwards of that place. A rosy lilac Dahlia called Juno from Mr. Rawlings was commended, as were also Dahlias Princess of Prussia, yellow, and George Parker, white tipped with lilac, from Mr. Turner of Slough. A similar mark of distinction was also bestowed upon a purple Dahlia called Lord Derby from Mr. Pope of Chelsea. A large showy yellow Œnothera, from Messrs. Carter, was likewise commended, as were also Tropæolum Garibaldi, a rich Orange crimson sort from Messrs. Garaway and Co. of Bristol, and two beautiful Gladioluses named Herr Rosenberg and Mrs. Blount, from Mr. Standish of Bagshot. Other fine varieties of Gladiolus were also shown by Mr. Standish, and some beautiful stands of Dahlias by Mr. Turner.

ENTOMOLOGICAL: *Sept.* 3.—H. T. Stainton, Esq. Vice-President, in the Chair. Mr. Waterhouse exhibited living examples of Tricodes hispidus in the larva, pupa, and imago states, forwarded to him by Mr. Plant of Leicester, and Dorcatoma chrysomelina, of Sturm, bred from rotten wood brought from Richmond Park; the species had not hitherto been detected in Britain. Mr. Stevens exhibited two specimens of Diachromus germanus, recently found alive in the town of Deal. Mr. Pelerin exhibited some fine Coleoptera, including a beautiful variety of Staphylinus Cæsareus, having the pubescence entirely fulvous. Mr. King exhibited a fine series of Crambus paludellus, and other Lepidoptera from Horning Fen, Norfolk. Mr. Stainton exhibited the living larvæ of Nemotois scabiosellus received from Herr Hofmann, of Ratisbon. Mr. Janson exhibited specimens of Donacia Comari, taken in Perthshire, and pointed out the distinguishing characters of this species, which had hitherto only been found in Germany. Mr. Rye exhibited a specimen of Aleochara ruficornis, found by Mr. Solomon in Campsee Glen, near Glasgow, and a Bagous, which he believed to be distinct from all the described species of that genus. The Secretary read a communication from Walter Elliot, Esq., of Wolfelee, Kawick, N.B., on the injury done to Larch and Spruce Firs by Hylobes abietis, the writer considering the ravages of this beetle to be the chief cause of the increasing mortality in plantations of those trees.

Notices of Books.

Le Jardin Fruitier du Muséum, ou Iconographie de toutes les espèces et variétés d'arbres fruitiers cultivés dans cet établissement, &c. &c. Par J. Decaisne 4to. Paris, Firmin Didot. Parts 25 to 36.

This splendid work, which has been already mentioned once or twice in our columns, has reached its 36th number; and the portion we have just received maintains the high character of that already noticed. The plates are beautifully executed, and although the colouring of some of the fruits may be considered too high by many on this side of the Channel, yet it is

doubtless true to nature as regards fruits produced in the last two bright summers in France. We have even seen fruits quite as highly tinted in this country when grown on a chalk soil, near the sea, on the south coast. The contents of the parts before us are of so much interest that we propose to examine them in detail, especially as the work can have very few horticultural readers in this country.

Groseiller de Hollande à gros fruits blancs.—This appears to be the same as our White Dutch Currant. It is stated that, as a general rule, White Currants are not so much grown about Paris as red ones, the market gardeners having found them less productive, and the fruit, from the thinness of its skin, apt to become spotted and russeted so as to lose its brightness for the market.

Groseiller à fruits carnés, the Champagne Currant. It is described as intermediate between the red and white. Opinions differ as to the value of this variety. Some contend that it is superior, others that it is inferior, to the White Currant. Prof. Decaisne is of the latter opinion, having always found the fruit more sour than that of the white. On the other hand it makes jellies which keep better than those from the white, and with less boiling. M. de Bavay has seen this variety bearing red bunches on the same plant, and thus showing a tendency to revert to its original type.

Winter Bon-Chrétien, Poire Bon-Chrétien.— Flesh white, firm, breaking, more or less gritty round the core; juice abundant, sugary and perfumed when the fruit is very ripe. It is better to train the tree against a wall than as a pyramid in the north of France. There is a variety with striped fruit. The Winter Bon-Chrétien has a very long stalk, and must not be confounded with the Bon-Chrétien Turc and Bon Chrétien d'Auch, which have very large fruit, with a very short and thick stalk.

The introduction of this variety has been attributed, Prof. Decaisne knows not with what foundation, sometimes to St. Martin, who is said to have brought it from Hungary in the beginning of the 5th century; sometimes to St. Francis de Paula, who died in 1485. Panciroli supposes, and with a greater degree of probability, that *Bon-Chrétien* is a corruption of *Bon-Crustuménien* (*crustamium*). Rabelais says, "Vous mangerez de grosses Poires Crustuménies, des Berguamottes, une Pomme de Courtpendu." The Winter Bon-Chrétien, though not held in such high esteem as the Belle-Angevine [Uvedale's St. Germain], du Curé [Vicar of Winkfield], &c., which, on account of their size and colour, constitute the great ornament of the winter dessert, is sold, nevertheless, in Paris at the end of winter by the principal fruiterers at the same price as fine Easter Beurré Pears, or at 2 or 3 francs each; but this price was much exceeded in the 16th and 17th centuries, when, according to Pierre de l'Etoile, as much as a crown apiece was given for these Pears on some occasions. We must add, that although this Pear was formerly a good deal grown on walls in England, it now succeeds so badly in comparison with many newer sorts that it is no longer deemed worthy of cultivation in our climate.

Poire Crottée.—This is a variety of the Doyenné Blanc, apt to crack and speck. It is considered the same as the *Louise de Prusse* of M. Bivort, but different from that of M. Willermoz.

Poire Royale d'Hiver.—In Italy this bears the names of *Pera Spina, P. Papana, P. Casentina*, &c. In France it is often confounded with the *Poire Muscat Lallemand*; and Prof. Decaisne considers it identical with the Poire *Louis-Grégoire* and *Jean-Baptiste Bivort*. The flesh is firm, yellowish white, juicy, sweet, perfumed and of a peculiar, very agreeable flavour, resembling that of the *Fortunée de Parmentier*, but less astringent; season, November till March. This Pear cannot be recommended for cultivation in England, where it has been tried. The *Louis-Grégoire*, and *J. B. Bivort* are stated to be synonymous with it; the former to have been raised at Jodoigne, in 1832, and the *J. B. Bivort* to have fruited for the first time at Geest-Saint-Remy in 1847. However that may be, it is certain that the Royale d'Hiver is a very old Pear.

Vermillon, or *Bellissime d'Automne* is a long Pear, greenish-yellow on the shaded side, red next the sun, sprinkled with numerous white and deep red spots. Flesh breaking with a sweet, somewhat perfumed, slightly vinous juice, ripe in September.

Poire Colmar d'Été.—Fruit small or middle-sized, turbinate; skin smooth, sprinkled with brown dots; stalk straight, more or less fleshy; flesh firm or half-melting, juicy, sweet, perfumed. Prof. Decaisne retains the name of Colmar d'Été given to this fruit by Van Mons, and states that it must not be confounded with the *Colmar d'Été de Strasbourg*, which is the same as the *Poire Œuf de Cygne*, nor with the *Colmar d'Automne*, as M. Willermoz has done. The *Colmar d'Été* is considered only of second-rate quality by Prof. Decaisne. In the *Revue Horticole*, which he quotes, the flesh is described as melting, but somewhat gritty; juice abundant, and very good: ripe in October. According to Prévost (*Pomol. Seine-Inférieure*), the flesh is rather fine, very tender, half-melting; juice abundant, very sweet and perfumed. Ripe in September.

The cultivation of the Colmar d'Été has not been extensive in England, and therefore we cannot say whether it will prove suitable to this climate or not. We can, however, corroborate Prof. Decaisne's statement that it is different from the *Poire Œuf de Cygne*; and we may remark that the latter is not the same, nor so good, as the *Swan's Egg Pear*.

Poire Donville.—Fruit large, oblong, swelling out in the middle, flat at the eye; stalk very long, stout, a little curved, generally thickened at its insertion; skin yellow, tinged with brownish-red next the sun, sprinkled with numerous brown dots, and marked with pale-brown russet spots near the stalk. Flesh white, breaking, very sweet. A baking Pear. Season, December. The tree is an abundant bearer. According to Prof. Decaisne, Pomologists have been generally mistaken with respect to the *Poire Donville*. Some have made a new variety of it under the name of *Chaumontel anglais* or *Belge*; others, from the similarity of the name, have taken it for the *Martin Sire or Ronville*. M. Willermoz has erroneously made it synonymous with the *Chaumontel ordinaire*. At Bourdeaux, according to Catros, it is confounded with the *Petit Rateau*. It was described by Merlet in 1667 as the *Donville*, or *Calot*, or *Poire de Provence*. According to Poiteau it is much esteemed for preserving and confectionary.

(To be continued.)

An eighth edition of *Rivers' Orchard House* has come out (Longmans). It is somewhat extended but seems to be little altered from the last edition, good evidence that the management of such buildings is brought very nearly to a certainty. Those who have them this year must congratulate themselves, for in them, and no where else except in heated buildings, has fruit acquired either colour or flavour. In Orchard houses, however, the wretched summer has been scarcely felt. We add Mr. Rivers' own prefatory remarks to this new edition.

"In this (the Eighth) edition, the 'Vineyard under Glass' is a new idea likely to be of great interest, offering as it does a most agreeable method of cultivating the Vine. I have also extended my directions for cultivating the Tangerin Orange, one of the most delicious of our autumnal fruits. I have in like manner suggested the extension of Orange culture, so as to include the Maltese Blood and the thin-rinded St. Michael's Orange, which require the same treatment as the Tangerin, and of the latter of which I have imported young trees of the true sort direct from the island. I feel a firm conviction that Orange-tree houses for the production of fruit only, and not as formerly for their cultivation as ornamental trees and shrubs, will ere long be in every good garden.

"In the management of Apricot trees in orchard houses, it will be seen that, writing from recent experience, I have directed syringing the trees to be nearly or quite discontinued. I have also made some change in the mode of summer pinching, which will be found advantageous. In the summer pinching of Peach and Nectarine trees I have also made some trifling change as to the time when it should be discontinued. I have, in fact, given all the fruits of my experience up to the time of publication.

"I may, I think, venture to suggest that "Tiffany houses," as employed by Mr. Standish, may be found very cheap and useful in the culture of Plums, Cherries, Pears, and even Apricots in pots. The trees may remain in the house till their fruit is quite safe from the effects of our spring frosts, say the first week in June, and then be placed in the open air to ripen their fruit. With the ripening power of 'Tiffany houses' we are at present unacquainted. If they can be made to serve as efficient protectors of the blossoms of such kinds of fruits as will ripen in the open air, they will be of great service in the fruit-garden. The best form for a house of this kind would be, I apprehend, the span roof, the sides four feet high, the centre six or seven feet. The tiffany for the roof should be fixed; that forming the sides should be loose, so as to admit of its being turned up daily for the admission of fresh air."

Icones Morphologicæ atque Organographicæ Introductionem synopsi muscorum europæorum præmissam illustrantes. By W. Ph. Schimper. Stuttgard, 1860. 4to.

This is a quarto dissertation upon the structure of Mosses, written in Latin, German, and French, and illustrated by 11 excellent plates filled with details of structure. We do not remark anything novel in the statements, nor any attempt to explain the analogy, with the organs of other plants, of the very singular apparatus called the theca or capsule in Mosses. But for the purpose which the author has in view—*diriger les premiers pas du commençant dans cette branche de la Botanique*—it is extremely well adapted.

Weddell's *Chloris Andina*. The 12th number has reached us, containing 6 plates and letter-press from Scrophulariaceæ to the beginning of Bignoniaceæ. Of Alpine Calceolarias alone 34 species are described.

Some time ago Messrs. Longmans commenced *a graduated series of Reading lesson books* for all classes of English schools, to be completed in five books. Book the second has now appeared, and contains capital extracts from authors of established reputation or bits by the editor. The contents consist of Stories of Animals and Adventure and Miscellaneous subjects, and very entertaining stories they are; remarkably well suited to the understanding of little folks.

TRADE LISTS RECEIVED. — Catalogue of Choice Nursery Stock offered for sale by STEPHEN BROWN, SUDBURY, SUFFOLK; also a Catalogue of Dutch and Cape Bulbs and other flower roots from the same grower.—List of Bulbs and other flower roots cultivated and imported by E. G. HENDERSON & SON, WELLINGTON ROAD, ST. JOHN'S WOOD.

Miscellaneous.

How to Teach a Garden Boy his Work.—Let the lessons be one at a time, and amazingly simple. As to cleaning a piece of ground previous to digging, teach so much of the botany of three or four of the worst weeds as that each may be known in a crowd, or at any distance. Let it be a rule that these are to be taken up as carefully as a crop of Beet, and laid aside, that it may be seen how little injury they have suffered in the act of uprooting. The ground being thus cleared, let it be understood that digging means lifting the earth to the depth of 15 inches, and laying it upside down, the common substitute for which is a mere disordering of the same surface that was uppermost before; hence the wetness and coldness of soil, the late sowing and little reaping, together with the waste of manure, which occur in the gardens of the peasantry, a loss sustained through life for the want of a single lesson. To secure good digging, see that a furrow or trench of the specified depth be opened on the one side of the plot to be dug, and the stuff wheeled to the other. Let this furrow be 2 feet wide and cut straight down, and let the boy understand that when it is filled in the process of digging he must leave another as wide and as deep, and maintain such openness of trench all the way through the plot. Point out the different colours of the soil that comes up, and show that his work, if rightly done, will all the way present the same appearance. If such a colour is exhibited, the depth is good, the annual weeds fall, of course, to occupy the lowest place, and neither the rake nor the genial sun will bring them to light any more. The manure is by this means also duly deposited, and not wasted by frost and evaporation. * * * The wire riddle makes a rule for itself, and is admirable for giving exactness of idea to the worker, as well as of finish to his work. You want a piece of ground made fit for small seeds, and you give orders to have it well cleared of stones. But your words do not convey your idea; the boy takes his notions from a Clover field. Show him the riddle and say that the soil to a given depth must pass through its wires. They have no latitudinarian notions, and your boy so furnished is as perfect a workman as the first in a palace garden. The work is a masterpiece, and never did hand of thrifty wife print with more pleasure her store of new-made meal than you will a mould of such aptitude, whether for receiving the fine fibres of a flower or the fairy heads of the Amaranth. At such a work your boy is a treasure; you have him at any rate, and the work, though slow, is sweet to the eye when done; but it might lose some of its sweetness on settling accounts with the other hands at the rate of 2*s.* per day. I shall notice little more than one other sort of work, to exemplify the methods of turning your boy's hands to good account. I allude to one which he can do perfectly, which will never fail in supplying fair-weather employment, and by the perseverance of which the manse garden will show the best crops in the parish. Let not prejudice as to the inadequacy of strength prove a hindrance. Nothing but ignorance of the spade and of muscular exertion can make the name of trenching sound harsh as work for a boy. The work is in fact as easy as any other: severity lies in quantity, not in kind. A man to make 2*s.* must trench 24 square yards; and if your boy do one-fourth of that number, neither is he overwrought nor do you keep him for nothing; and even at this lowly rate it is surprising, so little do we notice the progress of time, how great the amount will appear after a long period. Supposing you have a trench opened, and the work proceeds, the progress, though marked by small additions, is still an object in dreary winter. But a snowfall has shut all up, and yet the sky is delightfully serene. For want of management in such a season, your boy, having nothing to do, would certainly be off, spending his pence on gunpowder, and joining a group of rascals about the hedges, idly shooting at birds, swearing either at a hit or miss, and contracting an intolerable itch for a life of poaching, and hence of drams, to be had by the easy-won price of a pheasant, or fulmart tail, by other acts of theft. Keep your boy from such associates, as you have to answer for his soul. *Manse Garden.*

More about the Habits of the Kite.—The food of the Kite is rather general in its nature, consisting of various quadrupeds, young rabbits, hares, rats, mice, and moles, of which latter animals no less than 22 were discovered in the nest of a single Kite, showing how rapid and noiseless must be its movements when it can secure so wary and keen-eared an animal as a mole. It does not seize the swift-winged birds through the air, but pounces on many a partridge as it sits on the ground, and is remarkably fond of taking young and unfledged birds from their nests; reptiles of different kinds, such as snakes, frogs, lizards, and newts also form part of its food, and it will not disdain to pick up a beetle or a grasshopper when it can find no larger prey. The Kite is also a good fisher, waging nearly as successful war against the finny inhabitants of the rivers or ponds as the osprey itself; sweeping suddenly down upon the fish as they rise to

the surface in search of food, or in their accustomed gambollings, and bearing them away to the shore, where it settles down and eats them in peace. The nest of the Kite is chiefly built with sticks as a foundation, upon which is placed a layer of moss, wool, hair, and other soft and warm articles. The locality which is chosen for the nest is generally in some thick wood, and the bird prefers a strong, forked branch for the resting-place. The eggs are generally two in number, and sometimes three, of a greyish or light brownish-white colour, speckled with reddish chesnut blotches, which, as is the case with so many hawk's eggs, are gathered towards the larger end. The Kite still breeds in several parts of Great Britain, a recent instance being mentioned by the Hon. G. Berkeley in a communication to the *Field* newspaper, which, as it illustrates something of the disposition of the bird, shall be given in his own words. "I discovered the fact of a Kite's nest in one of the woods in my possession, while at Harrold Hall, in Bedfordshire, near which I could not secrete myself sufficiently to witness the return to it of the old bird, because she soared above the wood, and did not consider the cover safe until I had taken my departure. One day I took my keeper with me to the nest, when the Kite, as usual, took to the skies. I then concealed myself, and sent my keeper away. The Kite soared over him, or 'watched' him safe away, and being unable to count even two, she boldly, and without further precaution, came back to her eggs, and I killed her." A curious incident connected with the Kite is mentioned in the "Journal of a Naturalist." On a winter's evening a heavy fog came on, succeeded by a severe frost, and actually froze the feet of a number of birds to the boughs on which they were roosting. Among them were several Kites, which were thus fastened into the icy stocks, and no less than 15 of these birds were captured by certain adventurous youths, who climbed the trees in spite of the frosty coating, and made easy prey of the poor prisoners. It is a strange circumstance that so many Kites should have been found together, as the Kite is not a gregarious bird, and associates only in pairs. The same author draws a very neat distinction between the flight of the buzzard and that of the Kite. "Though we see it sometimes in company with the buzzard, it is never to be mistaken for that clumsy bird, which will escape from the limb of some tree, with a confused and hurried flight indicative of fear, while the Kite moves steadily from the summit of the loftiest Oak, the scattered crest of the highest poplar, or the most elevated Ash—circles round and round, sedate and calm, and then leaves us." The Kite is possessed of a very docile and agreeable temper, and is easily tamed. Mr. Thompson records an instance, where a pair of these birds were taken from a nest near Loch Awe, in Argyleshire, and were so thoroughly domesticated that they were permitted to fly at liberty every morning. When thrown into the air, they always soared aloft in their graceful circling flights, displaying their wonderful command of wing, and exulting in its exercise, but still so affectionate in their nature that they always returned to the hand of their owner when called. They were generally fed on rats and mice, and were very fond of catching the former animals as they were let loose from a cage. The bird has even been trained for the purpose of falconry, and has been found to perform its task to the satisfaction of its owner. A rather curious "lure" was employed in order to induce the Kite to return to its master after its flight, consisting of a living owl with a fox's brush tied to one of its legs, partly in order to impede its flight, and partly to make it more attractive to the gaze of the wanderer. The extraordinary dislike which is felt for the owl by most of the day-flying birds is well known, and it was probably on account of that aversion that the owl was used as a decoy.—*Routledge's Illustrated Natural History.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Be prepared with specimen plants in flower to supply the places of such as may be going out of bloom. If early Camellias are wanted let some of the most forward be placed in a rather close house, to induce them to open their buds, giving them a regular supply of manure-water; and some of the earliest Epacrises may be placed in a close part of the greenhouse, where they will soon open their blossoms; also Daphnes and many other plants, provided their flower-buds are prominent. Aim at keeping the atmosphere of this house rather dry, using just enough fire-heat on damp cold nights to allow of giving sufficient air to keep the atmosphere in motion, so as prevent damp being injurious. Twiners on the roof of stoves should now be more than ever kept within bounds, cutting back all shoots that have done flowering, and tying the others so as to obstruct light as little as possible. Place specimens ripening their wood in the coolest part of the house, and water sparingly at the root. Achimenes, Gloxinias, and Gesneras, that are properly ripened off may be stored away in any dry place where they will be secure from frost, but take care to place them where they will be free from damp, and they should not be exposed to a lower temperature than about 45° or 50°; many valuable plants of this kind have been lost through storing them in dry sheds, &c. Hard-wooded shrubs, such as Ixoras, that have not made their wood after flowering, should be encouraged with a warm moist temperature, syringing them lightly overhead, and shutting up the house early in the afternoon. Get any growing plants that require more pot room shifted as soon as convenient, in order to get them well rooted into the fresh soil before winter. Keep a sharp look out for insects, especially thrips, which are often troublesome at this season on such plants as are growing in a close warm house; either fumigate or remove the affected plants and thoroughly clean them immediately this pest is perceived, for if left to its own way with growing tender-foliaged plants, it soon disfigures the finest specimens.

FORCING DEPARTMENT.

PINERIES.—Plants now showing fruit will require some attention. Let them be kept rather warm and dry until after blooming, when they will not be so readily injured by a damp or low temperature. Those who grow Pines in pots should gather all those showing fruit together, so as to be able to treat them more judiciously than can be done when they are scattered throughout the whole stock. Plants that have been kept cool and dry for some time past, in order to prepare them for fruiting, should now be placed in a brisk heat, taking care to thoroughly moisten the soil about their roots, so as to get the fruit fairly set and safe before November. Continue to afford young growing stock a warm moist temperature, with plenty of manure water at the root; but use fire-heat sparingly, and avoid drawing the plants by a high night temperature. With proper management and convenience, 70° will be quite safe if the weather proves favourable. Successful growers in times gone by recommended a low temperature and dry atmosphere, in order to prevent growth after this season, and under their circumstances this was the most judicious practice, but tan beds and dung linings have given place to hot-water tanks and pipes, and small squares of glass, with wide black laps and heavy supports, have been replaced by roofs which hardly intercept a ray of light, and to adopt the practice of former days would only be a waste of means. It is hardly too much to say that with modern facilities we ought to produce two crops of fruit in the time that was necessary to produce one under the old style of houses and heating, but this cannot be done by those who are afraid to keep their plants growing after the decline of the season. Growers, however, who have still to contend with the disadvantages of dung pits, will do well to regulate the temperature so as to avoid weakly growth, and this must also be attended to under any circumstances.

VINERIES.—Take advantage of dry weather, should it occur, to get the wood of young Vines well ripened; use moderate fires, with a free circulation of air, and where the object is to ripen the wood keep the atmosphere as dry as possible. Late Grapes not yet ripe should also be assisted with fire heat and a free circulation of air, in order to forward the ripening. Keep ripe fruit cool with plenty of air, to prevent injury from damp, and cut out any decaying berries directly they are perceived. Houses in which the wood is thoroughly ripe can hardly be kept too cool, and the ventilators of these should be left open night and day in dry weather. This will prevent the continuance of growth, and is the best means of getting the Vines into a dormant state ready for pruning. The border of the early house should be covered with something to protect it from wet; for although under ordinary circumstances there would be no immediate necessity for this, it will be better done now than later this wet season.

FLOWER GARDEN AND SHRUBBERIES.

Tender plants in borders must be covered when there is the slightest appearance of frost. As has been often recommended, give careful attention to young stock, and recollect that sturdy, well-rooted plants are much easier to winter than large plants with long-jointed soft wood. With good convenience late-rooted cuttings may still be potted off; but unless they are very thick in the cutting pots we would prefer wintering them in these to shifting at this season, for they occupy much less space in the cutting pots, and having more space for their roots, they are frequently more healthy and require less attention in winter than those that are potted singly. Square pans 12 inches wide and 5 inches deep are very suitable for wintering cuttings of Verbenas, Lobelias, and other plants which can be kept in a small state. One of these will hold some 20 good plants, and with care, to prevent their being injured by damp, they will winter quite as well treated in this way as if potted singly in 4-inch pots, and a vast quantity may be stored in a small space. Where things of this kind have to be kept in cold frames or pits, the plants should be potted singly, as they would be very liable to damp off, despite every care, if placed thickly together in pans, and put where it may be impossible to give air for weeks together. Let us, however, protest against the system of wintering bedding stock in such unsuitable places. This practice is generally adopted from some mistaken notion of economy; but if a fair calculation of the time required to attend to plants wintered in this way could be made, and all the losses, &c., taken into account, it would be found to greatly overbalance the trifling cost of putting up a proper heating apparatus and furnishing a few bushels of coke or coal annually. Where alterations are projected or in hand, these should be proceeded with in the most expeditious manner.

HARDY FRUIT AND KITCHEN GARDEN.

Take advantage of the first dry state of the ground to get Celery earthed up. On heavy soils it is sometimes necessary to surround the plants with sand or sifted ashes to prevent their rotting off, which they are apt to do if surrounded with soil that holds much water. Thin young crops of Turnips, Spinach, &c., before they become weakly and drawn through standing too closely together. Stir the surface of the soil deeply among growing crops to admit air to the roots, and keep down weeds. Get spare ground manured and dug or trenched for another crop, whenever time can be spared for that kind of work.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON

For the Week ending Sept 27, 1860, as observed at the Horticultural Gardens

Sept.	Moon's Age.	Barometer. Max.	Barometer. Min	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep	2 feet deep.	Wind	Rain.
Friday 21	7	29.779	29.892	65	42	53.5	58½	56	W.	.02
Satur. 22	7	29.673	29.646	62	41	51.5	59	56½	S.W.	.50
Sunday 23	8	29.694	29.646	59	34	46.5	53½	56	S.W.	.00
Mon. 24	9	29.734	29.487	57	39	48.0	57	56	N.E.	.80
Tues. 25	10	29.759	29.523	58	29	42.5	56	55	S.W.	.01
Wed. 26	11	29.788	29.611	60	37	48.5	55	54½	S.E.	.24
Thurs. 27	12	29.676	29.626	66	47	56.5	55½	54	S.W.	.14
Average..		29.756	29.634	60.7	38.4	49.5	56.3	55.4		1.71

Sept. 21—Light clouds, very fine; slightly overcast.
— 22—Rather boisterous; drizzling rain; heavy rain at night.
— 23—Overcast; fine; slightly overcast; cold at night
— 24—Foggy; overcast; very heavy rain during the night.
— 25—Boisterous with rain; densely and uniformly overcast; clear; frosty.
— 26—Foggy, fine in forenoon; heavy clouds and showers; rain.
— 27—Fine; heavy showers and sultry intervals; overcast; foggy; rain at night

Mean temperature of the week, 6½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Oct. 6th, 1860.

Sept. and Oct.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 30..	64.4	43.6	54.0	21	0.58 in.	3	2	3	3	5	9	8	1
Mon. 1 ..	63.2	45.2	54.2	17	0·53	2	2	2	2	7	14	4	1
Tues. 2..	64.2	43.9	54.0	17	0.48	2	3	1	—	9	10	6	3
Wed. 3..	63.5	44.5	54.0	16	1.01	2	3	1	1	11	10	4	2
Thurs. 4..	64.0	44.0	54.0	18	1.06	—	6	2	—	7	16	2	1
Friday 5..	62.9	41.2	52.1	17	0.82	4	3	2	1	6	12	5	1
Satur. 6..	61.5	44.0	52.7	19	0.78	1	3	5	3	4	10	6	2

The highest temperature during the above period occurred on the 4th, 1859, and 5th, 1834—therm. 80 deg; and the lowest on the 2d, 1853—therm 27 deg.

Notices to Correspondents.

CANADA: *W B.* The climate of Canada being the same as that of the N. United States, books on cultivation in the latter apply to the former. Probably Beecher's Plain and Pleasant talk on Fruits, Flowers, and Farming (Sampson Low & Co., London) will give you the information you seek. Lists of Nurserymen in those countries are not circulated here, but you may possibly hear of them at Charlwood's, in Covent Garden. We know nothing about secrets for rotting live stumps, and cannot advise you to believe all you may hear upon such a subject. Salt is as likely to destroy them as anything. Plenty of books on Farming and Gardening may be had in New York.

ERRATUM.—In our report of the Crystal Palace exhibition under the head of Melons read, Mr. John Pottle, Bealings, Suffolk, instead of Mr. Potter, Woodbridge.

HEATING: *A Subscriber.* We suppose it is possible so to construct a gas stove as to heat a small greenhouse without hurting the plants; but all yet contrived seem to turn out ill. Can't you heat yours by a small hot-water pipe conveyed from the kitchen boiler? It would be certain to answer, and would not hurt the plants. Any hot-water apparatus maker would put it up; and 3-inch pipes would probably suffice.

INSECTS: *R L.* Your Pear leaves are infested with the black slimy larvæ of a small black winged Saw-fly (Tenthredo cerasi). Dust the leaves with lime, or syringe them with tobacco or lime-water. *W.*

NAMES OF FRUITS: *C W D.* The largest Pear from a wall is the Bonne d'Ézée; the Apple is the Kentish Codlin. The two small Pears are not known in their present unripe state.‖

NAMES OF PLANTS: *Geo. Davies.* Barleria Gibsoni is rightly named. It must have been very recently introduced. We never saw it before.—*Devonian.* Eremophila oppositifolia.—*A S.* 1, Bromus sterilis; 2, some Poa—very like P. annua; 3, Lolium perenne; most miserable scraps.—*W R.* It is impossible to identify such miserable specimens as those sent without fructification. No. 2 is Adiantum Capillus-veneris. 4. Niphobolus Lingua.—*Sub. Whitehaven.* 1. Polystichum angulare. 2. Adiantum pedatum. 3. Pteris serrulata. 4. A slender form of Lastrea dilatata, if British. If not send a more perfect form.

OAK GALLS: *J N.* A full account of the galls of which you have sent specimens will be found in our volume for the present year, see p. 73.‡

ORCHARD HOUSES: *W G.* We strongly advise you to adopt in every respect the plans recommended by Mr. Rivers in the new (8th) edition of his Orchard House. His advice is the result of experience, and is far more in detail than any reply for which we could find room. The position of the house with respect to the points of the compass is immaterial.

PEAS: *Stirling.* Box received; contents next week.

SPELLING THE NAMES OF PLANTS: *H A.* The best books for a guide are the last edition of Donn's Catalogue and Loudon's Hortus Britannicus. That which you mention is of no sort of authority It must however be remembered that some names are spelt in more ways than one, and each is right. Thus Linnæus and Linneus are both right, as are the adjectives thence derived. Jerdoniæ is correct: Jerdonii not, for the reason you have given. Erica Shannoniana is right, Shannoni and the two others wrong. There is a rule that when a plant is named after the person who first discovered it or brought it into notice the genitive is used (Shannoni); but when named in compliment only the adjective nominative is employed (Shannoniana). But it is often disregarded. The word Giovanni is not Latin, but mere Italian, and has no business with a Latin termination. As to Parmentier, a Belgian cultivator, all spellings except this are wrong.

THE LEE CHEE OR LITCHI: *D Doig.* This fruit tree is from the south, not north of China, and requires a hothouse. It is a good sized tree. You are not likely to do anything with it. It has however fruited in the collection of the Duke of Northumberland As to quality it is excellent.

VANCOUVER'S ISLAND: *G G F.* We can give you no better advice than is contained in Mr. Pemberton's book, noticed last week. On no account trust to Government for employment. It is not to be had and would not be worth having if you could get it.

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Incorporated by Special Act of Parliament in 1853.
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NEW VETERINARY COLLEGE, EDINBURGH.—Authorised in Terms of the Charter of the Royal College of Veterinary Surgeons under Her Most Gracious Majesty's Sign-Manual.

WINTER SESSION, 1860-61.—Introductory Lecture by Professor JOHN GAMGEE, on WEDNESDAY, October 31, at 2 o'clock. Classes open on THURSDAY, November 1.

Descriptive Anatomy of the Domestic Animals	Dr. A. MONASTIER
Practical Anatomy	Dr. A. MONASTIER and Mr. JAMES LAW
Anatomical Demonstrations	
Physiological Anatomy and Physiology	Professor JOHN GAMGEE and Dr. MONASTIER
Chemistry	Dr STEVENSON MACADAM
Analytical Chemistry	
Practical Chemistry	
Materia Medica and Practical Pharmacy, applicable to Veterinary purposes	Mr. JAMES LAW
Veterinary Medicine and Surgery ..	Professor JOHN GAMGEE
Principles and Practice of Shoeing ..	Mr. GAMGEE, Sen.
Clinical Instruction (Daily)	Mr. GAMGEE, Sen., and Professor JOHN GAMGEE

For further particulars apply to Professor JOHN GAMGEE, New Veterinary College, Edinburgh.

SMITHFIELD CLUB CATTLE SHOW, 1860.—THE ANNUAL SHOW OF FAT CATTLE, SHEEP, AND PIGS will take place on December 11, 12, 13, and 14, at the Bazaar, King Street, Portman Square, W.

The LAST DAY for Certificates for both Stock and Implements to be received by the Honorary Secretary is THURSDAY, November 1.

The following forms of Certificates are now ready, and intending Exhibitors in applying for them need only quote the letters and state how many of each letter they require:—

CATTLE.
Form A.—Ox or Steer
,, B.—Cow or Heifer
,, C.—Ox, Cow, or Heifer in extra stock

SHEEP.
Form D.—Pen of three Wethers
,, E.—One Wether or Ewe in extra stock

PIGS.
Form F.—Pen of three Pigs
,, G.—One Pig in extra stock

Prize Sheets, with Rules and Regulations, and Forms of Certificates as above, may be obtained of
B. T. BRANDRETH GIBBS, Hon. Sec.,
Corner of Half Moon Street, Piccadilly, London, W.

N.B.—All communications on the Club's business should have the words "SMITHFIELD CLUB" outside, to distinguish them from private letters.

The Agricultural Gazette.

SATURDAY, SEPTEMBER 29, 1860.

WE regret to see, by specimens forwarded from Brigg, that the fungus called ERGOT is very abundant among the Rye in that part of Lincolnshire. This affection of the grain has now become so rare that it is to be feared lest the formidable consequences of Ergotised corn when eaten may be forgotten. It is in reality a dangerous poison if taken into the body mixed with food, producing violent spasmodic convulsions and dry gangrene. If taken in doses of as much as two drachms, giddiness, headache, and flushed face are produced, together with pain and spasms in the stomach, nausea and vomiting, with colic, purging, and a sense of weight and weariness of the limbs. SRINC, a German writer, states that on one occasion, in the kingdoms of Wurtemburg and Bohemia, he saw what is called convulsive ergotism raging to such an extent that 200 patients died out of 500. In severe cases the very limbs of men and animals rot off.

THERE are just now two enormous ears of Wheat figuring in our advertising columns. One represents the Giant Red Wheat of Major QUENTIN, Waterford; the other the new Red Wheat of Mr. PATRICK SHIRREFF, of Haddington. To the merits of the former we have the following testimony of Mr. PAWLETT, of Beeston, Bedfordshire, who sends the annual report of his experiments with Wheats to our contemporary, *Bell's Messenger*.

The present crop, although better than last season, is below the average of the six preceding years, by about 7 per cent., the Browick Red Wheat having during that period, or since 1853, produced about 44 bushels, and Grace's white 47 bushels per acre. This season I shall not have so much by about 3 bushels per acre of each sort; and, from what I can learn, the Wheat crop will be equally deficient in quantity generally in this neighbourhood. During the last 20 years I have tried nearly 60 sorts of Wheat, of the most productive kinds that I could meet with. None has answered better on my farm than Grace's White and the Browick Red. I, therefore, did not sow many sorts last season, and only one new variety, viz., the Giant Wheat, which I procured from Major QUENTIN, in Ireland, at a cost of upwards of two guineas per bushel, which appeared to me then a very high price, but I am amply repaid by an extra produce. I did not get this Wheat until late in the autumn, and not in time to try against my best sorts of white, nor to sow on my best land, as it was all planted before the Giant Wheat arrived here. I was, therefore, obliged to drill it after Cabbages, very late in November, on light moory land, which has grown Wheat every other year during the last 20. It was put in at 8 inch intervals by the side of the Browick red, at the rate of only 4 pecks of seed per acre, being desirous, on account of the high price it cost, to make it go over a fair quantity of land. The result has proved as follows, the value per acre having been computed at the price the Wheat is now worth to the miller:—

	Quantity per Acre.	Value per qr.	Value per acre.
	bush. pk.	s. d.	£ s. d.
Major QUENTIN's Giant Red	48 2	54 0	16 19 6
Browick Red	39 3	56 0	13 19 0

I was anxious to know whether the Giant Wheat required to be sown thin, or moderately thick; therefore, I drilled an adjoining plot of land at the rate of 7 pecks of seed, which produced 52 bushels per acre. This experiment shows an extra yield of 9 bushels in one case, and 12 bushels per acre in the other, with a clear profit of more than 3*l.* per acre over the Browick Red. I believe the produce would have been larger had the Wheat been sown on good land, in proper time, and after a better preparation; and would, under favourable circumstances, in a good season, readily produce 60 bushels per acre. The quality, however, of the Giant Wheat is not equal to the Lammas, nor the Golden Drop, but about the same as the Spalding and the Browick Red. It grows about the same height, but much stronger in the straw, with a very large ear, and tillers, or stools out, more than any Wheat I have met with.

I have only another small experiment worth recording, made with three kinds of Wheat, drilled on the 11th of October, at 8 inches asunder, at the rate of 7 pecks of seed per acre, after a White Clover ley, the produce of which I found to be as under:—

	Quantity per Acre.	Value per Qr.	Value per Acre.
	bush. pk.	s. d.	£ s. d.
Grace's White	44 0	60 0	16 10 0
Corner's White	43 1	62 0	16 15 0
Browick Red	41 3	56 0	14 12 3

This experiment was made on some of the best land I have, on a good preparation, and will, I think, induce me to give up growing the Browick Red; as I find White Wheats generally suit my land best. I intend to sow about an equal quantity of Grace's White and Corner's White, as I do not yet know which is the most profitable; the former yields the best, but the latter is of the best quality. I shall, however, grow a large breadth of the Giant Wheat, as it has beaten the Browick Red in profit from 3*l.* to 4*l.* per acre, and is by far the most productive kind I ever met with.

To the merits of Mr. SHIRREFF's Wheat we have the testimony of judges of the Highland Society, who have awarded him their medal. And we have the still higher testimony of Mr. SHIRREFF's own past services to agriculture in this particular department. We owe to him the Hopetoun and the Mungoswells White Wheats and the Hopetoun Oat; and a remarkably luxuriant sort of Vetch; and these are all proofs of the untiring patience and assiduity with which he has cultivated this tedious branch of agricultural research; and they are pledges of the value of this his latest contribution to agricultural progress and improvement. We have not the slightest doubt of the propriety of recommending Mr. SHIRREFF's Wheat for extensive trial.

—— THE three weeks at which, three months ago, we estimated the delay of harvest time by the weather of April, May, and June, have been doubled at the least, by the weather of July, August, and September. We are now, over most of the southern counties, no nearer the completion of our harvest than we were in the middle of last month last year. Having traversed many of these counties during the past ten days, we are bound to speak of the lamentable consequences which are now at length following upon the perpetual rainfall of many weeks. There is everywhere an immense extent of Barley either lying in swathe upon the ground or beaten flat amidst the Clovers which are growing through it. A great deal of Wheat, too, remains uncarried on all the higher lands. And the high prices realised for the few good samples in the market show how general is the opinion of the injury which has been sustained.

Besides the corn upon the land, there is, we

believe, more water standing on the surface now than there has been at any time for many previous years. And beneath that surface the whole substance of the soil is water-logged and saturated more generally than has been known since most of our drainage engineers commenced their operations. We cannot doubt that during the coming winter the contrast between drained and undrained land will be more obvious than ever. And the discussions of our agricultural journals will turn almost exclusively upon the anomalies of drainage legislation; and the practice and the principles of the operation it professes to promote.

We must add that the coldness of this wet weather, while it has delayed or diminished the injuries sustained by our corn crops, has greatly retarded the growth of all green crops, and a dripping season has not proved so beneficial to the growth of Swedes and Mangel Wurzels as might have been expected.

AGRICULTURAL STATISTICS OF IRELAND FOR THE YEARS 1859 AND 1860.

ABSTRACT OF CEREAL CROPS.

	1859.	1860.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Wheat	464,175	469,642	5,467	..
Oats	1,982,662	1,961,384	..	21,278
Barley	177,894	180,964	3,070	..
Bere and Rye ..	13,198	12,822	..	376
Beans and Peas ..	14,851	12,745	..	2,106
Total ..	2,652,780	2,637,557	8,537	23,760

Decrease in Cereal Crops in 1860 :—15,223 Acres.

ABSTRACT OF GREEN CROPS.

	1859.	1860.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Potatoes	1,200,347	1,171,837	..	28,510
Turnips	322,137	318,691	..	3,446
Mangel Wurzel & Beet Root ..	27,054	32,060	5,006	..
Cabbage	31,680	22,749	..	8,931
Carrots, Parsnips, & other Green Crops	21,971	21,630	..	358
Vetches & Rape ..	33,243	40,533	7,290	..
Total ..	1,636,432	1,607,483	12,296	41,245

Decrease on Green Crops in 1860 :—28,949 Acres.

GENERAL SUMMARY.

			Acres.
Increase on Meadow and Clover in 1860	..	..	157,375
Decrease in Cereal Crops	,, ..	15,223	
Do. Green Crops	,, ..	28,949	.. 52,010
Do. Flax	,, ..	7,838	
Total increase in the extent of land under crops in 1860	.. ..		105,366

TOTAL EXTENT, IN STATUTE ACRES, OF CEREAL AND GREEN CROPS.

	1859.	1860
Wheat	464,175	469,642
Oats	1,982,662	1,961,384
Barley	177,894	180,964
Bere and Rye	13,198	12,822
Beans and Peas	14,851	12,745
Potatoes	1,200,347	1,171,837
Turnips	322,137	318,691
Mangel and Beetroot	27,054	32,060
Cabbage	31,680	22,749
Carrots, Parsnips, and other green crops	21,971	21,613
Vetches and Rape	33,243	40,533
Flax	136,282	128,444
Meadow and Clover	1,437,111	1,594,486

RETURN OF LIVE STOCK.

	Horses.	Cattle.	Sheep.	Pigs.
1859.....	629,075	3,815,598	3,592,804	1,265,751
1860.....	620,938	3,599 235	3,537,846	1,268,590
	Decrease. 8,137	Decrease. 216,363	Decrease. 54,958	Increase. 2,839

—William Donnelly, Registrar-General.—Agricultural Statistics Office, Sept. 10, 1860.

HUBBACK'S PEDIGREE.

IN defence of my opinion respecting the crossing of the improved Shorthorns, I send a series of pedigrees of Hubback, collected in 1822 by Mr. Hutchinson, of Sockburn. These, with the account of this animal in British Cattle, compared with the description given by George Cully, of the Teeswater, about 1790, makes my inferences highly probable. Charles Colling seems, like Bakewell, to have carried on breeding like trade, as an "art and mystery;" it is known he refused the use of Hubback to his brother Robert and Mr. Waistile, and you will find it stated in the introduction to the American "Herd Book" that Charles declined to give a pedigree to a purchaser of stock, under the plea of having made it a rule never to do so, though this rule was broken into at the sale; and I am afraid some of the early pedigrees are far from certain. That the alloy or Galloway blood was introduced into the Ketton breed is quite certain, as the cow Lady, with one-eighth of that breed, was sold at the sale in 1810 at a high figure, as well as some of her produce, which introduced this blood into some of the first-class herds, without their being depreciated in the eyes of breeders; nor do I see that even a cross with the Kyloe, could such be proved, lessens the value of the descendants when such had been made and perpetuated, to secure an excellency at once instead of waiting for such a long time to do this by selection. Greyhounds are not the less valued from being descended from Snowball, although he was the result of a successful experiment of Colonel Thornton's in crossing the original with the English bulldog. As respects the points, I am happy to see they are received in a candid spirit. I court criticism, so that they may be rendered perfect and acceptable to the public generally. The great difficulty is to make this rule brief, and at the same time sufficiently distinct for use.—I am, &c., *John Chrisp, in the North British Agriculturist, Newcastle-on-Tyne.*

1. Major Rudd, A.D., 1816 —"The bull Hubback was descended from the stock of Sir J. Pennyman, Bart., of Ormsby, in Cleveland, Yorkshire, who about the year 1770 paid much attention to the improvement of the Shorthorned cattle, and purchased the best bulls and cows he could procure. He purchased several cows of Sir W. H. Quinton, of Scampston, who was then celebrated for his breed of Shorthorned cattle. It is probable that Hubback was descended from this breed, but the fact cannot be ascertained."

2. The late Mr. Robert Colling, A.D., 1818, thus gives the pedigree of "Juno," No. 3 in Catalogue.—"Her grandam by Hubback, g. grandam by sire of Hubback, g. g. grandam by Sir J. Pennyman's bull, descended from the stock of the late Sir William H. Quinton, of Scampston," and this is all we have from either this gentleman or his brother either directly or indirectly on the subject of Hubback's pedigree. They were, however, Major Rudd's authorities for what he published in 1816—origin and pedigrees of the Sockburn Shorthorns, by John Hutchinson.

3. Major Rudd, A.D., 1821.—"I am in possession of evidence which establishes the fact that the dam of Hubback owed her propensity to fatten to an admixture of the Kyloe blood, and perhaps this letter will for the first time communicate publicly that the sire of Hubback had an intermixture of Alderney or Norman blood. Hubback, therefore, who was the main root of the improved Shorthorns, united three crosses, viz., the Dutch, or old Shorthorn breed, the Kyloe, and the Alderney. The sire of Hubback was descended from the stock of Sir W. H. Quinton. I was intimately acquainted with Sir J. Pennyman's steward, who has repeatedly assured me that Sir James told him this breed was a cross between the Shorthorns and Alderney. Such then being the pedigree of Hubback, it follows that all the improved Shorthorns are a mixed breed, the result of judicious crossing."

4. Major Rudd, A.D., 1821.—"The sire of Hubback belonged to Mr. George Snowdon, who had been a tenant of Sir J. Pennyman, and by that means derived his bull. It is certain that the late Mr. R. Colling believed the descent of that bull to be from the stock of Sir J. Pennyman and Sir W. H. Quinton, for in his catalogue of his stock of 1818, he deduces the pedigrees from their stock. Of these proofs I was not apprised when my former notes were published."

5. George Baker, Esq., November 9, 1821—"Attempts having been made—by hearsay evidence, and otherwise—to question the blood of Hubback, I send you his pedigree. I have the authority of Mr. Charles Colling to say he always considered him a thorough bred Shorthorn bull. Mr. J. Hunter, of Harworth, who sold his dam with Hubback at her foot, to Mr. Basnet, of Darlington, says his father bought her of Mr. Stephenson, of Ketton, and that she was a pure bred Shorthorn. Mr. Alexander Hae, of Shiraton Banktop, who lived in that neighbourhood, and remembers her and her calf perfectly well, says she was of a beautiful colour and handler, and when she got on to good land near Darlington she got so fat she would not breed again. Hubback, he says, was got by Mr. Snowdon's bull, a son of Mr. Robson's bull of Dimsdale, who was bred by old Mr. Waistell, of Burdon, a very noted breeder, and got by Mr. James Masterman's bull, of Coatham near Darlington, and was a true bred Shorthorn. I consider the improved Shorthorns to come from the breed of Hubback and Mr. Maynard's cows, which from time and judicious crossing have brought them to their superior excellence. No cow or bull can ever be called a Shorthorn with a cross of Scotch blood."

6. John Hunter, as reported to J. Hutchinson. Esq., Nov. 30, 1821.—"Sir,—According to your request, I called on the 22d inst. on John Hunter, bricklayer, Harworth, who informed me that his father was a tenant under Madam Bland. About 50 years ago, as nearly as he could recollect, he left off farming and came to Harworth, having sold off all his cattle, except one little beautiful Shorthorn cow, which he brought along with him. She went ever after in the lanes, he having no land. On calving to a bull belonging to Mr. Geo. Snowdon, of Harworth, a bull calf, she and her calf were taken to Darling, and sold to a Quaker, who the same day sold her and her calf to a Mr. Basnett, timber-merchant. He farther said that a great number of gentlemen had lately made the same inquiries, and had received the same answer. *Chas. Foss.*"

AGRICULTURE OF THE SOUTH COAST.

BY PROFESSOR J. BUCKMAN.

THE peculiarities of agricultural management in any particular district recorded by an attentive observer from a distance, especially when the circumstances of the new scene and those of his old observations are widely different, must always possess considerable interest, and we therefore purpose offering a few notes collected during a month's residence (a fortnight in July and in August of the present year) in the south-east of the county of Sussex. Those to whom the country is familiar will be aware that the coast line from Brighton to Chichester and on to Portsmouth is exceedingly flat, forming, indeed, a very level tract, having the sea as a boundary line to the south, and backed by the elevated ridge of the Sussex hills, the highest altitude of which does not exceed 900 feet on the north; the irregularity of the outline of hill and sea-shore causing a varying width of vale reaching as much as eight miles.

The geological structure of the hills is wholly of chalk, and hence they are called the Chalk Downs; the cretaceous strata dip underneath the valley, where they are overlaid by the eocene of the tertiary, and this valley, which is remarkably flat, offers a more or less stiff soil, which is more tractable than it would otherwise be from the circumstance that the substrata are to a greater or less extent covered up with a post tertiary *debris*, derived partly from the retirement of the sea which once seems to have extended to the foot of the hills themselves, and so there is left behind a mixture of sand, sandy clay of an alluvial character, and partly an intermixture of shingle with flint pebbles derived from the degraded chalk.

The coast line is at present so low that an inordinately high tide washes away large masses of the shore, and so the geologist has in these phenomena to review a long history in the elevation of this tract from the sea, and the constant endeavour of its restless waters to get back this lost territory of old Father Neptune.

Bognor is a rather interesting sea-side town, welcome to the summer searcher after health from its deliciously cool breezes which, when coming from the sea, even in the hottest weather are sufficiently refreshing, and when coming from the land the sweep across the Downs renders the air considerably cooler than it would otherwise be. While however the heat of summer is tempered by these methods, yet this is not an inordinately cold part of the island even in winter. This is attested by the comparatively early state of the crops; Wheat being already cut in the first week in August of this late season, and besides, even by the sea-side the Myrtle and Fuchsia will be found to stand winter after winter, and so to get of a sufficient size to occasionally cover the fronts of the houses. From Bognor, then, our excursions were almost daily towards the base of the hills in every direction, and, as might be expected, our first observations were as to the nature and promise of the crops, and we shall therefore direct first attention to our notes thereupon.

The following, then, is a summary of the kinds of agricultural crops in general cultivation, with their quantities as nearly allocated as our judgment will allow, so that it must not be taken for more than an approximation to the truth; still it will serve the purpose of more forcibly explaining what struck us as peculiar to the district under review.

TABLE OF CROPS, &c.

	Per cent.		
1. Pasture	12		
2. Seeds	2	Fodder plants, &c. ..	22
3. Red Clover	5		
4. White Dutch	3		
5. Vetches	2	—Soiling plants	2
6. Beans	5	Pulse	17
7. Peas	12		
8. Wheat	20		
9. Barley	4	Cereal plants	34
10. Oats	10		
11. Mangel Wurzel	20	Roots	25
12. Turnips	5		
	100		100

The items in this table are somewhat remarkable, and therefore deserve a short description.

1. *Pasture.*—Its paucity when compared with the arable land would at first appear somewhat remarkable for a low land district of heavy land; but we must bear in mind that here the land is very good, and will bear the best of arable crops; and that rivers are not at all frequent, so that with the exception of a few acres on the banks of the Arun, which is a tidal river for the district under review, there is indeed very little in the way of natural pasture; it is not therefore a dairy country to the fullest extent, though we may remark that the peculiar Sussex cattle prevail, and the produce of butter and milk is of superior quality.

2. *Seeds.*—What in the Midland Counties of England are known as "seeds," that is a mixture of Rye-Grass and Clovers, as Red, Dutch, and Trefoil, are here comparatively seldom to be met with, for in the more unmitigated clays or the stronger lands, broad Clover is used alone, and in the lighter soils, where the sand drift has left a thicker covering, the White Dutch Clover is mostly grown for the purpose of sheep feed, the kinds of sheep being for the most part the South Downs.

3. *Red Clovers* are commonly grown, and we were much interested to find that in this crop the curious parasite Orobanche minor (small Broom-rape) was very general; this, though called small, is only so in comparison with the O. elatior, as it is sometimes nearly a foot in height, and from its rapid advance where it takes hold it often proves ruinous to a second cut of the Clover, and it is in this that it generally makes its appearance. We first saw this in Sussex, near Brighton,

and afterwards traced it near Bognor in several fields about Alnwick and Pagham. We had previously seen most of it, or perhaps the O. elatior, in the Isle of Wight, and have met with it in Gloucestershire, and in Wilts within a short distance of Stonehenge, so that we are convinced that this pest is spreading over the country at a rate much more rapid than agreeable; though it must be confessed that as yet few farmers know much of its presence, and even the botanist is but ill acquainted with its natural history, how it is first developed, and how it becomes attached to the Clover roots, and hence experiments upon this interesting subject are much wanted.*

4. *Dutch Clover* is usually confined to the lighter soils, on which it is depastured principally by sheep, the favourite breed being the Southdown.

5. *Vetches* yield large crops, but it is much to be regretted that this is such a weed-growing county that they are far too much intermixed with whole masses of anything but the crop plant, such as Papaver Rhæas, red Poppy; Sinapis arvensis, Charlock; Agrostemma githago, Corn Cockle. The latter being, indeed, common everywhere in Vetches, arising from the fact that its seeds are large and dark in colour; and so the casual observer does not detect them in a sample of seed, though we have seldom examined a sample of Vetch seed without it, and in one instance to the extent of 2048 weed seeds to a bushel of the crop seed.

6. *Beans* are looking tolerably well where they stand, but the crop will be deficient, among other reasons for the loss caused by the protracted winter. Amongst Pulse they form but a small proportion, considering the heavy nature of so much of the land, which would seem to be admirably adapted to this crop.

7. *Peas.* They are grown everywhere, and their luxuriant appearance everywhere we almost fear will be opposed to a good kidding, as the moist season has made them run too much to leaves; still the vast extent of grey Peas here cultivated strikes a stranger as somewhat curious until he finds out that to a great extent they take the place of Beans as a feeding crop, and besides this that Peas are even now used as an article of food amongst the poor to a greater extent than at present pertains in most parts of England. Go where one will the huxters' shops will be found to exhibit a large pan of fried Peas, in the centre of which is a half pint measure, indicative of the manner in which they are retailed to the poor, and a good and sensible food it is.

This is a matter of no small importance when we consider their value in a muscle-making point of view, and, as we observed that the Potato plots are diseased all over this district, we are led to hope that the labourer will set a due estimate on the value of Peas, and that the farmer may be induced to spare him some at a moderate price wherewith to eke out his subsistence in what is likely to prove a dear winter to most of us; and if it be known that 1 lb. of Peas is equal to about 20 lbs. of Potatoes in real feeding and strength-giving properties, no county need regret the loss of the latter fickle plant which has lately proved to be what the countryman calls a "casualty crop," if it has good store of Peas to fall back upon.†

Peas seem to be well grown in this county, the soil is carefully prepared, and the crop kept remarkably clean; where however weeds have over-run the fields, and a general one which here occasionally does so is the Papaver Rhæas (Red Poppy), the amount of deterioration is enormous.

8. *Wheat* is here remarkably tall and more even, with more straw upon the ground than is usual this season, but with all this there is reason to anticipate a smaller yield than usual; still, however, the ears are long, and there is less of the small or "bee Wheat" than one finds so often in a season of drought; but when we come to look more carefully into the structure of even the best ears of Wheat in Sussex, and more especially near the sea-side, it is seen that each of the small bunches which range in two opposite rows on the rachis or termination of the stem, so as to form the complete ear, will, when full, possess two perfect grains of corn, and one or sometimes two smaller ones, which will be separated as "tail." This is the condition when fertile, but when not so none of the grain will be better than tail. This is an important point in estimating the prospects of a crop of Wheat, and no less so is that of examining the leaves and straw to ascertain if it be much affected with mildew, Puccinia graminis, and other epiphytic "blights," as if these be present to a large extent, which happily they are not this season, most of the grains will be poor and starved; and plump corns will thus be the exception and tail the rule.

9. *Barley.*—This crop is not cultivated to the extent which it usually is in a lighter soil, and the present season fully justifies this course, as all the crops we saw were tall and weak in the straw, and hence the gales of the present season have almost flattened it to the ground, thus injuring still further what before did not promise to be a first-rate sample. With regard to the growth of Barley on heavier land, where a part must sometimes be occupied with this crop, we know that if the soil be good it usually grows too much straw and leaf. Would it therefore be advisable to experiment with a view to alter this? We have seen salt used with a Wheat crop to cause shortness and cleanness in this respect, and have certainly seen much benefit from its adoption, probably from the alkali entering into combination with the silicate, which in the shape of silicate of alumina—clay—is not otherwise separable. As weak straw is generally deficient in silica, it may follow that salts of soda and potash may be useful in aiding its separation from soil in which it occurs in small quantity, and so help to carry it through the circulation for the use and growth of the plant.

10. *Oats* are largely grown, and the white Tartarian and Potato types of Oats seem to be generally preferred; they are very tall and promise well, but it is curious to observe that on these soils the Oat is the latest grain in ripening, and indeed, taking Wheat, Barley, and Oats in this respect, they seem to ripen in the order in which we have placed them, whilst on lighter soils it usually happens as follows: Barley Oats, Wheat.

11. *Mangel Wurzel.*—We have been astonished at the great spread of this crop in this part of the country when compared with the midland counties. Everywhere this crop is increasing in breadth, but here the Turnip is not more than a quarter of the quantity that the Mangel presents. This preference is accounted for from the fact that the farmers of Sussex did not suffer the loss of this root nearly to the extent of those in the middle of England, the generally early and warmer climate allowing them greatly to escape the first frost of last winter, which was elsewhere so destructive; but on the other hand the Turnip crop suffered here as elsewhere from the protracted alternations of wet and cold.

The Mangel crop, except on the very cold and badly drained lands, is progressing more favourably than the ungenial weather could have led us to suppose. The seed is usually drilled on the flat, much care is taken with the regulation of the plants, which however the late hay-making in too many cases caused to be delayed to their prejudice. Vacant spaces are mostly filled up by transplantation, which this year has answered remarkably well.

12. *Turnips.*—The small amount of land occupied with this once favourite crop and in a district apparently favourable to the growth of both Swedish and common Turnips, has doubtless resulted, as before intimated, in the comparative abandonment of these roots. Where they are grown they promise as well as we have seen, but the wet has caused them to perish where draining is inefficient. Turnips in this district are all drilled on the flat, but if it be necessary in thin soils, as in the Cotswold district, to ridge roots in order to get a greater depth of soil below them, it would seem to be also of advantage in a stiff soil, and especially so in a wet season, in order that each ridge may so far act as a temporary drain and keep them from perishing of cold and wet.

While on this class of plants it may be remarked that the Rape is beginning to be employed, but still not in sufficient quantity to attract any decided attention. Kohl rabbi was not observed at all, though we feel sure that the district would be favourable for its growth.

Cabbage, Carrots, Parsnips, and Potatoes are rarely grown as farm crops; however as esculents we can state that they are of good quality, and much of the district under review would admirably suit kinds of these as farm produce.

As stated at the outset these are only a few comments upon such notes as a month's residence enabled us to glean. *J. B.* [The above paper should have appeared before the "Notes on Sussex," published last week.]

* We would here remark, that as we are desirous of investigating the natural history of these parasites, any specimens of Orobanche in seed, and especially if attached to their foster parent, will be especially welcome, and these, whether they be on crop plants or on the wild plants to which some of the species attach themselves. [Specimens should be sent to Professor Buckman, the Royal Agricultural College, Cirencester]

† It should here be noted that Potatoes are not much cultivated as a farm crop in the district under review.

THE ROYAL AGRICULTURAL SOCIETY AND THE IMPLEMENT MAKERS.

THE defection from the list of exhibitors at the recent Canterbury meeting of the Royal Agricultural Society of most of the leading agricultural implement makers having called forth severe animadversions from the leading daily and weekly papers, we think it but fair to those who have declined to take part in the public competitions which the Society has for the last 20 years so earnestly and successfully fostered to make known the reasons which have induced this defection—not that we desire to become the champions of the firms who have struck so serious a blow at the Society from which they have unquestionably derived great pecuniary advantages, and to the interest of whose annual meetings they were therefore under a tacit obligation to contribute—but that the public may understand that it is no slight matter which has drawn forth this strong protest, which if firmly adhered to on the one hand, and resisted on the other, must eventually reduce the annual gatherings to mere exhibitions of live stock. It is no secret to those who have mixed much with inventors and makers of agricultural implements, that for years past they have expressed discontent at the frequently recurring contests, where they are expected, like prize-fighters, to be always ready to jeopardise their hard-earned reputation, by entering into competition with all comers. The mental labour and anxiety attendant on the effort which firms of repute felt it necessary to make, to retain their position, not merely as manufacturers of the best implements in their several specialties, but also of those that could win prizes, superadded to the ordinary cares of a large manufactory, were found to be so wearing, to say nothing of the inconvenience which personal attendance at the shows, and consequently absence from their works, occasioned, that a deputation of manufacturers brought the matter for consideration before the Council of the Royal Agricultural Society of England, so long ago as November, 1855, when a plan of triennial, instead of annual, trials for certain classes of implements was adopted by the Society, the prize sheet being divided into three sections, viz.:—1. Implements for tillage and drainage. 2. Machines for the cultivation and harvesting of crops. 3. Machines for preparing crops for market and food for cattle. In addition to this movement, a memorial signed by all the regular implement exhibitors at the annual shows, with the exception of two dissentients, represented to the Council the general feeling of the manufacturers to be opposed to the existing system of money prizes for competition. "We object," says the memorial, "to this system, on the ground that it operates as an undue stimulus to competition, tending less to the production of useful and practical machines than to the development of ingenious peculiarities, by which, with the aid of highly skilled manipulation, the prizes may be won; but more especially is our objection taken on the ground of the unfairness of its operation." For special objects it was proposed to reserve the money prizes, in order to encourage experiments tending to the attainment of practical results altogether beyond the powers of existing mechanism. This, be it remembered, was in the year 1855. In a pamphlet issued by the Association of Agricultural Engineers in 1857 entitled "The Manufacture of Agricultural Machinery considered as a branch of national industry," the author, who signs himself "A Manufacturer," and who may be assumed to give the views of the Association, in condemning the practice of competitive trials at the gatherings of local societies, says—"Any advantage to be derived by local or district societies from a persistence in prize-giving, is very questionable. The slight benefit it may confer upon the small tradesmen of the neighbourhood is surely purchased at too dear a rate, by the tendency which it has to repel from the gatherings of such societies those makers of established reputation, by the exhibition and working of whose implements the local maker and farmer could not fail to be benefited." Here is a significant hint, and made in the year 1857, of the feeling engendered in the minds of manufacturers by competitive trials. It is not surprising, therefore, that the year 1860 should have witnessed that demonstration of feeling which has excited so much indignation. It would appear that the trial at Canterbury, under the countenance of the Royal Agricultural Society, of implements other than those which were, in the accepted order of rotation, to have competed for prizes, was deemed an infraction of the rule acted upon for the first time last year, by which the trials for the several classes of implements were made quadrennial; and this, with other grievances in the background, sufficed to precipitate a course to which most of the leading firms are now committed. The following is the list of manufacturers, who have withdrawn their names as exhibitors, viz.:—

BARRETT, EXALL, & ANDREWS,	W. H. NICHOLSON.
CLAYTON & SHUTTLEWORTH,	RANSOMES & SIMS,
CROSKILL & CO.,	B. SAMUELSON,
GARRETT & SONS,	SMYTH & SONS,
HORNSBY & SONS,	TUXFORD & SONS,
J. & F. HOWARD,	WHITEHOUSE & CO.

That manufacturers of such repute as most of these, commanding not only extensive capital, but, in their own persons, inventive talent of a high order, should, from a petty feeling of jealousy of unknown or rising men, subject themselves to the taunts, evil surmises, and active opposition of those who have chosen to take the side of the Council of the Agricultural Society, is simply ridiculous. It is possible they may be in fault, though we by no means wish to insinuate that it is so; but that they had at least honourable reasons for adopting the course which they have taken, ought, in the absence of facts to the contrary, to have been assumed. From what we can gather, the following are the reasons which mainly dictated the proceedings which deprived the Canterbury Show of so much attractive machinery, viz.:—

1. That the Society has broken faith with the exhibitors, in departing from the quadrennial system of trials mutually agreed upon. 2. That the prize sheets are so indefinitely worded, that makers are in the dark as to the kinds of machines the Society desires to encourage. 3. That the trials are unsatisfactory and the awards capricious; inasmuch as the time devoted to the trials is necessarily very limited, and no fixed principles of judging are laid down for the guidance of the judges. 4. That the exhibitors have no power to object to the appointment of the judges, whether on the ground of their incompetency, or their business relations, or to the choice of the consulting engineer, who stands in the position of umpire. 5. That the reports of the trials are meagre, inaccurate, and incomplete, and published so long after the show as to be of little service either to the public or the trade. 6. That the expenses of exhibiting and competing for prizes have increased so greatly, that the business resulting from attendance at the Royal Agricultural Show is not commensurate with the outlay.

These are, one would think, tangible objections, and

deserving the respectful consideration of a Society professing to promote the welfare of agriculture; but if a true indication of the feeling of the Royal Agricultural Society is to be gathered from the speeches delivered at the annual dinner, war is to be proclaimed against the delinquents who have dared to assert a right which no one would dream of denying to manufacturers in any other branch of industry. When the experience of successive years shows prizes apportioned, not according to real, but presumed merit, and a style of manufacture adopted solely for the purpose of excelling at competitive trials, it is time for honest men to speak out. In the pamphlet before referred to, the writer, quoting from the Society's own Reports, shows that, in respect of agricultural engines, this system was so generally recognised, that one well-known class was denominated "racers," from being designed solely with the view of performing great feats, not however without the nicest skill being required to bring out the result. There has, in fact, been imported into agricultural machinery (by reason of the tests of merit being determined solely by the amount of steam generated from a given quantity of fuel, or of powder consumed, as indicated by the dynamometer), a system almost identical with that of light weights, which has found so much favour with the Jockey Club; and if among the council of the Royal Agricultural Society there was no Lord Redesdale to expose the folly of the system, it was time for the leading agricultural implement makers, who saw but too clearly the danger to which it tended, to make a stand for the cause, which its acknowledged advocates had, to some extent, forsaken; for no one can seriously suppose that to produce machines utterly unfit for the rough work of the farm, is to promote the welfare of British agriculture, however satisfactory may be the results of those machines, in the hands of trained men, in the show yard of the Society. What the implement makers ask for, and it is no outrageous demand, is "that trials of agricultural machinery should be of longer continuance than heretofore, and conducted as much as possible in the manner, and under the same circumstances, that such machinery will be used, in the ordinary practice of farming." If this be granted, racing engines and machines will quickly disappear, for they would break down or blow-up under actual work; but if refused, manufacturers of established reputation are justified in discountenancing the distribution of prizes under such circumstances. Again, they have a right to know, now that implements have arrived at a certain stage towards perfection, what are the precise points of improvement which the Society desires to see embodied in future implements. But at a recent conference, the Implement Committee refused to explain to a deputation of manufacturers, who waited on them, the views of the Society as expressed in their prize sheets. Considering the amount of good which the Royal Agricultural Society has already conferred on the country, and admitting, as we do, its ability still further to benefit agriculture, we are sorry to see this antagonism among its members; for, if not removed speedily, it must have a serious effect on the influence for good of the Society. At the same time, we think the connection of the Society with agricultural implement trials had better cease altogether, than that the makers should be dragooned into a service which must draw off their attention from following out substantial improvements, and entail on them such expenses as must necessarily enhance, instead of cheapening, their implements. We trust, however, for the sake of all, that the breach may be healed by a timely concession on the part of the Society; and that no such attempt, as has been threatened, will be made by the squirearchy, through exclusive dealing, to put down the little band of protestors; for they may find that they are tilting at a power, which, whether viewed politically, or commercially, is not to be despised. *Newton's London Journal of Arts.*

Societies.

GLOUCESTER: *Thursday, Sept.* 27.—The agricultural reputation of the late Earl Ducie, the establishment of the Royal Agricultural College, the celebrity of its dairy husbandry, and of its wold farming—have always secured a considerable rank in the agricultural world for this county. More lately it has been taking the lead in the establishment of a Steam Ploughing Company, and in the revival or establishment of district farmers' clubs. The Kingscote club has been distinguished by the publication of several excellent papers from its members; and at the meetings of the Vale of Berkeley Society, Messrs. Hornsby & Howard meet with as keen a rivalry as at matches of national importance—their ploughmen, Brown and Hulatt, competing for the local prize, which was this year won by Mr. Howard's man—John Hulatt—just as they would at Warwick or at Leeds.

The County Association—now a union of the hill and vale Societies, has just held its annual show in Gloucester, and first-rate classes of Short-horn and Hereford cattle have been exhibited, along with a small show of good implements, including Snowden's well-known paring plough, Bentall's pulpers, Hornsby and Howard's ploughs, and a good collection of drills, chaffcutters, &c. shown by Kell of Gloucester. There has been also a good though small show of roots, Swedes, Mangels, Carrots, and an excellent display of cheese.

The classes of the Short-horn breed included 1 old bull, 6 yearling bulls, the distinctions going to Messrs. Langston, Hewer, and Holland; 13 bull calves, the prizes going to Messrs. Ruck and Lane; 8 entries under the heading of "bull, cow, and offspring," a most excellent and interesting class, Mr. Langston taking the first prize; no fewer than 14 breeding cows, Mr. Langston and Mr. Stratton being first and second; 20 2-year old and 14 yearling heifers, and 14 heifer calves, the prizes being awarded (1st, 2nd, and 3rd) to Messrs. R. Stratton, Earl Radnor, and Morris—Messrs. R. Stratton, Garne, and R. Stratton, and Mr. Garne respectively. Besides these 90 entries of short-horns, no fewer than 61 in the Hereford classes competed for the Society's prizes. The sheep classes included 38, the pig classes 25, and the horse classes a dozen entries.

There is as much interest and quite as much instruction derivable from a good meeting of any of these more quiet county Societies as from the mass and turmoil of a national gathering; and first-class Short-horn breeders are now so generally scattered over the country that large numbers of the very best stock are to be found at every local exhibition.

EAST LOTHIAN: *Reaping Machines Competition at Longniddry.*—The following is the report by the judges of the competition with reaping machines at Longniddry and Hoprigg on the 4th inst.:—

The following is the list of the owners of machines which appeared for competition, numbered by lot:—

1. Mr. Durie, Standingstone—Crosskill's Bell's.
2. Mr. Halliday, Haddington.
3. Messrs. Kemp, Murray, & Nicholson, Stirling.
4. Mr. Douglas, Dunnikier, Kirkcaldy.
5. Mr. Calder, Tanderlane—Burgess & Key's.
6. Mr. Baird, Kerse Mill, Stirling.
7. Mr. Gray, Brownrigg—Gardner & Lindsay's.
8. Mr. Henderson, Longniddry—Burgess & Key's.
9. Mr. Hunter of Thurston—Crosskill's Bell's.
10. Messrs. Gillespie, King's Barns, Fife.

The trial fields of Wheat and Barley having been inspected by the committee and divided into numbered spaces, almost square, and of about equal size, each machine took its own number on the fields. The grain in the intervening spaces having been cut and carted away prevented confusion, and allowed ample space for inspection by the judges and the public. The time that each machine took to perform its allotted task was accurately noted; but as the spaces varied slightly in size and also in form, as in the case of No. 4 in the Barley field, much importance was not attached to it. Besides, taking everything into consideration, there was little difference in time between any of the machines, particularly those which made the best work. After these allotted spaces had been cut, the machines which did their work best were tried for a time on new spaces of Wheat, and also one after another on the same space of Wheat, and also of Barley. The latter was a particularly severe trial, the Barley being much laid and twisted; yet it was cut and taken up in a superior manner, and even better than it would have been done by the hand in ordinary working. The machine which most uniformly throughout the day made the best work was No. 7, a Gardner & Lindsay's, belonging to Mr. Gray, and to it the premium of 10*l.* was awarded. No. 3, belonging to Messrs. Kemp, Murray & Nicholson, and No. 6, belonging to Mr. Baird, were the next best, and premiums of 5*l.* were awarded to each, as they were so equal it was impossible to decide between them. The raker on No. 3 was awarded a premium of 1*l.* for the superior way he handled his rake in forming and removing the grain in sheaves from his machine. A premium of 1*l.* was also awarded to each band of gatherers and binders attached to the machines Nos. 3, 4, 7, and 9, for the excellent manner in which they performed their duties.

It will be observed that the three machines to which premiums have been awarded are all of one type—viz., modifications of Hussey's original machine, with a back manual delivery; while five, or one-half of the machines in competition, were made to deliver at the side by the machines themselves. Without pretending to settle the respective merits of the two classes, the judges in this case had no doubt that the smaller machines, with manual delivery, made the best work; but, over and above this, they were obviously much lighter of draught, and from the grain being put off in sheaves it was more easily gathered, and from their simplicity of construction they must be less liable to breakage or to get out of repair. The judges see no reason why the whole of the small machines might not be brought to work equal to the prize machine, as there appears little difference in their construction. Of the machines with side delivery, No. 9—Crosskill's Bell's—belonging to Mr. Hunter, made the best cutting, though the judges considered it perceptibly inferior to that made by the machines to which premiums were awarded. The machine No. 4, belonging to Mr. Douglas, and made by him, possessed considerable novelty from its simplicity, and apparent lightness of draught. For these reasons the judges are induced to notice it, and express their hope that in future competitions its delivery will be so far improved as to entitle it to take a higher position.

In conclusion, the judges would only further remark that the trials were carefully made, long-continued, and severe. From the superior manner in which the larger portion of the machines performed their difficult tasks, and the great improvement that has latterly taken place in their construction (adopting them to every description of farms), the judges would congratulate the agriculturists of the county in having within their reach an implement the use of which tends so much to the speedy and economical ingathering of the crops. (Signed) TWEEDDALE. ALEX. WYLLIE.
GEO. HARVEY. GEORGE HOPE.
MATHEW BUIST.

TIME THE MACHINES TOOK TO CUT AN IMPERIAL ACRE.

	Wheat. Hs.	Wheat. Min.	Barley. Hs.	Barley. Min.
1. Mr. Durie (Crosskill's Bell's)	Not counted.			
2. Mr. Halliday, Haddington	1	10	1	23
3. Messrs. Kemp & Co., Stirling	1	30	1	20
4. Mr. Douglas, Dunnikier, Kirkcaldy ..	1	32	1	38
5. Mr. Calder, Tanderlane (Burgess & Key's)	Not counted.			
6. R. Baird, Kerse Mill, Stirling ..	1	10	1	30
7. Mr. Gray, Brownrigg (Gardner & Lindsay's)	1	13	1	15
8. Mr. Henderson, Longniddry (Burgess & Key's)	1	3	1	13
9. Mr. Hunter, of Thurston (Crosskill's Bell's)	1	10	*	
10. Messrs. Gillespie, King's Barns, Fife	1	25	1	29

Abstract of Trial of Reaping Machines at Longniddry, September 4, 1860, *on the Wheat Field.*

No.	By whom entered.	By whom made.	Time occupied in cutting and stooking an acre.	Number of persons with each machine.	Width of cutters.	Total expenses per day.	Acres cut in a day of 10 hours	Expenses per acre.	Number of miles travelled by horses in cutting 8 acres.	State of horses.	Awards.	Total points
1	Durie	Crosskill's Bell	(9) 2 hours	(2) 12 stooking 2 machines	(1) 6 ft. 6 in.	s. (2) 36	(9) 5	s. d. (9) 7 2	(1) 20	(9) In a lather	..	(42)
2	Halliday	Halliday	(2) 1 hour 9 min.	(2) 12 stooking 2 machines	(5) 5 ft. 3 in.	(2) 36	(2) 8¾	(3) 4 1¼	(5) 25	(3) Sweating	..	
3	Kemp & Co.	Kemp & Co.	(7) 1 hour 30 min.	(2) 12 stooking 2 machines	(5) 5 ft. 3 in.	(2) 36	(7) 6¾	(7) 5 4	(5) 25	(5) Sweating very much	Awarded 5*l.*, and 1*l.* to (40) binders and 1*l.* to raker	
4	Douglas	Douglas	(8) 1 hour 32 min.	(2) 12 stooking 2 machines	(1) 5 feet	(2) 36	(8) 6¾	(8) 5 6¼	(9) 203	(1) Never turned a hair	Awarded 1*l.* to binders	(47)
5	Calder	Burgess & Key	..	(2) 12 stooking 2 machines	(3) 5 ft. 6 in.	(2) 36	..	..	(3) 24	(5) Sweating very much		
6	Baird	Baird	(3) 1 hour 10 min.	(2) 12 stooking 2 machines	(7) 5 ft. 2 in.	(2) 36	(3) 8¼	(4) 4 2¾	(7) 25⅔	(5) Sweating very much	Awarded 5*l.*, and 1*l.* to (33) binders	
7	Gray	Gardner & Lindsay	(5) 1 hour 13 min.	(10) 14 stooking 2 machines	(7) 5 ft. 6 in.	(10) 40	(4) 8¼	(5) 4 10	(7) 25⅔	(5) Sweating very much and one changed. Crank very hot	Awarded 10*l.*, and 1*l.* to (53) binders	
8	Henderson	Burgess & Key	(1) 1 hour 3 min.	(2) 12 stooking 2 machines	(3) 5 ft. 6 in.	(2) 36	(1) 9¼	(2) 3 9¼	(3) 24	(1) First pair of horses knocked up, and second pair for barley	..	(24)
9	Hunter	Crosskill's Bell	(2) 1 hour 10 min.	(1) 9 stooking 2 machines	(1) 6 ft. 6 in.	(1) 30	(5) 8	(1) 3 9	(1) 20	(1) Never turned a hair	Awarded 1*l.* to binders	(13)
10	Gillespie	Gillespie	(6) hour 25 min.	(2) 12 stooking 2 machines	(9) 5 feet	(2) 36	(6) 7	(6) 5 1¼	(9) 203	(3) Horses sweating	..	(48)

No. 9 left the ground by special authority of the judge, and just in time to get the machine and horses trucked for Inverwick (not Inveresk), otherwise they could not have got to Inverwick that night, and if there had not been a delay in starting with the Wheat, and the conditions had been adhered to, viz. that each machine was to cut half an acre for trial, &c., the whole might have been finished and plenty of time to get to the train and return home. The Barley left by No. 9 would have been all cut in another 15 minutes, which would have made its time 55 minutes in cutting the acre—the lowest timed being 73 minutes. The horses and men with No. 9 work their 8

* Left before finishing.

hours daily all through the harvest (weather permitting). There is no report from judges as to which lot was best stooked. No. 9 can go on cutting down without the necessity of 14 persons in attendance to remove the cut corn before the machine comes back again, and these 14 people are busy cutting down other fields, or tying up what was cut the day before at the rate of 9 for No. 9 and 14 for No. 7 per acre. No. 9 only requires the gate of field opened to commence work, and grain cut by it is generally in the stack in about 3 days shorter time than when it is tied up at once. No. 9 has a great advantage for farmers, viz., that it must be kept at its full width of cut, and idle men cannot shirk when the master's back is turned, as it stops immediately that they try to lessen their cut of 6 feet 6 inches. The horses that worked No. 9 at this competition were at their usual daily work with the machine next morning. The numbers in each column within parentheses denote the relative position of each machine under the different columns. Expenses are calculated at the rate of 12*s.* per day for two men and two horses with each machine, and 2*s.* per day for each binder and stooker. By computing, it will be seen that while the prize machine in order to cut 8 acres per day requires to travel at the rate of 3¼ miles per hour, No. 9 only requires to travel at the rate of 2¼ miles.—Thurston, Dunbar, 5th Sept., 1860. [It will be observed that our correspondent has estimated the points differently from the usual course—the smallness of the numbers indicating superiority.] *North British Agriculturist.*

Farmers' Clubs.

NEWCASTLE-UPON-TYNE.—*The Teeswater Short-horns:*—Mr. Chrisp laid before this Club the following Supplementary Paper: Having dwelt at such length on the origin of the improved breed of Short-horns, I gladly comply with the wishes of the last meeting to give a continuation with a reference to a scale of the points of a perfect animal of this breed, which may lead to determining their relative value, and the establishment of a set of rules for the guidance of judges of cattle shows, as well as the more general satisfaction of the competitors. Perhaps the uncertainty, if not the capricious decisions of the present practice, cannot be better shown than by the award made at Darlington in March, 1797, when Charles Colling's bull Favourite, then a two-year-old, was placed second with the minimum prize of two guineas; the indignity of the position must have been felt severely by the owner, as he never showed another animal at the Durham Agricultural Meetings. We must not forget that Favourite was the sire of the celebrated Durham Ox as well as of Comet, and must be considered as the great progenitor of the present breed of Short-horns, through whom Hubback's blood is claimed by many herds. It is acknowledged at the conclusion of the 18th century a breed of cattle appeared on the banks of the Tees, surpassing all others in beautiful symmetry of form, aptitude to fatten, as well as fitness for the butcher—consequently both pleasing to the eye, as well as profitable to the grazier. As the spirited quick stepping horse was about this time supplanting the slow and patient ox at the plough and team, the object of the cattle breeder was no longer to obtain large bone and wiry sinews, consequently C. Colling and his compeers had only to look for delicate beef and plenty of fat in the produce of their herds, and that those joints should weigh the most which brought the highest price in the shambles. Nor has the mild and docile temper of the breed rendered them less a favourite with dairymaids, whose well filled pail renders them grateful for bountiful returns of good feeding and good treatment. I must not pass by their qualifications for the dairy; no other race could come near the older breed for quantity of milk, and we have on record many instances of large quantities from the improved Short-horns; though the breeder often loses sight of this merit in selecting his dams. I therefore urge in making points of perfection that this object ought to be kept in view, as I hold with many authorities that a tendency to lay on fat is not incomptible with a good dairy cow, if due attention is given to her food and other treatment. Many instances could be given of a heavy milking cow becoming fat in a short time when freed from the pail. Although most butchers like a large carcase, which brings down the scale, yet they also prize the greatest quantity of beef on the best joints. Therefore great size is discarded, as leading to overgrown ungainly animals, difficult to fatten. On the other hand, little dwarfed stunted animals are equally to be avoided in breeding. The Short-horn bull must have a symmetrical form, of medium size; body (including quarters and neck) rather long than short; bones fine, legs short; all choice parts well covered with gelatinous flesh, and fat mixed, not patchy; skin medium thickness, mellow to touch; hair fine, silky, thick set, long in winter, not wiry; head well set on to neck; scalp wide; face dished a little, rather long than short, fine muzzle, open nostrils; horns medium size, fine, clear, and waxy, free from black stains; the eyes prominent, bright, but placid; the neck a little elongated and arched, well set on to the shoulders, which ought to slope backwards, be broad and level, deep, with fine shoulder points; brisket deep, prominent and broad between the fore legs; ribs round, back straight, quarters long; full-fleshed thighs, deep and full at twist; arms full above, fine at knee; flanks deep and full; tail well set on, at right angles with back, and not thick or coarse; colours, roan, red, white, or flecked—black, or shadings of black on skin, hair, horns, or hoofs objectionable. Altogether, the animal ought to have a gay and "stylish" appearance in gait as well as in form, which breeders consider betokening high blood, and which most animals of the Short-horn tribe have more or less. The same characters will, with allowances for the more feminine appearance, answer for the cow, though I should add full development of udder, not fleshy, well-set teats, good milk veins, and perhaps a hereditary character for good milking qualities. The following points are the work of a young friend who has kindly helped me. Perhaps the best way to treat them is for a few of our members to take the pleasant labour of trying the prize animals by these rules at our local shows, and reporting the result:—

	No. of points.	What constitutes goodness.
Head	.. 4	Moderate length, wide, and rather dished, with clear horns, and flesh-coloured nose—not black.
Neck	.. 1	Being well sprung from shoulders, and slightly arched.
Neck vein ..	.. 2	Prominent and full.
Shoulder and crops	.. 6	Former being well thrown back and wide at top, "points" well covered, and not prominent. Crops being very full.
Breast	.. 2	Coming well forward, wide, and full.
Back	.. 3	Breadth and levelness.
Loin	.. 4	Breadth, and being well covered, not low.
Hocks	.. 2	Breadth, and being at right angles with back bone.
Rumps	.. 2	Not being drooped.
Quarter ..	.. 2	Length, levelness, and being well filled up
Thigh	.. 2	Length and fineness, and being well beefed inwards.
Twists	.. 8	Coming well down.
Hock	.. 1	Being well bent, and not turned in.
Flank	.. 3	Full and coming well forward.
Back ribs ..	.. 3	Well sprung from back, and round.
Fore ribs ..	.. 3	Round, and coming well down.
Quality and hair	.. 4	Skin not being too thin, but soft and mellow, hair long and silky.
Colour ..	.. 1	Roans and reds.
Under and milk vessel	3	Well formed teats and udder, large milk veins.

Mr. Atkinson said he agreed with most of the points which Mr. Chrisp had named in the paper, but thought too much stress was laid on a long head. Nor was he in favour of a very long breast, for it indicated a deficiency of weight.

Farm Memoranda.

DRISHANE.—On the bank of the river Finnow and about half a mile to the eastward of the town of Millstreet, stands Drishane Castle, the seat of Lieutenant-Colonel Henry Wallis, D.L. The Drishane estates are now entirely managed by the Colonel's only son Mr. John R. S. Wallis, the gentleman who in 1857 filled the office of High-Sheriff of the county. A great deal of this land is let in farms varying in size from 20 to 200 acres, the greater number of them averaging 100.

The houses of the tenants are remarkably good, and the general appearance of the inmates that of a thriving contented class of people. Mr. Wallis is now engaged in fitting up a reading-room for those in his employment, where newspapers and agricultural periodicals will be supplied, and each man will have the privilege of introducing another. Those now engaged with him are a very intelligent class of men well able to second his efforts for their amelioration. Mr. Wallis now retains in his own hands 800 acres, 400 acres cultivable land are worked by him on a five-course shift. The plan generally adopted is the Norfolk four-course, that is lea-ploughed up for Wheat, followed by Turnips, a portion of these fed off by sheep and Barley laid down with Clover seeds. The plan adopted at Drishane is, taking the Norfolk four-course as a basis, to alter it into a five-course, and thereby get three corn crops in five years instead of two in four years, as is the regular custom. Mr. Wallis ploughs up his lea and has Oats put in the first year. This is followed by Turnips in the second, Oats or Wheat in the third, Oats or Barley laid down with Grass seeds, top-dressed with 200 cwt. of artificial manure in the fourth, and the fifth year the Grass mown. Every crop gets manure if required either directly or indirectly, that is farm yard dung or artificial manure. Of the Phospho-Peruvian, as supplied by the Messrs. Purdon of Dublin, Mr. Wallis is much in favour, and he used 20 tons of it this year. He finds it preferable for Turnips to Gibbs' Peruvian. He finds it equal weight for weight with Gibbs' best Peruvian, and has the advantage of buying it at a cheaper rate, the Phospho costing 12*l.* a ton, while the other costs 14*l.* The 400 acres are this year under Turnips, Mangels, Wheat, Oats and Barley. Wheat is sown after Turnips and Mangels, at the rate of 6 stone to the acre, by Hornsby's 11-row corn drill. Last year a field of 15 acres had put into it by the drill seed at the rate of five stones to the acre. This, at the current price of seed Oats then, 1*s.* 4*d.* a stone, amounted for the 15 acres to 46*l.* 13*s.* 4*d.* By the old system as pursued of putting in 14 stones to the acre, the seeding would cost 133*l.*, showing a saving in favour of the drill work of over 86*l.* in the seed. Now, the cost of the drill was 40*l.*, so that in this one crop of 15 acres of Oats, the drill was paid for and a saving of over 46*l.* realised in the seeding alone. In other words, as compared with the old, Mr. Wallis had his land seeded, a sum of 46*l.* placed in his pocket, and the possession of the drill itself, the only set off against this being the outlay for those engaged about the implement.

Oats are grown with 2 stones of seed to the acre. This complete reversal of the 14 stone plan astonished the farmers who came to look at what they considered the folly going on at Drishane, and they strongly predicted that there would be no crop at all.

All around are seen evidences of the stubborn battle which Mr. Wallis has successfully fought with the natural obstacles of the ground. One large tract forming part of the bog, has been reduced to cultivation It is now in a sort of transition state from snipe-feeding bog to corn-growing land. Drains were cut through it, and the water passing slowly off; the surface was wet and slippery. It is now what the cultivated fields to the eastward were little over three years ago, and they are now what that slippery surface over which one could with difficulty make his way will be in a similar space. Pipe tiles have been used in the drainage of the land reclaimed. These stood 28*s.* a thousand, and the total cost of the draining was 5*l.* an acre. At this rate 200 acres of the lands of Drishane have been drained within the last three years. The aid of machinery and implements, too, has been largely secured at Drishane.

Under sheds in one of the yards was a very fine collection of agricultural appliances. Hornsby's corn drill; Smith and Ashby's hay tedding machine and rake; Young's, of Ayr, Turnip-sowing machine; M'Pherson's machine for making wire fences; Wood's combined reaper and mower; Howard's prize ploughs, &c.

Smith's Steam Cultivator, obtained through Mr. T. M'Kenzie, local agent for the Messrs. Howard, is in practical working at Drishane. The apparatus as it stands in the field ready for work comprises three principal parts, viz., a stationary steam-engine, an iron windlass, and an instrument something like the body of a plough, and some minor parts consisting of anchors, snatch-blocks and porters. On a stout oak frame like a cart stands the windlass. This consists of two iron drums hung horizontally on independent axles, but placed close together: one hauls in the wire rope by which the implement is drawn, and at the same time the other drum, yielding to the strain of the rope, turns the other way and pays out. When the implement reaches the end of the furrow over which it was to go, a man attending on the windlass throws the drum that last hauled the implement along out of gear, and brings into gear the drum that before was paying out, and so reverses the action of the implement. The cultivating implement consists of a very strong frame, in which are fixed three shares, the central one being in advance of the others about 30 inches. In front is a pair of wheels with cutting edges, by which it is easily guided, and about the centre is another pair, by means of which the depth is regulated. When adjusted to the required depth, and the shares set to break up, say 8 inches deep, the points of the shares become imbedded in the soil, and the whole mass, about a yard wide, is torn from its position, and more or less mingled together, leaving for the most part the weeds and Grass which it is desirable to destroy near the surface.

When the apparatus is set to work, the steam engine by a band turns a driving wheel at the side of the windlass. This causes the drum put in gear to haul on the wire rope; the implement, which in this first process has three tines sunk in the soil, is dragged along, and, as already stated, the earth is torn from its position and the mass mingled together. After this the land is crossed by the five tines, and then the ground only requires to be harrowed, and is ready for the reception of the seed, it being considered that the value of the work when performed dry is superior to two ploughings, or one dragging or scarifying. The ropes adjust themselves to any length, and triangular or crooked pieces of land can be almost as easily and quickly worked as square pieces. The implement adapts itself to unequal surfaces, through hollows, and over hills, no matter how deep or steep. A great advantage connected with the apparatus is that if placed in a central position it will break up 40 acres without either the engine or windlass being removed. The apparatus at Drishane was worked by an 8-horse power double cylinder engine manufactured by the Messrs. Clayton and Shuttleworth. On Tuesday last the work was commenced. A piece of bog about 20 acres in area, which Mr. Wallis rents from Mr. Morris, because it runs into his land, was selected for the purpose. It is called Tullig bog, and until last year had within the memory of man been devoted to the feeding of snipe. Such a marsh was it that the former tenant, some of whose cows often fell into it, had to summon his neighbours and pull the animals out with ropes. This was drained last year by Mr. Wallis, and he is now cultivating it for Rape. On Tuesday the apparatus was got to work and was kept going on that and the following day and up to two o'clock on Thursday, at which time 20 hours of its action had shown their results. In that space five acres were gone twice over, straight and cross to a depth of from 12 to 14 inches. In the recrossing it is customary to use a five tined implement, but in the present instance only three tines were used, as five were considered too heavy for that land. The five acres twice over in 24 hours was equal to one acre twice over in four hours, or one acre once in two hours. This was considered by many practical farmers as being most extraordinary work, taking into account the nature of the place. It would be utterly impossible to get horses into it, and were it not for the steam cultivator it should lie there until next Spring to be then worked for Potato gardens by hand labour. The cost of this would be startling. To get it into any sort of condition by hand labour would cost at the very least 30*s.* an acre. During Tuesday, Wednesday, and the part of Thursday that the apparatus was at work, the furnace consumed at the rate of five cwt. of coals in twelve hours. These, at 1*s.* a cwt., cost 5*s.* Employed about the apparatus to mind the engine, guide the implement, and attend to

the windlass and anchors, were ten men. These cost 10*s.* for the day, and this sum with the 5*s.* for coal makes 15*s.* for the three acres gone twice over in the 12 hours, or six acres gone once over. But that was higher than the general cost. Six men are all that are really required in fair stubble land, but in the bog of Tullig the additional men were placed to mind the anchors, which were in some measure liable to be dragged from the yielding soil. This would reduce the cost to 11*s.* for the six acres. Of course to this must be added interest and wear and tear, which it is estimated brings up the total expense to from 4*s.* to 4*s.* 6*d.* an acre. The same work performed by hand labour, as already shown, would be 30*s.* besides the delay of waiting until next spring to do it. On Friday the implement was also got to work, and the same results as the preceding days were gained.

The ease with which the difficulties presented by the land were overcome, and the ready way in which the men were enabled to work the tackle without other aid, was a source of the greatest surprise to the farmers who had come to see the work. The engine cost Mr. Wallis 250*l.* and the cultivator with its appurtenances 21*l.* To go against this he will be able to dispose of five horses, which will bring 20*l.* each on an average, making a total of 100*l.* The feeding of each of these stood 25*l.*, so there is at once 125*l.* a year saved. Putting this 100*l.* and 125*l.* together, it will be seen that in little over a year the cultivator will be paid for, and in a similar space the cost of the engine will be cleared off. It is objected to these machines that they are to expensive for farmers, but there is no reason why a number of farmers should not join to procure one, or large farmers might purchase them and hire them out.—*Abridged from the Cork Constitution.*

Reviews.

The Meat Manufacture; a Practical Treatise on the Rearing and Feeding of Live Stock. By R. O. Pringle; co-editor of the *Irish Farmers' Gazette.* Simpkin, Marshall & Co.

This is a remarkably cheap shilling's worth—full of sensible advice and well written information on a topic which is just now of the very greatest importance. Mr. Pringle describes the practice of well known agriculturists, and the researches of many distinguished men in the scientific world, on the points which his subject includes; and accordingly we have analyses, and recipes, and details of all kinds given in abundance, along with a great deal of useful commentary and advice, evidently the work of an experienced man. The following passages illustrate the nature of the work and the manner in which it is put together.

"*Grain, &c., as Cattle Food.*—When grain bears a comparatively low value, or when it has been injured by the effects of the weather, it may still be usefully employed in the preparation of cattle for the butcher; and those who send their beasts to the market in a half-fat state, owing to their supply of roots running short, whilst they are at the same time selling their grain at a low figure, may learn a lesson which may result in retaining their cattle and grain at home, using the latter in finishing the former, and thus realising better prices for both articles—cattle and grain—than is done when both are sacrificed, as we find often to be the case. It is when cattle are approaching ripeness that they make the greatest improvement; and thus it often happens that beasts are sold at a loss to the feeder, because sold in an unfinished state, whilst if they had been kept on but a short time longer they would have shown more satisfactory results. But the man whose stock of Turnips is getting short, and who does not understand that he may profitably eke out that stock by using his low-priced or damaged grain as feeding stuff, is compelled to sell his cattle often just when they are at the turning point between a dead loss and a reasonable profit. In this manner, therefore, the intelligent farmer sees means of turning the materials at his command to profitable account, which would never occur to those whose ideas cannot travel out of the ordinary jog-trot; and whilst the latter are, perhaps, grumbling over their apparently hopeless condition, their more quick-witted neighbour is ever on the alert to avail himself of everything which is likely to minister to his success; thus enabling him, not untrequently, to ride out the storm which leaves them helpless wrecks. Beans are also valuable food for fattening beasts, and when used for this purpose they ought to be ground into meal and mixed with chaffed hay or straw. A bullock which will weigh from 7 to 8 cwt. may get from 3 lbs. to 6 lbs. per day of Bean-meal; but it is usually mixed with crushed oil-cake, equal proportions of each—say 6 lbs. of the mixture given at two feeds. In like manner Peas are a highly nutritious description of food, and a valuable auxiliary when used in conjunction with roots. Grinding must also be resorted to in the case of Peas, and the coarse meal thus produced may be mixed with chaff and oil-cake, in the same manner as we have mentioned in the case of Beans. Linseed oil-cake has been long used in England as a feeding material for cattle, &c., and its use is now become more general also throughout the rest of the kingdom. When given along with Turnips at the rate of from 3 lbs. to 4 lbs. or 6 lbs. per day, there is not a question but that it is remunerative; there are many, however, who give much larger quantities, and the result is that a proportion of the food is lost as such, serving only to enrich the manure. This is especially the case in England, where we find that 10 to 12 lbs. a day, and even larger quantities, are very frequently given, with few or no roots, the only other food used being hay. It has been ascertained, however, that fattening cattle receiving 5 lbs. each a day of oil-cake paid better with half Turnips than they did when fed on a full allowance of Turnips alone (Transactions of the Highland and Agricultural Society, vol. xiv., page 61); and in Mr. Templeton's prize report on fattening cattle, which is contained in the Transactions of the same Society, January, 1853, he states 'that the lots which had 3 lbs. of Linseed-cake each per day made a fair return for the value of the cake consumed.' The cattle in the latter case were divided into six lots, treated in the following manner:—'Lot 1, in hammels or boxes with a small yard, with 3 lbs. of Linseed-cake each per day. Lot 2, in ditto, with no cake allowed them. Lot 3, in stalls, with 3 lbs. of Linseed-cake per day. Lot 4, in ditto, with no cake allowed them. Lot 5, on pasture, with 3 lbs. of Linseed-cake each per day. Lot 6, on ditto, with no cake allowed them.' It is as well to remark that, in this case, the daily allowance to each of the cattle during winter was only 84 lbs. of Turnips—yellow Aberdeens or Swedes—together with 14 lbs. of hay, and the feed of 3 lbs. of oil-cake."

"*Manufactured Cattle Food.*—Mr. Lawes was the first to show, by a series of carefully made analyses, the true nature of these made-up kinds of food, and he has since been corroborated by Drs. Anderson and Voelcker, and latterly by Dr. Cameron, of Dublin. Those gentleman have proved that the prices charged for such food are very much greater than their intrinsic properties would warrant, purchasers paying from 40*l.* to 50*l.* per ton for a material which is not worth more than 7*l.* or 8*l.*. Professor Voelcker's report to the Council of the Royal Agricultural Society of England is very strongly condemnatory of such preparations. He says:—'Most samples of cattle food which I have hitherto examined contain large proportions of Rice-meal (the refuse of Rice-dressing mills), Oat dust, and the sweepings of flour mills, mixed with spoiled and inferior flour. The bad taste and fusty smell of the latter are concealed by strong-smelling drugs, such as fenugric, or Anise, or Fennel seed, and also by bitter substances, such as Gentian. In one particular sample, much recommended as food for pigs, I have found the bulk of the meal to consist of crushed Carrots, Beans, Rice, and Barley-meal; this food also contained some sulphur and nitre, as well as fenugric, and a little Aniseed; it was, in fact, a regular medical powder.' We would therefore recommend all parties to use only such articles as they really know the value of, or which will bear the test of examination: for while such preparations as those to which we refer do possess a certain amount of value, it has not hitherto been at all equivalent to the price charged."

"*Mr. Lawes' Experiments on Sheep Feeding.*—The following table exhibits the results of Mr. Lawes' experiments:—

Particulars.	Hants. 26 weeks.	Downs. 26 weeks.	Cotswolds. 20 weeks.	Leicesters. 20 weeks.	Cross-bred Wethers. 20 weeks.	Cross-bred Ewes. 20 weeks.
Average weight per head when put up	Lbs. oz. 113 7	Lbs. oz. 88 0	Lbs. oz. 119 13	Lbs. oz. 101 0	Lbs. oz. 97 1	Lbs. oz. 91 4
Average weight per head when fat (including wool)	183 1	140 12	183 7	145 14	140 0	133 12
Average total increase per head	69 10	52 12	63 10	44 9	43 8	42 8
Average increase per head weekly	2 10¾	2 0¼	2 4¼	1 12¾	1 11¼	1 14
Average increase per 100 lbs., live weight	1 12¾	1 12¼	1 14	1 12¾	1 11¼	1 14

Upon this part of the summary Mr. Lawes remarks:—It is seen that of the six lots that have been experimented upon, the Cotswolds give by far the largest average weekly increase per head; indeed about half as much more than either the Sussex, Leicester, or cross-bred sheep, and nearly one-fourth more than the Hampshires, which are the second in order of rate of increase per head per week. The increase per 100 lbs. live weight per week does not show by any means such a variation in the rate of increase among the six lots, when it is thus calculated in relation to their respective weights, instead of per head. Still, even in this respect the Cotswolds stand the first; next come the cross-breds, then the Hampshires and Leicesters, and lastly the Sussex Downs. It is here worthy of observation that, excluding the Leicesters, the order in which the different lots gave increase in relation to their weight is obviously pretty nearly the inverse of that of the quality of the mutton. That is to say, those which have given the greatest increase in proportion to their weight yield the coarsest mutton, and those which give the least increase in relation to their weight the finest mutton. Consistently with this view, the Leicesters, however, fall somewhat short in the rate of their increase, considering the somewhat inferior quality of their mutton, compared with that of the cross-bred and Hampshire sheep.' In the second division of Mr. Lawes' summary he gives the various particulars of the consumption of food by the different lost of sheep. These were as follows:—

Particulars.	Hants.		Sussex.		Cotswold.		Leicesters		Cross-bred Wethers.		Cross-bred Lwes.	
Average food consumed per head weekly .. { Oil cake ..	Lbs. oz. 7 12¾		Lbs. oz. 6 0¼		Lbs. oz. 8 1		Lbs. oz. 5 14		Lbs. oz. 5 14		Lbs. oz. 5 14	
Clover hay	7 0		5 12¼		6 14¼		5 9¼		5 9¾		5 9¾	
Swedes ..	106 3¼		77 12¼		113 4		83 13		82 14		78 0	
Average food consumed per 100 lbs., live weight animal .. { Oil-cake.	5 4¼		5 4¼		5 3¾		4 12		5 0		4 15¼	
Clover hay	4 11½		5 0¾		4 7½		4 8½		4 12¼		4 11¾	
Swedes ..	71 10¼		68 0¼		73 0¼		67 13		70 10		69 5½	
Food consumed to produce 100 lbs. increase of live weight animal .. { Oil-cake ..	291 9¼		297 6¼		253 10¼		202 13¾		264 4¼		263 8¼	
Clover hay	201 6¾		285 7		216 11¾		251 4¾		251 10¾		250 5½	
Swedes ..	3006 12		3885 12		3557 8		3761 0		3725 4		3671 0	

Without alluding to the other items in the tables, we shall conclude this part of our subject with 'a short enumeration of useful and practical facts relating to sheep-feeding,' which Mr. Lawes considers have been brought out by his experiments:—

"*Consumption of Food.*—Sheep of different breeds consume quantities of food in proportion to their respective weights when at an equal age, stage of feeding, &c.; that is to say, three sheep weighing 100 lbs. each will consume the same quantity of food as two sheep of 150 lbs. each. Sheep on good fattening food—such as cake or corn, with chaff and roots—will consume weekly about 4¾ lbs. of cake, 4¾ lbs. of hay, and about 70 lbs. of roots, for every 100 lbs. of their live weight. When fed as above, they will consume every week about one-seventh of their own weight of the dry substance of food; that is, after deducting the moisture it contains.

"*Rate of increase.*—Sheep well fed and under cover will increase about 2 per cent. per week upon their weight; that is to say, 100 lbs. live weight will increase from 1¾ lb. to 2 lbs. per week. To increase 100 lbs. in live weight, sheep will consume about 2¼ cwts. of cake or corn, 2¼ cwts. of hay chaff, and 1½ to 1¾ tons of roots. The increase of a fattening sheep is at the rate of about 1 lb. live weight to 8 lbs. or 9 lbs. of the dry substance of the food consumed.

"*Live and Dead Weights, &c.*—Hoggets or tegs (under 12 months old), and in a lean or store condition, will contain about one-half of their weight carcase, and about one-half offal. Shorn sheep, sufficiently fat for the market, will contain about 56 lbs. of carcase in every 100 lbs. of the unfastened live weight. Sheep in an ordinary state of fatness yield from 7 lbs. to 14 lbs. of offal or loose fat per head, according to breed and size—the long-wools giving the least, and the Downs the most."

Miscellaneous.

Former Prices of Wheat.—I send you an extract and knowing the person who took it I can vouch for its correctness. I have seen corn averages of more modern times, but nothing so far back as this. *J. H.*

Chronicon Preciosum is a book which seldom falls into the hands of common readers; a few extracts from it respecting the price of Wheat at various periods may be acceptable to many of our readers, and show them that there have been periods, allowing for the different value of money, when Wheat

has been at more than four times the present price.—London Packet, from Dec. 30, 1795, to January 1, 1796.

The qr. of Wheat was—	£	s.	d.	The qr. of Wheat was—	£	s	d.
1043	0	0	6	1416	0	16	0
1125	1	0	0	1423	0	8	0
1196	0	13	4	1434	1	6	8
1197	0	18	8	1455	0	1	2
1205	0	12	0	1460	0	8	0
1237	0	3	4	1463	0	2	0
1243	0	2	0	1486	1	4	0
1246	0	16	0	1491	0	14	8
1257	1	4	0	1494	0	4	0
1258	0	16	0	1497	1	0	0
1270 .. .. from	4	16	0	1499	0	4	0
to	6	8	0	1521	1	0	0
1286	0	2	8	1551	0	8	0
But from a storm of rain, thunder, and lightning on St. Margaret's night, July 20, it rose to	16	0		1557	0	8	0
				Before harvest rose to	2	13	4
				After harvest fell to	0	5	0
				1574	2	16	0
				After harvest	1	4	0
1287	0	3	4	1587	3	4	0
1288	0	1	6	1594	2	16	0
1294	0	16	0	1595	2	13	4
1315	1	0	0	1596	4	0	0
1316	1	12	0	1597 .. .. from	4	0	0
1317	2	4	0	to	5	4	0
1336	0	2	0	1646	2	8	0
1349	0	2	0	1647	3	13	8
1359	1	6	8	1648	4	5	0
1361	0	2	0	1654	1	6	0
1363	0	15	0	1662	3	14	0
1379	0	4	0	1667	1	16	0
1387	0	2	0	1675	3	4	8
1390	0	16	8	1687	1	5	2
1401	0	16	0	1693	3	7	8
1407	0	2	0	1705	1	10	0

Thus, from the experience of ages, we may expect to see Wheat as low as it has formerly been, in proportion to the value of labour and money: and the change in many of the above examples appears to have been very sudden.

Calendar of Operations.

SEPTEMBER.

BERWICKSHIRE MERSE FARM, *Sept.* 17.—The present is a singular harvest, as well for its lateness, as for the distinct separation of the different cereals in their dates of ripening. In truth, but little corn has been permitted to reach the state usually termed ripeness; for farmers were impatient to begin, after waiting 10 days beyond an average of seasons, and three weeks later than last year. A few early places had a week's shearing in August, but cutting was not general till the first of this month. Operations were somewhat precipitated by the advent of our Irish friends in unusually large numbers, and by the consequent moderation in wages—rates seldom exceeding 2*s.* a day, with victuals. First came Barley harvest by itself; a capital crop, and in a fair state of readiness, but more Clover in it than is good for winning. This disposed of, Oats were still green—much of them very green—but the work must proceed, when once begun. So folks just shut their eyes, and went at it. The like was never seen. In many a field the stooks rose as green as Leeks; and even those who acted more prudently must have had their own doubts, on surveying their day's work. The third harvest yet remains. Wheat and Beans seem determined not to turn ripe. As with the Barley, some few are making a small beginning; but, of the general crop, it would be difficult to say when it will be ready. Winter Wheat is thin in the ground, but shows a good head; but much of the spring-sown has hardly anything in the ear yet. Beans promised splendidly in spring, but have not proved corny. Most likely there will be a desperate onset, with hooks and machines, about the end of this week, by which time we hope to see a considerable portion of spring corn safe in stack. The weather at first was dull, grey, and coldish, with occasional showers; but last week we had some drying west winds, though the sun seldom showed face. On Saturday, however, we had showers from north-east, and yesterday it rained all evening steadily from south-west. This afternoon has been fine and airy, but the barometer continues low. If the weather improve, there will be full employment for this week, in securing what is cut as fast as possible. A few samples have appeared in the local markets, but they cannot be held to represent the crop, for they are in such poor condition as is seldom seen, having been threshed damp from the stook, or heated in the stack. Swedes are bulbing splendidly; and even the late Turnips are growing well, though next month will be well gone before they are fit for use. Mangels, from want of sun, have not come up to expectations; and Potatoes, more or less, show signs of blight, after so wet a season. Pastures have been close eaten all summer, and young Grasses, though strongly planted, are not yet available. Lambs, thriving hitherto, begin to feel the want of some such change of food. From this lack of meat, the price of lambs has not reached the high point anticipated from the shortness of their numbers. *J. T.*

Notices to Correspondents.

LAMBS: *O T A.* This disease in lambs is often termed *Red Water*. It is in fact *Ascites* or dropsy of the belly, and supposed to arise from lying on wet ground covered with hoar-frost. Remove to a drier locality, and give dry food and linseed-cake with a view to prevent fresh attacks. *W. C. S.*

WEEDS: *Correspondent.* The plant is Ranunculus arvensis, Corn Crowfoot or Corn Buttercup—the "Hungerweed" of the midland counties' farmer. Its usual habitat is that of stiff, cold, and poor arable, and it is well distinguished when in seed from its spinous carpels, or seed cases. This peculiar form of the seed causes it to adhere to other refuse seeds when winnowed from the threshed corn, so that it is certain to be thrown away with the refuse. It thus gets to the muck heap, and is thence carted to the field. But perhaps its more general method of propagation is from seed grown on the spot, where much of it is yearly ripened, especially in Beans, Barley, and Wheat, in which when but thin it excites little notice; but as each plant may produce from 200 to 300 seeds, and of a kind which insects and birds refuse, they usually all germinate; and in this way, no doubt, has been produced the quantity sufficient, as our correspondent states, to overrun a few fields. The best method to get rid of it is never to let a plant seed; hoe the Wheat two or three times if required. Hoeing will benefit the crop in other ways besides driving out an enemy, and if it should cost "no trifle," yet in a case of this kind its value and so its cost should be added to successive crops. Once keep it from seeding, and the check upon its increase is immediate. Thus the old saw of—

"One year's seeding,
Is seven years' weeding."

May be be matched by another—

"There are no weeds to reap or mow,
But sow themselves; or ourselves sow."

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STEAM THRESHING AND DRESSING MACHINES.
R. GARRETT & SON have great pleasure in confidently recommending their NEW PATENT MACHINES, which prepare all kinds of grain for market expeditiously, economically, and finish completely.

R. GARRETT & SON also persevere in introducing every improvement that practice or science may suggest for adding to the already well-approved efficiency of the other Machines of their manufacture.

Machines of all kinds can constantly be seen at the Works, and by receiving two clear days' notice will be shown in operation. CATALOGUES sent, post free to any address. Early orders are respectfully solicited.

Address, R. GARRETT & SON, Leiston Works, Suffolk.

N.B.—In order to prevent the disappointment that unavoidably occurred in former years in the supply of Drills, R. G. & SON beg to assure their friends that with their present enlarged facilities, they can undertake to supply any kind of Drill in six days from receipt of order.

PARKES' STEEL DIGGING FORKS.
BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

GALVANISED GAME AND POULTRY NETTING—By improved machinery at reduced prices. 2-inch Hexagon Mesh, 24-inch wide, light, 5*d.*; Medium, 6*d.*; Strong, 7*d.*; Extra strong, 9½*d.* per yard. Any other width, strength, or mesh, from ½ to 6 inches, at proportionate rates. Every description of Wire-work by THOS. P. HAWKINS, Manufacturer, 27, Dale End, Birmingham.

WATERPROOF CAPES, 3 feet deep, 3*s.* each, for Gardeners, Carters, Gamekeepers, Watchers, and Farm Servants; same kind, lined with Woollen, 5*s.* each; may be had with Sleeves, 5*s.* 6*d.*, and Lined, 7*s.* 6*d.* each. Leggings, 3*s.* each.
WATERPROOF GARDEN FRAME COVER.—Tarpaulin, 6*d.* per square yard; Transparent Sheeting Waterproof, near 2 yards wide, 1*s.* per yard run; thick Canvas do., 1*s.* per square yard. Horses Waterproof Loin Cloths, 7*s.* each; Driving Aprons, 7*s.* each, lined; Waggon and Cart Covers, 1*s.* and 2*s.* per square yard.
WIRE WORK, 1*s.* per yard, 6 feet high (other widths in proportion), of 15 Gauge Wire; Sheep do., 4-inch mesh, 3 ft. 6 in. high, 4*d.* per yard run.; Rabbit Proof, rather more than 1 inch mesh, 10*d.* per square yard; Poultry Wire Work, 9*d.* per yard, 6 feet wide.
FISHING NETS, SHEEP NETS, RABBIT NETS.—All kinds of Fishing Nets very cheap; Sheep Nets, nearly 4 feet high, 20*s.* per 50 yards, made of thick New Zealand Cord; Rabbit Nets, on Cords, 50, 80, and 100 yards long. All kinds of Garden Nets, Bird Nets, &c.
R. RICHARDSON, White Horse Factory, Bidborough Street, Judd Street, W. Office: 99, Euston Road, London, N.W.
EIGHT THOUSAND YARDS STRAINED WIRE FENCING, 6 wires deep, 3½*d.* per yard run, including Straining Bolts. Sample of the Wires sent.
R. RICHARDSON, 99, Euston Road, London, N.W.

THE FOLLOWING ARE SOME OF THE MOST APPROVED IMPLEMENTS
MANUFACTURED BY
JAMES AND FREDK. HOWARD,
BRITANNIA IRON WORKS, BEDFORD.
1860.

PLOUGHS.

D PLOUGH, FOR A PONY	£2	5	0
D D PLOUGH, FOR ONE HORSE	3	5	0
H PLOUGH, FOR TWO HORSES	4	2	6
H H PLOUGH, FOR GENERAL PURPOSES ..	4	7	6
D D RIDGING PLOUGH, FOR LIGHT WORK ..	3	15	0
P RIDGING PLOUGH, FOR GENERAL PURPOSES	4	5	0

HARROWS.

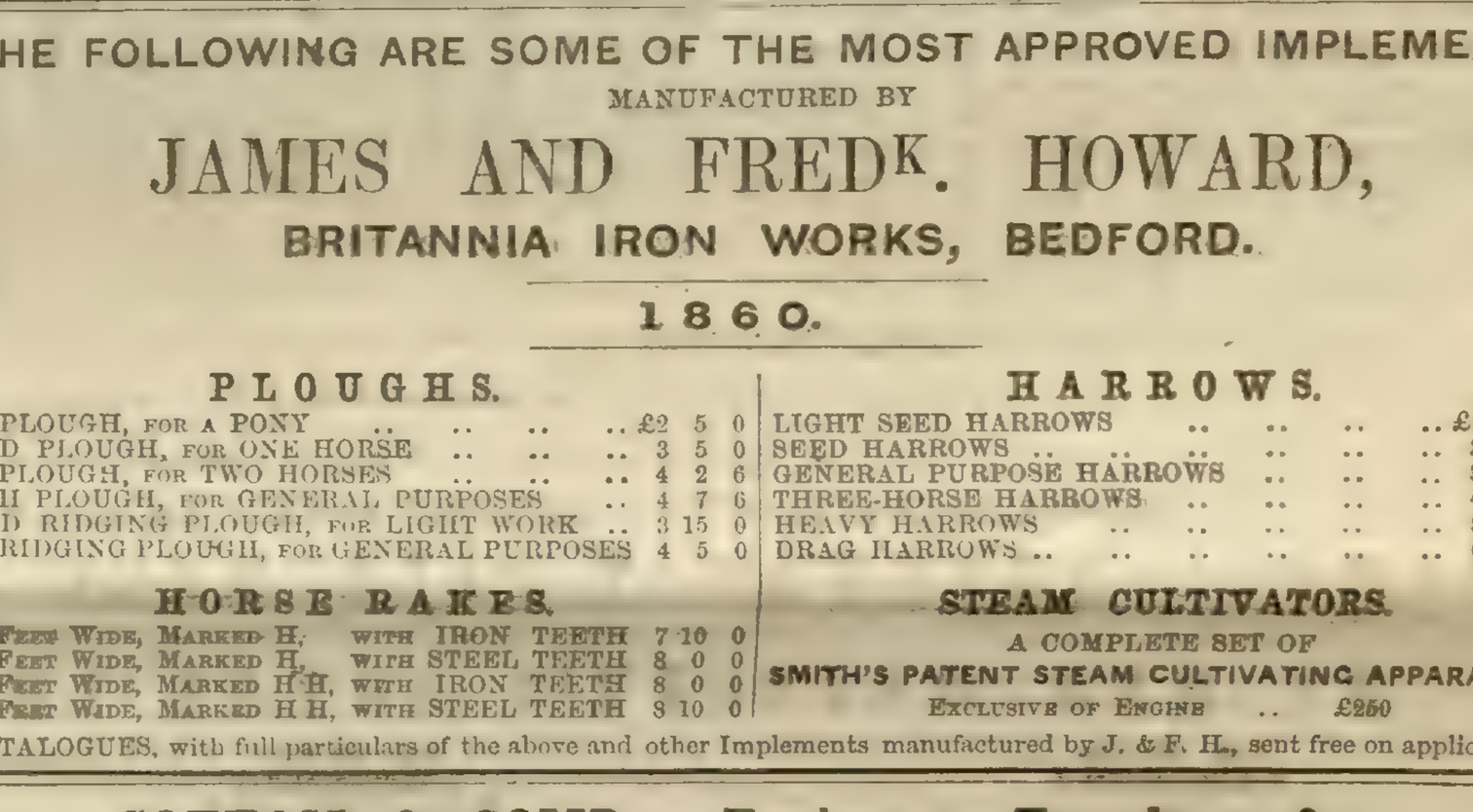
LIGHT SEED HARROWS	£2	17	6
SEED HARROWS	3	3	0
GENERAL PURPOSE HARROWS	3	10	0
THREE-HORSE HARROWS	4	0	0
HEAVY HARROWS	5	0	0
DRAG HARROWS	6	6	0

HORSE RAKES.

7½ FEET WIDE, MARKED H, WITH IRON TEETH	7	10	0
7½ FEET WIDE, MARKED H, WITH STEEL TEETH	8	0	0
8½ FEET WIDE, MARKED H H, WITH IRON TEETH	8	0	0
8½ FEET WIDE, MARKED H H, WITH STEEL TEETH	8	10	0

STEAM CULTIVATORS.
A COMPLETE SET OF
SMITH'S PATENT STEAM CULTIVATING APPARATUS,
EXCLUSIVE OF ENGINE .. £250
CATALOGUES, with full particulars of the above and other Implements manufactured by J. & F. H., sent free on application.

COTTAM & COMPY., Engineers, Founders, &c.,
2, WINSLEY STREET, LONDON, W.
A SHOW ROOM DEVOTED ENTIRELY TO ARTICLES OF HORTICULTURE.
THE NEW ILLUSTRATED CATALOGUE UPON APPLICATION.



COTTAM AND COMPY. having had upwards of 40 years' experience in the arrangement and construction of every description of HORTICULTURAL BUILDINGS AND HEATING BY THE CIRCULATION OF HOT WATER, are well qualified to guarantee the perfect execution of any works intrusted to them in the erection of

Conservatories	Summer Temples	Orchid Houses	Apricot and Peach Houses
Conservatory or Glass Walls for the protection of plants or ripening wall fruit	Arbours, &c.	Conservatories for Window or Balcony Gardening	Tropical Fruit Houses
	Greenhouses	Vineries	Forcing Pits and Frames
	Orangeries,		Cucumber and Melon Houses,

Drawing and Estimates free upon application.

EXHIBITION PRIZE MEDAL GATES AND STABLE FITTINGS.
Iron Hurdles, Strained Wire Fencing, Game Netting, &c.
Every description of Plain, Ornamental, Cast and Wrought Iron, and Wire Work.
SEE SEPARATE LISTS UPON APPLICATION.

COTTAM & COMPY., Iron Works, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon.)

HOTHOUSES FOR THE MILLION,

ON THE PRINCIPLE INVENTED AND PATENTED BY

SIR JOSEPH PAXTON, M.P.

COMBINING SIMPLICITY, CHEAPNESS, EXCELLENCE, AND DURABILITY,

BEING CAPABLE OF FULFILLING IN THE MOST PERFECT MANNER ALL THE REQUIREMENTS OF HORTICULTURE.

FIG. 10.

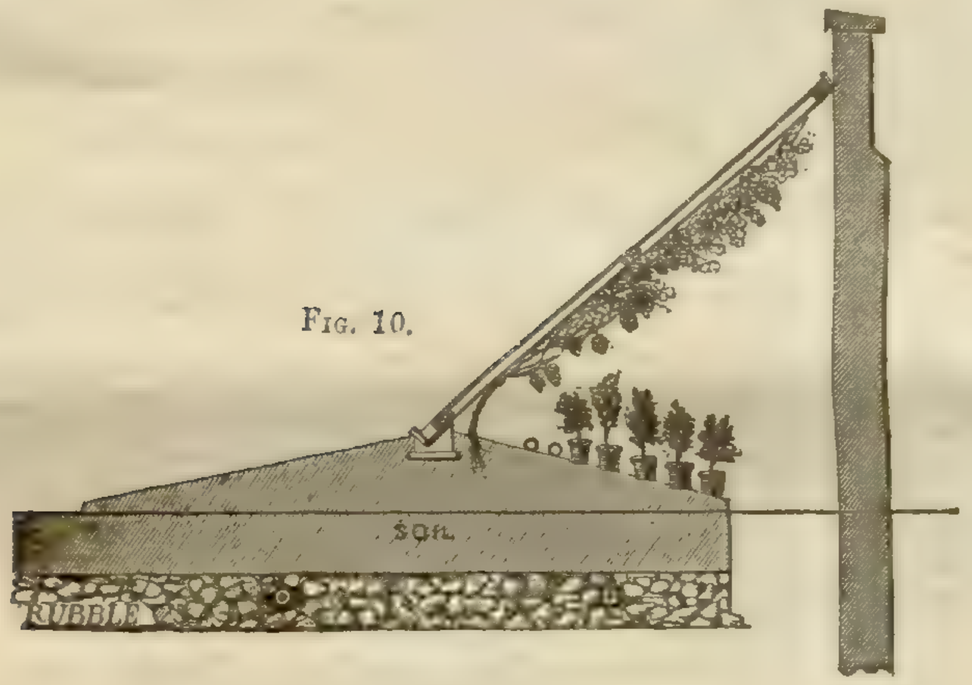


FIG. 6.

The prices of Lean-to Houses complete are as follows:—

Ft.	In.		8 ft. Lights			10 ft. Lights			12 ft. Lights			14 ft. Lights			16 ft. Lights		
20	7	in length	£12	0	0	£16	0	0	£21	0	0	£28	10	0	£34	5	0
31	3	in length	16	10	0	21	2	6	26	10	0	37	12	0	45	16	0
41	11	in length	20	18	0	26	18	6	33	7	6	46	14	0	57	7	0
52	7	in length	25	12	6	32	15	0	40	5	0	55	16	0	68	18	0
63	3	in length	30	6	0	38	10	0	47	2	6	64	18	0	80	10	0
73	11	in length	34	12	6	43	15	0	53	7	6	74	0	0	92	0	0
84	7	in length	39	6	0	49	11	6	60	5	0	83	2	0	103	11	0
95	3	in length	43	19	0	55	10	0	67	2	6	92	5	0	115	2	0
105	11	in length	48	17	6	60	12	6	73	10	0	101	10	0	126	13	0

The prices of the Span-roofed Houses, with Water-troughs, Doors, and Ends complete, are as follows:—

Ft.	In.		8 ft. Lights			10 ft. Lights			12 ft. Lights			14 ft. Lights			16 ft. Lights		
20	7	in length	£24	0	0	£32	0	0	£42	0	0	£57	0	0	£68	10	0
31	3	in length	33	0	0	42	5	0	53	0	0	75	4	0	91	12	0
41	11	in length	41	16	0	53	17	0	66	15	0	93	8	0	114	14	0
52	7	in length	51	5	0	65	10	0	80	10	0	111	12	0	137	16	0
63	3	in length	60	12	0	77	0	0	94	5	0	129	16	0	161	0	0
73	11	in length	69	5	0	87	10	0	106	15	0	148	0	0	184	0	0
84	7	in length	78	12	0	99	3	0	120	10	0	166	4	0	207	2	0
95	3	in length	87	18	0	111	0	0	134	5	0	184	10	0	230	4	0
105	11	in length	97	15	0	121	5	0	147	0	0	203	0	0	253	6	0

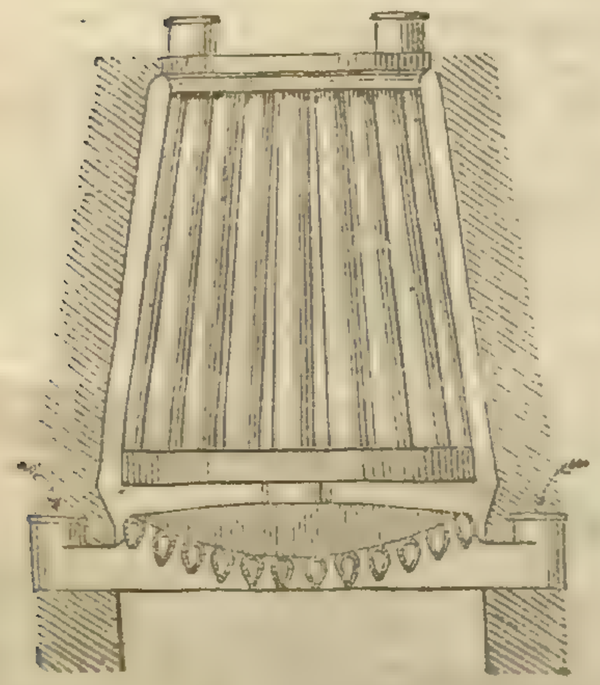
If only one end is required a corresponding deduction will be made. The 14 and 16 feet lights are made stronger than those of less dimensions.

The above prices do not include package, railway freight, heating apparatus, or erection.

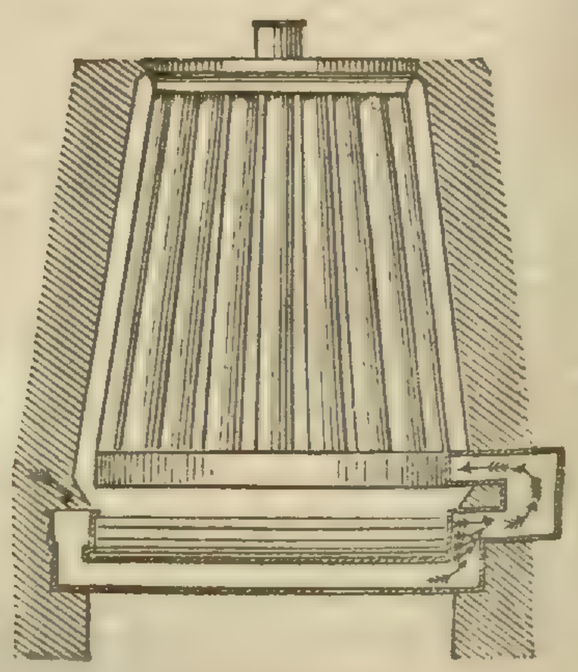
ILLUSTRATED CIRCULARS WITH LISTS OF PRICES CAN BE HAD ON PREPAID APPLICATION TO

SAMUEL HEREMAN, 7, PALL MALL EAST, LONDON, S.W.

BY HER MAJESTY'S ROYAL LETTERS PATENT.



SECTION.



SECTION.

ORMSON'S PATENT JOINTLESS TUBULAR BOILER

Is now from **Practical Tests** allowed to be the best ever invented for **Efficiency, Power, and Economy**, and from the following **Facts** it will be manifest to every person's understanding that it must be infinitely more safe for carrying out the **One Boiler** system than any other **Upright Tubular Boiler.** For instance, the ordinary old-fashioned **Jointed Upright Tubular Boilers** made by **all** other manufacturers, having 20 tubes for the Boiler, and 12 tubes for the Waterway Furnace bars, would have 64 joints made of cement and rope yarn **all** exposed to the direct **Action of the Fire,** whereas in **Ormson's Patent there is not One Joint** upon which the **Fire can act,** hence the great advantage and security of this **Patent.**

These Boilers are made of various sizes so as to suit the amateur or for heating the **Largest Establishments on the One Boiler System.**

HORTICULTURAL BUILDINGS OF EVERY DESCRIPTION MANUFACTURED BY STEAM POWER MACHINERY.

LOWEST PRICES AND BEST MATERIALS.

PLANS, SPECIFICATIONS, AND ESTIMATES FREE ON APPLICATION.

HENRY ORMSON, Horticultural Builder and Hot-Water Apparatus Manufacturer,

STANLEY BRIDGE, KING'S ROAD, CHELSEA, LONDON, S.W.

DUTCH FLOWER ROOTS.

CHARLES TURNER, THE ROYAL NURSERIES, Slough, has just received his usual large consignments from Holland, and is gratified in being able to state that the bulbs are very fine, and in the best condition. The ANNUAL CATALOGUE is just issued, and will be sent free to any address.

As successful cultivation depends in no inconsiderable degree upon early planting, the great advantage of giving immediate orders is obvious.—The Royal Nurseries, Slough; adjacent to Eton and Windsor, and also at Salt Hill.

CHOICE BULBS.

STEPHEN BROWN'S CATALOGUE (late BASS & BROWN) supplied free on application. It contains one of the finest collections of DUTCH, CAPE, and other BULBS. The cultural and descriptive matter is this year greatly enlarged, and prices are very moderate.

Finest named Hyacinths, 6*s.*, 9*s.* and 12*s.* per doz.

Fine, in colours, without names, 3*s.* per dozen.

Assorted Collections of Bulbs, either greenhouse or hardy, at 10*s.* 6*d.*, 21*s.*, 42*s.*, 63*s.*, 84*s.*, and 100*s.*

If 20*s.* and upwards, free to all stations in London.

Seed and Nursery Establishment, Sudbury, Suffolk.

ROSES—ROSES—ROSES.

IMPORTANT TO ALL WHO GROW THEM.

W. H. DAVIS begs to inform his numerous connection and the public generally that his CATALOGUE OF ROSES is now ready, and will be forwarded gratis to any address upon prepaid application.

His unrivalled collection comprises all the best Show varieties grown in extra strong healthy plants, and such that cannot fail to give the greatest satisfaction.

None but really good and strong Plants will be sent out, and at very low prices.

Plants given to compensate for distant carriage.

Early orders are respectfully solicited.

Rose Nurseries, Newbury, Berks.

ROSES.

JOHN CRANSTON'S DESCRIPTIVE CATALOGUE OF ROSES FOR 1860 AND 1861 will be ready for distribution in a few days. It will be forwarded as usual to all customers and free to all applicants.

J. C. flatters himself that his Catalogue will be found a useful guide to all purchasers, likewise to every one interested in the cultivation of the Rose.

The descriptions of New Roses will be found copious and faithful, so far as was possible to make them from the experience of one season.—Nurseries, King's Acre, near Hereford.

ONE YEAR SEEDLING LARCH.

EDWARD SANG AND SONS, Kirkcaldy, beg to offer a few hundred thousands of really good one year-ling LARCH, thin sown, and grown without stimulants. Price 3*s.* per 1000; in large quantities by special bargain.

TO PLANTERS.

ROY AND BELCHER have to offer transplanted SCOTCH FIR, from 1½ to 2½ feet; and BEECH, from 1½ to 2½ feet. The above are very fine, and prices are moderate, which may be had on application.

Ferry Hill Nurseries, Aberdeen.

NOTICE.—The subscribers, DAVID AND GEORGE LAIRD, NURSERYMEN and SEEDSMEN, Cupar, Fife, N.B., have on hand a very fine stock of the following to spare to the Trade, viz:—1 and 2 years Transplanted LAUREL BAYS, 1 and 2 years Cuttings of ditto, 2-years Transplanted EVERGREEN PRIVET, 1 and 2-years Transplanted LARCH.

Cupar, Fife, Oct. 6.

2-YEAR SEEDLING HOLLIES, &c.—The Subscribers beg to offer to the Trade 200,000 2-year SEEDLING HOLLIES, stout plants and beautifully rooted, at 10*s.* per 1000, Sample thousand on application. Also a few thousand 2-year and 3 year EVERGREEN OAKS, very fine stuff, at 30*s.* per 1000. FRANCIS & ARTHUR DICKSON & SONS, Upton Nurseries, Chester.

COMMON LAURELS.—About 2000 fine healthy Plants, from 3 to 6 feet. The Advertiser being overstocked offers them in small or large numbers at a very moderate figure.—CHARLES SOUTHBY, Nurseryman, Clapham, S.

M. AND C. O'KEEFFE, NURSERYMEN, Heytesbury Street, Dublin, beg leave to say that they are extensive Growers of SEEDLING and TRANSPLANTED FOREST TREES, THORN QUICKS, &c., to which they direct the attention of the Trade. PRICED LISTS on application.

TO PLANTERS OF CONIFERS.

YOUELL AND CO. can supply 50 species of RARE AND HARDY CONIFERS in good plants for 5*l.*, package included, and carriage paid to Liverpool, Manchester, Newcastle-on-Tyne, Hull, London, Peterborough, or to any Railway Station within 150 miles of the Nursery.

A LIST of the above can be had on application.

Royal Nursery, Great Yarmouth.

CONIFERÆ.—A fine Stock of very handsomely grown Plants of various heights—see AUTUMN CATALOGUE, just published, sent free.

50 fine CONIFERÆ, of good size, for		£5	0 0
25 fine do.	do. for	2	10 0

The names and heights of either lot may be had. Early planting is recommended. If 20*s.* and upwards, free to all stations in London.

STEPHEN BROWN, late Bass & Brown, Seed and Nursery Establishment, Sudbury, Suffolk.

CEDRUS DEODARA, &c.—

CEDRUS DEODARA,	from 3	feet to	8	feet
„ LEBANI	„ 5	„	10	„
CUPRESSUS LAWSONII	„ 1½	„	4	„
PINUS EXCELSA	„ 2	„	6	„
THUJA AUREA	„ 1	„	3	„

The above are handsome well-grown specimens. PRICES, which are very moderate (for cash only), will be forwarded on application.—WOOD & Co., Barbourne Nurseries, Worcester.

TO THE TRADE AND OTHERS.

TO BE DISPOSED OF IMMEDIATELY, 20,000 Evergreen Privets, 2 to 3 feet; 50,000 Scotch Firs, 1 to 2 feet; 80,000 Spruce Firs, 1 to 1½ feet; 50,000 Larch, 15 to 20 inches; 15,000 Larch, 2 to 3 feet; 15,000 Spruce Firs, 15 to 20 inches; 50,000 Rhododendron ponticum, 2 years, 1 year transplanted; also a quantity of Standard Roses.—For particulars and price, apply to W. MASON, London Road, Macclesfield, Cheshire.

TO THE TRADE.

SEEDLING AND TRANSPLANTED FOREST TREES.—Upwards of 12,000,000 1 and 2-year Seedling Scotch Highland Pine, Tyrolese and Home-grown Larch, Norway Spruce, Ash, Elm, English and Turkey Oak, Beech, Norway Maple, Plane or Sycamore, Thorns or Quick, all strong and of first-rate quality. About 3,000,000 1 and 2-year Transplanted Scotch Highland Pine, Larch and Norway Spruce, strong healthy plants. Samples and prices on application; through rates by Rail and Steam to London, Edinburgh and Glasgow. Parties requiring large quantities may have special offers for plants delivered in either of the above places.

R. MORRISON, Nurseries, Elgin, N.B.

CUTHILL'S STRAWBERRY PLANTS.—HIGHLAND MARY, 1*l.* per 100; 12*s.* for 50; 8*s.* for 25.

IMPROVED BLACK PRINCE, same price. Both great bearers and good forcers.

PRINCESS ROYAL OF ENGLAND, 7*s.* 6*d.* per 100; selected, 10*s.*, fine forcer.

PRINCE OF WALES, 7*s.* 6*d.* per 100; selected, 10*s.*

BLACK PRINCE, 5*s.* per 100; selected, 7*s.* 6*d.*

The two first named have been severely tested on my ground these last three years by hundreds of people. They are early and late, on account of the numerous trusses continually coming up. Dr. Lindley told me, that he never could depend upon having a Strawberry until he had my breed.

Cuthill on the Strawberry, showing how to obtain early and large crops off a small piece of ground. 1*s.*

Payable to JAMES CUTHILL, Camberwell, London, S.

DANIEL ROBERTSON'S WIZARD OF THE NORTH.

R. S. YATES begs to inform the numerous applicants for the above, in accordance with the terms of his former advertisement, that he has forwarded to each (with one exception from near Bristol, whose address was mislaid; they shall be resent on application), and has taken a receipt from the respective carriers. Should any of them not have been received, having yet a quantity left, they shall be sent if applied for forthwith.

Mr. R. S. YATES, St. Ann's Square, Manchester; and Sale, Cheshire.

PLANTS OF HUNT'S SPLENDID SWEET WILLIAMS.

J. HOADE AND SON beg to offer nice healthy plants of the above (true stock), free by post, 18 for 13 stamps. Also a few packets of Seed 1*s.* each.

Addlestone Nursery, Addlestone, Surrey.

JEAN VERSCHAFFELT, NURSERYMAN, Ghent, Belgium, begs to announce that his NEW CATALOGUE for 1860-61 is now ready and may be had on application to Mr. L. SILBERRAD, 5, Harp Lane, Great Tower Street, London, E.C.

LUCULIA GRATISSIMA, ETC.

FRANCIS AND ARTHUR DICKSON AND SONS, Upton Nurseries, Chester, have a large stock of the above, fine clean healthy plants, 6 to 18 inches high, which they offer to the Trade at 30*s.* to 42*s.* per dozen.—Also DRACÆNA TERMINALIS, about 1 foot, fine plants, 24*s.* to 30*s.* per dozen.

GLADIOLUS BRENCHLEYENSIS.

YOUELL AND CO. beg to inform the Trade they are in a position to supply strong flowering BULBS of the above variety, unequalled by any other for the brilliancy of its colour. See report by Dr Lindley in *Gardeners' Chronicle* of Sept. 8, page 816. Price per 100 or 1000 on application.

Royal Nursery, Great Yarmouth, Norfolk.

ANDROMEDA FORMOSA.

W. H. ROGERS holds a large quantity of the above very beautiful hardy evergreen American shrub, which he can offer 6 inches high at 50*s.* per 100; 12 inches high, fine strong plants, 12*s.* per dozen; and selected single specimens, 2*s.* 6*d.* each.—Red Lodge Nursery, Southampton.

LILIUM GIGANTEUM (FLOWERING BULBS).

AMBROISE VERSCHAFFELT, Ghent, Belgium, begs to offer a few large and splendid Flowering Bulbs of the true LILIUM GIGANTEUM. Price 21*s.* each.

LILIUM GIGANTEUM.

MESSRS. PETER VAN VELSEN AND SONS, FLORISTS, Overveen, near Haarlem, Holland, beg to offer strong Bulbs of the above. Price, per dozen, in Holland:—

3 years old, 18*s.* | 2 years old, 30*s.* | 1 year old, 20*s.*

London Agents:—BETHAM & BLACKITH, Cox's Quay, Lower Thames Street, E.C.—Oct. 6.

NEW GOLDEN STRIPED ARBOR-VITÆ.

(THUJA VERVAENEANA.)

A. VAN GEERT, NURSERYMAN, Ghent, Belgium, begs to announce he is now ready to send out the above very showy novelty, of which he has purchased the entire stock of the obtainer, M. Vervaene, of Ghent.

Price 7*s.* 6*d.* each; one over for every three taken.

LARGE SPECIMEN WELLINGTONIAS.

JAMES BACKHOUSE AND SON have pleasure in offering 12 to 15 very handsome perfectly formed specimens, from seed, of this noble tree, 5 to 7½ ft high, and 12 to 14 feet in circumference. The above have been grown in the open ground without the slightest protection and will remove with perfect safety.—York Nurseries, October 6.

TRICHOMANES ELEGANS.

JAMES BACKHOUSE AND SON offer fine established plants of the above rare and beautiful FERN, at 42*s.* and 63*s.* each. A few extra fine specimens at 105*s.* each; and small plants at 21*s.* to 31*s.* 6*d.* each. They can also supply good plants of—

Trichomanes spicatum		Trichomanes venerum	
„ anceps		„ trichoideum	
„ scandens		„ sinuosum	
„ alatum		Hymenophyllum ciliatum	
„ attenuatum		„ polyanthos	
„ crispum		„ demissum	
„ Kaulfussii		„ crispatum	
„ floribundum		„ hirtellum	

And many other varieties of both genera.

York, October 6.

TRITOMA UVARIA GLAUCA.—Nothing can excel the beauty of this truly magnificent hardy Herbaceous Plant. Some of the old-established plants have had this season from 20 to 30 spikes of beautiful orange-scarlet flowers, and it is certainly the most effective and showy plant among the tribe of perennials.

Blooming Plants, 12*s.* per doz. | One year younger, 6*s.* per doz.

Orders of the above will be executed on receipt of a Post-office Order or Postage Stamps for the amount.

JAMES KITLEY, Lyncombe Vale Nursery, Bath.

TO PINE GROWERS.—Wanted, some fine strong suckers of the undermentioned sorts, viz.:—

	Plants.		Plants.
Prickly Cayenne about	12	Broad-leaved Queen	6
Smooth-leaved do.	12	St Vincent's	6
Black Jamaica	6	Sugar-leaf, either Brown or Brown-leaved	12
New Jamaica	6	Trinidad	3
Green Providence	6		

Address to E. S. W., Private Bag, Post Office, Mansfield, Notts.

Any party having only one of the above sorts will receive attention to his offer, stating age, size, and price.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SON'S PRICED AND DESCRIPTIVE CATALOGUE FOR 1860 AND SPRING 1861, comprising Fruit Trees of all the leading kinds, new and selected Roses, fine varieties of American Plants, Choice and Rare Conifers, Evergreen and Deciduous Trees and Shrubs, and a fine Stock of Transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

WILLIAM PAUL (Son and Successor to the late A. PAUL), Cheshunt Nurseries and Seed Warehouse, Waltham Cross, N.

DUTCH BULBS, RUSSIAN MATS, MUSHROOM SPAWN, &c.

Please Address WILLIAM PAUL.

CATALOGUE.

YOUELL AND CO.'S GENERAL AND DESCRIPTIVE PRICED CATALOGUE for this season is now ready, and will be sent free on application.

It contains detailed Lists of Greenhouse Plants, Conifers, Shrubs, as well as all the newest introductions in Soft-wooded Plants.—Royal Nursery, Great Yarmouth.

NEW FUCHSIAS and CHRYSANTHEMUMS of 1860.—12 New CHRYSANTHEMUMS for 9*s.*; or 50 vars. for 1*l.* 5*s.*

12 New FUCHSIAS for 9*s.*: or 25 varieties for 10*s.*

CATALOGUE may be had on application.—JOSEPH COURCHA, Wellington Row, Hart Lane, Bethnal Green Road, London, E.

NOW IS THE TIME FOR PLANTING.

JOHN IVERY respectfully invites inspection to his superb stock of EVERGREENS, DECIDUOUS TREES, FLOWERING SHRUBS, FRUIT TREES, &c. All have been transplanted within the last year. Evergreen Oaks, 4 to 7 feet; Phillyrea, 2 to 5 feet; Irish Yews, 3 to 5 feet; Arbor vitæ, 2 to 5 feet; Cedrus deodara, 1 to 5 feet; Laurestinus; Sweet Bays; Laurels, common and Portugal, Hollyer's variety; Lygustrum, Box, and all other varieties of the best description. Large specimen Weeping Limes and Elms, Acacia, Laburnum, Mountain Ash, and Forest Trees. Various Lilac, Guelder Roses, and other Flowering Shrubs in great quantity, Irish and other Ivy, Climbing Roses, hardy Climbers in great variety in pots; also a choice collection of Greenhouse Creepers, Fruits, large and trained Peaches and Nectarines, Apricots, Morella, Cherry, Pears, Plums, &c. Also dwarf trained of the above variety, very fine. Large standard Pears, Apples, Plums, Cherry and Gooseberry, Currants, Raspberry and Strawberry in great variety.

J. I. also informs his friends that his BULBS have arrived in good condition. CATALOGUES to be had on application.

Hanover Nursery, Peckham, S.E.

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The Gardeners' Chronicle.

SATURDAY, OCTOBER 6, 1860.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, October 9 { Horticultural (Fruit Committee) at St. Martin's Place ..... Noon

THURSDAY, — 11 { Horticultural (Floral Committee) at St. Martin's Place ..... Noon

BAD as the past season has been it has at least had the merit of showing what hardy fruits can be relied upon for a crop and for ripening when summer temperature is lowest, sun the feeblest, and air the dampest. It is from this point of view that gardeners should look at the result of the summer. If that is done we may not doubt that some opinions formed upon the produce of the two last exceptional seasons will be considerably modified; and that we shall know better than

before upon what to rely when weather is at its worst.

In nothing is this more striking than in the crop of Plums. Of that valuable fruit how few have proved worthy of their reputation. A sprinkling on even those reputed to be sure bearers is all that has stood; Bullaces, the hardiest of Plums as we had supposed, are in many places missing; COE'S Golden Drop, Washington, and the Gages themselves, whether green or purple, remain incurably sour. Amidst this general loss of reputation, two varieties have shown incontestably most excellent qualities. They have been good when others have proved bad. We do not mean that they have formed sugar like a Greengage, but they have proved good in a bad season as well as in a fine one; in any season they are always first-rate kitchen sorts, and in warm dry summers they claim a high place in the dessert.

Men should have seen these Plums in the grounds of Mr. FRANCIS DANCER of Turnham Green, one of the great market gardeners of the metropolis, at a time when all others were utterly unripe, or so few and far between as scarcely to be visible among the leaves. There stood rank upon rank DENYER'S Victoria and MITCHELSON'S (which might be better called DANCER'S Improved) Damson trees, with their branches breaking down by the vast profusion of their crop. Week by week were the trees picked over for the markets of London and Manchester, and for many a day without any perceptible diminution of the quantity.

Denyer's Victoria Plum is well known about London. It is a large oblong fruit, in size between a Magnum Bonum and an Orleans, of a reddish salmon colour; Dr. HOGG describes it as a culinary variety, but "very juicy, sweet, and pleasantly flavoured." That is to say it is a good table fruit, but chiefly valuable for preserving or cooking; an opinion in which we concur. It is therefore of great importance in small gardens where there is no room for variety.

As to *Mitchelson's*, that is scarcely known to any one; and can hardly be said to be in the trade. It is oval, almost as large as a Victoria, of the deepest purple, with the peculiarly agreeable acid and sweetness which render a ripe Damson so great a favourite. As a table Plum it is certainly not so good as some others, though far from being unfit for the dessert. As a fruit for cooking, bottling, preserving, or making jam, and jelly it is unsurpassable; for in addition to its other excellent qualities it rivals the Red Currant itself in the rich colour of its juice. To our taste, indeed, its jelly is preferable to any other for serving up with roast meat. As to its produce, imagine the branches to be loaded with fruit as closely packed as Onions in a rope, and some idea may be formed of its fecundity. Its history is unknown; who raised it has been forgotten. We believe, however, it appeared originally in the hands of a Mr. MITCHELSON, whose name it bears, but how it passed into his possession has never been recorded. Dr. HOGG himself makes no mention of it in the body of his *Fruit Manual**. Very likely it is some foreign variety, a point that we feel no anxiety to investigate. We are content to know that an invaluable fruit has been acquired, without looking curiously into its origin.

A CASE of poisoning from the use of deleterious Fungi has lately occurred at Ipswich, in which the verdict given by the jury is such as to require some remark. Appended to the more ordinary form of verdict "Death caused by the eating of poisonous Mushrooms," is the following recommendation:—"That great caution should be exercised by persons eating Mushrooms, inasmuch as Dr. ALFRED SWAINE TAYLOR has in his work on medical jurisprudence, an extract from which was read to the jury, stated 'that there do not appear to be any satisfactory rules for distinguishing those Mushrooms which are wholesome from those which are poisonous. And that in some persons even the edible Mushrooms will produce disorder of the stomach and bowels by the effects of idiosyncracy.'"

Dr. TAYLOR'S more recent work on Poisons, published in 1859, contains but little on this particular subject which did not appear in the former treatise. Unfortunately the part relative to Fungi is not done with that care which is so remarkable elsewhere. It is clear that Dr. TAYLOR had little knowledge of Fungi, and he does not appear to have submitted what he has written to any one possessed of more information. He states for example, in the beginning of the article, which is very short, that *Agaricus campestris* and *esculentus* are perhaps most commonly employed as articles of food. Now *A. esculentus* has not yet been found in England at all, though it is said to be not uncommon in Scotland, and if so is we believe never eaten there. It is moreover a very small species, and used more as a condiment in Germany than as an article of food, and is not to be compared with many other species, as *Ag. arvensis*, or *Ag. oreades*, for instance, in point of frequency of use. It is observed again that "all Mushrooms that are highly coloured or grow in dark shady places are generally poisonous," a statement which is at variance with the fact that some of the best species occur in woods, that several of these are highly coloured, and especially that the most wholesome of all Fungi, the Bed-Mushrooms, are mostly produced in total darkness. He speaks moreover of the Truffle as Morchella esculenta, whereas he ought to have said Morell, a Fungus of a very different form and nature.

These matters are however important only so far as they indicate the necessity of not confining our studies to the modicum of information respecting Fungi which Dr. TAYLOR has placed before us.

The especial point to which we would direct attention is the conclusion drawn by the jury from the statement that there are no satisfactory rules for distinguishing wholesome from poisonous Mushrooms. The statement is true enough, but it amounts to no more than a like assertion would with respect to phænogamous plants. No person can give any rule which shall distinguish a poisonous fruit in Solanads from one which is wholesome, as for example the Brazilian Cherry from the fruit of the Deadly Nightshade, and the same may be said of other natural orders. Several persons were poisoned some years since with the latter, which was sold instead of Bilberries, a substitution made in ignorance, exactly as the root of Aconite is sometimes substituted for Horse-radish. The discrimination of wholesome from unwholesome phænogamic productions is matter of experience, and no one is safe in the use of any vegetable substances whatever, without such a degree of information as shall preclude all reasonable chance of error.

It may be very well then to caution persons against gathering Fungi without a proper knowledge of what is wholesome and what is poisonous, but to go further is to proscribe the use of Fungi altogether. In dangerous or fatal cases it is scarcely ever possible to ascertain precisely what has caused the mischief. A few poisonous individuals may have been intermixed in the general mass, and if the whole of the gathering has not been used, none of the poisonous species may remain. It is very true that a few constitutions may be such as not to admit of the use of Fungi at all, exactly as Shellfish or Love Apples, and some other allied fruits, are a positive poison, or at most unwholesome to a few. Such cases are however quite exceptional, and the person who has once suffered will not in all probability be foolish enough to venture upon such food again. Where however there is proper knowledge, cases of disagreement are far from numerous, and where they do occur we have no doubt that it arises mostly from dressing specimens which have entered upon a state of decomposition. In England we have never heard of a case of poisoning from the true *A. campestris*, and the particular variety which is for the most part cultivated artificially is on all hands acknowledged to be perfectly safe; and as in this instance no mistake can well be made, it is almost the only Agaric which appears for sale in the Paris markets. In the London markets, on the contrary, *A. arvensis* is far more common than any other species, and its use is extending of late years in districts where it was formerly most unjustly condemned because it acquires a yellow stain when bruised. As this species, however, is very thick and fleshy, it requires in general far more stewing than the common Mushroom, and we can easily conceive that a hungry person partaking of it largely without proper mastication might experience disagreeable and occasionally fatal consequences; but this is no more than arises in isolated cases from a too hearty meal of ordinary food. TAYLOR'S work above quoted, at page 152 will furnish cases in point.

The observations of the jury, then, should have been directed not against the use of Fungi in general, but against the ignorant use of them, or rather abuse. It is from ignorance alone that so much valuable food which is spread in profusion around us, and has been aptly termed the Poor man's Manna, is utterly wasted, and that so much prejudice exists on the subject. *M. J. B.*

* See p. 894 for Dr. Hogg's description.

GRAPES AND GRAPE GROWING.

THE account you have given at p. 835 of the Grapes in the Conservatory of the Horticultural Society at Chiswick is very interesting, but still when critically examined it shows how limited the number of varieties is which are really worth cultivating, or which can rank with, not to say supersede the established kinds. As your reporter appears to have adopted the nomenclature of the "Fruit Committee," and as I feel convinced that in several cases they have either judged from improper materials or have erred in their estimate of the different varieties, you must pardon me while I endeavour to point out the errors they have fallen into. It may appear a bold step to call in question the conclusions of a committee of experienced men, especially when those men have no interest, except that of the public, to serve in the judgment they pronounce; but when we consider how difficult it is to form an opinion upon mere casual examination, it certainly appears that a man who daily observes the progress of a plant or fruit from its first budding to ultimate and complete development and maturity, ought to be the best able to form a correct estimate as to its distinctive character and value. If, judging from such premises I have arrived at a conclusion different to that of the Committee, however unfortunate it may be, it shows that either they or I must be wrong.

Judging by the success of my own plants as premiated by learned societies, through most competent censors, it will be easy to prove that the most useful plants are not always those which receive the highest prizes. Of course I am speaking of new things. Now, among these, I raised some years back several sets of Fancy Pelargoniums; some of these received first-class certificates, some were certificated, and others had labels of commendation. But where are they now? Many of them have disappeared from the catalogues of nurserymen; but the stubborn fact remains, the two varieties regularly exhibited, and recommended by myself and my foreman, viz., "Celestial" and "Cassandra," never received a prize at all; yet go into any garden in the country, and if it contains Fancy Pelargoniums at all, you are safe to find one, if not both these varieties. It would be impossible to enter an exhibition tent without finding them, even Mr. Turner with his magnificent collection being unable to pull through a season without the aid of these two varieties. I might enumerate two more sent out at the same time—"Conspicuum" and "Electra," neither of them premiated plants, but both for several years leading exhibition varieties. To show however the impropriety not to say impossibility of judging from mere casual inspection, I may mention another variety, "Nil Desperandum." This, though as near perfection as need be when caught right, was so inconstant, had such a propensity for producing its flowers deficient in petals, that for weeks together you would not see a perfect bloom upon it; but one morning it was sheeted with beautiful flowers, and attaching the above commemorative name it was sent for exhibition and returned in the evening with a "first class certificate." I admit that judging from the plant put before them, the censors could not have done otherwise, but had I or my foreman been required to sign a guarantee that the plant was constant in its habit of blooming, we should have declined the responsibility, and have told the judges it was worthless. I mention these facts to show that mere certificates originating with occasional observers are not a safe guarantee of the value of a plant or fruit; they, the plants, may be as they appear at the time, or they may be, as was the case with Nil Desperandum, mere plants of the day, and otherwise, or beyond that, quite worthless.

In the matter of the value of a new plant or fruit, I am still of the opinion I expressed some nine years back, that no man can be so good a judge of its properties and value as he who has the daily care of it; and if at the same time he is a conscientious judge of the properties necessary to constitute a good flower or fruit, I would rather trust to his opinion and recommendation than that of all the occasional observers in the country. It may be thought that I go against seedling censors altogether; but such is not my intention. I am willing to take their opinion for all that it is worth, but to render it really and truly what it is represented to be, it must be backed by a declaration on the part of the exhibitor that the premiated plant is at all times worthy of the judgment that has been passed upon it. I would thus in every case, before awarding a prize to a new plant, have a form of declaration setting forth its merits, drawn up and submitted to the proprietor; and if he refused to indorse the merits as described, then the prize should be cancelled altogether. Any person acquainted with the progress of horticulture could point to numbers of both fruit and flowers sent out within the last 20 years, and at the time pronounced to be great acquisitions, but now where are they?—gone clean out of cultivation! This should not be, and would not be if censors were more particular, and exhibitors were held responsible for the plants they send out, instead of, as is too frequently the case, sending them into the market on the responsibility of the censors.

With these preliminary remarks I will proceed to notice the Hamburgh Grapes. Here I perceive Warner's Hampton Court and Richmond Villa are given as synonymes of the Old Hamburgh. Richmond

Villa I judged several times at the metropolitan exhibitions before it was sent out, but never found it of first-class quality, and hence never awarded it a prize. It is, however, a singular fact that when grown in a house with other kinds, if the wasps get in they will strip this Vine before they touch any other, thus showing there must be some difference in its quality, or why this selection? Of the Dutch Hamburgh I see Wilmot's and the Mill Hill are given as synonymous; the Dutch Hamburgh, as far as I have ever seen it, is a coarse and inferior kind, but the true Mill Hill, as I received it from Mr. Fleming, and have grown it for some years, if not first-class, is certainly not an "inferior kind." The "hammered" appearance is given as a characteristic of the Dutch Hamburgh. This is an error, as the hammered appearance is not confined to the Dutch Hamburgh, but is alike the mint mark of good cultivation in all the Hamburghs, the Golden being no exception to the rule; indeed it is not an unusual thing for clever Grape growers at an exhibition, when noticing really fine Hamburghs, to say "Ah! those have been well forged," meaning that the "hammer mark" of a first-class cultivator has been put upon them. I am convinced the Mill Hill and Dutch Hamburgh are not the same; the Dutch I never considered worth planting, but the Mill Hill I should not hesitate to introduce as one of a choice collection.

To the Frankenthal is referred the Pope and Victoria, Hamburgh, and Welbeck Tripoli. The Frankenthal I have not grown for many years, but I always considered it inferior to the Hamburgh, and, consequently, it must be less valuable than the Welbeck Tripoli. I have reason, however, to believe there are several varieties out under this name. Through me it was that it was first introduced to the London trade. Mr. Tillery kindly sent me some cuttings from which a number of plants were raised; part were planted by myself, and the remainder were given to Mr. Glendinning, of Chiswick, and Mr. Ivery, of Peckham. Of the plants I planted myself only two or three turned out to be the genuine Black Tripoli of Welbeck; and hence I have reason to believe that some of the plants distributed by Mr. Glendinning and Mr. Ivery must also have been wrong; and hence also, as the plants at Chiswick were probably procured through Mr. Glendinning, the genuine Tripoli may not be at Chiswick at all. I believe the Pope and Welbeck Tripoli to be identical; but the Victoria Hamburgh is a coarser Grape, and under the same treatment will neither break into bud nor ripen so soon by ten days or a fortnight as the Tripoli. I am speaking of the Welbeck Black Tripoli in its genuine state, and as I have grown it for years. In the Hamburgh class it has no superior either in point of size, quality, colour, or flavour; in fact it and the Mill Hill Hamburgh are the only Black Hamburghs I should think of planting as permanent Vines.

I now go back to the exhibition of the Horticultural Society in St. James's Hall, when so much was said, and deservedly so, in favour of the magnificent Muscats exhibited by Mr. Drewett, of the Denbies. I have not the report of that meeting at hand to refer to, but if my memory does not deceive me, Muscats so called were exhibited by Mr. Drewett, R. Crawshay, Esq., and Jones Nash, Esq., of Bishops Stortford; the bunches of Mr. Drewett were described as remarkable for their size, compactness, and perfect amber colour, the superior growth being attributed to the bottom-heat with which the border was at all times supplied. But was it really so? From Vines which I have fruited, raised from eyes supplied to me by Mr. Drewett, I have but little doubt the Muscat at Denbies is not that of Alexandria at all, but in reality was generally known as the Charlsworth Tokay, now fortunately very generally grown as the Muscat of Alexandria. This Charlsworth Tokay I believe to be identical with the variety known as Barnes's Muscat; the original plant, now nearly or quite 100 years old, fills a large Vinery, and produces splendid crops in the garden of G. W. Norman, Esq., Bromley Common, Kent. This is also, I feel pretty certain, the same as the Pass Muscat of Mr. Pontey, of Plymouth, and the Bowood Muscat. At least I fruited plants of the Charlsworth Tokay and Bowood Muscat side by side this season, and was quite unable to discover any difference, as likewise were numbers of gardeners who both saw and tasted them. Now from what I know of Mr. Nash's Grapes, I have no doubt it is the Muscat of Alexandria, long, loose, irregular bunches, and Mr. Crawshay's are in all probability the same, but the Charlsworth Tokay is a free-growing, free-setting, and excellent variety, setting freely at a temperature much below 60°, and ripening with less heat than the Muscat. This Charlsworth Tokay is, I believe, of Yorkshire origin, the Muscats being generally in that county called Tokay; at least it was there nearly 30 years ago when I first became acquainted with the Muscat under the name of Tokay, and I am rather surprised that Mr. Whiting, who made inquiry about it some time back, should not have known it under the same name in that county.

Of the Vines at Chiswick the general appearance was certainly very fine, and though some of the bunches were good, one could not but desire that a lighter crop had been taken, so that the bunches might have attained their fullest perfection. I fear the Vines will suffer from the crop they are now carrying; and considering they have still much growth to make before they reach the top of the house, it was not right to take so heavy a crop this season. The success of the Vines planted inside in a shallow border, a few inches deep on the old stone pathway, is very remarkable, but how long they will remain in the same condition will depend in a great measure upon the nature of the treatment they receive. With timely and judicious watering they may stand for years; but let a crop in the growing season once know the want of water, and the chances are it will be ruined for ever. The experiment, however, shows the success which is likely to attend shallow borders, and it shows also that an approximation to the natural rocks of the Vine may be imitated with considerable chances of success in its cultivation. Shallow borders with hollow and impervious bottoms were adopted many years ago by Mr. Mearns, at Welbeck; I assisted to make many of these borders, but did not remain sufficiently long at Welbeck to see the result of the experiment, nor did I ever hear that any remarkable success attended the practice. Experiments of this kind require very careful supervision, and to make an expensive border without devoting the necessary attention to it to bring the crop to perfection is just a waste of money; yet how frequently in gardening do we run to wild expenses in the first formation, and then begrudge the few pounds necessary to keep the machinery in working order after it is formed.

The only kinds at Chiswick which struck me among the novelties as being desirable was Burchardt's Amber Cluster, and Keinsheimer Blanche Précoce, both of which appear likely kinds for early work or pots. The bunches are small, but the fruit in both cases is rich and peculiar in flavour. Burchardt's Prince also promised to be an excellent late kind to grow with the Muscats for a late supply. I was very much surprised to find the Golden Hamburgh, though fine in bunch to be deficient in flavour; at least it was not anything like so good as it had been with me in Somersetshire. Here it was the best (always excepting the Muscat and Frontignan) white Grape I ever tasted, and well deserving of extensive cultivation. It is however constitutionally very delicate. One night the down pipe of the gutter which took the water from the roof of the house got stopped, which caused a heavy night's rain to overflow just upon the root or collar of the Golden Hamburgh. Within a week it showed evidence of injury, and at the least one-third of each bunch shanked. With some this variety is considered a delicate grower and shy bearer, Mr. Spencer and Mr. Turner, of Slough, having told me that strong Vines with them had not shown a single bunch. With me every shoot produced two to three bunches, 12 of which were left upon a strong Vine for a crop. Another person tells me it will not fruit in pots, all attempts to induce it to do so having failed. Why this should be so I cannot understand. A well-grown and properly matured Vine should produce fruit in pots as well as in the open border, and until it fails under my own management I shall not believe it will not do so.

The Muscat Hamburgh I saw in fine condition at Pine-apple Place. This is a really good Grape, certainly much finer than I had been led to suppose it was. I hear Mr. Mayer, at Sir R. Bulkeley's, in Anglesea, has it much finer, and I hope to see in the course of the autumn.

Looking through the Grapes at present in cultivation it appears that all purposes of a regular supply will be attained with the following varieties:—White—White Frontignan, Golden Hamburgh, and Charlsworth Tokay. Black—Black Frontignan, Welbeck Black Tripoli, Muscat Hamburgh, Mill Hill; and for late work, Lady Downe's Seedling, Oldaker's St. Peter, and Burchardt's Prince. If more Vines were required I should rather duplicate with some of the best of the preceding than plant a larger number of kinds. *W. P. A., Sept.* 25.

MYCOLOGY, No. XXXI.

—Crucibulum vulgare, *Tul.*—There are few observers of Nature who have not admired some one, or more species of the curious group to which the subject of our present illustration belongs, though perhaps in some degree uncertain to what part of the organised world they should be referred. Naturalists of some pretensions have sent them home from the tropics as the nests of some species of spider, and there is a little excuse for their doing so, as they are so utterly unlike anything else in the vegetable kingdom.

Their general appearance is that of a cylindrical or bell-shaped cup filled with eggs, which in an early stage of growth are immersed in jelly. Sometimes the outer coat is smooth or slightly tomentose; sometimes on the contrary it is densely scaly; its inner surface is at times smooth as if varnished, but in some species it is deeply and regularly grooved. Sometimes the edges meet so as to form a continuous covering to its contents, but sometimes again there is a distinct lid or operculum quite different in appearance from the rest of the cup.

When the contents are examined, after the jelly has been absorbed, the flat lens-shaped bodies which fill the cup are found to have a little dimple, by the centre of which they are attached to a footstalk of a complicated structure, but always more or less elastic, by means of which they adhere to the walls of the cup. Before however the true peduncle commences there is a swollen body, which contains an elastic thread of great length and variously convoluted. If the lens-shaped bodies or sporangia are examined they are found to consist of a cellular mass inclosed in one or more coats of variable thickness, and by careful manipulation under the microscope, it will be found that in the centre of the mass some of the cells are elongated into sporophores, which are either simple or branched, and bear at their tips four hyaline spores.

It appears then that the true affinity of these apparently anomalous productions is with the Fungi of the naked spored series; their closest relation being with some of the false truffles. Intermediate links have not however at present been discovered, so that the group to which they belong is more or less isolated.

The exotic species are numerous. In Great Britain we have three species only belonging to two distinct genera, and all of these are more or less widely distributed.

Crucibulum vulgare is not uncommon in woods on fallen twigs, or chips, but its favourite habitat is old Fern stems, on which it sometimes assumes a very attractive appearance. The genus Crucibulum is distinguished principally from Cyathus by the compara-

Crucibulum vulgare.

Copied by permission from Dr. Greville's Scottish Cryptogamic Flora.

tively delicate peduncle of the sporangia, and the less complicated structure of the walls of the cup.

The other two species which belong to the genus Cyathus are so remarkable that our readers will probably be glad to have characters by which they can be readily distinguished. *Cyathus striatus* then will be easily recognised by the scaly outer surface of the cup, which is of a bright brown, and by the deeply grooved inner surface. It occurs on Pine chips, amongst sawdust &c., but it is not confined to Conifers. It is found also occasionally on the ground itself, and when well grown is very beautiful, the bright brown being of a peculiarly rich tint, not to mention the elegance of form and sculpture.

Cyathus vernicosus is perhaps the most common of the three, being frequent in stubble fields on the ground itself and on half decayed manure. It is not uncommon also on the soil of garden pots, where it seldom fails to call the cultivator's attention, though apt in such cases to be soiled with minute Algæ. The colour is generally of a mousegrey or lead blue; the outer surface tomentose and the inner polished. The form is moreover more graceful than in the two preceding species, in the former of which it is mostly cylindrical and in the second obconic, while in the present it is campanulate. We know of no use to which they can be applied, their principal merit consisting in their beautiful form and curious structure. *M. J. B.*

Home Correspondence.

Destruction of Insects.—The gardening world is much indebted to Mr. Robertson (see p. 871) for the candid and straightforward manner in which he has explained his difficulties in overcoming the white scale on his Pines; for the result of unsuccessful experiments is quite as useful as an account of more fortunate issues; and whatever the merits of any particular composition may be, it is evident that we have not yet discovered an infallible cure without incurring injury to plants. It has generally been believed that water heated to about 130° was fatal to insect life, and that such plants as Pines would withstand that amount of heat. Mr. Robertson's experiment however proves otherwise; and I shall be glad to hear of other parties trying similar experiments and reporting upon them, for white and brown scale, mealy bug, thrips, and mildew, are such pests as to require active measures to keep them in check, and whoever can discover a cheap, easy, and efficacious way of destroying them without injuring the

plants, will be conferring a great benefit on the community; and although I repudiate the idea that insects of any kind are produced spontaneously, they certainly multiply with great rapidity where circumstances favour their doing so. Take for example a Fig tree in autumn, and see how quickly its leaves become covered with scale. The question therefore is, where does the pest come from? This I leave for others to answer, certain it is that many Fig trees are affected in this way, and how to prevent them being in that condition, or to stop the enemy with any moderate amount of labour when he has once effected a lodgment, is a subject I should like those who have considered the matter, to come forward like Mr. Robertson and give us the benefit of their experience. *J. R.*——I am glad to see that Mr. Robertson had published the receipt I gave him last July for the destruction of scale on Pines, the discovery of which I was fortunate enough to make after various attempts, and I have used it with great success. It appears from his letter that he has found it to answer, and I hope that all who have to contend with such a pest may find it equally efficacious. *George Cairns, Gardener to E. Griffiths, Esq., Newcourt, Hereford.*——I can vouch as to the certainty of soft soap and sulphur destroying scale, as well as most other insects that annoy the gardener. I however add Tobacco-water, and have never used it so warm as recommended by Mr. Robertson, having generally employed it for Stove and Greenhouse plants, Fruit Trees, &c. The quantity used will be found in a prize essay on Orchards, published in the Journal of the Bath and West of England Agricultural Society in 1859. *W. H.*

Double Zinnias.—We observe that in your report of the last meeting of the Floral Committee of the Horticultural Society (see p. 874), you state that the blooms of Double Zinnia elegans exhibited by us "were less double than Messrs. Vilmorin's." As Messrs. Vilmorin's and our blooms were both awarded "first class certificates," we think that the difference could only exist to a slight extent, and we take the liberty of stating that our blooms having been grown in England were exposed to the very unfavourable weather we have experienced during the past season, which has been so trying to all descriptions of half hardy annuals. We have no doubt that had our plants been raised in as favourable a climate as those of Messrs. Vilmorin, they would have proved in every way equal to them; and we have every confidence in this year's harvest of seed producing first class blooms next season should we happily be favoured with a better summer. *James Carter & Co., 237 & 238, High Holborn.*

Monstrous Pea.—We have sent you what we consider to be rather a curious production. It is taken from a plant of a robust healthy looking dwarf Pea 3 feet high, which was sown in March last. The whole plant is covered with such "blossoms" as we send, and towards the top they are as dense as a fine crop of hops and very beautiful. The grower of this curiosity has been watching it week after week in the hope that it would produce flowers and pods like its neighbours. *W. Drummond & Sons, Stirling.* [This is an exceedingly curious deviation from ordinary structure. What should be flowers are accumulations of small ovate green scales packed one over the other, till they resemble the head of a Hop. And what is not a little remarkable most of these scales have other accumulations of scales in their axils. So that in the first place all the parts of the Pea flower assume the form of green scales, and secondly every part pushes forth from its axil a second brood like the first.]

Sagacity of Bees.—I beg to add as a "pendant" to this subject the fact that many years ago, when a boy, I observed a similar instance to that described in your Paper of the 22nd ult. in the flowers (as far as I recollect) of the common Snapdragon. The Bees being unable to force their way into the corolla, had perforated its base, just above the nectary, and extracted the "liquid sweet." I have no idea what species of Bee it was, but I have a perfect recollection of the fact, which interested me much at the time, *A. J., Roxburghshire.*

Hint to Nurserymen.—I complain that nurserymen when advertising do not distinctly state whether plants are hardy or not. Plants may come from Peru and be hardy if near the snow line. I planted Lisianthus Russellianus out of doors—you can guess the result. I planted a dozen Tritoma aurea last year in a border and left them after blooming; not one has appeared this year, although said to be hardy. *F. D.*

Almond tree in Fruit.—There is a paragraph in your paper (see p. 874) relating to the fruiting of an Almond tree, beginning "There is here," &c., but where here is your correspondent does not state, or what sort of Almond it is. We had in the Garden here (in the neighbourhood of Andover) a Yucca in flower this season. The plant is about 4 feet high, and the flower stalk 9 feet long and beautifully covered with blossoms though owing to the season, I suppose, it did not all come into flower at the same time. I have now had the stalk cut off—is that the best thing to do with it? *Deodar.* [Yes.]

Beech Trees and Lightning.—In answer to "C. T.," p. 874, Mr. McNab informed the Botanical Society of Edinburgh (June 13, 1850), that some years before, while on a tour in America, he observed (particularly in Canada), that during thunderstorms the workmen resorted to the Beech trees for protection, from an idea that they were not liable to be struck by lightning; and he added that he himself knew no instance of a Beech tree being so struck. A gentleman present (Mr. Brand), gave an instance of a Beech tree in Aberdeenshire; and I am told that on Thinnigrove Common, near Nettlebed, Oxfordshire, one Beech tree out of three or four that were growing round a pit was shattered by lightning about the year 1840. I have also a note of several sheep having been killed under a Beech by lightning at Booker, about 2¼ miles west of High Wycombe, but how many years ago I cannot say. Enquiries in the chair-making district about Wycombe and Henley-on-Thames might probably discover other instances. *Diss.*——I beg to inform your correspondent that several of the Beech trees at this, place have been struck by lightning; they are, however, growing on the keep, which is rather exposed. *J. K. H. Castle, Wallingford.*——Your correspondent is in error in saying that Beeches are never struck by lightning. I have often heard the same thing stated, but during a heavy thunder storm it was observed that one of the large Beeches in the noble avenue leading from Marlborough to Tottenham Park, the seat of the Marquis of Ailesbury, was shivered to atoms even to within a few feet of the ground, and I believe the stump now remains. It is near the Marlborough entrance on the right hand side. *W. H.*

Plants used as Badges.—Some time ago one of your correspondents made inquiry respecting certain plants used as badges. In the course of my reading I met with the following list, which may perhaps furnish the information wanted:—

PLANTS WHICH FORM NATIONAL BADGES.

Countries.	Names of Plants.
England.. ..	The Rose, Rosa sp.
Scotland.. ..	The Thistle, Cnicus lanceolatus
Ireland	The Shamrock, Oxalis Acetosella, according to Mr. Bicheno; but commonly considered to be the White Clover, Trifolium repens
France	The Fleur-de-lis, Iris sp.

LIST OF PLANTS WHICH FORM THE BADGES OF THE HIGHLAND CLANS.

These plants, many of which are trees and shrubs, are frequently planted over graves by Highland families settled abroad; they are also occasionally planted in gardens both abroad and at home, and in some cases they are sculptured on tombs. The authority for the following list is Blackwood's Magazine:—

Names of the Clans.	Names of the Plants used as Badges.
Buchanan ..	Betula alba, the Common Birch
Cameron ..	Quercus pedunculata, W. (Q. Robur, L.), the common British Oak
Campbell ..	Myrica Gale, the Sweet Gale, or Dutch Myrtle
Chisholm ..	Alnus glutinosa, the Alder
Colquhoun ..	Corylus Avellana, the Common Hazel
Cumming ..	Salix caprea, the great Round-leaved Sallow, or any other native species
Drummond ..	Ilex aquifolium, the Common Holly
Farquharson ..	Digitalis purpurea, the Purple Foxglove
Ferguson ..	Populus alba, the great White Poplar or Abele
Forbes	Cytisus scoparius, the Common Broom
Frazer	Taxus baccata, the Yew
Gordon	Hedera Helix, the Common Ivy
Graham ..	Daphne Laureola, Spurge Laurel
Grant	Vaccinium oxycoccus, the Marsh Whortleberry, or Cranberry
Gunn	Rhodiola rosea, the Rose root
Lamont	Pyrus Malus, the Crab-apple tree
MacAlister ..	Erica cinerea, the Fine leaved Heath
MacDonald ..	Erica Tetralix, the Cross-leaved Heath
MacDonell ..	Calluna vulgaris, the Common Ling
MacFarlane ..	Rubus Chamæmorus, the Cloud berry
MacGregor ..	Pinus sylvestris, the Scotch Pine
MacIntosh ..	Buxus sempervirens, the Common Box tree
MacKenzie ..	Lichen rangiferinus, the Reindeer Lichen
MacKinnon ..	Hypericum pulchrum, St. John's Wort
MacLachan ..	Pyrus aucuparia, the Quicken tree, Mountain Ash, or Rowan tree
MacLean ..	Empetrum nigrum, the Black Cranberry, or Crakeberry
MacLeod ..	Vaccinium Vitis Idæa, the Red Whortleberry, or Cranberry
MacNab.. ..	Rubus saxatilis, Roebuck berry
MacNeill ..	Fucus vesiculosus, the Sea ware
MacPherson ..	Buxus sempervirens variegata, the Variegated Box tree
MacQuarrie ..	Prunus spinosa, the Blackthorn
MacRae ..	Lycopodium alpinum, the Savin-leaved Club Moss
MacRay.. ..	Scirpus lacustris, the Bulrush
Menzies ..	Fraxinus excelsa, the Ash
Munro	Eagle's Feathers, or, according to the *Vestiarium Scoticum*, the Juniper
Murray	Juniperus communis, the Common Juniper
Ogilvie	Cratægus Oxyacantha, the Hawthorn
Oliphant ..	Acer campestre, Common Maple
Robertson ..	Pteris aquilina, the Common Brake
Rose	Rosa canina, the Briar Rose
Ross	Arbutus alpina, the Black Beanberry
Sinclair	Lycopodium clavatum, Common Club Moss
Stewart	Cnicus lanceolatus, Spear Thistle
Sutherland ..	Phleum pratense, the Cat's-tail Grass or Timothy Grass.

P. M.

Strelitzia Regina.—I am told that this plant is a very shy bloomer; with me it sends out its noble flowers (frequently double) in great abundance, and it may be useful to state that the plant, having three or four years ago burst its pot, is now growing in the common sand which originally formed its bed, and which seems to suit it exactly. Perhaps this is the secret of its luxuriant growth. *J. K. H., Castle, Wallingford.*

Odontoglossum grande, Double White Azalea.—There is at present a variety of Odontoglossum grande here sending up three flower-spikes from the base of one bulb; upon these spikes are 19 fully expanded flowers, a specimen of which I inclose, along with a couple of blooms of Azalea magnifica alba plena, taken from a plant which has been in flower since the middle of August, and which will continue so for a few weeks to come. It flowered in the month of February this year, after which I put it in the East India Orchid-house, more with the view to encourage growth than to set flower buds. I observed its prominent tendencies early in the season, and set it out of doors in the middle of July, when five weeks afterwards it opened its first blooms. *Jas. Anderson, Meadow Bank, Uddingston, Glasgow.*

Native Plants.—I am asked to send the following native plants to a distance of 400 miles; viz., Typha angustifolia, Butomus umbellatus, Nuphar lutea, Sagittaria sagittifolia, Stratiotes aloides, Utricularia vulgaris, U. minor, Hydrocharis morsus-ranæ, and Villarsia nymphæoides. The last six of these I shall have no difficulty in finding (except perhaps the very last); but since the death of your valued correspondent, Mr. David Cameron, no one appears to have favoured the world, through your columns, with "Extracts from a Note Book;" and I do not observe in what Mr. Cameron bequeathed to us any information as to the removal from their habitats, conveyance (including packing), or subsequent treatment of any of these plants. I shall be obliged if any one will favour me with their experience. *Diss.*

Notices of Books.

The Fruit Manual; containing the Descriptions and Synonymes of the Fruits and Fruit Trees commonly met with in the Gardens and Orchards of Great Britain, with selected Lists of those most worthy of Cultivation. By Robert Hogg, LL.D., F.H.S. 12mo. Pp. 280.

Time was when the work of Forsyth, a poor affair, was the standard authority in this country for cultivated fruits. By degrees his errors were corrected, and omissions supplied. The end of Napoleon the First brought the cultivator of the soil a sudden respite from the first of all necessities, that of self defence. Swords were converted into pruning knives and bayonets into trowels, as is now literally taking place in the disarmed districts of British India, and men began, of different nations, once more to band together for promoting the arts of peace. Then began that intercourse with the gardens of Europe which has never since been interrupted; and with intercourse came a better knowledge of the fruit trees of the Continent. It was discovered that more men than Knoop and Duhamel had written upon their distinctions and qualities; and the names of Van Mons, Diel, Parmentier and others took their place in the literature of Pomology. At last appeared Sabine's *Catalogue of Fruit Trees in the Garden of the Horticultural Society*, a dry skeleton of names. This was succeeded by Mr. George Lindley's *Guide to the Orchard and Kitchen Garden*, the elaborate work of an accurate and very experienced cultivator, which will never lose its value. Then came Thompson's famous descriptive *Catalogue of the Horticultural Society's Collection*; and from this time English Pomology has stood upon a firmer basis than that of any other country. It is, however, nearly 30 years since the last of these works appeared, and during that time the knowledge of fruits has made such great progress among us that a new book which might be also a new standard authority, was urgently required.

This want has been well supplied by the little volume before us. Its able author has long been practically familiar with all that concerns our hardy fruits, and by a judicious exclusion of bad, or unimportant, kinds he has been able to compress his matter within less than 300 pages, his work forming a companion which gardeners may carry in their pockets as constantly as a pruning knife. But we must allow Dr. Hogg to speak for himself. "I have not," he observes, "attempted to enumerate all the varieties of fruits known to exist in the country, but to describe those only which either are in cultivation, or are worthy of being cultivated for their superior merits. In some instances there are sorts mentioned, not because of their excellence, but because of their popularity from long usage, and in such cases I have stated their true character in comparison with others. My object has been to prepare a convenient manual of reference for amateur fruit-growers, nurserymen, and professional gardeners, and to condense in a space as small as possible all useful information respecting the varieties of fruits mentioned. I have been particularly careful in regard of the synonymes; and at the end of each of the kinds of fruits I have given selections of varieties for limited gardens, and for different situations and aspects. In most cases I have given a synoptical arrangement of the different fruits by which to facilitate their identification; and I trust that the pains which have been bestowed upon the work generally, will secure for it a favourable reception, and an indulgent consideration for any errors that inadvertently may have occurred."

We trust so too; for the volume commends itself to everybody interested about fruits, and the price (3*s.* 6*d.*) places it within the reach of all. The selections of sorts adapted to various latitudes in Great Britain will be found particularly useful. As an example of the manner in which fruits are described, we select from the author's supplement the account of Mitchelson's Plum, referred to in another column—

"MITCHELSON'S.—Fruit above medium size, oval, not marked with a suture on the side. Skin black when fully ripe, dotted with a few very minute fawn-coloured dots, and covered with

a very thin blue bloom. Stalk half an inch long, stout, and inserted in a depression. Flesh yellow, tender, very juicy, sweet, and of good flavour, separating from the stone. Shoots smooth.

"An excellent preserving Plum. Ripe in the beginning of September. In general appearance it is like the Diamond, but smaller, and does not possess that very brisk acidity which characterises that variety. It is a prodigious bearer, the fruit being produced in clusters, and it is invaluable as a market plum."

Le Jardin Fruitier du Muséum, ou Iconographie de toutes les espèces et variétés d'arbres fruitiers cultivés dans cet établissement, &c. &c. Par J. Decaisne. 4to. Paris, Firmin Didot. Parts 25 to 36.

(*Continued from p. 875.*)

Poire d'Arenberg.—Fruit large, or very large, turbinate, obtuse, swelled out in the middle; stalk slender, obliquely inserted, the fruit on its upper side forming projections more or less prominent; skin yellow, very smooth, spotted and marbled with fawn or pale russet, and tinged with red next the sun; eye middle-sized or small, placed in a deep irregular cavity, surrounded with obtuse folds. Flesh white, melting, very juicy, sugary, with a slightly acid, and somewhat astringent peculiar flavour. Season, November to January. The tree is an abundant bearer. This excellent variety was named in compliment to Louis Prosper, Duc d'Arenberg, who was born at Brussels in 1785. It appears to have been found, without a name near Louvain, on the estate of Héverlé, belonging to the Duc d'Arenberg. It was introduced by the late Camuzet into the nurseries of the Muséum under the name of *Colmar d'Arenberg*, and was exhibited in 1852 before the committee of Agriculture and Horticulture of Bourbourg (Nord) under the name of *Beurré Bachelier*. According to Prévost (*Pomol. Seine-Infér.*), it was sold in 1839 with the designation of *Ardente de Printemps*, and, in 1840, with that of *Colmar d'Arenberg*. To the above extracts from Prof. Decaisne's work, we may add as our own remarks, that *Colmar d'Arenberg* is the name by which the sort in question is known in England, and that it is one of the recently introduced varieties which has proved worthy of cultivation in our climate; the specimens we had an opportunity of tasting were ripe in the end of November, and very good.

Poire Bonne d'Ézée.—Fruit above middle-sized, obtuse-oval; stalk thick, fleshy, straight or oblique, slightly sunk at its insertion; eye placed in an even shallow depression, with the segments of the calyx erect or spreading. Skin smooth, pale green, faintly tinged with red next the sun, and sprinkled with fawn-coloured spots. Flesh white, melting, remarkably sweet, scarcely acidulated, very slightly perfumed, but not musky. A very good fruit, but not high flavoured. Season, September and October. It was found in 1838 by M. Dupuy Jamin, a Parisian nurseryman, at Ézée, Department d'Indre et Loire. The tree is a good bearer. Prof. Decaisne states that the Poar Charles Exodocie appears to be the same as this; the form, colour, time of ripening, and flavour being absolutely the same in both. We should recommend the Bonne d'Ézée for trial in England, where it will probably succeed in the open ground. Judging from what we have seen it appears likely to prove a good bearer in this climate.

Poire Léchasserie.—Fruit middle-sized, obovate or obtuse-pyriform; stalk thick, of medium length with generally a fleshy wrinkle at its insertion; eye level, the segments of the calyx spreading in form of a star; skin green, yellowish green, or yellow when the fruit is ripe, sprinkled with fawn spots. Flesh fine, white, melting; juice abundant, more or less musky. Season, November, December. The tree is a good bearer. According to Prof. Decaisne this variety has been described and figured by Loiseleur under the name of *Besi de Hérie*, whilst Langley has cited the Besi de Hérie under the name of *Léchasserie*. It is an old French sort, having been described by La Quintenie in 1692.

Poire des Vétérans.—Fruit large, pyriform, thickest about two-thirds from the stalk, and more swelled to one side than the other; stalk remarkably long, curved, thickened at its insertion; eye in a very shallow depression, with the segments of the calyx spreading, forming a sort of star. Skin yellowish, sprinkled with fawn-coloured spots, which are most abundant near the stalk. Flesh white, half-melting, very juicy, but partaking a little of the flavour of the sap. Season, October and November. The tree is a very abundant bearer. Prof. Decaisne agrees with M. Willermez in the opinion that the *Poire des Vétérans* and the *Poire Rameaux*, described by M. de Bavay, are synonymous, and that the *Poire des Vétérans* is inferior to many other varieties which ripen at the same time. He also states that he received this same Poire des Vétérans from M. A. Royer, Président de la Commission de Pomologie Belge, under the name of *Bourier Bourgmestre*. It is also very generally designated *Besi des Vétérans*.

Poire de Rance.—Fruit middle-sized or large, pyriform, sometimes almost cylindrical, frequently obtuse at the end and contracted near the middle; stalk very long, straight or curved, inserted in the axis of the fruit, or a little to one side amidst some small plaits; eye in a regular slight depression, the segments of the calyx short and persistent. Skin somewhat reticulated, roughish to the touch, green or brownish-green tinged with brownish red next the sun. Flesh white towards the centre, greenish next the skin, granular, firm; juice abundant, acidulated, sugary, a little astringent. Season, winter and spring. The tree is a good bearer.

This sort, according to Van Mons, is said to have been raised by M. Hardenpont at Mons, where it is called the *Beurré Hardenpont du Printemps*; other pomologists, on the contrary, assert that it was raised in Hainault, at a village named Rans, or Rance. Prof. Decaisne quotes the English description given of this Pear in the 5th vol. of the Transactions of the Horticultural Society, published in 1822, from which it appears that specimens of the fruit were first received by the Society from M. Parmentier, of Enghien, in 1820. It is now so well known in this country that we need only remark that it does not succeed on the Quince Stock, or if it does exist upon it for some years its fruit is apt to acquire something of the astringency mentioned in the above description; and, again, when grown to a large size against walls in very rich borders the flesh is coarse and watery. In order to have it rich and sugary it should never be grown above medium size.

In connection with the account of the Beurré Rance, Prof. Decaisne gives the following quotation with reference to the *Beymont* Pear, which will doubtless prove interesting to many of our readers:—

Beymont.—"The aspect of the tree is identical with that of the Beurré Rance, its wood and fruit likewise correspond. I regard it as a sub-variety of that sort, more vigorous and more productive as a standard in the climate of Belgium. The fruit resembles that of a Bon Chrétien from the open ground. Its flesh has the same texture as that of the Beurré Rance; that is to say, greenish white, granular, full of juice, which is more sugary than that of the above-named sort, grown in our strong soils. Its maturity takes place from February till April. We presume that the Beymont has sprung from a seed of the Beurré Rance. Nor would this be the only instance amongst Pears of the reproduction of varieties almost identically the same as the original; thus the Beurré Esperen is very nearly a reproduction of the Doyenné d'Hiver [Easter Beurré], and for this reason it has been withdrawn from the trade. Bivort, *Album Pomol.*

(*To be continued.*)

The Dead Shot, or Sportsman's Complete Guide: By Marksman (12mo, Longmans, pp. 225), is intended to teach novices how to manage a shot gun. With rifle shooting it does not meddle. There can be no doubt that if its instructions are attended to, sporting would be more skilful and more safe. But we fear that there are men too careless, and we venture even to say too stupidly conceited, to pay attention to the precepts of either wisdom or experience whenever the subject of firearms is introduced, everybody imagining himself to be perfectly acquainted with everything belonging to them. Unfortunately such self-conceit is in this case extremely dangerous to others as well as its possessor; were it otherwise it might be as well to leave the latter to his fate. In the volume before us the author explains the structure of fowling-pieces and their locks, gives good advice as to the manner of choosing them, points out errors, and shows how to avoid them, deals with the peculiarities of dogs, partridges, pheasants, grouse, blackgame, woodcocks, hares, and rabbits. He even touches upon dog-breaking, and dips into the mysteries of pigeon-shooting, concerning which we have the following piece of information:—"It may be worth while to caution the inexperienced against being drawn into a match with 'professional pigeon shooters,' some of whom, I am sorry to say, are mere 'professional cheats.' They generally stipulate that each person shall find his own trap; and among their contrivances for unfair advantage is that of using a 'spring trap,' which is neither more nor less than a 'cheating trap.' In appearance it resembles an ordinary pigeon trap, but it contains an ingeniously contrived spring, which, on the trap being pulled, causes the bird to fly in a particular direction, such as the 'professional' is most practised in shooting; and so he seldom fails to kill his bird. And they sometimes induce country sportsmen to shoot a pigeon match with them without any stipulation as to guns or shot; and then, perhaps, on coming to the ground where the sportsman expects to meet his opponents on equal terms, and he is provided with a gun of No. 12 caliber, they have guns of No. 6 gauge, from which they fire 4 or 5 drachms of powder, and 2 ounces or more of shot. Another of their well-known but more recent contrivances is that of using loaded waddings; these to all appearances are mere thick paper waddings, but on opening they will be found to contain nearly a quarter of an ounce of shot. There are many other equally disgraceful tricks which are sometimes resorted to by 'professionals;' and I need scarcely say that such are the practices which bring pigeon-shooting into disrepute. For these reasons gentlemen-sportsmen generally refuse to shoot with strangers, lest they should be 'professional tricksters.'"

Another and more important warning is the following:—"It is awkward, improper, and dangerous to carry a loaded gun with the muzzle pointing downwards. Such a practice has been the cause of more accidents through barrels bursting than anything else; a charge of shot is like a small heavy weight in the barrel pressing upon a moveable gun-wadding; and with the least jar, whilst the muzzle is pointing downwards, it is very apt to force its way from the powder, and move the shot-wadding from its position; particularly if the gun be very smooth and clean inside, or if the waddings be thin, or the edges greasy. It is scarcely necessary to add that, as a natural consequence in the event of the shot moving from its position, and so creating a vacuum in the barrel, it will be almost certain to burst on discharge. Also if you happen to fall whilst carrying the gun in that improper position, and the muzzle should pitch on the ground and cause the gun to explode, the barrel or barrels exploded will assuredly burst, and the chances are ten to one but you would be killed. I once had a narrow escape of an accident of this nature. On stepping out of my gunning-punt in frosty weather, with a loaded double-barrelled shoulder-piece under my arm, and my hands and pockets so full of wild fowl that I fancied I could not carry the gun in any other than that unsafe position, with the muzzle pointing downwards, though I had taken the precaution to put the hammers at half-cock, I accidentally trod upon a piece of ice and slipped, when, having heavy water-boots on, I could not recover myself; and falling forwards the muzzle of my gun struck into the ground, both barrels plugging up with the sand; fortunately neither barrel exploded, or, as an inevitable result, I should probably have been killed on the spot. On drawing the gun out of the ground I found the muzzle had penetrated several inches, leaving holes in the sand resembling those made by boring pieces out of a cheese with the tasting-knife. One of the most common causes of guns bursting is that of accidentally stopping the muzzle with clay or snow, through carelessly and improperly carrying the gun with the muzzle downwards, and so climbing hills, hedges, and ditches. A gun may also be instantly burst by firing it off whilst the muzzle is thrust several inches into the water."

These extracts show that Marksman's volume is worth the study of sportsmen, whether young or old. We particularly commend to the former the attitudes represented in the plates that accompany it.

Trade Lists Received. — Louis Van Houtte, à Gand (Belgique). Prix-Courant de Plantes de Serre Froide, contenant les Azalées de l'Inde, les Camellias, les Rhododendrons et les Conifères de Serre froide, les Fougères de Serre froide, les Chrysanthèmes, Crassules, Dahlias, Fuchsias, Héliotropes, Salvia et les Tropæolums tuberculeux et herbacés; Calcéolaires (graine et plant), Cinéraires (graine et plant); des Aralias nouveaux, de forts exemplaires d'Erica, le magnifique Myosotidium nobile, le nouveau Pimelea elegans, &c., &c.

Garden Memoranda.

Jardin de Botanique et Zoologie, Antwerp.—The entrance to this is near the Railway Station, in a pretty part of Antwerp. It is approached between rows of Limes, reminding one forcibly of the Duke of Devonshire's road at Chiswick. At the back, on each side, was a good hedge of Arbor-Vitæ, and right and left were numbers of the cockatoo and parrot tribe. The grounds are pretty and undulating. In the centre of the garden is a small lake, and here and there were groups of Lombardy Poplar and Weeping Willow, together with pyramidal Yews. The principal garden attraction at this time is a fine specimen of American Aloe in bloom; it has a stage up to the top of it, and is about 25 feet high. We noticed some good standard Bays in tubs; also Amaranthus tricolor in a bed, producing a very good effect, and a good bed of Lilium lancifolium rubrum; a pretty bed of Hollyhocks edged with Petunia and having Verbena outside; also a bed of tall Prince's Feather with Petunias covering the ground; a good bed of Dahlias, and a nice specimen of Wellingtonia. The lawn here was not in good keeping; the men appear to mow in a very awkward way, with the handle of the scythe laying upon the left arm. Here, as in other places, the want of gravel seems to give the ground an unfinished appearance. The zoological part of the garden ranks higher than the botanical, there being several good specimens which are well kept and housed and cared for.

Royal Belgian Horticultural Society's garden.—This forms a long square from the Boulevard de Laaken, to very near the Railway Station. Here is a fine range of conservatories, consisting of a lofty centre and long side wings. These occupy a commanding position, looking towards the best part of Brussels; the contents however are not equal to what might be expected from outside appearances. We saw but few rare Palms, and those mostly hardier sorts. We noticed some pretty suspended red earthenware pots planted with various Lycopodiums, Tradescantia zebrina, &c., which had a pretty effect; also some good plants of Eupatorium and Jasminum odoratissimum, the latter being half standards; some good plants of Rochea falcata and Clerodendron fragrans. The centre contained Phœnix spinosa, Zamia glauca, together with Ferns, Begonias, &c., among which few were remarkable. The other wing or the one nearest the station was mostly occupied with aquariums, to which the water is laid on, and each has its supply and waste pipe; these had a good and very clean appearance. The ground appeared capable of being made into a series of beautiful terraces, being a gradually rising slope. In several instances I noticed scarlet Nasturtium, producing a very pretty effect. The hardy herbaceous ground had once been arranged in natural orders, but it now contains a mixture of annuals and perennials, trees and shrubs.

The "*Marché aux Fleurs*" represents our London

Covent Garden. It is a large building in a central part of the town, the ground floor being the vegetable market, the gallery the flower market. In the floral department we noticed good plants of the following in pots, viz., Rochea falcata, Eupatorium odoratissimum; some good perpetual Carnations, German Asters, Fuchsias, Nerium splendens, Vallota purpurea, Veronicas, and small-leaved Ivy, trained both as plants for suspending and on trellises; the former in many instances had a very pretty effect. The bouquets were tastefully made up, varieties of Fern being much used. In the vegetable market the great feature of difference between this and London, is that in the former we see large quantities of Chicorée à feuilles de Laitue (Batavian Endive) and small curled Chicorée de Rouen, both well blanched; also large quantities of Chervil, Sorrel, Tarragon, and the large Black Radish; the Potatoes generally were small, and at table appeared very yellow; but they were very good in flavour. Cauliflower was good and abundant, also Haricots. *J.H.*

Miscellaneous.

Cotton in India.—Proceedings of a special meeting of committee of the Agricultural and Horticultural Society of Madras, held July 5th. Read the following, which had been received through Mr. Goldingham, from Mr. G. H. K. Thwaites.—"It is well known that there is not an absolutely perfect resemblance between the individuals produced from the same plant or animal; and this want of perfect resemblance may consist not only in difference of form, but also of constitution, or the capability of resisting the effects of an increased amount of heat or cold, drought or moisture, and as, moreover, this tendency to vary is largely taken advantage of in Europe, in the improvement of breeds of cattle, and of plants, there can be no doubt, that it might, under patient and skilful hands, be also employed in the improvement or acclimatisation of Cotton in India. Mr. Jaffrey's observation "that there may probably be found in a field of native Cotton, one variety of a more robust habit, and producing better Cotton than the others," is very much to the purpose, and well worthy of being borne in mind and acted upon. Experiments might be made of raising plants from the seed, of such a variety, repeating the process with the best of the seedlings so raised, and going on in this manner for several generations of seedlings. It cannot be doubted that a very decided improvement would be the result. But I would also suggest another mode of proceeding. Let it be ascertained by careful observation whether amongst a number of plants of the better description of American Cotton, any exhibit, in even a slight degree, a greater capability than the others of enduring or thriving under the climate of the Cotton districts of India. Let plants be raised from the seeds of such, and some of these would probably exhibit a still further tendency to acclimitisation. By selecting in each generation so raised the most thriving and healthy plants to raise from again, there is little doubt of obtaining in time a stock of plants possessing complete adaptation to the conditions of the climate in which the process has been carried on. It will probably be urged, against this system, that it is not unlikely that with the acclimatisation of the plants there may seem to be also a degeneration of the quality of the staple. This may be the case in some instances, but it is not likely to be so, to any great extent, in all or nearly all, and therefore this should be kept in mind in the selection of seed. If an improved variety be obtained under either of the three systems suggested, it must of course be kept up by careful cultivation, and selection of seed. Under careless cultivation an improved variety would doubtless degenerate." *G. H. K. Thwaites, Paradenia, Ceylon, Feb.* 1, 1860.

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

Conservatory, &c.—Summer flowering twiners, which usually become unsightly by this season, should be cut back rather freely, as also any others that will bear this treatment. Shade can now well be dispensed with; therefore not a spray that can be spared should be left to obstruct the light. Acacias, and other winter-flowering plants having been subjected to a period of comparatively dry treatment, to ensure their blooming profusely, should now be pretty liberally supplied with water at the root, in order to get them into flower during the dull season, when they will be much more esteemed than in spring, when flowers are becoming plentiful. Manure water, if it can be used, should be given frequently to Chrysanthemums. Give air freely on favourable opportunities, avoiding cold draughts against plants that have been brought from a warm house, and guard against damp by using gentle fires with a little top air on wet days. Let pot specimens in bloom be frequently re-arranged, so as to make the most of these, for the finest specimens become too familiar to be interesting when allowed to remain too long in one place. Be careful not to over-water things brought from the stove, and also to use the water in a tepid state; as watering tender plants with cold water after this season injures the young roots, shortens the duration of the blossoms, and often ruins the plant. Use weak manure-water for Salvia splendens, so as to preserve the plants in a vigorous state, and keep them blooming as long as possible. Give attention to securing a plentiful succession of things for maintaining the gaiety of the house during winter.

FORCING DEPARTMENT.

Pineries.—As has been frequently mentioned plants swelling their fruit should be assisted with a brisk temperature, say from 65° to 75° at night, regulating this according to the state of the external temperature, keeping the house rather close on sunny days and allowing the thermometer to rise to 80° or 85° before giving air freely. Also endeavour to proportion the moisture to the temperature, for a high dry temperature is not favourable to the swelling of the fruit, and there is no chance of getting well swelled heavy fruit without plenty of warmth and moisture. Maintain a steady bottom-heat of about 85°, and use every care to keep the soil in a healthy state as to moisture. When watering is necessary, use clear manure-water, and give sufficient to moisten the whole of the soil, and avoid frequent dribblings, for when this system of watering is practised it is nearly impossible to keep the under soil, where the principal roots should be, in a healthy state. Use the syringe very sparingly, and only to dew the plants, as heavy syringing after this season is apt to keep the surface soil so moist as to render it difficult to judge as to when water should be given. Any young plants growing in pots which may require re-potting should be seen to at once so as to allow of getting them established in their fresh pots, while they can be kept moderately warm. See that the balls are in a proper state as to moisture before repotting, as neglect of this is a frequent cause of young stock fruiting prematurely. Keep moist and rather warm for a time after shifting, so as to encourage the formation of fresh roots.

Vineries.—Should wet weather continue we would again advise covering the borders of the early house with dry stable litter, Fern, or whatever can be obtained most conveniently that will answer the purpose of keeping the border dry. Nothing answers better for this purpose than clean straw, provided the border has a proper slope from the front of the house; in that case it is easily thatched so as to throw off the wet entirely. But the straw is too valuable in most parts of the country to be used for this purpose, and wooden shutters would be found cheaper in the end. It will also be advisable to cover the borders of houses in which it is intended to keep ripe Grapes for any length of time, so as to prevent the soil getting saturated about the roots. Look over ripe Grapes frequently, particularly in damp weather, cutting out any tainted berries immediately they are perceived, and keep the atmosphere as dry as possible, using gentle fires when necessary with a free circulation of air; but a warm temperature is nearly as injurious as damp, therefore use no more fire-heat than may be absolutely necessary. Let no pot plants requiring watering remain in houses where the Grapes are ripe and expected to hang for any length of time.

FLOWER GARDEN AND SHRUBBERIES.

Unless where alterations are in hand the principal work in this department for the present will be mowing and clearing up; and if anything like neatness is to be maintained, sweeping up of leaves will soon require daily attention; also see to getting gravel walks thoroughly cleared of weeds and Moss; roll them frequently when wet, to keep the surface hard and smooth. Continue to afford young stock in pits and frames the most careful attention, and endeavour to get it well rooted and strong without keeping so close or warm as to render it soft and liable to fog off on the first approach of winterly weather, as is the case with stock got up in heat late in autumn and then stored away in cold pits for the winter. Therefore admit air freely to all plants that are sufficiently rooted to bear it without flagging. Newly potted-off things should, however, be placed on a gentle bottom heat which will impart a little warmth to the soil and encourage the formation of roots, but sufficient air should be given to prevent anything like weakly growth. Cuttings of Calceolarias, Scarlet Geraniums &c., may still be put in where the stock is deficient. Scarlet Geraniums will root almost anywhere, but Calceolarias are not quite so accommodating, as cuttings taken from plants in the open ground are very liable to damp off in heat; these will be found to do very well, however, in a close pit or frame where there is the means of applying a little warmth when necessary to dispel damp. See to securing as many cuttings as possible of any scarce plants which it may be desirable to increase while there is a fair chance of rooting them, and also be prepared to protect Scarlet Geraniums and other things which it may be intended to take up and winter, for we may expect frost any time after this season, and if such things can be protected so as to prevent the foliage and young wood from being much injured they are much more easily wintered.

HARDY FRUIT AND KITCHEN GARDEN.

As formerly recommended, look over fruit remaining out of doors frequently, and gather it as it becomes fit. Also examine that stored in the fruit room, as there will occasionally be found a few decaying for a few weeks after housing, and these should be removed as soon as perceived. Keep the fruit room cool and airy, in order to allow of the escape of moisture given off by the fruit, which is considerable for a few weeks at first. Where it is intended to make fresh plantations of fruit trees this season, the ground should be prepared at the earliest convenience, and any fresh soil to be used for planting should be thoroughly exposed to the action of the weather so as to have it in a mellow state when wanted for use. If not already done clean and dress Strawberry plantations, clearing away all useless runners, giving a good dressing of manure when necessary, but be careful to select that which is thoroughly decayed, and which can be covered without the necessity of digging deep or injuring the roots. The principal crop of Celery should now be kept rather closely earthed up, using quick lime and soot freely to destroy slugs, and if these are troublesome go over the lines every morning for several successive days, and apply quick lime or pick up the pests.

COTTAGERS' GARDEN.

Follow up cleanly cultivation, and stir the soil among all growing crops. Employ leisure time in collecting materials for manure; remember that all decaying vegetable refuse is valuable in this respect, especially after having been well watered with the contents of the cesspool.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON

For the Week ending Oct. 4, 1860, as observed at the Horticultural Gardens

Sept. and Oct.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 28	13	29.755	29.694	57	44	50.5	57	54	N.	.09
Satur. 29	14	29.928	29.851	58	35	46.5	56	54	N.	.01
Sunday 30	○	29.101	30.027	61	44	52.5	56	54	W.	.00
Mon. 1	16	30.205	30.167	60	38	49.0	56	54	N.W.	.00
Tues. 2	17	30.279	30.225	64	40	52.0	56	54	W.	.00
Wed. 3	18	30.203	30.075	64	30	47.0	56	54	N.W.	.00
Thurs. 4	19	30.364	30.255	59	40	49.5	56	54	W.	.00
Average..		30.119	30.042	60.4	38.7	49.5	56.1	54		.10

Sept. 28—Rain; very boisterous at night.
— 29—Overcast, unsettled sky; clouds; overcast; cold at night
— 30—Fine; overcast throughout.
Oct. 1—Hazy; cloudy; clear at dight.
— 2—Fine; cloudy and fine; foggy at night.
— 3—Partially overcast, and rather boisterous; fine; slight frost.
— 4—Quite clear; clear, cool, and very dry air; clear and fine.

Mean temperature of the week, 4¾ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Oct. 13th, 1860.

Oct.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 7..	62.2	44.2	53.2	17	0.58 in.	1	6	3	2	3	14	4	1
Mon. 8..	60.8	41.6	51.2	17	0.55	1	5	3	4	5	7	5	1
Tues. 9..	59.8	43.1	51.5	18	0.52	—	6	2	1	5	13	6	1
Wed. 10..	61.1	43.6	52.3	19	0.68	2	2	4	—	7	9	6	4
Thurs. 11..	61.8	43.2	52.5	17	0.34	2	4	2	2	4	10	5	5
Friday 12..	60.2	42.2	51.2	19	1.00	4	3	3	1	8	5	7	3
Satur. 13..	60.2	42.2	51.2	17	0.33	2	4	4	1	4	8	8	3

The highest temperature during the above period occurred on the 7th, 1831, and 8th, 1859—therm. 74 deg; and the lowest on the 8th and 11th, 1858—therm 26 deg.

Notices to Correspondents.

Grapes: *St. Omer.* The Richmond Villa is a Black Grape, what you have sent seems to be a piece of Muscat of Alexandria. The Tokay weighing 3 lbs. is a fine specimen of Grape growing, and is the same as what is so called here.

Manures: *An Old Subscriber.* Nothing is worse than mowings of lawns, unless they are reduced to charcoal, when they are useful.

Names of Fruits:—*A. N.* 1, Hanwell Souring; 2, Red Colville; 4, Beauty of Kent; 5, Nonsuch; 6, Old English Codlin; 7, Marmalade Pippin; 8, like American Sops of Wine; 9, is perhaps the Reinette du Canada; 11, Court-pendu Plat. —*J A Leicester.* Labels mostly detached from the fruit. 4, Oslin; 6, Scarlet Nonpareil; 7, like an early Red Margaret; but without the usual colour, probably owing to the season. Another early Apple; the flat round one is the Summer Thorle. The largest Apple, Alexander. The large black Plum is the Diamond. Another appears to be Pond's Seedling. No. 4 Plum is a sort of Damson.—*E F P.* 1, 2, Flemish Beauty; 3, Uvedale's St. Germain; 5, Forelle; 7, Duchesse d'Angoulême; 11, St. Germain; 14, Burgermeester; 26, 44, 69, Beurré de Capiaumont; 27, Ambrosia? 31, Belle-et-Bonne; 32, Seckel; 39, Beurré Diel; 47, Easter Beurré. The fruit being yet too green, the names of the other Pears cannot be now determined.—*G W, Rochford.* Your Pear is the Louise Bonne of Jersey, from probably a rather late blossom.—Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to name more than six sorts, whatever may be the number forwarded.

Names of Plants: *David Davies.* 1, Variegated Alyssum maritimum; 2, Isolepis gracilis.—*Messrs Carter & Co* We believe your Enothera to be the *grandiflora* of Lamarck, but not of the Hortus Kewensis. But to speak positively it is necessary to see the root-leaves and stem-leaves. Flowers alone are insufficient.—*W C T.* Phalaris arundinacea.—*Clarence* Potentilla anserina.—*J E.* Cotoneaster affinis. The Clarkia is very pretty. Send it to the Floral Committee of the Horticultural Society.—*Sub.* 1, Adiantum pubescens; 2, Gymnogramma ochracea; 3, Woodwardia (Doodia) aspera; 4, Phlebodium aureum.—*G G* Your sketch looks like Pontederia crassipes.—*R* 1, Monarda didyma; 2, Comptonia asplenifolia; 3, Potentilla fruticosa.

Notice to Quit: *Nurseryman* Consult a solicitor. Nurserymen live under the same law as other people, and require the same notice unless there is a special agreement.

Rosery: *An amateur* All depends upon general magnitude and the character of the surrounding objects. No rule can be given. Generally 4 feet is found enough for each.

Wort: *T D.* This seems to mean root (or, by a figure of speech, a part being taken for the whole, plant); it is applied now to groups of plants having common characters. Thus Soapwort, signifies a plant used instead of soap; and Soapworts all plants of the same natural order.

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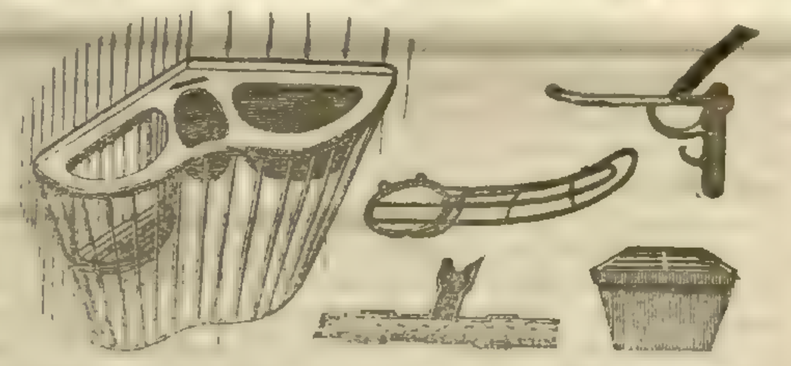

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2, Old Palace Yard, Westminster, S.W.

To Landowners, the Clergy, Estate Agents, Surveyors, &c. in England and Wales and in Scotland.

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable William Napier, Managing Director, 2, Old Palace Yard, Westminster, S.W.

THE GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY.
Offices, 52, Parliament Street, S.W.

Directors.

Henry Ker Seymer, Esq., M.P., *Chairman.*
Sir John Villiers Shelley, Bart., M.P., *Deputy-Chairman.*

George Thomas Clark, Esq.
J. Chevallier Cobbold, Esq., M.P
Henry Currie, Esq.
William Fisher Hobbs, Esq.
Edward John Hutchins, Esq.
Sir S. Morton Peto, Bart., M.P.
William Tite, Esq., M.P.
William Wilshere, Esq.

Under this Company's Act Landowners may effect the following Improvements on their Estates, and charge the Outlay and expenses thereon, by way of Rent charge, to be paid by Half-yearly Instalments, viz.:—

I. All works of Drainage, Irrigation, and Embankment.
II. The erection of Farm Houses, Cottages for Agricultural Labourers, and all kinds of Farm buildings.
III. The construction of Roads.
IV. The Grubbing and clearing of old Woodlands, Enclosing, Fencing, and Reclaiming Land.

The Landowners by whom any of these Improvements may be executed, are—Tenants for Life, Trustees, Mortgagees in Possession, Guardians, Committees of Incompetent Persons, Married Women, Beneficial Lessees for Lives or for a term exceeding 14 years, Corporations, Ecclesiastical or Municipal, Incumbents, Sequestrators, Charitable Trustees, &c.

The owners of Estates, not entailed, who may be desirous to avoid the expense or inconvenience of a Legal Mortgage, may also charge their Estates with Improvements under the simple and inexpensive process of the Company's Act.

The term of years for the Rent Charge is fixed by the Landowner, so as to adapt the amount of annual payment to the circumstances of the Tenants, the term for Building Works being limited to 31 years, but for all other Improvements being capable of extension to 50 years.

No investigation of Title being required, and the charge not being affected by Incumbrances, no legal expenses are incurred.

The arrangements for effecting Improvements are threefold—

No. I. The Works may be designed and executed entirely by the Landowner's Agent, and the Company employed only to supply the Loan and conduct the matter through all the forms for charging the outlay on the Estate.

No. II. The Company will supply Plans, Specifications, and Estimates for any Improvement to be executed by the Landowner's Agent, as under No. I.

In each of these cases the Landowner will be solely under the control of the Inclosure Commissioners.

No. III. The Company will undertake the entire responsibility of the Improvement, prepare the Plans, execute the Works, and finally charge on the Estate the actual amount expended with their Commission thereon approved by the Inclosure Commissioners.

Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.

Works of Drainage and other Improvements are also executed on Commission for Landowners who merely require the skill and experience of the Company's Officers and a Staff in constant practice.

Applications to be addressed to William Clifford, the Secretary, 52, Parliament Street, S.W., London

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.

Principal—J. C. Nesbit, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor Buckman, Dollar Ward, Cirencester.

SMITHFIELD CLUB CATTLE SHOW, 1860.—The ANNUAL SHOW OF FAT CATTLE, SHEEP, AND PIGS will take place on December 11, 12, 13, and 14, at the Bazaar, King Street, Portman Square, W.

The LAST DAY for Certificates for both Stock and Implements to be received by the Honorary Secretary is THURSDAY, November 1.

The following forms of Certificates are now ready, and intending Exhibitors in applying for them need only quote the letters and state how many of each letter they require:—

CATTLE.	SHEEP.
Form A.—Ox or Steer	Form D.—Pen of three Wethers
,, B.—Cow or Heifer	,, E.—One Wether or Ewe in extra stock
,, C.—Ox, Cow, or Heifer in extra stock	PIGS.
	Form F.—Pen of three Pigs
	,, G.—One Pig in extra stock

Prize Sheets, with Rules and Regulations, and Forms of Certificates as above, may be obtained of

B. T Brandreth Gibbs, Hon Sec.,
Corner of Half Moon Street, Piccadilly, London, W.

N.B.—All communications on the Club's business should have the words "Smithfield Club" outside, to distinguish them from private letters.

THE BIRMINGHAM CATTLE AND POULTRY SHOW, 1860.—The TWELFTH GREAT ANNUAL EXHIBITION OF CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, AND ROOTS, will be held in Bingley Hall, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, December 3, 4, 5, and 6; when PRIZES, CUPS, or other articles of Silver Plate, and GOLD and SILVER MEDALS, to the amount of 1236*l.*, will be awarded.

Prize Lists and Certificates of Entry may be obtained from the Secretary The ENTRIES close the 1st of November next

The principal Railway Companies will convey Stock home free if unsold. John B. Lythall, Secretary.

Offices, 11, Upper Temple Street, Birmingham.

The Agricultural Gazette.

SATURDAY, OCTOBER 6, 1860.

We have been favoured by the Foreign Office with copies of additional letters on the subject of Dates for cattle food, from the various vice-consular stations on the north coast of Africa, which Lord John Russell has been kind enough to obtain

in reply to the questions addressed to him last spring.

It appears that at Saffi, on the western coast of Morocco, 400 tons of inferior Dates could be annually procured at 4*l.* to 5*l.* a ton. And the freightage of them would not exceed 30*s.* a ton. Dried black Barbary Figs could also at present be obtained at the same price. In both cases, however, any additional demand would raise the price considerably.

At Mazagan Mr. STOKES, H.M.'s Vice-Consul, reports that a small quantity of the poorest Dates are obtainable as low as 48*s.* a ton, and freight is 20*s.* a ton. We are not told if there be here, as elsewhere, any duty charged on export. Nearly 300,000 quarters of Beans, upwards of 40,000 tons of Maize, and 6000 quarters of Peas were shipped for English ports from Mazagan in 1858; but exportation is now prohibited.

At Mogadore the poorest Dates are now worth 55*s.* per ton; but there is a heavy duty on export, amounting to a prohibition.

On the whole the returns present but little probability of any considerable import of inferior Dates as cattle food from the coast of Africa, at prices which are likely to compete with those of other feeding stuffs now used.

——It appears from recent reports in these columns that judgment by "points" (each having a certain numerical value, and furnishing the total merit by simple addition) is now being advocated and practised, whether the subject be a Guernsey cow, a Short-horn bull or a reaping machine. A lecturer on cattle breeding at the Newcastle Farmers' Club, and a committee of Scottish farmers judging reaping machines at Longniddry, equally adopt this as the best plan of estimating the absolute or the relative excellence of competing live stock or of rival implements.

It is of the first importance that correct judgments be given at cattle shows and implement trials. The whole influence of agricultural societies is wielded by the judges; and if they place it in the wrong scale the whole labour of the year is not merely thrown away and lost—it is rendered mischievous, and had better not have been. We should be glad therefore of the opinions of our readers on this subject. The question is an alternative:—Whether is it better that judgments should be the almost instinctive verdicts of experienced men who arrive perhaps unconsciously at a conclusion after inspection—or the simple arithmetical result of a valuation, within prescribed limits, of 20 or 30 specific points, supposed to include the whole character of the subject under examination.

If the latter be a possible process there can be little doubt of its superiority; and where it is a simply mechanical object or result that is under review the process may be possible enough. If it be a threshing machine, for instance, that is being tried, and 100 marks be held to represent perfection, it may be reasonable enough to say that 30 shall be given to perfectly clean straw, 15 to perfectly whole grain, 10 to the entire absence of chaff, 20 to facility of performance, 15 to cheapness of machine, and 10 to the simplicity of its construction. Or some other scale of figures may be selected, and it may be possible to defend the chosen valuation of the different "points" against all cavillers, and thereafter to assign the number under each head to the performance of any given machine that is being tried. And it is possible that this may be also practicable and advisable in the case of the reaper and the mower. But when a living animal comes under review we venture entirely to dispute the possibility of any such method of adjudication, and therefore the fairness of any results to which attempts on such a principle may lead. Two animals *shall*, we venture to say, appear to be of equal value under any possible system of "points," by separately estimating each, which shall really be of very unequal value indeed. And of two animals thus compared, it is perfectly possible that the one with the smaller aggregate numerical valuation shall be the better of the two. That this may be, must appear to any one who considers that the valuation of a given set of points, proper to extreme strength in one particular feature, may be entirely unfit and inappropriate if in that particular the animal be weak. Take for instance such cardinal points as vigour of constitution, and excellence of pedigree; it is plain that the valuation of the other 15 or 20 "points" enumerated ought to hinge entirely on the quality of the animal under these leading features—and the relative values which are rigidly given to each under the published scheme ought, on the contrary, to be capable of almost indefinite contraction or expansion according to the merit of the animal under these principal heads.

As it is you give 10 perhaps to vigour, 2 to the shape of the horn, 3 to the setting on of the tail, or you adopt some almost equal absurdity, so that mere details are enumerated and added up, which shall be able possibly to swamp, certainly to palliate or excuse, defect in one or more cardinal points without which the animal may be naught.

We should like to have seen Captain GUNTER'S "Duchess," and Mr. AMBLER'S "Woodrose," compared either at Canterbury or at Pontefract under any possible scheme of separately valuing "points." The probability is that the judgment of our best Short-horn breeders would have been upset, and evidences of vigour and vitality would have been overborne and beaten, by an accumulation of petty advantages in little matters—to the discouragement of true merit.

LAND DRAINAGE AND OUTFALLS.

As the season for the county agricultural meetings is commenced and county members are looking about them for topics to speak upon, allow me the opportunity of suggesting a theme which may save them from the necessity of touching upon forbidden political matters. The object I am about to suggest is not, it is true, so seductive as the forbidden ones, but as it has considerable bearing upon the first steps in agricultural advancement, and concerns nearly every landed proprietor in the kingdom, it is possible it may find some advocates who will not be daunted by its magnitude and difficulties. I refer to the crying necessity for a general measure for the improvement of outfalls. Last year at this time several popular speakers endeavoured to amuse the tenant farmers who assembled to hear their speeches by declaring that the drought which then prevailed in the Midland and Eastern Counties was the result of the over drainage of England! and they elicited a cheer by this direct evidence of what they were pleased to call, with a sneer, the "misapplication of science to agriculture." One year has sufficed to show how short-sighted such observations were. It is impossible, in fact, to conceive a more perfect answer than the frequent rains of the last 12 months have given to that piece of after dinner philosophy. It would not be surprising to find these same speakers this autumn pointing out the insufficiency of the drainage they before ridiculed, and gaining even more emphatic cheers from their audience by reversing their former declarations. And in doing so they would be very much nearer the facts, for, in truth, the frequent rains of the past summer have served to exhibit results which earnest students of scientific facts will do well to study.

The drought of the summer of 1859 was the result of a comparatively dry summer succeeding a winter (October to March inclusive) in which only 6½ inches of rain fell in the Midland and Eastern Counties, the rainfall of the 12 months ending June 30, 1859, closely approximating 21 inches (taking the mean of the Midland and Eastern Counties). How different has been the state of things in the 12 months ending the 30th of June, 1860! The fall of rain during the last winter (1859-60), was nearly double that of 1858-59, viz., 12 inches, and the total rainfall of the year ending June 30 last will be found to exceed 33 inches. Nature is a sure pay-mistress, and will not rest till the balance is struck. The past summer has shown with unmistakable decision the immense advantage of under-draining the cold retentive clays of which this country has so large a proportion. Undrained lands of this description have produced crops which are literally not worth harvesting, if they are ever in a state to be carried, whereas lands of precisely the same nature, but which have been drained, have produced some of the best Wheat and Beans, and have allowed of the Wheat crops being already cut and carried, and, in some cases, threshed and sold. I know of several instances in which the difference in value of this year's produce of the same land, drained and undrained, would pay the whole cost of draining.

But however great the simple difference between drained and undrained lands, that difference has been greatly increased where the land has been deeply cultivated and the furrows got rid of. Where the furrows have been retained, the water has been occasionally seen in the growing crops, even on some of the best drained lands, where the natural form of the ground leads to its collection; but where steam cultivation, or conviction of mind, has led to the flattening of the surface, no such evil has existed. The past summer has also proved with equal clearness, though not with the same difference in value of the crops produced, the superiority of deep over shallow drainage. In one particular case which I have examined, the difference was as much as two to one in quantity in favour of the former, and as much as a week or ten days in point of time; and having myself 100 acres of corn now standing in the field with every prospect of being spoiled, I can speak feelingly on the advantage of a week's advance at harvest. There can be but little doubt that the superiority of deeper drainage in the earlier ripening of the corn is due to the higher temperature of the soil as the depth is increased, and which at 4 feet is found to be 2° higher than in undrained land at 2 feet.

I do not make these remarks to provoke discussion upon the oft-disputed point, *the proper depth of under-drainage*, but to draw attention to the data afforded in the present season for determining the nature and extent of a measure so long promised, and daily becoming more and more required, for the improvement of outfalls. The floods that have covered the valleys and silted the Grass, and spoilt thousands of acres of meadow hay, have given self-evident proofs of the necessity of remedial measures with respect to the main arteries. By the various unconnected works of under-draining already executed, which form but a very small proportion of what will some day represent the drainage of this country, vent has been given to pent up waters previously dispersed by driblets and evaporation. They have converted bogs and beds of free soil, in which water stagnated, into filters of rapid action, and have compelled tenacious clays to let go their hold of water, which had hitherto been claimed solely by the atmosphere. These waters of drainage have been got rid of regardless of the fact that water set free from above commits injury below, unless it be securely guided to its ultimate discharge; and thus it is that underdrainage, at certain seasons of the year, has augmented the floods in particular valleys, and will continue to augment them still more, as the practice (which may be said to be only commenced) extends.

But I do not desire to occupy your space at this moment by dwelling upon this branch of the subject. I prefer confining my observations to the obstacles we have to contend with, in underdrainage itself, from the want of effective outfalls where no engineering difficulties present themselves, but where the rights of interposing private property, and the weakness of the law with respect to existing public ditches, impose a positive veto to sound and creditable works. In Lombardy, where irrigation is carried to perfection, every irrigator has the right to bring water through the property of his neighbour upon payment of due compensation. In England, where we talk of Drainage as the foundation of our superior agriculture, we cannot convey the water of drainage to the natural outfalls, if the land of an objecting landowner intervenes; nor can we deepen or straiten a public watercourse passing through a neighbour's property, nor can 99 proprietors desirous to improve an unprofitable unhealthy marsh, effect their object if one negative voice is raised. Ought we not to have some general and facile means of overcoming such patent evils as these? It may be the opinion of many that each evil should command its own remedy, and that a special Act of Parliament should be obtained for each bit of district drainage and each separate outfall, but those who have had to pay for such Acts and those who have tested the practical difficulties resulting from the incompetent character of the tribunals before whom such measures are brought, will agree with me that confusion will only become worse confounded if we be left to such remedy.

The statistics of the cost of parliamentary proceedings in the matter of drainage are not inviting. The cost of the Norfolk Estuary Acts was 40,112*l.* 10*s.*, while Messrs. Peto and Betts' contract for the works was 142,000*l.*! The cost of the Neve Valley Drainage Acts has been 30,083*l.* 0*s.* 10*d.*; the extent of land proposed to be benefited is 16,000 acres, so that nearly 2*l.* per acre has been expended in parliamentary proceedings alone. The average cost of underdraining is 5*l.* per acre, as it is executed under the Drainage Commission, the administration of which does not exceed 2*s.* per acre—a cost it will be well to compare with the Parliamentary expenses I have quoted, when it is considered *how* the remedy is to be applied. *J. Bailey Denton, Woodfield, Stevenage, Sept. 24th*, 1860.

THE AGRICULTURE OF BERKSHIRE.

BY THE REV. J. C. CLUTTERBUCK

OF LONG WITTENHAM.

I. THE THAMES.—IN describing the geological and physical features of the Royal county, the father of English rivers first claims our attention. It forms half the boundary and receives the whole of the drainage of the county.

Before the construction of the Great Western Railway it was the principal carrier of heavy goods, including timber and agricultural produce; the traffic on its waters is now comparatively insignificant. Though from this cause the works necessary to its navigation are in danger, though the mills driven by its waters may yield to the increasing competition of steam power, it is, and always must be, the main drain to several of the midland counties. The present and future condition of the river, having reference to the inability of the Thames Commissioners to improve the present water-way, or even to maintain it in its present condition, must therefore affect the interests of agriculture in some parts of the county.

The flood water of the Thames is known to benefit the meadows which it overflows, by supplying fertilising substances equivalent, as it is calculated, to a coat of manure, provided that the water does not rest too long upon the surface. With a continuance of flood great damage is done, especially when a wet spring protracts the duration of the floods, as sometimes happens, or the

river overflows its banks from heavy summer rains. In the former case the surface is covered with a film of decayed vegetable matter, which hinders the springing of the Grass. In the latter the crop already in growth is seriously injured. To illustrate the extent of the first, many years since a considerable tract of meadow near Faringdon was covered by the vegetable matter macerated by the wearing and working of the flood water into a mass resembling coarse brown paper. A farmer, to show the toughness of its substance, appeared at market in a coat roughly made of this natural fabric; specimens were handed about at the time, and probably some might still be found preserved as curiosities, and as tokens of the effect of a protracted flood. In the year 1853, immediately following the extraordinary rainfall of the preceding autumn, when 5.11 inches in excess of 20 years' average was registered at the Oxford Observatory in the months of October, November, and December, and 11.68 inches excess in the whole year, a Committee sat at Oxford under the presidency of the late lamented Mr. Philip Pusey, to consider and report upon the inundations of the Thames. A meeting was also held at Faringdon to consider the mischief arising from floods along the upper part of the river. It appeared that in the Faringdon district, extending about 10 miles from Lechlade to Newbridge, at least 1000 acres were covered by the floods from September 1852 to February 1853, to the entire destruction of the after Grass on that land. The calculation proceeded to sum up the whole drowned land as 12,000 acres, the value of which would be increased by improved water way 10*s.* per acre. It was further stated that much more land, though not actually covered by water, would be greatly improved by any material reduction of the flood level, because the under drainage is impeded, if not altogether prevented, by the flood water standing in the ditches into which the drains are cut. The injury here spoken of applies in a greater proportion to Oxfordshire than to Berkshire, but these facts could not well be omitted in speaking of the river with reference to the agriculture of the county.

The remedies suggested were, first, a plan proposed by Mr. Saunders of Oxford, comprehending the City of Oxford sewage, and having reference to the sanatory condition of that important city, estimated at a cost of 14,000*l.*; and secondly, a plan for enlarging the existing water-way by Mr. Treacher, the surveyor to the Thames Commissioners, at a cost of 4000*l.* Nothing up to the present time has been done, the rainfall from 1852 to the end of 1858 has been under the average; therefore there has been little flood, and consequently not so keen an interest taken in the subject. Passing from the very unsatisfactory state of the Thames as a main outfall above Sandford, which as regards the immediate neighbourhood of Oxford might in a great measure be remedied by an increase of the present very confined water-way, we proceed to trace the course of the river.

From Lechlade to Sandford the river finds its bed in the Oxford Clay; at the latter place it passes through a narrow gap in the middle oolite, to the Kimmeridge Clay, turns the escarpment of the Iron sand at Culham, touches the Gault Clay at Long Wittenham, whence it passes over a shelf of the Iron sand in the bed of the river at Clifton Hampden; returns to the Gault, enters on the Upper Greensand near its junction with the Thame stream, and finally enters the gorge in the Chalk at Moulsford, which forms its bed till it passes to the London and Plastic clays as it leaves the county, of which throughout this course it defines the geological limits. As the carrier of the drainage of so large a tract of country, it must be looked on as ruling some of the highest interests of agriculture. With the exception of the district above Sandford, the damming of the stream for navigation and mill power inflicts little injury on the land which it bounds. It always must bring down flood waters from the Oxford, Kimmeridge and Gault Clays. That the floods are accelerated by agricultural drainage is beyond dispute; the effect of this on the perennial flow of the river as derived from springs, whether on the Oolitic, Greensand or chalk formations, as well as the weepings from the drift, is not so easily determined, but the artificial drainage of moorland such as Ottmoor and other districts must run off the water within shorter limits than when in a state of nature. The perennial springs in the Oolitic or Chalk formations, which are the chief sources, can scarcely be affected by the surface drainage of impermeable strata, though the lesser springs weeping out in some localities when tapped by drainage and led away by new channels probably diminish the perennial flow, before these sources are replenished by the autumnal and winter rains. Before the decrease of the traffic on the Thames, many improvements were made in the system of turning the water for navigation and the use of mills. The shutting tackle as it is named is composed of a sill laid to the lowest available level; upright posts called rymers fitting to the sill and removeable; and two sets of moveable floodgates called ground gates and overfalls, the one fitting above the other. When all this tackle is in, the water stands at the height required for the navigation; when all removed, a clear way is given to the flood waters. When these arrangements are perfect the water-way is sufficient; but in many instances old weirs fitted with baskets for fishing purposes, or old tackle with fixed posts, as at Sandford, contract the water-way, obstruct the passage of drift-wood, rushes, &c. and perpetuate the damage done by floods—nor is this all. There are other impediments natural to the stream. Rivers subject to floods have a tendency to shift their course. As the current sets on a bank and washes it away, the "debris" accumulates where the reflux and eddy causes a comparative stillness. In many places the Thames in the memory of man or within the limits of recent tradition has changed its bed; that is now meadow which was once water, and *vice versâ*. The progress of accumulation is as follows. Suppose a rush bed sloping to the stream: this is gradually silted up, the accumulation goes on in a greater ratio at the water's edge and leaves a depression behind it, Willows and Osiers are planted on this newly formed bed, and the water-way is permanently narrowed.

The formation of ice at the bottom of the stream is another cause of obstruction. The ground ice when it rises under the influence of the sun lifts the stones and gravel to the surface; these masses float down the stream till they lodge in certain localities and increase the natural obstructions. This ice does not usually form except under a temperature below 20°, as in January 1857 and December 1859. The costliness of works on a large scale, the difficulty of engaging proprietors in a common action, are hindrances not easily overcome. Yet we are not without an example of the manner in which the banks, with all their tendency to self obstruction, may be efficiently and permanently improved by a judicious application of labour. In Windsor Home Park between the Victoria and Albert Bridges, the banks of the Thames have been, under the direction of Mr. Ingram of the Royal Gardens, not only improved in appearance, but so formed as to increase the water-way. Formerly they were in a rough and broken condition, subject to disintegration at one point, and undue accumulation at another. From an open fence about 25 feet from the water's edge, they have been carefully sloped, beginning with a true inclination for about two-thirds of the space, then presenting a slight convex nearer the water, with a total fall in all of about 6 feet. Thus no salient point is presented to the current, and the gradual inclination gives an increased way to the rising waters, which here pass smoothly and silently between the banks, which both belong to the Crown. We have thus a practical example of the improvement of the main outfall of the drainage of this and the neighbouring counties; and in drawing attention to it, we take leave of the father of English rivers as it quits the Royal county.

Home Correspondence.

Reaping Machines.—My experience of a reaping-machine this year is as follows:—A bolt breaks from being ill made; the little ground wheel stops from having no off-hole, a great defect; and the washer and colter are ill adapted for what they have to do; the pole snaps at the shoulder, where the yoke fits on, and is seen to be not good tough Ash but a piece of common Elm, fit only for coffin boards, and not sound either, but partly rotten. At last we start it under the direction of the agent for its sale, on commission I presume. All goes pretty well on a piece of our lightest and easiest Oats, except that all round there is a line of stalks not cut but left dragged down, which the agent refuses to acknowledge as a defect, and complains that I am too particular. In an hour he leaves us, declaring his satisfaction at the performance of the reaper. In a few hours more the Oats are rather heavier and inclining a good deal, we get on very badly, frequent stoppages, and at last it takes three or four hours to do an acre, stopping every few minutes. Then we try on Barley, a nice fair crop, with a good plant of Clover under. The reaper is carefully set according to the instructions, but it won't do where the corn hangs at all away from the machine. We spend five hours in trying alterations of the reel and the platform uselessly, and give it up; then write to the agent to tell him the difficulty, but get no answer for more than a week. Meantime a neighbour, also an agent for the reaper, hears that there is a stoppage, and kindly offers help, sets to his own fancy, and drives on with the work for two or three hours. By this time the corn was riper, and cuts a little better, but the reel will not bring the laid corn upright, and a terrible long stubble is left, and a great many heads are cut off and fall among the Clover. My friend is a brilliant theorist, and consoles me by the assurance that on a farm there is no waste, that the stubble is quite as well on the ground as in the stack, and that as to the heads they will sprout and grow and the sheep will eat them. At this moment a ton of that stubble is worth 4 cwt. of guano, and the heads of Barley are safe in the aprons of the gleaners, who are loud in their blessings on the reaper. When in due time I am favoured with a reply from the agent who supplied the reaper, he has taken quite a high note, intimates that it is my fault or my men's if it will not work, says it is not well adapted for Barley (although he had seen and approved the very crop where it failed), and requests the favour of a check for his money. I reply that the machine is his and at his risk, and that I have nothing more to do with it, but will not refuse to cart it back to the station for him. A few days after he calls on me, remarkably bland and affable, hopes we shall be able to make splendid work on the Wheat, assures me of his own good intentions, laughs at the setting of the reaper, as practised by the opposition agent, as most absurd, and invites me to a trial on a neighbour's farm, which, however, the weather has at present prevented. Two of my neighbours are having a similar experience; with one of them the agent has utterly failed to do any decent work; the other is still waiting for the trial. Another reaper in the vicinity has cut a good deal for a landed proprietor in a slovenly style that no tenant farmer would tolerate, but there is capital stubble left for the proprietor's partridges. The destruction of the Clover by the little land-wheel would be very serious in a dry season. The impossibility of doing anything with two horses is generally admitted; the agent laughs at the idea; one reaper, a few miles off, has four regularly; and the Duke of ——, close by, has used 15 horses in one day, five changes of three each. Of course an extra horse requires an extra driver. As a rule, taking one day with another, 10 acres would be a good day's work, even where it does better than with us. I should put the figures thus:—

1 man, 5*s.* 6*d.*; 2 boys, 4*s.*	.. ..	9*s.*	6*d.*
3 horses, at 2*s.* 6*d.* each	.. ..	7	6
Extra help getting through gates, mowing corners, &c.		4	0
Repairs, wear and tear, interest on prime cost, &c.	..	10	0
		31	0

Or about 3*s.* per acre. Of course I am very liable to correction on this point, not having worked it for several successive days. There are cases near this where the machines are doing well, but I think there is evidence enough to show that they are not yet perfect. I do not give my name, as it is not required from those who praise the reapers. I know of one case in which an anonymous eulogist is financially interested in their success. *A Would-be Reaper.* [A known correspondent.]

Societies.

Birmingham: *Sewage Manure.*—An interesting conference lately took place on the invitation of the Mayor, between gentlemen farming in its neighbourhood, men of science interested in Agricultural improvement, and public spirited men who like the Mayor himself wished to see the accomplishment of anything tending to the public health and prosperity. The topic was one which more than any other combines these two objects, viz. the utilisation of Town sewage.

Mr. Lloyd, the Mayor, said that in Birmingham they had a system of sewerage by which the contents of cesspools, &c., were collected, and after it had passed over the filtering beds, the Corporation of Birmingham turned it into the Tame. With such levels as they had, he saw no reason why it should not, instead of being turned into the Tame, be carried along the banks of the river so as to enable farmers to have the sewage at a more trifling cost than any that had yet been supplied throughout the kingdom. When they became aware of the immense advantage which had attended its use in other localities, it would be for the landowners and farmers he now addressed to say whether they would lend a hand in helping to achieve the same results here. Mr. Lloyd then read statements showing the result of sewage irrigation at Ashburton, Malvern, Mansfield, Edinburgh, Rugby, &c. In proof of the real value of irrigation in this neighbourhood, the Mayor also referred to the legal proceedings taken against the Corporation by Mr. Wheelwright, of Erdington Hall, who showed that by being deprived of the irrigation of 55 acres, his loss on two years' crop was 400*l.* This, he considered, was in itself sufficient to induce the farmers along the valley of the Tame to take the matter into their serious consideration, and make arrangements for sharing in such obvious advantages.

Mr. Adderley, M.P., said he was sure he need not waste time in expressing that which everybody must feel—their great sense of the public spirit which had induced Mr. Lloyd to bring them together. The Mayor had no private object whatever. He saw that a great public good might be effected, and he felt as every Englishman holding a high and distinguished position ought to feel—that it was his duty to do all in his power to have this object carried out. He apprehended that the question before them that day was what they were to do with the overflow of sewage after leaving the various filtering tanks. The main point to be considered, therefore, was the actual value of this overflow for agricultural purposes. When Rugby was referred to, it should be recollected that there the neat sewage itself was applied to the land, and not the overflow of tanks in which all the solid matter was deposited. If they had chemical analyses showing what this overflow contained, and what would be its effect upon Grass land, then their way would be clearer than it was at present.

The Mayor said there was no reason why farmers should not have the sewage without filtration, but many gentlemen preferred having it in a diluted state. In Mr. Wheelwright's case the water was very much diluted. They would, however, have an opportunity of hearing what Dr. Voelcker, an authority on all such matters, had to say on the point very properly raised by Mr. Adderley.

Dr. Voelcker said there could be no doubt the Corporation were taking a step in the right direction, as he believed that the idea of extracting solid matter from sewage, and converting it into a cheap portable manure, was fast becoming a thing of the past. As to

the possibility and advantage of applying sewage in a liquid state there could not be a doubt. The only question which had been raised that day was, what is the comparative value of the matters in solution and the matters which subside in the tanks? In February last he made a careful examination and analysis both of the clear liquid and the deposit. He found that by far the largest amount of the various fertilising matters were contained in the sewage in a state of solution; that a very insignificant quantity of valuable fertilising matter was removed in the tanks; and that the clear sewage was equally well adapted for irrigation as the sewage before it enters the subsiding tanks, and was indeed in some respects better on forced Grass lands. Birmingham sewage, he might remark, differed from th at of other towns by being much more diluted, owing to the quantity of water used in the manufactures, and by containing extraneous matters which were not found els where, such as copper, zinc, and iron, chiefly in combination with sulphuric acid. The amount of these, however, was so inconsiderable that he did not believe they could do the slightest harm. Remembering, indeed, that farmers steeped their grain with sulphate of copper, sometimes with arsenical solution, sometimes with sulphate of zinc, it was ridiculous to trouble themselves with regard to the small quantities of metallic compounds which the sewage contained. He believed that instead of doing harm they would do good to the land along the valley of the Tame, as they would prevent injurious exhalations.

Mr. Richard Fowler said that there was no doubt on the mind of any farmer that the sewage of the town was a mine of wealth if properly applied; but in its application there were great difficulties which it would take a long time to overcome. The first thing the Corporation had to consider was the mill-owners. How would they deal with them? The nuisance in the Tame would never have been what it is had the landowners and tenants been allowed free access to the river, which they could not have, because of the mill owners. With all respect for Dr. Voelcker, he must deny that the water was of the same value before as after the solid matter was taken out, and in proof of his assertion he referred to the Tame, which was highly valuable for irrigating purposes near Bilston, Walsall, and Wednesbury, but had lost its value when it got two or three miles lower down. At his own farm, also, he had found the water used on a higher field was of no value when it came to a lower.

Dr. Voelcker said that when he spoke of clear liquid he simply spoke of water which had been deprived of suspended matter; but there was still left in solution matter more valuable as a fertiliser than that which had been deposited; and as land possessed the strange power of removing not only matter in suspension, but also matter in perfect solution, the consequence was that when the clear liquid was applied to the land, the soil retained the matters in solution, whatever ultimately became of the water from which they were taken. It was only lately that this remarkable power had been recognised, but Liebig and others were perfectly satisfied regarding it. Mr. Fowler was therefore correct when he said that sewage water lost its fertilising qualities after being used on land. He was only wrong when he said that this was because the mere solid matter was removed.

Mr. Adderley said that, on the Mayor's suggestion he had much pleasure in moving the formation of a committee to consider the best method of bringing the Corporation and the farmers into close contact in this matter. It would consist of the Mayor (whom he hoped to see acting in that capacity another year), Mr. Standbridge, Lord Bradford, Mr. Adderley, Mr. King. Mr. Wheelwright, Mr. Couchman, Mr. Potter, Mr. R. Fowler, Mr. W. Fowler, Mr. Dixon, Alderman Cox, Mr. Twamley, and Mr. Hutton.

Mr. Fowler seconded the motion.

Towards the close of the conference, which lasted nearly two hours and a half, the Mayor read a letter of apology for non-attendance from Mr. Alderman Mechi, of Tiptree Hall Farm, in which he said: "Could I attend, I should endeavour to enforce upon the meeting that a farm of 500 acres near Edinburgh, which was worth only 500*l.* per annum, has been so improved by the application of the town sewage of a portion of Edinburgh, that it now produced an annual revenue of about 9,500*l.* Some portions of the oldest irrigated meadows were let this year by public auction at a rental of 35*l.* to 44*l.* per imperial acre, the average of the whole letting being 27*l.* per imperial acre. The character of soil near Birmingham being friable and sandy, renders it peculiarly eligible for irrigation purposes, and if it can be purchased at a price not exceeding 200*l.* per acre, a great individual profit must result from flooding it abundantly with town sewage. The cows and horses of Birmingham would then rejoice in an abundant supply of green herbage, and the good people of your thriving city would receive a quality of milk that can alone be derived from land enriched by human excrement. I speak practically on this matter, from every day observation on my own farm."

East Cumberland: *Agricultural Education.*—At the annual meeting of this Society the other day, Sir J. Graham spoke as follows on the subject:—He was sorry also to differ from the chairman and from one of the representatives of East Cumberland (Mr. Marshall), who were both in favour of the establishment of a northern agricultural college—a project from which he dissented on the ground of expense. He believed that the best teaching of agriculture was to be found at the present time in Cumberland and Westmoreland. Applications had repeatedly been made to him by great landowners in the south to recommend to them from these two counties persons qualified to manage large estates. When he was one of the servants of the Crown, the Prince Consort asked him to recommend a person capable of managing the home farm at Windsor. He offered the appointment to one of his own tenants, whose father was dead. He had been trained upon a large farm. He was the right hand of his mother, who held one of the best farms on my estate. But what was the feeling he manifested? He was not flattered by the offer; he was not attracted by the position. But he said: "I feel that I am of use to my mother and sisters; I am happy where I am; I thank you for the offer, but let me have a share in the lease; let my name be associated along with my mother's, and I would prefer to remain in Cumberland," and he then procured a farmer from Dumfriesshire to undertake the duty. When he left to manage the farm of the Duke of Richmond, in Sussex, the Royal family greatly regretted his loss. Now, he was satisfied that the home of the Cumberland farmer afforded a better education in the system of agriculture than any college. He had always been favourable to these agricultural meetings. They were convivial and useful, because there was an assemblage of all classes—landlords. yeomanry, tenants, were all drawn together in a harmonious meeting—harmonious because not political. The great advantage was, that notes of their practical experience were compared from time to time. As to draining, if ever there was a year when the advantage of draining was palpable to the senses and experience of men, it was the present. They had suffered little in Cumberland from the wet weather, but they might trace the fields which had been drained and those which had not been drained. In the former the crop was ripened, in the latter it was green. The necessity for draining was now generally admitted—the only difficulty was in finding capital to carry it on with spirit and efficiency.

The Chairman (T. Sackold, Esq.) said he was glad that the right hon. baronet had given a controversial character to these meetings which formerly they did not possess. The right hon. baronet disapproved of his suggestion that the time had arrived when an Agricultural College might be established for the northern district of England, and he had attempted to prove the fallacy of it, first by showing that some person who wanted an agent in the south of England applied no doubt to the best man, considering the way in which the Netherby estate is managed, for a gentleman to manage his estate. Did that prove that the Agricultural College at Cirencester was not an entire success? He contended that it did not. Then the right hon. baronet told them that the son of one of his farmers who was a widow, and this son the right hand of his mother, preferred to take a share in the lease of a Netherby farm rather than become an agent of even the highest gentleman in the realm, the Prince Consort. Now, he contended, that that man displayed a sound discretion, for who would not rather have a lease of a Netherby farm than become the agent of any man? Did that prove in any degree that the Agricultural College at Cirencester was a failure? The next argument was that the Duke of Newcastle applied to the right hon. baronet for an agent, and instead of going to the Agricultural College at Cirencester, he, like a discreet gentleman as he is, selected a gentleman from the north of the border, and for the very best of reasons. They knew that Scotchmen were excellent practical farmers, and in venturing to recommend to the meeting an agricultural college he took care to tell them that he did not in the least undervalue the practical knowledge which came from actual experience, but on the contrary, that he considered it the most indispensable of all. But who would have gone to the Agricultural College at Cirencester in order to get an agent for the Duke of Newcastle, when they knew that none of the students remained there after 13 years of age? Now, would it not be of advantage to the farmers of this country to send their sons to college, where they might attain analytical knowledge of the soil they were destined to till, and where they might also learn the component elements of the various plants they were required to cultivate, and by that means be able to apply the means best calculated for their successful growth; where they might also learn the component parts of the various kinds of food used for the different kinds of stock, and be able to discriminate between their fat-producing, their muscle-forming, and their bone-creating properties? Did the right hon. baronet mean to suggest that such information would not be of benefit in after life? He was sorry to disagree with the right hon. baronet, and still to entertain the opinion he had formed. The right hon. baronet had also introduced the subject of drainage. Last year was the test of the advantage of draining; but the difficulty is to obtain capital. It was his lot to be thrown into conversation with an eminent statistician, who told him that he had estimated that 2,000,000*l.* might yet be invested profitably in drainage. The right hon. baronet appeared to consider that a large sum, and he had no doubt many present agreed with him. But when he considered that within the last 20 years upwards of 300,000,000*l.* of capital had been invested in railways, and that not leaving the country poorer but richer, he thought they need not trouble their heads about where the capital was to come from. Moreover, he was happy to know that many landed proprietors had ample means to drain their own land, and those who had not might obtain assistance by application to the Inclosure Commissioners. Mentioning the Inclosure Commissioners reminded him of a circumstance to which, after the turn the meeting had taken to-day, and on which he congratulated them—he alluded to the introduction of freedom of speech—he might be allowed to advert, as he thought it of some importance; and he should do so because he felt convinced that he was not infringing in any degree on the rules of the society. He hoped he should not be considered wanting in respect to the opinion of the gentlemen who have seats in what the Americans call "the mighty House of Commons," when he said that in his humble opinion the Lands Drainage Act, under the provisions of which the Inclosure Commissioners were empowered to advance money for draining, was the only real boon which the agriculturists of this country had received at the hands of Parliament within the scope of his recollection.

Reviews.

Hints to Landlords, Tenants, Labourers, &c. By S. G. Finney. J. Ridgway, 169, Piccadilly.

This is a curious collection of odd chapters and shrewd remarks—suggestive and stimulant rather than instructive—but containing, nevertheless, a great deal of information, the result apparently of considerable personal experience. The following passage may be read with advantage at this time of the year, when speech making at annual agricultural meetings is common:—

"The real object of these societies ought to be to produce the greatest amount of corn, roots, and meat at the least cost—to produce anything at a cost beyond its value is, to me, the height of folly. These societies should be for the instruction of the farmer; and who better can do this, at these dinners, than the men who gain the various prizes? Under this impression, I will just throw down a few toasts for an agricultural dinner:—

"1st. The Queen and Royal Family.

"2nd. Success to the Association.

"This toast should be given to a man who would base his speech on the advantages of such societies.

"3rd. The Secretary.

"It would be his duty to introduce the rise and progress of the society, and the advantages that have been derived from it, with its future prospects and success.

4th. The Health of the Judges.

"Which should be replied to in dilating on the various articles and stock that have obtained prizes; and they should point out any improvement that might benefit the locality.

"5th. The First Prize for the best Ox.

"The gainer of this prize should reply to this toast, giving every particular of the ox and the food consumed, with his opinion of the best sort of ox to fat, and best description of food, and the best way of giving it, so that the most meat may be obtained for the least money.

"6th. The First Prize for the best Horse.

"The gainer should reply with every particular relating to the horse, and his opinion of the best description of horse for the various descriptions of soil.

"7th. The First Prize for the best Pen of Sheep.

"This should be replied to in the same way as the ox.

"8th. The First Prize for the best Pig.

"This should be replied to in the same way as the ox and sheep.

"9th. The First Prize for the best Roots.

"Here is a wide field for the gainer of this prize to enlarge on the best description of root to grow—the best sort of that description—the best sort of land to grow it on—the best way to feed it—the best system of cultivating the land for it—that description of food that will grow the best quality—the best time for sowing—the best time of year for the plants to gain the most saccharine matter—and the best way and time of storing them.

"10th. The First Prize for the best Sack of Wheat.

"11th. The First Prize for the best Sack of Barley.

"12th. The First Prize for the best Sack of Oats.

"These three to be replied to in a similar way to the roots.

"13th. The Chairman.

"He says what he likes, but by so doing does not waste the evening.

"I think by adopting a rule or course such as the above you would much enlarge the societies, and many more farmers would rally round them, and give greater attention to their business, because they would then have the desired information thrown down before them; besides which they are a class of men who are particu-

larly tenacious about receiving information from any but their own body, consequently every encouragement should be given to bring their *own light* out."

Miscellaneous.

We greatly regret to learn the death of Mr. Thomas Harkness, late secretary of the Royal Agricultural Society of Ireland, and formerly a frequent agricultural correspondent of this Journal. We take the following paragraph from the *Dumfries and Galloway Standard*. "Mr. Harkness was fond of agricultural pursuits, and had no small share in popularising the 'high farming' system with which Mr. Caird's name is identified. Soon after his removal to Stranraer he established an agricultural club for the discussion of rural affairs, and promotion of agricultural improvements; and so well were his labours appreciated, that before leaving Wigtownshire he was presented by the members of the club and other friends with a superb piece of silver plate, value 100*l*. In 1852 Mr. Harkness was elected secretary of the Royal Agricultural Society of Ireland, having been promoted to that post in preference to 54 other candidates, natives of the country. The society flourished under his management; but, we believe, there were more thorns than roses in the appointment, and he eventually resigned it and removed to Harrow on the Hill, in the vicinity of London—attending there to the careful upbringing of two young relatives consigned to his guardianship, and still indulging at times in literary and agricultural recreations. The death of his wife about three months ago was a blow from which he never recovered: it loosened his hold and lessened his love of life—preparing the way for the stroke of apoplexy under which he expired. He will be remembered for the strength of his friendships and the extent of his charities as a private gentleman, and for the good public services he did to the town of his adoption, and the cause of Progress throughout the land."

Calendar of Operations.

OCTOBER.

West Sussex, *Sept.* 25.—There is nothing for us to report but wet, wet; since the 14th we have not had a day fit for harvesting, and no signs yet of improvement, and the short time that we had of 14 days fine from the 30th August to the 14th inst. was not sufficient for carting all the corn. In this immediate locality the Wheat is nearly all in; but there is still some Barley and Oats, perhaps one-third of them out, and the continued damp of the past 10 days has caused some of the Barley to sprout, and especially the Wheat that is out. As might have been expected, most of the Wheat has been harvested in a damp state, and will not be fit for grinding by itself for a long time. But still there are many lots of new in our market, and most of them in a very bad state, both as to condition and quality. The best samples, with few exceptions, little better than last year's tailing; and we hear—which we may, judging from the quality, believe—the yield is very bad. Some in our market on Wednesday last was sold at 40*s*., while good old Wheat was worth from 66*s*. to 72*s*., the best average of new Wheat was worth from 50*s*. to 56*s*. Good Barley will be scarce, as much of it was laid, and the Clover growing up above it, and part of it is now out and suffering injury from the weather. Oats are a good crop, and the quality promises to be good. Of Peas we had a good crop, but they were much damaged, laying so long on the ground before we were able to carry them, and many dropped out and were left on the ground to be picked up by the pigs. A little further back on the higher lands harvest is not far advanced, and few will finish before the 29th, even in the most forward districts. And Wheat sowing will get rather behind, and will be heavy work, and unless frosts set in we may look forward to having the young plants destroyed more or less by slugs. They are already making inroads upon the young Trifolium, and have in some spots defied our being able to grow Turnips. The young Clovers all look well, and there is abundance of pasture Grass, but still no stock does well. There are still sad complaints of the Potatoes; some say they will hardly have the seed safe. There is yet no sign of the weather clearing. We have had during the past night the heaviest fall of rain that we have had during the season, accompanied by a hurricane of wind from the north and north-west, and everything looks in a sad plight. *G. S.*

Northumberland, *Tyneside*, October 1.—After five weeks of harvest the cutting of the corn crops has been concluded on few of the earlier farms in this usually early district. In the great majority of cases, however, the later varieties of Oats, and all the Wheat are still uncut, and in cold and undrained situations it is doubtful if they will ever fill and ripen properly. On the warmer class of soils, in fair condition, Oats and Barley are above an average in bulk, and the former show a plump and heavy sample, while the finer qualities of malting Barley will be scarce; Wheat has cut up a light crop of straw, but the heads are large and well developed, indicating a produce within 20 per cent. of an average. Turnips on such soils promise a better crop than we have seen for several years, though the cold and wet season has retarded the bulbing of the Mangels; while Potatoes are a good crop and nearly free from blight. Winter Beans are very various; we have seen two or three good fields, and are now preparing for another sowing. The great bulk of the soil in this district is of a cold ungenial description, however, and a very different report must be given of its produce. All the cereals were stunted in their growth by the continued additions of moisture, throughout the season, and from the severe frosts which prevailed from the 18th to 23d ult., added to the soft milky state of the grain, there is every prospect of the produce being found seriously deficient. Turnips and Potatoes on such soils have all along had a starved and miserable appearance. The Wheat already in stack will require many weeks to fit it for the millers, and a change from the present close moist weather is anxiously looked for in order that what remains in stock may be gathered in. *W. C. T.*

Notices to Correspondents.

Books for an Unlearned Groom: *O F A.* "Stewart's Stable Economy," "White's Compendium of the Veterinary Art;" a new edition of the latter will soon be published by Longman & Co. *W. C. S.*

Grass: *T Fordham.* The specimen you sent is Bromus secalinus, a common agrarian Grass, probably wild in the district, as it is generally diffused amidst corn and other crops, its spread having been accelerated by being so often mixed with seeds; hence Saintfoin, Vetches, and seeds, *i.e.*, mixed artificial pasture, will commonly be found to contain a small quantity, and as it is very prolific the great accession one sometimes meets with is accounted for.

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MESSRS. PARKER and WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:—

	P. packet—*s.*	*d.*
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation..	1	6
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" pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

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INDIAN AZALEAS, choice vars., with flower buds, per 100, 4*l*.
Do. do. stronger plants, 6*l*.
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Do. do. seven new varieties, with flower buds, including three double ones, viz.—

Blanc de neige	Rosæflora plena
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Hardenbergia ovato-rosea, very distinct	7	6	Rhododendron Président Vandenheeke, the finest of the hardy tribe ..	21	0
Cobœa scandens foliis argenteis variegatis, 5*s*. to	10	6	Clematis venosa, 3*s*. 6*d* to	5	0
Pteris tricolor	15	0	,, lanuginosa, strong plants .. per doz.	24	0
Cyattea medullaris ..	7	6	Pæonia Moutan, Triomphe de Gand, very large cherry coloured flower, the finest of the tribe..	42	0
Acrosticum crinitum ..	10	6	Mahonia Calereensis ..	7	6
Begonia quadricolor ..	7	6	Quercus nigra	5	0
,, Alexander von Humboldt	7	6	Viburnum macrocephalum, strong plants ..	7	6
Dracæna punctata ..	15	0	Yucca argyrophylla, fine	5	0
Stadmannia Pindaiba ..	42	0			
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INDIAN AZALEAS, with flower-buds of the best vars., p. 100, 5*l*.
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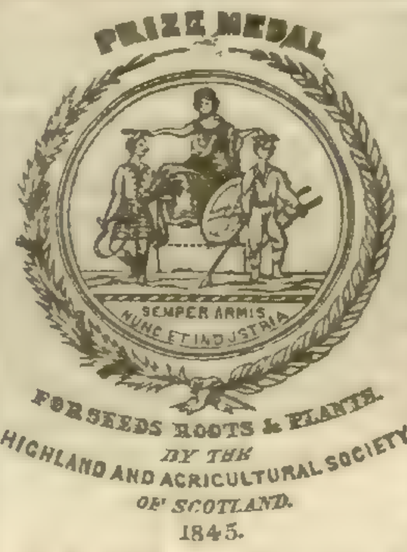

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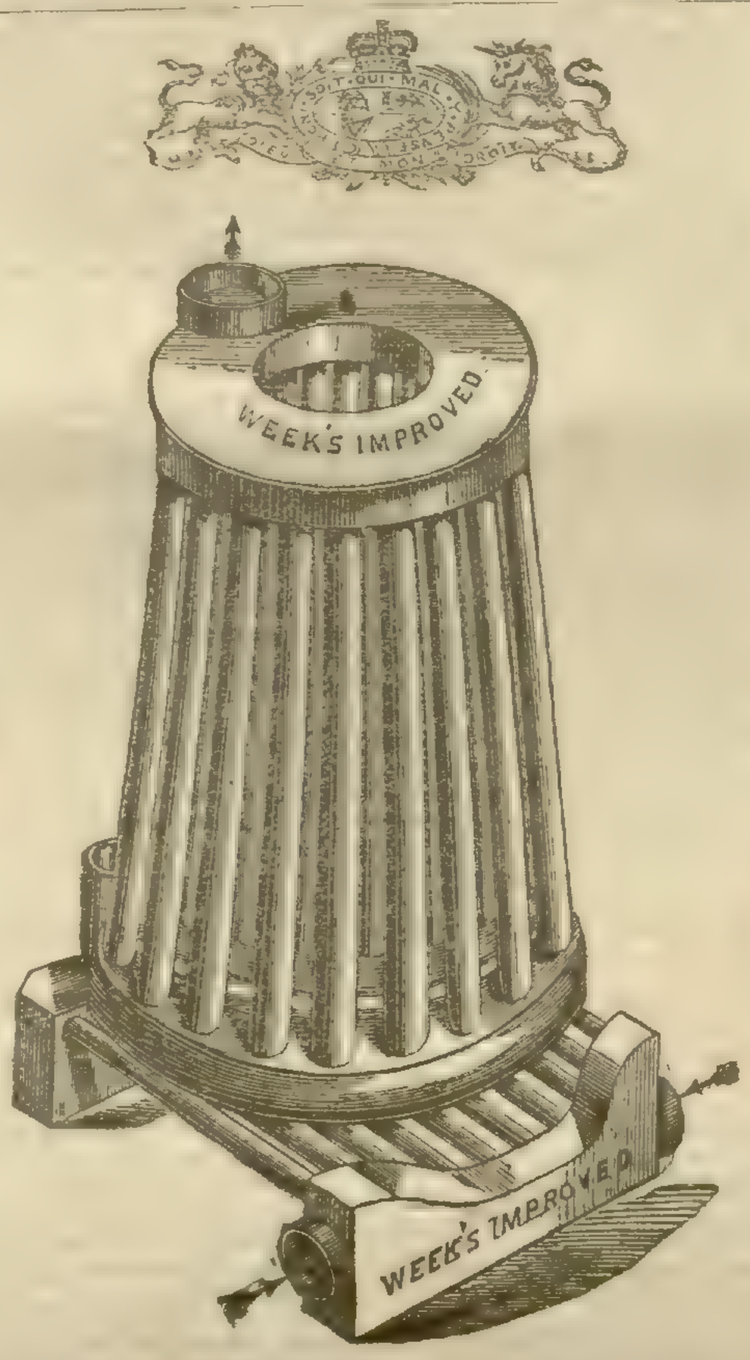

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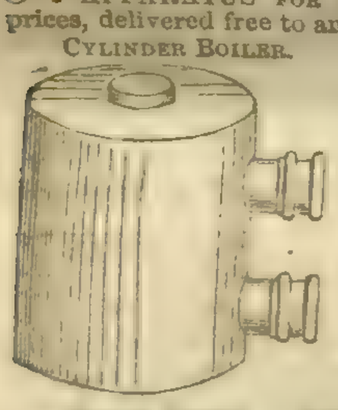

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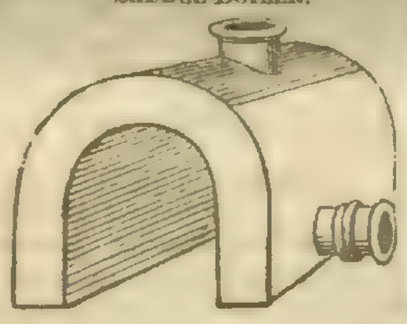

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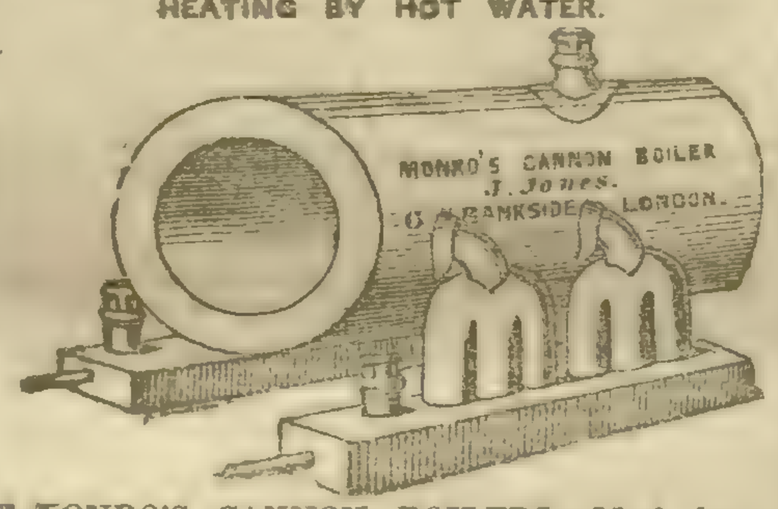

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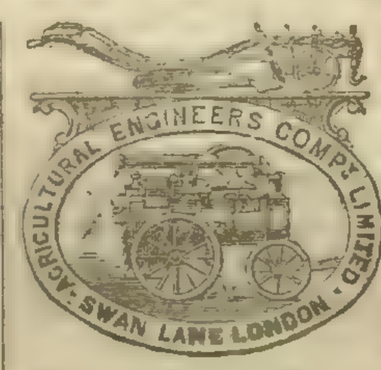

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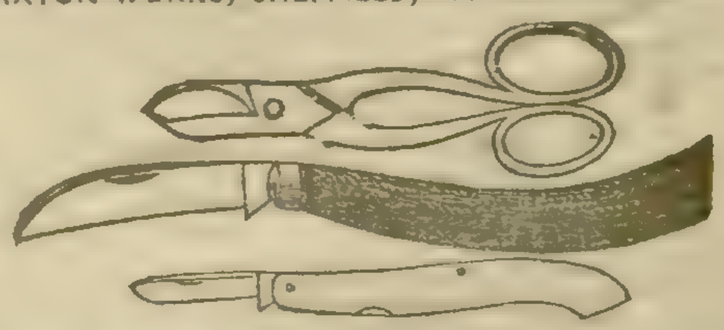

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☞ *None but fresh imported Bulbs are kept on the premises.*

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Messrs. SUTTON'S mode of packing is most effectual and economical.

For terms, &c., apply to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

The Gardeners' Chronicle.

SATURDAY, OCTOBER 13, 1860.

WE are asked for information concerning a fruit tree called YANG-MAI, which Mr. FORTUNE has introduced from China, and which now appears in the Catalogue of Mr. NOBLE of Bagshot. Unfortunately all that is known on the subject is what follows: — In old KÆMPFER'S *Amœnitates exoticæ* mention is made of a Joobai, or Jamma mómu, a tree allied to the 'Arbutus, folio non serrato,' of Caspar Bauhin, and further described as a wild Peach (Malus persica sylvestris), with a reddish granulated fruit, a roundish oblong stone, &c. The word Mómu, it further appears, is the Japanese name of the Peach itself.

This plant Dr. WALLICH rightly identified with a small tree found in the valleys of the North of India. In his Tentamen he gave a figure of it under the name of *Myrica sapida*, and a long botanical description, from which the following is an extract:—"In Nepal, I found it growing wild, and also cultivated in gardens. The fruit ripens in the rains, has a pleasing appearance, and a refreshing, acidulous taste. It is known there only by the name of Kobusi; to the westward it is called Kaephul. Its wood is hard, of a pale brown colour. The leaves, on being rubbed, have a pleasantly aromatic, though faint smell."

It is in FORTUNE'S account of his visit to the island of Chusan that we first hear of this YANG-MAI, which he describes as "a scarlet fruit not unlike an Arbutus or Strawberry, but having a stone like a Plum in the centre" (*Wanderings in China*, p. 58), adding nothing further, except that from the manner in which he introduces it we are led to believe that he thought it good.

Some years later, being again in Chusan, he once more mentions the Yang-mai. "I must not," he says, "fail to notice a fruit which is cultivated on the sides of the hills here, and in various parts of the province of Chekiang. It is called the Yang-mae [the spelling is now altered], and appears to be a species of *Myrica*, allied to the Himalayan *M. sapida*, noticed by FRAZER, ROYLE, and other writers. The Chinese variety is, however, much superior to the Indian. Indeed, I believe the Chinese have both, but use the Indian one as a stock for grafting upon. There is a very large plantation of this tree in Chusan, and the

fruit was beginning to be brought to the market during my stay there. It was sold at a very cheap rate, and was considered a great luxury by the natives. I had frequently seen the trees of the Yang-mae, but never when in fruit, so I determined to visit one of the plantations. Starting very early one morning, I crossed over the first range of hills, and found myself in the centre of the island with my view bounded by hills in all directions. On the sides of these inland hills there were large quantities of the Yang-mae. The trees were bushy, round-headed, and from 15 to 20 feet in height. They were at this time loaded with dark-red fruit, not unlike, at first sight, the fruit of our Arbutus, although very differently formed and much larger. I observed two kinds, one with red fruit, and the other with fruit of a yellowish colour. The trees formed most striking objects on the hill-side. The natives were busily engaged in gathering the fruit and packing it in baskets for the markets. Large quantities are consumed in the city of Ting-hae, the capital of Chusan, and a great deal is taken across to the main land. The streets of Ning-po used to be crowded with it during the season. The gatherers appeared delighted to see a stranger, and offered me liberal supplies of this fine fruit. It looked very beautiful and inviting, both upon the trees and also as it lay crowded in the little baskets." (*Tea Districts of China*, p. 345.)

This we believe to be all that is known upon the subject.

It will have been observed that Mr. Fortune, although he speaks of the fruit being "fine," does not say whether he found it as good as the Chinese, or whether it was only fine looking. On the other hand, his remark that it is much superior to the Indian kind described by Wallich, leads to the inference that by the word "fine" he meant good. In conversation moreover he always mentioned it as an excellent fruit. It now remains for gardeners to answer the question experimentally by growing the plant; not however in the open air, although probably hardy, but in an Orchard-house, or a Peach-house, or some such place.

We have scarcely seen a single crop of Grapes this year, where the roots are planted externally and deeply seated, in which the fruit is not in the spotted condition observable in some bunches of Grapes just received from a correspondent. In some houses there is not a single bunch which is free from spot, and in cases where the spot is absent, there is either shanking or the berries become discoloured and turn acid without ripening. On the contrary under better cultivation we have seen a whole range of houses in the most healthy condition, without a trace of spotting, shanking, or discoloration; the foliage green and healthy, and the Grapes themselves peculiarly fine in spite of the comparative absence of external heat and direct sunlight. This shows how much may be done under very unfavourable circumstances. It has long been clear enough, that the bad condition of Grape crops in nine cases out of ten depends upon the state of the roots, and cultivators are now pretty well aware of the fact. The fine condition of the crop above mentioned is attributed by the excellent cultivator under whose care it has been produced to the fact that the roots have been encouraged to spread at the same time both within the house and without; in the latter case every care being taken to secure them from stagnant water, and to keep them properly aërated, while the soil within the house is such as promotes a healthy growth in that direction. The consequence of this treatment is that when the Vines first push forth their buds the moisture is supplied principally from the internal roots, the temperature of the soil in which they run being such as to promote a healthy growth without too great distinction between the temperature of the air with which the young leaves are bathed, and the sap with which they are supplied. Under this influence the fruit is set, and just when an additional supply of nutriment is wanted, the roots on the outside of the house come into active operation, the fruit swells rapidly, and the healthy condition of the whole is in consequence beyond all praise.

It is imperative indeed to attend to the internal condition of the house. Cold draughts will be sure to cause rust, and drops of water resting too long upon the tender fruit will induce decay, not to mention the production of aërial roots on the branches, spongy spots upon the leaves, and other diseased conditions. The main point however is beyond doubt to have healthy roots, a point which cannot be secured without proper draining and aërating, nor can it consist with the application of putrid manures, or of compost into which undecayed vegetable substances enter as sticks, strong stalks of leaves or other generators of fungous spawn, which is as sure a cause of death as the most acrid mineral poison. With every care, however, if the Vines are planted on the outside of the house, it is very difficult to secure a proper condition. The best way therefore is to plant within, with liberty to the spreading of the roots in every direction. With such conditions we shall hear little of spotting, shanking and a host of similar affections which are now the torment of the cultivator. *M. J. B.*

One of our correspondents complains that his Mushrooms are "all wrong" this year, and that the plants come "heels upwards." On examining the specimen which he forwarded, we are not surprised at his consternation, though a very little observation would have shown what was really the matter, and we have little doubt that by this time he is aware that Tares have been accidentally sown amongst his Wheat.

The production of which we give a figure is simply the young state of *Agaricus rhacodes*, a species which not unfrequently makes its appearance in hothouses, though we have not before heard of its usurping the place of true Mushrooms in the bed. Had its very near ally *Ag. procerus* been in question, the substitution would be of little comparative consequence to an "expert," as it is one of the very best of our esculent Fungi. *A. rhacodes* however at present has too doubtful a reputation to make its use justifiable without distinct experiment. We fear that the presence of this Fungus in the bed may prove a source of long annoyance, and that the evil may not admit of remedy. The only probable plan of getting rid of the plague is to dig out carefully every patch of the intruder the moment it appears, and to put a little pinch of quick lime or salt into the hole from whence it was removed. If this does not answer the case is hopeless, and the bed may be destroyed at once.

Agaricus rhacodes: *young.*

The dark globe which in the specimen before us looks like a piece of India Rubber is the future pileus; the larger cup-shaped swelling below forms ultimately the bulb of the stem which at present is concealed within the pileus. The true root consists of a few string-like branched threads, the whole of the part above being the fructification. *M. J. B.*

Chiswick, Oct. 12. *Temperature this morning*, 25°, and by the Radiator, 22°.

THE BRIAR AND ROSES ON THE BRIAR.

[We extract the following capital practical article on a subject most important to Rose growers from our able contemporary, *the Florist.*]

1. *Preliminary Observations.*—I have received thanks for my Manetti paper, and I am induced to write an article on the above subjects, that a fair balance may be held between the two stocks, and that I may not be quoted as an enemy to Briar Roses. I have never been an enemy to them, properly planted, in a suitable place, in a suitable soil; or to them, when highly mulched and well watered in soils, otherwise too hot for them, in very torrid summers. This summer has been peculiarly favourable to Briar Roses here; I never knew them do so well. Mildew and black blight have, however, touched severely many Roses on either stock. The Manetti Roses have now finished their first series, having been cut for the 30th of June; and some of them have the new buds of the second series formed. This will account for my not being able to "put in an appearance" at the National exhibition. Few of the Briar Roses here, though they have good centres, are large enough to satisfy the requirements of the judges, who look, I think, too much to size and too little to other qualifications. Some of the remarks made in my Manetti article will apply to Briar Roses, and need not be repeated.

2. *The Foundation.*—As the foundation of a building is the most important part of it, so the Briar is the most important part of Briar Roses. If this be bad, the Rose united to it cannot prosper. Hence the necessity of looking well to the roots, the rind, the spine, and the head of the stock. If these are all good when they come from the nurseryman, you must not complain, if they do ill afterwards. The roots are easily examined, and should be pumped upon on their arrival, and should never be suffered to become dry. The spine in the centre should be firm, and the rind should be free from dark stains. Light stains are not so material as dark ones. Caries and ultimately death commence with black stains in the rind. Examine the head of the stock; it should be healed over the margin at least. If, however, it should not be healed, or if there is an aperture between the skin and spine, cut it afresh, and wash it with Robinson's liquid glue, or with gutta percha dissolved in chloroform. I have been using these two on Briar stocks (204), now budded, and they heal and grow fast. Cut always with a sharp knife. If a surgeon cuts off an arm with a blunt knife, he will hurt his patient; and, if he neither cauterises the cicatrix, nor bandages, nor ties the bleeding vessels, death will ensue. The Briar may not do so, but it will suffer detriment, which will manifest itself hereafter. The rind has an infinite number of vessels, invisible to the naked eye, from which the sap will exude. Probably Friar's Balsam might not be bad for the purpose. There is a great analogy running through the field of nature. Trees, vegetables, animals, and men, are but different links in creation; and, as far as the analogy lasts, the treatment for one will suit the other. Let me, then, repeat once more, that the healing of the vessels at the top of the Briar is most important, especially when a dwarf-habited Rose is budded thereon, and that the cause of failure in Briar Roses is as often at the head as in the roots.

3. *The Cut at the Head of the Briar.*—This should be as sloping as possible, that wet may not rest on the Briar-head. It should be cut close up to the budded branch, that frozen dews, when they thaw, may find no lodgment at the base of the budded Rose. I lost several Roses last winter from this cause, and from their wood not being ripe, and from their rind not being hardened.

4. *The number of Briar branches to be budded.*—It is safest to bud three, but one branch with the best shoots should only be left. Where two parallels are budded, both may be left. Where distance intervenes between them there is always a fighting for the mastery, and neither will be good.

5. *The branch end of a budded Briar.*—This should be cut close to the budded Rose, when it starts, and it should be healed as above.

6. *Staking and Binding.*—When you plant, stake and tie the Rose to the stake loosely for some days, till the ground has pitched, or you will hang up the Rose. After the ground has pitched, tie the plant to the stake firmly, passing the bast, like a figure of 8, between the plant and the stake. It will keep the stake from galling the tree, and from preventing circulation in the rind.

7. *The height of the Stock.*—Being so exposed to S.W., W., and N.W. winds, I prefer standards about 2 feet or 2½ feet out of the ground. Moreover, they are not so expensive to stake, can be viewed more easily, and be shaded with less trouble, for exhibition. If the quality of the Briar is good the height is immaterial; if bad, or only moderate, of course the less you have of it the better. If the stock is good I find delicate Roses, such as Masson and Magnan, do better on 4 feet standards than on dwarf. I have two each on first class standards, and they are doing admirably. Delicate Roses should not be nearer the ground than 2 feet. If they are in valleys, where damp prevails, they will be healthier on 4 feet standards. On low stocks I have lost many of the above Roses. Look not so much to the height of standards as to the quality. The *qualitas rei* is of more consequence than the *qualitas vocis*, to use a term in logic.

8. *General and Cultural Directions.*—You cannot do better than buy Mr. Rivers' charming book, and Mr. Cranston's truthful little brochure. Would I had bought them before I bought my experience!

9. *Selection and digging up Briars to bud on.*—Choose those that are young and yet firm in their spine or pith. Choose them of a good hard green in the rind; they are best when they have lost their prickles. In autumn or winter pay your servant something extra to take them up carefully with their small web roots on; and if he does his work well praise him, and give him a good supper and some beer. The nearest way to the human heart (in England at least!) is down the throat! No man will scratch his face, tear his clothes, and dig up carefully Briars for a penny per stock. My noble ones, thus procured, have just been budded by Mr. Gill, nurseryman, of Blandford, and tied by his lad, and I hope some day to be able to say, that Briar Roses do as well here as those on Manetti have just done.

10. *Position in the Garden.*—A Rose that will do nothing in one situation, will do well in another, even in the same garden. Bourbons of a dark colour, here, usually do best near a north wall, where they get heat without being burned by the sun. In the sun they are apt to crack and fuse their colours. Reveil and Aurore de Guide, for instance, have done so this year. Leprestre, a noble Rose, blooms freely exposed to sun. G. Peabody, a fine purple crimson, has also opened

freely. It is useless planting in windy situations slow growers or delicate Roses. Triomphe de Rennes, Noisette, will do well with protection in the open, but it will do twice as well against a wall. Paul Joseph, Proserpine, and Mons. Ravel, all bloom best under a north wall. And hardy, vigorous Acidalie will bring her blooms to greater perfection on a south wall. The Rev. Mr. Helyar told me, when here, that the south wall is the proper place for (H. P.) Napoleon. Eliza Sauvage, here, is blooming beautifully in the crux of a north-east wall in the yard, with an abutment to the west, but open to the south. These will serve for illustrations of right Roses in right places. A right Rose on a wrong stock, and in a wrong place, has produced much disappointment in many Roseries.

11. *A Briar fallacy.*—I have heard people say that because a Briar grows finely in a poor hedge, where the soil is thin, and the substratum is dense chalk, that poverty and chalk are good for Roses on the Briar. I admit that where lands burn, chalk (where clay cannot be got) may be beneficial as a retainer of surface moisture, in the same way as popple stones (cobbles), Grass, or mulching; but, it is not good as an under soil. At the back of my house, half way up a steep eastern chalk hill, the fields and hedges are mine, and from them I have dug up the finest Briars, some 10 feet high, and fit, at that height, to bud "Fulgens," as a weeper; but, on examining them, I found that, though they had some small web roots of their own, their main dependence was on a very large deep-rooted stool, to which they were attached by a strong cord. The strongest land produces, on the whole, the finest Briars, and suits "generally" Roses on the Briar. Attached to such like stools I dug up from swamps last winter fine Briars. There is one other reason why Briars grow finely even in poor hedgerows, viz., their roots are protected by fallen leaves, which suggests mulching. I have found here that Briar Roses in lawn holes do better with a 6-inch radius free from Grass than with a larger one. As far as my eight years' experience goes, I have found mulching good for Roses, and also conducive to success on Briars just budded, which should also be as well staked as established Rose trees. If Briars were kept well watered before budding and after, I firmly believe that they would "take" quicker, and more certainly in hot weather than cold, because the circulation is quicker.

12. *A few Roses that will stand gales of wind; and which, though beaten to shreds, will, upon being cut back, break again and bloom.*—Triomphe de la Duchere, Jules Margottin, Cambaceres, Triomphe de l'Exposition, William Griffith, Lafitte, Baronne Prevost (the "Colonel" is best far, but not for a windy corner, much less for a tempest), La Reine, William Jesse, Pius the Ninth, Bouquet de Flore, Acidalie, Aimée Vibert, Bachmeteff, Caroline de Sansal, Triomphe de Paris, Angleterre, Maxime, Paxton, M. Trudeaux, Mont Carmel, Louis Odier, Duchess of Sutherland, and Duchatel. These stand gales best here; they have good constitutions. I know that better Roses than some of them might be named, but observe the place for which I name them. I for one cannot afford to part with Baronne Prevost, La Reine, Pius the Ninth, and William Jesse. Let what will happen, I get something out of them every year. Four-fifths of the trash that comes out every year may well give way to them, and to their fine and lasting constitution. These four were among my first 40, and they are "younger" and better than when I had them eight years ago. Alas! how many deaths of other Roses have I witnessed.

13. *Roses that do well on a Briar here, but which require shelter from wind; they should be in every garden.*—Raglan, the Géant, Alphonse Karr, Lamartine, Beaux Arts, Prince Noir, Patrizzi (both lovely dark Roses), M. Phelip, Toujours Fleuri, Avranches, Lord Palmerston (both hold colour under sun better than any others that I have; the petals of the last are very thick, the colour is distinct), M. Rivers, M. Portemer, Evêque de Nimes (both lovely), M. Masson, Louise Magnan, M. Massot, Col. de Rougemont (the noblest and most elegant of all large Roses, but requires an extra good Briar); M. Heraud, Alice Leroy, Sir J. Franklin, Prince Leon, and Madame Vidot. These are all nice Roses for protected situations, and some of them are the finest in the world for form and quality. There is nothing for quality and form superior to Prince Leon. The following Manetti Roses I can now confidently recommend: General Jacqueminot, Duchesse d'Orleans, Louise Peyronny (Peyromy in Verdier's catalogue), Comte de Nanteuil, Vidot, Prince Impérial, A. Fontaine, and Prince Leon. These last seven do well in dry ground, but near the river they do not do well. The following Roses new, or new to me, I can most highly recommend. The two first are noble show Roses, and are in their second year, or first year of bloom, viz., Anna Diesbach, Madame Vigneron (both nearly 5 inches in diameter, and of good quality; the former I think will show an eye), Louise d'Autriche, Reine de Dannemark (both splendid), Armide, Comte de Beaufort, Lord Elgin, Francis the First, Dr. Bretonneau, and Altesse Impérial. The three last are pot Roses planted this spring, and I can only speak of them as nice Roses. The last is very dark and rich; the two preceding it are good clear crimsons free from purple stain and well shaped. Comte de Beaufort disappointed me last year, which shows the necessity of patience with tender pot novelties.

14. *Removal of Briar Roses.*—Young trees may be moved every three years; but when they are old, and have been many years in the same place, it is better to root-prune them, and renew the soil around them carefully. In lawn holes they may be cut in a radius of 8 inches every year with a Grass edging knife; and new mould and dung should be given to them, and an equal quantity of soil must be taken away.

15. *Hide-bound.*—Scoring the bark, like Apple trees, is the only remedy. I have found it succeed with both stocks. Manetti stocks, with their tough thick skins, when exposed, are very liable to be hide-bound.

16. *The Briar's affinity for Clay.*—I have found the poorest clay do good. I put a double handful of poor yellow clay to a Briar Rose, and found, that above the radius of the roots the stock threw out abundant filaments.

17. *One Word to Propagators.*—Send out good Roses only, and on good Briars. Weed out all trash from your Rosery. Do not bud large quantities of unproven Roses. In your Catalogues describe the Roses negatively as well as affirmatively. Charge a good price for a good article, and remember that a bad Rose, or a good Rose on a bad or unsuitable stock, is not worth acceptance; and that with many persons it will impede the purchase of Roses that are really good.

18. *One Word to Purchasers.*—Do not call nurserymen hard names because a Rose dies or does bad. They strive to please us, go to great expense, and often suffer great losses. As regards new Roses, they are obliged, by your haste for novelty, to sell by the characters which they have received with them from the raisers before they have had time to prove them. When you get a novelty don't neglect it, and don't kill it with kindness.

19.—*One Word to Exhibitors.*—Cut your Roses for show with good stalks, and exhibit them with their buds and leaves fairly; and remember, that "Roses are not Races!" Fraud, under so fair a flower—a national flower—is a national sin, and a "transgression in a sin." Never use stiletto, pincers, gouge, or glue; but go and return from the show, winner or loser, with the inward satisfaction of an honourable man. You will never, then, have to regret, that you have partaken of those unworthy frauds, which are an injury to the public and the incipient "caries" of so good a cause.

20. *A Restraining Thought.*—

"Be this the closing tribute of my strain!
Be this, fair Rose, of charms thy last and best!
That when the Son of God for us was slain,
Circled with you he sweetly sank to rest,—
Not the grave's captive but a garden's guest,
So pure and lovely was his transient tomb!
And He, whose brow the wreath of thorns had prest,
Not only bore for us Death's cruel doom,
But won for us an amaranthine bloom."

W. F. Radcliffe, Brighton, July 12.

THE BOTANIC GARDENS, SYDNEY.

The improvements that are being made in the Sydney Botanic Gardens are so gradual in their operation that they probably do not attract from casual visitors that attention which they deserve. Those, however, who remember the size and condition of the gardens a few years back will recognise the desirable alteration that has taken place. The improvements have been numerous, but perhaps the most noticeable is that in the lower garden, where a large quantity of additional land has been reclaimed, part from the bush and part from Farm Cove. Some four or five years ago the Botanic Gardens contained about 28 acres; since that time three acres of land have been added and partly cultivated, and as in process of time the gardens extend to the Governor's bathing house, about three more acres will be obtained.

A large portion of the reclaimed ground is about being laid out; one part of it will be artificially laid out, and another will be devoted to a scientific arrangement. In the ornamental part a large pond of an irregular shape has been formed; in this it is proposed to grow various kind of aquatics, especially the larger Water-lilies, including the beautiful Nelumbium, the Lotus or Pythagorean Lily, and the Nymphæa gigantea, the pink and blue Water-lilies of the northern lakes and creeks. The pond in its narrowest part will be crossed by a small rustic bridge, and its sides will be ornamented with rockwork and suitable trees. The surrounding ground will be planted with new or rare trees.

The scientific part of the new ground will be occupied with an extension of the natural system of arrangement, on a similar plan and scale to that already adopted on the ground adjoining. This plot is to be devoted exclusively to the illustration of Exogenous plants, or those with leaves veined like network. This class being a very extensive one, it will be divided into four sub-classes, according to the method of Professor Lindley. These four sub-classes are named and characterised as follows:—1. Hypogynous—plants in whose flowers the stamens do not adhere to either the calyx or corolla. 2. Perigynous—having the stamens adhering to either the calyx or corolla, and the ovary superior. 3. Epigynous—having the stamens connected with either the calyx or corolla, all adhering to the ovary, which is inferior, or nearly so. 4. Declinous—flowers that are unsexual. Each of these sub-classes will be illustrated by as many natural families as include plants of a really ornamental or useful character and will bear the fullest exposure. The sub-classes will be separated by gravel walks 12 feet in width, and the natural families by turf 3 feet in width. The shape of the ground to be thus appropriated being an irregular pentagon, a mathematical division of the bed is not practicable; but the natural families are ingeniously separated by the intersection of a number of graceful curves.

These appropriations will, when finished, add materially to the completeness of the gardens, and although the scientific division may not be properly appreciated by the public it will be of the greatest value to those who may wish to study botany. The larger number who last season attended Mr. Moore's lectures at the Botanic Gardens than during any previous season, may be regarded as an indication that the taste for this interesting science is on the increase Whether this be the case or not it is clearly the duty o the Government to furnish the proper opportunities and encouragements for the study of botany, especially in connection with an institution where that study can be so conveniently and agreeably pursued. The Botanic Gardens are frequently visited by accomplished naturalists from Europe, and from the adjacent colonies, and these ought to be able to carry with them the report, not only that specimens of all the most beautiful and commercially valuable plants are to be seen in our gardens, but also that their properties and classification are understood.

Most of the visitors to the Sydney Botanic Gardens express their admiration of the beauty of the trellised enclosure along the eastern boundary of the upper garden walk, being for about a length of 100 yards encircled by Roses, Woodbines, Passion flowers, and other popular varieties of climbing plants, which are trained around the trellis work, and cluster in graceful profusion. The attractiveness which the leafy shade, the gay colours, and the delicious scents of these flowers have imparted to this beautiful retreat, will now be further increased by the construction of an aviary in the centre of the walk. Shortly before leaving this colony, a few months since, Mr. Alfred Denison, brother of the Governor-General, offered to hand over to the public his collection of birds, on the condition that a suitable aviary should be built for their preservation. A sum for this purpose was placed on the estimates for the present year, but, like many other public works, its construction was unfortunately for a long time delayed, in consequence of the frequent Ministerial changes.

The erection which is now in progress for the reception of the birds is of wood, with stone foundations. It is 64 feet in length, and 14 feet in width, and is divided into eight compartments, for various descriptions of birds. The front and about one-third of the roof, as well as the divisions and the ends, are enclosed with wire work. A small stream of water is conducted through the several compartments, and each division is fitted with perches and breeding boxes.

We subjoin a list of the birds now in the public aviary. We regret to learn that since Mr. Denison left the colony, owing to the imperfect accommodation afforded at Government House, no less than a third of the number has been destroyed by rats. The collection now consists only of 71 birds, which are classified as follows:—Pheasants, two golden (cock and hen), and two common Chinese, both from China; partridges, one Indian tree, from India, and one Chinese, from China; quails, nine Chinese from China; teal, three Chinese ducks, from China; pigeons, one Great Victoria (cock), one bronze wing, four Wonga Wonga, two dagger breasted, one Nicobar Island, two Navigator Island, and one crested; doves, three ring streaked and two speckled: rails, one wingless, from New Zealand, and three other kinds, from Captain Denham; satinbird, one (cock); cockatoos, three great white and one crested, from Western Australia; parrots, two lowries and one green; goatsucker, one large tailed; sparrows and finches, 21 varieties.

Although the collection is a comparatively small one, it comprises some of the choicest of those gorgeously-plumaged birds for which the Australian bush is so famed. Besides adding a new feature to the Botanic Gardens, the exhibition of these beautiful creatures, in well-constructed cages, and in a convenient spot, may be not unlikely to induce those who have rare or beautiful live birds to present them to the aviary. We believe that a large portion of the Zoological Society's collection in Regent's Park consists of presents from travellers who, having brought home strange animals, preferred handing them over to those who made it their profession to study their habits and natural food, to running the risk of their thriving by keeping them in their own possession. There will be more inducement to making such presents to the Sydney Aviary than to the Zoological Gardens in London, as here the exhibition will be free to the public, and open every day in the week. As the care of the birds will be entrusted to competent persons, under the direction of Mr. Moore, and as the building can be greatly extended without spoiling its symmetry, we may hope that the present will be only the nucleus of a collection which shall as admirably illustrate the feathered aboriginal tribes of Australia as the well-arranged plants and flowers do its botanical products. *Sydney Morning Herald.*

Home Correspondence.

Vine Mildew.—In looking over a recent Number of the "Comptes Rendus" of the French Academy of Sciences, I observed a very interesting paper of M. Mercieul, on a new mode of treating the Vine disease. The plan suggested by the author appears to possess many advantages over the ordinary local treatment hitherto adopted, and as it may perhaps be of interest to your readers, I venture to send you the following brief abstract:—"M. Mercieul, member of the Vine Disease Commission, has made, during the present season, some interesting experiments on diseased Vines. He selected a number of stocks which the previous year had been so seriously attacked by the Oïdium that not a single Grape could be gathered. He divided them into two equal groups. The one he submitted to treatment, and the other he left for the sake of comparison. In the beginning of August the Oïdium began to appear on both groups. On the 16th he submitted the first group to the following treatment: he removed the earth around the stems of the Vines a distance of about a foot, and of a depth to lay bare the small rootlets. Into each excavation thus made he put a large handful of flowers of sulphur, heaping it up around the stems. This being done he replaced the earth and watched the Vines daily. On the 20th of September the Vines of the first group were in excellent condition, and the Grapes presented a fine appearance. The mycelium (fungus) had not disappeared from the berries which were attacked at the time the sulphur was applied, but they were not farther diseased, and he had every reason to believe that they would come to perfection. He particularly observed that none of the other berries became diseased. The second group was in a most pitiable condition. The Oïdium had made rapid progress, and there appeared every reason to fear that not a single Grape would be saved. The author recommends this mode of treatment to be adopted during the winter, as the sulphur would then be ready to act on the sap at the moment of its ascent in the spring. The question the author proposed to himself is this: Does the morbific principle of the Oïdium act locally or upon the sap? A series of comparative experiments lead to the conclusion that the Vine disease (Oïdium) is a general and not local disease, and requires constitutional treatment such as is here indicated." *Henry Medlock*, 20, *Great Marlborough Street, W.*

Bees.—The gathering season of 1860 has hitherto been so unfavourable for bees, that very few, if any, stocks can be found in any part of the country which are sufficiently provisioned for the approaching winter; and nothing but the most liberal treatment on the part of beekeepers will enable them to preserve their stocks from imminent destruction. In a year in which spring, summer, and autumn have all alike been bad, no beekeeper can feel surprise at the impoverished condition of his stocks at this time; and it is likely we shall hear in a few months of the destruction, through famine, of nine-tenths of the stocks now alive, if they do not soon receive an ample allowance of food for winter consumption. To prevent, if possible, the occurrence of such a disaster, I beg to furnish some directions for feeding. The first duty of the beekeeper is to weigh every stock intended to be carried through the winter, so that he may know how much honey or syrup is required to be given to his bees; but if he does not take the precaution of weighing his stocks, he should act on the assumption that every one of them requires to be fed, and he should immediately supply a sufficient quantity of food. The gross weights of hives mentioned below must be considered as their weights on the 1st of October next, and the quantity of food afterwards allowed for each stock is intended for its use between the 1st of October and the 31st of March. The average consumption of food in that period by every stock is 1½ lb. per month—say, 10 lbs. per stock; but in my apiary I generally increase the allowance to 12 lbs. per stock, as I do not like my bees to be stinted of food when they are most dependent for it on my assistance. A common cottage hive should weigh 20 lbs.; if made of thick bands, or eked, 21 lbs. or 22 lbs.; but these weights do not allow for floor boards. Other descriptions of hives vary so much that it is impossible to state their weights; but you may easily calculate such weights by taking the following estimate for your guide. The estimate is especially applicable to storifying bar hives:—

	lbs	oz.
Weight of stock section (including body, top, screws, and seven bars)	7	4
Weight of contents of stock section (including 10 lbs. of food)	18	0
Weight for floor board	4	0
Gross	29	4

Every hive that falls below the given standard should have its tenants fed without intermission, until the required weight is made up in food alone. They may be fed with honey, or with syrup made according to the following recipe:—Sugar 1 lb., honey, ¼ lb., mild ale 1 pint; boil for a minute or two. I have sometimes added to this mixture, on its cooling, a tablespoonful of rum. Mr. Payne, author of "The Beekeeper's Guide," gives another recipe. He says: "My experience has proved to me that a most excellent and cheap liquid food may be made in the following manner:—1 lb. of loaf sugar, a quarter of a pint of water, and 4 oz. of honey, boiled for three minutes." For convenience, the syrup should be kept in light coloured glass bottles; each bottle should contain 2 lb. of syrup; and after a hive is weighed, the required number of bottles should be labelled and set apart for that hive only. The distribution of the food amongst the several stocks of an apiary may thus be regulated with certainty. There are many methods of feeding, but I prefer feeding at the top of the hive. The feeding-dish should seldom be placed on the outside of the hive, as robbing and fighting often result from the practice; but outside feeding in small quantities may be resorted to for a short time at least, when all the stocks of an apiary are fed simultaneously. Each stock should, in other cases, be supplied with from 1 lb. to 4 lbs. of syrup at a time; and if the bees do not rapidly appropriate the food, it should be warm when it is offered to them. A good stock can now appropriate 2 lbs. of syrup in 36 hours. In the absence of a better thing, the syrup may be given in a straight-sided dish, containing pebbles or floats (bottle corks, for instance); but whenever floats are used in this case, the surface of the syrup should be completely covered with them, to prevent the drowning of bees. Carelessness in this respect would ensure the destruction of hundreds of bees. The feeding of bees in the depth of winter should be avoided; but if it should become necessary, sticks of barley-sugar may be put amongst the combs of stocks requiring food. Stocks should also be fed from the beginning of next April, so long as they continue to accept the offered food. An ounce of food per day will be a sufficient allowance for one stock. When you consider that every stock should have 10 lbs. of food in the hive on the 1st of October—that six stocks should have 60 lbs. of food—eight stocks, 80 lbs. of food, and so on—this business of feeding bees is not the trifling matter it is generally considered to be by persons who have had no experience in bee-keeping. Ten pounds of syrup is an immense quantity of liquid for such tiny things as bees to store in their hives; and the bee-keeper who has to supply each of his stocks with so large a quantity of food should not delay its administration for one hour, for the cold weather of October will soon make it impossible for him to feed them in the mode I have recommended. *John Lowe, Broad Oak, Accrington.*

Almond Trees.—A correspondent asks if the fruiting of the Almond tree is uncommon. The Almond must be more hardy than its congener the Peach, because though always a standard it fruits so often as it does, probably always in the south of England in sheltered situations; at least I remember two near Windsor, at the top of Egham Hill, that rarely failed when I was a boy. Probably it is more rare so far north as this; yet I have one entirely exposed on every side except the north-west, which set a very large crop of fruit, the season being so late and the wood so well ripened last autumn. But the storm of May cleared it of all but a few fruit, which are now slowly ripening. The tree stands alone on a lawn, and is the Jordan variety. *G. Jeans, Alford Vicarage, Lincolnshire.*

Beech Trees and Lightning.—The question as to the immunity of Beech trees from lightning was solved during a thunder storm here, in June last, when two labourers, who sought for shelter under a Beech tree, were struck by lightning. It is singular that the men, leaning forward on their hoes, were only struck in their legs, and experienced only temporary paralysis. The tree does not appear to have been injured. *Thomas C. Brown, Further Barton, Cirencester.*——At Cobham Lodge there is a Beech which was struck by lightning before February 6, 1839. The Beech was forked 10 feet from the ground, and was split down to the ground so that light was seen through the split. It being an ornamental tree it was recommended to have the forked stems chained together with a strong iron chain, and this was done high up, and now, October, 1860, may be seen the filling up between the cleft in the bark on both sides. *M., Cobham, Surrey.*

Badges of Scottish Clans.—I am obliged to "P. M." for his answer to my appeal; it has cleared off all my inquiries except the following, which perhaps some kind correspondent may yet supply. Is Scirpus lacustris (the Bulrush) the badge of Mac Kay or of Mac Ray? Is Calluna vulgaris the badge of Mac Donell or of Mac Douell? And what is the badge of Mac Dougal? *Diss.*

Monstrous Fuchsia.—I beg to send you two sepals from the blossoms of a seedling Fuchsia I have. You will observe a small horn-shaped process on each. One sepal on each flower has this peculiarity. I shall be much obliged by your informing me if this Fuchsia cornuta is a novelty. *C. M. Vowell, Minster House, Cheltenham.* [We never before saw the like.]

Spergula pilifera.—Some time ago a reactionary feeling set in against this little plant, as, indeed, was not unnatural. And in the last Number of Turner & Spencer's "Florist" a very decided opinion was expressed against its ever doing for lawns. I think it is premature yet to decide either way. Mr. Shirley Hibberd is sanguine as to its performing all that was promised of it. I am inclined to think it may, but though I sowed my seed a month before Mr. Hibberd, I require more time yet to be sure. And the soil on which it grows makes as much difference to it as to any plant I know. A stiff clay well enriched suits it perfectly. But the writer in the "Florist" is mistaken in supposing the past moist season favourable to its growth or even life. Patches put in of the same size, and at the same distances, and at the same time last year, filled up their spaces in one-third the time they have taken to do it this. I have an oblong bed containing about 25 square yards, that has nearly reached its velvet condition, while another put in before it in lighter soil, and about six times the size, nearly square, will hardly be ready for inspection when the writer in the "Florist" comes here. However, they will both be left untouched for his critical examination. Our principal botanist here is of opinion, from the state of these beds, that it will be superior to Grass for lawns in many cases. *George Jeans, Alford Vicarage, Lincolnshire.* [We are obliged to add that on our stiff clay we can make nothing of it.]

After Treatment of a Blooming Yucca.—As allusion has been made in last week's Paper by your correspondent "D. U." to advice asked for by me, in June, 1859, as to the best means of preserving a plant of Yucca gloriosa, then coming beautifully into bloom, from decaying, which Yuccas often do after blooming, allow me to inform "D. U." that the advice given in your columns was strictly adhered to; the spike was allowed to grow and expand its many hundreds of blooms, and was cut down as soon as the beauty of the flowers was over. In spring, this year, several suckers appeared at the base of the stem, and were removed immediately. In two or three weeks afterwards a fine strong shoot pushed from the base of the flower stem; it is now developing leaves, and in a short time the plant will look better than it did before blooming. By following your advice, therefore, we not only enjoyed the large spike of bloom, which we were afraid would be the destruction of the plant, but we find that the plant is none the worse for it. The suckers ought to be taken off as soon as they make their appearance, as by leaving them on they exhaust the old plant. *G. Archer, Finedon Hall.*

Management of Peach Trees.—There have been many failures in Peaches this year, and as I have been very successful in obtaining excellent crops of both Peaches and Nectarines, it may be interesting to know my mode of treatment. Three years ago I found that the Peach trees here had become almost worthless; the roots had gone down into the subsoil, and the trees produced nothing but long succulent shoots which would not ripen. The consequence was I had no fruit. I immediately set to work to remedy the evil. I had all the trees taken up, the mould removed from the border to the depth of 2 feet, and 9 feet in width from the wall; the soil being very bad I had it wheeled on to the quarters of the garden. I next had the bottom made smooth and hard, with a gentle fall from the wall to the outside of the 9 feet, which was to be the width of the border, where a drain was made 1 foot deep the whole length, in this way: a drain tile was placed at the bottom, and above that were laid rubble stones and broken bricks up to the level of the bottom of the border; over these were put 6 inches of the same material from the wall to the outside of the border; then the first spit of a pasture field was placed over the whole with the Grassy side downwards, then filled up with a good porous maiden loam and about one-sixth part half rotten leaves, the whole being previously well incorporated together. The soil was raised 8 inches above the level to allow for settling down. The trees were then taken from where they had been laid in by the heels, and such roots as they had, which were very bad, were pruned and spread out in very shallow holes, and covered with about 6 inches of soil. All was then made smooth, and the trees were mulched to keep off frost from the roots. Some of the trees that were dead were thrown away and were replaced with new ones. The old ones did but little the first year, but last year they had a very fair crop, as had also the young ones. This year both old and young trees were literally covered with bloom, and almost every bloom set, so that the fruit had to be severely thinned several times, which is better than doing it all at one time; although the season has been so unfavourable, every tree has ripened a fine crop which is nearly gathered. The young wood promises well for next year, as it is thoroughly ripened to the point, which is the grand secret in Peach culture, and which is only to be obtained by means of well drained borders. During this last year I have hardly lost a branch on a wall 1000 feet long, planted with Peaches and Nectarines in the manner described above. In autumn as soon as the wood is ripe and the leaves begin to fall, I lift all the young trees, prune their roots and replant them, which operation prevents the trees from making over luxuriant growths and keeps the roots from penetrating the subsoil the old trees do not require to be lifted, except they appear to be growing too luxuriantly. I merely shorten the roots by digging round at a distance of five or six feet from the stem. The situation of these gardens is low and damp, being nearly surrounded with ornamental water; we therefore suffer much from late spring frosts. For the protection of the bloom in spring I use a coping made with three quarters of an inch Fir boards, fixed under the coping of the wall; it is made to project 18 inches from the wall, with sufficient fall to throw off rain. It is set on brackets so as to be taken down when the fruit is safe from frosts. I put it up just before the bloom begins to swell, and take it down about the 20th of May, by which time the leaves are so far advanced as to protect the young fruit. I find this coping far preferable to canvas nets, or any other covering I have tried, as it keeps the bloom and shoots quite dry in wet weather, and being dry the frost does no harm. Besides the advantage it affords to the setting of the

fruit, I find the coping boards of great service for protecting the borders of my late Vineries from rains; they are made in lengths of 12 or 14 feet and are easily fixed over the Vine borders with a few stakes and poles. *J. Bethell, Ashburnham Place, Sussex.*

Gishurst Compound.—I tried this upon insects placed under a good microscope. I began with my greatest pest the thrips. I found that the slightest touch with a camel's hair pencil dipped in a solution of 2 oz. to the gallon of water was instant death, as they turned black and shrank up. With aphides of all sorts I found it equally destructive, but I should recommend 3 oz. to the gallon; they certainly lived longer after being dipped than the thrips. Red spider was as quickly destroyed. Mealy bug required a much stronger solution, and it was much longer before life was destroyed; but after leaving it under the glass for half an hour, it was completely dried up. I should use quite 6 oz. to the gallon of water, and where only applied upon hard wood or strong leaves, I should not wash it off for some time, if at all; scale that adheres closely to the leaf is certainly more difficult to kill, and I should not be satisfied unless it was removed with the brush I use the mixture with, and in all cases, both of mealy bug and scale, I should use a second application where it can be followed. The best plan is to dip the plants in the solution, and for this purpose I have a large zinc tub, in which I also clean the plants afterwards, by immersing them in clean soft water, which removes the otherwise disagreeable appearance the plants have owing to the compound sticking to them. Peach trees and Vines are benefited by a dressing of it after pruning, adding enough clay to make it of the consistency of paint; it saves the trouble of making the old mixtures of soft soap, sulphur, soot, &c. *George Bond, Walcot, Gardener.*——I have had this in use all the summer, and I must say that as far as my experience goes many thanks are due to Mr. Wilson from the gardening world, as the inventor of so cheap and efficient a remedy for the destruction of all insects injurious to vegetation. My own impression is that a liberal application of this mixture during the autumn, after the fall of the leaf, and again in spring, before the buds expand, would almost, or at all events to a great extent, annihilate insects, and thus render fruit trees comparatively free from them during the summer months. I conclude that under these circumstances the Compound might be used with impunity at any strength, and Mr. Judd's experiments seem quite to prove such to be the fact. *S. Brewin, Wortley, near Sheffield.*——As regards dressing trees in a dormant state with my Compound, Mr. Rivers, in the 8th edition of "The Orchard House," under directions for January, (p. 12), says, "Paint the trees (every shoot and bud) with Gishurst Compound, half a pound to the gallon of water." *George Wilson, Belmont, Vauxhall.*

Knevett's Empress Eugenie Strawberry.—Passing hastily through Covent Garden Market one day during the past summer, I noticed this beautiful looking Strawberry in many of the shops. One of the principal fruiterers however informed me that he did not exhibit it, as the flavour was deficient. I have subsequently been informed that it is a very superior kind in every respect, and in a fruit catalogue now before me it is described as "juicy, sweet, and richly flavoured." As I do not recollect any allusion having been made to it in your columns, I shall be greatly obliged by some of your readers stating what its merits really are. *A. B.*

Names of Grapes and Pines.—Your correspondent "W. P. A." having commenced sifting the varieties of Grapes, and pointed out that those fine Muscats which we have admired in London are not Muscats at all, but Charlsworth Tokay, one is led to inquire how it is that our judges at metropolitan shows have never pointed this out to the gardening world before. Surely this must be a fault that requires looking into. Country gardeners find their way to at least one great show in the year, and this they do with an eye to improving themselves and their masters' places; they admire and endeavour to imitate, but can it be true that what we imagine to be one thing is in reality something else; and will the matter end with Grapes? Let me hope that some master hand will take up Pines; they are now largely grown, but go where you will they are wrongly named. Who, for instance, can point out the difference between the various kinds of Queens, or where can you find a work that will give the information required? It is, I know, to be found in one of the first volumes of the Transactions of the Horticultural Society, but how few have access to these; and if they have, there must now be occasion to put a "W. P. A." among them, after so many years. Let us hear what modern gardeners have to say on the subject. *J. Morris, Braintree.*

Pears.—With reference to the remarks (Sept. 29) on the Colmar d'Eté Pear, I beg to say that I received a tree with this name from Mr. Rivers in 1852 on the Quince, which is planted on a south wall. It has fruited every second year since, and several times abundantly considering its size. At present there are about three dozen medium sized Pears upon it. I think it an excellent sort, and except as to colour and period of ripening, mine corresponds with Decaisne's description. The colour with me is very bright yellow, with red cheek and almost transparent, and the period of ripening is October or November. Another Pear received at the same time from Mr. Rivers, called Beurré d'Aumalis, has succeeded admirably here. It has never failed to produce fruit, and this year I have upwards of 200 Pears on a standard not very much larger than a large Gooseberry bush. This Pear is generally large, but owing to the wet season not so this year. *J. C., Speymouth, Fochabers, N. B.*

Burchardt's Amber Cluster Grape.—Being about to erect an orchard-house, I should feel obliged if any of your subscribers could inform me where this Grape can be purchased. I am not aware that it has been offered for sale, or that it is in any nurseryman's list; but I apprehend from the favourable way you have spoken of it, as well as your last week's correspondent "W. P. A.," that it would meet with a ready sale. *R. F., Woking.*

Golden Hamburgh Grape.—In your paper of the 6th inst. is an article on the Vines at Chiswick by "W. P. A." and as the writer is in error in one or two instances I will endeavour to set him right; first then with respect to my seedling the Golden Hamburgh, W. P. A. says "the flavour is not so good at Chiswick as with me." Now the difference is this; it is planted outside at Chiswick, and the season being so wet has influenced not only the flavour of my Grape but also that of others. At a nobleman's in the country where a whole house of it is grown planted inside, it was actually considered to be too sweet and luscious. This statement can be proved by half a dozen of our best practical gardeners who tasted the fruit from the above named house. Again, W. P. A. says—"but it is constitutionally very delicate." This I can with the greatest confidence deny; I will guarantee it to be not only as hardy as the Black Hamburgh, but as any other Grape known. If the collar of a Vine is allowed to be saturated with water greatly at variance with the temperature inside, and shanking occurs, is that to be considered the fault of the Vine? That it is very prolific, the Vine in the large conservatory at Chiswick is a proof, and it is a free grower and a great bearer in pots. In short I can most confidently and strongly recommend it, not only from my own experience but from that of several others. I will just mention an instance or two that came under my own notice this autumn. At the Cheltenham Horticultural Show in September, a nobleman's gardener in the neighbourhood gained the first prize with the Golden Hamburgh for the three best bunches of white Grapes. Ditto for the best collection of fruit, wherein there was a large dish of Golden Hamburgh. All of these were grown in pots. At the Great Malvern Horticultural Exhibition the previous week to the above, for the best dish of white Grapes the Golden Hamburgh beat the Muscat of Alexandria. Surely, then, all this will be enough to put a stop to the pros and cons of persons who always attribute blame, if any, to the subject at issue rather than to their own carelessness. *M. Busby, F.H.S., 27, Alfred Road, Westbourne Green.*

The late Crystal Palace Fruit Show.—I must admit that I am greatly surprised that none of your correspondents have before this time noticed the apparently unjust award of prizes that took place at the September exhibition; mistakes were so conspicuous to me and many others that I feel I should not be doing my duty to allow them to pass over unnoticed. In the first place in Class I. Mr. Samuel Solomons was awarded a 2nd prize for two dishes of Peaches and Nectarines, when he should certainly have been disqualified through exhibiting but six Nectarines when the schedule distinctly stated eight. Again, in letter D, the Queen Pine Class, Mr. Solomons was awarded a first prize for a fruit which in my opinion and also that of many others should have been last, unless the prize was awarded for the largest crown; in that case Mr. Solomons was fairly entitled to it. In Class I., Scarlet-fleshed Melons, the same want of judgment took place; a Green-fleshed Melon under the name of Scarlet Gem was awarded a second prize; this should likewise have been disqualified, there being a separate class in letter K for Green-fleshed Melons; the fruit in question therefore should have been disqualified according to the rules.—In the case of Flower judging one great error in my opinion also occurred, viz. in the first prize Verbena stand, Lizzy was exhibited twice; the second time it was called Seedling, but so exactly was it like Lizzy, that no one could distinguish the difference; this therefore was another case for disqualification, for granting that it was a seedling it was so like Lizzy that the two under any circumstances could not be exhibited in one stand; the schedule plainly stated that there must be 24 distinct varieties. For my own part I do not approve of the exhibitor's name and card being attached to fruit or flowers until after the prizes have been awarded. Neither do I approve of dealers and Covent Garden salesmen being allowed to exhibit with growers and gentlemen's gardeners. The former of course have the picking from the productions of the three United Kingdoms. *E. Bennett, Osberton.*——Having taken a great interest in floral and horticultural exhibitions, I have been much surprised at the unfairness (I should call it) of exhibition schedules, as regards the prizes offered for different kinds of flowers: for instance, at the late Crystal Palace Show, 5*l.* was offered for 24 Dahlias; while at the same show for 36 Roses, 3 trusses of each, 3*l.* only was given; for 24 Verbenas, 5 trusses of each, only 1*l.* Last year the same society offered for 24 Dahlias 5*l.*; and for 12 spikes of Hollyhocks only 2*l.* In one schedule I have seen for this year, was offered 2*l.* for 24 Dahlias, and 1*l.* for 24 spikes of Hollyhocks; another offers 5*l.* for 24 Dahlias, and 1*l.* for 12 spikes of Hollyhocks. Other schedules are also faulty. I do not say that the Dahlia ought not to have the highest prize, but I do think that there ought not to be such a wide difference between it and Hollyhocks. Some people advocate showing the Hollyhock in spikes more than it is, but they forget that besides being more trouble to convey to the exhibition, when the spike is once cut off the beauty of the plant is done with for the season; and there are not many amateurs who would like to cut their Hollyhocks for the prizes offered. At the Crystal Palace nearly as much money again was offered for Dahlias as for all other cut flowers put together. Therefore, why should Dahlias be thus liberally rewarded at the expense of other flowers? *A Constant Reader.*

Societies.

Horticultural, *Oct.* 9 (Fruit Committee).—Collections of Grapes were shown on this occasion by Mr. Hill, gr., Keele Hall, Staffordshire, and Mr. Henderson, gr. to the Duke of Sutherland at Trentham. Among the varieties were Cannon Hall Muscat, Barnes' Muscat, Bowood Muscat, and Muscat of Alexandria, Sahibee, Black Prince, West's St. Peter, Lady Downes' Seedling, Black Eagle, Muscat Hâtif de Saumur, Black Hamburgh, Old and White Tokay, Bidwell's Seedling, Golden Hamburgh, Pope Hamburgh, and Barbarossa. Of these Muscat Hâtif de Saumur promises to be a useful white sort. It has a small round juicy rich berry with a true Muscat flavour; Bidwell's Seedling is a showy black kind, but in this instance disagreeably earthy in taste. What was called Tokay appeared to be some wine Grape not unlike White Portugal. Several dishes of Seckle Pears were produced, among which the best came from Messrs. Bain & Park; of White Doyenné considerably the best came from Mr. Mason, and Mr. Spivey, gr., Hallingbury, Essex. Of Fondante d'Automne, the best were shown by Mr. Whiting, gr. at the Deepdene, near Dorking; and the second best by Mr. Snow, gr., Wrest Park, Bedfordshire. Marie Louise was contributed, but so unripe that it was considered best to send it to the Garden at Chiswick for a time, and bring it forward when in proper condition at a future meeting. Among other sorts of Pears the best proved to be Gansel's Bergamot and the second best Beurré d'Amanlis. These were furnished by Mr. Ralfe, gr., Mount Felix, Walton-on-Thames, and Mr. Whiting of the Deepdene. Among Pine Apples was a Seedling, a cross between the Queen and Montserrat, sent by Mr. Oats of Stoneleigh Abbey, Kenilworth. It was a good-looking fruit, 7 inches in length and 13 inches round, with circular flat pips, and on being cut proved extremely well flavoured; a certificate was awarded it. From Mr. Bailey, of Nuneham, came a green-fleshed Melon, round, yellowish green, and prettily netted, which came up by accident in one of his frames after a crop of Trentham Hybrid had been taken from it. It proved to be delicious in flavour, rich and sugary, even in this sunless season. A certificate was awarded it. Messrs. Veitch sent fruit of two kinds of sweet-kernelled Syrian Peaches, both of which were considered highly promising; they were however not in a condition to judge properly of their merits. From Mr. Webster, of Gordon Castle, came a distinct looking Plum, said to be a seedling from the Jefferson; but very inferior to its parent in flavour. Frogmore Late Green Gage Plum from Mr. Ingram proved excellent. It was stated to be three weeks later than the Green Gage. Reine Claude de Bavay and Coe's Golden Drop Plums from Mr. Snow were excellent specimens of good cultivation, and the last was extremely well flavoured. Among other fruits were seedling Grapes from Exeter and Reading, but no award was made to them. The last, which came from Mr. Ingram, gr. to J. J. Blandy, Esq., was very black in colour and sweet; but deficient in juice and somewhat tough in the skin. It might probably be worth growing out of doors.

October 11.—*Floral Committee.*—A first-class certificate was awarded to Mr. Standish, at this meeting, for Gladiolus Rev. Joshua Dix, a very bright crimson scarlet showy kind. A special certificate was also awarded to Mr. Dancer, of Fulham, for a finely flowered plant of Stenocarpus Cunninghamii. Hollyhock Advancer from Mr. Johnston, Terregles, was commended; it is a salmon-coloured mottled variety, remarkable for compactness and fine form.

Notices of Books.

Le Jardin Fruitier du Muséum, ou Iconographie de toutes les espèces et variétés d'arbres fruitiers cultivés dans cet établissement, &c. &c. Par J. Decaisne. 4to. Paris, Firmin Didot. Parts 25 to 36.

(*Continued from* p. 895.)

Poire de Chaumontel.—[The figure represents a fruit about the size of those imported from Jersey.] The Chaumontel was much in vogue in the time of Louis XV., and it is still much esteemed at the present day. The average price varies from 10 to 12 francs per hundred when they are plentiful in the markets, and when their size is scarcely half that represented by the

figure; but fruit the full size of the latter is usually sold at a franc each in the middle of winter.

"La Poire de Chaumontel est un gros Bœuré d'Hyver, assez long, d'un gris brun et rouge, qui est fondante et de bon goust; son eau est encore un peu âcre, venant d'un vieil sauvageon tout épineuse. Ce fruit estant cultivé et mis sur une bonne Coignace [grafted on a good Quince stock], sera plus doux et excellent; c'est la dernière et la plus tardive des Poires bœurées." Merlet, *Abrégé des bons Fruits*, 1667. [It appears from the same work, ed. 1690, that the original tree of the Chaumontel was found at Chaumontel, near Luzarches. Merlet says:] "Ce fruit estant venu depuis peu d'années sur un sauvageon à Chaumontel, qui j'ay fait rafraischir, le greffant sur le Cognossier, la suite des années le rendra encore meilleur, et en fera un de nos premiers fruits, qui j'ay mangé, sortant de son sauvageon, vers la Pentecôte."

It appears from Merlet's statement that the original tree was old in 1667. Prof. Decaisne mentions that he was informed by M. Leflamand, mayor of Luzarches in 1857, and then 92 years of age, that the old tree of the Chaumontel described by Merlet, and which belonged to M. d'Assilly, conseiller à la cour des Aides, died in the memorable winter of 1789.

Poire Duchesse de Mars.—Fruit middle-sized, obtuse, in form of a Doyenné; stalk short, thick, straight, slightly sunk at its insertion; eye very large, open; skin yellow, with red more or less brilliant next the sun, and russeted near the stalk. Flesh whitish, somewhat granular, firm, juicy, very musky. The tree is a good bearer, but grows weakly on the Quince, although vigorous enough on the Pear stock. Some nurserymen confound the *Duchesse de Mars* which ripens in winter with the *Poire de Montigny* [or Besi de Montigny], of which the period of maturity rarely extends beyond the end of the year. I have received from M. A. Royer a Pear under the name of Comtesse de Lumay, which does not appear to differ from the *Duchesse de Mars*, neither as regards its external characters nor its period of maturity and musky flavour. [The Duchesse de Mars and Besi de Montigny are perfectly distinct; but they very much resemble each other in their peculiarly musky, terebinthinous flavour, which to many is very disagreeable.]

Poire Gros Certeau d'Été.—Fruit middle-sized, pyriform, stalk long; eye level with the end of the fruit; skin smooth yellow, tinged with red next the sun. Flesh yellowish, half-breaking, astringent, juicy, perfumed. Of second-rate quality, "Le Certeau d'Ésté est une Poire longue, belle à peindre, qui vient par trochets, et est plus belle que bonne. Merlet, *Abr. des bons Fruits*, 1675." [It proved unworthy of cultivation in England.]

Poire Naguette.—Fruit Apple-shaped, small, or middle sized, depressed; stalk short, thick, inserted in a regularly-formed cavity; eye very large, in a shallow depression; skin greenish yellow, sometimes slightly tinged with red next the sun, sprinkled with large russet spots. Flesh white at the centre, slightly tinged with green next the skin, fine, melting, juicy, sugary, with a little acidity, perfumed, but less so in the large fruits than in the small. Season from the middle of August till the middle of September. The tree is a good bearer. The fruit is sometimes met with in the streets of Paris under the name of Poire d'Oignon. It belongs to a particular group of varieties, which the pomologist of the 17th century designated *Caillot* or *Poire de Rose*. The sort above described has the synonyms of *Caillot-Rosat à courte queue*, *Gros Oignonnet*, or *Oignon Allemande*. To these, modern nurserymen have added the *Bergamotte Fievée*, which they have confounded, notwithstanding their difference, with the *Poire Grésilière* of Prévost, which is synonymous with the *Bergamotte Lucrative*, or *Seigneur d'Espéren*. The Poire Naguette was described by Cl. Saint-Étienne in 1670. Mayer, *Pomona Franconica*, 1801, states that it is well-known in some cantons by the names of *Poire d'Herbe*, *Poire Disque*.

Poire de Parthenay.—Fruit large, obovate, swelled out in the middle; stalk straight, slightly sunk at its insertion; eye slightly depressed; skin clive yellow, dotted and marbled with brown. Flesh firm, sweet with a little acidity, and somewhat astringent. Prof. Decaisne states that some pomologists class the *Poire de Parthenay* among the baking Pears; but he believes with M. de Liron d'Airolles that it may be justly considered a second-rate table fruit. Season January to May. The tree is a good bearer. This variety was discovered by Poirault, a merchant at Parthenay (Deux-Sevres), where it is still cultivated in the open ground under the name of *Poire de Poirault*, or *Poire à Poirault*.

Poire Délices d'Angers.—Fruit middle-sized or large, roundish-oblong, depressed at the eye and stalk, like a Doyenné; stalk short, thick, with fleshy folds at its insertion, often thickened at its junction with the spur; eye in a regularly formed shallow depression, segments of the calyx erect; skin thick, golden yellow, more or less marbled with olive, bronze, or ferruginous russet, reddish brown next the sun. Flesh firm or half-melting, juicy, sweet, somewhat musky and very agreeably perfumed. Season, end of October, November. This must not be confounded with the *Poire Pomme*, now called Beurré de Rackenghem by some pomologists, and which belongs to the group of Caillots. It has received the name of Délices d'Hardenpont d'Angers in order to distinguish it from the Poire Délices d'Hardenpont des Belges, which is, as has been shown, the *Poire Marquise*.

Poire Fusée.—Fruit small or middle-sized, very long, pyriform, tapering into the stalk, which is long and slender, straight or oblique; eye in a slight depression, the segments of the calyx spreading; skin bright yellow on the shaded side, brilliant red next the sun, intermixed with numerous spots of darker red. Flesh firm or breaking, yellowish-white, granular, with little juice, sweet, somewhat astringent and musky. Season, October. The fruit answers for stewing and also for making *Poires tapées* [dried in an oven and flattened at the same time by pressure]. Merlet has described Poires Fusées of various seasons:—1st, the *Fusée hâtive* which ripens in July and corresponds with one of our Bellissimes; 2nd, the *Fusée d'Été*, ripening a fortnight later, probably the *Grosse Cuisse-Dame* [Jargonelle]; 3rd, the *Fusée de Mi-août*, another Bellissime; 4th, that of *Lombardie*; 5th, the *Bouline*, similar to the *Poire de Saint-Sanson*, of the month of August; 6th, the *Friseur*, which is our *Vermillon*; 7th, the *Fusée de Novembre*, à queue courte; 8th, *Fusée d'Hiver*, one of the latest, and probably allied to one of our *Torquin* Pears.

According to Cl. St. Etienne, *Nouv. Instr.*, 1670, the P. Fusée was by some called Gros-Roland, or Chesnegalon. Prévost (*Pomol. Seine-Infér.*) states that this must not be confounded with a very good Pear for compote, which is also called Poire de Fusée, but which is better known at Rouen by the name of *Poire de Margot*.

Poire Grésilier.—Fruit middle-sized, roundish-turbinate, or Doyenné shaped; stalk short, fleshy, irregular, bearing traces of some bracts; eye level with the fruit or placed in a very slight depression, the segments of the calyx spreading or erect. Skin yellowish-green, tinged with red next the sun; flesh remarkably fine and melting, a little green next the skin, juicy, with a very sugary perfumed flavour. Season, beginning of September. The tree is very productive. The synonyms of this excellent Pear have been hitherto completely misconceived. I have retained, says Professor Decaisne, the name of Grésilier under which Prévost first made it known to us by a good description accompanied with figures. The French nurserymen have confounded it with the *Poire Naguette* or *Bergamotte Fievé*, which is very different, whilst the Belgian pomologists have designated it under the name of *Seigneur d'Espéren* without foreseeing the confusion which this name would entail as we have already the Poire Seigneur or Épargne, the Poire Seigneur or Doyenné, the Poires Seigneur d'Orsai, Seigneur jaune, Seigneur Everard de Sénéclauze, Seigneur d'Hiver, or Poire de Pentecôte [Easter Beurré], and finally the Catalogue of Van Mons contains a Petit Seigneur. The name of P. Grésilier, given by Prévost, besides its right of priority, appears to me to have the great advantage of being clear of such confusion for the future.

Poire d'Alençon.—Fruit middle-sized, obovate; stalk very short, thick, straight or slightly bent, sunk at its insertion, eye not sunk. Skin smooth, greenish-yellow, marbled and spotted with russet. Flesh white, melting, very fine, sugary, perfumed, slightly astringent, excellent. Season, November—March. The tree is vigorous and succeeds well on the Quince Stock. The Poire d'Alençon appears to have been discovered in 1810 by M. Thuillier, a nurseryman at Alençon, in a hedge on the farm of Ratterie, commune of Cussey, Department of l'Orne. This excellent Pear has been described by M. Prévost, under the name of Doyenné d'Hiver, but he distinguishes it from the Bergamotte de Pentecôte [Easter Beurré]. On the other hand, M. Willermoz has given as a synonym the name of Saint Michel d'Hiver, which equally applies to a Pear described by Duhamel, and of which (continues Prof. Decaisne) I have myself given a description. Bivort, *Album Pomol.*, states that many cultivators have given it the name of Doyenné marbré, in consequence of the regular and decided marbling of its skin; and that it also bears the name of *Doyenné d'Hiver nouveau*.

Poire Epine Rose.—Fruit small or middle-sized, round, flat, Apple-shaped; stalk very long and slender, sunk in an even cavity; eye large, segments of the calyx reflexed; skin green or olive-yellow, brownish red next the sun, sprinkled with brown dots. Flesh whitish, coarse, gritty; juice abundant, sweet, perfumed. A fruit of second-rate quality. Season, August. The tree is very productive.

Poire Duval.—Fruit large, oblong-pyriform; stalk straight, but obliquely inserted, the fruit projecting on its upper side; eye nearly level with the fruit or in a slight flattening; skin very smooth, greenish yellow, sprinkled with dark-coloured dots, with a little marbling of russet, rarely tinged with red. Flesh white, somewhat granular, firm or half-buttery, juicy, sweet, acidulated, perfumed, with a very agreeable flavour. Season, November. The tree is very productive. When the P. Duval acquires a tinge of yellow and red it might be easily mistaken for the *Louise Bonne d'Avranches* [Louise Bonne of Jersey]; but its period of ripening is usually two months later.

Poire Oignonet de Provence.—Fruit small, round; stalk long, slender, straight, or slightly curved; eye level with the fruit, the segments of the calyx erect; skin Grass-green, slightly covered with a glaucous bloom, sprinkled with small dots, and sometimes faintly tinged with red next the sun. Flesh fine, greenish, half-melting, juicy, acidulated. Season, end of August. This variety, inferior to many others ripening at the same period, has nevertheless the great advantage of being every year very productive.

Poire Nain Vert.—Fruit small, or middle-sized, oblate, or Apple-shaped; stalk slender, variable in length, curved, deeply inserted; eye in a regularly formed depression; skin yellowish green, spotted, and marbled with russet, which is rough to the touch, especially near the eye and stalk. Flesh white, firm, half melting, juicy, sweet, but not rich. Season, October; a third rate fruit. The tree forms a bush between 3 and 4 feet high. It is remarkable for its dwarf habit, and its erect, thick, fleshy branches. It was obtained from seed about 20 years ago by the late M. de Nerbonne at Huillé, and it is stated that the original tree may be seen in the collection of the Horticultural Committee of Angers. Prof. Decaisne suggests that if it can be easily propagated it might perhaps be employed as a stock for dwarfing Pear trees, in the same way as the Paradise stock is employed for Apple trees.

(To b continued.)

Over Sands to the Lakes, by Edwin Waugh (Ireland, Manchester), is, in the form of a pamphlet, an excellent guide book to the lake district, with many a clever woodcut illustrating places and scenery. The "sands" spoken of are those of Morecambe Bay, forming "the most impressive gateway to the Lake country," and dividing the districts of Furness and Cartmel from the rest of Lancashire. In an old Lancashire ballad of Flodden Field, the two last places are spoken of:—

"From Silverdale to Kent sand side,
Whose soil is sown with cockle shells;
From Cartmel eke, and Connyside,
With fellows fierce from Furness fells."

but few knew of their existence till our railway days which have brought travellers acquainted with places once inaccessible. Mr. Waugh speaks of them thus:—"Furness is indeed 'a land whose stones are iron, and out of whose hills thou mayest dig brass;' but the wild fells and green valleys of Cartmel know little of the bustling world, save what belongs to their purely agricultural and pastoral character; and the primitive race of mountain folk dwelling therein clings to the manners, language, and traditions of its 'fore-elders' with an affection little disturbed by communion with the great changes of modern life. To the scholar and student of manners, to the lover of nature, and the man of science, these secluded hills and glens teem with rich and rare interest." In days gone by these places could only be reached by crossing the "sands" in question, and an exciting sort of crossing it must have been:—"The channels are constantly shifting, particularly after heavy rains, when they are perilously uncertain. For many centuries past, two guides have conducted travellers over them. Their duty is to observe the changes, and find fordable points. In all seasons and states of the weather this was their duty, and in times of storm and fog it must have been fraught with danger. These guides were anciently appointed by the Prior of Cartmel, and received synodal and Peter-pence for their maintenance. They are now paid from the revenues of the duchy. The office of guide has been so long held by a family of the name of Carter, that the country people have given that name to the office itself. A gentleman, crossing from Lancaster, once asked the guide if 'Carters' were never lost on the sands. 'I never knew any lost,' said the guide; 'there's one or two drowned now and then, but they're generally found somewhere i'th bed when th' tide goes out.' A certain ancient mariner, called Nuttall, who lives at Grange, on the Cartmel shore, told me that 'people who get their living by "following the sands," hardly ever die in their beds. They end their days on the sands; and even their horses and carts are generally lost there. I have helped,' said he, 'to pull horses and coaches, ay, and guides too, out of the sands. The channel,' he continued, 'is seldom two days together in one place. You may make a chart one day, and, before the ink is dry, it will have shifted."

In this agreeable manner the traveller is carried along through 50 pages of instructive local information.

Ure's Dictionary of Arts, Manufactures, and Mines stands now at the 12th part, only three more remaining to complete the work. The principal articles are those on Paper, an important one by Mr. Hunt himself, Peat, Perfumery, Photography, Pottery and Printing, the latter a pretty complete history of the invention and explanation of the art in its minute practical details. Under an article contributed by Mr. Greville Williams, Potash (Nitrate of, or Saltpetre), we find the following curious statement, which is doubtless new to all except professed chemists:

"2. The second mode of preparing nitre which we shall consider, is from nitrate of soda and chloride of potassium. On dissolving equivalent quantities of these two salts in water, and salting down, double decomposition takes place. The chloride of sodium may be removed from the hot concentrated fluid by means of shovels, while the nitrate of potash, being much more soluble in hot than in cold water, remains in solution, but crystallises out on cooling. The decomposition takes place in accordance with the annexed equation:—

$$NaO,NO^5 + KCl = NaCl + KO,NO^5.$$

"The above reaction is one of great interest and importance, inasmuch as it enables us to convert Peruvian

or cubic nitre, as nitrate of soda is sometimes called, into the much more valuable salt, nitrate of potash. During the last war with Russia it was found that large quantities of chloride of potassium were exported, and found their way into that country. For some time no notice was taken, because the salt appeared too harmless to be declared contraband of war. Eventually it was found that it was entirely used in Russia for the purpose of affording nitrate of potash, by the process described. It need scarcely be said that the gunpowder made through the medium of our own chloride of potassium, was employed against our troops in the Crimea."

Trade Lists Received. — Louis Van Houtte, à Gand (Belgique). Prix-Courant de Plantes rustiques de plein air, contenant les Arbres et arbrisseaux de pleine terre, les arbustes grimpants, les Conifères de plein air, les Rosiers; les articles de terre de bruyère, tels qu'Andromeda, Azalées de pleine terre, Erica, Kalmia, Ledum, Magnolias, Pivoines en arbre, Rhododendrons rustiques, etc.; les Plantes vivaces de pleine terre, ainsi que leurs Spécialités telles que: Collections d'Althæa rosea (Roses trémières), Bellis (Pâquerettes), Chrysanthèmes, Dianthus (Œillets), Filices (Fougères rustiques), Iris à Rhizômes, Pæonia (Pivoines herbacées), Phlox decussata, et Finalement quelques nouveautés en poiriers et autres articles.

Garden Memoranda.

Hampton Court Palace Gardens. — This has been a season of little else than grumbling and disappointment with the generality of flower gardeners, and really in many places there has been reason for it. Not so, however, at Hampton Court. Here the wet weather seems to have been favourable for many things. Verbena beds in general are as well filled and as healthy as ever we remember to have seen them, and are even now one mass of flower; Purple King, André, Lord Raglan, General Simpson, Ariosto, Mr. Holford, and Madeline appear to be favourites here, and deservedly so, for they really make charming masses. Calceolarias were also very good; conspicuous among them were Kayi, angustifolia, integrifolia, aurea floribunda and amplexicaulis; the latter mixed with dwarf Tagetes looks extremely well, and when in juxtaposition with Madeline Verbena has a fine effect; Perilla pegged down covered the beds it was in beautifully; Tropæolum Lobbianum elegans likewise was very good, as was also the old Stachys lanata, mixed with Flower of the Day Geranium; of all white beds, however, none equals Variegated Sweet Alyssum, when grown in the same perfection as it is here. Among Scarlet Geraniums Tom Thumb seemed as good as any, especially under the Yew trees which line the principal walks. The dwarf Zelinda Dahlia also does well pegged down under trees. In short, so well have out-door plants succeeded here this season, that it is difficult to say what has done best. In front of the Palace, to fill up two triangular corners, are what may be termed two rainbow beds; each of these consist of seven rows 2 feet in width, planted thus—First, *i.e.*, next the Grass, Tom Thumb Geranium; second, Variegated Sweet Alyssum; third, Purple King Verbena; fourth, Calceolaria angustifolia; fifth, Purple King; sixth, Variegated Sweet Alyssum; and next the Grass again, Tom Thumb Geranium. These two beds are very effective, being literally one mass of bloom, and as level on the top as if they had been clipped. Beyond these every other bed consists of self colours; mixtures have only been planted for the sake of contrast. Each colour is arranged with a view to effect, both near and at a distance. The border, half a mile in length, which runs in a line with the east front of the Palace, and in which there is nothing to obstruct the view, is arranged so as to match the beds on the opposite side of the walk. Here each bed represents blocks of distinct colours. Perilla is placed between Tom Thumb Geranium, and whites always between blues, purples, or reds.

Out of 326 beds, three or four, although planted the same as the others, and with similar plants, were not quite satisfactory. Upon inquiring the reason of this we were informed that these "seedy" beds, as Mr. Donald termed them, had not been trenched; all the other open beds had: two or three times during these last five or six years. In the bottom of each trench was put a good wheel-barrow load of leaves, not rotten, but just as they were swept from under the trees. This was done as soon as the frost destroyed the plants on the beds, which were also put into the trench along with the leaves, a practice which saved the trouble of wheeling them away, and in many cases moving them back again when they became rotted. This mode of management has its advantages. In a dry season trenched ground retains moisture much longer than when left undisturbed; this was abundantly proved here last year. This season the trenching afforded excellent drainage, and the putting a layer of leaves in the bottom of each trench favoured the speedy carrying off of the superabundant moisture which has been experienced this year. Vegetable matter thus buried also turns up the following winter in just the right condition for plants to thrive in it. This plan of flower-bed management therefore cannot be too extensively practised.

As regards the great Vine, we regret to say that its condition is not satisfactory. Both bunches and berries are smaller than they have been in former seasons, and judging from the wood it has made, next year's crop may be expected to be even worse than this. Let us hope however that we may be mistaken.

Jardin Royal de Zoologie et d'Horticulture.—This is near the Luxembourg Railway Station, Brussels; the great attraction here appeared to be music, if one may judge from the large quantity of chairs placed round a raised circular platform of brickwork surrounded by a border planted with Verbenas, Geraniums, &c., with iron girders supporting a canopy or shade; these are covered with Hops. At the further end of this garden are the residence and hothouses of M. Linden; that gentleman was from home, but we were shown through the houses by his brother-in-law, M. Funck. The first place we entered might be called the show house; it contained Palms, Ferns, &c., of the large class; these were well and tastefully arranged, also several good Tydæas. One of the most showy and remarkable plants in this house was Cibotium princeps, a very beautiful and magnificent tree Fern, having singular furry red wool on the stem, leaves, and fronds; also some fine plants of Ceroxylon ferrugineum, a very handsome Palm—this house is about 80 feet long and 22 feet in width.

House No. 2.—Here we saw Pteris villosa, Angiopteris ascensionis, both fine specimens; Pteris sp. nova, having a peculiar serrated edge to the leaf.

In House No. 3 was a new Cattleya from San Paul's.

In No. 4 the beautiful Rhopala glaucophylla, remarkable for its stately appearance and handsome leaves; also R. crenata, which is new and originally from the mountains of San Paul's; also R. montana, Cupania fimbriata, together with beautiful specimens of Theophrasta imperialis, T. macrophylla, and T. nobilis, all plants of extreme beauty; the last variety is very rare. A new Tecoma from Brazil, with peculiar woolly stem and leaf, was also growing here; likewise Aralia Lindeniana and A. reticulata, though not new, yet beautiful. Of Crescentia regalis there was a very fine specimen; also Stadmannia sp. from Brazil; Cataleuca rubicunda, having beautiful silvery under-side of leaves; Isotypus rosiflorus, remarkable for its beautiful silvery leaf and stem; Guarea macrophylla, a very fine specimen, with handsome foliage; Gomphia Theophrastæ, and Colea Commersonii.

In House No. 5 were magnificent specimens of Pleetocomia spectabilis and Thrinax elegans, a small and very pretty Palm. We also noticed about 20 varieties of Pandanus, of which elegantissimus was the most attractive.

House No. 6 is principally occupied with Orchids, among which we noticed the following in bloom, viz.:—Odontoglossum Bictoniense, Miltonia spectabilis, Epidendrum prismatocarpum, Odontoglossum hastilabium, Sobralia violacea, a good specimen; some good Cypripediums, and the rare and very handsome Anæctochilus eldorado, having irregular gold lines finely dotted; also Cattleya amethystina.

No. 7 is devoted to plants either officinal or medicinal. We noticed a fine stock of the rare and curious Galactodendron utile, or Cow Tree, and the new Columnea erythrophæa, with handsome long scarlet flowers.

In House No. 8 we found Aralia integrifolia, remarkable for its long and handsome leaves; a new Fuchsia, called cinnabarina, somewhat of the habit of F. serratifolia; a peculiar climber from New Grenada called Mutisia Clematidis, having tendrils at the end of each leaf, the habit of a Passiflora and composite yellow flower; and Dracæna Veitchii, the leaves of which have a central red line.

House No. 9 was mostly occupied with Orchids; among which was a new Asplenium and the great Musa Ensete.

In No. 10 was a beautiful plant resembling Cissus, called Mikania splendens, and a pretty Alloplectus Schlimii.

In No. 11 was a very fine stock of the remarkably beautiful Pteris tricolor, which we venture to predict will become one of the most beloved of Ferns, being handsome and distinct in appearance; the three colours are beautifully blended and variegated, the rib being of purplish red, as also the young partially developed fronds; it has a broad silvery stripe down the centre of each leaf, and a portion of the leaf is dark green. This Fern looked very striking to the eye. At another place it was not so bright in colour, which was said to be owing to the plant being impatient of syringing. In the same house was the Campylobotrys regalis, a plant of singular beauty, and large variegated leaves of the colour of Begonia Rex; with Saccolabium violaceum in bloom. Here were also the beautiful Anæctochilus (Macodes) petola, and Centradenia grandiflora.

No. 12 was devoted wholly to the culture of Begonias. It contained several very fine plants of B. Rex Leopoldi, and B. Duchesse de Brabant, the last a plant of extreme beauty. *H. J.*

Miscellaneous.

Manuring Vines in Vineyards.—We find the following in a prize essay by Mr. Pettavel upon the cultivation of the Vine in the Colony of Victoria (N. Holland):—"Vines in this country will not require manuring for many years, for those which are grown for wine-making only will last from 20 to 30 years without needing any manure, provided only that they be regularly and carefully pruned and disbudded (which with the generality of Vine-dressers will be the case), and the ground kept well stirred and clean, so that weeds may not help to exhaust its strength. This is more particularly true of the species which yield red wine; those which give white wine being of a stronger species, exhaust the soil more rapidly, and the land would therefore sooner require manure. However, manuring will, in all cases, materially alter the flavour of the Grape and the taste of the wine, and manures of different sorts will have different effects. The Vine-dresser should guard against the strong manures of the slaughter-house; decaying leaves, the shoots taken from the Vines, straw, horse and cow-dung, made into a heap, with a large quantity of earth, and kept so for 12 months, being during that period turned over two or three times, applied in small quantities, will be the best for general use. To soils which are deficient in lime, crushed bones, if they are sufficiently plentiful and cheap, or the waste lime of the soap maker (which is principally carbonate of lime), would be found of great value. I know a gentleman who has a small Vineyard planted with the Burgundy varieties of Vines; he has not manured it for 30 years, still it bears yearly a good average crop, and produces the choicest wine in his cellar, which shows that the Vine, if properly cultivated, will not very soon need manure."—Mr. Belperroud, another prize essayist, writes as follows on the same subject:—"The winter is decidedly the best season for manuring, after pruning is done, and before the fork-hoeing; the beneficial effect of it will be evident the first year, and the Grapes will come sooner to maturity; and the second year, double the quantity of bunches may be expected: full crops too will be borne for five or six years afterwards. The variety of manures suitable for the Vine is so great, that it would be tedious to enumerate them, but I may briefly mention that bones, skins, refuse of breweries, ashes, lime, mortar, leaves and small branches of shrubs or trees, guano, are all good. The rubbish of an old house (*déblais d'une maison*), lime and ashes well washed, beyond all other manures improve the quality of the wine with certainty, particularly when applied in a strong clayey ground. Common salt suits Grapes very well, particularly Muscatels, and I suppose every kind of Muscat. The murk of Grapes coming from the still, or from the press, is an excellent dressing for every variety of soil. Guano has been tried at Berramongo for the Gouais; the first year of its application it had no visible effect on the stocks, the second it produced much wood and large berries, but no increased quantity of bunches; but in the third year it was astonishing to observe the great difference between 12 rows that had been manured with guano, and other 12 rows that had not been manured at all—the former looked healthy, dark green, had long strong branches loaded with large bunches of fruit, and far more advanced than others in their neighbourhood; it yet remains to be proved, however, whether it will stand long, or if it will increase the quantity of the fruit, without injuring the fine quality of the wine."

Habits of the Kestrel.—The common Kestrel is one of the most familiar of the British Hawks, being seen in almost every part of the country where a mouse, a lizard, or a beetle may be found. It may be easily distinguished while on the wing from any other hawk, by the peculiar manner in which it remains poised in air in a single spot, its head invariably pointing towards the wind, its tail spread, and its wings widely extended, almost as if it were a toy kite raised in the air by artificial means, and preserved in the same spot by the trammels of a string. While hanging thus strangely suspended in the air, its head is bent downwards, and its keen eyes glance restlessly in every direction, watching every blade of Grass beneath its ken, and shooting down with unerring certainty of aim upon any unhappy field mouse that may be foolish enough to poke his red face out of his hole while the Kestrel is on the watch. The marvellous powers of the Kestrel's eye may be easily imagined by any one who has any experience of the field-mouse and the extreme difficulty of seeing the little creature while it is creeping among the Grass straws. Its ruddy coat blends so well with the mould, and the Grass blades bend so slightly under the pressure of its soft fur, that an unpractised eye would fail to detect the mouse even if its precise locality were pointed out. The number of field-mice consumed by this hawk is very great, for it is hardly possible to open the stomach of a Kestrel without finding the remains of one or more of these destructive little animals. On account of its mouse-eating propensities, the Kestrel is a most useful bird to the farmer, who in his ignorance confounds all hawks together, and shoots the Kestrel because the kite steals his chickens. Not that the Kestrel is wholly guiltless of chicken-stealing, or even of the greater crime of poaching on the preserves. Like all animals, it occasionally changes its diet, and pounces upon a chicken, a young pheasant, or a partridge. One of these birds has actually been shot with a young pheasant hanging in its claws, and the legs of young game have been found strewed beneath a nest where a Kestrel had reared her young. Young rabbits and hares have sometimes fallen victims to the hunger of the Kestrel, which is, however, unable to carry them away except during their earliest stages of independent existence. Reptiles of different kinds, such as frogs,

small moles, and newts, are also a favourite prey of this bird, which has often been known to snatch fish out of the water by a dexterous sweep of its ready claw. When the Kestrel lives among the rocks upon the sea-coast, it haunts the shore at low water in search of food, and makes many a meal on little crabs, shrimps, small fish that have been left in the rock-pools of the receding tide, and many other marine creatures. In the use of its claws the Kestrel is remarkably quick and ready, and being also a swift-winged bird, it is in the habit of chasing cock-chaffers and other large beetles on the wing, and catching them neatly with its claws as it shoots past their course. Without pausing in its flight, the bird transfers the insect from the foot to the mouth, and eats it without taking the trouble to alight. With such eagerness does it pursue this kind of prey, which we may suppose to be taken as a dessert after a more substantial meal upon mouse-flesh, that it continues its chase far into the evening, and may be seen in hot pursuit of the high-flying beetles long after dusk. Caterpillars and other larvæ are also eaten by the Kestrel, which does not disdain to alight on the ground, and draw the earthworms out of their holes. Sometimes, but rarely, it attacks the smaller birds, choosing especially to pounce upon them as they are gathered together in little flocks, and are so confounded at the sudden appearance of their enemy, that they fall easy victims to the destroyer. On this account, the Kestrel is often seen in the winter months hovering near the farmyards, in hopes of making a successful dash among a plump of sparrows as they congregate over some fresh straw, or settle among the fowls for the purpose of picking up the grain which was intended for the poultry. Mice, however, are always its favourite diet, and as the multiplication of these little quadrupedal pests is much increased by the abundant food which they find in cultivated grounds, and stacks and barns, the Kestrel has learnt to attach himself to human residences, instead of becoming self-banished, as is the case with almost every other hawk. There is hardly a village where the Kestrel may not be seen hovering with outspread wings, and surveying the fields below. In general, however, it troubles itself little about feathered prey, unless it can pick up a very young pheasant or partridge, as is indeed seen by the conduct of the sparrows and other small birds. If a sparrow-hawk, merlin, or hobby should appear in sight, the little birds are at once in an uproar, shrieking, chattering, darting from place to place, and expressing their alarm in a thousand ways. But when a Kestrel comes into view, they display hardly any uneasiness, and do not suffer themselves to be disturbed by its presence. Swallows, however, trusting to their speed of wing, are very fond of mobbing the Kestrel, and are so impertinent that even a single swallow has been seen suddenly to turn the tables on a Kestrel which was pursuing it, and to attack its astonished opponent with equal skill and audacity. On one occasion when a Kestrel had caught a sparrow, its cries took the attention of a number of swallows, which made a united attack, and forced the hawk to release its frightened but unhurt victim. With the aid of a good telescope, every movement of the bird may be discovered as it hangs in the air, and the sight is a very interesting one. Its wings keep up a continual shivering, its widely spread tail is occasionally moved so as to suit the slight changes of the breeze, the spirited little head is in perpetual motion, and the dark-brown eyes gleam with animation as they keep their restless watch. It seems from various observations that each Kestrel has its regular beat or hunting-grounds, and may be observed punctually repairing to the same spot at the same hour, much after the manner of the golden eagle. *Routledge's Illustrated Natural History.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

Conservatory, &c.—Hyacinths and other Dutch bulbs, if not already got, should be procured and potted without delay. Orange trees meant for forcing in winter for the decoration of this house should also now be attended to. These and the fragrant Daphne indica are invaluable for winter blooming, and should be largely grown for that purpose. Also see to having plenty of Salvia splendens, which is useful for mixing among Chrysanthemums. It is a good practice to place the largest plants of Salvias in a shady situation out of doors for a few weeks in autumn; plants so treated will be found to bloom more strongly, and last longer in beauty than others run up in a warm house. Look carefully after the watering of large specimen hard-wooded plants in pots, especially Heaths, which are soon injured by being either over or under-watered. Examine the specimens often and carefully, and where they are found to be dry water thoroughly, so as to moisten the whole of the ball; also look sharply after mildew on soft-wooded Heaths, and dust the plant with sulphur directly the enemy is perceived. Get Azaleas tied into form as soon as can be done, in order to give them a neat appearance. Also attend to the staking and training of other things as leisure time can be found. Look carefully after red spider on Bossiæas, Chorozemas, and anything else found to be liable to that pest, and see that it is eradicated before the plants get disfigured. Red spider is easily got rid of by laying the affected plant on its side, and well washing the under sides of the leaves with the engine, applying the water with as much force as the foliage will bear. Repot strong growing Pelargoniums; plants that are fairly established after repotting can hardly be kept too cool. Also keep Cinerarias as cool and moist as is consistent with safety, and attend to repotting such as require it; fumigate immediately aphides are perceived upon any of the plants. Primulas must also be carefully attended to, in order to encourage them to make rapid growth, particularly double varieties. Keep Tree Violets clear of their great enemy, red spider, by a liberal use of the syringe, and give them plenty of manure water, which will assist in keeping them in vigorous health.

FORCING DEPARTMENT.

Pineries.—Any of the stock which may appear to require repotting should be examined and shifted at once, if this is found necessary, in order that the roots may get hold of the fresh soil before dull weather sets in, when it will not be safe to encourage free growth. And any necessary re-arrangement of plants growing in the open bed should also be effected as soon as possible, as with a little care in shading and keeping the atmosphere moist, this can be carried out at present with very little risk of checking the plants, so as to throw them into fruit. Encourage plants expected to show fruit next January to make vigorous growth, for these should be sufficiently advanced by the beginning of next month to allow of keeping them rather cool and dry, so as to check and thoroughly mature their growth, for unless this is attended to there will be considerable risk about getting them to show fruit at that season. Plants which have been prepared for fruiting, and which it is desired to get up at once, should be encouraged with a moist warm atmosphere, keeping the soil about their roots in a healthy state as to moisture. Some have a dread of applying water at the root in the case of plants that have been kept dry for a time to check growth, and withhold it until the fruit is perceptible; but this is a mistake, causing loss of time as well as injuring the plants, as unless root action is encouraged, plants cannot be expected to start freely. If artificial treatment must be resorted to in order to get the plants to fruit at the desired time, there is no method so certain or so little injurious as keeping them cool and dry for a month, and then affording them a moist warm temperature and a brisk bottom-heat, giving sufficient water at the root to properly moisten the soil. Take off and pot, or plant out suckers at short intervals as they can be obtained of sufficient strength, for having a regular succession of plants is the most likely way to secure a regular supply of fruit.

Vineries.—Take advantage of the present dry weather to give air freely in houses where the ripening of the wood is the object, and if a little fire-heat is used, with the air, this will be much more efficacious now than later. But except in the case of young Vines with a very gross habit it will hardly be necessary to use fire-heat while the weather continues dry. Keep the surface of the border in a free open state, so as to encourage evaporation, for keeping the roots too wet is the main cause generally of the wood being backward in ripening at the proper time.

Figs.—Where any are ripening keep the atmosphere as dry as can conveniently be done, and also let the trees be on the side of dryness at the root, but avoid such a degree of drought as would be likely to injure the foliage or the bearing wood for next crop. Keep the shoots thin and neatly tied in, so as to expose them fairly to light and air, but avoid stopping at this season. Keep the atmosphere moist where the fruit is swelling, giving the foliage a good washing with the syringe frequently to prevent red spider, and give plants in pots or tubs a liberal supply of manure water.

FLOWER GARDEN AND SHRUBBERIES.

Cuttings should be carefully looked over to see that nothing has been omitted, and that a sufficient quantity of everything is in a promising state for making nice plants before winter; it should be borne in mind that things which are at all difficult to winter rooted after this season may be considerably thinned before spring, and also that they will not be sufficiently strong to furnish many cuttings for spring propagation; consequently a larger quantity than would have been necessary had the cuttings been put in a month ago, should be provided. But if there is a reserve stock of strong plants in pots, which is a safe practice where there is a large quantity of bedding stuff required, and proper convenience for growing them and propagating in spring, these will furnish a large quantity of cuttings next March which, as has been formerly stated, will form equally good plants by turning out time as cuttings put in now. In the case of such things as Ageratums, Heliotropes, and dwarf Lobelias, it is useless wintering young stock, as these grow so freely in heat, and are so easily propagated from soft cuttings that a few good-sized old plants which require but little room or attention in winter will furnish a very large quantity of plants by bedding out time. Attend to the potting of cuttings sufficiently rooted, and give every after attention to these in order to get them well established. Persevere with leaf-sweeping and other routine work.

HARDY FRUIT AND KITCHEN GARDEN.

Pay every attention to getting the wood of Peaches and Apricots well ripened, by exposure, shortening, &c. Prepare for planting all kinds of fruit trees, by getting the ground in good order for the different kinds. On cold stiff soils it is advisable to plant on hillocks, 1 foot or 18 inches higher than the surrounding surface. The trees will not grow so fast in consequence, and will require more attention in summer in the way of mulching, but they will form short-jointed, well ripened, fruitful wood, which is the best preventive of canker, gum, &c., and will save the labour of resorting much to root-pruning. No opportunity should now be lost for getting Potatoes, Parsnips, Carrots, Beet, &c., out of the ground, and stored up in a dry condition. Potatoes may either be kept in narrow pits, with a little dry earth sprinkled among them, or in airy dark sheds. Pull Cauliflower before it gets too large, and prepare a shed or pit to plant a quantity on the first approach of frost. French Beans may require a slight protection at night. Remove those growing in pots, where they can have the protection of glass; lay down strong growing Broccoli, so that the stems may be covered with earth; plant out Lettuces and Endive for spring use. If planted on the sloping sides of wide ridges they will stand better, damp being quite as destructive as frost. Take the precaution of securing a quantity of both in pits or frames, or have the means of protection in readiness. Remove the leaves from Rhubarb and Seakale, that you intend forcing very early, and keep a look-out for slugs and weeds.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON

For the Week ending Oct. 11, 1860, as observed at the Horticultural Gardens

October.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Friday 5	20	30.093	30.017	62	41	51.5	55	54	W.	.00
Satur. 6	21	30.267	30.189	68	44	56.0	55	53½	W.	.00
Sunday 7	22	30.188	30.118	69	40	54.5	56	54	W.	.00
Mon. 8	23	30.138	29.981	62	39	50.5	56	54	W.	.01
Tues. 9	24	30.009	29.914	54	30	42.0	55½	54	N.W.	.01
Wed. 10	25	30.145	29.488	54	40	47.0	54	53	S.W.	.36
Thurs. 11	26	30.504	29.418	49	25	37.0	53½	53		.16
Average..		30.063	29.875	59.7	37.0	48.3	55.0	53.6		.54

Oct. 5—Partially overcast and windy; clear at night.
— 6—Slight fog; exceedingly fine throughout.
— 7—Overcast; very fine; overcast.
— 8—Fine; very fine, with dry air; slight rain.
— 9—Cloudy; boisterous and cold; clear; slight frost.
— 10—Fine; overcast; barom. column remarkably hollow; cold rain.
— 11—Overcast; cold, with constant rain; sharp frost at night.
Mean temperature of the week, 4 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Oct. 20th, 1860.

Oct.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 14..	59.3	41.7	50.5	16	0.50 in.	2	5	4	1	7	5	5	3
Mon. 15..	58.0	40.7	49.4	16	1.04	2	2	4	1	9	5	7	4
Tues. 16..	58.4	40.5	49.5	15	0.56	—	5	5	1	4	7	10	4
Wed. 17..	58.1	41.4	49.7	14	0.31	1	1	1	1	3	6	9	2
Thurs. 18..	58.0	41.8	49.9	19	0.85	3	3	3	1	2	6	7	4
Friday 19..	59.3	40.0	49.6	16	0.61	1	4	3	3	2	6	9	3
Satur. 20..	59.4	42.6	50.0	15	0.34	1	6	1	3	5	7	8	3

The highest temperature during the above period occurred on the 14th, 1845—therm. 76 deg.; and the lowest on the 19th, 1843, and 20th, 1842—therm 22 deg.

Notices to Correspondents.

Books: *J H.* Thompson's Gardener's Assistant.—*One interested.* We do not know the price. If booksellers would only print the price on the covers of their books it would be far more convenient to the public. Enquire of your bookseller.—*A M.* Outlines of British Fungology. By Berkeley. The other work you seek for is that of the Contessa di San Giorgio, about which you must apply to Messrs. Herries & Farquhar, of 16, St. James's Street, London.

Drainage: *C P.* Drain the land 4 feet deep if you can; if not as near that depth as may be. Mr. Fortune's two Chestnuts are in the country, but we know not in whose hands. They were dispersed at Mr. Glendinning's sale; and the "Castanea chinensis" is probably one of them.

Grapes: *J L O.* There is no decided difference between the Muscat of Alexandria and the Charlesworth Tokay. It is questionable whether they are not the same.‖

Gunnera scabra: *C M F.* This is a very large leaved hardy herbaceous plant, with a noble aspect when growing on the top of a damp mound of stones. It is not a water plant. Certainly it would be superb in Hampshire.

Names of Fruits: Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to name more than six sorts, whatever may be the number forwarded.—*A Subscriber.* The Peach is the Royal George. 1. Washington; 2. Jefferson; 3. Ickworth Impératrice; 4. Reine Claude Violette; 5. Louise Bonne of Jersey; 7. Beurré d'Aremberg.—*J F.* 1. Diamond Plum; 2. Resembles the Whitton.—*W. H. Westerham.* Not known.‖

Names of Plants: *J R E.* 1, Solanum vescum; 2, 3, and 4 are no doubt Parsonsias; 5, Clematis hexasepala. We cannot undertake to name seedlings not in flower; and you have forgotten the regulation about numbers.—*Arcanum* Polygonum lapathifolium.—*M* Hibiscus lilacinus—*O P.* Teucrium Scorodonia, a weed in the soil—*John T.* Marchantia hemispherica.—*J D.* Symphoria racemosa—*W M J.* Some Acanthaceous plant, not in a state for determination.—*H D* Panicum capillare.—*A Y.* 1. Polypodium Dryopteris; 2. Lastrea spinulosa.

Silver Beet: *Beta.* If by this name you mean Chard Beet, it may be forced like Seakale; but it has a disagreeable earthy taste, which renders it unfit for the tables of persons of cultivated taste.

Vinery: *The Cottage.*—If you cannot get deep enough beneath of water, you cannot warm your border artificially. You had better cover the existing border with a good bed of concrete so inclined as to allow water to drain away. And on this concrete raise your new border 18 inches deep at the back, sloping to the front so as to catch all sun-heat possible. Or you may have the border inside the house; but still, in that case you must take measures to render it impossible for the roots of the Vines to get into the water; and you will do that best by following the foregoing advice.—*E P.* Whether or not you can heat it from the kitchen boiler is more than we can say without inspection. To judge from your description we should say it could not be so heated.

Vines: *S. Bertin.* We shall be happy to re-examine it; but it seemed identical with our ill-ripened Muscats of the present season.

Misc.: Full price will be given for No. 9, 1858.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

AUTUMN SOWING.

THE PATENT NITRO-PHOSPHATE OR BLOOD MANURE COMPANY (LIMITED), consisting of Tenant Farmers, occupying upwards of 30,000 Acres of Land.

Chairman.—JONAS WEBB, Esq., Babraham, Cambridge.
Works: Plaistow, Essex.

ODAMS'S BLOOD MANURE FOR WHEAT (Autumn Sowing)
ODAMS'S BLOOD MANURE FOR ROOT CROPS,
ODAMS'S SUPERPHOSPHATE OF LIME.

PRICES, with particulars for use, may be obtained at the Offices, 109, Fenchurch Street, E.C. C. T. MACADAM, Sec.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840,)

Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES, AND BONE MANURE FOR PASTURES.
CONCENTRATED URATE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR AUTUMN SOWING.

They would call particular attention to the article DISSOLVED BONES, in which they guarantee every portion both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW PURSER, Secretary.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

LAWES'S MANURES.

LAWES'S TURNIP MANURE	£6	6
,, BONE SUPERPHOSPHATE OF LIME ..	6	6
,, MINERAL SUPERPHOSPHATE OF LIME ..	5	5
,, BARLEY, GRASS, AND MANGEL MANURES	8	0

Wheat Manure: Peruvian Guano is proved to be the best and cheapest artificial manure that can be used for Wheat at autumn sowing.

Peruvian Guano direct from Messrs. Gibbs; Sulphate of Ammonia, Nitrate of Soda, and all Chemical Manures. Linseed, Rape, and Decorticated Cotton Seed Cakes supplied at the market prices, by Mr. J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

KEEP YOUR PREMISES FREE FROM MICE AND SPARROWS.

BARBER'S POISONED WHEAT kills them (only) on the spot. In 1*d*., 2*d*., 4*d*., and 8*d*. packets.—W. SUTTON & Co., 10, Bow Churchyard, London, E.C. Agents Sold by all Druggists, &c., throughout the Kingdom. Works: Ipswich.

A SILVER MEDAL has been awarded to Mr. THORLEY for his famous CATTLE FOOD CONDIMENT. The following is a copy of the letter from the Keighley Agricultural Society on the subject:—

"Keighley, Oct. 3, 1860.

"Sir,—I am directed by the Committee of the Keighley Society to forward to you the Society's Silver Medal on account of the Cattle Food you exhibited at their Show on the 5th Sept. I forward this letter and the Medal by the same post.—I am, Sir, yours truly, "R. FAWCETT, Secretary."

"Mr. J. Thorley, London."

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

AGRICULTURAL AND GENERAL MACHINERY—AS PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C.

LAWN-MOWING MACHINES—LURGESS AND KEY'S

MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6*l*.; 19 in., 6*l*. 10*s*.; 22 in., 7*l*.; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

GUTTA PERCHA TUBING FOR SPREADING LIQUID MANURE.

THE GUTTA PERCHA COMPANY have been favoured with the following Letter relative to the use of Gutta Percha Tubing in spreading Liquid Manure.

From JAMES KENNEDY, Esq.

"Myremill, by Maybole, Ayrshire.

"I have received your inquiry as to my experience in the use of Gutta Percha Tubing. I had 350 yards of it from your firm, and I have used it for the last few months in distributing liquid manure from my tanks over my fields, having often a pressure of 300 feet on it; and have been able to get the liquid from the end of the Tubing, by the pressure from the steam engine, upwards of 40 yards. I have 350 Scotch acres laid with metal pipes under ground for the conveyance of liquid manures over my farm, and your Gutta Percha Tubing has given me great facility in spreading it over the surface of the land. I likewise think highly of the Gutta Percha Union Joint."

Every variety of Gutta Percha articles manufactured by the GUTTA PERCHA COMPANY, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their wholesale dealers in town and country.

LAND DRAINAGE.

MR. SCOTT has completed his arrangements for the season, and is now prepared to undertake work to any extent by Contract or on Commission. No charge made for Plans and Specifications under any circumstances.

18, Parliament Street, London, W.C.—Oct. 13.

A NEW METHOD of HARVESTING in Wet or doubtful Weather, whereby Grain or Fodder can be secured for general purposes without removal from the fields, and with less expense than usually attends the same in fine weather. Threshed Grain can be dried in bulk with the same applances without Fire or Solar heat.—Apply to the Patentee JOHN ROBERTS, Upnor, Rochester, Kent. Carpenters and Agricultural Implement Makers wanted as Agents in every Town in the Kingdom.

RANSOME AND SIMS, Ipswich, continue to give their best attention to the manufacture of the most Modern and Improved AGRICULTURAL MACHINERY. R. & S. have long been celebrated for combining in their Agricultural Machinery the utmost simplicity, durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture. ILLUSTRATED CATALOGUES post free, on application to the Orwell Works; or to their London Agent, SHEPPARD RANSOME, 31, Essex St., Strand, W.C.

PARKES' STEEL DIGGING FORKS.

BURGESS AND KEY, 95, Newgate St., E.C., London, being the Wholesale and Retail Agents for these celebrated TOOLS have always a large Stock on hand from which their Customers may select what they may require.

ANTHONY'S PATENT AMERICAN CHURN.—The FIRST PRIZE was again awarded to this Churn in Competition with several others at the Chester Meeting of the Royal Agricultural Society; it has obtained the First Prize given by the Society at every Meeting since 1850. Messrs. BURGESS & KEY, 95, Newgate Street, E.C., strongly recommend it as the most perfect Churn now in use. Full particulars sent on application.

HIGHLAND AND AGRICULTURAL SOCIETY.
AGRICULTURAL EDUCATION.

The Examination for the Society's AGRICULTURAL DIPLOMA will be held towards the Close of the ensuing Session of Edinburgh University. Information regarding the Course of Study, and the other conditions which must be observed by Candidates, may be obtained by applying to Mr. HALL MAXWELL, 6, Albyn Place, Edinburgh.

QUEEN'S COLLEGE, GALWAY.
DEPARTMENT OF AGRICULTURE.

The COLLEGE SESSION for 1860-61 will commence on TUESDAY, October 16, when the Supplemental and Scholarship Examinations will be proceeded with as laid down in the Prospectus.

The first Matriculation Examination for the Session will take place on FRIDAY, October 19.

Additional Matriculation Examinations will take place before the close of the term.

In the department of Agriculture Four Scholarships of the value of 15*l*. each are appropriated; two to Students of the first year, and two to Students of the second year. The College is also empowered to award at the same examination Two Prizes of 10*l*. each to Students of the first year, and Two of 10*l*. each to Students of the second year.

In addition to the Scientific Education given in the Lecture Rooms of the College, the most ample means are now possessed for giving practical instruction to Students in Agriculture. The Professor will exhibit on his own Farm, as well as on a large property of which he has the management, the best samples of land improvement, and superior cropping on waste, worn-out bog and mountain land, with specimens of the crops raised thereon.

Further information may be had on application to the Registrar, from whom Copies of the Prospectus may be obtained. By Order of the President,

Oct. 13. WILLIAM LUPTON, A.M., Registrar.

FARM BUILDINGS.

LOANS may be obtained under the General Land Drainage and Improvement Company's Act for the full amount required by the Owners of settled Estates, Incumbents Trustees, Bodies Corporate, &c. for the erection of Farm Houses, Farm Buildings, and Labourers' Cottages designed by their own Agents and sanctioned by the Inclosure Commissioners.

The loans are repaid by a Rent Charge on the estate for any term the Landowner may fix, not exceeding 31 years.

No investigation of title being required or notices given to Reversioners or Mortgagees, no legal expenses are incurred.

The Company furnish designs of every description, and undertake the entire responsibility of the works wherever desired by Landowners.

No profit whatever is taken by the Company on any works they execute, the actual expenditure only approved by the Inclosure Commissioners, with a commission thereon, being charged in all cases.

Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

THE LANDS IMPROVEMENT COMPANY.—
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.

TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c. IN ENGLAND AND WALES AND IN SCOTLAND.

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

THE BIRMINGHAM CATTLE AND POULTRY SHOW, 1860.—The TWELFTH GREAT ANNUAL EXHIBITION OF CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, AND ROOTS, will be held in Bingley Hall, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, December 3, 4, 5, and 6; when PRIZES, CUPS, or other articles of Silver Plate, and GOLD and SILVER MEDALS, to the amount of 1236*l*., will be awarded.

Prize Lists and Certificates of Entry may be obtained from the Secretary. The ENTRIES close the 1st of November next.

The principal Railway Companies will convey Stock home free if unsold. JOHN B. LYTHALL, Secretary.

Offices, 14, Upper Temple Street, Birmingham.

SMITHFIELD CLUB CATTLE SHOW, 1860.—THE ANNUAL SHOW OF FAT CATTLE, SHEEP, AND PIGS will take place on December 11, 12, 13, and 14, at the Bazaar, King Street, Portman Square, W.

The LAST DAY for Certificates for both Stock and Implements to be received by the Honorary Secretary is THURSDAY, November 1.

The following forms of Certificates are now ready, and intending Exhibitors in applying for them need only quote the letters and state how many of each letter they require:—

CATTLE.	SHEEP.
Form A.—Ox or Steer	Form D.—Pen of three Wethers
,, B.—Cow or Heifer	,, E.—One Wether or Ewe in extra stock
,, C.—Ox, Cow, or Heifer in extra stock	PIGS.
	Form F.—Pen of three Pigs
	,, G.—One Pig in extra stock

Prize Sheets, with Rules and Regulations, and Forms of Certificates as above, may be obtained of
B. T. BRANDRETH GIBBS, Hon. Sec.,
Corner of Half Moon Street, Piccadilly, London, W.

N.B.—All communications on the Club's business should have the words "SMITHFIELD CLUB" outside, to distinguish them from private letters.

The Agricultural Gazette.

SATURDAY, OCTOBER 13, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

Tuesday, October 16, Hereford.

A GREAT deal has been written in this Journal at different times respecting Ergot, yet, important as the subject is in several points of view, it is quite certain that agriculturists in general are not familiar with it.

As Ergoted grain is very prevalent this year in some districts, and the consequences which arise from its prevalence are often very serious, we think it a good opportunity of bringing the matter before our readers in such a form that they can scarcely be indifferent to it in future.

Ergot, then, is an affection of the seeds of many species of Grass, including those which are cultivated under the common name of corn, by which they are converted into a hard, dark, spur-shaped body, generally much larger and longer than the seed, though sometimes, as in Wheat, not differing very materially in size. Externally it is slightly rough, varying in tint from black or brown to purplish, with frequently a white mealy wash in parts, and at first if not permanently tipped with a little irregular scale-like process. When examined under the microscope it exhibits, on a section of this upper portion or the parts adjacent, little spore-like bodies seated on the tips of short straight threads vertical to the surface of the mass, which are supposed to have the office of impregnation, while within it consists of a white cellular mass rich in oil globules.

Such is the condition of the plant the season in which it is produced, or till it has remained for some time on the ground, or is lightly covered with soil after the lapse of some months in a common garden pot. A very curious change then takes place. A little pin-shaped purplish Fungus sprouts in greater or less quantity from the sides, the head of which is studded with little receptacles containing linear transparent sacs filled with thread-like sporidia.

The Ergot then, as generally known, is merely a transitional form, or rather the first stage in the existence of the Fungus, ending with the production of minute bodies, which are either reproductive, or, as is more probable, serve for the impregnation of the perfect Fungus.

The grains of a large variety of Grasses are subject to become Ergoted, and Ergoted grains have

also been observed in the genus Eleocharis, which belongs to the order Cyperaceæ. Amongst the Grasses, besides the cereals Rye, Wheat, and Barley, may be mentioned Couch-grass, Darnel, Rye-grass, Cock's-foot, Foxtail, and Reed. The Ergot of the Reed, and blue Melic (Molinia cærulea) so common in moors, does not produce the same Fungus as that of the other Grasses just mentioned, and that again which springs from the Ergot of the Eleocharis is specifically distinct. The seeds of the common Reed are peculiarly subject to Ergot, and the heads of flowers when blown off by the wind lie upon the damp soil for some months before the Ergot is properly developed. The Fungus of this Ergot may be raised artificially by placing the head upon damp sand covered with Moss, or if they are placed with the stalks constantly immersed in water the Ergot will in time produce its Fungus. If any of our readers wish to see the Ergot of Rye, Barley, or Wheat developed, they have only to cover them slightly with soil about the month of April, keeping it moderately moist with rain water, and they will be pretty sure to have a crop. And they will raise exactly the same Fungus from the Ergot of Rye-grass, except that in proportion to the size of the Ergoted grain, the resulting Fungus will vary in size and number.

The reproductive bodies of this Fungus are extremely minute, and as said above, appear under the form of very slender threads, which may be wafted by the wind and carried to the young spikes of corn or Grass. The development of these bodies has not been observed. The first indication, however, of the disease is the presence of a thick, sweet, honey-like, colourless matter upon the spikes, which is filled with granules, resembling somewhat those of yeast; and it is supposed that the grain becomes Ergoted in consequence of their presence. This was supposed by Queckett to be the perfect Fungus, and was called by him *Ergotetia abortifaciens*, the ergot being supposed to be merely a diseased condition of the grains induced by the Fungus. The granules which appear at the upper part of the Fungus must be distinguished. They differ in form, and probably have the function of impregnation, though this scarcely admits of proof.

The main point, however, which interests the farmer is the deleterious effect of the Fungus. In Rye Ergot is often so common as materially to affect the sample, and where it forms a large proportion of the crop, woe to the persons who habitually partake of the bread made from the flour. Serious derangement of health is sure to take place, and ultimately gangrene, very difficult of cure, the progress of the disease being slow and painful, and the patient sinking under the weakness caused by the successive loss of the extremities. The specific action of Ergot on the womb has long been known, and it is accordingly employed constantly by medical practitioners in cases of difficult labour with the most beneficial results. It is also given by country herbalists to procure abortion, and where the use of the decoction is long continued, dangerous ulcers and even death have been not unfrequently the result.

Barley and Wheat are seldom affected to any dangerous extent, and as the use of Rye bread is confined to certain districts the deleterious effect of Ergot is only partially known. It is however quite certain that the Ergot of our pastures is frequently most injurious to cattle and sheep, causing them to slip their young. This casualty, it is well known, is far more common in some seasons than in others, and its prevalence accords with the frequency of Ergot. In some pastures, where the Bents have not been mown off, the greater part of them, especially where belonging to Rye-grass, are affected. A dram or two devoured by a sheep, is sufficient to produce abortion. The exact quantity, however, has not been ascertained.

It would be madness, therefore, to turn the pregnant sheep or cows into a pasture so affected. Since, however, the continued use of Ergot is productive of an ulcerous condition, it may be no less injurious to feed off any pasture in which the Bents are much Ergoted. We have known a whole herd more or less troubled with gangrene, and we have no doubt that the cause might be traced up in many cases to Ergot; and even where the effect is not visible in external ulcers, we have no doubt that health is seriously affected. Instances of this kind have been placed before us, and there is reason to believe that they would be very numerous if agriculturists were better acquainted with the fact. It is easy enough to find Ergoted spikes now; and where the farmer finds them prevalent he should not only refrain from pasturing the grounds in which they prevail, but should carefully cut down the affected Bents and burn them. If this is not done now the Ergoted grains will fall, and in the spring when the perfect Fungus appears the seeds will be carried by the wind and affect other Grasses. In like manner, if Ergoted corn is sown, the Ergot will fructify in spring just as the ear appears and

will affect the new crop; and even in the absence of Ergoted grain the crop may be diseased from Ergot in the neighbouring pastures which has been produced upon the Bents and has not been destroyed. Our figure represents Ergot on Rye-grass of the natural size, and upon a foreign species of Elymus; and in the left hand corner two Ergoted grains are given with Cordiceps purpurea springing from them. *M. J. B.*

We have great pleasure in laying before our readers the accompanying lists representing the fecundity of as many as a hundred species of such wild plants as usually go under the denomination of weeds, and in doing so we may remark that we have for a long time taken advantage of opportunities as they have presented themselves, for making an estimate of the number of seeds which a single plant may furnish. To this end we have usually endeavoured to obtain, though not the largest example which might be found of each species, yet still one that was by no means wanting in health and vigour. In some cases our conclusions have been arrived at by counting the number of seeds to one capsule or flower head, and multiplying by the number of capsules or flower heads of the whole plant, as for examples taken at random from our note book:—

Sinapis nigra, 800 Siliquas × 10 seeds in each .. = 8,000
Papaver Rhœas, 500 seeds in each capsule × 100 capsules = 50,000
Silene inflata, 200 seeds in each capsule × 40 capsules = 8,000
Sonchus oleraceus, 250 seeds to each head of flowers × 100 heads of flowers .. .. = 25,000
Sonchus arvensis, 190 seeds to each flower × by 100 heads of flowers .. .. = 19,000
Chrysanthemum leucanthemum, 300 seeds to each head of flowers × by 45 heads of flowers .. .. .. = 13,500

This plan much simplifies the calculations, though of course it must be conceded that in this as indeed in any other plan, one may be liable to error. In order to ensure a fair average report, many of our calculations are founded upon the mean of the estimate of several plants. In some cases we have preferred to give the results of examinations of two specimens, as will be seen in the list where the name is prefaced with figures; these will show that however startling the first placed number may be, it is still far exceeded by the second. Many of our examples are the result of absolute counting of seed by seed.

The importance of inquiries of this nature must be manifest. Although, as must be evident to all, we cannot hope to arrive at absolute accuracy, yet the evidence obtained is near enough to truth, and sufficiently clear in its teachings, to offer us many a salutary lesson against allowing a weed to seed wherever it can be avoided. Of the evil of this we have daily proofs in our gardens: on one spot a thousand seedling Groundsels will appear, or a patch of Shepherd's Purse has just come up, or, as in our own private walled-in garden, the broad-leaved Willow Herb has spread to every nook and corner from a little neglected bunch which was allowed to seed in the "wilderness." Or again, if we go over the farm, we shall see in the Clover field the isolated patches of young weedlings of various kinds all in circles around the old plant, the seed of which was in all probability sown as part of the crop seed. Whence then come these seedlings? Of course the only rational answer is —from seed! There can be no other way, get there when they may; and when a farmer tells us that such and such a weed "is natural to the soil," for he is sure he kept it "clean as a flower garden," let him look at the appended list and see if he allowed one weed plant to seed, what might be the consequence. Nay, if he only seeds a single flower of some plants, he may prepare for a future colony of 500! In illustration of the manner in which weeds suddenly appear on a farm or in a particular field, we relate the two following cases.

1. In the spring of this year a farmer in Gloucestershire requested us to examine his Wheat fields, which had as he stated "become suddenly filled with a Parsley-like plant," which he was fearful had been sown by some enemy in order to poison his cattle. Upon going over the fields we found immense patches of *Æthusa cynapium*, Fool's Parsley. This he stated was nowhere else on the farm. However, we were not long of finding it in many other places, nor of convincing ourselves that the quantity of young plants which we saw was the result of the seeding of this weed on the ground the year before.

It was in going over this farm that we observed in the "seeds" a most curious exhibition of the *Bromus mollis*, the soft Brome or Lop Grass. In straight lines over a great part of the field this plant occurred in quadrangular patches arranged in regular rows. These patches of this annual Grass were so distinct that they had a most curious appearance, from their luxuriant growth in what we might term "poor seeds," and we are enabled to give their history. Turnips had been fed off two years before by sheep, served with seed hay, put in the usual wooden sheep racks: and this, like too much of the fodder of the stony Cotteswolds, was full of Lop. But all the Lop we saw was not from the seed then sown, as that had come up with the Barley and sown its seeds before the Barley was harvested; and hence the "seeds" likewise sown with the Barley crop presented in their first year the peculiar appearance indicated.

2. Another case has been this week brought before us by the following letter from a correspondent—

"Will you oblige me by some notice in your next Number of the weeds inclosed herewith? That with the small yellow flower has made its first appearance this year in a Wheat field which was well summer fallowed last year. Where the weed with the yellow flower is thick there is scarcely any Wheat, other parts of the field having a very good crop.

Of the weeds sent one was *Bartsia odontites*, Red Bartsia, a very common weed, which judging from the mutilated specimen sent we should conclude would have deposited no less than 2200 seeds per plant for the continuance of its race. The other was *Lapsana communis*, Nipple Wort, which had either seeded in the fallow and left a probable progeny of 2800 for each plant, or had been introduced in any manure that was employed on the field. The note would seem to indicate a patchy method of propagation, and such patches we have no doubt proceeded as usual from a central seeded plant, exciting great astonishment when seen in quantity, though a few specimens would pass unobserved. And yet it is a few that produce the many, all the more indeed in a new locality, as a fresh soil and habitat, with even a weed, tend to a more luxuriant growth—a position amply proved by the amount of injury the weed has done in this case.

On looking over the Table, there are several families which will well repay especial consideration; but we shall direct attention to only one, namely, the *Compositæ*. It will be seen that this natural order is not only rich in weed species, but as a rule its individual plants are more prolific than those of other orders, they are also more

generally distributed. Of course these results are due to their peculiar structure, and in this we see the absolute necessity of all in one neighbourhood making common cause and working to the same end. The difficulties of the clean farmer are greatly enhanced by not having a careful neighbour; and all are injured by the neglect of waste places, roadsides, and dirty hedgerows. Let, then, the subjoined Table be carefully examined and duly tested. Let him once count the number of seeds of a big Dock, or even of a single capsule of a Lychnis, or a Poppy, and we confidently predict that the farmer will have applied Euphrasy to his eyes to some purpose.

However formidable may be our figures, it must not be forgotten that they give the reproductive rate of one generation only; and although it is true that most of the plants seed only once in a year, and some, indeed, only once in two years, yet it must not be forgotten that many species produce seeds two, and even three times in a season. Examples of these latter will be found in various Speedwells, Chickweed, Groundsel, Shepherd's Purse, and that gardener's pest, the annual *Poa*. Now, it may be true that a hard, or, as lately, an intermittent kind of winter, may kill, as it did last winter, a great number of seedlings, yet long frost so binds up the seeds of a number of species that birds are left to starve, whilst much of their food escapes to germinate, so that on the whole we see little difference in the amount of weeds between a severe winter and a mild one. But let the farmer set to work steadily to prevent weeds seeding on the farm, and he will soon see a diminution of his enemies, and more especially if he looks narrowly into the seeds that he buys, to be sure that he is not introducing pests by this means. We now append the Table, upon which we may make more extended remarks on a future occasion.

TABLE OF THE FECUNDITY OF WEEDS.

Botanical Name.	Common Name.	No. of Seeds.
Ranunculaceæ.		
Ranunculus repens ..	Creeping Crowfoot or Buttercup	1,500
Papaveraceæ		
Papaver Rhœas	Red Poppy	50,000
,, dubium	Long-smooth-headed Poppy	60,000
Fumariaceæ.		
Fumaria capreolata ..	**Fumitory**	1,500
Cruciferæ.		
Thlaspi arvense	Penny Cress	4,000
Capsella Bursa-pastoris ..	Shepherd's Purse	4,500
Erysimum alliaria	Jack by the Ledge	4,320
Sinapis arvensis	Charlock	4,000
,, nigra	Black Mustard	8,000
Raphanus Raphanistrum ..	Wild Radish	6,000
1. Sisymbrium officinale ..	Treacle Mustard	5,400
2. ditto ditto ..	ditto ditto	27,200
Cardamine hirsuta	Hairy Bitter Cress	3,750
Resedaceæ.		
Reseda lutea	Wild Mignonette .. Dyer's Green Weed	20,000
Caryophylleæ.		
1. Silene inflata	Bladder Campion	8,000
2. ditto ditto	ditto ditto	24,000
Lychnis dioica	Catchfly	3,425
Agrostemma Githago ..	Corn Cockle	2,500
Stellaria media	Chickweed	5,000
Cerastium viscosum ..	Common Mouse Ear ..	18,500
,, arvense ..	Corn ditto ..	6,000
Arenaria serpyllifolia ..	Thyme-leaved Sandwort ..	6,000
Linaceæ.		
1. Linum catharticum ..	Purging Flax	475
2. ditto ditto	**ditto ditto**	525
Geraniaceæ.		
Geranium molle	Soft Cranesbill	750
Rosaceæ.		
Geum urbanum	Common Avens	1,620
Poterium sanguisorba ..		
Onagraceæ.		
1. Epilobium montanum ..	Broad-leaved Willow Herb	5,000
2. ditto ditto ..	ditto ditto	8,000
Umbelliferæ.		
Pastinaca sativa	Wild Parsnip	18,400
Daucus carota	Wild Carrot	10,000
Æthusa cynapium ..	**Fool's Parsley**	2,400
1. Chærophyllum temulentum	Wild rough Chervil ..	12,000
2. ditto ditto ..	ditto ditto	19,200
Torilis nodosa	**Knotted Hedge Parsley** ..	1,800
,, Anthriscus	Common Hedge Parsley ..	3,240
Scandix pecten-veneris ..	**Shepherd's Needle**	600
Anthriscus sylvestris ..	**Beaked Parsley**	9,600
Heracleum Sphondylium	**Cow Parsnip**	5,000
Rubiaceæ.		
Galium tricorne	**Corn Bedstraw**	1,100
,, **aparine**	**Goose Grass Cleavers** ..	1,250
Sherardia arvensis	**Field Modder**	480
Dipsaceæ.		
Dipsacus sylvestris ..	Wild Teazel	10,000
Knautia arvensis	Field Scabious	4,500
Compositæ.		
Helminthia echioides ..	Ox Tongue	3,900
Sonchus arvensis	**Corn Sow Thistle**	19,000
,, **oleracea**	**Common ditto**	25,000
1. Leontodon Taraxacum	**Dandelion**	2,040
2 ditto ditto	**ditto** ..	8,500
Apargia autumnalis ..	Autumnal Hawkbit ..	2,250
1. ,, **hispida**	Hairy ditto ..	600
2. ditto ditto	ditto ditto ..	864
Crepis virens	Smooth Crepis	10,000
Lapsana communis ..	**Nipple-wort**	2,800
Tragopogon pratensis ..	Goat's Beard	600

TABLE OF THE FECUNDITY OF WEEDS—*Continued.*

Botanical Name.	Common Name.	No. of Seeds.
Arctium Lappa	Burdock	21,520
Carduus nutans	Musk Thistle	3,750
,, lanceolatus ..	Spear Thistle	30,000
,, arvensis	Corn Thistle	5,000
,, acaulis	Stemless	600
ditto ditto	do. with stems (cultivated)	3,500
1. Centaurea nigra ..	Hard-head	700
2. ditto ditto	ditto	3,000
3. ditto ditto	ditto	10,800
1. ditto Scabiosa ..	**Great Hard-head**	8,000
2. ditto ditto ..	ditto	4,800
1. Tussilago farfara ..	Coltsfoot	1,800
2. ditto ditto	ditto	48,750
Senecio vulgaris	**Groundsel**	6,500
1. Chrysanthemum leucanthemum	**Ox-eye Daisy**	5,500
2. ditto ditto	ditto ditto	13,500
Anthemis arvensis ..	Corn Chamomile	10,500
,, cotula	Stinking ditto	40,650
Matricaria chamomilla ..	Mayweed ditto	45,000
Pyrethrum Parthenium ..	Fever few	125,000
ditto ditto ..	ditto	150,000
Convolvulaceæ.		
Convolvulus arvensis .	Corn Bindweed	600
Cuscuta epilinum	Flax Dodder, clinging to one Flax plant . ..	392
,, Trifolii	Clover do. in a circle of 1 ft.	1,000
Boragineæ.		
Myosotis arvensis	Field Forget-me Not ..	900
Orobanchaceæ.		
Orobanche minor	Lesser Broomrape	20,000
Scrophularineæ.		
1. Veronica hederæfolia ..	Ivy-leaved Speedwell ..	450
2. ditto ditto ..	ditto ditto ..	750
1. ditto agrestis ..	Green procumbent ditto .	600
2. ditto ditto ..	ditto ditto ..	1,000
ditto **polita** ..	**Grey-field ditto**	450
Digitalis **purpurea**	**Foxglove**	640,000
1. Bartsia odontites ..	Red Bartsia	4,800
2. ditto ditto	ditto	5,150
Linaria vulgaris	Common Toadflax	47,200
Labiatæ.		
Lamium album	White Dead Nettle ..	1,200
Violaceæ.		
Viola tricolor	**Pansy**	455
Primulaceæ.		
Anagallis arvensis	**Pimpernel**	4,000
Plantagineæ.		
Plantago media	**Plantain**	5,600
1. ,, var. major ..	Great Plantain	24,000
2. ditto ditto ..	ditto ditto	30,240
,, lanceolata ..	**Narrow-leaved**	3,600
Chenopodeæ.		
1. Chenopodium album ..	Goosefoot	3,000
2. ,, ,, ..	ditto	10,500
Atriplex angustifolia ..	Narrow-leaved Orache ..	6,600
1. ditto patula	Common ditto ..	2,000
2. ditto ditto	ditto ditto ..	10,800
Polygonaceæ.		
Polygonum convolvulus .	Climbing Buckwheat ..	3,600
,, Persicaria ..	Persicary	2,000
,, **aviculare** ..	**Knot Grass**	1,500
Rumex obtusifolius ..	**Blunt-leaved Dock**	13,000
,, crispus	**Curled Dock**	10,500
Euphorbiaceæ.		
Euphorbia helioscopia ..	Sun Spurge	972
,, exigua	Dwarf Spurge	1,500
,, **peplus**	Petty Spurge	1,200
Urticaceæ.		
Urtica dioica	Common Stinging Nettle .	100,000
Aroideæ.		
Arum maculatum	Cookoo-pint	960
Asphodeleæ.		
Allium vineale	Crow Garlick	240
Juncaceæ.		
Juncus bufonius	Bog rush	5,000
Gramineæ		
Alopecurus agrestis ..	Blackbent	800
Holcus lanatus	Soft Grass	600
Avena fatua	Wild Oat	750
1. Bromus mollis	Soft Brome Grass Lop ..	4,000
2. ditto ditto	ditto	6,200
ditto **sterilis**	Sterile Brome Grass .	1,080

THE PROPER OFFICE OF STRAW ON A FARM.

Straw is used on most farms, both as food for stock, and as a bed for them to lie on; I shall therefore endeavour to assign to each of these uses its proper value. The requirements of the farm-yard necessitate, as I believe, certain modifications in the use of straw; and the system of letting the cattle "eat their liking" from the crib, and tread the rest under foot, though still finding favour in some secluded districts, may be amended.

The present high price and growing demand for meat will make us all look inquiringly at our straw-stacks, anxious to know whether all their value departed with the grain, or whether there be not beef and mutton latent in straw as well as in Turnips.

It is a common remark on many of the best managed and most profitable farms, "How shall I manage to tread all this straw into good dung?" And on other farms differently situated, "How shall I get straw for all this stock?"

It is, however, a mistake in any case to be too anxious to "tread in" straw. Straw is not dung; it is, as litter, a medium for soaking up the liquids and solids of the farm-yard, making a dry bed for cattle. Taking its market value at 1*l.* per ton (in some neighbourhoods it is twice as much), 50 tons will buy 50*l.* worth of guano, worth on any farm more than 50 tons of straw merely "trod into dung."*

The using of straw for the sake of getting rid of it, is a miscalculation, and any covenants which necessitate this by withholding permission to sell it, are surely founded in error.

I shall now turn to a more common state of things, where straw is not in excess of the ordinary requirements of the farm; first examining what appears to be the most important, because the most indispensable, of the uses of straw, viz., as litter. All the larger animals require litter of some sort. A warm, dry, and soft bed is quite indispensable for their comfort. As an expedient for saving straw, I once put 12 three-year-old oxen on boards to fatten, and found it a very cruel experiment. The animals were always in a state of distress; one of them refused to lie down, and remained standing four days, until the muscles of the thigh swelled from the unnatural tension. A comfortable layer of straw soon set all right again, and as the spaces between the boards allowed the moisture to pass into a drain, a great saving of litter was effected.*

A wish to save straw occasionally leads to a sparing use of it in the yards, always resulting, however, in the immediate discomfort of every head of stock. In fact, the best of food, and unremitting attention, will not compensate for the want of a comfortable bed. Frequent supplies of dry litter in sheds and yards are absolutely necessary. Those who are accustomed to a well stocked farm-yard are aware how entirely success depends on attention to details; the omission of any of these mars all. A comfortable bed is one of the most important.

It may be asked, "Is it the proper use of straw, to be spread over the wet surface of a yard, to be soaked by rain, and then covered up by a fresh layer, and finally 'trodden' into indifferent dung?"

This question brings me to the subject of covered yards. The desire to spare straw led to the erection on my own farm, and on another under my direction, of sheds covering a considerable space of yard, besides cattle boxes. It would be quitting the present subject to expatiate on the various advantages derived from these arrangements; I may observe, however, that one great advantage is the saving in straw which they effect.

With regard to live stock, I have seen them thrive as well in warm, sheltered yards, open to the sun, and well supplied with litter, as in the best appointed stalls, boxes, or covered yards. But the litter is wastefully used, the manure less valuable, and the amount of cartage greater.

The quantity of rain falling in a year, on a yard 50 feet by 40 feet, at 25 inches per annum, amounts to 25,967 gallons, weighing nearly 116 tons. During heavy rain a large quantity runs off, carrying with it the soluble portions of the manure; but after making due allowance for evaporation, there will remain many tons absorbed by the straw, costing nearly 7*d.* per ton if carted a quarter of a mile.† In covered yards the dung is concentrated; it is never washed; and cartage —that costly item—is reduced to a minimum.

The quantity of straw required to keep open yards in a comfortable state, depends of course on the weather; and ~~also on~~ the kind of food given to the stock. Turnips and green food ~~increase~~ the secretion of urine, and litter is needed in proportion.

In ordinary years, and in open yards, with sheds, 50 head of stock require, as litter, 300 tons of straw in nine months, from September 1st to June 1st. This reckoning supposes 10 horses to be kept in the stable, whose litter is thrown daily into the yards; the rest being cows and fattening cattle. The amount of straw used daily per head is 18 lbs., or twice as much as is required under shelter.

It is stated in an excellent paper on manure, in "Morton's Cyclopædia," that 20 lbs. of straw per day are required to litter an ox, in a box containing 100 square feet. This agrees with the quantity used in my own boxes, in each of which I find, after six months fatting, 8 tons of dung, 6 tons 8 cwts. of which

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* The above conclusions are not strictly correct, or at least not applicable in all cases. 1st, although straw be not dung, yet the carbon as well as the minerals which it contains have a positive value as manure, and exert a special influence on light sandy soils. On such soils guano is a very inadequate substitute for farmyard-manure. Moreover, in the case before us, 50 tons of straw must be taken to represent a large number of tons of inferior manure. On farms where a good head of stock is economically fed, it must be quite an exceptional case if there be any superfluity of straw; because, where the land is strong and the climate moist, so that a great bulk of straw per acre will be grown, there will generally be a considerable admixture of pasture with the tillage land; when the land is light and the climate dry, and the farm almost exclusively arable, the yield of straw will not be great, and a considerable portion of it will be required as a substitute for hay in feeding the stock. A good farmer does not generally find that he has more straw than he can turn to good account, although, under certain circumstances, he may think it better economy to sell a portion, and replace it by purchased manure.—P. H. F.

* The Cocoa-nut matting used by Mr Huxtable in his cow-stalls may be found serviceable by other farmers who, as in his case, are situated in neighbourhoods where straw is both dear and scarce. It would not, however, be suited to the same advantage for steers as for cows.—P. H. F.

† This cost of 7*d.* per ton is the estimate i.—

	s.	*d.*
2 men to fill 36 tons	3	8
5 horses and 4 carts (a trace-horse being employed to drag the load on to the heap) at 2*s.* 6*d.*	12	6
2 lads to drive	1	8
1 man at the heap	2	2
	20	0

$$\frac{\text{s.}}{36} = \frac{20 \times 12}{3 \times 12} = \frac{\text{d.}}{3} = 7d. \text{ nearly.}$$

—H.E.

are derived from the ox, and 1 ton 12 cwt. from the litter.* About 24 lbs. per head are used in the covered yards, which are occasionally treated to a dose from the stable-tank.

Fifty head of beast, fattened in covered yards, will produce in six months—

	Tons.
Voided by the animals	325
Litter (24 lbs. per head daily)	100 nearly
	425

425 tons of dung, fit to plough into the ground at once.

The same stock in open yards will produce—

Voided by the animals	325
Litter (48 lbs. daily)	200
Water	?
	525

525 tons of mixture, to be carted to a heap and fermented. This is exclusive of a great weight of water.†

In six months fatting of 50 head of cattle, in covered yards, the amount of straw saved is therefore 100 tons; worth, at Mr. Horsfall's estimate, 35*s.* per ton, to convert into butter and beef!

I conclude this part of the subject by observing, that the proper use of straw as litter is, to provide a comfortable bed, and to absorb the excrements of the stock. These conditions can only be fully secured when the bed on which the animals lie is covered. *Mr. Evershed in the Journal of the Agricultural Society.*

(To be continued.)

THE AGRICULTURE OF BERKSHIRE.

BY THE REV. J. C. CLUTTERBUCK,

OF LONG WITTENHAM.

II. The Forest District.—The natural divisions of the county, recognised by Mavor, are the Vale, the Hill, and the Forest. The Vale comprises the portion bounded by the river Thames to the north, and the chalk range to the south. The Hill is limited to the chalk downs and chalk district bounded by the Kennet. The Forest, with a slight exception, is bounded by the Kennet and Thames to the north, and the counties of Surrey and Hants to the south. We have the Bagshot sands, the London and Plastic clay, representing the tertiary series, in the Forest. The Chalk, Upper Greensand, Gault clay, trace of iron sand, Kimmeridge clay, middle oolitic rocks, and Oxford clay, representing the secondary geological series, in the Hill and Vale. These with gravel and other drifts have distinctive agricultural characters, and comprise within them the main differences to be observed in the cultivation of the soil of the midland counties of England. We purpose to adopt the order suggested by the geological features of the county, beginning with the higher or tertiary, and descending in the order of stratification to the lower or secondary series, and thus bring under notice some of the characteristics of the farming of Berkshire, as practised upon and suited to these various soils.

The Forest District first claims our attention. Windsor Forest was of old very nearly if not exactly, co-extensive with this district. We learn that Windsor Forest once extended up the Vale of the Kennet to Hungerford, and that the track was disforested by charter in 1226. The boundary was afterwards contracted till the Loddon was its limit, until in the enclosure in 1813.

We have already stated that this district consists of the Bagshot sands, the London and Plastic clay formations. The Bagshot sands, which take their name from the wild and barren tracts known as Bagshot Heath, and of which they form either the surface or subsoil, extend east and west along the southern boundary of the county. The aspect of this district bespeaks the poverty of the soil. The different beds, from a sharp sand to a tenacious clay, frequently covered with a flinty drift, offer little attraction to the labour or capital of the agriculturist. In most cases they require the preliminary of thorough draining. This indispensable step to improvement must necessarily begin with the landlords. In many cases it is undertaken by them, together with the erection of suitable buildings at a per centage of 6 and 5 per cent. respectively. Some considerable breadths of land have been brought into cultivation, and fair root crops, preparing the way for the growth of corn, are obtained. Very much is evidently held by persons with insufficient capital, which gives a miserably poverty-stricken appearance to a large portion of the district. Much is still occupied by Fir and Larch plantations and barren and unproductive heath. The fact that it was proposed to gather the water for the supply of London from these sands and gravels bespeaks its springy character. Though certain leading features rule its geological condition, and the divisions into upper, lower, and middle beds are recognized, no general rule can be suggested for determining their relative value, or any definite rules be laid down for their improvement; except drainage where it is required, and a liberal after treatment to compensate for the natural ungrateful character of the soil.

The aspect is considerably altered for the better where the London clay amalgamates with the overlying sands. The outcropping beds of this clay occupy a large portion of this district, and for the most part form irregular slopes with a varied surface of low undulations, occasional plateaus, and rounded escarpments, which may be traced from Windsor Home Park to the ground above Reading, and the low hills over-hanging the Kennet to the south-western boundary of the county. Where divested of a covering of drift it forms a strong tenacious soil, affording useful pasture and yielding good hay under careful and liberal management. When properly drained and worked it bears good crops of Wheat, Beans, and Oats, as well as heavy root crops, which from the nature of the soil cannot be fed upon the ground in winter. Many parts of this stratum, either covered with flint, gravel, drift, or on the sheer clay are farmed in a slovenly and inefficient manner. The want of drainage in either case tells its own tale. There are many exceptions where small holdings are judiciously and economically farmed by persons whose industry compensates in some measure for want of capital; other portions are well farmed by amateurs, but the general rule is small and irregularly shaped enclosures surrounded with ill-conditioned fences, with large quantities of hedgerow timber, which varies from Oak, Ash, and Elm, and thrives on this and the stratum beneath it as the variety of soil either promotes or impedes its growth. In many cases the value of the timber must equal if not exceed the value of the land. The district thus retains much of its original forest character. The farm lately owned and occupied by the late Sir John Conroy, presents a striking contrast to the character of the country around it, being entirely cleared of timber, a process which if repeated by many large proprietors would change the aspect of, and in doing so destroy the charm of a neighbourhood which is the favoured residence of very many persons whose wealth and presence has made them the great improvers in the cultivation of a naturally barren or stubborn soil. Mr. Caird has said so much of the farm in question that it calls for some remark. It has no natural attractions for the investment of capital. The portion adjoining the Loddon consists of a deep hungry flint gravel, which requires all the help that the ample stock once kept upon the farm by Sir John Conroy could give it. Not kindly for Swedes or Barley; there must have been a marvellous application of extraneous fertilisers to extract from such a soil the large crop of that grain spoken of by Mr. Caird. It will carry sheep, but much of their food must be grown elsewhere, if the stock kept is materially to influence the production of the land. The upper part of the farm, a rather strong clay, is a more grateful soil, and is on an average with the surrounding land, which is well farmed on a liberal though rather old-fashioned system.

The farm buildings with their modern and scientific appliances are designed for high farming, and a large feeding stock, which was the system carried out by its former owner. If persons reading the accounts of this farm should be tempted to invest largely in land of a similar character, they should be careful thoroughly to investigate the natural qualities of the soil, before they trust their capital upon it as a commercial speculation.

The lowest of the geological series of the Forest district is the Plastic clay formation. It has been called by high authorities the Woolwich and Reading series, fixing it as characteristic of a part of Berkshire. The town of Reading stands on the escarpment of this formation, which is covered more or less with the argillaceous flinty gravel so widely spread over the surface of the tertiaries and chalk beneath them. The clay and sand of which this series consists may be traced more or less from Maidenhead to Hungerford to the south of the Kennet, though it is not limited to this boundary. Outlying portions are found capping the higher elevations of the chalk; this makes it very difficult to define its extent on any map, or to determine where it is *in situ*, or merely a deep clay or sand drift, traces of both these are found as far north as the summit of Sinodun or Wittenham hills, where there is a capping of clay and sand to the depth of 10 feet and upwards, resting on traces of the lower chalk. But speaking generally it belongs to the Forest, of which it forms the most fertile portion. It is to the amalgamation of the sand and clay beds mixed with the flinty drift that the very valuable land near Reading is due, a condition of soil extending along the banks of the Thames, near Maidenhead and Pangbourn, and on either bank of the Kennet. Indeed the valley in which this river finds its bed seems to have been formed by the sweeping away of the loose sand underlying the tenacious clay. Where these are found *in situ*, their juxta-position facilitates the manufacture of bricks, pottery, and other ware, in a locality where there is no stone for building purposes, and where draining is essential. When the surface of these clays is covered with gravel, water is upheld in sufficient quantities for ordinary purposes; when necessary to get rid of this water for agricultural drainage, it may often be easily disposed of by piercing the clay and reaching the sand or chalk beneath, and so finding a ready outfall. This is exemplified in the many swallow holes near Tilehurst and Bradfield, the outlying portions of these strata *in situ*. The cutting on the Great Western Railway at Sonning, and on the Hungerford branch, as well as the numerous brickfields, expose the geological features of this formation, the breaking up of which has added so much to the fertility of the chalk district. There is an evil to which this as other sandy strata of the tertiaries are subject, namely, the disease in Turnips, known as Anbury or Fingers and Toes, presenting a serious drawback to the profitable cultivation of light soils, on which the growth and consumption of roots is essential to maintain a proper rotation of crops, and the production of corn. It is known that an effectual remedy is found in a liberal application of the chalk, which in most cases may be reached by sinking through the sand, to which the disease owes its presence and intensity. Here as elsewhere it may be traced through the geological stratum on which it is prevalent. This is so in the iron sand in Oxfordshire, where it is found in its most destructive form in those spots where the sand is not covered by calcareous drift. If the chalk can only be reached on the spot, at a level at which it is surcharged with water, or where the sand is inconveniently deep, the carriage of the chalk becomes a question of expense; in this case it has sometimes been found more economical to apply burned or quick lime, of which the same quantity is only half the weight; the chalk or other lime stone becoming lighter by the evolution of carbonic acid in the process of burning. It has been found better to mix the lime with the parings of banks, the scrapings of roads, &c., to let it remain for a time in clamps before it is applied to the land. When Anbury is due to the soil, the remedy seems rather to belong to the landlord than the tenant. Lime in any form is effective, especially the scraping of roads formed of calcareous gravel. Mavor makes the valley of the Kennet a distinct division of the county: though it calls for a separate notice we will include it, for convenience sake, in the forest district. It has been already remarked that this valley occupies the place due to a great part of the Plastic clay formation. It is filled with deep beds of drift and peat which give it a peculiarity of character. Of old these peat beds were of great value, as a supply of fuel and ashes used as manure. These old peat beds have been partly filled up and now grow sedge or rushes, or are more profitably planted with Osiers. This gives a fen-like aspect to the valley. In some places, especially in the higher parts of the valley, water meadows are laid out; in others the natural character of the soil forbids their formation. The geological section of the beds which form the subsoil over the chalk are peat alluvium, shell malm, and gravel, varying in their several depths. In some places the land under arable cultivation is so little raised above the drainage level that inconvenience must accrue from the impossibility of lowering the subterranean water to a sufficient depth below the cultivated soil. Where the soil in the valley is sufficiently raised it is equal to the land on the slopes of the hills.

The neighbourhood and ancient town of Wokingham in the Forest district is noted for the number of fowls, mostly of the Dorking breed, which are bred, reared, and fatted, and find a ready sale to London and other dealers who attend the weekly market. This branch of agricultural produce has found a place here for a long time past; the nature of the ground, lately disforested, the number and smallness of the holdings, the little capital it requires, and the easy distance from London have probably had their influence in introducing the practice of breeding and rearing poultry in a locality not very attractive to farming on a large scale. The tracts occupied by the Bagshot sands, which overlie the gently undulating surface of the London clay, are well fitted for the formation of artificial sheets of water by leading the drains which carry the discharge from springy ground, or agricultural drainage to one point. This has been done at Bear Wood, where a large lake is formed by the construction of a dam penning back the water in a valley beneath the house. The handsome piece of water thus formed serves the double purpose of ornament and turning a large overshot-wheel, which drives a corn and saw mill, threshing, and other agricultural machinery. In speaking of this adaptation of drainage water to farming purposes, we cannot omit to notice the good and liberal cultivation of the rather unkindly soils of the Bagshot drift and London clays on the farms to which this machinery is attached, and which may be quoted as a good practical example of the improvement of which such land is capable, by drainage and well ordered cultivation. It has been observed already that improvement in this district must come from the landlord. The first steps are of such a costly character that no tenant, with the longest tenure, could be expected to sink his capital in chalking, draining, or other operations which permanently benefit the land.

(To be continued.)

A PICTURE FROM AN AMERICAN RAILWAY TRAIN.

The country between Hamilton and Detroit is for a long time, like all the land of Upper Canada, rich and well cultivated—even where the black gnarled stumps of burnt Pines stick up like tombstones of the forests, looming dark and mournfully upon the upstart growth of Indian Corn beneath. Sometimes it is meadow

* Mr. Lawes informs me that he takes from his horse-boxes, of the same size, 6 tons in 6 months. The one statement corroborates the other, or rather Mr. Lawes shows quite as small a decrease as I should have anticipated from the horse being out at work during so many hours. As far as I could ascertain, the supply of straw given to the horse averaged quite as much as 20 lbs. per day; and if this be the case, the horse would contribute about two-thirds as much as the ox to make up 6 tons.—P. H. F.

† The exact weight of water left in the dung cannot easily be estimated, as a portion evaporates and some runs off; but if 116 tons per annum fall on a yard 50 feet by 40 feet, and if eight such yards are needed for 50 head of stock, and if the dung be exposed during 6 months of average rain-fall, the 525 tons of dung will be soaked by 464 tons of water.—H. E.

land, with the ragged zigzag fences of lopped trees strewn loosely between the fields,—sometimes a long tract of corn is passed, with the massive sheaves stacked together like straw tents, and the ground covered with bright orange Pumpkins and Squashes, which the inexhaustible fertility of the land has nurtured between the ridges of Maize. Then come acres and acres of orchards, with trees heavy and overborne with their rich burden, drooping down like Willows to the ground, and their red and yellow fruit sparkling softly in the evening sun. All the barn-doors of the clean, white farm-houses stand wide open, showing heaps of corn piled high within, and across the clearings oxen come slowly along with mounds of other sheaves in rough wooden carts, dragging a plenty for which the farmer has no room in the timber outbuildings which ordinarily accommodate the harvest. On every side are such signs of bounteous abundance, there is such a calm in these wild, clean, fruitful homesteads, there are such signs of progress and of energy, even in the forests hacked aside to make room for cultivation, that one can not but gaze with lingering astonishment upon the scene of rising prosperity, and think of that vast class at home whom Bumble denominates as "able-bodied paupers" going supperless to bed for want of work. Why, here are millions of acres of such fertile land as English farmers never think of getting without draining, manures, and top dressings and all the scientific agricultural slang which mark the presence of poor land. Here are millions of acres still clad in all the savage grandeur of the wilderness, and seeming to call—in their rich matted growth of timber and luxuriant underwood—for some one to clear an overburdened soil, and let the natural fertility of the earth have scope to show its proper might and usefulness. Where the lumberers fell timber in the Upper Ottawa they scatter handfuls of Indian corn among the ragged stumps, and lo, in some six weeks' time, a harvest for a few in number, though enough in quantity to keep an English parish. Yet men break stones in England for 8*d.* a-day, and cost the country 10*d.* more while doing it, and farmers here cry out for labour and get it for a few short months, till their servants have saved enough to better themselves and buy land, when at once the law of Canada steps in with restrictions which drive them in hundreds and thousands yearly to the far west of America. It is not to be supposed that the active folly which drove the States into manly insurrection and independence will ever be repeated by the Home Government; but one sees each hour such slimy traces of red tape Barnacles over Canada, such signs of its being left to the miseries of short-sighted legislation, such checks upon its growth, as no young colony, however naturally vigorous, withstands for long. **There is a mighty future for Upper** Canada if emigration to its fertile soil is only fairly encouraged and developed by the Government at home —if they will only hold out such real inducements as American agents hold out falsely, and who manage to persuade people, even when half settled in British dominions, to make another and a final move for prairie land. In truth and honour, and as one responsible for every written word, I cannot help saying that, land for land, the prairie is better than even the picturesque valleys of Upper Canada, but there is not at all that difference between the two which would lead a farmer to prefer 100 acres out West to 150, or even 120, round Hamilton or London. Enable emigrants to buy three acres in Canada for what they would only get two in Michigan, Illinois, or Wisconsin—let a man buy 10 acres or 1000 if he pleases, or as his means permit, and there would be no want of settlers in Canada. The value of uncleared land in Upper Canada varies from 2 dols. to 4 dols. an acre; yet sometimes, during the prevalence of speculative epidemics, 600*l.* sterling per acre has been offered and refused, and as much as 120*l.* per foot of frontage tendered in vain for by-streets in small towns.

Towards dusk the Royal train quitted the cleared farm lands, and entered upon a tract which the tremendous Canadian forests hemmed in close, casting a peculiar sombre gloom, unknown to autumn evenings, over the little line of rails between. There is something in the ponderous stillness of these forests—something in their wild, torn, mossy darkness, their utter solitude and mournful silence, which impresses the traveller in a new aspect each time he sees them—which awake ideas of melancholy which I wish I could describe, though I cannot forget. In Upper Canada the endless hills of Pines give way at last, or at most stand thinly intermingled with gigantic Beeches, tall Hemlocks, and Ash, with Maples, Birch, and wild Sycamore, the underwood of these great leafy hills. Mile after mile and hour after hour of such a route was passed—a deep black solitude, with here and there a vista opening up, showing the massive trunks, gray as cathedral ruins, which bore the rich canopy of leaves aloft. I call it leaves, for even the hurry of writing would not excuse its being called a canopy of green. The winter is closing in fast upon the sombre glory of the forests, and they stand in such glowing tints, such deep rich scarlets, as if the leaves were steeped in blood; such piles of glittering yellows, of pinks, and quiet faded mellow hues, that you gaze, lost in admiration, as hill after hill opens out in sheets of burning colour, like the last grand shower of Nature's pyrotechnics before they close in frost and snow and darkness for the winter season. Crossley and other artists may paint an American autumn, but who can describe it? Look at the monstrous Pine, that was barked last year, and which, all dead and white, seems to spread its lean shrivelled arms abroad like fleshless bones, trying to stay its fall. Over the trunk a creeper comes, which, turned to pink, to purple, gold, and scarlet by a few nights' frost, droops in festoons of colour like ragged, brilliant drapery; but so bright, so wild, and graceful in its quiet curves, that it seems at once both more and less than natural—the work of a decorator in its arrangement of colours, such as only Nature's colours ever give. In the foreground stands a clump of trees, clustering round in piles of gold, intermixed with wild Sycamores of light quick green, red, purple, crimson, and almost blue. Behind are trees of every shade of autumn glory, from faded gold to almost black, while above towers the massive deep green Pine, unchangeable in its solemn features as Canada itself, with a host of umbrageous deserters round it in wrinkled brown and faded leaves of all hues, rustling to the wind with a sharp dry crackle as the "fall" comes on them. Let any one who can from such poor description imagine miles upon miles of this forest scenery bathed in all the tints of a stormy sunset, with hill and vale, mountain and river bank, deep swathed in gorgeous robes of hues like these, and he can then form a poor—though but a poor—idea of what North American scenery is during the Indian summer, that bright, quiet, treacherous forerunner of the severest winter in the world. *Correspondent of The Times.*

Home Correspondence.

Reaping Machines.—Information being desired respecting these important aids to farmers, we gladly put in our mite, as there are so many and such contradictory opinions afloat about their merits. Last year was a most expensive one for cutting Corn, added to the anxiety that was so prevalent from the scarcity of labour and the aptitude of Corn to shed. This induced us to order a machine, and in July it came to hand. It was first tried upon a seven acre field of Barley, which took a day to finish, cutting, tying, and stooking, four horses (two at half a day each, hard work) and 10 men. Part of the work, about an acre, where it was laid left a long stubble, but altogether as a beginning we felt satisfied. In removing it to the next field for operation some distance on the road, the heavy wheel got fixed, and two hours' delay was occasioned by its examination and alteration before it could travel further. Ordinary 9 or 10 feet gates are another considerable cause of delay, which we generally shortened by taking one of the gateposts up. However, we at last reached a 11-acre field of heavy Wheat, round which two swathes had been mown; we here had prepared a heavy ring and chain to adapt a third horse, so this day employed six horses (half a day each, that is three at a time), and they made far easier work of it. We also had two additional hands and a boy to drive or ride the fore horse. We made very good work of this field, and completed cutting before night and tying; but it took two men two days each to stook and drag rake it. The men averaged 5*s.* a day each, besides beer, therefore their labour came to 4*l.*, it being a heavy crop would not this year have cost less than 12*s.* or 14*s.* an acre; so if we say, 30*s.* for horses, beer, &c., we shall have a total cost of 5*l.* 10*s* against 6*l.* 12*s.* or 7*l.* 14*s.* an acre, or even more. We afterwards completed two other fields of Wheat, one under extremely favourable circumstances, it being a clean standing crop, the whole of it making good work; the other was difficult, being partly much laid. The one, about 11 acres, was completed in a day all but dragging; the other, 7 acres, took more than a day to cut. The last attempt with the machine was on an 8-acre field clogged with Chickweed, much laid, and in a damp condition; of this we cut with difficulty rather more than half, the remainder was mowed by hand. We learn that our neighbours did not fare so well as ourselves; in fact all kinds of reaping machines in this neighbourhood seem to have been failures, from the abundance of weeds, from the immature condition of the crops, and from the laid and twisted state of them. From our own experience this year we feel much confidence in their utility hereafter; still there is room for improvement in Burgess and Key's; they appear to be too heavy, and they are too wide to be easily removed from one field to another; they are not adapted for small occupations, the number of horses and men being only available on a good sized farm, and they do not seem likely to be in demand as hired machines in their present shape, as what with preparing for their use and finishing off work after them, they keep any one busy as fast as the crops may ripen. People should not expect too much from them; this one condition will alone recommend them—that without making any farmer independent of labourers, they do enable farmers with a moderate number of hands to secure his crops within a reasonable time. They are not much cheaper than mowing or reaping, but they are equally beneficial to a man's regular stock of labourers if they are allowed to earn as much as ours have done this harvest—four at the rate of 6*s.* a day for a month, and six at 5*s.* a day, with beer. Other hands at various rates, according as they worked by the great or by the day. *J. W., Peterborough.*

Societies.

Chemico-Agricultural: *Dairy Produce.*—Professor Hodges said that he had just returned from Dublin, where he had been engaged in delivering a course of lectures to the pupils of the Albert Training School. He reported the condition of the crops on the school farm as most encouraging. The Potato disease, however, had made considerable progress in some varieties of Potatoes—fully 20 per cent. of the kemps were diseased. The Wheat crop was considerably above average. Mr. Boyle, the agriculturist, had placed in his hands some exceedingly interesting tabulated returns of extended experimental investigations which had been carried on for some time on the farm. These would be published in the Journal. The following is one of the returns referred to:—

Comparative value of Italian Rye-grass and Clover in the production of Butter.

1860.	Quantity of Milk.	Per Centage of Cream.	Butter Produced.	No. of Quarts of Milk for 1 lb. Butter.	Temp. of Milk when put in Churn.	Temp. of Milk when finished Churning	No. of Hours Set.	Time in Churning.	Quantity of Milk from which samples were taken.	Feeding of Cows.	Observations.
	Galls.		lbs. oz.	Quarts.			Hours.	H. M.	Galls.		
July 6 ..	10	8·5	3 0	13.3	65°	65°	84	1 25	32	2nd year's cut of Italian Rye-grass and Rye-grass & Red Clover.	Cows out in Paddock for three hours daily Grass.
„ 18 ..	10	9·5	3 10	11.03	60°	65°	80	2 45	33	2nd cutting of 1st year Italian Rye-grass alone.	Same as above.
„ 27 ..	10	8·5	3 8½	12.6	59°	64½°	88	1 10	30½	2nd cutting of Italian Rye-grass & Clover—the latter being about half the weight of the crop.	Do.
Aug. 4 ..	10	8·7	3 4½	12 2	61°	65°	92	2 15	30	Same feeding—duplicate of last.	Do.
„ 28 ..	10	9,0	3 7	11.6	60°	65°	90	2 30	27	3rd cutting of Italian Rye-grass—no Clover.	Do.

On referring to this table, it will be observed that the milk produced when the cows were fed on Italian Rye-grass alone produced more butter than when the feeding was principally on Clover. *W. Boyle, Albert Model Farm, August* 31.

Farmers' Clubs.

Pembroke: *Welsh Butter.*—At the last dinner of this Society, Mr. Bagnall, who had acted as judge of the dairy produce, said—"You will remember that at the last meeting I had occasion to state that I was disappointed with the quality of the butter then exhibited. This was fully accounted for by the peculiar character of the season, for as we cannot expect a man to make bricks without straw, we cannot expect farmers to make butter without Grass and water. Last year the season was attended by a remarkable drought. This year it gives me very peculiar pleasure to state that I have been pleased with the butters which have been exhibited to-day. I notice a very decided improvement in the quality. I always believed that the Pembrokeshire butter was over-salted, and that I think has been entirely removed. I am glad to hear, from information which I have had from merchants in this town, that, upon the whole, the Pembrokeshire butters of the farmers are much improved. You may have noticed a controversy in the London papers with regard to the exorbitant prices of butter, but I do not think such complaints have been well founded. In these days of free trade, and in a place like London, with its severe competition, I think it impossible for any trader to obtain exorbitant prices. I remember two years ago a

gentleman connected with a firm in this town—not one of the oldest firms—mentioned that he could always pass off his butter to the London market, and that he had a vent there for all his butter. I was surprised at this, and as I failed in my previous efforts to open a market in London for Carmarthen butter, made a purpose journey to London, and attended Leadenhall, Newgate, Hungerford, and other markets. I also called upon a large firm at the bottom of Ludgate Hill; I saw the principal, and I handed him my card, and introduced my business to sell Welsh butter—Carmarthen butter. He turned round, and said, 'Your butter will not suit the London market.' I asked 'Why?' and he replied, 'They are too good for our market.' As we are not often complimented for having an article too good, I thought he was 'chaffing me,' and I began to think that as I was fresh up from the country, perhaps he might have seen something green in my eye, and although I could stand a little chaff, I did not like practical jokes. 'I am not joking,' he said: 'I repeat that your butter is too good.' The Londoners, or Cockneys, have a peculiar taste for butter: they don't like a wholesome honest butter, but something that will cut like clay—something that will spread stiffly over bread, without permeating either into bread or paste, and therefore butters are prepared in a peculiar manner for the London markets. They adulterate it with oleaginous and farinaceous substances, and make it thick and hard: it is thus a very inferior butter, for while it sells for 84*s.* in the market, Pembrokeshire butter will realize from 100*s.* to 105*s.* We can, therefore, go on improving without fearing any competition from Dorset, Carlow, or Cork."

IPSWICH: *Pleuro-pneumonia.*—After a paper on "The prevalent diseases in cattle and sheep," by Mr. C. Shorten, of Ipswich, Professor Simonds said they had two subjects before them—pleuro-pneumonia, and the diseases of lambs. First, as to pleuro-pneumonia, he might say in the outset that this was a misnomer, and the erroneous name had done not a little to mystify the subject. The name of a disease should always correspond with its nature. Pleuro-pneumonia signifies inflammation of the pleura and the substance of the lungs; the disease itself was really not of an inflammatory character. We have but too strong evidence that it is contagious, and, unhappily for the country, this fact has been too much lost sight of. In fact this disease was an epizootic. In August, 1842, just previous to the alteration of the tariff, the disease came to us. It was then new to us, but it was not a new disease in foreign countries. Owing to the coincidence of the outbreak of the disease with the free admission of foreign cattle, it has been thought by many that it was an imported disease; but such was *not* the case, it was an epidemic. It had raged throughout all the continents of Europe, Asia, and Africa; but until the last few years it had not appeared in America or Australia. Recently, it had appeared on those continents also; and its arrival there could be traced to contagion. Many diseases were disseminated both ways. The morbific matter entered the system, and when seated there poisonous exhalations were given off. This was the case in small pox: after the disease had reached a certain stage, pustules were formed, and each pustule contained the same morbific matter as was originally inhaled. It was not the case that all animals exposed were infected, any more than it was with man. There must be a susceptibility as well as a cause. Some constitutions would resist more than others, just as men were differently affected by strong drinks; what would intoxicate one man would take no effect upon another. This opened the way to speak of secondary causes, and how farmers might help nature to resist the disease. Animals were rendered susceptible by over-crowding. Hence, in the London dairies the disease was more rife than anywhere else. Damp and wet yards were also to be avoided, and keeping cattle in places where much muck was fermenting, especially if animal matter was present. There were some pastures which in dry weather were unexceptionable; the same pastures in autumn, when exposed to fogs and damp, would engender it. To use plain language, we must have our wits about us. The malady itself: it was not an inflammatory, but a local and specific one. The morbific matter enters into the blood by respiration, and then concentrates itself in the lungs. This affection was in many respects very peculiar. It is an eminently fatal disease. We are often twitted with our inability to stop its ravages, while cases were reported in which some ignorant cow-leech had treated it successfully. In explanation, we might say that it is not every farmer who is able to recognise the presence of the disease in its early stages; indeed, they were not easily distinguished by the regular practitioner. In those cases where these marvellous cures had been effected, the truth was, the disease had not been present at all; but the farmer was not sufficiently acquainted with its early symptoms to be able to detect the deception of the man who said that the affection he had cured was this disease. Bring any of the boasted remedies to a genuine case—one fully established to be such by the testimony of competent persons—and they invariably failed. Both in cattle and in man, nature is unable to remove the deposits caused by the disease, and to substitute sound tissue in the place of that destroyed. It always was a fatal desease, and it always would be: the more we know of it, the more positive we were of this. In no one case has an animal ever been cured: the disease is sometimes arrested, but never cured. It often happens that cattle are sold appearing well; when slaughtered, the lung is found diseased. Sometimes, in the centre of an apparently healthy lung, a diseased portion is found which is dead and insulated by nature from the living part, being surrounded by a layer of lymph. In no case was the mischief done by the disease upon the lung ever repaired. When does its contagion cease? is a question upon which there has been much discussion, and which is still undecided. As soon as the animal sickens the disease is contagious. If it was arrested, it was not easy to say how soon the animal might safely mix with others. The legislature might, with much benefit to the country, take this matter up. On the continent, the measures taken by Governments had done much to stay the ravages of the disease. In some countries, if a herd were affected, it was compulsory to separate it immediately; the proprietor was compensated by the Government, whose officers took possession of the herd; those badly diseased were slaughtered, and those that were not affected or had recovered were branded on the horn so as always to be known. By the adoption of such measures as these much has been done to lessen the severity of this scourge. The principles of treatment: These could only be properly put into operation by a veterinary surgeon. As a farmer himself, and addressing farmers, he would recommend, when the disease was decided, to spend nothing in physic. Get rid of the beasts as soon as possible; the first loss was the best. There were some preventive measures which might be put into operation with advantage. When it entered a herd much might be done to prevent its spread, by remembering the contagiousness of the disease, and that a certain state of the system was necessary before it was taken. Sometimes it was dormant in the system a long time before it broke out. When this was the case the morbific matter might be got rid of. In this respect this disease differed from all others. The first thing to be done was to remove the healthy animals; this was decidedly better than removing the affected, as there might be something in the place where the disease first appeared to induce it. In altering the circumstances we might remove some secondary causes. Next, as to bringing the system into a healthy condition, and, if possible, to rid it of the morbific matter; first, a mild purgative should be employed, to induce action of the bowels; second, some agent to act on the urinary organs. The nitrate of potash ($\frac{1}{4}$ to $\frac{1}{2}$ an ounce daily, for two or three days) was as good as anything for this purpose. Thus the system would be gently cleansed. Third, for the encouragement of the production of pure and healthy blood, some kind of stimulant might be used, as sulphate of iron, or the oil of turpentine. Fourth, feed the animals generously. The early adoption of these means would often rid a herd of the disease. To sum up, the disease is contagious; it is an epidemic, or epizootic; it is never cured; it had many secondary causes. Amongst these he would mention the travelling of animals. Irish beasts were often driven from fair to fair, and were most likely to catch it in one place or another. He would recommend when fresh beasts were brought, that they should be kept entirely away from other stock for three weeks, by which time the disease would manifest itself. If it broke out, let it be remembered that it was a fatal disease.

Reviews.

The Journal of the Royal Agricultural Society of England. Vol. XXI. Part 1.

The latter half of the volume contains articles by Dr. Voelcker, on the chemical properties of soils; by Mr. Wells, on the drainage of Whittlesea Mere; by Mr. H. Evershed, on the office of straw on the farm; by Mr. Herbert, on the meat supplies of London, of which an extract will appear elsewhere; by Mr. Lawes, on the growth of Clover; by Mr. Frere, on the moveable steam-engine and the feeding of stock; by Prof. Simonds, on the composition of the blood; and by Mr. Tuckett, on rotations of crops.

Let us look at Mr. Evershed's essay on Straw: the reader will find the first part of it in another page. It is followed in the volume (indeed there is a running commentary throughout the essay) by a review from the pen of the editor, commencing with the following sentence, intended, we presume, to signify an approval of the performance:—

"From the conflicting opinions of scientific men, based on chemical analysis, as to both the feeding and manuring value of straw, and the almost contradictory statements of other writers on this subject,—the large promises of direct profit held out by some from the combination of straw-chaff with richer food in cattle feeding, contrasted with the assertions of others that however high may be the true theoretic value of straw for feeding, still it will not answer to buy rich food for the purpose of mixing with straw-chaff,—we turn with satisfaction to the practical good sense of the author of the present essay."

During the prolonged examination of it which ensues, Mr. Frere reviews the "estimates" of previous writers on the quantity of farm-yard dung made under different circumstances, viz. from a given quantity of straw. Among others he refers to Mr. Morton's account of Whitfield Farm, thus:—"Not to refer to bygone estimates, I will only note that Mr. Morton, in his recent article, vol. xix. of Journal, p. 461, speaking of the horse labour performed on Whitfield Farm, speaks of 1200 tons of dung being carted where only 120 acres of corn are grown. This would give 10 tons of dung as the produce of 1 acre of straw; or, supposing the litter, as assumed above, to contribute one-fifth of the bulk, and no straw at all to be consumed otherwise than as litter, we should require for this result an average yield of 2 tons of straw to the acre on autumn and spring corn alike—assuredly a very high average."

On this it must be remarked that the 1200 tons are not an estimate but a fact—that in many successive years upwards of 2000 cubic yards of manure were made on that farm, and that more than 120 acres of corn were grown annually on that farm; but that Mr. Frere is wrong in quoting the case as having any bearing whatever on the question, how much dung is made from so much straw? Mr. Morton's reference to the subject was in order to ascertain the quantity of cartage in the cultivation of a given extent of land, and the dung heap contained earth and every kind of fertilising matter available on the farm, besides the soiled litter of the yards and boxes.

But it is to another remark in the course of Mr. Frere's review that we direct attention. In explanation of the usefulness of straw as food under certain circumstances he uses these words:—

"It may be that the admixture of some other kinds of food with straw may conduce to the development of these gastric juices, and to some extent exercise a condimental influence on the digestive process."

The word "condimental" is a new one coined within the last few years for the express purpose of effecting the sale of outrageously costly foods in order to the profit of enterprising adventurers. The sentence just quoted which contains it is one of several in the course of the Journal which will be quoted with triumph by Mr. Thorley and his friends. Nay, they are already glorying over the fact that the leading authority in the literature of English agriculture is at length to lead public opinion aright. The following is from the columns of a contemporary at Hull.

"It has been observed that most great discoveries have gone through two or three stages before they have met with general consent and acknowledgment. First of all, we have the stage of ridicule; the thing is too absurd to have reason wasted on it. It is so easy, too, to laugh, that there is required no argument or thought about it. But the discovery, if good, survives the ridicule stage, and comes into that of abuse. There may be some shadow of truth in the thing, but it is overweighted with that which is bad. Either the man who made the discovery is nobody, or his discovery is worse than nothing. It is bad: it is impracticable: it is useless: it is dear: it has all the faults that can be brought together in one point, and therefore cannot be right. But the abusive stage leads directly to the argumentative stage, and then if there be merit in the thing debated it speedily comes to be acknowledged as a great truth, and admitted among things known and approved. Instances of the truth of these observations will occur in plenty to the minds of every one; but we have in our own time a memorable illustration. Thorley's Food for Cattle has reached the argumentative stage, if it be not already coming out even of that. It has been ridiculed, and abused, and argued upon, and it will end in being believed in. How near it approaches to this point may be seen in the Royal Agricultural Society's Journal just published. There is in it a lengthy and able article by the new editor, Mr. Frere, in which he details his experience in cattle feeding, and he unhesitatingly says that Thorley's Food is good. Take the following extracts from pages 231 and 235—'I gave them some of Thorley's Cattle Food, and I am bound to say that it appeared to produce a satisfactory effect when the beasts were off their feed. There is this drawback, however, to its use, that, if commenced, it should not be discontinued.' * * * 'It being highly probable that straw chaff will play an important part in this economical manufacture of beef, we see that recent improvements have much diminished the cost of cutting. that the attention of both scientific and practical men is actively directed to the discovery of means that will render this substance more digestible; that a slight fermentation seems conducive to this end, and may be economical, whilst it is probably as efficacious as heating by steam. The digestion of the straw itself may be promoted by the admixture of other kinds of food supplying those juices in which straw is defective as compared with Grass or hay. Even if this supply cannot be procured from ordinary kinds of food at its feeding prices, attempts will not be wanting to supply the defect by medicinal compounds, which may in the long, result in procuring us a good, well ascertained article at a moderate price. This is to all intents and purposes the very highest encomium which could be passed upon Thorley's Food."

The writer adds:—

"But the Food is scarcely yet beyond the [illegible] dull people. The Editor of the *Gardeners' Chronicle* has been marked by the obstinacy with which he has resisted evidence of the utility of Thorley's Food. Correspondents, in his own paper, have been snubbed by him for admitting that there might be some merit in the condiment; and now he falls foul of the Editor of the Agricultural Society's Journal for presuming to

praise it. In trying to stay the progress of Thorley's Condiment, the Editor of the *Gardeners' Chronicle* is very much in the position of the elderly dame who endeavoured to keep back the waves of the Atlantic with her house broom!!"

We have no hesitation in saying that there is not a bit of evidence on the subject of Thorley's Cattle Food that has hitherto reached us, that has not been published in our columns. Dr. Voelcker, Professor Andersen, Mr. Lawes, Dr. Gilbert, and Mr. Pawlett have all spoken in our columns on the subject, giving their judgment and experience. Mr. Spooner and Mr. Brown, veterinary professors, have given their opinions, and "the waves of the Atlantic" have had unrestricted flow, unhindered by any "house broom" here whatever.

Let us however state the case once more. Mr. Thorley uses in his compound, according to Dr. Hassall, the best grain and pulse, and according to a recent trial the best oilcake; and besides these it contains medicinal compounds as flavourers. Now these medicinal compounds cannot be a very large proportion of the whole, for if they were, their medicinal influence would be excessive; the whole of the large remainder then is paid for by the farmer who buys the food, at the rate of 35*l.* or 10*l.* a ton (whatever the charge may be), whereas he can get them in the market for less than one-third that amount. That is the point to which we would fix his attention. And not only this, but if he spends 40*l.* on a ton of Thorley's Food he will obtain at most 2*l.* or 3*l.* worth of extra value in manure; whereas if he spends it on 4 tons of oilcake he will get, as Mr. Frere would put it,

$$4 \times \left\{ \begin{matrix} £2 \\ \text{or} \\ £3 \end{matrix} \right\} = \left\{ \begin{matrix} £8 \\ \text{or} \\ £12 \end{matrix} \right.$$

in the manure derived from its consumption, besides the beef or mutton which in either case he may make.

On both of these grounds then we shall not cease to recommend feeders to buy known foods at their fair market prices, instead of mysterious compounds at a price which has to cover excessive cost of advertising, and no doubt a natural desire for profit, besides the expense of materials and of mixing.

Farm Memoranda.

(*Continued from p.* 843.)

MR. HORSFALL'S FARM NEAR OTLEY.—I stated a number of animals kept per acre on the pastures, with the qualification of "some little assistance from other sources." This assistance only consists, I think in a little cooked food for the milch cows, and in the fact that when the pasturage begins to be less hearty, they at just about the time of my visit in the middle of August, they are stabled at night, and receive a little Grass in the stall. This Grass is often obtained from the same pasture with a scythe, for, at intervals where the droppings of the animals have laid, the herbage will not have been eaten off, and a man can soon cut enough of the rank growth thus produced to serve for the housed stock, and if not wanted for the cattle, it is cut just the same and given to the horses. In this way not only the whole growth of the field is completely economised, but the Grass itself is kept in better growing order, as well as in better appearance. In hot weather Mr. H. is in the habit of stabling his animals all the day and letting them out at night. All the grass land is also subject to further manurings, of which we shall speak in connection with the stables and their management.

Of the Grasses, Mr. Horsfall likes best the Poas and the Festucas, the former genus comprising a number of varieties, among which what is there called meadow grass (Poa pratensis) is perhaps the best known, and the latter class or Fescues being generally regarded, I think, as peculiarly suitable for low-lying grounds. For under Grasses, as he called them, and Clovers, he don't care so much. His lands are all drained, the lines of pipe-tile running 8 yards apart, and from 3 to 4 feet deep, the latter depth being found preferable, and having been employed in the drains most recently put down.

Mr. Horsfall's simplest feeding stable was an inexpensive building, of which I had the curiosity to take the exact measurement, as he seemed to like the plan on which it was put up quite as well as any other, and as its cheapness, moreover, is such as to put it within the means of any American farmer. The inside length was 42 feet 1 inches, outside width 14 feet 10½ inches. The back wall was of brick, 7 feet 3 inches high, the end walls also of brick with doors. The front of the building, toward which the roof sloped, was probably about 6 feet high; it was composed of six pairs of doors, so that this whole side could be thrown open if necessary. The roof was of slate and thatched underneath, a very simple and not uncommon English method, worthy of adoption here, of maintaining a more even temperature by keeping out extremes of heat and cold—the spaces between the roof timbers being filled in with straw, held in place by light strips nailed across, or in some other similarly cheap and easy way. In speaking of roofs, I think it is Mr. Mechi who recommends whitewashing them; because, as he states, the rains of winter will not carry it off, and the sun's heat is then reflected, while the snow and frosts of winter will at once remove it, and then what heat the sun gives will be absorbed.

A wing attached to this building contains feed and a well sheltered apartment for roots; while the water may be added to carry it by one turn of a spigot into each stall. I have forgotten whether the last arrangement was already in operation, or whether it was spoken of as an improvement to be made. One improvement was suggested as worthy of attention in erecting such a stable, viz., the provision of slides in the doors for better ventilation, or what was thought perhaps preferable, the hanging of the doors in two parts, so that either top or bottom alone might be opened or shut at pleasure.

Coming now to the interior arrangement, we find that a little greater width would allow an alley-way for feeding, which runs along the back wall, and toward which the heads of the animals stand, a little wider and more "handy," its width now being only about 30 ins. The building accommodated 11 or 12 stalls, their width being 3 feet 6 inches to 3 feet 9 inches. The manger bottom is only 2 or 3 inches above the level of the floor. Its inside width at bottom is 14 inches; the inside board is 9 inches wide, sloping outwards, and the back of the manger 1 foot 11 inches high, also with a slight slope, so that its inside width at top is 15½ inches. In front of the stall a timber runs 3 feet 8 inches high from the manger bottom, say 4 feet 2 inches outside height from the ground. This would leave an aperture of about 20 inches from the back of the manger to this piece of scantling, 8 inches of which is filled by a board hung upon hinges to the latter, so that when feed is put in from the alley-way it opens back for its admission, while the cattle cannot push it outwards so as to put their heads through.

The stall partitions are about 5 feet wide from the extreme front; the cattle are fastened by a chain about the neck, attached to a ring sliding up and down upon a stanchion about a foot back from the manger in the side of the stall. The floor of the stall is worthy of particular description. A piece of Cocoa-nut matting 3 feet square occupies the upper end, having straw under it, and securely fastened down. Back of this there are grates opening into a tank beneath, not quite 3 feet deep, 2 feet 8 inches wide, running the whole length of the stable. The grates are of the same width as the tank, each one 3 feet 3 inches long, fitting neatly together and with the rest of the floor, and capable of removal one by one for any temporary purpose. The frame is made of 3 by 3-inch timber, with slats 4 inches wide and 1½ inch thick, and 2½-inch spaces between the slats. The distance from the manger to the outer edge of these grates is 7 feet 8 inches.

Of the underground tank there are six extensions, answering as outlets, one at the end of the building, and the other five along the side, the outlets enabling a man to work at any part of the tank in removing the manure more conveniently than could otherwise be done, and to some extent entirely upon the outside—a cart backed up to where he is at work, and no doors being open to chill the animals. There is a pump to take as much of the liquid as can thus be drawn off. No bedding beyond the mat is used for the cattle. The more solid parts of the manure are taken away in carts, and sometimes mixed, especially if they are not to be immediately applied, with the scrapings from the adjacent public road or the cleaning of the ditches. But it is to the application of this substance to his Grass lands, almost without stint, that Mr. H. owes their unflagging, or rather, I may truly say, their constantly increasing productiveness. A dozen good loads spread upon an acre just before a gentle shower will be washed into the ground like a healing ointment, there being no straw or other coarse material in the way. The time for manuring the meadows is as soon after the mowing as the weather suits; for the pastures, during the winter. The liquid manure is often mixed with the rest for application in this mode; it is also pumped into barrels and put over the pastures in spots where the cattle don't appear to like the Grass so well, or where it is coarse and wiry, or on spots a little bare; and three or four doses of this kind in winter or spring are said to bring on the herbage wonderfully, and indeed seem to change its nature at once. If there is an extra supply of the liquid manure, it may be carried to the source from which the water used for irrigation is distributed, and poured in there to render it still more fruitful of good as it is diffused over the field through the diverging channels already described. In what I have just said about the tank I omitted to mention that it contains a partition having interstices between the boards just so as to let the liquid part through into a little compartment with which the pump connects, and retain the more solid mass behind. Mr. Horsfall estimates the annual production of manure from cattle, if it is well preserved, as worth at least 5*l.* per head.

Dr. Voelcker had then just published in the Royal Agricultural Society's Journal an essay on liquid manure, which, as I subsequently read it after visiting the Cirencester school, appeared to me eminently practical, sound in its general reasoning, and cautious in its conclusions. But Mr. Horsfall thought it calculated to impede rather than increase the use of liquid manure, because Dr. V. classes "soils containing a fair proportion of clay, especially stiff clay soils," among those not benefited by its application, thus running exactly in the teeth of the long-continued and successful practice at Burley Hall. Dr. V. also advocates the dilution of liquids—a thing that Mr. Horsfall never does—drawing his argument too exclusively, as the latter thought, from the Flemish farmers on the sandy soils of Belgium. It is undoubtedly true that to use liquid manure to advantage upon stiff and retentive ground the land must be well drained and in good order; and, of course with these pre-requisites, Mr. H. considered its application more effective there than anywhere else. He would not apply it in very hot weather, of course; preferring a murky if not absolutely a rainy day, and thought that any previous dilution would then be attended with evil instead of good results. It seems quite possible, however, that upon drier and lighter soils, or in a climate less moist, the reverse should be the case, as Dr. Voelcker argues.

For steaming the food the cattle get Mr. Horsfall employs cans made of block tin holding three bushels each, which last in use about two years, and are portable and easily handled. His apparatus accommodates three such cans, which are filled three times a day for the 20 milch cows he keeps in winter, the mixture steamed being composed at the time of my visit in the following proportions, the quantity mentioned being that prepared for each cow's daily subsistence:—

Rape-cake	5 lbs.	Malt-combs	3½ lbs.
Bran	1½ ,,	Indian meal	1 ,,
Straw, cut to half-inch lengths ..	10 to 12 lbs.		

This mixture is just dampened, the degree of moisture it contains being a very important matter, and one which experience must determine—the food having a greater or less laxative effect, according as the water in it is increased or diminished. Cotton cake Mr. Horsfall has also employed to good advantage, and Indian meal he considers the most fattening food he can get, if it is properly mixed with other substances—indeed the composition of the feed given in winter, unless I am mistaken, would vary from the above by the substitution in it of 3 or 4 lbs. of Indian Corn instead of 1. The steam is admitted to this mass for about an hour, and there is really something quite attractive in the odour it exhales—an effect which must be increased in a cold day by its warmth. Mr. Horsfall modifies his feeding materials of course with changes of price at different times. He has in past years used a great deal of Bean meal to good advantage, but at present it is too dear for the purpose, and Wheat bran and other substitutes are cheaper, as will be perceived from the fact that while Wheat has heretofore averaged 56*s.*, and Beans 34*s.* per quarter—that is, Wheat at 1.75 dols., and Beans at 1.06 dols. per bushel, the former was selling this year at 1.25 dols. per bushel, and the latter at 1.56 dols. The cooking of the feed he estimates to cost for fuel only 2*d.* (four cents.) per cow per week, while with but little additional assistance in preparing the food and in milking, one man has the entire charge of the 20 cows. The advantage of feeding straw, in Mr. Horsfall's view, consists in the fact that you thus utilise as fattening agents those elements in it which would escape by fermentation if it were converted into an ordinary dung heap, while the very ones which alone render it of service as a fertiliser are those of which the animal economy can make no use, and which are therefore thrown off by it, and collected in his tanks for the same destination they would otherwise have taken, but performing a double office when they reach it.

The price at which the milk is sold from this establishment is four cents. a quart; but there not being sufficient demand to consume it all in this way, what is unsold is made into butter, perhaps to the amount of 50 lbs. per week. There is an old well at the very door of the dairy room, employed for the sole purpose, as there are waterworks which supply all that is used, of cooling the cream in hot weather, before churning—a can containing it being let down 26 feet the night beforehand, where the temperature stands at about 46°. The dairy room is purposely a small one, as the temperature there can thus be much more easily regulated; and upon maintaining it properly, much of his success in butter making is believed to depend. There are several tiers of shelving around the room, hollow, several inches deep, and lined with sheet lead. A current of water, cold in summer and hot in winter, is kept in constant circulation from one to another, and Mr. H. finds that he can thus keep the thermometers that hang at one or two different points in the apartment, at from 52° to 56° with great equability. The upper shelf about the room was covered with an inch or two deep of charcoal, which had been found to operate most successfully in the preservation of an atmosphere constantly sweet and pure, without such an admission of the exterior air for purposes of ventilation as would be necessary without this precaution. Unless I have forgotten, however, the sides of the room near the top were also provided with one or two outlets for the escape of any foul air that may rise from below.

I was particularly interested in what I saw and learned at Mr. Horsfall's, because it showed so plainly the practical nature of all the experiments he has undertaken, and because the numerous details with which it furnished me became of double value in connection with his writings, which have already had a wide circulation in this country. I may allude very briefly to one point in them to which Mr. H. particularly called my attention. In calculating the value for feeding purposes of various articles of food (Royal Agricultural Society's Journal, vol. 18, p. 170), the per centage they contain of starch, sugar, &c., was reduced to fat by taking "the proportion as 90 of starch, sugar, &c., to 50 of fat." Mr. Lawes, from experiments which

I think he has subsequently made, is led to the conclusion that five to two is a more correct proportion than that of 90 to 50, which I believe Mr. Horsfall thinks probably more correct, and explains by supposing that some oxygen combines in the process of digestion with the carbon of the food to form carbonic acid gas, and is thrown off and lost. This does not affect the ultimate results of Mr. Horsfall's investigations, but he thought it worthy of being placed on record with them. *Mr. L. Tucker's American Glimpses of English Agriculture.*

Miscellaneous.

"*The best old-fashioned Winter Feeding of Cattle.*—Previous to removing the cattle from the pastures to the feeding-houses, they should be gradually accustomed to the change of diet which awaits them, by having a few Globe Turnips spread on the pasture for some days before the removal takes place. There are some people who make a great fuss, bleeding all their cattle indiscriminately, both when they put them up for fattening and also when they turn out their young stock in spring to the Grass; but if cattle are in good health there is not the slightest use for so doing, and the practice resembles that which was once so much in vogue, when nearly every one thought that he or she ought to be bled once a year, 'in order to keep down the humours.' The fattening cattle are fed three times a day, viz., in the morning, at noon, and at sunset. Regularity in giving the meals is essential, and all unused food which may be lying before the cattle must be taken away, and the troughs carefully swept ought before a fresh meal is given. The quantity of Turnips given at the morning and evening meals is larger than that which is given at noon, because a greater interval has elapsed before the morning feed is given, and, for a corresponding reason, the evening meal is also larger than that which is given at noon. The Turnips are sliced previous to being given to the cattle, and when they have consumed their allowance, the houses are cleaned out, a supply of hay or straw put before them, the litter freshly made up, and they are then left to ruminate quietly until the next feeding time. Light has been found to exercise a considerable effect on fattening animals, chiefly we suppose, by rendering them more restless when exposed to it; and as everything which tends to disquiet them should be avoided, the light should be as much excluded as possible after the cattle have been fed. The houses must also be kep at a moderately warm temperature, say from 45° to 50°, whilst, at the same time, a constant supply of pure air must be maintained. When cattle are tied up they ought to be daily dressed with a curry comb, because they are prevented from cleaning their skins as they would do if left loose. This should not be done, however, whilst the animals are in the act of feeding, as it rather irritates them. Some people, especially those who leave their Turnips in the fields during winter, are in the habit of giving the roots to the cattle covered with dirt, just as they come from the field. We think this is both a slovenly and improper practice. When Turnips are lifted during dry weather for the purpose of being stored up during weather, in general very little earth adheres to them, and such Turnips will be found clean throughout the season; but whenever the roots are dirty they ought to be washed before being given to the cattle. Where no other convenience exists for this purpose, a large quantity may be very speedily washed by simply dashing them about in a tub; but the quickest and most efficacious mode we ever saw was that which was adopted by Jonathan Richardson, Esq., M.P., during the time he occupied the farm of Ingram, near Lisburn. A small stream which passed the farm-yard was damned at a little distance above the buildings, and the Turnips were carted, or carried in a wheel-barrow, from the heaps where they were stored—immediately adjoining the stream—and thrown into its bed below the sluice. When the sluice was opened, the force of water carried the Turnips along with it, rolling them over the paved bottom of the stream, until they reached a grating close by the door of the root-house, which prevented them from going further, and the sluice being shut down, or the water collected having been run off, the roots were left in a perfectly clean state, and were easily thrown out, as the water speedily passed away, leaving the Turnips dry. The supply of Turnips intended for cattle should be drawn and stored convenient to the yards, so that there may always be a proper supply obtainable, whatever the weather may be at the time. Those who leave out their Turnips and draw them only as required, not only poach the land by carting on it during wet weather, but also run the risk of their supplies falling short should a snow storm come on, or of being obliged to give their cattle frosty Turnips, than which nothing can be worse for the animals. The quantity of Turnips consumed by fattening animals generally varies according to their size; at the same time, even in a level or equal sized lot, some animals will be found to consume a larger quantity than others. As a general rule, cattle which will weigh when fat from 5 cwt. to 6 cwt. will consume from 11 to 12 stones each per day; and cattle which will weigh from 8 to 9 cwt. will use 16 or 18 stones per day. It is of great importance, however, that the feeder should study the characteristics of every individual animal in this respect, so that none be forced to take a larger quantity than is beneficial, and this is particularly necessary when the cattle are first put up to feed, because even a moderate allowance of roots may prove to much for the digestive powers of some animals, and thus produce irritation of the bowels, and excessive purging. Such animals must, therefore, be restricted in their allowance until such time as their digestive organs become accustomed to the food, when the quantity given may be gradually increased. Others again, will consume a larger quantity than the average, without injury; and much, therefore, depends on the good sense of the cattle-man; for inattention or ignorance on his part will often prove the cause of serious loss to his employers. The production of meat consequent on the consumption of Turnips is, therefore, subject to divers controlling influences, arising from various causes, as well as from the difference which exists in the nutritive properties of the roots themselves; because, even the same variety of Turnip, grown under different circumstances of soil, climate, and manure, will vary considerably in its feeding qualities. As a general rule, however, it has been held that, on an average, one ton weight of Turnips will produce 14 lbs. of beef and tallow. We would remark further, that all straw which is given to cattle as fodder should be given in as fresh a state as possible; and we do so because we have frequently seen straw which had been threshed for weeks, and for want of proper house storage built up in ricks, given to cattle, and this has been particularly the case when travelling steam-engines have employed to thresh, because the parties so employing them were induced to get through a large extent of threshing at once. Where the motive power is stationary there need not, in ordinary cases, be more threshed at once than will be required only during a limited period; and by this means the fodder will always be kept sweet and nutritious. At the same time, it is in all cases necessary to have proper straw-barn accommodation, so as to prevent the fodder from being wasted as well as damaged. When different varieties of Turnips are grown for the use of fattening cattle, it ought to be observed that the least nutritious should be first used, proceeding gradually to those of higher value. Thus, if the cattle have been first supplied with Globe Turnips, the next given will be the Aberdeens, and finally Swedes. Mangel Wurzel should also be retained to the last, as this variety of food improves by keeping, losing that acrid quality which the roots possess, and which produces purging when these are given soon after being drawn from the field. There are many feeders, however, who commence their fattening cattle at once with Swedes, reserving the Aberdeens and other varieties for the younger stock; but in this case a sufficient supply of Swedes must be provided, for it would be disadvantageous to begin the fattening of cattle with this variety and afterwards fall back upon Aberdeens, in consequence of the supply of Swedes having failed. We mention this because there are some who appear to imagine that it does not matter what kind of Turnip is given, and that all varieties are alike nutritious." *The Meat Manufacture, by R. O. Pringle.*

Notices to Correspondents.

ARTIFICIAL MANURE: *Young Beginner.* A pamphlet by Mr. Moule describes the manufacture of an inodorous fertiliser from clay and night soil (Bradbury & Evans). As to the other substances named—10 of bones, 5 of sulphuric acid mixed in a heap, and the result mingled with 15 of any waste flesh or night soil, and then thrown together and repeatedly mixed and turned over, with 70 or more of moist but friable clay soil, will make the very best of composts, to be used as a dressing at the rate of 10 to 20 cwt. per acre.

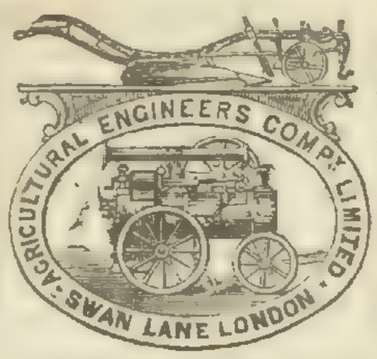
CATTLE SALES: *R.* Mr. Strafford last week disposed of two first class herds of Shorthorns, viz., those of Captain Spencer and of the late Mr. Wilkinson, of Lenton. In the former case 20 cows and heifers made 1518*l.* 6*s.*, or 75*l.* 18*s.* 4*d.* a-piece, and ten bulls and bull calves made 486*l.* 3*s*, or 48*l.* 12*s.* 3*d.* each. At Lenton 32 cows and heifers made 1127*l.* 14*s*, and 16 bulls 441*l.*, and 21 dairy cows and heifers made about 500*l.*

LAND AGENCY: *J Bunce.* Your best plan is to reside with a land agent who is also a farmer for a year or two, and so acquire the necessary skill and knowledge; you will thus have an opportunity of proving your ability in whatever business he may ultimately charge you with, and so gradually acquire a connection which may lead to an appointment

LUCERNE: *P Q.* It is oftentimes raised in a seed-bed and transplanted into the field, a practice which has been recommended by some of the earlier authors as producing in rich deep soils even greater returns than by the ordinary method of drilling. On such soils it is recommended to nip off the main tap-root to about 8 or 9 inches long, so as to induce the formation of lateral roots that should ramify through the upper layers of the soil. On the Continent this practice is still followed in many places; it can, however, only be admitted where either the breadth to be planted is very limited or manual labour very cheap; at the same time a small patch of Lucerne raised in the garden is very useful to furnish plants for any blanks that may occur in the field.

TOP-DRESSING GRASS LAND: *Martyn Roberts.* To top dress with 2 tons of rotten Fern the land from which you had removed 2 tons of hay, would probably keep it in heart, so far as the mere supply of mineral and other ingredients is concerned. But whether perpetual cutting of Grasses during or just after flowering will ultimately destroy any of them is another question, hinging on the habit of the plants themselves, and independent altogether of that scientific book-keeping which merely asks for the balance for or against the land consequent on the supply and removal of so many ingredients and so much of each.

WATER DRILL, &C.: *J. G. Stewart.* Apply to Mr. Chandler, of Aldbourne, Hungerford, the inventor of it. 3 cwt. of guano and a half-dressing of dung is a good manuring for any crop. An autumn dressing of dung and 2 or 3 cwt. of guano in spring is the best possible treatment of land for Carrots. There is no oil that we are aware is used for attracting rabbits. If you sow soot on Grass they will be attracted to the new growth that springs up.



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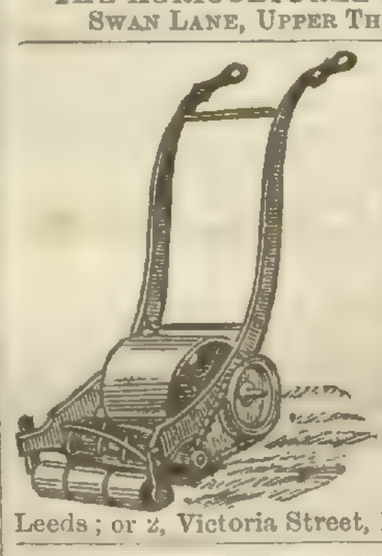

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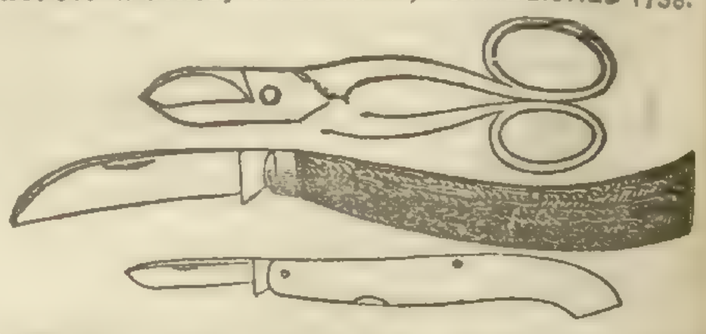

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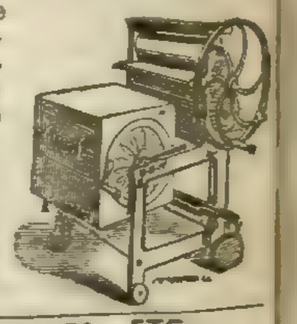

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An improved make, 3 yards wide,	2*s.* 6*d.*	per yard run.

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THE GARDENERS' CHRONICLE AND AGRICULTURAL GAZETTE.

A Stamped Newspaper of Rural Economy and General News.—The Horticultural Part Edited by Professor Lindley.

No. 42.—1860.] SATURDAY, OCTOBER 20. {**Price Fivepence.** STAMPED EDITION, 6*d*.

INDEX.

Agriculture, Berkshire	939 *b*	Gymnogramma Wetenhalliana	934 *a*
Agaricus gloiocephalus	933 *c*	Hampton Court	934 *c*
Almond in fruit	935 *a*	Hollyhock fibre	934 *b*
Beech trees and lightning	934 *b*	Hydrangeas, blue	936 *c*
Berkshire, agriculture of	939 *b*	Jardin Fruitier, Decaisne's	935 *a*
Black Currant Liqueur	931 *c*	Lightning and Beeches	934 *b*
Bulbs	932 *c*	Liqueur de Cassis	931 *c*
Cattle foods	940 *c*	Mycology	933 *c*
Conifers at Watcombe	935 *c*	Normandy Pippins	932 *b*
Cucumber Model	935 *a*	Pampas Grass	935 *a*
Cultivation, deep	940 *a*	Pears, preserved	932 *c*
Drainage and rainfall	938 *a*	Rainfall and drainage	938 *a*
Education of gardeners	934 *b*	Rose showing	934 *b*
Farming made Easy	940 *c*	Spergula pilifera	934 *a*
Fern, New Garden	934 *a*	— saginoides	934 *b*
Fibrous plants	934 *b*	Straw, uses of	938 *b*
Foods, cattle	940 *c*	Tiffany house	935 *b*
Fruit Catalogue, Rivers'	935 *b*	Vine borders, heating	935 *a*
Grapes, Golden Hamburgh	934 *c*	Watcombe, Conifers at	935 *c*
— Muscat	934 *c*	Weather, the	938 *a*
— without fire heat	934 *c*	Worcester Farmers' Club	940 *a*

CRYSTAL PALACE. — CHRYSANTHEMUM SHOW. The GRAND ANNUAL SHOW OF CHRYSANTHEMUMS will be held at the Crystal Palace on THURSDAY, FRIDAY, and SATURDAY, November 15, 16, and 17.

Entries close Thursday, November 8. Schedules of Prizes can be had on application to Mr. W. HOUGHTON, Secretary to the Show, Crystal Palace, Sydenham.

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Admission—1st day, 1*s*.; 2d day, 6*d*. Omnibuses run from the Royal Exchange, and Trains from Fenchurch Street every quarter of an hour. W. T. HOWE, Secretary.

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WILLIAM JAMES NICHOLSON respectfully informs his friends that he can now supply good and true STRAWBERRY PLANTS of nearly every known variety A DESCRIPTIVE CATALOGUE of nearly 200 sorts for the guidance of purchasers may now be had.

WILLIAM JAMES NICHOLSON, Eggleschiffe, Yarm, Yorkshire

THE OSCAR STRAWBERRY. — This valuable variety has maintained the high opinion expressed of its merits last season, having obtained prizes at the Crystal Palace, Royal Botanic, Paxton, and Fruit Committee of the Horticultural Society. Fruit large, handsome, and firm, of good flavour, early, hardy, and great cropper. One of the best for early forcing: per 100, 7*s*. 6*d*.; in pots, 1*s*. 6*d*.

CHARLES TURNER, The Royal Nurseries, Slough.

GOOD FIBROUS PEAT FOR SALE.—Apply to B. MORGANS, Bristol near Seven Oaks, Kent.

GOOD FIBROUS PEAT, 12*s*. per Ton, delivered free at Elm Bridge Station, South-Eastern Railway.—Address JOHN CATTELL, Westerham, Kent.

TAN GRATIS, in the immediate neighbourhood of Covent Garden Market, W.C.—Apply to ESSEX & SONS, 28, Staunton Street, Clare Market, W C.

CHOICE BULBS.

STEPHEN BROWN'S CATALOGUE (late BASS & BROWN) supplied free on application. It contains one of the finest collections of DUTCH, CAPE, and other BULBS. The cultural and descriptive matter is this year greatly enlarged, and prices are very moderate.

Finest named Hyacinths, 6*s.*, 9*s.* and 12*s.* per doz.

Fine, in colours, without names, 3*s.* per dozen.

Assorted Collections of Bulbs, either greenhouse or hardy, at 10*s.* 6*d.*, 21*s.*, 42*s.*, 63*s.*, 84*s.*, and 100*s.*

If 20*s.* and upwards, free to all stations in London.

Seed and Nursery Establishment, Sudbury, Suffolk.

DUTCH FLOWER ROOTS.

CHARLES TURNER, THE ROYAL NURSERIES, Slough, has just received his usual large consignments from Holland, and is gratified in being able to state that the bulbs are very fine, and in the best condition. The ANNUAL CATALOGUE is just issued, and will be sent free to any address.

As successful cultivation depends in no inconsiderable degree upon early planting, the great advantage of giving immediate orders is obvious.—The Royal Nurseries, Slough; adjacent to Eton and Windsor, and also at Salt Hill.

WINTER AND SPRING FLOWERING PLANTS.

F. AND A. SMITH are now sending out at reasonable prices finely grown plants of Acacia, Azalea, Aphelexis, Boronias, Burchellia, Chorozema, Cineraria, Cactus, Cytisus, Carnation (Tree), Daphne, Epacris, Ericas, Eutaxia, Gardenias, Geraniums, Hydrangea, Primula, Prostrantlera, Poinsettia, Polygala, Roella, Roses, Indica minor, Devoniensis, Yellow Noisette, Gloire de Dijon, Cramoisie supérieur, &c. Tremandra, Greenhouse Climbers in variety. Also a selection of Hyacinths and Tulips suitable for Forcing in good condition. Prices with Lists on application.—Dulwich, Surrey, S.

THE "OLD" NURSERIES, CHESHUNT, HERTS.

GEORGE PAUL, eldest son of, and many years partner with, the late Adam Paul, and of late years the senior partner in the firm of A. PAUL & SON, respectfully informs the public that the PARTNERSHIP IS NOW DISSOLVED, and that in future GEORGE PAUL will carry on business in Cheshunt Street, as usual, under the name of PAUL & SON.

G. PAUL earnestly solicits a continuance of the kind and liberal patronage so long bestowed on the late firm.

Address PAUL & SON, the "Old" Nurseries, Cheshunt, Herts.

WE, THE UNDERSIGNED, hereby give notice that the Partnership hitherto existing between GEORGE PAUL and WILLIAM PAUL, Nurserymen and Seedsmen, of Cheshunt, carrying on business in the name of "A. PAUL & SON," is this day dissolved,

Communications intended for GEORGE PAUL should in future be addressed "PAUL & SON, the Old Nurseries, Cheshunt Street, Herts, N."

Communications intended for WILLIAM PAUL should be addressed "WILLIAM PAUL, Cheshunt Nurseries, Waltham Cross, N."

GEORGE PAUL.
WILLIAM PAUL.

Nurseries, Cheshunt, Herts, Sept. 29.

TRANSPLANTED FOREST TREES.

WOOD AND INGRAM beg to offer the following extra fine and well-rooted stuff:—

ALDERS, 4 to 5 feet, 30*s.*; 5 to 6 feet, 40*s.* per 1000.
ASH, 3 to 4 feet, 25*s.*; 4 to 5 feet, 30*s.*; 5 to 6 feet, 35*s.*; 6 to 8 feet, 40*s.* per 1000.
BEECH, 2 to 3 feet, 25*s.*; 3 to 4 feet, 35*s.*; 4 to 5 feet, 45*s.* per 1000.
CHESNUT, SPANISH, 3 to 4 feet, 30*s.*; 4 to 5 feet, 40*s.*; 6 to 8 feet, 60*s.* per 1000; 8 to 10 feet, 25*s.* per 100.
ELMS, NARROW-LEAVED ENGLISH, 1 year's Seedling, 5*s.* per 1000.
ELMS, NARROW LEAVED ENGLISH, 2 to 3 feet, 25*s.*; 3 to 4 feet, 30*s.* per 1000; 6 to 8 feet, 12*s.* per 100.
ELMS, HUNTINGDON, from layers, 3 to 4 feet, 12*s.*; 4 to 5 feet, 15*s.*; 5 to 6 feet, 20*s*; 6 to 8 feet, 30*s.* per 100.
ELMS, HUNTINGDON, from grafts, 7 to 8 feet, 50*s.*; 8 to 10 feet, 70*s.* per 100.
FIR, SPRUCE, 1 to 1½ foot, 50*s.*; 1½ to 2 feet, 60*s.*; 2 to 3 feet, 70*s.* per 1000.
FIR, SCOTCH, 2 to 3 feet, 25*s.*; 3 to 4 feet, 30*s.*; 4 to 5 feet, 35*s.* per 1000.
FIR, LARCH, 2 to 3 feet, 25*s.*; 3 to 4 feet, 30*s.*; 4 to 5 feet, 35*s.*; 5 to 6 feet, 50*s.* per 1000.
HORNBEAM, 2 to 3 feet, 25*s.*; 3 to 4 feet, 30*s*; 4 to 5 feet, 35*s.* per 1000.
MAPLE, 1½ to 2 feet, 20*s.*; 2 to 3 feet, 25*s.*; 3 to 4 feet, 30*s.*; 4 to 5 feet, 35*s.* per 1000.
MAPLE, NORWAY, 4 to 5 feet, 10*s.*; 5 to 6 feet, 15*s.* per 100.
OAKS, BRITISH, 2 to 3 feet, 30*s.*; 3 to 4 feet, 35*s.*; 4 to 5 feet, 45*s.*; 5 to 6 feet, 60*s.* per 1000.
POPLAR, BLACK ITALIAN, 2 to 3 feet, 25*s.*; 3 to 4 feet, 30*s.*; 6 to 8 feet, 50*s.*; 8 to 10 feet, 60*s.* per 1000.
POPLAR, LOMBARDY, 1½ to 2 feet, 4*s.*; 2 to 2½ feet, 6*s.*; 6 to 7 feet, 15*s.*; 8 to 10 feet, 40*s.* per 100.
POPLAR, ONTARIO, 6 to 7 feet, 20*s.*; 5 to 8 feet, 15*s.* per 100.
SYCAMORE, 2 to 3 feet, 20*s.*; 5 to 6 feet, 40*s.*; 6 to 8 feet, 40*s.*; 8 to 10 feet, 60*s.* per 1000.
WILLOW, BEDFORD, CÆRULEAN, and HUNTINGDON, 3 to 5 feet, 30*s.* per 1000. Prices to the Trade on application.

W. & I.'s new CATALOGUE of NURSERY STOCK, including Fruit, Forest, and Ornamental Trees and Shrubs, Evergreens, Roses, &c., is nearly ready and will be forwarded free on application.—Nurseries, Huntingdon

LARGE ORNAMENTAL TREES, EVERGREENS, AND SHRUBS, FOR AN IMMEDIATE EFFECT.

JOHN CATTELL begs to announce that he has a large Stock of ORNAMENTAL TREES, EVERGREENS, and SHRUBS, suitable for producing an immediate effect. They are all handsome fine grown specimens, well rooted, and will remove with safety, having been recently transplanted.

J. C. respectfully invites ladies and gentlemen who intend planting to inspect his Nurseries (in which will be found nearly every article usually grown in Nursery Gardens). No idea can be formed from an advertisement of the description of plants offered; among them will be found of large size, Abies Douglasii, Menziesii, and Morinda; Araucaria imbricata, Cedar of Lebanon, Cedrus Deodara, Cryptomeria Japonica, Picea Cephalonica, Pinus Excelsa and Insignis, Taxodium sempervirens, Portugal Laurels, 6, 7, and 8 feet high, and the same in diameter, Common Laurels, 5 to 6 feet high and well furnished, Common Yews, 6, 8, and 10 feet high, and feathered, Rhododendrons of various kinds, Kalmia latifolia, Andromeda floribunda, Aucuba japonica, Laurestinus, &c. Ash of sorts, Birch, Beech, Horse and Spanish Chestnuts, Elms of sorts, Limes of sorts; Oak, English, Turkey, and Scarlet American; Planes, Poplars; Sycamore, common, purple and variegated leaved; Thorns in great variety, Walnuts, American Weeping Willows, &c., the prices of these will be found very moderate.

The following CATALOGUES are now ready and will be forwarded prepaid upon application.—No. 6, Grape Vines, Strawberries, &c.; 7, Dutch and other Bulbs; 9, Fruit Trees; 10, Ornamental Trees and Shrubs, Conifers and Rhododendrons, &c.; 11, Forest Trees and Shrubs offered in quantities; 8, Rose Catalogue, will be ready in a few days.

Westerham, Kent, Oct. 20.

TO PLANTERS.

ROY AND BELCHER have to offer transplanted SCOTCH FIR, from 1½ to 2½ feet; and BEECH, from 1½ to 2½ feet. The above are very fine, and prices are moderate, which may be had on application.

Ferry Hill Nurseries, Aberdeen

CONIFERÆ.—A fine Stock of very handsomely grown Plants of various heights—see AUTUMN CATALOGUE, just published, sent free.

50 fine CONIFERÆ, of good size, for .. £5 0 0
25 fine do. do. for .. 2 10 0

The names and heights of either lot may be had. Early planting is recommended. If 20*s.* and upwards, free to all stations in London.

STEPHEN BROWN, late Bass & Brown, Seed and Nursery Establishment, Sudbury, Suffolk.

FOR SALE, terms Cash, 500,000 THORNS, strong and well-grown fine roots, height from 6 inches to 1 foot. Samples and price on application to W. TRESEDEN, Nursery, Cardiff. Also about 150,000 SPRUCE, varying from 9 inches to 3 feet, all clean and well grown stuff.

NOTICE.—The subscribers, DAVID AND GEORGE LAIRD, NURSERYMEN and SEEDSMEN, Cupar, Fife, N.B., have on hand a very fine stock of the following to spare to the Trade, viz.:—1 and 2-years Transplanted LAUREL BAYS, 1 and 2-years Cuttings of ditto, 2-years Transplanted EVERGREEN PRIVET, 1 and 2-years Transplanted LARCH.

COMMON LAURELS.—About 2000 fine healthy Plants, from 3 to 6 feet. The Advertiser being overstocked offers them in small or large numbers at a very moderate figure.—CHARLES SOUTHBY, Nurseryman, Clapham, S.

THREE MILLIONS OF TRANSPLANTED QUICKS.

GEORGE CHIVAS offers the above, varying from Good to exceedingly Strong, clean and well rooted. A Sample Bundle containing 100 of each, 5 sizes, forwarded on receipt of 15*s.* Truck loads delivered Free at any Railway Station. Also, a Million of Transplanted LARCH; half a Million of Transplanted SPRUCE; Ten Thousand Superior Standard APPLES and PEARS; and a large General NURSERY STOCK.—Chester, Oct. 20.

CHARLES DALY AND SON will Sell two-years TRANSPLANTED LAURELS, 15*s.* per 1000; PORTUGAL do., 30*s.* per 100; COMMON RHODODENDRON, good furnished plants, 1 to 1½ foot, 20*s.* per 100; SEEDLING THORNS, 1*s.* 6*d.* per 1000; two-years TRANSPLANTED, good, 190*s.* per 1000, free in Liverpool or Glasgow. CATALOGUE free by post.—Coleraine, Ireland.

GREEN HOLLIES, &c.—Fine repeatedly transplanted GREEN HOLLIES, COMMON LAUREL, PORTUGAL LAUREL, YEWS, TREE BOX, MACHONIAS, and other Evergreens in great quantity, 1, 2, 3, and 4 feet. Prices on application. The Trade liberally dealt with.—JAMES DICKSON & SONS, The "Newton" Nurseries, Chester.

ROBERT NEAL, NURSERYMAN, Wandsworth Common, S.W., begs to call the attention of buyers to his large and well selected stock of EVERGREENS and FLOWERINGSHRUBS, ORNAMENTAL TREES, AMERICAN PLANTS, FRUIT AND FOREST TREES, STANDARD AND DWARF ROSES of every description. A large stock of BOX-LEAF EVERGREEN PRIVET, from 1 to 6 feet for hedges; GREEN HOLLY, 1 to 6 ft.; RICH BOG and LOAM for American Beds; LEAF MOULD. The Nursery is 10 minutes' walk from Clapham Common, and New Wandsworth Station, Crystal Palace Line.

LARGE TREES, ETC.

WM. PAUL, Cheshunt Nurseries, Waltham Cross, N., has a quantity of large handsome TREES, Evergreen and Deciduous, which must be cleared off 10 acres of the old Nurseries very shortly, and will be sold cheap. Cedrus deodara, Cedar of Lebanon, Yews, Box, Laurels, Arbor-vitæ, Privet, Red Cedar, fine specimens of choice Coniferæ, Alders, Planes, Poplars, Elms, Limes, Fruit Trees, &c. All have been frequently removed and rise with plenty of fibrous roots. Carefully taken up and delivered free to any railway station in London. Further particulars on application.—Please address WILLIAM PAUL, Cheshunt Nurseries, Waltham Cross, N.

MESSRS. WATERER AND GODFREY have a very large quantity of strong 2-years TRANSPLANTED THORNS. Also about [and 5 ft.

200,000 strong transplanted SPANISH CHESNUTS, 3, 4,
200,000 strong transplanted HAZEL, 3 to 3½ feet.
100,000 ,, ALDER, 3 to 5 feet.
100,000 SCOTCH, about 18 inches.
200,000 LARCH, 2 to 3 feet.
100,000 SPRUCE, 1½ to 2 feet.
20,000 Grafted ENGLISH ELMS, 4 to 7 feet.

Prices and Samples on application to the Advertisers, Knap Hill Nursery, near Woking, Surrey.

PLANTS SUITABLE FOR HEDGES.

JOHN CATTELL begs to offer the articles enumerated below, as being well adapted for Hedges or Screens. The plants are strong, healthy, and well rooted.

Prices, which are moderate, will be forwarded on application:—

Alder	.. ..	5 to 6	ft.
,,	.. ..	7 to 9	,,
Berberry, Common		1½ to 2	,,
,, ,,		2 to 2½	,,
Beech	.. ..	2 to 3	,,
,,	.. ..	3 to 4	,,
,,	.. ..	4 to 4½	
Box, Green	.. ..	2 to 2½	,,
,, ,,	.. ..	2½ to 3	,,
Briar, Sweet, stout and fine			
Hornbeam	.. ..	2 to 2½	,,
,,	.. ..	4 to 5	,,
,,	.. ..	5 to 6	,,
Laurel, Common	..	2 to 3	,,
Laurel, Common	..	3 to 3½	ft.
,, ,,	..	3½ to 4	,,
Privet, Evergreen	..	1½ to 2	,,
,, ,,	..	2 to 3	,,
,, ,,	..	3 to 3½	,,
Quicks, bedded, strong.			
,, large for gapping.			
ArborVitæ, American		5 to 7	,,
Spruce Firs	,,	2 to 2½	,,
,, ,,	,,	2½ to 3	,,
Yew, Common	..	2 to 2½	,,
,, ,,	..	2½ to 3	,,
,, ,,	..	3 to 4	,,

And up to 10 feet.

Westerham, Kent, Oct. 20.

TO PLANTERS OF ORNAMENTAL TREES & SHRUBS.

R. GLENDINNING begs to offer the undermentioned well known species, which have all been recently transplanted, and may be removed to any distance with perfect safety.

Cedrus deodara	..	3 to 12	ft.
,, ,, robusta		1 to 3	,,
,, ,, viridis		1 to 3	,,
,, Atlantica	..	2 to 9	,,
Pinus excelsa	..	3 to 10	,,
,, Cembra	..	3 to 5	,,
,, Fremontiana (scarce)	..	1 to 3	,,
,, insignis	..	1 to 6	,,
Picea Nordmanniana		1 to 10	,,
Picea pinsapo	..	1 to 7	ft.
Araucaria imbricata		2 to 8	,,
Cupressus Knighti		3 to 8	,,
,, funebris	..	1 to 4	,,
,, Chilensis	..	3 to 6	,,
,, Nutkaensis (Thujopsis borealis)		2 to 8	,,
Libocedrus chilensis		1 to 4	,,
Biota glauca	..	1 to 3	,,
Irish Yews	..	2 to 8	,,

Grown to one stem and perfectly symmetrical.

The above is a mere extract from a large collection, comprising all the species deserving of cultivation.

Planters who require large trees to produce immediate effect in parks, cemeteries, &c., or to form screens from unsightly objects, can be supplied with a great variety of trees from 6 to 20 feet high. Full particulars may be obtained on application.

Chiswick Nursery, London, W.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:—

	P. packet—*s.*	*d.*
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation..	1	6
CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
,, Moor Park, extra fine..	1	0
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed ..	2	6
CINERARIA, from finest named varieties ..	2	6
DIANTHUS Heddewiggi	1	0
PANSY, from named varieties	1	0
PRIMULA sinensis fimbriata	2	0
SOLANUM capsicastrum	1	0
,, pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London N.

MESSRS. WATERER AND GODFREY respectfully invite attention to this Advertisement. They are in a position to offer:—

Araucaria imbricata, stout healthy plants, about 1 foot, at 6*l.* per 100.
,, ,, 2, 3, 4, 5, and 6 feet, from 3*s.* 6*d.* to 68*s.* each; many hundred plants.
,, ,, magnificent specimens 7, 8, 10, and 15 feet high.
Abies Douglasii, 10, 12, and 15 feet high, splendid specimens, moved in the spring.
,, Orientalis, several hundreds, 3 to 6 and 8 feet.
Picea Nobilis, Seedlings in pots, 7*l.* 10*s.* per 100.
Do. do. stout handsome plants, perfect specimens, 1, 2, 3, and 4 feet high, from 21*s.* each upwards.
[It is not too much to say our stock of this plant far exceeds anything of the kind to be met with in any other Nursery. None are grafted.]
Picea Nordmanniana, glorious plants in numbers, all from seed, 3, 4, 5, 6, and 7 feet high, and as wide in proportion.
,, Pinsapo, many hundred plants, 2, 3, 4, and 5 feet high, some magnificent specimens 7 to 10 and 12 feet high.
Cedars of Lebanons, several hundred very prime plants, 5, 6, 7, 8, and 12 feet high, move with balls like Rhododendrons.
Cedrus Deodara, 2½ to 3 feet, stout well grown plants from seed, 10*l.* per 100, 80*l.* per 1000.
,, ,, many hundred fine specimens, 5, 6, 7, 8, 10, and 15 feet high.
,, Africanus, 5, 6, and 8 feet.
Cupressus Lawsoniana, by far the largest stock and the finest plants to be met with, all from seed handsome and well furnished, 18 to 24 inches, 30*s.* per dozen, 10*l.* per 100.
,, ,, 2½, 3 and 4 feet, 3*s.* 6*d.* to 21*s.* each.
,, Macrocarpa, 4 to 6 feet, very handsome plants, moved in August, 30*s.* to 42*s.* per dozen.
Wellingtonia Gigantea, 1½, 2, 3, and 4 feet high, 5*s.*, 7*s.* 6*d.* to 42*s.* each.
Thuja aurea. This originated at our Nursery, and our plants are altogether unequalled. We have large numbers 3, 4, 5, and 6 feet high, 7 to 12 feet in circumference, perfect matches.
,, Gigantea, from seed in quantity, 3 to 5 feet.
Thujopsis borealis, 2, 3, and 4 feet.
Yews, Golden and Elegantissima, many hundred plants 4, 6, and 8 feet high, and smaller 1 to 3 feet, by the thousand.
,, Irish, 5, 6, 8, and 10 feet high.
,, ,, worked with Golden Yews, 6, 8, and 10 feet high.
,, Common English, an immense stock of fine plants, 4, 6, 8, and 10 feet high, in fine condition for removing.
Variegated White Cedars, 1½ foot, 18*s.* per dozen; hundreds of fine plants 3 to 4 feet high, 60*s.* to 84*s.* per dozen. This is one of the handsomest striped plants in existence.
Junipers, Irish, 4, 5, 6, and 8 feet, perfect columns.
,, Chinese, a splendid lot of plants of all sizes, some very fine, 10 to 15 feet high.
Holly, Common Green, of all sizes, a very fine lot of plants, 5, 6, and 8 feet high, moved in April last.
,, The best gold striped, many hundred fine plants, 2 to 4 feet high, some few larger.
,, Waterer's Holly, a very compact variegated kind, admirably adapted for planting in pairs or at points. Many hundred pairs, matching perfectly, 3 to 4 feet high, 21*s.* to 31*s.* 6*d.* each. (This is the hardiest of all the variegated Hollies—is, in fact, never injured.)
,, Standard variegated Hollies.
,, Scotica and laurifolia, two most beautiful hardy green sorts, fine plants, 5 to 6 and 8 ft. high, in large numbers.

A very complete collection of Dwarf Firs, consisting of—

Abies clanbraziliana
,, pumila
,, pygmæa
,, Gregorii
,, compacta

These are all distinct varieties of the Spruce. We have them by hundreds, many being from 10 to 20 years' growth.

Pinus sylvestris pumila, dwarf Scotch, an extraordinary plant.
,, strobus pumila, or tabulæformis, dwarf Weymouth.

AMERICAN PLANTS.—More than 40 acres of ground are devoted to the growth of these plants, and purchasers may select from a stock of many hundred thousands.

Rhododendrons, Azaleas, and Kalmias, fine healthy bushy plants, from 2, 3, 4, 5, 6, and 8 ft. high, and as much through.
Standard Rhododendrons, many hundreds of the oldest and finest specimens in the country, as well as of all the newer kinds.
Hardy Heaths and Menziesias, a collection of the hardiest and best, good plants, 10*l.* per 1000.
Andromeda floribunda, 3, 4, 6 feet high, and wide.

The ordinary kinds of Evergreens and Deciduous Trees and Shrubs are grown to an enormous extent, and we may especially mention—

Green and Variegated Box, many thousands, 4, 5, 6, and 8 feet.
,, Hollies, 3, 5, 6, and 8 feet, moved in the spring.
Laurels, Common, an immense stock, 2, 3, and 4 feet high.
Arbor-vitæ, American and Wears, 5 to 8 and 10 feet high.
Phillyreas, 3, 4, 5, and 6 feet high, in large quantities and very handsome.
Aucuba japonica, many thousand bushes, 2, 3, and 4 feet high.
Yews, common English and Irish, an immense number of fine plants, 2 to 5, 6, 8, and 12 feet high.

Planters, for IMMEDIATE EFFECT or to *any extent, small or large*, will find it to their interest to pay us a visit. No similar establishment in Europe offers such a selection, and we are determined not to be undersold by any respectable house in the Trade.

The Nursery is readily reached by train (10 minutes) from Waterloo to Woking, and capital conveyances are always to be had there; the Sunningdale Station is also within an easy access of the Nursery. The South-Western Railway is connected with almost every other line, and large specimens (or small in quantity), can be sent throughout to almost any part of England without change of truck and saving the cost of package.—Knap Hill Nursery, Oct. 20.

SUTTON'S
COLLECTIONS OF FLOWER BULBS.

ALL GOODS CARRIAGE FREE EXCEPT VERY SMALL PARCELS.

FOR OPEN GROUND.—COLLECTION No. 1. £2 2s.

24 Double Hyacinths	12 Choice Irises	12 Double White Narcissus
50 Scarlet Ranunculus	100 Double Snowdrops	12 Parrot Tulips
24 Double Anemones	6 Crown Imperials	12 Double Yellow Tulips
12 Pheasant Eye Narcissus	300 Crocuses, in 6 colours	12 Gladiolus
24 Van Thol Tulips	100 Mixed Ranunculus	12 Campernelle Jonquils
12 Double Scarlet Tulips	24 Single Anemones	24 Fine Mixed Tulips

Collections No. 2 and No. 3.—The above choice sorts in quantities proportionately reduced, **21s. & 10s. 6d.**

FOR POTS AND GLASSES.—COLLECTION No. 4, £2 2s.

12 Hyacinths, by name	1 Lilium lancifolium speciosum	12 Double Sweet Jonquils	6 Gladiolus, by name
12 Polyanthus Narcissus, do.	1 Lilium lancifolium album	12 Sweet Persian Irises	12 Ixias, choice sorts
12 Tournesol Tulips	1 Amaryllis formosissima	24 Double Van Thol Tulips	6 Dog's-tooth Violets
12 Single Van Thol Tulips	1 Cyclamen persicum	12 Rex Rubrorum Tulips	3 Fritillarias
6 dozen named Crocuses			3 Achimenes

Collections No. 5 and No. 6.—The above choice sorts in quantities proportionately reduced, **21s.** and **10s. 6d.**

SUTTON'S AUTUMN CATALOGUE

is now ready and will be sent post free on application. In this Catalogue prices are affixed to every article.

The best 12 Hyacinths, by name, for pots or glasses, 9s.; Double do., for beds, 3s. 6d. p. doz.

☞ *None but fresh imported Bulbs are kept on the premises.*

ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.

NEW SEEDS.

THE QUEEN'S SEEDSMEN,
PETER LAWSON & SON,
27, GREAT GEORGE STREET, WESTMINSTER, S.W.

ARE NOW SUPPLYING NEW SEEDS FOR AUTUMN SOWING.

The very finest qualities of TRIFOLIUM INCARNATUM, ITALIAN RYE-GRASS, ALSIKE CLOVER, DWARF BROAD-LEAVED RAPE, MUSTARD, PERMANENT GRASS SEEDS, all carefully selected, and delivered Carriage paid at moderate rates.

HARDY SCARLET RHODODENDRONS.

JOHN WATERER begs to announce that his New DESCRIPTIVE CATALOGUE of HARDY SCARLET and other choice RHODODENDRONS, as are annually displayed at the Royal Botanic Gardens, Regent's Park, is now published and will be forwarded on application. It likewise furnishes a List of all popular Hardy Plants, with a selection of the most desirable Conifers, with heights and prices.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

The CATALOGUE can also be had of Mr. JOHN KERNAN, 4, Great Russell Street, Covent Garden, W.C.

PANSIES.—By the 100 or 1000, best show varieties. Likewise the BEDDING PANSIES, light blue, purple, and yellow, as grown so extensively at the Duchess of Sutherland's, Cleveden. Fine for winter gardens.

Also PINKS, PICOTEES, CARNATIONS, CLOVES, &c. Best show varieties.

W. BRAGG, Star Nursery, Slough.

FINE NEW BEDDING PLANT.

JAMES BACKHOUSE AND SON intend to send out next spring the beautiful AGATHÆA CŒLESTIS VARIEGATA, which forms compact tufts, 4 to 6 inches high, of thick and finely variegated foliage, somewhat resembling in its markings Vinca elegantissima. Flowers, bright sky blue, an inch or more across, borne well above the leaves. It received a certificate of merit from the Royal Botanic Society, and see *Gardeners' Chronicle* of October 29, 1859, page 872 a. 3*s.* 6*d.* each, or 30*s.* per dozen.—York Nurseries, Oct. 20.

LARGE SPECIMEN WELLINGTONIAS.

JAMES BACKHOUSE AND SON have pleasure in offering 12 to 15 very handsome perfectly formed specimens, from seed, of this noble tree, 5 to 5½ ft. high, and 12 to 14 feet in circumference. The above have been grown in the open ground without the slightest protection and will remove with perfect safety.—York Nurseries, October 20.

TRICHOMANES ELEGANS.

JAMES BACKHOUSE AND SON offer fine established plants of the above rare and beautiful FERN, at 42*s.* and 63*s* each A few extra fine specimens at 105*s.* each; and small plants at 21*s.* to 31*s.* 6*d.* each. They can also supply good plants of—

Trichomanes spicatum	Trichomanes venosum
,, anceps	,, trichoideum
,, scandens	,, sinuosum
,, alatum	Hymenophyllum ciliatum
,, attenuatum	,, polyanthos
,, crispum	,, demissum
,, Kaulfussii	,, crispatum
,, floribundum	,, hirtellum

And many other varieties of both genera.

York, October 20.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SON'S PRICED AND DESCRIPTIVE CATALOGUE FOR 1860 AND SPRING 1861, comprising Fruit Trees of all the leading kinds, new and selected Roses, fine varieties of American Plants, Choice and Rare Conifers, Evergreen and Deciduous Trees and Shrubs, and a fine Stock of Transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

CEDRUS DEODARA, &c.—

CEDRUS DEODARA,	from 3 feet	to	8 feet	
,, LIBANI	,, 5	,,	10	,,
CUPRESSUS LAWSONII	,, 1½	,,	4	,,
PINUS EXCELSA	,, 2	,,	6	,,
THUJA AUREA	,, 1	,,	3	,,

The above are handsome well-grown specimens. PRICES, which are very moderate (for cash only), will be forwarded on application.—WOOD & Co., Barbourne Nurseries, Worcester.

WM. BRAGG begs to offer the following new and choice Flowers:—

YELLOW PICOTEES.

This beautiful class of Picotees has up to a recent period occupied but an inferior position compared with the white ground varieties both in quality and habit; but W. B. has succeeded in raising a new strain with a more vigorous, robust habit of growth and flowers, with broad, smooth, unserrated petals. They were exhibited at the Horticultural Society's Rooms and other places, and commended for growth and quality, and will prove a valuable addition to all collections.

	Per pair—*s.*	*d.*		Per pair—*s.*	*d.*
Empress of India	.. 10	6	Harlequin	7	6
Beauty	.. 10	6	Loveliness	7	6
Canariensis ..	.. 7	6	Lady Willoughby de Eresby	7	6
Delicatum ..	.. 7	6	Great Eastern ..	7	6
Eleanora	.. 7	6	Yellow Climax ..	7	6
Etonian	.. 7	6			
Fairy Queen ..	.. 7	6			

The price of the set of 12 varieties will be 4*l.*

CARNATION,

	s.	*d.*
SHAKSPEARE, splendid scarlet bizarre, first class certificate at the Horticultural Society's rooms, Aug. 9, per pair	10	6

PINKS.

AMBASSADOR, certificate at the Royal Botanic Show, July 4, per pair	5	0
BRILLIANT, certificate at the Royal Botanic Show, July 4, per pair	5	0

PANSIES.

Master William ..	.. 5 0	Volunteer	3 6
Cloth of Gold ..	.. 5 0	Ld. Carrington (Winchester)	3 6

Star Nursery, Slough.

PINE APPLES, GRAPES, ETC.

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GRAPE VINES, FROM EYES FOR FRUITING IN POTS, OR PLANTING.

JOHN WEEKS AND CO. can supply any quantity of very fine healthy Pine Plants, either Fruiting or Succession.

GRAPE VINES remarkably strong and fine, 50 varieties, all the best sorts.

JOHN WEEKS AND CO.'S HORTICULTURAL SHOW ESTABLISHMENT is entirely devoted to the growth and Forcing of GRAPES, PINES, PEACHES, FIGS, CUCUMBERS, and other choice Fruits. The whole open for inspection, thereby showing the most improved plans of HORTICULTURAL BUILDINGS with the VENTILATING and HOT-WATER APPARATUS in full operation.

JOHN WEEKS AND CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, London. Plans, Estimates, and Illustrated Catalogues free on application.

ROSES—ROSES—ROSES.

IMPORTANT TO ALL WHO GROW THEM.

W. H. DAVIS begs to inform his numerous connection and the public generally that his CATALOGUE OF ROSES is now ready, and will be forwarded gratis to any address upon prepaid application.

His unrivalled collection comprises all the best Show varieties grown in extra strong healthy plants, and such that cannot fail to give the greatest satisfaction.

None but really good and strong Plants will be sent out, and at very low prices.

Plants given to compensate for distant carriage.

Early orders are respectfully solicited.

Rose Nurseries, Newbury, Berks.

ROSES.

JOHN CRANSTON'S DESCRIPTIVE CATALOGUE OF ROSES FOR 1860 AND 1861 is now ready for distribution. It will be forwarded as usual to all customers and free to all applicants.

J. C. flatters himself that his Catalogue will be found a useful guide to all purchasers, likewise to every one interested in the cultivation of the Rose.

The descriptions of New Roses will be found copious and faithful, so far as was possible to make them from the experience of one season.—Nurseries, King's Acre, near Hereford.

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MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their new priced and descriptive CATALOGUE of the above, to which are added supplemental Lists of Fuchsias, Stove, Greenhouse, and Hardy Plants, Ferns, Ornamental Foliage and Variegated Plants, Fruit Trees, &c. (which include the best new plants of the season, is now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

SEEDS FOR EXPORTATION.

NEW SEEDS, GROWTH OF 1860.

SUTTON AND SONS will shortly be prepared with their New Seeds of this year's growth for export orders.

Messrs. SUTTON'S mode of packing is most effectual and economical.

For terms, &c., apply to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

T. W. DASHWOOD begs respectfully to announce that he has succeeded to the Business hitherto carried on by Mr. H. Stroud, and solicits a continuance of those favours so liberally bestowed on his predecessor.

Queen's Road Nursery, Peckham, Surrey, S.E.

THE HORTICULTURAL SOCIETY will be glad to receive TENDERS to supply the following PLANTS for the use of the New Gardens, Kensington Gore:—

Thuja gigantea, 6 feet	Irish Junipers, 6 feet
Phillyrea obliqua, ,, media } 2 to 5 feet	Thuja Sibirica compacta, 6 feet
Buxus sempervirens aurea, about 2 feet	Dwarf Standard Portugal Laurels, 2 feet (stems)
Erica vulgaris Hammondi	Standard Rhododendrons, stems 5 feet
Heaths and Menziesias	Widdringtonia cricoides, 3 to 4 feet
Laurustinus, 2 to 4 feet	Dwarf Standard Variegated Holly, stems 2 feet
Portugal Laurel, 2 to 5 feet	Thuja Wareana, 6 feet
Rhododendron myrtifolium	Yucca recurva
Green Holly, 3 to 4 feet	Pyracanthas, 2 to 3 feet
Golden ,, 2 to 3 ,,	Tulip Trees, 15 to 20 feet
Silver ,, 2 to 3 ,,	Acacia inermis, stems 5 feet
Common Yew, 15 inches	Scarlet Thorns
Golden ,, 15 inches	Alaternus, 2 to 5 feet
Common ,, 4 to 5 feet	Cotoneasters of sorts
Fine Dwf. Hybrid Rhododendrons, four vars. 2 to 3 feet	Evergreen Oaks, 5 to 8 feet
Miniature Roses	Juniperus chinensis, 6 feet
Standard Portugal Laurels, stems 5 feet	Thujopsis borealis, 6 feet
Cedrus Libani, 10 to 15 feet	Thuja aurea
Euonymus Japonica, 2 to 5 feet	Rhododendron hirsutum
Aucuba Japonica, 2 to 4 feet	Copper Beech, 15 to 20 feet
Lucombe Oaks, 10 to 15 feet	Quercus Fordii, 10 to 15 feet
Cedrus Deodara, 15 feet	Juglans nigra, 15 to 20 feet
Cupressus macrocarpa, 6 feet	

The Council trust to the liberality of the public for Contributions.

GEO. EYLES, Superintendent.

Kensington Gore, W.

The Gardeners' Chronicle.

SATURDAY, OCTOBER 20, 1860.

AMONG the miscellaneous information contained in Prof. DECAISNE'S very valuable *Jardin Fruitier* is a statement respecting the CULTIVATION OF BLACK CURRANTS IN FRANCE, which is to us quite new. It has been long known indeed that what is called *Cassis* was a part of their manufacture of Syrops and Sweet Wines, but it has been supposed to be altogether insignificant. An amber coloured aromatic *liqueur de Cassis* is also to be sometimes found in Wine stores, but is rarely

drank in this country. It now however appears from a statement communicated to Prof. DECAISNE by Dr. MAILLARD, of Dijon, that making Black Currant liqueur has become a very considerable branch of industry in the Department of the Côte-d'Or. It seems that in the year 1841 the first attempt at preparing Black Currant liqueur was made, and since that time the manufacture has so rapidly increased that at Dijon alone there are now three first-class houses, producing together 88,000 gallons; six second-class ones producing 66,000 gallons; and at least 20 others manufacturing a like quantity. Establishments also exist at Beaune, Châlon-sur-Saône, and several other small towns in the same district; in all 880,000 bottles.

Up to the present time the production of the article in the Côte-d'Or has depended upon the supply of fruit, which has frequently proved unequal to the demand, and has had to be brought from considerable distances. Even in the neighbourhood of Lyons Black Currants are now cultivated for the Dijon market. For the first few years when the success of the manufacture remained uncertain, the owners of Vineyards confined themselves to planting Black Currants here and there among Vines, and by the sides of roads and foot-paths, so as not to risk any considerable outlay of capital or loss of ground. But the manufacture is now so well established that landowners are cropping their land with Black Currants alone, the number of plants introduced into Vineyards being also on the increase. The rage, indeed, for planting was so great in 1857 that rooted plants sold as high as 3*l.* 4*s.* and even 4*l.* 16*s.* per thousand. Now, however, price has found its usual level, that of 16*s.* to 24*s.* per thousand. The exact number of plants cultivated round Dijon does not seem to be ascertainable, the proprietors themselves not knowing how many they have planted. It is, however, probable that to estimate the number near Dijon at 1,500,000 would be greatly below rather than above the mark.

In the Department of the Côte d'Or, the centre of Currant cultivation exactly coincides with that of the Vine. In fact, it may be said to extend from Chagny to Dijon in a narrow zone skirting the eastern slope of the mountain chain of the Côte d'Or, 18 to 25 miles in length, and from one to three miles in breadth. Within these narrow limits are to be found all the great growths of Burgundy wine, connected by Vineyards only producing *Vin ordinaire*. It is among these, and in land of a similar nature, that the Black Currant is cultivated. Many of the villages producing large quantities of the latter, are noted for the excellence of their wines, as for example—Volnay, Beaune, Aloxe, Savigny, Prémeaux, Nuits, Vougeot, Chambolle, Vosne, Morey, Gevrey-Chambertin, Brochon, Fixin, Marsannay, Talant, Fontaine. Leaving this centre the Currant follows the Vine in the valleys that traverse the mountain range towards the west; there are extensive plantations at Nolay, Plombières, Malain, Laumes, and Montbard, and others occur occasionally in the large and fertile plain which extends from the foot of the Côte-d'Or chain to the Saône, and in which the Vine is not cultivated. Finally they are to be found in the department of the Saône-et-Loire, particularly in that part of it which adjoins the Côte-d'Or. Rather considerable plantations also occur near Autun and Châlon-sur-Saône.

Contrary to what might have been expected in fruit with so strong a flavour, there exist great differences in the quality of the Currants from different localities. The French liqueur makers easily distinguish them, and carefully reserve Currants of superior quality for first-class liqueur, which sells as high as 2*s.* 9*d.* per quart, wholesale. In general, indeed, wherever wine is good the Currant is also good. By this is not meant the choice growths but *vins ordinaires*, the Vines producing which are frequently grown along with Currants.

For example, among the villages which produce the best Black Currants are Gevrey-Chambertin, where about 70,000 plants are grown; Vougeot, Vosne, &c. The Currants of Talant, Fontaine, Malain, Les Laumes, Montbard, Plombières, and Nolay, where wine is of low quality, are considered inferior; and those of the plain of Genlis, Auxonne, &c., where the Vine is not cultivated at all, are the least esteemed.

The Currant is planted in these districts in various ways. At first the plants were put in 3 feet 4 inches apart each way. Latterly many growers have made trenches 4 feet 3 inches apart and 15 inches deep, in the bottom of which the Currants are planted 4 feet 3 inches apart. The after culture is very simple: in spring the ground is deeply hoed, and during the rest of the season two or three more hoeings are given to destroy weeds. Pruning is done in spring, at the same time with the Vines. There is no fixed principle in its performance, the shoots being cut more or less short, according to the locality, and the notions of the cultivators. As to soil, chalky land with a little clay in its composition, such as prevails in French wine districts, suits it very well.

An important part of the subject is of course the yield of Black Currant plantations, and the average price that may with some sort of certainty be counted on. The latter is difficult to determine, because as yet the balance between supply and demand is not established, and it is evident that it will vary according to the number of fresh plantations, the abundance of the crop, &c. The average prices in former years have been as follows:—In 1841, 3*s.* 3*d.* per cwt.; 1842 and 1843, 4*s.*; 1844 and 1845, 8*s.* 1½*d.*; from 1844 to 1855 it averaged 12*s.* 2*d.*; 1856, 1857, 16*s.* 3*d.*; 1858, 30*s.* 5½*d.*; 1859, 20*s.* 3*d.* to 28*s.* 4½*d.*

These are, however, only approximate estimates; but it is believed that as soon as a proper supply of fruit shall be secured the price will average about 12*s.* 2*d.* per cwt., an estimate probably not too high, since some of the most important houses in Dijon have contracted with growers to take all their crop for 10 or 12 years to come at very nearly the above rate. Taking these prices as a basis for calculation, Dr. MAILLARD makes the following estimate of return, allowance being made for late frosts and other variations of the weather.

It is generally admitted that every bush that has been planted five years in fields containing Currants only will yield 3¼ lbs. of fruit. The yield of plants growing singly in Vineyards is much greater. But to avoid errors, suppose that each plants produces, on an average, 2½ lbs.; then if the acre contain about 2240 plants, and the fruit sells at 12*s.* 2*d.* per cwt. the value of the crop per acre would be 26*l.* 14*s.* Land in which the Currant is usually grown is worth from 32*l.* to 48*l.* per acre, and deducting from 4*l.* to 4*l.* 16*s.* for the interest on the value of the land, there would remain about 22*l.* per acre as the annual return, without counting the cost of planting and subsequent culture.

Such are the statements made by Dr. MAILLARD, and they seem to deserve consideration among ourselves, especially by market gardeners whose land no longer pays as it once did. Unlike the Vine the Black Currant acquires all its excellence in England; and it seems more to the purpose to try the experiment of growing it for the distillers than to attempt Vineyard making in a climate wholly unsuited to the purpose.

In conclusion, let us express a hope that the owners of Vineyards in the Côte d'Or, will not take to making Burgundy wine for their new English market out of Black Currants as well as Grapes.

NOTWITHSTANDING rain and cold, which at one time threatened the destruction of our corn crops, we have been blessed by Providence with a prodigious quantity of orchard fruit. Apples and Pears are breaking down trees with their weight. Some of these will of course pass into the form of Cider and Perry; many more will disappear under the operation of the usual daily consumption. But still there will remain an important quantity which is likely to be merely wasted. Question is, what can be done to avoid that waste? In this country, with the exception of a few Apples dried in ovens in the city of Norwich, all which are of the acid leathery coated kind called the Norfolk Beefing (we are glad to see that Dr. HOGG holds to the English way of spelling this name), we have no method of preparing either Apples or Pears so that they will keep. Our French neighbours do it for us; and the commerce between France and England in the matter of what are called Normandy Pippins is something considerable enough to merit attention.

These Normandy Pippins as we call them are what in France bear the name of *Pommes tapées*, as dried Pears do that of *Poires tapées*. The method of preparing the latter is occasionally described in French Cookery books: but as far as we know the former is a mystery not to be divulged. They obtain this name of *tapées* from the appearance they present of having been tapped or patted down. Since we find that many persons now wish to make a trial of the French method of thus preparing the fruit, we have made some enquiry which has led to the following information, due to the kindness of a correspondent in Normandy.

"I have applied to several friends in two different departments to obtain the real method of preparing our Normandy Pippins. It was only yesterday I succeeded. I, therefore, lose no time in letting you into the secret. 1st. Take a certain quantity of Apples, peel them. 2d. Put them by rows and beds on what we call in French *des claies*, in English mats made of wicker. Upon every bed of Apples must be placed a mat in order to flatten them. To obtain that result, they must be put into an oven, as soon as the bread is taken out, or in an oven heated on purpose to the same degree. They must be left in the oven till it is cold. Two or three days after you begin again the same operation. The third time they are baked enough to be preserved. Put them in dry boxes lined with paper, and in a dry place. When you want to eat them, they must be first put to soak in water during one hour: then put on a slow fire till they become soft. I bought half-a-dozen *pommes tapées* yesterday, put them to soak in about a pint and a half of water; when they were nearly done I added a little sugar to make the syrup. They had been one hour on the fire. We found them excellent. I know not if your fruit in England is like ours; in France it has the taste of water."

We imagine that any sound, keeping, kitchen Apple will submit with pleasure to this simple process. As to Pears, since French cookery books are little used among us, we add two receipts for preparing them.

1. From *Le Cuisinier des Cuisiniers*.—Peel your Pears from the stalk downwards, scrape the stalk, and cut the tip off. Throw them into cold water and boil them till they are soft to the touch; then take them out with an egg-slice and put them into cold water. Drain them, and to half a hundred Pears put 500 grammes of sugar into 2 litres of water; when the sugar is dissolved, put your Pears in, and leave them for two hours. Then take them out and arrange them, stalks uppermost, on wicker mats, and put them into a cool oven (such as bread has just been drawn from), and leave them there all night. The next day you steep your Pears again in the sugar and water, and put them into the oven as before. This must be repeated for four days. The last time they must not be taken out of the oven until they are perfectly dried. They may be kept in a dry place as long as you like.

2. From *La Cuisinière de la Campagne*.—Take 100 Rousselet Pears, nearly ripe; peel them without disfiguring them; cut off the tip of the stalk, and throw them into a pan full of cold water; place it on the fire, and boil them gently, try them, and when they are soft to the touch, take them out with an egg-slice and put them into cold water; drain them upon a cloth. Then dissolve 2 lbs. of sugar in 3½ pints of water in your pan; boil it and skim it; then cover the bottom of your pan with Pears and give them one boil and no more; take them out and put them into an earthen pan; then add fresh Pears in the place of those taken out, until they have all had a boil. Let them cool and arrange them on wicker mats, stalks uppermost, pressing them slightly so as not to crush them; put them into an oven from which bread has been drawn; next day steep them in the cold syrup, and re-arrange them on the wicker mats, before placing them in the oven again, which process must be repeated four times. Then pack them in boxes in two rows, one on the top of the other, put a sheet of paper over them, then two more rows and so on. Keep them in a dry place. The remains of the syrup may be used for fruits in brandy, or preserves, &c.

BULBS.

WE extract the following useful article on the employment of Bulbous plants for Flower Garden decoration, from Messrs. Carter and Co's. (of Holborn) Vade Mecum, or Bulb Catalogue lately published. "Without their use," say Messrs. Carter, "a flower garden must always look sombre and bare in the spring months. The present system of bedding has considerably interfered with the culture of bulbs; but with a little extra attention, the beds may be made showy from the time that vegetation commences in the spring. For instance, in a symmetrical or angle-bedded flower garden, where a good show of bedding plants is desired with the smallest amount of trouble, a fine effect at a distance will be produced by having a nice batch of bulbs—Crocus, Tulips, Hyacinths, Scillas, &c.—placed at the corners. The beds may then be rough dug in the winter in the usual way for the advantage of the regular bedding plants; and filling the corners will give a pleasing appearance to the whole group in the spring. These bulbs in most cases may remain for several years in the same place, in fact, just so long that they may not get too deep like an Oxalis, or be thrown out of the ground like a Crocus, accordingly as the new bulbs are formed below or above the old ones. The beds may be levelled and planted just as if no bulbs were there; and by the time that the bedding plants are spreading freely, the foliage of the bulbs will be decayed and out of sight. Of course such corners in oval rim or ridge planting, though giving a lively appearance to the parterre, are not to be compared to a whole parterre filled throughout with shaded and contrasted colours. But our practice and observation would lead us to adopt the cornering or edging system in preference to planting in beds, if full justice could not be given to both bulbs and bedding plants: it may be inferred from this, that the bedding plants will do well in summer and autumn, and the bulbs also receive no injury from late planting or the bedding plants being inserted among their decaying foliage in May. We have seen many beds so managed, but very rarely with much satisfaction for the whole of the season: making a hole with a trowel in a hard-crusted bulb bed, and there placing a bedding plant, is not the best way to make that plant root vigorously and blow freely; and the bulbs are apt to be blamed, when we

ought to censure our own carelessness or want of thought. A few beds well managed will confer more credit on the cultivator than many beds in a slovenly condition. Allowing, then, that full beds look better, when well done, than mere cornering or dotting, how various and beautiful are the combinations that may thus be easily formed! Here, for instance, is a little group of clumps just under the parlour window; the group being of a circular form, one round bed in the centre and six round it, branching out like the spokes of a wheel; plant the centre with the Queen Victoria Crocus, a lovely white, about 2 inches apart in the rows and 6 inches from row to row, and then have two beds opposite with purple, two with yellow, and two with blue, and how nicely they will look! Or, if preferred, border the white centre with purple, the blues with yellow or variegated, and the purples with white; or the colours may be shaded in each bed; perhaps there may be only one circular bed near the house that can be devoted to Crocus, perhaps 9 or 10 feet in diameter; this would look extremely elegant if filled with concentric rings of all the different shades of colour, white relieved with purple, purple with yellow, and edge with blue on the contrasting system, varying the edging according as the kerb or path round the bed is of a cold or a warm colour. If the shading of colours is preferred, the result will equally show that there has been thought and design in the planting: but there is no end to the modes in which even a single bed may be planted: we lately recommended a young lady to plant a somewhat larger, rather oval bed with Crocus in the Lover's-knot style; and she told us that the effect was charming; the broadish bands of the knot were yellow, the enclosed spaces in the centre purple, the space round the bands was blue, and the striped and white finished the edgings. We have instanced Crocus as being so easily managed; but the same artistic arrangements may be as easily effected with Tulips of the early-blooming kinds, Narcissus, Hyacinths, &c. In all such cases we would prefer planting as advised under each division, and lifting every year, but so as to secure the ripening of the bulbs: we will shortly state how this may be done and yet not interfere with a preparation of the beds for bedding plants. In favourable seasons the beds of summer things will keep good until the end of October; then the beds are to be cleared; and if the bulbs are to have justice, the ground ought to be dug, aërated, and suitably prepared. Some bulbs would suffer from being out of the ground so long; therefore secure a small space behind a fence or any such place, and plant all the bulbs rather thickly in sandy leaf-mould on a hard bottom; from this they may be removed in October, November, and onwards, and planted in nicely prepared soil on a quiet, dull day. So much for autumn preparation so as to give justice at planting time to bulbs.

"Such early blooming things as Snowdrops, Crocus, Scillas, and the earliest Tulips, will have pretty well ripened their buds by the beginning of May; and therefore may be carefully lifted and placed in the reserve garden, and watered a little before the leaves quite decay; even the early Tulips, all the later and double kinds, and the best of the Hyacinths and Narcissus would receive more justice if they were planted in pots early in autumn, and plunged in pots when the beds were ready for them; and then, as soon as the flowering was over, the pots could all be taken up and plunged again in the reserve ground until the foliage decayed; and the beds could thus be properly forked and aërated and prepared for the bedding plants. The pots, thus once obtained, would last with ordinary care for many years, and the cultivator would have the satisfaction of feeling that he did everything that he could do to promote the healthy growth alike of bulbs and bedding plants. Unless in late summers, Hyacinths suffer but little when lifted carefully out of the ground, and planted and watered, and, if required, shaded afterwards; but the labour and care would be lessened if the bulbs were in pots. Tulips need this potting much (if they must be moved when done flowering, to give justice to the bedding plants), as they suffer much for the future if a check is given to the foliage.

"*Making a Pit for Tender Bulbs.*—It is well known that the Belladonna Lily, Ixias, Irids of the tenderest kinds, Alstrœmerias, many of the hardier Amaryllids, Japan Lilies, Agapanthus, &c., bloom well for years when planted at the foot of a fruit-wall of a hothouse, or even greenhouse. They would do almost equally well at the foot of any other wall where they could be treated with plenty of moisture and sun when growing; and comparative dryness and protection when at rest; the whole of these would do equally well in a small pit, say 5 feet wide: the bottom thoroughly drained, an open stratum of rubble above that, of 9 or 12 inches, and a staple of sweet, sandy loam of 18 inches over all. This would enable all the bulbs to be planted deep enough, and provided that the bottom was solid below the rubble, there would not, in the case of the larger bulbs, be much chance of their roots getting too deep; with such a convenience, the staple soil could be regulated with peat or rotten leaf mould according to the requirements of each kind; and, once established, the bulbs would bloom with a vigour that could rarely be met with under mere pot culture. As such a pit would need protecting only in the winter and spring months, the height of its walls need not be more than 2 feet above the soil inside at back, and one foot in front, making 4 feet as back altogether, and 3 in front, the half, if deemed advisable, being below the surrounding level, so that all may be easily seen and examined, provided that drainage can be easily accomplished. If there be any difficulty in this drainage, we would scarcely sink the bottom of the pit below the surrounding level. The walls will be neatest if of brick, and, but for the expense, we would make them of 14 inches and hollow: if the wall were only 9 inches, that we would prefer being hollow: the wall-plate all round would keep all firm and secure, and though it would be best to have rafters from back to front in the usual way, they would not be essential. For covering such a pit, we would use chiefly wooden shutters, as the cheapest in the end, though covers made of asphalte felt would do very well. A few glass sashes would be necessary (say for a third of the length of the pit), in order to give light to those kinds that grow in winter and very early in spring: the wooden covers would keep all those safe that rested in winter or did not appear above ground until the spring. Were it not for the expense of the thing, we would have no objection to have glass all the way, and wooden shutters, to be used only in extreme weather: keeping economy in view, much may be done with wooden shutters almost alone. Of course, in planting, the period of growth should be considered, so that the winter growing and summer growing should be kept distinct. The interest arising even from the care required to manage such a pit would be very great; and the pleasure would be increased by having something fresh to look at for the greater part of the year, from a few Hyacinths early in spring to Gladioli and Belladonnas late in the autumn. Though we have spoken of a brick pit for neatness, that is not at all necessary; a double wall of stout boards, with 4 inches between them, stuffed with sawdust, would be equally suitable. In fact a wall or paling of slates, backed with Grass turf, as a turf-pit, would be as good as anything, so far as protection went; but the great drawback to all such contrivances for this purpose is, that they would be apt to harbour mice and other vermin, which might soon destroy the finest bulbs. On this account alone we prefer brick, as affording no nestling place. A narrow pit of this kind, some 20, 60, or more feet in length, according to taste and convenience, would, except in the few dark months in the year, yield a pleasure second to none that a garden could afford; and that pleasure will be enhanced in proportion to the skill, attention, and labour bestowed. The short cultural notes in the body of the Catalogue will help the uninitiated in the right management; and such a pit, and such a mode of using it, we heartily commend to all our correspondents, and especially to those having suburban residences, with little ground to spare for floral display."

AGARICUS GLOIOCEPHALUS. From an original Drawing.

MYCOLOGY.—No. XXXII.

AGARICUS GLOIOCEPHALUS, *Dec.*—The Agaric here figured is one of the finest of the genus. It is far from common, but as it is a good specimen of a particular type, we have chosen it as a subject of illustration.

Agaricus volvaceus, which is nearly allied, may be found occasionally in stoves, but we have not had an opportunity of preparing a figure from recent specimens. It may be easily known from the present by its dry, not viscid pileus, which is besides more or less streaked with darker lines. It is a much suspected species, and if used at all should be used with great caution.

A. gloiocephalus was first discovered by Decandolle in the neighbourhood of Montpelier, and is figured by Letellier at tab. 645, H.I. The other figures belong to *A. speciosus*, of which we shall have to speak presently. *A. gloiocephalus* has a convex pileus about 3 inches across, with a strong, regular, obtuse swelling or umbo in the centre; it is of a delicate mouse grey, viscid when moist, but when dry shining, quite smooth; margin striate, in consequence of the thinness of the flesh. Stem 6 inches or more high, about half an inch thick in the centre, attenuated upwards, bulbous at the base, clothed with a few slight fibres, easily splitting, solid, rather dingy, ringless. Volva loose, villous like the base of the stem, splitting into several unequal lobes. The gills are broad, especially in front, narrower behind, and quite free, so as to leave a space round the tips of the stem, white tinged with greyish pink; margin slightly toothed. Spores rose-coloured. The smell is strong and unpleasant, with something of the pungency of the radish and a disagreeable taste.

It differs from *A. speciosus*, to which it is closely

allied, and of which it is possibly a mere variety*, in the presence of a large umbo, and in the margin being free from striæ. Both agree in smell and odour, and though *A. speciosus* is said by Micheli to be eatable, we doubt the truth of the assertion much, and should have fancied that it had been confounded with *A. vaginatus*, which is the Coucoumelle grise of the French, and considered very delicate, had not Micheli's report of the peculiar smell and characters been so decisive. Both are easily distinguished from *A. vaginatus* by their viscid pileus and pinkish gills, but more especially by their rose-coloured spores.

The sub-genus *Volvaria*, to which they belong, is characterised by the presence of a volva and pink spores. One species only is common, *A. pusillus*, which abounds some years in autumn in exposed rather rich pastures, and may be confounded by superficial observers with the true Mushroom. But a glance at the volva, which is always present, and the attenuated stem, is sufficient to prevent mistakes, a point of some consequence, as the qualities of all the species in the sub-genus are to say the least doubtful; and it is very possible that in some cases where Mushrooms have proved deleterious, this little species may have been intermixed. Like the true Mushroom itself it has been very scarce this season, or we should have taken an opportunity of giving a figure. *M. J. B.*

NEW GARDEN FERNS.

40. Gymnogramma Wetenhalliana, *Moore.*

Fronds dwarfish, ramose, the branches as well as pinnæ corymbosely multifid-crisped at the apex, bipinnate; pinnules oblong-obtuse, deeply pinnatifid, with small rather distant toothed segments; under surface pale sulphur-coloured.

This plant was shown at the meeting of the Floral Committee of the Horticultural Society on the 13th of September last, and was awarded a First-class Certificate as a very beautiful and distinct new crested Fern. It was exhibited by Mr. P. Kelly, gardener to Mrs. Ridgway, of Ridgmont, Bolton-le-Moors, Lancashire, by whom it had been raised; and had been obtained, according to information furnished by Mr. Kelly, from spores taken from a slightly crested branch accidentally produced by a plant of *G. peruviana*, which plant had been growing in company with *G. sulphurea*. Whether or not the contiguity of these two plants had any effect on the produce, it is certain that the new form, though stated to have been raised from peruviana, has more of the general character of sulphurea, and that the ceraceous powder which gives the colour to the under surface, is intermediate in colour between that found on these two well known species. The conclusion seems inevitable that the plant is either a sport from sulphurea the spores of the two kinds having become accidentally intermixed before sowing (which might happen by the natural process of dispersion), or that it is of the nature of a hybrid. It is a remarkable fact that where two or more kinds of Gymnogramma are grown near together, intermediate forms not unfrequently occur among the seedlings obtained from them, and these have given some countenance to the opinion that hybrids occur among Ferns.

The Gymnogramma now under notice, forms a dwarf spreading tuft, the fronds arching outwards from the crown, and becoming borne down over the pot-rim by the weight of the tassels, while those occupying a more central position again arch over these in successive tiers. The fronds are about a foot in length, variously branched in the stipes or rachis, as well as divided into a large spreading corymbose tassel at the end. In one of the larger fronds now before us the stipes is thus divided, and one of the divisions again divided near its base, so that there are three separate branches, each divided at the apex into a tassel, which when spread out measures 3 to 4 inches across; these tassels are densely multifid-crisped towards the extremities, and furnished below with small pinnule-like segments. The pinnæ are again pinnate at the base, tapering to a slender rib, which is almost leafless, and then spreading out into a dense fan-shaped tuft, of an inch more or less in breadth. The larger pinnules are oblong, half an inch long or upwards, distant, blunt-ended, deeply pinnatifid, the segments being small, distant, wedge-shaped or obovate, and rather strongly-toothed. The colour of the under surface is a very pale sulphur, almost white. The colour of the rachis is a light chestnut brown, becoming deeper-coloured in the stipes. It is a very elegant dwarf tasselled Fern, and is stated to be less affected than other Gymnograms by cold and damp. The name is given in compliment to a relative of Mr. Kelly's employer. *T. M.*

* The two are considered as identical in the "Outlines of British Fungology," just published.

Home Correspondence.

Spergula pilifera.—About the middle of September, 1859, I obtained 100 excellent plants of this in 4-inch pots, from one of the large London nurserymen; I immediately planted them on a well-prepared edging 120 feet long and 15 inches wide, at about 15 inches apart in a straight line. At the end of the first fortnight after they were planted, they had evidently got good hold of the soil; then came a deluge of rain, followed by a succession of severe frosty nights; every plant without exception turned a pale straw colour, and being unsightly I took them up and planted them in a dry, sheltered, sunny corner, where they soon improved in health. Abandoning the idea of again planting an edging of Spergula, I turfed my verge, and having no faith in its being adapted for lawns, and being certain that it would not bear constant sweeping, or ever be fit for a lady to walk upon, except she had a pair of goloshes on her feet, about the third week in April I planted a portion of my plants 1 foot apart, on a slightly raised mound 8 feet in diameter, under an Araucaria that had recently been planted. As the temperature of the earth and air increased, it grew rapidly. By the end of July the mound was completely covered with a beautiful green Moss-like verdure, than which nothing could be more beautiful, or better adapted for such a situation. It is now 3 inches thick, and if it keeps growing on for half a dozen years as it is now doing (and I see nothing to prevent it), we may reasonably expect that it will be not less than 18 inches thick, springy, and elastic as a piece of sponge, and capable of holding as much water. For such a position as I have described it is admirably adapted. As a substitute for Grass on lawns, or where constant sweeping during the fall of the leaf is required, it is thoroughly unfit. *Thos. Gell, St. Lawrence, Isle of Wight.*——I am surprised to observe (see p. 912) that Spergula pilifera does not always succeed upon stiff soil, I have it upon light mould; but it is now as brown as a brick, and I fear that it will never recover, whilst Spergula saginoides, close by its side, is as green as a Leek. This latter flourishes equally well upon light or stiff soil, or even clay, and will, no doubt, in a year or two supersede pilifera altogether for lawns. It will grow and continue of a fine deep green colour equally well on any soil (not too poor), under the drip and shade of trees or hedges, or exposed to the heat of the sun on a flat surface or on sloping banks. I inclose a tuft of each for your inspection. I also send a leaf of a striped Leek, the seed of which I saved two years ago from a single plant, and which I have proved this year to come true from seed. Is this any novelty or acquisition? *B., Stafford.* [The Leek is a novelty; but what is the use of it?]

Education of Gardeners.—It appears that before we can be considered competent gardeners, we must all go through a thorough examination of scholarship, such as arithmetic, bookkeeping, geometry, mensuration, mechanics, chemistry, physiology, botany, agriculture, geography, French, German, freehand and mechanical drawing. I readily agree that gardeners should be all good scholars, but I am astonished to find so many apparently ignorant as to how the majority of gardeners are situated. It should be recollected that most gardeners are obliged to begin business at ages varying from 12 to 14. It is therefore scarcely possible for a youth of that age to have reached such a point of perfection in education. Some may be ready to say that he can learn while he is an apprentice. I answer, can from 3*s.* to 4*s.* per week (and perhaps a premium to pay out of it) procure books and teaching? And we all know (at least we ought to know) that a journeyman is little better; as under gardener he gets wages ranging from 10*s.* to 14*s.* per week, a sum insufficient to keep him in clothes and other necessaries, to say nothing of education. I know many a young gardener who is pursuing his business with as much zeal and perseverance as it is possible for a young man to do, and yet had he to go through examination such as I have mentioned before he got a situation, I am afraid he would never get on at all. I believe however that there will still be gardeners as long as this world exists; it began with one and it will most likely end with them. And I cannot help thinking that it would have been much more to the credit of some of your correspondents had they encouraged and sympathised with the young gardener's difficulties rather than put a stumbling-block in his path. *An Under Gardener.*

Rose Showing.—I have read with much interest the observations copied from the "Florist" on the Briar and Roses on the Briar, especially the part entitled "One Word to Exhibitors." If it can by any means be made clear to exhibitors that any addition even of a leaf will disqualify them, it will do away with much annoyance. I have been an exhibitor for years and taken divers prizes at the Botanic and Crystal Palace Exhibitions. I was disqualified this year at the National Rose Show for adding leaves as I have always done, neither tied on nor meant for fraud. In the same manner I took the second cup at the National Show last year, at the Hanover Square Rooms, and I find myself not acting honestly. I only want a good understanding and that all boxes of Roses for show shall be thoroughly examined by the judges, and every schedule of prizes shall have the following notice appended to it, viz.: any addition even of a leaf will disqualify exhibitors. I think that will rectify all mistakes. *J. H., Maidstone.*

Beech Trees and Lightning.—In addition to the information already given by your correspondents in pp. 894 and 912, I may state that a Beech tree standing on the western boundary of a narrow strip of plantation in the west of Northumberland was struck by lightning on the 26th of May of the present year. The bark was stripped off in several places round the trunk, which does not, however, appear to be otherwise greatly injured. Δ. [This notion may now we think be consigned to the limbo of vulgar errors.]

Hollyhock Fibre.—I may mention for the information of your Correspondent (see p. 874), that a patent was, I think, taken out about five years ago by some one in Scotland for a mode of converting this fibre into paper. Whether the attempt to utilise it in this way has proved successful or not I am not able to say; but I should like much to know. Δ.

Hampton Court.—I was glad to see (p. 915) that you have done justice to Mr. Donald and his management. I have never seen this royal palace look half so well as it did when I visited it on the 4th of this month. The bedding out of 50,000 plants every year requires forethought. The arrangement of colours was just as it ought to be, and every plant was loaded with bloom; not a weed was to be seen, and the Grass was like a Brussels carpet. The plan of trenching the beds and putting such fine drainage below to decay, and again to be brought up to enrich the surface, appears to be just what is wanted. Manure of this kind is rich enough for flower beds when the ground has been properly trenched. Leaf-mould of this description seems to bring out colours vividly, and to put a dark glossy green on the foliage, which is also kept within proper limits. Plants are propagated here in sand beds by the thousand; all houses and pits are full for 1861. Many of the older plants are taken up for propagating from for next year, as well as for planting out. *James Cuthill, Camberwell.* [We omitted to state at p. 915 that the great Vine, whose condition we were obliged to report as unsatisfactory, is not under the care of Mr. Donald; but that of Mr. Turrel, who has had the management of it for many years.]

Golden Hamburgh Grape.—My remarks, it appears, hsve stirred up your correspondent Mr. Busby. A little allowance can be made for a man's solicitude for the reputation of his pet and only child; but at the same time it would be well if people before they rush into print would consider what they are writing about. Mr. B. accounts for the deficiency of flavour in the Golden Hamburgh at Chiswick by the Vine being planted outside. If such was really the fact, my Grapes ought to have been inferior (instead of superior) to those at Chiswick, inasmuch as up to the end of September we had in Somersetshire nearly 7 inches more rain than fell in the garden of the Horticultural Society. Add to this the drenching the border got from the "stoppage of the down pipe," and it will be seen the cause Mr. B. has assigned for deficiency of flavour will not bear the test of examination, and is just no reason at all. Had he said, that considering the age of the Vine, the untoward season, and the roots being in an outside border, it was carrying a heavier crop than it was capable of bringing to the highest state of maturation, he would not have been far from the truth, and would have assigned a cause not less agreeable with experience than with inductive reasoning. Oh, but (says Mr. Busby, at Cheltenham) the "Golden Hamburgh beat the Muscat." Just so. Judging for quality a well ripened Hamburgh may beat an immature Muscat, the same as when judged for size a Syrian or White Nice may take the prize from any other Grape. At Trowbridge, in 1859, two dishes of Golden Hamburgh received no prize at all, being beaten by the Muscadine; but there all white Grapes were bad, and the Golden Hamburgh so injured by the use of Gishurst Compound as to render it worthless. The Golden Hamburgh is a good Grape, but, all things being equal in point of cultivation, not superior or even equal in flavour to the Muscats, White Frontignan, or Chasselas Musqué. On the point of its bearing capabilities I merely "told the tale as 'twas told to me;" but with reference to constitutional peculiarities I will put the actual case, and Mr. Busby and the readers of this can judge for themselves. If three Vines are planted side by side, and not more than 2 feet apart, the kinds being Purple Constantia, Golden Hamburgh, and Welbeck Tripoli, and from the intermixture of the roots in the border, all liable to the same injury from a deluging of water; and if the first is slightly injured, the second (the Golden Hamburgh) much, and the third not at all, can it be said they are all equally vigorous? Methinks not; and I should feel disposed to class it with the Frontignans and its parent the Dutch Sweetwater. To say it is as vigorous as any Grape, or to compare it with the Syrian White Vine, or even Reeves's Muscadine, is a mistake. To conclude, I may restate my conviction, that the Golden Hamburgh is a very good and desirable Grape, and deserving of extensive cultivation, but it will not bear the rough usage of the Black Hamburgh, nor must it be expected to ripen so perfectly in a greenhouse temperature. *W. P. A.*

Muscat Grapes.—I have sent you a cluster of white Grapes for inspection and name. I raised the Vine from eyes five years ago. I call it Muscat of Alexandria. It is the variety of Grape about which Mr. Pontey, of Plymouth, wrote at p. 814. He calls it Pasque Musk. The Vines which produced the bunch in question were planted April, 1857, and this year they have borne a crop of 120 clusters; owing to the cold wet season I have been obliged to fire strongly, which has very much reduced the size of berry. *Henry Bedderd, Tehidy Park, Redruth.* [This was a fine bunch, confirming the statement made by Mr. Pontey, at p. 814, as to the excellence of the Grapes at Tehidy. It appeared to belong to the Cannon Hall Muscat variety.]

Grapes without Fire Heat.—I beg to send you a bunch of Black Hamburgh Grapes which has been grown without fire-heat. As our Peach and Nectarine blooms annually suffered much from late spring frosts, five years ago my employer desired me to get a substantial protecting material. I at once proposed glass

as the best and cheapest in the end. Accordingly we had a wall 120 feet long and 13 feet high covered with glass about 5 feet from the wall. In March 1858 I planted 15 Black Hamburgh Vines along the front inside, 8 feet apart. Last year I had a few nice bunches, and the wood was thoroughly ripened. This season I have suffered them to bear 150 bunches, and they are equally good as the one I enclose, with the exception of one which has proved to be a Barbarossa, and which I shall use as a stock for Golden Hamburgh. I quite agree with you that the best way is to plant within. I do not doubt if I had planted outside that the very wet season we have had would have caused them all to shank. *J. J., Cloverley Gardens, Shropshire.* [With this came as handsome a bunch of Black Hamburgh Grapes as the most fastidious person would wish to see on his table. Capitally thinned, as black as Sloes, and as sweet as any Grape ever ought to be.]

Cucumbers.—I beg to send for inspection a brace of Cucumbers. They were cut from one of two plants which have been in continuous bearing since March last, producing on an average 12 per week. What I send is hardly a fair example of size and shape. My plants have had no fire heat given them from the middle of last May till the present month, nevertheless under such disadvantage they have produced a most prolific crop. The plant from which the fruits sent were cut had at one time on it 14 much larger, all ripe and well swelled, each varying from 18 to 24 inches in length. One point in favour of this sort is it never goes yellow at the handle; when it does change colour it does so all over at the same time. One of the fruit sent has maintained its present length six weeks, the other five. Its prolific nature and hardihood of constitution is however its best recommendation. I call it Model and have obtained it from careful selection during many years cultivation. *Charles Russell, W. L. Leaf, Esq., Woodlands, Clapham Park.* [The specimens sent were white spined, deep green, with a fine bloom on them, straight and handsome. We do not see however in what they differ from Sutton's Berkshire Champion mentioned at p. 836 of our present year's volume.]

Pampas Grass.—We hear nothing of this plant blooming this year; indeed generally I think it was too much injured last winter to be capable of flowering much this season. Here a fine plant is just throwing some 50 of its silvery plumes. But this is a favoured spot, the Ice King rarely putting in an appearance, and when he does, so mildly as to do but little injury. Here we are about to plant the Gynerium for game cover. Has any one a male plant to part with? I should be glad to get one either by exchange or purchase. *Pendyffryn, Conway, North Wales.* [It is flowering beautifully on our heavy clay.]

Heating Vine Borders.—In one of your late Numbers was given an article on the advantages attending heating Vine borders. Will you kindly inform me if the chamber for the pipes should be of the width of the border, or merely of sufficient size for the pipes? *H. G. Solient.* [The pipes should be enclosed in a vault, just large enough for a man to creep into it, for the purpose of examination in case anything goes wrong.]

Almond Tree in Fruit.—I beg to say that the Almond tree (A. communis) now in bearing, about which an inquiry was made in your Paper of October 6th, is growing at Dolaucothy in the north of Caermarthenshire, South Wales. *C. C., Dolaucothy.*

Notices of Books.

***Le Jardin Fruitier du Muséum, ou Iconographie de toutes les espèces et variétés d'arbres fruitiers cultivés dans cet établissement,* &c. &c. Par J. Decaisne. 4to. Paris, Firmin Didot. Parts 25 to 36.**

(Continued from p. 914.)

Poire Truitée [*Forelle*]. — Fruit middle sized, oblong, obtuse at the ends, but variable in size and likewise somewhat in form, sometimes it is marked with a slight longitudinal groove; stalk variable, generally long, straight, scarcely sunk at its insertion; eye in a slight depression, closed by the segments of the calyx; these are oval, obtuse, somewhat fleshy at the base. Skin thick, of a fine yellow on the one side, carmine red on the other, sprinkled with large spots of deeper red, the centres of which are marked with very small fawn specks. Flesh white, fine, half-melting, juicy, sugary, slightly perfumed, with a peculiar very agreeable flavour. Season, November to January. The tree is a very abundant bearer.

The Poire Truite is mentioned by Cl. Saint-Étienne, *Nouv. Instruct.*, 1670. According to Bivort, *Album Pomol.*, it is known in the neighbourhood of Courtray by the name of *Corille*. Prof. Decaisne quotes the following account by Naudin, *Revue Horticole*:—

"France is the country which has given rise to the most esteemed varieties of Pears; the Germans have announced one which we have long known, namely the Poire Truitée, in allusion to its colour and spots. It is difficult, said Professor Diel, who has described it, to find a Pear so brilliantly coloured, and with flesh as rich and melting as that of the *Poire Truitée;* for generally these handsome fruits so richly coloured are sharp and astringent, and can only be used when cooked. This on the contrary is excellent raw; the tree is an early bloomer, but at the same time it is so robust that in 1850 the young fruit, just set, perfectly withstood a cold of (—10° Centigrade) 18° Fahr. below freezing, and which destroyed all the flowers of other Pears, then in full bloom."

[The hardiness of the Forelle Pear, in comparison with other sorts, has been severely tested in England, too frequently indeed of late years. It blossoms early, as above stated, and we have known it withstand 14° Fahr. below freezing when it was nearly out of blossom, yet it set a good crop; whereas the blossoms of other sorts of Pears were killed, whether expanded or in the bud. Owing to its superior degree of hardiness the Forelle Pear certainly deserves more extensive cultivation than has hitherto been assigned to it in this country.]

Poire Béquesne.—Fruit middle-sized, pyriform or oblong; stalk long; eye level with the fruit, the segments of the calyx erect or spreading; skin yellow, tinged with red next the sun, russeted about the stalk, and sprinkled elsewhere with dark-coloured dots. Flesh white, dry, breaking, sweet, perfumed. *Fruit à cuire ou propre à faire des Poires tapées.* [A stewing Pear.]

Poire Colmar.—Fruit large, turbinate; stalk straight, obliquely inserted; eye large, in a shallow, regularly-formed depression, on the sides of which the segments of the calyx recline; skin greenish yellow, sprinkled with dots and some brown specks. Flesh white, granular, melting or half firm, juicy, sugary, and rich, with slight perfume. Season, November till March. The tree requires to be grown against a wall. The Colmar is mentioned by Merlet, in 1690, as a fruit, the most new and rare in France, of excellent quality, and which might be eaten all the winter. La Quintinye, also writing in 1690, states that he received it from a connoisseur of Guyenne, and from another place under the name of Poire Manne, and Bergamotte Tardive. [There is perhaps no such excellent variety of Pear that will continue so long in eating as the Colmar. Fruit from the same tree has been fit for use from December till the end of March.

Poire de Beurré.—Fruit above middle-size, roundish oval; stalk very short, thick, and fleshy next the fruit, which tapers into it with a slight contortion; eye in a shallow depression, surrounded with some concentric russet lines; skin brownish olive, sprinkled russet. Flesh whitish, very melting, juicy and sugary, with a perfumed, delicious flavour. Season, end of September, October. The tree is a good bearer, and suitable for the open ground [in France]. Prof. Decaisne states that contrary to the opinion of the generality of modern pomologists, he distinguishes the Beurré Gris (Brown Beurré) from other varieties with which La Quintinye was the first to unite it; and he states that he never could meet with the Green, Grey, Yellow, and Red Beurrés on the same tree as some have pretended to have done, and that, if under some circumstances the Beurré Gris acquires a tint more or less bronze, it never possesses the brilliant red colour, nor the flavour of the Poire d'Amboise or Beurré Rouge.

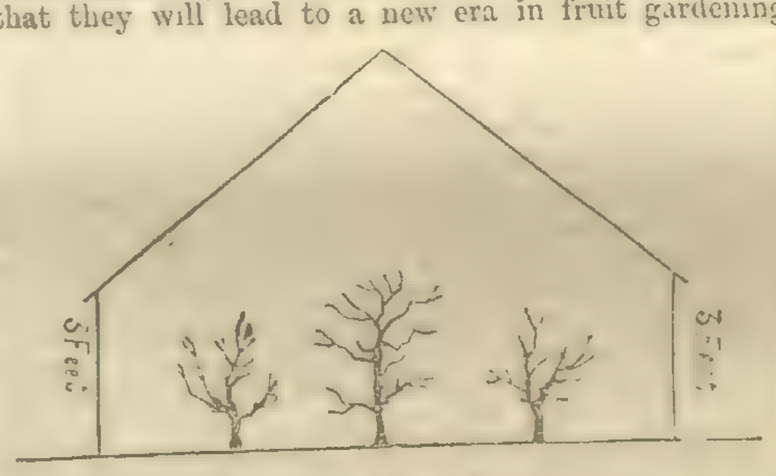
Poire d'Amboise.—Fruit above middle-size, turbinate, or short-pyriform; stalk cylindrical, slightly sunk at its insertion; eye in a shallow, regularly-formed depression; skin smooth, greenish-yellow on the shaded side, and of a fine crimson red next the sun. Flesh very fine, melting, sugary, with a delicious perfumed flavour. Season, September and October. Poiteau says the Beurré d'Amboise acquires a fine red colour, and that its qualities are absolutely the same as the Beurré Gris, but more perfect.

(To be continued.)

In his new *Descriptive Catalogue of Fruits,* Mr. Rivers has again weeded out many *new* varieties of all kinds, which are now ascertained to be either worthless in themselves or in this climate. Among other novelties it contains the author's view of what are called Tiffany Houses, which we are authorised to transfer to our own pages:—

"Houses built with stakes or slight timber, and the roofs and sides covered with tiffany, have very recently been introduced and found efficient in protecting half-hardy plants from severe frost.

"I now propose to erect temporary houses of the same materials to protect dwarf and pyramidal fruit trees while they are in bloom, and I have no doubt but that they will lead to a new era in fruit gardening among amateurs, offering, as they do, a very cheap method of protection. A border or bed of fruit trees may be 8 feet wide and planted with three rows of bush fruit-trees, as shown in the above section, one row in the centre, and the other rows 3 feet from it, and the trees 3 feet apart in the rows, thus occupying 6 feet of the bed.



Section of Tiffany House.

"A Tiffany House to cover the trees in a bed of the above width may be 8 feet wide, 3 feet high at the sides, and 5 feet high in the centre.

"The roof of tiffany should be fastened to the rafters with shreds 3 or 4 times double, so as to make a thick pad, and either nailed on with short nails or fastened with screws, so that it may be easily taken to pieces annually the first week in June, for till then we are not safe from spring frosts. The Tiffany House should be placed over the trees the first week in March, unless the season be unusually early, when the middle of February would be better. The sides should be loose, and be turned up night and day in mild weather, while the trees are in bloom, but in cold sharp windy weather in the blossoming season they should be kept down, and fastened to the upright stakes by tying or otherwise.

"A Tiffany House 24 feet long and 8 feet wide will thus shelter 24 trees, either bushes or pyramids; if for the latter, the sides of the house should be 4 feet, and its centre 7 to 8 feet in height. If it be thought desirable to keep the trees in a comparatively small space, they may be removed biennially in October. If larger trees are desired, the house may be enlarged as the trees grow. A Tiffany House may be from 1 to 500 feet in length, and 20 in width if desirable, for there are no particular limits to its extent, only the effects of a 'March wind' must be thought about when lofty and extensive houses are put up. As measures of economy the timber and tiffany should be placed in a dry place when removed, and the rafters fastened to the plate and ridge board with screws. A Tiffany House thus treated —'kindly and gently'—will last for several years, and in places where the climate is sufficiently warm to ripen Apricots, Plums, Pears, Cherries, and even early Peaches, in the open air, they will, I have no doubt, be extensively employed."

Routledge's Illustrated Natural History, Part XX., includes Swallows, Trogons, Kingfishers, Bee-eaters, and their allies.

In the number of Moore's *Floral Magazine* for October we find figures of the Pelargoniums called Perdita, Modesty, and Garibaldi (wrong numbered on the plate), the first and last two flaming red-hot novelties as much alike as two peas; two single Hyacinths, Snowball, white, and Lord Clyde, deep violet; a double white Camellia, called the Pearl; and a really handsome variety of Lycaste Skinneri with nearly white lip and sepals, and rich purple petals.

Garden Memoranda.

Watcombe, South Devon, the late I. K. Brunel's, Esq.—This estate, though no residence has yet been erected upon it, has been planted with so much judgment and care, and contains such a fine and extensive collection of Coniferæ, that a short account of it will doubtless be interesting to the admirers and cultivators of this beautiful tribe of plants. The climate of this district being so mild and genial, they have attained a luxuriance and freeness of growth which is almost unknown in less favoured localities, and many of the species usually considered half hardy and doubtful, here flourish in the greatest perfection and wholly uninjured. Abies Morinda, for instance, may be said to thrive here nearly as well as the Austrian Pine in the Northern and Eastern Counties.

The road from Torquay to Teignmouth passes through the estate in a cutting, the sides of which have been planted so as entirely to conceal it from view. This is so skilfully done, and the plantations are now so much grown up, that a person unacquainted with the locality would have no idea of its proximity. Access is gained to either side by a rustic wooden bridge thrown across the road, the appearance of which would be much improved by the introduction of a few climbing plants, such as the Virginian Creeper and some Ivy, especially at the sides.

The estate is entered at a point about three miles from Torquay, and a short drive conducts to the site which was selected by the late Mr. Brunel for the house. The view from here it is not easy to describe, so numerous are the points of interest. Looking in a south-easterly direction (which would be the aspect of the principal windows), along a beautiful wooded valley, the end of Torbay is seen, closed in by hills, and the entrance not being visible, it assumes the character of a lake, bounded in the extreme distance by the hills in the direction of Dartmouth. To the left, the outline is broken by the old tower of St. Mary's Church (shortly to be replaced by a new one), and the village of the same name, which crowns the summit of a hill. In this neighbourhood are some extensive quarries of limestone, which, being of a reddish hue, and surrounded by trees, form a very pleasing addition to the scene. On the right the view is closed by a lofty hill, the plantations on which have been very judiciously arranged, large glades being occasionally left which contrast well with the dense masses of wood. The effect of the planting of this eminence is however best seen from a distance, where the irregular outline and scattered groups of plantation produce the impression that these are merely the outskirts of an extensive wood on the other side of the hill. This neighbourhood affords some beautiful models for the planting of elevated districts and broken ground, many of the hills being densely dotted with masses of Furze and other low shrubs, the outlines of which are in the highest degree picturesque. At the end of Watcombe, nearest the sea, there is an extensive

patch of Furze particularly deserving attention, from its wonderful variety of outline and surface. Seen from above it has precisely the appearance of a wood in miniature.

From the summit of a hill adjoining the one just alluded to, the prospect is most extensive and varied, embracing the hills of Dartmoor with their numerous granite tors; the coast from the estuary of the Exe to the Bill of Portland; and towards the south the whole of Torbay, terminated by the bold promontory of Berry Head.

Immediately beyond the site of the house the ground falls rapidly in a south-easterly direction, and on either side are steep slopes, which, uniting in the bottom, form a valley of no ordinary beauty. The sides of these slopes are planted with ornamental trees and shrubs, among which several winding paths on different levels conduct to the lower portion of the grounds. On these slopes are some splendid specimens of Abies Morinda, A. cephalonica, A. Pinsapo, A. Menziesii, Pinus Cembra, P. excelsa, P. insignis, and P. muricata, varying in height from 10 to 30 feet. Of Abies Brunoniana and A. bracteata there are also a few specimens in a very flourishing condition. The Cypresses are well represented, C. macrocarpa having in one or two instances attained a height of nearly 30 feet; C. Uhdeana (very fine), C. Goveniana, and C. Knightii, with Juniperus excelsa, and several other species, all from 10 to 15 feet. Of Cryptomeria japonica, C. Lobbii, Araucarias, Deodars, and Wellingtonias, there are many fine examples, as well as smaller ones of Libocedrus Doniana, L. chilensis, Taxus adpressa, T. Harringtonia, and Thujopsis borealis. The last named bids fair to assume a very graceful weeping habit. Among other plants in this part may be mentioned Berberis atropurpurea, a variety with leaves almost the colour of the Purple Beech; some beautiful specimens of B. japonica, B. intermedia, and B. Bealii, and Quercus glabra, an evergreen Oak with large handsome leaves, forming a very neat and compact shrub. In a lower part of the grounds are collections of Thorns and Evergreen Oaks, embracing nearly all the hardy species. Some of the latter are very fine specimens, and most of them are this season producing acorns in abundance.

Proceeding across the public road by the bridge previously mentioned, the Pinetum is reached. Here are two walks, one leading to the summit of a high cliff (known by the name of the Giant Rock), from whence a view is obtained of the lovely bay of Watcombe and the adjacent rocks immediately below. The views towards the sea, and of the coast here broken up into numerous small bays and bold projecting headlands, frequently richly clothed with wood down the very face of the cliffs, and occasionally varied by a huge mass of isolated rock, compose a scene of which words can convey but a feeble impression, and from which, when seen under the influence of the setting sun, it is difficult to turn away. The other walk passes round the face of the hill, and from it the prospect is much varied, embracing both sea and land views.

About 40 acres on this hill are devoted to the Pinetum, and a more suitable spot for such a purpose could scarcely have been selected, though some points are considerably exposed to the south-westerly gales. The Austrian Pine, P. insignis, Abies cephalonica, and A. Pinsapo, of all of which there are a large number of fine specimens, seem, however, to bid defiance to the elements. It may be observed here that in this climate, Pinus insignis is, if possible, a more useful plant than the Austrian Pine, as it is unquestionably of much more rapid growth, many specimens of the former planted at the same time, having attained a size fully half as large again as the Austrian Pine. A beautiful specimen of Abies nobilis, about 10 feet in height, is also thoroughly exposed to the violence of the gales, but has withstood them quite uninjured, although the gardener, Mr. Elston, states that it has encountered some fearful storms. Of other Pines deserving particular notice are P. macrocarpa, P. pseudo-strobus, P. apulcensis, P. Montezumæ, P. ponderosa, P. Sabiniana, P. Devoniana, P. pyrenaica, P. Gerardiana, and P. Russelliana; Abies Nordmanniana, a beautiful plant about 8 feet in height; A. Webbiana, about the same size, and bearing one of its handsome purple cones, and A. Brunoniana, of which there are several fine specimens. The under side of the leaf of this elegant Fir is of as silvery a whiteness as the best of the Silver Ferns; and the general habit of the plant is peculiarly graceful. Pinus pumilio is largely used for a low growth. There are several other plantations in various parts of the grounds containing many of the species before enumerated.

On an elevated spot behind the site of the house is a plantation of about 4 acres, consisting chiefly of Pinus insignis, interspersed with some Austrians and Scotch Firs. A few of the P. insignis have attained a height of nearly 40 feet.

The whole estate contains an area of 118 acres, of which about 60 are laid out in pleasure-grounds. It has been brought to its present state by Mr. Forsyth, acting under the guidance of Mr. Nesfield, and is now most efficiently kept in order by the present intelligent gardener, Mr. Elston, to whom the management of the whole estate is entrusted.

While on the subject of Coniferæ and plants of that kind, it may be mentioned that at Luscombe, near Dawlish, in this neighbourhood, the seat of Charles Hoare, Esq., and one of the most beautifully wooded estates in the country, is a magnificent specimen of Abies cephalonica, measuring some 40 feet in height, and thickly clothed with branches from the ground. There is also here a good though small collection of Pines. *J. W. C.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—As has been formerly stated, summer-flowering twiners, which usually get unsightly at this season, should be cut back freely, as should also any others that will submit to that kind of treatment. In the case of cold pits, if not already done, get straw shutters or whatever else it may be intended to use for coverings for them put in readiness for use without delay. Straw shutters if well made are expensive in the first instance, but are considered by many to be the most efficient of any kind of covering in use; and taking into account the time they last they are perhaps as cheap as any. Expose the stock in such pits freely to air on every favourable opportunity, so as to check growth and get the wood firm. Very little water will be required at the root, but look over the plants every few days, withholding water until it is absolutely necessary, and then giving a moderate soaking, which is the only safe method of watering at this season. Heaths and other things subject to the attacks of mildew must be closely watched, and sulphur applied the moment the enemy is perceived.

FORCING DEPARTMENT.

PINERIES.—The trying period for those who have to winter their young stock in pits heated by fermenting materials has now arrived, for with sunless weather and cold nights it is a very difficult matter to preserve Pines in a healthy state, where warmth must be accompanied by excessive moisture. Keep the linings sufficiently strong to maintain the temperature at about 65°, which will allow of giving air rather freely on fine days, and a little must also be given in all states of the weather, when doing so does not cause the thermometer to sink under 55°. There should be no attempt made at inducing growth with the present amount of light, but the linings should be kept rather strong, so as to be prepared against the setting in of severe weather, and also to allow of giving sufficient air to prevent excess of moisture. See that efficient coverings are prepared, and endeavour to keep the bottom-heat steady at about 75°, and the soil in a rather dry state. This system of Pine growing is now, however, but little practised, and it would be economy on the part of those who adopt it to supersede it at once by means of a hot-water apparatus.

VINERIES.—The night temperature to begin forcing with should range about 50° by fire-heat, raising it to 60° by day, or a little more with the assistance of the sun. Also endeavour to secure a little warmth for the roots in the outside border, and if fermenting materials be used watch these narrowly, and endeavour by timely additions and frequent turnings to secure a regular gentle warmth of 60° or 65° at a foot below the surface of the soil. If fermenting materials are employed, there will be a great saving of labour, &c., by thatching them with a good coat of something to throw off wet, and preserve them from the weather.

FLOWER GARDEN AND SHRUBBERIES.

Chrysanthemums will soon be in flower here; let them be tied out so as to display their blossoms to the best advantage. Fuchsias and such things if not already protected for the winter must soon receive attention. Dry Fern is an excellent material for covering the stems, &c., of plants that require a slight protection in winter. Choice sorts of Hollyhocks, of which there is not sufficient stock of well established young plants in pots, should be taken up, potted now, and wintered in a cool house; they will be exceedingly useful for furnishing cuttings, and these if got in early in spring will make excellent plants for next season. Be very careful to secure transplanted things against wind, especially large plants, which should never be left until they are properly staked or otherwise made fast, for when this is put off it frequently happens that the roots get injured through the tops being rocked about by the wind. Get ground intended to be planted with Dahlias and Hollyhocks next season deeply trenched and ridged up so as to expose the soil as much as possible to the weather, putting in plenty of good rotten manure, especially where the Hollyhocks are to stand, for these require a deep rich soil.

HARDY FRUIT AND KITCHEN GARDEN.

The late stormy weather which we have experienced has blown great quantities of Apples off the trees; these must therefore be picked up, kept by themselves, and used first. Continue gathering both Apples and Pears, most varieties of which will now be fit; at all events the setting in of such stormy weather renders it inexpedient to leave them so long as might have been advisable under more favourable circumstances. Nonpareil Apples should be amongst the last gathered, and the same may be said of Glou Morceau, Beurré Rance, and Easter Beurré Pears. If Coe's Golden Drop Plums be carefully gathered, wrapped singly in thin paper, after remaining some days in a dry airy room and then packed in shallow boxes, they will keep a long time, and so will the blue Imperatrice, and the Ickworth Imperatrice, the latter being the more preferable Plum of the two. It cannot be too often repeated that all choice fruit should be gathered when perfectly dry, and in storing, wherever an extensive surface of fruit is exposed, air must be admitted freely, for at this period exhalations are most abundantly given out, and more especially by the early varieties on their becoming fit for use. These, in fact, ought not to be in the same apartment with the more valuable late-keeping sorts. Peaches in some places are not yet half ripe; where flued walls exist a little warmth must therefore be afforded them, not only to ripen the fruit but to harden the wood. Look frequently over the fruit room, and remove at once any fruit that appears to be unsound. Prepare ground for planting. The forcing of Seakale and Rhubarb must soon be attended to, and where there is a good stock of strong roots, a supply of these will be easily kept up. Where there is room to spare in the Mushroom house this forms a very suitable and convenient place for forcing these. The roots should be placed on a slight bed of warm dung, filling up the places between them with old tan or the soil and manure mixed from an old Mushroom bed, giving a good watering to wash it in amongst the roots. The bottom-heat should not exceed 70°, as too much heat is not favourable to securing strong growth, but except for the first crop it may be dispensed with altogether. Take advantage of wet days for making fresh Mushroom beds, and clearing out those that are spent; also collect and prepare droppings for forming fresh beds by spreading them in a shed and turning them every day until they are sufficiently dried to prevent excessive fermentation after putting up. Carefully examine Onion stores, and remove all in which there are any symptoms of decay.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON
For the Week ending Oct. 18, 1860, as observed at the Horticultural Gardens.

October.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 12	27	29.875	29.790	53	36	44.5	52½	53	W.	.10
Satur. 13	28	29.557	29.389	54	39	46.5	52½	51½	S.W.	.06
Sunday 14	●	29.776	29.513	54	29	41.5	52	52	N.W.	.01
Mon. 15	1	29.763	29.500	54	46	50.0	52	51½	S.W.	.28
Tues. 16	2	29.668	29.474	50	40	45.0	53	51½	S.W.	.29
Wed. 17	3	29.935	29.858	58	37	47.5	53½	51½	W.	.01
Thurs. 18	4	29.760	29.492	56	45	50.5	53	51½	S.W.	.18
Average..		29.762	29.573	54.1	38.8	46.5	52.6	51.8		.93

Oct. 12—Clear, quite cloudless; fine; overcast; rain.
— 13—Cloudy; rain; heavy showers.
— 14—Partially overcast; slight showers; very clear and cold; slight frost.
— 15—Rain throughout; boisterous at night.
— 16—Rain; constant heavy rain; boisterous.
— 17—Clear and fine; very fine; slight rain.
— 18—Overcast; cloudy; heavy rain in afternoon.
Mean temperature of the week, 3½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending Oct. 27th, 1860.

Oct.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 21..	58.2	39.8	49.0	14	0.61 in.	3	6	3	3	5	7	5	2
Mon. 22	58.6	43.2	50.9	19	1.96	2	1	4	1	8	9	5	4
Tues. 23..	57.8	40.3	49.0	18	0.56	3	1	1	3	4	12	8	2
Wed. 24..	55.8	39.3	47.5	15	0.88	1	3	4	—	8	11	5	2
Thurs. 25..	55.4	38.0	46.7	16	0.80	4	6	5	3	4	4	5	3
Friday 26..	54.9	36.6	45.7	13	0.52	5	4	3	2	7	6	5	2
Satur. 27..	54.7	33.7	46.7	22	0.92	2	5	3	1	6	5	7	5

The highest temperature during the above period occurred on the 21st, 1850—therm. 73 deg.; and the lowest on the 23d, 1859—therm 17 deg.

Notices to Correspondents.

BLUE HYDRANGEAS: *A. B.* Iron filings are sometimes mixed with the mould. Sulphate of iron is also used to water it. All that is essential is that the iron should be in a soluble form, or capable of becoming so. Alum has been found to act like iron.

BOOKS: *Trewidden.* For the purposes of the planter on a large scale we advise you to consult Brown's Forester; for small work, like transplanting Evergreens, Barron's Winter Garden may be recommended. There is a good useful, though unscientific, recent Catalogue of Coniferous plants, called Gordon's Pinetum, published by Bohn.—*C M F.* No such book either does or can exist. Be as careful as you may in making a catalogue, such is progress in this country, that before the work can even be printed plants not included in it will find their way into cultivation. The book you have is as good as any.—*W C.* Thirty-six numbers of the *Jardin Fruitier* have appeared, each containing four coloured plates, and costing five shillings. You may possibly see it at some foreign bookseller's, but we doubt it.—*J T H.* Brown's Forester. For price, &c., apply to any bookseller.—*Gardener.* Chevreul on Colours will doubtless answer your purpose.

FUNGI: *J S P.* Your Fungi are *Bulgaria sarcoides* and *Clavaria umbrina*, a new species, both figured in "Outlines of British Fungology" just published. It is a small state of the species. *M J B.*

GARDENERS' BENEVOLENT INSTITUTION: *A Young Sub.* Enquire of the Secretary, 14, Tavistock Row, Covent Garden.

INSECTS: *J C H.* Your weevils are the Calandra granaria. The plans most likely for their destruction are either to subject the Wheat to repeated shaking, or to place it in a kiln and so destroy the weevil. Both plans have been practised with success.—*Tuf.* The insects which abound in your garden are the spring-tailed Podura fimetaria, which feeds on decayed vegetable matter. If troublesome, water the beds with lime-water or gas-tar water.—*Avon.* We shall be glad to learn the result of the Gishurst compound on the aphis of the Nectarine. *W.*

NAMES OF FRUITS: Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to examine more than six sorts, whatever may be the number forwarded.—*W G G.* 5, Minchall Crab; 6, Nonsuch; 7, Northern Greening; 10, perhaps Beurré de Capiaumont; 27, Dutch Mignonne. Your seedling Apple is much allied to the Alexander, but is not so handsome.—*S H* 1, Alfriston; 4, Wormsley Pippin; 5, Hanwell Souring; 7, Trumpington or Eve; 11, Beurré Rance. Your Peach which you had for the Walberton Admirable is probably correct, the leaves agree with those of that sort.—*A Subscriber.* 1, Beurré Diel; 2, appears to be Duchesse d'Angoulême, from a late blossom; 3, Epine d'Été; 4, Jersey Gratioli; 5, Bishop's Thumb; 6, resembles Bon Parent.‖—*A B C.* 1, 5. Beurré Rance; 2, Bon Chrétien Fondante; 4, 8, Passe Colmar; 5, Beurré Rance; 6, Old Colmar.‖

NAMES OF PLANTS: *P M P.* Pentstemon azureus.—*G.* The broad-leaved variety of Pyrus intermedia. It has nothing to do with Pyrus vestita.—*W M.* Echeveria secunda.—*Arboreus.* Rhamnus Frangula.—*Young Sub.* Heliotropium [illegible]

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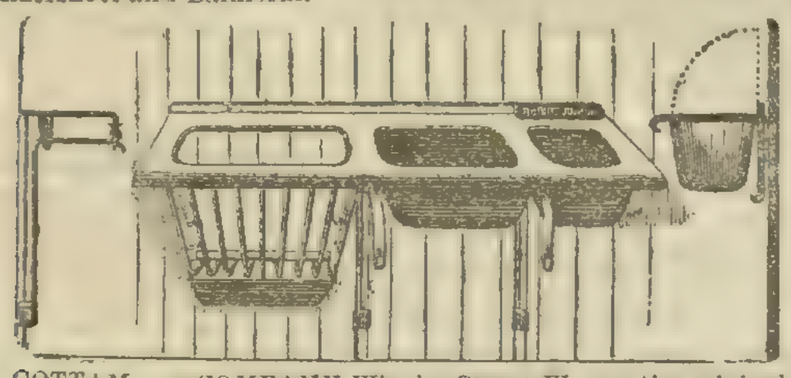

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2½ in.	short	1 ft. 7 in.	1	1	0
2½ ,,	long	3 ,, 3 ,,	1	10	0
3 ,,	ditto	3 ,, 6 ,,	2	4	0
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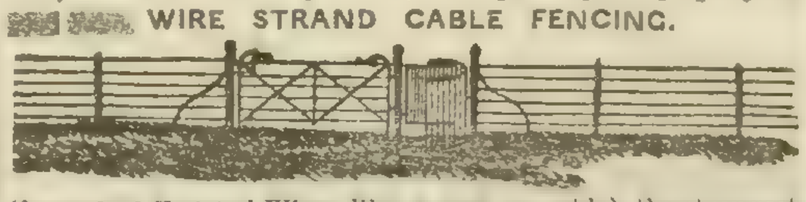

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Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 10*d.* per yard.

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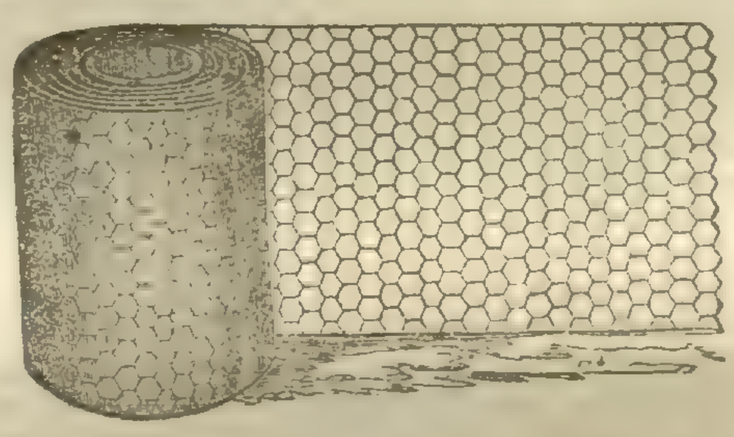


BARNARD, BISHOP, AND BARNARDS, in consequence of improvements in their machinery for the manufacture of the above article, have been enabled to make a great reduction in the prices.

		Galvanised.	Japanned Iron.
2-inch mesh,	24 inches wide	5*d.* per yd.	4*d.* per yd.
2-inch ,,	strong do.	6 ,,	4½ ,,
2-inch ,,	intermediate, do. ..	7 ,,	5½ ,,
2-inch ,,	extra strong, do. ..	9½ ,,	7½ ,,
1⅝-inch ,,	24 inches wide	5½ ,,	4½ ,,
1⅝-inch ,,	strong, do.	6½ ,,	5½ ,,
1⅝-inch ,,	intermediate, do. ..	7½ ,,	6 ,,
1⅝-inch ,,	extra strong, do. ..	10 ,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 8½*d.* per yard, 3 feet wide Galvanised Sparrow-proof Netting for Pheasantries, 2½*d.* per square foot. Wire Netting of every mesh from half an inch to 6 inches.

Wire Fencing and Netting delivered Carriage Free to all the principal Railway Stations.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.

Principal—J. C. NESBIT, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

LAND DRAINAGE.

WORKS OF DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.

Repayment may be made by the Landowner as successive portions of the works are completed; or the actual expenditure, with a commission thereon, may be charged on the property improved, by way of rentcharge on the estate created for various terms of years so as to adapt the rate per cent. of annual charge to the circumstances of the tenants.

No investigation of title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.

Works of Irrigation, Enclosing, Wood Grubbing, Road Making, and Farm Buildings are executed in a similar manner.

Landowners desirous to execute any of the Improvements by their own Agents, and charge the outlay and expenses on the Estate, may obtain Loans for the purpose.

Applications to be made to WILLIAM CLIFFORD, the Secretary at the Offices of the Company, 52, Parliament Street, S.W.

THE LANDS IMPROVEMENT COMPANY.—Incorporated by Special Act of Parliament in 1853.

2, Old Palace Yard, Westminster, S.W.

TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c. IN ENGLAND AND WALES AND IN SCOTLAND.

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W.

THE BIRMINGHAM CATTLE AND POULTRY SHOW, 1860.—The TWELFTH GREAT ANNUAL EXHIBITION OF CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, AND ROOTS, will be held in Bingley Hall, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, December 3, 4, 5, and 6; when PRIZES, CUPS, or other articles of Silver Plate, and GOLD and SILVER MEDALS, to the amount of 1236*l.*, will be awarded.

Prize Lists and Certificates of Entry may be obtained from the Secretary. The ENTRIES close the 1st of November next.

The principal Railway Companies will convey Stock home free if unsold. JOHN B. LYTHALL, Secretary.

Offices, 14, Upper Temple Street, Birmingham.

SMITHFIELD CLUB CATTLE SHOW, 1860.—THE ANNUAL SHOW OF FAT CATTLE, SHEEP, AND PIGS will take place on December 11, 12, 13, and 14, at the Bazaar, King Street Portman Square, W.

The LAST DAY for Certificates for both Stock and Implements to be received by the Honorary Secretary is THURSDAY, November 1.

The following forms of Certificates are now ready, and intending Exhibitors in applying for them need only quote the letters and state how many of each letter they require:—

CATTLE.
Form A.—Ox or Steer
,, B.—Cow or Heifer
,, C.—Ox, Cow, or Heifer in extra stock

SHEEP.
Form D.—Pen of three Wethers
,, E.—One Wether or Ewe in extra stock

PIGS.
Form F.—Pen of three Pigs
,, G.—One Pig in extra stock

Prize Sheets, with Rules and Regulations, and Forms of Certificates as above, may be obtained of

B. T. BRANDRETH GIBBS, Hon. Sec.,
Corner of Half Moon Street, Piccadilly, London, W.

N.B.—All communications on the Club's business should have the words "SMITHFIELD CLUB" outside, to distinguish them from private letters.

The Agricultural Gazette.

SATURDAY, OCTOBER 20, 1860.

WE are now completing a year of very extraordinary weather—the warmest and the coldest October almost ever known—a cold and wet November—a very cold December, falling 25° below the freezing point and ending in warm rain—a mild and dry first week in January, followed by a latter half extremely wet—a very stormy, wet, cold February—a snowy, cold, wet, stormy March—

excessive rains and storms in April—a very wet and stormy May—a cold, wet, unseasonable June—dry during the first fortnight of July, but rainy afterwards and cold throughout—a very wet, inclement August—a September partly fine and partly wet, and rain almost ever since. We have had twelve months of unusually low temperature, excessive rainfall, and temp stuous weather.

The rain and cold together have delayed the ingathering of our grain crops, in some cases two months beyond the period of last year's harvest. They have checked the growth of our green crops all over England. They have spoiled the hay crop nearly everywhere, so that food for cattle will be of inferior quality and diminished quantity during the ensuing winter, and prices of store stock are in consequence already falling. They have destroyed to a great extent in England our Hops and our Potatoes. They have utterly destroyed many of our smaller seeds and no doubt injured the vitality of all. Our wholesale seedsmen with large stocks by them will make fortunes, and our smaller seed growers will be ruined in large numbers. Already we hear of purchases both here and on the Continent of inferior seeds to kill and mingle with the small percentage of really good quality that is this year available, so as to make the bulk required for the demand. There cannot be a doubt that both in its immediate and ultimate effects the weather of the past four seasons will prove when its results are fully seen to have exerted a very disastrous influence.

We hope next week to give the judgment of our correspondents all over the country as to its effect on the main crops of the farm. Its influence, however, both on the vitality of seeds for next year's produce and on the fitness of the soil for their reception remains yet to be proved. But it may be well to direct attention, as indeed Mr. BAILEY DENTON has already done (see p. 898) to such means as remain at our command for avoiding or counteracting the mischievous consequences of excessive weather. We cannot help its influence on the vitality of our seeds, and we can do but little either to help or to escape its effects on the processes of harvesting them when ripe. It is in the preliminary growth of the plant—in the preparation of the land for the seed, and in its fitness for the nourishment of the young and growing crop that we are most able to meet the mischief of bad weather, or fully to avail ourselves of the advantages of good weather.

Land drainage is the only specific for an excessive rainfall; and by its influence on the "bottom-heat" in which our plants are grown, it is the only means at our command for meeting the evils of low temperature. There is experience enough now of its wonderful results in both of these directions: and a great stimulant will doubtless have been given by the unusual rainfall of 1859-60 to this great permanent improvement of the land. It is on the relations of water and soil, where these are difficult, that its fertility almost entirely depends. The chemist tells us that our cold unmanageable clay soils contain more of the food of plants than many of our loamy sands letting for much higher rent. It is not the poverty of the storehouse which causes the starvation of the plants—it is the want of a key to the stores. Land drainage is that key. Facilitate the passage of the rain-water through a poor "cold" clay soil, and it will very soon be neither poor nor cold. The food for plants already there will be made available, and by the growth of a useful rotation of crops which will then be possible, the store of food for future plants will be increased, and its accessibility will be increased as well. All this is now the *a b c* of agricultural schooling—everybody knows it and everybody is ready to put it into useful fruitful practice.

How important then it is that no artificial difficulty should interfere with a process which would add so greatly to the resources of the country! The inability of the tenant for life of an entailed estate to charge it with the cost of so great an addition to its value has been removed by the legislature. Money can now be borrowed on such property, and an annual rent charge on the estate for its repayment can be granted by owners with limited interest in the land. There are many companies whose powers enable them to execute all kinds of permanent improvements—drainage among others—on such terms.

Mr. BAILEY DENTON, the well-known engineer of one of them, did good service the other day by calling attention both to the pressing need of such improvements and of further legislative facilities for their accomplishment. He called attention to the data afforded in the present season, for determining the nature and extent of a measure so long promised, and daily becoming more and more required, for the improvement of outfalls:—

"The floods that have covered the valleys and silted the Grass, and spoilt thousands of acres of meadow hay, have given self-evident proofs of the necessity of remedial measures with respect to the main arteries. By the various unconnected works of under-draining already executed, which form but a very small proportion of what will some day represent the drainage of this country, vent has been given to pent up waters previously dispersed by driblets and evaporation. They have converted bogs and beds of free soil, in which water stagnated, into filters of rapid action, and have compelled tenacious clays to let go their hold of water, which had hitherto been claimed solely by the atmosphere. These waters of drainage have been got rid of regardless of the fact that water set free from above commits injury below, unless it be securely guided to its ultimate discharge; and thus it is that underdrainage, at certain seasons of the year, has augmented the floods in particular valleys, and will continue to augment them still more, as the practice (which may be said to be only commenced) extends.

"But I do not desire to occupy your space at this moment by dwelling upon this branch of the subject. I prefer confining my observations to the obstacles we have to contend with, in underdrainage itself, from the want of effective outfalls where no engineering difficulties present themselves, but where the rights of interposing private property, and the weakness of the law with respect to existing public ditches, impose a positive veto on sound and creditable works. In Lombardy, where irrigation is carried to perfection, every irrigator has the right to bring water through the property of his neighbour upon payment of due compensation. In England, where we talk of Drainage as the foundation of our superior agriculture, we cannot convey the water of drainage to the natural outfalls, if the land of an objecting landowner intervenes; nor can we deepen or straighten a public watercourse passing through a neighbour's property, nor can 99 proprietors desirous to improve an unprofitable unhealthy marsh, effect their object if one negative voice is raised. Ought we not to have some general and facile means of overcoming such patent evils as these?"

A correspondent from the neighbourhood of Biggleswade directed attention to the same subject in our columns the other day, and contended for the same necessity—a general measure for the whole country enabling majorities to act in circumstances where now a single voice has power to stop measures of great local value. He pointed out that not only is there no such enabling Act for the whole country, but that at present local Acts very often prove direct hindrances to the objects which apparently they were intended to facilitate. Thus we have before us a copy of an Act (1772) affecting parishes in the East Riding of Yorkshire, which was passed for draining and for navigation too!—two objects which are perfectly antagonistic; and there are plenty of similar instances—where localities, if they are not separately the victims of suicidal measures, are cut off from any possibility of concert for mutual advantage, by separate measures inconsistent with each other.

Large areas of first class Wheat land are thus entrenched, the drainage, such as it is, is isolated, the Commissioners of one local Act saying, "Oh, you must not come in here," and others on another side, "You cannot go in there!" We can refer to an estate which should have been drained in an easterly direction. There were two local Acts to prevent it, the drains connected with which are not sufficient for their own districts; the consequence was the land was drained due west against the fall! As our correspondent puts it: "England should be drained as one estate, the princes of the local courts should be mediatized."

Let us hope that some general measure for the purpose may be introduced during the next session of Parliament.

We shall be glad to receive and publish information bearing on its necessity, of which there must have been ample proof in the experience of most of our readers during the extraordinary seasons through which we have lately passed.

THE PROPER OFFICE OF STRAW ON A FARM.

(*Continued from* p. 920.)

STRAW AS AN ARTICLE OF FOOD.

All cattle will eat a certain quantity of straw if they can get it. The calf, who knows no stint, nevertheless chews straw in his pen, and the pampered medallist at Baker Street, or Bingley Hall, astonishes wondering citizens by condescending to eat a portion of his bed.

Nor is this an abnormal condition of things. Any one who will visit those beautiful southern counties, celebrated by Cobbett in his "Rural Rides," where picturesque little homesteads are dotted about the country, and the sound of the flail may yet be heard, will find the fatting cattle standing by turns at the barn door, disposing of each choice handful as it is put forth, and when duly satisfied retiring to the shed to chew the cud, showing every sign of content and enjoyment.*

The yards of the smaller farmers, as yet untouched by modern innovation, often display an interesting picture of neatness and economical contrivance. That look of comfort pervades them, which is of the first consequence to the well-being of stock, and without which "Tables of Nutrition" will be studied in vain.

The analyses appended to this paper show that straw of various kinds contains rather more of the muscle and flesh producing substances, and considerably more of those which furnish heat and fat, than Turnips. A ton of straw contains more food than a ton of roots. But if cattle are fed on the latter alone they will thrive,† and on the former store stock will barely, under any circumstances, retain their condition. This proves nothing as to comparative value, but it proves that the elements of nutrition must not only exist, but they must exist in an available form.

An ox fed on oil-cake alone would shortly die, because the elements of nutrition would not be presented to him in an available form. But it does not follow that oil-cake presented in some other form could not be digested. The same applies to straw; and, indeed, we should be led to conclude, from the fact of an ox requiring so much bulk in his food, that straw might be employed to supply that need.

Straw is a cheap article with which to distend the stomach, and we ought to use it in just such proportions as we find, by experience, it can be profitably used, as a substitute for other and more expensive food. There are two main elements in our calculation: cost of food, and value of beef produced. There is another value of the manure. But although nitrogenous and other elements are worth something as manure, they are worth more in the shape of meat. Cattle should be fed, therefore, so that as little as possible goes into the manure. In other words, the food should be given in such a form that the animal can appropriate the maximum of its most valuable constituents.

There are few farmers who do not use straw to some extent as a substitute for some portion of the more costly articles of diet. Perhaps its most general use, in this way, is as food for store cattle in combination with roots. If 20 lb. of straw and 1 cwt. of roots cause an ox to thrive as fast as 2 cwt. of roots, then there will be a gain to the feeder by using the former.

		s.	d.
Cost of 2 cwt. roots at 7*s.* 6*d.* per ton	=	0	9
Cost of 1 cwt of roots .. .. = 4½*d.*	}	0	6¾
And 20 lbs. of straw at 1*l.* per ton = nearly 2¾*d.*	}		
Gain		0	2¾

This is a saving of 26½ per cent. nearly.

It is a common plan in grazing districts, where roots are scarce, to feed store cattle on about 20 lbs. of straw and 3 lbs. of Bean-meal. I have found them do better on straw, with roots instead of meal, even when the supply of roots did not exceed ½ cwt. per head per day. Cattle wintered on straw and meal only become "hide bound" with staring coats.

The cheapest, though not probably the most economical, plan of feeding store cattle is to give them whole roots, and to put the straw, uncut, into racks, making them, in fact, cut and prepare their own food. The objection to this plan is the danger of choking an animal by a small root, or a portion of one, sticking in the throat. There is great risk of such an accident when the roots are small and hard. Mangel, being soft and usually larger than Turnips and Swedes, may be given with comparative safety. Store animals fed in this way will do well, and perhaps as well as on prepared food, probably in consequence of the more perfect mastication and deglutition of food when taken slowly.

It was one of the advantages of threshing by flail that the straw came daily from the barn into the racks as it was wanted. Under the present system it will generally be found more convenient to cut a portion of the straw stack into chaff at a leisure time, and store it away for future use. It is quite indispensable to store it in a place free from damp, for unless kept perfectly sweet it will disorder the stock, and will not be eaten with relish.

A cheap and excellent floor for a chaff-house is made with asphalte; and unless the site is particularly dry, the interior walls should have a coating of the same material, reaching 3 or 4 feet from the ground.

The cost of cutting straw into chaff with a machine driven by horse gear is 6*s.* per ton. And it costs quite as much to cut it by steam power, unless other machinery, covering part of the expense, is driven at the same

* This picture belongs to the poetry of agriculture. No doubt the best-fed beast delights in an occasional lock of straw, which doubtless is of great service, directly to digestion, and indirectly to nutrition; but he likes it as the citizen does his plain-boiled Potato with his steak, or the northern tourist his thin oatmeal cake, or single saucerfull of porridge with cream. But our author shows plainly, further on, that he does not overrate straw as the mainstay of a dietary, nor does he seem to consider the natural form of straw to be the most available form for the general purposes of nutrition. The part of "comfort" which follows is a word in season.—P. H. F.

† Surely not alone? When was this ever put to the proof? Farmers, talking in a loose way, may have fattened their beasts on Turnips alone, but this was not practically effected in well-littered yards; so that they spoke taking no account of the straw consumed in addition, the value of which, as an auxiliary, is sufficiently indicated above.—P. H. F.

time. Under the most favourable circumstances a saving of 2*s.* per ton may be effected.*

It has been suggested that steaming straw renders it more wholesome. On trial I find that a large apparatus with two "pans" will steam 250 bushels, weighing 1625 lbs., in a day, at a cost of 7*s.* 6*d.* per ton. This quantity would be sufficient for 90 head of cattle, supposing each to receive 18 lbs. daily. The expense of steaming a smaller quantity is much greater in proportion, as the cost of fuel and attendance cannot be reduced in proportion to the smaller quantity of straw steamed.

The expense of this process is very much reduced, when the waste steam of a fixed engine can be employed.

If it cost 6*s.* per ton to cut straw into chaff, and an additional 7*s.* 6*d.* per ton to steam it, then it may well be doubted whether the cost of preparation is warranted by the value of the article when prepared.

Straw with its 40 per cent. of woody fibre is, at the best, anything but digestible. And we know of no available method for converting this fibre into food. Steaming does not appear to do much for it except to make it palatable; and I believe, the advantages derived from steaming may be obtained at much less cost, by fermentation with pulped roots.

Fatting cattle can be readily induced to eat from 10 lbs. to 14 lbs. of straw-chaff by mixing it with their cake or corn. Either fatting or store cattle will eat any kind of chaff when mixed and fermented with pulped roots. My cows are at the present time eating 18 lbs. each daily of straw chaff prepared by this method; and I have found no difficulty in inducing them to eat Rape-cake, which otherwise they would not touch, by grinding it small and mixing it into the heap of pulped roots and chaff.

With regard to the value of different sorts of straw, any kind saved in good condition is better than any other kind at all damaged. If at all injured, it should be condemned for litter; none but the best should be given to stock. The nearer it approaches to ripeness when cut, the less wholesome and nutritious it is.

Cattle prefer Oat-straw, or Barley-straw with Clover in it, and both are excellent fodder. Pea haulm is eagerly eaten by sheep, and is very serviceable in the racks of horses and store-cattle in the winter months. On sheep-farms every handful should be saved for the ewes and store flock.

Bean haulm is frequently exposed too long in the field, but if carted in good condition, it should be carefully saved and cut into chaff. For although cattle and horses will eat it from racks during the winter months, they will waste a portion. On dairy-farms Bean-straw is especially useful for the cows, and may be made palatable by fermenting with pulped roots.

It is an interesting fact that well-fed cattle, kept in open yards, will eat more straw during the winter months than other cattle kept under the warm shelter of a roof. The careful manager saves his stock of Bean-straw until the cold weather sets in, knowing that at that season its bitter flavour will be disregarded.

During the present winter I compared the quantity of mixed hay and straw-chaff eaten by six oxen, fattened in a warm cattle-house, with that consumed by cattle of the same age and bred in an adjoining yard. Each lot was fed alike in respect of Corn and roots, and as much chaff was given as they would eat. Those in the house ate 14 lbs., and the others 18 lbs. daily; showing a difference of nearly a fourth less carbonaceous food, required by cattle when kept in a condition of artificial warmth.

This fact indicates the value of straw for maintaining animal warmth. It would require a long course of experiments to ascertain its value as compared with hay sand other articles of food. The results of experiment of this kind are frequently unlike. They are affected by the age and breed of the animal, by the kind of food used in connection with the straw, by temperature and other circumstances. When animals are much exposed to cold it may be right to give them a considerable quantity of straw, and but little hay, in their food; but it does not follow that it would be right to give the same quantity and proportions, on removing the cattle to a warm house. We have already seen that when kept warm they require less carbonaceous food.

Straw is not sufficiently digestible and nutritious to be a desirable addition to the food of young animals.

Having thus pointed out the known value of straw as an article of food, I now leave it to the reader to decide whether in his own particular case he cannot profitably convert more of it into meat.

Composition of Wheat straw, air-dried. From Morton's "Cyclopædia."

Nitrogenised, or muscle-producing substances ..	1.85
Substances free from nitrogen, heat and fat producing substances	26.34
Insoluble substances	41.22
Mineral substances..	4.59
Water	26.00
	100.00

"Barley-straw. From Morton's Cyclopædia."

Nitrogenised substances	1.70
Free from nitrogen, soluble and insoluble ..	82.12
Mineral	5.24
Water	10.94
	100.00

Oat-straw. By Boussingault.

Nitrogenised	1.8
Non-nitrogenised, soluble	22.1
Ditto insoluble	43.8
Mineral..	3.6
Water	28.7
	100.00

Pea-straw. By Boussingault.

Nitrogenised..	12.55
Non-nitrogenised, soluble..	21.93
Ditto insoluble	47.52
Mineral	6.00
Water	12.00
	100.00

Bean-straw. By Way, "Royal Agricultural Society's Journal."

Moisture	14.47
Albuminous matter	16.38
Oil or fatty matter..	2.23
Woody fibre	25.84
Starch, gum, &c.	31.63
Mineral	9.45
	100.00

Rye-straw. By Boussingault.

Nitrogenised..	1.52
Non-nitrogenised, soluble	37.10
Ditto insoluble	39.75
Mineral	2.93
Water	18.70
	100.00

Clover-hay.

Nitrogenous	10.29
Non-nitrogenous	62.63
Mineral	6.08
Water	21.00
	100.00

White Turnips, Swedes, Mangels (by Voelcker), *and Carrots.*

	White Turnips.	Swedes.	Carrots.	Mangels.
Nitrogenous ..	1.143	1.443	1.48	1.81
Non-nitrogenous ..	7.799	8.474	11.61	11.19
Ash	.628	.623	.81	.96
Water	90.430	89.460	86.10	86.04
	100.000	100.000	100.00	100.00

Gosfield, Halsted.

THE AGRICULTURE OF BERKSHIRE.

BY

THE REV J. C. CLUTTERBUCK, OF LONG WITTENHAM.

(*Continued from p.* 920)

III. The Forest District.—We cannot take leave of the Forest without notice of the farms at Windsor.

The Shaw farm consists chiefly of the Park itself. A stock of more than 200 head are bred and sustained from the Shorthorn cows, which with some Channel Island cattle, supply milk to the Royal dairy which is combined with the management of this farm. The covered cowhouse, with open yards attached, fitted with every convenience of water supply, drainage, &c., for the accommodation of 60 cows in two lines of double stalls, standing face to face with a passage between them. The stalls for the hired or home-bred bulls and weaning calves are also under cover; these with the pig sties, loose boxes, and other offices complete the whole establishment, the dairy itself being a very handsome building, near at hand. The pigs here are of the white breed, for which his Royal Highness the Prince Consort obtained prizes at Warwick, and the Gold Medal at the last Smithfield Show of 1859.

The young stock when weaned on the residue of the milk from the dairy, are transferred to the farm buildings, whence they return to the dairy as selected bulls or cows, or if steers, they are fatted with the draft cows, replaced by the younger stock. The manure made in the cowhouse is removed by barrows to a covered shed, where having received a portion of the tank drainage from the cow-yards and styes, which is pumped upon it, it is removed to the land.

The yards at the farm are open and surrounded with sheds, the cattle bedded in part with straw and fern from the park. The sheep, half-bred Down and Leicester, are under cover, enclosed in small pens floored with sparred boards; the manure as in such cases is collected in receptacles beneath. This practice has found little favour generally with feeders of sheep. One person when asked his reason for discontinuing it, stated that he was satisfied that the sheep fed faster, but added many of them became cramped, and many died, besides which his land was benefited by the treading of the sheep. It has been further objected by practical farmers, that there is a loss to the soil of the fertilising properties imparted by the wool when it comes in contact with the soil. The aspect of the sheep is not that of happiness or comfort, and they contrast in this respect with a flock of Cheviots at large in the park, whose produce by a Leicester ram are destined to undergo the same ordeal.

The land under the plough is manifestly unfitted to carry sheep, though capable of yielding heavy root crops, in exchange for the manure which it shares with the extensive Grass land around it. The course of the cultivation of Wheat, Beans, and Oats is regulated by that elastic system of rotation, safely practised and easily commanded, where thorough drainage is combined with a liberal supply of farm-yard dung, extraneous fertilisers, and deep and clean cultivation.

The large quantities of manure made on this farm are applied to the Grass as well as the arable land, by which large crops of hay, and early and after Grass are secured, the latter being especially valuable in affording a bite for the cows, which during the winter have generally a run in the park between the morning and evening milking.

The cattle are fed in the usual way with sliced or ground roots mixed with cut hay, oil or Cotton-cake meal. The machinery for threshing, &c., is driven by a stationary engine.

The establishment is completed by an evening school in which instruction is given to the young men employed on the premises.

Though the Flemish farm within the limits of the Great Park is one of the establishments which owes its origin to His Majesty George III., its buildings are of modern and recent construction, bearing on the wall the date 1858. With the exception that all the milk of the cows is devoted to the young stock, which promotes their freshness and early growth, the system is much the same as at the Shaw farm, though here the stock is exclusively Hereford, reared on the spot from home bred animals, assisted by a liberal introduction of fresh blood, as circumstances may require. The stock appears in the prize list at Warwick. The aspect of the buildings built of red brick is simple and substantial, the jambs of the doors and windows are filled with round moulded bricks, thus no sharp corners are presented. The whole of the buildings are covered with Colthurst's patent tiles, fitted with Beadon's gutter tiles, by which a neater finish is given to the eaves than by ordinary spouting. There has evidently been great attention to all such details as combine convenience and economy. The doors are hung on rotating sheaves, travelling railway fashion on iron rods fixed above the door, which entirely disengage them from the door sill beneath, thus preventing the inconvenience of jamming by stones or any other substance. The racks are fixed on the partition walls dividing the yard into compartments. The water is laid on from the source that supplies the Castle in case of fire. The central yard is covered and well ventilated; the necessity for such a covering in this county is a matter on which there are various opinions, the majority as far as we can judge are opposed to it. The cow house and cart stable are on either side; from the latter the manure is emptied into the yard. An open cow yard at the back of the cowhouse and pigstyes make up the buildings assigned to the herd, which number about 100 head. The horses and cattle are all littered with straw cut by machinery, which is removed when sufficiently trodden into manure immediately to the land. The machinery for threshing, grinding, chaff cutting, &c., is driven by an 8 horse-power stationary engine. The stack yard adjoins the buildings. The corn stacks of moderate size, on iron stands, are fitted to be threshed in a short day's work. The pigs are of the Berkshire breed, of a very useful kind. There are no sheep on sparred boards.

The arable land attached is the stiffest on the three farms, being on the sheer London clay, with exception of the capping of forest drift on some of the higher ground; notwithstanding this it is cultivated on the four-course system, with such deviations in the rotation as the judgment of the manager may suggest, a practice which may often be profitably indulged in when the land is liberally farmed with a large feeding stock, but ruinous when cross cropping and stolen crops are dictated by the cupidity of the farmer, rather than to maintain the balance between high cultivation and the exhaustion of the soil. It has been determined, after experiments with Smith's and Fowler's steam-ploughs, to adopt this new method of cultivation on this farm. The new roads on this heavy soil are first formed of a bedding of heather covered with the drift gravel of the district.

Passing the Queen's Schools for the instruction of the children of persons employed or living in the park, we come to the Norfolk farm, on the banks of the streamlet which feeds the Virginia Water. The soil is here of a rather lighter quality, the London clay being in some places covered with the overlying drift of the Bagshot sands. The buildings are a record of the farming of H. M. George the Third, by whom they were constructed as a model farm of the day; they thus form a valuable and interesting link between the present and the past. Mavor tells us that on all these farms oxen were worked instead of horses; that on the two farms not less than 120 were kept in work, 40 being brought in and 40 fatted off every year; that Herefords were kept upon the Flemish and Devons on the Norfolk farm; this is still the same, with this difference that they are now kept as breeding and fattening stock instead of being worked. The horses on these farms are of a superior character, many Clydes-

* Details of cost of chaff-cutting :—

	£	*s.*	*d.*
1 man to feed	0	2	0
1 man to supply him	0	1	8
2 men to straighten the hay or straw	0	3	4
1 man to remove chaff to chaff-house	0	1	8
1 man to drive horses	0	2	0
2 to bring hay or straw from the stack to machine	0	3	4
1 horse for ditto	0	2	0
3 horses to work by turns, two at a time	0	6	0
For use of chaff-cutter and horse-gear (10 per cent. on 25*l.* if used once a-week)	0	1	0
	1	3	0

If 4 tons are cut in a day the cost is 5*s.* 9*d.* per ton; it would, however, be a long day's work to cut that quantity into short chaff fit for feeding cattle with a 2-horse gear. If allowance be made for short days in winter, when chaff is most in use, and for the interruptions which sometimes occur, 6*s.* per ton is not too high an estimate.—H. E.

dale, some bred on the premises, a filly of this stock gaining a prize at Warwick. Though the buildings are antiquated, and not fitted with new and scientific appliances, the quality and character of the pure Devon stock is in no wise inferior to the Herefords on the Flemish farm. An animal here bred has taken a prize in the county whence the stock was originally brought. Two prizes were also awarded to this stock at the Warwick Show of 1859, and a prize at Smithfield. The farm is managed on the four-course system. A part of the roots are consumed on the land by a dry flock of sheep. Here, as elsewhere, in the forest district, it is not deemed expedient to retain the same sheep longer than is necessary to feed them for sale. Mayor speaks of a flock of 450 Southdown ewes kept, and their lambs reared for stock, and a Wether flock of 500 on the Flemish farm. Experience has no doubt shown that the best farming here is to breed and feed cattle rather than sheep. The large herds of stock of the three leading breeds cannot fail to become an important element in the production and quality of the stock in a district in which this high class of breeding is so little practised. The cultivation of these farms, whether under horse or steam cultivation, may from the character of their soils, be a good pattern for the farming on the tract of land which lies in a direct line between Windsor Great Park and Reading, and on which there is much room for improvement.

Home Correspondence.

Deep Cultivation.—As a speedy means of substantiating the theory of deep culture of the soil for the advancement of agriculture, I am resolved this autumn by way of experiment to bestow an extra threepenny-worth of manual labour, on each and every rod of one ridge in all my fields of corn I sow for crop 1861, either with the spade or fork, in addition to other ordinary preparations and sowing of the said fields. This to be done just previous to the sowing time, when all will be sown and treated in other respects alike, and so on till the corn is cut. Moreover, I intend to do it myself, or assist, superintend, and watch the assistant labourer whom I may employ to perform it, in order that I know the work is done and without any "jibbing," about an equal depth that the "steam plough" is expected to perform it. And I do it with almost sure and certain hopes of success. The weather is now (Oct. 1st) fine again, after another parenthesis of three weeks' rain and absence of sun. [Unfortunately the rain has returned since Oct. 1.] It is a matter deserving our gratitude that the air and earth has been unusually cold, during this unexampled humidity; or all our corn remaining in the fields must have been sprouted. Had the land been hot, and the weather warm as last year and some others, with such a super-abundance of rain as we then experienced, the consequences might have been much more serious than they really are, but thanks be to God it is not so. I entertain some fears however that if the sowing of corn is not forwarded this year more than usual, and the best selected seed is not sown, much misplant will be experienced. The land is now not only wet and tenacious, but too cold to expect from it free germination of the seed at a late period. Many seeds usually sown in August and September for spring supplies, such as Lettuces, Cauliflowers, Carrots, &c., have signally failed to grow, and the seed-growers and seedsmen have been wrongfully charged with the failure; and this too does not unfrequently happen in other adverse seasons also, when slugs and insects have devoured them. In such cases artificial means should be resorted to to raise them, and to secure supplies. Some French Beans, Cucumbers, and others, sound and new, sown by myself in August by way of experiment, refused to come up or even spirt at all. Potatoes are expected by this time to be proved, and should now be taken up and stored in a dry, cool, and ventilated apartment, of course secured from frosts when necessary. Only about one-fourth are expected to be good, and must be dear. *A. Hardy, Maldon.*

Farmers' Clubs.

Worcestershire Annual Meeting and Show.—As regards the show generally it was one of more than average merit, and the entries in most classes were numerous. Of Herefords there were 42 entries, and 39 of Short-horns, besides several fat cows possessing considerable excellence. Of sheep there were 18 entries, including four pens of Leicesters, but only two of Shropshires, and they both belonging to Mr. E. Holland, M.P., of Dumbleton. There were about 30 pigs exhibited, 22 horses. Of both corn and roots there was a capital supply. The corn included some secured after the late severe rains, but which was nevertheless in good condition. The Barley likewise was on the average better than in former years, and the Swedes shown were vastly superior, the finest perhaps ever exhibited in connection with this society. Twelve Swede Turnips shown by Mr. G. M'Cann, and which gained the first prize, weighed no less than 141½ lbs.; the twelve best red Mangel Wurzels also exhibited by Mr. M'Cann, 123 lbs.; and the twelve best yellow ditto, shown by Mr. C. Randell, 139½ lbs. The samples of Hops were more numerous and of better quality than had been expected, considering the season; the wool also was first-rate; and fruit, all circumstances considered, about an average. There were likewise some very fine cheeses. The display of implements consisted of really useful articles, among them Harrass's American horse-power, with Snowden's patent chaff-cutter.

At the Annual Dinner Sir J. Pakington said: Within the last few days he had travelled through the agricultural district lying between the rivers Forth and Tweed, where he saw most splendid farms, with fields large and hedges small, where he could count the homesteads because of the fewness of trees to intercept the view; where, too, they could hear the shrill sound of the steam engine chimney. The crops there were magnificent, and under that system rents were high, because farming was profitable. Farming there was profitable, because leases were long, and therefore the farmer who farmed with capital—and none ought to farm without it—had no fear or hesitation in investing it in the soil. What was the result? Such rents were paid as were never heard or dreamt of in this county, and it was a common thing that the rents there should be so high that he was afraid to mention them. He was assured by a friend of his in Scotland that it was a common thing for farmers to pay a corn rent equal to two, and in some cases even three, quarters of corn. He must confess that, as a Worcestershire man, he should be sorry to see all the Oaks, Elms, and Apple orchards in the county stripped from the ground, and their fields left as bare and fruitless as in the district he had named, for he saw there many high steam engine chimneys, but he looked in vain for a lofty tree. The agriculturists of this county might, however, effect much improvement in their land before making such a complete alteration as he had named, and he would recommend them to study the question whether it would not be well to carry out the improvement.

Sir T. E. Winnington, M. P., said: Like his right hon. friend Sir John Pakington, he had also been travelling lately, and had visited the counties of Norfolk and Suffolk. There too he saw tall chimneys intermixed with rural scenery, and there too he saw steam-engines used. Although they had such implements to assist them in their operations, they must not forget the hand that guided them. The labourers required more intelligence and instruction than formerly, and then no doubt they would see the agriculture of the county and England generally advance in an equal ratio.

Mr. Lakin, the Secretary, then read the committee's report, which was as follows:—

"The committee, in making their report, beg to congratulate the society on a most successful exhibition. The animals in the show-yard were much more numerous than on any former occasion, many of them of remarkably good quality, and it was remarked that the total number of animals entered for exhibition in 1852 was 95, whereas in 1860 they were 155, and of the increase 54 were in cattle alone. The competition for corn was larger than usual, and some of the samples of remarkably fine quality considering the ungenial weather the farmers have had to contend with. The exhibition of pigs was believed to be the best in quality that has ever been held in Worcester. The roots, notwithstanding the season, were more numerous, and equal in quality to any former year, and we beg to call attention to the Kohl Rabi exhibited to-day as a root worthy of especial attention. As regards the exhibition of fruit, the Apples and Pears were not more in quantity or so good in quality as last year, with the exception of the Old Nonpareil, which was particularly fine, and supports its character as one of the best eating Apples of the day. The ploughing and digging took place yesterday, and there was a spirited competition, especially among the diggers; and considering the variable nature of the subsoil the work was considered to be done in a very superior manner. The prizes in the respective classes having been affixed in the show-yard, and will again appear in the local papers, the committee feel it unnecessary to enumerate these."

Mr. Hudson thanked those gentlemen who had had the spirit and courage to offer silver cups and high premiums to induce the farmers of Worcestershire to try artificial manures, to the use of which, under God's Providence, he attributed their having such splendid crops as compared with other counties. It was a great thing that, in a season like the past, when it had rained continually, they should be able to produce about the finest samples of corn that he had ever seen. But there was another and very dark side of the picture. Although in Worcester there were fine corps of Wheat and Beans as well as Barley, the most fatal blight ever known had attacked their root crops, and particularly their Potatoes. Almost the entire growth of small gardens and allotment grounds was gone, a circumstance which they must all deplore, and which must fall heavily on the working classes. But whilst supposing that they would be almost obliged to give up growing Potatoes, suddenly he was surprised with an announcement in one of the Scottish papers that in one of the most beautiful parts of Scotland a farmer had sold his entire crop of Potatoes at 57*l.* per acre, producing to him altogether a sum of about 4000*l.* That farmer might afford to give a very high rent for his land—and really there were some parts of Scotland so productive from the nature of the climate and depth of the soil that few could be compared with them. He had not himself been into Scotland, nor had he seen that crop of Potatoes, but he had seen one belonging to a farmer in his own village which was as luxuriant as any crop he had ever witnessed, having a bed of as green foliage, with blossoms as rich and beautiful, and roots as good and productive as could be found, and they were, he believed, of the same description of Potato as was grown in Scotland. He was glad to see so many of their representatives in the House of Commons present, and he felt it his duty to ask them seriously to think on the subject of blights, and suggest to Parliament the appointment of a committee to inquire most particularly into the subject. A commission of agriculturists, chemists, geologists, and practical farmers, to go into Scotland, through Ireland, and different parts of England, comparing the different kinds of manures, soils and roots, would, he believed, be of great advantage, as they might obtain such knowledge as to put the farmers in a much better position as regarded the growth of their root crops. They found, for instance, the parish of Leigh productive of Hops, and almost all the samples shown at that exhibition had been brought from thence. Another parish was productive of Potatoes free from blight, and hence he concluded that there was something peculiar in the quality of the different soils. Would not the establishment of a commission to consider these matters and discover the relative merits of soil, change, and climate, be of service? He thought the Government should take the matter up, and provide a commission, and then he had no doubt that in a few years great advantage would be obtained.

Mr. Curtler said: Mr. Hudson, he thought, had proposed a very difficult task to the hon. members present, and to the Government, to legislate on the subject of blights. What the preamble of the Act of Parliament was to be, and what its title was to be, he could not tell, but they were asked to consider an Act of Parliament for the destruction of blights. They might as well attempt to stop the rain and the wind as to stop blights. He should be very curious to see the Act of Parliament for the purpose; although by whom it was to be introduced into the House of Commons he did not know. Still it might be very easy for anyone to do it; call in Mr. Hudson's assistance, and the thing would be done.

Lord Northwick said that inquiries had been made by Professor Lindley on the subject of blight, and also by other learned men, who all agreed that no cure for the Potato disease was known. The only principle on which to act was to admit air between the rows of Potatoes, to plant them on a dry soil, and not to use ammoniacal manures. He had followed that system many years, and had generally obtained a far better crop than his neighbours, and without disease.

Mr. Curtler said he knew that Professor Lindley and Professor Playfair had upon investigation declared it to be impossible to find out a remedy for blights, and that farmers must therefore trust to Providence; but inasmuch as Mr. Hudson had found out a specific they did not want a commission. They would be obliged to Mr. Hudson to give them the results of his experience, and the whole thing would be done. *Much abridged from the Worcester Herald.*

Reviews.

Scientific Farming made Easy, or the Science of Agriculture reduced to Practice. By Thomas C. Fletcher, Agricultural and Analytical Chemist. Routledge.

Mr. Fletcher has compiled a useful little book, and the little original matter which it contains seems to be trustworthy and instructive. The volume is in two parts—on the Soil and its Fertilisers, and on Cattle-feeding respectively. That mistakes have been committed is plain from the following instances. A table is given of the constituents in pounds avoirdupois contained in one ton of several manures, and among them is nitrate of soda, which is declared to contain 8 lbs. 3 oz. of soda, and 364 lbs. of ammonia! At page 123, too, is a synopsis of our breeds of cattle, in which we see the "Dutch! or Short-horned" breed described as having "hide thin, horns short, little hair; colour red and white nearly equally mixed; tender constitutions,"—all which is simply ridiculous. It was perhaps hardly to be expected that "an agricultural and analytical chemist" should know much of the characteristics of our domesticated animals, but then he should not undertake to instruct farmers on such subjects. And as to the composition of manures, on which he *may* speak with authority, greater care against blunders should have been exhibited. We extract in illustration of the author's performance, instructive passages from each of the two parts in which he has divided it.

(1). *Adulteration of Manure.*—"A manufacturer of an excellent artificial manure complained, the other day, to the author, that in his trade it was hardly worth while to be honest; for he found that the manures produced by certain other makers, which he knew from analysis to be vastly inferior to his own, were just as readily bought by the farmers at the same price. In illustration of this, I will mention a fact that came under my own observation in a Yorkshire market. I saw a respectable manufacturer of superphosphate, whose article I had examined, and knew to be genuine, offer it to a farmer with whom he had done business for eight or nine years; but the latter objected, as he thought the price (7*l.* per ton) was too high. Shortly after an agent offered him a superphosphate for 6*l.* per ton. He forthwith bought of him 7 tons. I procured a sample from the bulk, analysed it, and found it to contain, among other matters, 67.53 per cent. of gypsum, worth in that market 10*s.* 6*d.* per ton."

(2) *Advertised Cattle Foods.*—"I have been favoured by a friend with the following, as the ordinary

formula for making a ton of one of the most extensively advertised of these foods:—

		cwt.	qr.	lbs.	Wholesale cost price. £	s.	d.
Carob (locust) Bean, finely ground	at 6*l.* per ton	6	0	0	1	16	0
Indian Corn	at 7*l.* ,,	9	0	0	3	3	0
Linseed Cake	at 10*l.* ,,	3	0	0	1	10	0
Powdered Turmeric ..	at 6*d.* per lb.	0	0	40	1	0	0
Sulphur	at 1½*d.* ,,	0	0	40	0	5	0
Saltpetre	at 4½*d.* ,,	0	0	20	0	7	6
Liquorice	at 10*d.* ,,	0	0	27	1	2	6
Ginger	at 6*d.* ,,	0	0	8	0	1	6
Aniseed	at 8*d.* ,,	0	0	4	0	2	8
Coriander	at 8*d.* ,,	0	0	10	0	6	8
Gentian	at 7*d.* ,,	0	0	10	0	5	10
Cream Tartar	at 1*s.* 3*d.* ,,	0	0	2	0	2	6
Carbonate of Soda ..	at 4*d.* ,,	0	0	6	0	2	0
Levigated Antimony ..	at 6*d.* ,,	0	0	6	0	3	0
Common Salt	at ½*d.* ,,	0	0	30	0	0	8
Peruvian Bark	at 3*s.* ,,	0	0	4	0	12	0
Fenugreek (Trefoil) ..	at 7*d.* ,,	0	0	22	0	12	10
Total		20	0	0	11	13	8

"The above articles are put down at the ordinary wholesale market price, but if purchased in large quantities, might be got much cheaper. The use of the best Linseed-cake is also assumed, when it is by no means improbable an inferior description is often used. However, be this as it may, a profit of 200 per cent. ought to afford the use of none but the best articles. Independently of the slight colouring with turmeric and flavouring with liquorice, coriander, aniseed, &c., and the medical compounds as before set forth, the main bulk of these manufactured foods is composed of the Carob Bean, Indian Corn, and Linseed-cake. These form nine-tenths of its substance; and it is worthy of note, that of these by far the most valuable, in point of both price and feeding quality, is Linseed-cake, and this is used in the smallest proportion. If, however, the farmer chooses to pay three or four times as much as the intrinsic value of an article, it is, of course, at his option to do so; but, inasmuch as the main object of farming is a remunerative profit, it passes my comprehension to understand how that object can be gained by feeding animals on substances that cost from 40*l.* to 50*l.* per ton.

"The above ingredients, throwing aside all the medical and flavouring compounds, give, upon analysis, the following results:—

Water	13.01
*Nitrogenous (or flesh-forming substances) ..	14 97
Fatty matter	5.78
Starch, sugar, &c.	54.40
Indigestible woody fibre	6.25
Mineral matter, ash	5.59
	100.00
*Equal to Nitrogen	2.36

"Such a mixture as the one represented by the foregoing analysis could be made by a mixture of Barley-meal, Beans, and oil-cake, at less than one-fourth of the price charged for the before-mentioned cattle food. As to the stimulating properties contained in these foods, I am inclined to think their constant use is very questionable, and very likely to be productive of harm.

Calendar of Operations.

OCTOBER.

LAMMERMUIR SHEEP FARM, *Oct.* 10.—We are now in the midst of harvest, and rain and snow have this day been falling. Cutting is not yet finished in the district, and much grain was shaken by the wind of last Wednesday. The gale was so terrific that the wonder is not that the corn was shaken, but that any was left in the straw at all. One field of ripe Barley in view has scarcely a head left on it. Where however from the situation the fields were sheltered from the west, the loss is not so great as might be supposed. On the earlier farms a good deal of corn has been stacked, but on the higher lying and later ones, little more than a beginning has been made. Meadow hay, though it cost much labour and anxiety in the working, was got in in good order. It was a capital crop, a matter of no small consequence to hill farmers, and which a winter such as last renders invaluable. Turnips also look well, and we should think that after the experience of last winter, every endeavour will be made to secure them against frost, either by storing or earthing up in the drill. The latter practice however, though serviceable in an ordinary winter, did not prove sufficient to protect them in such a winter and spring as last. We have heard another method recommended, viz. pulling 3 or 4 drills together, running a deep trench with the plough in which to place them, and again with the plough covering them well up. Our hill flocks have now again in great measure regained their condition, as the Summer has been a good one for hill pastures, and keep abundant. But we question very much how they would stand a second bad winter. Lambs have brought high prices this year, but the numbers have been sadly deficient. Draught Ewes have also sold at high prices, though not so extreme as many people anticipated from the losses of last winter, it being understood that much of the usual off-going stock would have to be retained to fill up the blanks. *J. S. B.*

Notices to Correspondents.

ADDRESS: *W R G.* The Southdown breeder whom you name is long since dead. He resided at Glynde, near Lewes.

BOOKS: *W F P.* Nicholl's Shilling Book on Farming; O. O. Roberts' Hints on Agricultural Economy as the Antidote to Agricultural Distress; Blacklock on Small Farms. Apply to any bookseller. Where the rows of plants are so wide apart as to show the spaces when the plants are forming seed, it is better that the rows be north and south, so that both sides of each row may have equal share of sunshine.

LAMBS: *S W.* This disease in lambs is often termed *Red Water.* It is in fact *Ascites* or dropsy of the belly, and supposed to arise from lying on wet ground covered with hoar-frost. Remove to a drier locality, and give dry food and linseed-cake with a view to prevent fresh attacks. *W. C. S.*

DISEASE IN POTATOES. *Mr. Foxe, &c.* We shall have remarks next week on this subject, to which attention was lately called by Professor Buckman.

RYE: *D.* Your Rye is affected with a disease quite distinct from Ergot. We will notice it next week. It is very curious. *M. J. B.*

RAYNBIRD AND CO., SEED MERCHANTS and GROWERS, Basingstoke, and 89, Seed Market, Mark Lane, London, E.C.

Samples and Quotations of all kinds of AGRICULTURAL SEEDS, and SEED CORN, sent post free on application.

Peruvian Guano, Lawes' Turnip Manures, Linseed Cakes, Cotton Seed Cakes, &c., of best quality at Market Prices.

HARDY'S SELECTED SEED WHEAT, OCTOBER, 1860.

PIPER'S, or IMPROVED SMOOTHY, red, 60 lbs. to the bushel.
HARDY'S ,, PROLIFIC, ,, ,, ,, ,,
ROUGH CHAFFED ,, white ,, ,, ,,

Terms, 10*s.* per bushel; sacks, 1*s.* 4*d.* each. Free to London or any station on the Eastern Counties Railway. Cash, per Post Office orders. Samples sent on receipt of stamped and addressed envelopes.

A. HARDY & SON, Seed Growers and Merchants, Maldon, Essex.

TO GARDENERS.—The Advertiser will be glad to make exchanges with any one having cuttings or old plants from borders to spare of the following GERANIUMS:—Flower of Day, Mountain of Light, Countess of Warwick, Alma Golden Chain, Lady Cottingham, Brilliant, Baron Huget, Boule de Neige, Hendersoni, Hark-away, Trentham Rose, Royal Dwarf, &c.—A. O., Post Office, Chesterfield.

CORDON-TRAINING OF FRUIT TREES, Diagonal, Vertical, Spiral, and Horizontal, adapted to Orchard-house and Open-air Culture, by the Rev. T. COLLINGS BRÉHAUT, will be published shortly by Messrs. LONGMAN & Co.

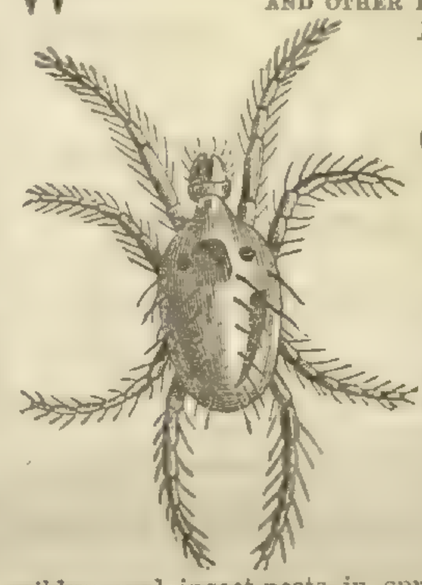
GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2*d.* to 3*d* per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES, to JAMES HETLEY & Co., 35, Soho Square, London, W.
See *Gardeners' Chronicle* of October 6.

NURSERYMEN supplied with the best GENUINE TOBACCO PAPER at 4*l.* per cwt.; 2*l.* per half cwt.; any quantity less than half a cwt. 10*d.* per lb. The above article warranted genuine.—Address TOM BRYANT, William Jackson & Sons, Tobacco Manufacturers, Leeds.

WINTER DRESSING FOR ORCHARD HOUSE AND OTHER FRUIT TREES.



Extract from the Eighth Edition of the Orchard House. By Mr. Rivers.

"January paint the trees (every shoot and bud) with Gishurst Compound, half a pound to the gallon of water. This will destroy the eggs of Aphides."

Vines and outside wall trees should first be washed, stem and shoots, with 8 oz. solution of Gishurst, then smeared with clay and Gishurst, (see *Gardeners' Chronicle* Oct. 13), or with lime, sulphur, and Gishurst, made into a paste. If the smell be disliked, make the solution 48 hours before use.

Full directions as to the use of weaker solutions against mildew and insect pests in spring and summer, with particulars of the experience of many great gardening authorities, are enclosed with the boxes of Gishurst. These are supplied retail through any nurseryman and seedsman at 1*s.*, 3*s.*, and 10*s.* 6*d.* each, wholesale by PRICE'S Patent Candle Co., Limited.

PORTABLE TERRA COTTA STOVES FOR GREENHOUSES are the safest and most economical that can be used, require no attention, will keep a room 18 feet square at temperate heat 24 hours for one penny. Prices, 35*s.* plain; 50*s.* ornamental.

Apply to JOHN ROBERTS, Upnor, near Rochester, Kent. In use daily at 9, Rathbone Place, Oxford Street, W.

GLASS FOR GREENHOUSES, &c.

Sheet Glass, in Crates.

	16 oz.	21 oz.	26 oz.	32 oz.	36 oz.
Best ..	5½*d.* ..	7¼*d.* ..	9¼*d.* ..	1*s.* 0*d.* ..	1*s.* 0½*d.*
Seconds.	3¾ ..	5 ..	6¼ ..	0 9¼ ..	1 0
Thirds ..	2½ ..	3½ ..	5¼ ..	0 7¼ ..	0 10¼
Fourths.	2¼ ..	3¼			

Glass cut to any given sizes not on the List.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2½*d.* per foot
,, 3rds, 2¾*d.*, 2½*d.*, and 3*d.* per foot
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot
,, 3rds, 3½*d.*, 4*d.*, and 4½*d.* per foot

Glass for Orchard Houses,

As supplied by us to Mr. Rivers.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in.	Common	13*s.* 6*d.* ..	£1 1*s.*
20 in. by 14 in. / 20 in. by 15 in.	Superior do. ..	16 0 ..	1 3
	English Glass ..	18 0 ..	1 9

The above prices include the Boxes, with but few exceptions. When Packages are charged, full price is allowed when returned.

Sheet Glass, Stock Sizes, 16 oz.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 ,, 10, 13 ,, 10, 14 ,, 10, 15 ,, 10 ..	14*s.* 0*d.*	12*s.* 6*d.*
13 ,, 11, 14 ,, 11, 15 ,, 11, 16 ,, 11 .. / 14 ,, 12, 15 ,, 12, 16 ,, 12, 17 ,, 12 .. / 18 ,, 12, 19 ,, 12, 20 ,, 12 .. .. / 16 ,, 13, 17 ,, 13, 18 ,, 13 .. .. / 19 ,, 13, 20 ,, 13, 21 ,, 13	16*s.* 0*d.* per 100 feet.	13*s.* 6*d.* per 100 feet.
16 ,, 14, 17 ,, 14, 18 ,, 14 .. .. / 19 ,, 14, 20 ,, 14, 21 ,, 14 .. .	Boxes included.	

ENGLISH GLASS of the above sizes 18*s.* per 100 feet.

Small Sheet Squares, in 100 feet Boxes.

6 by 4 / 8 ,, 6	6½ by 4½ / 8½ ,, 6⅜	7 by 5 / 9 ,, 7 / 10 ,, 8	7½ by 5½ / 9½ ,, 7½ / 10½ ,, 8½	11*s.* 6*d.* / 12 6

Boxes 2*s.* each, returnable at full price.

Patent Plate and Polished Plate Glass.
Ornamental and Coloured Glass.
Perforated Glass for Ventilation.

LONDON AGENTS FOR HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.

MILK PANS, PROPAGATING GLASSES, and every description of GLASS for Horticultural purposes.

JAMES PHILLIPS & CO., 180, Bishopsgate Street Without, London, E.C.

GLASS WAREHOUSE.—ESTABLISHED 1750.

THOMAS MILLINGTON,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

Reduced Tariff for Horticulture, Pictures, and Dwellings.

ORCHARD-HOUSE SIZES. **SMALL SQUARES.**

Supplied to Mr. Rivers and many Others.

In. by In.	16 oz.	21 oz.
20 .. 12 / 20 .. 13 / 20 .. 14 / 20 .. 15	Common, per 100 feet, 13*s.* 6*d.* / Super ,, 16*s.*	18*s.* / 23*s.*

In. by In.	Per 100 feet.	Per foot.
6 .. 4 / 6½ .. 4½ / 7 .. 5 / 7½ .. 5½	Common 11*s.* 6*d.*	1½*d.*
8 .. 6 / 8½ .. 6½ / 9 .. 7 / 9½ .. 7½	Super. 12*s.* 6*d.*	1¾*d.*

Squares in 100 and 200 Feet Boxes.

Inches by Inches.	Inches by Inches	Inches by Inches.	Inches by inches.	Inches by inches.		P. 100 feet.	P. foot.
10 .. 8	12½ .. 9½	13 .. 10	15 .. 10	13½ .. 11½	4ths.	12*s.* 6*d.*	1½*d.*
10½ .. 8½	13 .. 9	13½ .. 10½	12 .. 11		8ds.	14*s.* 3*d.*	1¾
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 . 11	2ds.	18*s.*	2¼
12 .. 9	12¾ .. 10¼	14¼ .. 10¼	13 .. 11		1sts.	21*s.* 6*d.*	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13*s.* 6*d.*	1¾*d.*
16 .. 11	16 .. 12	17 .. 13	20 .. 16	20 .. 17	3ds.	16*s.*	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19*s.* 8*d.*	2½
18 .. 11	18 .. 12	23 .. 13	24 .. 15	.. ..	1sts.	24*d.*	3
13 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 12	22 .. 14	22 .. 16	.. ..			

If less quantity than 100 feet is taken, a moderate charge made for package.

GLASS CUT TO ANY GIVEN SIZES NOT ON LIST.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2½*d.* per foot.
,, 3ds, 2½*d.*, 2¾*d.*, and 3*d.* per foot.
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot.
,, 3ds, 3½*d.*, 4*d.*, and 4½*d.* per foot.

HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Not accountable for breakage.

GENUINE WHITE LEAD	32*s.* 0*d.* per cwt.	LINSEED OIL	2*s.* 4*d.* per gall.
ANTI-CORROSION PAINT	34 0 ,,	BOILED ,, ...	2 9
LINSEED-OIL PUTTY	8 0 ,,	TURPENTINE	3 3

BLACK, GREEN, and all other kinds of PAINTS, VARNISHES, BRUSHES, &c.

JOHN WEEKS & COMPANY,

SOLE INVENTORS AND MANUFACTURERS OF THE

ONE-BOILER SYSTEM OF HEATING BY HOT WATER.

PATRONISED BY H.R.H. THE PRINCE CONSORT.

WEEKS' ONE-BOILER SYSTEM.

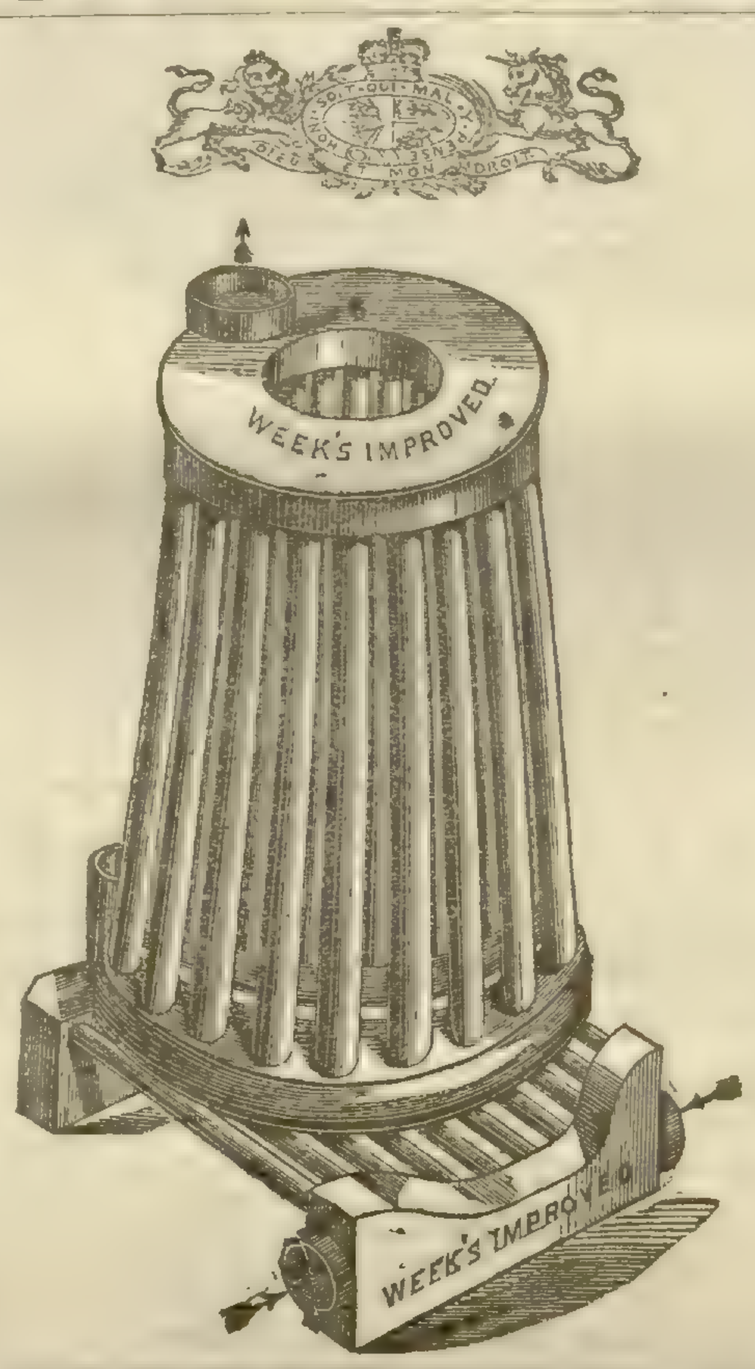
LIVERPOOL BOTANIC GARDENS.

The extensive alterations and additions at the above Gardens, in removing all the old gigantic Boilers and Furnaces, and substituting them by WEEKS' PATENT IMPROVED ONE-BOILER SYSTEM, are now complete and can be seen in most successful operation.

This Apparatus is the largest ever adjusted to one Boiler in the neighbourhood of Liverpool, and from its novel and greatly improved construction is specially worthy of minute inspection.

Every house in the Garden is heated from this one Apparatus, and by the ingenious arrangement of a series of valves hot water can be distributed in any portions of the Stoves, Greenhouses, &c., or withheld at pleasure, and the temperature regulated with the greatest nicety to meet the requirement of any particular department.

For full description see account in the *Liverpool Mercury* of May 30, 1860.



WEEKS' ONE-BOILER SYSTEM.

The Nurseries of Messrs. Arthur Henderson & Co., Pine Apple Place, and Messrs. E. G. Henderson & Son, Wellington Road, both of St. John's Wood, and ranking among the largest Establishments in England, are now Heated on WEEKS' ONE-BOILER SYSTEM. At the latter the Apparatus has been in use upwards of five years, during which period many additions have been made, and it now comprises nearly two miles of piping. The working of this Apparatus has been most efficient, and given the Proprietors the greatest satisfaction. They will be at all times happy to give every information to visitors, who will be well remunerated by an inspection of the same.

Mr. Arthur Henderson expresses himself thus:—"I am delighted and more than satisfied with the pleasing results produced by the superior arrangements of WEEKS' ONE-BOILER SYSTEM, and shall be most happy to fully explain and recommend it to all who may honour my Establishment with a visit."

JOHN WEEKS & COMPANY,

HORTICULTURAL BUILDERS, ENGINEERS, AND IRONFOUNDERS, KING'S ROAD, CHELSEA, S.W.

PLANS, ESTIMATES, AND PAMPHLETS FREE ON APPLICATION.

CARD.

SAMUEL N. McGERROW,
GENERAL HORTICULTURAL BUILDER,
Knotty Ash, near Liverpool.

Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

HOT-WATER APPARATUS FITTED in every description of Hothouses, Mansions, Churches, Chapels, &c., on the most approved principle by J. MEREDITH, Vine Cottage, Garston, near Liverpool.

N.B., First class references may be had on application.

HOT-WATER PIPES at Wholesale prices, with Elbows, Syphons, Tee Pipes, and every other connection. Wrought and cast iron Boilers, Saddle, Conical, Cylinder, and Elliptic, from 24*s.* each. Boilers and Iron Stands to use without brickwork. Valves from 12*s.* 6*d.* each. Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S.

HOTHOUSES FOR THE MILLION
MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

					£
A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete					30
Do.	do.	40 ft. by 20 ft.	do.	do.	50
Do.	do.	60 ft. by 24 ft.	do.	do.	90

LIST OF PRICES of any size forwarded on application to J. LEWIS.

HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.

KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they Erect all kinds of Conservatories, Vineries, Greenhouses, &c., combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & SON have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

RANSOME AND SIMS, Ipswich, continue to give their best attention to the manufacture of the most Modern and Improved AGRICULTURAL MACHINERY. R. & S. have long been celebrated for combining in their Agricultural Machinery the utmost simplicity, durability, efficiency, and economy of repair, and their constant care is given to the maintenance of these important principles in everything which they manufacture. ILLUSTRATED CATALOGUES post free, on application to the Orwell Works; or to their London Agent, SHEPPARD RANSOME, 31, Essex St., Strand, W.C.

HOT-WATER APPARATUS.

ALEXANDER SHANKS & SON

(Patentees and Manufacturers of the Celebrated Lawn Mower,)

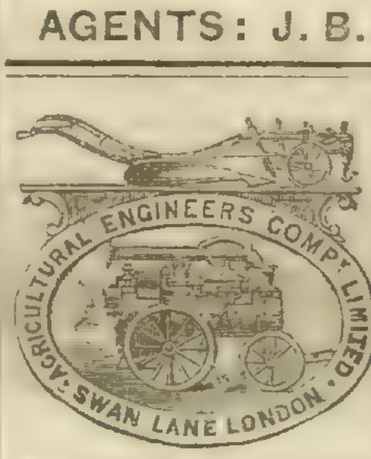
RESPECTFULLY inform the Nobility, Gentry, Nurserymen, and Gardeners that they will be glad to furnish PLANS AND ESTIMATES FOR HEATING BY HOT WATER, VINERIES, GREENHOUSES, PITS, &c., in any part of the Kingdom as well as abroad.

A. SHANKS AND SON have a staff of experienced workmen for this particular kind of work, and in every case guarantee a satisfactory working Apparatus **at a very moderate cost.**

PLANS AND ESTIMATES FOR ERECTING HOT-WATER APPARATUS complete in any part of the country, and PRICES OF BOILERS, PIPES, BENDS, &c., in London will be furnished on application to

ALEXANDER SHANKS & SON, Dens Iron Works, Arbroath, N.B.

AGENTS: J. B. BROWN & CO., 18, CANNON ST., CITY, LONDON, E.C.



LAWN MOWERS, ROLLERS, WATER ENGINES, CHAIRS, TABLES, and every description of Garden requisites.

HURDLES, GATES, WIRE FENCING, &c.

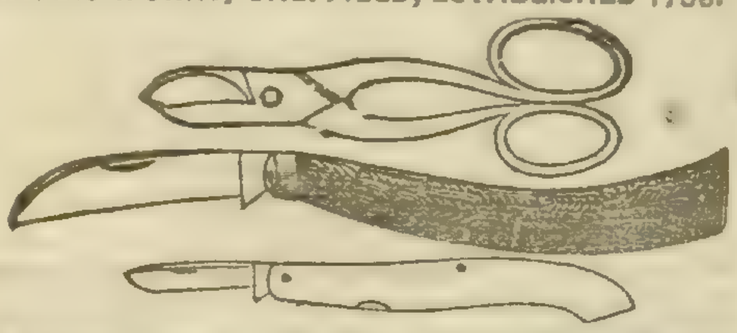
CARTS, MOWERS, HAY-MAKERS, HORSE RAKES, DRILLS, PLOUGHS, &c.

STEAM ENGINES, THRESHING MACHINES, HORSE WORKS, MILLS, CHAFF CUTTERS, &c.

PUMPS, CHURNS, MANGLES, BINS, &c.

Price Lists free upon application to
THE AGRICULTURAL ENGINEERS' CO. LIMITED,
SWAN LANE, UPPER THAMES STREET, LONDON, E.C.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.



SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

GARDEN BORDER EDGING TILES.

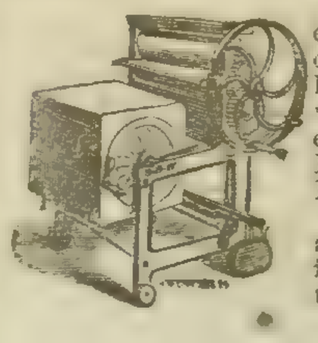
ROSHER AND CO. beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.

Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.

N B. Sketches of the patterns will be forwarded by post on application. Ornamental Flower Boxes kept in stock.

ORNAMENTAL PAVING TILES FOR CONSERVATORIES, HALLS, CORRIDORS, BALCONIES, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs. Also WHITE TILES, highly glazed, for Lining Walls of Baths, Dairies, Kitchen-ranges, Larders, &c. To be obtained of ROSHER & Co., at their premises as above.

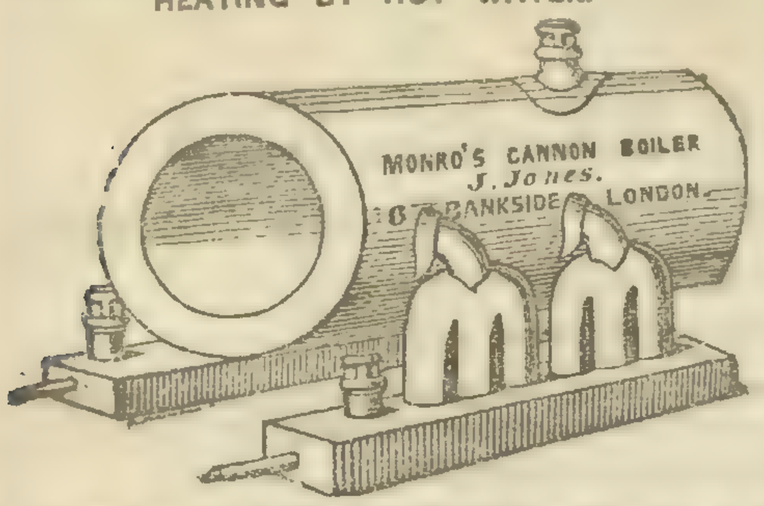
BRADFORD'S PATENT WASHING MACHINE.
SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations." — THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

HEATING BY HOT WATER.



MONRO'S CANNON BOILERS.—Much has of late been said about BOILERS FOR HEATING BY HOT WATER, but these Boilers have now proved themselves to be the best at present invented. They are adapted for Heating every description of Building, and are made of various sizes. The price of the

24-inch Wrought Iron is	£6 10
36-inch Wrought Iron is	8 10
48-inch Wrought Iron is	12 0

Larger sizes if required.

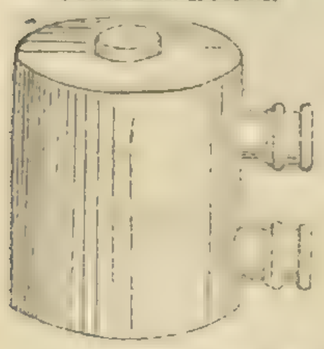
References to Gentlemen and Nurserymen where these Boilers are now at work. The Cannon Boilers are now kept in stock, and are to be had only of J. JONES, 6, Bankside, S.E.

Also, every description of Saddle and Cylinder Boilers. Hot-water Pipes and Connections at prices lower than those of any other house in London. Estimates for Hot-water Apparatus erected complete in any part of the country, or prices for the materials, and an Illustrated Catalogue on application to J. JONES, 6, Bankside, Southwark, London, S.E.

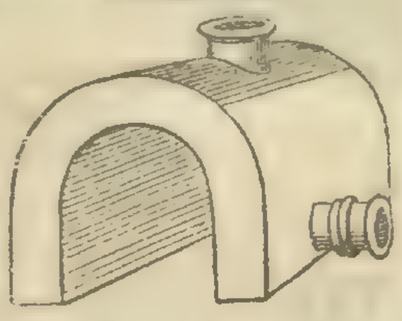
HOT-WATER APPARATUS.

J. JONES begs to offer a complete HOT-WATER APPARATUS FOR GREENHOUSES, at the following prices, delivered free to any Railway Station in England:—

CYLINDER BOILER



SADDLE BOILER.



Size of House.	With Cylinder Boiler.	With Saddle Boiler
20 feet by 10 feet ..	£8 10 0 ..	£9 0 0
25 ,, by 12 ,, ..	10 0 0 ..	10 10 0
30 ,, by 12 ,, ..	11 10 0 ..	12 0 0
30 ,, by 15 ,, ..	13 10 0 ..	14 10 0
40 ,, by 15 ,, ..	16 10 0 ..	17 10 0
50 ,, by 15 ,, ..	18 10 0 ..	20 0 0

The above prices include Boiler, strong Furnace Doors, Bars, Soot Doors, Cistern, Damper, Hot-water Pipes and Connections, Air Pipes, &c., all ready for fixing, and of the best quality. Further particulars will be sent on application. Parties ordering must send plans, showing doorways, position of boiler, &c.—J. JONES, Hot-water Apparatus Manufacturer, 6, Bankside, Southwark, London, S.E.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

DESIGNS FOR FLOWER BEDS AND GARDENS. The Second Edition of Second Series of 50 Designs is now ready, and will be forwarded to any address on receipt of 24 postage stamps by J. MARSHALL, 2, Goldsmith St., Nottingham.

GUTTA PERCHA TUBING FOR SPREADING LIQUID MANURE.

THE GUTTA PERCHA COMPANY have been favoured with the following Letter relative to the use of Gutta Percha Tubing in spreading Liquid Manure.

From JAMES KENNEDY, Esq.

"Myremill, by Maybole, Ayrshire.

"I have received your inquiry as to my experience in the use of Gutta Percha Tubing. I had 350 yards of it from your firm, and I have used it for the last few months in distributing liquid manure from my tanks over my fields, having often a **pressure of 300 feet on it; and have been able to get the liquid** from the end of the Tubing, by the pressure from the steam engine, upwards of 400 yards. I have 350 Scotch acres laid with metal pipes under ground for the conveyance of liquid manures **over my farm, and your Gutta Percha Tubing has given me great facility in spreading it over the surface of the land. I likewise think highly of the Gutta Percha Union Joint.**"

Every variety of Gutta Percha articles manufactured by the GUTTA PERCHA COMPANY, Patentees, 18, Wharf Road, City Road, London, E.C., and sold by their wholesale dealers in town and country.

ROUEN DUCKS FOR SALE.—Superior Drakes and Ducks of this esteemed breed, large and well feathered, and of this year's hatch. A Drake and three Ducks, 3*l.* 3*s.*; single Drake, 1*l.* 1*s.*; single Duck, 15*s.*—Apply by letter, post paid, to Miss ELLEN BALDWIN, Briarley, Aigburth, Liverpool.

FARM WANTED, in Surrey, Sussex, or Kent, from 100 to 500 acres, with good House and Buildings, the Shooting to go with the Farm.—Address, with full particulars, F. RAVENSCROFT, Esq., 29, Southampton Buildings, Chancery Lane, London, W.C.

WANTED, a small FLORIST and SEED BUSINESS, with Dwelling House, in a good neighbourhood. Suburbs of London preferred.—Address, with full particulars, to S., 3, Clara Cottages, Clayton Road, Peckham, S.E.

TO BE LET, with immediate possession, the old DERBY NURSERY, being advantageously situated in a fine position. Stock and terms moderate.—For particulars apply to Mr. NUTTING, Seedsman, Barbican, E.C.; or to Mr. GEORGE PAUL, Nurseries, Cheshunt, Herts.

CROWN LANDS.—HAINAULT, ESSEX.

TO BE LET, by Tender, by order of the Hon. CHARLES GORE, the Commissioner in charge of Her Majesty's Land Revenue in England, about 50 acres of ARABLE and GRASS LAND, with Farm buildings, in the Parish of Barking, Essex, together with a valuable Common right. The Farm is near to Chigwell Row, and about 3 miles from the Ilford Station on the Eastern Counties Railway. TENDERS will be received on or before Monday, November 5, addressed to the Hon. CHARLES A. GORE, 1, Whitehall Place, Westminster, S.W.—Particulars and forms of Tender may be had on application as above, of Mr. JOHN CLUTTON, 9, Whitehall Place, S.W., and of Mr. THOMAS SKINNER, North Street, Romford, where a plan of the Estate may be seen.

Sales by Auction.

CONSIGNMENT FROM GHENT FOR ABSOLUTE SALE.

MESSRS. PROTHEROE AND MORRIS are directed to Sell by Auction at the Mart, on TUESDAY, Oct. 23, at 12 o'clock, instead of the 17th, as previously announced, being unavoidably postponed, about 500 choice Double Camellias and Azalea indica, fine bushy plants, and well furnished with bloom buds; 400 Lilium lancifolium rubrum and album; 300 Asclepias tuberosa; 200 fine hardy Rhododendrons by name; also about 200 very handsome Standard and Dwarf Roses of the best kinds; Ghent Azaleas, Kalmia latifolia, &c. On view the morning of sale.—Catalogues had at the Mart, and of the Auctioneers and Valuers, Leytonstone, Essex.

TO GENTLEMEN, NURSERYMEN, FLORISTS, AND OTHERS.

MESSRS. PROTHEROE AND MORRIS will submit to public competition by Auction, at the Mart, Bartholomew Lane, City, E.C., on FRIDAY, October 26, at 12 o'clock, a first-class Collection of DUTCH BULBS, consisting of the finest Double and Single Hyacinths, Narcissus, Jonquils, Anemones, Crocus, **Tulips, &c.; also about 400 handsome** Standard, Half Standard, and Dwarf Roses of the best kinds; **selected American Plants: comprising Ghent and other Azaleas, Hybrid Rhododendrons, Kalmias, Andromedas, &c.,** well set with bloom buds, &c. On view the morning of Sale.—Catalogues had at the Mart; and of the Auctioneers, American Nursery, Leytonstone, Essex.

SALE OF EVERGREENS, STANDARD ROSES, BEARING FRUIT TREES, ETC.

MESSRS. PROTHEROE AND MORRIS are **instructed by James Thorne, Esq., of Mawbey House, South Lambeth, to Sell by Auction on the premises,** on THURSDAY, November 1, at 11 o'Clock, (in consequence of the Land being required for building), all the fine SHRUBS and TREES standing thereon, comprising Green and Variegated Hollies, from 3 to 10 feet in height, fine bushy Aucubas, 3 to 6 feet, Rhododendrons, 2 to 6 feet, **Box, Arbor-vitæs, Euonymus,** &c., fine Standard Roses, **Dwarf and Standard Peaches and Nectarines, many in a bearing state; Pyramid Pear Trees,** Gooseberries and Currants; a Greenhouse 60 feet long, new Hot-water Boiler and Pipes, Summer-houses, Garden Seats, Statues and Vases, Iron Fencing, two Leaden Pumps, several handsome Rabbit Hutches worthy of notice, and other effects. —May be viewed three days before the Sale. Catalogues (6*d.* each, returnable to purchasers), may be had of Mr. CHANDLER, Horticultural Agent and Valuer, 28, Priory Road, Wandsworth Road, S.; at the various Seed shops in London, and of the Auctioneers, American Nursery, Leytonstone, Essex, N.E.

IMPORTANT AND EXTENSIVE SALE OF NURSERY STOCK.

To NOBLEMEN, GENTLEMEN, NURSERYMEN, AND PUBLIC COMPANIES ENGAGED IN PLANTING.

MESSRS. PROTHEROE AND MORRIS have received instructions from Mr. F. Hopgood to submit to an unreserved Sale by Auction, on the Premises, Acton Vale Nursery, near the 4-mile stone on the Uxbridge Road, and within 10 minutes' walk of the Acton Railway Station, on MONDAY, November 5, and following days, at 11 o'clock each day, the Lease having expired, the whole of the valuable NURSERY STOCK, consisting of a large assortment of Evergreen and Deciduous Shrubs, ranging all sizes, and many fine specimens suitable for immediate effect; very handsome Standard and Dwarf Roses, including the best kinds; Ornamental Fruit and Forest Trees in great variety; strong Vines, **Ivies, Clematis, Virginian Creepers, Honeysuckles, &c., in pots,** together with a very choice collection of Greenhouse Plants. **Full particulars will appear in future Advertisement. May be viewed one week prior to the sale.**—Catalogues may be had (6*d.* each, returnable to purchasers), on the Premises; of the principal Seedsmen in London; and of the **Auctioneers, American** Nursery, Leytonstone, Essex.

STOKE NEWINGTON.

To NOBLEMEN, GENTLEMEN, AND OTHERS PLANTING.

MESSRS. PROTHEROE AND MORRIS have **received instructions to Sell by Auction on the Premises,** Albion Road, Stoke Newington, on MONDAY and TUESDAY, November 12 and 13, at 11 o'clock each day, fine EVERGREENS, ORNAMENTAL TREES, and DECIDUOUS SHRUBS, consisting of Aucubas, Laurels, variegated and Green **Hollies, Arbor Vitæs, Bays, Ivies, Box, Limes, Planes, Poplars, Scarlet Chestnuts, fine Weeping Ash,** Evergreen Privet, &c.; a choice assortment of Fruit Trees, comprising Standard and Dwarf Trained Peaches, Apricots, Nectarines, Cherries, Plums, Pears, Gooseberries, Currants, Grape Vines, &c.; **fine Standard, Dwarf, and Climbing Roses,** American **Plants, including Azaleas, Rhododendrons, and Andromeda** floribunda, well set with bloom buds. May be viewed prior to the Sale.—Catalogues had on the Premises, of the principal Seedsmen in London, and of the Auctioneers, American **Nursery, Leytonstone, Essex.**—N.B. The Lease of the above Ground to be disposed of by private contract.

LEYTON GRANGE.

MESSRS. PROTHEROE AND MORRIS are instructed by the British Land Company (Limited), to Sell by Auction, on the premises, Leyton Grange, near the Church, Leyton, Essex, and within 10 minutes walk of the Leyton Railway Station, on WEDNESDAY, November 14, at 11 o'clock, the large EVERGREENS and FLOWERING SHRUBS, including fine specimen variegated Hollies, 10 to 12 feet; Laurestinus, Aucubas, Red Cedars, Arbutus, Rhododendrons, Kalmias, Azaleas; choice Standard and Dwarf Roses, very handsome; Herbaceous Plants, &c.; fine Dwarf-trained fruit-bearing Peaches, Nectarines, Apricots, Standard Plums, Apples, Cherries, Mulberry, Gooseberries and Currants; about 400 yards of Holly Hedge, 10 to 12 feet high; several beds of strong Asparagus for forcing; a large quantity of excellent Box Edging; two Greenhouses, Pit, sundry Lights, capital 4-inch Hot-water Pipe Boiler, Compost and other effects. May be viewed four days prior to the sale.—Catalogues had on the premises; at the Lion and Key, Leyton; and of the Auctioneers and Valuers, American Nursery, Leytonstone, Essex.

BLACKHEATH.—To GENTLEMEN, NURSERYMEN, AND OTHERS.

MESSRS. PROTHEROE AND MORRIS have received instructions from Mr. Hally to sell by Auction on the premises opposite the Railway Station, Blackheath, Kent, on FRIDAY and SATURDAY, November 16 and 17, at 11 o'clock each day without reserve, the ground being taken for immediate Building purposes, the whole of the valuable NURSERY STOCK, including a large quantity of Evergreens and Deciduous Shrubs, Ornamental Fruit and Forest Trees in great variety, and comprising the usual assortment; also **choice Greenhouse Plants, consisting of fine Double Camellias** set with bloom buds; Ericas, Epacris, Geraniums, &c.—May be viewed one week prior to the Sale; Catalogues had on the Premises, of the principal Seedsmen in London, and of the Auctioneers, American Nursery, Leytonstone, Essex, N.E.

IMPORTANT SALE AT THE GOLDWORTH NURSERY, WOKING, SURREY.

To NOBLEMEN AND GENTLEMEN ENGAGED IN ORNAMENTAL PLANTING, NURSERYMEN, AND OTHERS.

MR. J. C. STEVENS is favoured with instructions from Mr. Robert Donald, whose lease has nearly expired, to sell by Auction, at the Goldworth Nursery, Woking, Surrey, on MONDAY, October 29, and following days, at half-past 11 precisely each day, a most VALUABLE and EXTENSIVE COLLECTION of SPECIMEN CONIFERS and other ORNAMENTAL PLANTS, all of which have been well prepared for transplanting, forming a large proportion of the Home Nursery. It includes magnificent specimens (besides many others) of the following well known sorts:—

Araucaria imbricata,	6 to 8 ft.	Cupressus Lawsoniana ..	.. 2 to 4 ft.
Cedars of Lebanon ..	8 to 10 ,,	Cryptomeria japonica ..	..15 to 20 ,,
Cedrus Africanus ..	5 to 8 ,,	Picea Pinsapo ..	3 to 6 ,,
,, Deodara ..	10 to 15 ,,	Juniperus Chinensis	8 to 10 ,,
,, Atlantica ..	10 to 12 ,,	Wellingtoniagigantea	3 to 5 ,,
Pinus Austriaca ..	6 to 8 ,,	Pinus Nordmanniana	3 to 6 ,,
,, Benthamiana	4 to 8 ,,	,, Brunoniana ..	6 to 8 ,,
,, Cembra ..	8 to 10 ,,	,, Douglasii ..	10 to 15 ,,
,, Excelsa ..	10 to 15 ,,	,, insignis ..	10 to 15 ,,
,, Lemonii ..	5 to 7 ,,	,, macrocarpa ..	10 to 30 ,,
,, Sinclarii ..	8 to 10 ,,	,, Smithii ..	15 to 20 ,,
Taxodium sempervirens ..	20 to 30 ,,	Yews (Irish) ..	8 to 10 ,,

Also various first class Evergreens and Deciduous Trees of numerous sizes. Fine dwarf trained Fruit Trees, Standard Fruit Trees, Dwarf and Standard Roses of the best kinds, and a variety of other hardy plants.

May be viewed one week before the Sale, when Catalogues (1*s.* each, returnable to purchasers) may be had at the Nursery, at the principal Inns in the neighbourhood, and at Mr. J. C. Stevens' Auction Rooms and Offices, 38, King Street, Covent Garden, W.C.

Approved Bills at three months will be taken of purchasers above 50*l.* The Goldworth Nursery is one mile from Woking on the South Western Railway, where a van will meet 9.40 train from Waterloo to convey parties to the Sale.

WALLS COURT, NEAR BRISTOL.

EXTENSIVE AND IMPORTANT SALE OF SHORT HORNED CATTLE, HORSES, PIGS, IMPLEMENTS, &c.

MR. STRAFFORD is entrusted by Thomas Proctor, Esq. (who is retiring from Farming in consequence of ill-health), with the Sale by Auction, without reserve, of the whole of his valuable STOCK, on TUESDAY, WEDNESDAY, and THURSDAY, October 23, 24, and 25 next, consisting of upwards of 200 Head of Breeding, Fat, and Store Cattle, many of the Fashionable and pure blood, also the very superior Team of Horses, Pigs, &c. with the whole of the Agricultural Machinery and Implements, which are of the most modern character, and have been selected from the best makers, without regard to expense.—Catalogues and Pedigrees and other particulars may be had on application to Messrs. H. & T. PROCTOR, Cathay, Bristol; or Messrs. PROCTOR & RYLAND, at Birmingham, Chester, or Warwick; and of Mr. STRAFFORD, 13, Euston Square, London, N.W.

BATTERSEA, SURREY, NEAR THE YORK ROAD.

MR. W. T. ATWOOD has received instructions to Sell by Auction, on THURSDAY, October 25, at 12 o'Clock, on the premises (late in the occupation of Mr. Andrew Symonds), the LIVE and DEAD STOCK of a Market Gardener, comprising strong useful Horse, Market, and other Carts; 23 5 light Boxes and Lights, Dried Herbs, Garlick, quantity of Seeds, Heaps of Manure, Turban and other Ranunculus Roots, Tools, and other useful articles.—May be viewed the day previous to Sale; Catalogues had at the Inns in Covent Garden: and of Mr. ATWOOD, Mortlake, S.W.

LILLESHALL.—TWO MILES FROM NEWPORT, 5 FROM WELLINGTON, SALOP, AND 1 FROM DONNINGTON STATION ON THE SHROPSHIRE UNION RAILWAY.

To NOBLEMEN, LAND AGENTS, NURSERYMEN, PLANTERS, AND OTHERS.

MR. R. POOLER will Sell by Auction on TUESDAY, October 30, upwards of 200,000 truly valuable Forest, Fruit, and Ornamental Trees; splendid Evergreens, choice Shrubs, strong Transplanted and 3 year old Quick, Hollies, Privet, &c., the property of Mr. Thomas Adams. The Stock is finely grown, well rooted, and for the extent not to be excelled by any nursery. Those from a distance are specially invited to arrive in good time to view the Stock. Lunch at 10 o'Clock, and Sale to commence at 11 to a minute.—Catalogues may be obtained, on application, to the Auctioneer, High Street, Newport, Salop.

NURSERY STOCK FOR SALE.

MR. DUNCAN MACFARLANE, AUCTIONEER, will Sell by Public Roup, at Taybank Nurseries, by Perth, on MONDAY and TUESDAY, November 5 and 6, commencing each day at 11 o'clock, the whole NURSERY STOCK, &c., belonging to Mr. William Stewart, consisting of Forest Trees, Shrubs, Fruit Trees, Bushes, &c. In the course of the Sale there will also be exposed a Pair of Fanners, two Cases of Drawers for Seeds, a number of Bushel Measures and Weights, Sieves and Riddles, Office Desks, Garden Frame, and Garden Implements, &c.—For Catalogues and other particulars apply to JAMES SPOTTISWOODE, Solicitor, 25, George Street, Perth; or Mr. JOHN CLARK, Gardener, at Taybank Nursery.

COVENT GARDEN MARKET, LONDON, W.C.

BUTLER AND McCULLOCH'S

Descriptive Bulb Catalogue and Amateur's Guide to Winter and Spring Gardening

NOW READY, AND MAY BE HAD ON APPLICATION OR SENT POST PAID.

THE number of genera, the numerous species and varieties the above Catalogue contains, combined with the Descriptive Notes, Cultural Directions, and Hints on the Distribution and Arrangement of Bulbs, make it perhaps the most valuable and comprehensive of the season, either to the Amateur or Practical Gardener.

For General Index of the above Catalogue, see Advertisement on page 828 *of* Gardeners' Chronicle, *Sept.* 15.

All Orders 21s. and upwards sent Carriage paid, no charge made for packing or package.

COLLECTION "D" for CONSERVATORY DECORATION, 42s.,

Contains 24 splendid HYACINTHS in 24 sorts, 12 splendid POLYANTHUS NARCISSUS in 12 sorts, 3 splendid JAPAN LILIES, extra large roots, 30 beautiful Single TULIPS in 10 varieties, 18 beautiful Double do. in six varieties, 18 Single DUC VAN THOL do., 12 SCILLA SIBIRICA, 12 Double and 12 Single Sweet-scented JONQUILS, 100 new Seedling CROCUS in 10 beautiful sorts, 12 IXIAS, 12 SPARAXIS. Half of the above, 21*s*.

COLLECTION "E" for THE FLOWER GARDEN, 42s.,

Contains 40 REX RUBRORUM Double Scarlet TULIPS, 40 TOURNESOL Variegated do., 40 YELLOW ROSE Sweet-scented do., 40 LA CANDEUR White do., 50 SCARLET RANUNCULUS, 50 CITRON do., 40 GOLDEN do., 30 Mixed HYACINTHS, 100 GARDEN NARCISSUS in 6 sorts, 25 ENGLISH IRIS, 6 CROWN IMPERIALS, 25 FRITILLARIAS, 200 CROCUS in four sorts, 100 SNOWDROPS, 40 SCARLET ANEMONES, 40 Mixed do. Half of the above, 21*s*.

CARTER'S COLLECTION OF BULBS.

COLLECTIONS OF HYACINTHS.

No. 10. 100 in 100 extra fine sorts	£5	5	0
No. 11. 100 in 50 extra fine sorts	4	4	0
No. 12. 100 in 25 extra fine sorts	3	3	0
No. 13. The best 12 Hyacinths for exhibition, with large trusses of bloom and extra strong bulbs	0	15	0
No. 14. The best 12 Hyacinths for glasses	0	12	0
No. 15. The best 12 Hyacinths for pots	0	10	0
No. 16. 12 Hyacinths for pots or glasses (good sorts)	0	8	0

No. 1.—80s. Collection of Bulbs for Forcing.

50 Extra fine Hyacinths, in 25 sorts
54 Polyanthus Narcissus, in 9 sorts
25 Single Sweet-scented Jonquils
25 Largest Double Jonquils
300 Newest Seedling Crocus, in 50 sorts
3 of each of 12 best varieties, Single Early Tulips
12 Tulips Duc Van Thol, red and yellow
12 Ditto ditto, scarlet
12 Ditto ditto, rose
12 Ditto ditto, yellow
12 Ditto Double La Candeur
12 Ditto ditto Rex Rubrorum
12 Ditto ditto Tournesol
12 Ditto ditto Yellow Rose

No. 2.—40s. Collection of Bulbs for Forcing.

2 dozen extra fine Hyacinths, in 12 sorts
2 dozen Polyanthus Narcissus, in 9 sorts
2 dozen Single Sweet-scented Jonquils
150 Newest Seedling Crocus, in 50 sorts
1 dozen Tulips, Duc Van Thol, red and yellow
1 dozen ditto ditto, scarcet
1 dozen ditto ditto, rose
1 dozen ditto ditto, yellow
1 dozen ditto Vermillion Brilliant
1 dozen ditto Rex Rubrorum
1 dozen ditto Tournesol

No. 3.—20s. Collection of Bulbs for Forcing.

Half the above quantities.

No. 4.—80s. Collection of Bulbs for Conservatory and Out-door Planting.

4 dozen Border Hyacinths, in 3 colours, double or single
3 dozen very fine Hyacinths, for Pots or Glasses, in 18 sorts
1½ dozen Polyanthus Narcissus, in 9 sorts
100 Sweet-scented White Dutch Narcissus
50 Narcissus Poeticus
12 Single Sweet-scented Jonquils
250 Blue Crocus
250 Yellow Crocus
250 Purple Crocus
250 White Crocus
100 Duc Van Thol Tulips
50 Single mixed Tulips
25 Rex Rubrorum Double Tulips
25 Tournesol Double Tulips
25 Splendid mixed English Iris
100 Splendid mixed Spanish Iris
100 Finest Single mixed Anemones
100 Scarlet Turban Ranunculus
100 Double Snowdrops
100 Single Snowdrops
12 Dog's Tooth Violets

No. 5.—40s. Collection of Bulbs for Conservatory and Out-door Planting.

Half the above quantities.

No. 6.—20s. Collection of Bulbs for Conservatory and Out-door Planting.

1 dozen Border Hyacinths, in 3 colours, double or single
1 dozen very fine Hyacinths for pots or glasses, in 12 sorts
6 Polyanthus Narcissus, in 6 sorts
25 Sweet-scented White Dutch Narcissus
12 Narcissus Poeticus
50 Yellow Crocus
50 Purple Crocus
50 White Crocus
25 Duc Van Thol Tulips
25 Single mixed Tulips
12 Rex Rubrorum Tulips
12 Tournesol Tulips
25 Finest mixed Spanish Iris
25 Scarlet Turban Ranunculus
25 Double Snowdrops

No. 7.—80s. Collection of Bulbs for Out-door Planting.

Six Dozen Hyacinths for bedding, consisting of 1 dozen each of the following colours:—Crimson, rose, purple, blue, white, white with purple eye (double or single, whichever may be preferred.)

100 Sweet-scented white Dutch Double Narcissus
100 Pheasant-eye crimson and white single Narcissus
500 Yellow Crocus
500 White Crocus
250 Purple Crocus
100 Single mixed Early Tulips
50 Double mixed Early Tulips
25 Finest mixed French Seedling Gladiolus from Gandavensis
12 Gladiolus Brenchleyensis
50 Splendid mixed English Iris
50 Splendid mixed Spanish Iris
250 Large Double Snowdrops
12 Finest mixed Martagon Lilies
100 Splendid Scarlet Turban Ranunculus
50 Finest Single mixed Anemones

No. 8.—40s. Collection of Bulbs for Out-door Planting.

2 dozen mixed Red Hyacinths, double or single
2 dozen mixed Blue Hyacinths, double or single
2 dozen mixed White Hyacinths, double or single
100 Sweet-scented White Dutch Double Narcissus
250 Yellow Crocus
250 White Crocus
250 Purple Crocus
50 Single mixed Early Tulips
25 Finest mixed French Seedling Gladiolus from Gandavensis
25 Splendid mixed English Iris
50 Splendid mixed Spanish Iris
100 Large Double Snowdrops
12 Finest mixed Martagon Lilies
50 Splendid Scarlet Turban Ranunculus

No. 9.—20s. Collection of Bulbs for Out-door Planting.

Half the above collection.

For further particulars, see

THE AUTUMN SUPPLEMENT TO

CARTER'S GARDENERS' VADE MECUM,

which will be forwarded post free on application to

JAMES CARTER & CO., Seedsmen, 237 & 238, High Holborn, W.C.

EARLY FLOWERING BEDDING TULIPS.

The finest Collection of the above are described and Priced in E. G. HENDERSON AND SON'S BULB CIRCULAR, which may be had on application (postage free), also notices of the following:—

LILIUM GIGANTEUM.
" " CORDIFOLIUM.
" SPECIOSUM (LANCIFOLIUM) GRANDIFLORUM.
AMARYLLIS.—A splendid collection
CYCLAMEN.—The finest collection of this charming plant.
SCILLA SIBIRICA.—The most brilliant blue spring-flower.
A PRICED LIST OF Garden Plants with silvery foliage.
" " " with variegated foliage.
" " " with ornamental do.
" " early Spring-flowering Garden Plants.
" " New French blotched Pansies.

GYNERIUM ARGENTEUM, per 100 or 1000, each 6*d*., 9*d*., to 2*s*. 6*d*.

LADY EMILY PEEL PETUNIA. (Surpassing Shrubland Rose, Marquis de la Ferté, and Countess of Ellesmere).

ANNIE KIEN. The greatest novelty of the season in Petunias.

CLOTH OF GOLD and GOLDEN FLEECE.

The above Summer Bedding Geraniums have proved to be the finest of all varieties in their section—surpassing the Golden Chain and others in their close and dense habit, richness of leaf-tint, and picturesque effect, presenting a more even and unbroken surface of golden foliage than any other known plants.

CAMELLIA TRICOLOR IMBRICATA PLENA.

Wellington Nursery, St. John's Wood, London, N.W.

NEW HARDY RHODODENDRON.
R. NAPOLEON BAUMANN.

JOSEPH BAUMANN, NURSERYMAN, Ghent, Belgium, begs to announce that he is sending out for the first time his new SEEDLING RHODODENDRON. It is a good grower, free flowering, pyramidal truss, bright rose, all the petals dotted over with deep crimson spots, very fine foliage; altogether excellent. It received the first prize at the great Ghent Show for best seedling. Good plants with three to four shoots, 1*l*.; stronger plants, 2*l*. Free to London (Custom House) One over for every three taken.

J. B.'s NEW CATALOGUE, with the figure of this Rhododendron, may be had on application at the Ghent Nursery.

JOSEPH BAUMANN, Nurseryman, Ghent, Belgium, begs to offer the following plants; packing and carriage free to London (Custom House):—

	£	s.
100 Hardy Ghent Azaleas, with names and good sorts full of flower buds	5	0
100 Stronger Plants do. do.	8	0
100 Very Strong Plants do. do.	12	0
100 Azalea indica, best sorts with flower buds	4	10
100 Stronger Plants do. do.	8	0
100 Himalaya, Assam, and Bhotan Rhododendrons	5	0
100 Stronger Plants	10	0
100 Hardy Ghent Rhododendrons, 2 years old	7	0
100 Camellias, 2 years old	5	0
100 Lilium lancifolium album, strong	3	5
100 " " rubrum	3	5
100 Asclepias tuberosum	1	10
100 Wellingtonia gigantea, 1 foot high	10	0
100 Kalmia pumila, glauca, and angustifolia	8	0

WINTER BLOOMING PLANTS.—Purchasers are respectfully invited to inspect the very large stock of the Subscribers. AZALEAS, ERICAS, EPACRIS, CYTISUS, and ACACIAS, can be seen in thousands.

Fine grafted JASMINUM GRANDIFLORUM, well set with flower. OTAHEITE ORANGES in fruit, &c.

HUGH LOW & Co., Clapton Nursery, N.E.

WINTER FLOWERING PLANTS.—We have a large stock of fine healthy plants, well set with bloom, of the best varieties of AZALEA INDICA, CAMELLIAS, EPACRIS, and ERICAS, and will be glad to quote prices upon application. Also very nice grafted plants of JASMINUM GRANDIFLORUM.

JAMES DICKSON & SONS, Newton Nurseries, Chester.

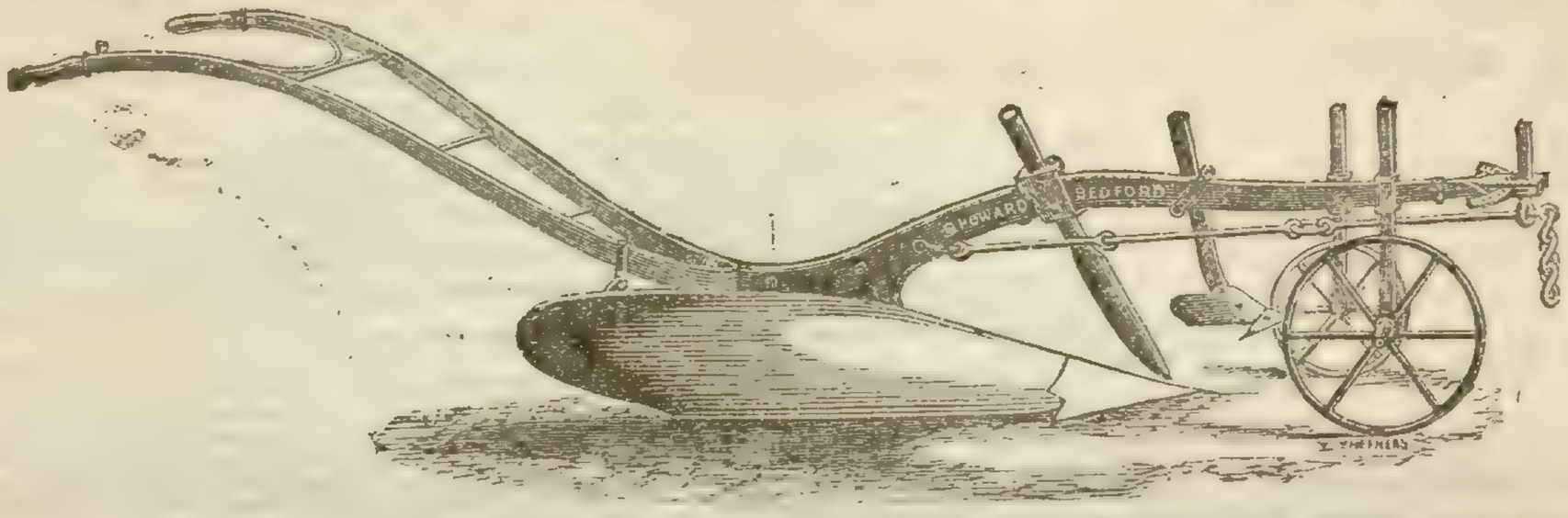
SPLENDID NEW INDIAN AZALEA MAGNET.

WILLIAM BARNES is now prepared to send out the above splendid AZALEA, which has been much admired this season by many first rate judges. It was awarded a Prize at the Crystal Palace on May 26, where it was exhibited in the class of new and rare plants in bloom. It was also exhibited before the Floral Committee of the Horticultural Society on June 23, and there received a Certificate of commendation. Mr. Moore, the Secretary, describes it thus:—"Colour, deep rosy tinted salmon pink, marked on the upper segment with rose purple spots; it is of remarkable hardy constitution, and free flowering, small plants being literally covered with bloom." The plants now offered are all grafted on clean healthy stems, and each plant has from 5 to 10 strong shoots upon it. Price 15*s*. each.

Camden Nursery, Camberwell, London.—Oct. 20.

Printed by WILLIAM BRADBURY, of 13, Upper Woburn Place, and FREDERICK MULLETT EVANS, of No. 20, Queen's Road West, both in the Parish of St. Pancras, in the Co. of Middlesex. Printers, at their Office, Lombard St., Precinct of Whitefriars City of London, and published by them at the Office, No. 41, Wellington St., Parish of St. Paul's, Covent Garden, in the said Co.—SATURDAY, October 20, 1860.

AGRICULTURAL IMPLEMENTS.



SPECIAL SELECT LIST OF THE MOST APPROVED AGRICULTURAL IMPLEMENTS.

In the present day, when both Gentlemen and Tenant Farmers so liberally stimulate and encourage the inventive skill of manufacturers of Agricultural Implements and Machinery, the task of intelligent selection on the part of the Farmer is oftentimes one of no little difficulty. Among the variety of rival claims (and more especially when there is a degree of excellence, in some point or other, in almost every claimant for pre-eminence) it not unfrequently happens that the chief difficulty is to fix a choice which shall prove to be satisfactory.

It having been suggested to Messrs. J. B. Brown & Co. that a very useful Department might be added to their business by having *carefully prepared Lists of* the Most Select and Approved Implements and Machines, such as have fully proved themselves to be the best of their class, and may always be depended upon to give the fullest satisfaction, Messrs. Brown & Co. have much pleasure in now commencing a series of such Lists, every article in which they have the fullest confidence in guaranteeing in every respect. They beg now to submit the following—

No. 1.—SELECT LIST OF BEST PRIZE PLOUGHS.

HOWARDS' CHAMPION PLOUGHS.

The demand for HOWARDS' CHAMPION PLOUGHS has this year been considerably larger than at any former period. The New Ploughs, H and H H, are the best Messrs. Howard have ever yet manufactured; they are less liable to breakage, lay the furrow in a better form, leave more edge on the work, and draw lighter than any former patterns.

*** IMPORTANT PLOUGHING MATCH, GLOUCESTER MEETING, Oct. 3, 1860.—The Silver Cup in the Farmers' Sons' Class, the Silver Medal to the best Ploughman, and Ten other Prizes, including the First Prize in Three Classes, were won with Howards' Champion Ploughs.

HOWARDS' NEW PATENT H CHAMPION PLOUGH FOR TWO HORSES.

This Plough and the one following are believed to be not only the *cheapest* but the *best* and *most durable* General Purpose Ploughs yet produced. The above Plough, marked H, is suitable for both light and heavy land, and while light enough for two horses, is strong enough for four. Some thousands of these New Patent Ploughs have been made since the Warwick Meeting, 1859, but not a single instance of breakage has come to the knowledge of the makers. Price 4*l.* 2*s.* 6*d.* Skim Coulter, 5*s.* 6*d.*

HOWARDS' NEW PATENT HH CHAMPION PLOUGH FOR GENERAL PURPOSES.

This Plough gained the FIRST PRIZE as the BEST PLOUGH for GENERAL PURPOSES at the Warwick Meeting, 1859, being the Chief Prize for Ploughs awarded by the Royal Agricultural Society of England, at this Meeting. The above is exactly on the same principle as the H Plough, but is a size larger, and is intended for general purposes. It is more suitable for deep work and for ploughing at matches than the smaller sizes. Price 4*l.* 7*s.* 6*d.* Skim Coulter, 5*s.* 6*d.*

HOWARDS' POTATO RAISING PLOUGH.

With a pair of horses 3 to 4 acres of Potatoes can be raised in a day; it leaves fewer in the ground than when dug by hand, and raises the roots without bruising or scratching the skins. It may readily be converted into a Ridging Plough by adding a pair of breasts. Price 3*l.* 7*s.* 6*d.* With breasts complete, 5*l.*

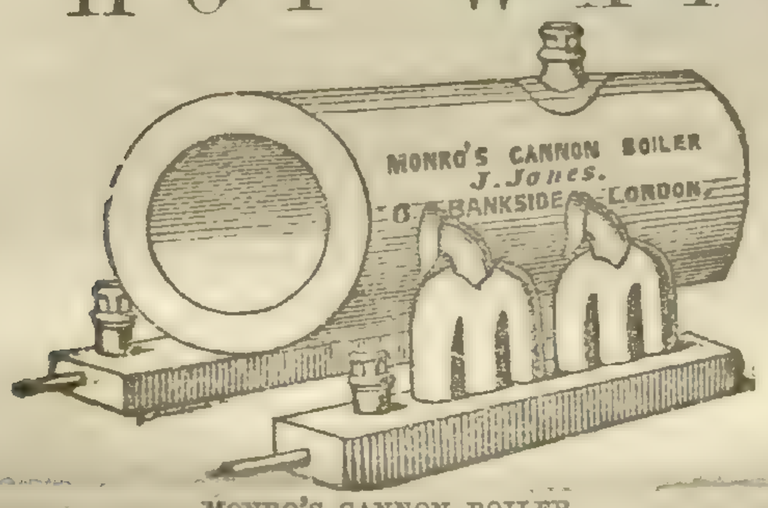
☞ Orders are received by Messrs. J. B. Brown & Co. for every description of Agricultural Implements, and of any make, at the Manufacturers' prices; and great care is taken as to the proper execution and prompt dispatch of all orders entrusted to them.

AGENTS

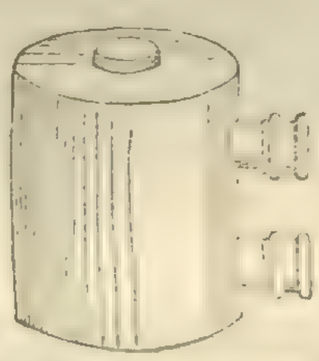
J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

TO NURSERYMEN, GARDENERS, AND OTHERS.

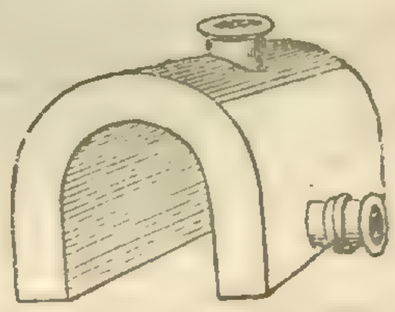
HOT-WATER APPARATUS.



MONRO'S CANNON BOILER.



CYLINDER BOILERS OF VARIOUS SIZES.



SADDLE BOILERS OF WROUGHT AND CAST IRON, OF ALL SIZES.

THE LARGEST STOCK OF

HOT-WATER PIPES & CONNECTIONS, BOILERS, &c.,

OF THE BEST QUALITY AND AT THE LOWEST PRICES.

THE WHOLE OF THE ABOVE KEPT IN STOCK READY FOR IMMEDIATE DELIVERY.

PRICES WILL BE SENT ON APPLICATION, OR ESTIMATES FOR

HOT-WATER APPARATUS

ERECTED COMPLETE IN ANY PART OF THE COUNTRY.

J. JONES, 6, BANKSIDE, SOUTHWARK, LONDON, S.E.

CARTER'S COLLECTION OF BULBS.

COLLECTIONS OF HYACINTHS.

No. 10. 100 in 100 extra fine sorts	£5	5	0
No. 11. 100 in 50 extra fine sorts	4	4	0
No. 12. 100 in 25 extra fine sorts	3	3	0
No. 13. The best 12 Hyacinths for exhibition, with large trusses of bloom and extra strong bulbs	0	15	0
No. 14. The best 12 Hyacinths for glasses	0	12	0
No. 15. The best 12 Hyacinths for pots	0	10	0
No. 16. 12 Hyacinths for pots or glasses (good sorts)..	0	8	0

No. 1.—80s. Collection of Bulbs for Forcing

50 Extra fine Hyacinths, in 25 sorts
54 Polyanthus Narcissus, in 9 sorts
25 Single Sweet scented Jonquils
25 Largest Double Jonquils
300 Newest Seedling Crocus, in 50 sorts
3 of each of 12 best varieties, Single Early Tulips
12 Tulips Duc Van Thol, red and yellow
12 Ditto ditto, scarlet
12 Ditto ditto, rose
12 Ditto ditto, yellow
12 Ditto Double La Candeur
12 Ditto ditto Rex Rubrorum
12 Ditto ditto Tournesol
12 Ditto ditto Yellow Rose

No. 2.—40s. Collection of Bulbs for Forcing.

2 dozen extra fine Hyacinths, in 12 sorts
2 dozen Polyanthus Narcissus, in 9 sorts
2 dozen Single Sweet-scented Jonquils
150 Newest Seedling Crocus, in 50 sorts
1 dozen Tulips, Duc Van Thol, red and yellow
1 dozen ditto ditto, scarcet
1 dozen ditto ditto, rose
1 dozen ditto ditto, yellow
1 dozen ditto Vermillion Brilliant
1 dozen ditto Rex Rubrorum
1 dozen ditto Tournesol

No. 3.—20s. Collection of Bulbs for Forcing.

Half the above quantities.

No. 4.—80s. Collection of Bulbs for Conservatory and Out-door Planting.

4 dozen Border Hyacinths, in 3 colours, double or single
3 dozen very fine Hyacinths, for Pots or Glasses, in 18 sorts
1½ dozen Polyanthus Narcissus, in 9 sorts
100 Sweet-scented White Dutch Narcissus
50 Narcissus Poeticus
12 Single Sweet-scented Jonquils
250 Blue Crocus
250 Yellow Crocus
250 Purple Crocus
250 White Crocus
100 Duc Van Thol Tulips
50 Single mixed Tulips
25 Rex Rubrorum Double Tulips
25 Tournesol Double Tulips
25 Splendid mixed English Iris
100 Splendid mixed Spanish Iris
100 Finest Single mixed Anemones
100 Scarlet Turban Ranunculus
100 Double Snowdrops
100 Single Snowdrops
12 Dog's Tooth Violets

No. 5.—40s. Collection of Bulbs for Conservatory and Out-door Planting.

Half the above quantities.

No. 6.—20s. Collection of Bulbs for Conservatory and Out-door Planting.

1 dozen Border Hyacinths, in 3 colours, double or single
1 dozen very fine Hyacinths for pots or glasses, in 12 sorts
6 Polyanthus Narcissus, in 6 sorts
25 Sweet-scented White Dutch Narcissus
12 Narcissus Poeticus
50 Yellow Crocus
50 Purple Crocus
50 White Crocus
25 Duc Van Thol Tulips
25 Single mixed Tulips
12 Rex Rubrorum Tulips
12 Tournesol Tulips
25 Finest mixed Spanish Iris
25 Scarlet Turban Ranunculus
25 Double Snowdrops

No. 7.—80s. Collection of Bulbs for Out-door Planting.

Six Dozen Hyacinths for bedding, consisting of 1 dozen each of the following colours:—Crimson, rose, purple, blue, white, white with purple eye (double or single, whichever may be preferred.)

100 Sweet-scented white Dutch Double Narcissus
100 Pheasant-eye crimson and white single Narcissus
500 Yellow Crocus
500 White Crocus
250 Purple Crocus
100 Single mixed Early Tulips
50 Double mixed Early Tulips
25 Finest mixed French Seedling Gladiolus from Gandavensis
12 Gladiolus Brenchleyensis
50 Splendid mixed English Iris
50 Splendid mixed Spanish Iris
250 Large Double Snowdrops
12 Finest mixed Martagon Lilies
100 Splendid Scarlet Turban Ranunculus
50 Finest Single mixed Anemones

No. 8.—40s. Collection of Bulbs for Out-door Planting.

2 dozen mixed Red Hyacinths, double or single
2 dozen mixed Blue Hyacinths, double or single
2 dozen mixed White Hyacinths, double or single
100 Sweet-scented White Dutch Double Narcissus
250 Yellow Crocus
250 White Crocus
250 Purple Crocus
50 Single mixed Early Tulips
25 Finest mixed French Seedling Gladiolus from Gandavensis
25 Splendid mixed English Iris
50 Splendid mixed Spanish
100 Large Double Snowdrops
12 Finest mixed Martagon Lilies
50 Splendid Scarlet Turban Ranunculus

No. 9.—20s. Collection of Bulbs for Out-door Planting.

Half the above collection.

For further particulars, see

THE AUTUMN SUPPLEMENT TO

CARTER'S GARDENERS' VADE MECUM,

which will be forwarded post free on application to

JAMES CARTER & CO., Seedsmen, 237 & 238, High Holborn, W.C.

COVENT GARDEN MARKET, LONDON, W.C.

BUTLER AND McCULLOCH'S

Descriptive Bulb Catalogue and Amateur's Guide to Winter and Spring Gardening

NOW READY, AND MAY BE HAD ON APPLICATION OR SENT POST PAID.

THE number of genera, the numerous species and varieties the above Catalogue contains, combined with the Descriptive Notes, Cultural Directions, and Hints on the Distribution and Arrangement of Bulbs, make it perhaps the most valuable and comprehensive of the season, either to the Amateur or Practical Gardener.

For General Index of the above Catalogue, see Advertisement on page 828 *of* Gardeners' Chronicle, *Sept.* 15.

All Orders 21s. and upwards sent Carriage paid, no charge made for packing or package.

COLLECTION "D" for CONSERVATORY DECORATION, 42s.,

Contains 24 splendid HYACINTHS in 24 sorts, 12 splendid POLYANTHUS NARCISSUS in 12 sorts, 3 splendid JAPAN LILIES, extra large roots, 30 beautiful Single TULIPS in 10 varieties, 18 beautiful Double do. in six varieties, 18 Single DUC VAN THOL do., 12 SCILLA SIBIRICA, 12 Double and 12 Single Sweet-scented JONQUILS, 100 new Seedling CROCUS in 10 beautiful sorts, 12 IXIAS, 12 SPARAXIS. Half of the above, 21*s.*

COLLECTION "E" for THE FLOWER GARDEN, 42s.,

Contains 40 REX RUBRORUM Double Scarlet TULIPS, 40 TOURNESOL Variegated do., 40 YELLOW ROSE Sweet-scented do., 40 LA CANDEUR White do., 50 SCARLET RANUNCULUS, 50 CITRON do., 40 GOLDEN do., 30 Mixed HYACINTHS, 100 GARDEN NARCISSUS in 6 sorts, 25 ENGLISH IRIS, 6 CROWN IMPERIALS, 25 FRITILLARIAS, 200 CROCUS in four sorts, 100 SNOWDROPS, 40 SCARLET ANEMONES, 40 Mixed do. Half of the above, 21*s.*

NEW HARDY RHODODENDRON.
R. NAPOLEON BAUMANN.

JOSEPH BAUMANN, NURSERYMAN, Ghent, Belgium, begs to announce that he is sending out for the first time his new SEEDLING RHODODENDRON. It is a good grower, free flowering, pyramidal truss, bright rose, all the petals dotted over with deep crimson spots, very fine foliage; altogether excellent. It received the first prize at the great Ghent Show for best seedling. Good plants with three to four shoots, 1*l.*; stronger plants, 2*l.* Free to London (Custom House). One over for every three taken.

J. B.'s NEW CATALOGUE, with the figure of this Rhododendron, may be had on application at the Ghent Nursery.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:—

	P. packet—*s.*	*d.*
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation..	1	6
CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
" Moor Park, extra fine..	1	0
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed ..	2	6
CINERARIA, from finest named varieties ..	2	6
DIANTHUS Heddewiggi	1	0
PANSY, from named varieties	1	0
PRIMULA sinensis fimbriata	2	0
SOLANUM capsicastrum	1	0
" pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London N.

NEW SEEDS.

THE QUEEN'S SEEDSMEN,

PETER LAWSON & SON,

27, GREAT GEORGE STREET, WESTMINSTER, S.W.

ARE NOW SUPPLYING NEW SEEDS FOR AUTUMN SOWING.

The very finest qualities of TRIFOLIUM INCARNATUM, ITALIAN RYE-GRASS, ALSIKE CLOVER, DWARF BROAD-LEAVED RAPE, MUSTARD, PERMANENT GRASS SEEDS, all carefully selected, and delivered Carriage paid at moderate rates.

ROSES.

JOHN CRANSTON'S DESCRIPTIVE CATALOGUE OF ROSES FOR 1860 AND 1861 is now ready for distribution. It will be forwarded as usual to all customers and free to all applicants.

J. C. flatters himself that his Catalogue will be found a useful guide to all purcha-ers, likewise to every one interested in the cultivation of the Rose.

The descriptions of New Roses will be found copious and faithful, so far as was possible to make them from the experience of one season.—Nurseries, King's Acre, near Hereford.

NEW ROSES.

A. VAN GEERT, NURSERYMAN, Ghent, Belgium, begs to recommend the following New Hybrid PERPETUAL ROSES, sent out for the first time :—

MME. AUGUSTE VAN GEERT (P. Robichon).—A very pretty well formed striped Rose, 12*s*.

TRIOMPHE D'AMIENS (Mille Mallet). — Extra well formed, beautiful red (velouté), spotted with white, 21*s*. Gained the Gold Medal at the Exhibition of Amiens, 1859.

REINE DES VIOLETTES (Mille Mallet). — Large flower (forme coupe), deep violet colour, 18*s*.

One over for every four of a sort taken.

CATALOGUES.

H. LANE AND SON'S CATALOGUES for the present season are now ready, and have been sent to their customers as usual. The following may be had upon application :—

CATALOGUE OF ROSES,
CATALOGUE OF TREES AND SHRUBS,
CATALOGUE OF FRUIT TREES.

The Nurseries, Great Berkhamstead, Herts.

CATALOGUE.

YOUELL AND CO.'S GENERAL AND DESCRIPTIVE PRICED CATALOGUE for this season is now ready, and will be sent free on application.

It contains detailed Lists of Greenhouse Plants, Conifers, Shrubs, as well as all the newest introductions in Soft-wooded Plants.—Royal Nursery, Great Yarmouth.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SON'S PRICED AND DESCRIPTIVE CATALOGUE FOR 1860 AND SPRING 1861, comprising Fruit Trees of all the leading kinds, new and selected Roses, fine varieties of American Plants, Choice and Rare Conifers, Evergreen and Deciduous Trees and Shrubs, and a fine Stock of Transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

WINTER BLOOMING PLANTS.—Purchasers are respectfully invited to inspect the very large stock of the Subscribers. AZALEAS, ERICAS, EPACRIS, CYTISUS, and ACACIAS, can be seen in thousands.

Fine grafted JASMINUM GRANDIFLORUM, well set with flower. OTAHEITE ORANGES in fruit, &c.

HUGH LOW & Co., Clapton Nursery, N.E.

WINTER FLOWERING PLANTS.—We have a large stock of fine healthy plants, well set with bloom, of the best varieties of AZALEA INDICA, CAMELLIAS, EPACRIS, and ERICAS, and will be glad to quote prices upon application. Also very nice grafted plants of JASMINUM GRANDIFLORUM, ACACIA GRANDIS, PULCHELLA, AGROPHYLLA LONGIFLORA MAGNIFICA, and others.

DWARF OTAHEITE ORANGES, beautifully set with fruit.

JAMES DICKSON & SONS, Newton Nurseries, Chester.

WINTER AND SPRING FLOWERING PLANTS.

F. AND A. SMITH are now sending out at reasonable prices finely [illegible] Aphelexis, Boronias, Burchellia, Chorozema, Cineraria, Cactus, Cytisus, Carnation (Tree), Daphne, Epacris, Ericas, Eutaxia, Gardenias, Geraniums, Hydrangea, Primula, Prostranthera, Poinsettia, Polygala, Roella, Roses, Indica minor, Devoniensis, Yellow Noisette, Gloire de Dijon, Cramoisie supérieur, &c. Tremandra, Greenhouse Climbers in variety. Also a selection of Hyacinths and Tulips suitable for Forcing in good condition. Prices with Lists on application.—Dulwich, Surrey, S.

CARNATIONS AND PICOTEES.

JOHN KEYNES is prepared to send out Six New and Splendid CARNATIONS and Six New and First-rate PICOTEES, the 12 pairs for 3*l*.

CATALOGUES now ready. The Silver Cup was awarded to J. KEYNES at the National, where some of these Seedlings were exhibited in his Stand, which will not easily be forgotten by those amateurs who saw them. There being but few pairs of a sort, early application will be best to secure good plants.

Salisbury, October 27.

NEW GOLDEN STRIPED ARBOR-VITÆ.

(THUJA VERVAENEANA.)

A. VAN GEERT, NURSERYMAN, Ghent, Belgium, begs to announce he is now ready to send out the above very showy novelty, of which he has purchased the entire stock of the obtainer. M. Vervaene, of Ghent.

Price 7*s*. 6*d*. each ; one over for every three taken.

CRIMSON PERFECTION RHUBARB.

ROBERT SALT again begs to offer the above excellent variety of RHUBARB, feeling confident that it will continue to give every satisfaction. It is very early and productive, and the interior of the stalks a crimson colour.

Price—1-year old roots, 8*s*. per dozen ; 2-year old ditto, 12*s*. ; 3-year old ditto, 18*s*., with usual discount to the Trade.

Longton Staff, Oct. 27.

BUCKLEY'S NEW CRIMSON RHUBARB.

JOHN BUCKLEY, GARDENER and SEEDSMAN Saltisford, Warwick, begs respectfully to offer to the public his new RHUBARB, the quality of which surpasses any other yet out. Specimens have been sent to Dr. Lindley for his opinion. See the following in the *Gardeners' Chronicle* of February 26, 1859 :—

"John Buckley, your specimens are very handsome, rich rose, red quite through, and and are evidently derived from Bucks, the true Rheum undulatum. When cooked they were remarkably delicate and free from stringiness."

It has also been exhibited at Messrs. Hurst & M'Mullen's, 6, Leadenhall Street, London, where plants may be had Wholesale and Retail. Price 3*s*. 6*d*. each. A liberal allowance to the Trade.

RHUBARB.

BALDRY'S SCARLET DEFIANCE is now the best sort in cultivation, either for market gardeners, private growers, or forcing. It was awarded First Prize, May 2, 1860, by the Pomological Society of London, when 18 varieties were exhibited, a portion of each kind was examined, Baked, and also a portion examined Green. The Society report that it is unquestionably a First Class Variety, very stout in habit, medium in length. Pulp very deliquescent, high coloured, and [illegible]bly subacid, excellent for market as well as for private growers. Mr. Baldry of Enfield has a very large quantity of roots (strong crowns), to sell at 12*s*. per half dozen. 1*l*. 1*s*. per dozen, or 6*l*. 6*s*. per hundred, to include package, on receiving Post-office Order.—Address to Mr. WILLIAM CLARK, Seedsman, Bishopsgate Street Within, London, E.C., the sole Agent.

PINE APPLES, GRAPES, ETC.

PINE PLANTS, FRUITING AND SUCCESSION.
GRAPE VINES, FROM EYES FOR FRUITING IN POTS, OR PLANTING.

JOHN WEEKS AND CO. can supply any quantity of very fine healthy Pine Plants, either Fruiting or Succession.

GRAPE VINES remarkably strong and fine, 50 varieties, all the best sorts.

JOHN WEEKS AND CO.'S HORTICULTURAL SHOW ESTABLISHMENT is entirely devoted to the growth and Forcing of GRAPES, PINES, PEACHES, FIGS, CUCUMBERS, and other choice Fruits. The whole open for inspection, thereby showing the most improved plans of HORTICULTURAL BUILDINGS with the VENTILATING and HOT-WATER APPARATUS in full operation.

JOHN WEEKS AND CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, London. Plans, Estimates, and Illustrated Catalogues free on application.

GRAPE VINES FROM EYES IN POTS.

LUCOMBE, PINCE, AND CO. have now a remarkably fine healthy stock of strong Vines, from 6 to 10 feet high, of all the choicest sorts, fit for immediate planting, propagated from eyes, taken from their own experimental Vinery which enables them to warrant each kind true to name.

LISTS of sorts and prices may be had on application to them.

Exeter Nursery, Exeter.

GERANIUMS, HERBACEOUS AND ALPINE PLANTS. ORCHIDS, CHRYSANTHEMUMS, HARDY VARIEGATED PLANTS, &c.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their new priced and descriptive CATALOGUE of the above, to which are added supplemental Lists of Fuchsias, Stove, Greenhouse, and Hardy Plants, Ferns, Ornamental Foliage and Variegated Plants, Fruit Trees, &c. (which include the best new plants of the season, is now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

HARDY SCARLET RHODODENDRONS.

JOHN WATERER begs to announce that his New DESCRIPTIVE CATALOGUE of HARDY SCARLET and other choice RHODODENDRONS, as are annually displayed at the Royal Botanic Gardens, Regent's Park, is now published and will be forwarded on application. It likewise furnishes a List of all popular Hardy Plants, with a selection of the most desirable Conifers, with heights and prices.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

The CATALOGUE can also be had of Mr. JOHN KERNAN, 4, Great Russell Street, Covent Garden, W.C.

CHOICE BULBS.

STEPHEN BROWN'S CATALOGUE (late BASS & BROWN) supplied free on application. It contains one of the finest collections of DUTCH, CAPE, and other BULBS. The cultural and descriptive matter is this year greatly enlarged, and prices are very moderate.

Finest named Hyacinths, 6*s*., 9*s*. and 12*s*. per doz.

Fine, in colours, without names, 3*s*. per dozen.

Assorted Collections of Bulbs, either greenhouse or hardy, at 10*s*. 6*d*., 21*s*., 42*s*., 63*s*., 84*s*., and 100*s*.

If 20*s*. and upwards, free to all stations in London.

Seed and Nursery Establishment, Sudbury, Suffolk.

DUTCH FLOWER ROOTS.

CHARLES TURNER, THE ROYAL NURSERIES, Slough, has just received his usual large consignments from Holland, and is gratified in being able to state that the bulbs are very fine, and in the best condition. The ANNUAL CATALOGUE is just issued, and will be sent free to any address.

As successful cultivation depends in no inconsiderable degree upon early planting, the great advantage of giving immediate orders is obvious.—The Royal Nurseries, Slough ; adjacent to Eton and Windsor, and also at Salt Hill.

DUTCH BULBS, good and cheap.—The following Collection for 10*s*. 6*d*. :—12 choice Hyacinths, 12 Narcissus, 20 early Tulips, 20 Double Tulips, 12 Jonquils, 20 Iris, 12 Anemones, 100 mixed Crocus, 12 Gladiolus, 50 Snowdrops, 25 Ranunculus, 12 Fritillarias.—WM. DENYER, Florist, 82, Gracechurch Street, London, E.C.

IMPORTED DUTCH BULBOUS ROOTS.

E. P. DIXON will supply the following on receipt of Post-office Order for 21*s*., viz. :—100 Crocus, 20 vars.; 12 Double Narcissus, 12 Poeticus Narcissus, 12 Duc van Thol Tulips, 12 Tournesol Tulips, 12 Rex Rubrorum Tulips, 12 Finest mixed Fritillarias, 12 Spanish Iris, 12 English Iris, 3 Jacobæa Lilies, 6 Crown Imperials, 50 Scarlet and 50 Yellow Turban Ranunculus, 12 Parrot Tulips, 50 Double Snowdrops, 12 Grand Monarque Narcissus, 12 Double Anemones, and 6 Choice Hyacinths —57, Queen Street, Hull.

TRITOMA UVARIA GLAUCA. — Nothing can excel the beauty of this truly magnificent hardy Herbaceous Plant. Some of the old-established plants have had this season from 20 to 30 spikes of beautiful orange-scarlet flowers, and it is certainly the most effective and showy plant among the tribe of perennials.

Blooming Plants, 12*s*. per doz. | One year younger, 6*s*. per doz.

Orders of the above will be executed on receipt of a Post-office Order, or Postage Stamps for the amount.

JAMES KITLEY, Lyncombe Vale Nursery, Bath.

EARLY FLOWERING BEDDING TULIPS.

The finest Collection of the above are described and Priced in E. G. HENDERSON AND SON'S BULB CIRCULAR, which may be had on application (postage free), also notices of the following :—

LILIUM GIGANTEUM.
" " CORDIFOLIUM.
" " SPECIOSUM (LANCIFOLIUM) GRANDIFLORUM.
AMARYLLIS.—A splendid collection
CYCLAMEN.—The finest collection of this charming plant.
SCILLA SIBIRICA —The most brilliant blue spring-flower.
A PRICED LIST OF Garden Plants with silvery foliage.
" " " with variegated foliage.
" " " with ornamental do.
" " early Spring-flowering Garden Plants.
" " New French blotched Pansies.
" " GYNERIUM ARGENTEUM, per 100 or 1000., each 6*d*., 9*d*., to 2*s*. 6*d*.

LADY EMILY PEEL PETUNIA. (Surpassing Shrubland Rose, Marquis de la Ferté, and Countess of Ellesmere).

ANNIE KIEN. The greatest novelty of the season in Petunias.

CLOTH OF GOLD and GOLDEN FLEECE.

The above Summer Bedding Geraniums have proved to be the finest of all varieties in their section—surpassing the Golden Chain and others in their close and dense habit, richness of leaf-tint, and picturesque effect, presenting a more even and unbroken surface of golden verdure than any other known plants

CAMELLIA TRICOLOR IMBRICATA PLENA.

Wellington Nursery, St. John's Wood, London, :

TO THE TRADE AND OTHERS.

PAMPAS GRASS AND SPERGULA PILIFERA.

SUTTON AND SONS invite inspection of the Pampas Grass now in bloom in their Nursery, from which the photograph was taken last season, as published in their Amateur's Guide. They have also on sale strong plants in pots at moderate price if taken by the dozen, hundred, or thousand.

Also SPERGULA PILIFERA TUFTS AND SEED.

Reading, Oct. 27.

THE BEST SHOW HYACINTHS.

SUTTON'S SELECTION.

HYACINTHS, choice sorts, by name, 9*s*. per dozen. Ditto ditto, good, 6*s*. per dozen.

Also, all other kinds of BULBS, good and cheap, as see SUTTON'S PRICED CATALOGUE, now ready, post free.

Royal Berks Seed Establishment, Reading.

FRUIT TREE CATALOGUE FOR 1860-61.

JAMES VEITCH, JUN., begs to announce that his CATALOGUE of FRUIT TREES, comprising a selection of all the best known varieties in cultivation, is now ready, and will be forwarded on application.

J. V., jun., would respectfully solicit early orders, as owing to the late severe winter a larger demand than usual is anticipated, and the earliest orders have invariably the best plants.

Royal Exotic Nursery, King's Road, Chelsea, S.W.—Oct. 27.

SUPERB HALF SHRUBBY SEEDLING CALCEOLARIAS.

JAMES VEITCH, JUN., having a good Stock of strong young established plants of the above, more than he requires for his own blooming, begs to offer the surplus at

6*s*. per dozen, or 42*s*. per 100.

The Seed being saved with great care from fine shaped flowers of the richest and most varied colours, the Stock now offered may be fully relied on.

J. V., Jun., has also a larger quantity of HUMEA ELEGANS established in single pots, than it is convenient for him to winter ; these he offers at 9*s*. and 12*s*. per dozen according to size.—Royal Exotic Nursery, King's Road, Chelsea, S.W.

DEVON AND EXETER BOTANICAL AND HORTICULTURAL SOCIETY.—HUYSHE'S VICTORIA PEAR.—A PRIZE of TWO GUINEAS, presented by the Rev. JOHN HUYSHE, will be awarded for the best TWELVE SPECIMENS of the above mentioned Pear, to be exhibited at the Devon and Exeter Botanical and Horticultural Society's Show at Exeter, on FRIDAY, the 16th of November next. Non-subscribers to the Society to pay an entrance fee of 2*s*. 6*d*.

Notice of intention to exhibit must be sent to the Honorary Secretary not later than Saturday the 10th November, and specimens may be transmitted to him on or before Wednesday the 14th, with the entrance fee.

Exeter, Oct. 25th, 1860. T. W. GRAY, Hon. Sec.

The Gardeners' Chronicle.

SATURDAY, OCTOBER 27, 1860.

IT is to be doubted whether there is any subject whatever in the Gardening world that has been so long debated to little or no purpose as the preparation of A BORDER FOR VINES. Forgetful of the first principles of cultivation, men have lost themselves in strange conceits, which are as remote from anything in nature as truth from falsehood. The golden rule in gardening is to follow nature exactly ; or at least with no further departure from her guidance than may consist in providing more food for a plant than the savages of vegetation can of themselves procure. Of course, in laying down this broad principle, it is understood that the nature which is to be our guide is nature in her most perfect state. It is not meant, because certain plants may be found wild in jungles and copses that they are therefore to be compelled to crowd each other in a garden ; nor because some species straggle beyond the great limits of their race, that therefore such extreme cases, however natural they may be, are to be made the subject of slavish imitation.

The great difficulty that occurs in applying this principle is to determine what *are* the most favourable conditions in nature. It is not everybody who when he sees an object or observes an event, knows what he is beholding. To observe is an art which few men can exercise with anything approaching accuracy. It demands a long and skilful cultivation of the senses and reasoning faculties. Above all things it requires a strict avoidance of that evil ha it called "jumping to a conclusion," which is the foolish parent of horticultural error.

In nothing is this truth more apparent than in

the subject of the present remarks. Men imagine that the Vine must like a soil which exists in no place where it naturally grows. They see a Cabbage thriving on a dunghill, and straightway they conclude that a Vine must love a dunghill also. They see a Cucumber drinking up pailsful of water, and luxuriating in warm mist, and down goes in their memorandum book the axiom that a Vine must like a heated swamp. Hence two of the grand errors in Vine cultivation.

When we look into English gardening books we find as many ingredients required for a Vine border as for a magical incantation.

> "In the poison'd entrails throw.
> Toad, that under a cold stone,
> Days and nights hast thirty-one
> Swelter'd venom sleeping got,
> Boil thou first i' the charmed pot!
> Fillet of a fenny snake,
> In the cauldron boil and bake:
> Eye of newt, and toe of frog,
> Wool of bat, and tongue of dog,
> Adder's fork, and blind-worm's sting,
> Lizard's leg, and owlet's wing.
> Scale of dragon, tooth of wolf;
> Witches' mummy; maw, and gulf,
> Of the raven'd salt-sea shark;
> Root of Hemlock, digg'd i' the-dark;
> Liver of blaspheming Jew;
> Gall of goat, and slips of Yew," &c., &c., &c.

We beg pardon of our learned friends who patronise Vine-border mixtures; we are far from insinuating that they are conjurors, or capable of bewitching anything; but really the witches' prescription is too much like some of theirs to be forgotten. Sweepings of pavements, road scrapings, rotten Oak leaves, old tan, bricks, lime-rubbish, shell marl, mild lime, gravel, bone dust, pigeons' dung, sheep droppings, Bean straw, brown loam, wool, woollen rags, limestone, hoofs, horns, trimmings of hides, hair, the entrails of a sheep, a cow's leg, a hog's head, a dead horse, are all recommended in turn by one ingenious writer or another, to say nothing of other unsavoury ingredients. And yet a Vine is simple in its tastes, clean in its habits, and abhors garbage. It loves free air, a warm rocky soil, and in the latter part of its season a fierce sun. Give it that and it has all that its constitution demands.

If we look around we find examples enough, some record of which is to be found in our own columns. The fine Grapes grown by the late JOHN WILMOT, of Isleworth, had their roots in clay, cinders, and hard rubbish. Mr. GEORGE CRAWSHAY'S Vines grew in a gravel walk. Those of Mr. GLENDINNING, at Turnham Green, had nothing to feed upon except a pathway of stiffish clay and common black garden mould. The great Vine at Cumberland Lodge, near Windsor, perhaps the finest now in England, draws its supplies from a bed of hard sand. Nor do we believe that when in its glory the old Vine at Hampton Court was better fed, for the notion that its roots were in a sewer is, as far as we have been able to discover, wholly unsupported by evidence. A still more recent example of the error in supposing that the Vine requires the amazing mixtures that have been prescribed for it is afforded by the plants now growing in the great conservatory of the Horticultural Society at Chiswick. We suppose that no one will deny their being in the highest health, or their crop all that can be desired; there are those indeed, and men of no small authority in such matters, who pronounce it too heavy. And in what have their roots been growing? At first in loam and chopped turf with a little charred earth and some manure, just to give them a start; and now in a bank of gravel, the pebbles of which are held together by soapy loam mixed with garden mould. To be sure, the bank is warm and dry, and high above the surrounding level: but that is precisely what the Vine really does require; and into it the roots have already penetrated for 10 feet. The fact is that any naturally good soil affords a Vine all the food it wants, provided the other conditions of vigorous growth are carefully ensured and skilfully maintained.

THE readers of the *Gardeners' Chronicle* do not require to be reminded how constantly we have supported the opinion of those who believe that the vegetable world produces other substances fit for PAPER MAKING besides rags. It has always appeared to us inconceivable that no other vegetable refuse should be discoverable, which could be as profitably used up in a paper mill as the remains of tattered garments. Among the materials procurable in limitless quantity we have on more than one occasion pointed to the exhausted leaves and husks of Indian Corn, which, although not articles of English agriculture, are producible in every country the summer heat of which is equal to that of Southern France.

It now appears from a statement in the *Daily Telegraph*, the best conducted of the penny daily press, that this opinion has already received full confirmation. We condense the account given by our able contemporary, based upon an article in the columns of the *Breslauer Gewerbeblatt*;—

Recent experiments have proved Indian Corn to possess not only all the qualities necessary to make a good article, but to be in many respects superior to rags. The discovery to which we allude is a complete success, and may be expected to exercise the greatest influence upon the price of paper. Indian Corn, in countries of a certain degree of temperature, can be easily cultivated to a degree more than sufficient to satisfy the utmost demands of the paper market. Besides, as rags are likely to fall in price, owing to the extensive supply resulting from this new element, the world of writers and readers would seem to have a brighter future before it than the boldest fancy would have imagined a short time ago. This is not the first time that paper has been manufactured from the blade of Indian corn; but, strange to say, the art was lost, and required to be discovered anew. As early as the seventeenth century, an Indian Corn paper manufactory was in full operation at the town of Rievi in Italy, and enjoyed a world-wide reputation at the time; but with the death of its proprietor the secret seems to have lapsed into oblivion. Attempts subsequently made to continue the manufacture were baffled by the difficulty of removing the flint and resinous and glutinous matter contained in the blade. The recovery of the process has at last been effected, and is due to the cleverness of one Herr MORITZ DIAMANT, a Jewish writing master in Austria, and a trial of his method on a grand scale, which was made at the Imperial manufactory of Schlögelmühle, near Glognitz (Lower Austria), has completely demonstrated the certainty of the invention. Although the machinery, arranged as it was for the manufacture of rag-paper, could not, of course, fully answer the requirements of Herr DIAMANT, the results of the essay were wonderfully favourable. The article produced was of a purity of texture and whiteness of colour that left nothing to be desired; and this is all the more valuable from the difficulty usually experienced in the removal of impurities from rags. The proprietor of the invention is Count CARL OCTAVIO ZU LIPPE WEISSENFELD, and several experiments give the following results:—

1. It is not only possible to produce every variety of paper from the blades of Indian Corn, but the product is equal, and in some respects even superior, to the article manufactured from rags.

2. The paper requires but very little size to render it fit for writing purposes, as the pulp naturally contains a large proportion of that necessary ingredient, which can at the same time be easily eliminated if desirable.

3. The bleaching is effected by an extraordinarily rapid and facile process, and, indeed, for the common light coloured packing paper the process becomes entirely unnecessary.

4. The Indian Corn paper possesses greater strength and tenacity than rag paper, without the drawback of brittleness so conspicuous in the common straw products.

5. No machinery being required in the manufacture of this paper for the purpose of tearing up the raw material and reducing it to pulp, the expense, both in point of power and time, is far less than is necessary for the production of rag paper.

Count LIPPE having put himself in communication with the Austrian Government, an Imperial manufactory for Indian Corn paper (*maishalm papier*, as the inventor calls it) is now in course of construction at Pesth, the capital of the greatest Indian Corn growing country in Europe. Another manufactory is already in full operation in Switzerland; and preparations are being made on the coast of the Mediterranean for the production and exportation on a large scale of the pulp of this new material.

Such are the statements made by our contemporary, with whom we join in the expression of a fervent hope that a great traffic will spring out of this new material, and that English vessels will shortly be freighted with shiploads of books and paper in embryo. We cannot however agree with him in believing that Indian Corn will ever be grown in England for the supply of paper mills. It is to be hoped that English land can be applied to more profitable uses.

ORANGE TREES AND ORCHARD HOUSES.

CALLING a short time back at Sawbridgeworth I was delighted to see the large provision which Mr. Rivers has made and is making for the introduction of the Tangier and other sweet Oranges into orchard-house cultivation. It is rather a slur upon the progress of horticulture to say that the Orange is not so well cultivated in England at the present time as it was nearly half a century ago, but such is the fact, for I have now before me a drawing of two China Oranges, grown in Derbyshire in 1813, weighing 2 lbs., and each girthing 13 inches; and these not Oranges to look at, but thin-skinned fruit, rich and luscious, and such as were used daily for dessert in that establishment. These Oranges, in fact the different species and varieties of Citrus, were grown for use as well as ornament; and from two large houses exclusively devoted to the cultivation of these fruits many hundreds of dozens were annually taken both for confectionary and other uses. All (but a small proportion in boxes) of these trees were planted out, some being trained on the back wall, which they covered completely with the systematic regularity of the best trained Peach tree; others were trained on table trellises, while a large proportion were standard and dwarf bushes, and trees of larger size than any in the country at the present time. From these trees being planted out it will be seen they were not exposed in the open air as is the custom at the present time, and this no doubt was the hinging point of success in their cultivation. But the object in their cultivation was two-fold; first, ornament, for which they fulfilled the requirements of the proprietor in the most satisfactory manner; and secondly, the supply of the table, which was accomplished in a style which rendered the desserts not only the most *recherchés* but the best appointed I have ever seen, even up to the present time. A dish of full sized and thoroughly matured Oranges, cut with a small twig, a leaf or two, and sometimes a few flowers adhering, and tastefully dished up, is really a sight worth seeing, and for effect on the table not to be surpassed by any fruit in cultivation. But if you require fruit of that description, the conditions necessary for its production must be fulfilled, and these will not be found in exposing the trees to the open air through the summer and autumn months, no more than the conditions of first-class Grape growing would be carried out by planting the Vine to pole, as in its native Vineyard, and then grumbling at the seasons because the Grapes do not attain the same amount of perfection.

What, then, are the necessary conditions, and how are they to be attained? First, we must have, as near as we can get it, an Italian summer, with abundant moisture and the temperature varying from 45° to 70° by night and from 70° to 100° in bright sunshine during the day. With this fine growing moist temperature we must get the fruit swelled to its fullest proportions, and then we must have a free circulation of air, and a drier but not dry atmosphere to perfect its maturation. If you want a thick skinned, woolly, juiceless, bitter Orange, and about as good to eat as a fresh gathered Medlar, follow the prevailing fashion of exposing in the open air from June to October, pride yourself also on the number of years the plant has been in the same pot or tub, and also on the small quantity of water or manure it requires, and your object will be attained to the fullest extent; but if you want an Orange with the skin little thicker than a shilling, take a young healthy plant and treat it much the same as you would a spring started pot Vine, thin out the fruit, allowing just sufficient for the plant to bring to maturity, supply it liberally with weak manure-water, and you will produce a fruit with the juice almost oozing through the skin, and equal in point of flavour to the best Orange ever imported from Italy or the Azores. In fact they are better, for an Orange fully matured upon the tree is more brisk and sprightly in flavour than it is possible those can be which are gathered while they are yet green and ripen during the voyage to this country.

While Oranges can be bought in the streets of good quality at "three a pinny, three a pinny, real Chany," it may be thought a bold step to attempt to grow them as a mercantile speculation in this country. Mr. Rivers thinks it would pay, and I have little doubt but he is quite right, for on the same principle that the monied classes—the purchasers of luxuries—will give 5*s.* to 10*s.* per lb. for hothouse Grapes in preference to Lisbon at 1*s.* to 1*s.* 6*d.*, so would they pay a remunerative price for the finer kinds of Oranges, when they discovered how really superior they are; while the blossom, for perfumery and the supply of Covent Garden and other markets, and the thinnings of green fruit for confectionary purposes, will pay most if not all the expenses of cultivation.

I know nothing in the horticultural world more enchanting than a well managed collection of Orange trees and their allies. The great variety among the Oranges, the gorgeous fruit of the Citrons and Shaddocks, the splendid foliage and the rich perfume of the whole, render these trees especially deserving of cultivation in this country, and trees, too, which the most uninitiated in horticultural matters may soon learn to manage successfully.

Glass houses, too, are cheap enough; Mr. Rivers showed me an excellent span-roofed house, 100 feet long, 25 feet wide, 5 feet high at the sides, and 12 feet to the apex of the roof, which he had had put up last spring at an expense of 130*l.*, or just 26*s.* per foot forward. This was not a make-shift house, but one well put together and fit for the garden of a nobleman. Such a house would be just the thing for the cultivation of the Orange. All that would be necessary would be a

heating apparatus to expel frost and to assist the trees a little at the commencement of the growing season. A couple of 4-inch pipes running all round the house would be sufficient for that purpose, and they could be put there for little more than 30*l*., boiler included. Indeed a really substantial and well appointed house of the preceding dimensions could be put up on Mr. Rivers's plan and heated perfectly, with considerable architectural ornament added, for less than 200*l*. This would not be an extravagant sum for such a purpose, and if the time should ever come when the fruit garden is treated as a separate establishment, then the Orange-house will be considered one of its greatest luxuries. I had intended when I commenced, to have offered some detailed observations on the cultivation of the Orange, but space admonishes me, and they must be deferred to a future opportunity, as well as some remarks on the general appearance and management of Mr. Rivers's orchard-houses. *W. P. A.*

TEA CULTIVATION IN INDIA.

We find the following interesting statement in the Proceedings of the Revenue Department of the Madras Government; from the report of Dr. Cleghorn.

Localities where Tea Plants are growing.

4000 feet. I. Shevaroy Hills.—There are several well grown trees at Yercaud, introduced by G. Fischer, Esq.; these have not been picked or pruned, and, indeed, have been left to nature, but are growing vigorously nevertheless.

4500 feet. Rain-fall 120 in. M. Temp. 68.° II. Coorg.—A case of plants was brought from China by Colonel (Lieut.-Gen.) Dyce in 1843; these (now trees) appear to me over luxuriant, producing a rapid growth of leaves and not bearing seed with regularity.

4800 feet. III. Nundidroog. — A number of plants have lately been sent to this Hill Sanatarium, they were beginning to droop in the Lál Bágh Garden, Bangalore, but there is hope of their thriving in their new location. "The mean temperature of Bangalore is 75°, and the average rain-fall 35 inches." The climate being too dry and too hot, the plants necessarily become dwarfed.

5600 feet. Rain-fall and Mean Temp. not known. IV. Bababooden Hills. — Four plants from General Dyce's stock were received from Mercara in 1847, these grew well without care. A packet of fresh China seeds was sent last year; Colonel Porter, Superintendent of Nuggur, raised 23 plants above Ghát near the Sircar Bungalow, and a number of seedlings have been planted out about a thousand feet lower by Mr. Denton, Coffee Planter.

6060 feet. Rain-fall 55 in. V. Nilgiri Hills.—*a. Coonoor.*—A full report of Captain Mann's plantation is recorded in Proceedings of Government, No. 1272, dated 21st September, 1859.

Besides this, mentioned places. there are a few plants at the under-

7300 feet. Rain-fall 60 in. M. Temp. 58°. *b. Ootacamund.* — Introduced or raised by Mr. McIvor, Government Gardens, from Saharunpore Seed and by General F. C. Cotton at Woodcote.

c. Kaity.—Introduced or raised by Sir S. Lushington and Lord Elphinstone.

d. Kulhutty.—Introduced or raised by Mr. Rae.

7100 feet. VI. Pulni Hills.—Major Hamilton reported that a considerable number of Tea plants at Kudaikarnal, were an inch or two above ground and appeared fresh and healthy.

1200 feet. VII. Curtallam.—I have received flowering specimens from the old spice garden, which correspond with the standard figures of *Thea Chinensis*. The shrubs are 20 years old, 12 to 15 feet high, and where the seed came from is not known.

	Altitude Feet	Rainfall Inches
Caldoorty ..	6700	150 to 200
Vellymallay near Udagiri ..	1800	80
Athaboo near Tinnevelly ..	3200	40

VIII. Travancore. —Tea trees grow luxuriantly in Messrs. Binny & Co.'s plantations (formerly Mr. Huxham's), 40 miles east of Quilon on the road to Curtallam, and from whence some plants were procured 10 or 12 years ago, which were planted at Vellymallay, near Udagiri, 1800 feet, and at Athaboo near Tinnevelly frontier, 3200 feet. At both places they are growing luxuriantly.

These facts are taken from General Cullen's letter to the Madras Government, and I may state that some seeds received from him were planted and throve on the Nilgiris at an elevation of 5500 feet.

4. In Tea, as in all cultivated plants, there are variations, the discrimination of which is of the utmost importance commercially, and also in an economical point of view, but I have not materials for attempting a precise definition of these differences. This, however, is known, that the seed having been obtained from different parts of China, the introduced plant varies in stature exceedingly, from a bushy shrub of 3½ feet to a ramous tree, 25 feet high.

5. There is a vast difference also between the narrow leaved forms and broad leaved specimens in some of the localities mentioned.

6. At present the leaves are taken indifferently from several sorts, which should not be done, when preparing Tea for commercial purposes; and the means of manufacture are of the rudest description.

Java (under Equator), Siam and China 10° to 31° N. L. (Fortune).
Rio de Janeiro 22½° S. L. Tang-chow-foo 36° N. L. (Reeves).
Principal districts between 27° and 31° N. L. (Fortune).

7. The Tea shrub of commerce, though long confined to Eastern Asia, is now cultivated far beyond the limits of China, and Japan, in Java (under the Equator) in Assam, the North West provinces of Hindustan on the banks of the Rio Janeiro, and recently in North America. From the published reports of Mr. Fortune and Dr. Jameson (Selections from the records of the Government of India, No. XXIII, 1857), it appears to prefer a climate probably of 67° to 73° mean temperature. Such is nearly the mean temperature of the hill slopes near Kúnúr, Kotagiri, and of many of the valleys in the Eastern and Northern slopes of the Pulni and Nílgiri Hills, and also of the Bababooden range in Mysore, and of Kudra Muka in South Canara.

8. It ought also to be observed, as illustrative of the hardiness of the Tea shrub, that the cultivation extends over a great breadth of latitude (from the banks of the Rio Janeiro 22½° South Latitude to the province of Shan-ting in China 36½ North Latitude), and that as we recede from the Equator, the lower latitude compensates for the difference of altitude. The Chinese cultivate on the lower slopes of the Hills, whilst in the North West Provinces, the culture is carried on between 2000 and 6000 feet.

9. This valuable plant has been found wild in Upper Assam and Chacar, while its congeners abound on the Nilgiri and other mountain ranges of this Presidency. Its cultivation, therefore, might be attempted with good prospect of success in any of the localities mentioned in paragraph 7. In the case of Captain Mann's plantation near Kúnúr, we have the opinion of four competent judges — Mr. H. Ricketts, B.C.S.; Mr. Stanisforth, B.C.S.; Major R. Strachey, Beng. Eng.; Captain Impey, Beng. Eng.—that the experiment had entirely succeeded as regards the grow of the plant.

It now only remains to prove the merchantable character of the leaf, and this I hope will soon be tested.

RECEIPTS AND EXPENDITURE OF THE ROYAL FORESTS,

For the Year Ending March 31, 1860.

From the 38th Report of the Commissioners of Woods, &c.

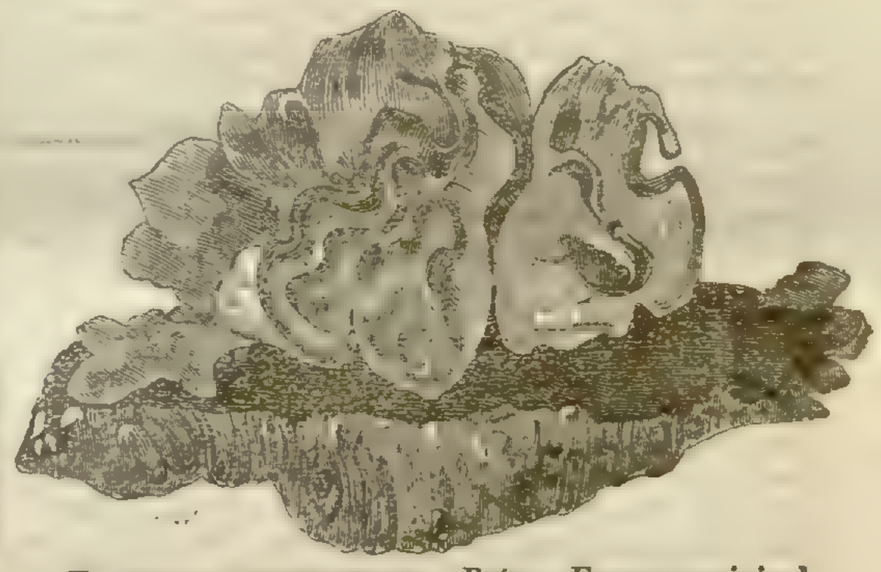
	Receipts. £	s.	d.	Expenditure. £	s.	d.		£	s.	d.
Windsor Forest and Parks ..	6626	4	7	18,313	10	0				
New Forest ..	22,554	10	0	12,913	1	7	*Profit*,	9641	8	5
Dean Forest (excl. of Mines) ..	14,865	6	3	9205	9	6	*Profit*,	5659	16	9
Highmeadow Wood	3578	8	6	2486	8	4	*Profit*,	1092	0	2
Alice Holt ..	1496	8	11	1146	3	0	*Profit*,	350	5	11
Woolmer	1290	10	5	308	0	2	*Profit*,	982	10	3
Bere	3016	17	3	1061	18	6	*Profit*,	1954	18	9
Parkhurst ..	819	12	9	843	18	10	*Loss*,	24	6	1
Hazleborough Wood	251	1	6	272	7	7	*Loss*,	21	6	1
Salcey	1357	13	6	945	9	9	*Profit*,	412	3	9
Delamere ..	426	10	8	1085	4	10	*Loss*,	658	14	2
Chopwell Wood ..	101	8	2	470	18	2	*Loss*,	369	10	0

MYCOLOGY.—No. XXXIII.

Tremella mesenterica, *Retz.*—Few objects in nature are more beautiful than the bright orange lobed and folded gelatinous masses which are so common in autumn on dead hedges, consisting principally of Sloe or Whitethorn, and on fallen branches of Oak in our woods. The substance of this and similar productions is so different from that of Fungi in general, that they were formerly associated with Algæ, to some of which they have a certain resemblance. Since however the structure of these plants has been better known, they have quietly dropped into their true place, and are by all reckoned as Fungi. Several British species are recorded, several of which are remarkable objects from their colour, which varies from white to various shades of pink and yellow, thence to purple and bright orange, and finally to mulberry-red and chocolate, while some are of a more dingy cast and pass through several shades of brown to black.

What however renders these Fungi of the most interest is the curious way in which they connect the lower grades of the higher Fungi, as the species of Corticium (No. XIX, p. 481) with the parasitic Fungi which are so common and destructive to our corn, but especially with the gelatinous species which are so conspicuous on the different species of Juniper. These parasites are no longer isolated beings; and every pretence is now taken away for considering them as mere luxuriant developments of the cells of the mother plant, consequent on superabundant moisture and a peculiar condition of the atmosphere. At least if this theory of Unger's hold good with respect to these parasites, it must be equally true of the Fungi which are allied to them; and what then is to be said of such species as *Thelephora sebacea* which closely agrees with Tremella in structure, but is altogether independent of the substances on which it indiscriminately grows without the slightest organic union, or without deriving from them a particle of nourishment.

It is now known that in the parasitic Fungi such as Wheat mildew, the condition of the plant, as it appears when the Wheat is ripe, is not that ultimate stage in which the true fruit is produced. The jointed bodies supposed by Sir Joseph Banks and others to be either capsules or seeds, send forth filaments at a later period which bear upon them cells which are the true reproductive organs. The parasites on Juniper have precisely the same structure, but the gelatinous element



Tremella mesenterica, *Retz.* From an original sketch.

is so developed in them that they are much more exposed to the naked eye, projecting as they do an inch or more from their matrix, and exhibiting a bright orange or rufous tinge.

Now the Tremellæ, which agree with these Juniper parasites perfectly in outward aspect, possess a structure just intermediate between that of the lower Hymenomycetes and the above mentioned parasites. The hymenium in Tremellæ does not consist, as in most Hymenomycetes, of a closely packed stratum of parallel fruit bearing cells, all as nearly as possible of an equal height, but the fertile threads radiate in every direction and bear, at unequal heights, swellings at the tips of their branches which accord with the jointed bodies in Wheat mildew usually supposed to be the spores. These swellings are moreover frequently lobed and divided into fours, like the quarters of an Orange. From these lobes proceed long waved delicate threads which produce the true spores at their tips. These spores again produce in some cases at their surface little cells which are supposed to be the male organs, and as if analogy were to hold good throughout, it appears from the observations of Tulasne, that the same thing happens in some of the corn parasites, or in nearly allied species which grow on plants belonging to different natural orders.

The Tremellæ sometimes occur in great abundance on dead branches. Whole trees of Sallow are sometimes covered when dead with *Exidia recisa*, and we have seen Ash and Oak trees equally prolific. *Hirneola Auricula Judæ* is common on Elder and Elm trunks, and is the only species considered of any use, but its utility as an ingredient in gargle for sore throats is quite problematic, and depends probably on some fancied resemblance between its surface and that of the inflamed fauces.

In conclusion it may be proper to state that in Tremella, as also in the genus Dacrymyces which is closely allied to Tremella, one species of which must strike every one when growing on damp Fir pales where it is almost universal, plants frequently occur in which no true fruit is produced, but in its stead reproductive cells known under the name of conidia, and analogous with buds and other anomalous reproductive organs in Phænogams. Should any of our readers therefore try to verify our observations with a microscope, they must be prepared to meet with individuals which will not answer the normal conditions, but those only which we have just mentioned. It may be well also to state that there is a fine species of Tremella which occurs in this country, though rarely, in enormous masses at the base of living Oaks. *M. J. B.*

Home Correspondence.

The Pear and the Mountain Ash.—Inclosed I send you what I consider an extraordinary deviation from the usual laws of Nature. The inclosed Pears are gathered from a tree grafted on the Mountain Ash, Pyrus aucuparia. You will observe that the fruit is quite diminutive (though those sent are a picked sample, many being much smaller), and that they have assumed in a great measure the colour of the Mountain Ash berry; the flavour is very similar to that of the fruit of the Mountain Ash. I have no means of ascertaining what variety of Pear was grafted on the stock in question, as it was grafted some 20 years since by a labourer who is now dead. The Pears in the same orchard in which this is growing are with two or three exceptions "Perry fruit" varieties, which are of no use for any other purpose. The tree is now more than 20 feet high, and in good health, and as

far as I can learn the peculiarity is permanent. There are other trees in the vicinity worked on the Mountain Ash, but the fruit has no peculiarity about it. Is there not a question involved in this case? Whether the quality of our "worked fruits" may not be improved or deteriorated, according to the nature of the stock on which they are worked? It is a question I must leave to wiser heads than mine, but the case in question I think clearly proves the possibility of such an occurrence. *C. C., Radnorshire.* [This is a striking instance of the danger of admitting what is called proof in Natural History. Our correspondent has made a very precise statement, in perfect good faith, and yet there is no truth in it. The tree he sends is not a Pear at all, but it may have been worked on a Mountain Ash. It is nothing more than the well-known Pyrus Bollwylleriana, which is no more a Pear than an Apple, but a curious and distinct wild species.]

Variegated Araucaria.—Permit me to enclose for your inspection some leaves taken from a seedling Araucaria imbricata, growing in the pleasure grounds here. You will observe that some of the leaves are green, others striped green and yellow, the yellow predominating. The variegation is not confined to one branch or portion of the tree, but extends over fully one half of the entire foliage, alternating, with the green, from a few inches to a foot or more in length; the effect is exquisitely beautiful and very striking. The plant is now about 7 feet in height, and nearly the same in diameter. *Archibald Fowler, Gr. to the Earl of Stair, Castle Kennedy, Stranraer.* [We presume that the variegations in question are owing to the unusual amount of wet we have had this season, added to a naturally wet locality.]

Late Peas.—We have this day (Oct. 19) forwarded you a box containing samples in various stages of what is to us a new Pea. If not new, it is a very distinct and fine variety; the wasted appearance of the pod is natural to it at all seasons of the year; of this we are certain from our acquaintance with it for the two past seasons. We think it will prove a valuable acquisition, as the plants from which the sample in question were gathered, are now about 7 feet high, and have been bearing from about 2 feet from the ground. A dish of such Peas as those inclosed at the present season of the year would disgrace no table, and their having been gathered from plants that have been bearing for the last two months will make the kind more valuable. The following extracts from our friend's letter will confirm the truth of what we have stated. *Parker & Williams, Paradise Nursery, Seven Sisters Road, Holloway.* "We are still furnishing beautiful green Peas, and those that were so broken with the wind are curling up their tops and blooming, and are loaded with pods; they will be fine for 14 days yet. Some of the earlier rows that were ready to pick two months ago are yet yielding a dish every morning, and I have not yet gathered any from our latest sowing. To-morrow I will forward you a box with a small dish of them; I could send more in 10 or 14 days, but frost may set in; we have had 4°, but nothing is touched." [These Peas reached us on the 21st Oct., and perfectly agreed with the foregoing description. They seem to be different from Knight's Tall Green Marrow. There however remains the question whether their lateness and productiveness are inherent qualities, or are owing to the unusual wetness of the season. It is certainly an unexpected circumstance that Peas sown on the 14th May should still be bearing on Oct. 20.]

Gloire des Sablons Currant.—In Number 38 of your Paper (p. 852) Mr. Rivers publishes a very interesting article on Currants, in which, however, I notice a mistake which I beg to correct. Mr. R., in speaking of my seedling Currant, states that it is either the same as No. 12 (Striped-fruited), or a seedling from it, but equally worthless! It is neither the one nor the other, being raised by myself in the year 1854 from seeds of the old champaign or flesh coloured Currant. The seedling tree is still in my garden, and fruits not only abundantly but is well worth the description I at first published of it. If therefore Mr. Rivers finds it worthless or identical with another sort, he cannot possess the true one; at any rate he has never been supplied by me direct. *Ferdinand Gloede.*

Rose Showing.—So far as the National Rose Shows are concerned, the remarks of "J. H., of Maidstone" are as superfluous as his extra foliage. Every schedule of the N. R. S. states plainly and prominently that "any addition will disqualify." *S. R. H.*

Golden Hamburgh Grape.—As W. P. A.'s remark on the Golden Hamburgh "not being expected to ripen as perfectly in a greenhouse temperature," is contrary to my experience of that variety, and calculated to deter those from planting it that might otherwise have done so, I beg to state that the Golden Hamburgh ripened here a week earlier than the Old Black Hamburgh, in a house where some thousands of bedding "stuff" were kept, until the middle of April. It ripened about the end of the first week in September, no fire was used until the Black Grapes began to colour, and it might any ordinary season be expected to ripen by that time, without the aid of fire heat. *Thomas Gell.*

Pleroma elegans.—I never fail to bloom this plant to my entire satisfaction. I generally dry and harden off my plants in the autumn, when some of the older foliage turns a reddish brown and falls away. I am informed that plants are exhibited at London well bloomed, and with the foliage perfectly green and healthy from the bottom of the plant to the top. If this be so, I should be grateful to any of your correspondents who would kindly inform me how to accomplish this object. *Crypt.*

Pampas Grass.—A plant of this is now in full bloom at Cintra Lodge, the pretty hill residence of Mr. Martin H. Sutton of Reading. It has been in beautiful condition for the last fortnight; a similar specimen in Messrs. Sutton's Nursery at the bottom of the hill in question, half a mile nearer Reading, is also just coming finely into flower. As is so commonly the case everything is found to be earlier and the temperature higher on the hill though exposed to strong winds than the valley in which the last named plant is growing. *M.*

Rainfall in September 1860:—

Stations.	Height of Rain Guage. Above the Ground.	Above Sea Level.	Depth of Rain. Total for the Month	Total since Jan. 1st, 1860.	Greatest fall in 24 hours. Depth	Date.
	ft. in.	feet.	in.	in.	in.	
Little Bridy. Dorset	0 4	348	3 64	36.71	..	..
Barnstaple. Devon	1 9	..	3.55	39.06	.89	18
Castlefield, Calne, Wilts	0 11	330	2.57	..	.85	25
Camden Town London .	0 4	100	2.92	25.25	.89	25
Finchley Road London .	0 4	..	2.90	..	..	..
Finchley Road London ..	36 4	..	2.25	..	..	..
Oundle, Northamptonshire .	25 0?	..	2 30	..	.82	25
Norwich ..	1 0	30?	3.42	26.64	..	..
Derby .. .	5 0	170?	2.54	26.22	..	..
Manchester ..	..	..	2.88	27.67	..	..
North Shields ..	1 0	124	1.88	..	.41	29

The fall of rain during the month has been (almost for the first time this year) little if at all in excess of the average. The amounts registered at the several stations bearing nearly their usual ratios to each other, it may be inferred that the amount of rain has been distributed over the country with considerable equality. Some of the above stations having been only recently established, it is impossible to compare the amounts in the fifth column with the mean annual fall at each place; but there is reason to believe that in the southern and home counties as much rain has fallen in the nine months ending September 30, as usually falls in the whole year. *G. J. Symons*, 129, *Camden Road Villas, N.W.*

The Dodder, and a remedy for it.—I read as follows in a morning paper. "There are few agriculturists unacquainted with the pernicious effects of the parasitical plant called Dodder (*Cuscuta Europæa*) in fields of Clover and other similar kinds of fodder. In shooting up from the seed it entwines its capillary roots round those of a neighbouring plant, while it creeps up the stalk of the latter. Having effectually prevented any nourishment from being absorbed by the roots, which it keeps in its tight embraces, it soon causes its supporters to wither away, and remains sole master of the field. Thus, by the vigour with which it spreads, it will in a short time destroy a whole field. M. Forgeot, an agriculturist, has just published a remedy against this pest. It simply consists in watering the field with a solution of 2lb. of sulphate of iron for every 10 litres of water. Dodder is easily recognised by its thin yellow filaments encircling the plant, to which it clings by means of certain minute claws or thorns with which it is armed. As soon as its existence is ascertained, the infected place should be separated from the rest by an enclosure, and the plants in its immediate vicinity should be pulled up by the roots. This done, the above solution is abundantly administered; the Dodder dies away, and the Clover, freed from its enemy, regains its natural vigour." Can you tell me where I am to look for such Dodder as is here described. Its habits are not those of the English parasite. *Gradgrind.* [What the writer calls capillary roots are evidently the stems of the plant; as the "claws or thorns with which it is armed (!)" are the roots. What is meant by its preventing nourishment being absorbed by *the* roots "*which* it keeps in its tight embraces" we are unable to say. The description is doubtless a specimen of literary muddle.]

Lifting and Storing Potatoes.—The unsettled state of the weather will, I fear, prevent Potato growers from lifting and storing their crops in as satisfactory a state as they could wish; but as there appears no alternative but lifting the tubers at once and storing them away the operation must be effected. In places where large open sheds, barn floors, and such accommodation can be afforded for drying the tubers, it will not be very difficult to get them in a proper state for storing, especially if a good current of air can be allowed to pass amongst them; but in places where there is no such accommodation for drying, it will be found very difficult to store them dry, as they should be. In this case I would recommend a small quantity only (certainly not more than a cart load) to be placed together in small pits, in the centre of which should be placed a lump of lime about the size of a man's head; and before covering them in, a good dusting of quick lime should be distributed over the heap; the lime absorbs the moisture during the sweating of the tubers, and by so doing prevents them from overheating, and it also greatly improves the quality of the Potato. No doubt it absorbs much water from the tuber itself, and consequently Potatoes thus treated boil more mealy than those pitted without lime; such is my experience in the matter. The Potatoes should be allowed to remain in the small pits just mentioned for at least a month; by that time all danger of overheating will be past. They should then be put together in one or more large pits, and large baskets containing lumps of lime should be inserted in the pits about every 12 or 14 feet apart, to absorb any moisture yet remaining; the Potatoes should also be well dusted over with lime as recommended for the smaller pits. Perhaps of all the methods that have been from time to time recommended of storing the Potato, there is none equal to the old earth pit now spoken of, provided the tubers are properly cared for. Before covering them in, a good coating of straw should be placed next the Potatoes, a few open pipes should be placed in the sides of the pit to allow any moisture to escape, 6 or 8 inches of mould should then be laid firmly and uniformly over the straw, finishing the pit with a thatch all over. The Potatoes at Osberton so covered kept perfectly free from frost during the past severe winter. *Edward Bennett, Gr. to G. S. Foljambe, Esq., Osberton Hall, Worksop, Notts.*

Empress Eugenie Strawberry.—In reply to "A. B.'s" inquiry respecting this variety, I beg to say that he will find, on reference to the back Numbers of the *Gardeners' Chronicle*, that this superior Strawberry has been frequently mentioned favourably. Some few years ago, when Mr. Henry Knevett, sen., the raiser, first introduced it, it was highly spoken of by the Pomological Society (see p. 486, 1856). This called my attention to it, and whilst in London, in July, 1857, I called upon Mr. Knevett at Isleworth, who not only with his usual politeness showed me through his grounds, but offered me plants of his favourite to take home with me to France. I had thus an opportunity of judging it fairly, and I can boldly assert that we have not many Strawberries equal to it in every respect. It is to be regretted that Mr. Knevett never advertised the Empress for sale. During another stay in London in July last, I again went to Isleworth to test once more the fruit in question on the spot, and I thought it particularly good, considering the unfavourable weather we then experienced. Mr. Knevett took me to a piece of ground of 7 acres, planted exclusively with the Empress, which was in full bearing. It was a magnificent sight. I beg to add that in spite of the wet and cold season the flavour was exquisite, and as a proof I mention that I took a few overripe berries in a bottle along with me to the Rev. Mr. Radclyffe, at Rushton, in Dorsetshire, who, although having them only the following evening, pronounced them quite first rate. *F. Gloede, Les Sablons, Moret-sur-Loing, France.*

Is the Quality of Peaches known by the Leaves?—I am induced to ask an answer to this from experienced cultivators, as I find the following confident passage in a new work apparently of some authority:—"The best varieties of Peach trees may be known by the leaves having the serrated edges perfect, for, should they be smooth, the quality of the fruit will be found to be inferior. It is also remarked that the late Peaches blossoms early, and the early Peaches have their blossoms later: these facts I have frequently noticed." (Dr. Bennett's "Gatherings of a Naturalist in Australia," p. 317). If these are facts, they should be of considerable practical utility in the raising of new varieties. *J. M., Heathbank, Forfarshire.* [Ideas like this are born of fancies. The leaves of Peach trees are either serrated, without glonds, or comparatively smooth, being only crenated with globose or reniform glands at the base. Thus by their leaves they are divided into three classes. Whilst it is true that some of the best kinds are included in the class with serrated leaves, for example, the Royal George and Noblesse, yet there are excellent ones in the other classes, of which the leaves are not serrated, such as the Grosse Mignonne, Bellegarde, and Late Admirable. In the class with crenated leaves and reniform glands the sorts are not generally of so fine a quality as those in the other classes, and consist chiefly of yellow-fleshed and late Clingstone Peaches. With regard to the early Peaches blossoming late and the late ones early, such is not the case in this country.]

Foreign Correspondence.

CAMDEN PARK, NEW SOUTH WALES: *Aug.* 20.—*Bougainvillæa.*—Perhaps a few hints from the antipodes on the successful cultivation of Bougainvillæa spectabilis may not be unacceptable to your readers. I am glad to observe that at length the attention of gardeners in England is awakened to the singular beauty and easy management of this magnificent plant, but they do not seem yet to have made out all that can be effected with it; that it can be flowered in as great perfection and almost without supports, in 8 or 9-inch pots as when cultivated in a large mass of soil. It has been flourishing with us here between 20 and 25 years. I received the original plant from Messrs. Loddiges, and not long afterwards caused it to be turned out in a sheltered place, against a lofty blank wall, shutting in a range of offices, with a due eastern aspect; but near the angle of a central building which overtops the rest of the range by a story, and thus offers a due north, or full meridian aspect, to such branches as may have

extended far enough from the ground to be trained under the cornice of the second story. So long as the Bougainvillæa was confined to the eastern wall it produced but a few straggling imperfectly coloured blossoms. But when its branches had extended themselves along the northern flank of the building, throwing their shoots in wild confusion over the cornice, they at each returning spring became one rich mass of glowing colour for many weeks. Before the view was intercepted by growing trees, the brilliant hue was distinctly perceptible at considerably more than a mile. The branches open to the full morning sun on the eastern wall scarcely ever flower, and never in profusion. Some years later a second plant was turned out to occupy, with Petrea volubilis (a plant seemingly of very similar constitution), the gable end wall of a gardener's cottage with a full meridian aspect. This site being less sheltered from frost than the other, the plant is trained close to the wall until it be well filled up, and the numerous laterals are repeatedly shortened in during their succulent growth so as to get the plant completely furnished from the ground upwards with young spray, not extending above 10 or 12 inches from the wall. Even at this distance they are sometimes cut off when the fully exposed thermometer falls below 24° or 25°. From August to November this plant also becomes one sheet of magnificent bloom, and before the bracts completely fade we often find perfect seeds. Now it seems evident that it is the influence of certain conditions upon the young shoots and foliage which is the cause of the free flowering, and not any particular state of the roots. In both the above cases the foundations of the walls against which they are planted were "pigeon-holed" beneath the surface, to permit the roots to pass through to revel, during the heats of summer, in the cool damp earth beneath the floors. The original plant has a considerable extent of surface trained, as I have said, with an eastern aspect, which hardly ever flowers; whilst every bit of spray which turns the angle of the building so as to get the full influence of the meridian sun in the winter months, covers itself with rich blossom. Your readers may be here reminded that in this latitude, a full meridian aspect against a wall is by no means the hottest during the summer, especially if there be eave, cornice, or other slight projection above; in such case the sun's rays being so nearly vertical, the plants as well as the wall are nearly always in shade, and never suffer. Very different is the case with an eastern or western aspect. Our original Bougainvillæa with the former was somewhat indiscreetly too closely cut in during the hot weather, and the main stem, suddenly deprived of due shelter, although above 30 inches in circumference, was nearly killed through a short distance from the ground.

Some years since I had about a dozen nice plants of Bougainvillæa growing in pots, from 8 to 10 inches in diameter. They were not immediately required for planting out, and we did not wish to give them a larger shift; so they were put on one side—neglected, in fact—until their growth was quite stopped for want of water, and the leaves nearly all fell off. They were barely kept alive throughout the winter; but getting a seasonable drenching during a rainy period, we noticed that they began to show blossom-buds. They were at this time plants with stiff upright stems, 2 or 3 feet high, requiring no support, furnished more or less with spray and long flexible shoots. They were placed under a common frame with their tops brought close to the glass, and as their pots were filled with roots they were liberally supplied with weak liquid manure. By the end of five or six weeks they were perfectly beautiful; being nothing from the rims of the pots upwards, but growing heaps or festoons of the richest shades of purplish crimson.

In this case the roots had been starved from want of water and by confinement, but had received no unusual stimulus from heat. They had been confined in fact throughout the winter, and the maximum temperature rarely rises above 60° in the shade, whilst the minimum is very often from 26° to 30°, sometimes several degrees lower. I think, then, I may fairly assume that strong bottom heat is by no means requisite to produce the flowering state, but that it may be induced even in specimens quite small by having their roots cramped for pot room, by withholding water after the end of summer; and by exposing them to the strongest light possible, when it is desired to bring them into flower, combined with liberal treatment at root, I am persuaded that an intelligent gardener could hardly fail of success, and you have yet to learn what lovely specimens, as a pot plant, can be produced from it. I recollect some being flowered at a very small size, but the particulars I have forgotten.

At Paris, in 1855-57, I made acquaintance with the very intelligent gardener who had charge of the large houses at the Jardin des Plantes, which contain the Palms and hard wooded plants. He pointed out to me a distinct species of Bougainvillæa, which he said was the true B. spectabilis, and that it produced blossoms still more brilliant than the better known species; more approaching to vermilion in colour, and, he added, much more beautiful. I think also he mentioned that in the Brazils, where he had been collecting, there are several other species or varieties with blossoms of different hues.

Through the kindness of Prof. Decaisne I obtained a plant of this species to bring hither, which I succeeded in doing upwards of two years since. I found however that either the same, or another species very like it, had already been introduced, but I have never learned from whence. At this moment I have a fine plant of each in 12-inch pots, which promise in a few weeks to be covered with bloom. They are each from 4 feet 6 inches to 5 feet high, and something more, through having been trained into fan shape to admit of their being placed close to a wall for protection. They are plunged in fact at the foot of the large plant of the old Bougainvillæa described above as being trained against the north end of the gardener's cottage. They have been starved since the summer by want of pot room and moisture, but within the last 15 days have been well supplied with water and liquid manure. Already on the stronger branches at each axil, clusters of 12 to 20 and more of blossoms in embryo may be distinguished. In colour they are already very different (being much more brilliant) from the blossom buds in the same stage of advance upon the old variety growing close by. Should it prove to be worthy of a place along with the other I will write again by the next mail, and no doubt it can be obtained in Paris.

With our two large plants it is usual every year, after the flowering, to cut the secondary branches hard back (so as to leave barely foliage enough to protect the bark from being scorched), to encourage the production of young shoots all over; and these are again shortened or stopped as often as requisite; only we do not like to continue this system more than absolutely requisite after the autumn is well advanced. The growth will not be stopped even by two or three degrees of frost. *Wm. Macarthur.*

Notices of Books.

Le Jardin Fruitier du Muséum, ou Iconographie de toutes les espèces et variétés d'arbres fruitiers cultivés dans cet établissement, &c. &c. Par J. Decaisne. 4to. Paris, Firmin Didot. Parts 25 to 36.

(*Continued from p. 935.*)

Poire Saint-Germain Panaché.—The fruits are generally smaller than those of the type, and taper more regularly to both extremities; their skin, of a pale green, with very little russet, exhibits yellow stripes, more or less broad, which extend from the stalk to the eye. The nature of the flesh and the period of the maturity of this variety is the same as in the common Saint-Germain.

Groseillier Versaillais (Versailles Red Currant).—This variety is superior to the Red Dutch as regards the size of the berries. The bunches are always very compact, consisting usually of 15 berries, as large as a wild Cherry, glossy, of a fine red colour, and all ripening at the same time. The varieties known as Groseille Cerise, Gondoin, Impériale, Victoria, Knight, &c., are not sufficiently distinct to deserve separate descriptions. For preserving Currants on the bushes as late as November, it is necessary to remove part of the foliage, and to wrap up the bushes with straw, as soon as the fruit has approached maturity. A very dry day should be chosen for this operation. The fruit is thus preserved from the action of the sun, which would otherwise dry it up, and from the pillage of certain birds that are very fond of it late in the season. The fields of Currants which are cultivated in the vicinity of Paris, in the communes of Croissy, Lonjumeau, Louvéciennes, Montreuil, Noisy-le-Sec, Hueuil, Soisy, &c., have given rise to a very considerable commerce for making preserves, immense quantities of which are consumed in Paris. The fruit, when it is produced near railways, is also exported to England.

Groseillier Cassis (*Ribes nigrum*) var. Gros Cassis de Naples [Black Naples Currant, figured, but not specially described].—The Black Currant, in its wild state, grows in the woods of Central Europe, in Kamtschatka, Thibet, the Himalayas, Candahar, and in Cashmere, at an elevation of 10,000 to 13,000 feet. Its penetrating odour arises from an essential oil contained in the small glands with which the surface of all parts of the plant is furnished, and which likewise exist in most of the species from the north-west of America (*Ribes sanguineum, R. palmatum*, &c.). Some interesting particulars, to which allusion is made elsewhere, are given respecting the extent to which the Black Currant is cultivated in some parts of France.

Groseillier Rouge (*Ribes rubrum*) [common Red Currant].—This is met with by the sides of rivulets, and in places somewhat moist and shaded. It is a native of Northern Europe, the mountains of India, at from 6000 to 9000 feet of elevation, and likewise of North America. This species has given rise to the Red Dutch, White Dutch, and other cultivated varieties.

Poire Diel.—Fruit very large, variable in form, turbinate, pyriform, sometimes oblong, obtuse. Stalk curved or straight; eye in a regularly-formed cavity, segments of the calyx erect, fleshy at the base, pubescent; skin citron yellow, sprinkled with brown dots intermixed with russet specks. Flesh white, half-melting, juicy, sugary, perfumed. Season, end of autumn. An abundant bearer. The Poire Diel [or Beurré Diel] was named after August-Frederic-Adrian Diel, M.D., a celebrated German Pomologist, author of several valuable works, and among others, Versuch einer systematischen Beschreibung der in Deutschland vorhandenen Kernobstsorten [Attempt at a systematic description of Apples and Pears existing in Germany]. The original tree of the Beurré Diel was found, without a name, in the village of *Les Trois Tours* near Vilvorde, by M. Meuris, Van Mons's gardener. Prof. Decaisne states that he has seen fruit of it from a wall which measured upwards of 5½ inches in length, about 4 inches in diameter, and which weighed 2 lbs. 3¼ ounces.

Poire du Tilloy.—Fruit small or middle-sized, oblong, blunt at the ends, a little contracted in the middle; stalk straight, thick, especially at its insertion; eye open, not sunk; skin olive yellow, more or less covered with ferruginous specks. Flesh white, very fine, melting, juicy, sugary, with slight acidity, perfumed, but not musky. A very good Pear. Season, end of October and beginning of November. The tree assumes a pyramidal form of growth, and is very fertile. This variety appears to be the same as that described under the name of *Belle Julie* by M. Bivort.

Poire Henriette.—Fruit small or middle-sized, turbinate, or depressed globular; stalk long, curved, thickened and fleshy at its junction; eye small, more or less sunk; skin dull greenish yellow, marbled and spotted with russet, obscurely tinged with red next the sun. Flesh firm or half melting, very juicy, sugary, and high flavoured. A very good fruit. Season, November, December. This variety appears to have been obtained at Audenarde, Belgium, by M. Van Cauwenberghe, according to the Catalogue of the Horticultural Exhibition of Brussels, 1858; but, on the other hand, in the *Annales de Pomologie Belge*, it is attributed to Bouvier.

Poire Muscat Lallemand.—Fruit rather large, turbinate, swelled out more to one side than the other; stalk middle-sized, curved, thickened at its insertion; eye level with the top; skin olive yellow, sprinkled with dots and patches of russet. Flesh firm, yellowish, juicy, perfumed, but not musky, somewhat astringent, with a little of the Crassane flavour, but less agreeable. Season, November till March. Tree vigorous and fertile. This is included among the good Pears by La Quintinye; it may be distinguished from the *Royale d'Hiver*, with which it is often confused, by its eye being on a level with the end of the fruit, instead of being sunk, as is the case with that of the Royale d'Hiver. The *Poire Alexandre Lambré*, described in the *Annales de Pomologie Belge*, 1854, appears the same as the *Muscat Lallemand*, but different from the round Pear described and figured under the same name in the *Album Pomologique* of Bivort. Prof. Decaisne further remarks, that the Muscat Lallemand of Knoop has no analogy with the sort described and figured in the work before us, but resembles the Martin Sec; and as to the figures published in the *Pomona Austriaca*, as well as in the *Jardin Fruitier* of Noisette, they are, as usual, copied from Duhamel.

Poire De Doyenné Roux.—Fruit middle-sized, of the same form as the common Doyenné, obtuse, and slightly depressed at both ends; stalk short, thick, straight or a little curved, sunk at its insertion; eye in a regularly formed shallow depression; skin smooth, ferruginous brown, becoming red as the fruit approaches maturity. Flesh white, very fine, juicy, sugary, perfumed, but not musky, with a peculiarly rich, agreeable flavour. Season, November. The tree is a good bearer. Prof. Decaisne states that the Poire *Emilie Bivort* is closely allied to the above, if not identical. [In England the Doyenné Roux, which is the same as the Doyenné Gris, is higher flavoured than the Doyenné Blanc, although the latter is excellent under favourable circumstances. When grown in a very rich border and trained against a wall, the Doyenné Pears are apt to be coarse-fleshed and comparatively flavourless.]

(*To be continued.*)

Plato's Doctrine respecting the rotation of the Earth. By Geo. Grote, Esq. (Murray). In an essay of 35 pages the author carefully examines with all the learning and acuteness of a profound Greek-scholar the three following questions:—

1. Whether the doctrine of the earth's rotation is affirmed or implied in the Platonic Timæus?
2. If affirmed or implied, in what sense?
3. What is the cosmical function which Plato assigns to the earth in the Timæus?

The result of the quiry is stated as follows:—

"Plato conceives the kosmos as one animated and intelligent being or god, composed of body and soul. Its body is moved and governed by its soul, which is fixed or rooted in the centre, but stretches to the circumference on all sides, as well as all round the exterior. It has a perpetual movement of circular rotation in the same unchanged place, which is the sort of movement most worthy of a rational and intelligent being. The revolutions of the exterior or sidereal sphere (Circle of the Same) depend on and are determined by the revolutions of the solid cylinder or axis, which traverses the kosmos in its whole diameter. Besides these, there are various interior spheres or circles (Circles of the Different), which rotate by distinct and variable impulses in a direction opposite to the sidereal sphere. This latter is so much more powerful than they, that it carries them all round with it; yet they make good, to a certain extent, their own special opposite movement, which causes their positions to be ever changing, and the whole system to be complicated. But the grand capital, uniform, overpowering, movement of the kosmos, consists in the revolution of the solid axis, which determines that of the exterior sidereal sphere. The impulse or stimulus to this movement comes from the cosmical soul, which has its root in the centre. Just at this point is situated the earth, 'the oldest and most

venerable of intra-kosmic deities,' packed round the centre of the axis, and having for its function to guard and regulate those revolutions of the axis, and through them those of the outer sphere, on which the succession of day and night depends—as well as to nurse mankind.

"In all this we see that the ruling principle and force of the kosmos (τὸ ἡγεμονικὸν τοῦ κόσμου) is made to dwell in and emanate from *its centre.*

"When we come to Aristotle, we find that the ruling principle or force of the kosmos is placed, not in its centre, but in its circumference. He recognises no solid revolving axis traversing the whole diameter of the kosmos. The interior of the kosmos is occupied by the four elements—earth, water, air, fire—neither of which can revolve except by violence or under the pressure of extraneous force. To each of them rectilinear motion is *natural;* earth moves naturally towards the centre—fire moves naturally towards the circumference, away from the centre. But the peripheral substance of the kosmos is radically distinct from the four elements: rotatory motion in a circle is *natural* to it, and is the only variety of motion natural to it. That it is moved at all, it owes to a *primum movens immobile* impelling it: but the two are co-eternal, and the motion has neither beginning nor end. That when moved, its motion is rotatory and not rectilinear, it owes to its own nature. It rotates perpetually, through its own nature and inherent virtue, not by constraining pressure communicated from a centre or from a soul. If constraint were required—if there were any contrary tendency to be overcome—the revolving periphery would become fatigued, and would require periods of repose; but, since in revolving it only obeys its own peculiar nature, it persists for ever without knowing fatigue. This peripheral or fifth essence, perpetually revolving, is the divine, venerable, and commanding portion of the kosmos, more grand and honourable than the interior parts or the centre. Aristotle lays this down (De Cœlo, ii. 13, p. 293, b. 10) in express antithesis to the Pythagoreans, who (like Plato) considered the centre as the point of grandeur and command, placing fire in the centre for that reason. The earth has no positive cosmical function in Aristotle; it occupies the centre because all its parts have a natural movement towards the centre; and it is unmoved because there *must be* something in the centre which is always stationary, as a contrary or antithesis to the fifth essence or peripheral substance of the kosmos, which is in perpetual rotation by its own immutable nature."

For the evidence that is produced in support of this view we refer to the pamphlet itself.

Descriptive Botany; or the art of describing Plants correctly in Scientific Language. By Prof. Lindley (Bradbury & Evans, 1s.). A second edition of this little book, written for self-instruction and the use of schools, has just appeared with a few additions and corrections.

The Fate of Franklin, by R. D. Blackmore (Hardwicke), is a poem written "in aid of the Spilsby fund for erecting a statue of Franklin in his native town." The purpose of the author is so good that criticism is disarmed.

On the Climate of Worthing. By W. G. Barker, M.B. Lond. 12mo. pp. 72, and 14 meteorological tables. Churchill. Dr. Barker is Medical Officer to the Worthing Dispensary, and, as in duty bound, has a strong opinion that the climate of this well-known watering place is remarkably well suited to consumptive patients, especially in the winter. In one respect "it stands unrivalled, viz., the extent of its exercising ground. From the sea to the hills the country is a perfect level, and invalids are enabled to take a great variety of rides and drives, should their health permit, without passing into a different atmosphere."

He states, moreover, that in consequence of the operation of sanitary works, of which Worthing was, it must be owned, wofully in want, the annual mortality has fallen from 16.5 per 1000 to 14.5. We rejoice to hear it, and recommend invalids to read Dr. Barker's work, which will enable them to examine his statements for themselves.

A Treatise on the Vine. By S. Caulfield, Richmond Nurseries, Dublin. A pamphlet; and a very dear one. About 30 pages of loosely printed matter equal to less than six columns of this Journal would hardly be worth half-a-crown, even if they contained information of use to a gardener, which this does not. It is a poor affair.

The Great Eastern's Log. Bradbury & Evans. A shilling pamphlet, by one of the officers of the ship, giving an account of what happened to her and her passengers during her late voyage to the United States, It is interesting when the narrative is serious, and amusing when it is not; as in the log of the great Picnic, as kept by the reporter to the New York Herald, during the excursion to Cape May.

TRADE LIST RECEIVED.—AMBROISE VERSCHAFFELT, Ghent, Prix Courant, No. 67, pour l'Automne 1860 et le Printemps et Été 1861.

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY.—In most places Chrysanthemums will soon be the chief feature of attraction, and where these are largely grown, which they should be whenever there is a demand for flowers late in autumn, they make a fine display, and are worth every necessary attention to preserve them in beauty as long as possible. They are very impatient of a close, rather warm atmosphere, and if the house contains plants requiring this treatment, the Chrysanthemums should as far as practicable be placed in the coolest part, where air can be given freely on every favourable opportunity; for except they can be rather freely exposed to air their foliage soon gets attacked and disfigured by mildew, especially if the plants are bushy and well grown. See also that they are kept well watered at the root. Use fire-heat only when absolutely necessary either to prevent the temperature from falling too low or to dry the atmosphere. If such things as Geraniums, Cinerarias, and Calceolarias must be wintered in the same house with Heaths and other hard-wooded plants, they should be kept as much as possible by themselves, as they will require a somewhat closer temperature than hard-wooded plants, but where circumstances admit of it these should occupy a house or pit by themselves. Cinerarias and Geraniums intended for late flowering will do very well in a cold pit if the weather should not prove unfavourable, but those intended for flowering early should be placed at once where fire-heat can be used at will, so as to be able to preserve the foliage from damp. Roses for early forcing should be pruned by this time, and placed where they will at least be safe from heavy rains. Where American and other shrubs are used for forcing, these should be taken up and potted without delay, placing them in a cold pit until they are wanted for forcing, or in a turf pit where they can be protected from severe weather by straw mats, shutters, or other covering.

FORCING DEPARTMENT.

PINERIES.—The plants expected to show fruit early next year will be greatly benefited by being kept in a comparatively dry state for a few weeks previous to subjecting them to a warm moist temperature. The atmosphere should be kept dry, also allowing the soil about the roots to become as dry as can be done with safety; do not, however, subject the plants to a very low temperature, but keep this at from 60° to 65° by means of fire-heat, for although the plants will bear a considerably lower temperature without any apparent injury, those not subjected to any unnecessary extremes will produce the finest fruit; and a short period of comparatively dry treatment will ripen the growth, and just as effectually induce a tendency to show fruit as checking the energies of the plant by an unnaturallyt low temperature, and without any of the ill effects o the latter method. Little dependence can be placed on the weather after this season, therefore see to plants in pits with insufficient means of heating being well protected by means of covering at night, and maintain the command of a rather high temperature by frequently renewing the linings, &c., so as to be prepared for any sudden decrease of the external temperature; avoid anything approaching excess of atmospheric moisture among young stock, whether in pits heated by linings, or in better arranged structures, which only tends to promote a too free rate of growth for the amount of light, and weakly blanched foliage is the result.

VINERIES.—Where forcing is about to commence attend to previous directions as to keeping the atmosphere moist, as there will be some difficulty in getting Vines to break freely except this is attended to. If circumstances allow of having a bed of fermenting manure inside the house, this will be found the best means of keeping the atmosphere regularly moist, but if this cannot be used the house must be sprinkled with the syringe frequently, and the evaporating troughs kept full. Also see that the roots are afforded a steady gentle warmth, until the buds are fairly swelled; keep the temperature about 50° by fire-heat at night, and 60° by day, letting it rise to 70° on sunny days.

FLOWER GARDEN AND SHRUBBERIES.

Where land is not too wet alterations of grounds and planting of Evergreens should be carried on with dispatch, but on no account attempt planting where the soil is in a state of puddle; the drier soil is when placed round the roots of newly planted shrubs (provided they are judiciously watered in) the sooner they will emit fresh roots. Mulching is, however, requisite to keep out frost, and earlier in the season to prevent evaporation. As tree leaves are always in request either as a fermenting material or for leaf soil, they should be carefully collected. If they are required only as a manure they may be stowed away in any bye place and left to rot; but if, as is generally the case, they are in demand as a cheap mode of furnishing bottom-heat to Pines as well as for forcing different kinds of vegetables, some pains should be taken to keep them dry. For this purpose they should be stacked up in some back place or behind the garden walls, where access can be had to them at all times, and after allowing time for them to settle, put on a coat of thatch to effectually secure them from rain. By these means they will be found in a state fit for use for a twelvemonth to come.

HARDY FRUIT AND KITCHEN GARDEN.

Pruning and nailing may soon be proceeded with even though it should delay some of the other work, which can be done with more comfort in bad weather than nailing; it is most important to get nailing done while the weather is favourable. Look over fruit stores frequently to see that all is keeping well, and remove any fruit that may show symptoms of decay, so as to prevent the mischief from spreading; attend to gathering fruit as directed last week. A good stock of Lettuce fit for use should be put into cold frames or turf pits, where they can be protected from frost by means of straw mats or some other efficient covering; also take care to secure a good supply of Endive for winter use. Cauliflowers coming in must be frequently examined; those not wanted for use should be taken up and stored till wanted, for these cannot be safely trusted to the weather after this time. Take advantage of favourable weather to get manure wheeled on quarters where it will be wanted, and get all spare ground trenched and ridged as soon as possible.

COTTAGERS' GARDEN.

Follow up cleanly cultivation, and stir the soil among all growing crops. Employ leisure time in collecting materials for manure; remember that all decaying vegetable refuse is valuable in this respect, especially after having been well watered with the contents of the cesspool.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON
For the Week ending Oct. 25, 1860, as observed at the Horticultural Gardens.

October.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep	2 feet deep.	Wind	Rain.
Friday 19	5	29.704	29.491	60	41	50.5	53½	51½	S.W.	.01
Satur. 20	6	30.008	29.874	58	27	42.5	54	52	W.	.00
Sunday 21	7	30.206	30.001	57	31	44.0	53	51½	S.W.	.00
Mon. 22	8	30.022	29.962	61	40	50.5	53½	51½	S.	.00
Tues. 23	9	30.041	30.029	62	50	56.0	53	51½	S.W.	.04
Wed. 24	10	30.054	29.963	63	46	54.5	54	51½	S.	.01
Thurs. 25	11	30.008	29.990	64	50	57.0	55	52	S.W.	.04
Average..		30.078	29.910	60.7	40.7	50.7	53.7	51.6		.10

Oct. 19—Lightly overcast; densely clouded; boisterous,
— 20—Very clear; quite cloudless; fine but windy; clear; slight frost.
— 21—Slight haze; fine throughout.
— 22—Fine; very fine; slightly overcast.
— 23—Overcast; densely clouded; drizzly; rain at night,
— 24—Uniformly overcast; very fine throughout.
— 25—Overcast; exceedingly fine; densely overcast; rain.
Mean temperature of the week, 1½ deg. above the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending Nov. 3, 1860.

Oct. and Nov.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 28..	54.2	36.4	45.3	20	1.06 in.	1	5	3	—	6	12	3	4
Mon. 29..	53.5	35.0	44.3	16	0.63	3	5	3	1	5	13	1	3
Tues. 30..	54.8	38.3	46.6	17	0.98	3	6	1	3	4	13	2	2
Wed. 31..	53.8	38.3	46.1	18	0.88	1	3	3	2	2	12	1	4
Thurs. 1..	54.5	38.5	46.5	16	0.25	3	1	4	3	4	8	8	3
Friday 2..	54.5	38.5	46.5	15	0.51	1	3	5	3	2	13	3	4
Satur. 3..	53.3	37.3	45.3	18	0.36	2	2	9	—	6	7	8	—

The highest temperature during the above period occurred on the 29th and 30th, 1853—therm. 67 deg.; and the lowest on the 3d, 1845—therm. 20 deg.

Notices to Correspondents.

AMERICAN BLIGHT: *G P.* Simple washing will not destroy it. The bark must first be well scraped, especially all crevices, and when the trees have shed their leaves, paint them with the following composition, viz., half a peck of quick lime, half a pound of flowers of sulphur, and a quarter of a pound of lamp black mixed with boiling water, till it has assumed the consistency of thick paint. Any prunings or scrapings removed must be burned. ‡‖

BOOKS: *Leeds.* Loudon's Hortus Britannicus is a catalogue which with its supplements goes down to March 1850, and includes Cryptogamic plants. Loudon's Encyclopædia of Plants is a work illustrated with wood engravings, with supplements going down to March 1855, and does not include Cryptogamic plants in them.

COTONEASTER: *Nora.* This and the Apple tree bark are alive with the common mussel scale insect, described at p. 735, of our volume for 1843 They are in such a state that we fear the only cure is burning them and the surface earth in which they grow. As to the wall, which we suppose to be an old one full of nail-holes, it must be grouted with Portland cement; or the successors to the Cotoneaster will perish like it.

CRACKED PEARS: *A G.* Fruit cracks because it receives from the branch that bears it more water than it can throw off by its surface. Then water accumulates in the interior of the fruit, the skin is distended, and at last gives way as you see. We had no cracked fruit last year; this year, in some places there is little else.

FUNGI: *J J Foster.* Your Fungus is *Bulgaria inquinans.* Your "black dummies" are not tempting enough to induce any one to try their culinary properties, except it be the Chinese, who eat such trash as the Nostoc which covers our gravel walks after rain, or some species very like it. *M J B.*

GREEN ROSES: *C M F.* It is only four weeks ago (see p. 852), that we gave a full account of these productions, to which we beg to refer you.

INSECTS: *M T B.* We believe the Coccus-like production on Oak branches on the ground is fungoid, and not Entomological. *W.*

NAMES OF FRUITS: Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to examine more than six sorts, whatever may be the number forwarded.—*W D F.* Your Pear, supposed to be the Beurré de Capiaumont, is Napoléon.—*L H W.* The variety of Pear of which the tree bore upwards of 5000 fruits in 1858 is the Black Achan.—*Robinson.* Your Seedling Apple, yellow, middle-sized, of quite an oval form, with the eye and stalk in very small cavities, has a rather brisk acidity, but is not rich enough for dessert.—*R A D G.* The Seedling resembles in size and form the Fearn's Pippin. The flesh is soft, pleasant, but not rich.—*N Cole.* 1, Alfriston; 2, Like a small specimen of Rymer; 3, Waltham Abbey Seedling; 4, Hughes's Golden Pippin; 2, Easter Beurré; 3, Old Colmar.—*J B S.* 1, Sturmer Pippin; 2, Easter Beurré; 3, Old Colmar.—*J B S.* 1, Sturmer Pippin; 2, Veiny Pippin; 3, Alfriston; 4, London Pippin; 1, Beurré d'Amanlis; 2, Duchesse d'Angoulême (imperfect, from a late blossom).—*An Old Sub.* B appears to be the Hawthornden, late and small; the other is not known. ‖

NAMES OF PLANTS: *H W C.* 1, Populus canescens; 2, canadensis?; 3, candicans; 4, nigra. As to No 5, which is beyond the prescribed number, it is the White Egyptian Poplar of Nurseries, and some variety of P. nigra.—*Sylhet.* Cheilanthes farinosa.

NUTS: *R E B.* Your Cobs are pierced by the Titmouse. It is remarkable that this bird has confined its attentions to Nuts and has neglected Filberts—at least in some places—as with us.

PEAR LEAVES: *W C E.* Your leaves are infested with a parasitic Fungus, *Roestelia cancellata.* Your only chance of getting rid of it is burning the leaves as soon as they appear. The spores have in all probability fallen to the ground this season, and it may therefore be too late, though we would still recommend you to burn every infected leaf and the surface of the ground for 6 feet beyond the circumference of the branches. *M J B.*

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. Nesbit, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

AUTUMN SOWING.

THE PATENT NITRO-PHOSPHATE OR BLOOD MANURE COMPANY (Limited), consisting of Tenant Farmers, occupying upwards of 30,000 Acres of Land.

Chairman.—Jonas Webb, Esq., Babraham, Cambridge.
Works: Plaistow, Essex.

ODAMS'S BLOOD MANURE FOR WHEAT (Autumn Sowing)
ODAMS'S BLOOD MANURE FOR ROOT CROPS,
ODAMS'S SUPERPHOSPHATE OF LIME.

PRICES, with particulars for use, may be obtained at the Offices, 109, Fenchurch Street, E.C. C. T. Macadam, Sec.

THE LONDON MANURE COMPANY
(Established 1840,)
Are now prepared to send out the following MANUFACTURED MANURES:—

SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES, AND BONE MANURE FOR PASTURES.
CONCENTRATED URATE.
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CORN MANURE FOR AUTUMN SOWING.

They would call particular attention to the article DISSOLVED BONES, in which they guarantee every portion both of the soluble and insoluble phosphate, to be obtained entirely from Bones.

The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E C. Edw. Purser, Secretary.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.

CONCENTRATED TURNIP MANURE, equal in value to the preceding.

Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."

Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to Burnard, Lack, & Co., Sutton Road, Plymouth.

LAWES'S MANURES.

LAWES'S TURNIP MANURE	£6 6
,, BONE SUPERPHOSPHATE OF LIME ..	6 6
,, MINERAL SUPERPHOSPHATE OF LIME ..	5 5
,, BARLEY, GRASS, AND MANGEL MANURES	8 0

Wheat Manure: Peruvian Guano is proved to be the best and cheapest artificial manure that can be used for Wheat at autumn sowing.

Peruvian Guano direct from Messrs. Gibbs; Sulphate of Ammonia, Nitrate of Soda, and all Chemical Manures. Linseed, Rape, and Decorticated Cotton Seed Cakes supplied at the market prices, by Mr. J. B. Lawes, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

JOHN FOWLER, Jun., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

THE GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY.
Offices, 52, Parliament Street, S.W.

Directors.

Henry Ker Seymer, Esq., M.P., *Chairman.*
Sir John Villiers Shelley, Bart., M.P., *Deputy-Chairman.*

George Thomas Clark, Esq. | Edward John Hutchins, Esq.
J. Chevallier Cobbold, Esq., M.P | Sir S. Morton Peto, Bart., M.P.
Henry Currie, Esq. | William Tite, Esq., M.P.
William Fisher Hobbs, Esq. | William Wilshere, Esq.

Under this Company's Act Landowners may effect the following Improvements on their Estates, and charge the Outlay and expenses thereon, by way of Rent charge, to be paid by Half-yearly Instalments, viz.:—

I. All works of Drainage, Irrigation, and Embankment.
II. The erection of Farm Houses, Cottages for Agricultural Labourers, and all kinds of Farm buildings.
III. The construction of Roads.
IV. The Grubbing and clearing of old Woodlands, Enclosing, Fencing, and Reclaiming Land.

The Landowners by whom any of these Improvements may be executed, are—Tenants for Life, Trustees, Mortgagees in Possession, Guardians, Committees of Incompetent Persons, Married Women, Beneficial Lessees for Lives or for a term exceeding 14 years, Corporations, Ecclesiastical or Municipal, Incumbents, Sequestrators, Charitable Trustees, &c.

The owners of Estates, not entailed, who may be desirous to avoid the expense or inconvenience of a Legal Mortgage, may also charge their Estates with Improvements under the simple and inexpensive process of the Company's Act.

The term of years for the Rent Charge is fixed by the Landowner, so as to adapt the amount of annual payment to the circumstances of the Tenants, the term for Building Works being limited to 31 years, but for all other Improvements being capable of extension to 50 years.

No investigation of Title being required, and the charge not being affected by Incumbrances, no legal expenses are incurred.

The arrangements for effecting Improvements are threefold—

No. I. The Works may be designed and executed entirely by the Landowner's Agent, and the Company employed only to supply the Loan and conduct the matter through all the forms for charging the outlay on the Estate.
No. II. The Company will supply Plans, Specifications, and Estimates for any Improvement to be executed by the Landowner's Agent, as under No. I.
In each of these cases the Landowner will be solely under the control of the Inclosure Commissioners.
No. III. The Company will undertake the entire responsibility of the Improvement, prepare the Plans, execute the Works, and finally charge on the Estate the actual amount expended with their Commission thereon approved by the Inclosure Commissioners.

Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.

Works of Drainage and other Improvements are also executed on Commission for Landowners who merely require the skill and experience of the Company's Officers and a Staff in constant practice.

Applications to be addressed to William Clifford, the Secretary, 52, Parliament Street, S.W., London.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. Nesbit, F.G.S., F.C.S., &c.

The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.

Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor Buckman, Dollar Ward, Cirencester.

THE AGRICULTURAL HALL COMPANY (Limited). Registered pursuant to the Joint-Stock Companies' Acts, 1856 and 1857,

Capital 30,000*l.*, in 3000 Shares of 10*l.* each.

Directors.

Jonas Webb, Babraham, Cambridgeshire, Esq., Chairman.
Joseph Shuttleworth, Lincoln, Esq., Vice-Chairman.
John Banister, South Street, Finsbury, London, Esq.
John W. Brown, Uffcott, Swindon, Wilts, Esq.
John Clayden, Littlebury, Essex, Esq.
William Collins, St. John's Street Road, Clerkenwell, Middlesex, Esq.
William Cox, Harley Road, St. John's Wood, Middlesex, Esq.
Joseph Druce, Eynsham, Oxfordshire, Esq.
Richard Garrett, Leiston Works, Suffolk, Esq.
John Giblett, Lower Clapton, Middlesex, Esq.
James Howard, Bedford, Esq.
Robert Leeds, West Lexham, Norfolk, Esq.
Robert Morgan, Camden Road Villas, Middlesex, Esq.
With power to add to their number.

Bankers.—Messrs. Fuller, Banbury, & Co., Lombard Street.
Solicitors.—Messrs. Kingsford & Dorman, Essex Street, Strand.
Secretary.—Samuel Sidney, Esq.
Offices: 23, Essex Street, Strand.

The principal object of this Company is to provide a suitable building for the Annual Christmas Exhibition of the Smithfield Club.

The want of an appropriate building for holding the Annual Exhibition of the Smithfield Club has been long felt, in consequence of the very insufficient accommodation afforded by the Bazaar, Baker Street, hitherto used for the purpose. It was some time since determined by the Club not to renew their term for those premises if a more convenient building could be obtained. Accordingly at the General Meeting held on December 6, 1858, a Committee was appointed to inquire in what way the requirements of the Club could best be supplied. After 18 months' deliberation, and having fully considered several propositions which were laid before them, the Committee came to the conclusion that the site known as Dixon's Layers, at Islington (which had been secured by the promoters of this Company), was most advantageous for the Annual Exhibition; and recommended that, if a responsible Company were formed who would enter into an agreement to erect a suitable building thereon, and pay the Club the sum of 1000*l.* per annum, the Exhibition should be leased to them for a term of 21 years, commencing 1862; and the Committee reported to the Club to that effect.

This Report has been adopted and confirmed in the fullest manner by the Smithfield Club, and the terms of the agreement finally decided on, by which the Club agree to hold their Annual Christmas Show in the Agricultural Hall for 21 years, commencing with the Show in 1862; the Company to pay them 1000*l.* annually; the terms in other respects being similar to those made with Mr. Bulnois, the owner of the premises in Baker Street. The Smithfield Club is not a chartered or registered body, and the agreement will therefore be signed on their behalf by two of their Members who have been nominated, by special resolution, for the purpose.

The site of land on which the Hall is to be erected contains between 3 and 4 acres, immediately faces Islington Green, extends westward to the Liverpool Road, and is within a few hundred yards of the "Angel," at Islington; it will have entrances from all sides. Its central position, as regards the various Railway Termini (with all of which it is in direct communication by means of the New Road), renders it peculiarly adapted for the purposes for which it is intended. No less than 1100 Omnibuses pass daily by one of the proposed entrances, and 1900 by the "Angel." The site has been secured for a term of 21 years, with an option of extending it to 60 years.

The area of the Agricultural Hall will contain about 100,000 square feet, exclusive of the galleries, exceeding in extent the accommodation agreed to be provided for the Exhibition of the Smithfield Club, with the addition of Committee Rooms, Salesmen's Room, Offices, and convenient Refreshment Rooms. The Hall will not occupy all the land, but a considerable portion will remain available for other purposes, and for the enlargement of the premises, if at any future time further accommodation should be required for the Christmas Show.

As the Hall will only be occupied by the Cattle Show for a fortnight in each year, it is proposed to use it for various public purposes, from which, it is confidently anticipated, a considerable rent will be realised. The want of a large covered building in the Metropolis has been long felt.

With regard to the financial prospects of the undertaking, it is estimated that the profit arising from the visitors to the Cattle Show alone will be more than sufficient to pay a dividend of 5 per cent., after making due allowance for the 1000*l.* a year to be paid to the Smithfield Club, and for all other expenses. This dividend will obviously be greatly increased by the profit derived from the various other uses to which the premises will be appropriated.

The capital of 30,000*l.*, one-half of which has already been subscribed by members of the Smithfield Club, will, it is believed, be amply sufficient to cover all the contemplated outlay. It is proposed to raise the amount in 3000 Shares of 10*l.* each; 1*l.* a Share to be paid on application, and the remainder as it may be required for the purposes of the building. A month's notice of such call will be given.

Prospectuses and forms of applications for Shares may be had at the Offices of the Company, 23, Essex Street, Strand, W.C., and should be addressed to the Secretary on or before Monday, November 5.

Form of Application for Shares.

To the Directors of the Agricultural Hall Company (Limited)
—— day of ———, 1860.

Gentlemen,—Having paid to your Bankers the sum of £ ——, I hereby request you will allot me ——— Shares (or any less number) in the Agricultural Hall Company (Limited), and I undertake and agree to accept the same, subject to the Articles of Association, to pay the Calls thereon, and to sign an Acceptance thereof, when called upon to do so.

Name in full .....
Profession or Calling .....
Address .....
Date of Application .....

THE LANDS IMPROVEMENT COMPANY.—Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.

To Landowners, the Clergy, Estate Agents, Surveyors, &c. in England and Wales and in Scotland.

The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable William Napier, Managing Director, 2, Old Palace Yard, Westminster, S.W.

RUGBY AND DUNCHURCH CATTLE SHOW, November 29.—A prize of FIFTEEN POUNDS is open to all England for the best FAT BEAST of any description, the property of the Exhibitor for six months prior to the Show. Entrance 10*s.*, to close on November 13. For Forms of Certificates, &c., apply to Messrs. W. & E. Harris, Secretaries, Rugby.
N.B. Covered Sheds will be provided for all the Beasts shown.

THE BIRMINGHAM CATTLE AND POULTRY SHOW, 1860.—The TWELFTH GREAT ANNUAL EXHIBITION OF CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, AND ROOTS, will be held in Bingley Hall, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, December 3, 4, 5, and 6; when PRIZES, CUPS, or other articles of Silver Plate, and GOLD and SILVER MEDALS, to the amount of 1236*l.*, will be awarded.

Prize Lists and Certificates of Entry may be obtained from the Secretary. The ENTRIES close the 1st of November next.

The principal Railway Companies will convey Stock home free if unsold. John B. Lythall, Secretary.
Offices, 14, Upper Temple Street, Birmingham.

SMITHFIELD CLUB CATTLE SHOW, 1860.—The ANNUAL SHOW OF FAT CATTLE, SHEEP, AND PIGS will take place on December 11, 12, 13, and 14, at the Bazaar, King Street Portman Square, W.

The LAST DAY for Certificates for both Stock and Implements to be received by the Honorary Secretary is THURSDAY, November 1.

The following forms of Certificates are now ready, and intending Exhibitors in applying for them need only quote the letters and state how many of each letter they require:—

CATTLE	SHEEP
Form A.—Ox or Steer	Form D.—Pen of three Wethers
,, B.—Cow or Heifer	,, E.—One Wether or Ewe in extra stock
,, C.—Ox, Cow, or Heifer in extra stock	PIGS.
	Form F.—Pen of three Pigs
	,, G.—One Pig in extra stock

Prize Sheets, with Rules and Regulations, and Forms of Certificates as above, may be obtained of
B. T. Brandreth Gibbs, Hon. Sec.,
Corner of Half Moon Street, Piccadilly, London, W.
N.B.—All communications on the Club's business should have the words "Smithfield Club" outside, to distinguish them from private letters.

CRYSTAL PALACE.—AGRICULTURAL ROOT SHOW.—The Show of AGRICULTURAL ROOTS and other Produce will be held on TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, and SATURDAY, December 11, 12, 13, 14, and 15, 1860, being the week of the Smithfield Club Cattle Show, and the Crystal Palace Winter Poultry Show.

The Entries for the Poultry Show close Saturday, Nov. 10; and the Entries for the Agricultural Root Show, Saturday, Nov. 24.

For Schedules of Prizes, apply to Mr. W. Houghton, Secretary to the Poultry and Agricultural Root Shows.

The Agricultural Gazette.

SATURDAY, OCTOBER 27, 1860.

The reports in other pages will enable our readers to ascertain the judgment which has been formed of the past harvest, after a longer examination of the crops than was possible at the date of our last report, and after some trial of them by the threshing machine. It is plain that our former statement of the case, complained of by some as presenting too gloomy a picture, has erred in not being dark enough. There was a bulky crop of both Oats and Barley on the ground, but both—the latter especially—have been injured by bad weather. There never was the promise of an average crop of Wheat, and what there was has also suffered much.

As a general rule, Oats will still be a fair crop. Good samples of malting Barley will be extremely rare, and Wheat will yield unusually below its average produce.

Of green crops, we have to report that Potatoes are almost universally a failing crop. Turnips generally are very poor, the exceptions in both cases being found in the northern counties; while Mangels are universally inferior and unproductive, and good Hay is both scarce and dear. Both man and beast will have to draw on whatever may be

stored from former years for their food supply during the coming winter.

—— Let us remind intending exhibitors at the forthcoming Exhibition of the Smithfield Club, that all entries for the Show must be sent to Mr. BRANDRETH GIBBS, the Hon. Secretary, at the corner of Halfmoon Street, Piccadilly, W., on or before the 1st of November.

IF the present cold wet season has not been productive of the usual number of Fungi, it has at least been prolific in species which do not usually make their appearance in this country. Amongst other curious matters which have come under our inspection, is an affection of Rye, which, if it were general, might be of serious consequence. The glumes and seed are infested with little patches of a bright red jelly which is generated beneath the cuticle, from whence it at length oozes out, and forms at first distinct and then effused spots, resembling very closely those which are so common on dead Nettle stems. On examination under the microscope, the whole mass is found to consist of curved spores very obscurely if at all articulated. The seed of the Rye is in consequence much exhausted, and the general effect upon the crop extremely injurious. There is no doubt that the little parasite is *Fusarium heterosporium* of Nees von Esenbeck, who found his plant on the glumes and seeds of the common Rye-grass. It is true that I find no globose bodies intermixed, but this is merely a circumstance which depends upon difference of condition and not upon structure.

The disease is apparently due to the damp condition of the atmosphere and absence of direct sunlight for so many weeks, and is therefore beyond the control of the cultivator.

We have long been on the look out for this species, which we have never before been able to find, and we now think it probable that the very singular parasite belonging to the genus *Fusisporium* which Fries found in Sweden on Oat and Barley stubble, in a very wet August, may turn up in England. The stalks are clothed with long white woolly hairs standing out in every direction and bearing in the midst a mass of yellow jelly. The spores are far longer than in the Fungus before us, and the plant itself is superficial and does not, as in the present case, rise from the internal tissues of the matrix.

There are other Fungi upon the glumes and seed of the Rye, but such only as have clearly grown upon them after their health had been impaired by the *Fusarium*. The crop in which the parasite appeared was one of seven acres on a high and dry chalk hill in the neighbourhood of Arundel, and the greater part of the ears were affected. *M. J. B.*

THE Potato crop has so completely failed this year that the small amount saved cannot but render their price extremely high. From this it is to be inferred that the poor man who has been a degree more fortunate with his crop than his neighbour, will be induced to part with a portion of his store for so much coin that he will be in the same condition as he who has none. For with both the question will be a pressing one. What are we to eat as a substitute for the Potato? And again it will not be the poor man only to whom this inquiry will be interesting, but others even in better circumstances will ask—are Potatoes worth what they cost, or in buying them at the present high price are we not paying dearly for what is not bread? In fact all consumers of Potatoes, not as a luxury merely, but as food, are already on the look out for a substitute which shall contain as much nutritive matter at a less cost than is likely to be the case with the Potato, at least for the present season; whilst with some it is indeed a subject of thought as to whether an esculent so uncertain in its yield and lately so liable to disease should be so implicitly trusted to, as heretofore. Now in order to aid inquiries in this matter, we purpose offering a few remarks on the relative values of the different kinds of vegetable substances commonly used as food, to which end we shall proceed to lay before our readers a table of the comparative qualities of foods as laid down by some of our best chemists and physiologists, the materials for which any one near London may readily investigate by looking over the food collection of the South Kensington Museum, where he will find not only specimens of all feeding substances in their natural state, but each kind of food separated into its proximate principles, placed side by side in a case separately devoted to each; viz., specimens in their relative quantities of all the materials that enter into the composition of any and every kind of grain and used as food.

Now in order to illustrate this matter we would direct attention to the "case" with Potatoes in it. We saw models of some of our best kinds of this tuber, and then side by side were arranged in neat little partitions specimens of the following components of 100 lbs. of Potatoes:—

TABLE I.—PERCENTAGE COMPOSITION OF POTATOES, ARRANGED AS

Flesh Formers (gluten?)	1.4		
Starch	15.5		
Dextrin	0.4	Flesh Formers	1.4
Sugar	3.2	= Heat givers	22.5
Fat	0.2	Mineral matter	0.9
Fibre	3.2		
Ashes	0.9		
	24.8		

Here then we trace seven substances that enter into the composition of the Potato, which united make up 24.8 lbs. out of the hundred; what then is the rest? why absolutely 75.2 lbs. out of the hundred are *water!* and we shall not readily forget the huge bottle of water we there saw to illustrate part of the composition of good average Potatoes. It is then worth while to go to the Kensington Museum to be satisfied that out of every 100 lbs. of Potatoes, which now cost from 6*s.* to 10*s.*, 75 lbs. is water, and the rest but indifferent feeding matter. However all cannot go to this Museum, and we would, therefore, recommend the purchase of "A Guide to the Food Collection in the South Kensington Museum, by Dr. LANKESTER, Superintendent of the Animal Products and Food Collections"; price 6*d.*, from which we now construct the accompanying Table, in order to at once put the reader in possession of the difference between the components of Potatoes and other "food-stuffs," summing up the matters, for the sake of brevity, into water, flesh-formers, heat givers, and mineral matter.

TABLE II.—COMPOSITION of 100 PARTS OF

	Water	Flesh Formers.	Heat Givers.	Mineral Matter.
Potatoes	75.2	1.4	22.5	0.9
Rice	13.5	6.5	79.5	0.5
Wheat	14.0	14.6	69.8	1.6
Barley	14.0	13.0	69.5	3.5
Oats (*Oatmeal*)	13.6	17.0	66.4	3.0
Maize, Indian Corn	14.0	12.0	73.0	1.0
Rye	14.0	13.8	71.5	1.7
Peas	14.1	23.4	60.0	2.5
Lentils	14.0	26.6	58.5	1.5

Now it will here be seen if these conclusions are to be relied upon, and we have no doubt whatever of their general correctness, that no other feeding substance contains so much water as the Potato, and none so small a percentage of *heat givers*, that is those substances which, through the heat engendered by their chemical decomposition in the animal, tend to keep the body warm; whilst the flesh formers, or those matters which build up the muscle and so restore the animal strength, are ridiculously small in a food to be so much trusted as is the Potato.

But in order to put this in a still clearer light it may be well to state, that it has been ascertained that as much as 5 oz. *per diem* of flesh formers is necessary to restore the daily waste of say a labouring man, so that the following Table will show the relative amounts of the foods just tabulated it will require to make up that quantity, and an approximation to the cost of each:—

TABLE III.—OF RELATIVE QUANTITY AND PRICES OF

	Quantities.	Average cost.
	lbs. oz.	*s. d.*
Potatoes	20 13	0 7
Rice	4 13	1 2
Wheat Flour	2 1	0 4½
Barley Meal	2 6	0 4½
Oatmeal	1 13	0 4½
Maize	2 9	0 7½
Rye	2 3	0 6
Peas	1 5	0 2¾
Lentils	1 3	0 5½

This Table assumes that the average price of Potatoes is somewhere about 7*s.* for 2 cwt., but this year this price will be nearly tripled. Bread too may be a little dearer this year than our Table states; still the price of Potatoes, judging from their real amount of food, will be far dearer than even bread of the best quality. To those then who will have to buy Potatoes it follows, that unless these tubers are indispensable as a luxury, they are in reality the dearest kind of food at the present moment, taking into consideration their qualities and capabilities at the price.

If we look at our various kinds of grain we shall find no great dissimilarity between them either in properties or price, so that with all the English predilections in favour of Wheaten bread, we may at once see that with the present dearness of Potatoes, bread, even though it has advanced in price, is not more than half the price of Potatoes; and as the latter are so dear we may reckon that our loaf will be even more 'proof,' (the country word for nutritive), in that the baker will not afford the amount of Potatoes for mixing as when these are cheaper.

Judging from the facts established in Table III. Oatmeal would appear to stand high as a feeding material, a fact indeed proved by all who habitually partake of it.

But of all the vegetable productions there are none so rich in muscle-making matter as the Pea and none upon which life can be so cheaply maintained.

In fact, as a general food, the Pea is open to the objection of being too concentrated, and consequently too stimulating for exclusive use, and indeed we should conclude that any vegetable is unfitted for constant consumption exclusive of all others, and the only wonder is that the Potato should ever have been so entirely relied upon. Taking then the Pea with its known properties and its comparative cheapness, we would now advocate its use if not as a substitute for the Potato, yet as the vegetable best adapted not merely for supplying the void created by a failing Potato crop, but as affording the poor man an opportunity of supplying himself and family with a more hearty food, and at a far less cost even in average seasons than that of the Potato, taking, of course, the position that he has to buy his Potatoes; though if he should be a successful grower, it is after all not clear that he had not better sell this esculent to those to whom they are wholesome not altogether as food, but as a diluent of the more stimulating meat diet.

So fully are we satisfied of the value and importance of Peas as a common article of food, that we have ever regretted its neglect in favour of the large cropper, the more easily grown, but still the water-logged Potato, and further we have been long convinced that the moral and social well-being of the British labourer has declined just in proportion as he has relied upon this tuber, to the exclusion of better feeding plants—a subject upon which we hope to enlarge in a future article.

However this may be viewed by some as speculative, yet we see that the Potato is at present a failure and cannot be bread to the poor man or any one at its high market price, and hence then he is of necessity obliged to seek some feeding article in its stead. Let him use Peas as one of the best and cheapest that can be obtained; use them not exclusively, but to eke out other feeding matters, for which purpose he will find that there are different sorts which can be used in various ways, viz.:—

Whole.—In this form the gray Peas as being softer are well adapted for parching or frying with a little butter or fat of any kind; in this form too they will be found in every huxster's shop in towns and villages of the Sussex coast, and in this shape they are constantly partaken of by children and others as an agreeable halfpenny or pennyworth of "tuck."

Whole or Split.—In this shape boiling Peas are necessary; and a village soon finds out where the best boilers are to be got; indeed in former times, every farmer and workman knew the peculiar bits of land which would grow "good boilers." These of course are indicated for use: 1st, as boiled Peas, which with a bit of pork or bacon or meat of any kind, may well eke out the Potato, Cabbage, Green, Parsnip, Carrot, or other garden vegetable.

Here perhaps it may occur to some to quote the observation of the princess who said "How silly were the poor people!" she would "rather eat bread and cheese than starve." True, some may say all these things are good enough with meat, but to the poor this is not always accessible; still the answer is that Peas are even as nutritious as meat itself, and indeed much more so than pork or bacon. But we are advocates for variety in food and flavour to the fullest possible extent, but surely he who wholly trusts to the Potato gets but little of either.

2d. Pease pudding* we hold to be food for a king; however, the rich man wisely abstains from too freely partaking of it, for to him with his meat diet it would be living twice over, and he would suffer from plethora unless he diluted his meal, and to him then the Potato is an object of importance, not as his diet, but as a wholesome diluent thereof, as well as of the meat that he usually takes pease pudding with, namely, Pork, a *meat of highest heat-giving* but *lowest flesh-forming properties* of any kind usually employed. 3rd. Ground Peas. Pease Meal may be used as no bad mixture in baking, as an addition to broth, or mixed with a little boiling milk and water, and

* For recipe, see Notices to Correspondents.

flavoured with salt, or any favourite condiment, will afford a most nutritious meal, which even the invalid or infant may safely partake of; but it should be borne in mind that in all cooking of Peas soft or rain water should be used, as hard water prevents even the best Peas from cooking properly, and they should be soaked in water for some time before cooking.

These remarks then are meant to show that in Peas we have a substantial article of diet; this was proved by ages of their use as the most general food of the people, with the exception of the bread made from Barley or Wheat. However the facility with which the Potato can be grown and the amount of *filling up* which it unquestionably is capable of has led to its adoption to a mischievous extent, for its constant growth in the same soil has ruined the constitution of the Potato itself, whilst on the other hand the people have so relied upon it that they have done considerable mischief to their *physique* in consequence, and the failure of the crop leads to food panics which are very serious in their consequences.

In this state of affairs we would recommend at least a partial reversion to the older diet to meet the present emergency, and for the future we would strongly urge upon the cottager to plant a portion of his Potato allotment with Peas, and the rest perhaps with Potatoes—in other words only to grow half his usual breadth of Potatoes. We find that even with the advanced price Peas may be be at this next planting season, yet that the land can be sown with this crop for about 25*s.* an acre, and for this purpose the Early Emperor and the old dwarf White Marrowfat are well suited, as both are prolific, and the former coming in early, the poor man may make a few shillings by selling some of them green.

At the meeting of the Worcester Agricultural Society on the 10th of October, the subject of "Blights" was brought forward by Mr. Hudson of Pershore. His observations were directed principally to the experience of the present year as regards the Potato murrain, and inasmuch as great differences in this respect exist in different parts of the United Kingdom, he thought the county members ought to urge on Government the appointment of a scientific commission to investigate the subject generally.

His proposition was received with mingled cheers and laughter, and a member after some observations which were certainly not warranted by anything which fell from Mr. Hudson, remarked "You may as well try to stop the wind or the rain as to stop blights."

Now we have no great liking for commissions in general. The members generally set out with strong prejudices on the subject they have to investigate, and their report is usually a mere statement of a foregone conclusion, supported by a few partial facts. Such commissions are far more frequent on the Continent than in this country, and we cannot find that they either lead to any good practical results, or even to much new information.

If the word "Blights" be taken to comprehend the mildew of the Vine, Hop, and Potato, it must be extended to Wheat mildew, smut, bunt, rust and other maladies, and the commissioners would have enough upon their hands to investigate thoroughly only one of these maladies.

Mr. Hudson however speaks of "Blights" as if there were no knowledge on the subject. He believes "there is a cause for blights." Why, not only is there a cause, and that well known, but for three of the blights mentioned above there is a remedy. The *Erysiphe* of the Hop, the *Oidium* of the Vine, and the *Tilletia* of Bunted Wheat, are all under the control of every good cultivator. The mildew of Wheat is not capable of cure, because the Fungus (*Puccinia graminis*) which produces it, is closely attached to the straw, and therefore is not affected by the same treatment as Bunt, whose spores are set free in the course of threshing; the same remark applies in great measure to Rust; and in Smut the spores are all blown away by the wind long before the harvest. Specific powders may be advertised for the cure of these complaints, but from the very nature of the case they must be ineffectual, however their virtues may be vaunted.

We come now to the Potato murrain, which was more immediately in question. The cause of this affliction is as certainly ascertained as that of the Hop or Vine mildew. Why then is it not under the same control? Simply because the little *Botrytis* on whose presence it depends has a totally different habit from the *Erysiphe* and *Oidium*. The young threads of these, save in a few exceptional cases, creep on the outer surface of the leaves, so that any powder or solution which may be efficacious can come immediately in contact with them; but in the Potato murrain the spawn of the Fungus traverses the inner tissue of the plant where no remedy can be applied. The most hopeful suggestion, as regards topical applications, in consequence was the powdering of the divided sets with sublimed sulphur, and this treatment, which at present has not been sufficiently tried, has been said to have produced good results. Whether however the sulphur acts in such a case by coming immediately in contact with spawn of the *Botrytes* which may exist in the tuber, or whether it is destructive to the spores which have fallen upon the surrounding soil, is a matter for consideration, and the more so, because in the Vine mildew it has been found a good practice to lay bare the roots and powder them with sulphur. Now as there is no pretence that the spawn of the *Oidium* traverses the tissue of the roots and stem, the good if any must depend upon the destruction of the spores, thus preventing their development on the *surface* of the roots and of lower portions of the stem.

All the good we believe which has been achieved with respect to any of these affections has been accomplished by private individuals. The needful investigations require more time and patience than can possibly be at the disposal of any commission. If a commission is to be established at all, it should be not to investigate the cause of these Blights, which is already ascertained, but to discover if possible the circumstances of soil, climate, aspect, cultivation, &c. which are favourable to their development or otherwise. Some information of value on such a point might possibly be elicited by a few weeks' examination of the crops in different parts of the country. The circumstances however which control these plagues are so nice as to be often far above our powers of observation. In the same plot, under apparently precisely the same conditions of outward elements, contiguous patches will frequently be healthy and diseased; and if we are baffled here, much more are we likely to be so in examining similar tracts in different localities. The peculiar constitution of the plants of which the crop is composed, the source from whence the seed or cuttings were derived, the manures with which they were treated, the local miasmata, and a number of other circumstances, of which we can obtain no account whatever, may all be important items in the matter. Still it is possible that a commission might obtain some valuable general rules, showing that some conditions are, on an average, almost certainly destructive and others favourable; and above all what especial varieties of Potato most effectually resist the murrain. Beyond this we do not believe that a commission would effect any good, and the prospect of beneficial result even in this limited point of view is so very problematical, that we think it very unlikely that Government would feel inclined to speculate on the subject. *M. J. B.*

We have to lament the death of the Duke of Richmond, K.G., which took place on Sunday last, at the family mansion in Portland Place. A life of great public value and of especial usefulness to the Agricultural interest of the country has thus come prematurely to a close, for it had not reached the period of threescore years and ten. The late Duke was one of the founders of the Royal Agricultural Society of England, of which he had twice been President; he was also President of the Smithfield Club. His popularity among agriculturists, both those immediately connected with him as tenantry, and the general body of the farmers of this country, was unbounded; and it had been fairly won by the readiness with which at all times his time and services were placed at their disposal, and by the cordiality with which he welcomed every occasion of association with his brother agriculturists.

EXPERIENCE IN MOWING AND REAPING BY MACHINERY.

In the following notes I shall confine myself strictly to the results of my own experience this season. I have no desire to depreciate reaping machines which I have not used, or to overstate the capabilities of the one I use. Though well satisfied with it I shall be glad to see it surpassed by others, as I have no doubt, in process of time, it will be.

I had for several years considered the introduction of effective reaping machines as essential to the safe and satisfactory ingathering of our crops. In chronicling the harvest of 1856, one of much difficulty and loss in Scotland, I wrote thus: "For the energetic prosecution of the labours of harvest I believe that 'reaping by machinery' is becoming a necessity. Each year shows increasingly the delay caused—the expense incurred by reaping by the hook. The scythe is somewhat more expeditious, doing more of the actual work of cutting by a given number of hands, and the gathering of the cut corn leaves it in a state that in ordinary years sooner fits it for stacking, but in such a year as this it causes the stooks to be less able to keep out the wet, and has a tendency to retard the ingathering operations by the occupation of the farm servants in cutting when they might and should be ingathering."

Though thus decided as to *a* machine, I was undecided as to *the* machine. The results of trials as reported were conflicting; and the testimonials sent out by rival makers puzzled rather than convinced me. In 1859 I witnessed the competition trial for the Highland Society's prizes at its Edinburgh meeting. What I then saw, joined to the testimony of Mr. Hope, Fenton Barns, and other well-known Lothian farmers, led me to order the "combined reaper and mower" of Gardner and Lindsay, of Stirling. It was delivered to me in June, 1860; cost, including two cutting knives, 26*l.* 5*s.*

I thought that with the directions sent along with the machine there would be no difficulty in at once putting it to work. My first trial in cutting Grass was unsatisfactory; the knife cut well, but the machine clogged often, and fastened in the ground at the far-off side. As the best method of getting out of this difficulty I requested the makers to send a person accustomed to its working. They promptly sent one of their intelligent foremen, and in an hour's trial after his arrival I discovered that the imperfect working arose from imperfectly carrying out the instructions given, and I may remark, in passing, that I believe that the want of an experienced person to direct the first day's working of a reaper is often the cause that it is never satisfactorily worked. I cut 34 acres of heavy Grass at the rate of 10 acres per day; the labour employed being one man driving the pair of horses, another attending the working, and four women to remove the cut Grass out of the track of the machine at its next round, this last being so much towards the making of the hay.

My harvest of corn and Beans extended altogether to 144 acres, 132 of which were cut down by the machine in a more satisfactory manner than could be done by hook or scythe; the other 12 acres were cut by these instruments in consequence of their falling ripe when the reaper had full work on other fields.

These 132 acres occupied the reaper 203 hours, being 20⅓ days of 10 hours per diem. The corn was all more or less lodged and twisted, and was, therefore, cut only in one direction—against the lie—the machine returning out of gear. This accounts for the daily average work being, as stated, a little short of 7 acres. Our best work was in a field of spring-sown Wheat in which we cut 12 acres (about 4 quarters per acre) in 15 hours. This was towards the end of the harvest, when the workers were more expert; and I have no doubt that in another year, even with lodged and twisted corn, we shall come up to that—say 8 acres—as a daily average. But I do not expect to have often a harvest in which from continued wet all the corn is lodged; I hope to have years in which we shall have standing corn, and then shall cut round the field and do at least 12 acres per day.

The cutting, binding, and stooking of the work performed as above occupied in all 8 men and 6 women; *i. e.*, one man driving the pair of horses, one man on the box with a rake to deliver the cut corn from the platform in sheaves, six women to put the corn into sheaves and make the bands, and six men to tie the sheaves and put them in stook. The horses were not overtasked by a continuous yoking of five hours; but as all the farm horses were idle at the time we changed them generally at the end of two-and-a-half hours. In cutting all round the field the draught would of course be continuous, and I should then think it imperative to change the horses as above, and the numbers of gatherers and stookers would require to be increased to nine; that is, cutting one way, 8 acres per day, takes eight men and six women; cutting all round, 12 acres per day, would take eleven men and nine women. This work keeps them fully occupied; but the labour is light compared to that of cutting with hook or scythe. The raking after the gathering can be performed by a boy with a horse rake, going over the spaces between the stooks; the line of the stooks to be raked subsequently to their being carted off.

I had only one breakage of any importance, after understanding the working the jointof the driving crank. To repair it took half a day's work. The machine being now fully tested I anticipate few if any detentions next season.

"Men should not dispute but whisper results to each other." With disputes as to the merits of rival machines I have nothing to do. Into discussions with the advocates, or rather apologists, of the hook and scythe—both doomed to disuse except in such small occupancies as the flail still holds a place in—I do not and shall not enter. I have given above a plain unvarnished tale of the experience of a season in which "reaping by machinery" has been tested under great disadvantages, and come well out of the ordeal. *S., Inverness-shire.*

THE HARVEST OF 1860.

REPORTS (October 20) FROM OUR OWN CORRESPONDENTS.

COUNTIES.	WHEAT.		BARLEY.		OATS.	BEANS.	PEAS.	POTATOES.	TURNIPS.	MANGELS.	NAME AND ADDRESS.
	Quantity.	Quality.	Quantity.	Quality.							
SCOTLAND.											
CAITHNESS	....	....	Not average	Light	Average; light	....	....	Inferior in quality	Very good	....	J. S. MacIvor, Wick
ABERDEEN	Not average	Inferior	Full average	Good	Over average	....	....	Inferior	Excellent	....	W. Hay, Ellon
	....	....	Good	Good	Fair	....	....	Good and healthy	Good	....	J. Nicoll, Turriff
	....	....	Great crop	Good	Abundant	Abundant	....	Fair and good	Splendid	Seeded	J. Laing, Peterhead
	Small breadth	Very deficient	44 bush. p. acre	51 lbs. p. bush.	40 bush. p. acre	....	....	Fair; healthy	Not average	....	J. MacDonald, Huntly*
	Not average	Inferior	Average	Not average	Average	....	....	Good	Average	....	J. Barclay, Enzie
INVERNESS.	Large	Inferior	Large	Stained	Not average	....	....	Not average	Large	Poor	—, Inverness
ELGIN	Much under average	Very inferior	Quite average	Fair	Full average	....	....	Good	Very good	....	——, Forres
	Not average	Rather soft	Full average	Good	Over average	....	....	Very good	Very good	....	J. Grigor, Forres
	Not near average	Under average	Full crop	Fair	Good	....	....	Good	Over average	....	J. Hamilton, Forres
FORFAR	1-4th under average	Indifferent	Full average; 36 bush. p. acre	53 lbs. p. bush	Full average; 48 bush. p. acre	Average	....	Over average, and the soundest crop for many a year	Average	Under average	W. Smith, Brechin
	Under average	Inferior	Over average	Good	Average	Over average	Under average	Over average	Average	Not successful	R. Colvill, Chance Inn
	Much under average	Inferior	Full average	Much very good	Over average	Good	....	Good	Various	Not good	A. Bell, Montrose
MID LOTHIAN	Short	Inferior	Large	Good	Good	Good; late	....	Large crop	Very heavy	....	J. Morton, Dalkeith
	Near average	Middling	Average	Average	Full average	In the field	Green when cut	Full; sound crop	Fair	Poor	J. Melvin, Ratho
	Bare average	Bare average	Over average	Stained	Over average; much out	Over average	....	Great crop	Full average	Seeded	J. Hislop, Midcalder
HADDINGTON	Full	Average	Over average	Average	Average; good	Over average	....	Aver.; sound	Full crop	Moderate	G. Hope, Drem
	Average	Average	Very good	Very good	Good	Good; late	Good	Abundant and good	Good	....	J. Steele, North Berwick
STIRLING	Full average	Good; soft	Over average	Excellent	Fair	Over average	....	Good	Excellent	Not good	A. Buchanan, Whitehouse Farm
PEEBLES	....	....	Full average	Full average	Over average	Over average	....	Average; healthy	Over average	....	J. Lyle, Inverleithen
SELKIRK	Under average	Inferior	Over average	Over average	Under average	....	....	Average; good	Full crop	Inferior	J. Stalker, Galashiels
ROXBURGHSHIRE	22 bush. p. acre	Coarse; sound	33 bush. p. acre	Sound	36 bush., and good	....	....	4 tons p. acre; good	18 tons; good	Not good	P. Brodie, Charilaw
	28 bush. p. acre	....	34 bush. p. acre	....	38 bush. p. acre	Bulky	....	4½ tons p. acre	19 tons p. acre	....	J. Thomson, St. Boswells
RENFREW	Average	Deficient	Average	Fair	Bulky, but fair	Still in the field	....	Good	Not average	Not average	J. Gardiner, Neilston
	Average	Some still out	Average	Fair	Bulky	Good	....	Good	Average	Not average	W. Boyd, Renfrew
AYR	Not average; 3½ qrs. per acre	Not average	Average	Soft	Variable; very late	Large; late	....	Average; sound	Not average	Not average	A. Ralston, Lagg
	Average	Generally inferior	....	....	Good	Good; still out	....	Good	Deficient	Bad	W. McJannet, Irvine
	Average	Not good	....	....	Near average	....	....	Good	Not average	Not average	W. Orr, Beith [Mains
BERWICKSHIRE	26 to 30 bush.	57 to 61 lbs.	36 to 50 bush.	53 to 56 lbs.	50 to 60 bush.	40 bush.	....	5 to 6 tons	15 to 20 tons	12 to 15 tons	J. Wilson, Edington
	Not average	Sound but raw	Average	Good	Over average	Over average	Average	Good & sound	An average	Very poor	G. Logan, Stitchell
WIGTOWN	Barely average	Inferior	....	....	Full average	Inferior	....	Half diseased	Bare average	Small	W. H. M'Clean, Stranraer
DUMFRIESSHIRE	Injured	Not first-rate	Good	Injured	Good after lea; poor after fallow	....	....	Fine crop, and sound	Various	Not half a crop	J. Little, Langholme
ENGLAND.											
NORTHUMBERLAND	20 bush. p. acre	Not first-rate	40 bush. p. acre	Not first-rate; but sound	Average	Average	Inferior	Under average	Average	Not good	J. Grey, Dilston
	Average, but shaken by wind	Fair	Full average	Fair	Good and full	Good	Poor	Good	Various	Inferior	J. Laing, Coldstream
	Not average	Under average	Full average	Not average	Average	Average	Not average	Full average	Average	Not average	T. P. Dods, Hexham
	Pretty fair	....	Good	Good	Good	....	....	Good	Very fair	....	T. Wilson, Ulleswater
CUMBERLAND	Not average	Middling	Average	Fair	Good	....	....	Average	Very good	Average	T. Donald, Carlisle
	Hardly aver.	Full	Best ever known	Average	Not average	Good	Good	Good	Good	Good	J. Rigg, Abbey House
WESTMORELAND	Not average	Coarse and soft	Full average	Various	Good, but much out	....	....	Average	Regular	Light	J. Crosby, Kirkby Thure
	Not average	Inferior	Not average	Inferior	Good	....	....	Not average	Average	Average	J. Robinson, Warcop
DURHAM	Not average; much shaken by wind	Soft and inferior	Average	Good	Under aver.; shaken	....	Bad	Poor and diseased	Not good	....	G. Crofton, Kimblesworth
	Not average	Very soft	Abundant	Half unmarketable	Average	Some damaged	....	Good, but light	Good	Poor	G. Bell, Durham
YORKSHIRE	Not average	Unequal; inferior	Average	Average	Various	Full crop; not yet cut	Average	Average	Hardly aver.	Average	H. J. Turner, Richmond
	3 qrs. p. acre	1-4th short of flour	1 qrs. per acre	Dark in colour, but good quality	Good	Good, but late	Blighted; bad	1-4th of a crop	Half a crop	Light	J. Clarke, Hestle, near Hull
	24 to 28 bush. per acre	Very indifferent	40 bush. p acre	Rough	Tolerable	Heavy	....	Not very bad	Light	Light	P. Stevenson, Rainton
	2-3ds of a crop	Bad	Average	Average	Average	Good	Average	Average	Late, but average	Half of last year	T. Taylor, Pontefract
LANCASHIRE	Not average	Inferior and damp	Average	Various	Average	Average	....	Not average; sound	Not half a crop	Half crop	F. Twining, Wigan
	Not average	Poor and damp	Under average	Stained	Fair	In the fields	....	Deficient and diseased	Not half a crop	Not half a crop	G. W. Fowler, Liverpool
	Bulky	Moderate	Short	Fair	Various	Average	Fine	Good samples	....	Poor and very late	R. Robinson, Garstang
	3½ qrs.	Poor	5 quarters	Good	5½ to 6 qrs.; good	....	....	6 tons	15 to 20 tons	10 to 15 tons	G. Drury, Holker
CHESHIRE	Under average 25 bushels per acre; 1-5th to 1-4th less than last year	Not good Inferior to last year in quality	Full 33 bushels per acre	Good Variable; not good colour	Very good Good; various	Light Good	....	Light 110 bushels per acre	Very fine 12 to 14 tons per acre	Various 12 tons per acre	H. Tipping, Northwich W. Palin, Tarvin
DERBYSHIRE	....	....	....	....	Bulky	....	....	Very bad and poor	Nearly a complete failure	Very bad	B. Swaffield, Hartington
	16 to 20 bushels per acre	Bad	Average	Very deficient	Deficient	Good but not likely to be harvested	....	Diseased	Half a crop	Half a crop	J. Parkin, Idridgehay
NOTTS	2-3rds of crop	Various	463 quarters	Stained	5 or 6 qrs.	364 quarters	4 quarters	Small and bad	Very late	Small	J. Young, Newark
	Generally bad	Light and mildewed	Bulky	Coarse	Bulky; light	Good; but out	Very bad	Very bad	Middling	Very bad	—, Southwell
	Under average	Various	Average	Rough	Average	Average	Average but sprouted	Bad diseased	Under average	Under average	C. Walton, Clifton
LINCOLNSHIRE	3 to 4 qrs. 28 bushels per acre	Inferior Bad	6 qrs. 44 bushels	Stained Pretty good	Average	Good	Very bad	Very bad Very much diseased	Bad Very bad	Bad Light	F. Stafford, Mainham F. Sowerby, Aylesby
	3½ qrs. per acre	Very inferior	5 quarters per acre	Inferior and stained	Average, but hurt	Average; but out	Not average	Badly diseased	Light	Very light	W. Dudding, Wragby
	20 bushels per acre	Bad	5 quarters	Bad	Bad and half cut	....	Straw	Worse than ever	Very light	Not ripened	W. Wingate, Market Raisen
	20 bushels per acre	Bad	4 quarters	Good	Average	....	....	Diseased	Small	Light	S. Darby, Horncastle
	Near average	Various; injured	Full average	Very good	Full crop	All out	Uncertain	Bad	Small	Small	J. Clarke, Long Sutton
	1-3d short	Deficient	Full crop	Part injured	Full crop; not well harvested	Good; some out	....	Losses	Improving	Not half a crop	J. G. Dixon, Caistor
SHROPSHIRE	Much under average	Indifferent	Good	Good	Good	....	....	Diseased	Half crop	Two crops	E. Bowen, Corfton

* "In late situations, and in the upper districts of this county, there is much of the Oat crop uncut, in various stages of ripening, the produce of which, if anything, it is impossible to estimate."

THE HARVEST OF 1860—Continued.

COUNTIES.	WHEAT.		BARLEY.		OATS.	BEANS.	PEAS.	POTATOES.	TURNIPS.	MANGELS.	NAME AND ADDRESS.
	QUANTITY.	QUALITY.	QUANTITY.	QUALITY.							
ENGLAND.											
RUTLAND ..	Average	Inferior	Average	Coarse	Good	Average	Average	Good crop but diseased	Not good	Not good	W. Fancourt, Empingham
NORTHAMPTON	Probably average	....	Probably average	....	Probably average	Not yet in	....	Very bad	?	....	W. Gray, Courteen, Hull
	Rather under average	Much inferior	Average	Very little good	Full average	Full average	Bare average	Not average	Various	Small	J. Whitwell, Peterborough
	About average	Very inferior	Average	Very bad	Average; much hurt	Full but out	Very bad	Never so bad	Very bad	Very bad	J. B. Smeaton, Naseby
	1-4th under average	Unripe and light	1-5th under average	Much hurt	1-6th under average	Over average	Half under average	Average; 2-3ds rotten	1-3d of a crop	Half a crop	P. Love, Northampton
LEICESTER .	Much under average	Very inferior	Not quite average	Under average	Average	Spring sown good	Failure	Very much diseased	Very bad	Under average	J. Buckley, Normanton Hill
WARWICK ..	Under average	Very inferior	Quarter under average	Various	Good	Large crops	Half a crop	Much diseased	1-3d of a crop	Late & small	J. F. Tulloch, Wroxhall
	Not average	Various	Average	Various	....	Average	Average; bad quality	Much diseased	Under average	Much under average	W. Gibbs, Stratford-on-Avon
	Much under average	Thin and soft	Average	Medium	Good	Good but out	Very bad	All but a total failure	Very poor	Fair	J. Ford, Newbold Pacey
	Very deficient on heavy soils	Large proportions not fit for use	Full average	Stained but dry	...	Average but out	Pretty good	Cerain failure	Worst ever known	Not more than half a crop	J. C. Adkins, Milcote
	Very various	Thin	Various	Not average	5 to 7 qrs.	Good; 3-4ths out	Failure	Half diseased	Not average	2-3rds of crop	T. Bowick, Kenilworth
	Various	Generally good	Fair	Half inferior	Middling	Good	Very bad	Never worse	Failure	Very bad	W. Aitchison, Coventry
HEREFORD	Not average	Inferior	Average	Various	Average	Average; very late	Good	Sadly diseased	Not good	Pretty good	P. Norman Edwards, Brinsop Court
	35 bushels per acre	62 lbs. per bushel	40 bushels per acre	Fair	....	30 bushels per acre	....	Total failure	Bad	Very good	W. Price, Ross
	Not average	Good	Over average	Good	....	....	Average	Diseased	Late; small	Average	[more J. Mathews, Blake-
MONMOUTH	25 bushels per acre	Damp	25 bushels per acre	Stained	30 bushels per acre	....	....	Much diseased	Leaves	5 ton per acre	H. Pride, Monmouth
	Not deficient	Various	Good	Injured	....	....	....	Very bad	Very poor	Middling	—, Abergavenny
WORCESTERSHIRE	Average	Fair	Good	Rough	....	Strong	Fair	Very bad	Middling	Fair	R. Smith, Droitwich
GLOUCESTER	Average	Good	Not average	Good	Average	Not average	Various	Very bad	Total failure	Pretty good	H. Hudson, Pershore
	30 bushels per acre	Good	50 bushels	Good	60 bushels	40 bushels	Various	Nearly all rotten	Half crop	Two-thirds crop	T. Cobban, Whitfield
	Much under average	Inferior	Average	Plump but washed	Average	Very variable	Bulky	Half a crop	Late and small	Small	J. Coleman, Cirencester
	16 bushels per acre	Inferior	36 bushels per acre	Good	Good	Very good (out)	Good	Very bad	One quarter last year's crop	Bad	[don J. N. Hulbert, Bagen-
	Under average	Much inferior	Full average	Injured	Good	Various (out)	Pretty good crop; badly got	Very bad	Inferior	Not so good	—, Stonehouse
	1-5th under average	Very bad	Over average	Damp and stained	Over average	Average	Over average; soft	Bad	Small	Small	S. Rich, Didmarton
	25¼ quarters	Inferior	4 quarters	Much stained	Average	Average (out)	Various	Worse than ever before	Generally bad	Not half a crop	G. Edmonds, Lechlade
	20 bush p.acre	Not good	30 bush. p. acre	Not good	40 bush. p. acre	Not good	Blighted	1-3rd bad	Various	Good	C. L. Denton, Coleford
OXFORD	Not average	Indifferent	Average	Good; stained	Good	Good	Average	Bad	Scarcely average	Average	R. Page, North Newington
	24 to 30 bush. per acre	Inferior	32 to 34 bush. per acre	Various	Late: still out	Good: out	Good	Much diseased	Light	Inferior	S. Druce, Eynsham
BERKS	Not average	Inferior	Under average	Variable	Late and inferior	Spring sown good, but out	Injured	Very bad	Late and light	Generally bad	E. W. Moore, Coleshill
	Deficient	Inferior	Average	Stained	Over average; badly got	Over average; out	Good, but hurt	Diseased	Good	Good	E. J. Lance, Reading
	Not average	Damp	Average	30s. to 50s. per quarter	Very good	In field	Good	Very bad	Not good	Half a plant	F. Fordham, Newbury
	3 qrs. per acre	Light and damp	4½ qrs. per acre	Stained	7 qrs. per acre	5 qrs. per acre	4½ qrs. per acre	Bad	Small; weedy	Small	J. Adnams, Thatcham
	28 bushels per acre	Below average	40 lbs.	Damaged	Fair	Good but out	Good, spoilt	Fair	Bad	Half a crop	J. Williams, Abingdon
	3 qrs. per acre	Variable	Over average	Much hurt	Excellent	Good but late	Good, but nearly all left in the field	Very bad; never worse	Small	Generally bad	T. Owen, Hungerford
BEDFORD ..	Not much threshed	Very variable	Very various	Inferior	6 qrs. per acre	Good crop, but out	5 quarters	Diseased	Inferior	Bad	—, Bedford
BUCKS	3½ quarters	Average damp	5 quarters	Inferior	7 quarters	4 quarters	....	....	....	....	A. Fraser, Claydon
	....	....	....	....	....	....	....	Very bad	Small	Small	W. Smith, Woolston
	Average	Inferior	Full average	Very bad	Average	Over average	....	Half a crop	Bad	But ½ average	E. Evans, Windsor
	Average	Raw	Average	Tolerable	Not average	Abundant; out	....	Nearly all rotten	Under average	Under average	W G. Duncan, Bradwell
HERTS	Under average	Various	Under average	Generally stained	Average	Very good	Not average	Badly diseased	Light	Light	G. Webb, St. Albans
	4-5ths of aver.	2-3ds inferior	3 -4ths of an average	Half injured	Average	Fair; still out	3d deficient	Wretched	Very late	Various	—, St. Albans
HUNTINGDON	Average	Not good	Average	Stained	Good	Very good	Various	Much diseased	Light crop	Light	P. Purves, Brampton
CAMBRIDGESHIRE	8 bushels deficient	2 stone per coomb below average	....	....	Good generally	Good	Good	Good deal diseased	....	Very small	A. S. Ruston, Chatteris
NORFOLK ..	4 bushels deficient	Inferior	Good	Good	Good	Good	Indifferent	Very bad; never worse	Generally light	Small	W. Cubitt, North Walsham
	¾ of average	Very inferior	Not average	Various	Not average	Good; still out	Fair; injured	Total failure	Small and late	Half a crop	T. Brown, Denver
	6 bushels deficient	Not much complaint	6 bushels deficient	Coarse and stained	Bare average	Good; still out	Damaged	Never so bad	Fair Swedes	3-4ths of a crop	W. H. Taylor, Wymondham
SUFFOLK ..	8 bush. under average	Bad condition	None good	Much very black	Average	Quite average	Not average	Very bad	Bad	Half a crop	L. O. Collingham, Saxmundham
	2½ to 3½ qrs. per acre	Damp	2 to 4 qrs.	Not fit for malting	....	Still out	....	Diseased	Very poor	Poor	G. Edwards, Framlingham
ESSEX	....	Damp	....	Stained and damp	Indifferent	Soft	Bad	Bad	Fair; late	Small	Hardy & Son, Maldon
	Deficient	Bad	Average on light land	Injured	Average	Good; still out	Average; hurt	Very bad	Not good	Not good	W. F. Hobbs, Colchester
	.. .	Very poor	4 quarters	Good; early carried	6 quarters	5 quarters	Good; but much lost	Very bad	Not good	Improved	W. Hutley, Witham
	3½ qrs.	Half injured	4 quarters	Half good	Over average	Average	Half crop	None	1-4th crop	Half crop	C. Hall, Narestock
	22 bushels per acre	Damp	3½ quarters	Damp	36 bushels per acre	Partly good	Bad	Failure	Bad crop	Not half	J. J. Mechi, Tiptree
	Not average	Inferior	Poor crop	Very various	....	Fair; still out	Tolerable	Very bad	Bad	Bad	A. Barfield, Dunmow
KENT	Not average	Various	Over average	Good; outstanding	Very good	Great crop; still out	Much hurt	Not half a crop	Not good	Small	W. Manser, Ramsgate
	Much under average	40s. to 72s. per quarter	Good	1-3d ft for malting	Very good	Partial	Over average	Half diseased	Half crop	Half crop	R. Matson, Wingham
SUSSEX	Half a crop	Thin and light	Nearly aver.	Various	Nearly average	Nearly average	Nearly all failed	Very much decayed	Bad	Generally small	H. Scott Hayward, Folkington
	Much under average	Light	Under average	Inferior	Damaged	Good; still out	Next to nothing	Sadly blighted	Small	Very small	J. Brotherton, Hurstpierpoint
HANTS	¼ injured	....	1-4th injured	....	1-4th injured	Full average; hurt	Full average; hurt	Worse than ever known	Good; small	Small	J. W. Clark, Romsey
	1-5th under average	Various	Average	Various	Average; half light	Good; still out	Average	1-3d eatable	Very bad	Small	J. T. Twynam, Winchester
	Not average	Part good	Over average	Half damaged	Over average	Very good	Large crop; damaged	Diseased	Small	Small	H. Raynbird, Basingstoke
	23 bushels per acre	Inferior	30 bushels per acre	Irregular	46 bushels per acre	20 bushels per acre	26 bushels per acre	Not more than "seed"	Half a crop	Half a crop	J. Blundell, Bursledon
DORSET	1 3d under average	Very light	Over average	Much good	Full average	....	....	Great failure	Very light	Light	R. Damen, Dorchester
	1-3d under average	Very inferior	Average	Much injured	Good	....	Average; hurt	Very bad	Foul and small	Foul and small	W. J. Voss, Corfe Castle
	20 bushels per acre	Variable	8 to 12 sacks	3-5ths stained	Good	....	Spoilt	Very bad	Average.	Small	T. H. Saunders, Watercombe
	3 sacks short	Very bad	Good	Generally good	Very good	Good	Good	Unusually bad	Very bad	Bad	W. J. Pope, Bridport
	Half of last year	Very bad	Equal to Aug. report	Injured	Not all harvested	Good; still out	Bad	Never so bad	Very bad	1-4th of a crop	J. Furmedge, Beaminster
SOMERSET.	24 bushels per acre	Middling	32 bushels	Stained	....	Good; still out	....	Very bad indeed	Bad 1-3d crop	Very small	J. W. Eastment, Wincanton

THE HARVEST OF 1860—Continued.

COUNTIES.	WHEAT.		BARLEY.		OATS.	BEANS.	PEAS.	POTATOES.	TURNIPS.	MANGELS.	NAME AND ADDRESS
	QUANTITY.	QUALITY.	QUANTITY.	QUALITY.							
ENGLAND.											
WILTS	Various	Various	....	....	Good	Bad	Full crop	Nearly all rotten	Very late and small	1-4th of a crop	——, Swindon
	24 bushels per acre	Very inferior	5 quarters	Various	Good	Good; still out	Average	Half a crop	Very bad.	Very small	G. Brown, Avebury
	1-4th less than average	Very thin	Nearly average	Various	Good	Pretty good	Fair; much lost	Diseased	Small	Small	T. Arkell, Penhill
	Under 20 bush. per acre	Damp	Less than expected	Various	Good field	Out	....	Very bad	Very late	Inferior	T. Chandler, Hungerford
DEVON.....	Average on dry land, and *vice versâ*	1-3d very bad	Average	Badly saved	Various	....	Badly saved	Very much diseased	Bad	Small	G. Turner, Barton
	Inferior; some still out	Inferior	Much in the fields	Inferior	Late	....	....	Bad	Bad	Bad	J. Benson, Tavistock
	1-4th under average	Very thin	1-4th under average	Thin, and stained	Good	....	....	Very small	Size of Apple	Half a crop	S. Cornish, Kingsbridge
	Average	Average	Not average	Injured	Average	....	....	Very bad	Worst I recollect	Inferior	——, Totnes
CORNWALL.	Under average	Inferior	Fair	Various	Much yet to be cut	....	....	Much diseased	1-3d of a crop	Very small	J. Wills, Launceston
BRECON	18 bushels per acre	Inferior	24 bushels per acre	Fair	Average	....	....	Much diseased	Very bad	Very bad	J. Muscatt, Jun., Gilestown
IRELAND.											
DERRY.....	....	Middling	....	Middling	Average	....	....	Half a crop	Not average	Not average	C. Pollock, Magherafelt
	Small	Middling	Large	Good	Good; still out	....	....	Bad and half diseased	Very deficient	Half a crop	S. Orr, Coleraine
DONEGAL ..	As usual	Indifferent; half out	....	....	Much uncut	....	....	Small; but pretty fair	Small; and late	Indifferent	T. J. Atkinson, Ballyshannon
	Average	Average	Good	Average	Good	Late	Inferior	Half a crop	Inferior	Inferior	W. M'Cleary, Portaferry
DOWN	1-3d under average	Indifferent	....	Fair	Full average; still out	Uncut; and out	....	Not half	Half an average	Half a crop	J. Andrews, Comber
ARMAGH ..	Small	Not good	....	....	Very good	Good	....	Bad	Bad	Not good	R. B. Hardy, Tandderagee
	Short	Medium	Short	Medium	Average	....	....	Bad	Bad	Good	W. Boyd, Armagh
CLARE.....	....	Inferior	....	Bad and damp	Average	....	....	Very bad	Bad	Good	E. Bennet, Newmarket-on-Fergus
	Not average	Soft	Not average	Inferior	Very good	....	....	Very bad	Bad	Bad	W. Digan, Killeloe
WEST-MEATH	....	Bad	....	Good	Good; late, uncut	....	....	Very bad	Light	Very light	W. Newburn, Mullingar
ROSCOMMON	....	Medium	....	....	A little under average	....	....	Very bad	Half last year	Good	J. Kelly, Roscommon
	....	....	....	....	....	....	....	Poor	Late	Not average	J. Smith, Castleblaney
MONAGHAN	....	....	....	....	Not average	....	....	One-third to half diseased	Bad	....	
	....	....	....	....	Good; out	....	....	Half diseased	Bad	Pretty good	T. Middlemiss
FERMANAGH	Average	Good	....	....	Average	Average	....	Bad	Very bad	Not average	A. Mair, Brookboro'
LOUTH.....	....	Inferior	Average	Pretty good	Good	....	....	Very bad	Very light	Pretty good	W. M'Culloch, Dundalk
SLIGO	....	....	....	....	Tolerable	....	....	Indifferent	Very poor	....	J. Kennett, Boyle
LONGFORD	Very little	Good	....	....	Over average	....	....	Diseased	Bad	....	J. M. Goodiff, Granard
LEITRIM....	....	....	....	....	Average; very late	....	....	Bad	Small	....	J. Lindsay, Carrick-on-Fergus
TYRONE	1-4th under average	Defective	....	....	Not equal to expectatio	....	....	2-3ds of a crop	2-3ds of a crop	Inferior	J. Knox, Strabane
GALWAY....	....	Inferior	.....	Good	Good	....	....	Diseased	Not good	Various	G. Lamb, Mountbellew
QUEEN'S COUNTY	Good	Not good	Large	Injured	Good; late	....	....	Very bad	Very bad	Fair	M. Dunne, Stradbally
KING'S COUNTY	Not average	Inferior	Full	Good	Abundant; much uncut	....	....	Not half a crop	Deficient	Deficient	E. Bewley, M.D., Clare
CARLOW	Various	Bad	Various	Very good	Very good	....	....	Very bad	Bad	Bad	J. De Renzy, Clonegal
	Good average	Inferior	Full average	Good	Full average	....	....	Very bad	Thin and small	Good	O. W. Mosse, Rutland House
CAVAN	Far under average	Pretty good	....	....	Very good; late	....	....	Very much diseased	Small and bad	Various	J. H. Nesbitt, Belturbet
MAYO	Very short	Tolerable	Very short	Tolerable	Average; but out	....	....	Average; and good	Average	Average	G. Hildebrand, Westport
KILKENNY	Average	Good	Average	Middling	Not average	....	....	Very bad	Very bad	Very bad	D. A. Milward, Tullogher
	Three-quarters of average	Middling	Three-quarters average	Fair	Average	....	....	Half a crop	Half a crop	Half a crop	P. Grace, Freshford
LIMERICK ..	Average	Bad	Average	Good	Very good	....	....	Half of a large crop	Small; bad	Very good	E. H. Gubbins, Bruff
TIPPERARY	Small	Good	Small	Good	Good	....	....	Bad	Middling	Good	W. Ryall, Cashel
	....	Injured	....	Very variable	Very good	....	....	Half diseased and going	Not average	Not average	J. Orr, Clonmel
	Not average	....	Not average	....	Average; badly saved	....	....	Very bad	Not average	Good	J. B. Massy, Ballywire
KERRY	Over average	Various	Average	Middling	Not good; but ripening	....	....	Almost all bad	Bad	Not average	J. Creagh, Tarbert
	....	Fair	....	....	Short crop; and not ripened	....	....	Very bad	Fair	Good	J. O. Sullivan, P. P. and V. G., Kenmare
CORK	Nearly average	Tolerable	Average	Middling	Good	....	....	Fair crop; one third injured	Small	Not average	H. Longfield, Doneraile
	....	Bad	....	....	Very good; some uncut	....	....	Very bad	Bad	Middling	D. Clanchy, Charleville
	Not average	Inferior	Not average	Inferior	Much over average	....	....	Small crop; half rotten	Half a crop	Half a crop	Prof. Murphy, Queen's College

Home Correspondence.

Current Notes: Root Storing.—So many of us got caught by the early frosts of last year, that this subject is not unworthy of consideration at the present moment. It divides itself into two parts—the getting up, and the storing properly so called. We propose offering a word or two on each, and would gladly appreciate an interchange of thoughts, whether on matter of opinion, or of fact. 1st, The lifting of the crop. This is generally accomplished by hand labour alone. In a season like the present, when even the best lots of Mangels turn up with a large mass of roots and fibres at the bottom of them, the cost of raising is greatly enhanced. Orange Globe varieties, which grow well in the ground, are enough to strain the wrists of those who have much to do with them. Can the work be lightened? It can. We are running a skeleton plough under them, with much advantage. A common wheel plough will answer the purpose well. Remove the mould-board and coulter, and put on a new medium-sized share. This lets you get thoroughly under the row of plants, a wheel running on either side. The wheels may be set about level, the furrow wheel being the lowest, if anything. From 3 to 4 inches deep we find amply sufficient to move the bulb, without cutting more than 1 in 10 of any tap-roots worth mentioning. The plants retain a moderately erect position, and the clearing is overtaken as early as convenient, behind the plough. The plan described may, to many of our readers, not be new; but there are others to whom the suggestion will, in so backward a season, be acceptable. 2d. Storing.—Last year, many Mangel crops were not only injured by the frost before taking up, but large quantities were totally destroyed after being carefully stacked, and judiciously covered. The loss, however, varied considerably according to the mode which had been adopted in storing. Where straw, or stubble only were used, to however great a thickness, or however carefully laid on, the loss was yet considerable: where inefficiently performed, the injury was proportionately greater. On the other hand, where a light coating of straw or stubble was used, and then covered with 9 inches of fine soil, little damage was experienced. We should not therefore be disposed to trust to thatching only. The more porous the covering material, the greater the loss. Thus an occasional heap covered with offal hay suffered less than where covered with Barley straw; while this, again, was better than the stubble covered lots. The chief injury was sustained by the frost striking from the frozen soil upwards; and a pretty shrewd friend of ours, acting on the belief of this, adopted the precaution of placing a layer of stubble manure round the base of the heap, on the setting in of the frost. He thus escaped without loss. And as regard the varieties of the Mangels, all did not suffer equally, though stored under the like circumstances. Heavy crops of Long Red were most destroyed, then Yellow Globe, while Orange Globe, especially where not grown too large and coarse, stood the winter best. We happened to have a field of the latter variety, which was not stored till the others were completed. They were placed in round heaps containing two cartloads each, on the ground and slightly covered with straw, then moulded up. A couple of acres had nothing beside soil, and when the crop came to be folded off in March and April, these turned out considerably the soundest and freshest, not having 10 per cent. of uneatable roots. Adjoining them we stored eight acres of Swedes in November in the like manner, though in smaller heaps. The Swedes came out in February sound and fresh as in October, and scarcely an unsound root to the acre. As is well known, there were few fields of which the same remark could be made. We hope to learn a lesson here, and to avoid in future covering them with

anything besides the article in which they grow. A fish thrives best in water, and if the above case goes for anything, roots keep best in their native element, if the expression is allowable. In Scotland we have known Carrots remain in the ground throughout the winter and be dug up fresh as ever, in open weather according as required. Hence we respectfully suggest, where a contrary practice obtains, that the Mangels and Swedes be covered with soil only. And if you want to thatch at all, let the thatching be on the top of the other covering. At least in the case of Potatoes, the air being more effectually excluded, the best results ensue. Sprouting does not take place in a mild autumn, and there is a freshness belonging to the outside tubers which cannot be otherwise retained. For Mangels, nine feet wide forms a convenient base; and if this is dug out 15 inches deep, a good body of soil is obtained for covering the heap. A little additional soil, dug from one side, is however needful, for a nine-inch thickness over the whole of the store. Few safer or more economical modes can be adopted. *T. Bowick, October* 18.

Parsnips v. *Potatoes.*—Dr. Lankester, of the South Kensington Museum, thus writes to your contemporary *Bell's Weekly Messenger*. "In answer to your correspondent in Jersey, who recommends the employment of the Parsnip in the place of the Potato, let me call the attention of your readers to the relative merits of these two esculents as articles of diet. They will then be able to judge as to whether Parsnips at half the price of Potatoes would be any boon to those whose taste might not lead them to object to those roots as food. The analysis of one pound of each of these substances is as follows:—

	Potatoes. oz.	Potatoes. grains.	Parsnips. oz.	Parsnips. grains.
Flesh forming or nutritious matter	0	145	0	87
Starch	2	200	0	245
Sugar	0	214	0	210
Fat	0	32	0	35
Gum	0	27	0	52
Woody fibre	0	320	1	123
Ashes	0	368	0	70
Water..	11	0	13	53

A little study of this analysis will show how very inferior as an article of diet the Parsnip is as compared with the Potato.—To begin with—the flesh-forming matter is only about half what it is in the Potato, a sixth of what it is in rice, and one twelfth of what it is in Wheat, so that a pound of Potatoes contains as much nutritive matter as two pounds of Parsnips, while a pound of rice or of Wheat flour contains respectively as much nutriment as 6 and 12lb. of Parsnips. The next substance we arrive at is the starch, which in plants which are not consumed, as the Parsnip and Potato are, for their nutritive value, is still more important, and here we find that the Potato is five times as rich as the Parsnip. The substitute for the starch in the Parsnip is the woody fibre, which is not employed in the system as food at all, and, besides, renders it very indigestible. A pound of Potatoes contains 11 ounces of water, but a pound of Parsnips 13 ounces; hence I think we may come to the conclusion that if Parsnips could be bought in this country three times as cheap as the Potato by weight, they would still be dearer as articles of food. I write this in the hope of preventing any of your readers speculating in Parsnips, as they may rely on it that, even at the low figure at which they may be bought in Guernsey, they would prove too expensive as a substitute for the Potato at present." *M. S.*

Calendar of Operations.

OCTOBER.

Isle of Ely, *Oct.* 15.—The precarious harvest of 1860 yet remains unfinished. Here and there we see a field of white corn still exposed to the inclemency of the weather, and looking as though the stack would have been its best place weeks ago. Beans generally are in the field, and in the Fens many are yet uncut, or just being cut. Our report this month should embrace some facts respecting the quantity and quality of grain this year's crop yields. We regret to have no favourable information to communicate, as regards the generality of our Fen Wheats. The quality is very inferior and much weighs very little over 15 stone per coomb; some of the better samples reach 16½ stones, and very few indeed are as high as 17 stone. The yield is not good—about 1 qr. per acre below an average. Oats are a better crop, and both yield and weigh well. Beans are a good crop as far as appearances go, but it will be a long time ere it can be tested by the threshing machine. Those of our Fen farmers who made the most haste during the two or three weeks of fine weather we had last month fared the best, as they got all their Corn into the stack in prime condition. Those who were less active, however, had a good opportunity afforded them of stacking their Corn in fair condition during the first few days of the present month, although somewhat discoloured and sprouted by the previous fortnight's almost incessant rain. Wet has again prevailed and prevented a completion of harvest operations. During a tour in Yorkshire and Lincolnshire last week we saw a good deal of corn out, especially Oats. In some high districts the Wheat was just being cut, much being still very green, and some too backward to ripen at all this season. Wheat sowing has commenced, but the weather is unfavourable for making much progress. Work generally, through the lateness of the harvest, is very backward, and it will be unusually late ere the seeding this year is completed. Mangels in most instances are small, and in our tour just referred to, we observed the Turnips were generally a wretched crop. Some of the late sown whites rather resembled Turnip Radish beds than Turnip fields—the bulbs were so exceedingly small. With a severe winter, keeping in the spring must be extremely scarce. Potatoes are much diseased and about an average crop. The corn trade for good qualities is firm, for low qualities bad. Lean cattle and sheep are lower. *Your Fen Reporter.*

Notices to Correspondents.

An Agricultural Problem: *A Landlord* says a tenant has liberty to sell straw and expend the money in artificial manures. He selects Rape Cake, and makes his sheep perform the duties of "a manure distributor." Question—how far are my interests as landlord protected by this mode of application of the manure? I think my tenant looks sharp after his own interest, but not having myself even "bowing acquaintance with science," I shall be glad of the solution of the question by a scientific and practical agriculturist. [Your interests are perfectly safe. The tenant might *consume* the straw if he chose, in like manner as he chooses to consume the cake; the exchange of a portion of the straw for cake will be beneficial to both landlord and tenant.]

Australian Wheat.—We have to thank Mr. Wilson for a magnificent sample of Wheat, weighing 66 to 68 lbs. per bushel, and unsurpassable for the colour, form, and beauty of the grain. It has however a singular aromatic taste, probably derived from neighbourhood during its transit to some aromatic drug.

Foreign Plant: *A R* says:—"I received a few seeds in a letter from Messrs. Nutting & Sons, Barbican, London, with the following name, 'Serradilla, new fodder plant for poor and sandy soils.' This small sample I had sown in the first week of June, in a very poor portion of ground; it made but little progress for some time, but afterwards became very luxuriant, and now is full 3 feet high, beautifully green and tender, and not the least hurt by the severe frost we have had. It is very much like a Tare when growing. Do you know anything about it. From what I have seen there is no doubt but it will come into general use.—His plant belongs to the genus Ornithopus, or Bird's-foot. We this year had it sent to us under the name of Serradilla, but our sample, which was grown on the forest marble, has so much perished with the wet and cold of this season that we cannot speak so highly of its merits as a fodder as our correspondent.

Four-Acre Piece: *Anxious.* The problem does not seem very difficult. You wish to have in spring 1 acre planted with Mangel Wurzel, half an acre with Rape then getting into flower, to be followed by Cabbage; half an acre of autumn-sown Vetches getting forward for use; half an acre to be sown with spring Vetches; half an acre sown with Carrots, and 1 acre planted with Potatoes. Suppose eight half-acre pieces with the following succession upon them:—1, Mangel Wurzel, April till October; 2, Potatoes, February till October; 3, spring Vetches, April till August and September; 4, Carrots, March till October; 5, Mangel Wurzel, April till October; 6, Potatoes (early sort), February till September; 7, Winter Vetches, October till June or July, followed by Rape, August till May; 8, Cabbage, June till November and December.

Gas Liquor: *G R A.* It varies exceedingly in the quantity of ammonia which it contains; 100 gallons may contain from 20 lbs. to 40 lbs. of ammonia. You will find that there is a very full account of it by Professor Way, in Blackie's Cyclopædia of Agriculture, art. Gas Waste.

Grass Land: *Rusticus.* Your land probably needs drainage. You must seek an outfall for drains 4 feet deep, and place them if in clay land 6 yards apart. There is nothing more under our control than the vegetation on our pastures. Drained land manured with bone-dust and mineral manures will grow Clovers and rich pasture. If manured exclusively with ammoniacal manures it will grow the Grasses exclusively. In either case good management and drainage will get rid of the rushes.

Mangel Leaves: *J W C.* The following is the process for preserving them, as recommended by "an old Norfolk farmer" in the *Mark Lane Express.*—In taking up the roots, which must of course be done in dry weather, the tops must be cut off close to the bulb, and carefully laid in small heaps. Cut trenches as for storing Potatoes or Mangels, but from 12 to 15 feet wide, and of such a depth as the dryness or otherwise of the soil will allow. If, however, the land is subject to wet in the winter, it will be better to make the trenches shallow, and raise the ridge of the tops above the ground, than to have them lying in the wet, which would destroy them. When the trenches are ready, place in them a layer of tops about 8 inches in depth, and gently press them down. Then sprinkle salt over them in the proportion of ¾ lb to every 4 cubic feet of tops: then put in another layer, and more salt, and so on layer after layer, bringing them to a ridge at the top above the ground. When the trench is thus filled, the sides of the angle must be carefully covered with mould beaten hard and smooth with the spade, and afterwards when cracks and fissures appear on the face, which will be the case as the foliage condenses by the evaporation of the natural moisture, they must be filled up, and the bank kept smooth and hard to shoot off the rain and snow-water of winter. This is absolutely necessary to the success of the plan. When the trench is filled and completed, a drain must be dug all round it, to catch the water from the sides, and this must be conveyed to the nearest ditch by a continuation of the drain. The lower layers of leaves should be thicker than the upper ones, otherwise they will, by the draining of the moisture, receive an undue proportion of the salt. The evaporation of the vegetable moisture from the mass and its perfect conservation will take six weeks, when it may at once be given to the cattle. The usual quantity given to cows is about one bushel per day, and those who know their value will not be more lavish of them. Every kind of animal are fond of them, and will leave any other food for them. But they are particularly adapted to milch cows, both increasing the quantity and improving the quality of the milk, cream, and butter. They keep them in health, which is owing to the salt, and it is found that calves reared by cows fed upon them thrive and fatten fast. When thoroughly cured the foliage is quite dry, and in fact has the appearance of dead leaves. The ridges may be raised from 3 to 5 feet above the ground, and even more, so as to have a steep slope to shoot off the rain. No straw should be used, as it would be apt to retain moisture and rot the leaves. Thus cured they will keep till late in the spring. The importance of adopting this plan in such a season as the present, when there is almost certain to be a dearth of cattle food, need not be insisted on. I may say that Turnip tops can be rendered equally available by submitting them to the same process, and thus an immense mass of food may be saved which is now completely wasted, the necessary consequence of having so large a quantity to be disposed of at once.

Pease Pudding: *Norwich.* Tie 1 quart of Peas loosely in a cloth, put them in cold water and let them boil two hours to be quite tender, then beat them fine with a wooden spoon, with ½ oz. of butter, pepper and salt to your taste; tie the pudding up again quite tightly in a cloth for an hour with any meat you intend to serve it with; let it stand in the colander about 10 minutes, untie it, and turn it out. Peas should always stand two hours in cold water before being cooked.

Pease Soup: *Norwich.* An excellent soup can be made with 1 pint of Peas, 5 quarts of water, four large Onions, stick of Celery, and three Carrots. Wash and cut the vegetables in pieces, and fry them in any kitchen fat, with two tablespoonsful of brown sugar; then put the whole into the water with the Peas, and all the bones saved for the purpose, and more meat if the soup is desired rich; a salt herring or a pig's foot is an excellent addition. Boil the whole five hours

HOW TO BREW ALE, at 7*d.* per Gallon, fine as Sherry, and an aroma equal to Burton Tenpenny. This new Practical Treatise is by a Derbyshire man of 28 years' labour at the spigot and tun in the best brewery in the county. No brewing utensils required, only those for household use. This is guaranteed to be the best and cheapest mode to produce fine Ale ever made public, leaving a profit of 1*s.* 9*d.* per gallon. The above beautifully printed in large type, can be had of the sole Publishers for 12 Penny Post stamps. Sent post free to any address.—Direct to Fisher & Son, Publishers, Kingsland, London, N.E. Established 1817.—Notice.—Just appended to this universally prized Book, the Publican's Plan to produce Gin without Distillation, also all the methods to make the improved Ginger Beer, Soda Water, Lemonade, all the Cordials and Nectars, together with the Penny French Ices, the Delightful Temperance Beverages, and all the French American, and English cheap fruit drinks.

LIVE FISH FOR STOCKING PONDS, AQUARIUMS, &c.—Carp, Tench, Roach, Dace, Perch, Chub, Gudgeon, Minnows, Gold and Silver Fish, Eels, &c. To be had at Charles Wright's, Fishing Tackle Manufactory, 376, Strand, W.C. Aquariums sold.

MICROSCOPIC PHOTOGRAPHIC NOVELTIES.—Just published, GARIBALDI and the KING of SARDINIA, 2*s* 6*d.* each; or post free for 32 stamps. Just published, Second Edition, an ILLUSTRATED and DESCRIPTIVE CATALOGUE, containing the Names of 1500 MICROSCOPIC OBJECTS, post free for six stamps.—Joseph Amadio, Throgmorton Street, E.C.

LE SOMMIER ELASTIQUE PORTATIF.

HEAL and SON have patented a method of making a Spring Mattress portable. The great objection to the usual Spring Mattress is its being so heavy and cumbersome.

The SOMMIER ELASTIQUE PORTATIF is made in three separate parts, and when joined together has all the elasticity of the best Spring Mattress. As it has no stuffing of wool or horsehair, it cannot harbour moth, to which the usual Spring Mattress is very liable; the prices, also, are much below those of the best Spring Mattresses, viz.:—

3 feet wide by 6 feet 4 inches long	..	..	£2	5 0
3 feet 6 in.	,,	,,	2	10 0
4 feet	,,	,,	2	15 0
4 feet 6 in.	,,	,,	3	0 0
5 feet	,,	,,	3	5 0
5 feet 6 in	,,	,,	3	10 0

The SOMMIER ELASTIQUE PORTATIF therefore combines the advantages of elasticity, durability, cleanliness, portability, and cheapness.

An Illustrated Catalogue of Bedsteads, Bedding, and Bed-Room Furniture sent free by post on application.

Heal & Son, 196, Tottenham Court Road, W.

METCALFE, BINGLEY, and CO.'S NEW PATTERN TOOTH BRUSHES, Penetrating Unbleached Hair Brushes, genuine Smyrna Sponges, and every description of Brush and Comb and Perfumery for the toilet. Metcalfe's celebrated Alkaline Tooth Powder, 2*s.* per box.

THE FAIRY BOUQUET.—This delicious perfume was originally discovered by one of Titania's principal attendants. It is made from wild flowers, culled by fairy hands from "the bank whereon the wild Thyme grows." The authenticity of the recipe is vouched for with the same degree of certainty as is the existence of Titania herself. It is now prepared solely by Metcalfe, Bingley, & Co., Perfumers, &c., 130 B and 131, Oxford Street, London, W.—In bottles, 2*s.*, 3*s.* 6*d.*, and 5*s.* each.

THE PERFECT SUBSTITUTE FOR SILVER.—The REAL NICKEL SILVER, introduced more than 25 years ago by William S. Burton, when PLATED by the patent process of Messrs. Elkington & Co., is beyond all comparison the very best article next to sterling silver that can be employed as such, either usefully or ornamentally, as by no possible test can it be distinguished from real silver. A small useful set, guaranteed of first quality for finish and durability, as follows:—

	Fiddle or Old Silver Pattern. £	s.	d.	Thread or Brunswick Pattern. £	s.	d.	Lily Pattern. £	s.	d.	King's or Military Pattern. £	s.	d.
12 Table Forks	1	13	0	2	4	0	2	10	0	2	15	0
12 Table Spoons	1	13	0	2	4	0	2	10	0	2	15	0
12 Dessert Forks	1	4	0	1	12	0	1	15	0	1	17	0
12 Dessert Spoons ..	1	4	0	1	12	0	1	15	0	1	17	0
12 Tea Spoons	0	16	0	1	2	0	1	5	0	1	7	0
6 Egg Spoons, gilt bowls..	0	10	0	0	13	6	0	15	0	0	15	0
2 Sauce Ladles	0	6	0	0	8	0	0	9	0	0	9	6
1 Gravy Spoon	0	6	6	0	10	0	0	11	0	0	12	0
2 Salt Spoons, gilt bowls..	0	3	4	0	4	6	0	5	0	0	5	0
1 Mustard Spoon, gilt bowl	0	1	8	0	2	3	0	2	6	0	2	6
1 Pair of Sugar Tongs ..	0	2	6	0	3	6	0	4	0	0	4	6
1 Pair of Fish Carvers ..	1	4	0	1	7	6	1	10	0	1	12	0
1 Butter Knife	0	2	6	0	5	6	0	6	0	0	7	0
1 Soup Ladle	0	10	0	0	17	0	0	17	0	1	0	0
1 Sugar Sifter	0	3	3	0	4	6	0	5	0	0	5	6
Total	9	19	9	13	10	3	14	19	6	16	4	0

Any article to be had singly at the same prices. An Oak Chest to contain the above, and a relative number of Knives, &c., 2*l.* 15*s.* Tea and Coffee Sets, Dish Covers and Corner Dishes, Cruet and Liqueur Frames, &c., at proportionate prices. All kinds of re-plating done by the patent process.

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SOLE INVENTORS AND MANUFACTURERS OF THE

ONE-BOILER SYSTEM OF HEATING BY HOT WATER.

PATRONISED BY H.R.H. THE PRINCE CONSORT.

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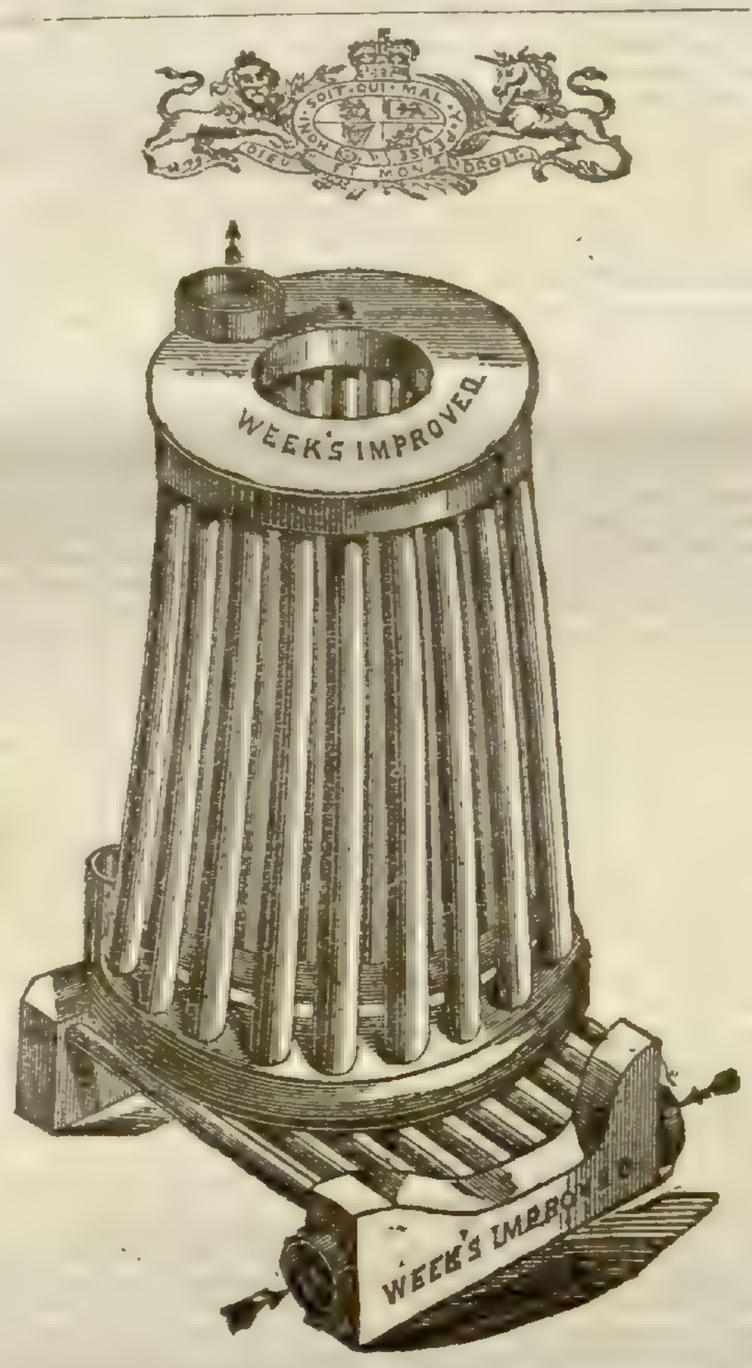
LIVERPOOL BOTANIC GARDENS.

The extensive alterations and additions at the above Gardens, in removing all the old gigantic Boilers and Furnaces, and substituting them by WEEKS' PATENT IMPROVED ONE-BOILER SYSTEM, are now complete and can be seen in most successful operation.

This Apparatus is the largest ever adjusted to one Boiler in the neighbourhood of Liverpool, and from its novel and greatly improved construction is specially worthy of minute inspection.

Every house in the Garden is heated from this one Apparatus, and by the ingenious arrangement of a series of valves hot water can be distributed in any portions of the Stoves, Greenhouses, &c., or withheld at pleasure, and the temperature regulated with the greatest nicety to meet the requirement of any particular department.

For full description see account in the *Liverpool Mercury* of May 30, 1860.



WEEKS' ONE-BOILER SYSTEM.

The Nurseries of Messrs. Arthur Henderson & Co., Pine Apple Place, and Messrs. E. G. Henderson & Son, Wellington Road, both of St. John's Wood, and ranking among the largest Establishments in England, are now Heated on WEEKS' ONE-BOILER SYSTEM. At the latter the Apparatus has been in use upwards of five years, during which period many additions have been made, and it now comprises nearly two miles of piping. The working of this Apparatus has been most efficient, and given the Proprietors the greatest satisfaction. They will be at all times happy to give every information to visitors, who will be well remunerated by an inspection of the same.

Mr. Arthur Henderson expresses himself thus:—"I am delighted and more than satisfied with the pleasing results produced by the superior arrangements of WEEKS' ONE-BOILER SYSTEM, and shall be most happy to fully explain and recommend it to all who may honour my Establishment with a visit."

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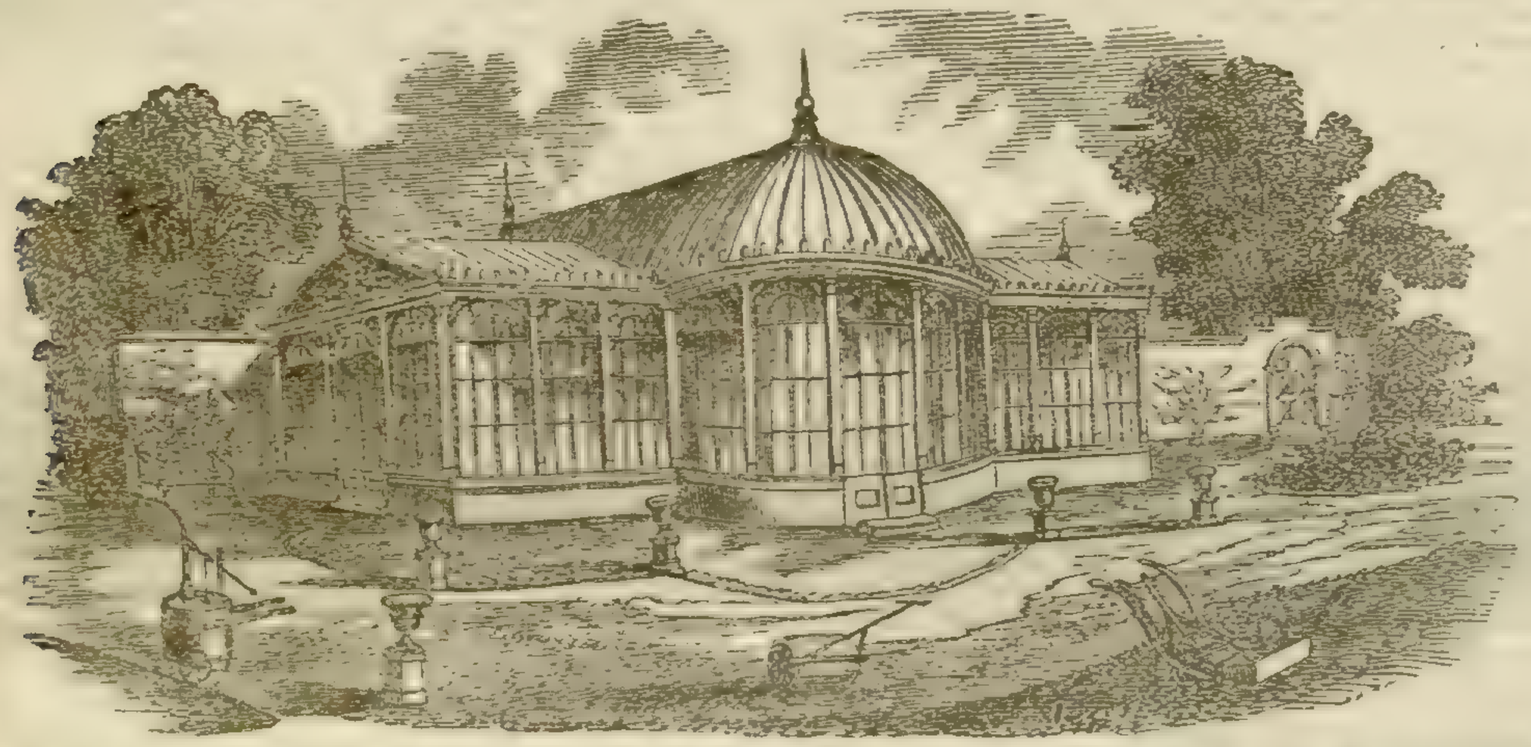

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Conservatories	Summer Temples	Orchid Houses	Apricot and Peach Houses
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GREENHOUSES made of best Yellow Deal at 8*d.* per square foot; if glazed and four times painted, from 1*s.* Pit Lights glazed and four times painted, 8*d.* per foot; unglazed, 4½*d.* per foot. One hundred 6 ft. by 4 ft. Lights ready for use at 16*s.* each, or 76*l.* the lot.

N.B. Ready built, may be seen erected, three Houses, a Lean-to, 24 ft. by 12 ft. 6 in., 33*l.*; Span, 23 ft. by 12 ft. 4 in., 34*l.* Also an unglazed Lean-to, 29 ft. long by 12 ft. 9 in. wide. All materials warranted good.

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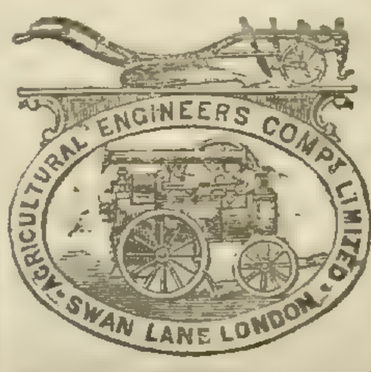

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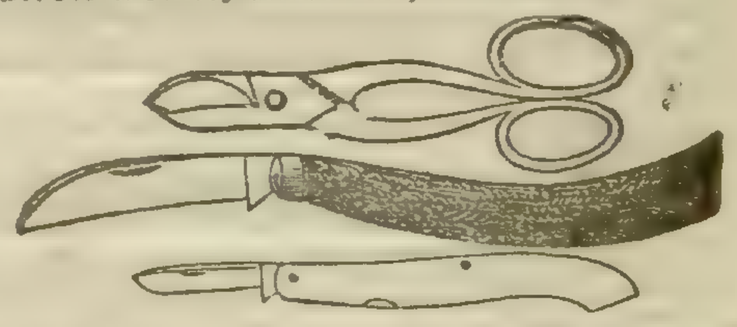

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FORGERY AND FRAUD.—Understanding that there is at present an attempt being made by some unprincipled parties in our city to deceive the public with an inferior Starch, made up in packets closely resembling the GLENFIELD STARCH, we consider it our duty to warn our fair readers to be careful when purchasing to see that the word "GLENFIELD," and the maker's name, "ROBERT WOTHERSPOON," is on every package, as none others are genuine.

PINE APPLES, GRAPES, ETC.

PINE PLANTS, FRUITING AND SUCCESSION.
GRAPE VINES, FROM EYES FOR FRUITING IN POTS, OR PLANTING.

JOHN WEEKS AND CO. can supply any quantity of very fine healthy Pine Plants, either Fruiting or Succession.

GRAPE VINES remarkably strong and fine, 50 varieties, all the best sorts.

JOHN WEEKS AND CO.'S HORTICULTURAL SHOW ESTABLISHMENT is entirely devoted to the growth and Forcing of GRAPES, PINES, PEACHES, FIGS, CUCUMBERS, and other choice Fruits. The whole open for inspection, thereby showing the most improved plans of HORTICULTURAL BUILDINGS with the VENTILATING and HOT-WATER APPARATUS in full operation.

JOHN WEEKS AND CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, London. Plans, Estimates, and Illustrated Catalogues free on application.

TRITOMA UVARIA (TRUE). — When planted in large beds on lawns, groups in mixed borders, shrubbery borders, or margins of select plantations, the T. UVARIA, with its long graceful leaves, majestic flower spikes 3 to 7 feet high, crowned with densely flowered racemes 18 to 27 inches long, may well, in such situations, be called the most ornamental of summer and autumn blooming plants. Per dozen, 4*s.* 6*d.*, 8*s.* 6*d.*, 12*s.*; extra strong plants, 18*s.* For Cyclamens, Liliums, &c., see large Advertisement, p. 970.

BUTLER & MCCULLOCH, Covent Garden Market, W.C.

JOS. MAY having a considerable quantity of the following begs to offer them to the Trade, and will forward prices on application: Crown Imperial Lilies, Common White ditto, Scarlet Martagon, Mixed Martagon, Orange, Tiger Lilies, Single mixed Anemones, Pheasant-eye Narcissus, Double White Narcissus, Double Roman Narcissus, Paper White Narcissus, Gladiolus Brenchleyensis.

1, Wellington Street, Strand, near Waterloo Bridge, W.C.

ROSES.

JOHN CRANSTON'S DESCRIPTIVE CATALOGUE OF ROSES FOR 1860 AND 1861 is now ready for distribution. It will be forwarded as usual to all customers and free to all applicants.

J. C. flatters himself that his Catalogue will be found a useful guide to all purchasers, likewise to every one interested in the cultivation of the Rose.

The descriptions of New Roses will be found copious and faithful, so far as was possible to make them from the experience of one season.—Nurseries, King's Acre, near Hereford.

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A. VAN GEERT, NURSERYMAN, Ghent, Belgium, begs to recommend the following New Hybrid PERPETUAL ROSES, sent out for the first time:—

MME. AUGUSTE VAN GEERT (P. Robichon).—A very pretty well formed striped Rose, 12*s.*

TRIOMPHE D'AMIENS (Millie Mallet). — Extra well formed, beautiful red (velouté), spotted with white, 21*s.* Gained the Gold Medal at the Exhibition of Amiens, 1859.

REINE DES VIOLETTES (Mille Mallet). — Large flower (forme coupe), deep violet colour, 18*s.*

One over for every four of a sort taken.

NEW ROSES.

DUCHER, HORTICULTEUR, Rue de la Mouche, No. 4, Quartier de la Guillotière, Lyon. On sale the 1st November, 1860:—

BARLOW.—Vigorous; flowers medium size, full, flat, perfect shape, en bouquets; colour purple to black velvety, centre violet. **A beautiful Rose, seedling of Géant des Batailles. Price 20 francs.**

GENERAL ZACHARGEVSKY.—Hybrid Perpetual; vigorous; flowers medium size, full, perfect shape; colour rose pink, frequently veined, sweet smelling; grows freely; foliage somewhat resembling William Griffith. Price 15 francs.

DARZENS.—Hybrid Perpetual; vigorous; thick stem, covered with thorns; flowers very large, almost full; colour rose tinted chamois, very sweet smelling. This variety differs from every other Rose by its growth and colour. Price 15 francs.

WINTER BLOOMING PLANTS.—Purchasers are respectfully invited to inspect the very large stock of the Subscribers. AZALEAS, ERICAS, EPACRIS, CYTISUS, and ACACIAS, can be seen in thousands.

Fine grafted JASMINUM GRANDIFLORUM, well set with flower. OTAHEITE ORANGES in fruit, &c.

HUGH LOW & Co., Clapton Nursery, N.E.

WINTER FLOWERING PLANTS.—We have a large stock of fine healthy plants, well set with bloom, of the best varieties of AZALEA INDICA, CAMELLIAS, EPACRIS, and ERICAS, and will be glad to quote prices upon application. Also very nice grafted plants of JASMINUM GRANDIFLORUM, ACACIA GRANDIS, PULCHELLA, AGROPHYLLA LONGIFLORA MAGNIFICA, and others.

DWARF OTAHEITE ORANGES, beautifully set with fruit.

JAMES DICKSON & SONS, Newton Nurseries, Chester.

WINTER AND SPRING FLOWERING PLANTS.

F. AND A. SMITH are now sending out at reasonable prices finely grown plants of Acacia, Azalea, Aphelexis, Boronias, Burchellia, Chorozema, Cineraria, Cactus, Cytisus, Carnation (Tree), Daphne, Epacris, Ericas, Eutaxia, Gardenias, Geraniums, Hydrangea, Primula, Prostrantthera, Poinsettia, Polygala, Roella, Roses, Indica minor, Devoniensis, Yellow Noisette, Gloire de Dijon, Cramoisie supérieur, &c. Tremandra, Greenhouse Climbers in variety. Also a selection of Hyacinths and Tulips suitable for Forcing in good condition. Prices with Lists on application.—Dulwich, Surrey, S.

CARNATIONS AND PICOTEES.

JOHN KEYNES is prepared to send out Six New and Splendid CARNATIONS and Six New and First-rate PICOTEES, the 12 pairs for 3*l.*

CATALOGUES now ready. **The Silver Cup was awarded to** J. KEYNES at the National, where some of these Seedlings were exhibited in his Stand, which will not easily be forgotten by those amateurs who saw them. There being but few pairs of a sort, early application will be best to secure good plants.

Salisbury, November 3.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SON'S PRICED AND DESCRIPTIVE CATALOGUE FOR 1860 AND SPRING 1861, comprising Fruit Trees of all the leading kinds, new and selected Roses, fine varieties of American Plants, Choice and Rare Conifers, Evergreen and Deciduous Trees and Shrubs, and a fine Stock of Transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

MELBOURNE, NEAR DERBY.

EDMUND SALSBURY begs to offer 1-year Seedling Quick; 2 and 3 years' Transplanted do; 1 years Seedling Hollies; 1, 2, and 3 years' Transplanted do; 3 years Spanish Chesnuts, and a large variety of Lancashire Gooseberries, including the large bearers as well as the new prize varieties. Also Elton and Alice Maud Strawberry plants. The above are held in very large quantities, are of first class quality, and will be offered to extensive purchasers at very low prices.

Prices on application, and no charge for samples.

EXHIBITION OF CHRYSANTHEMUMS.

JOHN SALTER, F.H.S., begs to inform the Public that his unrivalled Collection of these beautiful flowers will be in bloom throughout November and December. He invites Amateurs to visit his Nursery, where they will see, both under glass and in the open ground, not only all the varieties in general cultivation in their natural growth, but very many SPLENDID SEEDLINGS, large flowers and Pompones, which he will have the honour to send out early in 1861.

The WINTER GARDEN, which has been considerably enlarged, will present a "coup d'œil" unique in this or any other country. Free admission every day except Sunday.

Versailles Nursery, William Street, near Hammersmith Turnpike, London, W.

GERANIUMS, HERBACEOUS AND ALPINE PLANTS, ORCHIDS, CHRYSANTHEMUMS, HARDY VARIEGATED PLANTS, &c.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their new priced and descriptive CATALOGUE of the above, to which are added supplemental Lists of Fuchsias, Stove, Greenhouse, and Hardy Plants, Ferns, Ornamental Foliage and Variegated Plants, Fruit Trees, &c. (which include the best new plants of the season, is now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

HARDY SCARLET RHODODENDRONS.

JOHN WATERER begs to announce that his New DESCRIPTIVE CATALOGUE of HARDY SCARLET and other choice RHODODENDRONS, as are annually displayed at the Royal Botanic Gardens, Regent's Park, is now published and will be forwarded on application. It likewise furnishes a List of all popular Hardy Plants, with a selection of the most desirable Conifers, with heights and prices.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

The CATALOGUE can also be had of Mr. JOHN KERNAN, 4, Great Russell Street, Covent Garden, W.C.

NEW HARDY RHODODENDRON.
R. NAPOLEON BAUMANN.

JOSEPH BAUMANN, NURSERYMAN, Ghent, Belgium, begs to announce that he is sending out for the first time his new SEEDLING RHODODENDRON. It is a good grower, free flowering, pyramidal truss, bright rose, all the petals dotted over with deep crimson spots, very fine foliage; altogether excellent. It received the first prize at the great Ghent Show for best seedling. Good plants with three to four shoots, 1*l.*; stronger plants, 2*l.* Free to London (Custom House). One over for every three taken.

J. B.'s NEW CATALOGUE, with the figure of this Rhododendron, may be had on application at the Ghent Nursery.

SCARLET RHODODENDRONS.—Handsome bushy plants, from 1 to 2 feet high and 2 to 3 feet through, 10*l.* 10*s.*, mixed with Hybrids, PONTICUM, from 2 to 4 feet, 7*l.* 10*s.* per 100.

KALMIA LATIFOLIA, 2 to 3 feet high, 5*l.*; 4 to 4½ feet high, 7*l.* 10*s.*

AZALEAS, large bushy plants, 2½ to 4 feet and larger, 5*l.* per 100; best Ghent varieties, 75*s.* per 100.

CATALOGUES on application.

GEO. BAKER, American Nursery, Bagshot, Surrey.

NEW CINERARIAS OF 1860.

F. AND A. SMITH are now sending out their splendid Varieties of the above, which for colour, dwarf habit, and large compact heads of bloom, are unsurpassed; many of them are finely formed, and others have the largest flowers known. A DESCRIPTIVE CATALOGUE may be had on application—Dulwich, Surrey, S.

NEW GOLDEN STRIPED ARBOR-VITÆ.
(THUJA VERVAENEANA.)

A. VAN GEERT, NURSERYMAN, Ghent, Belgium, begs to announce he is now ready to send out the above very showy novelty, of which he has purchased the entire stock of the obtainer, M. Vervaene, of Ghent.

Price 7*s.* 6*d.* each; one over for every three taken.

CHOICE SEEDS.

MESSRS. PARKER AND WILLIAMS beg to offer the following New and Genuine SEEDS, all of which are strongly recommended:—

	P. packet—*s.*	*d.*
CAULIFLOWER, New Early Mammoth or Frogmore Forcing, the earliest var. in cultivation	1	6
CUCUMBERS, all the best varieties	1	0
LETTUCE, Alma (Griffin's)	1	0
" Moor Park, extra fine	1	0
FLOWER SEEDS.		
CALCEOLARIA, herbaceous, finest mixed	2	6
CINERARIA, from finest named varieties	2	6
DIANTHUS Heddewiggi	1	0
PANSY, from named varieties	1	0
PRIMULA sinensis fimbriata	2	0
SOLANUM capsicastrum	1	0
" pseudo-capsicum; this is quite equal in beauty for decorative purposes to the preceding	1	0

A PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE SEEDS, containing all the best varieties in cultivation, is published, and will be forwarded post free on application.

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

EARLY FLOWERING BEDDING TULIPS.

The finest Collection of the above are described and Priced in

E. G. HENDERSON AND SON'S BULB CIRCULAR, which may be had on application (postage free), also notices of the following:—

LILIUM GIGANTEUM.
" " CORDIFOLIUM.
" " SPECIOSUM (LANCIFOLIUM) GRANDIFLORUM.
AMARYLLIS.—A splendid collection
CYCLAMEN.—The finest collection of this charming plant.
SCILLA SIBIRICA.—The most brilliant blue spring-flower.
A PRICED LIST OF Garden Plants with silvery foliage.
" " " with variegated foliage.
" " " with ornamental do.
" " early Spring-flowering Garden Plants.
" " New French blotched Pansies.
GYNERIUM ARGENTEUM, per 100 or 1000., each 6*d.*, 9*d.*, to 2*s.* 6*d.*

LADY EMILY PEEL PETUNIA. (Surpassing Shrubland Rose, Marquis de la Ferté, and Countess of Ellesmere)

ANNIE KIEN. The greatest novelty of the season in Petunias.

CLOTH OF GOLD and GOLDEN FLEECE.

The above Summer Bedding Geraniums have proved to be the finest of all varieties in the Crystal Palace—surpassing the Golden Chain and others in their close and dense habit, richness of foliage, and picturesque effect, presenting a more even and unbroken surface of golden verdure than any other known plants

CAMELLIA TRICOLOR IMBRICATA PLENA.

Wellington Nursery, St. John's Wood, London, N.W.

SAPONARIA CALABRICA ALBA (PURE WHITE).

J. G. WAITE, SEED MERCHANT, 181, High Holborn, London, W.C., has much pleasure in offering the above new annual, which is of very dwarf habit, and being pure white contrasts most admirably with the Saponaria Calabrica rosea. It produces blossoms in great profusion and remains in flower during the whole summer and late in autumn; it is invaluable for beds, or as edgings for borders. Prices to the Trade only, to be had on application.

THE ASSIGNEES of F. GODWIN, Sheffield, refer readers of the *Gardeners' Chronicle* to their Advertisement in this day's Paper, and also to those of the 13th of October, having still a large STOCK to dispose of. Also Standard and **Dwarf Roses, Grafted Rhododendrons, trained Peaches, Nectarines, and Apricots, &c., with other usual Nursery Stock.**

Post-office Orders to be made payable to FISHER GODWIN, Jun., to whom all orders are to be addressed at Broadfield Nurseries, Sheffield.

FRUIT TREE CATALOGUE FOR 1860-61.

JAMES VEITCH, JUN., begs to announce that his CATALOGUE of FRUIT TREES, comprising a selection of all the best known varieties in cultivation, is now ready, and will be forwarded on application.

J. V., jun., would respectfully solicit early orders, as owing to the late severe winter a larger demand than usual is anticipated, and the earliest orders have invariably the best plants.

Royal Exotic Nursery, King's Road, Chelsea, S.W.—Nov. 3.

SUPERB HALF SHRUBBY SEEDLING CALCEOLARIAS.

JAMES VEITCH, JUN., having a good Stock of strong young established plants of the above, more than he requires for his own blooming, begs to offer the surplus at

6*s.* per dozen, or 42*s.* per 100.

The Seed being saved with great care from fine shaped flowers of the richest and most varied colours, the Stock now offered may be fully relied on.

J. V., Jun., has also a larger quantity of HUMEA ELEGANS established in single pots, than it is convenient for him to winter; these he offers at 9*s.* and 12*s.* per dozen according to size.—Royal Exotic Nursery, King's Road, Chelsea, S.W.

VINES FROM EYES IN POTS.

M. ROCHFORD, MARKET GARDENER, &c., Page Green, Tottenham, N., and Oak Hill, East Barnet, Herts, has a fine collection of the above for sale, from 4 to 12 feet high, propagated from the celebrated Vines at Oak Hill. Their pots are full of healthy roots, and the kinds will be warranted true.—Application at either the above places will meet immediate attention.

GRAPE VINES FROM EYES IN POTS.

LUCOMBE, PINCE, AND CO. have now a remarkably fine healthy stock of strong Vines, from 6 to 10 feet high, of all the choicest sorts, fit for immediate planting, propagated from eyes, taken from their own experimental Vinery, which enables them to warrant each kind true to name.

LISTS of sorts and prices may be had on application to them.

Exeter Nursery, Exeter.

The Gardeners' Chronicle.

SATURDAY, NOVEMBER 3, 1860.

MEETINGS FOR THE ENSUING WEEK.

THURSDAY, Nov. 8 { Horticultural (Floral Committee) at St. Martin's Place ..... Noon

THE time for PEACH TREE PRUNING is at hand, and it is time to think upon what there is to do, and how it should be done. The state of the tree in a very great number of places gives proof enough that a little advice ought to be acceptable. Look at the trees on the walls at Blankfield; in spite of the calamity that befel them in 1859 they are now as regularly furnished with bearing wood as if they had been made artificially; no naked rods, no coarse water shoots, not a square inch neglected; and so they always are; and there never yet has been a season in which a beautifully regular crop of fruit was not provided, although it does not always ripen. Look on the other hand at the walls of Chartington Manor. A grand place that! No end of kitchen garden, and pits and Vineries and Pineries and conservatories; and under the management of a wonderfully clever gardener, as he takes care should be made known unto all men. There is a capital foreman who does the principal work of superintendence, and every thing goes right except the Peach trees. These the Gardener condescends to manage himself, and an extraordinary contrast they certainly do offer to those at Blankfield. We cannot say that the contrast is favourable; we only say that it is a contrast. The branches are laid in with mathematical precision: they are like the ribs of a lady's fan—long rods that look rather nicely in the winter time. But the trees have a small fault—in summer time they have few leaves, and not much fruit. It is true that fruit may be found, if you get a pair of steps and look at the ends of the rods; but unless you have good eyes you won't see it. As for the centre of the trees, where most fruit is borne at Blankfield, there you find nothing but brown bark, with good-sized ulcers oozing through it.

If from the grand display at Chartington you step into the Vicarage Garden at Pewsey Hollow, close by, you find yet another state of things. The living is too small to enable the

clergyman to keep a gardener, and so he cuts his trees himself. He is a clever man, and a good observer, and from a solitary old Peach tree he manages to get a fair crop of fine fruit every year. But one side of his tree is three times as big as the other, and it has an old stem not unlike what a ship-builder calls a "crook."

Hundreds of cases not unlike these examples are to be found all over the kingdom, owing to not knowing exactly what treatment a Peach tree requires. If we could but grow it like an orchard tree, as they do in the warm south, it would take care of itself; but the Peach is the tenderest of all our exotic fruit trees; nothing but a wall will enable it to ripen out of doors; and when cramped and tortured out of the form of a great round bush into that of a wooden screen, nothing but highly artificial management will keep it in health and productiveness. Let us then offer a few words of advice in this dull November weather, when gardens which have lost their beauty are already making preparation for recovering it.

When a Peach tree has been perfectly well managed it exhibits well disposed branches furnished from bottom to top with healthy bearing wood of sufficient thickness to produce large fruit in abundance; and at the same time each bearing shoot has from its base a young shoot growing up into its successor. This is the summer aspect of the tree. In winter it is found that the shoots which have borne fruit have been cut off, because they do not bear a second time, and that they are replaced by the succession shoots. The latter, however, are not trained in at full length, but shortened considerably in order to induce them to push a shoot from their base to succeed them in their turn.

On the other hand, trees may be anywhere seen of the same age as the last, growing in the same kind of soil, and under similar circumstances of climate and aspect; but instead of health and vigour they exhibit symptoms of decay. The branches are regularly trained like those at Chartington Manor. The bearing wood is weak, because the shoots have been laid in at full length, for which reason also no succession shoots come from the bases of those left for bearing. On these weak shoots the fruit is small and badly fed. Now and then coarse, watery shoots burst out from the old wood, and the size of the wounds shows that they had been allowed to grow during the summer and had been cut back closely at the winter pruning. The branch in the vicinity of the wounds pours out gum again in consequence of the stagnation of the sap which these vigorous shoots would have taken up had they been allowed to remain.

Now, when one tree exhibits a healthy vegetation, and produces abundance of fine fruit; whilst another is diseased and yields a comparatively small quantity of inferior quality under circumstances equally favourable, the difference can only be ascribed to errors in some essential points of management. We shall therefore endeavour to indicate such of them as we consider to be productive of the worst consequences. A few preliminary remarks on the nature of Peach and Nectarine trees are, however, necessary in order that certain points connected with their cultivation may be more readily understood.

Under favourable circumstances these trees grow with extraordinary vigour when young, and soon arrive at a bearing state; but they are not naturally long-lived. Grown as a standard, in this climate at least, and not pruned, the branches become naked, and only produce young shoots at their extremities; and these push every year less and less till at last only an inch or two of young shoot is formed, and a few leaves which are insufficient to draw sap to keep alive the long extent of naked branches which they terminate, and the latter consequently linger and die off. Occasionally, however, strong shoots push directly from the old wood, and these give the vegetation of the tree a fresh impulse; but it is irregularly carried on between lingering branches and sudden outbreaks of strong shoots. The sap of the Peach has a stronger tendency to flow into the upright shoots than is the case with that of the Apple and Pear; and the greater its upward force the less is it inclined to deviate into lateral channels, so that the side branches are more liable to become weak and die than those of Apples and Pears. In cultivation this strong upward tendency of the sap requires to be carefully watched and checked, so that it may be diverted into the side branches which it would otherwise pass. Let it never be forgotten that the fruit of the Peach and Nectarine is borne on wood of the preceding summer's growth; and although some say also on spurs on older branches, yet on inspection it will be found that these spurs consist of short growths made likewise in the preceding summer. It must also be clearly understood that the shoots which have once borne fruit never bear it again.

Let us now see how far these facts account for the errors to which the bad condition of Peach trees may be generally traced. These errors chiefly consist in laying in the bearing shoots at full length; in encouraging the sap to rise to the top of the tree, instead of using means to divert it into the lower branches; or in disbudding too much at one time.

If bearing shoots are laid in at full length, the tree after being nailed looks better than if they were shortened. The shoots if vigorous enough will bear very well, and so the trainer at first gets credit for his work. But next year, when he finds that the bearing branches have pushed a young shoot at their extremity, but rarely a succession one from their base, he once more lays all in at full length. And by diligently repeating this wise proceeding the length of the naked portions increases, and that of the terminal young shoots diminishes, till at last the few leaves borne at the extremities are unable to keep alive the great length of leafless slender wood below them, which of course dies and then has to be removed. In this way trees are rendered branchless.

Sap being disposed to flow more into the upper parts of the branches than into the lower, and the latter being apt to become too weak from that natural tendency, it is wrong to render them still weaker by encouraging the rise of sap upwards. This however is done whenever in summer the lower part of the tree is pruned and nailed several days before the upper; or when the foliage on the upper part of the branches is allowed to be greatly in excess of that on the lower, which is always the case when lateral shoots are permitted to grow above but not below; moreover, whenever the lower part of a tree is shaded by tall crops in front, whilst the upper enjoys the full light, a similar disparity of growth must take place with the same consequences.

In spring the Peach tree produces many more shoots than can be trained against a wall, and it becomes necessary to thin them, which should always be done at an early stage of their growth. It is, however, very wrong to remove at one thinning the whole of those which may be deemed superfluous; for by so doing the early vegetation of the tree receives a shock from the effects of which it cannot soon recover.

When we recollect that volume on volume has been written on this subject, we cannot pretend to say that the *modicum* of advice contained in the preceding remarks explains the whole art and mystery of the matter. But we do say that with the addition of a little intelligence and a little experience it is amply sufficient to prevent such errors as most commonly lead to the ruin of the Peach tree.

THE evidence before the Committee of the House of Commons on Gun and Mortar Boats, and the report thereon, is now before the public, and though it contains very little that we have not already mentioned, it is not expedient to pass it by altogether without notice.

The circumstances under which the boats were built, the necessity of completing them as speedily as possible, and the impossibility of supplying if not of obtaining a sufficient number of proper inspectors to insure good workmanship and materials without crippling our dockyards, exonerates Government at least from the blame which has attached to it on the subject. The use of unseasoned timber was in many cases indispensable, from the enormous quantity which was requisite, and the real position of the case is stated in a manly and straightforward way in one of the answers of Sir BALDWIN WALKER:—

"These vessels were wanted in a short period; the vessels ordered at the end of 1855 were required for the Baltic campaign in the spring of the following year. It was of the utmost importance that they should be ready; and I say *if Government had been aware that they could not get anything but green timber, so necessary was it to have this description of vessel, that there was nothing left but to build them.*"

The excuse of the inspectors lies in the fact that they had more work on their hands than they could possibly accomplish. In some cases their duties took them away for hours, and not only was advantage taken of their absence by the workmen whose pay depended upon the rapidity with which the work was finished, but even when they were known to be in the yards every possible plan was taken of throwing dust in their eyes, that the wilful negligence of the artificers, who were almost beyond control, might be concealed. We fear moreover that the foremen in the yards did not always sufficiently act upon the fact, that the contractors were in honour as responsible for good materials and proper workmanship, as if there were no Government inspectors. One of them when asked whether any sap was used, it being admitted beforehand that instructions were given not to use sap, replied in a tone which certainly seems to throw the responsibility on the inspectors: "If there was sap used, the Government inspector had an opportunity of condemning it."

Still it seems very strange that with any inspection such a condition could exist as confessedly existed in the Caroline and some other boats without detection. Two principal points to which the inspector's direction would naturally be turned, would be the clinching of the copper bolts, together with security for their being of the proper length, and the prevention of the use of sap-wood. The practice of using short bolts is so notorious that they are known by the name of devils, and many disasters have arisen from the fraud. The following passage illustrative of the point occurs in BRENTON's life of Lord St. VINCENT, pp. 159-160:—"Every ship was supposed to have a certain number of bolts driven to secure the fabric. The tops and points only were driven in, the rest was carried away. It is probable that the loss of the York, of 64 guns, and the Blenheim, of 74 guns, was the consequence. The Albion, 79, we know to have been nearly lost by this hellish fraud."

As regards the use of sap, the case is now so evident in the Caroline to the most unpractised eye, that the inspector himself fairly declares that he cannot understand how it can have been passed over. The only solution of the difficulty rests on the want of time to make an accurate inspection, for we cannot suppose that the inspector could fail to be alive to such tricks as plaistering the defective places with mud or tar, and the discovery of some such tricks which were attempted, would only make him more ready to detect others. There was indeed some mystification before the Committee about the difference between white and maiden sap, and the difficulty in some instances of detecting sap from heartwood. We know that in the case of greenheart such a difficulty does exist, and it is one of the objections to its use for planking that common workmen may neglect to remove it. The same observation applies to some other kinds of wood, and there is slight difficulty occasionally in accurately defining, even in British or Italian Oak, where heartwood ends and sap begins. As every separate ring of wood which succeeds the heart is in a different degree of forwardness, the whole of the heart having once been sap, it is easy to conceive that such a difficulty may exist, especially when the wood is green. The difficulty, however, in the hands of persons of any experience is in practice almost null, and the commonest carpenter will seldom fail to give an accurate judgment. In the Caroline, however, wood was confessedly inserted where there was no question between white and maiden sap, and in such quantities that it is very suprising that both foremen and inspector should pass it by. The inevitable consequence of the use of such wood, when closed in rapidly and prematurely, is dry rot and decay.

In the case of the two mortar boats which were broken up at Chatham, not only was sappy timber used, but the pins or dowels connecting the ribs were so extremely faulty that we are surprised the subject was not mentioned before the committee when their condition was reported. This is a point of as much consequence as the use of short or unclinched bolts.

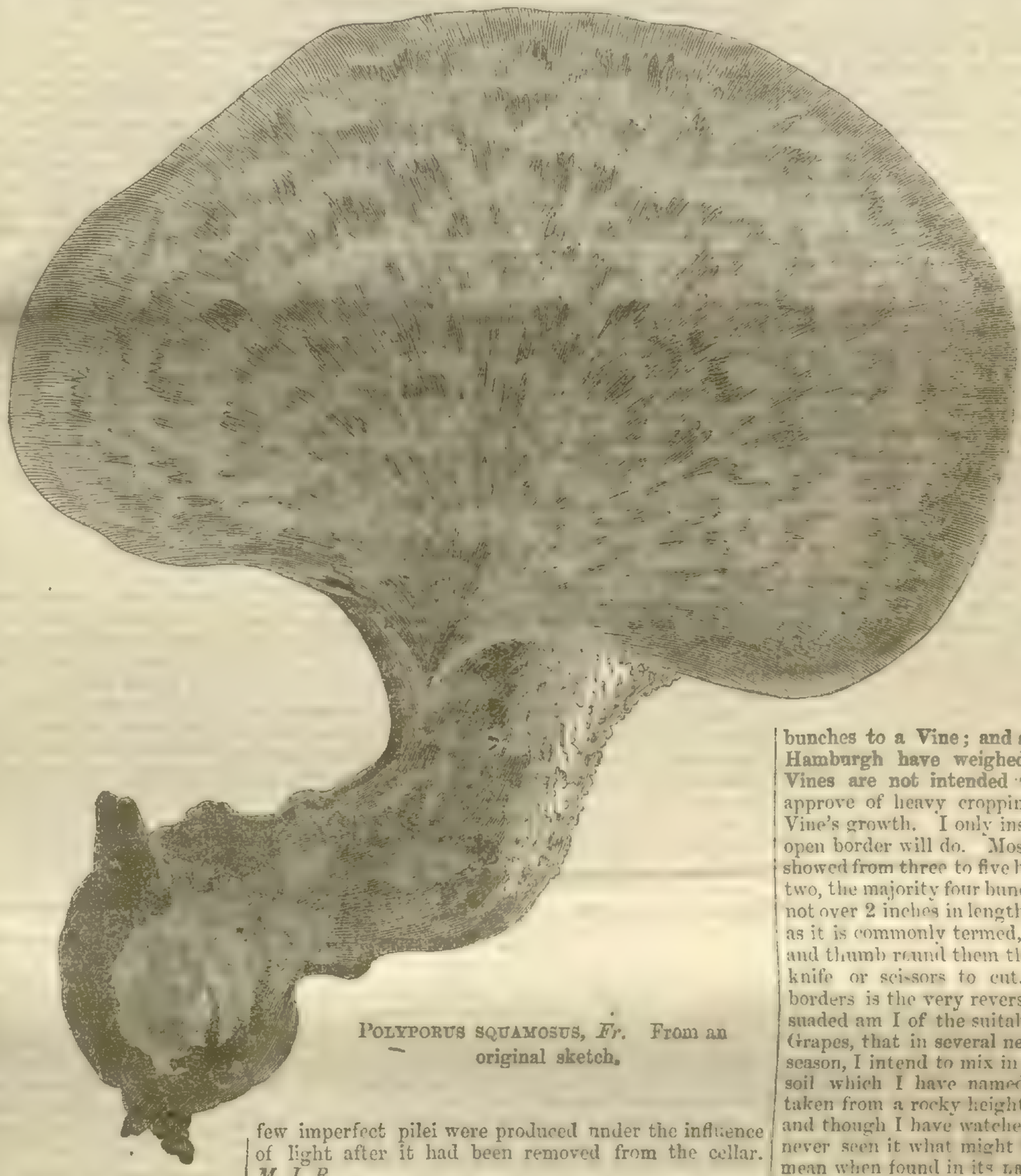
It seems curious, again, that not one word was mentioned before the Committee of the fact that dry rot may exist from mere chemical causes, where there is no fungus. This would have at once explained a matter which seemed to cause surprise, that rot might exist in one plank without spreading to the next. It has besides a bearing upon the vexed question, whether the hauling up the vessels into dry slips is good practice or not. Without giving a positive opinion upon the subject, we may express our conviction that dry rot was in no case *caused* by it. The state of the Coquette alone, which has never been hauled up, is sufficient answer to the assertion "that nothing else rotted the Caroline." Of course whether afloat or hauled up, a free ventilation would have greatly checked if not entirely prevented the evil,

but from the pressure of the service it appears plain enough that this was impossible.

We have but one additional remark to make. It seems surprising that men who have spent all their lives in the navy should be ignorant of such obvious matters as the difference between sap and heart, and the nature of the disease to which naval timber is exposed. One of the officers examined says, "I do not think that I should know sap-wood from any other, but it is the business or duty of an inspector;" while another speaking of the possibility of rot spreading from one plank to another, says, "I am speaking of circumstances of which I have no knowledge." We are not surprised at any ignorance respecting useful matters which exists in high quarters, from the great defect of our system of education, and this alone can account for similar ignorance amongst persons whose lives have been spent amongst our wooden walls, or we should otherwise refer it to the old case of "eyes and no eyes." In our own apprehension a good commander ought to be well acquainted with points so very essential as the quality of timber and its liability to decay. We could conceive many instances in which the want of such knowledge might be of the greatest importance, even should it not lead to disastrous consequences.

MYCOLOGY.—No. XXXIV.

Polyporus squamosus, *Fr.*—No species of the extensive genus Polyporus, which is distinguished from Boletus by the pores not being easily separable from each other and from the pileus, is more generally known than the present, as it occurs on almost every decayed Ash tree through the length and breadth of England, besides making its appearance occasionally on Walnut, Maple, and other trees. In the midland counties it is popularly known by the name of sap-ball. It attains at times an enormous size, having been found 7 feet in circumference, and many pounds in weight. A single mass has sometimes occurred, weighing more than 3 stones of 14 lbs. each. When once it attacks a tree it is the sure harbinger of rapid decay. The solid wood soon becomes soft and white, being converted into what is commonly called touchwood, and is traversed by thin dark plates, which as the softer substance falls away by the action of the outer air and moisture, become superficial and frequently line the hollow tree, having the air of some species of Corticium. In this state indeed it has been wrongly referred to the common *Corticium cinereum*.



Polyporus squamosus, *Fr.* From an original sketch.

The heavy smell, which is disagreeable to most persons, and the tough leathery substance, would seem at first sight to indicate anything save an esculent species. Indeed one might almost as soon think of eating saddle flaps, as Mrs. Hussey observes, as this uninviting Fungus. It is, however, sometimes eaten upon the Continent, especially in France, where it has several popular names, and Desvaux especially speaks of a peasant in Poitou, who made use of it without experiencing any inconvenience. He remarks how ever that he took care to stew it for a long time to get rid of any noxious principles.

If ever it could afford wholesome food it would have been in the present year, when it attained a large size with inconceivable rapidity. We have seen some fine specimens on Poplar, as tender and brittle as a common Mushroom. The taste of these when raw was by no means unpleasant, and we could have wished that some more adventurous mycophagist than ourselves should have made trial of it. We have no doubt that by cutting it into thin slices, steeping them in boiling water, and then drying off the superfluous moisture by pressing in a cloth, a wholesome dish might have been prepared, like that which is yielded by *Hydnum repandum*, though it could scarcely have been expected to be so delicate. We confess, however, that these are the only specimens we ever met with which could possibly have tempted us to make an experiment. All others have appeared hopelessly tough and unmanageable. There is, however, one use to which this Fungus can be put which is really excellent. If well prepared it makes the most admirable razor strops, far superior to any that have been puffed off by the most confident empiric who could boast "we keeps a poet." The largest specimens for this purpose must be chosen, as free from worms as possible, and dried carefully so as to prevent the growth of mould when cut into a convenient shape. *Polyporus betulinus* may be used for the same purpose. Prepared specimens may be seen in the Museum of the Royal Botanic Garden at Kew, together with the perfect plant.

Polyporus squamosus is at once known by its fan-shaped pileus, which is of a pallid ochraceous hue, and ornamented with close pressed darker scales; the stem is blunt and almost black; the pores very large and broad though shallow, and running some way down the stem. It varies greatly in size and thickness, and the pileus is not always equally scaly.

When growing in a dark cellar, it sometimes assumes the most curious form, approaching that of a stag's horn, and either produces abortive pilei only, or very imperfect ones. Occasionally it proceeds apparently from a mass of coke, but we believe, if accurately examined, it will be always found to have been in the first instance attached to rotten wood. Other Fungi in similar situations produce branched stems only, without any perfect pilei. *Agaricus ostreatus* for instance has been found bearing a very close resemblance to a Cauliflower, insomuch that its true nature was not apparent till a few imperfect pilei were produced under the influence of light after it had been removed from the cellar.

M. J. B.

VINE BORDERS.

From a considerable amount of experience in removing Vine borders made after the manner you have described in your columns of the 27th October, I can corroborate every sentence of your withering condemnation of all such border-making. I am convinced that, in a vast number of cases—it were far better for the constitution of Vines, that no attempt at making borders were made at all, and have no difficulty in believing how, under the circumstances you have described, the Messrs. Wilmot, Glendinning, and Crawshay's Vines, as well as those in the great conservatory at Chiswick, have produced Grapes vastly superior to others planted in huge ditches filled up with the loathsome mixture you have named.

It is questionable if, on any other point connected with horticulture, the schoolmaster is more needed abroad than on the one now under consideration. And the gross ignorance which yet exists as to the food and mode of feeding Vines is scarcely credible. Not many years ago I was astonished to find—on visiting a garden not a very long way from London—a ditch (some 3 feet wide and as deep, running along the extremity of a Vine border from which spring Grapes were expected), kept brim full of offal by a special contract with a butcher. The stench was unbearable, and I really could not have believed, had I not seen it, that any gardener was so silly as to think that Vine roots would live—to say nothing of feeding—near such a mass of offensive animal refuse. But such was the fact, and this too in September, when the Vines were leafless and at rest. The wood was as weak as straws, and stood in need vastly more of the doctor than the butcher.

Within the last few years I have removed about a dozen of old Vine borders, the majority of which had been made of retentive soil and the drainage defective, while in some of them graves had been made for dead calves and such quadrupeds. In every instance the Vines were weak, and the crops had shanked to a fearful extent. Most of these borders were from 14 to 20 feet in width and 3 to 4 feet deep; but I did not find a single root more than a yard from the pillars on which the Vinery front was supported. And any active roots that could be seen were as close to the brick and stone work as could be. This, as well as plenty of other instances, goes to show that it is not a mass of soapy, and in many instances stinking matter that Vines delight in. On the contrary, they run riot in a shallow, open, and consequently warm medium, and their chances of fruitfulness and longevity in borders of the latter description are a hundred to one against carrion borders, or any other that are deep, retentive, ill-drained, and cold.

In replacing these borders I filled up about from 14 to 18 inches in some cases with stones, making sure of a ready outlet for water. The compost I used was a light, very turfy loam, about eight sacks of unboiled inch bones to every 36 cubic yards of loam, and a sixth part of half-decayed Oak or Beech leaves, with a cart-load of lime debris to every five of soil. When I could not get lime debris I have added the same proportion of gritty pit sand. Vines planted in this in the spring of 1859 are now much stronger rods than some that had been planted a score of years in heavy puttied borders. One house, planted with Vines struck from eyes the spring of 1859, has this year borne a beautiful crop at the rate of eight to 12 bunches to a Vine; and some of the bunches of Black Hamburgh have weighed 2 lbs. and 2¼ lbs. These Vines are not intended to be permanent, as I do not approve of heavy cropping at so early a stage of the Vine's growth. I only instance it to show what a light open border will do. Most of the shoots on these Vines showed from three to five bunches each. None less than two, the majority four bunches, with stalks to the bunches not over 2 inches in length; many were so short necked, as it is commonly termed, that after putting the finger and thumb round them there was scarcely room for the knife or scissors to cut. The tendency of carrion borders is the very reverse of this. And so fully persuaded am I of the suitability of an open rocky soil for Grapes, that in several new borders I have to make this season, I intend to mix in a quantity of stones with the soil which I have named above. The loam I use is taken from a rocky height, and is very light and fibry, and though I have watched it for several winters I have never seen it what might be termed in the least wet, I mean when found in its natural state on the rocky and elevated bed.

I do not think it difficult to demonstrate how it is that in such a porous medium the Vine will make as strong a growth with shorter joints, as in a rich mass of soil. In the first place a far greater proportion of active feeders will be made in the open border, and these roots will perform their functions with avidity, while the medium in which they are placed is an excellent repository for all that is nourishing and necessary for the Vine. The reverse of this is the case in cold, heavy, retentive borders. I would much rather plant in a bed of sand than in many an expensive prepared border. In fact the earliest and finest Grapes I ever saw had their roots in a bed of black sand, and such forms a most excellent vehicle for nourishment

when such is applied from top-dressings or waterings of manure-water. There is an erroneous idea, current enough yet, that the strength of a Vine is dependent on a rich border, instead of on the amount of roots made in a congenial medium and on the amount of foliage and space given to the Vine in the Vinery. Let any one plant two Vines, one in a "carrion border" if he please, and the other in a border such as we recommend; let the former be allowed to make a small amount of foliage, and the latter a greater amount; cut them down at the end of the season when pruning time arrives, and see which will throw up the most vigorous and fruitful cane the following summer. Such a simple experiment would help to convince many that a vigorous, and above all, a fruitful growth is not dependent on a rich sappy border altogether.

Were I to add the excrement of any animal to Vine borders it would be horse droppings after they had been lying in a comparatively dry state for some months. Horse dung is of a warmer nature than that of pigs or cows, so frequently used, and it has rather an opening influence on the soil than otherwise. But I think bones the best of all manure for Vines, from their own inherent richness and their absorbing power. How frequently do we see the roots of the Vine clinging tenaciously to them as well as passing right through them, in the prime of health, wherever there is a crevice for them to penetrate. *A Vine Grower.*

THE CLASSIFICATION OF PINE APPLES.

[At the request of several of our readers we republish from the Transactions of the Horticultural Society the paper on this subject alluded to by our correspondent, Mr. Morris, on the 13th of October (see p. 913.) It was drawn up with great care by the late Mr. Donald Monro, assisted by our excellent correspondent, Mr. James Duncan, of Basing Park, but, having appeared in a work inaccessible to the majority of practical Gardeners, is little known. It is the great authority upon the subject up to the time of its publication in the year 1831.]

In order to facilitate their discrimination, I have first separated the kinds reputed to be species, which are readily known by their peculiar habit, and I have then distributed the varieties of Ananassa sativa, or the true Pine Apples, in classes and divisions, characterised by such distinctions as have been found by experience most permanent. After much consideration it has been determined to employ the different degrees of serrature in the leaves as the primary mode of division, because it is they that cause in the greatest degree that natural habit of the varieties by which a practised eye will recognise them without an inspection of the fruit. The groups so formed are the least artificial that could be discovered, for the form of fruit and colour of the flowers, although excellent marks of distinction, separate varieties which are almost identical in their general habit; for this reason such characters have been admitted as only of secondary importance.

In order to render the arrangement as distinct as possible, a tabular view has been made to precede the more detailed descriptions, and I would take the liberty of recommending those who make use of this report for the purpose of verifying their Pines, to consult the table before having recourse to the descriptions themselves.

In arranging the synonyms, published authorities have been referred to in all cases where they existed; but as by far the greater number of Pine Apples are unpublished, it has necessarily resulted that for a very considerable proportion of the synonyms no other authority could be cited than that of English gardens.

CLASSIFICATION.

Sp. 1. ANANASSA BRACTEATA. 1. Scarlet.

Sp. 2. ANANASSA DEBILIS. 2. Waved-leaved.

Sp. 3. ANANASSA LUCIDA. 3. King. 4. Fisherwick Striped Globe.

Sp. 4. ANANASSA SATIVA.

* LEAVES SPINELESS.—a. **Flowers purple**: 5. Havannah. 6. Smooth Havannah. b. **Flowers lilac, nearly white**; *fruit globular:* 7. Green Antigua. *Fruit pyramidal:* 8. Striped smooth-leaved Sugar-loaf.

* * LEAVES WITH MINUTE SPINES (about 11 in an inch on an average).—a. **Flowers purple**; *fruit oval:* 9. White Providence. 10. Green Java. 11. Black Jamaica. *Fruit cylindrical:* 12. Orange Sugar-loaf. 13. Downton Havannah. *Fruit pyramidal:* 14. New Jamaica. b. **Flowers lilac**; 15. New Demerara. 16. Striped Surinam.

* * * LEAVES WITH MIDDLE SIZED SPINES (about six or seven in an inch on an average).—a. **Flowers purple**; *fruit cylindrical:* 17. Sierra Leone. 18. Anson's. 19. Montserrat. 20. Trooper's Helmet: *Fruit pyramidal:* 21. Green Providence. 22. St. Vincent. b. **Flowers lilac**; *fruit cylindrical:* 23. Globe. 24. Lemon Queen. 25. Otaheite. 26. Surinam. 27. Buck's Seedling Globe. *Fruit pyramidal:* 28. Brown-leaved Sugar-loaf. 29. Brown Sugar-loaf. 30. Mealy-leaved Sugar-loaf. 31. Black Sugar-loaf. 32. Striped-leaved Sugar-loaf. 33. Trinidad. 34. Buck's Seedling. 35. Enville. 36. New Enville. 37. Spring Grove Enville. 38. Lord Bagot's Seedling. 39. Blithfield Orange.

* * * * LEAVES WITH LARGE RIGID SPINES (about four in an inch on an average).—a. **Flowers purple.** 40. Black Antigua. 41. Welbeck Seedling. 42. Ripley. b. **Flowers lilac**; *fruit globular:* 43. Russian Globe. 44. Russian Cockscomb. *Fruit cylindrical:* 45. Queen. 46. Ripley's Queen. 47. Green Queen. 48. Moscow Queen. 49. Striped Queen. 50. Silver-striped Queen. 51. Antigua Queen. 52. Blood Red.

DESCRIPTIONS OF SORTS.

1. SCARLET PINE.—Syn. Scarlet, Brazilian Scarlet, Ananassa bracteata.

Leaves remarkably long and flat, rather broad and flaccid, of a yellowish green, often tinged with pale brown, and almost destitute of mealiness; spines very strong, far asunder, and rather regular. Flowers large, dark purple, contrasting beautifully with the scales which are of a brilliant scarlet at that stage of the growth. Fruit pyramidal, before ripening of a dullish yellow colour, on its approaching maturity it changes to a pale green, and becomes a little mealy; when ripe palish yellow. Pips small and slightly prominent, being half covered with the scales, which terminate in very long, broad, reflexed points, of a dull scarlet colour. Flesh very pale yellow, slightly fibrous, very juicy and soft, slightly acid without much flavour. Crown large, leaves rather numerous and erect.

Presented by Robert Barclay, Esq., by whom it was procured from Lisbon in 1820. Mr. Barclay received it from Don Joachim de Paes, who introduced it into Portugal from the Brazils. It is rather a sweet and highly flavoured sort, producing fruit from 3 to 5 lbs., but its great merit consists in its beautiful appearance just after the flowers have withered.

2. WAVED-LEAVED PINE.—Syn. Waved-leaved, Ananassa debilis.

Leaves large, flaccid, spreading, wavy, dark green, slightly mealy above, and stained with dull purple; teeth reddish, small, equal sized; the full-grown leaves are about 3 feet long, and a well grown fruiting plant occupies a space of about 3 feet in diameter. Flowers pale purple. Fruit oblong, or tun-shaped; before ripening very deep green, when ripe dull yellow, with a greenish cast on one side; nearly destitute of mealiness. Pips projecting, middle-sized, pointed, as long as the scales, the uppermost of which are nearly destitute of a point, the lowest have a withered, deeply toothed point. Flesh yellow, transparent, very tender, delicate, and juicy; flavour extremely pleasant, with a slightly perceptible acid. Core woody. Crown large, not disposed to become cock's-comb shaped, or to be proliferous.

First introduced into notice by Mr. Miller, of the Bristol Nursery; but its origin is unknown. Readily distinguished from all others by its flaccid waved leaves, which never acquire the rigid, erect character of the Queen Pine and its varieties. From its peculiar habit, it has been considered in the work above quoted, as a distinct species. It fruits in about two years from the sucker.

3. KING PINE.—Syn. King, Grass-Green King, Common King, Old King, Havannah, Ananas viridis inermis, of the French.

Leaves rather long, somewhat broad and keel-shaped, margins destitute of spines and sometimes a little undulated, of a clear shining yellowish green, and entirely free from mealiness; its growth is also very peculiar, the centre leaves embrace each other very closely, and require considerable force to separate them. Flowers purple. Fruit cylindrical inclining to ovate, of a bright olive colour before ripening, bright orange when ripe, flesh yellow, opaque, firm, and free from fibre, sweet and pleasant with only very little acid. Crown large, leaves embracing each other in the centre.

This Pine, according to Martin in his Edition of Miller's Dictionary, "was raised from seeds taken out of a rotten fruit which came from the West Indies to Henry Heathcote, Esq.;" it is a very handsome middle sized fruit, generally weighing from 3 to 4 lbs., but is rather tardy in fruiting. It, and the other smooth leaved varieties, require less water and more heat than the other sorts.

4. FISHERWICK STRIPED GLOBE PINE.—Syn. Fisherwick Striped Globe.

Readily distinguished from all others by its leaves; in appearance somewhat resembles the King Pine, but differs in the following particulars. The leaves have weak irregular spines on their margins, they are rather of a darker green, slightly tinged with pale brown, more particularly in the centre of the plants, they are also somewhat thickly interspersed with silvery specks on the under surface.

Said to have originated at Fisherwick, the seat of the Hon. F. G. Howard, from a stool of the Globe Pine; it seems to be an exceedingly worthless variety, having been six years in this collection without having produced a fruit.

5. HAVANNAH PINE.—Syn. Havannah, Brown Havannah, Smooth-leaved Antigua, Smooth Antigua, Ripley, Ripley's, Old King, Common King, Ananas semi-serrata, of the French; Lapete Pine-apple, in the Island of St. Vincent.

Leaves narrow, long and spreading, of a light bluish green, considerably tinged with pale brown, and slightly mealy; spineless except sometimes, when a few appear near the points. Flowers purple. Fruit cylindrical, sometimes tapering a little to the summit, before ripening dark purple and rather thickly covered with meal; when ripe of a darkish orange. Pips large, flat and a little depressed in the centre; scales covering about one-third part of the pips, and ending in a long reflexed point. Flesh pale yellow, rather solid and without much fibre, juicy, but neither sweet nor very highly flavoured. Crown large, leaves numerous, long and spreading.

Origin unknown; cultivated by Speechly at Welbeck, before the publication of his Treatise: not a favourite with gardeners by reason of the spreading character of its leaves, nor of such excellence as to warrant the introduction of more than a very limited number of plants in any collection.

6. SMOOTH HAVANNAH PINE.—Syn. Smooth Havannah, Green Havannah, Havannah, Ananas Antigua aurantiaca, of the French.

The leaves of this variety differ from those of the one just described, in being of less robust growth, rather more tinged with brown, and much more mealy. The Fruit is of the same form and appearance as the Havannah, but is seldom so large. The Flesh is of the same colour and consistency, but abounds with a rich, sweet, highly flavoured juice. The Crown is generally considerably smaller than in that sort.

The origin of this Pine is unknown; it is not, however, of recent origin or introduction, having been grown for a considerable length of time in the Pine Stoves of different parts of England. It was imported by the Society from St. Vincent's.

7. GREEN ANTIGUA PINE.—Syn. Green Antigua, Smooth-leaved Green Antigua, Smooth Green Havannah, Ananas sans épines, and Ananas Malabarica, of the French.

The leaves of this variety differ from the Havannah in being considerably shorter, and of a pale colour; they are also broader, more keel-shaped and much stronger than in that variety, and also entirely destitute of spines. Flowers of a very pale lilac colour. Fruit globular, sometimes inclining to oval; before ripening of a dull green, and very thickly covered with meal, when ripe deep yellow. Pips middle-sized, roundish, and projecting to a very acute point. Scales covering about one-third of the pips, and ending in narrow short points. Flesh deep yellow, transparent, rather stringy, with a little acidity, but neither very sweet nor highly flavoured. Crown rather large, leaves numerous and reflexed.

Like the other smooth varieties, its quality would not warrant the introduction of more than a very few plants into any collection. It has been imported both from Maranhao and St. Vincent's.

8. STRIPED SMOOTH-LEAVED SUGAR-LOAF PINE.—Syn. Smooth Striped-leaved Sugar-loaf, Smooth-leaved Sugar-loaf.

Readily known by its leaves, which are entirely destitute of spines, and striped with dull purple. The flowers are very pale lilac. The fruit is of the same form and appearance as the other varieties of Sugar-loaf. Flesh deep yellow, remarkably soft, with scarcely any fibre or acidity, a little sweet but neither rich nor juicy. Crown middle-sized, leaves very numerous.

This extremely worthless variety originated some time previous to the publication of Speechly's Treatise, and seems now to be almost lost in the country.

9. WHITE PROVIDENCE PINE.—Syn. Providence, New Providence, White Providence, Mealy-leaved Providence, Ananas Providentia of the French.

Leaves large, long, broad and spreading, of a light bluish green colour, sometimes blotched with a deeper shade and very mealy; spines very small, thickly set and rather irregular. Flowers large, dark purple. Fruit oval or tun-shaped,* nearly equal in size at top and bottom, very dark green or purple, and thickly covered with meal, on approaching maturity gradually changing to a reddish yellow. Pips very large and nearly flat, sometimes a little depressed in the centre. Scales covering nearly half the pips, and terminating in shortened blunt points. Flesh white, opaque, sweet and juicy without much flavour, slightly stringy and rather soft and melting. Crown large, leaves numerous and rather spreading.

Some very large fruit of this kind have been grown in various parts of the country, particularly at Ragley by Mr. Baldwin, at Stackpole Court by Mr. Buchan, at Shugborough by Mr. McMurtrie, and at Rheola Vale, Neath, Glamorganshire, by Mr. Dixon, gr. to John Edwards, Esq. Mr. Edwards's fruit weighed 14 lbs. 12 ozs., including four gill suckers, and measured 26 inches in circumference, and 12 inches in height; the usual size is from 5 to 10 lbs., and although deficient in point of flavour, it is found to be greatly improved by being allowed to remain on the plant until quite ripe.

The name of White Providence has been adopted (in preference to that of Providence given it by Speechly) in contradistinction to Green Providence.

10. GREEN JAVA PINE.—Syn. Narrow-leaved Java.

Readily distinguished by its long, broad, palish green leaves, with small feeble spines; they are also very flat, and entirely free from any tinge of brown or purple. Flowers large, dark bluish purple. Fruit oval, sometimes tapering a little to the summit, weighing from 4 to 5 lbs.; before ripening light green, and lightly covered with meal, when ripe of a fine clear citron colour. Pips rather above the middle size and flat. Scales covering fully one-third of the pips, and end in long narrow points. Flesh pale yellow, rather soft, juicy and melting with a rich pleasant acid. Crown middle sized, leaves not very numerous.

Presented by the late Sir Thomas Stamford Raffles, during his residence in Java; from its recent introduction enough is not known of it to decide on its merits as a winter Pine.

11. BLACK JAMAICA PINE.—Syn. Black Jamaica, Montserrat, Jamaica, Copper-coloured, Tawny, Black Barbadoes, St. Vincent's Sugar-loaf.

Leaves rather long and narrow, slightly spreading, and somewhat keel-shaped, of a dull green, tinged with a dark brown colour and rather mealy. Spines short, regular, and thinly set. Flowers purple. Fruit oval, not much lengthened, rather compressed at the ends, colour before ripening very dark olive, afterwards a dark orange, inclining to that of copper. Pips roundish, irregularly angular, about the middle size, rather prominent at the margins and concave in the centre. Scales covering one-third the pips, and terminating in lengthened points. Flesh pale yellow, opaque, firm, slightly stringy, very rich, juicy, and high flavoured. Crown large, spreading, all very mealy.

A Pine of great excellence, weighing from 3 to 5 lbs., deserving to be generally cultivated, and richly meriting the character given it by Speechly, namely, that "in the autumnal months and even during winter it produces a fruit much more swelled and more perfect than any of the other sorts, and not liable to suffer by decay or imperfection either in the fruit or stalk, as is usual with those of the other sorts, in a season when the sun's power is not great." The Ripley, however, is a sort in every respect equal to the Black Jamaica as a winter fruit. It has been thought advisable to adopt the name of Black Jamaica in preference to Montserrat, because the former is that under which it is almost universally known, while the name Montserrat which usually belongs to a different and very inferior variety is applied to the Black Jamaica in only a very few places.

12. ORANGE SUGAR-LOAF PINE.

Leaves rather long and narrow, somewhat keel-shaped, and a little spreading, of a dull green, considerably tinged with dark brown, and rather mealy; spines short, thinly set, and regular. Flowers pale purple. Fruit cylindrical, before ripen

* Speechly says it is "inclining to a pyramidical form;" however, the specimens which I have had an opportunity of examining, are invariably of the form above described.

very dark olive, somewhat shining, and slightly mealy; when ripe deep yellow inclining to an orange colour. Pips large and flat. Scales covering about half the pips, and ending in short, blunt reflexed points. Flesh pale yellow, almost destitute of fibre, very juicy and sweet, with a rich highly flavoured acid. Crown middle-sized, leaves numerous and spreading.

Received from Mr. Isaac Oldaker; it is one of a great number of seedlings raised at Blithfield, the seat of the Right. Hon. Lord Bagot, and is much superior to any of the numerous new varieties obtained from that source.

13. DOWNTON HAVANNAH PINE.—Syn. Knight's Seedling. A seedling raised by Mr. Knight. It differs from the Smooth Havannah in nothing whatever except having small spines on the edges of the leaves. The quality, form, and colour are precisely the same. Mr. Knight originally called it Knight's Seedling, but the name now proposed serves better to indicate its resemblance to a well-known old variety.

14. NEW JAMAICA PINE.—Syn. Black Jamaica, New Black Jamaica, St. Kitts, New Jamaica, Brown Antigua, English Globe, Montserrat, St. Vincent's Sugar-loaf, M'Rae's St. Vincent's.

This differs from the Black Jamaica in the colour of the leaf, which is rather paler, and in the margins being slightly reflexed. The fruit is pyramidal and slightly mealy. The colour black (hence Speechly's name), on approaching maturity changing to that of a dark orange. Pips differ from those of this variety by being half covered with the scales, and rather more prominent and angular. Flesh pale yellow, somewhat opaque, slightly fibrous, sweet and rather acid, very pleasant, rich and high flavoured. Crown middle sized, leaves rather numerous and spreading.

An excellent summer fruit, but is apt to become deformed during the winter months, it generally weighs from 3 to 4 lbs.

15. NEW DEMERARA PINE.—Syn. New Demerara; Harrison's New.

Leaves strong, very broad and rather long, slightly keel-shaped and spreading, of a dull green colour, and tinged with reddish brown on the upper surface, the lower surface is remarkably mealy, a feature by which it may readily be distinguished. Spines rather minute and regular. Flowers lilac. Fruit globular, depressed at each end, of a dark green colour before ripening; afterwards a dull ochre tinged with red; very mealy on the centre part of the pips, which are large and prominent. Scales covering half the pips and ending in narrow lengthened points. Flesh white and firm, very juicy but not highly flavoured. Crown large, leaves rather long and erect.

Received from Mr. Miller of the Bristol Nursery, but its origin is unknown; it is a weighty fruit, but very inferior in point of flavour.

16. STRIPED SURINAM PINE.—Syn. Silvery Striped Pine, from Surinam, Striped Silver and Pink Surinam, Striped Surinam, Silver Striped, Ribbon Grass, Prince of Wales' Island, Prince of Wales' Island striped.

This has been described by Speechly to exceed in beauty the whole tribe of variegated plants, not only in the leaves, which are beautifully striped with dark green and delicate white, tinged with a fiery red; but also in its fruit which is cylindrical and variously marbled with red, green, yellow, and white. Pips small, rather prominent and covered to the extent of one-third by the Scales, which terminate in narrow sharp points. Flesh dullish yellow, very acid and moderately flavoured. Crown middle sized, of the same character of the leaves.

Although a beautiful this is an exceedingly worthless variety; it is a very shy grower and requires a long time to come to a fruiting state. I have known plants of it eight or nine years old before they fruited, and I have been informed on credible authority that at some places so long a period as 18 or 20 years elapses without the plant showing the least symptom of such a change.

17. SIERRA LEONE PINE.—Originally presented to the Society by the late Mr. Chevalier, under the name of Wild Pine of Sierra Leone; and lately by Mr. Whitfield, under the name of Black Antigua.

Leaves long, broad and rather flaccid, with revolute undulated edges, of a clear bluish green, and from the circumstance of it being a very free grower, often considerably blotched with a darker colour. Spines short, middle sized and regular. Flowers purple. Fruit cylindrical, of a dull green colour tinged with red; when ripe, it gradually changes to a dull ochre colour, thickly covered with meal. Pips rather below the middle size and slightly prominent. Scales covering nearly one half the pips, and terminating in lengthened reddish coloured points; when approaching maturity it gradually changes to a dull ochre colour. Flesh very pale yellow, almost white, tender, abundantly juicy, free from fibre; crisp and melting; sweet without acidity; pleasant though not rich. Crown large and rather sweet, often accompanied by gills at its base, leaves numerous: it is also inclined to emit suckers at the base of the fruit, and those on the stem are inclined to fruit before the other is half matured.

An exceedingly free growing variety and of considerable excellence; from having been so lately introduced we are not aware of its qualities as a winter Pine.

18. ANSON'S PINE.—Syn. Ansons, Anson's Queen, Lemon Antigua.

Leaves long, rather more slender and erect than in the Otaheite, to which it bears a considerable resemblance, particularly in the spines and in the flatness of the leaves. Flowers purple. Fruit cylindrical, before ripening of a darkish green and rather mealy; when ripe of a bright lemon colour. Pips rather above the middle size, prominent at the margins and depressed in the centre. Scales covering half the pips, and ending in narrow acute points. Flesh white, opaque, entirely without stringiness, very sweet and pleasant, but without acidity. Crown middle sized, leaves not very numerous.

The origin of this Pine was not known to any of the cultivators of that fruit who sent plants of it to the Society; it is probable that it was raised from seed at Shugborough. It generally weighs from 3 to 5 lbs., but is not a sort of much excellence.

(To be continued.)

Home Correspondence.

Golden Hamburgh Grape.—It is not my desire to interfere between the opinions of your correspondents "W. P. A." and "Mr. Busby," further than to offer what experience I possess regarding the merits of this Grape. First, we have it growing in our early Vinery, between a White Muscat and Black Hamburgh, each planted in an outside border, where it grows as vigorously as the most fastidious person could desire, and who will say that the past season has not been more paralysing to vegetable vitality, and prejudicial to the production of good Grapes, than any that have preceded it for many years past. Still, with this drawback, the Golden Hamburgh has done well here, and proves equal to all that has been said in its favour. Not only is it constitutionally strong, but it is highly productive, producing large and finely formed bunches at each spur of exquisite flavour. The disease called shanking is a very unusual occurrence here; but it so happened that the adjoining Black Hamburgh was slightly affected, while the fruit on the Golden Hamburgh escaped without a diseased berry. More than this, being desirous to satisfy myself as to the quality of the Muscat Hamburgh I had a graft inserted on a side shoot of the Golden Hamburgh in 1859, for want of a more convenient place, when it produced a strong well ripened cane 14 feet long. At the pruning season the length was reduced to less than one half, and allowed during the present year to bear three bunches. Up to the time when the fruit began to colour all went on well. Shanking now showed itself so severely that not more than a few berries in each bunch escaped. Were evidence wanting, what I have said is sufficiently clear to show that the Golden Hamburgh is neither so delicate nor so difficult to manage as some persons would have us to believe. For early forcing in pots it fruits just as freely as the most productive variety. In our latest Vinery we have it growing among West's St. Peter, Muscat of Alexandria, and Lady Downe's Seedling. Here I feel compelled to some extent to reverse my opinion; the bunches are smaller, more diffuse, and by no means so highly flavoured as when growing in a higher temperature. Such has been the case for two years past, so that I propose substituting in its place one of a more uniform character. Whether the fault complained of arises from its being grafted upon a Black Barbarossa stock, I am unable to say; yet such is the condition of the other Vines, without producing any injurious effect. The annual growths are exceedingly strong and possibly not sufficiently ripened, which may account for the discrepancy. *A. Cramb, Tortworth Court.*

Mildew.—The following are the particulars of a case that lately came under my observation. I had a plant of Dianthus Chinensis Heddewigii in a Vine border, and as it did not flower all the summer I felt anxious to see what sort of a blossom it would produce. I therefore took it up in September, potted it, and placed it in a cold frame; here it did well, but to bring it more rapidly into bloom I placed it in the Vinery, and I soon had the satisfaction of beholding a very beautiful flower. After it had done blossoming I put it back in the cold frame again; here in a few days it became attacked by mildew in its worst form, but as I had plenty of young stock I did not mind the loss of one plant. It will thus be seen that it was my bad treatment which caused the plant to be affected; and it is owing to sudden checks such as that I have just described that mildew attacks plants and fruit trees, and it is my opinion that the evil exists in the atmosphere more or less 10 months out of 12, ready to seize upon any unhealthy plant that has been subjected to unskilful treatment. The only two months I consider to be more exempt from it than the others are July and August. In the case of Vines I have always found that a sudden change in the temperature has brought on mildew. I have visited a number of places this wet summer, and I have found more mildew on the Vines everywhere than I have ever seen in all my life before, and in every case the roots were sodden with wet; in some instances the borders were made far down below the ground, level and as flat as a pancake, so that the rain which fell on them could not possibly run off but was compelled to soak into them, rotting off every bit of young root, even if it had been possible that the Vines could have made any in such a puddle. Your articles on Vines and Vine border-making I hope therefore will receive the attention they deserve. *W. Prestidge, Gardener, near Birmingham.*

Wellingtonia.—Amongst the numerous fine specimen Coniferous plants with which the extensive grounds attached to the residence of the late Sir Charles Lambe, Beauport, near Hastings, abound is a Wellingtonia about 7½ feet in height, producing two cones which bid fair to ripen. An Araucaria imbricata, of which there are also at the same place many fine specimens in the most luxuriant health, has attained the height of 45 feet. *Thomas Cripps, Nurseries, Tunbridge Wells.*

Bougainvillæa spectabilis.—Under the impression that two different varieties or species are or have been supplied under this name, I would thankfully receive from Mr. Daniells or any other successful cultivator, a few leading characteristics appertaining to spectabilis proper, for I doubt not that many like myself are pushing their plants along to fit them for slow oven treatment by spring, that would ill brook disappointment, now that its successful cultivation has been so clearly pointed out. I was induced to order a plant from a first-class London nursery, which in due time arrived, a picture of health, which it still retains. Latterly, having a little leisure for visiting both nursery and private establishments, I was surprised to find to all appearance a distinct species in various stages of growth, distinguished by a russety hue, very hairy leaf, forming an upright acute angle with the stem, shorter jointed, with a stiff short spine. Opposed to the above the plant in my possession has a full green, almost glaucous appearance, a succulent downy leaf, drooping even in its earlier stages to an obtuse angle with the stem, a long slender spine, and altogether a looser jointed and more rampant grower than the "true species" of my wanderings. *B. H.*

Muscat Hamburgh Grape.—My experience in growing this is that it requires a warm house (a temperature for instance between that required for Muscats and Hamburghs, and not a cold house as some of your Correspondents recommend) to bring it to perfection. I should like to hear the opinion of the Exhibitors of this Grape who were successful in taking the prizes offered for it at the Crystal Palace in September last in reference to this point; for myself I consider that this variety of Grape ought to be in every establishment where good fruit is an object, as it is a strong grower, an abundant cropper, a free setter, and not liable to shank. *R. S.*

Conifers.—I have taken the liberty of making a few remarks on a splendid collection of Coniferæ (near a hundred sorts) growing at the seat of T. Wray Harding, Esq., Upcott, near Barnstaple, North of Devon. I am sure your readers will be glad to hear that many rather tender and rare kinds have stood the trial of last severe winter on a cold high exposed situation, but dry, and protected from the north (only a few miles from the sea) by some large trees of Fir and Beech. I was much struck with the extraordinary size of a splendid plant of Pinus insignis planted 1845, the top having been cut off twice to prevent it from being top heavy and blown down, one tree having been destroyed by a severe gale a year or two before. I recommended the top to be reduced and the roots loaded with massive stones if possible to secure this; in 1845, 15 years ago, it was only 2½ feet high, now the tree is above 60 feet high, with branches all round in splendid proportion. This I think one of the largest in the West of England. Annexed are the names of a few fine specimens which I think are well worth Coniferæ gentlemen calling to see, about two miles from Barnstaple station, North of Devon Railway. I am sure the proprietor will have much pleasure in showing them:—Pinus patula, 25 feet, bushy; P. radiata, 30 feet, fine specimen; P. muricata, 20 feet, hooked Pine; P. Dicksoni, 30 feet, full of cones; P. Hartwegii, 25 feet, grand plant; Picea nobilis, 20 feet, had two cones this season; P. Pinsapo, 20 feet, P. Cephalonica, 25 feet, bushy and fine specimens; P. religiosa, 20 feet, P. Webbiana, 25 feet, much injured last season, but now growing well and is a grand plant; Wellingtonia gigantea, 8 feet, planted only three years, a splendid plant; Cedrus Deodara, full of cones, C. atlantica, 20 to 30 feet, fine specimens—the latter will prove a grand tree, growing fast, and upright as Lombardy Poplar, in an exposed situation; Cryptomeria Japonica, 20 to 30 feet, fine plants, full of cones; Cupressus torulosa, 20 feet, fine plant; C. Uhdeana, 15 feet, fine plant; C. sinensis, 15 feet, not injured the least last season, a grand plant; Libocedrus Chilensis, 15 feet, very fine; Abies Douglasii, 40 feet, full of cones; A. Nordmanniana, 12 to 15 feet, this will prove one of the finest and most hardy of its class; A. Brunoniana, full of cones; Juniperus macrocarpa, 12 feet, very grand specimen; Taxodium sempervirens, 25 feet, fine grown plant; T. distichum, 20 feet, very fine tree. The following are fine specimens, from 2 to 10 feet, looking well generally:—Thuja gigantea, T. Doniana, T. Wareana, T. pendula, T. flagelliformis, T. orientalis, T. orientalis aurea nana, T. Nepaulensis, T. articulata, Thujopsis borealis, splendid plant; T. dolabrata, a beautiful plant from Japan, quite hardy, not injured last season; Cupressus Lawsoniana, C. Corneyana, C. funebris, C. M'Nabiana, C. sinensis, Juniperus oblonga pendula, J. tetragona, J. Witmannia, J. argentea, J. excelsa, J. recurva, J. Traversiana, J. Chinensis, J. Bermudiana, Abies Pindrow, A. Jezoensis, Biota glauca, B. meldensis, B. freneloides, B. dumosa, Cunninghamia sinensis, Cephalotaxus Fortuni, mas., fœm.; C. drupacea; Taxus Harringtonia, T. adpressa, and many others; Chamæcyparissus Thurifera, and others; Podocarpus McKayana, Fitzroya Patagonica, Pinus filifolia, injured much last season; Pseudo Larix Kæmpferi (Golden Larch), not doing well; Larix Griffithii, splendid tree; Podocarpus coriacea, P. Japonica, P. Tatarica, Torreya Humboldti, T. grandis, T. myristica, Picea Frazeri, P. Hudsonica. *Alex. Pontey, Nurseryman, &c., Plymouth.* [We print our correspondent's list as we received it; but we confess our unacquaintance with some of the names he gives.]

Clianthus Dampieri and Epigynium.—Our plant of Clianthus Dampieri having turned out very much better and proved a much finer and handsomer thing than we anticipated, we have taken the liberty of enclosing a specimen for your inspection. We have it planted out in a span-roofed pit, where it has been flowering ever since last April, and is as you will see still growing vigorously, and if we had a little more sun would look as well as ever it has. Up to within the last few weeks it has almost invariably produced its flowers in clusters of 5, but latterly it has, as you will see, had 6 and 7 in each head. The plant has borne since it came into bloom 680 trusses, and averaging these at 5 blooms each, we get a total of between 3000 and 4000 flowers. It

has been and is a most beautiful object, and has much attracted the attention and interest of visitors. In case you may not have seen it we also send you a specimen of a pretty plant, the berries of which have rendered it very ornamental for some time past; both these and the foliage are now going off, but are still very effective. It is Epigynium leucobotrys. Our plant of Clianthus extends over a length of about 13 feet, being trained to upright stakes. *E. G. Henderson & Son, Wellington Road, St. John's Wood.* [Certainly the large shoot that accompanied this, with noble clusters of superb scarlet and black flowers, was a magnificent object; the most magnificent that the season produces. As to Epigynium leucobotrys, whatever its proper name may be, a point we cannot determine in consequence of not having seen the flowers, it is a charming shrub, with racemes of snow white pear-shaped berries, resembling pearls and as large as peas. Jewellers and artificial flower makers should study them.]

Formation of Vine Borders.—In your leading article of last week a laudable desire is manifested to guard against the too common error of mixing carrion of every sort in the soil for Vine borders, and so bright is the beacon you have placed on the rocks of Scylla that I fear its glare will drive many into the opposite gulf of Charybdis, and that they will resort, not to the knacker's yard for dead horses, but to sand and gravel pits for ingredients in which to plant their Vines. That this was not your intention I am certain, though the instances you quote of very successful Grape growing apparently in sand and gravel may have that effect. A pretty extensive acquaintance with the requirements of Vines that are to be kept in good health and bear regular crops of good Grapes for a number of years convinces me that they require a better border than a common gravel walk to grow in, as in the case of Mr. Crawshay's, though here I am satisfied their growing in a gravel walk was more apparent than real, for such is the rambling nature of the roots of the Vine, that I am convinced they would not confine themselves long to a gravel walk, but pass into more congenial soil. This remark will equally apply to the clay in Mr. Glendinning's case, and to the cinders at Isleworth, for an instance came recently under my observation at Morden, near Edinburgh, where Vine roots had gone 60 yards in quest of nourishment, and on their way passed through two gravel walks and under a garden wall, showing clearly that it is impossible to say where such roots may penetrate to in the course of years; and if proof of this were wanting, those Vines planted some three years ago in the conservatory at Chiswick having passed out of their narrow border and penetrated a gravel bank to the extent of 10 feet, would supply it. From all this it appears plain to me that Vine borders should be made of considerable width, and in addition that the Vine roots should have easy access provided for them to pass into the common garden soil beyond, especially if into Asparagus beds, where they are not likely for years to be disturbed; and that the border should neither be made of cinders, gravel, nor clay, but of good friable loam, with an admixture of charred earth and wood, on which, while in the process of cooling, the cesspools of either cowsheds or stables have been poured; some old plaster or lime rubbish, and a ton of crushed bones for the border of a house about 60 feet in length. In the year 1847, on the 1st of July, I planted a house of Muscats at Wrotham Park in a border such as I here describe. In 1848 the Vines in it bore three bunches on each rod; in 1849, 10 on each; and in 1850, the heaviest crop of Grapes I ever saw, and from that date till the present season, when I saw them in August last, they have borne great crops of fine Grapes, and have all the appearance of continuing to be as fruitful as they have been for many years to come, showing clearly that the Vine does not require all the ingredients put into the "witches' cauldron" to ensure its fruitfulness, while at the same time it thrives in a good substantial mixture such as I have here indicated. *W. Thomson, Dalkeith Park.*

Routledge's Illustrated Natural History.—In an extract from this work on the "Habits of the Kestrel," given in your paper a short time ago (p. 915), I was, I must say, not a little surprised to find in the following sentence the mole classed as a reptile! "Reptiles of different kinds, such as frogs, small moles, and newts, are also a favourite prey of this bird," &c. I had previously always considered the mole a true mammal! A. [This is a curious slip for a naturalist, but the original is as you find it in our columns.

Bowood Muscat Grape.—The opinion is gaining ground, that the Bowood and Passe Muscat are identically the same thing. This I feel to be quite true; not from hearsay, nor from any contrast made in other gardens, but from what has come under my own notice. We have here both of them growing in one house, devoted exclusively to the growth of Muscats. Now I have observed these Vines attentively for a couple of years, from the opening of the buds to the maturation of the fruit, and never could detect the least difference between them, either as to time of ripening, outline of bunch, form or flavour of the berries, and I have not noticed that the one sets its fruit more freely than the other. *A. Cramb, Tortworth Court.*

Early Fruiting of Grafts.—If you think the following incident worth your notice, I will mention that last year my gardener grafted three grafts upon a small stock cut down to about 4 feet from the ground; this year the three grafts produced 20 Apples, 14 of which I took off the size of Walnuts, leaving six to mature. The whole six came to perfection, and this autumn every eye is a blossom bud. The grafts have not grown in size, but are in perfect health. *Geo. W. Lenox, Ynysingharrad, Pontypridd, Glamorganshire.*

Societies.

ENTOMOLOGICAL, *Oct.* 1.—H. T. Stainton, Esq., V.P., in the chair. Mr. Ianson exhibited a new British species of Haltica taken near Reigate and Arundel, and Mr. S. Stevens specimens of Diachromus germanus and Coptodera Massilienis, both taken at Hastings, and probably imported individuals; also collections of insects formed in New Zealand by Mr. Oxley, and in the neighbourhood of the Cape of Good Hope by Mr. Trimen, the latter included specimens of the rare Hypselogenia concava, and an apparently new and very beautiful species allied to Goliathus Derbyanus; also a box of Lepidoptera from the same neighbourhood. Mr. Westwood exhibited a series of beautiful exotic Lepidoptera which he had recently obtained in Paris, including Papilio Dædalus, Morpho Aurora, Zethera Pimplea (both sexes, the male only having been previously known and differing most strikingly from the female), Debis Lorquinii, a new species of Hipparchiidæ, remarkable for the brilliant blue gloss on the wings of the male; also some beautiful Theclæ and Erycinæ, and specimens of both sexes of Saturnia cynthia (the Eria silk-moth of India), and of the allied S. Ricini, and male and female hybrids reared between the two last mentioned species in Paris, where extensive experiments are being made with the view of introducing them into the French silk manufactories. Dr. Baly exhibited a series of species of the genus Donacia, together with preparations of the generative organs, which he had ascertained to afford excellent specific characters in this difficult genus, two rare species of which were exhibited by Mr. Ianson. Professor Syme exhibited a specimen of Sphinx Convolvuli reared on the 15th September, having been nearly 12 months in the pupa state; the ovaries nevertheless were very small in this specimen. Mr. Smith exhibited some parasitic Chalcididæ infesting Anobium paniceum, and also an individual of a Danish species of Bombus (B. equestris), which flew on board a vessel half way between England and Denmark. A beautiful series of magnified drawings of the larvæ of all the British species of Melanippe reared from the eggs was exhibited by Mr. W. Buckler. Mr. F. Bond also exhibited various rare species of Leucania, Agrotis, and Heliophobus, from Freshwater in the Isle of Wight. A note was read by Mr. Ianson on the economy of Hylobius Abietis, a large weevil injurious to Fir trees. Dr. Knaggs pointed out the distinctions between two allied species of Nonagria heretofore confounded together, for one of which he proposed the name of N. Bondii. A letter was read from Mr. Trimen giving an account of the mode in which the egg cases of the species of Mantidæ are formed, and which he had ascertained simply consisted of a coating of viscous cement discharged with each separate egg, and which rapidly dried into a mass. He also gave an account of the habits of the genera Mastigus and Selasia.

SUDBURY COTTAGERS' VEGETABLE SHOW: *Oct.* 23.—The Sudbury Association for rewarding the deserving labourers and servants of the farmers in this neighbourhood has for some time connected with it ploughing matches and anniversary for the distribution of its prizes, and an exhibition of the produce of cottage gardens. What such encouragement may effect was most strikingly proved on this occasion. The handsome and spacious Corn Exchange was the place of exhibition. A wide open space was left in the centre for spectators and the approach of the meritorious poor to receive their prizes. Each one was presented to the President, N. C. Barnardiston, Esq., by the Rev. Edwin Sidney, and they received the congratulations of the company, amongst whom were Sir William and Lady Parker, Major Parker, M.P., the Misses Barnardiston, and other principal persons of the town and its vicinity. Round the sides of the room were placed the specimens of produce shown. On the left were fine specimens of root crops grown by the farmers themselves, mingled with Evergreens, Pears in pots, well fruited, and other plants from the Nursery of Mr. Brown. On the right a long row of tables contained the cottagers' vegetables. That such fine specimens should have been produced in a season so unfavourable astonished all who saw them. The Potatoes were as fine as were ever shown, and were bought for seed of the poor growers for large prices with great eagerness. Immense pains must have been taken in their cultivation, and several of those who brought them said that there were not many diseased ones in the allotments or cottage gardens where they grew; their beautiful Kidneys and York Regents could not be imagined; they were perfect examples of their kinds. Carrots were beautifully bright in colour, and of enormous size, and Parsnips were of extraordinary dimensions; both were shown in large quantities. Sticks of Celery were also exhibited of first-rate quality and great dimensions. As heretofore, the village of Buces, under the auspices of the Rev. A. Hanbury, greatly distinguished itself; but the amount of prizes given induced others to compete successfully with the deserving cottage gardeners of that place. A splendid basket of fine green Peas from the village of Shimpling, was exceedingly admired, and the grower obtained as a prize a handsome wheel-barrow offered by the Misses Hallifax. There was exhibited an immense quantity of Onions of the highest quality, and they obtained numerous rewards. Besides the regular prizes many extra ones were offered in the shape of spades, watering-pots, and forks. Six spades were given by W. Atkinson, Esq., six forks by Captain Bence, three watering-pots by J. W. Poley, Esq., and some single ones by the Rev. Edwin Sidney and others, besides many prizes by the President, and several members of the Association. These excited great competition, and occasionally the wives of the cottagers took them, declaring that they were the chief cultivators of these small but productive plots of ground. Many good Cauliflowers were shown, with noble Savoys, some of the latter being very large. But the most interesting portion of the show was a series of baskets tastefully arranged, containing each a large variety of cottage garden produce. The one which obtained the first prize was a model of neat arrangement, and had in it many autumnal flowers; Turnips, Radishes, Carrots, Lettuces, Peas, Kidney Beans, and many other well grown vegetables. It was an object of great admiration; and the others which won inferior prizes were scarcely less so. There were some excellent Apples also shown, but of course not a bunch of out-door Grapes, as in former years. Nothing else however was wanting except fine Pears, and as a whole a more meritorious cottagers display could scarcely be conceived. It was evident that the exhibitors were influenced by a laudable emulation, and that these annual rewards, and the kind commendation of their superiors, are highly appreciated by them. Great pleasure was manifested in their demeanour as the Rev. Edwin Sidney stated the merits of each, and they were kindly greeted by the President and company. Engaging the rural poor in such cultivation of their little gardens has not only been the means of obtaining such excellent examples of esculent vegetables, but it has a great moral effect. Their leisure hours in the long days are thus well spent, they keep at home with their wives and families, and some of them are found working even by moonlight. They most of them keep a pig, and enjoy the profit of it, besides obtaining an excellent and paying manure, while the very habit of care and vigilance tends to their improvement in general providence. A neat cottage garden is generally accompanied by a tidy house, and both are regarded by a humble pride that makes home happy. We are convinced that the promoters of such exhibitions as the one we have now described are doing real good amongst the labouring classes, and the Vegetable Show at Sudbury this trying year has shown what skill and industry may accomplish for the poor man when due encouragement is given to him by his wealthier neighbours and employers.

Notices of Books.

Le Jardin Fruitier du Muséum, ou Iconographie de toutes les espèces et variétés d'arbres fruitiers cultivés dans cet établissement, &c. &c. Par J. Decaisne. 4to. Paris, Firmin Didot. Parts 25 to 36.

(*Continued from p.* 955.)

Poire Figue.—Fruit large, long-pyriform; stalk short, thick, fleshy at its junction with the fruit; eye middle-sized, placed in a very slight depression; skin yellowish-green, sprinkled with small dots, and covered to a considerable extent with patches of olive russet. Flesh white, half-melting, sweet, but slightly astringent. Season, November and December. The following note respecting this Pear was received by Prof. Decaisne from M. Léon le Guay, of Alençon: "The Poire Figue is very capricious. It is frequently excellent, but often in humid soils it is insipid, and sometimes bitter. It is apt to speck, and the specks are a sure indication of its bitterness. This variety was found about 30 years ago in a nursery belonging to M. Lecomte-Mortefontaine, in the commune of Cussay, near Alençon. It was sent out under the names of *Figue d'Alençon*, and *Bonnissime de la Sarthe*. The first name is the one which ought to be retained." The correctness of the above has been confirmed by M. Dupont, President of the Société d'Horticulture de l'Orne; and there is nothing in it to the contrary of the *Poire Figue* having been perfectly described by Duhamel half a century before its discovery by M. Lecomte-Mortefontaine. [We think the Poire Figue described by Prof. Decaisne is certainly different from that of Duhamel: the former, "commençant à mûrir en Novembre, et se conservant quelquefois jusqu'à la fin de Decembre." Duhamel states that the Poire Figue "mûrit au commencement de Septembre." In other words, the one *commences* to ripen in November, and will sometimes keep till the end of December; the other ripens in the beginning of September. Now, although it frequently happens that Pears such as the Easter Beurré and Beurré Rance, which usually keep till February, March, or April, do sometimes become fit for use in December; yet we are not aware that any Pear which ripens usually in the beginning of Sep-

tember will keep till November, far less till December. Long-keeping Pears will sometimes ripen months earlier than usual; but no early September Pear will keep for months after its general season of maturity. We therefore conclude that the *Poire Figue d'Alençon* is not the *Poire Figue* of Duhamel. Nor is it the Poire Figue of Knoop, which is unquestionably the Windsor Pear, and is well described by the author just mentioned. This again is different from the Poire Figue, known also in this country by the name of Knevitt's Pear, Holderness Pear, a very old tree of it having existed at Holderness House; this sort ripens in September and is a good Pear, but gives way at the core in a few days after maturity.]

Poire Surpasse-Meuris. — Fruit large, turbinate, obtuse; stalk short, obliquely inserted, the fruit projecting considerably on its upper side; eye in a very regularly-formed shallow depression; skin greenish-yellow, sprinkled with dots and russet specks, brownish-red next the sun. Flesh fine, half-melting, juicy, sugary, but slightly astringent, and not high flavoured. Season, August, September. Said to have been raised from seed at Louvain, and bore fruit for the first time in 1824. It was named by Van Mons after his gardener. [This ripens at the time when many better Pears are in season. It must not be confused with another Pear, Ne plus Meuris, named after the same person, which though not so handsome in appearance is very superior in quality, and from its long keeping is much more valuable.]

Poire Cassante d'Hardenpont.—Fruit large, pyriform, or oblong, obtuse; stalk long, straight, or slightly bent, thick, fleshy, and wrinkled at its junction with the fruit; eye depressed; skin yellowish, thick, sprinkled with large spots and patches of russet. Flesh white, breaking, sweet but not juicy, slightly perfumed; a stewing Pear. Season, November, December. Tree of erect growth, very productive. [The name of Hardenpont is attached to various Pears, of first-rate quality, such as the Hardenpont du Printemps or Beurré Rance, &c. The following is the result of Prof. Decaisne's endeavours to find any of M. Hardenpont's pomological writings that might exist.] After having searched in vain in the works of the 18th century for some traces of the pomological labours of Hardenpont, I had recourse to the kindness of M. Morren, Professor of Botany at the University of Liège, who has favoured me with the following note:—"Hardenpont (Nicolas), born at Mons, June 14, 1705; died December 31, 1774, a clergyman attached to the church of Saint-Nicolas-en-Havré, has published none of his pomological researches. He possessed, at the gates of Mons, a garden, which still belongs to his family."

Poire Belle de Mouars.—Fruit long pyriform, or somewhat cylindrical, obtuse at the ends; stalk variable in length, straight or oblique; eye in a slight depression; skin at first brownish olive, changing to a ferruginous brown as the fruit approaches maturity, somewhat rough, with russet dots. Flesh white, firm, or half-breaking, with little juice, and an acidulated sugary flavour. Season, November and December. The tree is vigorous and productive. Good only for kitchen use.

Poire Nonpareil.—Fruit middle-sized, round; stalk straight, fleshy, inserted in a small cavity; eye in a very slight depression; skin very thick, green, changing to citron yellow where shaded, sprinkled with russet-brown dots, tinged with orange-red next the sun. Flesh fine, half-melting, juicy, sugary, with a citron perfume, and peculiar, very agreeable flavour. Season, winter. Prof. Decaisne refers this variety to the *Poire Sans-Pair*, mentioned by Bonnefons and by Dom Claude Saint-Étienne as synonymous with the preceding under the name of Nonpareil. It has also the synonyms of Poir Sans-Pareille, Besi Sans Pareil, &c. [This Pear, even in good seasons, was found not adapted for the climate of England.]

Poire Belle Angevine.—[Uvedale's St. Germain.] Fruit very large, oblong; stalk obliquely inserted, fleshy, cylindrical; eye in a small cavity, surrounded with slight protuberances; skin citron or golden yellow on the shaded side, brilliant red next the sun, everywhere sprinkled with round dots, sometimes very thinly russeted on the part immediately adjoining the stalk. Flesh white, breaking, astringent, without perfume. An ornamental fruit, and excellent for stewing. Many persons have erroneously confounded this magnificent fruit either with the Poire d'Angora, or with the Poire Gilot, to both of which the name of Poire d'Amour is applied. In order to avoid for the future this great confusion as regards a fruit which has more than 20 synonyms, Prof. Decaisne states that he has adopted the name by which it is known [in France] at the present time, although he says he has no reason to believe that the variety originated in Anjou. Handsome fruits, like that represented, and not much larger [the one figured in the work is 7 inches long and 4½ inches in diameter] are usually sold for as much as 7*s.* or 8*s.* They serve for ornament and especially for the Epergne. The Horticultural Society of Tours obtained a fruit in 1846 which weighed 4 lbs. 15 oz., and measured 9$\frac{8}{10}$ inches in length, and 19$\frac{1}{2}$ inches in circumference.

Cuthill's Black Prince Strawberry.—Fruit very early middle-sized, conical, glossy, dark red, or almost black; flesh reddish, in the first fruits rather dry, but the successional ones become soft and juicy, with a very agreeable flavour, though not very sweet. The plant is of slender growth, yet hardy, withstanding cold and also the heat of the sun. It grows in any kind of soil, and the plantation will last three or four years. This Strawberry is valuable for those who take country houses near Paris for the summer, and wish to enjoy the fruit of their plantations the same season. Planted in the beginning of April, Cuthill's Black Prince will yield, two months after, a tolerable produce, such as cannot be obtained, to my knowledge [says Madame L. Vilmorin, who writes the article] from any variety of Strawberry, except the Scarlet Globe.

Stirling Castle Pine Strawberry. — Fruit large, ripening in the middle-season, conical, broad, and cordate at the base; brilliant pale orange-red; flesh close at the core, fine, buttery, with a delicious, refreshing flavour. The plant is hardy, very fertile, and frequently produces some fine fruit in autumn. It was introduced into France by M. Vilmorin in 1851. We expected, from its hardiness, the advantage which it presents of setting all its fruits, which bear carriage well, and above all from their quality, that it would be a valuable acquisition for the market gardeners. Since 1853, many have attempted its cultivation at Verrières, but all have been obliged to give it up, the pale tint of the fruit rendering it not acceptable to the Parisian purchasers. The long duration of its season of production, requiring the crop to be gathered at different times, may be a fault as regards culture on a large scale for the market, but becomes a merit with private growers, for it permits all the fruits to attain, in succession, their full size. It is one of the best sorts for preserving.

(To be continued.)

Archaia; or, Studies of the Cosmogony and Natural History of the Hebrew Scriptures. By J. W. Dawson, LL.D., F.G.S. &c. Montreal, 1860.

[This work not having reached us, and having eluded our inquiries, we gladly avail ourselves of the following notice, published in a late Number of Taylor's able Annals and Magazine of Natural History.]

Amongst the numerous cosmogonists, and quasi-cosmogonists, who have attempted to reconcile the supposed "inconsistencies" of the Mosaic and geological records, there are not many who have possessed that accuracy of judgment and thought, or who have combined a sufficient amount of scientific with theological acumen, to make any permanent impression on the minds of either philosophers or biblical critics. The consequence is, that, practically, each particular inquirer has taken up, more or less, an independent position,—oftentimes caring but little, or even almost unconscious, whether or not the investigators of truth by different, but converging, lines of argument have arrived at conclusions in harmony with his own! And thus it is that, in some departments, much valuable information which might have been found explanatory of facts obscurely hinted at in others, has been either entirely lost sight of or else regarded as worthless,—and all through the want of that "happy balance" of unbiassed discernment which can detect the golden thread of truth throughout its countless ramifications, not merely in Nature, but equally also in the immaterial and moral worlds.

Whatever may be the results arrived at by the author of the clever and ingenious volume now before us, it will at least be admitted that he has executed his task with a greater amount of ability and judgment than perhaps any writer on the same subject who has preceded him. At once an accomplished geologist, a scholar, and a sound biblical critic, and possessing (which is more important still) a thorough knowledge of Hebrew and a power of unprejudiced perception rarely to be met with, it is not surprising that he should have thrown some new light on many points which have been hitherto but imperfectly discussed: and we feel sure that all who are interested in the study of a subject which yields to none other in importance (though it has lost much by the injudicious handling of shallow sceptics and the rampant speculation of literary dabblers) will thank Dr. Dawson for so able an exposition of his views.

There is a class of reasoners on the Continent (happily not very numerous in this country) who believe the Mosaic narrative of creation to be simply a well-composed myth. They think that the mind of England is not yet sufficiently advanced to accept so bold a doctrine, but that, nevertheless, "for some beautiful moral purpose, Moses tried to palm off upon his credulous countrymen a poetic fiction drawn from what he had learnt in Egypt,"—forgetting that he inserted in the selfsame book which contains this "fiction" the Ten Commandments, and the heaviest denunciations against forgery and deceit! To "philosophers" of that school Dr. Dawson's work does not appeal; but those who, on other and more substantial grounds than that which their own hasty and imperfect judgment may supply, already believe in the integrity of Holy Scripture, and who can conceive it possible that statements are not necessarily untrue simply because they themselves do not at once intuitively understand them, will find a fund of valuable information and suggestions scattered throughout this pleasantly written volume.

To enter into the general plan of the 'Archaia' would require far greater space than that which is here afforded; but we cannot better describe it than as a "running commentary" on the early announcements of Genesis, in which a close collation is made of the Hebrew original with the modern discoveries of science. Separate chapters are devoted to the "days," or æons, of creation, and to an inquiry into the nature of the actual facts to which allusion is made in the Mosaic history of the Cosmos. In his sixth chapter Dr. Dawson inclines strongly towards La Place's theory, commonly known as the Nebular Hypothesis, as most in accordance with the scriptural account of the existence of light before any mention is made of the luminous centre of our system: "What, then, was the nature of the light which on the first day shone without the presence of any local luminary? It must have proceeded from luminous matter diffused through the whole space of the solar system, or surrounding our globe as with a mantle. It was 'clothed with light as with a garment,'—

'Sphered in a radiant cloud; for yet the sun was not.

We have already rejected the hypothesis that the primeval night proceeded from a temporary obscuration of the atmosphere; and the expression 'God said, Let light be,' affords an additional reason, since, in accordance with the strict precision of language which everywhere prevails in this ancient document, a mere restoration of light would not be stated in such terms. If we wish to find a natural explanation of the mode of illumination referred to, we must recur to one or other of the suppositions mentioned above, that the luminous matter formed a nebulous atmosphere slowly concentrating itself towards the centre of the solar system, or that it formed a special envelope of our earth, which subsequently disappeared."

The various points which are usually supposed to be antagonistic to each other in the two records are examined *seriatim*, and, as it seems to us, in most instances answered satisfactorily. According to the Hebrew narrative, "all the earth's physical features were perfected on the fourth day, immediately before the creation of animals;" and geological discovery, in which animals play the first part, carries us back to an epoch corresponding with the beginning of the fifth day, which "day," or æon, would appear "to include the whole of the Palæozoic and Mesozoic epochs of geology." But in the Mosaic epitome it will be remembered that plants are stated to have made their appearance on the third day, and thus to have preceded animals in the order of succession; so that "we are shut up to the conclusion that the flora of the third day must have its place before the Palæozoic period of geology." "But that there were plants," continues our author, "before this period, we may infer almost with certainty from the abundance and distribution of carbonaceous matter in the form of graphite in the Azoic or Laurentian rocks of Canada; but of the form and structure of these plants we know nothing."

Many interesting suggestions bearing on controverted points might be adduced from the pages of this treatise, did space permit. Thus, in discussing the exact meaning of the Hebrew word "min," Dr. Dawson remarks, "A very important truth is contained in the expression 'after its kind,' *i. e.* after its species; for the Hebrew 'min,' used here, has strictly this sense, and, like the Greek idea and the Latin species, conveys the notion of form as well as that of kind. It is used to denote species of animals in Leviticus i. and xiv., and in Deuteronomy xiv. and xv. We are taught by this statement that plants were created each by itself, and that creation was not a sort of slump-work to be perfected by the operation of a law of development, as fancied by some modern speculators. In this assertion of the distinctness of species, and the production of each by a distinct creative act, revelation tallies perfectly with the conclusions of natural science, which lead us to believe that each species is permanently reproductive, variable within narrow limits, incapable of permanent intermixture with other species, and a direct product of creative power." And, again, whilst drawing a distinction between the expression to "create" and simply to "form" or "make," he adds: "We may again note that the introduction of animal life is marked by the use of the word 'create,' for the first time since the general creation of the heavens and the earth. We may also note that the animal, as well as the plant, was created 'after its kind,' or 'species by species.' The animals are grouped under three great classes—the Remes, the Tanninim, and the Birds; but, lest any misconception should arise as to the relations of species to these groups, we are expressly informed that the species is here the true unit of the creative work. It is worth while, therefore, to note that this most ancient authority on this much controverted topic connects species on the one hand with the creative fiat, and on the other with the power of continuous reproduction."

In like manner, in his 16th chapter (on the "Unity and Antiquity of Man"), Dr. Dawson once more reverts to the same subject: "The species is not merely an ideal unit; it is a unit in the work of creation. No one better indicates than Agassiz does the doctrine of the creation of animals; but to what is it that creation refers? Not to genera and higher groups: they express only the relations of things created;—not to individuals as now existing: they are the results of the laws of invariability and increase of the species;—but to certain original individuals, protoplasts, formed after their kinds or species, and representing the powers and limits of variation inherent in the species—the 'potentialities of their existence,' as Dana well expresses it. The species, therefore, with all its powers and capacities for reproduction, is that which the Creator has made,—His unit in the work, as well as ours in the study.

* * * The limits of variability differ for every species, and must be ascertained by patient investigation of large numbers of specimens, before we can confidently assert the boundaries in some widely distributed and variable species; but in the greater number this is not difficult, and in all may be ascertained by patient inquiry."

With the above quotation we must conclude our brief notice of Dr. Dawson's able and interesting work, merely remarking that, if he has not in all instances succeeded in entirely satisfying the minds of critics, he has at least offered more intelligible solutions of the greater mass of supposed "difficulties" than have been hitherto arrived at—and such, we might add, as may be readily accepted without doing unnecessary violence to either Scripture or science.

Walpers' Annales Botanices Systematicæ. Vol. V. fasc. VI., completes the volume, which is entirely occupied by Endogens, especially Palms and Arads.

Garden Memoranda.

W. SCORER'S, ESQ., CHAMPION HILL, CAMBERWELL.—*Of the many suburban residences which surround our* great metropolis, this is one of the most tasteful and pretty. Situated as it is on a comparatively high hill, the extraordinary amount of wet which we have experienced this year has done little or no injury; on that account the flower borders have been unusually gay, and the neatly-kept lawn and pleasure grounds enjoyable even when people in less favoured localities could hardly get out of doors. High cultivation is successfully carried on; the kitchen garden, which under old plans of management scarcely produced anything fit to be looked at, now furnishes both fruits and vegetables of excellent quality. This has been effected chiefly by substituting trenching for ordinary digging; by the former plan the surface soil is effectually turned down and rested for a time; fresh material in an active healthy state is brought into operation, and since that has been systematically carried out clubbing and a host of evils which were wont to invade the produce of this garden while under shallow cultivation have entirely disappeared. In well managed market gardens, indeed, clubbing is unknown, a circumstance to be attributed mainly to deep and frequent trenching.

It is not however in the vegetable ground alone that improvement has taken place since the garden has been put under vigorous and skilful management. The Vineries are as full of beautiful Grapes as could possibly be desired. Hamburghs and other varieties of that kind are as black as Sloes, large both in bunch and berry, thin skinned, rich and juicy, and finely covered with bloom; white kinds have also ripened equally well. What is termed making borders has been little attended to here; the roots are near the surface though doubtless widely spread on a light and dry soil, and that seems to be exactly what the Vine likes. An ample illustration of the ill effects of applying carrion to borders is however to be found here. Some years ago a dead horse was buried in a portion of the border, and the Vines in that part of the house have been all but killed. Early pruning is strictly carried out here, an opinion being entertained that that tends to the production of better crops of Grapes. After pruning, which usually takes place in November, the Vines are well washed with the usual mixture of soft soap, sulphur, lime, and soot, all incorporated together and made to the consistency of thick paint. When forcing begins, plenty of water is at all times thrown on the pathways and heating surfaces, and after the fruit is fairly set syringings are freely given; these keep the foliage clean and check the progress of red spider. When the bunches begin to colour, applications of water are as a matter of course discontinued, and plenty of air is then given on all favourable opportunities. Under treatment of this kind, judiciously applied, and common though it be, excellent Grapes such as have been described are produced.

A small conservatory is devoted to flowering plants, and is always gay. Plants also occupy the other houses, except the centre one of the range, which is employed for the growth of Mushrooms, Seakale, Rhubarb, Chicory, and small salads.

Miscellaneous.

Vine Mildew no Novelty.—The weather is magnificent—quite hot still. The summer in these parts has been remarkably warm, and the vintage first-rate; the Vine disease has disappeared, and the wine made is unusually rich; the common people think much of this, and consider it a good omen. At Ferrara I was told by Professor Benzoni that records exist in the archives of a similar visitation 150 years ago, when the *malattia* lasted 10 years. This has only lasted seven. *Times.*

Vine Mildew, Cure for.—Colonel de Golberg, of the 38th Regiment of Infantry, has addressed the following letter to the Prefect of the Gironde, explaining the method he has discovered to preserve Vines from the Oidium by vaccination:—

"I had the honour, three months since, to receive a visit from several members of the Agricultural Society of the department of the Gironde, who wished to ascertain from me my method of vaccinating the Vine. At this moment the sap of the Vine is beginning to cease. I have chosen this period to explain the result of the incisions in which I had placed one or two seeds of the diseased Grape. I vaccinated 10 Vine stocks within a period of a month; the four which were vaccinated at the commencement of the malady produced remarkable results, and I wish to explain these results to the members of the Agricultural Society who honoured me with a visit. The following are the results:—The four stocks first vaccinated completely cured the Grapes which they bore, and a clammy matter was formed in the interior of the incisions; the others subsequently vaccinated have produced less successful results, a small quantity only of clammy matter having been produced, which leads me to believe that the vaccination should be performed as soon as the disease appears. One stock which was not vaccinated lost every one of its Grapes. Another stock did not produce any clammy matter in the incision, and a portion of the Grapes rotted."

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Plants getting past their best, should be replaced at once by something of a more showy character. When the principal collection of Chrysanthemums comes into bloom a selection should be made of the best and most useful sorts, for there are many worthless varieties in cultivation, and it is better to grow duplicates of really good kinds than to retain such as are but indifferent, merely for the sake of having a long list of names. Give timely attention to providing a succession of bloom with which to keep this house gay, and avoid as far as possible the expense of hard forcing, which is injurious to most plants. Be careful not to let things in bloom suffer for want of water, giving weak clear manure water to Chrysanthemums, Salvias, Camellias, &c., and use every means to preserve the beauty of specimens in bloom as long as possible. Damp and mildew are the great enemies to be guarded against at present in conservatories and greenhouses, and these must be sharply looked after, especially in the case of plants that have not ripened their growth well, and are in a rather soft state. If damp is troublesome it must be got rid of by means of free ventilation on mild days, using a little fire-heat at the same time, and for mildew a dry airy atmosphere is the best preventive, but the plants should be frequently examined, applying sulphur on the first appearance of the evil. Very little water will be required here at present, but the plants should be carefully looked over about twice a week, so as to make sure that nothing is allowed to feel the want of it. If not already done, get plants tied into proper form with the least possible delay, for it is very difficult to tie a plant so that it will not look somewhat stiff and unnatural, and the sooner all this kind of work is done the better the specimens will look when in bloom.

FORCING DEPARTMENT.

PINERIES.—Plants in bloom will require very careful management to prevent their being injured by damp, and the atmosphere must be kept dry, with a rather brisk temperature, admitting a little fresh air on every favourable opportunity; and if there is, as there should be, a proper ventilating apparatus or the means of admitting air over the pipes, so that it may get warmed before coming in contact with the plants, a little should be admitted constantly. Plants in bloom should also be near the glass, and where they will catch every ray of sunshine. It is nearly impossible to get fruit to swell anything like properly at this season, therefore unless a succession of ripe fruit is indispensable, and cannot be secured except by driving plants that bloomed late in autumn, these had better be kept rather quiet until spring. Where an attempt must be made at present to get fruit to swell, a moist warm temperature of about 70° at night and 75° by day must be maintained, allowing it to rise to 80° with the assistance of sunshine, and the bottom-heat must be kept regular at about 85°, taking care to keep the soil in a healthy state as to moisture. But it is difficult to get the fruit to make much progress at present, and a little time lost now will be easily overtaken in spring when the plants will enjoy a high moist temperature, and the fruit will increase more in weight in one month then than in two at present.

VINERIES.—As soon as the early house is closed for forcing, be careful to secure a thoroughly moist state of the atmosphere by frequently sprinkling the floors and every available surface, but as observed previously, a regular moist state of the atmosphere is most effectually secured by means of a slight bed of fermenting materials in the house, which will also afford a little warmth, and the moisture from this is much more congenial to vegetation than anything that can be effected by the most careful use of the syringe or evaporating pans.

FLOWER GARDEN AND SHRUBBERIES.

The weather is still favourable for executing alterations; and where these are in hand they should be prosecuted with the greatest possible despatch. Planting, or the removal of large evergreens cannot be finished too soon; for it is of the utmost importance that the plants should be afforded some chance of making fresh roots before the trying winds of March. See to even small plants being secured against wind; for these are often greatly injured by being blown about after planting, which a small stake and a few minutes' work would prevent. Get in a stock of Briars for budding upon next season. Let the roots be well trimmed, cutting back closely the strong ones; for these, if left, will be of little use except to furnish an endless supply of suckers.

HARDY FRUIT AND KITCHEN GARDEN.

If any transplanting or root pruning of fruit trees has to be done let this be attended to as soon as the leaves are off, and see that those exposed to wind are securely staked before leaving them. Also get the ground prepared for fresh plantations, and the trees planted as soon as convenient. Take every opportunity of pushing forward pruning and nailing. Give air freely to Lettuce and Cauliflower plants under glass; indeed, the sashes should merely be used to exclude frost and throw off rains, for they will do all the better in spring for being kept hard over the winter. If not already done make a sowing of Peas and Beans on well sheltered dry ground, and do not spare the seed of the former, for it will be some time exposed to the depredations of mice. Take advantage of the first sunny day that may occur with the ground in a rather dry state to earth up Celery.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON
For the Week ending Nov. 1, 1860, as observed at the Horticultural Gardens.

Oct. and Nov.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain
Friday 26	12	29.921	29.885	62	40	51.0	55	52½	S.W.	.02
Satur. 27	13	29.903	29.894	61	39	50.0	55	52½	S.	.00
Sunday 28	14	30.016	29.953	67	42	54.5	55	52½	S.	.01
Mon. 29	○	30.106	30.064	60	34	47.0	54½	52½	E.	.00
Tues. 30	16	30.162	30.001	67	36	51.5	54	52½	E.	.00
Wed. 31	17	30.141	30.034	52	35	43.5	53	52	N.E.	.06
Thurs. 1	18	30.030	29.974	55	30	42.5	53	51½	N.E.	.00
Average..		30.039	29.975	60.5	36.5	48.5	54.2	52.3		.03

Oct. 26—Densely and uniformly overcast; rain; densely clouded; fine.
— 27—Fine; exceedingly fine throughout.
— 28—Slight fog; very fine; foggy at night.
— 29—Dense fog; hazy; very fine.
— 30—Foggy; hazy; very fine; foggy at night.
— 31—Foggy; overcast; fine; foggy.
Nov. 1—Fine; exceedingly fine; very clear at night; frosty.
Mean temperature of the week, 2½ deg. above the average.

RECORD OF THE WEATHER AT CHISWICK.
During the last 34 years, for the ensuing Week, ending Nov. 10, 1860.

Nov.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 4..	51.5	37.0	44.2	15	0.39 in.	2	4	7	2	6	6	5	2
Mon. 5 .	53.2	38.7	45.9	20	0.25	4	2	3	4	5	10	3	3
Tues. 6..	53.4	38.9	46.1	19	0.30	2	4	1	3	5	13	4	2
Wed. 7..	52.6	38.3	45.4	18	0.52	1	5	2	3	4	11	5	3
Thurs. 8..	51.1	35.3	43.2	19	0.36	2	4	1	2	2	13	6	4
Friday 9..	50.7	35.2	42.9	15	0.31	3	3	3	3	5	9	3	5
Satur. 10..	50 9	35.4	43.1	11	0.33	3	5	2	2	8	9	2	3

The highest temperature during the above period occurred on the 5th, 1852, and 6th, 1834—therm. 63 deg.; and the lowest on the 9th, 1854—therm. 18 deg.

Notices to Correspondents.

BOOKS: *Muke.* We most strongly recommend you to study Mr. Berkeley's new British Fungology, an invaluable work, with beautiful figures of great numbers of our British Fungi. We shall take an early opportunity of noticing it at length.

BOUGAINVILLEA; *G H J.* You will find this in the Vegetable Kingdom under its more Latin form Bugainvillea. The name has not, that we are aware of, been applied to more than one genus, and as all the species forming it are scrambling plants, we do not see how they can have been called trees by Humboldt. We have not that author's "Aspects of Nature" at hand.

CALATHEA FASCIATA: *Dornton.* This plant is very like the common Maranta bicolor. There is a figure in the *Mittheilungen des Russischen Gartenbauvereins*, Part 2, by Dr. Körnicke. The flowers are white and inconspicuous. We do not know whether it is in cultivation, nor should we place it among fine-foliaged plants.

FUNGI: *Leicester.* Your Grape is attacked by the common *Penicillium glaucum.* It appears to have been originally discolored, and therefore liable to the attack of any common mould.—*J Kemp.* The leaves of *Stachys lanata* are attacked by some species of *Erysiphe*, which is still in an imperfect state.—*D.* The Fungus on the lower part of the butt of a Sycamore is *Xylaria polymorpha.*—*Winton.* Your Fungus is *Rœstelia cancellata.* It has not been recently described in the *Gardeners' Chronicle.* The Sphæria on Stachys lanata will be noticed next week. *M J B.*

GARDEN WALLS: *Snowden.* For pointing old garden walls good lime mortar is better than cement, because in the latter you cannot drive nails. You may, however, stop the holes in the face of the bricks with cement.

GRAPES: *Earnshaw.* The Sage Grape of Concord (U.S.) is described by Dr. Jackson as a native of the wood of that town. Three of its berries weigh an ounce. It seems to be very acid.

GYNERIUM: *Didymus.* To say that this plant growing near Rye is the finest in England, is not sufficient in the absence of measurements, &c., of the plant.

INSECTS: *J D.* The insect found on the Green Gage Plum is the larva of some two winged fly (Syrphus—?). We believe it feeds on aphides and not on the fruit. *W.*—Your Hyacinth bulbs were probably injured by the wet, the wounds then attracting large numbers of minute Poduræ (P. fimetaria), which ordinarily feed on decaying vegetable matter. A small Millepede and a fragment of, apparently, a dipterous pupa accompanied the Poduræ; but none of these appear to us to have been the originators of the mischief. *W.*

NAMES OF FRUITS: Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to examine more than six sorts, whatever may be the number forwarded.—*Snowden.* 1, Fondante d'Automne; 3, Aston Town; 4, Marie Louise; 5, Beurré de Capiaumont; 6, Seckel.—*A G.* 2, Hughes's Golden Pippin; 4, 5, Dumelow's Seedling; 6, Dutch Mignonne; 7, Boston Russet. Pears: 8, Beurré Rance; 9, Louise Bonne (of Jersey).—*C W D.* The large Pear is the Calebasse Grosse or Calebasse Carapon; the other was sent by Mr. Knight as the Dunmore; but it is not the true sort.—*E.* Appears to be the Bergamotte Cadet.—*A R H.* 1, Beurré de Capiaumont; 2, Eyewood. The Apple, handsome but not good, is unknown.—*W Heale.* 2, Minchall Crab.—*P G.* Your Grape, although from a cutting received from Italy, is the same as the Morillon d'Espagne.

NAMES OF PLANTS: *G A W.* Phytolacca decandra, sometimes used to colour port wine.—*G C.* The broad-leaved plain Holly, not so well known as it ought to be; the leaf you have sent of it is rather larger than usual, being 4¼ inches in length and 3¼ inches in width.

SPINACH: *Bedford.* This pot herb is the most digestible and harmless of all vegetables. What can possibly lead any one to say it is poisonous?

SWEET ACORNS: *G M.* Two kinds of Oak produce Acorns sweet like Spanish Chesnuts. One is Quercus Ballota, a variety of Q. Ilex; the Acorns are called Belotes in Spain. The other is a variety of Q. sessiliflora, known in Naples under the name of Castagnara. We believe the first may be had in this country; the second not.

MISC.—Full price will be given for copies of July 7, this year.

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LAWES'S TURNIP MANURE	£6 6
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Wheat Manure: Peruvian Guano is proved to be the best and cheapest artificial manure that can be used for Wheat at autumn sowing.
Peruvian Guano direct from Messrs. Gibbs; Sulphate of Ammonia, Nitrate of Soda, and all Chemical Manures. Linseed, Rape, and Decorticated Cotton Seed Cakes supplied at the market prices, by Mr. J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

STRAW ON THE FARM MORE THAN DOUBLED IN VALUE, if chopped up into chaff and seasoned with THORLEY'S CONDIMENT. MR. THORLEY has great pleasure in stating that during the past month he has received communications from some hundreds of the best practical and scientific agriculturists in the United Kingdom, corroborating the fact that this compound is just what is wanted, especially during the present wet season, for working off a vast amount of bad hay, making it palatable, and inducing the animal to eat it with avidity; and by mixing the Condiment with straw-chaff, animals are enabled to extract more nourishment from it than they otherwise could.
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RUGBY AND DUNCHURCH CATTLE SHOW, November 29.—A prize of FIFTEEN POUNDS is open to all England for the best FAT BEAST of any description, the property of the Exhibitor for six months prior to the Show. Entrance 10*s.*, to close on November 13. For Forms of Certificates, &c., apply to Messrs. W. & E. HARRIS, Secretaries, Rugby.
N.B. Covered Sheds will be provided for all the Beasts shown.

The Agricultural Gazette.
SATURDAY, NOVEMBER 3, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

MONDAY, Nov. 5 { London Farmers' Club. ..... 6 P.M. (Mr. Fisher Hobbs on Implement Trials.)

OLD men declare that although they have experienced many wet summers and wet harvests, during which grain has sprouted to a considerable extent—far more indeed than during the present season—yet, take it altogether (the continuance of wet weather and the very low temperature that has prevailed throughout the year), they have never experienced such a season before. Indeed with the exception of two intervals of about 10 or 12 days, we have really had no summer whatever. In some respect the low temperature has been an advantage; it has prevented the standing and cut Wheat from growing out, which with the prevalent moisture and a warm temperature, must otherwise have occurred to a vast extent. At the same time, to this low temperature quite as much as to the undue moisture, must be attributed not only the great deficiency in the yield of Wheat, but the diminished weight of the root crop and particularly of the Mangel Wurzel. And whilst the Grasses on the whole have not perhaps been deficient in quantity, yet a considerable portion has been spoiled or damaged both in the process of haymaking and in the neighbourhood of rivers by being sanded by the floods. The wet weather, too, has rendered the after Grass deficient in nutriment, and endangered the health of the animals by the insect life which it has caused to become rife.

In the locality in which we write, whilst the rainfall for the twelve months ending September, 1859, amounted to upwards of 27 inches (somewhat over the average), that ending September, 1860, has been nearly 38 inches; whilst for the last six months it has exceeded the same six months of the preceding year in the proportion of 5 to 3. The consequence of such an excess of moisture has been to render those diseases rife which owe their origin to excess of humidity. Of late years we have been comparatively free from that dire disease the Rot, or Cothe, which so frequently decimated the sheep stock of the country during the last and earlier part of the present century.

This immunity is to be attributed partly to the drier seasons we have had of late and still more to the improvement in draining generally adopted, by which the surface water is removed from many large districts. It would seem, however, that this good luck is to cease, and that the disease will again visit us and prove as prevalent as ever. The earlier maturity which our sheep stock now possess, and the artificial means at hand of preparing them for the butcher, greatly tend to diminish the pecuniary loss which used to attend this disease. Rabbits and hares have been found to be rotted in numbers, and we are not surprised at this being the case in low districts or retentive lands; we have also understood from butchers that a large number of sheep that they have slaughtered during the last few months have exhibited the appearance of this destructive malady; these sheep have been grazed in marshy districts. The ordinary warranty of soundness given by sheep dealers at fairs is understood by them to apply to the Rot alone; and although it is more than doubtful whether such a limitation would hold good in point of law, yet as this is not only the most formidable disease, but the most obscure in its earlier symptoms, the custom seems in some measure to answer its intended purpose, so that in case of after dispute the question is limited to the fact as to whether the sheep were Cothed at the time of sale, and this is ascertained by the presence or absence of Flukes in the liver at a short period subsequently to the time of sale. This then is the essential character of the disease—Flukes in the Liver; and although these parasites may revel awhile in their peculiar abode, the biliary ducts, without any evident impairment of the animal's health or any actual unfitting of the flesh for the purposes of the butcher, yet it is but a matter of time—the vital functions are gradually but surely undermined, and even in the earlier stages the dead weight of the animal is some pounds deficient. The rot is a disease appertaining to a wet summer; it is often peculiar to certain spots of pasture, and although there has been much discussion on the subject, the best and doubtless the true theory is that it is imparted by the *ova* of the fluke entering the system with the food, and in part reaching their proper nidus, the biliary ducts. These flukes or *plaice*, as they are also called from their resemblance to the fish of this name, vary in size from an eighth to a quarter of an inch in diameter, and owe their presence to minute eggs deposited on the Grass in those spots exposed to the joint influence of sun and moisture. These flukes appear to feed on the bile, and so prevent it fulfilling its proper functions, and thus although at the commencement the symptoms are by no means marked (indeed it is considered that at first the sheep somewhat improve), yet soon afterwards an impaired appetite, paleness of the membranes, loss of flesh followed by loss of wool, and a flabby feeling of the limbs, indicate the train of symptoms which have a fatal termination; medical treatment is almost thrown away in this disease, although salt appears to have some effect as a cure, and still more as a preventative. The grand object should be to prepare the animal for the butcher as soon as possible by giving the most nutritious food, and more particularly Linseed-cake, which acts favourably not only by the concentrated nutriment which it possesses, but also by the 10 or 12 per cent. of oil which it contains, and which appears to have a medicinal effect, probably somewhat similar to that of cod-liver oil in cases of consumption. The sheep should of course be removed to a healthy spot, and a few roots with hay sprinkled with salt besides an allowance of 1 lb. of cake should be daily given. Salt marshes, it should be observed, are not subject to this malady, which fact certainly indicates that salt is fatal to the growth or germination of the ova which produce this disease. The effect of excessive rain is to diminish the per centage of salt in the land, and thus the Grasses are not supplied with the usual quantity. Soda is one of the elements essential to the animal economy, and its deprivation or diminution is as fatal to health as its excessive supply. In a wet season it is well to remember that animals from the causes we have stated need a greater supply; thus it should occasionally be strewed over their food, and a lump of rock-salt should never be absent from the troughs. We have dwelt awhile on the most fatal and formidable disease due to a wet season; we propose hereafter to notice others belonging to the catalogue.

WE have to announce that Sir CHARLES DOMVILE'S 1st prize of 10*l.*, for the best Essay on the most profitable mode of cultivating Small Farms, as advertised in our columns of August 10, has been awarded to Mr. W. J. M. POCOCK, of Castle Hill, Maidenhead.

IN the Twenty-sixth Report of the Commissioners of National Education, Ireland, there is embodied the usual annual statement of Dr. KIRKPATRICK, the inspector of Agricultural Schools under that Commission. To the educational part of the statement we may hereafter refer. For the present we desire to direct attention to the result of two experiments undertaken at the instance of Dr. KIRKPATRICK, by one of his subordinate officers Mr. BALDWIN.

The first of these experiments was instituted with a view of testing the relative merits of the leading artificial manures in the Irish Manure markets. The crop experimented with was SHANNON'S Swede Turnips, a variety favourably known in some parts of Ireland.

The manures were applied at the rate of 3*l.* per

statute acre on the half-opened drills on the 6th of June, and the seed sown the same day after the manure was covered in by the final closing of the drills. All the experimental plots brairded equally well; and there was an even crop throughout the entire season on the entire experimental ground. The crop was saved on the 9th December, and the result is shown in the following table:—

Plot.	Manure.	Price per cwt. s.	d.	Produce. tons.	cwt.
1.	Peruvian Guano ..	14	6	20	14
2.	Phospho Peruvian ..	13	0	19	19
3.	Ritchie's Bone Manure ..	7	6	18	8
4.	Odams's Blood Manure ..	7	3	18	3
5.	Lawes's Superphosphate ..	7	6	17	13
6.	Dublin Manure Co.'s do. ..	7	8	17	5
7.	Home-made Bone Manure ..	7	0	17	4
8.	Kooria Mooria Guano ..	8	0	16	1
9.	Patagonian Guano ..	7	0	17	7

These manures are all so well known that any reference to their composition is unnecessary. The result, however, though not contrary to what might have been expected on many soils, is in favour of Peruvian guano, and is by no means without points of instruction when rightly interpreted. The manures employed may be divided into three classes:—1st. Peruvian guano, which contains a high percentage of ammonia (say 16 per cent.); 2d. Phosphatic guanos, or those containing little ammonia and which depend for their efficacy on phosphates; and 3d. Manures (such as phospho Peruvian, ODAMS'S Blood Manure, &c.) which contain a large quantity of phosphates with a moderate quantity of ammonia (say 2 to 4 per cent.).

Experience has shown that very different effects may be expected from the application of the foregoing manures. It is, therefore, of importance to know the condition of soil and climate under which the Glasnevin experiment was conducted. It has been elsewhere shown that when land contains a large quantity of organic matter capable of producing ammonia, a phosphatic guano would, in all probability, prove more economical than the more costly Peruvian. On the other hand, in a soil deficient in organic matter, and therefore incapable of producing ammonia, Peruvian guano may by the solvent action of its ammonia on the fertilising matter of the soil, prove the most economical of all artificial manures. And, again, on soils in medium condition a mixture of Peruvian guano and superphosphate seems, in accordance with the same reasoning, the most likely to yield the heaviest crop at the lowest cost. With some occasional exceptions (and in such cases there must be exceptions arising from the errors and imperfections unavoidably incidental to the mode of conducting the inquiry) our experiments have fully borne out this view of the case; and we may say the same is supported by concurrent testimony. The experiment under review leans in the same direction. The ground experimented on was, by previous cropping, reduced to the state most favourable to the action of Peruvian guano, and least so to that of the more mineral manures—Kooria Mooria guano, &c. The phospho-Peruvian guano, which, as regards the percentage of ammonia, may be regarded as intermediate between Peruvian guano and phosphatic guanos, has not only approached Peruvian guano very closely in the Glasnevin experiment, but has become a favourite substitute in many districts of the kingdom.

It combines in excellent proportions for a great mass of soils, ammonia and phosphate of lime, the two leading constituents of manures. And no doubt if the price were reduced 1*l.* or 2*l.* per ton it would prove a still more formidable rival to Peruvian guano.

Perhaps the most significant lesson which this and similar experiments teach is that there are very well marked exceptions to the generally received opinion as to the superiority of phosphatic over ammoniacal manures for the growth of Turnips.

IRON AND TIMBER.

[The following paper is in continuation of two or three previous communications from Mr. Scott Burn on Building Materials, which appeared at page 342, &c.]

Composite Beams.—A few notes and illustrations on the use of beams of wood in which iron is employed for the purpose of strengthening weak beams may be useful. In many cases beams cannot be easily obtained of sufficient scantling to support a given weight with a certain span. In this case the operation of trussing may be resorted to with great advantage. As the strength of a beam may be increased threefold by its adoption, where wrought iron is used, its position should be so arranged that the pressure it has to sustain should be that of tension, or that force which has a tendency to draw asunder the fibres of the iron. Fig. 29 illustrates a trussed beam in which a wrought-iron roll, ½-inch diameter, is employed.

a b c d, show in plan the two halves of the trussed beam—each half is termed a flitch; *e f g h* shows a side elevation of one "flitch"; *i k*, end elevation of the two flitches. A central stud *k'* is placed between the two flitches, and brought tight up by the nut at its upper end, this pressing on the plate *l* resting upon the upper edges of the flitch. The lower part of the stud *k'* is rounded off with a grooved edge. Into this groove the iron rod *n n* is passed, the ends being led upwards

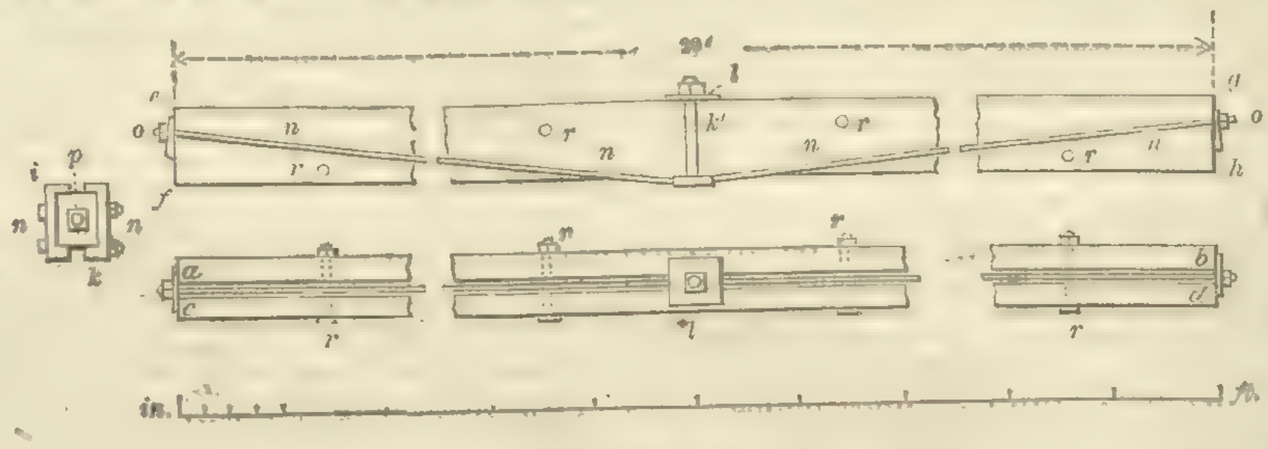


FIG. 29.

and passed through iron plates bearing on the ends of the beams as shown at *p* in the end elevation, and there secured by bolts and nuts, *o o*. The two flitches are further secured by bolts and nuts, as at *r r r r*. The beams thus trussed will bear a pressure nearly three times as great as a single beam of which the thickness is equal to the two "flitches" placed together side to side.

Fig. 30 illustrates a trussed beam in which cast-iron struts

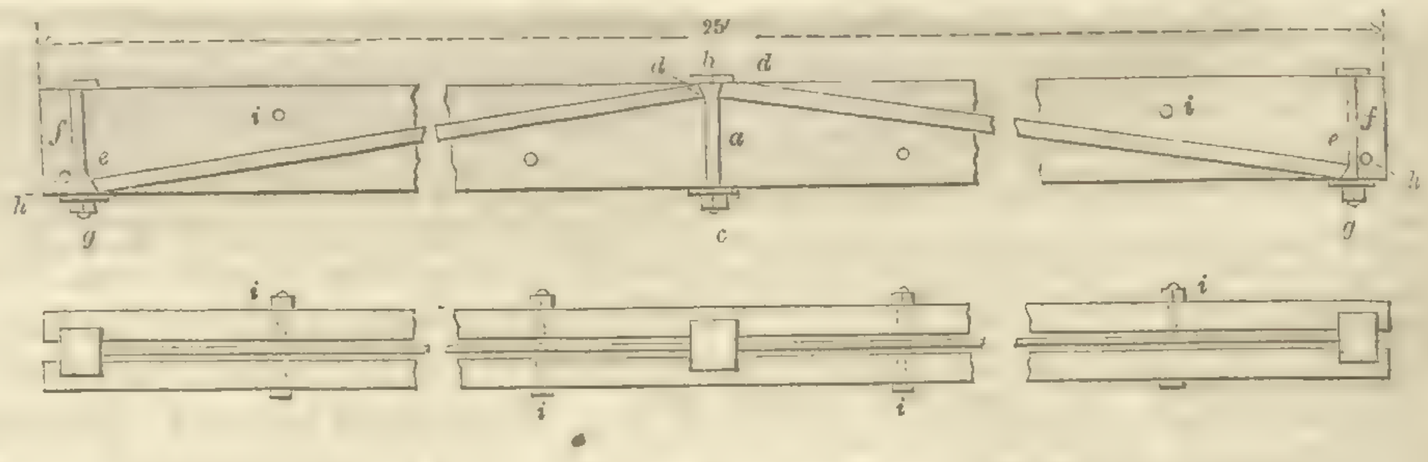


FIG. 30.

are employed. In this a central stud, *a*, is used, the head *b* being tightened on upper edges of beam by the nut *c*. The cast-iron struts abut at their upper ends, *d d*, in this stud; and at their lower ends, *e e*, in the studs, *f f*, which are secured by bolts, *g g*. Iron bolts, *h h*, are provided at back of studs, *f f* to keep them in their place, when pressed upon by

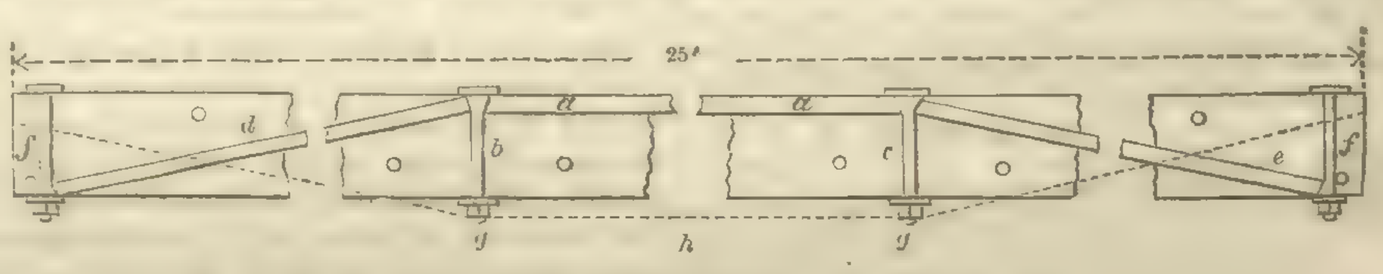


FIG. 31.

the struts *d d*, *e e*. In same drawing is given a plan and an end elevation of the two flitches. Bolts and nuts, *i i i i*, keep the two flitches together.

Fig. 31 shows a method of trussing a beam on the "queen-post" principle—fig. 30 being on the "king-post." On this a straining piece, *a*, is placed between the studs *b c*; the side struts, *d e*, butting at their lower ends upon studs *f f*. The dotted lines show the method of employing a wrought-iron rod

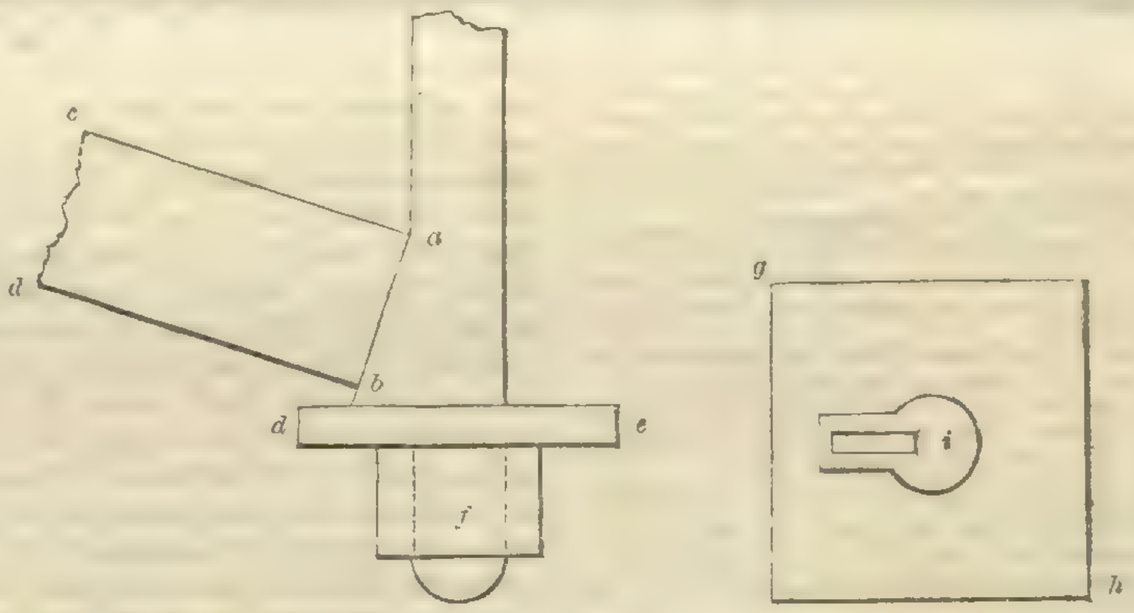


FIG. 32.

in tension, as in fig. 29, the rod passing over the two studs, *b e*, and secured by nuts at the ends, in manner shown in fig. 29. The scale to which the drawings in figs. 29, 30, and 31 are made, is given in fig. 29. The length of the beam between supports of fig. 29 is 20 feet; of figs. 30 and 31, 25 feet. As space does not permit us to give the full length, we have broken off the length, as in the drawing.

In adopting the form of trussed beam with "struts," as

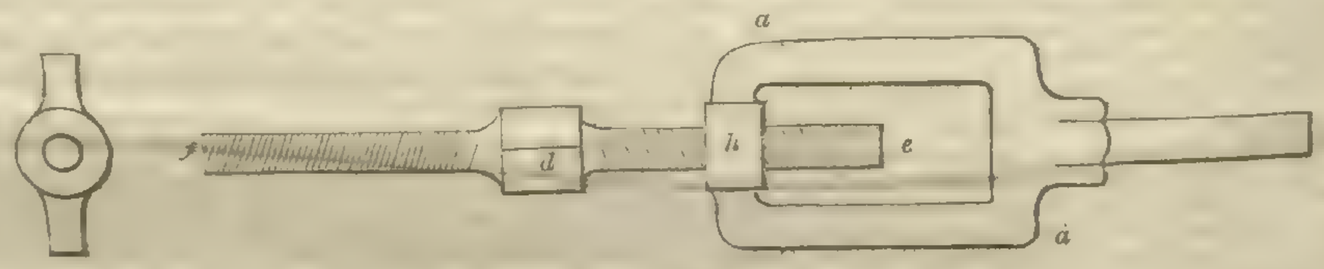


FIG. 33.

d, *e*, fig. 31, care should be taken to make the bearing surface, as *a b*, fig. 32, against which the end of strut *c d* abuts, to be at right angles to the direction in which the strut presses, as *a c* or *b d*. In fig. 32, which is to a scale of one-fourth the

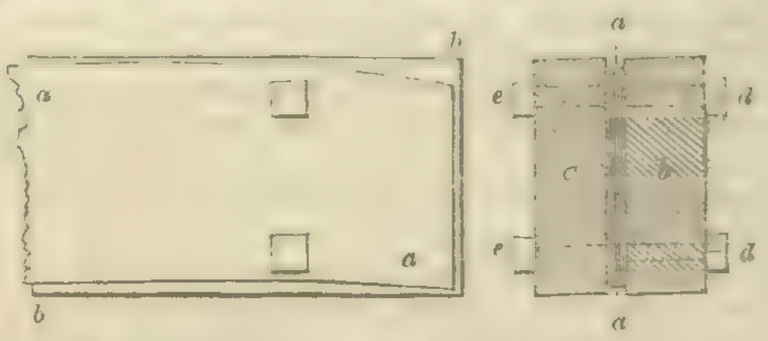


FIG. 34.

full size, *e e* is the plate which is tightened up against the lower edges of beams by the nut *f*; *a k* shows the plan, *i* being the groove in which the end *a b* of strut *c d* is placed.

Where a wrought-iron truss rod is employed, as in fig. 31, as at *f g*, *g f*, the rod passing over studs at the points *g g*, as at *k'* in fig. 29, a method of tightening the rod is shown in fig. 33. The rod *f g*, *g f*, fig. 31, is divided into two lengths, *f g h*; the end *h* being finished as shown at *a a*, fig. 33, the loop shown in end elevation in the same figure, being screwed to receive bolt *d*, the ends *e f* of which are furnished with right and left-hand screws. The end *f* passes through a nut corresponding to *b*. By turning the screw *f d e* by the head *d*, the parts corresponding to *a a* are brought together. The scale of fig. 33 is one eighth full size.

Beams are sometimes strengthened by having "flitches" of thin plates of wrought-iron placed between them, as the flitch *a a*, fig. 34, between the beams *b c*, the whole being secured together by the bolts *d d* and nuts *e e*. In place of the iron plate having parallel sides throughout its length, the sides may be parabolically curved as in the sketch. The scale to which this drawing is made is 1 inch to the foot.

The dimensions of a cast-iron beam of section shown in fig. 23, p. 342, at *k l m n*, 18 feet long, calculated to bear a weight on flooring—the floor surface being equal to 24 superficial feet—of 172 cwt. per foot, are as follows:—The total depth of girder 15 inches, width of lower flange *k l*, 15 inches; width of upper flange *m n*, 4½ inches; thickness of lower flange at its thickest part, 2½ inches; at the edges 1½ inches; thickness of the upper flange, 1 inch; thickness of central rib or web, bottom, 1¼; at top, 1 inch. Dimensions of beams of various

depths, and for various spans, and to support 1½ and 2½ cwts. per superficial foot, will be found in a very full series of Tables in Weale's Engineers' Pocket Book. The weight of the beam of the above section may be assumed to be about 25 cwt., and the cost of casting to be from 5*s.* to 7*s.*, according to circumstances.

To find the permanent load—assuming this to be one-fourth of the breaking weight of the beam, a very safe allowance—of a cast-iron beam, the following rule is given. "Multiply the area or superficial section in inches of the bottom flange by the total depth also in inches, and divide the product by the length of the beam in feet—the quotient will be the load in tons which may be safely distributed over its entire length, or one-half of the weight which may be safely suspended from, or made to bear upon its centre.

The following as to the bearing strength and weights per lineal foot of rolled wrought-iron beams of section as in fig. 27, (p. 342) will be useful; they are prepared from data kindly furnished us by Messrs Mather, Ledward, and Co., Liverpool, the makers. Where the total depth of the beam is 12 inches, and width of flanges 4¾ inches, the length being 19 feet, the permanent load in the centre should not exceed 15,015 lbs., uniformly distributed over its surface 24,948 lbs. The weight per lineal foot of this section of beam is 44 lbs. Where the depth is 7½, and width of flanges 4⅜ths inches, the length being 19 feet, the permanent load at centre is 7700, and uniformly distributed, 12,810 lbs. The weight per lineal foot of this section being 34 lbs. Where the total depth is 4¾ inches, width of top flange 3⅜, of bottom do. 3 inches; the weight at centre is 1840, uniformly distributed 3080 lbs. The weight per lineal foot being 13 lbs. By building the ends of the beams into the walls a distance equal to three times the depth, one-third may be added to the permanent load.

THE AGRICULTURE OF BERKSHIRE,

BY

THE REV. J. C. CLUTTERBUCK, OF LONG WITTENHAM.

(*Continued from p.* 940)

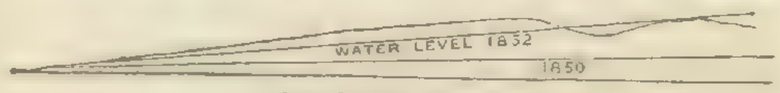
IV. The Chalk District is geologically divided into the upper and lower chalk, characterised respectively by the presence or absence of flints. Though the limit of the division is not clearly defined on the surface, the lower chalk for the most part forms the downs and sheepwalks on the ridges overhanging the vale, and is the subsoil of the arable land at the foot of the chalk escarpment to its junction with the greensand beneath. The upper chalk, with its clearly defined bands of flint, may be seen in the Pangbourn and neighbouring cuttings of the Great Western Railway; it is exposed in chalk pits, and met with in shafts sunk at various places to raise chalk for agricultural or other purposes. The southern limit assigned to this district is the river Kennet, and so much of that portion of the county bounded by the Thames between Reading and Maidenhead as is not covered by the outcropping London and Plastic clays. We may also except those outlying portions of these strata, in some cases bearing traces of the Bagshot beds, which are found on the high ground to the north of the Kennet. The centre of this tract of country is for the most part cleared or being cleared of wood land. The eastern part retains more of the wooded character of the neighbouring counties of Oxford and Bucks, the same character marks the south-west portion. The whole district is broken into a series of irregular undulations crowned in some instances with plateaux of some extent, or falling in gentle slopes tending in conformity with the general dip of the strata southward; all with the exception of the downs and ridges is more or less covered with the argillaceous or sandy flint drift, the breaking up of the clay and sand of the Plastic clay formation before spoken of, which forms the staple of the soil under arable cultivation, requiring a different management with the increased tenacity of the soil, which sometimes requires draining. It is remarked that the northern slopes in these undulations, though they present sharper escarpments, are generally covered with a deeper bed of tenacious soil than those to the south, the higher ground only being capped with Plastic clay *in situ*.

There is a feature in the clay drift which adds to the impervious nature of the subsoil, namely that the more tenacious particles of the clay seem to have been carried down by the action of water infiltrating the surface, thus depositing a dark coating of clay immediately on the surface of the chalk or on the flints resting upon it, forming that which Dr. Buckland called a pargetting, and which according to his statement contained a small portion of oxide of manganese. In the drift in the hollows sarsden stones are often found buried. These stones are considered by geologists to be concretions of the sand of the Plastic clay; their presence here is rather of geological than agricultural interest, excepting the fear that if steam cultivation be introduced, they may seriously hinder the operations of the plough. As we approach the chalk escarpment marked by the ancient ridge and Ickfield way, the lessening of the argillaceous portions of the drift gives a thinner character to the soil, which often consists of a slight covering of vegetable mould resting on the drifts of flints and chalk, or sheer chalk itself.

The chalk drift extends beyond the limits of the chalk stratum and covers a portion of the green sand beneath, though its traces are found as will hereafter appear very far down in the vale. A tract of land between Ilsley and Abingdon is covered by this drift to the depth of many feet; consisting almost entirely of finely comminuted chalk and small angular flints, it makes a genial soil easily worked and, though lying flat, is naturally drained, and is farmed on the four-course system under a liberal cultivation, and bears remarkably fine crops of Swedes.

There are many points that the chalk district suggests as worthy of our notice.

First, the great inconvenience of the want of water from the depth at which the water level in the chalk lies from the surface; for this there is no remedy. Sinking wells over 300 feet, with the machinery for raising the water, must be expensive as a first outlay, as well as the wear and tear and constant labour it entails. The labour may indeed be lessened by improved machinery, but the inconvenience cannot be overcome. The depth at which water will be reached in the chalk may be made a matter of calculation: in the absence of a neighbouring well we must take the level of the nearest known spring or outfall, allow not less than 10 feet per mile, as the inclination of the subterranean water line to such outfall. This calculation may be corrected in any chalk district, by the ascertained relative level of water in any two wells in a line to the outfall; the depth to the water in a well sunk between the two, would be the mean of the level of water in the two wells. The principle on which the calculation is based is that the surface line of the subterranean water dips towards the nearest vent, and that the angle of inclination is ruled by the friction, or resistance encountered by the water in its passage through the stratum. It is this natural adjustment of the water line in the chalk, and the periodical replenishment of the subterranean reservoir by the autumnal and winter rains, which causes the bursting of the brooks and bourns, such as at Lambourn in this county. This is



Lambourn Brook.

deemed an extraordinary phenemenon. The simple explanation is that after an excess of rain (as in 1841-2, 1852-3, the two last periods of the bourn running), the angle at which the water rose in the soil is greater than the angle described by the surface which the water reaches a point above its ordinary spring head.

Section showing the relative Levels of Water at two periods.

The bursting of these bourns has been predicted by observations on wells, in which the water has risen above its ordinary level, and by reference to the winter rain fall.

The quantity of water caught in tanks from the roofs of buildings cannot meet the wants of man and beast on large farms. Happily there is a means of supply to a certain extent, by the construction of dew ponds, even on the highest ridges of the chalk downs. These ponds, as their name betokens, derive their supply from the condensation of the atmosphere on their surface; the direct rain-fall scarcely affects them. Given the contents of the pond, the depth of rain falling, the number of cattle and the rate of their consumption of water, the result arrived at on comparing the water with the drain upon it is a great excess in favour of the pond, at the end of the hottest part of the summer. The known fact that a rain gauge on the ground at the Oxford Observatory registered 27.171 inches, against a gauge 22 feet above the ground which registered only 22.136, an excess of 4.935 on the rainfall of 1859, leads to the inference that the cold rain drops attract the moisture as they near the ground —thus the dew pond attracts the vapour to its cold surface. These ponds are constructed by persons skilled in the operation. An excavation is made in the surface of the chalk, either square or round, from 30 by 40 yards to as many feet; the bottom, of a bason shape, is then covered with clay carefully tempered and worked in portions: the clay is interspersed with considerable quantities of quick lime, said to prevent the working of the worms. As the portions are finished they are protected from the atmosphere by a covering of straw, then all is covered by a layer of chalk; water is then introduced; if there be snow in the winter the pond is filled with it as saving the carriage of water. Then for years these ponds placed on the open ridges and spurs of the downs, never are known to fail. The cost of one of the ponds of large size is about 40*l*. The use of steam power has created a new demand on the stock of water. The increase of these ponds on an extensive farm, has already been made the subject of arrangement between a landlord and incoming tenant in the event of the introduction of steam cultivation.

Breeding and feeding sheep is the ruling feature of Berkshire farming, especially in the district lying between the vale and the river Kennet; the number of sheep annually penned at Ilsley marks this as the centre and great emporium of this ancient staple of British produce and wealth; the sheep at its fairs and markets are numbered by tens of thousands. They are frequented by dealers and flockmasters from all quarters, who buy with confidence from the known healthy and hardy condition of the stock. Mavor in his report to the Board of Agriculture gives reports of 62 parishes, of which 32 are in the Chalk district, of the breeds of sheep kept at his time; they are, 1st, Berkshire Notts, Wiltshire, Cotswold, Leicester, and Southdown. The Berkshire Notts, or polled sheep, a word still in use with reference to polled cows, in contradistinction to those with horns, are so far as we are informed wholly extinct, but are described by those who remember them as having a long speckled face, and legs, rather light in the carcase, and very bare of wool on the breast. To use an expression of an old Berkshire shepherd—"It was no trouble to shear they." This sheep was found in nine parishes on the chalk, the Wiltshire horned sheep in 19, the Cotswold in 1, the Leicester in 1, the Southdown in 12, the Berkshire Nott, which must have resembled the half breds of the present day, in 9. The Wiltshire were the favourites, the Southdown beginning to supersede them. Mavor remarks, the Southdown seem to be admitted on all hands to be extremely well adapted to the soil of a great part of this county; he speaks of his Majesty's Southdown breeding stock on the Norfolk farm, and of a capital breed of 500 Southdown kept by Sir J. Throckmorton: (we shall be led to speak of cross breeding hereafter) the Southdown was evidently then coming into fashion. The Southdown is properly applied to the Sussex such as bred by Ellman; and whence the peculiar type of the down sheep known as the Hampshire was derived it seems impossible to learn; there can be no sheep whose character is more marked, and this sheep has almost universally superseded all others in the hill or chalk district. This shows us how the whole character of the sheep stock may be changed in 50 years. The Wiltshire horned sheep and Berkshire Notts, are almost as little known now, as though they had never been. The Hampshire, or, we might say, Ilsley-down is evidently fitted for the climate, the farming, the soil and peculiarities of the district, and forms the chief base of the improved and cross-breeds in this county. The improved Hampshire or West country Down is just now the sheep of the day. The improvement of this breed is in progress of successful development. The prizes awarded at the late show of the Royal Agricultural Show have given to the labours and intelligence of Mr. W. Humfrey and others a token of the most marked approval. The hardy race has been improved by the infusion of so much of the best Sussex blood as to secure their best qualities. This stock year by year commends itself to the cross-breeder, and it imparts a marked improvement to the stock in the neighbourhood in which it was originally reared. The rams bred at Oakash command large prices for hire; the ewes known to derive their blood and that of their produce from this stock are eagerly sought for at prices far beyond the usual market values of a like weight of fleece and carcase. Cross breeding sheep finds little favour in this district, so preeminently fitted for breeding and rearing large and valuable flocks—though there are cases of crossing the Down ewe with the Leicester ram. The produce of different flock masters varies little, except as to keeping a breeding or dry flock. The downs still furnish extensive and valuable sheep walks on the ridges of the chalk; such land attached to farms which grow winter food are necessarily breeding farms. Lands altogether under arable cultivation either maintain dry flocks, or are cleared early of their breeding stock by the sale of couples in the spring. The highest class of sheep farming, whatever its profits may be, is to be found in the maintenance by artificial Grasses and green crops of a breeding flock throughout the year where there is no down or sheep walk. The general details of the management of such a farm will be the best explanation of this rather difficult undertaking.

The farms in the hill district are held by men of capital, as the holdings are extensive, and the land cannot be farmed profitably without a large stock especially of sheep. Such is a farm lying about midway between the Vale and Forest placed at a considerable elevation, say 500 feet above the sea. The chalk is here so covered with a coating of Plastic clay drift or gravel, as in most places to form strong if not heavy subsoil, naturally drained, or drainable into the chalk beneath. The chalk itself has been extensively applied to the surface, an operation performed by sinking shafts at convenient distances, raising the chalk by a hand windlass and spreading it on the surface, for which about two pounds per acre are paid to persons who contract for the job. This farm consists of above 700 acres, of which all are arable except a small portion kept in grass rather as accommodation land for domestic purposes than as affecting the farm management. The fences, live or dead, are well kept, the roads conveniently laid out and maintained in good repair by the flints, of which there is an abundance either raised with the chalk or found on the surface. The farm buildings with a good house and offices occupy a central position, giving full accommodation for stock, sufficient for the work, and maintenance of the condition of the land. The horse labour is performed by active and well bred horses bought in as colts, worked with regard to their improvement, and the realization of high prices if sold in their maturity to London dealers. This system, frequently followed on the best managed farms, accounts for the working three horses in a plough, whereby the young horses are spared and broken into use, the staff of horses being about 24. Oxen are not fitted for this locality, as even in the tenacious portions of the surface clay there are many flints which cut the hoof and necessitates shoeing or as it is termed, cueing. The well-bred pig stock of the Berkshire breed, amounting to 100, are bought in young, and being well fed supply the staple of the farm yard manure. Here as throughout the district the great feature is the sheep stock. In the farm alluded to, of late years a breeding flock has in some measure been substituted for a dry flock. The undue price of store sheep has been a temptation to break

through the latter practice, which by many is preferred to a breeding flock on a farm with strong land. On farms of this description, with no natural Grass or down sheep walk, providing food for a flock of 500 or 600 ewes and their produce throughout the year taxes the forethought and judgment of the flock master to the utmost; as there must be no break in the most trying seasons in the succession of food. It is with reference to this that the rotation of crops is arranged. First a breadth of 20 acres of Sainfoin is laid down each year, which stands instead of permanent Grass generally for four years. The Wheat crop is one-fourth of the farm. After the Wheat crop a portion of this as soon as the corn is off is ploughed up for Rye, winter Oats, winter Barley, and Vetches, sometimes Trifolium incarnatum is harrowed in for food for the sheep in the spring. Another portion of the Wheat stubble is manured for Mangels, Swedes, and Turnips, After the Trifolium, Rye, Vetches, &c. are fed off. Swedes or Turnips are drilled in with artificial manure, superphosphate or guano, and if the season is too far advanced for these, Mustard is sometimes substituted.

The ewe lambs replace the yearly draft which are made off being fed on cake, corn, &c. The wether lambs are also made off in the same way either as tegs or shearlings. This flock has sustained a high character by hired tups of the best quality, a cross of the Hampshire and Sussex down. Sometimes the above rotation is varied by growing Beans or Peas, which being well manured prepares the way for growing the best quality of Barley; and this, with Oats, occupies the ground which with the assistance of Sainfoin and artificial food has sustained the flock throughout the previous year. Clover is sown only with a part of this crop, to secure the land from its repetition more than once in eight years. Rye-grass, though objected to as injuring the Wheat crop, is substituted for the Clover, generally being mixed with Trefoil, and sometimes with Honeysuckle, and the remainder of the shift is made up with Mangel, and occasionally a Bean crop, which requires to be followed by manure before the Wheat is sown. Such is a slight outline of the management of a farm on which a breeding flock is kept without the advantage of natural Grass down or sheep walk.

MEAT CONSUMPTION OF LONDON.

FOR many months past the all-important question of production and consumption of stock in the United Kingdom has formed the topic of serious discussion amongst all classes of society. On the one hand, it has been contended that there is an absolute scarcity both of beasts and sheep in the country; on the other, that this scarcity is the result of a system of feeding which is calculated to keep prices at an unusually high range. When we consider the great interests involved in the subject of production, the enormous demands upon the resources of our graziers, and the rapid increase in the population, together with the increasing prosperity of the industrial classes, this question requires more than ordinary attention at our hands. In the first place then, let us inquire into the causes which have led to the recent excitement in the demand for beasts, not only in London, but throughout the provinces; and further, whether the grazing community have not acted upon a false principle, which may eventually be prejudicial to the interests of the consumers.

Now it may be assumed that not a few of our original breeds have fallen off considerably in number even in our best districts; but at the same time it may be remarked that they have given place to a race of animals cross-bred, chiefly between the Scots and Shorthorns. In point of fact, crossing has now become so general, that fully half the beasts disposed of in our various markets consist of other than pure breeds. That the new system has paid remarkably well is quite evident from its rapid extension, and from the enormous weight which the crosses have attained in a much shorter period than the pure-bred animals.

Early maturity—so long aimed at by the largest breeders—has certainly made such progress as to awaken inquiry, if not anxiety, regarding the future existence of those races of stock which for so long a period have supplied our enormous consumption. We have observed that early perfection in beasts has yielded large profits. On this head no doubt can possibly exist; but the question is, has it produced an increased supply of really consumable food? Our impression is that, although most of the crosses, especially those from Scotland, have yielded large quantities of fat, still if we take any given number of beasts, and compare them with breeds which were disposed of some 15 years since for slaughtering purposes, the weight of meat has not diminished in consequence of the increased amount of fat.

How, then, it may be asked, do we account for the present enormously high range in the value of beasts compared with that of many former periods? We have now open ports for the admission of live stock; we import largely, and apparently are rapidly draining the Continent of every head of stock that can possibly be spared, and all this without any positive advantage to the consumers, so far as price is concerned. We must bear in mind two features in the trade which will at once explain our position, and show beyond a doubt that future prices are likely to rule high: first, the rapid increase of our population; and, secondly, a consumption large beyond all former precedent in proportion to that population. To meet the demand thus enormously increased, stock has been prematurely forced for sale, and in too many instances disposed of immediately on its becoming marketable.

Here then we perceive a state of things for which there is no positive remedy; and unquestionably it can only be met by a decreased consumption of animal food—an event not likely to arise except in periods of distress amongst the industrial classes, arising from foreign competition or from over-production at home. In proof that high currencies must prevail for a considerable period, we may observe that the rapidity with which beasts have of late years been disposed of has, to some extent, reduced the available supplies, not only in England, but likewise in Ireland and Scotland; whence it follows that if consumption continue to advance steadily as it has done of late, any considerable fall of prices is out of the question. At the present time the best Scots and crosses disposed of in the metropolitan market are worth fully 5*s.* 4*d.* per 8 lbs. That quotation, if stock were in abundant supply in the grazing districts, would speedily increase the arrivals; but, in order to prove that scarcity really exists, we may observe that beasts have been purchased in the metropolis at these high rates for consumption in Birmingham, Manchester, Liverpool, and Dublin, to such an extent that at one period London was absolutely suffering from the deficiency thus occasioned.

Again, owing to the want of food, large numbers of our second-rate breeds have been disposed of in poor condition, but yet at such high quotations, that they did not much influence prices. In all the provincial markets stock has come forward slowly; enormous prices have been paid for it, and the jobbers have found great difficulties in carrying on their operations for supplying London with food. The conclusion at which we feel justified in arriving is, that great inroads have been made upon the supply of stock; that consumption is in excess of our past rate of production; and that consequently we can hardly anticipate a range in value much below present prices.

We have now to consider the question of supply as it bears upon that of sheep. Let it not be assumed that we profess to understand the flockmasters' business better than themselves; but undoubtedly there are questions in connexion with it which require serious consideration. It is well known that the "in-and-in" system of sheep breeding has become a pretty general one, more especially in favoured districts.* It is equally well known that attention has been shown to a description of stock exhibiting great aptitude to fatten; and in this way crosses have become more and more numerous. Have they, we may inquire, produced an increased quantity of meat? Probably not. We believe that the forcing system has destroyed large numbers of sheep which, under ordinary circumstances, would have been kept longer on the land; and, further, that although many breeders have kept up the shape of their animals remarkably well, and have in many instances realised large profits, the end aimed at, viz., the production of fat in a brief period, must tend to high quotations. In a comparative sense, the sheep now sold in our markets carry a very moderate amount of consumable food. Be it observed that we are not alluding either to Downs or Half-breds, but to Lincolns, Leicesters, Kents, and crosses between other heavy breeds. If we could find meat increasing in the same ratio as fat, we should find it wholly unnecessary to dwell upon the future otherwise than with feelings of satisfaction at what has been accomplished: as it is, there is much reason to apprehend that unless the old proportions of fat and lean are restored, and the supply largely increased, we shall not be able to keep pace with the demand which, at the present time, threatens to render us more and more dependent upon the foreigner, whose producing energies are now, if we mistake not, taxed to the utmost.

But how are we to effect changes in breeding and feeding in order to arrive at results which, nationally speaking, are highly important in their character? At the present time the feeders of sheep contend that they are compelled to keep pace with the spirit of the times; that nothing short of rapid production can be a source of profit to them; and that to keep stock longer upon the land than is absolutely necessary would, with the competition going on, be attended with absolute loss. Doubtless there is much truth in these statements, but they do not, as we imagine, go to the bottom of this question, which has assumed dimensions which make it one of national importance.

We do not attach much weight to the stated determination on the part of a portion of the labouring classes to abstain from the consumption of meat until prices shall have declined to a lower range. Even as it is, nearly all inferior joints are disposed of at a rate which is a loss to the butcher, so that the effect of our present high prices falls first and chiefly on the upper and middle classes of society, who buy the prime joints at prices further enhanced by the difficulty of disposing of inferior joints, and secondly, on the butcher, who, of late, has hardly derived any profit from his trade. The rise in price is chiefly due to changes connected with the comparative prosperity of our artizans; but the burden has fallen even more severely on others than on them.

Higher wages, extraordinary activity in commerce, and a teeming population have, we have no hesitation in saying, not only reduced the available supplies of stock in the country, and introduced a system of breeding different from that of some 20 years since, but they have placed the country in a position from which it seems difficult to escape. We need not, perhaps, enter into particulars to prove that wages are now higher, and that the population has increased; but we may refer to one fact which, at once, is conclusive as regards our commercial greatness. The "official" value of our imports and exports of produce and manufactures, in 1859, was nearly 450,000,000*l.* sterling, against about 220,000,000*l.* in 1839. In the past six years we have exported over 160,000,000*l.* in bullion, and fully that enormous quantity has been imported. Here, then, we see a state of prosperity without a parallel in the history of any country. This prosperity must, of course, "be fed," and it remains for our graziers and breeders to determine how far, and by what means, they can increase the supply of animal food to keep pace with the wants of the times. There is another point to which we may here allude, as tending to keep up the value of live stock, viz., the enormous price of tallow in our markets. The operations of the speculative class in Russia, in 1859, prevented the usual quantities of tallow from being shipped to England, and the result was, that at one period the quotations for Siberian qualities in London were as high as 64*s.* per cwt. The decline in the consumption produced a fall of fully 10*s.* per cwt.; but owing to the scarcity of home-made tallow a portion of the decline has been recovered. Rough fat has of course fluctuated with the value of tallow. In the early part of the year the first-named article was worth 3*s.* 4*d.*, now it is selling readily at 2*s.* 9½*d.* per 8 lbs. Thus it will be perceived that a refuse has realised the value of good consumable food in ordinary periods of abundance. If fat is to continue at a high figure meat will unquestionably be dear in price; but much will depend upon the ability of the speculators to hold tallow, and the value of money in the discount market.

Supplies, Demand, and Value, during the past Six Months.—Notwithstanding that the total number of beasts exhibited and disposed of in the metropolitan cattle market in the last six months has been a full average one, viz.—114,702 head against 113,373 head in the corresponding period in 1859, and 111,592 in 1858, prices, from causes to which we have already alluded, have ruled unusually high. The average value of the best Scots has been 5*s.* 6*d.*, against 5*s.* in the previous six months, and 4*s.* 6*d.* in 1858. But here we may observe that at least a moiety of the various breeds has been disposed of in little more than a half-fat state, and hence the actual supply of meat has been trifling. The same remark may be applied to sheep, especially to the long-woolled qualities. Compared with last year—taking the average of the six months—the value of that description of stock has advanced from 4*d.* to 6*d.* per 8lbs., though at one period the rise was much greater, viz., 1*s.* to 1*s.* 4*d.* per 8 lbs. The annexed returns show the total supplies exhibited, the quarters from whence they were derived, and the prices at which they were disposed of:—

SUPPLIES OF EACH KIND OF STOCK EXHIBITED AND SOLD DURING THE FIRST SIX MONTHS OF THE FOLLOWING YEARS:—

	1855.	1856.	1857.	1858.	1859.	1860.
Beasts	113,089	115,115	112,309	111,592	113,373	114,702
Cows	2,440	2,977	2,682	2,917	2,977	2,904
Sheep and Lambs	651,600	636,030	536,790	588,758	668,702	662,010
Calves	8,610	6,125	8,420	8,878	7,272	9,515
Pigs	16,59	15,344	13,241	13,096	14,869	14,201

"DISTRICT" BULLOCK SUPPLIES.

	1855.	1856.	1857.	1858.	1859.	1860.
Northern Districts ..	600	900	..	4,000	4,000	4,000
Eastern Districts ..	54,989	51,700	60,500	66,890	67,460	68,520
Other parts of Engld.	12,530	13,850	14,490	14,560	19,090	21,420
Scotland	9,827	10,008	8,860	8,456	10,030	5,032
Ireland	4,000	3,400	2,700	4,820	2,217	1,477
Foreign	13,612	7,830	9,238	5,649	7,580	9,078

AVERAGE PRICES OF BEEF AND MUTTON.

	1855.	1856.	1857.	1858.	1859.	1860.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
BEEF:—						
Inferior	3 2	3 0	3 2	3 0	3 2	3 6
Middling	4 0	3 10	4 0	3 10	4 0	4 6
Prime	4 10	4 8	5 0	4 6	5 0	5 6
MUTTON:—						
Inferior	3 2	3 0	3 10	3 2	3 4	3 10
Middling	4 2	4 0	5 0	4 2	4 8	5 2
Prime	5 4	5 2	6 0	5 2	5 10	6 2

From the above returns it will be seen that average number of beasts has been drawn from our grazing districts; that we have drawn extensively upon foreign resources; but that the arrivals both from Ireland and Scotland have considerably fallen off. In reference to the value of lambs, we may state that at one period it was 8*s.* per 8 lb. for the best Down breeds, now it is 7*s.* Both calves and pigs have ruled high; the top figure for the former having been 6*s.*, the latter 5*s.* 4*d.* per 8 lbs. to sink the offal. In a comparative sense the arrivals of meat up to Newgate and Leadenhall, both from Scotland and different parts of England, have fallen off considerably. Prices have, consequently, kept pace with the rise in the live markets; but our impression is, that they have seen their highest range for the year, and that they will tend to stimulate the produc-

* Does not this remark apply rather to fancy stock, than to the general supply on which markets mainly depend?—P. H. F

tion of stock both in the United Kingdom and on the Continent. *Mr. Herbert, in the Journal of the Agricultural Society.*

Home Correspondence.

Mangel Leaves.—The Norfolk farmer describes clearly enough the building up the layers of leaves, and the salting, to a height of 3 or 5 feet above the ground. He adds, "when the trench is thus filled, the sides of the angle must be carefully covered with mould beaten hard and smooth with the spade, to shoot off the rain and snow of winter." This is unintelligible as applied to a stack of leaves formed 3 to 5 feet high, with a ridge roof. If the rain and snow is to be thrown off, the roof must be covered with earth; and that involves the sides and ends being coated with earth to support the earth forming the covering of the roof. He adds, "no straw should be used, as it would be apt to retain moisture and rot the leaves." On the contrary, straw is commonly used as a covering for roofs to throw off rain and snow, whereas earth absorbs it. The more obvious course would be to raise a wall of earth round the sides and end of the stack, and to thatch it with straw; but it is desirable that the old Norfolk farmer should clearly describe that protection which he has found practically efficient, as the effectual conservation of the leaves in the present state of things is very desirable. *L.* [The better plan is to bury the leaves in a dry pit, pressing them hard down and leaving but little above the surface—just enough when earthed and thatched to cast the rain.]

Societies.

BALLINASLOE: *Farming in Galway.*—At the late annual meeting of this society, the following report was read by the judges of Farms, &c.

"In submitting the foregoing awards, which we have made after a lengthened and careful inspection, we have to observe that though the number of entries for competition was larger than in former years, yet the increase has not been commensurate with the extension of the society's district, which now includes within its precincts, besides a portion of Roscommon, the whole county of Galway. The number of competitors, however, is likely to increase as the operations of the society become more fully understood.

"Green crops in general are neither so heavy nor so advanced as at the same period in former years. This is attributable, in a great measure, to the wetness and severity of the season, by which the cultivation and growth of these crops were greatly retarded. Indeed, the Turnip crop, in the early stages of its growth, presented, in many instances, so unpromising an appearance that farmers were subsequently led to neglect it. A large proportion of the green crops of this year has been grown entirely with artificial manures, the scarcity of provender during the last winter having greatly lessened the supplies usually obtained from the farm-yard. It is not surprising from the number and variety of extraneous manures offered to the public that some of them should fail to produce the expected results, and this we have repeatedly found to be the case. It is, therefore, of importance that manures, whether imported or chemically prepared in this country, should be purchased only from merchants of respectability, whose character and position would be a guarantee that the article vended was genuine; and the same is also true in respect of seeds. Though the Turnip crop generally may be deficient to some extent, it is but right to observe that we have seen fields where the crop was all that could be desired, and where, by high culture, a heavy return had been obtained, notwithstanding the backwardness of the season.

"A large amount of drainage has been effected during the last year throughout the district; and there has also been a considerable increase in the number of competitors of every class for the society's premiums under this head. The drainage at Moyne, on the estate of John S. Kirwan, Esq., reflects the highest credit on the engineer (Mr. Cooper, C.E.), by whom it it has been planned and directed; and the manner in which the work has been executed by the contractor is worthy of our best commendation. Some instances have come under our observation where drainage has not been sufficiently effective, not having been followed in due course by any of the operations of tillage. We are, therefore, of opinion, that as the district abounds in large tracts of bog and moorland, the society might, with great propriety, offer a few premiums to small farmers for reclamation alone—the land, in every instance, to have been brought by drainage and other means from a state of nature into cultivation within a specified period.

"Though the harvest has been an unusually late one, the return of cereals will be much heavier than many individuals have been led to expect. As regards the Potato crop, we regret being unable to make a favourable report. The extent of land grown with the esculent is considerably less than last year, and though the yield is scarcely an average, at least one-third has been affected by the blight. The loss will be most severely felt by the smaller class of farmers, who should in future depend less on a crop which of late years has proved to be so uncertain.

"The premiums offered by the society for the erection and improvement of labourers' cottages have not induced that extensive competition amongst proprietors which had been anticipated. This is to be regretted, as nothing can tend more to the amelioration of the condition of the lower classes than providing them with comfortable and commodious dwellings. It is time that the unsightly hovels which are a disgrace to certain districts of the west were removed, and the peasantry accommodated with suitable residences. We observe that the Earl of Clancarty, Lord Ashtown, and others, are at present engaged in the erection of cottages for labourers, and it is to be hoped that proprietors generally will feel it their interest to assist thus in the improvement of the country.

"We have not had a single competitor for Flax in the first class at the late inspection. The number of competitors for the best rood and half rood, however, seems still to be on the increase. As we have already observed, this crop, which is an important source of industrial employment to the families of small farmers and others, is generally grown for domestic uses, nor will it be cultivated to any extent in the west of Ireland, in the absence of stated Flax markets.

"As we have stated in various reports, much of the usefulness of the society must always depend on the co-operation it may receive from the landlords of the district. Wherever the landlord has set his tenantry a proper example, the benefit conferred by the society may easily be observed, and where the contrary has been the case, the results are as plainly to be distinguished. Now that the society has broken new ground, it is to be hoped it may receive from proprietors that cordial and effective support to which its past operations so well entitle it. We have again to observe that a number of competitors have been disqualified, in consequence of their entries not having been made within the time specified in the society's premium sheet."

GLASGOW, *The Bothy System.*—At the Social Science gathering, the Rev. Dr. Begg read a paper on this subject: He said—Public attention is at length fairly turned to the evils of the bothy system as it exists in many of the richest agricultural districts of Scotland. At the same time, although the impression in regard to its mischievous and destructive tendency is all but universal amongst impartial men, some attempts to defend it, at least as a necessary evil, have recently been made. The question is simply between the erection of suitable cottages for ploughmen, where they may marry, if they please, like other working men, and the present miserable system of huddling five, six, or eight ploughmen into a miserable hut called a bothy, as a cheap residence, to the ruin of their morals and of the best interests of the country. That this latter arrangement is quite unnecessary, even in connection with the most improved systems of farming, is proved by the fact that such a plan of accommodation does not exist in Mid-Lothian, for example, where the farming is as high as in any district of Scotland, and that no such system is known in England. Its origin is recent, and is to be traced simply to a short-sighted idea of economy. It may be of some consequence now to look at the question more deliberately, both in its relations to landlords, tenants, and the community respectively.

1. In reference to landlords. It is often boasted that the landlords of Scotland receive the highest rents in Britain. But a landlord may receive too high a rent—he may receive more than his fair proportion. If his rent is raised by taking advantage of the helpless—by refusing to furnish the necessary accommodation to those who actually cultivate the soil—it is obtained unfairly, and to the sacrifice of the best interests of the country. If any plan is adopted by landlords, merely on the ground of economy, by which the rural population is degraded, and the country filled with bastards, criminals, and paupers, the greatest public injustice is done, and the entire kingdom is entitled to interpose to redress the wrong. It may no doubt be said, the Scotch landlords are often poor, need all their money, and have no means to erect cottages, whilst, by the law of entail, they are restricted from borrowing for the purpose upon the security of their estates. The answer to this is that such an argument is totally inadmissible; that in a well ordered community, men ought not to derive the advantages of holding property who cannot discharge their incumbent duties; and besides, that, by an Act of Parliament passed during last session, this argument is totally inapplicable, because no longer consistent with fact. The entailed proprietors of Scotland can now erect the necessary number of cottages upon their estates, and burden the property itself with a large proportion of the expense. One step more and our legislation will be complete. What is at present permissive must become compulsory under Government inspection. The answer to this again no doubt may be, that the landlords of the kingdom are strong in Parliament, and that there is little hope of obtaining Acts of Parliament to restrain them, however necessary such acts may be, and however willing they may be to restrain others. Such a statement might be applicable if the evil with which we proposed to grapple existed over the entire kingdom. Even in that case, however, it would only prove the necessity of altering the legislative arrangements of the kingdom, and placing the power in more worthy hands.

2. Let us now consider the question of bothies in reference to farmers. They approve of the system because they imagine that unmarried servants living in bothies are cheaper than married men living in cottages.

Even supposing that this were true, they are not entitled to make money out of cheap arrangements which are ruinous to the social, moral, and eternal interests of their servants. To come to lower ground, there is no reason why the whole class of ploughmen should be treated as unworthy of the sweets of domestic life any more than the other labouring classes of the community. The very idea of such a thing is monstrous, and calculations of gain based upon such a theory are equally an outrage upon civilisation and Christianity. But, even if we were to admit that farmers might set the laws of nature and of social order at defiance far the sake of gain, it is very doubtful if unmarried servants will, in the long run, be found to prove economical. The matter is not yet fully tested by experience. No doubt a plausible pretext is sometimes urged, viz, that a certain number of unmarried servants will, after all, still be necessary, and that for them bothies must still be provided. Again we answer that the experience of other districts where bothies are unknown proves the futility of such an argument.

3. Let us now briefly consider the question in reference to the rural population of Scotland. This is by far the most melancholy aspect of the question. It is only of late years that the bothy system has been introduced, and even now it is extending like a moral pestilence.

With its extension the moral state of the peasantry of Scotland, formerly high in the scale of intelligence and virtue, is being gradually lowered to the most abject level of moral debasement. A spectacle unprecedented in modern times is witnessed—viz., a rapidly improving agriculture, and a rapidly degenerating population. Everything done to increase rents, to promote the development of beasts and the capabilities of the soil, and yet everything done to reduce men to savages and to roll back the wheels of civilisation. It is notorious that Scotland is now becoming pre-eminent for bastardy, crime, and pauperism, whilst rape, infanticide, and perjury, are by no means uncommon. The old habits of thrift, Sabbath-keeping, and sobriety, by which the people of Scotland were distinguished in the rural districts, are being entirely destroyed. As time advances, this sad result will, unless a change is effected, be gradually developed. The evil will not only become chronic, but the foundations of the social fabric will be entirely undermined. In these circumstances every statesman and philanthropist may well be alarmed. Let us strike at the root of this great social nuisance, and, by demanding an immediate legislative remedy, let us seek to bridle a greed which must ultimately ruin them, but which is now threatening utterly to ruin us as a people, and to make the peasantry of Scotland, once greatly distinguished by pre-eminent social virtues, a hissing and a byeword amongst the nations of the earth. Let us save the proprietors of Scotland themselves from the consequences of what is at once a gigantic social folly, and an unprecedented national crime.

The Rev. John Montgomery also read a paper upon "Over-crowded villages."

The Chairman then intimated that as the papers read were all upon topics of a very similar kind, the section would now be prepared to hear any remarks which any member might be prepared to make upon them.

J. Hall Maxwell, Esq., of Dargavel, premised that, in the few remarks he was about to offer upon the paper read by the Rev. Dr. Begg, it was to be understood that he did not appear here in his official capacity as secretary to the Highland and Agricultural Society, but as a landlord from a neighbouring county who felt an interest in the questions brought before this section. He was willing to accord most readily to Dr. Begg credit for sincerity, for candour, and for a desire to promote the interests of that class of the population of this country, whose cause he had so warmly espoused; but he might be permitted to express the great doubt he entertained whether the tone which the rev. doctor had assumed was the best calculated to forward that course—and he could not by any means subscribe to the statement of facts which he had stated, nor to the conclusions which he had drawn in the paper he had read. Dr. Begg's paper was characterised strongly with that vague exaggeration which pervaded every paper and publication which had come under his (Mr. Maxwell's) notice, and which treated of this same question. First of all, the state of the farm servant was exaggerated; secondly, the faults of the bothy system were also much exaggerated; and, thirdly, the evils of the bothy system, in connection with the farm servant, was still further exaggerated. He was glad of being afforded this public opportunity of denying many of the very absurd and ridiculous statements which had been put forth from time to time with respect to this question. He did not hold, certainly, that the Scottish farm-servant was to be regarded as a model of perfection; but those, like the ladies and gentlemen of a city such as Glasgow, who judged of him only from the statements made in the papers published against the bothy system, could form only a very false notion of his true condition. He believed he was better fed, better clothed, better housed than his grandfather was, and, taking him all in all, was a quiet, honest, hard-working fellow, fearing God and honouring the Queen, and making a good servant to any one who proved to him to be a good master. He would not propose on this occasion to enter upon a discussion as to the relative moral position of the rural and town populations of this country, as evidenced by the returns of registrars, but he would like another test by which to try the position of the Scottish farm servant. If his condition socially was so bad as had been described by Dr. Begg, what ought to be the nature of the returns relating to the crime of the country? But he was prepared to maintain that our criminal statistics would present results very different from those which would naturally be expected after hearing such assertions as those made by Dr. Begg. Mr. Maxwell here read an extract from a letter from a country correspondent, descriptive of the arrangements and accommodation of a bothy for unmarried men, from which it appeared that everything necessary for their comfort and convenience was supplied to them. This (continued Mr. Maxwell) is a description of a bothy as it is. He was prepared to admit that a bad bothy was a very bad thing; but this did not necessarily prove that all were bad, or that the system was deserving of the condemnation passed upon it by Dr. Begg. At that very sitting they had heard gentlemen describing the evil effects which arose from bad lodging-houses, but that would never be advanced as an argument, he presumed, for the abolition of all lodging houses in the city of Glasgow. What he complained of was that the opinion of many people upon the bothy system was founded upon impressions obtained from instances when the system was abused, but he had read to them the description of a well managed bothy, and he could only say that he wished that they had such bothies in his own county. Let those who were conversant with the overcrowded state of the agricultural villages say whether the accommodation of the farm servant then was superior or more comfortable than that described by his correspondent, and let them understand that he had no reason to suppose that the case he had adduced was an exceptional case. What he thought they should endeavour to do was to induce the farmers to improve their bothies up to this mark, and not impute to a system faults which only arose from negligence and mismanagement. In the next place, he was prepared to deny that the bothy system was the cause of the evils that did exist in the condition of the farm servant. He would take Scotland over, and was able to pick out counties which more nearly approached, although, at the same time, they fell far short of the fearful state of things which had been pourtrayed by Dr. Begg, and in which the bothy system was altogether unknown, than in any county where the system was in vogue. He had not yet come to the point in the remarks made by Dr. Begg upon which he would have wished to say a few words—namely, the attack made by him upon the tenant farmers and the landlords of Scotland.

The Chairman (Sir John Forbes) here intimated to Mr. Maxwell that he was afraid he could not now enter upon this point, as the time allowed to each speaker in the discussion was in his case exhausted.

Mr. Hall Maxwell was desirous of saying a word or two upon the arrangements enforced by this Association at this meeting. Instead of their having a paper read as a key upon which a discussion might hang, the greater portion of the time was occupied in listening to papers being read, and if any person had a crotchet—

The Chairman—I am afraid, Mr. Maxwell, that these remarks of yours would be more properly addressed to the Council of the Association.

Mr. Maxwell—I can only protest against the course thus adopted.

The Rev. Mr. Clerichew did not doubt but that the evils of the bothy system had been to an extent exaggerated; but he was of opinion that the evils which existed among the farm servants of Scotland were not to be traced altogether to that source alone—they went deeper. The bothy system was the result of the large farm system, which destroyed, by debarring the farm servant from the prospect of improving his condition, the main incentive of life. The bothy system was no doubt essentially bad, but he did not anticipate that its abolition would touch the root of the evil.

Mr. Colquhoun, of Killermont, said with respect to the bothy system, which had received such a castigation from Dr. Begg, he did not think that it was alone the source of the evils complained against. Dr. Begg, in his earnestness against the system, may have so magnified the bad results arising from it that he could see nothing else. The question had its difficulties, but he felt, with Dr. Buchanan, that while the mere health and physical comfort of the farm servants might, under good management, be provided for in a bothy, yet if a body of young men were continuing under this system, they could avoid the penalty arising from this outrage upon a natural law. He would entreat his eastern neighbours to consider well if other modes of lodging young men could not be devised which would prove less pernicious to the morality of the population.

Dr. Begg was glad to find Mr. Hall Maxwell present on this occasion, and although not here in his official capacity, yet the immense influence which he possessed in connection with the agricultural interests of Scotland rendered his presence at such a meeting of the utmost importance. He did not think he had exaggerated the evils of the bothy system—it was radically bad; but he wished to disabuse the minds of those present of the idea that he (Dr. Begg) had spoken disparagingly of the Scottish farm servant. It was not of him that he complained, but it was of those who did not treat him well; and he thought he was acting the part of a friend when he told the landowners of their faults. With regard to the question of exaggeration that was a question of fact, and he was glad to find that in the forthcoming census steps would be taken to ascertain the number of apartments in every house in Scotland. He rested his opposition to the bothy system upon the ground stated by Dr. Buchanan—it sets at defiance a law of nature, and you may multiply your accommodation, you may increase your conveniences, but you can never get rid of this evil. He did not believe that the large farm system was the cause of the degraded position of the farm servant. This he regarded as a very superficial view of the question. The working classes must undertake to be their own landlords ere the evils complained of would be radically cured. But the existing obstacles must be removed. At the present time some landlords will not sell their land; there must be a legislative enactment to break up this monopoly, and I am glad to find that the Lord Advocate has at last come over to our side on this question. No man should have the power of stopping the growth of a large city, and this point attained you must abolish that expensive system of conveyancing which now exists—we must have no more payments of 9*l.* or 10*l.* for a title to a bit of ground.

Mr. Dunlop, M.P., alluded to a measure he had introduced last session, which had become law, and which bore to some extent on one or two of the points alluded to by Dr. Begg. This measure affords a precedent upon two points—it establishes the principle of a compulsory sale, and it also provided a cheap means of conveyancing, the cost being only some 7*s.* 6*d.* The speaker then alluded to the remarks made by others who had preceded him, upon the large system of farming now adopted, and expressed his fears that at the present day it would be absurd to attempt checking it. Agriculture was daily assuming more and more the character of a manufacture, and as such it was being gradually recognised. The steps which led a working man in a manufacturing business upwards were clearly enough defined, but as yet those by which a farm servant could raise himself in the social scale were not so easily perceived.

Mr. William Irvine, of Hawick, said—As Dr. Begg has made a pointed allusion to a special grievance of which I have been the victim, and as the admirable papers of Messrs. Keddie, Salmon, and Montgomery have illustrated most amply the awful condition of the dwellings of the working classes, without mention of names or direct appeal, it occurs to me that a practical turn may be given to the business before the section by a simple statement of the facts associated with the social condition of the town of Hawick, my native place. During the last 30 years our population has been doubled, and with the solitary exception of a garden and a field of about half an acre each, the area of the town has not been extended. Consequently the huddling system, so well described by Mr. Keddie, has been carried to such an extent in Hawick as to arrest and alarm all feeling Christian men, to whom our miserable conditions are familiar. The simple fact that we have 27 deaths annually in each 1000 of our population, and that the neighbouring towns of Galashiels, Selkirk, Melrose, Jedburgh, and Kelso, average only 16 in the 1000, displays the terrible nature of the dwellings of our workmen, in which you may find families of 12 and 14 living and dying in one room about 16 feet square, and to which all the cooking, eating, and sleeping of the family is confined—parents and children are condemned by our social conditions to sleep in one apartment. The question arises, what is the cause of these frightful conditions, and the answer is simply that the town is surrounded by the property of his Grace the Duke of Buccleuch. The speaker went on to say that a building society had been organised in Hawick, on the Lancashire principle, about ten years ago—that no land was suitable for that purpose but the broad acres of Buccleuch—that memorials and deputation to his Grace had been in vain, and consequently the operations of the society to improve the conditions of their dwellings had been unavailing—so that in a population of 11,000 people we had an excess of mortality over the towns of the district of 121 people. Again, Hawick is a progressive commercial town, and its progress is at an end if ground for mills cannot be obtained. My own firm has applied to his Grace of Buccleuch for a feu, and we have been compelled to remove part of our business to Peebles at great inconvenience and waste of time and capital. We do not wish to dispossess the landowners of their property. We simply ask them to improve their own condition by aiding in the improvement of ours. The Duke gets 16*s.* an acre annually for land that the Building Society and the Hawick manufacturers would willingly give him 20*l.* an acre annually for, but that is nothing to his Grace, who leaves his affairs in the hands of factors who snap their fingers in our faces and laugh at our extremities. How is this to be remedied? Simply by such an Act of Parliament as enables railway companies to accomplish their beneficial purposes. Mr. Dunlop has spoken of the difficulty of obtaining such an Act, but if the Commons House of Parliament despises the legitimate claims of the Commons, it is a farce—and if your Social Science Congress meets to make fine speeches without practical applications, it will become only "a sounding brass and a tinkling cymbal." To give a practical turn to the business of this section to-day, allow me to suggest that the Social Science Congress recommend "that Corporations of towns and cities be empowered to appropriate lands in their neighbourhoods for the improvement of the dwellings of the workpeople, and also for the extension of trade, and this without prejudice to the possessions of the landed proprietors, and in consideration of such value as may be assessed by a jury or other competent authority."

Farmers' Clubs.

CANNOCK.—At the late annual meeting of this Society the Chairman, Mr. R. C. Chawner, said: It was something extraordinary that almost everything was talked about at agricultural meetings except matters appertaining to farming. There was one exception this year, however, at Burton-upon Trent, for on that occasion an old friend of his (Mr. Bass) who occupied the vice-chair, took the farmers to task, and gave them a lesson on pure agriculture. Mr. Bass said he was anxious to buy Barley from his neighbours, but could not, as they did not grow it of a quality suitable for the brewing of pale ale; and he suggested how they might improve it. He also addressed them upon another point—having derived his information from a paper in the Journal of the Royal Agricultural Society, "On the proper office of Straw on a Farm." He would direct the attention of those present to what Mr. Bass had said about growing Barley, and point out to gentlemen engaged in cultivating the land of this country the position they would be in if they followed the advice of Mr. Bass. They knew that in all leases there were certain clauses prohibiting a farmer from deviating from the established custom of tillage, and in the absence of such clauses a court would take the custom of the country as the guide of its decisions.

These clauses, he contended, were tyrannical, as interfering with the work of the farmer, because, if he deviated from the system laid down, he would expose himself to an action for dilapidation. Therefore, that question was one which must be settled first before they proceeded to alter their course of husbandry. At the same time, the greatest authority of the day, Professor Liebig, had stated that "prescriptive courses are the greatest impediment to the progress of agriculture in England." He contended that it was impossible for any man living to write down a course which should suit the climate under which they farmed the land in England. The nearest approach ever made was made by Mr. Morton, when he farmed the model farm of Lord Ducie, Gloucestershire, and the only rule that practical man could arrive at was, that you must grow grain and green crops alternately, and vary them as much as possible, considering the nature of the soil to be cultivated. Nothing could better point out that no rule could be laid down, because there were occasions when that simple rule might be omitted with advantage, and there were also occasions when the state of the atmosphere, as they had experienced during the past year, or the state of the markets, or the demand for produce, might make it more advantageous to grow consecutive grain crops. He held it to be a slur upon the character of the British farmers, taking their capital and character into account, that they were not allowed to farm the land according to their own views, even supposing they did so for their own personal interest, as that interest compelled good farming. He spoke upon this subject with no feelings in favour either of the proprietors or occupiers of the land, but the honest sentiments of a man who for 30 years had been engaged in the honest cultivation of the soil, who was convinced that until they emancipated the farmer from all trammels, and left him to carry on his work as he thought best, even for his own interest, they would never have the land cultivated as it ought to be. Upon the question of the use of straw—a question which had recently been introduced in the Journal of the Royal Agricultural Society—they were told that the straw they used in feeding was only worth 25*s.* per ton, while, if they sold it to those men who had a demand for it, it would be worth 3*l.* Here, again, he was compelled to refer to the restrictions which prevailed throughout the country. It could scarcely be known that farmers were restricted from doing anything of the kind. There were farmers who could sell their straw to great advantage (and it was a great pity there were any restrictions upon its sale) where they could procure manure of a quality that they could not make in their own farm yards. But if they sold it without getting the manure in return, what would become of the land? Liebig, a great authority, had stated that the great end of agriculture was to restore to the land what was taken away from it. If they took away the constituents of the soil, they could not go on growing the same plants unless they restored the food they required, and the only way to do this was by the application of farm yard manure. If they sold the hay and straw from the land, and did not bring them back, how would they be able to go on? They must return the bulk of the surface crops to the land in some shape or other. He had no intention to decry the use of artificial manures, because he believed they contained many elements of the food of plants which farm-yard manure did not; but he used them as additions to and certainly not as substitutes for farm-yard manures. He could never believe that by using their straw upon a farm it was only worth 25*s.* per ton; and he would say to the men who were so anxious to obtain produce of this kind for their splendid dray horses at Burton, take some land and grow the straw, and they would then know more about the land and the value of straw.

Rebiews.

Thorley's Illustrated Farmer's Almanac for 1861, contains monthly memoranda relating chiefly to the management of the live stock of the farm, and a good deal of matter extracted from the trade pamphlets of Mr. Thorley and the writings of Mr. Burness, chiefly on the value of condiments as food. There is also a full list of Fairs and an imperfect list of Agricultural Societies, in the course of which we are told that the Highland and the North Lincolnshire are the only two Societies which exclude the exhibition of Cattle Condiments from their yards.

The announcement of this Almanac is not borne out by its execution. The "several splendid illustrations of Prize stock in Chromo-lithography (six colours)" amount to a couple of pictures—the one of a Shorthorn ox, and the other of a "Devon" steer, with a white face! And besides these, there is a section of Thorley's 4-storied mill also given in colours.

The grandiloquent offer to advertisers, of coloured pages at 100*l.* a page, and white pages at 50*l.* a piece, has been accepted only by Mr. Thorley himself; and in this instance, at any rate, his customers will have to bear the brunt of an enormous expenditure in advertising, unenforced by Messrs. Lawes and Morton, on whom the responsibility of prices proportionate to this expenditure has hitherto been laid.

We are happy, however, to find that notwithstanding our protests (or perhaps in consequence of them), and notwithstanding the increased expenditure on advertisements thus rendered necessary, the price of manufactured cattle foods is coming down. Messrs. Jupp announced a cheaper food some months ago, and Mr. Thorley found forthwith a market for his waste which enabled him to reduce his own to 40*l.* a ton. And now, Mr. E. Gripper, of Winchester Wharf, advertises a horse and cattle food at just one-half this sum, for the efficiency of which no doubt ample testimony will be forthcoming; and this will probably enforce a still further reduction in the prices charged by other firms.

It is hardly possible to speak of Mr. Thorley's Almanac excepting simply as a trade advertisement, for in almost every page of the monthly memoranda, which is its only original part, the reader is directed to condiments in general, and Thorley's in particular, as apparently the only means of ensuring agricultural success. Thus we are told that—

"Deer parks very frequently require an artificial supply of food during this month; and if properly seasoned with Thorley's condiment, &c."—

The conclusion is everywhere urged as "manifest that farmers should learn to adopt the economy of food, the economy of waste upon the body [whatever that may mean], and the manufacture of a superior quality of beef involved in Thorley's cattle condiment movement, &c." And it is declared that—"fresh air, cleanliness, shade, and Thorley's condiment are essential."

The instructions and advice on *this* "essential" point are overdone; and in place of a full and well balanced series of agricultural lessons, of which "100,000 copies" circulated as "a first edition" through the country would have done national service, we have what will be generally felt to be an extravagant and one-sided representation of a mere point in the agricultural field, of real service to no one but an enterprising tradesman.

Miscellaneous.

The Birmingham Cattle and Poultry Show.—The show this year is fixed for the 3d, 4th, 5th, and 6th of December. As far as it is possible at present to form

an opinion, the prospects for this year's meeting may be considered favourable, as we believe that a number of new exhibitors will enter the lists, while it is rarely that the old supporters of the Birmingham Show fail to make their appearance. The prize list for the present year may justly be considered the best and most complete in every department which the Council has yet issued, the special prizes being unusually liberal in amount. Amongst these are a silver cup, of the value of 25*l.*, offered by the president, the Duke of Marlborough, for the best ox or steer of any breed or age, to be bred and fed by the exhibitor; and another silver cup, value 20*l.*, contributed by the vice-president, Thomas Lloyd, Esq. (the Mayor of Birmingham), for the best cow or heifer, to be also bred and fed by the exhibitor. As the three extra prizes of 20*l.* each, and the two gold medals, each of the same value, are still offered by the Society, the exhibitor of the best ox or steer may (if the breeder also, as was the case last year) carry off prizes of the value of 75*l.*; and the exhibitor of the best cow or heifer, on the same conditions, prizes of the value of 70*l.* Mr. Lloyd's extra prize has materially improved the list, rendering it, in fact, as nearly perfect as possible, although we may hope that the Council will be enabled hereafter to increase the ordinary prizes in the cattle classes. There are this year two additional extra prizes for sheep, the hotel and innkeepers of Birmingham having liberally offered a couple of silver cups, value ten guineas each, for the best pen in the long-woolled and in the short-woolled classes. Two exhibitors of sheep will each, therefore, receive prizes amounting to 30*l.* 10*s.*—the usual class prize, 10*l.*, silver cup, and extra prize, 10*l.*—and we may fairly expect to see a large entry in this division of the show. The hotel and innkeepers also contribute a third special prize, viz., a silver cup of the value of five guineas for the best pen of young breeding pigs in the exhibition. There is also, we are gratified to state, an increase in the number of special prizes for roots. First of these is a silver cup, value 10*l.* 10*s.*, offered by Sir John Ratcliff, for the best collection of four varieties, Long and Globe Mangel Wurzel, Swedes, and Carrots. Messrs. Proctor and Ryland offer a silver cup, value 5*l.* 5*s.*, for the best six specimens of Kohl Rabi, to be shown for this prize only, and Messrs. Griffin, Morris, and Griffin a similar prize for the best six specimens of Yellow Globe Mangel Wurzel, to be shown on the same conditions. *Midland Counties Herald.*

Notices to Correspondents.

DISEASED RYE: Will Mr. Drewitt oblige by sending further specimens of his diseased Rye referred to last week?

FORAGE PLANTS: *W. M. D.* The plant you have sent is the *Medicago maculata*, Spotted Medick; it is admitted into the British Flora, but there is reason to believe that it mostly occurs in the arable land as an introduction in foreign seed. There can be little doubt but that it is perfectly wholesome to cattle, and indeed we cannot help thinking that it might be cultivated as a green fodder crop. *J. B.*

GOOSE: *J B D H.* Not at all uncommon.

GUANO TO WHEAT: *Agricola.* We would apply some 2 cwt. of Peruvian guano per acre, in moist weather, immediately before the harrow or the horse hoe, in early spring over the young Wheat crop. If your Wheat is liable to lodge and mildew, this will make it more so. Superphosphate, however, will not be of much service to it, and guano certainly will so far improve your promise of a crop that it will increase the straw, which will yield larger and more numerous, and, if weather permits, better filled ears.

GUTTA PERCHA BOOTS FOR SHEEP; *Barnet.* Apply to W. R. Woods, 94, Goswell Road, E.C.

JERUSALEM ARTICHOKE: *W P.* Its yield is about the same as that of the Potato, and like it crops of 10 tons have been grown per acre, while one-third or one-half of this is more common. It is a watery starchy food, inferior to the Potato, and should be steamed, and may be given to cows. Too much Linseed in the food will affect the taste of the milk, but a hot and salt linseed soap may be thrown over chaff with good effect.

LIME: *Old Sub.* It must be hauled out fresh from the kiln, placed in small equidistant heaps on the land, covered with earth and allowed to slake. Then spread just before you plough it under. Lime is best ploughed under with a shallow furrow. To a poor pasture we would apply 1 cwt. of guano and 2 cwt. of superphosphate mixed in compost with vegetable mould and applied broadcast per acre.

NIGHT SCHOOL: *Old Subscriber.* Next week.

SEED TURNIPS: *C. Donald.* Pray excuse the delay of a week. If your stems are obviously running, it is doubtful if they will survive the winter; and if they are of different sorts near one another they are sure to yield cross-bred and mongrel seeds. We recommend cutting them down, even though they have run to some extent, and transplanting to a dry plot, covering the bulbs entirely. They will sprout and seed next summer. But you must seed only one sort in the same field.

STOCK: *Suffolk Farmer.* A farm of 150 acres, 60 acres being arable, "good land inclining to be heavy," is in sufficiently stocked with "10 or 12 cows, 80 breeding ewes, lambs being sold in June and July, a few calves, 3 sows, and a few pigs." You ought to grow food for stock on such a farm equal to 100 tons of green food per month, and that should keep nearly 500 sheep. A cow, or a horse, may be put as equal to 9 or 10 sheep; a pig, or calf, as equal to two sheep, and you can easily perform the calculation.

TANK: *A Constant Sub.* We would not advise any arrangement of filters. These are sure to require cleaning out, and extensive replacement sooner or later. Let your flow into the tank pass through a small cesspool in which the sediment may be deposited, and provide for *its* being easily cleaned out. Then pump from a point a good way above the bottom of the tank.—For *that* will require cleaning out once a year notwithstanding the cesspool. The cheapest way to build a tank is of the circular form, upon a brick and cement floor of the required depth—building the course of bricks around a circular framework of wood, which is raised as you proceed; and the space is to be carefully layed and puddled behind each course of bricks as it is laid.

TOPS OF MANGELS: *A Constant Reader.* They are by exposure exposed to the same waste as takes place in any organic matter when it is burned. And it is presumed that the matter thus dissipated is better in the soil than in the air—hence the advice to plough in leaves, &c., while still green.

GLASS FOR GREENHOUSES, &c.

Sheet Glass, in Crates.

	16 oz.	21 oz.	26 oz.	32 oz.	36 oz.
Best ..	5½*d.* ..	7¼*d.* ..	9½*d.* ..	1*s.* 0*d.* ..	1*s.* 0½*d.*
Seconds.	3⅜ ..	5 ..	6¼ ..	0 9¼ ..	1 0
Thirds ..	2½ ..	3½ ..	5¼ ..	0 7¼ ..	0 10¼
Fourths.	2¼ ..	3¼			

Glass cut to any given sizes not on the List.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2½*d.* per foot
,, 3rds, 2¼*d.*, 2½*d.*, and 3*d.* per foot
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot
,, 3rds, 3½*d.*, 4*d.*, and 4½*d.* per foot

Glass for Orchard Houses,

As supplied by us to Mr. Rivers.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in. / 20 in. by 14 in. / 20 in. by 15 in.	Common	13*s.* 6*d.* ..	£1 1*s.*
	Superior do. ..	16 0 ..	1 3
	English Glass ..	18 0 ..	1 9

The above prices include the Boxes. with but few exceptions. When Packages are charged, full price is allowed when returned.

Sheet Glass, Stock Sizes, 16 oz.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 ,, 10, 13 ,, 10, 14 ,, 10, 15 ,, 10 ..	14*s.* 0*d.*	12*s.*6*d.*
13 ,, 11, 14 ,, 11, 15 ,, 11, 16 ,, 11 .. / 14 ,, 12, 15 ,, 12, 16 ,, 12, 17 ,, 12 ..		
18 ,, 12, 19 ,, 12, 20 ,, 12	16*s.* 0*d.*	13*s.*6*d.*
16 ,, 13, 17 ,, 13, 18 ,, 13	per 100 feet.	
19 ,, 13, 20 ,, 13, 21 ,, 13		
16 ,, 14, 17 ,, 14, 18 ,, 14	Boxes included.	
19 ,, 14, 20 ,, 14, 21 ,, 14 .. .		

ENGLISH GLASS of the above sizes 18*s.* per 100 feet.

Small Sheet Squares, in 100 feet Boxes.

6 by 4 / 8 ,, 6	6½ by 4½ / 8½ ,, 6⅝	7 by 5 / 9 ,, 7 / 10 ,, 8	7½ by 5½ / 9½ ,, 7½ / 10½ ,, 8½	11*s.* 6*d.* / 12 6

Boxes 2*s.* each, returnable at full price.

Patent Plate and Polished Plate Glass.
Ornamental and Coloured Glass.
Perforated Glass for Ventilation.

LONDON AGENTS FOR HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.

MILK PANS, PROPAGATING GLASSES, and every description of GLASS for Horticultural purposes.

JAMES PHILLIPS & CO., 130, Bishopsgate Street Without, London, E.C.

GLASS WAREHOUSE.—ESTABLISHED 1750.

THOMAS MILLINGTON,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

Reduced Tariff for Horticulture, Pictures, and Dwellings.

ORCHARD-HOUSE SIZES. **SMALL SQUARES.**

Supplied to Mr. Rivers and many Others.

In. by In.		16 oz.	21 oz.
20 .. 12 / 20 .. 13 / 20 .. 14 / 20 .. 15	Common, per 100 feet,	13*s.* 6*d.*	18*s.*
	Super ,,	16*s.*	23*s.*

In. by In.	In. by In.	Per 100 feet.	Per foot.
6 .. 4	8 .. 6	Common	1½*d.*
6½ .. 4½	8½ .. 6½	11*s.* 6*d.*	
7 .. 5	9 .. 7	Super.	1¾*d.*
7½ .. 5½	9½ .. 7½	12*s.* 6*d.*	

Squares in 100 and 200 Feet Boxes.

Inches by Inches.	Inches by Inches.	Inches by Inches.	Inches by inches.	Inches by inches.		P. 100 feet.	P. foot.
10 .. 8	12½ .. 9½	13 .. 10	15 .. 10	18½ .. 11½	4ths.	12*s.* 6*d.*	1½*d.*
10½ .. 8½	13 .. 9	13½ .. 10½	12½ .. 11		3ds.	14*s.* 3*d.*	1¾
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 .. 11	2ds.	18*s.*	2¼
12 .. 9	12¼ .. 10¼	14¼ .. 10¼	13 .. 11		1sts.	21*s.* 6*d.*	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13*s.* 6*d.*	1¾*d.*
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16*s.*	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19*s.* 8*d.*	2½
18 .. 11	18 .. 12	23 .. 18	24 .. 15	.. ..	1sts.	24*s.*	3
13 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 12	22 .. 14	22 .. 16	.. ..			

If less quantity than 100 feet is taken, a moderate charge made for package.

GLASS CUT TO ANY GIVEN SIZES NOT ON LIST.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2½*d.* per foot.
,, 3ds, 2½*d.*, 2½*d.*, and 3*d.* per foot.
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot.
,, 3ds, 3½*d.*, 4*d.*, and 4½*d.* per foot.

HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Not accountable for breakage.

GENUINE WHITE LEAD	32*s.* 0*d.* per cwt.	LINSEED OIL	2*s.* 4*d.* per gall.
ANTI-CORROSION PAINT	34 0 ,,	BOILED ,, ...	2 9
LINSEED-OIL PUTTY	8 0 ,,	TURPENTINE	3 3

BLACK, GREEN, and all other kinds of PAINTS, VARNISHES, BRUSHES, &c.

GLASS FOR CONSERVATORIES, GREENHOUSES, PIT FRAMES, ETC.

HETLEY AND CO. are supplying 16-oz. Sheet Glass of British Manufacture, packed in boxes, containing 100 square feet each, at the following REDUCED PRICES for cash. A reduction made on 1000 feet.

Sizes.—Inches			Inches.			Per foot.	Per 10 feet.		
		Under	6	by	4	at 1¾*d.*	£0	12	6
From 6	by 4	,,	7	,,	5	,, 2*d.*	,,	0	16	8
,, 7	,, 5	,,	8	,,	6	,, 2¼*d.*	,,	0	18	9
,, 8	,, 6	,,	10	,,	8	,, 2½*d.*	,,	1	0	10
,, 10	,, 8	,,	12	,,	9	,, 2¾*d.*	,,	1	2	11

Larger sizes, not exceeding 40 inches long.

16 oz. from 3*d* to 3½*d.* per square foot, according to size.
21 oz. ,, 3½*d.* to 5*d.* ,, ,, ,,
26 oz. ,, 3½*d.* to 7½*d.* ,, ,, ,,

PATENT ROUGH PLATE, THICK CROWN GLASS, and PATENT PLATE GLASS, for Horticultural purposes, at reduced prices, by the 100 square feet.

GLASS TILES AND SLATES made to any size or pattern, either in Sheet or Rough Plate Glass.

Propagating Glasses, Beehive Glasses, Cucumber Tubes, Glass Milk Pans, Glass Water Pipes, and various other articles not hitherto manufactured in Glass.

PATENT PLATE GLASS.—The present extremely moderate price of this superior article should cause it to supersede all other inferior window glass in a gentleman's residence. No alteration connected with the sash is required.

GLASS SHADES, as ornamental to, and for the preservation of every description of goods susceptible of injury by exposure. Prices, since the removal of the excise duty, reduced one-half. List of Prices and Estimates forwarded on application to

JAMES HETLEY & CO., 55, Soho Square, London, W.

HOT-WATER PIPES at Wholesale prices, with Elbows, Syphons, Tee Pipes, and every other connection. Wrought and cast iron Boilers, Saddle, Conical, Cylinder, and Elliptic, from 21*s.* each. Boilers and Iron Stands to use without brickwork. Valves from 12*s.* 6*d.* each. Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S.

CARD.

SAMUEL N. McGERROW,
GENERAL HORTICULTURAL BUILDER,
Knotty Ash, near Liverpool.

Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

HOT-WATER APPARATUS FITTED in every description of Hothouses, Mansions, Churches, Chapels, &c., on the most approved principle by J. MEREDITH, Vine Cottage, Garston, near Liverpool.

N B, First class references may be had on application

HOTHOUSES FOR THE MILLION

MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

					£
A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete					30
Do.	do.	40 ft. by 20 ft.	do.	do.	50
Do.	do.	60 ft. by 24 ft.	do.	do.	90

The price of any other size forwarded on application to J. LEWIS.

HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.

KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they erect all kinds of Conservatories, Vineries, Greenhouses, &c., combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & Son have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

JOHN WEEKS & COMPANY,

SOLE INVENTORS AND MANUFACTURERS OF THE

ONE-BOILER SYSTEM OF HEATING BY HOT WATER.

PATRONISED BY H.R.H. THE PRINCE CONSORT.

WEEKS' ONE-BOILER SYSTEM.

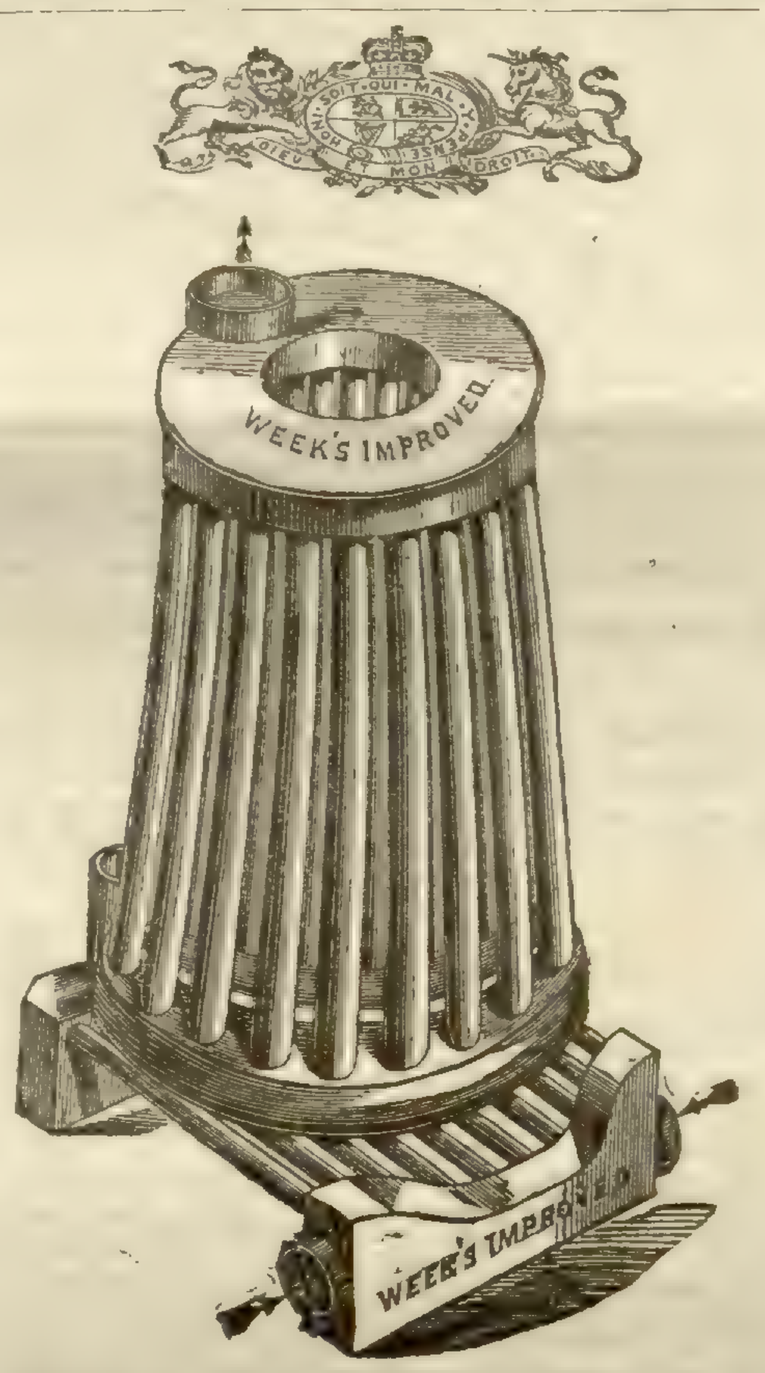
LIVERPOOL BOTANIC GARDENS.

The extensive alterations and additions at the above Gardens, in removing all the old gigantic Boilers and Furnaces, and substituting them by WEEKS' PATENT IMPROVED ONE-BOILER SYSTEM, are now complete and can be seen in most successful operation.

This Apparatus is the largest ever adjusted to one Boiler in the neighbourhood of Liverpool, and from its novel and greatly improved construction is specially worthy of minute inspection.

Every house in the Garden is heated from this one Apparatus, and by the ingenious arrangement of a series of valves hot water can be distributed in any portions of the Stoves, Greenhouses, &c., or withheld at pleasure, and the temperature regulated with the greatest nicety to meet the requirement of any particular department.

For full description see account in the *Liverpool Mercury* of May 30, 1860.



WEEKS' ONE-BOILER SYSTEM.

The Nurseries of Messrs. Arthur Henderson & Co., Pine Apple Place, and Messrs. E. G. Henderson & Son, Wellington Road, both of St. John's Wood, and ranking among the largest Establishments in England, are now Heated on WEEKS' ONE-BOILER SYSTEM. At the latter the Apparatus has been in use upwards of five years, during which period many additions have been made, and it now comprises nearly two miles of piping. The working of this Apparatus has been most efficient, and given the Proprietors the greatest satisfaction. They will be at all times happy to give every information to visitors, who will be well remunerated by an inspection of the same.

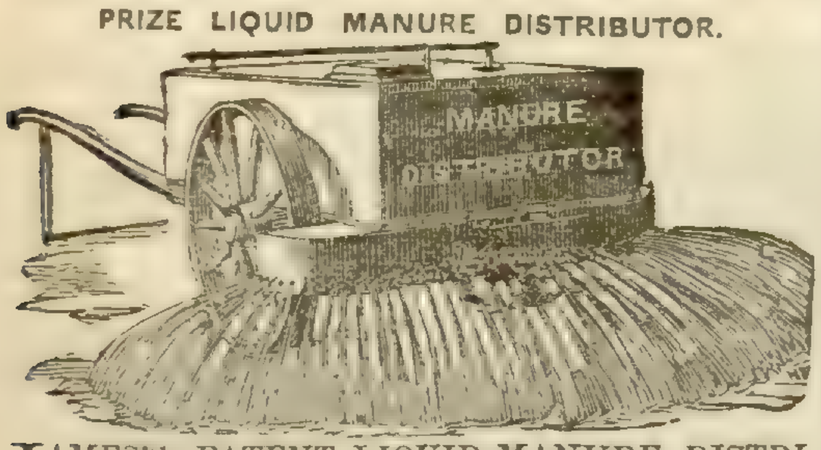
Mr. Arthur Henderson expresses himself thus:—"I am delighted and more than satisfied with the pleasing results produced by the superior arrangements of WEEKS' ONE-BOILER SYSTEM, and shall be most happy to fully explain and recommend it to all who may honour my Establishment with a visit."

JOHN WEEKS & COMPANY,

HORTICULTURAL BUILDERS, ENGINEERS, AND IRONFOUNDERS, KING'S ROAD, CHELSEA, S.W.

PLANS, ESTIMATES, AND PAMPHLETS FREE ON APPLICATION.

PRIZE LIQUID MANURE DISTRIBUTOR.

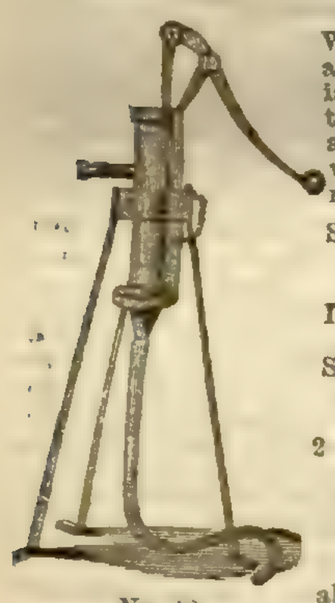


JAMES'S PATENT LIQUID MANURE DISTRIBUTOR OR WATER-CART, warranted not to choke up or otherwise get out of order. It is thoroughly adapted for Drill Crops, or Pasture Land, or for Watering Streets; has been awarded NINE FIRST PRIZES.

Full Particulars and Testimonials may be obtained of the Patentee, ISAAC JAMES, Tivoli Waggon Works, Cheltenham.

N.B.—Improved LIQUID MANURE PUMPS, either fixed or portable.

WARNERS' IMPROVED LIQUID MANURE OR GENERAL PORTABLE PUMP.



No 42.

This Pump is fitted with WARNER'S Patent Bucket and Valve, and cannot clog in action. The barrel is made of galvanised iron, not likely to corrode, and can be raised or lowered at pleasure on the stand, the legs of which fold together, and it may be carried with ease by one man.

	£	s.	d.
Stand and Pump, with screwed tail piece, fitted with strong brass union for suction pipe	2	15	0
If fitted with barrel of planished copper	3	4	0
Stand and Pump, with plain tail piece, for tying on suction pipe	2	9	0
2-inch India rubber and canvas flexible suction pipe, on wires, either in 10, 12, or 15 feet lengths .. .. per foot	0	2	5

No. 43 is a similar Pump to the above, without stand, but with strong wrought-iron straps, for fixing to water cart or plank, price 2*l.* 5*s.*

Every description of Machinery for raising Water, by means of Wheels, Rams, Deep Well Pumps, &c.; also Fire and Garden Engines, &c.

J. W. & SONS' Illustrated Catalogue will be forwarded post free on application.

The above may be obtained of any Ironmonger or Plumber in town or country, or of the Patentees and Manufacturers,

JOHN WARNER AND SONS,
8, Crescent, Cripplegate, London, E.C.

BARNARD, BISHOP, AND BARNARDS, NORWICH.

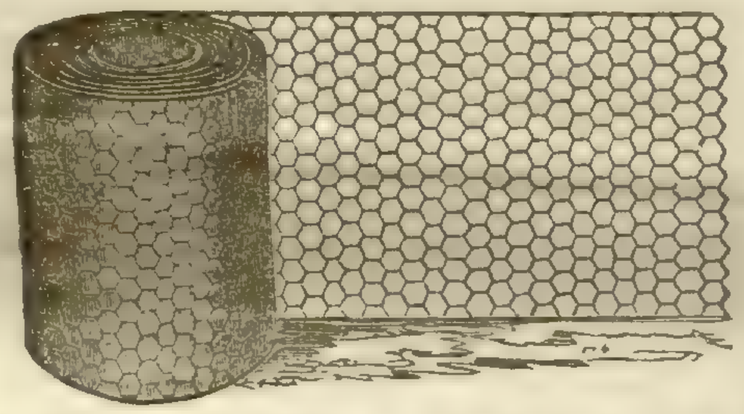
Reduced Prices of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 10*d.* per yard.

The same with Galvanised Wire Rope, 1*s.* per yard.

Illustrated Catalogues with prices of every variety of Wire Fencing and Wire Netting forwarded free on application.

MACHINE MADE GALVANISED WIRE NETTING.



BARNARD, BISHOP, AND BARNARDS, in consequence of improvements in their machinery for the manufacture of the above article, have been enabled to make a great reduction in the prices.

	Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide	5*d.* per yd.	4*d.* per yd.
2-inch ,, strong do.	6 ,,	4¾ ,,
2-inch ,, intermediate, do. ..	7 ,,	5½ ,,
2-inch ,, extra strong, do. ..	9½ ,,	7½ ,,
1⅝-inch ,, 24 inches wide	5½ ,,	4½ ,,
1⅝-inch ,, strong, do.	6½ ,,	5½ ,,
1⅝-inch ,, intermediate, do. ..	7½ ,,	6 ,,
1⅝-inch ,, extra strong, do. ..	10 ,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 8¼*d.* per yard, 3 feet wide Galvanised Sparrow-proof Netting for Pheasantries, 2½*d.* per square foot. Wire Netting of every mesh from half an inch to 6 inches.

Wire Fencing and Netting delivered Carriage Free to all the principal Railway Stations.

PRICES REDUCED.

H. J. MORTON AND CO., Galvanised Iron Works, 2, Basinghall Buildings, Leeds.

GALVANISED IRON ROOFING for Farm Buildings and other Roofs; the cheapest, most durable, and neatest Roofing in use; also Spouting at 10½*d.* per yard.

WIRE STRAND CABLE FENCING.

(formed of Twisted Wires like a rope or cable), the strongest, cheapest, and neatest fence in use, will resist the largest cattle, and will not bend or get out of form by trespassing upon or over. Price, with five lines of the Galvanised Strand, iron main posts, and pronged Standards, 1*s.* 2½*d.* per yard.

This fence is far cheaper than posts and rails, or any kind of iron fencing; and possesses four times the strength of solid bars. Will not rust nor corrode. Upwards of 1200 miles of this Fencing supplied.

GALVANISED GAME AND POULTRY NETTING.

Galvanised, 24 ins. wide 2-inch mesh, 5½*d.*, 7½*d.*, and 9½*d.* per yard.

Galvanised, 24 ins. wide, 3-inch mesh, 4*d.*, 5*d.*, and 7*d.* per yard. The Netting made any width, and with openings of any size.

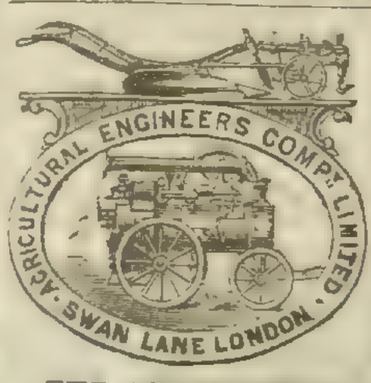
GALVANISED IRON CHAIN CAMP STOOLS & CHAIRS, POULTRY FOUNTAINS & FEEDERS, PRONGED DAHLIA RODS AND ROSE STAKES, &c.

Strong CATTLE HURDLES from 9*s.* per yard.

PATENT IMPROVED GAS WORKS,

of all sizes, for the use of Private Houses, Mansions, Railway Stations, Mills, Collieries, Mines, Villages, &c. Works from 10 to 500 lights estimated for. The works can be entrusted to an ordinary labourer.—Apply to

HENRY J. MORTON & Co. 2, Basinghall Buildings, Leeds.



STEAM ENGINES, Portable and Fixed, Combined and Portable THRASHING MACHINES, DRESSING MACHINES, GRAIN MILLS, PULPERS, CHAFF CUTTERS, OIL-CAKE CRUSHERS, HORSE WORKS, PLOUGHS, HARROWS, CLOD CRUSHERS, DRILLS, CARTS, WAGGONS, and all Descriptions of Agricultural and Miscellaneous Machinery.

THE AGRICULTURAL ENGINEERS' CO. LIMITED,
SWAN LANE, UPPER THAMES STREET, LONDON, E.C.

SAPONARIA CALABRICA ALBA (PURE WHITE).

J. G. WAITE, SEED MERCHANT, 181, High Holborn, London, W.C., has much pleasure in offering the above new annual, which is of very dwarf habit, and being pure white contrasts most admirably with the Saponaria Calabrica rosea. It produces blossoms in great profusion and remains in flower during the whole summer and late in autumn; it is invaluable for beds, or as edgings for borders. Prices to the Trade only, to be had on application.

CONIFERÆ.—A fine Stock of very handsomely grown Plants of various heights—see AUTUMN CATALOGUE, just published, sent free.

50 fine CONIFERÆ, of good size, for .. £5 0 0
25 fine do. do. for .. 2 10 0

The names and heights of either lot may be had. Early planting is recommended. If 20*s.* and upwards, free to all stations in London.

STEPHEN BROWN, late Bass & Brown, Seed and Nursery Establishment, Sudbury, Suffolk.

TO PLANTERS OF CONIFERS.

YOUELL AND CO. can supply 50 species of RARE AND HARDY CONIFERS in good plants for 5*l.*, package included, and carriage paid to Liverpool, Manchester, Newcastle-on-Tyne, Hull, London, Peterborough, or to any Railway Station within 150 miles of the Nursery.

A LIST of the above can be had on application.
Royal Nursery, Great Yarmouth.

GLADIOLUS BRENCHLEYENSIS.

YOUELL AND CO. beg to inform the Trade they are in a position to supply strong flowering BULBS of the above variety, unequalled by any other for the brilliancy of its colour. See report by Dr. Lindley in *Gardeners' Chronicle* of Sept. 8, page 816. Price per 100 or 1000 on application.
Royal Nursery, Great Yarmouth, Norfolk.

THREE MILLIONS OF TRANSPLANTED QUICKS.

GEORGE CHIVAS offers the above, varying from Good to exceedingly Strong, clean and well rooted. A Sample Bundle containing 100 of each, 5 sizes, forwarded on receipt of 15*s.* Truck loads delivered Free at any Railway Station. Also, a Million of Transplanted LARCH; half a Million of Transplanted SPRUCE; Ten Thousand Superior Standard APPLES and PEARS; and a large General NURSERY STOCK.—Chester, Nov. 10.

LARGE TREES, ETC.

WM. PAUL (Son and Successor to the late A. Paul), Cheshunt Nurseries, Waltham Cross, N., has a quantity of large handsome TREES, Evergreen and Deciduous, which must be cleared off 10 acres of the old Nurseries very shortly, and will be sold cheap. Cedrus deodara, Cedar of Lebanon, Yews, Box, Laurels, Arbor-vitæ, Privet, Red Cedar, fine specimens of choice Coniferæ, Alders, Planes, Poplars, Elms, Limes, Fruit Trees, &c. All have been frequently removed and rise with plenty of fibrous roots. Carefully taken up and delivered free to any railway station in London. Further particulars on application.—Please address WILLIAM PAUL, Cheshunt Nurseries, Waltham Cross, N.

GREEN HOLLIES, &c.—Fine repeatedly transplanted GREEN HOLLIES, COMMON LAUREL, PORTUGAL LAUREL, YEWS, TREE BOX, MAHONIAS, and other Evergreens in great quantity, 1, 2, 3, and 4 feet. Prices on application. The Trade liberally dealt with.
JAMES DICKSON & SONS, The "Newton" Nurseries, Chester.

ROBERT NEAL, NURSERYMAN, Wandsworth Common, S.W., begs to call the attention of buyers to his large and well selected stock of EVERGREENS and FLOWERING SHRUBS, ORNAMENTAL TREES, AMERICAN PLANTS, FRUIT AND FOREST TREES, STANDARD AND DWARF ROSES of every description. A large stock of BOX-LEAF EVERGREEN PRIVET, from 1 to 6 feet for hedges; GREEN HOLLY, 1 to 6 ft.; RICH BOG and LOAM for American Beds; LEAF MOULD. The Nursery is 10 minutes' walk from Clapham Common, and New Wandsworth Station, Crystal Palace Line.

MELBOURNE, NEAR DERBY.

EDMUND SALSBURY begs to offer 1-year Seedling Quick; 2 and 3 years' Transplanted do.; 1 year Seedling Hollies; 1, 2, and 3 years' Transplanted do; 3 years Spanish Chesnuts, and a large variety of Lancashire Gooseberries, including the large bearers as well as the new prize varieties. Also Elton and Alice Maud Strawberry plants. The above are held in very large quantities, are of first-class quality, and will be offered to extensive purchasers at very low prices.
Prices on application, and no charge for samples.

PLANTING SEASON.

WM. URQUHART AND SONS, Dundee, beg to announce that their PRICED LIST for this season of FOREST TREES, ORNAMENTAL TREES, SHRUBS, BORDER FLOWERS, ROSES, FERNS, and AURICULAS may now be had on application.—Dundee, Nov. 10.

THE ABERGAVENNY NURSERY GROUNDS.

JAMES SAUNDERS begs to call the attention of Gentlemen and Planters to his large well grown stock of FOREST and ORNAMENTAL TREES, EVERGREEN and FLOWERING SHRUBS of every description, too numerous for an advertisement. Catalogues of which are being prepared and may be had on application in a few days.

10,000 to 15,000 grafted ELM, of various kinds and sizes, from 3 to 20 feet.
20,000 POPLARS, several kinds and sizes.
50,000 COMMON LAUREL, from 1 to 4 feet, PORTUGAL LAURELS, LAURUSTINUS, PINUS, of sorts, varying from 1 to 10 feet.

A large quantity of fine Specimen Trees and Shrubs for producing immediate effect, and suitable for parks and lawns. The lease having nearly expired on one portion, the land must be cleared as quickly as possible.—A liberal discount for Cash.

WALTON NURSERY, LIVERPOOL.

WM. SKIRVING begs to announce that, in consequence of part of the Land of one of his Nurseries being required for building purposes, he intends clearing off the Trees and Shrubs thereon as soon as possible; to accomplish which, he is willing to submit to a great reduction on current prices.

The Stock consists of many hundreds of fine well-grown specimen plants of the most choice hardy Coniferous Trees lately introduced, with very large quantities of smaller sizes of the same. There is also a very extensive stock of Evergreen and Flowering Shrubs on the land to be cleared, amongst which are fine large specimen Plants of the varieties of Green and Variegated Holly, the English and Irish Yew, Cedars, Cypress, Arbor-vitæ, and Rhododendron, with many thousands of ordinary planting sizes.

W. S. invites the particular attention of Planters of Public or Private Parks, Cemeteries, Garden or Pleasure Grounds, to inspect the Stock now offered, feeling certain such a collection of Trees and Shrubs, for extent and variety, has seldom or ever been offered to the public.

At the same time W. S. begs to offer his large Stock of Fruit and Forest Trees, and several acres of transplanted Thorn Quicks, in his adjoining permanent and new Nurseries. CATALOGUES on application.—November 10.

GERANIUMS, HERBACEOUS AND ALPINE PLANTS, ORCHIDS, CHRYSANTHEMUMS, HARDY, VARIEGATED PLANTS, &c.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their new priced and descriptive CATALOGUE of the above, to which are added supplemental Lists of Fuchsias, Stove, Greenhouse, and Hardy Plants, Ferns, Ornamental Foliage and Variegated Plants, Fruit Trees, &c. (which include the best new plants of the season, is now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

HARDY SCARLET RHODODENDRONS.

JOHN WATERER begs to announce that his New DESCRIPTIVE CATALOGUE of HARDY SCARLET and other choice RHODODENDRONS, as are annually displayed at the Royal Botanic Gardens, Regent's Park, is now published and will be forwarded on application. It likewise furnishes a List of all popular Hardy Plants, with a selection of the most desirable Conifers, with heights and prices.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

The CATALOGUE can also be had of Mr. JOHN KERNAN, 4, Great Russell Street, Covent Garden, W.C.

SCARLET RHODODENDRONS.—Handsome bushy plants, from 1 to 2 feet high and 2 to 3 feet through, 10*l.* 10*s.*, mixed with Hybrids, PONTICUM, from 2 to 4 feet, 7*l.* 10*s.* per 100.

KALMIA LATIFOLIA, 2 to 3 feet high, 5*l.*; 4 to 4½ feet high, 7*l.* 10*s.*

AZALEAS, large bushy plants, 2½ to 4 feet and larger, 5*l.* per 100; best Ghent varieties, 75*s.* per 100.

CATALOGUES on application.
GEO. BAKER, American Nursery, Bagshot, Surrey.

NEW HARDY RHODODENDRON.
R. NAPOLEON BAUMANN.

JOSEPH BAUMANN, NURSERYMAN, Ghent, Belgium, begs to announce that he is sending out for the first time his new SEEDLING RHODODENDRON. It is a good grower, free flowering, pyramidal truss, bright rose, all the petals dotted over with deep crimson spots, very fine foliage; altogether excellent. It received the first prize at the great Ghent Show for best seedling. Good plants with three to four shoots, 1*l.*; stronger plants. 2*l.* Free to London (Custom House). One over for every three taken.

J. B.'s NEW CATALOGUE, with the figure of this Rhododendron, may be had on application at the Ghent Nursery.

CARNATIONS AND PICOTEES.

JOHN KEYNES is prepared to send out Six New and Splendid CARNATIONS and Six New and First-rate PICOTEES, the 12 pairs for 3*l.*

CATALOGUES now ready. The Silver Cup was awarded to J. KEYNES at the National, where some of these Seedlings were exhibited in his Stand, which will not easily be forgotten by those amateurs who saw them. There being but few pairs of a sort, early application will be best to secure good plants.
Salisbury, November 10.

WINTER FLOWERING PLANTS.—We have a large stock of fine healthy plants, well set with bloom, of the best varieties of AZALEA INDICA, CAMELLIAS, EPACRIS, and ERICAS, and will be glad to quote prices upon application. Also very nice grafted plants of JASMINUM GRANDIFLORUM, ACACIA GRANDIS, PULCHELLA, AGROPHYLLA LONGIFLORA MAGNIFICA, and others.

DWARF OTAHEITE ORANGES, beautifully set with fruit.
JAMES DICKSON & SONS, Newton Nurseries, Chester.

CHOICE BULBS.

STEPHEN BROWN'S CATALOGUE (late BASS & BROWN) supplied free on application. It contains one of the finest collections of DUTCH, CAPE, and other BULBS. The cultural and descriptive matter is this year greatly enlarged, and prices are very moderate.

Finest named Hyacinths, 6*s.*, 9*s.* and 12*s.* per doz.
Fine, in colours, without names, 3*s.* per dozen.
Assorted Collections of Bulbs, either greenhouse or hardy, at 10*s.* 6*d.*, 21*s.*, 42*s.*, 63*s.*, 84*s.*, and 100*s.*
If 20*s.* and upwards, free to all stations in London.
Seed and Nursery Establishment, Sudbury, Suffolk.

DOWNIE AND LAIRD beg to intimate that they are now sending out the undermentioned beautiful new and distinct PANSIES:—

	Each.
Rev. H. DOMBRAIN.—Dark shaded with blue, large size and fine form	5*s.*
ECLAT.—Dark self, deep glossy purple, fine form	5*s.*
Dr. STEWART.—Yellow ground, belted with bronzy purple, extra fine show flower	5*s.*
FRANCIS LOW.—Golden yellow ground, light bronzy purple belting, of exquisite form, 1st class certificate by the Scottish Pansy Society in June 1860; and the only flower passed by that Society this season	5*s.*
PRINCE CHARLIE.—Light sulphur, ground belted with purple, fine form	5*s.*
PRINCE ARTHUR.—Deep yellow ground, belted with deep purple, very smooth, and of fine form	5*s.*
DUCHESS OF KENT.—Light straw ground, deep purple belting, size large, very showy and distinct	5*s.*
LADY LUCY DUNDAS.—Pure white ground, belted with light purple, first class show flower	5*s.*
ISA CRAIG.—Pure white ground, belted with deep blue, first rate show flower	5*s.*

17, South Frederick Street, Edinburgh.

RHUBARB.

BALDRY'S SCARLET DEFIANCE is now the best sort in cultivation, either for market gardeners, private growers, or forcing. It was awarded First Prize, May 2, 1860, by the Pomological Society of London, when 18 varieties were exhibited, a portion of each kind was examined, Baked, and also a portion examined Green. The Society report that it is unquestionably a First Class Variety, very stout in habit, medium in length. Pulp very deliquescent, high coloured, and richly subacid, excellent for market as well as for private growers. Mr. Baldry of Enfield has a very large quantity of roots (strong crowns), to sell at 12*s.* per half dozen, 1*l.* 1*s.* per dozen, or 6*l.* 6*s.* per hundred, to include package, on receiving Post-office Order.—Address to Mr. WILLIAM CLARK, Seedsman, Bishopsgate Street Within, London, E.C., the sole Agent.

BUCKLEY'S NEW CRIMSON RHUBARB.

JOHN BUCKLEY, GARDENER and SEEDSMAN Saltisford, Warwick, begs respectfully to offer to the public his new RHUBARB, the quality of which surpasses any other yet out. Specimens have been sent to Dr. Lindley for his opinion. See the following in the *Gardeners' Chronicle* of February 26, 1859:—

"John Buckley, your specimens are very handsome, rich rose, red quite through, and and are evidently derived from Bucks, the true Rheum undulatum. When cooked they were remarkably delicate and free from stringiness."

It has also been exhibited at Messrs. Hurst & M'Mullen's, 6, Leadenhall Street, London, where plants may be had Wholesale and Retail. Price 3*s.* 6*d.* each. A liberal allowance to the Trade.

PINE APPLES, GRAPES, ETC.

PINE PLANTS, FRUITING AND SUCCESSION.
GRAPE VINES, FROM EYES FOR FRUITING IN POTS, OR PLANTING.

JOHN WEEKS AND CO. can supply any quantity of very fine healthy Pine Plants, either Fruiting or Succession.

GRAPE VINES remarkably strong and fine, 50 varieties, all the best sorts.

JOHN WEEKS AND CO.'S HORTICULTURAL SHOW ESTABLISHMENT is entirely devoted to the growth and Forcing of GRAPES, PINES, PEACHES, FIGS, CUCUMBERS, and other choice Fruits. The whole open for inspection, thereby showing the most improved plans of HORTICULTURAL BUILDINGS with the VENTILATING and HOT-WATER APPARATUS in full operation.

JOHN WEEKS AND CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, London. Plans, Estimates, and Illustrated Catalogues free on application.

GRAPE VINES FROM EYES IN POTS.

LUCOMBE, PINCE, AND CO. have now a remarkably fine healthy stock of strong Vines, from 6 to 10 feet high, of all the choicest sorts, fit for immediate planting, propagated from eyes, taken from their own experimental Vinery, which enables them to warrant each kind true to name.

LISTS of sorts and prices may be had on application to them.
Exeter Nursery, Exeter.

EXHIBITION OF CHRYSANTHEMUMS.

JOHN SALTER, F.H.S., begs to inform the Public that his unrivalled Collection of these beautiful flowers will be in bloom throughout November and December. He invites Amateurs to visit his Nursery, where they will see, both under glass and in the open ground, not only all the varieties in general cultivation in their natural growth, but very many SPLENDID SEEDLINGS, large flowers and Pompones, which he will have the honour to send out early in 1861.

The WINTER GARDEN, which has been considerably enlarged, will present a "coup d'œi." unique in this or any other country. Free admission every day except Sunday.
Versailles Nursery, William Street, near Hammersmith Turnpike, London, W.

NEW CHRYSANTHEMUMS OF 1860.—50 New varieties of CHRYSANTHEMUMS for 1*l.*, or 5*s.* per dozen. CATALOGUE may be had on application.—JOSEPH COURCHA, Wellington Row, Hart Lane, Bethnal Green Road, E.

CHRYSANTHEMUMS.

J. H. BIRD, F.H.S., NURSERYMAN, Stoke Newington, N., begs to inform his Friends and the Public that his matchless COLLECTION of the above flower is now coming beautifully into bloom. Amongst them will be found some beautiful seedlings of his own, which will be sent out early in 1861. This beautiful collection, not to be equalled in Europe, to be seen gratis every day. Sundays excepted.

The Gardeners' Chronicle.

SATURDAY, NOVEMBER 10, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	Nov. 12	Stoke Newington Chrysanthemum Society's Exhibition.
TUESDAY,	— 13	
TUESDAY,	— 13	Horticultural (Fruit Committee) at St. Martin's Place
WEDNESDAY	— 14	Stoke Newington (Original) Chrysanthemum Society's Exhibition.
THURSDAY,	— 15	
THURSDAY,	— 15	
FRIDAY,	— 16	Crystal Palace Chrysanthemum Show
SATURDAY,	— 17	

THE WILD SPECIES of GRAPE found in the United States have for some years past attracted attention, partly on account of their hardiness, and partly because a singular foxy taste that belongs to them has been imagined to resemble that of Raspberries or been dignified by a comparison with European Muscats. Moreover it has been asserted that some of them at least produce wine of great excellence. We have now before us an official report to the United States Government upon these subjects, and it seems worth while to glance at the general conclusions of the reporters.

According to Dr. JACKSON the Catawba and Isabella Grapes are of the first quality and are extensively cultivated for wine making; and he adds that no varieties which contain less than 15 per cent. of saccharine matter will make a wine that will keep without the addition of sugar or "alcoholic spirit." For this reason the "celebrated Scuppernong" Grape must be treated with sugar and brandy. Nevertheless "the rich flavour of the Grape renders it peculiarly valuable, the wine having the flavour and bouquet of the celebrated Tokay wine of Hungary." Upon looking to the details of this report we find that the Isabella contains 16 per cent. of saccharine matter, the Catawba 17 to 18, and the Scuppernong only 12. It is also to be remarked, that out of 38 sorts of native Grapes analyzed only six yielded 15 per cent. of sugar, or more; viz., the Henshaw, Catawba, Isabella, Vitis sinuata, Bartlett, and Clinton. Some of the others contained only 9, 7½, and 8 per cent., and must, therefore, be absolutely sour. Upon the whole the ample details furnished by Dr. JACKSON, of Boston, and Mr. WEBER, of Washington, offer no inducement to Europeans to occupy themselves with American native Grapes, and not much to Americans to speculate in wine making unless for domestic use.

It appears however from another report made by Mr. WILLIAMS, who by order of the Government visited the Southern States of the Union, that in Arkansas there are Vines apparently of the *Vitis æstivalis* species, which promise better than the northern sorts. He particularly mentions one called "The Mountain," often seen in the light loose dry soils of the Tertiary formation. The berries are as large as those of middle sized

Catawbas, black, and capable, in that climate, of hanging on the Vines till winter. Raisins, said to be of good quality, have been made from it. Another sort called the "Red River," is much like this.

He speaks moreover of the "Washita," perhaps a variety of the Vitis vulpina or Fox Grape. This Grape had been taken to France, where "it had established a reputation for the highest excellence." Indeed "a very intelligent gentleman who informed Mr. WILLIAMS that he was from the Rhine, and was acquainted with the Grapes grown in the wine countries, did not believe a finer Grape than the Washita could be found in the United States *or in Europe*."

In addition to this Mr. WILLIAMS speaks of fruits grown in New Mexico, of which we know nothing. In the market of Santa Fé he found excellent Plums resembling "the wild variety known in the Southern States as the Chicasaw, though more sweet and delicious than Southern Plums. Then there were Apricots, small in size, but in richness of flavour not to be surpassed." Moreover he speaks of a certain "blue" Grape extensively cultivated in Paso del Norte, with large loose and branching bunches sometimes weighing 3 lbs., and berries thin skinned, very juicy and exceedingly sweet; notwithstanding a very imperfect way of cultivating the Vines.

Is it not to be wished that these Vines should be procured for experiment—as stocks—or as breeders—or, in the case of the "Blue" Grape, as objects of special cultivation? They would probably repay the trouble in some way. One might give better hanging qualities, another might throw vigour into weak sorts, a third might increase the weight of the bunch. These are questions to be replied to by amateurs, to whom we commend them.

A CORRESPONDENT, "P. G." has enclosed a sample of "COE'S GOLDEN DROP PLUM" to show that this singular season has not been so very unfavourable to all descriptions of fruit as might be supposed. The specimens sent were from trees growing on the north side of a wall 14 feet high, so that the sun can never have shone upon them except for a very short time early in the mornings, and that only during the very longest days. Nevertheless the fruit was well coloured, and of very good quality, although of course not equal to the produce of a bright hot summer. We have ourselves had a similar result. A small tree, forgotten, allowed to grow wild, smothered with suckers, overshadowed by branches, and on the north side of a great pile of wood, nevertheless bore some extremely good Plums—such indeed as would have been pronounced excellent had they come from any other sort.

This fact seems to deserve being generally known, for, now that planting is about to commence, it should induce those who have north walls to cover to select for the purpose something better than Morello Cherries, Red Currants, Apples, or the other staple kinds of fruit generally relegated to that inhospitable climate.

OUR readers are aware that the Horticultural Society have been for some months in search of a collector of seeds and plants in foreign countries. It appears, however, that no one has been found who possesses such qualifications as the Council consider indispensable. They have therefore given temporary commissions; one to a naturalist in the Philippines, and another to a collector now travelling in S. Africa, and supplies from the latter may be expected next spring. He is, however, specially instructed not to send home such things as Cape bulbs, Heaths, and other common forms of South African vegetation, but to confine himself to plants with novel features, and handsome flowers and foliage. If the wishes of the Council are fulfilled the Horticultural distributions and Ballots in the coming season ought to possess great interest.

EVERY fruit grower is too familiar with that form of disease in Apples which consists in the partial spotting of their flesh, indicated by little shallow discoloured pits in the outer surface. It is that form of disease to which we had occasion to allude at page 870 of this year's *Gardeners' Chronicle*, and which was described under the name of Caries in No. 98 of our series of articles on Vegetable Pathology. Hitherto, as far as our experience goes, this disease has been confined to Apples, but we have just received intimation that it is this year to be found in Pears also.

A small and ill-grown specimen of Marie Louise now before us confirms this report. The skin is equally discoloured, the contents of the cells of which it is composed being filled with brown matter. The immediately subjacent cells seem at present unaffected, but further down diseased brown patches occur, reminding one forcibly of the spots in diseased Potatoes. The walls of the cells are more or less discoloured, and where the disease has attacked the peculiar radiating cells in the centre of which occur the gritty cells, the gritty matter is itself impregnated with the brown substance indicative of decay. In either case the cause is equally obscure. The disease in the case reported to us is confined to a single tree amongst several others of the same variety, and in many instances the side of the fruit exposed to the sun is the only side diseased, a circumstance we have not observed in Apples. The growth of the diseased side is checked while the other increases, so that the Pears are more or less distorted.

The particular tree, it may be observed, is on a south wall, but a good deal shaded by a large Birch in the afternoon, though not more so than others which are free from disease on the same wall. *M. J. B.*

WE understand that at the late competition between the Hitcham and Bromborough Pool allotment holders 12 out of 15 sweepstakes were won by the former. This shows the importance of continuous as well as continued perseverance. It always seems to us a great misfortune when those who start these little useful rural rivalries fall away now and then with "no show this year," or "we'll have another but not next year." When this is done the spirit of the competitors is damped, for they have no certainty that the pains they may take will be properly rewarded. Surely it would be better to provide such associations with the means of having every year a certainty of such rewards as their industry and skill may entitle them to. To give them the cold shoulder now and then acts more powerfully as a discouragement than occasional patronage as an encouragement.

A *Natural History Review* is announced by WILLIAMS and NORGATE to appear in quarterly 4*s.* numbers, under the high authority of Drs. CARPENTER, M'DONNELL and PERCEVAL WRIGHT for *Physiology and Histology*; Mr. RAY GREENE and Mr. SCLATER for *Systematic Zoology* and the *Distribution of Animals*; Mr. BUSK, Mr. LUBBOCK, and Prof. HUXLEY for *Human and Comparative Anatomy and Embryology*; Prof. OLIVER for *Phanerogamic Botany*; Mr. FREDERICK CURREY for *Cryptogamic Botany*; and Messrs. HUXLEY and WYVILLE THOMSON for *Palæontology*. The proposed Review will therefore embrace every department of Biological Science.

Its contents will be divided into—I. Reviews; II. Original Articles and Reports; and III. Bibliographical notices and Miscellanea. The first section will embrace criticisms of all important new biological works published either in this country or abroad. The second will comprise such original papers, as may be of sufficient importance to deserve publication, though they may not be of a nature to demand a place in the Transactions of a Scientific Society. Careful Reports upon the present condition of particular branches of Natural History will form an additional important constituent of this section. In the third section will be comprised notices of all the Papers on biological subjects read before Scientific Societies; a bibliographical record of the various serial publications and works on Natural History that have appeared during the quarter; and, finally, miscellaneous notes.

While the last section will form a record of the daily progress of Science, of the greatest importance to the working Naturalist, the two former may be expected to contain communications of value, not only to the man of Science, but to that large and increasing number of persons who take an interest in the results of the investigations of the professed Naturalist.

Under the Editorial auspices we have announced it is to be expected that the proposed periodical will take a very high place in Scientific Literature.

ORCHARD HOUSES.

RECURRING to my visit to Sawbridgeworth it is astonishing to see the extent to which Mr. Rivers has carried the preparation of trees for orchard house cultivation, he having at the present time fruit trees of all kinds, I think I may say by the thousand. House after house is filled with pot Vines in the most beautiful condition; the same may be said of the Peach, Nectarine, Apricot, and Figs, while outside were miniature forests of Apples, Pears, and Plums, and also a large quantity of Orange trees. Most of these trees were unexceptionable in point of health, and as far as could then be judged likely to be finely set with bloom buds. I noticed, however, the summer stopping of the Peaches and Nectarines had not been carried to the extent which Mr. Rivers's written instructions had led many persons to think it ought to be, and hence instead of having bundles of diminutive branches, as I have seen in some places, and too weak for anything, Mr. Rivers had by judicious disbudding in the first instance, and stopping the shoots retained at every fourth to sixth leaf, provided such growth as when fully matured, as it soon promises to be, could not fail to yield an abundant show of blossom and fruit. As a matter of convenience, and as being easily understood by the uninitiated in the mysteries of fruit tree management perhaps, this bush training is the best and least troublesome that could be adopted or recommended by Mr. Rivers; but where the object is fruit of the finest quality, especially of Peaches and Nectarines, it is indispensable that it be exposed in the fullest manner to the action of the solar and other maturing influences; then no doubt the espalier, table, umbrella, or balloon form is preferable; but then judgment and method is necessary in the carrying out of these systems, and that can only be attained by experience, and such a knowledge of vegetable physiology as does not fall to the lot of every amateur cultivator who gardens for health and amusement. A number of Peach trees in one of the fruit houses in the garden of the Horticultural Society trained in the "umbrella" form are at the present time really all that could be desired in point of symmetry and fruitfulness. I am sorry I did not see the fruit upon them, but it had been gathered and sold at a good price, most of it being sent to Liverpool a short time prior to my visit to the garden.

These trees, be it observed, are planted out; and I noticed at Sawbridgeworth in the fruiting house that upon two trees planted out the fruit was much finer than upon any retained in pots. In fact the evidence afforded by Mr. Rivers's fruiting trees was confirmatory of all that I have ever contended for in relation to orchard-house management, viz., that if you want fruit of first-rate size and quality the crop must be apportioned to the maturing capabilities of the trees, not less so in trees in pots than in those growing in the open ground. Mr. Rivers had some trees of Peaches and Nectarines with the fruit hanging literally like bunches of Onions; but to carry the simile a little further it may be said the fruit, as compared with what it ought to be, was only of the pickling size, or more like Nutmegs than Peaches or Nectarines. I have frequently, both in print and orally, when questioned on the subject, stated that a plant is capable of bringing a certain quantity of fruit to perfection, and that if more is left on it will be ripened at the expense of the size and quality which under proper treatment it ought to attain. But if on the contrary, the crop is over-thinned, and less are left on than the tree could bring to full size and maturity, then you get fruit of larger size and sometimes unusual proportions. The late Mr. Clement Hoare, in his treatise on the Cultivation of the Vine in the Open Air, laid it down as a rule that a Vine should not be permitted to produce fruit until its stem at the base had attained a circumference of 3 inches; then it would mature 10 lbs., and I think (I am writing from memory) 5 lbs. for every inch which it increased in circumference afterwards. A rule of this kind may be considered in some measure arbitrary, as it is well known the Vines with stems of much smaller dimensions do produce good fruit, and we sometimes hear of a Vine being planted one season and producing a heavy crop the succeeding one; but still I think it may be laid down as a rule that such Vines never attain what may be called a mature old age; they may produce for a year or two fine crops, but this premature exuberance is soon checked, and afterwards they produce fruit of comparatively inferior quality. This I have noticed in many instances. A new garden for two or three years becomes celebrated for its magnificent Grapes, and we hear of the wonderful crops, but this rarely lasts long, and I could without much trouble enumerate a number of places where this has happened. On the contrary, if the plants are allowed to become fully established, and have the power of maturing a crop fully formed before they carry one, then there is but little fear the Vines will attain a ripe old age before there is much falling off in their fruit bearing capabilities. And so it is with trees of all kinds. "First catch your hare," as Mrs. Glasse says, that is form a vigorous healthy tree, neither weak nor woody, treat it judiciously as to the crop you allow it to carry, and you will be rewarded with fruit of the finest quality both in size and flavour. Extremes of all kinds must be avoided, extreme fruitfulness, as well as extreme luxuriance—extreme root pruning, and likewise extreme manuring, but endeavour to get your trees into a healthy fruitful state and keep them so by avoiding extremes of all kinds.

In Mr. Rivers's home nurseries the number of fruit trees preparing for orchard house and miniature orchard planting is almost incredible. In some cases whole quarters may be seen of one variety, while all the leading kinds are cultivated by hundreds, if not thousands. Most of the trees were for the season in fine health, and promised to be more fruitful next year than could have been expected. Still I am not an advocate for this extreme dwarfing, though for

amateurs it is very nice to be able to purchase trees which with proper management will produce a crop the first season of planting. Pears, Apple, and Plum trees, little more than 2 feet in height, were producing abundant crops; but the large pyramidal trees of 20 years or more growth had failed. These are planted on retentive clay with a depressed basin round each to receive manure-water, which in ordinary seasons is necessary to trees whose root-room is so very much restricted; but this year these basins had retained the water to such an extent that the trees looked anything but assuring as to the crop for another season. These however are fine trees, and for some years past have produced fruit equal, and sometimes superior to the best sent into Covent Garden Market. Of large pyramidal Plum trees, Mr. Rivers, to make room for his new house, had been obliged to remove some at the time they were coming into bloom, but the crop they were carrying when I saw them was of the finest description, the branches being positively smothered with fruit. These trees were some 8 or 10 feet in height, and the branches 6 feet through at the base; some of them no doubt carried 2 or 3 pecks, or perhaps more, of fruit, and these came nearer to my idea of what orchard-house trees ought to be than the diminutive things so frequently seen. There is something on the cut and come again principle in such specimens; one dish of fruit does not exhaust the crop. Late in the spring of this year I purchased some 6 to 8 feet pyramidal Plums for planting in boxes for the orchard-house. Some of them had flower buds, and though they were not put into the tubs until the blossoms were quite expanded, several yielded very satisfactory crops.

Of the Vineries in the sand banks several of them contained satisfactory crops, and from others the fruit had been cut. The arrangement of these houses is of the most primitive and novel character, but still they answer the purpose and produce excellent crops. Of course the bunches are not large, but the berries are good and the produce such as most people would be satisfied with. The curate's Vinery contained plenty of fruit, but I fear the season has been too cold and wet for it to attain full maturity. On the whole my visit to Sawbridgeworth was satisfactory, and as I had not been there for nearly 16 years a good deal of novelty and improvement was presented to me.

Since writing the preceding, I find I was in error in stating that Mr. Rivers's large house cost 130*l.*; this was the amount paid by Mr. Rivers to the builder, but in addition he provided the Oak posts, and assisted with the nursery labourers in the erection of the house, the whole of which expense would be covered by 20*l.*, thus making the actual cost 150*l.* My correspondent pictures this house filled with 150 pyramids of the Peach Apricot, which he calculated would yield 20 to 30 bushels of fruit annually; just calculate the value of that quantity of Apricots in Covent Garden a fortnight before any come in from the open walls; recollect too, they would be of the finest quality, and then no doubt they would bring home a golden harvest. With the experience of the present season, scarcely a fruit in the open air fit to eat, Orchard-houses become a great fact; and when in addition we know they can be erected more cheaply than a brick wall, there can be no doubt they must come into general use. *W. P. A.*

STOCKS.

[The following Report on Annual Stocks, grown for trial at Chiswick, is extracted from the last Number of the Horticultural Society's Proceedings.]

A LARGE number of varieties of this favourite flower (Matthiola annua) was contributed for comparison at the garden by the undermentioned seedsmen:—Messrs. Carter & Co., Holborn; Mr. W. Thompson, Ipswich; and Mr. C. Turner, Slough. Those sent by Mr. Thompson being mixed varieties, though of good quality, are not enumerated below.

Notwithstanding the unfavourable season a very good bloom was obtained. It was found, however, that so little fixity of nomenclature or even of classification had been hitherto attained, that a detailed report would have been altogether useless; and the Committee came to the conclusion that its attention might be most usefully directed towards making an effort to remedy the evils just referred to, by endeavouring to group the various forms into definite sections. The groups that have been adopted may, it is hoped, be approved and employed by English growers; and when the groups themselves have become generally recognised, it may be found possible to apply fixed names to such individual varieties as are of choice quality, in order to admit of their being recognised and purchased with something like certainty. This, at the present time, it must be considered as almost hopeless to attempt to do.

The seeds were in this case sown on April 9th in frames. The plants were "pricked out" and hardened off in the usual way, and were finally planted out for flowering on a prepared south border. They were examined and reported on during the first and second weeks of August while in the height of their bloom.

The classification proposed for the various kinds of Annual Stocks, which were the only ones brought under the notice of the Committee, is as follows:—

§ 1. *Ten-weeks' or German.*—In this group, the plants grow about a foot in height; the habit is dwarf, compact, and branching below; and the inflorescence consists of a longer central spike and shorter lateral ones. The choicer kinds in the collection, falling under this head, belong to two subdivisions, one of which has been called by the seedsmen "large-flowered," in contradistinction to those in which the blossoms are of the usual or average size. The most desirable of the kinds were:—

(*a*) *Flowers of usual or average size.*—"Dwarf White" (Carter), white; "Red brown" (Carter), dull deep brownish-red or chocolate; "Carmine Dwarf" (Carter), light rose-colour; "Dark Violet" (Carter), deep violet-purple; "Chamois" (Carter), pale coppery-pink; "Flesh-colour dwarf" (Carter), pale blush.

(*b*) *Flowers above average size.*—"Dark Blue" (Carter), a kind of reddish-purple; "Light Blue" (Carter), pale purple or bluish-lilac; "Carmine" (Carter), light rose colour; "Rose" (Carter), deep rosy-pink or Peach blossom; "White" (Carter), white, tolerably pure; "Crimson" (Carter), rather deeper rose than the sort called "Carmine."

§ 2. *Dwarf Ten-weeks'.*—This group has the habit and characteristics of § 1, but the plants are dwarfer, averaging about 9 inches in height, and they are also more branched. The variety sent as "Dwarf Crimson" was considered to be one of the finest and most useful varieties in the whole collection. The best varieties were "Dwarf Crimson" (Carter), the same as "New Dwarf Crimson" (Turner), bright rosy-crimson, dwarf, and free-blooming; "Rose hybrid" (Carter), pale rosy blush; "White hybrid" (Carter), French white; "Light Blue" (Carter), pale bluish-lilac; "Flesh-coloured Miniature" (Carter), pale blush; "Chamois" (Carter), pale pinkish-buff.

§ 3. *Branching, or Pyramidal Ten-weeks'.*—The plants in the varieties referred to this section are taller than those in § 1; they attain an average height of a foot and a half, and they are also more diffusely branched. Among the annual Stocks they are at once distinguishable by their height and more loosely branched appearance. It is to this group that the term "intermediate," applied to several distinct forms, seems properly to belong. The variety called "White Branching" proved to be remarkably fine; certainly one of the finest in the collection. The most worthy of notice in this group, of which there is also a "large-flowered" subsection, were—

(*a*) *Flowers of usual or average size.*—"Victoria Scarlet" (Turner), very high coloured rosy-carmine. It is suggested that the term "scarlet" should be altogether discontinued, in describing this class of colours, and the word "crimson" substituted. "Bright Crimson Branching" (Carter), bright rosy crimson; "White Branching" (Carter), very pure and fine; "Light Blue" (Carter), pale purple or bluish lilac.

(*b*) *Flowers above average size.*—"New Pyramidal Scarlet" (Turner), the same as "Light Carmine Branching" (Carter), light rose-colour.

§ 4. *Bouquet.*—The chief characteristic of this group, represented at Chiswick by one variety only, consists in its excessively branched dwarf habit of growth. The plants form a compact flat-topped bush, about 9 inches in height, everywhere branching repeatedly, and all the little branchlets showing flower-buds; there is consequently a great number of undeveloped flowers, and this, together with a want of brilliancy in the colour, renders the variety much less effective than others of inferior habit. It was called "Dwarf Crimson" (Turner), very free, the colour a rosy-crimson, somewhat dull, the undeveloped buds and centres being greenish.

§ 5. *Miniature.*—This section also was represented by one sample only, and may not prove constant. The plants are very dwarf, not more than 6 inches high, having a short, dense, unbranched flower-head, seated closely upon the compact tuft of leaves; "Lazuli Blue" (Carter), pale lilac or French white.

§ 6. *Spike-flowered.*—These were sent as "Miniatures" along with the variety referred to § 5. They are, however, of a different habit, being taller, growing about a foot high; the stem is almost simple, the few branches being very short, setting close to the main stem, and producing a spike-like inflorescence. This as well as § 5 may be inconstant, and of doubtful character. The best varieties were—"Dark Blue" (Carter), deep reddish-purple; "Carmine" (Carter), light rose, with greenish centre, which does not open well.

§ 7. *Wallflower-leaved Ten-weeks.*'—This group has the characters of § 1; but the leaves are glabrous instead of hoary. There is no other material difference. The following were very handsome varieties; indeed, that called "Dwarf Crimson" was one of the earliest, richest-coloured, and most enduring varieties in the whole collection.—"Dwarf Crimson" (Carter), bright rosy-crimson; "Sulphur" (Carter), pale or creamy yellow, the single-flowered plants being white; "Carmine" (Carter), light rose; "Flesh-colour" (Carter), pale blush; "Poppy-gray" (Carter), pale lilac.

§ 8. *Branching Wallflower-leaved.*—This group has the character of § 3; but with the leaves glabrous as in § 7. The only variety in the collection referable here, and this of good quality, was "Light Blue" (Carter); pale purple or bluish-lilac.

§ 9. *Spike-flowered Wallflower-leaved.*—This has a narrow unbranched or very shortly branched spikelike inflorescence, similar to that which occurs in § 6. The variety mentioned below was distinct and handsome. "White Wallflower-leaved" (Carter), white, dwarfish, and compact.

The varieties mentioned above under the names of Dwarf Crimson (§ 2); Victoria Scarlet, and White Branching (§ 3); Dwarf Crimson, and Sulphur (§ 7), and White Wallflower-leaved (§ 9), are Stocks of first rate quality and highly deserving of general cultivation.

A GERMAN FRUIT ROOM.

Two kinds of fruit-rooms should always be provided, one for summer and another for winter fruits; for that which would be suitable for the Pear would not answer for the Strawberry; the former must be kept in a dry, dark room, where the air has but little access; but the Strawberry should be laid in a place like a larder, cool and airy.

The winter fruit room requires greater care in its construction, and is much more expensive than the summer one. The cost of erecting and fitting up a winter fruit room in as complete a manner as might be desirable would cost about 150*l.*; but a very good one may be constructed for less money. A room on the basement or on the first floor may be chosen, with only a door and window to the south or east. It is important that it should be large enough to admit of the fruit being properly laid out; and that it should be free from damp, and not liable to great and sudden changes of temperature; the latter should be maintained as far as possible between 41° and 48° Fahrenheit. The window and its shutter should be made to fit perfectly close, in order that neither mice nor air can have access.

If the room is square and sufficiently wide, fruit shelves may be put up all round; and in the middle, a series of round turning stages, 2½ feet in diameter, supported above each other at a foot apart. The boarding for the shelves must be sound, dry, and planed smooth. When put up they must be furnished with a small ledge to prevent the fruit from rolling off. For constructing one of these turning pyramidal stages, take a piece of square timber about 4 inches on the side, but rounded at each end, and pointed with iron. To the four sides of this upright post let horizontal pieces be fixed about a foot apart, for the support of the circular shelves, which should be hooped with tin or zinc. When these are secured to the upright post, the pyramid resembles an upright shaft or axle with numerous horizontal wheels. The pivot ends of the shaft are so fitted into copper sockets, which are fixed in the floor and top of the room, as to admit of the shaft with all the circular shelves attached being turned round with the slightest touch. In consequence of the facility which this arrangement affords of turning round the shelves, there is no necessity for going up and down a ladder in order to shift it from place to place when inspecting the fruit. By means of two hooks which catches against an iron stay at top, the ladder is secured in a position that enables a person to reach the whole of the fruit, by turning round the shelves, without moving the ladder.

Before the fruit is brought in, the wood-work of the room should be thoroughly washed and well aired. The shelves should then be covered with a layer of perfectly dry Moss or sawdust.

The fruit should be carefully sorted. That which ripens first should be placed in front, and the side of the fruit which has been exposed to the sun's rays should be placed uppermost in order that the ripening hue may be more easily observed.

When the fruit is all taken in and placed on the shelves, it should be covered with thin paper in order to protect it from the air and dust. During the first three days, if the weather is fine and dry, air may be given for one or two hours in the middle of the day. After three or four days the fruit must be kept shut up and in the dark.

Should the fruit become so covered with moisture as to endanger its sound keeping, recourse may be had to muriate of lime, which may be placed in any corner of the fruit-room. When, in consequence of attracting the moisture, the muriate of lime becomes liquid, it may be dried by heat and used again. Sulphuric acid, in an open jar, may be employed for the same purpose, and when the acid has attracted moisture to the extent of saturation, a fresh supply of the substance must be introduced. *F. C. Willermoz, Taschenbuch für Pomologen, Gärtner und Gartenfreunde, Stuttgart*, 1860.

CLASSIFICATION OF PINE APPLES.

(Continued from p. 977.)

19. MONTSERRAT PINE.—Syn. Montserrat. Copper, Cape Coast, Bogwarp, Red Ripley, New Ripley, Copper-coloured Antigua, Cochineal, Brazil, Old King, St. Kitts, Malacca. Sumatra, Ananas Antigua rubra of the French, Indian Creole, St. Vincent's Cockscomb, Chevalier's Sierra Leone.

Easily distinguished from all other varieties by the dark purple colour of the spines, which are rather small and irregular; fruit of specimens of it will weigh from 3 to 5 lbs. Flowers purple. Fruit cylindrical, sometimes broader at the top and narrowing towards the stem, before ripening, dark green and mealy, afterwards of a pale orange tinged with a copper colour. Pips middle-sized and rather flat. Scales covering one half the pips, of a triangular form towards the points, which are rather lengthened. Flesh solid, lemon coloured, semi-transparent, somewhat juicy, rich and acid, without much flavour or sweetness. Crown rather large leaves numerous.

This Pine is pretty generally known in the country under one or other of the above names, but from the circumstance of its being rather an inferior variety, few collections contain more than a very few plants of it.

20. TROOPER'S HELMET PINE.—Syn. Trooper's Helmit, Cockscomb, Hussar, Broad-leaved Java.

Leaves rather long, flat and erect, of a pale yellowish green colour, and mealy on the under surface. Spines middle-sized and regular. Flowers purple. Fruit orbicularly cylindrical, before ripening pale green and rather mealy, when ripe dark

ochre. Pipe large, flat, depressed in the centre and plaited round the margins. Scales covering half the pips, of a whitish colour, and terminating in lengthened blunt points. Flesh bright lemon colour, very juicy and high flavoured without sweetness or briskness, rather of a coarse and stringy nature. Crown large and spreading, leaves numerous.

This is a fruit of great beauty but not of particular excellence, generally weighing from 3 to 5 pounds; the scales being whitish, and the margins of the pips plaited, cause it to have a novel appearance.

We have received it from Java, under the name of Java Broad-leaved and Java Narrow-leaved, and also from St. Vincent's.

21. GREEN PROVIDENCE PINE. — Syn. Green Providence, Wollaton Providence, Wollaton Green Providence, New Green Olive, Green Antigua, Royal Green Providence, Royal Providence.

The leaves of this sort are very distinct from all others; they are long, very broad, slightly spreading and keel-shaped at the base, tapering to a lengthened point, the upper surface is dull green with scarcely any meal, the lower surface is very mealy. Spines middle-sized and regular. Flowers purple. Fruit pyramidal, broadish at the top, before ripening of a dark green, when ripe of a pale orange, slightly mealy. Pips rather above the middle size and slightly prominent. Scales covering one half the pips, with long narrow pointed ends. Flesh pale yellow, opaque, slightly fibrous, sweet and pleasant without much acid. Crown small, leaves not very numerous.

This variety was obtained from seed at Wollaton, the seat of Lord Middleton; it generally weighs from 3 to 6 lbs., and is of considerable excellence as a summer fruit.

22. ST. VINCENT'S PINE. — Syn. St. Vincent's, Green St. Vincent's, Green Olive, St. Thomas's, Green Providence, Stubton Seedling, Sugar-loaf Bahama.

This has been described by Speechly to have leaves of the "same length as the Queen;" if well grown they will be found to be much longer, and differ only from the Green Providence in being narrower, less keel-shaped, and the upper surface paler green and rather more mealy. Flowers purple, middle-sized. Fruit bluntly pyramidal, slightly mealy and of a dull olive colour, when ripe of a dingy yellow. Pips middle-sized, flat, and rather depressed in the centre. Scales covering nearly half the pips; the tops are short and adhere closely to the fruit, which gives it rather an even appearance. Flesh pale yellow, opaque, juicy, crisp, without much fibre, rich, sweet, and very highly flavoured. Crown middle-sized, leaves rather numerous and slightly spreading.

This bears a small fruit, generally weighing from 2 to 4 lbs., but from its being a highly flavoured variety, a few plants of it will readily be admitted into every collection; it swells readily during the winter months.

23. GLOBE PINE.—Syn. Globe, English Globe.

This sort is readily distinguished by the rigid and erect character of its leaves, which are rather narrow and slightly keeled, a bluish green and very mealy, especially on the under surface. Spines middle-sized and regular. Flowers lilac. Fruit globular, sometimes rather cylindrical, of a dark olive colour before ripening, afterwards of a darkish yellow, slightly mealy. Pips middle-sized, very slightly prominent. Scales covering about one-third the pips, and terminating in rather lengthened points. Flesh yellow, transparent, very juicy and slightly fibrous, sweet, rich and rather acid. Crown small, leaves not numerous.

A good variety, and valuable as occupying less room in the stove than any other sort by reason of its erect leaves. It generally weighs from 3 to 5 lbs., but does not swell very readily during winter.

24. LEMON QUEEN PINE. — Syn. Lemon Queen, Lemon-coloured Barbadoes, Barbadoes Queen, White Barbadoes, Ripley's new Queen.

This tolerably good and handsome variety, is easily distinguished by its leaves, which are grooved or channeled, and the margins often involute, of a bluish green colour, with a considerable quantity of mealiness. Spines rather deep and irregular. Flowers large. Fruit cylindrical, before ripening of a bright lightish green, when ripe pale lemon-colour, and slightly mealy. Pips rather above the middle size and flat. Scales covering about one half the pips, ending in short points which adhere closely to the fruit. Flesh pale yellow, transparent, very juicy, a little stringy, rather sweet and pleasant, although not very highly flavoured. Crown middle size, often cockscomb-shaped; generally weighing from 3 to 5 lbs.; does not swell very readily during winter.

25. OTAHEITE PINE.—Syn. Otaheite, Anson's.

Leaves long, rather broad and of erect growth, nearly equal in breadth until near the top where they terminate rather acutely; they are also particularly flat, and of a dark bluish green slightly tinged with brown, and a little mealy on the upper surface, very mealy on the lower surface. Spines middle-sized and remarkably irregular. Flowers lilac. Fruit cylindrical inclining to oval, upon ripening deep olive green covered densely with a cinereous meal, when ripe deep orange yellow. Pips large and flat. Scales covering rather more than one third the pips and ending in short points, which adhere closely to the pips. Flesh pale yellow, rather stringy and slightly acid, with an abundance of juice, but not particularly well flavoured. Crown small, leaves rather few and erect.

This large free-growing and very handsome Pine generally weighs from 4 to 7 lbs., and where large and handsome fruit are in request, in preference to highly flavoured ones, this will undoubtedly continue to be cultivated, but in small and select collections it is scarcely worth having.

26. SURINAM PINE.—Syn. Surinam.

Leaves rather narrow, long and slightly spreading, of a bluish-green colour, a little tinged and slightly covered with mealiness. Spines rather deep and not very regular. Flowers lilac. Fruit cylindrical, of a dull green before ripening, when ripe a deep orange and rather mealy. Pips roundish, middle-sized, projecting and pointed. Scales covering about one-third part of the pips, and ending in lengthened reflexed points. Flesh pale yellow, transparent, rather stringy and very juicy, but neither sweet, rich, nor acid.

A very distinct, but inferior sort, generally weighing from 2 to 4 lbs.

27. BUCK'S SEEDLING GLOBE PINE.

Leaves long, rather narrow, somewhat keel-shaped and spreading, of a bluish green, slightly tinged with brownish purple and thickly covered with meal. Spines not very strong but very irregular. Flowers darkish lilac. Fruit cylindrical, somewhat inclining to a globular form, before ripening of a dingy dull green and a little mealy, when ripe darkish orange. Pips somewhat below the middle-size and a little prominent. Scales covering about half the pips, and ending in lengthened narrow points. Flesh pale yellow, rather close, firm and juicy, with a rich, highly flavoured acid. Crown small, leaves broad, short and reflexed.

This very excellent and distinct variety was sent to the Society by Mr. William Buck, gr. to the Hon. F. Greville Howard, at Elford, in Staffordshire, where it was raised from seeds in 1819. It fruited in the Horticultural garden, and weighed nearly 5 lbs.

28. BROWN-LEAVED SUGAR-LOAF PINE. — Syn. Brown-leaved Sugar-loaf, Striped brown Sugar-loaf, Mocho, Brown Sugar-loaf, Antigua Sugar-loaf.

Leaves rather strong, broad, somewhat keel-shaped, and slightly spreading, dark green, much tinged with purplish brown, rather mealy. Spines middle-sized and regular. Flowers lilac. Fruit cylindrical, of a dingy green and considerably covered with mealiness before ripening; when ripe dark yellow inclining to orange. Pips large, slightly prominent. Scales covering nearly one-half the pips, and ending in short blunt points. Flesh deep yellow, rather opaque and slightly fibrous, not very juicy but highly flavoured and particularly sweet and rich. Crown middle-sized, leaves rather numerous and spreading.

This is an excellent variety well calculated for general culture. Although differing materially from the other varieties of Sugar-loaf in the shape of the fruit, yet it has been thought advisable to retain its name; its origin is unknown. Good specimens will weigh from 3 to 5 lbs.

It must not be confounded with the next sort.

29. BROWN SUGAR-LOAF PINE. — Syn. Brown Sugar-loaf.

The leaves of this variety are different from all the other Sugar-loaves; in appearance they much resemble the Enville, but are less mealy and more tinged with brownish red; the fruit also bears a striking resemblance to that of an Enville, but is nearly destitute of mealiness. Flesh is rather firm, deep yellow, opaque, without much fibre, very juicy, rich and highly flavoured, with a little acidity. Crown resembles that of an Enville.

I am inclined to think that this is the Sugar-loaf of Speechly. The Brown-leaved Sugar-loaf does not agree with Speechly's description, inasmuch as that fruit is cylindrical; and his is described to be pyramidal.

A very good and handsome Pine, generally weighing from 3 to 5 lbs., and swelling readily during the winter months.

(To be continued.)

Home Correspondence.

Spergula saginoides.—In the correspondence which has taken place in regard to Spergula pilifera, all that has been said against it as a lawn or carpet plant comes to this—that, like all other plants, you can kill it if you are bent on doing so, but even then it is not an easy matter. Planted in a wet hollow, and covered with water for weeks together, it survived and grew, and proved its merit by its beauty. On trashy London mould it has made charming verge lines in one season. Three times transplanted; first, because it looked yellow when the frost caught it before it was established; next, because it made the adjoining Grass look poor by comparison; and next, for mere whim, it started away at last and did what was wanted of it most obediently. Some who pronounced against it, confess to having got it up in heat, and then coddled it under glass, till its hardy, fresh air-loving constitution was broken; and others wanted it to make a turf instanter, on worn out, hot, sandy, or chalky soil, and it failed through lack of skill and lack of patience. After all patience is the chief virtue for those who plant Spergula pilifera. It must have time; it will not come so quick as Grass, that is, to make so close a turf, simply because we cannot sow it broadcast by the bushel. Some day, when the seed is dirt cheap, we may be able to do that, and then Spergula turf will be possible with less patience than at present. But one grave objection, and only one, has been urged against it, and that is, that when in bloom it has the appearance of a lawn awfully foul with Daisies. It is true that from the middle of July till the middle of August it produces myriads of lovely little white blossoms. But the appearance is very different to that of a Daisied lawn; the blossoms are smaller, more numerous, and look more like a fall of sleet than a sprinkling of Daisies; and this fall of sleet may in some cases interfere with the colouring of flower-beds, and for a few weeks be objectionable on that ground. In any discussion it is best to admit as much as you can of the arguments urged by the other side, and in the defence of Spergula pilifera this is all I am disposed to admit; and I apprehend it does little to weaken the claims of the plant to general adoption for outdoor carpets. My circle of Spergula is not in the best place for such an experiment; it is close to the house, it is under the shade of an immense Robinia, has walls on each side within a few yards of it, and yet it has thickened now into a close and elastic felt, and is as smooth as a billiard table. I do not trust wholly to my own opinion as to its excellence. It has been seen by Mr. Veitch, Mr. Chitty, Mr. Oubridge, Mr. Cole, Mr. Cutbush, Mr. Holland, Mr. West, and a vast number of gentlemen gardeners, whose judgment in such matters is as ripe as that of most professionals, and they all say it is a triumph. I have made up my mind to the same verdict. It is a triumph, and those who hold back in doubt only defer the enjoyment of a new pleasure. I suggested in a former note on the subject that possibly Sagina procumbens and Spergula saginoides might be turned to account for the same sort of work. I have planted a small patch of Sagina inside a little semi-circular rockery in a rather damp position, and it looks as if it would be not long in constituting itself a respectable feature. But Spergula saginoides has been well proved by Mr. Summers, and if he does not offer it as a companion plant to the original, he will be like one who has put his hand to the plough and then turned back. I saw this Spergula when I called last at Forest Hill; its growth is somewhat different to pilifera, and for certain hungry soils it will probably supersede it. Spergula saginoides is a British plant, and therefore no difficulty can arise in its culture as to climate. It is almost as abundant in Scotland as the renowned Heather, and a companion plant of the Heather on mountain slopes and rocky hollows. During winter this preserves its bright green hue unhurt by frost or damp, and it is a shade darker in colour than pilifera, and, like it, produces myriads of starry, snow-white flowers only half the size of those of pilifera. But its distinctness as regards adaption and culture arises out of the fact that it is as much at home on sand or gravel as pilifera is on heavy loams or clay. In all other respects what has been said of one holds good as to the other. Lawns are quickest produced by planting tufts, and the more the tufts are divided the greater is the economy, and a close turf may be produced just as quick by planting pieces an inch across, 4 inches apart, as by using tufts as big as one's hand, at the same or greater distance, because it is only on the circumference of each that it can make lateral growth. Saginoides is as fond of the roller as pilifera, and the firmer the ground is kept after the first dressing the faster will it grow. As a proof of its vitality, I may mention that Mr. Summers sent me a scrap of the plant in a letter in June last. It lay on my table three days; I then cut it up, dibbled it in some sandy stuff in little bits, about the size of pins, in a 5-inch pot, put a bell-glass over, and every one rooted. There is now therefore a choice of two distinct plants for those who are disposed to venture on a new idea in the formation of lawns, bowling greens, and verdant ground-work for geometric gardens, and the chances of final success are by the proof of S. saginoides, as two to one upon what S. pilifera had previously brought us to. *Shirley Hibberd, Stoke Newington.* [Our enthusiastic friend is entitled to be heard on this subject; *but*——]

Bougainvillæa.—In answer to your correspondent "B. H.", I beg to state that the true species of Bougainvillæa spectabilis is not the one in his possession; but the one he describes so very minutely as having been seen by him at various establishments during his visits to them, is the true one. I myself visited most of the principal London nurseries last June, and a plant was pointed out to me as Bougainvillæa spectabilis, which I believe to be B. Braziliensis, according to the description given of that sort by Mr. Duncan, at page 833. I have the three varieties, named by him, growing here. They are all very dissimilar in foliage. I consider B. splendens to be a very desirable variety, both on account of its beautiful light green foliage and short jointed growth, and its being much better adapted for growing in a pot as a bush or specimen plant than any of the others. The bracts are of a beautiful bright pink, and stouter in texture than those of B. spectabilis. It blooms in a lower temperature, and during the late summer and autumn months. A plant of it has flowered beautifully this autumn at Holkham Hall, the seat of the Earl of Leicester, under ordinary conservatory treatment. In conclusion I beg to state, for the information of those who wish to obtain the true B. spectabilis, that it may be had of Mr. Veitch, Royal Exotic Nursery, King's Road, Chelsea; Messrs. E. G. Henderson, St. John's Wood; Mr. A. Henderson, Pine Apple Place, who have been supplied with stock from the original plant that bloomed so freely here last summer; and I have no doubt that plants raised from it will be much more likely to bloom, as the plant, from proper treatment, will have been brought back to its original state. *J. Daniels, Swyncombe Gardens.*—— I am much obliged to you for your information respecting the spelling of the word Bougainvillæa. As others of your readers may have had their curiosity excited about this genus, and some of them may not have the advantage which I have of reference to a library, perhaps you will allow me to say that it appears that Humboldt and Bonpland did meet with an arborescent species in Mexico. They say "We saw a grove of small trees only about 18 or 19 English feet high, which, instead of green, had apparently perfectly red or rose-coloured leaves. It was a new species of Bougainvillæa, a genus first established by the elder Jussieu, from a Brazilian specimen in Commerson's herbarium. The trees were almost entirely without true leaves, as what we took for leaves at a distance proved to be thickly crowded bracteas. The appearance was altogether different, in the purity and freshness of the colour, from the autumnal tints which, in many of our forest trees, adorn the woods of the temperate zone at the season of the fall of the leaf." This I find in the Aspects of Nature. In the Plantæ Equinoctiales, I find they say "C'est un arbre très joli. "Arbre haut de douze à quinze pieds." In the Nova Genera et Species Plantarum, they say "Arbor bi- aut triorgyalis." In the Plantæ Novi Orbis, they say of these plants "Frutices aut arbores." I think there can be no doubt, then, that the Bougainvillæa Mexicana is a tree, and a very beautiful one. *G. H. S.*

Nurserymen's Assessments.—I have received an

Income Tax Bill; I am charged 10*d.* in the pound on my profits, and also 10*d.* in the pound on the rent of the land I occupy. Two of my neighbours, nurserymen, far more extensive than I am, pay the occupation tax only: a third is charged 10*d.* on profits and 5*d.* on rent. From inquiry I find that these unequal charges extend all over England without reference to amount of profits. Would any of your readers therefore be so kind as to say what amount a nurseryman is liable to pay? *A Nurseryman.* [You should apply to the Income-tax Commissioners at Somerset House.]

Bowood Muscat Grape.—Is your correspondent (see p. 978), certain that he has this Grape? From what he states I should doubt it. We grow the Bowood in the same house with Barnes's and Muscat of Alexandria; we could see no difference between the two latter; but the wood of the Bowood is shorter jointed, the leaf stalk much shorter, and the wood, foliage and fruit, a month later in ripening than the Muscat of Alexandria, and the fruit is larger both in bunch and berry than that of either of the others. As it sets as freely as a Hamburgh when well managed, there is no White Grape equal to it for size, colour, or flavour. *C. C., Teddesley.*

Pampas Grass.—Among the many fine specimens of this Grass which I have seen near London, none surpassed one in the centre of Mr. Turner's Nursery, at Slough, which the foreman told me had been growing five years, and on which I counted about 200 flower-spikes. *Iota, Bishopstoke.*——Cannot a word be said in favour of the male Gynerium, which has been considered so inferior to the female erect-plumed plant? To me it seems to have far more beauty—of a peculiar sort indeed, wanting the silvery whiteness of the other, but having more elegance and grace. *T. M.*

Is Pampas Grass fit for Covert?—I propose to add rather considerably to my covert this winter, and having some flat land in which I may make some decoy ponds, I am thinking of planting the Pampas Grass largely. Do any of your correspondents know if it has been successfully employed in this way? Any information on the subject will oblige *An Old Subscriber, Woolsthorpe.*

Herb Pudding.—The following receipt for making this may prove useful:—Wash, scald, and shred very fine a handful of Spinach, Beet, Parsley, and Leeks, or as many of them as you like. Have ready a quart of groats or prepared Barley steeped in warm water half an hour, 1 lb. of pork fat cut into small pieces, two or three large Onions chopped small, and three sage leaves well packed. Put in a little salt, mix all well together and tie up close. Boil an hour, and the bag must be loosened whilst boiling to give the pudding room to swell. *An Old Subscriber.*

Renanthera coccinea.—This is now beautifully in flower here; its spike measures 3 feet in height and 2 ft. 9 inches across. It has 126 flowers on it, which have been in perfection for these last three weeks; the plant is 8 feet high, and is attached to a piece of Cork during its whole length. *Charles Brockhurst, Gardener to W. H. Crawford, Esq., Lakelands, Cork.*

Rainfall in October, 1860.—

Stations.	Height of Rain Guage. Above the Ground.	Height of Rain Guage. Above Sea Level.	Depth of Rain. Total for the Month.	Depth of Rain. Total since Jan. 1, 1860.	Depth of Rain. Greatest Fall in 24 Hours. Depth	Depth of Rain. Greatest Fall in 24 Hours. Date.	Rainy Days.
	Ft. in.	Feet.	Ins.	Ins.	Ins.		
Little Bridy, Dorset	0 4	348	2.00	38.71	.51	10	17
Barnstaple, Devon	1 0	..	4.01	43.07	1.19	10	19
Castlefield, Calne, Wilts	0 11	330	1.70	..	.29	12 &20	14
Camden Town, London	0 4	100	1.77	27.02	.44	10	11
Finchley Road, London	0 4	270	1.63	..	..	..	..
Finchley Road, London	36 4	306	1.11	..	..	..	..
Oundle, Northamptonshire ..	20 0	..	1.46	..	.47	16	15
Norwich	0 0	30	1.75	28.39	.36	16	12
Derby	5 0	170?	2.52	28.74	.43	16	20
Manchester ..	3 0	106	3.43	31.10	.84	16	22
North Shields ..	1 0	124	2.24	23.80	.83	15	22

The figures in the last column show the total number of days on which any measurable quantity of rain was collected; care being taken to exclude days when the deposition had arisen from dew only. The Finchley Road gauges are of the finest manufacture, of precisely similar size and construction; they have been tested by Mr. Glaisher and found correct; placed side by side with my own standard they read identically even to the thousandth of an inch. They are now placed at the elevations above stated, in exposed and very favourable positions, at a distance of (horizontally) about 100 feet from each other. Hence it is hoped that the differences due to an elevation of 36 feet may be satisfactorily determined. *G. J. Symons*, 129, *Camden Road Villas, N.W.*

Societies.

Linnean: *Nov.* 1.—The President in the chair. Mr. J. Clarke presented specimens of a new British plant, Lathyrus tuberosus, and read a short notice of it, from which it appeared that the plant had been gathered at Fyfield, near Ongar, Essex, in August last. It was found growing abundantly in the hedge-rows, and in large quantities on the borders of cultivated fields and among corn, and is more or less frequent over the parish, and the adjoining one of Willingate Spain, an extent of about three miles. It was stated that there is no appearance whatever of its having been introduced. The farmers speak of it as growing on their land for 50 years, and one stated that he had known it for 60 years. They call it Tine Tare. [This has already been stated in the *Gardeners' Chronicle*, see p. 774]. Lathyrus Aphaca, Lathyrus Nissolia, and Bupleurum falcatum were stated to occur in the same district. The following paper was read:—"Introduction to the Florula of Aden," by Thomas Anderson, M.D.

Notices of Books.

On Multiplicity of Embryos and Germination in Cœlebogyne, a Sequel to the Treatise on Fructification without Impregnation in Plants. By A. Braun. 4to, pp. 155, tab. lith. 6. Berlin, 1860.*

So much has been written about that wonderful Spurgewort at Kew which for so many years has produced abundance of fertile seeds without a trace of any male flowers, or without ever yielding a single male plant, notwithstanding the numerous specimens which have been raised from seed at Kew and elsewhere, that, notwithstanding the somewhat arrogant observation of Regel that its progress from the blossom to the fruit has never been observed by any *German* botanist, as if Germany alone were capable of correct observation, it might have seemed almost useless if not impossible to produce 150 quarto pages on a subject well nigh exhausted.

Though, however, the treatise before us contains little that is new or which throws any light on the vexed question of fructification without impregnation, it contains a good deal of interesting matter on other points; we, therefore, think it right to direct to it the attention of our more scientific readers. Much, however, is of a truly German and transcendental character, and as remote as anything can well be from practical science.

The talented author's attention was directed again more especially to the subject by an assertion in the 14th Number of Bonplandia for 1858, that the so-called embryo in the seed of Cœlebogyne is not a true embryo, but merely a bud, the root not being turned towards the micropyle, but connected with the chalaza by a firmer tissue than any which surrounds it, and the supposed albumen presenting none of the distinctive characters of that substance. A parallel case was moreover adduced from the fructification of Keens' Imperial Strawberry, in the seeds of which it is asserted that there is no true embryo, but a bud similar to that which it is said exists in Cœlebogyne. It became, therefore, a matter of interest to ascertain what the structure really was in Cœlebogyne, for there was no opportunity of examining the particular variety of Strawberry; and accordingly a fresh examination was undertaken by Braun, though this was perhaps unnecessary after the fruit had been so carefully examined by Smith, Brown, and Hooker fil. besides other botanists. It appears from this that the embryo is as truly an embryo as any that has been stimulated into growth by impregnation, agreeing with that of other Spurgeworts, and that there is not on morphological grounds the slightest foundation for a contrary opinion.

It had already been observed that in the embryo sac, more than one embryo cell was pretty uniformly produced, and it now appears from Braun's observations that a multiplicity of embryos is almost normal in the non-impregnated seeds.

From this observation, which is illustrated by a series of admirable figures, the author takes occasion to state all that is at present known about the multiplication of embryos in plants, each instance being accompanied by such observations as it especially suggests. It appears that the production of more than one embryo is far more common than is supposed, and that in some cases, as in Allium fragrans, it is normal. As this phenomenon is not uncommon in the fleshy seeds of Amaryllis and some allied genera, he enters upon the peculiar structure of those seeds, tracing the growth of the fleshy mass from the integuments of the ovule, from which it is derived, and not from the development of the contents of the nucleus.

The question as to the nature of the reproductive body in the seeds of Cœlebogyne leads to a long discussion on the different forms of buds in plants, and of the true morphological nature of ovules, which will be read with interest, though the discussion is not calculated for our pages. The conclusions founded on it are entirely in favour of Braun's views as to the embryo in Cœlebogyne being a true embryo, though produced without impregnation.

This is followed by some considerations founded principally on Cryptogamic plants, upon the subject of Parthenogenesis in general, and the indication of a few additional instances, professedly rather suggestive than confirmative.

The treatise then ends with a long discussion on three questions arising out of the subject.

1. Whether Parthenogenesis is a sexual or non-sexual mode of reproduction. 2. What is the real point of commencement of the cycle of development in plants. 3. Is the fructification of Cryptogams a blossom in the same sense as the fructifying apparatus is in Phænogams.

A very few words on these theoretical matters will exhaust all the space we can afford for our notice. The first appears to be a mere contest of words. As the embryo is produced in a distinct female apparatus, it is a sexual production in contradistinction to adventitious buds of any kind which are produced at indifferent points of a plant. Whether, however, an embryo produced without impregnation can in another direction be truly called a sexual production appears to us a mere contest which cannot possibly lead to any conclusion. As to the second question, since the embryo cell is produced before impregnation, the cycle must commence with its production and not with the act of impregnation. It seems mere idleness to contend whether this cell is an embryo cell, or merely a preparation for an embryo cell, and whether it is truly an embryo cell or not before impregnation. The third point is of more importance; but we have no room for its discussion here. The whole series of phenomena known in the development of the different parts of the fructification, and the results of impregnation in Cryptogams are so totally different from what takes place in Phænogams, notwithstanding the striking analogies which are presented in different directions, that we think it quite impossible to institute any satisfactory morphological relations between them. The result of impregnation, and the repetition of the process in Mosses is, moreover, so different from the same circumstances in Ferns, where a single act of impregnation, as far as the production of spores goes, may suffice for a hundred years or more, that we seem to have fallen upon an essentially different class of beings. The fructification of Cryptogams, as far as our present knowledge goes, cannot, we think, be considered as blossom comparable with that of Phænogams; and such is the conclusion at which our author has arrived.

* Über Polyembryone und Keimung von Cœlebogyne. Ein Nachtrag zu der Abhandlung über Parthenogenesis bei Pflanzen, von A. Braun. From the Transactions of the Royal Academy of Sciences in Berlin, 1859.

The Honey-Bee, its Natural History, Habits, Anatomy, and Microscopical Beauties. By J. Samuelson and Dr. Hicks. Small 8vo. pp. 166. Van Voorst.

The volume before us is not for mere apiarians, but for naturalists. Bee nature is the author's theme, bee management is left to others. Mr. Samuelson writes of the habits, of the external members, of the internal anatomy of a bee; how the little creature feeds, and breeds, and builds, and otherwise behaves. All this has been told a hundred times before: but so well informed a naturalist as the author adds much that is new to the general reader, and knows how to invest even so familiar a subject with renovated interest. Among other points we find an explanation of the new doctrine of Parthenogenesis, and some highly magnified representations of the microscopical appearance of parts invisible to the naked eye. For the latter Mr. Samuelson acknowledges his obligation to Dr. Hicks. The whole concludes with "two chapters on instinct and reason, being an introduction to the study of comparative psychology, by the *same author*;" but by which of the two authors whose names immediately precede this sentence we are unable to discover.

Let us see how Mr. Samuelson has executed his task. As to the antennæ, usually called feelers, are they really for touching, or rather for smelling and hearing? as some say. Our author is of opinion, "That they are organs of touch is decided beyond a doubt: but whether there is combined with this sense that of hearing or smell, or whether the vesicles are organs that convey external impressions to the nervous centres in a manner inappreciable by us, is still an open question; for however carefully they have been examined and compared with the sensory organs in other races of animals, no physiologist has yet been able to pronounce definitely as to their true function."

And again, "Whilst its antennæ remain unimpaired, the instincts of the bee are wonderfully active and acute; but as soon as it is deprived of these mysterious organs, its whole nature seems to undergo a change, and its psychical or mental state may then be compared to that of an imbecile or insane person—to one, in fact, who has 'lost his senses.'"

Mr. Samuelson wisely refrains from pronouncing a positive opinion upon this perplexing subject. "Although we are not in a position to state decidely what is the precise function of the antennæ, we may mention that the opinion, derived chiefly from their anatomical structure, is gaining ground, that they are organs of hearing as well as touch, and the mode of their application leads to the same belief. The question is however, as before stated, still undecided, and it presents a most interesting field for research, not only to those who employ the microscope in the investigation of the anatomy of insects, but also to naturalists who observe their habits, and in either case the careful student can hardly fail to throw additional light upon the inquiry. There is no doubt whatever that the bee possesses the senses of touch, hearing, and smell, or functions corresponding therewith; the difficulty is to assign to them a locality."

Then as to the wings, simple folks imagine that wings are made to fly with, and for nothing else. No mistake can be greater. The wings are to breathe with, and smell with, to say nothing of their being natural fans and the seat of blood vessels. "They are composed of a double membrane which is covered all over with fine hairs, and stretched out upon what are

termed 'nervures,' or ribs, that ramify between the double fold. "Accompanying the nervures are also to be found a set of vessels for the circulation of air (tracheæ), and another set for the passage of blood; and although the nervures are not so numerous in this as in some other insects, they are of a firm consistent nature, giving to the wings that tough membranous texture which characterizes the order (Hymenoptera).

"But you may be disposed to ask *why* the wings of a bee should require to be tougher and more resisting than those of other insects. This would be a very natural inquiry, and one that we shall seek to answer satisfactorily; but, before doing so, let us for a moment direct your attention to another feature in connection with these organs. Supposing it to be necessary that they *should* offer great resistance to the atmosphere and present the broadest possible unbroken surface, this object would of course be greatly facilitated if the two pairs of wings could be locked together in such a manner that it would be impossible for a current of air to pass between them. Well, then, without rendering them permanently adherent, which would make it inconvenient for the insect to fold its wings, Nature has, by a beautiful but simple contrivance, attained this end: for, if you take your lens and examine the anterior or front edge of the *hinder* wing, you will be surprised to find a row of exquisitely formed hooks; whilst on the opposite edge of the *anterior* wing with which this row of hooks comes into immediate contact, you will be able to detect a species of rib or bar, to which the hooks may be made to adhere firmly, and both wings thus attached to one another when *requisite*, presenting the desired unbroken surface to the atmosphere.

"And now, reader, the *reason* why these wings are of a tough resisting nature, and so wonderfully organised, is because they are not only employed in flight, but also (as we shall see hereafter) in the ventilation of the hive: in the latter capacity the insects cause them to vibrate very rapidly, so as to create a current; in fact, they operate precisely on the principle of the fan. It is hardly necessary, we presume, to point out to you how inefficient such an instrument would be if it had a slit down the middle; and you will now perceive why it is necessary that the fore and hind wings of the bee should be capable of being locked together, so as to present one continuous unbroken surface.

"At the roots of the wings, upon what is termed the sub-costal nerve, there are to be found a number of pear-shaped vesicles, of a somewhat similar character to those described upon the antennæ; here, however, they are open within and elevated above the surface, and not, as in the antennæ, depressed or indented. In like manner they can only be carefully investigated when the colouring matter has been removed through the agency of chlorine, and then a high microscopic power reveals similar bundles of fine nerves leading to the vesicles, and connected by a trunk to the central ganglion or nervous mass. These nerves prove the vesicles, as in the former case, to be organs of sense, and Dr. Hicks has attributed to them the function of smell. This inquiry, must, however, still be considered an open one."

Here, again, we must admire our ingenious friend's prudence. He leaves Dr. Hicks to fight his own battle, and to prove if he can that bees smell with their wings.

As to honey, we all know how hard it is to find in cities the genuine article. Mr. Samuelson assures us that it is adulterated not only with sugar, and Potato starch, but with *oil, and with pipe clay!* No wonder that prudent people insist upon buying their honey in the comb. Pipe clay above all things is that which one would least desire to feed on; and yet it seems that after all we are too often eaters of dirt.

One of Mr. Samuelson's chapters is chiefly occupied by an account of the modern curious doctrine of Parthenogenesis, which he fully explains. It is however a subject that demands much more space than we can afford; and we therefore refer the reader to the volume itself.

The extracts we have given are sufficient to show the nature of Mr. Samuelson's book, which we should add is a continuation of the same ingenious author's work on "Humble Creatures," among which the Earthworm and Honeybee have already received his attention, as will be remembered by the readers of the *Gardeners' Chronicle*

Dr. Griseiach's Flora of the British West India Islands (Reeve). The third part of this work, completing the first volume, has just appeared. It contains Leguminosæ, Myrtaceæ, Melastomaceæ, Lauraceæ, and some smaller orders.

The Floral Magazine for November has figures of *Kinghorn's Azalea*; *Pteris tricolor*, a beautiful drawing of a beautiful Fern; an orange blotched variety of *Cattleya Mossiæ*, very like *C. Wageneri*: and a superb representation of some varieties of the beautiful *Dianthus Heddewigii*.

Le Jardin Fruitier du Muséum, ou Iconographie de toutes les espèces et variétés d'arbres fruitiers cultivés dans cet établissement, &c. &c. Par J. Decaisne. 4to. Paris, Firmin Didot. Parts 25 to 36.

(*Concluded from p. 979.*)

The 36th part of this valuable work concludes with a table of the synonyms of the Pears described in 1839; and as this may prove useful to our readers we give it entire:—

PEARS.

D'ALENÇON.
Doyenné gris d'hiver nouveau
,, d'Alençon
Saint-Michel d'hiver (of some).
D'AMBOISE.
Beurré rouge
,, d'Anjou
,, d'Isambert le Bon
,, de Saintonge
,, D'Ambleteuse
D'ARENBERG.
Colmar d'Arenberg
,, Artoisenet
,, Kartoffel
Ardente de printemps
Beurré Bachelier (of some).
BELLE ANGEVINE.
Abbé Mongein (of some)
Amour
Anderson
Angora (of some)
Beauté de Terwueren
Berthebirn
Bolivar
Comtesse de Terwueren
Duchesse de Berry d'hiver
Gros fin-or long d'hiver
Grosse de Bruxelles
Grosse Dame Jeanne
La Quintinye
Louise bonne d'hiver
Poire d'Horticulture (of some)
Poire de Kilo
Royale d'Angleterre
BELLE DE THOUARS.
Belle de Thouarsé
Coulon Saint Marc
Belle de Prague
Saint-Marc
Belle de Troyes
BEQUÈNE.
Bellissime de jardin
Asperge d'hiver
BEURRÉ.
Beurré gris
Isambert
Isambart
BONNE D'EZÉE.—
Belle excellente
Belle et Bonne d'Ézée
Charles-Frédéric
BON CHRÉTIEN.
Bon Chrétien d'hiver
,, de Constantinople
Poire d'Apothicaire
CASSANTE D'HARDENPONT.
Poire d'Hardenpont
Saint Pierre d'hiver
Poire de fer (of some)
DE CHAUMONTEL.
Besi de Chaumontel
Beurré de Chaumontel
Bon Chrétien de Chaumontel
COLMAR.
Poire-Manne
Colmar d'hiver
Bergamote tardive
Poire incomparable
Gros-Mizet
COLMAR D'ÉTÉ.
CROTTÉE.
Doyenné galeux
Saint-Michel crotté
Philippe strié
Louise de Prusse (of some)
Passa-tutti
DÉLICES D'ANGERS.
Délices d'Hardenpont d'Angers
Beurré Lasalle
,, des Hautes Vignes
Zéphirin Grégoire (of some)
DIEL.
Beurré magnifique
,, Lombard
,, Diel
,, royal
,, du Roi
,, incomparable
,, des Trois-Tours
,, de Gelle
,, vert
Beurré (Poiteau)
Dorothée royale (of some)
Gracioli d'hiver
Gros Dillen
Guillaume de Nassau
Drijtoren.
DONVILLE.
Chaumontel belge
,, anglais
Calot
DOYENNÉ ROUX.
Doyenné rouge
,, gris
,, Grey
,, d'automne
Gansell-Bergamote
Late Virgalieu
Emilie Bivort
DUCHESSE DE MARS.
Comtesse de Lumay
DUVAL.
Roi-Louis nouveau
Dwaël
ÉPINE ROSE.
Poire de Rose
,, Rosate
Épinay rose.
FIGUE.
Figue d'hiver
,, d'Alençon
Sylvange d'hiver
Bonnissime de la Sarthe
Petaiess
FUSÉE.
Alberti
Certeau d'automne
Cuisse-Dame
De Rue
de Rives
Emmanuel (of some)
Gros Roland
Mitre
d'Etoupe
de Chesnegalon
GRÉSILIÈRE.
Seigneur (Esperen)
GROS CERTEAU D'ETÉ.
Colorée d'août
Rouge le Vierge
Belle de Bruxelles (of some)
Certeau d'Été
Emmanuel (of some)
Courte d'Ersol
HENRIETTE.
Belle Henriette
Henriette d'Orleans
LÉCHASSERIE.
Besi Léchasserie
,, des Chasseries
,, Henri-Landry
Épine longue d'hiver
Henné
Verte longue d'hiver
de Villandry
Poire des Chasseurs (of some)
,, de Chasse
Muscat d'Echassery
MUSCAT LALLEMAND.
Colmar boisé
Alexandre Lambré
NAIN VERT.
Poirier à bois monstrueux
NAGUETTE.
Eau-rose à courte queue
Caillot-rosat à courte queue
Epine à courte queue
Oignon allemand
Gros Oignonet
Bergamote Fievée
Poire disque
NONPAREILLE.
Poire sans pair
,, sans pareille
,, incomparable (of some)
Besi incomparable
,, sans pareil.
OIGNONET DE PROVENCE.
Besi des champs
DE PARTHENAY.
Bergamote de Parthenay
,, Stoffels
Beurre de Parthenay
Poire Poirault
DE RANCE.
Beurre de Rance
,, Bon Chrétien
,, de Noirchain
,, de Flaudres
,, d'hiver
,, Epine
Bon Chrétien de Rance
Beymont
Hardenpont de printemps
ROYALE D'HIVER.
Louis Grégoire
J. B. Bivort
Duchesse de Montebello
Spina di Carpi
Pera Passana
,, Casentina.
SAINT-GERMAIN PANACHÉ.
Surpasse Meuris
Ferdinand de Meester
,, de Meister
,, de Munster
Poire Demeester.
DU TILLOY.
Saint Germain du Tilloy
,, Dutilleul
,, du Tillay
,, de graines
Belle Julie
TRUITÉE.
Poire Truite
Grain de Corail
Forellen-Birn
Forelle
Poire Forelle
VERMILLON.
Bellissime d'automne
Belle et Bonne
Poire des Dames (of some)
Vermillon des Dames
Frizéus
DES VETERANS.
Besi des Veterans
Bouvier Bourgmestre
Rameau
Baneau
Hericart de Thury

Recollections of the Druses of the Lebanon and Notes on their Religion. By the Earl of Carnarvon (Murray). The personal acquaintance of the noble author with the strange people called Druses and with their singular faith, renders the volume before us peculiarly acceptable at the present juncture, when all men's minds are filled with horror at the atrocious massacres recently committed in Lebanon. The founder of the sect is stated to have been Hakem Biamr Allah, or Bemrillah, the sixth Fatimite Caliph, a man who "has acquired a pre-eminence of guilt amongst some of the most cruel rulers of the East. He inaugurated his boyhood by the assassination of his teacher, the commencement of his reign by the murder of his best public servants, the middle of his career by the death and proscription of his subjects, and blackened the whole of his life by ruthless acts and insane edicts. He struck off the hand of one man, then heaped money and honours upon him, and finally cut out his tongue; at one time he would break the wine jars, at another he would destroy the dogs in Cairo; he alternately banished and recalled the musicians and astrologers. He would one day starve the women of Cairo in the baths or in their homes, and the next day he invited them on false pretences to his palace, where he threw them into the Nile. Like Caligula, he delighted to wander restlessly about the streets at night; like Nero, he kindled the fires and exulted in the conflagration of his capital. He lived a madman, he ruled a tyrant, and he died an impostor. Such was the man in whom the Druses have now for 800 years believed, not only as the founder, but as the fountain and head of their religion."

And what is this religion? Lord Carnarvon explains it learnedly, and at considerable length. We can only find room for one passage:—"The imposing doctrine of faith in one God, in whom there are no parts, to whom no attributes can be assigned, before whom the tongue refuses to utter, the eye to see, the mind to understand, whose very name is ineffable, which crowns the pyramid of Druse theology, might seem to remove Heaven too far from men and their affairs; and therefore the weaknesses of human nature have been well accommodated by the reflexion and incarnation of the Deity in successive ages. Nine times previously in India, Arabia, Persia, and Africa—so Hamzé taught—had the Supreme Intelligence deigned to reveal himself under the form and name of mortal men. In the person of Hakem, for the tenth and last time, God's will was republished, His forbearance manifested, and a final appeal made to the obduracy of the world. For 26 years 'the door,' in the figurative language of the Druse doctors, stood open to Christian or Mahommedan, Jew or Gentile; but when that term of grace had expired, the work of conversion was closed, and the world was left uninvited and unenlightened for the future, till in the great consummation of mortal things, amid the gathering of armies and the tribulation of the faithful, when Mahommedanism shall fail and Mecca be no longer sacred, Hakem shall reappear to conquer the earth, and to give supremacy to the Druse religion."

There are, however, said to be secret and abominable practices grafted on the Druse religion, to which a distinct charge of Devil-worship has been applied:—"What, indeed, may be the character and the extent of that worship; how far it is in the nature of invocation or of deprecation, is a question which, however interesting, need not be discussed here. The Druses have been accused of both. Hyde says that they call Satan their Sheik, or 'Pyr,' and are themselves designated as Sheitani, or Devil-worshippers. In the same manner the book of Seth, before alluded to, is explained to be the book of Sid or the Devil. Other indications there are, which, in examining the subject, would be found to point in this direction; and, if the information which Bishop Pococke received be true, a connection with the ancient and infamous rites, whose authorship has been said to be deduced from Cush and the Scythian race, might be shown."

Lord Carnarvon however is not quite satisfied that the Druses deserve the character that has been given them:—"There is no charge which has more often been made by travellers and writers, no belief more fixed in the minds of the Christians of Syria, than the gross immorality of the Druses. But these charges have rested on popular hearsay, and have been directed by the intolerance of a Christian and Mahommedan majority against a hated minority, whose habits of secrecy, even if they offered a ready handle to calumny, were, it must be remembered, almost essential to the maintenance of their nationality and independence. Nor can we forget how often and needlessly, and sometimes even how unjustly, similar charges have been brought against a religion or a race which, whether rightly or wrongly, was unpopular. Such accusations have been made by Pagans against Christians, by Christians against heretics, against Jews, against Mahommedans, against Christians themselves. His Lordship also refers to the important fact that "the Druse religion enjoins in all the precision of language the excellence of a pure and unblemished life; and M. de Sacy, the highest that I can quote on such a subject, concludes his observations on a kindred point by saying, 'la religion (Druze) telle qu'elle était enseignée par Hamza et son fidèle disciple Moktana, était loin de porter aucune atteinte aux mœurs." Niebuhr and Col. Churchill are equally incredulous.

In conclusion he observes that "Whatever may be the traces and influences of heathenism, Christianity, whether derived directly from the Gospel and the Christian Church, or from the heretical sects which found so congenial a home in the East, has unquestionably coloured many parts of the Druse system. Sometimes we find a mere copy of Christian language and morality, whilst at another time the thin lines of Christian heresies may be seen to cross the network of their complicated theology. Hamzé, indeed, as we have seen, adopted in his writings the precepts and even the phraseology of the Gospel; assimilating, as far as he could, his own to the Christian system, in the hope of

thus alluring fresh recruits to his master's standard. In all the broad features of the religion, as established by him, the Christian element con be clearly discerned, and may almost be said to be openly avowed."

For the evidence upon which these statements rest, readers will of course desire to examine the volume for themselves.

Sir John Coleridge's lecture at Tiverton *on Public School Education* has been republished by Murray, with additions and corrections from the pen of the learned judge. We may refer to it hereafter.

Under the name of *Curiosities of Civilisation*, Dr. Wynter has republished a series of papers from the Quarterly and Edinburgh Reviews (8vo, Hardwicke, pp. 385). The subjects are Advertisements, Food and its Adulterations, the Zoological Gardens, Rats, Lunatic Asylums, the London Commissariat, Woolwich Arsenal, Shipwrecks; Lodging, Food, and Dress of Soldiers; the Electric Telegraph, Fires and Fire Insurance, the Police and the Thieves, Mortality in Trades and Professions, each being presented in the form of an ingenious essay. Among these the one which treats of Rats will be found more interesting if possible than any other of a very delightful series.

TRADE LISTS RECEIVED.—*Stabilimento d'Orticoltura di Prudente Besson fuori Porta Susa, Torino. Catalogo Generale per l'Autunno* 1860 *e Primavera* 1861. [*Horticultural Establishment of Prudent Besson, Turin, outside the Porta Susa; for the Autumn of* 1860 *and Spring of* 1861.] This catalogue of a highly respectable Italian nurseryman possesses considerable interest in England, containing as it does lists of Figs, Vines, and other southern fruits concerning which we are as yet much less informed than we should be, as well as the names of varieties of Apricots, Cherries, Peaches, &c., unknown among us. It is also announced that Orange and Lemon trees, of *various kinds*, can be had at from 3 to 8 francs each; but no list is given.

Garden Memoranda.

CHRYSANTHEMUMS IN THE TEMPLE GARDENS.—The remarkable season now drawing to a close, although highly disastrous in its effects on what are termed bedding plants, has nevertheless been unusually favourable to the growth of certain kinds of border plants, among which may be classed Chrysanthemums. These have succeeded most satisfactorily, and judging from the display in the Gardens now under notice, bid fair to be fully equal to what they have ever been even in better seasons. Some of the blossoms, indeed, such as may now be found on Queen of England and Alfred Salter, have never hitherto been surpassed even in these Gardens—widely spread as their fame is for skilful Chrysanthemum culture—either for size or beauty, and all are well worth inspection. Nothing is now wanted but two or three weeks of fine weather to enable the blooms yet to open to develope themselves in perfection.

As regards cultivation little can be said that has not been stated before. As soon as the plants have done blooming they are cut down, and when they have pushed suckers an inch high or so, they are taken up with as much soil adhering to their roots as will stick to them, and the plants are placed tolerably close together in a sheltered piece of ground previously prepared for their reception. During severe frosts they receive some slight protection, and in this position they are permitted to remain until the beginning of March or April, when they are taken up, divided, and replanted where they are intended to flower. Too great attention in Mr. Broome's opinion cannot be paid to the proper division of the plants; to the unskilful performance of this operation he attributes the production of small sized sickly flowers; the ball, he asserts, should never be replanted whole, but should be thoroughly divided, and in no case should more than three suckers be put in one place, and each should be set as free from the other as possible. With regard to kinds which break late, however, and whose suckers are comparatively small, great care should be taken; such sorts should not be disturbed until say the beginning of May.

When the young plants have reached the height of 8 or 10 inches, they should be pegged down, which not only prevents them from growing too tall and overrunning the other flowers which bloom during the summer and early autumn, but preserves the foliage around the lower portion of the flower stem, and saves a good deal of labour in tying up; of course, this treatment need not be applied to those plants which are intended to form back rows, or to bloom against walls or palings. When, after this, they again reach the height of 1 foot or 18 inches, commence tying them up to slender sticks, which can be procured in bundles for the purpose, and continue doing so until they have reached their extreme height and show their flower buds.

In the heat of summer, when the plants begin to flag and the fibres to show themselves on the surface of the ground, a top-dressing of dung or mould should be given them, and great attention paid to their watering. the plant being of a succulent nature requires a great quantity of fluid nourishment, which should be given to it regularly twice a day, in the evening and at early morning, before the sun has got any great power. Manure water, without copious doses of which fine flowers cannot be insured, and which can be made by adding water to horse, cow, or sheep dung (about a pound by guess of the first, and half that quantity of either of the other two, to a 2-gallon watering-pot), should be used at least twice a week, but oftener if possible, until the flower-buds begin to show their respective colours, when it should be discontinued, and plain water only be given until the autumnal rains render even this unnecessary.

Should it be desired to show large flowers in the borders, the laterals or side shoots, together with all but one flower bud on each stem, should be thinned out. In thinning out, if great care be not taken, the crown buds are apt to snap off; this operation should be performed therefore with a very light steady hand, and with sharp and fine-pointed scissors.

It is, perhaps, superfluous to say that the beauty of flower borders is mainly dependent on the arrangement of the plants in them, with respect to their habit of growth as regards their height, and with respect to their harmony of colour.

To these points great attention is paid by Mr. Broome, and the result is in every way encouraging; a finer bank of flowers than his best border is could not well be found.

In the Middle Temple Mr. Dale has also a fair display, especially of large kinds, under the protection of mats. This season Pompones bedded out are perhaps scarcely so brilliant as we have seen them in warmer and sunnier autumns; they however serve to show how useful a plant the Chrysanthemum is likely to become for this kind of decoration, and how well it is calculated to render our out-door gardens gay and attractive, even long after the beauty of their summer occupants has fled. This portion, therefore, of the Gardens is also well worth inspection.

Miscellaneous.

The Central Park, New York.—Considerable progress has been made with the Central Park. In 1858, 33 plans for forming the proposed new park were submitted in competition, and four premiums, consisting of 400*l*., 200*l*., 150*l*., and 100*l*., were awarded. The successful design was presented by Messrs. F. L. Olmsted and Calvert Vaux, and the works were at once commenced by the Commissioners having the matter in charge; Mr. Olmsted,—the author, among other works, of "Walks and Talks of an American Farmer in England,"—being appointed to the chief position and the resident charge of the work; and Mr. Vaux acting as consulting architect. The cost of land taken for the park, with the extensions in contemplation, will be rather more than 1,000,000*l*. The expenditure at present made on it amounts to about 500,000*l*., and the total sum authorised to be expended is about 800,000*l*. When the architects sent in their designs they pointed out that, up to that time, in planning public works for the City of New York, in no instance had adequate allowance been made for its increasing population and business; not even in the case of the Croton aqueduct, otherwise so well considered. This apparently bad calculation is mainly owing to the fact that, at every census since that of 1800, the city's rate of increase has been found to be overrunning the rate previously established. In the allotment of land for the new park it was determined that this mistake should not be made. The park is about 2½ miles long, and ½ a mile wide. bounded on the sides by straight parallel "avenues," and at the ends by streets crossing these at right angles. It is now enclosed by a rough, dry stone wall, 4 feet 6 inches high, in which there are gates at convenient intervals. The area enclosed is about 768 acres, of which 136 acres are occupied by the reservoirs of the Croton aqueduct, whence the city is supplied with water. Measures are in progress for adding a space of 75 acres, which will make the length of the park 13,516 feet, and its area 843 acres. The old reservoir covers 30 acres, and stands upon high ground in the centre of the park. The embankment is faced exteriorly with dressed stone, and, except where obscured by the recent improvements, forms a conspicuous object in the view from nearly all points in the southern half of the park. The new reservoir, when completed, will cover 106 acres; but these are too much elevated for the water within them to form a part of the landscape. The park is practically divided by the reservoirs into two portions, the northern or upper park, containing 160 acres; the lower park, containing 331 acres; and the connecting ground, lying on both sides of the reservoirs, 135 acres. It will be further subdivided by four thoroughfares (a very necessary consideration), one crossing it between the reservoirs, one at each end of them, and the remaining one near the middle of the lower park. These thoroughfares are to be so constructed, by means of tunnels and other contrivances, as not to interrupt the landscape, or practically effect any division of the park. Roads and walks will cross them in such a manner that, when the trees and shubbery by their side are somewhat grown, they will not be seen by the casual observer. They will be noticeable from no part of the park, except at their extremities, where they unite with the exterior streets, at a higher grade than the surface of the park; appearing as causeways, a few hundred feet in length, terminating upon a hillside. The park not being directly accessible from these covered ways, it will be unnecessary to close them at night, when the public are shut out from the park itself. They will furnish the means of direct transit across the park for business purposes, without causing inconvenience to its visitors. Two of these roads are now nearly completed, and one already in use. To clear the site it was necessary to knock down many wretched hovels. During the autumn of 1857, 300 dwellings were removed or demolished by the Commissioners of the Central Park, together with several factories and numerous "swill-milk" and hog-feeding establishments. Large tracts, partially covered with stagnant water, were superficially drained, and 10,000 cart-loads of loose stones taken from the surface and conveyed to the borders of the park, furnishing materials for the construction, during the winter, of the present enclosing wall. Even after the removal of the buildings, and the drainage of the pools, the lower park still presented a confused and unsightly appearance. Parts were rocky and parts a bog. With the exception of portions of the two swampy valleys and the two 10-acre tracts above mentioned, and about 3 acres on Sixty-sixth Street, near Sixth avenue, there was not an acre in which the great underlying ledge of gneiss rock did not, in some form, thrust itself above the surface. Probably not a square rood could be found throughout which a crow-bar could be thrust its length into the ground without encountering rock. The designers desired that the park should, as far as practicable, present to the eye a charming rural landscape, such as, unless produced by art, is never found within the limits of a large town; always remembering, however, that facilities and inducements for recreation and exercise are to be provided for a concourse of people, and that the object of the scenery to be created is only to further the attainment of this end in the most complete and satisfactory manner. No kind of sport is to be permitted which would be inconsistent with the general method of amusement, and no species of exercise which must be enjoyed only by a single class in the community to the diminution of the enjoyment of others. Casual observers have been apt to think the selection of the site an unfortunate one, its general ruggedness being rather forbidding than expressive either of dignity or grace. But this was due very much to the absence of soil and foliage. As these are supplied, the quality of picturesqueness becomes agreeably prominent. Grass and shrubbery can be formed anywhere; but rocks, and those salient forms of earth-surface which are only found in nature where rock exists, can never be imitated on a large scale with perfect success. Although, therefore, it will require a heavy expenditure to make the park complete, a good artistic effect may be looked for. In one part is a broad hill-side, broken by ledges of rock and bestrewn with boulders. This, which is to be called the Ramble, furnishes an interesting picture viewed from almost any point, but particularly so from the end of the mall. On the descent from this to the pond an ornamental stone terrace is under construction. At the highest and most remote part of the hill, as seen from this terrace, a small tower will be erected; and this will be the vista-point of the avenue of the mall. Looking northward from the terrace it will be the only artificial structure in sight (the reservoir being "planted out" and the rising ground on the right and left shutting off the city). The whole breadth of the park will be brought into this landscape, the foreground of which will be enriched with architectural decorations and a fountain; the middle distance, composed of rocks, with evergreens and dark shrubs interspersed among them, reflected in the pond; and the distance extended into intricate obscurity by carefully planting shrubs of lighter and more indistinct foliage among and above the gray rocks of the background. The sunken and tunnelled street thoroughfares across the park were planned to remove what would otherwise have been a ceaseless annoyance. Extending the application of the same expedient, several miles of gravelled walks have been laid out, carried by arched passages under the drives when necessary, by means of which all parts of the lower Park may be traversed on foot, without encountering a single carriage or horseman. The rides are everywhere in like manner made independent of the drives, but horsemen can enter the carriage-roads if they choose. It is intended to introduce an arboretum, in which, within a space of about 60 acres, will be arranged in as natural a manner as possible, consistently with convenience for study, specimens of every tree and shrub which can be grown upon the site in the open air. The hill-side and valley between the Fifth avenue and the east drive of the upper park are reserved for this purpose. When the Commissioners made their last report, at the beginning of the year, about 18,000 trees and shrubs had been planted; 3¼ miles of road had been made; 5 miles were in progress; 7¼ miles of paths were completed; 10½ miles of drains had been laid down; 10 bridges were finished, and eight were progressing. The law permits bequests to be made to the city for the improvement and ornamentation of the Central Park, or for the establishment or maintenance of museums, zoological gardens, &c., upon prescribed conditions. The Commission have already granted permission to place within the park a monumental statue, in marble or bronze, of the late Commodore Matthew C. Perry, the gift of one of its members. The Commissioners say, "To its intimate commercial relations with all parts of the Union, the city owes its unprecedented advance,

wealth, and population. It is fit that the virtues of heroes and statesmen, whose fame is the common heritage of the country should, in this crowning work of its metropolis find appropriate commemoration." It is interesting to observe the eagerness that exists in the public mind for the establishment, within the Central Park, of institutions that will afford the means of popular cultivation and innocent recreation. Observatories, museums of natural history, zoological and botanical gardens, and galleries of art, find offers of substantial aid for their foundation; and though the board doubt the propriety of appropriating the moneys placed at their disposal for these or any kindred purposes, they deem it right to aid by all means in inducing the foundation of them by others. They propose to establish a system of licences for franchises and privileges, that will yield a revenue to the park without in any respect obstructing or taxing its free enjoyment in all departments. Licenses for refreshment-rooms; for light and proper public vehicles to run on the park; for perambulators, or Bath-chairs, for invalids, to be allowed on the walks; and for boats on the lake, are all to be made to yield a revenue, and relieve the city of a part of the annual cost of maintaining the park. In their report the commissioners give the following statement of the size of the most celebrated European parks (that of New York consisting of 843 acres).

		Acres.
"London—All parks in and near London, including gardens, squares, and parade-grounds		6,000
Ditto.	Hyde Park	380
,,	Kensington	227
,,	St. James's Park	87
,,	Green ,, ...	56
,,	Regent's ,, ...	372
Windsor—Great Park		3,500
,,	Little ,, ...	300
Richmond ,, ...		2,250
Dublin—Phœnix ,, about		2,000
Gardens at Versailles, about		3,000
Paris—Bois de Boulogne		2,158
Berlin—Thiergarten, about		200
Munich—Englischer garten, about		500
Vienna—Prater		1,500
Magdeburg—Park and garden		120
Birkenhead Park, near Liverpool		180"

The central lake was completed in December last, with the exception of a small amount of work at the extreme northern point, and the water entering from the natural sources of supply was shut in by closing the gate at the dam. The arrangement of this lake is for a summer depth of 7 feet, and a winter depth (for the greater security of persons frequenting it for skating) of 4 feet. The area covered by the summer level of the water is 20 acres, and by the winter level 17 acres. All the inlets for the drainage into the lake likely to bring impurities or turbid water are provided with filters. Mr. W. H. Grant, we may add, is the superintending engineer; Mr. G. E. Waring, the draining engineer. Some dissatisfaction has been expressed in respect of the time occupied and the largeness of the works contemplated; and, even on this side of the Atlantic, we have received a letter of complaints on the subject. The New Yorkers, however, may console themselves with the reflection that it is much better to do a thing well than quickly. A noble park worthy of their handsome city is not to be produced now-a-days out of a stony tract by rubbing a lamp. *Slightly abridged from the Builder.*

Artificial Oyster Breeding.—The "Phare de la Manche," of Cherbourg, publishes a report from M. Levicaire, Commissary of the Maritime Inscription, on the success of the operations which have taken place in the Bay of St. Brieuc for the breeding of oysters, agreeably to the directions of M. Coste. The report states that a recent examination has fully and satisfactorily proved the advantageous results obtained on the five banks which have been laid down, and which have exceeded the most sanguine expectations. Three fascines which were taken up indiscriminately from one of the banks formed in June, 1859, contained about 20,000 oysters each of from 1 inch to 2 inches in diameter. The total expense for forming the above bank was 221f., and if the 300 fascines laid down on it be multiplied by 20,000, 6,000,000 oysters will be obtained, which, if sold at 20f. a thousand, will produce 120,000f. If, however, says the report, the number of oysters on each fascine were to be reckoned at only 10,000, the sum of 60,000f. would be received, which, for an expenditure of only 221f., would give a larger profit than any other known branch of industry. The report concludes by expressing thanks for the services which M. Coste has rendered to the country, and to the inhabitants near the Bay of St. Brieuc. *Times.*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Next to Camellias, Azaleas are perhaps the most showy plants that can be had in bloom early in the season, and where there is a good stock to select from some of the most forward plants should be placed in heat soon, moistening them overhead two or three times a day. Unless, however, plants can be had which made their growth and set their buds early, they need hardly be expected to flower so finely as under more natural circumstances in spring, and unless the buds are plump there will be some danger of the plants starting into growth instead of flowering. Dutch bulbs should be largely cultivated where a fine display is required, and where hardy shrubs are forced for the decoration of this house, these should be got into flower as soon as circumstances admit. Do not forget to introduce into gentle heat by degrees a good batch of Roses, choosing the most promising plants of Teas, Bourbons, and Hybrid Perpetuals, which are the best kinds for winter flowering; a gentle bottom-heat will be of service to these as also to most other plants subjected to heat in order to get them into flower early, and a moist state of the atmosphere must be secured, admitting a little air freely on every favourable opportunity. In greenhouses damp or insects soon do irreparable injury to soft-wooded plants at this season, and these must be carefully attended to if they are to be wintered in first-rate condition. Pelargoniums should be kept rather cool and dry, giving whatever water may be necessary on the mornings of fine days, so that the superfluous moisture may be removed before the evening, avoiding the use of fire-heat except when necessary to prevent the temperature falling below 40°, or to dispel damp when this cannot safely be done by giving air. Calceolarias require very similar treatment, except that they are very subject to the attacks of thrips, unless afforded a moist atmosphere; they must therefore be narrowly watched, and fumigated lightly two or three evenings successively if this pest makes its appearance, keeping the atmosphere moist and giving air on every favourable opportunity to prevent the foliage from flagging. Cinerarias for late blooming must also be kept cool and airy, and should not be allowed to suffer for want of pot room. These must not be trusted in cold pits after this season, for they cannot endure much frost. Plants intended to flower early should be encouraged with a gentle heat, keeping them near the glass and admitting air whenever it can be done.

FORCING DEPARTMENT.

PINERIES.—If circumstances should render it necessary to subject a portion of the stock intended for fruiting to a brisk temperature at once to induce it to start, the most promising plants should be very carefully selected, and placed in a small house or pit by themselves; and, where anything like a regular supply of ripe fruit is required, several houses, or separately heated compartments, should be at command; and without this convenience no gardener can reasonably be blamed for having too many ripe at one time and none at others. It is not by any means desirable to start more plants into fruit at this early season than may be absolutely necessary, for they will produce finer fruit later in the season than can possibly be obtained from them now; and where a separate house cannot be commanded for those which must be subjected to a high temperature, we would advise that the plants selected for fruiting should be placed in the warmest part of the house at command, filling the rest of the compartment with young stock. The former should be afforded a bottom-heat of about 85°, and the latter about 10° or 15° lower; the atmosphere should range from 68° to 75° by fire-heat, allowing it to rise 5° with the assistance of sunshine, keeping the young plants near the glass, and properly supplied with water at the root. This temperature will be considerably too high for young stock at this season, but we have seen this system practised with considerable success; and although the young plants may get somewhat drawn, they will gain strength as light increases, and the evil will be less than running the risk of starting at this early period of the season the greater portion of the plants that are at command for keeping up the supply throughout the summer.

VINERIES.—Until the buds are fairly broken in the early house the points of the shoots should be kept nearly on a level with the lowest part of the Vine; and if this should not be found sufficient to induce the buds to start equally throughout the length of the Vine, the rod should be bent so as to bring the most forward buds to the lowest level, elevating those that are backward. Maintain a thoroughly moist atmosphere by frequently sprinkling the floor and passages, &c.; and syringe the Vines lightly at least twice a day until the leaves begin to appear, when the amount of moisture must be moderated. Give every attention towards securing a gentle warmth for the roots: turning the litter, and adding fresh as may be requisite, and keeping it well protected from the effects of heavy rains and severe weather. Be satisfied with a moderate night temperature until the buds begin to push, when it may gradually be raised to 60° by the time that the leaves fairly begin to open.

FLOWER GARDEN AND SHRUBBERIES.

For some of the more tender kinds of Roses some protection will soon be necessary. Also get in the stock of Briars for budding upon next year without delay, for unless these are planted before spring they seldom furnish strong shoots for early budding. With weather like the present, all new work should be pushed forward with vigour, and if the soil has been properly prepared by draining, where necessary, as should always be done before planting, there will be fewer failures from planting now than if the work was delayed until March. Where however the ground to be planted is of a harsh clayey nature, and in an unkind state at present, it will undoubtedly be better to defer planting until spring; soils of this nature should always be dug or trenched some considerable time before planting, as neither draining nor anything but exposure to the action of the atmosphere will bring them into a fit state for planting. Roll walks and lawns occasionally to keep them firm and smooth. There will be comparatively little to be done in the flower garden at present, except sweeping and cleaning, and any spare time will be well spent in going over the stock of plants in pits for next season's use, removing every decaying leaf, and where the surface soil has got green, removing this and top-dressing with sandy loam. There is nothing so unfavourable to these plants at this season as damp, therefore take every opportunity you can of admitting fresh air.

HARDY FRUIT AND KITCHEN GARDEN.

As much pruning and nailing as possible should be done before the approach of spring; lose no favourable opportunity therefore of forwarding these operations; for, besides the advantage of having that kind of work done before the busy season, the garden will present a much neater appearance after the wall trees are nailed and the borders made trim, and the small fruit-bearing bushes pruned and the ground among them turned over. See that standard trees which have been root-pruned are firmly secured against injury from winds, and also get any root-pruning or transplanting to be done this season executed as soon as possible. Endeavour as far as circumstances will permit to have a good supply of Parsley under safe protection; for there is generally a large demand for this, and in the event of a severe winter like the last it is difficult to save it by the ordinary protection of hoops and mats. Lettuces and Cauliflowers in frames should be freely exposed on all favourable occasions. Look over root stores occasionally to see that nothing is going wrong, and be very careful of any Broccoli that may be fit for use or turning in. As has been recommended take advantage of frosty weather to get manure wheeled on spare ground, and see to keeping a good supply well rotted and fit for use when wanted. Trench, dig, and ridge every spare inch of ground whenever the weather will permit these operations to be advantageously performed. This is particularly to be observed in gardens, the soil of which is of a clayey nature.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON

For the Week ending Nov. 8, 1860, as observed at the Horticultural Gardens.

Nov.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 2	18	30.025	30.009	51	22	36.5	52	51½	E.	.00
Satur. 3	19	30.099	30.033	50	22	36.0	51	51	E.	.00
Sunday 4	20	30.082	30.042	45	30	37.5	49	49½	E.	.00
Mon. 5	21	30.118	30.096	47	36	41.5	48½	48½	E.	.00
Tues. 6	22	30.388	30.300	48	35	41.5	48½	48½	E.	.01
Wed. 7	23	30.450	30.394	49	23	36.0	49	48	N.E.	.00
Thurs. 8	24	30.358	30.244	49	29	39.0	48	48½	N.E.	.00
Average..		30.217	30.145	48.4	28.1	38.3	49.4	49.3		.01

Nov. 2—Fine, but cold; clear and cold at night; frosty.
— 3—Frosty and foggy; hazy and cold; frost at night.
— 4—Foggy; cold haze; overcast; hazy with cold wind.
— 5—Light hazy clouds and very cold; cloudy; overcast; cold and windy.
— 6—Cold, with uniform haze; cloudy; slight rain; densely overcast.
— 7—Partially overcast; fine; very clear, frosty at night.
— 8—Frosty, fine, light clouds; clear and fine at night.

Mean temperature of the week, 7 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK.

During the last 34 years, for the ensuing Week, ending Nov. 17, 1860.

Nov.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 11..	51.2	36.1	43.6	14	1.02 in.	3	3	5	1	7	8	4	1
Mon. 12..	50.8	34.6	42.7	15	0.50	3	4	6	3	3	6	3	2
Tues. 13..	50.0	35.7	42.9	18	0.66	2	3	5	2	6	4	3	4
Wed. 14..	47.9	33.9	40.9	17	1.24	6	3	4	3	2	5	3	4
Thurs. 15..	48.3	34.9	41.6	16	0.34	2	5	5	3	4	9	5	1
Friday 16..	48.6	33.0	40.8	12	0.31	6	3	4	3	5	7	4	2
Satur. 17..	48.0	34.5	41.3	16	0.40	7	5	3	1	6	7	2	3

The highest temperature during the above period occurred on the 12th, 1841—therm. 63 deg.; and the lowest on the 16th, 1841—therm. 15 deg.

Notices to Correspondents.

BOOKS: *Inquisitive.* Paul's "Rose Garden," or Rivers' "Amateurs' Guide," will doubtless answer your purpose.

COLD VINERIES; *Mr. Geo. Eley*, of Tong, near Sittingbourne, would be glad to hear from Mr. J. J., of Cloverly Gardens, Shropshire.

MOULDY GRAPES: *A Gardener.* Your Grapes are unripe, and decaying; and are attacked by the common mould-fungi. The cause is no doubt excessive dampness and the low temperature of the atmosphere. You would have prevented it by keeping up a good *dry* heat: you have aggravated it by attempting to dry Tobacco leaves in the house. The tree is Photinia glabra.

NAMES OF FRUITS: Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to examine more than six sorts, whatever may be the number forwarded.—*E W.* 1, Alexander; 2, Hawthornden; 3, Wormsley Pippin; 4, Blenheim Pippin.—*W C.* 1, Blenheim Pippin; 2, Wyken Pippin; 4, Hacon's Incomparable; 6, Yellow Ingestrie; 7, Brabant Bellefleur; 8, Cluster Golden Pippin.—*A C., Beckenham.* 1, Kerry Pippin; 3, Dutch Mignonne; 4, Fearn's Pippin; 5, Vicar of Winkfield; 6, Doyenné Blanc.—*T M W.* 2, Keswick Codlin; 3, Barcelona Pearmain; 4, Easter Pippin or French Crab; 5, Æsopus Spitzenberg; 6, Miller's Glory; 7, Dutch Codlin.—*Constant Reader.* 1, Louise Bonne (of Jersey); 2, Jersey Gratioli; 4, Passe Colmar; 5, Gansel's Bergamot; 10, Chaumontel; 11, Marie Louise.—*G S.* 1, Doyenné Blanc; 2, Beurré Diel; 3, Urbaniste; 4, Comte de Lamy; 7, Seckel.‖

NAMES OF PLANTS: *Droitwich.* 1, Photinia glabra; 2, Leycesteria formosa; 3, Turkey Oak; 4, Evergreen Oak.—*T B.* Seedling Pteris aquilina.—*Nota bene.* We are sorry to say we cannot determine the names of plants from description. The Anchusa at Biarritz is possibly not an Anchusa at all.

SWEET PEAS: *M A* wishes to know what is a fair average crop per acre of Sweet Peas?

THE HORTICULTURAL SOCIETY'S NEW GARDEN: *Peterborough, G.* The ground work is nearly finished; the Box scrolls have for some time been completed in part; and the planting has commenced by the removal on Monday last from Chiswick of a fine Deodar 28 feet high. Two transplanting machines of great power are at work, and if the weather remains favourable the general features of the Garden will very shortly become apparent.

WHITE PRIMULA: *J Haines.* Pretty, but not materially different from others already in cultivation.‡

MISC.: *W F H.* The charge is 6*d.* a line, each line being 10 words.—Full price will be given for copies of July 7 for the present year.

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Offices, 52, Parliament Street, S.W.

Directors.

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No. II. The Company will supply Plans, Specifications, and **Estimates for any Improvement to be executed by the Landowner's Agent, as under No. I.**

In each of these cases the Landowner will be solely under the control of the Inclosure Commissioners.

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Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.

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THE LANDS IMPROVEMENT COMPANY.—
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.

TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c. IN ENGLAND AND WALES AND IN SCOTLAND.

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Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

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For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard Westminster, S.W.

WANTED, to ride, a PONY, from 12½ to 13½ hands high, of small girth, good mouth, and paces, and quiet to ride. Also a second-hand Small SPRING CART, adapted for a pony 14 hands high.—Apply to B. C., Post Office, Temple Bar, W.C.

EXHIBITION OF DOGS AT BIRMINGHAM.—The First Great Exhibition of SPORTING and other DOGS will be held in the Repository of Messrs. Bretherton & Harrison, Cheapside, Birmingham, on MONDAY and TUESDAY, December 3 and 4, the first and second days of the Cattle and Poultry Show. Admission on Monday, the PRIVATE VIEW, 2*s.* 6*d.*; and on Tuesday, 1*s.* The doors will be opened at 9 o'clock each morning.

For Special Railway Arrangements, see the Advertisements and Bills of the several Companies, and of the Cattle and Poultry Show. F. BURDETT, Hon. Sec.

Edgbaston, Birmingham.

BIRMINGHAM CATTLE AND POULTRY SHOW, 1860.—The TWELFTH GREAT ANNUAL EXHIBITION OF CATTLE, SHEEP, PIGS, ROOTS, AND DOMESTIC POULTRY, will be held in Bingley Hall, Birmingham, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, December 3, 4, 5, and 6.

The Private View on Monday, December 3. Admission—Monday, **5*s.*; Tuesday, Wednesday, and Thursday, 1*s.*** The doors will be opened at 9 o'clock each morning.

For Special Railway Arrangements, see the Advertisements and Bills of the several Companies.

The Agricultural Gazette.

SATURDAY, NOVEMBER 10, 1860.

THE paper in another page, by Mr. FISHER HOBBS—read before the London Farmers' Club last Monday—relates to a subject on which great variety of opinion exists, but of which the importance is diminishing year by year. In the infancy of the present prodigious manufacture of agricultural implements, when makers had to be satisfied with merely local custom, prejudices and ignorance necessarily prevailed. and there was need of some central authority whose judgments should have national weight. But now, when the machines of a dozen different makers are everywhere to be met with—and they come if not into direct competition at least into as close contact as adjacent farms can give them, there is ample opportunity of forming judgments of their merits under just those ordinary circumstances and conditions, the want of which at official trials was the other day deplored.

Nine different reaping machines cut down nearly 8000 acres this summer in East Lothian—a small county—whose farmers may thus be almost called the neighbours of each other. Will not a more accurate judgment of the relative merits of these machines have been formed in Haddingtonshire, and published in its markets and at agricultural gatherings, than could be arrived at or made known by a day at Canterbury or at Pontefract, at Cork or at Dumfries? There is everywhere and always now a contest amongst rival implements—and it is no longer confined, as it may have been at first, to a day's central trial before appointed judges. The verdicts of these judges are therefore of much less importance now than they used to be—and Mr. FISHER HOBBS was speaking on a point of great importance formerly, but of diminished interest now. So long however as trials are held at all, they should be conducted under circumstances as fair as possible, and the suggestions to this end to which the discussion before the Farmers' Club gave rise, deserve consideration.

FEW things in Agriculture are more desirable than a cheap and portable manure of good quality and of home manufacture, which may come in aid of the daily more precarious supply of genuine guano. Now it strikes us that there is a perennial source of excellent compost, which is at present very much neglected except in the immediate neighbourhood of our more rocky coasts, the preparation of which would employ an immense number of hands, and might in some measure replace the loss which was sustained some years since by so many Highland proprietors, when Kelp was superseded by the results of the more modern chemical discoveries.

The peculiarly good quality of the Wheat in the Isle of Thanet, and the fertility of the soil, has been long attributed to the use which is made of the seaweed thrown up on the shore. In LEWIS's History of Thanet, published in 1723, there is the following passage:—

"Within these few years past, the inhabitants of the north and east side of the island next the sea have made great use of the Alga or Sea Woor,* which is often cast up by the sea in great quantities under the cliffs. This the farmers carry on their Maxhills (manure heaps),† where they mix it with their other dung, which it helps to rot. In this mixture they observe no proportion, but endeavour to have one layer of dung and another of Sea Woor, which they turn once or twice in the summer, in order perfectly to mix and rot it. But it's observed that the Sea Woor is not so kind for the land lying near the chalk as for the colder land; and that where the land is very cold, the best way is to carry out the dung rough without laying it in the Maxhill at all. The stench of this weed when first laid on the Maxhills is very nauseous, but as it is in the open fields is more tolerable."

This practice is continued up to the present day, only the seaweed is often put in layers with earth or sand without any admixture of farm manure, and it is from observation of the result of this treatment, when the weed is converted into a rich unctuous mass, that the proposition we shall have to make presently has arisen.

This use of sea-weed as a manure is by no means confined to one or two localities; but its merits are pretty generally recognised, wherever it is easily accessible, insomuch that in one of Miss MARTINEAU'S clever tales, "Ella of Garveloch," the value of the land is in part expressly set down to its vicinity to the seashore, rendering it capable of fertilization by the refuse weed.

We are not aware that any perfect analysis exists of the large seaweeds which abound on the rocky shores of the Hebrides, some of which attain such a size as to be almost a fair load for a man. The enormous mass furnished sometimes by a single plant of Laminaria bulbosa for instance, is such as to be scarcely credible to persons who have not wandered along those rugged coasts. Of the more generally diffused species however, Fucus vesiculosus, there are many analyses (at least of the ashes when dry), the mean of which as obtained in five localities, the mouth of the Clyde, the mouth of the Mersey, the North Sea, Denmark, and Greenland, is given by PEREIRA as follows:—

Potash	11.96
Soda	12.25
Lime	10.92
Magnesia	9.53
Chloride of sodium	19.32
Iodide of sodium	0.25
Phosphate of iron and phosphate of lime ..	5.64
Oxide of iron	0.05
Sulphuric acid	24.62
Silica	4.06
	100.00

In Greenland specimens there is as much as 10 per cent. of phosphates. There is nearly 17 per cent. of ashes (16.60) on an average in the raw seaweed. Of the volatile matters which exist in the plant we have no information. It would have been satisfactory to have obtained an analysis of the stuff yielded by the manure heaps as now prepared in Thanet, but we were unable to procure proper specimens when in the district in June, and promises of a supply have not at present yielded any result.

It is, however, clear from what has been stated, that we have before us the elements of a very useful manure, if it can be prepared in such a manner as to be reasonably portable, and combining with the salts some of the fertilising materials which have been volatilised in the course of incineration.

What we would suggest is that the seaweed after being if possible slightly dried, should be ground into a paste with conical rollers in the same way in which woad is commonly prepared. The result most probably would be so soft and glutinous, that it could not be readily made into balls

* From Anglo-Saxon Seewaur, from its wavering to and fro on the top of the water at high tide.

† Or Mixens, as they are now called in the island.

like woad. As however the districts in which the preparation of such a manure might possibly be profitable, for the most part abound in peat, it might be a good practice to convert some of this into ashes, which might be mixed with the pulp, till of a consistence to be readily made up with the hand into balls, which might be exposed to strong drafts of wind on crates, under partially closed sheds. How far it might be useful to have recourse to somewhat of the practice which is exercised in the preparation of woad, and after a time to submit the balls when broken down to fermentation, is a point which must be left to those who are willing to make experiments. The whole matter is thrown out as a mere suggestion, but we are sanguine that in good hands it may lead to very important results. *M. J. B.*

A QUESTION was addressed to us by a correspondent the other day as to the management of a night school, on which, from many years' experience, we are able to speak with some confidence. We recommend that a room and tables and forms, and warmth and light, and the promised punctual attendance of one or more teachers for two hours on two or three evenings of the week being provided, the announcement of all this being in readiness for any young men who will avail themselves of it, should be accompanied by the intimation that a charge will be made sufficient to cover all these expenses. Twopence a week a-piece will be readily paid by agricultural labourers—and, where the attendance of only 15 or 20 can be expected, one penny a night will be needed to pay for coals and candles; when 30 or 40 are in attendance one half that sum will be enough. The advantages of a payment are that triflers will be kept away, that those in earnest will be the more determined to make use of the opportunities for which they pay; and that the teachers will feel more bound to punctual attendance and earnest work. As to "Rules" none are needed, beyond the understanding that payment is expected on the first evening of the week, and that the doors will be closed a quarter of an hour after the time of commencement. The maintenance of order must be the result not of rules, but of the personal resolution of the teacher.

Where reading is not taught, the work is better done, as regards each class, if of only one kind each evening. Let the whole of one evening be devoted to writing—taking copybook writing and writing on slates from dictation alternately, and let the whole of a second evening be devoted to arithmetic. If reading as well as writing and arithmetic be needed, then perhaps it is better to spend one-third of each evening on the three lessons respectively. As soon as a boy can write well enough to write from dictation, he is master of an admirable means of his own improvement and instruction. And there is no more useful hour than that which he thus spends at the evening school.

The lads attending the school should be told that a certain degree of scholarship is now *necessary*; that if a young man of good character can write well enough and cypher well enough to keep an account of farm labour and of wages, and at the same time has acquired a knowledge of the labour which he can thus superintend, he is worth double the ordinary wages of an agricultural labourer at once. We have been able within the last year to send many young men from field and garden, where they had been earning 2*s*. a day, up to places of trust and superintendence of the kind just indicated, where they have received at once 20*s*. a week—to rise in the course of time to one-half more, just because of the knowledge acquired of them and by them at the village evening school; and facts of this kind should be made known on the first assembling of a school, so as to convince the lads and working men of the neighbourhood of the immense importance to them of the degree of scholarship which by patience and perseverance they may, during the winter evenings, add on to the skill and ability already acquired by them in the field.

"AN Agricultural Problem" was proposed the other day, and the solution which we offered has not proved satisfactory. A landlord permits the tenant of his arable land to sell straw and expend the money in "artificial manures." He accordingly selects Rape-cake, and makes his sheep perform the duties of manure-distributors. On this the former says:—"I think my tenant looks sharp after his own interest; but not having even 'bowing acquaintance' with science I must ask others to say how far my interests as landlord are protected by this mode of application of the manure." Our opinion was given that whether or not the tenant had strictly limited himself to the permission granted by the landlord, the interests of the latter were perfectly safe. The former might *consume* the straw in like manner as he consumed the cake, and the exchange of a portion of the straw for cake would be beneficial to both landlord and tenant.

Our correspondent, however, is not satisfied with our reply, and he repeats his question in another form:—"Will a given sum of money expended on Rape-cake and eaten by sheep do as much good to the land as if expended on artificial manures and applied direct?"

The answer now depends altogether upon the manure selected and the wants of the soil. The money may fertilise the land more by its expenditure on cake than by its expenditure on manure—or it may not—that depends on whether the manure is properly selected. If Rape-cake be chosen (for it is often applied directly as a manure to the land) even then the answer may be yea or nay, according to the condition of the soil. If the land be clayey we should certainly prefer its being applied directly; if it be light and sandy, we should prefer its being applied by sheep fed with it and folded on the land. No doubt it will not in that case all reach the land, for part of it will be burnt and part of it will be built up in the bodies of the animals; but the remainder will be more efficacious, owing to the manner of its application.

If, then, the question be one of literal and rigid interpretation, the answer must be that the agreement between landlord and tenant has not been strictly acted on by the tenant. We submit nevertheless that the permission granted has not been essentially exceeded, and that it is for the interest of the landlord as well as of the tenant that the sale of straw, which is food as well as manure, should be allowed when the proceeds are spent on either "artificial" food or "artificial" manure. No question in fact between the two ought to be discussed in any other than a liberal spirit: it is a mistake to argue upon the literalities of an agreement when it has been essentially observed. Next to the farmer himself, the man who is most interested in the prosperity of the cultivator of the soil is the owner—no permission or agreement therefore ought to be construed so strictly as to hinder a tenant from benefiting himself provided he does not thereby injure his landlord.

THE AGRICULTURE OF BERKSHIRE.

BY

THE REV. J. C. CLUTTERBUCK, OF LONG WITTENHAM.

(*Continued from p.* 984.)

V. THE VALE DISTRICT.—Descending the escarpment and undulations of the lower chalk, we pass into the vale—the Vale of White Horse, with all its historic associations and exuberant fertility. The exact limit of the lower chalk overlying the upper green sand is not easily distinguished. The unpractised eye will be apt to confound the rubble beds of the latter with the chalk, except where the seams marked by small dark granulated particles give a green tint to the soil. The very simple chemical experiment of submitting portions of each to the action of dilute muriatic acid, will show the large proportion of matter insoluble in acids in the beds of green sand, rubble or rock, as compared with the chalk. There can be no doubt of a general chemical identity between these beds in Berkshire and those of which careful analysis is given in the Royal Agricultural Society's Journal, vol. xii., by Messrs. Way and Paine, and which are developed in the neighbourhood of Farnham. A specimen submitted to the late Mr. Paine was pronounced by him to be identical with No. 4 of the soft brown rock above the gault, the analysis of which we give as an extract:—

	Per cent.
Combined with a little organic matter	6.38
Soluble in dilute acids, 50.81	
Silicic acid (silica)	26.89
Carbonic acid	3.13
Sulphuric acid	0.30
Phosphoric acid	Trace
Chlorine	Ditto
Lime	5.34
Magnesia	0.35
Potash	0.74
Soda	0.31
Protoxide and Peroxide of Iron	7.25
Alumina	6.50
Insoluble in acids, 42.81	
Lime	1.61
Magnesia	0.91
Potash	2.16
Soda	0.42
Alumina, with a little oxide of iron	7.88
Silicic acid and sand	29.83
	100.00

It is spoken of as one of the richest subsoils of the whole chalk series, and admirably adapted for the growth of Hops, Wheat, Beans, &c. There is no particular mentioned with reference to this bed of the green sand, which is not applicable to the same stratum in Berkshire. The other analysis given would no doubt find a parallel. The green marl is not very rich in fossils. Of the analysis of the lower chalk it need only be said, that we find 2.04 per cent. only of clay and sand insoluble in acids. On exposure to atmospheric changes these beds crumble into a fine powder. They then have a tendency to run together, so that we have the anomaly of a soil with little alumina (3.15 as compared with 19.06 in the lower gault), resting on a pervious subsoil of rubble or rock, requiring a certain amount of surface drainage, so that it is necessary either to plough or dig out the furrows, or put in shallow drains to prevent injury from the water standing too long on the surface, though it will gradually sink into the earth, either on the land itself, or in the courses by which it flows from it.

This stratum forms a series of low escarpments rounded to the north and generally falling with an inclination so regular and well defined to the south as to indicate the surface of beds which have resisted the action that has swept away the weaker layers with which they were once covered. Thus the distinctive green sand is seldom seen *in situ*, though sufficient of it is left to enable us to trace its position throughout the county. The hollows, especially those at the back of the escarpments, are filled with drift derived from the breaking of this and other beds mixed with chalk and chalk marl. In some cases, as at Aston Tyrrel, South Moreton, &c. the green sand is covered with the same Thames drift which is spread so widely over the gault and other strata in the vale. That this drift came from the north is obvious from the presence of fragments of the various strata it has passed over or which were broken up in its course; thus when it is found touching the foot of the chalk, it is charged with frequent fragments of the upper green sand, and we notice that this drift is itself covered with a counter drift of the chalk which must of necessity have come from the south. It is more necessary to notice this fact, as agricultural geologists have too readily given up the subject of drifts in despair. Their disposition in localities may seem capricious; of their origin and the course they took there seems to be ample proof. To the agriculturist they have the greatest interest, as they not only form the greatest proportion of the soils in the vale, but are sources of fertility to strata which would otherwise have been comparatively dreary swamps.

In the depressions of the green sand at and about its junction with the chalk, not due to this junction, as both are permeable strata, but to the natural level at which the water is upheld and finds its vent from the chalk, are frequent and copious springs of remarkably fine water, which as streamlets wear their way through the undulations of the low hills of the green sand receive the drainage of that stratum, pass over the Gault and Kimmeridge clay, and drive many mills in their passage to their main outfall the Thames. The district formed by the outcropping beds of the upper green sand call for especial notice, not only from their extent in this as compared with other counties to the North of the Chilterns, but from their extraordinary agricultural value. There is perhaps no stratum the surface of which is so extensively worked without drift or covering, or which has carried to other strata the fertility inherent to its chemical constituents and condition.

Arthur Young called the red land of Oxfordshire the "Glory of the County;" the inhabitants of the vale may claim for their green sand as high a title. The soil for the most part is easily worked. Where covered by Thames chalk or upper gravel drift, as at Cholsey, its cultivation is that of a lighter soil. This gives a variation to the farming where these soils, and the sheer green sand, form one or various occupations. On either there is no rigid adherence to a defined rotation of crops. Wheat is followed by Swedes or Turnips, Vetches, and other green crops, which are also followed in the same season by Turnips, Mustard, Rape, &c.; these fed by sheep prepare the way for Barley or Oats. Half the breadth is laid down to seeds, the rest to Peas, Beans, Mangels, &c. or on the heavier portions Wheat, Beans, and a third crop adopted as a matter of judgment or convenience. On some of these farms before the enclosures, now happily with few exceptions effected, few sheep comparatively speaking were kept; indeed at these times the fallow and yard dung was all the help given to these naturally fertile soils, and even now the character of the soil invites a liberty of treatment which too often degenerates into carelessness and neglect. There are instances in which Hops have been lately introduced with success on this stratum, though it is feared that the absence of trees as a shelter will interfere with the adoption of this precarious but valuable crop. There are many spots in this district troubled with surface water, of which it is difficult to be rid, from the naturally low level with reference to outfall, aggravated by the blockage of mill dams. Such is the locality intersected by the Great Western Railway between N. and S. Moreton; the black peaty surface soil contains a considerable per centage of vegetable matter, and rests on a subsoil of a drift of the green sand and chalk covering the green sand itself. This subsoil, uncharged with water, is considered by many a tenacious clay. Bid a farmer examine it: passing it between his finger and thumb, he will probably pronounce it to be clay; test it by a simple chemical experiment and it will be found to consist of about one-half lime and the remainder the

constituents of upper green sand. A very considerable part of land here and elsewhere, though not without its use, is under rough Grass; by lowering the outfall for the drainage it might be improved as meadow, or broken up for arable cultivation, especially under Mangel and other root crops. A single mill worth a few hundreds a year sometimes pens back the water on lands capable of improvement by drainage to as many thousands. Though the variety of soils in this district, co-extensive with the upper green sand, forbids the reduction of its cultivation to any limited or well defined system, we may take an instance in which with portions of several of the soils calling for varied treatment, a definite system is as far as may be observed. In speaking of one farm we wish to avoid all invidious comparison, and merely select it for the sake of demonstration.

Take as an example a farm on the upper green sand, of which the immediate subsoil is either the sheer green sand or the drift by which it is covered. The farm consists of nearly 450 acres, of which 100 are Grass, cultivated on the four-course system, with such variations as circumstances may require. The general stock of the farm consists of 18 horses, 12 working oxen of the Devon or Hereford breed, 28 cows, 10 other beasts, which with a certain number of the working oxen are fatted and sold off yearly. The young stock, the produce of the herd of cows, are reared, retained, or sold as the fodder grown upon the farm is more or less abundant. In addition to these, a flock of over 300 of well bred best country down ewes, to which carefully selected rams of the same breed, either bred on the farm or procured from the best breeders, are put. A certain number of the ewes are drafted every year, and their places supplied by the ewe lambs their produce; if these fall short a selection of ewe lambs or tegs from the best stock is sought without reference to price. About 100 of the best wether lambs are sold, the remainder fatted on the farm and disposed of as tegs. The pigs number about 80, of whom 20 are breeding sows. The stock of pigs on this farm bears a deservedly high character, great care having been taken for a series of years to retain or procure elsewhere the best and purest Berkshire blood; no expense to secure this object is spared, and large prices are easily obtained for the stock which combine the best characteristics of the Berkshire breed, especially growth, and aptness to fatten. The cultivation of this farm is managed and arranged with direct reference to the maintenance of the stock, the object being to sell as much and buy as little as possible. The corn and fodder for the horses, cows, oxen, pigs, breeding flock of ewes, is all grown upon the farm. Providing for the latter without infringing on the Grass crop requires much previous arrangement. After the Wheat crop a portion of the stubbles receives a dressing of farm yard dung, ploughed in during the autumn and winter as a preparation for Swedes or Mangels; Rye for which the land is also manured, sown in the early autumn; Hop clover (Trefoil) harrowed in on the growing Wheat in the foregoing spring; Trifolium incarnatum, harrowed in on the stubble soon after the removal of the Wheat:—these with a large breadth of winter Vetches, form a succession of spring and early summer food, which when fed off by the flock make way for Swedes and Turnips, to be again fed off in the autumn and succeeding winter. Thus, with little exception, the fallow bears two green crops. A part only of the roots are fed on the ground, a part being used to supply food for the stock in the yards, or the ewes in standing folds during the lambing season, an additional reason for this being, that from the natural richness of the soil and high state in which the farm has been sustained for a series of years, it is found that the consumption of the whole crop upon the ground would over-force the succeeding Barley or Oat crop, and cause them to be lodged. In addition to these supplies of food, a portion of ground lying at a low level on a drift of the green sand and chalk, and covered with a black vegetable mould, unkindly for carrying out a corn crop, is sown with Rye-grass, which supplies an early feed, comes twice to the scythe under liberal treatment, and a second time to be fed. Only half the Barley and Oat crops which follow the root and green crops, is sown with Clover to secure its recurrence once only in two courses; the remainder, well manured, bears Beans or Peas, in proportion to the requirements of the stock by which they are consumed; Vetches, which may be followed by Rape or Mustard, or a portion also well manured for Mangels, a rotation which, on some of this land, is found a good preparation for the Wheat crop which is to follow. It is also sometimes the custom to drill or hoe in Turnip seed between the rows of Peas and Beans, or if the Peas are harvested early, to make a tilth and then sow Turnips, which are commenced on the ground, and add manure for the Wheat crop which is to follow. Manuring the seeds in the early spring as a direct assistance to the Clover crop, and indirect preparation for following crop of Wheat, is a practice which obtains in many farms where the supply of manure is equal to the requirements of the soil.

In the farm which has led to these remarks there is a notable departure from a practice too common in this as in other parts of Berkshire—the neglect of Grass land. On the green sand, with the exception of the meadows near the brooks, the only Grass is usually some small enclosures, or orchards near the homestead. Even these are often little cared for, but where there is a greater extent it seems to be looked upon as that from which all is to be taken and nothing returned. The cause usually being the under stocking the farm, so that the manure is in arrear of the requirements of the exhaustion of the soil, the natural fertility of which tempts to this scourging system. In the case before us the arable and Grass land have both their share of the ample quantity of manure made by the sheep stock in the field, or the horses, beasts, and pigs in the yards. The greatest triumph of farm management is achieved when the food grown and consumed on his own land makes the farmer independent of the market of artificial fertilisers, whether it be corn bought and consumed, or whether it be guano or chemical manures.

ON THE MOVEABLE STEAM-ENGINE.

These notes on the moveable steam-engine are designed for the information of farmers who reside in those parts of England where it is not yet naturalised; where, consequently, the prices charged for work done have not yet been properly adjusted, or the cost and liabilities incurred for repairs and renovation adequately determined. Such readers may gather useful hints from details which to others may appear commonplace. They must bear in mind, however, that the experience recorded has been drawn from a neighbourhood where the yield of grain is large in proportion to the bulk of the straw grown; where the land is chiefly arable, and, therefore, much employment is provided for the machine in a small circuit; where the farms, also, are large, so that the work goes on consecutively for several days without the delay and waste of time caused by removal; and where the occupation-roads, though not good, are passable. Each reader must, therefore, decide for himself what allowance he must make in applying the conclusions arrived at to his own neighbourhood.

In the eastern counties the hired steam-engine is now in such general use that competition has done its work; prices have found their level, and the same profits cannot be made as rewarded the enterprising men who first set them going, or even the owner of the solitary horse-power machine of the district, in times gone by. Where the engine and machine have been purchased with judgment, a good model and sound workmanship have given a fair profit; but several men, possessed of small capital and little knowledge, have lost money by the speculation, by their want of discretion. To show how loss is incurred, I may state that I bought a machine for 105*l*., worked it for three months, found that it was not up to the mark, laid it by for a time, and then returned it to the maker, who gave me 10*l*. for it. Bad debts, too, will arise; I have had one of about 50*l*.

As regards the amount of work done, 40 quarters of grain may be considered an average yield from one day's Wheat threshing from sheaves chiefly mown. This will increase in a good year up to 45 quarters from mown Wheat, and 55 quarters from reaped corn. We once threshed in a day of 10 hours at Michaelmas, 75 quarters of Wheat. For Barley, a yield of 35 quarters is reckoned a fair day, and 40 quarters a good day for say 8½ hours' work in autumn and winter. 62½ quarters is our maximum: they were threshed in March.

The regular price of the district was 1*s*. per quarter for Wheat and Barley, or 35*s*. a day for the hire of engine and machine, with engineman and feeder; but the price per day has given way to 32*s*., unless elevators are furnished, when the old charge of 35*s*. is maintained. These elevators dispense with the services of two men (or three when the straw stack is high), and are, therefore, well worth the extra charge of 3*s*. Reaped Wheat, without the use of elevators, would now be threshed at about 10*d*. a quarter. Oats are not much grown in my district: they are charged at the same rate as other corn, or threshed by the day. We sometimes undertake to furnish extra labour, besides the engineman and feeder, at the charge of 1*s*. 6*d*. per quarter. In this case, the work is thus distributed; the engine-owner finds, besides the use of the elevators,

2 hands for corn-stack.
1 lad to cut bands for feeder.
1 man to tend sacks and clear away cavings.

The hirer will still provide labour

For supply of water and coals.
For loading carts with corn and driving away.
For stacking straw.
For removing cavings, colder, or short stuff,

This arrangement sometimes suits holders of small occupations; but, to the machine-owner, a short job, even at a higher rate of pay, is not so remunerative as a good bout of threshing on a large farm. It will be observed that these calculations are made for threshing in the field, such being our general practice, based on the following reasons.

In the case of Wheat, we now set little store by the chaff, and can always easily preserve as large a portion of it as we care to mix with cut straw for the cart-horses; unless, therefore, we cart straight from the field into the barn, for early threshing on a wet day in harvest, the Wheat is mostly threshed where it is stacked in the field, to save double handling of the sheaves.

The labour of the yardman and odd horse at odd times, in taking the litter home to the yard, is but little increased in consequence of threshing in the field, and that increase is but little felt. The loss occasioned by the dropping of the stray ears and locks of corn, from the loads when in progress from the stack to the barn, is fully equivalent to the waste arising from grain shed round the threshing-machine, where a small measure of grain would, if scattered, make a great show.

Some old harvest-waggons, which the hilly nature of the farm compels me to retain in use, are very serviceable for receiving and conveying home the cavings or short stuff derived from the Barley for the use of the stock, nor are they to be despised as moveable straw stands when the Wheat-straw requires stacking. The late incendiary fires have unhappily deterred many neighbourhoods from concentrating their stacks around the homestead, according to the old practice.

The common consumption of coals is at the rate of 6 cwt. per day when Barley is threshed, or 7 cwt. for Wheat. The coals are furnished by the hirer, and their consumption will be a good deal modified by the kind of water with which he supplies the engine; with good soft clean water, drawn from a tank filled from a slated barn, less coal will be burnt by 1 cwt. or 1½ cwt. a day than when the water comes from a dirty pond. It is a happy circumstance for the owner of the engine that the hirer has such an inducement to supply clean water, as the injury done to the engine and boiler (the tubes of which become furred up and foul whenever dirty water is used) is a matter of far more importance than the saving of 1 cwt. or 2 cwt. of coal.

For some years we have never used a flail. The prejudice in favour of fresh flail-threshed straw from the barn-door, for fodder, lingered on in my bailiff's mind for some seasons after I had begun to employ steam-power. Chance removed it in this way. We generally arrange to use the white land Barley-straw for fodder, and that grown on Heath land for litter. One year the fodder ran short, and we had recourse to some heath Barley-straw, which had been machined and stacked some time before, to eke out our supply for food. The stock were observed to eat this straw with more relish than any of the growth of that year. From that time the flail was doomed. The preference shown was accounted for in this manner:—1st, all the dust had been well beaten, shaken, and blown out of the straw by the machine; and, 2nd, the straw, which contained some admixture of layer, had been bruised in threshing, and appeared to have undergone a second gentle heating after it was stacked, and to have benefited by it; but, be the explanation what it may, we were satisfied of the fact, and have since acted on our conviction.

My machines only winnow the corn once; a single dressing then fits it for market. The advantage of a light machine for draught on hilly ground and indifferent farm-roads, and the difficulty of dressing at once, so as just to suit the market, have determined me, after some hesitation, to abide by the older and simpler form, in preference to the new double-dresser.

A connexion with steam-power let out on hire is conducive to the well-being of a farm in several ways:—1st, as an encouragement to steady and intelligent labourers; these are selected from the farm at first to feed the machine, and are then promoted to the charge of the engine; an opening for advancement is thus afforded to a class which stands much in need of such a stimulus.* Secondly, the work of threshing is most continuous during those months in which other labour is rather slack; it decreases as the spring advances, and labourers become more in request, nor are the machines again called actively into play until the Wheat is reaped, and the greater part of it stacked. Some additional hands are therefore made available for the farm connected with the engine, at the time when labourers are most wanted. Again, the occupier of land is able to superintend the working of a steam-engine to greater economical advantage than a man of another class, for he is near at hand, with a horse at command, and an occasional hour to spare for inspecting the work; moreover, he can, without inconvenience, accommodate a small farmer with extra hands, if required, and easily lend one or two horses at an emergency, and when roads are bad and fields wet, to assist in removing the machine and engine—a task which generally devolves on the next hirer.

I shall conclude my statement with a brief abstract of expenses for repairs and other outgoings; 1st, for one engine and machine, in the year ending Michaelmas, 1856, and then for two in 1857, 1858, and 1859. In each case they were in pretty constant employ from September to Lady-day, and had nearly half work between Lady-day and harvest.

Expenses of Steam Engine and Threshing Machine.

Expenses on one Machine from Michaelmas, 1855, to Michaelmas, 1856.

	£	s.	d.
Bills	33	14	6
Wages	52	2	7
Labour, largess, &c.	10	19	7
	96	16	8
1856—1857.			
Repairs	53	15	6
Oil	12	12	0
Insurance	2	1	11
Paid for hire of engine, largess, &c.	10	19	8
Wages	62	17	2
	£142	6	3

* To men of this class, wages at 2*s*. 6*d*. instead of 1*s*. 6*d*. a day, with some extras, are a considerable direct gain apart from contingencies. It is the interest of the engineman to put the feeder into the way of managing the engine, for which he gets several little services done in return, so that a succession of engine-drivers possessed of competent knowledge is readily provided if necessary

A second machine and engine were at work during part of this year.

1857—1858 (Two Machines).

	£	s.	d.
Wages	81	8	10
Expenses	10	3	2
Hire of engine	5	2	0
Repairs—			
Carpenter	3	0	0
Messrs. Ransome	4	1	2
Blacksmith	17	7	4
Clayton & Co.	16	11	0
Hurrell (foundry)	3	5	0
Parker (straps)	13	6	0
	57	10	6
	£154	4	6

1858—1859 (Two Machines).

	£	s.	d.
Wages	87	17	1
Expenses—			
Lodgings, largess, &c.	2	7	6
Parcels	0	14	0
Carriage of engines	7	6	6
	10	8	0
Brasses repaired with patent metal	2	16	2
Cloths	2	16	0
Insurance for one machine and engine	2	2	0
Clayton, bill for oil, brasses, and brushes	29	17	0
Extra oil bill	4	10	0
Hurrell, for casting files, brasses, &c.	7	12	9
Parker (straps)	18	2	0
Mending straps	2	8	0
Ransome & Co., repairs, tarpaulins, &c.	14	5	3
Carpenter	9	10	3
Blacksmith	16	14	0
	£208	18	3

In addition to this expenditure, 10 per cent. on the prime cost was included in each year's account for depreciation, without, however, the residue being regarded as realised profit.

The calculation of 10 per cent. was adopted as the usual allowance made on machinery; but, as Mr. Wells has well shown in his paper on Steam Cultivation,* the agricultural locomotive engine is exposed to an unusual amount of wear and tear.

1st. From the horizontal position of the piston, "which, without great care, rapidly becomes oval-shaped." 2ndly. From the concentrated form of the boiler, the tubes of which are difficult to clean, and wear rapidly away. 3rdly. From the injurious effect of bad roads during removals, and the constant oscillation of the engine when at work. 4thly. (We may add) From the evil effects of exposure to dust and wet.

Mr. Wells concludes that the wear and tear of a locomotive must be estimated at fully 20 per cent. above that of a fixed engine. Considering, however, the large items already inserted in these annual accounts for repairs of tubes, boilers, &c., for the engines, and considering, on the other hand, how improvement is constantly superseding older threshing-machines, it appears to me safe to estimate the depreciation both of engine and machine at 20 per cent. *Mr. P. H. Frere, in Journal of Agricultural Society.*

Home Correspondence.

Grain Cut by Reaping Machines in East Lothian.—I send you the following table from the *North British Agriculturist*, showing the quantity and kinds of grain cut in East Lothian, with the reaping machines of various makers during the harvest of 1860. It was laid the other day before a meeting of the Commissioners of Supply of that county:—

Makers of Machines.	Number of Machines.	Acres Cut. Wheat.	Barley.	Oats.	Beans.	TOTAL.
Gardner & Lindsay	119	2791½	1586	1608½	105	6151
Bell	16	237	178½	267½	..	683½
Burgess & Key	11	174	67	104	..	345
Halliday	7	128	59½	107	..	294½
Hussey	2	25	17	10	..	52
Dray	2	118	..	14	..	132
Wood	1	38	30½	..	..	68½
Goodlet	1	16	..	6	..	22
Wight	1	..	..	8	..	8
Various†	..	4	2	15	12½	33½
	160	3531½	1940½	2200	117½	7789½

M. S.

Steam Culture.—Mr. Smith, of Woolston, has addressed the following letter to the *Times*:—I finished my harvest, carting the last of my Beans on the 22d of October, carting all well. *Heavy Land.*—Field No. 1, Barley stubble, remarkably clean; No. 2, Swedes, very good, land very clean; No. 3, 12 acres, Bean stubble, smashed up and drilled Wheat, cost of seed bed 7*s.* per acre, the eighth corn crop under steam, lays nicely; No. 4, Wheat stubble, very clean and strong, cutting the stubble. *Light Land.*—No. 1, Clover ley, 12 acres, mown twice for hay, ploughed with horses, clean, Wheat drilled, up, and looks well; No. 2, 13 acres, Bean stubble, very clean, smashed up and drilled Wheat, worked well; No. 3, Wheat stubble, very clean; No. 4, Barley stubble, remarkably clean, with a fine plant of Clover in it; No. 5, Oat stubble, very clean; No. 6, Mangels and Swedes, all pulled and stacked. The Mangels: there are 858 roots on 22 yards square, weighing 3 tons 2 cwt. 8 lbs., giving a weight of 31 tons and 80 lbs. per acre. The Swedes: there are per acre 11,440 roots; 1430 bushels, 56 lbs. per bushel; 35 tons 15 cwt. The working of my steam tackle 12 days and of my horses 10 days will smash up Nos. 1 and 4 heavy land, and 3 and 5 light land, and put them in the best possible form for the winter, ready for planting Beans and roots in the spring. My farm is open to inspection of all. *William Smith, Woolston, Nov.* 1.

* A Lecture delivered to the Farmers' Central Club, June, 1860, by Mr. J. Wells, of Booth Ferry House, Howden.

† This grain was cut by machines brought for competition at Longniddry.

Societies.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

The Council resumed their sittings after the Autumn recess on Wednesday, November 7, when a monthly meeting was held: present, the Right Hon. the Earl of Powis, President, in the Chair, the Earl of Macclesfield, Lord Berners, Lord Feversham, Lord Tredegar, Lord Walsingham, Hon. Colonel Hood, Hon. A. Vernon, Mr. Amos, Mr. Barnett, Mr. Barthropp, Mr. Bramston, M.P.; Mr. Caldwell, Mr. Druce, Mr. Exall, Mr. Frere, Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Wren Hoskyns, Mr. Howard, Mr. Lawrence, Mr. Shuttleworth, Mr. Torr, Professor Simonds, Dr. Voelcker, Mr. Jonas Webb, Mr. Burch Western, Mr. Wilson (of Stowlangtoft), and Professor Wilson.

Before the commencement of business, the President wished to call the attention of the members to the melancholy circumstance of the death of the Duke of Richmond, which had deprived the Society of one of its original members, of one who had held the office of President three times, and who always gave the greatest attention to agricultural matters. His Grace had carried off many of the Society's prizes, and his live stock always held a distinguished position in the shows. He was unable of late years to attend the meetings as formerly, but every one connected with agriculture must feel the great loss the Society has sustained by his decease. The names of 28 candidates for election at the next meeting were read.

FINANCES.—Mr. Barnett, chairman of the Finance Committee presented the report on the accounts of the Society to the end of the previous month, from which it appeared that at that date the current cash balance in the hands of the bankers was 1624*l.* 18*s.* 6*d.* The Secretary's receipts had been duly examined by Messrs. Quilter, Ball, & Co., and were found correct. During the recess, the Committee had met several times to take into consideration the subject of the arrears of subscriptions, and had thought it necessary to issue circulars, calling on members to remit the subscriptions due to the Society. The result has been that whilst many have paid their arrears, about 400 names have been struck off the list, consisting of those who from death, insolvency, or misfortune are incapable of paying. There still remain a great number of members who have taken no notice of their liability; it has therefore been deemed advisable to divide England and Wales into districts, and a list of those in arrear will be sent to members of Council residing in them, in the hope that they will endeavour to procure the payment of such arrears, and give any information in their power to the Secretary as to the ability or inability of paying, and in order to the preparation of a correct list of members, which it is important should be ready for insertion in the next number of the Journal. The amount of arrears collected during the present year is 2258*l.*, and a large sum still remains due from members in arrear.

The Committee have to lament the death of Mr. Huxley, late senior clerk in the office, where he had served with zeal and fidelity for 18 years.

JOURNAL.—Mr. Thompson, M.P., chairman of the Journal Committee, presented suggestions from that committee on the subject of the cost of delivering the Journal to the members of the Society. The Committee take this opportunity of announcing to competitors for the prize to be given for an Essay on the Agriculture of Hampshire, that for the purposes of this prize, Hampshire will be considered to include the Isle of Wight.

Authority was given to this Committee to allow the use of the blocks used in printing the engravings in the Journal to authors and other members of the Society, in such cases as they shall think fit, all cost to the Society or injury to the blocks being provided against.

The subject of the late period of the publication of the Reports of the Judges on Implements exhibited at the country meetings having been brought forward by Mr. Brandreth Gibbs, it was resolved, after long discussion, that the times of publication of the two numbers of the Journal be on the 1st of February, and as early in August as the Report of the Judges of Implements can be published, and within one month after the country meeting.

On the motion of the Hon. Col. Hood, seconded by Mr. Thompson, it was resolved that at the country meeting the Implement Yard shall be open to the public on Monday, on payment of 5*s.*, and the Stock Yard at 1 o'clock, or as soon as the judges have made their awards, without extra payment. On Tuesday the Show Yard of live stock and implements to be open to the public on payment of 5*s.* On Wednesday the admission to the Show Yard to be 2*s.* 6*d.* On Thursday and Friday the admission to be 1*s.*

On the motion of Mr. Fisher Hobbs, Mr. Owen Wallis, of Overstone Grange, Northampton, was unanimously elected a Member of Council, in the room of Lord Southampton, resigned.

The time for the General Meeting of the Society at their house in Hanover Square was fixed for 12 o'clock noon on Wednesday, the 12th December.

The Council decided that the date of the Leeds meeting should be the week commencing Monday, July 15, unless the assizes or local arrangements should interfere.

A communication was received from the Foreign Office, accompanied by a Report of the Committee on Agriculture of the United States respecting the cattle disease, which was referred to the Veterinary Committee.

The Council then adjourned to Wednesday the 5th December.

Farmers' Clubs.

CENTRAL: *Monday, November* 5.—"*The Public and Private Trials of Agricultural Implements: can they be made more efficient?*"—Mr. W. Fisher Hobbs read the following paper on this subject:—I am inclined to think that these discussion meetings of ours by no means depend for their success or utility on the introducer of the subject; but, on the contrary, that our meetings really act up to what they are called, and that the discussion itself is frequently the most interesting part of the evening's proceedings. Fortunately for myself, I feel that such will certainly be the case on the present occasion. My chief duty, as I take it, will be really confined to introducing the question, enumerating such as I consider to be the chief points we should dwell on, and then leaving these to the practical analysis of the members of the Club; whether they be the cultivators of the soil, the judges at our great meetings, or that influential body the manufacturers and exhibitors of implements, all of which classes, I am happy to see, are represented here to-night. To show that I have already acted upon this view of the case, I will at once read to you a circular letter which I have addressed to the judges who have taken office during the last three years, to many of the implement makers who have exhibited during the same period, as well as to a number of other gentlemen whose opinions and advice I knew might conduce to a satisfactory development of this question. There are many, no doubt, I have omitted to send to, while from several of those I have addressed I have received some valuable suggestions; and I hope that many of those who have not answered my letter have come here to-night prepared to speak to the subject:—

London, October 10, 1860.

Dear Sir,—At the request of the committee I have consented to open a discussion here at the next monthly meeting of the Club, on Monday, November 5th, on "The Public and Private Trials of Agricultural Implements—can they be made more efficient?" I shall engage to do this as one practical man addressing his fellow members of the Club, with a view to ascertain how far the trials of machinery have hitherto been compatible with ordinary farm work; or, how such tests may be made more reliable and trustworthy. Knowing the interest you have long taken in this subject, and the experience you have had of our more modern agricultural machinery, I write to request that you will favour me with your opinion as to how we should proceed. The chief points, as it strikes me, are: The duration of the trials: should more time be allowed to obtain a satisfactory result? The nature of the ground, and the season of the year best adapted for the trials of different kinds of machinery; the duties of the judges, and the necessity for some earlier report from them; the comparative merits of public and private trials, and the advantages that might follow from extending these, or having them more frequently adjourned to seasonable periods. There are other branches of the subject which may have had your attention, and that I trust you will advise me upon. As, however, the time is drawing near, I shall be obliged by any reply you may favour me with being forwarded at your earliest convenience.—I am, dear sir, yours faithfully, W. FISHER HOBBS.

I wish to mention here that this subject has long occupied my attention, and if you will turn to my "Report of the Trials of the Implements at Carlisle, in 1855," as given in the 16th volume of the Journal of the Royal Agricultural Society of England, you will find that I then insisted on the trials of machinery and implements being more thoroughly adapted to the ordinary work of the farm. It is precisely with this view that I now entertain the question, and it was in this light that I recommended it to the attention of the Committee of this Club, in December last, considering it to be essentially one of those topics that might be discussed with much advantage by those who, after all, are the most interested in it—the farmers themselves; but I had then no idea of undertaking the duty myself, and it was not until it was most strongly pressed by the Committee that I consented, at the last moment, to fill up the gap. The question may perhaps by some be looked upon as rather a delicate one, although I am not prepared to see it in that light. You must again understand that it is not as one of the Council of the Royal Agricultural Society of England, or as an old steward of implements at several of its country meetings, but simply as a member of this club that I am now addressing you. The subject on the card, as you will see, resolves itself into two divisions—the public and private trials of implements; and it may at the first glance appear somewhat difficult to separate them: but I may as well explain at once that the private trials are those necessarily confined to the inspection and examination of the machines by the judges and engineers; and the public trials are intended more to illustrate the kind of work an implement is equal to after the judges have in some degree formed their

opinion on its merits. I need not say how strongly I insist upon the necessity of these trials under the inspection of competent judges; for you must remember that the purchasers are not always the best judges of the implements they should select; inveterate habit and strong custom will frequently induce a farmer to persevere with implements of an inferior character, simply because such are and have been long in use in his own locality; then, the influence and representations of neighbouring manufacturers or active agents are very great, and as often lead to the agriculturist adopting a certain description of implement, not so much of his own choice or for his own advantage, as from the self-interested advice of those who are anxious to secure him as a customer. Even the public exhibition of implements would lose much of their effect, but for those reliable and authoritative tests; for here too the farmer is equally open to the cupidity of the exhibitor or his "showman," who may have more "knack" in pushing a sale than in producing a good implement; hence, it becomes palpably necessary that a rigid examination should be made by impartial and able men, who should have every available opportunity and ample time to decide which is the best amongst the implements offered to the notice of the public: in fact, as I said in my report of the Carlisle Meeting, "the agricultural mind is scarcely yet in a position to discriminate between the claims of competing machinery, or to form a satisfactory judgment on its practical value for farm purposes." Of the different kinds of machinery, those adapted to field-work may be witnessed with less inconvenience by the general body of spectators; while there are certain minutiæ and delicate tests in fixed machinery and some in-door implements which it would be almost impossible to try in a satisfactory manner, were the public permitted to be present at the time the judges are engaged in their duties. However, whether public or private, the great point comes very much to the same issue, "Can these trials be made more efficient?" In other words, can we afford the judges more opportunity for their inspection, and of coming to a conclusion, occasionally, perhaps, more satisfactory to themselves? Can we give the exhibitor more time to develop a really valuable implement, one that shall not merely aim at the speed of a "racer," or get through, by some "clever jockeyship," a few minutes' or at the most a few hours' work; when, without such "nice handling," and if once committed to the care of ever so intelligent a farm labourer, it would most probably break down in a week? One of the chief points, then, as I have said in my circular letter, is "the duration of the trials;" should more time be allowed to obtain a satisfactory result? I may here quote some of the evidence with which I have been favoured on this branch of the subject:—

A. remarks that "the trials of many implements and machines are carried on at a time of the year when such practices may be said to be out of season." Again he says, "But whether the machine be a little or a great one, it ought never to be stamped with the approval of an agricultural society, without first being submitted to so thorough and practical a test that no doubt can exist of its being a useful farmers' implement."

B. says—"You plough, and the land is utterly unfit. As a farmer you would not plough under such circumstances; it would be lost time and madness to do it. You reap by the same rule, with corn as green as Grass, and totally unfit for operation."

C. "The trials of field implements should not take place if the soil is not in a fit state for them How can ploughs and harrows fairly work upon land baked as hard as a stone? Or how can clod-crushers and rollers fairly work in soft wet land? Therefore these trials should be postponed, if the soil is unsuitable and the work is unbusiness like. Reaping machines should be tested on ripe corn only; mowing machines before the Grass is dead and tough; hay-tedding machines immediately the Grass is mown; hay-rakes as soon as the hay can be winnowed. Steam cultivation should be specially tested in all its variations, on different soils and under all the varied conditions of the land."

D states: "I think a much longer trial should be given to the more complex machines; as steam-ploughs, combined thrashing-machines, reapers and mowers, than is the present practice. The simpler machinery, as cake-crushers, bruisers, chaff-cutters, &c., have not so many chances of disturbance in their arrangement, and therefore need less-prolonged trials; these, however, are generally knocked off far too quickly. In all cases I would test the different machines at the season for which, in practice, they are intended."

F, in referring to a public trial of ploughs in July, says: "The land was baked as if in an oven; the day was broiling hot, and the men and horses irritable from excitement and the heavy nature of the work; never was patience more required and given, to decide the contest."

H says: "The trials of agricultural machinery are much too short, and in all cases the Judges should have really a private trial, so as to be perfectly satisfied with the merits of each machine; it is impossible in the short space of time of five or ten minutes to arrive at a satisfactory decision. When the judges have decided, then give the public every opportunity of forming their own opinion. In the second place, the truest mode of testing each machine individually, would be the working it at the season of the year on the crop for which it is intended."

I. "I think that more time should be given to each implement than is generally the case, particularly in reference to mills, cake breakers, &c. Care should be taken as to durability; I have known a prize cake crusher purchased, and all the small teeth smashed at the first trial with hard cake, when attached by a strap to an engine."

J. "Time should be given at any meeting, to enable judges to make such experiments as fully to qualify them in supporting their decisions."

K. "The public trials of implements at our agricultural shows, and especially at those of the Royal Agricultural Society, should be so conducted as to give the judges appointed to decide on the relative merits of the implements which are brought under their notice the fullest opportunities of coming to correct conclusions. Otherwise the public can have no proper reliance on their decisions. The trials of the steam ploughs and cultivators take place under very exceptional conditions. The generally favourable nature of the land selected, and the small amount of it, can give no real test of their capabilities on the generality of farms. The actual cost and quality of the work on soils of a mixed and variable character, their liability to derangement by breakage and other casualties, their power of overcoming the difficulties incident to fields of great inequality of soil and surface and also irregularity of boundary, their capability also of completely ploughing or grubbing the whole of fields so circumstanced and finishing them in a workmanlike manner—these are all points upon which the judges should have the fullest opportunities of coming to correct conclusions, and are very essential conditions on which their decisions should be based. With regard to threshing and dressing machines, I have seen many occasions on which the shortness of the trials has been very conducive to the credit which some of them have gained, and which a trial of proper duration would have altogether negatived. They start with their riddles, screens, shakers, &c., all perfectly clean, and are just coming to that point when they are about to choke and waste the corn, when the trial ends. With regard also to the reaping machines, the time of trial renders it impossible to obtain fairly ripened corn. The small quantity of unripe Rye assigned to each machine renders the trials little better than a farce."

The next point is, "The nature of the ground and the season of the year best adapted to the different kinds of machinery;" and with this I may associate the policy of having such trials more frequently adjourned to seasonable periods. There is no doubt that the consideration of this feature must be attended with considerable difficulty, which would be especially felt by agriculturists, who, however much they may be inclined to give up two or three days for an object, will not be very ready to repeat the sacrifice. Now, if we had several meetings, at several seasons of the year, according to the character of the machinery to be tested, it would be not only next to impossible, even if it be desirable, to collect together a large attendance, but the difficulty of obtaining efficient judges would be further increased, and this is already very great. Under the triennial, or, as it is now, the quadrennial system, it is so arranged that certain classes of implements only come on for trial in the same year, and so far the difficulty may be said to be solved; but, is the month of July the best time for testing the merits of some of our field implements? If not, it would seem at the first blush that two meetings would be necessary—one for the show of stock and the exhibition of implements at the usual time, and another for the trials of those implements whose turn is on for that year. I fear it would be very impolitic to attempt to organise two such distinct meetings, and hitherto the difficulty has been overcome by the adoption of adjourned trials; that is, by deferring the adjudication of certain implements until the season of the year when they come properly into use. This has been attempted with some success in the case of the reaping machines; and I do not see why such an example might not be adopted with some other field implements, which might then be put upon the land at a time when it is more fit for their use, and when the farmer himself could more thoroughly judge of them at work. The third item in my category is "The duties of the judges, and the necessity of some earlier report from them." In touching upon this subject, let me say I believe that the duties of the judges of implements have been very ably and conscientiously performed. They are, too, entirely "labours of love," and are frequently pursued under difficulties, annoyances, and an amount of hard work, which none but those engaged upon such occasions can have any due conception of. I believe, moreover, that the intelligence and fitness of the judge for his office have generally advanced as the machinery which he inspects has itself improved. No man, in short, with his wits about him, serves an apprenticeship with more advantage than a judge, or, I may add, a steward of the implement department. The actual duties of a judge should be self-evident. In the first place, he must be a man of unimpeachable integrity; he must likewise have great practical acquaintance with the class of implements he undertakes to adjudicate upon; he must understand something of their mechanical construction; he must be able to appreciate the wear and tear belonging to them, and to make a due estimate of their value as working adjuncts of the farm. Even, beyond this, he should have that knowledge of the world which will enable him to allow for the "nice arrangement" and "skilled-handling" of the exhibitor and his assistants, and so to recommend to the farmers' attention only those inventions which will carry with them further proof when employed every day upon the farm, as well as on high days and holidays at great agricultural exhibitions. There are many gentlemen thus qualified, and you must allow me to say that I have had many opportunities of witnessing the earnestness and devotion with which they will begin their work, and the pluck with which they will finish it, after several days of much labour and fatigue. It is not perhaps in human nature to be perfect, as it certainly is not for an unsuccessful man always to be satisfied; but I believe that the more we hear of the judges the more we shall appreciate their services, and that when their reports are published at that early period, much of the idle talk we now sometimes hear will be corrected. As to implements not always acting up to that high character obtained for them at the trials, we must ever bear in mind that any such disappointment may arise from no fault or mistake on the part of the judges, but simply from the successful exhibitor having sent a really good implement to the show-yard, and manufactured an inferior one afterwards. It is right, I should say, that many of the exhibitors are very desirous to have longer trials for their "entries," but it is frequently attributable to their own negligence that so short a period is occupied in the examination of their own inventions; and it often happens that the judges themselves, in addition to their other duties, have to assist in putting an implement in working order before they can proceed. Then a wheel, a band, a strap, a screw, or a wedge is not uncommonly found to have been left behind, or some more palpable excuse is offered for not proceeding in due rotation—the delay being as often the result of clever "jockeyship" as of mere chance or accident. Let me offer to your notice the miseries that a judge of many years' standing has experienced in this way. He says—"I could complain of the carelessness and inattention of exhibitors who continually bring untried and unprepared implements for trial. No implement ought to be brought to the test of chosen judges until it has undergone repeated trials in preparation; our most successful exhibitors do not thus commit themselves." Again he says—"Now, supposing exhibitors came prepared in perfect order for trial, then a long ordeal is not at all necessary; but the time of the judges is often most unfairly drawn upon by the various adjustments required, and thus the trials are further curtailed; this ought not to be, and the first thing I would suggest is that implements improperly prepared for trial should be at once thrown out." You will gather from all I have advanced and quoted that the efficiency of the trials of agricultural implements depends in a great degree upon a sufficient length of time being allowed for the due examination and thorough testing of the many articles brought into competition; this is, as I consider, the main point of the whole question before us to-night. The system adopted after the Carlisle meeting, of classifying the several varieties of machinery, and only bringing them on for trials at longer intervals, should, of course, directly tend to more time being spent in investigating their merits. The same principle should also facilitate the adjournment of certain trials to more fitting seasons of the year; so that reapers should cut the corn when it is ripe, the plough go to work when the land is in a working condition, and the steam cultivator and threshing machine when they are the daily requirements of the farm. It is, I think I may say, by no means improbable but that this practice will come more and more into use, as many gentlemen whose judgment is generally regarded with respect have a growing opinion in favour of adjourned trials, and are making efforts in the right direction for that purpose. It is not my intention to conclude with any formal resolution, as I find that such a custom has grown out of use at the club's discussions; but I would suggest that one of the chief topics the meeting should turn its attention to might be the suggestion of adjourned trials, and how far they can be carried out, with due consideration for the convenience of the judges, the exhibitors, and the public. I have no doubt in my mind that such a system of seasonable testing of certain implements would be much more reliable, and that the awards would be depended on by the agricultural world with more confidence and certainty. I must repeat that I maintain the necessity for an annual exhibition and trial of our agricultural implements; that I uphold the energy and abilities of the judges; and that I appreciate the ingenuity and spirit with which the exhibitors have persevered, and successfully advanced the mechanics of agriculture.

For the discussion which took place on this important subject, we will endeavour to find room next week.

Teviotdale.—"*What is the best means a Farmer can adopt to secure unadulterated artificial Food for Sheep?*"—Mr. Paterson, Greenbanks, said the question as to what was the best substitute for Turnips, as food for sheep and cattle, had already been discussed by the Club, and they now arrived at another—How was a good oilcake to be got? This, experience had taught most of them, was a most difficult matter. It might be said it was a very simple question. Go to a respectable dealer, offer a good price, and you will be certain to get a good article. But in the apparent simplicity of the case the difficulty consisted. When you went into a market, you bought from a respectable man an article represented as genuine. "Genuine as imported" was the term used; and it meant simply nothing at all. A farmer might in this way get many tons of cake, so utterly worthless, that he had better have lost the money altogether. It might be said, "Submit the cake to analysis;" but this, in a great majority of cases, would not answer the purpose Suppose a farmer goes to market, and buys three tons of cake; if he has it analysed, he pays 30*s.* of a fee to the chemist, and thereby increases the price by 10*s.* per ton. The turnip crop was now quite inadequate to the requirements of the farmer, and an auxiliary feeding substance was an absolute necessity. It was therefore of the greatest importance that the purchaser should be protected against the adulteration practised by unprincipled dealers. As an evidence of the extent to which this practice was carried, he would read an extract from the report of an eminent chemist, lately presented to the Royal Agricultural Society of England. It was as follows:—"Whilst inferior manures are now the excep-

tion, I regret to say the adulteration of oilcake, and the employment of bad and foul seed, is a growing evil, which requires to be checked. The number of inferior and downright injurious oilcakes submitted to me for analysis and examination has far exceeded that of really good cakes." There was great necessity for some plan being adopted to meet this evil, and it could not well be met by any man single-handed. Union is strength; and unless they united for mutual protection, they could not prevail against the impostors. If the members of this Club were to combine, and get all the cake they required from one dealer, it would be a means of inducing him to provide a good and wholesome article; and the propriety of their doing so was worthy of their most serious consideration. There was another way of overcoming the difficulty, and that was, by making the Rapecake themselves. The process, he believed, was extremely simple, and two or three acres of land might easily be sown with Rape, which was a very prolific article. He was quite prepared, for one, to make the experiment. These were the only remedies which he considered practicable: but he would be glad to hear and adopt a better, if a better were suggested.

Mr. Haddon said there was a Farmers' Union in Kelso established for the purpose of protecting the members from imposition in the shape of adulterated manures and feeding stuffs, and its operations had been productive of great advantage to the neighbourhood. The growth of Flax was at one time a very favourite topic with an extensive landed proprietor on the other side of the Border, Sir James Graham, who loved to debate on the great advantages of cultivating it; but that idea was now almost exploded, and unless Flax was grown on a large scale there was danger that, while other things would be neglected, it would not be well attended to. He thought an organisation such as that which existed at Kelso would protect the farmers of the district from fraud, and suggested that the Kelso Society should be communicated with.

Reviews.

The Relations of Veterinary to Social Science, being the Inaugural Address delivered by Professor John Gamgee, Principal of the new Veterinary College, Edinburgh.

We have received a proof copy of this pamphlet, which is characterised by the well known intelligence and energy of its author, and furnishes the reader with an hour's instruction and satisfactory employment. The lessons he receives are chiefly on the relations of man and animals as regards health—the communicability of disease from one to the other—and the sanatory effect of the sound or unsound food derived from healthy or diseased animals. On these points we extract the following passages:—

Diseases of Men and Animals.—"In the first place, men and animals are subject to similar diseases—to diseases communicable one to the other, and to diseases which spontaneously originate either in man, in some instances, or in the lower animals in others, and are transmitted from first to second, or second to first, without other means of development or propagation. The study of diseases, in their comparative relations in different animals, constitutes the science of Comparative Pathology. It must be obvious to all that the amount of danger man incurs by living amongst animals, under different circumstances, should be known, but on this most important subject we need means of determining the spread of diseases in animals, their nature, and the extent to which they are committing ravages. That there are many unsuspected sources of disease in man, from the prevalence of disease in animals, is often suggested, but positive facts are with difficulty obtained. I must illustrate my meaning. In different parts of England, Scotland, and Ireland, cattle are subject to anthrax, commonly known as quarter-evil, or by the more ludicrous epithet, 'black leg.' We have to thank our northern latitude for the rare development, in these cases, of the virulent anthrax poison, which destroys many human beings in warm climates. So destructive is this poison, that flies resting on the carcases of animals that have died of this disease, or even on the parts affected in the living animal, may fly on to a man's face or hand, induce malignant pustule, and death in a short time. Though such accidents are doubtless extremely rare amongst us, we must not take it for granted that they do not occur. Dr. Keith of Aberdeen related a case to me, where disease and death spread through the family of a man who dressed a carcase of an ox that had died of quarter-ill; and had we better means of collecting information on these subjects, many similar instances would doubtless come to our knowledge. A cutaneous disease of very common occurrence in cattle, and which generally receives the name of ringworm, is a pustular eruption communicable to man; and I have often seen bad boils—a furunculoid eruption—on the hands and arms of those attending these animals, which has led to considerable indisposition, and been difficult to cure. Again, I may mention the vesicular murrain so prevalent in cows, attended with the development of a virus, which is often squeezed into the milk-can as the cow is milked. Such milk, drunk warm, will kill calves and pigs, and induce fever and cutaneous eruptions in men. Why shall it not be attended with dangerous and fatal consequences when partaken of by the infantile portion of the population, which consume so large a quantity of the dairy produce! But of late years considerable interest has been excited by the metamorphoses of parasites. In a piece of pork a few yellow specks or transparent vesicles, which do not appear of the slightest importance, may in reality be tapeworms in one stage of development, for the destruction of which we have to hope for prolonged boiling or efficient roasting. If the meat be eaten underdone, a parasite at once developes in the human intestine, which it sometimes baffles human skill to displace. The veterinary surgeons throughout the length and breadth of our land should be accurately acquainted with the parasitic diseases of animals; and, however unattractive the study at first sight may appear, no scientific mind can fail to appreciate the advantages to be derived from a more extended knowledge of Helminthology. Therefore, gentlemen, the sources of disease in man which are to be discovered by studying the diseases of animals, are far from few and trifling, and facts regarding them should claim the attention of the veterinarian. On this very interesting subject I have to recommend perusal of two very lucid and elaborate papers by Dr. Lindsay of Perth, and my esteemed friend, Dr. Richardson of London. Both these important contributions to comparative pathology were published in the first volume of the 'Edinburgh Veterinary Review;' and I am proud to think that our annals of comparative pathology should contain the contributions of men so fitted to act as pioneers in the study of the sciences to which that journal is devoted. Secondly, the diseases of men and animals are often due to similar causes. They are the result of cognisable agencies which operate alike on all living things, and their investigation, though almost exclusively engaged in by the medical man, should occupy the time and attention of enlightened veterinary surgeons. The evil results of over-work, overcrowding, absence of light in stables, as in dwellings, of artificial diet, of the nature of food as changed by modern cultivation, and the influence of such changes on animals, all constitute vast subjects for inquiry. The mysterious nature and operation of enzootic as of endemic influences, of epizootic as of endemic influences, of miasmata and contagion, should as constantly occupy the members of our profession, devoted to the study of sanitary subjects, as the members of the profession of human medicine. All these researches, and in fact, every part of veterinary science, has a bearing on agriculture. It is a fact worthy of notice, that the Medical Officers of Health of the City of London—amidst their most interesting and intricate researches as to the influence of sewage emanations, and a host of similar causes that are to be observed in all crowded cities, contributing to fill our hospitals and swell mortality lists—specially allude to the injurious influence exerted by stables and byres. In these matters, backed by adequate authority, veterinarians should effect much good. The 'Medical Times,' in an article on the development of sanitary medicine, commenting on a report by Dr. Lankester, says, 'Stables are necessary nuisances. Horses or donkeys we must have; but then we ought to take especial care that they be kept in a suitable and laudable manner—*i.e.*, up to the level of scientific sanitary requirement. But how seldom are they so kept! There are,' writes the Doctor, 'few sources of nuisance which are more constantly complained of, than ill-kept and ill-drained stables.' In his own parish, he, Dr. Lankester, has waged great and Garibaldian (successful) warfare against these Augean quarters, and reports the abatement of 208 out of 268 stable nuisances complained of. Happily, as it appears, the owners of horses are more readily worked up to proper sanitary sentiments in behalf of their quadrupedal slaves, than householders usually are in behalf of their biped tenants. As Dr. Lankester says, 'The reference to the notices of improvement in the stables showed that the owners were quite alive to the value of the health of the animals that lived in them; a response which it is sometimes difficult to arouse in behalf of the human occupants of houses needing sanitary amendment.' Dr. Lankester's experience is encouraging, and it shows how, backed by by the influence of authority, a person can accomplish that which, on the simple advice of professional men, can rarely be secured. Many of us have waged war against the denizens of filth and disease in which cows are kept, but we cannot boast of the success which has attended the assiduity of Dr. Lankester as Medical Officer of Health. Sanitary reformers in considering the history of epidemics have of late years disregarded far too much, in my opinion, the contagious nature of diseases. Cholera, typhus, yellow fever, &c.—undoubtedly most destructive under the influence of defective hygiene—are maladies characterised by the development of a specific poison, which the Germans have termed the *contagium*, or principle by which contagion is effected. The investigation into the nature of contagium, of the many circumstances which influence and favour, or check it, presents to the veterinarian one of the most practical objects for inquiry that I am acquainted with. As Dr. Richardson says, in the article before alluded to, the production of maladies by the discovery of their poison, which Dr. Lindsay accomplished in regard to cholera, is one of the best means to settle questions relating to the origin of disease; and, by careful experiment, much is to be accomplished which has ever been regarded as obscure, and circumstances are reconciled, which, on a superficial observation, have been regarded as contradictory. I may be permitted here to quote the concluding sentences of Dr. Richardson's paper. He says:—

'1. That by experiment it might be proved, in what excreta of an affected animal the poisons of certain specific epidemics are located. 2. By what surfaces of the body such poisons may be received, so as to excite their morbific effects. 3. Whether the virus of a disease acts in the production of the phenomena of the disease, primarily or secondarily, *i.e.* by its own reproduction and presence, or by the development of another agent. 4. Whether the effect of climate, season, temperature, moisture, and the like, in their influence on the spread of epidemics, act by modifying the poison which excites the epidemic, or by modifying the condition of the individual who is exposed to the poison. While the solution of any one of the problems suggested above would be a fact of the time, the inquiries themselves lie open to the veterinarian even more inviting than to the physician. His opportunities are greater for such researches, and his increasing science is leading his mind each day nearer to the appreciation of their worth.'

That Dr. Richardson, imbued as much as any man I know with a catholic spirit and keen appreciation of the value of knowledge, does not agree with Vegetius in reckoning veterinary science as secondary to and consequently distinct from human medicine, is proved by the last paragraph of the essay so frequently referred to. He says:—

"'Recognising, as I do, the importance to medicine of every addition to veterinary science and art, and the fact that medicine human and medicine veterinarian is as distinctly *one* as the animal creation is *one*, I feel greatly honoured in having the opportunity of introducing into this new literary work this brief and very incomplete paper.'

"Though too modestly estimating his contribution to our first Scotch veterinary periodical, Dr. Richardson has proved, by much more than that short article, how far and deep the veterinarian can, with great benefit to himself and direct benefit to others, dive into the mysterious workings of nature."

Trade in unhealthy meat.—"In considering, gentlemen, the relations of veterinary to social science, it is expedient that I should revert to the services which the public ought to expect from qualified men checking a dishonest trade in diseased animals. This is worse than all other dishonest trades, inasmuch as its effect is to ruin the health of many, though it more directly robs the poor of their means of sustenance, by selling innutritious, if not unwholesome food, and this at a price which, however small, must be exorbitant—the material being often worse than worthless. It has been my lot to speak very openly on this subject, and incur the displeasure of those whose interest it is to keep up the trade. It was even sought by some to prove that I injured the farmers, though in reality none more than the agricultural community have an interest in the appointment of such inspectors, and this for various reasons:—1stly. The sale of a large number of diseased animals tends to some extent to diminish the price of healthy stock. If the first were discarded, the second would necessarily, in any case, be raised in price. 2ndly. Every carcase can be proved of far higher value than the dishonest flesher usually thinks fit to give. A very common price allowed is 1*l.*, occasionally much larger sums; but, as a general rule, the diseased animals would cover a great part of their first price as lean beasts, if turned to proper account, for purposes of art and manufacture. On this subject I hope, on some early occasion, to speak at greater length, inasmuch as thousands of pounds are annually lost to farmers, either by the dishonourable trade in diseased beasts, or by the absurd mode of burying a dead animal, and not procuring from it the materials of great value, which are improvidently wasted. 3rdly. Were well-educated veterinary surgeons to be appointed to slaughter-houses, they might in many cases, in passing an animal as wholesome which might have been supposed the reverse, check frauds which are rather common. As an instance of this, I may mention a case in which I was called in to condemn an ox for pleuro-pneumonia. I found him healthy, though suffering from slight temporary indisposition. Had I confirmed the opinion of the man who wished to condemn the beast, and said that the animal had the lung disease, it would have been sold at a great sacrifice. Lastly. With the present system of meat inspection, diseases are entirely overlooked, or matters of minor importance are regarded as very serious. An organ might be condemned by the veterinary surgeon, whereas now the whole beast is destroyed, or *vice versâ*. The agricultural community has, however, a direct interest that the veterinary profession should have the inexhaustible means of observation, to enlighten him on the diseases of stock which can be furnished by no other means so readily as by the appointment of veterinary surgeons, with salaries and authority suited to their stations as inspectors of slaughter-houses and dead-meat markets. This subject, gentlemen, is one which has interested me since the days I was a student in the London Veterinary College, when I wandered about the London dairies, and saw the disgusting practices incident to the sale and consumption of diseased cows:—how the most filthy products of disease were hashed up with other meat, equally unsightly and unpalateable, to make sausages; how a lot of the carcases of cows were purchased and dressed up with the fat of two or three young fat bullocks killed with them; and how the flesh of diseased animals not only found its way to the poor man's home but to the table of the middle and upper classes, from the quarters sold to the butchers who could not kill enough weekly for their own consumption. Edinburgh people may be gratified by the knowledge that most of the bad carcases are trucked to London; but every

person with the slightest regard for decency and humanity must revolt at the unmitigated evil which I have striven to expose."

Calendar of Operations.

NOVEMBER.

WESTER ROSS: *November* 3. From time to time we deferred reporting, expecting the conclusion of the harvest, week after week. Notwithstanding the slowness of ripening and the continuance of rain, the long looked for at length came. We commenced cutting 140 acres, with 8 scythes, on the 10th September, and not until the 16th October was the cutting finished. For the first 9 days we had pretty constant work, losing only one whole day within that time. Afterwards our work was very much interrupted, both by unsettled weather and by want of ripe corn. On the 24th October carting to the stackyard was finished, with the exception of 4 acres of Peas, which still lie weather-bound in the field. The harvest being protracted, and the crop more bulky than usual, the expense is necessarily increased. A large part of the crop was so laid and twisted that the scythemen could not follow each other as usual, but had to take a ridge each, and cut it up as they best could, a plan greatly more speedy than at first might be anticipated. Our half-year's servants were engaged in the work as usual, and the wages of last year were paid the hired labourers. Scythemen had 3*s.*, binders 2*s.* 6*d.*, women for gathering, and boys for raking, 1*s.* 9*d.* per day, all without victuals. The wages of the half-year's servants, and the cost of horses, are not included. The whole outlay for cutting, binding, stooking, leading, and stacking is 36*l.*, or a little over 5*s.* an acre. Included in this also is the cost of re-stooking the whole crop a-field after the extraordinary gale of October 3rd. We have said that the crop is bulky, seldom indeed are the stackyards so full as they now are, and, although the grain be damp, and much of it inferior in quality, the yield will be satisfactory. It will be some months ere the Wheat be fit for grinding, the Barley will be far from reaching the weight of last year, and the Oats are uncommonly various in quality. On the whole however this year promises well for the north country farmer, and it is greatly needed. A few years have passed which added little to the farmers' deposit in Bank. Potatoes are sound and abundant, and astonishing prices are offered for them. Turnips have so improved that our stock will participate in the general abundance of the season. We have got about one-half of the Wheat sown, at which we wrought in the intervals of harvest labour, and our hurry will scarcely be lessened until the remainder be sown.

SOUTH ESSEX: *October* 30.—"Although October has presented a very low and humid atmosphere, with but little sunshine, yet it has rained but very little and has been warm, fulfilling the old adage "Always 20 fine days in October." At the present date it is remarkably warm, day and night. Mangels, Turnips, Grass, and Clover, are growing profusely, and will make up in some degree for the sad loss of provender sustained by wet and cold during the last 12 months. The early-sown Wheats are also progressing favourably; but many slugs abound, and are committing their ravages, and will do so more than usual if not prevented by lime or some other nauseous applications strewed over them. The Trifolium plants have suffered very much already where preventives have not been attended to; not merely to kill them, but to prevent their approach. I cannot but believe that the reports in the *Agricultural Gazette* of the 27th inst. present too gloomy a picture of the state of the corn crops, and particularly the yield of Wheat. Surely it must be too much a one-sided statement in the aggregate; so much below an average was never before heard of. To be candid, many of us have certainly known it worse. How often have we known the corn sprouted to a very great extent, and nothing but ropy bread could be procured, except at an extravagant price. This year it is not so; at least from sprouted corn. No accounts are given in those reports of the loss of seeds, which certainly is greater than ever before known, and would that all my own land in seed had been of Wheat as good as my own, and several others in this immediate neighbourhood, bad as they must be acknowledged to be to a great extent; my loss would have been much less than it really is. 75 per cent. is certainly not too much to put down for the spoliation of seeds by wet and cold. I have 30 acres of various denominations not worth a groat, whilst 50 acres more are injured to a great extent; and this is not an uncommon case, for it is alike throughout the United Kingdom. Out of 250 returns of the Wheat crops, there appears to be only one to have exceeded 28 bushels per acre. [You have not read the reports correctly]. I myself have exceeded that, and as good Wheat as need be grown. That there is below an average I do not deny, viz. 32 bushels; but to exaggerate the failure will tend to no good with agriculturists, this the farmer may depend upon. What it will do and has done, is to cause an influx of foreign corn, so as to reduce the real value of all our own, both bad and good, so that it cannot remunerate the British farmer in any possible way, nor even will he find a fair market for his own at all, except for the very best." *A. Hardy, Maldon, Essex.*

Notices to Correspondents.

BREWING. "The British Wine Maker" is the title of a book containing information on almost all the points you name. On Hop-growing consult the English Agricultural Society's Journal.

GRASS LAND: *Rusticus, No.* 2. Apply bonedust and feed the pastures all down; and you will immensely improve the pastures. This will encourage Clovers; but we cannot presume that it will extirpate Agrostis stolonifera. Read Mr. Lawes's experiments on Grass lands, in a recent Number of the Agricultural Society's Journal. We shall call attention to them shortly.

MANGEL WURZEL: *C D.* Ask for the experience of others as to putting ewes in lamb on Mangel Wurzels at this season. If pulped and mixed with chaff, we believe it may be safely [illegible].

[illegible] ESSAY: *D.* We are unable to assist you; apply to the Secretary.

PRICE PER ACRE: *S V.* You want us to state the dream as well as the interpretation. How would it be possible to form an opinion of the produce of grain without having seen the crop. Valuers of growing crops form a guess, guided by the average of past years; valuers of crops in the rick—that is, threshers or all.

THE TOP OF THE KOHL RABI: *Thor.* Unless accompanied with a spring growth, when it is highly nutritious and a delicious vegetable, it is of much the same use and quality as the top of the Swede. The bulb, if allowed to remain through the winter upon the land, sends forth shoots very luxuriantly in the spring, and early produces a large amount of green food, but as this is made at the cost of the bulb, which is wasted in the same way as other Turnips are by their flowering, and as the modern practice of drawing the roots and feeding on yards, and thus freeing the land for winter ploughing and early sowing, is so much more advantageous, it cannot be recommended to leave it on the land for spring [illegible].

CLEAN FOUL CLOVER LEA: *Constant Reader.* Plough it up [illegible] half-a-dozen men with forks to clear out the Couch [illegible] of each furrow slice as the plough passes them. Spread dung manure it and cultivate it for Turnips or Mangel Wurzel; clean it well with horse and hand hoe during [illegible] Summer, and lay it down in 1862 with Barley and Grass seeds.

THE FOLLOWING ARE SOME OF THE MOST APPROVED IMPLEMENTS
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7½ FEET WIDE, MARKED H, WITH IRON TEETH	7 10 0
7½ FEET WIDE, MARKED H, WITH STEEL TEETH	8 0 0
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LIGHT SEED HARROWS	£2 17 6
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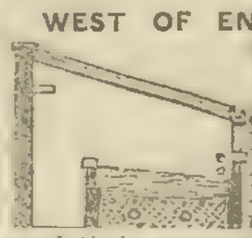

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				£
A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete				30
Do.	do.	40 ft. by 20 ft.	do. do.	50
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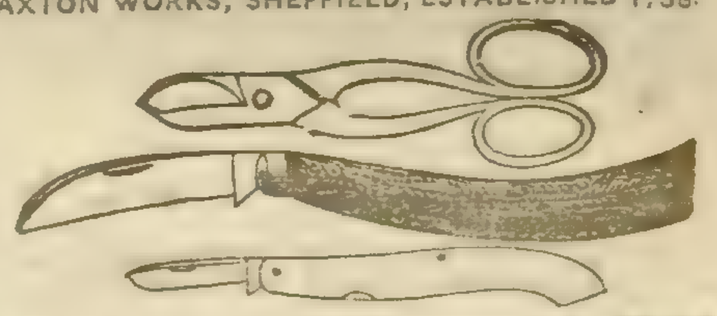

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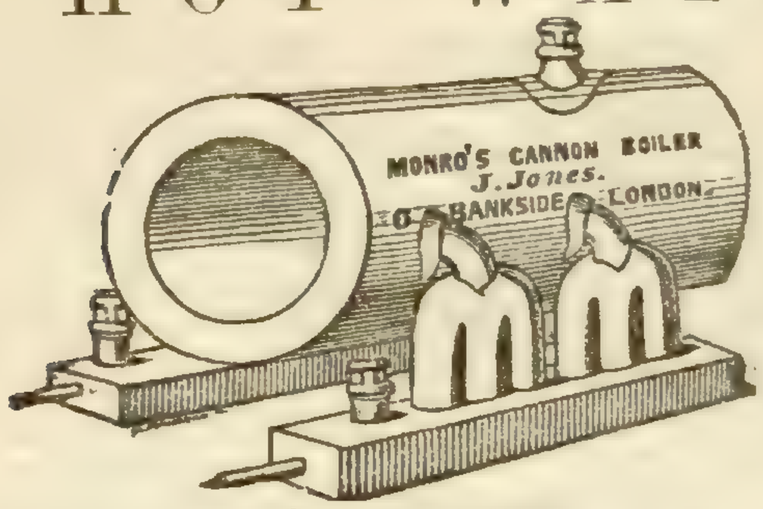

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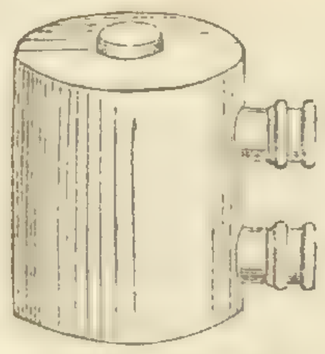

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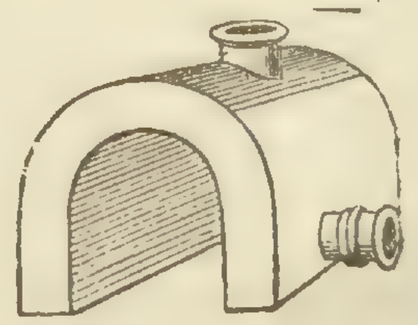

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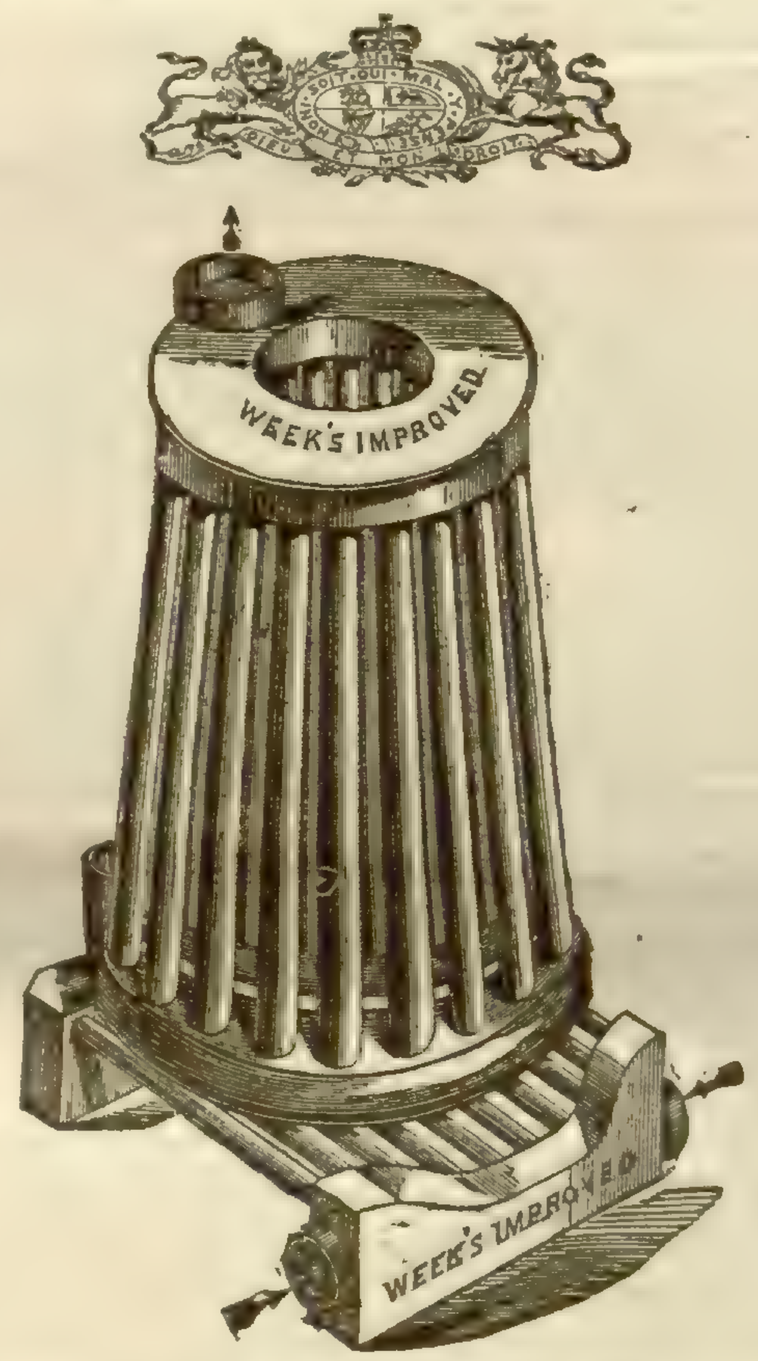

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100 in 25 choice „ ...	2	2	0	25 in 25 choice „ ...	0	12	6				
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12 Hyacinths, by name	1 Lilium lancifolium speciosum	12 Double Sweet Jonquils	6 Gladiolus, by name
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Bulbs sent to help carriage.
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R. GREEN, having just purchased from one of the most celebrated growers a large stock of the choicest GREENHOUSE FERNS, is enabled to offer them at very low prices. Thousands to choose from, in pots varying from 3 to 9 inches. Wardian cases of all descriptions. An immense quantity of DUTCH BULBS 20 per cent. under the usual prices.—R. GREEN, 154, Kingsland Road, N.E., 55 doors from Shoreditch Church.

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Assorted Collections of Bulbs, either greenhouse or hardy, at 10*s.* 6*d.*, 21*s.*, 42*s.*, 63*s.*, 84*s.*, and 100*s.*
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The Gardeners' Chronicle.

SATURDAY, NOVEMBER 17, 1860.

MEETINGS FOR THE ENSUING WEEK.

MONDAY, Nov. 19—South Metropolitan Chrysanthemum 1 P.M.

Of all the branches of Natural History that interest residents in the rural districts of this country, not one surpasses in importance the distinctions and peculiarities of Fungi; and none

has been so imperfectly illustrated by means accessible to the mass of naturalists. Hence it is that everybody shrinks from the study of the subject, and to this hour there is not one real Botanist in a hundred who does not look at the question with something like despair. It is true that many books of the highest value treat of Fungi, especially of the large and conspicuous species. But with all their merits they afford no great aid to the general observer. Price, in such a case inevitable, places them beyond the means of most persons. The great folio work of SOWERBY with 400 or 500 coloured plates, the beautiful volumes of Mrs. HUSSEY, and their 140 plates; and the exquisite treatise of TULASNE on the race of Truffles (*Fungi hypogœi*) are very costly. BULLIARD'S quarto *Herbier de la France*, with 600 plates, a large proportion of which represent Fungi, is a book of great rarity, and the publications of ROQUES, BADHAM, and GREVILLE, with all their excellences, scarcely do more than touch the rim of the cup of knowledge, to say nothing of their costliness. Now pictorial representations of these productions are indispensable up to a certain point, seeing that the mere technical language of Botanists, which it is impossible to dispense with, can only be interpreted by the initiated, and not always by them. Hence a work with faithful figures illustrating at least the classification and more striking facts connected with the organisation of these plants has become an object of necessity; and we rejoice to say that such a work is at length before the world. The Outlines of British Fungology, by the Rev. Mr. BERKELEY, now supplies the student with all necessary means for understanding the subject. It has an excellent Introduction of 88 pages; a systematical description of all the species of frequent occurrence, written in English, with as little use of technical language as the subject will admit of, and moreover 24 plates from the skilful hand of FITCH, crowded with coloured figures. The only point to object to is the employment of so barbarous a word as Fungology.

Ignorant persons may wonder what interest can attach to such productions as Fungi; they imagine them to be merely what are called toadstools or toadskeps; or if they look a little further their vision rests upon a Mushroom or a Morel. When you talk of Truffles, then indeed the lovers of good eating, many of whom never before heard that a Truffle was a Fungus, prick up their ears and begin to think there may be something in the study; but there they stop. Little dream they how vast a part these productions perform in the economy of nature. Could they only understand the many forms, and many properties attaching to such plants, they would cease to regard them with contempt. Let us quote a few examples. That many are eatable, and many poisonous, is known to all men; what is not so well known is that they are among the most deadly and insidious enemies of mankind. What devastated Ireland, and led to the regeneration of that country but the Potato Fungus; what has ruined the vineyards of all the west of Europe and Africa but the Vine Fungus; what carries destruction into the galleries of silk growers but the Caterpillar Fungus; what crumbles to dust our houses and shipping but the timber Fungus; what seizes upon poor human nature in its great extremity but fever Fungi? Our corn shrivels in the ear; its enemy is the Wheat Fungus. It becomes a ball of filthy soot; the smut Fungus is present. The grain that should ripen into nutritious food becomes a deadly poison; the Ergot Fungus brings on that mischief. Our living trees turn pale and perish standing; root Fungi are their enemy. Our bottles which once contained a generous beverage gradually are the receptacles of a filamentous mucilage, and wine becomes a stale and spiritless fluid; the mother-Fungi are there. Infinite indeed is the evil they produce, and yet we owe our daily bread to their action; for the substance called yeast, to which belongs the singular property of setting up fermentation, is itself no more than a vast assemblage of living Fungi, too minute to be seen by the naked eye. What a field there is here for observation and reflection! what friends to encourage, and what enemies to destroy! what food to collect; and what waste of food to avert.

Concerning these matters we have now a guide to which we may all refer; for the price of Mr. BERKELEY'S work is within the means of most readers; at least it might be if it were considered a volume indispensable to public libraries, and naturalists' shelves, as it ought to be.

Nor is it confined strictly to scientific details; the intelligent cultivator may find his account in studying its pages, with an eye to the ordinary details of his business. Take for instance what is said about the endless questions connected with the artificial growth of Mushrooms.

"The cultivation of the common Mushroom is carried on to a very great extent wherever scientific gardening is practised, but nowhere to a greater than at Paris, where the Catacombs present all the requisite conditions. Mushrooms are generally raised from artificial spawn, which is purchased of the seedsmen, and inserted in fragments amongst mould carefully prepared and placed either on the ground or on convenient shelves; and, where proper attention is paid to the requisite degree of temperature and moisture, care being taken to exceed neither, the cultivation is almost always successful and very profitable. * * *

"It has been questioned whether Mushrooms might not be raised successfully on lawns, and there is no doubt that this sort of cultivation would succeed. But even supposing it should, it must more or less interfere with the nice keeping of the surface, a point of so much consequence to English gardeners, which would inevitably exhibit here and there dead patches, the effects of the last year's growth. And if *A. arvensis* should be chosen, which would probably be more easy of cultivation in such situations than any other species, the extent of dead surface would be considerable. There is another very great objection to the cultivation of this species, which is that the spawn at times gives out a most oppressive smell. During the last summer I was astonished at the very powerful odour which arose from the large rings of *Agaricus arvensis*, creating at once a sense of nausea. This, indeed, was so annoying, that even the labourers, whose perceptions of such matters are not in general very delicate, observed it. This observation applies also to the Champignon, which is one of the most eligible in other respects for lawn cultivation. The spawn of *A. arvensis* penetrates to a great depth, and Mrs. HUSSEY relates an instance where the scent was so overpowering, that it was with great difficulty that the labourers who had to dig out a quantity of the spawn which had become a nuisance, could accomplish their task.

"An esculent species of Agaric is raised at Naples by simply depositing a quantity of Coffee-grounds in a warm cellar. No spawn is used, but the Fungus seems very generally to make its appearance after a certain time. Like most species which grow in such habitats, it is probably a mere state of some common form. A Polyporus used for food is raised in Italy from Hazel-stumps, by simply charring them partially, and then supplying them with a proper quantity of water. Another species, *P. tuberaster*, springs up in Italy from conglomerated masses of earth and spawn, known by the name of *Pietra Fungaja*, or Fungus-stone, when placed in the conservatory; and I have seen specimens raised in LEE'S garden, at Hammersmith, from imported spawn. Attempts have been made to cultivate a fine variety of Mushroom from spawn imported from the Swan River. It is to be hoped that this may be tried again, and that *Agaricus fabaceus*, an American species, may also have another trial. A few species of Fungi occasionally make their appearance in the soil or on wood imported with exotic plants. I have seen, for instance, *Schizophyllum commune* in great abundance, accompanied by a pretty white *Marasmius*. The lovely *Marasmius hæmatocephalus* lately made its appearance at Kew, in a pot with a species of *Carludovica*: the curious *Aseröe* came up in the same establishment on Australian mould, and other species might be noticed of which I have specimens in my herbarium, and amongst these *Hypoxylon marginatum*, an American species, which was observed in the conservatory at Chatsworth. These, however, are mere accidents, but they tend to show that many species might ornament our stoves from imported spawn, if their introduction was desired."

The latter part of this long extract opens out quite a new field of inquiry; for if it should be possible to grow exotic Fungi like other plants, we shall have gained a new class of objects with brilliant colours, singular forms, and even nocturnal luminosity.

RURAL CHINA.

[We pick the following scraps out of the interesting letter of the Correspondent of the *Times*, who accompanies the Allied Forces in their advance upon Pekin.]

1. For upwards of six miles we passed through gardens, the produce of which supplied the garrison of the forts and the town of Taku. They were admirably cultivated. Little water-wheels furnished an easy means of irrigation, and the vegetables might have put a Battersea market garden to shame. Large Swede [*qu.*] Turnips, excellent French Beans, crisp Radishes, Lettuces, Yams, and many other vegetables grew in great profusion. The fruit was magnificent. Trellised Vines, whence the ripe luscious fruit hung in mellow clusters, reminded us of Italy. Peaches, water Melons, Apples—very like Newtown Pippins—and Pears of every description, were abundant. For six miles "drooped the heavy-blossomed bower, hung the heavy-fruited tree."

2. For a mile and a half did the road wind through the streets of Ko-ku, no street exceeding eight feet in width. The open sewers were choked to repletion with offal of every description; what they were unable to contain lay scattered about the streets. The houses of mud and straw bore a strong family likeness to those of Sinho and Tang-kow, and the peculiar, faint, sickly smell, so well known to all travellers in China, greeted our nostrils from every group we passed.

3. Four miles' march brought us to another town, Kiang-kia-chwang, near which we determined to halt for the night. A large Acacia [what was this?] at the entrance of the village shaded a strip of green by the side of some water, and there we pitched our tent.

4. Leaving the town, we came on an extensive plain covered as far as the eye could reach with Millet [qu. Holcus] 12 to 14 feet high. For six or seven miles we rode through this gigantic corn, now nearly ripe for the harvest. The Millet answers a vast variety of purposes. Its head is ground into flour, and very good flour it makes, or distilled into shamshoo, the vilest and most deleterious of drinks. The leaves when green are eaten by the cattle; when dry they make excellent fodder. The stalk serves for fuel, for thatching, for partition walls, for fences, for mixing with mud for the walls of houses and for the embankments of the canals. It was the only grain we saw on the road. We were told that directly the Millet is cut at the end of this month Wheat is sown, which is reaped at the latter end of June. The Wheat when cut is replaced by the Millet.

5. We have not had one drop of rain for three weeks. The thermometer has risen to 98° in the shade at noon, and yesterday we were treated to an Indian "hot wind," but the nights are cool, and even cold. [This was in September.]

6. Forcing our way through unsavoury Celestials, we find ourselves in a small square occupied by the "eel-pie" and "baked Potato" men of the place. Your working man dines in the street, and this square is a favourite *al fresco restaurant*. Li, on our right, deals in meat pies. He has a small charcoal fire below his oven, and in a trice his *pâté* is compounded and cooked before the public. Ho, by his side, supplies vegetable diet, Turnips, Onions, Pumpkins, Yams, cut into small slices and served in the water wherein they are boiled. Here is a man with sweetstuff, pastry, and "tuck." There another with fruit—Grapes, Peaches, Lotus fruit, Water Melons, Apples, and Pears.

7. Mr. Parkes heard that a committee of merchants had been appointed by Sang-ko-lin-sin to furnish supplies for the whole Chinese army in the north. He sought them out, and explained that, as their office had now become a sinecure, they must transfer their allegiance to the Allies. The committee made no demur, and a tariff of prices was soon arranged. They rated the Mexican dollar at 1000 cash, which, at the present rate of exchange, gives 200 cash for a 1*s*. The pound avoidupois is equal to the Tien-tsin catty, by which everything is sold. Bullocks are divided into three classes. The first weigh about 500lb., and cost 25 dollars (5*l*.) per head; the second, weighing about 400 lbs., are fixed at 20 dollars; the third, about 300 lbs., are 15 dollars each. Sheep of all sizes cost 3 dollars per head. Beef and mutton are also sold by retail, the first at 3*d*., the second at 4*d*. per lb. Tea is 1*s*. 2*d*., sugar 4*d*., and flour 2½*d*. per lb.; Onions, Turnips, and Pumpkins, five cash per lb.; fowls 9*d*., and ducks 1*s*. 9*d*. each. The finest Grapes may be had in abundance at 3*d*. per lb.; the largest Peaches at 1*d*. each. Water Melons—most refreshing of fruits and large enough for a dozen,—cost 5*d*. each. Ice in large blocks of 25 lb., pure and clear as the finest Wenham Lake, is sold for 6*d*. a block. There is any quantity of forage of every description—hay, Millet stalk, green Grass, Paddy, Peas, Beans, and Indian Corn. Coal costs ½*d*. and charcoal 1*d*. a pound. Coolies receive 1*s*. per day per man. Supplies of every description are abundant and excellent. The mutton is fat and well flavoured, and no finer Grapes or Peaches are grown than those which now come to Tien-tsin market. A favourite fruit with the Chinaman is the classic Lotos, in shape like a small Melon [what can this be?]; it is full of stoneless kernels, sweet and pleasant to the palate. Often and often have I eaten them without experiencing the dreamy sensations they are said to produce.

8. The banks of the canal are fringed with very large Willows, weeping and upright. Ascending 10 miles the aspect of the country changes. First come topes of large trees, and then what may really be dignified by the name of a wood. We jump on shore and enjoy our tiffin *sub tegmine*. The timber is large and fine—Walnut [*qu.*], Willow, Locust trees [*qu.*], and immense Pear trees.

9. Yesterday the thermometer stood at 102° in the bell tents and under the awnings of the Granada [In Sept.]

MYCOLOGY.—NO. XXXV.

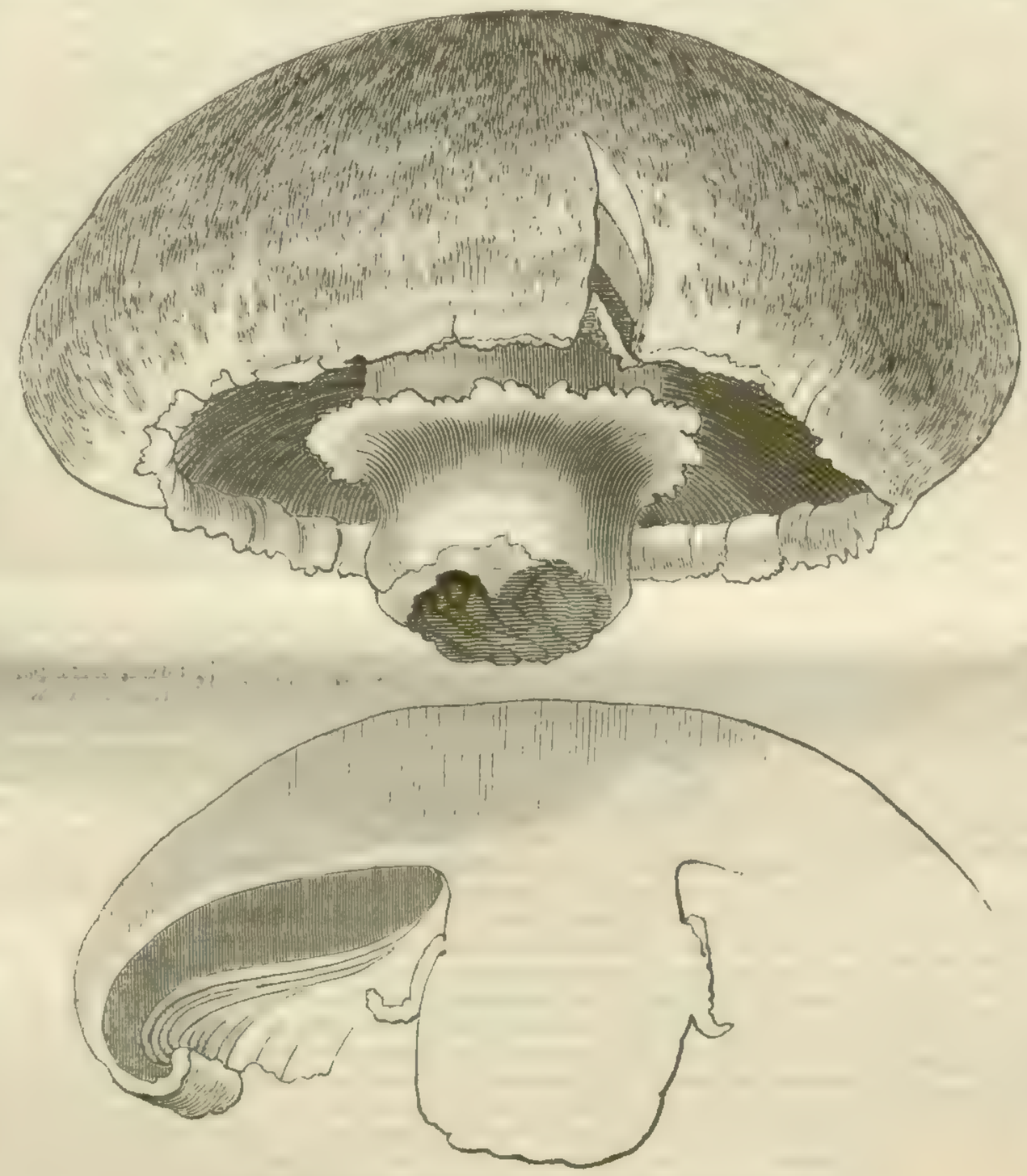
Agaricus campestris, *L.*, var. *vaporarius*, Otto.—Perhaps no single species of Fungus is so widely diffused as the common Mushroom. It occurs in climates of the most different character, and though undoubtedly it is most at home in temperate regions, it often abounds in the tropics, and reaches, if it does not pass over, even the nearest limits of the Arctic circle.

Under these circumstances it is not surprising that it should assume a great variety of external forms, which will be regarded as varieties or species according to the views which authors may chance to take as to the limits of species. The most remarkable and valuable of these, so far at least as they occur in this country, will from time to time come under our notice. In this and the two following mycological notices, we shall give figures of different forms which occur in cultivation, commencing with that particular kind which forms the staple of Mushroom growers.

Every one is acquainted with the characters of the common field Mushroom, whose valuable qualities are scarcely to be met with combined in any other species, and in most cases, this knowledge extends so far as to enable persons at once to reject as doubtful such varieties as do not come up to the recognised standard. The pileus must be of a pure white or only very slightly stained with brown, the juice either colourless or inclined to red without any tinge of yellow, and the gills of that beautiful red which is known *par excellence* under the name of Mushroom colour. Of late years, however, the true Mushroom has been scarce; and during the present autumn, though we have been unusually wanderers through the pastures, we have not seen a single specimen which would pass muster with housewives of the old school. Far the greater part of the Mushrooms which are exposed for sale in Covent Garden Market belong to a different species, *Agaricus arvensis*, and these are often in such a state as to bring discredit upon Mushrooms altogether. About three weeks since we saw a basket covered with the curious production called Blood-rain; and as may be easily conceived, the specimens were in an advanced state of decomposition, which would render them wholly unfit for food.

At all times of the year there is however a greater or less supply of true Mushrooms raised artificially, and the confidence reposed in these, from their general uniformity of character, is such, that they are used without question or scruple, though as we shall see hereafter, very different forms are sometimes intermixed.

The particular variety here figured is of very rare occurrence in an uncultivated state, and is perhaps confined to dunghills or places strongly impregnated with horse manure, which seems indispensable to its production. We have no account of its origin, but believe that it owes its especial character, and especially its brown silky pileus and darker gills, to the coarse nutriment with which it has been supplied. Certain it is that it frequently comes up in frames where horse droppings have been extensively used, without any insertion of artificial spawn, and is then undistinguishable in character from individuals raised purposely on the Mushroom bed.



Agaricus campestris, L., *var.* vaporarius, Otto.

From a drawing by Mr. W. Fitch, from specimens forwarded by Mr. Buchanan.

In old books many receipts are given for the production of spawn. Few persons, however, care to trust to any uncertain mixture of their own, but purchase the spawn at once from persons whose business it is to prepare it. At Belvoir, however, Mr. Ingram, who is a very extensive Mushroom-grower, is, we believe, wholly independent of the spawn dealers. The straw which is broken into minute fragments in the riding school by the constant exercise of the horses is simply placed in a heap in the open air without any protection, and the mass is soon traversed by innumerable white threads which are for the most part the mycelium of the true Mushroom. Other species occasionally make their appearance, but never to such an extent to become a very serious inconvenience. The only precaution necessary before applying the spawn thus prepared, is to turn the mass over two or three times, so as to prevent its undergoing too high a degree of fermentation and becoming sodden, or in the gardeners technical term sour, as in such a case the spawn would be sure eventually to perish. The relative condition of the compost is easily determined by the grateful or unpleasant smell of the white threads which penetrate it in every direction.

In this country Mushrooms are grown for the most part either in the establishments of the more wealthy, or for sale by nurserymen, who can always command a high price for the produce. They may however be produced in small establishments with profit, where two or three frames only are used, and there is no convenience for making regular Mushroom beds. Where Melons are grown it is a good practice to place a few lumps of artificial spawn in the soil, and in most cases where the crop is off, there will be a good succession of Mushrooms. They do not succeed so well with Cucumbers, as these require such a free supply of water as may be injurious to the spawn. The difficulty, however, of raising Mushrooms artificially is far less than is generally supposed, and a warm, dry cellar may be made as available as sheds built expressly for the purpose.

The Mushrooms of the Paris cultivators, who perhaps raise more than any other persons in the world, are identical with our own; but there is at least one different form in cultivation abroad. *A. vaporarius*, Otto, seems, indeed, to be the same with ours; but the plant figured by Vittadini under that name is very distinct, the universal veil forming large transverse scales or rings upon the stem, totally different from anything which exists in the plant of which we have given a figure. Other particulars respecting garden Mushrooms must be reserved for the two succeeding notices. *M. J. B.*

Home Correspondence.

Vine Borders.—Permit me to say that the kitchen garden here is situated at the foot of a steep hill, and on the north side. The natural soil of the garden is a strong clay well adapted for making bricks; in fact it has been made use of for that purpose. The houses have a southern aspect and are placed at the lowest part of the garden, the ground in which rises gradually from them in an opposite direction. The Vines having been in an unsatisfactory state for some years past, what Grapes they produced neither ripening nor colouring as they ought to have done, I of course concluded that the border was too wet and cold for them, and very probably too deeply made. I proposed examining it and entirely lifting the roots, which I accordingly did. I found them down exactly 4 feet in a very cold retentive soil, long and naked without one atom of fibre, and in nearly all cases completely decayed by excessive moisture, so much so that it is a matter of astonishment how the Vines could possibly do so well as they ever did, which however at the best was very bad indeed. The bottom of the border itself was good, having a substantial layer of concrete, which is now in very good order, and draining pipes too there were, but of course they were precluded from being of service, as by far the greater portion of water never reached the bottom of the border at all in consequence of the latter not having any draining material in it. I therefore next proposed that the whole border should be entirely cleared and reconstructed, and replanted with young Vines. This proposal also received the assent of my employer, but here I found myself in a dilemma, not having any material at command to fill the old border up to the height required to form the bottom of the new one. I therefore next examined the furnace with which the boiler is heated, for the houses themselves are warmed by hot-water pipes; and without in the least interfering with them, I found that it would be quite practicable to conduct a flue from the furnace round the border, resting on what was formerly the old bottom, which flue could be connected with small arches from the houses the width of the border, the arches of course acting as hot-air chambers under the new border; and thus, at comparatively trifling expense, occupy in a very useful manner the otherwise useless space between the new and old borders. This was also approved of and is now nearly completed. The flue I have caused to be so constructed that with the use of a damper I can when required introduce some amount of heat into the new border, which will at certain times prove a great desideratum. Having had the renewing of the border in anticipation, I have been looking out for suitable materials for that purpose for these last 12 months, and here I would wish to state my entire concurrence with Mr. Thompson's plan of making a border, mentioned at page 978. I also heartily coincide with one who designates himself "A Vine Grower," in the same Number (see p. 975); there can be no doubt that the use of such unnatural and offensive ingredients as carrion is fast becoming obsolete. *John Potter, Gardener to the Hon. Mrs. Byron, Thrumpton Hall, Notts.*

Golden Hamburgh Grapes.—As there are so many opinions with regard to this Grape, I think it due to Mr. Busby and also to Mr. Veitch, who sold my master a plant of it, to say that in the spring of 1858, the Vinery in which I intended to plant it not being finished, it was grown in a pot until April, 1859, when it was planted inside, and made splendid growth that season. This year I had a very good crop; both bunch and berry were good, and of all the Grapes grown here, consisting of the new and best varieties, there was none more highly prized than the Golden Hamburgh, which quite deserves the high character it has received. I do not agree with Mr. Gill that it is as early as the Black Hamburgh. I have it planted in the same house with the Black Hamburgh, White Frontignan, Chasselas Musqué, and some others, and it was 10 days or a fortnight later than Black Hamburgh. It was ripe at the end of September, and very little fire heat had been given it. In short, it had none until the Black Grapes began to colour. *James Maclean, Gardener to Colonel Leslie, M.P., Glasslough, Monaghan, Ireland.*

Orchard Houses.—In common, I believe, with many persons possessed of orchard houses, I have been puzzled to account for the ill success this year of trees planted in the ground, in comparison with those grown in pots under the same roof and treatment. I imagined that the trees planted in the ground, and trained upon the walls facing the south, would enjoy all the advantages of those grown in pots, and something more; but, I dare say I am not singular in finding my wall trees a comparative failure (the fruit being without flavour), while my trees in pots have proved all that I could desire, even in such a summer as the last. I think however that I can now account for the difference; and it is with that object I now address you. In top-dressing my potted trees, on a sunny day, about a fortnight ago, I was struck with the warmth of the earth I had occasion to remove from the pots; and I had the curiosity to compare its temperature with that of the earth surrounding the roots of the trees planted in the ground. The result was, temperature of the air in the orchard house, 64°; of the earth in the pots, 62½°; of the ground in which the trained trees were growing, 57°; while that of the air outside was 62°; and of the ground at a foot deep, 56°. Here we have a difference in favour of the pots of 5½°, from an enfeebled October sun; but, from what I have observed, I cannot doubt that in summer, surrounded by air heated to 80°, and even 90°, the roots of the potted trees must have enjoyed an advantage of 10° and even 20° over those growing in the ground. This high "bottom-heat," it strikes me, is a strong argument in favour of potting orchard house trees, and is one of the main causes of the success of the system. *C., Clapham Park.*

Bowood Muscat Grape.—Your correspondent (see p. 1001) may safely allow his doubts to evaporate, as I possess the genuine article; our original plant having been supplied by the late Mr. Griffin, of Bath, and came direct from Bowood. The short-jointed wood, and the short foot-stalk of the leaves, noticed by your correspondent, offer but feeble evidence upon which to establish a distinction. Such differences may often be observed on Grape Vines of the same kind growing in the same house, and are attributable to the way in which the Vines are grown rather than to any

inherent constitutional difference in the plant, or distinction of the fruit, either as regards the possession of superior or inferior qualities. I have never seen Barnes's Muscat, and therefore can offer no opinion about it; but this I do know, that there exists a decided difference between the Passe Muscat, and the old Muscat of Alexandria, not however in flavour, nor the period of ripening, but the Passe Muscat is much larger in the size of the berry, fruits freely, and is in every way identical with the Bowood Muscat. *A. Cramb, The Gardens, Tortworth Court.*

Alpine Strawberries.—Can any of your readers tell me what is the reason that my gardener cannot fruit the Alpine Strawberry that I bring him from Italy, when those I bring from the mountains of Switzerland he can grow well, and they fruit abundantly. The plants from Italy grow well; but he says they are a different sort. The Italians ones throw up single blossoms from the stool, those from Switzerland throw up trusses. *S. W.*

Overladen Orchard House Trees.—I have read with some amusement the criticisms of "W. P. A." on my orchard house trees. It is the old story about precept and practice. I make it a point to scold every one that suffers the fruit on his trees to be crowded, and I utterly forget my own "beam," which happens in this wise. To use the publisher's term, I "reserve to myself the right" of thinning my Peaches and Nectarines in the orchard house devoted to my specimen trees, and am sometimes surprised (as I was last August) to find trees with very large unthinned clusters of very small Peaches which have escaped my eye. This has however nothing to do with the size of Peaches that can be grown in pots; for I fully believe that Peach trees 10 or 15 years old in 18 or 20-inch pots will, in the end, be found to give Peaches as large and of finer flavour than can be grown in any other way. In the orchard-house at Hollingbury Place, near Bishop Stortford, which is 200 feet long and 15 feet wide, I saw the past season Peaches of first-rate size on the trees in pots. Each pot was placed on three bricks, forming a triangle, leaving plenty of space for the water to escape. The trees had been twice or thrice dressed with surface manure, and abundantly watered with soft water. They were in 13-inch pots, and I have seldom or never seen such vigour of growth; it seemed scarcely credible that such gigantic bushes could derive all they required to support such a crop of fine foliage, shoots, and fruit, from the small quantity of earth contained in a pot of that size. In this house we had an opportunity of comparing the size of Peaches grown under three different modes of culture. The back wall was covered with large old Peach trees trained to it; the fruit on these was very large, the crop being thin, those on the espaliers were large, and those on the trees quite as large as those on the espaliers. This is the only orchard house in which I have seen Peach trees trained as espaliers, and the effect of these, a row being planted on each side of the central walk, is very charming. In writing these few lines it must be understood that I have not a word to say against planting out trees in orchard houses; where a large supply is required, or where Peaches &c. are grown for market nothing can answer better. I only wish to combat the idea that trees in pots must necessarily bear small fruit. Apropos of this subject an orchard-house friend has just written to me as follows. "The Fall Pippin has proved with me very attractive. This little tree, 2 feet 6 inches high, staggered under nine Apples, six weighing 1 lb. each;" so much for an Apple tree in a 13-inch pot. *T. R.*

Societies.

HORTICULTURAL: *Nov.* 8.—(*Floral Committee*).—From Mr. Turner of the Royal Nursery, Slough, came Celosia aurea in the form of a large bushy plant, loaded with handsome golden yellow plumes. For this a special certificate was awarded. Statice profusa from Messrs. Parker & Williams was commended. This is a hybrid raised between S. Holfordi and S. puberula, and is remarkable for the length of time its blossoms keep in perfection. The plant exhibited was stated not to have been out of flower since last May. Chrysanthemum Lady Harding from Mr. Salter, received a first-class certificate; and another variety named Little Harry, from the same raiser, was commended. The former had flowers of a pale rose colour; those of the latter were shaded orange yellow.

Mr. Rivers exhibited a plant of Taxus baccata erecta, which was thought to be the same as the Yew exhibited at a previous meeting by Mr. Crowder, of Horncastle. Some pretty hybrid Gesneras raised between cinnabarina and picta were shown by Mr. Bousie. Mr. Veitch exhibited a specimen of Celosia coccinea, the parent of the crimson Cockscomb. This had been raised from imported seeds. A fine group of the red berried Skimmia japonica came from Mr. Noble, of Bagshot; and a very ornamental species of Cotoneaster, called Symondsii, of upright shrubby habit, with Box-like oval leaves, and bright orange-scarlet berries, was brought for inspection by Mr. Standish. Several New Zealand Ferns were contributed by Messrs. Lee, of Hammersmith.

Nov. 13.—(*Fruit Committee*).—Mr. Ogle, gr. to the Earl of Abergavenny, at Tunbridge Wells, sent examples of Pine Apples, the produce of plants which had been growing and fruiting ever since 1849. These had been managed on the Hamiltonian system; 50 plants were stated to be growing in a pit 27 feet in length and 7 feet in width, and off some of the plants as many as four fruit are sometimes cut at one time. The sorts were Black Jamaicas and Envilles. The former weighed 3 lbs. 13 oz., and measured 15 inches in circumference; the latter weighed about 5 lbs., and measured 15 inches round and 12 inches in height. For these a certificate was awarded. Among some late Grapes furnished from the Society's garden the best among black kinds was found to be a kind called Morocco Prince, a much better variety than Old Black Morocco; among white sorts White Nice was considered the best. A collection of Pears also came from the Society's garden, but generally speaking they were not of very good flavour, a circumstance to be attributed to the bad season for Pear ripening which we have this year experienced. Among the best were Eyewood, Beurré d'Aremberg, Baronne de Mells, Comte de Lamy, Maréchal de la Cour, and a kind called Lewis. A dish of Beurré Bosc Pears from Mr. McLellan, of Barnet, was found to be tolerably well flavoured, and Mr. Stanly sent handsome fruit of Marie Louise. A large collection of Apples, chiefly kitchen sorts, from the neighbourhood of Malton, in Yorkshire, was shown by Mr. Strickland, but as they were unripe it was thought advisable to take them to the garden at Chiswick, and reproduce them at future meetings as they became fit for examination.

A Seedling Apple came from Mr. Reid, of Sydenham; it was a pale yellow kind resembling Golden Noble, but not nearly so large. It was stated to be a good cropper, and to keep from October till March. Mr. Webb, of Reading, also sent a Seedling in the way of Court of Wick; but as exhibited not so good, the flavour being flat and insipid. From J. B. Glegg, Esq., came a handsome large green Apple without name. It resembled Reinette du Canada, and was stated to be a good keeper. Cultivators about Congleton, whence it comes, consider it to be one of the best sorts they possess for culinary purposes. Mr. Rivers sent examples of red and yellow Raspberries to show what can be produced in that way at this season of the year. They were well furnished with comparatively speaking really good fruit. From Messrs. Lee came specimens of their new Monstrous Cob Nut, a large handsome kind well worth cultivation. Some good specimens of Parsley were exhibited, and Mr. Turner, of Slough, sent some very large Leeks, some of which weighed within an ounce of 5 lbs.; the blanched part measured 10 inches in length and 6¾ inches in circumference. They were called Henry's Leek, a variety which has been successfully exhibited in Edinburgh, but is not nearly so well known in England as it should be.

Notices of Books.

The Six Months' Seasons of the Tropics. By James Lees. 12mo. pp. 95. Longmans.

IN this small volume the author attempts to prove that in all tropical countries there are two summers and two winters; not one summer and one winter as is generally supposed—"a circumstance entirely overlooked by other writers, even by those from whom we might confidently have expected to have received some account of them—by Humboldt, Linnæus, and Buffon, as well as by several of our own writers on astronomy, as Keill, Long, Ferguson, Emerson, Bonnycastle, Woodhouse, and Sir John Herschel. So that hitherto they have been either totally disregarded, or, at the most, have met with but a passing notice."

After discussing the question in an astronomical point of view, he proceeds to consider the effect of a double summer and winter upon the phenomena of animal and vegetable life.

"One of Sir Isaac Newton's rules for right reasoning in natural philosophy (besides that already given in Chap. II.), is the following, namely, that 'to the same natural effects we must, as far as possible, assign the same cause.' We must therefore assign the same phenomena of animal and vegetable life to the seasons in places within the tropics that we do in places beyond them. Amongst such phenomena may be enumerated—In vegetables, the casting and renewal of the leaves, and the blossoming and fruiting of trees and shrubs. And in animals—The migration, incubation, and moulting of birds; the shedding of the horns of deer; the lambing and kidding of sheep and goats; the hybernation of bats; the hybernation of serpents; the hybernation and laying of the eggs of tortoises, alligators, lizards, toads, and frogs. And as all these phenomena, or most of them, usually take place once, and only once, in a course of seasons, the effect of the 12 months' seasons upon them is to make them occur once a year; and for the same reason:—1. The double seasons will make them occur twice a year. 2. And in the six months' courses they will take place once between the December and June solstices, and again between June and December; and the effect upon them of the two principal features of the six months' seasons will be peculiar. 3. In the great and little summers and winters the phenomena in one of the occurrences every year will be superior to those in the other in all tropical places removed from the equator. As, for instance, in vegetables, the crop of fruit in one occurrence will be superior to that in the other; or there will be a crop of fruit in one, and in the other only a crop of blossoms, the superiority being the greater according as the place is more distant from the equator. And as the summers and winters are equal at the equator, every tree or shrub in that locality will bear two pretty equal crops of fruit in a year, provided it be in a congenial climate and at a suitable elevation, but not otherwise. 4. The converging of the summers will make less than a six months' interval between the occurrences of the summer phenomena in all tropical places except the equator, and the smallness of the interval will be according to the distance of the place from the equator."

The author then adduces the evidence upon which he founds his opinion, quoting numerous authorities for the occurrence of two summers and two winters annually in various parts of the tropics; and illustrating the subject by the phenomena of vegetable life.

"By such proofs," he observes, "the double seasons have been shown to exist in no less than 42 different countries and islands, interspersed throughout the whole of the torrid zone, at the equator and in every part of the northern and southern tropics, in both the eastern and western hemispheres; thus establishing, almost beyond the reach of controversy, the important fact of their universal prevalence. Also, by similar proofs, the existence of the six months' courses has been shown in 31 countries and islands, or, over a range so extensive that their universal prevalency can scarcely be brought into question. But the great and little summers and winters, and the converging of the summers (the latter especially), have not been so largely exhibited. Nor, indeed, could it be expected; as instances of them are seldom given, requiring greater care than is usually bestowed upon observations on phenomena. And there are only a few proofs from animal life; for, in fact, not many are to be met with, since animals move about, and are therefore not so easily observed as vegetables, that are stationary. These deficiencies, however, could speedily be supplied if here and there an individual who may reside in the tropics, or who may go into them for a time, would carefully notice phenomena, and publish his observations either in a work of his own, or in any of the scientific periodicals of the day. But the existence of the six months' seasons is not the only thing that has been shown. The serviceableness of a knowledge of that existence has also been made apparent. It has been rendered evident that such a knowledge will give to cultivators in the tropics a proper idea of the manner of the production of trees and shrubs; and will show them that if they do not obtain two crops of fruit in a year, they are either in an unsuitable climate and elevation, or in a wrong latitude. It will thus enable them to avoid the great mistake of the Ceylon Coffee growers, who cultivate a tree in a climate so uncongenial that one of the crops is nearly destroyed every year."

It is for those who are personally familar with tropical countries to pronounce a judgment upon Mr. Lees' theory, and we should like to know what our tropical correspondents have to say to it.

Routledge's *Illustrated Natural History*, Part XXI., is occupied by the history of Hoopoes, Sunbirds, Honeyeaters, and a beginning of the class of Humming birds, of which little glittering creatures there are many excellent figures.

The new edition of *Ure's Dictionary of Arts, Manufactures, and Mines*, is now complete, in three solid 8vo. volumes; and we may allow Mr. Hunt, the laborious and very able editor, to give his own explanation of the purpose he hoped to accomplish in undertaking it.

"The objects which have been steadily kept in view are the following:—To furnish a work of reference on all points connected with the subjects included in its design, which should be of the most reliable character. To give to the scientific student and the public the most exact details of those manufactures which involve the application of the discoveries of either physics or chemistry. To include so much of science as may render the philosophy of manufacture at once intelligible, and enable the technical man to appreciate the value of abstruse research. To include such commercial information as may guide the manufacturer, and fairly represent the history and the value of such foreign and colonial productions as are imported in the raw condition. To present to the public, without much elaboration, a sufficiently copious description of the arts we cultivate, of the manufactures for which we are distinguished, and of those mining and metallurgical operations which are so pre-eminently of native growth, including at the same time a sufficiently detailed account of the industries of other states."

We think we may say that in all important respects his intentions have been skilfully carried into execution. No one will deny that the three volumes before us are among the most admirable of the works of reference of the present day.

Garden Memoranda.

HORTICULTURAL SOCIETY'S GARDEN, KENSINGTON GORE.—Our readers will be pleased to learn that the great operations connected with the formation of this new garden are in a very forward state. The heavy

works relating to the main drainage have long since been completed, and the smaller or lateral drains are also nearly finished. Water pipes of large size have been laid down for supplying the fountains and other ornamental waterworks with which the grounds are to be interspersed, and a deep culvert has been constructed for conveying the waste water back to a well placed behind the conservatory, there to be pumped up by steam to a level sufficiently high to make it again serviceable in the great operations in which it is to take part. Earthworks are also progressing with rapidity; great mounds of soil that required to be moved in order to form the proper levels have been put out of the way, and order and beauty, under the hands of skilful workmen actively superintended, are springing into existence simultaneously in all quarters.

The levels and foundation of most of the main walks have been completed, and large portions of some of them are gravelled; others only wait for cartage and heavy surface traffic of that kind to be finished to be also gravelled. These walks, varying as they do in width from 26 to 40 feet, cannot fail when completed to have a noble and striking appearance.

Much of the Box embroidery work is also finished, a remark which applies more especially to the two great triangular panels in the first terrace garden. Each of these occupies about a quarter of an acre, and has, as might be expected, a very good effect. At the lower end of each of them are spaces laid down in different coloured gravels, and out of these spring what are termed volutes in the shape of closely planted double lines of Box, holding in their graceful and beautiful convolutions gravel walks, measuring from 2 to 3 feet in width, and flower beds of handsome shape, tying all together in an intricate scroll work more easily conceived than described. These panels when planted and their walks enriched with different coloured gravels, which they will be in spring, may be expected to prove two of the most interesting features of Mr. Nesfield's beautiful plan. Other embroidery work is also fast progressing towards completion. Of four beautiful designs in scroll work—two on each side of the garden, on sloping banks facing the ornamental water and great central walk—two are finished and the others nearly so. These are to be laid down in Box, so as to represent the Rose, Shamrock, Thistle, and Leek, and judging from what is finished the effect is excellent, even now before the different coloured gravels have been applied; when that shall have been done they may therefore be expected to look still more pleasing. The groundwork for green slopes and grassy terraces in the neighbourhood of these scrolls is also ready for turfing, of which about 10 acres are required; most of the principal features of this portion of the garden are therefore already apparent.

Tree planting has commenced, and will now, if the weather continues favourable, be pursued with activity. Some fine Deodars, measuring from 12 to 25 feet in height, are already in position. These have been brought from the Garden at Chiswick, and judging from the fine balls with which they have lifted, some weighing nearly as much as 8 tons, no reasonable doubt need be entertained of their success. In moving they are dug carefully round and tunneled under so as when completely free to be able to introduce broad planks under the centre of the ball. To the ends of these planks chains are applied, and after well securing and wrapping the ball in mats, the whole is lifted up by means of strong screw-power to the centre of a four-wheeled transplanting machine, which moves the tree in an upright position to its place of destination. Thus managed scarcely a rootlet is injured, and the ball carries safely without cracking. Various Lime trees, 25 ft. high, liberally presented to the Society by Wm. Gibbs, Esq., of Tyntesfield, near Bristol, have also been planted so as to form avenues on the east and west sides of the garden near the corridor terrace walks. The season previous to transplanting these had been root-pruned, and they amply illustrate the benefits of that system, for from the ends of the whole of the roots cut issued bundles of fibres of the most healthy description ready to lay hold of the new soil as soon as covered in.

Of buildings connected with the garden we have to report that the foundation of the great conservatory, with open corridor and front, has been laid; and that although nothing beyond that has been done on the spot yet, that the iron work is being put together elsewhere, and that when brought on to the ground will be rapidly put up. Arcades, too, are also rising on all sides with a speed which shows that the contractors are in earnest. Those on the north-west corner are perhaps the most forward; but elsewhere bits have been finished, and their light and elegant appearance, their brick piers, and terra-cotta columns, contrast well with the beautiful objects with which they are associated. At the entrance new offices have been built, and are nearly ready for occupation. They contain a Council-room and a meeting-room, a hall of most graceful proportions, 60 feet in length and 40 feet in width, roofed with glass, well ventilated, and heated with hot water. At either end of this are the clerks' apartments, which are connected with each other by means of a narrow passage at the back of the house, and round the ends of these are the entrances to the garden. The walls of the refreshment pavilion are also nearly built. It will therefore be seen that with the exception of the two bandhouses for musicians, the buildings are altogether in a forward condition. If the winter and spring are favourable, everything will probably be finished by the time appointed for the opening of the garden to the public early in June next.

MR. BIRD'S CHRYSANTHEMUMS.—Seldom have we seen so fine a display of Chrysanthemums under glass as is now on view at Mr. Bird's place, Green Lane, Stoke Newington. We would therefore advise admirers (and who are not?) of this most useful of all winter flowers to pay this establishment an early visit. A house of open and light construction, 90 feet in length, 30 feet in width, and 14 feet in height, is literally crammed full of plants each of which is loaded with blooms of the most beautiful description, and of all shades of colour from pure white to bright red, producing *en masse* a striking and excellent effect. Individual blooms are also large and fine; examples of Dupont de l'Eure may be seen in quantity as compact and round as a cricket ball; Novelty, a large showy kind in the way of Queen of England, was likewise conspicuous, as were also Alma, rosy purple, incurved and fine; Alarm, a large crimson coloured new kind; Yellow Perfection; Saco Varo, a pretty lilac variety, incurved and handsome; Negro Boy, a very dark sort; Golden Queen of England, large and striking, but this season somewhat coarse; Cassandra, white, with beautiful broad petals delicately tipped with rose; Fabius, rich bright orange; Dr. Maclean, rosy purple, and a very fine show variety; Alfred Salter, large and showy; Delight, yellow; Yellow Formosum, a useful sort; Lucidum, white; Madame Leboise, pink; Madame Poggi, crimson; Marechal Duroc, rose; Plutus, yellow; Princess Marie, rose; Stellaris globosa, and Vesta, the last one of the best whites we possess. These are all first-class varieties. We also noticed some fine specimens of Gluck, a large Anemone flowered sort, and one of the best of that class. Many others were also in fine condition, such as Themis, Pio Nono, Madame André, Leon Leguay, Duke, Cassy, Antigone, Prince Albert, and Madame Clos. Two seedlings raised by Mr. Bird looked as if they might some day rank as first class flowers; one was named Garibaldi, a compact rosy purple sort; the other was a white kind named Lady Mayoress. Pompones are not yet in flower, so that with these and large kinds yet unopened, a good display may be expected to be maintained even up to Christmas. Three large Vineries are full of plants kept in reserve for supplying vacancies as they occur in the show house.

Miscellaneous.

Statistics of the Indigenous Roots, Barks, &c., with their Products, of the United States.—The following table, extracted from the *American Journal of Pharmacy*, does not include any articles but those used for medicinal purposes—nor ginseng, about 50,000 lbs. of which are annually received at the port of Cincinnati:—

Table of Resinoids, Extracts, &c, manufactured at Cincinnati, for the Year ending May 1st, 1860.

Resinoids	150,000	ounces.
Extracts, Inspissated Juices, &c. ..	26,500	pounds.
Essential Tinctures	4,000	,,
Tinctures, Syrups, &c.	50,000	,,

Of Podophyllin and Leptandrin; about equal quantities are prepared, and the two constitute more than one-half of all the resinoids produced. For the preparation of the above-enumerated articles, at least 250,000 lbs. of the roots, &c., are required. The sales of the crude, bruised, and powdered roots, barks, &c., we estimate at 310,000 lbs., making an aggregate of 560,000 lbs. sold and manufactured in this city during the year; the average value of which cannot be less than 150,000 dollars, giving employment to a large number of persons, who are engaged in the collection, drying, and manufacture of these home productions.

Yellow Poppy Seed Oil.—M. Cloez, of Paris, has recently, says the *Technologist*, made known the result of some experiments relative to the Yellow Horned Poppy, or Glaucium luteum, which is found on some parts of our shores. It is common all round the Mediterranean, and up the Western Coast of Europe to Scandinavia. It expands its handsome yellow flowers during July and August, which are succeeded by elongated capsules, containing a large number of minute seeds. These seeds lose only 8 per cent. of water when dried in an oven; and, after drying, contain 42½ per cent. of a siccative oil, which can be used as an aliment, or for burning. In its ordinary state the seed yields, by pressure, 32 per cent. of this oil. The marc, or residue, constitutes a valuable manure, giving, on analysis, 6 per cent. of nitrogen, and an ash, amounting to 14½ per cent., rich in phosphate of lime. This oil, without doubt, resembles greatly the Poppy-seed oil, obtained from Papaver somniferum, and the plant might be cultivated for the sake of its seeds on our sandy shores, where nothing else remunerative can be produced; but we question whether it would yield anything like as much seed per acre as the Opium Poppy, and, therefore, whether it would pay to cultivate it for that purpose. Mr. Cloez's results, however, are worthy of being recorded.

Variegated Ferns.—For several years past there has been an ever increasing love for Ferns and for beautifully-coloured leaved plants in the horticultural world, and it would seem that the same rule obtains in this, as in the commercial world, namely, that the supply corresponds with the demand. Until the last three years few among us would have expected to have seen variegated Ferns; it is, perhaps, the last family of plants in which we should have anticipated it, and yet we have now three very distinct species most beautifully coloured, and there are vague and mysterious whisperings floating about hinting that these will not be all in a few years time. The first variegated Fern which appeared in the field was Mr. Veitch's Pteris argyræa; the still more brilliantly-coloured Pteris tricolor came the following spring from the celebrated garden of M. Linden of Brussels; and then the third species, Pteris cretica albo-lineata, was introduced to the Royal Botanic Garden, Kew, from the mountains of Java. Mr. Stansfield, the well-known Fern nurseryman of Todmorden, informed us a short time since that, while making a botanical excursion with his friend, Mr. Eastwood, the latter had discovered a patch of the common Brake so beautifully and distinctly variegated that it had the appearance of being sprinkled with snow. It is very extraordinary that all the variegated Ferns yet discovered belong to the same genus, Pteris; and that the variegation is no mere accidental marking (as sometimes occurs in Asplenium adiantum nigrum) is proved by the gratifying fact that the plants all come perfectly true from spores. So far as our experience goes, not one of these variegated Ferns has, in a single instance, gone back to the green state which we must theoretically consider their original condition. Pteris argyræa is, no doubt, a variegated variety of Pt. quadriaurita; its fronds attain a height of 5 feet (inclusive of the stipes), which causes it to have an imposing appearance entirely distinct from the other two species; it is a native of Central India. The fronds are, when full grown, about 2½ feet long, pinnate with the pinnæ deeply pinnatifid; the two basal pinnæ produce two or four branches from the lower side—these are pinnatifid like the pinnæ; the second pair of pinnæ have generally small branches of the lower side in the same way; a broad silver stripe is well defined down the centre of each division of the frond—the form of the frond is altogether very elegant. This species grows quickly and succeeds well in the usual Fern soil, viz., turfy peat and a little loam and leaf-mould, mixed with plenty of good sharp sand. This Fern and Pt. tricolor both require stove temperature, but probably Pt. cretica albo-lineata will succeed quite as well in a cool greenhouse after the young plants are established as in a stove; but no Ferns, not even our hardy ones, object to heat while in a young state. Pteris tricolor appears to be a variety of Pt. aspericaulis, the form of the frond and the general habit of the plant corresponding exactly with that species. There is a well-marked silvery stripe down the centre of all the pinnæ and the secondary divisions of the lower pair, while the stipes and principal veins are bright crimson. The young fronds are most brilliantly coloured; the parts which, in the adult frond, become green, are of a bright crimson, while the stripe which afterwards becomes silvery is a pale delicate pink. A well grown specimen of this plant is one of the most beautiful objects it is possible to conceive. Pt. aspericaulis is not one of the easiest Ferns to cultivate, and Pt. tricolor seems to have inherited part of its constitution. It, however, grows well in a close warm house, partially shaded by other plants; it should be carefully guarded from draughts of cold or dry air, which cause the fronds to turn brown at the edges; and it should never be syringed, particularly through the winter. It was discovered in Malacca. Pteris cretica albo-lineata is much more hardy and grows very freely under ordinary treatment. The fronds are about a foot long and the stipes 8 or 10 inches; they are pinnate, with linear lanceolate pinnæ; the lower pair of pinnæ are bipartite, or divided into two; the grey or silvery stripe occupies about half the width of each pinna. The sterile fronds are broader than the fertile, and serrated with small sharp teeth; the fertile fronds are more upright in habit and rather longer than the others. The habit of the plant is very graceful, and it makes a small-growing neat specimen. *Delta, in Turner and Spencer's Florist, Fruitist, and Garden Miscellany for November.*

Poisoning by Aconite.—A case of poisoning by Aconite root is described by Mr. J. B. Brown, in the *Lancet* of Oct. 6th, arising from the accidental use of Aconite root in the place of Horseradish. A pound of the Aconite root was cut into slices and mixed with a gallon of pickles. Four members of a family partook of the pickles, and were attacked with violent spasms, and severe pains, with prickling sensation in the limbs, and partial loss of sight. Chloric ether and ammonia were given in full doses. Two of the patients who had taken a large quantity of the vinegar suffered more severely, and in these cases Mustard poultices were applied to the chest and back of the neck, and galvanism employed, in addition to the other remedies. All the patients gradually recovered. *Pharmaceutical Journal.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Attend carefully to specimen hard-wooded plants, which it may be necessary to winter in this house; many of these are impatient of

fire-heat and a confined atmosphere. Use no more artificial warmth, therefore, than is absolutely necessary, and endeavour to counteract its drying effects either by means of evaporating pans, or by sprinkling the borders, &c., in order to prevent anything like a dry parched state of the atmosphere. It is in many cases difficult to maintain a sufficiently moist atmosphere without causing drip, as the moisture in the house gets condensed upon the glass, and unless provision is made by means of inside gutters and pipes to catch the condensed moisture and carry it off, it is nearly impossible during frosty weather to preserve the beauty of flowers for any length of time; and in cases where there is no provision made against this kind of moisture falling upon the plants, the temperature should be kept as low as may be consistent with safety, avoiding moisture in the atmosphere as far as possible whenever the glass is affected by frost. Plants in cold pits that may have been excluded from light and air for a few days must not be too suddenly uncovered; on the contrary, they should be very gradually inured to exposure. Take advantage, however, of mild days to give air freely and keep the plants very sparingly supplied with water at the root so as to prevent the production of weakly sappy wood. Look frequently over anything subject to the attacks of mildew, apply sulphur the moment this pest makes its appearance, and see that everything is perfectly free from insects. If there is any prospect of a scarcity of bloom next May, a portion of the Achimenes and Gloxinias should be repotted at once and placed in a warm part of the stove, choosing such as have been the longest at rest; and a few Clerodendrons, Allamandas, a plant or two of Echites splendens and Dipladenia crassinoda, may also be started; but unless plants of these are at command with well-ripened wood, and that have been some time at rest, there will be nothing gained by attempting to start them into growth at present, for in most cases it is difficult at this season to maintain a sufficiently warm temperature to secure anything like free growth from these unless the plants have been well prepared for an early start. A gentle bottom-heat of about 80° or 85° will be of great service to such things in inducing a healthy root action, and if this can be secured there will be little difficulty about obtaining free vigorous growth. Let Ixoras and all other hard-wooded plants that have made sufficient growth be kept rather dry at the root in order to check their growth, and induce a tendency to form bloom buds; but do not let the soil in the pots get so dry as to affect the foliage.

FORCING DEPARTMENT.

PINERIES.—The supply of ripe fruit from May until August being usually obtained from plants that start into fruit without making growth in spring, a fair proportion of the stock should therefore be in a well matured state by or shortly after this season, and any sudden changes of temperature which might induce too many of them to show fruit at once should be carefully avoided. That portion of the stock expected to furnish the autumn supply of fruit should not be too much checked at present, indeed these may be kept growing slowly all the winter, which is perhaps the most certain method of preventing their fruiting too early in spring. Where the stock of plants likely to fruit without making farther growth is considered insufficient to meet the demand until August, the stronger plants of those for autumn fruiting should be encouraged to make growth as early as can be done without weakening the foliage, with the view of preparing them for showing fruit in April. Examine the soil occasionally about young stock growing in the open bed, and do not allow it to become unhealthily dry, for this would probably result in a great portion of the stock showing fruit prematurely, and it is also a work of some difficulty properly to moisten the bed if it is once allowed to get too much dried up. Use no more fire-heat for the present than will suffice to maintain the requisite temperature, which, for the general stock, need not be high for some time yet.

VINERIES.—As soon as the buds in the early house are fairly started the temperature should be increased to 60° at night and 65° by day, allowing it to rise 10° on bright days. Take every opportunity of admitting a little fresh air, but recollect that the foliage will not bear exposure to cold drying winds, therefore air should be admitted in contact with the heating apparatus, and when it may be necessary to give back air the sashes or ventilators must be opened but very little, and if pieces of netting could be nailed over the openings this would greatly assist in preventing cold currents blowing into the house. Where the border cannot be warmed, see that it is well protected from wet, &c., by a thick covering of dry litter, or whatever more efficient covering can be recommended. Look over ripe Grapes often, removing any decaying berries, and aim at securing a dry atmosphere with the least possible application of fire-heat.

PEACHES.—Until the trees are fairly on the move do not keep the night temperature higher than from 40° to 45° by means of fire-heat; but an advance of 10° early in the day, with plenty of moisture in the atmosphere, should be secured. Syringe the trees frequently, and secure a thoroughly moist atmosphere. Also see that the inside border is in a moist healthy state, and if this is not the case, two or three applications of tepid water should be given. It is becoming very much the order of the day to have Peach trees and most other things which are wanted for very early forcing in pots; and this plan offers the advantage of being able to afford the roots a mild regular bottom-heat, which is of the greatest importance in early forcing, and excellent crops are thus obtained. But the trees must be prepared for this purpose by having been grown some time in pots; and where these are not at hand, unless they can be purchased from the nurserymen who prepared them, nothing can be done this season except to procure and pot the trees, and prepare them for next year.

STRAWBERRIES.—Where ripe fruit is wanted early, a portion of the most promising plants should now be selected and placed in a pit where they can be afforded a gentle bottom-heat; or if this cannot be commanded, a Peach-house or Vinery which has just been closed for forcing will do. They must, however, be kept close to the glass, for they require all the light that can possibly be afforded them at this season, and a free admission of air on mild days, with a low temperature until the fruit is fairly set.

FLOWER GARDEN AND SHRUBBERIES.

As soon as the leaves are down get all borders neatly trimmed up for the winter; in doing this, places intended for Hollyhocks, Dahlias, &c., next summer should be prepared by deep digging and working in plenty of good rotten manure; there is generally as much time to spare now for that kind of work as at planting time. See that coarse growing plants which may be encroaching upon their weaker neighbours are reduced so as to occupy their proper places. Valuable plants, as variegated Hollies, Rhododendrons, &c., if not growing as freely as it is desirable that they should do, would be benefited by a liberal allowance of rotten manure or well-decayed leaf soil applied as a top-dressing, covering it with a little fine soil, and working it into the ground around the ball towards the extremities of the roots. But Rhododendrons, and what are generally termed American plants, bear removal so well that these where not growing satisfactorily should be taken up, the ground well prepared by a liberal addition of peat or leaf soil, and replanted. Continue to give careful attention to half hardy plants in cold frames, taking advantage of every favourable opportunity to expose them freely to air. Anything of which there is but a spare supply of plants to propagate from should be placed in growing quarters at once, taking care to keep them near the glass and free from insects, mildew, &c., for soft-wooded plants in heat at this season are very subject to the attacks of insects. If not already done Gladioli should now be planted. Choose a warm thoroughly-drained situation, work the soil well by deep digging, and add plenty of rotted manure, elevate the bed, or patch a few inches above the general level, plant the bulbs 5 or 6 inches deep, and 6 inches apart, surrounding them with 1 inch of sand before covering with mould; protect during the winter, against excessive wet and frost, with a thick layer of sawdust, old tan, dry litter, an old carpet, thatched frame, or tarpaulin; the three latter coverings must be removed during favourable weather, and the former coverings entirely cleared off when the plants appear. In small gardens, where the ground is required for Spring flowering bulbs, plant two or three in a 6 or 8-inch pot, and treat as recommended for Liliums; immediately the beauty of the spring flowers is over, prepare for the reception of the Gladioli; in planting out, great care must be exercised in removing them from the pots, not to disturb the roots. In wet cold soils, the bulbs would be safer if stored in pots during the winter, and planted out in May. When done blooming, the bulbs may either be lifted in patches, potted and treated, during the winter, as already recommended, or allowed to remain in the ground, and protected as described above; established patches produce a finer display than the bulbs would if annually disturbed and broken up. Ranunculuses may also now be planted. The situation of the beds should be cool and somewhat moist; at the same time, there should be good drainage. The most suitable soil is a hazelly loam. If, therefore, the natural soil be unsuitable, remove it to the depth of about 2 feet, and 4 feet in width, replacing it with rich loam from an old pasture; this ought to be rather firmly trodden in, and should form the foundation and principal portion of the bed. On this should be laid a liberal dressing of well decayed manure, mixing it a little with the under soil; and over this, for the top of the bed, should be laid a layer of soil six inches deep, for planting the tubers in; this latter should be stiffish fibry loam, mixed with well-decayed cow-dung and leaf-soil. Draw drills, 6 inches apart, and 2 inches deep, with a small hoe, and plant the roots 4 inches apart, with the claws downwards, gently pressing them into the soil; the crown of the tubers should be at least 1½ inch under the surface of the bed.

HARDY FRUIT AND KITCHEN GARDEN.

Do not let Pears get over-ripe before being used; also look over the whole stock as often as time can be spared, removing any fruit that exhibit symptoms of decay, and put them aside for immediate use. Any of the choicer varieties of Pears that do not ripen properly in the fruit room should be removed to a warm dry room for a few days, which will be found to greatly improve them. Keep all fruit as cool and dry as possible; if frost is excluded from the house, it can scarcely be too cool where the object is to preserve fruit plump and sound as long as possible. Push forward pruning, nailing, tying espalier trees, and such like tedious operations as fast as the weather and circumstances will admit. Get manure wheeled upon vacant ground when the weather is frosty and this can be done without injuring the walks, and get all spare ground turned up, so as to expose it to the action of the weather. For land that has been long cropped with vegetables a dressing of fresh loam would in many cases be preferable to manure, and where this is wanted and can be obtained it should be got to hand, in order that advantage may be taken of frosty days for wheeling it upon the ground. Where fresh soil cannot be obtained, charred vegetable refuse, such as pruning of shrubberies, edgings of walks, and many things which turn up in the course of the season, may be cheaply made to form an excellent substitute.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON

For the Week ending Nov. 15, 1860, as observed at the Horticultural Gardens.

Nov.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 9	25	30.271	30.182	46	27	36.5	47	47	N.E.	.06
Satur. 10	26	30.067	29.908	42	35	38.5	48	47	E.	.04
Sunday 11	27	29.856	29.836	41	25	33.0	47	47	E.	.00
Mon. 12	28	29.673	29.603	45	39	42.0	46½	46½	E.	.00
Tues. 13	●	29.586	29.493	48	40	44.0	48	46½	E.	.17
Wed. 14	1	29.566	29.249	50	41	45.5	48½	46½	S.W.	.57
Thurs. 15	2	29.387	29.260	54	31	42.5	49	47	S.W.	.00
Average..		29.843	29.647	46.5	34.0	40.2	47.7	46.8		.84

Nov. 9—Overcast; densely overcast; rain at night.
— 10—Rain; foggy and drizzy; rain.
— 11—Hazy and cold; fine; frosty at night.
— 12—Foggy; hazy; densely overcast.
— 13—Foggy; fine; densely overcast; rain at night.
— 14—Foggy; overcast; fine; heavy rain at night.
— 15—Hazy; fine; very clear at night.
Mean temperature of the week, 2½ deg. below the average.

RECORD OF THE WEATHER AT CHISWICK

During the last 34 years, for the ensuing Week, ending Nov. 24, 1860.

Nov.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 18..	48.3	34.0	41.1	19	0.56 in.	3	6	3	2	3	11	3	3
Mon. 19	48.5	34.3	41.4	16	0.87	1	4	4	4	3	11	2	5
Tues. 20..	48.7	35.5	42.1	13	0.55	1	7	2	—	6	6	6	6
Wed. 21..	49.2	36.7	42.9	20	0.37	3	5	4	3	3	10	4	2
Thurs. 22..	48.8	35.0	41.9	19	0.62	3	4	6	3	4	6	7	1
Friday 23..	47.2	34.8	41.0	15	0.36	1	5	3	2	5	11	5	2
Satur. 24..	47.4	32.7	40.0	11	0.50	4	6	3	2	4	8	2	5

The highest temperature during the above period occurred on the 20th, 1844—therm. 59 deg.; and the lowest on the 23d, 1858—therm 9 deg.

Notices to Correspondents.

BOILERS: *Rusticus.* For so small a house almost any boiler of low power ought to answer. There are two—Monro's Cannon Boiler and Lobjoit's—which will give you all the heat you want. Stephenson's and Shewen's boilers are, we learn, no longer made.

BOOKS: *An Enquirer, Bristol.* We have studied Botany diligently for nearly 50 years, and we are a very long way from having a "thorough knowledge" of the science. Be content then with the possible; and by way of a beginning make yourself master of Dr. Lindley's School Botany and Descriptive Botany. When you have done that we will advise you further.—*Young Gardener.* Lindley's School Botany.—*Chester.* We know of no illustrated work on forming flower-beds for villa gardens. A few patterns are in Macintosh's Book of the Garden.

EDGING TILES: *Hanworth* asks whether Hogg's edging tiles answer the purpose for which they are made—especially as to their supposed power to resist the effects of frost—and where they can be procured?

INSECTS: *Anon.* The minute moth-like insects on the leaves of your Gesneras and Hibiscus, are evidently the Aleyrodes proletella, a species belonging to the family Aphidæ, extremely difficult to destroy in the perfect state, and which being very active on the wing will spread over other plants. They are more tender, and consequently more easily destroyed in the larva state by using a wash of lime-water and soap-suds on the leaves. *W.*

LEATHER CUTTINGS: *An Enquirer, Bristol.* Cuttings of hides, if dug into the ground, will act slowly like horn, hoofs, &c., and be useful; but leather, that is to say, tanned hides, is, we believe, worthless.

NAMES OF FRUITS: Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to examine more than six sorts, whatever may be the number forwarded.—*Pomona.* 1, Duchesse d'Angoulême; 2, 3, Beurré Diel; 4, Passe Colmar; 6, appears to be Jean de Witte; 5, Hall Door. *E W.* 1, 2, Blenheim Pippin; 3, Wormsley Pippin; 4. Fondante d'Automne.—*T J.* 1, Beurré Bosc; 5, Louise Bonne (of Jersey); 6, Winter Nelis; 8, Eyewood; 10, Beurré Diel. —*J B.* 1, 5, Marie Louise; 3, Beurré de Capiaumont.‖

NAMES OF PLANTS: *Alpha.* 3, Sedum Sieboldi, a very handsome plant. We cannot undertake to name leaves.—*Liverpool.* Bifrenaria racemosa.—*Topsy.* Sericographis Ghiesbreghtiana.

PEACH PRUNING: *Ellesmere.* Don't you see that the management of a Peach tree trained as a bush for the orchard house must *necessarily* be wholly different from what is required for a plant trained to a wall. If you apply the orchard house plan to your walls you will ruin your trees.

SEEDS FROM NATAL: *Dundee.* You have received nothing but common things out of some garden, which you might have bought of any nurseryman for 18*d*. Those who send such seeds to their friends in Europe doubtless mean well, but act unwisely. There is probably not one mere garden plant in the world which is not known or has not been known in this country. Correspondents should send their friends here the seeds of wild plants—and of nothing else.

THE PAMPAS GRASS: *W.* What you describe is hermaphrodite This plant does not bear male and female flowers on the same individual, but on different individuals. We hold to the opinion that the female is the only one worth growing. The male is too brown and too much like a reed.

WIZARD OF THE NORTH STRAWBERRY: *Mr. Richard Gosling.* market gardener, Boston, complains that although Mr Yates, of St. Ann's Square, Manchester, offers to supply applicants gratuitously with this Strawberry, yet that he, Gosling, can get neither plants nor reply to his application.

MISC: *G H.* If you deal with "travelling" nurserymen make up your mind to be cheated. The names you have sent us are, to use the plain English tongue, so many lies. Just refer to the *Gardeners' Chronicle* of 1857, page 190; and see what happened to the good folks at Manchester. We believe that upon the appearance of the remarks alluded to, the gentleman referred to disappeared with his wonders—1*s.* will be given for a Number of *Gardeners' Chronicle* of February 27, 1858.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

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Peruvian Guano direct from Messrs. Gibbs; Sulphate of Ammonia, Nitrate of Soda, and all Chemical Manures. Linseed, Rape, and Decorticated Cotton Seed Cakes supplied at the market prices, by Mr. J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

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Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."
Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

AGRICULTURAL AND GENERAL MACHINERY.—As PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

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MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6*l.*; 19 in., 6*l.* 10*s.*; 22 in., 7*l.*; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—
"420, Strand, London.
"Gentlemen.—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough, I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles.
"Your obedient servant, G. GLENNY."
Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype Trays, &c. manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.—The Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C.

"FRIGI DOMO."—Patronised by her Majesty, the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, late Mrs Lawrence of Ealing Park, and — Collier, Esq., of Dartford.
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"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.
Two yards wide .. .. 1*s.* 6*d.* per yard run.
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ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Trinity Lane, Cannon St., City, E.C., and of all Nurserymen and Seedsmen throughout the kingdom. "It is much cheaper than mats as a covering."

THE FOLLOWING LETTER, addressed to the MEMBERS of the ROYAL AGRICULTURAL SOCIETY, appeared in the *Times* this week, which deserves perusal:—

TO THE MEMBERS OF THE
ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MY LORDS AND GENTLEMEN,—I beg you will allow me the honour of conveying to you, through the medium of the press, my grateful acknowledgments of the handsome manner in which you have responded to my circular of the 15th ult., which I took the liberty of addressing to you.

It is very gratifying to me, indeed, to find that the trial which has already been made by members of your noble institution corroborates the fact that my Condiment has the effect of economising and making straw on the farm more than double its value if chopped up into chaff and seasoned with THORLEY'S Condiment. This compound is just what is wanted, especially during the present wet season, for working off a vast amount of bad hay, making it palatable, and inducing the animal to eat it with avidity; and by mixing with straw-chaff the Condiment, animals are enabled to extract more nourishment from it than they otherwise could. Agriculturists, and other owners of stock, are now, by the successful use of this Condiment, beginning to experience that the value of food depends upon its perfect digestion. Chemically, its constituent elements may be of the highest value, but if imperfectly digested, what is the value of food to the animal which eats it? It has been proved beyond a doubt that hay and straw properly seasoned with my Condiment is more nourishing than unseasoned food, although the latter may contain a much larger amount of alimentary matter.

Professor Anderson, recently referring to the Transactions of the Highland Society, illustrates incidentally the value of my simple theory, now reduced to practice, which I have with untiring perseverance introduced into the management and feeding of cattle. He writes as follows:—"The effect a food produces upon the animal is often due to flavour, or to the presence of infinitesimal traces of substances which evade detection. The nutritive matters are the same in all foods, but it depends upon their flavour whether they are readily eaten, or whether they are so repulsive that the animal avoids them until the calls of hunger become irresistible. In the latter case, of course, they fail to produce that effect which was to be anticipated from the amount of nutritive matters contained in them."

I may remark that the Editorial opposition to the use of Condiment in the seasoning of food for animals with which I have had to contend, written by literary gentlemen in want of a subject, has done an injury not so much to myself as to the farmer; but now I find that I have the support of the best scientific authorities in this country and America, it encourages me to persevere in the great work I have undertaken; and I am now proud to be in a position to announce, in spite of all opposition, that, in consequence of the increased consumption—contracts for 100 tons per month, to supply our colonies and many of our first-class agriculturists, such as Peter Annandale, Esq., of the Shotley Grove, Gateshead, and others, who now order it by tons—I am enabled to reduce the wholesale price to 30*l.* per ton—say, 20 barrels—delivered free by my own waggons to any railway station in London.*

I venture to invite the particular attention of every member who keeps horses, cows, sheep, or pigs, to the following observations, applicable to each of those animals respectively:—

THE HORSE.—No unprejudiced mind, who understands anything at all about the physiology of this noble animal, can read my testimonials without coming to the conclusion that Condiment to the horse is invaluable in his trained state. The small quantity of food that supports the horse of the Arab in Arabia and the East is the surprise of travellers. Now, not only does his food contain a larger amount of condiment, but the very water he drinks is seasoned with it. Does not this, then, account for what travellers tell us about the "Arab and his horse?" And does not the absence of such condimental aliment account for the enormous quantities of food consumed by horses in this country, and the little work vast numbers of them can do for it? It is estimated that in the metropolitan district alone there are upwards of 478,600 heads of cattle, cows, horses, &c., the various owners of which, by using my Condiment, would effect a saving of 4*s.* per week per head, which would show an aggregate saving of ninety-five thousand seven hundred and twenty pounds—95,720*l.*! a-week, or four million nine hundred and seventy-seven thousand four hundred and forty pounds—4,977,440*l.*! per annum!!

THE COW.—By the use of my Condiment, Sir John Pringle's cow gave three times the quantity of milk, the quality being richer; so that upwards of three times the quantity of the albuminous matter of her food was manufactured into the casein of the milk, matter which previously went to the dunghill. Another cow, by the use of the same Condiment, works up into the milk more than four times the quantity of protein compound. A proportionally larger amount of all the other elements of food, including the Condiment itself, is also worked up into milk respectively in both cases, and in a thousand cases besides.

THE SHEEP.—Mr. Baylis, Mr. Hemming, and many others, who have given my Condiment to sheep, record a favourable experience of its use. All declare their sheep to be healthier and freer from disease, where the Condiment is properly given. Writers on the natural history of the sheep unanimously mention that this animal prefers Alpine and condimental food; and if the cause of disease in Scotland (for an essay on which the Highland Society now offers a prize) is a deficiency of condiment in the food of sheep—which is more than probable—the prohibition of the exhibition of THORLEY'S Condiment at Edinburgh last year places Mr. Hall Maxwell, I am afraid, in no very enviable position.

THE PIG.—Numerous experiments are now being made with my Condiment on pigs—one or two of which are expressly to test the value of the Rothamsted experiment, under the direction of persons, some in favour of Condiment, and others against its use; and up to the present time the pigs on seasoned food are gaining 29 lbs. for every 12 lbs. gained by pigs fed on *unseasoned* food—facts which speak for themselves. And I have no hesitation in predicting that Lingley Hall Show at Birmingham, and Smithfield Show during the ensuing month, will tell a tale in my favour. Again tendering you my most respectful thanks for your kind notice of my recent circular,

I am, my lords and gentlemen,
Your most obedient and humble Servant,
JOSEPH THORLEY.

The Inventor and Sole Proprietor of
THORLEY'S Food for Cattle.

Offices and Steam Mills, Caledonian Road, King's Cross, London, N.

Retail Depot, 77, Newgate Street, City, E.C.
November 17, 1860.

* The carriage per railway on ton parcels from station to station according to Act of Parliament, is 1½*d.* per ton per mile.

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MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
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EXHIBITION OF DOGS AT BIRMINGHAM.—The First Great Exhibition of SPORTING and other DOGS will be held in the Repository of Messrs. Bretherton & Harrison, Cheapside, Birmingham, on MONDAY and TUESDAY, December 3 and 4, the first and second days of the Cattle and Poultry Show. Admission on Monday, the PRIVATE VIEW, 2*s.* 6*d.*; and on Tuesday, 1*s.* The doors will be opened at 9 o'clock each morning.
For Special Railway Arrangements, see the Advertisements and Bills of the several Companies, and of the Cattle and Poultry Show. F. BURDETT, Hon. Sec.
Edgbaston, Birmingham.

BIRMINGHAM CATTLE AND POULTRY SHOW, 1860.—The TWELFTH GREAT ANNUAL EXHIBITION OF CATTLE, SHEEP, PIGS, ROOTS, AND DOMESTIC POULTRY, will be held in Bingley Hall, Birmingham, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, December 3, 4, 5, and 6.
The Private View on Monday, December 3. Admission—Monday, 5*s.*; Tuesday, Wednesday, and Thursday, 1*s.* The doors will be opened at 9 o'clock each morning.
For Special Railway Arrangements, see the Advertisements and Bills of the several Companies.

The Agricultural Gazette.

SATURDAY, NOVEMBER 17, 1860.

THE paper on outfalls, in another column, by Mr. BAILEY DENTON, will be read with general interest. There is indeed especial interest attaching to its subject at the present time, owing to the extraordinary quantity of water which is this season filtering through imperfect outfalls, to the great damage of the land from which it is tardily escaping, instead of pouring, as it ought to do, through unimpeded waterways directly to the sea. And additional interest will be taken in these letters of Mr. BAILEY DENTON, owing to their being preliminary to a public meeting of landowners and others, to be held in reference to this subject during the Smithfield week in London, with the intention of urging a legislative interference with the present hindrances to land drainage.

DAVEY *v.* GILLETT. This action, which is of considerable importance to the agricultural interest, was tried at the Faringdon Petty Sessions

on Thursday, the 8th of the present month. The plaintiff, a respectable farmer in Berkshire, sued the defendent, who is a seedsman, for damages which he had sustained in the loss of crop from the admixture of a quantity of Burnet in the Sainfoin seed purchased from him. It appeared from the evidence of the plaintiff and his men that they were totally unacquainted with the Burnet until it was introduced into the parish in the Sainfcin seed; and in reference to the crop in dispute, it was shown by Prof. BUCKMAN that the Burnet, with some varieties of Bromus (commonly called Lop), formed somewhere about a quarter of the crop. The seed for it was estimated to have contained as much as 10 per cent. of Burnet, which had come up regularly in the drills, and was of the true agrarian or cultivated form, much larger and more rampant in its mode of growth than the wild examples of Burnet, which, in as far as he could observe, did not form a part of the native flora of the district.

For the defence it was attempted to be shown that the defendant had sold the seed from sample, and as, therefore, the plaintiff had used his own judgment, the case could not be sustained. This plea, however, was not only denied by the plaintiff, who deposed to paying an extra price for the seed, in order to get the very best, but it was overruled by the Court, inasmuch as buying by sample required that the sample shown should be taken by the purchaser to be compared with the bulk, which was not the case. The matter then left for the jury to decide was whether the plaintiff had sustained damage, and, if so, to assess its amount; and we are left to suppose that these gentlemen could not understand the nature of the damage, as their verdict was for the defendant.

Now, in reference to this subject it may be a matter of interest to learn that though the different seeds were exhibited in Court, yet that both the counsel and his Honour confessed to a great difficulty in distinguishing them; a difficulty, indeed, fully participated in by a large majority of farmers; still, however, they are not only well known by the seedsmen, but are easily separated, and therefore Sainfoin seed cannot be sold as genuine when it contains filth of this description; and the evil arising out of such a sale ought not to be left to the decision of those who confessedly know nothing of the matter, and further who cannot comprehend either the nature of the damage itself or the means by which it has been inflicted. We are led to make this observation because there seemed to be a feeling in the Court that inasmuch as the Burnet produced a larger plant than the Sainfoin that therefore it could hardly be mischievous; when, in truth, this is the ground of its injury; for the Burnet is a plant of bad feeding quality, and yet grows so rampant as to smother out the Sainfoin, which is a desirable plant, from its extremely nutritious character. In this case it is no argument to say, as was done, that Burnet seed is dearer in the seed market than Sainfoin seed itself, as it was scarcely supposed that the Burnet had been purposely introduced; but the complaint was that it had not been separated, and as we now get most of our Sainfoin from abroad it is usually very foul, and all honest seedsmen would use their utmost skill to separate the weeds from the real seed, as it is just for this skill and the loss in bulk in consequence, that they are paid by the farmer a considerable advance upon their wholesale purchase, sufficient indeed to make the business of a seedsman one of great profit and respectability—a circumstance which has doubtless greatly contributed to the admission into its ranks of a number of pretenders who are slow to believe that honesty is the best policy.

We cannot conclude these remarks without expressing our obligations to Mr. DAVEY for thus bringing this matter before the public, as in this he is only following up what we have been so earnest in exposing for some time past, and though he has failed in obtaining that redress which he has sought, to the evident surprise of a crowded Court, it must gratify him to know that he is legally correct, and that his right to redress will be admitted when the case can be rightly understood.

AT the debate which followed Mr. FISHER HOBBS's paper read last week before the London Farmers' Club, the "dispute or quarrel or whatever it might be termed" between the English Agricultural Society and the exhibitors at its annual shows, was immediately brought under discussion by Mr. TREHONNAIS.

Mr. ALLEN RANSOME denied any quarrel on the part of the exhibitors of implements, or the existence of any *animus* against the Royal Agricultural Society of England; their protest was against the growing evil of imperfect trials which that Society sanctioned. The agricultural mind had been wrongly informed by the Society's judges, and instances could be quoted of prize implements being recalled by the makers of them, rather than suffered to remain out and damage the reputation of the firm that had manufactured them, and to whom the prize had been awarded. Implement trials should be conducted during the season proper for the use of each class of implements. One season was not fit for all, and as regards the ploughing trials of the Society, not only are they unseasonable, but they are entirely unnecessary and useless. "After 10 years of neck and neck competition, among the principal rival prize takers in this instrument, will any farmer tell me," said Mr. RANSOME, "if an advantage to the extent of 5*s*. per annum can be obtained by the use of any one of them over the other?" Trials of scarifiers, reaping machines, steam ploughs, threshing machines, were subjected to similar criticism, and Mr. RANSOME claimed that those implements which are in familiar use should be taken out of the category of implements to be tried, so that by confining the trials to the new or the less commonly used machines, time should be obtained for the leisurely and thorough examination which all machines require. He was also convinced that the benefits of competition at shows could not be secured so long as one prize crowned the whole. When six or seven men, all possessing about the same amount of mechanical knowledge and ability, had each spent hundreds of pounds in endeavouring to present a good implement, the fact that if they competed for a prize, one of them would be sent up to the seventh heaven of glorification, while all the others would be nowhere, would naturally disincline them to exhibit at all.

Mr. HOWARD, of Bedford, agreed with Mr. HOBBS in the view which he had taken of the implement trials before the Agricultural Society. Although the Royal Agricultural societies had partially succeeded in the object they had in view, they had also committed a great many mistakes. Everyone who had bought many prize implements must know that such was the case; every implement maker, on looking back at the awards made at various periods, could point to numerous mistakes on the part of the judges. He remembered the deferred trial which took place at Mr. HOBBS's of the reaping machines. Although that trial was an extended one, deferred from the Chelmsford meeting, it was by no means a satisfactory one, nor was the award one which ought to have guided the farmers of this country. The first prize was awarded for a reaping machine which he happened to buy—being present at the trial—and which no doubt did its work best under the circumstances. He took it home, and it did its work in a most efficient manner upon the land on which he tried it—that was to say, land as flat as the table before him; but immediately he tried it on land which had a rise of not more than 1 foot in 20, it proved perfectly useless. A number of farmers bought reaping machines fashioned upon the same model, and they were equally disappointed at the result. He thought that there should be much fuller and more elaborate reports with regard to the various machines that were tested. At present the judges picked out some one machine, and pronounced that the best; and that for months was all the world knew about it. But that was not the best mode of proceeding. Reports ought to be published immediately of the actual performance of the machines, apart altogether from the opinion of the judges as to which was best.

Mr. BRADSHAW, of Guildford, quoted instances of a similar kind to that which Mr. HOWARD had referred to. Prize carts, prize reapers, and prize ploughs had all been discarded by him.

Mr. CROSKILL, of Beverley, contended that prizes were not such an incentive to effort as public competition. As to agriculturists basing their purchases on the results of trials at agricultural shows, he was confident that that was a state of things which was rapidly passing away. He believed that the farmers of England were as capable as any other body of men of forming a correct judgment as to their own business and interests. They did not want engineers or amateurs in mechanical science to be judges for them as to what implements they required for their farming operations. As to the second reason urged for the continuance of trials—that they are the cause of the improvements in agricultural machinery, it was contrary to common sense to suppose that any man could get his living by making such machinery and not be continually improving it.

Mr. BENNETT, of Cambridge, spoke strongly on behalf of the Agricultural Society. He contended that the protesting manufacturers were in great error. It might be very inconvenient, and doubtless was, to keep up competition, and they had to pay individually a heavy penalty for their own popularity, still the community reaped the benefit. And he would contend that the proceedings of the Royal Society, ever since its establishment, had by encouraging competition effected immense benefit to the country, and was making British agriculture the envy and admiration of surrounding nations. No one would rejoice more than himself to see any improvement effected in the mode of testing the merits of different implements; but let well alone, and he begged them most of all not to cease to encourage the spirit of emulation among all classes of the agricultural community.

Mr. SHACKEL of Reading spoke on the one hand of the advantage he as a farmer had derived from the meetings and exhibitions of the Agricultural Society, and declared on the other that some gentlemen had acted as judges at their meetings who "knew no more of ploughing, reaping, or sowing than one of his cart horses." So far as his experience went, then, it would seem that exhibitions of implements are useful, and that *trials* of implements have hitherto been useless.

Mr. SAMUELSON of Banbury believed that the trials before the Agricultural Society had been productive of very great benefit in two ways; first, by directing the attention of that section of the agricultural public who required such assistance to the existence of improved machinery for farming purposes; and secondly, by bringing before the agricultural community the results of dynamometrical and other tests, which could not otherwise have been obtained. But at the same time he did think that the awards which followed these tests frequently partook of the character of a *non sequitur*. The reports of the judges might be relied on as a conscientious statement of facts, but the opinions based upon them might not be of equal value; and he held that, if those who were called judges, and who, he believed, generally discharged their duties with great ability, and with perfect impartiality, would confine themselves to the making reports on trials, leaving farmers to form their own opinions as to what in each particular case would best meet the requirements of individuals, those reports would command an amount of respect and attention, which was not given to their awards and to the prizes which they conferred.

Mr. WILSON, of Essex, charged the implement makers present with having spoken and acted for self aggrandisement at the expense of the Society, for which Mr. ALLEN RANSOME called him to order. What had been said there that evening, he declared was unkind, and in some measure unjust. If the judges had determined wrongly, it appeared to him that the system, and not the Society, was at fault. Who appointed the judges he did not know. But he believed the Society had always distributed a large amount of money in prizes, and found a large field for the exhibition of implements, as well as a large field where those implements could be tried; and if the articles were tested by an improper dynamometer or incompetent judges, the way to solve that was, not to bicker with the Society, but at once arraign the decision of the judges.

Mr. WILLIAMS of Baydon alluded to the steam culture trials as insufficient, requiring larger space and longer time than were allotted to them at the annual gatherings of the Society.

Mr. FRERE was familiar with the competitive system before examiners at Cambridge, and could vouch for it that with occasional individual injustice as its fruit, there was a great balance of advantage arising out of it, and this must in fact be the result of a prize system however regulated, and whether directed towards educational objects or towards the improvement of agricultural machinery.

No resolution was arrived at by the Club—and the discussion is left to exert what weight belongs to the several remarks that were made. It is to be hoped that a conference of all parties interested in the subject will lead the committee which has been appointed by the Council of the Society on this subject to right conclusions as to the future management of the Society's Implement Exhibition.

LAND DRAINAGE AND OUTFALLS.—No. II.

[Mr. Denton's first letter on this subject will be found in page 898.]

You closed your recent editorial remarks on this important subject by soliciting information and facts bearing upon the necessity of a general legislative measure such as I ventured to urge in my former communication. Let me add my earnest wish that the country should bestir itself in time, so that the Home Secretary may feel the necessity of securing an Act in the next session of Parliament.

Having observed, however, that grievances of this character are seldom removed by the force of general opinion, but remain till one strong hand takes the matter up, I am afraid we must look to some other influence than the power of the public voice to secure a general measure. "What is everybody's business is nobody's," unless it be that of the Home Secretary, and may his be the strong hand to take it up and carry it through.

The object, indeed, is so large if all points be included, that no private member of Parliament can be expected to take it upon himself. Lord Morpeth (now Lord Carlisle), after the very wet winter of 1852, brought forward a comprehensive measure dealing with rivers, mills, millowners, and all minor evils, and it got as far as the second reading in the Commons, and was dropped. Mr. Ker Seymer in 1856 brought in a measure which, excluding from its operations mill streams, and the vast and more difficult questions affecting tidal and navigable rivers, dealt with those minor evils only which impeded the under-drainage of land. It reached the House of Lords and was there ejected. Several attempts at legislation by private members had been previously made—by Mr. Pusey, Mr. Handley, and others—but they all failed to reach maturity, owing, no doubt, to the magnitude of the object, the obstructions of mill-owners, and the personal jealousies existing among land-owners themselves. But at the time of those attempts the vast and profitable results of under-drainage were not known, and could, therefore, have no influence upon Parliament. Now we have had 15 years experience of the operations of the various Drainage Acts and the very general success which has attended those operations, has made all intelligent men, who before doubted the advantages, converts to deep and systematic under-drainage; an extending practice which cannot be separated from, as, indeed, it is greatly dependent upon, the outfall question we are now discussing. It was a wet year that forced Lord Carlisle's bill, short lived as it was, upon the attention of the legislature, and as there is now from the late adverse season every probability of agricultural disaster, it is not unlikely that increased interest in the object may be manifested next session, for it is our practice in this country to profit more by disaster than by success. Although the winter can hardly be said to have commenced, we are suffering from the effects of a wet autumn following a wet summer in which the rainfall has considerably exceeded evaporation, a circumstance so unusual, if it be not unprecedented, that we cannot calculate its effect upon next year's produce. To understand our position and to ancipate the condition of the wet lands next spring, I may mention that in the month of August last the quantity of rainfall in excess of evaporation was 2.562 inches. Last year, when so much was said about the prevailing drought, evaporation was in excess of rainfall in the same month 3.218 inches, so that the difference in the two years was 5.780 inches. Disbelievers in the advantage of under drainage should ponder over these figures, and remember that their undrained seed-bed is saturated by rain which generally returns to the atmosphere.

What the effect of a winter on clay lands in this condition will be, remains to be seen.

In my former letter I pointed to the three difficulties which offer such serious obstructions to sound and creditable works of under drainage. It is my present object to bring those difficulties more prominently before the public:—

I. The first was the interposition of a neighbour's land between the drained land and the desired outfall. The difficulty in cases where a neighbour either objects to afford egress for the waters of drainage, or remains passive, is so self-evident that it is hardly necessary to dwell upon it. The relief to be obtained is simply some facile means of acquiring an easement or right of passage through the interposing property upon payment for the damage done. In the construction of railways the right to pass through any description of property is recognised on the ground of public necessity. Committees of both the Houses of Parliament will hardly listen to the objections dictated by private interest. Great Britain, the parent of railways, does her utmost to encourage her offspring. Is there not equal reason for granting a passage for drainage-water, by the discharge of which the produce of food in this country is so greatly increased? Does not every intelligent clay-land farmer look to under-draining and the amelioration of the soil and the equalisation of seasons resulting from it, as the only means by which he can meet the increasing cost of labour and taxation; and still, with the example of Lombardy and its laws with respect to irrigation before us, many thousands of acres of land in this country capable of an immediate increase of produce of as many thousand quarters of corn are disabled from taking advantage of under-draining by the interposition of a single plot of land which stays the drainers' works, and bids defiance to the improving owner who would provide for increasing population while he would obtain profit himself. A phantom castle stands in the way; an Englishman's freehold! which, though it be but a single acre holding back the water upon thousands of other acres, we have not the right to cross, even though we improve the property we cross.

What is the present effect of this state of things? Shallow and inefficient drainage is very often carried out in lands approaching the outfalls under the plea of incapability of obtaining a proper outlet. In other cases interposing owners remain passive, in order that the first promoter may bear the whole expense of the work; and it very frequently happens that the more enterprising landowner, rather than suffer an imperfect finish to disgrace his improvements, has taken upon himself his neighbours' work as well as his own.

II. The second difficulty I would dwell on is the present unsatisfactory state of the laws as to ordinary ditches and watercourses. One can hardly reconcile our present advance in under draining with the fact that we cannot cleanse, widen, deepen, or straiten any public watercourse passing through the property of another person without his consent, much less can we oblige him to do it, though its condition may be known by all parties to be insufficient for the discharge of the water of accumulated drainage. It is true we have the Act called Lord Lincoln's Act (10 & 11 Vic. cap. 38, sec. 14), but it is worse than nothing, for it has the credit of being legally sufficient, although I believe only one case to enforce the cleansing of an existing ditch has ever been tried under it, and that failed to attain the object in view. The reasons are obvious. The necessity of giving formal and legal notice—the uncertainty and delay of obtaining a warrant from two justices in petty sessions—the personal annoyance of appearing as an opponent to a neighbour who, peradventure, may be a magistrate himself; the disagreeable process of levying a distress for costs and expenses, and sundry other invidious discomforts and troubles attending the Act render it practically nugatory. Moreover it contemplates merely the cleansing and scouring of existing ditches; no provision is made for widening, deepening, and straitening such as are shallow and tortuous, without which it is waste of money to interfere with them. The following scene was described to me as one which was enacted upon an occasion of an effort to bring Lord Lincoln's Act into operation.

A landowner appeared at the petty sessions of ——, in the county of ——, to obtain a warrant under the Act. Having stated his case he found that the neighbour against whom he required the warrant was known to the three presiding magistrates. They all expressed a disinclination to issue a warrant, and postponed the case, promising to see their negligent friend and induce him to clear out the ditch without litigation. When the landowner attended a fortnight afterwards he was surprised to find not only that there was no engagement to cleanse the ditch, but that when the case was brought on for hearing, the clerk was instructed to search for precedents, and the case was again adjourned. It need hardly be said that as no precedent was found the landowner did not trouble himself further, and the ditch remains uncleansed to this day. How often it is that ditches into which it is sought to empty the "4 feet under-drainage," now so much adopted, are often not half that depth! In my own experience I have met with instances where the outlets of estates, of which the inheritance has been charged with the cost of under drainage have lost their action within a few years of the charge being created, and in one case a tenant on a large estate pointed out the "failure," as he termed it, of certain works of under-drainage at a time when he was himself unable to find the discharging outlet! It had in fact been closed by the silting up of the outfall ditch as perfectly as ever any cork closed the mouth of a bottle, and on investigation I found that the owner of the property below would not remove nor allow his neighbour to remove the impediment. All this is radically wrong. As we would cut a single drain, or drain a single field, by beginning at the lowest end of the one and at the outlet of the other, in order to give freedom to incoming waters, so should the drainage of the entire kingdom be conducted. Every part should organize with the whole—the tidal sea with the flowing rivers, the rivers with the main tributary watercourses; the main watercourses with the outfall ditches; the outfall ditches with the outlets of the main under-drains, and the mains with the minor under-drains.

Reversing this order of operations, we have launched into a vast expenditure of money in under drainage, without any consideration of the general system or ramification of works essential to an effective discharge of the water set free.

III. The third difficulty I pointed out was that which a majority of improving landowners feel when they find they cannot drain a low-lying district in consequence of the objection or disability of a minority. With the experience we have had of the beneficial working of the General Inclosure Act, under which two-thirds in value can bind the remaining one-third to inclose open fields and common lands, it appears anomalous that no such facilities exist enabling land owners in districts to unite in carrying out ordinary drainage works under proper restrictions, so as to avoid the heavy cost and cumbrous provisions of special legislation.

But as my present object is to draw attention to the crying necessity for improved facilities for deep and effective under drainage, by an Act of Parliament, securing a more ready discharge for drainage waters, I will not provoke objections by enlarging upon the sphere of action to which a general measure might most advantageously apply. The clay soils—the Wheat growing and bread producing soils, which require parallel under drainage to bring them under subjection, occupy for the most part the higher grounds, and it is well known that the springs that burst from the outcrop of strata find vent at high levels. All I would claim for those who have expended and are still expending large sums of money in ridding these higher lands of injurious waters is, that they should not be debarred from effective discharge into the natural outfalls by the interposition of a neighbour's landmark or the insufficiency of the laws relating to the maintenance of common water-ways.

In a future letter I will endeavour to point out the legislative means by which the present difficulties may be overcome. *J. Bailey Denton, M. Inst. C.E, 32, Parliament Street, Westminster.*

THE AGRICULTURE OF BERKSHIRE.

BY

THE REV. J. C. CLUTTERBUCK, OF LONG WITTENHAM.

(*Continued from p.* 1007.)

THE VALE.—The tenacious character of the Gault and Kimmeridge clays gives a distinct agricultural character to these strata. They may be spoken of together because they are found in juxtaposition, without the intervening Portland oolite and iron sand as in Oxfordshire, and are marked to a certain extent with the same condition of exposed or covered surface. The gault is known to geologists as a bed of very uniform thickness, it forms a narrow and very remarkably level band beneath the low escarpments of the green sand: the Kimmeridge clay is subject to greater variations in extent and surface. Where these clays are exposed or covered with drift of the chalk and green sand, they are in either case strong, and in the latter fertile soils. The gault is exposed among other places near the Didcot station, and presents a peculiarly uninviting aspect, the water in winter stagnating on the surface of rough and apparently unproductive soil, though it is a strong clay thinly covered with the green sand and chalk drift, with a surface soil containing much vegetable matter. The low level at which the land lies makes it very difficult to obtain a drainage outfall, a difficulty increased by the depth to which the stratum is covered with the Thames drift, which rises to an elevation of several feet between this point and the river. A main carrier in such localities cut in a direct line would improve the value of large tracts of heavy but useful land. Persons passing this spot would scarcely believe that the Didcot corn market, lately established as a commodious corn exchange, is a centre for the sale of the produce of some of the best corn land in England. Numerous and spirited buyers attend this market to seek the best qualities of Wheat, which they buy liberally to any amount.

Near the place alluded to is a farm not long since owned and occupied by an amateur farmer, which was deep drained on the most approved principles, but with so little fall that there is very great difficulty in keeping the outfalls clear; added to which, the water is pent back by mill-dams on the stream below; thus the large sum sunk in draining is of little value to the present occupier. Some of the land is of the nature above described on the green sand, which runs together and presents a surface which holds the water even above deeply seated drains. Happily the sheer surface of the gault is but little exposed; near the outcrop beneath the green sand it is generally covered with the drift from that stratum mixed with chalk, each of these being easily distinguished. Where this drift is deep the land is very fertile and not difficult to drain, as the drift, though of a tenacious character, parts freely with its water. This condition extends very frequently to the whole surface of the Kimmeridge clay. As this clay in many places descends with an inclination more or less acute to the brooks and rivers which are their natural outfalls, this land when properly drained is of first-rate quality, as in the case of Drayton, Steventon, Hamey, &c., lying between the Great Western Railway and the river Ock. Here may still be seen that venerable implement, the old Berkshire wooden plough; and here too we have the instance of an unenclosed parish.

The drainage also is too often confined to the furrows which are shallow drained between wide spreading and deeply-ridged lands, deceiving the eye by hiding the water, but not abstracting it to a sufficient depth to perfect the cultivation. The expense of draining in Berkshire is often divided between the landlord and tenant, instead of the whole being executed by the landlord, with the payment of say 6 per cent. for capital so invested. If the division is to be made it would be better that the landlord should find the labour and the tenant the tiles; the tiles are often buried in the furrows at 1*s.* or 1*s.* 6*d.* per chain, which is less than the cost of the tiles. The tenant has not an

interest in the labour equal to that of the landlord, because labour is the element in drainage which gives permanence to the improvements. It is a sad mistake to put aside the importunity of a tenant for drainage by a grant of tiles, which may or may not be effectively used. This condition of the gault is just that which has been dealt with at Hinxworth, in Hertfordshire, under the superintendance of Mr. Bailey Denton, who, sanctioned by the owner, has invited public attention and free criticism to this work as demonstrating the efficacy and value of deep drainage in the gault, with the treatment suited to its various conditions. In speaking of Mr. Denton, it would be a vast improvement to the district now under our notice, if the suggestions on road-making contained in his prize essay in the "Royal Agricultural Journal" could find a practical application here.

The cultivation is different from that on the green sand; sheep are seldom seen in the fields during the winter; though naked fallows have passed away there is still much old fashioned—not therefore bad—farming, much of Wheat, Beans, Clover, Tares, &c., though few Swedes or Turnips, and little Barley—all under a very elastic rotation. Leaving the heavy we come to the light soils. The Gault and Kimmeridge clays are both covered extensively with the Thames drift, which is again covered with the chalk and green sand drift, on the depth of which the fertility of the soil depends. Distinct layers of green sand, intermixed with fragments of chalk and chalk flints, may be seen miles away to the north of the outcrop of these strata, distinctly proving the set of the current by which these vestiges of geological disturbance have been deposited where they are found as natural extraneous fertilisers. Without attempting to define the limits of the clay so covered, we find it on the Gault from Drayton, to Sutton, Appleford, Wittenham, &c., and from the first of these places to Abingdon, Radley, &c., on the Kimmeridge clay. A glance at the country, its four-course system, rapid succession of two or even three green crops on a fallow, the frequent sheep folds at all seasons, mark a light and convertible soil. On such land more than any other, lambs are bred and fed for the Easter London market; a profitable trade when all goes well, but one often, and perhaps justly denounced as destroying the sheep stock. Ewe and wether lambs go to the great centre of consumption; when the ewes are fresh as they must be at lambing to enable them to do their part, as the Peas and other artificial food, aided by early Rye, Trifolium, Hop, Clover and Vetches do theirs for the lambs, the value of the ewes whose condition is maintained by corn and cake, tempts the farmer to make them off, at a period when they might breed other lambs, and so the breeder and the bred are destroyed together. The lambs trade is rather precarious from the occasional glutting the market, either dead or alive; the former is preferred in the early and colder period, the latter in warm weather for obvious reasons. An early or a late spring has great influence on this trade; in the latter case it is said of lamb—"there is nothing to eat with it, or the weather must be warmer to make a demand." A hard frost which kills Broccoli or other garden produce influences the lamb trade and sometimes saves their lives. When the lambs are killed in the country, all is managed between the local butcher and the London salesman. The business habits and ready payments of these persons save the farmer much trouble; the railway affords a ready conveyance either dead or alive, and these add inducement to persist in this trade. There is great variation in the breeding with reference to the lamb trade. Some prefer the Down, some Down and Cotswold, others Down and cross bred or Oxford Down; the Down lamb has the preference in the market, the cross breds in weight; it sometimes happens that the lightest lamb will bring home the most money. By careless breeding inferior lambs are produced which will not fatten, and they remain as an eyesore to the flock. The lambs fall at or before Christmas; from 10 to 15 weeks old they go off say at an average of 30*s*. a piece. The fattening of lambs requires close attention; it has been found well to give the ewes Pea straw to pick over before lambing, and Bean straw afterwards as most healthy for the lambs; before lambing Turnips are used sparingly. The ewes are retained in yards or covered cotes in the field during the lambing season; if practicable they are allowed to go to and fro daily for part of their food to the field till they lamb. When the lambs can travel the couples do the same. In the field the fold is set so as to allow the lambs the first nibble at the Swedes or Turnips, or green crops, by a division in the fold, and the introduction of a few hurdles, with upright bars which are made to revolve to ease the growing lambs in their passage between them; the same arrangement is made in the yards, where the lambs are supplied with the best of the Clover, Hop, Clover, or meadow hay, Peas, and other food to make them off as rapidly as possible.

Home Correspondence.

Michaelmas Corn Averages.—I avail myself of the return of the close of the farmer's year to send you a statement of the weekly average prices of Wheat, Barley, and Oats for 53 weeks, ending Sept. 29, 1860, making the general average for the year:—

For Wheat	49*s*. 9*d*.	per imperial quarter
For Barley	35 6	"
For Oats	23 11	"

During the whole of the year, up to the month of September, the average price of Wheat has gradually advanced. The lowest price was on October 7, 1859 (42*s*. 1*d*.), and the highest on September 21, 1860 (62*s*. 11*d*.), being a difference of 20*s*. 10*d*. per imperial quarter, or an increase of very nearly 50 per cent. In the absence of statistical returns bearing on the question, it is difficult to form an opinion as to the probable range of prices up to the harvest of next year. It is to be hoped that the large supplies we shall obtain from America may tend to steady the prices in this country.

Weekly Average Prices of Wheat, Barley, and Oats in England and Wales for 53 Weeks, ending September 29, 1860

Per *London Gazette*.			Wheat.		Barley.		Oats.	
1859.			*s*.	*d*.	*s*.	*d*	*s*.	*d*.
October	7	.. ..	42	1.749	35	9.458	20	10.001
	14	.. ..	42	5.942	35	8.213	21	7.128
	21	.. ..	42	6.204	35	10.390	21	3.636
	28	.. ..	42	10.285	35	5 545	21	2.038
November	4	.. ..	43	1.655	35	6.303	20	11.242
	11	.. ..	42	9.581	35	9 734	22	1.509
	18	.. ..	42	10.683	35	11.089	21	5.088
	25	.. ..	43	1.595	35	11.503	21	11.312
December	2	.. ..	44	1 528	36	1.712	22	6.796
	9	.. ..	44	8 165	36	5 977	21	9 548
	16	.. ..	43	11 614	35	10 095	21	5 696
	23	.. ..	43	8 342	35	1 92	21	9.098
	30	.. ..	43	6.787	34	9.136	21	1.910
1860.								
January	6	.. ..	44	2.690	34	8 428	21	5.349
	13	.. ..	44	2.990	34	5.718	21	5.756
	20	.. ..	43	11.843	34	7.731	21	5.288
	27	.. ..	43	11.072	34	4.016	21	1.247
February	3	.. ..	43	10.334	34	7.431	21	5.864
	10	.. ..	43	8 709	34	10.365	21	0.499
	17	.. ..	43	6.516	34	11.387	21	11.038
	24	.. ..	43	11.443	34	11.106	21	11.098
March	2	.. ..	44	5 301	35	7 997	22	7.307
	9	.. ..	44	9 770	36	6 127	22	11.309
	16	.. ..	45	0.189	36	3 613	22	9 318
	23	.. ..	45	2.358	36	5.693	23	1.596
	30	.. ..	45	6.176	36	11.339	23	4.579
April	6	.. ..	46	5 162	37	2 885	24	1.571
	13	.. ..	47	9.694	36	4 997	23	7.813
	20	.. ..	49	1.225	37	2.588	24	2.480
	27	.. ..	49	6.722	37	6.860	24	2.363
May	4	.. ..	51	2 827	37	11.226	24	5 169
	11	.. ..	52	6 388	37	5 361	25	5.050
	18	.. ..	52	6 741	37	7.790	25	10.074
	25	.. ..	52	1 035	36	6.488	25	3.678
June	1	.. ..	52	6 161	36	2.150	26	6.895
	8	.. ..	53	4.625	35	10.460	26	8.305
	15	.. ..	54	2 312	35	0.666	27	8.765
	22	.. ..	54	11.004	35	3.476	26	11.161
	29	.. ..	57	0 602	34	7.124	27	5.248
July	6	.. ..	58	5.125	32	10.912	25	5.846
	13	.. ..	57	9.786	34	0 960	26	5.164
	20	.. ..	57	7.029	33	5.895	25	8.130
	27	.. ..	56	6.168	32	5.587	26	4.160
August	3	.. ..	57	0.372	33	1.434	26	4.783
	10	.. ..	58	7.318	33	0.320	26	6.233
	17	.. ..	59	6.724	34	0.099	26	1.204
	24	.. ..	59	6.068	32	10.256	28	2.970
	31	.. ..	60	1.479	34	9.557	27	1.929
September	7	.. ..	60	11 555	33	3.589	28	2.837
	14	.. ..	62	10.000	35	2.000	27	2.000
	21	.. ..	62	11.812	37	10.470	27	0.905
	28	.. ..	58	3.834	38	5.401	25	9.802
October	5	.. ..	56	11.580	39	3.936	25	3.197
		53)	2639	1.459	1883	8 461	1271	2 977
Average		.. ..	49	9.536	35	6.499	23	11.829

Charles M. Willich, Actuary, University Life Assurance Society, 25, Suffolk Street, Pall Mall, Nov. 9.

Societies.

TRING.—At the annual meeting of this Society just held three silver cups were awarded for good root crops to Mr. T. Procter, Mr. J. K. Fowler, and Mr. D. Griffin. The Secretary read the following communication from Mr. T. Procter, relative to his mode of cultivation:—

"I am adopting the five course on my farm, I take Turnips, Barley, Clover or Beans, Wheat, Oats. I have only taken this course for two years; but, as far as I have gone, I am perfectly satisfied. I consider there is only one drawback—the keeping the land clean; but I think that is to be met by using the hoe liberally in the corn crops. Fifty-four acres of my root crops this season were Oats last crop, and I shall take the whole season as soon as I can accomplish it. In cultivating my land I invariably winter fallow deep, but do not always spring plough. One of my best pieces of Turnip this year was steam-cultivated twice over, and the seed drilled in on the flat with one harrowing. I prefer this system when the season will allow; we get a better seed bed. I have not dunged for my root crop for the last seven or eight years; I prefer dunging for the corn crop the preceding year. I have dunged the last two years for my Oats, and shall invariably do so for the future on my dry or light land, but my dirty or heavy land I think it better to manure for Beans; the Clover leas I also dung for Oats after the Wheat. My dressings for root crops have been for the last seven or eight years 3 cwt. of Lawes's manure, with 30 bushels of ashes (burnt on the farm) drilled in with the seed, and 3 cwt. of guano sown broadcast and ploughed in very lightly, or scuffled in as the case may be, at the cost of about 3*l*. per acre. Previous to this process of management, I sometimes got a fine seed bed, and in carting on my dung spoilt all, and lost my crop. I think the dung put on the previous year gets mixed with the soil, and is more beneficial to the roots; however, as far as my experience has gone, I have thus grown a much heavier crop. My object in taking an Oat crop, in the first instance, was to pay me for my outlay for artificial manure; but I am also enabled to keep much more stock in my yards and turn out much more dung, and, only having to dung my ploughed land once in five years instead of four, I am enabled to manure my Grass land much better. I have endeavoured to answer your questions as well as I know how, and I hope you will be able to write out a paper from it, which you can read to the society, or make any other use of it you think proper, as it is the object of these meetings that we should communicate our experience to each other for our mutual benefit."

Mr. J. K. Fowler said: At the meeting of the Royal Buckinghamshire Agricultural Association, Mr. Procter's roots had met with well merited commendation on all sides, and he was free to admit that he had been that day well beaten by Mr. Procter. He was of opinion that the quality of the soil should be taken into consideration by the association offering rewards for root crops, and if he in his land were to manure for white corn crops he could not by any possibility produce a good root crop. He thought it was of importance they should hear something as to the advantages of manuring in autumn, and for his part he thought deep cultivation of the greatest advantage in the production of roots. If he could avail himself of the use of a steam plough he would rip up the soil to the depth of from 10 or 12 inches, and lay 15 or 16 tons of dung in ridges to the acre; but, as he had not a steam plough he should do it with six horses, with one of Howards' ploughs, which would rip it up to the depth of 14 inches (?). That would be left till spring, when the scarifier would be passed through it, and the Couch picked out, after which it would be dunged, and a thorough good dressing with guano or superphosphate would be given to it from 2 to 3 cwt. to the acre, and for Mangels 4 or 5 cwt. of salt to the acre, which he had found of great advantage. This year his Mangels had been comparatively a failure, which he attributed to applying too much salt, accompanied by a wet season.

Mr. Thomas Butcher said—When he considered the markets that were open to the British farmer—the increasing population, and the condition of the agricultural interest abroad and at home, it did his heart good; but when he heard comparisons slightingly made as to the importance of agriculture it made his flesh creep. It made him indignant when he heard remarks derogatory to the British farmer comparing his productions with those which came from abroad. Let them look at the immense amount of produce which this country yielded as compared with that which came from abroad, and they would come to the conclusion that if the home supply were to fail great distress would prevail, and that they would not be able to obtain sufficient for their home consumption. There were in the year 1853 one million and a half live sheep sent to the London markets, and there were 230,000 head of live cattle, besides 36,000 or 37,000 tons of meat pitched in Leadenhall and Newgate markets, the aggregate of animal food alone sold being 14 million pounds annually. That showed the necessity for the farmers to go on increasing, and that encouragement should be given to them. It was scarcely credible that Surrey and Sussex alone sent to the metropolis two million chickens! Another article of which there was a vast consumption was milk, or what was called milk, and of which a great portion was raised from the pump. Twenty thousand cows were kept in London, and it might be reasonably supposed by those who had tasted London milk that not a little water was required to adulterate the yield of so many cows. Besides all this, it appeared that three million quarts of milk were brought to London by the Eastern Counties Railway annually. Four hundred and thirteen millions of half-quartern loaves were consumed in London yearly. If the brewers would allow him to say a word he would inform the company that it took 1000 million tumblers of pale ale and porter to wash all that food down; which might, coupled with the quantity of milk consumed, account for the springs of London having sunk a foot.

Farm Memoranda.

MAISEMORE.—Passing from Wiltshire to Gloucestershire, we spent the day after that of our inspection of the Broad Hinton herd in going through that of Mr. Morris, of Maisemore Court, about two miles from Gloucester. We noticed this herd last year as offering an example to dairy farmers. We found it in every way prospering. Mr. Morris's farm is a good one, containing much fine pasture land, and he has just taken an adjoining farm which will raise his acreage to 600. The Maisemore Court Farm, consisting of 460 acres, with a modest and comfortable mansion still occupied by the late proprietor, had just been sold to the Ecclesiastical Commissioners, and the manner in which they deal with the good tenant they find in occupation is worthy of all commendation. Mr. Morris has just arranged to take a lease for 21 years of the farm and mansion, with a power on his side only to determine it at the expiration of the first 14 years. The Commissioners are erecting one of the most complete and commodious homesteads we ever inspected, and it is carefully adapted to the system of husbandry pursued by Mr. Morris. In fact, the details of the plan are in a great measure his own, worked out under the superintendence of Mr. Clutton, the agent of the Commissioners. This homestall comprises stabling for 12 horses; bulls, calves, and cow houses, with a barn, corn and chaff houses, intended for the application of steam machinery to threshing, chaff cutting, and the other requirements of a stock farm. All is built of brick, in the most substantial manner, with slated roofs, and around two of the outsides of the square the stacks will be placed. The contrast between the new farm buildings and the rambling, unconnected, and dilapidated buildings hitherto in use cannot be greater, whether as regards the economy of labour or the comfort of the stock. Fortunate is Mr. Morris that the old buildings were wholly incapable of repair, and that his landlord is a corporation which did not hesitate to make a considerable but judicious outlay once for all.

Indeed, if landowners generally would from time to time erect such substantial homesteads on their farms, they would find it greatly to their own interest, both by securing and accommodating good tenants, and by getting rid of that system of perpetual repairs by which the incomes of most English estates are so much reduced.

The additional farm of 140 acres, chiefly good land, which Mr. Morris has taken, will require an enlargement of his herd—for, as we last year mentioned, his is a working dairy herd of pure-bred Shorthorns. At present, every cow and heifer on his farm, with a single exception, is bred from two cows which his father bought in 1829, from Mr. Strickland (of Apperley Court, Gloucestershire, we believe.) Mr. Strickland's herd was then of long standing and consisted of the best blood, he having been a purchaser at the sales of the two brothers Colling, and had always used first-rate bulls. Unfortunately, Mr. Morris's father not being sufficiently alive to the importance of detailed and particular pedigrees, omitted to obtain them with his cows at the time of his purchase. He was satisfied that they were pure-bred, and as coming from Mr. Strickland's herd. As time passed on, the produce of these two cows expanded in the hands of the Morrises, father and son, to a considerable herd, of much local repute and very successful in taking local prizes, and then application was made to Mr. Strickland for the detailed pedigrees of the two cows he had sold to Mr. Morris. But no, with an absence of liberality not common amongst modern Short-horn breeders, Mr. Strickland refused to communicate these details, and consequently the pedigrees of Mr. Morris's cows, after many generations of known blood, always end in "cow bought of Mr. Strickland." The uniform and thoroughbred character of the herd, however, fully corroborates the purity of their blood.

Many of the best cows of the Broad Hinton herd take their place and do regular duty in the large herd of dairy cows kept by Mr. Stratton, but at Maisemore the dairy herd and the Short-horn herd are the same. With the exception of a few heifers prepared for the Gloucester Agricultural Show, not a cow or heifer receives either cake or corn, yet the condition of all is as good as could be desired for every purpose save prize-competition. Like Mr. Stratton's, Mr. Morris's Shorthorns are highly prolific, and he seems to have none of the apprehensions of abortion some of our breeders are compelled by sad experience to entertain. Consequently, though his chief sales consist of his young bulls, he has always heifers of good pedigree and hardy constitution which may be purchased at reasonable prices. Many of the Maisemore bulls are purchased to go abroad, but the principal customers are the dairy farmers of the district, and it speaks well for their disposition to improve their stock that Mr. Morris can readily sell all the bulls he can rear. This is the way in which Short-horns are best utilised. Both Broad Hinton and Maisemore may be said to produce Shorthorns "for the million." Though Mr. Morris's young stock are well kept, the economy with which he accomplishes it is surprising, and beyond the first cost of the cattle there is no reason why ever dairy farmer, of competent capital, in Gloucestershire and Wiltshire, should not imitate Mr. Morris in keeping nothing but pure Shorthorns for his dairy. That it would answer his purpose to do so we have no doubt. For his best young bulls he would obtain ready sale, while the secondary animals, converted into steers, would sell well as yearlings. Many of the heifers would be sure to sell at good prices, while the cows, when no longer profitable to milk, would fatten easily on the summer Grass. That these considerations are operating widely on the dairy farmers of the West of England is quite obvious from the improvement their stock is undergoing. A successful breeder is generally an enterprising farmer in other branches of his business; and so it is with Mr. Morris. He, like Mr. Stratton, works the steam plough. He is an active member of the company formed in Gloucestershire for providing steam ploughs for the use of members and others. The company, formed this year, has already five steam ploughs and apparatus complete; and the day before our visit one of them had been fixed on Mr. Morris's farm. The land was then, however, too wet to commence working. *The Economist.*

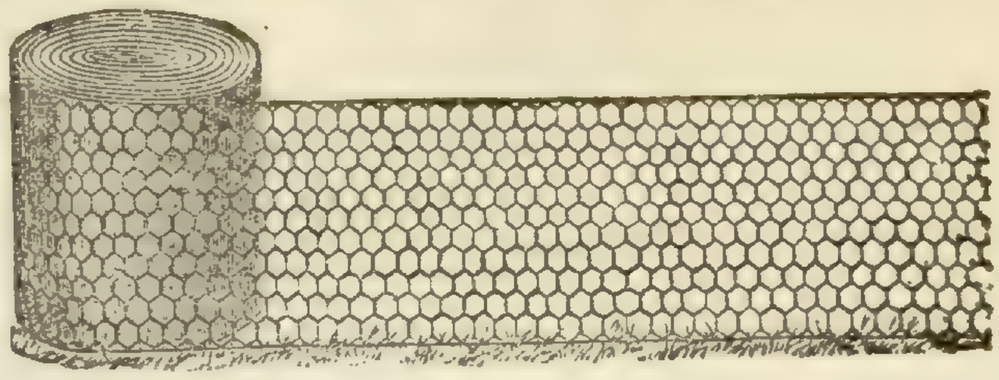
Notices to Correspondents.

BOOKS: *R. Mr.* Edward, Ruddock, 40, Wellington Street, Woolwich, has published a cheap "Pocket Manual of Homœopathic Veterinary Medicine," on the diseases of horses, cattle, sheep, swine, and dogs. A larger Treatise has been written in reference to diseases of the same animals, by Mr. James Moore, Veterinary Surgeon, entitled, "Outlines of Veterinary Homœopathy;" and Mr. Wm. Haycock, V.S., and M.R.C.V.S., has published a volume, "The Gentleman's Stable Manual."

FARMING: *Excelsior.* Suppose you have suitable weather, you may have on your light soil six or eight men ranged at equal intervals in the wake of a plough, and with forks turning all the Couch to the top in each furrow-slice as it is turned over, and it may then be burned. The ploughing will cost 8*s.* per acre, the eight men 16*s.* per acre, and the after mowing say 6*s.* per acre—in all 30*s.* And it may be found necessary to repeat the operation, with, however, half the number of men, as there will be less Couch. You may grow Wheat after the land has been cleared; and if you top dress it in spring you may reckon upon a good crop. 94 acres of arable and 43 of good pasture land will probably need a capital of 1500*l.*; that is supposing your *rent* to be 270*l.* Land so good will yield produce enough to keep a large stock.

GAPES: *W. Y.* will find the remedy for gapes in the No. for April 8th, 1848, and July 18, 1846. It is often occasioned by drinking dirty puddle water.

IMPROVED PREMIUM WIRE NETTING.



PRICES PER LINEAL YARD, 24 INCHES HIGH:—

Size of mesh.	Mostly used for	Light.		Medium.		Strong.		Extra strong.	
		Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.
2¼ inch	Hares, Dogs, Poultry	3½*d.*	4½*d.*	4½*d.*	5½*d.*	5*d.*	6½*d.*	6*d.*	8*d.*
2 inch	Game Netting	4*d.*	5*d.*	4¾*d.*	6*d.*	5½*d.*	7*d.*	7½*d.*	9½*d.*
1⅝ inch	Small Rabbits, Hares, &c.	4½*d.*	5½*d.*	5¼*d.*	6½*d.*	6*d.*	7½*d.*	8*d.*	10*d.*
1½ inch	Smallest Rabbits	6*d.*	7½*d.*	7½*d.*	9*d.*	9*d.*	11*d.*	11*d.*	13*d.*

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland or Ireland.

Any width of Netting under 8 feet made at proportionate prices.

☞ **Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.**

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GLASS FOR GREENHOUSES, &c.

Sheet Glass, in Crates.

	16 oz.	21 oz.	26 oz.	32 oz.	36 oz.
Best	5½*d.*	7½*d.*	9½*d.*	1*s.* 0*d.*	1*s.* 0½*d.*
Seconds	3¾	5	6½	0 9½	1 0
Thirds	2½	3½	5¼	0 7½	0 10½
Fourths	2¼	3¼			

Glass cut to any given sizes not on the List.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2½*d.* per foot
" 3rds, 2¼*d.*, 2½*d.*, and 3*d.* per foot
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot
" 3rds, 3½*d.*, 4*d.*, and 4½*d.* per foot

Glass for Orchard Houses,

As supplied by us to Mr. Rivers.

		16 oz.	21 oz.
20 in. by 12 in. / 20 in. by 13 in.	Common	13*s.* 6*d.*	£1 1*s.*
20 in. by 14 in. / 20 in. by 15 in.	Superior do.	16 0	1 3
	English Glass	18 0	1 9

The above prices include the Boxes, with but few exceptions. When Packages are charged, full price is allowed when returned.

Sheet Glass, Stock Sizes, 16 oz.

	3rds.	4ths.
11 by 9, 12 by 9, 13 by 9, 14 by 9 .. / 12 ,, 10, 13 ,, 10, 14 ,, 10, 15 ,, 10 ..	14*s.* 0*d.*	12*s.* 6*d.*
13 ,, 11, 14 ,, 11, 15 ,, 11, 16 ,, 11 .. / 14 ,, 12, 15 ,, 12, 16 ,, 12, 17 ,, 12 .. / 18 ,, 12, 19 ,, 12, 20 ,, 12 .. .. / 16 ,, 13, 17 ,, 13, 18 ,, 13 .. .. / 19 ,, 13, 20 ,, 13, 21 ,, 13	16*s.* 0*d.* per 100 feet.	13*s.* 6*d.*
16 ,, 14, 17 ,, 14, 18 ,, 14 .. .. / 19 ,, 14, 20 ,, 14, 21 ,, 14	Boxes included.	

ENGLISH GLASS of the above sizes 18*s.* per 100 feet.

Small Sheet Squares, in 100 feet Boxes.

6 by 4 / 8 ,, 6	6½ by 4½ / 8½ ,, 6⅜	7 by 5 / 9 ,, 7 / 10 ,, 8	7½ by 5½ / 9½ ,, 7½ / 10½ ,, 8½	11*s.* 6*d.* / 12 6

Boxes 2*s.* each, returnable at full price.

Patent Plate and Polished Plate Glass.
Ornamental and Coloured Glass.
Perforated Glass for Ventilation.

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Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.

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Reduced Tariff for Horticulture, Pictures, and Dwellings.

ORCHARD-HOUSE SIZES.

Supplied to Mr. Rivers and many Others.

In. by In.	16 oz.	21 oz.
20 .. 12 / 20 .. 13	Common, per 100 feet,	13*s.* 6*d.*	18*s.*
20 .. 14 / 20 .. 15	Super ,,	16*s.*	23*s.*

SMALL SQUARES.

In. by In.	In. by In.	Per 100 feet.	Per foot.
6 .. 4	8 .. 6	Common	1½*d.*
6½ .. 4½	8½ .. 6½	11*s.* 6*d.*	
7 .. 5	9 .. 7	Super.	1¾*d.*
7½ .. 5½	9½ .. 7½	12*s.* 6*d.*	

Squares in 100 and 200 Feet Boxes.

Inches by Inches.	Inches by Inches.	Inches by Inches.	Inches by Inches.	Inches by Inches.		P. 100 feet.	P. foot.
10 .. 8	12½ .. 9½	13 .. 10	15 .. 10	13½ .. 11½	4ths.	12*s.* 6*d.*	1¼*d.*
10½ .. 8½	13 .. 9	13½ .. 10½	12 .. 11		3ds.	14*s.* 3*d.*	1½
11 .. 9	12 .. 10	14 .. 10	12½ .. 11½	14 .. 11	2ds.	18*s.*	2¼
12 .. 9	12¾ .. 10¾	14¾ .. 10¾	13 .. 11		1sts.	21*s.* 6*d.*	2¾
15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13*s.* 6*d.*	1¾*d.*
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16*s.*	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19*s.* 8*d.*	2½
18 .. 11	18 .. 12	23 .. 13	24 .. 15	.. ..	1sts.	24*s.*	3
13 .. 12	20 .. 12	20 .. 14	20 .. 16	.. ..			
14 .. 12	22 .. 12	22 .. 14	22 .. 16	.. ..			

If less quantity than 100 feet is taken, a moderate charge made for package.

GLASS CUT TO ANY GIVEN SIZES NOT ON LIST.

16 oz.—4ths, 1¾*d.*, 2*d.*, and 2½*d.* per foot.
" 3ds, 2¼*d.*, 2½*d.*, and 3*d.* per foot.
21 oz.—4ths, 2¾*d.*, 3*d.*, and 3½*d.* per foot.
" 3ds, 3½*d.*, 4*d.*, and 4½*d.* per foot.

HARTLEY'S IMPROVED PATENT ROUGH PLATE.

Not accountable for breakage.

GENUINE WHITE LEAD	32*s.* 0*d.* per cwt.	LINSEED OIL	2*s.* 4*d.* per gall.
ANTI-CORROSION PAINT	34 0 ,,	BOILED ,,	2 9
LINSEED-OIL PUTTY	8 0 ,,	TURPENTINE	3 3

BLACK, GREEN, and all other kinds of PAINTS, VARNISHES, BRUSHES, &c.

JOHN WEEKS & COMPANY,

SOLE INVENTORS AND MANUFACTURERS OF THE

ONE-BOILER SYSTEM OF HEATING BY HOT WATER.

PATRONISED BY H.R.H. THE PRINCE CONSORT.

WEEKS' ONE-BOILER SYSTEM.

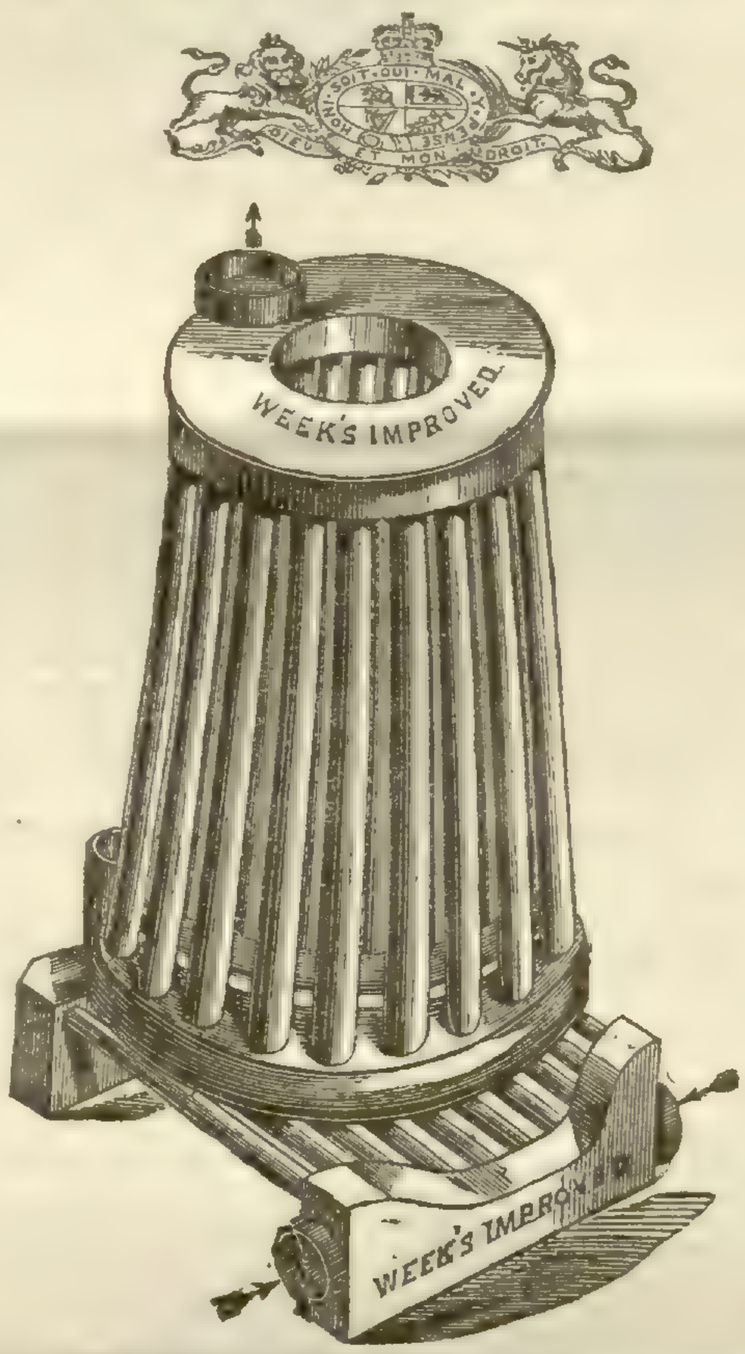
LIVERPOOL BOTANIC GARDENS.

The extensive alterations and additions at the above Gardens, in removing all the old gigantic Boilers and Furnaces, and substituting them by WEEKS' PATENT IMPROVED ONE-BOILER SYSTEM, are now complete and can be seen in most successful operation.

This Apparatus is the largest ever adjusted to one Boiler in the neighbourhood of Liverpool, and from its novel and greatly improved construction is specially worthy of minute inspection.

Every house in the Garden is heated from this one Apparatus, and by the ingenious arrangement of a series of valves hot water can be distributed in any portions of the Stoves, Greenhouses, &c., or withheld at pleasure, and the temperature regulated with the greatest nicety to meet the requirement of any particular department.

For full description see account in the *Liverpool Mercury* of May 30, 1860.



WEEKS' ONE-BOILER SYSTEM.

The Nurseries of Messrs. Arthur Henderson & Co., Pine Apple Place, and Messrs. E. G. Henderson & Son, Wellington Road, both of St. John's Wood, and ranking among the largest Establishments in England, are now Heated on WEEKS' ONE-BOILER SYSTEM. At the latter the Apparatus has been in use upwards of five years, during which period many additions have been made, and it now comprises nearly two miles of piping. The working of this Apparatus has been most efficient, and given the Proprietors the greatest satisfaction. They will be at all times happy to give every information to visitors, who will be well remunerated by an inspection of the same.

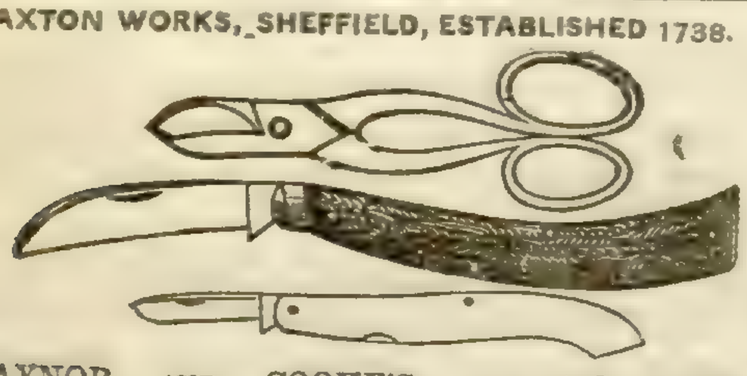
Mr. Arthur Henderson expresses himself thus:—"I am delighted and more than satisfied with the pleasing results produced by the superior arrangements of WEEKS' ONE-BOILER SYSTEM, and shall be most happy to fully explain and recommend it to all who may honour my Establishment with a visit."

JOHN WEEKS & COMPANY,

HORTICULTURAL BUILDERS, ENGINEERS, AND IRONFOUNDERS, KING'S ROAD, CHELSEA, S.W.

PLANS, ESTIMATES, AND PAMPHLETS FREE ON APPLICATION.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.



SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

PRICES REDUCED.

H. J. MORTON AND CO., Galvanised Iron Works, 2, Basinghall Buildings, Leeds.

GALVANISED IRON ROOFING

for Farm Buildings and other Roofs; the cheapest, most durable, and neatest Roofing in use; also Spouting at 10½*d.* per yard.

WIRE STRAND CABLE FENCING.

(formed of Twisted Wires like a rope or cable), the strongest, cheapest, and neatest fence in use, will resist the largest cattle, and will **not bend or get out of form** by trespassing upon or over. Price, with five lines of the Galvanised Strand, iron main posts, and pronged Standards, 1*s.* 2½*d.* per yard.

This fence is far cheaper than posts and rails, or any kind of iron fencing; and possesses four times the strength of solid bars. Will not rust nor corrode. Upwards of 1200 miles of this Fencing supplied.

GALVANISED GAME AND POULTRY NETTING.

Galvanised, 24 ins. wide 2-inch mesh, 5½*d.*, 7½*d.*, and 9½*d.* per yard.

Galvanised, 24 ins. wide, 3-inch mesh, 4*d.*, 5*d.*, and 7*d.* per yard. The Netting made any width, and with openings of any size.

GALVANISED IRON CHAIN CAMP STOOLS & CHAIRS, POULTRY FOUNTAINS & FEEDERS, PRONGED DAHLIA RODS AND ROSE STAKES, &c.

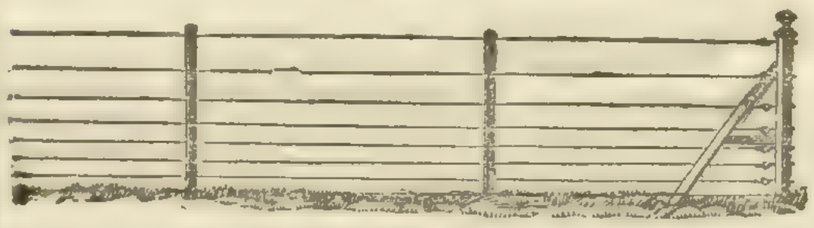
Strong CATTLE HURDLES from 2*s.* per yard.

PATENT IMPROVED GAS WORKS,

of all sizes, for the use of Private Houses, Mansions, Railway Stations, Mills, Collieries, Mines, Villages, &c. Works from 10 to 500 lights estimated for. **The works can be entrusted to an ordinary labourer.—Apply to**

HENRY J. MORTON & Co., 2, Basinghall Buildings, Leeds.

BARNARD, BISHOP, AND BARNARDS, NORWICH.



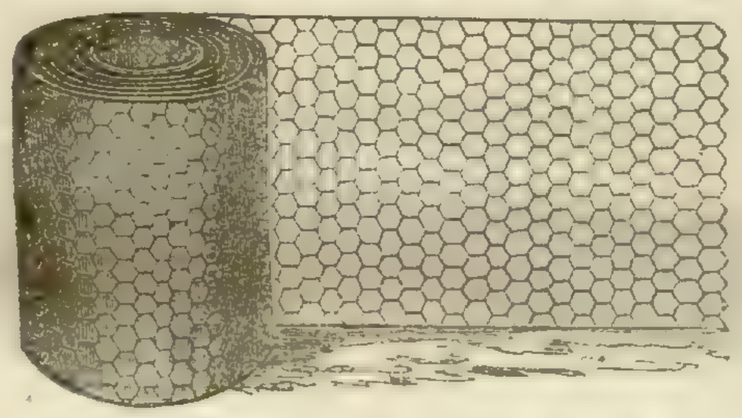
Reduced Prices of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 10*d.* per yard.

The same with Galvanised Wire Rope, 1*s.* per yard.

Illustrated Catalogues with prices of every variety of Wire Fencing and Wire Netting forwarded free on application.

MACHINE MADE GALVANISED WIRE NETTING.



BARNARD, BISHOP, AND BARNARDS, in consequence of improvements in their machinery for the manufacture of the above article, have been enabled to make a great reduction in the prices.

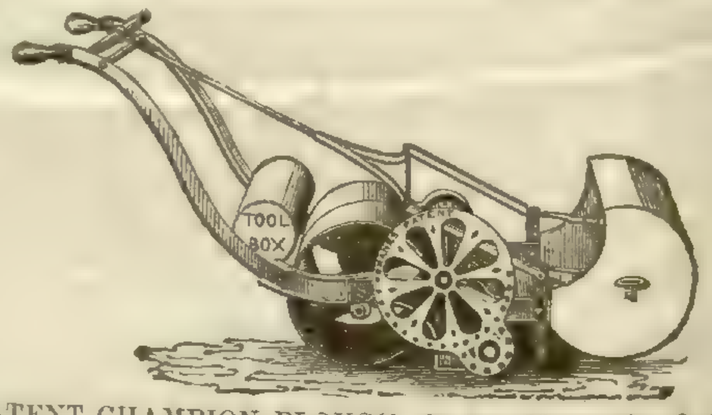
		Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide ..	..	5*d.* per yd.	4*d.* per yd.
2-inch ,, strong do. ..	..	6 ,,	4¾ ,,
2-inch ,, intermediate, do.	..	7 ,,	5½ ,,
2-inch ,, extra strong, do.	..	9½ ,,	7½ ,,
1⅝-inch ,, 24 inches wide ..	..	5½ ,,	4½ ,,
1⅝-inch ,, strong, do. ..	..	6½ ,,	5½ ,,
1⅝-inch ,, intermediate, do.	..	7½ ,,	6 ,,
1⅝-inch ,, extra strong, do.	..	10 ,,	8 ,,

All the above kinds can be made of any width (under 8 feet) at proportionate prices. If the upper half is of a coarser mesh than the lower, it will reduce the prices about one-fifth.

Strong Galvanised Poultry Netting, 8½*d.* per yard, 3 feet wide Galvanised Sparrow-proof Netting for Pheasantries, 2½*d.* per square foot. Wire Netting of every mesh from half an inch to 6 inches.

Wire Fencing and Netting delivered Carriage Free to all the principal Railway Stations.

HOWARDS' PRIZE PLOUGHS AND HARROWS.



H PATENT CHAMPION PLOUGH, for two Horses	£4	2	6
H H PATENT CHAMPION PLOUGH, for general purposes	4	7	6
SKIM COULTERS, 5*s.* 6*d.* each.			
HOWARDS' PATENT LIGHT SEED HARROWS ..	2	17	6
HOWARDS' PATENT SEED HARROWS	3	3	0
HOWARDS' PATENT GENERAL PURPOSE HARROWS	3	10	0
HOWARDS' PATENT THREE HORSE HARROWS	4	0	0

Agents: J. B. BROWN & Co., 18, Cannon Street, City, London.

JOSEPH HAYWOOD AND CO.,

MANUFACTURERS OF

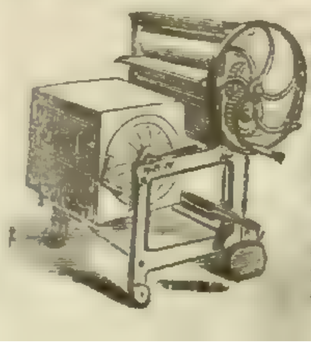
PRUNING AND BUDDING KNIVES,

SPORTSMAN'S, and all kinds of POCKET CUTLERY.

Dealers in Gambia Garden Shears, Scissors, Syringes, &c.

GLAMORGAN WORKS, Sheffield.

BRADFORD'S PATENT WASHING MACHINE. SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations."—THOMAS BRADFORD Patentee, Cathedral Steps, Manchester. London Office: 65, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

CARTER'S LIST OF GLADIOLI.

WE have great pleasure in introducing to the notice of our customers the following splendid collections of GLADIOLI, which have been selected by us from the stocks of the most celebrated French cultivators; we wish also to call attention to the great reduction in the price of many of the varieties.

POT CULTURE.—Pot in light turfy loam and sand, with good drainage, mixing this compost with well-rotted leaf-mould, in about the proportion of one-third; prepare a bed of litter from the stable, which cover with tan or any dry and light composition, and place a frame on it, in which plunge the pots; give plenty of air, and withhold water, until the bulbs have made root and the leaves appear; it may then be carefully given, when there is no danger of frost. Should the winter prove very severe, bank the frame up well with dung or litter, and cover the lights with straw or Bass Mats. If it should not be convenient to carry out the above directions, the following will be found a very good method of cultivation:—pot in sandy loam, as above, and place the pots in Greenhouse or Conservatory, near the glass, taking care that the degree of temperature is sufficient to keep out frost.

GARDEN CULTURE.—Prepare your beds or borders by well digging them a spit deep, burying a stratum of good leaf-mould or rotter manure at the bottom. The surface soil should be rendered open by mixing sand with it and being well broken in digging; plant the bulbs in clumps or rows according to fancy, about 6 inches deep, taking care to cover them 1 inch deep with sand previous to re-covering with mould. After the roots are planted, rake the ground well, giving it a southern inclination if possible; keep free from weeds, and stir surface occasionally; in severe weather cover the bed with 2 or 3 inches of dry litter or sea-sand. In the later stages of growth, the bulbs should be kept moderately moist.

French Seedlings from Gandavensis.

These varieties, from their free flowering habit, strong trusses of bloom, and magnificent richness of colour, are among the handsomest autumnal ornaments to the garden, and beyond a doubt the finest of all the Gladioli tribe.

	Dozen.	Each.
Baronne Saillard, salmon, red and carmine	10s. 0d.	1s. 0d.
Berenice, beautiful rose red, variegated	10 0	1 0
Calendulaceus, salmon rose	10 0	1 0
Canari, light yellow, rose striped	10 0	1 0
Endymion, rose, tinted purple	10 0	1 0
Eugénie, white, rose and carmine	5 0	0 6
Galathée, carnation striped	10 0	1 0
Goliath, light red, carmine striped	10 0	1 0
Hébé, carnation, striped carmine	10 0	1 0
Impératrice, carnation striped	10 0	1 0
Madame Binder, pure white, rose striped	12 0	1 3
Mathilde de Landvoisin, white, carmine striped	12 0	1 3
Mazeppa, rose, yellow striped	10 0	1 0
Monsieur Vinchon, salmon, red and white	10 0	1 0
Nemesis, clear bright rose, white stripe	10s. 0d.	1s. 0d.
Neptune, red, variegated carmine	10 0	1 0
Nimon de l'Enclos, carnation and rose	12 0	1 3
Oracle, brilliant cherry rose	10 0	1 0
Osiris, purple and white	12 0	1 3
Othello, light orange red, fine	10 0	1 0
Pégase, carnation and chamois	10 0	1 0
Pénélope, French white, carmine striped	10 0	1 0
Prémices de Montrouge, bright red, large petals, good substance	10 0	1 0
Rebecca, white and lilac	12 0	1 3
Sulphureus, sulphur-coloured	12 0	1 3
Vesuvius, fine red	5 0	0 6

Newest Varieties of French Seedlings from Gandavensis.

	Each—s. d.
Achille, currant-red and white	3 0
Berthe Rabourdin, pure white, carmine spots	3 0
Calypso, carnation striped rose	2 3
Cérès, pure white and purple	3 6
Clémence, satin rose, carmine striped	2 3
Comte de Morny, dark cherry-red	3 0
Comtesse Paul de Ségur, delicate rose, striped with carm.	1 9
Diane, delicate carnation and rose	3 0
Docteur Andry, bright orange	0 9
Duc de Malakof, orange red and sulphur	3 0
Edith, carnation striped	0 9
Eldorado, fine pure yellow	6 0
Erato, delicate rose, carmine striped	3 6
Eugène Domage, deep red, brown stripe	3 6
Eveline Brydie, delicate salmon, spotted with carmine	1 6
Isoline, carnation, carmine spots	2 3
Junon, white, striped with lilac	5 0
L'Eclair, brilliant vermilion, spotted with deep carmine	1 9
La Quintinie, bright light orange	3 6
Le Poussin, light red, beautifully marked	6 0
Lelia, peach and lilac	3 0
Léon Leguay, beautiful	1 0
Louis Van Houtte, velvety carmine, spotted with purple	1 6
Linné, orange cherry, yellow spots	3 6
Madame Basseville, cherry and white	3 6
Madame Briot, satin rose, spotted with carmine	1 6
Madame de Vatry, sulphur, white and carmine	3 0
Madame Furtado, delicate rose, with carmine spots	2 0
Madame Haquin, yellow, white and lilac	2 3
Madame Hardy, rose, violet spots	3 0
Madame Paillet, carmine, marked with white and violet	1 3
Madame Poignant, delicate rosy carmine	6 0
Madame Souchet, delicate flesh, deep rose spots	3 0
Madame Victor Verdier, deep rose, spotted with violet carmine	1 6
Mademoiselle Marsault, fleshy white, violet, carmine spots	6 0
Marie, pure white, carmine spotted	3 6
Monsieur Lesèble, white, purple spots	5 0
Monsieur Poiteau, bright cerise	2 0
Napoleon III., bright scarlet, striped	3 0
Ophir, dark yellow and purple	3 0
Pline, light cherry and white	3 0
President Decaisne, bright cerise, carmine spots	1 6
Princesse Clothilde, salmon rose	6 0
Princesse Mathilde, light rose and carmine	3 0
Rembrandt, bright deep scarlet	3 6
Raphaël, deep red vermilion	5 0
Solfaterre, fine pure yellow	7 6
Solferino, orange scarlet violet, carmine spots	6 0
Thérèse	2 3
Véléda, light rose and lilac	2 3
Vulcain, scarlet purple velvet	2 3

Fine free blooming varieties from GANDAVENSIS (for Clumping).

The following seedlings from GANDAVENSIS are more robust in habit than the Ramosus varieties, and are richer in colour: all weak-growing kinds we have discarded, and offer the under-mentioned splendid varieties at an unprecedentedly low price: for centres of beds, planting among Rhododendrons or in Shrubberies, their effect is magnificent.

	Per doz.—s. d.
Brenchleyensis, vermilion	5 0
Courantii fulgens, crimson	2 6
Don Juan, orange red, yellow spots	5 0
Emma, bright carmine, shaded	5 0
Fanny Rouget, rose, white and carmine	3 0
Fulgens aurea picta	3 6
Gandavensis, scarlet and yellow	2 6
Madame Coudère, carmine, shaded	3 6
Madame Henrincq, yellow and lilac	5 0
Monsieur Blouet, rosy carmine	3 6
Monsieur Georgéon, salmon rose	3 6
Triomphe d'Enghien, carmine var.	3 6

3 of each of the above 12 sorts, 10s. 6d.; 6 do. do. do., 19s.; 12 do. do. do., 35s.

The following are newer varieties.

	Per doz.—s. d.
Adonis, yellow and carmine	5 0
Aglaë, salmon	5 0
Archimède, red, carmine striped	5 0
Aristote, carnation rose variegated	5 0
Comtesse de Bresson, red variegated	5 0
Daphne, cherry, striped carmine	7 0
Egerie, salmon and dark rose	5 0
Hélène, French white, pur. striped	5 0
Janaire, orange red	5 0
Monsieur Corbay, purple striped	5 0
Pallas, carmine and orange	5 0
Pollonia, rose and carmine	5 0

3 of each of the above 12 sorts, 13s. 6d.; 6 do. do. do., 25s.; 12 do. do. do., 47s.

JAMES CARTER & CO., Seedsmen, 237 and 238, High Holborn, W.C.

NEW DESSERT APPLE, DUKE OF DEVONSHIRE.—The Subscriber is now sending out Plants of the above valuable Apple raised at Holker Hall, Lancashire. It is a first-rate late dessert fruit, remaining in excellent condition till the beginning of June. Fully described in "Cottage Gardener" for June 1859, and "Gardeners' Year Book" p. 102.

Plants 7s. 6d. each, with the usual discount to the Trade.

DESCRIPTIVE CIRCULARS and FRUIT TREE CATALOGUES on application.—ROBERT M. STARK, Edgehill Nursery, Edinburgh, November 24.

FILBERTS are the most profitable of all Fruit Trees. They will grow best and be most productive on the poorest soils. The Prolific Filbert is the most remunerative of all. Fine plants from 3 to 4 feet high, 5 years' transplanted, of the Prolific Old Red Filbert and the Cob Nut, at 6s. per dozen; 4 years' transplanted, 4s. per dozen. Chionanthus fragrans, 1 ft. high, 12s. per doz.; Edwardsia grandiflora, 1 ft. high, 12s. per doz.; Fabiana imbricata, 1 ft. high, 12s. per doz. Figs, the Brown Matta, strong plants, 3 ft. high, 6s. per doz., 1s. charged on each dozen for package.

JAMES KITLEY, Lyncombe Vale Nursery, Bath.

SPLENDID GRAPE VINES.

GEORGE S. DODS has some very fine GRAPE VINES in pots of the following kinds, viz:—

Black Hamburgh	Black Tripoli
Muscat of Alexandria	West's St. Peter
Victoria Hamburgh	Black Prince
Golden Hamburgh	

Most of the canes average from 8 to 12 feet long, and strong, and would produce a fine crop next year in pots. Prices can be obtained on application.—Epsom Nursery, Surrey.

NEW AUTUMNAL RASPBERRIES.—The following kinds bear most abundantly all through October till late in November:—

1, OCTOBER RED, 4s. per dozen.
2, OCTOBER YELLOW, 4s. per dozen.
3, BELLE DE FONTENAY, or BELLE D'ORLEANS, 4s. per dozen.
4, AUTUMN BLACK, 18s. per dozen.

No. 2 is a remarkably fine dessert fruit. No. 4 is a dwarf sort, which gives large dark red fruit. Carriage paid to London.

THOS. RIVERS, Nursery, Sawbridgeworth.

PINE APPLES, GRAPES, ETC.

PINE PLANTS, FRUITING AND SUCCESSION.
GRAPE VINES, FROM EYES FOR FRUITING IN POTS, OR PLANTING.

JOHN WEEKS AND CO. can supply any quantity of very fine healthy Pine Plants, either Fruiting or Succession.

GRAPE VINES remarkably strong and fine, 50 varieties, all the best sorts.

JOHN WEEKS AND CO.'S HORTICULTURAL SHOW ESTABLISHMENT is entirely devoted to the growth and Forcing of GRAPES, PINES, PEACHES, FIGS, CUCUMBERS, and other choice Fruits. The whole open for inspection, thereby showing the most improved plans of HORTICULTURAL BUILDINGS with the VENTILATING and HOT-WATER APPARATUS in full operation.

JOHN WEEKS AND CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, London. Plans, Estimates, and Illustrated Catalogues free on application.

LODCEMOOR NONPAREIL APPLE.

W. FOSTER, NURSERYMAN, Stroud, Gloucestershire, offers DWARF TREES of the above excellent Dessert Apple from the original tree, at 2s. 6d. to 3s. 6d. each; also a few bushy STANDARDS in a bearing state, at 6s. each.

Fruit of the above was exhibited at the Pomological Society's Meetings, and highly commended as a late Dessert kind.

SCOTTISH ARBORICULTURAL SOCIETY.—The SEVENTH ANNUAL MEETING of this Society was held in the Rooms, 6, York Place, Edinburgh, on Wednesday, Nov. 7,—Mr. JOHN MACLAREN, Hopeton, in the Chair.

It was resolved to offer PRIZES for ESSAYS on the following subjects for next year:—

I. Introduction and Cultivation of the newer Coniferæ and other Forest Trees, with special reference to the Climate of Great Britain and Ireland. (Silver Medal).
II. On the Successful Raising of Two Crops of Scotch Fir in Succession on Moorland. The Crop reported on to be not less than 2 years old. (Silver Medal).
III. The best Season for Felling Timber of various kinds; with a view to future Durability. (Silver Medal).
IV. The best Method of Rearing and Maintaining Live Fences; with an Account of the Plants best fitted for filling up Gaps in old Hedges. (Silver Medal).
V. The Results of Mixed and Unmixed Plantations. (Silver Medal).
VI. The Species of Timber Trees suitable to the various Soils, Elevations, and Exposures, and the effects produced on the different varieties. (Silver Medal).
VII. The Rearing and General Management of Scotch Fir, Larch, and Spruce, mixed and in masses. (Silver Medal).

President—His Grace THE DUKE OF ATHOL.

Vice-Presidents.

JOHN J. CHALMERS, Esq., of Aldbar, Brechin.
The Right Hon. THE EARL OF AIRLIE, Cortachy Castle, Forfarshire.
Mr. W. THOMSON, Chopwell, Ebchester.
Mr. ROBERT PHILIP, Aldbar, Brechin.
Mr. JOHN MACLAREN, Hopeton.
Secretary—Mr. R. M. STARK, Edgehill Nursery, Edinburgh.
Treasurer—Mr. JOHN ANDERSON, Nurseries, Perth.
Auditor—Mr. THOMAS METHVEN, Stanwell Nursery, Edinburgh.

Copies of the Society's Transactions for 1860, 1s. 6d. each, may be had of the Secretary.

The Gardeners' Chronicle.

SATURDAY, NOVEMBER 24, 1860.

WE do not think much of ARTICHOKES in England, though all gardens of the better class contain some. But in other countries they form an important object of cultivation, especially for the sake of the "bottoms," which, when dried are in great request in France, where numerous dishes are prepared from them worthy of even Imperial tables. Possibly we do not grow them so skilfully as we might; possibly we have not the best sorts; probably we want the skill to cook them. A few hints therefore on Perpignan Artichokes, given in the *Revue Horticole*, may lead to some improvement.

At the district exhibition which was held, in 1859, at Carcassonne, there appeared among other produce of the country collections of Artichokes. In a note which accompanied them it was alleged that their excellence was owing to the nature of the alluvial soil in which they grew, and to the watering they got. The river Basse, saturated, as it appears, with town sewage, feeds numerous canals, which are made to irrigate the adjoining garden ground. Four sorts of Artichoke are grown there, the favourite being what they call the *Artichaut blanc* or *des quatre saisons*, elsewhere named *Artichaut gris*. This kind is quite as productive as the *Gros vert de Laon* grown on a great scale at Aubervilliers and elsewhere; or the *Gros Camus de Tours*, cultivated at Nantes, Rouen, and all the central west of France; besides which it is in bearing eight months in the year (this, however, only in the South we presume) and is much the hardiest known, it having been the only sort which escaped in 1829, an inundation of the market gardens of Perpignan, followed by intense frost.

The extent to which Artichokes are grown in France will probably surprise English readers. One market gardener grew 10,000 plants as long ago as 1826, and the demand for the article continually increases. It is reported that in the neighbourhood of Perpignan alone, in the year 1858-9 (a winter crop, from October to May in that warm region) the *Quatre saisons* Artichoke furnished 3,500,000 dozens, worth 875,000 fr. (35,000*l*.), at 2½*d*. a dozen; the whole receipts for this kind of crop having amounted to 42,200*l*.

Is there no place in Devonshire or Sussex, to gain a share in this considerable market return?

IF our previous remarks at p. 973 on pruning PEACH and NECTARINE trees have been understood, the errors pointed out in that article will of course be avoided. But we are not to be satisfied with the advantages of abstaining from doing wrong, when still greater results will flow from doing what is right. As a general rule, applicable to whatever mode of cultivation or training may be adopted, the maintenance of healthy foliage, and in sufficient quantity for the size of the tree, is most essential; for unless that is secured no sound wood can be formed, nor will perfect fruit be obtained. The health of the foliage depends greatly on the condition of the roots as regards moisture. If this is deficient, the amount required for the demand of evaporation cannot be supplied, and the foliage will consequently become unhealthy. Presuming that the borders are well drained, either naturally or artificially, their surfaces should be so disposed that all summer rains will be absorbed, unless, indeed, the season is excessively wet and cold. If the border slopes much from the wall, it should be brought nearly to a level; drills, however small, ought not to be formed across it, even such as are often made in earthing up such crops as early Potatoes, Peas, French Beans, &c. Such drills should run lengthwise.

Insects, chiefly consisting of red spider and green fly, must be destroyed as soon as they make their appearance. It is difficult to keep down red spider when there is a deficiency of moisture at the root; but when this is not the case frequent syringing will clear the trees of that pest. Green fly has ruined many trees. If not killed outright in one season, trees have in numerous instances been rendered unsightly by its ravages, and so unprofitable, as to be unworthy of a place on walls. It may, however, be easily and effectually cleared off by the application of Tobacco dust.

By such means leaves may be kept healthy; and as they are the principal agents by which growth is carried on, all increase of solid parts depend on their number and efficiency; generally speaking, therefore, as many of them should be encouraged as can be well exposed to light. But to this rule there are some exceptions. For example, on whichever side of the tree there is a preponderance of foliage, the formation of wood will be greater on that side than on the one furnished with comparatively few leaves. In such cases, always very liable to occur, the growth of foliage must be checked on the stronger side; but it should be encouraged to the utmost on the weaker portion, till both are equally strong.

Maiden plants should be cut back to two side buds, situated as nearly as possible opposite to each other. The shoots from these should be trained at an angle of about 45°, the tree will then resemble a Y. The sap will thus be divided so as to flow equally in two directions. The two main shoots just alluded to are destined to form the two principal limbs of the tree. They ought therefore to increase in thickness at an equal rate. If at any time one is found thicker than the other, it is a proof that previously, in one or more seasons, the amount of foliage on both sides of the tree had not been equally maintained.

It is natural for the sap of trees to flow mainly into one central upright stem until this attains its natural height; but in stone-fruit trees, and more especially the Peach and Nectarine, the sap should be diverted into two main branches, both inclined from the perpendicular, because from a central upright stem it will not readily flow into horizontal branches, and although these may be originated, yet they are apt to languish and die off, the lower ones more especially.

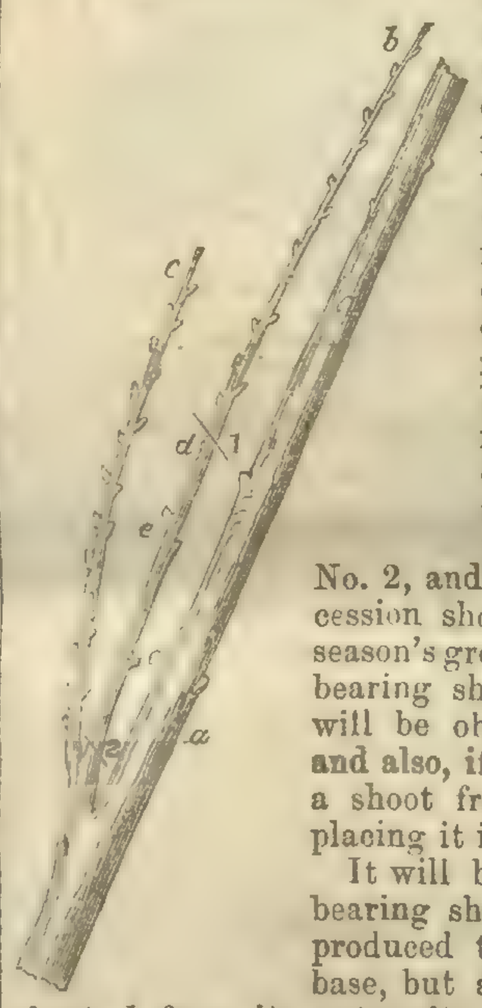
Whilst the first two shoots are making their growth they must be watched. If one is seen to grow stronger than the other it must be bent down, and the weaker one raised. This will give the young tree a somewhat irregular appearance, but it must be endured for a time, otherwise greater and more permanent irregularities will be the result.

In autumn, soon after the leaves have fallen, the two shoots should be cut back to 12 or 15 inches in length, and trained nearer the horizontal direction than they were in the previous season. In the following spring more shoots will push from the two shortened ones than are likely to be wanted. Select on each side an equal number of such as appear most suitable for prolongation as leading branches. Train them in an inclined position in summer, the stronger being more bent down than the weaker. When the strongest have grown 12 or 14 inches long, pick out the bud at their extremity. This operation will cause a greater development of the partially formed buds and insure their breaking into shoots in the following spring, when otherwise they would remain dormant, become overgrown and entirely disappear, unless the branch be cut back; and then, in consequence of that operation, some of the buds on the part left may burst through the layers which have formed over them. This mode of obtaining shoots ought, however, to be avoided as much as possible, and care should be taken to procure a sufficient number from eyes developed on young wood. If a shoot is shortened back at the winter pruning, the buds immediately below the section will generally burst into shoots, so that we can by shortening command a shoot wherever it is seen to be wanted, either for being trained on as a leader, or to form a bearing shoot. The treatment of the latter requires now to be explained.

In the accompanying figure—

a. Represents a portion of branch.
b. A shoot of the present year's growth.
c. The succession shoot, also of the present year's growth.
d. A bearing shoot of last season's growth.
e, e. Remains of fruit-stalks, where fruit was borne this season.
1. The place to which the bearing shoot *d* was shortened at the winter pruning last year.
2. The place to which the shoot *d* should be cut off at the ensuing winter pruning.

It must be remarked, that if the bearing shoot *d* had not been shortened last winter by the cut 1, it would have now been naked about as far as *b*, and no succession shoot *c* would have existed; and in that case the long piece of naked wood must be trained in order to obtain a fruit or two from the small bit of bearing shoot produced at the extremity. Instead of being under this necessity, the whole of the objectionable naked wood can be removed by the cut No. 2, and replaced by the succession shoot *c*, of the present season's growth, now become the bearing shoot from which fruit will be obtained next season, and also, if shortened as *d* was, a shoot from its base for replacing it in its turn.



It will be observed that the bearing shoot *d*, has not only produced the shoot *c* from its base, but also a similar young shoot *b* from its extremity. This shoot, being well furnished with blossom buds, offers so strong a temptation to retain it, that few can resist doing so, not being aware at the time that they are commencing the ruin of the tree. Some may say, "Let us have the two or three good Peaches which the shoot *b* would yield us, and then we will cut back the whole to the base at 2; there cannot be much harm in that?" There is. The portion *d* will be thicker by a year's growth, so that when cut out the wound will be so much larger. Space will be occupied which properly belongs to the then bearing shoot *c*, and its successional one, thus occasioning their foliage to be over crowded. Besides, there ought to be quite enough of regularly situated bearing wood without retaining that which produces irregularities. In a full-grown tree there may be 300 such branches as *d*, producing each one or two fruits; but reckoning only one, the total produce of a tree would amount to 25 dozens; and this, year after year, ought surely to be considered a satisfactory return.

From what has been stated, and by reference to the figure, it will be seen that the winter pruning of Peach and Nectarine trees is an easy matter; for in a tree that has been previously well managed it chiefly consists in repeating the cut No. 1 on every succession shoot a out to be trained in for bearing, and the cut No. 2 on those that have borne. The part of a tree above ground consists essentially of a stem and branches, and these parts of course may be of considerable age. But with regard to Peach and Nectarine trees, as a general rule, *no wood should be trained in that is more than two years old, or that has existed during two summers.* The branch *d* for example having borne fruit in the present summer, and having existed as a young shoot in the preceding one, it is reckoned two years old; and for the reasons stated in treating of the bearing shoot, and in accordance with the above rule, it is pruned off by the cut marked 2.

Occasionally it may be necessary to deviate from the above rule, as when from some accident a branch is naked or deficient of a bearing shoot where such ought to be. Supposing this should happen in advance of *b*, in that case it is advisable to train the bearing shoot close to the branch, allowing the shoot *b* to extend and bear where otherwise there would have been a vacancy. Such however will not be of frequent occurrence, if care be taken to originate a sufficient number of shoots whilst the branches are young. If this be done there will be no difficulty in furnishing the tree with both leading branches and bearing shoots.

In order to take advantage of young wood for obtaining shoots for leaders, several of the latter will frequently have to be originated at the same time; but although it may be necessary to do so, yet they should not be all equally encouraged in growth, otherwise the upper ones would become too strong for the lower. Of three, for instance, that may be originated at the same time, the lowest should be allowed to go on at once as a leader, the next treated for a year as a bearing shoot, and the upper as such for two years. In this way the upper will be kept in check from overgrowing the lower, with which they will soon make up, notwithstanding the advantage thus afforded it. ||

—— IT appears in a circular from Messrs. VILMORIN that they are offering seeds of a NEW UPRIGHT TOMATO, which requires no support. This plant is said to be entirely different from the kinds previously known. Its stem is 2 feet high or more, quite upright, and so remarkably strong and stiff as to be strictly self-supporting—a highly commendable quality. It branches less than the common great red Tomato, is less leafy, and does not want so much pinching. The leaves are rather curled, much puckered, very firm, and closely placed on the sturdy branches. Their colour is a remarkably deep shining green. It does not bear so freely as the common Tomato, but its fruit, which is of the same colour, is larger and more regularly formed. ~~In earliness~~ it is intermediate between the Early Red (*rouge hâtive*), and the Great Red (*rouge grosse*). It was raised from seed by GRENIER, the gardener of M. DE FLEURIEUX, at a place called the Chateau de Laye, wherefore it is to be called the *Tomate de Laye*.

—— SOME time since we made mention of a very extraordinary and quite unexpected change in the flowers of the PURPLE ZINNIA (p. 852), by which an addition has been made to our flower gardens not a whit less interesting than that of Double Dahlias. Before the subject is forgotten it is as well to put on record what is now known of the origin of the new race. Messrs. VILMORIN make the following statement.

Every body knows that the single-flowered Zinnia elegans occasionally produces flowers with a double row of radiant florets; but beyond this change Messrs. VILMORIN had never been able to persuade it to pass; nor indeed could they succeed in even fixing the sport such as it was. At last in the year 1858 they remarked in the garden of a M. GRAZAN, nurseryman at Bagnères, the true double form, grown by him for the supply of the flower market there. M. GRAZAN had received the seeds among others from India, and other persons have procured it from the same source. Thus we learn that no European cultivator is entitled to the credit of having raised this remarkable acquisition. How it came to India is at present unknown. Possibly some of our Correspondents there may be able to inform us.

MYCOLOGY.—No. XXXVI.

A. CAMPESTRIS, *L.*, var. *Buchanani*, Berk.—It was stated in our last notice, that hotbed Mushrooms are received every where without the slightest suspicion of the possibility of deleterious species being mixed with them, and it is on this ground that they are exposed for sale in the Paris markets without any question from the police. It is however far from being the fact that no other species ever make their appearance in the beds, and we now place before our subscribers figures of a very marked variety which occurred at Dyrham Park in great quantities in some beds which were under the management of Mr. Buchanan. We have since observed the same form in small quantities in punnetts of Mushrooms in Covent Garden, and a single specimen lately occurred in a large Mushroom bed which we had

occasion to examine. Unlike the ordinary bed Mushroom, the pileus is perfectly smooth and free from scales or hairs and looks as if it had been whitewashed or smeared with white paint; it is moreover deeply depressed and has in general no fragments of the ring adhering to the margin. The stem is very stout and solid; the ring slight and fugacious; the gills at first only slightly tinged with pink, and the whole habit very distinct. The qualities of this species are so good, and its produce so great, that we have recommended its cultivation as a distinct and useful variety, a point which with a little care might in all probability be easily accomplished.

Directions for the formation of Mushroom beds are to be found in any book of gardening. We have consequently not thought it requisite to load our pages with matter easily accessible to all. We believe however that something yet remains to be accomplished in their cultivation. At present there has been no selection of varieties, though there is as much difference between them as between bad and good varieties of Peas. There is a form for instance which occurs at the Swan River which is said to be of a most superior character. We have ourselves attempted to introduce this though at present without success, and the same may be said of *Agaricus fabaceus*, a South Carolina species, which is said to possess valuable properties. The attempts hitherto made at the introduction of these species or varieties have proved abortive, probably from the spawn becoming too dry in the course of a long voyage; but if a quantity of the soil were brought over in a Ward's case the mycelium would probably arrive in a state capable of vegetation.

Apart however from foreign forms we have some at home which would probably supersede the particular variety at present cultivated if experiments were made. There is one for instance, with deep Mushroom-red gills, abounding in a rich red juice, which far surpasses the common field or dung Mushroom, and we lately pointed out a magnificent variety in the plantations at Belvoir to our friend Mr. Ingram, which we trust he will be able to propagate.

While on the subject of the cultivation of Mushrooms, it may be well to add a few words respecting neighbouring forms, such as *Agaricus arvensis* or the Horse Mushroom, the tall variety of this species with a bell-shaped pileus when young or half grown, figured by Krombholz under the name of *Agaricus edulis* of Bulliard, and known in the midland counties under the name of Springers, which has occurred this summer by thouands in a single ring; and a large form, vieing with the Horse Mushroom in size, but distinguished by its turning red and not yellow when bruised. The spawn of these may be had in almost any quantity, and if beds were made with spawn procured from the fields, the permanence of such species might be easily established or overthrown. Other varieties more or less distinct occur both in our woods and pastures, and one known as the Hedge Mushroom is of very doubtful quality. Most of these indeed are inferior to the form commonly cultivated, but experiment might elicit useful properties, such as extreme luxuriance, rapid growth, early appearance, &c. At any rate it is an interesting field of investigation, and may be conducted with little waste of appliances, if the spawn is inserted in the soil in which Melons are planted. Other species totally distinct may come under trial, and we may even hope to import the Italian *Agaricus cæsareus*, which for beauty and excellence seems to be the prince of the whole genus. *M. J. B.*

Agaricus campestris, *L.*, *var.* Buchanani, *Berk.* From a drawing by Mr. W. Fitch.

HOW STRONG VINES BECOME WEAK.

It is well known that in many instances Vines which have borne excellent crops for several years have commenced to decline in vigour, and to yield inferior crops as regards size of bunches and berries, each successive crop being less than the previous, till at last even the Black Hamburgh varieties assume the appearance of small black clusters. After Vines have produced highly satisfactory crops for several years, and after they have grown up so as to well furnish the Vinery, it is very discouraging to witness their decline, notwithstanding that they are treated as well and in every way as carefully attended to as they previously had been in the season of their finest production. Still the falling off continues, and in order to put an end to the grievance, endured for a greater or less number of years according as hopes of improvement are more or less indulged, the Vines are condemned and replaced by a young set, for which a fresh border and other expensive alterations are usually made. It would of course be desirable if this could be rendered unnecessary, as well as the loss of crops during the time that the young Vines require to furnish the house. Before a remedy can, however, be properly suggested, the cause of the evil must if possible be ascertained.

The cause of Vines falling so early from a state of luxuriant productiveness into one of weakness is not obvious, and it has accordingly been variously stated. Some, from the appearance of decrepitude which the Vines assume, say old age; others that it arises from too heavy cropping; or the soil being too cold, too wet, or too poor for the roots. With regard to the first of these assigned causes, Vines cannot be supposed to decline so rapidly as above stated from age, for in a plant which naturally lives for hundreds of years, the falling off from age must be so gradual as to be scarcely appreciable during a period of only a few years. Nor can over-cropping have much to do in the matter, unless the Vines under fair circumstances have each borne more than the one at Hampton Court has done in the present and past century, annually as much as half a ton, more or less. The soil may be too cold and produce very bad effects, but where the Vines are planted inside the house, and the soil about the roots just as warm during the period in which the Vines declined as it was during that of their most favourable progress, that decline must be attributed to some other cause. As for the poverty of the soil, Vine borders are generally made rich enough, and no one would suppose that the few roots which are exhibited on turning out ill-thriving Vines could have exhausted the mass of soil in which they are found, more especially where top-dressing and manure-water have been plentifully supplied.

Since none of these usually ascribed causes will sufficiently account for the evil so desirable to be prevented, or at all events modified, it will be necessary to investigate carefully the circumstances under which the Vines progress to their highest bearing condition, and those under which they decline; for by so doing, some differences may be discovered worthy of consideration as regards the important point in question.

Before proceeding with these inquiries, it may be well to premise that it is through the agency of the leaves that all the parts of the Vine are formed. The layers of young wood which add thickness to the stem are formed from sap that must have been elaborated in the tissues of the leaves; and the roots do not grow of themselves nor directly from an appropriation of the food which surrounds them, but only from this after it has passed through the leaves and again returned from them, in an elaborated state, by the inner bark of the shoots and stem. Without leaves the plant cannot long exist. These simple but important facts, which have been incontestably proven by physiologists, should be constantly kept in mind by those who have the management of Vines. Many do; but some entertain still the foolish opinion that the leaves rob the fruit, and of course treat them accordingly; others say the leaves, by their shade, prevent the fruit from colouring, but this they do not.

We shall now proceed to trace the progress of a Vine planted under circumstances favourable to its vigorous growth, the glass roof under which it is trained being a lean-to, and the length of rafter 20 feet. The first season after planting the Vine reaches nearly or quite to the top; before winter the shoot is cut back to several feet from its base, more or less according to its strength. A shoot from the uppermost bud left is allowed to grow and form a leader. Instead of being distributed in perhaps 30 buds, as would have been the case had the shoot been left at full length, the whole flow of sap is concentrated in one, and that one consequently pushes with great vigour, making a rod 2 inches in circumference by the end of the season. It may then be shortened to 10 feet or to half way up the rafter; above this point an equally vigorous shoot will push next season, whilst the portion below, now in the second year of its growth, will produce lateral shoots, some of which may bear fruit. At the end of the season the leading shoot of the current year's growth is found to measure two inches in circumference, and the 2-year old portion below it 2¼ inches. The horizontal sectional areas of these two being in proportion to each other as the squares of their circumferences, are as 4 to 6¼; or the quantity of wood in the 10 feet length of one-year-old shoot is about 38 cubic inches, whilst that of the 10 feet length of two-year-old wood is 59 cubic inches. Here it may be observed that if as great a bulk of wood had been formed on the two-year-old portion as there was in the one-year-old rod, the former would have contained twice 38, or 76 cubic inches instead of 59.

From the preceding data it appears that the sectional area for the flow of sap in the young rod is represented by 4, and that in the two-year-old portion by 6¼; this is nearly in the proportion of 2 to 3. Then, if the whole capacity of the sap vessels of the Vine is divided into three portions, two of these will be required for carrying on a supply of sap to the two equivalents in the young rod, thus leaving only one-third for supplying the lateral spur shoots on the two-year-old wood. Hence it is the case, that whilst the young rod has the means of appropriating two-thirds of the flow of sap, and the lateral shoots below only one-third amongst them, they are weak compared with the leading shoot, and the bunches of fruit which they bear are consequently smaller than those on the leader.

So long as the leading shoot has room for extension it will continue to grow vigorously; and its ample foliage will greatly contribute to the increase of the stem and roots. By pruning in the spur shoots and shortening the leader the flow of sap is concentrated on fewer buds than are annually formed, that is one in the axil of every leaf, and the consequence of this proceeding is the production of vigorous shoots, the few receiving the supply of sap which would otherwise have been shared amongst the many. Whilst strong shoots can be produced, large bunches are generally obtained, and this may be the case until the Vine has completely occupied its allotted space; and when it has done this its amount of produce will have reached the maximum; and from this period may be dated that of its more or less gradual decline, and this we now have to notice.

The roots, it is premised, are still in the same temperature as before, and from their supporting the same quantity of healthy foliage, it is evident they continue in a healthy condition; the general treatment of the Vine is as good as in previous years; the pruning conducted so that every year about the same number of shoots, leaves, and bunches of fruit are produced; the leaves continue healthy and uniformly perform their

office in elaborating annually the same amount of sap. It might then be supposed, that under such equality of circumstances no falling off in the crops could take place. That they uniformly do so, although more or less rapidly, is a fact which certainly could obtain many corroborations; and the tendency to decline being uniform, it must proceed from some uniform cause.

Whilst the amount of foliage continues to be every year about the same, an equal quantity of sap will be annually elaborated. But the thickening of the stem and roots is progressive; and it is evident that as their thickness increases the layers of young wood must annually become thinner and thinner. **A stem 2 inches in circumference, and 10 feet in length, has 240 square inches of surface; but this in a stem 6 inches in circumference is 720 square inches, or three times as much as in the former case; therefore, with the same quantity of elaborated sap for its formation, the layer of new wood cannot be more than ⅓ of the thickness of that deposited on the less surface.**

Besides the quantity required to overlay the greater thickness of stem measured at a regular part, there are large spur protuberances to cover, and likewise wounds from pruning. All these go far towards doubling the surface over which the new matter prepared by the leaves has annually to be spread; and as the latter cannot be increased, the further increase of foliage being limited, whilst the demand is continually on the increase, it follows that the layer of new wood must necessarily become very thin, and when that is the case the shoots cannot be otherwise than exceedingly weak, and the bunches small in a corresponding degree.

Having thus endeavoured to point out a cause which uniformly tends to reduce Vines to a state of weakness, it remains to indicate the remedy. This is very simple; for we have only to remove the old wood by cutting back as near to the ground as can properly be done. The result of this will be a vigorous growth of young rods which will bear as Vines ought to bear.

CLASSIFICATION OF PINE APPLES.

(Concluded from p. 1000.)

30. MEALY-LEAVED SUGAR-LOAF PINE.—Syn. Mealy-leaved Sugar-loaf, White Sugar-loaf, Dominica, New Mealy-leaved Sugar-loaf, Allen's Seedling, Green Sugar-loaf, Anson's, Otaheite, Brown Sugar-loaf.

Flowers lilac. Fruit pyramidal, of a lurid green and slightly mealy, when ripe of a pale yellow inclining to lemon-colour. Pips rather below the middle size; flattish scales covering rather more than one-third of the pips, and ending in lengthened acute points. Flesh very pale yellow, almost white, transparent, rather soft and fibrous, sweetish without acid, slightly aromatic, not very pleasant. Crown small, leaves rather numerous.

This is readily distinguished from all other varieties by its leaves being channeled or grooved like those of the Lemon Queen, but in a less degree than that variety; it also differs in being less mealy, and tinged with dull brown; it is not described by Speechly, but appears to have been cultivated for a considerable time.

Good specimens will weigh from 3 to 4 lbs., but it is only an inferior sort, and not worth cultivating to any extent.

31. BLACK SUGAR-LOAF PINE.—Syn. Black Sugar-loaf, Copper-coloured Barbadoes.

The fruit is of the same form as the other varieties of Sugar-loaf, the colour is darkish purple and slightly mealy before ripening; when ripe light orange. Pips rather above the middle size and flat, sometimes a little depressed in the centre, and covered to the extent of one-third by the scales, which end in a very short blunt point. Flesh very pale lemon-colour, rather stringy, very juicy, and sweet with an agreeable pleasant acid. Crown rather large, leaves few and erect.

This is readily distinguished from all other varieties of the Pine Apple, by the purple colour of its leaves, which are long and erect; it is tolerably good during summer, but does not swell freely in winter.

32. STRIPED-LEAVED SUGAR-LOAF PINE. — Syn. Striped Sugar-loaf, Prickly striped Sugar-loaf, Green-leaved with purple stripes and spines on the edges, Purple Striped Queen, Green Sugar-loaf, Green striped Sugar-loaf, White Sugar-loaf, Striped-leaved, from Jamaica, Bird's Eye Bahama, Brown striped Sugar-loaf.

Flowers very pale lilac. Fruit of the same form as the other Sugar-loaves, of a clear palish green colour and rather mealy; when ripe of a bright yellow. Flesh deep yellow, semi transparent, slightly stringy, very juicy and sweet with a slight aroma, but without much acidity. Crown middle-sized, leaves rather numerous.

It is readily distinguished by its broad pale green leaves, with dark purple stripes; it generally weighs from 3 to 4 lbs., and is a fruit of considerable excellence.

It has been received from Jamaica by Sir Simon Houghton Clarke, Bart., under the erroneous name of Ripley.

33. TRINIDAD PINE APPLE.—Syn. Pitch Lake.

Leaves keel-shaped, very long and straggling, broad at the base, and tapering regularly to the apex, dull green much tinged with brownish purple, particularly on the spines and inner leaves, under surface very mealy. Spines remarkably irregular and growing in clusters, they are in the middle degree of strength and thickly set. Flowers lilac. Fruit of an elongated conical form, the greatest diameters of which are in the proportion of 12½ inches in height, by 5½ inches in breadth; before ripening dark olive and lightly covered with meal, when ripe dark orange, and slightly tinged with red on the lower part of the pips, which are large, of a roundish form, and only very slightly angular; the margins are rather elevated, with their centres depressed, excepting the lower part of the fruit where they are a little prominent. Scales cover about half the pips, and end in lengthened acute points at the lower part of the fruit, but near the summit they are much shorter. Flesh pale yellow, soft, with little fibre, very fragrant and sweet without acidity, very delicate and highly flavoured. Crown very small, contributing, in continuation from the fruit, to give the whole the sharp termination of a regular cone. The leaves are reflexed and considerably tinged with reddish brown.

This excellent and truly valuable Pine was presented to the Society by his Excellency the late Sir Ralph Woodford, the then Governor of Trinidad, where it attains an immense size: the largest of those fruited in our garden weighed 6 lbs., but it is reported to weigh occasionally 26.

34. BUCK'S SEEDLING PINE.

This variety greatly resembles the Trinidad, but differs in the following particulars. The leaves are not of so robust growth, they are considerably paler, more mealy, and entirely free from any tinge of brown or red, nor are the spines so strong or irregular. The fruit before ripening is rather paler and more mealy, the scales much longer and of a dull whitish or grey colour. The flesh is also somewhat paler, with a richer and more highly flavoured juice.

Raised from seed at Elford, and presented to the Society by Mr. William Buck.

35. ENVILLE PINE. — Syn. Enville, Old Enville, Cockscomb, Enville Sugar-loaf.

Leaves not very long, but rather broad and strong, slightly keel-shaped, somewhat recurved, of a bluish green and remarkably mealy, spines middle sized, thickly set and very irregular. Flowers lilac. Fruit pyramidal, of a dark purple tinged with a brownish red before ripening and very mealy, afterwards of a deep reddish yellow, with pale copper coloured scales which cover about one-third of the pips, and terminate in lengthened acute points. Pips generally about the middle size and slightly prominent. Flesh almost white, opaque, soft and melting, without much fibre, juicy, rather rich and sweet with a peculiar and pleasant perfume. Crown small, often cockscomb shaped.

This is a very good and handsome Pine, weighing from 4 to 7 lbs., and swelling freely during the winter months; it was raised from seed at Enville Hall, the seat of the Earl of Stamford and Warrington, but at what time is rather uncertain.

36. NEW ENVILLE PINE.—Syn. New Enville.

The leaves of this variety differ from the Enville in being less mealy, the spines are also stronger and more regular. The fruit is not only of the same appearance, but also of the same quality as the Enville. It was first introduced into notice by Mr. Miller, of the Bristol Nursery; but its origin is unknown.

37. SPRING GROVE ENVILLE PINE.

Leaves short, broad and flat, with revolute edges of a bluish green colour, much tinged with brownish purple and rather thickly covered with meal. Spines middle sized, rather thickly set and regular. Flowers lilac. Fruit pyramidal, very broad at its base; before ripening dark green and rather mealy, when ripe dark yellow. Pips middle sized, rather flat and somewhat depressed in the centres. Scales covering rather more than half the pips and terminating in very short points. Flesh very pale yellow, slightly fibrous, very juicy and rather sweet, but not highly flavoured. Crown very small, leaves not numerous.

This Pine was presented to the Society, by Mr. Isaac Oldaker. The fruit weighs from 3 to 4 lbs., but is not of much excellence.

38. LORD BAGOT'S SEEDLING PINE.—Syn. Lord Bagot's Seedling.

Leaves remarkably short, broad and flat, bluish green and thickly covered with meal. Spines middle sized and rather irregular. Flowers lilac. Fruit bluntly pyramidal, before ripening dark greenish purple and thickly covered with meal; when ripe pale yellow. Flesh white, opaque and firm, with scarcely any fibre, very juicy and highly flavoured. Crown small, leaves not numerous.

39. BLITHFIELD ORANGE PINE.

The leaves of this variety bear a striking resemblance to those of the Enville, but differ in being much weaker and less mealy. The fruit is rather broader at the top than in that variety; the pips are also somewhat larger and less mealy, the colour when ripe bright ochre. Flesh pale yellow, rather soft and melting with a pleasant highly flavoured juice. Crown small, leaves not numerous.

Presented to the Society with the last, by Mr. Isaac Oldaker.

40. BLACK ANTIGUA PINE.—Syn. Brown Antigua, Black Antigua, Jagged-leaf Black Antigua, Brown Antigua, Wortley's West Indian.

It is readily distinguished by its leaves, which are very long, narrow and acute, rather spreading, of a clear bluish green, the inner leaves being much tinged with a pale brown, upper surface slightly mealy, lower surface very mealy. Spines large, far apart and regular. Flowers purple. Fruit cylindrical, inclining to oval; before ripening, of a dull purple green and thickly covered with meal, when ripe dark ochre. Pips very large and prominent. Scales covering rather more than one-third of the pips, and terminating in short blunt points. Flesh pale yellow, slightly fibrous, rather soft and melting, with a pleasant acid, remarkably juicy, sweet and highly flavoured. Crown small, leaves few and erect.

This truly valuable and excellent Pine-apple was cultivated by Speechly at Welbeck, before the publication of his Treatise; during summer it is the most delicious and highly flavoured fruit with which I am acquainted, and as Speechly very justly observes, it should be cut on the first appearance of changing from green to yellow, an observation which is applicable to all those sorts abounding with juice. We have received it both from St. Vincent and Maranhao.

41. WELBECK SEEDLING PINE. — Syn. Welbeck Seedling, Crown, Prickly Providence.

This sort is readily distinguished from all others by its leaves, which are long, slender and spreading; broad at the base and tapering to a very acute point; of a dull green and only slightly mealy. Spines large, far asunder and regular. Flowers small, dark purple. Fruit somewhat cylindrical, generally broader at the top than at the base, before ripening dark olive; when ripe pale lemon-colour; very mealy on the centre of the pips, which are large, flat, rather wrinkled and depressed in the centre. Scales covering nearly half the pips, ending in short blunt points. The flesh is very pale yellow, almost white, semi-transparent, melting and juicy, slightly acid, with a rich agreeable flavour. Crown rather large, sometimes cockscomb shaped, leaves not very numerous.

A notice of this variety has been made in the Hort. Trans. vol. iv. p. 213, where it is stated to be "a small fruit," this, however, is only very seldom the case; under favourable circumstances it will be found to be a free grower, producing fruit of great beauty, somewhat above the middle size of Pine-apples, and of sufficient excellence to obtain it a place in every good collection: its name is sufficient to satisfy us respecting its origin, when we consider the great quantity of seedling Pine-apples raised from imported seeds at Welbeck by Mr. Speechly.

42. RIPLEY PINE.—Syn. Ripley, Old Ripley, Montserrat, Heaton House Montserrat, Brown Sugar-loaf, Indian Black Pine.

Leaves broad, rather long, and slightly recurved, dark green, much tinged with reddish brown, and mealy on both surfaces. Spines in the middle degree of strength and irregular; margins reflexed and sometimes a little waved. Flowers purple. Fruit roundish ovate, sometimes rather cylindrical, slightly compressed at either end; before ripening very deep green, and thickly covered with meal on the middle part of the pips, when ripe of a pale copper colour. Pips rather above the middle size and rather prominent, scales covering about one half the pips and terminating in lengthened acute points. Flesh pale yellow, opaque, very sweet and rich, firm and crisp, not stringy; and of a very agreeable flavour. Crown about the middle size, leaves rather numerous and spreading.

This Pine is readily distinguished from all others by reason of its being densely covered with meal on the centre of the pips: it generally weighs from 3 to 5 lbs., and is an excellent sort for winter forcing, and well deserving of general cultivation.

43. RUSSIAN GLOBE PINE.—Syn. Russian Globe.

Leaves rather short and broad, somewhat keel-shaped, spreading and a little furrowed; of a dull green, much tinged with a dark brown, slightly mealy. Spines long, thinly set and regular. Flowers lilac. Fruit globular, sometimes tapering to the summit, before ripening dark purplish green and thickly covered with meal, when ripe darkish orange, inclining to a copper colour. Pips large, flat and a little depressed in the centre. Scales covering about one-third of the pips, which end in long acute points, closely adhering to the fruit. Flesh of a clear yellow, slightly fibrous, very juicy and sweet, with a rich highly perfumed flavour. Crown rather large, leaves broad and spreading.

This is an excellent and highly flavoured fruit, generally weighing from 3 to 5 lbs. It was imported from St. Petersburg by the Society in 1819.

44. RUSSIAN COCKSCOMB PINE. — Syn. Russian Cockscomb.

Leaves rather strong, broad, short, and somewhat furrowed, slightly spreading and rather flat, with revoluted margins of a bluish green and very lightly tinged with brown, very mealy. Spines rather strong, far asunder and regular. Flowers lilac. Fruit globular, rather tapering to the summit; before ripening of a dark green and rather mealy, when ripe pale orange. Pips rather above the middle size and flat; sometimes having small tubercles at some of the angles. Scales covering nearly one-half the pips, ending in long blunt points which adhere closely to the fruit. Flesh pale yellow, rather transparent, very juicy and sweet, with a rich pleasant acid. Crown rather small, leaves broad and spreading.

This Pine was presented to the Society by Mr. Isaac Oldaker. It is an excellent summer fruit, weighing from 4 to 6 lbs.

45. QUEEN PINE.—Syn. Queen, Old Queen, Common Queen, Narrow-leaved Queen, Broad-leaved Queen, Ananas Ordinaire.

Leaves very short, broad and stiff, somewhat spreading and keel-shaped, of a bluish green and thickly covered with meal. Spines strong, rather far apart and regular. Flowers lilac. Fruit cylindrical, before ripening a lightish green and mealy; when ripe a rich deep yellow. Pips rather below the middle size and a little prominent. Scales covering rather more than one-third the pips, ending in lengthened points. Flesh pale yellow, very slightly fibrous and melting, remarkably juicy and sweet, with a rich pleasant acid. Crown middle sized, leaves numerous and a little spreading.

The origin of this truly valuable and excellent Pine is uncertain; it is the Ananas Ovale of Miller's Dictionary, and probably the sort originally introduced into this country; in ordinary cultivation it comes into fruit in 15 or 18 months after having been removed from the stool, and will then weigh from 3 to 5 lbs.

46. RIPLEY'S QUEEN PINE.—Syn. Ripley's Queen, Ripley's New Queen.

This sort differs from the Queen in the leaves being less mealy and of a paler colour, the pips are also less prominent. It is a more tender variety than the Queen, over which it possesses no advantage: we are not acquainted with its origin.

47. GREEN QUEEN PINE.—Syn. Green Queen.

The leaves of this variety differ from the two described above, in their being much stronger, rather less mealy, and often having some parts of their margins destitute of spines. The fruit is generally larger, and the pips are rather more prominent than either of the other varieties of Queen, but they seem to be equal in point of flavour. It was first introduced into notice by Mr. Miller of the Bristol Nursery, but its origin is unknown.

48. MOSCOW QUEEN PINE.—Syn. Moscow Queen.

The leaves of this sort differ from the other varieties of Queen in being furrowed and in the veins on the under surface being entirely destitute of mealiness, thereby causing it to have a striped appearance. It is an excellent and highly flavoured fruit, of the same size as the Queen. Received from Mr. Isaac Oldaker.

49. STRIPED QUEEN PINE.—Syn. Striped Queen, Striped-leaved Olive.

According to Speechly this is an accidental variety obtained from the Queen at Welbeck, about 20 years

before the publication of his treatise. It differs from the Queen in its leaves being striped with a pale greenish yellow and a little tinged with fiery red, the fruit is also a little variegated, and of the same quality as the Queen, but seldom swells so freely as that variety.

50. SILVER-STRIPED QUEEN PINE. — Syn. Gold Striped, Silver Striped Queen, Silver Striped.

The leaves of this variety differ from the Striped Queen in the margins being striped, whilst those of the Striped Queen are uniformly green; they are also broader, less tinged with red and the stripes considerably paler than that variety. Although both plant and fruit are of greater beauty, yet they are of much less excellence.

51. ANTIGUA QUEEN PINE.—Syn. Antigua Queen, Black Caraile, Yellow Caraile, Lord Effingham's, Antigua.

Leaves short, broad, keel-shaped and slightly spreading dull green and very much tinged with lightish brown and very mealy on the under surface. Spines strong, far asunder and regular. Flowers dark lilac. Fruit cylindrical, sometimes roundish; before ripening dark olive green and rather mealy, when ripe dull yellow. Pips rather above the middle size, prominent. Scales covering about one-third part of the pips and ending in a short blunt point. Flesh white, firm, remarkably juicy, a little sugary but not highly flavoured. Crown rather large, leaves numerous and spreading.

We have received it from St. Vincent under the names of Indian Sugar-loaf, and Herbert's Narrow-leaved St. Vincent. It is an extremely worthless variety, being almost always deformed.

There is a variety of this sort with deep yellow flesh which far surpasses the one now described in point of flavour, and the fruit is not so liable to become deformed as that of the old variety, which is seldom otherwise than mis-shaped: the leaves are also broader, more spreading, and the spines rather coarser.

52. BLOOD RED PINE.—Syn. Blood Red, Blood, Claret, Ananas Jamaica purpurea.

This Pine is readily distinguished by the purplish red colour of its leaves, which are long, broad, and rather erect. The spines are large and regular. Flowers lilac. Fruit cylindrical, sometimes tapering a little to the summit; before ripening dark purple and very mealy, when ripe a reddish chocolate colour. Pips middle sized, slightly prominent and half covered with the scales which terminate abruptly in very short points. Flesh white, rather soft and melting, somewhat fibrous, neither very juicy nor highly flavoured. Crown middle sized, leaves rather numerous and erect.

It was imported from Jamaica by the late Major Morrison of Gunnersbury, under the name of Buck Pine, and unnamed plants of it were also received from St. Vincent by the Society.

It is not of such excellence as to warrant the introduction of more than a very few plants in any collection.

Of the preceding varieties the following will probably be found the most useful in a very select collection.

The Queen (No. 45) is one of the best varieties at present known for general cultivation. It grows freely, fruits early, and although not so high flavoured as some of the larger kinds is still the most valuable for a small family. Exposed to a very high temperature in the months of June, July and August, it is liable to become hollow near the core, but early or later in the season it is not subject to that defect. It is the sort generally grown by gardeners for the London Market. The *Ripley's Queen* (No. 46), a slight variety of the common Queen, is probably the best; the leaves are greener and broader, and it does not throw up so many suckers.

The Moscow Queen (No. 48) is an excellent variety but is rather a slow grower; the fruit is about the same size as the common Queen, but superior to it in flavour.

The Black Jamaica (No. 11) is an excellent fruit at all seasons of the year, but particularly in the winter months, when Pines rarely come to perfection; it cuts firm to the core, is highly flavoured, keeps some time after it is fully ripe, and bears carriage better than any other. It is, however, rather a slow grower, and the fruit seldom attains a large size.

The Brown Sugar-loaf (No. 29) is the best of the Sugar-loaf kind; it is a large handsome and highly flavoured fruit, swells freely in the winter months, its flesh is firm and juicy.

The Ripley (No. 42) is large, handsome and high flavoured; it is a good summer fruit, and swells freely in winter.

The St. Vincent (No. 22).—The fruit is not large but highly flavoured, particularly in summer; and it is said to swell freely in winter.

The Black Antigua (No. 40) is an excellent and highly flavoured Pine if cut when it begins to turn from green to yellow, but if allowed to remain on the plant until it is quite ripe it loses all its richness.

The Enville (No. 35) is deserving of a place in collections as one of the handsomest Pines in cultivation; although it is neither rich nor highly flavoured.

The Lemon Queen (No. 24) is of free growth, the fruit is rich, juicy and high flavoured.

The White Providence (No. 10) when grown to a large size, is generally deficient in flavour, but is a very handsome showy kind. It may sometimes bear prematurely, and if in that case the fruit be allowed to become perfectly ripe on the plant it is equal in flavour to a Queen.

COTTAGE GARDENING.

IT is a pity the success which attends the management of cottage garden and allotment societies in some parts of the country is not more general, for it may be laid down as a rule that wherever you meet with a properly conducted cottagers' society you will also find cottagers alike prosperous, contented, and respectable in the positions they relatively occupy. A clean and well-cropped garden is rarely accompanied by an ill-kept, untidy cottage; the bright flowers outside will generally have a reflex of bright spots inside; and it is equally certain that these habits of order and neatness will not be practised from day to day as a part of the household duties without the mind being similarly influenced; and hence what was once a neglected chaos becomes one of those "cottage homes of England," about which Mrs. Hemans has sung so beautifully, but which with a few exceptional cases under enlightened and benevolent proprietors shine more in song than they do in reality. Cottagers' societies are really not so well managed as they might be. The causes which militate against their usefulness are various, sometimes sectarian, and it sometimes happens that proprietors are not so alive to their own interest as they might be, for there are instances within the range of my experience where application for land for allotment purposes has been met with the reply "The villagers are a disorderly and disreputable set of fellows, and not deserving of allotment gardens," the short-sighted proprietor forgetting that wretched houses and hands unoccupied are not the least potent causes of the demoralisation of the working classes both in town and country. Go into any neighbourhood where there are comfortable cottages and good gardens, and you will find the public-house comparatively unfrequented; but seek the opposite example, of which I am sorry to say there are too many in the country, and though the pot-house be miles away the men will be found there every night so long as they have either money or credit. I am not going to argue that Cottage gardens are a complete remedy for this state of things, but I fully agree with what Mr. Morton stated on this subject a few months back, that cottage gardens and allotments are a "saving bank for scraps of time," and so considered exert considerable influence in bettering the condition of the working classes. Visit any street or village where the cottagers have poor gardens or none at all, on a summer evening, and you find the men and boys lounging about smoking, gossiping, and playing at games of chance, ultimately adjoining to the public house to spend their winnings; but give these men a piece of garden to cultivate, and the occupation will quickly clear the street of such unseemly appearance. When I say give, I do not mean that labourers or mechanics should hold land rent free; there is no charity in that, and I have known such gardens to be entirely neglected, in fact left uncultivated; but give them land at a fair price, and they will gladly avail themselves of it. I know instances near market towns where land for garden purposes is rented at 35*s.* per acre and sublet at 15*l.* per acre. This is of course an extortionate price, but I believe fair land, according as it may be situated in town or country, will find plenty of occupants at the rate of from 2*l.* to 8*l.* per acre, and even at the latter price, if cultivated with ordinary care, and taking the produce at town prices, the produce will yield a profit, to say nothing of the moral good which is sure to accrue from its cultivation.

> "Yes, in a poor man's garden grow
> Far more than herbs or flowers,
> Kind thoughts, contentment, peace of mind,
> And joy for weary hours."

Returning, however, to cottage gardens or allotments as more immediately connected with a rural population, it is a disputed question what quantity of land each cottager ought to occupy. Some say allot him no more than he can cultivate in his leisure hours before and after his regular work; and I have heard some employers say, give them no more than they can cultivate after working hours, such masters claiming a right to the morning energy of the men; but this is a very narrow and selfish view to take. In some parishes the allotments are under the management of the Churchwardens, and this is not a bad arrangement, especially if the minister is a liberal-minded man. Where the garden land is limited in extent the apportionment of it should be regulated by size of the family; thus I know a parish where the parents have 10 perches each, and the children 2 perches, and thus a man, his wife and six children, would have a garden of 32 perches in extent, or nearly a quarter of an acre. Others contend, and I incline to their opinion, that no allotment for a family man should be less than 40 perches, one quarter of an acre; this by devoting one-half to corn enables them to grow a sack or two of Wheat or Beans annually, which, either for bread making or pig feeding, is a great help to a family. The average produce of Wheat per acre in allotment gardens is 50 to 56 bushels, but the average produce of farm cultivated land is little more than 20 bushels, thus showing the advantages of good cultivation, and of spade husbandry accompanied with the plough. Some again consider that large allotments render the labourer too independent, and consequently less under command than he was wont to be. I am old enough to remember the time, before the present Poor-law came into operation, when the "house-row" system was in full practice, and the unemployed of rural parishes had to go from farm to farm seeking employment at 1*s.* per day, and many of these being weavers, framework-knitters, or other poor tradesmen, were totally unused to farming occupations. These are considered hard times, but the unemployed found those much harder.

While however I am an advocate for large allotments, or at any rate allotments proportionate to the size of the family to be employed upon them, I am no advocate for giving them rent free, as I have frequently seen the ill effects of such misdirected philanthropy to be gardens badly managed, and in some cases not cultivated at all. Provide fair land and charge a fair price, sufficient to pay rates and taxes as well as rent, and insist upon the rent being paid regularly, or the occupation be forfeited. Allotments should also be as near to the occupant's residence as possible, so that his energies may not be too much taxed in going to his garden after working hours.

I know a man who by moonlight on a winter's night may be seen digging in his garden, and I have seen him with a child holding the lantern while he dug the ground. This man had about half an acre of land, and being quite an adept in cultivation I have no doubt that after supplying his family of eight children he made by the sale of early Cabbage, Potatoes, seeds, and Cabbage plants &c., 20*l.* a year from that quantity of ground. Here is a real and substantial help to a poor man, a help much more substantial than gifts of coal, overcoats, or blankets, inasmuch as the money is honestly earned, and he has a right to do as he pleases with it. This enables him to act independently, discourages pauper-mindedness, the greatest curse of our rural population, and likewise teaches him the value of industry and of his own labour particularly. Such a man may, as he has a right to do, demand a full price for his labour, and who can blame him for so doing? For my own part I should be glad if there were more of them in the country, and I should also be glad if the north of England practice of deserving labourers being encouraged with sufficient land to keep a cow was more in practice in other parts of the country. The small cottier system may be objected to when it extends beyond the keep of a cow or two, as the class of men who are neither farmers nor labourers, who have not sufficient work at home, and who too frequently are too indolent to go out to daily labour, are not to be encouraged; but a comfortable cottage and good garden, a pig in the stye, and a cow in the field, is the position in which I should like to see every deserving cottager in the country. *P.*

BOTTOM-HEAT FOR VINE BORDERS.

SOME short time ago you very forcibly called the attention of your readers to an instance which came under your notice of singularly high coloured and flavoured Muscat Grapes as a striking exception, particularly this year, to the generality of these, and accounted for it by the fact that the borders in which they grew were well supplied with bottom-heat. Corroborative of this there was, if my memory serves me rightly, an exhibition some time ago, at St. James's Hall, of unusually high coloured and in other respects perfect Muscats, said to have been produced from a heated border at the Denbies, near Dorking, and to this condition was their superiority traced. My own experience coincides exactly with the above; decidedly the most perfectly coloured Muscats that ever came under my notice were grown this unfavourable season on a heated border, while in the same locality I have not seen a well coloured Muscat Grape this year, although in all other respects equally well managed as those to which I refer.

Admitting the correctness of this—and it is a subject well worthy of discussion and settlement—it becomes a matter deserving the consideration of those who are now erecting new Vineries or renovating Vine borders. It is a generally admitted fact that Muscats require a higher temperature than most other Grapes to ensure a successful set, and to bring them to anything like a passable condition as to ripeness. (The only exception to this that I have ever met with, either verbally or in print, is in Sanders' book on the Cultivation of the Vine, where he also says that a rather moist and close atmosphere is best for setting Muscats—an idea from which I totally dissent.) Few intelligent gardeners will be found to question the correctness of that theory which would propound a soil temperature corresponding in degree with that of the atmosphere in which most, if not all, plants grow, just because it is found in Nature that the temperature of the earth near its surface exceeds by a few degrees that of the atmosphere. With many things grown in our hothouses bottom-heat is a point scrupulously and assiduously attended to, as, for instance, in the case of the Pine Apple and many other plants. And he who would assert that he would produce as fine Pine Apples standing on a cold shelf as in a bed of heated material, would, I guess, be soon brought to book. If in such cases the principle is proved to be correct, why not in the case of the Vine? Just because, in my opinion, bottom-heat for Vines has not generally been put to the test, and probably because some who have adopted it have failed through other points of mismanagement, in the same way as some who have ample bottom-heat for their Pines do not succeed. It is surely not an unreasonable idea to hold that, if the roots of Vines were acting in soil the temperature of which was two or three degrees warmer instead of many degrees colder than the atmosphere in which the branches and leaves were enveloped, the chances of first rate Grapes, all other things being equal, would be increased. And were such conditions

more general, my impression is that less would be heard of bad setting, shanking, and shrivelling. If it be true that the best Grapes and wines of continental countries are produced from their sunny slopes, where the roots grow in the mere debris of rocks, and in some cases in the ashes of volcanoes, and are consequently subject to the most intense warmth, and that the most inferior are produced from colder though more alluvial soils; surely the merest tyro might conclude that the chances of success would be greater in our hothouses with the roots of the Vines in an open and warm border instead of those that are retentive, wet and cold. The contrary of this is so thoroughly opposed to all sound theory that one is almost astonished to find that the heating of Vine borders in general has not long ere now met with more consideration, for you may travel all over counties and scarcely meet with such a thing as a border heated from beneath by means of either hot air or water. Gardeners who are at all conversant with the early forcing of the Vine are well aware that in most cases where Grapes are required before June, there is an attempt made to supply heat to the border by means of masses of fermenting dung and leaves applied to the surface. Now, though I would not assert that such an attempt was next to useless in all cases, I think that in many instances, where the border is left uncovered till drenched with cold rains in autumn, and where the only roots of the Vine are a long way from the surface—this practice is next to useless, at all events not worthy of being compared with a judicious system of supplying heat from beneath by means of either flues or hot-water pipes. The first outlay of expense connected with heating a border sufficiently need not be very great, and in course of a few years will soon be saved in labour and in the avoidance of the nuisance of huge hotbeds on the borders in the case of applying heat from the surface; and my impression is that the day is not far distant when the supply of heat to the border of the "early house" and that of the "Muscat house" will be as general as that of heating the atmosphere, and that a saving will thereby be effected in the course of time. I know that there are many who ridicule the idea of chambering and hot-water pipes, &c., and I was once rather sceptical on the point myself. No doubt in many instances the amount that the arrangement costs has been unnecessary, in many cases a sufficient amount of bottom-heat could be supplied at very little expense, and I am about to heat one on a very simple plan, which will not cost over two or three pounds, not entailing any material extra consumption of firing.

The benefit derivable in the case of early forced Vines from bottom-heat is magical, in the freeness with which the Vines start, and the regularity with which every bud breaks. I could name at the present moment two Vineries in which the Grapes are beginning to colour which were started with fire heat in September. The one broke with the greatest regularity all over the house, and has now every bunch about the same stage. The other broke irregularly and tardily, and there is now a great difference in the forwardness of the fruit. And why has this happened? Because the former is under the management of a first-rate practical gardener of great experience, and the latter under the guidance of a mere beginner? Not at all. The case is just reversed. The former has his border well supplied with bottom-heat from a flue, and most of the roots inside the Vinery. The latter has the roots of his Vine, all or nearly all, in a cold outside border, and hence the disparity. I have said that the expense of heating borders from beneath would be made up in the course of years. And this I feel certain would be effected, (to say nothing of more satisfactory results as to better crops and Vines of greater longevity,) to such an extent that the market grower who supplies Grapes in March and April would find the money so spent a profitable investment. How often do we see and hear of early forced Vines becoming so debilitated and unfruitful that they must be rooted out, new borders made, and young Vines planted in their stead. And this is not to be wondered at when we come to consider that in many cases their roots are far from the surface, in compressed and soured soil, and consequently cold, while their very life is being forced out of them inside the Vinery. Surely if their roots were in light soil heated to a temperature corresponding with that of the atmosphere, it would not be unreasonable to expect that they would make more root and bear their crops with a degree of impunity which is not possible under opposite circumstances.

One thing that struck me very forcibly for the last few years in the case of early forced Vines well supplied with bottom heat, was the small amount of roots the stems of the Vines threw out inside the house in the atmosphere, as compared with what I have generally observed in the case of early forced Vines. This disposition is not surprising when it comes to be considered the greater amount of root action secured by the heated border, thereby obviating the necessity for any further effort on the part of the Vine to draw support from any other source. *A Vine Grower.*

Home Correspondence.

Vine Borders.—I beg to forward for your inspection leaves and wood from Vines planted in spring, 1858, in a border very similar to the one described by Mr. Thomson, at Wrotham Park, but with the addition of burnt oyster shell. The border is about 15 feet wide, 2½ deep, well drained, with about 1 foot of brickbats and coarse lime rubbish, resting on a concrete bottom. In the summer of 1859 I kept the rods closely stopt about 7 or 8 feet above this; the laterals were allowed to run, a get the Vines well established. Last winter they were cut back to about 7 feet, and they have this season produced a magnificent crop of fruit, from 12 to 15 bunches each, averaging 2 lbs., and this in addition to making a great length of rod. Two other borders were made of the same nature in 1859, and many of the Vines this season have made 30 feet of fine strong rod. *J. Sheppard, Woolverstone Park.* [The leaves in question measured 16 inches in length and 14 inches in width. The wood, which was about the thickness of the thumb, appeared to be thoroughly well ripened.]

Boilers.—There is one subject which at this season of the year interests all gardeners, and which I should very much like to see discussed in your pages, and that is, what is the more efficient boiler for ordinary purposes, and how can a steady heat be best maintained during the long cold nights of winter? The queries which I would suggest as more important are the following:—1. What boiler has been found to produce the greatest heat in the shortest time with the least amount of fuel? 2. What length of pipe does it heat, and what amount of fuel does it consume? 3. How long can the fire be maintained without attention? 4. Is it desirable that the furnace door should have holes in it for the admission of air, or that it should be close? 5. Would it be more desirable to admit air by a tube at the back of the fire than in front? 6. Have any of your correspondents tried the Rev. Henry Moule's patent of a drawer full of water under the fire, and with what success? 7. What fuel or mixture of fuel will burn steadiest and longest? If you think it right to encourage the discussion of this subject, I think that some valuable information may be obtained. Have any of your readers tried Roberts' Terra Cotta Stoves, and would they not answer well to keep the frost out of orchard houses in the spring or cool greenhouses in winter? *An Inquirer.*

Hogg's Edging Tiles.—In answer to "Hanworth" (see p. 1024), I beg to say that I used between 5000 and 6000 of Hogg's tiles here three years ago; I obtained them from Witham, in Essex; they form a neat edging, but will not stand frost. About one-fourth of them were destroyed by it the first season, and they continue to crumble away; now I consider them a bad bargain. *John Mattison, Addington, Winslow, Bucks.*

Pine Apples.—There is a slight inaccuracy in the report of the Pine Apples I exhibited to the Fruit Committee of the Horticultural Society last week, which no doubt originated through the very slender and partly verbal report I gave at the time. There are two pits in which the Pines are growing, each 27 feet long by 7 feet 6 inches wide. Instead of 50 plants growing in one of them, it should have been that there are 50 fruit now in various stages of growth, 23 in one house and 27 in the other, a dozen or more of which will be ripe by the end of the year, many of them quite equal in size to those exhibited. A portion of the plants only was planted in 1849; the last portion was planted in 1851. I exhibited the fruit to show what may be done at very little expense and trouble; in fact, as your talented correspondent, Mr. Duncan, observed on seeing three Jamaica Pines I exhibited three or four years since at the Fruit Exhibition at Willis's Rooms, "I grow them on the lazy principle," but nevertheless on a principle that is worth adopting, for I have not been without ripe fruit for the last three years, and until within the last three months they had not had one hour's labour expended on them for two years, beyond opening and shutting the house and attending to the fires. *Henry C. Ogle, Gardener to the Earl of Abergavenny, Eridge Castle, Tunbridge Wells.*

Bowood Muscat Grapes.—Mr. Cramb in your Paper, and others in the various horticultural periodicals, seem determined to prove—to their own satisfaction at least—that Mr. Spencer did not raise the above Grape at all, and that it is the same as Passe Muscat according to Mr. Cramb, and a writer in the "Scottish Gardener" declares that it is the same as a Vine that has grown at Fynninghame, in East Lothian, for 57 years. Now, for various reasons, I believe these writers to be mistaken, but I know Mr. Spencer is too able a man to require that I should strike a blow in his defence. What I am about to remark upon is the mystery that hangs over the origin of nearly all recently introduced new varieties, or so called new varieties of Grapes. Those whose memories carry them back some 12 years remember how "Josling's St. Alban's" Grape came out and sold well; it is now known to be nothing else than the old Chasselas Musqué, though I think it is quite possible that Mr. Josling raised it from seed. Next we have a disputed parentage in the case of Golden Hamburgh, not yet set at rest by the extent of proof that many require after their scepticism has been aroused. Now, it is the Bowood Muscat that is on the card, and I would advise Mr. Snow to be prepared with extracts from the registries of the birth and baptism of the Muscat Hamburgh, for it will be its turn next. Joking apart, it seems a great pity that such squabbling could not at once be put an end to by proof which would satisfy all concerned, and I cannot conceive that there is any bar to its production. A Grape Vine cannot be raised from seed, planted and fruited for years in a large establishment without such being seen by many competent witnesses, and this would do away with that suspicion of commercial immorality which exists in the minds of many respecting such transactions as they stand at present. *A Constant Reader.*

Linen Covers for Fruit.—From inquiries which I have made, I am induced to think that the "value of linen" for the preservation of fruit is not generally known in this country, although it is customary to use it in America and the East. Linen, from the porosity of its fibre, is very "attractive of moisture," the moisture displacing the air held within its meshes when in a dry state; the fruit having its moisture thus attracted from it, ripens equally, and soon possesses that luscious flavour so necessary for the table. A "linen" cover entirely protects fruit from frost and damp. It has also the advantage of not imparting any disagreeable taste to the fruit, and I think that if its value were more generally known, an article might be manufactured of a durable nature, and at a price which might enable growers to send their produce to market without the musty flavour with which it is too often impregnated. *M. R., Brompton.*

So-called Anchusa, from Biarritz.—I enclose a specimen of a plant whose proper name I am very desirous of ascertaining, and which certainly deserves to be better known in England than it is, as far as my observation goes. The blossom struck me at the time it was gathered, and also when I saw the A. italica in England, that they were precisely alike. The flowers are quite as large, and so thickly set that a clump of them from 4 to 8 inches across is quite as attractive as one of the lesser Gentian. It was in bloom the first week in May, and grew plentifully not only on the road bank leading to Biarritz, but on that across the Pyrenees to Irun, &c. The soil is the detritus of that part of the range, and the plant appears to prefer a high and dry abode, so that it would require some care in winter to avoid damp; in other respects it would possibly prove quite hardy here. *Nota Bene.* [The plant in question is Lithospermum prostratum. We have it in our herbarium from Biarritz itself.]

Golden Hamburgh Grape.—Having lately successfully exhibited this Grape, permit me to say a few words in its favour. It is now about two years since I planted it in a Muscat house; I did not commence forcing it until the beginning of April, and therefore did not keep so high a temperature as I otherwise would have done; nevertheless I exhibited three bunches of it in August last, to the Royal Dublin Horticultural Society, and they gained a first prize. I quite agree with your correspondent in last week's Paper (p. 1021), so far as his remarks relate to bunch and berry; but I have an impression that it will ripen quite as early as Black Hamburgh, where both have been grown under the same circumstances. *Samuel Johnston, Gardener to Colonel Taylor, M.P., Ardgillan Castle, Dublin.*

Mushrooms and Charred Bones.—The account given in your last Number of Agaricus campestris is exceedingly interesting; of the truth of the remark that an excellent kind may be produced from horse droppings, I have practical experience. A few years ago I collected a quantity of horse and sheep droppings, which I mixed, and covered with a coating of mould, for the purpose of being applied, when thoroughly rotted, as manure; the heap became literally crowded throughout the whole of the succeeding summer with beautiful Mushrooms, of a bright pink colour in the gills, just as if a bed had been regularly spawned. Some years ago I had burned or rather charred about the end of autumn a quantity of bones (in order to make superphosphate of lime). They laid against a bank. The following summer, to my astonishment, the spot on which the operation had been performed produced vast numbers of Mushrooms of exactly the same description, so far as I was able to judge, as those indicated in the illustration in your Paper; the top was of a brownish colour, the gills a deeper red, the size generally larger, the stalks shorter, and the flavour richer than that of the common field or cultivated sort. For catsup they were found to be infinitely superior to any other kind. In former years, the fields around this locality produced immense quantities of Mushrooms, as well as Puff-balls, but during the past season I have not been able to discover anywhere so much as one of either of them, or, indeed, hardly a Fungus of any kind. Sarcely a butterfly, too, has been seen, but slugs have prevailed to a prodigious extent, and committed, indeed are still continuing to do so, sad mischief. Black-jack flies, also, have abounded in an unusual degree, and strenuously co-operated with the slugs in the demolition of all kinds of Cabbages while in a tender state. As for ridge Cucumbers I have had but few, and those of very small size. Vegetable Marrows with me have been a total failure. Tomatoes nearly unproductive, and such as did come to any size I was obliged to gather in a green state, and ripen them in the house. In short, both the farmer and gardener have had incalculable difficulties to contend against here throughout the whole of this extraordinary year. *Old Subscriber, Whitland.*

Autumnal Strawberries.—Some of your readers will perhaps remember that a few years ago in the month of November the Strawberry growers were all startled by some plants of a kind of Strawberry received from Belgium under the name of "Délices de l'Automne." The plants were masses of fruit in different stages of

growth, and large numbers were imported and sold at a high price. The following autumn when a crop was expected no fruit was to be seen, and the plants on examination proved to be nothing but a mixture of British Queen and Keens's Seedling. Many surmises of course arose as to how this autumn-bearing quality was brought about. I was always inclined to think that they were plants that had been forced in early spring and then planted out. I now find that I was not far from the truth, for on passing to-day a bed of a Strawberry called Triumph, the plants of which were growing in an orchard house in very small pots till the middle of June last, I found them full of fruit. They had borne some small fruit while in the house, but were starved and nearly forgotten. Soon after the time stated above they were planted out in a rich border and grew freely, and are now covered with fruit, some of which I now send to you. It would thus seem as if we had arrived at the solution of the "Délices de l'Automne" question, and I have no doubt that Strawberries in autumn may be had in abundance from any of our free-bearing kinds, such as Keens's, Oscar, Sir Harry, Princess Alice Maud, Princess Frederick William, and other early kinds, by having plants potted in December or January (mine were potted in the former month) in small pots (No. 60), suffered to grow and bloom in an orchard house, cutting off their fruit when green and planting the plants in a rich border towards the end of May. *Z.*

Societies.

CHRYSANTHEMUM.—Various exhibitions of Chrysanthemums have taken place during these last 14 days. First were the two Stoke Newington Societies' Shows; then came that at the Crystal Palace, and lastly the South Metropolitan, and other suburban meetings. At all these gatherings well-grown plants were produced; but they were for the most part insufficiently in flower, more especially Pompones, which are late this season. Among cut blooms, with the exception of beautiful collections from Mr. Bird, which everywhere took 1st prizes, few were in all respects perfect, and many were below the average in size. Novelty, Queen of England and Alfred Salter were, however, in most stands equal to what we have seen them in better seasons. Six blooms of the first of these varieties, shown by Mr. Bird at the Horns Tavern, Kennington, on Monday last, were the admiration of all who saw them. They measured nearly a foot in circumference, were compact and in every way excellent in shape. Blooms of Dupont de l'Eure, from the same cultivator, were also unusually fine, as were likewise many other kinds to which allusion was made in our columns of last week (see p. 1023).

Among specimen plants, at the different meetings, Prince Albert was one of the most effective, especially when looked at from a distance, its colour being a warm rich red, and nearly as striking as that of the handsome Pompone called Bob. Among light kinds we noticed excellent plants of Vesta and Goliath; Christine is also a useful sort for pot culture.

Among Pompones Golden Cedo Nulli was shown in good condition by most exhibitors, as were also Brilliant, Surprise, Mustapha, General Canrobert and Duruflet. These were all skilfully managed compact bushes, and well flowered. Of standard Pompones some good examples were shown, especially by Mr. Greatorex, of Hill Street, Kennington—not with flat tops like tables, but with clean stems, some 2½ feet in height, and heads bushy and symmetrical as those of standard Roses; treated in this manner they had a good effect, especially when forming a back row to or intermixed with dwarf kinds. Mr. Wiggins showed at most places excellent specimens trained on the flat system, and well arranged for effect; he was, however, somewhat unsuccessful with large kinds, although some of his plants, as Cloth of Gold, were very well flowered, and that, too, in pots of comparatively small size. Some good pyramidal Pompones were shown, more especially at the Crystal Palace, by Messrs. Monk and Bennett. Among these were good examples of Golden Cedo Nulli (on which some of the blooms had reverted to the white state), Duruflet, Helen, Requiqui, Adonis, and General Canrobert; the last two, though dwarf sorts, got up well.

Among large-flowered varieties Mr. Hutt showed some well-managed plants at the Crystal Palace; the sorts were Golden Christine, Chevalier Dumage, Defiance, Voltaire (a good red), Annie Salter, and Dr. Maclean, the last a fine kind; these were neatly trained and covered with blooms even down to the edges of the pots. Mr. George, of Stamford Hill, also showed good plants, among which the most conspicuous were Prince Albert, Insigne, Arigena, Vesta, and Madam Camerson.

Cut blooms, especially at the Crystal Palace, were numerous; of these Mr. Bird showed a magnificent stand, which was arranged in three rows of eight blooms each; the varieties were Alfred Salter, Dupont de l'Eure, Beauty, Novelty (the largest of all, and paler than Queen of England), Themis, Queen of England, Cassandra (a fine kind), Princess Marie, Maréchal Duroc, Lucidum, Alarm (dark red, but somewhat coarse); Formosum, Madame André, Anaxo, Madame Lebois, Duke, Nonpareil, Trilby, Plutus, Stellare globosum, Yellow Formosum, Miss Kate, Madame Meillez, and Fabius, the last a polished orange sort of considerable beauty. To these was deservedly awarded the first prize in the class in which they were shown. The next best blooms came from Mr. Wilkinson, of Bow, who had in addition to the kinds mentioned above, Lysias, Goliath, Versailles Defiance, Leon Leguay, Hermione, and Quintus Curtius. In the amateurs' class Mr. Paxton, Stoke Newington, showed very fine flowers, as did also Mr. Wortley, and others.

At the different meetings inspected we noticed excellent cut blooms of the following kinds in most of the stands, viz., Queen of England, Anaxo, Arigena, Cassy, Prince Albert, Dupont de l'Eure, Beauty, Triomphe du Nord (a large showy red, somewhat ragged but striking), Cassandra, Novelty (a kind which bids fair to displace Queen, which it resembles), Maréchal Duroc, Yellow and White Formosum, Goliath, Duke, Fabius, Alfred Salter, Gem, Madame André, Stellare globosum, Plutus, Alarm, Jardin des Plantes (a good yellow), Pio Nono, Favourite, Leon Leguay, Defiance, Picturatum, Trilby, Hermione, Lysias, Mrs. H. Holborn, Miss Kate, Lucidum, and Comte de Morny; the last a small dark red.

Among Anemone-flowered sorts the best were Fleur de Marie, Gluck, Margaret of Norway, George Sand, Margaret of Anjou, and Nancy de Sermet.

Of new kinds Lady Hardinge, a variety in the way of Miss Kate, but larger and fuller, Lady Mayoress, a white Hybrid Pompone, and Garibaldi, are all promising varieties. The first came from Mr. Salter, the two last from Mr. Bird.

Notices of Books.

The Romance of Natural History. By P. H. Gosse, F.R.S. Nisbet, 8vo., pp. 372.

So agreeable a writer and accomplished Naturalist as Mr. Gosse is always welcome; and we dare say readers will say never more so than when ushering into the world the entertaining book before us. The author tells us that more ways than one may be found for studying natural history. Among those ways is the path trod by the poet, "who looks at Nature through a glass peculiarly his own; the æsthetic aspect, which deals, not with statistics, but with the emotions of the human mind—surprise, wonder, terror, revulsion, admiration, love, desire, and so forth—which are made energetic by the contemplation of the creatures around him." This is the road now followed by Mr. Gosse; a delightful one no doubt; but we fear not quite so safe as that of Dr. Dryasdust, who classifies, that is to say puts into order, the observations of the field naturalist. However, such a work as the one before us lays little claim to scientific exactness; and must therefore be measured by the same standard as we apply to a romance; which it calls itself. In saying this we do not mean that the statements of our author are untrue; we only mean that if they are sometimes painted in lively colours such as fancy breeds, Mr. Gosse in no way breaks faith with the reader, or deserts the realm of science. He only renders natural history more brilliant.

The volume consists of a selection of stories relating to the habits of animals, collected from the statements of travellers, and of course therefore given on their authority; with this addition however, that the author believes in them himself; and undoubtedly his opinion is entitled to all respect. The matter is also enlivened by some extremely clever illustrations, for the most part drawn by Wolf and engraved on wood by Whymper.

The greatest novelty in the work is Mr. Gosse's advocacy of the reality of such creatures as the Unicorn and the Sea-serpent. Of the former, he observes—"It is highly probable that an animal of ancient renown, and one in which England has (or ought to have) a peculiar interest, resides in the region just indicated (Central Africa). I refer to one of the supporters of Britain's shield, the famed Unicorn. We may not, to be sure, find him exactly what the heraldic artists delight to represent him—a sort of mongrel between a deer and a horse, with cloven hoofs, a tuft-tipped tail, and a horn spirally twisted to a point; but there may be the original of the traditionary portrait of which this is the gradually corrupted copy." Among other testimonies he cites that of Mr. Freeman, the well-known missionary in Madagascar, who reports the general belief in the existence of a one-horned animal existing on the main land of Africa. A witness, an "intelligent native of a region lying northward from Mozambique," informed him that "an animal called the Ndzoodzoo is by no means rare in Makoa. It is about the size of a horse, extremely fleet and strong. A single horn projects from its forehead from 2 feet to 2½ feet in length. This is said to be flexible when the animal is asleep, and can be curled up at pleasure, like an elephant's proboscis; but it becomes extremely stiff and hard under the excitement of rage. It is extremely fierce, invariably attacking a man whenever it discerns him. The device adopted by the natives to escape from its fury, is to climb a thick and tall tree out of sight. If the enraged animal ceases to see his enemy, he presently gallops away; but, if he catches sight of the fugitive in a tree, he instantly commences an attack on the tree with his frontal horn, boring and ripping it till he brings it down, when the wretched man is presently gored to death. If the tree is not very bulky, the perseverance of the creature usually succeeds in overturning it. His fury spends itself in goring and mangling the carcase, as he never attempts to devour it. The female is altogether without a horn." This story is not without corroboration:—"M. Antoine d'Abbadie, writing to the 'Athenæum' from Cairo, gives the following account of an animal new to European science, which account he had received from Baron Von Müller, who had recently returned to that city from Kordofan:—'At Melpes, in Kordofan,' said the Baron, 'where I stopped some time to make my collections, I met, on the 17th April, 1848, a man who was in the habit of selling to me specimens of animals. One day he asked me if I wished also for an A'nasa, which he described thus:—It is the size of a small donkey, has a thick body and thin bones, coarse hair, and tail like a boar. It has a long horn on its forehead, and lets it hang when alone, but erects it immediately on seeing an enemy. It is a formidable weapon, but I do not know its exact length. The A'nasa is found not far from here (Melpes), towards the S.S.W. I have seen it often in the wild grounds, where the negroes kill it, and carry it home to make shields from its skin." If these stories are true then we shall assuredly some day witness the Lion and the Unicorn in our Zoological Gardens.

As to the sea-serpent, of which there is a figure from Mr. Gosse's own hand, a chapter is devoted to the discussion of whether such a creature really exists. After recounting the many stories current from the days of Bishop Pontoppidan to our own Captain McQuhae, and quoting Owen's condemnation of the whole batch, Mr. Gosse re-examines the evidence, relying mainly upon that of modern English intelligent witnesses. This examination brings him to the conclusion that "the sea-serpent exists," and that in all probability it is the last example of those hideous lizard-like creatures whose remains are found in the Oolite and Lias, and which naturalists call *Enaliosauria*. "Not," says Mr. Gosse, "that I would identify the animals seen with the actual Plesiosaurs of the lias. None of them yet discovered appear to exceed 35 feet in length, which is scarcely half sufficient to meet the exigencies of the case. I should not look for any species, scarcely even any genus, to be perpetuated from the oolitic period to the present. Admitting the actual continuation of the order Enaliosauria, it would be, I think, quite in conformity with general analogy to find important generic modifications, probably combining some salient features of several extinct forms. Thus the little known Pliosaur had many of the peculiarities of the Plesiosaur, without its extraordinarily elongated neck, while it vastly exceeded it in dimensions. What if the existing form should be essentially a Plesiosaur, with the colossal magnitude of a Pliosaur? There seems to be no real structural difficulty in such a supposition except the 'mane,' or waving appendage, which has so frequently been described by those who profess to have seen the modern animal. This, however, is a difficulty of ignorance, rather than of contradiction. We do not know that the smooth integument of the Enaliosaurs was destitute of any such appendage, and I do not think there is any insuperable improbability in the case. The nearest analogy that I can suggest, however, is that of the Chlamydosaur, a large terrestrial lizard of Australia, whose lengthened neck is furnished with a very curious plaited frill of thin membrane, extending like wings or fins to a considerable distance from the animal." The author is of opinion that we are not justified in assuming that all these Marine Lizards have perished:—"A correspondent of the 'Zoologist' adduces the great authority of Professor Agassiz to the possibility of the present existence of the Enaliosaurian type. That eminent palæontologist is represented as saying, that 'it would be in precise conformity with analogy that such animal should exist in the American seas, as he had found numerous instances in which the fossil forms of the Old World were represented by living types in the New. He instanced the gar-pike of the Western rivers, and said he had found several instances in his recent visit to Lake Superior, where he had detected several fishes belonging to genera now extinct in Europe." Moreover there is in the "Zoologist" the following statement:—"Captain the Hon. George Hope states that, when in H.M.S. Fly, in the Gulf of California, the sea being perfectly calm and transparent, he saw at the bottom a large marine animal, with the head and general figure of an alligator, except that the neck was much longer, and that instead of legs the creature had four large flappers, somewhat like those of turtles, the anterior pair being larger than the posterior. The creature was distinctly visible, and all its movements could be observed with ease. It appeared to be pursuing its prey at the bottom of the sea. Its movements were somewhat serpentine, and an appearance of annulations or ring-like divisions of the body were distinctly perceptible. Captain Hope made this relation in company, and as a matter of conversation. When I heard it from the gentleman to whom it was narrated, I inquired whether Captain Hope was acquainted with those remarkable fossil animals, Ichthyosauri and Plesiosauri, the supposed forms of which so nearly correspond with what he describes as having seen alive, and I cannot find that he had heard of them,—the alligator being the only animal he mentioned as bearing a partial similarity to the creature in question. Now, unless this officer was egregiously deceived, he saw an animal which could have been no other than an Enaliosaur,—a

marine reptile of large size, of sauroid figure, with turtle-like paddles."

Thus it appears that ancient monsters of the deep may still exist; and if so we shall some day expect to see a genuine descendant of the very dragon slain by St. George.

Of Moore's *Index Filicum* (Pamplin), we have a double Number, including Parts 8 and 9, completing Athyrium, reaching as far as nearly the end of Blechnum, and including the 20th plate. Certainly this will be one of the most useful books in Cryptogamic Botany; but its utility would be much increased were the publisher to be more expeditious in bringing it out. We believe we are right in saying that the preparation of the MSS. causes no delay in the publication. The work began in 1857; we are now at the end of 1860, and the Index is still struggling through the letter B. Four parts appeared in 1857; only one in 1858; and one in 1859. We have, however, three in 1860, which, it is to be hoped, is of good augury for the future.

TRADE LISTS RECEIVED.—*Joseph Baumann, (à la Nouvelle Promenade, Ghent)*. Price list for the Autumn of 1860 and Spring of 1861; with a figure of a handsome hardy hybrid Rhododendron, called Napoleon Baumann, apparently bred from R. maximum. It received the first prize at the show of the Horticultural Society of Ghent in the summer of 1859.

Miscellaneous.

Poisoned Aniseed.—In consequence of a communication made by the Dutch Government of the existence of a quantity of Hemlock in the Aniseed imported into Holland from Leghorn—in some cases in the proportion of even one-third of the weight—the French Government has issued a warning to merchants receiving consignments of Aniseed to examine them with the greatest care before delivery. Several cases of poisoning are stated to have occurred among the Dutch people, which may be traced to the undue consumption of Aniseed in which the lower classes indulge. It is believed, as the result of inquiry, that this admixture is due to the fact that in the Romagna the Hemlock is left to grow wild with the Aniseed, and great carelessness being manifested in the gathering, the admixture is growing every year more and more poisonous, until at last it amounts to actual danger to the lives of the consumers. As Aniseed is consumed also in this country, both amongst the general public, in the form of a cordial, and by the patients of medical practitioners, in a carminative water, much employed in the treatment of children, it may not be amiss that we should circulate the caution here also. *Lancet*.

Lesser Glow-worms.—Persons who eat Peaches, Apricots, and other stoned fruit (and who does not?) may often find a little centipede about 1½ or 2 inches long, curled up in the centre of the fruit. This insect, if placed in a glass, and looked at when it is dark, will be found to be considerably luminous. *Edward Jesse, in "Once a Week."*

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Forcing houses and pits will very soon require to be kept in full activity to supply the constant demand that will be made on them for plants in bloom. Care must, however, be taken before plants are removed to sitting-rooms to gradually harden them for a day or two, either by placing them in the conservatory or intermediate house. In addition to keeping the conservatory gay with blooming plants, let the arrangement of the house be occasionally changed, by grouping the plants somewhat differently, and adding a few striking ones, as some of the hardiest Palms, &c., for effect. Pay attention to the plants intended for successive blooming. Azaleas, Rhododendrons, Eranthemums, Justicias, Luculias, Cape Jasmines, Euphorbias, Epiphyllums, &c., for forcing should be in readiness when wanted. Narcissi, Hyacinths, &c., should be protected by a frame; when they begin to grow remove the plunging material down to the surface of the pots to prevent them rooting upwards. With the assistance of a garden frame, some stable manure, or tan, to furnish a gentle heat, the Hyacinth may be had in flower at Christmas; and with a good stock of bulbs, the display may be kept up till April or May. For early flowering, the bulbs should be planted early in September; those to flower in spring should be planted during the months of October, November, and December. The best pots are 5-inch (forty-eights) for one bulb, and 6 or 7-inch (thirty-twos and twenty-fours) for three bulbs. It may be well to add, that three roots grown together in one pot produce a much finer effect than single bulbs. If smaller pots than the above be used, greater care will be necessary in watering. The soil used for potting should be as rich as possible; such as one-half fresh loam, cut from a pasture, with the turf decayed in it, and well decomposed cow or horse manure, with a small portion of clean sand, well intermixed. If, however, this cannot be obtained, then the lightest and richest at command must be employed instead. Fill the pots lightly with the prepared compost, and place the bulb upon the surface, slightly pressing it into the soil. After giving the newly-planted bulbs a liberal watering, set the pots out of doors on a place where perfect drainage is secured, and cover them with about a foot of old tan, ashes, saw-dust, leaf-soil, or any other light material. After remaining there for a month or five weeks, the bulbs will be sufficiently rooted to render it safe to remove them to a gentle bottom-heat of about 55°, introducing the pots, in numbers proportionate to the demand, at intervals of about a fortnight; a succession of flowers will then be secured, until those in the open air come into bloom. We would caution the amateur, when forcing the Hyacinth, to be careful that the roots are not allowed to penetrate the fermenting material. Persons possessing no better accommodation for growing plants than a room window, will, with ordinary management, be able to grow and flower the Hyacinth as well, if not to have it in bloom as early, as those who can command a gentle heat. We need hardly observe, that plants grown during the dark days of winter, should be placed near the glass, and be freely supplied with air, when this can be given with safety; and those grown in windows will draw towards the light, unless the pots are frequently turned. A sitting-room window forms a suitable situation for Hyacinths while in bloom, and their beauty will be longer in fading here than in most situations: in no instance should they be removed from a close atmosphere, or suddenly exposed in a sitting-room window, until they have been previously hardened in a suitable temperature to withstand cold drying currents. We warn the inexperienced to guard against this common error, and to avoid subjecting the plants to sudden changes at any period of their growth. Mignonette and Neapolitan Violets will require abundance of light and air to keep them from damping. As a change from the present to severe weather may come on suddenly, be provided with ample means for covering pits, frames, &c., should it occur. As with the exception of forced plants most other things are now in an inactive state, the temperature of plant houses should fall to its minimum point consistent with the safety of their various inmates. Nothing can well be worse for the development of a healthy vigorous habit in plants than subjecting them to a high temperature at the present season when light, so important to the healthy action of vegetable life, cannot accompany it. Where Achimenes and Gloxinias are required to bloom early, a few pots may soon be started by plunging them in a little bottom-heat.

FORCING DEPARTMENT.

PINERY.—Pines are often deficient in flavour at this season; this is improved by exposing the ripening fruit to all the light you can command, and giving but little water. A good supply of air is likewise essential at all times for high-flavoured fruit, and more than ever necessary at this time. Continue an increase of heat to Pines now wanted to start, employing it principally by day. Attend to linings for plants grown in dung-pits and keep the atmosphere in which they grow dry.

EARLY VINERY.—As soon as the bunches can be discerned on the young shoots the extra buds should be removed, excepting such as may be required for producing bearing wood next season. In leaving these latter select such as are formed nearest the main stem to avoid the awkward appearance of long spurs at a stage further in their growth. Such shoots as have more than one bunch should have them reduced to that number, selecting the one likeliest to form the handsomest bunch. Tying in the young wood should be managed carefully, bringing the shoots to their proper position by degrees, to avoid the danger of their breaking. After the buds are started a few inches the syringe may be gradually withheld; as too much humidity at this season will sometimes injure both foliage and bunches, and a sufficient degree of moisture can easily be kept by sprinkling the floors and heating apparatus several times daily. Regulate the admission of air so as to have a gentle current at all times through the house; increase, of course, by day agreeably with the state of the weather. Gradually advance the night temperature to 60° and then to 65° by the time the flowers are ready to open, keeping the thermometer from 10° to 15° higher by day according to the amount of light you can command. Keep up the heat in the outside border by additions when necessary, bearing in mind the injurious effects any sudden check to roots in action will produce on the coming crop. Bring succession Vineries into work as wanted. Late Vineries in which Grapes are still hanging will require fires daily and air sufficient to keep the house and fruit dry; remove decaying berries and dead leaves, and well protect the roots from frost. For a late Grape the Barbarossa is found to possess valuable properties.

PEACH HOUSES.—Peaches and Nectarines which have been forced for several years oftentimes produce a large excess of fruit buds, and this more especially on weakly trees; a natural consequence of allowing these to remain are weak flowers and inferior fruit and wood. When therefore such is the case the trees will be greatly benefited by well thinning the bloom buds, leaving the largest and those most favourably placed; of course a considerable surplus will be still left to allow for casualties. Syringe twice or oftener daily till the bloom is ready to expand, when it must be discontinued. The night temperature may advance to 45° with an increase by day accompanied with a proportionate admission of air.

FIG HOUSE.—Damp the trees over frequently, and if wanted early increase the heat a degree or two weekly.

STRAWBERRIES in bottom-heat for forcing will require air daily to prevent drawing in those earliest started; when they show the truss of flower they should be removed to shelves in the Vineries and Peach-houses, but the principal crop should be advancing slowly as yet.

FLOWER GARDEN AND SHRUBBERIES.

Except in the driest localities nothing more can be done in this department than paying attention to order and neatness. Bedding plants, however, must have attention, for in all likelihood many things are suffering from damp, and such plants as appear to suffer most should be removed to other quarters where a drier temperature is kept. Keep the stock in pits and frames well ventilated and the surface soil of the pots frequently stirred. Dust with sulphur Verbenas and similar plants attacked with mildew. Be particular in keeping the interior of pits containing plants of the above description as dry as circumstances will permit.

HARDY FRUIT AND KITCHEN GARDEN.

Figs against walls will require some protecting material placed over them, more especially in the midland and northern counties. Some wall trees, as Pears, Plums, Cherries, &c., are often attacked by scale, in which case the infected trees should be well washed with a mixture of soft soap, tobacco water, and lime; half a pint of spirits of turpentine may be added to each 4 gallons of the mixture when they are much infested. The lime is added to give consistence to the mixture, and to show that no parts of the trees are missed in dressing. Let this be applied during dry weather if possible, that it may remain on for some time, and before the trees are nailed. Examine fruit stores often, and remove all fruit which indicates any symptoms of decay.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON
For the Week ending Nov. 22, 1860, as observed at the Horticultural Gardens.

Nov.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain in.
Friday 16	3	29.572	29.522	49	31	40.0	48½	46½	S.W.	.25
Satur. 17	4	29.400	29.210	41	32	36.5	48	46½	S.	.38
Sunday 18	5	29.980	29.772	40	30	35.0	46	46	N.W.	.02
Mon. 19	6	29.071	30.019	47	23	35.0	45	45½	N.W.	.00
Tues. 20	7	29.990	29.916	48	25	36.5	45	45½	S.W.	.00
Wed. 21	8	29.793	29.429	51	31	41.0	45	45	S.	.40
Thurs. 22	9	29.460	29.448	53	25	39.0	46½	45½	W.	.00
Average..		29.738	29.616	47.0	28.1	37.5	46.4	45.8		1.05

Nov. 16—Fine; densely overcast at night; rain.
— 17—Constant rain; overcast; cold wind with sleet.
— 18—Clear, with cold wind; slight rain at night.
— 19—Clear; exceedingly fine for the season; very clear; frosty.
— 20—Foggy; very fine throughout, frost at night.
— 21—Lightly overcast; fine; rain; boisterous; heavy rain at night.
— 22—Partially overcast; exceedingly fine; slight fog; frosty.
Mean temperature of the week, 4 1-5th deg. below the average.

RECORD OF THE WEATHER AT CHISWICK
During the last 34 years, for the ensuing Week, ending Dec. 1, 1860.

Nov. and Dec.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 25..	46.0	33.3	39.6	17	0.24 in.	3	2	6	4	7	6	3	3
Mon. 26..	47.0	33.3	40.1	18	0.70	1	5	6	1	4	12	1	4
Tues. 27..	46.6	34.8	40.7	16	0.88	1	5	4	1	5	9	5	4
Wed. 28..	47.8	35.4	41.6	17	1.21	2	4	2	2	7	6	7	4
Thurs. 29..	47.6	34.4	41.0	17	0.56	4	2	5	3	5	10	4	1
Friday 30..	47.7	35.0	41.4	18	0.31	4	3	2	3	3	9	8	2
Satur. 1..	48.3	35.4	41.8	16	0.25	2	2	2	4	3	7	10	4

The highest temperature during the above period occurred on the 1st, 1857—therm. 62 deg.; and the lowest on the 30th, 1856—therm 14 deg.

Notices to Correspondents.

APPLE TREES: *Old Sub.* We cannot possibly recommend one nurseryman rather than another. You may obtain with certainty what you want at any great establishment.

ASPARAGUS: *Fuys.* The best time of the year for planting new beds is the month of March—early.

DISEASES: *A B.* Your writing and spelling are so bad that we are not sure that we make out your meaning. The leaves are infested by the common Soot Fungus, which cannot be cleaned away. When the leaves fall it will go with them. But if the plants are smothered by others and have no proper circulation of air round them it will come back again.

FUNGI: *J S.* The thread-like Fungus is Typhula phacorhiza, Fr. —*J. S.* Your Fungi are Bulgaria inquinans and Peziza aurantia. *M. J. B.*

NAMES OF FRUITS: Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to examine more than six sorts, whatever may be the number forwarded.—*S J.* 1, 2, Beurré Diel; 3, Ne plus Meuris; 4, Beurré Rance; 6, King of the Pippins; 5, worthless and not known.—*G J.* Orange Bergamot is right; that called the Black Beurré is the Black Ochan.—*A R H.* 1, Blenheim; 3, Court of Wick. The Pear is the Vicar of Winkfield, for which the past summer has been too cold.—*A Nosely.* 1, King of the Pippins; 2, Dutch Mignonne; 4, Lemon Pippin. Pear, Doyenné Blanc.—*W F W.* Your Seedling Apple is tolerably good, but will scarcely rank as first-rate.

NAMES OF PLANTS: *John Sherratt.* Oncidium excavatum and a Sarcanthus, not a Saccolabium, new to us, but whether unpublished or not we cannot just now spare time to determine.—*Jane Taylor.* 1, Begonia acuminata; 2, suaveolens; 3, dipetala.—*G M B.* 1, Spergula arvensis; 2, Scleranthus annuus; both are annuals and destroyable without difficulty by careful tillage; 3, Pinus nigricans; 4, Arbutus hybrida.—*Waringstown.* It seems to be Pyrus vestita, the Nepal form of P. Aria.

PRESERVATION OF FRUIT; *H J M* says the French are said to practise a method of preserving Grapes for a considerable time, by means of enclosing the bunches in paper bags, and he hopes that some correspondent will oblige him by communicating the details necessary to the success of the process.

TRAINING: *Adrian W.* You will only waste time in trying the fanciful modes of training trees, so plentiful in books of French gardening. Study our good plain sensible English methods and at any rate make yourself master of them before attending to horticultural whimsies.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

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Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

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Under this Company's Act Landowners may effect the following Improvements on their Estates, and charge the Outlay and expenses thereon, by way of Rent charge, to be paid by Half-yearly Instalments, viz.:—
I. All works of Drainage, Irrigation, and Embankment.
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The owners of Estates, not entailed, who may be desirous to avoid the expense or inconvenience of a Legal Mortgage, may also charge their Estates with Improvements under the simple and inexpensive process of the Company's Act.
The term of years for the Rent Charge is fixed by the Landowner, so as to adapt the amount of annual payment to the circumstances of the Tenants, the term for Building Works being limited to 31 years, but for all other Improvements being capable of extension to 50 years.
No investigation of Title being required, and the charge not being affected by Incumbrances, no legal expenses are incurred.
The arrangements for effecting Improvements are threefold—
No. I. The Works may be designed and executed entirely by the Landowner's Agent, and the Company employed only to supply the Loan and conduct the matter through all the forms for charging the outlay on the Estate.
No. II. The Company will supply Plans, Specifications, and Estimates for any Improvement to be executed by the Landowner's Agent, as under No. I.
In each of these cases the Landowner will be solely under the control of the Inclosure Commissioners.
No. III. The Company will undertake the entire responsibility of the Improvement, prepare the Plans, execute the Works, and finally charge on the Estate the actual amount expended with their Commission thereon approved by the Inclosure Commissioners.
Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other Improvements are also executed on Commission for Landowners who merely require the skill and experience of the Company's Officers and a Staff in constant practice.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, 52, Parliament Street, S.W., London.

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The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
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Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard Westminster, S.W.

MR. HENRY OVERMAN has a VACANCY for an AGRICULTURAL PUPIL.—Weasenham, Rougham, Norfolk.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

COLLEGE OF AGRICULTURE AND CHEMISTRY AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
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The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

EXHIBITION OF DOGS AT BIRMINGHAM.—The First Great Exhibition of SPORTING and other DOGS will be held in the Repository of Messrs. Bretherton & Harrison, Cheapside, Birmingham, on MONDAY and TUESDAY, December 3 and 4, the first and second days of the Cattle and Poultry Show. Admission on Monday, the PRIVATE VIEW, 2*s.* 6*d.*; and on Tuesday, 1*s.* The doors will be opened at 9 o'clock each morning.
For Special Railway Arrangements, see the Advertisements and Bills of the several Companies, and of the Cattle and Poultry Show. F. BURDETT, Hon. Sec.
Edgbaston, Birmingham.

BIRMINGHAM CATTLE AND POULTRY SHOW, 1860.—The TWELFTH GREAT ANNUAL EXHIBITION OF CATTLE, SHEEP, PIGS, ROOTS, AND DOMESTIC POULTRY, will be held in Bingley Hall, Birmingham, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, December 3, 4, 5, and 6.
The Private View on Monday, December 3. Admission—Monday, 5*s.*; Tuesday, Wednesday, and Thursday, 1*s.* The doors will be opened at 9 o'clock each morning.
For Special Railway Arrangements, see the Advertisements and Bills of the several Companies.

The Agricultural Gazette.
SATURDAY, NOVEMBER 24, 1860.

MEETINGS FOR THE TWO FOLLOWING WEEKS.

MONDAY, Dec.	3	Birmingham Cattle and Poultry Show.
TUESDAY, —	4	
WEDNESDAY —	5	
THURSDAY, —	6	

A COMPANY is being organised for the utilisation of the sewage of Croydon, and Mr. SHEPHERD, C.E., calls attention to the simplicity of his method of supplying it to the land and the certainty of its profitableness when there. Mr. RAWLINSON thereupon urges caution on the intending shareholders, declaring that the failures, "and they have been many," of such schemes hitherto have arisen from extravagant outlays on works, or from a mistaken idea of the value of solidified sewage. He instances Carlisle as a case where sewage is being profitably applied at a cost not exceeding 1000*l.*, and he recommends that the capital of the proposed Company for Croydon be set at three instead of thirty thousand pounds.

Mr. SHEPHERD's rejoinder characterises the conduct of the Carlisle scheme as mistaken, and describes the attempt of the "proprietors" to put the sewage of 30,000 people on 50 acres of land, expecting that they will pay all expenses of steam-engine, pipes, labour, &c., as little short of insanity.

To this Mr. MACDOUGAL of Manchester replies, that he is the sole proprietor of the works at Carlisle, for utilising the sewage of that town—that his success depends on his having applied the whole of it on so small an area—that a very considerable degree of success, that is to say a moderate profit, has been actually realised, and that he attributes it (1) to the fact of its being a private speculation, so that no temptation has existed to excessive outlay; (2), to the limited area (not much exceeding 50 acres) over which the sewage has been applied, and (3) to the permanently imputrescible character of the sewage after having been treated, as by his patented method it is, with carbolic acid at a cost not exceeding "one penny per head per annum of the population."

—AN improvement is announced in the draught apparatus of FOWLER'S Steam Plough. Sufficient hold of the draught rope has hitherto been obtained by passing it so many times round pulleys underneath the steam engine. By making the grooves in these pulleys angular instead of semicircular, a greater bite upon the rope is obtained, so that a smaller number of turns suffices for the requisite hold, and less tear and wear of rope ensues accordingly.

But in place of two or more turns as heretofore, one half round a single pulley is now made sufficient by an extremely ingenious method of fashioning the receiving groove. This instead of being a simple furrow in the block, is made of two cheeks hinged so as to fall towards one another, in fact coming nearly into contact when unseparated by the rope, and forced the nearer to each other by every increase to the strain upon the rope which lies between them. The more severe the strain upon the rope the closer therefore is the grip by which it is held from slipping; and a single half-turn round the pulley is thus enough where three or four times as many bendings with all their consequent damage to the rope were formerly required.

Any cheapening of steam culture is of great public interest, and not only Mr. FOWLER, but the public generally, therefore may be congratulated on this last illustration of his ingenuity and skill.

WE noticed in a late Number of the *Agricultural Gazette* some Rye which had been forwarded to us from the neighbourhood of Arundel, which was seriously infested by a minute parasitic Fungus new to this country, and of which we have just received a further supply of specimens, together with the important information that the seed from which the plants were raised was of foreign origin, while a crop in the same field under no material differences of soil, the seed of which was of domestic origin, was entirely free. It is possible that if the seed had been observed accurately, suspicious appearances might have presented themselves, and the risk might have been avoided of introducing some fresh troublesome parasite. The appearances however may have been so obscure as to excite no suspicion. Even where there is no external indication mischief may be done, for it is quite certain that plants are not unfrequently deeply impregnated with the spawn of Fungi, where there are no observable outer signs of infection. Fungi strange to this country have been introduced occasionally by means of the parent plant.

Labrella Ptarmicæ has hitherto escaped the notice of Mycologists in Great Britain, though the plant which produces it, *Achillæa Ptarmica*, is common enough. About 20 years ago we happened to be in the neighbourhood of Lille where the Fungus is common, and plants of the Achillæa, the fresh shoots of which were only just peeping from the ground, were brought home and planted in our garden. The first year the plant produced a large crop of the *Labrella*, and a smaller quantity appeared for two or three successive years till the supply was exhausted. Plants of Violet which have been infested with *Polycystis Violæ* in like manner will reproduce the parasite for some years in the garden.

A few years since, again, a destructive parasite, *Pestalozzia Guepini*, was introduced into one of our first-rate nurseries, to the great loss of the owner, by means of some foreign Camellias from Italy, and it is all but certain that the mildew of the Vine and Potato were similarly introduced.

Parasites however may be also introduced by seed. A curious instance occurred some years ago in the Gardens of the Horticultural Society at Chiswick. Some seed of the common *Pyracanthus* was imported from Russia, and every plant raised from it was infested with *Helminthosporium pyroum*, while other plants of the same species in the garden were free. The parasite is now the pest of Pear trees, but whether it existed in this country before the invasion just mentioned we cannot say, though it had certainly not been previously observed. That other diseases may be propagated by seed we have proved beyond all

question, by repeated sowing of diseased Oats, and the matter is far more worthy the attention of cultivators than they are generally aware of.

As some of the Rye which we have received is ripe, we hope to be able to make experiments on the subject of propagation of Fungi by the seed of the parent plant next year. Meanwhile we would recommend the example of our correspondent in so readily forwarding ample materials for examination, to general imitation, as hundreds of important facts slip daily through our hands for want of competent authorities to record them. *M. J. B.*

WE have already referred to one disease prevalent among sheep in wet seasons, and therefore now (see page 981). Let us now turn to another.

Whilst we consider the true rot in the sheep to consist in the presence of the fluke, *fasciolæ hepaticæ*, in the ducts of the liver, there are yet two diseases that are not unfrequently mistaken for it. One is a disease of the liver, and is sometimes called sand rot, from apparently earthy substances (but really tuberculous bodies) found in the viscus, and which are erroneously supposed to arise from eating the earth of the flooded Grasses; the other is a disease of the lungs, *phthisis pulmonalis* (consumption in fact). The lungs are studded with tubercles, and in the latter stages these run together, and form vomicæ, and then abscesses. We need scarcely observe that both these diseases constitute unsoundness, if it can be proved that they have existed at the time of sale. The difficulty of proving this is much more than when such data as the presence of flukes are afforded, and this difficulty is the greater from the lapse of time which often occurs between the commencement and the manifestation of the disease. Although attacking two different viscera, one the liver and the other the lungs, there is some resemblance between the morbid appearances of the two organs; the liver is studded with hard knotty substances as well as the lungs, and these indeed are often mistaken for sand. In addition to this the liver often materially diminishes in size, and becomes otherwise extensively disorganised. Sometimes both organs are affected at the same time, which is more particularly the case when the prevalent disease amongst the flock is that of the lungs.

Some time since a friend of the writer's, just entering a large farm, purchased his breeding ewes in the autumn, from two different sources. One flock had no particular recommendation, except that they were strong, useful, hardy sheep, of the Hampshire Down breed. The other, somewhat less in size, were from a flock of much greater celebrity, and were quite or nearly pure South Downs. Both lots were in lamb, and went on pretty well until lambing time, soon after which the well-bred ewes began to fail to a great extent, the lambs also suffering from insufficient nourishment. More than one-half died, and their lungs exhibited the ravages of most extensive disease, containing tubercles, vomicæ, and abscesses. This was a case of phthisis or consumption: the seeds of the disease had no doubt been hereditary in the well-bred sheep, and a wet season had greatly assisted their development; this, however, was retarded by the parturient condition of the sheep, which we find is also the case in the human subject.

None of the Hampshire ewes were affected. In the flock we have mentioned, in all fatal cases the lungs were extensively diseased, and in some instances the liver; and notwithstanding the lapse of time that intervened, yet the total immunity of the Hampshire sheep under precisely the same treatment was a pretty sure proof that the disease existed at the time of sale. Very little can be done in the way of treatment in such instances as the above, because the owner is generally in the dark as to the existence of the disease until it is too late. Were it otherwise, the best course would be to push on the ewes for the butcher by means of oilcake, &c., notwithstanding their pregnant state.

Foot rot is another disease which of late years has been less frequent than formerly, but has again become rife in such a wet season as the present. It is immediately caused by the almost constant immersion of the feet in moisture, which weakens and softens the horn, particularly that part between the claws and next the skin: reaction follows cold, and inflammation takes place; the thin horn gives way and exposes the soft vascular tissues below, and matter often forms below the horn. This disease somewhat resembles the epizootic, which attacked both mouth and feet of cattle, sheep, and pigs; there is, however this marked distinction, that in the latter complaint the affection of the feet is the result and outward manifestation of the fever in the system, whilst in foot rot the fever which is often present arises from the pain and irritation of the local disease. The cure consists in removing sufficient horn to allow any confined matter to escape and to apply a styptic or caustic to the part, so as to prevent proud flesh growing, and to stimulate the vascular parts to secrete healthy horn. A number of medicines have been recommended and with success: muriate of antimony applied with a feather is a very convenient caustic, and so are likewise equal parts of hydrochloric acid and tincture of myrrh: a strong solution of sulphate of copper is a milder dressing, and tincture of Aloes or Friar's Balsam is milder still. All these are useful if applied with discretion according to the severity of the case. Another useful application, as well as a preventative, is coal tar, particularly if a little creosote is left in or added to it. A change to a dry pasture or soil is necessary, and some powdered plaster of Paris over the tar will assist its drying effect.

BEARD'S STEAM PLOUGH.

I HAD an opportunity last week of examining the working of Mr. Beard's steam ploughing apparatus in its every-day dress, on that gentleman's farm at Stowe, which afforded me great satisfaction; and I think I shall be doing a service to a portion of your readers by drawing their attention to it, and to the facilities it affords for applying steam to the cultivation of the soil, in those cases where the use of an ordinary threshing engine can readily be obtained, or where the more powerful apparatus of Mr. Fowler proves too costly in first outlay for the means of the farmer. The apparatus is of a very simple description, but excellent and substantial in construction, and can be attached with the greatest facility to any ordinary 7 or 8-horse threshing engine. The price complete with wire rope, anchors, moveable posters with pulleys for supporting the rope, double plough and spur wheel fitted and ready to key on to engine shaft, is 110*l*. The engine which was working the plough was one of Rickett's double cylinders, and cost 250*l*.; so that a complete set of apparatus can be obtained for 360*l*., even where the engine has also to be purchased. The force of attendants engaged was four men and two boys, namely one man with the engine, one at each end of the field with the anchors, and one with the plough, and two boys with the rope and posters. The work proceeded without interruption, and with the greatest celerity, although it consisted of giving a heavy winter furrow to a piece of that stiff waxy clay which abounds in Bucks, and although the fields had a sharp ascent. The rate of motion both up and down the hill I found to be quite 4 miles an hour, and the work done equal to 3½ acres per day. On lighter land with a three-furrow plough, 5 acres per day is the ordinary amount of work.

I do not of course, for a moment attempt to depreciate or undervalue Mr. Fowler's most beautiful arrangement, than which nothing in the shape of moving ploughs by steam on the great scale, can be more perfect or produce better work; but it appears to me, that a great deal may be done towards the more speedy progress of steam cultivation, by the use of a simple and cheap apparatus, capable of being readily attached to, and worked by the numerous threshing engines scattered all over the country; while Mr. Beard's apparatus has an excellence peculiarly its own, in its extreme portability and the handiness with which it can be worked by ordinary farm labourers, and set to drag ploughs, cultivators, harrows, drills, or indeed any implement whatever, a quality which was turned to good account last spring, in sowing Beans on land which it would have been quite impossible to crop in that manner in the case in question, if horses had had to walk over the surface of the field. *John Girdwood, 49, Pall Mall, November* 1860.

ON ARTERIAL DRAINAGE.

BY THOMAS ARKELL, PENHILL FARM, SWINDON.

HOWEVER beneficial a perfect drainage may be, I do not consider it necessary that it should be obtained at the expense of other interests that necessarily belong to the rivers of a country. These several interests of course vary much in extent on the different rivers, and even parts of rivers, but taking the river Thames above London, and its tributaries (to which my remarks will more particularly relate), I think the value of the several interests to be in the following order:—1st, Drainage; 2d, Flooding or Watering Meadows; 3d, Mill Power; 4th, Navigation; 5th, Fishery.

In the present state of our rivers, and under their present management (if management it can be called), I have no hesitation in saying "that four out of the five interests above mentioned, do not receive anything like the benefit they might under a proper and well regulated system of management," although the fishery department may receive some little injury, as rushes, flags, and other water weeds are probably beneficial to the production and preservation of fish, but the loss in this matter would be slight in comparison to the gain in other respects.

My time is employed in agriculture. I shall deal with the subject principally in an agricultural point of view.

I have placed drainage as of the first importance, being necessary to the health of man and beast, and for the increased production of their food. The object to be obtained in arterial drainage is, after the rain has fallen, and passed through the soil by springs and drains, and from the undrained clay soils over the surface, for it to pass off as soon as possible into the ocean. Of course the best way to accomplish this is to clean out, widen, straighten, and deepen the beds of the rivers, and if economically done the soil and mud thrown out in doing this should be formed into an embankment on each side, thus doing double duty, as embanking a river is tantamount to deepening the bed of it, and these banks being placed some little distance from the shore of the river, enable it to carry more water than if its bed was deepened the height of the banks. A river in such a state, with no mills, weirs, or other impediments to obstruct its course, and with an area sufficient to carry the highest floods without breaking the banks, would be in a state of perfection as regards drainage, but at the total sacrifice of three of the other interests belonging to the water; viz., flooding the meadow land, the mill power, and the navigation; and I have no hesitation that such an alteration would be more loss to the community than letting things remain in their present state.

2d. After drainage, next in importance I consider flooding and watering the meadow land for the production of Grass and hay, consequently animal food for man. I have said nothing to show the necessity of drainage, as that is acknowledged on all hands to be beneficial: but I do not think there is that importance attached to watering of meadow land in its various forms as it deserves.

Flooded, or natural meadows, is the term given to those meadows which flood naturally, and receive their goodness from the sediment of the water brought down from higher ground. Now a good flooded meadow (that is, a meadow that floods well) is generally mown for hay every year, cutting a good crop of the first quality for fattening cattle, and yet stands in need of no other assistance for manure but that derived from the floods; but there is a considerable quantity of the land that is flooded, perhaps the largest half, that receives very little benefit from it, and a good deal of it is considerably injured; and in many cases under present circumstances it is impossible to amend it. A good meadow is where the water flows in at its upper end, and then spreads in a regular current over the surface, with no stagnation at its lower end; now much of the land that is under water in a flood does not get a current to run over it, but the water runs in and back upon the low places, or flats, and there remains stagnant, or nearly so, until the flood is gone down, consequently the land is starved instead of being benefited by it. These remarks on stagnant water, of course, apply where the water is only moderately rich in sediment, for when the water is very muddy or receives the drainage of large towns the case would be different, provided the same water do not remain on too long.

Water or drowned meadows is the term used for those that are watered at pleasure, and not depending on floods. These are very valuable in consequence of producing a good crop of early Grass for March and April, and afterwards cutting a heavy crop of hay, though not of so good a quality as the flooded meadows. These are watered from the clear water streams, and those flowing from a calcareous soil are the best, as proved by the water meadows in Berkshire and Wiltshire from the chalk springs, and those in Gloucestershire from the oolitic springs; but from the continual penning of the water for the purpose of watering, a considerable injury is done to the drainage of the land adjoining, quite as much in some instances as where they suffer from floods.

Now, these flooded and water meadows are not only enriched themselves sufficiently by the water, but their crop is carried off and consumed, to enrich other land; so in reality, the water manures nearly double the quantity of land that is watered.

3d. The mill power I have put as the next greatest interest on the Thames and its tributaries. This may not be the case on the main stream itself, for there the mill power is inconsiderable in amount, not anything like what it might be, as the water is penned up mostly by weirs, to assist the navigation; but some go so far as to recommend buying up some at least of the mill property, for the benefit of drainage. I do not mean to say this may not be necessary in particular cases, but I do not think it necessary as a rule; had not steam-power become available when it did, I have no doubt we should have seen our rivers and rivulets in a very different state to what they are in at the present time, for it is more than probable that water-power would have been made available to its utmost extent; for I cannot suppose Englishmen would not have made some progress without the aid of steam, although I admit we should not have gone the pace.

4th. *Navigation.*—Inland navigation by canals and rivers was a very different interest before the railways became general through the country to what it is now, so I will not make any observations respecting it before

I speak of the subject as a whole, which I will now do as concisely as is possible to explain myself.

I have before said my remarks will go to show that an arterial river may be put in that state which would very much improve the drainage and the meadow land, and, if thought necessary, increase the mill-power, and improve the navigation. I will then suppose such river to be thoroughly cleansed, widened, deepened, and straightened, where necessary, and embanked to enable it to carry off the highest floods within its banks; this will be necessary to prevent the summer floods from overflowing to the injury of the Grass and hay in the meadows. This done, the next important step would be to place weirs or mills across the stream, in the most suitable places to turn the winter floods over the meadows. On large rivers, where part of the water could be spared for mill power, and sufficient left for the meadows, mills could be erected to a considerable extent, but on the smaller tributaries where all the water could be beneficially employed on the meadows, weirs would of course be preferable, so far as the meadows are concerned, where mills are erected, instead of weirs, it would be necessary to make it compulsory to erect sufficient space of floodgates and waste weir, to pass the summer floods, and the weirs of width and depth enough for the same purpose.

We will now suppose the mills or weirs erected all down the river, which would then appear something on the same principle as a carry in a water meadow, with stops to turn the water over the different beds, only upon a larger scale. I will next state where the proper place for these weirs, &c., would be, with a description of the laying-out and management of the meadows. If we take a view of the Thames, we see in certain places a wide extent of low, flat, meadow land, which floods, or if not, it may be flooded with proper attention; then again it narrows to a mere nothing, the high land approaching almost close on the river, then again expanding and contracting alternately throughout its course. This is not the case of the Thames only, but with all the rivers more or less. Now this formation, if not actually beneficial, is not at all detrimental to flooding, and it shows plainly where the weirs and dams should be erected for the purpose, which is a short distance below the commencement of these wide tracts of meadow land, so as to turn the water out on each or either side in proportion to the quantity of land to be flooded, and then at the tail of the meadow, to return again to its course, only again to be thrown out again and again as often as necessary. The bank thrown up to help keep the water in its course in the summer will answer the double purpose of preventing the water entering its course again immediately after being thrown out for flooding, and when there is not sufficient soil thrown from the river to make the embankments, it must be taken from the meadow side of the banks which will form a carry, and if the land is higher towards the river, as is often the case, than it is towards the middle of the meadow, it will help to lead the water more regularly over it.

The next important step to take is to divide the flooded from the adjoining upland. If weirs are erected on a river, sufficiently substantial to turn the whole of the water for flooding purposes, this division may be carried higher up than where the floods reach at present; this division is to be an embanked open drain, the bank to be placed on its lower or meadow side, to prevent the flood water from reaching the drainage water of the adjoining upland; the flood waters thus thrown on the meadows enclosed between two embankments if tolerably level, may not require much more to be done to flood well, but in most cases it will be necessary to form low banks, or wide shallow carries, in various directions, across or athwart the meadow, to equalise the current over them, for as I have said before, it is the regular flow of water over the surface, that constitutes a good flooded meadow. My father embanked the Thames for about 1½ miles, for the purpose of preventing summer floods, but at the sacrifice of the benefit derived from the winter floods, having little command over the river, and that little was sold by the landowner, to quiet a somewhat troublesome neighbour; still it had the desired effect, in several times saving the hay crop; once it so raised the envy of some person whose hay was spoiled, that the sluices were opened by night and the water let into the meadows. I mention these things to show the utter hopelessness now, as then, of carrying out improvements to any extent, unless supported by the iron arm of the law.

I must now return to consider the drainage of the adjoining up or dry land. It is on the land immediately adjoining the meadows, which lies between wind and water, as it may be termed, that the great injury for want of well regulated drainage is done, and which under present circumstances in many cases cannot be remedied, even by those who can see, and are willing to do what is necessary; at the same time I mean to say there is a very great deal of injury being done out of floods reach, which could now be easily remedied, if those whose duty it is to do it, could see and were willing to execute it, but it is so easy to assert (with a knowing shake of the head) that there is "no fall, it is all on a dead level" in their case, that it is almost useless to point out a remedy unless it can be easily enforced by those who suffer from their neglect, which I shall recommend being done. It is well known that on the banks of the Thames there is a great deal of low lying land that is very much starved and injured by the water lying too near the surface, the pastures growing a scanty sour herbage, and the arable land kept in a foul Grassy state, beside being very liable to lose plant, especially the Wheat plant, in the winter and spring months; the reason of this is obvious; it is from the present watercourses in too many cases emptying themselves into the river at right angles, or nearly so, instead of their following more the direction of its course and the fall of the country. Now, the plan of cutting open drains close along the edge of the flooded land, or at high water mark, sufficiently wide to carry off the drainage of the uplands, and taken down in the direction of the river far enough to be efficient, regardless of any division of parishes, or other obstacles, will drain the country as efficiently as though the mills and weirs were all abolished, and the existing outlets continued into the main stream. These open drains would not require cutting particularly large, as they should empty themselves often at the tail of the several mill and weirs. At the lower end of these drains, where they empty themselves into the main stream, their water must naturally come near the surface of the land, especially when the floods are on the meadows; this would necessitate the commencing the succeeding drain a few furlongs above the tail end of the preceding one a short distance on the upper side, but having no communication with it.

Now a river and the land adjoining, thus managed, would I have no doubt pay well for the outlay, that is, provided it is properly laid out and economically executed; the loss to the mill power would be trifling; they would lose a small district of water, as a small portion of what now flows into the river above their mill would be carried down and emptied in at the tail, but to counterbalance this their mill tail would be much lower from the improved state of the river. They might also suffer a little more from the summer floods being kept strictly within the banks, but they would gain considerably by having the winter floods kept more on the meadows, thus keeping the water at their mill tail lower.

(To be concluded next week.)

THE AGRICULTURE OF BERKSHIRE,

BY

THE REV. J. C. CLUTTERBUCK, OF LONG WITTENHAM.

(Continued from p. 1028.)

The Vale.—The management of the farms on the green sand, detailed last week, describes the best farming on the gault and green sand overlaid by the Thames drift. The Grass upon the sheer gault is often of a coarse sour character, much neglected on some farms, especially on spots subject to flooding, as on the tributaries of the Ock, whose waters are pent back by mill dams.

In the western limb of the Vale the Grass assumes an importance which needs especial notice; the tract in question lies between Wantage and Stanford, and is bounded severally by the Berks and Wilts canal to the south, and the river Ock to the north, consisting geologically of the gault and Kimmeridge clay. The gault, which lies to the south, is marked by its level surface which roughly defines its limits; it is here covered by the chalk and green sand drift. In an exposed section at Challow it was noted at 3 feet, resting on the strong clay, easily drainable; a fertile soil under the plough or in Grass, described as useful for hay or feeding, for which it has generally been used with success, as by the late Mr. Findar, of Wantage, and Mr. Joseph Phillips of Ardington, whose name of late years has so frequently appeared in the prize lists of the Smithfield Cattle Show. The richer meadows are found upon the Kimmeridge clay, which rises with a slight inclination of surface northward from its junction with the gault, and dips with several rounded escarpments at a greater angle than the rise, till it thins out under the brook near Stanford, where it overlaps the oolitic rock beneath. The surface thus undulating with some exceptions from the condition here noticed is covered with a coating of the chalk and green sand drift, in some spots to the ascertained depth of at least 3 feet, though generally much less. The top of one of these escarpments is capped with a bed of this drift so well defined that the occupiers of the land call it gravel, though it consists almost entirely of fragments of chalk and green sand rubble with a few small flints. These undulations give a natural surface drainage, though underdraining is found to benefit the land. When the deeper beds are touched, the drains draw so freely and drain the surface and furrows so effectually, that they need not be driven beyond the margin of the beds. In other cases where the drift is composed more of the friable green sand than the chalk, the drainage to be effective must be carried throughout. Very well defined traces of this drift containing fragments of chalk and green sand rubble rock, are found at least 2½ miles to the north of the nearest escarpment of the latter stratum. A close examination of this tract of Grass land is especially worth the notice of the agricultural geologist, and will solve the problem of its fertility. The practical farmer looks to the character of the herbage, the peculiar resistance of the soil to his footstep, the kindly or unkindly aspect of the surface. The geologist notes the undulations and escarpments as bringing to the surface various beds of the stratum, and when at a loss to determine the identity of the surface drift with the beds whence it has been driven, calls in the chemist to test its chemical constituents. We have dwelt longer and more minutely on this point because the most fertile spots of the far famed Vale of Aylesbury are geologically identical with the tract in question. Without attempting to describe the peculiar condition of the former or its supposed superiority, the beds above the Kimmeridge clay are there, the iron sand and Portland oolite, as well as the chalk and green sand. It is the drift, be its constituents the same or not, that assists the fertility of both these tracts of land.

This district is ill supplied with water, except from ponds and the streamlets through it, which have their sources in the chalk or green sand. An attempt was made on the formation of the railway to procure water at the Faringdon Road Station by sinking a well or by boring; the attempt was relinquished at a considerable depth. Boring in the Kimmeridge clay must always be difficult, from the layers of stony substances which it contains. On geological principles the attempt ought to succeed in obtaining water from the under-lying oolitic rock. A comparatively cheap experiment might be made to solve this difficulty, by sinking a shaft from 60 to 100 feet, half way between the Station and Stamford, where the clay would probably not be more than 200 feet thick, and the water would rise to within a few feet of the surface. This however might be reduced to a nearer calculation by an examination of the locality, and its geological conditions.

Mavor speaks of this tract of dairying land as producing 1000 tons of cheese annually from a total of 5000 cows; how far this quantity may be maintained or augmented we have no means of judging. Butter or cheese is made with the varying state of the market, ruled by the supply of milk and the requirements of the seasons. The butter finds a ready sale in a neighbourhood almost exclusively arable; cream is sent by railway in cans to London; the cheese, which answers to that known as single and double Gloucester, is made from 4 to 10 to the cwt., and is sought for by factors for the London or other markets. Some of the dairy farms have arable land attached to them, which enables the occupiers to supply themselves with straw, and roots for their stock. To speak of a farm entirely under Grass consisting of about 300 acres: a portion is devoted to feeding, from which the scythe is excluded, the remainder mowed for hay once, its after Grass being fed. The farm premises consist of cow yards and stalls, pig-styes, stack Bartons, or yards. The dairy is under the same roof as the dwelling house, or close to it; it is fitted with the cheese presses, churns, copper or tinned cheese tubs, leaden milk stands, all kept with the most scrupulous cleanliness. The cheese room above is fitted with shelves, on which the cheeses are ranged till they are in a condition to be removed. The farm steads are generally isolated in the midst of the land, not as in the arable parishes of the Vale clustered in villages, with the land (formerly common field), at a distance; this gives these dairy farms a healthy and cheerful aspect. The stock may consist of 80 milch kine of the short-horn breed, as much as may be home-bred, valued more for their dairying qualities than for their high blood, with two or three well selected bulls of different ages. The remainder of the stock, equal to the cows in number, or as many more or less as the farm will carry, consists of the heifers coming to the pail, yearlings, stirks, and weaning calves. The bull calves are seldom fatted, but are sold as they fall. Cows or heifers which refuse to breed are fed on the pastures. When the milking qualities of the older cows are on the wane, if well-bred and large-framed they are sold to dealers and sent to London, either down calving, or with their calves at their sides, where they are milked, dried and fatted: the refuse of the milk is consumed by pigs. A few ewes are kept, the run of some of the pastures is sufficient to enable them to rear their lambs with little trouble and attention. Three or four horses are kept, very often brood mares, sufficient for the work of carting the hay, manure, and other work of the farm. The song of the milk maid has ceased if it was ever heard on these pastures, as the cows are milked by men, each taking about 12 cows, on their return from the pasture at 3 in the morning and 4 in the afternoon. Early rising, industrious habits, great attention, and judgment in the breeding and management of stock are essential to the success of the dairyman, as cleanliness, care, and regularity are indispensable qualities in the females of the family who superintend the dairy and cheese room. In some farms making cheese is confined to the summer months, in others it is carried on with little intermission throughout the year. The hay ricks show that more attention is paid to haymaking here than in some parts of the county, where it is performed in a careless way on arable farms, and where by slovenly making, and seeking to increase the quantity by overgrowth, the quality so essential to the well-being of the stock is sadly deteriorated.

The character of the soil defines the limits of the Kimmeridge clay; where it laps over the out-cropping rock of the middle oolite, the drainage of the land at the junction of these strata presents some difficulties from the slight inclination at which the surface of the oolitic rock dips towards the clay; thus the water in wet seasons rises in the crevices of the rock and floods the surface. Here, as in other localities, the mill dams obstruct the drainage. The oolitic beds rise with a

gentle inclination to the north throughout the district between the Ock as a general boundary, and the rather bold escarpment overhanging the out-cropping Oxford clay beneath. To complete the geological description of this portion of the county, we find on Cumnor, Hurst, Foxcombe Hill, and other high ground, cappings of the iron sand which is absent in its ordinary position between the Gault and Kimmeridge clay; this junction of the clay and sand facilitates the manufacture of bricks and other kiln ware. The subjacent coralline oolitic rock supplies lime in the same locality. The outcropping of the clay on the sides of the hills presents a singularly rough contrast with the iron sand above and the oolitic stratum below. The amount of iron sand here developed, though worth notice, gives no distinct character to the district, except that so far as it extends it is marked by that light and garden-like cultivation for which it is noted in other counties.

(To be continued.)

Home Correspondence.

Cultivation of Swedes.—An estimate of the expense of preparing the ground and cultivation of 10 acres of Swedes:—

	Horse Labour. Days of 2 Horses.	Horse Labour. Cost of Horse Labour. £ s. d.	Manual Labour. Days of a Man.	Manual Labour. Wages. £ s. d.	Manure. £ s. d.
If there be any patches of Couch in the stubble after the crop of Wheat, these should be grubbed up and burned, and it may require a man per acre to do this .. .	..	..	10	1 0 0	
150 loads of dung, at 3s. per load	..	..	..	..	22 10 0
Carting 150 loads of manure to the field, two days of three horses and four men	3	0 18 0			
Two men filling manure, 1 man emptying carts, and 1 man driving the carts	..	..	8	0 16 0	
To spreading the manure	..	..	4	0 8 0	
To ploughing manure in October, November, and December	10	3 0 0	10	1 0 0	
To four times cultivating in February, March, April, and May	10	3 0 0	10	1 0 0	
To four times harrowing..	5	1 10 0	5	0 10 0	
To rolling, say one day of two horses and two men	1	0 6 0	2	0 4 0	
To drilling or ridging ..	5	1 10 0	5	0 10 0	
To drilling manure, bones, &c., with the drill ..	3	0 18 0	3	0 6 0	
To 100 bushels of bones, at 2s. 6d.	..	..	..	..	12 10 0
20 cwt. of guano, at 10s. .	..	..	..	..	10 0 0
To three times horse hoeing	4	1 4 0	4	0 8 0	
To twice hand-hoeing ..	..	..	40	4 0 0	
	41	12 6 0	101	10 2 0	45 0 0

41 pairs of horses one day, at 6s. per day.. ..	£12 6 0
101 days of a man, at 2s. per day	10 2 0
Manure	45 0 0
Seed	3 0 0
Expense of 10 acres	£70 8 0
REDUCE THIS TO 1 ACRE.	
$4\frac{1}{10}$ pairs of horses, one day	£1 4 7
$10\frac{1}{10}$ days of one man	1 0 $1\frac{1}{2}$
Manure, 45*l.*, one-tenth is	4 10 0
Seed 3*l.*, one-tenth is	0 6 0
	£7 0 $8\frac{1}{2}$

The valuation made by me when I took the farm was as follows:—

First ploughing	£0 8 0
Second ploughing	0 8 0
Four times cultivating equal to once ploughing ..	0 8 0
Four times harrowing, at 8*d*...	0 2 8
Rolling	0 0 8
Ridging twice	0 4 0
Sowing	0 1 0
Three horse hoeing, at 1s.	0 3 0
Twice hand-hoeing	0 6 0
	£2 1 4
To 30 cubic yards of manure, with filling and spreading, at 3s. 6*d*.	5 5 0
	£7 6 4

J. M.

Breton Cows.—Having formerly seen inquiries in the *Agricultural Gazette* with regard to Breton cows, I give you my experience. I once had some acquaintance with Brittany and its products, and I last year resolved to revisit the country, and having a vivid remembrance of the dairy qualities of its cows, I inquired further and soon made up my mind to export a cargo of 20, which I did with success. They have turned out satisfactorily—some have done wonders. One, sold here for 6*l.* 10*s.*, was (three months after her first calf) making 1½ lbs. of butter a day; although she would not make more than 3 cwts. of beef if fat. The owner would not now take 14*l.* for her. They are hardy, will do well on the most indifferent food, are quiet and gentle, can be led by a rope, and will I believe yield more milk and butter for the amount of food consumed than any other breed in existence. In fact I am so pleased with them that I intend importing another cargo. All cattle are housed at night in Brittany, and therefore care should be taken to avoid exposing them to the extremes of weather at first. They soon get used to night exposure, for their constitutions are most hardy. If any of your correspondents require further information I shall be happy to give them the benefit of my experience. *Breton.*

Straw and Manure on Whitfield Farm.—I saw some time ago a doubt thrown on the statement you made about the manure you stated to be the produce of Whitfield Farm. I send you the account and measurement of what was paid to Lord Ducie the spring he gave up the farm:—

2243 cubic yards, at 3s.	£336 0 0

And also the quantity which was afterwards left to Lord Ducie again at the next change of tenantry, viz.:

1798 cubic yards, at 3s.	£269 14 0

But besides this manure there was then:—

90 tons of Mangel	£42 0 0
50 tons of straw	62 10 0
	£364 4 0

The Mangels may produce ¼ of their weight in manure, say	22 tons.
And the straw 4 times its weight.. ..	200 ,,
	222 ,,

or probably 300 cubic yards, making with the quantity measured up, nearly 2100 cubic yards, as the manure left for Lord Ducie, so that I think the half of the land in roots and fodder crops with the straw on the other half can easily produce 15 loads of manure for the roots yearly. *J. M.*

Ewes on Mangels.—Can any one give me an answer to the following question? Is it safe to give Mangel Wurzel fresh in the field to ewes in lamb? Has any one tried it? My ewe flock will begin to lamb in six weeks, and I have a piece of Mangel where the bulbs are very small, hardly worth the expense of carting and storing; my shepherd wants to fold the ewes on it as he would on Turnips, and to reserve what Turnips I have for the flock after lambing. I fear it would be a hazardous experiment. My crop of roots is generally so deficient I must try to make them last as long as possible. Would it not be best to stack the Mangel in small heaps in the field, and give the tops to cows in the yard? [Yes.] The Mangel should, I think, be sliced with a Turnip-cutter and hay given with it; but my hay is neither very good nor plentiful. What is best to do in this case? *C. D.* [We recommend you to pulp the Mangel and chaff the hay, and mix them.]

Dibbling and dropping Wheat.—Dibbling Wheat is a good custom provided it can and is performed in a proper manner, for by the dropping process necessarily combined with it, the surface of the land is consolidated, and the kneading of the subsoil by horses is avoided, both being essential for the well doing of the crop. Dropping the grains, if justice is given to the plan, is better than by any modern implements and inventions of quickness, whether it is the common drill invented by "Tull from his organ pipes," or "Sigma's modern and admirable planter," both of which are good in the esteem of many; but I contend that they sow the grains too many at one place, though it may be in equal quantities, which only gives them credit thus far. It is, however, to be regretted, and necessary to be noticed, that this dropping is generally misapplied, and done in too confused, hurried, disorderly, and imperfect a manner, by idle or incompetent boys and girls placing too many or no grains at all into one hole, and even by the most industrious and careful women employed to do it, the quantity in each plantation are deposited (especially in cold and windy weather) too unequally to end in the best results, varying from nil to 20 or more grains, whilst 1, 2, or 3 would answer the purpose much better were they placed there in more uniform order, even admitting the holes to be extravagantly thick or thin, at the will or desire of the planter. I prefer the single hand dibble, which an experienced workman can handle with great dexterity and quickness, and can occasionally plant with his left hand in its right place and at its proper depth, more precisely the number of grains his employer wishes to be planted; or better still, by two careful women following the dibbler with small baskets, or measures, and a nut shell made to hold any desired number of grains, this nut shell to be dipped and filled at every plantation, and dropped into each hole by the right hand as it were by rule, or it may be by dint of practice and care nearly as exact with the forefinger and thumb, and this, too, at no more expense in the end than ordinary dibbling and dropping in the slovenly and incomplete manner I have described. Children, however, could do it as well, or better if they would, and did not the cold prevent them; and the only way to get them to do it properly, is by kindness of master and man, and moreover by rewards in money for their own use, to the best competitors. As I have so frequently endeavoured to prove rational and uniform seeding to be better than irrational and careless thick seeding from 1½ to 2, 3, or even 4 or 5 bushels per acre, as is sometimes practised in Scotland for securing the best of crops, I am particularly requested by several distinguished agriculturists to publish a recapitulation of my views, what quantity I consider is best suited for planting an acre of land, and at what distance the holes should be dibbled to admit of from either 1 to 6 or 7 grains to be deposited in each hole, at the rate of 1 bushel per statute acre. I will here briefly subjoin my calculations for their guidance, and I sincerely regret I did not do it earlier, as the season is far advanced. There are, then, 160 square rods, or 4840 yards, or 43,560 feet, or 6,272,640 square inches in a statute acre of land. There are also of small grained Wheat about 10,000 grains in a pint, or 20,000 in a quart, or 160,000 in a peck, or 640,000 in a bushel, consequently if it were required to be planted single grains at one inch apart square, it would require 9 bushels to plant an acre. If the holes or plantations are required to be made at 6 inches apart square, about the distance practised in the ordinary way, at 1 bushel per statute acre, it will admit of just 1,045,440 holes, and 6 grains for each plantation, provided the whole surface of the land were to be covered, with no furrows between. But as furrows are in most cases required, no seed is necessary for them, which reduces the number of plantations on an acre to about 897,520 viz., at 1 bushel per acre, 7 grains for each hole at 6 inches apart square, or 4 plantations on every foot, which if planted with precision will admit of all casualities the Wheat plant may be supposed to have to contend with from birds, rooks, pigeons, partridges, pheasants, rats, mice, slugs, wireworms, moles, hares, rabbits, and other destructives; also frost, rain, and snow, imperfect cultivation, weeds, &c. But what of the issue when neither of these mishaps do occur, as they often do not, when planted well with double this quantity of seed or even more? Some will reply, and I admit with truth, "That it would ripen earlier and prevent its tillering too much in the spring, which causes a coarse and uneven sample." But it then certainly will only eventuate in producing a puny and rootfallen crop, a weak progeny of less than one good ear's produce from each grain sown, and not able to withstand the ills attending it, at least in such a climate as ours, so unapt for ripening corn in very many seasons. I myself contend that one grain only at a place (though I would not trust to it unless I could plant it early in September), is far preferable to more, as then that one plant can be best ensured, but it must be planted early in order that it may tiller in autumn, and enable it to perform its natural capabilities; thus it would require only 10⅔ pints to plant an acre. I mean where the whole of the surface of the land is planted at 6 inches apart square, or four plants on one foot. I repeat it (though I do not set it down for a general rule), that one plant will produce more than the 6, or 7, 8, 9, 10, 20 or more would, or could, were they allowed to be grown at one place. I have proved it repeatedly by experiments, and others may do the same, that one plant at a place or in one hole, will invariably produce more than any number above it, proportionably from 1, 2, or it may be to 50. I conclude, then, that whatever quantity of seed we choose to plant, for securing the best of crops, and sparing the seed, every grain ought to be planted separately, in order that each and all may tell, and not be subjected to linger, fade away, fall down, or prematurely ripen. As it proves to be correct practice to do this by experiments repeatedly made on small plots of land, why, I inquire, would it not answer the purpose to do it on a broad scale? *A. Hardy, Maldon, Nov.* 12.

Societies.

AYRSHIRE AGRICULTURAL: *Show of Cheese.*—Mr. Tilly said, there was a great deal of very good cheese shown. He did not know if there was any cheese which could be called bad. Perhaps the entries were not so numerous as last year, but he did not think any other district could have produced so many good samples as had been exhibited. He thought he might also be allowed to say that the time at which they held the exhibition was a good time. The Highland Society made a mistake, in his opinion, in holding their show at the time they did. He thought if it had been later they would have had a better show, and the Ayrshire one would have suffered no loss in consequence. He wished to say a few words about the cheese trade, which is increasing very much. He believed they had a demand not only in this country, throughout Scotland and England, but he thought they would soon have the whole world as a market for their cheese. He thought, therefore, what they had to do was to stimulate the production of good cheese. All the markets were becoming better for cheese. He had been in the business 20 years, and he recollected the time when there was a great demand for cheese to the hop-pickers of Kent, and awful stuff was sent down there which they would not look at now. And the same thing could be said regarding the Dorsetshire labourers. They could not get quit of such cheese now; and it was a question with many what became of such cheese. He thought it was possible for every dairy farmer to make good cheese. There might be exceptions, but they were very rare. He thought good pasturage was much concerned in forming the character of the cheese, but care and attention in the making were better than excellent pasture. As an illustration of the carelessness of some dairymaids, he mentioned having found a butter cloth in some butter which had been churned along with it. Speaking of utensils; some were very imperfect. In the district he came from, lead dishes were going out of fashion, and glass and wood were coming into more general use. These things were important. Another thing—after the cheeses were

made there should be a good place for storing them. Much cheese that had been made good, became bad if it were exposed to damp or to a hot atmosphere. He was bound to say that the gentlemen who were proprietors in Somersetshire, and elsewhere in England, had liberally acceded to the wishes of their tenants in building new cheese houses. He did not say that landlords had done so without receiving any return for their outlay, either in increased rents or interest paid on the outlay money. He thought the future prospects of the Ayrshire farmers were most decidedly good—they had a fine breed of cows, a beautiful country, fine pasture. He did not think there was likely to be much change in the prices, as they were not, like dealers in the corn market, exposed to compete with cheese imported; nor was that likely to be the case with them, because the cheese made from cows upon old pasturage would maintain its superiority over that from new pasturage. —As in former years, the Cheddar cheese formed the great and peculiar attraction of the show. The entries were scarcely so numerous as last year. For the money prizes, 67 lots were brought over last year, and 62 this year. The appearance of the cheese was, on the whole, fully as good as at last show, but we cannot say that there was a general improvement in quality. The judges thought that a larger proportion of the cheese of this season had a strong flavour, and they were of opinion that it might be in some measure accounted for by the ungenial character of the season. There were 29 entries for the gold medal, 16 of which were from Wigtownshire and Kirkcudbright. The gold medal was offered for the best lot of cheese of any kind. One or two lots of Dunlop cheese were shown for the prize, but they were nowhere in the competition. Mr. Alex. M'Adam, Kilhilt, Stranraer, had the honour of carrying off both the first money prize and the gold medal. This honour is sure to be followed by something substantial. In our remarks on the competition of last year, we said 'there is something besides honour in such a victory, as the Collennan kane will doubtless be in demand in future years.' And the Collennan kane of this season has been sold at 70*s.* per cwt., or 15*s.* per tron stone. The competition for the gold medal was a close affair between Mr. M'Adam and Mr. Polluck, Raws. At the conclusion, the different parties of judges assisted each other, and the result was a unanimous decision in favour of this very meritorious Galloway dairyman. The judges thought that Mr. M'Adam had been particularly successful in keeping and maturing the cheese. Mr. Polluck's name appears likewise in the Cheddar and Dunlop prize lists, which shows that he is a formidable competitor. A keen feeling was evidently entertained by many of the spectators in regard to the comparative success of Ayrshire and Galloway at the competition. Last year the laurels were pretty equally divided, but this season Galloway has the advantage. Four of the six money prizes go to Wigtownshire and Kirkcudbright. In the competition for the medal, Wigtownshire was first, Ayrshire second, third, and fourth. The winners of the second and third money prizes were not named in the competition for the medal, which shows that something depends on the selection of cheeses for competition. In this the best makers may be unlucky, like Mr. Cooper last year. It is a remarkable fact that the Galloway cheese-makers were farther behind the makers of other districts a few years ago than they are now in advance. The introduction of the Cheddar method of cheese-making has completely changed their position. In no other quarter has the imitation of the English practice been so generally, we may almost say uniformly, successful. With many of the Galloway makers the old modes are said to have been so radically bad that they did not attempt to blend them with the new—an error into which really good makers of Dunlop cheese are apt to fall in changing to the Cheddar mode. We are afraid there is reason for the opinion we have heard expressed that this error prevents very many of our cheese-makers from attaining a high standard of excellence. Galloway is greatly indebted to one family for its honourable position as a cheese-producing district. It will be observed that the name of M'Adam is the most conspicuous in the lists. The attention of the M'Adams was directed to the improvement of cheese-making before the directors of the Ayrshire Agricultural Association sent their deputation to visit the English cheese districts. Robert rented the Baldoon dairy, and Mr. Caird sent him to Cheshire to learn the practice for which that county is famous. He succeeded well, and an account of his success, by Mr. Caird, in 1853, assisted to stir up the Ayrshire Association to a movement which, judging even by its present partially developed results, must be acknowledged as by far the greatest boon which the Association has conferred on the farming interests of the country. The report of the deputation recommending the Cheddar in preference to other English modes was at once adopted by the M'Adams, and followed out with intelligence and assiduity. Robert has gone to England, but the rest of the family have been able to establish their reputation as the first of Scotch cheese-makers. Their kanes are eagerly sought by merchants from different parts of the country. This year, Alexander's go to London—a market which seemed to be closed against Scotch cheese until the recent production of improvements in the manufacture. The M'Adams are an Ayrshire family. Their father was shepherd to the late Mr. Pettigrew Wilson, of Polquhairn, in Ochiltree. While we honour such merit we hope to see efforts made to rival or eclipse it at future shows. Let them look to their laurels. That there is a chance of victory to many others is evident from the fact that that none of our Scotch dairies as yet produce cheese of equal quality to a few of the best dairies of Somerset. Let no one be afraid that good cheese cannot be made on particular farms. Wherever any of Mr. Harding's family settle, there first-class cheese is made. *Ayrshire Agriculturist.*

Hamilton: Upper Canada.—The annual provincial show at this town is thus spoken of in the *Albany Country Gentleman* as to one of its important features. The grains exhibited must be classed among the half-dozen prominent features of the Exhibition, in any and all of which I cannot but regard it as comparing most creditably with any show I have ever seen. As to extent, an idea may be obtained from the following summary of the principal entries:—

Best 2 bushels of Winter Wheat	83 entries.
Best 2 bushels of Spring Wheat	84 do.
Best 2 bushels of Barley	64 do.
Best 2 bushels of Rye	21 do.
Best 2 bushels of Oats, white 53, black 19—total	72 do.
Best 2 bushels Field Peas	79 do.
Best bushel White Field Beans	29 do.
Best 2 bushels Indian Corn, white 25, yellow 40 —total	65 do.
Best bushel Timothy seed	60 do.
Best bushel Clover seed	17 do.

But more striking than all this, were the 32 entries, each of 25 bushels winter Wheat, competing for the Canada Company's prize of 100 dols., offered in the following language:

"For the best 25 bushels of Fall Wheat, the produce of Canada West, being the growth of the year 1860. Each sample must be of one distinct variety, pure and unmixed. The prize to be awarded to the actual grower only of the Wheat, which is to be given up to and become the property of the Association, for distribution to the County Societies for seed."

This liberal premium was wisely supplemented by the Association with four others, respectively of 50, 40, 30, and 20 dols., the winner of the first only being called upon to give up his Wheat, but all required to furnish the Secretary with a written statement of the nature of the soil, mode of preparation, the variety and quantity of seed, and time of sowing, manures, (if any used,) produce per acre of grain, and any other particulars of practical importance, before being paid the amount of premium. As to quality, it is difficult to imagine how it could have been much better; probably no premium was taken by any sample weighing less than 63 or 64 lbs. to the bushel, while I was told by one of the Judges that the weight of the first prize sample of 2 bushels was 66½ lbs., while that of the whole 25 bushels shown, in one or two instances, averaged throughout over 65 lbs. per bushel. The crop has this year, as may be imagined from the above, been an extraordinarily fine one in some localities; one farmer standing by stated that in his vicinity he believed that 40 bushels per acre would be no more than the average yield, while he personally knew of instances in which 52 had been obtained. Whatever allowance may be required for this, as an exceptional case, it is enough to indicate—like one or two other matters to which I shall refer in due time—that our best farmers will have to look to their laurels.

Farmers' Clubs.

Inverness.—At the discussion, *Is the change from Blackfaced Sheep and Highland Cattle to Cheviot and Cross Cattle of advantage to the County?*

Mr. Anderson, Kildrummie, said he supposed he was the largest feeder of Highland cattle, or probably cattle of all sorts, at this meeting, and from his experience he could tell them that, though very few local farmers took to feeding Highland cattle except himself, he had always found that, when well fed and well kept, Highland cattle were the most likely to fill the pocket. He had about 20 Highland cattle and 12 crosses. The 12 crosses cost for their keep as much as the 20 Highlanders, and he was paid as much for the Highlanders as for the crosses. He was a great defender of Highland cattle; they had never got the justice which they ought to have got. He had sold 3-year old Highland cattle at 34*l.* a-piece, and another lot he had sold for 29*l.* 10*s.* a-piece. His experience led him to decide always in favour of Highlanders, which, if they received good attention and were well kept, would pay better than any cattle in this county. Mr. Anderson also expressed himself to the effect that Highland cattle were not rightly used in the Highland districts by being supposed to be so much hardier than crosses; but Highlanders get on best when well fed and warmly kept, and would well repay any trouble which might be expended on them. Short-horns had been brought into a number of the Highland districts as well as crosses. He had Short-horns himself, but he had the greatest liking for the Highland cattle. He had some Highlanders—four year olds—now at Kildrummie, worth 30*l.* a piece. When his Highlanders were four years old, he sent them to the London Christmas market, and he was never disappointed in the price which they brought him. He had been disappointed with crosses, but never with Highlanders. He could not say much in regard to Blackfaced or Cheviot sheep. Blackfaced sheep would thrive where Cheviot would not, and he thought that Blackfaced should be the sheep of the Highlands. In regard to Highland cattle, and in observing as to their being badly used, he remarked that a gentleman from England had asked him the other day if he knew where he would get some Highland cattle to tramp down his straw. This was pretty work for Highlanders! In conclusion, he advised the members of the Society to rear Highland cattle, and keep them well—better to keep 10 well than to keep 20 badly—and they would repay them better than any other kind of cattle.

Mr. Sinclair, Culloden, said that his opinion of the change in the county from Highland cattle to cross was, that it had been too extensive. He quite agreed with Mr. Anderson that cross cattle had been taken into many parts of the county where they ought not to be, and for which the native breed was much better adapted. He considered that wherever Highland cattle were reared and fed well, they would pay better than crosses.

Mr. Gentle, Dell, in the course of a few remarks, took occasion to observe that, although the change from Blackfaced sheep and Highland cattle to Cheviot sheep and cross cattle had been great, it had been beneficial. It was no use trying to go against the general change. The fleece of the Cheviot was worth thrice what the Blackfaced was worth. He spoke also in favour of cross cattle as preferred to Highland, and said that, if well fed, there was no saying what weight good crosses might attain to. He spoke, in conclusion, greatly in favour of the Cheviot, as preferred to the Blackfaced breed in sheep, and gave his experience on the subject.

Mr. G. G. Mackay, Divoch, said:—The county of Inverness embraces such a variety of soil, climate, and pasturage, as must render any opinions enunciated as to the county generally inapplicable to many of its districts. In a general view, the eastern portion of the county is essentially different from the western. The climate of the eastern section is comparatively dry, and its pasturage healthy and innutritious. The climate of the western section on the other hand is humid, and its pasturage green, rich, and succulent. As we are here situated at the eastern extremity, it is with this division of it that we are specially connected, and to which my remarks shall particularly apply. Inasmuch then, as our natural hill pasturage is black and dry, it seems conclusive, that so far as we are dependent upon such feeding for the nourishment of our stock, we can most profitably keep such stock as experience proves adapted to it. Sheep, according to the system of farming pursued in this county, are mainly dependent upon our hill pasturage for their maintenance; and as Blackfaced sheep will thrive on poor pasturage, where Cheviot would not, I cannot help thinking that the Blackfaced is best adapted to our circumstances; and that any attempt to keep the Cheviot sheep in their stead must prove unprofitable. It is a common error to suppose that the temperature regulates the farmer's choice in the matter. The Cheviot sheep is as hardy, and will bear cold, storm, and temporary starvation, quite as well as the Blackfaced; but he will not fatten on the same hard ungenial pasturage. It is the products of the soil and not the climate that determines where the choice should lie. And as our pastures consist chiefly of Heather, our stock should be Blackfaced. If further argument were necessary to prove this, I should adduce the fact that as Blackfaced sheep are now comparatively dearer, their mutton more appreciated, and their wool proportionately more sought for and more necessary than ever to the puroposes of the manufacturer, it is obvious that their actual yield in the market must needs be, as it is, higher than their size or weight or condition in comparison with the Cheviot would warrant. Taking this in connection with the fact that we can maintain three Blackfaced sheep where we could only keep two Cheviot, I am of opinion that the change from the Blackfaced sheep to the Cheviot in this county, where it has taken place in these circumstances, is not an advantageous one. Now in regard to cattle—if our cattle were, as our sheep, dependent upon our hill pasturage, I should place Highland cattle in the same category with Blackfaced sheep, and say that they, and they alone, were adapted to our circumstances. And where the system of farming pursued is the same as it was a century ago, where cattle are fed on straw during winter, and on heather in summer, of course a change from Highland to cross cattle must be a ruinous one inasmuch as a Highlander will fatten where a Short-horn would decline. In short, Highland cattle will eat Heather but Short-horn cattle wont; so that if your food is Heather, your stock must be Highland. If, on the other hand, you have good houses and feed your cattle on straw, Turnips, and oilcake, you must have cross cattle, as such feeding is quite thrown away upon Highlanders. So far as my experience goes, it resolves itself into this; if you have good shelter and feed high, and wish to be remunerated, you must keep crosses, but if your summer feeding is Heather, and your winter feeding the same, with an occasional mouthful of straw, then keep Highlanders—for I suppose habit has made them, and them alone, capable of existence under such treatment. As, however, I believe high feeding will ultimately prevail, I approve of the introduction of crosses; I believe that the change from Highland to cross cattle, when made simultaneously with a change from starving to feeding, is an advantageous one.

Mr. Fraser, Faillie, had no experience personally as regarded sheep, but, from observation, he had formed impressions in regard to them. Mr. Gentle had said that the change from Blackfaced to Cheviot had been

beneficial, but he (Mr. F.) thought that in some parts of the county the change had been a great mistake. He thought that three Blackfaced sheep could subsist where two Cheviots could hardly do so. From the impressions he had formed, he was of opinion that the Blackfaced was the sheep for the county of Inverness. In regard to cattle, he thought that neither their severe climate nor their pastures were suitable for Short-horns. He kept Highlanders himself, because he found the climate was most suitable to support that kind of stock. He found that the warmer they were kept the better they thrived; indeed, he thought that it was almost useless to keep cattle over the winter unless they kept them warm. If the cold here was too severe for Highlanders, it was certainly too cold for Short-horns. In regard to the crossing generally prevailing in the county, he remarked that it was crossing by crosses. That, he did not think, was crossing. As he understood crossing, he thought it was a cross between two pure breeds. He thought that a cross between a pure Short-horn and a pure Highland was, where circumstances were suitable, better than a Short-horn — such as in the Aird and some other districts of the county.

Mr. Smith, Glen-Urquhart, said that where the pasture was hill and heathery pasture, the Blackfaced sheep, he thought, was most suitable, but where the farm was composed of green land and good pasture, the White-faced sheep was the most suitable. In regard to cross, Short-horn, and Highland cattle, Mr. S. spoke at considerable length, expressing his opinion that some parts of the county were best adapted for one breed, and some for another, and contending that Mr. Anderson's experience of the profitableness of rearing Highland cattle was quite exceptional, for he was not so much a breeder as a feeder—because he went to all the markets of the country and selected the best Highland cattle he could find, and then reared them up. On the whole, he thought that the cross and Short-horn was just as profitable for the farmer as the Highland breed.

Mr Fraser, Balloch, spoke decidedly of the Blackfaced breed as the sheep for this county, and deprecated the extent of crossing which was carried on in some parts of the county between that breed and the Cheviot, which, he remarked, had been carried on for 20 years on some farms, probably under the impression that by cross-breeding the Blackfaced would ultimately become Cheviots; but the breed, notwithstanding the crossing, were again relapsing into the Blackfaced. In reference to cattle, while speaking in favour of the Highland breed, he observed the large decrease within the last 20 years of Highland cattle in the county. Strathglass and Strathcrrick 20 years ago used to send more Highland cattle to the south than there were altogether there now; and some districts where then not a cross was to be found, were now in the same position in regard to Highland cattle as they then were in regard to crosses.

The Chairman (Mr. Simpson) summed up, giving a *resumé* of the opinions expressed by the different speakers, the general effect of which, he said, was, that we had to too great an extent abandoned the native breeds of cattle and sheep, and introduced Cheviot sheep and cows or Short-horn cattle in districts in which they could not and did not attain to anything like perfection. In this opinion, he himself, to a considerable extent, coincided. In regard to sheep it was evident, as Mr. Smith had stated, that the pasturage determined the stock. Thus Sutherlandshire, in the extreme north of Scotland, was a purely Cheviot stock-keeping county; Peeblesshire in the extreme south a Blackfaced district. In those counties the Cheviots and Blackfaces would be seen in a state of great perfection. The sheep farmers of this county seeing the success of the Sutherland Cheviots, and seldom seeing the Peebles Blackfaces, had, he believed too generally, come to the conclusion that the former should be in every possible situation introduced, the latter banished. This had led to errors, which, according to the statement of their Secretary, were now recognised and in process of correction. This, however, referred chiefly, if not entirely, to the high lying districts in the centre and southern portion of Inverness-shire; in the northern portion—in Strathcrrick, and still more in Strathglass, there were farms carrying Cheviot stocks that would bear comparison with the general run of—if not with the crack—Sutherland flocks. The green pastures of the west coast also suited a Cheviot stock, though he could not say much for the quality or condition of the majority of the sheep raised there—but this could, and he believed would, be corrected. In regard to cattle they had very valuable remarks from Mr. Anderson, whose experience was great. He found that beef was made more cheaply on a Highland than on a cross ox, and that the beef was of greater value in the London market, where its quality was well known and appreciated. He had seen a similar opinion expressed by Mr. M'Combie, Tillyfour, who stated that he got as much money for a compact "polled" (whose flesh comes next in quality to the Highlanders) as he did for a much larger cross ox. Highland cattle were much in demand for keeping in the parks of the English aristocracy, where their picturesque appearance suited the scenery, and doubtless their flesh was also relished in the baronial halls. It was also well known that a Highland heifer gave with a Short-horn bull one of the sweetest crosses that could be; and were there a large number of true bred beasts of that character reared here, they would be eagerly sought after; but the herds of true Highland cattle were really so few, that purchasers did not think it worth their pains to come to look for them. There had, however, been an excellent exhibition of them at the Society's show in August, and he hoped that by-and-by their numbers would be so considerable that purchasers would be attracted as they were to Orkney and Shetland for the comparatively inferior breeds of cattle raised there. In regard to Short-horn crosses, he thought them the best adapted for arable farms in low lying situations, He found, in his own experience, that a good cross could always be got by using a high bred Short-horn bull—(his own is from the stock of Mr. Stratton, of Broadhinton)—even when the cow was the cross of a cross. In conclusion, he would endorse the opinion expressed by several speakers, that either Highlanders or crosses would not only pay for good keeping — but, in fact, without good keeping, would not pay at all.

Notices of Books.

The Journal of Agriculture and Transactions of Highland Society. Oct. 1860. Blackwood & Sons.

This Number includes a treatise on the precious metals and their influence on prices, a subject of interest to agriculturists as intelligent men, but having no special right to a place in an agricultural journal, for its relation to them as farmers is of the slenderest character. There are also notes on novelties of the Canterbury show—a review of certain works on meteorology—notes of a Belgian tour—a paper on the nitrogen in soils—a capital essay on the management of bees, and the agricultural summary of the quarter—on the whole a heavy Number.

The Transactions of the Highland Society include the report of a committee on the engagement of farm labourers, to which reference has been made in past Numbers of the Paper—an account of the Dumfries show by Mr. Russell, and a paper by Prof. Anderson on the valuation of manures, containing the substance of a lecture given at Dumfries—three instructive papers. We have noted the following passages for extracts:—

Rain Making.—"Our agricultural readers would be much better pleased, we doubt not, to be told how rain can be made and conducted to their fields, than to be instructed how it is probably formed some five miles up in the clouds, through electrical agency. Philosophers conversant with electricity do marvellous things by its means. 'I have produced,' says Mr. Crosse, 'about 200 varieties of minerals, exactly resembling in all respects similar ones found in nature, as well as some others never before discovered in nature or formed by art.' And, living in an age when steam ploughs their fields and threshes their Corn, and electricity flashes intelligence of the market at Mark Lane, or of the state of the harvest in France, our agriculturists must not be utterly incredulous when hearing of Mr. Rowell's suggestion for making rain at will. 'Extensive fires, volcanoes, &c., produce clouds and rain by the rising smoke, heated air, &c. conducting the electricity from the accumulated vapour and clouds to the earth; and I believe that anything that would conduct the surcharge of electricity from the clouds would cause rain. And therefore, in a paper read at the meeting of the British Association at Glasgow in 1840, I suggested as a mode of testing the theory, that the raising of electric conductors to the clouds by means of balloons would enable the surcharge of electricity to escape, and thus cause rain to fall; and I have no doubt that, under favourable circumstances, clouds may be caused to form by withdrawing the electricity from the invisible vapour by similar means.' In corroboration of this opinion, Mr. Rowell quotes a letter from Mr. W. H. Weekes of Sandwich, a distinguished student of atmospheric electricity. 'I,' writes Mr. Weekes, 'have from very early life been an assiduous experimenter with electrical kites, atmospheric exploring wires, &c. Now, I beg to assure you that it has several times happened that when my kite has been raised immediately under a distended, light, fleecy cloud, at a moderate elevation, a free current of sparks has passed from the apparatus during some 10 or 12 minutes. I have suddenly found myself bedewed with a descent of fine, misty rain, and, on looking up, have seen the cloud upon which I was operating surprisingly reduced in magnitude.' After this testimony as to the possibility of tapping a dropsical cloud, we are not prepared to class a society for producing rain by means of kites, with the famous project of Dean Swift for extracting sunbeams from Cucumbers. At all events, the process will be much more economical than that of Mr. Espy of the United States, who proposed to drain the clouds by the kindling of huge fires—heavy falls of rain having been observed to result invariably from the burning of the prairies of Louisiana and the forests of Nova Scotia. This theory must remain *in nubibus*, so far as the country is concerned, seeing that we have no prairies, and cannot afford to fire our diminished forests, even with the certainty of emptying a rain-bearing cloud."

On the Nitrogen in the Soil.—"That it is absorbed by the soil, however, there can be no doubt; and to determine the quantities in which it exists in the soil at various depths, is the aim of the experiments which we have alluded to at the beginning of this article. And here we may remark, that the states of combination in which it exists could not be determined; but that all nitrates are excluded from the reckoning. Of these experiments there were two series—the first having for its object to ascertain the quantity of nitrogen in the surface-soil to the depth of 40 centimetres (nearly 16 inches); and the second to ascertain the same fact to the depth of 1 metre (nearly 40 inches). The fields were at a considerable distance from each other, the soil argilo-calcareous and a little siliceous, deep, and such as bore perfectly well Clover, Lucern, and Sainfoin.* That field whose surface-soil alone was investigated, was about 2 hectares (nearly 5 acres) in extent. It had grown during two years a mixed crop of Clover and Sainfoin. It had been tilled about a year before, and had not received any manure for four years. Holes were dug at suitable distances, and in eight different places, with a view to obtain average samples of soil, and from each of these two were taken, one to represent the surface-soil to the depth of 20 centimetres (nearly 8 inches), and the other the layer just below, to the depth of 40 centimetres (nearly 16 inches). Now, of these the former was found to contain, per kilogramme of soil, 1.659 grammes of nitrogen, and the latter 1.157 grammes; that is, the former contained .1659, and the latter .1157 per cent. of nitrogen in combination, exclusive of nitrates. Calculating from these data the quantity of nitrogen which each of these layers contained per hectare (2.47+acres), and supposing the soil to have twice the specific gravity of water—that is, 2000 kilogrammes per cubic metre—it is found that a layer of earth of 10,000 square metres, or one hectare of surface, 20 centimetres in thickness, represents a volume of 2000 cubic metres, weighing 4000 kilogrammes. Consequently, it would contain 4000 times 1.659 grammes; that is, 6636 kilogrammes of nitrogen. Now, a kilogramme being 2.2+lb. avoirdupois, and a hectare being 2.47+acres, we may reduce the French weights and measures to our own by multiplying by 2.2 and dividing by 2.47, or more shortly, by multiplying by the quotient of these numbers, that is by .892. Now this gives for the surface layer no less than 5919 lb. of combined nitrogen per acre. A similar calculation gives for the second layer 4628 kilogrammes per hectare, and therefore 4128 lb. per acre. The second set of experiments were conducted in a field of coarser soil, somewhat neglected, and very stony beneath. Samples of soil were taken so as to divide the metre of descent into four equal parts, and therefore 25, 50, 75 centimetres and 1 metre below the surface, corresponding nearly to 10, 20, 30, and 40 inches. And here analysis gave the following quantities of combined nitrogen in the different layers.

	Per Hectare.	Per Acre.
1 Layer	8366 kilos ..	7462 lb.
2 ,, ...	4959 ,, ..	4413 ,,
3 ,, ...	3479 ,, ..	3103 ,,
4 ,, ...	2816 ,, ..	511 ,,
Total	19,620 ..	17,491

On this series of experiments the author bestowed great labour, estimating the nitrogen both with and without the stones. Nor did he stop his inquiries at the depth of one metre. He analysed such soil as he found between the stones at a greater depth, and found that if that soil were formed into a stratum of 25 centimetres, or 10 inches in thickness, it would contain 1433 kilogrammes per hectare; that is 1279 lbs. per acre. Nor was it only the actual quantity of nitrogen at various depths which he determined, but the rate of decrease of this element at the descent it made. And in reference to this, he obtained the interesting result that, supposing all the nitrogen to come from above, it meets with more obstructions to its descent in the upper than in the lower strata, a phenomenon not without analogies in nature. Thus he found that the nitrogen in the second layer is 57 per cent. of that in the first; that that of the third layer is 70 per cent. of that in the second; and that that in the fourth layer is 81 per cent. of that in the third, each rising above the preceding by a common difference of 11. * * * But it is a question whether ammonia may not be developed out of its elements within the vegetable organisation, as well as in the soil outside of that organisation; and if so, then it must be regarded as a product of assimilation in vegetables rather than their food. This latter view has many arguments in its favour; and if so, then what is wanted in the soil for the good of a crop is not solely nitrogen existing already in the form of ammonia, but nitrogen existing in such a form that, on the touch of the living plant, it is ready to resolve itself into ammonia, either on the vegetable periphery or in its interior. If we adopt this view, we are then fully able to account for the well-known value of ammoniacal manures. That they cannot be wanted from any defect of ammonia or nitrogen in the soil follows of necessity from M. Pierre's experiments, and all others that have been made on the question."

Miscellaneous.

Adulteration of Manures. — The purchaser of manure requires to have all his wits about him in order to secure a really good and genuine article, and to avoid loss. The facts already stated regarding the large consumption of artificial manures, will show how much scope there must be for the sale of inferior and adulte-

* An account of M. Pierre's experiments, in all their details and in his own words, will be found in the "Annales de Chimie et de Physique" for May 1860, p. 63.

rated substances; and if we suppose the extent of adulteration not to exceed 10 per cent.—which is probably a low estimate—the loss to the farmer must amount to 400,000*l.*, independently of that incurred from failure of the crops on which these manures are used, and the expenses of carriage and application; a loss which might be completely guarded against by care, and by an outlay amounting to only a small fraction per cent. on the value of the manure. *Quarterly Journal of Agriculture.*

French Agriculture.—Some important agricultural experiments are now going forward in the wood of Vincennes. Five acres of ground on the plateau of Saint Maur have been laid out for experiments in the cultivation of corn, and foreign Wheat of different countries is now being sown on it. These works are executed by soldiers, under the direction of a gardener from the Jardin des Plantes. *Morning Chronicle, Nov.* 19.

Calendar of Operations.

NOVEMBER.

WEST SUSSEX, *Nov.* 12.—We have now got well into Wheat mowing, and have had a pretty good season lately, although at first some was put in rather wet; and work though it was likely to get behind has now got up with the season, so that soon we shall think ourselves out of the wood. The earlier sown Wheat has come up slowly and rather weakly, but this was expected, as the land was so cold, and it has been thought desirable to sow a little thicker than usual, as the seed is not likely to possess its usual vigour. Where we have had patience to wait for the dry weather, the land has worked easily, and we have been able to do without the usual number of harrowings, and so have avoided treading the land so much. The taking up of Mangold has been put off to a later period than usual, as it was backward in growth, and still very gross in the tops, but I do not think that much has been got by this, as the weather has continued so cold. It is now being taken up, and we find it a light crop, and not at all equal to the appearance that it presented on the ground; and as Turnips are almost a failure, we shall have to do very little in the way of fatting, and good quality beef will be scarce unless a large quantity of cake, &c., is used. The quality of meat in our market is about the same as it has been all through the summer, far inferior to what it usually is, and the supply is perhaps about the same Prices are high for what is really good, but the inferior is a very slow sale. Lean stock has come down considerably, especially full mouthed ewes, which are probably from 5*s.* to 10*s.* lower than last week. Cattle, though lower, are not so low as we might have expected, but are a dull sale. The Wheat is yielding badly, and the quality is poor; some of it looks as if there could hardly be flour in it. The prices in our market range from 44*s.* for new, to 76*s.* for old. Barley is much wanted for malting, and the best is worth from 46*s.* to 50*s.*, and even inferior grinding samples are dear, and so are Peas; though they have been much damaged and are soft they are worth from 42*s* to 44*s.* Oats are generally good and about the usual price, 23*s.* to 26*s.* Potatoes are very dear, and the cottagers are tempted to sell out; and perhaps it is better for them to do so, as the money invested in bread is more serviceable to them. *G. S.*

Notices to Correspondents.

CHEVIOT SHEEP: *An Enquirer* asks for the experience of any of our readers on the merits of this breed. We shall give his letter and some notes on it next week.

CREAM: *Farmer's Wife.* It is not the weather directly, but its indirect influence on the quality of the milk that makes cream thin in cold weather. The cows have poorer food, and more of it, probably, is consumed in respiration. The remedy, we suppose, will consist in improving the quality of the food.

MANURES, LINSEED CAKE, &C.: *X.* The London Manure Company report as follows for the past week:—There have been no arrivals of Peruvian guano during the past week. Linseed Cakes find buyers at advanced rates; the supply is still exceedingly limited, the imports of American being much below the average. Bones show a tendency to advance.

		£	s.	d.		£	s.	d.
Peruvian Guano, direct from Importers' Stores, or ex Ship	per ton.	12	0	0	to	12	10	0
Ditto ditto, under 30 tons	,,							
Bones	,,	4	15	0	to	5	5	0
Ditto, crushed	,,	6	0	0				
Ditto, half inch	per qr.	0	17	6	to	0	19	6
Ditto, dust	,,							
Animal charcoal (70 per cent. Phosphate)	per ton.	4	10	0	to	5	0	0
Coprolite, Cambridge, in London, whole	,,	2	2	0				
Ditto ditto, ground	,,	2	13	0				
Ditto Suffolk, whole	,,	1	15	0				
Ditto ditto, ground	,,	1	16	0				
Nitrate of Soda	,,	13	10	0	to	14	10	0
Sulphate of Ammonia	,,	14	10	0	to	15	0	0
Gypsum	,,	1	10	0				
Salt (in London)	,,							
Sulphuric Acid, concentrated, 1.845	per lb.	0	0	1				
Ditto, brown, 1.712	,,	0	0	¾				
Superphosphate of Lime	per ton.	5	10	0	to	6	6	0
Mixed Manures	,,	6	5	0	to	7	10	0
Dissolved Bones	,,	6	10	0				
Linseed Cakes, best American (barrel)	,,	12	2	6	to	12	10	0
Ditto ditto (bag)	,,	11	10	0	to	12	0	0
Ditto English	,,	11	10	0	to	11	15	0
Rape Cake	,,	6	0	0	to	6	10	0
Cocoanut Cake	,,	7	10	0	to	7	0	0

FOR DRESSING FOR GRASS LANDS. *Const. Reader.* Bones dissolved in muriatic acid will be a good top dressing for Grass lands. Boiled will be more easily dissolved than raw bones. They must be put in a vessel, wetted till they will take up no more water, and then have the acid poured over them.

WOOD POWER: If you say "always" command used, there is no objection to its use. But where it used to be much employed it has now long since been abandoned, and we should, in every case of which we have any knowledge, greatly prefer to spend an equal sum on any other kind of power. The subject is—the cost and merits of wind power for farmyard purposes.

WINTER KEEPING OF HORSES: *R.* Carrots may be given to horses as a substitute for half the ordinary corn and hay, and Mangels and Swedes (particularly if pulped), may also be given to a less extent; but Cabbages and Rape are far less suitable although a portion may be tried mixed up with straw chaff. Do not forget the Oats if you wish the horse to be in condition for work. *W. C. S.*

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D PLOUGH, FOR A PONY	£2	5	0
D D PLOUGH, FOR ONE HORSE	3	5	0
H PLOUGH, FOR TWO HORSES	4	2	6
H H PLOUGH, FOR GENERAL PURPOSES	4	7	6
D D RIDGING PLOUGH, FOR LIGHT WORK	3	15	0
P RIDGING PLOUGH, FOR GENERAL PURPOSES	4	5	0

HORSE RAKES.

7½ FEET WIDE, MARKED H, WITH IRON TEETH	7	10	0
7½ FEET WIDE, MARKED H, WITH STEEL TEETH	8	0	0
8½ FEET WIDE, MARKED H H, WITH IRON TEETH	8	0	0
8½ FEET WIDE, MARKED H H, WITH STEEL TEETH	8	10	0

HARROWS.

LIGHT SEED HARROWS	£2	17	6
SEED HARROWS	3	3	0
GENERAL PURPOSE HARROWS	3	10	0
THREE HORSE HARROWS	4	0	0
HEAVY HARROWS	5	0	0
DRAG HARROWS	6	6	0

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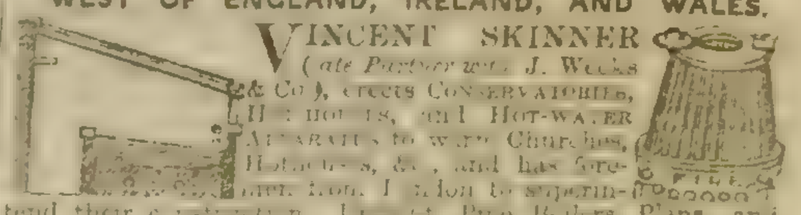

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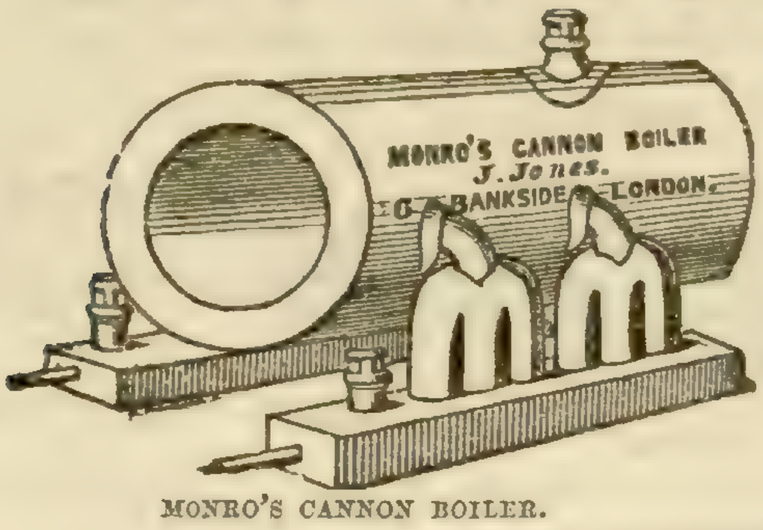

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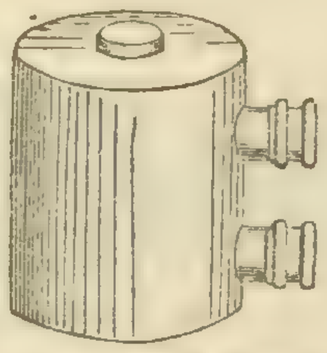

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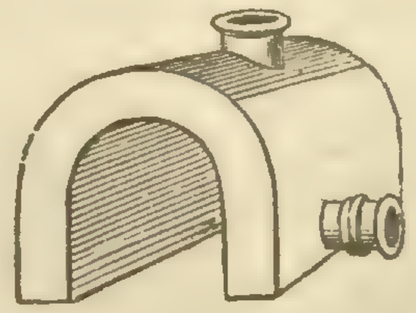

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See *Gardeners' Chronicle* of November 3.

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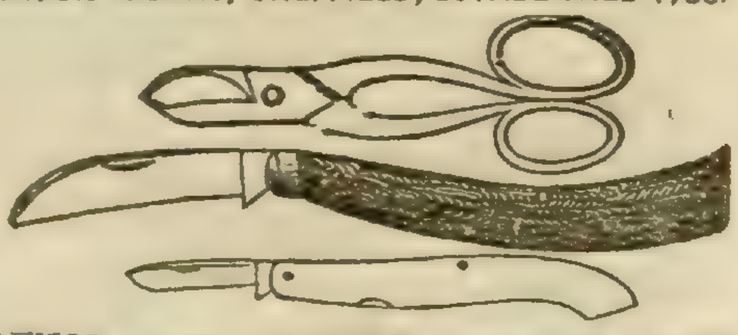

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No. 35.

Diameter of Barrel.	Height.		£.	s.	d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1	1	0
2½ ,,	long 3 ,, 3 ,,	gutta percha	1	10	0
3 ,,	ditto 3 ,, 6 ,,	or cast iron	2	4	0
3½ ,,	ditto 3 ,, 6 ,,	flanged pipe	2	9	0
4 ,,	ditto 3 ,, 6 ,,	as required.	2	18	0
2½ ,,	short, with 15 feet of Lead Pipe attached, ready for fixing		2	0	0
2½ ,,	long ditto ditto ditto		2	14	0

This Pump is fitted with J. W. & Sons' Patent Vibrating Standard Improved Revolving Cap, Metal Bucket, and Brass Suction Valve. By means of the Revolving Cap the handle can be shifted to the right or left hand, or opposite the nose, as desired.

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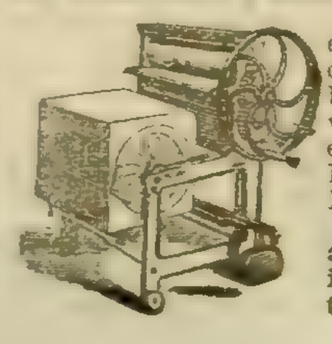

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WATERPROOF GARDEN FRAME COVER — Tarpaulin, 6*d.* per square yard; Transparent Sheeting Waterproof, near 2 yards wide, 1*s.* per yard run; thick Canvas do., 1*s.* per square yard. Horses Waterproof Loin Cloths, 7*s.* each; Driving Aprons, 7*s.* each, lined; Waggon and Cart Covers, 1*s.* and 2*s.* per square yard.

WIRE WORK, 1*s.* per yard, 6 feet high (other widths in proportion), of 15 Gauge Wire; Sheep do., 4-inch mesh, 3 ft. 6 in. high, 4*d.* per yard run.; Rabbit Proof, rather more than 1 inch mesh, 10*d.* per square yard; Poultry Wire Work, 9*d.* per yard, 6 feet wide.

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An improved make, 3 yards wide, 2*s.* 6*d.* per yard run.

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Descriptive Bulb Catalogue and Amateur's Guide to Winter and Spring Gardening

NOW READY, AND MAY BE HAD ON APPLICATION OR SENT POST PAID.

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Splendid HYACINTHS for Conservatory or Drawing-room Culture, 6*s*., 9*s*., and 12*s*. per dozen; Ditto ditto, for beds or masses, 21*s*. per 100.
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24 splendid named Hyacinths
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12 Polyanthus Narcissus, assorted
30 beautiful Early Tulips, for pots, in 10 varieties
100 splendid Double Tulips
100 Crocus, mixed
100 Ranunculus
20 Ixias, fine mixed
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6 Gladiolus
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100 Duc Van Thol, double variegated Tulips
30 Yellow Rose, double pure yellow Tulips
30 La Candeur, double pure white Tulips
50 Gloria Solis, double variegated Tulips
25 mixed Hyacinths
150 extra fine large Yellow Crocus
50 assorted Narcissus
30 mixed Iris
30 mixed Fritillarias
100 Scarlet Turban Ranunculus
50 Citron Turban Ranunculus
50 mixed Double Anemones
30 mixed Single Anemones
6 Crown Imperials
12 Gladiolus

CORDYLINE (DRACÆNA) INDIVISA.

MESSRS. JOHN AND CHARLES LEE

Have the pleasure to announce that they have now ready to send out the magnificent

CORDYLINE INDIVISA FROM NEW ZEALAND,

AN ACCOUNT OF WHICH WAS GIVEN BY DR. LINDLEY IN THE *GARDENERS' CHRONICLE*, OCT. 29, 1859, Pp. 868.

It is impossible to give an adequate description of this wonder of Nature, which should be seen in its native grandeur to be thoroughly appreciated. Specimens can, however, be seen at this establishment which already prove the accounts received of its merits to be quite reliable. Being found at a high elevation it will be a very hardy Conservatory Plant, and will probably bear total exposure in the West of England and in Ireland.

CORDYLINE INDIVISA attains a height of from 10 to 20 feet, in an erect and undivided trunk on which the foliage is retained with vigour almost to the ground. The leaves are set on to the greatest advantage, and measure from 5 to 6 feet in length, and from 6 to 9 inches in breadth. Their colour is of the richest description: a broad and prominent midrib of crimson brown runs through the entire length, and numerous red and white lines run parallel to the midrib: the whole surface is overlaid with a rich golden bronze producing an elegant effect. The under side of the leaves is glaucous. The whole tree is unsurpassed in its truly noble and unique beauty.

Nursery and Seed Establishment, Hammersmith, London, W.

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CYATHEA DEALBATA	TODEA BARBARA
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ASPLENIUM POLYODUM	POLYSTICHUM VESTITUM
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PLATYCERIUM STEMMARIA, 21*s*.
Prices according to size.
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The above are the most beautiful and distinct of this interesting and superb genus.
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F. AND A. SMITH are now sending out their splendid Varieties of the above, which for colour, dwarf habit, and large compact heads of bloom, are unsurpassed; many of them are finely formed, and others have the largest flowers known. A DESCRIPTIVE CATALOGUE may be had on application—Dulwich, Surrey, S.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SON'S PRICED AND DESCRIPTIVE CATALOGUE FOR 1860 AND SPRING 1861, comprising Fruit Trees of all the leading kinds, new and selected Roses, fine varieties of American Plants, Choice and Rare Conifers, Evergreen and Deciduous Trees and Shrubs, and a fine Stock of Transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

NEW GARDEN SEEDS, GROWTH OF 1860.

ROYAL BERKSHIRE SEED ESTABLISHMENT.

SUTTON AND SONS are now prepared to execute orders for all kinds of GARDEN SEEDS, and can warrant them genuine.
Royal Berkshire Seed Establishment, Reading.

EXHIBITION OF CHRYSANTHEMUMS.

JOHN SALTER, F.H.S., begs to inform the Public that his unrivalled Collection of these beautiful flowers will be in bloom throughout December. He invites Amateurs to visit his Nursery, where they will see, both under glass and in the open ground, not only all the varieties in general cultivation in their natural growth, but very many SPLENDID SEEDLINGS, large flowers and Pompones, which he will have the honour to send out early in 1861.
The WINTER GARDEN, which has been considerably enlarged, will present a "coup d'œil" unique in this or any other country. Free admission every day except Sunday.
Versailles Nursery, William Street, near Hammersmith Turnpike, London, W.

CARNATIONS AND PICOTEES.

JOHN KEYNES is prepared to send out Six New and Splendid CARNATIONS and Six New and First-rate **PICOTEES, the 12 pairs for 3*l*.**
CATALOGUES now ready. The Silver Cup was awarded to J. KEYNES at the National, where some of these Seedlings were exhibited in his Stand, which will not easily be forgotten by those amateurs who saw them. There being but few pairs of a sort, early application will be best to secure good plants.
Salisbury, December 1.

PELARGONIUMS.

CHARLES TURNER'S DESCRIPTIVE LIST of new varieties is now ready, comprising a selection of those eminent raisers, Foster, Hoyle, and Beck, and Fancy varieties raised at Slough.
A GENERAL CATALOGUE is in preparation, but plants of every esteemed kind are now ready.
The Royal Nurseries, Slough.

NEW AZALEA INDICA.—Alba unica, Adelaide von Nassau, Adolphe von Nassau, Alexander II., Aurelie, Bernard André, Bouquet de Flore, Comte de Hainault, Director Augustin, Distinction, Flower of the Day, Model, Nathalie, Queen of the Whites, Roi Leopold, Rosy Circle, Schone Mainzerin, Teutonia, Thusnelde, and William Luddick. Good clean plants; purchaser's selection of 12, 40*s*.; the set of 20, 3*l*., hamper and packing included.
THOMAS JACKSON & SON, Nurserymen, &c., Kingston, S.W.

LARGE ORANGES AND CITRONS.

WANTED, to give immediate effect against the back wall of a large Conservatory, Two ORANGE and Two CITRON TREES 6 to 8 or 10 feet in height. Such as have already been grown in a similar position will be preferred, provided they are in a safe state for removal. Any parties having either the whole number or a part to offer, will be so good as to send particulars of height, breadth, and price, to
JAMES VEITCH, JUN.,
Royal Exotic Nursery, King's Road, Chelsea, S.W.

The Gardeners' Chronicle.

SATURDAY, DECEMBER 1, 1860.

MEETINGS FOR THE TWO FOLLOWING WEEKS.

TUESDAY, Dec. 11 { Horticultural (Fruit Committee) at St. Martin's Place
THURSDAY, — 13 { Horticultural (Floral Committee) at St. Martin's Place ..... Noon

ALTHOUGH THE STATE OF THE WEATHER in any future season is sometimes conjectured with occasional approaches to accuracy, yet it cannot, at least in our present state of knowledge, be predicted with any degree of certainty. M. ARAGO, one of the most scientific philosophers of the age, studied the subject and arrived at the same conclusion. Nevertheless, observations on the vicissitudes of heat and cold, of moisture and dryness, &c., which occur in different seasons and localities, are valuable, not only in a scientific but also in an economical point of view. To the cultivators of the soil and to the consumers of its produce, or in other words to the nation at large, they afford a means of judging of the probabilities of scarcity or plenty, and the consequent expenditure which must be made for food. Thus, although meteorological observations do not enable us to foretel what the weather will be for a month, a week, or even a day, yet by their aid we can arrive very closely at what consequences will ensue from any unusual deviation from the ordinary course of the seasons. It is much to be regretted that it is only very recently that the importance of statistics respecting the produce of the land in the United Kingdom has been recognised, for we venture to say that when these shall have been collected for a series of years they will, if combined with extensive good meteorological observations, carried on in different parts of the country, afford information of the greatest value in estimating the influence which variations of climate will exert on different descriptions of crops, and enable us to recognise with greater certainty the likelihood of abundance or the contrary.

It will only be by collecting and comparing the peculiar features of each successive year, whether good, bad, or indifferent, that anything like general rules for our guidance with regard to crops can be established. There is no proof that the climate of this country has varied for the last thousand years. Formerly, as now, there were good and

bad seasons; but the general character of the climate remains the same. That the seasons were formerly not more uniform than they now are may be inferred from the circumstance that there were years of plenty, and years of great scarcity, so great indeed that famines were not unfrequent; and the latter appear to have come on very unexpectedly, probably owing in a great measure to the want of statistics with regard to the weather and the crops. We find it recorded that the price of Wheat rose, some 200 years ago, from below 20*s.* to upwards of 120*s.* in one season. This circumstance, with the occurrence of famines, prove that very bad seasons had been experienced, but not that they were worse than perhaps even the present; for it must be recollected that the land in those days was undrained, and in other respects badly cultivated; and such being the case, a cold wet summer like the past would render the whole population dependent for support on the poor thin sandy portions, those capable of producing at best but a scanty crop compared with the strong low lying soils, when such were not under water. Without the means of importation from abroad a famine must have been the consequence. Draining and improved cultivation have incalculably diminished the disastrous results of bad seasons; yet the latter occasion deficiencies which have to be in various ways provided against. It would therefore be desirable that the frequency of the recurrence of extraordinary good and bad periods could be ascertained. There are not however sufficient data for this; for there were scarcely any temperature and rainfall observations that could be depended on till nearly the beginning of the present century, and a longer series of years is necessary before sufficient averages can be deduced as regards the duration of good and bad periods, and the intervals between them, or in other words the average frequency of their recurrence.

It will be seen from the following table, and the subjoined remarks on the weather of the respective months, that this has been a most remarkable season. As regards wet and cold, it has been seldom equalled, certainly not within the last 60 years; and had it not been for the fortnight of dry weather which occurred so opportunely when the Wheat crop was in flower, the consequences would have been most serious.

Table of the Monthly Mean, Maximum, Mean Minimum, Mean, and Extremes of Temperature, and the amount of Rain, January to October inclusive, 1860, comparatively with the average.

1860. Months.	TEMPERATURE. Mean Maximum	Above (+) or below (—) the Average.	Mean Minimum.	Above (+) or below (—) the Average.	Mean.	Above (+) or below (—) the Average.	Extreme Highest.	Extreme Lowest.	RAIN.	Above (+) or below (—) the Average
									Inches. 2.18	Inches. +0.55
January ..	46.87	+4.11	30.74	—0.47	38.80	+1.81	57	20	1.20	—0.27
February ..	44.17	—1.50	26.84	—5.46	35.25	—3.48	58	14	1.63	+0.35
March ..	49.97	—0.75	32.77	—0.61	41.37	—0.63	60	18	0.95	—0.65
April ..	53.40	—4.21	31.00	—5.47	42.20	—4.84	65	20	3.04	+1.14
May ..	66.06	+1.49	39.90	—2.26	52.98	—0.38	75	27	5.15	+3.30
June ..	64.96	—7.17	44.36	—4.44	54.66	—5.80	73	34	2.72	+0.25
July ..	71.06	—3.65	45.85	—6.19	58.20	—4.92	77	34	4.16	+1.73
August ..	67.26	—6.25	47.16	—3.51	57.21	—4.88	76	38	2.82	+0.35
September ..	64.07	—3.65	40.27	—5.93	52.17	—4.79	72	28	1.60	—1.17
October ..	59.48	+3.48	38.39	—2.74	48.93	—1.14	69	25		

January.—Of the last ten months this is the only one in which the mean temperature was above the average. The nights were slightly colder, but the days were, on the average, 4°.11 warmer than usual. The maximum of the days was never below 39°, whilst on the 3d it reached as high as 57°, a point rarely attained in January, and never during the last 34 years in the first week of that month. The nights were generally frosty, but never exhibited any great degree of severity, the lowest point to which the thermometer fell being 20°; this was on the 25th and 31st. The ground temperature at 1 foot deep was 3°.21 above the average of this month for the 16 previous years. The high temperature of this month was doubtless owing to the prevalence of south and south-west winds; they were from south three days and from south-west 17 days. The barometer was 0.306 inch below the average, which is lower than in any other year for the last 30 with the exception of 1856. The amount of rain was rather more than half-an-inch above the average.

February.—North and north-east winds were prevalent; the barometer was generally higher than usual, and very high, 30.526 on the 14th; the amount of rain was 0.27 inch less than the average depth. The mean temperature was nearly 3½° below the average. The maximum of the days was never below 34°; on the 27th the thermometer was as high as 58°. The nights, except four, were more or less frosty; the lowest extreme was 18° below the freezing point, so that frost of unusual intensity was not experienced; nevertheless the temperature was so continuously low as to occasion the average minimum temperature to be lower by nearly 1° than that of any February during the last 63 years. The ground temperature was 3½° lower than in the previous January.

March.—The mean temperature was scarcely a degree below the average; the highest, 60°, occurred on the 29th, and the lowest, 18°, on the 3d and 5th. The prevalent winds were, from south-west 11 days, and from north-west the same number. Rain fell on 21 days; the amount was nearly ⅓ inch above the average. The ground temperature was about 1½° above the average.

April.—The mean temperature of this month, 42°.20, was lower than that of any corresponding one in the present century, with the exception of that of 1837, which was ¼° lower. The mean maximum, 43°.40, was 4°.21 below the average. In the years 1836, 7, 8, 9, it was somewhat lower; but in these years the mean minimum was much higher than in the present, which was only 31°; this is 5°.47 below the average, and lower than in any April for the last 63 years at least. The nights, in fact, were scarcely ¼ degree warmer than those of January of the present year. The extreme lowest occurred on the night of the 10th, thermometer 20°; but no fewer than 18 of the nights were more or less frosty. On the 12th and 13th the thermometer indicated 25°; and on the 20th, 21st, 25th, 27th, and 28th respectively, 25°, 21°, 25°, 23°, 24°, so that on seven nights towards the end of the month, the lowest temperatures at night averaged 8° below freezing. This degree of cold so often repeated would have entirely destroyed the blossoms of most kinds of fruit trees had their vegetation been previously much excited; but as this was not the case many escaped, although the young fructification was considerably injured. Rain fell to the depth of scarcely an inch; the amount was 0.65 inch below the average.

May.—In this month the nights were colder, but the days were warmer than usual, so that the mean temperature was very little below the average. The highest temperature was indicated on the 21st, 23d, and 24th, thermometer 75°, and this was nearly the highest point reached in the shade this year. On the night of the 9th the temperature was 5° below the freezing point. This was the last of the frosty nights, of which, reckoning from the 1st of March, there had been no fewer than 39. South-west winds were prevalent. The quantity of rain was upwards of an inch above the average. Of the total amount—3.04 inches—1.14 inch fell on the 12th alone. This was the greatest fall of rain on any one day in May for the last 34 years, with the exception of the 5th, 1843, when 1.26 fell. The ground temperature was, at 1 foot deep, about a degree above the average, but nearly as much below it at 2 feet below the suface.

June.—According to Howard's "Climate of London" and the Register of Observations at Chiswick, this was the coldest June that has been experienced for at least 63 years. The mean temperature was only 54°.66, nearly 6° below the average. The years in which the mean of June approached nearest to this, in the above period, were 1812, 1814, 1821, 1841; the means of these were respectively 55°.78, 55°.99, 55°.32, 56°.23. It may be remarked that one of these years, 1812, was, like the present, the one immediately succeeding a year in which a great comet had appeared. The mean maximum was 7°.17 below the average, and lower than in any June within the last 48 years. In 1812 and 1814 it was a fraction of a degree lower. The day temperature of June was actually lower than that of May of the present year by 1½°; the extreme highest in the shade only reached 73°; that in May 75°. South-west winds prevailed for 18 days, and brought more than their generally large proportion of moisture, but were unaccompanied with their usual warmth. There were only 4 days on which rain did not fall, and the total amount, 5.15 inches, was 3.30 inches above the usual depth. It appears that this was both the wettest and coldest June of any in the last 63 years. It was of course very unfavourable for crops generally, especially the more tender kinds. In the preceding very hot summers French Beans and Vegetable Marrows produced more than could be gathered in many instances; in the present such things either died or would scarcely grow.

July.—The 5th of July is the warmest day of the year on the average of the last 34 years. In this period and on that day of the month the thermometer has been as high as 97° in the shade. The same day proved this year the warmest of the season, but the thermometer only reached 77°. In no year in this century has maximum extreme been so low. The nearest approach was in 1812, when the highest point reached in the course of the year was 78°. The mean temperature of this month, like that of the preceding, was lower than in any corresponding one for the last 63 years at least. The ground was also colder than in any July for the last 16 years, the period in which we have comparable observations. The amount of rain was ¼ of an inch above the average; but none fell till the 15th, a most important period; for in that fortnight of dry sunny weather the Wheat came into flower and was set under favourable circumstances. Had the rain continued this could only have taken place very imperfectly. From many garden plants that were not in flower at that particular period no seeds could be obtained this season.

August.—This was the coldest August experienced in the century; and it was also the wettest, with the exception of the corresponding month of 1828, 1846, and 1848. There were only seven days on which it did not rain. The wind came from south-west during 15 days, but still without its usual warmth. The nearest to this month in lowness of temperature were the Augusts of 1812 and 1817, their means being respectively 57°.83 and 57°.84, whilst this was 57°.21. The ground temperature was between 2 and 3 degrees below the average.

September.—The mean temperature was almost as much below the average as in the preceding month, thus making the fourth consecutive one of which the coldness has been unprecedented in this century. In the first 12 days there was very little rain; but from that time to the end of the month there were only two days on which rain did not fall, the total amount being fully ⅓ of an inch above the average.

October.—The mean temperature was still below the average, but in a much less degree than in the four previous months; the days were even slightly warmer than usual, but the nights were colder. Six of them were frosty. So early as the 11th the thermometer indicated 7° below freezing, and on the 20th 5° below that point. Owing probably to rain with south-west winds possessing more of their usual warm character than they did in the former months, the ground temperature rose more than a degree above the average. The amount of rain was for the first time since April below the average.

When November and December shall have passed away we shall resume and complete this sketch; and see to what inferences, as concerns cultivation, it will lead. ||

WE see by a communication of M. DUCHARTRE to the Botanical Society of Paris that there is a great demand for WHITE LILACS for LADIES' BOUQUETS in Paris in winter, and that as the common White Lilac will not force well and the flowers turn yellow, M. LAURENT aîné meets the demand by causing the purple Lilas de Marly to expand in perfect darkness at a high temperature. This variety forces very well, and thus treated produces flowers of a pure white, which do not acquire any colour if gathered as soon as brought into the light. The leaves are apt to turn yellow, however, which is not the case with the Lilas

Charles Dix, which equally can be made to whiten, but with bunches of flowers not so fine as the Lilas de Marly. The Persian Lilac will not whiten.

These statements are not only extremely curious but quite unexpected. Why the absence of light should produce effects so dissimilar upon plants so similar as Lilacs is a question for vegetable chemistry to explain. It should be verified and extended in all directions by those who have to provide winter decoration by inexpensive means; for it is probable that the peculiarities thus said to exist among one race of plants will be equally characteristic of others.

—— It is stated by M. André Leroy that seeds naturally protected by a fatty or oily pulp may be readily made to germinate by crushing the pulp in potash water and afterwards rubbing the seeds in fine sand. Those of Magnolias, Hollies, Yews and the like, which will often lie in the ground for a couple of years without growing, come up readily after having been thus treated.

MYCOLOGY.—No. XXXVII.

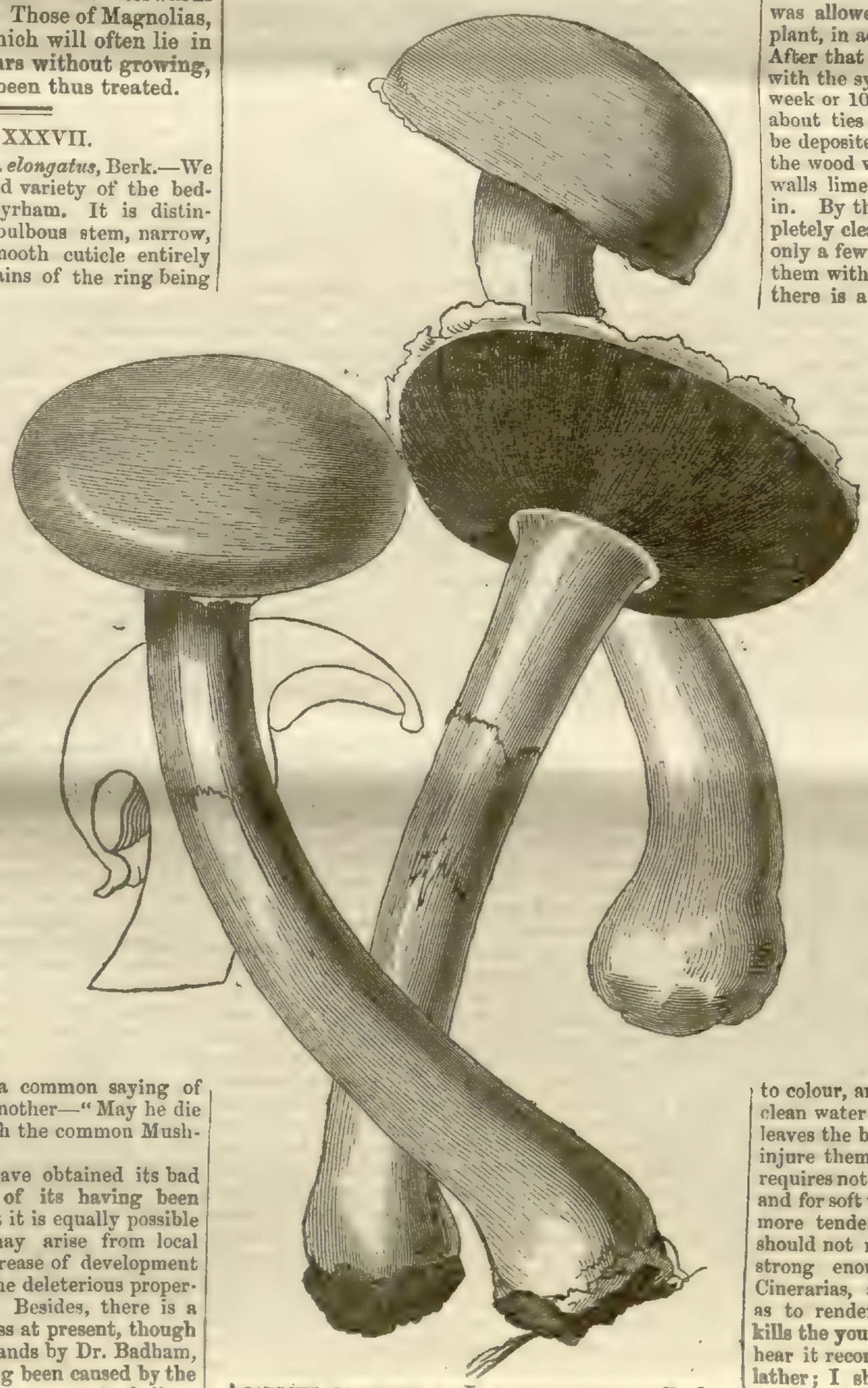
Agaricus campestris, *L.*, var. *elongatus*, Berk.—We present here figures of a second variety of the bed-Mushroom which occurred at Dyrham. It is distinguished by its elongated rather bulbous stem, narrow, convex, not depressed, pileus, smooth cuticle entirely free from scales, and by the remains of the ring being in most cases permanently attached to the border and leaving slight traces only if any upon the stem. It is far inferior in quality to Mr. Buchanan's Mushroom, and has nothing to recommend any especial attention being paid to its cultivation. The figures indeed are simply introduced here to give additional proof, how much more variable the cultivated species is than is usually supposed.

Dr. Badham, we believe, first called attention in this country to the fact that though *Agaricus campestris* is so generally received as a safe and wholesome species, it does not pass muster everywhere without challenge. In many parts of Italy there is a strong prejudice against it. Micheli indeed informs us that it is highly prized in Tuscany, where it has many names, while Vittadini states that it is little known in the Lombardo-Venetian districts, and was only introduced into the lists of Fungi recognised by the police in Milan and Pavia at his especial suggestion. In Rome it is not merely despised but is absolutely prohibited from appearing in the markets, and the prejudice against it is so universal that it is, according to Dr. Badham a common saying of any one who has enmity towards another—"May he die of a Pratiolo!" the name by which the common Mushroom is generally known in Italy.

It is just possible that it may have obtained its bad character there in consequence of its having been confounded with other species, but it is equally possible that the difference of quality may arise from local circumstances which cause an increase of development of the poisonous alkali on which the deleterious properties of bad Mushrooms depend. Besides, there is a treatise, to which we have not access at present, though it was once placed kindly in our hands by Dr. Badham, in which death is recorded as having been caused by the true Mushroom, nor was there any reason to believe that the evil consequences were due to an accidental admixture of other species. The Mushroom moreover is regarded with suspicion in Hungary and is seldom cooked, though *Boletus edulis*, a very inferior Fungus in our estimation, is largely used. In Vienna on the contrary, it is used without any scruple. DeCandolle indeed tells us (says Vittadini) that all the Fungi of the especial section to which A. campestris belongs, which have a complete or incomplete ring with gills at first rose-coloured, then ruddy, then brown, and at length black, are equally wholesome and incapable of being confounded with any poisonous species; but Micheli speaks of one agreeing in sectional characters under the name of *Fungus perniciosus*, whose nature is highly suspicious.

One of the principal uses to which the several forms of Mushrooms are applied is the production of ketchup, a name of Eastern origin. For this purpose the allied species or varieties are in general used indiscriminately, not to speak of more questionable adulterations, but there is an immense difference in the quality of the condiment produced from different varieties. The true Mushroom of our pastures and those varieties which afford a red juice when bruised are far the best. The ketchup merchants frequently keep the Mushrooms salted down in casks for months before they are converted into ketchup. In general, however, the more rapidly the juice is extracted the better is the produce, and the more likely to keep. It is a good practice to preserve it always in small stout bottles, such as will bear a good degree of heat before the corks are driven home.

Mrs. Hussey recommends a mode of preparing it, which she informs us is far superior to that in general use. The Mushrooms, being first cleaned from all extraneous matter, and those being utterly rejected which border at all on decomposition, are sliced and salted, and the juice suffered to run off through a second colander without any squeezing. It is then left for a few hours, and after being decanted carefully from any sediment, placed in small bottles, room having been left for a little alcohol in which the proper spices have been previously steeped. This is



Agaricus campestris, *L.*, *var.* elongatus, *Berk.*
(From a sketch by Mr. W. Fitch.)

said to keep admirably, and to retain its full aroma which is apt to pass off in the process of long continued fermentation or boiling. *M. J. B.*

Home Correspondence.

Gishurst Compound.—Much difference of opinion exists as to the merits of this; one person states that it will effectually destroy all insects, mildew, &c.; another that it kills or injures almost every plant to which it is applied, without killing the insects. It is from extreme conclusions like these (in most cases hastily arrived at), that many things suffer in general estimation which are really good when properly applied and used with caution. Having employed Gishurst extensively on a considerable number of plants under various circumstances, and affected with most of the insects with which gardeners are pestered, I have arrived at a correct conclusion as to what it really will do and what it will not do. I will commence with the mealy bug, which unquestionably is the worst of all insects to exterminate where once it gets thoroughly established. We were very much pestered with it here. Certainly it was never allowed to get to such a head as is sometimes seen; but the labour it took to keep it down was a serious affair. In the spring of 1859 I made up my mind if possible to rid myself of it. I put in cuttings of the different kinds of Dipladenias, which were thoroughly cleaned to begin with; when struck they were potted off and placed in a corner of a stove away from any affected plants. These were grown on through the summer, and were intended to take the place of old plants which were thrown away before commencing to clean the general stock. By the end of September, when the Ixoras, Stephanotis, Francisceas, and similar plants had matured their growth, I procured a shallow tub 4 feet 6 inches in diameter; this answered to catch the Gishurst as the plants one at a time, laid on their sides over the tub, were syringed. By so doing there was no waste, and about 4 gallons were sufficient to go over the stock. The Gishurst was used in the proportion of 5 ounces to the gallon, and was allowed to remain a quarter of an hour on each plant, in addition to the time it took to syringe them. After that they were washed with tepid water applied with the syringe. This operation was repeated every week or 10 days, for two months, and each time all about ties and crevices in the bark where eggs could be deposited were well looked over. During the time the wood work of the houses was well washed, and the walls lime-washed, old tan removed, and fresh brought in. By the above treatment I managed to get completely clear of all pests. Where, however, there are only a few small plants affected, diligently going over them with a small brush would clear them; but where there is a number of large plants infested it is impossible to manage the matter in any other way than that described. Here we have seven houses devoted to plant growing alone, and every summer during three years we had bug. It is often said that when a collection of plants once gets infested with it, there is no chance except to burn the whole and start again with clean specimens. This I feel certain is a mistake, as by persevering in the way I have described they may be thoroughly cleaned. I have frequently known persons use Gishurst once or twice very strong, and then say it would not answer; they injured the plants and the bugs made their appearance again. This would not have been the case if the mixture had been used weaker and with perseverance. I find that it effectually clears brown scale from such plants as Rondeletias, Gardenias, at one or two dressings, consisting of ten ounces to the gallon of water. The plants should be cut back to the old wood, otherwise they will not stand the mixture strong enough to kill the scale. Two and a half or three ounces to the gallon is quite strong enough for thrips on Azaleas, Camellias, Ixoras, or any thing that thrips infests. At the same strength it is instant death to red spider, and two or three dressings with four ounces to the gallon will generally remove all trace of mildew. I find it to answer either for thrips or red spider. Upon Vines of course it should be used before the fruit begins to colour, and the mixture should be washed off with clean water before it is allowed to dry on; it however leaves the berries slightly spotted, and therefore would injure them for exhibition purposes. For green fly it requires not less than four ounces to the gallon of water, and for soft wooded plants under glass (and consequently more tender in foliage than when fully exposed), I should not recommend its use. I find that to use it strong enough to kill green fly on Calceolarias, Cinerarias, and Fuchsias, injures the leaves so much as to render the plants worthless; it also completely kills the young leaves of Melons and Cucumbers. We hear it recommended for Orchids applied in a strong lather; I should be very sorry to use it on them at all. I know a collection on which it was so used, and they were very much injured. Neither can Ferns stand it—it appears to almost poison them. I tried it for mussel scale on Apple trees in the proportion of 12 ounces to the gallon of water, made into a kind of thick paint with soot and clay; but it did not kill the scale. It is also recommended for dressing Peach trees; but here it requires caution. A friend of mine had a Peach infested with brown scale, but he went cautiously to work and applied it to a single branch first; in a few days the scale fell off dead, and all the buds as well. Taking Gishurst, however, altogether, it is undoubtedly the best thing in its way that has yet appeared; its capabilities in effectually destroying mealy bug are sufficient to give it a first place among insect destroyers; but, as I have tried to show, it is not by one or two very strong dressings that a compiete clearance can be effected, but by using it at a medium strength and persevering. *T. Baines, Gardener, Summerfield, Bowden, near Manchester.*

Cyanophyllum magnificum.—We have here a plant of this raised from a cutting struck since last Christmas, whose largest leaf measures 34½ inches long, and 18½ inches broad; it has also several other leaves nearly as large. The plant has made 14 side shoots in

the time stated, those I have taken off, and 11 of them are struck (some of them nice plants with leaves 18 inches long), the remaining three are just about rooting. I should like to know if any of your Correspondents have seen a plant of this with leaves so large as the size just mentioned. *T. Baines, Gardener, Summerfield, Bowden, near Manchester.*

Heating.—I think that a subject more interesting to gardeners than this could not have been brought forward, especially at the present time, when so much is being said in favour of applying it to the bottom of Vine borders; it is therefore high time that the form of boiler best calculated to produce a certain amount of heat with a given quantity of fuel should be settled. This, as far as my experience goes, is best attained by the tubular form, as it exposes more surface to the immediate action of the fire than any other with which I am acquainted. We have now in use one of Ormson's patent, "No. 2," warranted to heat 700 feet of 4-inch pipe; so powerful is it, that I believe that to be much below its capabilities. I should not hesitate to attach at least 1000 feet, and this I feel convinced it would carry with ease if properly set. The best fuel for this form of boiler is the hard coke, such as is used in the locomotive; it gives out a very fierce heat, and is very lasting. The tube suggested by your Correspondent, "An Inquirer," to be introduced at the back of the fire to create draught, I should say is a decided improvement. All cold draught beyond sufficient for combustion is so much loss; the value of Silvester's patent doors can hardly be over-estimated, as draught can be regulated at pleasure. Good as I believe Burbidge and Healy's boiler to be, there would be a great loss if not fitted with Sylvester's patent doors. We have now two of Burbidge's boilers at work, one carrying 800 feet of 4-inch pipe, but I find it not equal to Ormson's. For real economy I think we must look to the tubulars. Allow me to correct a slight misprint in the notice you took of the Vines here. It should have been—I kept the rods closely stopped to about 7 or 8 feet; above this the laterals were allowed to run to get the Vines well established. *J. Sheppard, Woolverstone Park.*

The Unicorn.—I beg to reject the account which has been given to the public in your columns of the "far-famed Unicorn." It is indeed the "Romance of Natural History." Formerly one Elizabeth Love had a horn growing from her head when she was 50 years old. I myself have seen and examined the horn of a sheep. It was 1½ foot in length, and it grew from the middle of the sheep's ear, having nothing to do with the skull; nor did it differ in substance from the horns of other sheep, which horns, everybody knows, are hard and tough. But the horn of our unicorn, described in your Paper, from the report of an "Intelligent Native" of Africa, possessed the wonderful quality of becoming hard and soft at pleasure. Thus it was "flexible" when the unicorn was "asleep," and became "stiff and hard" under the "excitement of rage." Ay, so stiff and hard, that with it the unicorn can bore and rip a tree "till he brings it down." What an utter impossibility! No horn on the head of a living animal possesses the power of becoming stiff and supple, under any circumstances whatever. If an "Intelligent Native" had attempted to pawn such a palpable hoax upon me I would have looked upon him in no other light than that of an arrant impostor; and I would have assured him that I considered his history of the wonderful unicorn an impudent fabrication of his own brain. It would just suit the well stored shelves of my old grandmother's library, where nurserymaids are abundantly supplied with matter of wonder and excitement for a long and dreary evening in the gloomy month of damp November. I am not a believer in the existence of the animal commonly called a unicorn. *Charles Waterton, Walton Hall, near Wakefield.*

Culture of the Vine.—Notwithstanding all that has been written on this subject, Vine-growing may be said to be comprised in a nutshell. The three following points form the root and branch of the whole matter:—1. The texture of the border should be such as not to injure, by decomposition or otherwise, the fibrous roots which tenant it; whilst the materials of which it is composed should be of the most permanently nutritious character. 2. As much foliage should be allowed as can be well exposed to light. 3. There should be a constant circulation of air night and day, winter and summer, in proportion to the season and the requirements of the plants. It will at once be seen that Vines thus treated must have plenty of good fibrous roots, and sound, healthy, well-ripened wood. This is the point at which every gardener should aim. He may rest assured that if he can secure healthy vigorous Vines they will not fail to reward him with abundance of first-rate fruit. A most successful grower in my neighbourhood acts upon the following maxim:—"Upon the free healthy growth of the Vines this year depends the supply of Grapes next season." The late unpropitious weather has incontestibly proved the soundness of the practice. The Vines are remarkably strong and healthy, and both Muscats and Hamburghs have ripened and coloured splendidly. *An Amateur.*

Two Summers near the Equator.—Just after reading your notice of "The six months' seasons of the tropics," I lighted on a passage which shows that the existence of two summers near the equator has not escaped observation so completely as Mr. Lees seems to think. One Antoine du Verdier, in his "Diverses Leçons," Townon, A.D. 1610, says, "Au Royaume de Scena ou Xoa ou le Roy se tient, ils font deux cueillettes par chacũan: car ils ont aussi deux estez l'an,"—for they have also two summers in the year. Xoa is doubtless Shoa. Antoine is speaking of the kingdom of Abyssinia, of which his description seems pretty correct, although he surrounds the sovereign Prête Jan, Prester John, with much of that strange halo of exaggeration which appears to have formed part of his Majesty's prerogative. The account of the country purports to have been received orally from one of the Abyssinian friars, of whom there was then a small fraternity at Rome. *H. J. Moule, Wentworth Woodhouse, Rotherham.*

Edging Tiles.—Permit me to inform your Correspondent "Hanworth," that perfectly indestructible edging tiles are to be procured at the Dippenhall Silica Works, Farnham, Surrey; Manager, Mr. E. Whalley. I have had some in use for three winters, in an exposed situation, and they are as good as when they were first used, and form a neat edging for beds and gravel-walks. *Caroline Paine, Farnham.*

Ferns.—The mention of finding a variegated Pteris aquilina (p. 1023), induces me to send you fronds of two variegations of Polystichum angulare found in this neighbourhood, though many miles apart; the markings are alike except in colour, one being pale yellow, almost white, and to use "Delta's" words, "appears sprinkled with snow;" the other light green; they seem to be quite constant, having shown no inclination to throw off their bi-coloured garb. *J. M., Axminster.* [We are unable to discover the variegation spoken of.]

Botanical Names.—"J. B." will thank the Editor of the *Gardeners' Chronicle* to inform him the rule for terminating the botanical names, such as Hookeri, Douglassi, Darwini, &c. Sometimes they are written with one and sometimes with two i's. The latter appears to be incorrect. Hooker Latinised would become Hookerus and not Hookerius, and hence the genitive should end in i and not in ii. Proper names ending in y might very properly end in ii in the genitive, such as Lindleii. [The whole system of names is in so confused a state that we can offer no better explanation than that of our Correspondent. Nobody in these enlightened days of freedom of thought will pay any attention to rules of construction.]

Bowood Muscat Grape.—I had no intention of taking up this subject again, nor would I have done so, had it not been that your correspondent, "A Constant Reader" (see p. 1042), seems more disposed to distort truth than to enunciate facts. Instead of clearing away difficulties which he seems so anxious to remove, each consecutive step he takes renders his position more assailable and his cause more desperate. What can your Correspondent mean by saying that "Mr. Cramb in your Paper, and others in various horticultural periodicals, seem determined to prove, to their own satisfaction at least, that Mr. Spencer did not raise the above Grape at all?" Surely it is safer to rely on facts than to set adrift undigested opinions. I have satisfied myself as to the accuracy of my statements, and have fearlessly put them into circulation for the benefit of others, but whether admitted or rejected the result is immaterial to me. Will "A Constant Reader" name the person who has said that Mr. Spencer did not raise the Bowood Muscat? I, for one, have never said so. Why then introduce a gratuitous assumption, endeavouring to make the public believe that I have through some selfish feeling been trying to lower Mr. Spencer's reputation, a motive which never entered my mind. Nor have I ever seen such an opinion expressed in any publication whatever. My antagonist would have obliged me by adding substance to the "various reasons" by which he believes these writers to be mistaken, so that we might have facts instead of opinions to grapple with, and not swim smoothly over the surface. Does the case of Josling's St. Alban's Grape not give us reason enough to suppose that Mr. Spencer may, like Mr. Josling, unknowingly have reproduced an existing variety—clearing him at once from any design to impose upon the public. But if "A Constant Reader" will visit Tortworth when the Bowood and Passe Muscat are ripe, and point out the difference, I will give him credit for possessing a strong optic nerve. With regard to the Golden Hamburgh, what object can there be in keeping up a constant irritation as to its parentage, so long as we have got a distinct serviceable Grape. Much of this questioning and cross-questioning, I fear, arises from a jealous disposition more than anything else. *A. Cramb, The Gardens, Tortworth Court.*—As a Correspondent in your last Number wishes to know the origin of this Grape, I beg to inform him and your readers generally that it was raised from seed here several years ago, and that it was the result of crossing Cannon Hall with the Muscat of Alexandria; for although some of the flowers on the same bunch were impregnated with pollen from the White Frontignan, nothing observable in the seedlings led me to suppose that it had taken effect. Some 10 or 12 seedlings in all were obtained which were subsequently planted in a small Vinery devoted to growing the Cannon Hall Grape. One of the seedlings produced a large black berry of no merit; all the others (with the exception of the one now referred to) partook strongly of the character of the Cannon Hall; two or three of them were even superior to the parent in size of bunch and berry; but all set their fruit very indifferently, and, as in the course of some alterations the house was required for another purpose, all the Vines were thrown away with the exception of what is now called the Bowood Muscat, which was then only a weakly Vine, and had not fruited. As however I was then planting an adjoining Vinery with St. Peter's Grape for a late house, this Vine was planted with them, and after growing a couple of years it fruited, and it was from this Vine that a bunch was exhibited to the Pomological Society in 1855. Those exhibited to that Society, the year following, were grown in a low pit, but neither had a fair chance of attaining the perfection they have since done. With me this Grape has never grown so strongly as the common Muscat, nor does it generally ripen its wood so well. The foliage is also more tender than that of the latter Grape, in which respect it shows its close relation to its parent, the Cannon Hall. But it sets freely in the temperature of a common Vinery, producing wider and shorter bunches with larger berries than the White Muscat, and it is about 10 days earlier in ripening than that kind. I see that one of your Correspondents states that the Bowood bears a resemblance to the Passe Muscat; what that Grape is I am unable to say, never having seen or heard of such a variety before. I do not, however, take upon myself to say that the Grape he is fruiting did not come from me; but I can state that Mr. Griffin only ordered one plant, and I hear from other quarters of Bowood Muscats of which I know nothing. Another of your Correspondents states that it is identical with Barnes' Muscat, and the Charlesworth Tokay, which is simply incorrect, as both these are synonyms of the Muscat of Alexandria, on which the Bowood is a great improvement, both as regards the particulars stated above, and its great prolificacy. I have received so many notices of its superiority and excellence from eminent gardeners who have fruited it, that this explanation may appear somewhat superfluous; but as I have already stated, I give it for the information of your readers generally. *John Spencer, Bowood.*—All who wish to see the Bowood Muscat in its true character should pay a visit to Bowood, where it is grown in perfection with the Muscat of Alexandria, Barnes' Muscat, and Cannon Hall, in the same house side by side. And all who have the least discrimination about them will see at once wherein the Bowood differs from either of the above-mentioned Grapes, in size, shape of berry, and form of bunch. If the Bowood is the same as the Passe Muscat, as your Correspondent (see p. 1022) says it is, surely the British Pomological, or the Horticultural Society's Fruit Committee would have identified it as such, for both societies awarded it a first-class certificate. *John F. Mould, Gr. to J. Pladen, Esq., Hailesbourne Manor.* Of this variety Mr. Thomson of Archerfield writes in the "Scottish Gardener" as follows:—"A goodly number of new Grapes have, within the last few years, been brought before the public, and, as all are aware, with very flaming recommendations. There is, however, no doubt that the merits of the several varieties are yet, to some extent, to be tested. My intention at present is not to detract from the character given to any of those, but simply to say that I do not think that what has yet been said concerning the above Grape has done its extraordinary qualities justice. Strong as have been its recommendations already, I believe from what I have seen of it that it deserves all, and more than has been said in its favour. In the spring of 1859, I raised a plant of it from a bud, and planted it in a house along with a quantity of the Muscat of Alexandria, putting the Bowood Muscat at the coldest end of the house. It grew with great luxuriance and remarkably 'short-jointed,' the buds being 3 to 4 inches apart. By the end of the season the 'rod' was 2¼ inches in circumference, and was thoroughly well ripened. I mention these circumstances to show that it is not, as I know it to have been supposed, a weakly growing Vine, and subject to ripen its wood only in patches. It was cut back to a length of 5 feet, and this spring that length showed the great number of 60 bunches of Grapes, which exceeds anything I have ever seen or heard of in the way of fruitfulness. At present the Grapes are just stoning, and the berries of this variety are a third larger than those of the Muscat of Alexandria, under precisely the same treatment. Every berry sets perfectly in a much lower temperature than is considered necessary for the old Muscat, and in point of flavour they are about equal. I tender the above mite of evidence in favour of this Grape, just because I consider it one of great excellence, and worthy of a place in every garden where there is a Vinery. So confident am I of its excellence that I have this year planted 14 Vines of it." [There is no doubt about the history of this valuable Grape; and we cannot open our columns to further discussion; unless it be to expose the doings of certain parties who have been dealing in what they call the Bowood Muscat.]

Notices of Books.

The Sea and its Living Wonders; translated from the fourth German edition, and partly re-written by the author, Dr. G. Hartwig. Large 8vo, pp. 427. Longmans.

Dr. Hartwig in his preface expresses a hope that his feelings of love for the Ocean may have imparted some warmth to the pages of the very interesting volume

now before us. Upon that point he must have no misgiving. It is impossible that even the reader who happens to be familiar with the manifold subjects of which the author treats, can rise from its perusal without admiring the learning, skilful selection, and admirable word-painting which, among them, have produced so remarkable a narrative. Whether we regard lucidity of style, and a perfect command of our English tongue, or true eloquence expended upon philosophical truth, it is impossible to deny that it is the most important work of the year in popular Natural History.

Dr. Hartwig divides his subject into three parts. The *first* treats of the physical geography of the sea, of its extent, its waves, tides, and currents, and of what is called the migration of its waters, that is to say of the loss of quantity in one place due to evaporation, and its increase in another because of condensation. The *second* part reveals the nature of the more striking forms of animal and vegetable life which occupy the ocean, of whales, seals, and walruses, of birds, reptiles, and fishes, of crustaceans, soft-bodied creatures, and such as are microscopical; and finally the leaves of "the giant book of the earth-rind" are opened before the reader, and the history is told of that ocean of fire, those disruptions of all solid matter, and of that primitive ocean in the bosom of which appeared the first dawn of life; and still another, though conjectural, which "will be peopled with beings ranking as high above the whale or dolphin as they rank above the giant Saurians of the past." The *third* part records the progress of maritime discovery from the days of the old Phœnician navigators to that of Franklin, M'Clure, and M'Clintock. Moreover the volume is well illustrated by numerous good woodcuts and clever coloured plates as well as an excellent physical map of the globe, in which are shown the natural features of the land and the direction of ocean currents.

The author is gifted in a remarkable degree with the power of clothing even common things in the brilliant vestments of "words that fire and thoughts that burn;" and for the most part this is done with so much judgment that the realities of nature are not lost in a glare of poetic language. But, it must be owned that, like all enthusiastic writers, he does sometimes give too loose a rein to fancy, and carry figurative language beyond the limits of good taste. As, for example, when he describes the gradual movement of glaciers in their downward descent:—"It has been calculated," he remarks, "by Agassiz that the ice masses of the Aar glacier require 133 years to perform their descent from its summit to its inferior extremity—a distance of 10 miles—so that their sojourn in that chilled valley far surpasses that of the oldest patriarch of the mountains. How great must be their *delight* when they at last are liberated from the spell which so long enchained them, and freely bound along on their way to ocean! How they must *shudder* at the idea of once more returning to their desolate prison, and *long* for the perpetual warmth of spicy groves and tropical gardens." To say that a glacier is delighted, or shudders, or longs, are somewhat extravagant figures of speech. This is, however, but a small blemish. How far Dr. Hartwig is in general from being haunted by such dreams will be seen by the following extract, which ought to induce our readers to make themselves acquainted with his instructive pages:—

The Influence of Forests.—"I shall end with a few words on the influence of forests in attracting or retaining the atmospherical moisture, as it is a subject of great importance in the economy of nations, and shows us how much it is in the power of man to improve or to defeat the provisions of nature in his favour.

"Forests always cool the neighbouring atmosphere, for their foliage offers an immense warmth-radiating surface, so that the vapours readily condense above them and descend in frequent showers. At the same time their roots loosen the soil, and the successive falling of their leaves forms a thick layer of humus, which has an uncommon power in attracting and retaining moisture. Their thick canopy of verdure also prevents the rays of the sun from penetrating to the ground, and absorbing its humidity. Thus the soil on which forests stand is constantly saturated with water, and becomes the parent of perennial sources and rills, that spread fertility and plenty far from the spot where they originated.

"The rain-attractive influence of forests did not escape the attention of Columbus, who ascribed the frequent showers which refreshed and cooled the air, as he sailed along the coast of Jamaica, to the vast extent and density of the woods that covered the mountains of that island. On this occasion he mentions in his journal that formerly rain had been equally abundant on Madeira, the Canaries, and the Azores, before their shady forests were felled or burnt by the improvident settlers.

"The wanton destruction of woods has entailed barrenness on countries renowned in former times for their fertility. The mountains of Greece were covered with trees during the great epoch of her history, and the well-watered land bore abundant fruits, and sustained a numerous population. But man recklessly laid waste the sources of his prosperity. Along with the woods, many brooks and rivulets disappeared, and ceased to water the parched plains. The rain gradually washed the vegetable earth from the sides of the naked hills, and condemned them to sterility. When the snow of the mountains began to thaw under the warm breath of spring, it was now no longer retained by the spongy soil of the forests, and gradually dissolved under their cover; but, rapidly melting, filled with its impetuous torrents the bed of the rivers, and overflowing their banks, spread ruin and devastation far around.

"Unfortunately, forests when once destroyed are not so easily restored, and it requires many centuries ere the bared mountain side reassumes its pristine vesture of shady woods. First Lichens, Mosses, and other thrifty herbs, content to feed upon nothing, have to prepare a scanty humus for the reception of more pretentious guests. In course of time some small stunted shrub makes its appearance here and there in some peculiarly favoured spot, and after all requires vast powers of endurance to maintain itself on the niggard soil, exposed to the full enmity of wind and weather. This paves the way for a more vigorous and fortunate offspring; and as every year adds something to the vegetation on the mountain's side, and opposes increasing obstacles to the winds, the falling leaves and decaying herbage accumulate more and more, until dwarfish trees first find a sufficiency of soil to root upon, and finally, the proud monarch of the forest spreads out his powerful arms and raises his majestic summit to the skies.

"While Greece and Asia Minor have seen their fertility decrease or vanish with the trees that once covered their hills, other countries have improved as their vast woods have been thinned by the axe of the husbandman. In the time of the Romans all Germany formed one vast and continuous forest, and its climate was consequently much more rigorous than it is at present. All the low grounds were covered with impervious morasses, and the winter is described by historians in terms like those we should employ to paint the cold of Siberia.

"But the scene gradually changed as tillage usurped the sylvan domain. The excessive humidity of the soil diminished, the swamps disappeared, and the heat of the sea, penetrating into the bosom of the earth, developed its productive powers. Thus the Chesnut and the Vine now thrive and ripen their fruits on the banks of the Rhine and the Danube, where 2000 years ago they could not possibly have existed. But Germany would also see her fertility decline, if the destruction of the forests which still crown the brow of many of her hills should continue in a considerable degree. Numerous rivulets would then be dried up during the warm season, in consequence of the more rapid descent and thaw of vernal rains and wintry snows, and most likely, refreshing summer showers would be far less frequent. Even now the inundations which almost annually desolate the banks of the Elbe, the Oder, and the Rhine, are ascribed by competent judges to the excessive clearing of the forests in the mountainous countries where those rivers originate. These few examples suffice to prove to us the power of man in modifying the climates of the earth, and the vast importance of the study of terrestrial physics. By planting or destroying woods, he is able to compel nature to a more equitable distribution of her gifts. In marshy and low countries, he may remove the superfluous waters by drainage, and increase the productiveness of arid plains by judicious irrigation. Thus man is the lord and master of the earth; but hitherto he has done but little to reap all the advantages he might have obtained from his dominion, or even used it to his own detriment. Drainage, irrigation, and a judicious management of forest-lands, are only beginning to be understood even among the most enlightened nations. A great part of our damp island still remains undrained, and we allow the rivers of India to pour their waters into the sea, instead of diverting them upon her thirsty plains. But there can be no doubt that as knowledge increases, man will gradually learn to provide every soil with the exact measure of humidity that is requisite to make it bring forth its fruits in the greatest abundance. Views such as these teach us, that, far from having attained the summit of civilisation, we are still on the threshold of her temple, and that most likely our descendants will look down upon our present condition as we do upon that of our barbarous ancestors."

Captain Cook's Voyages of Discovery. Edited by John Barrow, Esq., F.R.S. Square 12mo, pp. 633. Black.

Were we asked to name a book that, in attraction for the young, ranks next to Robinson Crusoe, we should select Cook's Voyages; those simple narratives of daring navigation and resolute adventure which first brought Europe well acquainted with the great South Sea and its savage people. Of those famous expeditions, of the incalculable service they rendered to humanity, and of the death of the gallant commander in a scuffle with the cannibal inhabitants of Owhyhee, the history is one that ought to be engraved on the hearts of all who honour the brave. In the young more especially it must always excite the most thrilling interest; nor can any degree of intimacy with the now familiar names of Otaheite, Owhyhee, New Holland, New Zealand, countries then the dens of human demons, but now the abode of Christian colonists, diminish the feelings of admiration with which their early discovery is connected.

The edition before us is augmented by numerous extracts from Admiralty records of no great moment, and some well executed engravings. It seems to be intended merely as a Christmas book, and an admirable one it is; but the entire absence of either Index or Table of Contents, renders it useless as a work of reference.

Weddell's Chloris Andina, Part 13, containing Labiatæ, Ericaceæ, Umbelliferæ, and a few small orders, has just appeared.

The *Laboratory of Chemical Wonders.* By G. W. S. Piesse. 12mo., Longmans, pp. 256.

This is one of those books intended to convey instruction as well as amusement, of which these latter days have seen so many. What they contain is not of much value; but the interest they excite in young people may lead to serious study; and when that is so their importance must be admitted. The old dogma that a little learning is a dangerous thing, having died the death of the childish, it has been succeeded by another, that any learning is better than none; and Mr. Piesse endeavours practically to prove its truth by introducing his readers to information, partly by means of chemical (or as some irreverently call them firework) experiments on Phosphorus, Gunpowder, Brimstone, Saltpetre, and the like, and partly by a little natural philosophy. All such subjects, skilfully handled, contribute to the store of intelligence which the young should lay by for future use. But great care requires to be taken not to introduce statements that are untrue; for they become fixed in the memory and cannot be easily forgotten. Mr. Piesse should not have called the curious "lattice" plant or Ouvirandra from the swamps of Madagascar a seaweed! And we think, considering who his readers are to be, he would have done better not to overload his volume with such matters as atomic weights, chemical equivalents and the like.

Illustrations of the Genus Carex. By Francis Boott, M.D. Part 2, folio.

At length this truly great work approaches its completion, with a new volume of 103 pages of letter press, and 111 plates admirably executed. The genus at present stands with 250 well defined carefully distinguished species, forming a striking contrast to the rabble 800 put upon paper by Prof. Steudel. This re-examination of Carex has been most skilfully performed; it has been the labour of a life, and it now stands among the works of highest importance in systematic botany, as an enduring monument of scientific well directed labour.

Systematic Arrangement of the Species of the Genus Cuscuta. By Geo. Engelmann. 8vo.

This treatise, which appeared in the Transactions of the Academy of Sciences of St. Louis (U. S.), gives a very complete account of the mischievous plants called Dodders, one of which has become familiar to us on account of its ravages in Clover fields. The author admits no fewer than 77 species, after rejecting a swarm of—not far off 200—synonyms. Genera formed of late years at the expense of Cuscuta he refuses to recognise. Our C. Trifolii he also rejects, regarding it as a mere form of the common Cuscuta Epithymum, or lesser Dodder, thus confirming Mr. Bentham's judgment that it is one of our modern bad species. Of the habitations affected by these parasites, and of the peculiar nature of the stem roots, called *haustoria*, or suckers, we have the following account:—

"The different species often have a predilection for certain plants, or families of plants, for their sustenance; and I have myself at times thought I discovered an influence of the mother plant (or, better, nursing plant, nurse) on the form and development of the parasite. But I have become fully convinced that this influence is very limited, and probably goes not even farther than the influence of different kinds of soil and manure would go with any other plant. If some species seem very constantly to prefer certain plants to others (C. Europæa, Urtica dioica; C. Epithymum, Calluna vulgaris, or Genista sagittalis; C. chlorocarpa, Polygonum; C. Gronovii, Cephalanthus; C. lupuliformis, Salix; and, the most marked example, C. Epilinum, the Flax fields), it is probably because the kind of soil, the humidity or dryness, the shade or sun, and all the circumstances which suit the nurse, also agree best with the parasite. On the whole, succulent herbaceous dicotyledonous plants suit them best as nurses; some few species prefer low shrubs or semi shrubs, and most of the Monogynellæ and a few others affect larger shrubs and trees, of course penetrating only the tender bark of the smaller limbs.

"Cuscutæ are found, also, on acrid or poisonous plants. I have seen them on Ranunculaceæ, on Euphorbiæ, on Cicuta and other Umbelliferæ, on Rhus Toxicodendron, and others; I have seen them, also, though sparingly and not very thrifty, on Monocotyledoneæ, such as Liliaceæ, Gramineæ and others, and even on the siliceous epidermis of Equisetum. The fact is, that when once attached to a nursing stem, they throw out their branches and coil round any plant in the neighbourhood, and strike their suckers into the tissue, and grow on anything that can furnish them nourishment, even on their own branches and flowers. This is even the case with the most exclusive species, C. Epilinum, which attaches itself to all the weeds growing in Flax fields, and may be cultivated on Vicia, Impatiens, and many other plants. Rich nourishment on succulent plants expands the organs, enlarges the

flowers, increases the whole plant, and thus gives rise to varieties which at times have been distinguished as species; C. Epithymum in Clover fields becomes what has been called C. Trifolii; C. Europæa, on Vetches, C. Viciæ; C. Gronovii in shaded miry soil, on Saururus, C. Saururi; the overgrown form of C. Africana is C. Capensis, &c.

"The *haustoria* (suckers) of Cuscuta deeply penetrate into the tissue of the nurse, and they, with parts of the stem imbedded in this tissue, are able to reproduce the plant after all external vestiges of the stem have been rubbed off. This the gardeners often have occasion to deplore in regard to a variety of C. Epithymum, which has become a pest to some greenhouses in Europe. I have observed the same fact in different species which I have had under cultivation, especially in C. inflexa."

It will thus be seen that this is a valuable contribution to systematic botany. We must, however, protest against the introduction of such excruciating and intolerable words as sagittanthera, coined by the illiterate and forgiven by the good-natured. There is no necessity for thus offending men of education; but it is to be feared that unless Linnæus rises from the *dead such evils will continue.*

Garden Memoranda.

MR. SALTER'S NURSERY, WILLIAM STREET, HAMMERSMITH.—A prettier exhibition of Chrysanthemums than is on view here at the present time could not well be found; two lean-to houses, one placed at the end of the other in the form of the letter T, are full of these gayest of winter flowers, which are tastefully arranged in groups on the floor surrounded by neatly-kept gravel walks edged with Box. Against the walls have also been formed fine banks of plants which are loaded with large and handsome blossoms of all shades of colour, from dark crimson to pure white. Cannas and other plants remarkable for the beauty of their foliage have likewise been introduced here and there among the Chrysanthemums with excellent effect, showing what might be done in a cool conservatory with such materials even at this dull season of the year.

Among the newer kinds the best were an unnamed red-flowered Pompone with a golden centre, which promised to be a fine kind; a sport from King, with large yellowish buff blossoms; Little Harry, a prettily incurved yellow; Florence, a Pompone in the way of Adonis, but in all respects superior to that variety; Lady Hardinge. a showy kind noticed by us last week; Rifleman, a large red sort; Ariadne, a creamy coloured reflexed variety with a buff centre; and Baron Gros, a large incurved yellow.

Conspicuous among other sorts were Favourite, Madame Clos, a compact rose; Alarm, large crimson shaded with violet; Progne, dark crimson; Miss Prim, a compact neat yellow; Lord Elgin, a large crimson shaded rose; Mrs. Holborn, a very fine showy white; Jardin des Plantes, one of the most brilliant of yellows, and Mr. Murray, a new deep violet, in the way of Dr. Rosas, which is also a good kind. On Novelty were some fine flowers, but also many bad ones; for exhibition purposes in the shape of cut blooms this is certainly one of the best Chrysanthemums in existence; but for ordinary purposes it is defective, many of its flowers coming nearly single.

Among Anemone-flowered sorts, one of the most striking was Emperor, a large showy white, with a yellow centre—a clean-looking fine flower which contrasted well with the ordinary compact blooming varieties, and which for the sake of variety will be found a useful addition to any collection, however small.

Upwards of 4000 specimens are stated to be in bloom here under glass, and perhaps as many more may be found in borders out of doors; the latter have, however, bloomed badly this season, a circumstance to be attributed to the wet and sunless autumn which we have experienced. There is, however, enough of floral beauty to render the collection well worth inspection.

Miscellaneous.

Death of Dr. Klotzsch.—We have to announce the death of this gentleman, formerly Keeper of Sir. Wm. Hooker's herbarium, and since, for many years, in charge of the Royal Herbarium at Berlin. He was a hardworking naturalist, a good observer and a copious writer. But he wanted the power of synthetical arrangement, and hence became the inventor of genera which science can never recognize.

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &C.—In changeable weather like the present, this structure will require very careful management. The best plan is to keep as low and dry a temperature as can possibly be permitted, say from 40° to 45° at night, allowing it to rise a little in the daytime. In mixed greenhouses see that the young stock of Heliotropes, Pelargoniums, Cyclamens, and other flowers grown especially for winter, have nice light situations and regular attention as regards watering. This is a good time to introduce the following things into the forcing-pit, provided they have received the necessary treatment through the summer: — Rhododendrons, Azaleas, Persian Lilacs, Sweet Briars, Moss and other Roses, Sedums, Kalmias, Daphnes, Anne Boleyn Pinks, Dutch Bulbs, &c. Unless however they are in proper trim it will be labour in vain, and no mode of forcing or form of pit can compensate for this. The great secret of success, if the heat is wholly composed of fermenting materials, is to keep down accumulating damp and mouldiness by an almost constant ventilation, increasing the linings in order to raise the necessary temperature. Those who are fortunate enough to possess pits heated by means of hot water will of course pursue a somewhat different course. Look well to pits and frames containing stores for next summer, and have efficient protecting material always in readiness, with which to cover them whenever the weather is unfavourable.

FORCING DEPARTMENT.

PINERY.—Water plants in pots as little as possible at this season; where the general stock is grown in this manner it is a good plan to cover the pots over 2 or 3 inches with the plunging material; where the bottom-heat will permit that to be done it obviates the necessity of watering so frequently.

VINERIES.—Use fire-heat sparingly in houses where the fruit is ripe, but sufficient must be used if the weather should become frosty to prevent the moisture of the atmosphere being frozen to the glass inside the house, for if this is allowed to happen the moisture on thawing is liable to drop upon the bunches, injuring the bloom and causing the berries to decay. Admit air on every favourable opportunity, and examine the bunches often and carefully, so as to make sure of removing decaying berries the moment it can be perceived they are affected. Where forcing is fairly commenced be careful to maintain a properly moist state of the atmosphere, and this must be especially attended to in the event of severe weather, particularly when the buds are bursting. The evaporating troughs must be kept constantly supplied with water, and the paths, bed, &c., should be frequently syringed, and it will also be advisable not to have the tender foliage too near the glass if the weather changes. If fermenting material is used for warming the border, this must be well covered with dry litter to protect it from frost, and turned occasionally, adding some fresh as may be necessary to keep the heat in the border regular. It will be advisable, however, to have some dung and leaves thrown up to heat, as there would be some danger of chilling the bed by turning it in the event of frosty weather, and mixing it with the dung or leaves which had not commenced fermenting. Houses which it is intended to commence forcing the beginning of next month should also have some fermenting materials placed on the borders so as to encourage the roots a little before the Vines are excited, which will be of great service towards getting the buds to push strongly and without loss of time.

STRAWBERRIES.—Where these must be obtained as early as possible, say by the end of February, a lot should now be introduced. Any house or pit will do, provided a temperature of from 45° to 50° can be maintained with a moist atmosphere. Let them also have as light a situation as possible.

FLOWER GARDEN AND SHRUBBERIES.

Now that the leaves are off trees, or nearly so, let awns and shrubberies have a thorough cleaning. Examine pillar and trellis Roses, and if the weather is favourable see if the soil wants renewing or the kinds changing. For choice sorts roomy holes should be made capable of containing three or four barrow-loads of well prepared soil. Turfy loam of good quality is the chief thing; to this add a portion of rich rotten manure, and, if at hand, a little sandy peat or leaf-mould. Crocuses may still be planted; they like a deep, light, rich sandy soil; but will thrive in any ordinary soil or situation. In planting, the bulbs should be covered from 2 to 3 inches with fine mould; and if an effective display during the first season is desired, plant thickly —not more than 2 inches apart. For edging borders and beds, the Crocus is also exceedingly useful; and, where planted in lines along the margin of walks, or in clumps of 3, 6, 12, or more bulbs each, and allowed to remain in the ground for several years, the effect of the masses of flower which they produce, is all that can be desired. We have seen a very effective display in a flower garden in March, produced by each bed having a broad edging of Crocus, the colours being nicely arranged and contrasted. This may be secured without interfering with either the spring or summer occupants; for the bulbs may be planted close to the outside of the bed, where they will scarcely be in the way, either in digging or in planting. Unless the bulbs become too numerous, and the leaves spread over more space than it may be desirable to have covered with them, they should not be disturbed, as they bloom more profusely when well established. Care must be exercised, however, to protect them from mice, as they are exceedingly partial to Crocuses, especially in winter. For blooming in-doors, either in pots or in any of the various contrivances that are used instead of pots, strong bulbs should be selected, planting them in succession, and keeping the crowns of the bulbs slightly under the surface of the soil; place them in any dark, cool situation, for three or four weeks, to allow of their making roots, before exciting them into growth. If pots are used—and these are doubtless the best, if not the most ornamental—use good rich, sandy soil, and secure perfect drainage; for a liberal supply of water is required during the blooming period; and if the drainage is defective, the soil is very apt to become sodden by injudicious watering. When planted in China bowls or saucers, filled with sand and covered with Moss, drainage is unnecessary; but the sand must be kept moist, by placing the vessel in water once or twice a week, according to the temperature of the room. While the bulbs are kept in a dark place, very little water need be given, merely sufficient to keep the soil, Moss, or sand from becoming too dry. When the roots have made some progress, the crowns will soon make their appearance; and as soon as these are observed, remove to the greenhouse; or where this is not convenient, a cold frame or pit will answer perfectly; they will also do exceedingly well in a sitting-room window. All that is requisite is to allow them all the light and air possible on mild days, giving water as may be necessary, to keep the mould, &c., in a moist state. Green fly is very apt to make its appearance, particularly when the plants are kept in a rather close or warm situation; this, therefore, must be got rid of directly it is observed.

HARDY FRUIT AND KITCHEN GARDEN.

Trench, dig, and ridge every spare inch of ground whenever the weather will permit these operations to be advantageously performed. This is particularly to be observed in gardens the soil of which is of a clayey nature. If frost sets in let the manure necessary be wheeled out for the whole of the spring cropping, laying it in heaps either on the spot where it is to be used, or as near as possible to it. What is not required for immediate digging should be piled in small mounds and soiled over to prevent loss from evaporation. Never uncover tender vegetables after the breaking up of frost until they have become completely thawed, and even then do not uncover suddenly; leave a very light protection on them for a day or two in order to inure them gradually to light.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON
For the Week ending Nov. 29, 1860, as observed at the Horticultural Gardens.

Nov.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain
Friday 23	10	29.678	29.540	42	34	38.0	46½	45	N.E.	.00
Satur. 24	11	29.757	29.576	43	31	37.0	48	45	N.E.	.00
Sunday 25	12	29.511	29.418	42	33	37.5	46	44	N.E.	.03
Mon. 26	13	29.381	29.356	42	32	37.0	45½	44½	N.E.	.34
Tues. 27	14	29.409	29.387	47	36	41.5	45½	44½	E.	.00
Wed. 28	○	29.710	29.642	48	35	41.5	45½	44½	E.	.02
Thurs. 29	16	29.791	29.635	46	39	42.5	46	45	E.	.18
Average..		29.605	29.507	44.2	34.2	39.3	45.8	44.6		.55

Nov. 23—Dense fog; foggy and cold throughout.
— 24—Overcast; hazy; foggy.
— 25—Slight fog; hazy and drizzly.
— 26—Overcast; rain; cold rain and sleet at night.
— 27—Foggy; overcast; hazy, with cold wind.
— 28—Foggy; hazy; densely overcast; drizzly.
— 29—Dense fog; uniform haze; rain.
Mean temperature of the week, 2 deg. above the average.

RECORD OF THE WEATHER AT CHISWICK
During the last 34 years, for the ensuing Week, ending Dec. 8, 1860.

December.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 2..	47.2	34.3	40.7	15	0.51 in.	2	3	1	1	5	11	4	7
Mon. 3..	46.7	35.5	41.1	18	0.26	1	6	3	1	4	11	7	1
Tues. 4..	47.3	35.9	41.6	15	0.39	4	2	1	2	5	14	5	1
Wed. 5..	48.1	34.7	41.4	20	0.25	—	2	1	1	3	12	10	5
Thurs. 6..	47.1	35.5	41.3	19	0.31	1	2	1	1	6	14	6	3
Friday 7..	47.3	36.0	41.7	18	0.52	4	2	3	3	7	7	5	3
Satur. 8..	46.2	33.7	39.9	19	0.36	2	5	3	1	3	11	8	1

The highest temperature during the above period occurred on the 7th, 1856—therm. 60 deg.; and the lowest on the 5th and 6th, 1844—therm. 14 deg.

Notices to Correspondents.

BOOKS: *St. Leger.* You will find this and many other interesting Fungi excellently figured in Berkeley's new work on "Fungology." — *Henry Terpose.* It matters little what grammars you study. For preliminary study the cheapest and simplest is the best. Buy the cheapest. We cannot however hold out much hope of progress without the assistance, at least occasionally, of a teacher. Whatever you can do alone you will will do very much faster by a little aid.—*Enquirer.* Hamilton on the Pine Apple.

HOT-WATER PIPES: *W G.* Apply to advertisers; we do not deal in such things.

NAMES OF FRUITS: Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to examine more than six sorts, whatever may be the number forwarded.—*T Jones.* 1, Marie Louise; 2, Easter Beurré; 3, Beurré Diel; 4, Glou Morceau; 7, Beurré Rance; 9, Knight's Monarch.—*J W S.* 1, Flemish Beauty; 2, Forelle; 3 *(decayed)*; 5, Ormskirk Bergamot; 6, Van Mons' Léon le Clerc.—*Colchester.* 2, Wyken Pippin; 3, Boston Russet; 4, Golden Reinette; 5, Sturmer Pippin; 6, Golden Pippin; 7, Dutch Mignonne; Pear No. 1, Glou Morceau.—*B T M.* 1, Figue de Naples; 2, Belle après Noël. The seedling Apple partakes of the nature of the Ribston Pippin, scarcely so good, but certainly much superior to most seedlings, and deserves further trial.

NAMES OF PLANTS: *H.* Some form of Gymnogramma chrysophylla. Apparently a slight sport.—*J D.* Pteris serrulata.—*Ignoramus.* 1, Myrica cerifera; 2, Rhamnus catharticus.—*M C.* 1, missing; send another; 2, Sempervivum barbatum; 3, not in the least like L. macroura, which has great yellow flowers; probably some form of L. spinosa—your specimen is very incomplete.—*A C.* This has never come before, and the specimen now sent is in such a state that nobody can name it. It may be Saccolabium ampullaceum.—*Derby.* 1, The common Ceanothus azureus; 2, Begonia laciniata; 3, Geissomeria longiflora; 4, Thyrsacanthus rutilans.—*J S A.* 1, Pinus nigricans; 2, P. Pinaster, apparently; 3, Pinus insignis.—*B J.* A bit of the rare Thujopsis dolabrata.—*Old Sub.* 1, Pteris tremula; 2, Apparently young frond of Microlepia majuscula; 3, Pteris serrulata; 4, Anemidictyon Phyllitidis.—*J B.* Onychium auratum.—*J B.* 1, Asplenium dispersum; 2, Adiantum cuneatum.

OAK TIMBER: *M.* If the bark will come off the trees that are blown down, remove it now to a dry place. If not, bark them as soon as it will run in the spring. If it will neither separate now nor then, get it off at once.

PELARGONIUMS: *Ignoramus.* We see nothing unusual in your specimen, or in your account, as far as we can understand it, or the rude sketch that accompanies it.

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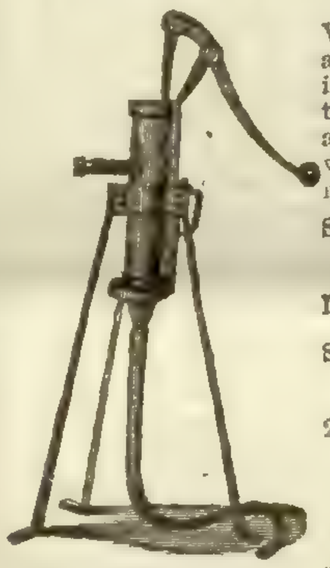

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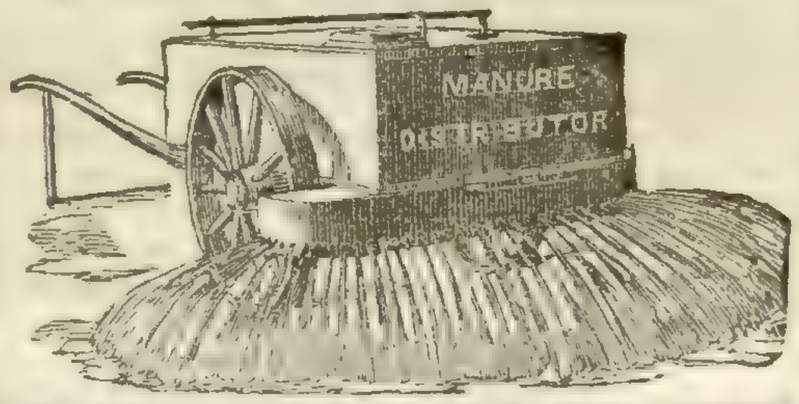

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EXHIBITION OF DOGS AT BIRMINGHAM.—The First Great Exhibition of SPORTING and other DOGS will be held in the Repository of Messrs. Bretherton & Harrison, Cheapside, Birmingham, on MONDAY and TUESDAY, December 3 and 4, the first and second days of the Cattle and Poultry Show. Admission on Monday, the PRIVATE VIEW, 2*s.* 6*d.*; and on Tuesday, 1*s.* The doors will be opened at 9 o'clock each morning.

For Special Railway Arrangements, see the Advertisements and Bills of the several Companies, and of the Cattle and Poultry Show.
F. BURDETT, Hon. Sec.
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Admittance One Shilling.

The Agricultural Gazette.
SATURDAY, DECEMBER 1, 1860.

MEETINGS FOR THE TWO FOLLOWING WEEKS.

MONDAY, Dec.	3	
TUESDAY, —	4	Midland Counties Show, Bingley Hall, Birmingham.
WEDNESDAY —	5	
THURSDAY, —	6	
MONDAY, —	10	London Farmers' Club..... 6 P.M. (Mr Scott Burn, on the Labourer.)
TUESDAY, —	11	
WEDNESDAY, —	12	Smithfield Club, at Baker Street Bazaar.
THURSDAY, —	13	
FRIDAY, —	14	
WEDNESDAY, —	12	Agri. Society of England..... Noon. Meeting on Land Drainage at Hanover Square Rooms .. 2 P.M.

THE preliminary difficulties in regard to the International Exhibition of 1862, may at length be said to be overcome. The guarantee fund exceeds 366,000*l.*, and the arrangements already completed include the appropriation of a part of the South Kensington estate (vested in the Commissioners for the Exhibition of 1851) as the site of the buildings connected with the Exhibition of 1862. There is, as Sir THOMAS PHILLIPPS stated, in his address to the Society of Arts last week, every reason to believe that the projected Exhibition will elicit even more valuable results than were achieved by its great predecessor. The extension of commerce during the interval, the progress of invention, the increase of population and wealth, the increased means of locomotion, the spread of education, and increased knowledge of and love for art, will, as he pointed out, all contribute to swell the numbers of visitors and spectators—and most of these influences will contribute also to the fulness and value of the collection which is to attract them. We cannot doubt that among those thus drawn by objects of immediate service to their several interests, agriculturists will be largely represented.

If during the next ten years we receive such a spur to the progress of agriculture as has been given during the past by the exhibition of (let us specify only) the reaping machine in the Crystal Palace of 1851, the gathering of 1872 (for which provision in the negotiations of the Society of Arts has already been made), will see us forward on our road to perfect and economical cultivation by an even longer stride than has been accomplished since the first great International show. That particular item in the agricultural departments of the Exhibition, though probably originating in this country, was contributed by American exhibitors; and it is to colonial and foreign exhibitors that we must again look for the special lessons which, without knowing what they may turn out to be, we confidently expect. The annual pictures of agricultural progress in our own country given at the great meetings of our agricultural societies must be presumed to be so far perfect that it can be but one year's progress that is shown by any exhibition of home agricultural produce or machinery; but the colonial contributions which we may expect will represent and no doubt astonish us with illustra-

tions of the increased skill and knowledge which have been attained during the 11 years which will have then elapsed since 1851.

Though we cannot anticipate the lessons or the contributions to our wealth as well as our intelligence which such illustrations must afford, yet it is certain that a collection of the natural products of climates similar to our own must be of direct use to us as agriculturists. Let us hope that the same energy which was so signally displayed both at home and abroad in 1851 may be exerted now. If such collections are of use to us they will necessarily be of use to those who send them. That is of course the only motive we can urge upon our readers either here or in the colonies; but public spirit and philanthropy needing no stimulant from us will doubtless also urge them to exertion.

Our Colonial authorities then may well be called upon to bestir themselves, on their own account as well as ours, to send complete collections of all their raw produce. Anything actually employed as manure or likely to be serviceable in that way—all grains and other useful seeds—plants used either for human food, or as food for cattle, with their ripened products—woods adapted for building, or for cabinet work—fibres—mineral and vegetable oils and other fatty substances—hides, wools, and furs—drugs, tanning substances, dyes—anything in short likely to satisfy a want, or even to create a desire, by which therefore a commerce may spring up serviceable to the industries, or contributive to the comforts of either the colony or the mother country—all such things claim place in an International Industrial Exhibition. There was, in the Crystal Palace of 1851, many an illustration of what goodwill and intelligence could do towards collections of such a kind as this. The Canadian department of the Exhibition, and especially the collection from Trinidad, sent home by Lord Harris, the then Governor, proved how, by a comparatively small outlay, well expended, suites of specimens of the very highest commercial interest and scientific value may be gathered, arranged, and transmitted.

It is, of course, in the agricultural relations of such collections that we are specially interested, and the Exhibition of 1851 showed in several instances that it is important we should know not only the agricultural products which are obtainable elsewhere, but also the means by which those products are there obtained. The machinery and processes of Colonial agriculture ought to be illustrated, and our own manufacturers and farmers would thus derive many a useful hint. Manures, seeds, and machines, are among the means of agriculture; and there ought, in the Exhibition of 1862, for the information of our English agriculturists, to be specimens of all the natural guanoes of the world—samples of all the grains, Wheat, Barley, Oats, and Pulse of all the climates which produce them, and a collection of all the agricultural machinery any how connected with their production.

And English agriculturists, upon the other hand, with all who provide the means of English agriculture—the manure manufacturer, the seedsman, and the machine maker—will on their part be prepared with full illustrations of the present status of English farm management for the instruction not more of their colonial visitors than of one another. Minerals, vegetables, animals—the produce of our quarries, pits, and mines—of our ploughlands and our pastures—of our cattle stalls, sheep folds, and dairies, ought all to meet the eye. The way in which such a series of home specimens is to be obtained, and the particulars of which the collection should consist, may be discussed at leisure, but the colonial collections require long time both for their formation and transmission, and it is, therefore, necessary thus early to call upon the leading men of our several colonies and on all who influence public opinion there, to take such measures as may result in a fair representation of their natural products and their several industries at the Great International Exhibition some sixteen or seventeen months hence.

A QUESTION was asked last week as to the fitness of Mangel Wurzels as food for a ewe flock at this season of the year.

We find on reference to last year's volume that Mr. LAWRENCE, of Cirencester, stated his experience on the subject. After referring to causes which had in his judgment induced earlier ripeness in fruits, he said:—

"Though the ripening process in Mangels, &c., is not so palpable to the sight or touch, I have assumed that the same causes would produce the same effects in these as in other fruits; and I have not hesitated to feed with Mangels much earlier than in former seasons. Under the impression that frost has still further accelerated this change in Mangels, and having satisfied myself they would not keep, I have reversed my usual course of proceeding, and placed all my stock on those roots, and stored the Swedes. As soon as the stubbles were cleared, I folded my ewe flock over them before the plough, distributing the roots over the ground, merely divided by an iron which at one blow separates them into four quarters, in preference to cutting them up into troughs in the usual mode. This prevents the ewes, now getting heavy in lamb, pressing one another in struggling for place at the troughs. I have given a limited allowance of the roots with as much chaff, composed of one-third Barley straw and two-thirds hay, as they would eat. My shepherd remonstrated; the ewes were to be scoured to death, and to cast their lambs. I said 'We will try; the mischief will be obvious enough if you will watch them carefully in my absence; and as soon as you perceive anything amiss remove the animals to the pastures.' On my return, after an absence of some days, I was glad to see the ewes in their folds, having gone over a considerable portion of the field, leaving a very obviously enriched surface to be turned under. I had anticipated some degree of relaxation in the bowels, but my companion and myself were gratified at finding nothing but those well-defined little black nuts spread over the surface, denoting perfect intestinal condition, and the ewes in a very satisfactory state. Our fatting bullocks have been fed with Mangels instead of Swedes, pulped and well mixed with chaff, from the time they were put up, and I never had any thrive better. This will be some consolation to those whose Mangels were out in that cruel frost, the only case in which I have known Mangels injured before November."

This is a statement of actual experience just of the kind for which we last week applied; and it will no doubt be satisfactory to our Correspondent who was doubting the propriety of the course which was followed with the best results by Mr. LAWRENCE.

It will however be borne in mind that a larger proportion of chaff than usual was given along with the roots—a quantity which may however be gradually diminished, until the condition of the sheep shows that the mixed Mangels and chaff are together succulent enough.

LET us repeat that a meeting of Landowners, Agents, and Engineers, will take place in the smaller room of the Hanover Square Rooms on Wednesday, the 12th of December, to discuss the question of the necessity of a General Outfall Bill for England and Wales being prepared by the Government without delay, property to an enormous extent in the low grounds in England being injured by the absence of a measure that will work with simplicity and broadly. It is understood that the chair will be taken, not later than two o'clock, by a noble lord who has expressed much interest in the subject, and it is hoped the question will be fully and fairly discussed by practical and able men. It will be seen that the meeting is so timed as to take place soon after the Royal Agricultural Society's general meeting on the 12th, and on the second public day of the Smithfield Cattle Show.

ON ARTERIAL DRAINAGE.

BY THOMAS ARKELL, PENHILL FARM, SWINDON.

(*Concluded from p.* 1047.)

I WILL now mention a case in point, that is, of a parish lying on one side of the river where the drainage is laid out as above recommended and is tolerably efficient, when not neglected in cleansing. The parish of Kempsford, Gloucestershire, was enclosed in the year 1790. The drainage was laid out by a Mr. Webb, of Stow-on-the-Wold, and for that time it must be considered the work of a clever man; it was considered of sufficient importance to be noticed on the Ordnance Map, No. xxxiv, but the grand secret of its success in that day, is the length of the parish, which is between four and five miles long, the river Thames flowing along one side of it about four and a half miles; this necessarily commands a fall sufficient for the purpose, and in that distance, there are three embanked drains, as above described, one rather over two miles long, another rather under, and a shorter one not so efficient; besides these, there is a main drain cut through the parish, about four and a half miles in length, through a low wet moory soil, lying between the river Thames and the river Colne, that would be almost valueless but for this drain, which answers well, except at its lower part, adjoining the neighbouring parish of Lechlade, where it does not act perfectly, from not being carried low enough down, or for the want of the bed of the Colne being deepened.

Previous to the enclosure of Kempsford parish the drainage emptied itself at right angles in the Thames from nine or 10 several drains or ditches, instead of from four as at present, and there is little doubt but such is the present state of many districts now, and the cause of much of the imperfect drainage in fact. On the opposite side of the river Thames, in Wiltshire, there are four parishes which abut against it in the same distance, and the consequence is the drainage is in a very bad state for want of drains cut in the proper direction, being prevented by the different parishes and the several owners of land.

When the river was navigated up to Cricklade, previous to the Thames and Severn Canal being made, there used to be three weirs kept up in the 4½ miles, but now two are quite gone, only one being kept up, and that more for the purpose of fishing than anything else, so that at the present time the flooding is caused more by the foul state of the river than anything erected for the purpose, and as a natural consequence, the meadows are not considered so good as they formerly were.

It only remains now to show how these advantages are to be arrived at and who shall pay for them. To expect its being done voluntarily is quite out of the question, for the envious nature of some, with the obstinate ignorance of others, connected with the general subdivision of land by parishes and different owners, is a complete bar to that; consequently I should recommend an application to be made to Parliament for a General River Act, somewhat like the General Enclosure Act, that on application by parties interested, any river and its tributaries, including all rivulets, open drains, water-courses, and open ditches, shall be put under the authority of commissioners for the purposes before mentioned; such commissioners (to be chosen by the several interests on that particular river district, for which they are appointed, according to a valuation previously made for rating purposes), to carry it into effect, so that they should represent the drainage, flooding, navigation, &c., thereon. Being thus chosen, their first step should be to appoint an engineer, or engineers, to make plans, take levels, &c., to lay before the commissioners at their meetings, and take instructions for carrying out the work. The commissioners should be rather numerous, and selected from the different localities to be surveyed; as, unlike an enclosure commission, their labour would not cease at the completion of the plans to be laid out and executed, for they should continue to act as arbiters in disputes, or in case of neglect to keep the works in order as allotted. Their labour would also include making orders (or giving evidence as to the necessity of making orders) for persons to keep open their several ditches and water-courses, for the proper drainage of the country.

I should consider it much better to have commissioners appointed independent of engineering qualifications, than to have the two combined in one as for enclosures, for there are men well qualified from their practical experience and strict sense of justice (most essential qualifications for a commissioner), who may not be clever at mapping and levelling, and on the other hand a clever engineer may not make a good commissioner, as he may lack the general knowledge and bearing of the several interests to be adjudicated upon. I am thus particular in this, the most essential business, the appointment of proper parties to carry it into effect, as on this depends whether it will answer for the expense incurred or not, for a plan ever so good may be worse than useless from bad management; and having seen the waste of money expended under Government draining inspectors, makes one feel rather chary in recommending Government commissioners, for fear improper parties should be appointed to the office, and instead of a boon it should turn out a job. There are Thames commissioners, I believe, in existence whose duty is principally, if not solely, confined to the navigation, and no doubt but there are some officials connected with most of the principal rivers, so that there is the ground-work of the plan in existence, it being only necessary to increase their numbers and enlarge their powers to start the thing; besides, if a Permissive Act was passed, and the scheme tried in only a few cases, it would soon be seen if it answered the expectations I have formed of it. If so, I shall never regret the little trouble I have taken in bringing it before the public, as I wish to raise my voice against sacrificing, to the sole object of drainage, the good that is now derived, and much more that may be derived, under an improved management of our rivers. For to see at one season a mine of wealth flowing by unheeded and uncared for, and at another doing an immense damage, is, to say the least of it, discreditable to the age we live in, and ought ere now to have been remedied. I will not deny but that our rivers would be in a much more efficient state for drainage if those whose duty it is to cleanse them were even only moderately to do so. From my own knowledge, I could say some very hard things on individual cases connected with the Thames, but as I am battling for an improved system, that would remove all sorts of injustice and negligence, I will not do so, as there may be (unknown to me) even greater hardships than I could mention, and a feeling of unfairness might be charged against me. On the other hand, I gladly

mention two cases where there has lately been considerable expense incurred by cutting a new drain and cleansing a tributary to the Thames, although from the state of the river they have not reached perfection. One is in the parish of Bampton, Oxford, where an inclosure has taken place under Mr. W. Bryan Wood, of Chippenham, where an inside drain has been cut in the direction of the river and carried down to a lower level; and the other is in the parish of Down Ampney, by Mr. Bravender, steward to the Earl of St. Germans, where some water meadows and a mill have been sacrificed for the benefit of drainage and tillage, and being on a very porous, gravelly subsoil, it may be judicious to have done so.

With reference to the geology of the district to be drained, I cannot exactly guess at what you require respecting it; and as to "the more rapid accumulation of water from the increase of underdraining," I rather doubt if such is the case. Where much draining has been done, the ditches and watercourses are kept in better order than previously, and carry off the water quicker, but in consequence of the draining much of the water is made to percolate through the soil that before flowed over it, therefore is longer in passing off. To make this appear clear, take the case of two different geological formations, nearly adjoining each other, in the neighbourhood of Thames Head, the great and inferior oolites and the Oxford clay. The Colne is the principal river in the former district, and it is scarcely ever known to flood, except on a sudden thaw of snow, or from thunder rain. The reason is obvious; from the porous nature and great depth of the oolitic rock, the rain passes through it, and issues at the different springs in its course, which form the river; consequently there is a more regular flow of water for a length of time than if the rain flowed off the surface and caused a flood. The Oxford clay district, being a very close tenacious clay soil and subsoil, and a considerable quantity of it not drained, after getting once saturated, the rain will pass off the surface nearly as fast as it falls, and in heavy rains immediately causes a flood; now I consider under-draining will tend to make the water flow less rapid, but for a greater length of time, acting more like springs.

It is possible to get the area of the Catchment Basin of the Thames, and dividing the porous soils, from which the water flows through springs, from the close clayey ones, from which it flows mostly from the surface, to give some estimate of the quantity of water to be discharged, and the size of the river, weirs, sluices, &c., necessary for the purpose; but I question if it could be so easily and correctly known, as from those living on its banks, who have noticed its floods and passage through the several flood-gates, weirs, and sluices for many years past.

There is one point which I think I have not sufficiently urged on your notice, that is the necessity of straightening the rivers, especially in those parts where they have the least fall, and the floods in consequence remain out too long; nothing would remedy this evil equal to shortening the distance for the water to run, as it is not only the shorter distance, but there is a greater fall in that distance, thereby accelerating the discharge considerably.

I may not have been sufficiently explicit for those who are unacquainted with the subject of watering meadows, but those who are at all familiar with it will I think be able to understand my meaning, as in this paper, being destitute of any maps or plans referring to the subject, I wish rather to draw attention to my views, and cause the subject to be canvassed over, than to lay down the details of a plan that may be at once acted on.

VILLAGE INSTITUTIONS.

BY THE REV. JOHN BACON, OF WOODLANDS, BERKS.

THE education of the agricultural poor is difficult. The early age at which they are removed from school almost neutralises its benefits; our only chance, therefore, is with the adult. The trial has been made with varying success by night schools; their benefits are not limited to the learning gained by the adult. Let us inquire not merely what he has gained, but from what has he been withdrawn? His daily life is known—his labour done, what has he, poor fellow, to turn to? In winter, if he is happily married, and more than usually domestic, his cottage may shelter him till he goes to bed; but otherwise, if hired for the year, a carter's boy, "fogger," or shepherd, his only shelter is the dark loft common to all, where the best of masters cannot allow a candle, or a fire to dry his wet-through clothes. What wonder he betakes him to the alehouse—the fruitful source of misery and sin; and when he cannot pay, or may not run in debt, what becomes of him then? He has no interests, no resources, but such as degenerate and corrupt. Has the night school won him from these accustomed evil propensities?—the love of learning A, B, C—of dully hammering over what he cannot understand? Try something in addition more attractive. Till he can read sufficiently the Lending Library is useless; and for those who can read well it is not enough. They complain that they have read all the books. For both readers and non-readers let there be a reading-room. The one may read, both may be read to. The matter read may include the easiest popular literature of the day, simple and attractive serials, newspapers, and amusing books. Tempt him to learn, and then improve his learning. The public reader and the room may be difficult to find; yet, where there is a clergyman and a school-room, their wants may be supplied. Wherever a proprietor resides let his help be sought, and now then an intelligent farmer will give aid, pecuniary or personal.

Let the scheme be popular in constitution. Scientific subjects can be so treated as to interest the rustics. Natural history they have an inherent love for. In the writer's parish, sparse and poor, without a village or hamlet, his children's love for butterflies and caterpillars has infected many a smock-frock. Larvæ and chrysallides are brought up to the parsonage, and the greatest curiosity is evinced to see their changes. The habits and the culture of plants are specially studied by country folk. The shepherds know the stars, though not their names, better than many a gentleman or lady, and long to hear about them.

The writer has lectured an old woman on the planetary orbits, with a chalk-drawn diagram on her round Elm table, till the spectacles have nearly fallen from her nose in wonder. And she has learned that it was not profane to doubt the sun's correctness as a time-keeper, which she had for years secretly suspected as she daily watched his shadow-line on the brick floor at noon, and turned to ask her favourite clock if he was right.

Sitting in a cottage in a thunderstorm, the interval between the flash and clap has led to explanations which have rivetted attention. That remarkable explosion in the air which was heard on the 17th of January last, caused great astonishment and curiosity among the rustics here. They listened eagerly to what was said about aërolites; and, if they did not understand it all, it made them more inquisitive, and gave the very opening we want—it brushed away that stolid indifference which generally bars access to them. In another village a more formal lecture was given to the members of the reading-room on hydrostatics, hiding of course the name. The interest was apparent, and next day three of the rustic audience began to try their hand at making a peculiar kind of waterclock.

The village reading-room and lecture-room may form the nucleus of other entertainments. A musical society, including choir and band, might often be organised. In several places in the same neighbourhood the old church choir, in every respect a nuisance, with its bass-viol, clarionet, and fife, had been extinguished, but has revived in better form. The singing now offends not the ear; and in one poor spot among the downs the amateur choir is often called upon to sing before the squire's guests or in the mansion of a neighbouring peer.

Some time ago, in the sequestered parish before instanced, the night school were assembling, and a party passed with a flute-player among them. The musician was duly complimented. The rest were asked whether they would allow London Lane thus to outdo King's Heath and Inholme's Common? The hint was quickly taken, and henceforth three several awkward squads were regularly marched in rival triumph through distant muddy lanes with flute, accordion, and whistlepipe, and the night school rose at once to nearly forty in a population of 300.

The Cottage Garden Society, a most useful institution, fills well the gap which the closing of the night school leaves. The village cricket club and other manly games demand our sympathy. Let us do all we can to humanize, to give worthier enjoyments than are within the peasant's reach at present, to bring him nearer to the class above him; by social intercourse and sympathy show him that his "betters," as he humbly calls them, have an interest in him, and do not wish to treat him merely as the beast of burden, toiling monotonously all the day, caring for nothing but the coming pay, and then abandon him to find his only recreation in the indulgence of his lower appetites. *Read at the Warminster Conference: Journal of the Society of Arts.*

THE AGRICULTURE OF BERKSHIRE,

BY

THE REV. J. C. CLUTTERBUCK, OF LONG WITTENHAM.

(*Continued from* p. 1048.)

THE VALE.—It is difficult to define and follow out the divisions of the middle oolite into the coral rag and calcareous grit. The former is valuable as furnishing lime; the latter gives a light and rather sandy soil, both little covered with drift. Naturally drained in their higher levels, throughout their limits they present a soil especially fitted for the cultivation of Barley, and the breeding, rearing, and feeding sheep—the leading feature of the farming of light soils.

The details of farm management on these quick and kindly soils would be little more than a repetition of the practice on the light soils of other parts of the Vale and chalk districts. The names of many of its cultivators are known as successful feeders, and occasionally breeders of horned stock, sheep, and pigs, which here as elsewhere are usually of the pure or crossed Berkshire breed. From its geographical position, climate, and geological condition, it is marked as a district in which the cross-breeding of sheep is very generally and successfully carried on; we shall therefore with some diffidence offer a few remarks on this very interesting and important subject. We must first recur to the statements of Mavor as to the breeds and crosses of sheep in the county when his report was written; he was evidently fully alive to the value of any information on this subject. "Berkshire," he says, "has a native breed of sheep, strongly marked, though less valued than formerly, still acknowledged to possess many qualities which adapt them to their situation; by crosses it has undergone several changes, though the characteristic features of the Berkshire Notts* are not easily obliterated. The name continues to be given to the various mixtures as long as they have black faces, Roman noses, black or mottled legs, and long tails." Referring to an engraving of a pure bred Nott wether furnished by Mr. Justice, he adds that gentleman's observations:—"The peculiar qualities of the Berkshire Nott seem to be its great size, height on the legs, and weight when fatted; and I cannot help thinking that this variety of sheep is well calculated for the strong lowlands of this county, though the South Downs at present are much in fashion. A very considerable farmer in my parish (Sutton Courtnay) has made the experiment this last winter: he tells me they do not answer his expectation; that they are only calculated for high dry lands, and will not thrive well when confined so much within the hurdles, as they must be in our flat situations. I am inclined to think they must again give place to larger kinds, at least in the Vale." Again, quoting the agreement of farmers: "Whether crossing the breed has improved it is undecided among judges. At the last meeting of the Berkshire Agricultural Society crossing breeds for stocks was generally disapproved of. 'Breed from the best natives,' says Mr. Frost, (H.M. George III.'s bailiff), 'cross for fatting.' The maxim appears to be founded on Nature, and I give it without comment. Crossing, however, is extremely common in this county, and it is between all breeds of sheep which have been introduced into it — between the Notts and the Wiltshires, and between them and the Cotswold sheep, between the Leicesters and the Cotswolds, and the Wiltshires and Leicesters — in short, the mixtures are as various as the tastes and fancies of their owners." Mavor drew up a paper which he circulated:—"Requested, a comparative view of the advantages and disadvantages of the different breeds of sheep kept in Berkshire, distinguishing their cost when bought in, the quality and value of their fleeces, and their improvement during any given time, whether sold as store or fatted, with their respective weights when killed." This, like other statistical inquiries, received few answers, and he was unable to accomplish his design, though he gives one answer, signed Geo. Harbottle, of Remenham, in full. He then gives his own notes, from which we gather that in 30 places mentioned in the Vale, Notts were kept in part or wholly in 21, Wiltshire 8, Cotswolds 3, Southdown 3, Leicester 3; of these the crosses were Notts and Wilts 1, Notts and Cotswold 1, Notts and Southdown 1. Noted as much used, Wilts and Leicester 2. In the chalk district it was as follows in 32 places named: Notts 9, Wiltshire 19, Cotswold 1, Leicester 1, Southdown 12, mixed 2; of these the crosses were Notts and Wilts 1, Notts and Cotswold 2, Notts and Southdown 1, Wilts and Southdown 5, Wilts and Cotswold 1, Cotswold and Southdown 1, Leicester and Southdown 2, noted as a good cross. This extract is given, with the epitome of the crosses, as a record which cannot fail to interest the cross-breeder of sheep. The great fact that we learn is that cross-breeding was then a subject much discussed; how far it may have fixed the character of the Hampshire or Ilsley Down we are not competent to judge. Mavor mentions the black face and Roman nose, black or mottled legs, as marking the sheep still called Notts, saying nothing of the long legs. This is much the type of the Hampshire Down, which may thus have sprung from a cross with the Nott; we merely offer the suggestion.

The direct cross-breeding of sheep as practised in Oxfordshire, and which has produced the stock called Oxford Downs, is one of those problems in the economy of agriculture either as to its theory or results not easily solved, in spite of the long experience of so many practical and scientific men. There is a very great difference of opinion among those whose practical knowledge entitles them to attention. To confine the question to the practice of the county, which is undoubtedly the cross between the Down ewe and the Cotswold ram:—all agree that the first cross is the best—the question is how is this improvement in fleece and carcase to be maintained in its greatest perfection? This is not merely a farmers' but a national question in the face of the high prices of mutton, and an expected increase in the demand for wool. The difficulty begins with the produce; if these are fatted, the difficulty ceases. We often see the flocks of Down ewes with the flock of tegs near at hand: their abundant fleece, their grey or speckled faces surmounted with a well placed fore-knot, black or grey legs, and general kindly appearance bespeak their origin; the wether tegs are fatted off, it is with the ewe tegs or theaves that the difficulty begins. What is to be done next? How many Berkshire and Oxfordshire farmers have asked the question! One who has for many years practised this cross breeding, admitting the value of the first cross, pronounces decidedly against a

* Nott, or polled, is used in contradistinction to the horned sheep; a Nott cow is a polled cow. N B. These remarks on cross-breeding sheep were written previous to the publication of the article on that subject by Mr. Spooner in Part 2, Vol. xx., Agric. Soc. Journ.

return to the original blood on either side; he says, trust to the maintenance of the distinctive character of the cross by the judicious selection of animals of the same class, asserting that departure from this rule immediately deteriorates the stocks, and often spoils the labour and attention of former years—this opinion is generally allowed to be correct. It is, we believe, notwithstanding this, a fact beyond dispute, that the most eminent cross breeders have seen in their flocks a tendency to follow the type of one of the original breeds, and to obviate this have broken through the rule and recrossed with the original stock in the opposite direction, an acknowledgment that after all there is no fixity of type. From the interest this subject is now exciting, we are tempted to refer to a very remarkable article in the Royal Agricultural Journal, Vol. 14, Part 1., "On the method of obtaining immediate Fixity of Type in forming a new Breed of Sheep," by M. Malingié-Nouel. Translated by Mr. Pusey. The object of the communication is to detail the dearly bought experience of the writer in trying to introduce a cross between the best English and French blood. The experiment signally failed till he hit on the expedient "of procuring English rams of the purest and most ancient race, and uniting them with French ewes of modern breeds, or rather of mixed blood, forming no distinct breed at all." This succeeded. The English sheep used were new Kent rams, the result was: "From the dropping of our lambs the strongly marked English character gave us the strongest hope that they would retain the excellence of the English fathers; and this hope was not disappointed. The next year the same cross was tried with the same success. The third year was still more interesting; our first ewe lambs at the age of 20 months had been put to the rams that had been saved. The offspring was most equal in quality, though proceeding from parents which were a first cross. From that time, now for some years, there has been at La Charmoise a double set of lambs, one set from the new Kent rams and the mixed blood ewes, another from rams and ewes the result of that cross."

Mr. Pusey adds in a note, "Besides its practical value, I cannot but think the communication throws some little light on one of the most mysterious of all physiological problems, the renewal of the features of parents in the reproduction of animals." If the facts adduced by the French writer find a parallel in English crosses, though a well sustained cross such as the Oxford might suffer as stated from the introduction of the original pure blood, it might be worth while to try experiments on a flock which by mismanagement had been allowed to degenerate, by introducing pure blood from an entirely new source. In many of the flocks where cross breeding is practised there is enough of the cross to destroy the beauty and mar the identity of the stock, and not to give it any decided fixity of type.

Though the cross between the Cotswold and Hampshire Down is the rule in this district, as in the Vale generally, we have heard of an instance at no great distance from these limits, of a flock of South Downs (Ellman's) crossed for more size and wool with the best Oxford Down from a known breeder. The stock thus bred with more fleece and larger frame leans to the character of Ellman's blood. With a view to further improvements some ewes were procured from a known breeder of the large Hampshire Down; rams bred from these by an Oxford tup have now been put to the first cross; we venture to anticipate that as the lambs fall they will show a preponderance of the Sussex type.

It must be remembered with reference to this question that the persons who, by fixing a type, have been able to claim a distinctive name for a cross-breed of sheep, have accomplished this by bringing great intelligence, unremitting care, and a judgment matured by long experience to bear on this subject. Whereas in negligent and unskilled hands the cross-breeding of sheep is a hazardous experiment. Great as is the obligation owed to those who have succeeded, like the leaders of this movement in Oxfordshire and elsewhere, we owe a still greater debt to those who by jealously maintaining the best blood of the purest breeds, enable us to return to these sources, and repair the mischief which may and often does result from rash and ill-considered experiment. The breeding of tups on a large scale is necessarily in a few hands; it is not only the highest branch of sheep farming and management, but requires the undivided attention which few can give, and the knowledge which few possess; 20*l.* or upwards seems a large sum for the hire of a single tup, but the result will often justify the outlay; it is not only the fancy farmers who give these prices but men whose calculations have direct reference to profit and loss. A visit to the sheep-folds where the tups are to be seen, will generally enable us to account for the success of the flockmaster on the one hand or the miserably ill-conditioned state of too many flocks on the other. All honour to those who in this in Down sheep, and in adjoining counties in Cotswolds, are devoting their time, capital, and intelligence to this all-important branch of the ruling feature of Berkshire farming.

We cannot quit this part of the county without observing that here is situated the Pusey property. As the great interest attached to the farms upon it has passed away with the removal of the late lamented owner from this scene of his labours and usefulness in the interests of agriculture, and as Mr. Caird reported on their condition before this event we may claim to pass them by in respectful silence.

Home Correspondence.

Messrs. Burgess & Key's Reaper and Mower.—As I gave a public invitation to see Messrs. Burgess and Key's Mower and Reaper at work, it may be well to give a brief account of their operations. The gentlemen who saw the Mower were much pleased—it was a very wet day, on a very heavy crop of Giant Sainfoin. I was not there, but one who was present, who laughed at the idea of such a machine cutting such a crop, wrote me word, "Unless I had seen the magnificent work I would not have believed it; no scythe on earth could have done it better." We cut 16 acres of a fair crop of Clover with it one day, but its great triumph was in my park, which has not been mown many years, and we never could get the men to cut it down low. The Mower did its work beyond all praise; this I witnessed myself. The frost at the end of April destroyed two-thirds of my Wheat, and consequently it was full of long Grass, and the storms beat it in every direction, yet the Reaper beautifully executed its work by cutting it one way. I hope agriculturists will not be led away by cheapness to get any machine without the side delivery. I consider all such practically useless, it obliges you to take off your hands and tie as you cut it, whereas we let our tying and do not retard our other operations at that busy season. *T. Beale Brown, Salputon Park, Andoversford, Gloucestershire, November 22.*

Farmers' Clubs.

OXFORD: *Manure Wasted and Land Starved.*—At the last meeting of the Club, Mr. G. R. Clarke said that having recently returned from France, where he had been for the purpose of investigating how far they made use of night-soil there, he proposed to speak of the value of night-soil as a manure, the best method of collecting it, removing it, and applying it to the land. His mind had been brought to this subject in two ways; first, by observing the way in which their streams and rivers were polluted by being converted into flowing cesspools; and next, by the enormous amount of valuable manure lost to the kingdom. After having made a sewer from his house to a brook, he saw the error of it, and make a fresh cesspool, in order that his garden might have the benefit of its contents. In 1858, he addressed a letter to the Royal Agricultural Society, and suggested that they should consider the subject under the following heads:—

1st. The amount and value of the manure which is lost to the agriculturist through the ill-construction of cesspools, and the difficulty of emptying them. 2ndly. The amount and value of the manure which is lost to the agriculturist, by the modern plan of conducting the sewage into streams and rivers. 3rdly. The effect of different kinds of water on the health, growth, fattening, and length of life of cattle. 4thly. The effect of sewage, when introduced into water, on the health, growth, fattening, and length of life, of cattle.

The following amongst other prizes, might be offered:—

1st. For essays treating of the above subjects generally. 2ndly. For the best mode of constructing cesspools, both for privies, and as receptacles for sewage from drains, farm yards, &c., whether of separate houses or villages; and for intercepting the sewage passing through existing sewers. 3rdly. For the best contrivances for emptying cesspools and ponds, as regards both liquid and solid matters with a view to its use for agricultural purposes. 4thly. For the best method of disposing of the materials when emptied out, whether in combination with other solid substances, or otherwise. 5thly. For the best plan of collecting the sewage of villages and towns, and of delivering the same to the agriculturists on equitable terms, keeping in view the health, convenience, and advantage of all parties; and their mutual co-operation, and their fair rateable contribution towards the labours and expense of the operation.

As that Society, however, had taken no notice of the subject beyond acknowledging the receipt of his communication, he thought the time had arrived when an effort should be made to call public attention to the matter. Accordingly he published a pamphlet entitled "Reform the Sewers and Rescue the Rivers. Where shall we bathe? What shall we drink? or manure wasted and land starved." With these introductory remarks he should at once proceed to deal practically with these different heads, in order to show that he had touched upon no one head which was not practical and of great importance.—In Manchester there were 66,000 houses, of which 51,000 were of the rent of 10*l.* and under. The Corporation of Manchester cleansed the privies of 36,000 of those houses. In order to put the inhabitants in a way of preserving the soil in the best manner, they combined the ash pit with the privy, and this operated in two ways, for the ashes absorbed the moisture, and next deodorised the soil. It was not taken in combination as with the earth, but by superficial attraction; there was no combination of ashes with the ammonia and gas, but they were attracted by the innumerable surfaces of the ashes. The Corporation exported the whole of 36,000 privies; they removed annually about 100,000 tons of night soil, for which they charged 1*s.* 6*d.* a ton, exclusive of carriage.—He would now tell the result of his investigations in France and Belgium, where he spent his last vacation for the purpose of ascertaining what they were doing in this matter. He was introduced to the firm of Messrs. Reitchie and Co., of Paris, who cleansed an immense number of privies belonging to private houses and public establishments. He went to their establishment at Bondy, where he saw a great many acres of land, from 60 to 80 acres, divided into compartments, where the soil was taken out to the depth of 8, 10, 12, and 14 feet, and into those receptacles the liquid manure ran from Paris, by means of a sewer; it remained there until it made a deposit; the liquid was then let out to another tank until it was exhausted. Ultimately there was a great accumulation of deposit till it was dry enough to be removed. He saw immense tanks of it, and it was subsequently packed for Paris; there was nothing unpleasant or offensive about it, and it smelt to him like sal volatile or ammonia. He went into their cellars at Paris and found three modes of collecting nightsoil; one was of a simple nature, namely, a tub or barrel in communication with the closet above, and when the tub was full another was substituted. The next was what was called the divided system, namely, of zinc or galvanised iron, with a strainer on the side and at the top, and the liquid run out by a pipe on the side into another tub. The tub with the liquid was obliged to be removed four times oftener than the other containing the solid matter. The third system consisted of a similar cask for dividing, but instead of the pipes being connected with another barrel, they were with a tank; it was then pumped into pipes or a sewer, and was thus carried to Bondy. He stood by and observed all these processes, and never detected the slightest smell. He had visited a cellar which was a baker's shop, and found himself among the sacks of flour and loaves, and in the same cellar he saw the nightsoil-collecting tubs, and perfectly free from any unpleasantness. He next visited the public institutions and prisons. He went to the Military Fort at Vincennes, where an intelligent officer, an engineer, showed him that everything went into a tank covered with a flat stone in the garden; the contents were pumped into carts constructed for the purpose, and carried away to the Emperor's farm two or three miles off. —With regard to Belgium, Mr. Dolman, of London, told him that great use was made of it. There they kept the liquid in tanks, into which they threw clean straw. A man got into the tank barelegged, and trampled down the straw until it was quite saturated: it was then put on sticks, and placed in carts, carried to the farm, and laid along the furrows. He had seen enough in France to satisfy him that the farmers in this kingdom would do well to appoint some good practical man to investigate these things, and report the result. The first point for consideration was, how they could make use of this manure; and next, as to the best ingredients for mixing with it. Many processes had been patented for deodorising the manure; but the result was, that it destroyed its properties on this point. The Rev. H. Moule, Vicar of Fordington, Dorset, had supplied him with the following information:—

He had everything which previously went into a cesspool received and removed in buckets. "At first," he writes, "the contents of these buckets were buried in trenches about a foot deep in my garden; but on discovering that after three or four weeks not a trace of this matter could be discovered, I had a shed erected, the earth beneath it sifted, and with a portion of this the contents of the buckets every morning mixed, as a man would roughly mix morter. The whole operation of removing and mixing does not occupy a boy more than a quarter of an hour. And within ten minutes after its completion, neither the eye nor nose can perceive anything offensive. When all the earth, which did not exceed three cartloads, had been thus employed, that which had been first used was sufficiently dried to be used for the same purpose again, and it absorbed and deodorised as readily as at the first. A portion of it is now being used for the fifth time for the same purpose; and thus all that offensive matter, which otherwise would have been wasted in the vault, a nuisance to my house and the neighbours, and a source, it may be, of sickness and disease, is now a mass of valuable manure, perfectly inoffensive both to the eye and the nose. I have taken fifty or sixty persons to see it, without previously acquainting them with its nature, and not one has guessed it. I have the same day submitted some to strong fire-heat, and that which unmixed with earth would under such heat have been intolerable, in this mixed state emitted no offensive smell whatever. This advantage of earth over water for such a purpose is complete. Water is only a vehicle for removing it out of sight, and off the premises. It neither absorbs, nor effectually deodorises. It rather, both in cesspools and in sewers, aggravates the offensiveness of the fermentation which soon sets in, and is often repeated; and further, it dilutes and wastes a most valuable manure. Whereas dried surface earth both absorbs and deodorises the most offensive matter, and that almost instantaneously; and under such circumstances as those narrated, it seems to preserve its full value for agricultural purposes. One experienced farmer who has visited my garden, is so fully satisfied of this, that within a fortnight he prepared a shed that he might pursue the same course. An assistant of Professor Way inspected the seven months' heap last November, a few hours after the earth had been again mixed with those other materials for the fifth time. He handled it, and smelt it, without discovering the slightest offence; and took some away with him in a deal-box with a loose cover tied only by a string in brown paper, and in his carpet bag."

With these facts before them there was every encouragement to adopt an improved method of collecting and mixing the manure, which had this additional recommendation, that it was always at hand, and could be used when it was wanted. If that were feasible, they had discovered the best method of deodorising, and found out what might be called the philosopher's stone. By the present system of sewers everything was carried away into the river, but Mr. Mechi's plan was to divert it over the land, which he had done with good result, and it might be done where the natural fall permitted it, but at the same time much of the manuring qualities was dissipated in the water. They had heard of numbers of acres near large towns being benefited in this way, but great waste attended it, as

was evident from the fact that the sewage of Edinburgh manured only about 300 acres, which showed that there must be an immense loss in the strength of the manure by evaporation and the mixture of water. He found it difficult to get attention to the subject, notwithstanding that they spent 7½ millions of money on the sewers in London, when the contents of them might be made serviceable to the land. The people at Manchester sold their manure for upwards of 6000*l.*, and though the expenses amounted to 16,000*l.*, they had cleansed 31,000 houses and increased the productions of the land. England did not keep pace with the population, and though they congratulated themselves on the advancement of agriculture, they were not able to feed the people. Once they were an exporting people, but now they imported 12,000,000 quarters of corn, and had already sent to their colonies upwards of 4,000,000 of people—a nation, it might be said. The population of Ireland was much less than it was 20 years ago, and yet they could not grow sufficient to feed the people who remained behind. They exported at the rate of 200,000 people a-year, and yet they were obliged to purchase 8,000,000 quarters of corn, and therefore, while they continued to waste the manure of the country, they would not be able to keep pace with the population. By making a proper use of the manure which they had at their command, they would greatly increase the producing powers of the whole kingdom, and make many a barren field yield an abundant crop.

The Rev. Mr. Clutterbuck had listened with great pleasure to what had fallen from Mr. Clarke, for it was a subject of very great importance to agriculture, and there was much truth in the old saying, "Muck is the mother of meal." With respect to the arrangements in France, alluded to by Mr. Clarke, he had witnessed the same in Algeria. He had observed at Nice, where he spent a winter, that in the vineyards there were facilities afforded for the collection of night-soil. Experiments had been made at Watford for utilising night-soil, which was collected in tanks, and the Earl of Essex paid 50*l.* a-year to be allowed the privilege of having the sewerage into his tanks, and it was then pumped over his park with great success.

Mr. Williams (of Northcourt) urged upon them the necessity of bearing in mind this fact that they should endeavour to return to the land what had been taken from it. He had tested the value of night-soil as a manure, by having taken a farm which was out of condition and exceedingly poor, but by the application of night-soil only he made it produce a good crop of Turnips where it yielded nothing before, and at a lower cost than he could have done it with any other manure. They were too prone to consider that this subject should be dealt with delicately, and regarded it as rather distasteful, whereas it was one of the most important and practical subjects, and deeply concerned the cultivation of the land. If they brought all back to the land which they took from it, they would be enabled to produce sufficient sustenance for the country at large. They gave large sums for artificial manures, which produced great results, whereas they had a much more effectual manure within their reach, and only wanted the necessary appliances for collecting, preserving, and making the best use of it.

Mr. Richard Chaundy (seedsman) had had considerable experience of the use and value of night-soil, for, 40 years ago, when he was in Kent, they used to fetch a great deal from London, starting at six o'clock at night and returning at six in the morning. They used it for a crop of Turnip seed, took it into the field, threw it on the land, and next day ploughed it in, and let it lay till spring. They used it for Beans, Peas, and Oats; and it suited the latter so well, that they grew 16 quarters to the acre. If they found the manure too strong, they mixed it with old tan, and threw it into a tank. They also mixed it with the sweepings from Greenwich, for which they paid 2*s.* 6*d.* a cartload, and they applied it to crops of fruit, and to fruit trees, and found nothing like it. All the market gardeners near London used to apply the manure, and Mr. Myatt, a large Strawberry grower, grew some surprising crops with it. It was a lamentable fact that the nightsoil produced in this city was wasted, notwithstanding that there was no manure so cheap, or one which answered so well.

Notices to Correspondents.

BRETON: *W W C.* We have sent your own address to him.

CHEVIOTS: *Enquirer.* Excuse the delay of a week. In the meanwhile we refer you to the article Cheviot in Blackie's "Cyclopædia of Agriculture."

ESTIMATES OF LABOUR: *M P.* Low's estimates we have found tolerably trustworthy even still. There is a handbook of farm labour (Longman) now in the press which may help you. Low's estimates are if we remember right on the scheme of a delayed payment of rent. From 8*l.* to 10*l.* an acre are needed for a well stocked arable farm.

LUCERNE: *Rainscomb.* 12 to 16 lbs. per acre is the usual seeding. For prices you must apply to a seedsman.—*Agricola.* Sow, in mid April, about 10 lbs. of seed per acre, in rows 14 inches apart, on deeply tilled and well manured loamy soil.

MANGOLD WURZEL: *G X.* Two cows during winter have been repeatedly, at fortnightly intervals, off and on Mangold Wurzel, the alternate fortnightly diet being Swedes and Carrots. Their produce of butter was white and bitter, and very small on Mangold Wurzel; and of good colour and taste, and plentiful, on the mixed food.

MEADOW: *Farmer.* The Grass would undoubtedly manure the land; it should be cut off late in autumn. But we imagine it would not have the effect on the ensuing produce that the manure of animals fed on it would exhibit, because the latter is in a more useful condition.

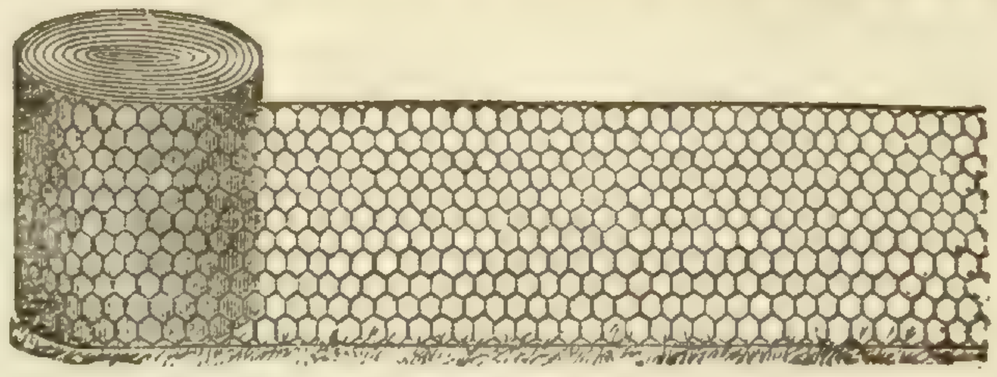
TO CLEAN A FOUL PASTURE: *J O.* If it be a soil of somewhat clayey or loamy texture, pare it early in March and burn it and spread the ashes, and plough it once and again and cultivate it and sow 3 cwt. of superphosphate per acre, and take a crop of Turnips cultivated on raised drills 30 inches apart, so as to admit of thorough cultivation of the land during their growth. Afterwards feed these Turnips on the land and sow Grass seeds with a thin seeding of Barley next year.

TO FILL GAPS IN LUCERNE: *M.* Transplant Lucerne plants from a seed bed.

VALUATION OF MANURE: *W R.* Manure made from stock kept always in good condition is better than ordinary farm manure, because that is made partly from store stock which exhaust their food. Nevertheless brewers' grains are not first-rate food, and cannot be expected to yield first-class manure.

ERRATUM.—At p. 1048, Mr. Hardy makes some calculation of the seed needed per acre into which an error has crept, which need not be corrected in detail except by saying that it increases the quantity stated to be needed beyond the truth.

IMPROVED PREMIUM WIRE NETTING.



PRICES PER LINEAL YARD, 24 INCHES HIGH:—

Size of mesh.	Mostly used for	Light.		Medium.		Strong.		Extra strong.	
		Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.	Japanned.	Galvanized.
2¼ inch	Hares, Dogs, Poultry	3½*d.*	4½*d.*	4¼*d.*	5½*d.*	5*d.*	6½*d.*	6*d.*	8*d.*
2 inch	Game Netting	4*d.*	5*d.*	4½*d.*	6*d.*	5½*d.*	7*d.*	7½*d.*	9½*d.*
1⅝ inch	Small Rabbits, Hares, &c.	4½*d.*	5½*d.*	5¼*d.*	6½*d.*	6*d.*	7½*d.*	8*d.*	10*d.*
1½ inch	Smallest Rabbits	6*d.*	7½*d.*	7½*d.*	9*d.*	9*d.*	11*d.*	11*d.*	13*d.*

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland or Ireland.

Any width of Netting under 8 feet made at proportionate prices.

☞ **Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.**

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PATENT COMBINED REAPING AND MOWING, or GENERAL PURPOSE HARVESTING MACHINE,

(WITH SIDE OR BACK DELIVERY WHEN REAPING),

HAS proved itself capable, during the past season, of Cutting Crops of Grass and Grain which no other Machine could attempt. It adapts itself to every irregularity of surface, and may be taken along a lane, or through an opening only 5 feet in width. The labour of raking is less than in any Reaper hitherto put into operation.

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It will be exhibited at the **SMITHFIELD CATTLE SHOW;**

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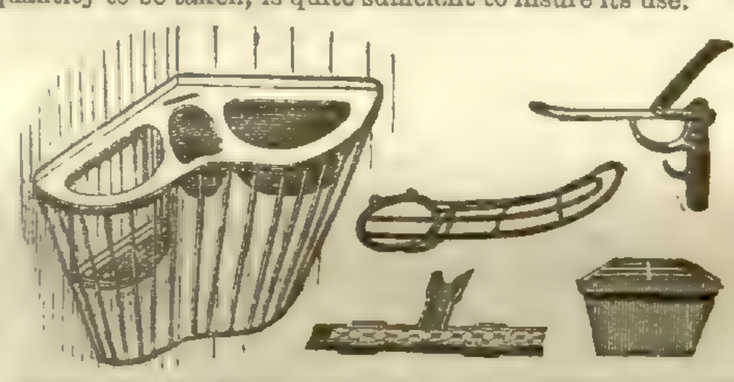

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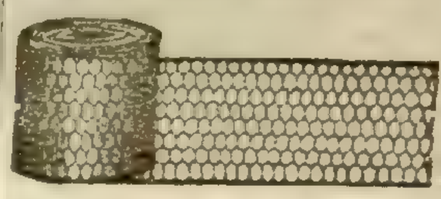

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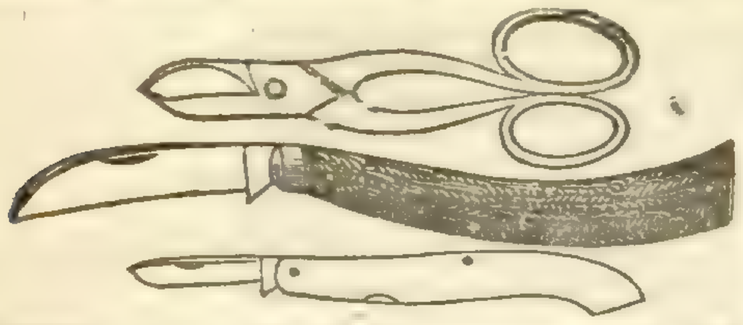

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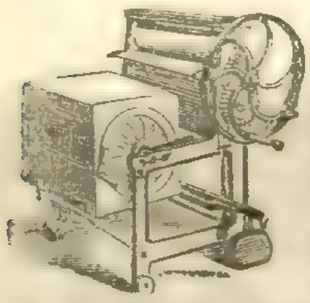

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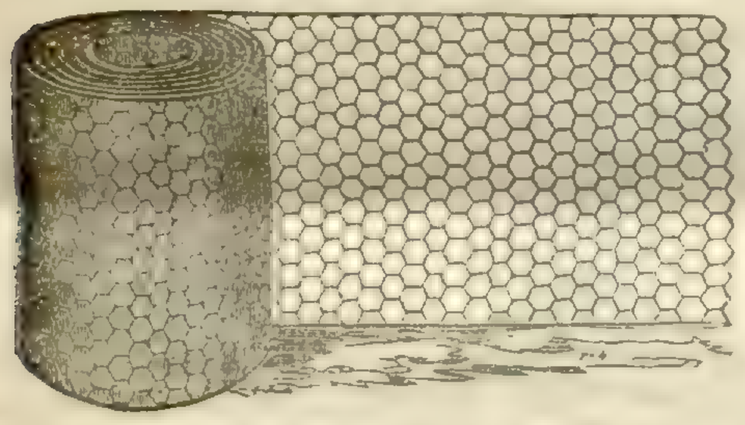

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2-inch	" strong do.	6 "	4¾ "
2-inch	" intermediate, do. ..	7 "	5½ "
2-inch	" extra strong, do. ..	9½ "	7½ "
1⅝-inch	" 24 inches wide	5½ "	4½ "
1⅝-inch	" strong, do.	6½ "	5½ "
1⅝-inch	" intermediate, do. ..	7½ "	6 "
1⅝-inch	" extra strong, do. ..	10 "	8 "

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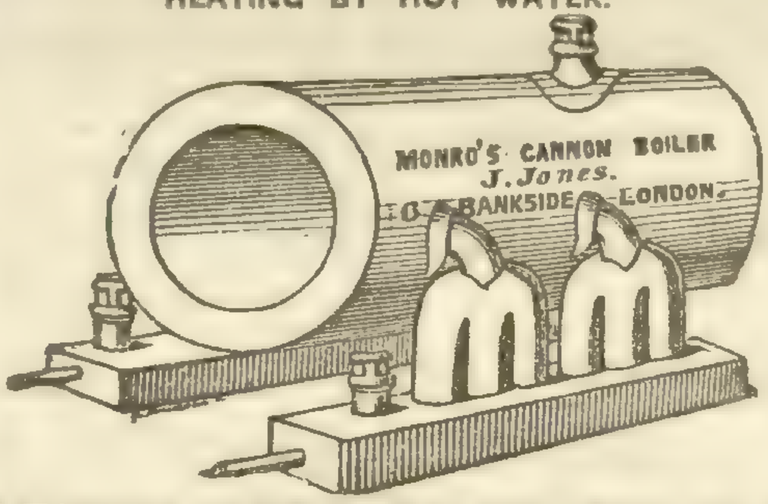
The price of any other size forwarded on application to J. LEWIS.

HEATING BY HOT WATER.



MONRO'S CANNON BOILERS.—Much has of late been said about BOILERS FOR HEATING BY HOT WATER, but these Boilers have now proved themselves to be the best at present invented. They are adapted for Heating every description of Building, and are made of various sizes. The price of the

24-inch Wrought Iron is	.. £6 10
36-inch Wrought Iron is	.. 8 10
48-inch Wrought Iron is	.. 12 0

Larger sizes if required.

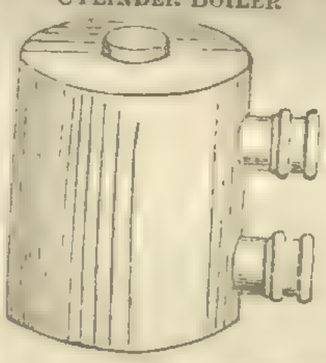
References to Gentlemen and Nurserymen where these Boilers are now at work. The Cannon Boilers are now kept in stock, and are to be had only of J. JONES, 6, Bankside, S.E.

Also, every description of Saddle and Cylinder Boilers. Hot-water Pipes and Connections at prices lower than those of any other house in London. Estimates for Hot-water Apparatus erected complete in any part of the country, or prices for the materials, and an Illustrated Catalogue on application to J. JONES, 6, Bankside, Southwark, London, S.E.

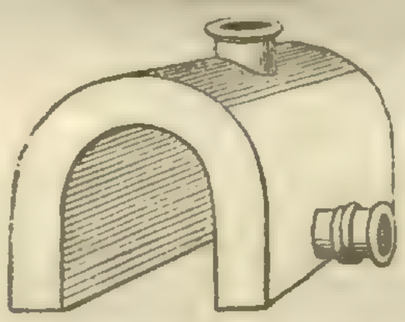
HOT-WATER APPARATUS.

J. JONES begs to offer a complete HOT-WATER APPARATUS FOR GREENHOUSES, at the following prices, delivered free to any Railway Station in England:—

CYLINDER BOILER



SADDLE BOILER.



Size of House.	With Cylinder Boiler.	With Saddle Boiler
20 feet by 10 feet	.. £8 10 0	.. £9 0 0
25 " by 12 "	.. 10 0 0	.. 10 10 0
30 " by 12 "	.. 11 10 0	.. 12 0 0
30 " by 15 "	.. 13 10 0	.. 14 10 0
40 " by 15 "	.. 16 10 0	.. 17 10 0
50 " by 15 "	.. 18 10 0	.. 20 0 0

The above prices include Boiler, strong Furnace Doors, Bars, Soot Doors, Cistern, Damper, Hot-water Pipes and Connections, Air Pipes, &c., all ready for fixing, and of the best quality. Further particulars will be sent on application. Parties ordering must send plans, showing doorways, position of boiler, &c.—J. JONES, Hot water Apparatus Manufacturer, 6, Bankside, Southwark, London, S.E.

PROPAGATING GLASSES.

	s.	d.			s.	d.	
2 ins. diameter	0	3½	each	12 ins. diameter	1	9	each
3 " "	0	4½	"	13 " "	2	0	"
4 " "	0	5½	"	14 " "	2	6	"
5 " "	0	6½	"	15 " "	3	0	"
6 " "	0	8	"	16 " "	3	6	"
7 " "	0	10	"	17 " "	4	0	"
8 " "	1	0	"	18 " "	5	0	"
9 " "	1	2	"	19 " "	6	0	"
10 " "	1	4	"	20 " "	7	0	"
11 " "	1	6	"				

METAL HAND GLASSES.

12 inches	6*s.* 0*d.* each		18 inches	9*s.* 0*d.* each	
14 "	7 0	"	20 "	10 0	"
16 "	8 0	"	24 "	12 0	"

Painted and glazed with 16 oz. Sheet Glass.
If open at top, 1*s.* extra.

HYACINTH AND FLOWER DISHES.

6 inches diameter, 1*s.* each | 9 inches diameter, 1*s.* 6*d.* each
12 inches diameter, 2*s.* 6*d.* each.

HYACINTH GLASSES .. .. 4*s.* 6*d.* per dozen.
CROCUS GLASSES .. .. .. 2*s.* 6*d.* per dozen.

JAMES PHILLIPS & CO., HORTICULTURAL GLASS MERCHANTS,
180, Bishopsgate St. Without, London, E.C.

GLASS FOR CONSERVATORIES, GREENHOUSES, PIT FRAMES, ETC.

HETLEY AND CO. are supplying 16-oz. Sheet Glass of British Manufacture, packed in boxes, containing 100 square feet each, at the following REDUCED PRICES for cash. A reduction made on 1000 feet.

Sizes.—Inches		Inches.		Per foot.	Per 10 feet.
	Under	6 by 4	at	1½*d.* is	£0 12 6
From 6 by 4	"	7 " 5	"	2*d.* "	0 16 8
" 7 " 5	"	8 " 6	"	2½*d.* "	0 18 9
" 8 " 6	"	10 " 8	"	2⅔*d.* "	1 0 10
" 10 " 8	"	12 " 9	"	2¾*d.* "	1 2 11

Larger sizes, not exceeding 40 inches long.

16 oz. from 3*d.* to 3½*d.* per square foot, according to size.
21 oz. " 3½*d.* to 5*d.* " " "
26 oz. " 3½*d.* to 7½*d.* " " "

PATENT ROUGH PLATE, THICK CROWN GLASS, and PATENT PLATE GLASS, for Horticultural purposes, at reduced prices, by the 100 square feet.

GLASS TILES AND SLATES made to any size or pattern, either in Sheet or Rough Plate Glass.

Propagating Glasses, Beehive Glasses, Cucumber Tubes, Glass Milk Pans, Glass Water Pipes, and various other articles not hitherto manufactured in Glass.

PATENT PLATE GLASS.—The present extremely moderate price of this superior article should cause it to supersede all other inferior window glass in a gentleman's residence. No alteration connected with the sash is required.

GLASS SHADES, as ornamental to, and for the preservation of every description of goods susceptible of injury by exposure. Prices, since the removal of the excise duty, reduced one-half. List of Prices and Estimates forwarded on application to

JAMES HETLEY & Co., 35, Soho Square, London, W.

FOR SALE, several GREENHOUSES, quite new, 3 PITS, 78 feet long, and a handsome 90 feet CONSERVATORY to be Sold immediately, space being required for alterations, at Granby Nursery, corner of Granby Street, Hampstead Road, N.

ALLEN'S PATENT PORTMANTEAUS and TRAVELLING BAGS with square openings.

LADIES' DRESS TRUNKS, DRESSING BAGS, with silver fittings.

DESPATCH BOXES, WRITING and DRESSING CASES, and 500 other articles for home or continental travelling, illustrated Catalogues for 1860. By post for two stamps.

J. W. ALLEN (late J. W. and T. Allen), Manufacturer of Officers' Barrack Furniture and Military Outfitter (see separate Catalogue), 18 and 22, Strand, London, W.C.

MICROSCOPES.

J. AMADIO'S BOTANICAL MICROSCOPES, packed in mahogany case, with three powers, condenser, pincers, and two slides, will show the animalculæ in water. Price 18*s.* 6*d.*—Address JOSEPH AMADIO, 7, Throgmorton St. E.C.

"It is marvellously cheap, and will do everything which the lover of nature can wish it to accomplish either at home or in the open air."—*The Field*, June 6, 1857.

Just published, 2d Edition, an Illustrated and Descriptive Catalogue, containing the names of 1500 Microscopic objects, post free for 6 stamps.

PRIZE MEDAL, PARIS EXHIBITION 1855.

METCALFE, BINGLEY, AND CO.'S New Pattern and Penetrating Tooth Brushes, Penetrating unbleached Hair Brushes, Improved Flesh and Clothes Brushes, and genuine Smyrna Sponges; and every description of Brush, Comb, and Perfumery for the Toilet. The Tooth Brushes search thoroughly between the divisions of the Teeth and clean them most effectually—the hairs never come loose. M., B., & Co.'s new and delicious perfumes the Fairy Bouquet and the Oxford and Cambridge Bouquet, in bottles 2*s.*, 3*s.* 6*d.*, and 5*s.* METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box.—Sole Establishment, 130B and 131, Oxford Street, 2d and 3d doors west from Holles Street, London, W.

FORGERY AND FRAUD.—Understanding that there is at present an attempt being made by some unprincipled parties in our city to deceive the public with an inferior Starch, made up in packets closely resembling the GLENFIELD STARCH, we consider it our duty to warn our fair readers to be careful when purchasing to see that the word "GLENFIELD," and the maker's name, "ROBERT WOTHERSPOON," is on every package, as none others are genuine.

When you ask for Glenfield Starch see that you get it, as inferior kinds are often substituted.

FINE HEAD OF HAIR.
THE BEARD, WHISKERS, AND MOUSTACHIOS.

ROWLANDS' MACASSAR OIL is universally in high repute for its unprecedented success during the last sixty years in the growth, restoration, and in beautifying the human hair. It prevents it from falling off or turning grey—strengthens weak hair, cleanses it from scurf and dandrif—and makes it beautifully soft, pliable, and glossy. In the growth of whiskers, the beard, and moustachios, it is unfailing in its stimulative operation. For children it is especially recommended, as forming the basis of a beautiful head of hair, while its introduction into the nursery of Royalty, and the numerous testimonials constantly received of its efficacy, afford the best and surest proofs of its merits.—Price 3*s.* 6*d.*, 7*s.*, 10*s.* 6*d.*, equal to four small, and 21*s.* per bottle. CAUTION.—On the wrapper of each bottle are the words, ROWLANDS' MACASSAR OIL, &c. in white letters, and their signature, "A. ROWLAND & SONS," in red ink.—Sold at 20, Hatton Garden, and by Chemists and Perfumers.

CHOICE PLANTS.

CYANOPHYLLUM MAGNIFICUM, 10*s.* 6*d.*
BOUGAINVILLÆA SPECTABILIS, TRUE, 3*s.* 6*d.*
" WESTIANA, 5*s.*
PLOCOSTEMMA LASIANTHUM, 10*s.* 6*d*
GARDENIA CITRIODORA, 2*s.* 6*d.*
" GEMMIFERA, 3*s.* 6*d.*
IXORA ACUMINATA, fine white, 5*s.*
DIPTERACANTHA AFFINIS, 5*s.* 6*d.*
PASSIFLORA EMPRESS EUGENIE, 3*s.* 6*d.*
DRACÆNA TERMINALIS, 5*s.* to 10*s.* 6*d.*
LAPAGERIA ROSEA. 21*s.*

J. AND C. LEE, VINEYARD NURSERY, HAMMERSMITH, W.

INDIAN AZALEAS.—The undersigned has ready to send out small grafted plants of the following choice NEW AZALEAS:—Cedo Nulli, Duchesse Adelaide de Nassau, Duc de Nassau, Gloire de Ledeberg, Fredrich Brenil, Etandard de Flandres, Rubens, Princesse Frederick de Nassau, Belle Jeannette, Johann Metzer, Goethe, Thusnelde. The Set of 12 varieties for 15*s*, package included.

J. HENCHMAN, Edmonton, London, N.

NEW AZALEA INDICA.—Alba unica, Adelaide von Nassau, Adolphe von Nassau, Alexander II., Aurelie, Bernard André, Bouquet de Flore, Comte de Hainault, Director Augustin, Distinction, Flower of the Day, Model, Nathalie, Queen of the Whites, Roi Leopold, Rosy Circle, Schone Mainzerin, Teutonia, Thusnelde, and William Luddick. Good clean plants; purchaser's selection of 12, 40*s.*; the set of 20, 3*l.*, hamper and packing included.

THOMAS JACKSON & SON, Nurserymen, &c, Kingston, S.W.

BOWER NURSERIES, MAIDSTONE.—I take this opportunity of thanking my friends for the liberal support I have received the last 20 years, and to inform them I have removed to my new Nurseries situate close to the Railway Station, which are considerably more extensive and eligible. They are now complete with a large stock of the best things (more especially Fruit Trees); the soil is of that nature as to ensure the removal of all kinds of Trees with great success. I have made a large outlay in the arrangement of the grounds and also the Show and Plant Houses, which are entirely new, and contain a very large stock of the best and leading plants of all sizes. My Seed business is carried on as before at my Shop in High Street and Warehouses Mill Street. I have disposed of my Ashford business to my eldest Son, who I trust will receive the same support I have hitherto done at those Nurseries. My whole attention will now be devoted to my Maidstone business, and I respectfully solicit the continuance of that patronage I have received which will be my constant study to merit. All communications in future to be addressed Maidstone only.—W. J. Epps, Dec. 8.

FOR SMOKING GREENHOUSES.

NEAL'S PATENT APHIS PASTILS, which light with a Candle, save all trouble, destroy all Insects, and are already used by some of the leading Gardeners, may be obtained of the principal Seedsmen and Nurserymen, 2*s.* per packet.—Manufacturer and Patentee, J. NEAL, Edward Street, Birmingham. Trial packets, 1*s.* each.

WINTER DRESSING FOR ORCHARD HOUSE AND OTHER FRUIT TREES.

Extract from the Eighth Edition of the Orchard House. By Mr. Rivers.

"January paint the trees (every shoot and bud) with Gishurst Compound, half a pound to the gallon of water. This will destroy the eggs of Aphides."

Vines and outside wall trees should first be washed, stem and shoots, with 8 oz. solution of Gishurst, then smeared with clay and Gishurst, (see *Gardeners' Chronicle* Oct. 13), or with lime, sulphur, and Gishurst, made into a paste. If the smell be disliked, make the solution 48 hours before use.

Full directions as to the use of weaker solutions against mildew and insect pests in spring and summer, with particulars of the experience of many great gardening authorities, are enclosed with the boxes of Gishurst. These are supplied retail through any nurseryman and seedsman at 1*s.*, 3*s.*, and 10*s.* 6*d.* each, wholesale by PRICE'S Patent Candle Co., Limited.

FUMIGATING AND SYRINCING.

GRIFFITHS AND AVISS, TOBACCONISTS, Coventry, call attention to their TOBACCO PAPER. It is simple in use, safe in application, altogether effective in the destruction of Green Fly, Black Thrips, &c., nominal in price, 12*s.* 6*d.* per dozen pounds, sent to any part of the kingdom on receipt of Post Office Order. To those in the Trade a liberal discount on 28 lbs. and upwards. The following practical gentlemen have submitted it to every kind of ordeal, and bear testimony it is all we represent:—

Mr. Charles E. West, the Earl of Denbigh, Newnham Paddox
Mr. Wm. Oliver, the Earl of Craven, Combe Abbey
Mr. A. Henderson, His Grace the Duke of Sutherland, Trentham
Mr. Wm. Pool, the Earl of Aylesford, Packington Hall
Mr. John Jennings the Earl of Derby, Knowsley Park
Mr. Thomas Pond, the Viscount Hood, Whitley Abbey
Mr. Geo. Tranter, the Hon. Granville D. Ryder, Westbrook, Hemel Hempstead
Mr. Geo. Bennett, J. Beech, Esq., Brandon
Mr. Jas. Knackston, J. R. West, Esq., Alcot Park
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Mr. Peter Conlon, C. Webb, Esq., The Gardens, High Grounds, Hoddesden
Mr. Francis R. Kinghorne, Nurseryman, Seedsman, and Florist, Richmond, Surrey
Mr. John Reeves, Ladbroke Nursery, Notting Hill, W.
Mr. John Jennings, Nurseries, Shipston-on-Stour
Mr. Edward Perkins, Nurseryman, Seedsman, and Florist, Leamington Nursery
Mr. John Ogden, Nurseryman, Seedsman, and Florist, Coventry
Messrs. S. Perkins & Sons, Nurserymen, Seedsmen, and Florists, Coventry

*** Agents Wanted. Nurserymen and Florists preferred.

N.B. Cast Fumigating Pots, Tobacco Water for Syringing, and Tobacco Juice for Sheep Dressing.

FOR SALE, a Bargain, 300 yards of 5 inch HOT-WATER PIPES, and other connections; also some 8 inch Sockets, 6 and 2 inch Flange Pipes, a 2-Horse Power Steam-Engine, 4 inch Deep Well Pump, sundry Machinery and Wheels; at JOHN CATTERMOLE'S, 7, Archbutt Terrace, Manor Street, Chelsea, S.W.

SLATE WORKS, ISLEWORTH, MIDDLESEX, W.

EDWARD BECK MANUFACTURES in SLATE a variety of articles for Horticultural purposes, all of which may be seen in use at Worton Cottage, on application to the Gardener, Sundays excepted. PRICED LISTS of PLANT TUBS and BOXES forwarded on application.

GARDEN BORDER EDGING TILES.

ROSHER AND CO. beg to invite attention to their varied Stock of ORNAMENTAL GARDEN BORDER-EDGING TILES in Terra Cotta, Terro-Metallic ware, and Earthenware. They present advantages over Box or Grass-edging in that they afford no harbour for slugs, &c., take up less room and are less expense and trouble to keep in order. They may be had of various patterns at R. & Co.'s premises.

Albion Wharf, Holland Street, Blackfriars, S.E.; and Kingsland Road Wharf, near the Canal Bridge, N.E.

N.B. Sketches of the patterns will be forwarded by post on application. Ornamental Flower Boxes kept in stock.

ORNAMENTAL PAVING TILES FOR CONSERVATORIES, HALLS, CORRIDORS, BALCONIES, &c, as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs. Also WHITE TILES, highly glazed, for Lining Walls of Baths, Dairies, Kitchen-ranges, Larders, &c. To be obtained of ROSHER & Co., at their premises as above.

GREENHOUSES MADE OF GOOD YELLOW DEAL, at 8*d.* per foot, if Glazed and Painted, 1*s.* Pits Lights painted complete, 8*d.* per square foot, if unglazed, 4½*d.* Fifty 6 feet by 4 feet Lights, well painted, 37*l.* 10*s.* Also, ready built, a Span-roof House, 23 feet 6 inches by 12 feet 4 inches, 31*l.* Lean-to, 30 feet by 13 feet, 44*l.* Ditto, 24 feet by 12 feet 6 inches, 33*l.* Ditto, 12 feet by 7 feet, 13*l.* Hand-glasses and Frames in variety, at reduced prices.—Apply to JOSEPH SMITH, Pine Cottage, New Road, Hammersmith, W.

GALVANISED GAME AND POULTRY NETTING.—By improved machinery at reduced prices. 2-inch Hexagon Mesh, 24-inch wide, light, 5*d.*; Medium, 6*d.*; Strong, 7*d.*; Extra strong, 9½*d.* per yard. Any other width, strength, or mesh, from ½ to 6 inches, at proportionate rates. Every description of Wire-work by THOS. P. HAWKINS, Manufacturer, 27, Dale End, Birmingham.

POULTRY, RABBIT, AND SHEEP FENCING, HARE, OR RABBIT NETS, on cords, for Covert Shooting, 12 mesh over, 4 feet wide, 2*d.* per yard. 18 mesh over, 6 feet wide, 3*d.* per yard. 24 mesh over, 8 feet, 4*d.* per yard. Each Edge Corded, ½*d.* per yard extra.

BAT-FOLDING NETS for Bird Catching, 8*s.* each, with Bamboo Poles complete, 20*s.* Extra large 25*s.* complete. Clap Nets for Bird Catching, 10 yards long, 5 feet deep, 15*s.*, with staffs, pull line, and stop cord, 1*l.* 10*s.*; Lark Nets, made square mesh, any size required, 3*d.* per square yard. A Partridge Trammel, 30 yards long, 5 yards wide, made square mesh, 1*l.* 11*s.*; or any less size, 2*d.* per square yard.—W. CULLINGFORD, 1, Edmund Terrace, Ball's Pond Road, Islington, London

LARGE WATERPROOF CAPES, 3*s.* each, 3 feet deep, for Gardeners, Gamekeepers, Watchers, and Farm servants; do. lined throughout with woollen, 5*s.*; do. with sleeves lined, 7*s.* 6*d.*; do. with sleeves unlined, 5*s.* 6*d.* Also 2000 Second-hand Police Capes redone up, worst, 18*s.* per dozen; best, nearly new, 36*s.* per dozen; Horses' Loin Cloths, 7*s.* lined with Woollen; Driving Aprons, 8*s.* and 10*s.* each.

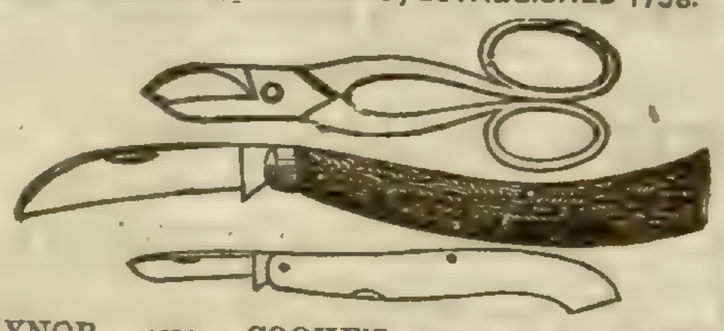
TRANSPARENT SHEETING for Garden Frames, nearly 2 yards wide, 1*s.*; Tarpawling, 6*d.* per square yard; Thick Canvas Waterproof Sheeting, 1*s.* per square yard; Patent Felt (M'Neil's), 1*d.* per square foot; Waggon and Cart Tarpawlings, 1*s.* and 2*s.* per square yard.

WORSTED GARDEN NETS for Blossom, much approved. All kinds of Garden Nets. Samples sent and prices.

RABBIT NETS, SHEEP NETS, long Hare and Rabbit Nets, 50, 80, and 100 yards, hung ready for use. Strong New Zealand Cord Sheep Nets, 20*s.* per 50 yards; set Bird Nets, and all kinds of Fishing Nets.

Wire Work, Rabbit proof, 1§ mesh, 15 guage, 6*d.* per square yard; in any width, 1½ mesh, 10*d.* per square yard. The cheapest article in the market, and all made from Swedish Iron. Sheep Wire Work, 4-inch mesh, 4*d.* per yard—4 feet nearly in height.—R. RICHARDSON, White Horse Factory, Bidborough Street, Judd Street, Office 99, Euston Road, London, N.

PAXTON WORKS, SHEFFIELD, ESTABLISHED 1738.



SAYNOR AND COOKE'S warranted PRIZE PRUNING and BUDDING KNIVES, SCISSORS, &c.—Sold by all respectable Nurserymen and Seed Merchants in the three Kingdoms.

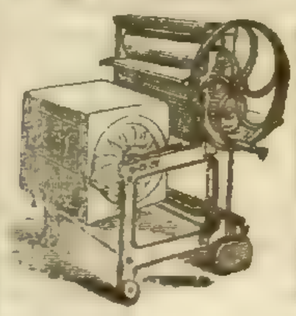
JOSEPH HAYWOOD AND CO.,

MANUFACTURERS OF PRUNING AND BUDDING KNIVES, SPORTSMAN'S, and all kinds of POCKET CUTLERY.

Dealers in Gambia Garden Shears, Scissors, Syringes, &c.

GLAMORGAN WORKS, Sheffield

BRADFORD'S PATENT WASHING MACHINE. SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations." — THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

CARD.

SAMUEL N. McGERROW, GENERAL HORTICULTURAL BUILDER, Knotty Ash, near Liverpool.

Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

HORTICULTURAL WORKS AND HOT-WATER APPARATUS MANUFACTORY.

KENSAL GREEN, HARROW ROAD, LONDON, W.

JOHN TAYLOR AND SON beg to call the attention of the nobility and gentry to the very superior manner in which they Erect all kinds of Conservatories, Vineries, Greenhouses, &c., combining every improvement with elegance of design and durability of materials and workmanship.

Their VENTILATING APPARATUS for the Fronts and Roofs of Houses has given the highest satisfaction. Churches, Chapels, Schools, Entrance Halls, Public Buildings, &c., heated with Hot-Water Apparatus in a most economical and efficient manner.

J. T. & SON have great pleasure in referring to numbers of the nobility and gentry by whom they are extensively engaged.

HOTHOUSES FOR THE MILLION

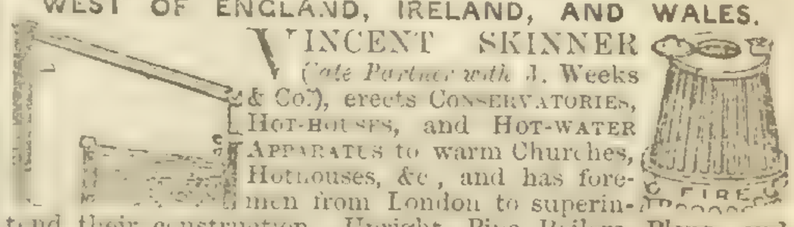
MADE BY STEAM POWER AT

J. LEWIS'S HORTICULTURAL WORKS, Stamford Hill, Middlesex, N. These Hothouses are made on a much better and stronger principle than those manufactured on Sir J. Paxton's plan, and are more durable and cheaper.

					£
A span-roof measuring 30 ft. by 16 ft., with two glass ends and doors complete					30
Do.	do.	40 ft. by 20 ft.	do.	do.	50
Do.	do.	60 ft. by 24 ft.	do.	do.	90

The price of any other size forwarded on application to J. LEWIS

WEST OF ENGLAND, IRELAND, AND WALES.



VINCENT SKINNER (*Late Partner with* J. Weeks & Co.), erects CONSERVATORIES, HOT-HOUSES, and HOT-WATER APPARATUS to warm Churches, Hothouses, &c, and has foremen from London to superintend their construction. Upright Pipe Boilers, Plans, and Estimates.—V. SKINNER, Bridewell Street, Bristol.

DESIGNS FOR FLOWER BEDS AND GARDENS. The Second Edition of Second Series of 80 Designs is now ready, and will be forwarded to any address on receipt of 24 postage stamps by J. MARSHALL, 2, Goldsmith St., Nottingham.

GLASS FOR CONSERVATORIES, ETC.

HETLEY AND CO. supply 16-oz SHEET GLASS of British Manufacture at prices varying from 2*d.* to 3*d.* per square foot for the usual sizes required, many thousands of which are kept ready packed for immediate delivery.

Lists of Prices and Estimates forwarded on application, for PATENT ROUGH PLATE, THICK CROWN GLASS, GLASS TILES, and SLATES, WATER-PIPES, PROPAGATING GLASSES, GLASS MILK PANS, PATENT PLATE GLASS, ORNAMENTAL WINDOW GLASS, and GLASS SHADES to JAMES HETLEY & Co., 35, Soho Square, London, W.

See *Gardeners' Chronicle* of December 1.

HENRY J. MORTON AND CO., 2, Basinghall Buildings, Leeds.

GALVANISED IRON WATER CISTERNS

for Cottage Houses, &c., to contain 50 gallons, 26*s.*; 80 gallons, 31*s.* each; and 140 gallons, 37*s.*, and fitted with tap, keeping the water perfectly sweet and clean; will not rust or corrode. Cisterns of all sizes.

GALVANISED IRON PUMPS

for Liquid Manure or Domestic Use, 3 inches diameter, 30*s.* and 32*s.* 6*d.* each; Tail Pipe for same at from 10*d.* per foot.

GALVANISED IRON SWING WATER BARROWS

for Garden or Farm use, containing about 20 gallons, entirely formed of iron, 35*s.* 0*d.* each.

PARKES' STEEL DIGGING FORKS.

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The Gardeners' Chronicle.

SATURDAY, DECEMBER 8, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

TUESDAY, Dec. 11 { Horticultural (Fruit Committee) at St. Martin's Place

THURSDAY, — 13 { Horticultural (Floral Committee) at St. Martin's Place

IT has already been announced that the HORTICULTURAL SOCIETY'S NEW GARDEN will open in form on the 5th of June. We can now state that the arrangements for the Exhibition then to be held are nearly complete, and that there will also be a grand Rose show on July 3, a grand show of Dahlias and other flowers on Sept. 11, and a great display of Chrysanthemums and Fruit on Nov. 6. About 1400*l.* are we believe assigned to these exhibitions for prizes. In addition to them the Floral and Fruit Committees will hold meetings twice a month, open to all Fellows of the Society, on a much larger scale than heretofore, the new offices at S. Kensington affording ample accommodation for such purposes.

The Schedules are in preparation in great detail, and it is expected will be issued in the ensuing week, when we shall point out the peculiarities of the new arrangements.

It must be obvious that the incessant wet weather is a serious impediment to the progress of the garden works; nevertheless, the planting goes on, and tenders for heating the great conservatory and constructing the garden architectural features are about to be called for.

The office of Assistant Secretary is still open, and affords to any young active man, well educated, well acquainted with gardening or Botany, of gentlemanly address, and thoroughly good business habits, an opportunity of advancement not often presented. The salary is said to be ample.

AN interesting lecture on the ACCLIMATIZATION of ANIMALS has been lately delivered by Mr. BUCKLAND before the Society of Arts, and is fully reported in their weekly journal. His object was to show that this subject opens a field of vast extent, and that it may be expected to lead to consequences of very great social importance. After referring to the proceedings of the French *Société d'acclimatation* founded in 1854, the prizes it has offered, and the hundred and forty thousand animals of one kind or another which it mentions as offering among them chances of submitting to domestication, Mr. BUCKLAND adverted to some examples of success that has already rewarded the experimentalist.

First in interest comes the *Eland* or great South African antelope, herds of which have been founded in different parts of the kingdom, especially at Hawkstone in Shropshire, by Lord HILL, who states that his elands are going on very satisfactorily, notwithstanding the wet and cold they have been exposed to during the last summer, having had no shed or indulgence of any kind since they were turned out in the park in May; they are, however, now in a large paddock, with a shed in it. His lordship has been most successful in breeding and rearing them, not having lost one. He has now six females and three males, and hopes four of them are in fawn, which will make a good herd next season. "Nothing," added Mr. BUCKLAND, "can be more stately than the eland, leading out his family along the lovely slopes of Hawkstone, where a great rocky ridge rises in the midst of the park, and stretches nearly through it, affording every variety of shelter. There the pale tawny flanks of the antelope glisten in the morning light; infinitely surpassing the dun deer in colour, while they rival them in grace, and their great size makes them immediate objects of attention. Their clean, small legs, full of power, push them over hill and dale at a tremendous pace; and if an obstacle opposes, their faculty of leaping is almost incredible compared with their weight." Of this beast Lord Hill had generously sacrificed for the table one six-year-old male in January last; and a haunch of it had been "degusted" by Prof. OWEN and other eminent gentlemen, the former of whom spoke highly of eland as a meat. It would seem, however, that some difference of opinion exists as to that point, for we find the Hon. G. BERKELEY explaining that no decisive opinion could be formed "as to fat, flesh, or flavour," since the eland was not in season. Mr. BERKELEY, however, states that the climate of Taymouth suits it, two having been bred in the park of the black deer there. In addition to this the opinion of the late Mr. MITCHELL was quoted that "out of *forty-two* species of deer, exclusive of the little moose deer of tropical India, there is hardly one which would not adapt itself to our seasons." For example, there is the stag of the Odenwald, the Wapiti, the Barbary deer, the Barasinghai of Nepal, the Persian deer, the Tartarian roe, and others, not to mention reindeer and the moose or Canadian elk.

Bisons were also referred to—"Every one has read and heard of the vast herds of these animals that are annually pursued and hunted down, yet seem hardly to diminish in numbers. English sportsmen make special expeditions in search of them, and within the last few months the Hon. GRANTLEY BERKELEY has returned from an expedition which he undertook solely to kill such animals. He has brought home with him the magnificent trophy which, through the kindness of the Editor of the *Field*, I am now enabled to show you. What a magnificent animal for our English parks; it is not only ornamental, but also exhibits qualities which would in some persons' eyes give it greater charms. It is good to eat, and carries a hump on its shoulders, a taste of which would be quite sufficient to impress on the minds of our *gourmands* the necessity of becoming a convert to the acclimatization of animals. I need not refer to printed records as to whether the bison will live in this country or not. It is a fact accomplished. The Great Northern Railway will, with the permission of that noble-minded encourager of acclimatization, the Earl of BREADALBANE, carry us not many miles from a magnificent park where we may see the shaggy monster of the prairies cropping Scottish Grass, and watched by Scottish keepers, and thriving well (like most foreigners) upon the fat of our favoured land."

Auroles and yaks, beavers and wombats, kangaroos, alpacas, and llamas next dwelt on the persuasive tongue of the lecturer, who concluded this part of his subject by enumerating the animals now actually in course of "acclimatization" in the garden of the Society in Paris. These are the hemione; a mule between the alpaca and an ass; pigs, from China; the pecory, from Brazil; the tapir, from South America; a flock of llamas and alpacas, and of yaks, zebras, various kinds of antelopes and gazelles, goats, sheep, agoutes, and kangaroos.

Mr. BUCKLAND next addressed himself to Birds; here the account of what acclimatization has in store for us became quite fascinating. There are Cheers, Monals, Japanese and Chinese pheasants, pucrasses, kaleges, peacock pheasants, and snow partridges, all to be bred for game. Nor is the farm yard to be neglected. Are there not Curassows, ocellated turkeys, colins, crested guinea fowls, talegallas, gelinottes, Australian parroqueets, the graceful Wonga-wonga, and all sorts of ducks, geese, and swans, cranes, and especially the laughing kingfisher—our pen unwittingly scrawled philosopher, but we have scratched it out—of Australia. This bird, useful if not ornamental, "may be taken as the type of a considerable group of kingfishers, which differ essentially in their habits from the lovely bird which flashes like a jewel along the brooks and rivulets of Europe. The powerful kingfishers of Australia seldom approach the water, but live in the dry scrub, and feed like birds of prey upon insects, reptiles, and small mammalia, instead of fish. The laughing kingfisher is excessively adroit in catching mice, and will wait as patiently as a cat at a hole whence he expects one to emerge. His note strangely resembles a rude powerful laugh, and the united efforts of the fine specimens enclosed in the aviary are heard far and near every morning. The regularity with which this laughter rings through the Australian forest at certain hours of the day, has not been unnoticed by the colonists, and among other trivial names for the bird, they have given it that of the Settlers' Clock." And finally why should not the bustards of our ancestors be restored to the Norfolk and Wiltshire sportsman, for the sake of being coursed.

Fishes came next in order, and we think formed the most interesting because most practicable part of the enthusiastic lecturer's suggestions. Certainly there is no improbability in salmon being by skill restored to the Thames; one indeed—a spawning fish—was taken the other day near Erith, and it is just as probable that other freshwater species should be brought to our rivers as that carp should have been procured for their tables by the clever old monks.

As to insects the Ligurian bee alone was mentioned. The Manchurian silkworm would have been still more interesting, as we hope to show on another occasion. But the inexorable march of time expelled from the lecture both insects and plants, concerning which last Mr. BUCKLAND thinks that there is an immense opening for the introduction of species that would prove to be of the greatest use both to the poor and the rich. May we be permitted to say we doubt it.

In conclusion it was announced that *a Society for the acclimatization of animals* had been started in London under the Vice-Presidency of the Hon. GRANTLEY BERKELEY, with Mr. BUCKLAND as Secretary. To the new association we wish all prosperity; although we are not sanguine about any such vast success attending its operations as some of its supporters contemplate. As to "thousands of animals and birds, domestic and wild, being made available to the United Kingdom by the labours of the Acclimat[iz]ation Society," we venture very respectfully to inquire where is their food if wild, and if domesticated will not their acquisition be a gratification rather than a matter of very great social importance.

An interesting discussion succeeded to the not less interesting lecture. Among the speakers was Mr. CRAWFURD, the late Governor of Singapore, who remarked that he was compelled to differ to a considerable degree from some of the premises laid down by his friend Mr. BUCKLAND. He begged to say that the number capable of being domesticated, both of the feathered tribes and mammalia, was very small. There were nine species of the horse family, and they had never succeeded in domesticating more than two of them, viz., the ass and the common horse. There were, he believed, 300 species of pigeon, and there was but one which had ever been domesticated, and that was the common blue rock pigeon, which existed in every part of the world he had been in. With respect to the deer and the antelope, he had eaten the flesh of both those animals, and he assured them the Indian deer was very bad food. He had never eaten good venison out of England—not even in his own country—Scotland. The fallow-deer beat all the others. The red-deer was very high-flavoured, but it was never fat, and they were obliged to add the fat of mutton to make it tolerable at table. Besides that, where was the room for all these animals if they could domesticate them? The deer of this country were kept as luxuries, and were only to be seen in the parks of gentlemen, from whence only they found their way into the market, and were sold at a very high price.

We should have been glad to hear that the true

meaning of the term Acclimat[iz]ation had been also examined. Domestication strikes us as better expressing the meaning of the promoters of the new Society. But to this we may refer hereafter.

MYCOLOGY.—No. XXXVIII.

—HYDNUM GELATINOSUM, *Scop.*—The very curious Fungus which forms the subject of our present illustration was found on old Pine stumps, in the autumn both of this and the past year, by Mr. Currey near Weybridge, a place which apparently abounds in rare species. It is at once distinguished from other British Hydna by its gelatinous texture, in which respect it resembles *Auricularia*, and other pileate gelatinous Fungi, with which it agrees in its definite hymenium confined to the underside, while in *Tremella* and similar Fungi with which it agrees in substance, the hymenium is equally distributed on all sides, or as botanists term it amphigenous.

Mr. Currey, when transmitting to us the specimens from which our figure is taken, called our attention to the fact, that not only does it resemble the Tremelloid Fungi as regards substance, but in the essential point of

HYDNUM GELATINOSUM, *Scop.* From an original sketch.

fructification; and it is probable that a similar structure will be found in all the gelatinous Hymenomycetes. The peculiarity is perhaps a necessary attendant of the soft elastic substance of which the part which bears the hymenium is composed.

In ordinary Hymenomycetes the fruit-bearing cells which are parallel to each other are all upon the same level. These are sometimes separated from each other by processes which project on the surface of the gills, but these have possibly a function of their own. At any rate they do not bear female fruit. In *Tremella* on the contrary the threads of which the substance of the Fungus is composed give off branches of very unequal lengths, several of which swell above and are more or less deeply divided into four lobes, from the tip of each of which a long thread is given off which ultimately bears the spore. Precisely the same structure obtains in the hymenium of our *Hydnum*, a fact which may be easily verified by placing a thin horizontal slice of one of the prickles of the hymenium under the microscope in a drop of water, covered with a thin piece of glass and slightly crushed. Mr. Currey's observation is of great importance, and may lead to further discoveries in other directions.

Hydnum gelatinosum is a mere object of curiosity, deficient as it probably is in any useful economical qualities. The pileus is fan-shaped or rounded in front, attenuated behind so as to make a short spurious stem. In an early stage of growth, however, it has no trace of a stem, and is decurrent at the point of attachment. The surface is of a bistre brown, uneven with frequent depressions, and rough at first with little points, but at length nearly smooth. The hymenium is either pure white, or shaded with a delicate blue tint; the prickles straight, of moderate length and very delicate. In drying, the plant shrinks up extremely, and loses all its beauty. *M. J. B.*

CULTIVATION OF THE VINE.

AT a time when the cultivation of the Vine is exciting so much interest it may perhaps not be considered out of place to give an abridgment of an essay written some years back, and read at a meeting of the "West Kent Gardeners' Association" at Blackheath, on March 5, 1845. There may not be much novelty in the article, but at any rate it will show that sound principles were fully recognised at that time, and that neither the theory nor practice of successful cultivation has been much improved since. Divesting the essay of its introductory matter, and assuming that the natural conditions under which the Vine flourishes most luxuriantly in its native country are fully understood, it will readily be conceived how necessary it is in this comparatively cold and sunless climate, to subject it to conditions approximating as nearly as circumstances will admit to those to which it would be exposed in its most favoured habitat, always however bearing in mind that although we can in our artificial cultivation produce a tropical climate (as to heat) we cannot command its light, and therefore if we present the plants with too much nutriment, we run the risk of inducing a plethoric habit which will result in soft spongy wood, rather than a fruitful Vine. The mean temperature of the earth in the climate of London is about 51°, but in winter, when the early forcing of the Vine is commenced, it is much colder, and the border in which the roots are extended will frequently be below 40°, and if we even say 45°, whilst the Vine has its branches and blossoms in a temperature of 70°, still we have a disparity of 25°, sufficient we think to account for tardy breaks, spindly bunches, and general debility. Hence the importance of covering a Vine border and making it waterproof early in the autumn, before the heat of summer has been lost by radiation, or the cold rains have washed it out of the ground. For protecting borders sometimes glass is recommended, but it is not so efficacious in preventing the radiation of heat in the winter as a good covering of dry fern. This, if the Vines are intended for early forcing, should be put on the end of September, to the thickness of one foot at the least, and then if the border has sufficient fall to carry the water quickly off, it may be thatched with wheat-straw or reed, but if not a weather boarding will be necessary. This will be best fixed by laying rafters at proper distances apart, and then, commencing in the front, lay on feather edged boards so as to overlap and carry off the moisture. A covering of this description laid on in proper time, before the heat has escaped in the autumn, will keep the soil at a temperature of 60° to 65° throughout the entire winter, and I am not sure that such a husbanding of heat is not preferable to covering the borders with hot dung at the commencement of forcing, as dung is irregular in its heating, and in a rainy season the border is liable to get more moisture than is good for it.

Propagation.—The Vine is propagated by layers, by cuttings, and by eyes. The latter is the method most generally practised, and consists of taking a strong plump bud from a well ripened shoot with about an inch of wood adhering both above and below the bud. These buds are potted singly in rich light compost, consisting of turfy loam, leaf mould, and bone dust, in large 60-sized pots, and are plunged in a brisk bottom-heat of about 80°. In about a fortnight the buds will begin to break, tepid water must then be cautiously applied, until the buds have made a shoot from 6 inches to 9 inches long. In about six weeks from the time the buds are put in, they will have formed plants a foot or more in height, and at this time they will require to be moved into larger pots, using as rich a compost as can be procured, and in pieces as rough as possible. It is a bad plan to confine the Vine during the time it is in pots, to small and frequent shifts, as it forces the roots to take a spiral direction, which is anything but favourable to the ultimate success of the plants. On the contrary, the young Vines should be moved from a 4-inch to an 8-inch pot, and from an 8-inch to a 13-inch pot, or larger if it is required for pot cultivation.

The temperature most favourable for growth is from 65° to 75° in the day time, and rising to 85° or 90° in sunshine, with an atmosphere loaded with moisture, and a brisk bottom heat of from 75° to 85° or 90°. Under such circumstances the Vine grows with the greatest luxuriance, and if assisted with liquid manure will produce strong fruitful Vines in one season. As the plants progress in growth remove entirely the side shoots or laterals, and when they have made shoots 2 feet long, stop the plants back to 18 inches; this will induce the plants to make a second leader, and by concentrating the energies of the plant will increase the strength of the buds. From the second shoot remove all lateral branches, and stop it back as before, and continue this practice until the Vine is of the requisite length and strength. As this is a system not generally practised or even recognised by cultivators, I may state that it is formed on the principle of rest and concentration of the sap, by stopping the plant it is rested until it breaks a second time, and this concentration of the sap tends much to strengthen the buds. Indeed by it I have seen Vines of incredible strength produced in one season. When the growth is completed, and this should not be continued later than the middle of August, the ripening process must be commenced by gradually withholding atmospheric moisture until the wood is thoroughly ripe and hard. Continue however to give the plants sufficient moisture at the roots to prevent their flagging, but bring them into a state of rest as soon as possible. When all fear of their breaking a second time is over, the plants may be pruned to the requisite length, still retaining the leaves on all the buds left. Expose the plants on a south aspect until the approach of frost, and then remove them under cover for the winter.

Formation of Border.—Having now prepared the plants, we will next proceed to consider the formation of the border, and here a vast field for controversy presents itself, one gardener making his borders 6 feet deep, while a second is content with them 16 inches; one gardener crying "give me all kinds of soils and manures;" a second saying, "loam alone is sufficient;" a third objecting to "any preparation at all;" a fourth maintaining that gravel is sufficient, or, at any rate that "old bricks, old mortar, charcoal, and bones, form the only mixture in which the Vine can be successfully cultivated in this country." With these conflicting opinions and directions before us, what is to be done? Whose practice are we to follow? I answer, follow no one; appeal to Nature, and see what Nature will direct you to do. In making a Vine border we are working for posterity, and therefore no considerations of convenience or expense should divert us from performing the operation in the best possible manner.

The first and most important advantage is to secure a dry foundation, and therefore the earliest consideration must be the thorough drainage of the border. To effect this the surface on which the border is to be placed should have an inclination of at least 1 foot in 8 feet, with a drain running parallel to the front of the house, and cross drains 4 feet apart over the entire surface of the border. If the subsoil is wet, or of an adhesive or plastic nature, it will be necessary to render it impervious to the roots of the Vines, either by paving it with tiles or stones, or giving it a good coat of well compressed concrete. In my own practice I use concrete 6 inches thick, and imbedded into it opposite each rafter, and communicating with the main drain, is a row of 2-inch drain pipes. Over these drain pipes I place a few inches of clean gravel, and over the whole border brick rubbish or stones to the depth of 6 inches, increasing in thickness over the drains so as to give the foundation before the soil is put on a corrugated or ridge and furrow appearance. This drainage is covered with litter from the stables, to prevent the soil getting into and choking it, and over it are placed large turves with the grassy side downwards. In situations where the subsoil is dry, and of a strong gravelly or sandy nature, as in the valley of the Thames, it may not be necessary to render the bottom of the border impervious to the roots; but if there is the most remote chance of the plants being injured by their roots penetrating the subsoil, the bottom of the border should be paved. On soils naturally wet and cold it would always be advisable to form the border entirely above the surface of the surrounding soil; indeed it is a question whether under every circumstance it would not be wise to place the under surface of the border above the level of the garden in which it is situated. So placed it would be impossible for it to become surcharged with moisture at any season, while by placing it so that the surface has a fall of 25° or 30° the sun would have much more power to warm it in the early part of the season. *W.*

(To be continued.)

THE SPECIES OF SPECIES MAKERS.

[Freely translated from a paper by Carrière in the "Revue Horticole."]

IN observing attentively different beings, you remark this fact, that not only their specific type is extensible, but that their different organs may be altered in various ways; and according as man finds it to his interest, he can develop in individuals those parts which he thinks desirable. This is done every day in plants, which we see enlarged or diminished at will, in dimensions, or in any other way that is thought advisable. Flowers, for example, can be varied either in size, form, or colour. It is the same with regard to animals, and with them the power of change seems to be even carried to a higher degree; in fact, by particular combinations, especially by judicious crossing, we have succeeded in varying colour, modifying form as well as size, and developing one part to the detriment of another, which is thought less useful. Such facts are brought to our notice daily, and upon them it consequently is useless to say more.

We may consider that all species offer a certain amount of resistance to change, which once overcome, each individual of which it is composed becomes far more pliable or more susceptible of being moulded, and consequently yields more readily to the changes that are imposed upon it. In fact it is known that some species of plants which have been cultivated for a considerable length of time without varying have at length shown signs of a slight change, which in a short time has resulted in something far more important, and all this without man's having done anything more than sowing the seeds; such is the case with Dahlias, Chinese Chrysanthemums, China Asters, &c. But with some other kinds it is quite different, and these changes cannot be produced except by taking active measures, that is to say, by fertilising the flowers artificially; such are Gloxinias, &c.; but in all these cases it must be remarked that this fertilisation has not been effected between different species, as is too often supposed, but between half breds; that is to say, between different

varieties of the same species. All individuals thus obtained will breed to any extent.

One proof of the fact, that every species offers a certain amount of resistance to change, is furnished by Erythrina crista galli, a plant well known in horticulture. It had been multiplied from seeds for very many years without producing any varieties, when one day it occurred to a very intelligent amateur to fertilise the flowers with the pollen from Erythrina herbacea, whose flowers are of a deep reddish purple; the result was perfect; the ovaries enlarged, and by and by the seeds, carefully sown, produced plants, which from their look, as well as the form and colour of their flowers, resembled those of Erythrina herbacea. The change was effected, the resistance overcome; the seeds gathered from this new acquisition produce varieties with flowers of extremely different size, form, and colour, and that naturally, that is to say, without being fertilised afresh. We must add that all the seedlings are perfectly fertile. The result of this experiment has an especial interest, inasmuch as it bears directly upon the question of species, furnishing a new proof that they have been excessively multiplied; that Erythrina crista galli and E. herbacea are not two distinct species, as has been thought till now, but simply two forms of the same specific type.

We perceive amongst animals facts similar to those we have stated with respect to plants; we also remark in them that certain species vary in very different degrees, some more, some less. In a word, we observe in both cases species more or less tractable, or more or less intractable, and that either in wild nature, or when special combinations take place, that is to say, when individuals that possess such characters as it is desired to propagate are crossed.

Let us add, that what makes this question of species so extremely complicated, is the much too ready admission of so called new species, where a very moderate amount of careful observation would show that they are only simple varieties. If all these pretended novelties were submitted to a strict investigation, the number of what are called species would be reduced by half and more, as would also the genera; and this would be a blessing to us all, whether men of science or simple gardeners. Uncalled for divisions and subdivisions are a burden to the memory, and quite discourage practical men. They have also the enormous inconvenience of filling the heads of people and their books with a crowd of names for which afterwards no application can be found. The architect's plan remains, but the materials have disappeared.

Although my object in writing this article was nothing more than to express my opinion upon the subject of species, I have been obliged to overstep a little the boundary I at first laid down, that is to say my intention of not mentioning the names of persons, in order that the discussion might not have the appearance of a personal criticism. But facts which cannot be omitted, on account of their bearing on the subject, and the force they give to my argument, oblige me to be less reserved. These facts in confirming what is here asserted, "that species have been multiplied far too often" have also the advantage of proving the slight grounds upon which many of them have been based. While I declare that this discussion rests exclusively on facts, the question is one about things not about men. However, to prevent all suspicion, I give the names of those authors from whose writings I have taken my information; they are the "Flore de France," by MM. Grenier and Godron, the last edition of the "Flore du Centre de la France," by N. Boreau, enriched by 500 new species, the observations and the "Pugillus" of M. Jordan, &c.

In the first place let us take the genus Rubus, because whilst it is a very natural genus, the facts with which it furnishes us are easy to prove, dealing as it does with plants known, one may say, to all the world. Thus, out of about two species, Rubus fruticosus and cæsius, of Linnæus, MM. Grenier and Godron have contrived to make 22 species; about which it is sufficient to say that if such fugitive forms are to be taken as types of species, I will engage to produce from the seeds of any one of them, an unlimited number of similar species of as much importance as those to which I have alluded.

Thanks to the vigilance and care of M. Decaisne, Professor of Agriculture at the Museum, who has traced back to their original source most of these species of Rubus, which have been planted in the nurseries of the Museum, where they could be easily studied and compared one with another, I can assure those who are interested in the matter that Rubi remain in very nearly the same state as they were in the days of Linnæus. Notwithstanding the number of species which have been invented, there is in reality but two, the very same as those the celebrated Swedish botanist knew in his time. As to the others, it demands some complaisance to admit them even as varieties of more or less importance. But in this enlightened age it is difficult to stop on so pleasant a road. Thus several botanists have already improved upon the number 22, and a rummage of the forest of Retz and Villers-Coterêts, has enabled certain Bramble-mongers to increase it by about 15 more. M. Boreau, a still cleverer man, has found out the way of running up the number to 54. Such rapid progress might have authorised us to hope that, although in time other types might be discovered by attentive observation, nevertheless we were for some time (at any rate) certain of remaining with the modest number of 54!—Not at all; on a sudden, a German botanist, M. Muller, of Wissemburg, startled even our Bramble-mongers by announcing that he had made out 238 species of Rubus!! After such a discovery we can only hope that the question will die out, that it will become ridiculous, and that French Bramble-mongers will give the palm to the very keen-sighted German gentleman; in a word, that the whole lot of such authors will be good enough to bury themselves under the prickly edifice they have created.

And what too of the genus Hieracium, the species of which have been multiplied to such a degree that at last they are only to be distinguished by the names or numbers stuck at their side in herbaria or botanic gardens. If these names or numbers happen to be lost, it is in most cases quite impossible to identify such species, the trifling characters of which can only be compared to those of the persons who established them. Some idea may be formed of the confusion that at present exists in this genus, when we recollect that the Hieracium murorum and sylvaticum of authors, have actually brought forth 60 new species.

Home Correspondence.

Botanical Names.—If *J. B.* will refer to the Report of a Committee appointed by the British Association for the Advancement of Science in 1842, to consider of the rules by which the nomenclature of Zoology may be established on a uniform and permanent basis, he will find the following:—In Latinizing proper names, the simplest rule appears to be to use the termination *us*, genitive *i*, when the name ends with a consonant; and *ius*, genitive *ii*, when it ends with a vowel. *P. G. E.* [We only wish those who name plants would *attend* to this very proper and simple rule. But alas!]

Ash Poles.—Will any of your readers give me their experience in the management of Ash poles? Should they be thinned, and if so, at what age is such treatment profitable? Or is it better not to thin them at all. *Constant Reader.*

Coe's Golden Drop Plum.—I have a tree of this variety growing against a north wall 12 feet high, which has this season ripened a good crop of finely-flavoured fruit; indeed, I may say the best fruit we have gathered this season. I think this fully bears out all that has already been said in favour of this Plum for a north wall. On the other hand four trees growing against a south wall have not borne any fruit this season, owing, I imagine, to the roots having entered the subsoil, which, however, I think must certainly also be the case with those on the north wall, though the latter are still doing well. *E. W., Kilmore Palace, Cavan, Ireland.*

Cyanophyllum magnificum.—Permit me to inform your correspondent Mr. T. Baines, who wishes to know if any one has seen a specimen of this with larger leaves than those he describes, that there is a plant here with leaves 36 inches in length and 20 inches in width, making an inch and a half longer and wider than Mr. B.'s leaves are. *George Thomson, Stansted Park, Sussex.*

Productive Nut Tree.—On the 19th of October last there was gathered from one tree in the garden of Mr. Webb, of Calcot, near Reading, the astonishing quantity of 107 lbs. of nuts, and since that day 3 lbs. more, making in all 110 lbs. of this fruit produced in one year by one tree. *W.*

Vines and Vine Borders.—After all the discussion that has taken place on these topics, especially the latter, my opinion is that more Vines fail from too little attention having been paid to the protection of their roots than from the quality of the material used in the borders. During the last week I have been engaged in examining the state of a Vine border which some years back no doubt was in a good condition, as very good Grapes were produced from the Vines which grew in it. The border is 17 feet wide, with a very nice slope, and the material of an open porous nature; from the front of the border to within 3 feet of the house there is not a root to be found, but in that space there is a moderate amount of healthy roots. A stone pathway extended the full length of the border at 3 feet from the house, and beyond that not a root.

The house is heated by a flue which is lower than the front plate, and the border is sensibly warm near the warmest end of the flue, and the Grapes, which are mostly Muscats, are of better quality; they however all shank more or less, but those the least at the warmest end of the house. The border was renovated some 14 or 15 years back, and since that time not a root appears to have entered the border beyond the pathway. Now had there been more protecting material or an artificial method of warming the border resorted to, I believe the case would have been different, as it appears what few roots have been made at the extremities have perished in the winter, as it has been the habit to place only 4 or 5 inches of new leaves on the surface, and half of these were blown off by March. I imagine some strong roots have made their way downwards, from the circumscribed space in which healthy roots are found, but I shall disturb them; by gentle treatment, encouraging abundance of foliage, and light cropping, coax them to take a ramble into the warm bed which I shall prepare for their roots. By a good amount of covering, and either thatching or applying shutters, I feel confident, from former experience, of renewing their wasted energies, and feel satisfied that I have acted according to Nature's laws. The border is well drained, and at the bottom of it is a good quantity of rubble; below the rubble a strong loam resting on limestone rock. The situation is 200 feet above the river Derwent, and about 600 feet above the Thames at London Bridge. The temperature of the soil at 2 feet deep in the open ground this Nov. 30, is 38°, where covered with 2 feet of leaves at 2 feet deep, 60°; the latter must be a more congenial element for the roots of the Vine than the former. Some people raise an objection to fermenting material being put on borders, but where nothing better is to be had that must be used; again they will say "but you begin at the wrong end, heat won't go downwards." How then does the sun warm the earth? Surely not from the antipodes, or it would be warmer in winter than in summer. Warmth will descend but not so rapidly as it will ascend, but when once the surface of the earth becomes warmed, one particle of soil heats another. I started some Vines the 3d of November, by placing previous to that time a good thickness of leaves, with a little stable litter, on the border, and now, at 2 feet deep, the temperature is 75°; the buds are just showing symptoms of bursting, and the points of the shoots inclined to bleed. Last season when I entered my situation in February, the bunches were visible, but nine-tenths went blind from excessive cold and wet. The border is on the north side, and was made by the late Mr. Arkwright as an experiment, and very good Grapes have been produced from the Vines. I have renewed half the border this year and expect good results. *J. Gadd, Gardener to P. Arkwright, Esq., Willersley, Derbyshire.*

Cuthill's Black Prince Strawberry.—I am now able to assert that Cuthill's Black Prince is different from Malcolm's Seedling which is commonly called Black's Seedling. They somewhat resemble each other in foliage and fruit, but the blossom is not at all the same; they differ a little in flavour, and the Black Prince is a few days earlier than Malcolm's. This season has not been at all favourable for Strawberry crops. I have 21 varieties growing here, and the finest crop I had this season was from plants of Black Prince, Cuthill's Princess Royal of England, and Prince of Wales. I had the finest blossom on the Princess Royal I have ever seen in the north of Scotland, and had the season been more favourable there would have been double the quantity of fruit. The Prince of Wales is really a fine late variety. I had plants on a north-east aspect, and had them a few weeks later than any other variety. *Jas. Thomson, Durris House, Aberdeenshire.*

Hogg's Edging Tiles.—About five years ago I purchased 3000 of these tiles, and laid them down as an edging to our kitchen garden walks. They have not been disturbed since, and on looking at them to-day I find that only about 20 of them have been injured by frost. We have terra cotta edgings here that stand frost well, but I like Hogg's best. *J. Morris, Gardener, Manor House, Wethersfield.*

Varieties of the Pampas Grass.—I have the two varieties of the Pampas Grass, one with narrow leaves from 4 to 6 feet long, which drooping over stand up about 2½ to 3 feet high. Its flower stems carry upright flowers, and are from 5 to 7 feet high, seldom quite 7 feet. The general appearance of its foliage is that of a Dasylirion. The other has leaves from 10 to 12 feet long, drooping over but standing from 7 to 8 feet high, rather more than less, and with flower stems varying from 10 to 12 feet. The flowers partially drooping or nodding likely the Prince's Feather. Its general appearance is that of an enormous Grass or Sedge. The dwarf variety flowers fully three weeks earlier than the large, and is much more free to flower. My plant has produced 15 stems the second year after planting, which was the first year of its flowering. The larger variety has only 15 stems this year, having been planted 5 years, and did not flower at all till the 4th year. I should be glad to know which is the male and which the female plant. The large variety is a seedling from the Horticultural Society, the other a purchased plant obtained by division. *J. R.*

The Seasons.—The extraordinary seasons that have been experienced during the last ten years, characterised by great heat and drought at first, and subsequently by unusual cold with heavy rain and floods, have naturally excited the attention of the public as well as of astronomers and meteorologists, while many conjectures have been hazarded in order to account for the phenomena. As no satisfactory explanation has been offered of the cause of these variations, I beg leave to forward you the enclosed work, by a reference to which and to the chapter which contains the History of the Black Death, it will be seen that the same vicissitudes were experienced during the whole period of the prevalence of this disease in Europe. Having inferred that we are now living in an epidemic period, which commenced with the appearance of the epidemic cholera in India in 1817, I also concluded at the time of the publication of the above work, that the disease in the human race would be followed by murrain among the cattle, and blights in the vegetable creation, with unusual atmospherical vicissitudes. This prediction has unfortunately been verified to the letter. Whether the explanation offered by me of the cause of these various phenomena will be considered satisfactory by you and others is another question, but the connection with each other cannot, I think, admit of any doubt. It follows, therefore, that as all general pestilences of

which we have any record have always prevailed for some considerable period—for one or two centuries—the phenomena that have accompanied and followed the epidemic cholera are likely to recur again and again. Although unable to prevent their recurrence, it may yet be in our power to guard, to a certain extent, against some of the results that follow in their train. I allude to the bad harvests, and to the famines that may hereafter be experienced. In the first place, as the wet and bad seasons are almost invariably preceded by hot and good ones, as was the case in Pharaoh's time, legislators and others should follow the example of Joseph, and lay up a store in abundant harvests for the subsequent deficient ones. In the next place, the cultivation of the Potato should be abandoned, excepting as a luxury, for as that vegetable appears to be more susceptible of disease than any other, its continued cultivation, as an article of food for the million, is almost a suicidal act. It is not necessary to add more, as the above will, I trust, be sufficient to induce you to consider the facts contained in the accompanying book with the attention they would seem to demand. *J. Parkin, Paris, November* 20. [Dr. Parkin's work on Endemic diseases consists of two parts, published by Hatchard, the first in 1841, the second in 1853. Both were noticed by us at the time of their appearance. The chapter on Black Death alone occupies 38 pages, and is therefore far too long for insertion here.]

Lean-to Houses.—I beg to forward you the following Table relative to the dimensions of lean-to houses. To gardeners and others engaged in planning and building such structures, I think it will prove useful by facilitating their calculations, and saving them much labour, and, perhaps, some little perplexity. The following illustrations will show some of the purposes to which it may be applied :—

Ex. 1.—Given the height of Back-wall 15 feet, and the required angle 40°; what would be the Width of the House and Length of Rafter?

Width of House ... = 1.191 × 15 = Ft. 17.865 or ft. 17 in. 10½

Length of Rafter = 1.555 × 15 = Ft. 23.325 or ft. 23 in. 3 9/10

Ex. 2.—With an angle of 50°, what would be the Height of Back-wall and Length of Rafter, supposing the width of the House to be 12 feet?

Height of Back-wall .. .. = Ft. 12 / .839 = Ft. 14.3 or ft. 14 in. 3 3/5

Length of Rafter = 14.3 × 1.305 = Ft. 18.661 or ft. 18 in. 7 9/10

Other examples might be adduced, but it will perhaps be sufficient to state generally that any one of the three dimensions with the required angle being given, the others may easily be found from the Table. Also of existing or proposed structures, if any two dimensions are given or known, the angle and the third dimension may be found by aid of the Table—

TABLE, showing the relative dimensions in Lean-to Houses, of Back Wall, Width of House, and Length of Rafters, when the Angle formed by the Rafter and Base or Ground Line ranges from 30° to 60° inclusive.

Angle of Rafter with Ground Line.	Height of Back Wall.	½ Width of House.	Length of Rafter.
Deg.			
30	1	1.732	2.000
31	1	1.664	1.941
32	1	1.600	1.887
33	1	1.539	1.836
34	1	1.482	1.788
35	1	1.428	1.743
36 ..	1	1.376	1.701
37	1	1.327	1.661
38	1	1.279	1.624
39	1	1.234	1.589
40	1	1.191	1.555
41	1	1.150	1.524
42	1	1.110	1.494
43	1	1.072	1.466
44	1	1.035	1.439
45	1	1.000	1.414
46	1	.965	1.390
47	1	.932	1.367
48	1	.900	1.345
49	1	.869	1.325
50	1	.839	1.305
51	1	.809	1.286
52	1	.781	1.269
53	1	.753	1.252
54	1	.726	1.236
55	1	.700	1.220
56	1	.674	1.206
57	1	.649	1.192
58	1	.625	1.179
59	1	.601	1.166
60	1	.577	1.154

A B., Chirk.

Oyster Shells for Vine Borders.—Under the head of the "Home Correspondence" in the *Gardeners' Chronicle* of last week, p. 1042, I was much struck with Mr. Sheppard's letter on the use of burnt oyster shells in the construction of his Vine border. On mentioning the subject to my gardener he seemed to think that were the oyster shells merely broken fine, and not burnt, they would have a more beneficial effect. I do not concur in his opinion, and as no doubt the letter must have attracted the notice of the Grape growers generally throughout England, Wales, and Scotland, and as every one is now busy in making new Vine borders and renovating their old ones, I should esteem it a favour if you would, in your next week's Number, under the Notices to Correspondents, give me your valuable opinion as to which of us is in the right. By so doing you will much oblige *A very Old Subscriber.* [There can be no doubt that burnt oyster shells will act better than broken ones.]

Foreign Correspondence.

NICE, *Nov.* 26, 1860.—The journey to this beautiful spot has been shortened considerably by the opening of the railway from Marseilles to Toulon. The diligence from the former place used to take about 25 hours for the transit; by the rail you now go in two hours, through a most picturesque country on the borders of the Mediterranean to the celebrated port of Toulon, and from thence the diligence or *malle poste* reaches Nice in less than 14 hours. It is expected that in two years the railway, now in active progress of formation, from Toulon to this place, will be opened, affording increased facility. Vegetation seems more backward than at my former visit, some six years ago; the Oranges were then almost ripe, now they are for the most part only beginning to change colour. though the crop is abundant. On one tree under which I stood a few days since, it is said there are 2000 at least, but I certainly did not stay to count them. I am told that the weather during the past summer has not been so hot as usual, and though dry yet a cloudy atmosphere has prevailed, so that there has been less of the brilliant sunshine for which this neighbourhood is so remarkable. In fact the climate may be said to have sympathised with that of England. At Toulon, I was informed there had not been rain for two months. The weather here during the present month has been of the ordinary variable character, November being considered as the most rainy month of the year; still we have had within the last fortnight nine days of beautiful warm sunshine, quite equal to what we were accustomed to in the best of our English summers; one night there was a slight frost by which the Vegetable Marrows were partially cut off in the valleys. There are yet many wild flowers in blossom, and those in the gardens, more particularly the Roses, are splendid. Green Peas, Cauliflowers, Alpine Strawberries, Figs, Peaches, Grapes, and Radishes, are still commonly sold in the markets. We have just begun fires, which are only necessary when the sun does not shine. Before I left England complaints were made of the doughy state of the bread arising from the damp condition of the Wheat, here, however, it is excellent, and the change is much enjoyed. The natives have a method of wetting their corn in a bin as we do Barley, for a short time and then laying it out in the hot sun on a brick floor to dry, by which the quality of the flour is improved. I annex an account of the daily temperature. It may be interesting to some of your meteorological readers by way of comparison with that of their own :—

THERMOMETER IN THE SHADE AT NICE.

	7 A.M.	Midday.	10½ P.M.
November 11	50°	55°	54°
,, 12	53	59	53
,, 13	52	61	53
,, 14	53	56	52
,, 15	50	59	52
,, 16	52	62	52
,, 17	55	59	55
,, 18	55	61	45
,, 19	40	55	41
,, 20	40	55	45
,, 21	47	56	44
,, 22	45	51	45
,, 23	52	53	45
,, 24	48	57	50
,, 25	41	59	48
Mean	48	57	49

E. Copland, 21, *Promenade des Anglais.*

Sociétés.

LINNEAN: *Nov.* 15.—The President in the chair. The following communications were read:—1. "Catalogue of Dipterous Insects collected in Batchian, Kaisaa, and Makian, and at Tidon in Celebes, by Mr. A. R. Wallace, with descriptions of the new species;" and 2. "Catalogue of Dipterous Insects collected at Manado in Celebes, and in Tono, by Mr. A. R. Wallace, with descriptions of new species," both by Francis Walker, Esq. 3. "Note on the Fructification and Affinities of **Hydnum gelatinosum,**" by F. Currey, Esq. 4. "Extracts from a letter from Miss Drew to Mr. Robert Patterson, of Belfast, on the habits of some singing mice," communicated by the President. Miss Drew stated that the inmates of their house had been much annoyed all winter by singing mice; "disagreeably tame or fearless little creatures, who have got into the beds, run up the cook's shoulders at family prayers, sat chirping on dressing tables, while toilettes were being made, and inside the parlour fender for an hour or more, heedless of several pairs of feet placed on the rail. These creatures have consumed much poison, which seems to agree remarkably well with them, as they only grow more tormenting instead of dying. Yesterday they took possession each of a toe of my India rubber shoes, which were lying in the middle of the kitchen floor. The shoes were moved a little several times by the brushing of skirts during the preparation of dinner, but still they sang on unmoved. After dinner I turned one of them into a basket (not having a cage at hand) where it continued its song for three hours with only a minute's intermission. When in the basket it had three distinct notes. The softest resembled the singing of a kettle; the next loudest the twittering of many sparrows; while the loudest and least frequent was so exactly the chirp of a cricket as to deceive the nicest ear. The chirping noise appears to cease only while they eat. Nothing frightens them, and the blows of shoes, Potatoes, bones, spools of thread, and other missiles, do not hurt them. They never hurry their movements, but chirp loudly night and day—up stairs, down stairs, on the dressing tables, in the beds, in the hall. The noise keeps the nervous members of the family from sleeping, and disturbs the children when practising. In fact, these two miserable mice are gradually assuming the sovereignty of the house. Every one, except myself, has an unuttered fear of them, but I perceive a great rally of courage in the kitchen regions to-day, where one victim is seen chirping in a wooden trap box."

ENTOMOLOGICAL: *November* 5.—J. W. Douglas, Esq., President, in the Chair. The President exhibited Mycetoporus angularis, one of the Staphylinidæ, new to this country, taken in October near Shoreham. Dr. Power exhibited the same species, which had also been found near Reigate by Mr. Brewer; also Sphindus Gyllenhallii, taken in fungus in the New Forest; Læmophlæus bimaculatus, Hetærius quadratus, found in the nest of Formica rufa at Weybridge, and other rare English beetles. Mr. MacLachlan exhibited some rare species of Phryganeidæ, including Limnophilus borealis and Agrypna Pagetana, taken at Ranworth fen. Mr. Scott exhibited a number of specimens of the very rare blind beetle Leptinus testaceus taken in a dead mole near Woolwich. Mr. Ianson also exhibited various new and rare British beetles, including three species allied to Bradycellus harpalinus. Mr. Stevens exhibited some very fine new Coleoptera, collected in Cambodia by M. Mouhot, including both sexes of Baladeva Walkeri (hitherto unique), and some splendid Buprestidæ, Longicorns, and Huthribidæ. Mr. Ianson exhibited the nest of a Hymenopterous insect (Pelopæus ——?) which had been found in the inside of a pianoforte returned from India, communicated by Messrs. Collard, the insects of that genus being often found in apartments in tropical countries, making their nests of mud in the angles of the walls, &c. A paper was communicated by F. Walker, Esq., containing descriptions of new species of exotic Lepidopterous insects in the collection of W. W. Saunders, Esq. Mr. G. R. Waterhouse read a paper on the Chrysomelidæ of the Linnean and Banksian collections, which he had carefully examined with the view of determining the synonymy of the species of that family, described by Linnæus and Fabricius, so far as could be learned by an inspection of the original specimens examined by those authors, and which had resulted in the discovery that the major part of the species were now known under their correct names. A new Part of the Transactions was announced as ready for distribution amongst the members.

ROYAL HORTICULTURAL OF IRELAND: The winter exhibition of flowers, fruit, &c., which took place the other day in the Rotundo, was in every way successful. Indeed, it could not have been otherwise, for neither pains nor expense were spared in rendering it all that could be wished. It may be remembered that last year the Pillar Room was that selected for the winter exhibition, but so numerous were the entries upon the present occasion that the Round Room had to be called into requisition. The style in which the flowers were arranged here displayed the greatest taste, the whole presenting a really brilliant and beautiful appearance. The stages were arranged round the room, with breaks so as to admit of promenade, and in the centre stood a large table, bearing an exquisite collection of flowers. The general effect on entering this part of the building was very striking, and elicited many marks of admiration from the visitors. The stages contained fine collections of Chrysanthemums, &c., in pots. In this class the principal exhibitors were the Chief Secretary, Dr. Nelligan, and Mr. Watkins. The two first-named gentlemen were so nicely matched that the judges were unable to say whose exhibition was the best, and had, therefore, to award a first prize to each. Stove and greenhouse plants were numerous. On the table in the centre, to which we have referred above, were placed some beautiful Camellias (in which Alderman Roe and Mr. Gray were the chief exhibitors), and round these Orchids stood in rich profusion. In the latter class the successful competitors were the Lord Chancellor, Mr. J. Hone, and Mr. O'Callaghan. In the Pillar-room everything was in equal profusion, the centre of the stages being filled with some exquisite New Holland plants, beneath which, on either side, line after line, were dishes of fruit, presenting a pleasing and tempting appearance. The collection of Grapes from the Chief Secretary, who had no less than nine varieties, besides competing successfully in the classes, was very fine indeed. Of Grapes, the Lord-Lieutenant, Mr. Gray, and Mr. Woods, also presented some admirable specimens. Mr. H. Maunders showed an excellent Pine Apple. Mr. Woods and Colonel Taylor exhibited an extensive collection of fruit. In Pears,

the Lord Chancellor and Captain Isaacs were very successful. The attendance was numerous and select. Towards evening the gas was lighted, and the effect created was novel and pleasing.—*Irish Paper,*

Notices of Books.

Cordon Training of Fruit Trees, Diagonal, Vertical, Spiral, Horizontal, adapted to the Orchard-house and Open air culture; by the Rev. T. Collings Bréhaut. Small 8vo, pp. 120. Longman and Co.

This short work, we are informed by the Author, is the result of much leisure time, which an enforced idleness, from over fatigue in the charge of a large parish, unexpectedly created. Summer after summer, and winter after winter was passed by him abroad and thus he was enabled to observe the various modes of fruit culture practised in different countries. Among other motives which inclined him to give the result of his own experience was the wish to make known the decided success of a *novel method* of fruit culture, called generally "Cordon Training." One form had been found extremely [well] adapted for the back wall of a lean-to orchard-house; this was the Diagonal Cordon, with three leaders—a form which may be considered as the perfection of the whole method. It has a certain resemblance to the single oblique training practised so successfully at Montreuil, near Paris; very important modifications were required, however, before any practical result could be depended on. "With respect to the actual results as yet obtained, the back wall of my Orchard house, which is a lean-to, produced at the rate of three Peaches per square foot. On this wall alone the produce was at the rate of 600 fine Peaches and Nectarines (some of the former were 9 inches in circumference), so that a house 100 feet long and proportionately broad might reasonably be expected to produce 2000 Nectarines and late Peaches on the back wall, and at least as many more Apricots and mid-season fruits upon the rows of trees in pots."

The second chapter of the work treats of the general principles of fruit culture, briefly of course, but the maxims may be very usefully acted upon. Although similar to those we have frequently endeavoured to inculcate in our columns, we may nevertheless give some of them in the author's own words.

"The amateur should remember, that the natural tendency of the sap is to flow upwards and towards the extremities of the branches, so that without due care, especially at the commencement, the centre of the tree, and the lowest branches (in the case of those on walls) become less vigorously stimulated, and are thus dwarfed in comparison with those higher up. This will cause an unequal distribution of fertility, and quickly destroy the harmony and symmetry of the tree. The leaves, according to their number and healthy state, draw up and attract the sap. Therefore a branch once enfeebled has by its *very want of power* an increased chance of decay.

"When then we perceive a commencement of this want of due vigour in any branch, we must hasten to remedy it. There are various ways of obtaining this object, but I refrain at present from mentioning many of them. One excellent plan is to allow a *larger* number of leaves on a *weak* branch than on a *strong* one. By removing a portion of the leaves on a vigorous branch (cutting them in two is the best), and by allowing as many as possible on a weak branch, we equalise both.

"Another method of strengthening a weak branch is to untie it from the wall, and allow it to swing loosely in the free play of sun and air on all its sides, one at least of which would otherwise receive nothing. By pinching off the green ends of branches [shoots] some time before the others, those first reduced in length are checked in their growth, because they have not so many leaves from being shorter."

In speaking of the seasons for pruning, the author says, there is no doubt that pruning *during the summer months* is too much neglected. There are so many demands upon the precious hours at this period, that this indispensable act has not often its due attention; then, when the winter surprises us, we are apt to find a huge entangled, overgrown mass to unravel, demanding very much more labour and skill. This is a vicious custom with unskilful gardeners, because a severe use of the knife is to them the great resource and panacea for all evils. All their errors, they think, are thus obliterated until the next season's wood shall recommence. A tree severely cut back, and tightly nailed in, looks so very knowing and argues so much forethought. No matter the age or kind of tree, a smart semicircle is described over its unhappy limbs, and branch after branch disappears "at one draw." But it is as in life, we can only hope with reason to turn aside the violence of a wrong bias at the outset. An even balance should be preserved; no part of the whole system should run riot while the remainder unfairly languishes.

Cordon training derives its name from its fanciful resemblance to a cord or chain. A certain number of leading branches are carried out, and on them spurs are developed, so that the branches look somewhat like twisted cables or chains. Several kinds of Cordon training are described in the work before us:—Diagonal, Spiral, Vertical, and Horizontal, but that which the author recommends is the *Diagonal Cordon on the triple system*, of which there is an illustration in the frontispiece. By referring to this, in connection with the explanations which are clearly given, the system will be readily understood. Against a wall the trees, maiden plants, are planted 3 feet apart, and trained obliquely at an angle of at first 65°. The laterals on the stem are shortened to two eyes. Supposing the stem is inclined to the *left*, a shoot from its base, about a foot above the surface, is trained horizontally to the *right*. Next season this shoot is sharply turned upwards and inclined to the left, parallel to the stem, for a second leader. In the third season a third leader is trained in a similar manner, and ultimately the three leaders are brought down to an angle of 45°. The framework then of the tree consists of the original stem of the maiden plant trained obliquely, and two branches parallel to it proceeding from a horizontal one. If this horizontal portion should fail, so must the two branches that are prolonged from it. But it may be said, why should there be apprehension of its failing, any more than one of the main branches of a fan tree set off in the V form? There is, it will be observed, a great difference in the angles of divergence. In the V it is about 45°, corresponding nearly with that which the branches of the Peach naturally form. Branches taken directly from an upright stem at an angle of 90°, that is in a horizontal direction, are not to be depended on in the case of stone fruits. But in this cordon system the angle is 135°, rather a backward turning for the sap to follow. Then, after proceeding 1 or 2 feet to the right, it has to make a quick half turn to the left. We think the acute angles had better be rounded off.

There are only the three oblique branches for bearing the crop, and they are only a foot apart; in fact, the rectangular distance between them is scarcely 8½ inches. The spurs, therefore, can extend little more than 4 inches on either side of the branch without interfering with each other, and only 3 inches if the branches live to become 2 inches in diameter; then, instead of keeping "the spurs and the growths on them *within six inches*," they will have to be kept within *three*, and that, even in the case of the Peach, will be close work.

We shall now endeavour to give some general idea of the system of spurring recommended, and which is well detailed in the work, which those wishing to try the experiment of cordon training ought to consult. Whether the system prove good or bad, it must be admitted that the author has clearly explained the mode of proceeding.

The summer laterals of the Peach are a sort of unsubstantial spray; their lowest buds are situated about an inch from their bases, and in this respect they differ from a shoot proceeding from a mature bud; they are slender bases to rest future hopes upon. Nevertheless, they are to be cut down to two eyes at the winter pruning; and the part left is termed a spur. As soon as the shoots from the two buds on the spur have pushed in the following spring so as to have six leaves, they are pinched down to two leaves on the *upper* side of the tree, and to three leaves on the *lower* side. In the same season, the shoots thus shortened push a fresh shoot; when this has made three leaves, it is pinched back to two; any future growths that may appear from those pinched back must be shortened to one leaf. At the winter pruning one of the two shoots is cut so as to be within the 6 inches prescribed, "and the other must be cut short to furnish new wood to bear alternately;" but that new wood is pinched in as above described.

Now, the difference between the bearing shoots in this spur system, and those in well managed fan trees, according to the method we have pointed out at p. 1038, is this: in the spur system the fruit is borne on the lower part of shoots that have been continually pinched back whenever they endeavoured to extend beyond a few inches. In the other case the fruit is borne on the lower part of succession shoots that were encouraged to grow full length, except in some particular instances where excessive vigour might render a check advisable.

In the spur system the shoot is dependent for its formation on two or three fully developed leaves, and some secondary ones formed on later growths, resulting from successive pinchings. Young or partially developed leaves do not elaborate much sap for the benefit of the parts beneath them. According to Mr. Knight, young leaves chiefly appropriate the sap they elaborate for their own growth. In this climate we require well developed leaves as early as the weather will permit, for late foliage produces only soft and immature wood. It is the uninterrupted growth of foliage throughout the summer that gives size, strength, and firmness to the lower part of succession shoots in the ordinary well managed fan training, and from such vigorous shoots large fruit is invariably obtained under favourable circumstances.

For these reasons we doubt the ultimate success of close pinching in our climate. It may succeed better in France, and in Guernsey, where the author made his experiments. It may answer for trees in pots in orchard houses, and for such it is strongly recommended in the work under consideration. Cordon training is stated to be applicable to the Apricot, Pear, Plum, and Cherry. As these naturally produce fruit spurs, close pinching will doubtless answer better than in the case of the Peach and Nectarine. This little work will be very useful to those who wish to try the modes of cordon training; and it also contains some useful hints respecting orchard houses. ||

Moore's Index Filicum.—We have received from Mr. Pamplin the following letter:—

"Although a matter of really small importance, yet as two friends have called my attention to your Reviewer's remarks on 'Moore's Index Filicum,' parts 8 and 9, in the *Gardeners' Chronicle* of last Saturday, it seems hardly right for me to let the statement therein made pass altogether unnoticed, especially as that statement is exactly the reverse of the fact. Your Reviewer says:—'Its utility would be much increased were the publisher to be more expeditious in bringing it out. We believe we are right in saying that the preparation of the MSS. causes no delay in the publication.' The author best knows as to 'the *preparation* of the MSS.,' the publisher only heeds the *possession* of it; and he is able to show by reference to—1st, the dates on the printer's file of proofs; 2nd, the author's own written communications to him, that whatever the cause of delay, it certainly is not attributable to himself.—*Nov.* 29."

The Floral Magazine for December has figures of the President Rose, a noble looking sort with pale salmon coloured flowers, of American origin; two huge Petunias with white flowers bordered and blotched with rich purple; three Gloxinias, and as many Fancy Pelargoniums.

Garden Memoranda.

MR. MACINTOSH'S NURSERY, KING STREET, HAMMERSMITH.—Among Chrysanthemums now in bloom in the show house here the following are worthy of especial notice, viz. Berthile, a free flowering Hybrid Pompone, lilac edged with white; Solfaterre, a pretty yellow Pompone, bearing from 6 to 8 flowers in a cluster on the end of each shoot, and one of the hardiest Chrysanthemums in cultivation, plants of it blooming profusely this season out of doors when many other kinds have failed; Helene, a lilac sort, is also useful for out-door decoration, as are likewise both white and golden Cedo Nulli, two of the best small flowered kinds in cultivation, the rich brown eye which both of them possesses setting off their other colours to excellent advantage. For indoors Brilliant is a useful Pompone, superseding Bob this season, which has flowered badly. Hendersoni is still one of the best early yellow Pompones; but this year, like others of its class, it has bloomed much later than usual. Madame Rousselon is a good lilac and white; but perhaps one of the best in this way is Madame Fould, which is full flowered and finely formed, and altogether one of the most beautiful of Pompones. General Canrobert is a finely formed yellow and a free bloomer, and the same may be said of Duruflet, a purplish lilac. Madame Jaquin is a good white with a yellow eye. Surprise is perhaps too like Madame Rousselon to be grown along with that kind in small collections; but for purposes of decoration on a large scale it will be found worth attention. Orion, a small yellow sort, is with some a great favourite, resembling as it does in appearance a miniature Sunflower.

Of large varieties one of the best is undoubtedly Vesta. For pot culture this is exceedingly well adapted. Progne and Aimée Ferrier are also two excellent kinds, the former a bright crimson. Among other sorts were Auguste Mie, Vulcan, a late red, Sydenham, Plutus, Pio Nono, Phidias, Ne Plus Ultra, Madame Clos, Golden Cluster, Mount Etna, Cassy, and Prince Albert, the last a large showy dark red variety.

Among Anemone-flowered yellow kinds Gluck still holds the first rank; it will be found a good associate for Emperor, a handsome white variety, mentioned in our report of Mr. Salter's place last week. Fleur de Marie is also a good white kind.

Of Solanum capsicastrum Mr. Macintosh has this year a fine stock of plants, the fruit on which is just beginning to change colour. His plants appear dwarfer and more prolific than is usual with this kind of Solanum. His treatment of it is as follows:—If good-sized specimens are wanted in a comparatively short time, let the young plants be introduced into the warmth of an intermediate house early in spring, and as soon as they have started freely into growth shift them into larger sized pots; at the same time examine the roots, and if they are found to be cramped, or the soil in bad condition, partly reduce the size of the ball so as to set the little rootlets at liberty. When potted place them again in heat, giving little water for a time; but syringe overhead occasionally in order to keep the atmosphere moist. This should be continued for a week or two until the roots have fairly taken hold of the fresh soil. After that water with water of the same temperature as that of the house in which they are growing. They will now succeed perfectly well under the kind of treatment usually given to plants in a growing state, paying attention to stopping all straggling shoots so as to induce a compact pyramidal habit. The pieces removed strike freely, and may therefore be employed to increase the stock. For ordinary purposes 6-inch pots are large enough for them; but if good-sized specimens are required they may easily be obtained with little trouble and of almost any shape that may be desired. About the end of June they should be placed out of doors in as hot and sunny a situation as possible, when they will keep flowering and set fruit better than they would indoors. In September let them be moved under glass,

where, when covered with brilliant orange berries, they are extremely ornamental. Indeed few plants can be compared with this for winter decoration, and what is important the berries are so permanent that the bushes bearing them retain their vivid colouring for several months at a time. The soil most suitable for this Solanum is a light fibry loam intermixed with a little peat and sand. Associated with capsicastrum were S. pseudo-capsicum and laciniatum; the last has large yellow fruit, singularly cut leaves and in summer handsome round violet blossoms.

Veronicas are largely grown here for autumn decoration. Among the sorts were Andersoni, Violacea, hybrida, meldensis, and Lindleyana, the last a white kind. Of these we noticed beautiful bushes just coming into flower. We also observed a variegated variety of Andersoni, which, independent of blossoms, had a pretty effect intermixed with ordinary green leaved plants. Skimmia japonica was finely covered with handsome red fruit, and we also observed a double flowered Feverfew with blossoms as white as snow and as large as those of a Pompone Chrysanthemum, to which they bore considerable resemblance. This will be found a useful plant for winter decoration under glass and also for beds out of doors in summer.

A mode of laying down Grass verges here may be worth the attention of occupiers of small places. It consists in making them of a semicircular form, a little flattened at the top, bringing the edge flush down to the gravel. In this way a larger surface of Grass is secured than could be obtained from the same basis if they were flat.

Miscellaneous.

Sea-Cucumbers.—The Holothuriæ, or Sea-Cucumbers, may be regarded in one light as soft sea-urchins, and in another as approximating to the annelides or worms. Their suckers are similar to those of the true star-fishes and sea-urchins. Besides progression by means of these organs, they move, like annelides, by the extension and contraction of their bodies. The mouth is surrounded by plumose tentacula, the number of which, when they are complete, is always a multiple of five. They all have the power of changing their shapes in the strangest manner, sometimes elongating themselves like worms, sometimes contracting the middle of their bodies, so as to give themselves the shape of an hour-glass, and then again blowing themselves up with water, so as to be perfectly globular. The great Sea-Cucumber is the largest of all the known European species, and probably one of the largest Cucumeriæ in the world, measuring when at rest fully 1 foot, and capable of extending itself to the length of three. Under the influence of terror, it dismembers itself in the strangest manner. Having no arms or legs to throw off, like its relations the luidia and the brittle-star, it simply disgorges its viscera, and manages to live without a stomach; no doubt a much greater feat than if it contrived to live without a head. According to the late Sir James Dalyell, the lost parts are capable of regeneration, even if the process of disgorgement went so far as to leave but an empty sac behind. Considering the facility with which the Sea-Cucumber separates itself from its digestive organs, it is the more to be wondered how it tolerates the presence of a very remarkable parasite, a fish belonging to the genus Fierasfer, and about 6 inches long. This most impudent and intrusive comrade enters the mouth of the Cucumber, and, as the stomach is too small for his reception, tears its sides, quartering himself without ceremony between the viscera and the outer skin. The reason for choosing this strange abode is as yet an enigma.—*Dr. Hartwig's "Sea and its Living Wonders."*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—Where there is a good stock of Azaleas to select from, some of the most forward plants may now be placed in heat in order to get them into bloom early; moisten them overhead two or three times a day. Unless, however, plants can be had which made their growth and set their buds early in the season they need hardly be expected to flower so finely as under more natural circumstances in spring, and unless the buds are plump there will be some danger of the plants starting into growth instead of flowering. Do not forget to introduce a good batch of Roses, choosing the most promising plants for winter flowering. A gentle bottom heat will be of great service to these, as also to most other plants subjected to heat, in order to get them into flower as quickly as possible, and a moist state of the atmosphere must be secured, admitting a little air freely on every favourable opportunity. Pelargoniums should be kept rather cool and dry, giving whatever water may be necessary on the morning of fine days, so that the superfluous moisture may be removed before the evening, avoiding the use of fire-heat except when necessary to prevent the temperature falling below 40°, or to dispel damp, when this cannot safely be done by giving air. Fancy kinds like the warmth of an intermediate house. Calceolarias require very similar treatment, except that they are subject to attacks of thrips unless afforded a moist atmosphere; they must, therefore, be narrowly watched and smoked lightly two or three evenings successively if this pest makes its appearance, keeping the atmosphere moist, and giving air on every favourable opportunity to prevent the foliage from flagging. Cinerarias for late blooming must also be kept cool and airy, and should not be allowed to suffer from want of pot room. Plants intended to flower early should be encouraged with a gentle heat, keeping them as near the glass as possible.

FORCING DEPARTMENT.

PINERIES.—If any portion of the stock is intended for fruiting early, a brisk temperature must be maintained to induce it to start; the most promising plants should be selected for the purpose and placed in a small house or pit by themselves, and, where anything like a regular supply of ripe fruit is required, several houses, or separately heated compartments, should be at command. It is not by any means desirable to start more plants into fruit at this early season than may be absolutely necessary, for they will produce finer fruit later in the season than can possibly be obtained from them now; and where a separate house cannot be commanded for those which must be subjected to a higher temperature, we would advise that the plants selected for fruiting should be placed in the warmest part of the house at command, filling the rest of the house with young stock. The former should be afforded a bottom-heat of about 85°, and the latter about 10° or 15° lower; the atmosphere should range from 68° to 75° by fire heat, allowing it to rise 5° with the assistance of sunshine, keeping the young plants near the glass, and properly supplied with water at the root. This temperature will be considerably too high for young stock at this season, but we have seen this system practised with considerable success; and although the young plants may get s mewhat drawn, they will gain substance as light increases, and the evil will be less than running the risk of starting at this early period of the season the greater portion of the plants that are at command for keeping up the supply throughout the summer.

VINERIES.—Until the buds are fairly broken the points of the shoots should be kept nearly on a level with the lowest part of the Vine; and if this should not be found sufficient to induce the buds to start equally throughout the length of the Vine, the rod should be bent so as to bring the most forward buds to the lowest level, elevating those that are backward. Maintain a thoroughly moist atmosphere by frequently sprinkling the floor and passages, &c.; and syringe the Vines lightly at least twice a day until the leaves begin to appear, when the amount of moisture must be moderated. Give every attention towards securing a gentle warmth for the roots; turning the litter and adding fresh as may be requisite, and keeping it well protected from the effects of heavy rain and severe weather. Be satisfied with a moderate night temperature until the buds begin to push, when it may gradually be raised to 60° by the time that the leaves fairly begin to open.

PEACHES AND NECTARINES.—It must be remembered that these fruits will not admit of rapid forcing in the early stages of the process, therefore fire heat should be applied with caution, so that the night temperature does not exceed 50°, otherwise the blossoms will be weak and liable to drop; during the day the temperature may rise to 60°, with plenty of air on every favourable opportunity. Syringe the trees, and close the house early after a bright day; continue this till the blossoms begin to expand. Cover the outside border with leaves or litter, for the purpose of excluding frost and heavy rains. Tie in the trees in the next house, and get all ready for starting by the end of the month.

CHERRIES.—Trees in pots must soon be placed in the early house, if early fruit is required. Top-dress with fresh loam and dung, and keep a moist atmosphere, with a night temperature of 45° to begin with. Admit plenty of air through the day.

STRAWBERRIES.—Protect the pots from frost and wet. Some of the early kinds may be placed in the forcing-house when the heat is moderate—the end of the month will, however, be soon enough in most cases. Do not water except they are very dry.

FLOWER GARDEN AND SHRUBBERIES.

If any of the tenderer kinds of Roses are yet unprotected, some covering material should be applied at once. Also get in Briars for budding upon without delay, for unless these are planted before spring they seldom furnish strong shoots for early budding. The transplanting of any large evergreens which unfortunately has been delayed until now should be proceeded with with vigour while the weather is mild and open. There will be comparatively little to do in the flower garden at present, and any spare time will be well spent in going over the stock of plants in pits for next season's use, removing every decaying leaf, and where the surface soil has got green, removing this and top dressing with sandy loam. There is nothing so unfavourable to these plants at this season as damp, therefore take every favourable opportunity of admitting fresh air.

HARDY FRUIT AND KITCHEN GARDEN.

See that standard trees which have been recently moved or root-pruned are firmly secured against winds; and also get any root-pruning or transplanting remaining to be done this season executed before frost sets in. Endeavour, as has been previously pointed out, to have a good supply of Parsley under safe protection for there is generally a large demand for this; and in the event of a severe winter it is difficult to save it by the ordinary protection of hoops and mats. Lettuces, Cauliflowers, &c., in frames should be freely exposed on all favourable occasions. Introduce a succession of Rhubarb, Seakale, and Asparagus roots into forcing-pits; if these are forced in the open ground, the linings should be turned occasionally, or renewed, so that a good heat be maintained; cover with mats or litter in frosty weather. Give air to Asparagus as soon as the heads appear above the soil. Sow French Beans in succession, and top the plants as soon as they have made their second leaf. Cucumbers require every attention at this time of year to keep them in health; still maintain the temperature previously advised, and give air every day when the weather permits. Stop and train the plants as they progress, and do not allow the leaves to crowd one another, otherwise they will soon get yellow; water occasionally with liquid manure; this should be done when the soil is dry. Keep up a moist temperature, from 55° to 60°, in the Mushroom house. Collect fresh horse-droppings and put them together in a dry place to heat, in preparation for making new beds by the end of the month.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON

For the Week ending Dec. 6, 1860, as observed at the Horticultural Gardens.

Nov. and Dec.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 30	17	29.688	29.564	50	33	41.5	46½	45		.12
Satur. 1	18	29.763	29.655	51	42	46.5	47½	45	S.	.01
Sunday 2	19	29.640	29.499	49	39	44.0	47	45	E.	.01
Mon. 3	20	29.472	29.311	47	41	44.0	47	45	E.	.12
Tues. 4	21	29.311	29.232	50	38	44.0	48	45½	E.	.07
Wed. 5	0	29.415	29.321	51	30	40.5	49	46	E.	.02
Thurs. 6	23	29.308	29.100	55	44	49.5	49	46	S.	.06
Average..		29.514	29.390	50.4	38.1	44.3	47.7	45.3		.41

Nov. 30—Dense fog; foggy; fine at night; rain.
Dec. 1—Cloudy; very fine; slight rain.
— 2—Rain; slight haze; drizzly; rain at night.
— 3—Foggy; hazy; rain in heavy showers at night.
— 4—Foggy and drizzly; cloudy; foggy; rain.
— 5—Dense fog; hazy; slight rain at night.
— 6—Densely clouded and rather boisterous.
Mean temperature of the week, 3 deg. above the average.

RECORD OF THE WEATHER AT CHISWICK

During the last 34 years, for the ensuing Week, ending Dec. 15, 1860.

December.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 9..	45.8	35.8	40.8	15	0.31 in.	2	7	4	1	3	11	5	1
Mon. 10..	46.0	33.7	39.9	11	0.33	2	4	4	1	7	9	4	3
Tues. 11..	45.1	32.3	38.7	8	0.62	—	3	3	4	5	13	5	2
Wed. 12..	45.3	33.5	39.4	14	0.44	2	2	2	1	8	12	5	2
Thurs. 13..	46.2	32.7	39.5	11	0.16	1	3	4	1	9	11	3	2
Friday 14..	45.7	34.1	39.4	13	0.32	3	3	2	2	8	9	6	1
Satur. 15..	46.2	34.7	40.4	19	0.50	3	4	1	3	9	8	5	1

The highest temperature during the above period occurred on the 13th, 1842—therm. 61 deg.; and the lowest on the 13th, 1846—therm 11 deg.

Notices to Correspondents.

ARAUCARIA: *F H M.* The spots that have appeared on your specimen are owing to the long continuance of wet weather and the absence of sunshine. You must hope for their disappearance next season: for nothing can be done.

"BLIGHT:" *Cirencester.* This consists of swarms of mealy bugs. We advise you to try the effect of Gishurst Compound made into a lather with *soft* water, and applied with a shaving-brush, or some such thing. But it must be repeated several times, as the insects are very difficult to kill, and some will continue to escape for a long time. The operation would be more easy if the Cotoneaster were pruned "hard in" and all the cuttings BURNT or thrown into BOILING water immediately. To bury them is worse than useless.

CHESNUTS: *B A.* They will not make Hop-poles in such soil as you mention.

CINCHONAS: *W T.* The statement in the *Port of Spain Gazette* of Aug. 4 that "large districts have been planted with these trees in the elevated lands of Hindostan," is an entire mistake. The learned Editor seems to have mistaken Tea for Cinchona. We are glad however to learn that steps are taking to establish plantations of the latter in the mountainous parts of Trinidad. It appears that Messrs. Cruger and Devenish, by order of the Governor, have visited the Maracas mountains, and particularly the peaks of Tocuche, which are the highest in the Colony, and also the "Cabeceras" of Oropouche, in the North-east part of the island, to see how far these heights might answer the purpose. In the expedition they were accompanied as far as Valencia by his Excellency and Colonel Fanshawe, R.E., both of whom proceeded farther East to the Oropouche River. One or two tracts of limited extent were selected as offering suitable situations for the attempt; but it will take some time to prepare the places for the proposed nurseries, and Mr. Cruger has this labour now under his supervision.

FUNGI: *X Y Z.* Your Fungus is, we believe, the spawn of dry rot. It is probable that the tall Fungus mentioned is a state of *Polyporus squamosus.* A morsel directed by post to M. J. B., King's Cliffe, Wansford, would enable him to give a more decisive answer. *M. J. B.*

GLADIOLUS SEED: *R S.* Sow in spring in shallow pans filled with light sandy soil. Place them in a cold frame, which should be kept rather close till the plants are up; after that prick them out into pots three or four together, or plant them out in the open ground ‡

GREEN PAPER HANGINGS: *Aliwal.* We have repeatedly warned our readers against the poisoned atmosphere of rooms in which these deadly preparations are used. Unfortunately coroners' inquests are no longer uncommon in consequence of people continuing to put up such paper. The green colour is produced by a preparation of arsenic.

NAMES OF PLANTS; *Bristol.* Cypripedium insigne and Cymbidium Mastersi.—*Orion.* Not Illecebrum diffusum but Briza major.—*J K.* Mere leaves cannot be named.—*J D.* We and others have always regarded it as a form of A. strigosa.—*M C.* L. speciosa was misprinted in our last L. spinosa; the morsel may, however, have belonged to L. bipartita.—*An Amateur.* 1, Filago germanica; 2, Prunella vulgaris—*A G H.* 4. Cotoneaster acuminata; 5. has no flowers, may be Eccremocarpus scaber. The box contained nothing else—*A D.* Acampe papillosa—*A Gardener.* 1. Epaeris impressa; 2. Not in flower; should not have been sent; may be a Myoporum.

THE WEATHER: *T S P.* There was a comet in 1859; but, as you correctly observe, the great comet, Donati's, appeared in the autumn of 1858. We should have said the year after the recent appearance of a great comet.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840,)
Are now prepared to send out the following MANUFACTURED MANURES:—
SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES, AND BONE MANURE FOR PASTURES.
CONCENTRATED URATE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR AUTUMN SOWING.
They would call particular attention to the article DISSOLVED BONES, in which they guarantee every portion both of the soluble and insoluble phosphate, to be obtained entirely from Bones.
The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
116, Fenchurch Street, E.C. EDW. PURSER, Secretary.

LAWES'S MANURES.
LAWES'S TURNIP MANURE £6 6
,, BONE SUPERPHOSPHATE OF LIME .. 6 6
,, MINERAL SUPERPHOSPHATE OF LIME .. 5 5
,, BARLEY, GRASS, AND MANGEL MANURES 8 0
Wheat Manure! Peruvian Guano is proved to be the best and cheapest artificial manure that can be used for Wheat at autumn sowing.
Peruvian Guano direct from Messrs. Gibbs; Sulphate of Ammonia, Nitrate of Soda, and all Chemical Manures. Linseed, Rape, and Decorticated Cotton Seed Cakes supplied at the market prices, by Mr. J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.
CONCENTRATED TURNIP MANURE, equal in value to the preceding.
Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."
Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

JUPP'S NEW HORSE, CATTLE, PIG, & POULTRY FOOD.
MESSRS. W. AND R. JUPP AND CO. beg to inform their friends and intending visitors to the SMITHFIELD CLUB CATTLE SHOW that they will be found during the four days, viz., 11th, 12th, 13th, and 14th December, at **Stand No. 418,** where they will be happy to distribute samples of both their Foods, and afford every information as to their use, &c.
PRICES:
HORSE and CATTLE FOOD, 35*l.* per ton, 35*s.* per cwt., or 1*d.* per feed of half a pint.
PIG and POULTRY FOOD, 16*s.* per cwt., or 1*d.* per feed of one pint; in sacks of 2½ cwt. and 1¼ cwt. each.
6, Cross Lane, Eastcheap, E.C.
☞ Messrs. W. & R. J. & Co., in answer to numerous inquiries, beg to say that in the present state of the market they are unable *materially* to alter the price of their foods, unless by substituting an inferior article; *and this they are determined not to do.* Their customers may therefore rest assured that the articles they send out will be identical with the samples analysed by Dr. Letheby.

THORLEY'S FOOD FOR CATTLE.
Retail Depot, 77, Newgate Street, City, E.C. Offices and Steam Mills, Caledonian Road, King's Cross, N.
N.B.—A pamphlet post free. This Condiment has now become a great fact throughout the world.

AGRICULTURAL AND GENERAL MACHINERY.—AS PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C.

LAWN-MOWING MACHINES—BURGESS AND KEY'S
MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6*l.*; 19 in., 6*l.* 10*s.*; 22 in., 7*l.*; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

SMITHFIELD CLUB SHOW.
STANDS 444 to 451.—Dec, 11, 12, 13, and 14.
T. W. ASHBY AND CO., (late SMITH & ASHBY), Stamford, Lincolnshire, will exhibit the following MACHINES at the above Show:—
SMITH & ASHBY'S Patent Prize HAYMAKER.
SMITH & ASHBY'S Patent Prize HORSE RAKE.
T. W. ASHBY & Co.'s Patent Prize CHAFF-CUTTERS.
SMITH & ASHBY'S Improved Prize OIL-CAKE MILL.
T. W. ASHBY & Co.'s Small Portable Prize STEAM ENGINES.
T. W. ASHBY & Co.'s New Patent Prize ROTATING HARROWS.

CATTLE SHOW.
TO FARMERS AND COUNTRY GENTLEMEN.
HORSES PREVENTED RUNNING AWAY by using the PATENT SAFETY SPRINGS, buckled to any driving or riding rein, which act instantly on a curb or Chifney bit. Invaluable for tender-mouthed horses that will not face a curb bit and occasionally run away. 2000 in use. Price 8*s.* to 12*s.* a pair.
Gutta Percha Anti-crib-biting Strap, 18*s.* 1000 in use.
Gutta Percha Jockey, for breaking horses easy mouthed, 56*s.* to 60*s.*; or on hire, 2*s.* a week. 2000 in use.
Springs for Girths, Rollers, &c., 2*s.*
Metal Springs for Reins, Chains, Ropes, &c., from 9*d.*
Fetlock, Speedy, Leg, Knee, Ring Boots, &c.
BLACKWELL, Patentee, and Manufacturing Saddler, &c., 259, Oxford Street, W, near the Marble Arch.
N.B. Lent on approval without charge.

J. B. BROWN AND CO., 18, Cannon Street, City, E.C., have an Office at SMITHFIELD SHOW, Baker Street—STAND 833—where particulars and prices may be had of their
SELECT LIST OF AGRICULTURAL IMPLEMENTS.
ALSO OF
CHAPLIN'S PATENT PORTABLE STEAM ENGINES,
IRON AND WIRE FENCING, IRON HURDLES,
FENCING WIRE, WIRE NETTING,
SHANKS' PATENT LAWN MOWING MACHINES, &c.
STAND 833, and
18, Cannon Street, City, E.C., (nearly opposite Swithin's Lane.)

FOWLER'S PATENT STEAM PLOUGH.—
Stands 616 to 621. Smithfield Club Show.
December 11, 12, 13, 14.
The above Machine, with all latest improvements, will be in operation near London during the Smithfield Show week.
PRICED CATALOGUES, containing Reports from all parts of the country, can be obtained at the Stands, or of
JOHN FOWLER, jun., 28, Cornhill, London, E.C.

SMITHFIELD CATTLE SHOW.—STANDS 754 TO 756.
CATTLE INSTRUMENTS, PROBANGS, &c.
READ'S PATENT VETERINARY INJECTING SYRINGES; Improved HOLLOW PROBANGS for Relieving Hoven or Choked Bullocks, Calves, Sheep, &c.
READ'S NEW PATENT GARDEN WATERING ENGINES, MACHINES, & SYRINGES, with all the latest improvements.
Manufactured only by the Patentee, RICHARD READ, Instrument Maker (by Special Appointment) to her Majesty, 35, Regent Circus, Piccadilly, London, W.
*** Descriptions sent post free.

CATTLE SHOW.—STAND No. 452.
REAPING AND MOWING MACHINES.
BURGESS AND KEY manufacture the following PATENTED MACHINES, several thousands of which are now in use on farms in all parts of the world.
McCORMICK'S REAPER with BURGESS AND KEY'S SCREW DELIVERY PLATFORM for laying the Corn off the side in swath. It will cut from 15 to 20 acres per day. It received the two last highest prizes of the Royal Agricultural Society of England, and also the two last highest prizes of the French Government. Price 42*l.* 10*s.* 2000 have been sold.
McCORMICK'S REAPER.—It is like the above, except the delivery. In this machine a man rakes the Corn off the side. It received the two council medals of the two Great Exhibitions of England and France. Price 25*l.*
ALLEN'S GRASS MOWER.—It will cut lower and better than the scythe. It received the last prize of the Royal Agricultural Society of England, and also the prize at Canterbury this year. 400 were sold for last harvest. Price 30*l.*
COMBINED REAPER AND MOWER; a combination of Allen's and Cassey's Reaper, of which latter it is an improvement. Price, two-horse machine, 35*l.*; for one-horse machine, 22*l.* 10*s.* Testimonials sent on application.
BURGESS & KEY, 95, Newgate Street, London, E.C. Manufactory, Brentwood, Essex.
The above prices include packing and delivery at any Railway Station in Great Britain and the Ports of Dublin, Belfast, and Cork.

SMITHFIELD CLUB SHOW, BAKER STREET,
DECEMBER 11, 12, 13, 14, ON STAND 599 WILL BE EXHIBITED
CLAY'S PATENT CULTIVATOR AND ERADICATOR, Royal (1859), Yorkshire (1858), and North Lincolnshire (1859-60) Societies', and Paris Exhibition (1860), Prize Implement. Requires one-fourth less horse-power than any other Implement tested by the Royal Societies' judges at the Warwick Meeting. The Frame of each Implement is applicable as a Broadshare or Scarifier, Surface Parer or Skim, Cultivator or Grubber, and Eradicator or Drag Harrow. Price from 6*l.* 5*s.* to 12*l.*, according to size and number of Tines, wrought iron.—Also,
CLAY'S NEW PATENT HORSE HOE.—Price of this Implement for a single row, 2*l.* 5*s.* By a very simple contrivance the width of cut can be instantly varied during the progress of the horse, so that all danger of cutting up the plants where the rows are irregular may always be avoided. Illustrated Catalogues with particulars sent on application to CHARLES CLAY, Oakenshaw Iron Works, near Wakefield.

SMITHFIELD CLUB SHOW.—STAND 766.
WOOD'S PRIZE GRASS-MOWING MACHINE, AND COMBINED REAPING & MOWING MACHINE, the only successful and practical Machine for both Grain Reaping and Grass Cutting, will cut from 10 to 15 acres of any kind of Grain or Grass per day.
Patronised by H.R.H. THE PRINCE CONSORT, H. M. THE EMPEROR OF THE FRENCH, H. M. THE KING OF THE BELGIANS, the Noblemen and Agriculturists of England, Scotland, and Ireland.
Price of Mowing Machines: {For One Horse, £20. For Two Horses, £22.
Price of Combined Mowing and Reaping Machine, complete in all respects for Mowing and Reaping .. £35.
These Machines have been awarded more Prizes than any other Machine in the world, among which may be mentioned—
The Yorkshire Agricultural Society's First Prize of 10*l.* as the best Mowing Machine at the Trial at Pontefract, July, 1860.
The Royal North Lancashire Agricultural Society's First Prize of 20*l.*, August, 1860.
The Grand Gold Medal of Honour as the best Mowing Machine, either native or foreign; also the Gold Medal and One Thousand Francs as the best Foreign Machine; and a Special Gold Medal, at the Great Trial at Vincennes, near Paris, June, 1860.
The First Prize Silver Medal and Two Hundred Francs at the Trial at Trappes, near Paris, June, 1860.
The Grand Gold Medal of Honour as the most useful Farm Implement at the Gustrow, Mecklenburg, Exhibition and Trial, June, 1860.
The First Prize Medal by the U. S. National Agricultural Society, as the best Mower, 1859 and 1860.
Prize of Silver Medal at Amiens, May, 1860.
Prize of Silver Medal and Five Hundred Francs by the French Government, at St. Cloud, July, 1859.
Prize of Silver Medal, Glasgow Agricultural Society, June, 1859.
Prize of 10*l.* by the Royal North Lancashire Agricultural Society, August, 1859.
Prize of 10*l.* by the Liverpool and Manchester Agricultural Society, September, 1859.
And the Prize of 25*l.* as the best Reaper, and 20*l.* as the best Mower, which was awarded this Machine at the Royal I. A. S. Meeting and Trial at Londonderry, August, 1858; and at the Great Trial by the U. S. A. Society, at Syracuse, July, 1857, it was awarded the Grand Gold Medal and Diploma, in competition with about 30 Machines. Also by the same Society, the First Prize, 1858 and 1859.
About ONE THOUSAND of these Machines have been put in operation in this country with the most complete success, as is amply testified by the users of these Machines, many of whom have kindly permitted reference to be made to them.
Copies of testimonials and further particulars may be obtained on application to W. M. CRANSTON, 58, King William Street, London Bridge, London, E.C.

CATTLE SHOW, BAKER STREET BAZAAR.
SUTTON'S CHAMPION SWEDES, and new varieties of MANGEL WURZEL, KOHL RABI, and other AGRICULTURAL ROOTS will be exhibited at their STANDS, Baker Street Bazaar, where orders will be taken for Seed. N.B.—As the Stock of Seed is limited it is advisable that orders should be given early.
Royal Berkshire Seed Establishment, Reading.

NOTICE.
SUTTON'S CHAMPION SWEDE SEED.—The crop of Seed being more than half destroyed by the inclement weather throughout the last Winter, Spring, and Summer, the present price is 2*s.* 6*d.* per lb., and to insure a supply early orders will be necessary. The Advertisement which appeared at p. 1072 of *Gardeners Chronicle* was an accidental republication of an announcement made last December.

CRYSTAL PALACE ROOT SHOW.
SUTTON AND SON'S EXHIBITION OF MANGEL WURZELS, TURNIPS, KOHL RABI, and other AGRICULTURAL ROOTS, will be seen in the Centre Transept during the present week.
Also at the CATTLE SHOW, Baker Street Bazaar.
Royal Berkshire Seed Establishment, Reading.

BOTH THE SPLENDID
PRIZE CUPS GIVEN BY H.R.H. THE PRINCE CONSORT have again been won with fields of SUTTON'S CHAMPION SWEDES; the Royal East Berks by Mr. James Sharp, Remenham, and the Royal South Bucks by Mr. Stephen Pullen, Horton.

SMITHFIELD SHOW.—STANDS 121 to 123, First Gallery.
ROBERT P. KER, who has for the last 20 years attended the Annual Meetings of the Smithfield Show on behalf of Mr. William Skirving, Seedsman, begs to intimate that he will for the future attend on his OWN ACCOUNT; and in accordance with this announcement R. P. K. has the pleasure to acquaint his Agricultural Friends that his Stand will be as above, at the ensuing Exhibition, beginning on December 11, when he will be prepared to receive orders for all the most approved descriptions of AGRICULTURAL SEEDS.
Seed Warehouse, 4, Basnett Street, Liverpool.—Dec. 8.

CATTLE SHOW.
WM. SKIRVING begs to announce to his friends and the public that he will attend, as usual, at the CATTLE SHOW, Baker Street, to exhibit ROOTS and take orders for AGRICULTURAL SEEDS of the most approved kinds. (Stand in Bazaar, 190.)—Liverpool, Dec. 8.

RAYNBIRD AND CO., SEED MERCHANTS and GROWERS, Basingstoke, and 89, Seed Market, Mark Lane, London, E C.
Samples and Quotations of all kinds of AGRICULTURAL SEEDS, and SEED CORN, sent post free on application.
Peruvian Guano, Lawes' Turnip Manures, Linseed Cakes, Cotton Seed Cakes, &c., of best quality at Market Prices.

COLLEGE OF AGRICULTURE AND CHEMISTRY AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.
The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
The GENERAL MEETING OF MEMBERS will be held at the Society's House, No. 12, Hanover Square, London, on WEDNESDAY, December 12, at Twelve o'Clock.
By order of the Council, H. HALL DARE, Sec.
London, December, 1860.

PRIZE CATTLE SHOW OF THE SMITHFIELD CLUB.—The ANNUAL EXHIBITION OF PRIZE CATTLE, SEEDS, ROOTS, IMPLEMENTS, &c., commences on TUESDAY MORNING and closes on FRIDAY EVENING, December 11, 12, 13, and 14. Bazaar, King Street and Baker Street. Open from daylight till 9 in the evening.
Admittance One Shilling.

The Agricultural Gazette.
SATURDAY, DECEMBER 8, 1860.

MEETINGS FOR THE FOLLOWING WEEK.

MONDAY,	Dec. 10	London Farmers' Club. (Mr Scott Burn, on the Labourer.)	6 P.M.
TUESDAY,	— 11		
WEDNESDAY,	— 12	Smithfield Club, at Baker Street Bazaar.	
THURSDAY,	— 13		
FRIDAY,	— 14		
WEDNESDAY,	— 12	Agri. Society of England.	Noon.
		Meeting on Land Drainage at Hanover Square Rooms	2 P.M.

DURING the past week the Birmingham Exhibition of Fat Cattle and other Stock, Poultry and Roots has been held, and a report will be found in another page. On Monday evening, Dec. 10, the Smithfield Club open their Metropolitan Exhibition of Fat Cattle, Sheep, and Pigs, and of Farm Implements, at the Baker Street Bazaar. On the same evening, at 6 P.M., Mr. SCOTT BURN'S paper on the condition of the labourer in our own and other countries will be read in the rooms of the Central Farmers' Club, Bridge Str et, Blackfriars.

On Tuesday the Smithfield Show opens to the public, and the general meeting of the Club is held for the election of officers at 1 o'clock. On the following day, at 11 o'clock, the general meeting of the English Agricultural Society will

be held in Hanover Square, and a meeting for 2 p.m. on that day at the Hanover Square Rooms, to take the subject of a general Land Drainage Bill into consideration. There will be no agricultural discussion this year before the Society of Arts during the "agricultural week."

—— SHOWS of roots are now the order of the day, and where the weight of the individual root (illustrative of what, by sort and treatment, can be done) is given, and the weight per acre of the crop from which it is taken (illustrative of what any farmer may expect to accomplish) is also published, and the cultivation, tillage, and general management of the crop are described by which the results were actually obtained, and by which they may be copied anywhere—there is no more interesting illustration of agricultural progress. Some of the Club reports are given and will be given in our pages. To that of the Birmingham Exhibition in another column we direct attention, and others lately held at Hadleigh and at Ipswich will be described.

An extremely interesting local exhibition of the kind was held last week at Reading, where Messrs. SUTTON, offering annually 20*l.* or 30*l.* of prizes for roots grown in the neighbourhood by their customers, succeed each year in collecting for exhibition on a market day a useful and instructive collection of roots. The thing might well be copied by all our principal seedsmen, so as to afford in all chief market towns suites of specimens for the information of those who rarely visit the greater shows of our agricultural societies.

In the rooms at Reading a very interesting collection of Mangels and of Swedish and common Turnips of different sorts was shown by Mr. BENYON, M.P. for the county. And large numbers of red and yellow Globe and long Mangels, of Skirving's, Sutton's and other Swedes, of green and red Rounds, green and yellow Tankards, Grey Stone and other sorts of common Turnip, of red and green Kohl Rabi, white and red Carrots, Parsnips, and cattle Cabbages, were shown by other cultivators. On the whole the Kohl Rabi and the Swedes were the finest roots, as they have proved generally this year, suffering least from a cold wet season, while the Mangels are much inferior to those of previous seasons. The best Swedes varied from 12 to 15 lbs. in weight; Kohl Rabi grown by Messrs. Sutton themselves, weighed 16 and 18 lbs. apiece; white Carrots grown by Mr. SHACKEL, of Earley Court, weighed 40 lbs. per dozen. Sound Grey Stone Turnips were exhibited weighing upwards of 20 lbs. apiece. The heaviest Mangels did not much exceed one-half the maximum weight of last year.

The collection was exceedingly interesting as a picture of the differences existing amongst true varieties of roots grown as cattle food.

MR. BAILEY DENTON'S third paper on Outfalls will be found in another column; and we direct to it the attention of all those interested in a subject which is, we hope, to receive a full discussion at the meeting in the Hanover Square Rooms next Wednesday, at 2 P.M. Meanwhile let us name as also deserving their attention a capital paper on River Reform by Mr. J. ALGERNON CLARKE, in the *Mark Lane Express* of last Monday, in which the proper objects and proper limits of legislation on the subject are well laid down. The following are instructive passages.

First, on the objects of a good measure:—

"I hope no one will suppose that we, the drainers, are seeking to dry up all canals, and send barges by the railway; to drain all fish-ponds, and let off ornamental waters; to prevent any brook from being conducted over meadows, and to confine the use of every river, stream, and water-course to the one sole purpose of carrying off spent liquid from 6 feet deep drainage-pipes. We say that in the annual downfal upon Great Britain are received the greatest riches and blessings; fertilizing stores for the greedy yet prolific soil; buoyant pathways for the sluggish boat and heavy-laden barge; cheap, unceasing motive-power for the industrious miller and manufacturer; moisture for the invaluable meadow herbage and hay; an element for the finny treasures of the sportsman to play in; sheets of limpid flood, to embellish the park of the noble, or the people's pleasure-ground; and supplies of "beautiful water," cleansing, purifying, sustaining alike the population of city, village, and open country. We say that, owing to the physical conformation of hill and vale, the geological structure of rocks and beds, the water-sheds and natural channels and springs distribute these downfal waters in such a manner, and in such directions, as to cause immense loss by injurious floodings in some localities, and all sorts of waste of power and usefulness of water in others. Nature provides the valuable agent; it is for Art to appropriate and apply it to the use of man. Art has been doing this for centuries, and has made good profit by mill-wheels, irrigations, navigations, fisheries, and so on; but then it has been art applied irregularly, disconnectedly, and selfishly, with no common purpose or aim, without reference to the general well-being of the inhabitants of these realms. Consequently the nation has not secured from the waters those full advantages which are derivable by treating the streams and outfalls on a comprehensive scale, in which every source of benefit should receive its due development, and the claims of all interests be equally considered. We say that the progress of husbandry, the pressure of an increasing population upon a limited area of cultivable land, the necessities of over-grown unhealthy towns and clustering villages seated in dangerous sanitary conditions, upon the banks of streams, the growing inadequacy of the channels to discharge floods that are at the same time continually requiring a more rapid exit as the work of under-draining extends—that these and other considerations render it imperative, for the safety and prosperity of all classes of the community, that a general and governmental conservancy and supervision of the whole hydrography of Great Britain should be at once organised and inaugurated."

On the means to be employed in order to this efficient supervision:

"I hope no one will ever be found to advocate the establishment of a board of national drainers, whose duty shall be to go round the kingdom and put right whatever water-courses they may find amiss, and make the district or the general public pay "the piper"....The general Act I wish for would be intended neither to dictate and oblige districts to put their waters in order, and force them, against their own inclination, to make the best of their water-power and the most of their low-lying lands, nor yet to over-ride local rights, and proceed to execute works which Government engineers may fancy to be necessary, and saddle a grumbling country with a tax for the outlay. I want a law establishing a central authority, after the fashion of the Inclosure Commissioners, with rules of action laid down, jurisdiction defined, and so on, with a staff of engineers, inspectors, &c.; so that any district desirous (with a sufficient majority of the interests concerned) to improve itself, could do so by appealing to this constituted authority, without the intolerable expense of repeated Parliamentary contests, and without the victimising squabbles of rival schemers and swindling speculators."

Mr. CLARKE then gives the history of the general subject and of the legislation hitherto connected with it, as well as of instances showing the need and cost of it. As he says:—"It is just because districts are left to fight their own battles against adventurers and schemers, to struggle with non-consenting or opposing interests, to agitate, survey, choose plans, pay lawyer after lawyer, and carry on an enormously burdensome Parliamentary contest, before a sod can be turned or a sixpence raised from the lands proposed to be benefited—it is because this unaided, roundabout, costly procedure is imposed upon whosoever dares to move in the cause of improved outfalls, that such scandalous cases have arisen, and that such egregious blunders have been perpetrated in the name of arterial drainage."

Hence the need of some general measure giving power to majorities to act within certain limits prescribed by the best knowledge of the subject which exists.

"Nobody wants to compel the drying of meadows which now yield good hay. If it is a fact that they are more valuable in their present aquatic condition than if well drained and ploughed, the district in which they lie must surely know this, and can reject any scheme for the purpose. Nobody wants to deprive a mill of power, or cut off the supply of water to a factory, or subvert a navigation, if no balance of advantage would be gained by such a course. The drainage district must alone be its own judge of its necessities. Only we, the drainers, are determined that their case shall be introduced to their own notice, and remedial measures be submitted to their judgment—this we shall accomplish by a general Act. And it is very clear that general rules for regulating compensations, compositions, purchases, &c., could be easily framed; because our rivers are capable of being classified according as they subserve the purposes of mills, navigation, simple drainage, or any one or more of these and other objects; and the remedial measures will be of similar character in certain descriptions of cases. We have already a sufficient number of precedents of the purchase of mills and canals, and compensations of all kinds, to guide us in framing a new general Act, or to direct the elective Boards or Committees in the drainage districts how to proceed in dealing with rights and claims.

Mr. CLARKE concludes his most interesting paper as follows:—

"I consider that a general Act should embrace two distinct objects. In the first place, it should enable any drainage district to remodel, improve, reclaim, by empowering it to deal with every possible form of water-right for the common good—to execute works, to raise rates for payment, and to establish a permanently organised supervision for the maintenance or improvement of the whole system of water-works in that district. And, in the second place, it should provide for the case of isolated estates or farms, towns, or other interests, in districts not needing or not willing to combine in such general works or extensive supervision. . . In conclusion, I must declare my opinion that the country greatly needs the immediate appointment of a commission of inquiry, which shall examine and report upon the drainage condition of Great Britain, thus furnishing a body of evidence which would "prove the preamble" of a general bill, and by the description of cases and precedents enable principles of procedure in compensating and settling with conflicting claims, to be drawn up alike for the guidance of the district drainage boards and the central commission."

—— BOTH the South Australian and the South African papers of the latest date contain reports of the agricultural exhibitions of the respective colonies.

The Grahams Town paper recommends a Government grant, which has been allowed in aid of agricultural shows, to be divided among the existing agricultural societies—so as to stimulate all alike, and prepare the way for the time, not yet arrived as it contends, when one great gathering for all the colony may be possible.

The South Australian paper advocates, on the other hand, not merely one show for the whole of the colony, but the interchange and exhibition of specimens from various colonies. It specifies in particular, as having excited great interest at recent exhibitions, the rival prize Wheats and Barleys of Melbourne and Adelaide, weighing 67½ lbs. and 56½ lbs. respectively or thereabouts, samples of which will be tried in the neighbourhood respectively of Melbourne and of Adelaide. English farmers will be glad to see specimens of this high quality at the International Exhibition in 1862; and we hope that the public spirit which is bestirring itself in Australian colonies for the benefit of one another may act for that of the mother country also; and that in 1862 we shall have ample opportunity of examining these and all other illustrations of distant agricultural capabilities.

—— LORD EBURY has called attention during the past week to the evils of indiscriminate benevolence, and the pauperising tendency of a recently proposed scheme for establishing homes for the reception of poverty all over London. He recalls the period when such pauperising schemes were in full development, in fact under legal sanction, and when the lax and what was intended to be a benevolent administration of the Poor Laws, paying wages not according to work done but according to the size of the labourer's family, &c., produced its natural fruits, and the peasantry of half our southern counties rose in insurrection. At the same time he suggests one way in which the benevolent feelings excited by recent publications of distress, may be put into profitable exercise. "It not unfrequently happens that while there is a glut of labour in one part of the country there is a dearth of it in another, a state of things which is not always known to those who would mutually profit by the intelligence. If, therefore, some central society could be established in London for the purpose of receiving intercommunications of this nature, it might be the means of essential service to the working classes, especially now when the means of transit are so easy and cheap that a job, though at some distance, would not necessitate the breaking up of a home."

The same suggestion has already been published in our columns more than once at harvest time, when the interests of masters seemed to demand the step. It surely is as deserving of attention now in the interests of the labourer, who is in some districts in great distress owing to high priced food and ill paid services, while elsewhere we have demands for "1000 drainers," and the like, proving the inequality of agricultural conditions which prevails.

—— AN important game case was lately heard before the County Court at Preston, wherein Mr. ROME, a farmer near Chorley, claimed damages for trespasses and injuries by the defendants done to his farm lands and the growing crops thereon, by having wrongfully overstocked a large quantity of pheasants, rabbits, &c., on or near the said lands. The defendants, it seemed, had the shooting over the farm in question, and in 1857 the game was entirely destroyed; but after that time, in order to have continued sport, the defendants purchased rabbits, and turned them out on or near the farm, and thus caused the injury to the crops complained of. Witnesses were called who had valued the crops in the years 1858 and 1859. Complaint had been made in both these years, and the defendants were requested to meet the plaintiff to make a fair valuation of the damage done, but no notice was taken of the application. The allegations of the plaintiff seem to have been proved. Thus it was given in evidence by a valuer, with reference to a particular meadow, that it was considerably injured by rabbits, as was evident from the numerous roads they had made, the great quantity of dung lying in the piece, and the many bare spots in the field where they had been feeding.

Three-fourths of the field had been manured with 600 single-horse loads of compost, and 17 tons of lime. The Grass on the manured portion was inferior to that on the unmanured part, and that is accounted for from the feeding of the rabbits thereon, that Grass being sweeter and more palatable to them than the other. In an ordinary season the meadow would have produced from 30 to 40 tons of hay. Probably 9 tons have been destroyed—value 5*l.* 10*s.* per ton. The crop of Wheat was thin. Twelve windles of Wheat have been destroyed—value 1*l.* per windle. This does not include damage by rats. The "further lawn" was very much eaten by rabbits; four windles having been destroyed. The "middle lawn" had a much better crop; but still two windles were injured by rabbits. That is not so near the plantation as the other lawn, but there were marks where the rabbits had been. Corn field No. 2 was in bad condition, and even making allowance for the deficiency of the cultivation, and the fact that under ordinary circumstances the crop would not have been good, 24 bushels, worth 4*l.*, were spoilt.

A "windle," it may be mentioned, is "3 bushels of 70 lbs., and 10 lbs. in addition, or 220 lbs. of Wheat, Beans, Peas, and Vetches, at Preston; or 180 lbs. of Barley."

The defence referred to the law of the matter

rather than to its facts. And the only case bearing on it, according to the defendants' counsel, was a dictum by Lord Mansfield that if the lord of a manor surcharged a common to such an extent by placing rabbits upon it, as that the herbage of the common should be totally eaten or destroyed, though the commoner could not abate the evil, he had a right of action. That was as between persons having independent rights. But here the plaintiff had no rights beyond those given to him by the lease.

The rejoinder was that there were two grounds of action—a trespass committed by the setting of traps, and the damage done to the crops. Putting it in the light that the increase of the game was an artificial one, the defendants might be brought within the terms of Lord Mansfield's dictum.

The Judge said the question of the stocking of the game might be submitted to the jury. The lease did not give any right to set traps for any other purpose than for the taking of game. The question was, whether there was evidence as to the placing of traps on the farm, or whether there was damage resulting from it, and whether the rabbits were turned out to increase.

After evidence on these points had been given the jury retired, and in 20 minutes returned with a verdict of 25*l.* for the plaintiff, half the amount claimed.

—— The *Cambridge Chronicle* speaks of a deep plough lately manufactured by Messrs. Howard of Bedford, for the special purpose of turning on to the surface of the fen soils some of their clay subsoil for weathering there, and so fertilising the lighter surface vegetable mould. Hitherto the work has been accomplished by "rude, home-made, queer-looking things called 'clunch ploughs,' drawn by six or eight horses, with as many men following, to throw out lumps of clunch, &c., which had fallen back into the furrow, and which required exposure to atmospheric influences to render them fertile and corn-producing. These implements, which nearly killed the horses through their ill-construction, and the want of mechanical skill in their formation, were, after a time, thrown on one side, and deep cultivation was fast going into disuse. Fen farmers though conscious of the necessity and advantage of deep ploughing were retarded in their practice of it, by the insufficiency of the implements they possessed." So says our contemporary; and the need of some more efficient implement which should of itself *place* the clay where it was wanted, and thus supersede the necessity of so many extra hands to lift the furrow slice or its fragments, seems plain.

The first trial of Mr. Howard's new fen plough was made the other day on the farm of our correspondent Mr. Alfred S. Ruston; and the following is a report of its operation:—

"A man with a pair of horses and a common plough went first, turning the soil to the depth of from 2 to 5 inches; the deep plough followed, drawn by 6 horses, and carrying a furrow from 12 to 14 inches deep, making a total depth of 18 inches. Another experiment was also made, the common plough going first as before, and the deep plough following drawn by 10 horses, with a furrow from 18 to 20 inches deep, making altogether a depth of from 22 to 24 inches. A single furrow during the preliminary trial was ploughed even 4 inches deeper than this. Persons not possessing a knowledge of fen soils would scarcely conceive that such an extraordinary depth could be attained; but it was done, and successfully too, and without overtaxing the strength of the horses. Indeed, the ease with which the plough was held, and the steadiness with which the horses walked off with it, and the manner in which the furrows were so completely inverted, excited great surprise, and elicited general approval. When ploughing 18 inches deep, more than once the plough ran 20 yards and upwards without being held at all; and when in the deep work, it was not more trouble to hold than an ordinary plough. The plough is a heavy implement, being very strong, and made entirely of wrought iron. Some of the 'lookers on' expressed an opinion that because it was heavy itself it must necessarily draw hard, but this does not follow, and the walk of the horses at the trial clearly testified the incorrectness of the notion. We conceive, in some of our fen districts, this plough might be almost used for 'claying' the land, as in several instances it ploughed up from 6 to 8 inches of clay, when working at the greater depth. We have no doubt but ultimately it will be brought into general use."

LAND DRAINAGE AND OUTFALLS.—No. III.

It must not be assumed because the removal of existing impediments to underdraining has been made the prominent feature in the preceding papers, that the highly important and much more difficult object, improved arterial drainage, is unappreciated. No one interested in agricultural progress can have failed to observe the vast injury to private property, and the incalculable loss to the country at large, which may be traced to the prejudicial effect of mills, dams, hatches, and weirs on our rivers and streams. Nor can any one who has been directly or indirectly connected with district drainages under Local Acts, have failed to observe the confused condition in which large breadths of country—such as Holderness in Yorkshire, the great Fen-levels in Lincolnshire, Huntingdonshire, and Cambridgeshire, and the Bridgwater Flats in Somersetshire—now exist, each Commission striving to reconcile inconsistencies of the worst order, and to outdo one another, at a cost in Parliamentary and legal expenses which would represent the fee simple value of no inconsiderable proportion of the land under their control.

The evils arising from river obstructions are much more likely to remedy themselves, or to be overcome by the superior claims of agriculture, than those which taint existing drainage districts under Commissioners, who unfortunately for the public weal are as jealous of interference as the Emperor of China, and who resist all approach to united action as tenaciously as his Chinese Majesty resists the approach of Lord Elgin into Pekin. The condition of many of these districts will be understood when it is stated that navigation and drainage are blended and outfalls canalized, and when it is mentioned as an illustration of the accumulating disorder prevailing that the Commissioners of one district—the "Eaubrink Cut"—after spending 100,000*l.* in obtaining eight Acts of Parliament, to make and amend, are on the point of seeking another Act to repeal the whole, and, to use the words of Mr. Laurance, of Elton, one of the first authorities on the drainage of the Fens—"to establish a system of conservancy more in accordance with the present state of things."

Water-mills are gradually becoming less valuable, and therefore less powerful in opposition; but as expiring strength struggles hard for life, so the millers will continue to resist until convinced of the profit of concession. And that period is not far distant. The cheapness and readiness of steam as a power, and the effect of railways in concentrating the corn trade at stations and in towns, are doing more towards reclaiming the many many thousands of acres rendered unproductive by mill-heads and dams than all the arguments of agriculturists. Railways have not only snatched the trade from rivers, canals, and turnpike roads, and turned the rural traffic at right angles to its former course, but have altogether changed the position of the miller. The mills that monopolised the trade and so pleasingly graced the landscape when viewed from our country roads, are now only seen from high viaducts, a circumstance which it is needless to state implies a mode of transit and approach, detracting very considerably from the miller's profit, and when legislative facilities are afforded for reclaiming the lost acres and compensating the miller, it will be found that very simple figures will suffice for the calculation. May that juncture soon arrive. In the meantime let not agriculturists consider that they have only District Commissioners, mill-owners, and navigation trusts to contend with, when seeking a comprehensive measure covering all the objects, great and small, comprised in arterial drainage; they have lawyers, including counsel, parliamentary agents and solicitors, engineers of high standing, and subordinate placemen, all declaring war against general measures and direct facilities for operations. How was the 100,000*l.* expended when the Eaubrink Commissioners sought their eight Acts of Parliament? How the 30,000*l.* when the Nene Outfall and Improvement Acts were obtained?

It is the jealousy of these conflicting and uncomprosing interests, and the opposition to be expected from them, which leads me to advocate a separate and immediate relief from those obstacles which now stultify the best efforts at systematic underdraining.

The allusion already made to the Inclosure Commissioners, and the comparatively trifling cost of proceedings under the various Drainage Acts which they dispense, will have prepared your readers for the suggestion that the necessary powers for effecting the simple objects to which I have confined my advocacy should be granted to them. The success that has attended the administration of the several Acts for the commutation of tithes, the enclosure of open and commonable lands, the enfranchisement of copyholds and—more appositely still—the underdrainage of lands, points to the Inclosure Commission as the best medium for dispensing any further general Acts for the permanent improvement of land.

Reverting then in the same order as in my last letter to the three objects of my advocacy, I will proceed to state the powers which I would suggest should be given to the Commissioners and the mode by which they should be exercised.

I. With respect to easements or rights of passage of drainage water through neighbouring lands. In many instances the required easement is to be obtained by simply asking the neighbouring owner for it, in which case it will only be necessary to obtain his signature to a printed form of grant, which should be prepared by the Commissioners in accordance with the Act of Parliament, and would be recognised as legally binding for ever after. It would only be when the permission was refused or by reason of legal inability it could not be given, that the powers of the Commissioners would be exerted. In either of these cases it is suggested that the Commissioners should, upon a representation from the promoter of the improvement, investigate the facts of the case through the medium of an Assistant-Commissioner or Inspector, who should report his opinion upon the necessity of the required easement, and the objections raised to it. Upon this report the Commissioners should themselves decide whether the easement should be granted, and should appoint an "able practical surveyor" (if the Assistant-Commissioner or Inspector be not competent), to determine whether any compensation should be paid for the easement—(in many cases the passage would be by under-drainage, which, instead of doing an injury, would effect a benefit)—and, if any, what amount of compensation should be paid. The whole case having been thus investigated, and compensation ascertained, the Commissioners would issue an order, giving entry to make and maintain the necessary passage.

It must not be supposed that no legal means exist for obtaining the object. There are several Acts, for instance, 10 & 11 Vic., cap. xxxviii.; 10 & 11 Vic., cap. cxiii.; 12 & 13 Vic., cap. xci., sec. 78; and 16 & 17 Vic., cap. cliv. sec. 63, all which afford means of entry on adjoining lands, and the means of securing easements for the passage of drainage water, but, the truth must be told, they are practically useless in consequence of the roundabout and expensive machinery by which they are put in motion. It is hardly possible to conceive a more impracticable Act of Parliament than the first mentioned, which is, oddly enough, called "Lord Lincoln's Outfall Act," and which, although passed in 1847, more than 13 years ago, has not been fortunate enough to claim a single case in which its powers have been found available! In fact, the only benefit that has yet accrued from the existence of any of the legal powers given by the several Acts specified, has been that which has resulted from the knowledge that such legal powers were in existence, and could be put in force if a landowner was determined to do so in spite of the delays, doubts, and costs attending the proceedings. Many landowners, in fact, having been informed of the existence of the powers in question have at once granted the required easements, while others who would not be so easily influenced have successfully denied them. It will be understood how inappropriate are the legal means referred to when it is explained that all the forms and expenses of proceeding have to be gone through in the simple case of passing an under-drain through a neighbour's field (which as before stated may do good instead of harm), as are required in the case of a railway passing through an estate for several miles, inasmuch as the Lands Clauses Consolidation Act, which was designed for railway purposes, is incorporated with the several Acts in question with a view of supplying the mode of proceeding; and it is not surprising that, with the uncertainty attending all references to a jury or arbitration and the heavy costs of proceeding, landowners underdraining their estates should determine to drain defectively, rather than not at all, or to delay the work until more immediate and facile means be granted by the legislature. But the difficulty which forms a positive veto in the majority of cases is this: the least amount of expenses that could attend a disputed case would so increase the cost of the particular drainage for which the easement was sought, that no tenant farmer could afford to pay interest on the outlay; and it follows, therefore, that as an owner for life is only justified in charging his estate with the cost of improvements the return from which will exceed the instalments by which the cost will be repaid in a given number of years, the powers afforded him under the Acts specified amount to a negative.

II. We now approach the second point—that of clearing, deepening, widening, straightening, and maintaining public watercourses. It is suggested that the difference between a public watercourse or thoroughfare drain and a private or boundary ditch should be fully recognised. In many parishes the clearing and maintaining of public watercourses or drains rest with the surveyor of the highways, and under numerous inclosure awards they are set out to and directed "to be for ever hereafter maintained by the surveyor of the highways for the time being." There can be no doubt that a public water-way or water thoroughfare is as essential to public convenience and public health as a public highway or road-thoroughfare. It may be a question whether the cost of clearing and maintaining should fall on the parish generally or upon the occupiers of adjacent lands neglecting to cleanse and scour out those portions of the public watercourse upon which their lands abut; but there can be no doubt that the surveyor of highways is the proper person to see that the necessary works of clearing and maintaining are done.

It is therefore suggested that instead of attempting to bring into force the cumbrous and expensive machinery of the Act 10 & 11 Vic., cap. xxxviii., sec. 14 (which, as explained in my last letter, has never yet been put in force), the surveyor of highways should be made responsible for the clear passage of all public water-courses, and should be liable to a penalty for the non-observance of his duties after proper notice has been given to him by any party injured by obstruction. This suggestion applies to clearance and maintenance only. With respect to cases of deepening, widening, and straightening, as such works would involve the taking of additional land, and an interference with private property, it is considered that the Inclosure Commissioners should have power to investigate the facts of each such case, and to proceed in the same way as in the case of an easement through neighbouring land, directing their final order to the surveyor of the highways, who should see that the necessary works are properly executed by

and at the cost of the parties promoting the improvement.

Were the present system of road management likely to remain as it is, and "the surveyor for the time being" to continue to be the squire, the farmer, or the village grocer, I should not propose to connect such a system with works of improvement such as are now under discussion; but as we are doubtless on the eve of a change by which the management of parish roads will be consolidated, and competent persons appointed as surveyors, it cannot be wrong to anticipate the time when the maintenance of public roadways and waterways may with general advantage be placed under the control of one and the same person.

III. Upon the last point, to enable a majority of landowners to effect improved drainage by means of a common outfall or combination of works, and to bind the minority to contribute to the cost thereof, it is considered that many of the provisions contained in Lord Carlisle's Bill may be made the basis of proceedings.

Lord Carlisle's Bill is called the "Drainage and Embankment of Lands Bill." It was introduced in 1852, and the Inclosure Commissioners were named as the Commissioners for carrying it into operation.

It will be seen that Lord Carlisle considered that three-fourths in extent should assent to the proceedings in order to find the remaining fourth. In the inclosure of open field lands it is only necessary that two-thirds in value should assent in order to bind the remainder, and as the Inclosure Act works most satisfactorily, there does not appear any sufficient reason why there should be any difference in the proportions in the measures.

The difficulty I feel with respect to Lord Carlisle's Bill is in fitting its provisions to small districts and to measures embracing a few proprietors and the simple every day object of an outfall. It seems too large for such works and too small for the consolidation of several districts now under the control of Commissioners, and as we are now encumbered with too many inoperative enactments, it is not desirable to add to their number.

The mode of dealing with mills, weirs, and dams, proposed by this Bill is clear and simple (see sections 63, et seq.), and is applicable to any measure of district drainage which contemplates the removal of any of these obstacles. It was intended to leave the Committee on the Bill to settle the extent of improvement of land which should be considered sufficient to justify the removal of any obstacle. It was suggested at the time that the fee simple value of the improvement to the land should be proved to the satisfaction of the Inclosure Commissioners to be at least double the fee simple of the water power to be lost. Thus, supposing the net renting value of the mill to be 40*l.* a year, and the fee simple value at 22 years' purchase to be 880*l.*, the increased annual value of the improved lands should be at least 58*l.* 13*s.* 4*d.*, which at 30 years' purchase would be 1760*l.*

With these remarks I commend Lord Carlisle's Bill to the serious consideration of landowners. The difficulty is indeed great of determining how far any present measure should go. Experience would show that nothing but immediate and inexpensive proceedings will be acceptable and practically useful in obtaining outfalls in ordinary underdraining, and it would be a subject of lasting regret if an opportunity to gain this minor and all important object should be lost by aiming at a measure for which the country is not ripe.

The uncertainty of the law as to the power of landowners to drain their lands is a striking feature in the present day. There seems to be no doubt that clay soils may be underdrained with impunity; but the same degree of certainty does not prevail with respect to the free water-bearing strata or the diluvial or alluvial soils which cover our valleys, although they are equally wet and equally require draining. These latter are for the most part percolating soils, and are charged with the water of pressure laterally from the valley sides and vertically from the bottom in its effort to find its way to the lowest outfall. In the recent decision of Vice Chancellor Stuart, in the case of Ennor *v.* Barwell, the important judgment of the House of Lords in the case of Chasemore *v.* Richards was disregarded, and the water of percolation was declared by the Vice Chancellor to be the same as the water of perennial springs, and that subterranean water pervading the soil, if gravitating towards a lower point in accordance with the inclination of the substratum or the surface of the ground, is not the property of the landowner but of the miller below, whose mill it would reach were it not got rid of by drainage, or otherwise appropriated by the owner of the land. The House of Lords had adopted the view of Baron Alderson in the case of Broadbent *v.* Ramsbottom, where he decided that "all water falling from Heaven on the surface of the ground could be appropriated by the owner of the land;" and that of Lord Wensleydale in the case of Rawstron *v.* Taylor, in which his lordship ruled that in instances of "water rising out of springy boggy land, and flowing in no defined channel, the owner of the land could get rid of the water in any way he pleased." I refer to this difference of opinion prevailing among our judges as exhibiting in conjunction with the inoperative state of the outfall law, a very unsound state of things at a time when we are held up to the rest of the world as the first nation in agriculture, and as leaders in the great work of agricultural drainage.

In closing these remarks on "Land Drainage and Outfalls," let me appeal for support to the landed interest who have profited so largely by legislation during the last 40 years, and who would be so greatly benefited by the measures now proposed. The prospects of our hereditary proprietors have undergone an entire change. Instead of the disastrous and overburdened condition in which entailed property existed half a century back, the Poor-law, the Tithe Commutation Act, and the several Acts enabling tenants for life to charge their estates with the cost of progressive improvement, have given it vigour and prosperity.

If this change is not overstated, I shall not be deemed presumptuous in reminding landowners that they are hardly doing justice to themselves and to their country by allowing the most important of all agricultural improvements to proceed from the wrong end. *J. Bailey Denton, M. Ins. C. E., 52, Parliament Street, Westminster, Dec.* 1.

SEAWEED.

You certainly took a step in the right direction in your article on Seaweed in the *Agricultural Gazette* of the 10th ult. The value of Seaweed as manure is recognised wherever it can be procured. On the rocky coast of Brittany many are the families employed collecting it. Every tide is watched; every particle secured, dried, and placed in a heap with a round top to throw off the rain; these heaps are periodically sold at prices which would make the English farmer stare and button up his pocket.

The French Government has even thought it of sufficient importance for legislation, and has prohibited Seaweed being cut from the rock more than once a year.

In this neighbourhood (south coast of Cornwall) we have at times large quantities of Seaweed thrown upon the beach after a storm which detaches it from the rocks; in this loose state it is washed about while the wind blows seaward; but the moment the wind changes to any point bearing over the land it makes its appearance in the surf on the beach there to be left by the receding tide. This legacy of the storm is quickly seized by eager agriculturists, who are to be seen with long wooden rake in hand up to the knees in water, contending with the sea and their neighbours to obtain the largest heap; this is quickly drawn out of reach of the next tide by numerous carts. "A very amusing and exciting scene," says my visitor, a stranger to the sea; so it is, but it costs money.

When a new beginner you are lured by the words of your foreman—"Plenty of Weed in to-day, Sir, excellent manure; and all for nothing." Visions of splendid crops rise before you—manure all for nothing! Strange words! You go down to the beach, get very much excited, your hands itch to take a rake yourself and dabble too, and if fortunate you retire the happy possessor of perhaps 50 cart-loads of Seaweed as your share.

Next day the flush of excitement has past, you count the cost—so many meals for so many men, extra drink, your horses fagged to death in the contention—and oh, delusion, your Seaweed has already cost you 6*d.* a cart load. Next your heap shrinks to half its original bulk, reducing it to 25 loads, making the cost 1*s.* per load. Add 1*s.* more for carting three-quarters of a mile up the hill, and you have just enough for an acre for 50*s.*, and it was to have cost nothing! You have not enough to finish the field, and purchase guano at a less rate in money's worth per acre to complete the manuring. By this time you have learnt your first lesson in the chapter on Seaweed. "It will not pay to carry far."

Seaweed used as a manure by itself has a baneful influence on Grass land; it encourages the coarse Grasses and weeds to the detriment of the finer and more useful sorts. Cattle, viz., horses, sheep, and cows, will always leave the part of a field dressed with Seaweed alone for that which is undressed or manured with anything else. Used alone for Wheat it tends to a rank growth of straw, producing at the same time a most unexpected crop of Couch-grass, without having any very marked effect on the amount of grain. For seeded Barley, particularly when used quite fresh, it is most useful, increasing the amount of grain and straw, securing invariably a good plant of Clover.

For Turnips or Mangel especially it is very useful, either alone or in compost. Used as manure for Potatoes on heavy land it is most detrimental, and is barely tolerable on light shallow soils. When used in a partly decomposed state it has been known to rot whole acres of the seed. As a decomposer of coarse ill made dung it is invaluable; to improve ditch and road scrapings it is also useful. Caustic lime seems to have a most beneficial effect on Seaweed. Earth, Seaweed, and lime, make a most excellent compost for Wheat, Grass, Apple trees, and Gooseberry bushes, but for Wheat more especially. I have not tried it on other crops.

This compost has undeniably a more decided effect than either of the ingredients separately, even if the compost be used in less quantity. I would suggest a modification of this process, viz., the use of lime instead of peat, spoken of in your article, at the same time omitting the grinding process altogether.

Prepare a tank made of brick cemented with Aberthaw; this tank to be covered with a shed open on the side least exposed to the weather, and extending over a surface twice the size of the tank; let this surface be so arranged that all leakage shall flow into the tank. Let all the Seaweed that can be collected be placed in this shed; as it shrinks add more, turning it frequently to promote decomposition. It will very much reduce its bulk, at least to one quarter. Now apply caustic lime fresh from the kiln to dry it, mixing it well and picking out the stones, stems, &c, using no more lime than necessary. It should now be available for the drill, and perhaps superphosphate of lime might be mixed with it with impunity, and so used for Turnips and other green crops. A small shed and tank would suffice to make up a large quantity of this manure where Seaweed and lime can be procured at all times. This subject is a most important one, and is deserving of a good sifting in your columns; if this notice will but lead to that end I shall be much gratified. *Breton.*

Home Correspondence.

Experience in Draining.—The following is an answer to an inquiry of the cause of a drain stopping, and of the remedy in future, and to the remark that the evil was thought to be an objection to 4-feet pipe draining. "I examined the matter in the choked 4-inch drain pipe you sent me, and from its woody fibrous nature am strongly of opinion that it came from the root of a tree, notwithstanding that you say there were no trees near to it. I have known a 6-inch drain stopped in two years by the root of a Poplar that stood 79 yards off, and do not think drains safe within 80 yards of certain trees; still, as the evil seldom happens, for it is only under peculiar circumstances that it does, and the cost of taking up the pipes and clearing them and relaying them periodically in those places is trifling, I do not think the liability to it for a moment weighs against the great advantages that such good drainage as 4-feet pipe drains afford gives. In all my experience I cannot recall 30 instances of drains stopped by roots of trees, and these extend over many thousand acres, and were nearly if not all from trees of the Willow, Poplar, and Alder tribes, and were all drains carrying perennial springs; the latter fact probably is owing to the dryness of the soil in summer, causing the roots to draw to where they find moisture in the pipes at hat season. Various attempts to keep out roots have been made by using collars, and by applying matter over the pipes that is obnoxious to vegetation, but I have little confidence in any of these remedies. I know of no way of closing the pipes to roots and affording access to the water at the same time, for I have repeatedly traced the entrance of the root to a hole not bigger than the body of a small pin, and yet the root that has entered by this small entrance, has thrown out a brush to fill the pipe in a few months, and wholly close it up. The benefit from 4-feet pipe drains, properly planned and carefully executed, I may say is being found too considerable and too necessary to the cultivation of wet soils, to be prejudiced by such occasional failures. The practice is so fast improving and superseding all other that I can see little likelihood of any check to it, the ones that I have heard of have been easily traced to failures from want of skill and imperfect care in the designing and executing the work. I am continually receiving fresh evidence of the benefit of it to tenants; in many instances this wet year the land has been seen to have returned the whole cost of the draining in the improvement of this year's corn crop, and in the facility it has given to carry on the cultivation during the long wet time we have had. I have just returned from the North, where the harvest is still not completed, owing to the wetness and coldness of the land, and many of the undrained farms still have their fallows not yet sown, and are without a prospect of getting any Wheat in this year; while on the drained land cultivation has not been stopped, and the Wheat sowing generally has been finished several weeks in good condition, and I only use the words I heard last week from a tenant in Durham to his landlord, when I say that draining has been the salvation of many tenants from ruin this wet year. *Hewitt Davis, November* 26."

Deep Cultivation.—Mr. William Smith's, of Woolston, account lately addressed to the *Times*, and which has appeared in the *Agricultural Gazette*, of his excellent crops, and the superior cultivation of his land by steam, is all important to be observed. The produce of his Mangel crop is particularly worthy of notice in a season like the present. I myself was just about giving a challenge for 1860 to agriculturists, for showing the greatest weight on a given space of common ploughed land, cultivated for the first time by the spade, and only common double trenched, when I was encouraged by observing Mr. Smith's extraordinary production on just about the same space of land as my own experimented plot, viz., 22 square yards by his steam culture. Is it not a typographical error in Mr. Smith's letter, stating that he grew "858 roots on his 22 square yards, or 3 tons 2 cwt. 8 lbs., giving a crop of 31 tons and 80 lbs. per acre?" [It should have been 22 yards square.] Probably the weight per acre is correct, but the number and weight for the 22 yards surely must be wrong? In my own 22 square yards of

the Yellow Globe variety, I had only 36 roots, and they averaged 15 lbs. each, or 4 cwt. 3 qr. 8 lbs., which by correct computation is 53 tons 2 qrs. 24 lbs. On another plot of equal dimensions, Red Globes and Long Reds, the produce averaged 10 lbs. each, of 36 roots, equal to 35 tons 6 cwt. 4 qrs. 16 lbs. per acre. Ordinary crops of 1860 by horse-power are not one-eighth thus good. *A. Hardy, Maldon, Essex.*

Societies.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

Monthly Council: *Dec.* 5.—Present: The Earl of Powis, President, in the chair. Lord Walsingham, Hon. W. G. Cavendish, M.P., Hon. Colonel Hood, Hon. A. Vernon, Mr. Raymond Barker, Mr. Barthropp, Mr. Caldwell, Colonel Challoner, Mr. Druce, Mr. Frere, Mr. Brandreth Gibbs, Mr. Hamond, Mr. Fisher Hobbs, Mr. Humberston, M.P., Mr. Lawes, Mr. Shuttleworth, Mr. Thompson, M.P., Mr. Torr, Colonel Towneley, Mr. Turner (of Barton), Dr. Voelcker, Mr. Owen Wallis, Mr. Jonas Webb, and Mr. Henry Wilson.

The following new members were elected:—

Spencer, Right Hon. Earl Althorp, Northampton.
Disraeli, Right Hon. B., M.P., Hughenden Manor, Bucks.
Wombwell, Sir George, Newburgh, Easingwold, Yorkshire.
Hanbury, Edgar, Eastrop, Highworth.
Beale, T. T., 237, High Holborn.
Elkington, H., Woodbrook, Northfield, Birmingham.
Moscrop, W. J., Buscot Park, Faringdon.
Minett, J. E., Arley, Coventry.
Holloway, T., Sunningdale, Berks.
Zoeppritz, George, Ravensbury, Germany.
Ralston, W. H., Keele, Newcastle.
Pusey, S. E. B., Pewsey House, Faringdon.
Heasman, Alfred, Augmering, Arundel.
Cochrane, James, Harburn, Edinburgh.
Campbell, R., Banscot Park, Faringdon.
Tennant, J., Riddings, Settle.
Barnes, C., Chorley Wood House, Rickmansworth.
Farrer, O. W., Hamilton Place, Piccadilly, W.
Tempest, R. F., Ackworth Grange, Pontefract.
Rumbold, C. J. A., 5, Percival Terrace, Brighton.
Daubeny, E., Cleve House, Bristol.
Daubeny, R., King's Bench Walk, Temple, E.C.
Fox, William, Dunston, Sleaford.
Jekyll, John, Dunston, Sleaford.
Gillett, J., Fawler, Charlbury.
Wilson, T., Woodhorn, Manor House, Morpeth.
Killick, A., Deepdene Park Farm, Dorking.
Giraud, Edward, Preston, Wingham.
Wicksteed, Rev. C., Hafod, St. Asaph.
Pretyman, A., Plasllnynon, Llanfair, Anglesey.
Smith, Mr. S., Haddlesax, near Selby, Yorkshire.
Couchman, John William, Tottenham Green, Tottenham, Middlesex.

Finances.—The Hon. Colonel Hood presented the report of the Finance Committee, from which it appeared that the current cash balance in the hands of the bankers on the 30th ult., was 886*l.* 18*s.* 11*d.* The Secretary's receipts during the past month were duly examined and found correct.

The Committee begged leave to suggest that the thanks of the Council be given to Mr. Manning for his active exertions in winding up the affairs of the late Secretary Mr. Hudson, thus securing to the Society a large dividend on the amount due. The report was unanimously adopted.

On the Report of the Chairman of the Journal Committee, the Council resolved that the following rule be adopted in the case of Reports of Judges of Implements:—

That the Editor be requested to correct any inaccuracies of style and clerical errors. That the Consulting Engineer be requested to correct any inaccuracies in the description of the machinery, or the records of the working of the Implements; but that any alteration in the report of a Judge of Implements which is not included under either of the foregoing heads, shall be submitted to the acting Senior Steward and the Chairman of the Journal Committee, and shall not be adopted without their approval.

The standing committee for 1861 were then appointed. Colonel Challoner, Chairman of the Implement Committee, presented the report, the recommendations of which were adopted as follows.

List of Prizes for the Leeds Meeting:—

For the Classes of Drills:—	
1 Corn or General purpose drills	£ 30
2 Corn—for small occupations	10
3 Turnips and other roots	30
4 Water Drills	10
5 Drills for small seeds	10
6 Drill Pressers	10
Two classes of Manure Distributors:—	
1 Distributors for dry manure	10
2 ,, for Liquid Manure	10
Horse-Hoes:—	
1 Horse-Hoes for general purposes	15
2 Single row Horse-Hoes for ridge or flat	10
3 Horse-Hoes for thinning Turnips	5
Mowing Machines for natural and artificial Grasses	20
Hay Making Machines	10
Reaping Machines:—	
1 For cutting, with self delivery	20
2 For cutting the corn, without self delivery	10
3 Combined reaping and Grass mowing	20
Horse Rakes	10
Pair-horse Waggons	10
Other Waggons	10
Single-horse Carts	10
Two-horse Carts	10
Harvest Carts	10
Market Carts on springs	5
Miscellaneous awards to agricultural articles and essential improvements therein (10 medals)	20
The application of steam power for the cultivation of the soil	100
Ditto, ditto, worked by an ordinary portable engine, not exceeding 10-horse power	100

It is recommended that the actual trials of the steam cultivators shall commence in the third week in June, and that 100 acres of land should be provided by the Local Committee, who are requested to ascertain immediately what land they can procure, and the condition they can place it in so as to represent as near as possible autumn cultivation.

All Cultivators must be again exhibited at work during the Show under the direction of the Stewards.

Exhibitors intending to send Steam Cultivators shall especially enter the same, with specifications on or before the 1st of May.

The preliminary arrangements for the Leeds Meeting were reported as progressing satisfactorily.

On the nomination of Mr. T. Raymond Barker, the Duke of Marlborough was unanimously elected to supply the vacancy in the Class of Trustees created by the death of the Duke of Richmond.

A Special Committee was appointed at the suggestion of Mr. Fisher Hobbs for the purpose of recommending additions and alterations in the Bye-laws and Resolutions of Council.

The Council then adjourned to Tuesday, December 11, at 11 A.M., when it is specially summoned by the President.

BIRMINGHAM CATTLE AND POULTRY EXHIBITION, 1860.

Bingley Hall has again proved worthy of its former fame, and its annual exhibition is evidently becoming more and more appreciated. Numerically speaking, the entries have this season been good; in cattle and roots ahead of last year. Not a single standing remained unoccupied among the beasts; and of roots the Show was not only good when the character of the season is considered, but thoroughly up to the mark of any former year. We subjoin the entries for

	1859	and	1860.
Cattle	109		110
Sheep	44		42
Pigs	81		75
Roots	87		118
Total.. ..	321		345

The money prizes offered by the Society amount to nearly 1000*l.*; and if the extra prizes, cups, &c., are taken into account, you get a gross amount of not less than 1300*l.* Then the building is so thoroughly a pleasant one, and there is such an air of comfort and roominess about it, that we question if its like can be equalled for such a purpose in the kingdom. It is a positive luxury to get inside, and to elbow one's way amidst the crowd, and bustle, and crinoline, to handle the fat beasts, or to punch the specimens of obesity in the pig department with your walking-stick—to get away from the raw English outdoor sort of weather we have lately had. The state of cleanliness, the white-washed walls and boardings, the sawdusted floors, the circles of gaslights, and the completeness of the whole arrangements, leave but little to be desired. Under the new and evidently efficient secretaryship of Mr. Lythall—whose courtesy we would here acknowledge in obtaining an early admission for the press—matters seem to move admirably along. But leaving any other preliminary chit-chat for those who have more time or greater space at command, we must proceed to take a rapid survey of a few of the leading entries. The show at Bingley Hall always begins with

The Herefords.—These hold a high place in the eye of the midland grazier; but this season the entries are barely up to the mark in point of quality of what we have ere now seen them. It was, however, hardly to be expected that a steer such as Mr. Shirley's last year's beast, should again present himself. Such extraordinarily developed animals are not met with every day. In the older class of steers the Earl of Aylesford takes the lead, with as level a beast as need be desired. He was bred near Ludlow, and is worthily regarded as the best Hereford in the yard. Much credit is due to his lordship's manager, Mr. Sharp, for his selection of the beast, when in store condition. We happened to see him at Packington some two or three months since, and then fully expected the results which have since followed. The thigh, loin, and twist are good, he handles kindly, and has a wide level back, broad enough for an alderman to sleep on. The second prize, awarded to Mr. Towers, also comes from Ludlow, but is not so completely furnished. Mr. Naylor gets a shade further on than last year, in the same class, being now highly commended.

In the younger class, Mr. Shirley holds the same position as last year, though with a beast in many respects behind the steer he then exhibited. The back is not so level, though the girth is excellent; but there is a decided appearance of over-feeding, which promises to yield well for the dripping-pan. Yet the roasting meat will not be awanting, as he handles firm as may be. Mr. Towers follows Mr. Shirley, and then several commendations to Lord Bateman and other exhibitors. The couple of young steers, entered by Mr. Pitt, are both too young for the position they occupy, but might do well to keep on for another year.

Among the Hereford cows, which formed a good class, opinions were freely expressed as to the relative merits of the first and second prizes. Mr. Richard Hill's cow had decidedly the fuller twist, and better thighs; while the first-prize cow gained it in full forehand and depth of chest. Mr. Pitt's cow also had a finer coat and head, though her carriage was hardly so good. Mr. Cother had a good cow in this class. The heifers were only represented by three entries, of which the first prize went to Messrs. James, from Dorsetshire, for as well furnished an animal as need be desired.

Short-horns.—Singularly enough—for it has not often been the case here—these outnumber the Herefords, and also take precedence in point of quality. Among the older steers, a very weighty ox, bred at Broad Hinton, and exhibited by Mr. Joseph Stratton, carries the honours of the day. Yet it is questionable if this approaches some that Mr. Stratton has sent here before. There is plenty of substance, great depth, a very kindly mellow touch, and the offal moderate; but he is not so level as might be, and our own taste would be for a lighter cast of head and horns. The second-prize ox is also a good beast, and the whole class are very worthily "generally commended." Earl Spencer is behind his entry of last year, and to tell the truth, the Althorp steer looked rather jaded after the toils (and non-success) of the Rugby meeting.

Among the younger steers, some good beasts presented themselves. The easel of Mr. Davis, who was early at work, at once told where the notability was located. We refer to the Duke of Beaufort's very choice steer, which held among the Short-horns the post of honour enjoyed by the Bawcott steer, among the Herefords of '59. It is as near being a perfect beast as one cares to see, and both development and quality are extraordinary for the age. He obtains the first prize of 10*l.*, the extra prize of 20*l.* as best Short-horn, and Gold Medal as best ox in the yard. Many remarks were made as to the President's prize not coming to this beast also, instead of going to Mr. Farquharson's Devon; but it must be remembered that the Duke of Marlborough's special prize was for the best steer bred by exhibitor. And the Badminton steer was not bred by the Duke of Beaufort, but by Mr. Butler, at Badminton. Mr. Langston's ox in the same class should not be forgotten.

In Col. Pennant's white Short-horn cow, which carried the highest honours of any cow or heifer in the exhibition, another point was made for the Durham breed. A straight level animal, with a rib and loin of the best description, shoulder point well finished off, and other points nearly to match, mark this out as no ordinary beast. And both this cow and Lord Howe's, which followed suit, show the value of good blood over mere feeding; for these have each some of the best Short-horn blood in their veins. But speaking of this reminds us that another couple of highly bred cows, those exhibited by Mr. Sanday and his Grace the Duke of Devonshire (from the Holker herd), had those massive rumps and lumps of fat which aged cows so readily take on, and which stood a chance of a prize 10 years ago, but which judges now very wisely leave in the back ground altogether.

In the Heifer Class, again, we have several leading breeders coming in competition together. Broad Hinton takes the lead. Bushey Grove comes next (not exhibited by Mr. Majoribanks), and Capt. Gunter follows with a high commendation. The second prize was not so ripe as she ought to have been, else Broad Hinton might have come in only second best.

Devons.—A few good specimens of this breed generally find their way to Birmingham, though the selection is less numerous than at Baker Street. We have already noticed Mr. Farquharson's success among the aged steers, with a beast much heavier than the general run of the sort. Mr. Overman of Burnham, Sutton, who has seldom missed sending hither, gained the second prize. Among young steers we much liked the Prince Consort's beast, with bone almost as light and clean as you find in a well-bred hunter. Well ribbed, and of great girth for his size, with plenty of quality, there could be no cause to dispute the decision. But he did not show himself to great advantage, back arched and gathered up together, apparently from tender feet. The honours of the heifer class also went to Windsor Castle, though the competition was a close one. The second prize animal might be placed first, if both were going to Baker Street. Mr. Umbers, a Warwickshire breeder, sticks well to the Devons, and sends an entry which is creditable to his judgment.

Long-horns.—Here we may go on the principle, the less said the better. They are only represented by six or seven entries, of which the best is evidently the steer of Mr. Reading, of Priors Hardwick. That is about the richest grazing part of Warwickshire, and the day has been, 30 or 40 years ago, when Priors Hardwicke Long-horns would find their way to the Smithfield Christmas markets, and return from 30*l.* to 40*l.* or more per head, besides clearing road expenses. But with the extension and improvement of the Short-horns there seems to have been a proportionate depreciation in the quality of the stock which Bakewell delighted to honour.

Other Pure Breeds and Cross-breds.—These form a very large and interesting collection—larger, in fact, than we have previously seen. But we would very respectfully ask how it happens that the winning steer (78), could be called a cross at all. He had most of the Short-horn characteristics, and might, we think, to all intents and purposes have found his place appropriately enough in Class 6. There needs to be a little more definition in matters of this kind; or, at all events, breeders should explicitly say—as some of

them did say—what the "cross" is. If we only read the words "cross-bred Short-horn" we are as much in the dark as ever. Whereas, if the cross were quoted, a useful lesson or two might be learned. A Welsh steer of Colonel Pennant's takes the second prize in the same class with the crosses. Among the various crosses, none seems to answer better, as a whole, than that betwixt the Short-horn and West Highland, of which a good illustration was given by Mr. Beasley, of Overstone Grange, with his entry No. 74.

We must make the same complaint respecting the fat cows, under this division; for all that we know respecting Lady Emily Foley's very sweet first prize beast, that looks so wonderfully like a Short-horn, is that she is catalogued a "cross." So of others.

SCOTCH BREEDS.—"Is that a Scot?" was no unfrequent remark when looking at the polled steers alongside of their W. Highland brethren. For it seems that a Scotch steer is almost associated in the minds of some with the shaggy coated and wide-horned denizens of Argyleshire and and the Grampian regions. But this season we have polled and horned in friendly competition together, and a goodly collection they make. A polled steer exhibited by that well-known breeder Mr. M'Combie, takes the first prize, and a West Highlander from Bridgnorth, the second. Mr. M'Combie had another polled Galloway, which was commended, and to the taste of some critics would have come in for the second prize. We would very honestly endorse the decision of the judges, for the West Highlander was out and out the best finished and levellest beast of the two, even if not so heavy as the other. By the way, how comes it that we find a polled Galloway from the byres of Tillyfour? Has the Highland Society's Dumfries decision weakened Mr. M'Combie's belief in the superiority of the northern polled stock of Angus and Aberdeen. Certainly you get a heavier beast, but our taste would go for the other strain by a long way.

SHEEP.—We get a few fresh faces among the exhibitors, some of the old ones have retired, and others have been beaten by new comers. For instance, in LEICESTERS, Mr. Fojambe gets no farther than a commendation, though perhaps his sheep are hardly so good as we have seen them. Some spacious Cotswolds are shown among the Long-wools. The names of the prize-takers we need not here enumerate, as they are given below. But certainly these Cotswold men have a knack of showing off their flocks to the very best advantage. Such condition of skins and wool we don't every day meet with.

Among SHROPSHIRES the Evesham flock carries the chief honours before it, with still better sheep than last year, though hardly so heavy weights. Mr. Holland evidently takes up most heartily whatever he puts his hand to, and he is now an exhibitor in nearly every department of live stock. The pen he shows are really fine animals, one of the lot a magnificent sheep. They weigh fully 40 lbs. per quarter. In the same department the Earl of Aylesford is commended. Southdowns do not stand in high repute about "the black country," as there is too much quality, and too little quantity about them generally, to answer for the consumption of the million. Such is the belief hereabouts; but probably another reason may exist in the comparative unsuitableness of the district for them. Lord Walsingham comes out well as usual. In Cross-breds, we have two very heavy pens shown; Mr. Overman's (Southdown and Leicester) obtaining the first prize.

PIGS.—This is always a large entry here. There are, however, half a dozen fewer pens than last year, though the absence of fewer rough specimens makes ample amends. Mr. Morland's name occurs again and again, with the choicest entries. The Countess of Chesterfield also comes out well; while Mr. Crisp, of Butley Abbey, and Mr. Mangles, of Givendale, have all entries worth much more attention than the time at our disposal permits us to give. One very noticeable feature among the breeding pigs (Berkshires), is the success of Sir Francis Goodricke, over the head of Mr. South, of Henley-in-Arden, who always used to take the lead in this department. The pigs of Sir Francis are of the handsomest forms, well backed, short faced, and with capital chine. We make a remark which we know to be correct, when we say that the success of the Studley Castle entry is no chance-work affair, but is the result of years of persevering and painstaking effort. A ready sale was being found for these five months' old pigs at ten guineas a head.

We were struck with the appearance of an indifferently looking pen of pigs, in Class 31, of which the following is the catalogue entry:—Exhibitor and Breeder: Mr. Alfred Francis Appleford, 19, Bath Street, Leamington. Age, 11 months and 24 days. Fed on bran, stuffs, and Barley meal, from August 12 to October 22, seasoned with Thorley's "Condiment," for two, the third without the "Condiment:" from October 23 up to the time of exhibition, upon Indian corn and Barley flour, seasoned with "Thorley's."

Over the lot was stuck up a very nicely and artistically written show card, to the effect that such experiment had been made to test the truth of the Rotham-stead Laboratory, and to prove the value of Thorley's Condiment. A knot of visitors was collected around, listening to the verbal demonstrations of an individual who appeared to be the cicerone of the job. His reiterations and asseverations were strong enough certainly; and he was tolerably successful in directing the attention of passers-by to the frightfully skin and bone example of the poor unfortunate pig which "weighed fourscore less than the other two that had got the Condiment." The best of it was that neither of the pigs were worth looking at, compared with decent looking average pens on either side of them. But such a style of reasoning had evidently little sympathy with the English public; and sad to relate, on passing the 77, Newgate Street stand, with its 45 feet lineal of enormous board and canvas placarding, shortly after, we saw the veritable card referred to, which had been returned by the authorities to its proper ownership, as it occasioned an impediment to the on-lookers.

The following is the award of prizes:—

FAT CATTLE—HEREFORDS.

Class I. Oxen or Steers.—1st prize, 10*l.*, and Extra Prize of 20*l.* as best Hereford, Earl of Aylesford, Packington Hall, near Coventry; 2d, 5*l.*, Mr. John Towers, Ludlow; Highly Commended, John Naylor, Esq., Leighton Hall, Welshpool, Montgomeryshire. Age, 3 years and 10 months.

Class II. Steers.—1st, 10*l.*, and Silver Medal as breeder, Mr. Richard Shirley, Bawcott Tugford, Munslow, Shrewsbury; 2d, 5*l.*, Mr. John Towers, Ludlow; Highly Commended, Lord Bateman and Mr Taylor, Burleigh Villa, near Wellington, Shropshire; Commended, Lord Bateman and Mr. W. Aldworth, Abingdon.

Class III Cows.—1st, 10*l.*, and Silver Medal as breeder, Mr. George Pitt, Chadnor Court, Leominster; 2d, 5*l.*, Mr. Richard Hill, Golding Hall, Shrewsbury; Highly Commended, Mr. Tudge, Ashford, near Ludlow; Commended, Mr. Cother, Middle Aston, Oxford.

Class IV. Heifers.—1st, 10*l.*, Messrs. J. W. & C. James, Mappowder, Blandford; 2d, 5*l.*, Mr. J. Williams, St. Mary's, Kingsland, Leominster.

SHORT-HORNS.

Class V. Oxen or Steers.—1st, 10*l.*, Mr. J. Stratton, Manningford Bruce, near Pewsey; 2d, 5*l.*, Mr. J. Manning, Milton Ham, Northampton. The Class generally commended.

Class VI. Steers.—1st, 10*l.*, Extra prize of 20*l.* as best Short-horn, and Gold Medal, as best Ox or Steer in the yard, his Grace the Duke of Beaufort, Badminton; 2d, 5*l.*, J. H. Langston, Esq., M.P., Sarsden House; Highly Commended, Mr. Richard Stratton, Broad Hinton.

Class VII. Cows.—1st, 10*l.*, Vice-President's Prize, as best Cow or Heifer bred by the exhibitor, Gold Medal as best Cow or Heifer in the yard, and Silver Medal as breeder, Hon. Col. Pennant, M.P., Penrhyn Castle, Bangor; 2d, 5*l.*, Earl Howe, Gopsall Hall, Atherstone; Commended, Earl of Radnor, Berkshire, and Mr. T. Hands, Canley, near Coventry.

Class VIII. Heifers.—1st, 10*l.*, and Silver Medal as breeder, Mr. Richard Stratton, Broad Hinton; 2d, 5*l.*, William Wells, Esq., Redleaf, Penshurst; Highly Commended, Captain Gunter, The Grange, Wetherby, Yorkshire. Age, 3 years and 11 months.

DEVONS.

Class IX. Oxen or Steers.—1st, 10*l.*, President's Prize as best Ox or Steer bred by the exhibitor, Extra Prize as the best Devon, and Silver Medal as breeder, J. J. Farquharson, Esq., Langton House, Blandford; 2d, 5*l.*, Mr. J. Overman, Burnham Market, Norfolk.

Class X. Steers.—1st, 10*l.*, and Silver Medal as Breeder, H. R. H. the Prince Consort; 2d, 5*l.*, Earl Howe; Commended, Mr. J. Overman, Burnham Sutton

Class XI. Devon Cows.—1st, 10*l.*, Mr. W. Farthing, Stowey Court, Bridgewater.

Class XII. Devon Heifers.—1st, 10*l.*, and Silver Medal as Breeder, H. R. H. the Prince Consort; 2d, 5*l.* J. J. Farquharson, Esq., Langton House, Blandford; Highly Commended, Mr. Walter Farthing; Commended, Mr. Umbers, Weston Hall, Leamington.

LONG-HORNS.

Class XIII. Oxen or Steers.—5*l.*, Mr. John Reading, Priors Hardwick, Southam.

Class XIV. Cows or Heifers.—1st, 10*l.*, Mr. J. Faulkner, Bretby Farm, Derbyshire; 2d, 5*l.*, Mr. Thomas Satchwell, Hernfield House, Knowle, Warwickshire.

OTHER BREEDS.

Class XV. Oxen or steers.—1st, 10*l.*, and Silver Medal as breeder, Mr. Aaron Pike, Mitton, near Tewkesbury. (Cross-bred Short-horn.) 2d, 5*l.*, Col. Pennant, M.P., (Welsh.) Commended, David Ainslie, Esq., Costerton, Blackshiels, Midlothian. (Polled Aberdeenshire and Short-horn.)

Class XVI. Cows.—1st, 10*l.*, and Silver Medel as breeder, the Right Hon. Lady Foley, Stoke Edith Park, Herefordshire. (Cross.) 2d, 5*l.*, Earl of Harrowby, Sandon Hall, Staffordshire. (Cross-bred Short-horn.) Commended, Mr. Aaron Pike, Mitton, Tewkesbury (Cross Short-horn), and Mr. J. Camm, Farnsfield, Southwell, Nottinghamshire. (Short-horn Cross)

Class XVII Heifers.—1st, 10*l.*, Mr. Andrew Longmore, Rattie-by-Banff, Banffshire. (First-cross between an Aberdeenshire Cow and a Short-horn Bull.) 2d, 5*l.*, Mr. Richard Machin, Papplewick, Nottingham. (Cross.) Commended, Mr. J. Beasley, Overstone, Northampton. (Short-horn and Highland Scotch.)

SCOTCH BREEDS.

Class XVIII. Oxen or Steers.—1st, 10*l.*, Mr. W. McCombie, Tillyfour, Aberdeenshire. (Galloway Polled Scot) 2d, 5*l.*, Mr. E. Rainforth, Monkhopton, Bridgnorth. (West Highland Scotch.) Commended, Lady Brinckman, Sundorne Castle, Shropshire (West Highland), and Mr. McCombie, Tillyfour. (Galloway Polled Scot)

WELSH BREEDS.

Class XIX. Oxen or Steers.—1st, 10*l.*, and Silver Medal as breeder, Mr J. Francis, Manor Farm, Hanging Houghton, Northampton (North Welsh.)

Class XXI. Cows or Heifers.—5*l.*, J. H. Langton, Esq., M.P. (Short-horn.)

SHEEP.

Class XXII. Leicesters.—Three Fat Wethers, under 22 months old.—1st, 10*l.*, Extra Prize of 10*l.*, Hotel and Innkeeper's Silver Plate of 10*l.* 10*s.*, and Silver Medal as breeder, Mr. William Lovel, Nafferton Grange, Driffield, Yorkshire; 2d, 5*l.*, Mr John Hurst, North Dalton, Driffield; Commended, G. S. Fojambe, Esq., Osberton Hall, Worksop.

Class XXIII Long-woolled, not being Leicesters: Three Fat Wethers, under 22 months old.—1st, 10*l.*, and Silver Medal as breeder, Mr. C. Kearsey, Glewstone, near Ross (Cotswold); 2d, 5*l.*, Mr T. West, Greenhill Farm, Blechington, Oxfordshire (Cotswold)

Class XXIV. South and other Down: Three Fat Wethers, under 22 months old.—1st, 10*l.*, and Silver Medal as breeder.—Lord Walsingham, Thetford (South Down.) 2d, 5*l.*, Duke of Beaufort, Badminton, Highly Commended, Lord Walsingham. (South Down) Commended, Earl of Radnor, Coleshill, Berkshire.

Class XXV. South and other Downs: Three Fat Wethers, over 22 but under 34 months old.—1st, 10*l.*, Extra Prize of 10*s.*, Hotel and Inn-keepers' Silver Plate, and Silver Medal as breeder, Lord Walsingham. (South Down.) 2d, 5*l.*, Mr. J. Overman, Burnham Market. (South Down.) The class generally commended.

Class XXVI. Shropshires: Three Fat Wethers, under 22 months old.—1st, 10*l.*, and Silver Medal as breeder, E. Holland, Esq., M.P., Evesham; 2d, 5*l.*, Mr. T. Mansell, Adcott, Shropshire; Commended, Earl of Aylesford (for two pens).

Class XXVII. Shropshires: Three Fat Wethers over 22, but under 34 months old.—1st, 10*l.*, and Silver Medal as breeder, Earl of Dartmouth, Patshull; 2d, 5*l.*, Earl of Dartmouth.

Class XXVIII. Cross-bred: Three Fat Wethers, under 22 months old.—1st, 10*l.*, Silver Medal, and Silver Medal as breeder, Mr. J. Overman, Burnham Market. (South Down and Leicester.) 2d, 5*l.*, Mr. S. Druce, Eynsham, near Oxford. (Oxford Down.)

Class XXIX. Cross-Bred: Three Fat Wethers, over 22, but under 34 months old. No entry.

PIGS.

Class XXX. Fat Pigs: Three Fat Pigs of one litter, under 10 months old.—1st, 10*l.*, and Silver Medal as breeder, G. B. Morland, Esq., Chilton Farm, Harwell; 2d, 5*l.*, Mr. E. Sheppard, Roundway Park Farm, Devizes.

Class XXXI. Fat Pigs: Three Fat Pigs of one litter, under 15 months old.—1st, 10*l.*, and Silver Medal as breeder, Countess of Chesterfield, Bretby Hall, Burton-upon-Trent; 2d, 5*l.*, Mr. T. Crisp, Butley Abbey, Suffolk; Highly Commended, Geo. B. Morland, Esq; Commended, Mr. G. Beale, Frolesworth, near Lutterworth.

Class XXXII. Fat Pigs: Fat Pig, exceeding 15 months old.—1st, 6*l.*, and Silver Medal as breeder, George B. Morland, Esq.; 2d., 3*l.*, Mr. Mangles, Givendale, near Ripon; Highly Commended, Mr. G. Beale, Lutterworth (two lots), and Mr. Thomas Crisp, Suffolk; Commended, Mr. G. M. Sexton, Wherstead Hall, Ipswich, and Mr. J. Harrison, jun., Heaton Norris, Stockport, and Mr. G. Mangles, Ripon.

PRIZES FOR BREEDING PIGS.

Class XXXIII. Berkshire Pigs: Five Pigs of one litter, over 3, and not exceeding 6 months old.—1st, 10*l.*, and Silver Medal as breeder, Sir F. L. H. Goodricke, Bart., Studley Castle, Bromsgrove; 2d, 5*l.*, Mr. W. Cooper, Impsley Farm, Henley-in-Arden; 3d, 3*l.*, Mr. W. J. B. Scott, Queen's Hotel, Birmingham; 4th, 2*l.*, Mr. J. Smith, Henley-in-Arden; Silver Medal, Sir F. L H. Goodricke, Bart.; Commended, Mr. W. Hewer, Sevenhampton, Highworth, and Mr. J. Spencer, Villiers Hill, Kenilworth.

Class XXXIV. Pigs of other large Breeds: Five Pigs of one litter, over 3, and under 6 months old.—1st, 10*l.*, and Silver Medal as breeder, Mr. A. Guy, Eaton, Leicestershire; 2d, 5*l.*, Mr. G. T. Gibbons, White Hill Farm, Kirtlington.

Class XXXV. Pigs of a Small Breed: Five Pigs of one litter, over 3, and under 6 months old.—1st, 10*l.*, Hotel and Innkeepers' Silver Plate of 5*l.* 5*s.*, and Silver Medal as breeder, Mr. T. Crisp, Suffolk; 2d, 5*l.*, Mr. S. Wiley, Brandsby, Yorkshire; Silver Medal, Mr. S. G. Stearn, Brandeston, Wickham Market; Commended, Mr. J. P. Adams, Malvern, and Mr. G. Mangles, Ripon.

PRIZES FOR ROOTS.

Class I.—A Silver Cup, worth 10 guineas, offered by Sir John Ratcliff, Knt., for the best Collection of Long Mangel Wurzel, Globe Mangel Wurzel, Swedes and Carrots, six roots of each to be shown, from crops of not less than 2 acres in each case, to Sir William Heathcote, Bart., M.P., Hursley Park, Winchester.

Class II.—A Silver Cup (5 guineas), offered by Messrs. Proctor & Ryland, of Birmingham, six specimens of Kohl Rabi, to Mr. William Smith, Woolston, Bletchley Station, Buckinghamshire.

Class III.—A Silver Cup, worth 5 guineas, Messrs. Griffin, Morris, & Griffin, of Wolverhampton, six specimens of Yellow Globe Mangel Wurzel, to Mr. James Innes. Wroxton, near Banbury.

Class IV.—Kohl Rabi.—1st, 2*l.* 2*s.*, Mr. W. Smith, Woolston; 2d., 1*l.* 1*s.*, Mr. M'Cann, Court House, Malvern; Commended, Duke of Beaufort.

Class V. Long Mangel Wurzel.—1st, 2*l.* 2*s.*, Mr. C. Pratt, Stratford-upon-Avon; 2d, 1*l.* 1*s.*, Mr. T. Keable, Rowdefield Farm, Devizes. Commended, Sir William Heathcote, Bart., M.P.; Mr. S. Robinson, Shaw House, Melbourne; Mr. John Moore, Northgate Street, Warwick.

Class VI. Globe Mangel Wurzel.—1st, 2*l.* 2*s.*, Mr. C. Pratt, Stratford-upon-Avon; 2d, 1*l.* 1*s.*, Mr. A. H. Johnson, Gunnersbury. Commended, Mr. J. E. Tysoe, Rumer Hall, Stratford-upon-Avon; Mr. T. Keable, Devizes.

Class VII. Swedes of any variety.—1st, 2*l.* 2*s.*, T. R. B. Cartwright, Esq., Aynho, near Brackley; 2d, 1*l.* 1*s.*, Mr. W. Smith, Woolston. Commended, Duke of Beaufort; Marquis of Breadalbane, N.B.; Mr. J. E. Tysoe, Stratford; Mr. C. Pratt, Stratford-upon-Avon.

Class VIII. Common Turnips.—1st, 2*l.* 2*s.*, Mr. G. Mangles, Ripon; 2d, 1*l.* 1*s.*, G. B. Morland, Esq., Harwell, Berks. Highly Commended, Mr. W. Fletcher, Mansfield, Notts; Commended, Duke of Portland; C. Kearsey, Ross.

Class IX. Carrots of any variety.—1st, 2*l.* 2*s.*, Duke of Portland: 2d, 1*l.* 1*s.*, Mr. T. Keable, Devizes. Commended, Mr. G. McCann, Malvern.

Class X. Ox Cabbage.—1st, 2*l.* 2*s.*, Mr. S. Robinson, Shaw House, Melbourne, Derbyshire; 2d, 1*l.* 1*s.*, Mr. James Innes, Banbury.

Class XI. Potatoes.—1st, 2*l.* 2*s.*, Mr. G. Mangles, Ripon; 2d, 1*l.* 1*s.*, Mr. T. Halford, Newbold-upon-Stour, Shipston-upon-Stour. Commended, Mr. S. Robinson, Melbourne; Mr. J. Thompson, Atherstone.

With a few words on the ROOTS we must now conclude.

ROOTS.—The large increase in the entries is rather remarkable in a season like the present. Not only so, but the quality and weight—especially of Swedes—are first rate. Appropriately enough, the entries commence with William Smith, of Woolston, the father of steam cultivation; and if his competitive selection of Long Mangel, Globe Mangel, Swedes, and Carrots, is at all a fair criterion to go by, steam cultivation will receive a marked impetus. Some of his Swedes measured as much round as do the writer and the majority of the readers of this notice—for the larger proportion of middle-sized men will not stand more than a yard in girth, below the arm pits. The 10 guinea cup went to Sir W. Heathcote, of Hursley Park; and although the run betwixt him and Mr. Smith was of the closest character, not even a commendation was suggested. In Swedes and Yellow Globe Mangel, we certainly think that the Baronet had the worst of it, though in Long Reds, and in Carrots, Woolston was behind. Mr. Smith's entry is so full, and so suggestive, that we make no apology for transferring it:—

"The Mangels and Carrots were drilled April 18th: the Swedes drilled May 8th. The land cultivated in the autumn 18 inches deep, by steam power. 10 tons of farm-yard manure per acre to the Mangels and Swedes; 3 cwt. of guano per acre to the Carrots; all applied in the autumn. The total cost of preparing the seed beds, 13*s.* 8*d.* per acre. The Mangel and Swede land lay in ridges through the winter. The seeds were

drilled upon it in the spring without any cultivating operation, except hand-hoeing the tops of the ridges just before drilling. The Carrot land was worked and drilled upon the flat. Mangels and Swedes after Wheat; Carrots after Oats."

Whatever thoughts may be suggested as to the advantages of deep and untrodden stirring of the soil to the depth named—and on these points there will not be two opinions—the comparative superiority of old-fashioned farm-yard dung over artificials, in a wet cold season, is illustrated both here and in several other entries. In the Cup class, Mr. Benyon did not get quite up to his usual standard, and we missed the genuine "Englefield Globe Mangels" altogether. In setting aside, which we did last May, a few acres for experimental purposes, and then sowing every variety of Mangel which we could by any means procure from several leading seedsmen, we found, on weighing, that the Englefield Globe had the largest weight per acre. And we therefore trust that the variety, if it is a variety, will not be forgotten. Mr. Johnson, of Gunnersbury, was also behind his usual standard.

The competition in Kohl Rabi—for Messrs. Proctor & Ryland's cup—was very keen, there being entries from eight different counties. But here steam culture triumphed, and the cup went to Woolston. Nearly all the specimens, however, were good, although several careful growers, such as Mr. Innes, from Wroxton Abbey, have done better ere now.

But Mr. Innes carried off Messrs. Griffin's cup for Yellow Globe Mangels, with a splendid lot, the entry for which reads thus—Dobito's; sown April 16th to 20th; after Oats; manured with 15 tons of farm-yard manure, 5 cwt. of Mangel manure, and 5 cwt. of salt per acre; soil, red loam.

In the Society's Kohl Rabi competition Mr. Smith again comes first, and with Swedes second. In the catalogue Mr. Smith and Mr. Fowler stand side by side with several entries—the latter being "grown upon land cultivated by Fowler's steam plough;" but unfortunately no appearance was put in from 28 Cornhill, and we had not the opportunity of instituting a comparison.

Both the Mangel first prizes were taken by Mr. Pratt, of Stratford-on-Avon, who has long had his hand in the growing of prize roots, and who generally comes off first or second best here. The keenest competition of all lay among Swedes, for which there were about 30 entries. The second prize has already been noticed, the first going to Mr. Cartwright of Aynho. Then followed commendations to Wiltshire and Argyleshire, the latter to the Marquis of Breadalbane, on the west coast. The Oban entries were very creditable: though not first-rate, both here and among the common Turnips, the weights were good. Yet among "common Turnips" the judges evidently went very much more for quality than for weight, as we could name many specimens that outweighed the prize lots. The justice of this verdict is naturally questioned by some competitors, because in this class of entry we expect to go for weight and bulk, leaving quality and storing properties for the Swedes.

Carrots and Cabbages were both fine, the prize lot of the latter weighing some 290 lbs. the half dozen. The Duke of Portland came first with Carrots, a very different entry of this root to what we remember seeing from Clipstone Park a few years ago. The Oban Carrots were a very long way behind, and those sent from Woolston were not so clean as might be looked for with deep cultivation. The Potato show was but a small one, and Kidneys were again naturally in repute.

THE POULTRY SHOW AT BIRMINGHAM.

IT will be found in every pursuit that, although 20 societies may follow the same rules, and start on the same basis, yet that one, or at most two, will eclipse or distance all others. They become national, as are the Derby, the St. Leger, certain musical festivals, and some flower and fruit shows. They are associated with particular dates, and all other engagements are avoided if they are likely to clash with them. Such is the Birmingham show. We have not to do with the cattle, but we always see with admiration the care taken of their comforts, and the luxury of space, air, and cleanliness with which they are shown, and which is peculiar to Bingley Hall.

If we took up a Guide-book or history of Birmingham, we should think it incomplete if it did not mention and describe this building; and when it spoke of the value of land sold by the foot, almost by the inch, then mentioned the extent covered by Bingley Hall, a good idea might be formed of the enterprise of a few gentlemen, who having essayed a small pig and poultry show, open in a loft for a few hours, not only foresaw such exhibitions as the present and preceding ones, but ventured to erect such a building, with no other dependence than the subscribers to and the receipts at an annual exhibition of poultry and fat stock. It would be too much to say their success has been uninterrupted from the first, but it is a pleasure to be able to congratulate the managers on their present position, and on the steady confidence in the soundness of their rules, and their right to public support, which have resulted in their present success, of which they may be legitimately proud.

The poultry pursuit was once termed a mania, but it has outlived this. Birmingham has held its 12th grand annual meeting, and there has been no falling off in interest, attendance or quality. We may except from this that the number of pens was slightly in decrease of last year, which may, we believe, be accounted for by the fact that another large show—the Crystal Palace—which usually follows six weeks afterwards, this year issued its prize-list for the week immediately succeeding the show of which we treat. Whatever may have been the intentions of the first promoters of this show, they must be gratified by their entire success. If they wanted the nature and requirements of each particular breed to be understood, so that a man could choose the proper fowl for his soil, as he does a plough, it can now be done. If the inhabitant of a town wants a bird that will live in a small yard, he knows which to take; the same may be said of the man who wants eggs, or of him who looks for table fowls. Formerly a fowl was a fowl. It was necessary the nondescripts that inhabited the yard should have a name, and as the poor creatures were left to gain their scanty existence at the barn door, they were called barn-door fowls. Birmingham gave the death blow to them, and by offering liberal prizes encouraged those who kept fowls to keep some that would be far more profitable. The question might be almost treated scientifically by inquiring the difference in the return for food consumed, because the "pariahs," the barn-doors of which we have spoken, were birds of unbounded appetites, vigorous digestions, and active habits, averse to obesity, and turning all their food to thew, sinew, and muscle, not that which is desirable on the table. They were also small, seldom exceeding 2½ or 3 lbs. in weight, of very dry, coarse, and inferior meat. For this is now substituted the large heavy succulent Dorking, weighing double, without any greater consumption of food. Shows like that of which we treat, have done for poultry that which the Royal Agricultural Society of England and its pioneers have done for cattle; they have substituted the most profitable and choicest animal, yielding the largest proportion of delicate food, for that which has a preponderance of coarse meat, or, to use the technical term, offal.

The benefits do not stop here. These societies supply the spur and incentive to experiments. If none such existed, people would hardly know what to do with a bird of unusual merit. If its production involved trouble, or entailed any additional expense, it would be prudent to pause before running the risk; but now it is a certainty that it will not only raise the breeder's reputation, but also make a profitable return for any reasonable outlay. To this we trace the constant increase in size, which is now the rule instead of the exception, and which is constantly adding to the food of the country.

At a future time we will return to this subject, at present we must refer to the classes of this great Show. We cannot undertake to name every pen that deserves it, because it would occupy more space than we can devote to it. The Game classes show by their numbers and the interest they excited among the spectators, they are old favourites with the English people, and that the prohibition of open cock fighting has not abated the admiration for, and liking of this old favourite. The success of Mr. Gilbert Moss, Captain Hornby, the Hon. W. Vernon, and Mr. Archer was remarkable among the winners.

The Dorkings still increase in weight and in popularity among the aristocracy, as will be seen in the names of the successful. The novelty of the Silver Grey classes was evidently approved by those who breed for colour, but it is still plain that feather and great size have not yet been combined. The old Dorking classes brought out two new names; one, the Marchioness of Winchester, took the highest honour, the Silver Cup; not easily, however, being hard run by Lady L. Thynne, Mr. Vernon, and Capt. Hornby. The latter gentleman headed the chickens, followed by Mr. Wakefield. These two gentlemen took the same order in the class for two pullets, and Messrs. Hornby and Bromley for two hens. The White Dorkings were large and good, but few in numbers. The adult Spanish were not so good as usual. Captain Hornby showed the best hens we have seen for a long time; the cock was perfect, but small. The chickens made amends, and added another cup to the numbers gained by Miss Rake, Messrs. Rodyard, Hyde, and Teebay also deserve mention. The classes for Hens and Pullets were not sufficiently numerous. The Cochin Chinas were most excellent, and gained Silver Cups for Messrs. Tomlinson and Stretch. Messrs. Cattell and Kellaway showed excellent birds, and deserved their prizes. The old cock in the Partridge pen, belonging to Mr. Stretch, is a marvellous bird. The Whites were good, and although the first prizes went to Messrs. Chase and Dawson, we were glad to see Mrs. Fergusson Blair second. This lady deserves all her success for her enterprise. The Bramahs divided their favours between Mr. Teebay and Mrs. Craigie; they were not impartial, as three out of four prizes went to the former.

All the Poland fowls were good, but it is necessary among them to distinguish the Silvers, which justified their claim to have every pen noticed in the prize list. All the Hambros were good, especially the Golden classes and the Silver Spangled. Messrs. Lane and Worrall are pre-eminent. The Silvers miss Mr. Archer

The classes for single Cocks were numerous and good and Lady L. Thynne again achieved the distinction of taking the first prize for Dorkings. Many of these were of remarkable size and beauty. The same may be said of Mr. Brundrit's Spanish, Mr. Tomlinson's Cochin, and Mrs. Craigie's Brahma Pootra.

The Gold and Silver Laced Bantams were the best we have seen for a long time, and some of the blacks were remarkable. Game Bantam cocks were numerous, and many of surpassing beauty. As usual the Grey outweighed the White Geese. Mr. Towle's Cup pen of three Greys weighed 70 lbs.; Mr. Daft's White, 60 lbs. Aylesbury Ducks were not as heavy as usual, the Cup pen of four birds weighing only 31½ lbs.

The Rouens were a more numerous and a beautiful class, the prize pen weighed 28 lbs. There were 31 pens shown. The Black Ducks are fast arriving at perfection, and the prize pens of Mr. Beasley and Miss Steele Perkins were highly meritorious.

The Turkeys gave a cup to Mr. Smith, but Mrs. Fergusson Blair was second, and birds that had travelled from Scotland weighed 55 lbs. the three against 61 in the prize list. The first prize for young birds went also to Mr. Smith.

There was a great novelty in a pen of Virginian American birds, of a blue feather, spotted and striped with black.

The show was a success throughout. Visitors and sales were all on the increase. The members of the Council and Committee were as usual indefatigable, and nothing was wanting for the comfort of the birds or the pleasure of the visitors.

The judges were the Rev. R. Pulleine, Mr. Andrews, Mr. Hewitt, and Mr. Baily.

The exhibition of dogs at Mr. Brereton's Repository included nearly 300 animals of every variety known to the United Kingdom. We shall give a report next week.

SOCIETY OF ARTS.—No agricultural paper is to be read during the ensuing "agricultural" week in town. At the late annual meeting, the Society's Silver Medal was given to each of the following gentlemen. We publish the list, as most of the topics named are agricultural:—

To Mr. R. Thomson, for several novel and ingenious instruments, for use in dental surgery. The Society's Silver Medal.

To Mr. Leonard Wray, for his compound of materials as a substitute for gutta percha. The Society's Silver Medal.

To Mr. J. C. Morton, for his paper read before the Society "On the Forces used in Agriculture." The Society's Silver Medal..

To Mr. Leonard Wray, for his paper read before the Society, "On the Means of Increasing the Production of Sheep's Wool and Angora Goat's Hair." The Society's Silver Medal.

To Mr. George R. Burnell, for his two papers read before the Society, On Building Stones—The Causes of their Decay and the Means of Preventing it;" and "On Building Woods—the Causes of their Decay, and the Means of Preventing it." The Society's Silver Medal.

To Dr. Dauglish, for his paper read before the Society, "On a New System of Bread Manufacture." The Society's Silver Medal.

To Dr. J. Forbes Watson, F.R.S., for his paper read before the Society, "On the Chief Fibre-Yielding Plants of India." The Society's Silver Medal.

We add here such extracts from the current premium list of the Society as have any special interest for agriculturists.

The Society's Gold and Silver Medals will be awarded for communications on the following subjects:—

For an account of the mode of occurrence, and of the uses of Cornish, Devonshire and Dorsetshire Clays, and the quantities annually worked.

For an account of the different Natural Stones, whether limestones or sandstones, used for architectural purposes in the different large towns in the United Kingdom, stating the comparative durability, price, special use, and general statistics of each, together with suggestions for preventing decay.

For a description of the manufacture of saltpetre, and its preparation for the market in the East or West Indies.

For the economical production of Cyanogen Compounds for employment in the Arts, or as manures.

For the production of Ammonia or Nitric Acid from their elements, by methods which would admit of practical application.

For the best essay on the theory and practice of fermentation, particularly as applied to the art of brewing, with an account of any successful means by which the process of malting may be modified or dispensed with.

For an account of the processes employed in the manufacture of Starch, the sources from whence it is obtained, and the purposes to which it is applied.

For the largest and best sample of Starch, produced from a non-edible substance, as cheap as any at present in use, and obtainable in large quantities.

For the best and most economical means of applying Carbonic Acid Gas to the preservation of Meat.

For an economical method of rendering the refuse from Scrolls in making size, and the waste Alkali and filth extracted from rags in process of boiling, available each separately as a manure.

For an account of the means at present employed in the utilization of so-called "refuse products" generally.

For the best method of preparing Pure Water for Locomotive Engines, either by distilling or otherwise, so as to prevent incrustation in the boiler, and the necessity for "blowing off," thus saving fuel and time.

For an account of the best machinery for preparing, grinding and dressing Barley and Oats into their respective manufactured constituents, Pearl Barley, Groats, &c.

For the best method of converting precipitated or extracted Sewage Matter into a dry state, valuable for agricultural purposes.

THE NORTHERN COUNTIES FAT STOCK AND POULTRY SOCIETY.—The eighth annual exhibition of this Society, hitherto known as the "South Durham and North Yorkshire Fat Stock and Poultry Society," is to be held on Wednesday, Thursday, and Friday of next week, at Darlington. Although the entries for cattle are somewhat fewer this year than last, the show of Short-horns is expected to be unusually attractive. In

this department there are 51 entries, last year 81. Of sheep, there are 19 pens, last year 21; pigs, 43, last year 32; and poultry, no less than 470, against 339 last year. The prize money amounts to nearly 500*l*. The banquet, to be held on Thursday, will be presided over by Earl Vane.

Miscellaneous.

The Monsell Estates.—We are asked on behalf of readers in the county of Limerick to announce that Michael Robert Ryan, Esq., J.P., Temple Mungret, has been appointed Agent to the estates of the Right Hon. William Monsell, M.P. As a Magistrate and Agent in the County Mr. Ryan has already secured the confidence and approbation of all parties; and undoubtedly, his energetic and intelligent discharge of the duties of the Mayoralty of Limerick during last year, proved him to be highly capable of filling any office where intelligence and activity are required.

Calendar of Operations.

DECEMBER.

TYNESIDE, NORTHUMBERLAND: *Dec.* 4.—The weather during November has been extremely unfavourable for securing the remainder of the corn crops in this district, and there are still many scores of acres (chiefly Oats and a little Wheat) still standing in the fields within two or three miles of the Tyne, both on the north and south sides of the river. The great bulk of the Wheat and Oats, even where secured in fair keeping order, must stand many weeks in stack before they are fit for miller's purposes; Barley is the only grain in anything like condition for use, and consequently damp and inferior samples are very much reduced in price from the large supplies brought forward. Barley and Oats are in general yielding satisfactorily, but we cannot say the same of the Wheat, which is a poor affair altogether. The breadth of land under Wheat cannot be above half the usual quantity at this date, much of it put in late and in bad order, and we fear the seed in a damp state also, so that we cannot wonder that very little of it has yet shown above ground. On the whole the season is a disastrous one on all cold undrained soils under tillage, the usual cast of store cattle have to be parted with at a low figure. The Turnip crop is a mere trifle; much of the fodder is still soaking in the fields where it grew, and the Wheat crop—which is generally looked to for meeting the rent-time—after having a third or fourth part of a poor crop shaken out by the wind, was first whitened by the frosts, and then blackened by the continued rains. On warm loamy soils under good cultivation the case is different, the corn crops cut up well, and were secured in good time; and the Turnip crop is the best we have had for many years, returning as much as 10*l*. per acre to the grower in some cases where eaten on the ground by sheep. The Potato crop turned out a very various one, but in most cases moderately free of disease. *W. C. T.*

WESTER ROSS: *December* 3.—The weather last month, although variable, was on the whole suitable for the advancement of out door labour. The rainfall was under 1½ inch, and the frost though keen continued not long enough to affect materially the labour of the field. In the higher districts the harvest has only very lately been completed; and even in the earlier districts Peas and Beans have done little more than reach the stackyard. From the lateness of the harvest it could scarcely have been otherwise than that the crop should have been damp and unmarketable; but unfortunately after the crop was stacked, we had a continuation of calm misty weather which heated and necessitated the turning of a larger number of stacks than has been the case for many years. Our grain of course, reaches the market in miserable condition. Very little Wheat has been threshed, as it is quite unfit for grinding. The weight of it ranges from 50 to 60 lbs. per bushel, scarcely any exceeding the latter figure. Barley is nearly all under the standard of 54lbs., and Oats are variable and inferior in quality and weight. Last year Wheat weighed from 63 to 66, and Barley from 55 to 59lbs. per bushel. Our late harvest has left us with the usual amount of autumn work to accomplish with little time for its accomplishment. A few additional weeks of fresh weather would be a great boon. We have been busy preparing for, and sowing Wheat; and, tomorrow, if favourable, we expect to have it completed, when some 45 acres would be laid down. Nearly the whole green-crop lot remains to be turned over, and very few Turnips are stored. Our Turnips, especially the softer kinds, have greatly improved of late, and are now a full crop; the Swedes appeared unable to make head with such a superfluity of wet. The hogs are now on Turnips, and still bear the marks of the scarcity of meat for their mothers last spring. The abundance of railway work for our labourers this winter bids fair to make up for the idleness and destitution of last winter.

Notices to Correspondents.

CHEVIOTS: *Cor.* The following are some of the facts connected with this breed. Their home is the hill country of Northumberland and Berwickshire. The fat sheep weighs from 12 lbs. to 20 lbs. a quarter. The fleece weighs from 3 lbs. to 4 lbs. It is a larger bodied sheep than the Black-faced sheep. They are not remarkable for fecundity, and the lambs rarely equal the ewes in number. The ewes are disposed of at 4 or 5 years old, having had 3 or 4 lambs. The full history of the breed is given in the "Cyclopædia of Agriculture," by the late A. T. Wilson, who was practically conversant with the subject. The best fairs for Cheviots are Lockerbie, August 18, (if that be Saturday, Sunday, or Monday, then on the following Tuesday), for lambs; Moffat, Friday after 2d Monday of September (rams and other sheep); Langholm, July 26 (lambs); September 18 (rams and other sheep); Dunse, 4th Tuesday of March (hoggets in wool, and ewes in lamb); 3d Tuesday of May (sheep for grazing); 2d Monday of July (lambs and wool); 3d Thursday in September (draft ewes); Lauder, Friday before 12th July; St. Boswell's Green, July 18; Melrose, August 12; and in England at Stagshaw, Friday before Whitsunday; and Brough Hill, September 30, and October 1. [We append in full our correspondent's letter and ask for further information from any of our readers. "I should feel obliged by any one conversant with the breed in their own locality, stating whether the pure breed is now anywhere, and where, and by whom peculiarly fostered and improved. Whether the pure breed is still confined to the hills, or whether it has been adapted, with due regard to the preservation of its original purity, to ordinary sheep treatment on enclosed pastures and Turnips. Also whether in its "improved" state it has lost its quantity of lean flesh in an increased tendency to fatten. And lastly, what are the merits of the breed in respect of quantity and quality of wool"]

LAMB PLANTATION: *F H S.* It is not in the least likely that cattle turned out into an old grassy lamb plantation, will injure the bark of the trees.

LAND DRAINAGE: *J J H.* Mr. Bailey Denton's publications. Apply to any Bookseller. The Essay in "Morton's Cyclopædia of Agriculture.

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PATENT COMBINED REAPING AND MOWING, or GENERAL PURPOSE HARVESTING MACHINE,
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HAS proved itself capable, during the past season, of Cutting Crops of Grass and Grain which no other Machine could attempt. It adapts itself to every irregularity of surface, and may be taken along a lane, or through an opening only 5 feet in width. The labour of raking is less than in any Reaper hitherto put into operation.

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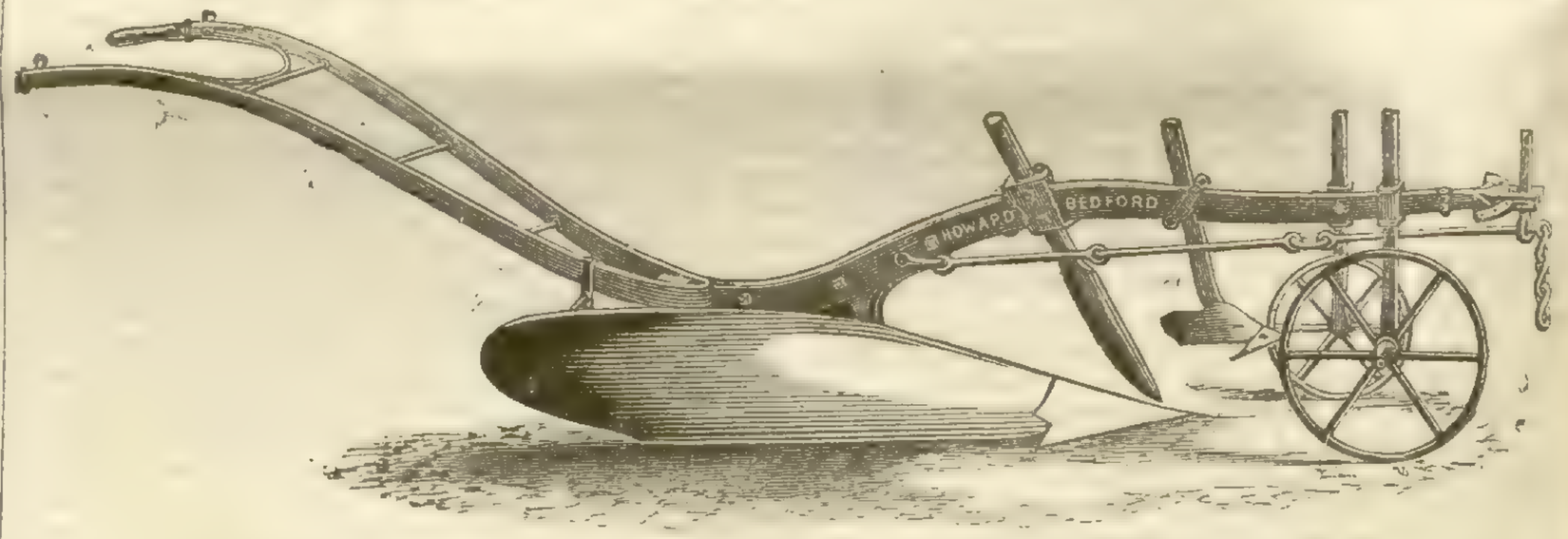
HOWARDS' CHAMPION PLOUGHS.



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2. The FRAME or body, to which the lever neck is fitted, is formed so as to stand the roughest usage.
3. The BODY can be removed from the beam, and a Subsoil or Ridging body attached.
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5. The LEVER NECK is so boxed in as not to be liable to either wear or breakage.
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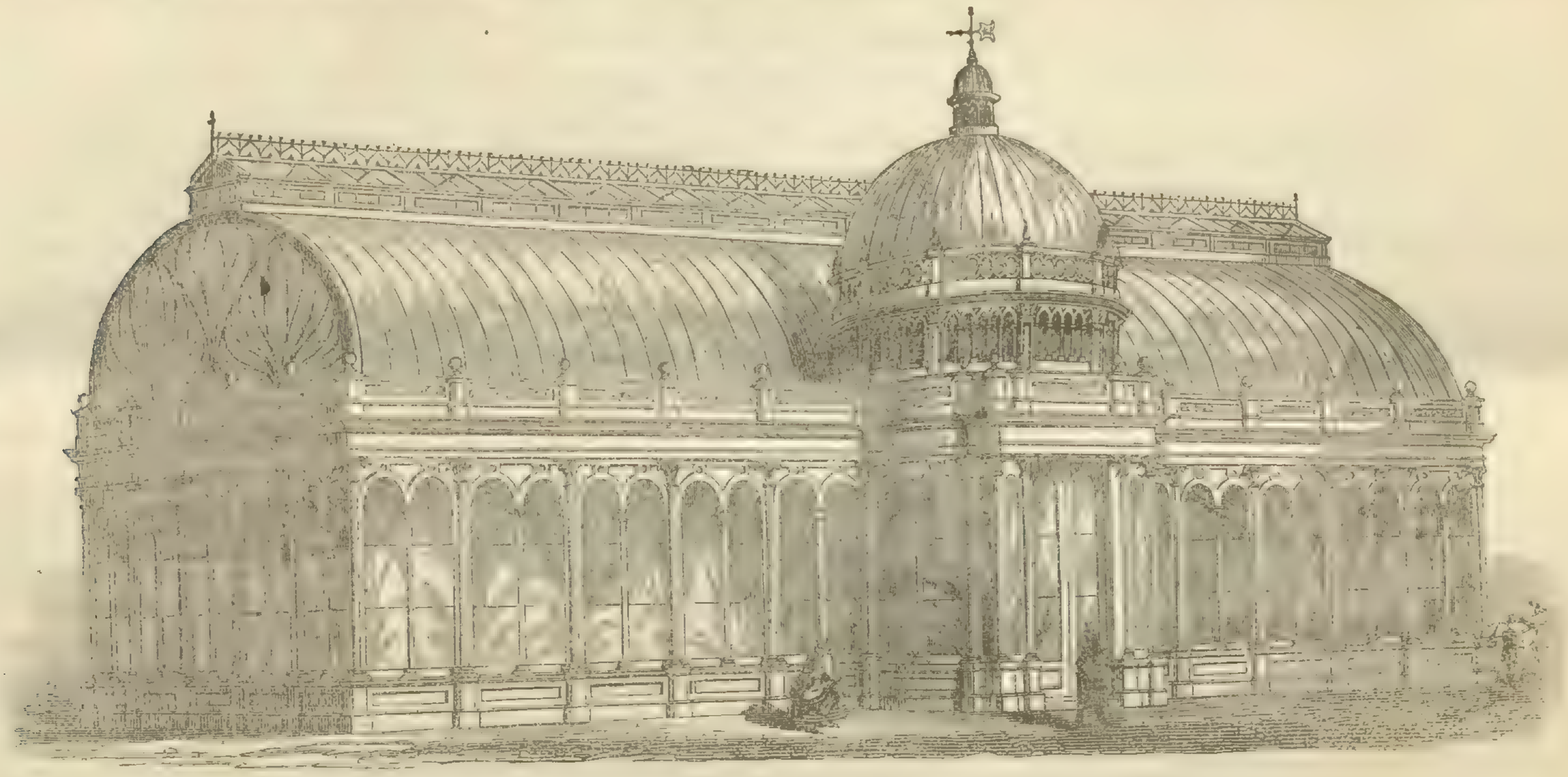

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15 .. 11	15 .. 12	16 .. 13	24 .. 14	24 .. 16	4ths.	13s. 6d.	1¾d.
16 .. 11	16 .. 12	17 .. 13	20 .. 15	20 .. 17	3ds.	16s.	2
17 .. 11	17 .. 12	20 .. 13	22 .. 15	20 .. 18	2ds.	19s. 8d.	2½
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5 ,, ,,	0	6½	,,	15 ,, ,,	3	0	,,
6 ,, ,,	0	8	,,	16 ,, ,,	3	6	,,
7 ,, ,,	0	10	,,	17 ,, ,,	4	0	,,
8 ,, ,,	1	0	,,	18 ,, ,,	5	0	,,
9 ,, ,,	1	2	,,	19 ,, ,,	6	0	,,
10 ,, ,,	1	4	,,	20 ,, ,,	7	0	,,
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See *Gardeners' Chronicle* of December 1

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CARROT, best sorts for summer and winter use	14 ditto	7 ounces	3 ounces	2 ounces
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CELERY, SUTTON's Solid White and others	2 ditto	2 packets	2 ditto	2 packets
COUVE TRONCHUDA, a most delicious vegetable	1 packet	1 ditto	1 packet	1 packet
ENDIVE, best sorts	1½ ounce	2 ditto	1 ditto	
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LETTUCE, SUTTON's Superb Cos, and others for succession	5 packets	4 packets	3 packets	2 packets
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PARSLEY, splendid curled kinds	2 ditto	2 ditto	1 ditto	1 packet
PARSNIP, Hollow Crown, fine	6 ditto	4 ditto	2 ditto	1 ounce
RADISH, finest sorts for succession	1 pint and 10 ounces	12 ounces	6 ounces	3 ounces
SPINACH, summer and winter kinds	2 pints	1 pint	4 ditto	2 ditto
SALSAFY	1 large pkt	1 packet		
SCORZONERA	1 do. do.	1 ditto		
TURNIP, fine sorts for succession	16 ounces	8 ounces	3 ounces	2 ounces
VEGETABLE MARROW, new Custard and others	2 large pks	2 large pks	2 packets	1 packet
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From Mr. BONE, *Gardener, Huntsham Court, Tiverton.*

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"Your Seeds are the very best my gardener ever made use of, and gave the highest satisfaction."

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PLATYCERIUM STEMMARIA, 21*s.*

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BELLEYMEI (1860), 21*s.*	WIGHTI (1860), 21*s.*
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CHANTINI, 5*s.*	BRONGNIARTI, 5*s.*
ARGYRITES, 3*s.* 6*d.*	HOULLETI, 7*s.* 6*d.*

The above are the most beautiful and distinct of this interesting and superb genus.

J. AND C. LEE, VINEYARD NURSERY, HAMMERSMITH, W.

NEW FUCHSIA, MADAME CORNELISSEN.—Among the white corolla class, is the best double, deepest coloured sepals in contrast, best reflexed, more profuse in bloom, and best habit. Plants young and free in growth, well adapted for making specimens in the coming season, offered at 3*s.* 6*d.* each, post free, 4*s.* 6*d.*

PETUNIA LADY EMILY PEEL, 3*s.* 6*d.* each, and THE QUEEN, 2*s.* 6*d.*

PETUNIA ANNIE KIEN.—Double crimson, with picturesque white margins, 3*s.* 6*d.* each.

TREE CARNATIONS, full of flower and bud.

THE BULB GUIDE, for Amateur Growers, is now published, and may be had of Messrs. HENDERSON in exchange for 13 postage stamps; also a Coloured Lithographed Plate of the Wellington Nursery (22 inches by 15), on receipt of 12 stamps.

E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

NEW GARDEN SEEDS, GROWTH OF 1860.

ROYAL BERKSHIRE SEED ESTABLISHMENT.

SUTTON AND SONS are now prepared to execute orders for all kinds of GARDEN SEEDS, and can warrant them genuine.

The PRICED LIST will be ready in a few days.

Royal Berkshire Seed Establishment, Reading.

The Gardeners' Chronicle.

SATURDAY, DECEMBER 15, 1860.

WE have now before us the official announcement of the line of action to be taken next year at Kensington by the HORTICULTURAL SOCIETY.

Meetings of the Fruit and Floral Committees, for the purpose of examining new plants and fruits, will be held every month. At these meetings Fellows will be admitted, with their friends. On the 5th and 6th of June there will be *a grand Exhibition of Flowers and Fruit*, upon the plan of those formerly held at Chiswick. The 3d of July will be devoted to *a grand Rose Show*. On the 11th of September there will be a Flower Show principally devoted to *Dahlias*. And on the 6th of November there will be a great display of *Fruit and Chrysanthemums*.

The FRUIT and FLORAL COMMITTEES will continue to award Certificates of Merit as at present. The FLORAL COMMITTEE has before it the following objects: To examine, and to report upon the merits of such New Plants and Flowers of all kinds as may be submitted to its judgment, whether (1) imported species, (2) garden varieties intended for decorative purposes, or (3) florists' varieties; including, also, all new plants flowered in the Society's Garden establishments. The FRUIT AND VEGETABLE COMMITTEE has the following duties:—(1) To encourage the production of new and improved varieties of fruit and vegetables, by examining and reporting on such as may be submitted to it for the purpose; (2) To collect and disseminate reliable information, respecting the adaptability of particular kinds of fruits to the varied conditions of soil, locality &c., throughout the United Kingdom; and (3) To report on all fruits and vegetables grown in the Garden for the purposes of comparison or experiment.—By both Committees Honorary First-class Certificates and Commendations will be awarded, at the discretion of the majority of the members present, to such of the novelties exhibited before them as may be thought deserving thereof. Other meritorious subjects will be rewarded by Special Certificates. All persons, whether Fellows of the Society or not, are invited to send flowers and fruit for examination. A report of the several meetings, containing an announcement of the awards made, will be sent to the respective exhibitors as soon as it appears in the Society's "Proceedings." In neither committee can the merits of the subjects exhibited be discussed or decided on in the presence of the owners or exhibitors interested in the award.

In the GRAND GENERAL EXHIBITION IN JUNE, when the Garden will be formally opened, in addition to prizes varying in value from 1*l.* to 20*l.* for Orchids, Rhododendrons, Azaleas, Roses, General Collections, Fruit, and the other usual subjects of competition, we find the following new classes: Dracænas and Cordylines, Sikkim or Bhotan Rhododendrons, Begonias, *Tree* Ferns, tuberous Tropæolums, and Wardian Cases filled with plants effectively arranged. Moreover, "Special prizes for the best group of three baskets of fruit and flowers, for the decoration of the dinner table, are offered by C. WENTWORTH DILKE, Esq., V.P.H.S. First Prize, 10*l.*; Second, 5*l.*; Third, 3*l.*; Fourth, 2*l.* Beautiful arrangement will be the test of merit in this exhibition; valuable flowers or fruit are therefore not demanded. Each set must consist of three baskets. Ladies are invited to join in the competition. The Prizes will be awarded by a jury of ladies." Here we have a very important new feature: and artistic skill may now distinguish itself as well as skill in cultivation. Extremely liberal arrangements are made for the issue of Passes and Breakfast Tickets to Exhibitors, but "no Exhibitor can take more than 8 Passes and 8 Breakfast Tickets."

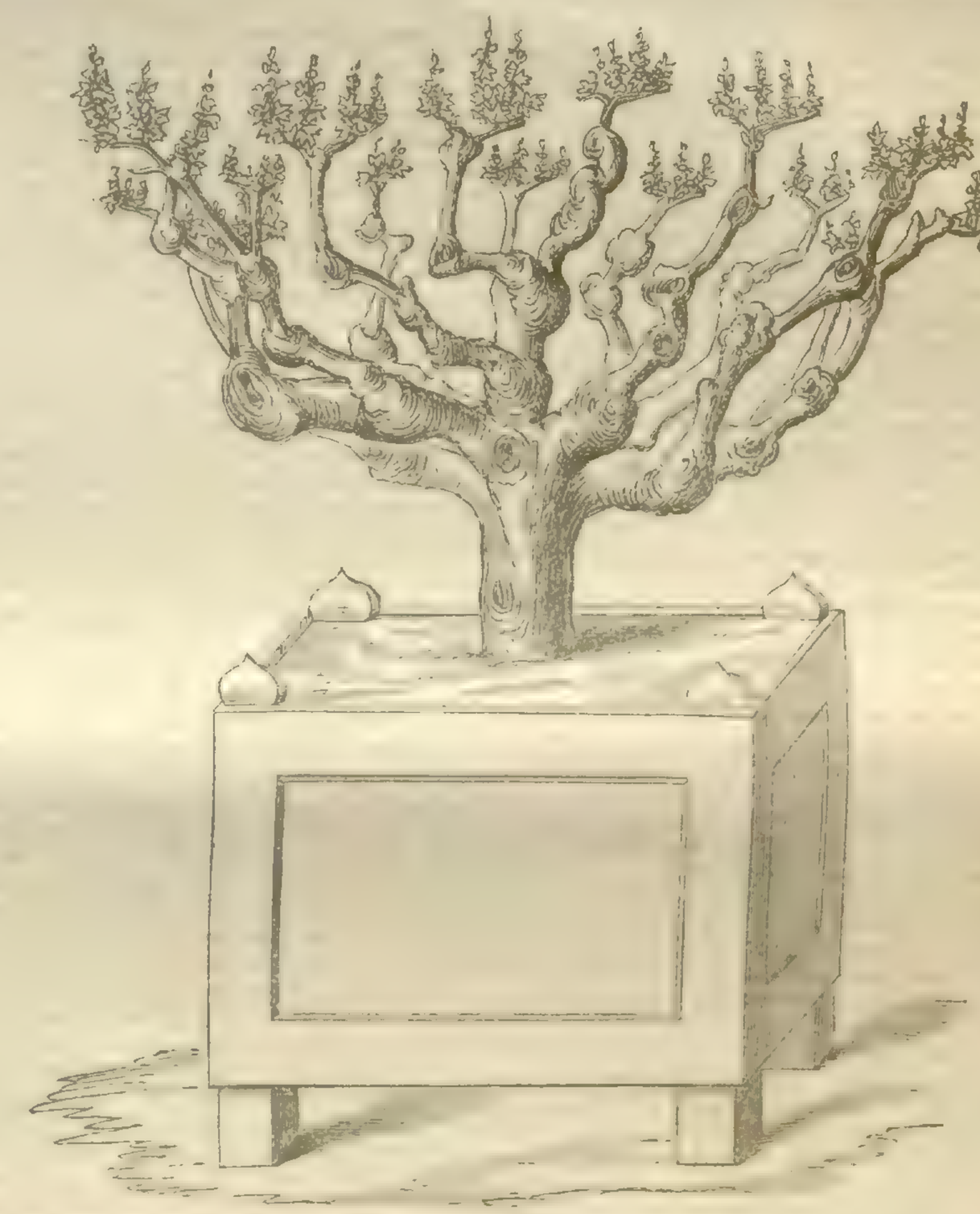
At the GRAND ROSE SHOW in July 14 classes are formed, with prizes varying between 1*l.* and 7*l.* Three classes are for Roses in pots, one for a basket or Vase, and the remainder are to be cut.

The SEPTEMBER DAHLIA SHOW also admits Roses, Hollyhocks, German and French Asters, Gladioli, and Phloxes. The prizes vary from 10*s.* to 8*l.*

Finally, the CHRYSANTHEMUM AND FRUIT EXHIBITION in the beginning of November, which will last for two days, is to consist of 14 classes of Chrysanthemums, and about 40 of Fruit. Among the former the prizes run from 5*s.* to 6*l.*; among the latter the highest is 6*l.*, the lowest 10*s.* In addition to the ordinary arrangements for a Fruit Show, prizes are offered for Stewed Pears, Pommes tapés, and Oranges and Lemons, we presume of home growth.

With such arrangements, and the attractions of its new palatial garden, the Horticultural Society promises to have a season unexampled in its history for brilliancy and public utility.

AMONG what may be called the CURIOSITIES OF TRAINING is the following, which may possibly be found applicable to VINES in Orchard-houses. M. MONTANGON, of Landournerie, in the Charente, has received from the Horticultural Society of the Gironde a Gold Medal "for the beauty, vigour, and abundant bearing of his Vines, to be attributed," as the judges believed, "to a peculiar manner of training." This method they call Vignette training (*en cul de lampe*), the nature of which is represented by the annexed figure.



About the year 1800 this style of management was commenced by M. MONTANGON on rather more than 15 acres of Vineyard occupied by white Grapes, which have never since been trimmed in any other way. It has the advantage of doing away with stakes or supports after the Vines are 10 years old, and ensures the equal ripening of the Grapes. It is stated that every 24 plants produce rather more than 5 gallons of wine; which indicates pretty well what weight of Grapes each plant may be made to bear. As the method of management is not described the gardener must judge for himself how to set about it; no very profound problem to solve. Such plants would create quite a sensation in an Exhibition. Perhaps M. MONTANGON would part with a few plants, ready trained.

OF all parts of the earth in which vegetation is vigorous, and little known, Japan stands pre-eminent. With a climate like that of England, and a half Siberian or Himalayan and half Chinese Flora, it offers the greatest inducement to Europeans to investigate its productions. But from the beginning of the 17th century it has been closed against us. Portuguese who came to grief, and Dutchmen who held their own, have been alone allowed access to the land of promise. So that since the days of KÆMPFER, the names of THUNBERG the Swede, and SIEBOLD the Hollander, are almost the only ones that are associated with Japan and its plants. But recent political events have wrought a change in the unchangeable government of that secluded country; treaties have broken down prejudices, and governmental interdicts; and, what with England and the United States, each exercising, by their men-of-war, a gentle pressure upon Japanese susceptibility, Europe is at last permitted to look at the North-eastern lands of Asia.

We already knew enough of this remote country to be well assured that whoever first set foot in its interior, with true Anglo-Saxon courage, intelligence, and perseverance, would reap a harvest the richness of which is beyond estimate; and the dangers and difficulties, real or imaginary, that are to be encountered, have not been long in finding a champion to defy them. We have now the satisfaction to announce that Mr. JOHN GOULD VEITCH, the eldest son of our great London

nurseryman, and grandson of Mr. VEITCH of Exeter, is in the midst of the country, gathering together the finest collections of seeds and plants that have been presented to the traveller since the time when DOUGLAS brought from the land of Chenooks, Calapoosis, and Kyemuses, those invaluable novelties with which the Horticultural Society enriched our country.

Mr. VEITCH, who is a young man, had already distinguished himself by his diligent application to botanical studies at University College, where he received a Certificate of proficiency. He is also well known for the excellent business habits that he had acquired under the direction of his father: and as soon as it was ascertained that Japan was open, he eagerly sought the means of proceeding thither. This was effected some months ago under the protection of powerful persons in this country, by whom he was strongly recommended to the English authorities in Japan; he took his passage on board the Malabar in the month of April last; was shipwrecked at Galle in that ill-fated vessel; lost all he possessed on board; immediately afterwards procured a passage in another ship, and after a month's passage reached Nagasaki on the 20th of July, having visited Hongkong, Canton, and Shanghae in his way. His modesty, gentle manners, and resolute determination to effect his purpose, speedily gained him friends: and at the present moment he is attached to the British Consular establishment at Jeddo, in consequence of which he was enabled to form one of the first party of Europeans who have ascended the sacred mountain of Fusi Yama, the circumstances attending which are described by Mr. FONBLANQUE, in a late number of the *Times* newspaper.

The result of his mission is of the deepest interest, and we have the gratification of now presenting our readers with extracts from his letters to his family, in which he gives an account of his daily proceedings up to the departure of the latest mail. It will be seen that he will soon have skimmed the cream of the Flora, and that those who follow him will have little novelty to gather. Thus we shall again see the value of private enterprise in English hands, and how far more efficient it proves than missions entrusted to mere Government agents.

EXTRACTS

FROM MR. J. G. VEITCH'S LETTERS.

No. I. *Nagasaki, July* 24, 1860.—I have much pleasure in informing you that I arrived here safely on Friday last, the 20th inst., after a beautiful run of 38 hours from Shanghai. The little I have as yet seen of Japan is exceedingly fine. Nagasaki harbour is I think the finest scenery I have ever met with, surrounded by mountains covered to the top with vegetation.

The Japanese in this part are very well disposed towards us, and far superior in every way to the Chinese; the people are obliging and seem glad to do anything for us, but the great difficulty is with the officials. It is impossible, as far as I can hear, to get in this place beyond the limits of the treaty, which extends about 10 miles round the town. On my arrival here I obtained a room at a temple in the middle of the town, and three other Englishmen are staying at the same place with me. Strange to say, they are all Devonshire men; Mr. Rice, brother to the musician at Exeter; a Mr. Davy, engineer in the navy; and a Mr. Templar. I consider myself very fortunate indeed to have fallen into such quarters, and hope to be able soon to get over most of the ground open to foreigners. Attached to the temple is a large garden, and I have prepared a place for getting together the plants I collect.

It is just now the summer season, and consequently no seeds are yet ripe. My intention is to get together all the plants I can, and find out the localities where any trees grow of which I wish to obtain seeds, and to go to Kanagawa and Jeddo as soon as an opportunity offers; at present there is no vessel bound for the north of Japan, but we expect one in the course of two or three weeks.

I have already picked up in an old Japanese garden one or two nice plants, which I think will prove to be good things; from what I have seen as yet I think there are many good evergreens here, but no Conifers of note. Cryptomeria japonica is common, but all the rarer species are further north, and indeed I would rather find them there than here, as I fear they would not be hardy. I propose going on to Jeddo as soon as an opportunity offers, and then probably on to Hakodadi. As the winter sets in early in November in the north I shall be able after collecting at Hakodadi to return to Jeddo, getting seeds of Coniferæ, &c., and then, coming back to Nagasaki, take all my collections to Hong Kong. From what I can judge I shall be able to get a good many plants suitable for glass cases. And I hope to send you some seeds of new hardy Ferns in my next letter; but they are not yet quite fit.

The Japanese are very industrious and clever at their work. The way they make different articles in paper is very extraordinary. Amongst other things they make first-rate waterproof overcoats and hats, umbrellas, pocket-books, and cases of all sorts, string, &c. I am trying to find out from what they manufacture it. I fear I shall have some difficulty in getting hold of this, as hitherto they have always refused to give any information on the subject, further than it is made from a tree.* I hope to be able to find out all about it, as I think it would be most interesting. Their lacquer ware and porcelain are beautiful and not expensive. The people, as a race, are far superior to any other in the East.

No. II. *Nagasaki, Aug.* 4, 1860.—I have just been informed that the Grenada sails to-morrow for Shanghai, which gives me an opportunity of letting you know how I am getting on. In my last letter, dated Nagasaki, July 24, I informed you of my safe arrival in Japan, and of my having obtained a room at Dita-Couche Temple. I also informed you of my present intended proceedings as regards getting to the north.

Since that date I have been occupied in rambling over the hills in this neighbourhood, and looking into all the gardens I can gain access to in the town. The people are excessively civil, and in no one instance have I met with the least hindrance; on the contrary, every one gives me any plant I take a fancy to, and seem pleased to do it. I go about, with a Japanese interpreter carrying my cases and baskets, at all times of the day; and more than once I have returned through the town after dark, and as yet I have never been stopped or insulted in any way; the Government officers and the language are the only difficulties I have to contend with. The first I fear I can never get over; the system of government consists so much of espionage, and every officer being a spy on the other, it is impossible to do anything with them. The language I am getting hold of fast, and I think another fortnight (a month in all) will teach me as much as I require to make my way. Japanese is very easy. The mode I adopt is to carry a book in my pocket and write down words as I pick them up; for instance, on getting wet through one day during a thunder-storm, I found out the Japanese for rain, &c., and so on.

I have been as far inland towards the centre of the island as foreigners can get, but have still a good many hills and valleys to visit. The vegetation on the hills and mountains, the highest of which accessible to foreigners is 2000 feet, is very varied; but at this season of the year there is scarcely anything in flower. I often walk all day and scarcely get more than 10 specimens. There are many shrubs seeding, but none of these are ripe, and I am compelled to leave them until my return from the north. Amongst shrubs, Aralia Sieboldi is very common, several sp. of Viburnum, Camellias, and numerous other evergreens. In the gardens here I have picked up several nice things, of each of which before I leave for the north I will send home a specimen.

The only Japanese nursery near here is about 15 miles distant, and in a part of the country where foreigners cannot go. I have, however, sent a man there to bring me what he can find. All the plants I have hitherto obtained are potted and put away in my garden here at the temple. I have between 40 and 50 plants, and almost fancy myself at Chelsea while I am watering them, &c. When I leave for the north, my friend Mr. Rice (who has been very kind to me) will take charge of them. I am now getting a glass case made by a Japanese carpenter, as a sample, and if it answers I shall order a few to be ready by the time I return from the north.

I have been collecting specimens of Japan timber trees growing in this neighbourhood. I have obtained 33 named kinds, and hope to get a similar collection at Jeddo and Hakodadi. I think these will be very interesting, as being the first collection of the kind made in Japan.

I have now been here just a fortnight, and since my arrival there has been no mail from China; therefore I have not received news from home since I last wrote. There has been no opportunity of going to the north since I came here; but I can employ 14 or 15 days more very well indeed, and then I should like an opportunity of getting on.

No. III. *Nagasaki, Aug.* 12, 1860.—Another vessel leaving this port to-day for China, I take advantage of an opportunity which but seldom offers here just now of sending home letters. I have been for a long time anxiously expecting my letters and newspapers. The means of communication are so very few at present between China and Japan that no mail has been received from home since I arrived here. The latest news we have is May 26. I have now been in Japan a little more than three weeks. I have my small room, about 10 feet by 6, in a Buddhist temple, and a Chinese servant; and having become quite accustomed to the peculiarities of the people, I am as comfortable as I possibly can be away from home. The priests are very kind to me; they take great interest in my plants, scarcely a day passing without their bringing me some novelty in their eyes. I always receive their presents and thank them very much, although I generally throw them away afterwards. The glass cases quite bewilder them; I had some trouble to make the carpenter believe I was in earnest in ordering them. They think me mad to try and send plants to England in this manner.

The population in this neighbourhood is the kindest and politest I ever met with. During my rambles every one has something to say to you, such as "Good day;" "Where are you going;" "Where do you come from;" "What is your name;" "Give me some buttons," &c. (English buttons are a great source of pleasure to the children.) They are very anxious for you to sit down and take tea with them, an invitation which I very often accept. The quantity of tea I drink is enormous; it is really delicious; served up hot in small cups without milk or sugar, and refreshes me more than anything else after walking. The houses are very clean and all floored, even the poorest, with bamboo matting. They have no furniture of any kind, but sit or lie on the matting during the day, and sleep on it at night, with the addition of a pillow. The pillows are very curious; if you take a stereoscope and put a roll of paper on the top for the head to lay on you have a fac-simile of a Japanese pillow. They are very comfortable indeed and cool to the head. The Japanese never enter their houses with their shoes on, but leave them outside before going in, and put them on again on coming out.

I can give you no description of the beauty of the scenery about here; we are entirely surrounded by hills and mountains, so much so that on entering the harbour you cannot see anything of the town until you are close upon it, and then it bursts upon you all at once. The entrance to Nagasaki harbour is considered by persons who have travelled in many countries to be the prettiest scenery of the kind they ever saw; the mountains are covered to the very top with beautiful trees and shrubs, and you cannot walk for an hour in any one direction without ascending one of them.

Japanese ladies are quite the reverse of Chinese. Instead of running away on the approach of foreigners they are very desirous of seeing you and admiring your clothes. They all object to our whiskers, considering them very ugly, and tell us to cut them off and be like Japanese men. Their hair is jet black, has a beautiful gloss on it, and is very handsome. They take great pains with it. Ladies have it dressed by professionals every day, and often spend an hour or two over it. The general form in which it is worn is called the tea-pot fashion, but they never wear it two days together exactly alike, always varying it a little. The men are fine strong fellows, but I have never seen a woman more than 5 feet in height. They are all quiet and happy amongst themselves; you never see or hear of any quarrelling or disturbance of any kind with them; they seem to have everything they want and live without care. European ladies and children are a source of great attraction whenever they appear in the town. There are two English ladies residing here, the wife of a missionary and the wife of one of the merchants. The Japanese frequently carry the English children along the streets and give them anything they wish for.

We have warm weather here just now, often 90° in the shade. The mosquitos are very troublesome at night; whenever my Chinese boy neglects to clear my bed and I am awoke by them, I call him up and make him do it at all times of the night as a punishment. Our dinner party yesterday (Sunday) consisted of five, all from Exeter or Exeter born, rather a remarkable coincidence here at the other end of the world.

(To be continued.)

* Possibly their Kaadsi; our Broussonetia papyrifera, the mode of making which into paper is fully described by Kæmpfer (p. 466) in his chapter on Chartopœia japonica.

BOTTOM HEAT-STEAM.

SUPPOSE a furnace and boiler (placed in a hidden corner of a garden), such as to generate a large quantity of steam, and an iron pipe to issue from it conveying the steam, to be laid 3 feet under the surface of the ground. Suppose a portion of ground to be laid with bell-shaped draining pipes, 2 or 3 inches in diameter, in parallel lines, 3 feet under the surface, and all to be connected with the iron pipe conveying the steam. At the opposite ends of the earthen drain pipes let there be perpendicular pipes or shafts coming up to the surface, to act as safety valves and to secure the current of steam, to be kept open, or more or less closed by a small wisp of hay. Let the steam be kept up, more or less, at such seasons of the year and at such times in each day, as experience and the objects sought, might direct.

What would be the effect of such an action of steam on the subsoil and upper soil. Would it not gradually create a warmth in both, ascending upwards, and would it be to a moderate or great degree, requiring to be regulated and controlled. The steam would no doubt be condensed to a certain extent, and the water would run off in the pipes, which would act as drains, but the pipes would themselves get hot and communicate a dry heat to the subsoil; while on the other hand, steam would escape from each junction of the bell-shaped earthen pipes, which fit into each other, but are open to water or steam. This steam would ascend into the subsoil and reach the upper soil, imparting a moist heat as it went, and it would create a moist and warm atmosphere above the surface of the ground. The great question is, the degree and proportion in which all these things would happen, and how far the whole action would be considerable and susceptible of being

controlled and moderated, and how far it would be salutary in reference to the growth of plants.

That such a system would act well under glass can scarcely be doubted. It might be regulated so as only to exclude frost, or a little more; or it might be applied as regards season and degree, so as to govern all the various objects in forcing fruit. Any excess of moisture in the atmosphere under glass, might be corrected by ventilation.

What would be the effect of such a system applied to the border of a fruit wall, so as to influence the roots of fruit trees, and what the effect on garden culture, applying the steam at such seasons as should ward off frost, and such as were suitable to promote early growth.

But the idea is probably more applicable to fruit houses, orchard houses, and others, and the scheme seems to be a more simple mode of applying heat and moisture than the whole apparatus of hot-water pipes, and much less costly—certainly in the construction, and not more so as respects fuel. It seems likely to create bottom-heat in a more effectual and salutary manner than any other system, if there be no objections which have not been apparent. It would seem to be an idea on the merits of which it is difficult to decide *a priori*, and where experiment is required. It may be observed that lines of pipes under glass could of course be laid at such distances as might be deemed and found to be best, and if perpendicular shafts were brought up inside the houses, thereby diffusing steam, they might be opened or closed at pleasure. On the other hand, the warm vapour rising from the earth inside a house might be found sufficient. *Steam.*

NEW GARDEN FERNS.

41. PLEOPELTIS INCURVATA, *Moore, Ind. Fil. ined.* POLYPODIUM INCURVATUM, *Blume, Fl. Jav.* 151, t. 65.

Fronds dissimilar, coriaceous, marginate, glabrous; the sterile hastate or pinnatifid with ovate acuminate lobes; the fertile long-stalked, deeply pinnatifid, the segments opposite, linear-acuminate, with inflexed margins, and bearing on each side a single series of large approximate sori, deeply saccato-immersed, the sacs forming prominent tubercles on the upper surface; rhizome creeping, scaly.

This is a very handsome and conspicuous plant, remarkable for the diversity of aspect in the sterile and fertile fronds. The rhizome is about the size of a goose-quill, creeping, clothed with ovate-lanceolate acuminate scales. The fronds are smooth and shining, coriaceous, deep green, with a callous margin; the sterile ones variable in form, simple, with a subcordate-triangular circumscription, hastate, or more rarely irregularly subpinnatifid, the few lobes oblong-lanceolate, acute or acuminate, the intermediate one largest, and the base of the frond slightly decurrent into the smooth stipes. The fertile fronds are deeply pinnatifid or almost pinnate at the base, larger and taller than the sterile ones, ovate, with 7—11 long narrow or elongate-linear segments, which are adnate and obliquely decurrent at the base, acuminate, entire, with inflexed margins, the upper surface for their whole length marked with prominent tubercles, in the hollows of which the sori are immersed. The sori are large, in a single crowded series between the costa and the margin, roundish, or the basal ones somewhat oval in form. The plant is a native of Java, from which island it was received by Mr. Pike, of Cork. Our knowledge of its existence in a living state, in the gardens of this country, is derived from specimens cultivated in the Royal Botanic Garden, Glasnevin, Dublin, which were obligingly communicated by Mr. D. Moore.

42. POLYPODIUM SANCTUM, *Swartz, Syn. Fil.* 39. ASPIDIUM SANCTUM, *Mettenius.* PHEGOPTERIS SANCTA and P. TENELLA, *Fée.*

Fronds slender, membranaceous, lanceolate, 3 to 10 inches long, pinnate; pinnæ about 1 inch long, tapering from a broad base, pinnately-partite, the segments minute, oblong, more or less confluent upwards; lower pinnæ very much abbreviated; sori small, seated near the margin of the segments.

This Fern was raised from spores in the Glasnevin Botanic Garden about three years since, and is described by Mr. Moore as "a beautiful small growing species." It is a well known West Indian Fern, but has not, as far as we know, been previously cultivated here. The plant has a short caudex, producing a tuft of fronds, which from their small size and slender proportions, as well as from their minute division, must have a very elegant appearance. The average height of the fronds is about 6 inches. According to Mettenius the sori are furnished with a minute indusium, which he describes as being setose. *T. M.*

Home Correspondence.

Botanical Names.—If the rule for Latinizing proper names quoted in your last from the "Report of the Committee appointed by the British Association in 1842," is a fair sample of the code therein proposed, we cannot wonder that it is so lightly esteemed. It says, use the termination *us*, genitive *i*, when the name ends with a consonant; and *ius*, genitive *ii*, when it ends with a vowel. In obedience to this Lindley would make *Lindleyii*; Decaisne, *Decaisneii*; Kirke, *Kirkeii*; Munroe, *Munroeii*, &c.; and on the other hand, Bennett would make *Bennetti*; Lobb, *Lobbi*; Potts, *Pottsi*, &c., none of which would, we think, be tolerated. The fact is that there is no practicable rule for such terminations, and euphony is the only safe guide. Names are *means*, not *ends*, and rules that lead to embarrassment defeat the objects for which a nomenclature is intended. *J. D. H.*

Bruce's Banana at Kew.—Many of your readers will be interested to hear that the great Musa Ensete has ripened a few seeds in the great Palm house at Kew. The plant in question flowered in spring, when orders were given for fertilising the female flowers from the males, which were then scarcely expanded; the result has been the maturation of several out of the many fruits; one of them containing four large black stony seeds the size of a Hazel-nut. Musa Ensete is a native of Abyssinia, where it was discovered by Bruce and figured in that traveller's great work. Unlike most of its cultivated congeners its fruit is small, dry, inedible, and ripens only a few very large seeds: the base of the young flower scape is however eaten cooked, and is highly esteemed by the natives. The Ensete was for several years the chief ornament of the Kew Palm house from the grandeur of its foliage and size of its trunk; the former being upwards of 20 feet long and traversed with a stout red vivid rib; whilst the latter attained a girth of nearly 9 feet in three years. The Ensete has no suckers at the root as other Bananas have, from which to propagate, and like these dies after flowering; there are, however, several beautiful young plants at Kew, which promise to rival their predecessors. A full account, with drawings by Fitch, will appear in the January Number of the Botanical Magazine. *J. D. H.*

Cross breeding.—Your article on Saturday last upon Mr. Buckland's lecture upon the acclimatization of animals, reminded me of an account of an evening meeting of the Zoological Society a year or two ago, in which allusion is made to the herd of Leucoryx then to be seen in the Gardens of the Regent's Park, as well as also to the adjoining group of Elands, to which the first fawn had just been added. It is very satisfactory to hear that the anticipations expressed at that meeting have been realised, through the liberality of Lords Hill and Breadalbane; as it was then stated that "the protection afforded to these animals was scarcely greater than that of a first class feeding house on a good farm, and there is therefore no reason whatever to doubt that the breeding of Elands may in a comparatively short period from this time be completely within the reach of any gentleman who chooses to make the necessary outlay for obtaining it. May success attend the future efforts of Mr. Buckland and the Society for the domestication of other animals, alluded to by him in his lecture. The purport however of my allusion to this important subject is to bring to your recollection that although the idea of domesticating, acclimatizing, or crossing of the breeds of animals has not obtained much attention, yet that with regard to horticulture—to the introduction of new fruits, and to the artificial mixtures of these fruits, our ancestors, as early as the time of Queen Elizabeth, had directed their attention. In proof of which you will perhaps permit me to make an extract from an Elizabethan writer, quoted by T. Harland, Esq., in his publication of the "House and Farm Accounts of the Shuttleworths of Gawthorpe Hall," in the Chetham Society's Works. After stating that orchards existed for many ages as appendages to wealthy religious establishments, and that the Abbey of Whalley possessed many, he makes the following extract from "Harrison." "Our orchards were never furnished with so good fruit (tempore Elizabeth) nor with such variety as at present, for beside that we have most delicate Apples, Plums, Pears, Walnuts, Filberts, &c., and those of sundry sorts planted within 40 years past, in comparison with which most of the old trees are nothing worth, so have we no less store of strange fruit, as Abricots, Almonds, Peaches, Figs, &c., in noblemen's orchards. I have seen Capers Oranges, and Lemons, and heard of wild Olives, growing here, beside other strange trees brought from far, whose names I know not. We have such workmen as are not only excellent in grafting the natural fruits, but also in their artificial mixtures, whereby one tree bringeth forth sundry fruits, and one and the same fruit of divers colours and tastes, dallying as it were with Nature and her course, as if her whole trade were perfectly known to them. Of hard fruits they will make tender, of sour sweet, of sweet yet more delicate, bereaving some of their kernels, others of their cores, and finally enduing them with the savour of musk, amber, or sweet spices, at their pleasure." *Cliviger.*

Expansive force of Fungi.—A friend says that in his foundry Mushrooms often spring up; they are supposed to be generated by the horse-manure which is used in preparing "loam" for casting. Many cases have occurred of these Mushrooms apparently lifting heavy castings from the horizontal position. Is it possible for things so fragile and of such quick growth to move these cumbrous masses of iron? *W. S.* [It is not unknown that Mushrooms have a very extraordinary power, considering their fragile nature, of upheaving solid masses. The late Mr. Andrew Knight used to mention the following example:—Travelling one day in the autumn on a turnpike-road in Herefordshire, when a long drought had reduced the earth to extreme hardness, he observed what appeared to be an upheaval in the hardest part of the road. Upon examining the cause he found that a Mushroom, several inches under the surface, was struggling to force aside the superincumbent mass of earth, and had succeeded so far as to raise and fissure it, and he believed that if he had not extracted it the Mushroom would have forced its way into the air.]

Bowood Muscat Grape.—As you stated in your last that no further discussion could take place in your columns in reference to this Grape, unless it was to expose the doings of certain parties, I send a few remarks which may tend to throw some light on the subject. In January, 1856, a house of Muscats was planted here by the then gardener, and among them was a plant which he called Bowood Muscat, but at the same time he told one of the men that he would get into trouble if that variety was known to be in his possession, as it was not then in the trade. I am not prepared to say how he obtained this Grape, if it was the true variety, or whether he had more than one plant of it; but the following season, when he was discharged, he took the Vine in question up, and sold it to the late Mr. Griffin, of Bath. On this transaction, as Mr. G. is dead, I will make no comments, but as Mr. Cramb asserts that he had his plant from that nursery, and as Mr. Spencer (see p. 1062) states that he sent but one plant to Mr. G., he may have sold that or some other to Mr. Cramb, so I shall leave your correspondent to draw his own conclusion. If Mr. C. is, therefore, not now satisfied with the variety, the blame does not rest with it, but with other individuals who substitute other sorts for it. If Mr. Cramb will pay me a visit, I will give him the opportunity of getting the information I have just given corroborated by the party who helped to plant and also to take up the Vine in question, and at the same time show him a Black Hamburgh among the Muscats, only reaching the top of the house this season, which was planted in the room of the so-called Bowood Muscat. Perhaps Mr. Cramb would then come to the conclusion that it was just possible that he had got the wrong variety. *S. Taplin, Gardener, Corsham Court, Chippenham, Wilts.*

Weather Prognostics.—I should be sorry that the year 1860 should pass away without our extracting from its extraordinary character any benefit whatever. I was therefore pleased to find that at p. 1059 you had made some remarks on "Conjectures as to the State of the Weather in any Future Season." You are aware that early this spring I published an anticipation of the past summer season, unambiguously expressed and remarkably realised. I could give other and similar facts sufficient to throw an air of probability on the truth of the principle of prognostics I support, and I would have offered some observations to you in the spring had I not considered that your notice of the matter was too late for a prediction to be of use (the bad weather having set in), and likewise that there was an air of total incredulity in the notice itself. Others have from time to time and in various manners noticed either the exact period of the vernal equinox itself or some time about that period, and have derived varying conclusions therefrom. My own attention was thereby called to the subject, and it is certainly not impossible that after many years of observation I may be able, somewhat more than the first observers, to limit and define what is the period of the vernal equinox to be observed, and what it really can be depended on usefully to do in the way of weather prognostics. Our summer seasons are either ordinary ones, when it can be of no particular use to know the particulars, or extraordinary ones distinguished by extremes of heat, drought, or of cold wind and rain. The vernal equinoctial period "rightly observed" will distinguish beforehand between ordinary and common, or extraordinary and extreme summer seasons, and it will give the great characteristics and many particulars of the last, but no particulars at all of the first, but simply the knowledge that the season to be expected will be ordinary. I shall be happy to send you some remarks on this subject, if agreeable, and afterwards to be acquainted with your remarks thereon. But in order that the subject may be viewed with fairness, or pursued to any useful conclusion, it will be necessary in the first instance not to attach to the principle powers which it does not possess, and then, when they fail, to say "We cannot depend upon it." I noticed some weeks since in your columns a letter extracted from the *Times* under the signature of R. H., Cheltenham, in which it was sweepingly announced that any one noticing the periods of the vernal and autumnal equinoxes from the 20th to the 26th of March, and from the 20th to the 26th of September, could reckon on six months of the same sort of weather to follow each period, and could understand what sorts of winter and summer seasons were to follow. I dispute the fact that from the 20th to the 26th March is the correct period itself for observation, likewise the fact that anybody without any previous observation could distinguish an ordinary from an extraordinary equinox, and I totally deny that the autumnal equinox throws any light whatever on the ensuing winter, as I have for years been trying it in all sorts of ways, and never could get any light from it, or trace the slightest connection between it and the future season. *Thomas Du Boulay. Sandgate.*

Forest Clearances.—Referring to your extracts from Dr. Hartwig's work relating to the humid influence of forests, the following paragraph taken from my work, "Emigration Fields," published in 1839, enters a little further into the subject:—"These facts do not promise

favourably as to the future condition of Australia. Something might be done by attention to keep up or increase the forest cover, which has a great influence in attracting or retaining moisture; but the increase of sheep and cattle is exceedingly opposed to the springing up of woods, and the frequent burning of the withered Grass is a complete prevention. It is not improbable that some kind of trees may be found more attractive of dews and rain than others. In the East Indies it is common, when they plant a certain productive kind of tree, to plant along side of it another kind, of little or no value of itself, which they say has the power to attract moisture sufficient to support the more valuable kind, which would otherwise perish. These they call wet nurses; and it is worth experimenting to ascertain whether the wet nurse really acts in some peculiar way to attract moisture, or if it merely affords the dampness of shade. If in the former way, this kind or class of trees might be most advantageously employed in modifying the climate of Australia. In some parts of the dry country of France they have rows of fruit trees, above 100 yards apart, in the corn fields, which afford considerable shelter to the crop from drought. This plan might be tried in Australia, as well with the Grass fields as with those under tillage; and the effect of different kinds of trees might be tried in different districts, especially the East Indian wet nurse, if it suits the climate. The condition of Easter Island, which, from the destruction of the forest cover or some other causes, is now almost entirely destitute of fresh water, and where a once numerous population is sinking, should not be lost sight of by the Australians." See pages 88 and 89. My own observations on the Continent of Europe, as well as in Britain, are strongly in favour of plantation belts in localities subject to injury from droughts, and especially where the soil is what is termed light and porous—siliceous without sufficient alumina—and the atmosphere not subject to cloud. The formation of cloud, at times useful, is perhaps not beyond human power. I have noticed from a large cleft or re-entering angle of a high basalt precipice a continued stream of cloud arising and rolling away in the atmosphere over the country, like smoke from a great fire, apparently not caused by any difference of temperature or greater humidity in the rock of the cleft, or from any air or water springs, and which I could only attribute to a flow of electricity from the cleft. In the North of Spain during the latter part of summer, the great Asturian chain of mountains running parallel to the coast about 20 miles inland, is during the day generally capt by blue clouds spreading northward, by which the stripe of comparative low country between the mountains and the sea is shaded from the sun, as by a curtain, rendering the climate of this lower country cool and moist, the air near the dew point, during that season of the year. This obstruction of light and heat prevents the Grape and Orange from ripening in this locality, even upon the low land of light porous quality only a few feet above sea level. The people of the country informed me that this cloud curtain was a modern formation, that formerly, some 250 years ago, the sun's rays were not thus obstructed, and that the autumn was then sufficiently warm for the Orange and Lemon ripening, but that about 200 years ago they had been obliged to root out their numerous orchards of these, and replace them by the Pear and Apple, which are highly productive and of fine quality. This change of climate corresponds with the high marks of aration upon many of our Scottish hills, still further up than we now find it profitable to cultivate, and with the large size of Oak trees and large acorns found in the morasses in high and bleak localities of the north of Scotland, the trees being so large that I have seen a bridge for carts made of one lying longitudinally across a deep ditch; advantage having been taken to dig the ditch across under it, as it lay, and to flatten its upper surface, and the acorns larger than those now grown in the south lowlands of Scotland, and equal to those of England. This deterioration of climate is attemped to be accounted for by the formation of peat moss, damping and cooling the atmosphere and generating mist and cloud. But the moss itself seems due to the change. In Norway the same evidence exists of deterioration in the hollowed out traces of farm steads higher up the mountains than is now found practicable for man to subsist. I have at present little time to follow out the subject, to point out the effects of the clearances now going on in Germany, France, Russia, and North America, in rendering the climate drier, and impoverishing the soil, the opening up of the ground under aration causing the evaporation of the vegetable soil (the mother, *Mutter*, German), which generally increases under forest cover, but I may have a future opportunity of doing so. *Patrick Matthew, Gourdie Hill, Carse of Gowrie.*

Wizard of the North Strawberry.—My attention has only just been directed to a complaint of Mr. Gosling inserted in your columns of the 17th of November, in reference to this Strawberry. I regret that he should have been disappointed; I thought that I had taken every precaution against such an occurrence, having taken the trouble to publicly advertise the matter. Parties having applied and not having received plants from any cause, should therefore, I think, have re-applied to me. That would have been the proper course. I have, however, now despatched plants by train to Boston, and beg to say that I have yet 300 or 400 at any one's service who may apply for them. Adverting once more to this Strawberry, Mr. Robertson offered through the Pomological Society (now about to be dissolved) certain prizes for the best sample of his Wizard, to be shown in 1861. I contended at the time, as I do now, that such awards would not prove it a desirable variety, nor would they meet the case; but I will renew my offer through the Horticultural Society (if it will take charge of my reward) to place 5*l.* at its disposal to be paid to any one who shall produce fruit of Mr. Daniel Robertson's Wizard, of the North, grown in the open ground, which shall obtain a First Class Certificate, provided he will stake the same amount to be paid over to the Gardeners' Benevolent Institution Fund, in the event of its failing to obtain the award in question. *Richard S. Yates' Sale, Cheshire.*

Rainfall in November, 1860.

STATIONS.	Height of Rain Gauge. Above the Ground. Ft.	In.	Above Sea Level. Feet.	DEPTH OF RAIN. Total for the Month. Inches.	Total since Jan. 1, 1860. Inches.	Greatest fall in 24 hours. Depth. Inches.	Date.	Rainy Days.
Little Bridy, Dorset	0	4	348	3.94	42.65	.75	21	17
Barnstaple, Devon	1	0	31	2.74	45.81	.55	21	16
Castlefield, Calne, Wilts	0	11	330	2.56	....	.78	16	14
Camden Town, London	0	4	100	2.72	29.74	.61	17	21
Finchley Road, London	0	4	270	2.80	....	....	....	19
Ditto ditto	30	4	306	2.36	....	....	....	18
Oundle, Northamptonshire	20	0	....	2.24	....	....	....	23
Norwich	....	....	0	3.30	31.69	.61	17	24
Derby	0	0	30	1.52	30.26	.90	17	19
Manchester	5	0	179	2.11	88.20	.28	30	18
North Shields	3	0	106	3.40	27.20	.51	21	21
Dumfries	1	0	124	2.00	36.01	.55	21	23
Nookton, Leven, Fifeshire ..	0	6	80	4.23	25.79	.75	21	23
						.42		

At Little Bridy the greater portion of the fall on the 21st occurred between 9 A.M. and midnight. At Oundle the amount on the 17th includes the product of a heavy fall of snow between noon and 6.30 P.M. At Manchester the total fall is 0.60 inch less than the average of the last 11 years. For the sake of uniformity, it has been decided to include in the monthly totals all the rain which falls before the early (8 or 9 A.M.) observation on the 1st. In the entry of the greatest fall, the date is that prior to the morning on which it is measured. *G. J. Symons*, 129, *Camden Road Villas, N.W.*

A Few Suggestions to Gardeners.—The position of under-gardeners and their requirements, together with their duties and responsibilities, are subjects not unworthy of a few remarks, and I trust that I shall be successful in pointing out a few important duties necessarily incumbent on head-gardeners and those committed to their charge. We have of late heard several complaints that young men after serving a regular apprenticeship are very defective workmen, and likewise have but a very superficial knowledge of their business. The reason of their inefficiency is apparently obvious, and may partly be attributed to the young men's own negligence and partly to their masters, who often leave the training of them almost entirely to their fellow workmen. Apprentices are obliged to work for several years at a low rate of wages; in return they ought to be remunerated by undergoing a proper training, and likewise thoroughly instructed in every branch of their business, and made fully competent to occupy a journeyman's situation after the term of their apprenticeship has expired. During the period of their apprenticeship they ought to receive a share of the work carried on in every department, and be taught to be active in performing it, for if careless and indolent habits are at first acquired they are not afterwards easily eradicated. A gardener who undertakes to teach an apprentice ought not only to make him an active workman, but he should instruct him further by explaining to him the proper seasons of sowing and planting—of keeping successional crops in the culinary garden; the names of plants and their treatment, and a practical knowledge of forcing. It is likewise a duty incumbent on all gardeners who have young men under their training to try to implant good moral habits. It is in a great measure the forming of their characters; and if good principles are at first established, they generally lead a life conformable to their beginning. Such vicious habits as intemperance, swearing, and licentious conversation, ought to be strictly prohibited. The improvement of bothies which has recently been made throughout the country will, no doubt, have a tendency to induce young men to improve their minds in their leisure hours, and not to waste their precious time at cards and other useless and unprofitable amusements. The study of horticulture, of course, must occupy a portion of their time, and many excellent works have been written on the subject. There are also various periodicals, containing an explanation of every improvement in horticulture as it comes into practice, and new plants described that are introduced, and their proper treatment explained. I do not mean however to suggest that gardeners ought to read no other works than those on horticulture. I think their reading should be much more extensive; that they ought to make themselves acquainted with the standard works of our most celebrated authors. These they may obtain from lending libraries for a very small sum. It is of much importance that gardeners be well acquainted with English grammar, to enable them to speak correctly and to write an intelligible letter. The harsh incorrect style and vulgar expressions of uneducated persons must sound very disagreeably in the ears of accomplished and refined society. By study and perseverance how many self-educated men have arrived at a great degree of perfection. Hugh Miller, the Cromarty mason, as is well known, was self-taught, and was one of the most brilliant men of genius that our country has ever produced. But we need not pass the profession of gardeners for men who have arisen to eminence. Before concluding I would strongly impress on gardeners to treat their men with civility and kindness, and strictly observe the golden rule, "to do unto others as we would they should do unto us." Never yet have I observed men perform their work any better for being ordered to do it with a haughty air of authority, or delinquents made better or more attentive to their duties, by being reproved with an outrageous burst of reproachful language accompanied with oaths. A master may, indeed, entertain the idea of his own superiority by his hideous accents, and temporary madness, while, in fact, he only degrades and makes himself ridiculous in the eyes of his workmen, who can only regard him as a petty tyrant. Neither have I ever seen a garden any better kept where the men are obliged to drudge out-doors in rainy weather till they are drenched, nor do I see the propriety or necessity of it, when in-door work might be given them. I am glad to admit however, that such rigid discipline is seldom administered; that head gardeners as a whole are men of superior character. *D. M., Duncrub.*

Societies.

HORTICULTURAL, *Dec.* 11: (*Fruit Committee.*)—A collection of Pears, chiefly from the East Riding of Yorkshire, was furnished by a local branch of the Committee formed in that district. Among them were Winter Windsor, Red Doyenné, Old Colmar, Moorfowl Egg, Easter Beurré, Van Mons Leon le Clerc, Winter Nelis, Passe Colmar, Beurré d'Aremberg, Winter Crassane, Louise Bonne, Beurré Diel, and Marie Louise; these were mostly from standards, and though many of them were small and flavourless, yet some, as Winter Nelis for example, from a south wall in the neighbourhood of Thirsk, were good considering the unfavourable summer we have experienced. Among Apples from the same quarter were Chapman's Ribston, which was stated to be one of the best varieties in Yorkshire, and upon being cut it fully maintained the high character it has received, being little, if any, inferior in flavour to the common Ribston. Cumberland Favourite, and Nelson's Codlin have also the reputation of being both useful Yorkshire kinds.

Among Pears from the Society's garden were specimens of Winter Nelis, from a potted tree growing in the orchard-house, and also from a pyramid out of doors; not only did the former have the advantage over the latter in size, but in point of flavour they were greatly superior to the out-door fruit. Nothing, in short, could be more excellent than the Pears shown on this occasion from under glass, furnishing another instance to the many already on record of the value of Orchard houses, especially in such a season as the past.

A seedling Pear to which a certificate was awarded was contributed by Mr. M'Keldie, of Torrington. It was a small top-shaped warm-brown-skinned kind, well worth cultivation, the flavour being very good even in this unfavourable season. The tree was stated to be a great bearer and very hardy. A seedling Apple very like the Blenheim was shown by Mr. M'Laren, of Bedford; Mr. Graham, of Cranford, also furnished some examples of Apples, among which were Court of Wick, Franklin's Golden Pippin, and Gooseberry Pippin, the last an excellent variety, not half so extensively grown as it should be; for it is an excellent bearer, free from canker, and in flavour about equal to a Ribston.

A handsomely shaped and beautifully ripened Queen Pine Apple was exhibited by Mr. Loddiges, of Hackney. It was stated to have been produced by a plant growing in a pot placed over a tank of water in a house formerly devoted to the growth of Orchids, and in which little or

no fire heat has been employed until lately, and even now the temperature seldom if ever exceeds 60°. The fruit shown measured 8 inches in length, 15 inches in circumference, and was in every way excellent. Equally good Pines of other sorts are also, we understand, grown by Mr. Loddiges in the same manner.

Bunches of White Tokay Grape, large and showy, were exhibited from Lord Middleton's garden, near Godalming; it was stated that this sort did not differ much, if at all, from the White Portugal of the shops.

A beautiful collection of variegated Kails for garnishing was shown by Messrs. Veitch; they consisted of sorts raised by the gardener at Dalmeny Park, near Edinburgh, and were stated to come remarkably true from seed. The last named cultivator also furnished some new Vegetables, among which the most important was a sprouting Cabbage, whose little side shoots on being cooked proved tender and excellent in flavour. This will doubtless be a profitable winter green, yielding, as it does a good-sized Cabbage on the top, and after that an ample supply of sprouts from the stem after the manner of the Brussels Sprout. It is, however, quite a Cabbage; people, therefore, who dislike the flavour of the Brussels Sprout may not object to this.

Linnean, *Dec.* 6.—The President in the Chair. W. S. Atkinson, Esq., F. J. Farre, Esq., M.D., M. T. Masters, Esq., and Walter Moxon, Esq., M.B., were elected Fellows. Sir C. Bunbury, Bart., exhibited a specimen of Cinclidium stygium, a rare Moss, discovered on Tuddenhem Heath near Mildenhall, in November last, by Mr. Edmund Skepper, a zealous and intelligent botanist of Bury St. Edmunds. This Moss is new to the Flora of Suffolk. Tuddenham Heath was long since noted as the locality of several rare plants, and especially of Liparis Lœselii. The following papers were read:—1. "Notes on Sphærularia Bombi," by J. Lubbock, Esq. 2. "Memoir on the Aurantiaceæ," by Prof. Oliver.

Notices of Books.

The Wit and Wisdom of the Rev. Sydney Smith (8vo., Longmans, pp. 355). The world has long ago discovered that jesters are not fools, but in many cases among the wisest of men. Were any proof of this demanded it could be found in this extremely good selection of the laughing philosopher's sayings, which, we agree with the editor, may "rank beside the thoughts of Pascal without his mysticism, and eclipse the wit of Rochefoucauld without his misanthropy." As a Christmas volume it is inimitable. Had Mr. Gladstone been reading the following when he delivered his famous attack upon our public offices?

"The world never yet saw so extravagant a government as the Government of England. Not only is economy not practised—but it is despised; and the idea of it connected with disaffection, Jacobinism, and Joseph Hume. Every rock in the ocean where a cormorant can perch is occupied by our troops—has a governor, deputy-governor, storekeeper, and deputy-storekeeper,—and will soon have an archdeacon and a bishop. Military colleges, with 34 professors, educating 17 ensigns per annum, being half an ensign for each professor, with every species of nonsense, athletic, sartorial, and plumigerous. A just and necessary war costs this country about 100*l.* a minute; whipcord 15,000*l.*; red tape 7000*l.*; lace for drummers and fifers, 19,000*l.*; a pension to one man who has broken his head at the Pole; to another who has shattered his leg at the Equator; subsidies to Persia; secret service-money to Thibet; an annuity to Lady Henry Somebody and her seven daughters—the husband being shot at some place where we never ought to have had any soldiers at all: and the elder brother returning four members to Parliament. Such a scene of extravagance, corruption, and expense as must paralyse the industry, and mar the fortunes, of the most industrious, spirited people that ever existed."

Bell on the Hand (8vo. Murray, pp. 260.)—This, the sixth, edition of Sir Charles Bell's famous Bridgwater Treatise, appears under the editorial superintendence of Mr. Alexander Shaw, who prefixes 25 pages of new matter occupied by "an account of the author's discoveries in the nervous system." The following passage, though forming part of the original treatise, may be advantageously brought to the notice of the reader at the present time, when attention is so largely directed to similar subjects:—

"In discussing the subject of the progressive improvement of organised beings, it is affirmed that man, the last created of all, is not superior in organisation to the others; and that if deprived of intellectual power, he is inferior to the brutes. I am not arguing to support the theory of the gradual development and improvement of animals; but however indifferent to the tendency of the argument, I must not admit the statement. Man is superior in organisation to the brutes—superior in strength—in that constitutional property which enables him to fulfil his destinies by extending his race in every climate, and living on every variety of nutriment. On the other hand, gather together the most powerful brutes, from the arctic circle or torrid zone, to some central point—so ill suited is their constitution to the change, that diseases will be generated, and they will be destroyed. With respect to the superiority of man being in his mind, and not merely in the provisions of his body, it is no doubt true;—but as we proceed, we shall find how the Hand supplies all instruments, and by its correspondence with the intellect, gives him universal dominion. It presents the last and best proof in the order of creation, of that principle of adaptation which evinces design.

"Another opinion requires to be noticed. It is alleged that the variety of animals existing in the world is not a proof of design, or of there being a relation between the formation of their organs and the necessity for their exercise; but it is supposed that the circumstances in which the animals have been placed are the cause of the variety. It is pretended, that, in the long progress of time, the influence of these circumstances has produced a complication of structure out of an animal which was at first simple. We shall reserve the discussion of this theory until we have the data before us; which alone, without much argument, will suffice, we think, to overthrow it.

"I may notice shortly another idea entertained by some naturalists, who are pleased to reduce these differences in the structure of animals, to general laws. It is affirmed that in the centre of the animal body, no disposition to change is manifested; whilst in the extremities, on the contrary, surprising variations of form are exhibited. If this be a law, there is no more to be said about it; the inquiry is terminated. But I contend that the term is quite inapplicable, and worse than useless as tending to check inquiry. Why is the variation in the form most common in the extremities, whilst towards the centre of the skeleton there is comparative permanence? I conceive the rationale to be this: that the central parts, by which, in fact, we mean the skull, spine, and ribs, are in their offices permanent; whilst the extremities are adapted to every exterior circumstance. In all animals the office of the cranial part of the skull is to protect the brain, that of the spine to contain the spinal marrow, and that of the ribs to perform respiration; why should we expect these parts to vary in shape while their offices remain the same? But the shoulder, on the contrary, must vary in form as it does in motion, in different animals; so must the shape of the bones and of the joints more distant from the centre be adapted to their various actions; and the carpus, tarsus, and phalanges must change more than all the rest, to accommodate the extremities to their diversified offices. Is it not more pleasing to see the reason of this most surprising adjustment, than merely to say it is a law?

"There is yet another opinion, which after perusing the following chapter will suggest itself to those who have read the more modern works on Natural History. It is supposed that the same elementary parts belong to all animals; and that it is to the transposition of these elementary parts that the varieties in their structure are attributable. I find it utterly impossible to follow up that theory to the extent which its abettors would persuade us to be practicable. I object to it as a means of engaging us in very trifling pursuits—and of diverting the mind from the truth; from that conclusion, indeed, to which I may avow it to be my intention to carry the reader. But this discussion also must follow the examples; and we shall resume it in a latter part of the volume."

The Typical Character of Nature. By Thomas A. G. Balfour, M.D. James Nisbet & Co., pp. 147.

The general reader expects to peruse with interest the lay productions of an intelligent physician, and he will not be disappointed in this book. The subject is one which must have often suggested itself to the mind of every thoughtful educated person, for we are so surrounded by the wonders of Nature and dependent on their marvellous agency, that the very sun which shines upon us, the air we breathe, the rain and the dew, the bud, the blossom, and the fruit, seed time and harvest, all teach us lessons typically; we need only to be put upon the track, and we are sure to find ample fields of profitable contemplation. Dr. Balfour has treated his subject in a lively, intelligent, and very suggestive manner, supplying a considerable amount of interesting information in a very little book, but stirring up the student to seek for more: he makes continual reference to Scripture, endeavouring with all reverence to illustrate difficult passages, and pressing science as much as possible into the service.

The general reader will perhaps be disposed to think the subject has been viewed too much from the professional point of view, especially if he chance to miss the foot-note at the bottom of the first page, informing him that this treatise was originally designed as an address to medical students. In one of these passages, having spoken of the earth as described in Scripture under the figure of a womb which receives the dead bodies of God's saints for a time, and is delivered of them on the morning of the resurrection, Dr. B. thinks this throws a flood of light upon that difficult passage in the 8th of Romans, "the creature itself shall be delivered from the bondage of corruption, &c.," where he makes the Greek word κτίσις mean the "earth," uses the expression delivered in the midwifery sense of the term, and understands "the bondage of corruption" to be "the holding the putrid bodies of the saints," and the passage concludes, "for by the hope given to the *earth* we are saved." In this we cannot agree with the Doctor. If also, amid much that is interesting and many things that are instructive, the author should have occasionally ridden his hobby almost to death, he surely won't expect everybody to follow him.

In our own more immediate department we might say that the highly restorative beverage called coffee is commonly made from the horny *albumen* of the seed and not from the *endocarp*; and in a rude state of society it is more natural to suppose that a people driven to great shifts for food should press acorns, bark of trees, and other vegetable products into their service, using them in a variety of ways, and occasionally making valuable discoveries of food that was palatable and nutritious, rather than choose those valuable substances by the "dictate of an innate instinct."

It is gratifying to find that there are some instructors of medical students who strive to lead the minds of their pupils towards subjects not strictly medical.

Hogg's Gardener's Year Book for 1861. The favourable opinion we last year expressed of this Almanac is confirmed. It is undoubtedly the best book of the kind that has appeared. It is full of useful information, has a good monthly Calendar, gives an account of the new plants or fruits of the year, and concludes with a long and very complete double list of Nurserymen in all parts of the world. We would only suggest that in future French weights and measures at least, if not German and Italian, should be explained in the Introductory matter.

Routledge's Illustrated Naturalist for December treats chiefly of Humming Birds and Warblers, the figures of many of which are beautiful specimens of art. From this we must however except what is called a group of British Warblers, a mere muddle, and a very ugly one, quite unworthy of the artists employed on the work. The letter press is more than usually entertaining, as might be expected, considering the interest that attaches to the fairy-like creatures of the sun of which it treats. We extract the description of a bird which few readers suspect to be their neighbour:—"The little Grasshopper Warbler has earned its name by its very peculiar song, which bears a singular resemblance to the cry of the grasshopper or the field cricket. It arrives in England some time in April, according to the weather, and leaves us in September. Speaking of this bird, Mr. White, the naturalist of Selborne, says: 'Nothing can be more amusing than the whisper of this little bird, which seems to be close by, though at a hundred yards' distance; and when close at your ear is scarce louder than when a great way off. Had I not been a little acquainted with insects, and known that the grasshopper kind is not yet hatched, I should have hardly believed but that it had been a *locusta*, whispering in the bushes. The country people laugh when you tell them that it is the note of a bird. It is a most artful creature, skulking in the thickest part of a bush, and will sing at a yard's distance provided it be concealed. I was obliged to get a person to go on the other side of the hedge where it haunted; and then it would run, creeping like a mouse before us for a hundred yards together, through the bottom of the Thorns, yet it would not come into fair sight; but in a morning early, and when undisturbed, it sings on the top of a twig, gaping and shivering with its wings.' I can corroborate this account by personal experience of the bird, and generally found that the country people entirely denied that the strange hissing whistle was that of a bird, and attributed it to the field mouse. The ventriloquial power (if it may so be termed) is as remarkable as in the case of the common grasshopper, for it is almost impossible to ascertain from the sound the distance or even the direction of the creature which utters it. The nest of the Grasshopper Warbler is cup-shaped, and made of various kinds of Grasses, the coarser being woven round the circumference, and the finer placed in the centre. It is so admirably hidden that it is discovered less frequently than that of any other warbler. In all my bird-hunting days, I was never fortunate enough to secure an egg of the Grasshopper Warbler, although the bird was far from uncommon. A large patch of Furze is a favourite locality for the nest, and the bird hides it so ingeniously among the thick roots of the prickly shelter, that even when the bird is watched to its home, its discovery is a matter of very great difficulty. The eggs are from five to seven in number, and their colour is reddish-white, speckled with dark red spots. The general colour of the Grasshopper Warbler is greenish-brown, each feather being brown in the centre and green at the edges, so that its whole aspect presents rather a spotty or mottled appearance. The under surface is pale brown, diversified with some dark spots on the neck and breast. The total length of the bird is about 5½ inches."

Miscellaneous.

Late Blooming Roses.—My attention all this month, and the preceding one of October, has been drawn to a bed of Roses, consisting of a score or two of dwarf plants, which have had an unceasing succession of beautiful flowers, far beyond anything I have ever seen in autumn-blooming Roses. On looking into them I found them to be a new variety of Hybrid Per-

petual Rose called L'Etoile du Nord, which was one of the new Roses of 1860, condemned as not being up to my standard, its petals being thin, and the Rose, although very large, and of a brilliant crimson, seeming an inferior variety of General Jacqueminot, from which one would judge it had been raised. As the treatment of these Roses may be of interest, and lead to a new and simple mode of cultivating Roses for blooming very late in the season, I will, in a few words, give it. The original plants were received from France in December, 1859, with other new Roses, and their shoots taken off in January and grafted on Manetti stocks in the grafting-house, where, of course, artificial heat is employed. They grew well, and bloomed abundantly in a cool house, in April and May, but, as I have said, their flowers not being thought first-rate, the plants were suffered to remain in small 4-inch pots till the middle of June, and then planted out, not being thought worthy of further pot cultivation. The ground they were planted in was heavily manured, so that they grew very freely, but were not noticed till the beginning of October, when the bed was observed to be a mass of buds and blossoms, the latter quite globular and of extraordinary beauty, and so they have continued to be till this day, the 24th November. A large bouquet of them would have been shown at the meeting of the Floral Committee in November, but in the hurry of business they were forgotten. Now this simple fact seems to tell us that what has resulted from accident may be carried out by Rose cultivators, and lead to a method by which our Rose gardens may be made more beautiful in autumn than they have yet been. The *rationale* of the matter seems to be this. The plants, from being cramped in their growth in early summer, when all their energies are in full play, hasten in autumn to make up for lost time, and thus grow and bloom in the greatest vigour. In the *Gardeners' Chronicle*, No. 47, page 1042, I have described Strawberries as bearing freely in autumn from having been accidentally treated in the same way as my L'Etoile du Nord Roses. I should therefore counsel Rose lovers to pot in 4 and 6-inch pots, in the month of January, free-growing thin-petalled Roses, such as the above, General Jacqueminot, Oriflamme de St. Louis, Triomphe des Beaux Arts, and others of the same nature, so as to give diversity in colour, and allow them to grow and bloom in an orchard-house or greenhouse till the middle of June, and then cut off their bloom stalks and any flower-buds that remain, and plant them out in a rich border. The plants may be subjected to this treatment year after year, increasing the size of the pots to a small extent, so as always to stint their spring growth, for the roots of the plants will of course increase in bulk, and will in due course require 8-inch pots; it must, however, be a point observed, to give them as small pot room as possible, that the early summer energies of the plant may be arrested. I have, as it will be seen, pointed out thin-petalled Roses for this culture. I do this from observation only, for at this moment I have a bed of the very old Rose Gloire de Rosamenes in full bloom, and its flowers, instead of being flaccid and poor, as they are in summer, are globular, from not being expanded, and quite beautiful. I have also observed that some of the condemned new Roses growing in the same bed as L'Etoile du Nord have very double flowers and thick petals; these have bloomed very imperfectly. *Thomas Rivers, in Turner and Spencer's Florist for December.*

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—At this season every effort should be employed to keep up a good display of bloom here, for this house will now be used much more than when the weather is favourable for out-door exercise; its inmates, if attractive, will therefore now be much more valued than they would be at any other period, and on that account every possible care and forethought should be exercised, so as to secure a good supply of plants in bloom during winter and early spring. Azaleas which set their buds early will soon come into flower, if placed in a warm moist temperature, and some of the early-blooming Rhododendrons require very little forcing to bring them into blossom at any time after this season; therefore where there is a good stock of these, and Ghent and other hardy Azaleas, well set for bloom, a portion of the plants should be placed in heat at intervals of about three weeks, and as they are very showy and last long in bloom they will be invaluable. These, together with Camellias, Heaths, Epacrises, Acacias, Daphnes, Gesneras, Cyclamens, Cytisuses, Chinese Primulas, Cinerarias, Mignonette, Tree Violets, and other things which bloom naturally in winter, will afford a good display. Monochætum ensiferum is also an invaluable plant for winter decoration, but it requires a temperature of from 45° to 50°. If not already done, trim twiners, cutting back freely such things as Passion-flowers, and reducing the dimensions of all as far as can consistently be done, so as to admit as much light as possible. Winter blooming plants in borders, such as Acacias, Luculias, &c., must be well supplied with water at the root, but things which are at rest, especially deciduous plants, and such as are scarcely hardy in the temperature of this house, cannot be kept too dry at the root at present. Keep everything perfectly clean. Remove decaying leaves daily, and rearrange the plants in bloom frequently. Maintain a temperature of from 40° to 50°, and give air on the sheltered side of the house on every favourable opportunity, but avoid cold currents. Cold frames afford the best possible accommodation for the culture of all greenhouse plants in summer, but unless they are furnished with pipes, so that a little heat can be had to dry the atmosphere occasionally, and also to exclude frost, they are not fit quarters for many things in winter, for plants which are impatient of damp will not bear being covered and shut up, as, in severe weather, must be done to exclude frost; and although in mild winters most greenhouse plants may with care be wintered in cold frames, such things as Boronias, Leschenaultias, Gompholobiums, &c., should be removed to safer quarters at once. Water cautiously, keeping all rather on the dry side, but not to excess. Be prepared with efficient covering against frost, and give air freely whenever the weather will permit, especially to hard-wooded plants, as Heaths, &c., which it may be necessary to winter here.

FORCING DEPARTMENT.

PINERIES.—The supply of ripe fruit from May until August being usually obtained from plants that start without making growth in spring, a fair proportion of the stock should therefore be in a well matured state by or shortly after this season, and any sudden changes of temperature which might induce too many of them to show fruit at once should be carefully avoided. That portion of the stock expected to furnish the autumn supply should not be too much checked at present, indeed these may be kept growing slowly all the winter, which is perhaps the most certain method of preventing their starting too early in spring. Where the stock of plants likely to fruit without making farther growth is considered insufficient to meet the demand until August, the stronger plants of those for autumn fruiting should be encouraged to make growth as early as can be done without weakening the foliage, with the view of preparing them for starting in April. Examine the soil occasionally about young stock growing in the open bed, and do not allow it to become unhealthily dry, for this would probably result in a great portion of the stock showing fruit prematurely, and it is also a work of some difficulty properly to moisten the bed if it is once allowed to get too much dried up. Use no more fire-heat for the present than will suffice to maintain the requisite temperature, which, for the general stock, need not be high for some time yet.

VINERIES.—As soon as the buds in the early house are fairly started the temperature should be increased to 60° at night and 65° by day, allowing it to rise 10° on bright days. Take every opportunity of admitting a little fresh air, but recollect that the foliage will not bear exposure to cold drying winds, therefore air should be admitted in contact with the heating apparatus, and when it may be necessary to give back air the sashes or ventilators must be opened but very little, and if pieces of netting could be nailed over the openings this would greatly assist in preventing cold currents blowing into the house. Where the border cannot be warmed, see that it is well protected from wet, &c., by a thick covering of dry litter, or whatever more efficient covering can be recommended. Look over ripe Grapes often, removing any decaying berries, and aim at securing a dry atmosphere with the least possible application of fire heat.

PEACHES.—Until the trees are fairly on the move do not keep the night temperature higher than from 40° to 45° by means of fire heat; but an advance of 10° early in the day, with plenty of moisture in the atmosphere, should be secured. Syringe frequently, and secure a thoroughly moist atmosphere. Also see that the inside border is in a moist, healthy state, and if this is not the case, two or three applications of tepid water should be given.

CHERRIES.—Trees in pots must soon be placed in the early house, if early fruit is required. Top-dress with fresh loam and dung, and keep a moist atmosphere, with a night temperature of 45° to begin with. Admit plenty of air through the day.

FLOWER GARDEN AND SHRUBBERIES.

Valuable plants, as variegated Hollies, Rhododendrons, &c., if not growing as freely as it is desirable that they should do, would be benefited by a liberal allowance of rotten manure or well-decayed leaf mould being applied as a top-dressing, covering it with a little fine soil and working it into the ground around the ball towards the extremities of the roots. Rhododendrons, however, bear removal so well, that these where not growing satisfactorily should be taken up, the ground well prepared by a liberal addition of peat or leaf soil, and replanted. Rose borders should be well dressed with manure, which should be forked in lightly so as not to injure the roots. Keep Grass free from dead spray from trees, well rolled, neat, and trim. Now while the weather is open give careful attention to bedding plants in cold frames, taking advantage of every favourable opportunity to expose them freely but cautiously to air. Anything of which there is but a spare supply of plants to propagate from should be placed in growing quarters at once, taking care to keep them near the glass and free from insects, mildew, &c.; for soft-wooded plants in heat at this season are very subject to the attacks of insects.

HARDY FRUIT AND KITCHEN GARDEN.

Any of the more choice varieties of Pears that do not ripen properly should be removed to a warm dry room for a few days, which will be found to greatly improve them. Keep all fruit as cool and dry as possible. If frost is excluded from the house it can scarcely be too cool, where the object is to preserve fruit plump and sound as long as possible. Get manure wheeled upon vacant ground when this can be done without injuring the walks, and get all spare ground turned up as soon as possible, so as to expose it to the action of frost. For land that has been long cropped with vegetables a dressing of fresh loam would in many cases be preferable to manure, and where this is wanted and can be obtained, it should be got to hand in order that advantage may be taken of frosty days for wheeling it upon the ground. Where fresh soil cannot be obtained, charred vegetable refuse, such as prunings of shrubberies, edgings of walks, and many things which turn up in course of the season, may be cheaply made to form an excellent substitute.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON

For the Week ending Dec. 13, 1860, as observed at the Horticultural Gardens.

Dec.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Friday 7	24	29.170	28.889	53	33	43.0	49	46	S W.	.11
Satur. 8	25	28.911	28.696	49	38	43.5	49	46½	S.E.	.34
Sunday 9	26	29.105	28.854	51	31	41.0	48	46½	W.	.00
Mon. 10	27	29.470	29.418	50	27	38.5	49	46½	W.	.00
Tues. 11	28	29.584	29.504	46	33	39.5	48	46	N.	.00
Wed. 12	●	29.980	29.949	45	36	40.5	47	46½	N.	.01
Thurs. 13	1	30.068	30.030	44	32	38.0	46	45	N.	.00
Average..		29.469	29.334	48.3	32.8	40.5	48.0	46.0		.46

Dec. 7—Densely clouded; cloudy; rain at night
— 8—Rain; densely overcast; heavy rain at night.
— 9—Hazy clouds; very fine throughout.
— 10—Fine; very fine; slight frost at night.
— 11—Foggy; cloudy and cold.
— 12—Clear; overcast and cold.
— 13—Overcast; cloudy and cold; overcast at night.
Mean temperature of the week, ½ deg. above the average.

RECORD OF THE WEATHER AT CHISWICK

During the last 34 years, for the ensuing Week, ending Dec. 22, 1860.

December.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 16..	45.6	34.1	39.9	15	0.68 in.	3	3	2	2	5	8	6	5
Mon. 17.	45.7	34.1	39.9	16	0.37	5	2	1	3	5	8	5	5
Tues. 18..	44.9	33.1	39.0	19	0.62	4	8	—	2	6	9	5	—
Wed. 19..	44.7	34.0	39.3	17	0.38	3	4	4	2	6	10	4	1
Thurs. 20..	44.4	34.0	39.2	13	0.76	2	3	1	2	5	12	2	2
Friday 21..	43.8	33.8	38.8	13	0.20	1	1	3	1	2	14	3	4
Satur. 22 ..	45.3	33.5	39.4	17	0.37	3	6	3	2	2	11	6	2

The highest temperature during the above period occurred on the 16th, 1849—therm. 58 deg.; and the lowest on the 16th, 1853, and 19th, 1859—therm 7 deg.

Notices to Correspondents.

AMERICAN BLIGHT ON APPLE TREES: *G H.* Try the effect of painting them over with a strong lather of Gishurst Compound. Care must, however, be taken to brush it well into all crevices and cracks, or some of the pests will survive the dressing and re-establish themselves, and the work will have to be all done again.‡

BARLEY: *J M B.* We are not acquainted with any proliferous species or variety, nor do we find one mentioned. Possibly there may be such a thing in Metzger's book: of which we do not possess a copy.

MUSHROOMS: *X Y X.* Your Mushrooms are particularly fine and were excellent when stewed. They are the true garden variety of *A. campestris. M. J. B.*

NAMES OF FRUITS: Correspondents should not be unreasonable We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to examine more than six sorts, whatever may be the number forwarded.—*J D H C.* The Pear which you had from France is there called the Monsieur le Curé; in this country it has obtained the name of Vicar of Winkfield. It is found that it only succeeds well in our finest seasons. The Apple which you suppose is a seedling is unquestionably the King of the Pippins.—*Chm.* 1, 3, Beurré Diel; 2, Appears to be the Calebasse Delvigne.—*P B.* Hacon's Incomparable.—*E W.* 1, Lemon Pippin; 3, Chaumontel; 5, London Pippin. The others, of very inferior quality, are unknown.—*A G H.* 1, Hubbard's Pearmain; 2, Ne Plus Meuris.—*G H.* 1, Golden Noble; 2, Winter Codlin; 3, Norfolk Beefing.‖

NAMES OF PLANTS: *J G N.* Your trailing Potentilla-like plant, which bears a fruit very much like a Strawberry, is probably Fragraria indica.—*J S.* The word Cyanophyllum signifies blue-leaf; it will not do to plant out in the summer.

RIFLES: *Derby.* The Enfield is no doubt good enough for troops, and in reality is a very good arm. But it seems to us absurd to compare it with Lancaster's small bore service rifle, which is better than any Whitworth or Jacob, and just as good as the Enfield for troops.

ROSES IN POTS: *Reader.* These should be shaken out and repotted every year. If you do not give them that attention, the fault will be yours if they do not bloom satisfactorily.‡

SCALE: *R B.* The insects that bear this name are among the most difficult to destroy. All you can do is to scrub the branches well with a HARD brush, and immediately afterwards apply the strongest possible lather of Gishurst compound. Twigs which cannot be scrubbed should be cut off and burnt or boiled.

VINERY: *J P M.* The plan of a hollow wall will answer very well, but you must not let soot into it because you cannot clean it. If you do admit smoke you must be careful to provide ample means of removing the soot. The proposed border is of ample width. In your climate by all means keep the Vine roots inside—wholly if you can. It is not necessary to withdraw the Vines in winter unless you heat the house at that season. There are no better Vines for autumn supply, when much heat is not given, than White Muscadine and Golden Hamburgh, with Black Hamburgh and Black Prince, or West's St. Peter's. We attach little importance to the form of boiler: tubular boilers are in fashion, and they are very good ones.

VINES: *B A.* By the "long rod" system of pruning you can obtain larger bunches than by spurring; but by the latter a greater aggregate weight is frequently obtained. An intermediate system between that of the long rod and the spur answers very well, and you may adopt it when you find your Vines do not produce strong shoots the whole length of the rafter ‖

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

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The Agricultural Gazette.
SATURDAY, DECEMBER 15, 1860.

—— THE events of the past week have included the meeting and exhibition of the Smithfield Club, reported fully in another part of our impression—the annual meeting and discussion of the London Farmers' Club, also fully reported elsewhere—the Poultry and Root Show of the Crystal Palace Company, held on Wednesday and the following days—the annual meeting of the English Agricultural Society, of which an account will be found in another column—and the meeting in Hanover Square, in promotion of arterial drainage, held on Wednesday. In addition to these the Implement Committee of the Agricultural Society are holding a meeting as we are about to go to press, to consider the communicated opinions of manufacturers on the scheme of implement competition for the meeting at Leeds. On this point we may congratulate agriculturists on the great improvement observable in the Society's prize list for next year, published last week. There is less of that indefiniteness of which complaint was justly made. There is a more detailed specification of the implements for which prizes are offered. Reaping machines are divided into several classes; and a prolonged trial is offered to steam cultivators—to take place some time before the week of the exhibition. In all these things the wishes of the implement makers have been fairly met, and though some among them may still object to submit their implements to the award of judges whose reports are expected to require correction by so many different departments, as was last week intimated, before they reach the public; yet there seems to us little difficulty now in the way of any manufacturer consenting to compete for the Society's awards. It will at any rate now simply remain with each a question as to whether the chance of a favourable award, and the alleged necessity of thus keeping before the public eye, is worth the enormous cost which is for that purpose incurred.

—— IT is interesting to learn that America, which has hitherto acted as such a drain upon our best herds of Short-horns in England, with no small profit of course to their owners, is at length beginning to restore somewhat of the benefit she has thus derived. We understand that Mr. LANGSTON, M.P., of Sarsden, has just hired of Mr. THORNE, one of the largest buyers at the great Tortworth sale seven years ago, a young bull, the "5th Duke of Thorndale" by name, a son of "Duchess 66," (for which 700 guineas were paid at that sale) by "Grand Turk," bred by Mr. BOLDEN, and sold at Mr. AMBLER'S sale for 300 guineas.

Mr. ROBINSON, of Clifton Pastures, and Mr. C. HOWARD of Biddenham, have also hired of Mr. THORNE, the 2d Duke of Thorndale, got by "2d Grand Duke" (a son of the 600 guinea cow at the Tortworth sale) out of Duchess 71, a daughter of Duchess 66 (the 700 guinea cow just named) by the "Duke of Gloucester." Here we have the pure "Duchess" blood crossing and re-crossing the Atlantic for the improvement of herds on both sides of it; and while enormous sums are paid for the hire of such bulls, there is no reason why the cost of transit and of insurance should stand in the way of a still more frequent interchange of good offices of this kind.

A VERY successful meeting of landowners and others interested in the subject of RIVER REFORM was held on Wednesday last in the Hanover Square Rooms. The Earl of ROMNEY presided.

His lordship spoke of the evil for which a remedy is sought, as at any time mischievous, but latterly, with the extent of under drainage, increasing; and now, owing to the wetness of the season, in many cases disastrous. A measure is needed which shall give powers capable of easy and inexpensive use, in the first place, for obtaining an outfall through a neighbour's land where it cannot amicably be obtained; and in the next place, for removing impediments, whether artificial or natural, to the free passage of water down rivers and streams. Lord ROMNEY illustrated the long established principle that a man cannot do what he likes with his own—that the property in land is not absolute; that no right exists to inconvenience a neighbour, and that the rights which do exist are continually overruled by legislation for the general good. Parliament may therefore be called upon in this or in other cases to remove difficulties which inflict a general loss. And there is a special reason for legislation in the fact that these difficulties are to some extent owing to what Parliament has already done. It has lent money to drain lands—incorporated companies for that purpose—and so facilitated the escape of the water from the land, and having thus thrown the highland waters on to the lower valleys it may be fairly asked by the owners of property there to relieve them of difficulties which have thus been thrown upon them.

The meeting was also addressed by Sir HENRY VAVASOUR, who had been one of its principal promoters. He described the predicament in which the owners of low-lying property now lay, flooded by hill waters, which now so much more rapidly come down upon them—and hindered by obstacles—weirs and dams for mills and navigation. The occupant of hill land has only yesterday's rain and that of the day before to contend with. He of the low land has the water of many weeks pouring upon him from above, while below lie all those obstacles to its free passage. The proposal was that Government should be requested to frame and pass a measure relieving those who are in this predicament, and modifying local Acts for the general good.

Lord ROMNEY read a letter from the Dean of Christ Church, Oxford, intimating his concurrence in the object of the meeting, and pointing out the present condition of the land about Oxford, as illustrating the need of those powers to obtain which it had been convened.

A conversation ensued between Sir J. SHELLEY, Sir J. TYRRELL and others as to the reintroduction of Sir W. MILES's bill thrown out by the Lords in 1856, and as to the improbability of any measure being taken charge of by the Government, and the policy therefore of placing it in charge of individual members. The general feeling was that a measure to be effectual must be introduced by Sir G. C. LEWIS, and that to induce this there must be a unanimous expression on the part of the meeting of the need of his action in the matter.

Mr. BAILEY DENTON reviewed recent legislature on the subject, pointing out the failure of many introduced bills and the uselessness of those which had been passed. Lord LINCOLN'S Outfall Act, passed 13 years ago, had never once been appealed to. We do not want any more inoperative Acts; but the actual existence of so many only proves the more that we do need some simple and inexpensive method of dealing with the difficulties which they do not assist us to overcome.

Mr. CLUTTON spoke of the immense increase in the value of estates which would follow the removal of these difficulties. His knowledge of arterial drainage in Ireland enabled him to speak confidently on this point, and the present state of the valley of the Thames is a proof how much similar operations were needed here.

It was at length resolved, (1) that a general outfall bill is necessary in the present and advancing condition of English agriculture; and (2), that a committee consisting of the Earl of ROMNEY, Sir J. SHELLEY, Sir HENRY VAVASOUR, Mr. BAILEY DENTON, Mr. J. CLUTTON, Mr. HEATHCOTE, Mr. LANGSTON, Mr. J. ALGERNON CLARKE, Mr. FISHER HOBBS,, Mr. GRANTHAM, C. E., and Rev. J. C. CLUTTERBUCK, be appointed to determine a course of action, and to wait on the Minister and call his attention to the subject.

Mr. SCOTT BURN'S paper on THE CONDITION OF THE LABOURER will be found in another page. It refers very fully to the important subjects of cottage accommodation, agricultural education, hiring fairs, wages, village recreation, and benefit societies, and it also referred in terms of commendation to the condition of the agricultural labourer, or rather of the peasant farmer, in some parts of the continent. It is the condition of public opinion on these subjects by which we must gauge our hopes of any improvement being effected in these particulars, and we are glad to find that Mr. BURN'S somewhat advanced opinions were well received by a large body of English farmers. On the first point mooted, it seemed to be generally insisted on by the agriculturists present, both farmers and landlords, that the provision of cottages, while it was a farmer's necessity was a landlord's duty; on the second, the remark that the labourer might be educated too highly was received with marked disfavour, not, we presume, as the statement of an impossibility, but as the expression of a needless fear; on the third point the general impression seemed to be that the evils of statute fairs would die out, and must not be got rid of by the abolition of the only holiday which the working man possesses; on the fourth point little was elicited beyond the fact that wages have risen, and that the cost of farm operations does not necessarily or generally depend on the amount of wages paid; on the fifth and sixth there was little discussion.

A large portion of the discussion, though conducted before the London Farmers' Club, lay in the hands of gentlemen from Scotland; the introducer, though a Scotchman, and not precluded by the specification of his subject from discussing the condition of the Scottish labourer, did not give that part of his subject any undue preference; but we had afterwards an address from Mr. SANDERSON, a Scotchman, which was more an indiscriminate panegyric upon his country, a eulogium of the intelligence and trustworthiness of the agricultural labourer, than an explanation of the returns of illegitimacy, in consistency with belief in the morality even of those districts where they are the most flagrant, and a more moderate approval of the bothy system to which these returns were by others ascribed; and lastly we had from Mr. WILSON, an English farmer, an unequivocal assertion of the superiority of the Scottish labourer to men of the same class in England. He employs Scotch ploughmen, and prefers them for their greater intelligence and their greater sobriety and self control.

To epitomise the discussion: we had the declaration of Mr. BRADSHAW, of Guildford, that the cottage question was a landlord's question—that though considered as a separate investment, money spent on cottage building was not profitably expended, yet as part of the general expenditure on an estate, and as tending to the provision of intelligent and respectable labourers on the land, it was money well laid out.

Mr. EDWARDS asserted that the condition of the labourer hinged on that of the proprietors and farmers of the land. The owner of a burdened estate could not do anything—and careless agriculturists neither could nor would—even in the way of seeing that the young men whom they employ were taught the less common operations of the farm, such as thatching, hedging, draining. As a guardian of the poor he believed that the pauper child was better off than that of the independent labourer, and he advised that ill drained and incommodious cottages, the hot-beds of vice and pauperism and disease, should be "presented" by the parish authorities, and their condition thus brought publicly under the notice of their owners.

Mr. BEALE BROWNE, of Worcestershire, landowner and the owner of property in Ireland, admitted that cottage building was the duty of the owner of the property, but he declared as the

result of a pretty large experience as a cottage builder that you might build good houses with a view to provide separate sleeping apartments for the sexes, but that you could not get the people out of their habits, and they preferred the old plan of huddling together in fewer rooms to which they had been accustomed.

Mr. BROWNE made almost the only practical suggestions that were offered in furtherance of the object contemplated by the discussion, and these were (1) to pay men by the piece, seeing, however, that the work contracted for was thoroughly done, otherwise you demoralised the man; and (2) to give every opportunity to the intelligent young man on the farm of working with the tradesmen whom you employ, and so of acquiring the skill, and therefore the wages of a higher station. Mr. BROWNE's head carpenter, having now four or five men under his superintendence, was originally one of his labourers. We then had the address to which allusion has already been made as a too indiscriminate defence of the condition and the circumstances of the Scottish labourer, who was declared, in comparison with the Englishman, to be better paid, more intelligent, more skilful, and as well housed.

Mr. SIDNEY declared that while proud to show the foreigner our manufactories and their performances, he was always ashamed when he had to point out to them the English agricultural labourer. He protested however against the system of patronage, superintendence, and control, under which all philanthropic efforts for his improvement appeared disposed to place him. And on the suspicion with which he was ready to regard all such efforts for his good, and on the slowness with which he appreciated them, it was to be remembered of whom he came—of a parentage in a much more debased and degraded condition than his own—and one exerting a much greater influence on the condition of a generation who never read and rarely leave the home locality, than it could have in cases where these and other quickening and disturbing causes are in operation. Mr. SIDNEY warned agriculturists against the distructiveness and the "radicalism" with which—to their horror!—they would be chargeable if they undertook the abolishment of statute fairs and other holidays, not more abused by the labourer than by philanthropists, unless they at the same time provided some substituted recreation which the labourer would equally enjoy.

Mr. WALTON contended that the labourer was often oppressed by his master, who discouraged independent bearing and self-respect—that while wages in Hampshire were 9*s.* a week, in Yorkshire they were 9*s.* and three meals of food, "beef three times a day," and yet that labour in Yorkshire per acre is cheaper than in Hampshire; and in answer to the question how the condition of the labourer was to be improved he protested against the system of paying labourers alike, notwithstanding their various merits, and he declared, amid much merriment, the only method to be "constant work and better wages."—Mr. WILSON uttered high praise of the Scottish labourers whom he employs.—And another gentleman who contended that wages hinged upon the price of Wheat — a doctrine that we were glad to find was utterly denied by the members present, and who proceeded amid great uproar to condemn the prevailing opinions on the subject, was upon the point of breaking up the discussion in confusion, when Mr. BENNETT of Cambridge, in a few judicious sentences, recalled to the attention of the meeting the impossibility of dealing with the subject as if any one remedy could be efficient, and the need of patient perseverance in all the directions which had been so well pointed out by Mr. BURN.

A full meeting of English farmers, dwindling however towards the close of the discussion, owing to the superior attraction of the Cattle Show at Baker Street, which opened at 8 P.M., has thus had the condition of the English labourer most efficiently brought under their notice.

THE INTERNATIONAL EXHIBITION OF 1862.

I READ your announcement in the leading article of last Saturday's *Agricultural Gazette* with much pleasure, and was delighted to learn that the Exhibition of 1862 is to be proceeded with forthwith. No one can doubt the vast improvements in agriculture which have resulted from the Exhibition of 1851, for had the agriculturists learnt nothing more than the use of the reaping machine, that alone is a legacy left us by that Exhibition, the value of which cannot be overestimated. But you refer to the Exhibition of 1862, and point out almost an endless number of directions in which agriculturists both at home and abroad may exert themselves as rival competitors at the next world's fair.

Your remarks in my own case have led me to review the history of progress in times gone by, and to consider what are the directions in which agriculture most needs assistance at the present time. The history of progress in agriculture is the supplement to the history of civilisation and progress in general. The history of civilisation is the history of the steps taken to develop the resources of a country.

In England we may date our start in the race of progress from the formation of our coach roads, throughout the length and breadth of the land. The Romans well knew the value of good roads, and Macadam may be called the Roman road-maker in England in modern times. In 1763, just 100 years ago, owing to the want of good roads, there was only one stage coach conveying passengers between London and Edinburgh, and that started once a month, and occupied from 12 to 14 days in each journey. Pack horses were employed to carry goods between the smaller towns; as the roads were improved carts and waggons came into use; but at the close of the last century the cost of conveying goods from London to Leeds was 13*l.* per ton. After affording protection to life and property, a wise government can bestow no greater benefit upon a nation than by providing it with good roads, canals, and railways, for by so doing they diminish the cost of carriage, open up remote districts, and bring hitherto distant markets within reach of each other. In Europe, the countries where commerce and agriculture are least developed are those which are worst provided with roads, as, for example, Spain, Portugal, Sicily, and Greece. In England, having constructed our roads and used them largely, the resources of our manufacturing towns soon proved them to be inadequate to the growing requirements of trade, and to economise the cost of the transit of heavy goods as well as agricultural produce, canals were developed; they as time passed on were found to absorb so much time in transit from point to point, that many attempts were made to enable them to compete with mail coaches and fast vans; but circumstances and the nature of the goods to be conveyed were prohibitory, notwithstanding 2295 miles of canal were constructed and opened in England between the years 1760 and 1803; consequently we find that in 1825 the first railway was constructed of iron and stone between Stockton and Darlington, and the locomotive used in place of horses for traction. In 15 years from that date, viz. in 1840, the number of railways begun and finished in England amounted to no less than 50 in number, and the system has now extended to 10,000 miles, and we can travel to the most remote corners of our island by their means. Our cities are being undermined and tunnel-railways are being constructed, to relieve our streets of their ever increasing traffic, the result of increased means of developing our industries, and the improved and extended cultivation of the soil—a cultivation and development so extended as to demand in their turn increased facilities for bringing their products with still greater speed into our markets. But, you will say, what has all this to do with agriculture and the Exhibition of 1862? If you will bear with me I will endeavour to point out in what way the Exhibition of 1862 is, or may be, most intimately connected with this development of the railway system. In 1851, in addition to the reaping machine, we had exhibited to our wondering eyes a few agricultural steam engines, and now in 1860 there are 25,000 of such engines employed on our farms. The problem which agriculturists have been year by year trying to solve is how they may employ the power at their command with greatest economy and effect upon the land, and in preparing farm produce for the market, and much has been done both with regard to ploughing and many other operations, but still I think we do not half use our engines. It is true that attempts to place engines on our land have hitherto not proved sufficiently satisfactory; but this, I think, is a direction in which our engineers may exert themselves between now and 1862. Successors to Boydell will, I am sure, not be wanting. Mr. Halkett will doubtless try his combination of engine and train, and others I understand are preparing even at the present time to combine some modification of the old chain band endless tram with the agricultural locomotive. But is this all we want? I think not. We may fail to apply our engines on the land, then let us apply them as we are doing as a stationary power; but let us also endeavour so to modify the structure of our roads, carts, waggons, and wheels, that we may use our engines upon them, and draw our produce direct from our farms into the markets of our towns. You will say this cannot be done without rails unless we employ traction engines for common roads. Cannot a modification of Boydell's engine be used where rails do not or cannot be introduced upon our common roads?

Is not, however, the time come for our road surveyors to step in and lay down tramways on our common roads between existing railways and our smaller towns? Such a work does not necessitate engineering skill, nor does it admit of long bills from engineers or lawyers, or they would have begun long since. One of the many self-bearing bridge rails at present in the market, is all that is required to be laid level with our road, and to unite our market towns with the railways of the country, and a very simple modification of the wheels, such as I see has been lately proposed for the omnibuses to run on or off the tramways to be used in the streets of London, and our agricultural steam engines may then be made to draw our produce to the markets and bring back manure to our farms without necessitating the cost of loading on the farm or in town and unloading at the station, as is the case everywhere at present, to be re-loaded into carts again from the trucks at the country stations, thus absorbing time and capital to an unnecessary extent. I trust that the Exhibition of 1862 will see such plans put forward for extending the use of our steam power, as will necessitate the extension of our tramway system through every town and village in the kingdom, or such modification of our traction engines and in the laws affecting turnpike trusts throughout England and Wales, as will enable the agriculturists not only to till their land more effectively and advantageously, but also to bring the products of the soil to market with greater expediency and economy. If the Exhibition of 1862 helps forward agriculture in this direction I think that the farmers of England will have as much and more to be thankful for in connection with the second world's fair in this country, than they had for the Exhibition of 1851, notwithstanding it developed the powers of the reaping machine and did much to attract attention towards the steam-engine. *H. G. H., Hythe, Kent, December,* 1860.

Home Correspondence.

Rainfall.—Rain continues, night and day, almost unintermittingly. Our streams have carried into the sea more water during the last three weeks than ever I remember before; at least on the east side of Scotland. Our country was much cooled by the north wind and severe frost in the autumn, and recently the condensing of the aqueous vapour in the south-east wind is warming it again; the Grass and Turnips still are growing, the latter an excellent crop; but Wheat looks rather unfavourably, the slug is at work, and in clay soils, especially in the level Carse of Gowrie, from the insufficiency of the drainage the water is standing half way up the ridge in many places. Trusting to the drainage the old furrows and furrow leaders had not been opened. From no great fall of water having occurred for several years back, the blocking up of the pipe-drains had not been noticed, and now the result is to be a serious loss. In this Carse there is not sufficient declivity in the drain-pipes, which ought at least to be 1 foot to the 100 yards, and the ditches are not deep or wide enough to clear the pipe-drains in continued floods like the present. The consequence is that there is a deposition of clay in the pipes, which eventually closes them. I do not recollect such a continued tract of rain since the autumn of 1799. But then the rain came on in the end of August. We had a pretty fair crop just ripe. The harvest people came home to us on the Monday morning, and we did not cut five hours dry for four weeks. At the end of that time the grain was sprouted in the standing ear, and afterwards when leading, we had to employ a man before the forker to tear the sheaves asunder. By catching hold of one sheaf you could have pulled the whole stook after it. In the barn-yard I remember well seeing the lizards lying yellow on the ground around the building ricks, and which had fallen out of the ends of the sheaves. This excessive continuance of rain was followed next summer (1800) by unprecedented drought, and the effects of the drought were even more disastrous than the sprout and rot. The two successive crops were so defective that Oats rose in the early part of 1801 to 66*s.* per quarter; Oatmeal, 3*s.* 9*d.* per peck of 8½ lb.; with other grain in proportion. Much sickness followed, with considerable loss of life by fever, the same as in Ireland some 13 years ago. May we hope that the present excessive flooding will not be followed by an excessively dry summer. *P. M., Carse of Gowrie.*

Societies.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

There was a large attendance at the annual meeting held on Wednesday last.

Earl Powis, who was in the chair, referred in terms of great regret to the death of the Duke of Richmond. He then alluded to the circumstances of the Canterbury meeting; to the cost of it, and also to the need of it, as illustrated by the agricultural condition of a good deal of the county. The prospects of the Leeds Meeting were then alluded to, and the Secretary was called on to read the

REPORT OF THE COUNCIL.

The Council have to report that the Society consists at the present time of—

85	Life Governors,
95	Annual Governors,
1093	Life Members,
3651	Annual Members, and
18	Honorary Members,

Making a total of 4942 names on the list.

The members of the Society will have shared with the Council their sense of the great loss they have sustained by the decease of the Duke of Richmond, one of the trustees of the Society, and will long cherish the memory of one who had filled three times the office of President, and always evinced a warm interest in the affairs of the Society.

The Council have elected the Duke of Marlborough to fill the vacancy among the trustees, and Mr. Owen Wallis, of Overstone Grange, Northampton, to supply the vacancy among the general members of the Council, created by the resignation of Lord Southampton.

The statement of accounts for the half year ending 30th June, 1860, has been approved by Messrs. Quilter, Ball, & Co., public accountants.

The funded capital consists of 12,000*l.* stock; and it is hoped that a large portion of the arrears of subscription, amounting to 1472*l.*, will be shortly paid up. It is found that many members cease to pay their subscriptions under the impression that in this way they can terminate their membership; but the Council desire to remind them that by the bye laws all Members are bound to pay their annual subscription until they shall withdraw from the Society by a notice in writing to the Secretary.

Every claim against the Society has been discharged, a complete system has been introduced into the accounts, and the Council feel confident in stating that the finances are in a favourable condition. It has been decided that a complete list of the Members shall be published in 1861.

Since the last General Meeting, Professor Voelcker has delivered a lecture on oilcake, pointing out the composition and feeding value of different descriptions, and the means usually adopted for adulteration.

The country Meeting at Canterbury, though instructive in the varied character of the implements displayed and the nature of the live stock exhibited, did not prove successful in a financial point of view, and has entailed a considerable charge on the general funds of the Society.

The Council have to acknowledge the hospitable reception accorded to them at Canterbury by the mayor, as well as the valuable and zealous assistance afforded by the mayor and corporation, and also by the local committee, in carrying out all necessary arrangements.

The Council have settled the live stock and implement prize sheets for the country Meeting, to be held next year at Leeds, and in addition to the usual prizes, classes have been introduced for Sussex cattle and Cleveland horses. The trial of implements in 1861, according to the quadrennial system in force, will compose drills, manure distributors, horse-hoes, hay machines, mowing machines, reaping machines, horse-rakes, carts, and waggons. Prizes, amounting to 200*l.*, will be offered for the best application of steam power to the cultivation of the soil.

The Council have fixed that the Leeds Meeting shall take place in the week commencing Monday, July 15th. The Implement-yard will be open on Monday morning, on the payment of 5*s.*; and the Cattle-yard will be opened without any additional charge, as soon after 1 o'clock as the Judges have concluded their labours. On Tuesday and Wednesday both yards will be open at 2*s.* 6*d.*; on Thursday and Friday at 1*s.* This arrangement will afford the necessary facilities to all classes of that populous district.

The Society have, from time to time, been favoured, by order of the Secretary of State for Foreign Affairs, with copies of despatches received by her Majesty's Government relating to the agriculture of Denmark, which will appear in the forthcoming number of the Journal, and with others drawing the attention of the Council to the cattle disease, and to a plan for economising seed corn.

By Order of the Council,
H. HALL DARE, Secretary.

In moving the adoption of the report, Mr. Sidney called attention to the need of occupying new ground and making new exertions. He named as deserving the attention of the Society, the excessive fatness of breeding stock exhibited for the Society's prizes, and he suggested that the subsequent history of the prize animals should be ascertained, with a view to determine the effect of over feeding on breeding animals. He also alluded to the improvement of the more backward districts of the country—to the improvement of labourers' cottages as among the objects of the Society; and to the propriety of awarding prizes to implements after trial under ordinary circumstances, and for a sufficient length of time.

Mr. Arkell, of Swindon, in seconding the adoption of the report, spoke cordially and well on the present condition of the Society, and the need of infusing occasionally new blood into its management.

The next business before the meeting was the report of the auditors of accounts, from which we gather that the expenditure of the Society from January 1, till June 30, was: Establishment, 583*l.*; Journal, 798*l.*; Chemical grant 325*l.*; Veterinary do., 200*l.*; and Payments on account of Canterbury, 1827*l.* The full details will be given next week.

On the call of the President for suggestions from any member present, Mr. Clarke spoke of the need of further attention being directed to the subject of town sewage.

Lord Powis then ably summed up the proceedings of the meeting, and a vote of thanks was passed to his lordship.

Before, however, the meeting separated, Mr. Fowler called attention to the forthcoming steam-plough trial at Leeds. He said that 100 acres are useless for trying 10 steam ploughs, and that the time should be altered from June to May, so as to obtain a larger quantity of land for ploughing, a thing which could not be had later in the season except at an enormous cost. The feeling of the meeting was entirely with Mr. Fowler, and it was understood that his suggestion would be remitted to the Implement Committee, which meets on Friday.

SPECIAL COUNCIL: *Tuesday, Dec.* 11.—Present: the Earl of Powis, President, in the chair; Lord Berners, Lord Tredegar, Hon. Col. Hood, Mr. Barnett, Mr. Barthropp, Mr. Bramston, M.P., Colonel Challoner, Mr. Druce, Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Howard, Mr. Jonas, Mr. Milward, Mr. Pain, Mr. Pope, Mr. Robert Smith, Mr. Torr, Mr. Owen Wallis, Mr. Jonas Webb, Mr. Burch Weston, and Mr. Henry Wilson.

The Resolution of Council of the 7th November, 1860, was then by unanimous consent altered, and the price of admission at the Leeds meeting on the Tuesday, was fixed at 2*s.* 6*d.* instead of 5*s.*

Lord Berners requested leave to draw the atttention of the meeting to the fact that, it being the general opinion that all who knew the frank, kind, and amiable character of the late Duke of Richmond, and who have observed his career as a gallant and distinguished soldier, as Lord-Lieutenant of the County of Sussex, as a zealous supporter of the interests and improvements of agriculture, as member of both Houses of Parliament, and in every relation of life, will desire to record their opinion and express their feelings by erecting a lasting memorial to his worth. With a view to carrying out this object the following county gentlemen have formed themselves into a Provisional Committee for West Sussex:—The Hon. H. Wyndham, M.P., chairman; the High Sheriff of Sussex, the Hon. J. J. Carnegie, the Rev. Sir George Shiffner, Bart.; George Barttelot, Esq.; Richard Prime, Esq.; Major Sandham, William Townley Mitford, Esq., M.P; the Rev. John Goring. Subscriptions, not to exceed 3*l.* 3*s.*, to be paid into the London & County Bank, Lombard Street, or one of its branches.

The Council reassembled at half-past 11 o'clock, to which hour it had been adjourned on the 5th inst., when the Report of the Live Stock Prizes Committee was adopted, and the Stock Prize Sheet for the Leeds Meeting was finally settled.

The Council then adjourned over the Christmas recess till the first Wednesday in February.

THE SMITHFIELD CATTLE SHOW.

On Monday evening this annual gathering was laid open for a private view to exhibitors. It had previously received the honour of a visit from her Majesty and H.R.H. the Prince Consort and some of the members of the Royal family; and on the previous Saturday Mr. Brandreth Gibbs had the honour of conducting the Empress of the French, accompanied by the Duke of Atholl, over it.

A detailed account of the live stock and implements will be found below. We may here characterise the former department as without any special merit compared with previous years, unless it be in the Devon section; and the latter as being without any important novelty.

There are very large entries of Devons, containing animals which fairly beat the prize animals from Bingley Hall. A small number of Herefords: only one is present in the class of young oxen, while the corresponding class of Short-horns numbers no fewer than 14; a contrast which Hereford breeders should not allow to occur again if they mean to maintain the equally early maturity of their stock.

The Short-horn male classes were well and worthily filled. The heifers and cows are as we shall always be glad to see them, short in number. Of the Sussex breed a large number of well fed cattle of uniform size and quality were exhibited. The Norfolk and Suffolk and Short-horn breeds were imperfectly illustrated. Scotch oxen, both polled and horned, were well represented—the female classes again being scanty. No Irish or Welsh cattle worth looking at were shown.

The cross-bred classes were exceedingly interesting. The cross of the Short-horns with other breeds did not as a general rule impress the Short-horn character. It is presumed that in all cases where the cross is with the Short-horn, the bull is of that breed—but that fact should be named in future catalogues.

No. 131, the produce of a polled Angus cow by the 2d Duke of Cambridge, is Angus all over black and hornless; 133, a cross Aberdeen and Short-horn, is wholly Aberdeen; 135, Norfolk and Short-horn, is wholly Norfolk. In 136, a well-fed oxen by Mr. Beasley, the animal is more evenly affected by its crossed parentage. In 137, again, shown by Mr. Ainslie, of Blackshiels, the cross tends more to the Short-horn; and 139, a capital ox shown by Mr. Baker, the mixture of Hereford and Short-horn is as perfect as possible. Among the heifers again, we have a splendid animal shown by Mr. Beasley, of Overstone; it has the body of its Highland dam, and there are many instances in this class in which the Short-horn sire has not exhibited that preponderating influence on the offspring which it was believed to possess.

The extra stock classes contained many animals of great value. Mr. Hale's cow (The Belle), sold at Mr. Harvey Combe's sale, has come to the butcher. She was once beautifully and evenly covered with flesh, but was reduced, hoping to induce her to breed, and failing, then fed again, and she has not this time so uniformly covered her body as before. She is wonderfully wide and level between the hooks, but somewhat meagre and imperfect elsewhere.

CATTLE CLASSES:—This year's gathering has been held under the most unfavourable circumstances as regards the past season for grazing, almost within our recollection, and it is fortunate for those interested in its success that the season cannot have much influence upon the condition of cattle kept in an artificial state and under cover. We have ample evidence now that animals may be made up in first rate condition irrespective of the weather.

Taking the cattle classes together, the show must be considered a bare average one, for while the Herefords may be a little under the average of some former seasons, the Devons are certainly superior to late shows, particularly that of last year; and in our opinion they have never been excelled for weight and quality, whilst the Short-horns, excepting the cows and heifer classes, may be considered of full average quality, and the crosses also, many of them exhibit symptoms of useful progress. Many of the animals exhibited have been prize winners at local shows, which are a fine nursery for the metropolitan exhibition.

In proceeding to notice the cattle classes we will commence with Class 1, Devons. This class contained only six animals, but the whole of them commendable, taking age into consideration. Mr. Heath's 1st prize steer in this class was an exceedingly well made and even animal, rather bare, however, on the shoulder. The Earl of Leicester's 3d prize animal was also deficient.

Class 2 is an unusually good one. The 1st prize ox is rather small but exceedingly good in all his points, at the same time light in the flank for a first-rate animal. The 2d prize, awarded to Mr. Farquharson, is for the ox which took the prize at the Birmingham meeting the previous week, at the same time winning the prize as the best ox or steer bred by the exhibitor; there is, however, on this occasion no animal in the Devon breed entitled to the gold medal, and the 1st prize ox at Birmingham is only second here. Mr. Brake's ox stands a good third, and had he been better in quality of flesh would, in our opinion, have deserved the 2d prize.

Class 3. The 1st prize in this instance is a beautiful specimen of a Devon Heifer, and is fairly entitled to her position. No. 20, which received the 2d prize, is a good animal, but bare on the shoulder top, whilst No. 21, highly commended, is level and of fine quality, but without seeing them out it would be hard to criticise this decision.

Class 4. In our opinion the prizes were incorrectly given here, the 1st prize taken being a very good and well bred cow, but bare on the shoulder and not of such good quality of flesh as the 2d prize cow, which should have been placed 1st. All three animals winning in this class were bred by men of high repute and long standing. The Devons are on this occasion certainly equal if not superior to any former show.

The Herefords as a whole are rather under the average merit of former seasons, and a small number are exhibited, although we find the Gold Medal Cow amongst them.

In Class 5 only one Steer is exhibited, but it is a very good one, and takes the prize awarded below.

The prizes in Class 6 are well contested by nine animals; the 1st prize given to Mr. Lewis Loyd's ox was well deserved. It is an exceedingly firm and good animal; the 2d and 3d prizes going to good average specimens of the breed. We cannot however quit this class without alluding to No. 39, shown by Mr. Towers, of Ludlow, and highly commended, an ox of immense weight, but wanting in firmness.

In Class 7 only one heifer is shown, which, although standing alone, is yet very deserving of the honour.

In Class 8, Mr. Richard Hill's Cow, which wins the Gold and Silver Medals as well as the 1st prize in this class, is of a rare quality; but we were rather disappointed in her girth, only 8 feet. We may remark here that the 3d prize cow, shown by Mr. Pitt, of Dilwyn, was wonderfully fat, but deficient in quality of flesh.

The SHORT-HORNS, always in full force at Baker Street, are on this occasion neither wanting in numbers or merit.

In Class 9, the first prize for steers is awarded to No. 64, belonging to the Duke of Beaufort, the same steer which took the prize and Gold Medal at Birmingham. It has all the quality of the Devon, combined with the great size and weight for age of the Short-horn.

The 2d prize steer was a long way behind the 1st; indeed we considered that the animal which received the 3d prize, shown by Mr. Langston, was misplaced, and should have stood 2d. No. 63, being highly commended, was a very meritorious specimen, the whole of this class, numbering 14, must be considered a triumphant illustration of early maturity creditable to the present condition of the breed.

In Class 10 we find the winner of the Gold Medal, belonging to Mr. R. W. Baker, and taking the 1st prize against 11 others. This ox, being under 4 years old, is truly magnificent in size, quality, and breed; he girths 9 feet 4 inches, and reckoned to weigh 200 stones. The 2d prize is taken by No. 76, a good animal in the right place, shown by Lord Gainsborough. No. 68, belonging to Mr. Joseph Stratton, received the 1st prize at Birmingham, is on the present occasion a good 3d, and fairly exhibits the superiority of this class over that of Birmingham. No. 77, shown by Mr. Duffield, is highly commended, and being an enormous beast proves that such weights and value as are here combined, must make the rearing and feeding of Short-horned stock remunerative.

Class 11. Short-horn heifers have been seen better on former occasions; nevertheless the 1st prize is taken by a noble heifer of great weight and symmetry. The 2d prize, awarded to Mr. Richard Stratton, for No. 79, has almost the quality of a Devon; we however do not find in this class such specimens as were exhibited on former occasions by Colonel Towneley, nor is there much competition—only four in number entered.

Class 12 is of average merit, the 1st prize white cow being of great size and weight. The 2d prize animal,

shown by Lord Radnor, was placed below the 3d prize animal which competed with it at Birmingham, on the score of inferior quality.

In Class 13, the Sussex cattle are certainly an improvement upon former shows, but it is much to be doubted whether this breed could stand the test of well-conducted experiments against some other breeds, such as Short-horns and Herefords, although it is confidently asserted that the soil and climate of the south-east counties is equally suitable to them.

Class 14. The prize-takers in this class we consider more deserving animals than the oxen shown in Class 13.

Class 15. One ox shown of the Polled Norfolk breed, a useful animal; but we are quite at a loss to understand how such stock can be maintained in preference to the leading fashionable breeds.

Three large useful bullocks were displayed of the Long-horned breed in Classes 17 and 18, but certainly the same means taken to obtain these animals would have been more profitably applied to the Short-horned or Hereford breeds, particularly when it is considered that they were produced upon some of the finest land and best climate for grazing purposes.

Class 19. The Scotch Horned breed.—This is a most important breed, furnishing as it does the highest priced beef for the London market, and quoted in the Market Returns under the head of best Scots; and the prizes are well contested by eight good animals, the first prize being a beautiful specimen and well deserving his honours, but we cannot say as much for the 2d prize (No. 110), because in our opinion the black ox (No. 115), on the list highly commended, although somewhat smaller in size, girths within an inch as much as the 2d prize bullock, and is certainly much evener, firmer, and of better quality altogether, and possessing the best flank of any ox amongst the eight shown. Again, the commended ox in this class, No. 117, is not the quality and commendable animal as the white ox, No. 111, shown by Sir T. Whichcote, Bart.

Class 20. The three Scotch heifers shown here are a nice lot, and the prizes fairly awarded.

Class 21, of polled Scots, contains a lot of good stock and heavy weights, requiring however no comment.

The Irish breeds were not illustrated, and what animals of them were shown prove how much alteration is required to improve the native cattle.

In Class 25, Welsh cattle, there were two animals of good quality, the 1st prize taken by a very meritorious animal, shown by Col. Pennant.

Class 27. Cross or mixed Breeds.—The prize taken here is by a capital steer bred between the Short-horn and Polled Angus, of great weight for the age, with excellent quality. It is quite evident that to obtain the advantages of crossing stock, pure blood on either side must be used, and hence the necessity of keeping and encouraging the pure and distinct breeds as exhibited in the different classes at the meetings of the Royal Agricultural and other Societies.

Class 28 is a good class; No. 139, shown by Mr. Baker, of Cottesmore, a cross-bred ox of the Short-horn and Hereford blood, is worthy of admiration, being only 2 inches less girth than the Gold Medal ox, and of immense weight.

Class 29 (Cross-bred Heifers).—Altogether a most interesting display, the prize awarded to a very beautiful animal, whilst the high commendation is well deserved by a most attractive cross-bred cow between the Alderney and the Short-horn, and we would observe that it is a pity that all the cows here entered were not named as regards the cross, instead of merely being called cross-bred, as it gives the public no opportunity of setting their own value on the admixture of blood.

THE SHOW OF SHEEP exhibits but little improvement upon previous meetings, the Long-woolled breeds are no better than usual; the same may be said of the South-downs, except that they are fuller of flesh, but they are certainly not so fat as on some former occasions. There is, however, a vast improvement in the cross bred sheep, including the Hampshire and West Country Downs, and the display upon this occasion of Short-woolled sheep, not South-downs, is calculated to make the breeders of South-downs ask themselves some serious questions, when the profitable production of mutton is considered, either in connection with the interests of grazier, butcher, or consumer. In making our observations upon the show, we will begin with Class 30. Fat Wether Sheep of any Long-woolled breed (under 22 months), without restriction as to feeding. (Pens of Three.)

The pen obtaining the 1st prize are of beautiful quality for this breed, which is usually coarse in mutton, and the great change requisite in the breed is to improve the flesh, but this matter must rest with the grazier, who in the Grass districts of the kingdom has to take into consideration the value of wool, the quantity of meat to be made, and the sheep best adapted to the soil and climate; and were it not for the influence of these considerations, the Long-woolled breed must go out of use, and be succeeded by such animals as the West Country and Hampshire Downs, which will presently come under our notice in Class 38, and which for age are equal in weight to the Longwools, with 4*d*. per stone more value on the mutton. The 2d prize sheep in this class we thought fatter than the 1st prize pen, but not equal in quality of flesh, yet of great weight for the age, being estimated over 20 stones each. No. 167, a good third; No. 172, commended, were heavy, good stock, but still coarser.

Class 31. Fat Wether Sheep (under 22 months), each sheep not to exceed 220 lbs. live weight. The prizes are, in our opinion, fairly awarded in this class; but it shows no improvement upon former occasions. The restriction as to the weight of the animals is evidently intended to check size and keep up the quality of the breed, which is prone to grow large and coarse; in these long-woolled classes wool seems to be so important that we can scarcely hope for that improvement which is so much needed, viz., increased flesh; and we believe that breeders have yet to learn how this is to be effected.

Class 32. Fat Wether Sheep of any Long-woolled breed (not Leicesters) under 22 months.—The 1st prize, taken by a pen of pure bred Cotswolds, is a magnificent display of early maturity with extraordinary weights for their age. The 2d prize pen are neat good sheep, but the 3d prize is taken by animals which are decidedly coarse.

Class 33. Long and Short-woolled cross-bred Fat Wether Sheep (under 22 months).—This class is a famous one, the 1st prize being taken by Mr. Overman, with sheep of the Down and Leicester cross, which are of rare quality, the crosses being most judiciously and beautifully blended.

The 2d prize pen is also remarkable in the admixture of blood, being Down and Cotswold.

We must however put in our veto against the 3d prize, No. 211; because the highly commended pen No. 215, are far superior for quality and also as butchers' sheep; and had they received the 3d prize the judges would then have carried out the principle adopted in awarding the 1st prize in this class, viz., reward for quality and well mingled blood.

Class 34. Long and Short-woolled cross-bred fat Wether Sheep (under 22 months old) each sheep not to exceed 220 lbs. live weight.—The prize taken in this Class is obtained by the same breed of sheep as the 1st prize in Class 33, and although they stand alone, another pen being disqualified, yet they well deserve the honours and the remarks we have made upon Mr. Overman's stock in the former class.

Class 35. Fat Wether Sheep of any Short-woolled breed (under 22 months).—The 1st prize and the Gold Medal is awarded to No. 231, being pure Southdowns bred by the late Duke of Richmond; they are of wonderful quality, exceedingly firm and full of flesh. The 2d prize pen are very good sheep, but somewhat deficient in flesh, and one animal a long way behind the other two. The 3d prize is taken by some really good sheep.

Class 36. Fat Wether Sheep of any Short-woolled breed (under 22 months) each sheep not to exceed 200 lbs. live weight.—This class is well contested, and the 1st prize sheep, belonging to Mr. Rigden, is an improvement upon his 2d prize pen in Class 35. The 2d prize sheep are far inferior to those taking the 1st, one animal being quite unworthy of the other two. We must suppose that in this class the exclusion of sheep over 200 lbs. live weight is intended to preserve the South Downs in all their purity as light weights.

Class 37. Fat Wether Sheep of any Short-woolled Sheep, 2 years old and under 34 months.—Sir R. Throgmorton takes the 1st prize here with a pen far superior to the sheep shown by him in Class 36; they are remarkably full of flesh and prime in quality; the 2d and 3d prizes are properly placed, and given to pens of really beautiful stock.

Class 38. Fat Wether Sheep of any Shortwoolled breed, not being Southdowns, under 22 months.—This class on the present occasion is the most important in the yard, as showing the greatest improvement upon former years; the prizes we consider are fairly awarded, and are taken by noble specimens of the West Country and Hampshire Down breeds; the 1st prize sheep are of extraordinary weight and quality for their age, 21 months, and estimated at 23 stones each; they are certainly a very clever production. The 2d and 3d prizes are given to pens of famous sheep, and we would here remark, to show the advantage of good blood over mere feeding, that two out of the three prize pens of sheep were obtained by the use of rams from the stock of Mr. Humphries, who has been so successful with this breed of sheep at the meetings of the Royal Agricultural Society of England for the last four years. We were also somewhat disappointed that the Shropshire breed were not represented, for certainly if they are entitled to the special favour of the Royal Agricultural Society, they should take rank in this class and show their superiority over the West Country Downs if possible.

We must be excused for throwing out a suggestion that prizes should be given for this breed of sheep as lambs or tegs under 12 months old, as we often see them produced at this age up to 12 or 13 stones in weight, and this suggestion is in perfect keeping with the order of the day—"early maturity."

In the Extra Stock sheep pens nothing occurs very important or worthy of special notice, except No. 209, an extraordinary sheep of the Cotswo'd breed, of enormous weight and fatness, and estimated to weigh upwards of 30 stones.

THE SHOW OF PIGS may be considered a good average one as it applies to both large and small breeds.

Class 39. Pigs of any breed, not exceeding 4 months old.—The 1st prize is awarded to a pen exhibited by H.R.H. the Prince Consort; also the Silver Medal as breeder, and the honours are richly deserved; the award of the 2d prize is however a great mistake, as another pen of really good pigs, No. 281, (shown by Mr. Gibbons, of Kirtlington,) unnoticed by the judges and without any commendation, are an excellent lot, and far superior to those which received the 2d prize.

Class 40. Pigs of any breed above 4 and not exceeding 8 months old.—For the honours in this class there was a good contest; the 1st prize given to No. 286, a lot of beautiful well bred pigs shown by Mr. W. Baker, of Christchurch, and called the improved Hampshire breed, attracted much notice. No. 282 was a good second pen.

Class 41. Pigs of any breed above 8, and not exceeding 12 months old.—There were 11 competitors in this class. The 1st prize and Gold Medal was given to a pen of black pigs of the Chilton breed, which appears to be an improvement upon the Berkshires, and well worth the attention of breeders, being of remarkable quality. The 2d prize, given to No. 288, are a spotted sort, and named the Improved Leicesters, and exhibit some very judicious crossing to have obtained them. This class, as a whole, is highly commendable to breeder and feeder.

Class 42. Pigs of any breed above 12 and under 18 months old (pens of three).—This is a fine class of pigs, and closely contested by ten competitors, the 1st prize going to the improved Leicester breed, the same stock as takes the second prize in Class 41; the immense size and weight of meat in this pen is worthy of honourable mention, as the pigs, 17 months old, are estimated to weigh 100 stones each. The 2d prize is obtained by pigs of the Suffolk breed, being black, but not very large for their age; they are however a very nice variety of the porcine tribe.

Extra Stock: Pigs.—No. 323.—A Berkshire sow receives the Silver Medal, is 31 months old, weighs upwards of 100 stones, and is a capital specimen of the breed.

AWARD OF PRIZES.

CATTLE.

Class 1. Devon Steers, under 3 years old.—1st prize, 25*l*., William Heath, of Ludham Hall, near Norwich; Silver Medal to the breeder, James Quartly, South Molton; 3d, 5*l*., the Earl of Leicester; Commended, Mr. Dunning, of Taunton.

Class 2. Devon Steers or Oxen, above 3 years old.—1st, 25*l*., William Heath; Silver Medal to the breeder, William Heath; 2d, 10*l*., J. J. Farquharson, Blandford, Dorset; 3d, 5*l*., John Brake, of Pauncefoot Farm, Romsey; Commended, Mr. Bond, of Bridgewater.

Class 3. Devon Heifers, under 4 years old.—1st, 15*l*., Richard Mogridge, South Molton; Silver Medal to the breeder, Richard Mogridge; 2d, 5*l*., J. J. Farquharson; Highly Commended, H.R.H. Prince Albert.

Class 4. Devon Cows, above 4 years old.—1st, 20*l*., Walter Farthing, Bridgewater; Silver Medal to the breeder, Walter Farthing; 2d, 10*l*., Henry Bone, of Avon Farm, Ringwood; 3d, 5*l*., Robert Farthing, of North Petherton.

Class 5. Hereford Steers, under 3 years old.—1st, 25*l*., Henry Bettridge, of Hanney, Wantage; Silver Medal to the breeder, William Tudge, of Ashford, Ludlow, Salop; 2d, 10*l*.; 3d, 5*l*., no competition.

Class 6. Hereford Steers or Oxen, above 3 years old.—1st, 25*l*., Lewis Lloyd, of Monk's Orchard, Bromley; Silver Medal to the breeder, J. G. Alford, of The Thorne, Leominster; 2d, 10*l*., George Garne, of Pointington, Sherborne; 3d, 5*l*., William Aldworth, of Frilford, Abingdon; Highly Commended, Mr. Towers, Ludlow.

Class 7. Hereford Heifers, under 4 years old.—1st, 15*l*., J. W. & C. James, of Mappowder, Blandford; Silver Medal to the breeder, the late William James, of Mappowder, Blandford; 2d, 5*l*.

Class 8. Hereford Cows, above 4 years old.—1st, 20*l*., Richard Hill, of Golding Hall, Shrewsbury; Silver Medal to the breeder, Richard Hill; 2d, 10*l*., William Tudge, of Ashford, Ludlow; 3d, 5*l*., George Pitt, of Chadnor Court, Dilwyn, Leominster.

Class 9. Short-horned Steers, under 3 years old.—1st, 25*l*., the Duke of Beaufort; Silver Medal to the breeder, William Butler, of Badminton; 2d, 10*l*., G. N. Hulbert, of Badgendon, Cirencester; 3d, 5*l*., James H. Langston, M.P., of Sarsden House; Highly Commended, Mr. Stratton, Swindon.

Class 10. Short-horned Steers or Oxen, above 3 years old.—1st, 25*l*., R. W. Baker, of Cottesmore, Oakham; Silver Medal to the breeder, R. W. Baker; 2d, 10*l*., the Earl of Gainsborough; 3d, 5*l*., Joseph Stratton, of Manningford Bruce, Pewsey; Highly Commended, Mr. Duffield, Abingdon.

Class 11. Short-horned Heifers, under 4 years old.—1st, 15*l*., George F. Heneage, M.P., of Hainton Hall, Wragby; Silver Medal to the breeder, George F. Heneage, M.P.; 2d, 5*l*., R. Stratton, of Swindon; Commended, Mr. Champion, Calcot, Reading.

Class 12. Short-horned Cows, above 4 years old.—1st, 20*l*., the Hon. Colonel Pennant, M.P., of Penrhyn Castle; Silver Medal to the breeder, the Hon. Colonel Pennant, M.P.; 2d, 10*l*, the Earl of Radnor, of Coleshill, Berks; 3d, 5*l*., the Earl Howe, of Gopsall Hall.

Class 13. Sussex Steers or Oxen, of any age.—1st, 20*l*, Geo. C. Coote, of Tortington, Arundel; Silver Medal to the breeder, George C. Coote; 2d, 10*l*., Frederick Tuppen, of Westham, Eastbourne; Commended, Mr. Smithers, Staplehurst.

Class 14. Sussex Heifers or Cows, of any age.—1st, 10*l*., P. Gorringe, of Pebsham, Bexhill, Battle; Silver Medal to the breeders, the late Messrs. James and Pennington Gorringe; 2d, 5*l*., Lord Leconfield, of Petworth.

Class 15. Norfolk or Suffolk Polled Steers or Oxen, of any age.—1st, 10*l*., Robert Cooke, of Livermere, Bury St. Edmund's; Silver Medal to the breeder, James Chambers, of Beechamwell, Swaffham; 2d, 5*l*., no competition.

Class 16. Norfolk or Suffolk Polled Heifers or Cows, of any age.—1st, 10*l*, Robert Cooke, of Livermere, Bury St. Edmund's; Silver Medal to the breeder, James Chambers, of Swaffham; 2d, 5*l*., John Ellis, of Artington Farm, Guildford.

Class 17. Long-horned Steers or Oxen, of any age.—1st, 10*l*., R. H. Chapman, of Upton, Nuneaton; Silver Medal to the breeder, John Godfrey, of Wigston Parva, Hinckly; 2d, 5*l*., W. T. Cox, of Spondon Hall, Derby.

Class 18. Long-horned Heifers or Cows, of any age.—1st, 10*l*., J. H. Burbery, of The Chase, Kenilworth; Silver Medal to the breeder, the late S. Burbery, of Wroxhall, Warwick; 2d, 5*l*., no competition.

Class 19. Scotch Horned Steers or Oxen, of any age.—1st, 20*l*., the Duke of Beaufort; Silver Medal to the breeder, unknown; 2d, 10*l*., William Heath; Highly Commended, Mr.

Rainforth, Bridgewater; Commended, Lady Brinckman, Sundowne Castle.

Class 20. Scotch Horned Heifers or Cows, of any age.—1st, 10*l*., Viscount Hill; Silver Medal to the breeder, Viscount Hill; 2d, 5*l*., the Duke of Beaufort; Commended, Mr. Mortin, [illegible]mes.

Class 21. Scotch Polled Steers or Oxen of any age.—1st, 20*l*., William M'Combie, of Tillyfour; Silver Medal to the breeder, David Martin, of Bracco, Dumfries; 2d, 10*l*., William Heath, of Ludham Hall; Commended, Mr. Cork, Bury.

Class 22. Scotch Polled Heifers or Cows, of any age.—1st, 10*l*., J. & W. Martin; Silver Medal to the breeder, Alexander M'William, of Boquharm, Huntly; 2d, 5*l*., no competition.

Class 23. Irish Steers or Oxen, of any age.—No entry.

Class 24. Irish Heifers or Cows of any age.—1st, 10*l*., no merit; 2d, 5*l*., no competition.

Class 25. Welsh Steers or Oxen (Runts), of any age.—1st, 20*l*., the Hon. Colonel Pennant, M.P.; Silver Medal to the breeder, John Jones, of Tyn Llann, Llansadwrn, Menai Bridge; 2d, 5*l*., Francis Neale, of Pagham, Chichester.

Class 26. Welsh Heifers or Cows, of any age.—No entry.

Class 27. Cross or Mixed bred Steers, not exceeding three years old.—1st, 15*l*., Thomas R. B. Cartwright, of Aynhoe; Silver Medal to the breeder, Thomas R. B. Cartwright; 2d, 5*l*., James & William Martin, Aberdeen.

Class 28. Cross or Mixed-bred Steers or Oxen, above 3 years old.—1st, 15*l*., Richard Westbrook Baker, of Cottesmore; Silver Medal to the breeder, R. W. Baker; 2d, 5*l*., Edmund Beare, of Patson, North Walsham.

Class 29. Cross or Mixed-bred Heifers, not exceeding 4 years old.—10*l*., No. 142, Andrew Longmore, Rattie Banff; Silver Medal to the breeder, James Longmor, of Hilton, Banff; Very Highly Commended, Mr. Gibb, Dunster; Class generally Commended.

SHEEP.

Class 30. Fat Wether Sheep, of any Long woolled breed, 1 year old (under 22 months).—1st, 20*l*., Thomas Twitchell, of Willington, Bedford; Silver Medal to the breeder, Thomas Twitchell; 2d, 15*l*., The Hon. Colonel Lowther, Oakham; 3d, 5*l*., G. S. Foljambe, of Osberton Hall, Worksop; Commended, Mr. Bradshaw, Oakham.

Class 31. Fat Wether Sheep, of any Long-woolled breed, 1 year old (under 22 months), each Sheep not to exceed 220 lbs. live weight.—1st, 20*l*., G. S. Foljambe; Silver Medal to the breeder, G. S. Foljambe; 2d, 15*l*., C. J. Bradshaw, of Alstoe House, Oakham; 3d, 5*l*., The Hon. Colonel Lowther, Oakham; Highly commended—Class generally.

Class 32. Fat Wether Sheep, of any Long-woolled breed (not Leicesters), 1 year old (under 22 months).—1st, 15*l*., Charles Kearsey, of Glewstone, Ross; Silver Medal to the breeder, Charles Kearsey; 2d, 10*l*., Thomas West, of Greenhill Farm, Bletchington; 3d, 5*l*., William Hewer, of Sevenhampton, Highworth.

Class 33. Long and Short-woolled Cross-bred fat Wether Sheep, 1 year old (under 22 months).—1st, 15*l*., John Overman, of Burnham Sutton, Burnham Market; Silver Medal to the breeder, John Overman; 2d, 10*l*., John White, of Parsonage Farm, Rickmansworth; 3d, 5*l*., Samuel Druce, of Abbey Farm, Eynsham; Commended, Mr. Twitchell, Northampton.

Class 34. Long and Short-woolled Cross-bred fat Wether Sheep, 1 year old (under 22 months), each Sheep not to exceed 220 lbs. live weight.—1st, 10*l*., John Overman; Silver Medal to the breeder, John Overman; 2d, 5*l*., disqualified.

Class 35. Fat Wether Sheep, of any Short-woolled breed, 1 year old (under 22 months).—1st, 20*l*., John Kent, of Goodwood, Chichester; Silver Medal to the breeder, The Duke of Richmond; 2d, 10*l*., William Rigden, of Hove, Brighton; 3d, 5*l*., Lord Walsingham.

Class 36. Fat Wether Sheep, of any Short-woolled breed, 1 year old (under 22 months), each Sheep not to exceed 200 lbs. live weight.—1st, 10*l*., William Rigden; Silver Medal to the breeder, William Rigden; 2d, 5*l*., Sir R. G. Throckmorton, Bart., of Buckland, Faringdon; Commended, Mr. Kent, Goodwood.

Class 37. Fat Wether Sheep, of any Short-woolled breed, 2 years old (above 22 and under 34 months).—1st, 20*l*., Sir R. G. Throckmorton, Bart., of Buckland, Faringdon; Silver Medal to the breeder, Sir R. G. Throckmorton, Bart.; 2d, 10*l*., John and Alfred Heaseman, of Angmering, Arundel; 3d, 5*l*., John Kent, of Goodwood, Chichester, Sussex; Commended, Lord Walsingham.

Class 38. Fat Wether Sheep, of any Short-woolled breed (not South Downs), 1 year old (under 22 months).—1st, 15*l*., William Browne Canning, of Chiseldon, Swindon; Silver Medal to the breeder, William Browne Canning; 2d, 10*l*., Stephen King, of Old Hayward Farm, Hungerford; 3d, 5*l*., William King, of New Hayward Farm, Hungerford; Commended, J. Walter, Esq., M.P.

PIGS.

Class 39. Pigs of any breed, not exceeding 4 months old.—1st, 10*l*.; H. R. H. the Prince Consort; Silver Medal to the breeder, H.R.H. the Prince Consort; 2d, 5*l*., George B. Morland, of Chilton Farm, Harwell.

Class 40. Pigs, of any breed, above 4 and not exceeding 8 months old.—1st, 10*l*., William Baker, of Purewell House, Christchurch, Hants; Silver Medal to the breeder, William Baker; 2d, 5*l*., George B. Morland; Commended—Class generally.

Class 41. Pigs, of any breed, above 8 and not exceeding 12 months old.—1st, 10*l*., George B. Morland; Silver Medal to the breeder, George B. Morland; 2d, 5*l*., George Beale, of Frowlesworth, Lutterworth; Highly Commended—Class generally.

Class 42. Pigs, of any breed, above 12 and under 18 months old.—1st, 10*l*., George Beale, of Frowlesworth, Lutterworth; Silver Medal to the breeder, George Beale; 2d, 5*l*., Thomas Crisp, of Butley Abbey, Wickham Market.

GOLD MEDALS.

Gold Medal to the Exhibitor, for the best Steer or Ox in any of the Classes, R. W. Baker.

Gold Medal to the Exhibitor, for the best Heifer or Cow in any of the Classes, Richard Hill.

Gold Medal to the Exhibitor for the best Pen of Long-woolled Sheep in any of the Classes, Thomas Twitchell.

Gold Medal to the Exhibitor, for the best Pen of 1-year old Short-woolled Sheep in the 35th, 36th, or 38th Classes, John Kent.

Gold Medal to the Exhibitor, for the best Pen of Pigs in any of the Classes, George B. Morland.

EXTRA STOCK.

Silver Medal to the Exhibitor, for the best Steer or Ox in Extra Stock, the Earl of Leicester.

Silver Medal to the Exhibitor, for the best Heifer or Cow in Extra Stock, Walter Farthing.

Silver Medal to the Exhibitor, for the best Long-woolled Wether in Extra Stock, G. S. Foljambe.

Silver Medal to the Exhibitor, for the best Long-woolled Ewe in Extra Stock, Joseph Cradduck.

Silver Medal to the Exhibitor, for the best Cross-bred Sheep in Extra Stock, John Overman.

Silver Medal to the Exhibitor, for the best Short-woolled Wether Sheep in Extra Stock, John and Alfred Heasman.

Silver Medal to the Exhibitor, for the best Short-woolled Ewe, in Extra Stock, Sir R. G. Throckmorton, Bart.

Silver Medal to the Exhibitor, for the best Pig in Extra Stock, John King Tombs.

JUDGES.

CATTLE.—Richard Warren, William Bartholomew, Joseph Druce.

LONG-WOOLLED SHEEP AND PIGS.—George Turner, Jun.; N. C. Stone, William Bennett.

CROSS-BRED AND SHORT-WOOLLED SHEEP.—W. Tanner, Joel Roper, William Gulliver.

THE IMPLEMENT GALLERIES are as inconveniently crowded both by exhibitors and spectators as they have ever been, and in our judgment there was during the day generally an even larger number looking at the tools of good farming in the comparatively confined space allotted to them, and at the roots and other vegetables to whose production that machinery had contributed, than in the yards below, where in more accessible arrangement lay the cattle, sheep, and pigs fed *on* those roots, and *by* many of those implements. In both departments of the Show, however, the inconvenience is great enough to make us look forward hopefully to the gathering two years hence in the roomy Agricultural Hall which is preparing for its reception. We divide the exhibition in the gallery into two classes—the stands of the seedsmen and those of the implement makers.

1. ROOTS.—The stands of seedsmen include those of Mr. T. Gibbs, Mr. George Gibbs, Messrs. Sutton, Messrs. Lawson, Mr. Skirving, Mr. Kerr, Messrs. Page & Toogood, and Messrs. Wright & Son. Of these the best arranged and completest collection, including all the roots grown for food, is on the stand of Messrs. Sutton. They include remarkably fine Kohl Rabi, both green and purple, various well defined and well illustrated sorts of common Turnips, fair Swedes of Skirving's variety and their own, and a tolerable show of Mangel Wurzels, Carrots, and Turnips, of none of which, however, unless it be of the last, is there anywhere a collection of large roots to be seen.

Messrs. Lawson's stand is signalised by a collection of no fewer than 87 different kinds of the Turnip, three or four roots being shown of each kind. Among them is the Tweeddale Turnip, which by continued selection and careful growth under the superintendence of the Marquis of Tweeddale, has been year by year increasing in density, until, now heavier than water, it has acquired the specific gravity of 108.

Messrs. T. Gibbs & Co. have a collection of fine Kohl Rabi, extraordinary Parsnips, very good long and other Mangel Wurzel, Swedes grown by steam cultivation, from Woolston, and other Swedes from Northamptonshire, which were greatly inferior, and certainly had no place, of right, on a stand of selected roots.—Mr. G. Gibbs exhibited enormous Drumhead Cabbages, exceeding in circumference anything we have ever before seen; small Wurzels, good Swedes, and Kohl Rabi, &c.

Mr. Skirving shows a capital collection of his well-known large somewhat coarsely grown Swede. Messrs. Page & Toogood show, among other things, some enormous Green and Red Globe Turnips. On this stand too were Potatoes (sold at 20*l*. an acre), among which, as a mixed growth, had been obtained a full crop of Turnips—grown by Mr. Blundell, of Bursledon. Messrs. Wright, of Great Bently, Essex, exhibit some very large Swedish Turnips.

The general tendency of the seedsmen's stands has been to illustrate the special fitness of the past season to the Swede and Kohl Rabi—in fact, to the Brassica generally; that plastic plant, as the *Times* cleverly expresses it, out of whose leaves we have made the Cabbage, out of whose root or stem the Turnip and the Swede, and out of whose stalk the Kohl Rabi.

IMPLEMENTS.—*Steam Culture* is illustrated by plans and models on the stands of Mr. Fowler, Mr. Howard, Mr. Halkett, and Mr. Grafton. At Mr. Fowler's stand we learned that the new clip pulley, by which a one-half round of the rope is gripped sufficiently to enable any pull likely to be needed in the field, will effect a saving in the operation (a saving both of time and of tear and wear) to be counted by shillings per acre. Upwards of 50 of this powerful apparatus are now at work in different parts of the country, and not only individual agriculturists but companies—both of numerous shareholders—and of three or four adjacent farmers, are among Mr. Fowler's customers. We may hope soon to learn from Berkshire a more detailed account of expenses in steam culture than has yet been published. Four neighbouring farmers uniting in the purchase of a machine will be forced for mutual justice to keep a strict record of time, use, and wages, tear and wear, and work accomplished, which we hope hereafter to make known.

At Mr. Howard's stand information was to be obtained of equally encouraging kind regarding the popularity and success of Mr. Smith of Woolston's steam cultivator. Mr. Halkett exhibited the plans and models of his "guide-way" system of steam agriculture, to which reference has already been made in our columns; and Mr. Grafton, of 80, Chancery Lane, exhibited the plan by which he proposes to attain the advantages of the guide-way system without the expense of costly guide-way rods. Mr. Grafton's system consists in the use of an endless chain of blocks travelling round the 9 or 10 rollers on each side. On which blocks, as on an endless railway, the two engines at either end of the framework are to run, being guided by the skill of the engineer at either end or keeping abreast of one another.

Steam cultivation is the great movement of the day, and so claims a special reference.

We shall now merely specify the other stands and their contents, pointing out such novelties as we have noticed. *Mr. Hornsby* exhibited drills, winnowing machines, and ploughs; *Busby*, carts and ploughs; *Smyth*, drills; *Boby*, his well known screen; *Priest and Woolnough*, horse-hoes, drills, &c.; *Garrett*, Chambers' manure distributor, horse-hoes, horse works, winnowers and drills; *Clayton and Shuttleworth*, plans and specifications of steam engines; *Barnard & Bishop*, Turnip cutter, and graters, and mills; *Turner*, of Ipswich, mills, corn-crushers, &c.; *Page*, of Bedford, harrows, chaff-cutters, ploughs (of extravagant length); *St. Pancras Iron Works*, stable fittings; *Crosskill*, winnowers, carts, &c.; *Isaac James*, liquid manure cart, washing machine, &c.; *Coleman*, his well-known grubber, and Hanson's Potato digger; *Ransome*, a large stand of Biddell's revolving horizontal disc Turnip cutter, chaff-cutters, and the new rotatory screen. This consists of two wire cylinders, one just able to be placed within the other, revolving on different centres, whose eccentricity may be increased or diminished by a simple movement—the screens being nearest one another below, and furthest apart above. It is along the lower inner surface that the grain of course descends, and by altering the eccentricity of the inner screen the nearness of its wires to those of the outer screen, which is the measure of the screening power of the implement, may be altered at will. It seems a very efficient and simple implement.

To resume our list:—*Mr. Howard* next exhibits his ploughs and harrows, rakes, &c.; *Smith*, of Thrapstone, hay-makers, covered hay-troughs for sheep, &c.; *Barratt & Exall*, of Reading, steam engine, chaff-cutters, threshing machines, horse works, &c.; *Plenty & Pain*, ploughs, rakes, and harrows; *Smith*, of Kettering, horsehoes; *Mr. J. B. Brown*, of 18, Cannon Street, models of the best implements of all makers, and an extremely well edited and artistically Illustrated Catalogue, which deserves mention for its superiority in these respects to many other catalogues in the trade; *Mr. Cogan*, glass dairy apparatus; *Mr. Braggins*, of 8, Fish Street, Banbury, exhibits an extremely ingenious set of gate fittings, including a combined strap hinge above, by which you may easily alter the hang of the gate (and by which the gate is locked behind into its place when shut), and a very ingenious "click-clack" hinge below, providing for its taking the closed position when at rest. The whole seems to us very cheap as well as ingenious. *Mr. Cambridge*, of Bristol, shows rollers, winnowers, &c.

Mr. Dell, of Mark Lane, shows a clever winnower and smut machine, in which both blast and exhaust are applied, the one to drive off chaff and the other to draw off dust after the grain has been well beaten by a revolving apparatus to break every smut ball it may contain.

Among the other stands are *Cranstoun*, Wood's mowing-machine; *Snowden*, paring plough; *Hancock*, pulverising plough and butter-making apparatus; *Reed*, syringes, &c.; *Brown & Untie*, and *Edgington*, rick cloths; *M'Neill*, felt; *Clayton*, drain-pipe and brick machine; *Ratel* (32, Ironmonger Lane, E.C.), an ingenious, simple, and cheap arrangement for hammering out the edge of a scythe, and so avoiding the need of grinding. *Johnston*, of Oxford Street, exhibits churns and dairy apparatus; *Stacey*, of Uxbridge, chaff-cutters; *Hill & Smith*, fencing and gates; *Cottam & Co.*, stable fittings, &c.; the trustees of *Mr. Crosskill*, carts, water-carts, Potato washers, clod-crushers, &c.; *Bond & Robinson*, of Halesworth, a simple and cheap paring horse-hoe for working the surface between rows of Mangels or Turnips; *Spight*, of Brigg, his exceedingly cheap and ingenious horse-hoe, in which you have the means of shifting the whole affair laterally, of lifting the whole, and altering the plane of the hoe—of displacing each hoe to and fro, and from side to side individually, and of putting, if needed, three hoes one behind the other on each coulter so as to take the work piecemeal; *Robinson*, of Barton on Humber, exhibited a clod-crusher, having alternate toothed discs, wheels of different size strung on a common axle; *Warner* and *Fowler* exhibited pumps; *Holmes*, drills; *Thorley, Jupp*, and *Henri*, cattle foods; *Ferrabee*, of Stroud, churns and safety horse works, &c.; *Nicholson*, of Newark, hay-makers, cake breakers, &c., sack elevator and barrow—an exceedingly useful tool for the barn; *Wood's* root pulpers, and Philipp's root extirpator, a sort of abrupt rigid rake; *Ball*, of Rothwell, ploughs, Boby's screen, &c.; *Samuelson*, of Banbury, horse-rakes, reapers, chaff-cutters, Turnip-cutters, &c.; *Moody*, of Warminster, root-cutters; *Carson*, chaff-cutter, &c.; *Bentall*, root-pulpers, broad-shares, &c.; *Amies & Barford*, root steaming apparatus; *Picksley & Sims*, Corbett's root-pulper, in which the cutting cylinder is cast in sections, with the teeth in "chills," and an implement of greater power is obtained for somewhat less money; *The Agricultural Engineers' Company* have a large collection of all sorts of agricultural machines; *Richmond & Chandler* a capital collection of chaff cutters, steaming apparatus, &c. *Ashby*, haymakers, revolving harrows, &c. Mr. Ashby has patented an ingenious way of putting both barrels of his haymaker into and out of gear at once, in which he has done away with the hollow axle and slender

traversing rod, to which objections existed; *Burgess & Key* exhibit their mower and reaper; *Hunt*, of Earls Colne, exhibit their Clover seed machine, an ingenious hand drill, &c. *Dray & Co.* exhibit a large collection, including reapers, &c.; *Smith & Taylor*, of Ipswich, exhibit harrows, Winter's weighing and lifting machine for sacks, &c.; *Mr. Clay*, of Walton, Wakefield, exhibits his cultivator; *Chubb & Smith*, late Wedlake, exhibit corn-bins, mills, chaff-cutters, &c.; *Mr. Maggs*, of Burton, Dorset, shows his thatch-making machine; a grubbing apparatus on the revolving fork principle, introduced from Jersey, and patented almost everywhere was also exhibited by *Messrs. Samson and Jewell*. It is somewhat on the principle of Harrison's potato-diggers, the rotating forks being placed either across the motion of the machine, as in that implement, or with it; in either case scattering a furrow-slice turned over to it.

Down stairs there is a large and magnificent array of steam-engines and threshing-machines, exhibited by Marshall, of Gainsborough; Barrett & Exall, of Reading; Roby & Co., Foster, both of Lincoln; Brown & May, of Devizes; Proctor, of Lincoln; Smith & Ashby, of Stamford; Heywood, of Derby; Hornsby, of Grantham; Turner, of Ipswich; Tuxford, of Boston; Smith, of Thrapstone; the Agricultural Engineers' Company, of Swan Lane, E.C.; Gibbons, of Wantage; Wedlake, of Hornchurch; Catchpool, of Colchester; Humphries, of Pershore; Messrs. Hunt, Tye, Holmes, H. Ransome; Tasker, of Andover; and Ringwood, of Sutton, Surrey. Among the points noteworthy here was Barrett & Exall's patent open work or perforated threshing drum or beater.

THE CRYSTAL PALACE POULTRY SHOW.

A short paragraph must this week suffice to say, that this is no longer merely a poultry show, but it now combines stock and roots. Let us speak of the stock first—Lilliputian horses, cows and sheep—the former from Africa, the latter from Brittany. The horses are very small, but apparently as self-willed and stubborn as those of a larger size. We admire the Breton cows, but cannot say as much for the sheep. These are poor and out of condition, but experience has taught us more than once that diminutive size passes away before improved keep. So much for stock.

We were in every way pleased with the roots, not as of remarkable size or quality, but as representing the many sorts now cultivated. They not only brought 216 entries, but many noble competitors proved the interest they took in the question. The Marquis of Breadalbane and the Duke of Portland were among the principal prize takers. The Swedes in Classes 1 and 2 were fair, especially the latter, and we think many may learn a lesson in competition by seeing from the awards that not only is it necessary to send large roots, but they must be symmetrical, if they are to succeed in the teeth of great competition. Many of the successful may be fairly said to have united beauty with size. There were 30 entries for purple-top Swedes, of which 27 appeared. We marked only 6 of them as very good, 11 as fair, and 10 as inferior. Of the green tops, 1 only was good, 3 fair, and 7 inferior.

Turnips were less numerous and do not call for any particular remark. We thought those in Classes 5 and 10, green top whites and tankards, the best among them. We also admired those in Class 3 belonging to the Rev. T. Stevens, green top yellow turnips. Taken as a whole the Mangel Wurzel were the worst classes and the Parsnips were little better. The Carrots were excellent and the Potatoes better than we expected to see. We were also much pleased with the Kohl Rabi. It is making its way to a large class, and the usefulness of societies like these is never more shown than in such instances, where that which was a novelty a short time since is become a good class, and where the catalogue affords information sufficient to enable any one who looks at it to form his opinion as to the proper mode of culture. There was but a small entry of Cabbages, not so many as there should have been, or as we expected to see. Great interest was taken in this exhibition; and we confidently look forward to an increase of competition another year.

Farmers' Clubs.

LONDON: *On the Condition of the Labourer.* Mr. Scott Burn read a paper on this subject, which we are unwillingly forced to abridge:—

PRELIMINARY REMARKS.

I propose to glance at the various phases of a peasant's life, in somewhat like the following order:—Commencing with the earliest stages of his existence, we shall examine (1) the condition of the house in which first he sees the light, (2) the condition in which he can receive his education, and how far that education is calculated to aid him, (3) the mode by which he can offer his services to, and in which they will be accepted by a farmer, thus opening up the discussion of statute fairs and hiring markets; and (4) the wages which his labour will bring him. Having seen our labourer educated for his work, and how that work is rewarded, I shall glance at the extent of the time allotted to him (5) for rest and recreation, and what is the nature of the recreation of which he can avail himself; finally inquiring (6) what is likely to be his position in advanced years, and what provision he is capable of making for that trial in the life of every man, when, however much willingness to work exists, capability to do it fails.

While I shall try to deduce some practical points bearing upon the question, as to how best evils are to be remedied which we all so heartily deplore, I shall endeavour to bear in mind that there is no universal panacea for these evils—no one cure for the disease. As the evils have arisen from a complexity of causes, this complexity must be well considered before the cure can be discovered. Good cottages, for instance, with decent accommodation, will not alone obviate the evils; for vice can be, and is perpetrated in the palace as well as in the hovel, and disease and death reap their harvest of pain and woe as well from the one as from the other. Education—the three R's—reading, writing, and arithmetic, as they have been called—will not alone raise the position of the labourer; for we know well that along with the finest condition of the intellect, a depraved heart, with a vicious life, are too often united. High wages and cheap food will not do all that is required; for along with them we often find a reckless expenditure of the one, and a wanton waste of the other. From the persistency with which one section of this reform, which we thus see to be so many-sided in its character, has been paraded by some, as the thing which once carried out is to set all to rights, I believe much harm has arisen, and the improvement of the social condition of our agricultural labourers greatly retarded. Again, some discuss the subject from a purely philanthropic point of view; forgetful of the fact that there are circumstances which materially modify the operation of laws, or which affect considerably the high standard which they may set up. On the other hand, some take a purely practical view of the subject, referring all the points to the decision of expediency, or asking themselves perpetually, will it pay to do this, or to undo that? In this, as in other matters, the middle course is perhaps the safest one to follow, and likely to lead more rapidly to the end. For the philanthropist is not entitled to ignore the peculiar circumstances of the position in which the farmer may be placed, which may absolutely put it out of his power to obey the high behests of a rigid right; just as much as the practical man is not entitled to sneer at what he may call the high flown notions of the philanthropist, or to forget that in so far as they are founded upon the principles of "right," "justice," and "mercy," so must they be the standard to which all should aim at arriving, and by which all matters must ultimately be decided. Still further, we often find the subject discussed, as if all the evils connected with the condition of the agricultural labourer were dependent on, or caused by the classes above him—and as if the work of amelioration could alone be carried on by these. This may appear to be the truth of the case by men who make an outside or far off examination of the subject only; but that it is not the truth, nay, that it is indeed anything but that, those who know the peculiarities of peasant life know full well. There are indeed some things which the labourer cannot do for himself; but I insist that there are many things which he, and he alone, can do. And it is just because I have seen, during the course of a pretty extended experience of workingmen, so comparatively little real desire to raise themselves in the social scale—such a jealousy, petty and narrow-minded in the extreme, of those who attempt to show them the value of such a rise in life, and the necessity that exists that they should exercise the virtues of self-denial and self-control, in order to secure it—that I have lost much of the enthusiasm with which I at one time viewed the question, and that I now have daily more and more sternly fixed upon me the conviction that the reform of the social condition of the labourer will be a much slower process than we all wish for, if the work in connection with it is to be done only by one class, the farmer or the landowner, unaided by the labourer himself; and I conceive he is the truest friend of the labourer, as well as the kindest, who, while not failing to denounce the sins and shortcomings of the master, is no less decided in denouncing those of the servant. We hear much of the lack of sympathy between master and man, and I deplore it as heartily as any one; but I protest against the view which is too often now taken, that the out flowing of sympathy from the master to the man is what is only wanted—ignoring the truth that there is as often a failure of the stream of sympathy in the contrary direction from the man to the master. I am sure that those who practically know the labourer, know that often the motives of the master are miserably misconstrued, and that schemes which have the labourer's good mainly in view, are looked upon too often with jealousy or indifference. The work to be done in carrying out this most important of social reforms must be mutually done. And sure am I that, no matter how much is done by the master, if the servant does not aid by the cultivation of habits of self-control, no real or lasting progress will be made. Having offered these preliminary remarks, not altogether unsuggestive as I hope, I shall now proceed to take up *seriatim* the subjects I named in the arrangement proposed.

1. THE DWELLING-HOUSE OF THE AGRICULTURAL LABOURER.

"As the houses, so the men," says an authority upon sanitary matters: and there is much truth in it. The development of men in a moral as well as a physical sense, is undoubtedly greatly dependent upon the condition in which he is housed. No more can physical health be secured to the man lodged in a hovel, the arrangement and construction of which is so well calculated to create discomfort and to cause disease, than to the animal who is put up in a filthy ill-ventilated stable. And if it is worth the labour involved in the better housing of our farm stock, it is surely worth the labour to house well the workmen who look after them—worth in a double sense; for the labourer has a higher organisation, which requires to be nurtured, and this cannot be done where everything surrounding the man is calculated to disgust and to degrade. By simply taking care of out-door education, if indeed we do that, and ignoring altogether that of the hearth and home—for the child's most effective training, whether that be good or bad, is the work of the home—no satisfactory intellectual and moral elevation can result. In a Christian land it is imperative that our labourers should have a home fitted to be a Christian home. It is pitiable to have to say, in this 19th century highly-boasted-of time of ours, that a vast deal has yet to be done before this can be realised. I have received a number of communications from various parts of the country, on the subject of cottage accommodation, and the testimony from all is nearly complete, that it is in anything but an advanced condition. I here give extracts from a few of these, which will help to convey some notion of the condition of the house accommodation for labourers in Scotland and England.

In Shetland "the house accommodation consists generally of a hut and a ben" (two rooms *en suite*, the "but" answering to the kitchen, or living room, in the cottages of England; the "ben" to the best, or bedroom), "with sometimes an attic, built of limestone; earthen floors, thatched roof, a fire in centre of kitchen or but end, but chimney in better or ben end. Very little furniture, seldom a table, in kitchen; but uniformly a settle, or wooden sofa, on which a man might stretch himself; one or two wooden arm-chairs and semi-stools; a number of sea-chests, arranged as a platform; around the walls a plate or two, a tea-kettle; and the tea-pot almost uniformly and constantly at the fire. Ben end, table, chairs &c., all wooden: beds, with drawing lids, boxed. Beds in kitchen often one above the other, like ships' berths. Bed-clothes good. A handsomely-wrought, heavy bed-cover, in fancy wools, is the requisite providing of a female at marriage. In my district, the Unched parish, the dwellings are improving fast, and chimneys and floored ben ends are put into most of the newly-erected houses." The walls are rough, the windows small, the roof of thatch being held down (for winds blow fiercely in that wild part of her Majesty's dominions) by straw ropes, with dangling ends, weighted by heavy stones. Interior cleanliness is not much thought of, apparently; for I have seen the hens perching on the edge of the berth-beds, and the pig lying by the hearth; indeed, a general griminess pervades everything, from the want of a chimney, the smoke rarely leaving the vent, or aperture, in the roof, without curling in the interior of the house. Of the cottages in the remotest districts of the Highlands, as in the neighbourhood of Glencoe, a correspondent furnishes the following description: "The humblest style of cottages, or rather huts, are constructed of a rough frame-work of timber, with Heather or Gorse interwoven, about 2 or 3 feet in thickness. The walls, if they may be so called, are not generally higher than about 6 feet; the roof thatched, with poles laid cross-wise, and bound, to prevent its being torn up by the wind. In addition to this, ropes constructed of twigs are suspended, and attached to large stones, to give additional security; but the wind is so strong that, in exposed situations, such as the moor at Corpach, my friend Newton has seen the cottagers holding on by the ropes themselves. I believe, for these places, with a little croft attached, the rent is merely nominal. These cottages are built of stone; in some cases, of slate, as in the neighbourhood of Ballachulish. These are laid sometimes in regular fashion. Others are of rough stones of all shapes, something like a stone wall laid without mortar, and afterwards plastered in a rough way; others of river or rounded stones. The height of wall is not more than six feet; thatched roof; chimney constructed of a light framework of sticks, with turf laid against it. There are never more than two rooms, no ceiling, very often no fire-grate; but when there is, it is of the rudest description. The floors are generally bare earth, with perhaps a hearthstone or so. These have generally a little croft, in which they grow Potatoes, Oats, &c. For these they pay about 4*l*. a year. I do not think the croft system is to be found in many districts of the Highlands now. Some of these cottages are anything but water-tight; I have seen some of them, during heavy rain, almost flooded, owing to the thatch having been neglected." As regards house accommodation in Aberdeenshire, a valued correspondent writes me: "House accommodation, in this county, is both far too limited in quantity and bad in quality. It is the bounden duty of all proprietors to furnish a full equipment of substantial cottages, combining the requisites for comfort and decency, on all farms. Withheld, they stop the onward progress of social order, and hold out a premium to vice and degradation." In Perthshire, another correspondent informs me, "the house accommodation is gradually improving. Still, there is much improvement everywhere required, as many are still compelled to live in wretched hovels. Unfortunately, when long neglect and inattention have allowed the cottages of a county to fall into decay, it often happens that the extreme the other way is run into, when new houses are built; and many instances of late years have sprung up, where the accommodation given is far beyond the wants or requirements of the class." In Inverness, a correspondent informs us that the "house accommodation is still deficient, in many cases consisting of one or two rooms only, for a married man and his family. But almost all new cottages now built contain three or four rooms, thus giving the requisite number of rooms for a proper division of the family." Another correspondent in Inverness-shire writes me as follows: "The houses of farm-servants are not generally very good. Great improvement has taken place of late years in this department, and is still going on. Wherever new buildings are erected, attention is given to this; and I have little doubt that, by and-by, servants will, on the whole, be comfortably provided for. . . . . Cottages for married men consist generally of a room and one or two small closets (bedrooms), with a wooden floor, and neatly plastered. No doubt there are still a good many old houses very inferior indeed in the district; but a great change is going on; and soon, I trust, it will be comfortably housed." In Forfarshire, "house accommodation," as a correspondent informs me, "is generally indifferent, and very insufficient for the requirements of the county. A family is generally huddled into two apartments, often to the injury of health, and repugnant to modesty. Every intelligent farmer, and many proprietors, are now alive to the necessity of providing better cottage accommodation. Much has been done of late years, but little as to what is required." In Dingwall, "the house accommodation for servants is in some instances very bad, in others needlessly good. The subject is now exciting a good deal of interest, and a great improvement has been effected within the last few years." In Dumfries-shire, "Of nearly the whole, although now tolerably comfortable in fitting up, certainly too limited. On an average two apartments only." As regards the house accommodation in the Lothians, a distinguished agriculturist of that high-class-farmed district, writes me as follows:—"Within the last few years a great many new cottages have been built, containing ample accommodation for a family; but a large proportion still exist quite unfit for that purpose. However, landlords and farmers are now alive to the fact that unless better accommodation is speedily provided they cannot hope to retain the best servants." In Berwickshire, "formerly the cottages were of the rudest construction—little better than huts with earthen floors, often damp, and no division in the apartment except what was furnished by the box-beds of the cottars. Recently, however, a great improvement has taken place. During the last 15 years fully two-thirds of the cottages in the county have been erected anew, and, in general, they are now in a very comfortable condition. The walls are higher, they have more than one window, and of proper size. They are in two or more apartments, with brick or even [illegible] pavement floors; also garrets with deal floors, which are available for many useful purposes, and can be made comfortable sleeping apartments when required. The old class of cottages are now an exception in Berwickshire; also, I believe, in Roxburghshire." [Mr. Scott Burn then describes the bothy system, and his remarks we have extracted for publication another week, when we shall have more space at our command. Time fails me to go over the wide range of English counties in a similar manner, I can but give a few sketches, furnished me. In Dorsetshire, "as to house accommodation," says a correspondent, "I believe it is nowhere worse than in this county. The cottages are the greater part mud-built and very small, and contain but few conveniences; and there are many instances where a whole family, sometimes quite a large one,

have to put up with a solitary sleeping apartment—where the father and the mother, the boys and the girls herd together, to the total destruction of common decency, and consequently to the detriment of morality." A correspondent in South Lincolnshire says, "The poor are pretty well provided as regards home accommodation, though generally their houses are too small; and where a family is at all a large one, that leads to a sad state of immorality, from boys and girls, young and old, all being crowded together, and yet any increase of rent at once stops the labourers from attempting to lessen that seriously improper state of things." In Essex, says a correspondent, "cottage accommodation has been sadly neglected, but farmers are beginning to see that it is as necessary to have their labourers close at hand as it is to have their horses on the farm. The union of parishes has done away with the practice of pulling down cottages, or not erecting new ones, for fear the aged, sick, or infirm labourers should in their distress become chargeable to the parish which has had the benefit of their labours when capable of exertion. Landlords and tenants are too apt, even now, to look for profit from the housing of the labourer. This is a great mistake; for by huddling together the males and females in indecent propinquity, their health and morals become tainted, and re-act fearfully in various ways on the interest of both landlord and tenant. A suitable proportion of cottage accommodation should be attached to every farm, and at least one-eighth of an acre of garden ground will tend much to the comfort and morality of the labourer and his family." "One of the great existing evils," says a correspondent, referring to the state of matters in West Suffolk, "with the poor man, is a want of proper cottage accommodation: the miserable house with but one bed-room and the sitting room, is most prevalent; and you may travel through parish after parish, and scarcely find a cottage possessing three bed rooms; and so long as that is the case, however desirable the father of a family may be, or however much he may educate, we shall never find any moral or material difference; wages may increase, means of comfort may increase; but so long as whole families herd together, there can be no benefit morally. This brings me to the conviction that in the attempt to raise the condition of the labourer a wrong start has been made; and if as much pains had been taken with the cottage home as has been taken to provide school accommodation, much greater good would have been effected." "Generally," says a Northumberland correspondent, "a great improvement has taken place in their cottages." "The house accommodation," writes a Bedford correspondent, "is greatly improved in this county through the enlightened policy of our great landowner the Duke of Bedford, who has built some hundreds of model cottages; some landlords have followed his example, whilst others allow the rural population to live in hovels fit only for swine, and in which the moral senses of the young must become blunted." "The house accommodation," says a Wiltshire correspondent, "of the labourers of this county is far from what it should be. Of course (as in all agricultural districts) many of the cottages are old, and ill-constructed, having insufficient sleeping apartment for a proper division of the sexes; whole families are huddled together, to the destruction of all moral and virtuous feeling. It is generally on small properties, and where cottages belong to individuals whose only source of income is derived from the cottages, that we find the worst accommodation; still on some of the larger domains there are cottages that disgrace this fair land; but on the other hand I bear willing testimony to a much better state of things. I could name many influential landed proprietors who have expended large sums of money in erecting cottages on their estates, where good and ample sleeping accommodation, and every convenient requisite for a cottage is to be found, and let to the labourers at very moderate rents. I may state that there is usually a tolerably good garden attached to the labourer's cottage, and the allotment system is universal."

It would be an easy matter to add to these sketches; but enough has been given to show that throughout England and Scotland, the condition of the labourer's house accommodation may be described in one sentence: Improvement is going on, but going slowly; badly arranged and constructed cottages, with deficient accommodation, "are too frequently, good cottages too seldom, met with." But before leaving this department of the subject, permit me to advert to two points in connection with it.

The first of these is the system—having its origin in what are called "close parishes," where cottage building, from the action of the "law of settlement," has not been carried out—of having the cottages of the labourers at a distance from their work. I lately read in a country newspaper a statement to the effect that a farm labourer in so many years had walked so many thousand miles to and from his work. For my part I can scarcely find terms strong enough to denounce the suicidal folly and inhuman absurdity of this system. But what shall I say, and how shall I characterise that reason, too often given on both sides of the Tweed, for not building proper accommodation on every farm for the labourers who assist in its cultivation, namely, "because it does not pay?" As well and as reasonably might landlords refuse to build the farm building; the one is just as necessary to the proper conduct of the farm as the other.

2. EDUCATION OF THE LABOURER.

Time will not permit me to do more than merely glance at the leading features of this important department of agricultural economics. The testimony is so far complete, that the ordinary branches of education—reading and writing—are generally within the easy reach of farm labourers' children; more especially in Scotland, where the excellent and well-known parochial school system gives great facilities to all classes.

Evidence, however, is not the less convincing, that an unfortunate eagerness exists amongst the parents to take their children from school as soon as they can obtain work—no matter of how trivial a nature. The result of this is, that the children are only partially educated—in some cases so partially, that the lessons they receive are so evanescent in their nature that they shortly escape altogether from the memory. The evil then seems to be, not that education is sought in vain to be attained—although we do not ignore the fact, that a vast deal is yet to be done rationally before education can be obtained by all—but that the time to allow of the education to be completed, or at least carried on to a useful stage, cannot be obtained, or, what is worse, will not be given. Hence, a movement has recently been commenced, having for its aim the establishment of the "half-time system" in rural districts. The idea is borrowed from the manufacturing districts of Lancashire, where, by Act of Parliament, not only are boys prevented from working in a mill under 13 years of age, but by law also they are allowed so many hours a day for the purpose of attending school and having recreation. We see much in favour and little against this plan. If education is worth having at all, it is worth while to make such arrangements as will enable it to be had in a proper way. And it certainly is a melancholy fact that agricultural labourers value education so little as to prevent their children possessing themselves of its advantages. Masters have an immense power in their hands of influencing agricultural labourers to appreciate the advantages of education. Let them make it distinctly understood, that a child must be able to read and write before he will get employment, and that in the case of adults, the best work will be given to the best educated, and the labourer will soon learn to appreciate the value of education—such appreciation being, I regret to say, not by any means general amongst them. The system of education—such as it is—obtainable by the agricultural labourer, is not as yet generally adapted to give him that distinct and peculiar species of knowledge useful to him in his daily avocation. Agricultural education, strictly so called, is, in point of fact, rarely given; hence, a general ignorance amongst labourers of the very first principles of the art which gives them subsistence. At the same time, I cannot conceal what, I find, is the opinion held by many farmers throughout the country—that this superior education of the labourer is not required, inasmuch as it seems—so they think—to unfit him for his work, raise him above it, in point of fact. If, then, this is the case, and that a cultivated intellect and the routine of farm labour are incompatible, let us hope for the rapid realization of the period when much of its mechanical drudgery shall be done by the aid of improved modes of working, in which the work of human sinews shall be done by the untiring aid of the steam-engine, and the unfettering of the body of the labourer from dull and dreary work, shall leave him free to carry on processes demanding more of skill and a wider exercise of his intellect, than is now the case. But, whatever education is, it should not, I conceive, be that which has reference to the cultivation of the intellectual powers only. I do think that the present tendency of education is too much in the wrong direction, getting up the polish; the pith of the man and woman is neglected. The heart requires proper training, as well as the head; and in this direction, the lessons of the school may be ably supplemented by the precepts and examples of the hearth—the labours of the teacher in the school aided by the authority of the parent at home. To this end, the parent must become himself a ready and willing scholar in the school of self discipline, self-control, and self-denial.

3. THE HIRING OF THE SERVANT.

I now proceed to the next department of my paper, in which we glance at two of the principal modes by which an agricultural labourer can offer his services to expecting or waiting masters, these being hiring markets and statute fairs. In Scotland, hiring or feeing markets are very general.

They are usually held twice a year, at the county or chief town of the district; and as on these occasions a large number of people assemble, and old friends and cronies meet after months' absence, drinking is carried on, and other vicious scenes enacted. The consequence of this is, that a very decided and somewhat warmly carried on crusade has been commenced against these markets: a warm discussion has been, and is now, going on, eliciting doubtless a great array of facts, very dreary and melancholy, inasmuch as they show the evils attendant upon these meetings. Far be it from me to ignore the fact that these evils exist, or to in any way detract from the importance of the measures which propose to get rid of them; but it appears to me that there is a fault in the mode in which the discussion is carried on. I refer specially to the point which they generally assume, namely, that all the evils are inherent in the system, that it is in every way bad, and that it cannot by any possibility be good; ignoring the fact that these meetings simply give the opportunity, and, I admit, supply in great measure the temptation, which enables the labourers there assembled to carry out their orgies. If with a full sense of the dignity of labour and the worth of moral manliness, those attending them would determine that they would not drown their senses in a flood of drink, would not the evils altogether or nearly cease? On this point one of the most distinguished agriculturists in Scotland writes to me as follows, as regards the hiring market in his own neighbourhood, "It has been most prejudicial to both masters and men. Servants are hired not for their character, but from their height and breadth of their shoulders; in fact, it is impossible in a market to obtain a character. No consideration would induce me to hire a man in a market. You cannot be in contact with a man for 12 months without affecting him or being affected by him, either for the better or the worse. He will do something to excite your anger, or you will raise his wrath, without the most judicious selection. When I want a man I let it be known, and as yet have always had the offer of service to choose from. I have seldom any changes, while those who go to the market get new servants almost every year." As regards the "statute fairs" and "mops" in England, the same opinion pretty generally prevails, as I have already expressed in connection with hiring markets in Scotland. Much of what can be said on both sides of this subject is nearly comprised in the following extracts from one or two letters I have received on the subject. "There has been," says one, "a great desire to put an end to those hiring fairs, on the part of the clergy and others. They are no doubt the scenes of great immorality and vice, are attended with much evil, and tend to make servants unsettled in their situations. Several fairs have been discontinued, and registering offices have been opened in the small villages; but the alteration has been so lately made, that the effect can scarcely be stated at present." As regards the comparative utility of these statutes and registers, a correspondent, who while denouncing statutes as "most serious evils," states that "the hirers generally want more servants than one, and might not succeed at the registry office, so prefer attending the statutes. Another thing is, they see the servants and their late master at the same time." The doing away with the statutes, he further says, "is mainly in the hands of the masters—for if they refrain to go to hire, the servants would cease to attend them." Another correspondent energetically states his opinions thus on the subject: "A great deal of bosh has been uttered by a lot of meddling clergymen in reference to statute hiring. They had far better let us farmers alone. No reasonable objection can be urged against the system. Its use is undeniable, its abuse to be regretted, and very easily reformed. The grumblers say young men and women congregating for such a purpose must necessarily lead to immorality; any gathering of such a kind for any other purpose would, I presume, have the same effect. Here, if there were no statutes, they would still congregate and have their holiday; and why should they not? Many farmers in this county keep from 10 to 30 or even 40 yearly farm-servants; if there were no statute gatherings, how are they to be obtained? A register-office is a farce. We already know that such a system is the curse of the present scheme of getting household servants, and with ploughmen it would be undoubtably worse."

4. WAGES.

There can be no doubt of the influence which the amount of a man's wages exercises upon his position in society. It is very gratifying to think that in this respect the labourer's position is wonderfully improved. But increased wages should bring on the part of the labourer increased care of his resources—not induce, as is too often the case, reckless expenditure and waste.

While on the subject of wages, I venture to hope that ere long the payment of "wages in kind" will be abolished. I throw out this suggestion with considerable hesitancy; for I am well aware of the conveniences of the practice, and of the reasons which can be offered for a continuance of it; but it appears to me that the fairest way is to pay services in the current coin of the realm, leaving the servant to do just as he pleases with his wages. None of us, I take leave to think, would like to be paid in the way in which some of our farm-servants are paid. There is a species of constraint and of forcing about it not consonant with our notions of true British liberty; for the servant has no choice in the matter—it is not with him which of two, but this or none—"Hobson's choice" truly. We all known how the "truck" system in the manufacturing and mining districts led to evils so great that legislative interference ultimately put a stop to it. Now the system of paying wages partly in money and partly in kind, practised in some of our farming districts, is something of the "truck" system, modified doubtless, and not capable of producing the evils which the "truck" system in the manufacturing districts produced; but I nevertheless feel that it would be better if the simple principle of paying money for services were adopted in all our rural districts. In connection with the subject of wages, while on the one hand gladly seeing the better and daily bettering position of the labourer, I regret bitterly to see on the other a desire here and there, on his part, to introduce the baneful practice of "strikes." Wherever this unhappy tendency is seen to develop itself—and I much fear that its development will, if things go on as they are now going, progress pretty rapidly—every means should be taken to disseminate the true principles of economy amongst the labourers; to show them that "strikes" benefit no one, but do an immense injury to both parties. I confess I am not at all surprised that this desire to initiate "strikes" should show itself in our rural districts, but I am not the less pained to find that it is so. The evil if possible should be nipped at its early stages, and not allowed to assume such dimensions as to make its removal a matter of great difficulty. As regards the rate of wages, modes of payment, &c., now existing in various districts of England and Scotland, I fall back upon a return given lately in the pages of the *Agricultural Gazette*. [We refer our readers to our Number for April 28, 1860.]

5. RECREATIONS.

I propose very briefly to advert to the recreations of the labourer, and to the facilities which are offered him for spending his spare time. I regret to say that, so far as I have been able to ascertain, these facilities are very few, and not always of the best character. In many districts the spare time of the labourer is miserable in amount. Labour, if rightly directed, should give to him who exercises it, not only wherewith to provide for the necessities, but also for the rest and the luxuries of life.

It is gratifying to be able to state that things are rapidly improving in this respect. The garden, and cottage allotment systems, the reading-rooms, the itinerant libraries, the playgrounds, &c., which are rapidly becoming common throughout the country, will in time offer to the labourer recreation of a high order, and do much to rouse his ambition and stimulate him to occupy a higher position. The difficulties attendant upon a right solution of the question are numerous—no sooner do you find that you have got rid of one than up starts another. And yet I foresee one way in which these difficulties can be met and overcome; and that way the speediest and the best. It is the application of the principles of Christianity to the matter. I am no advocate for the introduction of sectarian views; I mean the pure Christianity of the Bible—that Christianity which is broader than any sect, wider than any so-called church. When we are environed with difficulties as to our mode of action, it is astonishing how rapidly these vanish, and how plain is the path of progress, when we take the leading ideas—the main principles of Christianity for our guide, which tell us in language so plain that he who runs may read, "Do unto others as ye would that they should do unto you." And, again, "He who knoweth to do good and doeth it not, to him it is sin." These are the touch-stones which will test whether the metal we offer is good or spurious—the true philsopher's stones, which will turn our dross into bars of the purest gold. I confess to being ambitious for my countrymen. I should like to see the landowner and the master both vie as to who should do the most in fulfilling the high requirements of their stations; but I would not the less like to see the labourer do his part, by the exercise of a continued self-improvement to raise himself in the social scale. I foresee great things for our rural labourers when this union of effort shall be carried persistently out—when the endeavours of the one shall be aided by the anxieties of the other, and the progress of both shall be rapid, and know few backward steps in that path which can alone lead to true individual happiness and real national greatness.

[After further remarks on the subject and on the means which the labourer possesses of securing comfort in old age, Mr. Burn then referred to the difficulties in his way, and concluded with a short account of agricultural labour on the Continent, to which we must refer hereafter.]

HADLEIGH. At the Annual Root Show of this Society the long Mangels were in weight far superior to the Globes, the quality being about equal. The Swede Turnips were generally exceedingly good. A remarkable Swede Turnip, shown by Mr. Joseph Rand, weighed no less than 22 lbs. It was a solitary one in a field of Mangel, the seed having been accidentally deposited there.—The white Turnips were produced in the natural way, and a better quality of this description of root has never been shown on these occasions. There was an extraordinary one, of the decanter species, forwarded by Miss Rowley, of Holbecks, which weighed 18 lbs. The Cabbages were very large, and some of them were of great weight.—At the subsequent discussion Mr. Postans, one of the judges, said there were altogether 24 acres of Mangels shown—12 2-acre pieces, and he divided them into sixes. The six lighter pieces averaged 21 tons 6 cwt. to the acre, or without their tops about 16½ tons per acre. The average weight of the six heaviest pieces with their tops was about 32 tons 11 cwt.—without their tops about 25 tons. Mr. James Norman's, of Layham, weighed 44 tons 3 cwt. They were very full of growth. He (Mr. Postans) had the curiosity, a month

after the judges had looked them over, they being very near to his, to see how much they had increased in the time. He found in the root they had increased upwards of three tons, but very little in their tops, which had begun to wither. He thought this might be interesting to some of the members in reference to the question whether they might not keep their roots growing longer than they sometimes did. As to Mr. Gurdon's transplanted Mangels, he wished to mention that the judges did not find them so heavy as others, nor so good. He forgot what was the exact difference in the weights, but he thought it was about 3 tons between the transplanted ones and the others. He made the weight of Mr. Gurdon's transplanted ones 28 tons 10 cwt. with, and 22 tons 2 cwt. without their tops.

The Swede Turnips.—He had classed these just as he had done the others, beginning with the lightest weights. The lightest they found were Mr. Wallace's, of Monk's Eleigh, which came to about six tons per acre. The lot which won the prize, were Mr. James Norman's, they weighing 19 tons 13 cwt. They were not very well hoed out, and in an ordinary season the judges would not have thought of giving them a prize at all, as they were no great weight; but when they came to consider that they weighed nearly three times as much as the first, and that the season had been so very adverse to the growth of roots, they thought the prize ought not to be withheld from him, therefore they gave it to him for his Swedish Turnips.

Other kinds of Turnips.—The first on the list was a piece of Mr. Tiffen's: they were called the Scotch Pudding Turnip, and were put in very late, and had not had time to make much growth, and their weight was only 15 tons. The next were Mr. Gurdon's; they came to 20 tons 13 cwt. He should tell them that these Turnips were grown after mown Tares, and the judges thought there was a great deal of credit due to the manager of that estate for getting so good a piece of Turnips in such a season as this after mown Tares. The next were Messrs. Rand's, at Peyton Hall—24 tons 5 cwt. The next Messrs. Rand's, Layham—24 tons 10 cwt.—and these took the prize. They were of the bell decanter kind (Mr. Thomas Hawkins' stock), of excellent quality, and full of growth: no doubt by this time they weighed 3 or 4 tons more than they did when the judges saw them, for they were then growing well on the land and were in fine condition.

Mr. Garnham gave an explanation as to the treatment for Turnips after mown Tares. The Tares were first ploughed for in September, with a coat of farmyard manure—about 20 loads per acre. They were mown off early for horses, and many of them cut into chaff with Rye. Afterwards the land was broken up, subsoiled, and scarified, and about 2 cwt. per acre of superphosphate sown, and the Turnips put in. This was all that was done with them. As to the Mangels, he broke up the land as soon as he had done Wheat seeding. It was then late in the spring. He then put in 13 or 14 bushels of lime per acre, with the stuff taken off the bank spread on the field. It was crossed and subsoiled in between the ridges, then ploughed in, and about 12 loads of London manure put in per acre without any artificial.

Mr. Gurdon said: With respect to transplanting Mangels, he had never advocated the idea of growing a whole crop by transplantation: what he wanted to ascertain was, whether they could transplant a root, keep it of good quality, and make it of good size and weight. This year only satisfied him that he was more and more correct in his conviction that it could be done. He was satisfied that transplanted Mangels might be grown to advantage, profitably, and to a very considerable size. He had tried the experiment now for three years, and he saw little reason to doubt, at any rate after such a season as we had had, that transplanted Mangels might be grown almost the same weight as those which had been shown; he had not had good plants for more than a quarter of an acre. They were not raised as they should have been, with proper mould. He went on planting, but the plants consequently were faulty, and were filled up subsequently after an interval of a fortnight or three weeks. Thus they got about six weeks too late; so this year should not be taken as a specimen of what could be done by transplanting. Let any gentleman who had any doubt about it try for himself, and next year get some nice loose mould mixed with vegetable mould. It was necessary, if they wanted a root for transplanting, to plant it in a loose soil, as they threw out a great quantity of fibrous roots. Don't break any of these, as if they did they would not go on well.

Mr. Joseph Rand spoke on the cultivation of white Turnips. He made a good fallow by the usual ploughing; he ploughed up early after harvest—it was after Barley. Then he gave it a ploughing as soon as he could in the proper season. After an interval he gave two crossings, and then only ridged it up once. Before he ridged it up he gave it farmyard manure—by no means a heavy coat, only 7 tons per acre of well made farmyard manure; but he attributed the result quite as much to its being a good stock of Turnips as to the cultivation. For quality he never saw better; and he never found his sheep thriving more than at the present time. He had named at these meetings, three or four years in succession, that his description of Turnip was the very best one to grow for early feeding, both for quality and quantity: the "bell decanter" he thought was the proper name. He believed for the introduction of that stock he was indebted to this Society, who recommended him to grow it. The advice to try it came from Mr. Thomas Hawkins, who furnished him with his first seed, and he had kept the stock ever since, now 13 or 14 years. As he had said before, they were very valuable for early feeding, and for 10 out of 12 years these Turnips had taken the prize both for acres and half-dozens; therefore he recommended gentlemen who wanted early feed for stock by all means to try it. Where he produced the Mangels to compete this year the land had been in Mangel three years in succession. All he did to the land this year was to stamp the leaves in (there were 12 tons an acre, according to the judges last year), and he fed some sheep on it. He fed his sheep with other food besides leaves, but he did not carry a handful of manure for this last crop: he congratulated himself that the leaves were very good and rich manure, particularly if Mangel Wurzel was grown after. The Mangel leaves returned back to the Mangel exactly what the Mangel plant required, and he believed them to be productive of a considerable portion of the weight he obtained this season. There was another thing. Going to judge Mangels as he did five or six weeks since, he would state that where there were plenty of leaves on the Mangels, if there was open weather, the more crop they would get.

Mr. Robert Hawkins asked Mr. Rand what he fed upon his land to produce his beautiful crop of Mangel—whether there was no cake used on the field or any part of the previous Mangels used on the land, as he could not account for tops only producing such a crop?

Mr. Rand said it was perfectly true that he fed with cake and tops too, and nearly half the Mangel produced the year before. (Laughter).

Mr. Sheldrake said, in taking the prize for Cabbages that day, he must say he had done what he had never done before, but it was a legitimate proceeding—that was, he cultivated in a garden. He had several rods of ground in his garden, and he planted something like five or six score of Cabbage plants, and gave them plenty of good farm-yard manure; and once, about the month of June, he watered them with liquid manure. He did not know any other preparation than that, or that any other was required. If any one had had any good ones there, he thought he should not have had the prize, as his Cabbages weighed only 90 lbs., and he thought it somewhat disgraceful to show a half-dozen not weighing more than that.

Mr. Gurdon said he thought Mr. Partridge would remember that he said at that table last year he thought his (Mr. Gurdon's) Mangel would have been better if, instead of growing it 30 inches from row to row, and 13 from plant to plant, he had grown it 27 and 15 inches. He took his advice this year. He did not know he was at all wrong as to 27 inches, but he wished he had planted it 13 from plant to plant, as he had lost 2-15ths in the number of plants. With the smallness of roots this year he had a great loss. If they had been large roots, Mr. Partridge's would have been good advice. If they asked him, he would stick to 27 inches; and 14 inches from one plant to the other. He thought 15 inches more than sufficient. If there was a year of small plants, they had a number of plants to make up; whereas if there were a few plants, and it turned out a year like this, then they were left behind. With respect to dibbling, he believed Mr. Garnham would tell them that the moment he got the dibble from the blacksmith he sent his drill home; and he thought that nothing would persuade him to use the drill again. He was sure the dibble was an instrument which would hereafter be generally used for Mangels. He tried the dibble with a cone last year, and did not like it. This year instead of having a round cone, he had a blunt edge, 3 inches long. *Very much abridged from the Bury Post.*

Reviews.

Cheesemaking made easy, or the improved Cheddar method of Cheese making practically explained, with remarks on various other methods of Cheesemaking. By Robert M'Adam, Dairyman, Gorsty Hill, near Crewe, Cheshire, lately in Baldoon, Wigtonshire.

We lately published (p. 1049) an account of an Ayrshire Show of cheese, and reference was made to the M'Adams of that county as all noted for their dairy management. The capital essay now published is by one of them. It was written in competition for a prize offered by Mr. Bass, M.P., and though in the judgment of the adjudicators unsuccessful for that prize, it is now published in accordance with numerous requests, and it will, we doubt not, be largely read. In a pamphlet of 40 pages it describes, in full detail, the author's own practice, and in more general terms the methods adopted in making the Cheshire, Dunlop, and Derbyshire cheese. The author's own practice is that called the "improved Cheddar method," and he has adopted it after having practised the Dunlop and Cheshire systems.

It is not fair to cull much from Mr. M'Adam's pages, which will, we hope, be purchased by those of our readers interested in his subject, but the following extract may be taken as answering two important questions:—

"It may be asked—Does this method of cheese-making produce as much weight of cheese from the same quantity of milk as other systems? We unhesitatingly affirm that it does. To ascertain this, we made comparative trials for five days in succession. On each of the five days, separate quantities of milk were accurately weighed and measured, and made into cheeses after the Cheshire, Dunlop, and Cheddar methods, in the most careful and improved mode, and in every instance the difference was in favour of the Cheddar method. On the 4th of August of the present year, the cheese produced from 165 imperial gallons, or 1634 lbs. of milk, weighed 170 lbs. when taken to the cheese-room. Comparative trials, to be correct, must be conducted with care, and made on the same day, otherwise they cannot be depended on, as a little variation in the state of the atmosphere alters the yield from the milk. Another question is often raised, viz., Whether cheeses are more easily made from the milk of cows fed on certain kinds of pasture. We answer, that after having made cheeses in seven different counties, and on many varieties of soil,—on the uncultivated moor land, and on the highly cultivated farm at 3*l.* per acre of rent,—from young Grass of the first year, and from fine, old, rich pasture that had never been cultivated in the memory of man,—from land highly-boned and that otherwise manured,—we are certain that first-class cheese may be made wherever good milk is produced. Wherever cheeses are said not to stand from too rich pasture, or wherever there is difficulty in pressing them, the maker may be assured that there is an error in the management, that his own skill is at fault, and his knowledge of cheese-making defective."

The pamphlet concludes with the following significant sentence:—

"We are happy to be enabled to state, that on the 25th current, at the Great Cheese Show at Kilmarnock, the three principal money-prizes (30*l.* sterling), also, the Society's Gold Medal, have been awarded to our pupils. We trust that further benefits will follow our humble effort to improve a valuable product of our country."

Calendar of Operations.

DECEMBER.

BERWICKSHIRE MERSE FARM, *Dec.* 10.—It is now nine weeks since we have had any good weather. In October 2.6 inches of rain fell in 20 days, the winds being S. and W., and in November from the east we have had 3.6 inches in 26 days. Here it will be seen that the amount of rain can scarcely be called excessive; its persistency, varied by dull sky and fog, must explain the constant saturation of the soil. After a late harvest work was unusually far back, but matters are much worse now. Much stubble remains to be turned over, but wet has driven ploughs to the lea. The crop of Turnips has turned out well, but is altogether exposed to risk from frost, which would be particularly destructive on a soaked soil. We have felt well off in being able to secure our weekly supply as required, and that by no means so clean as desirable; cattle, consequently, have not latterly made much progress, though assisted by cake and meal. Hogs, when confined to the Turnip break are merely eking out existence; not having a dry spot to lie on, nor meat free from mud. Where it has been practicable to give them their Turnips in a Grass field, the comfort of a dry lair has at least repaid the trouble, though unavoidably depriving the land of the treading so much and justly valued. Just eight years ago we had such a season as the present. We remember well that we sowed no Wheat until 1st February, and but little then. The produce was very inferior, but brought a high price. The bare fallows, confined to a small district, were sown early in October; as also some small pieces after Potatoes; but were we to say that one half of the usual breadth was now under Wheat, our estimate would certainly exceed the truth. Potatoes have proved a large and sound crop; but we fear some portion is still in the ground. Mangels are a mere trifle, and unusually difficult to lift; and few have got the half of them stored yet. A large part of the Bean crop is yet afield, in a state that may better be imagined than described. Passing the other day by an unwonted road, in a poor but not elevated part of the country, we saw what at first was took for dung hauled out on a stubble field. On nearer inspection, we discovered the mortal remains of a crop of Oats *in situ*. *J. T.*

Notices to Correspondents.

LAMENESS IN SHEEP: *C H O.* Mr. Spooner will next week report upon it.

LICE: *B H N.* Rub a decoction of tobacco into the coats of his heifers, or prepare the following ointment and use it in the same way.

Sulphur vivum	4 ozs.
Linseed or Train Oil	8 „
Turpentine	2 „

Mix and rub in.

MANGEL WURZEL: *P S.* There is a White Mangel. Any seedsman will get it for you.

SALT: *Constant Reader.* Rub on (and in) as much salt as can be used, for seven successive days, applying with the first salting ½ lb. of saltpetre to a flitch of 100 lbs. Afterwards rub the salt that is lying on the flitch, daily for a fortnight. A side of bacon of 100 lbs. will require probably 6 or 8 lbs. of salt. It is a good plan to rub 1 lb. of brown sugar on the thickest parts the first day.

TASTE OF MILK: *A Dairyman* will find if he boils all the roots before giving them to milking cows, any unpleasant taste in the flavour of the butter made from the milk will be to a great extent prevented. Or the mere act of pulping the roots by exposing the greatest surface to the action of the air will carry off much of the aroma, and so a good deal prevent any taste to butter, and the day before it is churned the cream should be put to stand in boiling water and frequently stirred, the cream being kept as hot as it will become in this way for half-an-hour, and stir it as it cools. Put into the cream pan before it daily receives the cream powdered saltpetre in the proportion of one dessert spoonful to every gallon of cream, and no disagreeable flavour will be found whatever food the cows take. The cream should not be churned the same day it is heated

PINE APPLES, GRAPES, ETC.

PINE PLANTS, FRUITING AND SUCCESSION.
GRAPE VINES, FROM EYES FOR FRUITING IN POTS, OR PLANTING.

JOHN WEEKS AND CO. can supply any quantity of very fine healthy Pine Plants, either Fruiting or Succession.

GRAPE VINES remarkably strong and fine, 50 varieties, all the best sorts.

JOHN WEEKS AND CO.'S HORTICULTURAL SHOW ESTABLISHMENT is entirely devoted to the growth and Forcing of GRAPES, PINES, PEACHES, FIGS, CUCUMBERS, and other choice Fruits. The whole open for inspection, thereby showing the most improved plans of HORTICULTURAL BUILDINGS with the VENTILATING and HOT-WATER APPARATUS in full operation.

JOHN WEEKS AND CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, London. Plans, Estimates, and Illustrated Catalogues free on application.

DWARF-TRAINED PEACHES AND NECTARINES.

W. J. EPPS has a large quantity of fine clean grown stuff of the above. Prices to the Trade and others sent on application.

The True KENTISH COB NUT TREES, very handsome plants, 6s. per dozen and upwards.

A GENERAL LIST OF FRUITS, ROSES, SHRUBS, PLANTS, &c., sent on application.

CHARLES B. SAUNDERS, NURSERYMAN, &c., Jersey, begs to offer the following articles to the attention of horticulturalists generally—

Fine Strong VINES, 6 to 10 feet long, and comparatively strong, of the most approved kinds, the roots of which have never been crammed or distorted by pot culture.

DWARF STANDARD PEAR TREE on QUINCE STOCKS, 2 to 4 years' growth, most of which are in fruiting condition.

Prices and lists of general stock on application.

MAGNIFICENT STANDARD PORTUGAL LAURELS,

3 to 6 feet stems, with very fine large bushy heads.

PYRAMIDAL PORTUGAL LAURELS,

handsomely grown plants, 6 to 9 feet in height.

Also well-grown ARAUCARIAS.

WILLIAM WOOD AND SON will be happy to furnish prices and all particulars of the above on application.

Woodlands Nursery, Maresfield, near Uckfield, Sussex.

ROBERT NEAL, NURSERYMAN, Wandsworth Common, S.W., begs to call the attention of buyers to his large and well selected stock of EVERGREENS and FLOWERING SHRUBS, ORNAMENTAL TREES, AMERICAN PLANTS, FRUIT AND FOREST TREES, STANDARD AND DWARF ROSES of every description. A large stock of BOX-LEAF EVERGREEN PRIVET, from 1 to 6 feet for hedges; GREEN HOLLY, 1 to 6 ft.; RICH BOG and LOAM for American Beds; LEAF MOULD. The Nursery is 10 minutes' walk from Clapham Common, and New Wandsworth Station, Crystal Palace Line.

LARGE TREES, ETC.

WM. PAUL (Son and Successor to the late A. Paul), Cheshunt Nurseries, Waltham Cross, N., has a quantity of large handsome TREES, Evergreen and Deciduous, which must be cleared off 10 acres of the old Nurseries very shortly, and will be sold cheap. Cedrus deodara, Cedar of Lebanon, Yews, Box, Laurels, Arbor-vitæ, Privet, Red Cedar, fine specimens of choice Coniferæ, Alders, Planes, Poplars, Elms, Limes, Fruit Trees, &c. All have been frequently removed and rise with plenty of fibrous roots. Carefully taken up and delivered free to any railway station in London. Further particulars on application.—Please address WILLIAM PAUL, Cheshunt Nurseries, Waltham Cross, N.

THREE MILLIONS OF TRANSPLANTED QUICKS.

GEORGE CHIVAS offers the above, varying from Good to exceedingly Strong, clean and well rooted. A Sample Bundle containing 100 of each, 5 sizes, forwarded on receipt of 15s. Truck loads delivered Free at any Railway Station. Also, a Million of Transplanted LARCH; half a Million of Transplanted SPRUCE; Ten Thousand Superior Standard APPLES and PEARS; and a large General NURSERY STOCK.—Chester, Dec. 22.

CEDRUS DEODARA.

MAULE AND SONS still hold large supplies of this favourite Tree, from seed, which they are offering at the following low prices:—Magnificent specimens, for immediate effect, from 10 to 15 & 20 feet high, at 2s. per foot in height; other smaller sizes. from 1, 2, 3, 4, 5, 6, 7, 8, & 9 feet, at 1s. per foot. Their Lists of AMERICAN CONIFER and FOREST TREES for the season can be had on application.

☞ Strong 2-year Gorse or Furze Plants for Fox Covert, &c., at 10s. per 1000.

Bristol: Nurseries, Stapleton Road and Stoke Gifford.

INTIMATION.

ALTERATION OF FIRM AND OPENING OF NEW NURSERY AND SEED ESTABLISHMENT, AT STANSTEAD PARK, FOREST HILL, LONDON.

DOWNIE AND LAIRD, NURSERYMEN, SEEDSMEN, AND FLORISTS, 17, South Frederick Street, Edinburgh, sincerely thank their numerous friends for the large amount of patronage received since commencing Business 12 years ago, and beg to intimate that they have opened a NURSERY AND SEED ESTABLISHMENT at STANSTEAD PARK, FOREST HILL, LONDON, S.E., and assumed as Partner Mr. JOHN LAING, who has for the last 12 years acted so successfully as Head Gardener to the Right Hon. The Earl of Rosslyn, at Dysart House, Fifeshire, and that the Business will now be carried on under the FIRM OF DOWNIE, LAIRD, & LAING. They respectfully solicit for the New Firm a continuance of that support so liberally bestowed upon the old. The Business in Edinburgh will, as hitherto, be conducted under the immediate Management of Mr. DOWNIE and Mr. LAIRD, and at London by Mr. LAING.

Stanstead Park is 6 miles distant from London Bridge, and within 5 minutes' walk of the Catford Bridge Station, on the Mid-Kent Line, to which there are trains from London Bridge Station and back upwards of 20 times daily, and about 10 minutes' walk from the Forest Hill Station, on the Crystal Palace Line, at which trains arrive and depart nearly every 15 minutes throughout the day.

17, South Frederick Street, Edinburgh.

DOWNIE, LAIRD, AND LAING beg to intimate that their NEW CATALOGUES of ROSES, FRUIT TREES, FLOWER ROOTS, GARDEN, AGRICULTURAL, and FLOWER SEEDS, &c, are now ready, and may be had free on application. Their NEW CATALOGUE OF FLORIST FLOWERS, containing every novelty worthy of cultivation, will shortly be published. Their collection of HOLLYHOCKS, PANSIES, PHLOXES, &c., is this season unusually fine, and embraces many new varieties of great merit.

17, South Frederick Street, Edinburgh; and Stanstead Park, Forest Hill, London, S.E.

CHOICE BULBS.

STEPHEN BROWN'S CATALOGUE (late BASS & BROWN) supplied free on application. It contains one of the finest collections of DUTCH, CAPE, and other BULBS. The cultural and descriptive matter is this year greatly enlarged, and prices are very moderate.

Also, free on application, the CATALOGUE OF CHOICE NURSERY STOCK.

Seed and Nursery Establishment, Sudbury, Suffolk.

HYACINTHS FOR BEDS, &c. &c.

WM. CUTBUSH AND SON can supply a VERY SUPERIOR quality of HYACINTHS for beds in SEPARATE DISTINCT COLOURS—dark blue, pale blue, pink, crimson, pure white, blush, and yellow—at 30s. per 100, or 5s. per dozen.

For description and prices of choice GLADIOLI and other BULBS, see their AUTUMN CATALOGUE, post free on application.—Highgate Nurseries, London, N., ONLY.

DUTCH AND OTHER BULBS.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their CATALOGUE of the above is now ready, and will be forwarded post free on application. Early orders are solicited, as their successful cultivation depends in a great measure on early planting.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, N.

GERANIUMS, HERBACEOUS AND ALPINE PLANTS. ORCHIDS, CHRYSANTHEMUMS, HARDY VARIEGATED PLANTS, &c.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their new priced and descriptive CATALOGUE of the above, to which are added supplemental Lists of Fuchsias, Stove, Greenhouse, and Hardy Plants, Ferns, Ornamental Foliage and Variegated Plants, Fruit Trees, &c. (which include the best new plants of the season, is now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

WINTER AND SPRING FLOWERING PLANTS.

F. AND A. SMITH are now sending out at reasonable prices finely grown plants of Acacia, Azalea, Aphelexis, Boronias, Burchellia, Chorozema, Cineraria, Cactus, Cytisus, Carnation (Tree), Daphne, Epacris, Ericas, Eutaxia, Gardenias, Geraniums, Hydrangea, Primula, Prostranthera, Poinsettia, Polygala, Roella, Roses, Indica minor, Col. Fabvier, Mrs. Bosanquet, Géant des Batailles, Yellow Noisette, Gloire de Dijon, Cramoisie supérieur, &c. Tremandra, Greenhouse Climbers in variety. Prices with Lists on application.

Dulwich, Surrey, S.

NEW CINERARIAS OF 1860.

F. AND A. SMITH are now sending out their splendid Varieties of the above, which for colour, dwarf habit, and large compact heads of bloom, are unsurpassed; many of them are finely formed, and others have the largest flowers known. A DESCRIPTIVE CATALOGUE may be had on application—Dulwich, Surrey, S.

WHOLESALE CATALOGUE.

GEORGE JACKMAN AND SON'S PRICED AND DESCRIPTIVE CATALOGUE FOR 1860 AND SPRING 1861, comprising Fruit Trees of all the leading kinds, new and selected Roses, fine varieties of American Plants, Choice and Rare Conifers, Evergreen and Deciduous Trees and Shrubs, and a fine Stock of Transplanted Forest Trees, &c., can be had free on application.—Woking Nursery, Surrey.

SCARLET RHODODENDRONS.—Handsome bushy plants, from 1 to 2 feet high and 2 to 3 feet through, 10l. 10s., mixed with Hybrids, PONTICUM, from 2 to 4 feet, 7l. 10s. per 100.

KALMIA LATIFOLIA, 2 to 3 feet high, 5l.; 4 to 4½ feet high, 7l. 10s.

AZALEAS, large bushy plants, 2½ to 4 feet and larger, 5l. per 100; best Ghent varieties, 75s. per 100.

CATALOGUES on application.

GEO. BAKER, American Nursery, Bagshot, Surrey.

HARDY SCARLET RHODODENDRONS.

JOHN WATERER begs to announce that his New DESCRIPTIVE CATALOGUE of HARDY SCARLET and other choice RHODODENDRONS, as are annually displayed at the Royal Botanic Gardens, Regent's Park, is now published and will be forwarded on application. It likewise furnishes a List of all popular Hardy Plants, with a selection of the most desirable Conifers, with heights and prices.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

The CATALOGUE can also be had of Mr. JOHN KERNAN, 4, Great Russell Street, Covent Garden, W.C.

NOTICE.

SOUTH EASTERN NURSERIES AND SEED ESTABLISHMENT, ASHFORD.

W. J. EPPS, JUN., begs respectfully to state that he has taken the above Nurseries of his father, and has a large stock of ORNAMENTAL SHRUBS and well-grown CONIFERÆ, consisting of Wellingtonias, Araucarias, Pinus Pinsapo, Smithiana, Deodars of all sizes; also a quantity of large deciduous Trees for belting Parks, Cemeteries, &c., which he will dispose of very cheap. An extensive collection of Trained and Standard FRUITS, ROSES, &c.

Every attention will be given to the commands of those who may favour him with their patronage, and it will be his constant care to merit them.

SEEDLING ASH, 5l. per 100,000.

WANTED, a quantity of FRUIT STOCKS, for cash. Sample and price required.

AGRICULTURAL AND HORTICULTURAL SEED ESTABLISHMENT,

HIGH STREET, MAIDSTONE.—NURSERIES: NEAR TO AND ADJOINING THE RAILWAY STATION.

W. J. EPPS takes this opportunity of sincerely thanking his Patrons and Friends for the very liberal support he has received during the last 20 years, and respectfully informs them that he has removed to his NEW NURSERIES, situated as above.

They are now complete with a large Transplanted Stock of every description (more especially Fruit Trees).

He has expended a large sum in the arrangement of the Grounds (which contains some magnificent specimens) and also in the erection of Plant Houses, Pits, &c.; few Nurseries possessing a better or larger collection.

The Seed Business is carried on, as before, at the Shop in High Street.

The Business at Ashford he has given up to his eldest Son, who he trusts will retain the same support which he has hitherto received at those Nurseries.

W. J. E will now devote the whole of his attention to his establishment at Maidstone, and respectfully solicits the continuance of those favours which it has been his good fortune to receive, and which it will at all times be his anxious study to merit.

Every article will be sold at the lowest possible price, and a liberal discount for cash payments.

CATALOGUES and LISTS forwarded on application.

NEW GARDEN SEEDS, GROWTH OF 1860.

ROYAL BERKSHIRE SEED ESTABLISHMENT.

SUTTON AND SONS are now prepared to execute orders for all kinds of GARDEN SEEDS, and can warrant them genuine.

The PRICED LIST will be ready in a few days.

Royal Berkshire Seed Establishment; Reading

ROYAL EXOTIC NURSERY, CHELSEA, S.W.

JAMES VEITCH, JUN., respectfully announces that his CATALOGUE OF KITCHEN GARDEN AND FLOWER SEEDS for 1860, with a List of Implements and other Garden requisites, is now published, and will be forwarded post free on application.

J. V., Jun., devoting his personal attention to this department of his business, can warrant his SEEDS TRUE TO NAME, and of the MOST GENUINE description.—Dec. 22.

HORTICULTURAL SOCIETY OF LONDON.

FLORAL COMMITTEE.

LIST OF AWARDS, NOVEMBER 8.

FIRST CLASS CERTIFICATE.

Chrysanthemum Lady Hardinge, from Mr. Salter, Hammersmith.

COMMENDED.

Statice profusa, from Messrs. Parker & Williams, Holloway.
Chrysanthemum Little Harry, from Mr. Salter.

SPECIAL CERTIFICATE.

To Mr. Turner, for a fine plant of Celosia aurea.

AWARDS, DECEMBER 13.

FIRST CLASS CERTIFICATE.

Thibaudia macrantha, from Messrs. Veitch & Son, Exeter and Chelsea.
Cypripedium insigne, var. from Messrs. Maule & Sons, Bristol.
Chrysanthemum Little Harry, from Mr. Salter.

COMMENDED.

Chrysanthemum Caractacus, from Mr. Salter.
Chrysanthemum Golden Hermine, from Mr. Salter.
Chrysanthemum Canary Bird, from Mr. Salter.

SPECIAL CERTIFICATE.

To Messrs. E. G. Henderson & Son, for a well-flowered collection of Tree Carnations.

The next Meeting of the Committee will take place on February 12, 1861.

THOMAS MOORE, Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, DECEMBER 22, 1860.

IT is a far more important matter to keep cellars free of Fungi than is usually supposed. The wine-merchant, indeed, is apt to pride himself on the festoons of *Antennaria* which hang down from his roofs, and the tufts which invest his bottles. This, we conceive, arises from the air of antiquity which they give to the contents of his vaults, and the consequent impression made upon their visitors. Nor, indeed, have we any charge to bring against this smutty Fungus. It is not, however, the same with the various white films or more perfect Fungi which run over the walls and contaminate the sawdust in which the bottles are packed; for not only do they endanger all the woodwork, but they often seriously affect the corks, and in consequence the contents of the bottles. In some instances in private houses where the walls are badly built, we have no doubt that the health of the inmates may sometimes be affected. Indeed, we have at this moment a case before us in which prevalence of cellar Fungi is a nuisance to the rooms above.

We believe that there is but one way of keeping cellars tolerably free, viz., to pay the walls with a strong solution of some metallic salt, as corrosive sublimate, white arsenic, or sulphate of copper. If, however, sawdust is used, there will still be a prolific source of mischief. We believe the various cases which arise of injury to wine, which becomes what is technically called "corked," are due principally to the action of Fungi. The evil is by no means imaginary, as many a merchant and private individual have found to their cost. *M. J. B.*

WE find the following in the *Morning Chronicle*:—

"In March, 1859, M. GUÉRIN-MÉNEVILLE addressed a note to the Emperor on the introduction into France of a NEW KIND OF SILKWORM, living in the open air on a very hardy plant, the *ailante*, or Japan Varnish tree, and producing two crops a year of a strong silky fibre, employed for centuries past in China to make clothes for the great mass of the population. The object of this note was to request the Emperor to provide the means of making an experiment on a large scale for the rearing of this silkworm. The authority was immediately granted, and the Imperial domain of Lamotte-Beuvron was selected as the place. The result is now published, and it surpasses all expectations. The new silkworms have

likewise been reared in great numbers at Toulon, on the estate of M. Aiguillon, and at the château of Coudray, near Chinon, the property of Count de Lamotte-Baracé. More than three-fourths of the worms produced excellent cocoons, though the condition of the atmosphere was very unfavourable, and it is now fully ascertained that the new worm gives a profit of cent. per cent., and often much more, whereas the Mulberry silkworm is reckoned very successful when it makes a return of 15 per cent. on the capital employed. The silk of the *ailante* worm differs essentially from that of the Mulberry worm. It is of an inferior quality, well adapted for coarse fabrics, and cannot enter into competition with that employed in the rich tissues of Lyons. The Varnish tree will grow on the most barren soil. The cocoons may be prepared by the peasantry themselves, whereas the ordinary silk requires much skill and care in dressing it. The new silk will form an excellent substitute for cotton, of which France annually imports 69,504,000 kilogs. from the United States. M. GUÉRIN-MÉNEVILLE proposes to call the new silk ailantine, or cynthiane, in order to distinguish it from the other kind in use. He is now studying the best means of promoting the production and manufacture of the new silk, which he positively declares will ere long supply the chief clothing of the people."

We believe the earliest information respecting this insect was derived from Mr. RUTHERFORD ALCOCK, when acting as H. M. Consul at Shanghae. About the year 1848 that gentleman sent to the Horticultural Society numerous pupæ and samples of cocoons as well as of the raw and manufactured silk. Unfortunately the pupæ were all dead. Suggestions by the late Mr. MITCHELL for the better transmission of pupæ were sent to Mr. ALCOCK, but we do not know whether further experiment was made. When the Great Exhibition of 1851 took place the samples of silk and Mr. ALCOCK's papers were placed in the hands of the late Dr. ROYLE for exhibition among other oriental products; but the box containing them suddenly disappeared, and has never been recovered. It was thought to have been mislaid, and if so may possibly exist at the India House. The samples of woven silk had much the appearance of nankeen, rather coarse and very strong, and would not have been taken for silk by any ordinary observer.

It may be as well perhaps to add that the "ailante" on which the worm feeds is the common Ailanthus glandulosa, one of the hardiest of trees, but very late in leafing in this country.

EXTRACTS FROM MR. VEITCH'S LETTERS ON JAPAN.

(*Continued from p.* 1104.)

No. IV. *Nagasaki, August* 13, 1860.—Since I wrote on the 4th inst. from this place I have received no letters from England, no mail having come to hand; I have therefore no letters to reply to. Since I last wrote, my time has been employed in wandering over the hills in this neighbourhood and looking about the gardens of Nagasaki. On the whole I have succeeded as well as I could expect, I think. I am daily picking up fresh things, and I therefore defer sending a final list until I am about to leave. I send you home by this mail *vid* Southampton, a small box of seeds, consisting of the following:—14 kinds of Japanese vegetable seeds, 26 do. medicinal, 29 do. seeds of herbaceous plants, shrubs, and trees, 6 packets Ferns. I am unable to give you any description of these things, not having seen them in flower.

I have succeeded in getting glass cases made which will do very well I think. I have a capital place for my plants, although of course I lose some from removal during the hot weather. I have erected a Bamboo shed over them, and covered it with oiled paper to protect them from sun at present, and wind and rain in the colder months.

I am anxious to get to Jeddo, as I expect to find some splendid things there. The Fern seeds I send from here must be nearly hardy, if not quite so. Gleichenia dichotoma grows well here, and would, I am sure, do well in our Hardy Fernery.

No. V. *Nagasaki, August* 22, 1860.—I am glad to inform you that I have just now a most excellent opportunity of proceeding to "Kanagawa." The man-of-war steamer Berenice, belonging to the Indian navy, leaves this port to-morrow at daylight, and I intend by permission of the captain to go up in her. This opportunity suits my arrangements capitally. I have had just a month here, which has enabled me to see almost all I could wish, and I think I shall get to Kanagawa at a very good season. The course the Berenice takes is of itself a great inducement for me to embrace the present opportunity. We go through the so-called Inland Sea, and shall be the fourth European vessel allowed to make the voyage. The few who have made it describe the scenery as beautiful beyond description.

By referring to a map of Japan you will see the route I mean. We leave Nagasaki 32¼° N. lat., round the most southern part of the Island of "Kinsin" and of the Japanese Islands, 31° N. lat., through the straits of "Van Dimen," and up through the Bungo Channel to the Surrinda Sea 34° N. lat. Our course then lies through the last named sea between the large islands of Niphon and Sikok to the Island of Awadsi, N. lat. 34½°. We then again enter the Sea of Japan, round the south point of Japan Proper and the Island of Osima, N. lat. 33½°, and proceed to Kanagawa. The immense number of islands met with, and the continual proximity of the mainland during the whole of the voyage, keeps up an unbroken line of scenery.

I should very much regret losing this opportunity, and I consider myself exceedingly fortunate to get up at all, more particularly under such peculiar advantages; the only drawback is, that I leave my letters behind. Since I arrived here we have had no letters, and there appears but a poor chance of our getting them. Two or three mails must be lying at Shanghai for us, but what with the almost entire cessation of business transactions there, and the great number of vessels which are taken up by the Government as war transports, there is no ship to bring them over. When I get away from here the difficulty will be doubly increased; I am, therefore, quite unable to answer letters.

Kanagawa is about 17 miles to the south of Jeddo; the only English resident I understand in the capital is the Consul-General, Mr. Alcock, and his attachés, no others are permitted by the treaty to go there until 1862. Mr. Alcock, I am told, often invites his friends to stay with him, and gives them an opportunity of seeing the town, &c.; and I have therefore great hopes, through my letters of introduction to that gentleman, that I may get up to Jeddo for a short time.

I enclose herewith a numbered list of the plants I have collected since my arrival; the greater part I hope are new, although some may be already in Europe. I have potted them all and erected Bamboo houses over them as a protection against the cold weather during my absence. They are in very good health at present, and I am sure that Mr. Rice, who has kindly taken charge of them, will do his best for me. I have succeeded in getting a very good glass-case made, and have left orders for several to be finished by the time I return. The few seeds I have collected here I shall take to the north with me, and make up a box by a later mail. The seed of the two Retinosporas is not yet ripe; I have, however, made arrangements to get some picked for me later in the season.

I have succeeded in getting specimens of the fibre and wood of the tree from which the Japanese make their paper; no flowers or fruit can be obtained. I have shown them to Mr. Wilford, and we believe it to be the "Broussonetia papyrifera."

No. VI. *Youkuhama, near Kanagawa, Sept.* 2, 1860.—As I informed you in my last letter, I left Nagasaki on the 23d ultimo in Her Majesty's war steamer Berenice. We had a beautiful passage up, with the exception of being compelled to anchor for a day and a half whilst a typhoon was raging furiously. The trip through the Inland Sea was very fine; I longed to get on shore amongst some of the islands we passed; we arrived here on the 31st ult. I have been fortunate in obtaining residence with Mr. Keswick, the representative of Messrs. Jardine and Co. here, to whom I brought a letter of introduction from their house in China. On my arrival I was informed that Mr. Alcock was coming down from Jeddo on the 2d (to-day) and about to start for the great mountain of Japan, "Fusi Yama," on the morning of the 3d. I called on the Consul here, and asked him to inform Mr. Alcock of my arrival; and last night I was delighted to receive an invitation from Mr. A. to accompany him, and be ready to start to-morrow at daybreak: you may fancy how I jumped at this opportunity.

We are to travel there and back on Japanese ponies, and I believe it will take us a fortnight to go and return.

This mountain is said to be 14,000 feet high, and is supposed by the Japanese to be holy. Thousands of pilgrims go there every year, and one year in 60 females are allowed to go; this happens to be the 60th year. Our party will be 28 in all, 8 Europeans, and 20 Japanese attendants, interpreters, &c. We shall be the first foreigners ever permitted to go inland or ascend the mountain; I will give you a full account of the whole on my return here. The Japanese will allow no one to go who is not attached to the Legation, and I have therefore to thank Mr. Alcock very sincerely for having kindly appointed me (pro tem.) "Botanist to her Britannic Majesty's Legation at Jeddo:" and as you may imagine I at once grew 6 inches taller on my appointment. From what I have seen of the country about here, I shall be able to get many fine things, and I hope a goodly quantity of seeds.

The Japanese are great lovers of flowers and shrubs, and I find quantities of plants grown by them in their gardens which I never see growing wild, nor can I ascertain where they are to be had in a wild state. Endless varieties of plants can therefore be had in the towns themselves, and others I can procure from the natives as I go on. The kinds of Conifers I am most anxious to procure appear to me the scarcest; one or two Pinuses in the way of our Scotch Pine grow everywhere. likewise Cryptomeria japonica, but the rarer species are scattered, and apparently not plentiful.

No. VII. *Youkuhama, near Kanagawa, Sept.* 22, 1860.—On the 19th inst. I received your letter up to the 9th July, and I am much obliged for all your kind expressions respecting my losses by the wreck of the Malabar. I have got on very well indeed so far, the only things I really want are Negretti and Zambra's instruments. I shall look forward to shortly receiving the box you have so kindly sent me containing another set of these instruments, and on its arrival I shall be quite set up and have everything I require.

My letter of September 2nd will have apprised you of my arrival here, the Capital of Japan, and of my intended trip to Mount "Fusi Yama." Mr. Alcock arrived here from Jeddo on the evening of the 3rd inst.; we started at daylight on the morning of the 4th, and returned here on the 16th.

In preference to giving you a long account of our trip in a letter, I propose sending an extract from my diary, and a few sketches of that which we saw. I regret, however, to say that I have not had time to complete the diary to send you by this mail; I hope, however, to have it ready for the next, but I send you enclosed a few notes on the vegetation of the country we passed through, and also a Japanese map of the mount.

I have collected seeds of the Fusi Yama Pines, &c. altogether about 25 kinds, which are now drying. My opportunities were very few, I could only pick them as I rode along the roads and put them into my case, we were not allowed to go off the main road, and you may fancy I could not do much either in taking notes or collecting.

Since my return here I have been principally engaged looking after seeds; the enclosed packet of "Sciadopitys verticillata" * is a part of my discoveries. The seeds sent are the produce of one cone, and I send them home to you as the first that have ripened. It is a very fine thing, its habit is perfectly pyramidal. I am sure it will thrive in Europe. I shall be very glad to hear you have received these seeds safely.

My movements at present are as follows:—Mr. Alcock, who is just now taking the baths in the country, has kindly invited me to stay with him on his return to Jeddo; this will be about the middle of October. I am now about starting for Hakodadi, the most northern port of Japan open to foreigners in the ordinary way. The opportunities of getting there are very few, and when once there it might be months before I could return. An unusually good opportunity has however at this moment offered, and under the circumstances I have decided on going there. A steamer leaves this on Monday, goes direct there, remains four or six days, and returns direct here; by this means I shall, I hope, be able to obtain many seeds, take a hurried view of the vegetation generally around Hakodadi, and return in time to visit Mr. Alcock.

In order that no time may be lost during my absence I have sent four men into the country collecting seeds.

(*To be continued.*)

NOTES ON THE VEGETATION OF JAPAN,

TAKEN DURING A TRIP INTO THE INTERIOR TO MOUNT "FUSI YAMA," THE HOLY MOUNTAIN OF THE JAPANESE, IN THE MONTH OF SEPT. 1860. BY JOHN G. VEITCH.

THE vegetation of Japan is remarkable for the immense variety of trees and shrubs growing throughout the length and breadth of the land. Three-fourths of these may be said to be evergreens, giving the country almost as fresh an appearance during the winter months as in summer.

The country we travelled through during our trip is probably second to no other in point of general vegetation; from the lowest valley to the mountain summits it is one dense mass of luxuriant trees and shrubs. The trees of considerable size which we met with consisted of Pines, Oaks, Maples, &c. Others of less dimensions, viz., Beech, Lime, Alder, Chesnut, &c., give a pleasing variety of foliage. The main roads are planted wherever practicable, with Pine avenues. These trees often attain the height of from 150 to 180 feet: their higher branches forming a perfect covered archway. The splendid effect thus produced by miles of noble trees, can scarcely be described.

Cryptomeria japonica (the Cedar of Japan) must undoubtedly be placed as one of the finest trees found in the country. It grows throughout the entire empire, attains a great height and circumference, and in point of beauty is truly magnificent. Amongst the many splendid specimens we met with, I noted the following as being the most striking:—1st. On the main road from Ha-tu-Kee to Hakone, an avenue of several miles in length, three trees which I measured in succession were 15 feet, 14½, 13½ feet in circumference at 3 feet from the ground. 2d. On the road

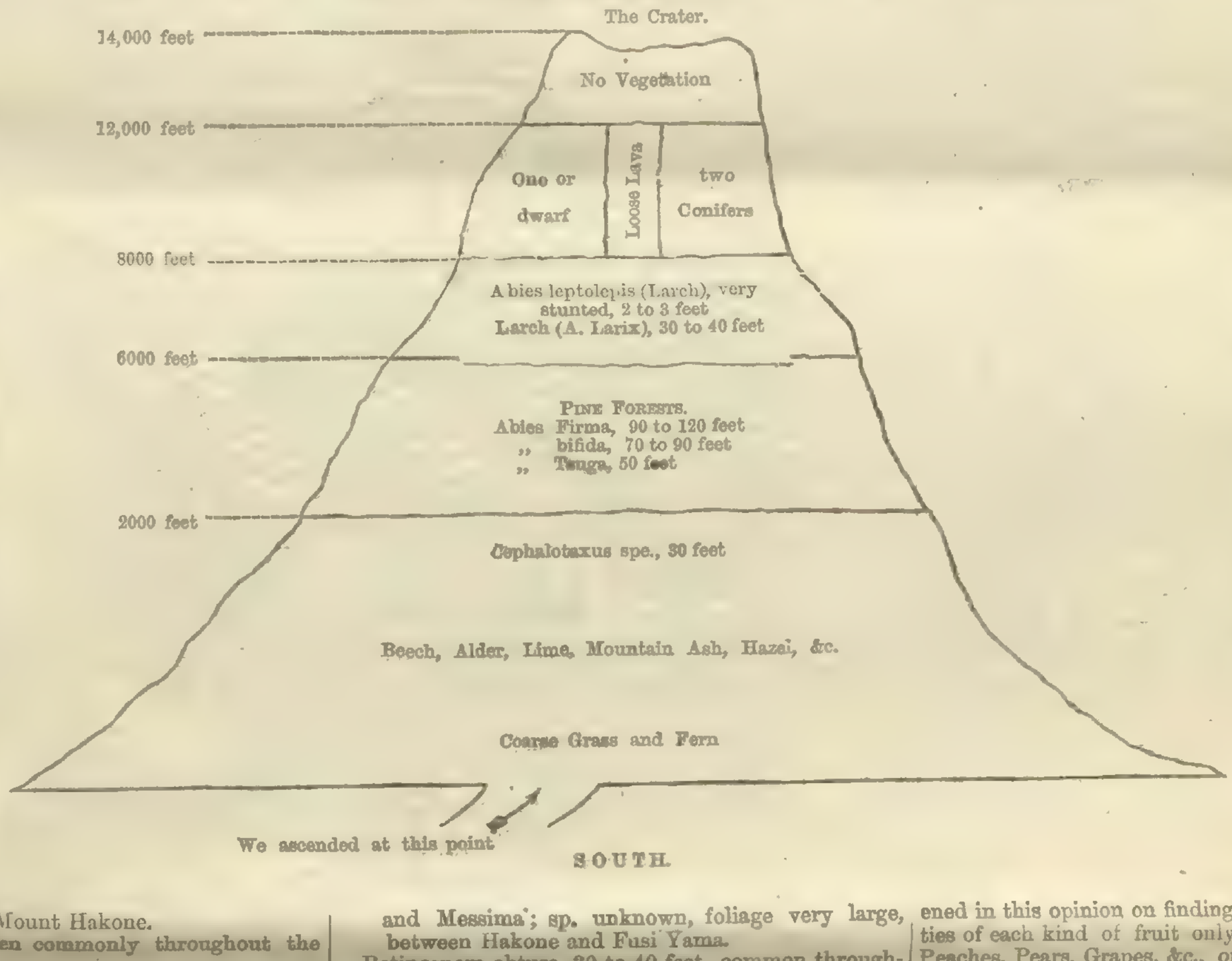
* This is probably the finest Conifer in Asia, after the Deodar.

from Messima to Atame I met with three noble specimens standing singly in the midst of a small village, about 170 feet high and 16 feet 6 inches in circumference at 3 feet from the ground. Near Atame we passed a forest remarkable for the peculiar straight trunks of the trees. They had grown in close proximity to each other and consequently had lost the greater portion of their branches. The effect produced was very similar to that of an immense number of ships' masts. Mount Hakone, 7000 feet in elevation, is clothed to the top with dense forests of Cryptomeria, Thujopsis dolabrata, Thuja pendula and orientalis, Retinospora obtusa and pisifera.

The following are some of the most striking trees and shrubs met with during our journey:—

Abies leptolepis, A. firma, A. bifida, A. Tsuga, on Mount Fusi Yama.
Acer, many species growing commonly.
Adiantum sp. nova, Mount Hakone.
Alnus glutinosa (Alder), the foot of Fusi Yama and other parts.
Aralia edulis, near Atame; A. Sieboldi, common in all valleys.
Aucuba japonica, common; foliis variegatis, common.
Asplenium fontanum, slopes of Mount Hakone; and three or four new? species.
Azaleas: splendid bushes, plentiful in all forests at a low elevation.
Bambusa Metake, very common in low-land forests; foliis variegatis, cultivated in gardens.
Benthamia japonica, Mount Hakone.
Berberis japonica, seen commonly throughout the journey.
Broussonetia papyrifera, planted on the road sides.
Buddlea sp., grown largely at the foot of Mount Fusi Yama. The Japanese manufacture paper from the bark.
Camellia japonica, splendid trees, common in all valleys.
Cephalotaxus sp., resembling C. Fortuni, Mount Hakone; another with foliage very pointed and sharp, Mount Fusi Yama.
Castanea vesca, near Messima.
Chamærops excelsa, seen constantly the whole trip to the foot of Fusi Yama.
Citrus japonica, common in valleys and gardens.
Clematis, 2 or 3 sp., not seen in flower.
Convolvulus major, many varieties, very common.
Corylus avellana (the Hazel), Mount Fusi Yama.
Cryptomeria japonica, in all valleys on Mount Hakone at 7000 feet; not found on Fusi Yama.
Cycas revoluta, common in all temple gardens.
Daphne japonica, foliis variegatis, near Messima.
Deutzia scabra, common on the sides of hills.
Diervilla, two or three sp. on Mount Hakone, not seen in flower.
Eriobotrya japonica, near Omio.
Euonymus japonicus, a common shrub.
Fagus sylvatica (Beech), foot of Mount Fusi Yama and Hakone.
Forsythia suspensa, near Kanagawa.
Funkia, two variegated varieties at the foot of Mount Hakone.
Hibiscus mutabilis, single and double, purple and white, common.
Hydrangea japonica, bracteata and hirta.
Illicium floridanum and religiosum, near Odawara.
Ilex sp. unknown, 10 to 12 feet, near Hakone and in the valleys.
Iris sp., one red, one white, unknown, near Minady; another is planted on the ridge of the thatch of cottages in all villages.
Juniperus sp., 30 to 40 feet, unknown, Atame.
Laurus Cinnamomum, Omio and most forests.
Lilium cailosum, foot of Hakone.
Magnolia sp., Mount Fusi Yama; foliage similar to that of M. macrophylla.
Musa paradisiaca, the Plantain, Muryyana and Messima.
Nerium japonicum, Muryyana.
Gardenia florida and radicans, common.
Orontium japonicum, common throughout the woods; a variety, foliis variegatis, grown in pots.
Onoclea sp. nova? foot of Mount Fusi Yama.
Paulownia imperialis, Muryyana and other parts.
Pernettya sp. nova, habit dwarf, 9 inches, berries pink, Mount Fusi Yama.
Pinus Massoniana, common, the avenues are often formed of this Pine: Pinus parviflora is common on Mount Hakone and other parts.
Pittosporum Tobira, a common shrub in low lands.
Podocarpus macrophyllus, foot of Mount Hakone also near Kanagawa.
Poinciana regia, Odawara.
Quercus cuspidata, common; Q. glabra, between Hara and Messima; sp. unknown, foliage very large, between Hakone and Fusi Yama.
Retinospora obtusa, 30 to 40 feet, common throughout; R. pisifera, 30 to 40 feet, common throughout.
Rubus sp. unknown, foot of Fusi Yama.
Spiræa Thunbergii? common in most valleys; also a sp. unknown, Mount Fusi Yama.
Smilax sp. unknown, a common plant trailing over slopes.
Thea Bohea, straggling bushes throughout our journey; plantation near Omio.
Thujopsis dolabrata, 40 to 50 feet high, forests on Mount Hakone.
Thuja pendula, Mount Hakone; T. orientalis, foot of Mount Hakone.
Weigela rosea, foot of Mount Fusi Yama; another species not seen in flower.
Wistaria sinensis, rambling throughout the woods.
Woodwardia japonica, on slopes of Mount Hakone.

VEGETATION AS NOTED AT THE DIFFERENT ELEVATIONS ON MOUNT "FUSI YAMA," THE HIGHEST MOUNTAIN IN JAPAN.



Indian corn grown in small quantities with variegated foliage: I only saw one patch of this near Fusi Yama. Beans, several sorts both dwarf and running. Peas, a dwarf variety grown largely in fields. Tobacco, grown in fields.

Carrots, Turnips, Onions, Pumpkins, Gourds, Cucumbers, Chilies, &c., grown in cottage gardens. Also many little things peculiar to Japanse taste only.

Cotton, or Gossypium herbaceum, and Thea Bohea, the Tea shrub, are not extensively grown in the country we passed through. But occasional fields of the former, and plantations of the latter, are met with.

THE AGRICULTURAL CROPS AND VEGETABLES OF JAPAN.

The main crop of the country passed through is Rice—grown generally in low marshy valleys, and irrigated as in China. In cases where the ground does not admit of irrigation, a kind is cultivated which succeeds in a dry soil. The latter crop, however, is much less productive. Having both varieties at their command, the Japanese grow immense quanties. Hills of considerable elevation are terraced to the top, producing a valuable crop, and giving the country a most picturesque and fertile appearance.

Two species of Millet are grown largely. (1). Dwarf, 2 to 3 feet. (2). Tall, 5 to 6 feet. The dwarf kind is grown in fields, similar to an English Wheat field, sown either broadcast or in drills. The tall kind is transplanted when young in single rows round the outer edges of the fields in which the dwarf Millet is grown.

Solanum esculentum (the Egg plant) is largely grown for the sake of its fruit, which is much eaten by the natives.

Caladium esculentum, Sweet Potato (Dioscorea Batatas), and Ginger, are all extensively cultivated; of the first both leaves and roots are largely consumed.

It would be a point of considerable interest to ascertain the cause of all the Japanese vegetables being more or less flavourless. From the little I have seen of their modes of cultivation, I consider it to arise from too much strong manure being given them when in a growing state. This causes them to grow rank and tasteless. Many of our crops in Europe are very similar.

JAPANESE FRUIT.

Nothing is more disappointing to Europeans visiting Japan for the first time than the scarcity of fruit that everywhere prevails, and the insipid flavour of what is produced. No country can be more favourably situated for its cultivation. The soil is very rich and productive. The climate is all that can be desired, yet throughout the entire empire fruit is scarce and bad. From the short experience I have had during my stay in these parts I can scarcely hazard an opinion in the matter, but from the little I have seen I consider the secret to lay in the Japanese paying no attention to the improvement of fruit. The original kinds have in all probability been grown year after year, and no pains been taken to improve them. I am further strengthened in this opinion on finding that one or two varieties of each kind of fruit only exist. For instance of Peaches, Pears, Grapes, &c., only one kind is grown; if there be a little difference in some, it is merely that they are larger or smaller varieties of the same kind. There is no difference in point of shape or flavour. I feel confident that if a few of our English fruit trees were imported and a fair trial given them, they would prove the soil and climate of Japan to be capable of producing fruit equal to any country in the world.

The following fruits are met with:—Cherries, Chesnuts, Figs, Grapes, Oranges, Pears, Peaches, Plums, Walnuts, and Melons two or three kinds.

OBSERVATIONS AT PORT KENNEDY ON THE TEMPERATURE OF THE SOIL, &c.

BY DR. WALKER.

On the 14th September, 1858, as soon as it appeared probable that we should winter at Port Kennedy, I sunk a brass tube 2 feet 2 inches vertically in the ground, and inserted a padded thermometer. The ground at the time of sinking the tube was frozen from 6 inches below the surface, and it was with great difficulty that I could get the tube sufficiently far down. The soil (surface) was similar to that strewn over the land, but from below 6 inches it was of a yellowish mud. The thermometer used was one of very small bore, with a long stem finely graduated (it had been prepared for taking the temperature of trees).

From the 18th to 29th September, no register was made, as the ship was not in port; also from the 10th to the 28th March, 1859, as I was absent from the ship, travelling. The minimum temperature registered was +0.5, on March 10, 1859; the lowest may be assumed at zero, on the 16th March. The register was continued until June 18, when water entered the tube and the thermometer was frozen to the side, so that it could not be detached.

Column 2 gives the register of the thermometer. Column 3 gives the depth of the overlying snow, which was always greater than the average quantity over the land. On the 17th January, 1859, a tube was placed 1 foot 1 inch deep in a mixture of shingle and earth; in this a thermometer was placed. The position of the ground was such that scarcely any snow lay upon it, the constant strong winds removing it almost as soon as deposited. Column 4 gives the register of this thermometer. February 12th, 1859, a tube was placed horizontally on the surface of the ground beneath the snow lying over the place where thermometer No. 1 was sunk, and the temperature as shown by this thermometer (Column 5) was registered until all the snow

disappeared. Column 6 gives the mean temperature of the air for the day on which the registers of the different thermometers were taken. Column 7 gives the mean temperature of the air for the number of days or hours intervening between the registering of the thermometers.

All the registers of the different thermometers are corrected so as to reduce them to that of the standard.

Date.	Thermometer buried 2 ft. 2 in.	Depth of snow.	Thermometer buried 1 ft. 1 in.	Temp. of surface below snow.	Mean of air on days of observation.	Mean of air from that of intervals.	Ross.
1858.		Ft. In.					
September	+30.9	....	....	....	+25.0	+24.5	+25
October ..	+24.4	0 6	....	....	+ 9.6	+ 8.4	+ 9
November	+15.8	0 0	....	....	—12.0	—13.6	— 9
December	+12.0	4 5	....	....	—34.9	—33.7	—16
1859.							
January ..	+ 6.2	5 8	—21.5	....	—34.0	—33.4	—26
February	+ 2.3	6 0	—24.8	— 3	—32.7	—34.8	—32
March ..	+ 0.7	6 0	—16.7	— 3.8	—19.9	—17.4	—27
April ..	+ 1.6	6 0	— 8.1	+ 0.7	— 1.6	— 5.4	— 8
May ..	+ 8.5	6 0	+ 8.1	+ 4.9	+16.4	+14.4	+14
June ..	+ 7.5	6 0	+27.3	+26.0	+34.2	+35.0	+84
July ..	+31.7	8 0	+30.0	....	+40.7	+39.9	36
August ..	?+40.0	8 0	?	....	?+30	+28.0	+26
Mean ..	+14.7	ft 0	....	....	+ 1.8	+ 1.0	+ 2.5

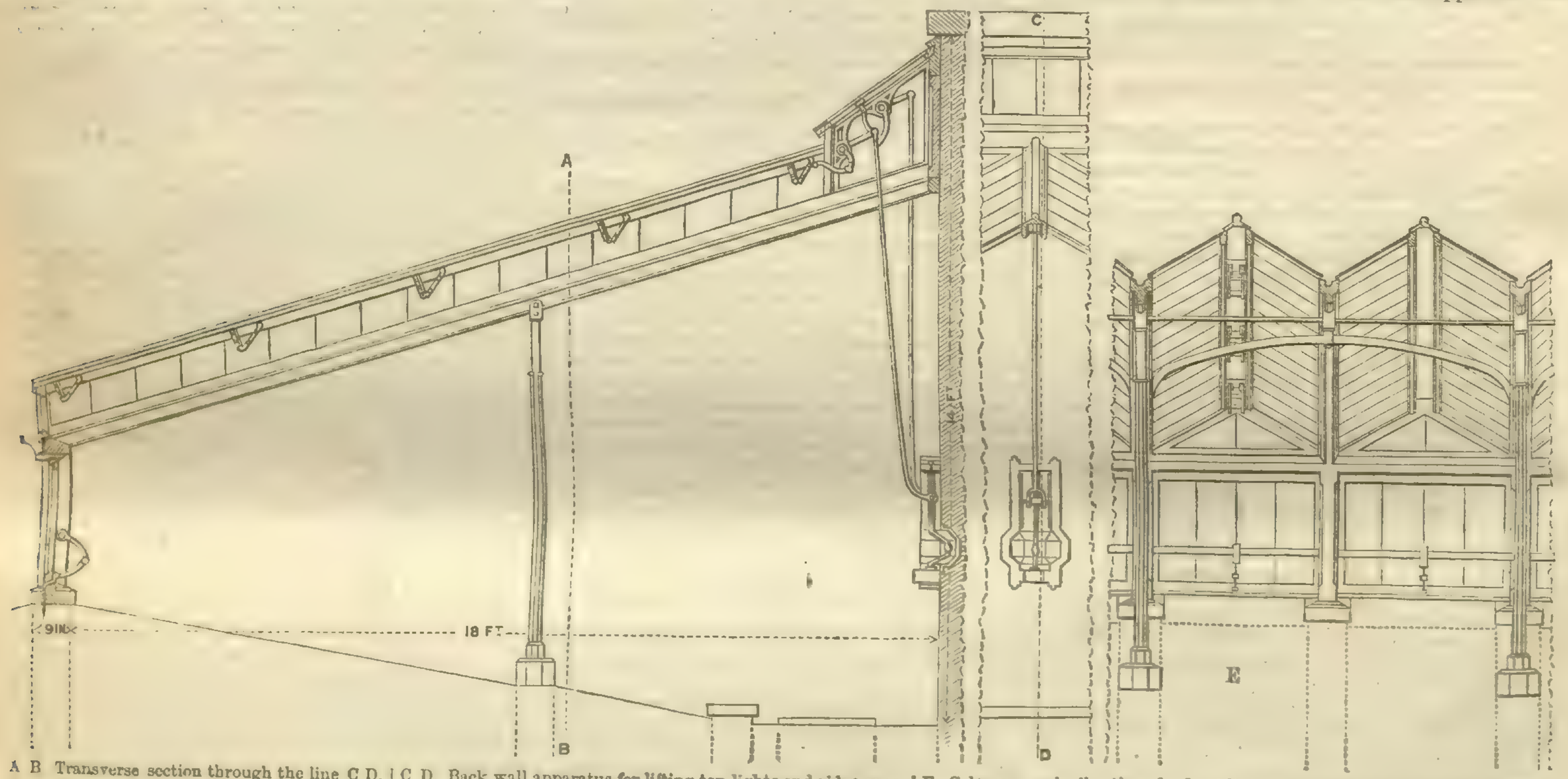
Linnean Society's Proceedings.

RIDGE AND FURROW VINERY AT TRENTHAM.

THIS house, which was erected in 1858, was designed by Mr. Fleming, of Trentham, and built by Mr. Smith, of Hanford, Staffordshire. Its length is 140 feet, and its width 18 feet inside the walls. The roof is, as will be seen, ridge and furrow in 26 spans; the ridge and furrows run transverse on the rake at an angle of 21°. The spans rise one-fourth the width on the upright line at the gables. The house is ventilated by means of the whole of the front lights opening 2 feet 6 inches; they are hung on pivots, about 8 inches from the top, and open at three lifts, consequently one-third of the whole length of the house is moved at one lift; each lift has a movement rod of 1¼ inch round iron, which runs horizontally through the mullions between the front lights, about 21 inches from the top of the light, each light being connected to the movement rod by means of a curved stay with two joints in it, one end of which is screwed to the bottom rail of the light, and at the other end there is a socket through which the movement rod passes, and it is secured to the rod with a key wedge; each lift is effected by means of a lever 20 inches long, which has a set screw and staple working on a semicircular bar, by which means the lights one-third the length of the house are thrown open simultaneously, and set at any distance not exceeding 20 inches, which is the height of the movement rod from the bottom plate, the air passing under and over the light.

We next come to the ventilating of the spans. Each span has an open ridge, on which the openings are 4¼ inches wide; on these is a ridge cap lifting the whole length of each ridge. When lifted to the full extent an opening on each side 3 inches wide is left. In the opening of each ridge are five brackets, to which hinges are attached at the bottom, and the top of the hinge is attached to the ridge cap, and works on the principle of a parallel ruler. The top hinge of each ridge is connected to 1¼ inch movement rod by a curved stay with joints in it, similar to the one described for the front lighs.

On the back wall of the house is fixed, 3 feet high from the path, a brace and screw lifting apparatus in a frame. The nut of the screw has horns which are made to work in slides inside the frame; to these horns are attached the jaw at the bottom end of the lifting rod, and the top end of the lifting rod is attached to a lever 8 inches long, which is secured by a socket and key wedge to the 1.14 inch movement rod. With this apparatus the ridge caps rise simultaneously, one-third the length of the house. Three of these apparatuses are used for raising the ridge caps.



A B Transverse section through the line C D. | C D. Back wall apparatus for lifting top lights and ridge caps. | E. Columns, arch ribs, tie rods, front lights and apparatus for opening them.

The top ends of the ridge and furrow roofs terminate about 2 feet 2 inches from the back wall; a hanging rail runs horizontally the length of the house, against which the top end of the ridge caps terminates, and the top ends of the open ridges are suspended, and underneath each of the furrows is filled in with a gusset light, similar to one of the gable lights, inverted. On the top of this hanging rail lays the bottom rail of the light, which terminates under the coping. This light also opens for ventilation the whole length of the house. The full extent it will open is 20 inches. It lifts in sheets the third of the length of the house, with curved stays, movement rod and brace and screw lifting apparatus, fixed in the back wall, similar to those already described. The mullions between the front upright

lights are Oak, 5½ inches by 4 inches; the top ends of the mullions are tenoned into a plate; the bottom end of each mullion is dowelled into a stone cap, standing on a brick pillar 14 inches by 9 inches, which runs down to the bottom of the Vine border; on the stone caps and underneath the front lights, iron sill plates with aprons run down between the stone caps into the Vine border, about 2 inches; consequently there is no obstruction for the roots. The gutters are all lined with lead, and empty themselves into an iron O. G. eave gutter carried to a cistern provided for its reception. The ventilation is so perfect that in the hottest weather in 1859, we could reduce the temperature within 2° of that out of doors; this we have been unable to do with any other structure. This house is heated by means of two saddle boilers fixed together, so that in cases of emergency we can work both together, or in case of accident we have only to turn the taps and the other will do the work. This is a system which I can strongly recommend; it was introduced here by Mr. Fleming. Beside heating the house in question, the following are also warmed by the same boiler, viz.:—A Muscat house, 40 feet long, 10 feet wide, 10 feet high at the back wall, and 1 foot 9 inches in front; a Camellia house of the same dimensions, but 7 feet high in front; also the young men's rooms, and last but not least, a bath-room for the young gardeners, in which is kept up a genial temperature and a copious supply of hot and cold water. *A. Henderson, The Gardens, Trentham Hall, Staffordshire.*

Home Correspondence.

Botanical Names.—As I understand the rule for Latinising proper names, the termination *ius*, gen. *ii*, should be substituted for, and not added to a terminal vowel; thus Decaisne would make Decaisnius, *gen.* Decaisnii, &c. Terminal *y* should be treated as a consonant and retained: *e. g.*, Lindley, Lindleyus, Lindleyi. In proper names ending with a consonant the termination *us*, gen. *i*, is added; thus Lobb would make Lobbus, *gen.* Lobbi; Hooker, Hookerus, *gen.* Hookeri; and to my ear these terminations sound quite as harmonious as Lobbii and Hookerii. If euphony is to be considered "the only safe guide," I think a glance at our scientific nomenclature will show how little individual taste is to be trusted. Take for instance Abildgaardia, Forbesoerinus, Agassizichthys, as examples. If therefore some rule could be generally adopted it would be most desirable, for we must remember that names once correctly given must be tolerated. *P. G. E.*

Gooseberries in flower before Christmas.—I have been pruning Gooseberry bushes to-day, December 13, and have met with several of the Champagne variety in bloom. As it is a rather unusual occurrence, I enclose a few for your inspection. *John Marshall, Mount Gardens, Whitchurch, Salop.*

The Season.—All gardeners agree that the late has been the most extraordinary season they have ever had to encounter. Fruits without flavour; the Potatoes (hereabouts) as ruinously bad as when the murrain first appeared; Grape Vines (in the open air) with berries scarcely the size of small shot, and mildew, wherever it appears, running its course unchecked. Garden and flower seeds have scarcely ripened at all, and in some instances have not been even formed. Such are remarks to be everywhere heard, and some even go so far as to predict an equal scarcity of fruit and flowers for the year ensuing; thus, say they, "the bulbs have not had sun enough to ripen them, either in Holland or England. The wood of Peaches and other wall fruit is not firm and compact, as a stronger degree of the sun's influence would have made it, and consequently we can but expect weakly and imperfect blossoms when the time arrives for their expansion." There is some truth in this, I fear; still we have had no early frost, or such a state of things would indeed have been most disastrous; and there is seldom a sky so gloomy as to preclude the feeling of hope. The Rose branches as well as fruit buds are ripening at last; and should a frost, now set in, plants are much better prepared to resist it than they were a month or so ago. As far as the embellishment of parks and gardens is concerned, the season has shown us that we might make groups of so-called deciduous trees that would retain their beauty of foliage even unto Christmas. Without going beyond my own nursery we have the Naples Alder in full, deep, rich foliage, 40 feet high. The Sandy Pear of China has scarcely shed a leaf, and well rivals the Naples Alder. But what I most delight in is the Kedbrook Elm, whose leaves from the deep green of summer have changed to a glowing yellow orange, and equally profuse as in the height of summer. A few days since I passed by an estate where I had grouped these, more than a quarter of a century since, and even with the slightest possible ray of the sun the effect was magnificent. Still, too, in great beauty we have the Azorian and Alpine R. amni, the Berberis coriacea, the variegated St. Peter's Wort, and even Almonds are as green as in October. Nor should the Hawthorn be omitted from the list of trees and shrubs whose foliage is as perfect as ever, irrespective of their brilliant fruit. Such are the Mexican Thorn, the Arbutus-leaved, the true coccinea, and the Stranvæsia. I might increase the list, but feel that I have enumerated enough to show that our landscape gardeners, by uniting such as I have mentioned, may, when the frost holds off till Christmas, produce effects that up to the present I have nowhere seen, and that would at this season serve to relieve the Pines and other Conifers with the genuine effect of summer foliage. *William Masters, Exotic Nursery, Canterbury.*

Grouping Fruits and Flowers for Table Decoration.—I would beg to call attention to your leading article of last Saturday, as to the line of action to be taken by the Horticultural Society of London next year. I would especially ask the committees of all local societies to notice the rules laid down for the meeting to be held in June, when special prizes are offered for the best group of three baskets of fruit and flowers for the decoration of the dinner table. It may be observed that valuable fruit or flowers are not demanded, and ladies are invited to join in the competition. It is now so usual to decorate our tables with fruit and flowers that it becomes quite an art to arrange them with taste, and we all know that it requires practice to make perfect; therefore I think it would be wise on the part of our friends in connection with all local societies, to hold out some inducement to obtain a degree of skill and merit in this art. I for one will be happy to make a beginning, and to offer a prize of the value of 30*s.* to the Royal Horticultural Society of Ireland, provided they adopt the good example set by the Society to which I have alluded. *E. A. M., Dublin.*

Peach Trees and Weevils.—Having seen in your pages in the early part of last summer parties complaining of their Peach trees being hurt by last winter's frost, I expected to have heard whether or not they had recovered. Here, in the gardens of Sir William Maxwell, Bart., are eight or nine young Peach trees, which in May and June lost all leaves from their young wood, except a few on the points of each shoot, and gum was oozing out. I saw that they had not been in good health the year before. And one day I asked my predecessor how he got on with the Peach trees. "Oh," said he, "Peach trees will never do here; that is the second plantation I have made; the first all died piece by piece, although planted in good fresh loam." I made a plantation of Apples, all young maiden trees; every day just as the buds were swelling I observed that they were picked out, and that the bark in many places was stripped off quite round the shoot. For some time I thought that tomtits were the depredators, therefore made up a compost of soot, sulphur, lime, and cow dung, with which I painted every inch of the trees. Next morning I went to see if my friends had been back, and was quite aggravated to see many fresh wounds. It struck me then that the Apple weevil was my enemy. I examined the earth about the roots, and found six, seven, and even as many as 10 weevils at a plant. I then examined the Peach trees, but found not so many as among the Apples, which may be accounted for in this way, that they go into the old nail holes during the day time, whereas the Apples are standards and espaliers. From all I have observed I make no doubt that it is not the frost which affects the Peach trees here, but that the depredator is the weevil.* A Myrtle for instance stood the winter on the same exposure without the least protection, and bloomed. The question which I wish to bring under notice is, how am I to destroy these devastators? I do not think it possible to hand pick them, as there are some hundreds of old Apple trees here covered with Moss and rough bark. I may add that the ravages of these creatures have not been confined to the Peach and Apple trees, but have extended to 200 new Roses planted last year. *William Laing, Monreith, Newton Stewart, N.B.* [Catch them at night when they feed. You may do it by shaking or beating the branches over a white sheet.]

Neal's Pastils.—I have tried these and am so well satisfied with the result that I think the matter worth bringing under notice. I burnt three cakes in a greenhouse, 40 feet long by 15 feet wide. The plants were infested with green-fly. Next morning on examining the foliage, which was not the least injured, I found all the green-fly dead. I consider the invention perfectly successful, as it is not only cheap but effectual. *E. B. Dunn, 10, St. James' Street, Weston-super-Mare.*

How to Mend Barked Apple Trees.—Different modes of grafting and inarching have been graphically described in your former Numbers, and all of them distinguished by different names. After describing the following process I must leave your readers to give it any name they think proper. In the very severe weather of December, 1859, rabbits came into an orchard and barked several Apple trees; two they cleaned of every atom of bark, and part of the sap wood, to the height of 10 inches all round the stem. The loss of one of these two trees was a serious matter, as it was a valuable kind of some 14 years' growth. I therefore endeavoured to save this tree as follows:—As soon as the wound was discovered it was bound up with cloth, and remained in that condition until last April. When the sap began to move I cut a large branch from a neighbouring Apple tree, and took the bark off in strips about 2 inches wide. I lifted the bark at the top and bottom of the wound with a sharp knife, and laid the strips of new bark over the wound, with the ends brought nicely under that which I had raised at the extremities of the wound. The rough skin was shaved off the strips where they were to unite. The whole was then bound tightly round with a strong cord and clayed over; the process was now complete. The tree never received the slightest check; it ripened its crop of Apples in perfection, and made a shoot in strength equal to those of any previous year. The wound of the second tree was bound up and left to chance. The fruit and leaves fell off prematurely early in September without making the least sign of a shoot, but it is still alive and will probably make another struggle for life in spring, and then terminate its existence. *William Culverwell, Thorp Perrow.*

* And this opinion is confirmed by learning that 20 years ago, Peaches were good and plentiful here.

Mushroom Culture.—At this season of the year, when vegetables are scarce, anything in the way of variety is gladly welcome on the dinner table, and as Mushrooms may be grown where the advantage of a cellar or outhouse is obtainable, with a temperature of from 48° to 55°, I would recommend those who possess that advantage to try their hand at their culture. I would simply remark to those who may not yet have attempted it that they may be easily produced by obtaining as much short dung (fresh from the stables, if to be had, but this is not of vital importance) as will make a bed 16 inches deep and any size required. Throw this into a heap for a few days to heat and dispel the greater part of the moisture it contains; then spread it out for a day or two to dry and cool down; after that throw it up together again for a few days; generally about five or six will be found sufficient. It will now be fit to make the bed with, which, let the size be what it may, should be, as I have said, about 16 inches deep. In making it take care to tread or beat it firm. As soon as the heat shall have risen and declined to 75°, it is ready to spawn, for which I find Cutbush's (of Highgate) Milltrack the best; 1½ bushel will spawn a bed 10 feet square; this, broken into pieces the size of small Apples, will, placed just in the dung, and covered 2 inches with any garden soil, well beat down, produce Mushrooms of first-rate quality in six weeks in a temperature of 50°. A bed thus treated, 12 feet long by 7 feet wide, spawned with ½ bushel of Milltrack, has produced me above 80 lbs. weight of Mushrooms, many weighing 4 oz. each, and is now in full bearing. *W. Young, Gr. to R. Barclay, Esq., West Hill House, Highgate, Dec.* 17. [We have seen these Mushrooms and the spawn itself, and can bear testimony to the excellence of both.]

Flowers now in Bloom.—Thinking it may interest lovers of out-door gardens in different parts of the country to know how many flowers are in bloom on this day, Dec. 9, 1860, this most singularly wet season, I send a list of those I gathered at Maes-y-dderwen, Swansea. Of Roses, on a wall and in the open ground, I had good flowers of Lamarque, Gloire de Rosamène, Safranot, Crimson Boursault (Spring Rose), common China, Ile de Bourbon, Cerise Noisette, Fellenberg do., Aimée Vibert, Acidalie, Souvenir de Malmaison, Souvenir d'un Ami, Géant de Batailles, Gen. Jacqueminot, Dr. Marks, Archduke Charles, Gloire de Dijon, Adam, Cramoisie Supérieur, Fabvier (China), Duchess of Sutherland, Duchess of Norfolk, Auguste Lelieur, Madame Desprez; Chrysanthemums, 15 sorts; Honeysuckle, Anemones of all colours, Scarlet Geraniums, Scabias, Calceolarias, six kinds of Fuchsias, Verbenas of several colours, Gaillardia picta, Rudbeckia hirta, Salvia fulgens and patens, Ageratum, Cowslips, Pentstemon campanulatum, Phlox Drummondi, Hollyhocks (poor), several Carnations, Pampas Grass, Aponogeton (in water), Veronica Andersoni (very fine), Mignonette, Creeping blue Lobelia, do. lilac do., tall white Campanula, tall purple Lobelia, two sorts of Buchnera, three sorts of Heaths, Chinese Privet, Cupheas, two sorts of Candy-tuft, Scarlet Geum, Sisyrinchium iridioides, Welsh Poppy, Statice, Escholtzia, four sorts of tall Phloxes, Double White Feverfew, two sorts of Periwinkle; Primrose, double, four colours; Primrose, single, two sorts; Violet, Anemone japonica, Campanula garganica, Cerinthe aspera, Purple Auricula, Pyrus japonica, Arbutus, Hellebore or Christmas Rose, Virginian Stock, Malope trifida, Anchusa Italica; Linum, crimson, blue, white, yellow; Œnothera prostrata, Coreopsis lanceolata, three sorts of Erodiums, Arabis alpina, Michaelmas Daisy; Alyssum, white, variegated and yellow; Aubrietia purpurea, and Marigolds. *M. Marryat.*

Portable Furnace for a Portable House.—In your notice of Hereman's Portable Hothouses for the million, you expressed surprise that the manufacturers of heating apparatus had not long ago provided us with portable furnaces. And it is odd that when by Sir Joseph Paxton's patent or any other plan, we have ensured permanent possession of our glass structures, we must make the freeholder a present of the furnaces and boilers which heat them by the necessity of fixing in brickwork on solid foundations. In putting up a house lately on the portable principle—having no lease—I was resolved, if possible, to adopt a mode of heating which should involve no possibility of future litigation; and if a portable furnace be a desideratum, I think I may say "Eureka," and invite the attention of people circumstanced as I am to an invention known as Musgrave's Patent Slow Combustion Stove. I made acquaintance with it last year, through an advertisement in the *Gardeners' Chronicle*, and I ordered one expressly to heat an apartment in which I keep a number of foreign birds. The horrible frost of October, 1859, was as fatal to some of my winged pets as to Eugenia Ugni and other nearly hardy plants out of doors, and my observation of the action of the stove in the dwelling house convinced me that there could be no danger in giving it a trial among plants. The house in which I have placed the stove for the coming winter is a lean-to, 24 feet by 9 feet. There is a sunk path along the back, and a border of earth along the front, and the stock is of a kind that will require only ordinary greenhouse temperature, so that all I expect of the stove is to keep out frost till March, and then keep the house at 55° to 60°. The stove is placed in the centre of the house, and stands without fixing of any kind, on the pavement of the sunk path. A 4-inch horizontal iron pipe is carried across the border nearly to the front ventilators, and then along the border to the end of the house, where it terminates in a 4-inch glazed

drain pipe chimney. Having had it in use all last winter for the purpose above named, I thought a trial of a week sufficient in its new position, and with that trial I was so well satisfied that I want without fear the advent of frost to test it under fair circumstances. A few words as to the comparative merits of this invention may enable those of your readers who are interested in the matter to form some estimate of its probable fitness for horticultural purposes. The stove consists of five cylindrical or tubular compartments, which for the present may be represented by the letter N. Suppose the left leg of the N to be the fire box, the cross line a chamber through which the fire descends, and the right-hand leg a chamber through which it ascends to find exit into the chimney. Then between the left leg and the cross line, and between the cross line and the right leg, are two spaces into which atmospheric air is admitted from the perforated exterior of the stove, and this being heated passes out, and a regular circulation of air through the body of the stove is thus kept up. The left leg or fire-box is formed of fire clay, and above it is a boiler, the vapour from which prevents the heated air from becoming at any time too dry. The bottom of the fire box is a solid block of fire clay, and the draught admitted through a small grating in front, can be regulated by means of a suspended door to any degree necessary. One great merit of the slow combustion principle is, that if properly made up with small coke the fire will last 12 or 15 hours without needing to be touched, and the stove may be kept alight for an indefinite period by regular feeding [illegible] at is remarkably constant, and overheating, even with a full draught, is almost perhaps quite impossible, because of the solid bottom of the fire-box and the check to draught of the descending chamber. There is no smell of coke or iron, and such an economy in the consumption of fuel that the flue is scarcely warmed when the stove is in full operation, the whole of the heat generated being transferred to the atmospheric air which circulates through the body of the stove. I am told by the makers that they have sold a considerable number for heating greenhouses; if any possessors of them will communicate their experiences, their information cannot but be of value with the increasing demand for portable garden structures. It may be right to add that mine cost me six guineas. It is more ornamental than need be for such a purpose, and it might be to the interest of the patentees to provide amateur gardeners with a simpler and less expensive apparatus. I believe it could be done for less than 5*l.*, and at that price form a piece of furniture that could be carried anywhere and fitted either to heat a wall, a study, or a greenhouse, as the possessor might require. *Sholto Hibbert, Nice, November 28.*

Wheelbarrows.—A few years ago favourable mention was made of some wheelbarrows that Mr. M'Ewen had made for use in the Society's garden. I should feel very much obliged if you would give a few particulars respecting them, and if not asking too much, a working plan of the same; it would probably be useful to other gardeners who like to see good and useful tools for the men to handle. *A. L. J.* These barrows did not justify the expectation formed of them. Like other showy things they broke down in actual service.

Pumalow of Amoy.—In a reprint of Letters to the *Times* from China, by G. Wingrove Cooke, in 1857-58, in speaking of fruits, it is stated in a foot note that the "Amoy Pumalow is the finest fruit in the world." In comparison with this the author says the Mangosteen of Penang is inferior. The only information I can find bearing on the above fruit (if it is the same), is in the Transactions of the Horticultural Society of London, where, in Vol. 3. Second Series, is a very interesting Calendar of the Weather, &c., for four months at Foo-chow-foo, by G. Tradescant Lay, Esq., her Majesty's Consul at that place in 1844. Under the head of "Fruit and Flowers in Season" for October is the following:—"The Pumeloes are ripe but small, unenticing, and not well flavoured. They are called "Paw" here; the rind of the stunted sort is made into boxes. If the "Pumalow of Amoy" is a fruit of such excellence as is represented by the *Times* correspondent, it is worth inquiring about. Some of your correspondents acquainted with the products of China may therefore be able to give some better account of this "Pumalow." *Chas. McDonald, Woodstock Park.*

Holly Tea.—The Chinese Tea leaf and the Holly berry have done their work so well that they have paved the way for a state of things which 100 years ago would have been considered visionary. Many persons now living can recollect the time when tea was a curiosity in this country. In the cooking of coffee, chocolate, and the like, there is a total want of that simplicity which so eminently characterises the making of tea. In pouring boiling water upon the dry Tea leaf there exists in the art of its cookery, there are no boilings, strainings, clearings, and the like wanted, and the bulk of tea drinkers this is of the highest importance. Cookery, roasting, and the like, therefore, however clever, are essentially inferior in this. Coffee is seldom well roasted at home, or even in coffee houses. Therefore tea of some kind from this tea plant is best calculated to meet the views of the million. Holly tea in Paraguay has already taken hold of the people, and they use it at every meal, drinking it after their own fashion. This is the Ilex Paraguayensis or Paraguay Holly. I have for years been making experiments with our native Holly, Ilex aquifolium, and have already reported progress in the Horticultural Society's Journal, the *Gardeners' Chronicle*, and elsewhere, in order to induce people to take [illegible] remembered, that it differs [illegible] at once a prized luxury [illegible] and the "maté" of [illegible] sucks his bombilla in peace [illegible] to the end of his days. Many bungling attempts at Holly tea making will no doubt have to be made before the thing gets perfected as in Chinese tea manufacturing, but it is of great importance to know that the highest chemical authorities agree that the species of Holly leaves contain the active ingredient in Chinese tea and African coffee, and that the article is likely so extensively manufactured and used as to have no limit as to its fitness for human food. The immense range of the Holly in the geographical distribution of plants, is perhaps without a parallel; and this cannot be looked upon as a matter of chance, but rather as a blessing of no ordinary kind for our use and enjoyment, for if the Holly [illegible] a blessing in Paraguay, let us try it in England on the same terms and for the same end. Being an evergreen the leaves of the Holly are to be had ready for roasting all the year round, but the times of gathering and the care bestowed upon the manufacture must always affect the quality of Holly as a drink. I have gathered the leaves at various seasons of the year, and I have compared the leaves dried and roasted of the various species used as food, such as the Ilex Dahoon and Ilex dipyrena; the latter, growing freely in Devonshire, gives evidence of the highest order on this point, as it is a most delectable species used in the "black drink" of the Indians [illegible] out of mind; and neither in taste nor in general appearance can this species be easily distinguished in the leaf from our common Holly. The Government of Paraguay made a monopoly of the Holly tea trade, and excelled in its manufacture, but it was only carrying out ideas which the Indians inherited from their forefathers and still retain in the black drink already referred to; therefore it is not by any means on the Ilex Paraguayensis alone that my arguments are based, as to the importance of this Tea. Ilex Paraguayensis, I. Dahoon, and I. dipyrena are all Tea plants of established reputation. I. Dipyrena as before stated being hardy in our climate, and moreover scarcely to be distinguished from our native Holly, is therefore the link in the chain to which we must attach our English Holly tea, and as this paper may be the last that I may write on this subject, I may as well recapitulate here what I have elsewhere said, in order to render this better intelligible to those who may not have heard of the thing before. Dried leaves of Holly, like dried berries of coffee, are not fit for food: they have to be roasted in a particular way so as to be neither raw nor burnt. Bread browned in an oven is the nearest intelligible example that I can give of this roasting process, and I may state that the smell is agreeable when the tea is roasted enough, and very disagreeable indeed when it is underdone. Any one who has passed a Coffee roasting establishment will remember the very unpleasant odour of that process. When a deciduous tree casts its leaf, we see clearly by the clean wound that its mission is accomplished, and that its connection with the tree would be of no further service; but it is not so with evergreens; and because their leaves remain for years upon the branches that produced them, we are apt to think that they are essential to the welfare of the plant. This idea the history of the Tea plants and their culture has set at rest; and as this will naturally be the first obstacle thrown in the way of Holly Tea making, viz., that the gathering of the leaves of the plant in winter or spring would damage the tree, I must state that young leaves, like young roots perform a quality of work that old leaves and old roots cannot, and when Ivy, for example, growing against a flower garden wall where it is frequently used as a background, has been clipped closely in in spring, and not an old leaf left, the young leaves want no assistance, but come forth far more beautifully than if they had been mixed with the old ones; neither is their size nor their texture at all altered by this annual fleecing. If the leaves of the Holly were to fall off in autumn, like the Willow and the Oak, their value to us as tea would be much less, for unless we could concentrate all our labour in that harvest time, the crop would be lost to us; whereas we can scarcely admire enough the marvellous economy that has stored the crop of even more than one year in good condition for our use. A familiar example of similar design may be seen in the crow sowing the Scotch Fir tree in the lone waste, and the adult Fir tree producing seed and storing it to feed the planter when the poor crow would have but short rations, were it not for the corn in the Fir-cone on the tree top. The abundance of design and signs of importance manifested in the history of the Holly cannot be overlooked; a sample which I send you is a beautiful sample of an entire heart-shaped leaf, and it is perfectly level on the face, and has neither wave nor spine upon its edges; now if this had been the usual character of young Hollies, I have no hesitation in saying that the species might have been extinct perhaps 1000 years or more before our time, for as the tree was good for food and pleasant to the taste of wild and domestic animals, unless it had come under the especial protection of man it would assuredly have been eaten up; but the kind hand that gave it, preserved it, and it was therefore set with daggers drawn in its own defence until it should attain its adult state, and then it assumes a milder form and shows high up a gentler [illegible] that could not well be trusted lower down. This character we also see in the Rose plant, for all the natural order Rosaceæ are eatable, at least none are poisonous; and we should have had the herbage of all Roses browsed by cattle, and destroyed, had they not been armed with spines. The prickles of the Holly then, like the sting of the bee and the spines of the Rose, are evidently set for the preservation of the species; and whoever will take the trouble to compare this account of an entire Holly leaf with one waved and pointed with spines strong and sharp, will no doubt agree with me that it is evident this plant has value, from the very care and design manifested by the Creator in its preservation; and enough is already known and proved to show that this view of the subject is perfectly just, and who knoweth but that in a few years it may rise to be next in economical importance to the bread-stuffs? The history of the bone trade, now a staple article in our agriculture as well as in our manufactures, may serve to show us how a thing may dog us for centuries and still be neglected or at least turned to small account, for I have seen bones picked off the fields along with stones and earthenware as useless. We have had bones always, but we did not always know their value, and this hint may be useful here. The beauty of a Holly plantation, the hundreds of happy lives employed in the growing of the plant, and in the harvesting of the produce, savour of the good things coming to us; the shearing or fleecing of the Holly in spring will be akin to the shearing of the sheep at Midsummer, and the Hop gathering in autumn—a national characteristic, requiring certain tools and appliances like the gathering of wool and Hops. Although I have stated spring as the season for gathering Holly leaves, it is merely out of deference to existing prejudices not to strip the plants in existence now of their beauties for half the year; but the autumn will assuredly be the chief time of tea gathering, and that early for the finer qualities, although greater strength and weight will be got from the spring gatherings, and the economy of thus employing labour at different periods will be no small benefit to the labourer as well as to the owner of the plantation. I am glad to find that Holly tea is already used in Suabia, and perhaps in other parts of Central Europe; and although its progress may be slow, it is nevertheless sure. We read of roasting Holly leaves for tea over fires in the open air, much after the fashion of our charcoal burners; the twigs and branches, as well as the leaves, were flung up over the fires, and when the leaves were picked off for carrying home the twigs of course were dry fuel for the next batch, and this sort of work was said to be very unhealthy; indeed it could not be otherwise, as the poor wretches would be in a constant atmosphere of wood-smoke as well as the exhalation from the roasting of the tea leaves. Kiln drying, roasting, or even burning to any degree, is no mystery to the British workman, who can roast the ore and roll the metal into money value in a business like way, and when the leaves of the Holly are once in the basket their future fate is sealed, for I can hardly imagine that all of us will fling overboard an article so highly esteemed by the most learned as well as by the rude native; but it is perfectly marvellous to see how difficult the task becomes to get over established prejudices. Oatmeal is not respectable, and I have known a Banker and a clergyman try their best to get poor people to eat it, but no. I have eaten Poppy seeds myself, and have tried to get others to follow my example. The seed of Papaver somniferum is as good to eat as the best Walnuts, and perfectly free from the poison in its husk. Some fine day this glorious bread and butter plant will gladden our homes, for it has oil as well as starch in it, but you will try it first either for a crop or for a meal! As to the Jerusalem Artichoke, in the earth as well as in the air, a root and fodder, who would bother to bear in mind that its broth is not fit for food when the tuber is boiled, but the tuber itself nevertheless is as good as the best Cauliflower, and as white when rightly managed. I had some Arum tubers cooked one day for my dinner (Portland Sago), Arum maculatum, and I told my sister that she must not eat any part of them raw, but this warning was not heeded, and she very prudently thought that before I should poison all the family, she would just bite a small crumb off one raw tuber, and as it proved like fire in her mouth, she quietly said to the child in a friendly way, "Don't you touch them, my dear, boiled or raw, for I have never seen their equal, and I had not more than the size of a nut just to taste." Now this is an example of the way things get treated that are beyond all doubt good for food—only the reason that guides us in other matters must be applied in their cookery. We have the Holly leaves, let us try to roast them, and try with a good will, in order that the money now used to buy Chinese tea by the labouring man may be saved, and that he may drink torrents of good tea without costing him a farthing as long as there are Holly leaves in hedges, woods, and waste ground to be got. In conclusion, I may state that I have grown all the species of Holly that could be purchased, and have now given fearlessly the fruit of my experience; and few living men have had better opportunities than I have had of seeing and becoming acquainted with trees and shrubs, for I assisted the late Mr. Loudon in his great works on these subjects, and have had the run of all the best gardens in the country, with full freedom to take notes at leisure, and I have consulted missionaries and other trustworthy travellers on the subject—men who have for years drunk maté, and any one consulting such as "Johnson's Chemistry of Common Life," will bear me out that I have advanced nothing singular or even new. I therefore commend this paper to influential parties interested in the welfare of their fellow men. *Alex. Forsyth.*

Foreign Correspondence.

NICE: *December* 13, 1860.—During the last fortnight the weather here has been very variable; in fact, all along the coast of the Mediterranean an unusual quantity of rain has fallen. The arrival of the mails both on the Genoa and Marseilles sides has been frequently considerably delayed. Fine weather has however again commenced, and the country presents its ordinary brightness. The common garden Anemone has made its appearance on the hills; I gathered two on the 11th inst. Numerous martins and swifts are to be seen flying about in the air, but no swallows. Butterflies are plentiful and handsome. Though we have nearly arrived at the shortest day, the sun rises at 7.30, and sets at 4.30, so that we can see to read from 7 till 5, giving us nearly 10 hours of good daylight. In proof of the power of the sun I may mention that this morning at sunrise the thermometer indicated 38°, one hour afterwards it rose (in the sun) to 80°, and in one hour more, at 9.30, to 100°. Not only do ladies carry their parasols, but gentlemen also their "sunshades."

The manufacture of bouquets here is quite a science, and very pretty it is. The flowers are most artistically arranged, each separate bloom being tied on the end of a kind of small dried Rush, and brought together so as to form one uniform surface, many of them presenting regular floral patterns, sometimes supported with wire. I lately saw a beautiful large bouquet formed in circles; outside was Mignonette, then Neapolitan (or as they are called here, Palermo) Violets, next a row of Camellias, then a band of Candytuft (Iberis semperflorens), interspersed with Pansies, and in the centre blue Forget-Me-Not in the form of a heart. They are usually sold at from one to three francs, but I have one now before me which was only half a franc, measuring 9 inches across and containing Geraniums, Roses, Habrothamnus elegans; Ageratum mexicanum, arboreum; Verbenas, Salvias, Pentstemons, &c. Two of the most conspicuous plants in the gardens now are the Habrothamnus elegans, often 6 or 7 feet high, bearing large bunches of dark crimson flowers, and the Salvia splendens, with some others of that family.

In my walks I have met with Asplenium Petrarchæ on the rocks, a pretty little Fern, between Trichomanes and Ceterach officinarum; I believe it is not much known in England, being rather difficult to cultivate. If, however, any of your readers would like to possess it, and do not mind the postage, I should be happy to forward it (while the stock may last) on receiving a line (post-paid, 4*d.*) addressed to me at "Pension Rivoir, 21. Promenade des Anglais, Nice." I could add the Ceterach officinarum and Asplenium Trichomanes, also Adiantum capillus-veneris, or either of them, as may be desired.

Annexed is a further statement of the external temperature. In a south bed-room, without fire, during the same period it has ranged from 59° to 64°, averages about 61°.

THERMOMETER IN THE SHADE AT

		7 A.M.	Midday.	11 P.M.
November	26	50	50°	51°
,,	27	53	55	56
,,	28	53	60	55
,,	29	48	64	61
,,	30	61	64	49
December	1	45	59	52
,,	2	52	52	54
,,	3	58	58	56
,,	4	52	55	50
,,	5	51	56	46
,,	6	43	60	53
,,	7	55	54	52
,,	8	49	52	44
,,	9	49	55	44
,,	10	47	58	48
,,	11	49	53	43
,,	12	41	53	41
Mean		50	56	50

It is said by some that this place is not favourable for pulmonary complaints; but it must be evident from the

pallid countenances continually met with, that numbers resort to it in the hope that it may be beneficial. *E. Copland.*

Societies.

HORTICULTURAL: *Dec.* 13.—*(Floral Committee).*—Messrs. Veitch exhibited on this occasion a specimen of Thibaudia macrantha, a little known warm greenhouse shrub, producing clusters of large handsome pendent blossoms, three and four in a bunch, from the woody portions of the branches. Each flower, which could not measure less than 2 inches in length and half as much in diameter, was angular in form, contracted at the base and point, and covered between the angles with beautiful oblique wavy lines of a rosy red colour, prettily interspersed over a white ground. For this a first-class Certificate was deservedly awarded. From Messrs. Maule & Sons, of Bristol, came a remarkably well grown specimen of Cypripedium insigne, for which a First-class Certificate was awarded; and from Mr. Salter came various Chrysanthemums, the best of which was Little Harry, a pretty kind, to which a First-class Certificate was awarded, and which has been favourably mentioned by us on former occasions; the following, from the same raiser, were commended, viz., Canary Bird, Caractacus, and Golden Hermione. Messrs. Henderson had some beautiful Tree Carnations, for which a special certificate was awarded.

ENTOMOLOGICAL: *Dec.* 3.—The President in the Chair. Mr. Stevens exhibited a box containing many new and beautiful beetles, just received from Mr. Wallace, collected at Ceram, one of the islands of the Eastern Archipelago, including the curious Pascoea Idæ, Monohammus Grayi, fine specimens of both sexes of Eucheirus longimanus, &c. Mr. King exhibited a box of rare British Lepidoptera, including Leucanea putrescens. Mr. Hogan exhibited an apparently new species of Phyllopodous crustacea, belonging to the genus Chirocephalus, and some blind well-shrimps (Niphargus sp.), from the neighbourhood of Andover. Mr. Lubbock gave some account of a remarkable parasite found in the bodies of humble bees, named Sphærularia Bombi by Léon Dufour, which had hitherto been only known in its mature form, the mode of its development and the manner by which it effects an entrance into the body of the Bombus being hitherto unobserved. Mr. Westwood exhibited a nearly white variety of Alcis repandaria bearing a large black blotch near the apical margin of the fore wings, which had been captured by Dr. Daubeny of Magdalen College, Oxford. He also mentioned the occurrence of a singular monstrous Bristalis similis, Meigen, recently presented to the Hopeian Collection, in which the head remained enveloped in the very thin pellicle (or true pupa skin) and was crowned with the lunate-shaped portion of the indurated head of the larva-skin through which the two horns had been protruded (see Reaumur, Mém. iv. pl. 33, f. 6, *d d*). Monsters of this kind are very rare; A. nodua described by Muller and a butterfly by Wesmael being the only recorded instances. A Dyticus however in Mr. Bowring's collection, and an Emperor Moth in Mr. Stephens' cabinet in the British Museum, were mentioned as retaining in the perfect state the head covering of the larva. Mr. Westwood also directed attention to the thin pellicle asserted to cover the limbs of moths on emerging from the chrysalis, and which might possibly be analogous to the skin cast by the May flies after their first flight. Mr. G. R. Waterhouse made some observations on the specimens of Donacia and Cassida in the Linnean Cabinet, and upon the nomenclature of the British species of Triplax. Mr. Sam. Stevens exhibited a number of Staphylinidæ recently captured in a small quantity of Moss, and Dr. Knaggs exhibited some minute eggs apparently pierced by a parasite, and stated that he had found the eggs of Trochilium bembeciforme deposited on the leaves of Sallow stumps.

Notices of Books.

Japanese Fragments, with Facsimiles by Artists of Yedo. By Captain Sherard Osborn, C.B. Square 8vo. Bradbury & Evans.

Every scrap of authentic intelligence concerning the land which is now becoming disclosed to the eyes of Europeans, is most welcome; and doubly so when proceeding from so agreeable a writer as Capt. Sherard Osborn, who moreover has some personal knowledge of the country and its inhabitants. In the pretty volume before us we have a lively account of the early history of the islands, of their government, people, manners, customs, and scenery; the whole very cleverly illustrated by copies of Japanese drawings, some rude indeed, like those of the Saxon Chronicle, but others, like the frontispiece, executed in a far more advanced style of art. For Christmas presents the little volume is admirably adapted.

The Horse and his Rider. By Sir Francis B. Head, Bt. 8vo. Murray. Pp. 226.

The gentlemen who fancy they can ride because they can sit upon a horse's back will be somewhat surprised to learn from Sir Francis Head that they know little or nothing about the matter. Just as when Mr. Rarey, the Horse-tamer, first delighted us by accepting ten guineas each for his secret, we discovered that we had no idea how horses may be hobbled. This entertaining volume will enlighten us upon such matters, and as its lively style will secure a crowd of readers, so may we confidently anticipate from its appearance a new era in English horsemanship. It is to be hoped, indeed, that in due time it will find itself the pocket companion of grooms and stable boys; for even they will be able to see that the gallant author is a thorough master of his subject, although, as he tells us, "he is not, and never has been, an inhabitant of that variegated region in creation commonly called 'the sporting world.' He has never bred, raced, steeple-chased, nor betted sixpence on any colt, filly, horse, or mare. He has never seen, nor been seen by, the Jockey-Club. He has never been on the turf. He does not belong to 'the ring.'" "Nevertheless, sometimes in the performance of public duties—sometimes from private inclination—sometimes for the benefit of his health—sometimes for recreation—sometimes for rumination—sometimes to risk his life—and more than once to save it, he has, throughout a long and chequered career, had to do an amount of rough-riding, a little larger than has fallen to the lot of many men."

Let us see whether the art we have just alluded to, that of hobbling, does not justify this statement. Sir Francis points out that in case of invasion, one of the most important arms of defence would be mounted infantry; and he shows how this kind of force may be easily formed provided horses are hobbled. Among the methods of effecting this operation he points out the following:—"Throughout Russia, the Cossacks,—whenever for any reason, small or large, they have wished to leave one horse, or a regiment of horses, to stand alone, to ruminate either in the snow or on a verdant plain—have, for ages, been in the habit of, as it were, rivetting them to the ground, by tying together their two fore fetlocks by a pair of hobbles, to the centre of which is affixed a narrow strap that buckles over the hock of one hind leg. By this triangular apparatus (weighing less than 1 lb.), which out of four legs leaves only one at liberty, the animal physically and morally is completely paralysed; indeed, he is not only unable to move away, but after his first fall is afraid again to try to do so." "In Mendoza, San Luis, Santiago, Buenos Ayres, and all other cities in the provinces of Rio de la Plata, in Chili, and in Peru, whenever a young dandy, calling upon his innamorata, is informed that she is 'en casa,' that is at home, he dismounts, extracts from his waistcoat pocket a beautiful pair of slight hobbles (weighing only 2 ounces), which by two silver buttons he affixes to the fetlocks of his high-bred horse, who, swishing with his long tail the innumerable flies that assail him, and looking at every animal that canters by him, stands stock still, until within the house all the compliments of the season have been paid, and all the songs to the guitar exhausted. In those countries every cavalry soldier carries a pair of such hobbles for his horse, not in his pocket, but as an ornament dangling from the throat lash of the bridle. By this invention a horse is not so thoroughly secured as by that used by the Cossacks; and accordingly, if he be overfed, very fresh, and greatly alarmed, he has power in a very awkward gait to move away. On active service, however, where horses have more work than food, it would prove efficient for a single horse, and would completely arrest a troop when connected together by their collar chains, by which arrangement a movement, however slight, by any one horse would be restrained by the *vis inertia* of all the rest." This contrivance has met with a practical application at the hands of Sir John Burgoyne, and "the result of the experiments, under the superintendence of Colonel Henry Sandham, and the able assistance of Capt. Duff, R.E., has proved so eminently successful that any one visiting Aldershott is now enabled to see six or eight horses hobbled at intervals of about 30 feet asunder, standing motionless, while the riders of the rest of the troop to which they belong, with drawn sabres flashing in the sun, are galloping through them backwards and forwards; and as of course cavalry horses could be made to do the same, it has been substantiated that the noble branch of our army, as also our volunteer yeomanry, by merely carrying hobbles, which only weigh two ounces per pair, would at once be enabled, in addition to other services, to act, whenever requisite, as mounted infantry." Only two ounces per pair! We should think that such hobbles might be used for other purposes than soldiering.

But to turn from the battle field to the hunting ground. Hear what Sir Francis Head says about converting a clever hack into a good hunter:—

"Now to metamorphose 'a hack' into 'a hunter' is principally effected by the bridle, and yet the great difficulty of the art is to learn not how much, but how little to use it; in short, a considerable portion of what the bridle has done has to be undone. Accordingly, instead of being encouraged to travel on his haunches with his fore legs lightly touching the ground, the latter must be required to bear the greater portion of the burden, which it is the duty of the hind legs to propel. The head has to be brought down to its proper level; and to induce or rather to oblige the horse to make his eyes the lantern of his feet, to study geology instead of astronomy, he should be slowly ridden, with a loose rein, over every little hole, grip, or heap that would be likely to throw a hack down. Whenever he can be made to stumble (if the rider feels that he will not actually fall), the reins should instantly be dropped. In like manner he should be walked for several days over the roughest ground that can be found, particularly land that has been excavated to obtain the substratum and left in holes. With a perfectly loose rein he should be gently trotted, gently cantered, and gently galloped over a surface of this description, the rider always dropping the rein when he blunders. Vegetius, in describing the horsemanship of the Parthians in the time of Xerxes, states that in order to make their horses sure-footed over rough, broken ground, they placed on a space of level ground a number of wooden troughs of different heights, filled with earth, over which in galloping they had many falls.

"Under similar treatment, the strength, activity, intelligence, and eyesight of the animal will, as in a wild state, cordially be combined by him to protect himself from the degradation as well as punishment of falling; and so ample and sufficient are these powers, that the rider will soon find, that instead of having to hold his horse up, it has become out of his power to throw him down. In fact, under the guidance of nature, rather than of man, 'the hack' in a very short period, and without going over a fence of any sort or kind, may thus be made competent to follow hounds across any country in the United Kingdom; while, on the other hand, the nag that had only been taught in a riding-school or in a dealer's yard to jump neatly over bars, gates, and hurdles, would, most particularly to the neck of his rider, prove to be infinitely worse than useless.

"Of course a horse is not a perfect hunter until he has had a small amount (for he does not require much) of experience in leaping; but as, with the exception of water, every horse is able, willing, and eager to jump, generally speaking, more than is desired, his rider has merely to teach the noble animal beneath him to add to his valour just enough discretion to induce him to look, not *before*, but *while* he leaps.

"A hunter when following hounds is so excited, that if, in addition to his own eagerness, he be hurried at his fences, he rushes more and more recklessly at them, until he gets into needless trouble. On the other hand, just as he approaches every fence, if he be always patted on the neck, and gently restrained, he feels satisfied that he is to be allowed to do the job; and accordingly, curtailing his stride as he approaches, he does it not only cleverly, but without any waste of exertion, which, to use a common hunting-field expression, 'he may want before the day's over.'"

In the same manner are described the art of riding at timber, water jumping, the use of spurs, the management of the bridle, the whole treatment of a hunter, both out and in the stable. To these subjects are added capital chapters on shoeing and roughing, on shying, singeing, saddling, bridling, and a variety of miscellaneous matters, among which are offered some very important suggestions respecting military horse power, especially the use of the lasso, now practised by the R. Engineer train and a portion of the Artillery. But we must conclude with the strongest recommendation to every man who loves his horse to study Sir Francis Head's capital volume; and with his advice upon roughing, for which it seems likely that there will be need enough in a few days:—

"Although of all axioms no one is more trite and true than that 'there is a right and a wrong way of doing everything,' yet our readers will hardly be prepared to learn that the Anglo-Saxon on one side of the Atlantic roughs his horse in the right way, and on the other side in the wrong way! In the United States, and especially in Canada, the surface of which for half a dozen months in every year, white as a bridal plum-cake, is composed of snow or ice, the toe as well as the two heels of each shoe are roughed; and as, in consequence thereof, the horse on every foot stands upon a tripod, his sinews and muscles not only remain in their proper position all the time he is in a stable, but while crossing a level country the sole of each foot when it presses the ground is parallel to its surface. In ascending the hinder front cog, in descending a hill the two hind cogs, and in traversing a plain the three cogs, of each shoe catch firm hold of the ground; and accordingly the horse, whether in ascent, descent, or on level ground, works in so true a position, and is so efficiently roughed, that out of deep snow he can, at any gradient, gallop suddenly upon what is called 'glare ice,' almost as hard as iron, without the slightest danger to himself or his rider. Now, in England, generally speaking, horses are most unscientifically roughed on their heels solely, which not only at once, even in the stable, especially when the outside cogs are unequally turned up, throws the mechanism of their feet and fetlocks out of gear—it not only throws them while travelling on a dead level into a false position, but, after all this maltreatment, the poor animal finds out that he is very inefficiently roughed. For instance, in descending a hill, only the cog or cogs of the heels of each foot, which can never be placed parallel to the ground, take hold of it. In ascending, his case is infinitely worse; for, as it becomes necessary, especially when he is drawing a very heavy load, that he should raise his heels off the road in order to stick into it his toes, he then discovers that while the hind portion of his shoe which he abstains from using has been roughed for him, the front

part, which, for the ascent, especially requires to be roughed, has been left untouched. Even to gallop a horse, shod in the English fashion, over level ice, is exceedingly dangerous; for although, so long as by a powerful bit he is forced on his haunches, the two cogs at the back of each shoe take hold, yet, if the poor animal be allowed to drop his head in order to propel himself at his utmost speed by his unroughed toes, they immediately slip from under him, and he thus experiences a defect, which it is astonishing should have been so long perpetrated by a nation who, at an enormous expenditure of time, intelligence, and money, have succeeded in rearing a breed of horses, the finest in the world, coveted by every foreigner, but which they persist in rudely roughing in the wrong way."

Miscellaneous.

Tacsonias.—These charming climbing plants, allied to Passifloras, originally brought from New Granada, Chili, and Peru, are neither as much known, nor as extensively cultivated, as they ought to be. It is true when only seen in a greenhouse, to which the rigour of a northern climate consigns them, a very imperfect idea can be formed of their beauty. But at Nice, where I brought the first specimens of T. manicata and T. mollissima, they have found a favourable climate, and are beginning to be known. It is to increase this extension that I write this notice.——*T. ignea.*—This magnificent scarlet kind, the finest of all, is extremely striking, the dazzling flowers with which it is ornamented forming a beautiful contrast with the shining dark green foliage. Its growth is rapid, covering a large space in a short time, and placed in a favourable situation it yields a succession of flowers during the entire year.——*T. splendens.*—This variety produces flowers which might easily be confounded with those of the preceding; it is an equally rapid growing climber, but differs from ignea in the colour of its foliage, which is glaucous instead of dark green.——*T. mollissima.*—This is remarkable for its long tube and thick petals of deep rose tinged amaranth; it blooms freely, and is both curious and extremely elegant.——*T. manicata.*—The flowers of this variety are as brilliant as those of a scarlet Geranium, and the stamens are almost black, producing an appearance like that of a scarlet Anemone. It is of vigorous growth, with dense and bushy foliage. The flower resembles that of T. ignea, but is of a darker shade, which gives a distinct character to this beautiful variety.——*T. pinnatistipula.*—The blossoms of this are pure white, and so numerous as to look like newly fallen snow, so abundantly do they cover the plant.—— In addition to these is *T. Helleri*, which is described as being of great merit, but I have not yet seen it in bloom. All these plants have hitherto been propagated by cuttings; but here I must notice an important fact in favour of the climate of Nice—it is that they, as well as the Ipomæa Learii, have ripened seeds, and plants raised from them may be seen in Mr. Stuart's garden at Villa Stuart. *Baron O. Prost in the Revue de Nice, Nov.* 1, 1860.

Climate of Pekin.—I have before me a series of meteorological observations made and registered by order of the Russian Government by M. Scatchkoff and his assistants at that capital during every single hour of every day and night consecutively throughout the years 1850, 1851, 1852, 1853, 1854, and 1855, which are printed and published *in extenso*, and which include every particular of a most complete meteorological register. The work which contains these observations (amounting, for Pekin alone, to upwards of 280,000 individual entries) is distributed gratuitously, on the most liberal scale, to the principal scientific institutions, and to many private individuals (myself among the number) throughout Europe; and, besides these, there are less complete, but still highly valuable records of similar observations, extending from 1841 onwards, with occasional interruptions. These form part, and but a small part, of the immense collection of magnetic and meteorological observations which the Russians (offering in this respect a most striking contrast to the conduct of our enlightened neighbours the French) have contributed to science from every part of their extensive territory, the records of which in my possession alone occupy more than three cubic feet of closely printed figure work, and which are still in progress. As regards the climate of Pekin, it results from these observations,* that the mean or average temperature of the whole year is 52° of Fahrenheit's thermometer, that of the hottest month (July), 82°, and of the coldest (January) 24°, each to the nearest whole degree. The corresponding temperatures for Greenwich are respectively 49°, 63°, and 34°; so that the winters there are, on an average, 10° colder and the summers 19° warmer than in London. Of course, individual days occur much hotter. The highest and lowest temperatures in the shade recorded in each of the six years (1850-1855) to the nearest degree above zero of Fahrenheit's thermometer are as follows:—

	Highest.	Lowest.
1850	96 ..	8
1851	96 ..	7
1852	100 ..	2
1853	98 ..	5
1854	101 ..	4
1855	99 ..	9

The thermometer in a London winter seldom descends to 9°, and vary rarely indeed to 2°. Generally speaking, the degree of moisture of the atmosphere varies between somewhat wider limits than at Greenwich, and the annual amount of rain and snow is somewhat greater,—about one-twelfth. The temperature of solar exposure is, of course, very great in summer. A blackened thermometer exposed to the sun is observed to rise, on some one day of every year, to a maximum height of from 130° to 138° Fahrenheit. *J. F. W. Herschel, Collingwood, Dec.* 12. (*Times.*)

* From a reduction of the four years (1850—1853).

Calendar of Operations.

(*For the ensuing week.*)

PLANT DEPARTMENT.

CONSERVATORY, &C.—Forcing pits will soon have to be kept in full activity to supply the various calls for plants in bloom, which during winter are more or less in demand in most establishments. Care should be taken before plants are moved to sitting rooms to gradually harden them for a day or two either by placing them in the conservatory or an intermediate house. In addition to keeping the conservatory gay with blooming plants, let the arrangement of the interior be occasionally changed by grouping the plants somewhat differently and adding a few striking ones, as some of the hardiest Palms, &c., for effect. Pay attention to the plants intended for successive blooming. Insects should be kept down and every means enforced to keep the foliage clean and healthy. The number of plants brought forward will depend on the demand and must be regulated accordingly. Azaleas, Rhododendrons, &c., for forcing still out of doors should have some protection during severe weather, or should be removed to any spare house till wanted. Narcissi, Hyacinths, &c., should be protected by a frame, as they now begin to grow; remove the plunging material down to the surface of the pots to prevent them rooting upwards. Mignonette and Neapolitan Violets will require abundance of light and air to keep them from damping. Cover pits, frames, &c. As, with the exception of forced plants, most other things are now in an inactive state, the temperature of plant houses should fall to its minimum point consistent with the safety of their various inmates.

FORCING DEPARTMENT.

PINERY.—Pines are often deficient in flavour at this season, which is improved by exposing the ripening fruit to all the light you can command, and giving but little water. A good supply of air is likewise essential at all times for high-flavoured fruit, and more than ever necessary at this time. Continue an increase of heat to Pines now wanted to start, employing it principally by day. Attend to linings for Pines grown in dung pits and keep the atmosphere in which they grow dry.

EARLY VINERY.—As soon as the bunches can be discerned on the young shoots the extra buds should be removed, excepting such as may be required for producing bearing wood next season. In leaving these latter select such as are formed nearest the main stem to avoid the awkward appearance of long spurs at a stage further in their growth. Such shoots as have more than one bunch should have them reduced to that number, selecting the one likeliest to form the handsomest cluster. Tying in the young wood should be managed carefully, bringing the shoots to their proper position by degrees, to avoid the danger of their breaking. After the buds are started a few inches the syringe may be gradually withheld, as too much humidity at this season will sometimes retard both foliage and bunches, and a sufficient degree of moisture can easily be kept up by sprinkling the floors and heating apparatus several times daily. Regulate the admission of air so as to have a gentle current at all times through the house, increased, of course, by day agreeably with the state of the weather. Gradually advance the night temperature to 60° and then to 65° by the time the flowers are ready to open, keeping the thermometer from 10° to 15° higher by day according to the amount of light you can command. Keep up the heat in the outside border by additions when necessary, bearing in mind the injurious effects any sudden check to the roots now in action will produce on the coming crop. Bring succession Vineries into work as wanted. Late Vineries in which Grapes are still hanging will require fires daily and air sufficient to keep the house and fruit dry; remove decayed berries and dead leaves, and well protect the roots from frost.

PEACH HOUSES.—Peaches and Nectarines which have been forced for several years oftentimes produce a large excess of fruit-buds, and this more especially on weakly trees; a natural consequence of allowing these to remain are weak flowers and inferior fruit and wood. When therefore such is the case the trees will be greatly benefited by well thinning the bloom buds, leaving the largest and those most favourably placed; of course a considerable number will be still left to allow for casualties.

FIG HOUSE.—Damp the trees over frequently, and if wanted early increase the heat a degree or two weekly.

FLOWER GARDEN AND SHRUBBERIES.

Except in particular cases little more can be done in this department at present than paying attention to order and neatness. Bedding plants, however, must have attention, for in all likelihood many things are suffering, and such plants as appear to be injured most should be removed to other quarters where a more favourable temperature is kept. Keep stock in pits and frames well ventilated, whenever the weather will permit, and the surface soil of the pots frequently stirred. Dust with sulphur Verbenas and similar plants attacked with mildew. Be particular in keeping the interior of pits containing plants of the description just mentioned as dry as possible.

HARDY FRUIT AND KITCHEN GARDEN.

Some wall trees, as Pears, Plums, and Cherries, &c., are often attacked by scale, in which case the infected trees should be well washed with a mixture of soft soap, tobacco water, and lime; a half pint of spirits of turpentine may be added to each 4 gallons of the mixture when the trees are much infested. The lime is added to give body to the mixture, and to show that no parts of the trees are missed in dressing. Let this be applied during dry weather, if possible, that it may remain on for some time and before the trees are nailed; washing the infected parts with water of the temperature of 160° is also a good remedy. Gishurst Compound applied in the shape of a strong lather, has likewise been proved to be a cure for scale on fruit trees.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON

For the Week ending Dec. 20, 1860, as observed at the Horticultural Gardens.

Dec.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 14	2	30.215	30.168	41	26	33.5	46	45	N.E.	.00
Satur. 15	3	30.220	30.154	41	29	35.0	45½	45	N.E.	.02
Sunday 16	4	30.035	29.746	43	30	36.5	45	44½	N.W.	.04
Mon. 17	5	29.661	29.592	43	20	31.5	45	44	N.	.01
Tues. 18	6	29.564	29.477	40	15	27.5	44	44	N.W.	.00
Wed. 19	7	29.413	29.368	39	19	29.0	43	43½	S.E.	.00
Thurs. 20	)	29.841	29.692	35	23	29.0	42	43	N.	.00
Average..		29.849	29.742	40.3	23.1	31.7	44.3	44.1		.07

Dec. 14—Foggy; overcast; frosty at night
— 15—Dense fog; foggy, densely overcast; rain.
— 16—Cloudy; fine; rain at night.
— 17—Cloudy, clear sky except a few clouds; clear; frosty.
— 18—Frosty; cloudy and cold, clear; sharp frost.
— 19—Frosty; fine; frosty; very cold; snow.
— 20—Frosty; snow clouds; sunshine occasionally; clear and cold.
Mean temperature of the week, 8 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK

During the last 34 years, for the ensuing Week, ending Dec. 29, 1860.

December.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 23..	44.3	32.5	38.4	18	1.13 in.	5	7	2	2	1	11	2	4
Mon. 24..	44.2	31.9	38.1	15	0.30	3	4	3	2	1	15	2	4
Tues. 25..	43.5	29.1	36.3	9	0.45	2	7	3	—	2	11	6	3
Wed. 26..	43.1	32.1	37.6	12	0.39	3	4	3	4	4	9	4	3
Thurs. 27..	42.7	29.7	36.2	13	0.40	5	4	1	4	2	7	7	4
Friday 28..	41.8	28.9	35.3	11	0.21	4	3	3	3	3	7	9	2
Satur. 29 .	43 3	33.9	38.6	15	0.17	2	4	1	3	4	8	7	5

The highest temperature during the above period occurred on the 25th, 1827, and 28th, 1855—therm. 58 deg.; and the lowest on the 28th, 1853—therm 8 deg.

Notices to Correspondents.

ACARUS: *Ignoramus.* Gishurst Compound would probably kill this, and likewise the woolly insect you mention; but on the other hand it might also kill the Orchids infested with them. If you do make up your mind to use it, it should only be experimentally, and with great caution. See what is said about its application to Orchids at p. 1061 of our current year's volume.‡

ASPARAGUS: *An Old Sub.* Plant early in March. Use one-year old plants. Three years old are only fit for forcing and throwing away. Never cut Asparagus till it has been planted two years; or if you do take a crop in the second year cut very little. If Asparagus is properly dressed every year with strong manure and salt, it will be as good at the end of 20 years as at first.

HEATING: *B.* There is no heating apparatus small enough for your purpose that we can recommend of our personal knowledge. We had hoped that gas would supply the want, and many kinds of gas stoves have been proposed, but none of them answer. A good apparatus that shall be cheap, effective, easily managed, free from risk, and suitable to little greenhouses, is the greatest desideratum in modern gardening. A small French poële of earthenware would do if you can import one; but the cost of importation is out of all proportion to its original expense. The subject is adverted to by a Correspondent in another column, who speaks favourably of a stove called Musgrave's, which we have not seen. The Clianthus Dampieri was mentioned the other day (see p. 977); it is now common, and one of the handsomest plants among autumnal greenhouse shrubs.—*R Q* Your house ought not to be heated to 80° when the external thermometer stands at 40°. If your apparatus works well it is sufficient for the work *it ought to have to do.* Three-inch pipes, however, are wrong; they ought to be 4 inch.

HORTICULTURAL SOCIETY.—We find that the Great Rose Show is not to be held on the 3d of July next, but on the 10th, in order that it may not clash with a meeting of the Royal Botanic Society.

INVESTMENT: *C W E.* Apply to any banker in the town where you live; or to your master's solicitor.

NAMES OF FRUITS: Correspondents should not be unreasonable. We cannot undertake to name baskets full of different sorts. In future we must make it a rule never to examine more than six sorts, whatever may be the number forwarded.—*J R.* 2, 4, 5, 6, Beurré Diel; 3, appears to be Marie Louise; 7, Duchesse d'Angoulême.—*D D.* The Pear seems not to be any cultivated variety; it is small, very gritty and worthless. No. 11, the Grange Apple.—*T B B.* Not known.—*R J E G.* Your seedling Apple, about the size of the King of the Pippins, resembles it in flavour. It appears to be worthy of further trial in a better season.‖

NAMES OF PLANTS: *John Cant.* Probably Thelasis pygmæa, a mere curiosity.—*A. Blaikie.* 1, Five-leaved Pines cannot generally be named without cones; your specimen appears to belong to P. insignis; 2, appears to be P. ponderosa.—*H H Cork.* Colletia spinosa.—*C E P.* The common bladder nut.—*A Devonian.* What you have sent is not the Kum-quat but one of the umbilicated Sweet Oranges. It has no resemblance to the Kum-quat, which bears a small oblong and extremely acid fruit. There is an account of it, with a good figure, in the Journal of the Horticultural Society, Vol. III., p. 239. A good many plants were formerly given away, and some ought to be still in the trade. It is, however, apt to die unless worked on the Linnonia trifoliata.—*G T.* He must have been a very ignorant person who sold you a plant under the name of Thuja Thuxura. The specimen of it which you have sent is not in a condition to be named, but probably belongs to some Cupressus or to a Juniper allied to Juniperus phœnicea.

MISC: *A B.* See an advertisement in another column.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

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Are now prepared to send out the following MANUFACTURED MANURES:—
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CONCENTRATED URATE.
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They would call particular attention to the article DISSOLVED BONES, in which they guarantee every portion both of the soluble and insoluble phosphate, to be obtained entirely from Bones.
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N.B.—A pamphlet post free. This Condiment has now become a great fact throughout the world.

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EDWARD BECK MANUFACTURES in SLATE a variety of articles for Horticultural purposes, all of which may be seen in use at Worton Cottage, on application to the Gardener, Sundays excepted. PRICED LISTS of PLANT TUBS and BOXES forwarded on application.

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Under this Company's Act Landowners may effect the following Improvements on their Estates, and charge the Outlay and expenses thereon, by way of Rent charge, to be paid by Half-yearly Instalments, viz.:—
I. All works of Drainage, Irrigation, and Embankment.
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The term of years for the Rent Charge is fixed by the Landowner, so as to adapt the amount of annual payment to the circumstances of the Tenants, the term for Building Works being limited to 31 years, but for all other Improvements being capable of extension to 50 years.
No investigation of Title being required, and the charge not being affected by Incumbrances, no legal expenses are incurred.
The arrangements for effecting Improvements are threefold—
No. I. The Works may be designed and executed entirely by the Landowner's Agent, and the Company employed only to supply the Loan and conduct the matter through all the forms for charging the outlay on the Estate.
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In each of these cases the Landowner will be solely under the control of the Inclosure Commissioners.
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Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other Improvements are also executed on Commission for Landowners who merely require the skill and experience of the Company's Officers and a Staff in constant practice.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, 52, Parliament Street, London, S.W.

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Incorporated by Special Act of Parliament in 1853.
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To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c. IN ENGLAND AND WALES AND IN SCOTLAND.
The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
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Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
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COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
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The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

The Agricultural Gazette.

SATURDAY, DECEMBER 22, 1860.

——ON Friday afternoon the deputation named by the late meeting at Hanover Square, waited on the Home Secretary to urge upon him the need of some strong and large measure being brought in by Ministers to enable majorities in flooded districts to obtain an outfall for their waters in spite of obstinate individual landowners, and in spite of local Acts "for navigation, &c."

We understand that Sir G. C. LEWIS expressed his willingness either to introduce or facilitate the passage of a Bill founded on Lord CARLISLE'S Act of several years ago, from which, however, it is to differ in certain important points pointed out as its defects by the gentlemen of the deputation. There is thus at length some prospect of a remedy being found for evils which have in many places this year been disastrous.

—— At the meeting on Friday last of the Implement Committee of the Council at Hanover Square, it was resolved, in accordance with Mr. FOWLER'S protest on the previous Wednesday, that 300 acres of unbroken stubble land be secured near Leeds for the trial of the steam plough and cultivator, and that this trial do take place as early as the middle of April. There is thus every prospect of a satisfactory comparison of the several rival methods of steam culture, and of a full illustration of the benefits which we may derive from them.

—— The treatment of foot-rot was thus referred to in a practical speech by Lord BERNERS at the annual dinner of the London Farmers' Club. His lordship said:—It had struck him when thinking of the losses suffered by farmers through epidemics among cattle, sheep, and pigs, that they might with advantage collect statistics of the number of animals that had died of different diseases, discriminating between those who had died under medical treatment and those who had died from being left to themselves.

He mentioned this, because he felt satisfied that if in the early stages of disease proper remedies were applied, an immense deal of loss would be avoided. At the meeting of the Royal Agricultural Society at Canterbury he took the liberty of reminding those who were assembled at the dinner of the advantage of their being members of that society, inasmuch as when an epidemic had broken out in their neighbourhood they might, by applying to the committee in Hanover Square, obtain the assistance of the veterinary professor for the expense of his journey. A few years ago he himself received the greatest benefit from that assistance in a case of pleuro-pneumonia among his cattle. He had also received similar benefit with regard to rot [foot-rot] among sheep. Having generally from 500 to 1000 sheep on his farm, it might well be imagined that he must have suffered a good deal during this wet season; but on inquiring the other day whether there were any lame sheep in the flock, he was told that there was not one. This was the result of his having followed the directions of Professor Simonds, first applying lunar caustic, following that up with tincture of myrrh, and avoiding all hot applications. A hot application might do good for a moment; but it must generally be repeated, and the result was that it caused inflammation and prevented a cure. He would recommend others to adopt the same treament that he had done.

—— At the special meeting of the Council of the Royal Agricultural Society on Tuesday of last week, Lord BERNERS called the attention of members of the Society to the movement which has fitly commenced in Sussex for recording the gratitude of agriculturists to the late Duke of RICHMOND. His lordship might well feel sure that all who knew the frank and amiable character of the late Duke, and who have observed his career as a zealous supporter of the interests and improvements of agriculture, would desire to record their opinion and express their feelings by erecting a lasting memorial to his worth. With that object in view a number of country gentlemen have formed themselves into a provisional committee for West Sussex. And the purpose, we presume, of this reference to the subject by Lord BERNERS was, that all members of the Society might have an opportunity of contributing (any sum under 3*l.* 3*s.*) to the fund which is to be raised. Subscriptions are received by the London and County Bank and its branches.

—— The Fat Cattle Shows, though less praiseworthy this year than usual, have not proved less attractive. The crowds in the Baker Street Bazaar were greater than ever before known. And of the Birmingham Poultry and Cattle Show, in Bingley Hall, we have the following statistics:—

RECEIPTS.

	1857.	1858.	1859.	1860.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Monday	119 10 0	59 16 0	128 5 0	184 10 0
Tuesday	312 8 0	240 17 0	337 2 0	330 18 0
Wednesday ..	366 17 0	319 4 0	300 6 0	328 7 0
Thursday	436 10 0	414 14 0	362 12 0	337 10 0
Total	1235 5 0	1034 10 0	1128 5 0	1181 5 0

ADMISSIONS.

		1857.	1858.	1859.	1860.
First day:	Subscribers' Tickets	4,002	3,673	4,293	4,259
	Paid	478	239	553	767
Second day:	Subscribers' Tickets	895	756	939	832
	Paid	6,306	4,868	6,744	6,618
Third day:	Subscribers' Tickets	793	590	751	877
	Paid	7,390	6,645	6,102	6,567
Fourth day:	Subscribers' Tickets	2,366	1,234	1,176	708
	Paid	8,800	8,473	7,394	6,750
Working classes		14,511	15,500	18,005	20,000
Total		45,541	41,778	45,952	47,378

The whole of the tickets which the Council determined upon issuing in quantities at a reduced price, for the special accommodation of the working classes, were disposed of on the first day, and from 7000 to 8000 more were applied for; but the executive body were of opinion that they could not exceed the number above-mentioned without inconvenience to their subscribers and the public.

The sales both at Bingley Hall and at the Baker Street Bazaar were as quick as could be desired. Small breeding pigs were readily disposed of at 4*l.* and 5*l.* a-piece. Fat beef fetched from 7½*d.* to 9*d.* per lb.; fat hogs, 11*s.* 6*d.* per stone; and mutton from 7½*d.* for large Long-woolled sheep, to 8½*d.* for the best Southdowns. With, we believe, one exception, all the animals at Baker Street were purchased before removal.

—— In the last volume of the Journal of the Agricultural Society, in a paper on "Agricultural Maxima," the case is described of a steer 22 months old, belonging to Mr. H. S. Thompson, M.P., which weighed 69 stones 10 lbs. (imp.). A somewhat similar case of extraordinary precocity has just occurred at Darlington, where Mr. BOOTH'S heifer, the "Soldier's Bride," has just carried off the 100 guineas challenge cup and other prizes from the Northern Counties Fat Cattle Show. She is 23 months old, and weighs, by estimation, at least 70 stone (imp.).

—— Among the lately published evidences of the suitableness of the past season to the growth of Turnips, where liberal treatment as to manure has prevailed, few have exceeded the published returns of Messrs. PROCTOR & RYLAND, who annually give silver cups to the best crops grown with their manure. In eight instances in North Wales the crop exceeded 20 tons, and the prize was awarded to a crop grown by Col. PENNANT, of Penrhyn Castle, weighing 28 tons per acre. In the Chester district the competing crops all exceeded 20 tons, and the prize went to Mr. WEDGE, of Sealand, Chester, for a crop weighing 23 tons per acre. In one instance, that of a crop grown by Mr. MAY, of Elford Park, near Lichfield, the weight of a crop of Swedes tested on October 8, October 23, and November 20, was 18 tons 15 cwt., 23 tons 18 cwt., and 26 tons 7 cwt. per acre respectively, showing the rapid growth obtained late in the season.

A DISCUSSION of the state of our labourer's cottages opens up once more an old scandal which cannot be too often exposed, for it is only as a public nuisance that there seems any chance of its being abated. A capital suggestion was made at the late meeting of the London Farmers' Club, to

the effect that the condition of disgraceful tenements should be publicly "presented" by parish vestries, first to their owners and then to boards of guardians, so that blame might lie publicly on the proper shoulders, or at any rate that some formal search might be instituted for the shoulders on which it ought to lie. The suggestion is a very good one, and Mr. TUCKER had in fact carried it into perfect execution in his letter to the *Times* (published in our last week's Paper) on the condition of the cottages in the Faringdon Union. The letters which have followed his account of that neighbourhood are for the most part confirmatory of his statistics, not merely as representing the neighbourhood of Faringdon, but as being a fair picture of an ordinary country district. So far as our own knowledge of such districts goes, we certainly cannot acquiesce in this. Of three neighbourhoods in different counties, known to us in some detail, not one presents, unless they be in such rare exceptions as to have escaped us, instances of the kind which Mr. TUCKER describes as the general rule. And though it is NO answer to the just outcry which has been raised, it is well to bear in mind that poverty in towns is even more miserably lodged than it is in the worst parts of the country. This evil in the latter case ought however to be more easily remedied than in the former, and the blame of its continuance therefore is the greater.

The responsibility in the case of "close" parishes rests of course simply on the one owner of the land—elsewhere it rests, in proportions not easily determined, and therefore more easily shirked, on the owners severally. Mr. BEALE BROWNE for landowners, and many others for the tenant farmers, at the late meeting of the London Farmers' Club were clear and outspoken, as indeed they could not help but be, as to the owners of the land being responsible for overcrowding cottages on their estates. The immense social injury which arises out of these circumstances ought to lie heavily indeed on the consciences of those who have thus to answer for them. Let us hope that the publicity given to the evil and the shame, may tend to their removal. The remedy seems obvious enough. Whether a good cottage can or can not be built for a rent which the labourer can pay, it is a very rare case indeed that the addition of land enough, let with it, will not command a rent which shall pay for both. A good cottage with half an acre of good land as a garden close by, will easily command a rent of 6*l.* or 7*l.* a year. Such land will command—it generally does command—double its agricultural rent, and in this lies the margin off which the landlord who borrows money of the Land Improvement Society for the erection of cottages, can write the extra rent (for mere house room) which is to repay the loan, and which lies beyond the means of agricultural wages. Garden cultivation can afford the higher rent, and would, indeed, have to pay it, though the land were a mile away. Place it at the cottage door, and it will be at once an immense boon to the cottager, and a great relief to the landowner.

In this, as helping forward cottage building, and in the small expenditure by which existing cottages may be materially improved, lie the two great remedies for the evils which Mr. TUCKER has so powerfully denounced.

As a contribution to the discussion on the condition of the labourer, opened by Mr. SCOTT BURN on Monday week, let us here reproduce some of the opinions which have been elsewhere expressed on "Bothies," "Mops," and men.

(1). On Statute Fairs or Mops. The following letter, from the Rev. N. STEPHENSON, of Shirley, near Birmingham, appeared last week in the *Midland Counties Herald*,—

"The friends of the abolition of statutes will be gratified on learning that they have recently been soundly rated by the upholders of these fairs, and publicly denounced as intermeddlers with the innocent recreations of the people. The walls of the borough of Evesham have lately been profusely covered with a tolerably large handbill, in which the then forthcoming mop was announced and defended; and the efforts of the County Registration Society were proportionately decried and condemned. The disinterested parties putting forth the placard, unwilling to lose the influence which the publication of their names would naturally carry with it, very properly appended their signatures to the number of 60. It is remarkable that amongst these there is not to be found the name of a single magistrate, clergyman, landlord, farmer, or any except such as are engaged in trade; and it is also equally remarkable that, besides sundry eating-house and beer-house keepers, spirit merchants, and maltsters, there should be found no less than 16 publicans in the small town of Evesham, containing some 3000 population, who of course can have no interest to serve save that of the public weal, and who thus hope to preserve their town from the moral injury which would be inflicted upon it by the abolition of the fair. In good truth, the sensitiveness of these publicans on the subject is a sure proof of their being sorely hit, and that the Registration Society is doing its work well, and that the doom of these fairs, at any rate as hiring fairs, is fast hastening to a close. In this light, Evesham fair this year was a failure; St. John's mop near Worcester was a failure; and at Solihull not a single servant or employer attended, and at no time were there present more than 20 persons. Equally disgraceful and disgusting scenes were enacted at King's Norton, Alcester, and Berkswell, as in former years, but in each and all of these places it was remarked that there was a very perceptible falling off in the attendance of employers, and that the amount of hiring effected was comparatively trifling. To reasonable men the change already effected is hopeful enough, and the beginning of the end is already looming in the distance. Let the fairs be attended only by "roughs" and prostitutes, to whom they are now being fast given up, and the police and the magistrates will in a few years consummate the work which the Registration Societies have so ably commenced."

(2). Our next extract is from a paper read before the Inverness-shire Farmers' Club, in which Mr. PENNY, schoolmaster of Nairn, the Secretary of the Association, thus condemns the Scottish farmers in connection with the management or mismanagement of the so-called bothy system under which their unmarried labourers are boarded together in an out-house with very little supervision—

"There was a time when every farm servant was looked upon almost as a member of the family whom he served, shared the same household comforts, around the same family hearth, and received instruction and rebuke around the same family altar, and in every respect was treated as a social and immortal being. But times are changed. In our eager pursuit after wealth we cannot spare time or means to secure to our hard wrought sons of toil those temporal comforts now placed beyond their reach by the avaricious hand of grasping worldlyism. Is it not too often the case that farmers would never grudge from 10*l.* to 50*l.* in giving additional accommodation for animals, because it was well known that, in a badly ventilated byre, or a badly constructed stable, animals would become diseased, and be lost? This loss went right to the pocket, and it told. Fresh animals had to be bought, and perhaps also these would die off. How diligently would not that man set about means to rectify the misfortune, and, if need be, expend any amount to secure a remedy. But if a farm servant, owing to the faulty construction of his dwelling, become rheumatic, or ill, and unable to perform his work, an instant dismissal follows. A slight temporary inconvenience is caused, but no appeal is made to the pocket, and plenty of others are ready to take the man's place."

This was the prelude to so severe a condemnation of the existing relation, or rather want of relationship, between master and servant in the district, as to excite indignant protest on the part of the farmers present. The fact, however, seems to remain unquestioned, that the bothy system is generally accompanied by great abuses; and that, in the scope which it affords for an almost entire ignoring of the younger men employed as yearly servants on the farm, it has a most mischievous tendency.

(3). Take now the opinion of an employer of labourers, which he must forgive us for characterising as extravagant. The following however, is the judgment of an East Kent farmer of the state of things around him, and the need of some remedial measures for the improvement of the labourers whom he employs.

"As to farming, it is little cared for around here: what with increased rents on every permanent improvement, horse keep, servants, labour, trade, and necessary expenses, all the farmer's produce is swallowed up, and he s well off, indeed, if he loses only his living. Horses and labourers perform daily only half a day's work; the work on a farm is not done at a time it ought to be done, and consequently the loss is often very great. We pay our labourers 14*s.* a week for doing only half a week's work, whereas we ought to pay them only 12*s.* a week, and that is at the rate of 4*s.* a day. You may say this cannot last long; but it does last, and becomes worse every year, and ruins farmer after farmer—a kind and good master makes bad servants and labourers. They will not work, either by day, piece, or task work; if by the latter it is not half done—in mowing, the sharpening of the scythes occupies more than half their time—whatever is done by horses is in that slow manner that it is difficult to get 1 acre of light land, with four horses, ploughed in the eight hours. They will not work for any master who looks after them; they steal half the corn which is allowed the horses; if any bullock is fattened on cake or corn, it does not have it half; if we fatten any hogs with whole corn, one half is stolen. Can it be wondered that fattening of stock does not pay. Our labourers keep ponies, donkeys, cows, pigs, rabbits, fowls—and who keeps them? On an average it costs our labourers 1*s.* a week for tobacco—they smoke to and from work, and at work; the women spend 1*s.* a week on snuff. We are beaten by our servants and our labourers. Our four horses, one man, and one boy, cost us 200*l.* a year and upwards, and what they rob us of, and what they wilfully break, is 50*l.* a year more at the least; the best of us, the most persevering, cannot get our work done. Having grubbed up our woods, hedges, taken in waste lands, filled up ditches, and carried out many permanent improvements, we do not grow so much corn as we did 20, 30, and 40 years ago, yet we want double the labourers. It is education which will ruin all our lower classes. What made so many Pauls, Redpaths, and Robsons? Why, education; it whets a man's appetite, and sharpens his intellect, which enables him with others to circumvent all manner of frauds. The time is not far distant when it will be a difficulty to trust any one." [!]

We altogether differ from our Correspondent. We believe that in the long run, and on the average, a man is served as well as he deserves to be; we believe that a good master makes *good* servants; that agriculture and all classes connected with it have improved during the period referred to, and that education will carry us along the road still further towards perfection.

WE have yet to speak of several of the diseases to which a wet season exposes our live stock. It cannot be denied that a large number of diseases which affect both sheep and cattle appear to be almost independent of the influence of medical skill. This is more particularly the case with animals that are left for the most part in a state of nature; in proportion as they are domesticated do their diseases become controllable, and thus those of horses are far more under influence than those of cattle.

With the medical practitioner, and still more with the veterinary surgeon, the remuneration is often in proportion to the length of the case, and very frequently in proportion to the absence of skill by which it is protracted. If the case is speedily cured the remuneration is but trifling, and if altogether prevented by judicious advice it is none at all. A friend of the writer's many years since succeeded to an old medical practice that for half a century had been conducted by one of the old school. Amongst the cases handed over was one of seven years' duration, which (the patient being wealthy) formed in itself no small part of the surgeon's professional income. The new surgeon cured the case in the course of a few months, much to the disgust of the old practitioner. This case illustrates a very unsatisfactory state of things, which is still more exemplified in the treatment of the diseases of animals. The interests of the owner of animals and of their veterinary attendant are too frequently opposed to each other. It is of course the desire of the former that his animals should be free from disease, whilst it is the surgeon's interest that they should be frequently attacked by some malady or other, and if he makes any suggestion which he knows will have a sanatory effect, he knows full well that it is against his interest to do so. It is quite true that in spite of this there are a number of conscientious men both in the medical and veterinary profession who never allow their own interest to interfere in making any suggestion that may occur to them calculated to prevent disease; but notwithstanding this the system is bad which separates those interests which ought to be one and the same. There is quite as much science and skill—nay, a great deal more—in discovering how to prevent a disease than how to cure it; because, in order to do the former, it is essential to study not only the nature and character of the complaint but also the predisposing and exciting cause; whilst the cure is as often discovered by accident and handed down by tradition as elicited by the revealings of science. Why therefore should not the former be rewarded as well as the latter?

The Royal Agricultural Society of England make a liberal annual pecuniary grant to the Royal Veterinary College for the purpose of promoting the study of the diseases of cattle and sheep. We have not a word to say against the grant or the zeal or ability of those who benefit by it, but at the same time, either from not going far enough, from the absence of zeal or rather the stimulus to zeal in the extremities as well as in the centre, the diseases of cattle, and particularly of sheep, are greatly neglected and most imperfectly studied. The diseases of sheep and cattle are to be found in the provinces, not in the metropolis; in country parishes and outlying farms, not in Marylebone or St. Pancras; and yet the aid is never sought for—the assistance rarely invoked—of those who reside in the country who are sent out by the Veterinary College as scientific and competent men. Could not a grant, at least equal to the present one, distributed in the provinces be made available for collecting and reporting the state of health in which cattle and sheep may be from time to time, the existence of any epidemic, the post-mortem appearances, and the best mode of prevention. Farmers would do well themselves to enlist the aid of their veterinary surgeons as respects their cattle and sheep by contracting (at so much per annum) for medical attendence, not only for their horses but for all their animals. The expense of this need not be much, provided the treatment of the cattle and sheep be limited to a supply of medicine and a general superintendence and advice, not a particular attendance on each individual case. The object would be attained of making it the interest of the medical man as well as the owner to prevent and ward off disease as much as possible.

We have been led to make these observations by considering the nature of a disease which is often connected with wet weather, and which rarely, if ever, yields to treatment, and whose fatal termination indeed is often the first intimation of its existence. We refer to that complaint which so frequently carries off young cattle, and is known under the denomination of quarter-ill.

Yearly heifers are most frequently affected, and more so when they are left out on wet pasturage late in the season. Whether it is the cold damp

ground or the sudden supervention of a hoar frost, the disease is extremely fatal and rarely yields to treatment. One of the limbs or quarters appears to be affected, and on examination after death reveals the existence of a black and congested state of the blood-vessels over a large extent of muscular and cuticular tissue. The part is thought to be mortified or frost-bitten. The vessels are congested or choked, vitality is destroyed in the part, and the extent of disease is too great for the system to throw off, even with the aid of strong internal and external stimulants.

As little or nothing can be done by way of treatment, can any prophylactic measures be adopted—anything by way of prevention? Yes, much! Those persons who house their young animals early in the winter, or provide them with a dry layer in yards or sheds, and supply them with plenty of food, and more particularly if they give them a little oilcake or Rape-cake daily, rarely suffer from the disease. Not only are the exciting causes to a great extent removed, but the constitution of the animal is invigorated, and furnished with the means of warding off disease—just as a well-manured field of grain will resist the influence of long-continued wet or unfavourable weather. There is no fact belonging to agriculture better established than the advantage of supplying young cattle at straw yard with a certain portion of oilcake or Rape-cake, and the knowledge of this fact cannot be too widely spread. Some advise the insertion of setons in the brisket as a preventive measure, but we must confess that we have no great reliance on this harmless practice.

MANURE FROM THE AIR.

The value of guano and most other concentrated manures consists to a considerable extent of the ammonia which they contain. As three-quarters of the atmospheric air consists of nitrogen, and as hydrogen forms one-ninth of all pure water, if some cheap means could be found for inducing the hydrogen of water to enter into combination with the nitrogen of air in the form of ammonia, this valuable manure could be produced in unlimited quantities, and the agricultural products of the world enormously increased. The efforts to do this have been at last crowned with success, as will be seen by the following abstract of some continental researches.

Since the remarkable labours of Messrs. Liebig, Schaltenmann, and Kuhlmann, on the fertilising action of ammoniacal salts, the production of ammonia at a low price has become a problem of the highest interest to agriculture. But to arrive at this result it is necessary to obtain the nitrogen elsewhere than in the nitrogenous matters; which may, for the most part, be employed directly as manures, and of which the limited quantities and elevated price permits in any event only restricted and costly manufacture.

Atmospheric air is an inexhaustible and gratuitous source of nitrogen. However, this element presents so great an indifference in its chemical reactions, that, notwithstanding the numerous attempts which have been made, chemists have not heretofore succeeded in combining it with hydrogen so as to produce ammonia artificially. This result, so long desired, has been reserved for MM. Margueritte and De Sourdeval, who have obtained it by employing an agent of which the remarkable properties and neat and precise reactions have permitted them to succeed where all others had failed. This agent is baryta, of which notice has recently been taken on account of the recent applications that M. Kuhlmann has made of it in painting, but of which no person suspected the part that it was to be called to play in the development of the agricultural riches of our country. The manufacture of ammonia is based on a fact entirely new, the cyanuration of barium. It had been believed until the present time, that potash and soda alone had the property of determining the formation of cyanogen; that the earthy alkaline bases—baryta, for example—could not, in any case, form cyanides.

Messrs. Margueritte and De Sourdeval have ascertained that this opinion is entirely erroneous, and that baryta, much better than potash or soda, fixes the nitrogen of the air or of animal matters in considerable proportions. It is already understood, that for the preparation of Prussian blue the cyanide of barium presents great advantages over that of potassium, for the equivalent of baryta costs only about the one-seventh of that of potash. Thus do we find practically and really obtained the result first announced by Desfosses and vainly pursued in France and England, the manufacture of cyanides from the nitrogen of the atmospheric air. This solution, so important, depends on the essential difference which exists between the properties of baryta and those of potash; the first is infusible, fixed, porous, and becomes deeply cyanuretted without loss; the second is fusible, volatile, and becomes cyanuretted only at the surface, and suffers by volatilisation a loss which amounts to 50 per cent. After the cyanide of barium was obtained, the grand problem for Messrs. Margueritte and De Sourdeval to resolve was the transformation of the cyanide into ammonia, by means at the same time simple, rapid, and inexpensive. The following is the operation:—

In an earthen retort is calcined, at an elevated and sustained temperature, a mixture of carbonate of baryta, iron filings in the proportion of about 30 per cent., the refuse of coal, tar, and sawdust. This produces a reduction to the state of anhydrous baryta, of the greater part of the carbonate employed. Afterwards is slowly passed a current of air across the porous mass, the oxygen of which is converted into carbonic oxide by its passage over a column of incandescent charcoal, while its nitrogen, in presence of the charcoal and of the barium, transforms itself into cyanogen and produces considerable quantities of cyanide. In effect, the matter sheltered from the air and cooled, and washed with boiling water, gives with the salts of iron an abundant precipitate of Prussian blue. The mixture thus calcined and cyanuretted is received into a cylinder of either cast or wrought iron, which serves both as an extinguisher and as an apparatus for the transformation of the cyanuret. Through this cylinder, at a temperature less than 300° (Centigrade) is passed a current of steam which disengages, under the form of ammonia, all the nitrogen contained in the cyanide of barium. It is impossible to foresee all the results of this great discovery. Among other things, it suggests the production of nitric acid from the air by oxidising ammonia. *Chemical News: by MM. Margueritte and De Sourdeval.*

THE SHOW OF DOGS AT BIRMINGHAM.

Under the presidency of Lord Curzon and the management of an influential committee, prizes of large amount were competed for by some 300 dogs, in the Horse Repository of Messrs. Brotherton & Harrison. And the *élite* of the company who thronged the bays between the cattle-stalls and the avenues between the cages of clucking and crowing fowls, also crowded the alleys between the rows of chained dogs. No such complete classification has ever been attempted before.

Viewing the strange diversities in form, capability, and disposition of the dogs in this whining, growling, and barking menagerie, we can scarcely admit the doctrine that the animals are merely varieties of one species, and that all have been developed by differences of food, circumstance, and training from a single original pair; or, as some say, are collectively a tamed derivation from the lean and savage wolf. In this gathering of all description of hounds, for instance, what extraordinary differences are observable in the nature and uses of the several breeds. Whatever of swiftness in pursuit of nimble game, of miraculous keenness of scent for a hidden or flying enemy, of untiring patience of search, of lithe agility or enduring speed, may be required for hunting over the open field, across the deep flood, in the burrowed entrenchment or the recesses of the rock—in short, whatever excellencies and peculiar instincts are valuable in the mighty hounds that chase the antlered deer; in the keen, swift, and sturdy hound that seeks the wily fox; in the slender, facile greyhound, all elegance and ease in rapid flight and leap; in the shaggy, half-amphibious otter-hound; in the terrible bloodhound, with his pendent lip; in the clever pointer and careful retriever—all are illustrated by perfect and unusually fine examples among numbers of the highest superiority of breed. The bloodhounds form a very grand class, to which the Earl of Bagot contributes the most magnificent specimens, remarkable for their character of head and expression. The fox-hounds would have been a larger class at any other season of the year. The Right Hon. Viscount Curzon and Earl Grosvenor are the prize winners. Harriers and beagles are but few. The large rough-coated deer-hounds make a fine show, each a sporting original of a Landseer picture. There are some specially fine greyhounds. The large pointers are the principal class, most of them of great merit; and the small pointers, especially the bitch class, still more extraordinary; the Hon. H. W. Powys, Mr. J. S. Soresby, Mr. H. Gilbert, the Earl of Derby, and the Earl of Lichfield carrying off prizes. The English setters are highly thought of. The Irish setters not so grand as a class, though the prize dogs are very fine. Some setters and spaniels, shown by Mr. Burdett, the Hon. Secretary, are considered unequalled. The retrievers are exceedingly good, Mr. Brailsford and Lord A. Paget winning the prizes. There is a good class of Clumber spaniels, used for cover shooting. Mr. Boales and Earl Spencer exhibit the most meritorious. The two German boar-hounds were much admired for their strength and handsome appearance.

Turning to the other division of the Show, we naturally exclaim, can all these marvellous diversified creatures be simply new kinds multiplied from original puppies which accompanied their fallen master out of Paradise, and not from several widely-different pairs which kept watch and order among the heterogeneous denizens of the ark? Here we have the majesty of the massively-framed mastiff, ferocious as a tiger to strangers, sagacious "as a Christian" in detecting thievery and chicane, gentle as a lamb to the hand that feeds and loves him; and we have the weedy, slim, Italian greyhound, in form suffering from internal and external stricture, yet all grace and tenderness; shivering at the end of a riband or a watch-chain, and incapable of stronger field exercise than the hunting of a guinea-pig. There is the nobility of the powerful Newfoundland, with his colossal paw—humane saviour of wrecked mariners from the swallowing wave; and there is the antic-loving toy terrier, ridiculous for his littleness, delighting to be caressed upon his lady's knee. There is the thick, iron-jawed bulldog, with his stealthy spring and unrelenting gripe, fierce, unflinching to the death; and there is the tiny spaniel, which loves to be nursed and dandled, or peeps timidly out of the shelter of his mistress's muff. There is the active black-and-tan terrier, sworn enemy of all four-footed vermin; and there is the lazy, curly King Charles, in an ungainly state of plethora of good living, able to waddle after a comely dame or repose upon her handsome hearthrug. There is the home-spun, plain, intelligent sheep dog; and there are the grotesque, negro-featured pug, and the Skye terrier, lithe like a ferret, and shaggy beyond recognition of head or tail. Yet veritable dogs all undoubtedly are, anatomically of one species, and only differing in character and instincts, whatever may have been the unity or plurality of their origin. And mankind, and womankind, too, are justly grateful to the race for ridding the neighbourhood of our homes of wild animals, wolves, and badgers, otters, polecats, rats, and such infesting and troublesome marauders; for conducing to our health-giving exhilarating sports; for guarding and protecting, like sentinels, our homes and persons, our flocks and property, and for the companionship and amusement furnished by their faithfulness, affection, and playfulness.

The mastiffs are a superb class; the black Newfoundlands equally good; the bulldogs repulsive, yet interesting from the very extravagance of sullen savageness and latent brutality in their expression, and for their well-known pluck and prize-ring qualities. Sheep dogs are fairly represented; the terriers attractive, and maintaining the credit of their order. One "rough customer" of a Scotch terrier is indeed a marvel: he is said to weigh less than 3 lbs., yet he is over two years old, and a day or two ago killed a fierce big rat, and his selling price is 50 guineas. One inimitably ugly pug, that as a lapdog would by contrast give charms to a Gorgon, is priced at 1000 guineas. The Italian greyhounds and diminutive toy terriers, of course, attract most attention from the fair visitors. The Alpine mastiffs, St. Bernard dogs, an awfully rough Russian terrier, the rare Maltese lion dogs, and the Esquimaux fox dogs are also a source of great interest. Complaints respecting the management and the mode of judging, we are sorry to say, arose among some of the exhibitors. *From the Times.*

THE AGRICULTURE OF BERKSHIRE,

BY

THE REV. J. C. CLUTTERBUCK, OF LONG WITTENHAM.

(*Continued from* p. 1068.)

The Vale.—We have now to notice the tract of land lying between the escarpment of the oolitic rock and the river Thames, occupied by the Oxford clay or clunch. At the foot of Wytham hill it is partly arable and Grass land. We are here reminded that the soil is clay by the water thrown from its surface in open furrows. From this point it forms a margin of stubborn clay, often with a surface of miserable aspect, till we come to the N.W. boundary of the county. Along this line the clay forms a series of low undulations and slopes, from its outcrop beneath the oolitic strata to the low ground spoken of as subjected to injury from the flooding of the river.

Burcott Park, between Faringdon and Lechlade, is specially noticed by Mavor. He holds up Mr. Loveden as one of the "few enlightened improvers of the Vale" and "his farm establishment as replete with every accommodation, and a fit model for a farm of such magnitude." He was a breeder of Hereford stock, Leicester and Cotswold sheep and pigs, and an encourager of new implements.

The draining now in progress on this estate, marked by the extraordinary rapidity of its execution, the large calibre of the main pipes, and its depth, must test the capabilities of the soil for profitable cultivation; like the Windsor farms it is unfitted for sheep, but under steam cultivation, and Wheat, Beans, and root crops, with heavy stocking by horned cattle and pigs, manure from the market town if to be had, and other extraneous fertilisers, it may become a model for the cultivation of the stubborn Oxford clay to the north—as the Windsor farms show what may be accomplished on the heavy tertiaries to the south, in this generally fertile and highly favoured county.

Swine.—Of the stock kept in Berkshire much has been said, both as to the horned cattle and sheep: a few words as to the pigs, of which it has its own breed. There is no part of the county without the Berkshire pig, generally of good quality. It seems superfluous to quote Mavor, who speaks of them as having "obtained unqualified approbation from the best judges," and as then "sometimes crossed with the Chinese." The improved Berkshire or crosses of the best blood are rather bred by amateurs than by farmers, and are too well known in the Smithfield and other shows to escape notice. The farmer finds a hardier animal better suited to his purpose; they are usually black, with little white on the nose,

breast, or feet. They are noted rather for their tendency to growth than for fast feeding qualities. They have a good though not coarse coat. As stores they find a ready sale, either to local feeders, or to be sent into Buckinghamshire and other counties in this trade. The tendency to growth constitutes the chief value. A well bred, full-grown Berkshire sow is marked by a certain ease and stateliness of movement; deep in the gammon, which is carried well to the hock; lengthy in frame, with rather a long nose when compared with some other breeds. The variations of price from various reasons is one of the drawbacks to breeding pigs. It has been said, when pigs are dear sell all off; when cheap, buy breeding sows, as the turn of the market is sure to come. The pigs fed to 10 or 12 score lbs. are sought for by local dealers, who pay at the scale and buy freely. The value set on the manure of pigs as compared with the then profit (?) of feeding, was curiously illustrated some years back by a farmer giving a miller 100 pigs worth 100*l.* on the condition that the latter fed the pigs on the farmer's premises up to an average named weight. It was said at the time that it was a harmless bargain. The farmer offered to repeat it; he would probably not do it now. The Berkshire farmer does not usually adopt the practice of feeding pigs in very small styes with scarcely any straw. Very often pigs are kept in yards throughout the feeding. At the beginning they are generally allowed some such run. The aspect of pigs so treated speaks in favour of the custom. Running the stubbles after harvest is a questionable practice. There is some risk, and it is doubted whether food so obtained is any real gain; much of course depends on the distance the pig has to travel, the state of the weather, the dry or moist condition of the grain, and the ground.

Implements.—We now proceed to consider the question of implements. In Mavor's report we find that there is scarcely any implement now in use that had not its representative at his time—steam of course excepted. 1st. Ploughs; Mavor speaks of the Norfolk and other ploughs, cast iron shares, &c., as of recent introduction. It has been said that men have ploughed the earth and ocean almost from the first, and that the best form of plough and ship is not yet determined. So it is still. The old Berkshire wooden plough is fast passing away. Some still persist that it is better than any other in dirty land; then comes the question, ought land to be ploughed when dirty? is a well-drained soil ever dirty? The wear and tear of the wooden plough more than its unwieldy character first led to its disuse; Howard's ploughs are generally preferred, though ploughs of local makers are much used. Agricultural ploughing matches have done much towards settling this question. Mavor gives us representations of pressers, skims, drills, scufflers, chaff-cutting machines, a variety of ploughs, &c., which show us that the seeds of improvement were then germinating; there is no reluctance on the part of farmers to adopt any implement that bids fair to succeed. Mavor also speaks of hand and horse-threshing machines; the former used in some localities by persons who travel for hire, the latter still are found.—Steam power is general, the jets of steam and columns of smoke arising from stack-yards or isolated stacks strike the eye throughout the country, telling their own tale. Mr. Hart, of Wantage, has obtained a high reputation for the perfection of his machines, which are extensively used. The work is usually done for hire, either by the day or quarter; it is no little credit to the intelligence of the Berkshire labourers that they readily learn to manage the engines without any foreign assistance. —The steam plough is found in many localities. Smith's implement has been used to "smash up," to use the received expression, the soil. Clover leas have been so prepared for Wheat sowing with a prospect of success in the coming crop, and instances of 200 acres each of autumn cultivation have come under our notice. Fowler's plough has been lately introduced on the Flemish Farm at Windsor. The time is probably at hand when steam cultivation will be carried on in the same way as steam threshing for hire. We may notice that Mr. Hannam, of Burcott, divided from Berkshire only by the river (with the aid of the wire-rope) several years since ploughed, ridged, harrowed, split the ridges, and rolled a field in which Potatoes were planted by the agency of steam alone. The frequent breaking of the rope was the reason for relinquishing the experiment. — The reaper has been little used, the last crop, though labour was short, was so much lodged that it presented difficulties not to be overcome.—Chaff cutting is either done by horse or steam power, but on ordinary farms by the old chaff-box, which is generally preferred to the hand machines, especially by the men. The drilling is much done for hire, except on the larger farms.

Waggons are preferred to carts in Berkshire for carrying hay or corn—as well as for market purposes. There are but few symptoms of their yielding to the one-horse cart. Arguments have failed to induce the farmers to adopt a system so highly recommended, even when supported by well authenticated trials, which have resulted in favour of carts. Much less are they likely to follow the advice given them in the 2nd Part of Vol. XI. of the Royal Agricultural Journal, "To sell their waggons while they can, and if they cannot make a bonfire of them." An instance has come under our notice in which a farmer noted for his absence of prejudice, began business with Scotch carts fitted with wings, and with a certain number of skeleton carts known as Mr. Hannam's, as having been first constructed under his directions. In a few years, waggon after waggon was added as his occupation increased, and any additional one-horse carts he required were built on the model of the old dung cart. This may be deemed retrogression, but the fact can only be accounted for on practical grounds. It is often said, if the homestead were in the centre of the farm, therefore the distance to the stack yard short, or if the corn were stacked in the field, carts might do, but with long distances we should never get the corn home. A waggon is obviously more easy to load than a cart, to say nothing of the dislike of the Berkshire labourer to the latter. This question was fully discussed at the Oxford Farmers' Club in 1859. An amendment to the original resolution proposed in favour of carts was moved by a Berkshire farmer—"That waggons are preferable to carts for harvesting hay and corn, but that one-horse carts are preferable for other general purposes on a farm." This was carried by a large majority.*

(To be concluded next week.)

SATURDAY NIGHT.

BY THE REV. J. ERSKINE CLARKE, OF DERBY.

THE very name of Saturday night suggests brawls and drunkenness. In the village and in the town, Saturday night is the dread of the workman's wife, and the source of anxiety to the clergyman.

On Saturday night, the workman has his week's wages; sometimes he is paid in the public house; often he has a score on the ale house shutter to settle, and so he takes the tap on his way home. He feels he has earned a right to some enjoyment. He knows he needs not to be up to work in the morning. His notion of enjoyment is almost limited to beer and tobacco, a song and a fiddle. He finds these and freedom from all restraint in the public house, and so he spends his Saturday evening there. Well is it if he does not spend also the money on which his "missis" is reckoning for the week's housekeeping—well is it if he does not reel back at midnight to his trembling wife and scared little ones.

After such a Saturday night, we can hardly expect a satisfactory Sunday morning; and accordingly the workman probably sleeps till noon—then lounges over pipe and paper—perhaps dresses himself for afternoon church, and spends Sunday evening where he spent Saturday night. There are thousands of glorious exceptions to all this, but there are quite enough examples of it to make it worth a parson's while to do something, if he can, for the working men on Saturday night. The women on that evening are, or ought to be, cleaning and swilling, making their houses in such a state that, unless the good man of a two-roomed cottage be a domestic hero, he cannot be expected to stay in it.

I have devoted myself in my own sphere of work largely to the improvement of Saturday night, and I have found it have the best effect on Sunday.

For the six winterly months of 1859 and 1860, on every Saturday night we had, in a large hall, a musical and literary entertainment, lasting from 7.30 to 9.30. The charge for admission was 1*d.* and 2*d.*, with a few 6*d.* seats in front. The hall held 1000 people. We never had less than 700 present; and on one occasion we had 1200, and sent away a street-full clamorous to get in. Our audiences consisted mainly of full-grown men. They used to sit in the same seats night after night, just as they would in church.

Our entertainment was after this fashion—an overture by a brass or reed band. Five of these bands gave their services cheerfully, requiring only some light refreshments. Their names will indicate their composition—"Rifle Band," "Midland Railway Band," "Darley Village Band," "The Dun Cow Band,"—after the public house where they practised—and "St. Michael's School Drum and Fife Band." After the overture would follow a song or glee by members of one of the choirs in the town. Then a reading—about ten minutes in length, by some gentleman of the town. Then the band, then another song; then, perhaps, a solo on the piano—(they once listened contentedly to a brilliant solo half an hour long!)—then a second reading by another gentleman—then song, band, glee—a third reading, the band, and God save the Queen.

We generally had about 12 pieces, and we went on sharp from one to the other. Variety, and nothing too long, was the secret of a successful night. On three occasions we engaged ventriloquists, and once a conjuror, but we still kept our readings in the programme. The readings we generally tried to make of varied character. The first the most solid—say, a few pages of Macaulay. The second poetical; pathetic ballads, or humorous verse, were most appreciated. The third reading was generally of broad humour, such as a scene of Dickens.

Subjects read:—Mr. Duberly Doubtington—Paper on Probability of French Invasion—The Favourite Scholar—The House Fairies—John Bull at Paris—Christmas Poems—How Poll Paid the Rent—King John and the Abbot of Canterbury—the Village Blacksmith—Maud Muller—The First and Last Dinner—The Combat—The Wife—Won't, Can't, and Try—Mansie Waugh—The May Queen—The Cataract of Lodore—Christmas Storms and Sunshine—The Search after Truth—William Whitehead's Will—Essay on Roast Pig—The Enfield Rifle and the old Brown Bess—Black and White Slavery—From Adam Bede—The Siege of Calais—The Death of Marmion—Eugene Aram—The Destruction of Sennacherib—The Lazy Genius—Something on a Delicate Subject—The Guests at the Red Lion—The Derby Blues and the Valiant Tailor—Brighton, Tunbridge Wells, and Bath in 1682—The Three Warnings—The Turned Head—From Richard II—William Tell—Betsy Brown—The Violet Boy—Try Again—The Bashful Man—The Shallow Trust—Little Jim—The Happiest Time—The Heart's Charity—Henry of Navarre—The Mourners—The Cannon and the Press—The Honeymoon—On a Pebble—Original Paper on Printing, &c.—Malhaussen on the Rocky Mountains—How the French Fared at Fishgard in 1797—Blucher's Judgment—Dora—The Black Cottage—The Dream of the Reveller—The Three Preachers—American Poets—Lord Ullin's Daughter—Lochinvar—Misadventures at Margate—Night before Waterloo—Hohenlinden—Arm—The Rifle—Alonzo the Brave—The Cruise of the Fox in the Arctic Regions—The Importance of Trifles.

The reading required to be loud and distinct, so that all could hear without effort. The voice pitched high and kept up—this was preferred to showy and dramatic reading In music nothing came amiss, but perhaps national and patriotic songs were the favourites. One matter of detail may be worth naming. The words of the songs were printed on the back of all the programmes, which were circulated in the manufactories and shop-windows; so that every handbill became that most precious treasure to the mass of the working people, "a song book!" From this cause the bills were eagerly sought for, and the shop keepers could not keep them in their windows, they were so pestered to give them away. The expenses of the 24 entertainments amounted to 120*l.* and the receipts at the doors to 150*l.*, leaving a balance for the Working Men's Association, by whose committee of working men the money was taken at the doors, and people shown to their seats, and order kept, for all these nights. The moral results were far more satisfactory than the pecuniary one. I heard, from working men, of well known frequenters of the public house who never missed one of our entertainments. I heard of men beginning to put into the penny bank, and getting clothes to go to church, and I heard that the publicans complained that we had got all their best customers. The regret, too, of the working men of the town when we gave up, and the present anxiety that we should recommence, prove that they fully valued the opportunity of spending an evening of rational enjoyment.

The only objection which was worth refuting, because made by religious people, was that ours was not the proper way to spend "the preparation for the Sabbath," as they called Saturday night. My reply was that I acknowledged it not to be the best conceivable way, but that it was a thousandfold better than the public-house way, which to scores was the only alternative; and that after all I did not see that our music and reading differed so widely from the open piano and conversation of the drawing-room. Others said that the men went drinking after our entertainment. There was no means of testing this, but I do not believe they did. They may have dropped in for a glass of beer; but after two hours in the pleasant atmosphere of music and song, and congenial company, I believe that few were weak or vicious enough to commence drinking to excess. I believe, too, that they would find the companies in the bar parlours all formed—the games at cards organised—and the strong period of temptation over.

Of course entertainments, on as large a scale as those here referred to, are only possible in towns, and I do not suppose that Derby is better fitted with appliances for them than any other town of equal size. But I think that something of the same kind might well be introduced even in the village school room. Well warmed, well lighted, with a few of the church choir to sing, and with the doctor, or railway clerk, or schoolmaster to read, I think a strong counter attraction to the allurements of the ale-house might be secured.

Even during this summer (if any summer we have had) I have found that a considerable number of young men were delighted to come to somewhat similar meetings, which we held in a smaller and private reading-room. As the ale-house benches are not tenantless in summer, there seems no real cause why such rational evenings should not be carried on in summer as well as in winter; and many of my working people wished me to carry on my series of great entertainments even in summer, but I was afraid to risk it, and thought it safer that the audience should leave off with an appetite.

I trust that I may be pardoned for such an egotistic paper—but I feel strongly that it would be a blessing to the poor if the clergy would direct the recreation of Saturday night. Perhaps it would be, now and then, a blessing to ourselves to be obliged to get our sermons finished earlier, and thoroughly to unbend our own minds. Above all, I have great faith that if working

* Published Record of the Transactions of the Oxford Farmers' Club, established 1849.

men were tided safely over the earlier hours of Saturday night—instead of being left listless and unoccupied and uncomfortable, a ready prey to temptation—they would often have saved, for their high and holy uses, the blessed hours of God's Day of Rest. *Read at Warminster.*

Home Correspondence.

Potato Disease: Removing the Infected Stalks.—In 1845 the following very remarkable circumstance transpired with us, which justifies us in prescribing this as a preventive of the Potato plague. In the month of June, 1845, two months before Potato disease was heard of or known, either in this country or in Belgium, or anywhere else, we had a tolerably large breadth of Ash-leaved Kidneys, about half matured, and as in former years, we had recourse to cutting off their tops, sacrificing the full development of the Potato (though by-the-bye, not a plan worthy of imitation on this account), namely, to give air to Lettuces, which were purposely transplanted between them for seeding. This was done on about one-half the plot, and only where the Lettuces were growing, not dreaming the least of Potato blight, for it was not then known. About two months after, a rumour broke out, first on the Continent, and in a week or two after in England and Ireland, that Potatoes were nearly all rotting. People were everywhere taking them up without delay, with a view of saving the few which proved sound, and amongst which were our own plot of Ash-leaved Kidneys, which were not mixed with the Lettuces; these also proved to be mostly all rotten. Those with the Lettuce seed, however, were as usual left till the seed was cut, when unexpectedly, and to our great astonishment, not one tuber on this plot was infected, or showed signs of disease, save that they were small as intended to be, for next year's planting. Hence the origin of cutting off the tops, which it will be observed was found to be efficacious in saving our crop, and that it was entirely by accident or chance two months before the disease was known or heard of. Potatoes should now be cultivated early, with the forwardest varieties, so as to admit of cutting off their tops as soon, or rather before symptoms of disease appear in the foliage, which now unfortunately happens much earlier in summer than it did at its first appearance in 1845. Could the preventive above alluded to have been foreseen in that year, it is probable that more than half which were spoiled might have been saved, as then, not till about August 12, did the contagion manifest itself. To pull the stalks up is not (in our opinion) right, as this is too abrupt a destruction of the plant. All the good to be derived from this expedient, in those late planted, is that it makes room to transplant Brassicas at their proper time, which is no mean consideration, as whether the tops are cut off or not, after being stricken with the fatal blight in the leaves the tubers cease to grow larger. *A. Hardy & Son, Maldon.*

Ewes on Mangel Wurzels.—In reply to "C. D.'s" inquiries, this is the third season I have kept my Leicester ewes entirely on Mangel from Nov. till about May, without the least ill effect. This year, the roots being very small and top large, I am consuming them on the land as they stand by tegs and ewes, the former going first, and the latter cleaning up each pen, both doing exceedingly well. I have never given tops to beasts without scouring them, and doing more harm than good. Should "C. D.'s" sheep be of a delicate constitution he may find the Mangel scour them. I partly guard against that by never using a pampered male animal. *Jos. H. Robinson, Abbey Farm, near Hinchley.*

Mangel Roots in Drains.—The enclosed fibrous matter was taken up yesterday from a tile drain, 4 feet below the surface in a field which bore this year a crop of Mangel Wurzel. I suspect it is the roots of that plant, but I should be glad to know whether it is not unusual for them to penetrate to so great a depth, especially in so wet a season. Though, at the same time, as the field was only drained in the early part of this year, and consequently the soil over the tiles (in this instance of a sandy nature), had not had time to become equally consolidated with the rest of the field, the lines of cutting would afford to the rootlets a much easier passage than the rest of the soil. Having an ample stock of the old-fashioned horse-shoe tiles on hand, I unfortunately used them for the draining in question, and it appears that the fibres entered the tiles at the bottom, where they had free access to the interior, which would not have been the case if I had gone to the expense of buying pipes; and the vegetable matter has filled many of the pipes up, to the extent of above half of their area. I will just add that the crop, consisting of Long Red and Orange Globe, was very inferior to what I usually grow. I think that it does not amount to above 12 tons an acre. If the rootlets are decided to be those of Mangel Wurzel, penetrating to the depth of at least 4 feet, it will add another proof to the value of deep cultivation. *A 16 Years' Subscriber.*

[Judging from the smell and taste, we believe the fibres sent to be the roots of the Mangel plant. Your experience in the matter is unusual but not unexampled. It will, we believe, be generally found less frequent in long drained and well cultivated fields than in newly drained pieces where the stream downward of water just over the drain is likely to misdirect the roots of any plant growing over the spot.]

Societies.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

THE following is the Half-yearly Cash Account, from 1st January to 30th June, 1860, presented at the Annual Meeting last week:—

DR.

	£ s. d.	£ s. d.
To Balance in hand, 1st January, 1860:—		
Bankers	1339 8 0	
Secretary	3 4 4	
		1342 12 4
To Income, viz.:—		
Dividend on Stock	146 17 6	
Subscriptions:— £ s. d.		
Governors' Annual 620 0 0		
Members' Annual 3276 6 0		
Members' Life-Compositions .. 170 0 0		
	4066 6 0	
Journal:—		
Sales 122 9 8		
Advertisements 39 10 9		
	162 0 5	
Country Meetings:—		
Chester .. 1 0 0		
Warwick .. 11 16 0		
Dividend from estate of late Secretary .. 970 11 10		
	983 7 10	
Sale of Sundries	46 4 0	
		5404 15 9
To Canterbury Meeting, July, 1860:—		
Amount received on this account	.. ..	2624 1 0
		£9371 9 1

CR.

	£ s. d.	£ s. d.
By Expenditure:—		
Establishment, including Rent, Taxes, & Salaries ..	583 0 5	
Postage and Carriage	30 5 2	
£ s. d		
Journal:—		
Printing 415 10 6		
Literature .. 181 0 6		
Stitching .. 60 6 2		
Delivery, Advertising, &c. .. 141 12 11		
	798 10 1	
Chemical Grant	325 0 0	
Veterinary Grant	200 0 0	
Advertisements	7 19 0	
Warwick Meeting Arrears ..	40 0 0	
Testimonial to B. T. Brandreth Gibbs, Esq., Hon. Sec.	19 0 6	
Sundries	3 13 11	
Subscription returned ..	1 0 0	
		2008 9 1
By investment:—		
2000*l.* New 3 per cents ..	.. ..	1875 0 0
By Country Meetings:—		
Paid on account—		
Canterbury, 1860	1827 16 2	
Leeds, 1861	0 2 0	
		1827 18
By Balance in hand:—		
Bankers	3647 6 10	
Secretary	12 15 0	
		3660 1 10
		£9371 9 1

(Signed) A. N. HOOD, for Finance Committee.
QUILTER, BALL, JAY, & Co., Accountants.

Examined, audited, and found correct, this 7th day of December, 1860.
(Signed) WILLIAM ASTBURY, } Auditors on the part
HENRY CORBET, } of the Society.

BALANCE SHEET, 30th JUNE, 1860.

LIABILITIES.	£ s. d.	£ s. d.	ASSETS.	£ s. d.
To Capital:—				
Surplus, 1st Jan., 1860 ..	13,264 6 11		By Cash in hand	3660 1 10
Surplus of Income over the Expenditure during the half-year, viz.:— £ s. d.			By New 3 per cent. Stock 12,000*l.*, cost	11,796 14 7
Income .. 5404 15 9			By Books and Furniture, Society's House, Hanover Sq.	2000 0 0
Expenditure 2008 9 1			*Mem.*—The above Assets are exclusive of the amount recoverable in respect of Subscriptions in arrear 30th June, 1860, which at that date amounted to 3697*l.*	
	3396 6 8			
		16,660 13 7		
To Balance at Credit of Canterbury Exhibition, 1860		796 2 10		
		£17,456 16 5		£17,456 16 5

CRYSTAL PALACE POULTRY SHOW.

This closed on Saturday after one of the most successful meetings ever held there. Whether we look at the entries, the attendance, or the sales, all alike show progress, all are on the increase. We do not wonder at it; the poultry mania, as it was called, has long ceased, and keeping or rearing it is now a pursuit. Like all others, it requires to be learned, and being learned there is no difficulty in making it remunerative. It is the knowledge of this that makes the sales increase as they do here and at Birmingham. While there is a certain demand for such Spanish fowls as Miss Rake's, not only for eggs, but for their beauty, there is also for Dorkings like those of Lady Thynne, Marchioness of Winchester, Captain Hornby, Mr. Wakefield, and others—birds that fairly weigh their 10 lbs. each. Success seems certain as the reward of painstaking. Miss Rake took five prizes in Spanish, and Lady L. Thynne, seven in Dorkings. If it were a hazard, exploits such as these would be unknown, because they are not due to the absence of meritorious competitors, but to their own excellence among good birds. With the mention that Captain Beardmore had equal success in White Dorkings, we will conclude these classes by saying we have never seen better Spanish or Dorking anywhere.

The classes that would next demand notice are the Game. Every shade and colour were here represented, and all were alike perfect in form and condition. This always has been a popular breed in England, and we could almost fancy a similarity between the bird and the people, at any rate in tastes. Messrs. Moss & Archer were very successful as usual, as well as the Hon. W. Vernon. Our old friends the Cochins were in full feather, both Buff and Grouse. Messrs. Cottell & Stretch, and Miss Musgrove, showed birds quite worthy of the olden time. We consider this breed as improving, and they deserve encouragement; but for them, many a breakfast table would be minus the egg in the winter, and many a hopeful sitting of Dorking, Spanish, or Game eggs would be spoiled for lack of an early sitter. The Bramah Poutras were beautiful. While some however are famous for size, others for their laying properties, there remain classes where the chief point is beauty of plumage, and these are not in any way behind their brethren. The Polands, whether we look at the Black with white top, or the Golden or Silver, so accurately and beautifully spangled, or the Hamburgh, both pencilled and spangled, all these have their points, but they are not purchased by the sacrifice of any valuable property. The Golden-pencilled of Messrs. Pierce, Munn, and Worrall, the Silver of Messrs. Kerr and Cannan, the Gold-spangled of Messrs. Lane, Worrall, and Bamforth; the Silver of Messrs. Teebay and Pearte; and the Polands of Messrs. Dixon, Adkins, and Edwards, entitle them to mention. Malays are a London fowl. Tradition connects them with the vicinity of the river, and modern practice confirms it. The East end sends the best specimens and takes most prizes. They are landed there by the homeward bound ships, and they suit the locality because neither smoke, confinement, nor a paved yard will injure them. Distinct breeds brought their usual varieties, Silkies, Andalusians, Sultans, and another rarity, called a cross between Spanish hen and red grouse. We can offer no opinion respecting them. We can speak highly of the Bantam classes; all of them, Sebright, Black, White, and Game, were perfect. The latter were especially beautiful, and show what may be done by careful breeding. Geese, ducks, and turkeys are called vulgar birds, and hence they are mainly judged by weight. Let weight speak then. There were geese that weighed 23 lbs., ducks 7½, and Turkeys 21 lbs. each. Good hearing for Christmas. The class for new breeds of pheasants produced none, but some good Chinese and Golden were shown. The judges were—G. J. Andrews, Esq.; Mr. Hewitt, and Mr. Baily.

Farmers' Clubs.

IPSWICH.—At the annual meeting of this Society, of which a full report is given in the *East Suffolk Mercury*, an excellent collection of roots was exhibited. The first prize Beet, by Mr. H. Biddell, averaged 13 lbs. weight per root. The finest single root of Beet was shown by Mr. G. Hare, of Holbrook; it weighed 17 lbs. The Turnips scarcely suffered this season. The Swedes were very fine. Mr. J. Spurling, of Shotley, showed some extraordinary Swedes, weighing 14½ lbs. each upon an average. The White Turnips were many of them of extraordinary size. Mrs. Morgan, of Bramford, entered one rough specimen, with straggling luxuriant top, weighing 27½ lbs.; although the top was grown to a surfeit, the Turnip was sound, and certainly not bad. The following prizes were awarded for fields of Roots:—

FIVE ACRES OF BEET.

Exhibitor.	Where grown.	Number of roots p. acre.	Average weight p. acre of roots, after being topped and cleaned. tons.	cwt.	qr.	lb.
J. Neve	Tuddenham	15,964	21	17	1	0
H. Biddell	Playford	8,784	20	9	1	16
W. Gurdon	Brantham	12,760	13	14	0	20
T. Clarkson	Playford	11,948	15	12	0	0
E. Packard	Westerfield	11,136	14	8	0	0
G. Hare	Holbrook	——	13	4	3	0
FIVE ACRES OF SWEDES						
R. L. Everett	Rushmere	25,680	10	6	0	0
G. Hare	Holbrook	——	10	4	0	0

The above results were obtained by weighing a quarter of an acre selected as an average of 5 acres.

At the subsequent meeting Mr. W. Gurdon, of Brantham Hall, said, he had no doubt if he had grown Swedes they would have been finer than the Beet. But what had been the advice given upon the experience of the last few years? It was, "give up Swedes, for they are all fingers and toes, and try Mangel Wurzel." So he had 8 or 9 acres of that last year, and this year he had 22 acres. When he told them he took his men off his dibble to cut his upland acres they would be able to judge how far he was behind in his farming this year. He was four, five, six weeks too late in his Mangel Wurzel, and could not get on to his land. He had now possessed his farm for more than 12 years, and had never given a drain pipe to his tenants; they had never asked him for one. This year he had commissioned Mr. Garnham to buy him 50,000. If he had employed a draining company, and had drained the farm, perhaps he should have been a little a-top of Mr. Neve this year.

Mr. Neve: With reference to his success, he must say he had used no special exertions whatever. The field in which his beet was grown was only cultivated in the usual manner. With respect to manure, there were carried on about 15 loads, and 1½ cwt. of guano per acre. During the summer he was frequently told that the field had a better appearance than any in the neighbourhood, and he was agreeably surprised to find it so. The cup which he had won he should value as long as he lived. It was the first cup which had ever been presented at any club of which he had been a member, and he thanked his stars for his good luck in getting it.

Mr. James Allen Ransome said, since their meeting last year they had lost one man from amongst them who might be called the father of farmers' clubs, his old friend Charles Poppy, a man who was still held dear by those who knew him 40 years ago; but it was a great pleasure to know that the assistance they had rendered him in his last days had been the means of his closing his life in comfort. He had looked with a great deal of interest to the progress of this club. At its meetings matters were discussed of the greatest interest to all who had the privilege of being present at them. Much could be done in that way, besides the advantages of prizes and rewards, by selecting good subjects and endeavouring to get persons well versed in those particular subjects, to give the assistance of their knowledge and experience; the object should be not only that those who had studied the subjects should enter into the discussion, but others should ask questions at all events if they could not contribute to the information on the subject, asking about what they did not understand, with that simplicity which belonged, or ought to belong, to farmers; for he believed that far more was to be elicited and learned from those things which were the expression of mere ignorance, than might be supposed.

The Mayor of Ipswich said there was a question broached last year, to which he had given a good deal of attention, which was the utilisation of the sewage of the town. In Croydon they were attempting to raise 30,000*l.* to bring the matter to a practical issue. He found the engineers at Croydon and at Carlisle as far asunder as the antipodes on the question. One said 30,000*l.* would not be enough, and the other said 3000*l.* would be too much. Another gentleman had endeavoured to take all the nightsoil out of the town of Rugby, but was now free to confess that he knew very little about the subject, the difficulty was so great of getting that commodity from the place where it was not wanted to the place where it was wanted. Now if this farmers' club would take the matter up, they might be able to offer some advice which would be a national benefit. The town was suffering every day because they had got that which the farmers had not got, but which they wanted. An experiment had been made in Edinburgh, and he should like to see it made if possible in Ipswich. He should like to see 1000 acres of that land down by the river, which belonged to Mr. Tomle, taken for the experiment. At Edinburgh a piece of unprofitable land was so taken, and the nightsoil laid upon it, and it was afterwards let by hundreds of acres at a time, at 13*l.* per acre. It would be a good thing if a thousand acres of Rushmere Heath could be brought to a tenancy of the worth of 13*l.* per acre. The town would be glad to pay the farmers handsomely to take this commodity away from the town.

The Chairman said—Let it go, and give it God speed! He had tried it, and he had tried many other things, and he had tried pure water, and he had found pure water the best of the two. He did not wish the sewerage question to be given up, but he always wished the sewage clean out of his way. If he blocked it up to keep it in his yard, he must fresh litter his animals three times a day, and the straw was become too valuable for that, so he let it run away, and was glad when it was out of his sight. Last year as an experiment, he entered upon the system of pulping roots. He now gave his opinion that pulping would prove of the greatest benefit to agriculture. The result of his experiment was that the value of the root was doubled through the agency of the pulping machine. If they could, by pulping their roots, produce food, containing the same quantity of nutriment from half the quantity of roots, they achieved a very great result. [We shall be exceedingly obliged for the experience of our correspondents on this important subject.]

Mr. R. C. Ransome, in acknowledging a compliment to the implement makers, said—As none of his firm had had an opportunity of addressing a meeting of this kind since last year, in Ipswich, he would say a word on the absolute refusal of their firm to exhibit at Canterbury, at the last show. He thought no firm had a right to adopt the policy which they had adopted in reference to a national institution, and refuse, when the time came, to give a reason for the policy which they adopted. It had been said their object was two-fold, first to prevent anybody from climbing by the ladder by which they had risen, and next that they wished to act in a troublesome and factious manner towards the great societies of the kingdom. To those who knew the firm, those charges needed no disclaimer from him. Their reasons were exceedingly simple. They did not think it paid them. In this sentence lies the gist of the matter. He spoke of course only for their own firm. They found if they carried away a medal, and then the farmers found the machine did not work, the medal was no use, and lost its commercial value. Then the shows were held in a busy season of the year, when they wanted to be getting out their thrashing machines, and to attend the shows they were obliged to go away and attempt to win fresh prizes, which they did not at all value, and he thought the farmers would prefer their getting their orders out to running over the world to show their machines. But how did that relieve them from the charge of factious opposition? Well, at the agricultural show three years ago certain results took place, and the reports were printed. These reports contained important errors, which the firm found it impossible, in spite of every endeavour, to get corrected or taken any notice of. There was afterwards a meeting at Canterbury, and one of the prizes offered was for a threshing machine, and as no specific kind of threshing machine was named, they inquired what specific kind of threshing machine they wished to encourage. The committee to whom the power was deputed of answering questions in such matters said, "Gentlemen, you had better bring a machine of each sort, and then you will find which is the most useful." Taking all these things into consideration, they thought it was a great deal better to stop away. He felt in this room, and in any part of Suffolk, and in any part of England, he could stand up and say they had never sent out a machine which would not work, that they had not either taken back or made it work. They wanted to bring about a better system of trial, and they wished the farmers would assist in refusing to maintain a system of exhibition which was a monstrous sham.

Reviews.

A Proposed new mode of Collecting the Animal, Vegetable, and other Refuse of Towns, and the Converting it into Compost for Agricultural Purposes, under the Direction of Local Boards of Health, pp. 40. Whitaker & Co.

In the autumn of 1845 and summer of 1846, several letters were addressed to this Journal by Mr. Liddell, of Beverley Road, Hull, on the management of farm yard manure, its proper commixture, and preparation for the field. His remarks on this subject will be found in our volumes for those years. They are characterised by a good deal of whimsical suggestion along with much sound sense. The same combination characterises his present publication. He calls attention to the sanitary condition of the town of Hull, and to its visitation by cholera in 1849, when he was one of a small committee of guardians appointed to take such steps as might be thought necessary to stay the progress of the epidemic. The point which seems to have especially attracted his attention at that time as a source of pollution, was the existence of great "muck-garths" (dung yards), in which all sorts of refuse were collected all through the year, and whence it was sold to farmers at certain seasons. On these he says:—

"We compelled the owners of these great heaps of manure to clear them off the ground without delay, and ourselves at the same time proceeded to divide that part of the town into districts, of a size that one man with a horse and cart could thoroughly cleanse before 9 o'clock in the morning. The cost of this mode of proceeding in surface cleansing, was at the beginning more than the value of the refuse sold to the farmers, but about the time our duties ceased, we had so far reduced the expense of collecting as to bring that and the selling price of the refuse nearly on a par. The experience acquired in this part of our duties, led us to believe that it was possible under a systematic mode of proceeding to sell the refuse for more than the cost of collecting."

Suggestions for the division of a town into districts for collecting refuse and for the mode of collecting from house to house—the selection of stations on the outskirts of towns, where the refuse could be delivered either into railway trucks or barges—and a discussion of the sources of fertility on the one hand and disease on the other;—all these are among the useful and practical contents of Mr. Liddell's pamphlet. Then we come upon several pages about compost towers, the old fancy first developed 14 years ago as an adjunct of the farm yard, and grown now into a sanitary agent. It seems to us no necessary part of Mr. Liddell's well organised plans for street cleaning. The various ingredients he would thus obtain—stable dung, market sweepings cow dung, animal matter—could be mixed and prepared for use without any such expensive contrivance as "a range of 10 towers, side by side and back to back (that is five in length of range), built upon the ground, each 20 feet long, 15 feet wide, and 50 feet high—capacity 500 cubic yards—total, 5000 cubic yards."

Prize Essay of the Oxford Farmers' Club, "On the benefits resulting to the Public in general, and to the Agriculturists in particular, from Farmers' Clubs and other Agricultural Associations, for which the first prize was awarded by Professor Daubeny to Mr. Joseph Plowman, Secretary to the Oxfordshire Agricultural Society, Oxford Farmers' Club, and Oxford Corn Exchange. Third Edition, Oxford, Published for the Author, 1, St. Aldate's Street.

We have only recently had the pleasure of reading this interesting and well written pamphlet, of which the following is given as an analysis and table of contents.

The subject, its comprehensiveness; reasons for dealing generally with it. The principle of association and mutual co-operation; its effects and success wherever applied: the delay in its application to agriculture; its ultimate and increasing application to that science. The first great national step in that direction; the first Board of Agriculture; the subsequent operations of the Highland, Irish, and English Royal Agricultural Societies; their efforts to raise the character of Agriculture by combining science with practice; the results.

Central Agricultural Societies: Their nature, objects and effect on the public generally, and on Agriculturists specially. The influence of the Royal Agricultural Society of England; its fundamental principles and beneficial effect on Agriculture generally; its influence on Provincial Societies; necessity of more extended and united action among the latter Societies; its success, where it has been tried and tested.

Farmers' Clubs. Their functions. The London Central Farmers' Club; its extent, influence and operations; the agricultural, social and political benefits arising from such clubs; their usefulness and success; the general claims which such Societies have on the support of all classes of the community.

The general argument for the advantages of co-operation and the illustrations of it derived from the history of existing societies, are uncommonly well given; and at a time when all our Metropolitan Societies are bestirring themselves, it may be well to give what currency we can to the opinions Mr. Plowman has formed of them. The following is what he says of the Model Farmers' Club of England—the London Central Farmers' Club. "So firmly rooted has this Society become, so well is it supported, and so widely is its influence felt, that it has earned for itself the appellation of the 'Bridge Street Parliament,' on account of its having been the medium of making known the views and wishes of the agricultural body, not only on practical matters in connection with their avocation, but on those legislative measures which are calculated to affect their interests. This has been of immense importance to tenant farmers, because, although the landed interest is adequately represented in both Houses of Parliament, the tenant farmers have long felt that there is almost a total absence of representatives of their particular interest, and the London Farmers' Club has in some measure made up for that deficiency. The adjustment of the burdens on land, and imposts which fetter industry, tenant right, corn returns, &c., are subjects to which the London Farmers' Club has directed its attention, and, through its instrumentality, the wants and wishes of those engaged in the cultivation of the soil have been made known. Upon all practical subjects this Club has been regarded as a great authority, for a question has seldom been discussed by it without eliciting the opinions and experience of many of the most distinguished agriculturists from all parts of the kingdom, to whom the Society is rendered available. There is great reason to believe that the success of the London Farmers' Club, and the light which it has thrown on agricultural subjects generally, have done much towards creating and stimulating a desire for similar Societies in the provinces."

The Smithfield Club and its labours, likely now to obtain a fresh extension through the relationship established with the Agricultural Hall Company, are barely referred to in the pamphlet, but many of its pages are taken up with the history and successes of the Royal Agricultural Society of England; and in particular the objects of the Society as set forth in its charter are thus enumerated.

1st. To embody such information in agricultural publications and other scientific works as have been proved by practical experience to be useful to the cultivators of the soil. 2nd. To correspond with agricultural, horticultural, and other scientific societies both at home and abroad, and to select from such correspondence all information which, according to the opinion of the Society, may be likely to lead to practical benefit in the cultivation of the soil. 3rd. To pay to any occupier of land or other person who shall undertake, at the request of the Society, to ascertain by any experiment how such information leads to useful results in practice, a remuneration for any loss he may incur by so doing. 4th. To engage men of science in their attention to agricultural implements, the construction of farm buildings and drainage, the application of chemistry to the general purposes of agriculture, the destruction of insects injurious to vegetable life, and the eradication of weeds. 5th. To promote the discovery of new varieties of grain and other vegetables useful to man, or for the food of domestic animals. 6th. To collect information in regard to the management of wood, plantation, and fences, and on every subject connected with rural improvement. 7th. To take measures for the improvement of the education of those who depend on the cultivation of the soil for their support. 8th. To take measures for improving the veterinary art as applied to cattle, sheep, and pigs. 9th. At the meeting of the Society in the country, by the distribution of prizes and other means, to encourage the best mode of farm cultivation and the breed of live stock. 10th. To promote the comfort and well

of labourers, and to encourage the improved management of their cottage and gardens.

We publish this after the general meeting of the Society, when the administration of its affairs has been subjected to discussion, because it will, we presume, be generally admitted that on a few only of these objects has any great energy of purpos been displayed; while with reference to some of great importance nothing whatever has yet been done. The 1st, 4th, 8th and 9th are in the first class, the 3d and 7th are, we believe, in the second. Mr. Plowman's essay is instructive, stimulant, and suggestive, and will have upon the reader something of the influence which its motto—"Gee up, Dobbin!"—exerts elsewhere.

Journal of the Bath and West of England Society for the Encouragement of Agriculture, Arts, Manufactures, and Commerce. 1861. J. Ridgway, 169, Piccadilly.

We have here already the first part of the volume for next year. Mr. Goodwin gives us all an example of promptitude and activity. The reason of so early a publication is, we presume, to be found in the fact that the report of the Annual Meeting has not before been published. There is less cause for such a delay in the case of the Bath Society meeting in June, than there is for delays of the English Society's reports which relate to a meeting in July. And it will be an improvement if the meeting of next year be fully reported, as it ought to be, in the second part of the volume which is now begun. The first 48 pages are occupied with the Dorchester reports, then come papers on the agriculture of the chalk districts of Dorsetshire, and on the hill farming of Wilts and Hants; shorter papers on Potato culture, on the Management of Young Stock. Essays: on the Agricultural Steam-engine, by Mr. Morehead; on Belgian Agriculture, by Mr. Spender; on the Use and Economy of Straw by Mr. Spooner. Forty or fifty pages constitute the "Note-book," containing papers extracted from other journals. We select a passage from Mr. Spooner's essay on straw, enumerating some of the points established in it.

"1st. That straw is already used for fodder to no inconsiderable extent, being commonly given as rack-food to horses, to store cattle in straw yards, and to fatting cattle and sheep instead of hay. 2d. That Barley or Oat straw, which is generally used for this purpose, is not only somewhat richer *per se*, but is often rendered still more so by the presence of young Clover and Grasses. 3d. That as Wheat-straw forms, on the average, only a moiety of the straw grown on a farm, and as there is a considerable demand for it for litter in the neighbourhood of towns, where it should always be allowed to be sold without restriction, the remaining portion will generally be required at home for the purposes of litter. It is, however, always more profitable to employ Oat, Barley, and Pea straw for fodder than for litter, as it is not only more digestible but also more nutritious than Wheat-straw, which is better adapted for the latter purpose. 4th. The practice of keeping store-cattle in the straw-yard through the winter months, on straw alone, cannot be too strongly condemned; as it not only starves the cattle, but robs the manure. Straw may, however, be advantageously and economically used, with the addition of a cheap yet highly nitrogenous food, like Rape-cake, to the extent of 4 lbs. daily, whether roots are given or not, as the cake supplies the materials in which the straw is principally deficient. 5th. That straw can be rendered available for food to a far greater extent than has hitherto been done. By the aid of concentrated food, it may at all times be substituted for hay, and thus supply an equal quantity of nutriment at a diminished cost. It may thus furnish the dry bulky food of which all cattle require some portion, and so enable animals to be fatted on farms where it would otherwise be impossible. 6th. That the practice of using straw spread out on light land preparatory to a sheep-fold, appears to be justified by experience, whilst the too frequent practice of allowing it to remain to moulder or decay in large heaps cannot be too strongly reprobated. 7th. That the use of straw for fodder may be greatly extended with economy and profit—(1.) By having it consumed by store-cattle with Rape-cake to supply its deficiencies, or by sheep with similar assistance; (2.) By using it in the place of hay for fatting cattle, and also for dairy purposes, thus extending the area on which beasts may be fattened. 8th. It is considered that on the whole, one-half of the straw grown may be passed through the bodies of animals for food, and one-half used as litter; for, admitting that the practice of dispensing with litter altogether, and compelling animals to lie either on the cold bare floor or on open boarding with a circulation of cold air coming up from beneath, may occasionally be pursued with impunity, yet the system is neither consistent with health nor conducive to the fatting process, which requires an economy of warmth, the means of producing which are supplied by expensive food. 9th. That though, where the appliances of steam are ready at hand and frequently made use of for other purposes, it may be advantageous to cut the straw into long lengths for litter, and short lengths for fodder so that it may be mixed with other food, yet it is very questionable whether when only animal power is available, the advantages resulting from the practice are sufficient to counterbalance the expense, for although it is better to mix roots with other food, the meal or cake is available for this purpose."

Farm Memoranda.

THE MOUNT STEWART DEMESNE, belonging to Lord Londonderry, consists of 1000 English acres, and occupies a ridge of land bordering upon and overlooking Strangford Lough, about 4 miles below Newtownards. The surface is considerably diversified by those little round heights which are so common throughout many parts of Ulster, and one-half of the demesne is under plantations, the whole being surrounded by a substantial stone wall.

Forty or 50 years ago the system of farming pursued at Mount Stewart, under the direction of Mr. Greenfield, was justly considered, we believe, one of the best examples of good management which could be found at that time. Great improvements were carried on, and the cultivation of the land was conducted generally in a very superior manner. At that time it was laid down to Grass, in which state it remained until about three years ago. The stock pastured on the demesne during the 10 years it lay in Grass consisted chiefly of young beasts, and the result has afforded a very apt illustration of the exhausting nature of such a course of management, the feeding qualities of the pasture having latterly fallen away to such an extent that young cattle did not show much growth or improvement when taken off at November, from that which they had exhibited when put on six months previously. This was clearly attributable to the exhaustion of the phosphatic matter originally contained in the soil, but which being taken up and assimilated by at least forty successive generations of growing animals, became ultimately so much lessened as not to afford a sufficient supply for the requirements of those which were latterly put on to graze, and hence their non-improvement. Mr. Andrews, who, as agent on the estate, has charge of the general management of the demesne, is remedying the lack of phosphatic material by the use of phospho-Peruvian guano, at the rate of 3 cwt. per statute acre applied to the green crops, and also with bone ash. He has likewise obtained a quantity of "greensand" from the Co. Antrim, which he intends to apply to some Grass land which cannot be conveniently broken up. The greensand has been mixed for some time with 7 cwt. of salt to the ton of sand, and some hot lime in addition, and in this state it has lain for some months, in order to allow the different materials to act upon each other. The mixture will be applied at the rate of 3 tons per statute acre.

Our readers may have observed that the use of green sand as a manure was again brought forward by Dr. Hodges, at a recent meeting of that most useful institution, the Chemico-Agricultural Society of Ulster; but as we think it important that the value of this native supply of phosphates should be as widely known as possible, we beg to call attention to the following extract from a report which Dr. Hodges laid before the Chemico-Society some years ago on this subject:—

"In a report which, some months ago, I had the honour of submitting to the council of this Society, I directed their attention to the important discovery which had been made in England of the existence of a very large amount of phosphate of lime in various rocks, of the formation to which the green sand, which is so largely developed in the north-east of Ulster, belongs. . . . . The rocks of the formation to which the green sand in the south of England belongs not only contain, as I have stated in my former report, a considerable per centage of phosphate of lime, but abound in nodules, which are regarded by many geologists as being the fossil dung of extinct animals.

"Having been induced to commence the examination of the chalk formations on our north east coast, and having succeeded in ascertaining the interesting fact, that our green sand, like that of England, was a valuable source of phosphoric acid, numerous analyses of it have been made in the laboratory of the Society, and the results communicated to the public. I have also the satisfaction of stating to the society, that not only do our green sand formations afford a considerable percentage of phosphoric acid, but that, embedded in them, in various localities, are discovered a large amount of nodules, which resemble the coprolites of the south of England, in containing a large amount of phosphate of lime.

"The phosphatic nodules which I received from Ballintoy are of a small size. I have not seen any of them larger than a pigeon's egg. They are usually of a brownish yellow colour, and very hard. The nodules from Woodburn have a dark green colour, and are of various sizes, from a hazel nut to a hen's egg. They contain a large amount of carbonate of lime, and are not so hard as those from Ballintoy. Two specimens of nodules from Woodburn contained as follows:—

	Insoluble matter, per cent.	Phosphoric acid, per cent.	Corresponding to phosphate of lime, per cent.
No. 1,	15.00	22.28	47.46
No. 2,	8.20	24.90	51.34

"The Ballintoy nodules which I examined had the following composition:—

Insoluble matter, per cent.	Phosphoric acid.	Corresponding to phosphate of lime, per cent.
10.50	14.96	29.66

"Observation, both in England and in this country, has proved that soils situated upon rocks rich in phosphoric acid are of high fertility. If, therefore, this society can succeed in directing the attention of our northern farmers to the sources of phosphoric acid which the investigations made in its laboratory have shown are available in so many places in this province, a new and hitherto little regarded mineral manure will be added to our stock of fertilisers."

There are millions of tons of this substance on the coast of Antrim, and we have reason to believe that in some experiments which have been made with it, in the cultivation of Turnips, it has been found to produce, without any addition, as large a crop as an ordinary application of dissolved bones. The effect of an addition of common salt, and also of ammoniacal salts, in facilitating the solution of phosphate of lime has suggested the propriety of making trials of those substances in combination with the green sand, from which Dr. Hodges hopes for good results. At the late meeting of the Chemico Society referred to, Mr. Andrews stated that he had obtained the sand at 2*s.* 2*d.* per ton.

There was one point in which the former management at Mount Stewart appears to have been defective, to wit, in the non-application of lime, a substance, which the nature of the soil—drift overlying grauwacke—evidently required. That want will now be supplied, and in the course of tillage carried out in the demesne the same system of liming will be adopted which has been followed for several years by the Messrs. Andrews on their farm, and which we omitted to state. Their plan is to put lot lime on the Turnips two or three days after sowing, and this method has been found a very effectual preventive against the fly. According to this system the land is limed once in each rotation. From the appearance of a well filled stack-yard, the corn crop of this year at Mount Stewart has evidently been good; whilst a large breadth of Turnips, &c., showed little of that stunted growth which is but too apparent in nearly al parts of Ireland this season.

In the future management of Mount Stewart demesne, it is intended to keep 200 acres of the land most convenient to the farm offices in close cultivation, following precisely the same system which is carried out by the Messrs. Andrews on their large farm. The remainder of the demesne—with the exception of a part which cannot be broken up, owing to the thinness of the soil and the proximity of the underlying rock—will be gone over with a regular course of cropping, including liberal manuring, and then laid down to permanent Grass.

The demesne, as we have stated, lay in Grass until three years ago, when the present renovating changes were introduced, the operations commencing with thorough draining, which is now about completed. Part of the drainage has been done at 30 inches deep and 21 feet apart, part at 36 inches deep with a similar interval between the drains, and a portion at 4 feet deep, and 30 feet apart. The latter depth and distance has been partially adopted at the suggestion of the inspector of the Board of Works, in order to test the effects of those different depths and intervals, in a compact subsoil such as that which exists at Mount Stewart and elsewhere in the Co. Down. It will be observed that although the drainage has been executed under the Board of Works, there has been a departure from the very stringent rules which are laid down by that body, for the regulation of depth and distance apart, irrespective of the natural condition of the soil, and we believe that the Mount Stewart drainage is the only work of the kind in which such alteration of the rules has been sanctioned by the Board. This has arisen from the strenuous opposition made by Mr. Andrews to what he was induced to believe a useless expenditure, judging from the perfect drainage which drains 30 inches deep had effected on his own farm and that of Mr. Boyd, the subsoil of which is identically of the same nature as that found at Mount Stewart. Mr. Andrews, however, agreed to meet the Board half way, by increasing the depth of the drains in Lord Londonderry's demesne 6 inches, so that the greater part of the land has been drained at 36 inches deep, with intervals of 21 feet, and the drainage is evidently perfectly effective. The minor drains are 4 inches wide in the bottom, and the largest stones used in filling do not exceed 2½ inches. These stones are put into the drains to the depth of 9 inches, and covered with a sod laid with the grassy side under.

The minor or parallel drains are filled, as we have stated, 9 inches in depth with small stones, and the submains to the same level; the latter being "box" drains of stones, with slate soles. The 4 feet deep drains are filled somewhat deeper with broken stones than the 30 or 36-inch drains.

The following is the actual cost of the drainage at Mount Stewart:—

	1. 30-inch drain 21 ft. apart			2. 36-inch drain 21 ft. apart			3. 48-inch drain 30 ft. apart		
	£	s.	d.	£	s.	d.	£	s.	d.
Cutting, per 21 feet	0	0	4	0	0	6	0	0	9
Quarrying stones per do. ..	0	0	1	0	0	1	0	0	1½
Breaking stones, per do. ..	0	0	1½	0	0	1½	0	0	2
Carting stones, per do. ..	0	0	1½	0	0	1½	0	0	2
Putting in stones and scraw, do.	0	0	1	0	0	1	0	0	1½
Returning the earth, per do.	0	0	1	0	0	1	0	0	1½
Total per Irish perch of 21 ft.	0	0	10	0	1	0	0	1	5
Nos. 1 and 2 contain 100 perches, and No. 3 69 perches, Irish measure, including box submains of stones, with slate soles, to the statute acre, the cost of which is	4	5	0	5	1	6	4	19	3
Submains.									
Cutting, per 21 feet	0	0	5	0	0	7	0	1	0
Quarrying stones, do. ..	0	0	2	0	0	2	0	0	2
Breaking stones, do.	0	0	1½	0	0	1½	0	0	2
Slates for bottom, do. ..	0	0	1	0	0	1	0	0	1
Setting the conduit, do. ..	0	0	1½	0	0	1½	0	0	1½
Putting in broken stones and scraw, do.	0	0	1	0	0	1	0	0	1
Returning the earth, do ..	0	0	1	0	0	1	0	0	1½
Total per 21 feet	0	1	1	0	1	3	0	1	9

In accordance with the general plan of improvement which is being carried on at Mount Stewart, the old farm-yard—a spacious and well constructed set of offices

in its day—has undergone a thorough repair, the internal arrangements being to some extent remodelled. The cattle houses are commodious, and well fitted up. We observed that the cattle are tied with double chains, a plan which prevents accidents, and at the same time permits the animals to lick themselves. The gutters behind the cattle are fitted with gratings, by which the liquid manure is carried direct to the urine pit. An excellent manure yard accommodates all the solid material; and the interior of the houses, walls, and roof are regularly and thoroughly white-washed, a most important matter, and of great service in preserving the health of the cattle. A steaming apparatus has been fitted up to prepare the food, and every arrangement is complete for carrying on the system of cultivation which has been marked out. A very beautiful 14-horse-power steam engine, constructed by M'Croskery of Newtownards, drives the thrashing machinery, which is fitted with Goucher's excellent patent beaters, doing its work very cleanly and expeditiously; burr millstones for grinding food for cattle, together with sawmills, &c., are also driven by the engine. When going through the demesne, we noticed two cattle yards, situated in different parts of the grounds, and we believe it is intended to put these also in a state of complete repair, the object being to reserve them for the accommodation of young stock, whilst the home yard will be filled with dairy cows and fattening stock. These separate yards will save cartage of roots and dung, being conveniently situated at a distance from the home-yard, in that part of the demesne which will be kept in regular tillage.

From the great extent of plantations at Mount Stewart—which we noticed were being very judiciously thinned—there is, of course, a good deal of paling and other out-of-door wood work; and for the information of those who are similarly circumstanced, we may state that the paint used for such work is made up in the following proportions:—1 gallon of gas tar, 1 pint turpentine, and 2 ounces of vitriol. These ingredients are mixed together, and form, we understand, a very excellent description of paint.

In the grounds immediately adjoining the house, a similar spirit of improvement is manifested to that which is visible elsewhere throughout this fine demesne. The lawns and parterres have been remodelled, and several new drives, as well as general demesne roads, constructed.

The kitchen and fruit gardens alone cover fully seven acres, enclosed with an excellent wall, being also laid out into three divisions by two interior walls. These walls are covered with a variety of fruit trees, some of which are 90 years old, and yet bearing well. The vineries, &c., which form a continuous range, 525 feet in length, were erected in 1780. One house is occupied by a single Vine, the White Syrian; and a framed label attached to one of the pillars informs us that "this famous Vine was planted in the year 1769, by Mr. Adams, gardener, in the Pine stove that stood in the Castle Gardens, Newtownards; and was then taken up in the year 1780, and replanted by James Wallace, gardener, where it now stands in the Pine stove at Mount Stewart." It covers 800 square feet, and still bears heavily. *Dublin Farmers' Gazette.*

Miscellaneous.

Adulteration of Food.—Dr. Letheby's report on the practical means of applying within the city of London the Act passed last session for preventing the adulteration of articles of food or drink has just been published. On the Commissioners of Sewers, by the statute in question, the duty devolved of appointing a public analyst of food, within their extensive jurisdiction, which embraces the whole of the city of London, and they recently conferred that appointment upon Dr. Letheby, who is busily engaged in making all the necessary arrangements for carrying out the intentions of the Legislature in the interest of the health of the civic community at large, but more especially of that of the poorer classes. He states in his official report, of which we give the material portions, that two classes of adulteration are aimed at by the Act—first, those occasioned by the admixture of any ingredient or material injurious to the health of persons eating or drinking it; and secondly, those accomplished by the mere admixture of a substance not injurious to health, but in fraud. As examples of the first class, he mentions the use of poisonous pigments for colouring confectionery; of red lead in Cayenne pepper and curry powder, of chromate of lead in custard powders, and of the salts of copper in pickles and preserves. Of the second class, he refers to the addition of inferior nutritive matters to bread, as Pototoes and Rice; the mixing of cheap farinas, as Potato starch, the starch of Curcuma, Wheat, Rice, Bread-fruit, &c., to arrow-root; Chicory and roasted corn to Coffee; inferior roots, &c., to Chicory; Mustard husk and farina to pepper; Flour to Mustard; water to milk; oxide of iron to cocoa and chocolate, and the various facings or glazings of inferior tea. A third class of adulterations, he says, occupy an immediate place; for while they are undoubtedly frauds, they are, perhaps, also injurious to health—as the addition of alum or sulphate of copper to bread; sulphuric acid to vinegar; plaster of Paris and chalk to confectionery and Mustard; the various sophistications of ale and porter; and the still more objectionable adulterations of wines and spirits. All these may be properly made the subject of analytical inquiry, for they clearly come within the compass of the Act. It is necessary, he says, that according to its provisions the different stages of the investigation shall be conducted in a systematic manner. First, in respect of the purchasing of the article, in all cases the purchaser of an article suspected to be adulterated shall, directly he has purchased it, and before he removes it from the shop, give notice to the dealer, or the person serving him, that he intends to have the article analysed, so that the dealer may have the opportunity of accompanying him to the analyst or of securing the article in such a manner as to prevent it from being tampered with. Secondly, as regards the analysis, wherever an analyst is appointed, any purchaser of an article of food or drink shall be entitled, on payment to the analyst of a sum not less than 2*s.* 6*d.* nor more than 10*s.* 6*d.*, to have the article analysed, and to receive from him a certificate of the result. He suggests that the Commissioners of Sewers authorise their inspectors of meat and of markets to purchase samples of food or drink which he sees exposed for sale in the city, and which he suspects are adulterated.

Farming by Women.—A strong-minded lady, of Nigara county, New York, has with her daughter, taken to farming. She thus states the result, in a letter to a friend:—"Farming is not the business that I should, from choice, engage in as a life-pursuit; but what we would do is not always within our reach; and it is not wise or just for women to hang upon their husbands, fathers, or brothers for support, and sit down and do nothing, merely because they cannot find that to do which best suits their inclinations. As we have a farm, we prefer to live honestly and independently by tilling it rather than to be supported in idleness, and live and spend our time as society and fashion dictate. We hope also to encourage other women, other mothers with their daughters, who are now shut up in close rooms toiling with their needles for a miserable pittance and a most precarious existence, to come out and labour on the land in the fresh air, and earn for themselves a more independent living. There is freedom and health for woman in tilling the land as a gardener or a farmer, which can be found in no other employment. That I and my daughters know by experience. We are free to live out the pure impulses of our nature, free to breathe the pure air of heaven, free to think and act for ourselves, and free to be what God made and designed us to be—true women. We are free in a sense we could not be in any other kind of labour. We have proved that women can do all kinds of farm work. We have 5 acres of sowed corn for food for our stock, 30 acres of Hungarian Grass, 5 acres of Spring Wheat, 8 acres of Carrots, and 60 acres of Oats. All these crops are good. We have a fine crop of Onions. We have some corn (planted for human food), and Potatoes and Peas that are very good, and some not so good. We are preparing to sow 40 acres with Winter Rye and Wheat. We have also a small dairy of 19 cows. We have one girl, 16 years old, to help us, which is all the help we have beside our own daughters. Occasionally, the men who are ditching, when out of work on the ditches, help us some. But in preparing the land, in getting in and cultivating all the crops I have mentioned, we have had only seven days' work from men, and that was in drawing the drill to plant the seed. The rest of the work has all been done by the five girls and myself. We have sowed our grain broadcast by hand; and I think any good farmer would have said it was just as well done as any man could have done it—with the same experience. My heart is in the work to demonstrate to the mothers and daughters of our country the practicability of employing themselves profitably, healthfully, and without any sacrifice of true womanly delicacy and politeness, in cultivating the soil, and making for themselves happy and independent homes on the land." *American Paper.*

Calendar of Operations.

DECEMBER.

ISLE OF ELY.—Our report has been unavoidably delayed for some weeks, but this is but of little moment probably, as the work upon a farm at this season of the year is very much of a routine character, and there is but little to interest. We continue to have a good deal of rain, and the land is completely saturated. Wheat seeding as far as can be is generally completed, but some of the wet clay high lands cannot be sown, and must stand over till the spring to have the advantage of the winter frosts to pulverise and fit them for working, when they must be sown with either some of the varieties of spring Wheat, or other spring corn. All hope of sowing them with autumn Wheat must now be abandoned. On our fen soils, where early sown, the Wheat is looking green and healthy, but many complain that it is not so strong and vigorous as has been the case in other years. Probably the inferior quality of the seed may to a great extent account for this. But very little Wheat came to maturity last summer, and the consequences are doubtless daily becoming apparent. The later sown Wheats even on fen lands grow very slowly, and are greatly complained of. On the high lands much of the seed has not even vegetated, though it has been for some weeks in the ground. A friend who had examined some of these told us to-day that he was forcibly convinced that much of the seed on these strong tenacious soils would never germinate, but decay in the ground. We fear there is too much reason to apprehend such results. Doubtless there will be a smaller breadth of Wheat sown this year than usual, and if a good deal that is sown does badly, it must seriously affect our supplies of this grain another year. Mangels are now generally secured, and upon wet lands and where very late sown, are a poor and almost worthless crop; but upon dry lands, and where sown the latter end of April, are a very fair crop, about two-thirds of a good crop. Ploughing for Oats and other spring crops on the high lands and for fallows on the fen, now occupies the attention of most farmers and employs their horses. The great event of the last month was the trial of Howards' new plough for deep cultivation at Chatteris. From personal observation we are prepared to pronounce the trial a perfect success, and that Messrs. Howard have once more shown themselves competent to produce any implement which the peculiar circumstances of the country may require. Deep cultivation has become essential to successful fen farming, but until now an efficient implement for the purpose has not been procurable. We therefore rejoice in the success which has crowned the efforts of those noted plough makers, and would strongly urge all our friends and neighbours who require such an implement to avail themselves of an early opportunity of inspecting both the plough and its work, and they will then, doubtless, like ourselves, prefer to purchase a plough like Messrs. Howards', than to beg one of those ill-constructed things which are to be found here and there in the fens. The corn trade is bad—wretchedly bad—and threatens ruin to many a fen farmer who is compelled to sell at present prices; 16 stone Wheat is selling at from 32*s.* to 38*s.* per qr., which with a crop of from 3 to 3½ qrs. per acre gives a very poor return, and loses money by wholesale. We are surprised that more of our farmers do not use Wheat for feeding purposes rather than buy Linseed-cake at the present high prices. There would be a double advantage in doing this. First, it would be cheaper and necessarily pay better; and, secondly, it would remove much of the inferior qualities from the market, and by lessening supplies would tend in a short time to influence prices. We commend the consideration of this subject to all Wheat sellers. Meat of all kinds continues to sell well, and lean stock are not so depressed as they were a few weeks since. The openness of the season, and the abundance of Grass-keeping, prevent prices becoming lower. *Your Fen Reporter.*

Notices to Correspondents.

BONE DUST: *W W.* will find in the article "Bones" in the "Cyclopedia of Agriculture," a full account of experiments with bones applied in the liquid and solid form, dissolved and undissolved, coarse and fine, boiled and unboiled—on Grass, corn, green crops, &c, in fact a full discussion of the subject (by Mr. Hannam, of Yorkshire) proper rather for a systematic work on agriculture than for the columns of a newspaper.

BRITTANY COWS: *Manchester.* Mr. Baker, of Chelsea, advertises them. Considerable numbers were shown at the Crystal Palace, and at Baker Street last week. Good cows just about to calve sold for 12*l.* or 13*l.*, which may be the *market*, but is beyond the *intrinsic* value of the animal.

COATING OF WALL: *C D.* It should be cemented, and rough cast on the weather side; no mere wash will keep out rain.

DISEASE AMONG SHEEP IN SUSSEX: *C H O.* The disease in question appears to be, with some modification, that which under the designation of "the Epidemic," has, with the exception of the last two years, been so prevalent during the last 15 years, not only amongst sheep, but also pigs and cattle. In the latter, the mouth is more frequently affected than the feet, and the cattle sooner get well than sheep in consequence of the latter being generally attacked in the feet, and from after exposure to wet, the disease often degenerating into foot-root. It differs from the latter, inasmuch as the local affection, instead of preceding, follows, and is the result of the internal fever of which the disease may be considered to consist. Its cause is probably atmospheric, and all we can do is to lessen its severity and obviate or modify its ill effects. Towards the former object we may advantageously administer once to each sheep a cooling aperient and diuretic, such as 2 ounces of sulphate of magnesia and 2 drachms of nitrate of potash, dissolved in warm water, with half a drachm each of ginger and gentian added; and as a local application, the sore between the toes may be washed with a solution of the sulphate of zinc—one ounce to a pint of water—and afterwards secured from undue moisture by a mixture of tar and grease occasionally applied at discretion with or without the lotion, and also a removal to dry ground. *W C S.*

ENGLEFIELD MANGEL WURZEL: *C D.* Englefield is the home farm of Mr. Benyon, M.P. for Berkshire. The seed is grown by Mr. Horsburgh, Mr. Benyon's steward, and is, we believe, all purchased by Messrs. Sutton of Reading.

LUCIFERS: *R.* The real injury they do is by the carelessness with which children are allowed to play with them in cottages and farm yards. The idea that the quantity of phosphorus thus used is a mischievous deduction from the quantity available in bones as a manure is preposterous.

MANURES, LINSEED CAKE, &C.—The London Manure Company report that upwards of 4000 tons guano have come in since their last. Bones and bone-ashes are still scarce and dear. Linseed Cakes are slightly lower, the imports being considerable, viz., 1327 tons, chiefly from America, during the week. Rape and Cotton Cakes maintain previous rates:—

		£	s.	d.		£	s.	d.
Peruvian Guano, direct from Importers' Stores or ex Ship (30 tons)	per ton.	12	5	0	to	12	12	0
Bones	,,	4	15	0	to	5	5	0
Ditto, crushed	,,	6	0	0				
Ditto, half-inch	per qr.	0	17	6	to	0	19	6
Ditto, dust	,,	0	17	6	to	0	19	6
Animal charcoal (70 per cent. Phosphate)	per ton.	4	10	0	to	5	0	0
Coprolite, Cambridge, whole	,,	2	2	0				
Ditto ditto, ground ..	,,	2	13	0				
Ditto Suffolk, whole ..	,,	1	15	0				
Ditto ditto, ground ..	,,	2	6	0				
Nitrate of Soda	,,	13	10	0	to	14	10	0
Sulphate of Ammonia ..	,,	14	10	0	to	15	0	0
Gypsum	,,	1	10	0				
Salt in (London)	,,			..		..		
Sulphuric acid, concentrated 1.845	per lb.	0	0	1				
Ditto, brown, 1.712	,,	0	0	¾				
Superphosphate of Lime ..	per ton.	5	10	0	to	6	6	0
Blood Manures	,,	6	5	0	to	7	10	0
Dissolved Bones	,,	6	10	0				
Linseed Cakes, best American (barrel)	,,	11	17	6	to	12	5	0
Ditto ditto (bag)	,,	10	15	0	to	11	15	0
Ditto English	,,	11	0	0	to	12	0	0
Rape Cake	,,	6	10	0	to	7	0	0
Cotton-seed Cake	..	7	0	0	to	7	10	0

ROOTS IN DRAINS: *16 years Subscriber.* The specimen was received. The fibrous material we judge by the taste to have been the roots of Mangels. It is not a common case, but neither is it entirely without a precedent.

TANK: *H P.* You can easily deliver the water to a cart 50 feet off by a force pump through a gutta percha tube. Your tank should contain one month's storage at 100 gallons a day, that is, it should at least hold 3000 gallons. For which purpose, if only 5 feet deep it must be 10 feet square, or if circular 11 feet in diameter. It is not essential either to mix with water, or to keep the liquid till it has rotted: no division in the tank is necessary. The best use you could make of it would be to soak vegetable composts with it, and apply the mass by-and-by in dung.

PINE APPLES, GRAPES, ETC.

PINE PLANTS, FRUITING AND SUCCESSION.
GRAPE VINES, FROM EYES FOR FRUITING IN POTS, OR PLANTING.

JOHN WEEKS AND CO. can supply any quantity of very fine healthy Pine Plants, either Fruiting or Succession.

GRAPE VINES remarkably strong and fine, 50 varieties, all the best sorts.

JOHN WEEKS AND CO.'S HORTICULTURAL SHOW ESTABLISHMENT is entirely devoted to the growth and Forcing of GRAPES, PINES, PEACHES, FIGS, CUCUMBERS, and other choice Fruits. The whole open for inspection, thereby showing the most improved plans of HORTICULTURAL BUILDINGS with the VENTILATING and HOT-WATER APPARATUS in full operation.

JOHN WEEKS AND CO., Horticultural Builders and Hot-Water Apparatus Manufacturers, King's Road, Chelsea, London. Plans, Estimates, and Illustrated Catalogues free on application.

ROBERT NEAL, NURSERYMAN, Wandsworth Common, S.W., begs to call the attention of buyers to his large and well selected stock of EVERGREENS and FLOWERING SHRUBS, ORNAMENTAL TREES, AMERICAN PLANTS, FRUIT AND FOREST TREES, STANDARD AND DWARF ROSES of every description. A large stock of BOX-LEAF EVERGREEN PRIVET, from 1 to 6 feet for hedges; GREEN HOLLY, 1 to 6 ft.; RICH BOG and LOAM for American Beds; LEAF MOULD. The Nursery is 10 minutes' walk from Clapham Common, and New Wandsworth Station, Crystal Palace Line.

LARGE TREES, ETC.

WM. PAUL (Son and Successor to the late A. Paul), Cheshunt Nurseries, Waltham Cross, N., has a quantity of large handsome TREES, Evergreen and Deciduous, which must be cleared off 10 acres of the old Nurseries very shortly, and will be sold cheap. Cedrus deodara, Cedar of Lebanon, Yews, Box, Laurels, Arbor-vitæ, Privet, Red Cedar, fine specimens of choice Conifers, Alders, Planes, Poplars, Elms, Limes, Fruit Trees, &c. All have been frequently removed and rise with plenty of fibrous roots. Carefully taken up and delivered free to any railway station in London. Further particulars on application.—Please address WILLIAM PAUL, Cheshunt Nurseries, Waltham Cross, N.

TREE AND SHRUB CATALOGUE.

JOHN CRANSTON begs to announce to his Patrons and the Public generally, that his DESCRIPTIVE CATALOGUE of Conifers, Ornamental Trees, Evergreen and Deciduous Shrubs, &c., is now ready for distribution, and will be forwarded on receipt of one postage stamp.

The above contains important and interesting notes with regard to the height the Trees enumerated attain, Native Country, date of introduction, and in the case of Flowering Shrubs, the colour and time of flowering.

Nurseries, King's Acre, near Hereford.

MESSRS. JOHN AND CHARLES LEE have the pleasure to offer new seed of their WHITE SPROUTING BROCCOLI FOR 1860–61. This valuable Vegetable has established its character for hardiness by withstanding the late severe winter, when nearly every other kind of Broccoli was destroyed. It also produced an abundance of secondary heads as shown in the Photograph (published the first Saturday in each month), and was in every way equal to the description given of it last year. Price 2s. 6d. per packet, to be had of all the principal Seedsmen.

Nursery and Seed Establishment, Hammersmith, London, W.

HIMALAYA FRAME CUCUMBER.

WOOD AND INGRAM beg to offer the above as the very best White Spine grown by them, being short in the handle, very prolific, long enough for anything, and sets freely and well at any time of the year. Packets, 1s. and 2s. each. Also the following fine varieties in 1s. packets:—Gen. Outram, Telegraph, Pea Green, Manchester Prize, Robinson's Defiance, Phenomenon, Kelway's Prolific, Perfection. Postage Stamps with order respectfully requested.

Huntingdon Nurseries.

THE BEST HOUSE AND FRAME CUCUMBER, "WILLIAM BROWN,"—This excellent house and frame variety is offered not as an exhibition kind, but as one of the best for general purposes, being a profuse bearer, of very fine quality, and medium length, such as every Gardener would wish to possess who has the daily wants of a household to meet, or a good marketable fruit to supply. It is held in the highest estimation by all the Gardeners in the neighbourhood where it was originally raised. Stock limited. Price 1s. per packet, free by post.

To be had only from JAMES TYNAN, Seed Warehouse, 68, Great George Street, Liverpool.

VEGETABLE AND AGRICULTURAL SEEDS, &c.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that they are now prepared to execute with NEW AND GENUINE SEEDS all orders they may be favoured with.

Their PRICED AND DESCRIPTIVE CATALOGUE, containing all NEW VEGETABLES PROVED TO BE GOOD, and all the best of the older varieties, will be forwarded post free on application. An inspection and comparison with prices of other firms is solicited.

The following are particularly recommended as very superior varieties in their respective classes, and should be included in the most select collections:—Beet, Compact topped; Broccolies, New White Sprouting, Winter White (true); Brussels Sprouts, Improved Dwarf; Cauliflowers, Early Dwarf Erfurt, New Early Mammoth or Frogmore Forcing; Celery, Imperial Dwarf Red, Nonsuch, Colewort Rosette; Leeks, Ayton Castle Giant, Hybrid Prize; Lettuces, Alma, Moor Park, Versailles; Peas, Early Prolific, General Wyndham, Perfection

Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

NEW METHOD, COMBINING ECONOMY AND EXCELLENCE.

JAMES TYNAN begs to invite the attention of Florists and Gardeners to his method of supplying SEEDS. In order to meet the wants of a large class of Amateurs and Gardeners, he has adopted the plan of making up seeds of the very best quality in small quantities, so that with the most economical outlay the small garden may be embellished with flowers of the greatest perfection and merit. This method has received very substantial approval from Florists and Gardeners in all parts of Great Britain, in the numerous orders annually received, and the flattering testimonials voluntarily tendered. GERMAN ASTERS and STOCKS of unequalled merit, BALSAMS, ZINNIAS, CALCEOLARIAS, CINERARIAS, PHLOXES and all the new annuals, both English and foreign (such as are usually sold in large expensive packets only), with every variety of Garden Seed worthy of cultivation.

The new French DOUBLE ZINNIA ELEGANS (see *Gardeners' Chronicle*, Sept. 22, 1860), and the splendid new HYBRID and other DIANTHUS, at 6d., 1s., and 2s. per packet. Priced Lists on application.

Seed Warehouse, 68, Great George Street, Liverpool.

PINE-APPLE PLACE NURSERY, EDGEWARE ROAD, W.

ARTHUR HENDERSON AND CO. beg respectfully to announce that their CATALOGUE of Kitchen Garden and Flower Seeds for 1861, with a list of Garden Implements, &c., is now published, and will be forwarded postage free, on application.

They particularly desire to call the attention of the Public to their "CELEBRATED SHORT-TOPPED GARDEN BEET," the only variety that really will repay the grower; colour, flavour, and quality, are such as to render it worthy of extensive cultivation; also "SNOW'S TRUE WHITE WINTER BROCCOLI," MOOR PARK LETTUCE; those very superior sorts as yet but little known, namely, the PALATINE, and VERSAILLES CABBAGE LETTUCES; neither of these are disposed to run to seed during the hot summer months; also the PINE APPLE PLACE WINTER BROWN COS LETTUCE superior to Alma; the WHITE AND BLACK SPINED IMPERIAL CUCUMBERS, HENDERSON'S CHAMPION OF THE WORLD CUCUMBER, LESLIE'S LONG RIDGE OUT-DOOR CUCUMBER; the new SPROUTING OR FEATHER STEMMED SAVOY, a scarce but most delicious Green; the "CHAMPION CABBAGE," "MITCHELL'S HARDY CAULIFLOWER," "LESLIE'S LATE WHITE BROCCOLI," "ROSETTE COLEWORT," "REED'S CELERY," "HENRY'S AYTON CASTLE GIANT LEEK," and other striking and first-rate Vegetables, which may be thoroughly depended upon as heretofore.

NEW FUCHSIA, MADAME CORNELISSEN.—Among the white corolla class, is the best double, deepest coloured sepals in contrast, best reflexed, more profuse in bloom, and best habit. Plants young and free in growth, well adapted for making specimens in the coming season, offered at 3s. 6d. each, post free, 4s. 6d.

PETUNIA LADY EMILY PEEL, 3s. 6d. each, and THE QUEEN, 2s. 6d.

PETUNIA ANNIE KIEN.—Double crimson, with picturesque white margins, 3s. 6d. each.

TREE CARNATIONS, full of flower and bud.

THE BULB GUIDE, for Amateur Growers, is now published, and may be had of Messrs. HENDERSON in exchange for 13 postage stamps; also a Coloured Lithographed Plate of the Wellington Nursery (22 inches by 15), on receipt of 12 stamps.

E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

EARLY FLOWERING BEDDING TULIPS.

The finest Collection of the above are described and Priced in E. G. HENDERSON AND SON'S BULB CIRCULAR, which may be had on application (postage free), also notices of the following:—

LILIUM GIGANTEUM.
" " CORDIFOLIUM.
" " SPECIOSUM (LANCIFOLIUM) GRANDIFLORUM.
AMARYLLIS.—A splendid collection
CYCLAMEN.—The finest collection of this charming plant.
SCILLA SIBIRICA.—The most brilliant blue spring-flower.
A PRICED LIST OF Garden Plants with silvery foliage.
" " " with variegated foliage.
" " " with ornamental do.
" " early Spring-flowering Garden Plants.
" " New French blotched Pansies.

GYNERIUM ARGENTEUM, per 100 or 1000., each 6d., 9d., to 2s. 6d.

LADY EMILY PEEL PETUNIA. (Surpassing Shrubland Rose, Marquis de la Ferté, and Countess of Ellesmere).

ANNIE KIEN. The greatest novelty of the season in Petunias.

CLOTH OF GOLD and GOLDEN FLEECE.

The above Summer Bedding Geraniums have proved to be the finest of all varieties in their section—surpassing the Golden Chain and others in their close and dense habit, richness of leaf-tint, and picturesque effect, presenting a more even and unbroken surface of golden verdure than any other known plants

CAMELLIA TRICOLOR IMBRICATA PLENA.

NEW WHITE COROLLA FUCHSIA MADAME CORNELISSEN. A fine double white corolla with gracefully recurved deep scarlet sepals, showing prominent oval, white petals, not too heavy, the beauty of which is considerably enhanced by the projecting rich violet crimson filaments, anthers, and styles. The habit of growth is compact and free blooming, admirably adapted for exhibition specimens. Young plants now offered will make splendid plants for competition in the coming year.

BOUGAINVILLÆA SPECTABILIS. 5s. each. (The magnificent conservatory climber.)

DIANTHUS CHINENSIS HEDDEWIGI.
" " LACINIATUS.
(Strong plants for spring flowering, 6s. and 9s. per doz.; and new Seed, 6d., 1s., and large packets, 2s. 6d. each.)

Wellington Nursery, St. John's Wood, London, N.W.

NOTICE.

SOUTH EASTERN NURSERIES AND SEED ESTABLISHMENT, ASHFORD.

W. J. EPPS, JUN., begs respectfully to state that he has taken the above Nurseries of his father, and has a large stock of ORNAMENTAL SHRUBS and well grown CONIFERÆ, consisting of Wellingtonias, Araucarias, Pinus Pinsapo, Smithiana, Deodars of all sizes; also a quantity of large deciduous Trees for belting Parks, Cemeteries, &c., which he will dispose of very cheap. An extensive collection of Trained and Standard FRUITS, ROSES, &c.

Every attention will be given to the commands of those who may favour him with their patronage, and it will be his constant care to merit them.

SEEDLING ASH, 5l. per 100,000.

WANTED, a quantity of FRUIT STOCKS, for cash. Sample and price required.

AGRICULTURAL AND HORTICULTURAL SEED ESTABLISHMENT,

HIGH STREET, MAIDSTONE.—NURSERIES: NEAR TO AND ADJOINING THE RAILWAY STATION.

W. J. EPPS takes this opportunity of sincerely thanking his Patrons and Friends for the very liberal support he has received during the last 20 years, and respectfully informs them that he has removed to his NEW NURSERIES, situated as above.

They are now complete with a large Transplanted Stock of every description (more especially Fruit Trees).

He has expended a large sum in the arrangement of the Grounds (which contains some magnificent specimens) and also in the erection of Plant Houses, Pits, &c.; few Nurseries possessing a better or larger collection

The Seed Business is carried on, as before, at the Shop in High Street.

The Business at Ashford he has given up to his eldest Son, who he trusts will retain the same support which he has hitherto received at those Nurseries.

W. J. E. will now devote the whole of his attention to his establishment at Maidstone, and respectfully solicits the continuance of those favours which it has been his good fortune to receive, and which it will at all times be his anxious study to merit.

Every article will be sold at the lowest possible price, and a liberal discount for cash payments.

CATALOGUES and LISTS forwarded on application.

EXHIBITION OF CHRYSANTHEMUMS.

JOHN SALTER, F.H.S., begs to inform the Public that his unrivalled Collection of these beautiful flowers will be in bloom throughout December. He invites Amateurs to visit his Nursery, where they will see, both under glass and in the open ground, not only all the varieties in general cultivation in their natural growth, but very many SPLENDID SEEDLINGS, large flowers and Pompones, which he will have the honour to send out early in 1861.

The WINTER GARDEN, which has been considerably enlarged, will present a 'coup d'œil" unique in this or any other country Free admission every day except Sunday

Versailles Nursery, William Street, near Hammersmith Turnpike, London, W.

HYACINTHS FOR BEDS, &c. &c.

WM. CUTBUSH AND SON can supply a VERY SUPERIOR quality of HYACINTHS for beds in SEPARATE DISTINCT COLOURS—dark blue, pale blue, pink, crimson, pure white, blush, and yellow—at 30s. per 100, or 5s. per dozen.

For description and prices of choice GLADIOLI and other BULBS, see their AUTUMN CATALOGUE, post free on application.—Highgate Nurseries, London, N., ONLY.

GERANIUMS, HERBACEOUS AND ALPINE PLANTS, ORCHIDS, CHRYSANTHEMUMS, HARDY VARIEGATED PLANTS, &c.

MESSRS. PARKER AND WILLIAMS beg to inform their friends and patrons that their new priced and descriptive CATALOGUE of the above, to which are added supplemental Lists of Fuchsias, Stove, Greenhouse, and Hardy Plants, Ferns, Ornamental Foliage and Variegated Plants, Fruit Trees, &c. (which include the best new plants of the season, is now published, and will be forwarded post free on application.—Paradise Nursery, Seven Sisters and Hornsey Roads, Holloway, London, N.

WINTER AND SPRING FLOWERING PLANTS.

F. AND A. SMITH are now sending out at reasonable prices finely grown plants of Acacia, Azalea, Aphelexis, Boronias, Burchellia, Chorozema, Cineraria Cactus, Cytisus, Carnation (Tree), Daphne, Epacris, Ericas, Eutaxia, Gardenias, Geraniums, Hydrangea, Primula, Prostranthera, Poinsettia, Polygala, Roella, Roses, Indica minor, Col. Fabvier, Mrs. Bosanquet, Géant des Batailles, Yellow Noisette, Gloire de Dijon, Cramoisie supérieur, &c. Tremandra, Greenhouse Climbers in variety. Prices with Lists on application.

Dulwich, Surrey, S.

ROYAL EXOTIC NURSERY, CHELSEA, S.W.

JAMES VEITCH, JUN., respectfully announces that his CATALOGUE OF KITCHEN GARDEN AND FLOWER SEEDS for 1860, with a List of Implements and other Garden requisites, is now published, and will be forwarded post free on application.

J. V., Jun., devoting his personal attention to this department of his business, can warrant his SEEDS TRUE TO NAME, and of the MOST GENUINE description.—Dec. 29.

The Gardeners' Chronicle.

SATURDAY, DECEMBER 29, 1860.

WE have the satisfaction of announcing that HER MAJESTY has been most graciously pleased to permit the Horticultural Society to bear henceforward the name of THE ROYAL HORTICULTURAL SOCIETY. Consequently the letters affixed to the names of Fellows will be F.R.H.S. instead of F.H.S.

THE important subject of GARDENERS' EDUCATION, which of late has slumbered, seems awakening now that practical work is ice-bound, and that men collect round fires to discuss matters speculative. At least our correspondence leads us to infer that such is the case. Let us then cast a glance over those many letters that have been called into existence by a scheme for better education propounded by a certain Mr. LINAGER so long since as June last. His plan was to institute authorised examinations to which those who chose to do so might submit. The effect he thought would be that those who could pass with credit would stand higher than others before the public, and would command better places with higher wages. To avoid the necessity of reference we reprint LINAGER's scheme, adding such explanations as a recent personal interview with its author has suggested.

I.—PRELIMINARY EXAMINATION:
(To be passed at any time between the ages of 18 and 21.)
1. *Writing.*
2. *Spelling.*
3. *Arithmetic* including book-keeping and timber-measuring.
4. *Land Surveying.*

II.—PASS EXAMINATION
(To be passed between the ages of 22 and 23.)
5. *Practical Skill* in cultivation.
6. *Practical Botany* and naming plants at sight.

III.—EXAMINATION FOR HONOURS
(To be passed between the ages of 24 and 25.)
7. *Vegetable Physiology*, in its relation to cultivation.
8. *Geography*, so far as relates to vegetation
9. *Climate*, in its relation to vegetation.
10. *Mathematics* (optional), not to go beyond the first book of Euclid.
11. *Pomology*, naming fruits at sight.

By this plan Gardeners would have three opportunities of showing the extent of their acquirements. They could be in the first place examined in writing, spelling, arithmetic, and land surveying; and those who could go no further would be called THIRD CLASS MEN. Although these would be in fact the lowest among educated Gar-

deners, they would stand far above all who could not pass, and being young men not exceeding 21 years of age would be likely to make further progress even although they should not go into the next class. Next to this would come an examination in practical Gardening, and the knowledge of the names of plants; and those who passed it would be SECOND CLASS MEN. It is to be supposed that most third class men would go into the second class; for when a man calls himself a Gardener, however low he may be, it is expected that he should know the names of his plants and how to grow them. Lastly, a much higher examination is proposed, which none but first-rate candidates could hope to pass. In this it would be necessary to prove an acquaintance with Vegetable Physiology, Geography, and Climate in their relation to plants, and with the names of fruits, to which might be added the rudiments of mathematics, but not unless the candidate desired it. Those who passed this would be FIRST CLASS MEN. The way in which Gardeners look at this proposal is upon the whole encouraging. It is true that some of our correspondents see insuperable difficulties in the way of carrying it out. But let us see to what they amount.

1. Some say that the wages of Gardeners will not admit of such an education. They think the expense of it overwhelming. But what is the expense? Surely no one will say that a Gardener need know less than a sharp lad out of a national school; or that he can dispense with reading, spelling, writing and cyphering, which is all that is required of the third class. "Oh! but" some timid youth exclaims, "there is book-keeping, timber-measuring, and land-surveying." If he reflects a little he will find that these are only applications of cyphering; and surely a Gardener ought to be able to keep his little garden accounts, to measure the timber in a tree on occasion, and at all times to say of how many rods, &c., a piece of ground may consist. Not being able to do these things creditably he has no claim whatever to the name of Gardener. Nor is there anything in these subjects which cannot be learned in a country village. We must own indeed that young men are to be found, far past the age of 21, who are deplorably ignorant of such simple matters as these. We have such a case in our eye. An extremely well-conducted young man who had passed some years in two great gardens, one in the South the other in the North, obtained an engagement under the assurance that he was very well educated and perfectly acquainted with common plants. When put to the test it was found that he had no notion of the manner of keeping the simplest form of account; for 50 he wrote 05, his pence he called ll, he could neither cast up a column of figures, nor express by figures a sum of money. As for plants, he called the Snowflake a Snowdrop, took an Alder tree for an Oak, when shown a Sweetbriar did not know what sort of Rose it was, and by way of climax pronounced a Privet a Myrtle and a Sweet Bay a Laurel. This be it observed is no exaggeration written for effect, but a rather favourable description of facts. Now this young man had no idea that he was ignorant; he had announced his acquirements in full conviction that he possessed them; and his deplorable ignorance was really chargeable to the head Gardeners in the great places where he had been so long; for he was by no means unintelligent, and was anxious to learn. Will any one, in the face of such cases as this, continue to say that the education of young Gardeners requires no improvement? Systematical examinations—in order to obtain certificates of knowledge—would render such instances very rare. For the discredit of being unable to pass would fall not merely on the rejected candidate, but upon the head Gardener under whom he had wasted the most precious years of his life. And that would be a result the importance of which cannot be over-rated.

2. A second objection taken to LINAGER'S scheme is that it fixes an educational standard far too high, considering the wages usually paid to gardeners; and that an uneducated man may without education, but by industry, fill a first class place. Herein seems to lie a double fallacy. Without such an education as is suggested for third class men, no person has a right to claim the name of a Gardener; such an education is therefore as necessary as a suit of clothes. Nor will any man with persevering industry remain uneducated; such an event is impossible. Moreover there is little in the two first parts of LINAGER'S scheme that any intelligent young gardener cannot teach himself, with the aid of a few shillings for books, and the help which a head gardener would be willing to give him, if he were really in earnest in the endeavour to improve himself. As to the standard being too high, it will, we hope, have been seen from what has already been said that that objection does not apply to third class men. Neither does it to the second class, in which most men will be content to remain. For what does this second class scheme require? *Satisfactory proof* of practical skill as a cultivator; this proof to consist of a certificate from some head gardener admitted by common consent to be a master of his business. We think it must be allowed that no gardener ought to obtain a place unless he can produce such a proof as this. It also demands a knowledge of practical Botany, and the ability to name plants at sight. The meaning of LINAGER in proposing this was that a knowledge of common plants should be insisted on, so that when the gardener is asked about the trees and shrubs, and flowers and wild plants that are to be found in every garden, he should be able to name them correctly. We appeal to all reasonable men whether it is not disgraceful in a Gardener to call a Sweet Bay a Laurel. A farm bailiff might as well call a Guinea fowl a peacock, or a gamekeeper a rat a weazel. This kind of knowledge is as indispensable as that of pruning or training, or cropping. We are assured by LINAGER that his proposal had no higher aim. And we shall not do young gardeners the injustice to believe that they would shrink from such an examination.

It is perfectly true, as a correspondent remarks, that some of the worst gardeners that have ever lived were men possessing a good deal of Botanical knowledge. We admit the fact. We know how that great garden in the East was maltreated by such a gardener, the Vines bearing more bugs than Grapes, and the Peaches being principally the repast of red spider. It is perfectly true that such things have happened within our own memory, and for all we know to the contrary may be happening now. But surely that is a strange kind of reasoning which says these things happen because the gardeners know something of Botany. We should rather say that they happened because the gardeners knew nothing else.

It is true that for the first class of gardeners qualifications of a much higher kind are demanded by LINAGER; and we admit that no inferior men will possess them. But they are not intended for inferior men. On the contrary, only men aspiring to the great places in the land would be likely to come forward; and those who passed the ordeal would be sure to secure such places. It may be true that second rate men would no longer be able to obtain places requiring first-rate talent. But that we regard as one of the best results to be expected from the adoption of LINAGER'S proposals.

These seem to be the general kinds of objection taken to the formation of what in some respects resembles a Horticultural College. In our next we hope to examine the question in another point of view.

IT is not fair in gentlemen calling themselves Botanists to charge Gardeners with an EXTRAVAGANT MULTIPLICATION OF NAMES, seeing that such Botanists have themselves set the bad example. Unless indeed it be alleged that the Gardeners set the example which some Botanists have taken to following. But the latter will hardly, for the sake of what little credit remains to them, acknowledge so great an inferiority. We say *some*; we ought to have said many; for the evil of preposterous subdivision among both the genera and species of plants has spread too widely, is extending still, as a cancer invading the animal frame, and like that fell disease threatens to destroy the body itself. Fortunately a small band of men of science who are really botanists is making a vigorous stand in opposition to the mischief, and will no doubt eventually extinguish it; but infinite harm has been done, and more may follow. In fact the nomenclature of the Vegetable world is becoming gradually enveloped in a fog of such density as to be impenetrable by the clearest eyes. Objects which in the days of LINNÆUS were plainly observable have now become mere nebulæ, and nobody's vision can separate the confluent gleams of indefinable particles.

Take for example that common Herb-Robert, to be found opening its little rosy eyes at the foot of every hedge. We once knew it as *Geranium Robertianum*; but now, if a PSEUDO-botanist, as the members of the hair-splitting party must be called, be shown the plant he may assure you that it is *Geranium Lebelii*; oh, no, will reply another, not at all, it is *Geranium semiglabrum*; you are quite mistaken, cries a third, I assure you that it is the true *Geranium modestum*; not at all, exclaims a fourth, it wants the peculiar characters of that excellent species so well pointed out by my learned friend Mr. JONES: there can be no doubt about its being *Geranium simile*. Ah, gently insinuates a young and ardent Pseudo, dear friends, I really cannot concur in these opinions; it is not at all what you suppose; I should much rather take it for *Geranium Villarsianum* or *mediterraneum*; unless, indeed, it should be *Geranium minutiflorum*; it may be any one of the last, but has nothing to do with the others. Such is the jargon of the Pseudos, each of whom admires and eulogises "the singular acuteness of his very able and most learned correspondent;" but cannot quite agree with him, and proposes a rectification; which shows that he is himself more acute, more able, and more learned still.

Nobody has exposed this new heresy more resolutely than M. CARRIÈRE, an excellent practical Botanist, and a man of sound good sense, from whom we borrow further examples of the doings of our friends the Pseudos. For instance LINNÆUS called our common Buttercup RANUNCULUS ACRIS; what blindness! Pseudo acuteness has found that it consists of six quite distinct (they call them *new*) species, viz., *stipatus*, *Friesianus*, *Borœanus*, *mixtus*, *rectus*, and *vulgatus*. As to ERODIUM CICUTARIUM; LINNÆUS must have been dreaming when he called that a species; a species indeed! We find it a conglomeration of perfectly distinct species, all of which must have new names; is there not *triviale*, and *bicolor*, and *hirsutum* and *commixtum*, and *pallidiflorum*, and *Borœanum*, and *Ballii*, and *littorale*, and *arenarium*, and *villosum*, and *tolosanum*, and *fallax*, and *Carioti*, and *provinciale*, and *prætermissum*, and *sabulicolum*, and *carneum*, and *subalbidum*? As for Sainfoin, ONOBRYCHIS SATIVA, it has long since perished and been succeeded by seven others. White Clover is transformed into seven, the Dandelion into 12, Eyebright into 11, and the wild Pansy into 24—capital *new* species. What, says M. CARRIÈRE, "would LINNÆUS say, could he rise from the dead? Perhaps he would be comforted when he saw the quality of the quantity." The Pseudos, however, evidently think quality unimportant if there is but quantity enough. They must regard the mighty Swede as a very poor fellow; and as for his authority there is no authority but their own. What a happy thing it is that common sense still dwells upon this earth.

How the Pseudo race came into the world is not exactly known. The general belief is that its dam was vanity, its sire inexperience. And that may very well have been the case; for if not true it is very like truth. It is to be hoped that since it is, upon this supposition, a mere mule it will, like other animal hybrids, eventually die out or become helplessly sterile. In the meanwhile we see no sign of increase; on the contrary it is already suffering from that *décadence* which alarms our friends across the water. Nowhere has it been more mercilessly handled than in France, and if either formal rebuke or clever quizzing will accelerate extinction, the day of the catastrophe is at hand when Pseudos will belong to Professor OWEN'S Palæontological museum. "I cannot but think," says M. DECAISNE, one of the most scientific of French Botanists, "that Natural History in general after having been for many years a mere science of observation, ought to endeavour to become a science of experiment; and that Botany in particular should have recourse to experimental proof for the purpose of fixing in some definite and certain manner the characters of an immense number of badly determined [so called] species. Let me add that it would be an immense gain if descriptive Botanists would undertake to condense species by reducing them to really fixed and natural types instead of dividing and multiplying them infinitely, as has been the fashion for the last 30 years. This is not my opinion alone; it is also that of my excellent friend Dr. HOOKER (see his introductory essay in the Flora Indica), and I may say of most serious monographists, who perceive instinctively that the road in which science is now travelling, and here I speak of both Zoology and Botany, must sooner or later lead to chaos, which would be the death of science." *Note sur l'Organogénie florale du Poirier.*

In this opinion we heartily concur. The subject has been taken up in earnest in Paris, and attended with very remarkable results, as has been shown by NAUDIN'S curious examination of the races of Gourds, Melons, and Cucumbers.

And it must be obvious that more solid reputation is to be gained by establishing experimentally a few positive truths than by conjuring up a Phantasmagoria of vegetable ghosts that vanish as soon as they are seen. It is true that it will not minister quite so much to personal vanity, but it will conduce far more to the honour of science, and will assist most powerfully in extinguishing a race of little pretenders.

WE think our correspondents would much oblige each other if they would communicate the lowest degree of cold experienced this week in their respective localities. The variations have been, as far as already known, most remarkable. Thus the lowest temperature near London has been 4°; while in Nottinghamshire (according to Mr. LOWE) it has fallen as low as 13°.3 *below zero*, near Brigg in Lincolnshire to 12°.9 below zero, and in Cheshire near Tarporley to 8° below zero; while at Wallingford it was not below 0, near Birmingham it was only 1° below zero, and in Berkshire was 2° above. If we receive any sufficient number of returns, in the *early* part of the week, they shall be abstracted for general information. In the meanwhile we give in another column a few cases for the temporary information of our readers.

MYCOLOGY.—No. XXXIX.

SCHIZOPHYLLUM COMMUNE, *Fr.*—Few genera are more curious in structure than that to which our present Fungus belongs, and none can exhibit more clearly the characters of its section. The true gill-bearing Fungi are distinguished by possessing plates which consist of two membranes folded together so as to make one, or which are easily separable into two. In some genera or species this is more clearly the case than in others, but if any confirmation were wanted of the correctness of the theory, we have it in *Schizophyllum*, in which the gills naturally split through their whole length and breadth into their two component parts, the free edge of either membrane curling over, and becoming revolute, so that the hymenium seems composed of little close set radiating membranous rolls or curls. The structure is most easily seen in a thin vertical section, and presents a curious object under a low magnifying power.

Schizophyllum commune appears under a great variety of forms, which according to the views of authors are considered as so many species, or as mere varieties. The only form which occurs in this country, and that very rarely, except on imported wood, is of a pure white or pinkish grey, fan-shaped, with the margin waved or slightly lobed, more or less narrowed behind, so as to form a spurious stem; the surface is tomentose, and frequently minutely scabrous, or rough with little points consisting of small bundles of threads, and is often more or less zoned or grooved concentrically; the gills are of a pale chocolate brown or pinkish grey. In exotic forms the pileus is often deeply lobed, the lobes themselves being very narrow and semi-cylindrical, and sometimes again divided so as to appear forked or branched. The modifications are indeed almost infinite, so that it is in general scarcely possible to select precise characters for the distinction of species.

No Fungus is more common in tropical countries than *Schizophyllum commune*, but as we proceed towards the north or south from the Equator it becomes gradually less frequent till it altogether vanishes. So rare is it in England in our woods and forests, that a very few botanists only have ever met with it; while on the contrary, in our stoves it sometimes occurs in the utmost profusion. In the Regent's Park Gardens, for instance, we have seen hundreds of specimens at the same time, and in such situations it forms a very attractive ornament, looking like some curious shell.

As the spores of Fungi are so light and minute they are wafted by the winds in every direction, and in favourable circumstances, where vegetation is rapid, and the species requires no long time for its development, exotic species may occasionally make their appearance in our woods and pastures. The species of warm climates are, however, in general so impatient of cold that they do not become permanently established. The first frost kills the spawn and destroys the vegetative powers of the spores which have been scattered abroad. In other cases continued drought may prevent the establishment of a species which requires long moisture. It is to these or similar causes doubtless that species keep within certain limits, while the same species may occur indifferently in similar climates in either hemisphere. In proportion, however, as climates are not subject to extremes, there will be often a great admixture of species, and thus in the equable temperature of some of the southern islands, we have truly tropical or subtropical forms mixed with others which are as truly plants of temperate regions. It is very possible that in such countries as our own, the spores of species which are never perfected with us may germinate, and go through the first phases of growth. Several kinds of mycelium, such as *Anthina flammea*, are of frequent occurrence, without ever proceeding beyond a certain barren condition; and of which, indeed, the perfect fruit-bearing state is unknown, and on the contrary, some species which bear fruit readily in this country are always barren in others. It is well known that amongst flowering plants there are many species which flourish far more luxuriantly when introduced into other countries than they do at home. Some of our common weeds for instance, as *Rumex acetosella*, in the southern hemisphere almost bid fair to drive out the weeds of native growth by their extreme luxuriance. Something of the kind we believe occurs occasionally amongst Fungi. While it is curious that on the one hand the Fungi of one season are so similar to those of another, with the exception of a few rarely developed forms, there are occasionally extensive and permanent growths of species which have escaped previous observation. The curious little Fungus of the Potato murrain is a case in point. It was never observed in this country till 1845, but since that time the Potato crops are frequently white with it, as if covered with hoarfrost. The Vine mildew is another case, but not so striking, because in all probability it is a mere modification of some European Fungus, while the Potato Fungus appears certainly not to have been in the first instance of European growth, except indeed it may be regarded as the introduction of a new species into the vegetable world by the fiat of the Creator!

SCHIZOPHYLLUM COMMUNE, *Fr.*
Copied by permission from Dr. Greville's Scottish Cryptogamic Flora.

Schizophyllum commune is by no means the only Fungus of foreign growth which occasionally makes its appearance amongst us. *Lenzites sepiaria*, for instance, is an occasional visitant, but though we have found it in rare beauty and extreme profusion on imported Fir poles, and on the platforms of several railway stations, we have never seen a single instance in which it could be supposed to be of native growth. And this is the more singular because it is developed in the open air, and does not require protection like *Schizophyllum*. *M. J. B.*

SIR GEORGE GREY'S ADDRESS

AT THE OPENING OF THE NEW LIBRARY AND MUSEUM AT THE CAPE OF GOOD HOPE, IN THE PRESENCE OF PRINCE ALFRED.

AT the opening of the new Public Library in Cape Town, after briefly referring to the early history of the Northern portion of the continent, as affording a parallel in previous ages to the efforts now being made for the promotion of civllisation in the present, Sir George Grey proceeded:—

Twice have the inhabitants of Alexandria, in northern Africa, done that which we have again this day assembled to attempt to do, and have raised up a library which was an ornament to the world, and twice has it been swept away. Again, when Alexandria was a favourite seat of the Patriarchs of the Eastern Church, was its library once more enriched by a large collection of books, and again was this library utterly destroyed, and Christianity itself almost swept from the country by hordes of invading Saracens. After that time, Alexandria, which had principally derived its wealth from the commerce of India passing through it, speedily declined, and this is attributed to the passage to India round the Cape of Good Hope having been discovered in 1497, and to a great part of the commerce of the East having been diverted in that direction. Yet with apparently such slight encouragement before us, we here in the South of Africa have again boldly entered on the attempt of establishing civilisation and Christianity in this continent, and of spreading their blessings through the boundless territories which lie beyond our borders.

Those who have preceded us here as colonists have done much to lay the foundation for such an attempt; they have already spread over a great extent of territory, large numbers of the coloured races have accepted the doctrines of Christianity and have adopted some of the arts of civilised life, and many others are daily following their example in these respects. But still we are a small and scattered people, with many dangers and enemies around us and in our front, and with a task before us requiring all our energies and well and ripely matured plans, if we hope to accomplish it. And we do not doubt that we shall succeed, for the cause we labour for is the promotion of truth and knowledge and the carrying out of God's service upon earth. We have as the leaders of our van a race of hardy, enterprising frontier men, patient of fatigues and want, self-reliant, and many of them good and pious men, who have already spread far into the interior. Recent discoveries have shown, too, that we have much in our favour. It is not known that at least almost to the equator a high plateau exists in the interior of this continent, healthy and habitable for Europeans, diversified in some spots with mountains covered with perpetual snow, traversed by rivers which have their origin in immense lakes, which wind in some parts through forests, in others through pasturage, which already supports sheep, and generally through a country yielding good returns to the husbandman. This territory is inhabited thinly by native races, who form for the most part only small tribes, who are docile in disposition, anxious for intercourse with Europeans and for trade, and who already in some parts form caravans, and engage themselves to carry the loads of traders through a country the only present means of communication through which is narrow native paths.

Such is the territory through which we hope our descendants may spread, carrying with them Christianity and the arts of civilised life; but we know they can only do this and become a blessing to those among whom they settle, by carrying with them a knowledge at least equal to that which we possess, and a wisdom which is based upon the collective experience of all the previous generations who have preceded them. Various are the plans which many noble and excellent persons in Europe and in various parts of this country are now engaged in carrying out with a view to this object; and here in Cape Town that we may do our part, we intend to attempt to rear up at one end of these gardens a university which may receive into its bosom all the youth of South Africa, of every race, who may desire to drink at the fount of knowledge, and which may ultimately pour forth from amidst its students into the states and colonies which may spring from this parent colony of the Cape of Good Hope wise and worthy men, fitted to achieve their share of the great task which lies before them. And at this end of these gardens an attempt has been made to build a museum, and to establish a library, which may perchance rival that of Alexandria in its extant, and which we trust is destined to a far more fortunate fate. The museum you are all acquainted with, and you know what the abilities and energy of Mr. Layard and his associates have already done to render it one of the most striking and useful of our institutions. The library which His Royal Highness is now about to open we hope may become as it were a great mind for all South Africa, in which is treasured up the wealth acquired by many mighty minds of various races and of many ages, which may here be consulted free of cost by all students who may resort to it, and who in the midst of this beautiful scenery may converse at their will with the poets, the philosophers, the historians of all countries and of all past times, and here acquire that knowledge which may enable them to bless and to earn the blessings of nations whose names are now unknown to us, but which are to be born in the interior of this vast continent. Already munificent donors have laid for this library a substantial and valuable foundation, upon which we may build with safety, emulating I hope their generosity and zeal in the cause of knowledge. What an effect education may have upon the native races in South Africa, and how they can appreciate its results and the advantages which must follow in its train, you may judge from a living instance, the actors in which stand amongst us and which may thus be brought home to us all in a memorable manner. The paramount chief of the Gaikas, with his principal councillors, accompanied his Royal Highness in the Euryalus from the Frontier to Cape Town. These men saw in their journey and voyage many sights to them very wonderful. But in their eyes the most admirable of all was the sight of a number of hardy, bare-footed lads, assisting at daybreak in washing the decks—foremost amongst whom in activity and energy was the son of the Queen of England. The following are their own expressive words on this subject, in a letter to Captain Tarleton, the Captain of the Euryalus:—

Sandilli and his councillors give thanks. By the invitation of the great chief, the son of the Queen of the English people

are we this day on board this mighty vessel. The invitation was accepted with fear. With dread we came on board, and in trouble have we witnessed the dangers of the great waters, but through your skill have we passed through this tribulation. We have seen what our ancestors heard not of. Now have we grown old and learnt wisdom. The might of England has been fully illustrated to us, and now we behold our madness in taking up arms to resist the authority of our mighty and gracious Sovereign. Up to this time have we not ceased to be amazed at the wonderful things we have witnessed, and which are beyond our comprehension. But one thing we understand, the reason of England's greatness, when the son of the Queen becomes subject to a subject that he may learn wisdom, when the sons of England's chiefs and nobles leave the homes and wealth of their fathers, and with their young Prince endure hardships and sufferings in order that they may be wise, and become a defence to their country, when we behold these things we see why the English are a great and mighty nation. What we have now learnt shall be transmitted to our wondering countrymen, and handed down to our children, who will be wiser than their fathers, and your mighty Queen shall be their Sovereign and ours in all time coming.

In conclusion, you must permit me to draw from the past and present an augury for the future. As you are all aware, I began this building and laid its first stone, when I was going down the hill of life; my plans in reference to it were then very imperfectly understood—public opinion in regard to it was perhaps somewhat against me—the whole project was beset with doubts and difficulties. Yet many friends stood firmly and affectionately by me, we knew we were working for the future, that we were doing that which was faithful and good and true, and this inspired us with confidence that our work would be crowned with success. We respected the feelings of those who differed from us, knowing that they were actuated by motives as pure as our own, and we believed that they would ultimately rejoice at what we had done, and lend a willing hand in completing the good work which we had commenced. But never in our brightest imaginings did we think that I was to be succeeded in that which I had begun in doubt and trembling by one so much brighter, so much nobler than myself; that I should have prepared the way for the promising son of the greatest and best monarch the world has ever seen, who was as it were to enter into our labours. Yet so it is, although in our blindness we could not foresee it. All this is what I accept as an augury that that which we are about to inaugurate this day shall become the birthright of a brighter and more glorious age, and that we are now preparing the means and smoothing the path which shall lead on another generation, another time, the fair and promising child of Queenly knowledge, into that heritage which strong arms and daring hearts are amidst so many toils, difficulties, and dangers, building up for it throughout the wide extent of Southern Africa. That as the first of the Royal Family who bore the name of Alfred drove back wandering hordes, aided in their civilization, and gave the peace to England, and established a university, and transmitted a lasting and permanent impulse to science and learning, so the second of the Royal Family who has that honoured name may, by what he has done in South Africa, have most materially and lastingly aided in the spread of Civilization, Christianity, and learning throughout this continent. *From the Anglo-African of September 27.*

NEW GARDEN FERNS.

43. WOODWARDIA ORIENTALIS, *Swartz, Syn. Fil.* 117, 315; *Hooker, Sp. Fil.* iii. 68.

Fronds large, coriaceous, pinnate; pinnæ ovate-lanceolate acuminate, scarcely petiolate, 6 to 12 inches long, obliquely wedge-shaped at the base, deeply pinnatifid, the segments largest on the anterior side, lanceolate-acuminate, serrated with cartilaginous teeth, and producing numerous small scaly gemmiferous buds on the upper surface, the buds springing from a point corresponding with the sorus beneath; indusia vaulted, coriaceous.

This fine addition to our list of garden Ferns has been lately introduced by means of the spores, which were collected by Mr. Fortune during his last visit to China. The plants have lately passed into the hands of Mr. Standish, of Bagshot, by whom they are now being offered for sale. It is a very elegant large-growing Fern, remarkable for the multitude of small plants borne on the upper surface of the fronds, in the same way as those produced on the well-known Asplenium bulbiferum. With something of the general aspect of W. radicans, this species differs in its narrower much acuminated segments, which are moreover longest on the anterior side of the pinnæ, so that the base of the latter is very unequal, the segments at the inferior base being either much reduced in size or suppressed altogether. The veins are everywhere anastomosing, forming small areoles. It is found in Japan, the Loo Choo Islands, and the island of Formosa. There are two forms met with in the wild state; one larger, more coriaceous, and said to be not proliferous: the other thinner in texture, more acuminated in the pinnæ, and very proliferous, as above described. This species does not, however, appear to be proliferous on the rachis, as in W. radicans, the gemmæ springing directly from the surface of the segments.

44. ADIANTUM FÉEI, *Moore, in litt.: Id. in Fée, Iconogr. Nour.* 29, t. 24, fig. 1.

Fronds tripinnate; primary and secondary rachides tomentose with short thick rufous hairs, flexuose, the latter remote, divaricately spreading, and curving towards the tips; pinnules obliquely-ovate, crenately incised, glabrous above, hairy beneath, petiolulate, the stalks clothed with a felt of short crowded rufous hairs; indusia broad, pallid, unequal, somewhat horse-shoe-shaped.

This very distinct and handsome species is a native of Mexico, and is cultivated by M. Linden of Brussels. The fronds are of considerable size, ovate, with pinnules of variable size, varying also in shape, and in the degree of lobing on the margin; the sterile crenatures are mucronulate. The flexuous tomentose rachis, and the divaricate branches, give it a very distinct aspect.

45. LITOBROCHIA AREOLATA, *Moore, Proc. Hort. Soc.* 245.

Fronds oblong-ovate, glabrous, pinnate-pinnatifid, the lower pinnæ bipartite, all sessile; segments oblong tapering, falcate, distinct, with rounded sinuses, the basal anterior segment dwarfed; veins forming a series of long arcs next the rachides of the pinnæ, and a series of several broad roundish areoles next the costæ of the segments, the rest generally free; sori linear marginal; stipites, rachides, and lower half of the costæ bright chesnut brown, the rachis proliferous near the top.

The general aspect of this plant is that of L. tripartita, but the fronds are not three-parted as they are in those of the same small size in that Indian species. The venation is also somewhat different, the areoles in the segments being broader and more rounded. The bright brown stalks and rachides and more distant lobing give it a different aspect from that of the other pedately pinnate-pinnatifid species already in cultivation. It appears to be of moderate size, and desirable in Fern collections. The plants have been raised from spores received from India, by Mr. R. Sim, of Footscray. *T. M.*

REPORT ON THE ROYAL BOTANIC GARDEN AT PERADENIA, CEYLON.

FROM SEPTEMBER 1859 TO AUGUST 1860, INCLUSIVE; BY G. H. K. THWAITES, F.L.S., DIRECTOR.

[*Extracts.*]

1.—*General state of the Garden and Premises.*—During the past year a conveniently situated house has been erected for the residence of the Conductor, who arrived in February last, to enter upon his duties here. The drives and walks, so far as finished, are in excellent order. The flower borders have been kept well stocked, with as great a variety of flowering plants as possible, and an evident improvement in this respect must have been observed since the arrival of the Conductor from Kew. A considerable number of Australian and Indian Firs have been planted out, and they will, in a short time, add greatly to the beauty of the Garden scenery.

2.—*Horticultural Department.*—The unfavourableness of the weather,—scarcely a third of the average quantity of rain having fallen since the beginning of January—has prevented my doing so much as I could have wished in the way of gardening operations, now that I have the assistance of an experienced person, sent, at the request of the Government, by Sir William Hooker, from the Royal Gardens at Kew. A good deal of ground has, however, been cleared for experimental and other purposes; and a commencement has been made with the careful cultivation of Vanilla. To this it is my intention that considerable attention shall be given; since it is found from information received from France through Mr. E. Rawdon Power, who kindly caused inquiry to be made; also from the Mauritius, through Mr. W. H. Wright of Peradenia, who sent samples of Vanilla grown at Peradenia, to the Exhibition held at the Mauritius last year; that the Vanilla produced in this neighbourhood is of a very excellent character, requiring only somewhat more careful cultivation and preparation, to bring it up to the higher qualities sent into the European markets. This it will be my aim to accomplish here, and I am very sanguine in my hopes respecting it, seeing that the climate is so peculiarly favourable to the growth of the plant. Hitherto the Vanilla Creepers have been allowed to attach themselves to trees of different kinds and heights, at the foot of which they were planted: it is found, however, so difficult in this way to regulate the height, the amount of shade, and the strength of support, that strong trellis-work has now been resorted to here, of a convenient height for the Vanilla plants to grow over; and, as the latter appear to flourish just as vigorously upon the trellis as upon growing trees, there seems to be no good reason why this system should not succeed, provided the roots of the plants are well supplied with suitable nourishment, in the way of decomposing vegetable matter. The plants are brought under much easier management by means of trellises, and if these latter are made of strong wood, with their ends not sunk in the ground, but supported upon stone or brick-work, they will, doubtless, last for many years. Within the last few days a thousand plants have been sent to a gentleman, who intends to try the cultivation of this valuable plant on one of his estates. As it has been considered desirable that the cultivation of the more valuable species of Cinchona (Quinine-producing plants) should be attempted in the Island, I have, in accordance with instructions given me by the Government, selected a piece of land in the neighbourhood of Newera Ellia, which appears to me in every way suitable for carrying out the experiment. A first consignment of plants for India is on its way from England, having recently been collected and brought from South America by Mr. Clement Markham, who is accompanying them to Bombay. This gentleman writes to me, that a portion of these will be sent, upon their arrival at Bombay, by the first steamer to Galle; so that they may be expected to arrive here in the course of next month. Mr. Markham also informs me, that another consignment of Quinine plants, now being collected in South America by Mr. Spruce and Mr. Pritchett, may be looked for about the end of the year. It is to be hoped that a good supply of seeds will accompany these, as much stronger and healthier trees may be expected to be produced from carefully collected seeds than from young plants which have been transplanted, and then subjected to the variety of temperatures involved in the transit from the higher lands of South America to this country by way of the Isthmus of Panama and the Overland route to India. A plant of Cinchona Calisaya was transmitted to me from Kew, by Sir William Hooker, a few months ago; but, unfortunately, it was quite dead upon its arrival, although every care was taken of it during the voyage by the gentleman who kindly took charge of it; some other kinds of plants brought in the same small case, arrived in perfectly good condition. Of the three excellent kinds of Tobacco we are so fortunate as to possess, viz., the Shiraz, the Manilla, and the Maryland, every care is taken to keep up a good supply of seeds, and a considerable quantity has been distributed. I have been informed by a gentlemen long resident in Java, that the Tobacco prepared in that Island fetches a very much higher price in the European markets than the ordinary Indian Tobacco, and that this is owing entirely to the care bestowed upon its preparation. It would seem useless to endeavour in this country, where labour is so scarce and expensive, to compete with India in the cultivation of Cotton, until we can get a kind of a very superior quality, which can be grown with as little difficulty as the common sort ordinarily produced here. As attention is now being particularly directed in India to the subject of Cotton cultivation, it may be hoped that, by means of careful selection and crossing, a description of Cotton will ere long be produced, which will possess the qualities of the superior American sorts, united with the facility of cultivation belonging to the common Indian Cotton. It has, hitherto, been very difficult to keep up a supply of good native Vegetable and Flower Seeds, sufficient to meet the constant demand for them; with the object therefore, of getting an abundance of the former, in variety and of the best kinds for distribution, some considerable extent of jungle has been cleared; and the ground is now being prepared for raising all kinds of suitable vegetables for the production of seed. The conductor of the Garden is also giving much attention to the collection of flower seeds, for distribution, and is assorting them into packets suitable, respectively, for gardens in this country, or for greenhouse and hothouse cultivation in Europe. Two Wardian cases of valuable ornamental plants have been received from the Royal Botanic Gardens at Kew, since my last Report; and some of them will prove very useful for distribution, as soon as they are large enough to bear being propagated by cuttings: and, in addition to the above, I must not omit to acknowledge a box of roots of several fine varieties of Achimenes, Gloxinia, &c. From the Calcutta Botanic Gardens I have received some excellent plants; and amongst them, a fine healthy one of the very beautiful Amherstia nobilis. With this arrived some specimens of the handsome Musa superba, together with other plants which were new to us, and nearly all of which are doing extremely well.

3. *Museum and Economic Department.*—Until a Museum Building is erected, it will not be in my power to accomplish so much as I could desire in forming a collection of the various vegetable products of the Island, available for the instruction of visitors. In a previous Report, I have stated that a considerable part of my private dwelling house is appropriated to matters entirely connected with my official duties, and I may now add, that the two large rooms I have given up for the purpose, are becoming inconveniently crowded. The comparative scarcity of labour in the Island, added to the expense of transmission of bulky articles to the markets of Europe, renders it desirable that, if attention is directed to the production of fibres, those should be selected which command the highest prices, and which require care and skill, rather than a great amount of labour in their preparation. I am about sending to Mr. Thurstan, at his request, a considerable number of plants of the kind producing the Chinese Grasscloth fibre, for cultivation in the experimental garden of the Industrial School at Colombo. By a well considered and carefully carried out system of maceration, it is not unlikely that this fibre might be produced of very superior quality in the Island. Since my last report, very considerable additions have been made to the Herbarium of dried plants: most valuable contributions of Indian species, correctly named, having been received from Dr. Hooker and Dr. Thomson. Dr. Cleghorn of Madras has sent me very useful specimens from that Presidency. The very numerous specimens of dried plants now in the Herbarium are arranged in their natural families and are at present tied up in parcels, until a sufficient number of cabinets can be obtained for holding them. They will then be much more conveniently referred to, than they can be at present. Every specimen is being rendered secure from the destructive attacks of insects, by being washed with a poisonous solution. The draftsmen have been regularly employed during the year in making drawings of living indigenous plants, either here or in the jungles. *G. H. K. Thwaites, Director.*

Home Correspondence.

Blanched Lilacs.—I confirm the statement of M. Duchartre, referred to in your Number of Dec. 1, as to the method followed in France of blanching the Purple Lilac Charles X. I purchased one a few years ago in a 5-inch pot, covered with white blossoms. After fading my gardener cut the branches in to the bottom pairs of leaf-buds, those only at the extremities of the branches having pushed into leaf by forcing. It was shifted into a larger sized pot and as much of the old soil as possible removed without disturbing the roots. On being placed in a cool greenhouse it soon shot out healthy branches 12 to 18 inches long, on the ends of which the flower buds formed. The following year it was forced in the usual way practised in England, but produced purple blossoms. I was curious to make myself acquainted with the mode of producing the change, and therefore during the following winter visited a nursery in Paris where early flowers are largely cultivated, and was there shown the trees in all stages of forcing. The treatment is as follows:—They are grown out of doors to the required strength, and then early in autumn potted in 5 or 6-inch pots and placed in a warm stove so much darkened that some time elapses before anything is visible. The flower-buds soon develope themselves into perfectly white flowers, and the leaf-buds near the ends of the branches into yellow leaves. The trees are then gradually exposed to light, the leaves acquiring thereby a delicate green colour, whilst the flowers remained unchanged. They are then ready for the market, and at this time of the year sell readily for 5 or 6 francs each. Those grown for cut flowers are pruned close back as soon as the blossoms are off, and planted out of doors, where they are allowed to recruit for two years. There is no difficulty in flowering them each year under glass by taking the precaution to cut in those branches early that show no flowers to the bottom pair of leaf-buds. This enables the tree to push out and perfect sufficiently strong shoots for the next year. As the flowering branches only produce straggling shoots from their extremities, they are best removed entirely after the blossoms fade. *Usworth.*

Tropical Orchard-houses.—In the interesting autobiography of Lutfallah it is mentioned that in the neighbourhood of Shikarpur, the cold is so great that even on the 26th February water froze in the vessels. I presume that these vessels were under cover, in a tent at least. Nevertheless, Mango trees were abundant. This is great encouragement to those who con-

template erecting tropical orchard-houses, as suggested by Mr. Rivers. It proves that it will not be necessary to keep up, during the winter, the orthodox minimum of 60°. Possibly some of your readers may be able to state what is the extreme northern limit of the Mango, and the winter temperature of the locality. *G. S.*

Hints to Gardeners.—Your correspondent "D. M." (see p. 1106) takes up the cause of young gardeners in so tender a manner that I fancy he cannot have had much experience of their habits. The remarks that have appeared from time to time in your Paper respecting gardeners, their requirements, education, &c., must do good service; but there is no rule without an exception. "D. M." however, cannot have had many very careless young men under him, or he would know that it is no small matter to please young gardeners, and do his duty to his employer. It is useless for a master to try to make competent gardeners of his young men, unless their inclinations are in that direction. I am sorry to say I have too much experience of the carelessness of under gardeners to be able to speak so tenderly of them as your correspondent. There are doubtless some noble exceptions; but in general young men do not care to learn their business so anxiously as they ought, and that is one reason why there are so many "poor tools," called gardeners, filling situations in different parts of the kingdom. I know that these remarks will not please self-sufficient persons, but the truth must be told before any good can be effected. I now repeat what I have often said before, that there are more good places in the kingdom than there are good gardeners to fill them. I often feel for respectable nurserymen when they have a good situation to fill, knowing as I do what difficulty they experience in finding an efficient person to fill it. There are scores of men wanting places, but they know that they are not fit to be recommended, as they only muddle themselves and spoil the nurseryman's reputation as a good judge of men's abilities. Suppose these remarks to be true, where lies the fault? I answer, indifference and want of application on the part of gardeners, both young and old, to make themselves masters of their business. A man cannot be a good gardener or a useful servant without great industry. All the knowledge in the world will not make a good gardener if it is not perseveringly and well applied. "D. M." speaks more of apprentices than others. I fear I can say but little on that head, as I have never lived in a place where apprentices were admitted. In my opinion the system as practised in most places is bad. In the first place it produces a class of inefficient persons who overstock the market, more particularly in Scotland. I had a respectable young man here who served his apprenticeship in that country, and paid, I suppose, the market price for it; he was a good hand at stoking fires and a tolerable nailer of wall trees; but in everything else he was inferior to a common labourer; in fact he had his business to learn after he came to England, and hundreds of others have to do the same. If the apprentice system only extracts money from young men instead of making good gardeners, the sooner it is at an end the better, both for gardeners and their employers. A gardener after taking a young man's money most likely feels that he is bound to get him off his hands as soon as his time is up to make room for others, and the young fellow is either sent to another gardener or to some nursery, where in due time he becomes a journeyman, and is sent to the first applicant in want of such a person. If he is a good young man, of a teachable disposition, he gets on as he deserves to do, but in nine cases out of ten he has still his business to learn, if ever he learns it at all. I have many men here, not apprentices, who have every facility to become good gardeners and good servants, but few indeed avail themselves of it, and I will never deceive any one by recommending them to another situation, if I am certain that they are not competent. Thus I shall scarcely make one gardener in a year out of 40 or 50 men employed. Now if the apprentice-system was in favour here what a nest the place would be for manufacturing young gardeners; as, of course, they must be got off when their time was up to make room for a fresh batch. I think that it is fortunate the system is not in the ascendant, as there is now no pretext to get rid of young men except from misconduct. My advice to young gardeners having any pretensions to become good servants is to put aside their frivolous pastimes and work in good earnest; let them learn everything necessary to make them useful servants and respectable members of society. There are many little matters connected with a gardener's duty that are too often overlooked; not one in every hundred think of asking why so and so is done, which if they did might afford them a good practical lesson, while the want of such information makes them look stupid in after years when they are called on to superintend even simple alterations in some department under their care. "D. M.'s" remarks in behalf of young gardeners I am afraid may lead them to feel that they are an ill-used class of men; but that I do not believe; let them put their shoulders to the wheel and all will go well in the end, we want more good men and fewer "incapables." I quite agree with "D. M." that it is bad management to compel men to work out in wet weather, but I hope few now a days adopt such a practice. *S. T.*

The Weather.—We have lately had the most severe frost which has occurred for many years in this vicinity. At 8.20 on the morning of the 25th, the thermometer stood at 5° below zero at my door, 5 feet from the ground. The register for the last few days has been as follows:—

Night of the 22d inst., minimum 20°+
" " 23d " " 13°+
" " 24th " " 5°—

At 5 P.M. on the evening of the 24th inst., the mercury indicated 9°+. At 10 o'clock it was 2⅘ds.+ (exactly corresponding with the greatest degree of cold registered by the same thermometer, in the same place during the previous winter 1859). During the night it fell steadily to 3°— at a very early hour of the morning of the 25th inst. A slight haze then overspread the sky, and the mercury rose to 2°—. About 6 A.M. it again became quite clear and the cold increased till about 8.20, when the register was 5°—. Till 10 o'clock it remained below zero, and rose very slowly during the morning, indicating 7°+ at 3 o'clock P.M., and 9°+ at 5. Soon after sunset the mercury fell 2°, and then steadily rose with but little variation through the night of the 25th to 17°+ at 8.30 this morning. Shortly before noon the wind (which during the two previous days had been North-West and North) veered round to North-East and East; on which the mercury rose rapidly to 29°+. During the 24th and 25th there was scarcely any perceptible motion in the air. An unusually large and brilliant halo encircled the moon for many hours last night. *James Backhouse, Jun., York.*——The weather here is extraordinarily severe for this place. A sharp frost on the 18th was followed by a heavy snow storm on the morning of the 19th, nearly 3 inches of snow falling in little more than an hour, accompanied by severe frost, which continues up to this date. Yesterday at 8.30 A.M. the thermometer indicated 9° of frost, and it did not rise above 33° during the day. We have now a piercing N.E. wind, and no signs of the frost breaking up. All flowers out of doors are killed; and shrubs such as Myrtles, Hydrangeas, Sweet Bays, and Laurustinuses are terribly cut. *J. B. T., Torquay, Dec.* 25.——The thermometer in this neighbourhood on the night of the 24th inst. fell to —6°, *i.e.*, 38° below the freezing point, a degree of cold rarely observed in this country. The thermometer from which the observation was taken is one of Casella's, and hangs on a S.E. aspect wall at 5 feet from the ground. It is to be feared that notwithstanding the quantity of snow which has fallen, evergreens and other plants have suffered severely. *C. D., Holt, Norfolk, Dec.* 26.——Whatever may be the records of the last ten days in other parts of the kingdom, here the thermometer registered 17½° as the maximum yesterday (24th Dec.), and 8° as the minimum during the night. The snow lies from 6 to 8 inches deep; wind from the N.W., and barometer pretty steady at 29.4. *J. M., Heathbank, Forfarshire.*

Large-leaved Plants.—Two correspondents have given the size of the leaves of their specimens of Cyanophyllum magnificum, but neither of them have stated whether they include the petiole in their measurement of length. The leaves of a plant in the aquarium of the Royal Botanic Gardens, Kew, measure 2 feet 7 inches in length, and 15 inches in breadth, with a petiole 4 inches long. There are several other very ornamental plants with foliage nearly as large as this, Botryodendrum latifolium, for instance; and Clavija macrophylla, whose leaves are more than a yard in length; and the beautiful Aralia reticulata. The leaves of the latter are long and narrow while the plant is young, but they gradually become shorter and broader, until they assume an ovate-lanceolate form, 26 inches in length and 8 broad. There is also an Urticaceous plant, called Laportea Gaudichaudii, with leaves 27 inches long and 11 inches wide. The plant which has produced foliage of this size is still quite young, and the leaves will probably become as large again; but they do not possess the colour and silky texture which distinguish those of Cyanophyllum. But of all arborescent Dicotyledons the plant with the largest leaves is Grias cauliflora; these are 5 feet in length and 18 or 20 inches wide. A noble specimen of this plant may be seen in the Palm-house here, bearing a crown of more than two dozen such leaves. *C. W. C., Kew.*

Mushroom Culture.—In my article (see p. 1129) I find that I inadvertently committed an error as to the quantity required to spawn a bed 10 feet square with Milltrack spawn. I should have stated that half a bushel is sufficient to spawn a bed of that size. In practice I have never had occasion to use more. *W. Young, Gr. to R. Barclay, Esq., West Hill House, Highgate.*

Weather Prognostics and the Season of 1860.—It is not to be denied that the formulas attributed to the late Dr. Kirwan and others for prognosticating the ensuing season from an observation of the vernal equinox, have failed in sustaining public interest or attention; for the late equinox, the most remarkable I have ever seen, was permitted to pass without the publication of a single comment (as far as I know) from any one but myself, until the weather itself, much later, began to create anxiety. I do not think those formulas adequate for the end proposed, though as to the time for observation I follow precisely that of Dr. Kirwan—from the 18th to 25th March inclusive; and if adequate observation is extended in any place or district to all those particulars and changes which constitute its weather at that period, I feel assured we may find therein a reliable sign for predicting extreme summers and their nature in the same district; and likewise for separating extreme summers to be expected from ordinary ones. If we insist upon tracing any particulars of these last, the investigation will be given up in despair, as it has nearly been several times by myself. The reasonableness of what I have just said, and indeed of the entire principle itself, seems to harmonise so with the following theory or explanation that I will submit it to you for consideration, as I did in June last to a meeting of the British Association at Oxford, viz., that the extreme differences in our summer seasons are founded mainly on extreme differences of temperature left by the preceding winter at its close on different portions of the surface of the northern hemisphere, varying also every year in depth and intensity, and therefore in durability—and that if this is the fact, then we might naturally expect that the nature of the winds resulting from this disposition of things would show itself first about the period of the vernal equinox, during the interregnum between winter and summer, and that the weather resulting from those winds would show itself also in different localities at that time, whether dry or wet, &c. Our summers vary almost every year, and I know not where to look for a corresponding variation among the recognised causes that move the winds, the authors of all the weathers, unless to the yearly *differences of surface* temperature I have alluded to, and which in extreme cases might be strongly marked enough to last the entire summer. Such a summer I take the last to have been. Two great streams of air, one moving up from the south west, and one probably rolling off some unusually cold surface in the distant north west, seem to have been making this country the principal point of their meeting during the entire season, and to have been discharging their contents upon us, and these winds were very strongly marked at the equinox. The equinoctial week from the 18th to 25th March is usually, that is, almost always, entirely separated or cut off in meteorological character from the weather which precedes and from that which follows it. All is usually, as it were, on a reduced scale and the changes rapid and frequent. The winds are usually feeble or moderate in strength, short-lived in direction, and I have not observed as much rain fall in the whole equinoctial week as has been observed to fall at other seasons in a single day of 24 hours. I find a remarkable correspondence between the weather of the 18th of March and that of May, the whole intervening month of April presenting a return, though somewhat modified, of those atmospheric movements which marked the previous winter. I mean that the weather prognosticated at the Equinox begins in May and not before. Now, I have much more to say, but it is impossible to say it within the reasonable compass of a letter. All my convictions are fixed and definite, and I do not draw back from a single thing I have written. I know I am an acute observer where I take an interest; but I have not the patient habits adapted to scientific investigation, and therefore I would wish to present all I have said as suggestions only for the consideration of men of scientific minds. Meanwhile I purpose next spring to offer to you an analysis of the vernal equinox prognostics, together with every ground on which they are formed, and thus to contribute my mite (if haply it should turn out to be so) to the general fund of knowledge. *Thomas Du Boulay, Sandgate.*

Societies.

BOTANICAL OF EDINBURGH: *Nov.* 8.—The President in the chair. The Chairman made the following opening remarks:—Gentlemen, we are now about to enter on another, the 25th session of this Society, and I believe we may safely assert that if the matter to be brought forward during the ensuing nine months shall equal that of the session which has just past, we shall have no reason to despair of our present condition or future prospects. We meet for the cultivation of botanical science, and it is difficult to overrate the advantages afforded by such societies as the present. They tend to unisolate the scientific worker, to take him out of the precincts of his closet, out of the narrow boundary of his own thoughts, and bring him into contact with his fellow-workers, so that he may be saved from forming an estimate either too high or too low of his own powers, may be saved also from working over ground already well explored, and have his energies directed into those paths where they may be exerted with the greatest chance of promoting the interests of truth. Botanical science at he present day is a very different thing from what it was even a quarter of a century ago. The microscope and the dissecting needle have within that period done their work, and proved their power, and the result has been a knowledge of vegetable structure and function—the determination of the true affinities of plants, and the founding of a philosophic system of classification—all which have given to the botanist of the present day an advantage which our predecessors could scarcely have anticipated. To convince ourselves of this, we have only to look back for a few years—to look back no further than the days of that excellent botanist and most accomplished and amiable man Sir James E. Smith, when the Linnean school was still paramount in this country, and contrast the science as then pursued with its condition at the present time

and yet there was something very charming in the studies of the old Linnean botanists. There was more field work then, at all events there was less closet work; and many a botanist even now looks back with pleasant memories to his return from his day's excursion, with his well-stored vasculum, and to the facilities which his flora afforded him of determining the name of every species, and ascertaining its uses in the economy of nature. But the Linnean system, beautiful as it was, and even marvellous in its ingenuity and its efficiency for the purpose at which it aimed, was yet inadequate to the wants of science. New revelations began to be discovered; affinities of morphology, regarding which the Linnean system was silent; and gradually but surely a revolution worked itself out in the minds of botanists resulting in the complete establishment of the natural system in the place of the artificial. I need scarcely remind you that the natural system is that of the Edinburgh school—it is that of every school which pretends to keep pace with the progress of science; and, when we say that, we say something more than what may be at first sight apparent. Let us for a moment consider what it means. It means that we can no longer view the many thousands of species which comprise the vegetable kingdom as so many isolated creations, but that we must work out their relations and determine their affinities; it means that the vegetable organism must be subjected to a searching anatomy; it means that the microscope must be unremittingly plied in the hands of the hardworking student; it means that the great laws of morphology shall be clearly enunciated and rigidly enforced; that the aid of experimental physics shall be solicited in the investigation of the as yet but partially understood phenomena of vegetable physiology, and that the resources of chemistry, organic and inorganic, shall be summoned to the field. All the great schools of botany in Germany, the schools in America, the schools in our own country, the schools which anywhere take a lead in phytological science, recognise this as the only true method of inquiry—the only course which can be followed by appreciable results. Such, gentlemen, is the course which lies before ourselves during the session on which we have now entered—and you will see that we cannot look forward to a session of idleness. But there is no inducement to idleness; labour itself in such a field is a pleasure. So excellent is the construction of the microscopes which are now in the hands of the naturalist, that the real difficulty is to withdraw ourselves from the work to which they invite us, and from the marvels of organisation which they reveal to us. I would not venture to propose to the members of the Botanical Society any particular path into which their studies might be most advantageously directed during the session which is now before us, for this, of course, will depend on individual inclination and individual opportunity; but I cannot avoid referring to a region where much remains yet to be discovered, into which the zoologist and the botanist, with all their united efforts, have as yet been able to shed but a few straggling rays of light, powerless to dissipate the mist which has ever enveloped it in obscurity. I allude to a certain class of phenomena which have never yet received from the biologist a satisfactory analysis, and whose real significance we have as yet failed to determine. I allude to that remarkable group of physiological acts which come under the head of vegetable irritability—a group whose investigation is assuredly one of the highest problems that the biologist can propose to himself; and one which, whatever may be said of the value of spontaneous motion, as affording a valid ground for the separation of the animal from the plant, is, I believe, essentially the same in the two kingdoms. Who can affirm the real difference between the ciliated zoospore of an Alga and the ciliated germ of a Vorticella? The motions of the sensitive plant, of the Hedysarum, of the Dionæa—what is their nature? Why do we not refer them to the same group of phenomena with the motions of the Vorticella, of the Hydra, of the Actinia? It is for no other reason than because the sensitive plant, the Hedysarum, and the Dionæa, possess in other respects characters which obviously associate them with undisputed plants—while the Vorticella, the Hydra, and the Actinia, appeal to us also by certain points of structure—'by the possession, for example, of a mouth,' for admission into the animal kingdom. It is for these reasons only, I assert, and not for anything in the phenomena themselves, that we have been in the habit of assuming the motions of the one to belong to a class of phenomena of a different kind from that to which we refer the motions of the other. A little consideration, however, must convince us, that in the present state of our knowledge we have no grounds for making this distinction. A nervous system can no more be traced in the one than in the other; and the stretching forth of the tentacles of the Hydra or Actinia in search of prey, the imperfect locomotion of the Actinia, and the more perfect locomotion of the Hydra, can no more be assumed as an evidence of animality than the shrinking of the sensitive plant or the spasm of the Dionæa. It is, then, in something more than mere motion in the animal, no matter how apparently spontaneous, that we must look for the distinction which separates it from the plant; and at this point there opens up to us the whole question of the difference between a plant and an animal—a question which, notwithstanding all that has been said on it, still remains undecided; for, like the alleged distinction afforded by spontaneous motion, all the other *differentiæ* which have been from time to time assumed as decisive will, after careful examination, show themselves to be more or less defective; some by want of universality, while others—even though we admit their value and see in them truly a deep-rooted and universal distinction—are yet in many cases incapable of application, and powerless in helping us over the difficulties which are perpetually occurring to us in our investigation of the minuter forms of organised existence. The whole question is indeed still an open one, and I have ventured thus to allude to it as one to which the attention of the structural and physiological botanist may yet be turned with advantage. The following communications were read:—I. "On Certain Peculiarities in the Growth of Pine Trees on the East Shore of Lough Neagh, county Antrim, Ireland." By the Rev. A. C. Canning. Mr. Canning remarked:—It is known to naturalists that the extensive sheet of water—Lough Neagh, in Ulster—is connected with interesting peculiarities, both of geological and botanical kind, which do not seem to have received that close scientific consideration which their nature would appear to merit. These peculiarities arise partly from the mechanical action of the waters of the lake and of the rivers and streams which flow into it, and partly from certain qualities possessed by the water of the lake itself. The attention of the writer has been directed from time to time to some of these, and one of them would seem to be so much a curiosity of vegetation as to deserve particular notice. What is alluded to is the peculiar appearance presented by certain Pine trees (Pinus sylvestris) which are found upon the east shore of the lake mentioned. The trees present the appearance of stems supported on large aerial roots, and thus raised upon props in a Mangrove-like manner. The soil is composed of about one-third common earth and two-thirds of a fine loose sand, which forms the beach of the lake, and is easily moved about by the action of running water. It is probable that, at an early stage in the growth of these trees, they occupied a position close to the waters of the lake, but, from the gradual subsidence of the latter, they now occupy a somewhat elevated bank at a little distance from the beach. Were the singular appearance of many of them the only circumstance to draw attention, it were perhaps superfluous to make them the subject of particular remark; but there is something, in the gradual adaptation to circumstances which is traceable upon a close inspection of the specimens of vegetable life, not a little curious and interesting, as proving what the observer might be disposed to term a form of vegetable instinct, according to which the growth and stability of the tree are provided for in relation to those influences which are found in different ways to act against both. This the writer has been much struck with, after a careful examination of the present appearance of some of these trees. In the case of one specimen he has found that the height of the aerial roots from the present soil to the commencement of the trunk is upwards of 5 feet, and, whilst presenting thus a Mangrove-like appearance not a little curious, he has found that the development of the supporting and nourishing roots seems from period to period to have been in close relation to the altering exigencies of the case. It is thus seen that, where the mechanical support came from the gradual washing away of the soil to be most needed, there the development of the means of support, and that upon plain mechanical principles, took place most prominently; and also as the tree proper came to be farther and farther elevated and removed from the soil, so the lower parts of the roots expanded and thickened, and, as it were, grasped the nourishing soil with still increasing vigour and tenacity. II. "On Bryum Duvalii (Voit.) as a British species, and the localities in which it has been found." By Mr. J. Sadler. III. "Additions to the Flora of Caithness," by R. Brown, Esq. Professor Balfour read the following note, which he had received from Dr. J. A. Smith, accompanied by a peculiar knot taken from a Beech tree:—"According to promise I send you the knot, or rather excrescence, from a Beech tree. It was taken this autumn from the boll of the tree by a person who was attracted by its rounded appearance, and so slight was its attachment to the trunk that he knocked it off with a stroke of the hand. It appears to me to have been formed at the root of a branch which had died, with the exception perhaps of a small portion of the new wood and bark close to its origin from the trunk. From this part the new wood continued to be gradually deposited in many a twisted fold, covering the inequalities of the branch, and forming at last a shell or case enclosing the remains of the branch which had been broken off, and left only a small portion projecting from the boll of the tree, and the process of decomposition had gone on until nearly a complete covering was formed. Had it continued for a little longer time, the branch would have been healed by the remains of the branch being entirely covered over with the new wood. Part of the dead branch remains in the cavity of the knot; unfortunately, however, it has been in a great measure cut out by the knife." Mr. Keddie sent a specimen of Hyssopus officinalis from the walls of the old church of Killearn. Mr. William R. M'Nab exhibited specimens of Goodyera repens from Banffshire.

COANWOOD READING.—The 11th annual meeting of the members of this Society was held on the 8th inst. After the usual preliminary arrangements Mr. Charlton, of Burnhouse, read the annual report, entering minutely into the prospects of the Society and state of the funds. From this it appeared that the income for the past year had been:—From members' subscriptions, 2*l.* 8*s.* 9*d.*; donations, 15*s.*; total, 3*l.* 3*s.* 9*d.* The disbursements for the same period:—Books, 5*l.* 3*s.* 8*d.*; coals and candles, 11*s.* 3*d.*; total, 5*l.* 14*s.* 11*d.*; leaving a deficiency of 2*l.* 11*s.* 2*d.* To cover this, there was a sufficient balance in the hands of the treasurer from last year, and a start again. The number of members last year had been less than any year since the commencement of the Society, averaging only 26; but as the Coanwood Coal Company are now opening an extensive colliery in the district, a considerable increase of members is anticipated. But even now the number of members is not a just criterion of readers, as the head of the house generally takes out the books, while all the family read. Forty volumes have been added to the library during the past year,—12 presented, and 28 purchased. 17 are on science, 2 on travels, 3 Curiosities of Literature, Chambers's Encyclopædia, Poetry, and Biography complete the list. After discussing the report and appointing officers, the meeting separated.

The Society was established in 1850 under very cheering circumstances. Donations in money amounting to 21*l.* 13*s.* 6*d.*, and about 250 volumes, were made by the inhabitants of Coanwood and their friends. About 60 volumes were new and valuable works. Amongst the principal donors were the late Hon. James Hope Wallace, Featherston Castle; the late William Ord, Esq., M.P., Whitfield Hall; and the late Dixon Dixon, Esq., of Unthank Hall. For the encouragement of readers, the admission price for members was fixed at the low sum of 6*d.* per quarter, or 2*s.* a year, at which price it still stands. It has done a great deal of good in keeping the young reading at their own firesides instead of gossiping with their neighbours, and we hope that greater efforts will yet be made to increase its influence and usefulness. A lecture now and then would be very useful in keeping up the spirit and attracting readers.

As an encouragement to the friends of the Society, and an incentive to others, we cannot withhold a slight sketch of this rural district. Coanwood—or as it first catches our eye in local history in the more appropriate Celtic garb of Collenwood, *i.e.* Hazelwood—is a sequestered dale nestling cosily in the green bosom of a semi-circular sweep of benty-shouldered and heathery-capt hills, four miles south of Haltwhistle. It is a pleasing spot, with well-built houses and homesteads cheering almost every sheltered nook, and as if to give it a solemn and attractive aspect an unpretentious Friends' Meeting House, surrounded by solitary mounds, without a stone to mark where "the rude forefathers of the hamlet sleep," is situated on the bank of a bubbling burn, which steals like a silver thread by the lovely spot and through the hazeley shaws, giving life, cheerfulness, and beauty to every rock, meadow, and woody bank. It contains a population of about 150, principally farmers and their families. The majority of these farmer-yeomen farm their own land and the land of their forefathers, each farm averaging about 100 acres of inland and 200 of common. About a dozen years ago Coanwood was as far back, socially and agriculturally, as the most fastidious stickler for old times and customs could desire. The common was then undivided, and each owner of inland was entitled to graze an unlimited stock of sheep, cattle, and horses on it. Those farmers adjoining the common who took care to herd well, and were unscrupulous respecting hounding their neighbours' stock into bogs or gully holes, or often off the fell altogether, especially at night, got the lion's share of it, to the great injury of peaceable individuals who would not join in the strife, consequently it was a fruitful source of distrust and ill-feeling. Belonging to every one, no one ever thought of draining or improving any portion of it, and springs were allowed to overflow 40 and 50 acres, where very little labour would have sent them down an irrigating channel. In consequence of their being undrained, overstocked, unsheltered, and the stock much disturbed, a very great number of sheep died of poverty and rot every winter, and scores of them might be seen about the burn sides and marshes every spring with "pokes" under their chins, dead or dying. The inland was in a very little better state, in consequence of the men who should have been improving it being too busy herding their sheep on the common. The land was as wet as water could make it. The custom was to take a crop of Oats off the pasture land every six or seven years and then leave it, without sowing Grass seeds, to form a sward by nature's unaided efforts. Sometimes it was threatened with a dose of lime, and that was all the manure it got, but owing to the wetness of the land this was entirely wasted, and many a Grass field was nearly without a sward from the poaching of the cattle, who were allowed to scamper in the fields both summer and winter. The cattle was a hardy mixture of all breeds except a pure one. Notwithstanding their hardiness it was not unusual for some of them to die of poverty and rot, owing to the wetness of the soil and want

of food and shelter. Since then there has been a wonderful change, and we are glad to say for the better. The common was divided and the fences finished 10 years ago. Scores of miles of open drains and a few close tile drains have been cut; Sparts, Rushes, and Bent are fast disappearing, and the natural Grasses are supplying their places and forming a well-set if not luxuriant pasture. The sheep, &c., now thrive well, and not a single rotten specimen has been seen for some years. As a proof of the improvement in the land and the quality of the sheep, we may mention that on one of the highest allotments, during the whole of last extremely severe winter the sheep were never removed, nor had they a bite of hay or anything else given to them but what they scraped for and pulled, and yet they produced a good crop of lambs, and not a single sheep died.

The inland, too, has been greatly improved; the shepherds who, a dozen years ago, did nothing but lay behind a crag, or mossbreak, watching their neighbour's proceedings, and hounding their sheep, when opportunity offered, are now legitimately and industriously employed in ploughing, draining, and improving their farms; good draining tiles being readily obtained at Mr. Wigham's Tilery, on the Featherston Estate. The pioneers in tile draining to a proper depth, had a good deal of prejudice to contend with and overcome, and some are rather a little behindhand yet, while others went at it in earnest, and have finished the drainage of their snug patrimonies some years ago. These have followed up draining by the most approved system of farming—fallowing with Turnips, well managed with lime, farmyard, and artificial manures, and this draining and management has more than doubled them in value in less than 10 years. Some of the low-laying moorland, too, which would scarcely carry four or five snipes, now carry as many sheep to the acre. Altogether, the crops of Grass, Turnips, Potatoes, and corn, mark satisfactory and gratifying improvement and progress. The Galloway cattle, instead of being the mixed breed they formerly were, are particularly pure, and many of them have carried away first prizes at something higher than a local exhibition. Thorn hedges and belts of plantations have been planted on a great many farms, and make capital progress, giving the district a clad appearance, but more are wanted to give the whole a snug and pleasing finish. The idea that thorns would not grow on high lands has been satisfactorily exploded here. Amid all this bustle and improvement education has not been forgot. A day-school at Garbut Hill fits the rising generation for playing their parts in this world, and a Sunday school, at the Meeting House, weans their affections from this world and fixes them on that which is to come. There is a simplicity and joyous happiness in the manners of the friends in this dale that seems to secure the affections of the young, and to cheer them through life, however far they may wander from their native dale; and those who have successfully tried their fortunes in the world of commerce have fondly cherished the hope of returning to and closing their days among the woods and wilds of nature, never losing sight of the simplicity of their father's house, nor the good old maxims which laid its foundation. *Carlisle Patriot.*

Notices of Books.

Paul's Rose Annual for 1860-61 contains good figures of the Empereur de Maroc, a hybrid perpetual, with flowers as dark as those of the old Tuscany; Victor Verdier, another H.P. much like the Coupe d'Hebe; Duc de Magenta, a grand looking Tea scented sort with delicate flesh-coloured flowers, and the Comtesse de Chabrillant, another H.P., of which Mr. W. Paul speaks thus—

"Such a flower as the 'Comtesse de Chabrillant' only occasionally rises into existence. It is sufficiently in advance of the mass to warrant us in predicting for it a long career of public favour, such as has been enjoyed by 'Baronne Prevost,' 'Caroline de Sansal,' 'Duchess of Sutherland,' 'Madame Vidot,' 'William Griffith,' and other well-known Roses. The flowers are pink, very sweet, in their best state lovely in colour, and of exquisite form. The petals are of great substance, silvery beneath: the foliage and habit are good, the branches thick and short, bearing an abundance of flowers. Monsieur Marest, a Rose-grower of Paris, to whom we are indebted for 'Prince Leon' and other celebrities, claims the honour of introducing the present flower, which has been already figured in one of the French Journals of Horticulture."

There is also the usual critical account of New Roses and good statistical tables relating to the Rose Exhibitions of 1860.

Every-day Chemistry, by A. Sibson (Routledge), is "a familiar explanation of the Chemical Principles connected with the operations of Every-day life,' contained in 217 closely printed pages. Mr. Sibson says that most of the analyses he has given have been performed personally, and makes the following statement of the plan of his work:—

"The idea at first entertained was to classify every kind of food, commonly so called, under the general title of 'Solid Food,' all beverages under the title of 'Liquid Food,' and everything appertaining to the atmosphere in relation to ourselves, under the title of 'Aërial Food;' and, finally, to trace the connection of these one with another, and with our bodily welfare, in a chapter to be called the 'Chemistry of Ourselves.'

"As will be seen, the principle of this arrangement has not been departed from,—some of the titles only having been altered, to insure a more correct terminology."

On Winds and Storms; with an Essay on the Weather and its Varieties. By Thomas Hopkins, M.B.M.S. Pp. 260. Longman & Co.

The author states that in the year 1854 he submitted to the public a meteorological work, the object of which was to show that aqueous vapour was the great disturber of the atmosphere. But he then supposed that ascending and overflowing tropical currents, as represented in the Hadleian theory of winds, although they did not produce the great winds that blow over the globe, might have a real existence. The collection of a larger number of facts, and more mature reflection, produced a conviction that imperfect analogies had led him, as they probably had led others, to wrong conclusions; and notwithstanding that high authorities continue to sanction the Hadleian theory, he is now convinced it is erroneous.

The influence of Heated Terrestrial Surfaces in disturbing the Atmosphere is treated of in the first place. The author says, "In meteorological inquiries it is considered that solar heat acting on the surface of the earth is the great disturber of the atmosphere, producing all the winds that blow over the face of the globe. We are told that the sun not only heats portions of the earth and the air near to its surface, but that heated tropical air rises and flows away in the upper regions towards the poles, from which it returns in the lower regions to go through the same course in perpetuity. That solar heat is in some way the great disturber of the air is admitted, and that air passes from one part of the atmospheric space to another, is also fully acknowledged as a fact. But the important enquiry which has to be made is, how or in what way does wind arise in the aërial currents that are found in different parts of the world?

"The heated air near the surface does *rise*, because it expands; but it does not follow that it flows over laterally in the higher regions as intimated. * * * No one asserts that the existence of this supposed stream has been actually ascertained—and therefore that which has been assumed as a fact, remains to be proved.

"The atmospheric gases are highly elastic fluids, which undoubtedly are expanded by heat. When, however, portions of them are thus expanded in the open atmosphere, they act on adjoining portions but do not penetrate those portions, as they merely press against them. And this pressure, the effect of expansion by heat, is propagated through all parts of the atmosphere around, both vertically and horizontally, and doubtless raises the upper part to a greater height in the atmospheric space. But the expanding force of the solar heat, as it is practically exerted, seems to elevate each part of the atmosphere in proportion to the heating, and to make it of different heights in different latitudes, rather than to cause the air to pass from tropical towards polar parts. An equilibrium of pressure may be established by superior density in cold latitudes, compensating for inferior height, and the whole atmosphere may be at rest, though different parts have different temperatures."

In treating of "*The Action of Aqueous Vapour in disturbing the Atmosphere*," the author says, "We know, from common experience, that disturbances are almost constantly taking place in the atmosphere which produce various winds, from those which flow gently to the wildest hurricane: and that these winds vary in the times of their duration, from momentary puffs to the never ceasing trade winds, yet who can point to the proximate cause of these movements of the air? If the Hadleian theory is no longer recognised, what force can be said to disturb the atmosphere, so as to produce its various movements? That force, though frequently operating in a gentle manner in soft breezes, at times acts with tremendous power, hurling destruction on man and his works over large portions of the globe. And when we ask where is the immediate source of this power, or what is its nature, no satisfactory answer can be obtained from standard works on meteorology."

According to the author's theory, the disturbance of the atmosphere is owing to the *evaporation* and *condensation* of aqueous vapour. Heat of course is the immediate cause of evaporation; and cold, or the want of heat, that of condensation. The former process depends on the energy of the sun's rays, and must precede condensation. The motive power, therefore, is derived in both cases from the action of the sun's rays. And this is communicated to the atmosphere, according to the theory before us, chiefly by means of aqueous vapour, as will be seen by the following extract:—

"Evaporation of water is a cooling process, that liquid being converted into ice when heat is sufficiently absorbed by the vapour and thus made latent. But the heat thus absorbed and made latent by evaporation is given out and made active by condensation. This occurs at all times when vapour is condensed into liquid water; the heat which was absorbed and rendered latent when the water was condensed into vapour being given out and made active when that vapour is re-converted into cloud. This latter change is therefore a warming process that takes place within the atmosphere, quite distinct from that which occurs at and near to the surface of the earth through the direct action of the solar rays." This is the basis of the author's theory.

"Clouds are often produced by condensation of vapour within limited localities; those parts must, therefore, be to some extent warmed when the gases within the cloud will expand into adjacent parts, become lighter, and be compelled by adjoining heavier gases to ascend and expand farther, allowing other and heavier to take their places, thus producing atmospheric ascending movements, and in time a fall of the barometer in the part. Here, then, we find a process in operation which is capable of creating disturbance in the atmosphere, and of putting it into motion, and, at the same time, rendering atmospheric pressure in the locality so much less as to produce a fall of the barometer—the fall of that instrument being proportioned to the condensation of vapour.

"The gases within the tropics are not less than as 29 to 1 of the weight of the whole atmosphere; anything, therefore, which either expands or contracts them in limited localities disturbs the atmospheric equilibrium, and originates movements to restore it, which movements carry the vapour with the gases; [by gases is here meant those constituting the atmosphere, essentially oxygen and nitrogen] but the vapour itself, viewed as a ponderable body, is too feeble to bear away the gases with it. The vapour, therefore, is instrumental in producing winds only by furnishing heat to the gases [air exclusive of the vapour of water] at one time and expanding them, and taking it from them at another time and condensing them; and it is only indirectly in this way that atmospheric vapour contributes to the creation of land and sea breezes. That such action of vapour is, however, necessary to the production of these breezes is shown, as in dry countries the breezes are not found.

"In whatever way, then, we trace alteration of atmospheric pressure and movement of the air, we arrive at the same result. Whether it is the daily effects produced by the sun, or the influence of various temperatures resulting from condensation of vapour in different latitudes or change of seasons, we come to the same general conclusion, which is, that the great disturber of the atmosphere is HEAT operating through aqueous vapour,—the heat sometimes leaving the vapour and attaching itself to the gases, and at other times leaving the gases to join watery particles of cloud and convert them into vapour. And it appears that by tracing the action of heat through the circumstances which it encounters, from diurnal as well as annual changes in the solar influence, we may account for those great alterations of atmospheric pressure and variety of winds which are found over the surface of the globe."

Agreeably to the author's theory are traced the atmospheric currents, whether they occur as trade winds, monsoons, cold descending winds, &c. All these he attributes to the heat derived from condensing vapour. The vapour is chiefly raised from the equatorial ocean by the power of the sun's rays and is condensed against the more elevated parts of the earth. Whilst condensation is going on partial vacua are produced, to occupy which currents of air move or rush forward with a steadiness and velocity proportionate to the amount of condensation, the great areas of which are the Himalayas and the Andes.

In meteorological researches, observes the author, the desideratum appears to be to obtain a clear perception of the natural powers or forces that disturb the atmosphere so as to cause its great movements; and to prove what these forces are has been his principal object. This we think he has done. By clear and well sustained reasoning he has rendered the subject more plain and simple than has hitherto been the case. The publication of the present volume might have been delayed, the author says, to a later period; but he had reason to apprehend that, if deferred, he might be unable to execute the task he had imposed upon himself. And, he adds, "many details respecting the complicated changes that take place in our aerial ocean remain to be examined and discussed; but this labour it is presumed may be performed with superior advantage after the disturbing forces have been traced and recognised." Every one who reads the present ingenious work will, doubtless, hope with us that he himself may be able to enter upon the investigation of the details to which he refers.

Messrs. Walton & Maberly have issued a new and revised edition of *Lardner's Handbook of Astronomy*, edited by Mr. Dunkin, of the Royal Observatory, Greenwich.

Miscellaneous.

What Cacti are Like when at Home. — This Cereus gigantens, the Queen of the Cactus tribe, is known in California and New Mexico under the name of Petahaya. The missionaries who visited the country between the Colorado and the Gila, more than a hundred years ago, speak of the fruit of the Petahaya, and of the natives of the country using it for food; and they also mention a remarkable tree that had branches, but no leaves, though it reached the height of 60 feet, and was of considerable girth. . . . . The wildest and most inhospitable regions appear to be the peculiar home of this plant, and its fleshy shoots will strike root,

and grow to a surprising size, in chasms in heaps of stones, where the closest examination can scarcely discover a particle of vegetable soil. Its form is various, and mostly dependent on its age; the first shape it assumes is that of an immense club standing upright in the ground, and of double the circumference of the lower part at the top. This form is very striking, while the plant is still only from 2 to 6 feet high, but, as it grows taller, the thickness becomes more equal, and when it attains the height of 25 feet, it looks like a regular pillar, after this it begins to throw out its branches. These come out at first in a globular shape, but turn upward as they elongate, and then grow parallel to the trunk, and at a certain distance from it, so that a Cereus with many branches looks exactly like an immense candelabrum, especially as the branches are mostly symmetrically arranged round the trunk, of which the diameter is not usually more than a foot and a half, or, in some rare instances, a foot more. They vary much in height; the highest we ever saw, at Williams' Fork, measured from 36 to 40 feet; but, south of the Gila, they are said to reach 60; and when you see them rising from the extreme point of a rock, where a surface of a few inches square forms their sole support, you cannot help wondering that the first storm does not tear them from their airy elevation. If the smaller specimens of the Cereus giganteus that we had seen in the morning excited our astonishment, the feeling was greatly augmented, when, on our further journey, we beheld this stately plant in all its magnificence. The absence of every other vegetation enabled us to distinguish these Cactus columns from a great distance, as they stood symmetrically arranged on the heights and declivities of the mountains, to which they imparted a most peculiar aspect, though certainly not a beautiful one. Wonderful as each plant is, when regarded singly, as a grand specimen of vegetable life, these solemn, silent forms, which stand motionless, even in a hurricane, give a somewhat dreary character to the landscape. Some look like petrified giants, stretching out their arms in speechless pain, and others stand like lonely sentinels, keeping their dreary watch on the edge of precipices, and gazing into the abyss, or over into the pleasant valley of the Williams' Fork, at the flocks of birds that do not venture to rest on the thorny arms of the Petahaya; though the wasp and the gaily variegated woodpecker may be seen taking up their abode in the old wounds and scars of sickly or damaged specimens of this singular plant. *Gosse's Romance of Natural History.*

Produce of the Vine in S. Australia.—"M." makes allusion to a statement in a lecture delivered at Gawler on the horticultural capabilities of the colony, "that seven acres of vineyard here in 1859 produced 100 hogsheads of superior wine." That the vintage of 1860 was a failure, I am free to admit; but it did not arise from injudicious pruning. "M." states that "the vineyard has not produced half that quantity since this statement was made." Of course not; and this is easily accounted for, as on referring to my horticultural diary I find the following entry:—"October 24, 1859—During Sunday night or early this morning a most severe frost occurred. The Vines, which previously were looking remarkably well, with a growth of from one to two feet, and giving promise of a more abundant crop than usual, were by 9 o'clock a complete wreck of blackened leaves and ruined branches." This was the reason why the seven acres did not again produce 100 hogsheads. "M." also appears to think that the strength of vines in good ground is overtaxed by expecting seven acres to produce the above quantity, or say 14½ hogsheads per acre, at the age of six years—when they should under favourable circumstances be in full bearing, but the authority he refers to (Maro) says the produce of Verdeilho (by the bye the smallest cropper in our vineyard) sometimes reaches as high as 700 gallons per acre, being within half a hogshead per acre of our general produce in 1859, whilst he tells us Gouais (or La Folle) produces 1200 to 1300 gallons per acre, being about 11 hogsheads per acre more than the vineyard said to be so greatly overtaxed. That vineyards may not be so productive at twelve as six years old will probably be found to arise from another cause other than bad pruning, namely, the injudicious manner of planting too closely. I have seen vines growing 3 × 3 and 4 × 4, and in some works on continental vineyards I find that such distance is often adopted. "M." goes on to say, "It is said that the vines have been injured by the frost." Of course, if it was said to be so it was simply the fact, and as I have shown by the before mentioned extract, its effect on the Vines for that season, at least, was ruinous—but, let me add, desperate as the case was, in about a fortnight afterwards all hands were set to work to remove the frozen branches, cutting them away close to an undeveloped bud. The Vines speedily made another start, and the result was that the vintage of 1860 produced 30 hogsheads of first-class wine from these seven acres, of a quality equal to the famed vintage of 1859. This assertion is borne out by the opinion of an eminent wine merchant of Adelaide, who, on going through the cellars, stated it as his decided opinion, that it was the best collection of wines he ever had the pleasure to taste and report on. Again, it is correct that proprietors are rooting up their Vines, but it is in some cases every other row only; for they, of course, find that the soil has too many mouths (rootlets) to feed, and I know of three of the most extensive wine-growers in this district who are thus thinning their vineyards. I will put, by way of illustrating my meaning, a case in another point of view. Suppose a paddock or run will carry a given number of cattle with a fair prospect of their thriving, would not the proprietor be considered very unwise to put double that quantity on the land, expecting them to do as well as the smaller number? So it is with Vines—give them room and they will have full play for their energies, becoming more robust and productive, besides allowing greater facility for a small plough to be worked amongst them in the winter and spring, and horse-hoe or "scuffer" during the summer months. I will just add another reason why Vines are being rooted up now. In the early days of the colony there were few sorts of Vines producing wine Grapes, and these only in small quantities. Vineyards were, therefore, necessarily planted with table fruit, of which we had a great abundance, and wine-growers are now rooting up these latter to make room for wine-producing Vines of first quality.—*J. F. Wood, in the Farm and Garden, Adelaide.*

Lancaster Rifle at the Cape of Good Hope.—The Marquis of Queensberry and party had excellent sport in the Strandveldt. Mr. Carruthers, of Caledon, anxious to show "the Douglas" South African Sport, asked, and was cordially granted permission to shoot over the farms of S. Foulkes, Esq., Duinefontein, the Hon. D. G. van Breda, Ratel River, and Michael van Breda, Esq., Zoetendals Vley. The party were received by Mr. Foulkes, in the good old English squire style, and were most hospitably entertained, had excellent buck-shooting, but could not get near an ostrich, although the young marquis stalked them for four hours on his hands and knees. At the Hon. D. G. van Breda's the party were welcomed by Michael van Breda, and received with that hearty welcome which made them quite at home. There the marquis was more successful. Mr. van Breda, with great tact, took him up to two ostriches, and "the Douglas" knocked them over right and left with Lancaster's smooth bore rifle, the cock at 130 yards and the hen at 220 yards. Mr. Stevenson, the admiral's nephew, killed two ostriches also; but not right and left. *The Anglo-African of Grahamstown, Cape of Good Hope, September* 20, 1860.

Calendar of Operations.

(For the ensuing week.)

PLANT DEPARTMENT.

CONSERVATORY, &c.—In pruning and training the climbers in this and other houses some regard must be paid to the time when it is desirable the plants should bloom. Thus, with stove climbers not required to flower before autumn, pruning may be deferred for some time yet, but for earlier display it should be done at once. Passion flowers, Bignonias, and similar plants which make long annual shoots should only have their branches thinned and slightly shortened, while others, as Combretums, for instance, may be spurred in. Kennedyas will soon be showing bloom, and what training they require should be done at once, but the pruning of these should not take place till after they have done flowering. Where Orange trees are grown to decorate the flower garden in summer care should be taken to prevent their beginning to push previous to their removal to the open air, and this more especially if the trees are wintered in a dark-roofed house. Where such happens the young leaves have always a thin flabby appearance, and soon turn brown after the plants have been set out-of-doors, whereas if growth is prevented till the trees are in the open air the foliage will bear any amount of sunshine, and still look green and healthy.

FORCING DEPARTMENT.

PINERIES.—The present severe weather will necessitate the use of a considerable amount of fire-heat, particularly where a high temperature is being maintained with the view of inducing the plants to show fruit, and in the case of swelling fruit see that a proportionate amount of atmospheric moisture is secured, for accomodating as the Pine must be admitted to be, it is by no means benefited by a warm parched state of the atmosphere; see that none of the stock is allowed to suffer for want of water at the root. For succession plants a temperature of from 50° to 55° by means of fire-heat will be sufficiently high, but it should not be allowed to fall below 50°.

VINERIES.—The early house will now require careful attention, and as the Vines in some places will probably be in bloom, the night temperature must not be allowed to fall below 60°. Maintain a healthy growing atmosphere by sprinkling the floors, &c., as may be necessary, and admit fresh air whenever this can be safely done. Also attend carefully to the border, and if fermenting material is used do not allow the heat to decline, and where this is not used see that whatever covering is employed is efficient.

PEACH HOUSE.—Discontinue syringing where the blossoms are beginning to open, but secure a nice, moist, healthy state of the atmosphere by sprinkling the passages, &c. as may be necessary, but avoid anything like dampness while the trees are in bloom. Maintain a steady night temperature of 50° or 55° while the trees are in flower. Take every favourable opportunity of admitting fresh air, and where the external air can be made to pass over the heating apparatus, which it should do so as to get warm before coming in contact with the plants, a gentle circulation should be constantly kept up until the fruit is fairly set. Avoid the admission of currents of cold air, however, which would be most injurious to the trees.

FIG HOUSE.—Damp the trees over frequently, and if wanted early increase the heat a degree or two weekly.

STRAWBERRIES in bottom-heat for forcing will require air daily when the weather is at all favourable to prevent drawing in those earliest started; when they show the truss of flower they should be removed to shelves in the Vineries and Peach-houses, but the principal crop should be advancing slowly as yet.

FLOWER GARDEN AND SHRUBBERIES.

Those who are fortunate enough to have the command of a gravel pit should get a good supply of this provided whenever the weather is suitable for that kind of work. Let everything in the shape of in-door operations which can be done now to save time in spring be attended to. See to having plenty of soil prepared for striking cuttings in, as also for potting off, and have plenty of draining materials prepared and sorted out in sizes. Where the stock of bedding-out plants is short the strongest store plants should soon be selected and placed in a moist growing temperature, keeping them as near the glass as possible, in order to secure strong growth and obtain good cuttings. If the plants are well rooted it will be advisable soon to give them a shift, using rich soil, for it is of great importance to obtain strong cuttings, as they are not half the time becoming established as when weakly dwindling shoots have to be used for that purpose.

HARDY FRUIT AND KITCHEN GARDEN.

Where orchard trees are infested with insects or Moss, as soon as the weather shall have become more favourable the bark should be well scraped with a blunt tool to remove as many of the larvæ of the insects as possible, after which the parts should receive a coat of the following composition; viz., hot lime and soot in equal quantities mixed with water from the cow-house until it attains the consistency of thick paint. This composition should be well rubbed into the crevices of the bark in order to make sure of its reaching every hiding place of the enemy; and if a little cow manure was worked up in the composition, it would be useful in causing it to adhere better. It is a tedious task to properly cover large old trees with this, but its effect in clearing them of insects will repay the trouble, and an occasional coat to young trees will be useful in keeping them clean. Gishurst Compound in the shape of a strong lather is also recommended for the same purpose. Where early sown Peas are likely to be a failure a quantity should be sown in strips of turf and raised in a gentle heat, to be hardened off and planted out in spring. For this, however, there is yet ample time.

COTTAGERS' GARDEN.

Make cuttings of choice Gooseberries and Currants, also Honeysuckles in the same manner, and Irish Ivy for covering naked fences. Collect into a heap everything capable of being converted into manure, and keep all about the cottage neat and trim.

STATE OF THE WEATHER AT CHISWICK NEAR LONDON
For the Week ending Dec. 27, 1860, as observed at the Horticultural Gardens.

Dec.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Friday 21	9	29.863	29.766	34	28	31.0	41½	42	N.	.00
Satur. 22	10	29.795	30.732	34	13	23.5	40	41	N.	.00
Sunday 23	11	29.700	29.441	35	12	23.5	40	40½	N.	.02
Mon. 24	12	29.425	29.403	32	4	18.0	39½	40½	N.	.00
Tues. 25	13	29.439	29.267	31	19	25.0	39	39½	N.	.00
Wed. 26	14	29.526	29.450	32	17	24.5	39	39½	N.E.	.00
Thurs. 27	15	29.509	29.431	34	24	29.0	38½	39	S.E.	.00
Average..		29.608	29.498	33.1	16.7	24.9	39.6	40.3		.02

Dec. 21—Uniformly overcast; cloudy; snowing.
— 22—Slight snow; clear and cold; sharp frost.
— 23—Frosty; fine; very clear and frosty.
— 24—Overcast; clear sunshine; foggy; frost at night.
— 25—Frosty and foggy; densely overcast; foggy; sharp frost.
— 27—Overcast; slight snow; uniformly overcast; snow-fall in the evening 4 inches deep.
Mean temperature of the week, 13 deg. below the average.

RECORD OF THE WEATHER AT CHISWICK
During the last 35 years, for the ensuing Week, ending Jan. 5, 1861.

December and Jan.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 30..	44.8	33.0	38.9	12	0.30 in.	1	5	2	2	3	10	10	1
Mon. 31	44.2	33.6	39.9	10	0.44	—	7	1	1	6	11	4	4
Tues. 1..	43.6	31.5	37.5	11	0.70	5	4	2	3	4	9	5	4
Wed. 2..	42.7	30.4	36.6	14	0.21	3	1	2	2	4	10	6	7
Thurs. 3..	43.2	31.8	37.5	18	0.56	1	2	6	1	6	9	4	6
Friday 4..	42.5	31.7	37.1	16	0.86	3	3	4	6	2	11	3	3
Satur. 5..	41.6	31.0	36.3	13	0.40	6	5	6	1	1	12	3	1

The highest temperature during the above period occurred on the 31st, 1859, and 3d, 1860—therm. 57 deg.; and the lowest on the 2d, 1854—therm. 4 deg.

Notices to Correspondents.

CACTI: *P. W.* Your *Opuntia* is infested with scale, from which we believe the mischief has arisen. We will however keep the case in remembrance, and if we make anything more of it, you shall have further information.

NAMES OF PLANTS: *Torquay.* 1, Ceanothus azureus; 2, Eugenia Ugni; 3, Jasminum nudiflorum; 4, Eranthis hiemalis.—*H. H.* Not in flower.

THE BOWOOD MUSCAT: *C.* We have already said that the discussion is closed.

VINES: *Philo.* Since you have a Muscat house plant Bowood in that; Lady Downe's Seedling should be put in your late Vinery. The Golden Hamburgh does not require different treatment from what is usually given to the Black Hamburgh. By all means plant inside, not outside.‡

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

THE LONDON MANURE COMPANY
(ESTABLISHED 1840,)
Are now prepared to send out the following MANUFACTURED MANURES:—
SUPERPHOSPHATE OF LIME, of best quality.
DISSOLVED BONES, AND BONE MANURE FOR PASTURES.
CONCENTRATED URATE.
BLOOD MANURE FOR CORN AND ROOTS.
CORN MANURE FOR AUTUMN SOWING.
They would call particular attention to the article DISSOLVED BONES, in which they guarantee every portion both of the soluble and insoluble phosphate, to be obtained entirely from Bones.
The London Manure Company also supply PERUVIAN GUANO (direct from Messrs. A. Gibbs & Sons), NITRATE OF SODA, SULPHATE OF AMMONIA, and every Manure of value.
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LAWES'S MANURES.
LAWES'S TURNIP MANURE £6 6
,, BONE SUPERPHOSPHATE OF LIME .. 6 6
,, MINERAL SUPERPHOSPHATE OF LIME .. 5 5
,, BARLEY, GRASS, AND MANGEL MANURES 8 0
Wheat Manure: Peruvian Guano is proved to be the best and cheapest artificial manure that can be used for Wheat at autumn sowing.
Peruvian Guano direct from Messrs. Gibbs; Sulphate of Ammonia, Nitrate of Soda, and all Chemical Manures. Linseed, Rape, and Decorticated Cotton Seed Cakes supplied at the market prices, by Mr. J. B. LAWES, 1, Adelaide Place, London Bridge, E.C., and Liffey Buildings, Eden Quay, Dublin.

BURNARD, LACK, AND CO.'S CONCENTRATED SUPERPHOSPHATE OF LIME; guaranteed to contain Phosphoric Acid soluble, equivalent to 40 per cent. of Tribasic Phosphate of Lime.
CONCENTRATED TURNIP MANURE, equal in value to the preceding.
Of these Manures Dr. Voelcker says:—"These results must be very gratifying to you, and are the best proof of the very high agricultural and commercial value which characterises your concentrated superphosphate."
Detailed analyses, with opinions of the late and present Chemists to the Royal Agricultural Society, with Testimonials, Prices, &c., may be had on application to BURNARD, LACK, & Co., Sutton Road, Plymouth.

LOOK TO YOUR GRASS LANDS AND DOUBLE YOUR CROPS by dressing them with PULVERIZED BONES, to be had only of JARED TERRETT HUNT, Lambeth Wharf, Lambeth, S., and Downham Market, Norfolk. 5 cwt. sufficient for an acre, and the present the time for dressing. Prepared bones for Vine borders and fruit trees. Half-inch bones, bone dust, superphosphate of lime, gypsum, guano, and all other artificials of guaranteed quality.

JOHN FOWLER, JUN., 28, Cornhill, London, E.C.—Full particulars of FOWLER'S PATENT STEAM PLOUGH can be obtained by applying at the above address. CATALOGUES containing Prices and Testimonials sent post free.

AGRICULTURAL AND GENERAL MACHINERY.—AS PRIZEHOLDERS for the best Articles manufactured, Messrs. BURGESS & KEY, of 95, Newgate Street, London, E.C., invite the attention of the Public to their large and choice Stock.

REAPING MACHINE—PRIZE REAPER,
And the best in the world, is manufactured by BURGESS & KEY, 95, Newgate Street, London, E.C.

LAWN-MOWING MACHINES—BURGESS AND KEY'S
MACHINES are the most simple and effective yet introduced to the public, and at a lower price—16 in., 6*l.*; 19 in., 6*l.* 10*s.*; 22 in., 7*l.*; including box of tools, &c., for sharpening. Garden Engines and all kinds of Garden Tools always in stock.

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E. R. AND F. TURNER, Ipswich, submit the prices of their celebrated CRUSHING MILLS for Oats, Linseed, Barley, Malt, &c. They save 25 per cent. of Oats in feeding horses; crush Corn for Pigs and Cattle, rendering it as efficacious as if ground to meal; reduce Linseed to fine meal with no loss of its oil, and bruise Malt perfectly.

	£	s.	d.
No. 11 Mill (recommended also for bruising corn for fowls)	3	15	0
No. 6 Mill for hand, £4 15, or with Bean Mill (No. 6 B)	5	15	6
No. 7 ,, ,, 6 10 ,, (No. 7 B)	8	8	0
No. 2 ,, ,, or power 8 0 ,, (No. 2 B)	10	10	0
No. 1 ,, for power .. 12 0 ,, (No. 1 B)	15	0	0
No. 8 ,, for steam pow. 18 18 ,, (No. 8 B)	24	0	0

Delivery free to all Railway Stations in England, and to the principal ports of Scotland and Ireland.
At the R.A.S.E. Canterbury Show, 1860, E. R. & F. T. were awarded the prize of 5*l.* for the best Crushing Mill for Power; the prize of 2*l.* for their Crushing Mill for Hand.
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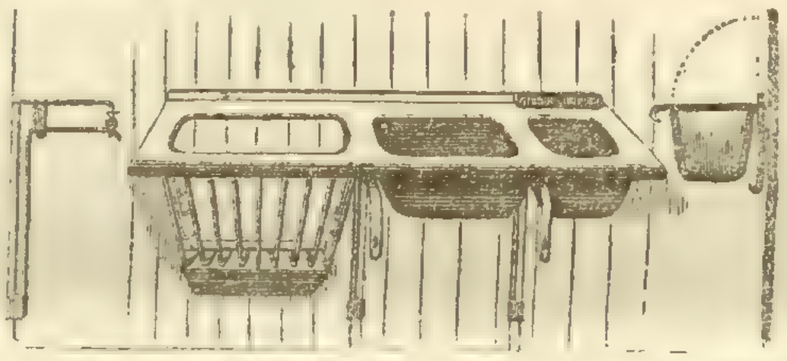
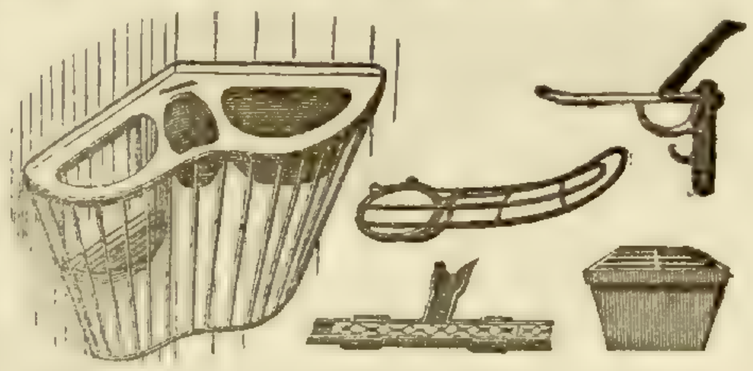
REAPING AND MOWING MACHINES.
BURGESS AND KEY, 95, Newgate Street, E.C. PRIZEHOLDERS for the best Agricultural Machinery Manufactured.
M'CORMICK'S REAPER, with BURGESS & KEY'S Screw Delivery Platform. Price 42*l.* 10*s.*
M'CORMICK'S REAPER for Manual Delivery. Price 25*l.*
ALLEN'S GRASS MOWER, which received the last prize given by the Royal Agricultural Society. Price 30*l.*
ALLEN'S GRASS MOWER, for one Horse. Price 22*l.* 10*s.*
COMBINED REAPER AND MOWER—Two-Horse Machine. Price 35*l.*
COMBINED REAPER AND MOWER—One-Horse Machine, Price 24*l.*
These Prices include Packing and Delivering at any Railway Station.
TESTIMONIALS.
A great number of highly flattering Testimonials in favour of their Reaper have been received, amongst them the following from
MR. JAMES ARNOT, *of Woodcote, Carshalton.*
"Having used your Machine for four years, I would not be without one on any consideration; and I can safely say that I have saved over 50 per cent. in the expense every year I have used it. In fact I have never yet seen an implement which pays itself in so short a time."

DIPPENHALL FIRE BRICK FACTORY, near Farnham, Surrey.—Manufactory for Fire Bricks, White, Red, and Black Facing Bricks, Plinth Bricks of various shapes and colours, for string courses; ornamental Garden Edgings, Terra Cotta Chimney Pots, and Vases in great variety; superior Tesselated Blue, Black, Red, Buff, and White Paving Tiles, for churches, entrance halls, &c. All kinds of Ornamental Ridge Tiles, Sewage and other Pipes, Bends, and Junctions; Ornamental Garden Border Tiles to any pattern or colour.—Apply to Mr. E. WHALLEY, Manager of the Works. Agent for Guildford, Mr. JNO. MOON, Builder.

COTTAM'S PATENT INVENTIONS FOR STABLE REQUISITES, awarded a Prize at the Paris Exhibition, patronised by the English and French Governments, as well as by the principal Nobility, Gentry, and Hunting Establishments in the kingdom. In use at her Majesty's Stables, Aldershott and Balmoral.



COTTAM AND COMPANY, Winsley Street, W., are the original inventors of the PATENT ENAMELLED MANGER, Water Trough, and Wrought Iron Rack, united to an iron top-plate, and forming one complete and useful fixture, having COTTAM'S patent noiseless halter guide and collar rein attached, which is taken to the back of the manger, and works with ease and freedom up or down the guide bar.
COTTAM'S NEW PATENT SEED-BOX, an important addition to the above fittings, being simple in construction, light, and durable, promotes cleanliness, and is economical in its results.
COTTAM'S PATENT PERMANENT ATTACHED DROP COVER, for the above, is a most essential addition to their fittings; it is never in the way; can be placed and replaced in an instant; while its cheapness, simplicity, and utility in keeping the contents of the troughs clean, and regulating the quantity to be taken, is quite sufficient to insure its use.



COTTAM'S PATENT SADDLE and HARNESS BRACKET combined, can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.
COTTAM'S IMPROVED WROUGHT IRON VENTILATING BRACKET preserves the shape and allows a free admission of air to the under parts of the saddle.
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COTTAM'S CAST-IRON SANITARY TRAP, from its improved construction, gives a full water-passage, and does not allow any smell to ascend from the drain.
PATENT LOOSE-BOX FITTINGS, and every article for the harness-room and stable, kept in stock, plain, galvanised, and enamelled. Iron gates, fencing, hurdles, &c.
The New Illustrated Catalogue and Estimates, gratis, upon application to COTTAM and COMPANY, 2, Winsley Street, Oxford Street, W. (opposite the Pantheon).

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WORKS OF DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.
Repayment may be made by the Landowner as successive portions of the works are completed; or the actual expenditure, with a commission thereon, may be charged on the property improved, by way of rentcharge on the estate created for various terms of years so as to adapt the rate per cent. of annual charge to the circumstances of the tenants.
No investigation of title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.
Works of Irrigation, Enclosing, Wood Grubbing, Road Making, and Farm Buildings are executed in a similar manner.
Landowners desirous to execute any of the Improvements by their own Agents, and charge the outlay and expenses on the Estate, may obtain Loans for the purpose.
Applications to be made to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W.

THE LANDS IMPROVEMENT COMPANY.—
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &C. IN ENGLAND AND WALES AND IN SCOTLAND.
The Directors beg leave to announce that the Company's Amendment Bill, 1859, has received the sanction of the Legislature. The Company now advance money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
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Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
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The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

NOTICE.

SUTTON'S CHAMPION SWEDE SEED.—The crop of Seed being more than half destroyed by the inclement weather throughout the last Winter, Spring, and Summer, the present price is 2*s.* 6*d.* per lb, and to insure a supply early orders will be necessary. The Advertisement which appeared at p. 1072 of *Gardeners' Chronicle* was an accidental republication of an announcement made last December.

The Agricultural Gazette.

SATURDAY, DECEMBER 29, 1860.

THIS day's paper must not be issued without a record in its columns of the extraordinary weather of the past week. So severe a frost as that of Christmas Eve has been rarely experienced; fortunately for the country it was already almost everywhere wrapped up in snow, or young Wheats would have been injured and much food for sheep and cattle in the fields destroyed. At many Thames-side villages above Reading, the registered thermometer on Christmas morning was read as low as zero. We have been favoured with the meteorological register of Mr. JOHN B. SPEARING, of Moulsford, near Wallingford; his instruments as those of an experienced observer may be trusted, and the record of his register thermometer read on Tuesday morning last was 6° below zero!

The maximum temperature of the previous 24 hours had been 26°; the daily range was thus no less than 32° Fahrenheit. On the following morning the minimum was zero, the maximum of the previous day having been 24°. Up till that date the temperature of the soil at 1 foot deep had remained above the freezing point. On the Thursday morning, however, it had fallen to 32°, and no doubt, as we have already said, the slowness with which the buried instrument was affected by the severity of the cold outside was due in great measure to the covering of snow as well as that of earth by which it was protected.

IN a former paper on the relative merits of Peas and Potatoes as food, we endeavoured to show that though the latter are so much trusted they contain but a small amount of true strength-giving matter; and especially did we urge that though this esculent was salutary to the rich as a diluent of stronger food, yet that at any price it is but a poor staff for the poor man to lean upon; while at its present high price, it is considerably dearer than bread, Peas, or other real flesh-making foods.

We purpose now, in order the more firmly to establish our position, slightly to review what the Potato has accomplished by its introduction and subsequent wide-spread cultivation. Before this tuber became generally grown by the agricultural labourer, we find that during his engagement he was usually fed in the farmhouse kitchen; or, if married, he had a weekly allowance of articles of food, which with his little garden-produce of Cabbage, Parsnips, Carrots, Peas, and the like, kept him hale and vigorous. The farmer's board was spread with coarse food it is true, but it was hearty and abundant. It might consist of an occasional slab of ancient and inferior beef, or a joint of pork or mutton from animals which were killed "to make sure of 'em;" but still so long as it was not diseased, even though it needed extra mastication, it could yield with Peas and other vegetables (or it may have even been brown bread) those 5 ounces of muscle-making matter which a hard working man wastes in performing his daily labour. What, then, was the result of this treatment? Let the deeds recorded in the tale of the scouring of the white horse inform us. Countrymen even in Gloucester, Wilts, and Somerset had sufficient

energy and strength to engage in athletic sports; they were fine grown men, with a really muscular development.*

Let us review their present state. If married the peasant lives with his family in a cottage of scarcely ever more than two rooms, and if there be a third the family exigencies compel the letting of this to an unmarried labourer. He may have a garden and keep a pig, and if he can but secure two sides of fat bacon for the year's consumption he is supremely happy; for in the old Christmas greeting:—

"I wish ye a merry Christmas,
And a happy new year;
A pocket full of money,
And a cellar full of beer;
A good fat pig to serve ye all the year,
Hoop!"

we have the peasant's notion of the elements of comfort. And having just examined the merits of Potatoes, let us just inquire into those of the pig, which is the poor man's most constant meat. To be considered good it must be fat, and then in order to have him serve all the year the flesh must be salted, by which the nourishment afforded by it is by no means improved. The composition of pig in a fresh state may be made out from the following table, in which we have included that of other meats for the sake of comparison:—

Assumed Average Composition of Entire Carcasses of Butchers' Meat—(Lawes and Gilbert.):—

Animals as fattened for the Butcher.	Composition per cent. of Carcasses excluding Head and Feet.			
	Mineral Matter.	Dry Nitrogenous Substance.	Fat.	Water.
		Flesh Formers.	Heat Givers.	
Calf	4.5	16.5	16.5	62.5
Bullock ..	5.0	15.0	30.0	50.0
Lamb	3.5	11.0	35.0	50.5
Sheep	3.5	12.5	40.0	44.0
Pig	1.5	10.0	50.0	38.5

To apply this in its relation to 1 lb. of meat we append another table in order to show this matter:—

	Veal		Beef.		Mutton.		Pork.	
	oz.	grs.	oz.	grs.	oz.	grs.	oz.	grs.
Water	10	0	8	0	7	16	6	69
Gelatine	1	82	1	62	1	52	0	385
Fibrine and Albumen (flesh formers)	1	199	1	122	0	385	0	315
Fat	2	281	4	340	6	176	8	0
Mineral matter ..	0	819	0	350	0	245	0	105

Veal has more flesh formers per lb. on account of its great absence of fat, thus explaining the principle upon which the fat of bacon is generally eaten with veal. Pork, again, with its great quantity of fat, is a fit medium for the flesh-forming food of Peas pudding.

Here then on comparing different meats, as we formerly did several vegetable food substances, we arrive at the conclusion that among animals the pig is lowest in the scale as regards its flesh-forming, strengthening, or body-restoring matter, as we formerly found the Potato to be in the list of articles commonly employed in vegetable diet—and these two form the most usual food of the man who is constantly at work, and therefore always requiring not the poorest but the most nourishing kind of food.

Now having so far described the most prominent characteristics of the labourer's diet, let us proceed to inquire into its results. It is quite certain that where food of an inferior quality is found to satisfy the labourer because he can easily get quantity, he is made to put up with a less wage than where his habits are in favour of a better kind of diet. Thus in the midland counties, where Potatoes are so much relied upon, wages are lower than elsewhere; but it would appear that where wages are lowest, there a certain quantity of beer is allowed; and where they are higher there are stipulations for the keep of so many sheep, a cow, the finding of so much Wheat or cartage of coals. These facts will be the more clearly brought home to us by the following extracts from a Table of the value of agricultural labour for 1860, published at page 392:—

	Counties.	(a) Plough-man.	(b) Shepherd.	(c) Ordinary Labourer.	(d) Harvest Labour.	Remarks.
1	Wilts	9s. to 10s.	9s. to 10s.	8s.	14s.	With beer.
2	Dorset	8s. to 10s.	10s. to 12s.	7s. to 9s.	12s.	A gallon of beer a day at harvest.
8	Gloucester	10s. to 11s.	10s. to 12s.	9s. to 10s.	12s.	With beer, and extra at harvest.
4	Worcester	11s. to 12s.	11s. to 12s.	10s.	15s.	2 quarts of beer per day (*a* and *b*).
5	Hereford	10s.	10s. to 11s.	9s. to 10s.	14s.	4s. of cider a week at harvest; 8 quarts daily on ordinary occasions.
6	Cheshire	12s. to 14s.	15s.	10s. to 12s.	18s. to 24s.	3 pints of beer in harvest.
7	Derbyshire	14s.	14s.	11s.	15s.	6d. per lamb extra (*b*).
8	Lancashire	15s.	16s.	14s.	20s. to 30s.	Probably no extras with such high wages.
9	Northumberland	15s.	18s.	16s.	20s. to 29s.	Perquisites of Wheat, Barley, house, &c.
10	East-Lothian	21l.	37l.	13s.	18s.	Perquisites of oatmeal, coals, house, &c. (*b*).
11	Mid-Lothian	13s. 7d.	13s. 10s.	13s. 6d.	18s. 9s.	Perquisites of meal, &c. About the average for Ireland, with no extras.
12	Down					

The above table is sufficient to show us that in the poorly-fed districts, that is, the bacon and Potato counties, wages are lower than elsewhere, and we may safely conclude that the power to labour is less also, as we find that any extras resolve themselves into beer or cider, the poor man whose stomach is merely filled up with a mass of non-muscle-making food, relying in all cases upon the stimulant of drink; and it may further be remarked, that the love of drink so engendered tends to lower his self-respect, for when he can fill his stomach cheaply his greatest happiness is too often that of boosing in the alehouse with what he has to spare; and when has not penury something to spare for a Lethean draught?

Such men get small wages, and they are not worth greater; they have not the power to work like the well fed man, and if we look at the wages of the northern counties we shall find that they are not at all out of proportion for the muscle which a north-countryman can render for the money, while his better system of living has elevated his mind, and he is an intelligent man, he reads, and writes, and thinks, and his sons are mostly so superior in intellect that they come south by hundreds to be bailiffs over the heads of the very natives whom one would suppose to be best acquainted with what ought to be done. In the north the perquisites are Wheat, Oatmeal, run for a few sheep, keep of a cow, sometimes malt—for a northman has sense to brew his own beer, and we wish him the best of luck with his brewing, for a jug of home-brewed shared with your family or a neighbour inspires generous sentiments, while sotting in a beerhouse has a tendency just the reverse.

From these remarks then we conclude that every working man wastes so much muscle *per diem* in his labour as requires a certain amount of muscle-making matter in his food to restore. If he gets this he maintains so far the conditions for health of body, and is likely to keep his mind healthy too; if not he degenerates both in body and mind; his physical nature, his stature, his thews and sinews, dwindle and degenerate, and he entails this degeneracy upon his offspring. The result of this want of muscle inclines to a trust in stimulants; and so, just as in large towns the greatest number and finest of the gin palaces will be in the poorest quarters, so in the districts where the agricultural labourers put up with a low quality of food and low wages, there the beer-houses will be thickest. Sadly, then, do we want line upon line, and precept upon precept, as to what is food. The poor man wants to be taught that it is not merely filling himself with Potatoes, 75 per cent. of which is water, and the rest containing but a small portion of the element of muscle, will restore the wasted strength of a day's work. He wants to be taught that it is not the fat of meat that will restore this; and above all he wants to learn that stimulants are not feeding.

To the poor man Potatoes and fat (for if he have a pig he wastes his substance in making it over fat, so that its lean is wasted by a kind of disease), are not an economical food, but should in reality be classed with luxuries for the rich. Let him then look more to nutritious food, as bread, Peas-pudding with his pork or bacon, Potatoes or Parsnips with his beef. But he asks, Where are we to get the beef? We answer: In the north the labourer has the produce of a cow, which he maintains as easily as a pig, and if he don't buy beef it is because he can eat Oatmeal, which contains muscle as well as beef. Don't trust to the Potato and the Pig; look above them and you will certainly attain to higher things, and better wages, and be worth them too. Again, let the clergy not be content with having procured allotments for the poor man's Potato ground, and suppose because in a good year of Potatoes, the man can be kept with a full stomach at a minimum of cost, that therefore he is well off; he must be inspired with higher wants than his pig, and we are of those who believe that a badly fed, poorly nourished body engenders cretinism and degeneracy not only in bodily and physical development, but in the higher attributes of the mind. Assuredly then this question of the composition of food is intimately connected with the moral as well as the physical well being of the people.

"ARTERIAL DRAINAGE" is a rather left-handed expression, for arteries in anatomy are those bloodvessels distributing the crimson life-stream from larger into smaller conduits, and thence into minuter capillary tubes and pores, whereas arterial drains and streams operate in the opposite direction, collecting the water of myriad springs and ditches, uniting it in brooks and water-courses, converging these into larger mill-streams and rivers, and discharging into expanding estuaries. The phraseology is certainly of Hibernian origin. English people speak of "trunk" drainage, outfall streams being supposed to bear a like relation to farm ditches and underdrains, that tree stems and limbs bear to the branches and twigs. Both of these metaphorical expressions are valuably suggestive, for it is an engineering truth, that the minor channels in every part of a drainage system ought to be proportioned to the main channel, and the main to its feeders, just as the tubular vessels for blood and the fibrous vessels for sap and strength are proportioned relatively to each other and to the entire system of which they form part. Undoubtedly, had we to rectify the drainage of a new unsettled country, where no vested rights and piecemeal works had previously established all sorts of disproportions in the rivers and drains, we should amend and construct every portion of channel on the idea that each river with its streamlets, feeders, ditches, nay, even the very springs that trickled toward its supply, formed one harmoniously connected system, which should be organised as a whole independent district, and we should adjust the "regimen" or regulated volume and velocity of every mile of river or length of drain, according to the exact increasing scale due at all distances between the fountain-heads and the final embouchure.

And in our own old country, if we would make the most of the annual downfall dropping in rains, condensing in dews, and feathering down in flakes of snow—if we would preserve a dry land surface for healthy grazing and prolific husbandry, convey safely to the ocean any excess of down-pouring that may threaten to drown us, irrigate wherever it would be profitable, store up and mete out cheap mill-power without waste to manufacturers of flour or of woven goods, fill the locks of canals to the brim without leakage and damage to fields beside the hauling way, scour out deep harbours for the seaport outlets of our national productions—those mouths into which the commerce of a world is poured;—in short if we would make the best of soil and stream for our thronging population, and beside all this revivify the very atmosphere of this too pestilent kingdom and halve the deadly percentage in the health returns, we must of necessity enter upon some course of central and general

* From this class the army was recruited with men of stature to which the contrast of the present day is said to be extraordinary. Upon this point we quote a communication recently received from a military man now and for many years past acting as captain and adjutant to a militia regiment in an agricultural county. His large experience may be relied upon. He says:—"Any person connected with recruiting must remark that the men are far below what they used to be as to tallness and strength. Nor is the present run of recruits fit for carrying much more than half what in my time was carried—in all about 60 lbs., and I have seen this done for weeks. The standard of the army up to 1852 was not less than 5 feet 6 inches; but men of this size in numbers cannot be obtained now. The surgeon of my old regiment, now dead, frequently spoke of this subject, and told me that about 40 years since the farmers fed their men and lads, giving as much bacon and bread as they could well get through, with a sprinkling of beer, and at that time this set of men were in appearance a perfectly different looking lot, ruddy and strong. The young fellows that now generally join the army are in a half starving state; at least a great number of them tell the surgeon so when remarks are made on their weedy condition. The surgeon I now speak about lived among large farmers, and told me that the bacon, Beans, greens, &c., used to be brought to a large kitchen when the bell sounded for dinner, and then the quantity consumed was wonderful." [The difficulty of obtaining good men as recruits may arise in part from the improvement of the class here disparaged—so that only the refuse of them now will listen to the recruiting sergeant. ED.]

supervision and conservancy of the whole drainage and water use of the country.

What! exclaims the practical improver, shall we stir up the passive weight and distinctiveness of a million existing rights and interests; shall we sweep away commissioners of sewers, supersede all local district commissioners, overseers and surveyors, abolish the Bedford Level corporation, repeal all private Acts for navigation, drainage, &c., start a Government management of all water courses, parcel out the kingdom into catchment basins, survey, report, proceed to execute works till everywhere "the crooked is made straight," and "every valley" as it were "exalted," and so with a strong despotic hand rendering England, despite its weeping sky, a land that engineers and doctors shall doat on above all other lands on the globe, as hydraulically and sanitarily perfect? No, good friend, not quite so rapidly as that; but that some great general legislative measure is required, owing to the failure of the Local Act system of introducing improvements or its inability to meet the cases demanding redress, you have no wish to dispute. Of course the hardy unsophisticated M.P. who should ask leave to bring in his little Bill for consolidating all existing and future drainages under one methodising centralised administration, would be greeted by the profound, enlightened, and progressive assembly of legislators with an immense cheer of approbation and irony. The Millennium is not coming till 1867, and our Parliament is not yet prepared for very comprehensive measures; but, meanwhile, we may surely pass a moderate Bill through both Houses capable of relieving upland valleys by a simpler and cheaper process than any yet sanctioned by those wise and practical bodies, and providing bewildered under drainers with a cheap and ready short cut through the annoyances of intervening owners and the negligence or inability of more public conservators.

Some people want only a minor measure for securing or amending the outlets needful for deep underdrainage, but are afraid of venturing within sight of a water-mill, or a meadow flooded by the reservoir of a canal. Well, for immediate pressing necessities, extending over a very great area of the kingdom and lying perhaps far above the reach of inundations either in winter or summer, such a measure must be passed at once; and it would include the remedy of many cases of real flooding by tortuous uncared for water-courses. But the river valleys, the great sufferers, can in few places be touched, unless you deal with water-wheels that are no longer picturesque beneath a railway viaduct, and with pent up navigations now so excessively important, whilst tolling perhaps one barge per week as it sluggishly lags across the country with goods which might fly by the rail. A law for the relief of minor cases can be easily obtained; a strong determination on the part of the agricultural interest can alone carry the larger and more momentary measure. *I. A. C.*

THE AGRICULTURE OF BERKSHIRE,

BY

THE REV. J. C. CLUTTERBUCK, OF LONG WITTENHAM.

(*Concluded from* p. 1136.)

The Vale.—With reference to other implements, as clodcrushers, Crosskill's and others are much used either for pulverising the soil, of which the clods and lumps were heretofore broken by women with wooden mallets called heal beetles, pronounced hile bitle, heal being to cover the grain when sown; Cambridges and other iron rollers, many forms of scufflers, scarifiers, broad shares, as the variations of the soil suggest. There is in common use, in some parts of the Vale, a cat's-claw drag in a square wooden frame on wheels, fitted with a lever to raise the tines at pleasure, which was invented, we believe, by a Berkshire or Oxfordshire farmer and is a very serviceable implement. It has been remarked that the germs of these growing implements are to be found in Mavor's report. Any striking changes since his time have been the perfecting these implements, which were sadly checked by the agricultural riots of 1830, which in parts of this county absolutely drove many implements, especially threshing machines, out of use for some years. Now it is difficult to persuade the labourer to resume the flail if occasion require.

Uninclosed parishes were frequent at the date of Mavor's report. Of a list given by him of 130 parishes 1-6th were uninclosed, 2-6ths partly inclosed, 3-6ths inclosed; we are not aware that there are six parishes uninclosed in the county at present—hence much of the improvement in stock, cultivation and general management. The rotation of crops was then not essentially different: on the heavy land, Wheat, Beans, Barley, seeds, fallow; on the lighter soils, Wheat, fallow with Turnips, Barley, seeds. The great improvement seems to be the growing more green and root crops, and no naked fallow. The Swedish Turnip, "ruta baga," was of recent introduction; Mangel is not mentioned. We believe it was not introduced as a field crop till about 1815, and then experimentally; indeed its great value has scarcely been recognised generally more than 10 years, if so much. Now, from the belief that the land is Turnip sick, and from the keeping properties of the Mangel when properly stored, the cultivation of Mangel is increasing yearly. We know an instance in which a crop of Trifolium incarnatum was fed early by couples, manured, ploughed deep, and the Mangel seed dibbled in. The crop so grown was estimated at 18 tons per acre. As a drawback to the Swede it has been remarked, that if to clear the Barley ground, or because the Barley might suffer from the whole crop being consumed, the Swedes have been fed on the Wheat stubble sown with Rye, Trefoil, &c., that Swedes sown the same season on this ground will rot. There is an impatience of the difficulties from fly or dry weather, which has led some farmers to substitute the Mangel almost entirely for the Swede. Again, the breed of sheep has been improved; the Down has superseded the Wiltshire on the chalk; the Down and Half-bred has replaced the Notts, said to have resembled the Half-bred, in the Vale. The forest sheep or heath-croppers, and greensward sheep, spoken of by Mavor, have passed away from a district ill-fitted for any breed of this stock. The pigs are still Berkshires. Nothing is more manifest to those whose remembrance carries them back 40 years, than the improvement of the horned stock; ill-favoured kine called the Newbury sort, bred on the wastes of the forest, were too often seen, where the Short-horn is now found.

We say little of artificial manures, we hold that the farm is best managed which buys little and sells much. We especially noticed two such farms—one on the green sand, another a dairy farm. The most striking improvements are in the increase of sheep stock on purely arable farms fed on the two crops raised on the fallows, the universal introduction of the Swede and Mangel, draining where it has been done, inclosure of common field, and the investment of capital in farming as a commercial speculation, instead of the old system of looking for the year's rent from the year's crop.

We are invited to name improvements still required. We name draining to be done entirely by the landlord, under competent superintendence; we have stated our reasons for this already. There are still large tracts of land in Berkshire undrained. To speak with all due respect, ecclesiastical, collegiate, and corporate bodies have too long allowed the vicious system of tenure which they have inherited to prevail—leasing on lives—so-called beneficial leases, "lucus a non lucendo" though there is a disposition to get rid of this evil. They are still in the wood—large estates managed by ever changing bursars, estates of which the tenants have never seen the landlord or any agent but a lawyer, buildings on repairing leases, cottages which are let with farms which no one cares to repair, farms clustered in villages and distant from the land, main outfalls blocked by almost useless mill-dams, other outfalls neglected, timber trees allowed to be shredded till they have no heads to draw up the sap. There are plenty of these things. But for practical improvement in husbandry, breeding, feeding, and every operation by which farming thrives and reflects credit on those who carry it out, we venture to take up the remark of one whose word was well nigh a law to the farmers of England—"The experience of our "best farmers," said Philip Pusey, "is the safest source of improvement." We confidently turn to the yeomen and tenant farmers of Berkshire and recognise in their intelligence, judgment, practical knowledge, and sometimes dearly bought experience, sufficient guides in the farming suited to the various and widely differing districts of this county. We also accept the lessons to be learned in the hazardous school of the experimental farming of the amateur. We venture respectfully to refer to the highest of these, believing that the farms at Windsor, with their recently introduced steam cultivation, simple convenience, the completeness of their establishments, their high bred stock, and the attention of those to whom the practical management is entrusted, will always be open to any subject of the realm, who led, not by idle curiosity, but by a wish for practical information, seeks to inspect them. In the forest the landlords and residents on their property are the chief improvers, as we should expect in a district in which a naturally sterile soil presents a picturesquely diversified surface. The chalk district affords abundant instruction to the breeders of sheep, whether at Oakash or old Hayward's farm, by those who have won the high honours conferred by the Royal Agricultural Society, or a host of others who devote their time, intelligence, and capital to carry out the work the breeder has begun, in all that is necessary to carry out sheep farming to perfection.

Descending to the Vale we find examples of the same principles pervading the richer soils, where much is sold and little bought, and the productiveness of the land is developed to the utmost in yielding crops for feeding stock, following each other in the closest system of rotation. We glance at the sheep cotes of the lighter soils, whence the lambs are so early sent to supply the monster demand of London. As we pass on towards the confines of the county to the north we learn how by judicious crossing the weight and valu of the sheep stock has been increased and fitted to this tract of light and kindly tillage.

Turning to the tract of Grass land to the westward in the Vale, we may learn how the judgment and care of the feeder enable him to win the prizes of the Smithfield Club, how the dairyman maintains and manages his stock and the economy of dairy produce. These and such like examples are to be found by the farmers at their very doors.

In application, to use again the words of Philip Pusey, "If our farmers will inquire what is done by the foremost of them, they will themselves write such a book of agricultural improvement as never was written elsewhere, in legible characters, with good straight furrows, on the broad page of England." Let the Berkshire farmers accept and apply this expression of practical wisdom.

Sounded in notes loud and strong, as from the token of the inheritance of the ancient House of Pusey, by one gone to his rest, may it wake up the latent energies of their West Saxon blood to new exertion in the improved cultivation of the royal county which it is their pride and privilege to till.

[The above article concludes the series descriptive of Berkshire agriculture. We understand that the several parts are to be collected and published by the Rev. J. C. Clutterbuck in pamphlet form.]

A DAY AT BEDFORD.

Harvest being over, and a day's relaxation promising to be acceptable, we were glad to take a three-hours' ride on the North-Western, and treat ourselves to what we had long desired, viz., a quiet inspection of ploughs and plough-making on an extensive scale. Some years since, when passing through Bedford, the Britannia Works, for it is these we refer to, were scattered about in different directions, workshop after workshop having been added according as the extension and exigencies of the business demanded. Consequently, in a hurried visit, one could hardly see little more than a meagre outline of the details of field implement manufacture. However, it is otherwise now, and the visitor with his admission order can in a few hours see what his tastes most lead him to, in the present beautifully arranged block of buildings.

Our examination being that of a sight-seer rather than that of a critic or reporter, the few notes we have to offer bear a correspondingly loose character.

BEDFORD

seems a very quiet orderly place, for on arriving there about 10 at night you might almost have fired a gun up the High Street, without risk of injury to any one. The public-houses, even, had apparently lost the wonted "life" which we expect to observe in them, in most places, at that hour; and whether policemen are needed or not, we can only say that it was not our lot to see a blue-coated gentleman, either then, or on the following day. Whence comes this amount of quietude and order? Have the famous educational privileges which Bedford enjoys, anything to do with it? This point we leave for settlement by others. The river Ouse flows sluggishly through the town, bearing on its bosom a few swans with their usual aristocratic bearing, as well as boats and barges for pleasure or utility. A handsome bridge with an inscription telling all the outs and ins of its history, spans the stream, which is here not unlike the Avon at Stratford. But these matters we do not dwell upon, nor upon the historical names interwoven with the place, whether that of Bunyan, "the glorious dreamer," or of John Howard, the mighty and laborious philanthropist—names which will be held in everlasting remembrance. But if the good people of Bedford seem careless of the great names with which their locality is associated, or its ancient relics or ruins, they are not unmindful of the practical benefits they derive in the present day, for the visitor, on asking "What is most worth seeing hereabouts?" is at once directed to the

BRITANNIA IRON WORKS

of Messrs. James and Frederick Howard. These are situated just across the Midland Railway, on the Woburn Road; and it is from the bridge over the line that decidedly the finest general view of the establishment may be had. Here the six span roofs of the building with their numberless glass tiles or daylights, and the beautifully variegated arrangement of the brick courses and the stone cornices in the walls may be seen to greatest advantage. The tall and symmetrical chimney stalk is almost a landmark in the district. The entrance lodge and archway, as well as the buildings and offices, are all in modern Italian style. Passing through the lodge across a large gravelled yard are the Works, where hundreds of clanging hammers send their reverberations through the air; for as Longfellow says of a far quieter scene,

"Week in, week out, from morn till night,
You can hear his bellows blow;
You can hear him swing his heavy sledge,
With measured beat and slow,
Like a sexton ringing the village bell
When the evening sun is low."

On the left, a carriage drive sweeps up to the offices, and the railway-house, or private goods station, on the opposite side. The open space referred to contains hundreds, if not thousands, of ploughs and harrows, arranged in close file, quite ready to sustain any attack

(of purchasers) which may be made. Here you find ploughs of every sort and size imaginable—some of them hardly imaginable; for we noticed one old wooden erection with a great uphill slope instead of a mould-board, and a beam reminding one of a schooner's bowsprit. This we learned was used for some purpose or other in the Fen country, and stands among the moderns like a relic of the past. The other varieties are well known, extending from the massive treble H that will turn over 14 inches of soil, and draw the sweat out of six or eight as good horses as you like to put before it, down to the finest tool for an amateur with his pony, or a market gardener with his general-purpose cob. Then there were Cape ploughs with their double-beams, which looked as if they would stand any amount of rough usage that either the Kaffir or his bullocks might put upon them; also ploughs for the "Garden of England" (Kent), having light skeleton mould-boards, so as to comply with the Kentish tastes for the complete inversion of the soil. But this wilderness of ploughs, all of the orthodox blue, is varied by the presence of their kindred relative, the harrow; also like the plough, of the most diverse sizes which could possibly be required. Then near the gas lamp and water fountain, in the centre, rows of cultivators for horse haulage and for steam traction—of the latter, however, more anon—present themselves. Beyond the carpenter's shop we found a field of horse rakes, which contrasted strangely with the noble Elms and leafy verdure around or above them.

With nothing more for the moment than a glance inside, at the pandemonium of fires and forges, of stalwart men and active lads, we pass to the other side of the Works against the river, where barges are unloading the crude materials that are destined to be fashioned into the products of the establishment. Piles on piles of pig-iron show themselves, loam for moulding, coke and coal for smelting. The latter is sea-borne from Newcastle to Lynn, and is thence delivered in barges to within a few yards of the spot where it is wanted for consumption. Still further to economise labour, the tramways extend completely round the building, as well as inside the workshops, with turntables in every direction. By means of the little trucks which run on these lines of railway, much heavy lifting as well as tedious wheelbarrow work is avoided, as one man can push nearly a ton weight along with comparative ease.

A very interesting scene, and one full of life and energy, is

THE FOUNDRY DEPARTMENT.

A couple of large cylindrical iron erections form the melting furnaces. They have a platform, to which the iron and fuel required for feeding them are hoisted by steam power. Then below is a spout or trough, through which the liquid metal runs in a glowing stream into a ladle mounted on wheels and running on the tramway. A rich sight, indeed, it is to see the fiery column pouring out and throwing beautiful coruscations of sparks around. All is as manageable, too, as if pouring milk from the pail into the coolers of the dairy. When full the ladle is pushed along the tramway, and the iron decanted out to the moulders as required. How rapid the transformation, and how illustrative of the control mind possesses over matter are the new forms which, momentarily, as it were, spring into being at the will of the moulder. Standing beside a dozen ranges of about 12 moulds or chills for casting ploughshares, you see a man and boy at each set or range working away, as if for life or death, when quick as thought out spring dozens of shares of the well-known and clearly outlined form, lettered and complete. Man and boy appear to have a separate job for either hand, and as you stand musing on the scene of busy activity, the same game is repeated. And the same again and again, until you cease to wonder where those many tons weight heaps of shares, reminding one of great Mangel stores in extent, all manage to come from. The arrangement for making and hardening the ploughshares has been patented by Messrs. Howard, and certainly nothing can be more complete or efficient. Of a more noisy character is another job going on close at hand. We refer to the shaping and fitting of steel mould-boards, on large iron blocks, so as to obtain perfect exactitude among all the turn-furrows of the pattern or patterns in hand. Stern looking, care-for-nothing sort of fellows these workers in iron seem to be; tossing about the largest mould-boards as if they were so many playthings, and minding not the deafening rattle which they inflict on the untutored ear of the stranger. Neither less interesting, nor less noisy is the next house, which for want of a better name, or for want of knowing better, we may style the

DRESSING DEPARTMENT.

A row of massive grindstones, 6 feet in diameter, salutes you on the right. From them also sparks are flying as the mouldboards are being smoothed against their rapidly revolving discs. This work carries fully as much danger with it as any other in the whole establishment. Certainly a grindstone, with a piece of metal pressed against it for sharpening or polishing, ought not to frighten anybody, but with one of these grindstones moving probably at 40 or 50 miles an hour in its circumference, the case is very different. Supposing the smallest fracture of the stone to occur, the centrifugal motion is necessarily so great that the detached portion flies off at a tangent, carrying destruction before it. The danger is certainly great in this as in many other operations in the Works, but the difficulty of enforcing sufficient caution is greater; one day a man loses his hand by carelessness; within an hour a dozen apply for his place. Another day a grindstone flies through the roof, frightening the grinder from his place; but no danger deters men when the pay is good, and the more dangerous the occupation the less fear seems to be felt, or care exercised, except under strict rules and constant supervision.

The motive power of the Works—a very powerful and massive compound (high and low pressure) engine by Goodfellow of Manchester—is worthy of more than a passing glance. Securely bedded on a foundation of solid masonry, you may stand within an inch of the basement and hardly recognise the fact of such a force beside you. And, being wholly enclosed in a room of plate-glass, the internal arrangements of which are kept in a drawing-room style of neatness, the whole effect is as fine as can be imagined. The steam has evidently to be conveyed some distance from the boilers, which are a pair of lusty twins, one or both of which can be used at the same time. Right over the boilers is a 10,000 gallon cistern for supplying the wants of the boilers, forges, grindstones, foundry, and offices with water, as well as a resource in case of fire. Beyond the engine, and under the same span, are lathes of every kind and character, fitted to cope with the largest steam windlass appurtenances, or the smallest wants of the common plough. Here was a strange visitor in such a scene. A Sebastopol gun had found its way thither, having been presented by her Majesty's Government to the inhabitants of Bedford, and Messrs. Howard having engaged to mount it. As it stood with its muzzle pointed down the shop, through a busy hive of industry, one could scarce help thinking of the contrast between the arts of peace and war. Hannah More worthily asks—

> O WAR, what art thou?
> After the brightest conquest, what remains
> Of all thy glories? For the vanquished—chains—
> For the proud victor—what; Alas! to reign
> O'er desolated nations—a drear waste—
> By one man's crime, by one man's lust of power,
> Unpeopled!

But space forbids us to linger on sentimentalities like these, else we shall be unable to do more than look at

THE FORGING HOUSE

with its steam hammer, its quadruple rows of forges, or the black, smoky, strong-armed men behind them. One steam-driven fan blast, revolving 3000 times a minute, serves the whole lot, and the workman has only to open or shut off the wind, according as his heating requires. Strange to say, the rushing of the wind into the fan or generator is comparatively inappreciable, notwithstanding that it may be blowing lustily from some scores of nozzles at one and the same time. This speaks of the unseen pressure of the air we live in. Piles of uncompleted plough beams and handles, rake frames and the smaller parts of those implements, under the hands of the workmen and placed near the forges, tell of a wondrous demand for improved machinery in this age of agricultural implements.

THE FITTING HOUSE

completes the range, and is adjacent to the painting-shed, so that it will be seen no plough or part of a plough has to go over the same ground twice. The fitting-house has more light than either of the preceding, because more is required for the class of work in hand. Here you find plough-frames, mould-boards, and other fittings stacked up by the hundred, all ready for "making-up," as a tailor would say of his broadcloth. We observed a steam cultivator, with its 1400 yards of wire rope, and all other essentials, in marching order, at the loading stage, for transmission by rail into Oxfordshire. The floor of the forwarding house is paved with irregularly-shaped blocks of wood, making a pleasant soft and springy floor, on which fractures or accidents to castings would not be likely to happen. Here the export packing seems to be managed, the shares and smaller articles going in barrels, and the larger parts in oblong boxes or cases. A 3-furrow balance plough of Chandler and Oliver's—manufactured here—was also by the landing stage, ready to follow Smith's "Smasher" to the fields.

We have not left ourselves room to allude to the pattern-store, in which duplicates of all castings made here are kept alphabetically arranged, in endless multiplicity; nor to the paint stores, the paint grinding, &c., the fire-engine, stabling, general store-shop, and the like. But the block of

OFFICES

under Mr. Frederick Howard's special management, must not be forgotten, at all events. Independently of the Works, they are of themselves, and on account of the beautifully systematic arrangements carried on in them, well worthy of a visit. No circumlocution office here. No mystifying of accounts and multiplying of accountants. From the door step to the iron safes there is the same easy and artistic proportion of parts and adaptation of means to an end. "Let all things be done decently and in order," seems to be the ruling motto of the presiding genius. Separate offices for separate clerks, with private access for each, gives an amount of effective elbow room not often seen. Then the waiting-room, so well furnished, and so elegantly finished, possesses attractions that may take the tedium from delay. A good selection of agricultural books as well as the *Engineer*, the *Agricultural Gazette*, and five or six other weekly papers interesting to the agricultural world; not even forgetting the *North British Agriculturist* for Scottish visitors, and the *Irish Farmers' Gazette* for friends from the other side of the Channel. These journals are all stored in lettered pigeon-holes of suitable size till the end of the year, and then take their ranks with the bound volumes which preceded them. The books are appropriately crowned with a substantial and large type copy of the Bible.

For the ingeniously disposed, there are in this room several models well worthy of attention. Among others, a self-acting arrangement of signals for railways.

In the office of Mr. James Howard we were glad to see a graceful remembrance, in the shape of portraits, of brother manufacturers of agricultural implements. Done up uniformly in gilt frames, and hung at equal distances on the walls, were the portraits of Mr. Allen Ransome, Mr. William Crosskill, Mr. Richard Garrett, and Mr. Richard Hornsby, sen., reminding one how closely "birds of a feather flock together," notwithstanding sundry jarrings occasionally visible to the outside world.

Our visit falling on a Saturday, when the hands are paid and all work ended at two o'clock for the week, we saw Mr. Frederick Howard superintend the details of a very interesting financial process. Nimbly as the fingers of a bank-teller, and banishing the word "mistake" from his vocabulary, he managed to sweep off, in separate payments, between 400*l.* and 500*l.* of wages, in 20 minutes. Let us state the process: it will be new to some, and there are various modes adopted for paying such large bodies of workmen. Standing at his office table, and with the cash arranged before him in separate heaps, consisting of sovereigns, half-sovereigns, crowns, half-crowns, florins, shillings, sixpences, fourpennies, threepennies, and pennies, he had a clerk beside him to read off the respective amounts from the labour book. "One, thirteen, eight" (1*l.* 13*s.* 8*d.*) might be the payment due to John Smith, or rather to "No. 420," and before the figures are scarcely uttered, the cash is dropped into a small numbered bag. This bag is stowed away in succession with scores of others, upon a tray marked "Forging Department," or any other department, as the case may be. The trays are taken exactly as the clock strikes two, to open windows, where the foremen of the departments hand past the bags, by simply taking the numbers in rotation, each man of course coming forward as his number is called. As the bags are emptied by the men they are placed in a receptacle close at hand, which is marked "bags," and which has the particulars of a fine enumerated for retention thereof, so that in a very few minutes (say 10) the whole are paid and off the Works. At the entrance-lodge, it being the first Saturday in the month, there was a copy of the "British Workman" free to each man, and a copy of the "Band of Hope Review" to each boy, who chose to apply for them.

Among agencies of a like kind with the latter we may simply enumerate the weekly meeting for prayer in the Works; the monthly lecture also in the Works by the Incumbent of "Trinity" and a dissenting minister alternately; and the sick fund to which the attention of visitors is directed at the entrance, instead of giving gratuities to any of the hands.

We could well wish to continue in the same strain, for our notes are not exhausted; but time and space both incline us to bid our readers good bye for the present. There are many valuable lessons to be learned in the establishment we have been looking at, as well as at other works of a kindred character. We love and honour the husbandman's calling all the more for what we have witnessed; as we hardly expected to see such a temple of industry devoted to the making of those very simple looking articles, the plough, the harrow, and the horse-rake. To these may be added the steam-cultivator. But it is evident that sticking to one class of implements has told well here; and those enumerated may be said to be in a measure akin one to the other. The classification and arrangement of piece-work, carried out to an unusual extent, is a feature of the deepest interest. As showing his opinions on this subject, I cannot do better than quote a few of the remarks made by Mr. James Howard in a lecture on "Labour and Wages," which he delivered at the Mechanics' Institutions at Bedford and Northampton, a little time back. He says on piece-work—"I like the system, as it enables the workman to earn higher wages, and the master pays for no more and no less than is done. I never had any difficulty in getting work done by the piece. I hear there are difficulties in other trades, but I think they would vanish when the system came into operation; 'tis worthy of remark and consideration, that those trades have made the greatest progress where piece-work has been the rule. It gives the industrious and skilful man a great advantage over the lazy and unskilful man. It also sets the energies of mind to work to find out readier and quicker methods of getting over work."

One word more, and we have done. Hard by the Works is Caldwell House, the residence of Mr. John Howard, the founder of the firm, and father of the present proprietors. It has been said that "a prophet has no honour in his own country." Not so, however, of Mr. John Howard, whom his fellow-townsmen have just elected Mayor for the third time (a circumstance without precedence in the history of this ancient

borough), and whose step, although 70 years of age, we were glad to see as elastic as that of any man in Bedford. It must be a source of no small gratification to the founder of such a concern as we have attempted to describe, to live to see the unforeseen and unexpected development of a trade, which when commenced was thought of little importance either by manufacturers or those upon whom improved machinery has bestowed such signal benefits, and by whom it is now so fully appreciated; for at the present day, the agricultural class is behind none in its estimation of good machinery. *T. Bowick.*

AUSTRALIAN FARMING.

In giving an outline of the system of farming pursued in Victoria, the various soils, crops, and other things connected therewith, I intend to confine myself to the two counties of Dalhousie and Talbot; because Victoria is a very large country, and, to describe it fully, would greatly exceed the limits of an article like this. These two counties stand in the first rank in the census, or agricultural returns, and may be considered as a fair good sample of what is doing in Victoria in the farming profession. I have said that the country is large, and contrary to the popular belief in England, it is not all flat. True it is, great plains stretch for miles in some particular directions. It may more properly be regarded as a rolling, rugged, sort of country; no very great hills are within its bounds, but there are plenty of small ones, and generally clothed with timber of different sorts, such as gum, iron-bark, stringy-bark, &c., woods of little commercial value, but excellent for fencing, and the erection of slab-buildings, which will be spoken of in due time. The soil of the colony varies from the poorest and most sterile of sandy clays to the deepest black alluvial and red chocolate volcanic debris. Upon the whole, it is to be considered that the sandy clays predominate. Various peculiarities will arise from the consideration of the district before mentioned, so we shall not tarry longer on the physical nature of the colony.

Soils and Climate.—In a district of such dimensions it may be expected that various soils will be found, and it is so. We shall mention them in their productive order, beginning with:—

1st. The chocolate soils are composed of volcanic debris, the result of volcanic action of the different hills in the district, which bear traces of having once been in a state of active eruption, although now extinct. These soils are of a deep reddish brown, and so greasy that one might imagine a cask of oil had been spilt on every square yard. They are unrivalled for Wheat, Potatoes, &c., and will, apparently, bear successive crops for a lifetime without exhaustion. They give about 20 to 40 bushels, or more, to the acre of Wheat, and from 30 to 70 of Oats; Potatoes sometimes as far as 10 tons. In winter time they are perfectly bottomless; 20 bullocks have often been yoked to one drag to drag it through the greasy mud

2nd. Black alluvial soil. This class ranks next in order of yield. They constitute the bulk of the soils round Kyneton and along the flats of the river Lodden, and the gullies and ravines that run among the hills. In a wet season these soils yield amazingly, being equal to the first-class, but in a dry season they lose the moisture, and a deficient yield is the result; therefore they cannot be calculated on with the same certainty as the chocolate soils. Forty of Wheat and seventy of Oats have been obtained in showery seasons; but in ordinary cases a third less is only obtained. For the same reason Potatoes have failed, except they be planted under the lea-sod, when they yield pretty well; but, on loose ground, they are only precarious.

3d. Sandy soils: A great proportion of our district is composed of this sort, and, in a dry season, are only of little value. The occupiers of such soils grow Oaten hay principally, of which hereafter, and sometimes a little Wheat, yielding about 20 bushels, and 1 ton, and often less, of hay. With prices coming gradually down, it would appear that, ere long, this class of soils would not pay for working.

The rents of these soils vary from 30*s.* down to 10*s.* per acre, with leases of all sorts of length, up to 21 years. The remainder of the country is taken up with ranges of low tiers of hills, covered with brush and stones, and worthless for any purpose save feeding, or rather starving, a few cattle or sheep.

Climate.—The climate, for nine months in the year, or from March to December, cannot be excelled in any part of the world. Ice in the mornings in July as thick as a shilling, is the extremity of cold; and, during the day, mild enough to work in shirt sleeves.

Rains principally set in about the end of March, and sometimes continue till everything is soaked through and through, clearing up after a little. We have a beautiful succession of fine days—days that Newcastle men could not dream of; but, as a set off, hot weather begins to show itself in December, and increases in intensity till the middle of February, when it moderates gradually. As may be expected, this weather is no joke. Now and again a breeze springs up from the north, and before noon it rages with terrible fierceness, driving clouds of dust along with it, and blighting everything before it. Then, the heat of it is overpowering. The thermometer at 130° in the sun and 120° in the shade, and the stifling hot air, like the blast of an iron foundry, completely prostrates the human frame, and labour, for a time, must needs be suspended. Of course, every green blade becomes like tinder, and at a moment's notice, appalling fires will break out, and laugh at the puny attempts of man to stay their progress. Whole tracts of country are swept by the terrible element, and woe to the farmer if he has been remiss in preparing for the storm of fire. This very season, acres upon acres of grain, homesteads and fences, have been swept away, and when night closes in, a pall of smoke encircles the landscape, making the midnight gloom more ghastly still. Happily, these devastations do not always spread so far, as farmers are generally aware of the necessity of ploughing round their farms, leaving a tract of fallow land across which the enemy cannot come.

Modes of Farming.—In discussing this branch of our topic, I cannot do better than take the case of a new settler, and follow him as he goes along; and we will begin with his purchase or lease. He sees a notice that on a certain day, certain lands belonging to the Crown will be offered at auction. He attends and buys a lot, pays down 10 per cent., the remainder in a month. If it is soil of the first or second class, he pays from 3*l.* to 5*l.* per acre, according to situation. If he leases, he may pay 20*s.* annually, and have it to fence himself. Well, he gets on the land in March, and erects a canvas tent, and at once sets the plough agoing. If he patronises bullocks, he buys six and a dray for, say, 100*l.*; if horses, he pays 40*l.* each for moderate-sized animals, while the plough costs him a dozen pounds. The harrows he will make himself, and he needs little more. The first ploughing is generally a heavy job, owing to the roots of the Grass and the trees. If he has any quantity of the latter, he either girdles, lops, or grubs them. The latter is the most effectual way; but money and time may be wanting, so he adopts one of the former plans.

In May or June he sows what crop he intends for that year, and perhaps extends the operation to July, should the season hold out favourably. He then sets to build a hut and fence his ground. The bush timber is easily split into 9 feet lengths, and about 8 inches by two inches making rails. These rails are inserted into mortices cut in a post of similar wood, of 9 feet by 3, standing 4 feet 8 inches high. This three-rail fence costs about 1*l.* per chain, if done by hired labour. His hut is done on one of the following plans:—

1st. He forms a skeleton hut, and laths it with wattle rods, and then plasters it with mud inside and out and thatches the top. This is wattle and daub.

2dly. Instead of wattles he sets slabs, dressed neatly, upright and close together; the chinks are stopped with mud; the roof covered with shingles (thin wood slates) or bark. This is a slab hut.

3d. Perhaps he prefers bricks and a galvanised iron roof. Bricks, costing about 2*l.* per thousand, come cheap enough, but the high wages of masons make either brick or stone too expensive; therefore, the first two plans are generally adopted

Well, the winter is past. September warns him it is Potato-planting time. This is done in a most primitive fashion. He ploughs away just as usual the original sod, and an attendant drops the seed every third furrow, and no more about it. Sometimes they are hoed, and sometimes not, and rude as this plan may seem, it bears the palm at the end of the season when the crop is looked for. Fine working to tilth, drills, &c., are not the things here at all. But harvest comes on, and our farmer is intent on saving some oaten hay for his stud: he allows the devoted patch to slightly change colour, and then cuts it down with a mowing machine if he has one, and rakes it with a horse-rake into cocks or rills, whence it is carted home, and transferred to the stack by means of machinery, without the aid of forks.

By the way, these machines are not in everybody's hands, many only using the scythe and hand-rake, but they are going fast out of use.

The hay is scarcely out of the way till the rest of the corn is ready. Here again the patent reaper, costing 60*l.*, is brought into play, cutting one acre per hour; the sheaves are tied and left there, often never stacked at all. Our hero's temper is now sorely tried with his assistants, so perfectly useless are nine out of every ten among them, although they get 30*s.* per week and rations—which means beef three times a day, with tea, white bread, vegetables, butter, and often grog.

The sickle is used on small places, the scythes on others; but, ultimately the machine will drive them out. The weather being generally good, our friend takes little care as to how he stacks it, if he stacks it at all; for, if on a large scale, he sets the portable engine in the middle of his field of Wheat, and carts the sheaves to the thresher instead of the stack. Perhaps he gets the Adelaide reaper to thrash it without the trouble of cutting and stacking. This machine goes along the field of standing grain, and has a comb in front which catches the heads, and a drum knocks them all into a box; it is marvellous how little this implement wastes. After the field has been thus unceremoniously treated, the straw is burned, not being considered worth any more trouble. If the field is Oats, the cutting is preferred on account of the value of the straw in chaff—of which more hereafter. Well, it is all done somehow or other; it has now to be marketed; little time has been wasted in thatching first and carrying into the barn afterwards. Except our farmer is very low and uses the flail, it is generally all threshed out of doors, and at once. Mills are plentiful, and are now giving 9*s.* per bushel for Wheat; and the number of horses kept on the gold fields create a good demand for Oats, which are very low at present, only 5*s.* per bushel. Hay is trussed up, and sold at about 8*l.* per ton, but the great trade is chaff. Our farmer has undoubtedly got a chaff-cutter, and he cuts some hay and more, mixes them up, and sells the amalgam as half-and-half. It is incredible what quantities of this ingredient are sold at prices varying from 4*l.* to 8*l.* I have known common straw chaff sold for 20*l.* per ton, not many years ago. This trade keeps his bullocks going while his horses are ploughing the ground to repeat over again the process of the previous year. He does not trust to half and half for their support, but cuts them clean Oaten hay, which, with a few Oats, keeps them in first-rate order. The allowance for the police horses is 16 lbs. of hay, and 10 lbs. of Oats per diem. I would recommend a trial of this plan by some of the Northumberland farmers, as it seems to answer very well here. An ordinary team will consume about 2½ cwt. per week, with 4½ bushels of Oats. As might be expected from the droughts prevalent in summer, little is done in the way of green cropping; our farmer contenting himself with planting a little Lucerne or Sorghum for his cows in the hot weather. We want the fresh pastures of England to do much in the dairy line. Colonial cheese is vapid tasteless stuff, unworthy of the name. After a little our hero builds another hut for his men (as married hinds are not to be had as at home, except in rare cases.) The whole single lot live in this hut, and enjoy their pound per week and rations regularly. Sometimes a married couple is hired by a single farmer to look after his household. They receive about 80*l.* per annum, with their board; but they soon save enough to start them in a piece of ground for themselves, and swell the ranks of the farmers of Victoria. Perhaps our farmer wants a house servant, heaven help him if he does. House service is only a place of sojourn for the young ladies till they get married, while their 30*l.* per annum generally goes to help to decorate their lovely persons, so that, at church or market, it is difficult to judge between mistress and girl. As a general rule, the finest-dressed may be considered as the girl. I have heard of one or two females who have been seen working outside; but it would be dangerous to ask sweet Anna Maria to do such low disagreeable things as hoeing a potato drill, or tying a sheaf. By-and-by our friend is made a member of an agricultural society, becomes of some importance in his neighbourhood, and thinks himself fully qualified to criticise the awards of colonial agricultural judges; such as the memorable decision given in the dark ages by a Melbourne judge, of the best managed farms, which may be briefly stated thus:—

"We give the first prize to Mr. W., seeing that he ha initiated a system of green cropping, to wit: on the ground where he has grown Wheat for years, till it has become sick, he is now growing Potatoes; and likewise, where he grew Potatoes till they grew sick, and refused to grow any more, he now grows Wheat Therefore, that is green cropping, and that being a good thing, he must have the prize-"—(Vide Report of Port Philip Society, 1857).

Rotation of Crops.—A few words will suffice for this. Heretofore no rotation worthy of the name has been practised; for successive years the land has grown Oats or Wheat, until it shows signs of exhaustion, and then it is allowed to lie fallow for a season to enable it to bear the same dose over again. A better system is gradually working its way, and before many years we shall see a part of the tillage land regularly fallowed, ploughed deep, and guanoed for Wheat.

On some farms near Melbourne, where Oats and hay have been grown for years, the practice of sowing the land down with Grasses is gaining ground, seeing that the land has become exhausted and grow no crops that would pay at the present low prices. An experimental farm is being got into order near Melbourne, for the purpose of instituting experiments in seeds, modes of tillage, subsoiling, draining, &c.; but, as no great results have yet been obtained, I need not now enter into details respecting it. It receives a subsidy from Government, as do the various agricultural societies in the colony; the total granted this year being about 13,000*l.* Last year each agricultural society received about 25*s.* for every pound of revenue they could show on their books. The Newstead Society, with which I am connected, received 3*l.*

Nothing of importance has been done in roots, although we can grow Mangels of immense size; but the price of labour effectually precludes extensive root growing for the purpose of stall-feeding, and the aphis, or blight, will soon make Cabbages extinct. The cultivation of Rape would prove a blessing to thousands of acres of impoverished land, but the climate has as yet said no.

The statistics having been taken, I can add some particulars for this year, as far as regards our neighbourhood.

AVERAGES.

TABLE OF PRICES OF PRODUCE FOR FIVE YEARS.

Parish.	Size of Farm.	Cultivated.	Kind of land.	Wheat, bush. per acre.	Oats, bushels per acre.	Oaten hay, tons per acre.	Potatoes, cwts per acre.
Franklin	103¼	96	Chocolate principally	27	33	14	95
Sandon	86	81¾	Light sand clay	21	26	1 1-5	13 0
Strangways	61	41¼	Black alluvial	17	33	1 1-5	17
Tarrangower	256	59	Heavy clay and light sand	20	27½	1 1-10	15

	1856.	1857.	1858.	1859.	1860.
Per bushel	s. 10 to 14	s. d. 10 to 13 6	s. d. 7 6 to 9 0	s. d. 10 0 to 12 0	s. d. 4 9 to 6 0
Wheat ..	£ s. 10 to 14	£ s. 10 to 19 0	£ s. 8 to 10	£ s. 5 0 to 7 0	£ s. 3 0 to 4 0
Oats ..	£ s. 14 to 30	£ s. 22 0 ..	£ s. 13 0 to 15 0	£ s. 8 0 to 11 0	£ s. 6 0 to 8 0
Per ton					
Hay ..	£ 20 to ..	£ 20 to ..	£ s. 4 0 0 to 6 0 0	£ s. 2 15 0 to 3 10 0	£ s. 2 0 0 to 3 0 0
Potatoes	£ 20 to ..	£ 20 to ..	£ s. 6 0 to 8 0	£ s. 3 0 0 to 4 0 0	£ s. 3 0 0 to 4 0 0

1858 was a remarkably productive year, therefore the low prices compared with 1857.

1859—Potato crop very heavy, hence the low prices.

1860—Hay, Wheat, and Oats good, but Potatoes worthless.

I will now conclude, by illustrating the characters of our farm labourers, by transcribing a letter, written by a friend of mine, that appeared in the *Argus* newspaper last November, in answer to strictures passed on the farmers by some writers in that paper:—

FARMERS AND THEIR LABOURERS.

To the Editor of the Argus.

SIR,—What an unmitigated lot of scoundrels the farmers of Victoria must be, should the allegations of Mr. W. Carven and a tradesman be true! What an extraordinary compound of extravagance and tyranny! As it is rather a serious matter to have such a catalogue of sins to answer for, pray grant me a little room for our side of the question.

I am one of the tyrannical class, and have had ample opportunities of canvassing the merits of the wandering, houseless nomads that seek work on the farms of the interior; but let me begin with our extravagance, side saddles, and the like.

One fact is worth a dozen arguments, so here goes fact No 1.—By actual observation I have ascertained that of every dozen farmers taking their wives to our provincial markets on a Saturday morning, one treats his better-half to a ride in a dog-cart, two are content with bullock drays, four in horse drays, and five are side by side in spring carts. At home, six have no servant, five have a servant each, and one has both cook and scullion, and time to work crochet. Eleven take their meals at the same table with the men (and that is no joke), while one contrives to mess alone in their little parlour; and, as to pianos, you might as well look for a piano in a farmer's house as for common sense in the convention; but I devoutly wish there were some up the country, that music might put forth its charms to soothe the farmer's breast, while suffering the infliction presently to be mentioned.

And, in illustrating this infliction, I will adduce fact No. 2, drawn from my own experience, and in every way correct. The harvest in question will answer equally well for 1858, and I fear 1859 too.

The harvest of 1857 found me the employer of sundry hands picked up in the orthodox way, viz., as they cast up on the highways, and I promised each the regulation price of 25*s.* per week, with rations. Being curious as to antecedents, I soon found out that I had one pensioner, one chemist, one attorney's clerk, two or three sailors, and a sleek grocer (that we facetiously dubbed Sugar), and sundry nondescripts. As may be imagined we got on gloriously, not one of the whole batch could make a band or tie a sheaf until they were shown how; but they were no way backward in asking wages for what they professed to know. Macbeth's maxim was in full play—"Time and the hour runs through the roughest day." Not knowing whether to laugh or cry, I looked, as one of the sailors said, like patience on a lee cat-head smiling at a half-wrung swab;" but by-and-by was relieved by a visit from a couple of Scotch lads, and a veritable god send these lads were. I was not long in advancing their wages to 35*s.* per week, and, by their help, the harvest was mastered. Sleek Sugar, who had melted like a piece of suet in a camp oven, and his mates, were bowed out of the gates, to tantalise other settlers and publish their wrongs in the weekly papers. Now, can you blame us, when men are so utterly worthless, if we take out the balance by making their time 12 instead of 10 hours? A good man is never asked to do it. Each of the Scotch lads was as good as two of the rest, and accordingly, I kept them for nine months, and they are now living in the receipt of 70*l.* each on a farm, waiting patiently till they have cash enough to start for themselves, and become employers of such men as your correspondents, and come in for a proper share of their virtuous indignation. Now, sir, these are the men who, in this colony, never want a day's work; and why? They know their business, and are appreciated accordingly; and, let others say what they may, from that class have sprung the majority of the Victoria farmers; and, if free selection is calculated to do any good, it is this class who will receive the benefit. Let the novice in farming matters beware how he is led away by glowing panegyrics of a yeoman's life, and rest assured that, if in an evil moment he turns farmer, without sufficient capital and a skilful pair of hands, he will find he has raised a demon that he will be unable to lay; while the farm labourer, who abjures drink and agitation, will rise to take his place among the yeomen of Victoria.

One word may suffice as to sleeping in huts alive with vermin, &c. If the country huts had a thousandth part of the small den that the town houses can boast of, we should burn the whole affair, bugs, fleas, and all—begin again, and build a new hut. I will conclude by saying that, if by any necromantic feat a half-dozen Berwickshire wenches were transported hither in the course of a night, I would back them at long odds to beat an even dozen of the average run of the road at any harvest work they like to mention: or else I am not an Old Colonist.

Mr. Jobson, late of Sturton Grange, read before the Newcastle Farmers' Club.

CONTINENTAL IRRIGATION.

To those desirous of witnessing the effects of a scientifically carried out system of irrigation, a visit to the singular district of the Campines of Belgium, or the fertile fields of Italy, will be productive of much that will be at once interesting and useful. Perhaps the most striking exemplification of the benefits of the system will best be obtained in the Campines, for within a short distance of a district which has so benefited by it, the traveller will be able to examine one in which are the dreariest of sterile spots, these presenting a remarkable contrast to the others, and showing how rapidly and completely sterility can be changed to fertility by such a comparatively simple process. The irrigation is carried out in a thoroughly scientific manner, government laws regulate its policy, and men of scientific attainments originate and superintend its practice. By the establishment of canals, at once the feeders of the irrigating channels and the highways, so to speak, by which the products of one district are carried to another, the whole face of what was once the dreariest of deserts is becoming rapidly changed, and districts are now highly productive which a few years ago bore upon their surface Heath and Briars, or were dotted here and there with the stagnant pools over the surfaces of which waved the water Rush. A Campanoise farmer put the train or sequence of a cause and effect thus: "with the water the Grass, with the Grass the cattle, with the cattle the manure, with the manure all that we can desire." A brief paper on the mode of making the irrigated meadows and their management may not be uninteresting to our readers, the authorities we shall follow being M. J. Keelhoff and M. Debay.

There are various ways of establishing irrigated meadows, of these we shall now only describe one, which Belgian engineers denominate "Irrigation par planches disposées en ados;" which we may describe as irrigation by sloping surfaces, the water shedding on each side from a central drain down sloping surfaces, the water being received at the foot of these by side drains. This being exemplified in fig. 1, the line *a b* is horizontal or nearly so, while the sloping surfaces *c d*, *c e* vary according to the nature of the land. This mode of irrigation is applicable to districts where the land is not very irregular, or having steep declivities. It assures the most regular distribution of the water over the irrigated surfaces. The

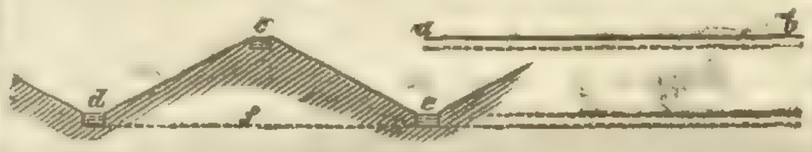

FIG. 1.

following will give a general description of the system. The irrigating channels or drains *a a a a*, fig. 2, corresponding to that marked *c* in Fig. 1, and which run along the crown of the divisions, are fed by the channel of supply *h h*, fig. 2. This channel is shut by a small sluice-board placed at the end *k*, so that all the compartments, as *a c c*, can be watered separately from those at *h h* at pleasure. The water from each of the channels *a a*, fig. 2, is shed over the surface on each side, and running down the slopes is received by the side drains *c c*. These again deliver the water to the channel *d d*, at the end of this is a return *e*, leading the water by a channel *f*, to a second distributing channel *g g*, placed in a lower level than that marked *b b*. From this channel *g g*, the channel *h h* is supplied, the water shedding over to *i i i i*, which deliver it to the channel *j j*.

In setting out the irrigating slopes of this method the first operation is to divide the land to be converted into meadows, into compartments about 75 yards wide. The compartments run in the direction of the general slope of the land; each compartment is divided in the middle by a line, this being the position of the channel *a a* fig. 2. This line is accurately levelled, and the slope or gradient of the land is ascertained. According to the slope is the number of divisions, as *c d*, *c e*, fig. 1. The rule is to make as many of these as there are half yards in the total amount of slope. Care is taken to arrange the compartments so that in forming the sloping parts the excess of earth at one part shall be immediately and easily available at the parts where it is deficient. Irrigation works on this system are very costly where the plan is so defective as to require earth to be brought from a distance to make up where it is deficient, or to take it away where it is in excess. As in railway making so here, the earth taken from the cuttings should be made useful in the embankments, and that plan will be best arranged which sustains a fine balance between these two requirements. Where the land to be irrigated is exactly or nearly level this balance is easily adjusted, for all that is necessary in this case is to place the crest of the slope, as *c*, fig. 1, at half the height of *c f* above the level of the land; the earth taken out to form the lower half of the slope will suffice to form the upper half. Where the land is very irregular in its surface an accurate series of levellings will have to be taken.

The dimensions of the distributing channel *b b*, fig. 2, are as follows:—The depth, 0^{m}.25*; the width, 0^{m}.50; the depth of water, 0^{m}.20; the slope of the channel is 0^{m}.0005 per mètre. These dimensions experience has proved to be well suited to systems where the length of the drains or channels *a a a* is 200 mètres. The bottom

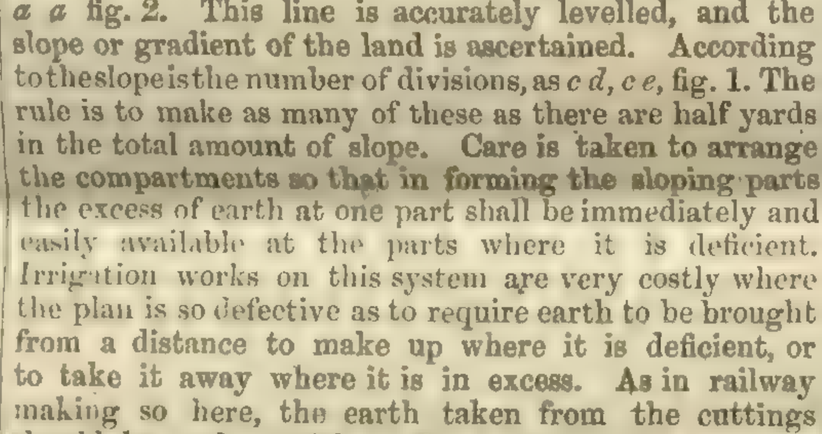

FIG. 2.

of the channels *a a a*, fig. 2, are maintained at a level, if their length does not exceed 100 mètres; if it extends to from 150 to 200 mètres, it will be necessary to give a slope to the channels of 0^{m}.0005 per mètre.

The sloping surfaces, fig. 1, are placed at right angles to the supplying channel *b b*, fig, 2, and at right angles also to the general inclination of the land. The most convenient length of these surfaces experience in the Campines has shown to be 25 to 30 mètres. The slope or inclination of the sides *c d*, *c e*, fig. 1, will vary according to the nature of the soil. If of stiff clay, the slope may be 0^{m}.02 per mètre; but in sandy soil, which will rapidly absorb the water, the slope will have to be more pronounced. In the Campines, where the soil is very light and absorptive, the best rate of declivity is found to be 0^{m}.05 per mètre. The breadth, &c., of the sloping surface *d c e*, fig. 1, varies also according to the soil, and by consequence, according to the angle of inclination. Where the soil is consistent, and comparatively more absorptive, the breadth can be made greater than where the soil is light and absorptive, when the angle of slope will be more decided. With a less pronounced slope, the height of the part *d c e*, fig. 1, above the mean level of the surrounding ground, should not be too great for a wide breadth. Thus, where the slope *c e*, fig. 1, is 0^{m}.02 per mètre, and the length of the channels *a a*, fig. 2, is 30 mètres, this height would not be more than 0^{m}.15. If with a slope of 0^{m}.05 to the mètre, the height of the slope above the level of land being 0^{m}.375, the construction would be too costly.

To fix the breadth of the "ados" or sloping surface *d c e*, fig. 1, according to the nature of the soil, "one should," says Mons. Keelhoff, Engineer of the Irrigation Services in the Campines (we translate freely) "take into consideration the regularity of the irrigation, the facilities for keeping the works in repair, and above all economy in the expenditure of the water employed."

When the breadth of the "ados" is considerable, the irrigation is effected in an irregular manner towards the base, for after a certain length the water divides itself into little streamlets, and the lower parts of the slopes receives an unequal distribution of the water, a fault which ought always to be avoided, and which makes itself felt in the Campines, where the breadth exceeds 10 mètres, that is each side 5 mètres.

The keeping of an "ados" of great breadth in repair, presents many difficulties; the management of the earth-work in bringing the sides to the proper slopes, especially in the light soils, being an expensive matter.

So far as regards the expense of obtaining water, it is infinitely less, the surface being equal, for a large ados than for a small one; this is easily explained; for the greater the width of the ados, the fewer the number of distributing channels required to water the same surface; now experience daily demonstrates to us, that in the light lands of the Campines seven-eighths of the water necessary for the irrigation actually passes by infiltration into the channels of distribution; the fewer then of such channels the less will be the quantity of water required for the irrigation of a meadow. This consideration alone should cause the custom to be dispensed with, of making the "ados" very narrow, as from 3 to 6 mètres in breadth, as one sees established in the major portion of the Vosges, Germany, and Belgium. They have fallen into the same error in the Campines; and the most part of the meadows are constructed in "ados" of 6 mètres in breadth. The expense of obtaining a supply of water is so excessive that there is great difficulty in furnishing the supply necessary for the irrigation of 3000 hectares of meadow lately created. This tendency to diminish the breadth of the "ados," arises from the prejudice that the water after irrigating the part of the slope contiguous or nearest to the channel of distribution, loses its fertilising properties, and is of little value in the estimation of several irrigators. They base their reasoning upon a fact true in itself, but owing its existence to another cause altogether; generally the Grass is more vigorous at the summit than at the base of the "ados;" then say the advocates of the very narrow "ados," the water has much greater value at the highest part than at the lowest, and consequently the more numerous the channels of distribution the greater the produce of Grass; but this vigorous growth at the highest part of the ados is not caused by the greater fertilising properties of the water at that point, but is due to the irrigation which is effected in a regular manner near the channel of distribution, however badly maintained may be the surface of the meadow; whilst that generally in this country where no rent is charged for the water, the meadows are kept in repair with so little care that towards the feet of the "ados" the irrigation is effected so incompletely and irregularly, that many parts of the surface receive none of its benefits; the result of this is the difference which is so generally remarked between the vigour of growth of the Grass at the upper part, and that at the lower part of the "ados."

We have constructed about 200 hectares* of prairies in "ados" of 10 mètres in breadth, 5 mètres for each wing or slope, with a declivity of 0^{m}.05 per mètre, and in these the irrigation is effected very equally, so much so that the "ados" have been maintained with their slopes perfect, and the vegetation has been uniform upon the whole meadow. We think, then, that in the light soils these dimensions are those which should be adopted.

In the strong soils we have seen "ados" of 10 mètres in breadth, with a declivity of slopes of 0^{m}.02 per mètre, which for efficiency left nothing to desire.

The channels of distribution at the summits of the slopes, *a a*, fig. 1, are placed at right angles to the channel of supply, *b b*, with which they are put in communication. There is a difference of level between the

* A mètre in French is 3.2809 feet English.

* A hectare is equal to 2 acres, 1 rood, 35 poles of our measurement.

hannels *a a a*, and that of *b b*, of 0m.25. This is necessary in order to enable the water to be distributed regularly from the channel *b b*, to those, *a a*, at the summit of the slopes. The breadth of the channels, *c*, fig. 1, is 0m.25 for a length of 23 mètres and a half, the breadth being increased near the end of the ados to 1m.50. The end of the "ados" is terminated like the end of a hipped roof, as shown in fig. 3, where the slope *a b* is the same angle as the slope *c e* of the side, fig. 1; *c d e*, fig. 3, is the plan of end of ados.

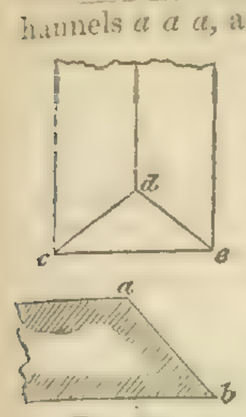

Fig. 3.

A great mistake, as M. Keelhoff points out, is forming the channels of the ados too deep; this excessive depth—0m.30, not only causes a loss from infiltration, but exercises a bad influence upon the turf. The loss sustained by the water filtering through the material is obvious enough, for the deeper the channels the greater the surface of earth passed over by the water, and the greater the pressure on the sides and bottom. But the influence which this over depth of the channels *a a*, fig. 2, has on the herbage may not be so obvious. Thus whilst the channels *a a a* are too large, it frequently happens that those at the base of the ados *d e*, fig. 1, which leads off the water to the channel *d d*, fig. 2, are too small. The result of this arrangement is that the water overflows the channels *c c*, fig. 2, and as a considerable quantity is also soaked up by the channels *a a*, a portion of the Grass is continually under water, and the action of the atmosphere so necessary to its healthy development prevented, decomposition partly ensues, while long, rank, and aquatic plants replace the good qualities of Grass. Good proportions of the channels *a a* are these—a depth of 0m.05, with a breadth of 0m.25; with these sizes a sufficient supply of water will be given to ados of the dimensions previously stated.

Where the soil in which the channels *a a*, fig. 2, are cut is stiff, the infiltration of the water into the sub-soil is of course less than in light soils; but still it is in some cases considerable, and all means should be taken to prevent it. In light sandy soils, M. Keelhoff has lined the inside of the channels with clay.

The channels *c c*, fig. 2, at the base of the ados have at their commencement near to the channel of supply, *b b*, fig. 2, a depth of 0m.20, and at the extremity near the channel *d d*, 0m.25. The outside channel *c' c'* next to the road, is made of a depth equal to 0m.40, as it receives the water of infiltration from the channel *b b* as well as its ordinary supply of water.

The great aim of all the arrangements is the continual and rapid flowing of the water from the points of supply to the points of discharge; none remaining stagnant at any part.

The sides of the ados, as *d c*, *c e*, fig. 1, should have a slight rise in the middle when first made; this settling will leave the level of slopes ultimately unimpaired.

The channels *d d*, receive the water from *c' c' c c*, and lead it off as before described to be utilized in the irrigation of another compartment. These should be so constructed as to enable the water to flow off easily without meeting any obstruction from the channels *c c*. This will be effected by making the base of the channel *d*, fig. 2, at its commencement 0m.24 below that of the channels *c c*. When the works are finished the edges of the channels and the sides of the "ados" are finished with turf, carefully preserving the outlines. If the consistency of the soil permits, the roller is used with great effect, the rolling being done previous to the laying down of the turf. Where the soil is very light the operation of laying down the turf is of necessity longer, but presents no great difficulties—the principal care required being to lay down the turfs of an equal thickness, and placing them edge to edge, in no case allowing one to overlap the other; the great aim being to render the surface as uniformly level as possible. Where turf cannot be had in sufficient quantity, the edges of the channels should only be turfed, the intermediate space being sown with Grass seeds about the beginning of winter.

In cases where the land is so dry and sandy, the vegetation of the turf fails entirely; so that recourse must be had to one of two methods; either to submit the surface to the irrigation for a time, or to sow seeds specially.

THE LANDLORDS OF COTTAGES.

BY THE REV. W. F. TREGARTHEN, OF OSMINGTON.

Within the last 50 years much has been done to improve the working man's home. In almost every village in England a change for the better has been wrought in the outward features of social life. The wave of improvement has passed over the land, and we may detect tokens of its passage in remote and unfrequented places. Attention is yearly more and more directed to the influences of home, and it is more and more acknowledged that morality suffers grievously from the neglect of the science of social economy. Persons familiar with country life will admit that many vices which destroy the happiness of the labourer would be robbed of their power if homes were more attractive and comfortable. The warm, well-lighted, cheerful, comfortably-seated rooms in the house, with the sign-board, on the hill, would not prove so enticing if the cottage chimney did not smoke, and its windows and doors admit cold draughts, enough of a frosty night to make the most hardy shiver. The working man does not like retiring to rest as soon as it grows dark. Village lectures or meetings in the evening are generally well attended. On Saturday nights the labourer stays at the beer-shop later than on other evenings, not always because he has more money, for wages are not always paid on Saturday night, but because, feeling no necessity to rise so early next morning, he is inclined to indulge longer in conversation. His home offers few inducements for a half-hour's conversation with his wife or friends. There is nothing in the appearance of his room to encourage a communicative mood. Considering how few have been their advantages, how many their trials, often nobly and patiently endured, let us touch tenderly the blemishes in their lives, and do our utmost to lift them out of the wretchedness and ignorance in which, alas! too many of them are sunk. Many a man denied the necessary relaxation and rest in his own home and chimney corner, has sought it elsewhere, and mistaken drunkenness for it. Many cottages in every village are still most wretched, some with only one bed room. The landlords are the only persons who can remedy this evil. And in many cases, to their honour, they have publicly acknowledged their obligations and shortcomings, and set to work to fulfil the one, and remedy, as far as possible, the other. The Duke of Bedford, in a letter which accompanies some excellent plans for improved cottages, sets forth this duty of the landlord in its true light, and enforces it in the most telling way—by example. "To improve the dwellings of the labouring classes," the Duke says, "and to afford them the means of greater cleanliness, health, and comfort in their homes—to extend education, and thus raise the social and moral habits of those most valuable members of the community—are among the first duties, and ought to be among the truest pleasures of every landlord." It is cheering that many landlords have ceased to view the cottages on their estates through the eyes of stewards and agents. But it is still not uncommon to let the cottages together with the farms, thus placing the occupancy entirely under the control of the farmer. The labourer thus lives in a building of which the farmer is practically landlord. Farmers, as a class, have generally not reached that point of intelligence, which recognises an unselfish outlay as a profitable investment. And in many places, whilst the landlords have spent large sums on sheds for cattle, nothing—or next to nothing—has been done to improve the labourer's home. To collect rents from cottagers is undoubtedly tiresome; this system of making the farmer the virtual landlord saves the real landlord trouble; but what he gains the labourer loses. Many a farmer, as long as the labourer performs his work, troubles himself little as to his comforts at home. This is an unnatural system, and gives rise to unnatural feelings. It debases the labourer, as it deprives him of the feeling of independence, and makes the farmer tyrannical. The farmer possessing the power of ejectment, it is often cruelly used. This system exercises also a baneful influence on education. The great obstacle of education is the early age at which children leave school. As long as our boys and girls are withdrawn from school at the age of eight and nine, their education must necessarily be most rudimentary. So great has this evil appeared to some who, from their position and interest in education, are well able to form an opinion, that they have urged legislative interference. At the Social Science meeting at Glasgow, Lord Brougham animadverts on this great obstacle. He says:—"It is now many years—I won't say how many—since I took occasion in the House of Commons to make a declaration that the schoolmaster was abroad—that the schoolmaster being abroad, I had no fear whatever of another person who had been said to be abroad in these times—I mean the soldier. I think that with the schoolmaster, with his primer in his hand, I would meet, for the benefit of society, the soldier with his sword. But I will now add another declaration, but not of so hopeful a nature as the other. If the schoolmaster is abroad, the workmaster is also abroad, and he counteracts the schoolmaster, which I have no fear of the soldier doing. And I would entreat the attention of our friend Sir James Kay Shuttleworth and his department to this great problem—to solve if they can this problem—and if they cannot give a solution to it to give an approximation as to how the effects produced by the workmaster in impeding the schoolmaster can best be removed, and how the children's parents can be weaned from the inclination to keep their children from school, in order to gain a little from their labours."

Half-time schemes, industrial schools, night schools, owe their origin and importance to the existence of this social evil. A very imperfect education—how imperfect those only who teach in night schools and examine the scholars can judge—is all that we can confer on children of the labouring classes under the present system. Whether the State should interfere and exercise a judicious control over the labour market, it is for wise men to determine. But, as a matter of fact, this sending of children to work in the field at the ages of eight and nine is the great hindrance to education, and fosters a process of intellectual and physical stunting. The ordinary village school is nothing more than an infant school, and the work of the night school in the winter's evening is in general necessarily confined to reading and writing, and a very little arithmetic. Education in rural districts has confessedly not made the progress which from our outlay of money and labour, and the improvements in system and apparatus, we had a right to expect. In a village with which I am familiar, where there has been a school for the last 25 years, with a good mistress and diligent supervision, the majority go to work before they have learnt to read and write tolerably. A few Sundays ago I jotted down the ages of five scholars in a class in the Sunday school, and the time they had each been engaged in out-of-door labour:—

J. S.	11 Years	2 years in field
J. M.	13 ,,	4 ,,
G. H.	12 ,,	4 ,,
G. N.	10 ,,	1 ,,
T. F.	10 ,,	at school.

The boy at school, and the boy who had left school only a year, read the Bible with tolerable fluency and seeming intelligence; the others performed their task in a very unsatisfactory manner. And I am certain that in many places this system of letting cottages with the farm to the farmer goes far to increase this evil. Perhaps I can best explain how it works by relating the particulars of a case. A family from the neighbouring village came to reside in the parish of B. and to work for a farmer in it. A boy eight years of age formed one of the family. It was known to the clergyman of B. that up to that time this boy had attended school in the neighbouring parish. He reckoned upon his attending the school in his parish, but a week passed and he did not appear. The parents were talked to, and the importance of keeping the boy at school for some time longer was set before them. To this they readily assented; and, when asked why they acted towards their child in opposition apparently to their conviction, the answer was this, "Master wants un." Surely it is an unhealthy state of things which hinders a parent from giving to his child advantages of the value of which he is sensible. The only person who can remove the hindrance is the landlord. He alone can untie this knot by the kindly exercise of his influence. Lady Londonderry, on a late occasion addressed her tenants in these noble words:—"With the assistance of the National Board there are now good schools all over the estate. Do you avail yourselves of them for your children? Do you sufficiently consider the solemn duty of training them up in the way they should go, or do you, when there is farm work to be done, make them assist you and neglect their attendance? My friends, it is my duty, after what I have heard, to put these questions before you. I leave you to ask your consciences to answer them." The day is not far distant, we hope and pray, when landlords in all parts of England will become imbued with the noble and true Christian spirit which characterises the conduct of some of the greatest landlords of this land, and then we shall no longer deplore the existence of this unnatural system of "Cottage home administration." The social machine is so constructed by the wise Designer of the Universe, that the work of one wheel cannot be thrust upon another without all the other parts suffering from the unequal distribution. Confusion and mischief, unhappiness and discontent, are the unfailing results of neglect of duty amongst the high and the low, the rich and the poor. It is the duty of the landlord to see to the comfort of his poorer brethren who labour on his estate. It is his duty to see that fair advantages of education are available to the children of the labourers in his parish. We would have him acknowledge and discharge these responsibilities, and not permit others to exercise powers which from their position they are strongly tempted to abuse. Cottage discomfort and educational obstacles will vanish in proportion as the landlord performs his duty. We would have him feel that the agricultural labourer on his estate is his tenant. Upon social and educational grounds we deplore the system which transfers the power of the landlord to the farmer, and gives him an influence over the labourer which is not legitimate, and therefore is prejudicial to the interests of society. *Journ. Soc. Arts. Read at Warminster.*

Home Correspondence.

The separation of Burnet Seed from Sainfoin Seed.—My attention has recently been called to a paragraph in the *Agricultural Gazette* of the 17th November last, on the trial of Davey *v.* Gillett at the Faringdon sessions for selling Sainfoin seed mixed with Burnet. I think your remarks that Burnet may be easily separated from Sainfoin are calculated to do the seed trade considerable injury. I have had upwards of 30 years experience in the trade, and never yet met with a machine that would altogether separate the one from the other. By great labour it is possible to get a portion of the Burnet out, but at a sacrifice of a large percentage of the small seeds of the Sainfoin, the larger seeds of the Burnet will still remain. Owing to the very wet summer but little Sainfoin has been saved in England, and we are almost entirely dependent on foreign supply. It is well-known that there is more or less Burnet in all the foreign Sainfoin. Who would risk selling it, if he is to be subject to the expense of defending similar actions? I would strongly advise my brother seedsmen only to sell it with all risk and not to guarantee it in any way. From inquiries I made of several parties who attend Mark Lane, and are well acquainted

with the locality, I believe Burnet to be indigenous to that part of the country, and that there is not a hedgerow on Mr. Davey's farms in which it may not be found. As you only gave a few extracts I wrote to a friend to procure, if possible, a local newspaper in which the trial was more fully reported; I got the *Reading Mercury*. After reading the evidence of Mr. Reeves, who stated "he was a farmer, and acquainted with Sainfoin seed, he purchased 8 quarters of Sainfoin of Mr. Gillett from sample; Mr. Gillett had previously sworn it was part of the same seed sold to Mr. Davey. Did not see any Burnet with it at the time; but some came up. Never had any Sainfoin without Burnet. Did not make any complaint about it, because he generally got it. Had a very fair crop from the seed obtained from the defendant,"—I do not see how it was possible for the jury, "several of whom I am informed are farmers," to come to any other verdict than for the defendant, although you set them down as a set of incapables, and not competent to form a correct opinion on the case. I may observe that I have no interest in the transaction beyond that of being likely to be inconvenienced by your remarks. *A London Seed Merchant.* [We have no wish to inconvenience you and will shortly give a further report on the subject.]

Farmers' Clubs.

TAMWORTH.—At the late final meeting of the Agricultural Chemistry Association here, Mr. Peel, of Middleton Hall, made the following remarks on the relation of landlord and tenant. Mr. Peel said: He could feel as a farmer, and could sympathise with them in many of those cases of difficulty in which they were sometimes involved. When he first became an agriculturalist he invested himself as completely as he could with the spirit of a farmer. Having entered upon the duties and avocations of a farmer, however, he had, as probably had been the case with themselves, sometimes found himself in difficulties. He might say, in passing, that he did not believe the British farmer occupied his proper position in society in this country. His pursuits were of such importance that he thought he ought to stand higher in the social scale than he now did; but there was one reason, and he felt some delicacy in mentioning it at that meeting, which was composed almost entirely of tenant farmers, why he retained his present position. This was the system, or rather want of system, of covenants and leases which prevailed between landlords and tenants. He had thought a great deal upon this subject, and he had come to the conclusion that, with some few exceptions, the system was rotten from the beginning. He believed that many tenants were looked upon with suspicion they did not merit. As far as this particular neighbourhood was concerned, indeed, he believed the plan pursued was that of letting the farms from year to year; and he thought this was a good system, for he thought that the sooner a tenant parted with a bad landlord the better it was for himself. He was not one to suggest that the landlord should be deprived of all protection against the deterioration of his property by a bad farmer; but he would at the same time grant to the tenant farmer as full and free a liberty of action as was compatible with security. In all cases where covenants were made between landlord and tenants, they should not be verbal, and consist of usages ill-defined and worse understood, but should be just agreements, as between honest men; and the same penalties that the tenant was subject to for neglecting to perform his covenant ought to be imposed upon the other party in the contract—the landlord. In every case, too, the tenant should be secured for compensation for the unexhausted manures he had put upon the land, and for improvements he had effected, when quitting the farm. He believed there was no set of men in the world more correct in their intentions than the landlords of England, and he would not say with Mr. Bright that they were men of robust constitutions but confused notions; but he did think that they did not see enough of their tenants to know what were their feelings of vexation and annoyance at the restrictions imposed upon them. When he looked upon that assembly and saw around him a number of as honest men as could be found, he wished to know why their agreements should contain these restrictions, which were penal only upon one side—why they should be looked upon with suspicion, as if they were poachers, and their landlords were all policemen? There was no fear of the landlord not having sufficient consideration for them; but it would be better for them all if they had a clearer understanding with the landed proprietors, not only as to what were the tenants' duties, but what were the landlords' duties. He could not but think that it would be beneficial if at meetings like these both parties were occasionally to meet together, and express themselves with freedom upon their respective positions and interests.

Reviews.

Diary for the Dairy, Piggery, Poultry Yard, Pigeon-House, and Apiary. By an Essex Amateur.

A Diary, Account Book, Calendar of Operations, Memorandum and Receipt Book containing among other useful matters a profound classification of poultry, notes on poultry feeding, and on the preparation of birds for exhibition. It is very full and has been found by many very useful.

Dairy Management and Feeding of Milch Cows; being the recorded experience of Mrs. Agnes B. Scott, Winkston, Peebles. Wm. Blackwood & Sons.

The lady forgets that her readers have not had her 19 years' experience, and she is not explicit enough for those of the public who may like to learn how to achieve her results. There are so very many varying influences which affect the delicate operations of dairy management, that the details of actual experience carefully observed and accurately given are very valuable. It is therefore a pity that Mrs. Agnes Scott, who could evidently well teach practical lessons, should be so general in her instructions. In her first chapter, perhaps the most useful one of the book, she says, "In winter at six o'clock in the morning two cows got a windling of straw between them." The foot-note explaining the term windling tells us it is an armful of hay or straw tightly wound up. An armful one man may consider double the quantity that another man might deem, or that Mrs. Scott might intend by the term. And again, to what kind of straw does she allude? for the different kinds vary amazingly in their value as fodder for the Byre.

In her directions for the making of butter we meet with the same vagueness of expression. We are told, page 11, the exact heat of the milk prepared for churning "must be regulated by the season, experience here will soon be an unerring teacher." We want her long experience as to the degree of heat which brings the greatest yield of butter in summer and winter respectively. We question if any one unaccustomed to churning cream could do it so as to produce good butter if taught only by the slight suggestions at page 14.

Again, in the method given for making skim-cheese, we want more particulars. We should like to know what "thickening is used, and how it is made, or where procured, to accomplish the very essential process of turning milk into cheese! and how much of this, when we know what it is, should be used? And we look in vain for the same particulars as to "colouring." As an illustration of her vagueness, we are told that when we leave the curd out it is firm and when put into the drainer, we are to put "*some* weight" over the lid to press the whey gently out of it. Would 5 lbs. or 50 lbs. accomplish this, we may ask? A very much more detailed account is needed to guide the uninitiated in making sweet milk cheese, which is really tedious and laborious work, requiring great care and minute attention to fixed rules. It is a pity that the authoress has only "glanced" at the various points of dairy management and given a few leading suggestions bearing upon each. We want her own experience put in practical form, which no doubt she is fully capable of doing. The cure in the appendix "For all ordinary diseases of Milch Cows," is mere quackery, as one remedy cannot reach the various ills they are subject to. Inflammation, local and general, is perhaps the most common, and various applications and remedies are needed to give any aid to the animal under the several forms it takes.

Notices to Correspondents.

CHEESE MARKET: *F G.* Thanks to you for intimating your intention. Will you be good enough to allow the exchange of a letter on the subject by sending your address to Mr. J. C. Morton, Streatley, near Reading.

FARM CAPITAL: *Algoa.* The usual computation is 10*l.* per acre for arable land. Under very vigorous cultivation and consequent need of heavy stocking, a larger sum will be necessary. The cutting and threshing of corn crops must be done by hand if there is no machine for hire; but as regards the threshing, this is a rare case now in England. It is not necessary to drill and machine-hoe the grain crop. On a very small farm we would use Sigma's hand-dibble, and save in the seed enough to pay the extra labour the same year.

GUANO ON POTATOES: *B eswing.* It is possible that the 5 cwt. per acre of guano in patches on your Potatoes may be the occasion if not the direct cause of the disease, through the excessive luxuriance of leaf which it may have occasioned.

HANDCOCK'S PULVERIZER PLOUGH: *T B.* We know that it is a capital tool and that it well deserves its name.

MOW-BURNED HAY: *Agricolo Siluriensis.* We publish our correspondent's question below, and shall be glad of the experience of any of our readers. Ours is to the following effect. That such hay should not be given to cows in milk, but may be given without harm to young cattle of all kinds, even to heifers, and cows in calf. No doubt it would be improved if cut into chaff, and mixed with pulped roots. [The writer, having one rick of his richest hay heated to that extent that his working horses will not eat hardly any of the highest coloured, wishes to know through the medium of the *Agricultural Gazette*, if he could feed his cows with it without injury to them in any way. The cows are very fond of it. Should it be deemed unsuitable for dairy cows—some calved, others to calve—to what class of animals and in what state, *i. e.* cut and mixed with wholesome straw or otherwise, can this mow-burnt hay be given with the best effects.]

MR SCOTT BURN ON THE LABOURER: *A Landed Proprietor.* Your note has been forwarded to Mr. Burn. His paper and the discussion will be published as the December Number of the Journal of the London Farmers' Club.

RECLAIMING WASTE LANDS; *A W.* If it be covered with strong Heather and Gorse, this must first be removed by mattock and adze, and then burnt on the ground. A shallow ploughing may then be effected by a strong tool and a strong team of horses. The earth moved should then be harrowed and grubbed, and the roots again burnt. The land should then be ploughed deeper, and a dressing of hot lime should be spread over the ground of about 100 bushels per acre, which must be mixed with the earth by the use of the grubber and harrow. You will then probably get a crop of Turnips by the help of 12 bushels of fine bone dust sown with the seed. We are assuming that the land is naturally dry.

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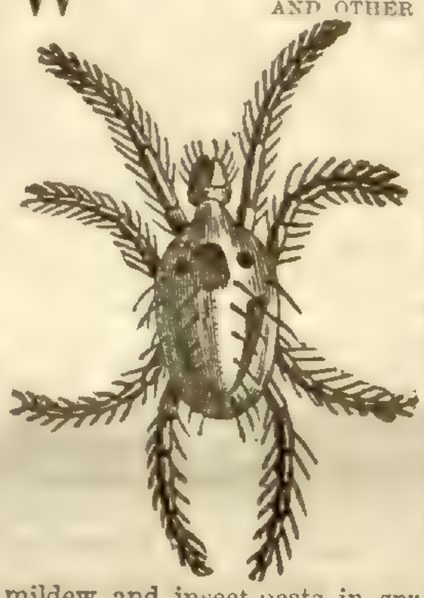
NEAL'S PATENT APHIS PASTILS, which light with a Candle, save all trouble, destroy all Insects, and are already used by some of the leading Gardeners, may be obtained of the principal Seedsmen and Nurserymen, 2*s.* per packet.—Manufacturer and Patentee, J. NEAL, Edward Street, Birmingham. Trial packets, 1*s.* each

WINTER DRESSING FOR ORCHARD HOUSE AND OTHER FRUIT TREES.



Extract from the Eighth Edition of the Orchard House. By Mr. Rivers.

"January paint the trees (every shoot and bud) with Gishurst Compound, half a pound to the gallon of water. This will destroy the eggs of Aphides."

Vines and outside wall trees should first be washed, stem and shoots, with 8 oz. solution of Gishurst, then smeared with clay and Gishurst, (see *Gardeners' Chronicle* Oct. 13), or with lime, sulphur, and Gishurst, made into a paste. If the smell be disliked, make the solution 48 hours before use.

Full directions as to the use of weaker solutions against mildew and insect pests in spring and summer, with particulars of the experience of many great gardening authorities, are enclosed with the boxes of Gishurst. These are supplied retail through any nurseryman and seedsman at 1*s.*, 3*s.*, and 10*s.* 6*d.* each, wholesale by PRICE'S Patent Candle Co., Limited.

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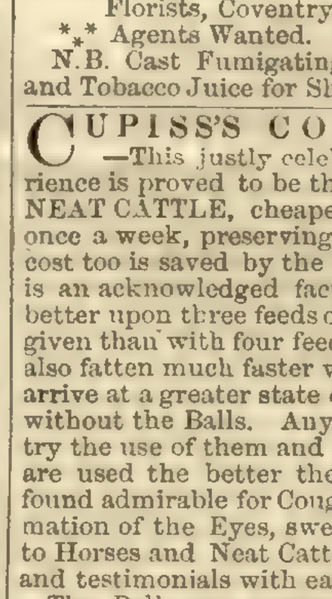

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The Gardeners' Chronicle Newspaper.

SATURDAY, JANUARY 14, 1860.

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News of the Week.

THE EMPEROR OF THE FRENCH has addressed a letter to the POPE, in which he frankly tells him that the only solution of the Italian question is the surrender of the revolted provinces by the Holy See. HIS MAJESTY states that among the chief reasons which induced him to conclude peace was his apprehension that the revolution would assume larger proportions. "Facts," he says, "have an inexorable logic," and hence in spite of his devotedness to the Holy See, and notwithstanding the presence of his troops at Rome, he could not escape from a certain connection with the effects of the national movement produced in Italy by the contest against Austria. If the POPE, he says, according to his request, had consented to an administrative separation of the Romagna and to the nomination of a lay governor, those provinces would have returned under his authority. But as unfortunately the POPE would not do so, the EMPEROR has been powerless to arrest the establishment of the new *régime*, his efforts have only had the effect of preventing the revolution from extending, and the resignation of GARIBALDI has alone preserved the Marches of Ancona from certain invasion. The Congress, he says, is now about to assemble; and though the Powers cannot disown the incontestible rights of the Holy See over the Legations, it is nevertheless probable that they will think it better not to have recourse to violence for subduing them, because it would be necessary to again occupy the Legations by a military force for a long time; and this occupation would keep up hatred and ill-will among the Italians, excite the jealousy of the Great Powers,

and perpetuate irritation, uneasiness, and alarm. "What then," asks the EMPEROR, "remains to be done?—for this state of uncertainty cannot endure for ever. After a serious examination of the difficulties and the dangers presented by the different combinations, I say, with sincere regret, and however painful the solution may be, that what appears to me to be most conformable to the true interests of the Holy See would be to make the sacrifice of the revolted provinces. If the POPE, for the repose of Europe, would renounce those provinces, which for 50 years have been a source of so much embarrassment to his Government, and were in exchange to request the great Powers to guarantee to him the possession of the remainder, I have no doubt that order would be immediately restored. The Holy Father would then secure to grateful Italy long years of peace, and to the Holy See the tranquil possession of the States of the Church."

The *Moniteur* of Wednesday in publishing the preceding letter quotes also from the official organ of the Papal Government the speech addressed by the POPE to General GUYON and the officers of the French army of occupation on New Year's Day. In this extraordinary speech the POPE denounced the recent pamphlet as "a monster monument of hypocrisy and a despicable jumble of contradictions," and expressed his hope that GOD would give the EMPEROR grace and wisdom to recognise the "falseness of the principles" which it lays down.

The *Morning Post* of yesterday announces the existence of "a virtual alliance between the Governments of France and England to recognise and protect the newly-acquired independence of Northern and Central Italy;" adding, that "this virtual alliance is the creation of no special treaty, nor was any special treaty required to define its ends, or determine and agree upon its means." It is also stated in the latest news from Paris that a treaty of commerce on the broad basis of mutual advantage has been concluded between France and England; and that the Congress will probably assemble on the 15th of February.

The Prussian Chambers were opened on Thursday by the PRINCE REGENT. The Royal speech declared that Prussia is willing to take part in the Congress on the affairs of Italy, and that with regard to a reform of the Federal Constitution, she will always consider herself the natural representative of the effort for increasing the strength of the nation, and efficaciously promoting German interests in general. It concluded by saying that it is not the intention of the Government to violate the bequest of a great period, and that "the Prussian army will, in future, be also the Prussian people in arms."

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Thursday week the Hereditary Prince of Hohenzollern-Sigmaringen, the Earl Cowley, Countess Blucher, Lord and Lady Wodehouse, and Lieut.-General Sir George Bowles arrived on a visit to her Majesty. On Friday morning the Queen and Prince Consort, accompanied by the Prince of Wales and the Prince of Hohenzollern, walked in the Home Park. The Duchess of Kent visited her Majesty. On Saturday morning the Queen, with Princess Alice, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort, accompanied by the Prince of Wales and the Hereditary Prince of Hohenzollern, went out shooting. In the afternoon the Prince of Hohenzollern, the Countess Blucher, Lord and Lady Wodehouse, and Lieut.-General Sir George Bowles left the castle. On Sunday morning the Queen and Prince Consort, the Prince of Wales, Princess Alice, and Prince Arthur attended Divine Service in the private chapel; the Dean of Windsor and the Rev. H. Ellison officiated and administered the Sacrament. On Monday morning the Queen, accompanied by Princess Alice, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort, with the Prince of Wales, went out shooting. In the afternoon the Duchess of Kent visited her Majesty. Mr. Fisher arrived from Oxford on a visit. On Tuesday morning the Queen, accompanied by Princess Louisa, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort came to London and presided at a meeting of the Council of the Horticultural Society at South Kensington. His Royal Highness afterwards visited the Exhibition of the Photographic Society. The Prince of Wales went out hunting. In the afternoon Mr. Fisher left the castle. The Duchess of Cambridge and Princess Mary, the Marquis and Marchioness of Westminster and Lady Theodora Grosvenor, the Earl and Countess Stanhope, the Earl and Countess Cowley and Lady Sophie Wellesley, Viscount Palmerston, Lord Waterpark, the Right Hon. General and Lady Alice Peel, and Mr. Gibbs arrived on a visit. On Wednesday morning the Queen walked in the grounds of the castle. The Prince Consort went out shooting, accompanied by the Prince of Wales, Earl Cowley, and Viscount Palmerston. The Duchess of Kent visited her Majesty. In the evening the third dramatic representation took place in St. George's Hall, when Mr. Sheridan Knowles's "Hunchback" was performed in the presence of the Queen, Prince Consort, and Royal family, the visitors at the castle, and a select party of the nobility and gentry of the neighbourhood. On Thursday morning the Queen and Prince Consort walked in the grounds of the castle. The Prince of Wales went to Claremont. The Duchess of Cambridge and Princess Mary, the Marquis and Marchioness of Westminster and Lady Theodora Grosvenor, the Earl and Countess Stanhope, the Earl and Countess Cowley and Lady Sophie Wellesley, Viscount Palmerston, Lord Waterpark, the Right Hon. General and Lady Alice Peel, and Mr. Gibbs left the castle. According to present arrangements her Majesty will arrive in town on the 23d inst., on which day a Privy Council will be held. On the 24th the Queen will open Parliament in person, and afterwards return to Windsor.

THE CABINET.—A Cabinet Council was held on Tuesday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held yesterday.

PARLIAMENTARY MOVEMENTS.—The Reading election has terminated in the return of Sir F. Goldsmid by a majority of 102 over Mr. Benson, the numbers being 662 to 560. Mr. Atherton, the Solicitor-General, has been re-elected for Durham without opposition. The Hon. Charles Carnegie, brother of the Earl of Southesk, is a candidate for Forfarshire, vacant by the accession of Lord Duncan to the House of Peers.

THE NAVY.—Rear-Admiral Sir Alexander Milne has been appointed Commander-in-Chief on the North American and West Indian station, in the room of Sir H. Stewart, whose period of service has expired.

THE VOLUNTEER CORPS.—On Thursday morning the Lord Chancellor's Court at Lincoln's Inn was densely crowded in consequence of his Lordship having expressed his intention to administer in person the oath of allegiance to the 1st and 2nd companies of the Inns of Court Volunteers. The Lord Chancellor previous to administering the oath delivered an address which will be found at length in another column, and on the conclusion of his remarks, Mr. Selwyn returned thanks to his Lordship for the honour he had done them by personally administering the oath, adding that in taking that step his Lordship had only followed the example set by Lord Eldon when Lord Chancellor, who at that time administered the oath to a similar corps.—A meeting of the London Brigade was held on Wednesday at Guildhall, when the Lord Mayor announced that the number of effectives was now nearly 1200, and that his Royal Highness the Duke of Cambridge, the Commander-in-Chief, has accepted the office of Colonel of the Brigade.—On Tuesday evening a very large and influential meeting of the principal inhabitants of Paddington was held in the fine vestry-hall of the parish, Mr. Raikes Currie in the chair, at which it was resolved to take measures for the immediate formation of a volunteer corps for that populous and wealthy district of the metropolis.—On Tuesday evening a public meeting was held at Walworth, at which it was resolved to form a company for that district in connection with the First Surrey; and on Wednesday evening it was resolved at a public meeting at Camberwell to form a company for that district also, in connection with the First Surrey.—At a meeting of the St. Pancras committee on Monday evening Mr. Bodkin announced that Messrs. Shoolbred, of Tottenham Court Road, were ready to give the names of 60 young men on their establishment as ready to join the corps, and that the firm would defray the whole expense of their outfit.—The Post Office Corps now amounts to upwards of 100 effectives, and are regularly drilled on the ground adjoining the Charterhouse.—On Monday night a very crowded meeting of inhabitants of the district of North Kensington was held in Pearce's Riding School, Westbourne Grove, the Hon. E. C. Curzon in the chair, at which it was resolved to fill up the first Kensington Company of the South Middlesex Rifle Volunteers, and to form a company for North Kensington. In the course of the meeting Lord Ranelegh stated that the present number of the corps was 1200, of whom about 800 or 900 were effective members, and the subscriptions amounted to about 1400*l*.—The council of the Civil Service brigade, composed of representatives from the several departments in which separate corps have been formed, assembled for the first time on Saturday at the Audit Office, when it was announced that the total strength of the brigade already amounted to 660 effective and 410 honorary members; and it was decided to apply immediately to the Lord-Lieutenant for authority to increase the effective strength of the corps from 400, for which number the Queen's sanction has already been obtained, to 1000 men—a number which it is anticipated, from the daily accessions of recruits, will shortly be attained.—On Saturday afternoon the members of the Tower Hamlets corps assembled, for the first time, in an unoccupied warehouse, near the railway station, Shadwell, for the purposes of drill. At present the number of effectives amounts to above 100, who have been enrolled during the last few days. It is intended to form eight companies, corresponding with the eight Poor-law divisions in the borough.—The enrolment of new members in the Southwark and Lambeth, or 7th Surrey is proceeding steadily, and equipments have been provided by Mr. Frederick Hodges for 12 volunteers; by Mr. Roupell, M.P., for 100; by Mr. Tarn for 8; by Messrs. J. and J. Vickers & Co. for 4; and by Captain Beresford for 60, on certain conditions.—The Queen has accepted the services of the Victoria Docks corps, which has been designated the 6th Essex. It will form a regiment complete in itself, with an establishment of major-commandant, 4 captains, 4 lieutenants, 4 ensigns, adjutant, surgeon, and 400 rank and file.—A meeting of the artisans employed at Woolwich Arsenal was held on Saturday, when a communication was read from the Secretary for War conveying her Majesty's sanction to the formation of a rifle corps for the Arsenal, and also suggesting the formation of an artillery corps, adding that the members of both bodies will be allowed time to drill without stoppage of pay, and that the services of the men will only be required within the establishment. The workmen connected with the Armstrong Gun Factory are about to form an artillery corps, and it is estimated that the various companies of volunteers from the several departments will amount to at least 1500 effectives.—On Thursday a numerously attended meeting of officers, artisans, and labourers from the several departments was held at Deptford Dockyard, when it was unanimously resolved to form a rifle corps for the officers and workmen of the establishment. A public meeting of the inhabitants of Deptford was held on the same day when it was resolved to support the corps now in existence for the towns of Greenwich and Deptford, and at present enrolled as the first subdivision of the Kent corps.—In the provinces meetings in aid of the movement have been held during the week at Abingdon, Alnwick, Bangor, Barmouth, Belper, Bishop's Waltham, Brentford, Brampton, Basford, Birmingham, Bourn, Bath, Bishop's Stortford, Burnley, Carnarvon, Cheriton, Cambridge, Drighlington, Dursley, Dolgelly, Exeter, Exmouth, Edinburgh, Guiseley, Hereford, Horncastle, Hexham, Holbeck, Hartismere (Suffolk), Lesmahagow (Lanarkshire), Maryport, Market Rasen, Newington (Kent), Newmarket, Padstow, Portmadoc, Pwllheli, Portland, Penllyn, Rochford, Southwell, Southwold, Sunderland, South Shields, Sawbridgeworth, Sittingbourne, Stradbroke, Tunbridge Wells, Watford, Whitehaven, Workington, Westerham, Weymouth, Whittlesey, and Wykeham.—The Duke of Manchester is organising a body of gentlemen who are to be styled the "Duke of Manchester's Mounted Volunteer Corps." If a sufficient number of volunteers can be obtained, the corps is to be divided into two troops, one to be called the Huntingdonshire and the other the Bedfordshire. The uniform is to be a scarlet tunic with rolled collar, cord breeches, Napoleon boots, and a black felt double-peaked hunting-cap. Considerable subscriptions and a fair number of volunteers have been obtained.—At a meeting of the committee of the Wick Artillery Corps, on Friday, a letter was read from the Duke of Portland, of which the following is an abstract:—

"After intimating his very decided disapproval of the volunteer movement, his grace denounced what he called the 'absurdity of the invasion panic and rifle fever got up by the Tories and the penny-a-liners for their own private purposes, and considered that the partisans of the movement were making laughing-stocks of themselves before the country.' He therefore declined to contribute anything towards the funds of the Wick corps, the more especially as he thought that, even supposing there was any chance of an invasion, Wick would be the last place of all others at which an enemy would think of landing. His grace further stated that although, as a proprietor in the county of Caithness, he would at all times be most eager to assist in any enterprise in the interests of the county and conducive to the public good, he would have nothing whatever to do with the present volunteer movement, and he concluded by expressing a willingness that his refusal to associate himself with it be made public."

Foreign.

FRANCE.—The *Moniteur* of Wednesday republishes from the *Giornale di Roma* of the 3d inst. the allocution pronounced by the Pope on New Year's Day, in reply to the congratulations of General Count de Goyon, Commander-in-Chief of the French Division in the Papal States, and given at length in our Italian news. This allocution, it says, would probably not have been made if his Holiness had received the following letter addressed to him by the Emperor, under date of the 31st December last:—

"Most Holy Father,—The letter which your Holiness deigned to write me on the 2d of December touched me deeply, and will reply with entire frankness to the appeal made to my good faith. One of my most serious anxieties during, as well as after the war, was the condition of the States of the Church, and, assuredly, among the potent reasons which induced me to conclude peace so promptly you must reckon the fear of seeing the revolution assume daily increasing dimensions. Facts have an inexorable logic, and, despite my devotion to the Holy See, despite the presence of my troops at Rome, I could not avoid a certain amount of connection with the results of the national movement caused in Italy by the struggle against Austria. As soon as peace was concluded I hastened to write to your Holiness to submit to you the views which I considered best suited to lead to the pacification of the Romagna, and I still entertain the opinion that if your Holiness had from that time consented to an administrative separation of those provinces, and to the nomination of a lay Governor, they would have returned to your rule. Unhappily this was not the case, and I found myself powerless to prevent

the establishment of the new Government. My endeavours only succeeded in preventing a spread of the insurrection, and the resignation of Garibaldi preserved the Marches of Ancona from certain invasion. Now the Congress is about to assemble, the Powers cannot disown the incontestable rights of the Holy See to the Legations; nevertheless it is probable that they will not be of opinion that you should have recourse to force to subject them. For if that subjection were obtained by the aid of foreign troops it would imply the military occupation of the Legations for a long time. This occupation would keep alive the hatreds and resentments of a great portion of the Italian people, as also the jealousy of the great Powers; this would be, then, to perpetuate a state of irritation, distrust, and fear. What remains, then, to be done, for this state of uncertainty cannot last for ever? After a serious consideration of the difficulties and dangers which the different combinations present—I say it with sincere regret, and painful as the conclusion may be, that the solution which appears to me most conformable to the true interests of the Holy See will be to surrender the revolted provinces. If the Holy Father, for the sake of the peace of Europe, should give up these provinces, which for 50 years have been a great embarrassment to his Government, and if, in exchange, he should request the great Powers to guarantee to him the possession of the remainder, I do not doubt of the immediate restoration of tranquillity. Then the Holy Father would insure to grateful Italy peace for many years, and to the Holy See the peaceful possession of the States of the Church. I am sure your Holiness will not misconstrue the sentiments which animate me. You will understand the difficulty of my position; you will give a kind interpretation to my frank language, remembering all that I have already done for the Catholic religion and for its august Head. I have expressed without reserve my full mind, and thought it indispensable to do so before the Congress. But I beg of your Holiness, whatever decision you may come to, to believe that it will in no respect change the line of conduct which I have always observed in respect of you. Thanking your Holiness for the Apostolic blessing which you have sent to the Empress, to the Prince Imperial, and to myself, I renew to you the assurance of my profound veneration.—I am, of your Holiness, your devoted son, NAPOLEON."

"Palace of the Tuileries, Dec. 31, 1859."

Lord Cowley, the British Ambassador, is expected to return to Paris to-day. An official communication was received, through Mr. Reuter's agency, on Wednesday, giving the following particulars of his lordship's visit to London:—

"In the month of August last, when the Conference of Zurich threatened to be dissolved, the English Cabinet proposed to the French Government to come to a special agreement between France and England for the settlement of the affairs of Central Italy. Count Walewski, in order to prevent the proposal of Lord John Russell being accepted, tendered his resignation, which was, however, withdrawn on the publication of a note in the *Moniteur* of the 9th of September last in favour of the restoration of the Grand Duke of Tuscany. The object of Lord Cowley's journey to London is to resume the negotiations which had been interrupted. The dismissal of Count Walewski was already decided upon when Lord Cowley left Paris after the reception on New Year's Day; but it is premature to assert that his lordship has been the bearer of certain proposals as the basis of an agreement between France and England, either in the form of a protocol or of a treaty. There is for the present no other negotiation going on than to resolve upon a basis which might become the point of departure for negotiations with the other great Powers, England having always recognised the principle that the territorial arrangements of 1815 could only be modified with the consent of the other great Powers."

It was rumoured on the Bourse on Wednesday that Lord Cowley had succeeded in his mission; that the Congress will assemble on the 15th of February; that Cardinal Antonelli had resigned; and that a treaty of commerce had been concluded between France and England. Prince Metternich was present at the ball at the Tuileries on Wednesday, and consequently the report that he had left for Vienna on a special mission was premature. The *Gazette de France* has received a first warning from the Minister of the Interior, and the *France Centrale*, published at Blois, has received a second warning for having protested against the first. The Protestant chapel of the Rev. Archer Gurney was suddenly ordered to be closed on Sunday. The reasons given are that Mr. Gurney would not in future be allowed to read a service in French, intended to supply the spiritual wants of British Protestants who, born in France, do not understand the English language. Count Lallemand (now in Paris on leave of absence), who in his quality of First Secretary has been appointed Chargé d'Affaires *ad interim* of the French Embassy at Constantinople, has received orders to proceed immediately to the Turkish capital. M. de Thouvenel has accepted the Ministry of Foreign Affairs, and will embark for France after the Count's arrival. Marshal M'Mahon will, it is asserted, replace Marshal Vaillant as Commander of the French army in Italy. General Montauban, Commander-in-Chief of the French expedition to China, arrived at Marseilles on Tuesday evening, and embarked on Thursday with his staff on board the Peninsular and Oriental Company's steamer for Alexandria. Madame Bourbalon, the wife of the French Ambassador in China, also left by the same steamer. M. de Lesseps has arrived at Marseilles from Constantinople, and active preparations are making for the execution of the Suez Canal.

SPAIN AND MOROCCO.—Accounts from the Spanish camp give further accounts of the action at Castillegos, in which the Spanish loss was nearly 600 killed and wounded. It appears that the Spanish army were directed to occupy new ground on the road to Tetuan. General Prim's division led, supported by that of Gen. Zabala. The brunt of the fighting fell on the first-named division; three or four only of Zabala's battalions having come into action. The Moors were driven, without much difficulty and early in the day, from their positions, and the Spanish divisions could have established themselves in their new ground by noon; but Gen. Prim in his eagerness for the fray led on his division beyond the position it was intended to occupy, and prolonged the fight till nightfall. During the action two squadrons of the "Princesa" Hussars made a dashing charge right into the Moorish camp, which, like the famous Balaklava charge, appears to have originated in the misinterpretation of an order conveyed by an aide-de-camp. In that charge seven officers of the two squadrons were wounded, and two killed. The Moors, instead of burying their dead, burnt them. On the 4th inst. the Spaniards were attacked in the Valley Negro by 2000 Moorish cavalry and 2000 infantry, who were dispersed by the Spanish Artillery, who had five killed and 19 wounded. On the 7th the whole army encamped to the north of the Negro Valley, after having defiled through the Passes without opposition. In the course of the day a council of Generals was to determine upon the plan of operations. On the 9th the Spanish army was one league from Tetuan. An attack of the enemy had been repulsed. It is stated that the army is to be considerably increased, and that the health of the troops at the encampment of Serallo is improving.

HOLLAND.—The Ministerial crisis has ended for the present by the Ministers who had offered their resignations consenting to remain in office. But the solution is only provisional, as the Chambers are about to be convoked, to decide on the measures which led to the crisis, and on their votes will depend the fate of the Cabinet. Those measures are—a bill on public works before the First Chamber, and a bill for constructing a canal from Amsterdam to the sea, before the Second Chamber.

PRUSSIA.—The Prussian Chambers were opened on Thursday by the Prince Regent, who delivered a speech of which the following is a summary:—

"After mentioning the events of European importance which have lately taken place, it stated that after the conclusion of peace Prussia, on the joint invitation of France and Austria, had declared her readiness to take part in a Congress to deliberate on the proper means for the pacification of Italy and the durable consolidation of her internal affairs. With regard to the manifestation of the desire for a reform of the Federal Constitution, Prussia will always consider herself the natural representative of the effort for increasing the strength of the nation and efficaciously promoting German interests in general. The Prussian Government wishes that the action of the Federal Diet should, in its relations with the constitution of the separate States, be confined within the strictest limits of competent intervention. Prussia therefore thinks it her duty, in reference to the constitution of Electoral Hesse, to recommend the re-establishment of the constitution of 1831, after removing all the articles which may be contrary to the Federal Pact, as being in accordance with that principle. The Prince Regent further said, that, united with his German confederates, he was constantly endeavouring to obtain for the German provinces of Denmark a legitimate constitution, conformable to the recognized common law of the country, and to have the interregnum settled in a satisfactory manner. The projects of law to be submitted to the Chambers related to the question of the land-tax, the provincial representation, the limitation of the electoral districts, matrimonial rights, general liability to military service, and the financial measures connected therewith. In conclusion the Prince Regent said,—It is not the intention of the Government to violate the bequest of a great period. The Prussian army will in future be also the Prussian people in arms."

The conference for the discussion of the question of fortifying the German coasts was opened at Berlin on on Monday, under the presidency of Lieutenant Moltke. On Tuesday the Prussian project for a system of common defence was submitted to the conference.

BAVARIA.—The reigning King of Bavaria is about to leave Munich for Spain, where by the advice of his physicians he will pass some months. His Majesty, whose malady is sleeplessness, was advised to go to the south of Spain last winter, but the state of things was then so critical that he could not venture to quit the kingdom. The King intends to visit Andalusia and Grenada, and will perhaps take a trip to Madeira.

AUSTRIA.—Accounts from Vienna state that a very disagreeable effect has been produced by the announcement of a complete understanding between France and England on the Italian question; and that the Government has sent off despatches to St. Petersburg and Berlin inviting Russia and Prussia to form an alliance with Austria to defend "the legitimate rights of Sovereigns." It is also said that the Austrian Government has ordered Prince Metternich to declare to the French Cabinet that it would decline to enter into the Congress on any other basis than the agreement of Villafranca or the treaty of Zurich.

ITALY.—The *Moniteur* of Tuesday publishes the following allocution, as having been delivered by the Pope in answer to the congratulations offered to him by General Guyon and the other officers of the French army on New Year's Day:—

"Monsieur le Général,—If on the advent of every new year we have received with pleasure the good wishes you have presented to us in the name of the officers and of the army which you so worthily command, those good wishes are doubly welcome to us to day, in consequence of the exceptional events which have occurred, and because you assure us that the French Division in the Papal States is placed there for the defence of the rights of Catholicism May God bless you, then—you and the whole French army! May He bless equally all classes of that generous nation! In prostrating ourselves at the feet of that God who was, is, and will be to all eternity, we beseech Him in the humility of our heart to shed abundantly His light and blessing upon the august leader of that army and of that nation; so that guided by such light, he may advance safely along his difficult path, and admit again the falseness of certain principles laid down recently in a pamphlet which may be styled a monster monument of hypocrisy and a despicable jumble of contradictions. We hope that, by the aid of such light—nay, more, we are persuaded that by such light, he will condemn the principles contained in that pamphlet. We are the more convinced of this as we have in our possession some documents which his Majesty, some short time since, had the kindness to send us, and which are a full condemnation of those principles. It is with this conviction that we pray God to shed His blessing upon the Emperor and upon his august Consort, upon the Prince Imperial, and upon all France."

The news of Count Walewski's resignation has produced a very painful impression on the Pope, and it is said that the Duke de Grammont has requested to be relieved of his functions as French Ambassador at the Papal Court. On Friday last, after the celebration of the ceremony of St. Epiphania, his Holiness called together the principal members of the Sacred College, and declared to them that he would never fail in the mission which God had intrusted to him, and that, like his predecessor, Pius VII., he would rather suffer exile, and even martyrdom.—The *Giornale di Roma* publishes the following official note on the French pamphlet:—

"An anonymous pamphlet has just appeared in Paris, entitled 'Le Pape et le Congrès' This work is a positive homage rendered to the revolution; an insidious thesis for those weak minds who are deficient in a just criterion to recognise the poison which it conceals, and a subject of grief to all good Catholics. The arguments contained in this pamphlet are a reproduction of the errors and insults so many times launched forth against the Holy See, and as often victoriously refuted, notwithstanding the obstinacy with which the deniers of the truth maintained them. If the object which the author proposed to himself was by chance to intimidate him who is threatened with such great disasters, the writer may be assured that he who has right on his side, who supports himself on the solid and immovable bases of justice, and who is more particularly supported by the protection of the King of Kings, has certainly nothing to fear from the snares of men."

It is reported that two of the Sardinian Ministers, General della Marmora, President of the Council, and M. Dabormida, President of Foreign Affairs, have resigned. M. Buoncompagni, the Regent, gave a grand ball at the Crocetta Palace in Florence, on New Year's Day, in the midst of which two tin cases filled with gun powder were exploded in the streets by some mishievous person who wished to produce a reactionary movement. A few days before two young English ladies were detected in writing on the walls of the Piazza del Duomo some sentences in favour of the Grand Ducal rule, and they would probably have been maltreated by the mob, if the Marquis Ginori, one of the new Government, had not interfered for their protection. It is stated that a violation of the boundary having occurred at the frontiers of Modena, Major-General Lippert has proceeded there. Field-Marshal-Lieut. Crenneville has left for Desenzano, to join the commission for the regulation of the Sardinian boundary, the seat of which is at Peschiera.—An antiquary at Venice has discovered an old parchment on which the Doge Marino Faliero had written that he had buried a million of sequins under the portico of the Church of St. Mark. As the exact spot is indicated in the writing, a commission has been appointed to make excavations in search of the treasure.

TURKEY.—Letters from Constantinople to the 4th announce that public agitation was increasing. It was supposed that Fuad Pacha would soon be dismissed. The Czar had forwarded decorations to the Pachas who were sent to Odessa to congratulate him.

INDIA.—Telegraphic despatches in anticipation of the Bombay mail of the 27th ult. have been received; but the following are the only particulars which they communicate:—

Nepaul.—A telegram from Lucknow of the 14th ult. confirms the capture of the Begum's late paramour, Mummo Khan, and states that Khan Bahadoor Khan, Beni Madho, his two sons, and a brother, are also in our hands, with all the principal leaders, and that in the whole 2000 prisoners are in our hands. The campaign against the rebels in Nepaul is therefore over. The Begum has escaped from Bootwal. The Nana's death is doubtful. Jung Bahadoor has returned to the capital, Katmandu, after operating against the rebels in the Terai.

Calcutta.—Mr. Wilson was preparing to set out for Delhi, to meet the Governor-General, after which he will return to take his place in the Council.

Singapore.—The submarine cable between Singapore and Batavia has been successfully laid.

Borneo.—Order has been re-established at Sarawak.

CHINA.—The treaty between China and the United States had been put in force on the 26th Nov. Part of the English troops have already left for the North.

UNITED STATES.—The President's Message was brought to the Senate on the 27th, and was read after a division, although the election of a Speaker in the House of Representatives appeared as distant as on the day when Congress first assembled. The Message fills upwards of six columns of the morning papers. The following is a summary:—

"I finally believe that events at Harper's Ferry, by causing the people to pause and reflect, will be the means, under Divine Providence, of allaying the existing excitement, and preventing further outbreaks of a similar character. For the suppression of slavery, all lawful means at my command have been employed, and shall continue to be employed, to execute the laws against the African slave trade. Those engaged in this unlawful enterprise have been rigorously prosecuted, but not with so much success as the crimes have deserved. A number of them are under prosecution. The wisdom of the course pursued by Government towards China has been verified by late events. Our treaty of peace and commerce with that Empire was continued at Tien-tsin on the 18th June, 1858, and was ratified by the President, with the advice and consent of the Senate, on the 21st December following. The ratifications of the treaty were afterwards, on the 16th August, exchanged in proper form at Pietsang. As the exchange did not take place till the day prescribed by the treaty, it is deemed proper, before its publication, again to submit it to the Senate. Our relations with the great Empires of France and Russia, as well as on the Continent of Europe, unless we may except that of Spain, happily continue to be of the most friendly character. In my last annual Message I presented a statement of the unsatisfactory condition of our relations with Spain, and I regret they have not materially improved. Without special reference to others, claims, the payment of which has been ably urged by our Ministers, and in which more than 100 of our citizens are directly interested, remain unsatisfied, notwithstanding their justice, and though their amount, 128,656 dols 54 c., has been admitted by the Spanish Government. I need not repeat the arguments which I urged in my last Message in favour of the acquisition of Cuba by fair purchase. My opinion on that measure is unchanged. I again invite your serious attention to this subject. Without a recognition of this policy on their part it will be almost impossible to institute negotiations with any reasonable prospect of success. Until a recent period there was good reason to believe that I should be able to announce

to you on the present occasion that our difficulties with Great Britain arising out of the Clayton-Bulwer Treaty had been fully adjusted in a manner alike honourable and satisfactory to both parties. From causes however which the British Government had not anticipated, they have not completed treaty arrangements with the Republics of Honduras and Nicaragua in pursuance of the understanding between the two Governments. It is nevertheless evidently expected that this good work will soon be accomplished; while indulging the hopes of that, no other subject remains which can disturb the good relations between the two countries. The question arising out of the adverse claims of the parties to the island of San Juan, under the Oregon Treaty of June 15th, 1846, suddenly assumed a threatening prominence. In order to prevent unfortunate collisions on that remote frontier, the Government has instructed the officers of the territory to abstain from all acts on the disputed ground which are calculated to provoke any conflicts, as far as it can be done without implying the concession to the authorities of Great Britain of an exclusive right. The title ought to be settled before either party should attempt to exclude the other by force, or exercise complete exclusive sovereign rights within the fairly disputed limits. Much excitement prevailed for some time throughout that region. Serious danger of a collision between the parties was apprehended. The British had a large naval force in the vicinity, and it is an act of simple justice to the admiral on that station to state that he wisely forbore to commit any hostile acts, but determined to refer the whole affair to his Government and await their instructions. This aspect of the matter, in my opinion, demanded attention, to prevent any act of hostility from taking place. Lieut-General Scott was despatched on the 17th of September last, to take command of the United States' forces if necessary. Considering the distance from the scene of action, and in ignorance of what might have transpired on the spot before the General's arrival, it was necessary to leave much to his discretion; and I am happy to state the event proved that this discretion could not have been entrusted to a more competent hand. General Scott has recently returned from his mission, having accomplished certain objects, and there is no longer good reason to fear a collision between the forces of the two countries during the existing negotiations. I regret to inform you that there has been no improvement of the affairs of Mexico since my last Message, and I am again obliged to ask the earnest attention of Congress to the unhappy condition of that Republic. Outrages of the worst description are committed on persons and property. There is scarcely any form of injury which has not been suffered by our citizens in Mexico during the last few years. We have been nominally at peace with that Republic; but, so far as the interests of our commerce or of our citizens who have visited the country as merchants, shipmasters, or in other capacities are concerned, we might as well have been at war. I recommend to Congress to pass a law authorising the President, under such restrictions as they may deem necessary, to employ military force against Mexico for the purpose of obtaining indemnity for the past and security for the future."

MEXICO.—Advices from Vera Cruz to the 27th ult. report continued disturbances in Mexico. Miramon's Government had protested against Mr. M'Lane's treaty, and has restored 400,000 dollars of the 600,000 dollars which Marquez took from the conducta, and forwarded it to Tepic. Miramon has also imprisoned Marquez on a charge of insubordination. The Liberals had surprised and captured Teotilan. General Wheat was to take command of the advanced guard of Alvarez's army of the south of Mexico, and Alvarez was about to open the campaign.

Public Addresses.

THE LORD CHANCELLOR on Thursday in administering the oath of allegiance to the Inns of Court Volunteers, delivered the following address:—

"It gives me high satisfaction that I have been called upon to administer to you the oath of allegiance on your entering as volunteers into the military service of the Crown. I rejoice in the national movement which is now displayed, and the ardour with which you participate in it seems to me to be very creditable to the profession to which we belong. You are ready to defend the liberties of your country not only in the forum but in the field. This movement is not prompted by any immediate apprehension of danger, nor from suspicion of the designs of any particular foreign ruler or State. Fortunately, we are in amity with all nations, and I trust that we are long likely to continue so. But the opinion generally prevails, and I believe it is well founded, that the martial disposition of our population has not of late years been sufficiently encouraged, and that our defences against foreign invasion have not kept pace with the increased facilities of effecting a landing on our sacred soil. Hence the danger of panic at home, and of holding out a temptation abroad to take advantage of our supposed unpreparedness. England is free from all notion of aggression; we are satiated with the excess of colonial and foreign possessions, and we desire without interruption to cultivate the pursuits of peace; but to secure these blessings we must bear in mind that war may come upon us unexpectedly, and that to ward off invasion we must be prepared to repel it. In my early youth, when a student of law, I myself was a soldier, and perhaps I might say, '*Militavi non sine gloriâ.*' I served in a most distinguished corps, the Inns of Court Volunteers of that day, remarkable for its discipline and efficiency, and I had the honour of being reviewed in Hyde Park by King George III., with above 100,000 volunteers then and there assembled, ready to march to the coast on the first alarm of the sailing of the Armada at Boulogne, which only waited for a fair wind, for Sandwich or Pevensey. We did our duty while the war lasted; but we, or rather the Government of that time, must be blamed for allowing all the volunteer corps in the kingdom—amounting, I believe, to between 300,000 and 400,000 men—to be disbanded and dissolved as soon as peace was proclaimed. For nearly half a century we have had no citizen soldiers among us, and we have depended for our safety against invasion on defenders regularly in the pay of the State, who, renouncing all civil employments, professionally devote themselves to arms. These are most gallant defenders, and we place unbounded confidence in their heroism; but they may be greatly outnumbered by the immense bands of veteran troops who may be disembarked on our shores, and they ought to be supported by our citizens voluntarily trained to arms in every county, city, and parish in the realm. It delights me to think that we approximate to a consummation so devoutly to be wished. You have set a noble example, which I doubt not will be universally followed, and let me express my anxious hope for your steadiness and perseverance in your military career. As the movement does not proceed from any momentary impulse or temporary cause let it be permanent. I have to congratulate you on being furnished with a new weapon, the Enfield rifle, said to be so much superior to that to which we trusted—the now ridiculed Brown Bess. In devoting a portion of each day to martial exercises, I can say, from observation and experience, that you will neither impede your legal studies nor injure the interests of your clients. Let the rifle be now daily in the hands of our fellow citizens as the bow was once in the hands of our ancestors, and may English riflemen be as superior to all others as English bowmen once were."

THE DUKE OF NEWCASTLE, as Lord-Lieutenant of Northamptonshire, attended a meeting at Worksop on the 4th inst., and made the following remarks on the organisation of Rifle Corps:—

"He would in the first place remark that it was most desirable, as far as practicable, to form companies of some battalion, rather than to have sub-divisions of one company, one part of a company residing in one neighbourhood and another at another place, because he saw that at some future day this would give rise to much difficulty. Each district should form a company in itself, and endeavour to concentrate its members within a limited distance. The movement was not well suited to thinly scattered populations, and it was difficult for farmers living down on the banks of the Trent to meet together at a certain appointed place for drill without great inconvenience. Where persons had to travel four, five, six, or seven miles to drill, and return the same distance, the movement could not be kept up. The yeomanry was best suited for farmers, because, possessing good horses, they could meet with that body, and find no inconvenience in attending duty for eight days in the year. But in such towns as Retford, Worksop, Southwell, Mansfield, and Newark the case was different. In each of these towns one, and in the larger towns two companies, could easily be raised, the drill could be properly attended, and the spirit kept up. By taking this step they would not only be doing patriotic service to the country, but they would benefit themselves, and at the same time be improving their social position. He had seen the advantage of it in the town of Nottingham, and was fully persuaded that it would do much good by keeping young men out of bad company, and at the same time afford relaxation and recreation. There was one point respecting the organisation of companies that he would especially call their attention to, and it was this:—He felt convinced that in case of necessity the rifle corps of Worksop and Retford and other places would be prepared to do their duty, and would not stay at home to await the approach of an enemy, but that they would march either to the coast of Kent or into Lincolnshire, or any other part of the kingdom where a descent was likely to be made. But if they went as separate companies they would be isolated from each other, and their not acting in concert would be seriously felt by any general who had command of them. It would be extremely difficult, even if it were possible, to command any body of riflemen under such circumstances, and therefore what he would suggest was that they should as often as possible meet for battalion drill. Now, they must not be alarmed at this suggestion, because it was not compulsory, though it was highly expedient they should do so. If they were willing to form a battalion with Newark and Southwell, they could go—say, to Newark for battalion drill for three days occasionally; but he wished them to bear in mind that neither the Government, nor he as the Lord-Lieutenant could so order them. If formed into a battalion, they would likewise have the advantage of having a lieutenant-colonel and a major, who could give them instruction, and, in fact, bring them up to a state of the highest efficiency; but these two officers, it must be borne in mind, would not have any command over them when they were not met for battalion drill, though their assistance and advice as practical men would be most advantageous. If formed into a battalion it would be necessary that they should have the same uniform. This he was most anxious should be borne in mind; and, without attempting to dictate to them as to what uniform they should adopt, he would say—'Do not let it be a mere piece of dandyism; let it be useful, and not adorned with too much silver lace and vanities of that description.' To colour he did not attach much importance. He thought too much prominence had been given as to the colour of the uniform. If they were going for service to the plains of India, or the steppes of Russia, it might be wise duly to consider the colour, but he did not regard it as a very essential consideration for rifle corps. Some preferred one colour and some another, but his own opinion was that a gray-brown was the best. He left companies to choose their own uniform, but at the same time he did not wish it to exceed a cost of 4*l.* per man. If, as he said before, they agreed to join to form a battalion, it was desirable that they should have one uniform, and what that uniform should be the respective companies would have to arrange among themselves, and the best way to do this would be for each company to decide as to whether a meeting should be held at Newark to fix upon one colour of uniform, and to send a deputation — say two or three of their members—to represent them. As Lord-Lieutenant he was most anxious to interfere as little as possible in these matters, being desirous to leave the respective companies to suit themselves. At the same time he should if possible, attend any meeting they might hold for such a purpose; but with the near approach of Parliament pending he could not promise to do so; and if not he would commit his views to writing, and forward the meeting the opinions he entertained. He believed it would be most undesirable that anything should be done to prevail on any officer to leave either the Yeomanry or the Militia to serve in this new volunteer force, for if this were done the officers might leave the 'new love' without returning to the old. With respect to the officers, he had never recommended any officer for appointment to her Majesty without consulting the wishes of the company as to whom they desired to command them. He had adopted this plan because he fully relied upon the good sense of the respective companies to name such persons as were worthy of the position in which it was proposed to place them. He had so far been most fairly treated by those on whom had devolved the responsibility of naming them, but at the same time he alone was responsible to the Queen for those whom he recommended for her Majesty's sanction. He had put them upon their honour to name fit and proper persons, and they had done so. There was one point to which he had not called their attention, and to which it was necessary he should refer. It was, that at the present moment it was inadvisable to enrol men who were not prepared to pay for a considerable portion of their outfit. He would recommend them not to make their company exclusive; and by all means have the representatives of all classes; but, at the same time, not to involve themselves in any great expenses at first in this respect. By all means they should have all classes in their corps, but should not at first attempt too much. If they only got a company of 100 to start with, they would be the nucleus of a greater number, who, in case they were required—which God forbid—might render good service. They must not endeavour to effect too much—if they did, instead of succeeding in the object they had in view, it might only end in discredit to themselves and failure, so far as they were concerned, to the cause which they desired to serve. That they would have to assist the artisan who joined the corps was evident, because it could not be expected that he would give his time, and then, out of his hard earnings, purchase his uniform; but his advice to them was, not to attempt too much at first. In conclusion, he would say that the number of volunteers was daily increasing throughout the country, and he was fully persuaded that before next summer was over there would be such a volunteer force throughout the length and breadth of this kingdom as would strike terror into the minds of those who might still have a disposition to attempt an invasion of our shores."

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 95¼ to ⅜ for Money, and 95¼ to ⅜ for the 8th of February; Bank Stock, 227½; Three per Cents. Reduced, 95½ to ⅝; New Three per Cents., 95⅝ to ⅝; Five per Cents., 109; India Stock, 221½; New Five per Cent. Indian Loan, 104 and 103¾; Five per Cent. Enfaced Rupee paper, 97 to 97⅛; Exchequer Bills, 28*s.* to 31*s.* prem.—FOREIGN: Danish Three per Cents, 1825, 83; Russian Five per Cents., 109½; Ditto Four and a Half per Cents., 98¼ to 98 ex div.; Ditto Three per Cents., 1859, 65⅞; Spanish Three per Cents., 44 ex div.; Turkish Six per Cents., 1854, for Acct., 78¼; Ditto for 1858, for Acct., 65⅛ to 64¾; Venezuelan Three per Cents., for Acct., 27¼.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£30,002,060	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion	15,527,060
		Silver Bullion	—
	£30,002,060		£30,002,06

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,963,822
Rest	3,250,728	Other Securities	19,892,930
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	5,561,925	Notes	8,170,740
		Gold and Silver Coin	697,069
Other Deposits	15,543,469		
Seven day and other bills	812,439		
	£39,724,561		£39,724,561

12th day of Jan., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — J. S. DATE, Cardiff, Flour Merchant—J. DYKE, Birmingham, Grocer—E. HAWKER, Southampton. Homœopathy Chemist — R. NUTTALL and N. CROSSLEY, Halifax, Machine Makers, J. ROSS, Truro, Cornwall, Draper—E. T. SHADWICK, Penarth, near Cardiff Common Carrier.

SCOTCH SEQUESTRATIONS — J. FINLAY, Glasgow, Carver — H. JOYNER, Glen-Urquhart, Cromartyshire, Farmer—J. JOYNER, Cromarty, Grocer—D. ROBERTSON, East Kilbride, Mason.

FRIDAY—BANKRUPTS—J. BENTLEY the elder and J. BENTLEY the younger, Liverpool, Gun and Pistol Makers—M. BRADBURY and G. WEAVER, Tunstall, Staffordshire, Clothiers—P. HAWES, Kinson Lodge, near Poole, Brickmaker—W. JACKSON, Kidderminster, Victualler—J. KEIRS, 27, Old Street, St. Luke's, Licensed Victualler—R. MIDDLEWOOD and J. MIDDLEWOOD, Leeds, Linendrapers — J. ROWLASON and T. BROOKS, Liverpool, Builders—W. STRANGE, 294, Strand, Printer and Publisher—J. WARREN, East Stonehouse, Devonshire, Licensed Victualler—W. J. WEBBER, Teignmouth, Baker.

SCOTCH SEQUESTRATION—W. R. PATERSON, Glasgow, Merchant.

Metropolis and its Vicinity.

FUNERAL OF LORD MACAULAY.—The funeral of Lord Macaulay took place in Westminster Abbey on Monday afternoon, at 1 o'clock. He was buried in Poet's Corner, in the spot described in our last Number, at the foot of Addison's statue. The body was conveyed from Holly Lodge, Campden Hill, Kensington, the residence of the deceased, at 11 o'clock. The procession consisted of a hearse and six horses, with three mourning coaches. It had been proposed that the coronet should be carried before the hearse on a cushion; but this piece of pageantry was set aside, in deference to the known opinions of the deceased upon such matters. The chief mourners were the Rev. J. Macaulay and Mr. Macaulay jun., Mr. C. L. Macaulay, brother and nephews of the deceased, and Mr. G. Otto Trevelyan, who occupied the first carriage. Mr. T. F. Ellis, Mr. E. Cropper, Mr. K. Macaulay, M.P., and Mr. H. T. Holland occupied the second carriage. One or two other carriages were filled with the principal domestics of the deceased. The procession passed down Campden Hill into Kensington, along the Kensington Road, through Knightsbridge, to Hyde Park Corner, where it was joined by the carriages of the noblemen and others desirous of paying that mark of respect to the deceased. The procession then continued down Grosvenor Place, along Birdcage Walk, through St. James's Park, and by way of Great George Street to the Abbey. On arriving at the Abbey the body was received by the pall bearers and other friends of Lord Macaulay, and the coffin was carried up the nave to the choir, preceded by the Bailiff of Westminster, the Almsmen of the Abbey, 16 boys of the Choir, the Sub-Dean, Canons Repton, Jennings, and Cureton, and Dean Trench. The pall bearers were the Lord Chancellor, the Earl of Carlisle, Earl Stanhope, Lord John Russell, the Bishop of Oxford, the Speaker of the House of Commons, Sir G. C. Lewis, Bart., Sir Henry Holland, Bart., Sir David Dundas, and the Dean of St. Paul's. The service was read by the Dean of Westminster. The outer coffin was of polished elm, enclosing a leaden coffin and shell. The lid was divided into three compartments; the upper one containing on an engraved plate the arms of the deceased, and the second containing the following inscription:—The Right Honourable Thomas Babington Macaulay, Baron Macaulay of Rothwell, born 25th Oct., 1800. Died 28th Dec., 1859. A large number of members of the Legislature and gentlemen of distinction in letters, science, and art, who were desirous to show their respect to his memory, were admitted by ticket to the Abbey, and the sister and sister-in-law of the noble lord, and one or two other female relatives, occupied seats in the clerestory immediately overlooking the grave. The House of Lords was represented by Lord Cranworth, Lord Broughton, Lord Monteagle, the Earl of Shaftesbury, Lord Glenelg, Lord Belper, Lord Radstock, and Lord Broughton. The Lower House was represented by the Chancellor of the Exchequer, Mr. Ewart, Mr. E. Baines, Mr. Serjeant Shee, Mr. Kinnaird, Lord Stanley, Mr. Thomson Hankey, Alderman Salomons, Mr. Villiers, Mr. Tite, Mr. Edwin James, Mr. Wilde, Mr. Massey, Mr. Mellor, Lord Harry Vane, Mr. Joseph Locke, Mr. Charles Forster, Lord Henry Lennox, and Lord Bury. Among the other persons present were Vice-Chancellor Wood, Sir John Lawrence, Mr. Russell Gurney, Rev. Dr. Hawtrey, Provost of Eton; M. Va

de Weyer, the Belgian Minister; Mr. Justice Willes, the Master of the Rolls, the Dean of Canterbury, Sir Roderick Murchison, Sir F. Palgrave, Sir E. Ryan, Sir D. M'Dougal, Sir R. Bromley, the Head Master of Harrow, Mr. Mangles, Mr. Charles Balls, Deputy Mayor of Cambridge, who appeared in his official costume, Mr. Beresford Hope, Mr. George Grote, Mr. Thackeray, Mr. Panizzi, Mr. Tom Taylor, Mr. Longman, Mr. Bentley, Mr. Bohn, Mr. W. R. Chambers, Mr. Higgins, Mr. Charles Knight, &c. A large proportion of the spectators were clergymen, ladies, and even children. Neither the ladies nor the children were in mourning, so that handsome bonnets and light ribbons rather marred the effect of an otherwise solemn and impressive ceremony. Though many who applied were unable to obtain tickets, it is said that there was ample room in that part of the old abbey for more than double the number who were admitted.—In connection with these details, we may mention that the National Academy of Hungary, on receiving the news of Lord Macaulay's death, has resolved that a special meeting shall be held for the delivery of an eulogium on him, to be pronounced by M. Csengery, editor of the *Budapesti Szemle*, and translator of his History of England into Hungarian. We may also quote from the Paris *Presse* the following eloquent tribute paid by M. Peyrat to his memory:—"In this great historian England has just lost one of her most illustrious citizens, and liberty one of her most glorious defenders. Lord Macaulay was only 59 years old. His death, then, is premature, and naturally awakens the most profound regrets of those who knew him, whether personally, or only through his works. A writer and critic of the first rank, he possessed an erudition as solid as it was various. His mind was a cyclopædia admirably arranged; everything was there, and everything in its place. He had that sort of universality which characterises superior men of all kinds, that precision of thought and appropriateness of language which throws light upon all subjects of discussion. No one has more clearly proved that what stifles and obscures the mind is the confusion, not the abundance of its ideas. He possessed in the highest degree the intellectual and moral qualities of the true historian; he judged men and parties with an elevation of view, an impartiality, and a rectitude which give a special authority to his eloquent and solid writings. He shows himself in general severe towards persons, and inflexible in matters of principle. We have more than once spoken of his beautiful History of England—he leaves it incomplete, to our irreparable loss. As a politician he had won and carried with him the esteem of all parties. In the course of an active life he may have been open to reproach for a few faults, but never for a single act which might give rise to doubts of the rightness of his intentions or the independence of his character. He always worked, and always by honest means, to ensure the prosperity and greatness of his country. In the midst of party struggles and the vicissitudes of fortune, in power and out of power, he was constantly faithful to his party, to his opinions, and to his friends. He combated all abuses, and his name is connected with the most important reforms. Religious liberty, above all, never had in any country a more persistent or more brilliant advocate. A Liberal in the true and grand acceptation of the word, an avowed enemy of all exaggeration, profoundly convinced that in politics all extremes are equally dangerous, he set himself, in his speeches and his writings, to prove that despotism and anarchy are inseparable, and that each tends to generate the other. We have before us, while we write these lines, the portrait of Lord Macaulay, and when our eyes rest on it we fancy we are again enjoying the rapid moments during which, five years ago, we had the happiness of seeing and hearing him. We are sure that no one who ever knew him, or ever read him, will dispute the justice of the homage we pay to his memory. Such men, to whatever country they may belong, are the glory of the liberal cause; and we believe that it is for the interest and the honour of liberty to grave their names on the column which commemorates those who have sincerely loved and practically served her."

THE SPECIAL SERVICES.—The evening services on Sunday night in St. Paul's, Westminster Abbey, and Exeter Hall were attended by crowded congregations. The services in the minor theatres were also well attended, and the attempt to render these buildings available for the religious instruction of the lower classes who cannot be induced to attend either church or chapel appears to be completely successful.

THE GREAT EASTERN.—A meeting of the Great Ship Company was held on Wednesday afternoon, Mr. R. J. R. Campbell in the chair. A report from the directors was read announcing the resignation of the board, and stating that they had mortgaged the vessel to the extent of 40,000*l.* for six months, at the rate of 7½ per cent. interest, with a rebate of 2½ per cent. if the money should be paid off before the lapse of the full period—a result which they considered likely, as there were 26,242 shares yet to be issued to complete the capital of the company to 330,000*l.* A motion to receive this report was followed by an amendment that before doing so a committee of investigation be appointed. After a protracted and angry discussion, abounding in personalities, it was resolved to decide the question by ballot, the result of which will be announced on Tuesday next.

STATUE OF GENERAL SIR CHARLES NAPIER AT ST. PAUL'S.—The uncovering of the statue of the late General Sir Charles Napier, which has been erected in the north transept of St. Paul's Cathedral, took place on Saturday afternoon. The statue is by Mr. G. G. Adams, of Sloane Street, who three years since executed the large bronze figure of the same general in Trafalgar Square. It is 8 feet 6 inches in height, and represents the general in his undress uniform, the left hand resting on a sword while the right hand holds a scroll. The pedestal bears this inscription:—"Charles James Napier, a prescient General, a beneficent Governor, a just Man." The statue was erected by the committee with the surplus funds remaining from the public subscription raised three years since among all classes, and in no small degree from private soldiers.

REMOVAL OF THE STATUE OF LORD CLIVE.—The statue of Lord Clive, which was erected some months since on a temporary wooden plinth in the Duke of Buccleuch's garden at Whitehall, was taken down last week and sent by railway to Shrewsbury, where it will be inaugurated with much ceremony.

FRESCO IN LINCOLN'S-INN-HALL. — A very noble fresco, 50 feet by 34, has recently been completed by Mr. G. F. Watts, at the north end of Lincoln's-inn-hall. It represents an imaginary assemblage of the great early lawgivers, from Moses down to the king who has been called the English Justinian—Edward the First. The figures are of colossal dimensions, and 30 in number. The design occupies the whole end of the hall, above the high table, from the upper edge of the panelling to the apex of the roof. This fresco is conspicuously distinguished from all the mural decorations hitherto executed in this country by its architectural character, which makes it fit into and form part of the hall which it adorns.

MR. SPURGEON'S NEW TABERNACLE.—The friends of Mr. Spurgeon held a meeting at New Park Street Chapel a few days since with the view of presenting him with a New Year's offering towards the completion of the new Tabernacle. A report was read of the receipts and expenditure since the commencement of the undertaking, from which it appeared that the sum of 9000*l.* had been already absorbed in the purchase of the ground and for other purposes, that there was still 8000*l.* at the banker's, and that at least 13,000*l.* more would be needed by the time the building was finished. The gentleman who gave 3000*l.* on the laying of the first stone had offered to give 2000*l.* more. Several gentlemen addressed the meeting, and remarked that it was truly surprising that so large a sum should have been collected in so short a time by the followers of this popular preacher. It is confidently hoped that by the end of this year the Tabernacle will be finished and opened for public service entirely free from debt.

ST. GEORGE'S-IN-THE-EAST.—Another young man has been summoned before the police magistrate by the curates of this church for disturbing the congregation by reading the responses in a loud tone of voice, and thereby interrupting the chanting. Mr. Selfe, after some discussion, induced the defendant to sign a paper similar to that which he had drawn up in the former case of the same kind. He then dismissed the case, expressing his earnest hope that he should hear no more of St. George's-in-the-East.—In consequence of the late disturbances in the parish church and the differences between the rector and the parishioners, the latter have resolved to petition the Queen and Parliament on the subject. The memorial to her Majesty states that the parishioners have heard with deep concern and know from 17 years' sad experience in their parish church that men have received holy orders in the Church who teach doctrines at variance with the Thirty-nine Articles, contrary to the Word of God (the source of England's greatness), hostile to the stability and supremacy of the throne and the integrity of the empire, and who also use ceremonies unsanctioned by law, and hymnals containing many Romish errors. They pray that her Majesty may be graciously pleased to issue a Royal commission, with all needful authority, comprising honourable and loyal persons, free from Tractarian principles and practices, to examine any clergyman holding office or preferment in the Established Church charged with promulgating erroneous doctrine; and should he be found guilty of teaching any anti-Christian, or anti-Protestant, or unscriptural doctrine, or using any Popish decoration, vestments, or genuflexions, to deprive him of his office or preferment, and to appoint another clerk of honest Protestant Evangelical report, full of the Holy Ghost and wisdom, to fill such vacant office or preferment. They likewise pray her Majesty to command the publication of a Protestant Catechism and Hymn Book—sound, comprehensive, and purely Christian in doctrine, to be read and learnt by heart by all the children taught in the schools of the Established Church in the kingdom, and to make it a breach of Church discipline, subjecting to a like privation any clergyman who shall introduce any other Catechism or hymnal, or neglect to have the authorised Catechism and hymns thoroughly taught to all the children in the schools under his care and management. "Believing," they add, "that a commission such as they supplicated her Majesty to issue will in due time restore order, peace and prosperity to the Established Church, faithful worship to God, and loyalty and devotedness to her Majesty, they humbly submit their petition to the Throne, praying that her Majesty, blessed with health, may long enjoy a happy reign in righteousness and holiness, and by the grace of God continue to be the beloved and popular monarch living and reigning in the hearts of her faithful subjects, and a nursing mother in the true Protestant Church." The petition to Parliament details the mode of conducting Divine service in the church during the last 17 years, the period of the present rector's incumbency, and adds that in 1843 when he entered on the living the parish was, to use his own words, "distinguished for its loyalty to the Sovereign and dutiful attachment to the Church;" but that in consequence of his obstinate and overbearing conduct many of the parishioners have been alienated from the Church of England, while the once numerous congregation at the parish church has been reduced to a few scores, and that in a parish of 48,000 people. It describes the circumstances which have given the parish its great notoriety of late, and expresses the general wish of the petitioners to return to a simple form of Protestant worship.

RELIGIOUS RIOTING AT ENFIELD.—For some time past there have been serious religious dissensions at Enfield, caused by the vicar introducing Tractarian customs into the services of the church. Some months since the vicar opened a chapel in the parish, called Clay Hill Chapel; but in consequence of some disturbances there it was for some time closed at the instigation of the bishop. On Christmas Day it was reopened, when there was a conflict between the vicar and one of the churchwardens, the facts of which came before the magistrates on Saturday. On that day the Rev. John Moore Heath, M.A., the vicar, appeared to answer a summons charging him with an assault, on the 25th Dec., upon Captain Bosanquet, R.N., one of the churchwardens, in the church or chapel of St. John, Clay Hill. Captain Bosanquet, in stating his case, said that he entered the chapel of St. John on Christmas Day, at half-past 10 or 11 in the morning. While sitting in his usual seat, the vicar came to him and asked if he had removed anything from the communion-table. He told the vicar that, as churchwarden, he had removed the super-altar. The vicar seized him and dragged him from his chair, calling upon a person present to assist in turning him out of the chapel. The vicar, finding that he received no help, left in a very excited manner, desiring the doors to be locked, and Captain Bosanquet to be locked up in the chapel. Some conflicting evidence was given, and the magistrates, after consideration, dismissed the summons, deciding that they had no jurisdiction. In the course of a discussion on another summons which Captain Bosanquet took out against his co-churchwarden, he stated that on the following Sunday (New Year's Day) he went to the chapel, and found several of the vicar's friends standing before the chancel with their hands joined, to prevent him getting to the communion table. Three or four of them set upon him, and his co-churchwarden, who was one of the leaders, took him by his collar and by the seat of his trousers, knocked him violently about, and so grazed his arm that he had not since been able to carve for dinner. They had previously told him that they would turn him neck and crop out of the church if he approached the communion table. He remonstrated against the vicar for employing these men, when he at once placed himself in a threatening attitude, and ordered him to be turned out. He remained there till the Communion Service began, to see that there was no music, as the bishop had prohibited it. The magistrates dismissed the case, but there seems to be no probability of a speedy settlement of the dispute.

DECLARATION OF THE ROMAN CATHOLIC LAITY.—The *Weekly Registrar* of Saturday states that Viscount Southwell, Lord Ralph Kerr, the Hon. W. Stourton, the Hon. A. Stourton, Sir W. Gordon, Bart., and 130 other gentlemen have signed the declaration of the Catholic laity. Sir John Simeon, on the other hand, has addressed a letter to Lord Petre, explaining his reasons for dissenting from the address to the Pope on the ground that the same liberty of political opinion should be accorded to the inhabitants of the Papal States as to the other States of Europe. Sir J. Simeon, it will be remembered, is a convert to the Roman Catholic faith, a nephew of the late Rev. Charles Simeon, of Cambridge, and was M.P. for the Isle of Wight from 1847 till 1851.

PUBLIC INDICATORS.—At a meeting of the City Commissioners of Sewers on Tuesday, the previous resolution of the Court, authorising the erection of an "Indicator" opposite Royal Exchange Buildings, was rescinded, and the permission was accordingly revoked.

TRAMWAYS IN THE CITY.—The expediency of laying tramways along the principal streets of the city having been frequently brought under the consideration of the Commissioners of Sewers, Mr. Haywood, their engineer and surveyor, was instructed to report upon the subject generally, but more particularly with reference to a proposal submitted by Mr. Redman. Mr. Haywood has accordingly presented his report, in the course of which he describes in detail the advantages of tramways in large and crowded cities, and concludes by recommending that from 1200 to 1500 feet of Mr. Redman's cast-iron tramway be laid experimentally in Leadenhall Street or Fenchurch Street, in single lines, next the kerbs, where, from the severe nature of the traffic, the several heads of security, duration, or cost can be advantageously tested and studied.

THE ROYAL CHARTER.—Since our last notice the divers have recovered gold bars, gold dust, sovereigns, and rupees to the value of nearly 21,000*l.* It is supposed that there is at least from 100,000*l.* to 150,000*l.* still in the wreck, and until the ship is lifted it is not expected that much more treasure will be recovered, as nearly all the amount of freight has now been obtained.

THE PUBLIC HEALTH. — The Registrar-General's official report states that in consequence of the warmer

state of the air, the deaths in London, which rose to 1677 in the last week of 1859, fell to 1281 in the first week of the new year. In the corresponding week of the 10 years, 1850-59, the average number was 1247; which, if raised in proportion to the increase of population, will become 1372. The return of last week was therefore 91 below the average. During the week the births of 1003 boys and 1005 girls, in all 2008 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1604.

Provincial.

BIRMINGHAM.—A meeting to consider the question of Parliamentary Reform was held in the Town Hall on Friday night, the Mayor, Mr. Lloyd, in the chair. Mr. Alderman Baldwin moved the first resolution, which declared that as the necessity of Reform has been acknowledged by all the great political parties and her Majesty's Government is pledged to introduce a Bill during the ensuing session, it is the opinion of the meeting that in order to be useful to the country and satisfactory to the people the Bill must provide for a large extension of the franchise, vote by ballot, and a better apportionment of members to population. Mr. George Edmonds, Clerk of the Peace, seconded the resolution, which was supported by Mr. Scholefield. Mr. Bright, M.P., then addressed the meeting, and was enthusiastically received. He said:—

"He felt sure they would all agree with him that it was a wholesome thing for constituencies and their representatives to meet periodically, as they had met on that occasion, for the purpose of discussing great questions of vital interest to the community which must very soon come before Parliament. But, if there were great questions affecting the vital interests of the community, which were to be determined, and could only be determined, by Parliament, how necessary did it seem that Parliament, to whose jurisdiction those questions were referred, should fairly represent the great interests and intelligence of the people of this country. He thought that he did not overstate the case when he said that for many years past there had been a growing conviction not among the unrepresented classes, but among all classes, that the House of Commons—the chief house of legislation in this country—did not truly include within its representatives all the interests of all classes which belong to the great concerns of the great population of this kingdom, and they had the most conclusive evidence of the accuracy of this opinion in the fact that without any great agitation from any combination or series of combinations throughout the country the whole country had come at last to the conviction that another Reform Bill was needed, which should include such an extended franchise as would secure a more complete representation of the people. It was not until 20 years after the Reform Bill had been passed that Lord John Russell—by far the most eminent, the most distinguished, and, in his opinion, the most trustworthy of his party on this question—fully admitted the necessity that existed for an extension of the suffrage, and in 1852 his Bill was introduced. He then went on to discuss the circumstances which led to the withdrawal of the measure in that year, and the subsequent introduction of a Reform Bill under Lord Aberdeen's Government. The withdrawal of the Bill on that occasion was consequent on our being allowed to drift into a needless and sanguinary war. He proceeded to refer to the promise of a Reform Bill by the first Administration of Lord Palmerston, and to the measure introduced by Lord Derby's Government, into the discussion of which, he said, he would not enter, out of compassion and charity to its authors. The election which followed, the effect of Lord Derby's Reform Bill, he described as characterised by a power of corruption which he supposed had never been equalled. He alluded to the meeting at Willis's Rooms, in which pledges had been given that a better measure in every way than the rejected one of Lord Derby's Government should be brought forward by those who were expected to take part in the Government. The Bill would, he supposed, be something in the shape of a compromise. It would, he expected, be a more moderate measure than one which had been introduced by Mr. Pitt 70 years ago; it would be more moderate than one of Earl Grey's 60 years ago; it would be more moderate than a Bill of Lord Durham's 30 years ago. Such, he presumed, would be the character of the measure to be introduced in the House of Commons in February next. He took it for granted that all places like Birmingham, Manchester,—full of manufacturing activity like Wolverhampton—and other places in Lancashire and Yorkshire, a 6*l.* rental franchise would double, or in instances rather more, the existing number of electors. In other towns, towns which are what is called 'finished,' and which have not had a new house or a new street within the memory of any one living, the increase in the number of electors would be comparatively small. He entered into statistics on the question and expressed an opinion that a 6*l.* franchise in towns and 10*l.* in counties would not increase 60 per cent. to the entire constituency. The present constituency amounted to a million, and if a Bill gave a 6*l.* franchise for towns and 10*l.* for counties, it might amount to a million and a half. The proposed Bill of Mr. Disraeli, according to his statement, would have added half-a-million to the constituencies. The measure which he submitted last autumn might add a million. He discussed the various franchises at some length, and said that if Lord John Russell's Bill passed there would still be four millions and a half of fathers, brothers, and sons who had no vote, and twenty-two millions and a half as unrepresented as if they lived in the kingdom of Naples. He complained of the false, slanderous, and malignant charges which had been made against him in connection with the course he had pursued in this matter, and concluded a speech of an hour and a half duration by expressing a hope that the time had come when the intelligence, the industry, and the prosperity of the country should be fairly represented in the House of Commons. The aristocracy themselves had not always been particular in contending with the power above them. The working classes had often organised themselves for the purpose of effecting various objects, some of them perhaps not always perfectly legitimate; but what he did hope was that in case the anticipated measure was defeated those organisations would be brought to bear in securing for those classes the place in the constitution which the constitution had assigned to them, and that the struggle would not be abandoned until this was obtained."

The resolution was passed unanimously, and petitions to Parliament were adopted in accordance with it.

CAMBRIDGE.—It is understood that either the Duke of Bedford or Lord John Russell will be invited to accept the office of high steward of this borough, now vacant by the death of Lord Macaulay.

CHATHAM.—It is the intention of the Government to place the naval establishments and dockyard at this port in a thorough state of defence, in accordance with the report of the Commissioners on the National Defences. Several extensive batteries are to be erected on the river front on the eastern side of the dockyard, to be mounted with long-range Armstrong guns. Upnor Castle is also to be mounted with guns of the heaviest metal, so as to sweep the river in all directions.

HERTFORD.—The East India College at Haileybury, once the celebrated nursery of the Indian Service, is about to become a depôt for military recruits. By the fresh arrangements contemplated, accommodation will be provided for 700 soldiers. The library and quadrangle of the college are to be turned into dormitories.

MAIDSTONE.—It is rumoured that Mrs. Smith Bannerman, who eloped a fortnight since with the Rev. A. W. Green, curate of Hunton next Dartford, was lost with the rev. gentleman in the recent wreck of the Blervie Castle. It is said that on the evening of their flight they were put on board the ship in the river, intending to proceed in her to Australia. A Gravesend boatman who professes to have had a knowledge of Mr. Green has deposed to the fact of having taken that gentleman off to the ill-fated ship on the night in question with a lady closely muffled, whose description exactly coincides with that of Mrs. Bannerman.

MANSFIELD.—The local papers state that Newstead Abbey, the ancient seat of the Byron family, will be brought to the hammer in a few days, in consequence of the death of its late owner, Colonel Wildman. It is expected that the Church of Rome, which omits no opportunity of regaining possession of those rich estates that once constituted the patrimonies of the various religious fraternities in England, will be among the most active competitors at the sale.

MIDDLEWICH.—A dreadful boiler explosion took place on the evening of the 4th inst. at the iron foundry of Mr. Samuel Heath, at this place. The effect of the explosion was to blow down the foundry, carrying the bricks 50 yards away from the premises. The owner of the foundry and one of his sons were dangerously scalded and injured, and another son, 35 years of age, was killed on the spot, Portions of the boiler which have been picked up are stated to be as thin as a sixpenny piece.

PETWORTH.—A long inquiry was concluded on Monday before the coroner, respecting the death of the illegitimate child of Harriet Moore, a girl of 20, an inmate of the Petworth Union, who, it is alleged, gave the child white precipitate. It was proved that the prisoner had purchased precipitate at a chemist's shop, and that the child had suffered intense pain before its death. Dr. Taylor, of Guy's Hospital, who examined the contents of the stomach of the infant, deposed that he found an insoluble compound of mercury which had all the powers of white precipitate. From the explanations of Dr. Taylor it appeared that this was an extraordinary case, from the fact of white precipitate having been so rarely administered internally; he knew of only one case, and that was at Chelmsford Assizes, 12 years ago, in which he was engaged. The patient had taken 25 grains and recovered. The whole point was this—whether the system possessed sufficient strength to throw it off by vomiting. The jury, after consulting for about an hour, unanimously returned a verdict of "Wilful Murder" against Harriet Moore, who was committed for trial at the spring assizes at Lewes.

PLYMOUTH.—Two courts-martial were held on board the flag-ship on Wednesday. The first was on John Dillon, a private of the Royal Marine Artillery serving in the Royal Albert, charged with striking Lieut. Daly, Royal Marines, on the evening of the 5th of January; the second on John Martin, gunner, Royal Marines, for attempting to strike Lieut. Daly on the same occasion. The evidence proved that while Lieut. Daly was going the usual night round between the hours of 10 and 11 P.M. on board the said ship, the prisoner Dillon rushed upon him from between the guns of the main deck and knocked him down by a violent blow in the mouth, which caused the loss of one of his teeth. At the same time, the prisoner Martin jumped out from under cover on the opposite side of the ship and attempted to strike the lieutenant, making use of threatening and disgusting language in doing so. The sergeant of the guard who accompanied the lieutenant on his round and the sentries immediately seized the prisoners and prevented their doing further mischief. They were not drunk, and had not been under punishment, so that there appeared to be no reason for their attack upon their officer. The Court found the charges proved, and sentenced John Dillon to be hanged at the yardarm of one of her Majesty's ships; and James Martin to receive 50 lashes, to be imprisoned two years, and to lose all pay and forfeit all time due to him.

RAMSGATE.—A great fall of the cliffs has taken place in this town in consequence of the breaking up of the late severe frosts. On Sunday a very heavy fall took place from the East Cliff, near the Refectory Tavern, blocking up the road running between the shipwright yard and the cliff, sweeping before it the yard fence, the trunk used for steaming planks, as well as the copper and furnace, at the same time burying a quantity of ship timber that was placed under the cliff. Fortunately there was no one passing at the time of the fall. There is evidently a great deal more to fall, as there are cracks on the top of the cliff 4 feet from the edge.

ROBERTSBRIDGE.—At a large and influential meeting of the Hop Excise Duty Repeal Association, held in this town on the 5th inst., Lord Harry Vane in the chair, it was unanimously resolved to urge upon Parliament the necessity of a repeal of this duty.

Ireland.

ADDRESS TO THE PREMIER IN FAVOUR OF THE POPE.—The following address to Lord Palmerston is now in course of signature among the Roman Catholic gentry of Ireland. It has been already signed by Lords Dunraven, Southwell, Bellew, and Killeen, 8 members of Parliament, 15 Marquises, 4 Baronets, and several mercantile men. Mr. J. Pope Hennessy on the other hand has sent an indignant letter to the secretaries charged with the conduct of the address, refusing to append his signature to the document on the ground that he "would as willingly sign an address to Lord John Russell praying him to correct and revise the titles of their bishops, as sign an address to Lord Palmerston praying him to intermeddle in Italian affairs."

"TO VISCOUNT PALMERSTON.

"MY LORD,—The undersigned Catholics of Ireland, deeply attached to the Crown and constitution of these realms, deem it right at this important crisis to express to your lordship, as the head of her Majesty's Government, our opinion respecting the attempt now made to subvert or weaken the temporal authority of the Pope. We believe it expedient for the general interests of Europe that the head of our Church, which comprises the great majority of the Christian world, should by his position as an independent Sovereign be free to exercise his spiritual authority over Catholics of all nations, unfettered by the dependence on any particular State. The wisdom of this policy has been acknowledged by Sovereigns and statesmen of various creeds. It has been solemnly sanctioned by treaty, and we deprecate a departure from it at the present time. Let it not be supposed that in our desire to preserve to the Pope his temporal possessions we are indifferent to the interests of his people. We value too highly the blessings of good government not to desire that they should be extensively enjoyed. We feel persuaded that his Holiness has a heart to carry further the reforms in the States of the Church which he had commenced, and it is our earnest wish that they may be soon completed. We deplore the causes by which they have been hitherto impeded, but we deem it unjust to hold the Sovereign Pontiff responsible for the misgovernment of which he has been accused. We appeal with satisfaction to the acts of his Holiness on his accession to the Papacy, by which he proved his earnest attachment to the cause of nationality and improvement, although his efforts were, unhappily, frustrated by the machinations of foreign adventurers, who worked by terror and intrigue on the feelings of a volatile population, and employed the reforms already effected by His Holiness as instruments for the subversion of his throne. In our anxiety to maintain unimpaired the temporal authority of the Pope we advocate opinions in accordance with the interests of the British Empire, which contains so many millions who venerate his Holiness as their spiritual head of the Church, and whose contentment is not unworthy of the serious attention of the British statesman. We think it right, therefore, frankly to declare these our opinions to your lordship, in the hope that they may exercise a just influence on the policy of her Majesty's Government and induce them to promote or concur in such a settlement of the affairs of Italy as, while it provides for the liberties of the Italian people, will secure the integrity, independence, and neutrality of the dominions of the Holy See."

SYMPATHY WITH THE POPE.—The aggregate meeting of the citizens of Dublin, convened by Dr. Cullen, took place on Monday in Marlborough Street Cathedral, and is said to have been a failure, Dr. Cullen himself with the Lord Mayor, three Aldermen, and two Queen's Counsel being the only persons of note who took part in the demonstration. Similar meetings have also been held at Dundalk, Mullingar, aad Clare. The following are extracts from the speeches delivered on these occasions:—

ARCHBISHOP CULLEN, at the Dublin meeting, began by declaring that the enemies of the Pope were the defenders of sedition, of the dagger, revolution, immorality, and infidelity; and proceeded to quote as his authority Lord Normanby, with whom, he said, he was well-acquainted. He insisted on the loyalty of the Roman Catholics, and asserted that when the Orangemen were suspected of aiming to exclude her Majesty from the throne in 1837, the Irish Roman Catholics came forward to defeat the conspiracy. "What," he said, "shall we say of France? I believe that in that powerful country the great mass of the people is with the Pope, but its infidel press is allied with that of England; and as to its ruler, he has shrouded himself so much in mystery that it would require an Œdipus to interpret the riddles of this modern Sphynx. Some time ago he drew on himself the most bitter censures of the British press, because he was considered favourable to Rome; at present all sorts of praises are lavished on him, because he is supposed to have abandoned his former views. Though those praises render the conduct of the Emperor very suspicious, yet I shall abstain from every judgment, as there is still room for hope that he will not act in such a way as to efface the merits acquired by past services to religion. I cannot however hesitate to denounce as most wicked and perfidious a pamphlet lately published entitled 'The Pope and the Congress,' which is said to have been written under the inspiration of the Emperor, and which has merited the eulogies of all English fanatics. This pamphlet is the work of a subtle and malicious enemy of the Holy See, who, pretending to give the kiss of peace and imitating the Jews in the court of Pilate, endeavours to inflict a deadly wound."—ALDERMAN REYNOLDS in seconding the first resolution made a declaration of loyalty to the Queen which created a sensation among his hearers, and led to the following episode:—"Notwithstanding their allegiance to the crown of England (general hisses in the body of the chapel), they were branded as traitors for sympathising with the Pope by newspapers, from the Thunderer in Printing House Square (hisses) to the little pop-guns the *Evening Mail* and *Packet*. (Hisses.) But the threadbare charge of disloyalty was pitched at them over and over again. He asked what evidence could be produced of their disloyalty? He believed that he was better off there than under any Government in Europe." ("No, no!" hisses in the body of the meeting, and cries of "Order" from the platform.) He repeated that he was. [A Voice: Ah! go along. (Laughter.)] Alderman Reynolds: The Irish people are loyal to the Crown of England. (Hisses.) [A Voice: We had enough of that.] Alderman Reynolds: In advocating the cause of the Pope they were not to be branded with the foul name of "traitors." (Hisses.) Were the Irish disloyal during the Crimean war? Who turned the scale at Waterloo but the Murphys and the Cavanaghs and other men of Milesian patronymics. Who helped the English at —— [A Voice: Ireland for the Pope. (Loud cheers.)] Alderman Reynolds: Three cheers for the Pope, and nine times nine for the Pope. They should not, in advocating his cause, be branded as traitors. (Hisses.) Louis Napoleon said that he was sincere in his intentions to support the Pope —— [A Voice: Three cheers for Napoleon. (Partial cheering.)] Alderman Reynolds: If the Emperor was sincere, and anxious to carry out the Treaty of Villafranca, he had but to hold up his little finger; but if he was playing another game—the game of political jugglery—it would recoil on himself. Now he was dis-

posed to believe nothing until he saw it accomplished. He would—at the risk of being hissed by some of his ardent friends who went further than he would go—he would again say that, having sworn allegiance to the throne, if he believed his appearance on that platform would leave him open to a charge of disloyalty to the British throne, he would not be there. (This statement was received by the meeting without any expression of approbation or disapprobation. Dr. Cullen, however, waved his hand several times as a signal to the meeting to cheer, and thereupon there was some cheering in the body of the chapel.) Dr. CULLEN then rose from the chair, and said,—"I beg to congratulate you upon hearing that cheer, because I have heard it whispered that some persons here present, perhaps from the enemy's camp, have put a false construction upon the hisses that were given a while ago. You hissed *The Times*, and I believe you were right. You gave that cheer for the noble expression of Alderman Reynolds, and so I think the thing is perfectly understood."—Alderman REYNOLDS. —It had been said that the Roman Catholic clergy rejoiced when they heard that there was a likelihood of a French invasion; but that was not true. (Hear, and "No.") They were all determined to go as far as they legitimately could to sustain the authority of the Pope, and they would not allow a feather of his wing to be touched. He concluded by calling for three cheers for the Pope, which were given by the meeting.—Dean KIERAN at the Dundalk meeting spoke as follows:—"The Emperor of France and the statesmen of England denounce Pius IX. to the reprobation of Europe, because he is, they say, the oppressor of his subjects. I deny the competence of these men to sit in judgment on Pius IX. Who has given them the power of sitting in judgment on the Sovereigns of the earth? What is there in the antecedents of the French Emperor to justify him in the course he is taking? Is it not notorious that in his own kingdom he has destroyed representative government,—that he has gagged the press—and only the other day suppressed the pastorals of the Bishops of France? Is this a man to sit in judgment on the Pope, and read lectures to him on the way in which he should govern his subjects? From the Emperor of France I turn to the statesmen of England, and I put to them the same question. They have assisted to do the work of revolution in Italy. When Lord Ellenborough proposed a subscription to buy arms for Garibaldi he struck a chord to which the heart of England vibrated; and, let them deny it as they may, their complicity with the rebels of Bologna is as patent as the existence of the sun. They sent their Mintos to fraternize with rebels—they sent their incendiaries to work on the inflammable passions of an excited people—they sent their gold and their intriguers, not to consolidate the liberties of Italy, but to gratify their hatred of the Pope, and try and pull down his spiritual and temporal power. Is this a nation from which a jury can be fairly selected to sit in judgment on Pius IX.? Lord Palmerston has declared that Rome was better governed by Garibaldi, Mazzini, and the dagger-men than by Pius IX. Lord Derby has declared that the states of the Pope are the plaguespots of Europe. Lord J. Russell has declared that the government of the Pope is an abomination. Are these men to interfere in the affairs of Italy, to set them right, and to decide as to the Pope."—The Catholic BISHOP OF KILLALOE at the Clare Meeting said—"I cannot understand how any British Minister or any British Sovereign should be so foolish, so demented, as to interfere with any portion of the temporal possessions of the Pope, whilst he ought to know that there are 15,000,000 of devoted spiritual subjects of the Pope and temporal subjects of her most gracious Majesty, who will take every wrong inflicted on that Holy Father as an injury done to themselves, and who, being members of the great mystical body, of which he is the head, must necessarily be participators in his sorrows, sharers in his sufferings. I cannot comprehend either how any British statesman can sanction insubordination or rebellion in the States of the Romagna, for a day of retribution may soon come, when some foreign ruler, imitating that fatal policy, may stir up sedition and insubordination in this island, where there are thousands and thousands of people dissatisfied with the present condition of affairs. No more can I comprehend, I confess, how any one who would pretend to be a wise councillor to her most gracious Majesty can sanction such a scheme of policy as would make the Pope the subject of any emperor or king in Europe? For that councillor is thereby doing the most serious injury that he possibly can to the balance of power in Europe, which is the greatest safeguard of this country. Let no man say that language such as this is disloyal. The loyalty of the Catholics of Ireland is called in question, but only by their enemies. Catholicity is loyal in principle. Allegiance is inculcated by the tenets of our holy religion. There is not in her Majesty's wide-spread dominions a people to whom we will yield in devoted attachment to her person and her throne. We render unto Cæsar the things that are Cæsar's, and we ever shall render unto God the things that are God's. If that be a divided allegiance, it is sanctioned by Divine authority, and every man professing the Christian religion is commanded to be disloyal. Many a time before has the temporal power of the Pope been unjustly assailed, but it will last while Rome lasts. May it never fail until Rome fails, until the trumpet of the archangel shall be heard over land and sea, proclaiming that time shall be no more." Dr. CANTWELL, Catholic Bishop of Meath, at the Mullingar meeting said:—"Where were his hopes fixed? First on the Emperor of Austria, one of the best Catholics living. There was not any person on earth, in power, who would make such sacrifices as Francis Joseph of Austria has proposed to do. There was another on whom depended everything in Congress. He did not give credit to England for much influence in it. They were sure of Austria, they were sure of France. Some doubted of it, but he could not bring himself to do so. Napoleon I., who struck the rock of Peter, died a prisoner on the island rock of St. Helena. Did they think Napoleon III. would forget that? He would never be the man to lay a profane hand on the Head of the Church."

DESTRUCTION OF THE ROUND CHURCH, DUBLIN, BY FIRE.—The parish church of St. Andrew's, called the Round Church, one of the finest of the old parish churches of Dublin, was destroyed by fire on Sunday morning in consequence of the over heating of the flues in the gallery. There had been divine service in the church in the morning, and the congregation had barely left when the fire broke out. So rapid were its ravages that in less than an hour and a-half the roof fell in, and before another hour had passed the centre woodwork of the structure was consumed, and when the engines arrived their only duty was to play upon the walls to prevent them from splitting. The church had just been repaired, and 8000*l.* will hardly cover the damage done.

Law.

SECONDARIES' COURT: *The Westminster Bell.—Mears* v. *Denison.*—This case came before the Court and a special jury a few days since on a writ of inquiry to assess damages for a libel, laid at 5000*l.* The plaintiff is Mr. T. Mears, the founder of the Great Bell of Westminster, and the defendant Mr. E. B. Denision, Q.C., who had the charge and superintendence of its construction. The libel, which arose out of the breaking of the bell, was published in the *The Times* of October 7, by Mr. Denison. An action was raised by Mr Mears, and the defendant having allowed judgment to go by default, the case now came before the Court to assess damages. Mr. Bovill, Q.C., and Mr. Coleridge, appeared for the plaintiff; Mr. Knowles, Q.C., Mr. Grove, and Mr. Garth, for the defendant. After the case had been stated at great length, and Mr. Denison's letter retracting the charges against Mr. Mears had been read, Mr. Knowles proposed that as no special damages had been sustained, and Mr. Denison had admitted his mistake, the case might be stopped by mutual consent. After a consultation of three-quarters of an hour, Mr. Bovill said he was instructed on the part of the plaintiff to accept the offer made—Mr. Denison retracting all his imputations on the plaintiff, and giving him full indemnity for all his expenses. The assessor considered this a most equitable arrangement, and the jury were discharged.

Railways.

THE CHARING-CROSS TERMINUS.—The detailed plans prepared by Mr. Hawkshaw, C.E., for extending the South-Eastern from London Bridge to a west-end station at Charing Cross, have received the approval of the Admiralty and the Conservators of the Thames, and the works will now be proceeded with under the powers obtained in the last session of Parliament. The bridge is of the kind known as the lattice girder, and will carry four lines of rail, together with two roads for foot passengers, one on each side of the railway. The whole will be supported on seven piers, the two existing piers of the suspension bridge (which will be removed) being made available for the work; the five new piers will be erected on cylindrical iron piles sunk into the bed of the river, after the new process adopted in laying the foundations of the Chelsea bridge and other similar structures. The works will probably occupy about two years in construction.

Obituary.

COLONEL WILLIAM MARTIN LEAKE, F.R.S., the eminent Eastern geographer, died at Brighton on the 6th inst., on the eve of completing his 83d year. Col. Leake was a member of an ancient and respectable Essex family, being a younger brother of Mr. John Martin Leake, of Thorpe Hall, near Colchester, a bencher of the Middle Temple and one of the chairmen of the Essex Quarter Sessions. Colonel Leake served for some years in the Royal Artillery, but retired with the rank of Lieut.-Colonel in 1823. Having been employed during the early part of his career on special service in the East he travelled over the whole of Greece and Asia Minor, and gave to the public the results of his researches in four or five works published at intervals between the years 1813 and 1830. Of these the best known are his "Travels in Asia Minor," "Travels in the Morea," "Athenian Topography," and "Travels in Northern Greece." He had only just completed the supplement to his last and most elaborate work, "Numismata Hellenica," when death put an end to his useful career of literary labour. Colonel Leake was a member of several learned societies, and was also an earnest politician and a zealous advocate of the freedom and independence of Greece.

MAJOR RIVERSDALE GLYN, of the Rifle Brigade, died on the 11th ult. off Aden, on his way home from India. During the war in the Crimea he served as subaltern in the 8th Hussars, with the escort of Lord Raglan. He exchanged into the Rifle Brigade during the most arduous period of the siege of Sebastopol, and on the conclusion of the war accompanied the brigade to India. All through Oude, up to the Terai, through the summer and winter campaigns, through the subsequent marches, he went on foot with his men till the dispersion of the rebels brought to his brigade a short rest, which only developed the seeds of the disease which had been planted by exposure. He is one of the many soldiers who have died since the rebellion of wounds gained in the struggle. He was the fourth son of George Carr Glynn, Esq., M.P.

WILLS.—The will of Lord Macaulay has been sworn under 80,000*l.*; the will of the Earl of Jersey, G.C.B., has been sworn under 50,000*l.*; his son, who died three weeks after succeeding to the title, died without a will, but his widow has administered, the personalty being sworn under 20,000*l.* The will of Lord James Stuart has been sworn under 45,000*l.*; that of the Hon. Mountstuart Elphinstone, 30,000*l.*; Colonel Keppel, of Lexham Hall, Norfolk, 25,000*l.*; Rev. Thomas Ludbey, M.A., rural dean and rector of Cranham, Essex, 20,000*l.*; Mr. Arthur Vansittart, of Footscray, Kent, and of St. John's Wood, 12,000*l.*; Miss Sarah Disraeli, 4000*l.*; Lady O'Conor, 35,000*l.*

BIRTHS.—On the 8th inst, at 4, Upper Brook Street, Grosvenor Square, the Right Hon. the Lady ROLLO, of a son—8th inst, at Settrington House, Malton, the Lady MACDONALD, prematurely, of twin daughters—3d inst, at Wimpole Hall, the Lady MARY CRAVEN, of a daughter—8th inst, at Waterhouse, Bath, the Hon. Mrs. GEORGE GREY, of a son—5th inst, at Lupton, in the county of Devon, the Hon. Mrs. YARDE-BULLER, of a daughter—2d inst, at 7, Rue Balzac, Paris, prematurely, the wife of MOUNTSTUART E. GRANT-DUFF, Esq., M.P., of a son.

MARRIAGES.—On Tuesday, the 10th inst, at Hanmer Church, the Rev. GEORGE ARKWRIGHT to the Hon. ELIZABETH KENYON, third daughter of Lord Kenyon—5th inst, at St. James's, Piccadilly, Captain FRANCIS SIDEBOTTOM, of her Majesty's Indian army, eldest son of Charles John Sidebottom, Esq., barrister-at-law, of Elm Bank, Worcester, to FLORA JANE, youngest daughter of the late Right Hon. WILLIAM YATES and Lady PEEL, of Baginton Hall, Warwickshire—4th inst, at Haberton, Devon, Captain CHARLES COOPER JOHNSON, Quartermaster-General's Department, Bengal Army, son of Sir Henry Allen Johnson, Bart., to JEMIMA ANNE FRANCES, daughter of the Rev. CHANCELLOR and the late LADY CHARLOTTE SOPHIA MARTIN—5th inst, at St. John's Episcopal Church, Edinburgh, LAWRENCE WILLIAM MAXWELL LOCKHART, 92d Highlanders, second son of the Rev. J. Lockhart, D.D., of Melton Lockhart, Lanarkshire, to KATHARINE ANNE, second daughter of the late Gen. Sir JAS. RUSSELL, K.C.B., of Ashiesteel, Selkirkshire, N.B. —5th inst, at St. George's, Hanover Square, the Rev. JOHN WHITTAKER MAITLAND, eldest son of Wm. Whittaker Maitland, Esq., of Loughton, Essex, to VENETIA, third daughter of Sir DIGBY NEAVE, Bart., of Dagenham Park, Essex—5th inst, at St. Andrew's, Fife, JOHN GORDON-CUMMING-SKENE, Esq., of Pitlurg and Dyce, N.B., to MARGARET MARIA, daughter of Sir DAVID BREWSTER, K.H., D.C.L., Principal of the University of Edinburgh—7th ult, at the Cathedral, Bombay, JAMES BRAITHWAITE PEILE, Esq., Bombay Civil Service, son of the Rev. T. W. Peile, D.D., Vicar of Luton, Beds, to LOUISA ELIZABETH, youngest daughter of General BERKELEY, 44, Harley Street, Cavendish Square, London—11th inst, at Thornton-in-Lonsdale, HENRY JOHN WARE, Esq., of York, to ISABEL, youngest daughter of RICHARD TATHAM, Esq., of Low Fields, Thornton-in-Lonsdale.

DEATHS.—On the 29th ult, at Exmouth, Major-General KING, H.E.I.C.S., aged 82—4th inst, at 7, Vicarage Gardens, Kensington, Lieut.-Colonel JOHN ABERCROMBIE, H.M.'s Benga Horse Artillery, aged 47—4th inst, at Bath, of typhus fever, FLORENCE OLIVIA, eldest daughter of Lieut-Colonel CARRUTHERS, Retired List, Madras Army, aged 19 years and 11 months —9th ult, at Funchal, Madeira, ELIZA CAROLINE, youngest daughter of the late Lieut.-Colonel HILL, C.B.—4th inst, at Wollaston House, Northamptonshire, ISABELLA GERTRUDE CAMPBELL, fourth daughter of the late W. F. A. Delane, and wife of the Rev. W. Campbell, one of her Majesty's Inspectors of Schools, having only survived two days the death of their only child GERTRUDE CAMPBELL, aged 4 years—7th inst, at 21, Upper Bedford Place, Russell Square, CAROLINE, eldest daughter of the late Sir WM RULE, many years Surveyor of the Navy—1st inst, at Whitfield, Northumberland, the Ven. Archdeacon SCOTT, Rector of Whitfield, and Hon. Canon of Durham Cathedral, aged 77—3d inst, at Trematon Castle, Cornwall, JEDIDIAH STEPHENS TUCKER, Esq., aged 59—6th inst, at his residence, 18, Lower Seymour Street, Portman Square, WILLIAM SPENCE, Esq., F.R.S., author of the "Introduction to Entomology," &c., aged 77—8th inst, at La Chaire, Rozel, Jersey, the residence of his daughter, Mrs. Samuel Fothergill, SAMUEL CURTIS, Esq., F.L.S., aged 81—8th inst, at Plymouth, MARIANNE, eldest daughter of the late JOHN ARTHUR, Esq., Collector of H.M.'s Customs at that port, and niece of the late Sir George Arthur, Bart.—6th inst, at his residence, in Tralee, Major O'CONNOR, second son of the late Maurice O'Connor, Esq., J.P., and formerly in the 85th Regiment, in which corps he saw a good deal of service, both in the Peninsula and Canada.

Markets.

COVENT GARDEN.—Jan. 14.

The weather being still mild and open the supplies of most things continue equal to the demand, and trade is tolerably brisk. Pine Apples and Grapes, however, maintain former prices; good Apples and Pears are scarce. Oranges are both plentiful and cheap. Good Cobs realise from 1s. to 1s. 6d. per pound. Chesnuts are plentiful. Asparagus, Rhubarb, Seakale, Savoys, Carrots, Parsnips, and Leeks may also be obtained. Parsley has been very scarce and dear; but it is now somewhat cheaper. Potatoes realise from 4s. to 8s. per cwt. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Heaths, and Roses.

FRUIT.

Pine Apples, per lb., 5s to 7s	Pears, per doz., 4s to 6s
Grapes, per lb., 7s to 10s	Oranges, per 100, 6s to 10s
Melons, each, 2s. to 4s	Lemons, per 100, 5s to 8s
Pomegranates, each, 4d to 6d	Filberts, p. 100 lbs., 50s to 60s
Apples, per doz., 1s to 2s.	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 7s to 10s	Beet, per doz., 1s 6d to 2s
Seakale, per basket, 2s to 3s	Celery, per bundle, 1s 6d to 2s
F. Beans, per 100, 2s to 2s 6d	Onions, p. half sieve, 1s to 1s 6d
Cauliflowers, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen bunches, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., per score, 1s to 1s 6d
— per bus., 2s to 2s 6d	Endive, p. score, 1s to 2s
— per cwt., 4s to 6s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 1s 3d to 1s 9d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d
Cucumbers, each, 2s 6d to 4s	
Artichokes, per doz., 2s to 3s	

METROPOLITAN CATTLE MARKET.

MONDAY, Jan. 9.

We have a much larger number of Beasts, and consequently although the demand is good, prices are rather lower. The supply of Sheep is also larger, but the demand is equal to it; we are therefore enabled to retain late quotations. Good Calves are scarce and dear. From Germany and Holland there are 430 Beasts, 920 Sheep, and 128 Calves; from Scotland, 500 Beasts; from Ireland, 70; from Norfolk and Suffolk, 1500; and 900 from the northern and midland counties.

	s	d	s	d
Best Scots, Herefords, &c. ..	4	8 to 5	0	
Best Short-horns	4	6 — 4	10	
2d quality Beasts	3	6 — 4	0	
Best Downs and Half-breds ..	5	4 to 5	8	
Do. Shorn		—	..	

	s	d	s	d
Best Long-wools.	5	0 to 5	4	
Do. Shorn		—	..	
Ewes & 2d quality	4	6 — 4	8	
Do. Shorn		—	..	
Lambs		—	..	
Calves	4	4 — 5	6	
Pigs	3	8 — 5	0	

Beasts, 4830; Sheep & Lambs, 21,050; Calves, 148; Pigs, 290.

THURSDAY, Jan. 12.

The supply of Beasts is about the same as on Thursday last. Trade is, however, not so brisk, and on the average prices are lower than on Monday. There are a few more Sheep; the demand is considerably smaller, and several remain unsold. Good Calves are in demand, but inferior kinds are unselling. From Germany and Holland there are 170 Beasts, 810 Sheep, and 152 Calves; from Norfolk and Suffolk, 300 Beasts; from the northern and midland counties, 200; and 120 Milch Cows from the home counties.

Best Scots, Herefords, &c. ..	4	8 to 5	0	
Best Short-horns	4	6 — 4	8	
2d quality Beasts	3	4 — 4	0	
Best Downs and Half-breds ..	5	4 — 5	6	
Do Shorn		—	..	

Best Long-wools .	4	10 to 5	0	
Do. Shorn		—	..	
Ewes & 2d quality	4	4 — 4	6	
Do. Shorn		—	..	
Lambs		—	..	
Calves	4	0 — 5	4	
Pigs	3	8 — 4	8	

Beasts, 1160; Sheep & Lambs, 5150; Calves, 183; Pigs, 120.

POTATOES.—SOUTHWARK, Monday, Jan. 9.

During the past week the arrivals coastwise have been light, and moderate by rail. The following are this day's quotations:—Yorkshire Regents, per ton, 90s. to 130s.; Lincolnshire do., 80s. to 110s.; Dunbar do., 100s. to 120s.; Perth, Forfar, and Fifeshire do, 70s. to 100s.; Kent and Essex do., 70s. to 100s.; Rocks and Reds, 65s. to 80s.; French Whites, 60s. to 80s.; Belgian do., 60s. to 70s.

BRITISH WOOLS.—LONDON, FRIDAY, Jan. 13.

South down Hoggets..	1	8 to	—	
Half-bred ditto..	1	8 —	—	
Down Ewes ..	1	6 —	—	
Kent Fleeces ..	1	6 — 1	6½	

Leicest. Wethers	1	5 to	—	
Ditto Hoggs ..	1	7 —	—	
Combing Skins	1	1 — 1	4	
Blanket ditto ..	0	6 —	10½	
Flannel Wool ..	1	2 — 1	7	

COAL MARKET.—JAN. 11.

Benton's West Hartley, 14s. 6d.; Bower's West Hartley, 15s.; Buddle's West Hartley, 15s.; Davison's West Hartley, 15s.; Lambert's West Hartley, 15s.; Tanfield Moor, 14s. 3d.; Tanfield Moor Butes, 14s. 3d.; Walker Primrose, 13s. 9d.; Wylam, 17s; Walls End Byron, 17s. 6d.; Walls End Gibson, 17s.; Walls End Gosforth, 17s. 3d.; Walls End Harton, 17s. 6d.; Walls End Braddyll's Hetton, 19s.; Walls End Elm Park, 15s. 6d.; Walls End Haswell, 19s. 9d.; Walls End Hetton, 19s. 9d.; Walls End Heugh Hall, 18s. 6d.; Walls End Kelloe, 18s. 9d.; Walls End South Hartlepool, 18s. 6d.; Walls End Thornley, 17s. 3d.; Walls End Thorpe, 19s.; Walls End Whitworth, 17s. 3d.;

16s.; Carway and Duffryn Malting, 22s. 6d.; Nixon's Duffryn, 22s. 6d.; Powell's Duffryn Steam, 22s. 6d.—37 ships at market.

HOPS.—BOROUGH MARKET, FRIDAY, Jan. 13.

Messrs. Pattenden & Smith report that a large quantity of fine Sussex have been sold this week at 80s. per cwt. and upwards. The market is very firm for all sorts.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Jan. 12.

Prime Meadow Hay	65s to 75s		Clover	90s to 100s	
Superior do. (old)	75	84	New Clover	—	—
Inferior do.	50	60	Second cut do.	75	85
New do.	—	—	Straw	25	30
Rowen	40	60		DAVIS & Co.	

WHITECHAPEL, THURSDAY, Jan. 12.

Fine old Hay	80s to 86s		Fine old Clover	98s to 105s	
Inferior do.	70	76	Inferior do	84	95
Prime New Hay	—	—	Fine New Clover	—	—
Inferior do.	—	—	Fine 2d cut	84	90
Straw	24	29	Inferior do.	60	72

MARK LANE.—MONDAY, Jan. 9.

There was a very small supply of Wheat from Essex and Kent to this morning's market, much of which was in better condition than last week, and therefore met a more free sale at the full prices of this day se'nnight. Foreign was inquired after, but being generally held above the views of buyers very little business resulted, and our quotations remain unaltered. Finest malting Barley brings last week's prices, secondary qualities and grinding are rather cheaper. The Oat trade is quiet and prices are unaltered. Flour is steady at late rates.

PER IMPERIAL QUARTER.		s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk	White	40—48	Red	40—45
— —	fine selected runs	ditto 46—48	Red	42—48
— —	Talavera	46—52		
— Norfolk		—	Red	—
— Foreign		38—56		
BARLEY, grind. & dist., 24s to 30s.	Chev.	38—44	Malting	34—40
— Foreign	grinding and distilling	23—33	Malting	35—41
OATS, Essex and Suffolk		19—24		
— Scotch and Lincolnshire	Potato	23—29	Feed	19—26
— Irish	Potato	24—28	Feed	19—24
— Foreign	Poland and Brew	23—26	Feed	17—24
RYE		35—38	Foreign	—
RYE-MEAL, foreign		—		
BEANS, Mazagan 30s to 40s	Tick	33—43	Harrow	33—43
— Pigeon 36s — 47s	Winds.	48—54	Longpod	—
— Foreign	Small	38—46	Egyptian	—
PEAS, white, Essex and Kent	Boilers	36—39	Suffolk	36—40
— Maple —s to —s	Grey	31—33	Foreign	30—37
MAIZE	White	—	Yellow	—
FLOUR, best marks delivered	per sack	37—43		
— 2d do.	ditto	27—37	Country	27—37
— Foreign	per barrel	18—27	Per sack	30—37

FRIDAY, Jan. 13.

On the 7th we had a sharp white frost with N.W. wind, but since the 9th the temperature has been higher, with E. and N.E. wind. In the Wheat trade little alteration has occurred during the last eight days. Old and dry samples of new command fully former prices, but the amount of business transacted has been limited; in Liverpool and Glasgow former prices were unobtainable, the amount of stocks yonder creating probably a desire on the part of some holders to realise, and a corresponding indisposition with consumers to purchase. Business in Spring Corn and Flour was also dull, and where any change in prices occurred it was in favour of buyers. From Southern Europe the arrivals off the coast are moderate this week, consisting of 8 cargoes of Wheat, 4 of Maize, 1 of Beans, 1 of Linseed, and 1 of Rapeseed. The sales are to a fair extent, including Berdiansk Wheat at 48s. 9d., Odessa Ghirka at 45s. 9d., nett, all per 492 lbs.; Ibrail Maize at 29s. to 30s. 4½d. per 480 lbs.; Ibrail Barley at 25s. per 400 lbs.; Calcutta Linseed at 47s. 9d. to 48s. per quarter, all c. f. and i. to a port in the United Kingdom; Taganrog Linseed at 47s. 9d. to 49s. per qr. delivered. The arrivals of Barley (English and foreign) are considerable, fair of English Wheat and foreign Oats, and small of foreign Wheat and English Oats. The little English Wheat offered for sale this morning was disposed of at fully Monday's prices; foreign met with scarcely any inquiry, and its value is nominally as last quoted. Barley is a slow sale at Monday's rates. Beans and Peas are unaltered in value. The Oat trade is quiet, and the few sales made were at about the prices lately current.

ARRIVALS FROM JAN. 9 TO JAN. 13.

	Wheat.	Barley.	Oats.	Flour.
English	3150 qrs.	9340 qrs.	1220 qrs.	1470 sks.
Irish	— ,,	— ,,	— ,,	— ,,
Foreign	2530 ,,	9140 ,,	19160 ,,	10 ,, — brls.

LIVERPOOL, Tuesday, Jan. 10.—At the corn market to-day there was a small business done in Wheat at 1d. per cental decline on the week. In Flour there was rather less doing. Indian Corn was offered at 3d. per qr. reduction. Oats were depressed and again the turn cheaper. Barley, Peas, and Beans were dull, and the latter 6d. per qr. lower. Oatmeal neglected.

FRIDAY, Jan. 13.—The grain market was dull and languid, and transactions quite of a retail character. Wheat 1d. decline. Egyptian Beans 34s. Indian Corn steady. Galatz, 32s. 6d. Other articles unaltered.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas
Dec. 3	44s 8d	36s 5d	21s 9d	30s 7d	41s 9d	39s 3d
— 10	43 11	35 10	21 5	32 10	41 1	39 1
— 17	43 8	35 1	21 9	30 0	41 0	38 9
— 24	43 6	34 9	21 1	28 10	39 11	37 6
— 31	44 2	34 8	21 5	35 1	39 7	37 8
Jan. 7	44 2	34 5	21 5	35 5	38 10	38 3
Agg. Aver.	44 0	35 2	21 6	32 2	40 4	38 5

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Dec. 3.	Dec. 10.	Dec. 17.	Dec. 24.	Dec. 31.	Jan. 7.
44s 8d						
44 2						
43 11						
43 8						
43 6						

THE WIDOW OF THE LATE PROFESSOR HENFREY, F.R.S., L.S., &c. of King's College, London, receives a small number of BOYS between the ages of 6 and 12, to EDUCATE with her own family. Terms, from 60 Guineas per Annum.—Turnham Green, W.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

WANTED, A PRACTICAL MAN, acquainted with the Culture of Stove and Greenhouse Plants, to attend to Visitors and Packing, and to assist in the Seed Trade, as may be required.—Apply to STEPHEN BROWN, Seed Establishment, Sudbury, Suffolk.

WANTED, a good practical WORKING GARDENER, to Manage Flower Garden, a Small Vinery, and Kitchen Garden, and accustomed to the Management of Cows. Must be a married man without incumbrance. The Wife to undertake a small Dairy and assist in the Laundry.—Apply any Tuesday or Friday between 10 and 1 o'clock to Mr. AMBLER, 1, Oakley Square, King's Road, Chelsea, S.W.

NURSERY FOREMAN.

WANTED, A PROPAGATOR, PLANT GROWER, AND FOREMAN of general trade experience, and well acquainted with the management of Roses, Indian Azaleas, Camellias, Stove and Greenhouse plants, as well as a general collection of Bedding and Herbaceous plants. Must be a good Salesman, and of good address, whose character will bear the strictest investigation.—Apply, with reference in own handwriting, stating age, experience, and wages expected, to WILLIAM BARNES, Camden Nursery, Camberwell, S.

WANTED, A MAN and his WIFE, without children; the Man as Gardener, and to attend to a couple of Cows; the Wife as General Servant, with a girl under her.—Apply, Post-paid, to the Rector of E. Horsley, Ripley, Surrey.

WANTED, in a Gentleman's family, a YOUNG WOMAN to undertake the Dairy and Baking, and to help in the Laundry.—Address R. J., Rice's Library, Mount Street, Grosvenor Square, London, W.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Single; understands his profession in all its branches. Good references.—TALBOT GOODWIN, Fruiterer, Camberwell, Surrey, S.

GARDENER (HEAD).—Age 35, single; thoroughly understands his profession. Good character.—G. H., Mr. James Cuthill, Denmark Hill, Camberwell, S.

GARDENER (HEAD).—Age 28, single, where two or more are employed; understands Forcing, Management of Ferns, Stove and Greenhouse Plants; a good Kitchen and Flower Gardener.—CHARLES TANNER, Esher, Surrey.

GARDENER (HEAD).—Age 29, married; thoroughly understands Growing Pines, Vines, Peaches, Melons, and Cucumbers, and Kitchen and Flower Gardens. Good references.—H. S., 11, Grove Street, Bath.

GARDENER (HEAD).—Age 31, single; thoroughly understands the management of Pines, Vines, and Peaches, the Forcing of Fruits, Flowers, Vegetables, &c.—B. C., Messrs. J. & C. Lee, Nurserymen, Hammersmith, W.

GARDENER (HEAD).—Age 32, single; has a thorough practical knowledge of his profession in its various branches. Can be highly recommended.—A. B., 13, Bridge Terrace, Harrow Road, Paddington, W.

GARDENER (HEAD.)—Single; has a thorough practical knowledge of his profession, including Early and Late Forcing. A good Kitchen and Flower Gardener. Can take the Management of Land if required. Good character from his late employer.—J. J., Post Office, Rochampton, Surrey.

GARDENER (HEAD).—Age 28, married; has had good experience in the cultivation of Stove and Greenhouse Plants, the management of Kitchen and Flower Gardens, and Forcing Pines, Vines, Melons and Cucumbers. Five years' character.—A. B., Mr. Cutbush, Nurseryman, Highgate, N.

GARDENER (HEAD).—Age 36, single; understands Early Forcing, Vines, Flower, Fruit, and Kitchen Gardens; also accustomed to Cows, Pigs, and Meadow Land, if required. No single-handed place accepted. Good character.—A. B., Post Office, Stoke Newington, London, N.

GARDENER (HEAD).—Age 29; of considerable experience, having lived in some of the very best establishments in this country; would be happy to engage with any nobleman or gentleman as above.—J. C., Colonel Baker's, Salisbury.

GARDENER (HEAD).—JESSOP BROTHERS, Seedsmen, the Aviaries, Cheltenham, desire to recommend a middle-aged, single Man, who understands Early and Late Forcing, to any lady or gentleman in want of a good Gardener.—Apply as above.

GARDENER (HEAD).—Age 40, married, no incumbrance; understands the Management of Pines, Vines, Cucumbers, Melons, and Stove and Greenhouse Plants, Flower and Kitchen Gardens. Fourteen years' good character.—A. B., Messrs. Barker & Son, Booksellers, Hammersmith, W.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 33, married; understands Pines, Vines, Peaches, Strawberries, Cucumbers, Melons, Stove and Greenhouse Plants, Flower and Kitchen Gardens. Has had four years' practice in the Orchard-house.—A. B., 10, Upper Carlisle Street, Maida Hill, London, W.

GARDENER (HEAD).—Age 31, married; has had several years' experience in Growing Orchidaceous, Stove, and Greenhouse Plants, Ferns, &c, both for exhibition and decoration, and 16 years' practice in the Flower, Fruit, and Kitchen Gardens. Three years' good character.—A. B., Post Office, Hersham, Surrey, S.

GARDENER (HEAD).—Age 38, married; offers his services to any nobleman or gentleman as a practical Gardener in the Cultivation of Pines, Vines, Peaches, Melons, and Cucumbers, with management of Kitchen and Flower Gardens. No objection to any part of England. Can be highly recommended from his present employer.—A. B., Post Office, Crouch End, Hornsey, Middlesex, N.

GARDENER (HEAD OR SINGLE-HANDED).—Age 28, married, no incumbrance; has a practical knowledge of his profession, including Forcing all kinds of Fruits and Vegetables, Kitchen and Flower Gardens; has been living Second under an experienced Gardener. Three years' good character.—W. J., Post Office, Barnet Common, Barnet, Herts, N.

GARDENER.—Age 35, single; understands Flower and Kitchen Gardens, Greenhouse and Vinery. Good reference.—J. B., Mr. Hutt's, Hadlow Castle, Kent.

GARDENER.—Age 25, single; where one or more are kept.—For particulars as to ability, &c., apply to Mr. WATSON, the Gardens, Ripley Castle, York.

GARDENER.—Age 32, married, without incumbrance; perfectly understands his profession in all its branches. Wife can manage a small Dairy or Poultry. Character will bear the strictest investigation.—A. B., 22, Albert Terrace, Knightsbridge, S.W.

GARDENER, OR GARDENER AND BAILIFF.—Married, with small family; thoroughly understands his profession in every department. Fourteen years' character; will bear the strictest investigation.—Apply to Mr. RIVERS, The Nursery, Sawbridgeworth, Herts.

GARDENER, OR GARDENER AND BAILIFF, OR GENERAL MANAGER over an Estate.—Age 30, married; has a thorough practical knowledge of Forcing all kinds of Fruits, Vegetables, Kitchen and Flower Gardens, the superior Cultivation of all kinds of Plants, including Orchids. Has been a successful exhibitor. Also the general routine of Farming, either Light or Heavy Soils, the Management of Woods and Plantations, &c. Is leaving in consequence of the break-up of the establishment. Character will bear the strictest investigation.—W. A. BYE, Hucclecote Gardens, near Gloucester.

NURSERY FOREMAN.—Has a general knowledge of the profession generally. Most satisfactory reference.—J. M., Nursery Lodge, Park Lane, Bath.

PROPAGATOR, OR PROPAGATOR AND FOREMAN of the Glass Department in a Nursery where the choice kinds of exotic plants are wanted in great quantities. A good Knifeman. First Class references as to character and ability.—T. G., Mrs. Cooke, 6, North Street, Grove Road, St. John's Wood, London, N.W.

TO NURSERYMEN.

FOREMAN, OR FOREMAN AND PROPAGATOR.—Thoroughly practical; has had 20 years' experience as above. A good Grafter of Roses, Rhododendrons, Azaleas, Camellias, Conifers, a good Grower of Stove and Greenhouse Plants, Ferns, Orchids, Ericas, Geraniums, &c. First-class reference as to character, &c.—C. M. N., *Gardeners' Chronicle* Office.

RESIDENT AGENT.—A Gentleman of good family, with a knowledge of conveyancing, is desirous of forming a re-engagement with any nobleman or gentleman requiring assistance in the care and management of his property. The advertiser is about to relinquish a similar appointment which he has held for the last five years. Ample references and testimonials will be given.—F. L., Mr. Coomes, Bookseller, 141, Regent Street, W.

RESIDENT LAND AGENT.—A Civil Engineer, aged 48, well connected, of liberal education, and active business habits, wishing to reside entirely in the country with his family, desires exclusive employment as Resident Agent of an Estate. In addition to his knowledge of Engineering and Building, he is practically acquainted with the best Agriculture and with Accounts, and morally interested in the advancement of a tenantry. Having a small income he would be content with moderate emolument. He can refer to eminent men in office, to country gentlemen, clergymen, solicitors, and bankers.—L. A., *Gardeners' Chronicle* Office, W.C.

LAND STEWARD OR BAILIFF.—Age 40, married, a native of Scotland; has had considerable experience in the Superintendence of Landed Property, Buying, Selling, and Management of Stock in general, Draining, Planting, and reclaiming of Land, &c. Testimonials of the highest character.—S. S., Wright's Buildings, Watford, Herts.

TO NOBLEMEN AND GENTLEMEN.

FARM STEWARD OR BAILIFF.—Middle-aged, married; has had considerable experience in the Management of various Soils, as well as the care and treatment of all kinds of Stock. The Wife would undertake the indoor Management of the Dairy if required. Unexceptionable references will be given as to character and ability.—A. B., Post Office, Saltwood, Hythe, Kent.

FARM BAILIFF (WORKING).—Age 28, married, no incumbrance; thoroughly understands the management of Stock, and Light and Heavy Soils. Good testimonials will be given.—A. H., W. T. Clark, News Agent and Stationer, Upper Sydenham, S.E.

BAILIFF.—Single; on light soil, to a nobleman or gentleman. Understands Buying, Selling, and Management of Stock, as well as the practical parts of Farming. Unexceptionable character.—A. B., Wootton Post Office, Bedford.

IMPROVER.—Young; has some knowledge of Gardening and wishes to gain more experience. He would be willing to serve for 2 years under a good Gardener in a nobleman or gentleman's Garden. Would be attentive to his duties and make himself generally useful. Can give satisfactory references as to character, &c.—G. G., Daws & Son, Booksellers, Gloucester.

IMPROVER.—Age 18; wishes to engage himself to a nobleman's or gentleman's Gardener, where he will have an opportunity of Improving himself. A small Premium if required.—A. B., Miss Wilkinson, South End Green, Hampstead, N.

CLERK, OR ASSISTANT TO A STEWARD.—Age 26; a good Accountant, and has considerable knowledge of Agriculture. Is willing to make himself useful on a Farm. Been to the R. A. College. Good references to present employer and others.—J. M., Whiteford, Callington, Cornwall.

CLERK AND ASSISTANT.—Middle-aged; having a knowledge of Botany. He is desirous of engaging himself to a Florist or Seedsman, to attend to the Shop, Books, and make himself generally useful.—M. B., 11, Air Street, Regent Street, W.

CLERK.—Young Man, active business habits; the son of a Nurseryman; knows Plants well, their prices, and the Seed trade.—P. O., A. Black, Esq., Bloomsbury Chambers, W.C.

TO THE NURSERY AND SEED TRADE.

SHOPMAN AND SALESMAN.—Of good address and thorough business habits; many years' experience in the general routine of the Nursery and Seed Trade in all its branches.—G. H., Post-Office, Notting Hill Gate, W.

TO NURSERYMEN AND SEEDSMEN.

SHOPMAN.—Young; 8 years' experience in first-first-class London and Provincial Houses, and thoroughly conversant with every branch of the business.—M. F., 5, Clare Street, Islington, Liverpool.

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(KNIGHT OF THE ORDER OF LEOPOLD OF BELGIUM)

LIGHT-BROWN COD LIVER OIL, administered with the greatest success in cases of CONSUMPTION, BRONCHITIS, ASTHMA, COUGHS, RHEUMATISM, GOUT, GENERAL DEBILITY, DISEASES OF THE SKIN, RICKETS, INFANTILE WASTING, AND ALL SCROFULOUS AFFECTIONS, is incomparably superior to every other kind. The recorded investigations of numberless eminent British and Foreign medical practitioners have placed beyond the reach of refutation the fact that no invalid can possibly realise the full beneficial effects of Cod Liver Oil, who does not take Dr. DE JONGH'S celebrated pure Light Brown Oil.

OPINION OF EDWIN LANKESTER, ESQ., M.D., F.R.S., *Late Lecturer on the Practice of Physic at St George's Medical School, Superintendent of the Food Collection at the South Kensington Museum, &c., &c.*

"I believe that the purity and genuineness of this Oil are secured in its preparation by the personal attention of so good a Chemist and intelligent a Physician as Dr. De Jongh, who has also written the best medical treatise on the Oil with which I am acquainted. Hence I should deem the Cod Liver Oil sold under his guarantee to be preferable to any other kind as regards genuineness and medicinal efficacy."

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ANSAR, HARFORD, & CO., 77, Strand, London, W.C.

The Gardeners' Chronicle Newspaper.

SATURDAY, JANUARY 21, 1860.

GEOLOGY.—KING'S COLLEGE, LONDON, W.C Professor TENNANT, F.G.S., will commence a COURSE OF LECTURES ON GEOLOGY, on FRIDAY morning, Jan. 27, at 2 o'clock. They will be continued on each succeeding WEDNESDAY and FRIDAY at the same hour. Fee, 2*l.* 12*s.* 6*d.*

R. W. JELF, D.D., Principal.

PROFESSOR OWEN, SUPERINTENDENT of the NATURAL HISTORY DEPARTMENTS, BRITISH MUSEUM, will commence a COURSE of TWELVE LECTURES on FOSSIL MAMMALIA, at the MUSEUM of PRACTICAL GEOLOGY, Jermyn Street, on FRIDAY, February 3, at 2 o'clock; to be continued each succeeding FRIDAY at the same hour. Tickets to be had at the Museum, Jermyn Street, S.W. Fee for the Course, 5*s.*

RODERICK I. MURCHISON, Director.

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The business of the Company embraces every description of risk connected with Life Assurance.

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Loans in connection with Life Assurance, on approved Security, in sums of not less than 500*l.*

BONUS OF 1861.—All Policies effected prior to the 1st July, 1861, on the Bonus Scale of Premium, will participate in the next Division of Profits.

ROBERT TUCKER, Secretary and Actuary.

News of the Week.

THE *Moniteur* of Sunday contained a most important letter addressed by the EMPEROR OF THE FRENCH to M. FOULD, the Minister of State, announcing that the time has come for applying themselves to the means of giving a greater development to national wealth, and extending foreign commerce by the exchange of products. His Majesty then communicates the bases of a programme of commercial reforms with the view of exempting from all duties primary articles indispensable for industry. These reforms include the suppression of the duties on wool and cotton, the progressive diminution of the duties on sugar and coffee, the improvement of the means of internal communication, the reduction of the canal dues, the grant of loans to agriculture and industry, the execution of considerable works of public utility, the suppression of the prohibitions of the tariff, and the negotiation of commercial treaties with foreign Powers. In carrying out this programme the EMPEROR announces that there still remains, of the war loan, the sum of a hundred and sixty millions of francs, nearly 6½ millions sterling, which he purposes, with the sanction of the Legislative Body, to apply in three yearly credits to the execution of great public works; while the sinking fund will compensate the Treasury for the loss which it will temporarily sustain by the reduction of duties. The EMPEROR concludes with the expression of his opinion that the present difficulties in foreign affairs will obtain a peaceful solution, and he therefore hopes that the Legislature will assist him in giving effect to these views, and thereby inaugurate with him a new era of peace, and insure its blessings to France.

This important document has been received with great satisfaction on both sides of the Channel. In this country it is regarded as the very best security which the EMPEROR could have given to Europe for the continuance of peace, and Lord COWLEY has already returned to Paris with the draft of a commercial treaty which will, it is hoped, place the relations of the two countries on a basis more durable than the good will of Governments. In France the proposition has also been received with general gratification, the only party which has openly expressed dissatisfaction being that of the Legitimists. In the large commercial towns and in the principal ports, such as Bordeaux, Havre, and Marseilles, deputations have been appointed to convey to the EMPEROR the gratitude felt by the merchants for the proposed reforms; while the manufacturing towns, which have hitherto been the strongholds of a monopoly which considered itself a match for any Government, have been propitiated by the announcement that HIS MAJESTY will take into consideration the claims of existing interests, and provide for them accordingly.

The official organ of the Papal Government published an article on Tuesday declaring to all Catholics interested in the preservation of the States of the Church, that the POPE, obeying the dictates of his conscience, has refused to accept the counsel given to him by the EMPEROR NAPOLEON in regard to the cession of the Romagna. The Abbé COMPIETA had previously been sent to Paris with a diplomatic note, which is said to have contained a formal and official protest against the recent pamphlet. It has been reported during the week that the POPE has also demanded the evacuation of Rome by the French troops, but there is reason for believing that the rumour is without foundation. The resignation of the Sardinian Ministry has been accepted by the KING, and Count CAVOUR has been charged with the formation of a new Cabinet. Count CAVOUR on Wednesday presented to HIS MAJESTY a list of the new Administration which is said to contain the well-known names of Signor FARINI, the Governor of Parma, Modena, and the Romagna; General FANTI, the Tuscan statesman; Count MAMIANI, the last constitutional Minister of the POPE; Signor CASSINI, the eminent jurist; Signor ELENA, the representative of Genoa; and Chevalier DESAMBROIS—all of whom are devoted to the cause of the national independence of Italy.

Accounts from Morocco inform us that the Spaniards have occupied the forts on the banks of the Tetuan river, and have made themselves masters of all the heights commanding the valley in which the city of Tetuan is situated. The Moors subsequently showed a disposition to attack them, but were thrown into disorder by the fire of the Spanish artillery. The invading army was only four miles distant from Tetuan on Tuesday last, and every preparation had then been made for advancing upon it.

Letters from Constantinople of the 12th inst. state that KUPRISLI PASHA was about to return to office, Sir HENRY BULWER having expressed to the SULTAN the displeasure of the English Government at his dismissal. M. THOUVENEL, the French Ambassador, had left for Paris to assume the office of Minister of Foreign Affairs, but before his departure he insisted upon receiving a more precise declaration concerning the Suez Canal.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor. On Thursday week the Earl and Countess of Clarendon and Ladies Constance and Alice Villiers, Lord and Lady Colville, Colonel the Hon. E. and Lady Louisa Douglas Pennant and Miss D. Pennant, and the Right Hon. E. and Mrs. Cardwell arrived on a visit. On Friday morning the Queen, with Princess Louisa and Prince Arthur, walked in the grounds of the castle. The Prince Consort and the Prince of Wales went out hunting, accompanied by Lord Colville and the Hon. Colonel Douglas Pennant. The Duchess of Kent visited her Majesty. On Saturday morning the Queen with Princess Louisa walked in the grounds of the castle. The Prince Consort, accompanied by the Prince of Wales and Lord Colville, went out shooting. The Prince and Princess de Joinville and Princess Françoise of Orleans visited her Majesty. The Earl and Countess of Clarendon and Ladies Constance and Alice Villiers, Lord and Lady Colville, Colonel the Hon. E. and Lady Louisa Douglas Pennant, Miss D. Pennant, and the Right Hon. E. and Mrs. Cardwell, left the castle. On Sunday morning the Queen and Prince Consort, the Duchess of Kent, the Prince of Wales, Prince Arthur, Princesses Alice, Helena, and Louisa, attended Divine service in the private chapel of the castle; the Rev. Dr. Philpott preached the sermon. On Monday morning the Queen, accompanied by Princess Alice, walked in the Home Park. The Prince Consort, with the Prince of Wales, went out shooting. In the afternoon the Queen and Prince Consort, accompanied by the Prince of Wales, visited the Windsor Royal Infirmary, and the model cottages erected by the Windsor Roya, Society for the improvement of the labourers' dwellings of which his Royal Highness is president. The Rev. Dr. Philpott left the castle for Cambridge. Viscount Sydney arrived on a visit. In the evening the Duchess of Kent joined her Majesty after dinner. On Tuesday morning the Queen and Prince Consort walked in the grounds of the castle. His Royal Highness afterwards rode out on horseback. The Prince of Wales went out hunting. The Duchess of Kent visited her Majesty. The Duke of Cambridge, the French Ambassador and Countess de Persigny, the Marquis of Exeter and Lady Mary Cecil, the Earl and Lady Constance Grosvenor, Lord and Lady John Russell, the Right Hon. Spencer and Mrs. Walpole, Major-General Sir Harry Jones, and Major-General Wylde arrived on a visit. On Wednesday morning the Queen, with the Princess Alice, walked in the grounds of the castle. The Prince Consort went out shooting, accompanied by the Prince of Wales, the Duke of Cambridge, the Marquis of Exeter, Earl Grosvenor, and Viscount Sydney. The Rt. Hon. Sir George Cornewall Lewis arrived on a visit. In the evening the fourth dramatic performance took place in St. George's Hall in the presence of the Queen and Royal family, the visitors at the castle, and a large party of invited guests. The plays performed were Mr. Tom Taylor's comedy of "The House and the Home," and Mr. B. Webster's farce entitled, "One Touch of Nature." On Thursday morning the Queen and Prince Consort, accompanied by the Prince of Wales and Princess Alice, walked in the Home Park. The Duke of Cambridge and the other visitors left the castle. In the afternoon the Queen held an investiture of the Order of the Bath. The Duchess of Kent visited her Majesty.

PRIVY COUNCIL.—Her Majesty will hold a Privy Council on Monday afternoon at Buckingham Palace.

THE PRINCE OF WALES returned to Oxford on Thursday from Windsor, to resume his studies. It is understood that his Royal Highness will pay a visit to the Bishop of Oxford to-day at Cuddesden Palace.

PRINCE ALFRED arrived at Naples on the 12th inst. in the Euryalus, after having visited the principal ports of Sicily, and stayed several days at Palermo. On the following day his Royal Highness paid a visit to the King and Queen, and attended the performance at San Carlo in the evening. The King had invited the Prince to take up his residence at the Royal Palace, and had given orders to the director at Pompeii to make researches in his presence, and offer for his acceptance any antiquities which might be discovered.

ORDER OF THE BATH.—On Thursday afternoon the Queen held an Investiture of the Order of the Bath, assisted by the Prince Consort as Grand Master of the Order. Colonel David Edward Wood, of the Royal Artillery, was first introduced and having received the honour of knighthood was invested with the insignia of a Knight Commander. The following officers were then introduced, and received from her Majesty the insignia of Companions of the order:—Colonel Raines, 95th Regiment; Colonel Parke, 72d Regiment; Colonel Longden, 10th Regiment; Colonel Liddell, 2d Bombay Europeans; Lieutenant-Colonel Orr, Madras Artillery; Lieutenant-Colonel Simpson, 34th Regiment; Lieut-Colonel Smith, 90th Regiment; Dr. Innes, Deputy Inspector-General of Hospitals; Dr. John Fraser, Deputy Inspector-General of Hospitals; Dr. Gordon, Surgeon 10th Regiment; Surgeon Jee, 78th Regiment; Colonel Lemon, Royal Marines; Lieut-Colonel Norman, 31st Bengal Native Infantry.

ORDER OF THE THISTLE.—The Order of the Thistle, vacant by the death of the Earl of Camperdown, has been conferred on the Earl of Fife.

THE CABINET.—A Cabinet Council was held yesterday afternoon at the official residence of the First Lord of the Treasury.

PARLIAMENTARY MOVEMENTS.—The Address in the House of Commons, in reply to her Majesty's Speech, will be moved by Mr. St. Aubyn, M.P. for West Cornwall, and seconded by Lord Henley, M.P. for Northampton. Mr. John George Blencowe was elected for Lewes on Monday, in the room of the late Right Hon. H. Fitzroy, without opposition. There is a vacancy at Scarborough caused by the accession of the Hon. W. H. F. Denison to the House of Peers. The following circular has been sent to the members of the House of Commons on the Ministerial side of the House:—

"Downing Street, Jan. 13, 1860.

"Sir,—The meeting of Parliament having been fixed for Tuesday, the 24th of this month, I have the honour to inform you that public business of great importance will be brought forward without delay when Parliament has met. I beg leave to express my earnest hope that it may be consistent with your convenience to attend at the House of Commons at the opening of the Session.—I have the honour to be, sir, your obedient and faithful servant, PALMERSTON."

THE ARMY.—The Colonelcy of the 66th Foot, vacant by the death of General Blunt, has been conferred on Major-General E. W. Bell.

VICTORIA CROSS.—The *Gazette* of last evening announces that the Queen has signified her intention to confer the Victoria Cross on the following officer and soldiers for acts of bravery performed by them in India:—Lieut A.S. Heathcote, 60th Rifles, Troop Sergeant-Major J. Champion, 8th Hussars, Colour-Sergeants G. Wriler and S. Garvin, Bugler W. Sutton, Privates J. Divane, J. Thompson, and S. Turner, 1st Battalion 60th Rifles, and Private J. Kirk, 10th Foot.

DIPLOMATIC APPOINTMENTS.—The Queen has appointed Edward St. John Neale, Esq., now Consul in

Bosnia, to be Secretary of Legation in China, and Mr. George Agar Ellis, first paid Attaché at Constantinople, to be first paid Attaché at Paris, in the room of Mr. Evan Montagu Baillie, appointed Secretary of Legation at Rio. The place of first paid Attaché at Constantinople will not be filled up.

CONVOCATION.—The Convocation of the prelates and clergy of the province of Canterbury will be prorogued from Wednesday next, the 25th inst., to Tuesday, the 14th of February.

THE VOLUNTEER UNIFORM.—In consequence of numerous applications having been made to the Secretary of State for War, on the subject of an authorized pattern uniform for Artillery and Rifle Volunteer Corps, a committee was appointed to select a set of patterns for the guidance of volunteers. They have now recommended a pattern suit to be adopted for colour and shape, the quality of the material being determined by the circumstances of each particular corps. The pattern suits are respectively faced with red and black and with green; but the committee do not recommend that these colours should be universally adopted for facings, many counties having colours of their own. The pattern suits recommended by the committee are deposited at the War Office, where they can be seen, and coloured drawings may be had upon application on and after the 24th inst. Although this dress is recommended by the committee to be generally adopted, it is not intended to be compulsory, the selection of the uniform being left to the members of each corps, subject to the approval of the Lord-Lieutenant of the county.

VOLUNTEER CORPS.—A Guards Corps is now in process of formation to be composed of gentlemen not less than 6 feet in height, which is above the average of other corps. At the preliminary meeting held on Monday in St. James's Hall, the Hon. T. C. Bruce in the chair, more than the number requisite for a first company was enrolled, and there is every prospect of a rapid increase of members. It was particularly mentioned during the meeting that while it is intended to render this corps in every sense of the word a "crack" one, it will be formed upon as inexpensive a basis as possible consistent with efficiency.—A general meeting of the members of the London Scottish was held on Wednesday, Lord Elcho in the chair. The corps now numbers about 400 members, who are about to be formed into six companies. About 60 members of Highland origin have formed themselves into a Highland company with the sanction of the executive committee, and have decided upon adopting the kilt as their rifle uniform. The donations and subscriptions towards the funds of the corps amount to between 1500*l.* and 2000*l.* The names of the officers who have been selected were announced by Lord Elcho as follows:—Captains: The Marquis of Abercorn, Mr. Septimus Carlisle, Mr. Conway, the Hon. Arthur Gordon, and Mr. George Mackenzie, the latter to serve in the Highland company. Lieutenants: Mr. Forrest, Mr. M'Kissock, Mr. Duke Hill, Mr. Scott, and Mr. Lumsden, of Pitcaple, late captain in the Aberdeenshire Militia. Ensigns: Mr. R. Fisher. Mr. C. Shepherd, Mr. Sutherland, of Croydon; Mr. Notman, and Mr. Belfrage. Of the company formed from members of the corps connected with the Oriental Bank, Mr. John Riach has been selected as Captain; Mr. J. S. Pender, late captain of the Perth Rifles, as Lieutenant; and Mr. John Macnab, as Ensign.—A numerously attended meeting was held at the Town Hall, Poplar, on Wednesday evening, Mr. R. Hanbury, M.P., in the chair, at which it was unanimously resolved to form a company for the Poplar district in connection with the Tower Hamlets Regiment.—A public meeting was held at Camden Town on Monday, at which it was resolved to form a company or companies, composed of the industrious and operative classes, to form part of the St. Pancras and North Middlesex Brigade, the payment of the annual subscription and expense of uniform to be made by weekly or monthly instalments.—At a general meeting of the King's College Corps, it has been decided after considerable discussion that the corps shall join the Westminster Brigade, bearing the name of the "King's College Company."—A general meeting of the members of the St. Paul, Covent Garden, and St. Mary-le-Strand division of the Westminster Brigade was held on Friday evening, when the chairman announced that the joint committee for the whole of the parishes of Westminster had effected an amalgamation between the St. George's (Belgravian) and the various Westminster companies, including the King's College corps, under the title of the Royal Westminster Rifle Volunteers, the whole under the command of Earl Grosvenor as lieut.-colonel.—On Saturday evening a public meeting was held in Guildford Street, Russell Square, at which it was resolved to organise a local committee for that district in connection with the St. Pancras Corps.—At a meeting of the acting committee of the Paddington Corps on Monday, it was announced that the total amount of subscriptions and donations is now upwards of 1100*l.*, and that a second company of effectives is already in course of completion.—A preliminary meeting, very numerously attended, was held on Monday in Gray's-inn-hall, at which it was resolved to form a corps of residents in the Inns of Court and Chancery and the adjacent districts, under the name of the Central London Corps.—The enrolled members of the Inns of Court Corps, who now number 600 rank and file, have elected Captain W. B. Brewster, late of the Rifle Brigade, son of the Right Hon. Abraham Brewster, of the Irish bar, to be Major-Commandant of their regiment, and Captain Wood, of the Indian army, and who has also seen service in the Crimea, to be their Adjutant, subject to the approval of the Lord-Lieutenant.—The Sun, Royal Exchange, Imperial, London, and Alliance Fire Offices have offered to pay the expenses of any of their clerks joining a volunteer corps.—The Woolwich Arsenal Artillery and Rifle Corps are making such rapid progress that the total force will shortly amount to at least 1500 officers and men, the majority being artillery companies.—A crowded and influential meeting of the inhabitants of Brompton was held a few days since at the National School, at which it was resolved to form a company for Brompton and neighbourhood, to be connected with the South Middlesex.—In the provinces, meetings in aid of the movement have been held during the week at Ashridge, Berkhampstead, Bromley, Barnard Castle, Brownkiln (Staffordshire), Chichester, Catterick, Dartford, Halstead, Hemel Hempstead, Harrington, Haldon (Devon), Hawkshead, Kingston, Kirkcaldy, Leyburn, Lenham, Linlithgow, Mitcheldean, Newbury, Needham Market, Ottery St. Mary, Presteign, Peterhead, and Tring.—Mr. Warde, of Yalding, Kent, having communicated with Viscount Sydney, the Lord-Lieutenant of the county, relative to the formation of a rifle corps to be composed of farm labourers, has received a reply stating that the Government do not approve of the formation of rifle corps of agricultural labourers, inasmuch as it would interfere with volunteering for the militia and recruiting for the line.—At a meeting at Edinburgh on Tuesday Lord Melville, General Commanding in North Britain, said that the volunteers were a loose and useless kind of force and never would be efficient. The Militia were not as efficient as they might be, but if placed on a proper footing they might be made efficient. As to the volunteer force it was perfectly useless, and no general officer would command it. Sir J. G. Baird said, he was glad to hear this statement from the Commander-in-Chief in Scotland, knowing the sentiments he entertained on the subject, but he begged to say that the volunteer movement had not arisen from any doubt of the efficiency of the army and Militia, nor from any motive of rivalry with them. He was happy to think that, as to the efficiency of the volunteer force, many officers of high rank held very different opinions from the noble lord.

Foreign.

FRANCE.—The *Moniteur* of Sunday published the following important letter addressed by the Emperor to the Minister of State:—

"Palace of the Tuileries, Jan. 5.

"Monsieur le Ministre.—Despite the uncertainty which still prevails on certain points of foreign policy, a pacific solution may confidently be looked forward to. The moment has therefore come to occupy ourselves with the means of giving a great impulse to the various branches of the national wealth. I address to you with that object the bases of a programme, some portions of which will have to receive the approval of the Chambers, and upon which you will concert with your colleagues so as to prepare the measures most suited to give a lively impulse to agriculture, to industry, and to commerce. For a long time this truth has been proclaimed, that the means of exchange must be multiplied to render commerce flourishing; that without competition industry remains stationary and maintains high prices, which are opposed to the progress of consumption; that without a prosperous industry, which developes capital, agriculture itself remains in infancy. Everything, therefore, is bound up in the successive development of the elements of public prosperity. But the essential question is to ascertain within what limits the State ought to favour these diverse interests, and what order of preference it ought to grant to each. Thus, before developing our foreign commerce by the exchange of produce, it is necessary to improve our agriculture, and to liberate our industry from all internal impediments which place it in conditions of inferiority. At the present day, not only are our great enterprises impeded by a host of restrictive regulations, but even the welfare of those who work is far from having attained the development which it has attained in a neighbouring country. There is, therefore, only a general system of good political economy which can, by creating a national wealth, spread comfort among the working classes. In that which relates to agriculture, you must make it share in the benefits of the institutions of credit, clear the forests situated in the plains, and replant the hills; devote annually a considerable sum to great works of drainage, irrigation, and clearage. These works, transforming the uncultivated districts into cultivated lands, will enrich the districts without impoverishing the State, which will cover its advance by the sale of a portion of those lands restored to agriculture. To encourage industrial production you must liberate from every tax all raw material indispensable to industry, and allow it, exceptionally and at a moderate rate, as has already been done for agriculture on drainage, the funds necessary to perfect its material. One of the great services to be rendered to the country is to facilitate the transport of articles of first necessity to agriculture and industry. With this object, the Minister of Public Works will cause to be executed as promptly as possible the means of communication, canals, roads, and railways, whose main object will be to convey coal and manure to the districts where the wants of production require them, and will endeavour to reduce the tariffs by establishing an equitable competition between the canals and railways. The encouragement to commerce by the multiplication of the means of exchange will then follow as a natural consequence of the preceding measures. The successive reduction of the duty on articles of great consumption will then be a necessity, as also the substitution of protecting duties for the prohibitive system which limits our commercial relations. By these measures agriculture will find a market for its produce; industry, set free from internal impediments, assisted by the Government, and stimulated by competition, will compete advantageously with foreign produce, and our commerce, instead of languishing, will receive a new impulse. Desiring, above all things, that order may be maintained in our finances, observe how, without disturbing the equilibrium, these ameliorations might be obtained:—The conclusion of the peace has allowed us not to exhaust the amount of the loan. There remains disposable a considerable sum, which, joined to other resources, amounts to about 160,000,000f. In asking from the Legislative Body permission to apply this sum to great public works, and by dividing it into three annuities, it would give about 50,000,000f. annually to add to the considerable sums already annually carried to the budget. This extraordinary resource will facilitate to us not only the prompt completion of the railways, canals, means of navigation, roads, and ports, but it will also allow us to restore in less time our cathedrals, our churches, and worthily to encourage science, letters, and the arts. To compensate for the loss which the Treasury will for the moment suffer by the reduction of duties on raw materials and on goods of great consumption, our budget offers the resource of the sinking fund, which it will suffice to suspend until the public revenue, increased by the augmentation of commerce, allows the sinking fund to be again brought into play. Thus, to resume:—Suppression of duty on wool and cotton; successive reduction on sugar and coffee; an energetic improvement in the means of communication; reduction of canal dues, consequently general reduction on the means of conveyance; loans to agriculture and industry; considerable works of public utility; suppression of prohibitions; treaties of commerce with the foreign Powers. Such are the general bases of the programme to which I beg of you to call the attention of your colleagues, who will have to prepare, without delay, the projects of law destined to realise them. It will obtain, I am fully convinced, the patriotic support of the Senate and of the Legislative Body, jealous of inaugurating with me a new era of peace and of assuring its benefits to France. Whereupon I pray God to have you in His holy keeping.

"NAPOLEON."

This important document is regarded in Paris as a conclusive proof of the Emperor's sincere desire to remain on good terms with England, and to draw closer the bonds that unite the two countries. It is said that it has been in serious contemplation for some time past, and that it has more than once been the subject of discussion in the Council of Ministers. The Emperor has laboured with much diligence to acquire all the necessary information, and has been seconded by M. Rouher, Minister of Commerce and Public Works, by M. Fould, Minister of State, and by Prince Napoleon, who has been the earnest advocate of these reforms, which he has carefully studied, having long been convinced of their importance to France. Mr. Cobden has also assisted the Emperor and the Ministers with his advice. There were only two of the Ministers who were directly opposed to them, M. Billault, Minister of the Interior, and M. Magne, Minister of Finance, the latter of whom continued to the last the champion of Protection. All the principal journals of France, with the exception of the organs of the Legitimist party and the Protectionists, have received the letter with warm approbation, and regard the proposed change as the first step to a complete system of free trade. Lord Cowley returned from London on Tuesday, and in the course of the day had a long interview with the Emperor, in which the new treaty of commerce between the two countries is said to have been discussed. The bases of the treaty are reported to be on the side of France, suppression of prohibitions, and diminution of the duties on coal and iron; and on the part of England, reduction of the duty on French wines, brandies, *articles de Paris*, and silks. The *Patrie* of Wednesday says that the prohibitions will not be abolished before July, 1861, when they will be replaced by protective duties of 30 or 25 per cent., which, with the advantages granted to French industry, will be quite sufficient to allow competition. Before however taking any definitive resolution, the Emperor has decided on hearing the opinion of the principal manufacturers. M. Thouvenel landed at Marseilles on Thursday, and left the same evening for Paris. The *Constitutionnel* contradicts the report that the French Government is about to proceed against the Society of St. Vincent de Paula, the most important Catholic charitable association in France, and that the Minister of the Interior has informed all public functionaries that they must choose between remaining members of that association and retaining their offices. It is reported that the Papal Nuncio delivered on Saturday to M. Baroche a note of the Papal Government, dated Jan. 7, containing a formal and official protest against the programme of the pamphlet, "Le Pape et le Congrès." Abbé Compieta, who was the bearer of this note, left Rome on the evening of the 7th inst., three days after the letter of the Emperor of the French had been received by his Holiness. The *Moniteur* of Thursday announces that M. Amedée Thierry has been nominated Senator, and M. de Lavenay Councillor of State.—Madame Lemoine's appeal to the Court of Cassation against the sentence to 20 years' hard labour, pronounced on her by the Court of Assizes of Tours for burning alive her daughter's illegitimate child, has been dismissed by the Court, on the ground that the reasons assigned were not sufficient to invalidate the condemnation. The Tribunal of Correctional Police of Paris on the 11th inst. gave judgment in the case of Vriès, the so-called "Black Doctor," accused of illegally practising as a medical man, and of swindling various persons by pretending that he had received supernatural revelations which enabled him to discover in the tropics an infallible antidote to cancer, asthma, dysentery, and other serious maladies. The Court found him guilty and condemned him to undergo 15 months' imprisonment, and to pay a fine of 500f. He has since appealed to the Imperial Court against the judgment.—The sale of Lord H. Seymour's wines commenced on Monday and excited extraordinary interest. The wines sold were all claret, and the prices realised were from 5 to 25 francs the bottle.

SPAIN AND MOROCCO.—A despatch from Madrid dated the 18th inst. states that the Division Ros had effected a landing on the banks of the river Tetuan without opposition. The forts did not reply to the fire of the Spanish squadron. Seven cannon and a large quantity of ammunition were found in the forts. On the 17th the Moors showed an intention of attacking

the Spanish positions, but a few cannon shots sufficed to disperse them. Every preparation had been made for passing the river and advancing on Tetuan, which was only four miles distant. On the 14th the Spaniards made themselves masters of all the positions of Cabo Negro, and after having obtained a complete victory they were commanding all the heights of the valley of Tetuan. It was expected that they would be before that place as soon as the artillery was able to pass. The *Madrid Gazette* of Saturday published the convention between Rome and Spain. Spain engages not to sell, exchange, or alienate the lands of the Church without the consent of the Pope, and recognises the entire and unlimited right of the Church to acquire, preserve, and hold its lands in usufruct.

PORTUGAL.—The Chamber of Deputies is composed of 103 Ministerial and 19 Opposition members. The Portuguese Government has declared its belief that all the ports of the Brazils are infected with yellow fever.

SWITZERLAND.—The National Council has taken into consideration the report of the Federal Council on the affair of the Valley of Dappe, and has voted the following resolution:—

"Considering the nature of the negotiations on the affair of the Valley of Dappe, and considering the actual state of political affairs, and being convinced that the Federal Council will know how to protect the dignity and the national interests of Switzerland, the Assembly leaves the direction of the affair to the Federal Council."

BELGIUM.—The Belgian *Moniteur* publishes a Royal decree, dated the 12th inst., authorising the issue of the loan of 45,000,000f. recently voted by the Legislature and settling the conditions of the public subscription to the same. Belgium intends to send an expeditionary force to China, to act in concert with the Anglo-French troops, with a view to establish a Belgian colony in China for commercial purposes.

PRUSSIA.—In the sitting of the First Chamber on the 16th the bill on matrimonial rights, as submitted last year, was brought in among other Government projects. In the Chamber of Deputies the bill on matrimonial rights to common property in Westphalia was discussed. The Minister of Finance communicated the budget for 1860, which, according to the proposals of the committee, contains the four land taxes of last year's budget, the only difference being that, instead of increasing the one land tax by 20 per cent., and lowering the other by 10 per cent., an uniform tax of 8 per cent. on the net proceeds is proposed for the whole kingdom. The project of law on bail, somewhat modified, was again introduced. The Minister of Commerce stated that he is about to propose the abolition of the laws against usury. This announcement caused a sensation among the deputies.

BAVARIA.—Accounts from Munich state that King Maximilian has relinquished his project of a journey to Spain.

RUSSIA.—The Duke of Montebello, the French Ambassador, has applied to the French Government for leave of absence, in order to accompany his wife, who is unable to habituate herself to the Russian climate. The Ambassador will leave St. Petersburg as soon as the weather permits. By a recent decision of the Czar the principal medical officers of the Russian navy are to be sent abroad for two years, during which they are to visit the most celebrated hospitals in Europe, and the principal ports of France, England, and Holland, in order to study the organisation of the European fleets as regards hygienic and medical arrangements, the food of the men in barracks and on board ships, the nature of their occupations, the organisation of the naval hospitals, and the quarantine establishments, &c. In consequence of the ravages caused by locusts in the southern parts of Russia last year, the authorities have charged commissions of landowners to devise measures for destroying the prodigious quantities of eggs which these insects deposit.

TURKEY.—Letters from Constantinople to the 12th inst. report that Kibrisli Pacha was about to return to office, Sir Henry Bulwer having expressed to the Sultan the displeasure of the English Government at his dismissal. M. de Thouvenel had, before leaving for Paris, insisted upon receiving a more precise declaration concerning the Suez Canal project.

IONIAN ISLANDS.—The following letter has been addressed by order of the Lord High Commissioner to his Excellency's Resident at Cephalonia, dated Dec. 16:—

"Sir,—The Legislative Assembly having annulled the elections of the four members for Cephalonia recently returned as representatives for that island, a new election will take place without delay. I am desired by the Lord High Commissioner to request that you will give positive instructions to the police, and all other parties coming specially under your influence and control, in no way to interfere in the elections in favour of or against any candidate. His Excellency is determined, as far as he is concerned, that no extraneous influence shall be brought to bear on the free choice of the people."

GREECE.—Letters from Athens state that the Governments of England, France, and Russia have again applied for the interest of the national loan provided by the guaranteeing Powers; and that a change of Ministry was shortly expected.

AUSTRIA.—The *Vienna Gazette* has published an Imperial decree, enacting that in judicial proceedings the testimony of Jews shall be regarded as of the same value as that of Christians.

ITALY.—The official *Giornale di Roma* declares to all Catholics interested in the preservation of the States of the Church that the Pope, obeying the dictates of his conscience, has replied negatively to the counsel of the Emperor Napoleon; and states the reasons of the Pope's refusal to cede the province of Romagna, which is now in insurrection. It appears that the note in the *Moniteur* of the 10th inst. produced a great sensation at the Roman Court, and that a meeting of Cardinals was held on the 14th at the Vatican, after which the Pope received Count Buol, the Austrian Ambassador, in a private audience. Since the publication of the Emperor's letter, great agitation has prevailed in Umbria and the Marches of Ancona, which are desirous of following the example of the Romagna. It is said that Bologna is to be fortified by the new Government; and that the Pope has come to the resolution to retire to Benevento if the French army should be ordered to evacuate Rome. The official *Piedmontese Gazette* announces that the King of Sardinia has accepted the resignation of the Ministry, and has charged Count Cavour with the formation of a new Cabinet. The following will probably be the list of the new Ministry:—Foreign Affairs, Count Cavour; War, General Fanti; Public Instruction, Signor Mamiani; Finance, Signor Gacini; Justice, Signor Cassini; Public Works, Signor Elena. For the Ministry of the Interior, Signor Desambrois, Signor Farini, and Signor Cassilla, are spoken of, but nothing has yet been decided. The Governor of Nice has prohibited the journal *L'Avenir* to discuss the annexation of Savoy to France, and to reproduce articles of foreign papers treating on the question. Letters from Florence state that, in consequence of a conspiracy in favour of the Grand Duke having been discovered, several arrests have taken place. — In spite of all vigilance, the Venetians have sent their mite to the Garibaldi subscription, and the commission intrusted with this subscription has published the address with which the subscribers in Venetia send their instalment of 20,000 lire, which together with 6000 sent before, makes the price of a thousand stand of arms.—The German journals announce that a company of English capitalists have made an application to the King of Naples for a concession for the extinction of Vesuvius. The principal seat of the fire of that volcano is situated several thousand feet below the level of the sea. By cutting a canal which would carry the water into the crater, the fire would be completely extinguished, and the operation, which would only cost 2,000,000f., would restore to cultivation land of 10 times that value.

CHINA.—The Chinese are reported to be making great efforts to be ready for warlike operations in the spring; they are strengthening the city of Pekin; and troops have been ordered up to Pekin from the Canton province. The details of the dreadful loss of the clipper ship Flora Temple, Captain Johnson, from Macao for Havannah, which was announced by the last mail, have come to hand, from which it appears that the whole of the Coolie labourers on board, numbering 850, perished.

JAPAN.—The Japanese Embassy was to leave for the United States on the 22d February. It was rumoured that the English Consul had ordered British citizens to go armed, in consequence of threatenings from the Japanese. Parties of the Americans from the frigate Powhattan had visited Jeddo.

UNITED STATES.—Affairs at Washington remained in *statu quo* on the 6th inst. In the House of Representatives the 24th ballot had been taken for Speaker without effecting a choice, Mr. Sherman, the Republican candidate, being still at the head of the list, but without a sufficient number of votes to secure his election. It was rumoured at Washington that a volunteer force was to be organised, to assist the Mexican Liberals. The Mexican treaty has been referred to the Committee of Foreign Affairs in the Senate. The impression is that it will be approved by a large majority, though it is doubtful whether Congress will vote the 4,000,000 dols. required to be paid. The *New York Times* says that "by her treaty with Honduras, Great Britain has abandoned her position assumed in her rejection of the Dallas-Clarendon treaty. The Bay Islands are unconditionally surrendered to Honduras, but the treaty remains to be ratified in London. No doubt exists now of the success of the Mosquito treaty. Great Britain will then have washed her hands of Central America. It is believed that measures are on foot to bring to speedy settlement the disputed title to San Juan Island. Both Governments are sanguine of an early and amicable settlement." Bishop Newman, of the Roman Catholic Church, fell dead in the street, in Philadelphia, from disease of the heart. Among the passengers by the present packet is Heenan, better known in the prize ring as the "Benicia Boy," who has come over for the purpose of fighting Tom Sayers, the champion of England.

BRITISH COLUMBIA.—Her Majesty's ship Plumper arrived at Esquimault on the 1st November from Nanaimo, having concluded her surveying operations on the northern part of the Strait of Georgia for the present season. During this cruise several new anchorages have been discovered and surveyed between Nanaimo and Cape Lazo (or Point Holmes, as it is sometimes called), a distance of about 50 miles. But the most important discovery is the existence of a considerable river in Vancouver's Island, navigable for boats or small stern-wheel steamers, on the banks of which are extensive tracts of excellent land, varying from 20 to 100 feet in elevation, and clothed with a rich luxuriant grass. This land is ready for the plough, is entirely clear of the pine tree, and studded here and there with a better kind of Oak than is usually found on the cleared lands of Vancouver's Island. This river, which has received the name of Courtenay, in honour of Admiral Courtenay, who formerly commanded her Majesty's ship Constance in these waters, empties itself into a good and spacious harbour, Port Augusta, which lies in about 49°36′ north latitude, and is scarcely 50 miles from Nanaimo. Major Downie was on his way down from the Upper Fraser River region by the Lillooet trail and Port Douglas. There were reports of his having made some valuable geographical discoveries on his journey from the coast to Port Alexander, including a chain of lakes extending along the route 150 miles, so that steamers drawing 12 inches of water can navigate a distance of 100 miles further than steamers drawing 4 feet, which latter run on Senas River, and a practicable portage of 40 miles will then reach Fort Alexander. These reports are looked upon at Victoria as important, as, if true, the upper mining districts will be much more accessible than heretofore, being brought almost within water communication of Victoria. Mrs. Cameron, wife of the Chief Justice of the colony and sister of Governor Douglas, died on the 26th November at Esquimalt. The following are extracts from a letter dated Vancouver, Nov. 27:—

"We are here in the first effervescence of an election. The registration has just begun. It is amusing to see how very ultra-English all the proceedings are. It seems a dogged fight between the English and Yankee element, none the less earnest for being thoroughly suppressed. We are terribly in want of English emigrants, and unless they come speedily we shall be overpowered by the Yankees.—The gold is really very abundant, and the extent of digging is much on the increase, especially about Fort Alexandria. In a late robbery case it came out in evidence that of a crew of 60 miners dirty and ragged beyond expression (no English tramp so ragged), upon a search being made for the stolen property, every man except the suspected thief turned out a large bag of gold—and this in spite of the exorbitant price of provisions and terrible difficulty of access to the gold country, which cannot be exaggerated. Capt. Pallisser is within a week's journey of this, and reports that a railway can be easily made right through. But what's the use of it if the Americans hold San Juan, the key to the country?"

BRAZILS.—The Brazilian Minister in this country has announced on authority that the belief of the Portuguese Government of yellow fever prevailing in all the ports of Brazil is contradicted by assurances which the Minister received from the Imperial Government by the last steamer, that the health of those ports was then good. The extreme improbability of an epidemic simultaneously appearing in all the ports of a coast more than 3000 miles in extent, in many of which the yellow fever has hitherto been unknown, need hardly be pointed out.

WEST INDIES.—The Atrato has arrived in 17½ days from St. Thomas's, though she has come home with only one engine, having disabled the other on her voyage out. There was no fever in any of the ships at St. Thomas's. A few deaths were reported on shore, including that of Mr. John Kains, Surveyor-General of the Post Offices in the West Indies. Mr. G. A. Edman, surgeon of the mail steamship Solent, had also died at Colon of yellow fever. Ten convicts who recently escaped from Cayenne in an open boat had arrived at Demerara. Among them was Carlo Rudio, who was engaged with Orsini in the attempt to murder the Emperor Napoleon in February last year, and was sentenced to imprisonment for life. The fugitives first reached Berbice, where Rudio left them, and the others then went on to Georgetown. A schooner of war sent in pursuit of them had not yet arrived. It is said, however, that the captain of the French war steamer Abeille had demanded their restoration, but that by the Extradition Treaty the Governor had no right to interfere.

Public Addresses.

THE EARL OF CLARENDON at a recent meeting at Watford made the following remarks on the progress and scope of the Volunteer Movement with reference to our international relations:—

"Free institutions were incompatible with the existence of large standing armies, and the people of England had determined by all constitutional means to find a subsitute for that force. If they were to have a large standing army there would always be a danger to freedom and liberty, and other Powers might be justified in asking if our intentions were pacific; but they could not ask what were the intentions of volunteer rifle corps, the formation of which was merely a defensive measure for the protection of our homes, not calculated to give umbrage in the slightest degree to foreign Powers. The movement, although as yet only in its infancy, had produced a very salutary effect throughout Europe. It was the most complete scheme that had been devised to secure peace, and place us beyond the recurrence of unmanly panics of which Englishmen should be ashamed. To see a danger, to be frightened, and yet to do nothing to avert it, was worthy only of a nation of old women; to see it and to shut their eyes to it was pusillanimous; but to look the danger steadily in the face was the part of freemen and patriots, and worthy of the people of England. The only Power from which danger could be expected was France, and he was the last man to say that the ruler of that nation meditated any course inimical to the interests of this country. On the contrary, he believed that the Emperor Napoleon considered a war with England as likely to be dangerous to himself, and productive of injurious effects on the progress of civilisation. The Emperor was a man of great sagacity, and possessed experience that had been dearly bought. What was the experience he derived from the Russian War? The lesson he learnt then (and he was betraying no confidence in saying it, as the opinions of the Emperor were well known) was, that they ought to be able at a given time and a given day to carry the precise amount of forces required to any given point, and he determined that in future France should not be without the means of transporting 50,000 men. He was quite right in determining that the armies of France should be placed in a state to uphold the position of the nation, and he had been enabled to send out 100,000 men in an extraordinary short space of time to commence a gigantic war. Now they could never look with indifference on the position of affairs on the other side of the Channel, which might now be said to be bridged over; and, without intending offence to any other nation, the people of England had determined that they would not be dependent on the good will or amicable intentions of any Government or combination of Governments whatever for the security of their shores. If the Emperor Napoleon had been killed in Italy (he was brave, and continually exposed himself), how did they

know that the next Government, possessing all their powerful resources, would continue to entertain the same friendly sentiments? There were certain friends of peace who said that all this preparation was totally uncalled for and unnecessary, as we should always have full notice of any meditated invasion, and should such an emergency arise England would rise as one man. Now, considering the complete condition of the French army and the resources of France, it would be utter imbecility on the part of that Government if they allowed 48 hours to elapse after a declaration of war without taking decisive steps, and he would ask them if those 48 hours would not be spent in confusion here. The rising of the people of England would be like the rising of a flock of sheep; without arms, without discipline, and totally unprepared, they would be but brave men rushing to certain destruction; but when they were properly organised and equipped an invasion would be impossible. No effort should be spared to attain this end. The Government gave them their cordial support; those who were too old to join should give their money; those who were effective should render themselves efficient; and no man could take part in the movement without feeling he was rendering a service to his country. When they were certain of repelling an invasion that invasion would not occur. Another feature in the movement was the bringing together in harmonious action those classes who usually did not amalgamate from the want of opportunity. The gradual but sure manner in which it had progressed was a proof of its sincerity, and a guarantee for its permanence. It ought not to be one of an ephemeral character, and the spirit of the nation, which was now thoroughly roused, would prevent it from relapsing."

THE EARL OF MALMESBURY at a meeting at Christchurch spoke as follows on the relative advantages of artillery and rifle corps:—

"It must not be supposed that we in this neighbourhood are neglectful of our duty in not having taken any part in the rifle movement which has made such advances elsewhere. The fact is this, that, having had the honour not long ago to be a member of her Majesty's Government, I know how anxious her Majesty's then Government were, and how anxious her Majesty's present Government are, that as much as possible, and especially on the coast of England, these volunteer forces should be formed of artillery; and I was desired by members of her Majesty's Government to exert myself to raise, if possible, and to encourage an artillery force in this district in preference to a corps of riflemen. I entirely agree with those men of military experience who have urged this upon me, and I believe that a force of volunteer artillery, provided we were defended by batteries erected by the Government, would be more peculiarly essential in the defence of this harbour, town, and roadstead than any body of volunteer infantry could be. Holding these opinions, I was assisted by several gentlemen of this neighbourhood in bringing out this project, and we met three or four times in committee, with the view of carrying it out manfully. I invited to Heron Court Sir John Burgoyne and his aide-de-camp, who surveyed Hengistbury Head and the coast to Highcliffe. They pointed out to me that these two points might be fortified with very great advantage to the security of the roadstead and harbour. I then proceeded to address myself to the War Department on the subject, and you may be aware that not long ago a Royal Commission was appointed by the Crown to make a report upon the fortifications necessary for the protection of the coast. I thought it wise until the report was issued to leave the question in abeyance, and not to raise a force of volunteer artillery in this district until we were certain that batteries would be erected for our defence, and this was my reason for so delaying the matter. You will see by the conditions under which volunteers are enrolled that they will be obliged to serve at the nearest batteries to the locality in which they are resident; and therefore if we had no batteries on these heads and near to this locality, the nearest batteries to Christchurch would be Hurst, Calshot, and perhaps Portsmouth. It would be altogether out of the range of possibility that gentlemen and persons employed as those whom I see before me could, under any circumstances, give up their time so as to leave the locality altogether and go to those distant fortifications, although they might spare a certain number of hours any day for drill at the batteries which were erected close to their own homes. I therefore proposed to the committee that no serious steps should be taken with the view of forming an artillery volunteer corps until I had ascertained whether the Government would erect batteries at a reasonable distance from this town. I have ascertained that—probably from a necessary economy—the Government has decided that no batteries will be erected in towns which are not either commercial or military towns, and that they could not consider Christchurch as coming under one of these categories. We should therefore, although permitted to have practising batteries—although the Government would send us down a couple of guns for the purpose of drill and instruction—still, practically speaking, we should be liable to be sent, when a serious occasion occurred, the whole way to Calshot Castle or to Portsmouth which is evidently out of the sphere of local volunteers. This being the case, I should recommend—and I expect that the inhabitants of Christchurch and the locality would probably prefer it—joining in the general movement of our fellow-countrymen in other parts of the kingdom, and forming a volunteer rifle corps instead of one of artillery. I very much regret that we are driven to this alternative, because, on the ground of utility, artillery is one of the best of all defences on the coast, and I am persuaded that if we had fortifications within our reach we should have been more useful as artillery than as riflemen. Still, there can be no doubt that volunteer corps of riflemen may be of service. It would be a slur upon us if Christchurch were behind the rest of Great Britain, and I trust that an effort will be made to raise a respectable corps of riflemen."

LORD PANMURE presided last week at a dinner given to Major Stewart, son of Sir William D. Stewart, of Grandtully, on his return from foreign service, and in the course of the evening referred as follows to the volunteer movement:—

"It is impossible to ask you to drink to the army without touching upon what is going on around us, and upon that display of martial spirit which is pervading the country at this moment. I am one of those, and I am not singular in my opinion, who think that this country does not, or ever did, stand a risk of being invaded by a foreign foe. I think that any one capable of conceiving so rash a project knows too well the stuff we are made of to attempt to set foot upon these our shores. But nevertheless it is not right that we should repose in false security, or that we should, by any remissness on our part, tempt a rash action on the part of others. Our shores are no longer what they used to be, for the invention of steam has almost bridged over the Channel; and therefore it becomes us when we see all Europe bristling as it were in arms—it becomes us to consider how we shall be best able to defend our hearths and altars in a case of necessity arising for it. Hence I rejoice to see the movement now taking place throughout the country to arm the population as volunteers for the defence of their own localities, and to teach every man the use of that weapon with which all ought to be familiar. You must all remember that in times gone by there was not a yeoman in England who was not encouraged to practise with the clothyard shaft, and not a man in Scotland who did not wait upon his chief in the Highlands, or rank himself under the banner of his baron if in the Lowlands; and every one knew how to use his weapon when called on to do so. Is there any reason why it should not be so now? Is there any reason why people may not be trusted with arms, as of old? There is none; and I rejoice in the movement which enrols in the ranks of volunteers men of all stations of society—where the peer and the peasant rub shoulders in regiments officered by men chosen by themselves."

MR. GEORGE CLIVE, M.P., Under-Secretary of State for the Home Department, at a meeting at Hereford on the 5th inst. spoke as follows on the state of Europe:—

"With respect to the actual cause of this armament so much has been said already that I do not think it necessary to do more than state emphatically my own entire concurrence in the sentiments put forth by the gentlemen who have preceded me. I hope—and at the risk of being considered over-credulous, I venture to say I believe—that the European Powers will show their rivalry more in arts and commerce than in the ancient struggles for increased power and dominion. It may be that Russia and other countries bordering upon what may be called the barbarous regions of the world will still seek by aggression to increase their already too large dominions; but I do not believe that in Europe the time will ever come again when nations will find it to their interest to cut each other's throats for the purpose of enlarging the territory over which their rulers may preside. We have seen that the conquests of the First Napoleon came to a very premature and unfortunate end for him. We have seen the result of the great lust of dominion which characterised the house of Austria; it is one large empire, which, so long as it was properly governed, proved its strength; but it is now doubting whether it can retain the allegiance of Hungary or not. We have seen the desperate and fruitless efforts she has made to crush Italian liberty and nationality; we have seen her expending much money and losing many valuable lives year after year in getting dominion over territory which has been wrested from her grasp with the greatest ease, and that not so much by the assistance of the French forces as by the spirit of independence the Italians displayed. The increased spirit of nationality displayed in all parts of the world will, in all probability, teach sovereigns, however despotic and military they may be, and however many legions they may command, that the time for territorial aggression has nearly passed away. I have that feeling very strongly at heart myself, though there are many people who believe that the world will go on in the same old way to the end, fighting as before. I believe that the spirit of intelligence, of Christianity, and, above all, of interest, will make that impossible. A great deal of this apprehension—I will not call it fear, because the English as a people are incapable of fear—but a great deal of this opinion that prevails about the aggressive designs of the Emperor of the French has arisen from the things which he may have said in former days, when it was his interest to say them, though he does not feel them at all now. In the words of the old Latin proverb, 'If you wish for peace prepare for war.' It all turns upon that aphorism, that while we are prepared for war we are determined to keep the peace, as well for ourselves as for all foreign nations. I believe the cause to be one in which the most peaceable man may fairly draw a sword or shoulder a rifle. It is only the feeling of security—I will not say protection—which makes home and all else valuable, which makes property itself more secure, and promotes the cause of commerce, intelligence, and education all over the world."

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England on Thursday raised their rate of discount from 2½ per cent., at which it was fixed on the 14th of July last, to 3 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 95⅛ for Money, and 95⅛ to ¼ for the 8th Feb.; Bank Stock, 230 to 229; Three per Cents. Reduced, 95¼ to ½; New Three per Cents., 95½ to ¼; New Two and a Half per Cents., 78½; India Stock, 221½ to 223; New Indian Five per Cent. Loan, 104⅜ to ¼; Five per Cent. Enfaced Rupee Loan, 98¾ to 98⅞; Ditto Five and a Half per Cent., 104⅞ to ⅜; Four per Cent. Debentures of 1858, 98½ to ⅜; Ditto 1859, 98½ to ¼; Exchequer Bills, 22*s.* to 28*s.* prem.—FOREIGN: Brazilian Four and a Half per Cents., 1858, 94⅜ to 94; Buenos Ayres Six per Cents., for Acct., 85; Ditto Deferred, 22½; Belgian Four and a Half per Cents., 98½; Mexican Three per Cents., for Acct., 22⅛ to ¼; New Granada Deferred Bonds, 4⅞; Peruvian Four and a Half per Cents, for Acct., 95; Portuguese Three per Cents., 1853, for Acct., 44¼; Russian Five per Cents., 110¼; Ditto Three per Cents., 1859, 65¾ to 66; Sardinian Five per Cents., for Acct., 85⅜ to 85½; Spanish New Deferred Three per Cents., 33⅜; Ditto for Acct., 33⅝; Turkish Six per Cents., 1854, 78¾; Ditto for Acct., 78½; Ditto for 1858 for Acct., 66¼ to 66½; Ditto Guaranteed Four per Cents., 105 to 104½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,643,005	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,168,005
		Silver Bullion	—
	£29,643,005		£29,643,005

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,813,822
Rest	3,281,484	Other Securities	19,593,664
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	5,166,259	Notes	7,589,865
		Gold and Silver Coin ..	710,493
Other Deposits	14,850,754		
Seven day and other bills	812,439		
	£38,713,844		£38,713,844

19th day of Jan., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—P. ANDREW, Swansea, Brewer—G. CLARKE, Streatham Place, Brixton Hill, Carpenter—G., W., and J. DIXON, Ecclesfield, Yorkshire, Steel Rollers—W. R. GROVER, Hand Court, High Holborn, Licensed Victualler—C. PAVIN, Lime Street, Merchant—J. PECK, Birmingham, Brass Cock Founder—G. WHITE, Birmingham, Grocer.

SCOTCH SEQUESTRATIONS—T. AITKEN, Dundee, Currier—A. GIBB, Balass, by Cupar-Fife, Auctioneer—A. NIELSON, Bellshill, Lanarkshire, Grain Merchant—C. STEWART, Milnhaugh, near Perth, Manufacturer.

FRIDAY—BANKRUPTS—W. CHELLEW, Point Truro, Commission Agent—W. ELLIS and SON, Nottingham, Scale Board Manufacturers—F. GILES, Dudley Port, Staffordshire, Ironmaster—W. GRINDLEY, jun., Longnor Edge, Staffordshire, Cattle Salesman—E. HASKINS, Shortwood, Pucklechurch, Gloucestershire, Horse Dealer—T. L. INGRAM, Lupus Street, Pimlico, Merchant—J. KEVIS, Old Street, St. Luke's, Licensed Victualler—J. S MISKIN, Rochester, Butcher—W. SHRIMPTON, Compton and Bishopstoke, Dealer—J. VARLEY, King's Mill, near Huddersfield, Yarn Spinner—S. WARD, Croxhall, Derbyshire, Dealer in Osiers.

Metropolis and its Vicinity.

THE VAULTS OF THE CITY CHURCHES.—At the last meeting of the City Commissioners of Sewers, the following important report from Dr. Letheby was read and ordered to be printed, and a copy sent to every member of the corporation and the Metropolitan Board of Works:—

"Several years have elapsed since the practice of sepulture within the City was abolished, but as complaints have been made of bad smells in some of the churches it has been considered prudent to make inquiries into the sanitary condition of all the burial vaults and graveyards of the City parishes. The desire for this investigation was communicated to me by Mr. Grainger, the Government inspector, about 18 months ago, and from that time to the present we have been engaged at intervals on the matter, till the City churches, 71 in number, have been carefully examined, and wherever it has been practicable we have made a personal examination of the public vaults. The general results of our inquiries may be expressed in a few words—that every available space beneath the floorings of the churches has been used for ages as a depository of the dead; and it passes belief how large a quantity of putrifying matter has in this way been disposed of. Even now the vaults are in some cases gorged with corruption, and all along the aisles and porches of the sacred edifice are graves filled with human remains. In most instances the only partition between the living and the dead is a thin slab of stone and a few inches of earth. These offer but a very imperfect barrier to the escape of noxious effluvia; and, slowly, therefore, but incessantly, the gaseous products of decomposition are effused into the atmosphere of the church. But at the night services, or during the winter season, when the air is rarified by the warmth of the fires or burning gas, the rank vapours are drawn out in unenviable profusion. It is impossible to say what mischief has been done by this, and how many, while worshipping within the sanctuary, have breathed the atmosphere of corruption, and have sickened unto death. As far as the investigations have gone, we have found about 250 vaults in the City churches, half of which are public; and, although it is impossible to obtain accurate information of the number of coffins within them, there is reason for believing that the number is not far short of 11,000; besides which there are hundreds of bodies in the graves of the aisles and porches. In most cases the vaults are entered from the general area of the church—the openings being covered by wooden flaps or by stone flags. The coffins are generally of lead, with an outer covering of wood, and they are often piled up in tiers to the very crown of the vault. When the wood decays the weight of the upper mass crushes the lead and lets out a filthy liquid of a most disgusting odour. But besides this process of destruction the lead itself is attacked by the foul gases, is pierced with numerous holes as if it were worm-eaten. It then swells up into a spongy mass of porous carbonate, which offers but slight resistance to the passage of the putrid vapours, and thus, little by little, the animal part of the body escapes and finds its destination. It is a huge fallacy to suppose that a coffin of lead preserves a corpse indefinitely. The law of nature is that organic matter shall not be idle, it must ever circulate and be in motion. This no earthly power can stay. We may strive to keep the cherished dead by binding them in cerements, by closing them up in wood and stone and lead, and building them into vaults and pyramids; but all is fruitless, for 'dust unto dust' is the fiat, and the law is inflexible. How vain, therefore, and how mischievous is the effort to preserve the dead amongst the living. In most of the vaults we have visited the coffins have been in every stage of rottenness, and the atmosphere sickening in the extreme; so much so that on many occasions we have been obliged to discontinue our inspections for a time. The air, charged with these effluvia, must escape; and it either diffuses into the atmosphere of the church, or passes, by the ventilating openings, into the public way. The inspectors inform me that there are no less than 120 of these openings in the City, many of which are but a few feet from the windows of inhabited houses. It is hardly necessary to say that this condition of things requires a remedy; and although we have not had the opportunity of dealing with it as we wished, yet we have applied such measures as will, we hope, reduce the mischief to the smallest compass. In every case where it has been practicable the vaults have been opened for ventilation, and then fumigated with chlorine, after which the coffins have been arranged in decent order and covered with about 2 feet of dry earth, over which there has been placed a layer of vegetable charcoal to the depth of 2 or 3 inches; and as the efficacy of this is dependent on the free access of atmospheric air, ventilating pipes have been carried from the vaults to the tops of the churches. All other openings have then been permanently closed, so that the noxious gases, if any should escape, shall be diverted from the church and public way into the upper atmosphere. Where these arrangements have been adopted the sanitary condition of the vaults has been improved, and it is hoped that the congregations may now meet in the sacred edifices of the City without annoyance or danger from the sickening elements of decay. If however in course of time it is found necessary to apply a more effectual remedy, it must be done as now by the interference of Government; for of the many churches that have required improvement, 26 have received it by Order in Council. Alone I have no power to act in this matter; therefore I am bound to speak in terms of high commendation of the valuable services which have been rendered by Mr. Grainger. The grave-yards of the City have likewise received attention. There are 88 of them in all, belonging to the several parishes, and they cover a superficial area of about 47,572 square yards. In most cases the level of the soil is much above the surface of the neighbouring ground. The height varies from a few inches to many feet, and the average elevation is about 24 inches. This is due to the gradual accumulation of human remains: and some notion may be formed of the extent of it by considering that a surface of 47,572 square yards, with 18 inches of soil upon it, represents a mass of rather more than 856,000 cubic feet. All this is matter rank with the remnants of graves, and it contains nearly 36,000 tons of human remains. Years and years must go by before this can pass through its appointed changes, and be once more the constituents of the living body, or the harmless elements of a mineral compound. Till then it will be hazardous in the extreme to disturb the ground to any depth. I urge this upon your consideration because it has been proposed on more than one occasion to utilise the burial grounds of the City, and to make them the subjects of building speculations. In point of fact, the same influences which have operated in bringing the graveyards of this metropolis into their present condition, and in using the sanctuary for a charnel house, may again act without concern for the living or respect for the dead, in turning to a profitable account the unused burial places of the City. But it is my duty to warn you that this cannot be done with impunity. Public safety requires that the soil of these places shall remain untouched for some time to come. It is indeed no light matter to expose so rank a mass of festering rottenness to the action of the air. The time was when such a thing has caused a pestilence, and who would rashly risk it now? That which gives importance to the subject at the present time is a proposition seriously entertained by the clergy to amalgamate the City benefices. If this is done there is every prospect of the destruction of many of the City churches, and then the ground on which they stand, as well as that

of the adjoining graveyards, will soon be used for building sites. It is no part of my business to discuss this matter further than it relates to the public health; but in that respect I am bound to tell you that the proposition is fraught with the greatest danger, for if it should lead to the occupation of the ground as I have said, it would not only be dangerous to the community to lay bare the putrid remains of the dead, but it would be more dangerous to those who might dwell in the houses built upon soil charged with so much corruption. But besides this, the graveyards are nearly the only open places in the city, and, bad as they are in one respect, they are as good in another. They let in the light and air to purify the stagnant atmosphere of the streets; and we cannot afford to lose them as the great aids to ventilation. Already they have begun to look cheerful with the care which has been bestowed upon them, and if this is encouraged, and the growth of vegetation promoted, they may yet be the green spots and the pleasant places in this great wilderness of industry. Thus, and thus only, shall we fulfil the sanitary requirements of the case and secure respect for the dead."

THE GREAT EASTERN.—At the adjourned meeting of the Great Ship Company the resolution for a committee of investigation moved at the last meeting as an amendment to the reception of the report of the Directors was negatived by a majority of 4919 votes to 3871. The report was then adopted, and a fresh motion for a committee agreed to after considerable discussion. The gentlemen appointed as members of this committee were Mr. H. T. Hope and Mr. Baker, Directors of the old company, Rev. Mr. Nicholson, Mr. Croskey, Mr. Taylor, Mr. Goetz, and Alderman Hodgson, and the meeting was adjourned to the 7th Feb. for the consideration of their report. The present Directors having resigned, hold office only *ad interim*, and a new Board will be appointed when the committee shall have made their report.

ROYAL INSTITUTE OF ARCHITECTS.—On Monday evening a very numerous meeting of the Institute was held to elect a president in the place of the late Earl de Grey—Mr. George Godwin, vice-president, in the chair. Mr. Tite, M.P., moved that, on the present occasion, the president should be elected from among the fellows of the Institute. Professor Donaldson moved as an amendment that the council should invite some distinguished nobleman to accept the office. Mr. Scott, A.R.A., Mr. Smirke, R.A., Mr. Pennethorne, Mr. Barry, Mr. Wyatt, and others spoke on the subject, and ultimately the motion and amendment were withdrawn, and Mr. Cockerell, R.A., was elected president.

THE WRECK OF THE BLERVIE CASTLE IN THE CHANNEL.—There is no longer any doubt that this ill-fated ship was lost on the Ridge Sand, as the wreck has been discovered near it by some Dover fishermen. It is believed that a large portion of the cargo still remains in the wreck; and the under-writers at Lloyd's are about to despatch some Whitstable divers to the spot, with a view of recovering the property. No bodies have been cast ashore, either on the French or English coast.

REMOVAL OF THE HYDE PARK INDICATOR.—At the last monthly meeting of the vestry of St. George's, Hanover Square, an application was made by M. Guerrin, the proprietor, for permission to take down the indicator from Hyde Park Corner, and make good the roadway at his own expense. The vestry unanimously acceded to the request.

ST. GEORGE'S-IN-THE-EAST.—The disturbances in the parish church and the unpopularity of the clergy and choristers who conduct the High Church and choral services, have become more formidable than ever, and are no longer confined to Sunday. There have been scenes inside and outside the church every evening for the last 10 days. There are services nightly at 8 o'clock, after the plan adopted at the church of St. Matthias, Stoke Newington, and other places. There was a fearful disturbance inside and outside the church on Sunday evening. The tumult was very great, and 3000 persons were assembled, who were with great difficulty dispersed by a large body of police, who behaved with great moderation. On Monday night, after the service conducted by the Rev. Bryan King, the Rev. Mr. Dove, and choristers, there was another riot, in which Mr. Daniel Stocker, aged 50, oil and colourman, of Ratcliff Highway, was apprehended by the police for urging a mob of boys to hoot the rector, and for further insulting him in the public streets by calling him a Puseyite, whereby a breach of the peace might have been occasioned. On Tuesday Mr. Stocker was brought before Mr. Yardley to answer this charge, when the evidence clearly proved that he was drunk and that he called the clergymen Puseyites in the presence of an excited mob who were quite prepared for violence and disorder. Mr. Yardley said, the state of things in St. George's had existed so long that it was necessary to put down offences of this description by passing sentences which would produce an effect. The more respectable and influential the prisoner was the more necessary it was to punish him with severity. He had asked if this was an insulated case, and the answer was that such cases were of frequent occurrence. It was, therefore, necessary to put the law in force with considerable severity. No one had a right to persecute another for his religious opinions in this country. It was a cowardly and tyrannical proceeding to hoot men and make them uncomfortable while going through the streets. If an illiterate boy had done this he should have discharged him as a simpleton, but when a man with some education joined a disorderly mob it was high time to punish him. If there had been any spark of manly feeling about the defendant he would have told the mob to disperse. At first it was his intention to have sent the defendant to prison for a long period by way of example, but as he had no wish to ruin his prospects as a tradesman he should not on this occasion resort to extreme measures. He wished it however to be understood that in future whether the person charged is respectable or not respectable, he will not have the opportunity of paying a fine, but will be sentenced to imprisonment absolutely. He then fined the defendant in the sum of 40*s*. The penalty was instantly paid. The election of an evening lecturer in the room of the Rev. Hugh Allen, which was to have taken place on Thursday, has been deferred for a month, in consequence of differences in the vestry as to the mode of taking the votes. There are 12 candidates for the office.

WRECK OF THE FLYING FOAM.—A despatch has been received at the Board of Trade from the Consul at Madeira announcing the total wreck at the north-western end of that island of the British ship Flying Foam, with the loss of the commander, Captain William Liddle, and the whole of the crew except six. The ship belonged to Messrs. Corbo & Potten, of London, and sailed on the 2d ult. from Cardiff with a cargo of coals for Shanghai. She struck on a sunken rock about 200 yards from the coast of Porto di Moniz, and speedily went to pieces.

EXPLOSION OF A FIREWORK MANUFACTORY.—On Monday evening as the son of Mr. Darby, the firework manufacturer in Regent Street, Lambeth, was engaged with two other young men in the preparation of coloured fires for the theatres, the composition suddenly exploded, setting the premises on fire, and so seriously injuring the three workmen that they were removed to the hospital in a state of great suffering, and two of them have since died. The workshop in which the explosion took place was totally destroyed.

CHURCH RATES AT GREENWICH.—At a vestry meeting of this parish held on Friday evening, the Vicar in the chair, a church-rate of 1*d*. in the 1*l*. was carried by a show of hands. A poll was demanded, but ultimately withdrawn.

MR. RAREY AMONG THE CAB-DRIVERS.—On Friday evening Mr. Rarey gave a gratuitous exhibition of his powers in subduing vicious horses, at Allen's Riding School, in Seymour Place, Bryanston Square, to which the cab and omnibus-drivers of the metropolis were specially invited by public advertisement. About 2500 members of the fraternity assembled, and after some delay in obtaining order, owing to the densely crowded state of the building, Mr. Rarey entered the ring, leading by a straw the celebrated horse Cruiser, which for so long a period baffled all attempts to subdue his temper. This animal excited great interest, and now appeared as docile as a lamb, following his teacher from one end of the school to the other. The next subject was a fine chesnut charger, the property of Mr. Allen, which had not before been practised upon. Mr. Rarey had rather more trouble with this subject than he appeared to expect, but in 10 minutes the animal was prostrate on the ground, amid the cheers of the professional audience. The last and most striking exhibition was a black cart horse, famous for its kicking and biting propensities, both of which were to all appearance completely subdued before the animal had been under Mr. Rarey's tuition more than a quarter of an hour. During the evening Mr. Rarey took frequent opportunities of impressing upon his hearers the cruelty and uselessness of excessive flogging under any circumstances of obstinacy on the part of the horse, and of instilling the great advantage of kindness in dealing with him. At the close of the lecture, Mr. Rarey was greeted with several rounds of deafening cheers, and his audience separated, evidently greatly interested and delighted with the instruction he had imparted to them. Mr. Rarey mentioned during the evening that he had recently given a gratuitous lecture to the same class of hearers in Glasgow, at which 5000 persons were present.

FALL OF THE NEW RAINBOW TAVERN.—On Thursday afternoon considerable excitement prevailed in Johnson's Buildings, Inner Temple Lane, in consequence of the fall of the interior of the new building of the Rainbow Tavern. It appeared that a wall had been built on an arch which was not sufficiently strong, when the whole gave way, burying six or seven of the bricklayers in the ruins. The men were speedily extricated, and conveyed to King's College Hospital, where they remain in a dangerous state.

THE PUBLIC HEALTH.—The Registrar-General's weekly return states that the deaths registered in London in the week that ended on Saturday, Jan. 14, were 1344. In the corresponding weeks of the 10 years 1850-59, the average number was 1213, which, if raised in proportion to the increase of population, will become 1334. The present return is therefore only 10 above the average. During the week the births of 985 boys and 953 girls, in all 1938 children, were registered in London. In the 10 corresponding weeks of the years 1850-9 the average number was 1645.

Provincial.

BLACKBURN.—The cotton mill of Mr. Henry Ward, in Swallow Street, containing 26,000 spindles, was totally destroyed by fire on the 12th inst. The damage done amounts to 15,000*l*., and is only partially covered by insurance.

LEEDS.—On Saturday last, at the Town-hall, the Rev. Harry Lloyd Bickerstaffe, a clergyman of the Church of England, was arraigned before the borough magistrates on a charge of bigamy. The prisoner, who is 34 years of age, is a man of gentlemanly appearance, but his dress was so unlike that usually worn by the clergy of the established church that he would not generally have been taken for a clergyman. The charge against him was that he had married at West Linton, Cambridgeshire, Miss Anna Maria Campbell, of Baker Street, London, his wife, Mona Brougham Bickerstaffe, being still alive. The solicitor for the prosecution, after stating the charge against the prisoner and detailing some of the chief circumstances in the case, applied for a remand, to afford time to have the necessary witnesses in attendance. The prisoner, in reply to the magistrates, said that he had no reason to offer why he should not be remanded, and he was accordingly remanded for a week. The prisoner formerly resided at Headingly, a village near Leeds, from which he absconded about a year ago. Just before Christmas last a warrant was placed in the hands of Mr. English, the chief constable of Leeds, for his apprehension. Mr. English succeeded in tracing him to London, and thence to his father's, and afterwards to Conway. There he lost all trace of him for a time, but on Thursday week he received information that he was at Abergele, near Rhyl, a small watering-place in Denbighshire. He had gone there, it appears, and put up at the Bee Hotel, but being without funds the landlord suspected that he was an impostor, and gave information to the police. The superintendent called upon him, when Mr. Bickerstaffe announced who he was, and stated that he was "wanted" at Leeds for bigamy. The superintendent communicated with Mr. English, who immediately proceeded to Abergele, and returned to Leeds with the prisoner on Friday. It appears that he has been curate of the following places:—Thornes, near Wakefield; St. Andrew's, Ancoats, Manchester; Chorlton-cum-Hardy, Manchester; Chapel-le-Dale, near Ingleton, Yorkshire; Port-Glasgow, Scotland; and Godalming, Surrey, at the last of which he became acquainted with Miss Campbell, representing himself as a single man.

LIVERPOOL.—The Earl of Derby and Lord Stanley were entertained at dinner on Thursday evening by the Mayor of Liverpool in the Town-hall. In the course of the evening Lord Derby, in a lengthy address, alluded to the state of the political world, and expressed a hope that the ensuing session would witness the adoption of a Reform Bill. It was desirable, he said, that the vexed question should be set at rest, and he believed the Conservative party would offer no factious opposition to the present Ministry in bringing forward a substantial measure of Reform. Lord Stanley also spoke at some length and expressed his sympathy for progress and toleration.

LYDNEY.—A tragic event, which ended in one murder and the serious injury of several persons under circumstances of almost unparalleled brutality occurred on the 4th inst. at St. Briavel's, in the Forest of Dean. Mr. William Kear, a farmer, residing at the Cherry Orchard, had in his service a young man named Joseph Webb, a strong muscular fellow, a pugilist, and the terror of the district. On the afternoon in question he had been drinking, but was not so intoxicated as to be unable to work. While digging in the garden, a son of Mr. Kear, 12 years old, in some way offended him, when he threatened to strike him with his spade. Some persons working near remonstrated on his threats and language to the child, when Webb flew into the most violent rage, and threatened to kill them all. He made a savage attack upon those around him, who fled in fear, but not before great and fatal injury had been done. A man named Hughes received such severe wounds on the head that he died the same night. Jane Howells was cut with a spade on the forehead, so that the flesh fell over her eyes. Mrs. Kear received a severe wound on the head, and her daughter had her shoulder dislocated, and received other injuries of a serious nature. The child who provoked the attack received some injury, and Mr. Kear, the father, narrowly escaped a blow from a large stone which the desperado aimed at his head. The savageness of the attack is proved by the fact that the spade with which it was made was broken, and the iron bent in several places. Webb fought and resisted furiously when the police went to apprehend him, and was not captured until they had stunned him with their staves. The Jury at the inquest returned an unanimous verdict of Wilful Murder against the prisoner, and the Coroner issued his warrant for his committal for trial at the ensuing assizes at Gloucester. The affair has caused great excitement in the locality.

MANCHESTER.—The Chamber of Commerce of this city has followed the example of that of Marseilles and of the merchants of Bremen and Hamburgh, by presenting a memorial to the Government demanding that commercial interests shall be exempted from the penalties of maritime war.

NEWCASTLE-ON-TYNE.—A very influential meeting was held on the 11th inst. in the new Town-hall, to adopt measures for the relief of the spiritual destitution in the mining and manufacturing districts of Durham and Northumberland. Earl Grey occupied the chair, and among those present were the Bishop of Durham, Lord Ravensworth, Earl Vane, Lord Tankerville, Lord Adolphus Vane Tempest, the Right Hon. T. E. Headlam, M.P.; Right Hon. J. R. Mowbray, M.P.; the Hon. H. G. Liddell, M.P.; Mr. Ridley, M.P.; Mr. Ingham, M.P.; Mr. Ferrer, M.P.; Sir Walter Trevelyan, Mr. Burden, chairman of the Durham Quarter Sessions; Mr. Orde, chairman of the Northum-

berland Quarter Sessions; a very large number of gentlemen connected with the mining and manufacturing districts of the two counties, and at least 200 clergymen. After considerable discussion it was resolved that Earl Grey and the Bishop of Durham be requested to draw up an address to be presented to the Government, calling attention to the spiritual destitution in the diocese, and to the injustice inflicted upon it by the Ecclesiastical Commissioners, in abstracting from the property of the Church within the diocese, revenues, of which a large portion ought to be applied to the relief of that destitution. It was also resolved to establish a society, to be entitled the Durham Diocesan Society, for the employment of additional clergy among the pitmen, miners, and iron-workers in the outlying districts.

NEWPORT (ISLE OF WIGHT).—On Saturday afternoon Edmund Lane and Gordon Hires, the first and second mates of the American barque Anna, now lying at Cowes, were brought before a full bench of county magistrates for the Isle of Wight, charged by the superintendent of the Hants constabulary with the wilful murder of six coloured seamen of that vessel, John Turtle, William Pomery, a man known as Frank, William Johnson, David Pagins, and James Armstrong. The proceedings were taken consequent upon an information by John Thomas and Abraham Rock, two coloured seamen on board the Anna, who stated that the unfortunate men had met with their deaths in consequence of the most atrocious cruelties inflicted on them by the prisoners. The evidence of Thomas referred to the deaths of four of the men, and that of Rock, and Rosewell, the steward, proved the death of the two others. The first part of the statement made by Thomas related to the murder of James Armstrong. The prisoner Lane, the chief mate, had given an order to this man, but he did not attend to it as quickly as the mate wished, when the latter, taking up a mallet, struck him with it over the eye. The man jumped up, fell on the main deck with his head forward, and then leaned over the chain. The witness went to his assistance, put his hand on his head, and pulled it back, and then saw that his left eye was "running out." Armstrong was then sent half insensible down on the martingale under the bowsprit to clean the earring. He was washed off the martingale and towed along in the water by the earring, which his arm was coiled round. Rock, one of the other witnesses, was about to haul him in, when the chief mate said, "Don't haul that nigger in; cut the earring, and let him go!" About two minutes after the unfortunate man let go his hold, and was lost. One of the other men, John Turtle, was dragged down by Hires, the second mate, who stamped on his head with his sea boots. Turtle died, and the witness swore that he found the bone of the forehead broken in the centre. Johnson and Frank also died after being half strangled and ill treated in the most frightful manner by the prisoners. As the offences were committed on board an American vessel and on the high seas, the American Minister in this country sent a protest against the jurisdiction of the Court, and nothing remained for the magistrates but to dismiss the charge. This protest was accompanied with a request that the magistrates would detain the defendants until the matter could be inquired into by the American Consul, so that they might be remitted to their own country for trial under the Extradition Treaty. The magistrates, however, considered that they could not hold them in custody until the formal requisition had been made, and so they were discharged, and conveyed to their ship under the protection of the police, the people outside the Court as well as those in the Guildhall having shown, by their hisses and groans, that they were prepared to give them a rough reception. At the same time the magistrates intimated to the witnesses that they would be protected while the ship remained in British waters, so that if they had any complaint it must be made to the police at Cowes. The superintendent of police had in his possession the mallet and belaying-pin, and also a steel instrument called a "knuckle-duster," alleged to have been used in torturing the coloured seamen. The captain, who was not implicated by the evidence, stated that the mates, as well as the crew, had had the yellow fever on the voyage, and that it was to death by that disease that the mates attributed the disappearance of the "darkies," as he called them.

NUNEATON.—All the denominations of Dissenters in this town were engaged last week in special united religious services "in connection with the concert for prayer throughout the world for the outpouring of the Spirit." Special services were also held in the parish church. A movement of this kind has likewise been commenced in Worcester, where united prayer meetings for Christians of all denominations have been held morning and evening, the former at the Natural History Rooms, and the latter, for greater convenience, at the Music Hall. All the meetings have been numerously attended.

OXFORD.—The Prince of Wales has consented to become a patron of the Royal Oxfordshire Horticultural Society, and has offered a donation of 5*l.* to the Cottagers' Fund, which the committee have appropriated for baskets of vegetables, to be competed for at the Commemoration Show.

PLYMOUTH.—Dillon, the Marine who was condemned to death by Court-martial last week for striking his lieutenant, has had the sentence commuted to transportation for life.

SHREWSBURY.—The statue of the great Lord Clive, by Baron Marochetti, which was recently removed from the Duke of Buccleugh's gardens in Whitehall, was inaugurated on Wednesday in the Market Square of this town. The ceremony commenced with a grand procession to the foot of the statue, in which a great many of the aristocracy of the district took part. Earl Stanhope, on behalf of the subscribers, then presented the statue to the Mayor and Corporation of Shrewsbury, and dwelt at some length upon the character of Lord Clive, whose faults, he said, were overpowered by his virtues, and whose prowess firmly established our Indian empire. The Mayor having responded, the Town-Clerk read an address expressing the acknowledgments of the corporation. The company then adjourned to the Lion Hotel, where they were entertained at a magnificent banquet by the Mayor. Lord Hatherton, Earl Stanhope, Earl Powis, Viscount Hill, Sir Charles Wood, M.P., Mr. Slaney, M.P., and Mr. Botfield, M.P., were among the company.

SOUTHWELL.—During the last two or three weeks the sporting gentlemen of this neighbourhood have been busily engaged in the old English sport of falconry. The neighbouring preserves of Norwood Park, Thurgarton Priory, Fiskerton Grange, Haskerton Hills, Oxton Forest, and other parks and preserves have been selected for the purpose. The hawks have not always succeeded in striking and securing their prey, but, upon the whole, a fair quantity of game has been bagged. The revival of this old sport of our forefathers has caused much excitement in the neighbourhood.

Ireland.

THE VICEREGAL COURT.—The Lord Lieutenant has returned to Dublin. On Thursday his Excellency held his first levee for the season, which was well and fashionably attended.

THE MAGISTRACY.—The Lord Chancellor has appointed Sir John Bradstreet, Bart. (President of the Society of St. Vincent de Paul), to be a magistrate for the County of Dublin.

THE EMPEROR AND THE POPE.—The following letter from Dr. Dixon, the Roman Catholic Primate of Ireland, was published in the *Freeman* of Monday, headed, "Letter from the Primate of all Ireland to the Catholics of Drogheda:"—

"Drogheda, 14th Jan., 1860.

"Dearly Beloved Friends,—On the late occasion of our meeting to express sympathy with the Holy Father I considered it my duty to make such observations on the conduct pursued by the French Emperor since the commencement of the war in Italy as were not calculated, I freely admit, to create an impression favourable to his Imperial Majesty, and that those observations were not disagreeable to you may be learned from the remarkable fact—peculiar, I should suppose, to our meeting in Drogheda, among all the meetings lately held in Ireland—that the only name received with hisses at that meeting was the name of Napoleon III. I avail myself now of the public press to call your attention to the full confirmation which the events of the last few days have given to the justice of the sentiments which then found favour with you. Some even among our Catholic brethren in this country were disposed to censure us as exceeding in severity towards his Majesty on the occasion to which I refer. All such persons are now, I should hope, undeceived. The Emperor has thrown off the mask. By means of the letter which he addressed to Rome on Dec. 31st and which he has published in the *Moniteur*, he stands revealed to the world as the imitator of his uncle in the treatment of the Holy See. The wretched plausibilities with which that letter is interspersed can impose on none. To find a parallel for the infamous address which he makes to the Holy Father, let us imagine a well armed captain of a gang of robbers, who, placing his hand on the throat of some unfortunate and defenceless traveller whom he has seized, says to him:—'You have, indeed, my dear friend, an incontestible right to your money; but consider this—I cannot permit any foreign or external aid to come to your defence; you may yourself, if you please, defend your purse; but I advise you not to mind doing so; the easiest solution of the difficulty in which you find yourself is, to give up your money quietly to me; and, in return for this amiable condescension on your part, I shall guarantee to you the secure possession of your clothes and your life. You may range with safety for many years through these mountain passes; and you will place me and the banditti who acknowledge my authority under a debt of gratitude which we shall ever cheerfully acknowledge.' It is such an address as this which the Eldest Son of the Church has made to the Father of the Faithful. Oh! how all good Catholics over the world must be horror-struck on reading that letter in the *Moniteur!* You will admit with me that the appropriate residence for its author would be the prison of Ham, rather than the Palace of the Tuileries. How I pity the chivalrous French nation lying prostrate under the feet of such a ruler! But let us hope that a voice will yet reach him, which, by the awe that it shall inspire, will have the effect of paralysing the hand stretched out against the Holy Father—I mean the voice of indignant Catholic Christendom, which, rising above the jubilation of the enemies of the Church over the world, will fall on his ear in some such words as these:—'Robber, take your hand from the throat of the Vicar of Christ.'—I am, dearly beloved friends, your ever faithful servant,

"† JOSEPH DIXON, Archbishop, Primate of all Ireland."

SYMPATHY WITH THE POPE.—A meeting has been held at Skibbereen to express sympathy with the Pope. The following are extracts from the speeches delivered on the occasion:—

DR. O'REA, the Roman Catholic bishop, who presided, said—"We here solemnly protest against the treatment the Holy Father has received at the hands of Napoleon III., of Victor Emmanuel—(groans)—and of those bloodthirsty emissaries that have been, at their instigation, and at the instigation of other parties, fomenting insurrection and anarchy in the Papal States. We here proclaim that, should the long threatening Congress of the leading Powers of Europe take place, any Plenipotentiary of our gracious Queen who shall vote for the alienation of those States does not represent our feelings. (Loud cheers.) We here proclaim that any member sent by us to Parliament who shall not raise his voice against such a spoliation does not represent our feelings. (Continued cheering.) He ceases to be our representative; he can no longer calculate on our support. (Hear, hear, and continued cheering.) Fellow Catholics, it is full time for us to take our stand—(great cheers)—to assume a bold and independent position. Continued cheering). Your political creed is now before you."—Father TROY spoke as follows of the King of Sardinia:—"This fellow—(laughter)—had a beautiful daughter, and what did he do? He says, 'I will marry you to one of the Bonapartes'—a fellow that had not a shilling to buy a bowl of pea soup for himself. (Great laughter). He was all hair and skin, like my neighbour's pig. (Continued laughter and cheers.) 'Oh,' says Victor Emmanuel, 'if I give my daughter in marriage to this Bonaparte, why, the Emperor will come and bring his battalions; he will give me the Pope's dominions, and I will settle them on my children and be the best man in the whole world.' But I tell Victor Emmanuel and Count Cavour that there are brave soldiers here in Ireland—(loud cheers)—and strong arms here in Ireland. (Continued cheers.) Why, I have in my two parishes about 1000 young men. (Vehement cheers.) What would they do? Why, they would pitchfork Mazzini, Gavazzi, and all the other conspirators in Rome into the Tiber, and then let them sink or swim. (Great cheering.) If the English Ministers and other spoliators could deprive the Pope of his dominions, what would you think if we brought the Pope over to Ireland?" (Loud cheers.) [A Voice: "With a *cead mille failthe.*" (Continued cheers.)] Father Troy: "I would send 1000*l.* and 1000 men for him. (Cheers.) Well, if the Pope was in Ireland it would be a great blessing. Shrovetide is coming on, and he would give us all dispensation. (Cheers.) There is one thing certain, fellow Catholics, we have enemies abroad and enemies at home, and every Catholic should be prepared to stand to his Church, to his God, and to his country. Strangers have got your lands and property, but they were not able to filch from you your pure religion—and we will stand or fall by that religion. I will not pray for the downfall of any kingdom, but I think that the day is not far distant when Ireland will be for the Irish and for nobody else. (Loud cheers.) We want no charities from England. We have strong arms and green fields. We want them to let us alone and to go away from us." (Hear, hear, and cheers.) [A Voice: "We will send them away." (Cheers.)] Father Troy: "Nabocklish. (Laughter.) My last prayer, if I were dying, would be Ireland for the Irish, and the Irish for Ireland." (Loud and continued cheers.)—Father BEAUSANG said: "It is quite clear that the strategy of England towards this country for the last three centuries has been the sword, penal legislation, and, though last not least, her present system of godless education. (Cheers.) Ah, my friends, the England of Mazzini and Garibaldi is the author of this oppression of the Pope. (Cheers.) Is this the England that cries for political freedom in Italy, and denounces the Holy Father as an oppressor? (Cheers.) Do you think that anything generous could emanate from such a nation to the Catholics whom she has so persecuted? Do you hesitate to believe that the England of that day is not the England of this? I call upon you, in the spirit of your Catholic ancestors—of 80,000 people banished from our shores—of a priesthood that never stained its name, who, in the gloomy night of persecution, rallied around God's holy altar, when only the flickering taper could reveal to the adoring gaze of the celebrant the unbloody victim of Calvary under the sacramental veil—(immense cheering)—to stand to your rights, and resist with stout and unflinching hearts the oppression that is sought to be forced upon you. (Great applause.) Against it I appeal to the glories of the women of Limerick, and invoke the name of Patrick."

MR. MASSEY O'GRADY.—The *Cork Examiner* of last week stated that a letter had been received in that city from a lady in the county of Limerick, the wife of a stipendiary magistrate, stating that the body of Mr. Massey O'Grady, whose mysterious disappearance has already been announced, had been found buried, and that no doubt existed of the unfortunate gentleman having been murdered. The letter added that four men had been apprehended on suspicion. The *Limerick Chronicle* states that there is no truth in this statement, and that it is firmly believed that Mr. O'Grady is still alive.

Law.

COURT OF EXCHEQUER.—*Beatson* v. *Skene—Charge of Libel.*—This was an action brought by General Beatson, who held the command of the Bashi-Bazouks in the early part of the Crimean war, against the defendant for libel, the libel being that Gen. Beatson had attempted to create a mutiny in a body of Turkish troops under his command in the Dardanelles, rather than give up the command to General Smith, under whose orders they were to be attached to the Turkish Contingent then under the command of General Vivian in the Crimea—an order to that effect having been sent to General Beatson by Lord Panmure, the then Secretary-at-War. The trial lasted two days, and ended on Saturday in a verdict for the defendant on the ground that the words were privileged. At the same time the jury wished to express their strong opinion upon the fact that when the defendant found how unfounded the charges were he had not retracted them. General Beatson has since announced his intention to apply for a new trial.

SURREY SESSIONS.—*The Builders' Strike.—Appeal.*—The appellants in this case were three bricklayers belonging to the builders' society for the protection of the men on the late strike and lock-out; and on the 9th of November last they were charged at the Lambeth police-court with using threats and intimidation to John Roy, a bricklayer and a non-society man, and the case being proved to the satisfaction of Mr. Elliott, the sitting magistrate, he sentenced Stanley and Jenkins to one month's imprisonment each, and Davis to 14 days. An appeal was then entered against that conviction, which came on for hearing on Monday morning, and lasted nearly all the day. The evidence proved that the complainant on the 2d November went to work at some new buildings erecting at Peckham, and that on the second day of his working there, after dinner, the defendants attempted to persuade him to join the strike for the assistance of the men on lock-out. He refused, and then they called him a "black," and would not work with him. The consequence was that he was compelled to quit his work. The Court unanimously confirmed the convictions, and expressed regret that a body of men should be so foolish as to combine for such a purpose. The defendants were then taken into custody and removed to gaol to undergo their sentence.

Obituary.

VISCOUNT ARBUTHNOTT died on the 10th inst. The deceased, John Arbuthnott, Viscount Arbuthnott and Baron Inverbervie in the peerage of Scotland, was born in 1778, and married in 1805 the eldest daughter of Mr. Walter Ogilvy, of Clova, who, but for the attainder, would have been the 8th Earl of Airlie, and whose son David was restored to the ancient honours of the family. Lord Arbuthnott had enjoyed the title nearly 60 years, having succeeded his father in February, 1800. For some years he was one of the representative peers of Scotland, and Lord Rector of the University and King's College, Aberdeen. He was also formerly Lord-Lieutenant of Kincardineshire, which he resigned in 1847. The titles and estates devolve on his eldest son, the Hon. James Arbuthnott, who was born in

806, and married in 1837 Lady Jean Graham Drummond Ogilvy, eldest daughter of the late and sister of the present Earl of Airlie.

THE DOWAGER LADY COWLEY died on Wednesday last while on a visit to the Marquis and Marchioness of Salisbury, at Hatfield House, Herts. Her Ladyship had been for some days ailing, but was considered much better on Tuesday. On the following morning she was seized by more alarming symptoms, and expired in a few hours, the relatives of her ladyship being quite unprepared for the occurrence. Lady Cowley was eldest daughter of the first Marquis of Salisbury by his marriage with the second daughter of the first Marquis of Downshire, and was born in 1786. Her ladyship married in 1816 Henry Lord Cowley, whose marriage with Lady Charlotte Cadogan had the same year been dissolved by Act of Parliament. By this marriage she had an only daughter, the Hon. Georgiana Charlotte Mary, married in 1848 to his Excellency Sir Henry L. Bulwer, now British Ambassador at Constantinople.

LORD LONDESBOROUGH died on Sunday afternoon at his residence in Carlton House Terrace. He had for some months been in declining health, and during the last 10 days all hopes of his recovery were given up by his medical attendants. His lordship was the second surviving son of the first Marquis Conyngham, by his marriage with the daughter of Mr. Joseph Denison, and was born in 1805. He was twice married, first, in 1833, to the fourth daughter of the late Lord Forester, who died in 1841; and secondly in 1847 to the eldest daughter of the Hon. Captain Charles Orlando Bridgeman, who survives her husband. His lordship leaves issue by both marriages. As Lord Albert Conyngham he served for a short period in the Horse Guards, and then adopted the diplomatic service. In 1824 he was appointed *attaché* at Berlin and in the following year removed to Vienna, where he remained until 1828, when he was made Secretary of Legation at Florence. In 1829 he proceeded to Berlin in the same capacity, and continued in that employment till 1831. He sat in the House of Commons for some years, having represented Canterbury from 1835 to 1841, and again from 1847 to the early part of 1850, when he was raised to the peerage by the title of Baron Londesborough. In 1849 he assumed the name of "Denison," in lieu of that of Conyngham, in accordance with the will of his maternal uncle, Mr. William Joseph Denison, who bequeathed to him the bulk of his immense wealth. In politics Lord Londesborough was a staunch supporter of the Whig party. He was created by George IV. in 1829 a Knight Commander of the Guelphic Order, was a Fellow of the Royal Society and several other learned institutions, President of the Numismatic Society, and a Deputy-Lieutenant of the West Riding. He is succeeded in his title and extensive landed property by his eldest son by his first marriage, the Hon. William Henry Forester Denison, born in 1834, and now M.P. for Scarborough.

THE HON. MONTGOMERY STEWART died on the 10th inst. at Castramont near Gatehouse, Scotland, in his 80th year. He was the fourth and last surviving son of the seventh Earl of Galloway, and uncle of the present peer. He was a magistrate and deputy lieutenant for the stewartry of Kircudbright and for Wigtonshire. He was born in 1780, and became a widower in 1833, having married, soon after he came of age, Catharine, daughter of the late Mr. Patrick Honeyman, by whom he had a large family, of whom six daughters and a son survive.

SIR HARRY MAINWARING, BART., died suddenly at Marbury on the 11th inst., in his 76th year. He retired to rest as usual at an early hour the night before, and next morning on one of his servants going to call him he found him out of bed on the floor quite dead. He was the eldest son of Thomas Wettenhall, Esq., who assumed the name of Mainwaring on succeeding to the estates of his half brother. He married in 1803 the youngest daughter of Sir Robert Salisbury Cotton, Bart., sister of the first Lord Combermere. Some years ago he was one of the leading sportsmen in Cheshire, and his mansion at Peover was the rendezvous of most of the sporting men of the north. He is succeeded in the title and estates by his son Harry, born in 1804, and married in 1832 to the eldest daughter of the late Thomas William Tatton, Esq., of Withenshaw Hall, Cheshire.

THE DOWAGER LADY SHAW died on the 11th inst. at her residence at 8, Kensington Gore. She was the only daughter of Benjamin Spencer, Esq., and married about the year 1834, as his second wife, the late Sir Robert Shaw, Bart., Colonel of the Dublin Militia, who represented New Ross in the Irish House of Commons, and subsequently sat for Dublin for upwards of 20 years in the Imperial Parliament. Her ladyship was stepmother of the present Sir Robert Shaw, Bart., of Bushy Park, county of Dublin, and of the Right Hon. Frederick Shaw, Recorder of that city and M.P. for the University of Dublin.

LIEUT.-GENERAL GRANT FALCONER, K.H., Colonel of the 73d Foot, died on the 10th inst. at his seat, Hazelbank, near Edinburgh. He had been upwards of 64 years in the army, having entered the service in 1795. He joined the 61st Regiment at the Cape early in 1801, accompanied that regiment to Egypt, and joined Sir David Baird's army at Cosseir, crossing the desert with the troops, and remaining with the army in Egypt until 1803. In 1804 and 1805 he served in the campaign in Italy under Sir James Craig. In 1806 he served with the 78th Highlanders during the campaign in Italy, under General Sir John Stuart; and was at the battle of Maida, where he had a horse shot under him when acting as aide-de-camp to General Acland; he was subsequently present at the siege of Scylla, the capture of Cotrone, &c. He again served in Egypt in 1807, and during that campaign was present at the attack on the fortified heights and forts of Alexandria, the first affair at Lake Elcho and Elhamet, the investment and siege of Rosetta, the actions at Rosetta and Elhamet of the 21st April. He next served in the campaigns of 1814 and 1815 in Holland and Flanders. He commanded the 78th Light Infantry at both actions at Merxem, in the attack of French at Brescat, and the bombardment of Antwerp. For some years he was the lieut.-colonel commanding the 22d Regiment, and was also inspecting field-officer of the recruiting staff. In 1837, shortly before the death of William IV., he was nominated a Knight of the Hanoverian Guelphic Order. On the death of General Macpherson, in 1857, he was appointed colonel of the 73d Foot. He attained the rank of major-general in 1851; and that of lieut.-general in 1858.

MR. WILLIAM VAVASOUR, of Hazlewood Castle, died on the 11th inst. in his 38th year. He was the next brother of Sir Edward Vavasour, Bart., and heir presumptive to that baronetcy. His father, the first baronet, who was raised to the title in 1828, was a younger son of the 16th Lord Stourton, and assumed the name of Vavasour on succeeding to the Hazlewood estates of his maternal cousin, Sir Thomas Vavasour, Bart., whose title became extinct at his decease in 1826. The Vavasours are an ancient Roman Catholic family, and have been seated in Yorkshire since the Saxon times. They derive their name from their office of valvasors under the king, an office little short of the baronial dignity. "There are," says Bracton, "for the civil government of mankind emperors, kings, and princes, magnates or valvasors, and knights." Mr Vavasour, had long suffered from a painful illness. He married in 1846 the Hon. Constantia Clifford, daughter of the late and sister of the present Lord Clifford, of Chudleigh, by whom he leaves issue two daughters and also three sons, who are in remainder to the Vavasour baronetcy and the estates of Hazlewood Castle.

WILLS.—The will of Mr. Thomas Bowater Vernon, of Hanbury Hall, Worcester, has been sworn under 20,000*l.*; Mr. Henry Meagoe, of Lower Brook Street, 100,000*l.*; Rev. Henry Scott Trimmer, 25,000*l.*

Miscellaneous.

THE LATE LORD MACAULAY.—Some mis-statements having been published respecting the continuation of Lord Macaulay's "History of England," it has been announced on authority, that some progress had been made by Lord Macaulay towards the completion of another volume, and that a portion of the MS. is fully prepared for publication. Circumstances, however, will probably delay for some time the appearance of any further portion of the History. The following is a copy of a well-known letter of Lord Brougham respecting the early studies of Lord Macaulay, which was first printed by Professor Selwyn:—

"TO ZACHARY MACAULAY, ESQ.—Newcastle, March 10, 1823.

"My Dear Friend,—My principal object in writing to you to-day is to offer you some suggestions, in consequence of some conversation I have just had with Lord Grey, who has spoken of your son (at Cambridge) in terms of the greatest praise. He takes his account from his son; but from all I know, and have learnt in other quarters, I doubt not that his judgment is well formed. Now you, of course, destine him for the bar, and, assuming that this, and the public objects incidental to it, are in his views, I would fain impress upon you (and, through you, upon him) a truth or two which experience has made me aware of, and which I would have given a great deal to have been acquainted with earlier in life from the experience of others. First, that the foundation of all excellence is to be laid in early application to general knowledge is clear; that he is already aware of; and equally so it is (of which he may not be so well aware) that professional eminence can only be attained by entering betimes into the lowest drudgery, the most repulsive labours of the profession; even a year in an attorney's office, as the law is now practised, I should not hold too severe a task, or too high a price to pay, for the benefit it must surely lead to; but at all events the life of a special pleader, I am quite convinced, is the thing before being called to the bar. A young man whose mind has once been well imbued with general learning, and has acquired classical propensities, will never sink into a mere drudge. He will always save himself harmless from the dull atmosphere he must live and work in, and the sooner he will emerge from it, and arrive at eminence. But what I wish to inculcate especially, with a view to the great talent for public speaking which your son happily possesses, is that he should cultivate that talent in the only way in which it can reach the height of the art, and I wish to turn his attention to two points. I speak on this subject with the authority both of experience and observation; I have made it very much my study in theory; have written a great deal upon it which may never see the light, and something which has been published; have meditated much and conversed much on it with famous men; have had some little practical experience in it, but have prepared for much more than I ever tried, by a variety of laborious methods, reading, writing, much translation, composing in foreign languages, &c., and I have lived in times when there were great orators among us; therefore I reckon my opinion worth listening to, and the rather, because I have the utmost confidence in it myself, and should have saved a world of trouble and much time had I started with a conviction of its truth. 1. The first point is this,—the beginning of the art is to acquire a habit of easy speaking; and, in whatever way this can be had (which individual inclination or accident will generally direct, and may safely be allowed to do so), it must be had. Now, I differ from all other doctors of rhetoric in this,—I say, let him first of all learn to speak easily and fluently, as well and as sensibly as he can no doubt, but at any rate let him learn to speak. This is to eloquence, or good public speaking, what the being able to talk in a child is to correct grammatical speech. It is the requisite foundation, and on it you must build. Moreover, it can only be acquired young, therefore let it by all means, and at any sacrifice, be gotten hold of forthwith. But in acquiring it every sort of slovenly error will also be acquired. It must be got by a habit of easy writing (which, as Wyndham said, proved hard reading); by a custom of talking much in company; by speaking in debating societies, with little attention to rule, and mere love of saying something at any rate, than of saying anything well. I can even suppose that more attention is paid to the matter in such discussions than in the manner of saying it; yet still to say it easily, *ad libitum*, to be able to say what you choose, and what you have to say—this is the first requisite, to acquire which everything else must for the present be sacrificed. 2. The next step is the grand one—to convert this style of easy speaking into chaste eloquence. And here there is but one rule. I do earnestly entreat your son to set daily and nightly before him the Greek models. First of all he may look to the best modern speeches (as he probably has already): Burke's best compositions, as the 'Thoughts on the Cause of the Present Discontents,' speech 'On the American Conciliation,' and 'On the Nabob of Arcot's Debt;' Fox's 'Speech on the Westminster Scrutiny' (the first part of which he should pore over till he has it by heart), 'On the Russian Armament,' and 'On the War,' 1803, with one or two of Wyndham's best, and very few, or rather none, of Sheridan's; but he must by no means stop here. If he would be a great orator he must go at once to the fountain head, and be familiar with every one of the great orations of Demosthenes. I take for granted that he knows those of Cicero by heart; they are very beautiful, but not very useful, except perhaps the 'Milo, pro Ligario,' and one or two more; but the Greek must positively be the model; and merely reading it, as boys do, to know the language, won't do at all; he must enter into the spirit of each speech, thoroughly know the positions of the parties, follow each turn of the argument, and make the absolutely perfect and most chaste and severe composition familiar to his mind. His taste will improve every time he reads and repeats to himself (for he should have the fine passages by heart), and he will learn how much may be done by a skilful use of a few words and a rigorous rejection of all superfluities. In this view I hold a familiar knowledge of Dante to be next to Demosthenes. It is in vain to say that imitations of these models won't do for our times. First, I do not counsel any imitation, but only an imbibing of the same spirit. Secondly, I know from experience that nothing is half so successful in these times (bad though they be) as what has been formed on the Greek models. I use a very poor instance in giving my own experience, but I do assure you that both in courts of law and Parliament, and even to mobs, I have never made so much play (to use a very modern phrase) as when I was almost translating from the Greek. I composed the peroration of my speech for the Queen, in the Lords, after reading and repeating Demosthenes for three or four weeks, and I composed it 20 times over at least, and it certainly succeeded in a very extraordinary degree, and far above any merits of its own. This leads me to remark, that though speaking, with writing beforehand, is very well until the habit of easy speech is acquired, yet after that he can never write too much; this is quite clear. It is laborious, no doubt, and it is more difficult beyond comparison than speaking off-hand; but it is necessary to perfect oratory, and at any rate it is necessary to acquire the habit of correct diction. But I go further, and say, even to the end of a man's life he must prepare word for word most of his finer passages. Now, would he be a great orator or no? In other words, would he have almost absolute power of doing good to mankind, in a free country, or no? So he wills this, he must follow these rules. Believe me truly yours, H. BROUGHAM."

BIRTHS.—On the 10th inst, at Wentworth Woodhouse, the Countess FITZWILLIAM, of a son—10th inst, at Wickwar Rectory, Gloucestershire, Lady GEORGINA M. L. OAKLEY, of a daughter—13th inst, at the Hotel du Louvre, Boulogne-sur-Mer, the Lady ISABELLA FREME, of a daughter—15th inst, at 8, Great Cumberland Street, the Hon. Mrs. FREDERICK CHICHESTER, of a daughter—13th inst, at Oxton, Notts, the wife of JOHN CHAWORTH MASTERS, Esq., of Annesley Park and Colwick Hall, of a son and heir.

MARRIAGES.—On the 12th inst, at the Subdeanery Church, Chichester, the Rev. GEORGE CASSON, M.A., Rector of Wold, Northamptonshire, to FRANCES HUTTON LONG GILBERT, third daughter of the Bishop of Chichester—11th inst, at St. Mark's, Hamilton Terrace, WILLIAM HENNIKER HEATON, Esq., R.N., son of the late John Heaton, Esq., and the Hon. Mrs. Heaton, of Plâs Heaton, in the county of Denbigh, to HENRIETTE MARY, daughter of T. P. ANDERSON, Esq., of 63, Hamilton Terrace—5th inst, at the old parish church, Brighton, the Rev. LEWIS M. HOGG, M.A., curate of Torwood, Torquay, to JULIANA ANNE HARRIETTE, eldest daughter of the late Colonel and the Hon. Mrs. SAUNDERSON, of Castle Saunderson, Cavan—17th inst, at Upton Church, Torquay, the Rev. ARTHUR HUGH NORTHCOTE, grandson of the late Sir Stafford Northcote, to LOUISA, only daughter of the late H. R. YORKE, Esq.—At Damascus, Dec. 5, NOEL TEMPLE MOORE, Esq., son of Niven Moore, Esq., her Majesty's Consul-General for Syria, to EMMA, daughter of Colonel CHURCHILL, of Howarra, Mount Lebanon—12th inst, at Christ Church, Highbury, THOMAS SIDNEY, Esq.

DEATHS.—On Wednesday, the 18th inst, in Portland Place, AMELIA CAROLINE, wife of Sir RICHARD PAUL JODRELL, Bart.—2d inst, at Malvern, Vice-Admiral GEORGE E. WATTS, C.B., aged 74—12th inst, suddenly at Brighton, SARAH LAVENDER, wife of JOHN BRADY, Esq., M.P., daughter and heiress of the late John Rayner, Esq., of Ely, aged 34—10th inst, at Miss Sellon's, The Priory, Bradford-on-Avon, HARRIETT, eldest daughter of the late Sir DAVID ERSKINE, Bart., of Cambs House, Fifeshire, and Pwllycrochon, Denbighshire, aged 33—Suddenly, COLTHURST BATEMAN, Esq., of Bertholly House, Monmouthshire, South Wales, and Weston Park, Bath, eldest son of the late Colthurst Bateman, Esq., of Bedford House, county Kerry, and brother-in-law to the Rear-Admiral John Maitland—11th inst, at St. James's Place, Pall Mall, the Rev. GEORGE CHARLES IRVING, M.A., Vicar of Goodhurst, Kent, and eldest son of the late Rev. M. Irving, D.D., Canon of Rochester, aged 36—14th inst, at his residence at Clapham Rise, the Rev. HENRY ROXBY ROXBY, LL.B., of Blackwood, East Riding, Yorkshire, Vicar of St. Olave's, Old Jewry, and Rector of St. Martin's Pomeroy, London, aged 60—10th inst, at his residence, Southernhay, Exeter, Dr. JOHN BLACKALL, M.D., for many years one of the most eminent physicians in that city, aged 88.

Markets.

COVENT GARDEN.—Jan. 21.

Pine Apples and Grapes maintain former prices; good Apples and Pears are scarce; Oranges plentiful and cheap. Good Cobs realise from 1s. to 1s. 6d. per pound. Chesnuts are plentiful. Asparagus, Seakale, Cabbages, Carrots, Parsnips, and Leeks are sufficient for the demand. Parsley, which has been very scarce and dear, is now somewhat cheaper. Cornish Broccoli begins to make its appearance by the crateful. Potatoes realise from 10s. to 13s. 6d. a sack. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Heaths, and Roses.

FRUIT.

Pine Apples, per lb., 5s to 7s	Pears, per doz., 4s to 6s
Grapes, per lb., 7s to 10s	Oranges, per 100, 6s to 10s
Melons, each, 2s. to 4s	Lemons, per 100, 5s to 8s
Pomegranates, each, 4d to 6d	Filberts, p. 100 lbs., 50s to 60s
Apples, per doz., 1s to 2s.	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 7s to 10s	Beet, per doz., 1s 6d to 2s
Seakale, per basket, 2s to 3s	Celery, per bundle, 1s 6d to 2s
F. Beans, per 100, 2s to 2s 6d	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen bunches, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., per score, 1s to 1s 6d
— per bus., 2s to 2s 9d	Endive, p. score, 1s to 2s
— per cwt., 4s to 6s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d
Cucumbers, each, 2s 6d to 4s	
Artichokes, per doz., 2s to 3s	

METROPOLITAN CATTLE MARKET.

MONDAY, Jan. 16.

The supply of Beasts is much smaller than on Monday last; trade is however by no means brisk, and it is with great difficulty that a small advance is realised in a few instances. The number of Sheep is about the same as last week, but the demand has decreased, consequently prices are lower. Good Calves are still in demand; other kinds meet with a heavy sale. Our foreign supply consists of 270 Beasts, 1200 Sheep, and 105 Calves.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 5	0	Best Long-wools.	5	0	to 5	2
Best Short-horns	4	6	— 4	8	Do. Shorn		—		..
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	4	— 4	6
Best Downs and Half-breds ..	5	4	to 5	6	Do. Shorn		—		..
Do. Shorn		—		..	Lambs		—		..
					Calves	4	0	— 5	4
					Pigs	3	8	— 4	8

Beasts, 3960; Sheep & Lambs, 21,160; Calves, 135; Pigs, 490.

THURSDAY, Jan. 19.

We have a small supply of Beasts, but quite equal to the demand. Monday's quotations are retained; it is however difficult to effect a clearance at those rates. The number of Sheep is small, yet they cannot all be sold. Good Calves are in demand. From Germany and Holland there are 150 Beasts, 720 Sheep, and 166 Calves; from Norfolk and Suffolk, 200 Beasts; from the northern and midland counties, 300; and 110 Milch Cows from the home counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 5	0	Best Long-wools .	4	10	to 5	0
Best Short-horns	4	6	— 4	8	Do. Shorn		—		..
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	4	— 4	6
Best Downs and Half-breds ..	5	0	— 5	4	Do. Shorn		—		..
Do. Shorn		—		..	Lambs		—		..
					Calves	4	0	— 5	4
					Pigs	3	8	— 4	8

Beasts, 950; Sheep & Lambs, 3090; Calves, 202; Pigs, 200.

BRITISH WOOLS.—LONDON, FRIDAY, Jan. 20.

The amount of business transacted has been to a fair extent on the whole and at full rates, consumers buying for immediate use rather than for speculative purposes.

POTATOES.—SOUTHWARK, Monday, Jan. 16.

During the past week the arrivals coastwise have been larger than the previous week, which caused a reaction in the trade,

and with the exception of best samples of Regents lower prices had to be submitted to. The following are the quotations: —Yorkshire Regents, per ton, 90s. to 130s.; Lincolnshire do., 80s. to 100s.; Dunbar do., 100s. to 120s.; Perth, Forfar, and Fifeshire do., 70s. to 100s.; do. Rocks, 70s. to 80s.; do. Reds, 65s. to 70s.; Kent and Essex Regents, 70s. to 100s.; French Whites, 60s. to 80s.; Belgian do., 60s. to 70s.

COAL MARKET.—JAN. 18.

Bell's Primrose, 14s.; Burnhope, 14s.; Howard's West Hartley, 14s. 9d.; Lambert's West Hartley, 14s. 9d.; South Peareth, 13s. 6d.; Walker Primrose, 14s.; West Wylam, 14s. 6d.; Walls End Belmont, 18s. 3d.; Walls End Haswell, 20s 6d.; Walls End South Hetton, 20s. 3d.; Walls End Hartlepool, 20s. 3d; Walls End Heugh Hall, 18s. 9d.; Walls End South Hartlepool, 19s. 3d.; Walls End Whitworth, 16s.; Carway and Duffryn Malting, 23s. 6d.; Gellia Cadoxton Steam, 23s. 6d.—48 ships at market.

HOPS—BOROUGH MARKET, FRIDAY, Jan. 20.

Messrs. Pattenden & Smith report a fair demand for Hops at fully late prices on speculation, home consumption, and for exportation.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Jan. 19.

Prime Meadow Hay	67s to 72s		Clover	90s to 100s	
Superior do. (old)	75	84	New Clover	—	—
Inferior do.	50	60	Second cut do.	60	84
New do.	—	—	Straw	23	30
Rowen	40	60			

DAVIS & Co.

WHITECHAPEL, THURSDAY, Jan. 19.

Fine old Hay	80s to 84s		Fine old Clover	98s to 102s	
Inferior do.	65	75	Inferior do	84	92
Prime New Hay	—	—	Fine New Clover	—	—
Inferior do.	—	—	Fine 2d cut	80	86
Straw	24	28	Inferior do.	60	72

MARK LANE.—MONDAY, Jan. 16.

The supply of Wheat from Essex and Kent to this morning's market was moderate, mostly in very damp condition; a few picked samples were taken at somewhat over the prices of this day se'nnight, but for the remainder no offers could be obtained, and it remained unsold at the close of the market. Business in foreign continues inanimate; but a few sales of Baltic were effected ex ship at rather under the prices lately obtained. Fine malting Barley brings last week's rates; other descriptions are 1s. per qr. cheaper. Beans and Peas are a slow sale. The Oat trade is firm, and there is a fair demand at late rates. Flour remains unaltered in value.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	40—48	Red	40—45
— — fine selected runs..ditto	46—48	Red	42—48
— — Talavera	46—52		
— Norfolk	—	Red	—
— Foreign	38—56		
BARLEY, grind. & dist., 24s to 30s..Chev.	38—44	Malting.	34—40
— Foreign..grinding and distilling	23—31	Malting.	35—41
OATS, Essex and Suffolk	19—24		
— Scotch and Lincolnshire..Potato	23—29	Feed ..	19—26
— Irish .....Potato	24—28	Feed ..	19—24
— Foreign.....Poland and Brew	23—26	Feed ..	17—24
RYE	35—38	Foreign.	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....30s to 40s....Tick	33—43	Harrow.	33—43
— Pigeon .....36s — 47s..Winds.	48—54	Longpod	—
— Foreign .....Small	38—46	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	36—38	Suffolk .	36—40
— Maple .... —s to —s ..... Grey	31—33	Foreign.	30—37
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	37—43		
— 2d do. ..... ditto	27—37	Country.	27—37
— Foreign .....per barrel	18—27	Per sack	30—37

FRIDAY, Jan. 20.

The weather has been very changeable during the past week, and to-day we have heavy rain. The trade throughout this country has been slow for all articles with a downward tendency, and for Wheat 1s. per qr. less money has been accepted, the condition being very unsatisfactory. In Leith the trade for best Barley and Oats was improving, at 1s. per qr. advance on each. Here we have observed some demand for foreign Wheat for spring shipment from the Baltic, and the holders having reduced their prices some transactions took place. The arrivals of grain and seed cargoes from the South of Europe and Egypt this week are small, embracing only 1 of Wheat, 3 of Barley, 2 of Maize, 2 of Linseed, and 1 of Beans. The sale was equally restricted, and we are only enabled to give quotations representing the prices asked rather than the value fixed by transactions. We quote Wheat, Bordiansk and Marianopoli, 48s., Taganrog and Odessa Ghirka 46s. 6d. to 47s., all per 496 lbs.; Egyptian Maize 30s. 6d. to 31s. per 480 lbs.; Black Sea Barley 24s. per 400 lbs.; Odessa and Taganrog Oats 18s. to 18s. 6d per quarter, all c. f. and i.; Calcutta Linseed 48s. 3d., Odessa and Marianopoli 50s. 6d. per qr. delivered. The arrivals of English grain this week have been to a fair extent, of foreign small, those of English Wheat amounting to 610 qrs. only. Dry samples of English Wheat continue to command a sale at full prices; other descriptions are extremely difficult to quit, and their value very irregular. Foreign remains neglected, and quotations are consequently nominal. For Barley the demand was very slow. Beans and Peas are unaltered in value. The Oat trade is steady at the extreme prices of Monday.

ARRIVALS FROM JAN. 16 TO JAN. 20.

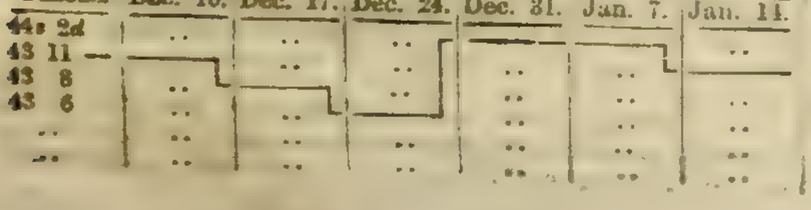
	Wheat.	Barley.	Oats.	Flour.
English ..	2430 qrs.	5150 qrs.	1140 qrs.	1680 sks.
Irish	— ,,	— ,,	8840 ,,	— ,,
Foreign ..	610 ,,	1430 ,,	10590 ,,	— ,, 4210 brls.

LIVERPOOL, Tuesday, Jan. 17.—At our market to-day there was rather more disposition to buy Wheat at 1d to 2d. per cental decline on the week. Oats quite as dear. Egyptian Beans were offered at last quotations. Flour was very inactive, at 6d. per barrel and sack reduction on the week. Barley and Peas were unaltered. Oatmeal was neglected, but no lower.

FRIDAY, Jan. 20.—The grain market steady. Good business in Wheat at Tuesday's rates. Flour steady. Indian Corn firm. Egyptian Beans 33s. 6d. Oats, Oatmeal, and Barley quiet.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Dec. 10..	43s 11d	35s 10d	21s 5d	32s 10d	41s 1d	39s 1d
— 17..	43 8	35 1	21 9	30 0	41 0	38 9
— 24..	43 6	34 9	21 1	28 10	39 11	37 6
— 31..	44 2	34 8	21 5	35 1	39 7	37 8
Jan. 7..	44 2	34 6	21 5	35 5	38 10	38 3
— 14..	43 11	34 7	21 5	30 4	39 0	36 7
Agg. Aver.	43 11	34 11	21 5	32 1	39 11	38 0

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.



WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

WANTED, a Young Man as FOREMAN, in a gentleman's Garden in the country. He must understand Forcing in all its branches, and be active and obliging, with a good character.—Apply to JAMES CUTHILL, Denmark Hill, Camberwell, S.

WANTED AS HEAD GARDENER, a married man with no children; Wife to take charge of the Lodge. He must thoroughly understand Forcing Grapes, Strawberries, &c., and the Management of Flower and Kitchen Gardens.—Apply or address, post paid, A. B., J. J. Dennison, Grocer, Wanstead, Essex, N.E.

WANTED, by a Clergyman, a GARDENER who thoroughly understands Kitchen and Flower Gardening, can attend to a small Greenhouse, and would clean Knives and Boots, and be generally useful out of doors.—Apply to Rev. H. A. HARVEY, Tring, Herts.

WANTED, AS GARDENER, an active, intelligent, married Man (without incumbrance), thoroughly acquainted with his profession in all its branches; to undertake a single-handed place, with the assistance of a labourer once a week when required, and the daily help of a boy for two or three hours. Wife to act as Laundress. A cottage rent free, fitted up for laundry purposes. The highest character will be required for respectability, sobriety, &c.—Letters addressed to A. Z., Post Office, Leamington, Warwickshire.

WANTED, a respectable MAN to serve in a Seed Shop, and to Propagate and Grow Greenhouse and Bedding-out Plants. He must be strictly honest, sober, and industrious, and thoroughly understand his profession.—Apply to Mr. HONEY, 71, Bank Street, Maidstone, stating terms and reference.

SEED TRADE.

WANTED, A SHOPMAN, who will have the principal Management of the Retail Department. He must be of good address and thoroughly conversant with the business. —Apply to DINGLEY & SON, 20, High Street, Birmingham, stating full particulars as to previous engagement and salary required.

WANTED, a young Man as PORTER or WAREHOUSEMAN, who has had some experience in Packing, especially of Plants; and who would be willing to do anything which may be required of him.—Apply by letter to A. Z., Hooper & Co., Covent Garden Market, W.C.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 35, single; thoroughly practical. Good reference, and a Total Abstainer.—C., R. Ward's, High Road, Lower Tottenham, N.

GARDENER (HEAD).—Age 32, single; practical; thoroughly understands his profession in all its branches. Two and a half years' most satisfactory reference.—A. B., 13, Bridge Terrace, Harrow Road, Paddington, W.

GARDENER (HEAD, WORKING).—Understands the Forcing of Vines, Melons, Cucumbers, and management of the Flower and Kitchen Gardens. Good references.—A. B. C., Mr. Barnes, Camden Nursery, Camberwell, S.

GARDENER (HEAD).—Age 34, married, no incumbrance; 18 years' experience; understands Early and Late Forcing, and is a good Kitchen and Flower Gardener. No single-handed place accepted.—S. P., Grove Cottage, Esher, Surrey.

GARDENER (HEAD),—Age 35, married, thoroughly practical and active; will be disengaged about the middle of February. Has lived four years Head Gardener to a nobleman, and can produce excellent Testimonials.—B., 4, Upper Weymouth Street, Portland Place, London, W.

GARDENER (HEAD).—Age 37, single; has a thorough practical knowledge of his profession, including the Forcing of Fruits, Flowers, and Vegetables, and the routine of Kitchen and Flower Gardens, with the superior cultivation of all kinds of Plants. Character will bear the strictest investigation.—B B., Mr. Burdett's, Walton-upon-Thames.

GARDENER (HEAD).—Age 37, married, one child, four years old; thorough practical knowledge of his profession in all its branches, Pines, Grapes, Peaches, Cucumbers, Melons, Kitchen and Flower Gardens. Character will bear the strictest inquiry. State terms, &c.—A. B., Summer's, Howard Park Nursery, Perry Hill, Sydenham, Kent, S.E.

GARDENER (HEAD).—Age 31, married; has had several years' experience in Growing Orchidaceous, Stove, and Greenhouse Plants, Ferns, &c., both for Exhibition and Decoration, and 16 years' practice in the Flower, Fruit, and Kitchen Gardens. Three years' good character.—A. B., Post Office, Hersham, Surrey.

GARDENER (HEAD).—Age 30, single; thoroughly understands the Growing and Forcing of Stove and Greenhouse Plants, Pines, Vines, Peaches, Strawberries, Cucumbers, and Melons; management of Flower, Fruit, and Kitchen Gardens. Unexceptionable references as to character and ability.—W. Russell, Aylesford, near Maidstone, Kent.

GARDENER (HEAD).—J. GORDON, Gr. to the Rev. J. D. Hudson, Frogmore Lodge, Ware, Herts, can with confidence offer himself to any gentleman in want of a good practical Gardener; has had upwards of 25 years' experience in the various branches of his profession; has been seven years in his present situation and can have an excellent character.—Address as above.

GARDENER (HEAD).—Age 33, married; has a thorough practical knowledge of his profession in all its branches on the latest and most improved principles, including Early and Late Forcing of Flowers, Fruits, and Vegetables, also the general routine of Farming, either Light or Heavy Soil, the management of Woods and Plantations, &c. Character will bear the strictest investigation.—S. P., 78, Edmund Street, Birmingham.

GARDENER (HEAD).—Age 37, married, no incumbrance; will shortly be disengaged, and will be happy to treat with any nobleman or gentleman requiring a steady persevering Man, having a thorough knowledge of his profession in all its branches; Laying out Grounds, care of Plantations and Meadow Land if required. Wife can take charge of Poultry. No single-handed place accepted. Four and a half years' irreproachable character from his present employer.—A. B., Mr. Holland, Florist, Roby, Lancashire.

GARDENER.—Married, one daughter; has had great experience in every branch of Horticulture and Agriculture; the Management of every description of Wooded and Built Property; and will guarantee the general Improvement of any Estate under strict economical principles with profitable returns.—J. D., Post Office, Widworthy, near Honiton, Devon.

GARDENER.—Age 35, single; understands Flower and Kitchen Gardens, Greenhouse and Vinery. Good reference.—J. B., Mr. Hutt's, Hadlow Castle, Kent.

PROPAGATOR, OR PROPAGATOR AND FOREMAN of the Glass Department in a Nursery where the choice kinds of exotic plants are wanted in great quantities. A good Knifeman. First Class references as to character and ability.—T. G., Mrs. Cooke, 6, North Street, Grove Road, St. John's Wood, London, N.W.

TO GENTLEMEN BUILDING AND IMPROVING THE GARDENS AND GROUNDS.

LANDSCAPE GARDENER, GARDEN ARCHITECT, AND PRACTICAL GARDENER.—Extensive experience; is open for engagement with any gentleman who may require the service of a person competent to design and carry out improvements in his gardens and grounds. Highest references to latest employers.—Address R. J. M., 56, Acton Street, Gray's Inn Road, Holborn, London, W.C.

GARDENER AND BAILIFF OR GENERAL MANAGER.—Age 35, married, no incumbrance; is open for engagement as above, in which capacities he has had considerable experience with his last and previous employers, from whom the highest testimonials can be obtained. Salary 100*l.*, with house, &c.—J. M., care of J. Veitch, Esq., Royal Exotic Nursery, Chelsea, S.W.

TO NOBLEMEN, LANDOWNERS, AND OTHERS.

GARDENER AND BAILIFF, or either separately.—Long experience, having been in last situation 25 years, and has just left in consequence of the Arable Land being let off. Can produce good satisfactory testimonials.—J. P., Sunbury Post Office, Middlesex.

FARM STEWARD OR BAILIFF.—Middle-aged; a native of Scotland; of active habits, and practically acquainted with Farming on the most improved principles, Buying, Selling, and Management of Stock in general.—X. X., Post Office, Watford, Herts.

TO NOBLEMEN AND GENTLEMEN.

FARM STEWARD OR BAILIFF.—Middle-aged, married; has had considerable experience in the Management of various Soils, as well as the care and treatment of all kinds of Stock. The Wife would undertake the indoor Management of the Dairy if required. Unexceptionable references will be given as to character and ability.—A. B., Post Office, Saltwood, Hythe, Kent.

TO NOBLEMEN AND GENTLEMEN.

FARM BAILIFF.—Age 36, married, with small family; has been extensively engaged in farming operations on heavy and light soils, understands Breeding, Rearing, Buying and Selling Stock and Corn, the management of Woods and Plantations; can keep Accounts. Wife can take Dairy and Poultry if required. Unexceptionable references given from last situation.—G. H., care of 14, Coronation St. Cambridge.

TO CORN AND SHEEP FARMERS IN THE COUNTIES OF WILTS, BERKS, HANTS, OR NORFOLK.

IMPROVER.—A highly respectable and steady young Man, who has had some years' experience in the Farming interest in Gloucestershire, is anxious for further improvement in either of the above counties, where his board and lodging would be considered equivalent to his services, which are really useful. References given and required.—J. G. GOODWYN, Bookseller, Tetbury, Gloucestershire.

SHOPMAN, OR SHOPMAN AND CLERK.—An active, energetic Young Man, of thorough business habits, well acquainted with the Wholesale and Retail Trade, both in London and the provinces, is desirous of a re-engagement.—J. B., *Gardeners' Chronicle* Office, W.C.

TO NURSERYMEN AND SEEDSMEN.

SHOPMAN.—Young; 8 years' experience in first-class London and Provincial Houses, and thoroughly conversant with every branch of the business.—M. F., 5, Clare Street, Islington, Liverpool.

TO PARENTS AND GUARDIANS.—The return of youth to their respective boarding schools induces a solicitude for their personal comfort and attraction, and ROWLANDS' MACASSAR OIL, for accelerating the growth and improving and beautifying the hair, ROWLANDS' KALYDOR, for improving the skin and complexion and removing cutaneous eruptions, and ROWLANDS' ODONTO, or Pearl Dentrifice, for rendering the teeth beautifully white, and preserving the gums, are considered indispensable accompaniments for the attainment of those personal advantages so universally sought for and admired.—Sold by A. ROWLAND & SONS, 20, Hatton Garden, London, E.C., and by Chemists and Perfumers.

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administered with the greatest success in cases of CONSUMPTION, BRONCHITIS, ASTHMA, COUGHS, RHEUMATISM, GOUT, GENERAL DEBILITY, DISEASES OF THE SKIN, RICKETS, INFANTILE WASTING, AND ALL SCROFULOUS AFFECTIONS, is incomparably superior to every other kind. The recorded investigations of numberless eminent British and Foreign medical practitioners have placed beyond the reach of refutation the fact that no invalid can possibly realise the full beneficial effects of Cod Liver Oil, who does not take Dr. DE JONGH's celebrated pure Light Brown Oil.

OPINION OF EDWIN LANKESTER, ESQ., M.D., F.R.S.,
Late Lecturer on the Practice of Physic at St George's Medical School; Superintendent of the Food Collection at the South Kensington Museum, &c., &c.

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HOLLOWAY'S PILLS are decidedly the best remedy for all disorders of the stomach and bowels, the liver and kidneys. They act with so decided an effect, and yet so gently, that people of the most delicate constitutions may take them with the most perfect confidence. They do not contain a single grain of mercury or other noxious substance, being composed exclusively of rare balsams. They are, therefore, equally safe and efficacious, and, as a family medicine, nothing yet invented or discovered can be compared with them for a moment. With these inestimable Pills at hand, together with the printed directions affixed to each box, no other medical advice or assistance can be needed in any ordinary case of sickness.

The Gardeners' Chronicle Newspaper.

SATURDAY, FEBRUARY 11, 1860.

GOVERNMENT SCHOOL OF MINES, Jermyn Street, S.W.—The following COURSE OF LECTURES are about to be commenced :—

TWENTY-FOUR Lectures on ORGANIC CHEMISTRY, by Dr. Hofmann, F.R.S., to be delivered on MONDAYS, at 10 A.M., commencing February 13. Fee for the Course, 1*l.*

FORTY Lectures on MINERALOGY, by Mr. Warington W. Smyth, M.A., F.R.S., to be delivered at 2 P.M., on MONDAYS, TUESDAYS, THURSDAYS, and FRIDAYS, commencing February 13. Fee for the Course, 2*l.*

FIFTY Lectures on NATURAL HISTORY, on the Principles of Zoology, Comparative Anatomy, and Palæontology, by Prof. Huxley, F.R.S., to be delivered on WEDNESDAYS, THURSDAYS, and FRIDAYS, at 10 A.M., commencing February 15. Fee for the Course, 2*l.*

THIRTY-SIX Lectures on APPLIED MECHANICS, by Prof. Willis, M.A., F.R.S, to be delivered on WEDNESDAYS, THURSDAYS, and FRIDAYS, at 12, commencing February 15. Fee for the Course, 1*l.* 10*s.*

THIRTY-SIX Lectures on GEOLOGY, by Mr. J. Beete Jukes, M.A., F.R.S. (in lieu of Prof. Ramsay, who is prevented from lecturing this Session), to be delivered on MONDAYS, TUESDAYS, WEDNESDAYS, and THURSDAYS, at 2 P.M., commencing on February 20. Fee for the Course, 1*l.* 10*s.*

Tickets and Prospectuses of the School may be had on application. Trenham Reeks, Registrar.

ESTABLISHED 1838.

VICTORIA AND LEGAL AND COMMERCIAL LIFE ASSURANCE COMPANY, 18, King William Street, City, E.C.

The business of the Company embraces every description of risk connected with Life Assurance.

Credit allowed of one-third of the premiums till death, or half the premiums for five years, on policies taken out for the whole of life.

Advances in connection with Life Assurance are made on advantageous terms, either on real or personal security.

William Ratray, Actuary.

News of the Week.

The Chancellor of the Exchequer made his financial statement last evening, in a crowded House, after Lord John Russell had laid upon the table the Commercial Treaty with France. He stated that, although the revenue presented a satisfactory proof of the increasing prosperity of the country, the account for the current year, in consequence of the Russian war, the Chinese expedition, and the new Treaty with France, would show a deficiency of 9,400,000*l.* He calculated that the Treaty with France would cause a loss to the revenue of 1,119,000*l.* He proposed to make changes in the Customs entailing a further loss to the revenue of 910,000*l.*, including the abolition of the duty on butter, tallow, cheese, oranges, lemons, nuts, and eggs; to reduce the duties on timber, currants, raisins, figs, and hops; to reduce the game certificates, to repeal the stamp on cheques, the duty on paper, and the impressed stamp on newspapers. To meet these reductions, he proposed to continue the present duties on tea and sugar for 15 months; to levy a registration duty on packages and goods imported and exported, or warehoused; a duty of 6*s.* a cwt. on chicory; to impose stamps on notes for the sale of colonial or dock warrants; a license on eating houses; and stamps on various small articles; to take up the malt duties; and to impose an income-tax of 10*d.* in the pound over 150*l.* a year, and of 7*d.* in the pound under that amount.

In the House of Lords on Monday, the Earl De Grey and Ripon stated that the volunteer corps now numbered between 60,000 and 70,000 men under drill, and that the number was daily increasing. The Government had supplied them with a sufficient quantity of arms; but it was not their intention to provide them with uniforms or to bear any portion of the expense which could tend to deprive the corps of their voluntary principle. On Tuesday the Earl of Derby called attention to the riots in the parish church of St. George's-in-the-East, and expressed a hope that the Government would take some steps to put an end to them. Lord Brougham said the conduct of the rector, whether right or wrong, was no excuse whatever for the disgraceful scenes that were enacted at that church. Earl Granville said that the police had done all they legally could do to suppress the disturbances, and they would continue to do all in their power to prevent a renewal of them in future. The Marquis of Normanby moved an address to the Queen, praying her Majesty to direct her Government to use their best endeavours to avert the annexation of Savoy to France. Earl Granville said that her Majesty's Government would view with alarm any such contingency as the annexation of Savoy to France; inasmuch as it would seriously disquiet Europe, and disturb the balance of power. He was, however, assured that France had no actual or present, but only a conditional intention of making such a demand; while Count Cavour, on the part of Sardinia, had expressly declared that his Government would not sell, bargain, or cede Savoy upon any terms. Under these circumstances, he trusted that the motion would be withdrawn. Earl Grey admitted that we could not resort to arms, but implored the Government to do all in their power to prevent a result so injurious to the interests of Europe. If there were any truth in the report that a secret treaty had been concluded between France and Sardinia before the late war, in which it was stipulated that the latter should receive an extension of territory in Central Italy, and that the former should receive Savoy in return, he could conceive nothing more immoral or iniquitous than such a compact. The Earl of Shaftesbury said that the independence both of Italy and Switzerland would be directly endangered by such a measure, and Lord Brougham asked if the frontier of the Rhine would not be the next question after the annexation of Savoy. The Duke of Newcastle assured their lordships that her Majesty's Government would leave nothing undone to promote that object which they all had in view. The Earl of Derby said that, whatever might be the result of the motion, it would at least show that not a single peer would acquiesce in the annexation of Savoy to France. That annexation could only be accomplished by unscrupulous violence on the part of France, or by base connivance on that of Savoy. Lord Stratford de Redcliffe expressed his entire concurrence with the remarks of Lord Derby, and the Marquis of Normanby withdrew his motion. On Thursday Lord Cranworth moved the second reading of the Endowed Schools Bill. Lord Chelmsford opposed the Bill, as a violation of the prescriptive and secular rights of the schools, so far as it gave an unrestricted admission of Dissenters to their management. The Earl of Derby said he could not consent to permit Church schools to fall into Dissenting hands, and hoped that the Bill would be seriously modified in committee. Earl Granville suggested that the Bill should be referred to a select committee. The Bishop of Oxford and the Lord Chancellor supported this suggestion, and the Bill was read a second time on the understanding that it will be referred to a committee.

In the House of Commons on Friday Lord J. Russell stated that Her Majesty's Government had received no information of any extraordinary military preparations in France. He did not believe that there was any desire on the part of either France or Austria to renew the war, and he had received assurances from the Government of Sardinia that nothing would be done by them to cause a renewal of hostilities. Mr. S. Herbert stated that it is the intention of the Government to disembody some of the militia regiments now doing permanent duty. On Monday Lord Palmerston announced that the Chancellor of the Exchequer had been confined to his bed by an attack of influenza since the meeting of the Cabinet on Friday, and that the Financial Statement intended to have been made that evening had consequently been deferred until Friday. On Tuesday, in answer to Lord C. Hamilton, Lord J. Russell stated that Her Majesty's Government had made propositions to France and Austria with the view to a solution of the Italian question; and that the only official reply which had been yet received from Austria declared that she could not recognise the present state of Central Italy, but had no intention whatever to interfere except in the defence of her own possessions. Lord J. Manners moved for leave to bring in a Bill to enable the Court for Divorce and Matrimonial Causes to hold its sittings with closed doors. Mr. E. James moved as an amendment the previous question. Lord R. Cecil and Mr. K. Macaulay supported the Bill; Mr. Roebuck, Sir G. Lewis, and Mr. Malins opposed it. On a division the amendment was carried by 268 to 83. On Wednesday Sir J. Trelawny moved the second reading of the Church-rates Abolition Bill. Sir C. Douglas seconded the motion. Lord R. Montagu moved, as an amendment, that the Bill be read a second time that day six months. The Bill was supported by Sir G. Lewis, Mr. Bristow, Lord Fermoy, and Mr. Thomson, and opposed by Mr. K. Seymer, Mr. Disraeli, Mr. Packe, and Mr. Hubbard. On a division the second reading was carried by 263 to 234. This result was received with loud cheers from the Opposition, the majority, which was 72 in the last session, having fallen to 29 on this occasion. On Thursday Sir F. Kelly obtained leave to bring in a Bill for the prevention of bribery and the amendment of the Corrupt Practices Act; and Mr. Collier obtained leave to bring in a Bill to prohibit the payment of expenses in carrying voters to the poll, and to facilitate polling at elections. Mr. T. Duncombe moved for leave to bring in a Bill providing that at the future elections of members of Parliament for Gloucester and Wakefield, the electors should give their votes by ballot. The motion was opposed by Sir G. Lewis and Lord Palmerston, and was negatived on a division by 149 to 118.

Home News.

The Court.—The Queen, Prince Consort, and the Royal family are expected to arrive at Buckingham Palace this afternoon for the season. On Thursday week the Duke of Bedford, the Duke and Duchess of Marlborough, the Marquis and Marchioness of Abercorn, with Lady Georgiana Hamilton and Colonel Horsford, of the Rifle Brigade, arrived on a visit. On Friday morning the Queen and Prince Consort walked in the Home Park. The Duchess of Kent and the Princess of Leiningen visited her Majesty. In the afternoon Princess Alice took a carriage drive and visited the Duchess of Kent at Frogmore. Colonel Horsford left the castle. Lieut.-Colonel Norman, C.B. (Indian army), arrived on a visit. On Saturday morning the Queen, accompanied by Princess Helena, walked and drove in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort went to the Wellington College. The Duke of Bedford, the Duke and Duchess of Marlborough, the Marquis and Marchioness of Abercorn, with Lady Georgiana Hamilton, and Lieut.-Colonel Norman left the castle. On Sunday morning the Queen, Prince Consort, the Princesses Alice, Helena, and Louisa, Prince Arthur, and Princess Leiningen, attended Divine service in the private chapel; the Dean of Windsor performed the service and administered the Sacrament. On Monday morning the Queen and Prince Consort walked in the Home Park. Princess Alice, Princess Helena, and Princess Louisa rode on horseback. M. F. Joubert had the honour of submitting on Saturday to her Majesty and the Prince Consort specimens of his new invention for photographs in enamel colours, burnt in on glass and on china. In the evening the Duchess of Kent gave a juvenile party at Frogmore, at which her Majesty and the Prince Consort were present, accompanied by the Princesses Alice, Helena, Louisa, and Beatrice, Prince Arthur and Prince Leopold. On Tuesday morning the Queen, accompanied by Princess Louisa, walked in the Home Park. The Prince Consort went out hunting. The Duchess of Kent and the Princess of Leiningen visited her Majesty. Mrs. Hodson, widow of Captain Hodson, had the honour of presenting to her Majesty, in person, two swords, one taken by her late husband from the King of Delhi, and the other surrendered by the King on the 21st September, 1857, the former of which formerly belonged to Jehanghier, A.D., 1605, and the latter to Nadir Shah. The Earl and Countess of Besborough, the Countess Grey, the Earl of Ducie, Lord and Lady Proby, the Hon. and Rev. L. Neville, Vice-Chancellor of the University of Cambridge, and Admiral Sir G. Seymour, arrived on a visit. On Wednesday morning the Queen, accompanied by Princess Alice, drove out in an open carriage. The Duchess of Kent and the Princess of Leiningen visited her Majesty. The Judge-Advocate-General had an audience of her Majesty to submit the proceedings of some courts-martial. The Vice-Chancellor of Cambridge left the castle. Lieut.-General Knollys arrived on a visit. On Thursday morning the Queen and Prince Consort walked in the Home Park. Princess Alice and Princess Helena rode on horseback. The Duchess of Kent and the Princess of Leiningen visited her Majesty. The Earl and Countess of Besborough, the Earl and Countess Grey, the Earl of Ducie, Lord and Lady Proby, Admiral Sir George Seymour, and Lieut.-General Knollys left the Castle.

The Cabinet.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Thursday at the official residence of the Chancellor of the Exchequer.

MINISTERIAL APPOINTMENT.—Mr. Hutt, M.P. for Gateshead, has accepted the office of Vice-President of the Board of Trade, vacant by the appointment of the Right Hon. W. Cowper to the First Commissionership of Public Works.

ORDER OF THE BATH.—Mr. Rowland Hill, secretary of the General Post Office, has been appointed a Knight Commander of the Bath.

THE HORSE GUARDS.—General Scarlett has been appointed to succeed Sir George Wetherall, who resigns the post of Adjutant-General on the 1st April.

THE VOLUNTEER MOVEMENT.—It is stated that a letter has been received at the War Office from Viscount Sydney to the effect that the reception of volunteer officers by her Majesty on the 7th March is not to be considered as giving them the *entrée* to any future levee. A Volunteer Ball is to take place on the evening of that day in the New Floral-hall, adjoining the Royal Italian Opera in Covent Garden. The ball is to be under the immediate patronage of her Majesty.

Foreign.

FRANCE.—A despatch from Paris dated on Sunday last states that Lord Cowley communicated to M. Thouvenel a few days ago a project of the English Cabinet for the definitive settlement of the Italian question. This project contains the following points:—

"1. The principle of non-intervention to be applied in an absolute sense. 2. Venetia to remain apart from all negotiations concerning new territorial arrangements, and to continue under the Austrian rule. 3. The inhabitants of Central Italy to be again invited to vote on their own Constitution. Should they pronounce themselves for annexation with Sardinia, the latter Power to be authorised to accomplish their wishes. 4. Sardinia to abstain from every measure destined to favour the annexation until the new vote of the Italian States has taken place. 5. France to withdraw her troops from Rome and from the other parts of Italy."

M. Thouvenel, after having received the orders of the Emperor, declared that the French Government would at once accept all the propositions except the 4th, and that before giving a definitive answer to that proposition the French Government thought it indispensable to be informed of the views of Austria. The *Moniteur* of Saturday publishes a report of Marshal Randon, Minister of War, announcing that, in conformity with the intentions of the Emperor, he will submit a project of law to the Legislative Body reducing the contingent of the class 1859 from 140,000 to 100,000 men. Orders have been received at Brest from the Minister of Marine to discharge all seamen who have served three years, and to lay up in ordinary the screw ships-of-the-line Wagram and Duquesne, together with the floating battery Congreve. It is reported that the troops will shortly be withdrawn from Lombardy, but the statement that they will also be withdrawn from Rome is said to be without foundation. Count Cavour's visit to Paris has been temporarily postponed, and the French Government has ordered Prince Latour d'Auvergne to prolong his stay at Turin for some time after the arrival of Baron Talleyrand, in order to support the counsels of moderation which Napoleon III. has intrusted him to submit to Count Cavour. More than 100 pamphlets have appeared on the "Italian Question." On Sunday in all the churches of Paris the priests, following the orders of the Archbishop of Paris, read the last encyclical letter of the Pope. The Archbishop has also ordered public prayers to be offered until Easter, in order "that his Holiness may overcome the tribulations and persecutions to which the Church is now exposed." The *Constitutionnel*, in an article signed by M. Grandguillot, says:—

"The report going the round of the journals relative to the annexation of Savoy and Nice to France is but the result of a presentiment of public opinion and a statement based on the logic of facts. The press has been struck by the attraction felt by the population of Savoy towards France, and by the justice of a measure which at the moment when Piedmont is to be singularly aggrandised would give France a geographical frontier. But this unanimous tendency of the press remains completely without official impulse. What Savoy wished for, what France desires, does not appear doubtful, but what the Government will and can do remains hidden under the veil of diplomacy. Those who assert that the affair is settled are no better informed than those who say it will not take place. The Emperor is the scrupulous defender of the essential conditions which insure and guarantee balance of power in Europe, and will certainly not allow it to be altered either to his own detriment or that of others."

The *Patrie* publishes an article stating that the Sardinian authorities are everywhere encouraging the movement against the separation of Savoy, by putting down the almost unanimous wish of the inhabitants, who are asking for annexation with France. The article expresses a hope that orders will be issued from Turin which may remove these impediments, and says:—

"The people of Savoy have the same right as the people of Italy to declare their opinions in perfect security and complete independence. France has not excited the manifestation of the ancient feelings of the inhabitants of Savoy, which have lately shown themselves by wishes so unanimous, sanguine, and absolute that they have attracted the attention of the whole of Europe. Their wishes are of so energetic a character that they have been manifested in spite of all obstacles and all difficulties. We have a right to demand a cessation of this intolerable state of affairs, and equal justice for all. People will then see that the real aspirations of Savoy and Nice are for France."

SPAIN AND MOROCCO.—Despatches from Madrid announce that Tetuan has been taken by the Spaniards, after a battle fought on the 4th inst., in which the Spaniards lost 10 officers and 58 men killed, and 53 officers and 711 men wounded. 800 large tents, forming the five encampments of the enemy, 50 pieces of artillery, camels, and all other equipage of the Moorish army were captured. The brothers of the Emperor took to flight, and, a summons having been transmitted to the enemy to surrender Tetuan within 24 hours, a deputation from the city came into the Spanish camp to beg for mercy, as the Mussulmans had commenced pillage and slaughter in the town. The division of General Rios entered the place without any opposition, and was received with manifestations of joy. The latest news says that Marshal O'Donnell judges it useless to pursue the Moors into the interior of the empire. Immense popular rejoicings have taken place at Madrid, which has been splendidly illuminated. The members of the Chamber of Deputies have presented their congratulations to the Queen, and preparations are making for grand public fêtes. The *Official Gazette* publishes a decree nominating Marshal O'Donnell Duke of Tetuan, raising him to the rank of Grandee of Spain, and giving to him the ground where the victory was obtained. General Echague has entered the valley of Anghera, where he destroyed 200 cottages, and took one gun, a quantity of cattle, and munitions of war. The steamer Madrid has been run into by the steamer Seine. Great damage was caused by the accident, but no lives were lost.

HOLLAND.—The First Chamber has rejected the Northern and Southern Railway Bill by 20 votes to 17.

HANOVER.—The English Government has offered to Hanover a delay of three months, commencing with the 16th of February, for regulating the redemption of the Stade dues by general conferences with all parties interested. Hanover has refused to settle the question by general conferences, and has proposed a special agreement with England. The English Government has rejected this offer, and insists upon a general conference of all parties interested in the question.

DENMARK.—The President of the Council and Minister of Justice, M. Rottwitt, was attacked with apoplexy on Wednesday evening, and died in a few minutes. In consequence of his death the other members of the Cabinet have tendered their resignations, which have been accepted by the King.

BADEN.—The funeral of the Grand Duchess Stephanie of Baden took place on Monday in the family vault at Pforzheim.

AUSTRIA.—The five points of the proposal of the English Government for the settlement of the Italian question were communicated to Count Rechberg by Lord A. Loftus two days before the opening of the English Parliament. On the same day the Marquis de Moustier communicated the same five points in the name of France. These points proposed that the States of Central Italy should be called upon to vote again on the question of their annexation to Piedmont; that the principle of non-intervention should be recognised; and that, in exchange for the points to be agreed to by Austria, Sardinia should be required to respect the Austrian dominion in Venetia. Count Rechberg is said to have received these proposals with great deference, to have declared that Austria herself would know how to protect Venetia, and that she will never accede to the third point, concerning the annexation of Central Italy to Piedmont. The Commissioners of the Public Debt of Austria have published an account of the state of the sinking fund, of which the following is an abstract:—

"The total capital amounts to about 196,000,000 florins, of which a nominal sum of 143,000,000 will be applied to the redemption of the public debt, thus saving about 6,000,000 of interest per annum. This reduction of the public debt, says the report, will increase confidence. A sum of about 41,000,000 florins—namely, Grundsentlastung securities, 9,500,000; Northern Railway bonds, 1,750,000; Gallician Railway bonds, 14,000,000; and Theiss Railway bonds, 15,750,000, will also be transferred to the National Bank as payment on account. The remaining 12,500,000 will be given to the general administration of the finances."

HUNGARY.—At a *bal masqué* which took place on Sunday evening last in the Hungarian Theatre at Pesth the national "Rakocsy dance" was demanded. The students of the University took no part in the manifestation. Three workmen employed in a machine manufactory were arrested, and, in consequence of their liberation being insisted upon, a body of soldiers who had been kept in readiness were summoned, and restored tranquillity without recourse to arms. Dancing was then resumed. On Friday last Baron Vay and Baron Pronay, members of the recent deputation from the Hungarian Protestants, were received by the Emperor at a long audience. His Majesty promised them that in a legal way their legitimate wishes will soon be satisfied. A circular of the Minister for Public Worship dated the 5th inst. has since been issued referring to the basis of the new division, and requesting the Protestant superintendents in Hungary and the Woywodschaft to discuss their wishes in private conferences, in order that they may be officially examined and brought to a definitive decision before the convocation of the Synod. The following are said to be the terms in which one of the deputation spoke to M. de Rechberg, Minister of Foreign Affairs:—

"We came here to see our king, but our king will not listen to us. We are referred to Count Thun, but we have nothing to do with that Minister of the Concordat. Words are vain things; we demand acts, prompt, complete, and satisfactory. If you do not perform those acts you will have to endeavour to escape from existing embarrassments not only without our aid, but in spite of our opposition. Venetia is lost! Vienna is in a very bad humour; the Tyrol is agitated; the clergy are discontented because you cannot assist the Holy Father; the coffers of the State are empty; there are no means of filling them: and loans are impossible. Russia, moreover, is your enemy, and you cannot confide in Germany. But you may count on us, on condition of being just. You must, however, make haste, for the danger is great."

THE TYROL.—Accounts from Innspruck state that great discontent prevails in the Tyrol at the provincial constitution which the Austrian Government has proposed, according to which the provincial States would be composed of representatives of the four classes—the clergy, nobility, tradesmen, and agriculturists. According to the *Ost Deutsche Post* this arrangement is regarded as no longer in accordance with the spirit of the age, and has been everywhere ill received.

ITALY.—Accounts from Venice of the 6th inst. state that Count Degenfeld, Commander of the Austrian army, has announced in an order of the day published at Verona that from the 15th of February the whole Venetian territory, the province of Mantua, and the districts of Trent, will be governed by martial law, as the attempts of the inhabitants to corrupt and provoke the Austrian troops are increasing. The Austrians are constructing four new forts round Peschiera, where a large hospital has been established. Sixty-four rifled cannon of large calibre have arrived at Mantua and have been placed in the fortresses of the Quadrilateral. Heavy rifled bronze cannon have been substituted for the cast cannon. Great military preparations are making, and arrests continue everywhere. General Hess has been pensioned. Letters from Turin state that the principles on which the new vote on the annexation of Tuscany and the Æmilian provinces to Piedmont is to take place have been resolved upon. A demonstration against the annexation of Savoy and Nice to France took place on Monday night at the Italian Theatre at Nice. The national hymn was repeated three times, and was received with shouts of "The King for ever!" "Italy for ever!" "Nice Italian!" A similar demonstration took place in the Royal Theatre on Wednesday. Another severe blow has been given to the power and *prestige* of Rome. By a decree of the present Tuscan Government, issued on the 27th ult., the Concordat concluded in 1851 between the Grand Duke Leopold and the Court of Rome has been declared null and void, on the ground that it was a direct violation of the ecclesiastical public law of Tuscany, besides being void from the very first, inasmuch as it had never received the sanction of that Tuscan Parliament which, though suspended in fact, had never been abolished by law. Letters from Rome state that the encyclical letter of the Pope was distributed on the 27th ult. among the Cardinals. The report of an approaching departure of the French army is said to be unfounded. No measures have been taken for effecting the evacuation of Rome by the French troops, as the Pope does not wish to compromise the tranquillity of the city, and intends to remain at Rome. A popular demonstration in favour of the independence of Central Italy took place a few days since at Rome, while the people were assembled to witness the evening parade of the French troops. The Mazzini party is said to be active, but General Goyon has taken measures for preventing any other manifestations. Numerous detachments of French soldiers patrol the streets during the night. The Pope had traversed a part of the city, and as he passed up the promenade of the Pincian Hill the crowd was immense. Trade was stagnant, strangers were leaving, and bankruptcies frequently occurring. The municipality was actively preparing for the new election of councillors. An address from the town of Perugia, containing 600 signatures, including those of Signori Massimo, Fiano, Prince Doria, and Rospegligni, had been sent to the Emperor Napoleon. The official journal of Vienna publishes the following letter addressed by the Pope to the Emperor Napoleon III., in reply to his letter of the 31st of December.—

"The Vatican, Jan. 8.

"Sire—I have received the letter your Majesty has had the kindness to write to me, and I reply thereto straightforwardly, and, as the phrase is, with my heart open to you. First of all, I do not dissemble the difficult position of your Majesty, which you yourself do not hide from me, and which I see in all its gravity. Your Majesty might get out of that position by some decisive step, which perhaps is repugnant to you; and it is precisely because you find yourself in such a position that you again counsel me, for the peace of Europe, to give up the insurgent provinces, assuring me that the Powers will guarantee to the Pope those that remain. A scheme of that nature presents insurmountable difficulties; and it is sufficient, to be convinced of it, to reflect on my situation, on my sacred character, and on the rights of the Holy See, which are not those of a dynasty, but of all Catholics. The difficulties are insurmountable, because I cannot give up what does not belong to me, and because I see very well that the victory it is wished to give to the revolutionists of the Legations will serve for a pretext and encouragement to native and foreign revolutionists in the other provinces to play the same game, seeing the success of the first. When I say 'revolutionists,' I mean the least considerable and most audacious portion of the populations. The Powers, you say, will guarantee the rest; but in the serious and extraordinary cases that may be foreseen, looking at the numerous aids the inhabitants receive from abroad, will it be possible for the Powers to employ force in an effective manner? If that is not done, your Majesty will be persuaded, as I am, that usurpers of others' lands and revolutionists are invincible as long as you use towards them only the power of reasoning. Besides, however that may be, I am obliged openly to declare to your Majesty that I cannot give up the Legations without violating the solemn oaths that bind me, without producing mischief and a shock in the other provinces, without doing wrong and shame to all Catholics, without weakening the rights not only of the Sovereigns of Italy unjustly despoiled of their dominions, but also those of the Sovereigns of the whole Christian world, who could not look on with indifference at the destruction of certain principles. Your Majesty makes the repose of Europe depend on the giving up, on the part of the Pope, of the Legations, which for half a century have created so much embarrassment for the Pontifical Government; but, as I promised at the commencement of this letter to speak with my heart bare, let me be permitted to return the argument. Who can reckon up the revolutions that have occurred in France during the

last seventy years? But, at the same time, who would dare to say to the great French nation that, for the repose of Europe, it was necessary to restrict the limits of the Empire? The argument proves too much, and so you must allow me not to admit it. And, besides, your Majesty is not ignorant by what persons, with whose money, with what aid, were committed the late outrages at Bologna, Ravenna, and other cities. Nearly the entire of those populations have remained horror-struck at this movement, which was unexpected by them, and which they have not shown themselves disposed to follow. Let your Majesty reflect, that if I had accepted the scheme explained in the letter you forwarded to me by the hands of M. Menneval, the insurgent provinces would now have been under my authority. To say the truth, that letter was in opposition to the one you honoured me with before beginning the campaign in Italy, in which you gave me consoling assurances without causing me any afflictions. Yet the letter to which you make allusion proposed to me in its first part a scheme, like the present, inadmissible. As to the second part of it, I thought to have adopted it, as may be shown by documents consigned to the hands of your Ambassador at Rome. I have reflected also on that phrase of your Majesty, that if I had accepted the scheme, I should have preserved my authority over those provinces, which seems to mean that, as we now are, they are lost for ever. Sire, I pray you in the name of the Church, and also with a view to your own interest, so to act that my apprehension may not be justified. Certain memoirs called secret inform me that the Emperor Napoleon I. left to his family useful warnings, worthy of a Christian philosopher, who in adversity found in religion alone resources and mitigations. It is certain that we must all soon appear before the Supreme Tribunal to render a severe account of all our acts and all our words and thoughts. Let us endeavour then to appear before God's grand tribunal so as to have to experience the effects of his mercy and not those of his justice. I speak to you in my quality of Father, which gives me the right to say the naked truth to my children, how elevated soever may be their position in this world. For the rest, I thank you for your kind expressions in my regard, and for the assurance you give me of your intention to continue the solicitude you say you have always hitherto had for me. Nothing more remains for me but to pray God to shed on you, on the Empress, and on the young Prince Imperial, the abundance of his blessing. PIUS IX."

Letters from Naples of Monday last state that the Ministerial crisis still continued, as the King had not given up the idea of ordering the army to pass the frontier. A revolutionary movement had broken out at Acerra, near Naples. Troops had been despatched thither, and a state of siege proclaimed. The formation of a camp of 10,000 men in Apulia was spoken of.

RUSSIA.—The Duke de Montebello, French Ambassador at St. Petersburg, is reported to have had a warm discussion with Prince Gortschakoff on the subject of the annexation of Savoy to France, to which Russia is opposed.

TURKEY.—The *Pays* of Wednesday announced that a private despatch had been received in Paris stating that a serious insurrection had broken out in Constantinople; but no confirmation of this report has been received in London. Letters from Constantinople to the 1st inst. state that general dissatisfaction prevailed in Turkey. The complaints against the Administration of the Grand Vizier were increasing, and it was believed that the Sultan would dismiss him on account of his unpopularity. The Dutch Minister had been insulted by a eunuch in a street of Pera, and had demanded satisfaction. The Turkish Government had promised to withdraw the paper money from circulation next month. Information causing suspicions against Prince Danielo had been received by the Porte. Intrigues of Prince Milosch for obtaining the complete independence of Servia had also been discovered, and the suzerainty of the Sultan was not mentioned by Prince Couza in the constitution. The tranquillity of Bosnia and Roumelia was also threatened. The Porte had therefore reminded the Powers of their engagement to defend the integrity of the Turkish Empire. The Turkish police force being insufficient, Riza Pasha had proposed to the Sultan the organisation of a Gendarmerie, to consist both of horse and foot, and to number 60,000 men. A committee had been appointed for examining this project, which had been favourably received by the inhabitants. The Queen's Speech had provoked a sympathetic manifestation on the part of the Italian residents in Constantinople.

CANDIA.—A considerable number of the inhabitants of Candia wish to become converts to the Roman Catholic religion, in order to defend themselves from the Patriarch of Constantinople. The Patriarch, informed of this, has sent a delegate to the island. The Turkish Governor has ordered the sale of 41,000 kilogrammes of brass cannon, to contribute towards the withdrawal of the kaimés from circulation.

RED SEA.—A despatch from Alexandria announces that the telegraphic line from Kurrachee to Muscat was laid with perfect success on January 17th, and that Mr. Newall started from Muscat to lay the line to Aden on the 21st.

INDIA.—The following despatch from Madras dated the 15th January has been received:—

Three Queen's Regiments and one Native Regiment and Artillery have been ordered for China. The Governor has gone on a tour to the south and south-west districts for two months.

CHINA.—Accounts from Shanghai to December 21 state that the Chinese are strongly fortifying Pekin and the entrance to the Peiho. 100,000 Tartar troops have been centred near the Peiho. The British are energetically preparing for the coming campaign.

JAPAN.—Accounts from Nagasaki to December 12 state that the trade with Japan has been stopped by the excessive demands of the Europeans for Japanese gold in exchange for dollars, and by the insults offered to the Japanese. The British Consul has issued a notification blaming the conduct of the Europeans.

AUSTRALIA.—The clipper ship Donald M'Kay arrived in the Mersey on Sunday from Melbourne, whence she sailed on the 12th November, bringing 190 passengers, specie valued at 150,000*l.*, about 5000 bales of wool of the new clip, &c. She was off Cape Clear on the 31st ult., but was blown seaward by a strong north-east wind. The Victoria Parliament continues to carry out the democratic tendencies of the colony. After adopting manhood suffrage and the abolition of the Property Qualification of members, it has adopted a Bill for abolishing pensions to retiring Ministers, and is now engaged in discussing a motion for an address to the Governor, praying that a sum be placed on the estimates for the payment of members, and it is considered probable that it will be agreed to. Another measure affecting the Constitution, which was introduced in the Lower House—a Bill to enable the Governor to dissolve the Legislative Council—has been rejected.

UNITED STATES.—Accounts from New York to the 28th ult. state that the Senate was not in session. The House of Representatives had adjourned for a few days after another ineffectual attempt to elect a Speaker on the 26th. On that occasion the Democrats united, and Mr. Smith, of North Carolina, only wanted three votes to be elected to the Speakership. The Government of Peru has refused to liquidate the American claims.

MEXICO.—Accounts from Acapulco state that only 2000 men of the army of the Liberals were engaged in the battle of December 21st, the main body having failed through the treachery of General Cortinas, who detained them above Matamoras, plundering the Texans.

Parliament.

HOUSE OF LORDS.

MONDAY.—*Joint Stock Companies.*—The LORD CHANCELLOR introduced a Bill for the regulation and winding up of joint-stock companies, the object of which was to consolidate the laws at present in force upon that subject. The Bill was read a first time. *Volunteer Corps.*—In reply to a question from Lord VIVIAN, Earl DE GREY and RIPON said that the volunteer corps had been constituted in such a manner as to give the Government the strongest hopes that they would be a valuable addition to the defensive forces of the country. The force already enrolled amounted to between 60,000 and 70,000 men, and was daily increasing. It was the intention of the Government to supply all effective members with rifles, but not with clothing, and also to appoint efficient adjutants: but they did not intend to violate the principle of volunteering by paying the corps during the period they were on drill. The Government however intended to encourage the movement by establishing a system of inspection throughout the country, which would, he considered, render the volunteer corps, if ever their services should be required, most formidable opponents. In reply to questions from Lords ELLENBOROUGH and WENSLEYDALE, he said that, on the ground of expense alone it would be impossible to appoint drill sergeants to all the corps, but arrangements were in progress whereby the services of drill sergeants might be readily procured at the expense of the volunteer corps themselves.—The *Court of Chancery Bill* was read a second time.—Lord DONOUGHMORE asked whether the accounts of the *Commercial Treaty with France* which had appeared in the newspapers were authentic, and also when that treaty would be laid on the table of the House.—Lord GRANVILLE said that the treaty would be made public when the Chancellor of the Exchequer made his financial statement, in order that the Budget and the treaty might be discussed together.—Lord DERBY hoped that it would not be necessary to postpone the production of the treaty until Mr. Gladstone's recovery.

TUESDAY.—*St. George's-in-the-East.* The Earl of DERBY asked what course her Majesty's Government intended to adopt with respect to the proceedings in the church of St. George's-in-the-East. He passed a severe censure upon the injudicious conduct of the rector, who, by adhering to a few empty ceremonials, was alienating the feelings of his parishioners, and driving them to the chapels of the Dissenters. Such conduct, however, was no excuse for the disgraceful proceedings which had occurred on the two previous Sunday evenings, of which to say that they sprang from religious feeling would be a mockery. These outrages were the work of a mob composed of the lowest dregs of the community, and he wished to ask the Government what steps they had taken to prevent these outrages, and whether they had ascertained what power the law gave them to put a stop to such scandalous proceedings; and, if such power was conferred by law, whether they had put it in force. If the law, however, was not sufficiently strong, he wished to know whether they were prepared to introduce some measure to put a stop to such proceedings.—Earl GRANVILLE agreed with Lord Derby in his condemnation of a clergyman who indulged in ceremonies so hateful to his parishioners. The police had very great difficulties to contend with, and had done all they legally could to suppress disturbances; and he had no doubt that they would do, as hitherto, all they could to prevent such riotous and scandalous conduct for the future.—Lord BROUGHAM suggested that the police should be admitted within the walls of the church, as their experienced eyes would enable them to single out the ringleaders and encouragers of the disturbances better than the churchwardens. He expressed his disgust at the abominable outrages which had been committed, and hoped that the Bishop of London would see the propriety of closing the church.—The Bishop of LONDON said that the suggestion of Lord Brougham had been acted on already, and had not succeeded. If on that occasion the two contending parties had put the question under his arbitration, he had no hesitation in saying that he could have settled the matter at once; and if now the parties were to place the matter in his hands, he thought the subject might be arranged without shutting up the church. *Annexation of Savoy.*—The Marquis of NORMANBY moved an address to the Queen representing to her Majesty that this House has been informed that her Government has stated to the Government of France the objections entertained by her Majesty's Government to the annexation of Savoy and Nice to France, and praying her Majesty to direct her Government to use their best endeavours to prevent the transfer of those territories to France. He had no desire to impute blame to the Government for the course they had pursued. It was only his desire to place upon record the dissent of their lordships from so important a measure. He proceeded to descant upon the discrepancy of the statements made upon this subject in July last by Count Walewski, and the rumours afloat and confirmed by the French newspapers at the present moment. No one believed on the Continent that a compact for the annexation of Savoy and Nice did not exist between the Emperor of the French and the King of Sardinia. It would be most satisfactory to hear that no change in the intentions of the French Government had taken place on this subject since the 18th of last March, when Lord Cowley wrote to Lord Malmesbury that the Emperor of the French contemplated no increase of French territory. He considered the question in its geographical and strategic aspect, and came to the conclusion that the annexation would be injurious to the balance of power in Europe, to the interests of Savoy and its inhabitants, and, by adding a discontented population to its sway, to the interests of France itself.—Earl GRANVILLE stated that he had no further information to add to that which he had formerly given to a question upon this same subject by Lord Normanby. Her Majesty's Government were still in communication with the French Government on the matter, and had been assured that, though there had been formerly a question of the annexation of Savoy and Nice under certain contingencies, as those contingencies had not arisen there was no question of annexation at the present moment. At the same time France did not deny that the creation of a powerful Italian kingdom on her frontier might give occasion to the consideration of such a question. The information from Sardinia was also to the same effect—that no compact existed between France and Sardinia for the cession, exchange, or sale of Savoy and Nice to France. He assured the House that her Majesty's Government had represented to the Government of France all the objections which in an European sense would arise from the contemplated enlargement of French territory, and pointed out that the arguments used by the French for the extension of the frontier to the Alps might with equal propriety be applied to the frontier of the Rhine and of Germany. At the present moment the Government were in communication with France, Sardinia, and Austria on the Italian question. The policy of this country was not one of nationalities, but the avoidance of any armed interference in the affairs of the peninsula, and to secure to the Italians the privilege of choosing for themselves. Considering the present circumstances of the two countries, and the friendly feeling existing between them, he considered that Lord Normanby would best consult the public interests by withdrawing his motion.—Earl GREY thought the statement made by Lord Granville showed the necessity of bringing forward this motion. Nothing could be more unsatisfactory than the conduct of the Government of France upon this subject, especially when coupled with the language of the French newspapers. The annexation, he thought, would be so pregnant with evil to Europe and this country that her Majesty's Government ought to do all they could to prevent such a catastrophe. He did not think the honour of this country involved in preventing this measure if the two parties interested were agreed upon it, but he certainly did think that the principle which would be violated by such an annexation should be most strongly supported by this country. He exposed the fallacy of the proposition that the subjects of a settled Government had a right to choose their own rulers and transfer their allegiance from their own to a foreign king at their own caprice and convenience. He entreated Lord Granville to reconsider his determination to oppose the motion, believing that they were all unanimous in condemning the proposed annexation, and he considered that, while the declaration of the House against the annexation would be received with the greatest satisfaction in Europe, it could not be deemed an unfriendly act to the Emperor of France, but rather the contrary, because, if it induced him to pause in his present policy, and to give up his present design, it would be advantageous to him, by preserving for him the confidence of Europe, which would be lost by pursuing the course in which he was now embarking. If it were really true that a secret treaty had been entered into between France and Sardinia for their mutual aggrandisement, it would be difficult to find language sufficiently strong to denounce the iniquity and immorality of such a compact, which could only be described as a great crime against the civilised world.—The Earl of SHAFTESBURY, in very strong language, denounced the present policy of France, which, under the guise of moderation, was pursuing a subtle course most dangerous to the interests of this country and of Europe.—The Duke of NEWCASTLE deprecated the use of strong language on such important questions, as calculated to excite an irritation which it would be most difficult to allay, and which would be a great obstacle to the proper reception and calm and dispassionate consideration of the representations made by her Majesty's Government on the question.—Lord BROUGHAM said he strongly objected to the annexation of Savoy and Nice to France, and asked where the violation of the settlement of Europe, if once departed from, would stop.—The Earl of DERBY hoped to have heard that the advice tendered by her Majesty's Government had been so received by the Emperor of the French that there was no longer cause for the apprehension of Europe in respect to the annexation of Savoy to France. The late Government had, before the breaking out of the Italian war, clearly shown the dangers which would thereby arise to Savoy, and the present Government had at length become impressed with the truth of those views. The discussion of that evening, whatever might be the fate of the motion, would bear this fruit—that it had exhibited the unanimity of every British peer on this question, an unanimity which would produce a most beneficial effect upon European opinion. The two Powers who would suffer the most, in his opinion, by the annexation would be the two countries immediately interested; for, if the annexation should take place, it would belie the whole of the proclamations of the Emperor of the French and the King of Sardinia, which were so worthy of admiration on account of the disinterestedness of the policy they had announced, and which were totally inconsistent with the rumours of the compact for the mutual aggrandisement of the two Powers. There was, however, another reason why Savoy should not be annexed to France. Piedmont was bound by a specific treaty to Switzerland never to cede Savoy, and Piedmont could not set aside the treaties with Europe, nor the specific treaty with Switzerland, without a violation of the international law of Europe. The language of Piedmont to France ought to be—that it was impossible, owing to her treaty with Switzerland, that she could yield on this question. If Piedmont held this language, France would surely not be so unscrupulously violent as to take these provinces by force. Such a step would be fatal to France in her relations with Europe. All confidence in the steady policy and peaceful character of the Emperor of the French would be lost, and it would be said that Austria had been expelled by France from Italy, not for Italian independence, but for the furtherance of her own selfish ends. The present was a great opportunity for the Emperor of the French to establish a character for peace and moderation, by declaring that he entertained no idea of extending the French frontier beyond its present limits, or of destroying the balance of power in Europe, but that, on the contrary, he would maintain a policy of non-interference in the affairs of other countries, by which declaration he would establish a moral power throughout Europe as great as the material power now wielded by France.—Lord STRATFORD DE REDCLIFFE expressed his thanks to Lord Normanby for bringing forward the motion, and entirely concurred with the remarks of Lord Derby.—The Marquis of NORMANBY, after a few words, withdrew his motion.

THURSDAY.—Lord CRANWORTH moved the second reading of the *Endowed Schools Bill*, stating that its object was to enable Dissenters to administer trust property for educational purposes, and that its provisions were almost identical with those of the Bill of last year.—Lord CHELMSFORD strongly opposed the Bill, on the ground that it would give a power to Dissenters contrary to the intentions of the founders of the endowments, and would be unfair to the Church.—The LORD CHANCELLOR supported the Bill, contending that it had met with the approbation of Churchmen and Dissenters alike.—The Bishop of LONDON said that the Bill was indefinite as to the number of schools to which it would apply, and asked if it

was intended to include National Schools.—The Earl of DERBY said he would not oppose the second reading, but he hoped the subject would be thoroughly sifted in committee.—Lord GRANVILLE suggested to Lord Cranworth the propriety of referring the Bill to a select committee.—The Bishop of OXFORD considered that the principle involved in what was called the "conscience clause" was very dangerous, especially as those Dissenters who wished to destroy the national church owned that one of the deadliest thrusts was to be dealt by enabling Dissenters to become trustees of endowed schools. After some further discussion the Bill was read a second time, on the understanding that it would be referred to a committee.

FRIDAY.—*Savoy and Nice.*—In reply to Lord NORMANBY, Earl GRANVILLE said there was no correspondence which could be considered official in the possession of the Government as having taken place between the British Ambassador at Paris, Lord Cowley, and Count Walewski. He could not undertake to say there had been no conversation between the Ministers on the subject, but certainly nothing that could be considered official existed on the subject. *Sunday Services.*—Lord DUNGANNON postponed his motion with respect to the performance of divine worship in the minor theatres of the metropolis, to Friday, the 24th inst.

HOUSE OF COMMONS.

FRIDAY.—*Indian Army.*—Sir C. WOOD stated, in reply to Sir M. FARQUHAR, that the Indian medals were in course of distribution, that the prize money for Lucknow amounted to 143,000*l.*, and that batta would be given to the troops and seamen engaged in the battles of Bushire and Kooshab, in Persia.—Sir H. CAIRNS asked the Chief Secretary for Ireland whether it was the intention of Government to introduce any measure respecting *Intermediate Education in Ireland*, and when such measure, if any, would be introduced.—Mr. CARDWELL said that the Government intended to introduce a Bill on the subject, but that he could not say when it would be in their power to lay it on the table. *The Godavery River.*—In answer to Mr. J. B. SMITH, Sir C. WOOD said that he was quite alive to the importance of opening the navigation of the river Godavery so as to afford easy access to the cotton districts of Berar, and steps had already been taken to remove the first barrier in the river. The *Probate and Administration (India) Bill* was read a second time, after a short conversation between Mr. CRAWFORD and Sir C. WOOD on the subject of the *Indian Loans.* On the order for the second reading of the *Petitions of Right Bill*, Sir C. LEWIS suggested an alteration in the details when the Bill was in Committee.—The SOLICITOR-GENERAL approved the Bill in the main, but there were parts of it, he said, which would require very careful consideration in committee. The Bill was then read a second time. On the order for going into committee upon the *Newspapers, &c., Bill*, Mr. AYRTON stated that its object was to repeal certain statutory provisions respecting newspapers which were obsolete or offensive. The Bill passed through committee. *Duchy of Cornwall.*—The SOLICITOR-GENERAL moved for leave to bring in a Bill for the limitation of actions and suits by the Duke of CORNWALL in relation to real property, and for authorising certain leases of possessions of the Duchy, the intention of which was to remedy some legal difficulties in relation to mines and minerals in Cornwall, and to put the possessions of the Duchy in the same position in relation to the *Nullum Tempus* Act as the possessions of the Crown.

MONDAY.—*Illness of the Chancellor of the Exchequer.*—Lord PALMERSTON on account of the indisposition of the Chancellor of the Exchequer postponed the Committee on the Customs Acts, and Mr. Gladstone's financial statement, until Friday, on which day he said the commercial treaty with France would be laid upon the table by Lord J. RUSSELL. *St. George's-in-the-East.*—Mr. BYNG put a question relative to the recent outrages in the church of St. George's-in-the-East on Sunday last.—SIR G. LEWIS demurred to the term "outrage" employed by Mr. Byng, and said that he had done all he could and did not intend to go any further in the matter. The House went into Committee upon the *Probate and Administration (India) Bill*, the clauses of which were agreed to, with amendments. The *Prisons (Scotland) Acts Continuance Bill* was read a second time. The *Newspapers, &c., Bill*, was read a third time and passed. Sir W. DUNBAR moved for and obtained leave to bring in a Bill to alter and amend the existing statutes relating to the *Registration of Births, Deaths, and Marriages in Scotland.*

TUESDAY.—*The Italian Question.* Lord C. HAMILTON asked whether Lord Cowley had been instructed to communicate to the French Government a project for the definitive settlement of the Italian question.—Lord J. RUSSELL said that her Majesty's Government had made a proposition to the Governments of France and Austria with a view to the definitive solution of the Italian question. This proposition was made on the 14th January, and was substantially this—that France and Austria should not interfere by force of arms in the affairs of Italy without the consent of the five great Powers of Europe, and that to this end the French troops should withdraw from Italy; that the Governments of Europe should not interfere with the internal relations between Venetia and the Emperor of Austria; and that the King of Sardinia should not send troops into Central Italy until a general expression of opinion should have been elicited on the subject of annexation. In reply to this proposition, France had given her consent, subject to certain modifications as to the time of removing her troops; Austria had also given a qualified assent, coupled with the declaration of her intention not to do more than defend her own territory; Prussia had given a qualified adhesion; and the answer of Russia had not yet been received.—Lord J. MANNERS moved for leave to bring in a Bill to enable the *Divorce Court* to hold its sittings with closed doors. He justified his motion on the ground that public decency and morality were outraged by the publication of the proceedings of the Court of Divorce. He therefore asked that the Judge Ordinary might have the same privilege as the Lord Chancellor and Vice-Chancellors, of closing his court in all cases in which, in his opinion, public morality might suffer by the publication of the proceedings.—Mr. E. JAMES resisted the motion, and moved as an amendment the previous question. He contended that the respectable and influential portion of the press had suppressed the indecent portion of their reports, and that if the authorised representatives of the morning journals were excluded, barristers and solicitors would supply defective and perhaps partial reports.—Mr. ROEBUCK descanted upon the immorality of the middle class of society, and gave it as his opinion that it was quite proof to anything that was likely to be revealed in the Court of Divorce. His own experience led him to agree in the conclusion that "the nicest people had the nastiest ideas;" and as he could not bring himself to believe that any good would result to the public from closing the court, he would vote for the amendment.—Sir G. C. LEWIS complimented the journals upon the care with which they had suppressed the disgusting details of the Divorce Court, and said that he could not give his assent to arming a judge with what was considered to be an unconstitutional power.—Lord R. CECIL and Mr. MACAULAY supported, and Mr. MALINS opposed the Bill, which, on a division, was negatived by 268 to 83.—Mr. MACKINNON obtained leave to bring in his annual Bill to establish equitable *Councils of Conciliation*, to adjust differences between masters and workmen.—Mr. CROOK obtained leave to bring in a Bill to place the employment of women, young persons, and children, in bleaching and dyeing works under the regulations of the *Factories' Acts.*—Mr. HADFIELD obtained leave to bring in a Bill to amend the law relating to the *Conveyance of Land for Charitable Trusts.*—Mr MELLOR obtained leave to bring in a Bill to amend the laws relating to marriages in England and Ireland, and extending certain provisions thereof to persons professing with the *Society of Friends*, called Quakers; and Mr. HUTT obtained leave to bring in a Bill to amend the law regarding *Roman Catholic Charities.* The select committee on *Packet and Telegraph Contracts*, being the same members as those who constituted the committee of last session, was reappointed. The Select Committee on the *Queen's Printer's Patent* was also nominated. The *Tramways (Ireland) Bill* was read a second time.

WEDNESDAY.—*Church-Rates.*—A vast number of petitions were presented against the abolition of Church-rates, one of which, signed by 64 archdeacons against the Bill, was read at length at the table.—Sir J. TRELAWNY then moved the second reading of the *Church-Rates Abolition Bill.* Acknowledging that the subject was one of great difficulty, he referred to the weight of authorities in favour of a settlement of the question, and reviewed the arguments against the abolition of the rate founded upon its legal incidents, contending that it was not, as sometimes alleged, a charge upon the land. The decision of the House of Lords in the "Braintree case" had made an entire alteration in the law of Church-rate, and the amount of rate now levied had been already reduced to 253,000*l.*, and was reducible still further by the exclusion of illegal charges, while the exemption of Dissenters from the compulsory payment of the rate (which the opponents of the Bill were prepared to accede), and making no distinction between them and Churchmen, would have the effect of augmenting the amount of voluntary contributions towards the repair of churches. He pointed out other resources for the diminution of charges, and asked the advocates of the rate whether, in assenting to its abolition, they, upon the whole, gave up much for an object so desirable as the final adjustment of this vexed question.—Sir C. DOUGLAS seconded the motion.—Lord R. MONTAGU moved, as an amendment, that the Bill be read a second time that day six months. It was formerly supposed that this was a question of conscience; but it now appeared, from the evidence of Dissenters, that the conscientious objection had nothing to do with the matter; that it was merely a political objection or a factious agitation, the ultimate aim of which was the severance of the Church and the State. He read portions of the evidence taken by the Committee in support of his position, observing that the ulterior object, to which end a victory over Church-rates would be used as a means, showed that more would be given up by the surrender of the rates than Sir J. Trelawny wished the House to suppose. He insisted that the evidence and the number of petitions proved that the desire for the abolition of Church-rates was not general, and that a feeling was growing up in favour of their continuance.—Mr. R. LONG seconded this amendment and dwelt upon the injustice of sweeping away a fund appropriated by law for the sustentation of churches, without equivalent or compensation.—Sir G. LEWIS said that he was not one of those who took extreme views upon this question, differing on some points from both sides, and he proceeded to explain the reasons which had led him reluctantly to the conclusion that, in the present state of the question, the only course for him to take was to vote in favour of the Bill. He pointed out what he considered as fallacies on either side, and, looking at the proposal to substitute pew-rents for Church-rates, he remarked that he could not understand the objection to resorting to a system of pew-rents, which were Church-rates under another name, and in which he was convinced an equivalent would be found.—Mr. K SEYMER, considering the present position of the Church-rate question, thought the House had a right to complain that a question of so much importance should be left in the hands of a private member. With reference to pew-rents, he believed that members of the Church of England in the rural districts were universally opposed to them.—Mr. BRISTOW said he thought that, both for the interests of the Church of England and the peace of the country, it would be wise and prudent to pass this Bill abolishing a compulsory Church-rate, which was an annually recurring cause of strife and ill will.—Mr. DISRAELI wished to put before the House a view of this question which had not been at all considered—viz., the extremely centralising character of the measure, which called upon a central authority to interfere with the parochial constitution, at least 10 per cent. of the parishes not wishing to be interfered with. He looked, he said, with great jealousy upon a central authority interfering with a constitution that had existed for centuries, and had been productive of beneficial results. The object was no longer to redress a practical grievance, but to adopt a speculative theory. Heretofore legislation upon this question was proposed to be based upon a conscientious scruple; but that basis was now abandoned, and the real question was whether there should be an Established Church. Although this issue was not necessarily put before the House upon this occasion, they had it in clear evidence that it was the real issue; and, believing that this measure would revolutionise the parochial constitution of the country, he should give it his hearty opposition.—Lord FERMOY denied that the abolition of Church-rates would interfere with the connection of the Church and the State. This measure would only do in England what had been done in Ireland—it would get rid of contests and heartburnings, and the Church of England would be stronger than before.—Mr. PACKE and Mr. HUBBARD spoke in opposition to the Bill, and Mr. THOMPSON in its support.—Sir J. TRELAWNY replied, and, the House having divided, the amendment was negatived by 263 to 234, leaving a majority of 29 in favour of the Bill, which was read a second time. The *Public Improvements Bill* was read a second time.—Mr. JOHN LOCKE moved the second reading of the *Attorneys and Solicitors' Bill*, explaining the clauses.—Mr. BOVILL suggested the postponement of the second reading. The debate was ultimately adjourned.—Sir H. CAIRNS obtained leave to bring in a Bill (No. 2) to amend the law relating to *Endowed Schools.*

THURSDAY.—Lord C. PAGET announced that he intended to move the *Navy Estimates* on Monday evening. *The China Expedition.*—In reply to Mr. S. FITZGERALD, Lord J. RUSSELL said that no convention had been entered into between the Governments of England and France to regulate the combined operations of the allied forces in China, or to determine the demands to be made by both Governments on that Power.—Mr. S. HERBERT stated, in reply to Mr. O'BRIEN, that the expedition about to be sent to China from India would be provided with rifles for the European soldiers and with smooth bores for the natives. *The Financial Statement.*—In answer to Lord H. LENNOX, Lord PALMERSTON said that he was as yet unable to say whether it would be in the power of the Chancellor of the Exchequer to make his financial statement, which from its nature must be of some considerable duration, before Monday, but that in any case the treaty with France would be laid upon the table as promised. At a later period of the evening Lord PALMERSTON announced that he had received a communication from the Chancellor of the Exchequer to the effect that the right hon. gentleman felt confident that he would be in his place to make the financial statement on Friday evening.—In answer to Mr. J. LOCKE, Sir G. LEWIS said that the Government had a measure in preparation to regulate the manufacture of *Fireworks in the Metropolis.*—Mr. MILNES obtained leave to bring in a Bill to amend the act for the *Registration of Voters* for Members to serve in Parliament.—Sir F. KELLY moved for leave to bring in a Bill for the *Prevention of Bribery*, and to amend the "Corrupt Practices Prevention Act of 1854." He stated that the Bill proposed that no payments in respect of any election should be made except through the election auditor; that every member should make a solemn declaration at the table that he had not paid and would not pay, any money except for legal purposes; and that, should the declaration prove to be false, the member making it should not only be liable to the usual penalties for perjury, but should ever after be disqualified from sitting in the House of Commons.—After some discussion, in which Sir F. GOLDSMID, Mr. E. JAMES, and Mr. MALINS took part, leave was given to bring in the Bill.—Mr. VANSITTART moved for a select committee to inquire into various questions connected with the *Finances of India.*—Sir C. WOOD said that most of the objects contemplated by the motion had been anticipated by the Government, and that no good could result from the appointment of the committee.—After a desultory debate, Mr. VANSITTART withdrew the motion, observing that he was quite satisfied with the discussion which he had elicited. *The Ballot.*—Mr. T. DUNCOMBE moved for leave to bring in a Bill providing that, at the election of members to serve in Parliament for Gloucester and Wakefield, the electors thereof give their votes by way of ballot.—Sir G. LEWIS opposed the motion, and said hs could not understand why a measure which was alleged to be so good should be applied in a penal sense to two boroughs only, and not be extended to every constituency throughout the empire.—Mr. CROSSLEY, Mr. ROUPELL, Mr. B. CARTER, and Mr. CHILDERS supported the motion; Mr. A. MILLS and Mr. BENTINCK opposed it.—Lord PALMERSTON said he had always opposed the ballot on general principles, as he considered that, instead of being an improvement on the existing system of taking votes, it would damage and degrade the national character. He could not see in it any security against corruption, while he felt persuaded that its direct tendency would be to increase and generalise the evil which they desired to check.—Mr. DUNCOMBE having replied, the House divided, when the motion was negatived by 149 to 118. The Select Committee on *Anchors, &c. (Merchant Service)*, was nominated. *Parliamentary Elections.*—Mr. COLLIER obtained leave to bring in a Bill to prohibit the payment of the expenses of conveying voters to the poll, and to facilitate polling at elections.

FRIDAY.—*The Treaty with France.*—Lord J. RUSSELL laid on the table the commercial treaty with the Emperor of the French. *The Budget.*—On the motion for going into a Committee of Ways and Means, the CHANCELLOR of the EXCHEQUER rose to make his Financial Statement. He said that events had rendered 1860 one of the most important years in the history of this country. They had the fact that they were relieved from no less than 21,146,000*l.* of the national debt, a result that had never occurred in a single year in the past, and which he believed would never again occur in any single year in the future. The duties of 12,000,000*l.* a year levied on tea and sugar would lapse with the present year unless they were renewed; and the Income-tax, amounting to between 9,000,000*l.* and 10,000,000*l.*, was also about to lapse. They had, in addition to these important features of the present year, to consider the commercial treaty between her Majesty and the Emperor of the French, and the alteration it would introduce into the financial system of this country if it received the sanction of the House. He was prepared to state that the general result of the financial year would be satisfactory. The military expenditure, including the China expedition, would amount to 15,800,000*l.*, being an increase of 3,618,000*l.* over the estimates of last year. The total expenditure of the year he estimated at 70,100,000*l.* The total income, assuming that the House would renew the taxes on tea and sugar, he estimated at 60,700,000*l.*, showing an apparent deficit of 9,400,000*l.* The Succession duty had failed to produce the amount expected, but the results of the Income-tax showed that there had been an increase in the wealth of the country, to the extent of 16½ per cent., in the present year. To meet this deficiency of 9,400,000*l.* he should ask the House to continue the duties on tea and sugar as they now stand for 15 months. He would now come to the commercial treaty with France, which he would recommend for the adoption of the House. France engaged to reduce the duties on English coal and coke, flax, and pig iron, in 1861. On 1st October, 1861, France would reduce duties and take away prohibitions on British productions mentioned, on which there was an *ad valorem* duty of 30 per cent. There was a provision that the maximum of 30 per cent. should, after the lapse of three years, be reduced to a maximum of 25 per cent. England engaged, with a limited power of exception, to abolish immediately and totally all duties on manufactured goods, to reduce the duty on brandy from 15*s.* to 8*s.* 2*d.*, on wine from 5*s.* 10*d.* to 3*s.*; with power reserved to increase the duty on wine if we raised our duty on spirits. England engaged to charge upon French articles subject to excise the duties to the same amount which the manufacturer would be put in consequence of the changes. The treaty was to be in force for 10 years, and its general result would be that the relief to the consumer would be 1,737,000*l.*, entailing a loss to to the revenue of 11,19,000*l.* He had also to propose a further change in the Customs, which would entail a loss to the revenue of 910,000*l.*, giving at the same time relief to the consumer of about 1,040,000*l.* He proposed to abolish the duty on butter, which yielded 95,000*l.* a year; on tallow, which yielded 87,000*l.*; on cheese, which yielded 44,000*l.*; on oranges and lemons, which yielded 32,000*l.*; on eggs, which yielded 22,000*l.*; on nuts, which yielded 11,000*l.*; and on other articles, yielding altogether 382,000*l.* He proposed to reduce the duties on timber from 7*s.* 6*d.* to 1*s.* and 2*s.*; on currants from 15*s.* 9*d.* to 7*s.*; on raisins from 10*s.* to 7*s.*; on figs from 10*s.* to 7*s.*; and on hops from 45*s.* to 14*s.* To meet these reductions he proposed to levy on all goods imported or exported a duty of one penny per package for registration, and on goods in bulk, in accordance with the unit under which they were entered. He calculated that this would produce 300,000*l.* a year, and would not involve the detention or examination of goods. He also proposed to levy a small rate on certain operations in warehousing, such as removing, packing, mixing, &c. From that measure he thought 120,000*l.* a year might be raised. He also proposed 6*s.* a cwt. on chicory, or any other vegetable matter prepared for mixing with coffee, and upon that point he should ask the committee to propose a vote that night. He proposed stamps on notes for the sale of colonial and dock warrants, a license on eating-houses, under whatever name they might be carried on, giving them the permission of selling wine and beer, and doubling the duty if they were kept open after 12 o'clock at night. Stamps on various other small articles would be imposed. He proposed, under certain modifications, to reduce the game certificates, to remove the stamps on cheques, to repeal the duty on paper, and the impressed stamp for newspapers. These remissions would give four millions of relief, and create a deficiency of nearly nine and a half millions. Against that he proposed to take up the malt duties, and to impose an income tax of 10*d* in the pound over 150*l.* a year, and 7*d.* in the pound under 150*l.* Three quarters of that amount would be collected this year. After a general review of the whole of the propositions, the right hon. gentleman contended that they were of the highest importance, morally, socially, politically, fiscally, and economically, and resumed his seat at 10 minutes to 9. [Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 94⅞ to ½ for Money, and 91½ to ⅝ for the 8th of March; Bank Stock, 231 to 230½; Three per Cents. Reduced, 94⅜ to 94¼; New Three per Cents., 94½ to 94⅝; India Stock, 220; Indian Five per Cent.

Stock of 1859, 102⅞ to 103¼; Five per Cent. Enfaced Rupee paper, 97¼ to 97½; Do. Five and a Half per Cent., 104 to 103½; Indian Four per Cent. Debentures of 1858, 97½; India Bonds, 3s. prem.; Exchequer Bills, 23*s.* to 25*s.* prem.—FOREIGN: Brazilian Four and a Half per Cents., 1852, 94; Ditto Five per Cents., 1843, 94; Buenos Ayres Deferred, 22½; Dutch Two and a Half per Cents., 66; Russian Four and a Half per Cents., 97¾ to 97⅞; Ditto Three per Cents., 1859, 65 to 65⅛; Spanish Three per Cents., 44⅜; Ditto New Deferred Threes, 33⅜; Do. Passive, 11¼; Turkish [Six per Cents., 1858, for Acct., 65½ to 65¾; Ditto Guaranteed Four per Cents., for Acct., 102 ex div.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,803,400	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion	14,328,400
		Silver Bullion	—
	£28,803,400		£28,803,400

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,171,190
Rest	3,429,945	Other Securities	20,061,216
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,304,217	Notes	7,448,700
Other Deposits	14,301,686	Gold and Silver Coin	648,917
Seven day and other bills	750,175		
	£39,330,023		£39,330,023

9th day of Feb., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — A. C. AYRES, Ramsgate, Surgeon and Apothecary—J. BARTON, Portsea, Brewer—I. H. BEDFORD and H. LIGHTON, Birmingham, Cut Glass Manufacturers—E. ELLIOTT, Berwick-upon-Tweed, Quarryman—G. GYNNE, Wardour Street, Soho, Cabinet Maker—D. HALSTEAD, Manchester, Worsted Dyer—C. JONES, jun., Margaret Street, Cavendish Square, Coach Builder—W. MYNN, Queen's Head Yard, Borough, Hop Merchant—R. NASH, Wolverhampton, Innkeeper—G. NINER, Union Street, Spitalfields, Wholesale Clothier—T. PHILLIPS, Birmingham, Engraver.

BANKRUPTCY ANNULLED—D. RICHARDS, Tredegar, Draper.

FRIDAY—BANKRUPTS—W. BRACEWELL, Coates, Yorkshire, Cotton-spinner—G. DAFT, New Lenton, Lace Manufacturer—E. GENN, Rotherham, Yorkshire, Grocer—B. GREEN, Fillingham, Lincolnshire, Corn Dealer—W. HOYLE, jun., Holmfirth, Yorkshire, Cloth Manufacturer—T. IRVING, Nottingham, Travelling Draper—S. LAMPARD, 15, Queen Street, Portsea, Plumber and Glazier—W. MILLER, Deptford, Coffee and Lodging House Keeper—J. MORRISON and L. O. ABELIN, Liverpool, Ship Chandlers—T. L. STORY, Thrapston, Northamptonshire, Tailer and Draper—C. WILKES, Hoxwich, Staffordshire, Miller.

SCOTCH SEQUESTRATIONS—W. DARBY, otherwise known as PABLO FANQUE, Glasgow, Equestrian—G. A. M'GREGOR and COMPANY, Glasgow, Pastry Bakers——D. MATHIESON, Glasgow, Lime Merchant—J. REID, now deceased, Mains of Cults, Aberdeenshire, late Farmer.

Metropolis and its Vicinity.

PRIVATE PROPERTY IN TIME OF WAR.—A deputation from Liverpool, Bristol, Manchester, Leeds, Hull, Belfast, and Gloucester had an interview with Lord Palmerston on Friday, to present a memorial in favour of the proposed exemption of private property from capture at sea in time of war. Lord Palmerston in reply said that he would not flatter the deputation by professing to agree with them. He considered the very existence of this country depended on its possessing the command of the seas, and that it was necessary for that object to retain the power of seizing the ships, and especially the seamen navigating the ships of foreign Powers. War was an enormous evil, but still it was sometimes necessary to go to war in self-defence; and a naval Power like England ought not to surrender any means of weakening her enemies at sea. If we did not seize their seamen on board their merchant vessels, we should have to fight them on board their ships of war. He denied that private property was spared in war on land any more than in war at sea. On the contrary, armies in an enemy's country took whatever they wanted, or desired, without the slightest regard to the rights of property, as we should find to our cost if a hostile army should ever succeed in landing in this country.

COURT OF LIEUTENANCY.—A Court was held on Monday at Guildhall, the Lord Mayor in the chair, for the purpose of confirming the appointment of the Duke of Cambridge as Colonel of the London Rifle Corps, and for the transaction of other business connected with that body. The proceedings were carried on with closed doors, but it is understood that the appointment of his Royal Highness was unanimously confirmed, and referred to the Queen for her Majesty's approval. The appointment of the majors, adjutants, lieutenants, and ensigns of the Corps was referred to a committee of the Court, with directions to examine the candidates and report upon their qualifications at the next meeting. Mr. Herbert Lloyd, Deputy-Governor of the Irish Society, moved, "That the reporters of the daily press be admitted to the deliberations of the Court." Mr. Norris, M.P., seconded the motion. Mr. Laurie moved "The previous question," which was seconded by Mr. Deputy Holt, and carried after considerable discussion. The business of the Court will therefore continue to be transacted in private.

GREAT SHIP COMPANY.—The adjourned meeting of this company was held on Tuesday, when Mr. Baker, the chairman of the Committee of Investigation, read the report of the committee. The report was to the effect that the committee had to lament that they had lost in Captain Harrison a material witness, and had examined a great number of persons; but, from their want of power to obtain evidence under the sanction of legal process, and to compel the attendance of witnesses, the information they had obtained had been so conflicting or *ex parte* that they did not feel warranted in passing a judgment which might either exonerate or implicate individuals connected with the management of their affairs. At the same time they had arrived at the conclusion that the interests of the company required that they should be intrusted to an entirely new Board, not exceeding seven members, and consisting of the Marquis of Stafford, Captain C. E. Mangles, Mr. H. T. Hope, Mr. Samuel Baker, the Hon. Captain Carnegie, R.N., Mr. J. Rodney Croskey, and Mr. Daniel Gooch. The committee recommended that the directors be authorised to borrow 50,000*l.*, in addition to the moneys already owing by the company; that the nominal capital be increased from 330,000*l.* to 430,000*l.*; and that full powers be vested in the Board to raise, by mortgage, debentures, preference shares, or otherwise, such additional capital, if necessary. The ship requires an estimated outlay of not more than 30,000*l.*, to send her on a voyage to America, equipped in accordance with the just requirements of the Board of Trade. Her cost to the proprietors would then be about 380,000*l.*, fitted for sea, which was less than 17*l.* per ton, and the committee were of opinion that under an united and energetic management she must become profitable. The committee strongly recommend to the new Board a careful economy, both at the company's offices and on board the ship. Mr. Baker concluded by moving that the report be received. The Rev. Mr. Nicholson having seconded the motion, a discussion of considerable length followed, after which the motion for the adoption of the report was carried. A resolution expressive of sympathy with the widow and mother of the late Captain Harrison having been passed, the chairman proposed that the noblemen and gentlemen recommended in the report of the committee be requested to act as directors. The resolution having been seconded, was, after considerable discussion, carried unanimously. A resolution was then agreed to empowering the directors to raise the necessary sum required, and a vote of thanks was given to the Committee of Investigation.

RENEWED RIOTS AT ST. GEORGE'S-IN-THE-EAST.—There was another fearful riot in the parish church at the service of Sunday evening. The mob began to assemble as early as 6 o'clock. Cannon Street Road was almost impassable, and when the gates were thrown open there were at least 4000 people waiting for admission. The rush was terrific, but no accidents of any kind occurred owing to the tact with which the police who were stationed outside managed the mode of admission. There was no refusal to "suspected" or other persons, and all who presented themselves were allowed to go in until the church was so densely packed that it could hold no more. The mob then commenced howling and yelling of the most audacious kind, and continued it without cessation until the priests and choristers walked in procession to their seats in front of the altar. At this time a perfect storm broke out, cries of "Fire" were raised, in order to cause dismay, and several of the gaslights were turned out. Mr. Churchwarden Thompson, on whom the whole of the constabulary arrangements inside the church devolved, obtained the assistance of some of his friends, and forcibly ejected some of the ringleaders from the church, leaving them, when outside, to be dealt with by the police. At the time for reading the lessons, the Rev. Edward Stuart, M.A., incumbent of St. Mary Magdalen, Munster Square, ascended the desk, and was greeted with shouts of "Off, off," "Puseyite," and "No Popery." At this moment, a body of men and boys in the north gallery began singing "Rule Britannia," the chorus, "Britons never will be slaves," being taken up with tremendous energy by persons in other parts of the church. Others mimicked the reader, and the whole congregation was in a state of the highest possible excitement. Lucifer matches were struck, orange-peel thrown about in every direction, and there is reason to know that fireworks were introduced into the church, and would doubtless have been used had it not been for the determined conduct of the churchwarden. The Rev. F. G. Lee, the former curate, was the preacher, and when he ascended the pulpit dressed in a simple surplice, he was assailed by a perfect hurricane of abuse. The most filthy epithets to which the human tongue could give expression were hurled at him, in addition to the more polite recommendations to "Go down," and "Be off." "No Popery," and "Go to Rome." Nothing could be heard of his sermon by those who were within half-a-dozen yards of the pulpit, and soon after he had commenced, the mob struck up with great vehemence, "We won't go home till morning," upon which Mr. Lee stopped. After a lengthened pause he asked whether he should go on, and received a loud shout in the negative. He exclaimed, "I will," and then proceeded to defend the conduct of Mr. King, the rector; said he had made concessions which had only made the mob worse, denounced the conduct of the people before him as sacrilegious, said that those who made these disturbances were unworthy of the name of Englishmen, and argued that Mr. King was acting constitutionally and legally in the course he had adopted. These remarks did not at all improve the temper of the mob, who hissed and yelled, shouted, slammed doors, and so effectually drowned the preacher's voice that, though he spoke for 40 minutes, not another word he uttered was heard. At the close of the sermon not 50 people left the church, and there was every desire to repeat the scene which was enacted on the previous Sunday evening of pelting the altar with any articles which could be conveniently hurled against it, but in this respect Mr. Churchwarden Thompson was too much for them, as prior to the opening of the church for the evening service he had removed the cross and other ornaments from the altar, and had caused every hassock, cushion, book, or other article which could have been used in this manner to be removed. Being unable to amuse themselves in this way the people sang songs—some of them the Doxology, while fights were going on in every part of the building. The bannisters of the reading-desks were broken down, but the altar fortunately escaped. When this state of things had continued about half an hour after the close of the service, Mr. Inspector Alison entered the church with a body of police and began the process of clearing out, an operation which lasted nearly an hour. Summonses have since been issued against some of the parties who have been identified as having taken part in the disturbances, and it is understood that they will be prosecuted under the act of Queen Mary, which has not been repealed [as many persons have supposed.

THE BUILDERS' STRIKE.—At a general meeting of Master Builders on Tuesday, it was unanimously resolved that as the objects contemplated by the declaration have now been accomplished, its further administration is unnecessary; and that in lieu thereof the suggestions of Lord St. Leonards be adopted. It was also resolved to give every support to the Workmen's Institute.

NEWSPAPERS FOR AUSTRALIA AND NEW ZEALAND.—The Postmaster-General has given notice that the Australian colonies have offered to pay the cost of transit through Egypt of newspapers sent to Australia viâ Southampton and Suez, and that the additional penny levied on these newspapers since the beginning of the present year has therefore ceased. The additional penny on newspapers to India and all other places eastward of Suez will remain as at present.

THE PUBLIC HEALTH.—The Registrar-General's weekly return states that the deaths registered in London in the week that ended Saturday, Feb. 4, were 1389. In the corresponding week of the 10 years 1850-59 the average number was 1205; which, if raised in proportion to the increase of population, will become 1326. The present return is therefore 63 above the average. During the week the births of 1003 boys and 940 girls, in all 1943 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1693.

Provincial.

CARLISLE.—On Friday last one of the most mysterious cases of concealment of death, if not something worse, that ever came to the knowledge of the public was brought to light in this city. On the 21st March, 1859, a large box was brought to the Bush Hotel, Carlisle, by a porter in the service of the Caledonian Railway Company. The porter produced his book, from which it appeared that the box had been sent from Paisley on the 18th of the same month. Two shillings were charged for the carriage, which was paid by Miss Bishop, the bar-maid, and the box was taken into the house. On the lid was nailed a piece of paper, on which was written in a very indifferent and clumsy manner the following address:—"This side up.—Mrs. Loudon, Bush hottell, Carlisle." The box remained in the house for some time, but as no one came to claim it it was removed to the market room in the yard, where it has since remained unopened and unclaimed till the present time. A few days since the landlord, having found that a lady named Loudon was living in the neighbourhood requested her to call and see if the box was intended for her. Mrs. Loudon's niece accordingly called and expressed her belief that it could not be for her aunt, but suggested that they should open it. The box was then opened and was found to contain a coffin. The police were immediately sent for, and on removing the lid of the coffin the body of what appeared to have been a very fine child, about three years of age, was discovered, but so completely dried by having been kept in a dry place, that in colour and substance it resembled a mummy. There was no fracture in the skull or bones, and on examining the intestines and stomach, the medical men found no indication of metallic or other poison. The city police have communicated with the police at Paisley, where inquiries will be made with a view to discovering the party who booked the box to Carlisle. It is also intended to have the coffin photographed, and copies sent to Edinburgh, Paisley, and other police establishments in Scotland, as the coffin is of such peculiar construction that it might be easily identified by the maker on account of the embellishments on the lid, and thereby furnish a clue to the discovery of the parents or others concerned in the matter.

COVENTRY.—On Tuesday morning a small butcher residing at Hillfields, in this city, murdered his wife by cutting her throat, and then committed suicide by stabbing and cutting himself with a knife and afterwards shooting himself through the head. The man had long been known by his violent and hasty temper, and on account of some suspicions which he entertained of his wife had separated from her for 13 years, during which time he went to America. They had only been living together again for about five months, and are believed by the neighbours to have led a most unhappy life.

DURHAM.—Another clerical elopement has just taken place in this city. The Rev. William Prosser, curate of St. Nicholas Church, who was married only a year ago to an accomplished young lady, has eloped with a woman who was formerly an inmate of the Penitentiary, with which he was officially connected. The girl on leaving the Penitentiary lived for a short period in the

service of Mr. Prosser, where it would appear from a correspondence which has since been discovered that an adulterous intercourse first took place between them. Upon the rev. gentleman's recommendation she was afterwards taken into the service of the Rev. H. Chaytor at Croxdale Parsonage. A few days since Mr. Prosser, being on terms of intimacy and friendship with Mr. Chaytor, went over from Durham on a visit, ostensibly for change of air and rest. It was while residing there that his improper intimacy with the servant was found out, and the discovery was of course speedily followed by his dismissal from his curacy. On Thursday week the curate and the girl went off together in a fly to Ferryhill Station, and proceeded southward by railway. Mr. Prosser though quite young had achieved considerable popularity as a preacher, and had hitherto been regarded as a pattern of piety and purity. He had become such an especial favourite among his congregation that on the Saturday before Christmas Day the young ladies connected with the Bible class presented him with a writing desk and inkstand as a mark of their respect and esteem.

OXFORD.—The Rev. F. W. Hope, in addition to the large donations which he has already made to the University, has now offered to endow a professorship of Invertebrated Zoology.

READING.—A daring escape of two convicts from a railway train while in motion occurred shortly after 4 o'clock on Saturday morning, on the Great Western line between Reading and Twyford. It appeared that 13 convicts under order of removal from Dartmoor prison to Chatham had been placed in the train in two lots, nine being under the charge of two officers, and the remaining four with one officer occupying two separate compartments in a second class carriage. The convicts were fastened to each other with the usual irons, and were all orderly and quiet, nothing occurring to excite suspicion that any contemplated effecting an escape. The train left Reading soon after 4 o'clock, and when three miles distant from the town two of the convicts, named John Brown and Robert Bevill, suddenly jumped from their seats and leaped through the window of the door, the train at the moment running at the rate of 30 miles an hour. Ths two officers in charge then discovered that both of them had managed to slip the irons from off their wrists, and were therefore not shackled in any way in their movements. On the arrival of the train at Slough, it was supposed that the convicts must either have been killed or injured, and the wheels of the carriages were examined to see if blood was discernible. None, however, could be traced, and it was therefore imagined that they were not killed, but that they might have sustained such injuries as to disable them from getting far away. Telegraphic messages were forwarded to the borough and county police, and on Saturday morning the chief constable of the county gave directions for the men to examine the woods and thickets between Reading and Maidenhead. This order was executed on Saturday and Sunday last, but without any trace having been found, or any information obtained of the missing convicts. On Sunday evening however both men were apprehended in the streets of Reading, one wearing a smock-frock over his prison dress, and the other a woman's cloak, and a shirt, which they had stolen from a cottage at Woodley. They were not captured without difficulty, but on being lodged in the police station they at once admitted that they were the escaped convicts. The magistrates on Monday remanded them to the county gaol for communication to be made with the authorities.

SCILLY ISLANDS.—During a violent gale on the 30th ult., 14 or 15 panes of plate-glass (5-8ths thick) in the Bishop Rock lighthouse were broken, the large brass ladder outside, and the fog-bell suspended to the gun-metal gallery round the lantern, from 120 to 130 feet above the sea, being carried away. This bell weighed 4 cwt., and could be heard a mile off in calm weather. The lighthouse was flooded, and shook so much that earthenware fell from the cupboards. On Wednesday last boats went from St. Mary's, but it was impracticable to land. Letters, however, were passed off by ropes, and the damage is roughly calculated at 1000*l*.

SOUTHAMPTON.—In pursuance of a warrant from the Secretary of State the magistrates of this town have entered into a minute examination of the charges against Lane and Hires, the two mates of the American barque Anna. The examination lasted three days, and the Mayor on Friday announced as the result that there was sufficient evidence to commit the prisoners for trial on charges of several murders. They have accordingly been committed to gaol, and will now be handed over to the American Consul to be sent to the United States for trial.

Ireland.

THE IRISH JUDICIAL BENCH.—It is stated that Mr. Justice Perrin has sent in his resignation to the Government. As yet nothing certain is known as to his successor in the Court of Queen's Bench, but there is a rumour that the Attorney-General will accept the appointment thus vacated.

NATIONAL SYSTEM OF EDUCATION.—The following is Mr. Cardwell's letter to Archbishop Cullen communicating the answer of her Majesty's Government to the memorial of the Roman Catholic Bishops for a separate grant for the education of the Roman Catholic portion of the community:—

"Irish Office, Nov. 28, 1859.

"Most Rev. Sir,—Her Majesty's Government have taken into their deliberate consideration the memorial of the Irish Roman Catholic Archbishops and Bishops, addressed to the Lord-Lieutenant. They have entered upon that consideration with an earnest desire to promote, to the utmost of their power, the welfare of the Irish people, and especially of that large portion of the people which belongs to the Roman Catholic Church. In dealing with the subject of education they readily acknowledge the paramount importance of religious training. They admit that, in the circumstances of Ireland, this religious training must be separate, and can only be superintended with success by teachers of the different Churches into which the country is divided. They therefore cheerfully recognise the right which belongs, and the duty which attaches, to the heads of the respective Churches in regard to religious instruction, and desire to afford to the clergy every possible facility and encouragement for the discharge of their important duty. But there is another province of education, not so sacred in its character, yet making large demands on the time of pupils destined to earn their subsistence by their own labour. This province is common to all denominations. All may freely be admitted to its generous rivalry, and all may contribute by their friendly intercourse to enhance the advantages which the system confers on the community. In Ireland Parliament assigns a considerable sum to the purpose of national education, and as this sum is drawn from taxes contributed by all, so it is devoted to an object in which all are equally concerned, the institution and maintenance of schools, where an excellent instruction is offered equally to every denomination of Christians. In the benefits conferred by such an application of the public money the Roman Catholics largely participate. Of the total number of 5335 schools mentioned in the last report of the commissioners as in connection with the Board in March, 1858, and educating in the whole 569,000 pupils, 3683 schools were under Roman Catholic patrons, and 481,090 pupils belonged to the Roman Catholic Church; of every 100 pupils in attendance 84 were Roman Catholics; of the teachers of all classes in the service 80 in every 100 were Roman Catholics; of every 100*l*. paid to those teachers 80*l*. were paid to Roman Catholics. In the schools of which the patrons are Roman Catholics the religious instruction is Roman Catholic; while in all the schools vested in the National Board Roman Catholic pastors have free access before and after school hours for the purpose of giving instruction to the pupils of their own Church. For this instruction every facility is offered. All the State requires is, that during school hours a good education, open to all Christians, should be given, and that no child should at any time be required to receive or be present at any religious instruction of which his parents or guardians disapprove. This system has now been in operation nearly 30 years. It has educated a whole generation, and is universally admitted to have conferred the greatest benefits upon the population of Ireland. Its maintenance must ever be an object of the utmost interest to a Government anxious to promote the welfare and the happiness of the Irish people. In replying, therefore, to the memorial of the Irish Roman Catholic Archbishops and Bishops, her Majesty's Government desire, in the first instance, to express in the plainest terms their steadfast adherence to the principles on which the National system of education has been erected. Those principles were clearly laid down by the Earl of Derby, then Secretary for Ireland, in the well-known letter addressed by him to the Duke of Leinster in the year 1831. They secure to the clergy their legitimate right of conveying religious instruction to the members of their respective Churches, while at the same time they sustain the just independence of the laity, whether Roman Catholic or Protestant. They have been repeatedly and deliberately considered in Parliament, and constitute the recognised conditions on which education in Ireland receives assistance from the State. Her Majesty's Government observe with regret that some of the demands preferred in the memorial are wholly incompatible with the maintenance of these principles. If those demands were conceded, the National system would be overthrown, and a system of sectarian education substituted for it, calculated to revive social divisions in Ireland, and to stimulate feelings which it is the object of every just and liberal Government to allay. Ever since the commencement of the National system, claims which have appeared to be open to a similar objection have been put forward in other quarters, and have been steadily resisted by successive Administrations. What the Ministers of the Crown, with the approbation of Parliament, have not yielded to the applications of others not less entitled to be listened to with respect they cannot now concede in answer to the present memorial. Remembering the support which from the commencement to the present time the Roman Catholic clergy have given to a system instituted mainly for the benefit of the poor, of whom their flocks have always constituted by far the larger number—looking to the large portion which schools under Roman Catholic patronage obtain of the grant, as at present administered—considering, above all, the inestimable advantages which the Roman Catholic population have enjoyed, and are enjoying, from the system of National education, her Majesty's Government cannot abandon the hope that the spiritual guides of that population will not only abstain from opposing, but will continue actively to support a system so liberal and so enlightened, and will give to it with their flocks the weight of their authority and influence. They observe that in your memorial you complain of an interference with the proper functions of the clergy. The principles recorded in Lord Derby's letter appear to afford no opening for any such complaint. If any grounds for it exist in practice, the members of any Church are entitled to bring their grievance to the notice of those in authority. From whatever quarter such a representation might proceed, it would not fail to receive the most careful attention. It certainly would not fail to do so when made by the spiritual pastors of by far the larger number of pupils receiving education in the schools. While, therefore, I convey to you, on the part of her Majesty's Government, the declaration of their firm adherence to a system of education open equally at the hours set apart for secular instruction to every denomination of Christians, I declare to you with equal plainness their desire to give full effect to that other principle of the system which provides for separate religious teaching and respects in the case of every child the just authority of the parent. Consistently with these principles, they are perfectly ready to examine, and, if need be, to remove the ground of any complaint which the heads of any of the Churches may prefer against the operation of any of the present rules, or of any part of the present practice. At the close of your memorial you refer to grievances which you consider to have grown up under the administration of the Poor Law. The duties of the commissioners are defined by statute, and they are responsible for the exercise of the powers conferred on them by Parliament. If those duties have been neglected, or those powers abused, an appeal is open to the tribunals of public justice, or to the authority of the Crown, according to the circumstances of the case.—I have the honour to be, with much respect, most Rev. Sir, your most obedient faithful servant, EDWARD CARDWELL."

IRISH COLLECTION FOR THE POPE.—Dr. Cullen, the Roman Catholic Archbishop, issued a letter last week, which fills nearly three columns of the journals, authorising the clergy and laity to make a collection of money for the Pope in aid of the exhausted treasury at Rome Dr. Cullen states that the Pope is "now brought to a state of great embarrassment by the ambition of Princes, the intrigues of unprincipled statesmen, and rebellion of some of his ungrateful subjects," and that it is a duty "to aid in supplying him in his present difficulties with the means for the administration of the spiritual affairs of his Catholic children spread over the whole world." He concludes by stating that in order "to encourage all to pray more fervently for the Pope, a portion of the wood of the Holy Cross, lately given by his Holiness to the Archbishop, will be exposed before Lent to the devotion of the faithful in the metropolitan church, as will be set forth in a special notice for that purpose." In accordance with this order the collection took place on Sunday, when the sum of 207*l*. was collected, of which amount Dr. Cullen himself contributed 100*l*.

MURDER IN MAYO.—On the night of the 1st inst Alexander Hawson, a ploughman in the employment of Lord Plunkett at Tourmakedy, county Mayo, was murdered on the road from Port Royal to his own house. He was found quite dead by his wife at midnight, his breast being completely riddled by slugs. He was an inoffensive man, the only ground of complaint against him being that a short time ago he prosecuted to conviction a poacher on Lord Plunkett's estate. Tourmakedy or Partry has for more than a year been in a very disturbed state, but though there have been many outrages, this is the first murder. Four men have been arrested on suspicion, one of whom, a man named Lolly, has been declared accessory to the murder by the coroner's jury. The wadding of the gun used by the assassin served to trace the crime. The prisoner is a Roman Catholic, and a herd to Lord Plunkett.

Scotland.

MONUMENT TO DR. DICK.—A beautiful monument of Peterhead polished granite, from a design by Mr. Scott, of Dundee, and executed by Mr. Wright, of Aberdeen, has just been erected in Broughty Ferry, in memory of the late Dr. Dick. It consists of an obelisk, 14 feet high, upon a pedestal of a corresponding character bearing the following inscription;—"In memory of Thomas Dick, LL.D., author of 'The Christian Philosopher,' &c. Born 1774. Died 1857."

SCOTTISH PROTESTANT REFORMATION.—The tricentenary of the Scottish Reformation is to be celebrated in Edinburgh by a great meeting or series of meetings, in August next. A committee for making arrangements is at present sitting in Edinburgh, and it is expected that deputations, not only from the various parts of Scotland, but also from England, Ireland, the Continent, and America will be present. Although the great demonstration will take place in Edinburgh, it is expected that the tricentenary will also be celebrated in numerous places throughout the country.

Railways.

METROPOLITAN UNDERGROUND RAILWAY.—This scheme, which has been for so many years before the public, is at length commenced. Shafts are in progress at several places along the line; one of them on the unoccupied piece of land at King's Cross, near the Great Northern station, and another near Euston Square. When a sufficient depth has been reached, the excavators will tunnel in the direction of the Euston station, with which a junction will be effected. At King's Cross a junction will be made near the first bridge which crosses Maiden Lane. These side branches will be on a level with the railways with which they communicate, but they will join the main or trunk line beneath the New Road, 25 feet below the thoroughfare. At the Paddington station a commencement has also been made, and the junction as in the other cases will be above ground. From Paddington to Euston Square the works have been contracted for by Messrs. Smith & Knight; the remainder of the work has been undertaken by Mr. John Jay. The whole distance between Paddington and the Bagnigge Wells Road will be tunnelled, but at this latter point the line will run on a level, or in an open cutting, as the nature of the ground may require. As at present arranged, the line will have its City terminus in New Victoria Street; but it is probable that before the line is completed powers will be obtained by the Corporation of London which will give to the railway the power of diverting a portion of the line to Smithfield, and providing it with a good station in connection with the proposed dead meat markets to be constructed there by the City of London. In constructing the line, the course will be as nearly as possible along the centre of the New Road, now occupied by the main sewer, and it is considered probable that the sewer will have to be removed, and reconstructed on one side of the line. The railway will be provided with two lines of rails, on the mixed gauge, so as to be available for carriages of the broad as well as of the narrow gauge, and the heavy goods traffic will be carried on during the night. The passenger carriages will be lighted with portable gas, and everything will be done to make a journey 25 feet below the surface of the ground as pleasant and comfortable as possible. About two years will be occupied in making the line.

THE PROPOSED RAILWAYS IN THE CITY.—At a recent meeting of the City Commission of Sewers a report was read from the General Purposes Committee stating that the committee had referred to the sur-

veyor of the commission the plans relating to the Smithfield Market Improvement and Approaches Bill, the Thames Tunnel Railway Bill, the Dover and Chatham Extension Bill, and other Bills of which notices had been given for the present session of Parliament, and which were intended to affect the City of London, and recommending that the Court should dissent from the whole of those Bills, in order to place itself in a position to oppose in committee if it be thought advisable to do so. In the course of the discussion it was stated that the proposed schemes if carried out would occupy no less than 53 acres of valuable land within the City, in addition to tunnels under and viaducts over the streets, and that a large amount of rateable property would have to be removed to make way for them, thereby increasing the rates already borne by the adjacent parishes. The report was adopted and ordered to be printed for circulation among the members of the Court.

Obituary.

LORD ORANMORE died last week at Brighton. His lordship was the eldest of the three sons of the late Mr. Dominick Geoffrey Browne, of Castle Macgarret, governor of the county of Mayo, and for some time its representative in the Irish and Imperial Parliaments. His mother was the daughter and heiress of the Hon. George Browne, son of the Earl of Altamont, and uncle of the first Marquis of Sligo. He was born in 1787, and was educated at Eton, at the University of Edinburgh, and at St. John's College, Cambridge. He entered Parliament in 1813 as M.P. for Mayo, which he continued to represent in every successive Parliament (with the exception of that of 1826-30) down to the year 1836, when he was elevated to the peerage of Ireland as Baron Oranmore, of Carra Browne Castle, Galway, and Baron Browne of Castle Macgarret, Mayo, of which county he was for many years vice-lieutenant. In December, 1834, on seeking re election for the last time at the hands of his constituents, he avowed himself a strenuous advocate for the abolition of tithes in Ireland, although he was a member of the Protestant Church, but he declined to support O'Connell in his agitation for the repeal of the Union, and also voted against the Bill for shortening Parliaments. He was a privy councillor for Ireland, a deputy-lieutenant and an active magistrate for the county Mayo. He married in 1811 the eldest daughter and co-heir of the late Mr. Henry Monck and granddaughter maternally of the second Earl of Arran, by whom he had a family of two sons and three daughters. One daughter survives, the Hon. Mrs. Ridley, wife of Colonel Ridley, of the Grenadier Guards; and also one son, the Hon. Geoffrey Dominick A. F. Browne, born in 1819, who married in December last the only surviving child of the late Mr. Alexander Guthrie, of the Mount, Ayrshire, and succeeds to the title and estates.

THE DOWAGER LADY LEIGH died on the 5th inst. at the family residence in Portman Square. She was the eldest daughter of the Rev. William Willes, of Astrop House, Northamptonshire, was born in 1798, and married in 1819 Chandos Leigh, Esq., afterwards Lord Leigh, of Stoneleigh Abbey, Warwickshire, and Adlestrop House, Oxon, whom she survived rather more than nine years. Her ladyship leaves a family of 10 children, three sons—the present Lord Leigh, Hon. E. Chandos Leigh, and James Wentworth Leigh, and seven daughters, of whom three are married, one to the Right Hon. C. B. Adderly, M.P.; another to Lord Saye and Sele; and another to the Hon. and Rev. H. P. Cholmondeley.

THE COUNTESS DOWAGER OF OXFORD died on the 4th inst. at No. 7, Halkin Street West, Belgrave Square. She was the eldest daughter of the late W. A. Fawkner, Esq., one of the clerks of the Privy Council, and married the 3d Earl of Oxford, by whom she had issue, the present Earl and other children.

COLONEL SIR HENRY FAIRFAX, BART., died at Edinburgh on the 3d inst., the day on which he completed his 70th year. He was the only son of the late Vice-Admiral Sir William George Fairfax, of St. Boswell's Bank, county Midlothian, who was flag captain of Admiral Duncan in the battle of Camperdown, and was knighted for his services on that occasion when sent home with the admiral's despatches. His late Majesty however, being anxious to show a further testimony of the admiral's services, was also pleased in 1836 to confer the dignity of a baronet of the United Kingdom on his son, whose decease we now record. Sir Henry Fairfax himself was a colonel in the army, and a magistrate and deputy lieutenant for Midlothian. He was an offshoot of the family of Lord Fairfax, was born in 1790, and married in 1830 the third daughter of Thomas Williamson Ramsay, Esq., of Lixmount, Midlothian, and of Maxton, Roxburghshire, but was left a widower in 1844. By that lady he had two daughters and two sons, the elder of whom, William George Herbert Taylor, has succeeded to the title as second baronet. The late Sir Henry Fairfax's sister Mary is the celebrated Mrs. Somerville, author of several works on natural philosophy.

CAPTAIN MOORSOM, R.N., C.B., the well-known inventor of the shell which bears his name, died on Saturday last at his brother's house at Brighton. He had been in a very weak state of health for some time, and resigned the command of the Diadem about four months ago, so that this event was not altogether unexpected, though very sudden, arising from the rupture of one of the vessels of the heart. Captain Moorsom was within a few days of 44 years of age. He entered the navy at 14. Although he obtained the "gold medal" of his year at the Naval College, he was not made lieutenant till seven years after he had served his full time as mate, and then his hope of further promotion appeared so small that he was frequently on the point of quitting the service. The invention of his "shell," however, brought him into notice. He served in the first Chinese war, and soon after the breaking out of that with Russia, being then a post captain, he was appointed to the Firebrand, whose commander had been killed at the mouth of the Danube. He never joined that ship, but was employed on shore with Captains Lushington, Keppel, Peel, and Hay, in the Naval Brigade. He had a large share in the organisation of that force, and was the only officer, with one exception, who served with it through all the bombardments until it was broken up at the fall of Sebastopol. Captain Moorsom was a C.B., a Chevalier of the Legion of Honour, and had the Order of the Medjidie, together with the Chinese, Crimean, and Turkish medals. He presented his invention of the "shell" to the Government, and it has been for some years adopted in the service. He was the author of a treatise on the Manœuvring of Steam Fleets.

MR. EDMUND GEORGE BANKES, of Studland Manor, Dorsetshire, who died on the 28th ult. in his 34th year, was nephew of Mr. W. J. Bankes, of Corfe Castle and Kingston Lacy, being the eldest son of the late Right Hon. George Bankes, Cursitor Baron of the Exchequer, and many years M.P. for Dorset; and only succeeded to the property of Studland Manor on his father's death in the summer of 1857. He has died unmarried; and the property passes to his next brother, Mr. Henry Hyde Nugent Bankes, barrister-at-law, married to the Hon. Miss Vivian, daughter of the late Lord Vivian.

SIR JOHN WYLDE, LL.B., late Chief Justice of the Cape, died a few days before Christmas last, aged 79. He was the elder brother of the late Lord Truro, being the eldest of the three sons of the late Mr. Thomas Wilde, solicitor, of Warwick Square, London. He was born at the close of 1780, or early in 1781, and at the usual age was sent, with his brother Thomas, the future Chancellor of England, to St Paul's School, of which he rose to be captain, and from which he proceeded in due course to Trinity College, Cambridge. He entered himself as a student at the Middle Temple in 1802, and having read law in the chambers of Mr. Chitty, was called to the bar in 1805, in which year he proceeded to his university degree as LL.B. Whilst at Cambridge he accepted a commission in the Cambridgeshire Yeomanry, and rose to be Colonel of the regiment, in spite of the fact that he was in no way connected with the landed aristocracy of the county. Having practised as a barrister in London and on the Home Circuit with average success, in 1827 he was nominated to the Chief Justiceship of the Cape, the duties of which he discharged with zeal and energy for 37 years. At the same time he received the honour of knighthood. In 1854, when a constitution was granted to the Colony, Sir John Wylde became president of the first Cape Parliament, and succeeded in conciliating the goodwill and securing the co-operation of all classes among its members. In September, in that year, while seated on the judicial bench, he was attacked by a paralytic seizure; but in spite of the entreaties of the counsel present, he refused to be removed from the court, or to deliver a written judgment. He heard the case out and gave his decision, but he never sat again. He retired on his full pension, and spent the remainder of his days in retirement at his seat near Cape Town.

WILLS.—The will of Earl De Grey has been sworn under 100,000*l.* personalty; that of Lady Peel has been sworn under 14,000*l.* personalty; that of Mr. Justice Crowder has been sworn under 70,000*l.*; and that of Mr. George Shearwood of Calcutta and Lime Street, merchant, under 25,000*l.*

Miscellaneous.

BITUMENISED PAPER TUBING.—An experiment was made under the great Clock Tower, Westminster, a few days since for the purpose of testing the strength, by hydraulic pressure, of a novel description of tubing, composed of bitumenised paper, invented by M. Jaloureau, a contractor for paving Paris and other large towns of France with bituminous concrete. In the course of his experiments some paper which had been coated with bitumen was laid aside in a coiled form, and after some time it assumed a very stiff and solid shape. Pursuing the idea which accident had thus developed, M. Jaloureau put several layers of bitumenised paper round a cylinder, and submitting them to internal pressure, found that a tube a quarter of an inch in thickness was capable of resisting a pressure of 250 lbs. to the square inch. The lightness of these tubes, their portability, cheapness, and non-liability to oxidation induced the municipal authorities of Paris to try them for the conveyance of gas, and in the recent experiments a piece of tube was produced, which, though stated to have been underground in Paris as a gas pipe for 12 months, had the appearance of being a perfectly new pipe. The tubes subjected to the pressure of the hydraulic pump bore a strain of 250 lbs. to the square inch without bursting, which is more than they would be ever called on to bear in ordinary use, being equal to 550 feet head of water. One of the tubes, ½-inch thick, and with a bore of 2 inches, was also tested by weight, and it only gave way to a pressure of 428 lbs., the bearings being 3 feet apart. The engineers who were present expressed themselves entirely satisfied with the experiments, and considered that they might be substituted with advantage in many cases where iron tubes are now used. As to their capability of resisting heat, it was stated that they might be submitted to a temperature of 160° of Fahrenheit without any deterioration of the material. It was also stated that the new tubing has a decided superiority in regard to economy, as its cost is not one-half that of the ordinary iron piping. Messrs. Paul Fosket and Alexander Young are the patentees of the invention in this country.

BIRTHS.—On the 4th inst, at 34, Charles Street, Berkeley Square, the Lady EMILY KINGSCOTE, of a daughter—3d inst, at the Ryhdd Court, Worcestershire, the wife of Sir EDMUND Lechmere, Bart., prematurely, of a son, still born—31st ult, at Heligan, Cornwall, at the residence of J. Tremayne, Esq., the lady of the Hon. and Rev. J. TOWNSHEND BOSCAWEN, of a daughter—3d inst, at 79, Eaton Place, Lady CAIRNS, of a daughter—6th inst, at 32, Grosvenor Place, the wife of Colonel GOULBURN, of Betchworth House, Surrey, of a son—31st ult, at Southwell, Notts, the Hon. Mrs. EDMUND MONCKTON, of a daughter.

MARRIAGES.—On the 8th inst, at St. George's, Hanover Square, Major-General the Hon. THOS. ASHBURNHAM, C.B., to the Hon. ADELAIDE GEORGIANA FOLEY, sister of Lord Foley—7th inst, at St. James's Church, Flockton-cum-Denby Grange, JAMES CROSBIE, Esq., of Ballyheigue Castle, co. Kerry, Ireland, to ROSA, fifth daughter of Sir JOHN LISTER KAYE, Baronet, of Denby Grange, Yorkshire—15th Dec, at Madras, Captain WILLIAM H. WHITLOCK, 5th Madras Native Infantry, second son of Major-General Sir George C. Whitlock, K.C.B., to MARGARET LOUISA, eldest daughter of Lieutenant-Colonel EDWARD LAWFORD, Madras Engineers—2d inst, at St. George's, Hanover Square, HENRY, fifth son of the Right Hon. Sir F. POLLOCK, Lord Chief Baron, to AMELIA, third daughter of the late C. BAILEY, Esq., of 5, Stratford Place, London, and Lee Abbey, Lynton, North Devon—17th ult, at Madrid, in the Chapel Royal of Atocha (their Majesties the Queen and King of Spain being Padrinos on the occasion), JOHN JOSEPH GORDON, K.M., of Wardhouse and Kildrummy, in the county of Aberdeen, Esq., to SENORITA DONA MARIA TERESA DE ARISTEGUI, eldest daughter of his Excellency Senor Don Rafael de Aristegui, Condé Mirasol—4th inst, at St. Peter's, Eaton Square, JOHN THOMAS TALLENT, Esq., of Hingham, Norfolk, to JANE, third daughter of the late RICHARD CRAWSHAY, Esq., of Ottershaw Park, Surrey.

DEATHS.—On the 3d inst, at Woodlands, Gorey, MARY SOPHIA, the wife of Major-General LOFTUS OWEN, and daughter of the late General Sir Anthony Farrington, Bart.—31st ult, at Rivenhall Place, Essex, CHARLES DACRE, youngest son of Sir THOMAS BARRETT LENNARD, Bart., aged 8 months—3d inst, at 7, Norfolk Terrace, Westbourne Grove West, MARY, relict of the late Major-General ARTHUR MOLESWORTH, E.I.C.S.—16th ult, 5, Bennett Street, Bath, LÆTITIA, relict of the late Brigadier General DAVID CLEPHANE, formerly Lieutenant-Colonel H M.'s 20th Regiment, aged 81—2d inst, at Penge, Surrey, the Rev. HENRY CLIFFORD RADCLYFFE, Incumbent of St. Luke's, King's Cross, and of 36, Upper Bedford Place—27th ult, at the Vicarage, the Rev. JOSEPH BROWN, M.A., vicar of Kirk Michael, Isle of Man, and episcopal registrar of the diocese of Man, aged 75—7th inst, at Upton Park, Slough, ELIZABETH ANNABELLA, widow of the late WALPOLE EYRE, Esq., of Bryanston Square, aged 65.

Markets.

COVENT GARDEN.—Feb. 11.

Pine Apples, Grapes, and other finer kinds of fruit, continue to maintain former prices; good Apples and Pears are very scarce, and realise high prices. Oranges are plentiful and cheap. Good Cobs realise 1s. to 1s. 6d. per lb. Chesnuts are plentiful. Rhubarb, Asparagus, Seakale, Cabbages, Carrots, Parsnips, and Leeks are sufficient for the demand. Parsley, owing to the open weather we have lately been experiencing, is very much cheaper. Cornish Broccoli, which is furnished by the crateful, fetches from 3s. to 4s. per dozen heads. Green Peas of foreign growth are now beginning to make their appearance. Best samples of Potatoes realise 4s. 6d. a bushel. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Pears, per doz., 6s to 8s
Grapes, per lb., 8s to 10s	Oranges, per 100, 6s to 10s
Melons, each, 2s. to 4s	Lemons, per 100, 5s to 8s
Pomegranates, each, 4d to 6d	Filberts, p. 100 lbs., 50s to 60s
Apples, per doz., 2s to 3s.	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 7s to 10s	Artichokes, per doz., 2s to 3s
Seakale, per basket, 2s to 3s	Beet, per doz., 1s 6d to 2s
Rhubarb, per bundle, 2s to 3s	Celery, per bundle, 1s 6d to 2s
F. Beans, per 100, 2s to 2s 6d	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen bunches, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., per score, 1s to 1s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d
Cucumbers, each, 1s to 3s	

METROPOLITAN CATTLE MARKET.

MONDAY, Feb. 6.

The number of Beasts is again small; trade is not very brisk, however last Monday's quotations are pretty well maintained. The supply of Sheep is still short, and consequently prices continue high, although trade is slow. There is no alteration in the Calf trade. From Germany and Holland there are 190 Beasts, 1060 Sheep, and 95 Calves; from Scotland, 400 Beasts; from Ireland, 200; from Norfolk and Suffolk, 2000; and 200 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	10	to 5	0	Best Long-wools.	5	0	to 5	4
Best Short-horns	4	8	— 4	10	Do. Shorn	..	..	—	..
2d quality Beasts	3	8	— 4	2	Ewes & 2d quality	4	6	— 4	8
Best Downs and Half-breds	5	4	to 5	8	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	4 4 — 5	8
					Pigs	..	..	3 8 — 4	8

Beasts, 3930; Sheep & Lambs, 18,760; Calves, 128; Pigs, 280.

THURSDAY, Feb. 9.

We have a short supply of Beasts, and the demand for best qualities is active. Monday's qualities are well supported for all kinds. There is about an average number of sheep; there is not much trade for them, yet we cannot quote any alteration in prices. Calf trade remains unaltered. Our foreign supply consists of 140 Beasts, 360 Sheep, and 127 Calves. Milch Cows, 170.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	8	to 5	0	Best Long-wools.	5	0	to 5	4
Best Short-horns	4	6	— 4	10	Do. Shorn	..	..	—	..
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	6	— 4	8
Best Downs and Half-breds	5	4	— 5	8	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	..	— ..
					Calves	..	..	4 4 — 5	8
					Pigs	..	..	3 8 — 5	0

Beasts, 830; Sheep & Lambs, 3340; Calves, 156; Pigs, 200.

HOPS.—BOROUGH MARKET, FRIDAY, Feb. 8.

Messrs. Pattenden & Smith report that the market is very firm at fully late prices.

COAL MARKET.—FEB. 3.

Bates' West Hartley, 14s. 3d.; Buddle's West Hartley, 14s. 6d.: Burnhope Gas, 13s. 6d.; Byass's Bebside West Hartley, 15s.; Tanfield Moor Butes, 13s. 9d.; Walker Primrose, 14s.; West Wylam, 15s.; Walls End Eden, 19s. 9d.; Walls End Harton, 19s. 6d.; Walls End Northumberland, 15s. 6d.; Walls End Braddyll's Hetton, 20s. 3d.; Walls End Hetton, 21s.; Walls End South Hetton, 20s. 9d.; Walls End Stewarts, 20s. 9d.; Walls End Hartlepool, 20s. 9d.; Walls End Heugh Hall, 19s. 9d.; Walls End South Hartlepool, 19s. 9d.; Walls End Kelloe, 20s.; Walls End Whitworth, 16s.; Walls End South Durham, 19s. 3d.; Powell's Duffryn Steam, 22s. 6d.—143 ships at market.

POTATOES.—SOUTHWARK, Monday, Feb. 6.

During the past week the arrivals coastwise have been greater than at any period during the season, and a further decline in prices has been the consequence. Quotations:—Yorkshire Regents, per ton, 90s. to 130s.; Lincolnshire do., 85s. to 95s.; Dunbar do., 100s. to 120s.; Perth, Forfar, and Fifeshire do., 80s. to 100s.; do. Rocks, 70s. to 80s.; do. Reds, 70s. to 80s.; French Whites, 70s. to 80s.; Belgian do., 60s. to 70s.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Feb. 9.

Prime Meadow Hay	65s	to 75s	Clover	.. .. ..	90s	to 105s
Superior do. (old)	75	84	New Clover	.. ..	—	—
Inferior do.	50	65	Second cut do.	..	70	90
New do.	—	—	Straw	.. .. ..	26	30
Rowen	45	65			DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, Feb. 9.

Sup. Meadow Hay	80s	to 88s	Inferior Clover	..	70s	to 88s
Inferior do.	60	70	New do.	.. .. ..	—	—
New do.	—	—	Straw	.. .. ..	31	35
Superior Clover	98	105			JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, Feb. 9.

Fine old Hay	80s	to 84s	Fine old Clover	..	98s	to 103s
Inferior do.	65	75	Inferior do	..	84	92
Prime New Hay	—	—	Fine New Clover	..	—	—
Inferior do.	—	—	Fine 2d cut	..	80	86
Straw	26	30	Inferior do.	..	66	72

BRITISH WOOLS.—LONDON, FRIDAY, Feb. 10.

We have to report a quiet state of our market, the rise in the rate of interest having led to a cessation of operations. Our stocks are very light, especially of fleeces and fleece sorts. Skin wool is now pulled in large quantities, and can be bought a shade lower.

	s.	d.		s.	d.					
South-down Hog-gets..	1	8	to	1	9	Leicest. Wethers	1	5	to	—
Half-bred ditto..	1	8	—	—		Ditto Hoggs ..	1	7	—	—
Down Ewes ..	1	6	—	—		Combing Skins	1	2	—	1 6
Kent Fleeces ..	1	6	—	1	6½	Blanket ditto ..	0	6	—	10½
						Flannel Wool ..	1	2	—	1 7

MARK LANE.—MONDAY, Feb. 6.

The supply of Wheat from Essex and Kent to this morning's market was very small, and more readily taken at fully the prices of this day se'nnight. The demand for foreign, although limited, has slightly increased, and its late value is well maintained. For malting Barley there is a good demand at rather above the prices lately current; grinding is a slow sale. Beans and Peas sell freely at last week's quotations. For Oats there is a fair inquiry at an advance of 6d. per qr. upon the rates of last Monday.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	40	48	Red	40	45
— — fine selected runs..ditto	46	48	Red	42	48
— — Talavera	46	52			
— Norfolk	—		Red	—	
— Foreign	38	56			
BARLEY, grind. & dist., 24s to 30s..Chev.	38	44	Malting.	34	40
— Foreign..grinding and distilling	23	31	Malting.	35	41
OATS, Essex and Suffolk	19	24			
— Scotch and Lincolnshire..Potato	23	29	Feed ..	19	26
— Irish .....Potato	24	28	Feed ..	19	24
— Foreign.....Poland and Brew	23	26	Feed ..	17	24
RYE	35	38	Foreign.	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....30s to 40s....Tick	33	43	Harrow.	33	43
— Pigeon .....36s — 47s..Winds.	48	54	Longpod	—	
— Foreign .....Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	36	38	Suffolk .	36	40
— Maple .... —s to —s ..... Grey	31	33	Foreign.	30	37
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	37	43			
— 2d do..... ditto	27	37	Country.	27	37
— Foreign .....per barrel	18	27	Per sack	30	37

FRIDAY, Feb. 10.

The weather during the past week has been changeable, frosty and fine with snow storms and rain; to-day wind N.W., with severe frost. The grain trade throughout the United Kingdom has been less depressed than for some weeks, and a disposition for business has become evident; the value of grain has however not experienced a general improvement, although in some districts English Wheat was written 1s. per qr. dearer, whilst English Oats and Barley advanced 6d. to 1s. per qr. Foreign Wheat is not quotably dearer, but fine foreign Beans, Barley, and Maize are worth 1s. per qr. more money, and Oats advanced 6d. per qr. The arrivals from Southern Europe are not larger this week than they have been for some time past. The sales include Taganrog Ghirka Wheat at 45s. 9d., per 492 lbs.; Sandomirka at 47s. per 480 lbs.; Galatz Barley at 24s. 6d., Ibrail at 25s. to 25s. 6d., Danube at 25s. 9d., all per 400 lbs. for forward shipment; Ibrail Maize at 32s., Salonica at 31s, both per 480 lbs.; Danube Barley, 10,000 qrs. from Ibrail at 13s. per qr., 12,000 qrs. from the Sulina at 15s. 6d. per qr., both f. o. b. The arrivals of Barley, both English and foreign, continue to be on a liberal scale, of all other grain small. This morning's market was thinly attended. Dry English Wheat commands attention at fully former prices; a portion of the damp remained unsold at a late hour. The inquiry for foreign is very limited, and its value remains unaltered. For spring corn of all descriptions there is a good demand at the extreme rates of Monday. The Flour trade is steady at late quotations.

ARRIVALS FROM FEB. 6 TO FEB 10.

	Wheat.	Barley.	Oats.	Flour.
English ..	1080 qrs.	1640 qrs.	620 qrs.	1190 sks.
Irish	— ,,	— ,,	1600 ,,	— ,,
Foreign ..	620 ,,	2490 ,,	6850 ,,	300 ,, / 1500 brls.

LIVERPOOL, Tuesday, Feb. 7.—At our market to-day there was a fair inquiry for Wheat, but holders generally required a slight advance, which checked business. Indian Corn was very saleable at 6d. per qr. advance on the week. Flour was inactive, but very full rates were insisted on.

FRIDAY, Feb. 10.—Grain market steady. Wheat in better demand at full prices. Flour dull. Indian Corn 6d. to 1s. dearer. Choice Galatz 34s., Ibrail 33s., Egyptian Beans, 35s. Oats a shade dearer, Oatmeal and Barley steady.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Dec. 31..	44s 2d	34s 8d	21s 5d	35s 1d	39s 7d	37s 8d
Jan. 7..	44 2	34 5	21 5	35 5	38 10	38 3
— 14..	43 11	34 7	21 5	30 4	39 0	36 7
— 21..	43 11	34 4	21 1	32 1	38 3	36 2
— 28..	43 10	34 7	21 5	28 11	38 5	36 3
Feb. 4..	43 8	34 10	21 0	31 0	38 1	35 4
Agg. Aver.	43 11	34 7	21 4	32 10	38 8	36 9

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Dec. 31.	Jan. 7.	Jan. 14.	Jan. 21.	Jan. 28.	Feb. 4.
44s 2d—			..	..	..	..
43 11	..	..			..	..
43 10	..	..	..	..		..
43 8	..	..	..	..	..	
..	..	..	..	..	..	..
..	..	..	..	..	..	..

THE WIDOW OF THE LATE PROFESSOR HENFREY' F.R.S., L.S., &c., of King's College, London, receives a small number of BOYS between the ages of 6 and 12, to EDUCATE with her own family. Terms, from 60 Guineas per Annum.—Turnham Green, W.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

WANTED, A FOREMAN OF BUILDERS. – A Gentleman who is about to repair and remodel the Farm-houses, Buildings, and Cottages upon his estate, is desirous of meeting with a person experienced in such work to superintend for a time the execution of the same.—Address, stating terms, previous experience, and references, to A. P. W., Post Office, Frome, Somerset.

WANTED, A YOUNG MAN to take charge of the Hard-Wooded House Department of a Provincial Nursery.—Apply, stating terms, references, &c., to F. GODWIN, Broadfield Nurseries, Sheffield.

WANTED, A MAN who thoroughly understands Propagating Hard and Soft-wooded Plants, and Nursery Stock in general. Good character required.—Apply to Messrs. FLANAGAN & SON, Mansion House Street, E.C.

WANTED, A MAN with a general knowledge of HARDY PLANTS, more especially of the Propagation and Culture of American Plants, Evergreens, Shrubs, and Fruit Trees.—Apply, stating full particulars, to JAMES DICKSON & SONS, Newton Nurseries, Chester.

TO SALESMEN.

MR. JAMES VEITCH, JUN., is in immediate want of a well educated person, of good appearance and address, to act as GENERAL SALESMAN, and to assist in getting up orders, &c. As some portion of the Correspondence will probably devolve upon him, it is necessary that he should be able to write a thoroughly good business letter. Energetic and persevering business habits are absolutely necessary. Application stating terms, references, &c., are in the first instance to be made by letter only.—Royal Exotic Nursery, King's Road, Chelsea, S.W.—Feb. 11.

WANTED, TWO very young MEN to assist in the PLANT DEPARTMENT, one of whom will be chiefly in the Propagating Department.—Apply to OSBORN & SONS, Fulham Nursery, London, S.W.

WANTED, FOUR or FIVE strong, active MEN, who are acquainted with OUT-DOOR NURSERY WORK; one or two will be required to have some knowledge of ROSES and FRUIT TREES.—For particulars apply to JOHN CRANSTON, King's Acre Nurseries, near Hereford.

WANTED, AS SECOND CLERK, in one of the principal Metropolitan Horticultural Establishments, a sharp active young Man, and to assist in the Correspondence. He must write a good hand, and be of a persevering disposition.—Address, with particulars of past experience and salary required, to *Gardeners' Chronicle* Office, W.C.

WANTED, A GARDENER AND LAUNDRESS.—An active intelligent Man, without incumbrance, who must be well acquainted with Gardening in all its branches, both Kitchen and Flower Gardens. A single-handed place, with cottage rent free; the help of a boy two or three hours daily, and a labourer once a week when required. Wife to act as Laundress for the family. The highest character will be required for respectability, and especially sobriety. No personal application will be attended to.—Address by letter to T. P., 7, Dover Street, Piccadilly, London, W.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Single; good practical experience. No single-handed place accepted. Country preferred. Testimonials good.—E. C., Paradise Nursery, Holloway, N.

GARDENER (HEAD).—Age 25, single; has a good knowledge of his profession. No single-handed place accepted.—Mr. WATSON, The Gardens, Ripley Castle, Yorks.

GARDENER (HEAD).—Age 40, married; has a thorough practical knowledge of his profession, also improving Estates, Management of Land, Keeping Accounts, &c.—H G., Mr. England Clarke, Nurseryman, Gravesend, Kent.

GARDENER (HEAD).—Age 29, married, one child; thoroughly understands his profession. Wife can take charge of Dairy or Poultry if required. Good character.—J. T., 2, Alder's Terrace, Lyham Road, Brixton Hill, S.

GARDENER (HEAD).—Age 38, single; practically acquainted with the management of Vinery, Greenhouse, and Flower and Kitchen Gardens.—W. R., 44, Foley Street, Middlesex Hospital, W.

GARDENER (HEAD).—Age 33, single; practical and thoroughly understands his profession. Has had good practice in England and Scotland. Good character.—E. C., Key's Library, 18, Westbourne Place, Paddington, W.

GARDENER (HEAD).—Single; successful cultivator of Stove and Greenhouse Plants, Early Grapes, Cucumbers, and all kinds of Vegetables, Wall Fruits, and Flower Garden. Ten years' character.—W. C., E. Dicker's, Westerham, Kent.

GARDENER (HEAD).—Age 28, married; has had good experience in the Cultivation of Stove and Greenhouse Plants, Kitchen and Flower Gardens, including Forcing of Pines, Vines, Melons, and Cucumbers. Five years' good character.—A. B., 3, Fort Place, Highbury Vale, N.

GARDENER (HEAD).—Age 36, single; understands Early Forcing, Vines, Flower, Fruit, and Kitchen Gardens; care of Cows, Pigs, and Meadow Land. Can have unexceptionable character.—A. B., Messrs. J. & J. Fraser, Leyton, Essex, N.E.

GARDENER (HEAD).—Age 37, married, without incumbrance; has a thorough knowledge of his profession. Wages, 1*l*. per week, with house. Three years' character.—Y. Z., 10, Bridge Field Grove, near Wandsworth Station, S.W.

GARDENER (HEAD).—Age 40; wife and one daughter, aged 17; having a thorough knowledge of his profession in every department. Has lived 20 years in the same place, 7 of which have been passed with the family now residing there.—A. G., Mr Wm. Saunders, Abergavenny.

GARDENER (HEAD).—Has lived three and a half years in a gentleman's house with his wife as Cook, but now wishes a place with a Cottage where his Wife's services are not required. Both are thoroughly trustworthy, and can be well recommended.—Rev. R. J. M., Castlecary.

GARDENER (HEAD WORKING).—Married, two children; understands his profession. Wages not so much an object as a comfortable situation. Apply to the Nursery for reference.—T. T., Mr. Smith's Nursery, St. John's, Worcester.

GARDENER (HEAD).—Age 34, single; of 16 years' experience; understands both Early and Late Forcing of Grapes, Pines, Melons, and Cucumbers, Peaches and Strawberries, Vegetables; is a good Kitchen and Flower Gardener. Can have a good character from his last employer.—A. B., Mrs. Philpott, Grocer, Esher, Surrey.

GARDENER (HEAD).—Age 31, married; great experience in all branches of his profession. Has been supplying a first class family with every necessary that can be produced from the Garden, both early and late. Would only accept an engagement where the garden is kept up in the first of order. Four and a half years' superior character from where he has been.—H. W., Mr. Austen's, Post Office, Brixton, S.

GARDENER (HEAD).—Age 28, single; has a thorough practical knowledge of his profession, including Pines, Vines, Melons, Cucumbers, and Strawberries, Early and Late Forcing, also the Management of Orchard Houses, and the Growing of Stove and Greenhouse Plants; is a good Flower and Kitchen Gardener. Two years' excellent character. No single-handed place accepted.—T. D., 2, Napier Road, Addison Road, Kensington, W.

GARDENER (HEAD), to any nobleman or gentleman in want of a first-class Gardener.—In the prime of life, energetic, and industrious; has had extensive and most successful practice in every department of Gardening; is an enthusiastic cultivator of all kinds of Fruit and Flowers. Moral character unexceptionable. Ample testimony to the above can be had from late employer and several of the leading Horticulturists of the day.—E., Mr. Thomson, Dalkeith Park, Edinburgh.

FOREMAN.—Well acquainted with Forcing and the Management of Stove and Greenhouse Plants. Good references as to character and ability.—B. B., 31, Eagle Street, Red Lion Street, Holborn, London, W.C.

GARDENER (FOREMAN), in a good establishment.—Age 26; well acquainted with Plants, Forcing, &c., and has a good general knowledge of his profession. Good testimonials.—A. B., Messrs. Rollissons', Nurserymen, Tooting, S.

GARDENER (GENERAL FOREMAN OR PLANT FOREMAN).—Age 24; in a nobleman's or gentleman's Garden. Good character.—Address, stating wages, A. M., Mr. Lovell's, Bridge Street, Banbury, Oxford.

GARDENER.—Married, one daughter; has had great experience in every branch of Horticulture and Agriculture; the Management of every description of Wooded and Built Property; and will guarantee the general Improvement of any Estate under strict economical principles with profitable returns.—J. D., Post Office, Widworthy, near Honiton, Devon.

GARDENER.—M. WRIGHT (age 33), Beymore Gardens, Bridgewater, will be at liberty the latter part of February, and wishes to engage with any nobleman or gentleman requiring the services of a thoroughly practical and industrious Gardener in every part of his profession.—Address as above.

GARDENER (UNDER).—Age 21; good character from last two places, 15 months and three years and a half.—T. R., 22, Dorset Street, Portman Square, W.

GARDENER, OR GARDENER AND BAILIFF.—Single; understands Forcing and the general routine of Gardening; also the management of Stock. Seven years' unexceptionable character. No single-handed place accepted.—M. M., Mr. Neal, Seedsman, High Street, Wandsworth, S.W.

GARDENER AND BAILIFF, OR STEWARD.—Experienced in every department of Horticulture and Agriculture, with good recommendations from gentlemen of the first respectability, and a corresponding member of the Horticultural Society of London. High salary not an object.—G. T., Mr. Whale, Nurseryman, Egham, Surrey.

FARM STEWARD OR BAILIFF.—Middle-aged; a native of Scotland; of active habits, and practically acquainted with Farming on the most improved principles, Buying, Selling, and Management of Stock in general. Satisfactory testimonials.—X.X., Post Office, Watford, Herts.

FARM BAILIFF.—Single; thoroughly competent to take the entire Management of a Farm (any size) in all its branches.—J. V., Post Office, Eltham, Kent, S.E.

FARM BAILIFF to a nobleman or gentleman.—A Farmer's Son, age 30; thoroughly understands the Rearing and Breeding of Cattle, &c. Can give the most satisfactory references.—W. J., Post Office, Faringdon, Berks.

FARM BAILIFF.—Age 45, married, small family; thoroughly understands Farming, both Stiff and Light Soil, and Breeding and Rearing of Stock. Can have an unexceptionable character from his late employer for 10 years.—H. R., Mr. Perch, News Agent, Wimbledon, Surrey, S.W.

TO NOBLEMEN AND GENTLEMEN.

FARM BAILIFF.—Age 36, married, with small family; has been extensively engaged in Farming operations on Heavy and Light Soils, understands Breeding, Rearing, Buying and Selling Stock and Corn, the management of Woods and Plantations; can Keep Accounts. Wife can take Dairy and Poultry if required. Unexceptionable references given from last situation.—G. H., care of 14, Coronation St., Cambridge.

TO NOBLEMEN AND GENTLEMEN.

BAILIFF.—Middle-aged; is thoroughly practical in Modern Farming. A good Judge of Stock, &c. Has had great experience in the Midland and Southern counties. First-class references.—Address Bailiff, Hastoe, Tring, Herts.

BAILIFF OR FARM MANAGER.—Age 30; thoroughly conversant with every branch of Modern Agriculture on a large scale, Land Drainage, Erecting Buildings, &c., and the most economical directions of Labour, Breeding, Purchasing, and Selling of Stock, and Corn. Understands the management of Woods and Timber. The best reference can be given.—A. M., Mr. Thos. Scott, Land Agent, 18, Parliament Street, London, S.W.

TO NOBLEMEN AND GENTLEMEN.

LAND AGENT (IN THE SOUTH OF ENGLAND).—A Northumbrian, who has a practical knowledge of the modern improvements in Agriculture, and who has had considerable experience in the Breeding and the Management of Short-Horns. Would not object to Ireland.—Mr. STORY, care of Messrs. Horn & Story, Booksellers, &c., Grey Street, Newcastle-upon-Tyne.

TO LANDED PROPRIETORS.

OVERSEER OR LAND STEWARD.—Age 38, married, without incumbrance; has been these last six years Manager upon an Estate and Home-farm of 350 acres in the West of England, where the most extensive and modern improvements in Land and Building have been carried out entirely under his superintendence. The Advertiser is a native of Berwickshire, N.B., having been bred upon the most extensive and ably managed Estates and Farms in that country and East Lothian. The most unexceptionable testimonials from his present employer, whom he leaves entirely of his own accord, and the most searching inquiries as to integrity and ability respectfully invited. Thoroughly acquainted with all sorts of Agricultural Machinery. Security to any reasonable amount if required.—A. B., Messrs. Sutton & Sons, Seedsmen, Reading, Berks.

TO NOBLEMEN AND GENTLEMEN AND GARDENERS.

APPRENTICE, where he can have the opportunity of learning all the various branches of Gardening.—Age 19; good education and character, strong, active; can Mow well. A Premium given.—T. H., Kilnwick Percy Gardens, Pocklington, Yorkshire.

IMPROVER (under a nobleman or gentleman's Gardener).—Age 19; two years' good character. A Premium will be given if required.—Y. Z., Mr. Danes, 3, New Chapel Place, Kentish Town, N.W.

CLERK, in the Factor's Office on a nobleman or gentleman's Estate.—Young; bred in a Scotch Bank, and now in a Lawyer's Office. Besides the above he is to some extent acquainted with Agriculture. Can produce satisfactory testimonials.—A. B., *Gardeners' Chronicle* Office, W.C.

TO NURSERYMEN AND SEEDMEN.

SHOPMAN OR CLERK.—Age 30; has had 12 years' experience in first class houses.—X. Y., *Gardeners' Chronicle* Office, W.C.

ASSISTANT SHOPMAN.—Age 18; has had six years' experience in a country house; is willing to make himself useful, and has a slight knowledge of Plants.—H. P., 28, Middle Row, High Holborn, London, W.C.

The Gardeners' Chronicle Newspaper.

SATURDAY, FEBRUARY 25, 1860.

ESTABLISHED 1838.

VICTORIA AND LEGAL AND COMMERCIAL LIFE ASSURANCE COMPANY, 18, King William Street, City, E.C.

The business of the Company embraces every description of risk connected with Life Assurance.

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WILLIAM RATRAY, Actuary.

News of the Week.

IN the House of Lords on Friday Earl GRANVILLE stated, that a communication had been received from the French Government to the effect that, if Sardinia should annex Central Italy, the EMPEROR OF THE FRENCH would deem it necessary to annex at least some portion of Savoy, but would not take such a step without consulting the other great Powers, and without the consent of the Savoyards. The Endowed Schools Bill passed through Committee, with the addition of a clause admitting the children of Dissenters into schools not founded exclusively for the benefit of the Church of England, and omitting the clause which admitted Dissenters to the trusteeships of all schools not expressly founded on Church principles. On Monday the Earl of DERBY called attention to the Commercial Treaty with France and complained of the entire absence of reciprocity in several of its provisions, referring particularly to the duties on shipping and to the article on the export of coal, which he denounced as impolitic and dangerous in its possible consequences to our relations with other countries. Earl GRANVILLE defended the Treaty, which involved, he said, provisions extending to the whole world, and though in England it was declared to be one-sided in favour of France, in France it was asserted to be one-sided in favour of England. On Tuesday the Earl of ELGIN entered into a defence of his policy in China. He denied that he had used either cruelty or injustice towards the Chinese, and said that he had advocated the policy of appointing a British representative at Pekin, because he was convinced that it was the only mode of making our relations with that country permanent. On Thursday the LORD CHANCELLOR introduced the first of a series of measures for the consolidation of the Criminal Statute Law; the Indictable Offences Bill and the Court of Chancery Bill passed through committee; and the report of amendments of the Endowed Schools Bills was brought up and agreed to.

In the Commons on Friday after a desultory discussion on the Commercial Treaty, and the mode in which it was proposed to take the opinion of Parliament upon its provisions, the House went into Committee of Supply, and Mr. SIDNEY HERBERT moved the Army Estimates. He stated that they were the largest estimates which had been submitted to Parliament since the Russian war, amounting to no less a sum than 14,842,275*l.*, being an increase of 1,982,978*l.* over those of last year. He entered into a variety of details in explanation of the items, and concluded by moving a vote of 143,362 men, exclusive of 92,490 in India. The vote was agreed to, after considerable discussion, in which Sir R. PEEL delivered a vehement protest against the volunteer movement and the magnitude of these estimates in a year of peace. On Monday Mr. DU CANE postponed his motion on the Budget, to enable Mr. DISRAELI to move an amendment which he had placed on the notice paper on Friday night, declaring the opinion of the House that before going into committee on the Customs Acts, a vote should be taken on the engagements of the Commercial Treaty. The amendment was supported by Sir H. CAIRNS, Sir F. KELLY, Mr. NEWDEGATE, Mr. AYRTON, Mr. MALINS, Mr. S. FITZGERALD, and Mr. HORSMAN; and opposed by the CHANCELLOR OF THE EXCHEQUER, the ATTORNEY-GENERAL, Mr. BRIGHT, Lord J. RUSSELL, and Lord PALMERSTON. On a division the amendment was negatived by 293 to 230, giving Ministers a majority of 63. On Tuesday Mr. DU CANE moved his resolution declaring the opinion of the House that it is not expedient to add to the existing deficiency by diminishing the ordinary revenue, and is not prepared to disappoint the just expectations of the country by re-imposing the income-tax at an unnecessarily high rate. Mr. BENTINCK seconded the resolution, which was supported by Lord R. MONTAGU, Mr. DAWSON, Mr. HENNESSY, and Sir S. NORTHCOTE; and opposed by Mr. GOWER, Mr. BAXTER, Mr. LIDDELL, Mr. DODSON, Mr. CROSSLEY, Mr. DUFF, and Mr. AYRTON. The debate was then adjourned. On Wednesday Mr. SLANEY withdrew his Public Improvements Bill, and Sir C. BURRELL's Window Cleaning Bill was lost without a division on the question of the second reading. The Election Petitions Act Amendment Bill was read a second time, the question of referring it to a committee being postponed till the Corrupt Practices Committee shall have met and decided whether they can undertake the additional duty. On Thursday the adjourned debate on Mr. DU CANE's motion was resumed, when the resolution was supported by Mr. HUBBARD, Mr. BLACKBURN, Mr. BEACH, Sir F. BARING, and Mr. WHITESIDE; and opposed by Mr. BAINES, Mr. MARSH, Mr. HORSFALL, Mr. BYNG, Mr. BRIGHT, and MR. CARDWELL. The debate was then again adjourned to last night, when it was resumed by Mr. NEWDEGATE in support of the resolution, and was not concluded when we went to press.

The Austrian Government has declined to accept the English proposals for the settlement of the Italian question on the ground that they not only essentially alter the basis of the European balance of Power founded by the treaties of 1815, but are also in opposition to the fundamental principle upon which the legitimacy of governments in general, and especially the Austrian monarchy, is founded, while they destroy the rights of the Italian Princes, which were placed under the guarantee of Europe, and which the Emperor FRANCIS JOSEPH considers it his sacred duty to protect in his quality of chief of the House of Hapsburg. At the same time Austria declares that for the present she will not endeavour to undo by force of arms that which she cannot prevent, although she reserves to herself full and entire liberty of action for the future. —A despatch from Tetuan, dated the 16th inst., states that Marshal O'DONNELL has transmitted to the Moors the following bases for the conclusion of peace:—The possession of all territory conquered, including Tetuan; an indemnity of 200,000,000 reals; an engagement to respect the Catholic religion, and commercial stipulations favourable to Spain.

Home News.

THE COURT.—The Queen, Prince Consort, and Royal family continue at Buckingham Palace. On Friday afternoon the Queen, accompanied by the Princesses Alice and Louisa, visited the South Kensington Museum. The Prince Consort presided at a meeting of the Fine Arts Commission. On Saturday morning the Queen, accompanied by the Princess Louisa, rode on horseback in the riding-house of the Palace. In the afternoon the Prince Consort rode on horseback and visited the South Kensington Museum. In the evening the Queen and Prince Consort honoured the performance at the Haymarket Theatre with their presence. On Sunday morning her Majesty and the Prince Consort, Prince Arthur, and the Princesses Alice, Helena, and Louisa, attended Divine service in the private chapel; the Rev. F. Garden, sub-dean of the Chapel Royal, preached the sermon. On Monday morning the Prince Consort presided at a meeting of the governors of Wellington College, held at the Palace of Westminster. In the afternoon the Queen and Prince Consort, accompanied by the Princess Alice, honoured Mr. Theed with a visit at his studio in Henrietta Street, Cavendish Square. In the evening the Queen and Prince Consort honoured the performance at the Olympic Theatre with their presence. Prince Arthur and the Princess Louisa attended the performance at Covent Garden Theatre. On Tuesday morning the Queen, accompanied by the Princess Helena, rode on horseback in the riding-house of Buckingham Palace. The Prince Consort went to the South Kensington Museum, and presided at a meeting of the Council of the Horticultural Society, when Mr. Nesfield explained his plans for the laying out of the new garden at Kensington Gore. In the evening the Queen and Prince Consort, accompanied by the Princesses Alice and Helena, honoured the performances at Covent Garden Theatre with their presence. On Wednesday morning the Queen, accompanied by Princess Alice, rode on horseback in the riding-house of Buckingham Palace. The Prince Consort rode on horseback. In the afternoon the Queen held a Court and Privy Council at Buckingham Palace. At the Court M. Musurus, the Turkish Ambassador, had an audience, and delivered to her Majesty a letter from the Sultan. At the Council Mr. William Hutt was sworn a Privy Councillor, and declared by the Queen in Council Vice-President of the Board of Trade. Mr. Charles Seely was appointed Sheriff of Hampshire, and Mr. Charles F. Thruston was appointed Sheriff of Merionethshire. Lord John Russell, the Right Hon. Sidney Herbert, Earl Granville, and Viscount Palmerston had audiences of her Majesty. In the evening the Queen had a dinner party. On Thursday the Queen held a levee in St. James's Palace. In the evening her Majesty, the Prince Consort, and the Princess Alice honoured the Adelphi theatre with their presence.

PRINCE ALFRED has arrived at Lisbon in the Euryalus When the frigate entered the Tagus, the Court prepared to receive his Royal Highness at the Arsenal, where the royal carriages were waiting; but the Prince landed *incognito*, and went on foot to the Palace.

THE PRINCE OF ORANGE left Badminton on Friday for Llanover, on a visit to Lord and Lady Llanover, visiting Troy and Raglan Castle on his way. On Saturday the Prince visited the iron works of Dowlais and Merthyr, the Crumlin viaduct, and Cyfarthfa Castle, the seat of Mr. Crawshay, where he had luncheon. Returning to Llanover in the evening, his Royal Highness was present at a banquet and ball given in his honour. On Sunday the Prince attended Divine service at Llanover Church, and on Monday left Llanover for Hereford, on his way to Chester and Bangor. On Thursday evening his Royal Highness arrived at Liverpool, and yesterday morning inspected the docks and public institutions. In the afternoon the Prince proceeded to Manchester.

THE PRINCE AND PRINCESS FREDERICK OF THE NETHERLANDS and their daughter, the Princess Mary, left Rotterdam on Wednesday, in the King's private yacht, for the Isle of Wight. The Princesses intend to remain three months in the island, but the Prince will return very shortly to Holland.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury.

BISHOPRIC OF ROCHESTER.—It is stated that the Rev. Dr. Vaughan, late head master of Harrow, will be the new Bishop of Rochester. In consequence of the death of the late bishop, the Right Rev. Dr. Campbell, who was recently elected to the bishopric of Bangor, becomes entitled to a seat in the House of Lords. The new Bishop of Rochester will not sit in Parliament until the avoidance of a see other than Canterbury, York, London, Winchester, and Durham.

GOVERNORSHIP OF BOMBAY.—It is understood that Sir George Clerk, at present permanent Under Secretary of State for India, will succeed Lord Elphinstone as Governor of Bombay.

PARLIAMENTARY MOVEMENTS.—The election committees for Weymouth and Carlisle commenced their sittings on Thursday, and those for Great Yarmouth and Roscommon, held their first sitting yeste day. —Captain Stackpoole was elected for Ennis on Monday without opposition. The death of Mr. Drummond has caused a vacancy for West Surrey. Mr. George Cubitt, of Denbies, near Dorking, has offered himself as a candidate for the vacant seat in the Conservative interest.

KNIGHTHOOD.—At the levee on Thursday Mr. William Atherton, M.P., her Majesty's Solicitor-General, and Captain Francis Leopold M'Clintock, R.N., Commander of the late Arctic Expedition, were presented to the Queen by Lord Palmerston, and received from her Majesty the honour of knighthood.

CONVOCATION.—On Friday in the Upper House the Bishop of Oxford moved an address to the Queen, praying for her Royal Licence to allow Convocation to alter, amend, or repeal the 29th Canon prohibiting fathers from acting as sponsors to their children. After a long discussion the motion was unanimously agreed to. A petition from certain clergy of the province of York, praying that, as the Convocation of York was prohibited by the Archbishop from sitting, they might be permitted to take counsel with the Province of Canterbury, was ordered to lie on the table, the Bishop of London observing that it looked very like the petition of revolting subjects of another kingdom. In the Lower House the report on Special Services was agreed to, with suggestions, and taken to the Upper House. It was unanimously resolved to concur in the address to the Queen for permission to alter, amend, or repeal the 29th canon; and a committee was appointed to inquire into the nature and working of recent legislation as it affected cathedrals and capitular bodies. On Saturday in the Upper House it was resolved to concur with the representation of the Lower House on the subject of Church-rates, and that a representation should be made to the curators of the press at Oxford urging them to

print the marginal readings and the translators' preface in editions of the Bible of all sizes. It was also resolved to appoint a committee to consider and report on the expediency of appointing missionary bishops. In the Lower House some business of a formal character was transacted, and both Houses were then prorogued to the 7th of June.

THE VOLUNTEER MOVEMENT.—An important meeting in connection with this movement was held on Saturday at the Thatched House Tavern, for the purpose of establishing a preliminary drill at public schools. Lord Elcho presided, and the meeting was addressed by Lord West, Sir De Lacy Evans, M.P., Mr. Ewart, M.P., the Hon. W. F. Campbell, M.P., Hon. G. Byng, M.P., Mr. Coningham, M.P., Hon. Granville Vernon, Rev. G. R. Gleig, chaplain-general, Rev. Dr. Hawtrey, Provost of Eton, and other gentlemen. Resolutions were unanimously adopted to the effect that, with a view to the permanence of the volunteer force, it is desirable that elementary military drill should be established at public and other schools; that where elementary drill has been established it has been found to conduce to the discipline and order of schools and to the mental advancement of scholars, as well as to their physical development and improvement; that it is highly important that the chief public schools should take the lead and set the example of the regular practice of elementary drill; and that the highest public approbation is due to the Provost, Head Master, and authorities of Eton for the prompt and judicious manner in which they have introduced preliminary drill into the Eton system. A committee was also nominated to carry out the objects of the meeting.—The arrangements for the Volunteer Ball in the new Floral Hall of Covent Garden Theatre are making satisfactory progress under the direction of a committee composed of the commanding officers of the different corps of the London district. The Queen has desired that the ball be announced as under her especial patronage, in addition to that of the Prince Consort and the Prince of Wales; the Duke of Cambridge, as Commander-in-Chief, has given it his official sanction; and the Duchess of Cambridge and the Princess Mary, the Duchess of Wellington, Lady Palmerston, and almost all the ladies of distinction in political and fashionable circles have consented to act as ladies patronesses. It is expected that the number of persons present will exceed 4000.

THE BUDGET.—The citizens of Manchester at a public meeting in the Town Hall on Tuesday, resolved to petition Parliament in support of the Budget and Commercial Treaty, and passed a vote of thanks to Mr. Cobden for his services in negotiating the Treaty. The Manchester Chamber of Commerce, the inhabitants of Birmingham, and the Town Councils of Edinburgh, Salford, and other places have adopted similar resolutions, coupled in some instances with an expression of regret that no attempt has been made to remove the inequalities of the income-tax. A numerous and influential deputation of paper makers, accompanied by several members of Parliament, had an interview with the Chancellor of the Exchequer, and afterwards with the President of the Board of Trade, on Saturday, to urge the Government not to persevere in the proposed reduction or abolition of the differential duty of 1*d.* per lb. on foreign paper, except in the case of countries from which the free export in rags is permitted. On the same day Mr. Gladstone received a deputation of wholesale stationers, to submit a statement as to the claims of the trade for full allowance of drawback on the abolition of the paper duty; a deputation from the Irish and Scotch distillers to draw his attention to the effect which the proposed reduction of duty on foreign spirits admitted into this country for consumption would have upon the interests of the British distillers; and a deputation from the wholesale tea and sugar merchants, to protest against the proposed stamps upon tea, sugar, tobacco, &c, imported into this country and bonded upon its arrival. On Monday the right hon. gentleman received a deputation from the licensed victuallers to protest against the proposed licenses to confectioners, eating-houses, &c., and a deputation from the maltsters in reference to the proposed alteration in the hop duties. Deputations have also had interviews with the right honourable gentleman from the wine and spirit merchants, the timber merchants, the hop growers, the shipowners, and the various trades connected with the bonded system, to remonstrate against those provisions of the Budget and Treaty which specially affect their respective trades, and in some cases to demand a drawback on stocks in hand. In answer to these representations the right hon. gentleman expressed his readiness to receive all suggestions, and to introduce such modifications in the Budget as may be proved to be necessary, at the same time assuring the deputations that the Bill intended to carry the resolutions into effect would not be pressed forward until ample time had been afforded to all parties interested to consider its provisions. The Chancellor of the Exchequer has since addressed the following letter to the Committee of Importers and others in Mincing Lane:—

"Downing Street, Feb 21.

"Gentlemen,—I have the honour to acknowledge your letter of the 17th. I must beg you not to construe the present communication as the answer of the Government to your representation. It is intended only to narrow any apparent ground of difference between us, and to suggest the course of proceeding most convenient with a view to the progress of public business. Your letter refers to that portion only of the financial proposals of the Government which is intended to meet, by compensating charges upon trade and exchange in one form or other, a share of the loss anticipated from the approaching remissions of duty. You comment more or less adversely upon the penny registration due, upon the charges for removals and operations in warehouse, upon the stamp proposed for dock warrants and for contract notes; and besides, you observe that any tax meant for revenue should be imposed, not upon traders as a class, but upon the community. I distinguish carefully between your particular and your more general objection. And with respect to the latter, I respectfully ask you to consider whether the financial scheme of the Government, viewed for one moment as a whole, is really open to the charge of relieving the community at the expense of traders as a class; and whether, on the contrary, the head and front of the attacks upon it be not this, that it too greatly relieves trade, and therefore relieves traders also in a primary and especial sense, and this by means of a tax to be imposed on the community. It is with reluctance that her Majesty's Government recommend to Parliament any new charges upon trade in any form. But the case is a very simple one. They found that in order to give the requisite breadth to their scheme, and secure some of its main ends, it was necessary to give a relief from present taxes amounting to nearly 4,000,000*l.* for the year 1860-1, and to nearly 5,000,000*l.* if we include the residue to take effect in 1861-2. They found that they might obtain this great relief, and, along with it, largely reduce establishments and patronage, and effect collaterally great administrative reforms, at a charge of something over 3,000,000*l.* to the revenue of the coming year. They did not conceive that they could ask for more than about 2,100,000*l.* from that revenue, with the present high scale of expenditure, even for the great purposes which they have had in view. It is therefore no wanton infliction which they suggest; but they are desirous to arrange, with your assistance and that of others who are well-informed, a beneficial commutation. They rely with confidence on your willingness to venture something for the public good. They wish carefully to consider with you how to keep the pecuniary demand within bounds, and, above all, how to prevent creating new obstructions to the course of trade where their main object is wherever possible to destroy old ones. I now pass to your comments upon details. Most or all of the resolutions on which you comment may require to be modified, but you will agree with me that definitive modification had better be reserved until it can express the final intentions of the Government. Nor will you be surprised or offended when I tell you that, as the Minister most directly responsible, I am reluctant to ask my colleagues to give the subject their final consideration until I am myself able to pay a less divided attention to the details than will be possible until the House of Commons shall have dealt with the larger and more vital questions involved in the scheme for remission of duties. I may, however, give you certain limited assurances, on which you may rely apart from anything that the necessarily technical language of the resolutions may appear to suggest. With respect to the penny registration dues, its basis in this. We have (I trust) arrived at a stage in our legislation when the whole pressure of customs duties will cease to be felt beyond a very narrow list of articles, and when the largest share, possibly four-fifths or more, of the entire import and export trade of the country, thus absolutely relieved, will continue to receive important services from customs establishments that (including superannuations) cost the country above 1,000,000*l.* a year. The registration due is intended, without affecting the operations of trade as duties do, to make a moderate contribution from trade itself towards this heavy charge. The requisite classification is of necessity, but inadequately, expressed in the resolution. I am satisfied that it will not be difficult, and that the measure is in principle generally admitted and approved. The warehousing charges aim at the same end; and likewise at establishing a greater equality between certain classes of places, with regard to warehousing advantages, than now exists. I admit that many of them are too high. I further admit that it may be open to consideration whether, in respect to some of them at least, and especially in regard to removals, a different form of proceeding may be preferable. A most respectable deputation from Liverpool has urged that all dealers in bonded goods should be required to take out an annual licence; and the Government are desirous to obtain the opinion of the commercial world upon this suggested alternative. With respect to dock warrants and to contract notes I refer to what I have already said respecting the proper time for definitive explanation or improvement. I beg, however, to assure you that the former are not intended to be liable to those frequent repetitions of the charge imposed which has been apprehended; and, in regard to the latter, that it is not, and never has been, the intention of Government to ask for a tax even of 1*d.* upon bills of parcels, or upon anything that essentially belongs to that class, inasmuch as the transactions to which they relate are already regulated, and, when they exceed 40*s.*, taxed by law. Should the faithful application of this pledge be found to diminish the estimated fruits of the stamp, it will nevertheless be redeemed. After giving your obliging consideration to this letter you may perhaps be enabled to draw into more specific forms any suggestions it may be agreeable to you to make. I shall be most ready to communicate with you, both in writing and personally, at the proper time; and it is for the general convenience, rather than that of the Government, if I venture to recommend that by mutual communication the classes best informed and most directly concerned should as far as possible represent to us on behalf of London and other places their collective wishes and opinions. As this letter appertains wholly to matters of general interest, I make no apology for sending it at once for publication; and I have the honour to remain, gentlemen, with much respect, your very faithful servant,

"W. E. GLADSTONE."

Foreign.

FRANCE.—The *Moniteur* of Sunday publishes a Ministerial report, addressed to the Emperor by M. Rouher, on the reform of the tariff for primary materials, of which the following is a summary:—

"The Minister expresses his opinion that the epoch for the exemption of wools and cottons may be fixed for the 15th April, and that the tariff for primary materials could be expressed as follows:—All wools and cottons in wool, imported from countries out of Europe, are exempt. If coming from other parts, and in French vessels, to be subject to a duty of 3fr. per 100 kilogrammes. If imported in foreign vessels, to pay a duty of 5fr. per 100 kilogrammes. The premiums paid on exportation will be suppressed:—1. For threads of cotton and wool within two months. 2. For tissues of wool and cotton within three months. The report of the Minister also proposes modifications of the tariff for dyes and chemical products."

The *Moniteur* also publishes a circular from M. Billault, the Minister of the Interior, to the Prefects of France, stating that the time has arrived to put an end to the attempt at agitation on the Roman question, instructing the prefects to prohibit according to law the distribution of writings and pamphlets unless duly authorised, and to report to the Council of State whenever the liberty of the pulpit is abused; and recommending them to "combine moderation with firmness, as the Emperor desires peace and liberty for religion." This circular has been followed by one to the same effect, addressed to the bishops of France by another Minister, M. Rouland, to whose department belong Public Instruction and all matters relating to public worship. In this document M. Rouland enumerates the customs, laws, and principles which have established in France the incontestible authority of the Church over religious society in independence of the State, which is the regulator of civil and political society. The Minister recalls the conduct of the Emperor since 1849, in according to the Church great confidence and liberty, and never making use of the prohibitions of special laws in reference to it. The Emperor, however, is not willing that this liberty which had been conceded in the interest of public welfare should become an expedient for agitation. The Minister reminds the bishops that the disagreement between the Emperor and the Pope does not refer to religious but only to temporal questions. To excite civil discord would be a deplorable fault of the religious class. The Minister acknowledges that the immense majority of the clergy have known how to escape such dangerous ground, but expresses his regret that some priests have abused the liberty of the pulpit to make offensive allusions and culpable provocations. The country, he says, condemns such outbursts of passion, and he therefore hopes that the bishops will bring back to the way of the Gospel and to their duty the men who had departed from it. If, he says, the clergy owe veneration to the Pope, they owe respect and fidelity to the Emperor, so that disorders compromising religion and prejudicial to the public peace may be prevented. He concludes by saying that while the Emperor will always be happy to protect the French clergy, he energetically desires that the laws be maintained and executed, and he has therefore the firm hope that the bishops will fulfil their mission of order, peace, and conciliation.—France and England are on the point of signing a convention relative to the prizes which may result from the approaching expedition against China. This contradicts the rumour that the two Powers intended to postpone the expedition.—The *Patrie* declares on authority that the rumour respecting the intention of the Government to establish an income-tax is without foundation.—M. Ferdinand de Lesseps and the Duke of Albufera were received on Sunday in a private audience by the Emperor, who gave them the positive assurance that M. Thouvenel has already received instructions to seize the first opportunity of entering into negotiations with the English Cabinet with the object of removing the last obstacles which oppose the realisation of the Suez Canal project.—The *Moniteur* of Sunday publishes a supplement containing, without a word of abridgment, a translation of Mr. Gladstone's speech introducing the Budget, accompanied by the following preliminary notice:—

"Never in the course of Mr. Gladstone's brilliant career was he so well inspired as on this occasion. Everybody will be struck at the largeness with which he comprehends and practically applies the principle of commercial liberty adopted by England as one of the foundations of her home and foreign policy. In presence of a considerable deficit, Mr. Gladstone does not hesitate to propose new reductions of duties for the sake of affording ease and giving activity to national industry, although in so doing he is obliged to increase other taxes, especially the one affecting incomes. The boldness of the financier is not less remarkable than the brilliancy of the parliamentary orator."

M. Michel Chevalier has addressed the following letter to a friend in England on the exportation of English coals:—

"Paris, 73, Rue de l'Université, Feb. 18, 1860.

"My dear Friend,—Nothing is spoken of here but the objections raised against that article of the treaty which regards the exportation of coals; and I take the liberty of writing you a few words on the subject. It is a subject with which I am perfectly familiar—and by this I mean that I am not only familiar with the subject itself, but that I am also acquainted with everything that has occurred in reference to this portion of the treaty between the two Governments. The assertion put forward is to the effect, that we should be prevented from carrying on a maritime war if deprived of English coal; or in other terms, that we obtain the means of carrying on a maritime war by being allowed to lay in a stock of English coal. This is a gross mistake respecting fact. France has fewer coal mines than England, but is not wholly destitute of them; the greater part of her mines are at a distance from the coast; but by means of our canals and our railways, now almost completed, the distance may be got over without too great expense. I have made calculations, from which it results that the French coal sold in our maritime arsenals (Brest, Cherbourg, Lorient, Rochefort) would not cost more than 10*s.* the ton (1000 kilogrammes) above the English coal; and that sometimes the difference in price would not be more than 5*s.* In time of war the increased expense might, perhaps, amount to 10 millions of francs in the year. Even doubling that sum, would such an increase of expense render a maritime war an impossibility? In time of peace the Atlantic fleet, with the immense forges of Brest, &c., &c., only costs five millions for coal. In the Mediterranean the case is still stronger. There the English coal is as dear as the coal of Alais (Gard), of Bessegeir (Gard), and of Graissessac (Herault). Lastly, England has an interest in the two contracting parties being allowed freely to export their coal; for our coals in the south (Alais, Bessegeir, Graissessac, and even sometimes Rive de Gié) might be found extremely convenient for its Mediterranean fleets. And also we can obtain the Belgian coal extremely abundant and extremely good. Thus the pretext invented by the English Protectionists is absurd; it is directly contradicted by the facts: they are, in reality, pursuing but one end—that of sowing distrust and irritation between two great nations. This course of the Tories is in fact provoking on the part of England an unfriendly act towards us. The rejection of the article of the treaty would be an unfriendly act, and it would be taken for such in France. The cry would be raised of 'Perfidious Albion!' Our great manufacturers would exclaim that they have been duped about the reduction in the export duties on English coal. The moral and political effect expected from the treaty, the drawing closer together of two great nations

would not be attained. And this would be the case even were the article to be struck out from the treaty, with the consent of the French Government.—Ever yours, MICHEL CHEVALIER."

SPAIN AND MOROCCO.—Accounts from Tetuan dated the 16th inst., state that Marshal O'Donnell has transmitted to the Moors the following bases for the conclusion of peace:—1. The possession of all the territory conquered, including Tetuan. 2. An indemnity of 200,000,000 reals. 3. An engagement to respect the Catholic religion and the grant of commercial stipulations favourable to Spain. A truce, terminating on the 23d, is granted for a reply, but it is doubted whether the Moors will accept these terms. The Moors having prepared to cannonade Melilla, General Buceta, though suffering from recent illness, attacked and carried their positions. The Spanish loss was 31 men. General Buceta re-entered Melilla more indisposed than before, and confided the command to the colonel. The Moors, being very numerous, re-captured their positions, but General Buceta returned, and again carried them, with the loss of 200 men. It is said that General Buceta has been placed under arrest, and is to be brought to trial for having undertaken these operations contrary to the orders of the Commander-in-Chief. The remains of the Moorish army are assembling at Fonduch, on the road from Tetuan to Tangier, near which there is a defile where they think they can attack the Spanish army with advantage.

BELGIUM.—In the sitting of the Belgian Senate of the 17th inst. the Duke de Brabant, the heir to the throne, spoke at considerable length upon the commercial prospects of Belgium. The question under discussion was the Budget for Foreign Affairs.

DENMARK.—Bishop Monrad has arrived at Copenhagan to undertake the formation of the new Ministry. He has declared to the King that his ministerial programme will entirely differ from that of the late Cabinet. His Majesty has consented to the policy of the Bishop.

HANOVER.—The King of Hanover has consented to submit the question of the Stade dues to general conferences. The English and other Governments interested in the question have requested Hanover to state the amount she claims for the redemption of the dues, in order to serve as a basis for the conferences, as Denmark did for the Sound dues.

PRUSSIA.—The negotiations between the great Powers in reference to the Italian question are vigorously proceeding, but the basis upon which a Conference is to be held is not yet agreed upon.

RUSSIA.—The Russian Government has expressed a wish to propose jointly with Prussia a Conference of the five great Powers on the Italian question. It is asserted that Prussia with certain reserves has consented to join in this proposal.

BADEN.—The Grand Duchess Stéphanie has left by her will the estate of Umkirch, near Freiburg, to the Princess of Hohenzollern-Sigmaringen, the villa at Baden to the Duchess of Hamilton, and the property at Mannheim to the Crown Princess of Saxony.

AUSTRIA.—The definitive answer of Austria to the English proposals, was despatched from Vienna on the 17th inst. to Paris and London. Count Rechberg explains that the proposal not only essentially alters the basis of the balance of power in Europe which was founded by the Treaties of 1815, but is also in open opposition to the fundamental principle upon which the legitimacy of Governments in general, and especially the Austrian monarchy, is founded. In the third instance, the proposals destroy the rights of the Italian Princes, which were placed under the guarantee of Europe, and which the Emperor Francis Joseph has a sacred duty to protect in his character as chief of the House of Hapsburg. If, induced by all these motives, Austria declines the proposed negotiations, she declares, nevertheless, that for the present she will not endeavour to undo by force of arms that which she cannot prevent, although she reserves to herself full and entire liberty of action for the future. The tone of Count Rechberg's answer is exceedingly moderate and courteous. The *Times* newspaper has been excluded from all parts of the Austrian Empire.

ITALY.—The Grand Duke Ferdinand IV. of Tuscany, after having passed a few days in the strictest incognito at Paris, has left again for Bavaria. It is asserted that he is about to address a manifesto to the Tuscan nation, promising to forget the past and to grant constitutional reforms. Accounts from Milan state that the King of Sardinia arrived at Milan on the 15th inst., and was received with extraordinary enthusiasm by the population. Governor Farini arrived at Ferrara on Friday, and was enthusiastically received by the inhabitants. A general illumination took place, and a grand ball was given by the Marquis de Costabili. On Wednesday he arrived at Rimini, and was received with the same enthusiasm in that city. The Duke de Grammont, the French Ambassador at Rome, presented to Cardinal Antonelli on Saturday the following important despatch from the French Minister of Foreign Affairs, in reply to the last encyclical letter of the Pope:—

"Paris, Feb. 12

"Monsieur le Duc,—I have already intimated to you the impression made upon us by the encyclical letter of the Holy Father to the bishops, and I did not conceal the sincere regret it occasioned us. I think it advisable now to complete the circular which I addressed to the diplomatic agents of the Emperor under date of the 8th inst., by examining with you the recent facts which have led to the actual state of affairs in the Legations, so as to establish whence the evil comes, and upon whom the responsibility rests. How, then, did the events in the Romagna occur, and how did they come to the point at which we now behold them? Is it to the last war only that we must attribute the state of things of that country? It would grieve me to dwell upon details present to the mind of any man not totally ignorant of current events, and, though the encyclical letter gave us the right to recall the past and to express a judgment as the Great Powers did since 1831, upon the political *régime* applicable to the Legations, I shall abstain from taking that ground. I shall confine myself to observe simply that from the day the Austrians withdrew, the events which have taken place after their departure were certain and inevitable. We are, moreover, convinced that the Pontifical Government has not the slightest foundation for reproaching us for want of solicitude and foresight as far as it is concerned. When hostilities commenced, the neutrality of the Holy See had been proclaimed and recognised by the belligerent parties. They continued to occupy the positions they held as guardians before the war. They relinquished the idea of fortifying themselves in the same to be reciprocally detrimental to each other; in short, they seemed imbued with the idea that above their passing disagreements there was a superior interest, equally dear to both—that of the maintenance of order in the States of the Holy Father. The garrisons of Ferrara, of Comacchio, of Bologna, and of Ancona, could in all security maintain tranquillity in the Legations and in the Marches, while the French garrison guarded Rome. It is not for me to appreciate the circumstances, certainly very imperious, in her opinion, which induce Austria to discontinue her task, but I have the right to recall that France remained faithful to hers. As soon as the Austrian troops had left the populations took advantage of the circumstance, without being driven to it by any special excitement, and it may be said that they rather found themselves independent than made themselves so. This is the whole secret of the rising of the Romagna. This rising, then, Monsieur le Duc, cannot be ascribed to France, nor can it justify any doubt in the sincerity of the assurances of sympathy and good will which the Emperor had given to Pius IX. at the commencement of the war. But was not the Emperor to take into consideration the new facts which arose contrary to his wishes? His Majesty, looking upon the difficulties of the situation in the only light he could do, and deeming, nevertheless, that the peace concluded at Villafranca might produce all the consequences he expected therefrom if the Court of Rome seconded his efforts, wrote to the Pope from Dezenzano on the 14th of July, making the conditions known to him:—'In this new order of things (added the Emperor) your Holiness may exercise the greatest influence, and put an end to all troubles for the future. Consent to, or rather grant by a *motu proprio* to the Legations a separate administration, with a lay Government appointed by yourself, but with an elective council; let that province pay a fixed revenue to the Holy See, and your Holiness will have assured tranquillity to your States, and will have no need of foreign troops. I supplicate your Holiness to listen to the voice of a devoted son of the Church, but who understands the wants of his age, and who is aware that force does not suffice to resolve questions and remove difficulties . . I behold in the decision of your Holiness either the germs of a future of peace and tranquillity or the continuation of a violent and calamitous state of things.' You know, M. le Duc, that these suggestions were not taken. While succeeding events multiplied difficulties, the Court of Rome persisted in an abstention of a nature to aggravate a state of things which could no longer be conciliated with its authority without sacrifices or without compensations. It was thus that all favourable opportunities were lost to keep the Legations to the Holy See; it was thus that an eventuality occurred which the Emperor had in vain endeavoured to prevent, and which his Majesty was led to point out to the Holy Father in his letter on the 31st of December. And now, I ask, things having occurred as I have stated them, were the counsels rejected so out of place? At all events, the sincerity with which they were given is at least proved. The respect—nay, more, the devotion—which the Imperial Government has shown on every occasion towards the Head of the Church is one of the striking features of the history of the last 10 years. The French clergy knows with what benevolence and broad views the Imperial Government has always conducted its transactions with the Court of Rome. It is also aware that it has found in the Empire a restoring power, and that under its protection it has resumed in French society the influence and authority denied by other Governments. These facts alone would suffice to show the intentions of the Imperial Government towards the Papacy, even had it not given it direct and undeniable proofs. We do not deny that the occupation of Rome, when it took place, was not dictated by political as well as by religious considerations; but who can deny that the Government of the Emperor was induced to continue year after year the sacrifices enjoined by that measure by an affectionate and persevering solicitude for the interests of the Holy See? Who does not admit the care we displayed in foreseeing the inconveniences the occupation of Rome might give rise to, in form as well as in substance, for the sovereignty of the Holy Father? Who can deny to see in these facts a proof of a most sincere intention and firm desire not only to protect the personal position of the Holy Father, but also to extend, if possible, his moral influence? The support given by French diplomacy to the Holy Father is intimately connected with this order of ideas in every country where religious interests are at stake, and which are intimately connected with the missions to China and Japan. Finally, M. le Duc, what better proof can be given of this constant care than the stipulation of Villafranca, by which the Emperor, by offering the honorary presidency of the Confederation to the Holy Father, wished to place him at the head of regenerated Italy? From this statement the deduction may be made how happy the Imperial Government would have been, and still would be under present circumstances, to find a combination of a nature to diminish the embarrassments of the Holy See. But here the good intentions of France run the risk of being thwarted by insurmountable difficulties. In fact, the question is not only to restore the Legations to the Pope, but also to provide the means to enable him to hold them without recourse to a new occupation or new intervention. Events have proved clearly enough the fallacy of such an expedient. The opinion of Europe is decided upon this point, and the occupation, condemned by the lessons of the past in the Legations themselves, can no longer be thought of without disowning necessities incumbent upon the wisdom and foresight of every Government. Such a line of policy is now-a-days inadmissible. Neither monarchical authority nor the authority of the Church could gain anything by it: religion and reason unite to reject it with equal energy. Thus, then, M. le Duc, the moment had arrived to take all circumstances into consideration as soon as the Emperor pointed out the urgency thereof to the Pope. Interests and considerations of the highest importance are to be considered with the Holy See. A determined resolve not to a limit the real state of things would only aggravate matters, and would lead to difficulties also insurmountable. On the other hand, if the Holy See could resolve to leave the religious region, which is not the real question, and return to temporal interests, which are alone concerned in the debate, perhaps it might, though it is rather late, effect a change in its favour. It would, at all events, allow the Government of the Emperor to give its support to a conciliatory and reasonable policy. You are authorised to read this despatch to Cardinal Antonelli, and to leave him a copy, should he desire to have one.

"I am, M. le Duc, "THOUVENEL."

In reply to this document Cardinal Antonelli confined himself to stating that immediately on receiving the orders of the Pope he will place the Nuncio at Paris in a position to communicate the intentions of the Papal Government. The most influential members of the Holy College affirm that the Pope holds in readiness a *motu proprio*, already signed, realising the promises made at Gaeta; but that before promulgating it Pius IX. demands that the patrimony of St. Peter shall be guaranteed to him. Twenty-five deputies from the English Roman Catholics have presented to the Pope a protest from England, which is said to have afforded great consolation to the Holy Father. The army of the Romagna has received reinforcements. The Archduke Maximilian has sent to the Pope 2000 capotes, a battery, and some cavalry. Nine hundred Bavarians, enlisted for the Papal army, have arrived at Ancona, and others are expected. The Italian patriots in Spoleto, Ferri, Rieti, Jesi, Perugia, Todi, Amelia, Narni, and another town have sent 10,000fr. to Garibaldi.

TURKEY.—The typhus fever, raging among the fugitive Circassians at Constantinople, is carrying off about 100 persons daily.

SERVIA.—A despatch from Belgrade of the 17th inst. states that Prince Michael Obrenovich has forbidden his house to the French Consul-General on account of his offensive conduct.

PERSIA.—A letter from Teheran of December 21 announces the arrival there of Sir Henry Rawlinson, British Minister Plenipotentiary to the Court of Persia, accompanied by the functionaries who attended him to Tiflis, and by Mr. Taylor, who replaces Mr. Stephenson as Consul at Teheran.

INDIA.—By the arrival of the overland mail we have accounts from Calcutta to the 10th January; Bombay, to the 17th January; and from Hong Kong to the 30th December. The following are the details:—

Lahore.—After a short visit to Roorkee, a reception at Meerut, and a stay at Delhi for two days, the Viceroy left the old capital on the 1st Jan., on his way to Lahore. There his lordship will receive the whole of the Sikh chiefs, with the Maharajah of Putteeala at their head, and bestow on the latter the reward he has so long expected. Thence Lord Canning proceeds to Peshawur, according to report, to meet the Ameer of Cabul.

Lucknow.—The Right. Hon. J. Wilson was at Lucknow on January 15.

Nepaul.—The *Delhi Gazette* has been informed that intelligence has been communicated to Government to the effect that the Nana was seen some little time ago on his road to Badrinath, disguised as a *jogi* or religious mendicant.

Poona.—Sir Hugh Rose has applied for six months leave of absence to England, on private affairs, and will be temporarily succeeded in the command of the Poona division by Brigadier Hale.

Calcutta.—The following are announced as the final arrangements of the general staff of the China expedition:—Lieut.-General Sir J. Hope Grant, Commander-in-Chief; Colonel Haythorne, Chief of the Staff; Colonel Mackenzie, Adjutant General; Colonel Stephenson, Deputy Adjutant-General; Colonel Bruce, Dep.-Adjt.-General, Moran Force; Major Drummond and Major Taylor, Assist.-Adjts.-General; Colonel Hollitch, C.B., Quartermaster-General; Colonel Ousely, Deputy Quartermaster-General; Captain P. S. Lumsden (60th N. I.), and Captain G. Allgood (49th N. I.), Assistant Quartermasters-General; General Napier and General Michel, Generals of Division. The following is a list of the Bengal force selected for the expedition:—*Europeans.*—No. 2 Battery 11th Brigade Royal Artillery, Cavalry (not detailed), 4th Company Royal Engineers, 23d Company, ditto; her Majesty's 3d, 6th, 1st Battalion; 8th, 1st Battalion; 23d, 1st Battalion; 37th, 60th Rifles, 1st Battalion; 67th, 73d, 87th, and 99th Foot. *Natives.*—Irregular Cavalry (not detailed), five Battalions of Infantry, each 800 strong.

Bombay.—The following is the Bombay force selected for the China service:—*Europeans.*—Her Majesty's 31st and 56th Foot. *Natives.*—3d and 5th Native Infantry, each 1000 strong.

Madras.—The following is the Madras force under orders for China:—*Europeans.*—No. 7 Battery 14th Brigade Royal Artillery, her Majesty's 1st Dragoon Guards, two squadrons, A and K Companies of Sappers and Miners, her Majesty's 44th and 66th Foot. *Natives.*—A Company 5th Battalion Artillery (Golundauzes); 1st Supplementary Company (Golundauzes.)

Kurrachee.—The submarine telegraph has been successfully laid from Bombay to Muscat, and the submergence of the cable between Kurrachee and Aden has been successfully commenced.

UNITED STATES.—Accounts from Washington of Feb. 10 state that the Committee on Commerce has been directed by the House to inquire into the expediency of prohibiting American vessels from engaging in the Coolie trade. The Boston Chamber of Commerce has memorialised Congress soliciting mediation between France, England, and China. Lord Lyons, the British Minister, had a protracted interview with the Secretary of State on the 6th inst. The barque Emily, recently brought to New York on suspicion of being a slaver, had escaped, and was supposed to have sailed for the African coast. Telegraphic advices from San Francisco state that the steamer Northern, belonging to the Pacific Mail Steamship Company, was wrecked off Mendocino on January the 6th, on her passage to Portland; 18 passengers and 18 of the crew were drowned. Among the former was Mr. Blomfield, son of the late Bishop of London. It is supposed that the Bishop of Columbia, to whom Mr. Blomfield was chaplain, was also on board the vessel, and that, as he is not mentioned, he was among the saved.

NOVA SCOTIA.—The Nova Scotian Cabinet had resigned. A new Ministry had been formed under Mr. Wm. Young. The following will probably be the new Government:—Hon. Wm. Young, Leader of the Government, without office; Hon. Joseph Howe, Provincial Secretary; Hon. Adams Archibald, Attorney-General. The Governor had refused to dissolve the House, which had adjourned for a month.

MEXICO.—Advices from Mexico give a deplorable account of the condition of affairs in the city of Mexico. The Miramon Government is completely demoralised, and the citizens generally are in bodily terror of some fearful outbreak. Miramon has reached the city of Mexico bereft almost entirely of his army, and having narrowly escaped with his own life. Full particulars of

his defeat near Colima are given in the Vera Cruz journals. The Liberals are steadily gaining, and no attack on Vera Cruz is anticipated. Mr. Mathew, the English Minister, is about to take his passports and leave for Vera Cruz.

NEW GRENADA.—Advices from Bogota state that a revolution had broken out in that capital. The Catholic clergy had collected all the Bibles distributed by the London Bible Society, and burnt them in the public square. The British Minister strongly protested against the proceeding, but Mr. James, the American Minister, was present countenancing the outrage. A full account of the affair had been sent to Washington.

BUENOS AYRES AND PARAGUAY.—Great indignation was manifested at Buenos Ayres in consequence of the British squadron attacking the steamer in which General Lopez embarked for Paraguay. The steamer backed her engines and got ashore. General Lopez returned to Buenos Ayres.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Endowed Schools Bill.*—The House went into committee on this Bill, and, after considerable discussion, a clause was agreed to, requiring the trustees of all schools not expressly founded for the benefit of the Church of England to admit the children of Dissenters, but at the same time to make provision for the religious instruction of the children of Churchmen.—Lord CHELMSFORD moved the rejection of the 7th clause, which rendered Dissenters eligible to act as trustees of all endowed schools where the endowment did not expressly require the trustees to be members of the Church of England. The clause was ultimately withdrawn, and the Bill passed through committee.

MONDAY.—*The Commercial Treaty.*—The Earl of DERBY inquired what steps the Government intended to take to carry out the 20th article of the treaty of commerce with France, which provided that the treaty should not be valid without the consent of Parliament. After noticing the precedent set by Mr. Pitt in 1787, he demanded that a similar course should be pursued on the present occasion. He took exception to several of the provisions of the treaty, and said that though he rated highly the advantage of extending our commerce with France, he wished to see it done, if done by treaty at all, by a treaty bearing on its face some marks of reciprocity. He regretted to see that no steps had been taken to obtain an equalisation of the duties on shipping, and denounced the article on the export of coal as most impolitic and highly dangerous in its possible consequences to our relations with countries with which France might be at war if coal were declared contraband of war. In addition to which it was an article in which there could be no reciprocity. He concluded by declaring that the treaty was so unpopular in France that the Emperor with all his power would have great difficulty in carrying it out.—Earl GRANVILLE in reply said that the treaty negotiated by Mr. Pitt referred to France alone, while the provisions of the present treaty would apply to the whole world, and ought not therefore to be considered upon the French basis only. In defence of the treaty he said that while in England many persons declared it to be one sided and in favour of France, there were not wanting those in France who declared it to be one-sided and in favour of England.—Earl GREY asked if it was wise for the purpose of cheapening French manufactures to bind ourselves to supply France with coals for 10 years, while France continued to prohibit or levy a high duty on the exportation of articles of raw produce, such as rags and silk, equally essential to the manufactures of this country?—The Duke of ARGYLL said if the treaty were to be tested by reciprocity some defects would doubtless be found in it; but the advantages conferred by the treaty ought to be considered with its defects. He should have been highly gratified if the treaty had been a Navigation treaty, but it was not so; and her Majesty's Government had not contemplated the revision of the French navigation laws, as the French Government had steadfastly refused to alter those laws. He wished it to be understood that the continuance of the income-tax was not due to the treaty, but to the increased naval and military expenditure which has rendered the continuance of the tax necessary.—After a few words from Lord HARDWICKE, Lord DERBY withdrew his motion.

TUESDAY.—*Law and Equity.*—The LORD CHANCELLOR laid upon the table a Bill for the further fusion of law and equity. *Constitution of Tasmania.*—In reply to the Earl of CARNARVON, the Duke of NEWCASTLE said that he was prepared to advise her Majesty to agree to the Bill for amending the constitution of the Legislative Council of Tasmania, but after considerable hesitation he had come to the determination that he ought to recommend her Majesty to disallow the Bill which disregarded vested interests by abrogating the clergy reserves. *The Tuscan Government.*—Earl GRANVILLE read a letter from Mr. Corbett, her Majesty's Chargé d'Affaires at Florence, stating that he had never attended any official reception of Signor Buoncompagni; but that, having known his excellency from childhood, he had attended one of his receptions privately. *The Chinese Mission.*—The Earl of SELKIRK moved for copies of all letters between the Earl of Elgin and the Earl of Malmesbury relative to the mission of the former to China.—The Earl of ELGIN took the opportunity to vindicate his conduct against the aspersions recently cast upon it in the House of Commons. He denied that he had been guilty of either harshness or injustice towards the Chinese, and said that he had advocated the appointment of a resident Minister at Pekin, because he was convinced that it was the only way to preserve permanent commercial relations with China. As to the differences which had taken place between himself and Sir M. Seymour, he said it was true that he had experienced much disappointment in not having been adequately supported in enforcing his policy under circumstances of peculiar difficulties, and perhaps his despatches might have reflected that feeling. At the same time he acknowledged in the frankest manner the services which the navy had rendered him, and mentioned among others the exploration by Captain Sherard Osborn of a large internal Chinese stream, and the opening up of Japan to British trade. The motion was then agreed to.

THURSDAY.—*Criminal Law.*—The LORD CHANCELLOR moved the second reading of one of a series of Bills for the Consolidation of the Criminal Statute Law. By this measure it is proposed that conspiracy to murder, now a misdemeanour, shall in future be made felony. The *Indictable Offences (Metropolis) Bill* and the *Court of Chancery Bill* passed through committee. The report on the *Endowed Schools Bill* was brought up and agreed to with amendments. The *St. Mary in Redal Marriage Bill* was read a third time and passed.

FRIDAY.—*Spain and Morocco.*—In answer to Lord CARNARVON, Lord WODEHOUSE said that the Government were not in possession of any information respecting the bases of peace which Marshal O'Donnell was reported to have proposed to the Moors. *Sunday Evening Services in Theatres.*—Viscount DUNGANNON called the attention of the House to the performance of Divine service at Sadler's Wells and other theatres by clergymen of the Church of England on Sunday evenings, and moved a resolution that such services, being highly irregular and inconsistent with order, are calculated to injure rather than to advance the progress of sound religious principles in the metropolis and throughout the country.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Commercial Treaty.*—Mr. STIRLING asked why it was necessary or expedient that the fiscal arrangements between Great Britain and France, proposed in the Budget, should be made the subject of a treaty, seeing that there existed no apparent constitutional obstacle to the adoption of those arrangements by the ordinary legislation of the two countries respectively.—Lord JOHN RUSSELL said the question was of so large a nature that he could hardly be expected to answer it at that moment, and he thought he should best consult the time of the House if he deferred the discussion until Monday.—Mr. DISRAELI inquired if the Government intended to follow the example of Mr. Pitt in 1787, in bringing the treaty of commerce with France under the notice of the House, so that it might have a full and constitutional consideration.—Mr. HORSMAN expressed his opinion that the conclusion of the treaty was a stretch of the Royal prerogative.—After some further discussion, Lord PALMERSTON said the only question was as to the order in which their proceedings should be governed. If the Government had brought the treaty forward before the details of the proposed commercial changes had been discussed, they would have been met by the objection that they were asking something unreasonable. They intended to take the sense of Parliament on the matters depending upon the treaty; and it would also be their duty to give the House an opportunity of stating their opinion, aye or no, upon that treaty.—In answer to a question by Colonel HERBERT, Lord JOHN RUSSELL stated that the 11th article of the treaty (relating to the import of coals) had been inserted without any political motive whatever. In a treaty concluded last year by the Earl of Malmesbury with Russia there was a clause virtually binding us not to prohibit the export of coals to that country, so that the principle involved in the clause was not a new one.—Sir H. CAIRNS pointed out the embarrassment which the article might create in case of war with any Power, and the possible jeopardy in which a rejection of a single clause would place the whole treaty. *Removal of the India House.*—In reply to Colonel Sykes, Sir C. WOOD said that it was intended to hire one-half of the new Victoria Hotel, at Westminster, at a rental of 6000*l.* a year, until the proposed India Office would be read for the accommodation of the council. The museum, library, and all the records worth keeping would be carefulyly preserved. *Savoy and France.*—Lord J. RUSSELL said he wished to add to the statement he made on Thursday, on the subject of the annexation of Savoy to France, that her Majesty's Ambassador at Paris, having addressed the Emperor on the subject, had been assured that his Majesty would not proceed to any final decision respecting it without consulting the great Powers of Europe, and that under no circumstances would he annex Savoy against the wishes of the inhabitants. *Army Estimates.*—The House then went into committee of supply, and Mr. SIDNEY HERBERT proceeded to move the army estimates. He frankly admitted that they were enormous, and the largest which had been presented to Parliament in modern times. In amount they were 14,482,275*l.*, being 1,982,600*l.* in excess of those of last year. Amongst the chief causes of the increase was the heavy outlay for rifled cannon, which alone amounted to nearly one million sterling. The force of all ranks which it was proposed should be voted was 143,362, being an apparent increase of upwards of 20,000 men, but in reality of but 6456, owing to transfers from India to China, and other augmentations. Objections had been raised to the maintenance of so large a force of regulars, and to the proposition to disband so many regiments of militia; but in his opinion, the militia should be regarded as a reserve force upon which to draw in case of war, and he dissented from the doctrine that the militia regiments ought all to be embodied in turn. The right hon. gentleman referred to the late experiments with the Whitworth gun, the success of which gave him great satisfaction; but at the same time, it should be remembered that Sir W. Armstrong had never yet made guns for purposes of range. Even if the Whitworth gun proved the better of the two, the Armstrong gun would not be thrown away, as the difference was not in construction but in rifling, so that the one could be adapted to the other. He expressed full confidence in the capacity of Sir W. Armstrong. There was now a sufficient supply of Enfield rifles for the regular troops at home and in India, the militia, the volunteers, and an ample store would yet remain. He described the improvements effected in the arsenals and barracks, and entered into a variety of details with reference to the several branches of the service, and the measures which had been adopted for promoting the health, general improvement, and efficiency of the troops, concluding by placing in the hands of the chairman the first vote for 143,362 men for the service of the year 1860-61.—Sir R. PEEL protested against what he termed extravagance of the public expenditure at a period of peace. He ridiculed the Volunteer movement, contrasted the French and English budgets, and contended that the country had a right to demand an explanation from the Government for the unnatural and unfortunate state of affairs which called for an outlay of 30,000,000*l.* in one year for national defences. After considerable discussion, the vote was agreed to.—The CHAIRMAN then reported progress and obtained leave to sit again. *The Budget and the Treaty.*—At the close of the sitting Mr. DISRAELI put upon the notice paper for Monday an amendment to the effect that the House will not go into committee on the Customs Acts, with a view to the reduction or repeal of the duties referred to in the treaty of commerce, until it shall have considered and assented to the engagements in that treaty.

MONDAY.—*The Budget.*—Mr. DU CANE announced, in a very crowded House, that as the resolution of which Mr. Disraeli on Friday night had given notice embodied a proposition which was entitled to priority, he would postpone until Tuesday the resolution of which he had given notice.—On the question that the Speaker leave the chair to go into committee on the Customs Acts, Mr. DISRAELI moved as an amendment:—"That this House does not think fit to go into committee on the Customs Acts with a view to the reduction or repeal of the duties referred to in the treaty of commerce between her Majesty and the Emperor of the French until it shall have considered and assented to the engagements in that treaty." He disclaimed any intention of making the motion a party question, and said that after minute inquiry and patient consideration he had come to the conclusion that the treaty of commerce with France, which had never been before the House, never could come before the House for its decision. It seemed to him that the Government should have pursued a course similar to that adopted by Mr Pitt in 1787, namely, have submitted the whole matter to the judgment, revision, and control of Parliament. With regard to the treaty itself he thought that it proposed a wanton destruction of sources of revenue much wanted at the present time, and that if it were a reciprocity treaty never was reciprocity less adroitly managed. He imputed to the Government nothing but inadvertence, but if persisted in it might lead to great inconvenience and possibly to public injury. What he was prepared to contend was that it was the undoubted right of the House of Commons to insist that any commercial treaty with France should have been submitted to its critical and constitutional control. He trusted that the Government would not force the House to a division upon the question, as, in his opinion, they might adopt the course recommended in the amendment with honour and dignity, for he trusted the time had not yet come when an English Minister would feel that he was in a false position because he deferred to the privileges of the House of Commons, and acknowledged the authority of Parliament.—The CHANCELLOR of the EXCHEQUER said that Mr. Disraeli was correct neither in his facts nor his principles. He read from the journals of the House some of the resolutions moved by Mr. Pitt in 1787, and some of the proceedings thereupon, and he denied that the Government had withdrawn the treaty from the cognisance of the House or abandoned the precedent of Mr. Pitt. He could not understand, he said, what were Mr. Disraeli's notions of the respective functions of the Crown and of Parliament in respect to treaties. He insisted that the Government had followed substantially the precedent of Mr. Pitt, with due allowance for the change of circumstances and of the law. But whether the course they had taken was right or wrong, he wanted to know what it was the House could do on a message from the Crown which it could not do on papers presented to the House? The proposition was puerile. The Government had held it to be their first duty, without interposing difficulties, to bring under the cognisance of Parliament the most vital and substantial parts of the treaty. If they had erred on any point it was by too rigid an adherence to the precedent of Mr. Pitt. The real sin of the Government, as he understood, was that they had combined the treaty and the Budget; that is, that they ought to have reduced at once the duties upon French wines and spirits by resolution, which must have taken effect immediately. He concluded by showing the consequences of this course, which would have had the effect, he said, of reviving the system of differential duties.—Sir HUGH CAIRNS said that the exportation of coal was a subject which could not be considered in committee on the Customs Acts. He thought that the proper and constitutional course would be first to take the opinion of Parliament upon the treaty as a whole, and then to consider the engagements connected with it.—The ATTORNEY-GENERAL contended that the alterations of the law proposed by the resolutions with reference to the treaty brought the propriety of the whole treaty at once into the field of discussion.—Sir F. KELLY said that the treaty would be invalid until the whole, in its entirety, shall have been sanctioned by Parliament. If any one vote should be rejected by the House it would be impossible to adopt the treaty, or even for her Majesty to submit it to the approval of the House.—Mr. NEWDEGATE opposed the treaty as a concession to France.—Mr. AYRTON and Mr. MALINS supported the amendment.—Mr. BRIGHT recommended that they should go through the whole Budget, accept what they believed to be good and reject what they conceived to be bad. He called upon the Opposition to forget party, and, for the sake of interests far more important, unite with the Government in their efforts to inaugurate a new commercial policy for the country.—Mr. S FITZGERALD said that the French navy was entirely dependant on us for its supply of coal, and that if the treaty were passed in its present shape, it would go far to deprive us, in case of war, of that which was essentially our best means of defence.—Lord J. RUSSELL said it was monstrous to suppose that the House should go into the consideration of the treaty clause by clause. He insisted that the Government had followed the precedent of Mr. Pitt, and that the amendment was wholly unnecessary. With regard to the motives of France, he did not believe that the Emperor had any warlike designs upon this country, or that he wished to get our coal for offensive purposes. It seemed to him that the Emperor of France had seen the advantage of free trade in this country, and had resolved, as far as was in his power, to make his own country rich as well as powerful.—Mr. HORSMAN supported the amendment, and referred to what he termed the "suspicious secresy" attending the treaty, which, he said, showed that there was something in it which would not bear the light, and which, when brought to light, the country would not approve. The Budget was in his opinion open to many grave objections. The Chancellor of the Exchequer was about to increase a deficit with one hand, while with the other he parted with a large source of revenue. He remitted two million of taxes to cement a friendship with France, and then imposed 10,000,000*l.* to meet her in the shock of war. This was a ruinous and unstatesmanlike policy, which he hoped the House would resist by agreeing to the amendment. Lord PALMERSTON said that Mr. Horsman had made a diversion in favour of the Opposition, by firing off the speech which he had intended for the Budget, and had charged the Chancellor of the Exchequer with departing from the policy of Sir R. Peel, who had never made a deficit, but if he would refer to the records of Parliament he would find that in 1842 Sir R. Peel increased a deficit, and that in 1845 he created a deficit. The question before the House was not one of taxes or finance, but simply of procedure. In fact there was no practical difference between the course indicated by the amendment and that which the Government intended to pursue. At half-past 12 o'clock the House divided, when the numbers were—For the amendment, 230; against it, 293; majority, 63. The amendment was therefore lost. The House then went into committee *pro formâ*, and the CHAIRMAN immediately reported progress, and obtained leave to sit again.

TUESDAY.—*Norwich Election.*—In answer to Mr. MELLOR, the ATTORNEY-GENERAL said that he did not feel it incumbent upon him, or necessary for the purposes of justice, that he should file an information in the matter of the alleged bribery at Norwich, inasmuch as the parties were themselves proceeding by indictment. *The Commercial Treaty.*—Mr. BALL asked whether, in case the resolutions to be proposed in committee were subjected to any substantial alteration, it would be possible to make the treaty with France conformable with those modifications.—Lord PALMERSTON said that the treaty was a complete compact between the two countries; but that it would be competent for either party to propose a supplementary treaty, which might be accepted or rejected, as was thought fit.—In reply to Mr. LYALL, Mr. HUTT said since the year 1826 iron ore of every description might be imported into France duty free whether carried in French or English ships. *The Budget.*—Sir W. MILES gave notice that in committee of ways and means, he will move the omission of the 16th resolution providing for the repeal of the paper duty, and the reduction of the income-tax from 10*d.* to 9*d.* in the pound.—Mr. DU CANE then moved the following resolution:—"That this House, recognising the necessity of providing for the increased expenditure of the coming financial year, is of opinion that it is not expedient to add to the existing deficiency by diminishing the ordinary revenue, and is not prepared to disappoint the just expectations of the country by reimposing the income-tax at an unnecessarily high rate." He said, that in undertaking the responsibility of moving a resolution such as that of which he had given notice, his motive was not to achieve a party triumph, but simply to discharge what he believed to be a duty which might well devolve upon an independent member of the Opposition. He regarded the scheme of the Chancellor of the Exchequer as unsound and unjust, and his main objections to it were, that whilst failing to grapple with our present financial exigencies, it left the country rather worse than it found it; that the principal reductions of taxation proposed, especially the duties upon wine and paper, were singularly inopportune at a moment when the income-tax was continued at a higher rate than it had ever been known at a period of peace, and that the Budget generally was based

upon an unnecessary and a one sided commercial treaty. He warned the House not to sanction what was essentially a Manchester Budget, based upon a treaty which was devoid of the first principle which should regulate such contracts —reciprocity.—Mr. BENTINCK seconded the resolution.—Mr. GOWER opposed the motion, and eulogised the Budget as another step towards the free trade policy inaugurated by Sir R. Peel.—Lord R. MONTAGU supported the resolution.—Mr. BAXTER opposed it on the ground that it would open up the trade of Great Britain to the world and give enormous impetus to the industry of the country.—Mr. LIDDELL defended the treaty with France, and predicted the most satisfactory results from its operation.—Mr. DODSON took exceptions to certain portions of the Budget; but, at the same time, commended it as a scheme remarkable for its boldness and foresight, and well calculated to lay the foundation of future national wealth. —Mr. DAWSON and Mr. HENNESSY supported the resolution; Mr. CROSSLEY and Mr. DUFF opposed it —Sir S. NORTHCOTE said he would have paid his tribute of admiration to the financial scheme of the Chancellor of the Exchequer were it not that he considered the country would have to pay too dearly for it. He regarded it as most discouraging that after all the exertions that had been made to shake off, or at all events materially diminish, the income-tax in 1860, it should be fixed at so high a rate as 10*d.* in the pound, while at the same time war taxes were maintained on tea and sugar, which were among the necessaries of life.—Mr. AYRTON defended the budget, and praised the Chancellor of the Exchequer for having presented a scheme of finance limited to the exigencies of a single year. The resolution of Mr. Du Cane was in his opinion a departure from sound Conservative principles, and he should record his vote against it.—On the motion of Mr HUBBARD, the debate was adjourned to Thursday. The *Consolidated Fund (407,640l.) Bill* was read a third time and passed. The *Valuation of Rateable Property (Ireland) Bill* passed through Committee.

WEDNESDAY.—*The Commercial Treaty.*—Mr NEWDEGATE asked whether it was understood by the Government that the proposed reduction and abolition of import duties, pursuant to the treaty with France, were to take effect as regarded the produce of other countries in virtue of the obligations of the treaty.—The CHANCELLOR of the EXCHEQUER said that, so far as he was aware, the treaty had no effect whatever except in regard to French productions; but if the question was intended to raise the point as to what course Parliament might take with regard to the productions of other countries—German silk, for instance—he might state that the treaty contained no provisions that would prevent their acting as they might think proper —Mr. SLANEY having moved the order for going into committee on the *Public Improvements Bill*, Mr. WALTER objected to some of its details and moved that it be committed that day six months.—After a short discussion, in which Mr. HENLEY and Sir G. GREY also urged objections to the machinery of the Bill, the amendment and the original motion were both withdrawn.—Sir C. BURRELL moved the second reading of the *Window Cleaning Bill*, the object of which was to prevent inefficient or unskilful persons from cleaning windows.—After a short discussion, Sir G. C. LEWIS moved as an amendment that the Bill be read a second time that day six months. The amendment was agreed to without a division, and the Bill was lost. The *Election Petitions Act Amendment Bill* and the *Attorneys and Solicitors Bill* were read a second time. The *Charitable Uses Bill* passed through Committee. The *Dwellings for Labouring Classes (Ireland) Bill* was read a second time. Mr. W. D. SEYMOUR obtained leave to bring in a Bill to amend the jurisdiction of the *High Court of Admiralty*.

THURSDAY.—*The Wine Duties.*—In answer to Mr. B. WOODD, the CHANCELLOR of the EXCHEQUER said that the Government had no intention of granting a drawback upon wine except to the extent of the difference between the present duty and the duty of 3*s.* per gallon payable under the resolution to be proposed; and then only to those parties who had complied with the condition prescribed in the Treasury minute of July, 1843.—Sir C. WOOD stated, in answer to Mr. JONES, that the *Prize money for Delhi* had at length arrived, and that immediate steps would be taken for its distribution among the troops engaged in the siege —In reply to Major KNOX and Mr. WYLD, the CHANCELLOR of the EXCHEQUER explained that no change was contemplated with regard to extending the system of *Inland Bonding*, and that it was not his intention to licence eating-houses to retail *Beer* —In answer to Mr. SHERIDAN, the CHANCELLOR of the EXCHEQUER said there was no intention to make incomes under 100*l.* per annum chargeable with *Income Tax*.—The adjourned debate on Mr. Du Cane's motion in reference to *the Budget* was resumed by Mr. HUBBARD, who stated his opinion that, however beneficial the treaty with France might ultimately be, its advantages would be more than counterbalanced by an increase, equivalent to 3*d.* in the pound, on the income-tax. He could not but think that our attempt to teach the French free trade was a costly process, of which the country would not eventually approve.—Mr. BAINES expressed his approval of the commercial changes proposed to be carried into effect, and the result of which, he believed, would expand the resources and stimulate the industry of the country.—Mr. BLACKBURN and Mr. BEACH supported Mr. Du Cane's motion; Mr. MARSH, Mr HORSFALL, and Mr. BYNG opposed it.—Sir F. BARING said that as regarded the treaty, France had the best of the bargain, and asked how it was that if the treaty was such a blessing in her case we did not extend the principle further, and enter into treaties with other European Powers. With regard to the Budget, though he was in favour of developing still further the principles of free trade, he entreated the House to consider the finances of the country, and predicted that the deficiency in 1861-2 would be 12,500,000*l.* at least. If this deficiency were to be met by continuing the income-tax at 10*d.* and the war duties on tea and sugar, there would still be a deficiency of nearly 2,000,000*l.*, and new taxes would be indispensable.—Mr. BRIGHT submitted that in point of fact the French made concessions to us five times greater than those which we offered them. The success of Mr. Du Cane's motion would lead to a dissolution of Parliament, a general election, a change of Government, a new Budget, and, what would be most unfortunate, an estrangement with France For his own part he entirely approved of the French Treaty, which had long been the object of his most ardent desires and his most cherished affections. He deplored the frightful expenditure for defensive purposes, and said he would support the Budget because it relieved industry, extended the hand of friendship to a great nation across the Channel, was a bright spot amid the darkness of European complications, and, in his belief, would prove hereafter a great measure of mercy to mankind.—Mr WHITESIDE taunted Mr Bright with upbraiding successive Governments for not retrenching the public expenditure, while at the same time he supported a Ministry which preached a policy of peace, but presented estimates for war. He went at length through the principal features of the Budget, all of which he opposed as unwise and unjust.—Mr. CARDWELL reminded the House of the difference between the state of trade a few years ago under the system of protection, and that which it presented at this moment The Government wished to carry out still further that freedom of commerce which had proved so successful in this country, by extending it to France; and they had no doubt but that, in the fulness of time, the most irreconcilable protectionist across the Channel would be converted into an enthusiastic free trader.—On the motion of Mr. NEWDEGATE the debate at 10 minutes past midnight was again adjourned.

FRIDAY.—*Spain and Morocco* —Mr. WYLD asked if the Government had received any information of the decree of the Queen of Spain, conferring the title of Duke of Tetuan upon Marshal O'Donnell, together with the territory of Morocco upon which the victory of Tetuan was gained. Lord J. RUSSELL said that her Majesty's Government had no specific information on the subject; but he believed that the title had been proposed *The Volunteers.*—In answer to Mr. E. JAMES, Mr. S. HERBERT said that her Majesty's Government did not intend to order any battalions or regiments of the Volunteer Rifle Corps during the ensuing summer to the camp at Aldershott, or any other encampment. [Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 94⅞ for Money, and 91⅞ to 95 for the 8th March; Bank Stock, 230 to 231; Three per Cents. Reduced, 95¼ to ⅛; New Three per Cents., 95⅜ to ¼; Indian Five per Cent. Stock of 1859, 104½ to 104; Five per Cent. Enfaced Rupee Paper, 98¼ to 98; Ditto Five and a Half per Cent., 104; India Bonds, par to 4*s.* pm.; Exchequer Bills, 27*s.* to 26*s.* pm.—FOREIGN: Brazilian Four and a Half per Cents., 1858, 93⅝; Chilian Four and a Half per Cents., 87; Peruvian Four and a Half per Cents., for Acct., 94⅜ to 95¼; Ditto Three per Cents., for Acct., 71⅜; Russian Four and a Half per Cents., 97⅜; Ditto Three per Cents., 1859, 65¼; Spanish Three per Cents., for Acct., 45 to 45¼; Ditto New Deferred Three per Cents., for Acct., 34 to 34⅛; Turkish Six per Cents., 1854, for Acct., 79⅜ to 80; Ditto for 1858, for Acct., 66½ to 67; Ditto Guaranteed Four per Cents., for Acct., 102 to 102⅛.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,928,190	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	14,453,190
		Silver Bullion	
	£28,928,190		£28,928,190

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£10,171,190
Rest	3,445,062	Other Securities	20,940,989
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	7,277,548	Notes	8,362,800
Other Deposits..	14,191,528	Gold and Silver Coin ..	699,634
Seven day and other bills	732,955		
	£40,174,613		£40,174,613

23d day of Feb., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—S. BEDDOE, West Bromwich, Rope Manufacturer—H. BINNING and G. DOWSON—J. GOODFELLOW, Coventry, Cabinet Maker—J. HANCOCK Bristol, Licensed Victualler—J. J. HOLT, York, Tobacconist—D. R. LILLY, Birmingham, Coach Builder—G. and M. SIMONS, King's Square, Goswell Road, Watch Manufacturers—F. H. STAIT, Cardiff, Baker—W. J. THORPE, Commercial Road, New Peckham, Painter and Glazier—J. S. WARBURTON and W. STEPHENSON, Manchester, Builders.

SCOTCH SEQUESTRATIONS—H. FERGUSON, Blairanroar, Perthshire, Farmer—J. FRASER, Inverness, Tailor and Clothier—J. GILBERT, Alness, Ross-shire, Wood Merchant—A. R. RENNIE, Leith, Merchant—D. TURNER, Coxhill, Muiravenside, late Farmer.

FRIDAY—BANKRUPTS—C. H. CHARLTON, Garden Court, Temple, Middlesex, Solicitor—J. H. COHN, Lime Street, City, General Merchant—J. J. GUMMOE, St. Austin's, Cornwall, Agent—S. MATISON, Liverpool, Butcher—G. READ, Portsmouth, Cattle Dealer—H. STEPHENS, Exeter, Innkeeper—J. WALL and J. BUXTON, Manchester, Wholesale Grocers.

SCOTCH SEQUESTRATIONS—J. BLAIR, Kilbarchan, Renfrewshire, Clothier—E. BOWEN, Glasgow, Ironmonger.

Metropolis and its Vicinity.

REMOVAL OF THE INDIA HOUSE.—In the House of Commons on Friday a conversation of some interest took place on the intended removal of the business of the India Office to Westminster. Colonel Sykes, in calling attention to the subject, asked if there was any foundation for the report that some of the manuscript records at the India House were to be destroyed, and the museum and library to be dispersed. He said the records at the India House, 200,000 in number, had with great labour and pains been racked, indexed, and classified in so methodical a manner that any paper that was required might be obtained in less than five minutes. These documents had to be referred to every hour, and the greatest inconvenience and confusion must obviously result if they were transferred to the temporary lodgings of the Government. At the India House there was also a museum, comprising a representation of India in all its phases of climate, soil, race, and productions; and there was not a manufacturing town in the kingdom which did not take an interest in that collection. This museum had been open to the public for only two years, and yet it had been visited by 150,000 persons. It was therefore most important that the collection should be kept together as a whole, and not broken up and dispersed in a variety of places. The British Museum could not exhibit one-half of its present treasures; and there could, therefore, be no use in sending the contents of this Indian Museum to be deposited in the underground storerooms of that overstocked institution. Besides this museum there was a library of Oriental manuscripts at the India House, which were consulted by learned men from all parts of Europe. No greater act of Vandalism could be conceived than the breaking up of such a collection. The legal question might also be raised whether all these treasures were not the property of the East India Company. Moreover, the cost of their removal to the temporary accommodation to be obtained by the Government pending the controversy as to the best style of architecture for our public offices would be enormous.—Sir C. Wood in reply said that the removal of the Indian Department to the West-end had been decided upon long ago, and the only question was as to the time at which it should be carried into effect. The present arrangement led to great public inconvenience, on account of the time wasted in moving backwards and forwards between Westminster and the India House. It was not a mere matter of personal but of public convenience that the offices of the India Department should be near Downing Street; and he was sure the noble lord who preceded him in office would confirm that statement. The benefit of the Indian Council would be entirely lost unless the Secretary of State was in constant communication with the members of it; and that could only be effected by removing it to the West-end. As it might be some time before the vexed question of style in regard to the new offices was settled and the buildings erected, a portion of the new Westminster Palace Hotel had been hired for the temporary accommodation of the Indian Department, which would probably be removed there in June. There was no intention, so far as he was aware, of dispersing the library. As to the East India Company, by June next adequate accommodation would be provided for the discharge of the not very onerous duties they had to perform. The removal of the India Office might possibly cause some inconvenience to mercantile men at the east end of the town, but everything would be done to lessen that inconvenience as much as possible. A portion of the business of the company, such as the transfer of India stock, might, he thought, be transferred to the Bank of England. With regard to the records, there were in many instances not merely duplicates, but triplicates and quadruplicates, and even quintuplicates; and, acting on the report of a committee he had appointed to examine them, he intended to destroy a large quantity of them having reference to ships of the East India Company, which were not of the slightest use. Those of any value would be preserved. To this statement we may add that on the removal of the India Council at Midsummer to Victoria Street the old India House in Leadenhall Street will be sold. It occupies rather more than an acre, and it is said that an offer of 200,000*l.* has already been made for it. There is another report, that it is likely to be sought as a terminus for all the principal railways.

FATAL COLLISION IN THE CHANNEL.—On Sunday morning a collision took place off Beachey Head between the Ondine steamer from Dublin, and the schooner Heroine, of Bideford. The Ondine was so seriously injured that she began to sink immediately. The boats were therefore got over the side, but the port lifeboat had been smashed by the collision, and the other lifeboat was stove in getting her over the side, and was filled to the thwarts with water. The second mate who had been ordered to take charge of her procured two buckets to bale her out, and on his return found in the boat 12 men, a lady passenger, the chief stewardess, a miner from Plymouth, called Marsh, with his wife and two children, and a passenger from Falmouth, called Drew. In less than half an hour the steamer reared her bows up in the air and went down stern foremost, and there is little doubt that the captain and at least 30 of the passengers and crew, including several soldiers on furlough, went down with her. When the lifeboat shoved off from the steamer she was so deeply submerged that the water reached up to the people's waists as they sat on the thwarts, and she was only kept from sinking by the cork in her compartments. Soon after the people in the boat began to be exhausted from the sea breaking over them, and dropped one by one, until only three were left, and these were rescued by the steamer Thetis and landed in the course of the evening at St. Helen's. The remainder of the passengers and crew, 21 in number, saved themselves in the oily boat and landed at Dover. The Ondine was the property of Messrs. Malcolmson of Waterford, and was a very unfortunate vessel. Capt. Hunt, her commander, had been committed for trial for manslaughter, for running down the Robert Garden off the South Foreland, some short time since, by which the pilot and some seamen were drowned. He was out on bail, awaiting his trial, at the time of the collision.

ANOTHER WRECK IN THE CHANNEL.—During the heavy gale on Sunday evening, the American ship Luna, 623 tons, Captain Warkmeister, which left Havre on that morning for New Orleans, with nearly 100 emigrants and a crew of 24 hands, was totally lost on the rocks off Barfleur, to the eastward of Cherbourg, and the whole of her passengers and crew, with the exception of two, were drowned. The Luna belonged to Baltimore.

THE ELPHINSTONE MEMORIAL.—A very influential meeting was held a few days since at Willis's Rooms, the Right Hon. Sir Charles Wood, Bart., in the chair, at which it was resolved to open a subscription for erecting some public memorial of the late distinguished Indian statesman, the Hon. Mountstuart Elphinstone. Among those present were the Duke of Argyll, the Earl of Ellenborough, Earl Stanhope, the Earl of Shaftesbury, Earl Fortescue, Lord Lyveden, Lord Broughton, Sir James Graham, M.P., Sir F. Baring, M.P., Lord Stanley, M.P., Sir W. Hogg, Sir F. Currie, Sir E. Colebrooke, M.P., the Right Hon. E. Ellice, M.P., Sir De Lacy Evans, M.P., Colonel Sykes, M.P., Sir John Lawrence, Mr. Grant Duff, M.P., the Hon. A. Kinnaird M.P., the Right Hon. Holt Mackenzie, and many other Indian statesmen, warriors, &c., several of whom

addressed the meeting in commendation of Mr. Elphinstone's services, both in a civil and military capacity.

ST. GEORGE'S-IN-THE-EAST.—The Rev. T. Richardson has been elected lecturer of this church in the room of the Rev. Hugh Allen. The votes were for Mr. Richardson 17, for Mr. Courtenay 7, and for Mr. Eastman 4. The three services on Sunday last passed off without interruption. About 300 policemen were on duty at the church, 50 of whom were stationed in the aisles. Mr. Rosier, clothier, of St. George Street, Ratcliff Highway, who has been cited by the Rev. Bryan King, the rector, to the Consistory Court, on the charge of brawling, appeared in that court on Tuesday, when the "articles" put in by the rector in support of the charge were read and admitted. Mr. Rosier appeared without counsel, and announced his intention to defend himself. The judge informed him that he was entitled to bring in an answer to the "articles" in writing, prior to the further hearing of the case.

THE WHITWORTH RIFLED CANNON.—The experiments with Mr. Whitworth's rifled cannon have been continued this week on the Southport coast. The practice with the 3-pounder at long range gave results still more astonishing than those recorded in our last Number. Six shots were fired at an elevation of 35° with the following range in yards:—1st shot, 9463; 2d shot, 9503; 3d shot, 9547; 4th shot, 9611; 5th shot, 9615; 6th shot, 9688 yards. It appears, therefore, that though this gun weighs only 208 lb., it attained a range of above 5½ miles, greater than has been recorded of any gun ever made. The 12-pounder, at an elevation of 7°, attained a range of 3107 yards; and the 68-pounder struck the ground at more than 2500 yards, and then ricochetted and struck again at 5000 yards. The extreme range of the 80-pounder was not tested, but it is shortly to be tried on a 4-inch iron plate, which Mr. Whitworth is confident of penetrating at 600 yards.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that in the week that ended on Saturday, February 18, 1454 deaths were registered in London. In the corresponding weeks of the ten years 1850-59 the average number was 1171; which, if raised proportionately to the increase of population, will become 1288. The present return is therefore 166 above the average. During the week the births of 950 boys and 930 girls, in all 1880 children, were registered in London. In the ten corresponding weeks of the years 1850-59 the average number was 1706.

Provincial.

NEWCASTLE-ON-TYNE.—The Stephenson Memorial Schools were opened a few days since by Lord Ravensworth, in the presence of the Mayors of the Tyneside boroughs and a large concourse of spectators. The schools are erected on the site of the humble house in which George Stephenson and his first wife occupied a tenement, and in which the late Mr. Robert Stephenson was born. The building is said to be highly appreciated by the working men of the district, and there is little doubt that the schools and mechanics' institute will do much good and be really useful among a very dense population.

OXFORD.—The Vice-Chancellor has given notice that he has received from "A non-resident Member of the University much attached to her interests" the sum of 50*l.*, for a prize to be awarded to the writer of the best English poem on "The life, character, and death of the heroic seaman Sir John Franklin, with special reference to the time, place, and discovery of his death." The poem to be in rhymed verse, to be recited during the meeting of the British Association, at the time and in the place which the Vice-Chancellor may appoint. All members of the University whatsoever to be at liberty to compete for the prize. The compositions to be sent to the Registrar of the University on or before the 1st of June next, the usual course for concealing the name of the writer and distinguishing the compositions being followed. The judges to be the Vice-Chancellor, the Dean of Christ Church, and Lord Ashburton.—In a convocation held on the 16th, the munificent offers of Miss Burdett Coutts, consisting of a valuable collection of Devonshire fossils, to be called the "Pengelly Collection," and the transfer to the chancellor, masters, and scholars of the university of the sum of 5000*l.* consols, the dividends arising therefrom to be paid to two scholars, to be termed "The Burdett Coutts Geological Scholarship," were accepted. It was also agreed to affix the university seal to a letter of thanks to that lady for her great and beneficial gifts to the university.

WAKEFIELD.—The report of the Wakefield Election Commissioners has been presented to Parliament. The following is an abstract of its contents:—

"The commissioners find that the election in April, 1859, was conducted by and on the part of each of the candidates in a corrupt and illegal manner, and that corrupt and illegal practices extensively prevailed. They set forth the names of 98 persons who were guilty of bribery in respect of the votes of other persons; 86 who were guilty in respect of their own votes; and 12 who 'were guilty of acts of bribery not on one side only, but on both.' They find that Mr. W. H. Leatham expended, through his agents, a sum of money amounting 'at least' to 2000*l.*, of which all but 478*l.* 7*s.* 5*d.* was disbursed in illegal payments; and that on behalf of Mr. J. C. D. Charlesworth a sum of at least 1150*l.*, of which only 652*l.* 10*s.* passed through the hands of the election auditors, was expended. Of the expenditure of a sum of between 1000*l.* and 1200*l.*, by Mr. Gilbert, through whom the bribery on the part of Mr. Leatham was carried on, they say that Mr. Leatham provided the said moneys with the intention that they should be employed, in part at least, in bribery and corruption, and that before the said moneys were provided Mr. Leatham had anticipated and suspected, by reason of his observation of what had previously taken place at elections for the said borough, that corrupt practices would probably be had recourse to in order to defeat him, and that he intended to make use of the like means in order to secure his own return. After detailing the ingenious method in which Mr. Charlesworth's money was placed out, they add, speaking more particularly of the sum of 1000*l.*, that Mr. Charlesworth, having provided the fund out of which the bribery, in fact, was afterwards carried on on his behalf, designedly abstained up to the election from inquiring as to the manner in which that fund was being employed, having before the election the means of knowing, and good grounds to suspect the manner of its disposal. The report concludes as follows:—'We find that large bodies of non-electors, to the number of several hundreds on each side, and including on Mr. Charlesworth's side at least several prize fighters, were employed by the respective candidates at wages varying from 3*s.* 6*d.* to 5*s.* a man per diem for some time before and up to the day of election. These men were ostensibly employed as watchers and runners for the purpose of detecting and preventing improper practices by the partisans of the opposing candidates respectively, but in our opinion not really for such purpose, but for the purpose partly of exercising an improper influence upon the election, by the expenditure of large sums of money in the borough both in payment of the non-electors themselves, and of the publicans whose houses they frequented, and where they were supplied with refreshment, and partly also for the purpose of causing intimidation and annoyance to the canvassers and voters of the opposing parties respectively. One case of actual abduction was proved before us, which will be found in the evidence of the witness Abraham Lupton. We have been informed by the witnesses that the employment of non-electors in the manner described is an established practice at the Wakefield elections. We find that it is without any necessity or legitimate object, that it impedes and interferes with the freedom of election, and that it causes intimidation and great annoyance to the voters on both sides, and furnishes cloaks for bribery and corruption in various ways. The fact found by us that neither of the candidates thought proper to pay the non-electors through the election auditor, but adopted the alternative of paying them wages in a manner secret and declared illegal by statute 17 and 18 Vict., cap. 102, sec. 18, satisfied us that the employment of the non-electors in the manner described was well known to be unnecessary and illegal, but the provisions of that statute as to the payment of expenses through the auditor appear to have been made of no account whatever by either of the candidates. We find that it was generally anticipated by the partisans on both sides for some time before the said election that recourse would be had to bribery by their respective opponents, and we find that the fact that bribery was being carried on on both sides was before the election a matter of common notoriety throughout the borough, and excited but a scanty measure of disapprobation even on the part of those who did not actually join in the work of corruption. Lastly, we find, having regard to the length of time before the election at which the preparations for the work of corruption were commenced—to the large proportion (142 out of 866) of the whole constituency engaged in corrupt practices and guilty of bribery—to the number of persons (including 56, themselves electors) who voluntarily joined in the work of offering and giving bribes—to the zeal and skill they exhibited—to the readiness with which their services were received and their acts adopted—to the open way in which bribery was carried on by the canvassers and discussed amongst all classes—and to the manner in which the voters received and bargained with the canvassers on both sides, that large numbers of the electors were then not for the first time engaged in the like operations of gross corruption.'"

Ireland.

TRIBUTE FOR THE POPE.—Meetings of Roman Catholics were held on Sunday in the principal parishes of Dublin to adopt steps to render the collections for the Pope, on Sunday next, as successful as possible. One of the speakers announced that Dr. Cullen had already transmitted 2000*l.* to the Holy See. Another accused the Emperor of the French as the "eldest son of the Church" of preparing a "chalice of sorrows" for Pio Nono to drain. One of the subscription lists was headed by the name of W. Cogan, M.P., for 50*l.*; but, generally speaking, the amounts subscribed were of trifling amount.

OUTRAGE IN WESTMEATH. — An extraordinary outrage has been committed on the property of Mr. George Allen, at Drumrainey, in the county of Westmeath. In the middle of the day a party of about 20 persons went on the lands, and with picks, crowbars, and shovels, unrooted and demolished the house and offices of the herd. Mr. Allen about 12 months since purchased this farm, a portion of which was in the possession of a tenant named Lennon, who has been lately ejected from it. Intimation of the outrage was at once communicated to the police, but before their arrival the work of demolition had been accomplished. Drumrainey has for many years been noted as the most lawless parish in Westmeath.

Scotland.

TRIAL OF THE BISHOP OF BRECHIN.—The bishops of the Scottish Episcopal Church assembled in Synod at Edinburgh on the 7th inst. for the purpose of hearing parties in the presentment against Dr. Forbes, Bishop of Brechin, for heretical doctrine on the subject of the Eucharist. The hearing lasted three days. The presentment accused the bishop of holding, maintaining, and teaching, in a charge delivered to his clergy on August 5, 1857, and since published and republished by him, doctrines contrary and repugnant to, unsanctioned by, and subversive of, certain of the articles of religion, and certain parts of the formularies for public worship used in the Scottish Episcopal Church, in so far as he taught (1) that "the Eucharistic Sacrifice is the same substantially with that of the cross;" (2) that "supreme adoration is due to the body and blood of Christ mysteriously present in the gifts," and that "the worship is due not to the gifts, but to Christ in the gifts;" (3) "that in some sense the wicked do receive Christ indeed, to their condemnation and loss," whereby the doctrines (1) of the oneness of the oblation of Christ finished on the cross, of the perfect propitiation which He there once made, and of the Holy Eucharist being a memorial or commemoration of His death and sacrifice on the cross; (2) of the non-adoration of the sacramental bread and wine, and non-corporal presence of Christ's natural flesh and blood therein; and (3) "that the wicked are in no sense partakers of Christ," were contradicted and depraved. Several other passages in the presentment were also cited as tending generally to deprave the doctrine of the articles and formularies, by drawing aside the plain and full meaning thereof. The bishop was heard at great length in his defence, his answers forming a large folio of 230 printed pages, the major part of which he read. He pleaded that it was not enough for the presenters to show that the passages complained of were opposed to the teaching of certain prevalent schools of theology in the English or Scottish Churches, that they were unsupported by the majority of English or Scottish divines, or, could this be done, even that they were without sanction from the formularies of the Church, and were in themselves erroneous. The presenters were bound, in a penal proceeding like the present, to show that the passages complained of were repugnant to and subversive, not of this or that interpretation of the Church's formularies, but of the literal and grammatical sense of the articles, formularies, or offices of the Church themselves; and in the consideration of this question the respondent was entitled to all the weight which was due to the deliberate averment that in his whole teaching he wished to abide by these formularies, and disclaimed the least intention of contradicting or disparaging them in any shape or manner whatever. Having made a full exposition of his views on the question of the Eucharist, and an elaborate reply on the points challenged, the bishop, in the course of his concluding remarks, said he might be allowed to remind the venerable Synod of one consequence which must inevitably follow a penal condemnation of his opinions. From the instant such a sentence was pronounced, the full communion which exists between our Church and the Church of England is at an end. It is an undeniable fact that opinions precisely the same as those of the respondent are held and taught by many hundreds of English clergymen, some of whom hold high and reponsible positions in the Church. No attempt whatever is made to interfere with them in any way on that account; no attempt ever has been made, except one, and that failed, to the avowed satisfaction even of those who had no sympathy with the opinions themselves. If, then, a clergyman may be punished in Scotland for what he may freely hold and teach in England, it is clear that, so far at least as the clergy are concerned, different terms of communion practically exist in the two churches. The Rev. Mr. Henderson, incumbent of St. Mary's, Arbroath, was heard at great length for the presenters, and went over the different points challenged to show that the accusation had been made out, and that the bishop's teaching was literally, grammatically, and substantially opposed to the doctrine of the Church's articles and formularies. He said that in calling on the Court to express condemnation of the Bishop of Brechin's teaching the presenters were not seeking to narrow the extent of that divergence which the Church in her toleration allowed to her teachers, but claiming from authority the vindication of those first principles of their creed, which could not be changed, invalidated, or depraved without involving a corruption of the truth and a perversion of those so taught. The toleration of the views maintained by the bishop on the subject of the Eucharist would amount to a legalised licentiousness in teaching which the Church, by their prescribing of a creed, and exacting an *ex animo* subscription to it, emphatically disallowed. The Synod then allowed the bishop to lodge a reply to the argument of the presenters before the 23d inst., and adjourned further procedure till March 14, when the Court will hear parties make such further observations as they may consider necessary before the debate is closed.

Railways.

FATAL ACCIDENT ON THE EASTERN COUNTIES.—On Monday morning, as the fast train which leaves Cambridge at 7 A.M. for London with passengers consisting mostly of millers and others connected with the Corn Market in Mark Lane, was approaching Tottenham Station at the rate of between 35 and 40 miles an hour, the tire of one of the leading wheels broke and threw the engine off the line. The wheels then came in contact with a pair of points, which threw the engine against the edge of the brick platform, when it turned over with great violence. Fortunately, the shock broke the coupling iron of the third vehicle, and left the remainder of the train behind. These carriages—about eight in number—never left the metals, or the loss of life must have been fearful. As it was, a second-class and a first-class carriage which were nearest the engine with the break-van, were heaped upon each other, while the steam from the engine enveloped everything in a dense mist. Immediate assistance was rendered from the station, and the dead and wounded were taken from the wreck. This occupied a long period; for the carriages had to be broken into fragments before it could be accomplished. Several of the injured were conveyed to the waiting-rooms at the station, while others were placed upon ladders, boards, &c., and carried to the neighbouring taverns. The engine-driver, a middle-aged man named

Rowell, was so terribly scalded and injured in the head that he died in the course of the day; the fireman, a young man called Cornwall, was smashed to pieces under the engine. All the passengers in the broken carriages were more or less seriously injured. Mr. Stokes, miller of Saffron Walden, had both legs and both arms fractured, and died almost immediately after being removed to the White Hart, having never rallied, and dying apparently in a state of insensibility. Mr. Satchell, hatter, of Fenchurch Street, City (who some time ago lost his wife and child by fire), was also conveyed to the White Hart, where, from the dreadful nature of his injuries, he also died soon after the accident. Mr. Manser, miller, of Hoddesdon, sustained a terrible compound fracture of the left leg, which was amputated in the course of the day. Mr. Manser, junior, his brother, had his hip dislocated. Mr. Bean, corn dealer and owner of a large flour mill at Parndon, who is upwards of 73 years of age, sustained a simple fracture of the right thigh and a very bad fracture of the left thigh, and had his left knee also fearfully crushed. Mr. Garrett, miller, of Roydon, sustained serious fractures of both legs, and several contusions of a formidable character about the thighs. Mr. Empson, of Saffron Walden, had both legs and one thigh broken, and was otherwise dreadfully hurt all over the body. Mr. Caswell had three dislocated ribs on each side, a fracture of the breast-bone, injury to the spine, and a general shock to the system. Mr. Taylor, of Saffron Walden, was badly injured in the knee and other parts of the body. Mr. Hotchin, solicitor, from Audley End, had both legs broken. Professor Ellicott, of King's College, Cambridge, sustained a severe fracture of the leg and other injuries. The inquest on the persons killed was opened on Wednesday, and is still in progress.

COLLISION ON THE WIGAN AND PRESTON.—On Monday morning, about a quarter past 1, the night up-mail train from Edinburgh to London came into collision with a train of empty coal waggons at the junction with the Springs Branch Colliery Railway, about two miles from Wigan. The result was the total destruction of several coal waggons, the partial destruction of the engine of the mail train, much damage to several carriages, and the serious injury of the railway guard, the Post-office guards, and the pointsman at the junction. Two or three of the passenger carriages were thrown off the line and considerably damaged, but the passengers, about half-a-dozen in number, including two ladies, escaped without serious injury.

Law.

COURT OF EXCHEQUER CHAMBER.—(Sittings in Error, before Lord Chief Baron Pollock and Barons Bramwell and Channell.) —*Earl Shrewsbury and Earl of Talbot v. Hay, Scott and others.*—The Lord Chief Baron on Saturday delivered judgment in this important case, which had come before this Court on appeal from the judgment of the Court of Common Pleas. His lordship gave a brief resumé of the facts, and concluded by saying that the Court was unanimously of opinion that the plaintiff below, as the issue male of the first Earl of Shrewsbury, to whom the title had descended, was under the express enactment of those statutes entitled to the property in question as tenant in tail, unless something could be shown to disentitle him; that that had not been done, and that the disentailing deed of 1856 could not prevent his right from prevailing. They, therefore, thought, with the Court of Common Pleas, that the rule should be discharged. The judgment was therefore for the Earl of Shrewsbury, and against the appellants. Notice of appeal to the House of Lords was immediately given, but the application has since been finally abandoned; so that the Earl of Shrewsbury has at last succeeded to the whole of the estates.

Theatres.

HER MAJESTY'S THEATRE.—An agreement was signed on Thursday which constitutes Mr. E. T. Smith, the manager of Drury Lane, future lessee of her Majesty's Theatre, at a lease of seven, 14, or 21 years.

Obituary.

LIEUT.-GENERAL JOHN WRIGHT, K H, of the Royal Marines, died on the 16th inst. at Southsea, in his 84th year. He was engaged in Lord Nelson's attacks on Rota and Cadiz in 1797, the battle of the Nile, the campaign of Naples in 1799, at the surrender of Castel del' Ovo, Castel Novo, Fort St. Elmo, Capua, and Gaeta, and the cutting out of the Guiscardo at Vigo. He also took part in the campaign in Egypt in 1801; and the last scene of his active service was at the siege of Algiers in 1816. On his retirement from the service he was placed on full pay.

SIR JAMES TURING, Bart., died on the 13th inst. at Rotterdam, where he was British Consul. He was born in 1791, and married in 1821 the second daughter of the late Sir Alex. Ferrier, K.H., by whom he leaves 13 children. He succeeded to the title in 1831 on the death of his kinsman, the late Sir Robert Turing, Bart., who revived in 1792 the family honours, which had lain dormant since the death of the first baronet, who was a devoted adherent of King Charles II. He is succeeded in the title by his eldest son, Robert Fraser, born in 1827, married in 1853 to the daughter of W. S. Davidson, Esq., of Lowndes Square.

THE REV. SIR JOHN BARKER-MILL, BART., died on the 20th inst. at his residence, Mottistont Abbey, near Romsey, from an attack of gout, from which he had been long a sufferer. He was the son of John Barker, Esq., of Wrexham, by the daughter of the Rev. Sir Charles Mill, last baronet of that line. He was born in 1803, and married in 1828 the daughter of Colonel Swinburne, of Keynsham. He was educated at Downing College, Cambridge, where he graduated M.A. in 1831. In 1835 he assumed by Royal licence the name of Mill, and was created a baronet on succeeding to the estates of his uncle. He has died without issue, and the title consequently becomes extinct.

MR. HENRY DRUMMOND, M.P. for West Surrey, died on the 20th inst. at his seat, Albury, Park, near Guildford, in his 74th year. He was born in 1786 and married in 1807 Lady Henrietta, eldest daughter of the ninth Earl of Kinnoul, by whom he had an only daughter, who married in 1845 Lord Lovaine, eldest son of the Earl of Beverley, heir presumptive to the Duke hom of Northumberland. He was a leading member of the Irvingite persuasion, and largely contributed to the erection of the Catholic and Apostolic Church in Gordon Square, of which it was understood he was an "angel." He had also erected a church for the same sect on his estate at Albury. He was the author of a very beautiful work entitled "Histories of Noble British Families," and other works. He had represented West Surrey in Parliament since 1847.

BIRTHS—On the 18th inst, at 22, Upper Grosvenor Street, Lady MARIA PONSONBY, of a son—20th inst, at Finborough, Suffolk the Lady FRANCES PEITIWARD, of a daughter—20th inst, at 1, Albany Terrace, Park Terrace, the wife of FLETCHER C. NORTON, Esq., of a son—21st inst, at 113, Park Street, Grosvenor Square, the wife of THOS. HUGHES, Esq., Barrister, of a daughter.

MARRIAGES.—On the 20th inst, at Coleshill, Berks, JAMES P. WILDE, Esq., Q.C., to Lady MARY PLEYDELL BOUVERIE, daughter of the Earl of Radnor—14th inst, at Childwall Church, ROBERT GLADSTONE, Esq., eldest son of Thomas Steuart Gladstone, Esq., of Capenoch, Thornhill, Dumfriesshire, to MARY ELLEN, eldest daughter of ROBERTSON GLADSTONE, Esq., Courtboy, Broad Green, near Liverpool—18th inst, at St. James's Church, Piccadilly, ROBERT GORDON, Esq., Captain 4th Regiment (Rifle Corps), Bombay, eldest son of the late Robert Gordon, Esq., to MARIE THERESA, youngest daughter of the late Sir EAST GEORGE CLAYTON EAST, Bart., of Hall Place, Berkshire—15th inst, at Lulworth Castle, Dorsetshire by the Right Rev. Bishop Vaughan, Lieutenant-Colonel VAUGHAN, of Courtfield, Monmouthshire, to MARY, only surviving daughter of JOSEPH WELD, Esq., of Lulworth Castle—16th inst, by the Most Rev. Dr. Cullen, ALFRED WILSON TREVELYAN, to FANNY, eldest daughter of Chief Justice MONAHAN—16th inst, at Madingley, WILLIAM CHARLES SMITH, Esq., of Shortgrove, to FANNY ROWLEY, daughter of the late Vice-Admiral Sir RICHARD KING, Bart., K.C.B.

DEATHS.—On the 14th inst, at Brighton, MARY HARRIET LIPSCOMBE, widow of the Right Rev. CHRISTOPHER, first Bishop of Jamaica—16th inst, at Alvescot Rectory, CHARLOTTE, relict of the late General JOHN STUDHOLME HODGSON, aged 88—16th inst, at his residence in Whitehall Gardens, ISABELLA GRACE, wife of CUTHBERT ELLISON, Esq., of Hepburn Hall, in the county of Durham, aged 74—10th inst, at Naples, Commander Geo. FOSTER BURGESS, H.M.S. Cressy, aged 33—7th inst, at Folkestone, FRANCIS H. GRAHAM, Esq., second son of the late Gen. Samuel Graham, of Stirling Castle, Scotland—20th inst, at Clarence Crescent, Windsor, Berks, JAMES THOMAS BEDFORD, Esq., of Upton Park, and Windsor, and one of the magistrates of the borough, aged 72—16th inst, at Versailles, at the house of her father, the Marquis de Croismare, ALIX, wife of Lieutenant FRANCHET D'ESPEREY, Sardinian Royal Navy—15th inst, at her residence, Claremont Villa, Redland Road, near Bristol, ELIZABETH, relict of the late Rev. ROBERT HALL, A.M., of that city, aged 74—16th inst, at Enville, Mr. JOHN AITON, 13 years Gardener to the Earl of Stamford, at Enville, aged 49 deeply lamented.

Markets.

COVENT GARDEN.—Feb. 25.

Supplies of most things continue to be tolerably well kept up. Pine Apples and Grapes have not altered since our last report. Good Apples and Pears remain scarce. Oranges are plentiful and cheap. Good Cobs realise 1s. to 1s. 6d. per lb. Rhubarb, Asparagus, Seakale, Cabbages, Carrots, Parsnips, and Leeks are sufficient for the demand. Parsley is much cheaper than it has been. Cornish Broccoli, which is furnished by the cruet-stand, fetches from 3s to 4s per dozen heads. Green Peas of foreign growth continue to make their appearance. Potatoes realise 4s. 6d. a bushel. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Pears, per doz., 6s to 8s
Grapes, per lb., 8s to 10s	Oranges, per 100, 6s to 10s
Melons, each, 2s. to 4s	Lemons, per 100, 5s to 8s
Pomegranates, each, 4d to 6d	Filberts, p. 100 lbs., 50s to 60s
Apples, per doz., 2s to 3s.	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 7s to 10s	Artichokes, per doz., 2s to 3s
Seakale, per basket, 2s to 3s	Beet, per doz, 1s 6d to 2s
Rhubarb, per bundle, 2s to 3s	Celery, per bundle, 1s 6d to 2s
F. Beans, per 100, 2s to 2s 6d	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen bunches, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., per score, 1s to 1s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d
Cucumbers, each, 1s to 3s	

COAL MARKET.—Feb. 22.

Bates' West Hartley, 14s. 6d.; Bell's Primrose, 13s.; Biddle's West Hartley, 14s. 9d; Davison's West Hartley, 14s. 6d.; Grey's West Hartley, 14s. 6d; Lambert's West Hartley, 14s 6d.; **Tanfield Moor Butes, 13s. 6d.; Wylam, 15s. 9d.;** Walls End Acorn Close, 17s. 9d.; Walls End Eden, 17s. 9d; Walls End Gosforth, 17s. 3d.; Walls End Framwellgate, 17s. 9d; Walls End Haswell, 16s.; Walls End Hetton Lyons, 17s. 3d.; Walls End Russell's Hetton, 18s. 3d.; Walls End South Hetton, 19s.; Walls End Hartlepool, 17s 9d; Walls End Heugh Hall, 17s 9d.; Walls End Hunwick, 15s.; Walls End Ketloe, 18s. 3d.; Walls End South Kelloe, 18s.; Walls End Thornley, 17s; Walls End Trimdon Thornley, 17s.; Walls End Thorpe, 18s. 6d—198 ships at market.

POTATOES.—SOUTHWARK, Monday, Feb. 20.

During the past week the arrivals coastwise have been moderate, but owing to so many being left in store unsold from former fleet the trade is still dull. The following are this day's quotations:—Yorkshire Regents, per ton, 90s. to 140s.; Lincolnshire do., 80s. to 95s.; Dunbar do., 90s. to 120s.; do. Reds, 85s. to 95s.; Perth, Forfar, and Fifeshire Regents, 75s. to 90s.; do. Rocks, 70s. to 80s; do. Reds, 70s. to 80s.; French Whites, 70s. to 80s.; Belgian do., 60s. to 70s.

HOPS.—BOROUGH MARKET, FRIDAY, Feb. 24.

Messrs. Pattenden & Smith report that the market is quiet, waiting the result of the Budget.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Feb. 23.

Prime Meadow Hay	70s to 75s		Clover	92s to 105s
Superior do. (old)	78	88	New Clover	— —
Inferior do.	60	70	Second cut do.	75 88
New do.	—	—	Straw	25 30
Rowen	45	60		

DAVIS & CO.

CUMBERLAND MARKET, THURSDAY, Feb. 23.

Sup. Meadow Hay	84s to 90s		Inferior Clover	75s to 90s
Inferior do.	70	76.	New do.	— —
New do.	—	—	Straw	81 85
Superior Clover	98	105		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Feb. 23.

Fine old Hay	84s to 88s		Fine old Clover	100s to 105s
Inferior do.	70	78	Inferior do.	88 96
Prime New Hay	—	—	Fine New Clover	— —
Inferior do.	—	—	Fine 2d cut	84 90
Straw	25	30	Inferior do.	70 75

METROPOLITAN CATTLE MARKET

MONDAY, Feb. 20.

The number of Beasts is about the same as on Monday last, and there is very little if any alteration in the trade; the tendency is rather upwards than otherwise. The supply of Sheep is again small, and the demand is good, consequently late quotations are well supported; indeed, in a few instances they are rather exceeded. Good Calves are scarce and dear. From Germany and Holland there are 300 Beasts, 990 Sheep, and 68 Calves; from Scotland, 300 Beasts; from Ireland, 300; from Norfolk and Suffolk, 2100; and 100 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	10	to 5	0	Best Long-wools	5	4	to 5	6
Best Short horns	4	6	— 4	10	Do. Shorn	..	..	—	..
2d quality Beasts	3	6	— 4	2	Ewes & 2d quality	4	8	— 5	0
Best Downs and Half-breds	5	8	to 5	10	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	..	..
					Calves	..	..	4 8 — 5	10
					Pigs	..	..	4 0 — 5	0

Beasts, 3890; Sheep & Lambs, 18,510; Calves, 91; Pigs, 210.

THURSDAY, Feb. 16.

The number of Beasts is small and the weather favourable, consequently Monday's quotations are well supported, although trade is slow. The supply of Sheep considerably exceeds the demand. There is no disposition to take much lower rates, therefore several remain unsold. Calves are lower. Our foreign supply consists of 60 Beasts, 160 Sheep, and 56 Calves. The number of Milch Cows is 145.

Best Scots, Herefords, &c.	4	10	to 5	0	Best Long-wools	5	2	to 5	6
Best Short-horns	4	6	— 4	10	Do. Shorn	..	..	—	..
2d quality Beasts	3	6	— 4	2	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds	5	6	— 5	10	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	..	..
					Calves	..	..	4 6 — 5	8
					Pigs	..	..	4 0 — 5	0

Beasts, 815; Sheep & Lambs, 3590; Calves, 82; Pigs, 150.

MARK LANE.—MONDAY, Feb. 20.

The supply of Wheat from Essex and Kent to this morning's market was again moderate; in some instances last week's rates were slightly exceeded, but the advance not being generally obtainable some quantity remained unsold at a late hour. The inquiry for foreign was limited at the prices of this day se'nnight. Barley is a steady sale at late quotations. Beans and Peas are fully as dear as last week. The Oat trade is quiet, without alteration in prices. There is no change in the value of Flour.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk.. White	40	48	Red	40	45
— — fine selected runs..ditto	46	48	Red	42	48
— — Talavera	46	52			
— Norfolk	—		Red	—	
— Foreign	38	56			
BARLEY, grind. & dist., 24s to 30s.. Chev.	38	44	Malting	35	40
— Foreign..grinding and distilling	23	31	Malting	35	41
OATS, Essex and Suffolk	19	24			
— Scotch and Lincolnshire. Potato	23	29	Feed	19	26
— Irish Potato	24	28	Feed	19	24
— Foreign.....Poland and Brew	23	26	Feed	17	24
RYE	35	38	Foreign	—	
RYE-MEAL, foreign	—				
BEANS, Mazagan.....30s to 40s.... Tick	38	43	Harrow	38	43
— Pigeon .....36s — 47s..Winds	48	54	Longpod	—	
— Foreign Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent..Boilers	36	38	Suffolk	36	40
— Maple —s to —s Grey	31	33	Foreign	30	37
MAIZE White	—		Yellow	—	
FLOUR, best marks delivered..per sack	37	43			
— 2d do. ditto	27	37	Country	27	37
— Foreign .....per barrel	18	27	Per sack	30	37

FRIDAY, Feb. 24.

Since Friday last the weather has continued on the whole frosty, and less changeable than for many weeks. The wind was principally from N.W., but it changed yesterday to S.E., and so continues. The grain trade has been firm with a continued upward tendency of prices throughout the country, and we must quote in the markets of the interior a further rise of 6d. to 1s. per qr. upon all descriptions of grain, with a continuance of purchases of red Wheats at 56s. per 504 lbs., f.o.b. in Liverpool; for Ireland we have, however, to add that the advance, and the circumstance of foreign Wheat being in proportion dearer than English, restricts business. The arrivals from the South of Europe on the coast are small this week, being limited to 1 cargo of Wheat, 5 of Maize, and 7 of Barley. The sales, which have been only on forward delivery, comprise, Berdianska Wheat at 47s. 6d. per 492 lbs.; Cavet Maize at 32s., Salonica at 32s. 4½d. to 32s. 6d., and Ibrail at 32s. to 32s. 1½d., all per 480 lbs., Odessa at 33s. 9d per 492 lbs.; Danube Barley, at 24s. 6d. per 400 lbs., and Ibrail at 23s 3d per qr. map; Calcutta Linseed at 48s to 48s 6d. per qr., c. f. and i. The arrivals of Barley have been to a fair extent this week, of other English grain small, and there have been no supplies of either foreign Wheat or Oats since Saturday last. The English Wheat fresh up and left over from Monday was sold at that day's prices. The business doing in foreign is not active, but there is rather more inquiry at fully late rates. Barley, Beans, and Peas bring Monday's prices more fully. In the absence of supplies the Oat trade is very firm at the extreme rates lately current.

ARRIVALS FROM FEB. 20 TO FEB. 24.

	Wheat.	Barley.	Oats.	Flour.
English..	1120 qrs.	4400 qrs.	270 qrs.	1000 sks.
Irish	— ,,	— ,,	2190 ..	— ,,
Foreign..	— ,,	2100 ,,	— ,,	350 ,, 1540 brls.

LIVERPOOL, Tuesday, Feb. 21.—At our Corn Exchange this morning we have had a fair attendance of both local and country millers and dealers, and Wheat has commanded a better sale at an advance of 1d. per cental over the rates of Friday. Flour is held steady at extreme prices. Indian Corn attracted a fair consumptive inquiry at the quotations of last market day, higher prices were asked at the commence-

ment, but were not obtainable. Oats and Oatmeal are both held for a slight advance. Beans, Peas, and Barley all maintain former rates. Linseed cakes are 2*s.* 6*d.* per ton dearer, and offered sparingly.

FRIDAY, Feb. 24.—The grain market was moderately attended. Wheat in fair demand at the advance. Flour neglected. Indian Corn steady at full prices. Galatz 34s. 6d., Egyptian 33s. 6d., Ibrail 33s. 6d. Beans firm; all other articles quiet.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Jan. 14..	43*s* 1*d*	34*s* 7*d*	21*s* 5*d*	30*s* 4*d*	39*s* 0*d*	36*s* 7*d*
— 21..	43 11	34 4	21 1	32 1	38 3	36 2
— 28..	43 10	34 7	21 5	28 11	38 5	36 3
Feb. 4..	43 8	34 10	21 0	31 0	38 1	35 4
— 11..	43 6	34 11	21 11	29 9	38 4	36 0
— 18..	43 11	34 11	21 11	31 10	38 6	36 3
Agg. Aver.	43 9	34 8	21 5	31 4	38 5	36 1

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Jan. 14.	Jan. 21.	Jan. 28.	Feb. 4.	Feb. 11.	Feb. 18.
43*s* 11*d*—			..	..	..	
43 10	..	..		..	..	..
43 8	..	..	..		..	..
43 6	..	..	..	..		..
..	..	..	..	..	..	..
..	..	..	..	..	..	..

BRITISH WOOLS.—LONDON, FRIDAY, Feb. 24.

There has been more business transacted than for some weeks previously, and at a concession from the extreme rates in cases where holders were anxious sellers, but generally there is not much disposition to effect sales in quantities at a reduction.

South-down Hog-gets..	1	8	to 1	9	Leicest. Wethers	1 5 — —
Half-bred ditto..	1	8	—	—	Ditto Hoggs ..	1 7 — —
Down Ewes ..	1	6	—	—	Combing Skins	1 2 to 1 6
Kent Fleeces ..	1	6	— 1	6½	Blanket ditto ..	0 6 — 10½
					Flannel Wool ..	1 2 — 1 7

THE LATE CHARLES BARTER.—The friends of this enthusiastic Naturalist, late Botanist to the Niger Expedition, are desirous of raising a fund to assist in the support and education of his two orphan children, a girl seven, and a boy five years of age. Both are at present entirely dependent on their grandfather, who resides at Basingstoke, Hampshire, but it is felt that many would gladly assist, if they were aware of their circumstances, particulars of which may be had of Mr. KENNEDY, Covent Garden, W.C., or Mr. MATTHEWS, Publisher of the *Gardeners' Chronicle*, 5, Upper Wellington Street, Covent Garden, W.C., both of whom will be happy to receive subscriptions in their behalf.

£500. A clear income of not less than 300*l.* per Annum may be realised without risk by any gentleman having from 500*l.* to 800*l.*, at command with or without partnership in an unusually Lucrative Monopoly.—Address D. Tassley, Esq., 26, Wigmore Street, Cavendish Square, W.

THE WIDOW OF THE LATE PROFESSOR HENFREY, F.R.S., L.S., &c., of King's College, London, receives a small number of BOYS between the ages of 6 and 12, to EDUCATE with her own family.—Turnham Green, W.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

E. G. HENDERSON AND SON require a PROPAGATOR in the Hard-wooded Greenhouse department.—Apply, stating terms, with reference to Wellington Nursery, St. John's Wood, London, N.W.

WANTED, a properly qualified person to act as FOREMAN in a moderately sized Nursery in the North of Ireland. It is indispensable that parties applying have a good knowledge of Plants, Propagation, and Culture, and be able to make Sales. Wages from 16*s.* to 21*s.* per week.—Address, A. B., Messrs. Brown & Standfast, Little George Street, Westminster, S.W.

WANTED, A FOREMAN AND PROPAGATOR in the Plant Department.—Apply, in own handwriting, stating terms, with references as to ability and character, to R. GLENDINNING, Chiswick, London, W.

WANTED, A HEAD AND UNDER GARDENER.—Father and Son would not be objected to.—Address by Letter only, R. M. EVANS, Esq., Orpines, Wateringbury, Kent.

WANTED, AS GARDENER, a steady industrious Man and Wife, without incumbrance, to live in and look after a Cottage and Garden. Wages moderate.—Apply by letter only to H. M., care of Mr. Cox, 22, Lower Street, Islington, N.

TO ORCHID GROWERS.

WANTED IMMEDIATELY, a first-rate CULTIVATOR OF ORCHIDS. He will have the entire management and charge of one of the finest collections of Orchids, including Anæctochili, in the kingdom. A thoroughly competent person will be liberally paid.—Application to be made to Mr. JAMES VEITCH, Jun., Exotic Nursery, Chelsea, S.W.

WANTED, a steady and active MAN to undertake the Management of HARD and SOFT-WOODED PLANTS, where they are grown extensively for Sale.—Apply by letter, with references as to character and ability, stating wages expected, to MR. LAING, Twickenham Nurseries, S.W.

WANTED, in a London Nursery, a Person competent to take charge of the PACKING DEPARTMENT. He must have had good practical experience in Packing Plants in Pots. Wages, 15*s.* per week.—Address, in own handwriting, stating age, name, and references, to R., care of Mr. H. Williams, Willow Lodge, Willow Vale, Shepherd's Bush, W.

WANTED, immediately, an active, industrious MAN, with a good knowledge of Outdoor Nursery Work. Also a YOUNG MAN that has been used to general work in the Glass Department.—Apply, stating terms, with references, to H. & R. Stirzaker, the Nurseries, Lancaster.

WANTED, AN IMPROVER, with a Premium, where he will have a first-rate opportunity for obtaining a general knowledge of Gardening in all its branches of Early and Late Forcing.—Address, S. H., Lower Beeding, near Horsham, Sussex.

WANTED, a strong LAD, to Milk and assist in the Garden.—Apply to Mr. SURMAN, near the Church, Eltham, Kent, S.E.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 38, married, without incumbrance; understands his profession. Part of the Wife's time, if required. Wages moderate; 2½ years' references.—A. B., Mr. Kerman's, 4, Russell Street, Covent Garden, W.C.

GARDENER (HEAD).—Age 43, married; has a thorough practical knowledge of his profession in all its various branches. Can be highly recommended. No single place accepted.—A.D., Post Office, Hornsey, N.

GARDENER (HEAD).—Middle-aged, married; is a good Grape Grower, and understands his profession in general; care of Stock if required. Good character.—M. Y., Mr. Beardwell, Baker, High Street, Upper Sydenham, Kent, S.E.

GARDENER (HEAD).—Age 30, married; thoroughly understands his profession in all its various branches. Laying-out of Grounds, &c. Wife a good Laundress. Good character.—J. F., 9, North Street, Maida Hill, W.

GARDENER (HEAD).—Age 36, single; understands Early and Late Forcing; 20 years' experience in the business. Unexceptionable character can be given.—O. Z., Messrs. James and John Fraser, Leyton, Essex, N.E.

GARDENER (HEAD).—Single; practically acquainted with Vinery, Stove, and Greenhouse, Flower and Kitchen Gardens, &c. Good reference. No single-handed place accepted.—H. H., 14, Spurrier Gate, York.

GARDENER (HEAD).—Is about to leave his present situation in consequence of a change in the establishment. Can have a high character for knowledge, honesty, sobriety, &c.—F. W., Heath Lane Lodge, Twickenham, S.W.

GARDENER (HEAD).—Age 33, single; practical; thoroughly understands his profession; has had good practice in England and Scotland. Can be highly recommended.—E. C., Key's Library, 18, Westbourne Place, Paddington, W.

GARDENER (HEAD).—Age 31, single; thoroughly understands the Management of Pines, Vines, and Peaches, the Forcing of Fruits, Flowers, Vegetables, &c.—A. Z., Messrs. Lee's, Nurserymen, Hammersmith, W.

GARDENER (HEAD).—Age 27, single; well experienced in Forcing Pines, Vines, Melons, &c.; and management of Kitchen and Flower Gardens. Two years' good character. Wages 1*l.* per week with Cottage.—A. B., Library, Addison Road, Notting Hill, W.

GARDENER (HEAD).—Age 44, single; has a thorough knowledge of his profession; also the management of Arable and Meadow Land, Stock, &c. Good Accountant. Unexceptionable reference.—D. D., Post Office, Acton, Middlesex, W.

GARDENER (HEAD).—Age 28, married; has had good experience in the Cultivation of Stove and Greenhouse Plants, Kitchen and Flower Gardens, including Forcing of Pines, Vines, Melons, and Cucumbers. Five years' good character.—3, Fort Place, Highbury Vale, N.

GARDENER (HEAD).—Age 41, single; a native of Scotland. Has had 30 years' experience in the various branches of his profession in noblemen and gentlemen's Gardens. Understands Land Drainage, &c. Will be disengaged shortly. Good character.—G. G., 1, Pleasant Row, Upper Holloway, N.

GARDENER (HEAD).—Age 43, married, without incumbrance; has a practical knowledge of Forcing in all its branches, Stove and Greenhouse Plants, Fruit, and the management of Flower and Kitchen Gardens; also Woods and Plantations. Can be well recommended.—A. B., Mr. Pamplin's Nursery, Walthamstow, Essex, N.E.

GARDENER (HEAD), to any nobleman or gentleman requiring the services of a first-class Gardener.—The highest testimony to moral character and ability can be had from present and previous employers. No single-handed place will be treated with.—State terms, &c., to A., 2, Everilda Street, Caledonian Road, N.

GARDENER (HEAD).—Age 31, married; great experience in all branches of his profession; has been supplying a first-class family with every necessary and luxury that can be produced from the Garden, both early and late. No place will be accepted but what is kept up in first-rate order. Four years and a half superior character.—H. W., Austen's, Post Office, Brixton, S.

GARDENER (HEAD).—Age 27, married, one child; thoroughly understands Early and late Forcing, Pines, Vines, Peaches, Fruits, Flowers, and Vegetables, the management of Stove and Greenhouse Plants, and Flower and Kitchen Gardens; also a small quantity of Meadow Land or Plantations. Wife will take charge of Poultry or small Dairy, if required. Seven years' good character.—E. B., Messrs. Lee's Nursery, Hammersmith, W.

GARDENER (HEAD).—Age 28, single; has a thorough practical knowledge of his profession, including Pines, Vines, Melons Cucumbers, and Strawberries, Early and Late Forcing, also the Management of Orchard Houses, and the Growing of Stove and Greenhouse Plants; is a good Flower and Kitchen Gardener. Two years' excellent character. No single-handed place accepted.—T. D., 2, Napier Road, Addison Road, Kensington, W.

GARDENER (HEAD OR GOOD SINGLE-HANDED).—Age 30, married. Good character.—B. B., Mr. Pavvit, Greengrocer, Tottenham, Middlesex, N.

GARDENER (HEAD), OR GARDENER AND BAILIFF.—Age 40, married; has been most successful in the Cultivation of Pines, Grapes, and Peaches, Late and Early Forcing of Vegetables; also of Hothouse and Greenhouse Plants, Fruit, Flower, and Kitchen Gardens, with Woods, Land, and Stock. Wife can take charge of Poultry.—A. B. Drummond's Nursery, Bath, Somersetshire.

FOREMAN (GENERAL).—Well understands the different branches of his profession. Can have four years' good character from last place.—C. C., Paradise Nursery, Seven Sisters Road, Holloway, London, N.

FOREMAN, in a small place, or JOBBING MAN.—Middle-aged; a first-rate Knife Man, well versed in Budding, Grafting, Layering, Training, or anything else. One of the old school. Wages not less than 1*l.* 1*s.* per week.—G. S. T., 35, Princess Road, Notting Hill, N.W.

FOREMAN in a nobleman's or gentleman's Garden.—Age 25; has had eight years' thorough practical experience. Was two years Foreman at Woburn Abbey.—T. R., the Gardens, Old Alresford House, Hants.

FOREMAN, or PLANT FOREMAN,—Age 24, in a nobleman's or gentleman's family; understands Plant and Fruit Forcing. Good character.—State wages to N. E., Bloomfield Hall, Norwood, Surrey, S.

BAILIFF OR FOREMAN—Age 32, married, without incumbrance; understands Heavy and Light Soils, and the management of Stock; also possesses a good general knowledge of Gardening.—A. B., Farnell's, 478, New Oxford St., W.C.

GARDENER.—Middle-aged, married, without incumbrance; understands Forcing, and the management of Vinery, Greenhouse, and Flower and Kitchen Gardens. Unexceptionable character.—A. B., 51, Hawley Road, Hampstead Road, N.W.

GARDENER.—Middle-aged, widower, no incumbrance; thoroughly understands his profession. Leaves in consequence of his present master changing his residence. Nine years' good character. Never had but two employers.—JAMES MORRIS, Stratford Hills, Colchester.

GARDENER.—A gentleman is anxious to procure a situation, with cottage, for his Gardener. He understands Kitchen and Flower Gardens, Greenhouses, &c., and has no objection to the care of Stock and Meadow Land. Excellent character can be given him.—W. D., the Rectory, East Horsley, Ripley, Surrey.

GARDENER.—R. SCOTT, late of Parham Park, wishes to engage with any nobleman or gentleman in want of a Practical Gardener. Has lived in situations in Scotland and England where gardening has been carried on extensively. For character and ability apply to the Hon. R. Curzon, Jun., Parham Park.—R. SCOTT, Watersfield, Petworth, Sussex.

GARDENER to any lady or gentleman requiring a first-rate Gardener.—EDWARD NEVILLE (middle-aged, without incumbrance), has just left Sir E. Lacon, Bart., Hopton House, Suffolk, in consequence of the Estate being sold. He has had long and varied experience in all branches of the profession, and can be highly recommended by his former employers for ability as well as moral integrity.—Hopton House, near Lowestoft, Suffolk.

GARDENER, OR GARDENER AND BAILIFF.—Married, with small family; thoroughly practical working man who understands his profession in every department. Fourteen years' character, which will bear the strictest inquiry or investigation.—Mr. RIVERS, Nurseryman, Sawbridgeworth, Herts.

GARDENER (UNDER), or to manage a Garden.—Age 20; understands Pines, Vines, &c. Good references.—J. H. C., Mr. W. Bradford, Earl Lonsdale's, Barnes, S.W.

GARDENER (UNDER, or in a small family).—Age 20; willing to make himself generally useful. Good character.—L. S., Wood's Nursery, Wandsworth Road, Clapham, Surrey, S.

FARM BAILIFF OR MANAGER.—Age 35, single; Scotchman; has had considerable experience in Farming; desires a situation in England. Satisfactory references as to character and abilities can be given.—J. W., Post Office, Fettercairn, by Laurencekirk, N.B.

FARM BAILIFF.—Age 37; has had considerable experience on Heavy and Light Soils, and in the Breeding and Rearing of Stock, Buying and Selling of Stock, Corn, &c.; the management of Woods and Plantations. The wife can take the care of the Dairy and Poultry if required. Seven years' excellent character.—A. B., Mr. Haynes, 4, Alfred Place, Spa Road, Bermondsey, S.E.

FARM BAILIFF to a nobleman or gentleman.—A Farmer's Son, age 30; thoroughly understands the Rearing and Breeding of Cattle, &c. Can give the most satisfactory references.—W. J., Post Office, Faringdon, Berks.

FARM BAILIFF (WORKING).—Age 28, married, no incumbrance; thoroughly understands the Management of Light and Heavy Soils, and the care and treatment of all kinds of Stock. Good testimonials will be given.—T. H., 1, South Road, West Kent Park, Forest Hill, Surrey, S.E.

WORKING BAILIFF.—Age 45, with three children; thoroughly understands Farming both Stiff and Light Soils, and Breeding and Rearing of Stock; also attending Markets if required, and Keeping Accounts. Can have first-rate testimonials from his late employer for 20 years.—H. H., Mr. Perch, News Agent, Wimbledon, Surrey, S.W.

TO NOBLEMEN AND GENTLEMEN.

LAND AGENT OR BAILIFF.—Age 40, a native of Scotland; has been for the last 20 years principal Manager of an Estate and Farming operations; perfectly acquainted with Breeding and Managing of all kinds of Stock; also Agricultural Machinery, and is competent to carry out all recent improvements belonging to the Farm. If required Wife will take the Management of Dairy. Would not object to Ireland. Unexceptionable references given.—Y. Z., *Gardeners' Chronicle* Office, W.C.

TO NOBLEMEN AND GENTLEMEN.

STEWARD OR BAILIFF.—Respectably connected; perfectly understands the Cultivation and Management of Land, Breeding and Rearing of Stock, &c. Testimonials as to efficiency will be presented from noblemen, gentlemen, and others connected with agriculture in the county of Kent.—R. E., Messrs. Deane & Co., London Bridge, E.C.

FARM STEWARD OR BAILIFF.—Middle-aged; a native of Scotland; of active habits, and practically acquainted with Farming on the most improved principles, Buying, Selling, and Management of Stock in general. Satisfactory testimonials.—X.X., Post Office, Watford, Herts.

LAND STEWARD AND FORESTER at Lady Day next.—A practical Man of business who filled his last appointment under a gentleman of title and on a large estate for nearly 20 years; has had a very extensive experience in the Management and Sale of Underwood and Timber, the Cultivation of Farms, Government Drainage, Repairs, and General Business, and has accustomed himself to zeal and perseverance in promoting the interest of his employer.—L. S., Mr. Warner's Advertising Office, 314, Oxford Street, Hanover Square, W.

STEWARD (UNDER), CLERK, OR ASSISTANT TO A STEWARD.—Age 25; son of a Manager of an Estate; has been previously in a similar situation. Salary 50*l.*, or 25*l.* with Board.—X. Y., Librarian of Lofte's Reading Room, by Redcar, Yorkshire.

IMPROVER (under a nobleman or gentleman's Gardener.)—Age 18; four years' good character.—J. C., Hally's Nursery, Blackheath, S.E.

IMPROVER.—Age 18; wishes to engage himself to a nobleman's or gentleman's Gardener, where he will have an opportunity of Learning or Improving himself. A Premium will be given.—Mr. TROTTER, Gardener to R. Gosling, Esq., Ashford, near Staines, Middlesex.

APPRENTICESHIP (either in or out of doors).—Age 18, steady; in a first-class Nursery, where he would learn all the business. A small Premium given. State terms required.—Mr. J. TIDY, The Chequers Inn, Lewisham, Kent.

TO NURSERYMEN AND SEEDSMEN.

CLERK AND SALESMAN.—Age 27; is a good Correspondent, and can take charge of Books; has been for some years in one of the first houses in London. No objection to act as Traveller.—L. H. S., *Gardeners' Chronicle* Office, W.C.

SHOPMAN.—Age 22; has had eight years' experience in first-class houses. Good address. Unexceptionable references.—A. Z., Post Office, Winchester.

portionate advance. During the last few days the turnouts, in large numbers, have paraded the town of St. Helen's and the surrounding districts, and held open-air meetings. The number out on strike is estimated at about 3000.

Ireland.

The Pope's Tribute.—The collection ordered by Dr. Cullen, on behalf of the Pope, took place on Sunday in all the Roman Catholic chapels in Dublin. The amount subscribed was nearly 11,000*l.*; the sum raised in the cathedral parish alone amounting to 2322*l.*, and the lists have not yet been closed. When they are completed it is expected that Dr. Cullen's most sanguine expectations will have been exceeded, and that 13,000*l.* or 14,000*l.* will be on its way to Rome.

The Law Appointments.—The law changes consequent upon Mr. O'Hagan's promotion and the death of Mr. Hamilton Gorges are at length completed as follows:—The Hon. Mr. Trench, brother of Lord Ashtown, has been promoted from the chairmanship of Westmeath to that of Dublin county; Mr. Blake, Q.C., has been promoted from King's County to Fermanagh; Mr. West, Q.C., has been appointed to Westmeath; and Mr. Colley to the King's County.

The Church Education Society.—The presidents of this Society having recently applied to her Majesty's Government for such a modification of the rules of the national system as would enable the Society's schools to obtain assistance out of the Parliamentary grant, an answer has been returned declining to make any alteration in the rule relating to the use of the Scriptures, which forms the fundamental difference between the two systems. In consequence of this refusal the Lord Primate has addressed a letter to the honorary secretaries, counselling the patrons of all schools which may be in a languishing condition to join the national board. The committee of the Society have since adopted resolutions pledging themselves to co-operate with the patrons of such Church schools as are languishing from want of support, in order to raise them from their depressed condition, and to encourage those which remain by increasing the efficiency of the training institution, by a regular supply of school requisites, and by other means within their reach.

Scotland.

Edinburgh University.—The installation of Lord Brougham as Chancellor, and of Mr. Gladstone as Rector of this University, is deferred from the Easter to the Whitsuntide holidays.

The Aberdeen Bank.—The celebrated case of the Aberdeen Bank, which has been in litigation for nearly 10 years, the Scotch Courts having hitherto denied the right of inquiry into the malfeasance complained of by the shareholders, has now been brought to a definite stage by a judgment of the House of Lords on appeal. Their lordships have affirmed the relevancy of the allegations, and the title of each individual shareholder to sue thereupon. Actions in common law will therefore, it is presumed, be instituted. This decision will have a material bearing on the proceedings in the analogous but more recent case of the Western Bank of Scotland.

Railways.

Collision on the Edinburgh and Glasgow.—During the gale of Monday last the express train which left Edinburgh for Glasgow at 10.15 came into collision with a goods train between Bonnymuir and Greenhill. No lives were lost, but seven of the passengers were more or less injured by the concussion of the carriages. The accident is attributed to the state of the weather, which was so stormy that the goods train, which was proceeding in the same direction as the express, was actually kept back by the wind, and could only move at a very slow rate.

The Late Accident on the Eastern Counties.—Another name has been added to the list of fatal casualties caused by this accident, in the death of Mr. Bean, of Parndon, who died at the White Hart Inn, Tottenham, on Wednesday morning. Mr. Empson, another sufferer, still remains in a very precarious state, as does also Mr. Heylock, farmer, of Hasden, Essex, whose leg was amputated on Wednesday. The other persons are going on favourably. The adjourned inquest was resumed on Tuesday, and after the examination of several witnesses was again adjourned to Friday next.

Sporting.

The Intended Fight for the Championship.—In the House of Commons on Friday Mr. Hadfield called attention to a petition from the inhabitants of Sudbrook Park, Petersham, and Ham, complaining of a meditated breach of the peace in England by the intended pugilistic contest between a British subject and an American citizen for the so-called championship of England, and the consequences likely to arise therefrom; and inquired of the Secretary of State for the Home Department whether he intended to take measures to put down the proposed disturbance of the public peace. Sir G. Lewis in reply said that his attention had been called to the pugilistic encounter in question, and that he had written to Sir Richard Mayne, who, no doubt, would take proper steps to prevent any hostile meeting within the limits of the metropolitan district. Beyond this assurance he could not give any positive promise, because he was informed that neither time nor place had been fixed upon for the event.—Mr. Heenan, the American pugilist, better known in the sporting world as the "Benecia Boy," has established himself at East Harnham, near Salisbury, where he is undergoing the necessary training for the contest with Sayers, the present champion.

Obituary.

The Hon. George F. W. Yelverton died at Ennismore House, Kingstown, county Dublin, on the 26th ult., of disease of the heart, in his 41st year. He was the eldest surviving son and heir presumptive of Viscount Avonmore by his first marriage with the second daughter of Mr. T. Bootlie, of Whitehaven, and was born in 1818. He was for some years in the 64th Regiment, but retired from the army in 1848. By his death Captain the Hon. William Charles Yelverton, of the Royal Artillery, eldest son of the present viscount by his second marriage, becomes heir apparent to the title.

The Dean of Lincoln (the Very Rev. Dr. Ward), died on Monday last after a short but severe illness. He was educated at Oxford, and after having been for many years Rector of St. James's, Westminster, was appointed to the Deanery of Lincoln on the death of Dean Gordon in 1845. He leaves a wife and three children, the eldest of whom is Colonel Ward, an officer in the army.

The Rev. William Canning, Canon of Windsor, died suddenly on Friday morning. He had been attending divine service in St. George's Chapel, and was returning home with his two nieces, when he suddenly fell into the arms of one of the young ladies, and expired almost immediately, death having been caused by an affection of the heart. He was in his 82d year, and was appointed one of the canons of St. George's Chapel in 1828. He was brother to Lord Stratford de Redcliffe, and first cousin to the Right Hon. George Canning.

Capt. Harford, late of the Scots Fusilier Guards, committed suicide on the 21st inst. in a secluded walk in his beautiful grounds at Down Place, on the banks of the Thames, near Monkey Island, about three miles from Windsor. It appeared at the inquest that he must have discharged the contents of a loaded pistol into his left ear, as a portion of the skull on that side of the head was blown away, and his hat was picked up about 16 yards from the body. Mr. Harford on previous occasions had shown symptoms of lunacy, and the jury returned a verdict that he destroyed himself in a fit of temporary insanity. He was much respected in the neighbourhood, and has left a widow and family. He was in his 57th year.

BIRTHS.—On the 23rd ult, at Gunston Park, the Lady Suffield, of a daughter—23d ult, at Welwyn Rectory, Herts, Lady Boothby, of a daughter—26th ult, at 81, Eaton Square, the Countess de Morella, of a son—24th ult, at Springfield, South Queensferry, Scotland, the Hon. Mrs. Henry W. Cheetwynd, of a daughter—23d ult, at Ewell, Surrey, the wife of the Rev. Sir George L. Glyn, Bart., of a daughter—27th ult, at Rutland Gate, the wife of Lieutenant-Colonel Astley, of a daughter—21st ult, at West Huntington, near York, the wife of Lieutenant-Colonel G. Lister Kaye, of a daughter—24th ult, at 29, Lower Baggot Street, Dublin, the wife of Colonel Clement A. Edwards, C.B., 18th (Royal Irish) Reg., of a son.

MARRIAGES.—At St. Andrews, Plymouth, Octavius Phillpotts, Esq., youngest son of the Right Rev. the Lord Bishop of Exeter, to Georgiana Harriet, second daughter of T. V. Lane, Esq., and granddaughter of Pownoll Bastard, second Viscount Exmouth, of Canonteign—21st ult, at the parish church, Worth, George Latham, eldest son of Alfred Latham, Esq., 23, Norfolk Street, Park Lane, to Julia Louise, second daughter of John Nix, Esq., of The Hall, Worth, Sussex—21st ult, at the Scotch National Church, Crown Court, Covent Garden, Francis Lean, Esq., Lieutenant and Adjutant Royal Marine Light Infantry, eldest son of Francis Lean, Esq., R.N., to Lettice Anne, eldest daughter of the Rev. Dr. Cumming.

DEATHS.—On the 24th ult, at Monkstown, Dublin, Frances Mary, widow of the late Charles Le Poer Trench, Esq., and fourth daughter of the last Archbishop of Tuam—20th ult, at Frenchay, Gloucestershire, Catherine Beverley, widow of Lieut. General W. Smelt, C.B., and eldest daughter of the late Sir W. H. Robinson, K.C.H.—22d ult, at Brighton, Frances, widow of Captain J. H. Murray, R.N., and youngest daughter of the late Hon. Henry Pelham—21st ult, at Beaufort Lodge, Kingstown, Wm. Greene, Esq., Clerk of the Crown for the county of Westmeath, second surviving son of the late Sir Jonas Greene, Recorder of Dublin—25th ult, at Springfield, Lowesby, Leicestershire, Lawrence Woolaston, youngest son of the late Sir Frederick Fowke, Bart., aged 32—28th ult, at Roehampton, Stephens Lant Stephens, Esq., of Lynford Hall, Norfolk—27th ult, at Rewe, Devonshire, the Rev. Henry Fox Strangways, Rector of Rewe, aged 68—24th ult, at 13, Queen's Road West, Regent's Park, the Rev. Dr. Vaughan, of St. John's College, Cambridge, aged 67—24th ult, at his residence, Pulteney Street, Bath, Hugh Willoughby Bateman, Esq., eldest son of the late Richard Thomas Bateman, Esq., of Hartington Hall, Derbyshire, and Hill Grove, near Wells, Somerset, aged 36—20th ult, at his residence, Ackworth Lodge, near Pontefract, William Hepworth, Esq., one of her Majesty's Justices of the Peace for the counties of Yorkshire and Lancashire, and a Deputy Lieutenant of the former county, aged 58—27th ult, at 47, Hertford Street, Mayfair, General John D'Evereux, aged 82. He raised the Irish Legion, which, under Bolivar, was engaged in the successful struggle for independence in Columbia.

Markets.

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, March 1.

Prime Meadow Hay	70s to 75s		Clover	92s to 105s
Superior do. (old) ..	75	88	New Clover	— —
Inferior do.	—	—	Second cut do. ..	75 88
New do.	—	—	Straw	25 30
Rowen	45	60		

Davis & Co.

Cumberland Market, Thursday, March 1.

Sup. Meadow Hay ..	88s to 94s		Inferior Clover ..	80s to 90s
Inferior do.	70	80	New do.	— —
New do.	—	—	Straw	30 35
Superior Clover ..	98	105		

Joshua Baker.

Whitechapel, Thursday, March 1.

Fine old Hay	84s to 90s		Fine old Clover ..	100s to 105s
Inferior do.	75	80	Inferior do	75 90
Prime New Hay ..	—	—	Fine New Clover ..	— —
Inferior do.	—	—	Fine 2d cut	— —
Straw	27	30	Inferior do.	— —

COAL MARKET.—Feb. 29.

Davison's West Hartley, 15s; Holywell, 15s. 9d.; St. Cuthbert's Hartley, 14s. 6d.; Tanfield Moor Butes, 13s 6d.; West Hartley, 15s.; Wylam, 16s.; Walls End Acorn Close, 17s. 9d.; Walls End Eden, 17s. 9d.; Walls End Riddell, 16s. 9d.; Walls End Hetton, 19s. 3d.; Walls End South Hetton, 19s.; Walls End Cassop, 18s. 6d.; Walls End Heugh Hetton, 19s.; Walls End Hall, 17s. 9d.; Walls End Kelloe, 18s. 3d.; Walls End Trimdon Hartlepool, 18s. 6d.; Walls End Trimdon Thornley, 16s. 9d.; Carway and Duffryn Malting, 22s. 6d.; Powell's Duffryn Steam, 22s. 6d.—29 ships at market.

POTATOES.—Southwark, Monday, Feb. 27.

During the past week the arrivals coastwise have been light, but still equal to the demand; the trade keeps dull at last week's prices. The following are this day's quotations:—Yorkshire Regents, per ton, 90s. to 100s.; Lincolnshire do., 80s. to 95s.; Dunbar do., 100s. to 120s.; do. Reds, 85s. to 95s.; Perth, Forfar, and Fifeshire Regents, 75s. to 95s.; do. Rocks, 70s. to 80s.; do. Reds, 70s. to 80s.; French Whites, 70s. to 80s.; Belgian do., 60s. to 70s.

HOPS.—Borough Market, Friday, March 2.

Messrs. Pattenden & Smith report a better demand for both new and old Hops; the former for exportation to the Continent and the colonies. Prices are very firm. Present quotations:—Mid and East Kents, 70s. to 100s. to 140s. per cwt.; Weald Kents, 65s. to 75s. to 84s. do.; Sussex, 60s. to 70s. to 80s.

COVENT GARDEN.—March 3.

Supplies of most things are now beginning to improve, both in quality and quantity. Pine Apples and Grapes, however, have not altered since our last report. Good Apples and Pears are, as a matter of course, scarce. Oranges are plentiful and cheap. Good Cobs realise 1s. to 1s. 6d. per lb. Rhubarb, Asparagus, Seakale, Cabbages, Carrots, Parsnips, and Leeks are sufficient for the demand. Parsley is now becoming cheap. Cornish Broccoli, which is furnished by the grateful, fetches from 3s to 4s. per dozen heads. Green Peas of foreign growth continue to make their appearance. Potatoes realise 4s. 6d. a bushel. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Pears, per doz., 6s to 8s
Grapes, per lb., 8s to 10s	Oranges, per 100, 6s to 10s
Melons, each, 2s. to 4s	Lemons, per 100, 5s to 8s
Pomegranates, each, 4d to 6d	Filberts, p. 100 lbs., 50s to 60s
Apples, per doz., 2s to 3s.	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 7s to 10s	Artichokes, per doz., 2s to 3s
Seakale, per basket, 2s to 3s	Beet, per doz, 1s 6d to 2s
Rhubarb, per bundle, 2s to 3s	Celery, per bundle, 1s 6d to 2s
F. Beans, per 100, 2s to 2s 6d	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen bunches, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., per score, 1s to 1s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt, 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott, 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d
Cucumbers, each, 1s to 3s	

METROPOLITAN CATTLE MARKET
Monday, Feb. 27.

The number of Beasts is smaller than on Monday last, and consequently prices are maintained although trade is slow. There are a few more Sheep, and the demand is limited, yet we cannot quote lower for choicest kinds. Good Calves are scarce and dear. From Germany and Holland there are 220 Beasts, 890 Sheep, and 77 Calves; from Spain, 177 Beasts; from Scotland, 210; from Ireland, 200; from Norfolk and Suffolk, 2300; and 100 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools.	5	4	to 5	6
Best Short-horns	4	6	— 4	10	Do. Shorn	..	..	—	..
2d quality Beasts	3	6	— 4	2	Ewes & 2d quality	4	6	— 4	10
Best Downs and Half-breds ..	5	8	to 5	10	Do. Shorn	..	..	—	..
Do. Shorn		—		..	Lambs		..	—	..
					Calves	4	8	— 5	10
					Pigs	4	0	— 5	0

Beasts, 3530; Sheep & Lambs, 19,200; Calves, 103; Pigs, 590.

Thursday, March 1.

We are not very largely supplied with Beasts, yet it is difficult to effect a clearance. Prices on the average are about the same as on Monday. The demand for Sheep is very small; prices are rather lower, and several remain unsold. Calves are not quite so dear as of late. Our foreign supply consists of 70 Beasts, 560 Sheep, and 111 Calves. The number of Milch Cows is 152.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 5	0	Best Long-wools .	5	2	to 5	4
Best Short-horns	4	6	— 4	8	Do. Shorn	..	..	—	..
2d quality Beasts	3	6	— 4	0	Ewes & 2d quality	4	4	— 4	8
Best Downs and Half-breds ..	5	6	— 5	8	Do. Shorn	..	..	—	..
Do. Shorn		—		..	Lambs		..	—	..
					Calves	4	6	— 5	8
					Pigs	4	0	— 5	0

Beasts, 922; Sheep & Lambs, 3970; Calves, 143; Pigs, 165.

MARK LANE.—Monday, Feb. 27.

The supply of English Wheat to this morning's market was moderate; good dry samples met a ready sale at last Monday's quotations, but the damp and inferior remained unsold towards the close of the market. Foreign was but little inquired after, and its value unaltered. The Barley trade firm at last week's rates. Beans and Peas sell at the prices of this day se'nnight. Of Oats there are no arrivals, and the little business doing is at prices lately current. Town-made Flour unaltered in value, but Norfolks are held for a trifling advance.

Per Imperial Quarter.	s.	s.		s.	s.
Wheat, Essex, Kent, & Suffolk .. White	49	—48	Red	40	—45
— — fine selected runs .. ditto	46	—48	Red	42	—48
— — Talavera	40	—52			
— Norfolk	—		Red	—	
— Foreign	38	—56			
Barley, grind. & dist., 24s to 30s .. Chev.	38	—44	Malting .	35	—40
— Foreign .. grinding and distilling	28	—31	Malting .	35	—41
Oats, Essex and Suffolk	19	—24			
— Scotch and Lincolnshire .. Potato	25	—29	Feed ..	19	—26
— Irish ..... Potato	24	—28	Feed ..	19	—24
— Foreign ..... Poland and Brew	25	—26	Feed ...	17	—24
Rye	35	—38	Foreign .	—	
Rye-meal, foreign	—				
Beans, Mazagan .... 30s to 40s .... Tick	37	—40	Harrow .	38	—42
— Pigeon ..... 36s — 47s .. Winds	43	—54	Longpod	—	
— Foreign ..... Small	38	—46	Egyptian	—	
Peas, white, Essex and Kent .. Boilers	40	—45	Suffolk	36	—40
— Maple .... —s to —s ..... Grey	34	—38	Foreign .	30	—37
Maize ..... White	—		Yellow ..	—	
Flour, best marks delivered .. per sack	37	—40			
— 2d do. ..... ditto	27	—37	Country.	27	—37
— Foreign ..... per barrel	18	—27	Per sack	30	—37

Friday, March 2.

The weather during the past week has been generally fine but cold, with sharp night frosts, the wind blowing very hard, changing from S.W. to N.W. and back to S.W.; to-day it is showery. The grain trade throughout the country has continued firm but less active, the upward tendency in the prices of Wheat and Maize having subsided, the extreme value esta-

blished since the middle of last month is barely maintained, and sales are only in retail. Best malting Barley continues in good demand at 1s. per qr. advance; grinding sorts and Oats are also again 6d. per qr. dearer. The arrivals of grain and seed-laden vessels from the South of Europe off the coast are more numerous this week than they have been for some time, comprising 20 cargoes of Wheat, 6 of Maize, 10 of Barley, 1 of Oats, 2 of Rye, 1 of Dari, 7 of Linseed, and 1 of Rapeseed. The sales comprise Taganrog Ghirka Wheat at 47s. 6d. and Marianopoli at 50s. per 492 lbs; Danube Barley at 26s. 3d., and Ibrail at 26s. per 400 lbs. The sales for forward delivery have been considerable, but were chiefly confined to Maize; they include Odessa Maize at 33s. 9d. to 34s. 6d., per 492 lbs.; Salonica at 32s. to 32s. 6d., and Ibrail at 32s. 7½d. both per 480 lbs.; Danube Barley at 23s. 6d. per qr. imp., c. f. and i.; Calcutta Linseed at 48s. to 48s. 3d. per qr. delivered. The arrivals of English grain this week are moderate, large of foreign Barley, and exceptionably small of foreign Wheat and Oats. There was but a trifling attendance of millers at this morning's market. The value of Wheat either English or foreign is unaltered from Monday, and the latter is almost without inquiry. All descriptions of Spring Corn are in fair demand at our late quotations.

ARRIVALS FROM FEB. 27 TO MARCH 2.

	Wheat.	Barley.	Oats.	Flour.
English ..	1820 qrs.	1480 qrs.	90 qrs.	1060 sks.
Irish	— ,,	— ,,	170 ,,	— ,,
Foreign ..	450 ,,	7100 ,,	460 ,,	50 ,, 5990 brls.

LIVERPOOL, Tuesday, Feb. 28.—Since this day week there has been a good inquiry for Wheat, chiefly for Ireland, and the better sorts of red have realised 1d. per cental advance. Indian Corn has been offered at 3d. per qr. decline, but was in better demand yesterday. In other articles there has been no alteration. At our Corn Exchange this morning there was less doing in Wheat; the advance of Friday was not maintained. Prices closed as on this day week. Oats were unaltered. Barley, Beans, and Peas were all about as before. Indian Corn was fully as dear. Oatmeal supported last quotations. The transactions in both sack and barrel Flour were confined to retail at former prices.

FRIDAY, March 2.—The grain market was quiet, but steady. Wheat quoted at Tuesday's rates, without much business. Flour quiet. Indian Corn and Beans a turn in buyers' favour. All other articles unaltered.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Jan. 21..	43s 11d	34s 4d	21s 1d	32s 1d	38s 3d	36s 2d
— 28..	43 10	34 7	21 5	28 11	38 5	36 3
Feb. 4..	43 8	34 10	21 0	31 0	38 1	35 4
— 11..	43 6	34 11	21 11	29 9	38 4	36 0
— 18..	43 11	34 11	21 11	31 10	38 6	36 3
— 25..	44 5	35 7	22 7	35 3	38 11	36 11
Agg. Aver.	43 10	34 10	21 8	31 6	38 5	36 2

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Jan. 21.	Jan. 28.	Feb. 4.	Feb. 11.	Feb. 18.	Feb. 25.
44s 5d	..	..	..	..	..	
43 11	—	..	..	..		..
43 10	..		..	..	..	..
43 8	..	..		..	..	..
43 6	..	..	..		..	..
..	..	..	..	..	..	..

BRITISH WOOLS.—LONDON, FRIDAY, March 2.

There has been more business transacted than for some weeks previously, and at a concession from the extreme rates in cases where holders were anxious sellers, but generally there is not much disposition to effect sales in quantities at a reduction.

	s.	d.		s.	d.
South-down Hoggets..	1	8 to 1	9	Leicest. Wethers 1	5 — —
Half-bred ditto..	1	8 —	—	Ditto Hoggs .. 1	7 — —
Down Ewes ..	1	6 —	—	Combing Skins 1	2 to 1 6
Kent Fleeces ..	1	6 — 1	6½	Blanket ditto .. 0	6 — 10½
				Flannel Wool .. 1	2 — 1 6

THE LATE CHARLES BARTER.—The friends of this enthusiastic Naturalist, late Botanist to the Niger Expedition, are desirous of raising a fund to assist in the support and education of his two orphan children, a girl seven, and a boy five years of age. Both are at present entirely dependent on their grandfather, who resides at Basingstoke, Hampshire, but it is felt that many would gladly assist, if they were aware of their circumstances, particulars of which may be had of Mr. KENNEDY, Covent Garden, W.C., or Mr. MATTHEWS, Publisher of the *Gardeners' Chronicle*, 5, Upper Wellington Street, Covent Garden, W.C., both of whom will be happy to receive subscriptions in their behalf.

£500. A clear income of not less than 300*l.* per Annum may be realised without risk by any gentleman having from 500*l.* to 800*l.* at command, with or without partnership in an unusually Lucrative Monopoly.—Address D. Tassley, Esq., 26, Wigmore Street, Cavendish Square, W.

THE WIDOW OF THE LATE PROFESSOR HENFREY, F.R.S., L.S., &c., of King's College, London, receives a small number of BOYS between the ages of 6 and 12, to EDUCATE with her own family.—Turnham Green, W.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

WANTED, a good WORKING GARDENER. Wages 20s. per week.—Apply A. B., 25, Bishopgate Street Within, E.C.

WANTED IMMEDIATELY, an active industrious MAN, with a good knowledge of General Nursery Work, and particularly the Cultivation of Chrysanthemums.—Apply, stating terms, with references, to Mr. SALTER, Versailles Nursery, near Hammersmith Turnpike, W.

NURSERY FOREMAN.

WANTED, immediately, an energetic MAN of thorough business habits and obliging disposition, in a Nursery near London; he must be well up in all branches of the Out door department, more especially Roses and general Nursery Stock, and have a good knowledge of Ferns and Plants in general under Glass.—Apply, in own hand writing, stating terms and references to ability and character, to ALPHA, Messrs. Noble, Cooper, & Bolton, Seed Merchants, Fleet Street, London, E.C.

WANTED, two young Men well acquainted with NURSERY WORK one to assist in the houses, who must be neat and expeditious in all kinds of Potting, &c.; the other will be required to understand Packing, and to fill up his time in the Out-door Department, with which he must be well acquainted. Wages 15s per week.—Apply to WILLIAM BARNES, Camden Nursery, Camberwell, S.

WANTED a strong, active, cleanly LAD, about 16 or 17, under a Gardener, where he will have an opportunity of seeing the successful cultivation of Orchids and Stove and Greenhouse Plants. Some little knowledge of out-door Gardening required. Wages 7s. a week.—29, Adelaide Road, Haverstock Hill, N.W.

WANTED, as GENERAL PLANT SALESMAN, in a large Provincial Nursery, an active intelligent Man. He must possess habits of business and a good address, combined with a fair average knowledge of Nursery Plants generally. Apply to C. D., Messrs. Hurst & McMullen, Seedsmen, Leadenhall Street, London, E.C., in own handwriting, with references as to moral character and ability. None need apply whose testimonials are not of the most satisfactory description.

WANTED, about 30 miles from London, a middle-aged MAN and his WIFE, without family. The Man to take the management of, and attend to Dairy, Cows, and Piggery, and to be well acquainted with rearing Calves. The Wife to manage the Dairy and Poultry, and have some knowledge of Plain Cooking. No application will be attended to that cannot be well recommended for sobriety and honesty, and the knowledge required.—Address J. P. W., Mr. J. Lee, News and Advertising Agent, Billiter Square, London, E.C.

WANT PLACES.—Letters to be Post Paid.

FOREMAN (GENERAL).—Well understands the different branches of his profession. Can have four years' good character from last place.—C. C., Paradise Nursery, Seven Sisters Road, Holloway, London, N.

GARDENER (FOREMAN).—Age 22; seven years' practice.—A. B., Mr. J. Kirtland, Chipping Norton, Oxon.

GARDENER (FOREMAN), in a good Establishment.—Age 26; well acquainted with Plants, Forcing, &c., and has a good general knowledge of his profession. Good testimonials.—Messrs. ROLLISSON, Nurserymen, &c., Upper Tooting, Surrey.

GARDENER (HEAD).—Single; understands Conservatory, Greenhouse, Kitchen and Flower Gardens.—A. B., Mr. Ward's, 7, Grove Place, Highgate, N.

GARDENER (HEAD).—Can also take charge of Meadow Land. Upwards of 20 years in last situation.—A. B., 17, Caledonia Street, Pimlico, London, W.

GARDENER (HEAD).—Age 37, married, without incumbrance; has a thorough knowledge of his profession. Three years' reference. Wages, 1*l.* per week, with Cottage.—J. W., Mr. Rains, Middle Row, Covent Garden, W.C.

GARDENER (HEAD).—Age 30, married, without incumbrance; thoroughly practical in all branches of his profession. Good character.—E. CROOK, the Gardener at Lord Barrington's, Shrivenham, Berks.

GARDENER (HEAD).—Age 35, married; has a thorough practical knowledge of his profession. Four years' good character from last employer.—H. B., 29, New Church Street, Edgware Road, W.

GARDENER (HEAD).—Age 25, single; well experienced in good modern and economical Gardening in all its branches. Can have a good character for sobriety.—T. HARRISON, 1, Wilton Road, Pimlico, S.W.

GARDENER (HEAD).—Age 27, single; well experienced in Forcing Pines, Vines, Melons, &c.; and Management of Kitchen and Flower Gardens. Two years' good character. Wages 1*l.* per week with cottage.—A. B., Library, Addison Road, Notting Hill, W.

GARDENER (HEAD).—JAMES FOWLER, Gardener to the Right Hon. Earl of Harewood, Harewood House, near Leeds, is desirous of recommending a practical person of great experience to any nobleman or gentleman requiring a Gardener.—Address as above.

GARDENER (HEAD).—Age 36, married, no incumbrance thoroughly practical; understands his profession, Forcing Fruits, Flowers, and Vegetables, the Culture of Stove and Greenhouse Plants, Management of Fruit, Flower, and Kitchen Gardens.—ETON, Badgemore Park, Henley-on-Thames.

GARDENER (HEAD).—Age 32, single; practical; understands Pines, Vines, Peaches, Melons, Stove and Greenhouse Plants, Flower and Kitchen Gardens. Highly recommended.—G. W., 13, Bridge Terrace, Harrow Road, Paddington, W.

GARDENER (HEAD).—Thorough practical knowledge of his profession in all its branches. Most unexceptionable references. Has just left his situation owing to the death of his late employer, a Baronet, in the north of England.—A. B., Messrs. Batt, Rutley, & Co., Seed Merchants, 412, Strand, London, W.C.

GARDENER (HEAD).—Age 34, married, no incumbrance; has a practical knowledge of Early and Late Forcing, Pines, Vines, Peaches, Melons, Cucumbers, Strawberries, &c., Flower, Fruit, and Kitchen Gardens. Wife as good Plain Cook and Housekeeper to single gentlemen. Two years' good character.—J. C., Post Office, Leytonstone, Essex, N.E.

GARDENER (HEAD), to any nobleman or gentleman requiring the services of a first-class Gardener.—The highest testimony to moral character and ability can be had from present and previous employers. No single-handed place will be treated with.—State terms, &c., to A., 2, Everilda Street, Caledonian Road, N.

GARDENER (HEAD).—Age 34, married, no incumbrance; a native of Scotland. Perfectly understands his profession in all its branches, including Early and Late Forcing Pines, Vines, Peaches, Fruit, Flowers, and Vegetables; the management of Stove and Greenhouse Plants, &c. Can attend to Land or Plantations if required. Excellent testimonials. Will be at liberty at Lady-Day next. No single-handed place accepted. No objection to Ireland.—A. B., Post Office, Rugby.

GARDENER (HEAD).—Age 32; AMBRIDGE BAMWELL, Gardener to Sir Edward Hulse, Bart., will shortly be disengaged, and begs to offer his services to any lady or gentleman in want of a practical man. No single-handed place accepted. Satisfactory testimonials by applying to present or previous employers, Mr. FRASER, Marquis Camden's, Wildernesse Park, Sevenoaks, Kent; also Mr. FISH, Putbridge Bury, Luton, Beds.

GARDENER (HEAD), OR GARDENER AND BAILIFF.—Age 40, married; has been most successful in the Cultivation of Pines, Grapes, and Peaches, Late and Early Forcing of Vegetables; also of Hothouse and Greenhouse Plants, Fruit, Flower, and Kitchen Gardens, with Woods, Land, and Stock. Wife can take charge of Poultry.—A. B. Drummond's Nursery, Bath, Somersetshire.

GARDENER.—R. SCOTT, late of Parham Park, wishes to engage with any nobleman or gentleman in want of a Practical Gardener. Has lived in situations in Scotland and England where gardening has been carried on extensively. For character and ability apply to the Hon. R. Curzon, Jun., Parham Park.—R. SCOTT, Watersfield, Petworth, Sussex.

GARDENER.—Married, without incumbrance; well understands the Management of Hothouses, Greenhouses, and Flower Garden. Good recommendation from last situation.—J. BISHOP, 21, High Street, Devizes, Wilts.

GARDENER.—Age 33, married, no incumbrance; understands the management of a Kitchen Garden, Greenhouse, and Early and Late Forcing; 16 months' good character.—Address, F. DURBAN, 85, North End, Croydon, S.

GARDENER.—Age 37, married, no incumbrance; thoroughly understands his profession in all its branches. Two and a half years' good character.—A. B., Grove House Lodge, Dulwich Common, Surrey, S.

GARDENER.—Middle-aged, single; understands Early Forcing, Vines, Flowers, Fruit and Kitchen Gardens. Good character.—W. K., Mill Lane, near the Railway Station, Cheshunt, Herts.

GARDENER.—Age 38, married, without incumbrance; perfectly understands Early and Late Forcing, Kitchen and Flower Gardens. Wife thoroughly understands Dairy and Poultry. Good characters.—E. M. H., Morse's Nursery, Epsom, Surrey.

GARDENER.—Young, two in family over 4 years of age; 15 years' experience, desires a situation where Gardening, both Floral and Kitchen, is carried on with spirit. Can have a good character from his present employer.—G. C., Messrs. Hart & Nicklin, Guildford.

GARDENER.—Middle-aged, married, no incumbrance; thoroughly understands his profession in all its branches; the cultivation of Orchids, and the Laying-out of Ground. No single-handed place accepted. Wife Cook and Housekeeper if required. Good character.—D. C., St. George's Villa, Queen's Road, Richmond, Surrey, S.W.

GARDENER (UNDER).—Age 22; good character.—Address, stating wages, &c., to J. O., 8, Highgate Hill, N.

GARDENER OR BAILIFF.—Middle aged, married; has held first class Gardeners' situations, where everything was cultivated upon the most improved principles, and has had the management of an estate of 900 acres, &c.—A. B., Messrs. P. Lawson & Son, 27, Great George St., Westminster, S.W.

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The Gardeners' Chronicle Newspaper.

SATURDAY, MARCH 3, 1860.

LECTURES TO WORKING MEN, GOVERNMENT SCHOOL OF MINES, JERMYN STREET.—The THIRD COURSE of SIX LECTURES on LIGHT, by Professor TYNDALL, F.R.S., will be commenced on MONDAY, March 12, at 8 o'Clock. Tickets may be obtained by Working Men only, on Monday, March 5, at 10 A.M., upon payment of a registration fee of 6*d.* each. Applicant is requested to bring his name, address, and occupation written on a piece of paper, for which the Ticket will be exchanged. TRENHAM REEKS, Registrar.

THE MUTUAL LIFE ASSURANCE SOCIETY, 39, King Street, Cheapside, E.C.—A.D. 1834.—The TWENTY-SIXTH ANNUAL REPORT, Cash Account, Balance Sheet, &c., are now ready, and may be had on written or personal application. CHARLES INGALL, Actuary.

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News of the Week.

THE EMPEROR NAPOLEON opened the French Chambers on Thursday with a speech from the Throne. HIS MAJESTY commenced by assuring the Legislature that he "sincerely desired peace, and would neglect nothing to maintain it." He could not therefore but "congratulate himself on his friendly relations with all the Powers of Europe." After a brief reference to China, he proceeded to discuss at great length the progress and results of the negotiations on the Italian question. He stated that he had declared to the KING of SARDINIA his inability to follow him in a policy which appeared to indicate a wish to absorb all the States of Italy. He had, however, advised him to reply favourably to the provinces which had offered themselves to him, but to maintain the independence of Tuscany, and to respect in principle the rights of the Holy See. These arrangements, he said, would elevate Piedmont to a kingdom of more than nine millions of souls, and would give her all the passes of the Alps; he had, therefore, felt it his duty to claim the French side of the Alps for the safety of his frontiers. He next referred to the agitation of the Catholic world in regard to the temporal sovereignty of the POPE, and expressed his opinion that he might now be permitted at least to hope for a speedy solution. He then proceeded to describe the Treaty of Commerce with England, stating that the slight favour shown to such a treaty in France had induced him "to take upon himself the responsibility of that great measure." The treaty he said had only "advanced the period of salutary modifications, and given to indispensable reforms the character of reciprocal concessions, destined to fortify the alliance of two great nations." In conclusion he declared that "France menaces no one," and will be the last to awaken those irritating susceptibilities which impede civilisation, for "the more a country becomes rich and prosperous, the more it contributes to the wealth and the prosperity of others."

Lord JOHN RUSSELL on Thursday brought in the Government Reform Bill. The leading features of the measure are the reduction of the 10*l.* occupation franchise in boroughs to 6*l.*, thereby adding 194,199 to the number of voters in cities and boroughs, and the reduction of the 50*l.* franchise in counties to 10*l.*, the values to be fixed, not by the rating, but by the rental. It does not propose to adopt what had been called "fancy franchises," or totally to disfranchise any place, but to take one member from 25 towns with a population under 7000 now returning two members, and to distribute the seats thus made vacant by giving two additional members to the West Riding, one additional member to North and South Lancashire, North and South Essex, Middlesex, West Kent, South Devon, South Staffordshire, the North Riding, the Lindsay district of Lincolnshire, West Norfolk, East Somerset, and West Cornwall; one additional member to Manchester, Liverpool, Birmingham, and Leeds; one member to Birkenhead, Stalybridge, and Burnley; two members to Chelsea and Kensington united, and one member to the London University. Mr. CARDWELL and the LORD ADVOCATE subsequently introduced Reform Bills for Ireland and Scotland. The Irish Bill establishes a similar town and county franchise to

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that proposed for England, valued by the rating; gives one additional member to Cork county and Dublin city respectively; and permits Irish Peers to sit for Irish constituencies. The Scotch Bill establishes the same franchise as the English and Irish, gives one additional member to Glasgow and a member to the four Scottish Universities, abolishes the present registration system, and substitutes the valuation roll in its stead. The four members thus given to Ireland and Scotland are taken from the seats of the two English boroughs disfranchised on account of their corruption—Sudbury and St. Albans.

The adjourned debate on Friday on Mr. DUCANE'S motion on the Budget terminated in a majority of 116 in favour of Ministers, the numbers being 339 to 223. On Monday the House went into Committee on the Customs Acts, when the CHANCELLOR of the EXCHEQUER moved his resolution for the reduction of the wine duties, and for regulating the amount of the new duties by the alcoholic test. Mr. MILNES moved as an amendment that a drawback should be allowed upon all wine which could be proved to have paid duty within two years before the 10th of February. On a division, the amendment was negatived by a majority of 111, the numbers being 183 to 72. The resolution was then agreed to. On Tuesday Mr. KINGLAKE'S motion for papers in relation to the alleged annexation of Savoy and Nice to France, was assented to by Government and agreed to. Mr. COWPER obtained a Select Committee to consider the means of effectually cleansing the Serpentine. The House then went into Committee on the Customs Acts, when the several items in the list of articles to be exempted from duty were agreed to, down to the article "cork," which gave rise to a long discussion. Mr. T. DUNCOMBE moved as an amendment, that corks to be admitted ready made as squared for rounding should be "the produce of countries from which the export of corkwood is free." The amendment was opposed by the CHANCELLOR of the EXCHEQUER, and was negatived on a division by 191 to 118. The CHANCELLOR of the EXCHEQUER then consented to introduce words confining the admission of corks to such as were the produce, or manufacture of, or imported from France or Algeria. On Wednesday the CHANCELLOR of the EXCHEQUER'S resolution imposing an additional duty of 1*d*. per gallon on British spirits distilled after the 29th February was agreed to. The Qualification for Offices Abolition Bill was read a second time. Mr. MACKINNON withdrew his motion for the second reading of the Masters and Operatives Bill on the understanding that it will be referred to a select committee. The House then went into committee on the Adulteration of Food and Drink Bill, and after a long discussion agreed to two of its clauses. On Thursday, in committee on the Customs Acts, Sir J. PAXTON moved as an amendment that the reduction of the duties on silk should be confined to those countries which permit the free introduction of the silk manufactures of the United Kingdom. On a division the amendment was negatived by 190 to 68.

The Russian and Prussian Governments have repudiated the principle on which the English proposals for the settlement of the Italian question are founded, and have suggested a Congress of the Great Powers as the best mode of obtaining a settlement of the question.—A despatch from Tetuan states that at an interview with Marshal O'DONNELL on the 23d inst., the Moorish ministers refused to cede the occupation of Tetuan. The armistice was therefore declared to be at an end, and Marshal O'DONNELL immediately issued orders to the fleet to bombard the ports of Morocco.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Buckingham Palace. On Friday morning the Duchess of Kent arrived at Buckingham Palace from Frogmore, on a visit to the Queen. The Prince Consort rode on horseback. In the afternoon the Queen and Prince Consort, accompanied by the Princess Helena, visited the South Kensington Museum. In the evening her Majesty and the Prince Consort, accompanied by the Princess Alice, honoured the performance at Covent Garden Theatre with their presence. On Saturday morning the Prince Consort rode on horseback, and visited the Royal Patriotic Fund Schools at Wandsworth. His Royal Highness afterwards presided at a meeting of the British Association, held at Buckingham Palace. In the afternoon the Queen and Prince Consort, accompanied by Prince Arthur, visited Lincoln's Inn hall and library. In the evening her Majesty had a dinner party. On Sunday morning the Queen, Prince Consort, the Duchess of Kent, Prince Arthur, the Princesses Alice, Helena, and Louisa, attended Divine service in the private chapel of Buckingham Palace; the Rev. J. E. Kempe, rector of St. James's, Westminster, preached the sermon. On Monday the Prince Consort presided at a meeting of the Council of the Duchy of Cornwall. In the afternoon the Queen and Prince Consort, accompanied by the Princess Alice, honoured Mr. Bell with a visit at his studio in Douro Place, Kensington. In the evening her Majesty had a dinner party. On Tuesday morning the Prince Consort visited the British Institution. Prince Alfred arrived from Portsmouth. In the evening the Queen and Prince Consort, accompanied by the Princess Alice, honoured the performance at the Haymarket Theatre with their presence. On Wednesday morning the Prince Consort rode on horseback. In the evening her Majesty had a dinner party. On Thursday morning the Prince Consort rode on horseback. In the evening the Queen and Prince Consort, with Prince Alfred and the Princess Helena, honoured the Olympic Theatre with their presence. —The Queen and the Prince Consort and the younger members of the Royal family will leave Buckingham Palace on Thursday next for Windsor Castle, where her Majesty intends to pass a few days before going to Osborne.

PRINCE ALFRED arrived at Spithead on Monday in the steam-frigate Euryalus. His Royal Highness landed at Portsmouth on Tuesday morning, and arrived in London shortly after 1 o'clock, attended by Major Cowell, R.E. The Prince Consort met his Royal Highness at the Waterloo Station, and accompanied him to Buckingham Palace. His Royal Highness passed his examination for midshipman on board the Euryalus the day the ship anchored at Spithead. The examination extended over three days. The King of Portugal dined with the Prince and the officers of the ship, on board, on the 18th ult.

THE PRINCE OF ORANGE arrived at Oxford on Tuesday, and visited the colleges and public buildings. In the evening his Royal Highness dined with the Prince of Wales at Frewen Hall, and on Wednesday morning left Oxford on his return to London.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

BISHOPRIC OF ROCHESTER.—The Rev. Dr. Vaughan, late head master of Harrow, after some hesitation has declined the Bishopric of Rochester, to which he had been nominated by the Queen.

ORDER OF THE BATH.—The Queen has given orders for the appointment of Andrew Buchanan, Esq., her Majesty's Minister to the Queen of Spain, to be a Knight Commander of the Bath; and of James de Vismes Drummond Hay, Esq., Vice-Consul at Tetuan, to be a Companion of the Order.

PARLIAMENTARY MOVEMENTS.—The Carlisle Election Committee have reported that Sir James Graham and Mr. Lawson were duly elected. The Weymouth Election Committee have reported that Mr. Brooke and Lord Grey de Wilton were duly elected. The Yarmouth Election Committee have reported that Sir E. Lacon and Sir H. Stracey were duly elected; that several cases of bribery had been committed but were not proved to have been committed with the knowledge or consent of the sitting members or their agents. The Dundalk Election Petition has been abandoned. At the Cork County Election, the result of the first day's poll gave Mr. Deasy, the Attorney-General for Ireland, a majority of about 250 over Viscount Campden, who had been put in nomination by the Ultramontane party in opposition to him. The result of Thursday's polling at six out of the ten polling-places was a majority of 153 for Mr. Deasy. Mr. Laslett is about to retire from the representation of Worcester, on the ground of ill-health, and Mr. Padmore, an ironfounder and alderman of that city, has offered himself as a candidate in the Liberal interest. Mr. Divett is about to retire from the representation of Exeter. In the House of Commons on Tuesday, Colonel W. Patten having reported that Mr. John Pope Hennessy had failed to attend the committee of which he had been nominated a member, it was unanimously resolved that Mr. Hennessy be ordered to attend in his place in the House immediately. On Thursday the speaker announced that he had received a telegram from Mr. Hennessy, stating that the matter had escaped his recollection, and that he would hasten to London without delay.

THE ARMY.—General Sir George Brown, G.C.B., has been appointed to succeed Lord Seaton in the command of the forces in Ireland. In consideration of the eminent services of Major-General Sir Hugh Rose, G.C.B., during the late operations in India, her Majesty has promoted him to the rank of Lieutenant-General. The Secretary of State for War, with the concurrence of the General Commanding-in-Chief, has decided that the army shall be equipped exclusively with those rifled muskets, pattern 1853, the parts of which are universal, or respectively interchangeable; and that the arms which are non-interchangeable shall be kept for the militia, volunteers, and other forces.

THE NAVY.—Vice-Admiral Bruce hoisted his flag on Thursday, as Commander-in-Chief at Portsmouth, in succession to Admiral Bowles. Rear-Admiral James Hope, C.B., has been appointed a Vice-Admiral, while employed as Commander-in-Chief of the East India station.

THE CHANNEL FLEET consisting of the Royal Albert, Queen, Edgar, Donegal, Algiers, Trafalgar, Aboukir, Melpomene, Diadem, and Mersey, left Portland on the 23rd ult. under sail for Lisbon. In consequence of the heavy gales in the channel several of them have since been obliged to put back to Torbay and Plymouth with loss of spars and other casualties.

THE MILITIA.—Orders in Council appeared in Friday's *Gazette* regulating the period of training and exercise for the militia force in England, Wales, and Scotland for the present year. It is ordered that it "shall not in any case exceed 56 days, nor be less than three days." Such order to be transmitted to the respective lieutenants of counties, ridings, and places in England, Wales, and Scotland for their guidance.

THE TREATY OF COMMERCE WITH FRANCE.—An additional article to the Treaty of Commerce was signed in Paris on the 25th ult., by which the high contracting powers agree that the surtax on French brandies shall be 5*d*. instead of 2*d*. per gallon, as provided by the Treaty, the latter sum having been found insufficient "to countervail the charges with which, in consequence of the operation of the laws of Customs and Excise, home-made British spirits have now to contend."

Foreign.

FRANCE.—The following Speech was delivered by the Emperor on the opening of the Chambers on Thursday:—

"MESSIEURS LES SENATEURS,
"MESSIEURS LES DÉPUTÉS,

"At the opening of the last session, confiding in the patriotism of France, I wished to relieve your minds from exaggerated fears of a probable war. To-day it is my most ardent desire to reassure you against the inquietudes and anxieties which even peace has given birth to. I sincerely desire this peace, and I will not neglect anything to maintain it. I cannot but congratulate myself upon my friendly relations with all the Powers of Europe. The only portion of the globe in which our arms are still engaged is in the remote East; but the courage of our soldiers and sailors, aided by the loyal concurrence of Spain, will doubtless speedily bring about the restoration of peace with Cochin China. Respecting China, an important expedition will, in conjunction with the forces of Great Britain, chastise that country for her perfidy.

"The complications in Europe are, I hope, approaching to an end, and Italy is upon the eve of regulating freely her own affairs. Without recapitulating the long negotiations which have lingered for so many months, I shall confine myself to the present points. The dominant idea of the treaty of Villafranca was to obtain the almost complete independence of Venetia at the price of the restoration of the Archdukes. These negotiations having failed, in spite of my most earnest solicitations, I have expressed my regret on this account at Vienna, as well as at Turin, because the state of things, if prolonged, threatened to remain without any issue. While this state of things was the subject of loyal explanations between my Government and that of Austria, it caused steps on the part of England, Prussia, and Russia, which taken together, clearly evince the desire of the Great Powers to arrive at a conciliatory adjustment of all interests. In order to second these dispositions it was important for France to present such a combination as would have the greatest chance of being accepted by Europe.

"In guaranteeing Italy by my army against foreign intervention, I had the right to point out the limits of this guarantee.

"I have not, therefore, hesitated to declare to the King of Sardinia that, although leaving to him an entire liberty of action, I could not follow him in a policy which, in the eyes of Europe, appeared to intend the absorption of the States of Italy, and which threatened new complications. I have counselled him to reply favourably to the wishes of the provinces which offer themselves to him, but to maintain the autonomy of Tuscany, and to respect in principle the rights of the Holy See. If this arrangement does not satisfy everybody, it has the advantage of reserving principles, of calming apprehension, and it elevates Piedmont to a kingdom of 9,000,000 of souls. Having in view this transformation of Northern Italy which gives to a powerful State all the passes of the Alps, it was my duty, for the safety of our frontiers, to claim the French side of the mountains. In this reclamation of territory of small extent, there is nothing to alarm Europe, or to belie the disinterested policy which I have more than once proclaimed. France, however, will not acquire this aggrandisement, small as it is, either by a military occupation, or by exciting an insurrection, or by secret intrigues, but in frankly stating the question to the Great Powers. Their equity will, doubtless, induce them to recognise, as France would certainly do with regard to them in the like circumstances, that the important territorial change which is about to take place gives us the right to a guarantee indicated by nature herself. I cannot pass over in silence the emotion of a portion of the Catholic world, which has suddenly yielded to such unreflective impressions, and has thrown itself into such passionate alarms. The fact, which should have been a guarantee for the future, has been in such a manner misunderstood, and the services rendered in such a manner forgotten, that a very profound conviction, an absolute confidence, in the public reason has been necessary, in order to preserve, in the midst of agitations which have been excited, the calm which alone maintains us in the truth. Facts however have clearly spoken for themselves during the 11 years that I have maintained alone in Rome the power of the Holy Father, without for a moment ceasing to revere in his person the holy character of the chief of our religion. On the other side the populations of the Romagna, suddenly abandoned to themselves, yielded to a natural attraction, and during the war endeavoured to make common cause with us. Ought I to forget them in peace and abandon them afresh for an unlimited time to the risks of foreign occupation? My first efforts were to reconcile them to their Sovereign, but not succeeding, I endeavoured at least to maintain in the revolted provinces the principle of the temporal power of the

Pope. From the preceding you see, although all is not yet terminated, how we may be allowed at least to hope for a speedy solution. The moment, therefore, seems to have arrived to put an end to the deliberations which too long pre-occupy the public mind, and to find the means of boldly inaugurating in France a new era of peace.

"The army has already been reduced by 150,000 men, and this reduction would have been more considerable were it not for the war with China, the occupation of Rome, and of Lombardy. My Government will immediately submit to you a summary of measures which propose to facilitate production, to augment by cheap living the well-being of the working classes, and to multiply our commercial relations. The first step to be taken in this course was to fix an epoch for the suppression of those impassable barriers which, under the name of prohibitions, excluded from our markets foreign products, thus compelling other nations to adopt a reciprocity, to be regretted on our account, but something more difficult still retained us. It was the slight inclination existing for a treaty of commerce with England. I have, therefore, taken upon myself the responsibility of this great measure. A very simple reflection shows the advantage of this treaty to both countries. Neither of them will certainly fail, at the end of some years, to take, each in its own interests, the initiative in the proposed measures, but then the reduction in the tariff not being simultaneous, it would take place on both sides without immediate compensation. The treaty has then only advanced the period of salutary modifications, and given to indispensable reforms the character of reciprocal concessions destined to fortify the alliance of two great nations. In order that this treaty may produce its best effects, I demand your most energetic concurrence for the adoption of the laws which will facilitate the putting it into practice. I call your attention, above all, to the means of communication which by their development can alone permit us to compete with foreign industry; but as the moments of transition are always painful, and as it is our duty to put an end to a state of uncertainty so injurious to our interests, I call on your patriotism for the prompt examination of the laws which will be submitted to you, for enfranchising primary materials from all duties, and reducing those which weigh on provisions largely consumed.

"The resources of the Treasury will find themselves sensibly diminished; nevertheless the receipts and expenditure of the year 1861 will be balanced without the necessity of an appeal to the credit, or having recourse to new taxes. In tracing to you a true picture of our political and commercial situations, I desire to inspire you with full confidence in the future, and so to associate you in the accomplishment of a work fruitful in grand results.

"The protection of Providence so visibly extended to us during the war will not fail us in a pacific enterprise, which aims at the amelioration of the condition of the greater number. Let us then continue our march of progress, without allowing ourselves to be arrested by the murmurs of egotism, or by party clamours and unjust suspicions.

"France menaces no one, she desires to develope in peace, in the plenitude of her independence, the immense resources which Heaven has given to her, and she cannot awake gloomy susceptibilities, since, from the state of civilisation in which we are springs from day to day more forcibly that truth, which consoles and reassures humanity, that the more a country is rich and prosperous the more it contributes to the wealth and prosperity of other countries."

The note by which the French Government requests Sardinia to give up the project of the annexation of Tuscany is dated the 25th of February, and was despatched the same evening to Turin, where the courier arrived on Monday. The *Nord* publishes a telegram, stating that the reply of the Piedmontese Government reached Paris on Wednesday, and that its substance is that the whole question must depend upon the result of a vote by universal suffrage. M. Thouvenel, the French Minister of Foreign Affairs, has addressed a despatch to the French Ambassador at Vienna, to be communicated to Count Rechberg. In this State Paper M. Thouvenel draws an historical outline of the useless endeavours of France to bring about a solution of the question of Central Italy, the inhabitants of these provinces having refused to recognise their former Sovereigns. He then appeals to the conciliatory spirit of Austria in favour of the English proposals. As regards the Romagna, he expresses his regret that the Pope should have allowed the state of things in that province to become so aggravated, and says that France would still consent to a less radical combination than one proposing the dismemberment of the States of the Church, on condition of the principle of non-intervention being maintained. M. Rouher, Minister of Public Works, has addressed a report to the Emperor extending over 13 columns in the *Moniteur*, relative to the various works which are necessary to be executed in order to carry out the recommendations contained in his Majesty's letter for the improvement of canal and fluvial communication, roads, maritime ports, agricultural operations, &c. The report, which enters into very minute details, concludes with a summary of the various amounts to be expended for each purpose, and states that the total amount applicable to extraordinary public works, railways excepted, will be 160,000,000f., distributed over three years. The *Moniteur* publishes a decree on the re-organisation of the artillery, suppressing the regimental lists of the storehouses for field artillery, increasing the number of batteries by creating three new regiments, and re-establishing the artillery train. The Valery Company's steamer Louise foundered on Thursday week on her voyage to Bastia and thence to Marseilles, having run against the advanced pier of Bastia. A despatch received by the underwriters state that 50 persons, including the captain, were drowned. The number of passengers on board was 84.

Spain and Morocco.—An interview took place on the 23d ult. between Marshal O'Donnell and Muley Abbas, accompanied by El Kétib, Minister of Foreign Affairs, on the Tangier road, for the purpose of discussing the terms of peace submitted by Marshal O'Donnell. The interview commenced by the discussion of the question of the occupation of Tetuan. As the Moors obstinately objected to such occupation Marshal O'Donnell was on the point of breaking up the conference. Muley Abbas earnestly entreated him to renew the discussion, but it led to no result. The Moors requested a further delay, which Marshal O'Donnell refused to grant. The armistice was then declared at an end. The General-in-Chief returned to Tetuan, and immediately issued orders to Admiral Bustillos, who commands the naval squadron, to concert active operations. The Spanish squadron accordingly left Algesiras, in order to bombard the seaport towns of Morocco. The operations commenced with the bombardment of Larache and Arcilla, causing great destruction in those two places. Some of the Spanish vessels were slightly damaged, but the Spanish loss was only one man killed. It is said that Rabat has also been bombarded. The latest news states that the squadron has been compelled by bad weather to put back to Algesiras. Marshal O'Donnell will march to Rabat in three days. The tempest interrupts the communications. The whole press, particularly the Progresista section, has been violently attacking England. The censor has prohibited the circulation of the *Noveda*des on that account. The French Ambassador has presented to the Queen an autograph letter from the Emperor Napoleon.

Denmark.—The new Ministry has been formed as follows:—President of the Council and *ad interim* Minister for Foreign Affairs, M. Hall; Minister for Public Worship, and *ad interim* Minister of the Interior, Bishop Monrad; Minister of Justice, M. Casse; Minister of War, M. Thestrup; Minister of Marine, M. Bille; Minister for Schleswig, M. Wolfhagen; Minister for Holstein, M. Raesloef.

Austria.—The following is a more complete summary of the answer of the Austrian Cabinet to the English proposal, which has been remitted by Prince Metternich to M. Thouvenel, bearing date the 17th of February:—

"The message of Count Rechberg commences by expressing the high estimation attached by the Government of His Apostolic Majesty to the communication from France. The Austrian Minister is happy to discover in these friendly steps an evident desire to maintain a cordial understanding between the two Courts. Passing to the examination of the four points proposed by England, Count Rechberg points out, under the question of non-intervention, two essential things—1st, the principle of the right of intervention, and, 2d, the opportunity for its application. Without prejudging the principle in any way, the Austrian Cabinet recognises that, in the present circumstances, there is no opportunity either for Austria or France to interfere in Central Italy. The second point, as Count Rechberg observes, now applies to France alone. Austria having withdrawn her troops from all parts of Italy not under her control. Referring to the third point, which regards the interior organisation of Venetia, Count Rechberg declares that, although this question must remain quite extraneous to the negotiations between the Powers, the Emperor of Austria loyally maintains all the promises of Villafranca as regards Venetia. If these promises have not yet been realised, the fault can only be attributed to the intrigues and continual provocations of the Italian revolutionary party, which no longer conceals its intention of turning these evil passions against Austria herself, in order to deprive her of Venetia. As regards the fourth point, Count Rechberg considers it useless at the present moment to engage in a discussion of the principle of the proposed combination for the settlement of the affairs of Italy. Austria confines herself to the expression of her own conviction that the re-establishment of the former dynasties and the realisation of the project of an Italian confederacy would much better guarantee the future prosperity of the Peninsula. She will leave it to time and the course of events to confirm the justice of her judgment."

The Tyrol.—In consequence of the feeling lately manifested by the inhabitants of the Southern Tyrol, the general in command has been authorised to proclaim martial law in some of the districts. That country has hitherto been remarkable for its devotedness to the Austrian monarchy.

Prussia.—It is stated that the Cabinet of Berlin has concurred with that of St. Petersburgh, in regard to the English proposals for the settlement of the Italian question, and that the two Powers have made counter-proposals, to be submitted to a future Congress, after having been examined by a conference of the five great Powers. It is further said that M. Thouvenel, on receipt of these counter-proposals, stated that the French Government will reply to them in concert with England. It is reported at Berlin that a more intimate understanding between Prussia and Austria is likely to be established.

Russia.—The Russian Government has sent a reply to the Cabinets of London and Paris respecting the four proposals of England for the settlement of the Italian question. According to these statements Russia does not absolutely and directly reject these proposals, but discusses them with calmness and moderation. The Russian Government repudiates the principle upon which the proposals are founded. The Russian despatch concludes by declaring that Russia and Prussia entertain precisely the same views as they have done all along as to the means best suited under the pending difficulties to procure the durable peace of Europe. Russia maintains that a Congress of the representatives of the Great Powers assembled without any preliminary basis of negotiation is best suited to procure a solution of the question.—The *Morning Chronicle* states that a Treaty is on the point of being signed between Russia and Austria, by which Austria makes concessions to Russia in the East and on the Danube, and Russia guarantees to Austria the whole of her territory, including Hungary and Venetia, against insurrection and foreign foes. This statement is not confirmed from any other quarter, and is peremptorily contradicted by the *Independance Belge*, the *Pays*, and the *Patrie*. Letters from Vienna state that the report is without foundation; but assert that Austria, although not bound by such a treaty, will no longer oppose the Russian policy in Turkey.

Italy.—By a Royal decree of the 29th ult. the Electoral Assemblies are convoked for the 25th of March, and the Parliament is to meet at Turin on the 2d of April. Another decree appoints 32 new Senators. The King of Sardinia on Friday received at Milan a deputation of the clergy of that city, who presented an address to his Majesty. The King expressed his satisfaction with the sentiments expressed in the address, and added:—

"At the moment when political parties are endeavouring to disturb consciences under the pretence that the temporal power of the Pope is endangered, I am pleased to receive the expression of the sentiments of the Milanese, which are just and prudent. Worthy of their ancient reputation, the clergy agrees with me in acknowledging that it is of high importance that the spiritual authority should not interfere in political questions."

The Russian Ambassador at Turin has, in the name of his Government, represented to Count Cavour the heavy responsibility which would fall on Sardinia if, at the very moment when the European Powers are endeavouring to make the state of affairs less threatening, she were to take steps for the annexation of Central Italy to Piedmont. It is said that in consequence of these representations, and following the advice of France, all projects in reference to Central Italy are to be suspended for the present. The Tuscan Government, by a decree of the 20th ult., has appointed a commission for the purpose of a better distribution of all the revenues of the Roman Catholic Church in Tuscany among the secular clergy. The commission is instructed to send in a list, in August next, of all the priests whose revenue is less than 800fr. per annum. Advices from Rome state that an extraordinary commission of 10 Cardinals has been appointed to deliberate upon a reply to M. Thouvenel's despatch; and that they have unanimously decided that the preservation of the patrimony of the Pope is too intimately connected with the general interests of the Church to be treated simply as a political question. They also affirm that the Pope has received a communication from the King of Sardinia, demonstrating the impossibility of the retention of the Umbrian Marches by the Holy See, and proposing a treaty for their cession. The negative reply of his Holiness was couched in the strongest terms. The Pope declares himself ready to meet all emergencies. A decree of the Neapolitan Minister of War orders officers on leave to join their regiments on the 1st of March. Part of the Municipal Guards have been mobilised, and great agitation prevails in Palermo and in the Abruzzi.

Turkey.—A large fire broke out a few days since in the Asiatic town of the Dardanelles, and destroyed nearly the whole of the shipping quarter of the town. About 150 houses were burnt to the ground.

Servia.—A new Ministry has been formed at Belgrade as follows:—Minister of Justice, Philipovitz; Minister of the Interior, Tschoschitz; Director of the War Department, Schujevitz; Minister of Police, Stanisitz. Prince Milosch continues ill.

Montenegro.—A conspiracy against Prince Daniel has been discovered in Montenegro, the principal participators in which have received sentence of death.

India.—By the arrival of the Calcutta mail we have accounts from Calcutta to the 24th, and from Hong Kong to the 14th of January. The following are the details:—

Umballa.—Lords Canning and Clyde were to enter Umballa on the 16th January in state; the troops at the station turning out in full dress to receive their Excellencies. A grand durbar was to be held on the 18th, and a ball was to be given by the station to Lady Canning. The Viceroy will proceed with Sir Robert Montgomery to Peshawur by camel carriage dawk, and intended to be back at Lahore in the course of three weeks.

Lucknow.—The trial of Mummoo Khan, the Begum's paramour, has terminated in an acquittal. The trials of the other rebel chiefs are to take place in the vicinity where the deeds of bloodshed were perpetrated. Abid Khan, brother of Mummoo Khan, Mirza Feroze Buz Bahadoor, brother of the ex King of Delhi; Umrao Singh, Dabee Deen, Sheikh Sookhum, Gunga Singh, alias Lord Sahib, and Ramchurun, are all to be tried at Lucknow. Jwalla Pershaud, confidant of the Nana Sahib, and Bondee Singh, who was deeply concerned in the Cawnpore massacre, will be tried at Cawnpore; Ummeer Singh, brother of Koer Singh, and Bullee Singh, have been sent for trial to Goruckpore; while the Rajah of Hurraha, Ram Singh, will take his trial at Durriabad.

Delhi.—It is again stated that the Nana is not dead. Intelligence has been communicated to the Government that he was seen some time ago on the road to Bedsinath, disguised as a jogee or mendicant priest. It is also supposed that the other miscreants, Azeemoolla Khan, Bella Rao, &c., are also living. Feroze Shah is said to be in the jungles of Central India. The ex-Rajah of Mathowlie recently died at the Andamans.

China.—The Chinese Government, after opening the new ports of Swatow and Taiwan, has extended the provisions of the American treaty to the English and other treaty Powers. The question of tonnage dues has been settled by an edict from the Emperor, appointing 4 mace per ton as the rate to be levied on foreign vessels at all the open ports. This edict is in reply to Ho, the superintendent of trade at Shanghai, who, being pressed by Mr. Bruce on the subject, referred it to Pekin.

Japan.—The American Minister has obtained a pledge from the Japanese Government that the treaty of Jeddo shall be carried out in all its integrity, and certain special points have been agreed to which are advantageous for trade. It is expected that Mr. Alcock will secure for British subjects the same facilities.

Singapore.—His Netherlands Majesty's steamer Onrust, lying in a narrow creek about five days' steaming above Bangermassing on December 27, was attacked

by about 600 men in a great number of prahus, who suddenly made their appearance from the creeks, so that the crew had not time to fire more than one shot, when the assailants were in possession of the vessel. After murdering all on board, seven officers and 50 men, they ran the vessel aground.

CAPE OF GOOD HOPE.—Accounts from the Cape to the 20th Jan. state that the vine disease was spreading, and that there was not a vine-growing district free from the disease. The Lieutenant-Governor had appointed a commission to ascertain its real character and the extent of its ravages. The voluntary principle in ecclesiastical matters was making gradual but sure progress in the colony, and the laity were engaged in organising a general sustentation fund to supplement the present incomes of the clergy. Prætorius, Dictator of Transvaal, had also been elected President of the Orange State. It was believed that the Home Government would not sanction this union. News has been received of the Livingstone expedition to the Zambezi down to the 12th of December, when it was at the mouth of the Kongone. The party had all suffered from fever, but were recovering. The little steam-launch was useless.

UNITED STATES.—Accounts from New York to the 19th ult. state that the proceedings in Congress were not of much interest. The bill abolishing the franking privilege was passed in the Senate by the decisive vote of 54 to 2. In the House the measure had been referred to a select committee. A resolution has been adopted calling for a letter to the French Emperor on the subject of commercial relations and free trade. The Paraguay treaty had been confirmed by the Senate. Lord Lyons on the 16th ult. had a long interview with Secretary Cass in reference to the propositions of the English Government for the settlement of the San Juan affair. It is understood that he formally laid the proposition before the Secretary of State.

MEXICO.—The accounts from Mexico exhibit a frightful state of anarchy. Miramon left the capital for Vera Cruz on the 8th ult. with 5000 troops after levying a war loan of 200,000 dollars on property holders. He was expected to reach Vera Cruz on the 1st of March. The city had been declared in a state of siege, and was well fortified; and Miramon was without artillery. The entire foreign population of Chihuahua had been forced to quit the country. The Americans left a million dollars' worth of property behind. A desperate battle had been fought, in which the Liberals suffered a disastrous defeat.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Spain and Morocco.*—In answer to Lord CARNARVON, Lord WODEHOUSE said that the Government had received information from her Majesty's Ambassador at Madrid that Spain had demanded, as the bases of peace with the Emperor of Morocco, an extension of territory in Africa, a large indemnity for the expenses she had incurred in the war, the cession of a port on the Atlantic, the establishment of a Roman Catholic Bishop at Fez, and the admission of a diplomatic agent at the same place. *Sunday Evening Services in Theatres.*—Viscount DUNGANNON moved a resolution declaring that the performance of Divine service at Sadler's Wells and other theatres by clergymen of the Church of England on Sunday evenings, being highly irregular and inconsistent with order, are calculated to injure rather than to advance the progress of sound religious principles in the metropolis and throughout the country.—The Archbishop of CANTERBURY said that the services were not illegal, and that he could not see what steps their lordships could take to suppress them. It was, no doubt, contrary to the associations and feelings of their lordships that religious services should be performed in a theatre; but they must bear in mind that there were large masses of the population to whom the idea of entering a church was equally distasteful.—The Earl of SHAFTESBURY said that he was a member of the association for promoting these special services, and that theatres would not have been selected if any other building could have been procured. At present less than two per cent. of the working classes attended any place of worship whatever, and it was absolutely necessary to provide the remainder with religious instruction.—The Duke of MARLBOROUGH, and the Bishop of LLANDAFF opposed the motion, and Earl GRANVILLE advised Lord Dungannon to withdraw it.—The Bishop of LONDON said that the bishops had not interposed their authority to check the movement, because it was an experiment which might be productive of the greatest good to the ignorant masses of the population. The motion was ultimately withdrawn.—Lord EGERTON having presented a petition complaining of irregularities in the *celebration of Church services* at Enfield, the Bishop of LONDON said that he trusted these petitions would have the effect of necessitating the passing of a more stringent law for the regulation of such services.

MONDAY.—*Bleaching and Dyeing Works.*—Lord BROUGHAM called attention to the hardships suffered by women and children employed in bleaching and dyeing works, as shown by the evidence taken before a commission, and asked whether it was intended to extend the benefit of the Factory Act to such women and children.—Lord GRANVILLE said he would make inquiries on the subject.—Lord DUNGANNON, in presenting a petition from 700 women of Aylesbury, against legalising *Marriage with a Deceased Wife's Sister*, alluded to the universality of the feeling that such marriages were calculated to destroy the freedom of family intercourse, at present so happily established in this country.—Lord WODEHOUSE presented a similar petition from 428 women of Aylesbury, to a contrary effect, and expressed a hope that their lordships would not reject the measure about to be introduced to legalise such marriages.—The LORD CHANCELLOR expressed his satisfaction that the women had taken up this question, believing that it was strictly a woman's question, and that an immense majority of them were opposed to any alteration of the law.—The Earl of HARDWICKE called attention to the state of the *Naval Reserve*, and stated his opinion that the present number of this reserve was not sufficient for the defence of the country. He was sorry to see the little which had been as yet done to provide the country with an efficient reserve, and condemned the practice of allowing the Coast Guard service to be deteriorated by the indiscriminate admission of persons who had been engaged in the coasting trade.—The Duke of SOMERSET explained the steps which had been taken by the Admiralty to establish a supply of boys for the Navy by means of training-ships stationed at the naval and commercial ports, and to make the education given to them efficient for rendering them good and able sailors. One of the modifications of the present plan was to keep the boys at school on shore, instead of crowding them in a hulk, and thereby injuring their muscular development by excessive crowding, and to send them now and then to learn the duties of a sailor in brigs attached to the establishment. The Admiralty was only waiting for the passing of the Estimates to carry this scheme into effect. Great liberality had been lately shown to seamen; the quality of provisions supplied to them had been improved, their bedding and clothes were to be presented gratuitously, and several alterations had taken or were to take place in regard to the appointment of warrant and petty officers, and means were now under consideration for the quicker and more frequent payment of wages. The naval reserves at the present moment numbered between 11,000 and 12,000 men, and consisted of the Coast Guard, the Royal Naval Coast Volunteers, and reserve of last summer. The present enrolment of volunteers was only about 40 or 50 men a week, but he hoped that this number would be much increased when the suspicions engendered by the extreme liberality of Parliament were dissipated, and when seamen became thoroughly impressed with the knowledge that they would never be called out except in cases of absolute emergency.—Lord ELLENBOROUGH did not entertain great expectations of the value of the naval reserves sought to be established. The real reserve for the Navy was the body of seamen unemployed at all periods of the year. He congratulated the country on the successive efforts made by the Admiralty to improve the condition of the sailor, and thought the liberality of Parliament in this respect was most wise and worthy of the nation.

TUESDAY.—*Crime in Ireland.*—The Marquis of CLANRICARDE, in moving for returns of the number of offences reported to the police against the person in Ireland, and other returns relating to criminal matters, called attention to the impunity which attended crime in Ireland, and which was all the more extraordinary in the present improved state of society in that country. In the course of his speech he made some strong remarks on the inefficiency of the constabulary.—The Duke of SOMERSET assented to the motion, and said that the constabulary had shown itself a most invaluable force, and that its reduction would be a serious injury to the country. The real cause of the impunity of crime in Ireland was the unwillingness of witnesses to come forward.—Earl GREY and the Marquis of LONDONDERRY agreed that it was the unwillingness of the people generally to assist the course of justice which was at the bottom of the mischief.—The Duke of NEWCASTLE said he had no reason to believe that crime was on the increase in Ireland. The motion was agreed to. *Coolie Emigration.*—Lord HARRIS inquired whether a treaty had been signed authorising the French Government to appoint emigration agents in India, for the purpose of obtaining agricultural labourers for their colonies?—Lord WODEHOUSE said that the treaty was not yet signed, but was under the consideration of the Foreign and Indian departments. The utmost care would be taken to protect the coolie immigrants and their interests in the French colonies.—The Earl of DERBY said that the treaty in question had been commenced under the late Administration, and the Duke of NEWCASTLE stated that the French government had undertaken that the emigration of negroes from the coast of Africa should henceforth be abandoned. The *Probate and Administration Bill (India)* was read a second time, and the *Court of Chancery Bill* was read a third time.

THURSDAY.—*The Attorneys and Solicitors Bill* was read a first time on the motion of the LORD CHANCELLOR.—*The Probate and Administration (India) Bill* passed through committee.

FRIDAY.—*Savoy and Nice.*—Lord WODEHOUSE laid on the table the promised papers relating to Savoy and Nice. The *Yeomanry.*—In answer to the Earl of POWIS, Earl DE GREY said that there was no intention on the part of the Government to call out the yeomanry, but he could assure the House that there was no feeling of enmity towards the force, and no desire to take from them the support which they gave to the new volunteers.—The Earl of CORK was glad to hear there was no ill-feeling on the part of the Government towards the yeomanry.—The Earl of MALMESBURY regretted to hear that it was not intended to call out the yeomanry during the present year. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*Duty on Paper and Spirits.*—The CHANCELLOR of the EXCHEQUER said that a drawback would be allowed upon all paper in the hands of dealers made since the 1st of April, but that he intended to delay for a month or so the repeal of the duty on paper, which, on the resolution in the Budget, would take effect by the 1st of July next. The right hon. gentleman also stated in reference to the spirit duties that the duty upon foreign spirits, except rum, would be at the rate of 8*s.* 6*d.* per gallon—on rum, whether colonial or foreign, 8*s* 3*d.*, and upon British spirits 8*s.* 1*d.* A relief would be given to the manufacturers of British spirits, so as to enable them to compete fairly with the foreign distiller, of 2*d.* per gallon on raw spirits, and 3*d.* on potable spirits intended for exportation. *The Commercial Treaty.*—In answer to Sir H. WILLOUGHBY, Lord PALMERSTON said that he should propose the consideration of those articles which referred to the Customs in committee on the Customs Acts, and then bring the whole Treaty before the House by way of address to the Crown. In that address the House of Lords would, as a matter of course, be invited to join, so that it might be carried to the Throne as a joint address of both Houses.—The *Adjourned Debate* on Mr. Du Cane's motion was resumed by Mr. NEWDEGATE, who spoke in support of the motion, but admitted that his views upon protection had been considerably modified of late years. He could not, however, approve a financial scheme which he believed would give undue advantage to France and at the same time tend to curtail the very limited market that at present existed for female labour.—Mr. OSBORNE advocated the reduction of the wine duties, and pointed to the fact that, while the higher class of wines were taxed at the rate of 25 per cent., the duty on the lower wines, which alone the poor could hope to drink, were taxed at 250 per cent. He believed that if the duties were reduced the increased consumption would soon bring up the revenue to its former point, while a great step would be taken to improve the taste and promote the morals of the people.—Mr. F. BARING expressed himself not unfavourable to commercial treaties in cases where the principle of reciprocity was recognised, but contended that in the present case that principle had not been carried out. He could not approve of a budget which proposed to keep the income-tax at the high rate of 10*d.* in the pound, which maintained the war taxes on such prime necessaries of life as tea and sugar, and which consoled the toiling masses by recommending them to drown their cares in claret, to array themselves in French silks, and to follow the plough in kid gloves of Paris manufacture. He would vote for the motion, not to eject a Ministry, but to mark his sense of the danger of relying upon a system of voting away money while there was a deficiency in the Exchequer, and trusted to direct taxation to make it up.—Mr. M. GIBSON insisted that the Budget was framed in a spirit of liberality to all classes of the community, and that the agricultural interest would be largely benefitted by it. He hoped that in the course of time the treaty of commerce would be followed by a treaty of navigation also.—Mr. WALPOLE admitted that the main provisions of the Budget were right, and that he should be sorry to see them defeated; but he took exception both to the time in which many things were to be done, and as to the mode of doing them. He was in favour of the adoption of the treaty, although he was of opinion that Articles 3 and 11 would require careful consideration. With respect to the repeal of the paper duty he could not bring himself to the conclusion that so questionable a boon was not dearly purchased by an increase of one million in the income-tax.—The CHANCELLOR of the EXCHEQUER after noticing some of the topics discussed by Mr. Walpole and Mr. Baring, and an indignant allusion to a speech of Sir J. Pakington at a hop-grower's meeting, advising them to oppose the whole Budget, passed to the general issue before the House, and the motion as it stood. The Budget, he said, had been pronounced in that House ambitious, audacious, and a bold experiment upon the country, but Mr. Bright had given a different description of it. He had said truly that the Chancellor of the Exchequer could lay no claim to the merit of originality; he simply walked in the footsteps of those who had gone before him. What, he asked, was the motion? It declared that "it was not expedient to add to the existing deficiency by diminishing the ordinary revenue." Could this be reconciled with the treaty? In its terms it was aimed at the very life of the treaty. But much more than this. It was an opinion repudiating and condemning the mass of our commercial legislation for the last 18 years. He reviewed the financial operations of 1842, 1845, and 1853, and insisted that the plan which the Government proposed corresponded with those measures, referring to special circumstances further justifying this course, the effect of which would be to add to our resources, creating constantly growing funds by the remission of taxes. He admitted that it was impossible to expect a rapid return to a lower expenditure; but, being on a high level of expenditure, let us, he said, strengthen ourselves by pursuing the course which in former years had been found so efficacious. The stationary system of finance recommended by the motion would sacrifice the supply gained by past legislation, and provision must be made by new taxes. He was quite satisfied, he said, in conclusion, with the issue raised. If Parliament was to be reformed, the best security they could take was to show that they had done justice to all classes while the old system was in existence.—Mr. DISRAELI said that the Budget aimed at too much, and provided too little. The Chancellor of the Exchequer had estimated his deficiency at 9,400,000*l.*; it would be a moderate estimate to add a million more to the army expenditure on account of China; but, taking the deficiency at only 9,400,000*l.* for the next year, he would find wanting the 1,400,000*l.* for malt and hop credits, while 1,000,000*l.* would be required for Exchequer Bonds. It was because Mr. Gladstone's plan was not like those he had cited that the motion called upon the House to interpose and express an opinion upon his proposition. With respect to the treaty, he and his party had no prejudices against a commercial treaty with France; on the contrary, if the position of affairs permitted, nothing could be more desirable. But his objection to this treaty was that it was drawn with a want of forethought, of knowledge of the circumstances with which the negotiator had to deal, and that by the treaty the deficiency under which we were suffering would be largely increased, to the extent of 500,000*l.* beyond the amount at which Mr. Gladstone had calculated his loss. He exposed what he characterised as the great failures of the famous budget of 1853, which he connected with that of 1860, and asked why, after these conspicuous failures, the House should put confidence in a wild and improvident project of the same financier. Adverting to the state of affairs in Italy, he put it to the House whether this was not a moment when we ought to husband our resources, instead of sacrificing portions of our ordinary revenue.—Lord PALMERSTON said he was not going to discuss the extraneous topics introduced by Mr. Disraeli. He recalled the House to the subject before it—a resolution which, in a short compass, was one of the most important ever submitted to it. The motion involved two questions—our commercial relations with a foreign country and the development of our national resources at home; it asked the House to reject summarily and by anticipation the treaty and the Budget. If we were to face a large expenditure, we ought to do all we could to increase our resources; and the two measures were directed to that object, while they would spread over the other countries of Europe the sound principles of commercial intercourse. The House then divided, when the motion was negatived by 339 to 223. The remaining business having been disposed of, the House adjourned at half-past 2 o'clock to Monday.

MONDAY.—The *Commercial Treaty.*—In reply to Mr. BENTINCK, Lord J. RUSSELL said he had not thought it expedient, until the question of the treaty with France had been finally adjusted, to instruct Mr. Buchanan to urge upon the Government of Spain the propriety of making a concession similar to that to be made by France in favour of the trade and commerce of England.—Mr. HORSMAN asked whether it was true that a communication had been received from the French Government to the effect that they were not disposed to insist upon the 11th article of the treaty with respect to coal.—Lord J. RUSSELL said that the French Government had made a representation that if a strong desire was shown not to agree to the 11th article of the treaty the French Government were prepared to modify it. To this communication her Majesty's Government had given a very positive answer, that they neither wished nor proposed to make any alteration in the 11th article of the treaty. *The Beer Trade.*—Sir C. BURRELL inquired whether under the new licensing system, grocers would be allowed to sell beer.—The CHANCELLOR of the EXCHEQUER replied that it was not intended that the new licenses should be taken out for anything but wine. No change was proposed with reference to beer licenses. *The Wine Duties.*—The House having resolved itself into a Committee on the Customs Acts, the CHANCELLOR of the EXCHEQUER moved his resolution on the wine duties. He divided the resolution into two parts—the one having reference to the duties to be levied until the first of January next; the other referring to the duties to be levied afterwards. He proposed that during the present year the wine duties should be fixed at 3*s.* a gallon, and that after the beginning of next year, the duties should be 1*s.*, 1*s.* 6*d.*, and 2*s* per gallon, according to the alcoholic test. The ordinary light French wines would thus come in at the 1*s.* duty; the lighter Spanish and Portuguese wines at the 1*s.* 6*d.* duty; and the stronger Spanish and Portuguese wines, and those of the South of France, at the 2*s.* duty. The lower duty, he observed, would apply to all those wines which travellers were in the habit of drinking with sufficient relish on the Continent. Various reasons had induced the Government to depart from the simple method of one uniform duty upon wine, and had compelled them to propose a varying scale of duties. A uniform rate of 1*s.* per gallon would have occasioned an enormous fiscal sacrifice; but there was a much more serious reason—namely, the relation between the duty upon wine and the duty upon spirits, and hence it became necessary to adopt what was termed the alcoholic test. It had been objected that an undue preference would be given to wine; but his answer was that, although the proof spirit contained in wine was an essential element, it was not the only element in wine. There was a considerable quantity of spirit contained in beer. The competition between wine and spirits was indirect. Therefore, while the Government were obliged to keep down the duty on the weaker wines to 1*s.*, they were compelled by

fiscal considerations which they could not overlook to place a higher duty, but as low as they dared, upon wines containing a higher degree of alcohol. Then, if they were forced to have a varying scale of duty, they had next to consider on what principle to frame it. In some cases the *ad valorem* principle had been adopted, but no Minister of Finance would, he thought, undertake the responsibility of administering the law under a principle which offered so strong a temptation to fraud, with such weak and imperfect means of defeating it. The proposed scale by the alcoholic test, however, had some reference to value, and the system of classification had been resorted to in the case of sugars; but the test in the case of wine was a more certain one, and there was no fear of fraud. There was another important point connected with this charge,—namely, the drawback on wines. As a general principle, in his opinion, nothing could be worse than the allowing of drawbacks upon articles subject to Customs duties (Excise duties being of a different character); and although on general grounds there was no reason whatever for allowing a drawback on stocks of wine, yet it happened that there were specific and partial arrangements under which a claim might be put forward on the ground of good faith. He therefore proposed to allow drawback to all holders of wine who had complied with the Treasury minute of 1843.—Mr. Baillie asked for more explicit information as to the mode in which it was proposed to supply the deficiency of revenue.—Mr. Crawford believed that the alcoholic test would fail, and suggested practical difficulties in the way of its application.—Mr. Bentinck said the Chancellor of the Exchequer was not only about to reduce the revenue without showing how the deficiency was to be made up, but to take taxes off the luxuries of the higher classes without attempting to deal with those affecting the labouring poor.—Mr. Crossley contended that the working classes would be benefited by every measure which increased the demand for our goods, and consequently for their labour.—Sir E. Grogan advocated one uniform rate of duty upon wines.—Sir S. Northcote and Mr. Wood spoke in favour of a drawback.—Mr. M. Milnes thought the alcoholic test the very worst that could be chosen, and that a fixed duty must be eventually come to. He suggested an amendment of the resolution in relation to drawbacks.—Mr. Cayley complained that in the correspondence in relation to the treaty, no mention had been made of beer, and that injustice had been done to the growers of barley and manufacturers of malt.—Mr. Dodson thought that a reduction of the duties on French wines should have been met by a corresponding reduction of the duty on British beer imported into France.—Mr. Ball and Mr. Bass expressed a similar opinion.—The Chancellor of the Exchequer said that the remission of duty on English beer admitted into France had been urged during the negotiations, but it was at once declared on the part of France that this proposal could not be entertained. If they had insisted on this point they would have decidedly broken down. For, in fact, while we now levy 100 per cent. on the cheaper French wines, and should continue to levy under the new tariff from 25 to 40 per cent, the duty levied by France on English beer was not more than 16 per cent.—Mr. Milnes moved as an amendment an addition to the resolution granting allowance to all wine merchants who should be able to prove that they had purchased stock within two years preceding the 10th of February last, contending that this was but an act of justice to those persons.—Mr. Gladstone said that what Mr Milnes called justice amounted to this—that when a compact was made between two parties those who had not observed that contract were to be treated precisely as those who had. The cost to the Treasury would be 600,000*l.* for the drawback on wine, but it would not end there. They must apply the same rule to timber, to silk, and to a multitude of other articles affected by the Budget. On a division the amendment was rejected by 183 to 72. The first part of the resolution fixing the duty at 3*s.* was then agreed to; in the remaining part the Chancellor of the Exchequer substituted the "1st of January" instead of the "1st of April," 1861, for the date on and after which the scale of duties according to strength should take effect; and substituted 18 for 15 degrees, as the rate of proof spirit at which the scale should begin.—Mr. S. Fitzgerald urged objections to the scale of discriminating duties upon wine and said the alteration proposed would give the wines of France an advantage over those of Spain and Portugal.—Sir S. Northcote and Mr. T. Baring concurred in this view, and the latter advocated one uniform duty.—The Chancellor of the Exchequer reiterated his arguments in favour of a varying scale, and said that the effect of the alteration would be to give a large measure of advantage to the wines of Germany, and not to those of France. After some further discussion, the resolution was agreed to, and the Chairman was ordered to report progress. The *Administering of Poison Bill*, the *Packet Service (Transfer of Contracts) Bill*, and the *Medical Acts Amendment Bill* were read a second time.—Mr. Corbett obtained leave to bring in a Bill to amend the law relating to the *Office of Coroner*, and to provide for the payment of coroners by salary.

Tuesday.—*Annexation of Savoy and Nice.*—Mr. Kinglake called attention to the rumours of a proposal to annex Savoy and Nice to the empire of France, in order, he said, to obtain an expression of the opinion of the House upon that proposal, and which, he believed, would be unanimous. He read a communication which he had received from Paris last autumn, and extracts from French papers suggesting grounds for the transfer—grounds which, he remarked, would have an extensive and dangerous application. By the treaties of 1815 the northern portion of Savoy (Chablais and Faucigny) was declared to participate in the neutrality of Switzerland; but if it became a part of France, what, he asked, would become of this guarantee, and of the integrity of Switzerland, which would be jammed in between two departments of France? This annexation would have an embarrassing effect upon our own freedom of action, and would unsettle the political relations of Europe. He referred to the repeated declarations on the part of the Government of France, prior to the recent war in Italy, that the Emperor was actuated by no motive of personal ambition or desire of conquest. At the same time he had, he said, received in January of last year, a communication (which he had imparted to the British Government) stating that on the evening before the marriage of Prince Napoleon to the Princess Clotilde, a secret arrangement, called a *pacte de famille*, had been entered into between France and Sardinia for the cession of Savoy to France, although Count Walewski had assured Lord Cowley that no "treaty" whatever existed with that view. He had no doubt that an arrangement had been come to under which, in exchange for Lombardy, the Emperor of the French should possess Savoy and Nice; but, as all Lombardy had not been conquered, the contingency had failed. He protested strongly against the annexation of the two provinces, which, if carried into effect, would, in his opinion, be an open violation of treaties. He concluded by moving an address for copies of the correspondence between her Majesty's Government and the Governments of the Emperor of the French and the King of Sardinia in respect to the proposal.—Sir R. Peel, in seconding the motion, observed that this matter affected the whole Italian question, and was of such vital importance that it involved the interests of all Europe; the proposal in question being the first attempt to alter the basis of the territorial arrangements of 1815, the inroad must be checked with a vigorous hand. There was a stern and determined resolution on the part of the Savoyards to resist their transfer to France, the national feeling being, he knew, absolutely antagonistic to the connection; it would be in direct contravention of the Act of Congress of the 20th of November, 1815, and would affect at once the neutrality of Switzerland and of Savoy. And he believed that the feelings of the Italians when they found they had acquired liberty by the sacrifice of the freedom of other countries would be feelings of the deepest regret and grief.—Sir G. Grey did not dissent from the sentiments expressed by the mover and seconder of the motion. The question, he observed, had justly claimed a large share of public attention, and was worthy of the consideration of the House, which might rightly demand the fullest information as to the course taken by the Government. They were therefore ready to assent to the motion, and were prepared to lay the papers upon the table. He joined with Mr. Kinglake and Sir R. Peel in deprecating the annexation of Savoy to France, the consequence of which, he agreed, might unsettle Europe.—Mr. Disraeli thought it would be more convenient to defer the discussion until the papers were before the House, and should, therefore, refrain from expressing any opinion upon the merits of the question.—After some remarks by Mr. Milnes, Mr. Bowyer, and Mr. Warre, Lord J. Russell said that the Government had no diplomatic information respecting the family compact referred to, and the fact of any treaty prior to the war had been repeatedly denied by both the Governments of France and Sardinia. With regard to the annexation of Savoy, he could not but think that it was a course of policy which the Emperor of the French would hesitate long before he adopted, because it would produce distrust, and be in contradiction with the magnificent proclamation he had issued; because encroachments once begun would be deemed the precursor of others, and excite apprehension; and, finally, because it could not tend to strengthen France, whose security depended upon her own resources, upon the ungovernable spirit of independence and the warlike qualities of her people. The extension of her frontiers had never been a source of power to France, and was not a right or secure policy for her to adopt. The motion was then agreed to. *The Serpentine.*—On the motion of Mr. Cowper, a select committee was appointed to consider the means of effectually cleansing the Serpentine.—*The Municipal Corporation Mortgages, &c., Bill* was committed *pro formâ*. *Wine Duties.*—The Report of the Customs Acts was brought up and agreed to, with an amendment substituting in the resolution on the wine duties the "31st of December, 1860," for the "31st of March, 1861." *The Tariff.*—The House having resolved itself into a Committee on the Customs Acts, the Chancellor of the Exchequer explained the object and purport of an additional article of the Treaty, which, he said, provided for the case of commodities imported from abroad which were liable to Excise duties in England. There would, therefore, be a change in the duties on spirits, which he would explain when that resolution came before the Committee. He then moved the fourth resolution repealing the duties of Customs under the Treaty upon certain articles imported. Upon the first article, "agates or cornelians, set," a long discussion arose regarding the construction and interpretation of the Treaty, its principle, and its fairness and equity as a mutual contract and engagement.—On the next article, "apples, raw," Mr. Bentinck complained that small landed proprietors had been completely ignored in the repeal of the duty upon this article.—On the article "Corks, ready made, and squared for rounding," Mr. T. Duncombe moved and Sir F. Baring seconded an amendment to add the words "the produce of countries from which the export of cork wood is free." On a division, after a long and sharp debate, the amendment was negatived by 191 to 118.—An amendment moved by the Chancellor of the Exchequer, to insert the words, "the produce or manufacture of, or imported from France or Algeria," was agreed to.—The Chairman was then ordered to report progress.—The *Oxford University Bill* and the *Administering of Poison Bill* passed through committee.

Wednesday.—*Spirit Duties.*—The standing orders were suspended to enable the Chancellor of the Exchequer, in Committee of Ways and Means, to propose a resolution to the effect that, in addition to the duty now payable on spirits distilled in the United Kingdom, there should be charged on every gallon of such spirits at proof, which, on or after the 10th of February, should be distilled or be in the stock of any distiller, or in any duty-free warehouse, or removing to such warehouse, the additional duty of 1*d.* The resolution was agreed to. The *Qualification for Offices Abolition Bill* was read a second time.—Mr. Mackinnon moved the second reading of the *Masters and Operatives Bill*, the object of which, he said, was to establish councils of conciliation for the amicable settlement of disputes between masters and workmen.—Sir G. Lewis opposed the Bill, on the ground that its machinery was so imperfect that, if passed into law, it could not realise the expectations of the promoters.—After some discussion, Sir M. Peto suggested that the second reading should be postponed and the Bill referred to a select committee.—Mr. Mackinnon accepted the suggestion, and the second reading was postponed for a month, on the understanding that at the expiration of that period the Bill would be referred to a select committee. The House then went into committee on the *Adulteration of Food and Drink Bill*. The consideration of the first clause occupied some hours, and a number of verbal amendments having been agreed to, the committee divided on the question that the clause as amended stand part of the Bill, which was affirmed by 116 to 25. The *Spirits (Ireland) Act Amendment Bill* was read a second time. The *Administering Poisons Bill* was read a third time and passed.—Mr. Danby Seymour obtained leave to bring in a Bill to enforce uniformity in the use of *Ecclesiastical Vestments* by priests and deacons of the United Church of England and Ireland.

Thursday.—*Russia and Austria.*—Lord J. Russell, in reply to Mr. Stewart, said that Count Rechberg, the Austrian Foreign Minister, had positively assured her Majesty's Ambassador at Vienna that no treaty offensive or defensive had been entered into between Austria and Russia. *Income Tax.*—Mr. Garnett gave notice that in committee of ways and means, he will move that the decreased scale of income-tax should be extended to incomes between 150*l.* and 500*l.* a year. *The Reform Bill.*—Lord John Russell, in a very crowded House, moved for leave to bring in a Bill further to amend the laws relating to the representation of the people. He disclaimed the wish to introduce a new constitution, and denied that he had any intention of interfering with the ancient and glorious constitution of the country, under which a spirit of loyalty had been fostered which exhibited the desire of the people to extend rather than to destroy it. He proposed to add to the county franchise an occupation franchise of 10*l* a year, and to take sufficient security that the franchise should be a *bonâ fide* one. With this view no right to vote would be given in respect of any land or holding apart from a dwelling-house which should not have some building erected upon it of the value of 5*l* a year. With regard to lowering the borough franchise, it had been said that when he introduced the measure of 1832 he had framed it so as to exclude the working classes. This was not the fact, although the tendency of the Bill had been to throw a share of political power into the hands of the middle classes. But he owned that it was a great evil to exclude the masses of the working classes from a voice in the return of members to serve in Parliament. He was of opinion that they ought not to wait for agitation to remedy this admitted evil; they ought not to wait for the blaze of Nottingham or Bristol, but rather in quiet and tranquil times to make those changes which the increased intelligence and growing wealth and population of the country demanded. The Government were of opinion, on the whole, that it would be better to make the proposition as simple as possible, and not to introduce what had been termed "fancy franchises," hitherto unknown to the constitution. The total number of electors on the register at the last election was 440,770, but from these 30,705 were to be deducted for what was called "scot and lot" franchises. If, then, the franchise in cities and boroughs were reduced from a 10*l.* rating to a 7*l.* rating the increased number of persons who would be put upon the register would not be more than about 120,000. But taking the rating at 6*l.*, the total number of voters in the cities and boroughs of England and Wales would be 604,240, making an addition of 194,199, and raising the whole number to 634,969. Such was the franchise which it was proposed to create under the present Bill. Having reviewed the Reform Bill introduced by Mr. Disraeli in the first session of 1859, he said that the Government did not intend to adopt the principle of total disfranchisement, or to dispute the importance of allowing small places to return members to Parliament. They proposed, in the manner suggested by the late Government, to take one member each from the following 15 boroughs now returning two members, viz.: Honiton, Thetford, Totness, Harwich, Evesham, Wells, Richmond, Marlborough, Lymington, Leominster, Ludlow, Andover, Knaresborough, Tewkesbury, and Maldon. They also proposed to take a wider range, and estimating the population at 7000 instead of 6000 as proposed by Mr. Disraeli, to take, in addition to the above 15, a member from Ripon, Cirencester, Huntingdon, Chippenham, Bodmin, Dorchester, Marlow, Devizes, Hertford, and Guildford. This would leave 25 seats to be otherwise disposed of. They also proposed that two additional members should be given to the West Riding of Yorkshire, and one additional member to South Lancashire, North Lancashire, Middlesex, West Kent, South Devon, South Staffordshire, the North Riding of Yorkshire, the Lindsay district of Lincolnshire, South Essex, East Somersetshire, West Norfolk, West Cornwall, and North Essex. Four new boroughs would be created under the Bill, namely, Kensington and Chelsea as one borough, to return two members; and Birkenhead, Staley Bridge, and Burnley to return one member each. Four boroughs now returning two members would each receive an additional member, namely, Manchester, Liverpool, Birmingham, and Leeds. The Government had considered the proposition that in cases where three members were returned one should be given to the minority, and they were prepared to recommend that such should be the apportionment. They also proposed that, as the graduates of the Universities of Oxford and Cambridge enjoyed the privilege of the franchise, a member should be given to the University of London. His lordship concluded by expressing a hope that the measure the outline of which he had sketched would meet with a favourable reception from Parliament and the country.—Mr. Walpole said that the more he reflected the more he was convinced that the old distinction between counties and boroughs ought to be maintained to a greater extent.—Mr. T. Duncombe expressed great disappointment at the Bill, especially because it did not include the lodger franchise.—Mr. Ayrton, Mr. Williams, and other members took objection to the limited character of the measure. Leave was then given to bring in the Bill, the second reading being fixed for the 19th inst.—Mr. Cardwell next moved for leave to bring in the *Reform Bill for Ireland*, which reduced the qualification in counties from 12*l.* to 10*l.*, and the franchise in boroughs from 8*l.* to 6*l.* It also proposed to give an additional member to the city of Dublin and the county of Cork. The seats to be thus allotted would be taken from the four English seats which had been suspended by Act of Parliament. It was not intended to give any member to the Queen's University in Ireland, as the number of graduates was not as yet sufficient to entitle it to that distinction; but it was contemplated to remove the disqualification by which Irish peers were now precluded from representing counties or boroughs in Ireland, although entitled to sit for places in England and Scotland.—Mr. MacEvoy, Mr. Monsell, Colonel Dickson, Mr. Maguire, and other Irish members, protested against the proposition to admit Irish peers, the latter declaring the proposition to be revolutionary.—Leave having been given to bring in the Bill, the Lord Advocate moved for leave to bring in the *Reform Bill for Scotland*, which proposed to give one of the two remaining suspended English seats to Glasgow, and the other to the four universities. It also proposed to fix the occupation franchise in counties at 10*l.*, the borough franchise at 6*l.*, and the feudal franchise at 5*l.*; to simplify the system of registration, abolish the registration courts, and take the valuation rolls as the basis of the franchise.—After a long and desultory conversation leave was given to bring in the Bill. The three Bills were subsequently brought in and read a first time.—On the motion of Mr. Mackinnon, a Committee was appointed to consider the subject of *Disputes between Masters and Workmen.*—Mr. Cowper moved to nominate the *Select Committee on the Serpentine*.—Mr. Knightley moved to omit from the Committee the names of Sir J. Shelley and Lord Fermoy, on the ground that they were metropolitan members. On a division, the House decided by 122 to 36 that the names should be retained. *The Commercial Treaty.*—The House then went into Committee on the Customs' Acts, and the schedule of articles to be admitted duty free under the treaty with France was agreed to from "cotton manufactures" to "quinine," included."—On the question that "silk, millinery, or manufactures of silk, or of silk and any other material, as denominated in the tariff," be admitted free of duty, Sir J. Paxton moved a resolution that it was inexpedient to reduce these duties unless our silk manufactures were admitted into France on equal terms; but the resolution was inadmissible in point of form.—Mr. Newdegate declared that the weavers of Coventry were to be sacrificed to foreign political arrangements.—Mr. Bright remarked that protection not only enfeebled the arts, but the minds and reasoning power of the manufacturer.—Mr. Ayrton inveighed against the cruelty of consigning to misery the classes who subsist upon our silk manufacture, which was charged with a prohibitory duty in France.—The Chancellor of the Exchequer, in answer to Mr. Newdegate and Mr. Ayrton, said that the House found itself carried back to regions and principles which were good for the total destruction of what had been done for the last 20 years. He appealed to the vast improvement in our silk manufacture since the application to it of the principles of free trade as a sufficient refutation of their arguments.—Sir John Pakington opposed the clause and said that he could not consent to give up 300,000*l.* of revenue at such a moment as the present.—Mr. Ball moved that the chairman report progress, but the motion was negatived by 233 to 28.—The Committee then divided upon an endment, moved by Sir J. Paxton, to add the words "being the manufactures of, and imported directly from, any country which shall permit the free importation of the silk manufactures of the United Kingdom."—The amendment was negatived by 190 to 68, and the resolution was agreed to. The chairman then reported progress.

Friday.—*Savoy and Nice.*—Lord J. Russell laid upon the table the correspondence relative to the annexation of Savoy with France. In answer to Sir H. Verney, Lord J. Russell read an extract from the Emperor's Speech, and said that the Emperor had previously declared that he did not mean to proceed to any such annexation without consulting the great Powers. If the opinion was general and unanimous among the great Powers that France did not require such annexation, and that it would create alarm and disquiet to Europe, he should infer that France would not proceed to such annexation; but if the great Powers thought it was a fair proposition the

annexation would probably take place. *The Franklin Expedition.*—In answer to Sir F. BARING, Lord PALMERSTON said that a reward of 10,000*l.* had been awarded to Dr. Ray's expedition, so that there was no fund at present applicable to Capt. M'Clintock and his crew. He considered that a monument should be erected to the memory of Sir John Franklin, and he had no doubt it would be highly gratifying to Lady Franklin if Parliament would sanction such a proceeding.—Mr. DISRAELI quite concurred with the view taken by the noble lord.—Sir J. PAKINGTON also congratulated his lordship upon the view he had taken of the case.

[Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅝ to ¾ both for Money and the 8th inst.; Bank Stock, 230½ to 229; Three per Cents. Reduced, 95⅛ to 94⅞; New Three per Cents., 95 to 95⅛; India Stock, 218½; Indian Five per Cent. Stock of 1859, 104¼ to 104; Five per Cent. enfaced Rupee paper, 97⅞ to 98⅛; India Bonds at par; Exchequer Bills, 23*s.* to 26*s.* pm.—FOREIGN: Brazilian Old Five per Cents. for Acct., 103; Peruvian Four and a Half per Cents., for Acct., 93, ex div.; Russian Four and a Half per Cents., 98; Spanish New Deferred Three per Cents., for Acct., 33⅜; Ditto Passive, 12⅛; Turkish Six per Cents., 1854, for Acct., 79¾; Ditto for 1858 for Acct., 62¼ to 62½ ex div.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,952,700	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	14,477,700
		Silver Bullion	
	£28,952,700		£28,952,700

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£10,171,190
Rest	3,680,876	Other Securities	21,164,840
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,613,442	Notes	8,307,390
		Gold and Silver Coin ..	693,321
Other Deposits..	13,787,883		
Seven day and other bills	701,540		
	£40,336,741		£40,336,741

1st day of March, 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. BRIGNALL, Manchester, Dyer—D. CAHN, 3, Leadenhall Street, City, Merchant—T. CLARK, Bradford, Yorkshire, Paper and Rag Merchant—H. CLEMERSON, Loughborough, Leicestershire, Ironmonger and Brazier—J. A. CRANE, 7, King Street, Cheapside, City, Merchant—J. HERD, Liverpool, Corn Merchant—J. LANE, 3, Kingsland Place, Kingsland Road, Middlesex, and 29, Threadneedle Street, City, Mining Share Broker, Dealer in Shares, and Commission Agent—J. MINTON, junior, 109, New Bond Street, Middlesex, Manufacturer of Materials for Wax Flowers and Dealer in Alabaster Articles and Glass Shades—W. MILLER, Brookland, Kent, Grocer and Draper—F. NEWSTEAD, Magpie and Horse Shoe Tavern, 1, Bedford Street, Bedford Row, Holborn, Licensed Victualler—J. ROGERS, North Shields, Northumberland, Draper—J. SLATER, Small Heath, Birmingham, Retail Brewer.

BANKRUPTCY ANNULLED—T. GLENNIE, 32, Harley Street, Cavendish Square, Boarding-House Keeper.

SCOTCH SEQUESTRATIONS—W. ALLISON, Bishopton, Renfrewshire, Joiner and Cartwright—G. HART, Glasgow, Auctioneer and Commission Merchant—J. LAING, Edinburgh, Horse Dealer, Postmaster, and Auctioneer—R. SMYTH, Lisburn, Brewer—A. STEWART, Tarbert, Argyleshire, House Carpenter and Farmer—J. TURNBULL, Glasgow, Tinplate—R. WALKER, Hamilton, Lanarkshire, Innkeeper and Coach Proprietor.

FRIDAY—BANKRUPTS—J. G. BEDELLS, Brewood, Chemist—J. BERGER, Great Tower Street, Broker—J. BLACKMORE, Wellington, Somersetshire, Builder—J. CHATWIN, Birmingham, Gas Fitter—G. CLARK, Ashford, Builder—W. C. GILL, Manchester, Money Scrivener—H. HOBBS, Wooburn, Buckinghamshire, Brewer—T. HOLGATE, Bradford, Grocer—A. JACOBSON, Clerkenwell, Jeweller—H. F. KEMP and W. SKEY, Louth, Lincolnshire, Distillers—J. LOWE, Cheltenham, Printer and Publisher—J. MINTORN, jun., 109, New Bond Street, Manufacturer.

SCOTCH SEQUESTRATIONS—J. CRAWFORD, Saltcoats, Ayrshire, Shipowner—J. DARLING, Dunfermline, Manufacturer—A. ORR, Dumfries, Watchmaker.

Metropolis and its Vicinity.

INTERNATIONAL EXHIBITION OF 1862.—At the council meeting of the Society of Arts, on the 23d ult., the guarantee deed for raising a sum of not less than 250,000*l.* on behalf of the Exhibition of 1862 was approved, and the following were named as the trustees of the fund:—Earl Granville, K.G., the Lord President of the Council, the Marquis of Chandos, chairman of the London and North-Western Railway, Mr. Thomas Baring, M.P., and Mr. Wentworth Dilke, commissioners of the Exhibition of 1851; and Mr. Thomas Fairbairn, chairman of the executive committee of the Manchester Art-Treasures Exhibition. On Tuesday a deputation from the Council of the Society had an interview with the Prince Consort at Buckingham Palace, to communicate to his Royal Highness the steps which had been taken by the Council, and to submit to him the draught of the trust deed.

TELEGRAPHIC COMMUNICATION WITH INDIA.—The following message has been received at the office of the Red Sea Telegraph:—"We arrived off Maculla this day, and are about making the splice, which will complete telegraphic communication between Alexandria and India. All well on board the Imperatrice. The submarine cable has been successfully laid, and Alexandria is in telegraphic communication with the capital of her Majesty's Indian possessions." A subsequent despatch reports an interruption between Suakin and Aden (on the Red Sea line), which prevents the establishment of a complete communication between Alexandria and India for the present.

PURIFICATION OF THE SERPENTINE.—A deputation headed by Sir John Shelley, M.P., and Sir M. Farquhar, M.P., had an interview on Saturday with the Right Hon. W. Cowper, the new Chief Commissioner of Woods and Forests to call his attention to the bad condition of the Serpentine, and to the inadequacy of Mr. Hawksley's scheme to meet the evils complained of. The Chief Commissioner in reply admitted that Mr. Hawksley's plan did but meet one portion of the difficulty; and was at best but an insufficient scheme. It was quite the duty of the House of Commons to see into the matter, especially when dealing with a park which was one of the greatest ornaments of the metropolis. As to himself, he had no responsibility for that which had been done, yet still he did not think it a good plan, nor should he have ever thought of adopting such a plan; but his hands were tied and he feared there would be some difficulty in stopping the works now in progress. It will be seen from our Parliamentary report that Mr. Cowper has since obtained the appointment of a Select Committee of the House of Commons to inquire into the best method of bringing the Serpentine into a wholesome and safe condition.

PRESENTATION OF THE FREEDOM OF THE CITY TO LORD ELGIN.—On Thursday a Special Court of Common Council was held, at which the freedom of the City was presented with great ceremony to the Earl of Elgin for the important services rendered by him to this country and its commerce in Canada, China, and Japan. The freedom was presented in a gold box of the value of 100 guineas. Lord Elgin acknowledged the compliment in a speech of some length, in which he expressed his conviction that the treaty of Tien-tsin, in spite of the late events at the mouth of the Peiho river, will at no distant period be the forerunner of a peaceful and prosperous trade with that empire of 400,000,000 people.

THE ATLANTIC TELEGRAPH.—At a meeting of the Atlantic Telegraph Company on Wednesday the report of the directors stated that the endeavours made some months back to raise the necessary additional capital had resulted only in subscriptions to the amount of 72,000*l.* The Board however were disposed to defray from their own means the expenses of keeping the company in existence for a further period. A committee was constituted by the Board of Trade some time back to report on deep sea telegraphs, and the conclusions arrived at will shortly be laid before Parliament. The chairman and officers of the Atlantic Company were among its members, and had come to the conclusion that the information acquired was such as to demonstrate that works of this character were "much easier of accomplishment than the most sanguine have hitherto supposed them to be." The Board had likewise been encouraged by these investigations to attempt the recovery of the old cable and its restoration to working order. For this purpose 20,000*l.* would be required, but a considerable portion of this amount would be repaid by the sale of the cable which might be picked up. It was accordingly proposed to offer the 20*l.* shares remaining unissued, giving to the subscribers a lien on the proceeds of all the cable that might be saved, and the privilege in case of success of receiving gratuitously another 20*l.* share fully paid up. The balance-sheet of the company showed the funds in hand to be only 393*l.* The total expenditure had been 166,685*l.* The report was unanimously adopted, and resolutions were passed authorising the directors to raise 20,000*l.* on shares of 20*l.* each, with the view of bringing the existing cable again into working order or to recover as much of the submerged cable as possible.

OPENING OF NEW WESTMINSTER BRIDGE.—The first half of the new bridge was opened on Thursday afternoon to foot passengers, and yesterday morning it was opened for carriage traffic. There was no public ceremony on the occasion.

CHURCH RATES.—A deputation of laymen, headed by Lord John Manners and 16 members of Parliament, had an interview with Lord Palmerston on Friday to urge her Majesty's Government to re-consider their determination not to introduce a measure for the settlement of the law of church-rates during the present session. Lord John Manners explained the views of the deputation at length to Lord Palmerston, who stated in reply that the subject should receive the attention of the Government.

DESTRUCTIVE GALE.—At an early hour on Monday morning a violent gale of wind broke over the metropolis and suburbs and continued for several hours, causing serious injury to several persons, and a considerable amount of damage to the shipping in the river. The gale in some measure subsided during the night, but sprung up again on Tuesday morning, and continued with little intermission during the whole day. Several lives were lost chiefly by people being blown into the river and canals, houses and warehouses were unrooted, chimney stacks blown down, and trees and shrubs uprooted, particularly in the more exposed suburbs. On the lines of railway the telegraph posts were in many cases blown down, and the trains were considerably delayed. Several collisions took place on the river, but less damage was done to the shipping than might have been expected. The gale raged nowhere with greater fury or more sustained intensity than on the heights of Norwood. It was the severest trial which the Crystal Palace has yet undergone, but, beyond a few loose squares of glass which were blown out of the flat roofs, no material damage was done to any part of the building. The storm was also severely felt in the provinces, and much damage is reported from Portsmouth, Derby, Leicester, Nottingham, Birmingham, Stockport, and other towns.

LOSS OF TWO OTHER STEAMERS.—The Cork steamship Company's iron Steamer Nimrod, of 700 tons and 300 horse-power, was totally lost with the whole of her crew and passengers on Tuesday morning, on St. David's Head, on her passage from Liverpool to Cork. She had a crew of about 20 persons, 5 cabin, and 12 deck passengers. Among the cabin passengers was a son of Mr. Gould, of Cork, a director of the company, and Mrs. Wigham, wife of the captain of a vessel, about to join her husband at Queenstown. Of the deck passengers six were soldiers; the others were unknown. As soon as the ship struck, she parted in three compartments in sight of the people on the shore, who were unable to render any assistance, on account of the violence of the storm. Among the persons seen on deck, whose cries are described as heart-rending, was a female with four little children, who were clinging to her when last observed. Three of the unfortunate persons on board each took to a life-buoy and jumped into the sea. Two of them were seen to sink very soon; the other was assisted by some spars and kept on the water for about an hour, but ultimately perished. An attempt was made to throw a rope ashore, but to no purpose, as the sea was running so high. With the exception of the three sufferers who took to the life-buoys, all on board disappeared with the vessel. The Pomona, screw-steamer, Captain Penn, master, from Odessa for London, laden with wheat, foundered on the 23d ult., during a heavy gale of wind, the day after she left Malta. The passengers and 11 of the crew were saved; the remainder, 14 in number, were drowned. The Pomona was a new iron steamer, about 700 tons burthen, and was chartered by Messrs. Robinson, of Mark Lane, charterers of the screw-steamer Ondine, which was lost in the recent collision in the Channel with many lives. The loss of the Pomona and cargo is calculated at upwards of 40,000*l.*

GREAT FIRE IN THE CITY.—On Monday morning about 11 o'clock a fire broke out on the premises of Messrs. Morley & Co., warehousemen, 122, Wood Street, Cheapside. It arose from an explosion of gas, and spread with great rapidity. The premises in which it broke out were entirely burned down and the contents destroyed, and several of the adjoining houses in Wood Street and Goldsmith Street were seriously damaged both by the fire and the water of the engines.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the sickness which is now so generally diffused throughout the metropolitan population continues to develope itself in a high rate of mortality. The deaths registered in London the week that ended Saturday, February 25th, were 1500. In the corresponding weeks of the 10 years 1850-59 the average number was 1227, which, if raised proportionately to the increase of population, will become 1349. The present return is therefore 151 above the average. During the week the births of 977 boys and 987 girls, in all 1964 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1738.

Provincial.

BARNSLEY.—At the adjourned inquest on the bodies of the men killed in the recent explosion at the Old Silkstone Colliery at Higham, the jury returned the following verdict:—"We are of opinion that the explosion was purely accidental; at the same time, we earnestly recommend the Messrs. Charlesworth to make a more general use of safety lamps."

CHATHAM.—The foundation-stone of the handsome memorial which is to be erected to the memory of those officers and men of the Royal Engineers who fell in the Crimea during the Russian campaign, was laid on Thursday in this garrison by the Duke of Cambridge. The cost of the structure will be at least 7,000*l.*, exclusive of the iron work, which will be formed from the guns taken from the Russians, and given by the Government. The whole cost will be defrayed by the subscriptions of the officers and men.

FALMOUTH.—The foundation stone of the docks and the Prince of Wales's Breakwater, to be erected under Pendennis Castle, was laid on Tuesday by Viscount Falmouth with great ceremony.

MANCHESTER.—The following letter from Mr. Cobden, M.P., acknowledging the recent vote of thanks adopted by the Manchester Chamber of Commerce, was received on Friday by Mr. E. Potter, president of the Chamber:—

"Cannes, France, Feb. 18, 1860. My dear Sir,—I beg most gratefully to acknowledge the receipt of your letter, conveying the thanks of the directors of the Manchester Chamber of Commerce for my services in negotiating the recent Treaty of Commerce with France. If I have been instrumental in promoting this reform in the commercial relations of the two countries it has been only in the humble capacity of prompter to those who have fortunately possessed both the power and the inclination to give effect to my suggestions. It was owing to the readiness with which the English Government made its financial arrangements for the year subservient to the objects of the Treaty, and to the enlightened appreciation of its important bearings by the Emperor of the French and his Ministers, together with the frank co-operation of Lord Cowley, that the negotiations were brought to a successful issue. I trust that, after the lapse of a sufficient time for realising the effects of such a change, we shall witness a large extension of commerce between these two great neighbouring nations, which will not only increase their material prosperity, but greatly ameliorate their political and moral relations. Pray be the medium for conveying to the directors the assurance of my high sense of their kindness. I remain, very sincerely yours, RICHARD COBDEN."

ST. HELEN'S.—The colliers employed at the mines in this district have struck for an advance of 10 per cent. on their present wages, arguing that, as the masters have raised the price of coal, they are entitled to a pro-

The Gardeners' Chronicle Newspaper.

SATURDAY, MARCH 10, 1860.

BANK OF DEPOSIT,
ESTABLISHED A. D. 1844; 3, PALL MALL EAST, LONDON, W.
CAPITAL STOCK 100,000*l.*

PARTIES desirous of INVESTING MONEY are requested to examine the Plan of THE BANK OF DEPOSIT, by which a high rate of Interest may be obtained with ample security. Deposits made by Special Agreement may be withdrawn without notice. The Interest is payable in January and July. PETER MORRISON, Managing Director.
Forms for opening Accounts sent free on application.

ESTABLISHED 1838.
VICTORIA AND LEGAL AND COMMERCIAL LIFE ASSURANCE COMPANY, 18, King William Street, City, E.C.
The business of the Company embraces every description of risk connected with Life Assurance.
Credit allowed of one-third of the premiums till death, or half the premiums for five years, on policies taken out for the whole of life.
Advances in connection with Life Assurance are made on advantageous terms, either on real or personal security.
WILLIAM RATRAY, Actuary.

PELICAN LIFE INSURANCE COMPANY,
ESTABLISHED IN 1797.
70, Lombard Street, City, E.C., and 57, Charing Cross, Westminster, S.W.
Directors.

Octavius E. Coope, Esq	Henry Lancelot Holland, Esq.
William Cotton, D.C.L., F.R.S	William James Lancaster, Esq.
John Davis, Esq.	John Lubbock, Esq., F.R.S.
Jas. A. Gordon, M.D., F.R.S.	Benjamin Shaw, Esq.
Kirkman D. Hodgson, Esq., M.P.	Matthew Whiting, Esq.
	M. Wyvill, Jun., Esq., M.P.

This Company offers Complete Security.
Moderate Rates of Premium with Participation in Four-fifths or 80 per cent of the Profits.
Low Rates without Participation in Profits.
Loans in connection with Life Assurance, on approved Security, in sums of not less than 500*l.*
BONUS OF 1861.—All Policies effected prior to the 1st July, 1861, on the Bonus Scale of Premium, will participate in the next Division of Profits.
ROBERT TUCKER, Secretary and Actuary.

SCOTTISH UNION INSURANCE COMPANY (FIRE AND LIFE), 37, Cornhill, London, E.C.; George Street, Edinburgh; and Dame Street, Dublin. Established 1824. Incorporated by Royal Charter.
Governor.—His Grace the DUKE of HAMILTON and BRANDON.
London Board.—Right Hon. the EARL of MANSFIELD, President, and Eight Acting Directors.
FACTS AND FIGURES.

Capital paid up, and undivided Profits ..	£273,224
Accumulated Life Fund	427,432
Annual Revenue from all sources, upwards of	130,000
Amount of Life Assurances in force	2,000,000

The New Life Policies issued during the year ending August 1st, 1859, were 522.

Sums insured thereby	£252,740	0	0
Yielding of New Premiums	7,814	1	9

The Funds of the Company are securely invested, chiefly upon Mortgage or Real Securities, and in the Government and Public Funds.
The next investigation into the Life Department and Declaration of Bonus will be made as at August, 1861, and parties taking out Policies before August 1, 1860, will participate in one year's additional bonus over later entrants.
No extra premium charged for Members of Volunteer or Rifle Corps, so long as they remain within the United Kingdom of Great Britain and Ireland.
Forms of Proposals and Prospectuses, containing all the necessary particulars, may be had at the office, or from any of the Company's Agents.
37, Cornhill, London, E.C. F. G. SMITH,
March, 1860. Secretary to the London Board.

News of the Week.

IN the House of Lords on Monday the Duke of NEWCASTLE gave notice that in the event of the address to the QUEEN on the subject of the Treaty with France being agreed to in the House of Commons, he should propose a similar address to HER MAJESTY in the House of Lords. Earl GREY announced his intention to oppose the address. On Tuesday the Duke of NEWCASTLE stated that as the House of Commons had not sent up the address on the Treaty HER MAJESTY'S Government proposed to postpone the discussion upon it in their Lordships' House until Thursday in next week. The Earl of ELLENBOROUGH asked whether any communications respecting the annexation of Savoy had been made to the Great Powers by HER MAJESTY'S Government, and whether any expression of their opinion had been invited? The Duke of NEWCASTLE replied that the views of HER MAJESTY'S Government had been communicated to Russia, Austria, and Prussia, but they had not been invited to join in any protest against the annexation, nor had they given any opinion on the subject. On Thursday a discussion took place on the private correspondence which had passed on the Savoy question between Lord JOHN RUSSELL and Lord COWLEY. The Marquis of NORMANBY, Earl GREY, the Earl of MALMESBURY, and the Earl of ELLENBOROUGH censured the practice of corresponding privately on such important questions; and the Earl of DERBY expressed his opinion that, after the avowals made by the French Minister in July last, the Government had acted most improperly in suppressing private correspondence and leading Parliament to suppose that the project had come upon them by surprise. The Duke of NEWCASTLE in reply said that there had been no desire to conceal anything from Parliament; if there had been, Parliament would not have been informed that any private correspondence on the subject had taken place.

In the Commons on Friday, after an interesting discussion on the projected annexation of Savoy, the report on the Customs Acts was brought up, when Mr. NEWDEGATE moved, as an amendment to the resolution relating to silk, that the present duties on silk manufactures imported into the United Kingdom be retained until October 1, 1861. After a short discussion the amendment was negatived by 179 to 51. The report was then agreed to, and the Committee on Customs Acts was resumed. The resolutions reducing the duty on corks, hats, gloves, and paper-hangings having been agreed to, the CHANCELLOR of the EXCHEQUER moved the new scale of spirit duties. Mr. T. DUNCOMBE moved as an amendment that the duty on foreign spirits be 9*s.* instead of 8*s.* 6*d.* per gallon. The motion was resisted by the CHANCELLOR of the EXCHEQUER, and negatived on a division by 191 to 48. The resolution was then agreed to, and the CHAIRMAN reported progress. In the course of the sitting Lord PALMERSTON said that although there was no fund applicable to a pecuniary reward to Sir LEOPOLD M'CLINTOCK for his gallant services in the late Arctic expedition, her Majesty's Government would cheerfully concur in a special grant, if such a vote should be acceptable to the House. At the same time his lordship expressed his opinion that a monument should be erected at the public expense to commemorate the services of Sir JOHN FRANKLIN. On Monday Mr. BYNG's motion for an address to the Crown on the subject of the Commercial Treaty with France was postponed to Thursday, after an animated debate on the annexation of Savoy, in which Mr. KINGLAKE, Mr. S. FITZGERALD, and Mr. ROEBUCK contended that the House ought not to go further until it had fuller information as to the intentions of the EMPEROR with regard to Savoy. Lord JOHN RUSSELL, in reply, protested against these irregular and irritating discussions. He differed from the EMPEROR in his views respecting the annexation, and was convinced that it would not be persisted in if Austria, Russia, and Prussia declared against it. As to the Treaty, they ought to consider it on its own grounds, as developing the industry of the two nations, and, by binding them in a closer union, preventing the calamities of war. The House then went into Committee upon the Customs Acts, and agreed to certain resolutions repealing and reducing the duties on timber, malt, and the remaining articles on the list, with the exception of paper and prints. The Savings Banks and Friendly Societies Bill, the object of which is to give depositors an absolute right on the Exchequer for the repayment of their advances, and to limit the power of the CHANCELLOR of the EXCHEQUER to apply the moneys of these banks and societies to the payment of deficiency bills without the consent of Parliament, was read a second time. The Settled Estates Act (1856) Amendment Bill, the object of which was to give Sir T. M. WILSON power to build around Hampstead Heath, was lost on the question of the second reading by a majority of 86 to 43. On Tuesday Sir D. L. EVANS's motion for an address to the Crown praying for the gradual abolition of the sale and purchase of commissions in the army was negatived by a majority of 213 to 59. In the course of the discussion Mr. SIDNEY HERBERT stated that the Government were prepared to give effect to the recommendations of the Duke of SOMERSET'S Commission by abolishing purchase in the case of all commissions above the rank of major. On Wednesday Mr. MILNES withdrew the Registration of Voters Bill, on the understanding that the Government intend to introduce a Bill for the regulation of the whole machinery of elections. The Coroners' Bill was referred to a Select Committee. On Friday Mr. BYNG brought on his motion for an Address to the Crown in approbation of the Commercial Treaty. Mr. BAINES seconded the motion. Mr. LINDSAY expressed his approval of the Treaty, and in order not to endanger it, withdrew the amendment of which he had given notice in reference to the differential duties on British shipping. Lord A. VANE TEMPEST moved, as an amendment, the substitution of a resolution declining to express an opinion on the Treaty until the House should be better informed as to the intentions of the EMPEROR OF THE FRENCH with respect to the annexation of Savoy. Sir HUGH CAIRNS stated that he should vote for the address as he did not wish to overthrow the Treaty, though he had strong objections to many of its details. After some further discussion, Lord A. VANE TEMPEST withdrew his amendment, and the debate on the original motion was adjourned.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family are at Osborne. On Friday morning the Prince Consort rode on horseback with Prince Alfred. In the afternoon the Queen held a Chapter of the Order of the Thistle at Buckingham Palace. Her Majesty and Prince Consort, accompanied by Prince Alfred and Princess Alice, afterwards visited the Floral Hall, Covent Garden. The Prince of Orange dined with her Majesty in the evening. On Saturday morning the Prince Consort visited the Royal Exchange, for the purpose of inspecting the decorations which have been made in the interior. He afterwards visited the Church of St. Michael, Cornhill, and then proceeded to the Trinity House, where he presided at a meeting of the Corporation. In the afternoon the Queen, accompanied by the Princess Alice, took a drive in an open carriage and four. The Prince of Wales arrived at Buckingham Palace from Oxford. In the evening the Queen and Prince Consort, accompanied by the Prince of Wales, the Princess Alice, and Prince Alfred, honoured the performance at the Adelphi Theatre with their presence. The Prince Consort afterwards went to the conversazione given by Sir B. Brodie as President of the Royal Society at Burlington House. On Sunday morning her Majesty and the Prince Consort, the Duchess of Kent, Prince of Wales, Prince Alfred, Prince Arthur, the Princesses Alice, Helena, and Louisa, attended Divine service in the Private Chapel of Buckingham Palace; the Rev. T. J. Rowsell, incumbent of St. Peter's, Stepney, preached the sermon. The Prince of Orange visited her Majesty in the afternoon. On Monday morning the Queen and the Princess Helena rode on horseback in the riding-house of Buckingham Palace. The Prince Consort rode on horseback with Prince Alfred. The Prince of Wales left the Palace for Oxford. In the afternoon the Queen, accompanied by the Princess Alice, took a drive in a carriage and four. In the evening her Majesty had a dinner party. On Tuesday the Duke de Nemours visited the Queen. The Prince Consort rode on horseback and visited Prince Frederick of the Netherlands at Claridge's Hotel. In the evening the Queen and Prince Consort, accompanied by Prince Alfred, honoured the performance at Covent Garden Theatre with their presence. On Wednesday morning the Prince of Wales arrived at Buckingham Palace from Oxford. In the afternoon the Queen held a Court at St. James's Palace for the reception of officers of Volunteer Corps, and afterwards held a Privy Council at Buckingham Palace. The Prince of Wales who, with Prince Alfred, attended the Volunteer Court, returned after the ceremony to Oxford. In the evening the Queen and Prince Consort, accompanied by Princess Alice and Prince Alfred, honoured an amateur performance at the Lyceum Theatre with their presence. The Prince Consort afterwards visited the Duke of Cambridge at his residence in St. James's Palace. On Thursday morning the Queen and Prince Consort, accompanied by the Princes Alfred, Arthur, and Leopold, and the Princesses Alice, Helena, Louisa, and Beatrice, left Buckingham Palace for Osborne.

THE PRINCE OF ORANGE went to Southampton on Monday, and paid a visit to the Great Eastern. His Royal Highness afterwards examined the docks and warehouses at that port, and then returned to London. On Tuesday the Prince embarked at St. Katherine's steam wharf in the General Steam Navigation Company's ship Concordia for Rotterdam.

PRINCE FREDERICK OF THE NETHERLANDS arrived at Claridge's Hotel on Monday from Torquay, where the Prince landed about 10 days ago with the Princess Frederick and her family from Holland. In the evening his Royal Highness dined with her Majesty at Buckingham Palace. On Tuesday the Prince Consort visited Prince Frederick at Claridge's Hotel. His Royal Highness returns to Holland early next week, leaving

the Princess Frederick and her family at Torquay for the benefit of their health.

THE PEERAGE.—The Queen has extended the barony of Brougham and Vaux, hitherto limited to Lord Brougham, to his surviving brother, Mr. William Brougham, formerly M.P. for Southwark and Master in Chancery, and to his male heirs.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Tuesday.

ORDER OF THE THISTLE.—At the Chapter of the Order of the Thistle held on Friday at Buckingham Palace, the Earl of Fife was duly elected a Knight of the Order. His lordship then received the honour of knighthood from her Majesty, and was invested with the insignia of the Order with the usual ceremonies.

THE ARMY.—The Colonelcy of the 22d Foot, vacant by the death of Sir Wm. Napier, has been conferred on Major-General Sir John L. Pennefather, K.C.B., and the colonelcy of the 46th Foot, vacated by this appointment, has been conferred on Major-General Geddes. Lord W. Paulet, at present commanding the 1st Infantry Brigade at Aldershott, is appointed to the command of the South-west District in the room of Sir James Yorke Scarlett, appointed Adjutant-General of the Forces. Dr. Gibson, C.B., has been appointed Director-General of the Army Medical Department.

PARLIAMENTARY MOVEMENTS.—The Roscommon Election Committee have reported that Captain William Goff was not duly elected; that he was by his agents guilty of treating at the last election; but that it was not proved that such treating was committed with his knowledge or consent. The Dover Election Committee have reported their unanimous decision that Sir Henry John Leeke and Mr. Nicol were duly elected; that six electors were bribed, but that it was not proved that such bribery was with the knowledge or consent of the sitting members or their agents; and that the allegation contained in the petition concerning the interference of a Minister of the Crown was not proved satisfactorily to the committee. The official declaration of the poll at the Cork election took place on Monday, when Mr. Deasy, the Attorney-General for Ireland, was declared elected by a majority of 2279 over Lord Campden, the numbers being 5674 to 3395.

LAW APPOINTMENT.—Professor Creasy, Professor of Modern History in University College and one of the Assistant Judges of the Middlesex Sessions, has been appointed Chief Justice of Ceylon.

THE VOLUNTEERS.—The Queen held a Court on Wednesday afternoon in St. James's Palace, for the reception exclusively of officers of Volunteer Corps. The Court was attended by the Prince of Wales and Prince Alfred, the Duke of Cambridge, Commander-in-Chief, her Majesty's Ministers and great officers of State, and the ladies and gentlemen of the Court. The officers began to arrive at 12 o'clock, and were conducted to the Drawing Room, Queen Anne's Room, the Guard Chamber, Banquet Room, and other apartments of the palace, where they were formed into companies. They were then joined by the lords lieutenant of their respective counties or by the Under Secretary of State for War in the absence of the lords-lieutenant, who accompanied them to the Throne Room, and introduced them to the Queen, in the following order:—

ARTILLERY: Northumberland, Devon, Sussex, Edinburgh, Cornwall, Midlothian, Norfolk, Banffshire, Kent, Forfarshire, Essex, Lancashire, Cinque Ports, Renfrew, Dorset, Fife, Glamorgan, Lanarkshire, East Riding of York, Ayrshire, Gloucestershire, Pembrokeshire, North Riding of York, Cheshire, Lincolnshire, Aberdeenshire, Kircudbright, Inverness, Dumbarton, Berwick-on-Tweed, Cumberland, Durham. ENGINEERS: Middlesex, Lanarkshire. MOUNTED RIFLES: Devon. COLONIAL VOLUNTEERS: St. Helena. RIFLE CORPS: Devon, Middlesex, Surrey, Gloucester, Brecknockshire, Suffolk, Stirlingshire, Bucks, Glamorganshire, Pembrokeshire, Derbyshire, Oxfordshire, Cheshire, Wiltshire, Sussex, Edinburgh, Essex, Lancashire, Leicestershire, Mid-Lothian, Northumberland, Renfrewshire, Northamptonshire, Dorset, Norfolk, Staffordshire, Berkshire, Inverness-shire, Kent, West Riding of Yorkshire, Warwickshire, Lincolnshire, Denbigh, Hampshire, Somerset, Forfarshire, Cambridgeshire, Shropshire, City of London, East York, Worcester, Hertfordshire, Perthshire, Kincardineshire, Haverfordwest, Haddington, Carmarthen, Lanark, Nottinghamshire, Aberdeenshire, Cinque Ports, Monmouthshire, Merionethshire, Ayr, Dumfries, Elgin, Argyll, Cardigan, Durham, Bute, North Yorkshire, Montgomery, Carnarvon, Cornwall, Ross-shire, Radnorshire, Selkirkshire, Isle of Wight, Bedfordshire, Dumbartonshire, Kirkcudbrightshire, Fife, Newcastle-on-Tyne,

After the Levee a dinner took place in St. James's Hall, at which upwards of 1000 Volunteer officers were present, the side galleries being crowded with ladies and with officers who were unable to obtain tickets for the dinner below. The Duke of Cambridge was in the chair, and among the guests were the Lord Chancellor, Earl Spencer, Lord Colville, Earl Dudley, Earl Cowper, Earl de Grey, Lord West, Lord Valletort, Lord Elcho, Hon. Colonel Lindsay, Colonel McMurdo, Lieut.-Colonel Lindsay, General Tremenheere, the Lord Mayor, the Lord Provost of Edinburgh, &c. After the dinner, the Duke of Cambridge, in proposing "the Health of the Queen" amid loud cheers, congratulated the officers present on the reception which they had that day received from her Majesty. Earl De Grey and Ripon proposed "the Health of the Commander-in-Chief," and his Royal Highness, in returning thanks, said his chief object in taking the chair was to prove that the army rejoiced as much as any other class in the country at the success of the Volunteer movement. He knew of no better manner of proving that than by attending there in the red coat of a regular soldier. His Royal Highnes then proposed "Success to the Volunteer Movement," and spoke as follows:—

"I must congratulate you all upon the earnest desire which the meeting I see before me proves that this movement should be continuous. It is essentially necessary that to be of any use this movement should be continuous. There have been objections made to this movement on the ground that it is aggressive. I deny that altogether. I say it is a movement entirely of defence. In former times we reckoned it certain that, with our wooden walls to defend us, no enemy could come across the Channel from any quarter of the globe to attack us; but the scientific improvements of modern times—improvements which come upon us so rapidly that we scarcely know what the next day is going to bring forth—witness the Whitworth gun, for instance—lead us to the conviction that for our real comfort it is absolutely essential that a great empire like ours should always be in a position of perfect security; that we should be able to say to all the world, 'Come if you dare.' Even those who are most opposed to this movement agree that not to be afraid we ought to be prepared; and that, gentlemen, is just what we wish to be, and just what we are. For my own part, I rejoice exceedingly, and I am sure everybody in this hall, and everybody in the country, will rejoice, at the proof which this movement affords, that when the occasion arises, there is not a man among us who will not come forward to do the best he can for the defence of his country. But it would be a great error to suppose that because I, the head of the army, appear at a meeting of this kind, that the army is any way deficient for defensive purposes. Your function is not to take the place of the regular army, but to assist it, and I feel sure that the very best supplement of the regular army will be yourselves. There is the militia service, for which I have the greatest respect. I go down and inspect regiments of militia, and really when I see the line and militia regiments together I do not know one from the other. These I call the first reserve of the army. The Volunteer force, of which you are the officers, I trust will be the second reserve. As to your organisation, I may perhaps be permitted to say a few words. Many gentlemen seem to suppose that all you have to do is to become good shots. There is my friend General Hay—one of the best shots in the country—who thinks there is nothing like being a good shot. He is somewhat an enthusiast on this subject, and to a certain extent I go with him; but, after all, I have a great idea that to make a good soldier a man must know his drill. If you do not know your drill, shooting, in my opinion, is nearly thrown away. I have heard a good deal of talk about loose drill; but depend upon it that you must first drill steadily. Drill steadily first, and then you may afterwards become loose, *dégagé* riflemen. I have remarked with great pleasure that this movement is taking root downwards, and that at our schools the youth are taking their first lessons in drill. That is the most likely way in which to make this movement permanent. We are often told that we are not a military nation, and we may not be in the common acceptation of the term. We have no conscription, for instance; but produce a country where you could have such a display of military spirit as this Volunteer movement affords. Again, are not our militia, our regular army too, all volunteers? All—regulars, militia, and Volunteers—come from the same source. Are not all actuated by the same feelings in coming forward, each in their respective services, for the defence of the country?" His Royal Highness concluded by paying a high compliment to the Under Secretary for War, Earl De Grey and Ripon, for the zeal which he had shown at the War Office in all matters relating to the Volunteer Corps.—Earl De Grey, in reply, said the Government were fully aware of the difficulties which lay in the way of the success of the movement, and were prepared to do everything in their power to meet them. The test of the value of the movement would be its permanency, and the chief requisites for the permanency of the movement were discipline and drill. The ball in the evening took place in the New Floral Hall, Covent Garden, which had been specially fitted up and lighted for the occasion, the only decorations used being wreaths, festoons, and bouquets of white and red roses, which were displayed with such skill in form and colour as justified the good taste of the choice. The doors were thrown open at half-past 9, but the line of carriages at that hour extended to Pall Mall, and a long time elapsed before all the company had arrived. Up to a late hour at night a stream of visitors continued to arrive steadily, until the Hall and Opera house, which had been fitted up as a saloon for the occasion, were thronged with no less than between 1000 and 5000 ladies and gentlemen—the latter predominating by nearly three to one. Nearly all the gentlemen were in uniform, the greater number in that of the Volunteers, though there were crowds of officers of the Guards, Cavalry, Artillery, Infantry, Militia, and Navy. Dancing commenced at 10 o'clock, and during the evening refreshments were supplied on the stage of the opera, which was as brilliantly lighted as on a State night. The basement story under the Floral Hall was fitted up as a supper room, where supper was served at 12 o'clock to 450 persons at a time. The ball was kept up with great spirit to a late hour on Thursday morning.

Foreign.

FRANCE.—The *Moniteur* of Saturday publishes two important despatches from M. Thouvenel, the French Minister for Foreign Affairs; the first being addressed to the Baron de Talleyrand, the French Minister at Turin, and the other to the Count de Persigny, the French Minister in London. In the latter despatch M. Thouvenel declines, on behalf of France, to join with England in Lord John Russell's programme for the settlement of the Italian question. He points out that, while England has been only a spectator of the events which have led to the present situation, France has been an active belligerent; and that while England is still free to resume her position as a mere looker-on, the Emperor is burdened with the responsibility of the consequences which may ensue from his armed action. M. Thouvenel therefore informs the English Government that the Emperor has taken upon himself to inform the Court of Turin what his views and wishes are upon this question. Austria, he says, having refused the proposal of England, the Emperor was convinced that he could not succeed in relieving himself of his moral responsibility unless the principle of universal suffrage which constitutes his own legitimacy becomes also the foundation of the new order of things in Italy. In the despatch to Baron Talleyrand, the French Ambassador at Turin, M. de Thouvenel states the grave situation which has been created by the late events, and explains the dangers which would be incurred by Piedmont in over-extending her territory. He says that "the idea of annexation to Piedmont is rather a protest against another great Power than a deliberate attraction towards Sardinia. If this feeling did not appear from the beginning it would not delay to show itself in the emergencies which wisdom counsels Sardinia to contest. People would not delay to reproach her passionately for betraying the cause for which she had been aggrandised, and armed, and she would be exposed to two emergencies, both equally disastrous—war and revolution." The Emperor therefore proposes a solution having some chance of being accepted by Europe, and preserving to Sardinia the full exercise of the influence which she has a right to enjoy in the Peninsula. His Majesty is willing to allow Sardinia to annex Lombardy, Parma, and Modena, and to become the temporal administrator of the Legations of the Romagna, Ferrara, and Bologna, exercising his functions in the name of the Pope, but he objects to the annexation of Tuscany, and proposes that she shall retain her political and territorial individuality. M. Thouvenel maintains that the project of the annexation of Tuscany reveals a hidden thought of war against Austria for the conquest of Venetia, and an inward idea, if not of revolution, at least of menacing the tranquillity of the Pope and the King of Naples. If the Cabinet of Turin will adhere to the solution proposed, France will not only support this combination in a Conference or Congress, but she will also proclaim that no foreign intervention shall be allowed to attack it. The Cabinet of Turin is at liberty to follow another policy, but France will at no price consent to assume the responsibility of such a state of things, but will leave the King alone to rely upon his own army. In conclusion the Minister intimates that in return for this accession of territory to Sardinia, "the possession of Savoy and the Comté of Nice (saving the interests of Switzerland) presents itself as a geographical necessity for the security of the French frontiers." M. Thouvenel points out that this would also protect the interests of Switzerland, which France desires to take into consideration. He requests Baron Talleyrand to draw the attention of Count Cavour to this point, in declaring to him at the same time that France does not wish to force the will of the inhabitants, and that besides the Government of the Emperor will not fail, when the moment shall appear to him to have arrived, to consult previously the great Powers of Europe, in order to prevent false interpretation of the reasons which direct his conduct.—The *Constitutionnel* publishes an article signed by its chief editor, M. Grandguillot, explaining the French policy in Italy. In mentioning the solution proposed in the despatch of M. Thouvenel M. Grandguillot says:—

"If it is not a Sardinian solution it is an Italian one. Sardinia will possess in Tuscany an ally who will aid her to overcome the opposition of Naples and Rome, in order to constitute an Italian nation, with the concurrence of all its nationalities, and not an Italian kingdom, absorbing everything without considering the essential differences, the opposing interests, and the distrust of Europe."

SPAIN AND MOROCCO.—The Madrid journals of the 2d state that the bombardment of Larache did not cause so much damage to the town as was at first represented, the roughness of the sea having prevented the gunners on board ship from pointing their cannon with much precision. They say also that the number of Spaniards killed or wounded was 25, which is also greater than was at first stated. A letter from the Sultan of Morocco was read on the 23d ult. in the principal mosque of Tangier, announcing his rejection of the conditions of peace tendered by Spain; and also announcing that his Majesty was coming up to the northern provinces with a large force, declaring that there was little chance of peace being concluded with the Spaniards, that he had ample funds for carrying on the war, and would prosecute it, even though he lost all his seaports. He exhorted all true believers to rise in defence of their country, and said that orders had been given to the orderly and well-disposed Moors to put to death all those who, availing themselves of the confusion of a foreign war to gratify their appetite for plunder, were a scourge to their own countrymen and innocuous to the enemy. Acting up to the concluding announcement of this letter, the Sultan has dismissed the Arab cavalry who plundered Tetuan, after being decimated in their flight by the hostile mountaineers, and beheaded many of their chiefs.

PORTUGAL.—Accounts from Lisbon to the 27th ult. state that the Minister of Finance has presented his Budget, proposing an increase of taxes, which has given general dissatisfaction. The Opposition journals ask how can a Ministry propose an increase of taxes when the actual President of the Council has not paid a fraction since 1833. The amount due in taxes by the Hidalgos, Court, and Nobles is calculated at 3800 contos, or 840,000*l*. Of this amount 1800 are perfectly lost; the remaining 2000 contos are not received through considerations, and it is this that the press loudly protests against.

PRUSSIA.—An important debate took place in the Prussian Chamber of Representatives on the 1st inst. A petition was submitted to the Chamber by 383 inha-

bitants of Breslau in favour of the national and constitutional interests of Italy. In its report the committee expressed its sympathies for the national cause of Italy; it did not conceal the displeasure that would be felt in Prussia if any intervention took place, but it proposed to pass to the order of the day, convinced that the Government would share its opinion, which is that of the immense majority of the Prussian people. It, moreover, stated, in support of its conclusions, that no petition in a contrary sense had been presented to the Chamber. M. de Vincke made a remarkable speech on the occasion, in which he said that he looked upon everything that strengthened the power of Sardinia as an advantage for Germany and for Prussia, not only on account of similarity of institutions, but because Sardinia ought to be a bulwark against France. It was for the same reason that Sardinia ought also to keep the passes of the Alps. In Austria's own interests he trusted that Sardinia might become strong enough to become a bulwark against France, and Austria would do well to give up Venetia likewise. M. de Schleinitz, the Minister of Foreign Affairs, in concluding the debate said:—

"It is greatly in the interests of Europe that Italy, which is an important member of the Confederation of European States, should obtain not only a pacification *de facto*, but a legal and regular position. Prussia will never refuse her efforts to procure so desirable an end. Our most important task must be to prevent new complications from arising between the great Powers, and a new war from bursting over Europe."

AUSTRIA.—To inquiries made at Vienna by the representatives of some foreign Powers the Austrian Government has replied that, its interests not being directly affected by the annexation of Savoy to France, it would observe on this question the same passive conduct which the great Powers exhibited at the time of the last war in Lombardy, and that Austria will not protest against the annexation of Savoy.—An Imperial patent was published on Tuesday, ordering the augmentation of the Imperial Council by extraordinary Councillors, who are to be assembled periodically. The Emperor himself will appoint for life as members of the Council the Archdukes, the clerical dignitaries, and some distinguished persons belonging to the civil and military branches. The provincial Diets are to propose 38 members, subject to the approval of the Emperor, who will choose every member from a list of three candidates presented by the Diets. The members will take their seat in the Council for six years. The following are the subjects which will be submitted to the discussion of the Council:—The budget, the examination of the balance of public accounts, the demands of the Commission for the public debt, and important projects of general laws. The Council will have no initiative in the discussion of the wishes of the provincial Diets. The Ministers and the heads of the public central offices are entitled to take part in the discussions of the Council. The arrangement of the rules for transacting the business of the Council is reserved. The Councillors are to have no allowances from the Treasury. Another Imperial Ordinance convokes the assembly of the Councillors for the month of May next, in order to examine the Budget for 1861, for which purpose and for the active preparation of the establishment of the provincial Diets the Emperor will call competent men from all the provinces.

HUNGARY.—The Evangelical community have unanimously refused to submit to the Imperial decree of the 1st of September, and to the Ministerial ordinance of the 2d of September.

RUSSIA.—The *Journal de St. Petersbourg* gives an official denial to the statement relative to an alliance between Russia and Austria.

ITALY.—Count Cavour has given his reply to the French Government on the subject of the settlement of Central Italy, bringing forward the motives which prevent the Sardinian Government accepting the counsels given, and requesting France to agree to the annexation, should the inhabitants confirm it by their wishes. He admits that if no more should be obtained at this moment than that which the Emperor of the French is prepared to guarantee, a great deal will have been accomplished for Italy. He tells the Emperor that some short time since the proposition now made would have been possible, and even satisfactory. But that time is now past. The King of Sardinia, while acting under the counsels of the Emperor of the French, has become identified with that Italian party which will accept no compromise with the principle of the fusion of all the States of Northern and Central Italy. Count Cavour therefore declares that what is now demanded of Sardinia is an impossibility. He says that if he were to attempt to give effect to this policy he would immediately lose his power as a Minister; nay, he even avers that if the King, his master, were to espouse this French scheme, and were to attempt to consolidate his kingdom upon the plan proposed to him, he would cease at once to be the chosen King of the Italian people. As to the Vicariat over the Romagna, he objects that it would be satisfactory neither to the people of the Romagna, nor to the King of Sardinia, nor to the Pope. In regard to the question of Savoy, he reserves it for separate treatment but with respect to Tuscany Count Cavour, undeterred by the threat of France to withdraw from the contest and to leave Sardinia alone to contend against Austria and Naples, boldly accepts the position on behalf of his country, and declares that if the Tuscans should persist in their desire to annex themselves to Piedmont, the King of Sardinia is resolved to accept them as his subjects. The count says:—

"Whatever may be the reply returned by the States of Central Italy, the King's Government at once declares that it will accept it unconditionally. If Tuscany declares for the preservation of her self-government by means of the formation of a State distinct from Sardinia, not only will it not oppose the realisation of this wish, but it will frankly aid in overcoming the obstacles which such a solution might encounter, and obviating the inconvenience that may follow from it. It will act in like manner with respect to the Romagna and to the Duchies of Parma and Modena. But if, on the contrary, these provinces again manifest in a clear manner a wish to be united to Piedmont, we cannot any longer oppose it. Indeed, did we wish to do so we could not. In the present state of public opinion a Ministry who should refuse a second demand for annexation, sanctioned by a second popular vote on the part of Tuscany, would not only no longer find support in Parliament, but would soon be overthrown by an unanimous vote of censure. In accepting beforehand the contingency of annexation, the King's Government takes upon itself an immense responsibility. The formal declarations contained in the despatch of M. Thouvenel to Baron de Talleyrand, render, it is aware, the dangers much more serious which it may produce. If it do not recede before them, it is because it is convinced that by rejecting the demand of Tuscany, not only the Cabinet, but King Victor Emmanuel himself, would lose all influence and all moral authority in Italy, and would probably be reduced to the alternative of governing by force."

The *Opinione* of Turin affirms that in a note of the 2d inst., relative to Savoy, Count Cavour expresses the attachment of the Government of the King to his provinces; but, at the same time, true to the principle which he supports in Central Italy, declares his intention to interrogate the population in a manner to be established by Parliament, reserving the questions of the frontiers and guarantees to be given to Savoy. Count Cavour has also addressed a circular to the diplomatic agents of Sardinia abroad, dated the 21st of February, calling their attention to the circular of M. von Bissingen, which orders a forced enlistment into companies of penitentiary discipline of all Venetians who should appear hostile to Austria. Count Cavour points out that the elasticity of this expression allows the whole male population to be classed in this category. He thinks proper to draw the attention of the Austrian Minister for Foreign Affairs to the possible consequences of such a state of things in Venetia. Accounts from Nice state that on the occasion of the anniversary of the promulgation of the Sardinian constitution manifestations were made by the Piedmontese party in the Italian Theatre. Very few persons were present, and those in the boxes remained silent. A demonstration also took place in the French Theatre, where the population of Nice demanded the "Ode Napoleonienne" and the "Reine Hortense," which were performed amid enthusiastic applause, and shouts of "*Viva l'Imperatore!*" "*Viva l'Annezione!*" The situation of the country is very critical.—A decree has been published at Florence convoking the Tuscan people for the 11th and 12th of March in order to vote, by universal suffrage and ballot, on the two following proposals:—Annexation to Sardinia, or a separate kingdom. All Tuscans being 21 years of age, and enjoying political rights, are entitled to vote. A decree of the Government of Romagna also calls together the inhabitants of the Emilian provinces for the 11th and 12th of March to vote by ballot and universal suffrage on the two proposals, annexation to Sardinia, or a separate kingdom. In his proclamation convoking the Parliament the Governor reminds the people of what they owe to the Emperor, not only for aiding them during the war, but also for securing the provinces from foreign intervention, and says, that Europe is convinced of the impossibility of the re-establishment of the former dynasties. That which preoccupied the minds of the electors during the last election of the National Assembly has disappeared. He is now therefore going again to solemnly consult the national will, and he wishes the votes to be given with freedom and sincerity. The *Monitore* of Bologna states that the electors persist in demanding annexation. It is stated that the Austrian Government has received positive information from Bologna to the effect that the troops commanded by General Stefanelli insist upon returning to Tuscany. Many soldiers of this *corps d'armée* have deserted to the Papal territory. Advices from Rome confirm the statement that the communication presented by the Almoner of Victor Emmanuel to the Pope announced to his Holiness that the King of Sardinia would, perhaps, be under the necessity of occupying the Umbrian Marches, the population of which do not cease to demand the annexation of their country to Piedmont. The Pope replied immediately, expressing his surprise and grief, and threatening the King of Sardinia with excommunication. Eight students of the University of Rome have been expelled, and the Prelate Rector has been dismissed. Another disturbance has since taken place among the students, who have demanded the re-admission of the eight who had been expelled. General Goyon has sent a detachment of troops to the University, thereby preventing any disturbance. A popular manifestation of no importance in favour of annexation to Piedmont has taken place in Gubbio. The Pope is said to be ready to grant concessions, if the Legations submit. The Papal Government has prohibited commerce by transit between Ancona and the Romagna. The merchants have lodged a protest against this measure. Agitation prevails in the Marches; the landed proprietors refuse to pay taxes. Thousands of citizens are signing addresses to the great Powers in favour of the annexation. Soldiers enlisted in Austria continue to arrive in the States of the Church and in Naples.

TURKEY.—Sir Henry Bulwer will shortly leave Constantinople for England on family affairs. The Western Powers have made proposals to the Porte to assist in the maintenance of its rights in Servia and the Danubian Principalities should any complications and an armed intervention take place there. It is stated that the Porte has requested a treaty of alliance with them for certain emergencies.

INDIA.—By the arrival of the Bombay mail we have accounts from Bombay to the 11th of February. The following are the details:—

Umballa.—Lord Canning held a grand durbar in Umballa, at noon, on the 19th January, at which the Maharajah of Puttealah, the Rajah of Jheend, and a large assemblage of other princes and nobles were present. The scene is described as having been very grand and impressive. In the afternoon there was a grand review, in which the 7th Hussars, 6th Dragoon Guards, a troop of Royal Artillery, a detachment of the 85th Foot, the 87th Royal Irish Fusileers, and the 27th Enniskillens, with several native regiments, took part, after which Lady Canning presented new colours to the 87th. In the evening a ball was given by the officers of the Enniskillens, and the camp was to break ground again for Lahore on the 23d of January. It was said that Lord Clyde would accompany the Governor-General to Peshawur, where Dost Mahomed is to be received at a grand durbar.

Hyderabad.—A serious disturbance has broken out in the city of the Nizam, such as has not been known there for several years past. It was caused by the determination of Meer Futteh Ali, uncle of the present sovereign, to obtain possession of a house and garden within the jurisdiction of the English Residency, and was not suppressed until four men were killed.

Beyt.—The object of the expedition sent against the Wuzeerees has been accomplished, and the murderer of the late Captain Mecham has been surrendered, and was taken into Bunnoo on January 22. He had been slightly wounded by his captors, and was removed on a charpoy. He has confessed to having been the chief agent in the murder.

Nepaul.—It is reported that Jung Bahadoor has surrendered the Begum and her son Burjees Kadr unconditionally, without any stipulations for their maintenance, and that they have arrived at Gonda, and will be sent on to Lucknow. Should this news be confirmed there is no longer any rebel leader in the field in Nepaul.

Calcutta.—The Right Hon. James Wilson arrived in Calcutta on the 24th January, and on the following day a Council was held at which some important financial questions were discussed. It is understood that the question of a paper circulation is under consideration in the form of a Government note, bearing a small interest, which would, it is stated, meet the views of the natives on the subject.

Bombay.—The Government has notified that the Five and-a-Half per Cent. Loan is closed in the district treasuries. It is limited to 80 lacs of rupees in cash at Bombay and Madras respectively; the balance is to be subscribed at Calcutta. The 31st Regiment was to embark for China on the 15th and 16th of February. The 3d Native Infantry was expected from Wassund, and was to embark on the 16th and 17th of February.

POLYNESIA.—There has been another Polynesian massacre at Rubiana, one of the Solomon group. The schooner Pearl, of Anitcum (formerly a well-known yacht in Sydney harbour), has been captured and burned at that island, and her crew, eight in number, besides the captain, have been killed and eaten. An attempt was made to capture the Clarence Packet, by which this news was brought. It was understood, also, that a similar attempt was to be made upon the cutter Oberon. Two men, left on shore from that vessel, had been murdered, and the plan was to decoy the master of the Oberon on shore, under the pretence that these murdered men wished to see him.

UNITED STATES.—The 136th anniversary of the birthday of Washington was celebrated at Washington on the 22d ult. by the inauguration of an equestrian statue of the deceased statesman. At New York, on the 17th ult., there was a large and enthusiastic meeting at the City Assembly Rooms, for the purpose of expressing sympathy with the cause of Italian independence. Addresses were delivered by several prominent Americans, and letters were read from others giving their warm adherence to the objects in view. The principles urged in the Napoleonic pamphlet of "Le Pape et le Congrès" were enthusiastically endorsed, and the rights of Italians to independence of the Roman See were unanimously asserted and ably vindicated. A mass of official correspondence from Secretary Cass to the Ministers of England and France at Washington, touching the rights of neutrals on the ocean, and relative to the African slave trade, is published in the New York journals. The New Orleans correspondent of the *New York Herald* gives an outline of a scheme for the acquisition of Mexico; and states as probable that General Houston is now *en route* for Rio Grande backed by a large force of Texans, to carry the scheme into execution. The Governor of Kansas had vetoed the Bill abolishing slavery, but the Legislature had brought up the Bill again, and would probably pass it.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*The Yeomanry.*—Earl DE GREY having stated in answer to Lord Powis that there was no intention on the part of the Government to call out the yeomanry during the present year, the Earl of MALMESBURY expressed his opinion that it would be better policy to assemble the yeomanry for practice, than to resort small cost for duties which formed a valuable source of revenue.—The Earl of ELLENBOROUGH reprobated a haggardly economy that excluded money in contracts, pay, and stamps, and would have the effect of impairing the defensive resources of the country.—The Duke of NEWCASTLE denied that the efficiency of the yeomanry would be impaired by the intermission of a year; and in reply to Lord Derby, said that he had no doubt that if application were made to the Treasury by the War Department the same exemption would be allowed the Yeo-

manry in regard to horse duty as bef re.—*The Probate and Administration (India) Bil* was read a thir l time and passed.

MONDAY.—*The Commercial Treaty.*—The Duke of NEWCASTLE stated the course the Government intended to pursue with respect to a vote of the House in reference to the treaty of commerce with France. He said that if the address should be agreed to by the Commons he should propose to discuss it on Friday, but if the debate in the Commons were adjourned, to postpone the discussion to Monday —Earl GREY announced his intention to oppose the address. *The Lace Trade.*—Lord SHAFTESBURY presented a petition from 10,000 persons in Nottingham and its neighbourhood, praying that the lace trade should be brought under the operation of the Factory Act. He pointed out the lamentable consequences which late hours and want of parental control at night had upon the morals of the children, as well as on their physical condition, and concluded by expressing his intention to bring in a Bill to extend the Factory Act to the lace trade.—The Duke of NEWCASTLE believed there would be no opposition to the proposed Bill if the smaller manufacturers were dealt with carefully, and if the new system were introduced gradually. *The Stock Exchange Companies' (1860) Bill* was read a third time, and the *Administration of Poisons Bill* was read a second time.

TUESDAY.—The Marquis of CLANRICARDE moved the second reading of the *Dwellings of Labourers (Ireland) Bill*, the object of which is to give tenants for life power to raise money for the purpose of building better dwellings for the labouring poor.—After some remarks from Lord REDESDALE, the Bill was read a second time —On the motion of Lord CHELMSFORD the *Attorneys' and Solicitors' Bill* was read a second time.—The Earl of ELLENBOROUGH called attention to the omission of any reference to the other great Powers in the correspondence with France relative to the *Annexation of Savoy*. He felt bound to protest, in every way, against such an infraction of treaties as was involved in the annexation of Savoy, and wished to know whether the views of her Majesty's Government had been communicated to Russia, Prussia, and Austria, with the object of inviting their co-operation against the annexation —The Duke of NEWCASTLE said that the despatches of Lord Cowley referring to the matter, dated Jan. 28 and Feb. 13, had been communicated to the three Powers, but they had not yet been invited to join in a protest. *The Commercial Treaty.*—The Duke of NEWCASTLE gave notice that he intended to move an address to the Crown on the subject of the treaty on Thursday the 15th.—The Marquis of CLANRICARDE presented a petition against the *Grand Canal, Midland Great Western, and Great Southern and Western Railway Companies (Ireland) Bill*, and said that the amalgamation had been carried so far as to make the Bill a public and not a private measure. —Lords LUCAN, MONTEAGLE, REDESDALE, SHELBURNE, WESTMEATH, and STANLEY of ALDERLEY concurred, and suggested that there should be some public department to advise the Government on such Bills as this, the real object of which was not apparent from the title.

THURSDAY.—*Annexation of Savoy.*—The Duke of NEWCASTLE, in reply to a question from Lord CARNARVON, said that in addition to the public despatches a good deal of private correspondence had passed between Lord J. Russell and Lord Cowley, on the subject of the annexation of Savoy, but these private letters did not in any way alter the complexion of the case as it appeared in the public documents.—The Marquis of NORMANBY deprecated private communications on such a serious subject.—Earl GREY took a similar view, and contended that, if this practice were allowed, the control of Parliament over the executive would be gone —The Earl of MALMESBURY admitted that correspondence of a delicate nature with foreign Courts could not be carried on without occasional resort to private letters, but he thought Lord John Russell had gone beyond the ordinary limits on this occasion. —The EARL of ELLENBOROUGH said that when private correspondence did take place it ought at least to be left in the Foreign Office, as a record of what had passed.—The Duke of NEWCASTLE said there was no desire to conceal the fact that such a correspondence had taken place.—The Earl of DERBY said there was a third party to be considered in the matter—the French Minister, who had from the first informed the English Government that, under certain circumstances, Savoy would be demanded. But the Government had suppressed this fact, and had most improperly led Parliament to believe that the intelligence had come upon them by surprise.

FRIDAY.—*Affairs of Italy.*—The Marquis of NORMANBY moved for a copy of any instructions addressed to her Majesty's chargé d'affaires at Florence, directing him to impress upon the Provisional Government the duty of abstaining from any arbitrary acts calculated to destroy all freedom of action in connection with those fresh elections which her Majesty's Government had thought proper to recommend. He complained that her Majesty's Government had, very shortly after the peace, dropped the mask of neutrality, and assumed the attitude of partisans. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*Savoy and Nice.*—In answer to Sir H. VERNEY, Mr. COCHRANE, and Sir J. WALSH, Lord J. RUSSELL stated that her Majesty's Government had no knowledge of any treaty between France and Sardinia on the subject of the annexation of Savoy to the former State, and did not believe that any such treaty existed. The Emperor had already declared that he did not mean to proceed to any such annexation without consulting the great Powers; and if the opinion was general and unanimous among the great Powers against such annexation, he should infer that France would not proceed with it. With regard to the views of her Majesty's Government, they were contained, he said, in the papers he had just laid upon the table.—Sir R PEEL said that the reply of the noble lord was very far from satisfactory It was evident, from the speech of the Emperor of the French, that he was firmly resolved, in spite of the other Powers of Europe, to appropriate to himself the province of Savoy. Already the debate on Mr. Kinglake's motion, on Tuesday last, had produced an extraordinary effect in Paris, and it was currently reported that the Emperor had declared that, after all the sacrifices he had made, political and commercial, for the sake of England, he had gained nothing in return but the support of Monsieur Mimes. The hon baronet then referred to a discrepancy which he deemed of much importance, in the original text of the Emperor's speech, as published in different English journals, and, after a strong denunciation of the project, asked for more explicit information upon the subject of the annexation.—Mr. BRIGHT wished to know what Sir R. Peel proposed should be done in the case. These repetitions of inquiries, he said, tended to create greater complications in a matter of this nature The language of Sir R Peel was as extravagant as if Europe and England itself were on fire, and he strove not to suppress it, but to make it hotter. We could not prevent the annexation of Savoy to France, which he was informed the people of the province desired; but we might embroil ourselves with France. He would never have recommended or promoted the annexation; but "Perish Savoy," he would say, rather than that House should involve the Government in a war with France in a matter in which we had no interest whatever.—Lord J. MANNERS denounced Mr. Bright as a French advocate, whose opinions, he trusted, were not those of the Government, and was sure that they were not those of the country Mr. Bright would be equally ready when the time came to defend the annexation of Belgium and the Rhenish provinces —Mr MIMES denied that the Savoyards were generally hostile to annexation to France. He believed, on the contrary, that they would prefer joining a country using a language similar to their own, and sharing in their own general ideas of polity, to making such an alliance as that to which Sir R. Peel had referred. Such an annexation might, he thought, be carried out without disturbing the peace of Europe.—Lord JOHN RUSSELL said he could not but think that the intention of the Emperor of the French was to consult the great Powers of Europe before proceeding to the annexation of Savoy. He owned that he differed from the Emperor as to the effect of the severance of Savoy from Piedmont. He conceived that the annexation of Savoy to France, and the occupation by the latter of the passes of the Alps, would be more threatening to Italy than their occupation by Sardinia could be to France. With regard to this country he was far from desiring that Parliament should not pronounce an opinion upon the matter, but he deprecated these angry discussions, and the imputation of bad motives to a friendly Sovereign, as calculated to create bad feelings, not only between the two Governments, but between the two nations. In consequence of the Emperor not having referred in his speech to the wishes of the people of Savoy, Lord Cowley asked Count Thouvenel whether there was any change in the sentiments of the French Government upon that subject, and the answer was that the Emperor was, as before, determined not to attempt the annexation without consulting the wishes of the Savoyards themselves. With regard to the two versions of the Emperor's speech which had appeared in this country, he thought the better course would be not to form an opinion on the subject until the text of the *Moniteur* could be referred to. *Affairs of Italy.*—The O'DONOGHUE asked the First Lord of the Treasury whether he had received an address from certain Catholics in Ireland, calling upon him to interfere in the affairs of Italy, with a view to the full and complete restoration of the Pope's authority.—Lord PALMERSTON said he had received such a memorial, but it was well known that the intention of her Majesty's Government was that the Italians should be left to settle their own affairs without foreign interference or control. *The Franklin Expedition.*—In answer to Sir F. BARING, Lord PALMERSTON said that it was impossible to speak too highly of the courage, perseverance, and devotion of Sir L. M'Clintock and his brave companions, not less honourable than if they had been exhibited in a field of battle. At the same time, others had displayed the same high qualities, whose services, though they had not been so successful, ought not to be forgotten. A motion, it was true, had been made in the House, calling upon the Government to undertake a further expedition for the search of Sir J. Franklin, and he never acted more at variance with his own feelings than in declining, upon public grounds, to accede to that motion. A reward of 10,000*l.* had been offered for the discovery of the remains of Sir J. Franklin's expedition, and the whole of that sum had been awarded to Dr. Rae. At the same time, if it was the opinion of Parliament that it was a fit occasion for a special grant, her Majesty's Government would not refuse to carry into effect a vote of the House of Commons in favour of Sir L. M'Clintock. He considered that a monument should be erected to the memory of Sir John Franklin, and he had no doubt it would be highly gratifying to Lady Franklin if Parliament would sanction such a proceeding. —Mr. DISRAELI quite concurred with the view taken by the noble lord.—Sir J. PAKINGTON also congratulated his lordship upon the view he had taken of the case. On the bringing up of the report upon the *Customs Acts*, the discussion relating to the several items in the resolution passed in Committee on Thursday was renewed, in the course of which the CHANCELLOR of the EXCHEQUER gave some details on the subject of the *Cork Trade*, showing, he said, that freedom of trade was absolutely required for the benefit not only of the public but of the workmen. In the article of *Silk Manufactures*, Mr. NEWDEGATE moved an amendment, the object of which was to retain the present duties until the 1st of October, 1861. This amendment re-opened the whole question of the policy of abandoning the duty upon foreign silks without a corresponding concession in favour of British silks.—In reply to appeals for a stipulation in the future convention to remedy this inequality, the CHANCELLOR of the EXCHEQUER said he felt that, when once a country like France took such a step as she had done in the path of free trade, depriving her protected interests of protection, the future steps in the same direction would be comparatively easy. On a division, the amendment was negatived by 179 to 51. The report was then agreed to. The House then went into Committee upon the Customs Acts, and proceeded with the remaining resolutions.—Mr. T. DUNCOMBE moved that the duty on *Foreign Spirits* be 9*s.* instead of 8*s.* 6*d.* the gallon.—This amendment was resisted by the CHANCELLOR of the EXCHEQUER, and, after a long discussion, was negatived on a division by 191 to 48. The resolutions were then ordered to be reported.

MONDAY.—*The Whitworth and Armstrong Guns.*—In reply to Mr. H. BAILLIE, Mr. S. HERBERT said that nothing could be more satisfactory than the trials which had taken place with the Whitworth gun; but that, though its range was greater than that of the Armstrong, and the aim nearly as accurate, still, the difference between the two weapons was not so great as to warrant the Government in discontinuing the manufacture of the latter. It was, however, intended, as the more satisfactory course, to have a trial of both guns at Shoeburyness.—Sir H. WILLOUGHBY inquired whether the Chief Commissioner of Works had any control over the expenditure of the *Metropolitan Board of Works.*—Mr. COWPER said he had no power of interfering in any way with their proceedings.—Mr. MASSEY (Chairman of Committees) brought up the report on the resolutions of the *Customs Acts Committee*, which was agreed to. *The Commercial Treaty.*—Lord J. RUSSELL stated, in reply to a question from Mr. HANKEY, that the provisions of the French treaty did not apply to any colony of France except that of Algeria, but he hoped that no long time would elapse before all the French colonies would be admitted to the same privilege. On the subject of the *Importation of Rags from France*, his lordship said that the French Government were prepared to recommend to the Legislative Council that the existing prohibition against the exportation of rags should be removed —Lord PALMERSTON moved that the orders of the day be postponed until after Mr. Byng had moved his address to her Majesty on the subject of the Commercial Treaty. His lordship at the same time appealed to Mr Lindsay to postpone his resolution requesting the Government to use their endeavours to persuade France to relax the restrictions of the navigation laws. He did not intend to oppose the resolution, which would, he said, strengthen their hands in any negotiation they might undertake for the purpose —Mr LINDSAY declined to give any pledge until after the House had been put in possession of the terms of the motion to be proposed by Mr. Byng.—Mr. KINGLAKE opposed the proposition of Lord Palmerston. The treaty with France set out by stating that the object of the two contracting parties was to draw closer the ties of friendship which united England and France, and he held that it would be trifling with that important question if they now went into the consideration of the commercial treaty without having a more accurate knowledge than the House at present possessed of the relations which actually subsisted between the two countries. It seemed to him that, according to the ambiguous language of the speech recently made by the Emperor of the French that distinguished person had placed himself in a position of antagonism to this country by asserting a right to Savoy, and setting up the principle of "natural boundaries." If a pledge were given that France would not proceed to annexation without the consent of the Great Powers, the House could proceed with the discussion of the commercial treaty in a spirit which would conduce to the peace and tranquillity of Europe.—Mr. BYNG consented, in deference to what he considered to be the wish of the House, to postpone his motion until Thursday.—Mr. DISRAELI said he had been favoured with the terms of the proposed address; but that it appeared to him that whilst following the precedent of Mr. Pitt the Government had done so without bearing in mind the difference in the circumstances of the two cases.—Mr. S. FITZGERALD declared himself dissatisfied with the language used by Lord J. Russell, which he said was rather that of rhetoric than of dignified and firm remonstrance. The project of the Emperor of the French was dangerous to the peace and the best interests of Europe, and against it the great Powers were bound to unite in a determined protest. This being so, the contemplated address approving of the commercial treaty ought not, in his opinion, to be agreed to until a deliberate opinion had been expressed upon the annexation of Savoy and Nice.—Mr. BRIGHT inquired whether the language held by Mr. Fitzgerald was that which was also held by Mr. Disraeli and the Earl of Derby. If hon. gentlemen opposite were dissatisfied with the foreign policy of the Government, why did they not come forward in a frank and manly manner and propose a vote of censure? If the right hon. gentleman the member for Buckinghamshire had prompted the virtuous indignation of Mr. Fitzgerald he had adopted a course of which a great party ought to be ashamed.—Mr. WHITESIDE disclaimed all party motive.—Mr OSBORNE questioned the discretion of Mr. Fitzgerald, and deprecated the use of language which might lead to the foundation of enmity between the two countries.—Mr. ROEBUCK said that, as belonging to no party, but simply representing an English constituency, he had to consider first and foremost how the honour of England was to be best maintained and asserted. For his own part he wished to be on the most friendly relations with France; at the same time it must be remembered that the person with whom we were about to conclude a treaty of commerce had himself broken treaties, and now wished to appear on terms of friendship with us while he was doing a disgraceful and dishonourable act. He did not fear Napoleon, but he feared that it should appear in the eyes of Europe that we were going to truckle to him. The man who, for geographical reasons, wished to approach the Alps, might also for geographical reasons wish to acquire the Rhenish Provinces of Prussia, and ultimately enclose Belgium in his grasp. He approved of the language of Lord John Russell in reference to the annexation of Savoy, but he was of opinion that the address to the Crown ought not to be agreed to until an opportunity had been afforded for the discussion of the subject.—Lord JOHN RUSSELL deprecated the repetition day after day of these irritating discussions, and invited the Opposition to move a vote of censure at once if they were dissatisfied with the conduct of the Government. It was consistent neither with constitutional proceedings in that House nor with amicable feelings between this country and France to renew these discussions, asking for no decisive vote, proposing no definite result, but sowing suspicion and distrust, calculated to bring about a total rupture with a friendly country. His persuasion was that if the language of disapprobation was heard from all the great Powers, the project of annexation would not be persevered in. The Government of Sardinia, the Power most interested in the question, had not spoken on the question. His opinion was that the treaty of commerce with France was destined, if approved by Parliament, to draw closer the ties of friendship between the two nations, by giving both an interest in the blessings of peace, which would tend to prevent the great calamity of war.—Mr. BENTINCK expressed his opinion that the treaty was a great mistake, and that the majority of the public were decidedly opposed to it. After some further conversation the motion of Lord Palmerston was withdrawn. The House then went into committee on the *Customs Acts*, and the remaining resolutions were passed, with the exception of those relating to paper and hops.—In committee of ways and means the resolution for giving *Drawback on Spirits* to rectifiers and distillers was agreed to.—The CHANCELLOR of the EXCHEQUER moved the second reading of the *Savings Banks and Friendly Societies Investments Bill.* He explained its object to be to give to depositors in savings banks a right to claim from the Exchequer repayment of their advances, and to limit the power of the Chancellor of the Exchequer to apply the funds of savings banks and of friendly societies to meet deficiency bills without the direct authority of Parliament.—Mr. HENLEY expressed his approval of the Bill, but said he thought it might be improved in committee.—After some remarks from Mr. AYRTON and Mr. HANKEY the Bill was read a second time.—Mr. WHITESIDE moved the second reading of the *Settled Estates Bill.*—Mr. BYNG moved that the Bill be read a second time that day six months, on the ground that its real object was to enable Sir T. M. Wilson to grant building leases on Hampstead Heath. He had no personal feeling towards Sir Thomas Wilson, but he was bound to oppose this Bill in the interests of his constituents.—Mr. WHITESIDE said there was a clause in the Bill prohibiting the Court of Chancery giving powers to any one to build on Hampstead Heath.—Mr. E. JAMES opposed the Bill, and said that if it were to be passed into law there would be nothing to prevent Sir Thomas Wilson building a wall all round the heath.—After some further discussion, the amendment was carried, on a division, by 86 to 45. The Bill is therefore lost.

TUESDAY.—*Annexation of Savoy.*—Mr. KINGLAKE gave notice that on Monday next he would move an address to the Crown, thanking her Majesty for having communicated the correspondence relative to the annexation of Savoy to France, expressing the deep concern with which the House had heard of that project, and trusting that her Majesty would invite other Powers to join her in endeavouring to prevent a measure which had excited the distrust and alarm of Europe. *The Commercial Treaty.*—Mr. HORSMAN gave notice that on the motion for an address to the Crown in reference to the Treaty, he should move an amendment declaring the opinion of the House that the article relating to coal imposed unnecessary and impolitic restrictions upon the Crown and Legislature to which the House could not assent. — Mr. H. BERKELEY renewed his annual notice of motion on the subject of the *Ballot* for the 22d inst. *Purchase of Commissions in the Army.*—Sir DE LACY EVANS moved an address to her Majesty, praying her to order the gradual abolition, as soon as practicable, of the sale and purchase of commissions in the army (having due regard in doing so to existing rights), with the view of substituting for the purchase system, promotion partly by selection, partly by seniority, grounded on war services of merit, length of colonial and home services, and attested professional fitness. He was understood to recommend that, as a first step, the Government should abolish purchase in the case of majors and lieutenant-colonels, the cost of which to the country he estimated at 67,000*l* for the first year, after which the sum would gradually diminish year by year till it was wholly extinguished.—Mr. RICH seconded the motion.—Captain VERNON moved an amendment, declaring that as the seniority system already existing in the Royal Artillery, Engineers, and Marines, had been of an unsatisfactory character, it is not desirable to extend it to the whole of the army. He denied that the present system favoured the aristocracy. Any one who looked to the Army List would find that for one Plantagenet there were 50 Browns, Joneses, and Robinsons. The history of Sir D L Evans himself was the best answer to his own argument, for he was advanced solely by his own merit from the rank of lieutenant to that of lieutenant-colonel in the space of six months without the expenditure of a single

shilling. This could not have happened under the seniority system. It was a favourite maxim of his opponents that purchase was necessarily connected with blockheadism and opposed to merit. But he reminded the House that Jourdan, Suchet, Victor, Ney, and Soult, who had risen by merit, had been out-marched, out-generalled, and out-fought by Graham, Hill, Cole, Crawford, Picton, Pakenham, and Beresford, and that on the glorious field of Waterloo Napoleon, the child of merit, was defeated by Wellington, the soldier of fortune.—Colonel Dickson seconded the amendment, and contended that if the purchase system were abolished to-morrow it would be commenced again, for the junior officers would subscribe among themselves to purchase out their senior officers, as was done in the Indian service and in the militia.—Mr. O'Brien supported the motion; Sir F. Smith, Capt. Jervis, Colonel Lindsay, and Colonel P. Herbert opposed it.—Mr. S. Herbert said that if the system of purchase were abolished to-morrow, there would be no substantial difference in the class which officered the army. At the same time he was free to admit that the purchase system was in some cases open to grave objection. Having referred to the recommendations of the various commissions which had inquired into the subject, he said that he was prepared to recommend a scheme by which purchase should stop at the rank of major, and lieut.-colonels should be appointed by selection. He was prepared to take this course because it was in the upper classes the abuses occurred, while in the lower ranks there was that acceleration which tended to keep the army in a state of youth and vigour. In making this announcement he was also bound to declare that he would not move an inch further than he could see his way, and would not attempt to touch those portions of the existing system which, in his opinion, ought not to be disturbed.—Mr. Ellice predicted that the course which the Government were prepared to adopt would but aggravate the evil.—Colonel North believed that it would destroy the existing system.—Lord Stanley expressed a hope that there would be no division, as he considered the concession offered by the Minister for War a fair compromise of a difficult and delicate question.—Sir D. L. Evans accepted the suggestion, and offered to withdraw his motion.—Captain Vernon also consented to withdraw his amendment, but several members insisted on a division, which, when taken, resulted in the motion being negatived by 213 to 59.—Colonel Sykes obtained leave to bring in a Bill to amend an act for the better government and discipline of the *Universities of Scotland*, and for the union of the two universities and colleges of Aberdeen.—Lord Raynham likewise obtained leave to bring in a Bill to amend the law relating to the punishment of persons convicted of aggravated *Assaults on Women and Children* and for the more effectual prevention of *Cruelty to Animals*.—Mr. Laing obtained leave to introduce a Bill to make further provision for improvements in the harbours of the *Isle of Man*. On the order for the second reading of the *Piers and Harbours Bill*, Mr. Ridley opposed the Bill.—Lord C. Paget did not object, on the part of the Admiralty, to the second reading, on condition that the Bill should be referred to a select committee.—After some discussion the debate was adjourned. The report on the *Customs Acts* was brought up and agreed to, except the resolutions relating to malt and timber, which were deferred. The report of the *Committee of Ways and Means* was likewise brought up and agreed to.

Wednesday.—*Annexation of Savoy.*—Mr. Milnes gave notice that, on Monday next, on the motion of Mr. Kinglake for an address to the Crown respecting the annexation of Savoy and Nice to France, he should move an amendment expressing the deep regret of the House at the agitation, on apparently insufficient grounds, of a question affecting the frontiers of a great State defined and secured by the assent of Europe, and assuring her Majesty that the House would support her Majesty's advisers in conducting their negotiations upon the question to an issue compatible with the true interests of France, Switzerland, and Italy, with the faithful observance of treaties, and with the maintenance of the peace of Europe.—Mr. Milnes then moved the second reading of the *Registration of Voters Bill*, which he explained was intended to limit to 300 the number of objections to be heard in the Registration Court in any one day, with the view of remedying the inconvenience which now arose from cases being postponed, often leading to the erasing of voters' names, and the consequent loss of the franchise.—Sir G. Lewis said that the evil which the Bill was intended to remedy was by no means so extensive as to require a special Act of Parliament. It was desirable, however, that the existing intricate machinery of elections should be reviewed and consolidated, and with that end the Government had already prepared a Bill on the subject. He trusted, therefore that the hon member would withdraw his motion.—After some observations from Mr. Baines, Mr. Pease, Sir F Goldsmid, Mr. Clive, and Mr. Walpole, Mr. Milnes acceded to the request of Sir G. Lewis, and withdrew the Bill.—Mr Cobbett moved the second reading of the *Coroners' Bill (No 2)*, the object of which is to assign a fixed salary to coroners, who are now paid by fees, and thus prevent the disagreements which so frequently occur between county magistrates and coroners on the subject.—Mr. E. James moved, as an amendment, that the Bill be referred to a select committee.—Sir G. Lewis said that he had a Bill before the House to give coroners the right of appeal to the Queen's Bench in cases where the magistrates might disallow their fees, and he thought the mode proposed by the Government was the proper way of settling the question. He opposed the second reading of the present measure because it proposed to give an appeal to the Home Secretary, whom it would enable to fix the salary of the coroner as a charge upon the county rate. This was a new principle, which could not be justified except in a case of urgent necessity, and no such case had as yet been made out. After some discussion the amendment was agreed to, and the Bill referred to a Select Committee.—The *Spirits (Ireland) Act Amendment Bill* and the *Oxford University Bill* passed through committee.—In a Committee of *Ways and Means* a resolution was agreed to granting to her Majesty a sum out of the Consolidated Fund.—The report of the Committee on the *Customs Acts* was agreed to.

Thursday.—*Annexation of Savoy.*—Lord J. Russell appealed to Mr. Kinglake not to bring forward his motion on Monday as it would be disadvantageous to the public to proceed with it at the present moment.—Mr. Kinglake consented to postpone his motion to Monday week.—Mr. Cave moved for copies of the correspondence with the French Government in respect to localising the *Exportation of Coolies* to French colonies as labourers.—Lord J. Russell assented to the motion, which was agreed to. *Commercial Treaty*.—Mr Byng then moved that an humble address be presented to her Majesty, expressive of the sincere and grateful acknowledgment of the House for the treaty lately concluded with the Emperor of the French, and which they regarded as a new proof of her Majesty's desire to promote the welfare and happiness of her subjects, and as an additional guarantee for the continuance of the blessings of peace. He described at some length the advantages, political and commercial, which he considered would result from the treaty; and, referring to the foreign policy of the Government, said that it had been temperate and dignified, and such as he believed was calculated to preserve the peace of Europe. He admitted that the motion which he had submitted to the House bore the character of a vote of confidence in Ministers; and, looking at it in that light, he had no hesitation in saying that the honour of England and the best interests of the country were in safe hands.—Mr. Baines seconded the motion.—Mr. Lindsay said he heartily approved of the treaty and should therefore withdraw for the present the motion he had placed on the paper to add to the resolution a paragraph conveying the gratification which the House would feel if the treaty of commerce were accompanied by a treaty of navigation abolishing all differential duties on the trade carried on in British or French vessels between the ports of both nations.—Mr. Peacocke and Mr. B. Cochrane opposed the treaty; Mr. Clay, Mr. Ewart, Mr. Maguire, Mr. Slaney, and Mr. Ridley supported it.—Lord A. V. Tempest moved an amendment to the effect that the House declined expressing an opinion on the treaty until the final intentions of the Emperor of France with reference to the projected annexation of Savoy be made known to the House. He approved of the treaty, but thought it right to know more of the Emperor's intentions before assenting to the motion before the House.—Sir Hugh Cairns said that though he did not approve the treaty, it was his intention to vote in favour of the motion, on the ground that it would do more harm to reject the treaty than to pass it. He pointed out various defects in the treaty, and said it would hereafter be remembered as having curtailed a considerable portion of their revenue, and prevented the people from enjoying that exemption from excessive taxation which had long been promised them.—Mr. M. Gibson said it would give him great satisfaction to see other countries abolishing their navigation laws as we had done. He was of opinion, however, that the advantage derived by France had been overrated, as, if the whole carrying trade were thrown on our hands, it would not amount to more than 186,000 tons.—Sir S. Northcote objected to the treaty altogether, because it would cripple us for a series of years and interfere with our liberty of action. The amendment of Lord Adolphus Vane Tempest was then withdrawn, and the debate adjourned.—The Lord-Advocate obtained leave to bring in certain bills relating to *Titles to Land*, *Bankrupt Law*, *Herring Fisheries*, and *Inventory Duty in Scotland*. The *Isle of Man Harbour Bill* was read a second time.

Friday.—*The Budget.*—The Chancellor of the Exchequer made a full statement with regard to his Customs' resolutions, defining the mode in which he proposed to levy the registration fee of 1*d.* on ship packages. He intended to propose that dealers in wine in bond should pay a license fee of 10 guineas if they sold quantities between 90 gallons; and to modify his proposal with regard to the imposition of a stamp on contracts.—Mr. Mildmay asked whether it was intended to intrust the replanting of the *Shrubs in Hyde Park* to the same official to whom the planting was intrusted on the previous occasion.—Mr. Cowper said there was no reason why the person who had taken the shrubs up should not put them down again. Left sitting.

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 94⅜ to ½ for Money, and 94⅝ for the 11th of April; Three per Cents. Reduced, 94⅜; New Three per Cents., 94⅜ to ½; New Two and a Half per Cents., 78¼; Indian Five per Cent. Stock, 103⅞ to 104⅛; Five per Cent. Enfaced Rupee Paper, 99⅜ to ½; Ditto Five and a Half per Cent., 105; Indian Four per Cent. Debentures of 1858, 97⅛; India Bonds, 4*s.* prem.; Exchequer Bills, 18*s.* to 22*s.* prem.—Foreign: Buenos Ayres Six per Cents., 84; Belgian Four and a Half per Cents., 98½; Dutch Four per Cent. Certificates, 102¼ to 102½; Ditto Two and a Half per Cents., 66⅝; Equador New Consolidated, 13½; Peruvian Four and a Half per Cents., for Acct., 92¼ to 92½ ex div.; Portuguese Three per Cents., 1853, for Acct., 44; Russian Four and a Half per Cents., 97½ to 98¼; Ditto Three per Cents., 1859, 65; Spanish Three per Cents., for Acct., 44⅞.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,989,505	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	14,514,505
		Silver Bullion	—
	£28,989,505		£28,989,505

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£10,171,190
Rest	3,732,497	Other Securities	20,953,807
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	8,341,365	Notes	8,320,150
Other Deposits	12,830,611	Gold and Silver Coin ..	705,688
Seven day and other bills	697,452		
	£40,150,925		£40,150,925

8th day of March, 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—H. Bailey, Cheltenham, Gloucestershire, Cabinet Maker—J. Boucher, Blackwell, Derbyshire, Dealer in Timber—J. Collins, Oxford, Paper Maker—G. Crooks, Leeds, Grocer—G. Hayman, Portsmouth, Licensed Victualler—J. Kershaw and W. G. Kershaw, Wakefield, Yorkshire Stone Masons—T. Lewis, Abergavenny, Monmouthshire, Ironmonger—C. Marson, sen., Leominster, Herefordshire, Innkeeper—G. F. Mills, Tamworth, Warwickshire, Innkeeper—J. Pearce, Holborn Hill, City, Woollendraper—W. Pook, Exeter, Grocer—J. B. Williams, Sandbach, Cheshire, Ironmonger.

BANKRUPTCY ANNULLED—R. Robinson, King William Street, Strand, Spirit and Bottled Beer Merchant.

SCOTCH SEQUESTRATIONS—T. Beveridge, Clarkson, Merchant—R. Cunningham, Greenock, Upholsterer.

FRIDAY—BANKRUPTS—W. M. Bell, Liverpool, Draper—S. Boswell, Dorking, Builder—C. M. Cheetham, Worksop, Nottinghamshire, Linen and Woollen Draper—R. Goodacre, Nottingham, Grocer—T. V. Hopkins, King's Road, Chelsea, Grocer—J. G. Leeman, Ilkeston, Derbyshire, Draper—C. Marson, sen., Leominster, Innkeeper—N. Symons, Cambridge Street, St. Pancras, Middlesex, Ironfounder.

Metropolis and its Vicinity.

The Reform Bill.—On Saturday afternoon a deputation from the Lancashire Reformers' Union waited upon Lord J. Russell for the purpose of ascertaining if it were possible in the new Reform Bill to insure to Lancashire a larger share in the redistribution of seats. Mr. George Wilson, Chairman of the Union, Mr. Bayley, M.P., Mr. Heywood, and other gentlemen addressed his lordship and urged the claims of St. Helen's, Ulverston, Darwen, and Chorley to representation, and the expediency of dividing South Lancashire into two divisions, and of giving an additional member to Salford, the new seats to be gained by the disfranchisement of Clitheroe and other small boroughs. Lord John Russell in reply said:—"I think the best course I can pursue is not to enter into a discussion upon any of the statements which have been made to me at present. I can only say that the Government very carefully considered the measure before they brought it forward, both as regards what they ought to propose and what they were likely to carry. Of course, every one of the questions which have just been raised is calculated to lead to many considerations. Our object is to extend the right of voting as far as possible to a large class of persons, and to do something, though certainly not much, in the way of adding to the representation of populous districts. In doing that we were bound to consider not only what is best to be done if property and population are taken as the general basis, but also what can be done in the present state of affairs. I can only say that all the statements which have been made to me shall be duly considered, but I cannot hold out any hopes that we should be likely to carry a Bill that went much further than the present Bill."

Report of Committee on Church-rates.—The following are the proposals made by the Select Committee of the House of Lords on Church-rates, to alter the existing law on that subject:—

"1. That for the future persons desirous of being exempted from contributing to the church-rate in any parish may give yearly notice to that effect to the churchwardens prior to the meeting of any vestry for the purpose of making a church-rate; and that such persons shall not be entitled to attend any such vestry, or to vote upon the making or application of such rate, or to act as churchwardens in any matter relating to the church, or to retain any seat appropriated to them in the church during the term of such exemption. 2. That the rate, when voted by the vestry, shall be levied upon all persons liable to it who have not given such notice. 3. That the items for which a rate may be made shall be definitely declared by law. 4. That the ratepayers in any new parish or district shall be rateable for the purposes of their own church and no other. 5. That there shall be the same powers for the recovery of church rates as exist for the recovery of poor-rates, and in case of objection to the validity of the rate an appeal shall lie to the general quarter sessions, and that the jurisdiction of the Ecclesiastical Courts in such matters shall cease." The committee also call the attention of Parliament to the following resolution of the committee:—"That the principle of assessing the owner instead of the occupier to the church-rate is well deserving the serious consideration of Parliament in any future legislation on this subject."

Sunday School System.—On Monday evening an influential meeting of clergymen and superintendents of Sunday schools was held at Radley's Hotel, Blackfriars, to consider the present position of the Sunday school system in connexion with the Church of England, and to provide means for promoting its efficiency. The Bishop of London presided, and referred to the great importance of the Sunday school movement, which had, he said, given a great impulse to the cause of religion. He considered, however, that there were many faults in the system, and the object of the meeting was to endeavour to improve it. Sunday school children of a tender age were easily managed, but when they arrived at the ages of 14, 16, and 17 they were exposed to many temptations, and were very difficult to manage, while thousands of them at a more advanced age completely forgot the religious instruction received in their youth, and formed part of the great un-Christian community. It was therefore necessary to think of some plan to prevent Sunday school children of an advanced age from slipping through the hands of clergymen and relapsing into a state of ignorance. The meeting was then addressed by other speakers, by whom several practical suggestions were thrown out. A code of rules for the guidance of teachers was then agreed upon.

Loss of the Mail Steamship Hungarian.—Accounts received by the Canada, which left Halifax on the 24th ult., bring the melancholy news that the Montreal Ocean Steamship Company's screw steamer Hungarian, Captain Jones, which left Liverpool for Portland on the 8th of February, with about 35 passengers and a crew of 80 persons, was totally lost with all on board on Sunday morning, the 19th of February, on a reef off Cape Sable, about 200 miles south of the spot where the steamship Indian, belonging to the same company, was lost a few months back. Her lights were seen at 4 o'clock in the morning and disappeared at daybreak. Six mail-bags had floated ashore, but communication with the ship was impossible owing to a heavy sea. A portion of the vessel was visible at low water. A steamer had gone to the scene of the wreck, but the latest news states that it is quite certain that no one has survived. She had a full cargo of Manchester goods, which was insured at Lloyd's to the amount of about 150,000*l.*, and the vessel herself was insured for about 40,000*l.* The following is a list of the passengers copied from the books of the agents of the company:—

"*Cabin Passengers.*—Mr. J. E. Wilson, Mr. and Mrs. Balmer, Rev James Stuart, Mrs. Woods, Mr. and Mrs. E. Evans, Mr. Allan Cameron, Mr W R Crocker, Mr. J. W. Crocker, Mr. Leslie, Mr. and Mrs Talbot, Dr. and Mrs Samaniego Mr Barry A. B Cortin, Mr Wyatt, Mr. Boultonhouse, Mr Boulton, Mrs Belmo and child, Dr Barrett, and Mr. G J Nash, officer in charge of mails. *Steerage Passengers.*—Hugh M'Caffrey, Abraham Tagg, William Vogle, John Richardson, Henry Richardson, T. Allen, Frederick Child, Mrs. F. Child, Frederick Child, Bell Morrison, Richard Madden, Robert Martin, E. D. Bartlett, George Shank, George M'Dermott, John Daly, John Delaney, William Kerley, William Wright, Michael Lucey, Martin Downes, Francis Richardson, Miss Ellen Sheehan, and Patrick M'Guerin.

St. George's-in-the-East.—There were some disturbances in this church on Sunday afternoon, in spite of the presence of 250 policemen. A body of young men took their seats in the choristers' stalls with the intention of holding them against the clergy and choristers at the evening service. As they refused to quit, the Rev. Bryan King the rector took one of them by the collar, dragged him off the seat, and afterwards

locked him up in the vestry room as a prisoner. The same operation was performed upon a second man, then upon a boy, while a young man named Littlejohn, the son of a vestryman, was so severely handled by the rector that his clothes were torn. The police declined to interfere but offered to take the charge if the persons assaulted would give Mr. King into custody. This was ultimately declined, and proceedings were subsequently taken in the police court against the rector and others for assault. The result of the inquiry on Thursday was that the Rev. Bryan King was fined 5*s.* on the complaint of assault on Mr. Littlejohn, son of a vestryman; and Mr. Dove, the curate, was fined 40*s.* for assault on Mr. Constable Herbert. The rest of the defendants were admonished and dismissed.

GREAT NORTHERN CRYSTAL PALACE.—The scheme which was announced about 12 months since, under the title of the Palace of the People, at Muswell Hill, has at length taken a definite form, and the prospectus has been issued for the Great Northern Palace Company, with a share capital of 400,000*l.*, in 10*l.* shares, and a debenture capital of 200,000*l.*, making 600,000*l.* in the whole. The attendance at the Crystal Palace is cited to prove the value of the proposed scheme, as the new palace will be available for more than 1,500,000 persons residing on the northern side of the river, without the inconvenience of passing through the streets of London. It is described as being easily reached by omnibus, or by the Great Northern, Blackwall, North London, and Metropolitan Railways; whilst passengers arriving by the London and North-Western, Great Western, Midland, Eastern Counties, or Great Northern lines, from the various portions of the kingdom with which they are connected, can be conveyed to the palace without touching the London streets. An estate of 450 races has been secured, of which 150 are to be appropriated to the use of the palace and grounds; 30 acres reserved for benevolent institutions connected with art, science, literature, music, horticulture, and railway interests, and the remainder held for building purposes. Mr. Owen Jones has designed the palace, which will contain, amongst other attractions, a winter garden. There are to be concert and lecture rooms, and one feature of the institution will be to endeavour to make its resources subservient to the cause of popular education, under the direction of a council, of which Lord Brougham has consented to act as president. Every original subscriber of 10 shares will receive a free ticket of admission for a period of 10 years after the opening, in addition to any dividends which may be realised.

BRITISH MUSEUM.—A Parliamentary return has been published of all correspondence between the officers of the Museum and the trustees respecting the want of space for exhibiting the collections in the institution, and the removal of part of them. The result of the correspondence was the following resolution passed at a meeting of trustees held on the 21st of January, by a majority of 9 to 8:—"That it is expedient that the natural history collections be removed from the British Museum, inasmuch as such an arrangement would be attended with considerably less expense than would be incurred by providing a sufficient additional space in immediate contiguity with the present building of the British Museum." The Principal Librarian has ordered certain mutilated books to be exhibited in the reading-room, with a note directing attention to the circumstance that portions have been torn out by some person or persons who have visited the room, and expressing a hope that the readers will endeavour to discover and put a stop to such proceedings in future.

THE GREAT METROPOLITAN SEWER AT STRATFORD.—The works of this sewer which were delayed for some time partly from the strike in the building trade, and partly to enable the commissioners to apply to Parliament for additional powers, are now about to be commenced, and from 40 to 50 navvies have been ascertaining the nature of the soil between Stratford and Barking Creek. London blue clay is found on an average 16 feet below the surface, but in some places it rises from 20 to 27 feet deep. In the vicinity of Barking Creek, a fine gravelly soil and deposits of shells have been discovered, leading to the conclusion that the district was once covered by the sea.

THE SCHOOL OF DESIGN IN GOWER STREET.—The Committee of Council on Education have issued a minute stating that the rent, taxes, repairs, and other expenses of the school for female students in Gower Street, which have hitherto been paid by Government, have exceeded 500*l.* a year, and that the students' fees have only been sufficient to cover the cost of instruction. Their lordships consider that the time has arrived when the Government should no longer be charged with the local expenses, which in other cases are paid by the voluntary principle, and that if the school in Gower Street is to be maintained some voluntary agency must undertake its local management. Towards accomplishing this the Committee of Council will give every aid in their power; but they desire it to be understood that the rent and local expenses of the school will cease to be paid by Government in the course of next year, and that if no voluntary agency should come forward the school will be closed.

NAVAL ARCHITECTURE.—The Institution of Naval Architects has held its first series of meetings last week at the house of the Society of Arts, in the Adelphi. The first morning meeting was held on Thursday, the second on Friday, and the third on Saturday. There were also evening meetings on Thursday and Friday. Numerous papers were read and discussed—among others, one "On the strength of Iron Ships," by Mr. William Fairbairn, of Manchester.

HARBOURS OF REFUGE.—A deputation from Newcastle-upon-Tyne, West Hartlepool, and Filey had an interview with Lord Palmerston on the 8th inst., and another deputation had an interview with Mr. Milner Gibson on Monday to press upon her Majesty's Government the urgent necessity of commencing the construction of harbours of refuge, as suggested by a select committee of the House of Commons appointed to inquire into the best sites, by the formation of harbours on the north-east coast, the scene of so much loss of life and property. General Sir F. Smith, M.P., introduced the first deputation, which was accompanied by 23 other members of Parliament. Lord Palmerston said the subject was one of very great importance, and he would lay what had been addressed to him before her Majesty's Government. He was indebted to the deputation for the information they had given him, and he could assure them that the matter would have their serious consideration.

HIGH TIDE IN THE THAMES.—The prediction of the astronomers that an extraordinary high tide would occur on the 8th inst. has been completely fulfilled, the tide of Thursday not having been surpassed in magnitude and velocity by any that has occurred for many years. Its effects on the banks of the river from Richmond to Wapping were extremely destructive to property, notwithstanding the precaution taken by the occupiers of waterside premises in consequence of the high tide of Wednesday, which though destructive, was insignificant with that of Thursday. These extraordinary high tides have been caused by the moon being in perigee at its full on the 7th inst., and the sun and moon being near the equator; all of which causes combine to attract the waters of the ocean, and raise them above their ordinary level. The recent heavy gales have also greatly affected the tide, and caused it to rise to an extraordinary height both in the river and in several of the outports.

THE PUBLIC HEALTH.—The Registrar-General's report states that the number of deaths registered in London in the week ending Saturday, March 3, was 1442, or less by 58 than the deaths in the previous week. In the corresponding weeks of the 10 years 1850-59 the average number was 1207; which, if raised in proportion to the increase of population, will become 1327. The present return is therefore 115 above the average. During the week the births of 877 boys and 896 girls, in all 1773 children, were registered in London. In the ten corresponding weeks of the years 1850-59 the average number was 1742.

Provincial.

CHESTERFIELD.—The *Derby Mercury* states that the Rev. H. G. Garrett, charged last week at Chesterfield with embezzlement, having obtained the necessary bail, has left the town, and that though a number of writs have been placed in the hands of the police against him, they have been unable to find the offender. The same paper says that there is good reason to believe that Mr. Garrett will not appear to take his trial.

MANCHESTER.—The office of postmaster of this city, one of great labour and responsibility, has become vacant by the resignation of Colonel Willock, who has held it for about 32 years.

NEWCASTLE-ON-TYNE.—A terrible explosion occurred on Friday in the Burradon Pit, by which about 76 men and boys and 20 horses were suffocated or burnt to death. As soon as the explosion occurred two waste-men went down the pit to render assistance, but had not got three yards from the bottom when they were overpowered and killed by the afterdamp. Sixty-nine bodies had been recovered on Monday morning, but many of them were so much mutilated that it was difficult to identify them. One man had been blown into four pieces, and an idea may be formed of the force of the explosion from the fact that the head of a horse was found 50 yards from where the carcase was lying. The scene in the village on Saturday and Sunday was of the most painful character, and workmen were employed night and day making coffins for the bodies, which were interred together on Monday. The inquest on one of the sufferers was opened on Monday, when the jury returned a verdict that death had ensued from the effects of an explosion in Burradon pit, but that there was no evidence to show how it originated. A more general inquiry, however, will take place at the adjourned inquest on the other sufferers, when scientific evidence will be adduced, and the Government inspector and several viewers will be examined.

NORWICH.—The hurricane of Tuesday week was felt with great severity in all parts of Norfolk. In this city more damage was done to house property than the wear and tear of half a century could have effected, and in the county at large the devastation of buildings, farm produce in barns and stacks, and especially timber, has been wide spread as well as serious. There is hardly a single domain in the county which has not lost some of its finest timber. Holkham Park has lost nearly a thousand trees, some of which were removed from their original site with immense masses of earth attached to the roots. In Kimberley Park there has been considerable destruction, and some of the fine oaks for which it has long been famous now lie at full length on the sward. At Gunton Park it is stated that thousands of trees are destroyed. At Cossey Park the destruction has been considerable, and some of the choicest ornaments of the lawn in timber are destroyed. Blickling Park has also sustained considerable damage. At Westwick Park the hurricane has cut lanes in the woods of the domain, making its progress as clearly defined as though the axe had been its pioneer; and at Taverham Park the finest old timber has suffered considerably.

PEMBROKE.—The screw line-of battle ship Howe, of 3500 tons, 1000 horse-power, and 121 guns, was successfully launched at this dockyard on Wednesday last in the presence of an immense concourse of spectators.

RETFORD.—On Tuesday night Mr. Charles Spencer, a cattle jobber of Walkeringham, was murdered on his return from Gainsborough market, shortly after he had crossed the Trent by the Walkerith ferry. The murderer appears to have been lying in wait for him, and to have at first attempted the murder by firing two pistol shots. These must have failed to take effect, for the murderer then cut deceased's throat with some formidable weapon, cutting right through a thick muffler he had round his neck, and nearly severing the head from the body, which was then thrown into a dike 40 yards from his own residence, with the two discharged pistols. A man called John Fenton, who had been in the company of the murdered man earlier in the evening and knew that he had money in his possession, has been taken into custody on suspicion of having committed the murder. In his possession were found caps corresponding with those found upon the pistols, and also some bullets, which fitted the barrels exactly. A pair of trousers and a pair of leggings, which the prisoner is said to have worn on Tuesday, were found freshly washed. The inquest was opened on Wednesday, and after examining two or three witnesses, was adjourned for a week.

PORTSMOUTH.—The boring operations on the shoals of the eastern approaches to Spithead, for the purpose of selecting the sites for the forts recommended by the Defence Commission for the protection of the Dockyard, are now in progress. An excellent foundation has been found on the "No Man's" shoal, but on the "Horse" shoal nothing firmer than shingle has been found at a depth of 47 feet. The boring has been commenced on the southern portion of the "Spit" shoal, but has been interrupted by the recent stormy weather.

SHEFFIELD.—A non-unionist saw-grinder, named James Linley, died in this town last week, from injuries received by being shot in the head in August last. It appeared from the evidence at the inquest which took place on Friday that his life had been attempted on three previous occasions, and that the shot which has at length proved fatal was fired at him while drinking in the "snug" of the Crown Inn. At the time of the outrage two women deposed to facts which appeared to implicate a man called Brown, and two pistols of different sizes were found in his possession. As however it was impossible to extract the ball there were no means of proving that it had been fired from either of the pistols, and Brown was remanded at large. On the death of Linley the ball was extracted, and a gunsmith having expressed a decided opinion that it could not have been fired out of either of the pistols, being too large for one and too small for the other, Brown was discharged from further custody, and the jury returned a verdict of "Murder against some person or persons unknown."

SOUTHAMPTON.—At the Town Hall on Tuesday Frederick Cannon was brought up in custody, having arrived at this port on Monday in the Royal Mail Steamship Company's ship Oneida, from Pernambuco, charged with the wilful murder of the captain and chief officer of the ship Accrington, on the high seas, on her voyage from Liverpool to Calcutta. The prisoner was sent to Southampton by her Majesty's consul at Pernambuco. The official document received from the consul with the prisoner states that a naval court had been held to inquire into the cause of the deaths of the captain and chief officer of the ship, and it had been decided to send Frederick Cannon home for trial on the charge of murder, and 12 of the crew as witnesses. The Accrington was on her voyage to Calcutta with soldiers and soldiers' wives and children. The conduct of the captain appears to have been so violent and extraordinary that he became the terror of the whole ship, and the circumstantial evidence goes to prove that one morning Cannon, who was the steward, put a quantity of tartar emetic into some coffee, of which the captain and the principal officers partook. Captain Homer and Mr. Cooper, the chief mate, died from the effects of the poison; and Mr. Carroll, the surgeon, narrowly escaped with his life. The Southampton magistrates remanded the prisoner until the receipt of instructions from the Board of Trade. By the accounts from Pernambuco it appears that of the 470 women, children, and soldiers on board the Accrington, 90 have fallen victims to typhus fever, scarlatina, and measles, most of the cases having occurred on the voyage caused by the heat and want of ventilation inseparable from an iron sailing ship in the tropics, and by insufficient medical attendance. The women and children were all landed at Pernambuco, and by the exertions of her Majesty's Consul had recovered their strength and were preparing to resume their voyage. A new master had been appointed to the ship and an assistant-surgeon.

Ireland.

THE POPE'S TRIBUTE.—The *Freeman's Journal* announces that the collections for the Pope in the diocess of Dublin will exceed 15,000*l.*; and that similar collections are in progress in the dioceses of Ossory, Meath, and Ferns. The Meath collection was inaugurated on Sunday last by a subscription of more than 600*l.* in the town of Mullingar.

STATE OF MAYO.—In consequence of the great excitement now existing in the county Mayo, in connection with the intended evictions of the Partry tenantry, and the approaching trial of the parties charged with the murder of Alexander Harvieson, at Tourmakeady, it has been found necessary to send a troop of the 15th Hussars from Dublin to Castlebar, where they remain until the assizes and eviction are completed.

THE NEW MAIL STEAMERS FOR HOLYHEAD.—It has been determined to place on the Dublin and Holyhead line four new steamers, which it is confidently expected will surpass, both in speed and power, any which have yet been attempted. These vessels called the Ulster, Munster, Connaught, and Leinster, will each be upwards of 2000 tons burden, 350 feet in length, and propelled by 800-horse power at a rate of speed contracted to be not less than 18 knots an hour. The Ulster was launched by the Marchioness of Chandos from Mr. Laird's yard at Birkenhead last week; the Leinster was launched on Tuesday from Messrs. Samuda's yard on the Thames; and the Munster and Connaught will be launched at Birkenhead in the course of a few weeks. The engines of all the vessels are to be oscillating, and will be supplied by Bolton & Watt, the paddlewheels being fitted with feathering floats.

Scotland.

MARISCHAL COLLEGE, ABERDEEN.—The Earl of Airlie was last week unanimously re-elected Lord Rector of Marischal College, Aberdeen. His lordship has intimated his intention to deliver an inaugural address to the students on Thursday, April 5, the last day but one of the College session.

THE CONVICT SALT.—The convict Edwin Thomas Salt, who was to have been executed on Tuesday at Edinburgh, for the murder of his wife, while they were both in a drunken state, has been respited during her Majesty's pleasure. It is expected that the sentence will be commuted to penal servitude for life.

EDINBURGH ANNUITY-TAX BILL.—The Chamber of Commerce of Edinburgh have resolved, by 31 to 18, to petition against the Lord-Advocate's Annuity-tax Bill.

Railways.

THE LATE ACCIDENT ON THE EASTERN COUNTIES.—On Tuesday afternoon another was added to the list of the unfortunate sufferers by the recent accident at Tottenham, by the death of Mr. James Haylock, farmer, of Ashden, who expired at the Green Dragon, Bishopsgate Street, after having undergone amputation of his leg.

Law.

JUDICIAL COMMITTEE OF THE PRIVY COUNCIL.—*The Rev. A. Poole.*—This was a motion on behalf of the Rev. Alfred Poole, late stipendiary curate of St. Barnabas, for leave to prosecute an appeal before the Judicial Committee of the Privy Council, from a sentence of the Archbishop of Canterbury, pronounced on the 23d March, 1859, confirming the revocation of the appellant's licence by the Bishop of London on the 25th of May, 1858. The question was whether an appeal does or does not lie from the sentence of the Archbishop in the matter of confirming the revocation of a curate's licence under the provisions of the 1st and 2d of Victoria, cap. 106. Their lordships having deliberated for some time, Lord Chelmsford said, that the question of right to appeal was one of great importance; their lordships were of opinion that leave should be given, reserving the question of the competency of appeal, and the right of protesting against it.

SPRING ASSIZES: HOME CIRCUIT, HERTFORD.—*Highway Robbery.—William Dunnock*, 36, and *Simeon Richardson*, 36, were indicted for a robbery with violence upon Jonas Valentine. The prosecutor, it appeared, was a farmer residing in the neighbourhood of Essendon, near Hertford, and on the evening of the 26th October he was at a public-house at that place, called the Salisbury Crest, and left to return home about a quarter past 8 o'clock. When he had got a short distance a man, whom he believed to be the prisoner Richardson, came up to him and put some question to him, and as he was about to reply the prisoner knocked him into a ditch, and struck him with a life preserver, and another man, who was stated to be the other prisoner, then came up, and the two rifled his pockets of the money and other property that was about his person. It was proved that both the prisoners were drinking at a beer shop about the time the robbery was committed, and that they were seen following the prosecutor, and there was no reasonable doubt upon the evidence that the prisoners were the parties by whom the offence was committed. Both prisoners addressed the jury in their own defence with considerable skill. The learned Judge having summed up, the jury almost immediately returned a verdict of *Guilty* against both prisoners, and certificates were put in, by which it appeared that they had been previously convicted of felony and sentenced to four years' penal servitude. Mr. Justice Wightman sentenced them to be kept in penal servitude for 10 years.

WESTERN CIRCUIT: WINCHESTER.—*Arson.—Charles Murray* was indicted for setting fire to a stack of oats at Boughclere. The prisoner was seen hovering about the neighbourhood of the rick for some time, and at length it was found to be on fire, and was utterly destroyed. Its value was 75*l.* When asked about it the prisoner said he did it. The prisoner cross-examined the witnesses with considerable acuteness, but with extreme impudence. The jury found him *Guilty*, and two previous convictions being proved against him, he was sentenced to six years' penal servitude.

OXFORD CIRCUIT: READING.—*Arson.—George Lay*, aged 11, and *George Ferris*, aged 14, were charged with setting fire to a rick of straw and a rick of wheat, the property of J. K. Reeves, at West Hendred, on November 8. The two prisoners were seen coming from the direction of the prosecutor's stacks while they were burning. The elder boy Ferris was apprehended the next day, and admitted that he and the other prisoner had got some lucifer matches, and set fire to the ricks, and a box of matches was found in a ditch by which he had passed. Lay also was apprehended, and gave a similar account of how they had set the ricks on fire. It appeared that the boys had left their master's service a few days before the fire, and gave as a reason for doing it that they had been beaten by the carman, and did not like to go back. The jury found them *Guilty*, but strongly recommended them to mercy on account of their youth. Mr. Justice Keating sentenced each of them to be privately whipped and imprisoned for three weeks, and at the expiration of that period Lay to be sent to the Ealing Reformatory for five years, and Ferris to the Warminster Reformatory for the same period.

NORTHERN CIRCUIT: DURHAM.—*Highway Robbery.—William Hay*, a pitman, was charged on Monday with robbing Daniel Kennedy of a silver watch. The Rev John Kelly, a Roman Catholic priest, was called as a witness but refused to say from whom he had received the watch, which he had previously given up to the police, on the ground that the watch had come into his possession in the exercise of the duties of the confessional. Mr. Justice Hill said that the law protected Mr. Kelly from in any way criminating himself, and that he would see him protected, but that the law would not protect a clergyman of any persuasion who chose to receive property, the produce of a felony, immediately after the offence had been committed, from disclosing from whom such property was received. The rev gentleman still declined to say from whom he received the watch, stating that by doing so he would be disclosing information received in the confessional. He was again warned by the learned Judge, but persisted in this course, whereupon his lordship committed him to prison for contempt of Court. The prisoner was found *Guilty*, and sentenced to six months' imprisonment. Mr. Kelly was liberated on Wednesday.

Obituary.

LORD VISCOUNT SOUTHWELL, K.P., died on the 29th ult. in his 83d year. He was the representative of a Catholic family of great antiquity in the county of Nottingham, from a younger branch of which the present holder of the barony of De Clifford is descended. The deceased peer—Thomas Anthony Southwell, Viscount Southwell, Baron Southwell, of Castle Mattress, in the peerage of Ireland, an Irish baronet, Knight of St. Patrick—was born in 1777, and succeeded to the title in 1796. He married in 1799 the second daughter of John Berkeley, Esq., of Henlip, in the county of Worcester. One of his daughters is the wife of the Right Hon. Richard More O'Ferrall, M.P. Having no sons, Lord Southwell is succeeded in his title by his nephew, Thomas Arthur Joseph, son of the late Hon. Lieut.-Colonel Southwell, by the eldest daughter of the late Thomas Dillon, Esq., of Mount Dillon, in the county of Dublin.

THE RIGHT REV. DR. BLAKE, Roman Catholic Bishop of Dromore, died on Wednesday in Newry, at the patriarchal age of 85 years. He was in his day actively employed in the service of his Church, and had been sent on three missions to Rome in connection with the ecclesiastical affairs of Ireland and the Irish College.

SIR ROBERT C. HILL, C.B., who commanded the Blues in the Peninsular war and at Waterloo, died in the house where he was born, Prees Hall, Shropshire. He was the last surviving brother of the first Lord Hill. Four of the brothers were in the Peninsula and at Waterloo—General Lord Hill, Sir Robert C. Hill, Major-General Clement Hill, who died in command of the Mysore division of the Madras army at Guersoppa, in 1845, and Sir Thomas Noel Hill. Sir Robert C. Hill and his brother Clement were both severely wounded at Waterloo.

BIRTHS.—On Monday, the 5th inst, in Paris, the Duchess de MALAKHOFF of a daughter—4th inst, at Slains Castle, Aberdeenshire, the Countess of ERROLL, of a daughter—5th inst, at 37, Belgrave Square, Lady WALTER SCOTT, of a son and heir—24th ult, at Springfield, South Queensferry, the Hon. Mrs. HENRY W. CHETWYND, of a daughter—27th ult, at St John's Lodge, the wife of the Rev Dr BATESON, Master of St. John's College, of a daughter—24th ult, at Smart's Hill, Penshurst, the wife of RICHARD STREATFEILD, Esq., of a son.

MARRIAGES.—On the 6th inst, at Trinity Church, St. Marylebone, ROBERT GEORGE TUPNELL, Esq., Commander R.N., second son of the Rev. George Tupnell, to JESSIE ISABEL, youngest daughter of the late Sir WILLIAM CURTIS, Bart., of Portland Place, London, and Cliff House, Ramsgate.—19th Jan., at St. Paul's Cathedral, Calcutta, N. W. ELPHINSTONE, Esq., Deputy Commissioner in the Punjaub, second son of Captain Elphinstone, R.N., of Livonia, Devonshire, to GEORGINA HENRIETTA ELLIOT, youngest daughter of the late Lieutenant-General the Right Hon Sir GEORGE ARTHUR, Bart.—21st ult. at Erith, Kent, WILLIAM MARTIN, Esq., only son of the late George Frederick Martin, Esq., of Castlecare, in Norfolk, to CICELY CLARISSA, third and youngest daughter of Captain F. W. STEHELIN, late H.M.'s 13th Light Infantry, P.A.O., and great granddaughter of Lieutenant-General Stehelin, Royal Artillery.—2d January, at Mussoorie, Lieutenant WILLIAM G. MURRAY, 6th N.I., Topographical Assist., Great Trigl. Survey of India, to FLORENCE ISABELLA, daughter of the late Captain J. D. YOUNG, Brigadier-Major Queen's Troops, Fort William, Calcutta—1st inst, at St. James's, Paddington, CLIFFORD WATERMAN CHAPLIN, Esq., to ROSA, youngest daughter of the late WILLIAM JAMES CHAPLIN, Esq., of Ewhurst, Park, Hants, and 2, Hyde Park Gardens—29th ult. at Paris, ARBUTHNOT CHAS GUTHRIE, Esq., to ANNE EMILY FREDERICA second daughter of the late Sir HENRY CHAMPERNOWNE, Bart.

DEATHS.—On the 2d ult, at 3, Royal Crescent, Bath, the Right Hon Lady JANE HAMILTON, relict of Archibald Hamilton, Esq., of Rozelle, and daughter of Hugh, the 12th Earl of Eglinton, aged 85—29th ult, at Edinburgh, Miss GARDINER, daughter of the late General William Gardiner, sister of the Hon. Mrs. Charles Tollemache, and aunt of Maria, Marchioness of Aylesbury, aged 75—4th inst, at Wakefield, suddenly, MARY ANNE, widow of the Hon. HENRY DAVID ERSKINE, second son of the late John Francis, Earl of Mar, &c., aged 80—3d inst, at Overton House, Wakefield, AMY CECILY, infant daughter of the Hon. FRANCIS and Mrs. STUART WORTLEY, aged three months and a half—28th ult, wrecked in the steamer Nimrod, on her voyage from Liverpool to Cork, Sir JOHN JUDKIN FITZ GERALD, Bart, of Lisheen, county of Tipperary, aged 72—25th ult, at Little Chishill, Sir PETER BUCKWORTH SOAME, Bart., aged 66—2d inst, at 16, Blandford Square, Lady HAYTER, wife of Sir George Hayter, Kt., and K.S.L.—3d inst, at Thulgarten Constance, Grand Duchy of Baden, Sir GRENVILLE LEOFRIC TEMPLE, Bart., aged 30—4th inst, at Woodbine Hill, near Honiton, MARY, only child of the late Vice-Admiral Sir Houlton, MARY, only child of the late Vice-Admiral Sir HOUITON, MARY, only child of the late Vice-Admiral Sir THOMAS GRAVES, K.B., aged 87—4th inst at the Palace, Stephen's Green, Dublin, BLANCHE, wife of Captain G. H. WALE, R.N., and youngest daughter of his Grace the Archbishop of Dublin—23d January, at Calcutta, W. CAVENDISH SPENCER, Esq., Bengal Civil Service, eldest son of the Right Rev. Bishop Spencer, late Bishop of Madras, aged 30—28th ult, at Bognor, ELIZA, wife of the Rev. GEORGE RANKIN, and sister of the late General Sir P. Maitland, G.C.B., aged 77—29th ult, of scarlatina, at Windlestone Hall, county Durham, CAROLINE, daughter of Sir WILLIAM EDEN, aged 4 years and 8 months—2d inst, at Torquay, ISABELLA RACHEL, daughter of the late Major-General Sir ARCHIBALD GALLOWAY, K.C.B.—28th ult, at Waringstown House, county of Down, FRANCES GRACE, wife of Major WARING, of Waringstown and Newry, and daughter of the late Very Rev. Holt Waring, Dean of Dromore, aged 57—29th ult, at Charles Street, St. James's, Major-General REDMOND WILLIAM BROUGH, aged 68—5th inst. at Newton, in South Devon, HENRIETTA JANE, wife of Lieutenant-General JAMES STUART FRASER aged 59—5th inst, at 22, High Street, of bronchitis, Vice Admiral DIGBY, aged 73—1st inst. at Caverse Carre, Vice Admiral ROBERT RIDDELL CARRE, of Caverse Carre, aged 79—26th ult, GEORGIANA CAROLINE, wife of Captain MORGAN PRYSE LLOYD of Glasnevin, in the county of Carmarthen, and eighth daughter of the late Colonel SACKVILLE GWYNNE, of Glanbran Park, in the same county—29th ult, at Warren Wood, Herts, Mrs. RICHARDSON, widow of the late William Richardson, Esq., of Rich Hill, county of Armagh, Ireland, many years M.P. for the same county—2d inst, AUGUSTA, widow of the late Rev. Dr. ELDER, of the Charter House—3d inst, at Impington Hall, Cambridgeshire, MARIA, widow of the Rev ALEXANDER A. COTTON, formerly Rector of Girton, aged 89—29th ult, at Chelsea Rectory, the Rev. CHARLES KINGSLEY, Rector of Chelsea, aged 78.

Markets.

COVENT GARDEN.—March 10.

Supplies of most things though a little checked by the sudden return of cold weather still continue to improve. Pine Apples and Grapes, however, have not altered since our last report. Good Apples and Pears are still very scarce. Oranges are plentiful and cheap. Good Cobs realise 1s to 1s. 6d. per lb. Rhubarb, Asparagus, Seakale, Cabbages, Carrots, Parsnips, and Leeks are sufficient for the demand. Parsley is now comparatively cheap. Cornish Broccoli, which is furnished by the grateful, fetches from 3s. to 4s. per dozen heads. Green Peas of foreign growth continue to make their appearance. Potatoes realise 4s. 6d. a bushel. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Pears, per doz., 6s to 8s
Grapes, per lb., 8s to 10s	Oranges, per 100, 6s to 10s
Melons, each, 2s. to 4s	Lemons, per 100, 5s to 8s
Pomegranates, each, 4d to 6d	Filberts, p. 100 lbs., 50s to 60s
Apples, per doz., 2s to 3s.	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 7s to 10s	Artichokes, per doz., 2s to 3s
Seakale, per basket, 2s to 3s	Beet, per doz., 1s 6d to 2s
Rhubarb, per bundle, 2s to 3s	Celery, per bundle, 1s 6d to 2s
F. Beans, per 100, 2s to 2s 6d	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen bunches, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., per score, 1s to 1s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d
Cucumbers, each, 1s to 3s	

POTATOES.—SOUTHWARK, Monday, March 5.

During the past week the arrivals coastwise have been short, but rather heavy by rail. The trade still rules heavy at last week's prices. The following are this day's quotations:—Yorkshire Regents, per ton, 90s. to 140s.; Lincolnshire do., 80s. to 95s.; Dunbar do., 100s. to 120s.; do. Reds, 90s. to 100s.; Perth, Forfar, and Fifeshire Regents, 80s. to 100s.; do. Rocks, 75s. to 80s.; do. Reds, 75s. to 80s.; French Whites, 70s. to 80s.; Belgian do., 60s. to 70s.

HOPS.—BOROUGH MARKET, FRIDAY, March 9.

Messrs. Pattenden & Smith report that the market is quiet, and at present but little inquiry except for exportation.

COAL MARKET.—MARCH 7.

Bower's West Hartley, 15s. 3d.; Grey's West Hartley, 15s.; Howard's West Hartley, 15s.; Tanfield Moor, 13s.; Lambert's West Hartley, 15s.; Tanfield Moor Butes, 13s.; Walker Primrose, 13s. 6d.; Wylam, 16s.; Walls End Acorn Close, 17s. 6d.; Walls End Eden, 17s. 6d.; Walls End Riddell, 17s. 3d.; Walls End Hetton, 18s. 9d.; Walls End South Hetton, 19s 6d.; Walls End Cassop, 18s. 6d.; Walls End Heugh Hall, 17s. 6d.; Walls End Kelloe, 18s. 9d.; Walls End Shincliffe, 17s 3d; Walls End South Kelloe, 18s. 6d.; Walls End North Hartlepool, 15s 6d; Walls End Trimdon Thornley, 16s. 9d.; Carway and Duffryn Malting, 22s. 6d.; Powell's Duffryn Steam, 22s 6d.—175 ships at market.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, March 8.

Prime Meadow Hay	70s to 80s		Clover	90s to 105s
Superior do. (old)	84	90	New Clover	— —
Inferior do.	55	60	Second cut do.	75 88
New do.	—	—	Straw	25 30
Rowen	45	60		

DAVIS & Co.

WHITECHAPEL, THURSDAY, March 8.

Fine old Hay	84s to 90s		Fine old Clover	100s to 105s
Inferior do.	65	75	Inferior do	84 95
Prime New Hay	—	—	Fine New Clover	— —
Inferior do.	—	—	Fine 2d cut	83 90
Straw	26	30	Inferior do.	65 72

METROPOLITAN CATTLE MARKET

MONDAY, March 5.

The supply of Beasts is rather shorter and the weather favourable; the demand also is good, and consequently on the average prices have improved. Sheep also are not plentiful and late quotations are fully supported. Good Calves are very scarce and dear. From Germany and Holland there are 210 Beasts, 1250 Sheep, and 28 Calves; from Scotland, 150 Beasts; from Ireland, 270; from Norfolk and Suffolk, 2200; and 100 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	10	to 5	0	Best Long-wools	5	4	to 5	8
Best Short-horns	4	8	— 4	10	Do. Shorn	—	—	—	—
2d quality Beasts	3	8	— 4	4	Ewes & 2d quality	4	6	— 4	10
Best Downs and Half-breds	5	8	to 6	0	Do. Shorn	—	—	—	—
Do Shorn	—	—	—	—	Lambs	—	—	—	—
					Calves	5	0	— 6	0
					Pigs	4	0	— 5	0

Beasts, 5460; Sheep & Lambs, 17,970; Calves, 59; Pigs, 310.

THURSDAY, March 8.

There are a few more beasts, and trade is not very brisk; there is, however, scarcely any alteration in prices. We have

but an average supply of Sheep, but choicest descriptions are scarce; quotations of Monday last are pretty well maintained. Good Calves are scarce and dear. From Germany and Holland there are 120 Beasts, 800 Sheep, and 75 Calves; from Norfolk and Suffolk, 300 Beasts; from the northern and midland counties 100, and 155 Milch Cows from the home counties.

Best Scots, Herefords, &c.	.. 4	8 to 5 0	Best Long-wools	. 5	4 to 5	8
Best Short-horns	4	6 — 4 10	Do. Shorn	.. ..	—	..
2d quality Beasts	3	6 — 4 6	Ewes & 2d quality	4	4 — 4	8
Best Downs and Half-breds	.. 5	8 — 6 0	Do. Shorn	.. ..	—	..
Do. Shorn	.. ..	— ..	Lambs	.. ..	.. —	..
			Calves	.. ..	5 0 — 6	0
			Pigs	.. ..	4 0 — 5	0

Beasts, 1005; Sheep & Lambs, 4280; Calves, 113; Pigs, 210.

MARK LANE.—MONDAY, March 5.

The supply of English Wheat to this morning's market was moderate, and gradually disposed of at the prices of this day se'nnight The attendance was small, and the sale of foreign Wheat very limited; its value remains nominally the same. Barley is firm, with a good demand for grinding qualities. Beans and Peas bring last week's rates. The Oat trade is quiet, and prices are unaltered. There is no change in the value of Flour.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	40—48	Red	40—45
— — fine selected runs..ditto	46—48	Red	42—48
— — Talavera	46—52		
— Norfolk	—	Red	—
— Foreign	38—56		
BARLEY, grind. & dist., 24s to 30s..Chev.	38—44	Malting.	35—40
— Foreign..grinding and distilling	23—31	Malting.	35—41
OATS, Essex and Suffolk	19—24		
— Scotch and Lincolnshire..Potato	23—29	Feed ..	19—26
— Irish .....Potato	24—28	Feed ..	19—24
— Foreign.....Poland and Brew	23—26	Feed ..	17—24
RYE	35—38	Foreign.	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....30s to 40s....Tick	33—43	Harrow.	33—43
— Pigeon .....36s — 47s..Winds.	48—54	Longpod	—
— Foreign .....Small	38—46	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	36—38	Suffolk .	36—40
— Maple .... —s to —s ..... Grey	31—33	Foreign.	30—37
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	37—43		
— 2d do..... ditto	27—37	Country.	27—37
— Foreign .....per barrel	18—27	Per sack	30—37

FRIDAY, March 9.

During the past week the weather has been very changeable, sharp frost, alternate sunshine, rain, and snowstorms. The grain trade throughout the country has been inanimate. The supply of English Wheat continues good, as farmers generally cannot get on the land. The prices of all articles remain as last quoted, with very little doing. The purchases of Wheat for Ireland continue at intervals, but do not impart much life to the trade. The Flour trade is steady without alteration in prices. The arrivals of grain and seed-laden vessels from the South of Europe off the coast continue liberal, as do also the sales, which include Taganrog Ghirka Wheat at 48s. and Berdiansk at 50s. per 492 lbs.; Ibrail Barley at 25s. to 26s. 6d., and Odessa at 25s. per 400 lbs.; Odessa Maize at 34s. 9d. to 35s. per 492 lbs.; Egyptian Beans at 33s. per qr. imp. For forward delivery the following sales are reported: Egyptian Wheat at 39s. per qr. imp., Marianopoli at 50s. per 492 lbs.; Lagos Maize at 32s. per 480 lbs, Odessa at 32s. to 32s. 6d., and 33s. 6d. per 492 lbs., all c. f and i. to U. K. The arrivals of Barley, both English and foreign, have this week been large, of all other articles moderate, including only 40 qrs. of Wheat from abroad. There was but a small attendance at this morning's market, and the transactions in Wheat (either English or foreign) were limited; its value remains unaltered. The Barley trade is quiet, without alteration in prices. Beans and Peas bring late rates. Oats are a slow sale, at barely Monday's quotations.

ARRIVALS FROM MARCH 5 TO MARCH 9.

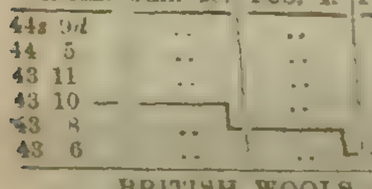
	Wheat.	Barley.	Oats.	Flour.
English ..	1440 qrs.	2430 qrs.	60 qrs.	1080 sks.
Irish	— ,,	— ,,	400 ,,	— ,,
Foreign ..	40 ,,	6290 ,,	10580 ,,	10 ,, 3790 brls.

LIVERPOOL, Tuesday, March 8.—At our Corn Exchange this morning there was only a slow retail inquiry for Wheat, with no disposition to press sales, and prices closed as on this day week. Indian Corn was fully as dear for the better qualities, and 6d. per qr. lower for feeding sorts. Flour was dull, but not any easier to purchase. Oats were rather more saleable. Barley and Peas were unaltered. Egyptian Beans were 3d. to 6d. per qr. cheaper.

FRIDAY, March 6.—The grain market was thinly attended, Wheat and Flour in retail demand. Indian Corn and Beans held firmly at former rates. Moderate business in Oats, Oatmeal, and Barley, without change in value.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Jan. 28..	43s 10d	34s 7d	21s 5d	28s 11d	38s 5d	36s 3d
Feb. 4..	43 8	34 10	21 0	31 0	38 1	35 4
— 11..	43 6	34 11	21 11	29 9	38 4	36 0
— 18..	43 11	34 11	21 11	31 10	38 6	36 3
— 25..	44 5	35 7	22 7	35 3	38 11	36 11
March 3..	44 9	36 6	22 11	32 0	39 1	37 8
Agg. Aver.	44 0	35 3	21 11	31 5	38 7	36 5

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.



BRITISH WOOLS.—LONDON, FRIDAY, March 9.

We have still a fair demand for most descriptions of wool at full prices.

BRISTOL WOOL FAIR, March 7 and 8.—This fair has been well attended; the quantity of wool offered small, and late rates fully maintained for both combing and clothing qualities.

COLONIAL WOOL SALES.—These sales are proceeding with spirit and with an upward tendency.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

NURSERY FOREMAN.

WANTED, in May, a respectable energetic MAN, well up to the Management of Men, and also the Grafting and Raising Rhododendrons and hardy Coniferous Plants.—Apply, with copies of testimonials, stating wages expected, to J. DICKSON & SONS, 32, S. Hanover Street, Edinburgh.

WANTED, A GARDENER, who thoroughly understands his profession in all its branches. An unexceptional character will be required as to ability, honesty, industry, and sobriety. A person without incumbrance preferred.—J. R., care of Mr. Humphreys, Farmers' Club, New Bridge Street, Blackfriars, E.C.

WANTED, AS GARDENER, an experienced and active Man, thoroughly understanding the Management of Fruit Trees and the routine of a Kitchen and Flower Garden, the former about an acre; no Greenhouse. Wages 18s. per week.—Apply to E. H. RAVENSWOOD, Bromley, Kent, S.E.

WANTED, an out-door MAN, who understands the culture and management of Fruit, Shrubs, and Nursery work in general. A single man preferred.—Application, with wages required, to be made to EDWARD TILEY, Nurseryman, &c., 14, Abbey Church-yard, Bath.

WANTED, two or three good JOBBING HANDS, wages 16s. per week.—Apply to W. HOLMES, Frampton Park Nursery, Hackney, N.E.

UNDER GARDENER.

WANTED, a steady active man as UNDER GARDENER, in the neighbourhood of London. He must know his work and be able to Mow, and will have to take charge of the Cows, Pigs, and Poultry.—Letters stating age, if married, wages required, with whom now or last living, how long, and in what capacity, addressed to J. T., Oakley's Livery Stables, Little Gray's Inn Lane, London, W.C., will be attended to.

WANTED, AN INVOICE CLERK to the London Seed Trade; good handwriting indispensable.—Apply by letter post paid to X., *Gardeners' Chronicle* Office, W.C.

WANTED, A YOUNG MAN (about 18), to take care of a pair of small Ponies and assist in the Garden and House, 12 miles from London.—Apply, between 11 and 4, at 29, Southampton Street, Strand, W.C.

WANTED, A MAN AND HIS WIFE, the MAN as Gardener and to attend to a couple of Cows, Pigs, &c.; the WIFE as General Servant with the assistance of a young person. Both to reside in the house.—Apply to the Rector of F. Horsley, Ripley, Surrey.

WANTED, A MAN and WIFE, without incumbrance; the Wife to be a thoroughly good Laundress, the Husband to be accustomed to Milking and the Management of Cows and Poultry, and to help in the Garden. To live on the premises. Characters must be unexceptionable. Apply by letter, stating full particulars as to previous situations, age, &c., to A. B., care of Mr. Baskett, Roehampton, Surrey, S.W.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 30, married; first-class in every branch of his profession. Can be highly recommended.—A. B., 35, North Street, Maida Hill, W.

GARDENER (HEAD).—Age 31, single; thoroughly understands the Management of Pines, Vines, and Peaches; the Forcing of Fruits, Flowers, Vegetables, &c.—A. Z., Messrs. J. & C. Lee's, Nurserymen, Hammersmith, W.

GARDENER (HEAD).—Is about to leave his present situation in consequence of a change in the establishment. Can have a high character for knowledge, honesty, sobriety, &c.—F. W., Heath Lane Lodge, Twickenham, S.W.

GARDENER (HEAD).—Age 27, single; well experienced in his profession, including Forcing, &c. Wages, 1l. 1s. per week. Two years' good character.—A. B., 24, Princes Road West, Notting Hill, W.

GARDENER (HEAD).—Age 50, no incumbrance; thoroughly competent; has had 30 years' experience in all branches of Gardening. Six years character. Good references.—R. S., Post Office, Enfield, Middlesex, N.

GARDENER (HEAD).—Age 28, single, a native of Scotland; has a thorough practical knowledge of all kinds of Forcing, with cultivation of Stove and Greenhouse Plants. Unexceptionable character.—A. B. ADAM, Forsyth Nursery, Rectory Road, Stoke Newington, N.

GARDENER (HEAD).—Age 35, married; has had extensive experience in every branch of his profession. Has lived four years Head Gardener to a nobleman. Can be highly recommended.—Gardener, 29, New Church Street, Edgeware Road, W.

GARDENER (HEAD).—JAMES FOWLER, Gardener to the Right Hon. Earl of Harewood, Harewood House, near Leeds, is desirous of recommending a practical person of great experience to any nobleman or gentleman requiring a Gardener.—Address as above.

GARDENER (HEAD).—Age 36, married, no incumbrance; thoroughly practical; understands his profession, Forcing Fruits, Flowers, and Vegetables, the Culture of Stove and Greenhouse Plants, Management of Fruit, Flower, and Kitchen Gardens.—ETON, Badgemore Park, Henley-on-Thames.

GARDENER (HEAD) to any nobleman or gentleman requiring a good practical person; well acquainted with Forcing all kinds of Fruits, Flowers, and Vegetables; good Kitchen and Flower Gardener. Highly recommended by his late employer.—G. L. M., Dover Gardens, Roehampton, Surrey.

GARDENER (HEAD).—Age 34, married, no incumbrance; thorough Knowledge of Early and Late Forcing, Flower, Fruit, and Kitchen Gardens. Wife good plain Cook; can take charge of Dairy and Poultry if required. No single-handed place accepted. Two years' good character.—D. B., Gardener's Lodge, Forest House, Leytonstone, Essex.

GARDENER (HEAD).—Age 30, single; understands every description of Gardening, Building of Hothouses, Laying-out of Pleasure Grounds, &c. Testimonials from present employer, and from several of the Head Noblemen's Gardeners in England. Can take charge of any quantity of Pasture Land.—E. F., Mr. Nickelson, Bushy Grove, Watford, Herts.

GARDENER (HEAD).—Thorough practical knowledge of his profession in all its branches. Most unexceptionable references. Has just left his situation owing to the death of his late employer, a Baronet, in the north of England.—A. B., Messrs. Batt, Rutley, & Co., Seed Merchants, 412, Strand, London, W.C.

GARDENER (HEAD).—Age 43, married; has a thorough knowledge of Gardening in all its branches. Can have a good character from the gentleman he has just left, and can be recommended by his former employer, with whom he lived 15 years.—J. N., Messrs. Fraser's, Lea Bridge Road Nurseries, N.E.

GARDENER (HEAD).—Age 34, married, no incumbrance; a native of Scotland. Perfectly understands his profession in all its branches, including Early and Late Forcing Pines, Vines, Peaches, Fruit, Flowers, and Vegetables; the management of Stove and Greenhouse Plants, &c. Can attend to Land or Plantations if required. Excellent testimonials. Will be at liberty at Lady Day next. No single-handed place accepted. No objection to Ireland.—A. B., Post Office, Rugby.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 31, married, one child. Has a general knowledge of his profession, and is desirous of engaging where a confidential and energetic Man is required. Five years' character.—J. H., Lower Grove House, Roehampton, Surrey.

GARDENER (HEAD).—Age 27, married, two children; understands the Management of the Flower, Fruit, and Kitchen Gardens, and Forcing in general. Three years' good character.—A. Z., Post Office, Bolsterstone, Sheffield.

GARDENER (HEAD).—Age 26; married, no incumbrance; several years' experience in Forcing Pines, Vines, Peaches, &c., also Flowers, Vegetables, &c. Nine years unexceptionable character.—J. H., Post Office, Cannington, Somersetshire.

GARDENER (HEAD).—Age 30, married; understands Early and Late Forcing, and management of Flower and Kitchen Gardens. Will be at liberty at the end of the month. Three and a half years' character.—A. B., Mr. Summers, Seedsman and Florist, Howard Park Nursery, Perry Hill, Sydenham, S.

GARDENER (HEAD).—Age 33, married, without incumbrance; wishes to engage with any nobleman or gentleman requiring a first-class industrious Gardener in every branch of his profession. Good character from the Nobleman he has just left in the West of England, and can be highly recommended.—A. B., Mr. Barnes, Camden Nursery, Camberwell, S.

GARDENER (HEAD).—Age 31, married; can be recommended as a first-class cultivator of Orchids, Stove and Greenhouse Plants, Ferns, &c.; also thoroughly practical in the Fruit and Kitchen Gardens. Five years' unexceptionable reference as to ability and character.—A. A., Post Office, Hersham, Esher, Surrey.

GARDENER (HEAD).—Age 32; AMBRIDGE BAMWELL, Gardener to Sir Edward Hulse, Bart., will shortly be disengaged, and begs to offer his services to any lady or gentleman in want of a practical man. No single-handed place accepted. Satisfactory testimonials by applying to present or previous employers, Mr. FRASER, Marquis Camden's, Wildernesse Park, Sevenoaks, Kent; also Mr. FISH, Putbridge Bury, Luton, Beds.

GARDENER (HEAD), OR GARDENER AND BAILIFF.—Age 40, married; has been most successful in the Cultivation of Pines, Grapes, and Peaches, Late and Early Forcing of Vegetables; also of Hothouse and Greenhouse Plants, Fruit, Flower, and Kitchen Gardens, with Woods, Land, and Stock. Wife can take charge of Poultry.—A. B., Drummond's Nursery, Bath, Somersetshire.

GARDENER.—Married, with one child; understands his profession in all its various branches.—A. B., Mr. Muskett's Nursery, Clapham, S.

GARDENER.—Age 40, married; a practical working Man. Can have a good character.—X., Post Office, Chertsey, Surrey.

GARDENER.—J. SHEPHERD, Gardener for a number of years to the late Colonel Wood, wishes to engage with a nobleman or gentleman who wants a practical Gardener. A satisfactory character given.—J. SHEPHERD, Littleton, Chertsey.

GARDENER.—Age 40; thoroughly competent in every branch, much experience in Planting, re-arranging, and Laying-out Grounds. First-class testimonials.—A. B., Bedford Nursery, Haverstock Hill, N.W.

GARDENER.—WILLIAM TAYLOR, Gardener to Sir William Middleton, Bart., Shrubland, Suffolk, will be glad to recommend one of his Foreman (age 31), to any nobleman or gentleman requiring a good Gardener.—Address as above.

GARDENER (SINGLE-HANDED), or UNDER GARDENER AND COWMAN.—Married, no incumbrance; 12 months' character.—S., Morse's Nursery, Epsom, Surrey.

GARDENER (UNDER).—Age 21; can Mow, Milk, and has some knowledge of Forcing. Two years' good character.—G. M. B., Mrs. Cupit, St. Ann's Lane, Wandsworth, Surrey, S.W.

GARDENER (UNDER).—Age 19; five years' good character. State wages, &c.—J. W., Post Office, Sutton Bonington, Loughborough, Notts.

GARDENER (UNDER), or IMPROVER, in a nobleman's or gentleman's family.—Age 23; eight years' experience; two and a half years' good character.—R. S., at F. H. Horne's, Bookseller, High Road, Lee, Kent.

TO LANDOWNERS.—A Gentleman long engaged in practical Farming on a large scale, and thoroughly conversant with the most improved systems of Agriculture, including the Management of Stock and the Growth of Timber and Underwood, is open to an engagement for the Management of an estate, either under the control of the proprietor or otherwise. The most satisfactory references both as to character and qualification.—F. K., Scadding's Library, Belgrave Road, Pimlico, S.W.

STEWARD OR BAILIFF.—A native of Scotland, who is practically acquainted with Farming in all its branches, Buying, Selling, and Management of Stock in general. Has been in England some years. Testimonials of the highest class.—O. P., Wright's Buildings, Watford, Herts.

BAILIFF OR GENERAL MANAGER.—Age 30; has had extensive experience on the most approved systems of Agriculture on Heavy and Light Soils, Erecting Farm Buildings, Drainage, Woods, and general improvements. Purchasing, Selling, and Breeding Stock. Can be highly recommended by Noblemen and Landed Proprietors.—A. B., Gibbs & Co., corner of Half-Moon Street, Piccadilly, London, W.

FARM BAILIFF.—Age 37; has had considerable experience on Heavy and Light Soils, and in the Breeding and Rearing of Stock, Buying and Selling of Stock, Corn, &c.; the management of Woods and Plantations. The wife can take the care of the Dairy and Poultry if required. Seven years' excellent character.—A. B., Mr. Haynes, 4, Alfred Place, Spa Road, Bermondsey, S.E.

FARM BAILIFF to a nobleman or gentleman.—A Farmer's Son, age 30; thoroughly understands the Rearing and Breeding of Cattle, &c. Can give the most satisfactory references.—W. J., Post Office, Faringdon, Berks.

BAILIFF.—Age 43; experienced and thoroughly practical; a good judge of Stock. Wife a good Dairywoman.—A. H., Thompson's Dining Rooms, 10, Pentonville Road, Islington, London, N.

STOCKMAN.—Age 28, married; is well acquainted with Farm work. Wife can take charge of Poultry if required. Good character.—T. S., 2, Bratt's Buildings, Finsbury Market, London, E.C.

The Gardeners' Chronicle Newspaper.

SATURDAY, MARCH 17, 1860.

BANK OF DEPOSIT,

ESTABLISHED A. D. 1844; 3, PALL MALL EAST, LONDON, W.

CAPITAL STOCK 100,000*l.*

PARTIES desirous of INVESTING MONEY are requested to examine the Plan of THE BANK OF DEPOSIT, by which a high rate of Interest may be obtained with ample security. Deposits made by Special Agreement may be withdrawn without notice. The Interest is payable in January and July. PETER MORRISON, Managing Director.

Forms for opening Accounts sent free on application.

News of the Week.

THE ADDRESS TO THE CROWN in approbation of the Commercial Treaty with France has been carried in both Houses by large majorities. In the Commons on Friday the adjourned debate on the Address was resumed by Mr. HORSMAN, who moved, as an amendment, to add to the resolution a declaration of the opinion of the House that the 11th Article relating to the export of coal imposed on the Crown and Parliament unnecessary and impolitic restrictions, and praying HER MAJESTY to effect the omission of that article from the Treaty. The amendment was supported by Mr. PACKE, Mr. BENTINCK, and Mr. DISRAELI; and opposed by Mr. VIVIAN, Sir R. PEEL, and the CHANCELLOR of the EXCHEQUER. On a division the amendment was negatived by 282 to 56, giving Ministers a majority of 226. The Address was then agreed to. In the Lords on Thursday Lord TAUNTON moved that the House should agree with the Commons in this Address. The Earl of CORK seconded the motion, which was opposed by Earl GREY, the Earl of MALMESBURY, Earl STANHOPE, Lord OVERSTONE, the Earl of DERBY, Lord CHELMSFORD, and the Earl of HARDWICKE, and supported by Lord WODEHOUSE, Earl DE GREY and RIPON, the Duke of ARGYLL, the Lord CHANCELLOR, and the Duke of NEWCASTLE. On a division the Address was carried by 68 to 38, giving Ministers a majority of 30.

In the House of Lords on Tuesday Lord CHELMSFORD introduced a Bill for the prevention of Sunday trading, the main provision of which is to compel the closing of all shops after 9 o'clock on Sunday mornings. In the Commons on Monday, on the order of the day for the second reading of the Bill for the Repeal of the Paper Duty, Sir W. MILES moved, as an amendment, a resolution to the effect that it was inexpedient to repeal the duty in the present state of the revenue, and at the cost of adding another penny to the income-tax. The amendment was supported by Mr. B. STANHOPE, Mr. A. MILLS, Lord R. CECIL, Mr. HORSMAN, and Sir J. PAKINGTON, and opposed by Mr. NORRIS, Mr. BLACK, Mr. MAGUIRE, Mr. M. GIBSON, and the CHANCELLOR of the EXCHEQUER. On a division the amendment was negatived by a majority of 53, the numbers being 245 to 192. The Bill was then read a second time. On Tuesday Lord JOHN RUSSELL made a statement respecting the annexation of Savoy, and the remonstrances which he had addressed to the French Government on the subject. He contended that the policy of HER MAJESTY'S Government, in regard to Savoy and Central Italy, had been to maintain the peace of Europe, to secure the right of the Italians to manage their own affairs, and to raise a people of cultivated intellect, who had been long oppressed, into a great and powerful nation. A long debate ensued, in which Mr. DISRAELI disclaimed any desire to make the annexation of Savoy a ground of war, but charged the Government with having brought it about by the course they had pursued in promoting the establishment of a great Italian Power. Lord PALMERSTON expressed his opinion that the EMPEROR OF THE FRENCH would commit a great mistake if he persisted in the annexation of Savoy, and would gain more by preserving the good opinion and confidence of Europe than by any accession of territory on the slopes of the Alps. On Wednesday Mr. LOCKE KING'S Bill for removing the restriction which compels clergymen of the Church of England to obtain the license of the bishop and consent of the incumbent of the parish, before they can celebrate Divine service in theatres and other buildings, was lost on the question of the second reading by a majority of 37, the numbers being 168 to 131. The Adulteration of Food and Drink Bill passed through committee, after an unsuccessful attempt had been made to extend its provisions to Ireland. On Thursday the ATTORNEY-GENERAL obtained leave to bring in a Bill to amend and consolidate the laws relating to Bankruptcy and Insolvency in England, the main objects of which are to abolish all distinction between bankruptcy and insolvency, and between traders and non-traders; to abolish the present courts with their numerous staff of commissioners; to substitute a single judge, to be on an equality in position and emolument with the judges of the realm; and to transfer the jurisdiction of the country Commissioners to the judges of the County Courts. The House then went into committee on the Customs Acts, when the CHANCELLOR of the EXCHEQUER moved an amended resolution reducing the duty on hops from the 1st of January, 1861, to 20*s.* the cwt., and from the 1st of January, 1862, to 15*s.* the cwt. Mr. DODSON moved as an amendment that the duty should be imposed for one year only. On a division the amendment was negatived by 138 to 104. The resolution was then agreed to, as was also another imposing a duty of 1*s.* a ton on foreign and colonial-built ships.

The voting of the four provinces of Central Italy on the question of annexation to Sardinia has taken place this week with perfect order and regularity. The result is that the people of Tuscany, the Romagna, Modena, and Parma, have decided, by such enormous majorities that the vote almost amounts to unanimity, in favour of annexation to Sardinia, and have utterly rejected both the claims of their legitimate Sovereigns and the scheme which was lately put forward by the EMPEROR OF THE FRENCH for the establishment of a separate kingdom. The latest news from Turin states that the Sardinian Government has acceded to the demand of France to effect the cession of Savoy and Nice by a special treaty between France and Sardinia. By this arrangement Sardinia will cede to France the whole of Savoy up to Mont Cenis, and the territory of Nice as far as Villafranca inclusively. Thus France will gain possession of all the passes of the Alps, and will likewise obtain the districts of Chablais and Faucigny, to which she attaches such importance that she has declined to enter into negotiations for ceding them to Switzerland.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Osborne. On Friday her Majesty and the Prince Consort walked in the grounds. On Saturday Prince and Princess of Leiningen visited her Majesty. On Sunday morning the Queen, Prince Consort, Prince Alfred, Princess Alice, Princess Helena, Princess Louisa, and Prince Arthur attended Divine service at Whippingham church. On Monday morning the Queen and Prince Consort walked out. The Prince and Princess of Leiningen arrived on a visit to her Majesty. On Tuesday the Queen and Prince Consort, accompanied by Princess Alice and the Prince and Princess of Leiningen, drove out. On Wednesday the Prince and Princess of Leiningen left Osborne.

VISIT OF THE PRINCE OF WALES TO CANADA.—It is now officially announced that the Prince of Wales will visit Canada in the course of May next. His Royal Highness, it is asserted, will go out with a very numerous retinue, and will remain in North America for about two months, during which he will visit the principal towns and great public works, as well as Niagara and other remarkable scenes of British America and the United States.

THE DUKE DE MONTPENSIER arrived at Plymouth on Tuesday in the Spanish war steamer Alava, from Corunna. His Royal Highness proceeded to London by the express train on Wednesday morning, and the Alava has since left Plymouth for Southampton with the Duke's baggage and attendants. His Royal Highness, who is travelling under the name of the Count de Villamarique, has come to England on a visit to his mother, the ex-Queen of the French, at Claremont.

PRINCE FREDERICK OF THE NETHERLANDS on Friday visited the arsenal, dockyard, and other Government establishments at Woolwich. On Saturday the Prince dined with Lord and Lady Palmerston. On Sunday morning his Royal Highness embarked at St Katherine's steam wharf on his return to Holland.

THE PEERAGE.—The *Gazette* of last night announces that the Queen has directed letters patent to be passed under the Great Seal, granting the dignity of a Baron of the United Kingdom, to Henry, Baron Brougham and Vaux, and the heirs male of his body lawfully begotten, by the name, style, and title of Baron Brougham and Vaux, of Brougham, in the county of Westmoreland, and of Highhead Castle, in the county of Cumberland, with remainder, in default of such heirs male, to his brother, William Brougham, Esq., and the heirs male of his body lawfully begotten.

PARLIAMENTARY MOVEMENTS.—The election for West Surrey, vacant by the death of Mr. Henry Drummond, took place on Saturday, when Mr. George Cubitt was elected without opposition. On Monday Mr. Padmore was elected for Worcester, in the room of Mr. Laslett, without opposition. The Norwich Election Committee have reported that Lord Bury was not duly elected, and that the election was a void election. The Peterborough Election Committee have reported that Mr. G. H. Whalley was duly elected. The Clare Election Committee have reported that Colonel Luke White was not duly elected, that a large number of cases of bribery and treating were proved, but that it was no proof that they took place with Col. White's knowlegde.

THE VOLUNTEER MOVEMENT.—His Royal Highness the Prince of Wales has been gazetted as honorary colonel of the Oxford University Rifle Corps. The commission is signed by the Lord Lieutenant of Oxfordshire, and bears date March 2d. His Royal Highness the Prince Consort has become patron of the National Rifle Association. Lieut.-Colonel Charles Morris, C.B., has been appointed by the Duke of Cambridge Assistant-Inspector of Volunteer Artillery. By permission of the authorities a Volunteer Rifle Corps on the plan of that of Eton is in the course of formation at Winchester College.

THE NEW REFORM BILL.—The following return of the number of male persons resident within each Parliamentary city and borough in England and Wales, or within seven miles thereof, assessed to the last poor-rate made before November 7, 1859, at 6*l.* and under 10*l.*, shows the number of Electors which will be added to the Register in each City and Borough by the lowering of the franchise from 10*l.* to 6*l.*:—

No	Name of Borough.	Number of Electors on Register.	Additional.
	ENGLAND.	*	
1	Tower Hamlets	28,943	5,088
2	Liverpool	18,779	15,068
		F. 1,791	
3	Marylebone (a)	21,031	402
4	Finsbury (b)	20,951	558
5	Manchester (City)	18,334	17,994
6	Lambeth (a)	21,757	2,110
7	Westminster (City) (a)	13,791	700
8	Birmingham (a)	9,222	19,600
9	Southwark (a)	10,606	2,643
10	Leeds	5,945	4,783
11	Bristol (City)	12,929	3,965
		F. 1,944	
12	Sheffield	7,381	10,202
13	London (City) (a)	19,026	255
		F. 6,361	
14	Wolverhampton	4,025	7,477
15	Greenwich (a)	8,078	2,487
16	Bradford (York)	3,599	3,193
17	Newcastle-upon-Tyne	6,058	2,823
		F. 1,502	
18	Salford	4,375	4,840
19	Kingston-upon-Hull (a) (d)	5,526	1,327
		F. 1,587	
20	Stoke upon-Trent	2,221	2,916
21	Oldham	2,151	1,334
22	Portsmouth	3,821	4,866
		F. 3	
23	Brighton (a)	4,609	1,756
24	Preston	2,657	5,287
25	Norwich (City) (c)	5,498	714
		F. 2,008	
26	Sunderland	2,729	1,906
27	Bolton	2,050	2,431
28	Leicester	4,207	3,802
		F. 1,405	
29	Nottingham	6,012	2,634
		F. 1,861	
30	Bath (City) (a)	3,172	767
31	Stockport	1,420	1,826
32	Plymouth	2,705	187
		F. 27	
33	Devonport	2,723	250
34	East Retford	2,602	486
		F. 79	
35	Blackburn	1,524	1,842
36	Exeter (City)	3,216	963
		F. 245	
37	Derby	2,505	3,021
		F. 371	
38	York (City)	4,355	1,493
		F. 2,446	
39	Macclesfield	1,073	2,323

* The numbers opposite to the letter F in this column are Freemen, which are included in the number of electors on the Register.

(*a*) The returns for the places thus marked contain the number of tenements, and not the number of male occupiers only, so far as regards tenements which are rated to the owners instead of the occupiers. In those cases a deduction of 20 per cent. has been made on account of female occupiers and unoccupied tenements.

(*b*) The returns for the parishes of Islington and St. Luke's, which form part of this borough, do not contain the number of persons occupying tenements rated to the owners instead of the occupiers.

(*c*) There are in this borough 12,162 tenements (rated to the owners instead of the occupiers) which are not included in the above return, as the rate-books do not afford the means of distributing them under the several heads of the return.

(*d*) There are in this borough 11,021 tenements (rated to the owners instead of the occupiers) which are not included in the above return for the reasons assigned in the case of Norwich.

No.	Name of Borough.	Number of Electors on Register	Additional.
	ENGLAND.	*	
40	Dudley	992	1,002
41	Coventry (City)	5,451	3,098
		F. 4,112	
42	Stroud	1,311	453
43	Cricklade	1,691	571
44	Southampton	3,765	415
		F. 8	
45	Cheltenham	2,171	1,088
46	Halifax	1,491	888
47	Ipswich	1,926	1,998
		F. 344	
48	Wigan	858	772
		F. 4	
49	Bury	1,246	1,278
50	Huddersfield	1,686	1,158
51	Great Yarmouth	1,393	1,798
52	New Shoreham	1,843	566
53	Ashton-under-Lyne	1,081	883
54	Rochdale	1,346	1,242
55	Tynemouth	1,062	423
56	South Shields	1,156	1,402
57	Chatham	1,544	1,342
58	Oxford (City)	2,731	1,086
		F. 1,016	
59	Cambridge	1,797	1,065
		F. 26	
60	Chester (City)	2,502	740
		F. 1,225	
61	Worcester (City)	2,541	1,358
		F. 875	
62	Aylesbury	1,320	350
63	Northampton	2,526	1,651
64	Monmouth District	1,745	622
		F. 80	
65	Carlisle (City)	1,252	658
		F. 320	
66	Walsall	1,092	3,073
67	Gateshead	913	969
68	Warrington	728	856
69	Dover	2,038	1,052
		F. 819	
70	Wakefield	952	323
71	Reading	1,841	584
72	Maidstone	1,848	467
		F. 440	
73	Wenlock	881	331
		F. 99	
74	Shrewsbury	1,404	834
		F. 456	
75	Colchester	1,257	573
		F. 407	
76	King's Lynn	1,019	665
		F. 143	
77	Whitehaven	571	474
78	Kidderminster	487	1,178
79	Canterbury (City)	1,564	482
		F. 809	
80	Gloucester (City)	1,721	399
		F. 534	
81	Lincoln (City)	1,435	1,060
		F. 513	
82	Boston	1,078	326
		F. 195	
83	Hastings	1,281	345
		F. 4	
84	Lancaster	1,288	698
		F. 401	
85	Berwick-upon-Tweed	814	114
		F. 376	
86	Rochester (City)	1,419	646
		F. 400	
87	Taunton	877	370
88	Bury St. Edmund's	692	509
		F. 10	
89	Winchester (City)	835	442
		F. 12	
90	Penryn and Falmouth	831	160
91	Durham (City)	1,147	246
		F. 530	
92	Hythe	997	497
		F. 43	
93	Scarborough	1,044	358
		F. 11	
94	Sandwich	1,030	667
		F. 313	
95	Great Grimsby	920	358
		F. 315	
96	Hereford (City)	971	574
		F. 214	
97	Kendal	4[illegible]2	193
98	Stafford	1,390	295
		F. 944	
99	Bedford	954	487
		F. 44	
100	Salisbury (City) (a)	687	504
		F. 11	
101	Pontefract	689	168
102	Clitheroe	408	102
103	Barnstaple	733	226
		F. 199	
104	Newark	763	244
105	Tiverton	508	242
		F. 6	
106	Whitby	555	155
107	Warwick	710	470
108	Grantham	742	170
		F. 205	
109	Truro	623	441
		F. 3	
110	Newcastle-under-Lyme	994	279
		F. 728	
111	Bridgwater	553	383
112	Frome	385	322
113	Beverley	1,417	202
		F. 849	
114	Morpeth	408	110
		F. 89	
115	St. Ives (Cornwall)	522	161
116	Windsor	589	209
117	Lewes	697	378
118	Weymouth and Melcombe Regis	733	186
		F. 5	
119	Shaftesbury	515	102
120	Poole	547	446
		F. 23	
121	Stamford	539	134
122	Banbury	672	194
123	Peterborough (City)	568	528
124	Chichester (City)	624	355
		F. 3	
125	Tamworth	465	99
126	Wilton	588	196
		F. 7	

No.	Name of Borough.	Number of Electors on Register.	Additional.
	ENGLAND.	*	
127	Rye	400	268
		F. 6	
128	Tavistock	14	53
129	Buckingham	364	102
		F. 8	
130	Wallingford	369	131
131	Newport (Isle of Wight)	673	311
		F. 2	
132	Woodstock	310	111
		F. 26	
133	New Malton	595	194
134	Bridgnorth	708	148
		F. 329	
135	Bridport	576	170
136	Eye	842	81
		F. 25	
137	Christchurch	839	136
138	Helston	348	121
		F. 7	
139	Bewdley	393	162
		F. 6	
140	Cockermouth	412	90
141	Wareham	342	74
142	Chipping Wycombe	392	129
		F. 5	
143	Droitwich	394	118
		F. 2	
144	Westbury	328	84
145	Midhurst	429	107
146	Lichfield (City)	705	170
		F. 115	
147	Malmsbury	320	92
		F. 7	
148	Guildford	699	238
		F. 40	
149	Hertford	618	190
		F. 119	
150	Devizes	326	113
		F. 16	
151	Great Marlow	337	93
152	Dorchester	449	102
153	Bodmin	398	44
		[F. 6	
154	Chippenham	387	155
		F. 11	
155	Huntingdon	392	142
		F. 53	
156	Liskeard	395	96
		F. 2	
157	Cirencester	421	106
158	Ripon	330	149
159	Launceston	438	91
		F. 1	
160	Abingdon	322	102
161	Horsham	387	186
162	Maldon	1,071	142
		F. 642	
163	Tewkesbury	341	106
		F. 26	
164	Petersfield	332	56
165	Knaresborough	286	88
166	Andover	239	79
		F. 4	
167	Ludlow	396	130
		F. 34	
168	Thirsk	413	149
169	Lymington	323	140
		F. 3	
170	Leominster	381	97
		F. 7	
171	Calne	174	70
		F. 6	
172	Marlborough	281	78
		F. 2	
173	Northallerton	291	70
174	Richmond (York)	327	118
175	Reigate	548	198
176	Wells (City)	326	85
		F. 90	
177	Evesham	328	83
		F. 60	
178	Dartmouth	264	62
		F. 7	
179	Harwich	334	110
		F. 1	
180	Totnes	341	47
		F. 14	
181	Thetford	221	71
182	Lyme Regis	265	139
		F. 3	
183	Ashburton	193	71
184	Honiton	287	46
185	Arundel	196	80
186	Cambridge University	4,566	—
187	Oxford University	3,623	—
	WALES: BOROUGHS AND DISTRICTS OF BOROUGHS.		
188	Merthyr Tydvil	1,341	3,288
189	Swansea District	1,926	1,346
		F. 363	
190	Carnarvon District	939	414
191	Cardiff District	1,831	1,024
		F. 258	
192	Carmarthen District	822	454
		F. 75	
193	Flint District	751	271
194	Montgomery District	890	306
		F. 69	
195	Pembroke District	914	715
		F. 344	
196	Denbigh District	852	274
		F. 208	
197	Beaumaris District	521	222
		F. 4	
198	Cardigan District	673	217
		F. 103	
199	Haverfordwest District	776	258
		F. 213	
200	New Radnor District	400	116
		F. 70	
201	Brecknock	302	90
		F. 3	

Foreign.

FRANCE.—A despatch from Turin of Wednesday last has reached Paris, stating that the Sardinian Government has consented to the demand of France to effect the cession of Savoy and Nice by a special treaty, to be concluded between France and Piedmont. The treaty will be followed by a vote of the Municipalities, and the two contracting parties will afterwards communicate to the European Powers the nature of and motives for this territorial arrangement between them. By this arrangement Sardinia cedes to France Savoy up to Mont Cenis, and Nice up to Villafranca inclusive. Thus all the passes of the Alps will be possessed by France, which will likewise obtain the districts of Chablais and Faucigny. It is also stated that M. James Fazy and Dr. Kern have been informed by the French Government that France declines to enter into negotiations for ceding Chablais and Faucigny to Switzerland.—M. Thouvenel had previously transmitted to Baron Talleyrand a despatch in reply to Count Cavour's despatches of the 1st and 3d inst. M. Thouvenel points out the essential difference which exists between the question of the annexation of Tuscany to Piedmont and that of the annexation of Savoy to France, and says that the principal difficulty which opposes the first is to obtain the recognition by Europe, which has guaranteed the possession of Tuscany to the dynasty of Lorraine. In the latter this difficulty disappears in the presence of the arrangement between France and Sardinia relative to the spontaneous cession of Savoy; consequently the Emperor of the French requests the regulation of the question of Savoy by a simple cession, to be settled by mutual consent, and without having recourse to universal suffrage. M. Thouvenel thinks that to become acquainted with the wish of the country it would suffice to consult the municipalities of Savoy. As regards the annexation of Tuscany, M. Thouvenel repeats that France could not follow Piedmont in a perilous course. If King Victor Emmanuel accepts the annexation of Tuscany, he would necessarily remain exposed to the risks of such a policy without being able to reckon upon the support of France. The *Pays* of Friday publishes an article signed by "M. Granier de Cassagnac," on the manner in which the project of the annexation of Savoy and Nice has been discussed in the English Parliament. M. de Cassagnac calls to mind that France left England full liberty to take and fortify Perim because England had to protect her interests in the East, and says France is now in a similar position in regard to Savoy and Nice, and he cannot understand why such noisy discussions take place in the English Parliament, which might compromise the alliance between the two countries. We must understand that the Emperor has not frivolously demanded a modification in the French frontier, which the aggrandisement of Sardinia has rendered indispensable. He will take into consideration the disposition of the inhabitants and the estimation of Europe, but it would be unreasonable to suppose that the Emperor would renounce that which regards the security of one of the most important frontiers of the Empire.—The *Moniteur* publishes a report to the Emperor from the Minister of Foreign Affairs, announcing the exchange of ratifications of the treaty of commerce between France and England, and submitting to the signature of his Majesty a decree for its promulgation. The report is followed by the decree in question, which recapitulates the treaty and the changes made by it in the duties on articles exchanged between the two countries. The official journal also contains a very long report to the Emperor from the Minister of Commerce and M. Baroche, submitting to his Majesty the facts which preceded the treaty, and the general considerations which justified the changes.—The *Moniteur* announces that the Government has submitted a project of law to the Corps Legislatif for devoting 40 millions in loans to manufacturers for the renewal and improvement of their machinery, and another project concerning modifications in the tariff for wools, cottons, and raw materials.—The Emperor has nominated M. Michel Chevalier a senator.—The keel of a new iron-sheathed line-of-battle-ship is about to be laid down at Cherbourg. She will be 328 feet in length, with an iron prow 30 feet long, and be called the Napoleon I. —M. Thiers has just delivered to the printer the last sheet of Vol. XVII. of the "Histoire du Consulat et de l'Empire." The third volume of the "Mémoires de M. Guizot" is to appear in a week or 10 days, and will, it is said, be equal in interest to the volumes already published.

SPAIN AND MOROCCO.—On Sunday last numerous Moorish tribes, including the Kabyles of Melilla, attacked the encampments at Tetuan and were repulsed. The Moorish positions were taken, and the Moors pursued for a distance of half a league, with considerable loss. On Monday last a Moorish messenger delivered a letter from the Emperor of Morocco to Marshal O'Donnell, expressing his desire for peace, and requesting the Marshal to facilitate an arrangement advantageous to both nations. Marshal O'Donnell consented to negotiate, but declared that he would not suspend his military operations.

SWITZERLAND.—The Swiss Envoy at Paris has handed to M. Thouvenel a protest against any measure of annexation of Savoy to France. The Swiss Government will address a note to the Powers who signed the Treaties at the Congress of Vienna for the maintenance of the *status quo* in Savoy, and the guarantee of the neutrality of Switzerland, and a portion of Savoy.

SAXONY.—The official *Dresden Journal* of Thursday

publishes a powerful article on the annexation of Savoy, in which it says:—

"The whole blame is to be attributed to the policy of England, which shook the bases of peace agreed upon at Villafranca, and to the passive attitude of the other Powers on the non realisation of the Treaty of Zurich. To offer any opposition at the present moment would be too late, as the annexation of Savoy to France may be regarded as an accomplished fact."

PRUSSIA.—The Committee of the German National Association, now assembled in Berlin, is about to publish an energetic declaration against the theory of natural boundaries, and the annexation of Savoy to France, stating therein that Germany will be strongly united in future times of danger. The commission of the Chamber of Representatives charged with the question of the re-organisation of the Prussian army has pronounced a verdict against the Government propositions. The Cabinet has declared to the commission that they should resign if the project were not accepted. The credits demanded for the Japanese expedition were accorded by the commission after some opposition.

AUSTRIA.—Accounts from Vienna state that though it is intended to maintain a passive attitude if the Emperor Napoleon persists in the realisation of his wish for the annexation of Savoy, Austria has nevertheless notified to the Prussian Government that she has already informed the Court of the Tuileries that if ever the Rhine frontiers should be menaced she would immediately unite with Prussia for the protection of the territorial integrity of the Germanic Confederation. Monsignore Mérode, private Chamberlain of the Pope, arrived at Vienna a few days since charged with a private mission and an autograph letter from the Holy Father to the Emperor of Austria.—General Baron von Eynatten, who had been arrested as a defaulter while Commissary-General of the army in Italy, in spite of all precautions committed suicide last week by hanging himself in his prison, leaving a document confessing his guilt, and expressing his repentance for it. Two officers who were connected with him have since shot themselves, and one of his sons has absconded to the United States. A Lieut.-General, an Italian merchant residing at Trieste, and M. Richter, Chief Director of the Crédit Mobilier Association, have now been arrested, it is supposed, for complicity with the late General Eynatten. The managers of the Crédit Mobilier have declared that the affairs of the establishment are in perfect order, and in no way connected with these transactions.

HUNGARY.—An English gentleman who has just arrived from Hungary gives a sad account of the condition of that country. He was very near being present at one of the Protestant meetings, and had he been there the Austrian authorities would most probably not have given him his passport, if he had escaped being sent to some fortress. He could not obtain a licence to carry fire-arms because he was living in a Liberal family, though they are almost necessary for protection against the numerous robbers. He never saw a single Englishman even at Pesth during the three years he was in Hungary.

ITALY.—The returns of the voting in the Æmilian provinces are complete. The numbers in favour of annexation to Piedmont are as follows:—The Romagna, 202,659; Modena, 115,621; Parma, 88,511. The number of votes for a separate kingdom has not yet been announced. The returns of the votes in Tuscany, with the exception of 32 communes, show—For annexation, 330,087; for a separate kingdom, 13,156. The following was the official return of the voting in the Romagna up to Thursday morning:—For annexation to Piedmont, 200,659; for a separate kingdom, 244; cancelled, 283. In all the towns of the Æmilian provinces the number of people assembled to vote was extraordinary, and in the country the clergy conducted the population to vote for the annexation. In Tuscany also the peasants were headed by their curés on their way to the voting places, and kept admirable order. The people were everywhere enthusiastic and full of confidence, and their behaviour was excellent. The streets of Florence were decorated with French and Italian flags, and an address to the King had been signed by the clergy. A Commission of the Municipality of Milan had presented an address to the King, expressing the devotion of the country to his Majesty, and their confidence in the national line of policy pursued by the Government of the King in reference to Central Italy, and at the same time stating their resolution to support such a policy, and, as a token of their firm resolution, offering to the King 3,000,000f. The municipality of Lodi were preparing to take a similar resolution, and other adhesions were expected. The *Opinione* of Turin publishes a note from Count Cavour of March 2, relative to the cession of Savoy, in which Count Cavour recalls the declarations contained in the despatches of M. Thouvenel, and declares himself far from believing that the aggrandisement of Sardinia could ever constitute a danger to France, to whom the late events attach her by the bonds of gratitude and friendship. "Nevertheless," Count Cavour says, "we are too sensible of what Italy owes to the Emperor not to give our serious attention to a demand which rests upon the respect due to the population. The Government of the King would never consent, even with a prospect of great advantages, to cede or exchange any part of the territory which for many centuries has formed a glorious appanage to the House of Savoy; but the Government of the King cannot refuse to take into consideration the changes which the events in Italy have produced in the situation of the population of Savoy and Nice. At the moment when we demand for the inhabitants of Central Italy the right to dispose of their destiny we expose ourselves to a charge of inconsistency and injustice if we refuse to the subjects of the King dwelling on the other side of the Alps the right to freely manifest their wishes. However deep the regrets we should feel if the provinces, the cradle of the Piedmontese monarchy, decided upon demanding a separation, we should not refuse to recognise the weight of a manifestation, however slight, if made in conformity with the prescription of Parliament.' Count Cavour says further that the declarations of M. Thouvenel relative to the great Powers and Switzerland foresee a false interpretation of the motives which guide the conduct of the Government, the removal of which could only be effected with great difficulty. These declarations being inspired by high sentiments of equity and justice leave no cause to doubt that in any hypothesis anxiety to leave proper frontiers to France and Sardinia would direct any negotiations on the question." Proclamations of the Governor of Savoy were posted on Saturday in all the parishes of that country, notifying that the inhabitants will be called upon to vote on the 18th inst. for the maintenance of the union with the monarchy of Sardinia, or for annexation to France, according to the form prescribed by Parliament.—Accounts from Rome state that the Pope has a Bull of excommunication prepared to be launched against the King of Sardinia whenever the annexation of the Romagna is carried into effect. The reply of the Pope to the last proposals of France has been sent to Paris, in the form of a despatch from Cardinal Antonelli to M. Thouvenel. The Pope declines the proposition to confine within an exclusive political compass a question which, as it concerns the integrity of the patrimony of St. Peter, is intimately bound up with the independence of the Church. Although decidedly rejecting the proposition to create a Vicariate of the Romagna in favour of a foreign Sovereign, his Holiness expresses himself disposed to enter into the path of reform on condition that the integrity of the States of the Church is guaranteed. A deputation of the students at Rome has been received by General Goyon, who delivered a written reply, exhorting them to resume their studies, and expressing his resolution to support the public authorities by all means at his disposal in order to maintain the observance of the laws.—Letters from Naples announce the arrest of about 500 or 600 persons suspected of Liberal ideas, and mostly belonging to the upper classes of society, including Prince Torrella, Prince Camporcali, the Marquis Afflitto, Duke Proto, and some 80 other persons, whilst not less than 1000 of the most notable personages of the city fled to the provinces, where they are still hiding. Some of the arrested have since been let out of prison, on a promise to leave the kingdom of the Two Sicilies. Mr. Elliot and Baron Brennier, the English and French Ministers, have remonstrated in vain against these tyrannical proceedings; and in consequence of a telegram sent to Malta by the former the English fleet has arrived at Naples, part of which has anchored in the port, the other part proceeding to Castellamare. This event has caused great sensation. In Sicily the police also pretend to have discovered a revolutionary plot, and people have not only been arrested but tortured in prison. There is great agitation at Palermo, Messina, and Catania. The Attorney-General and some of the police had been assassinated, and many of the authorities had received threatening letters advising them "to go home to their master at Naples."

SERVIA.—Prince Milosch has despatched a deputation to Constantinople, to establish a better understanding between the Porte and himself, and to obtain new political concessions.

INDIA.—The following despatches have been received this week:—

Calcutta.—Mr. Wilson made his financial statement on the 18th of February. The deficit is about 9 millions. He proposes a trade licence of from 2*s.* to 20*s.* yearly; a tax upon incomes of from 240 to 600 at 2 per cent., and above that at 4 per cent., with no exemptions. A large duty upon tobacco. The tariff is to be modified. There will be no loan.

Kurrachee.—A message from Alexandria reports that telegraphic communication is now complete between that place and Kurrachee.

CHINA.—Accounts from Foo-Chow-Foo of Jan. 19 state that tea is one to two taels lower. The quantity to complete the season's yield is expected to be small, and higher rates are confidently looked for.

JAPAN.—Disastrous fires at Nagasaki and Jokuhama have destroyed a large amount of European property.

WEST INDIES.—The Shannon arrived yesterday at Southampton with accounts of a terrible fire at Barbadoes, which has laid the capital almost in ashes. It broke out at Bridgetown on the 15th ult., destroyed the best portion of the town, and did damage to the amount of a quarter, some believe half a million sterling. Not above 30,000*l.* worth of the property which was destroyed was insured.

UNITED STATES.—Accounts from New York to the 29th ult. state that nothing important had transpired relative to the loss of the Hungarian, but it was certain that not a single person was saved. The surveyors had found three bodies; a fireman, woman, and child. The cargo, which was scattered along the coast, was drifting ashore. The mails, soaked to pulp, were forwarded to Halifax. The Senate was discussing the treaty with Mexico. Senator Seward had made a great speech in favour of the admission of Kansas into the Union. The House had at last elected a printer, in the person of ex-Governor Ford of Ohio. The Senate had called upon the President for a copy of any report which might have been made by the commissioners for marking the boundary between the United States and the British territory. Notwithstanding the Governor's veto, the Bill abolishing slavery had again been passed in the Legislature of Kansas. The hostilities carried on against the Indians in the northern part of California had been conducted in the most barbarous manner, and hundreds of Indians—men, women, and children—had been slaughtered in cold blood by the volunteers.

CANADA.—The Canadian Parliament was opened at Quebec on the 28th ult. In his speech the Governor-General announced that the Prince of Wales would visit Canada in the ensuing summer. He also congratulated Parliament on surmounting the financial difficulties, and on the consolidation of the public debt. Spencer Wood, the residence of the Governor-General, had been destroyed by fire.

BRITISH COLUMBIA.—Advices to the 30th January state that the total population in the mines of British Columbia was, by a careful computation, 1175. A hotel was about to be built at New Westminster on Fraser River. One hundred tons of coal per day were being exported from Nanaimo. The quality was improving. Goods were scarce at Port Douglas. A proclamation by the Governor of British Columbia, dated January 20, 1860, authorises the land commissioner, and all magistrates and gold commissioners, to sell at private sale any town lots, suburban lots, or surveyed agricultural lands which had been or might hereafter be offered at public auction and remain unsold. A Wesleyan missionary at Fraser River states that the Chinese were likely to get the principal benefits of the mines. They were arriving in large numbers, and while others were grumbling and hesitating, and in too many cases drinking and gambling, the Chinese were proceeding at once to the mines.

CENTRAL AMERICA.—Mr. Wyke, the English Minister at Nicaragua, had negotiated a treaty with President Martinez, having for its object the gradual extinction of the protectorate over Mosquito, the King of which is to be pensioned by Nicaragua.

PERU.—Another victim to the neglect of the Peruvian Government has been added to the list of assassinated foreigners, headed as it was by her Majesty's late Chargé d'Affaires, Mr. Sullivan. Captain Lionel Lambert, Commander of her Majesty's war steamer Vixen, has now been murdered at Lima. He had been bathing in the river and was waylaid on his return. His skull was fractured and both his wrists were black from the struggle in which he lost his life. His rings and watch were stolen, and his body was then thrown into the river, where it was found half a mile from the spot where the murder was committed.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Affairs of Italy.*—In answer to the remarks of the Marquis of NORMANBY on the arbitrary acts alleged to have been committed by the Provisional Government of Tuscany with the support of the British Government, Lord WODEHOUSE said that her Majesty's Government had not exhibited any partiality towards the Provisional Government, or had supported it in opposition to the wishes of the Tuscan people. On the contrary, they had consistently abstained from interference, and had endeavoured to induce other Powers to take a similar course. He was happy to say that nearly the whole of the stories of the cruelties said to be practised by the Provisional Government in reference to political prisoners were either totally unfounded, or grossly exaggerated. He could not produce a copy of the instructions moved for by Lord Normanby, for the simple reason that no instructions had been sent out, nor had any necessity arisen for them.—After some remarks from the Marquis of CLANRICARDE and Lord DENMAN, the Earl of MALMESBURY said it was generally believed in France that the present difficulties in reference to the annexation of Savoy and Nice would never have arisen if it had not been for the injudicious course pursued by her Majesty's Government in resisting the principle upon which the treaty of Villafranca was founded.—The Duke of ARGYLL said that the policy of the Government in regard to Italy would be one of neutralty but not of indifference.—The Marquis of NORMANBY then withdrew his motion. The *Consolidated Fund Bill* was read a third time and passed.

MONDAY.—*The Commercial Treaty.*—A conference was requested by the House of Commons in reference to the Address to her Majesty from that House, approving of the treaty with France. On the return of the Peers who had been appointed to confer, the Duke of ARGYLL brought up the Address agreed to by the House of Commons, after which, Lord TAUNTON gave notice that on Thursday he should move that their lordships should assent to the address.—In reply to the Earl of ELLENBOROUGH, the Duke of NEWCASTLE stated that there was nothing in the third article of the treaty authorising the French Government to increase the differential duties now imposed upon English ships. The *Medical Act Amendment Bill* was read a second time.

TUESDAY.—*Sunday Trading.*—Lord CHELMSFORD, in introducing a Bill to amend the law relating to Sunday trading, explained the scope and object of the measure, which was not one of coercion, but of protection, and would not prevent Sunday trading before the hour of Divine service. The necessity of such a measure he deduced from numerous petitions from tradesmen on the subject, who complained that in self-defence they were obliged to open their shops on Sunday, and were so prevented from attending Divine service. The *Attorneys', solicitors', &c., Bill* passed through committee.

THURSDAY.—*The Commercial Treaty.*—Lord TAUNTON moved that the House concur with the Commons in the Address to the Queen on the subject of the commercial treaty with France. He believed that the operation of the treaty would greatly lessen the chance of hostilities, and if ever they did occur, would meliorate their rigour. It was a great object in a commercial point of view to break down the prohibitory system now existing in France, and to accomplish it the Government were quite justified in sacrificing revenue, and not insisting on counter stipulations. Both in a commercial and political

sense, he saw in this treaty no evil and much good, and on that ground he earnestly commended it to the approbation of their lordships.—The Earl of CORK seconded the motion.—Earl GREY could not concur in the approbation of the treaty, which he thought was ill-advised and not likely to effect the purpose of its promoters. Though matters had now gone too far to oppose the treaty itself, he felt bound to oppose an address which expressed approbation of its provisions. He thought that the treaty ought not to have been signed without a formal disclaimer having been previously obtained from France of her intention to annex Savoy and Nice. Such a signal mark of our confidence and support as the signing of this treaty ought not under present circumstances to have been given. It had inflicted a stain upon the honour of the country by promulgating an opinion abroad that England had agreed to the annexation in order to promote her own material interests.—Lord WODEHOUSE said that the annexation of Savoy had nothing whatever to do with the treaty, nor was there, as has been hinted, any collusion between the English and French Governments in connexion with the annexation of Savoy.—The Earl of MALMESBURY urged that the treaty was not a convention between the people of England and the people of France, but between Lord Palmerston and the Emperor. Referring to the foreign policy of the Emperor, and more particularly to the proposed annexation of Savoy and Nice, he said that while, from the position which he had formerly occupied, he could bear personal testimony to the moderation of the Emperor's conduct, he was compelled to express his regret at the course which his Majesty had recently adopted.—Earl DE GREY and RIPON defended the principle on which the treaty was founded, and maintained that its effect would be to develop the trade and draw closer the relations of amity between the two countries.—Earl STANHOPE said he would yield to none in upholding the French alliance, but could not bring himself to the conclusion that it could be strengthened by a treaty of this description.—Lord OVERSTONE strongly objected to the treaty on the ground that it was a dangerous experiment to repeal duties which could not be replaced, and to make up the deficit by a tax which was to cease in a year. For his own part, he anticipated that the Chancellor of the Exchequer, so far from reducing the income tax next year, would have to increase it to a shilling in the pound.—The Duke of ARGYLL supported the motion.—The Earl of DERBY reminded their lordships that according to the calculation of the Chancellor of the Exchequer there would be a deficit next year of 11 millions. This enormous liability could only be met by an increased income tax. He confessed that he foresaw in the budget laid before Parliament the first step to a permanent income tax, and he consequently looked upon it as a course of policy fraught with danger to the country. Adverting to the annexation of Savoy and Nice he said that if the Emperor of the French resorted to such a step he would infuse permanent suspicion as to his future policy which years would not efface, while the distrust engendered by such an act would call for millions of increased expenditure by every Power in Europe.—After some remarks by the LORD CHANCELLOR, Lord CHELMSFORD, and the Earl of HARDWICKE, the Duke of NEWCASTLE replied on the part of Government, and urged their lordships not to refuse their sanction to an Address which had received the all but unanimous support of the other House of Parliament. At a quarter to two o'clock their lordships divided, when the numbers were—content, 68; not content, 38; majority, 30. The Address was then agreed to.

FRIDAY.—*The English Fleet at Naples*—In answer to the Earl of ELLENBOROUGH, the Duke of SOMERSET said that the purpose of sending British ships to Naples was that of affording protection to persons persecuted by the Neapolitan government.—Lord REDESDALE, the Earl of MALMESBURY, and the Earl of DERBY questioned the propriety of this proceeding.—Earl GREY defended it, and said that in the present state of affairs at Naples it was quite impossible to know whether it would not be necessary to afford protection to persons asking it. The mere dictates of common humanity might demand it. *Savoy and Nice.*—The Earl of CARNARVON asked whether the Government had any information to give respecting the telegram from Turin, stating that arrangements had been made between the King of Sardinia and the Emperor Napoleon for the cession of Savoy and Nice.—The Duke of NEWCASTLE said he must decline to answer the question.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*Questions* were put to the different members of the Government upon a great variety of subjects, including rifle volunteer officers, harbours of refuge, the continued decay of the stone in new Houses of Parliament, profits of tenant farmers, the batta to Delhi troops, the amalgamation of the Indian and British armies, the shrubs in Hyde Park, the committal of a Roman Catholic clergyman for refusing to divulge the secrets of the confessional, the commercial treaty, the annexation of Savoy, compensation to the officers of abolished manor courts, &c.—With regard to the *Shrubs in Hyde Park*, Mr. MILDMAY asked whether it was intended to intrust the replanting of them to the same official to whom the planting was intrusted on the previous occasion.—Mr. COWPER said that there was no reason to suppose that the trees and shrubs were planted in an improper manner. They were planted under the superintendence of Lord Llanover, whose practical skill and zeal in all matters relating to the parks were a guarantee that the work was well and carefully done. He was not aware that any serious damage was done to the trees and shrubs which were removed; on the contrary, he was informed that when they were again placed in the ground they would sprout and grow as vigorously and successfully as before. In accordance with the wish of persons interested in the matter, all the ground to which reference had been made would be again planted with flowers, as far, at least, as the means at the disposal of the department would allow; and where the space was too large for flowers there would be shrubs, either deciduous or evergreens. Everything would be done to render the spot a pleasant and agreeable walk to the inhabitants of the metropolis, and he thought the work could not be intrusted to a more competent person than the superintendant of parks who had originally planted them.—Lord A. VANE TEMPEST asked whether the Government had taken any steps to obtain the concurrence of Austria, Prussia, and Russia, in opposition to the *Annexation of Savoy*, and whether they had been made acquainted with the final answer of Sardinia, and the opinions of Switzerland respecting it.—Lord J. RUSSELL said that he had communicated the correspondence with France to the Cabinets of Berlin, Vienna, and St. Petersburg, but without asking them to take any steps upon the subject. At Berlin and Vienna the Ministers for Foreign Affairs had stated generally that they agreed in the views which were entertained by her Majesty's Government, but they did not state what steps they were prepared to adopt. No answer had as yet been obtained from St. Petersburg, nor had the Government received information that their despatch had arrived there. With regard to the final intentions of Savoy, he understood that the substance of Count Cavour's answer was, that if the Parliament of Piedmont should think proper to institute a vote on Savoy, with the view of ascertaining the feelings of the people on the subject of annexation, the Government would take care that every facility should be afforded to arrive at a free expression of opinion. *The Commercial Treaty.*—The adjourned debate on the address to the Crown was resumed by Mr. HORSMAN, who moved to add to the resolution of Mr. Byng an expression of the opinion of the House that article 11 relating to the export of coal imposed on the Crown and Legislature of the country unnecessary and impolitic restrictions to which the House could not assent, and praying her Majesty to effect the omission of that article from the treaty. He objected to the treaty becaus it fettered the action and legislative independence of Parliament, and bound the country to a ruler whose menacing attitude and bearing had imposed upon it, in time of peace, war taxes and a grievous expenditure. He also objected to the policy and principle of the treaty, for it gave everything and obtained nothing in return. In fact, it taxed the Englishman in order to give a profit to the foreigner. With regard to the 11th article, against which his motion was directed, he held that, although it might be a great advantage to the coal-owners to increase the price of the commodity, the enhanced price would be equivalent to the imposition of a new tax. We were, in fact, about to give to France the raw material of war, and at the same time to give every foreign nation a vested right in English coal. He charged the Government with sacrificing the interests of England in deference to those of France, with neglecting their duty to their Sovereign, and failing in their allegiance to the magnificent empire which it was their destiny to guide.—Mr. PACKE seconded the motion.—Mr. VIVIAN said he was intimately acquainted with the South Wales coalfield, and estimated that that field alone would be fully equal to supply England, at her present rate of consumption, for upwards of 500 years. The other coalfields in England and Scotland could furnish an almost fabulous quantity, and he thought it absurd to talk of coal being an exhaustible commodity, or of its export to France being a political consideration.—Mr. BENTINCK regarded the treaty as unjust, one-sided, and degrading to this country, and he believed that a war with France would be less prejudicial to the honour and interests of England than the ratification of this treaty.—Sir R. PEEL expressed his cordial approval of the treaty, which he said was but a further development of that wise and beneficent policy which his father had inaugurated. At the same time, he could not entirely separate the treaty from the foreign policy of the Government with reference to the annexation of Savoy, against which he urged them to express an indignant protest.—Mr. DISRAELI took a general view of what he called the "celebrated instrument" which was to draw more closely the relations between England and France. He objected to the treaty on financial, political, and diplomatic grounds. It was, in his opinion, unskilfully and negligently negotiated, and bore upon the face of it the evidence of precipitancy and carelessness. Our finances were not in a condition to bear the penalty which the treaty involved, and the treaty itself did not recognise the cardinal principle of reciprocity. With regard to the political bearing of the question, it was perfectly clear from a perusal of the official papers that her Majesty's Government must have been aware that they were following a policy in Italy which must have led to the establishment by Sardinia of a great Power in Central Italy, and of an extension of territory on the frontiers of France. He reminded the House that events had occurred within the last few days which materially altered the aspect of affairs, and he confessed that the policy adopted by her Majesty's Ministers filled him with distrust, for he feared that it would lead to dangerous complications in Europe.—The CHANCELLOR of the EXCHEQUER declared that if there were any ground for the heavy charges brought against the Government he should have invited the House to reject the treaty altogether, and not waste the time of the House by the consideration of a paltry motion to prevent the exportation of coal. Adverting to the financial portion of the question, he showed that the loss to be entailed by the treaty upon the commerce with France (including the total reduction in the wine duties) would not be more than between 600,000*l.* and 700,000*l.* Against this small loss of revenue there was the prospect of a great expansion of trade, and of the many social and moral advantages certain to flow from the abolition of a restrictive commercial policy. The idea that the quantity of coal likely to be taken by France would exhaust the coalfields of England was ridiculous. Why, all the coal that France was in the habit of taking from us was but 160,000 tons a year, of the value of 200,000*l.*, which was positively not more than a single ironmaster consumed in a year, or was now habitually wasted at the pit's mouth. If, he concluded, by the blessing of the Almighty, a spirit of justice, prudence, and moderation should prevail in the councils of Europe, we ought to hope that this treaty may produce effects beyond our power to calculate.—After some remarks by Mr. NEWDEGATE the House divided, when Mr. Horsman's amendment was negatived by 282 to 56. The original motion was then agreed to.

MONDAY.—*Importation of Rags.*—Lord J. RUSSELL, in reply to a question from Mr. PULLER, stated that Lord Cowley had communicated to him the intention of the French Government to impose an export duty upon rags from France when the existing prohibition has been removed, but he could not say what would be the amount of duty. Her Majesty's Ministers intended to take steps to obtain a free export of rags from other countries in which the export is now either prohibited or restricted by heavy duties. *Annexation of Savoy.*—Lord J. MANNERS asked whether the Government had received any further information with regard to the intentions of the Emperor of the French on the annexation of Savoy, and whether his lordship was still of opinion that his Majesty intended to consult the great Powers upon the subject.—Lord J. RUSSELL replied that Lord Cowley was engaged in the preparation of a despatch upon the subject. In answer to the other question, he said that he had no doubt the opinions of the great Powers would have due weight with his Imperial Majesty.—Mr. DISRAELI asked what course the Government proposed to adopt in relation to the motion of Mr. Kinglake, on the annexation of Savoy.—Mr. KINGLAKE complained that he had understood the Government would give him an early day for the discussion of his resolution, and he regarded their unwillingness to do so as something approaching to a breach of faith.—Lord J. RUSSELL denied that he had in any way led the hon. member to suppose that the Government would give him a day for his motion; on the contrary, he had said that it would be injurious to the public service to take the discussion at the present moment. If, however, there was any party in the House who were of opinion that it was the duty of her Majesty's Government to go to war with France to prevent the annexation of Savoy, the best way to proceed would be to found a motion on the subject. This would be a candid and straightforward course, and far preferable to continuing irritating and aimless discussions calculated to imperil the friendly relations subsisting between France and England, and injurious to the best interests of the country.—Mr. DISRAELI contended that it was absolutely necessary that there should be a discussion on the subject of Savoy, in order that the House might know how far the policy of the Emperor had been occasioned and favoured by her Majesty's Government. It appeared to him that their conduct was involved in great mystery, and that explanations were desirable.—Lord PALMERSTON said if the right hon. gentleman or any other member thought fit to propose a vote of censure upon the Government for the course they had pursued, the Government would be quite prepared to meet it. He thought, however, that it should be clearly explained whether those who wished to bring the question of Savoy again before the House did so with the view of merely expressing censure on the conduct of the French Government, or of asking the House to pass a vote of censure on her Majesty's Ministers.—Sir J. PAKINGTON intimated that nothing was further from the intention of Mr. Disraeli than to move a vote of censure; all that was wanted was an explanation with respect to such portions of the papers on the table as involved their proceedings in reference to the annexation.—Mr. HORSMAN thought the real question at issue was whether the conduct of this difficult and delicate subject was in the hands of statesmen who were equal to their position. The Foreign Secretary had spoken as if there were two parties in the House—one of whom was in favour of annexation, and the other desirous of going to war to prevent it. He would like to know to which of these her Majesty's Ministers belonged. Events were marching on towards their accomplishment, and it was for the House to decide whether a firm and vigorous display of the real opinion of England on the subject of annexation might not do more to preserve the peace of Europe and the honour of England than the efforts of a timid and vacillating Administration.—The CHANCELLOR of the EXCHEQUER said that the Government had no objection whatever to a discussion on their foreign policy.—Mr. S. FITZGERALD repudiated any intention an the part of those with whom he acted to propose a vote of censure on the Government. The subject then dropped.—On the order for the second reading of the Bill for the repeal of the *Paper Duty*, Sir W. MILES moved as an amendment that, regard being had to the state of the revenue, it was not expedient to repeal the paper duty at present. He thought that no case had been made out for the surrender of so large a source of national income as the paper duty, and that it would be far better to leave matters as they are than to increase so obnoxious and unpopular an impost as the income tax. If the income tax were left at 9*d.* in the pound, and the paper duty remained as at present, the deficit would only be 30,000*l.*, and this he submitted would be a far better course to adopt than to abolish a tax which was not felt to press harshly upon the people. The Chancellor of the Exchequer should remember that we were not only living from hand to mouth, but that we had forestalled our income.—Mr. BANKES STANHOPE seconded the motion.—Mr. NORRIS, Mr. BLACK, and Mr. MAGUIRE supported the Bill; Mr. A. MILLS and Lord R. CECIL opposed it.—Mr. M. GIBSON defended the policy of the Government, and urged that as they had given a promise to reduce by one million the indirect taxation of the country they could not have made a better selection than by remitting the duty upon paper, and thus giving an enormous impetus to the manufacturing industry of the country. He denounced the paper duty as a grievous and oppressive trammel upon mental labour, upon education and the diffusion of knowledge, and called upon the House to reject the amendment by a large majority.—Mr. HORSMAN could see no fiscal or moral grounds to warrant a change which transferred the tax from paper to the prime necessaries of life. This was a deliberate and flagrant abandonment of the principle laid down by Sir R. Peel, and he was prepared to resist it to the uttermost. He severely criticised the policy of the Government, and made a bitter personal attack on the Chancellor of the Exchequer, declaring that no man in the House was more vulnerable than he and none more indebted to the forbearance of the House for the many eccentricities which had marked his political career.—The CHANCELLOR of the EXCHEQUER reviewed at length the operations of the duty, pointed to the monopolies which existed not only in the manufacturing but in the printing trades, and stated that by abolishing the duty on paper, not only would countless springs of industy be released, but the literature of the country would be improved and made more conducive to the diffusion of education and morality among the people. He reminded the House that the tax had been condemned by a vote of Parliament two years ago, and that its continuance was altogether indefensible.—Sir J. PAKINGTON supported the amendment on the ground that to repeal a tax producing so large and important a source of revenue in order to confer a signal benefit on a class was unwise and unstatesmanlike. On a division the amendment was negatived by 245 to 192. The Bill was then read a second time. The remaining business was postponed.

TUESDAY.—*The Commercial Treaty.*—The ATTORNEY-GENERAL, in reply to Mr. NEWDEGATE, said that article 5 of the commercial treaty would admit to this country goods, not only the produce of France and Algeria, but of all countries.—Lord STANLEY asked what steps had been taken by Lord Canning for the restoration of the *State of Dhar* to its native rulers.—Sir C. WOOD stated that, notwithstanding the remonstrances of Lord Canning, the Government had determined to adhere substantially to Lord Stanley's decision to restore the State to its rulers, and had sent a despatch to the Governor-General desiring him to carry their orders into effect. *State of Italy.*—Lord JOHN RUSSELL laid on the table certain papers relating to the affairs of Italy, and entered into an explanation of the conduct of the Government in relation to those affairs. He began by representing the state in which the question of Savoy and Nice had been left by the late Administration, and proceeded to vindicate the present Government from the accusation that they had pursued a policy which, by promoting the annexation of the Romagna and Tuscany to Sardinia, laid a ground for that of Savoy to France. This accusation was founded, he said, upon an entire misapprehension. Their policy had been to endeavour by negotiation to secure to the Italian people the power of managing their own affairs. He explained the communications which had taken place on the subject of certain proposed combinations for the restoration of the Grand Duke of Tuscany, and the establishment of a kingdom of Central Italy. The British Government, he observed, were not hostile to either; they wished the people of Italy to decide for themselves; to assert their independence of any Power whatever, and if they thought proper, to unite themselves to Sardinia. It had been said that for a long time he had acquiesced in the design of France to annex Savoy, and that he took no step in the matter until late in the month of January. But this was a mistake of dates. On the 5th of July he had stated what he considered would be the consequences to the Emperor of the French if the plan of annexing Savoy was carried into effect, in the general distrust it would create. But, according to Count Walewski, no such plan was then contemplated, and, the contingency he referred to being improbable, it was unnecessary for him (Lord John) to say that, supposing the Grand Duke of Tuscany not to be restored, and a kingdom of Central Italy not to be formed, he must reiterate the declaration he had made. In January, however, the question had assumed a different shape, showing that there was a project on foot for the annexation of Savoy, and at the end of that month the Government renewed the expression of its fears as to the consequences of the measure. It had been objected that the Government had been so anxious for the independence of Italy that they had neglected other objects. But in 1856 Lord Clarendon had thought the question of the state of Italy of so much importance that he brought it before the Conference, and later occurrences had induced the Government to consider it one of European interest, and, if so, of British interest. It was for European objects that they had employed the influence of Great Britain, and employed it peacefully, to reconcile differences, prevent war, and lay the foundations of peace between the great Powers of Europe. If in doing so they could enable Italy to regain her independence, and raise a country which had for three centuries been sunk and degraded into one of the leading Powers of Europe, so far from being ashamed, and shrinking from any responsibility, he should always take a pride in having been allowed to participate in such an object.—Mr. WHITESIDE criticised the policy of the Government with reference to the Italian question, and charged Lord J. Russell with desiring to carr out in Italy a

description of policy which he would not tolerate in the Ionian Islands—namely, leaving it to the people of Italy to decide by universal suffrage what should be their particular form of government.—Mr. Milnes said that the annexation of France to Savoy was one of those national traditions which no stranger could understand. The annexation was not new to French history—it was proposed by Henry IV. to Queen Elizabeth, who acceded to it. It was a subject which excited the interest of every French citizen, even of every French refugee, and it was not to be wondered at if France took the opportunity, and submitted the question to the diplomatic consideration of Europe.—Mr. Horsman believed the House would be unanimous in thinking that the annexation of Savoy should not be made a cause of war. But the question was whether France would not thereby acquire a new military frontier for a great military Power. The treaties of 1815 were securities taken by the great Powers of Europe against the traditional policy of France—a policy of war and aggrandisement—and what right had Sardinia to liberate France from obligations for the protection of Europe?—After some remarks by Lord H. Vane, Mr. Griffith, and Mr. Kinnaird, Lord Palmerston said it was clear that this was not a case upon which the issue of peace or war ought to depend. The cession of Savoy did not involve the interests of this country so as to induce us to go to war to prevent it. As regarded England, France would not be stronger after the acquisition of Savoy than before. If this was agreed upon, it was clear that some of the measures recommended in the debate would not be expedient. To enter into alliances with the great Powers of Europe, unless the matter was of sufficient importance, would inspire alarm, and rouse the national feeling in France. Her Majesty's Government, when it appeared that no Congress would take place, stated to France and to the other Powers their objections to the measure. He thought it would be a great mistake in the French Government if they persisted in the plan of annexation, and it would be a glorious act on the part of France if, after having restored independence to Italy, it was content with the renown of that generous enterprise without mixing it up with so small an object. The reasons assigned for the annexation he thought insufficient, and the objection felt by the British Government was not founded upon what they considered British interests, but upon the danger to Europe of the precedent and of the principles—those of natural boundaries and the identity of language—upon which the annexation was justified. As it was not to be done without the consent of the Sovereign and people of Savoy, and the assent of the great Powers of Europe, we were not come to the point when we were authorised to hold that reflection might not induce the Government of France to abandon the design. In the opinion of the Government this was a question of European interest, and he could not help thinking that other Governments would take the same view as our own, and that the Government of France would find that it would gain more by preserving the good opinion of Europe than by the acquisition of this small territory.—Mr. Disraeli denied that the late Government were at all blameable for any of the complications which had arisen out of the Italian question. But even if Lord Malmesbury had failed to get a satisfactory answer from France, that circumstance ought to have impressed upon Lord J. Russell the necessity of taking immediate action in the matter. It seemed to him that the French Government had been frank and straightforward in the announcement of their intentions, and that her Majesty's Government had treated these announcements as mere rumours, and had pursued a policy in Italy which could scarcely fail to lead to the results which all parties in the House now deplored.—Mr. Kinglake repelled the accusation that in protesting against the annexation of Savoy he was an advocate for plunging the country into war with France. What he desired was, full explanation and discussion, and some more decided assurance than that given by the First Minister of the Crown that the Emperor of the French would not persevere in his project unless with the consent of the great Powers. The noble lord at the head of the Foreign Office had, it was true, written strong letters, but they seemed to have been entirely without effect upon the French Government, neither producing reply, irritation, nor counter-argument.—Mr. S. Fitzgerald expressed his apprehension that the annexation of Savoy and Nice would be accomplished long before an opportunity would be afforded to Mr. Kinglake to bring on his motion.—Mr. Osborne thought the Emperor of the French stood acquitted of all deceit in the matter, and that if any deceit or subterfuge were practised throughout the negotiations, it was to be traced to the Minister of his Sardinian Majesty. He saw no reason why we should complain of the annexation of Savoy to France.—After a few words from Lord J. Russell in explanation, the subject dropped.—Colonel Sykes rose to move for certain returns connected with the reorganisation of the *Indian Army*, when the House was counted out at a quarter past 10 o'clock.

Wednesday.—Mr. L. King moved the second reading of the *Religious Worship Bill*, the object of which, he said, was simply to extend the religious freedom enjoyed by all other classes to the clergy of the Church of England, who could not legally celebrate its rites and ceremonies in private buildings without the permission of the incumbent of the parish and the licence of the Bishop. He asked the House whether, when large congregations of the working classes who shun churches were attracted to theatres, where preaching was contrary to law, it was wise to let the law remain as it was.—Mr. Walpole said that nothing was more deplorable than the extent of spiritual destitution in the country, arising from the want of funds; but the Bill in its present form would introduce complete confusion and disturbance in every parish in England, endangering the peace of the Church.—Lord R. Cecil said that this was a measure that would revolutionise the Church of England. He had doubts whether the House generally concurred in the desire to promote the preaching of the Gospel, inasmuch as there were four gentlemen of the Hebrew profession occupying seats in the House who could not possibly concur in any such desire.—Sir F. Goldsmid said that while he desired liberty for his own creed, it was his wish that Christians should enjoy the advantages and promote the interests of their religion.—Mr. Milnes said that the Bill was objected to because it did not carry out the principle upon which it professed to be founded, and recommended Mr. King to withdraw it.—The Chancellor of the Exchequer said that the Bill in its present shape would produce anarchy and confusion in the Church, and hoped that Mr. King would not press a measure the scope and effect of which were different from what he intended, and introduce another measure more carefully considered.—Mr Horsfall, on the contrary, hoped that the Bill would not be withdrawn. He denied that it struck at the parochial system, there being a difference between that and the ultra parochial system, against which it might strike.—Mr. Ayrton, Mr. H. Seymour, and Mr. Bass supported the Bill; Mr. Cross and Mr. Adderley opposed it.—Mr. Bouverie thought the Bill would throw parishes into confusion, and moved to defer the second reading for six months.—Sir G. Lewis supported the amendment. The extreme brevity of the Bill left the House in the dark as to the precise grievance it was desired to remedy. It seemed to be wished that an opportunity should be afforded to open rival churches in private houses, which would operate to the promotion of religious discord and religious fanaticism, the Bishop being ousted of all jurisdiction and control.—Mr. Baines, Colonel Sykes, Mr. Coningham, Mr. Mellor, and Mr. Spooner supported the Bill, which was opposed by Mr. Newdegate, Mr. Lefroy, Lord Ashley, and Mr. Hardy. On a division the amendment was carried by 168 to 121; so the Bill is lost. The *Marriages (England and Ireland) Bill* passed through committee. The *Adulteration of Food or Drink Bill* passed through committee, after a division on the question of extending its provisions to Ireland, which was negatived on a division by 101 to 88.

Thursday.—*Law of Bankruptcy and Insolvency.*—The Attorney-General moved for leave to bring in a Bill to amend and consolidate the law relating to bankruptcy and insolvency in England. The great object which he desired to effect was to devise a cheap and effective machinery for collecting and realising the estates of insolvent persons. The expense of administering an estate in the Court of Bankruptcy amounted to very nearly 33 per cent. upon the assets realised. In ordinary life, 5 per cent. was considered a very high rate of charge for collecting debts; but in the Court of Bankruptcy, the unfortunate creditor whose debt amounted to 600*l.* would have to submit to a reduction of 200*l.* to satisfy the claims of those whom the State had appointed to collect the assets of his debtor. This was an evil which would alone be sufficient to warrant an alteration in the law. He had intended to propose the entire abolition of imprisonment for debt; but as such a suggestion might have caused a good deal of diversity of opinion, he had determined not to introduce it, but to leave it for a separate measure to be brought in hereafter. He proposed that any person, whether a trader or not, should be at liberty to present a petition for adjudication in bankruptcy, and that every insolvent person willing to make a surrender of his property and a full disclosure with respect to it should be adjudged a bankrupt. He also proposed to relieve insolvents from future liability to pay the debts of their creditors, as he considered that the present state of the law in that respect was cruel in its operation and detrimental to the interests of society. To meet the cases of persons who might decline to give up their property, it was provided by the Bill that, after remaining 14 days in custody, they should be brought before the Court, whether they liked it or not, be examined with reference to their property, and be adjudged bankrupt. Insolvency and bankruptcy would for the future be blended together, and the present absurd and unintelligible distinction would be done away with. In the case of non-traders a few very simple tests of insolvency would be adopted. A creditor holding a judgment against such a debtor would have the power to summon him before the Court, and if he could not satisfy the debt, or give security for it, he should be considered insolvent. The next great evil of the existing system was the manner in which provision was made for the administration of the law. There was not the least necessity for the five commissioners who now presided in the Court of Bankruptcy. The judicial functions of those gentlemen were limited to one hour a day for three days in the week, or three hours per week, for which they received 2000*l.* per annum each. He proposed to sweep away the commissioners in London altogether—to relieve them of their functions, and to give them their 2000*l.* a year for life, but to hold them liable to act should any exigency arise that might render it necessary to make them auxiliary to the administration of justice. In lieu of the five commissioners on whom the administration of the law now devolved, one judge would be appointed, who should take the same rank, and receive the same remuneration, as the judges at Westminster Hall. The business would also be divided so as to make a distinction between that which was purely judicial and that which was purely administrative. The latter would devolve upon the registrars of the court, and it would become necessary to establish an auxiliary court for small estates. Facilities would also be given for private arrangements and compositions, and it would not be necessary that the whole of an estate should be administered in bankruptcy as at present. The office of messenger to the Court of Bankruptcy appeared to be one which was much abused, as the individual so called received emoluments varying from 1200*l.* to 1700*l.* per annum, while the duties were discharged by a man who was paid 3*s.* 6*d.* a day for his services. It was intended, therefore, to do away with the messengers, and to transfer their duties to the official assignee. The power of giving certificates of a different class would no longer be vested in the judge, but a power would be given to him to suspend discharges, while cases of fraud would be sent to the criminal courts. In the provinces it was proposed that as the present commissioners died off their functions should devolve upon the judges of the county courts. With respect to the expenses of the court, it was expected that the stamp fees payable on registration deeds of arrangement and composition would produce a sum of 60 000*l.* per annum, sufficient to meet the expenses of the Court.—Sir F. Kelly, Mr. James, Mr. Bowyer, Mr. Malins, the Solicitor-General, Mr. Bazley, and other members made remarks upon the proposed measure, and leave was given to introduce the Bill.—The Attorney-General for Ireland obtained leave to bring in a Bill to remove doubts as to the application of the *Common Lodging-Houses Acts* to Ireland, and to explain and amend the provisions of the same, so far as they relate to Ireland.—The House then went into committee on the *Customs Acts*, when the Chancellor of the Exchequer moved that on and after the 1st of January, 1861, the *Duty on Hops* should be, until the 1st of January, 1862, 20*s.* the cwt.; and on and after the 1st of January, 1862, 15*s.* per cwt.—Mr. Dodson moved an amendment that the import duty should be imposed only for one year. By that time he hoped that, by economy and the increased produce of other taxes, they might next year dispense with the duty altogether on native and foreign hops. After some discussion the amendment was negatived by 138 to 104.—The resolution was then agreed to, as also a resolution imposing a duty of 1*s.* per ton upon *Foreign and Colonial-built Ships*.—On the order for the further consideration of the report on the Customs Acts, Mr. Lygon moved the adjournment of the debate; but this motion was negatived on a division. The consideration of the report was, however, deferred. Certain Bills were forwarded a stage.

Friday.—*Mr. Cobden and Mr. Newdegate.*—Mr. Bright complained of a speech made by Mr. Newdegate, in which he charged Mr. Cobden with having become Napoleonised, approved of the principles of the Emperor of Russia, and deserted his liberal principles. He had, he said, received a letter from Mr. Cobden, requesting him to vindicate his character before the House.—Mr. Newdegate defended his speech, and after quoting extracts from Mr. Cobden's letters and speeches, said he could not retract his opinion. *Reform Bill (Scotland).*—In answer to Sir J. Fergusson the Lord Advocate said that the residence qualifications would not be interfered with. [Left sitting.]

City Intelligence.

The new Customs Charges.—A meeting of gentlemen engaged in the colonial and foreign produce trade was held in the London Tavern on Thursday, Mr. Crawford, M.P., in the chair, when it was resolved to petition the House of Commons against those parts of the proposed Customs resolutions which impose a registration fee as inconsistent with free trade, and likely not only to trammel the commerce of England, but to drive much of it to foreign ports.

Money Market, Friday.—British Funds: Consols closed at 94½ to ⅝ for Money, and 94¾ to ⅞ for the 11th of April; India Stock, 220½; Indian Five per Cent. Stock of 1859, 104⅝ to ¾; Five and a Half per Cent. Enfaced Rupee Paper, 105⅝; Exchequer Bills, 21*s.* and 18*s.* prem.—Foreign: Brazilian Old Five per Cents., 103; Mexican Three per Cents., 22⅜; Peruvian Four and a Half per Cents., 92¾; Ditto Three per Cents., 72¼; Portuguese Three per Cents., 1853, 44½ to 44; Russian Three per Cents., 1859, 65¼; Spanish Passive, 14⅜; Turkish Six per Cents., 1854, 80½; Ditto Six per Cents., 1858, 62⅞ ex div.; Venezuela Three per Cents., 26¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,049,615	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion	14,574,615
		Silver Bullion	—
	£29,049,615		£29,049,615

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weigh Annuity)	£10,221,196
Rest	3,732,233	Other Securities	21,816,351
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	9,271,338	Notes	8,543,670
Other Deposits	13,030,840	Gold and Silver Coin	725,260
Seven day and other bills	719,005		
	£41,306,416		£41,306,416

15th day of March, 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—W. Ellis, Pennyfields, Poplar, Ship Joiner—D. Green, Sheffield, Joiner—J. Hasell, Bristol, Soap Manufacturer—T. Lofius, Sheffield, Coal Dealer—S. Stevenson, Leicester, Dealer in Yarns—E. Weisse, Piccadilly, Milliner.

SCOTCH SEQUESTRATIONS—W. Cameron, Frenchie, Manufacturer—J. Stewart, Aberdeen, Fancy Trimming Warehouseman.

FRIDAY—BANKRUPTS—E. Bland, Great Chapel Street, Westminster, Linen Draper—M. Bowden, Bristol, Flint Glass Manufacturer—W. Burgess, Cambridge Street, Pimlico, Candle Dealer—J. Evans, Bristol, Cattle Dealer—D. Fieller, Aldermanbury, Clothier—J. Harris, Littledeans Hill, Gloucestershire, Innkeeper—T. Lilley, North Shields, Tailor—L. Lowndes, Abergavenny, Draper—J. Merriman, Hyson Green, Nottinghamshire, Lace Manufacturer—R. Millar, the younger, and E. L. Munns, Bishopsgate, City, Wholesale and Export Oilmen—J. Mountford, Stoke-upon-Trent, Parian Manufacturer—W. S. Spicer, Kingston-upon-Hull, Tobacconist.

Metropolis and its Vicinity.

The Drawback on Paper.—The London Committee, of which Mr. Chater is chairman, have concluded an arrangement with the Chancellor of the Exchequer to the following effect:—1. The committee waive the right of export for reimportation. 2. The Chancellor will embody in the Bill for abolishing the paper duty clauses securing a full drawback upon paper upon which duty may be paid between the passing of the Act and the 15th of August next; and a drawback of 1*d.* per lb. upon paper upon which duty shall have been paid previously to the passing of the Act.

St. George's-in-the-East.—On Saturday evening Mr. W. J. Thompson, the senior churchwarden of the parish of St. George's-in-the-East, acting upon imperative orders he had received from the Bishop of London, entered the church with three carpenters, and removed the crosses from the altar, and the drapery which has given so much offence to the parishioners. At the service of Sunday therefore the altar was completely denuded of its High Church furniture; all the crosses and inscriptions were gone, and the choristers' seats, in what is now understood to be "the *quasi* chancel," were swept away. Against this attack upon what Mr. King has hitherto held to be essential to the performance of Divine service he simply protested, and on Sunday morning his curate and choristers took up their places within the rails of the Communion-table, the rector himself ascending the reading-desk, which for some years past has been disused, except for the lessons, which have generally been read, as they were last night, by a layman. The morning service passed off without interruption, but in the evening the congregation manifested their displeasure in a very marked manner, notwithstanding the presence in the church of nearly 300 policemen. There was no actual rioting, but a great deal of coughing and interruption; and at the close of the service, although the lights had been put out, the congregation refused to leave the church, and persisted in singing the doxology, the organist in vain attempting to drown their voices with the organ. After the lapse of an hour a large body of extra policemen entered the church, and very soon effected a clearance. The congregation then assembled opposite the rector's house, and again sang the doxology without the interruption of the organist, and, being turned away from this spot, continued their vocal efforts in Cannon Street Road until they were fairly tired out. Mr. King has commenced an action against Mr. Herbert, the chief constable of the parish, in the Court of Common Pleas, for trespass, and has also caused five other persons to be served with writs. Under these circumstances, there appears to be very little hope that the excitement which has so long prevailed in this unfortunate parish will be abated.

The late Signor Lablache.—The Queen has been pleased to present a copy of the portrait of the late Signor Lablache, executed for her Majesty by Winterhalter, to the surviving relatives—a compliment no less gratifying to the family than indicative of her Majesty's appreciation of Signor Lablache's worth. The gift is accompanied with explicit suggestions that the charge of the picture shall be entrusted during his lifetime to Signor Frederick Lablache, as the eldest member of the

family, and at his death to be transmitted in succession to any of his brothers or sisters, children of the late Signor Lablache, thus providing that the picture should remain an heir-loom to the family.

M. JULLIEN.—It was reported last week that M. Jullien had attempted suicide in Paris in consequence of his pecuniary embarrassments. It is now known that this report was without foundation, but the fact of his being in a lunatic asylum, with but slender hopes of his ultimate recovery, is undoubted. It is also true that, owing to unsuccessful enterprises which had led to his appearance before the Bankruptcy Court in Paris, he and his family are wholly without resources. Under these circumstances a subscription has been set on foot to which the English public are invited to contribute, in testimony of their appreciation of services long and zealously rendered. For upwards of 20 years the concerts of M. Jullien have afforded gratification to thousands upon thousands of persons; and it was not his least claim to notice that, in providing for the amusement of the people, he also contrived to improve and elevate their taste.

ZOOLOGICAL GARDENS.—The Zoological Society have just received an important addition to their menagerie, in the shape of a fine living specimen of the gigantic Salamander of Japan, the largest known species of amphibian. This singular creature, which somewhat resembles a monstrous water-newt, inhabits the lakes of the basaltic mountains of Japan, where it was discovered by the Dutch naturalist Dr. von Siebold, but even there is considered a scarce animal. It is famous as being the nearest living analogue of the Fossil Man or *Homo diluvii testis* of Scheuchzer (*Andrias Scheuchzeri* of geologists). The Society's specimen is at present about three feet in length, and is the first of the sort which has been brought alive to this country.

ROYAL BRITISH BANK.—The winding-up of the affairs of the Royal British Bank in the Court of Chancery is now virtually at an end. From chancery and bankruptcy the creditors have already obtained 14*s.* 6*d.* in the pound, and the balance of the moneys received by the official manager has, by arrangement, been added to the assets in bankruptcy, in order that a further dividend of 6*d.* may be immediately declared.

THE INDICATOR.—The advertising lamp, which was erected eight months ago under this name at Hyde Park Corner, was removed a few days since. It is said that the scheme has been in every respect an entire failure.

THE WRECK OF THE ROYAL CHARTER.—The underwriters have recently sold the wreck of the Royal Charter for 1000*l.* to Messrs. Gibbs and Co., the owners, at Liverpool. It is understood that no effort will be made to recover the remainder of the gold until the fine weather has set in. The underwriters represent that the amount of gold recovered was 40,000*l.* short of the amount on freight, and which they paid.

THE PUBLIC HEALTH.—The Registrar-General's official report states that the health of London has improved, the deaths having fallen in three weeks from 1500 to 1397. In the corresponding week of the 10 previous years the corrected average was 1365; the present return is therefore 32 above the average. During the week the births of 919 boys and 867 girls, in all 1786 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1768.

Provincial.

APPLEBY.—At the recent opening of the spring assizes in this town, the ordinary routine and parade which accompany the judges as part of the high sheriff's office were enlivened by the high sheriff, Mr. Matthew Benson Harrison, dressing his javelin-men and trumpeters in the costume of Charles I. The men wore leathern doublets, with blue velvet sleeves slashed with white silk, blue velvet breeches, high buff buckskin turnover boots, sombrero hats buttoned up on one side, and ornamented each with a long blue and white feather, and crossbelts with large buckles suspending old-fashioned large-handled swords; a red sash round the waist completed their costume. The trumpeters wore grey hats looped up; in other respects the same dress. The javelins were also very formidable, antique-looking weapons. Most of the men were handsome, tall young fellows; and so decked out, as they marched before the judges down the old-fashioned street of the town on a bright frosty morning, they carried back the mind to the days of the cavaliers, and formed a very picturesque and unusual sight.

FOLKESTONE.—For several hours on Saturday night this coast was visited by a heavy fall of snow. The wind blew strong from the south-west, which carried the snow with such force and density as to shut out all view of the coast lights. Amidst the storm two fine outward-bound ships from the Thames, the Wagoota, Captain Jardine, for China, and the Woodcote, Captain Fleming, for Adelaide, went ashore between this place and Dungeness, and it is feared that they will become total wrecks.

NEWCASTLE-ON-TYNE.—All the bodies of the men and boys killed in the recent explosion at Burradon Pit have now been recovered with the exception of one, of whom no traces can be discovered. The adjourned inquest was resumed on Monday at Burradon village. The excitement with regard to this melancholy catastrophe appears to increase, and the building where the inquiry was held was densely crowded. Mr. Harle appeared for the Government, Mr. Philipson for the owners of the pit, and Mr. Serjeant Ballantine and Mr. Blackwell for the relatives of the deceased men and boys—the two latter having been retained for the purpose by one or two large manufacturers in the north in order to protect the interests of the bereaved women and orphans. William Kirkley, the fore overman, was examined at great length, and was cross-examined by Mr. Serjeant Ballantine on Tuesday. The inquiry was continued on Wednesday and Thursday, and was then adjourned for a week. The collections in the churches and chapels of Newcastle on Sunday on behalf of the bereaved families amounted to 170*l.* The public subscription closely approaches 3000*l.* The subscribers to the Commercial Sale Room in Mincing Lane, London, have contributed 111*l.* 5*s.* to the fund.

PLYMOUTH.—On Sunday night the barque Heart of Oak, from Santander to Newcastle in ballast, while going up Channel 20 miles off this port ran into the French brig Duc de Trevise, from Havre to Rio Grande, and caused such damage that the brig immediately foundered. The crew and passengers of the brig, eight in number, fortunately got clear of the wreck in a small boat, and at daylight were descried by a pilot cutter and brought into this port. The barque put into the Sound on Tuesday with rudder damaged and other injuries caused by the collision.

RETFORD.—The adjourned inquest in the case of Mr. Charles Spencer, of Walkeringham, terminated on Wednesday in a verdict of Wilful Murder against John Fenton, the man who had been apprehended on suspicion on the morning after the murder.

ROTHERHAM.—A clue has at length been obtained to the discovery of the murderers of Mr. Luke White and his wife, who were murdered about three years ago in the village of Bolton-on-Dearne, near this town. It will be remembered that on the night of Dec. 4, 1856, Mr. White, an aged person, who was the village postmaster, a druggist, and local preacher, while engaged in preparing his sermon for the following Sunday, heard some one come to his shop door, and on going to see what was wanted was knocked down and murdered. His wife hearing a noise in the shop went to see what was the matter, and was also murdered, both bodies being found in a large pool of blood in the forenoon of the next day. No traces of robbery having been committed were visible, and the affair was shrouded in the most impenetrable mystery. Although every effort was made by the constabulary, and large rewards offered, no clue could be found to the perpetrators of the crime, and the coroner's inquest, after sitting for a considerable time, was obliged to return an open verdict. On the day the murder was committed a hawker was said to have been in the village vending caps and small wares, but no clue could be obtained to him afterwards, nor could he in any way be connected with the commission of the deed. The only person to whom suspicion pointed was White, the village constable, but no evidence could be adduced to connect him with the murder; but, on the contrary, it was shown that the murdered man had been one of his warmest supporters, and had that day been engaged in getting up a memorial to Colonel Cobbe in favour of his being permanently stationed in the village. However, nothing coming to light, White left the village, and has since been living to some extent as a suspected man in his native town of Barnsley. During the past week an Irish hawker, who is undergoing six years' penal servitude at Portsmouth, has made certain statements relative to the affair, completely exonerating White from any participation in the murder, and pointing out the guilty parties, stating that, although he himself did not commit the murder, he was in the house when the murdered couple were lying dead on the floor. In consequence of these disclosures the Secretary of State has issued warrants for the removal of the prisoner from Portsmouth to York, and for the apprehension of the parties criminated.

SOUTHAMPTON.—The magisterial inquiry into the alleged murders by poison on board the Accrington was resumed on Saturday, when it appeared from the evidence of the witnesses examined that the captain, who was in the habit of drinking excessively, was very cruel in his conduct to the crew and passengers, frequently striking several of the former and using abusive language to the latter. On the 10th November he locked the prisoner Carman in one of the pig-sties for an hour, and on the following morning the mate inflicted on him a cruel beating. One of the witnesses deposed that the prisoner after this remarked that the captain, or the chief officer, or he, would have to die before many days. On the 14th after eating their breakfast together the captain and chief officer died, and the doctor narrowly escaped the same fate. It was suggested that they had been poisoned by tartar emetic, and that the prisoner who, as steward, had access to the stores, had mixed it with their food; but there was no direct evidence of the fact, and the depositions sent home from Pernambuco were so loose and confused that they failed to substantiate the charge. At the adjourned sitting on Monday some further depositions were read, but they threw no light whatever upon the case; though they fully confirmed the evidence given on Saturday as to the brutal treatment of the crew and passengers by the late captain and chief officer, and disclosed details of conduct on their part, which, as one of the magistrates remarked, was a disgrace to the British flag. After a brief consultation between the magistrates, the Mayor said that the Bench had given the case their most careful and serious attention, and were of opinion that the evidence was not sufficient to justify them in sending it for trial. The depositions produced would be laughed at in a superior Court, and the magistrates of this town would be considered as senseless as the people of Pernambuco seemed to be. The prisoner was therefore discharged from custody. Captain Tinling, R.N., one of the magistrates, remarked that the proceedings on board the Accrington were the most disgraceful he had ever heard of. It was dreadful to think of so many women and children being exposed to the treatment of such madmen, without a military surgeon or officer to look after them. The Bench generally expressed their indignation at the cruelties which had been practised on board, and hoped that a full inquiry would be made. A question then arose as to the maintenance of Carman and the witnesses, and it was understood that the Solicitor for the Treasury who conducted the prosecution had instructions to attend to their immediate wants, and would see to their transfer to their homes at Liverpool. The prisoner Carman then retired, receiving the congratulations of his fellow seamen, and a slight cheer was raised by the people outside the court.

WOLVERHAMPTON.—A man named Samuel Jones was brought up on Monday, at the Petty Sessions, Willenhall, on a charge of burglary. Mr. Benjamin Guy, residing at Portobello, near Wolverhampton, deposed that on the night of Monday week he was awakened at about half-past 2 by two men bursting into his bedroom. One of these men was the prisoner, who carried a candle in one hand and in the other a life-preserver, and had a black mask on his face. Prosecutor immediately got out of bed, and made towards them, and a struggle ensued, during which he was severely injured. One of the men escaped, but Mr. Guy succeeded in holding down one till the arrival of a policeman, who, hearing shouts of "Murder," had come to the rescue. The prisoner was fully committed for trial at the assizes.

Ireland.

THE TRIBUTE TO THE POPE.—The *Freeman* announces that the Dublin collection in aid of the Pope already exceeds 15,000*l.*, and that when the provincial returns are made this sum will be largely increased.

LORD CAMPDEN AND THE CORK ELECTION.—The *Mail* of Friday evening contains an address from Lord Campden to the electors of Cork county, stating that his lordship gave no authority for the publication of the address bearing his signature, soliciting the support of the constituency. Lord Campden says, "The announcement of my nomination causes me the greatest surprise. I was nominated without my consent, for I beg you distinctly to understand that I did not proffer myself as a candidate, but only professed myself willing to undertake—if spontaneously elected—the weighty and responsible duty which would thus have been thrown upon me. This is the explanation of my absence, for had it been my intention to solicit your suffrage I should have done so in person. I did not put forth, and was not cognisant of the election address, purporting to bear my signature, which has appeared in print." His lordship, while avowing himself favourable to the preservation of the Pope's temporal rights and to the system of separate education, declares himself to be in politics an unmistakeable Conservative. To this letter Alderman M'Carthy has replied by publishing telegraphic messages, expressing Lord Campden's consent to sit for Cork if elected. These messages appear to have been sent not by Lord Campden but by Mr. Pope Hennessy, who has written to explain his reasons for so doing, and to express his opinion that there is no discrepancy between the versions of the story given by Lord Campden and Alderman M'Carthy, widely different as they may appear to be. Lord Campden in reply states that this opinion is perfectly satisfactory, and unites with Mr. Hennessy in the sentiment that the independent party in Ireland owe a deep debt of gratitude to those electors who polled for him, to the two prelates, to the members of the Committee, and to Alderman M'Carthy. It is not yet known who is accountable for Lord Campden's election expenses, which will necessarily be considerable, as Cork county cannot be fought with less than 5000*l.* or 6000*l.* a side.

Scotland.

UNIVERSITY OF EDINBURGH.—Lord Brougham has appointed Sir David Brewster Vice-Chancellor of the University of Edinburgh.

FALL OF A TERRACE AT EDINBURGH.—Ramsey Terrace, recently erected by the late Lord Murray on a spur of the Castle Hill, Edinburgh, overhanging Princes Street gardens, has given way owing to defective foundation, and become a mass of ruins. The work had been completed with the exception of the placing of the statue, for which Mr. Steell had been commissioned, when about three weeks ago several rents began to appear in the masonry. These grew gradually worse, and at last the mass of earth which had filled up the space between the natural slope of the hill and the retaining wall, becoming charged with moisture, pressed outwards the foundation of the wall, which had not, unfortunately, been carried down to the natural rock. An extensive landslip in consequence took place on the night of the 8th inst. the masonry falling, distorted and shattered, on the face of

the lapsed embankment. The cost of the erection of the terrace to the late Lord Murray is said to have been about 5000*l.* or 6000*l.*

Fatal Explosion near Airdrie.—On Friday night one of the furnaces at Dundyvan Ironworks, near Coatbridge, in the neighbourhood of Airdrie, exploded. Three men and a lad who were working in front of this were instantly overwhelmed by the liquid mass. Their clothes were consumed, and nearly every part of their bodies fearfully scorched. Their cries were pitiable, and the men ran some distance from the place, but the poor boy could not escape. With some difficulty, however, he was extricated and taken home; but died within an hour afterwards. The three men lingered in excruciating pain till Saturday, when they also expired.

Railways.

The Eastern Counties Railway Accident.—The coroner's inquest at Tottenham was brought to a close on Thursday, when the jury, after an absence of about two hours, returned the following verdict:—

"We find that the deceased individuals met with their deaths from the breaking of the tire of one of the leading wheels of an engine in consequence of a defective weld, and we are of opinion that had proper precaution and vigilance been used the accident might have been avoided."

It is alleged that the accident has resulted in another death at Bow, caused not so much through any material injury received as by the effects of the shock on a delicate nervous system. The list of deaths now amounts to seven.

Law.

The Assizes: Northern Circuit, York.—*Bigamy.*—The *Rev. Harry Lloyd Bickerstaff*, 34 pleaded guilty to an indictment charging him with marrying Anna Maria Campbell, his former wife, Mona Brougham Bickerstaffe, being then alive, at Leeds, on November 8, 1859. It will be remembered that the prisoner was a clergyman at Leeds. He met Miss Campbell at Brighton, and represented himself as a widower, though he had been married about twelve months before, and after living with his wife a few weeks had separated from her. About a fortnight after the second marriage a rumour reached Miss Campbell that the prisoner had been previously married. He immediately fled from home, and lived a frightfully miserable life for some time, constantly pursued by police, sleeping under hedges, and well nigh starved to death. When he could bear this no longer he voluntarily surrendered himself to the police. Mr. Justice Blackburn sentenced him to three years' penal servitude.—*Burglary with attempt to Murder.*—*Michael O'Brien*, 40, was indicted for burglary in the dwelling house of the Rev. John Wynn, and stealing therein one coat and about 25*l* in gold, and other articles his property, and also with assaulting the said John Wynn with intent to murder him, at Nappa, on the 1st January last. The prosecutor was vicar of Aisgarth, and lived at a house situated about 500 yards from any other dwelling. On the night in question the prosecutor retired to bed, about 10 o'clock, when all was right. He was awakened about three o'clock in the morning, and found two men in his house. One of these was taller than the other, and was armed with a hay spade. With this instrument the man aimed a blow at Mr Wynn's head, the fork of which was broken, very fortunately, by catching some woodwork. It nevertheless inflicted a very severe injury, laying Mr. Wynn's head open. The two grappled together, and after a severe contest Mr. Wynn succeeded in wresting the spade from his assailant. In the meantime the other person had assaulted the prosecutor with his fists and finally one of the men produced a razor, and threatened to stab him. Mr. Wynn grasped the razor, thereby cutting his palm, and was at length overcome. They seized him by the leg, and dragged him down stairs and trampled on his body until he promised to give them what money he had in the house if they would spare his life. They then secured the various articles, with the robbery of which they were charged in the indictment. The only point was the identification of the prisoner. The prosecutor's servant boy swore to him distinctly, and there was circumstantial evidence to implicate him. The jury convicted the prisoner, and the judge ordered that sentence of *Death* should be recorded against him, and stated that he should not recommend any commutation lower than penal servitude for life. Durham.—*John Richardson* was charged with having, on the 13th and 29th of August last, forged the acceptances of two bills of exchange. The prisoner on being placed at the bar appeared to be suffering from illness, and was accommodated with a seat. The prisoner up to the time of these transactions occupied a position of great respectability in West Hartlepool, and was a commission agent and clerk to the board of guardians. On the 13th of August last he took bills to the bank to the amount of 260*l.*, which were cashed. Among them was one purporting to be accepted by a Mr. Walden, a brewer at Hartlepool, who proved that it was a forgery. The jury found the prisoner *Guilty*, and he was sentenced to 15 years' penal servitude. It transpired that the prisoner had committed forgeries amounting in the whole to 1407*l.*

Oxford Circuit: Worcester.—*Attempt to Murder.*—*John Williams* was charged with cutting and wounding James Williams, at St John's, with intent to murder him. It appeared from the statement of the prosecutor, an old man, that the prisoner married his daughter, and that after they had lived together some months it was ascertained that the prisoner was already married. He was then prosecuted for bigamy, and imprisoned for the offence. Consequently enmity arose between the parties, and on the evening of the 23d December, as the old man was returning home from his work, he was waylaid by the prisoner, who knocked him down, and with a knife cut his throat. The old man got up, but his assailant again beat him on the head, and then left him. Prosecutor crawled back to his master's, and surgical assistance being promptly at hand, his life was saved. The wounds inflicted were on parts of the neck that might have caused death, but they were not cut deep enough to reach the main arteries or windpipe. Prisoner was apprehended at his own lodgings the same evening. He had met the old man's daughter after the attack, and had spoken to her. He was found *Guilty*, and Baron Bramwell ordered sentence of *Death* to be recorded.

Midland Circuit: Nottingham.—*Charge of Murder.*—*Herbert Slack*, 23, and *Alfred Slack*, 20, brothers, were tried for the wilful murder of George Clarke on December 26, at New Lenton, near Nottingham. It appears that in the early part of the day two men named Weston and Clarke had been drinking in Nottingham, and as evening advanced set out to return to their homes, a short distance from the town. Whilst on the road they were overtaken by the two prisoners, one of whom, Herbert Slack, tripped up Weston, causing him to fall. They made up the quarrel arising from this circumstance, but the elder Slack sent his brother for a swordstick, and when he had obtained this struck Weston again. Clarke came to the assistance of his companion, when Herbert Slack drew the sword and plunged it into his body just under his left shoulder. The unfortunate man staggered and almost instantly expired. The jury *Acquitted* the younger prisoner and returned a verdict of *Manslaughter* against the elder, and the Lord Chief Baron sentenced him to 15 years' penal servitude.

Norfolk Circuit: Bedford.—*The Luton Murder.*—*Joseph Castle* was indicted for the wilful murder of Jane Castle, his wife, at Luton, on the 9th of August. The prisoner and his wife had lived at Ware for about two years, but in consequence of their continued disagreements arising from jealousy on the part of the prisoner, the wife left him and returned to her mother's house at Luton. On the following morning the prisoner called and asked her to return. What passed between them was not known, but they were soon after seen ascending Summer's Hill, where the woman was found two hours afterwards with her head nearly severed from her body, and marks of a severe struggle near the spot where the body was lying. The charge was clearly brought home to the prisoner, and all the circumstances connected with the commission of the offence showed great and careful premeditation. The jury immediately found the prisoner *Guilty* of Wilful Murder, and Mr. Justice Williams passed sentence of *Death* in the usual form, holding out no hope of mercy.

Obituary.

The Countess Granville died on Tuesday night at Royal Crescent, Brighton. Her ladyship had been for the past eight months in declining health, and the Duchess of Dalberg, her mother, and Sir John Acton, her son, were summoned to Brighton some time ago in consequence of her precarious condition. The deceased Marie Louise, Countess Granville, was the only child and heir of Emeric Joseph, Duke of Dalberg, and was in her 49th year. She married in 1833 Sir Frederick Richard Edward Acton, by whom, who died in 1837, she had an only son, Sir John Acton, M.P. for Carlow. Her ladyship married secondly, in 1840, Earl Granville, then Viscount Leveson, and settled in England, where she had ever since been one of the most brilliant ornaments of London society.

Sir Grenville L. Temple, Bart., died on the 3d inst. at Thulgarton Constance, in the Grand Duchy of Baden, at the early age of 30. He was the son of the late Sir Grenville Temple, Bart. (who represented a younger branch of the ducal family of Buckingham), by the daughter of George Baring, Esq. He was born in 1830, and succeeded to the title in 1847. By his wife, Marie Avon Von Bristen, he leaves issue an infant son, born in 1858, who succeeds to the baronetcy.

Sir John Judkins Fitzgerald, Bart., who was among the passengers lost in the Nimrod steamer on the Pembrokeshire coast, on the 28th ult., was formerly high sheriff of Tipperary, and lieutenant colonel of the North Cork Militia. He was one of the oldest baronets, having been born in 1788. He was the eldest son of the late Colonel Sir Thomas Fitzgerald, by the daughter and co-heiress of Colonel Capel, of Cloghroe House, county of Cork. He succeeded to the title in 1816. He was three times married, and has left issue by his first wife an only son and successor, Captain, now Sir Thomas Judkins Fitzgerald, of Golden Hills, Tipperary, a magistrate for the counties of Limerick and Tipperary, and Captain in the Tipperary Light Infantry. He was born in 1820, and is married to a daughter of Mr. Henry White, J.P., of New Ross and Golden Hills.

Sir Robert Ferguson, Bart., M.P. for the city of Derry, and lord lieutenant of that county, died on Tuesday in Dublin, at the residence of his brother-in-law, John George Smilie, Esq., in his 65th year. He was an old and faithful follower of the Irish Whig Liberal party, and had sat for Londonderry during many Parliaments.

Mr. Baron Watson, one of the judges of the Court of Exchequer, died suddenly on Tuesday morning at Welshpool, during the discharge of his judicial duties at the Montgomery Assizes. Immediately after charging the grand jury Baron Watson, who had been for some weeks in ill health, was observed to put his handkerchief to his face and a smelling bottle to his nose. He leant back in his chair, and it was evident that something more than a fainting fit had seized him. Several medical men were immediately in attendance, and every means were resorted to that medical skill could devise, but he grew gradually worse, and a sofa cushion having been procured he was laid upon it and conveyed to his lodgings, which were close at hand. He had scarcely reached them when he expired. The Baron's son happened to be attending his lordship upon circuit, and was of course in attendance upon him when he died. It was stated by the medical men to be a case of serous apoplexy. The deceased, who was born in 1796, was educated at the Royal Military College, Marlow, and entered the army as cornet in the 1st Royal Dragoons in 1811, became a lieutenant in 1812, and, after having served in Spain and France under the Duke of Wellington, exchanged to the 4th Dragoons, with whom he served in Belgium and France in 1815. Having retired from the army, he entered as a student at Lincoln's Inn, 1817, and practised for several years as a special pleader, was called to the bar in Lincoln's Inn, in 1832, made a Q.C. and a bencher of that inn in 1843, and was appointed a Baron of the Court of Exchequer in November, 1856, when he received the honour of knighthood. He was the author of two legal works, was M.P. for Kinsale from 1841 to 1847, and for Hull from 1854 to 1856.

Mr. Stephens Lyne-Stephens, of Roehampton, whose death was lately announced, was the husband of the celebrated Mdlle Duvernay. He was formerly high sheriff of Norfolk, and sat in one short Parliament as M.P. for one of the smaller boroughs disfranchised by the Reform Bill of 1832.

BIRTHS.—9th inst, at Glenarm Castle, North Ireland, the Countess of Antrim, of a daughter—12th inst, at Kedleston, Derbyshire, the Lady Scarsdale, of a son—12th inst, at Thirlestane Hall, Cheltenham, the Countess Stenbock, of a son and heir—5th inst, at Lampert Hall, the wife of Sir Charles Isham, Bart., of a daughter, stillborn—5th Jan., at Government House, Hobart Town, Tasmania, the wife of his Excellency Sir H. E. F. Young C.B., of a daughter—8th inst, at Twickenham, Middlesex, the wife of Sir Lionel Smith, Bart., of a daughter.

MARRIAGES.—At St. Bride's Church, Temple, Edward Wallace Goodlake, Esq., of the Inner Temple, to the Hon. Caroline Wrottesley, only daughter of Lord and Lady Wrottesley—8th inst, the Marquis of Anglesey, to Ellen Jane, only daughter of George Burnand, Esq.—13th inst, at St. George's, Hanover Square, Arthington Worsley, Esq., second son of Sir William Worsley, Bart., of Hovingham Hall, Yorkshire, to Marianne Christina Isabella, youngest daughter of Colonel the Hon. Henry Hely-Hutchinson, of Weston, Northamptonshire, and Upper Brook Street, Grosvenor Square—5th Dec., at Auckland, New Zealand, the Hon. Edward W. Stafford, of Mayne, county Louth, First Minister of the Crown in New Zealand, to Mary, third daughter of the Hon. Thomas Houghton Bartley, Speaker of the Legislative Council.

DEATHS.—On the 12th inst, at Thorpe-Malsor, the Hon. Caroline Eliza, wife of Colonel Maunsell, and daughter of the Hon. William Cockayne, second son of Charles, fifth Lord Viscount Cullen, of Rushton Hall, Northamptonshire, aged 73—6th inst, Vice-Admiral James Arthur Murray, of Reading, Berks, only son of the late Lord William Murray, aged 69—At Heath House, Surrey, after 24 hours' illness, Frances Vic, relict of the late Major-General Sir George Wood, K.C.B., late of Ottershaw, and Potters Park, Surrey, aged 73—12th inst, at Harewood, Herefordshire, Sarah, wife of Sir Hungerford Hoskyns, Bart., aged 81—3d inst, at Stapleton Park, near Bristol, Edward Gore Langton, late Captain 52d Regiment, eldest surviving son (by his first marriage) of the late Colonel Gore Langton, of Newton Park, aged 71—8th inst, at Brighton, Georgiana Charlotte, widow of George Bative, Esq., Campden Hill, Kensington, and youngest daughter of the late Lieut.-General W. Wynyard, Colonel of 20th Foot, aged 73—10th inst, at 13, Great Stuart Street, Edinburgh, Helen, wife of Major General Swinburne, of Marcus and Pontop Hall—7th inst, at Fairlee Villa, near Bideford, Lieut.-Colonel John Crowe, K.H., late of H.M.'S 32d Regiment, a soldier of the Peninsula and Waterloo, aged 77—10th inst, from softening of the brain, Brevet Lieut.-Colonel Spring, late 44th Regiment—10th inst, Colonel Richard Bayer Otto, formerly Quartermaster-General at Madras, at his residence, 7, Queen Street, Mayfair, aged 78—2d inst, at the Rectory, Marchwiel, after a long illness, the Rev. J. H. M. Luxmoore, surviving son of the late Bishop of St. Asaph, aged 60—12th inst, at Effingham, Nancy Sadleir, widow of the late William Otter, formerly Bishop of Chichester—10th inst, at Nonsuch Park, Cheam, Surrey, W. F. G. Farmer, Esq., aged 48.

Markets.

COVENT GARDEN.—March 17.

Supplies of most things, especially vegetables, are scarce. Pine Apples and Grapes have not altered since our last report. Good Apples and Pears are scarcely to be had. Oranges are plentiful and cheap. Good Cobs realise 1s. to 1s. 6d. per lb. Rhubarb, Asparagus, and Seakale are furnished in small quantities. Parsley is still dear, and with the exception of a few Turnip tops and some good Cornish Broccoli there is little in the way of Greens in the market. Potatoes realise 4s. 6d. a bushel. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Pears, per doz., 6s to 8s
Grapes, per lb., 8s to 10s	Oranges, per 100, 6s to 10s
Melons, each, 2s. to 4s	Lemons, per 100, 5s to 8s
Pomegranates, each, 4d to 6d	Filberts, p. 100 lbs., 50s to 60s
Apples, per doz., 2s to 3s.	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 6s to 8s	Artichokes, per doz., 2s to 3s
Seakale, per basket, 2s to 3s	Beet, per doz., 1s 6d to 2s
Rhubarb, per bundle, 2s to 3s	Celery, per bundle, 1s 6d to 2s
F. Beans, per 100, 2s to 2s 6d	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen bunches, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., per score, 1s to 1s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d
Cucumbers, each, 1s to 3s	

POTATOES.—Southwark, Monday, March 12.

During the past week the arrivals coastwise have been large, and trade dull; the prices of the former week were barely maintained. The following are this day's quotations:—Yorkshire Regents, per ton, 90s. to 140s.; Lincolnshire do., 80s. to 95s.; Dunbar do., 100s. to 120s.; do. Reds, 90s. to 100s.; Perth, Forfar, and Fifeshire Regents, 80s. to 100s.; French Whites, 70s. to 80s.; Belgian do., 60s. to 70s.

HOPS.—Borough Market, Friday, March 16.

Messrs. Pattenden & Smith report that the settlement of the Hop duty question last night has given a better tone to this market, and should the Chancellor of the Exchequer act on the same principle as to foreign and English malt it is thought that a great increase in the consumption of beer would ensue, consequently an increased revenue from malt and hops be derived.

COAL MARKET.—March 14.

Bell's Primrose, 13s.; Byass's Bedside West Hartley, 15s. 3d.; Grey's West Hartley, 15s. 3d.; Hollywell, 16s.; Howard's West Hartley, 15s 6d.; Lambert's West Hartley, 15s. 6d.; Tanfield Moor Butes, 13s.; Walker Primrose, 13s. 3d.; Wylam, 16s. 6d.; Walls End Cassop, 20s; Walls End Heugh Hall, 19s.; Walls End North Hartlepool, 16s.; Carway and Duffryn Malting, 22s. 6d.; Powell's Duffryn Steam, 22s. 6d.—41 ships at market.

MARK LANE.—Monday, March 12.

The supply of English Wheat to this morning's market was small, and met a quick sale at fully former prices, and in some instances 1s. per qr. advance was realised. The inquiry for foreign continues to be limited, but holders are firm in their demands. For Barley of all descriptions there is a fair sale at late rates. Beans and Peas are unaltered in value. The Oat trade is quiet, and the little business doing is at the extreme prices of last week. There is no alteration in the value of Flour.

Per Imperial Quarter.	s.	s.		s.	s.
Wheat, Essex, Kent, & Suffolk	White	49—48	Red	40—45	
— — fine selected ears	ditto	46—48	Red	42—48	
— — Talavera		46—52			
— Norfolk		38—56	Red	—	
— Foreign		38—44	Malting	35—40	
Barley, grind. & dist., 24s to 30s.	Chev.	23—31	Malting	35—41	
— Foreign	grinding and distilling	19—24			
Oats, Essex and Suffolk	Potato	23—29	Feed	19—26	
— Scotch and Lincolnshire	Potato	24—28	Feed	19—24	
— Irish	Poland and Brew	23—26	Feed	17—24	
— Foreign		35—38	Foreign	—	
Rye		—			
Rye meal, foreign	Tick	33—43	Harrow	33—42	
Beans, Mazagan	30s to 40s.	45—54	Longpod	—	
— Pigeon	36s — 47s.	38—46	Egyptian	—	
— Foreign	Small	50—58	Suffolk	36—40	
Peas, white, Essex and Kent	Boilers	31—33	Foreign	30—37	
— Maple	—s to —s	—	Yellow	—	
Maize	Grey	—			
Flour, best marks delivered	White	37—43			
— 2d do.	per sack	27—37	Country	27—37	
— Foreign	ditto	18—27	Per sack	30—37	
	per barrel				

Friday, March 16.

The weather at the close of last week and beginning of this was very severe, with snow; and although we continue to have sharp night frosts, the temperature of the last day or two has been higher. In several localities, particularly on light soils, the Wheat looks badly, and some will be ploughed up, but it is yet too early to ascertain if the plant has been extensively damaged at the root. This probably will only be ascertainable after a fortnight's genial weather. The tone of the country markets has slightly improved, and occasionally an advance of 1s. per qr. on English Wheat was realised, while

Oats and Barley of all sorts were the turn dearer, and the value of Beans and Peas well maintained. Flour continues firm, with a tendency to improvement for English. Shipments for Ireland continue to be made at Liverpool of Wheat and Maize, but they are hardly so extensive as of late. The arrivals from the South of Europe this week show a considerable falling off; the sales reported include Odessa Ghirka Wheat at 46s. to 46s. 6d., and Berdiansk at 49s. 3d per 492 lbs; Baltic Barley at 26s. 3d., Ibrail 28s. 3d. delivered, and Odessa at 26s. 3d., all per 400 lbs.; Egyptian Beans at 32s. 6d to 32s. 9d. per qr. The arrivals of English Wheat and Barley this week have been to a fair extent, and very small of Oats and all foreign grain. The attendance at this morning's market was limited; Wheat, nevertheless, met an improved inquiry, and the partial advance quoted on English last Monday was general, holders of foreign being for the most part indisposed to accept late rates, but little business resulted at an improvement. Barley, Beans, and Peas bring Monday's prices. Oats are a slow sale and their value unaltered,

ARRIVALS FROM MARCH 12 TO MARCH 16.

	Wheat.	Barley.	Oats.	Flour.
English ..	2440 qrs.	2250 qrs.	260 qrs.	1580 sks.
Irish	— ,,	— ,,	100 ,,	— ,,
Foreign ..	2280 ,,	590 ,,	2980 ,,	150 ,, / — brls.

LIVERPOOL, Tuesday, March 13.—At our Corn Exchange this day there was a steady business in Wheat at full prices, and in some instances more money was paid for superior red. Flour was firm, but the transactions were limited. Indian Corn was fully as dear. Oats were more plentiful. Barley and Peas were both very firm.

FRIDAY, March 16.—The grain market was moderately attended, and a fair business transacted in Wheat at a further slight advance. Flour in good demand at Tuesday's quotations. Beans and Indian Corn very firm, the latter being held for higher prices; all other articles selling at full prices.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Feb. 4..	43s 8d	34s 10d	21s 0d	31s 0d	38s 1d	35s 4d
— 11..	43 6	34 11	21 11	29 9	38 4	36 0
— 18..	43 11	34 11	21 11	31 10	38 6	36 3
— 25..	44 5	35 7	22 7	35 3	38 11	36 11
March 3..	44 9	36 6	22 11	32 0	39 1	37 8
— 10..	45 0	36 3	22 9	30 5	39 6	37 3
Agg. Aver.	44 2	35 6	22 2	31 8	38 9	36 7

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Feb. 4.	Feb. 11.	Feb. 18.	Feb. 25.	March 3.	Mar. 10.
45s 0d	..	..	..	..	..	—
4 9	..	..	..	..	..	..
44 5	..	..	..	..	..	..
43 11	..	..	..	..	..	..
43 8	—	..	..	..	..	..
43 6	..	—	..	..	..	..

BRITISH WOOLS.—LONDON, FRIDAY, March 16.

Our market is somewhat quieter this week, especially for flannel wool, the consumers of which having supplied their requirements are now disposed to wait awhile, as the present prices are sufficiently high to indnce caution.

	s. d.	s. d.		s. d.	s. d.
South-down Hoggets..	1 8	to 1 9	Leicest. Wethers	1 5 —	—
Half-bred ditto..	1 8	— —	Ditto Hoggs ..	1 7 —	—
Down Ewes ..	1 6	— —	Combing Skins	1 2	to 1 6
Kent Fleeces ..	1 6	— 1 6½	Blanket ditto ..	0 6 —	10½
			Flannel Wool ..	1 2 —	1 6

COLONIAL WOOL SALES.—These sales maintain their spirit and rates as they progress.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, March 15.

Prime Meadow Hay	70s	to 80s	Clover	90s to 105s
Superior do. (old) ..	84	90	New Clover	— —
Inferior do.	55	60	Second cut do. ..	75 80
New do.	—	—	Straw	25 30
Rowen	45	60		DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, March 15.

Sup. Meadow Hay..	88s	to 95s	Inferior Clover ..	80s to 92s
Inferior do.	74	82	New do.	— —
New do.	—	—	Straw	32 36
Superior Clover ..	100	108		JOSHUA BAKER.

WHITECHAPEL, THURSDAY, March 15.

Fine old Hay	84s	to 90s	Fine old Clover ..	100s to 105s
Inferior do.	72	80	Inferior do	84 95
Prime New Hay ..	—	—	Fine New Clover ..	— —
Inferior do.	—	—	Fine 2d cut	83 90
Straw	26	30	Inferior do.	63 75

METROPOLITAN CATTLE MARKET
MONDAY, March 12.

We have a larger supply of Beasts and trade is slow; prices on the average are therefore lower, although there is not much reduction in choicest kinds. Sheep also are rather more plentiful; the demand is however pretty good, and quotations are unaltered. Good Calves are in demand. From Germany and Holland there are 150 Beasts, 1180 Sheep, and 45 Calves; from Spain, 60 Beasts; from France, 14 Calves; from Scotland, 250 Beasts; from Ireland, 240; from Norfolk and Suffolk, 2500; and 150 from the northern and midland counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 8	to 4 10	Best Long-wools.	5 4	to 5 8
Best Short-horns	4 6	— 4 8	Do. Shorn	— ..	
2d quality Beasts	3 4	— 4 4	Ewes & 2d quality	4 4	— 4 8
Best Downs and Half-breds ..	5 8	to 6 0	Do. Shorn	— ..	
Do. Shorn	— ..		Lambs	— ..	
			Calves	5 0	— 6 0
			Pigs	4 0	— 5 0

Beasts, 3980; Sheep & Lambs, 19,110; Calves, 103; Pigs, 390.

THURSDAY, March 15.

The supply of Beasts is larger than the demand, and consequently several remain unsold. Prices on the average are nearly the same as on Monday. Trade is exceedingly dull for Sheep, although we are not over supplied with choice kinds. There is a reduction of 4d. per stone in Calves. From Germany and Holland there are 21 Beasts, 120 Sheep, and 127 Calves; from Scotland, 50 Beasts; from Ireland, 70; from Norfolk and Suffolk, 300; from the northern and midland counties 50, and 140 Milch Cows from the home counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 6	to 4 10	Best Long-wools .	5 2	to 5 6
Best Short-horns	4 4	— 4 8	Do. Shorn	— ..	
2d quality Beasts	3 0	— 4 0	Ewes & 2d quality	4 2	— 4 6
Best Downs and Half-breds ..	5 8	— 5 10	Do. Shorn	— ..	
Do. Shorn	— ..		Lambs	— ..	
			Calves	4 8	— 5 8
			Pigs	4 0	— 5 0

Beasts, 960; Sheep & Lambs, 4590; Calves, 168; Pigs, 150.

NURSERY FOREMAN.

WANTED, in May, a respectable energetic MAN, well up to the Management of Men, and also the Grafting and Raising Rhododendrons and hardy Coniferous Plants.—Apply, with copies of testimonials, stating wages expected, to J. DICKSON & SONS, 32, S. Hanover Street, Edinburgh.

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WANTED, AS SALESMAN, in a large Provincial Nursery, an active, intelligent Man, to act as General Plant Salesman. He must possess habits of business and a good address, combined with a fair average knowledge of Nursery Plants generally.—Apply to C. D., Messrs. Hurst and McMullen, Seedsmen, Leadenhall Street, London, E.C., in own handwriting, with references as to moral character and abilities. None need apply whose testimonials are not of the most satisfactory description.

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The Gardeners' Chronicle Newspaper.

SATURDAY, MARCH 24, 1860.

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News of the Week.

IN the House of Lords on Friday the Duke of NEWCASTLE stated in answer to the Earl of CARNARVON that the government could not explain the "great and flagrant discrepancy" between Count CAVOUR'S despatches on the annexation of Savoy, and the telegraphic announcement of that morning that Sardinia had agreed to carry out the annexation by a special treaty with France. Her Majesty's Government had received within the last 24 hours a despatch of great importance from the French Minister of Foreign Affairs, which was at that moment the subject of deep consideration. On Monday Lord TEYNHAM moved a resolution for taking the votes at Parliamentary elections by means of secret ballot. The Duke of NEWCASTLE opposed the motion, which was negatived on a division by 39 to 4. On Tuesday Earl DE GREY and RIPON stated that four out of the 13 regiments of Militia Artillery were to be disembodied, that the Militia Act would expire next year, and that it was not intended to renew it. On Thursday Lord TEYNHAM moved the second reading of the Qualification for Offices Abolition Bill, the object of which was to abolish certain oaths taken by Dissenters on admission to municipal offices. Lord CHELMSFORD, the Bishop of CHICHESTER, and the Earl of DERBY opposed the Bill; the Duke of NEWCASTLE and the LORD CHANCELLOR supported it. On a division the second reading was negatived by 44 to 21. The Bill was therefore lost.

In the House of Commons on Friday, in answer to Mr. KINGLAKE and Sir R. PEEL, Lord JOHN RUSSELL stated that the Prussian Government entirely concurred in the views of her Majesty's Government on the proposed annexation of Savoy, but Austria and Russia had not yet expressed their opinions on the subject. His lordship added that he received on Thursday a despatch from M. THOUVENEL, the French Minister of Foreign Affairs, stating that the altered condition of Italy required the annexation as a political necessity. It was not in his opinion a fulfilment of the promise of France to consult the Great Powers, but the whole despatch was of so much gravity and importance, especially in those parts which related to Faucigny and Chablais, that it required the deepest consideration. Sir DE LACY EVANS then moved a series of resolutions, which led to a desultory debate on the subject of the expedition to China, and the conduct of Mr. BRUCE in forcing the passage of the Peiho. Lord PALMERSTON defended Mr. BRUCE, and Lord J. RUSSELL stated that the object of the approaching expedition was to obtain the ratification of the Treaty of Tien-tsin, an indemnity and apology for the past, and the right of having a resident Minister at Pekin or Shanghai. Sir D. L. EVANS ultimately withdrew his motion, and the debate closed with a vote of 850,000*l.* towards the expenses of the expedition. On Monday, on the order for the second reading of the Reform Bill, Mr. DISRAELI spoke at great length against the Bill, and though not prepared to oppose the second reading, expressed his hope that a measure "so unnecessary, so uncalled for, and so mischievous," would be withdrawn. Mr. LEATHAM, Mr. BAXTER, and Mr. BRIGHT supported the Bill; Mr. BAILLIE, Mr. ROLT, Mr. LIDDELL, Mr. CAMPBELL, and Mr. KNIGHTLEY opposed it. The debate was then adjourned. On Tuesday Mr. H. BERKELEY brought forward his annual motion in favour of the ballot. Lord HENLEY seconded the motion, which was supported by Mr. LAWSON and opposed by Mr. MARSH, Mr. C. FORTESCUE, and Lord PALMERSTON. On a division the motion was negatived by a majority of 107, the numbers being 254 to 147. Mr. T. DUNCOMBE obtained leave to bring in a Bill abolishing the resolution of the House which is now necessary before a Jewish member can be admitted to take the oath. On Wednesday Mr. DILLWYN moved the second reading of his Endowed Schools Bill, the object of which was to allow Dissenters to be chosen trustees of endowed schools where the endowment did not expressly limit the management to members of the Church of England. Mr. SELWYN moved as an amendment that the Bill be read a second time that day six months. The Bill was opposed by Mr. LOWE, Mr. LONGFIELD, Mr. A. MILLS, Mr. WALTER, and Mr. NEWDEGATE, and supported by Lord FERMOY and Mr. BAINES. On a division the amendment was carried by 190 to 120; the Bill was therefore lost. On the order for the second reading of the Bleaching and Dyeing Works Bill, the object of which is to extend to those works the provisions of the Factory Act limiting the hours of labour of women and children, Mr. A. TURNER moved as an amendment that the Bill be read a second time that day six months. The Bill was supported by Mr. ROEBUCK, Mr. COBBETT, and Lord JOHN MANNERS, and opposed by Sir H. CAIRNS, Mr. RICHARDSON, and Mr. CONOLLY. On a division the second reading was carried by 226 to 39. On Thursday the adjourned debate on the Reform Bill was resumed, when the Bill was supported by Mr. STANSFELD, Sir G. GREY, Mr. MASSEY, Mr. CROSSLEY, and Mr. BAINES, and opposed by Sir J. PAKINGTON, Mr. ADDERLEY, Mr. STUART, Mr. KER SEYMER, and Mr. WHITESIDE. During Mr. ADDERLEY'S speech, the Bill had a narrow

escape from being lost by the counting out of the House, and ultimately the debate was adjourned to Monday.

The KING OF SARDINIA has accepted the vote of the Æmilian provinces and of Tuscany, and has issued decrees annexing those states to Sardinia. The *Moniteur* of Thursday published a circular addressed by M. THOUVENEL to all the Powers that signed the Treaty of Vienna, explaining the reasons which have led to the annexation of Savoy. In this important document, which will be found at length in another column, M. THOUVENEL states that the aggrandisement of Sardinia has rendered it necessary for France to obtain more important frontiers, and that France has not pursued the annexation in the name of nationalities, but only as a guarantee for a better frontier. The *Moniteur* also publishes a Speech which the EMPEROR addressed on Wednesday to a deputation from Savoy, in which he said that "everybody in Europe who does not yield to the antagonistic spirit of another epoch considers this annexation of territory as natural and equitable."

Home News.

THE COURT.—The Queen and Prince Consort, accompanied by Princes Alfred, Arthur, and Leopold, the Princesses Alice, Helena, Louisa, and Beatrice, arrived at Buckingham Palace on Wednesday from Osborne, travelling from Portsmouth by a special train on the Direct Portsmouth Railway. On Saturday morning the Earl of St. Germans, Lord Steward, and Viscount Castlerosse, Vice-Chamberlain of the Household, arrived at Osborne from London with Addresses to her Majesty from both Houses of Parliament. In the afternoon the Queen and Prince Consort drove out, accompanied by Princess Helena. Prince and Princess of Leiningen arrived on a visit to her Majesty. In the evening the Queen had a dinner party. On Sunday morning the Queen and Prince Consort, Prince Alfred, Prince Arthur, the Princesses Alice, Helena, and Louisa, and the Prince and Princess of Leiningen, attended Divine service at Osborne; the Rev. G. Prothèro officiated. On Monday morning the Queen, Prince Consort, and Royal family walked out. The Prince and Princess of Leiningen left Osborne. On Tuesday the Queen and Royal family walked and drove in the morning and afternoon. On Wednesday afternoon, soon after the Queen's arrival at Buckingham Palace, her Majesty held a Court, at which Vice-Admiral Van Dockum had an audience, and delivered his letters of recall, and M. Thorben de Bille had an audience and delivered his credentials as Danish Minister. On Thursday the Duke de Montpensier visited the Queen at Buckingham Palace. In the afternoon the Queen honoured the Duchess of Sutherland with a visit at Stafford House. The Prince Consort, accompanied by Prince Alfred, rode on horseback and visited the South Kensington Museum. In the evening her Majesty had a dinner party.

THE PRINCE OF WALES.—The squadron ordered to assemble at Spithead for the purpose of escorting the Prince of Wales across the Atlantic, on his visit to Canada, will consist of the Hero, 91, screw, 600-horse power, Capt. George H. Seymour, who will hoist his broad pendant as Commodore of the squadron; the Ariadne, 26, screw, 800-horse power, Capt. Vansittart; the Flying-fish, 6, screw, 350-horse power, Commander Charles W. Hope; and the Royal paddle yacht Osborne, 430-horse power, Master-Commander Bower. His Royal Highness will take his passage out and home in the Hero, one of the finest 91-gun ships in Her Majesty's navy. The Osborne will be retained for service on the coasts and rivers of Canada during the stay of his Royal Highness in that colony.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

THE BISHOPRIC OF ROCHESTER has been conferred on Archdeacon Wigram, Archdeacon of Winchester, and Rector of St. Mary's, Southampton.

THE DEANERY OF LINCOLN has been conferred on the Very Rev. Dr. Garnier, at present Dean of Ripon, formerly chaplain to the House of Commons and rector of Trinity Church, Marylebone. The deanery of Ripon becomes vacant by this appointment.

PARLIAMENTARY MOVEMENTS.—The Beverley election committee have reported that Mr. J. R. Walker was duly elected, that seven persons were bribed, but that it was not proved that this bribery was committed with the knowledge of Mr. Walker or his agents. There are four candidates in the field for Norwich, Sir William Russell and Mr. Edward Warner in the Liberal interest, and Mr. W. D. Lewis, Q.C., and Mr. W. Forlonge, a wealthy gentleman who has recently returned from the Australian colonies, in the Conservative interest.—Mr. Alfred Seymour, brother of Mr. Danby Seymour, M.P. for Poole, is a candidate for Exeter in the Liberal interest, in the room of Mr. Divett. The O'Conor Don, who has just come of age, and Capt. Goff, of the 3d Light Dragoons, brother of the late member, are candidates for Roscommon. There are three candidates in the field for Londonderry, Mr. M'Cormack in the Conservative interest, and Mr. S. M. Greer and Mr. G. Skipton in the Liberal interest. Captain Charles White, a relation of the late member, is a candidate for Clare. The *Cork Reporter* states, as a proof of the interest felt in certain quarters relative to the result of the late election for Cork, that the state of the poll on the second day was telegraphed to Paris, and from thence to Vienna.

THE MEDITERRANEAN COMMAND.—It is stated that Vice-Admiral W. F. Martin is to succeed Vice-Admiral Fanshawe in the command of the Mediterranean fleet.

THE AUSTRALIAN COMMAND.—Captain Frederick B. P. Seymour, of the Pelorus, 21, screw-corvette, has been appointed Commodore of the Australian station, in the room of Commodore Loring.

VOLUNTEER REVIEW.—It is stated that her Majesty will review the Volunteer Corps of the metropolis, and such localities as may render attendance convenient, in the course of June next, in Hyde Park.

Foreign.

FRANCE.—The *Moniteur* of Thursday published two important documents—1, a circular addressed by M. Thouvenel to all the Powers who signed the final Act of the Congress of Vienna, relative to the annexation of Savoy and Nice; and 2, a despatch addressed by M. Thouvenel to the Chargé d'Affaires of France at Berne, in answer to the protest of Switzerland against the annexation. The following is the text of the circular to the Powers:—

"Paris, March 15th, 1860.

"Monsieur,—The Emperor, in his speech to the great bodies of the State on the opening of the Legislative Session, expressed his ideas in the prevision of a considerable territorial alteration on the other side of the Alps, and announced the intention of submitting to the wisdom and equity of Europe a question which is not raised by the ambition of France, but in a manner put by the very events themselves. His Majesty has considered that the moment has come to fulfil this engagement, and I hasten, in conformity with his orders, to empower you to communicate our explanations to the Cabinet of ——. Solemn acts, freely adhered to, on the termination of a campaign fortunate for our arms, have established in the most irrefragable manner, that we had not for object any territorial aggrandisement when circumstances forced us to intervene in the affairs of Italy. If the Imperial Government has been enabled to foresee, in hypotheses, from which disinterestedness ought not entirely to banish prudence, a situation analogous to that which to-day presents itself, we flatter ourselves not only that we have not sought to bring it about, but that we have, on the contrary, endeavoured, in all conjunctures, to follow the course most fitted to keep it out of the chances of the future. The stipulations of Zurich, like those of Villafranca, entirely excluded it. Although the possession of Lombardy strengthened Piedmont on the Alps, we had no hesitation in silencing our own interest; and far from favouring the development of a state of things which could furnish us with legitimate and pressing reasons for claiming guarantees, we employed, as Europe knows, all our influence to realise, in their literal tenour, the dispositions of treaties which reserved the maintenance of the territorial circumscriptions of Central Italy. I need not now advert to the circumstances which have prevented the success of our efforts. It is a point I have explained in former communications, and it will suffice to recall the fact that the necessity of concerning ourselves, before all things, and in the general interest, with the establishment of a definitive order of things in the Peninsula alone determined us to seek, in combinations different from that which we had fruitlessly essayed to make a triumph, the means of settling the pending questions. A new situation forced itself thenceforward on our foresight; and without putting ourselves in opposition to the policy which has constantly inspired both the acts and the language of the Emperor, we had, nevertheless, to consider the prejudicial effect which new arrangements in Italy might be capable of inflicting on our own interests. It is impossible to dispute the fact that the formation of a considerable State, possessing both slopes of the Alps, is an event of the highest gravity with regard to the security of our frontiers. The geographical situation of Sardinia acquires an importance which it could not have when that kingdom hardly counted 4,000,000 souls, and was, in some sort, held by a great number of conventions to be external to the Peninsula. With a development which must nearly triple its population and its material resources, the possession of all the passes of the Alps would permit it, in the case of its alliances ever making it our adversary, to open access to our territory to a foreign army, or by its own forces to disturb the security of an important part of the empire, by intercepting our principal line of military and commercial communication. To demand guarantees against an eventuality of which the occurrence, however distant we may suppose it to be, does not diminish the peril, is simply to obey the most legitimate considerations and the most ordinary courses of international polity, which never at any period has assumed greater value and sentiment as the one basis of the relations of States. Besides, are these guarantees calculated to give umbrage to any Power? Are they not, on the contrary, in the conditions of a just balancing of strength, and, above all, indicated by the nature of things, which has placed our system of defence at the foot of the western slopes of the Alps? At diverse periods of history for the last two centuries, especially when there was a question of settling the eventual succession to the throne of Spain, and later, when the succession of Austria was in question, combinations have been discussed which extended the possessions of Piedmont in Italy, and gave her sometimes Lombardy, sometimes other contiguous territories. In such views, assuredly less vast than that which is now before us, the annexation of Savoy and of the country of Nice has always been considered by several of the principal powers of Europe as a compensation necessary for France. Confident that my thoughts cannot allow of false interpretations, I experience no embarrassment in quoting a precedent of more recent date. May it not be permitted to seek a lesson from the history, of our century, without evoking irritating remembrances which the present generation repudiate? I will, therefore, call to mind that at a moment when Europe was little disposed to use forbearance with regard to France, it recognised on the Alps the necessities of our geographical situation, and unanimously thought it equitable to leave to us a portion of the territory which has now become much more indispensable to our security. It was only under the impression of the events of the following year that that clause was annulled. The Emperor, on ascending the throne, spontaneously declared that he accepted, as the rule of his relations with Europe, the respect of treaties concluded by preceding Governments, and this is a principle of conduct to which His Majesty will always make it a law to remain faithful. But it is impossible not to recognise the exceptional character of the circumstances which determine us to demand that a modification should now be effected in the delimitation of the frontier lastly traced between France and Sardinia. The result of the war has been to bring about, by the cession of Lombardy to Piedmont, a first change in the territorial circumscriptions of Italy; the annexation of other States to this kingdom constitutes a new change, of which the consequences have for us especial gravity; and it is in no way an abandonment of the respect accorded on all occasions by the Government of the Emperor to existing treaties to demand, that they should not, in reality, be altered to our detriment. In a communication which is addressed before all things to the good faith of the Cabinets of Europe, and which proves that which animates the Government of the Emperor, ought I to hesitate to say that, in restoring Savoy to Piedmont it was wished to constitute that country guardian of the Alps, so that it should hold the passes into France open? However annoying that situation was, we loyally resigned ourselves to it during half a century; still more, we even accepted it after a campaign recently, which would easily have furnished us the occasion of changing it; but ought we to admit that the conditions which we have scrupulously respected, so as to import no trouble into our international relations, should be aggravated? And can Europe, on its side, think it just that, in addition to the weight with which they already bore upon us, should be added that of a State of which the force will have tripled in the course of one year? In inviting the modification of the treaties on this point, we in some sort confine ourselves to asking that one of their stipulations may not acquire, beyond even the wish of the Powers which subscribed them, a bearing more grave and a sense more disadvantageous. I hasten to add that the Government of the Emperor does not wish to obtain the guarantees which it demands, except from the free consent of the King of Sardinia and of the populations. The cession which will be made will therefore remain exempt from all violence as from all constraint. Our firm intention, moreover, is to arrange it, as far as the territories of Savoy, subject to an eventual neutralisation, are concerned, so as not to injure any acquired right, and not to affect any legitimate interest. In accordance with our requirements, and with the will of the King of Sardinia, and without contravention of the general interests of Europe, the cession of Savoy and the country of Nice to France raises no questions incompatible with the best established and the most rigorous rules of public law. If the character, the language, and the customs of the populations destined to be united to France assure us that that cession is not contrary to their feelings; if we reflect that the configuration of the locality has intermixed their commercial and their political interests with our own; if we say, lastly, that the Alps constitute the barrier which must eternally separate Italy from France, we may confine ourselves to conclude from this, that the new frontier to be established between Piedmont and ourselves finds its sanction in the force of circumstances. It is not in the name of the idea of nationality, it is not as a natural frontier, that we prosecute the adjunction of Savoy and of Nice to our territory: it is solely as a guarantee, and under circumstances such that the mind cannot conceive that they should reproduce themselves anywhere else. In one word, strangers to all views of aggrandisement, still more so to all ideas of conquest, our sole object is to obtain, in the name of the principles of public law, that treaties should not be rendered for us more onerous in a point in which they had been framed in dispositions which time, I hope, has contributed to efface, and that as a security against the dangers which the development of Piedmont may bring upon us in the future, our frontiers should be fixed, by means of an understanding with the King of Sardinia, in accordance with the necessities of the common defence. The Government of the Emperor, full of confidence in the weight of the considerations which it could put forward, has entered into negotiations with the Cabinet of Turin on the subject of this important question. You know in what terms we opened this correspondence. You are equally acquainted with the answer, and you have seen that receiving the observations which we have put forward, the Sardinian Government has shown itself disposed, at the price of a voluntary sacrifice, to accept their consequence. I flatter myself that the reasons of necessity and of right which determine our conduct will be fully appreciated by the —— Government, with the sentiments of equity which inspire it, and the friendly spirit which directs its relations with France. It will understand that, seeking guarantees so legitimate, we should enter into arrangements with Sardinia to settle the necessary acts and dispositions. By circumstances most frequently independent of their will, Governments have not always succeeded in founding their combinations on bases uniting the conditions of a true stability, which, indeed, are no others than those of justice, enlightened by a healthy intelligence of reciprocal interests; and it is thus that acts intended to secure peace have sometimes only had for result the sowing in the political system of fresh seeds of difficulty and complication. The combination of which such just and such powerful motives now authorises us to desire the realisation is, on the contrary, so conformable to the general interest that it is necessarily required, we are confidently persuaded, to make part of any system wisely conceived and drawn up with foresight. It finds, therefore, its legitimacy in the absence of all clashing with the well understood observances of Europe, and also in the requirements of our own situation. We flatter ourselves that the question will be thus regarded by the court of ——. I beg you to read and to leave a copy of this despatch with Mr. ——. Receive, &c., "THOUVENEL."

In the despatch in answer to the Swiss protest M. Thouvenel expresses his astonishment at the steps taken by Switzerland, and says that "Switzerland, which has received so many proofs of the friendship of the Emperor, ought to have placed her confidence in France." M. Thouvenel then examines the question of right, denies the validity of the treaty of 1564, and says that the neutralisation of Chablais and Faucigny was made in favour of Savoy, and that the Federal Council, therefore, interferes without any legitimate reasons in the arrangements which France and Sardinia are about to conclude. M. Thouvenel acknowledges that the Powers might examine the stipulations of the treaties of 1815, and does not hesitate to say that France is disposed to adopt any modifications suggested either for the general interest, or, above all, for the interest of Switzerland. The *Patrie* of Thursday evening says that the Sardinian troops have commenced the evacuation of Savoy, and that the first detachment of French troops returning from Lombardy will arrive in Savoy on the 25th inst. The *Constitutionnel* says that the withdrawal of the French troops from Italy is a sign of an

approaching solution of the question of Italy, and must not be considered a sign of coolness between France and Sardinia. France, it says, leaves Lombardy because the independence of Italy is irrevocably assured, and Austria only intends to act in defence of the frontiers of Venetia.—The Emperor on Wednesday received a deputation from Savoy which presented addresses in favour of annexation. The Emperor expressed his pleasure in receiving the deputation, and delivered a speech, of which the following is an abstract:—

"The re-union of Savoy and Nice to France has been resolved upon in principle. The assent of Piedmont and the populations has been obtained to this rectification of the frontiers. Everybody in Europe who does not yield to the spirit of antagonism of another epoch considers this annexation of territory as natural and equitable, and the negotiations with the Powers who signed the treaty of 1815 permit the hope of a favourable examination of the question by the greater part of them. Friendship for Switzerland had almost caused a cession of territory to be promised, which, he believed, would not be contrary to the wishes of Savoy; but as soon as it was known that the population refused that Savoy should be dismembered, France renounced this cession, although wishing to protect the interests of Switzerland."

The deputation will dine to-day at the Tuileries. The treaty between King Victor Emmanuel and the Emperor Napoleon for the cession of Savoy and Nice was signed last week, and the Commissary-General at Lyons has since received instructions to provide for the French troops that are to occupy Savoy. The 1st and 2d Regiment of Dragoons, quartered at Lyons, have received orders to march to Chambery. The *Moniteur* contains a list of persons to whom decorations of the Legion of Honour are given for services rendered to the army in Italy. The action for libel brought by the *Siècle* and Madame Bertin against the Bishop of Orleans was brought to a close on Saturday, when the court decided in favour of the defendant. The *Siècle* charged Monseigneur Dupanloup with libel, and Madame Bertin brought an action in vindication of the memory of her grand uncle, a former Bishop of Orleans, from stigmas cast on his memory calculated to lower the consideration of his surviving family. After the pleadings had terminated, Mgr. Dupanloup, who had been defended by M. Berryer, rose and spoke for three-quarters of an hour. The Court, after due deliberation, declared the complaint of the *Siècle* to be unfounded, and acquitted the defendant on the charge against him. As regarded the complaint of the heirs of Bishop Rousseau, the defendant was also acquitted, the French law not admitting any charge for defamation against a person deceased. The prosecutors in both cases were condemned to pay the costs.—The *Moniteur* contains a report of the Minister of War, Marshal Randon, proposing—as the ideas of war are receding—to reduce the effective force of the battalions of Chasseurs from eight to six companies, the force which existed before 1853. The report is followed by a decree of the Emperor, approving the Ministerial proposal. Letters from Toulon state that the French fleet has been recalled from Algesiras.—It is reported that the export duty on rags which the Emperor proposes to substitute for the absolute prohibition hitherto in force will amount to about 100 per cent. on the price of common rags, and 50 per cent. on the price of the best quality.—The Prince Imperial having been born on the 16th March, 1856, entered his fifth year on Friday. He is exceedingly forward for his age, as he can already read, write, and ride.

Spain and Morocco.—Accounts from Madrid state that as the Moors will only consent to pecuniary sacrifices as the conditions of peace, the war is to be continued. There was a full Council of Ministers on Monday. It is asserted that Generals Prim, Rios, and Zabala have been raised to the dignity of Grandees of Spain of the first class, and that the permanent occupation of Tetuan has been definitely agreed upon.

Portugal.—The Minister of Marine, Senhor Manrico Ferreri, while speaking in the Chambers, was attacked with a paralytic stroke and died on the 14th inst. The Cortes have authorised the free exportation of wheat and barley until the 30th June.

Switzerland.—The Federal Council has addressed the following note to the French and Sardinian Governments, protesting against the annexation of Chablais and Faucigny to France, as the treaty of 1815 prohibited the cession of the neutralised districts of Savoy to any other Power than Switzerland. The following is the text of the note presented to the French Government by the Swiss Ambassador:—

"M. le Ministre,—In consequence of a despatch from Berne I am to inform your Excellency that the Federal Council have addressed to the Government of Sardinia a note, in which they demand the maintenance of the stipulations of the treaty of 1564, confirmed by the treaty of 1816 between Sardinia and Switzerland, in so far as they relate to the cession of the actual territory of Savoy to another Power. I am to add that my Government regards in a particular manner any annexation of the neutralised provinces, Chablais, Faucigny, and the Genevois, to another Power, as in contradiction to the stipulations of the treaties of 1815, which guarantee these provinces, in the interest of Swiss neutrality, as if they were an integral part of the Confederation, and declaring 'that they are to enjoy the neutrality of Switzerland in the same manner as if they belonged to her.' In the meantime, and with reference to the considerations which I had the honour to explain to you in the audience which you were good enough to grant me on the 15th of March, my instructions impose on me the duty of protesting formally, in the name of the Swiss Confederation, against every measure which may have for object to annex these provinces to France, till such time as the Powers of Europe, to which the Imperial Government has itself declared that it would submit this question, shall have decided.—I am, &c., "Kern."

M. Steiger, the Swiss Chargé d'Affaires at Vienna, has presented a circular note to Count Rechberg, in which the Federal Council protests to the Powers who guaranteed the treaties of Vienna against any measure having for its object the incorporation of Chablais and Faucigny with the French Empire. Count Rechberg replied that Austria reserves her definitive reply until she has ascertained the views of Europe, but he reminded M. Steiger that last year, when the French troops were conveyed by railroad from Culoz to Chambery, the Austrian Cabinet in vain represented to Switzerland, as well as to the great Powers, that the neutrality of that part of Savoy should be respected. By the passage of the French troops that neutrality was openly violated according to the treaties of 1815.

Hanover.—Hanover has proposed an indemnity as a basis for negotiations in universal conferences concerning the redemption of the Stade Dues. England has refused to agree to the amount proposed. The negotiations have therefore been renewed.

Electoral Hesse.—In the sitting of the Federal Diet on Saturday Prussia gave her vote in reference to the affairs of Electoral Hesse. Prussia demanded the re-establishment of the Constitution of 1831, after being submitted to examination by the Federal Diet. The committee on the affairs of Electoral Hesse afterward presented their report. The majority of the Committee proposed that the petition of the Second Chamber of Hesse should be dismissed, stating as their reason the incompetency of the Diet. The minority declared that it could not join in this proposal.

Prussia.—The despatch of M. Thouvenel, explaining the motives for the annexation of Savoy, was communicated to the Prussian Government on Friday. The reply of Prussia has since been sent to Paris and is said to refer partly to principles, partly to material facts. As regards principles, Prussia points out how dangerous appear to her the application of theories "of natural frontiers," "universal suffrage," &c. As regards the fact itself, Prussia declares openly that the cession of the slopes of the Alps to France will seriously weaken the security of the frontiers of Switzerland and of Germany. The Committee of the German National Association, now assembled in Berlin, is about to publish an energetic declaration against the theory of natural boundaries, and the annexation of Savoy to France, stating therein that Germany will be strongly united in future times of danger. The Grand Duke Nicholas of Russia has passed through Berlin on his way to Nice, to fetch the Empress Dowager, who has been staying there for the benefit of her health.

Austria.—A despatch from Vienna announces that Austria, considering the annexation of Central Italy to Piedmont as a flagrant violation of the Treaty of Zurich, which formally reserved the rights of the deposed Princes, has resolved to adjourn the renewal of official relations with the Court of Turin. In consequence of this resolve, Baron Brenner, who was to represent Austria at Turin, has returned to his former post at Athens. It is also announced that Austria will pronounce herself against any violation of the rights of Swiss neutrality guaranteed by treaties. The French Ambassador at Vienna informed the Austrian Government a few days ago of the approaching evacuation of Lombardy by the French troops, and, in the name of his Government, expressed a wish that, after the departure of the French troops, Austria, in accordance with the principles contained in Count Rechberg's despatch of the 17th February, would continue to observe non-intervention in the affairs of Central Italy. The Austrian Government has despatched its reply direct to Paris. It says that since the interview at Villafranca the Emperor Francis Joseph has made too many sacrifices for the maintenance of peace to be able to recommence a struggle which would soon become an European war. But, although maintaining a merely observant attitude, Austria feels, nevertheless, that she must draw the attention of France to the secret intrigues of Sardinian agents in Venetia, as well as the continued provocations of the Piedmontese Ministry; and she repeats most distinctly that the Emperor Francis Joseph will not hesitate to make the greatest sacrifices in defence of his rights over Venetia. The malversations in the Austrian army appear very much greater than was at first supposed. As many as 82 persons are already in custody, and arrests continue to be effected at Brunn, Prague, and Pesth. The malversations are stated to date from the battle of Solferino. On the sudden conclusion of an armistice after that affair, numerous contracts for supplies to the army were entered into, subject to the condition that in the event of peace being concluded the contractors should be allowed compensation. The greater part of these contracts were fictitious, being only made to obtain the compensation; and thus the Government was defrauded of 45 million zwanzigers, equal to 1½ million sterling. General Eynatten and his accomplices shared with the contractors the sums so obtained. Among the tricks resorted to, it is said that the cattle, from which the contractors realised three times their value, were trotted for a third time before the registrars, having been driven in the night back to their starting-posts. Two superior officers of the Austrian army, General de Rechlin Meldegg and Lieut.-Colonel Marx, have already followed the example of General Eynatten by committing suicide, and other high names are compromised.

Hungary.—On Thursday week about 200 students attempted a demonstration in the churches and churchyards of Pesth. Several students were arrested. On an attempt being made to rescue them, the officer in command of the troops ordered them to fire. Several persons were dangerously wounded, two of whom have since died. The police followed the retreating crowd and again fired, killing one old man and severely wounding several others. The demonstration was intended to commemorate the revolution of the 15th March, 1848.

Russia.—It is expected that Prince Gortschakoff, who for some time past has been seriously ill, will, on his own demand, be shortly released from his duties as Minister for Foreign Affairs, and that Baron de Budberg, Russian Minister at Berlin, will be his successor.

Italy.—The result of the voting in the Æmilian provinces has been proclaimed as follows:—Total number of electors, 526,258; number who voted, 427,512; for annexation to Piedmont, 426,006; for separate kingdom, 756; cancelled, 750. In Tuscany the proportion of votes in favour of annexation to those for a separate kingdom was as 70 to 3. The number of persons who voted was three-fourths of the total inscribed on the electoral lists. Governor Farini arrived at Turin on Sunday, and had an audience of the King, when he communicated the result of the Emilian vote in the following terms;—

"I have the honour to place in the hands of your Majesty the legal documents containing the returns of the universal suffrage of the people of Æmilia. May your Majesty deign to receive them with favour, as a token of gratitude and confidence."

The King replied as follows, accepting the annexation:—

"This manifestation of the national will is so universal and so spontaneous, that it confirms to Europe, at a different time and under altered conditions, the vote already expressed by the National Assemblies of Emilia. This manifestation completes the proofs of the order, perseverance, patriotism, and wisdom by which those people have merited universal sympathy and esteem. I accept their solemn vote, and henceforth will be proud to call them my people. In uniting to my ancient provinces not only the States of Modena and Parma, but also the Romagna, which has already separated itself from the Papal Government, I do not intend to fail in my deep devotion to the Chief of the Church. I am ready to defend the independence necessary to the supreme minister of religion, the Pope, to contribute to the splendour of his Court, and to pay homage to his Sovereignty. Our Parliament in receiving the representative of Central Italy will insure prosperity, liberty, and independence to the new kingdom."

Baron Ricasoli arrived at Turin on Thursday and communicated to the King the result of the Tuscan vote in a congratulatory speech, to which his Majesty replied as follows:—

"I accept the vote of Tuscany, which, after having been expressed by the National Assembly, is now confirmed by the unanimity of the popular suffrages. Tuscany, in associating her destinies with those of Piedmont, far from renouncing, continues her glorious traditions, and augments their importance by uniting them to those of the other parties of the State. The Parliament in which the representatives of Tuscany will take their seats beside those of Piedmont, Lombardy, and the Emilia, will bring the laws of the country into conformity with the fruitful principle of liberty. Thus, Tuscany will enjoy the blessings of administrative autonomy without weakening the union of power and the national will, upon which the prosperity and the independence of the country are principally dependent."

The King then signed the decree annexing Tuscany to Sardinia. His Majesty had previously signed a Royal decree annexing the provinces of Æmilia to Sardinia. Two other decrees have been issued convoking the Electoral Assemblies of the Emilian Provinces for the 25th inst., appointing 15 new senators and nominating M. Farini Minister of the Interior. The Government of Tuscany has addressed a note to the Powers of Europe explaining the reasons why the vote by universal suffrage rendered annexation to Piedmont a necessity. A solemn religious ceremony has taken place at Florence on the occasion of the publication of the result of the vote, at which the Archbishop intoned a *Te Deum*. The city was *en fête*, and shouts of "The King for ever!" "Ricasoli for ever!" were general. A Turin letter of the 18th says that the Episcopal Court of Turin, and all the other episcopal courts of the kingdom, have received the text of the excommunication pronounced by Rome on the occasion of the annexation of the Romagna; that the documents was brought to the Minister of Justice on Friday evening by the Grand Vicar of Mgr. Franzoni (that prelate himself being absent at Lyons); and that on Saturday the Council of State declared the bull void, as not having received the royal *exequatur*, and prohibited the publication of it. The Municipal Junta of Nice has voted against annexation to France, and the National Guard have elected by a large majority a colonel attached to the old allegiance. The delegate despatched by the Municipality of Nice is now at Turin, and is engaged in urging the Sardinian Government to prevent the severance of the county of Nice from the kingdom of Victor Emmanuel. 50,000 men are about to be levied in Tuscany and 25,000 in the Emilian provinces, which will increase the Sardinian army to nearly 300,000 men. It is asserted that Piedmont will contract a loan of 150,000,000 francs.—From Milan we learn that on Wednesday the French army in Northern Italy commenced its return movement to France,—the 80th regiment of the line, by way of Susa, one company leaving per day; the 2d regiment of the line, by way of Nice, one battalion departing daily.—Accounts

from Rome state that a demonstration took place on the 16th in favour of the Pope, who in proceeding to the Basilica of the Vatican was met by an immense multitude of citizens of all classes. Everything passed off quietly. The number of persons present was estimated at 5000, and included many persons of note. No cry of opposition was heard. On the following day however bills were scattered in the streets headed, "*Viva Vittore Emmanuele!*" and a project was started of a counter-manifestation on the 19th—the *fête* of Garibaldi. General Goyon read a despatch to the troops, commending their attitude in the maintenance of public order, and issued a warning to the students. On the 19th there was an attempt to get up a manifestation against the police, but it was immediately repressed.—Letters from the frontier of Naples announce increased agitation. A popular manifestation had taken place at Atri. Banners were displayed bearing the words "Victor Emmanuel for ever!" but the police checked the revolt. Eighty individuals who were compromised fled over the frontier. In consequence of these events the Government was preparing a general mobilisation of the rural guards. General Filangieri and Signor Cumbo had resigned. Prince Cassaro had been appointed President of the Council, and Signor Comitini had entered the Cabinet without a portfolio. Lord John Russell has addressed a despatch to Mr. Elliot, her Majesty's Minister at Naples, directing him "to ask an audience of the King with a view of doing all in his power to save an inexperienced Sovereign from impending ruin; to state that the commonest rules of justice are not observed by the King towards his subjects; that the exasperation caused by oppression is the parent of plots, assassinations, conspiracies, and insurrections; and that her Majesty's Government will neither accept any part of their responsibility nor undertake to ward off the consequence of a misgovernment which has scarcely a parallel in Europe."

TURKEY.—Accounts from Constantinople of the 7th inst. state that the Ministers remain in office, the Grand Vizier adopting the programme of his predecessors, who are reconciled with him. He has also undertaken a reorganisation of the law courts. Sir Henry Bulwer has assembled the diplomatic corps, and spoke in defence of the tax on European house rents. The Ambassador of Russia strongly opposed the project, and by his arguments convinced some of his colleagues. M. Ralchinsky, the principal agent of Russian Panslavism, has proceeded to Bulgaria to organise an agitation in that province. A Bulgarian journal, published by Russians, is about to appear at Constantinople.

INDIA.—The first private telegram between India and England, viâ the Red Sea route, was received at Lloyd's on Friday, dated Calcutta, the 10th of March, thu reducing the communication between the Chief Presidency of India and London to a period of six days. When the entire line of telegraph wire has been laid, the period of communication will be reduced to two days. The telegram referred to was as follows:—"Calcutta, March 10—Ship Redgauntlet, bound to London, burnt and scuttled. Some cargo will be saved." The Bombay mail has also arrived with news to the 25th Feb. The following are the details:—

Calcutta.—Mr. Wilson's Budget was submitted to the Legislative Council on the 17th February. Its chief feature is an income-tax, from which neither Zemindar nor landholder, soldier nor civilian, is to be exempted, the rate being 2 per cent. upon incomes of from 20*l.* to 50*l.* per annum; 4 per cent. upon incomes above 50*l.* per annum. Important alterations are to be made in the tariff The duty on twist and yarn is to be raised to 10 per cent. Saltpetre is to be subject to a duty of 2r. per maund of 82 lb. The License Bill has been modified, and the scale reduced to one rupee, four rupees, and 10 rupees. Hemp, jute, hides, wool, flax, tea, and coffee are to be free of duty. Twenty per cent. duties are to be lowered to 10 per cent. The loans were all closed on the 13th February, when the amount subscribed was found to have exceeded the 5 crores of rupees, equal to 5 000,000*l.* sterling, required for the year 1859-60.

Central India.—Hurkishen Singh, hurkaru of the infamous Koer Singh, of Arrah notoriety, was hanged at Jugdespore on the 30th January. The report of Ummer Singh's death is confirmed. Ram Kishen Singh, a brother of Hurkishen, and three other mutineers, await their fate in prison.

Bunnoo.—Mohabut Khan, the leader of Captain Mecham's murderers, was brought into Bunnoo bound hand and foot by the members of his own tribe on the 22d Jan., having been seized by a body of Wuzerees 50 miles within the hills. He made a clear confession of his crime and was taken to the spot where the murder was committed and there hanged.

Tipperah.—Accounts from Kundul narrate a terrible invasion of our territory by the Kookees, a barbarous tribe inhabiting the Tipperah hills, to the south of the districts of Silhet and Cuchar. Upwards of a thousand persons are said to have been massacred in two days Neither age nor sex was spared, and the victims were subjected to the most fearful cruelties. An enormous quantity of plunder was carried off from the plains. A wing of the Nursipore Battalion from Deesa and the clubmen, burkundauzes, and latteeals of the neighbouring Zemindars moved upon the district, but too late to do more than witness the desolation caused by the raid.

Indoor.—A report had been current of treason at Indoor, the capital of Holkar, but Sir Richmond Shakespear, the political agent, had denounced it as a hoax.

Lahore.—Lord Canning continues his progress northwards, having reached Lahore at the date of the last advices from that city. The Maharajah Runjheer Singh, of Cashmere, was to meet him at Wuzeerabad on Feb 22, when his lordship will proceed by dawk to Peshawur, visiting Simlah about the middle of April and Kangra and Benaspore.

PERSIA.—The Shah of Persia is said to be dead. He was only in his 29th year, and has left a son about eight years of age. It is feared that grave events are likely to occur in the prospect of a long minority.

UNITED STATES.—On the 29th ult. the galleries of the Senate Chamber were thronged to hear the speech of Mr. Seward, the Republican candidate for the Presidency, upon the great issue of the day. When the special order, the Kansas Admission Bill, came up, Mr. Seward rose and presented a memorial from the Kansas Legislature, demanding admission, and proceeded to speak on the general subject of slavery and its place in politics. Having reviewed the history of the question as a conflict between Southern capital and Northern labour, he referred to the coming Presidential campaign, and to the Republicans holding to the principle of preventing the territories by constitutional means from becoming focuses of slavery and polygamy. He said the policy of the Republican party was to stand by the freedom of speech and of the press, the speedy improvement of the public domain by wholesome laws and to encourage mining, manufacturing, and internal commerce, with needful connections between the Atlantic and Pacific States. He said the real principles of the Bill were national. He was no assailant of States. It was well and wisely arranged that the States were sovereign on the subject of slavery within their own borders. He said that John Brown and his associates acted on earnest though fatally erroneous convictions. He pronounced the Act as one of sedition and treason, and criminal to just the extent that it affected the public peace, and was destructive of human life. He did not think anything serious would grow out of the oft-repeated threat to dissolve the Union. —Mr. M'Lean had returned to Vera Cruz with full powers to act in any emergency. The United States' squadron in the Gulf had been materially increased, and troops were under orders for Texas and Mexico. The black crew of the British ship Aramingo had mutinied. One of the mutineers was shot, and the others were arrested at Charleston. The goods saved from the Hungarian were to be sold by auction on the 14th, and the wreck on the 23d inst. for salvage.

MEXICO.—Two war steamers had sailed from Havannah under the Mexican flag, and were reported as being engaged by Santa Anna to aid the Church party. Miramon's whereabouts were unknown at the latest dates, but he was understood to be on his way to Vera Cruz, and had issued a proclamation commanding its submission. The Indians were committing horrible outrages on the Mexicans. The people of Chihuhua had invited General Houston into their territory, as the only means by which order could be restored.

BRITISH COLUMBIA.—A fresh violation of the British territory is reported from British Columbia. A detachment of the American army had gone to Langley and seized a couple of prisoners, carrying them off into Washington Territory. Much excitement on the subject existed at Victoria, where great indignation had also been created against Governor Douglas, on account of the levying of a tax of five dollars on every mule load of provisions sent up Frazer river. At a meeting held in Washington Territory on the 23d January, a large portion of the members of the Legislative Assembly nominated General Harney for the Presidency of the United States.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Savoy and Nice.*—In answer to the Earl of CARNARVON, the Duke of NEWCASTLE said that a despatch from M. Thouvenel respecting Savoy had been received within the last 24 hours, but her Majesty's Government had not yet decided whether it could at once be laid upon the table.—In reply to Viscount DUNGANNON, the Duke of NEWCASTLE stated that the Government had under consideration the propriety of dividing the *See of Rochester*, so as to establish a bishopric of St. Albans, but no decision had as yet been arrived at.

MONDAY.—*The Ballot*—Lord TEYNHAM, in a long speech, moved a resolution that it is expedient in the election of members of Parliament that the votes be taken by ballot. He stated that he neither wished for the vote by ballot of America nor of Victoria, which was not secret, but of the other colonies where a system of secrecy had been adopted.—The Duke of NEWCASTLE said he did not look upon the ballot as a party but as a social and moral, and, in a certain sense, as a political question. The ballot would never work without greater attendant evils than those sought to be rectified, and those who desired to introduce the ballot into this country argued upon a false analogy between this country and her colonies, where the state of society and the organisation of labour was on a totally different footing. The abolition of bribery and intimidation was not to be effected by legislation, but by that which had already effected so much—the improved moral tone of the people of this country The vote of every man was a trust given him for the public good, and it was not right that he should be relieved of responsibility in its exercise, as he would be by the protection of the ballot, especially when it was considered that publicity was one of the principal elements of morality and freedom. Their lordships then divided, when the numbers were—Contents, 4; Non-contents, 39; majority, 35. The motion was accordingly lost

TUESDAY.—*The Militia*—Earl DE GREY and RIPON stated, in reply to a question put by the Earl of SHAFTESBURY, that it was intended to disembody four of the 13 regiments of militia artillery, of which the Forfarshire, the Edinburgh, and the Waterford would be three. The Militia Act would expire next year, and it was not proposed to renew it. *Annexation of Savoy.*—The Marquis of NORMANBY complained of having received an evasive answer from the Government to a question which he had put at the beginning of the session with regard to the annexation of Savoy and Nice to France, of which intention it now appeared the Foreign Secretary had long been aware. He gave notice that he would take an early opportunity of moving a resolution on the subject, and asserting the necessity of dealing with all such matters by official communications, instead of private letters, between the Foreign Secretary and our Ministers at foreign Courts.—The Duke of NEWCASTLE denied that any such evasive answer had been given, and urged that such an assertion was a reflection on Lord Granville, by whom the answer had been given. The *Packet Service and Contract Bill* and the *Consolidated Fund Bills* passed through committee.

THURSDAY.—*The Great Tasmania.*—The Duke of SOMERSET, in reply to the Earl of ELLENBOROUGH, said that the Admiralty were in no way responsible for the disaster which had occurred on board the Great Tasmania troop-ship on her way from India to Liverpool. With regard to the supply of provisions for the expedition to China, the utmost care had been taken, and, as far as the naval force was concerned, it was amply supplied until December next. Provisions sufficient for three months had also been forwarded to Hong Kong for the use of the land force. *The Easter Holidays.*—In reply to the Earl of DERBY, the Duke of NEWCASTLE said that the House would probably adjourn for the Easter recess on Monday week, until Tuesday, the 17th of April.—Lord TEYNHAM, in moving the second reading of the *Qualification for Offices Abolition Bill*, explained that the object of the measure was to relieve Dissenters from the necessity of subscribing certain declarations as a qualification for office.—Lord CHELMSFORD objected to the measure on the ground that it was totally unnecessary, and would disturb the settlement of affairs, and because no grievance had been made out He moved that the Bill be read a second time that day six months.—The Duke of NEWCASTLE and the LORD CHANCELLOR supported the Bill, as removing prohibitions and restrictions now vexatious and unnecessary.—The Earl of DERBY said that the Bill sought to repeal Acts of Parliament framed to require that all persons who took office should look on the Established Church as the national establishment. The very wish of the Dissenters to repeal those Acts was almost a tacit acknowledgment of a desire on their part to encroach on the Established Church, and his great objection to the Bill was that it was one of a series of measures for attacking the Church, and putting it on the same footing as the dissenting sects of the country.—The Bishop of CHICHESTER concurred with Lord Derby, and opposed the second reading of the Bill.—After a few words from Lords REDESDALE and TEYNHAM, the House divided, when the numbers were:—Contents, 21; Not-contents, 44; Majority, 23. The Bill was accordingly lost. The *Medical Acts Amendment Bill*, the *Packet Service (Transfer of Contracts) Bill*, and the *Consolidated Fund (4,500,000l.) Bill* were read a third time and passed.

FRIDAY.—*Law and Equity.*—The LORD CHANCELLOR laid on the table a paper containing very valuable information, which had been supplied to him by the Master of the Rolls and the Vice-Chancellors, calculated to throw light upon the Bill which he had brought in for assimilating law and equity. *Divorce Court.*—The LORD CHANCELLOR laid upon the table the Bill which he had promised with reference to the Divorce Court.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The French in Newfoundland.*—In reply to Mr. Justice HALIBURTON, Lord J. RUSSELL said there was no doubt that fortifications had been erected by the French on the Island of St. Pierre in 1856, but that the law officers of the Crown had reported that nothing had been done in the matter contrary to the treaty engagements between England and France in reference to that island. *Annexation of Savoy.*—Mr. KINGLAKE asked Lord J. Russell if there was any objection to lay on the table his answer to Lord Bloomfield's despatch of the 3d of March, respecting the proposed annexation of Savoy and Nice to France. He hoped that the noble lord would be able to state that the sinister rumours of the last few days were not true, and that it was not the fact that the Emperor of the French was proceeding to annexation without consulting the great Powers of Europe, and contrary to the promise which he had made.—Sir R. PEEL said he had that day received a telegraphic despatch from Annecy, assuring him that the country was agitated from one end to the other, and that the municipalities were perfectly ready to vote in favour of annexation with France, for the simple reason that all kinds of terrorism were being resorted to, as in the first French Revolution, to excite the apprehensions of an innocent and primitive population. He called upon her Majesty's Government to come forward in a loyal, manly, and straightforward manner, and protest against the policy of annexation as laid down by France. That protest would be heard far beyond the precincts of Parliament. It would rally Prussia, all Germany, and Europe, and perhaps save millions of treasure and thousands of human lives. It was, he thought, impossible to overrate the importance of the question, for the annexation of Savoy would not only affect the future interests of Piedmont and the future condition of Switzerland, but it was the first step in the conspiracy which had been set on foot against the rights and liberties of every European State. He concluded by censuring the ambiguous language of Count Cavour on the subject.—Lord J. RUSSELL said he had written no answer to Lord Bloomfield's despatch which contained the account of a conversation which his lordship had had with Count Schleinitz, the Prussian Foreign Minister, and the French Minister at Berlin. He himself had also had a conversation with Count Bernstorff, from whom he had gathered that the Court of Berlin entirely agreed in the opinions of her Majesty's Government on the subject of the proposed annexation. With regard to Austria and Russia, he had not as yet received any information as to what steps they might feel disposed to adopt in reference to the question. He owned that he regarded it as extraordinary and unprecedented that Count Cavour should declare in one part of his despatch that the King of Sardinia would neither sell, cede, nor exchange Savoy, and yet in another part state that if the Savoyards chose to attach themselves to France he would have no objection. It looked as if the King of Sardinia was not very unwilling to agree to the project of annexation. The position of this country was, therefore, very much influenced by this state of things. He had received yesterday the copy of a despatch which had been forwarded by M. Thouvenel to Count Persigny, containing the whole case of the French Government in favour of the annexation. It was couched in moderate language, and set out that the position of Italy having been changed that of France had been deteriorated, and that the proposed annexation had become a political necessity, caused by an exceptional state of circumstances. Looking, however, at the despatch as a whole, and regard being had to the fact that it described the annexation as necessary for the security of France, he could not say that it was such a reference to the opinions of the European Powers as would be a compliance with the promise of the French Government to consult those Powers. The despatch was one which required most serious consideration, and he had prepared a reply which, if approved of by her Majesty, he would lay upon the table. *The Chinese Expedition.*—Sir D. L. EVANS moved a series of resolutions on the subject of our relations with China. He urged that the attempt to force a passage to Pekin by arms was for many reasons undesirable and inexpedient; and that the employment of a large military and naval force would entail an enormous expenditure upon the country, without producing any corresponding results. He approved of the appointment of Lord Elgin as Ambassador Extraordinary, and expressed a hope that a wise and conciliatory policy would prevent the effusion of blood in a war which, whatever might be its termination, could not reflect much honour upon the English arms.—Lord J. RUSSELL thought it would be unwise to give our Plenipotentiary instructions of too strict a character, as circumstances might arise which might materially affect his position. He hoped it would not be necessary for our troops to advance on Pekin; but if fair terms could not be obtained without them, it would not be desirable to hamper those in command with instructions that they should not march upon the capital. The general instructions to the Plenipotentiary would be to require an apology for the past; a ratification of the treaty of Tien-tsin; and in case that concession were made, to demand an indemnity, and to claim

the right of having an English Minister resident at Pekin or Shanghai. The number of our forces would be about 20,000 men (not 40,000 as had been supposed), and he thought that a less number would not be sufficient to support our demands.—Sir J. Elphinstone believed that we were about to embark in a costly enterprise which would probably entail an expenditure of something like 10 millions.—Mr. Bright contended that Mr. Bruce had been guilty of great want of judgment, and was utterly unfit for his office. He did not see why we should insist upon having an English Minister resident at Pekin, and he protested against the Government persisting in a policy towards China which had been conducted in defiance of the laws of God and the principles of justice.—Mr. S. Herbert said that the object of the Government was to localise the war, and to limit it as much as possible to a war with the Chinese Government, so that its horrors might fall as little as possible upon the people. He looked back with regret upon all our transactions in China; but, being in a wrong groove, it was now very difficult to get out of it, although he hoped that the statesmanship of Lord Elgin would place us on a better footing with the Chinese.—Sir J. Pakington asked what was to be done in case the Chinese refused to make an apology. He was of opinion that we ought to insist upon the ratification of the treaty, although he could not admit that the Chinese had exceeded their right in obstinately defending the mouth of the Peiho.—After a few words from Mr. Hope and Mr. Cumming Bruce, Lord Palmerston defended the conduct of Mr. Bruce, who had merely fulfilled his instructions to the best of his ability. Mr. Bruce was entitled to proceed to Pekin by way of the Peiho, and the Chinese themselves had admitted that the proper route to the capital was by that river, because in their treaty with Russia it was expressly stipulated that the diplomatic agent of that Power should come to Pekin by way of the Peiho. The policy which her Majesty's Government intended to pursue towards China would be as simple as it was just. They would require the fulfilment of the treaty and an apology for the affair at the Pei-ho. There was, he thought, no reason to suppose that the Emperor of China would not comply with those terms; on the contrary, he had stated that the attack on the British fleet had been caused by the impetuosity of the admiral, and that he was ready to ratify the treaty. After some remarks by Mr. Whiteside, Mr. B. Cochrane, and Sir H. Verney, Sir D. L. Evans withdrew his motion. The House then went into committee of supply, and a sum of 850,000*l.* was voted on account of the expedition to China.

Monday.—*Annexation of Savoy.*—In reply to Mr. Kinglake, who stated that he had heard with great pleasure that the Municipal Council of Nice had voted to remain annexed to Sardinia, Lord J. Russell said that no note had as yet been received from the Swiss Government communicating their intention to address an appeal to the great Powers of Europe against the annexation of Savoy and Nice to France. Her Majesty's Government had, however, heard that such was the intention of Switzerland, and under these circumstances he asked the forbearance of the House to allow her Majesty's Ministers to deliberate freely and carefully upon the answer which they ought to give. *The Reform Bill*—On the order for the second reading of the Bill for Improving the Representation of the People, Mr. Disraeli said that the Bill might have been drawn up four or five centuries ago, as far as any new qualifications were concerned. The measure was of a mediæval character, without the inspiration of the feudal system or the genius of the middle ages. He objected to it because it did not propose any new franchise; for he held that a representation by numbers only never could be a just one, because it excluded lodgers from a voice in the representation of the people—because it would disfranchise some classes in counties, while it perpetuated the exclusion of others who were entitled by conduct and intelligence to vote—and because he regarded the proposed redistribution of Parliamentary seats as unsatisfactory. He could not understand upon what principle places like Manchester and Birmingham, which were already represented, were to have additional members, while other towns now unrepresented were to remain in that condition. The universal opinion in the country was that the Bill was a very bad measure; in fact, the only persons who approved of it were Lord J. Russell and Mr. Bright. The latter, with that candid audacity which in great part neutralised his pernicious opinions and advice, had already announced that no sooner would the Bill be passed than he would begin agitating the country for another. But although he was prepared to declare emphatically that the Bill was a bad one, at the same time he was not prepared to undertake the responsibility of rejecting it on the second reading. Neither could he say whether he or his friends would move any amendments in committee. The Bill of the late Government was more liberal than the present, and would have done more to strengthen the constitution. It was proposed at an opportune movement for an extensive political change, but the present prospect was very different. Europe was now prostrate and spiritless. A great military Power was building up a colossal empire by force of arms, and he asked whether this was a moment to interfere with that old aristocratic element of constitutional power under which England had attained to so great a measure of prosperity. Regard being had to the admitted fact that the Bill had found no favour in the House, he ventured to hope that a measure so unnecessary, uncalled for, and mischievous, would be withdrawn.—Mr. Leatham supported the Bill, though he regretted that it did not include the ballot, and that it did not abolish the petty and corrupt boroughs which now exercised an undue influence in the House of Commons.—Mr. Baillie regarded the Bill as by no means likely to lead to a final settlement of the question. He would rather have seen household suffrage and the abolition of small nomination boroughs.—Mr. Baxter believed that by extending the franchise to the working classes the Bill would strengthen, and not impair, the foundations of our institutions.—Mr. Rolt objected to the Bill, because it would tend to separate the representation of the people from the property of the country. As a step towards Americanising our institutions, he regarded its probable effects with great dismay.—Mr. Campbell thought that the Bill did not sufficiently answer the demands of the people. The omission of the ballot was fatal to its principle. It contained no guarantees for permanency, while it perpetuated the defects of the Reform Act.—Mr. Liddell opposed the Bill as tending to place electoral power in the hands of the least intelligent portion of the population, and to move the ancient landmarks of the constitution.—Mr. Bright wished to discuss the Bill in the spirit of a person anxious for Parliamentary reform, but willing to appreciate the difficulties which the present Government had to contend with in dealing with the question. The Bill must be regarded as one for the extension of the franchise in boroughs and counties. It touched but on the outside the question of disfranchisement; though in this respect it added a precedent to that established by the previous Bill. He could not say that he approved of the Bill, for it would only add 510,000 electors to the number now on the register; at the same time he believed that it would give a large measure of satisfaction out of doors, although he was persuaded that the time would come when the House would have to open its doors to admit those to whom the Constitution was more generous than the Legislature. He had no apprehension that any danger could ensue from concessions to the working classes. He had a generous confidence in the toiling millions, and he counselled those who heard him to extend a similar measure of faith to the masses of the people, and to repose on the good will, intelligence, and virtue of their countrymen.—Mr. Knightley opposed the Bill, on the ground that it was of an illiberal and retrograde tendency.—On the motion of Mr. Stansfeld, the debate was adjourned. *The China Expedition.*—On the report of the Committee on supply, General Peel called attention to the vote of 850,000*l.* for the Chinese expedition, and complained that the Secretary for War had enrolled more men, and incurred a much larger expenditure, than had been provided for in the estimates laid before Parliament. His own opinion was that a sufficient sum had not been taken to defray the cost of the war, and that the deficit next year would be enormous.—Mr. S. Herbert said that, unless the East India Company failed in some of their payments, the Government had taken a sufficient sum to meet the cost of the war. The sum to be taken would be 2½ millions, or more than the Persian war had cost.—Sir H. Willoughby expressed the alarm with which he contemplated the position in which the Chinese empire would be placed, distracted as it was by internecine war and the powerful attacks made upon it by Great Britain.—Sir J. Elphinstone said that if the war was conducted on the scale at present contemplated the deficiency next year would amount to 15 millions.—Sir C. Wood explained that the vote of 850,000*l.* was to make good the deficiency in the financial year ending the 31st of the present month. What might be the expenditure in the financial year 1860-61 it was quite impossible to conjecture. The report was then agreed to.

Tuesday.—*The Ballot.*—Mr. H. Berkeley brought forward his annual motion for leave to introduce a Bill to cause the votes of the electors of Great Britain and Ireland to be taken by way of ballot. He was astonished, he said, at the talent arrayed against him upon this question, but he had looked through the speeches of eminent members of that House in opposition to the ballot, and could not find in them a single valid argument. He cited and discussed their arguments *seriatim*, endeavouring to show that they were fallacious, or inconsistent with facts, or that they rested upon a rotten foundation. On the other hand, he appealed to the testimony of Lord Macaulay as to the necessity and the efficacy of the ballot. An admirable precedent for the adoption of the ballot in this country was furnished, he contended, by the Australian colonies, where it had achieved a bloodless revolution, and was the parent of prosperity.—Lord Henley seconded the motion, and insisted that the ballot would draw the line of distinction between the landlord's influence legitimately exercised, which he did not desire to discourage, and that enormous power which landlords or their agents sometimes improperly exerted over yearly tenants.—Mr. Marsh gave a description of the effects of the ballot in Australia, where he had been a member of the Legislature, which differed from Mr. Berkeley's, and said that he did not attribute the prosperity of the colony to the ballot, which in his opinion had produced great evils.—Mr. C. Fortescue said he had given a vote several years ago in favour of the ballot, but since that time he had thought a good deal upon the subject, and had come to the conclusion that the ballot in most cases would afford no protection even against intimidation.—Mr. Lawson, in supporting the motion, argued that the only remedy which could be effectual against bribery was the ballot.—Lord Palmerston assured Mr. Berkeley that his speech had failed to convert him. He still thought that the franchise was a trust, and not a right. If it was a right, a man could do what he liked with his vote, so that Mr. Berkeley's doctrine would go to legalise bribery. As long as it was held to be a trust, a man was guilty of a moral and a political offence if he bartered it away. Every political function in this country was exercised in the eyes of the public, and if the ballot became law he repeated that, in his opinion, it would degrade and demoralize the people of this country and turn the electors into law-breakers or hypocrites.—After a brief reply by Mr. Berkeley, the House divided, when the motion was negatived by 254 to 147. *The Jewish Oath.*—Mr. T. Duncombe obtained leave to bring in a Bill to amend the Act for the relief of her Majesty's subjects professing the Jewish religion, the object being to remove words in the Act which created a distinction between the mode in which Jews and Christians took the oaths as members of that House.—General Upton moved for a select committee to inquire into the truth of the allegations contained in a petition of the Ayr and Maybole Junction Railway Company, relative to the application of the grant for *Portpatrick and Donaghadee Harbours*. He was arguing in support of his motion, when the House was counted out.

Wednesday.—*The French Duty on Rags.*—In reply to a question from Mr. Puller, Lord J. Russell said that he had not as yet received any information as to the amount of duty which the French Government intended to impose on the export of rags.—Mr. Dillwyn moved the second reading of the *Endowed Schools Bill*, the object of which was to remove the disqualification which prevented Dissenters from acting as trustees of endowed schools in those cases where the endowment specified no particular religious teaching. The three Bills on the subject before the House afforded proof that the question was one which excited considerable attention out of doors. He thought, however, that neither the Bill of Sir Hugh Cairns nor that of Lord Cranworth, which had come down from the Lords, would provide a satisfactory remedy for the grievance complained of, and he was therefore induced to persist with his own bill, notwithstanding the circumstance that the House of Lords had already given its consent to that of Lord Cranworth. He proposed by his Bill that all schools founded prior to the Reformation should not be deemed to have been founded for the purpose of affording religious instruction in the doctrine of the Church of England exclusively, but that any schools founded in the reign of Edward VI. and subsequently, in which the deed of endowment expressly required the doctrine of the Church of England to be taught, should not be interfered with. He denied the right of the Church of England to arrogate to itself the exclusive control and management of the education of the country, and, though a member of that Church himself, he believed the Dissenters had a just claim to the concessions which the present Bill proposed to make.—Mr. Hadfield seconded the motion.—Mr. Locke opposed the second reading on the ground that the Bill would seriously interfere with the property of the Church, while it would not place Dissenters in as good a position as they would be placed under the provisions of another Bill now before the House. The Bill would take away the rights which had remained in the hands of the Church for 300 years, for the simple purpose of restoring them in another form. It declared that, so long as a majority of the trustees belonged to the Church of England, the doctrines of the Church should be taught; but if the Dissenters acquired a majority, then the whole course of religious teaching, though it might have remained in force for centuries, could be immediately changed.—Mr. Selwyn also opposed the Bill, and said that, as he considered the question admitted of no compromise, the best course to adopt would be to move as an amendment that it be read a second time that day six months.—Mr. Longfield seconded the amendment.—Lord Fermoy and Mr. Barnes supported the Bill; Mr. A. Mills, Mr. Walter, Mr. Newdegate and Mr. Bethcroft supported the amendment. On a division, the second reading was negatived by 190 to 120.—Mr. Crook moved the second reading of the *Bleaching and Dyeing Works Bill*, the object of which is to bring those establishments within the operation of the Factory Acts.—Mr. Turner moved, as an amendment, that the Bill be read a second time that day six months. He contended that there was no necessity for legislation on the subject, as there was no analogy whatever between bleaching and dyeing works and factories.—Mr. Richardson seconded the amendment.—Mr. Roebuck read a number of extracts from the reports of the factory inspectors to show that some legislation was necessary to curtail the hours of labour of women and young persons. He conjured the gentlemen of England as men, as fathers, and as brothers, to read the Bill by a triumphant majority.—Mr. Cobbett supported the Bill, and called on the House not to allow women and children to be worked for a period during which no member of the House would permit his horse to be worked, namely, fourteen hours and a half per day.—Sir H. Cairns said that the bleaching works in Ireland were altogether different to those of England, and that if Ireland were excluded from the operation of the Bill he would vote for it.—Mr. Richardson and Mr. Conolly opposed the Bill.—Mr. A. Egerton said, that after the statements made to the House he had no alternative but to vote for the second reading. On a division, the second reading was carried by 226 to 39.

Thursday.—*Annexation of Savoy.*—Mr. Kinglake postponed until Monday the motion which it was his intention to have made respecting the proposed annexation of Savoy and Nice to France. *The Reform Bill.*—The adjourned debate on the second reading of the Bill for amending the representation of the People was resumed by Mr. Stansfeld, who declared that as an advanced Reformer he was prepared to give the measure his cordial support. He looked upon a large extension of the franchise as an essential element in the healthy vitality of the State, and as a correction for that dangerous apathy which engendered corruption, and sapped the political independence of a people.—Sir J. Pakington described the Bill as "a miserable measure," which bore upon the face of it the appearance of a Cabinet compromise. The Bill of the late Government was founded upon a principle, but this measure was destitute of that merit. His chief objection to it was that it would overwhelm the property and intelligence of the country by force of numbers. He did not object to a large numerical increase of the constituency, or to extend the franchise to the working classes; but he objected to the working class, or to any class, monopolising the representation of the country. To guard against this dangerous monopoly of power he suggested as a means of securing a mature and careful revision of the representation, the appointment of a committee of the Privy Council deliberately to consider the whole subject. He might be asked, he observed, why he did not object to the second reading. His reply was, that as he was not hostile to the extension of the franchise, he could not in fair Parliamentary practice adopt that course. He might, it was true, have moved an abstract resolution, but he preferred to await the committee than follow the bad example set him by hon. gentlemen opposite.—Sir G. Grey defended the Bill, and said that it was drawn in a spirit conformable with the constitution, and with a sincere desire to amend the representation of the people. If Sir J. Pakington and his friends were really hostile to the measure, why had they not adopted the fair and open course of joining issue with the Government upon the second reading?—Mr. Adderley opposed the Bill, and attributed the responsibility of it to Mr. Bright. He believed that it would gradually lead to universal suffrage, and argued that if that were its object, the principle had better be adopted at once. [During the right hon. gentleman's speech it was noticed that there were only 24 members present, and an attempt was made to count out the House. A rush of Ministerial members immediately took place from the lobbies, the library, and all the adjacent rooms. Among those who entered was Lord John Russell, whose appearance was the signal for some laughter and cheers. The result was that before the doors were closed for the "count," many more than the requisite 40 were present; but this was no sooner ascertained than the House was again nearly deserted, not a single member being left on the Ministerial bench, and Mr. Adderley remaining the sole representative of the leaders of the Opposition.]—Mr. Massey, Mr. Crossley, and Mr. Baines supported the Bill; Mr. Stuart, Mr. Ker Seymer, and Mr. Whiteside opposed it.—At a quarter past 12 the debate, on the motion of Mr. Edwin James, was again adjourned to Monday. The *Endowed Schools Bill* (*No. 3*) passed through committee. The *Consolidated Fund* (£850,000) Bill was read a second time.

Friday.—*Norwich Election.*—Mr. T. Duncombe moved that a new writ be issued for Norwich in the room of Mr. Schneider and Lord Bury.—Mr. Roebuck suggested that the writ should be suspended for 10 years. After a long discussion on the corruption of the constituency the motion was agreed to. *Savoy and Nice.*—In answer to Mr. Kinglake, Lord J. Russell said it would be injurious to the public service to lay on the table at present the recent despatches on the annexation of Savoy. *Indian Affairs.*—In answer to Mr. H. Baillie, Sir C. Wood said he had sanctioned the issue of a paper currency for India, but the Government had not come to a final decision with respect to the reorganisation of the Indian army. [*Left sitting.*]

City Intelligence.

The Great Eastern.—The whole of the New Preference Stock in the Great Ship Company has been taken up by the present shareholders, more than double the amount required having been tendered for. There is therefore every probability of the vessel being now completed so as to be able to proceed to sea in an efficient state within a reasonable period.

Money Market, Friday.—British Funds: Consols closed at 91⅜ to ½ for Money, and 94⅝ for Account; New Two and a Half per Cents., 78½; Indian Five per Cent. stock of 1859, 104¾ to ⅞; Five per Cent. Enfaced Rupee Paper, 99; Ditto Five and a Half per Cent., 105; Indian Four per Cent. Debentures of 1858, 97½; Ditto 1859, 97; India Bonds, 3*s.* dis.; Exchequer Bills, 16*s.* to 19*s.* prem.—Foreign: Brazilian Four and a Half per Cents., 1852, 91¼ to 90¼; Ditto for 1858, 91¼ to 90¾; Buenos Ayres Six per Cents., for Acct., 85½; Ditto Deferred, 24½; Dutch Two and a Half per Cents., 66⅛ to 66; Ditto Four per Cent. Certificates, 102 to 101⅞; Mexican Three per Cents., for Acct., 21⅝; Russian Four and a Half per Cents., 97¾; Ditto Three per Cents., 1859, 64¾; Spanish Passive, 14¾; Turkish Six per Cents., 1854, for Acct., 79⅜ to 79½; Ditto for 1858, for Acct., 62⅞; Ditto Guaranteed Four per Cents., 102¼.

Gazette of the Week.

TUESDAY—BANKRUPTS—M. Benrimo and J. Picciotto (by the name of J. Picciotto), New Broad Street, City, Merchants—K. Goldsmith, Sutton, Cambridgeshire, Miller—J. B. Johnson, Aberdeen Mews, Highbury Islington, Livery Stable Keeper and Omnibus Proprietor—W. Marris, Nottingham, Draper—J. Melling and R. Carr, Attercliffe-cum-Darnall, Yorkshire, Glass Manufacturers—F. W. Milburn, Westbourne Park Villas, Boarding House Keeper and Victualler—T. Nicholson, jun., and J. B. Nicholson, Gloucester, Coal and Slate Merchants—J. H. Rylstone Cowes, Isle of Wight, Fishmonger—G. Ridsdale, Gower Place, Euston Square, Surgeon, Apothecary, Chemist, and Druggist—H. Smart, Gloucester, Printer, Bookbinder, and Stationer.

SCOTCH SEQUESTRATIONS—P. Brown, Dundee, Tailor—G. Cuts

HOLM, Glasgow, Commission Agent — J. DOBSON, Paisley, Clothier—B. J. J. NORTH, Edinburgh — SHACKELTON, KUSEL, and Co., Glasgow, Wholesale Jewellers.

FRIDAY—BANKRUPTS—J. C. BALL, Salisbury, Miller—R. L. COLE, 46, Lime Street, City, Merchant—H. COOPER, Aldgate, City, Grocer—J. HENDERSON, Nottingham, Draper—J. LONG, Leeds, Spirit Merchant—R. D. M'MANUS, St Austel, Cornwall, Apothecary—J. PERKINS, Oakham, Rutlandshire Haberdasher—S. PORTMAN, Oldbury, Worcestershire, Innkeeper—W. ROTHWELL, Enfield Highway, Schoolmaster—T. SAMPSON and W. BARNARD, Stroud, Shawl Manufacturers—J. SCOTT, Tweedmouth, Berwick upon-Tweed, Millwright—N. SMITH, younger, Horsham, Martley, Worcestershire, Hotel Keeper—J. S. SPENCER, Bloomsbury, Wine Merchant—J. STEVEN, Newcastle-upon Tyne, Hatter—C. H. TIDBURY, Lavender Dock Wharf, Surrey, Wharfinger.

BANKRUPTCY ANNULLED—C. KIEBER, Vigo Street, Regent Street, Woollen Draper.

SCOTCH SEQUESTRATIONS—W. H. COLE, late of Putney, now of Stornoway, Gentleman—J. FORRESTER, Edinburgh, Draper—J. LAWSON, South Shields, Builder and Shipowner——J. M'EWEN, Stirling, Grocer—T. A. POAT, formerly Insurance Manager, of Old Jewry, London, and now of Fort William—R. PRICE, Broughton Place, late of Stourbridge, Worcestershire, Attorney-at-law.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,062,435	Government Debt	£11,015,100
		Other Securities	3,159,900
		Gold Coin and Bullion ..	14,887,435
		Silver Bullion	—
	£29,062,435		£29,062,435

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£10,221,190
Rest	3,740,163	Other Securities	22,575,833
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	10,362,543	Notes	8,719,705
		Gold and Silver Coin ..	788,939
Other Deposits..	12,932,920		
Seven day and other bills	717,041		
	£42,305,667		£42,305,667

22d day of March, 1860. M. MARSHALL, Chief Cashier.

Metropolis and its Vicinity.

MR. COBDEN AND THE COMMERCIAL TREATY.—At a Court of Common Council on Thursday, Mr. W. Connell moved that the freedom of the city, in a box of the value of 50 guineas, be presented to Richard Cobden, Esq., M.P., "in recognition of his long and eminent services in liberating commerce from the shackles which prevented the development of the industrial enterprise of this country, and also for his voluntary and patriotic exertions in negotiating the recent treaty with France." Alderman Mechi seconded the motion. Mr. T. Barkley proposed as an amendment that the constant presentation of the freedom of the city detracts from its honour and usefulness, and in the present position of the corporation is ill-timed and uncalled for. The amendment was seconded by Mr. De Jersey. After some discussion the amendment was negatived by 79 to 34. Mr. Deputy Harrison moved a modification of the resolution, omitting all reference to the commercial treaty, but this was also negatived on a division, by 65 to 31. The original motion was then agreed to.

ROMAN CATHOLIC CHURCH.—The *Weekly Register* announces that a pilgrimage to Rome has been organised, and that a number of English Catholics will leave London on the 24th inst. It also announces the receipt of a donation of 1000*l.* from the Dowager Duchess of Leeds as the inauguration of a general collection in England in aid of the Pope, and states that a pastoral from Cardinal Wiseman, whose health is improving, is about to be issued in aid of the movement.

MONUMENT TO JOHN BUNYAN.—On Monday evening a meeting was held at the Freemasons' Tavern, under the presidency of the Earl of Shaftesbury, to consider the most appropriate means for raising a monument to John Bunyan in the metropolis. The meeting was attended by many gentlemen of influence in the church and dissenting congregations, and the following resolution was agreed to unanimously:—"That, in the opinion of this meeting, the absence of any public record for a period of nearly 200 years to the memory of so distinguished a man as John Bunyan is a matter deeply to be regretted, and that his eminent services in the cause of religion, and his untiring zeal for the welfare of his fellow men, demand the lasting gratitude of Christendom. It is therefore considered by this meeting to be very desirable that a statue to his memory be erected by public subscription in one of the leading and most public thoroughfares in the metropolis."

THE SATURDAY HALF HOLIDAY.—The London bankers on Monday resolved, in compliance with the general wish of the mercantile body, to close on Saturdays at 3 o'clock instead of 4. The memorials addressed to them on the subject expressed a desire that 2 should be the hour, but it has been thought better in the first instance to fix an intermediate time. The new system will come into operation on Saturday, May 19. The West-end army clothiers, tailors, &c., have also resolved to adopt the plan of early closing on Saturdays.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that in consequence of the cold which prevailed in the greater part of the week that ended on the 17th inst., the London returns exhibit an increase in the mortality. The deaths, which had declined to 1397, rose again to 1563 in the week that ended last Saturday. In the corresponding weeks of the 10 years 1850-59 the average, corrected for increase of population, was 1362. The deaths of last week were therefore 201 above the average. During the week the births of 1046 boys and 977 girls, in all 2023 children, were registered in London. In the corresponding weeks of the years 1850-59 the average number was 1724.

Provincial.

ST. ALBAN'S.—On Monday the committee for the restoration of St. Alban's Abbey had an interview, by appointment, with Lord Palmerston, in reference to the separation of Hertfordshire from the diocese of Rochester, and constituting the Abbey of St. Alban's the cathedral church of a new diocese. The deputation consisted of Lord Verulam, Lord Ebury, Archdeacon Grant, Mr. Puller, M.P.; Mr. Smith, M.P.; the Hon. F. Cavendish, the Hon. and Rev. W. C. C. Talbot, Mr. R. Dimsdale, Mr. R. Heale, Rev. Dr. Nicholson, Rev. M. Southwell, &c. His lordship was addressed by Lord Verulam, Lord Ebury, Dr. Nicholson, and others, who represented to him that the diocese of Rochester, as at present constituted, consists of the city and deanery of Rochester, the whole of the county of Hertford, and all Essex, with the exception of 10 parishes close to the metropolis, which are under the jurisdiction of the Bishop of London. The diocese includes a population of 577,298, 1,535,450 acres, and 561 benefices, less than 40 of which are on the Kent side of the Thames. One result of this state of things is that the late bishop very seldom visited his cathedral city, residing, as he did, at the episcopal palace near Chelmsford. The deputation proposed that a new see should be founded at St. Alban's, the bishop having jurisdiction over the 561 benefices comprised in the 35 deaneries of Hertfordshire and Essex, and that the city and deanery of Rochester, with its 40 benefices, should be annexed to the diocese of Canterbury, the archbishop of which would thus have jurisdiction over the whole of Kent, with the exception of Greenwich, Deptford, Woolwich, Plumstead, and two or three other parishes which are comprised in the diocese of London. Lord Palmerston listened to these statements with great attention, and in reply explained the difficulties that beset the application of such a remedy as was asked for. These difficulties arose from the want of sufficient funds, which the Ecclesiastical Commissioners are not in a condition to supply, and from the circumstances that the erection of a new see must be taken in connection with similar ecclesiastical wants and demands which are urged in other parts of the country, such as Cornwall, Gloucester and Bristol, and Lincoln. His lordship added, that the subject should receive his attention, although he was not able at the present moment to hold out any hope of the wishes expressed by the deputation being carried into effect.

LIVERPOOL.—The clipper ship the Great Tasmania, of the Black Ball line, arrived in the Mersey on the 14th inst. from Calcutta, with 20 officers and 937 men of the Bengal army, who had been discharged from the Company's service on refusing to transfer their services to the Crown on the suppression of the Indian mutiny. Previous to their embarkation at Calcutta the men were kept a fortnight in the depôt at Chinsurah, where the canteen-keeper, a sergeant-major, held out every inducement to them to drink. They accordingly sold their clothes to buy drink, and during their stay the depôt was a continued scene of drunkenness and dissipation. Many of the men were carried on board the Tasmania half drunk, and so debilitated by their excesses that they were unable to resist the diseases which bad provisions subsequently tended to superinduce; so that the ship during her voyage was converted into a floating hospital. The Government authorities had undertaken to find everything which the men required on the voyage—food, water, hammocks, medicines, and stores. Before the ship weighed these provisions were inspected by a committee of officers, who passed them as fit for food. The first bread that was sent on board by the authorities was so bad, that on breaking the loaves the centre was found to be merely unbaked dough. Bread of a better quality was furnished; but when the voyage had lasted a few days it was found that a great portion of it was unfit for food, and 36,000 lbs. of biscuit were so infested with weevils that it was necessary to throw them overboard. The beef when boiled was so offensive that it also had to be thrown overboard, and a large number of the meat-casks, after being condemned by a committee of officers, were thrown into the sea. The onions and vinegar were black, and being quite unfit for food were thrown overboard. The lime juice contained several dead rats, skinless from the long time they had been in the liquor, but the men nevertheless partook of the juice to escape the horrors of scurvy. On reaching St. Helena the captain made a representation to the Governor, who sent on board a large supply of the finest navy biscuit. Shortly after leaving St. Helena the supply of lime juice, which had been scanty previously, failed altogether; and about the same time the water ran short. Sickness increased, and whilst many of the men were suffering from the ravages of dysentery, the scurvy, from the entire absence of effectual means of prevention, spread rapidly. The sick list soon numbered 300 men, and the efforts of the surgeon and his assistant, although strenuous and unceasing, failed in checking the enormous sickness which prevailed. A great number of the men were actually lying on the bare deck shortly after the ship left St. Helena; and much of their suffering is due to the exposure and consequent want of rest. On the arrival of the vessel in the Mersey the state of affairs was dreadful. Sixty deaths had taken place during the voyage, and about 140 of the unfortunate men were lying in a dangerous condition. Arrangements were immediately made for the removal of the sick to the Liverpool Workhouse. Carts and cars were sent down, and 135 men, many of them in the last stage of disease, were removed to the workhouse. The men were warmly wrapped in rugs and blankets; but one poor fellow was found dead in the car on its arrival at the workhouse, and to many others a fatal termination of their illness appeared inevitable. Since they were admitted into the hospital, three deaths have taken place from scurvy, but the majority of the cases are in a fair way of recovery. A coroner's inquest was opened on Monday, when all the circumstances of the case were thoroughly investigated. The inquiry was brought to a close on Wednesday night, when the jury after two hours' consultation returned the following verdict:—

"That Thomas Beach died from natural causes, and that his death was accelerated by necessary removal to the workhouse." In the case of the other six they found that they "died of scurvy, brought on by bad food and exposure to cold on board ship." The jury further found, "That the provisions supplied by the Government as stores for the use of the troops were bad, and unfit for human food, with the exception of the tea, pork, pickles, and rice. That there was an entire absence of proper disinfectants, and that the lime juice had lost its medicinal properties when put on board. That the officers who signed the 'General Inspection Report' are the culpable parties, so far as the quality of the stores is concerned. That the captain and officers of the ship are entirely free from blame, and that the ship's contract was satisfactorily fulfilled. That the military officers and the surgeon did their best, under the circumstances in which they were placed, to promote the health of the men under their charge." The foreman also made the following presentment on behalf of the jury:—"The jury think it an imperative duty to urge upon the Government the necessity of such a change in the system of military inspection and supply of clothing before soldiers leave India or any other foreign country, whether they are still in the service or have had their discharge and are receiving a Government passage home, as shall prevent men in future arriving in England in cold weather so insufficiently clothed as the men who have arrived by the Great Tasmania."

Ireland.

THE TRIBUTE TO THE POPE.—The Pope has addressed a letter to Dr. Cullen, expressing his thanks to the clergy and people for their third contribution of 1000*l.*, and granting them in return his apostolic benediction. "You may rest assured," he says, "that our attachment to you, your clergy and people, is of the warmest kind, and, as a most certain pledge thereof, we grant you, venerable brother, and the flock committed to your care, our apostolic benediction, from our inmost heart, and with our best wishes for your true happiness."

Scotland.

THE CASE OF THE BISHOP OF BRECHIN.—A Synod of the Bishops of the Scottish Episcopal Church was held at Edinburgh on the 15th inst., to give judgment in the case of the Bishop of Brechin. The episcopal judges present were the Bishop of Edinburgh and the Bishops of Moray, St. Andrew's, Aberdeen, and Glasgow. The Bishop of Brechin was accompanied by the Rev. Mr. Keble and other gentlemen. The charge against the Bishop of Brechin was, his having taught in a primary charge delivered to his clergy in August, 1857, 1st, that the sacrifice of the Eucharist is identical with the sacrifice of the Cross; 2d, that adoration is due to Christ, as in or under the consecrated elements of blood and wine; and 3d, that there is a reception of Christ by the wicked; and by said teaching he was charged with depraving the articles of religion, the Scotch communion-office, and other formularies of the Church. The bishops gave their opinions at great length, after which the Bishop of Glasgow (clerk of Synod) read the finding of the Court, which was to the following effect:—

"At Edinburgh, the 15th day of March, 1860, the College of Bishops having resumed consideration of the presentment at the instance of the Rev. William Henderson, incumbent of St. Mary's, Arbroath, and Patrick Wilson and David Smith, vestrymen thereof, being members of the Scottish Episcopal Church, against the Right Rev. Alexander Penrose Forbes, D.C.L., Bishop of Brechin, complaining of the teaching and doctrines contained in the charge delivered by the said bishop to the clergy of his diocess, and thereafter published and republished by his authority, and having heard parties fully thereon, find that the said present is relevant and proven to the extent and effect aftermentioned. More particularly find, with reference to the charge contained under the first and second heads of the presentment, that the teaching of the respondent there complained of is unsanctioned by the articles and formularies of the Church, and is to a certain extent inconsistent therewith; find that the third charge of the presentment is not proven. But, in consideration of the explanations and modifications offered by the respondent in his answers in reference to the first charge, and in consideration, also, that the respondent now duly asks toleration for his opinions, and does not claim for them the authority of the Church, or any right to enforce them on those subject to his jurisdiction, we, the College of Bishops, feel that we shall best discharge our duty in this painful case by limiting our sentence to a declaration of censure and admonition; and we do now solemnly admonish, and in all brotherly love entreat the Bishop of Brechin to be more careful for the future, so that no fresh occasion may be given for trouble and offence, such as has arisen from the delivery and publication of the primary charge to his clergy complained of in the presentment."

THE LATE SIR JAMES M'GRIGOR.—An obelisk to the memory of Sir James M'Grigor has just been erected at Aberdeen, in the quadrangle of Marischal College, within the venerable walls of which building the deceased baronet was educated. This testimony of respect to his memory is one of a local nature, having no connection whatever with the memorial, which owes its origin and much of its success to his admirers south of the Tweed. The Aberdeen obelisk is 72 feet high,

and the material of which it is composed is highly-polished granite of a red colour, with the exception of a slab of gray-coloured granite, which has been introduced in the pedestal for the purpose of containing an inscription recording his services in the army for the long period of 57 years. The base of the obelisk is surrounded by a platform of gray-coloured granite from the neighbourhood of Aberdeen.

Law.

The Assizes.—Midland Circuit: Lincoln.—*The Skegness Murder.*—*Samuel Moody*, described in the calendar as a fisherman, was charged upon an indictment with the wilful murder of Elijah Lynn, at Skegness, on the 5th February last, and was further charged with the like offence on the coroner's inquisition. It appeared that on the night in question the prisoner and two farm labourers, named Lynn and Howard, were drinking together at one of the public-houses by the seaside, and were turned out together when the house was closed at 12 o'clock. They were all at the time more or less excited by drink. Howard bought a bottle of gin to take home with him, but during their walk together Lynn and the prisoner several times drank out of the bottle. When they had arrived at a certain point of their journey Howard left the others, who were then apparently on friendly terms, and proceeded on his way home. Lynn and the prisoner proceeded in an opposite direction. On the following afternoon a number of boys playing by the roadside discovered the body of Lynn in a ditch, within about 150 yards of the spot where the three men had separated the night previously. There were marks of a struggle on the road, and by the ditch side two caps were found, one of which belonged to the deceased and the other to the prisoner, who was in consequence immediately apprehended, as it was known that he had for some time been at variance with deceased. When in custody it was observed that he had sundry cuts on his face which were not there on the previous evening. When asked how these marks had been caused he said that he had cut himself that morning while shaving. His beard, however, showed that no razor had touched it for several days. The trousers he had worn on the night of the murder were found to be quite wet and muddy on the knees, and his boots corresponded with marks on the road. He said that he knew nothing about the murder, and that he had seen the deceased home. This however was contradicted by the widow of deceased, who stated that while sitting up for her husband she heard footsteps near the house about 3 o'clock in the morning, and on looking out she saw the prisoner pass her house without his cap. The *post mortem* examination proved that deceased had been stupefied by a severe blow on the head, which fractured his skull, and had then been smothered by lying in the muddy water at the bottom of the ditch. The jury after half an hour's deliberation returned a verdict of *Guilty* of Manslaughter, and the prisoner was sentenced to 15 years' penal servitude.

Derby.—*The Chesterfield Embezzlement.*—*Rev. Henry Gordon Garrett* was charged with taking and converting to his own use, on the 6th of December last, 1*l.* 3*s.* 9*d.*, the property of the Rev. George Butt, vicar of Chesterfield. This case excited intense interest, and the court was crowded. The prisoner was last year curate of the parish church, Chesterfield, of which the Rev. George Butt is vicar, and the offence laid against him was, that he appropriated a sum of money which had been collected in the parish church in aid of the Church Missionary Society, which had been entrusted to him, to his own use, instead of using it for the purpose for which it was collected. Evidence having been gone into, the Judge said he was of opinion that it was a case of civil liability, and not one for a criminal prosecution. Prisoner had done an act which he ought to be ashamed of, but which clearly did not come within the act of parliament. The prisoner acted as treasurer to the society, and the parent society ought to have made him pay it in a civil court. Under the whole of the circumstances, the prisoner must be acquitted on this charge. There was a second charge for stealing 10*s.*, the property of the clothing club, but counsel declined to offer any evidence. His lordship said the jury would return a verdict of *Not Guilty*, at the same time they could not but lament to see a clergyman placed in such a disgraceful position. The prisoner then left the dock; but as he was going out of the court-door he was apprehended on a warrant by the Superintendent of the Chesterfield police, on a charge of embezzlement at Cardiff, and there was a second officer in attendance with a warrant against him.

Oxford Circuit: Stafford.—*Price* v. *Insley.*—This was an action of trespass, and the question in dispute was as to the title of a small piece of land which had been inclosed from a common at Kingswinford. In the course of the trial it appeared that defendant was the son of a poor woman who formerly lived in a small cottage by the common, and that while a boy, he had from time to time inclosed small pieces of land on the common in front of the cottage in order to gratify his taste for the cultivation of flowers. After the defendant was old enough to go to service he still continued his favourite pursuit, as opportunity afforded, and he became so distinguished a florist as to obtain medals, and receive the marked commendations of botanists. The plaintiff was the present proprietor of the cottage, and he claimed the bit of land so enclosed; and, as might be expected the defendant stoutly resisted his claim. After the trial had proceeded some time, and the real facts of the case became known, the plaintiff, whose property was prejudiced by this bit of land belonging to another person, consented to waive his claim, and offered to buy the land for 30*l.* This offer was accepted, and by consent a juror was withdrawn. *Conspiring to defraud the Earl of Stamford.*—*James Hackett* was charged with conspiring, between the year 1851 and June, 1859, at the parish of Enville, with James Parish, to defraud the Earl of Stamford and Warrington of certain sums of money. It seemed that Hackett during the years in question was steward to Lord Stamford, and, with Parish, who is his brother-in-law, assessor and collector of income and assessed taxes. Parish, however, had been the acting assessor and collector, and Hackett had been so only in name. The assessment and also the demand papers were all made out by Parish, who had now left the country. It was shown that from 1851 till last June Lord Stamford had paid as much as 1400*l.* income tax more than he ought to have paid, and it was contended for the prosecution that Parish and Hackett had conspired together to defraud his lordship. The yearly payments were collected in moieties, and the last moiety demanded and paid was a larger sum than his lordship should have paid for the whole year. For the defence it was maintained that Hackett's offence was an overweening confidence in Parish. It was shown that his duties as steward were very onerous, and that having no reason to suspect that Parish was otherwise than an honest man, he had paid him the amount that he had demanded, without ascertaining the sum at which his lordship was assessed. It was also urged that the entries of the monies he had paid as income tax were made in books that were kept open in the steward's office, to which his assistant and others had access. After a lengthened trial the jury *Acquitted* the prisoner.

Obituary.

Mrs Jameson died on the 17th inst. after an illness of a few days, caused by bronchitis succeeding a cold caught in the Reading Room of the British Museum. She was the eldest daughter of Mr. Murphy, painter in ordinary to the Princess Charlotte, a well-known artist in the early part of the present century. She married Mr. Robert Jameson, the late Vice Chancellor of Canada, whom she survived six years. Her literary labours commenced with the "Diary of an Ennuyée" in 1826, and were followed by numerous volumes on various subjects of biography and art. Her principal and most popular publications were her "Characteristics of Women," chiefly studies from Shakspeare; "Visits and Sketches at Home and Abroad," "Winter Studies and Summer Rambles in Canada;" the latter being a record of her own social views and convictions. In 1842 she published the "Hand-Book to the Public Galleries of Art in and near London," which was the first of a series of artistic works which she subsequently produced, viz., on "Sacred and Legendary Art," "Legends of the Monastic Orders," "Legends of the Madonna," &c. One of her last publications was a revised and enlarged edition of "Memoirs of the Early Italian Painters." For two years past she had been engaged on a laborious and elaborately illustrated work, nearly completed, and to be entitled "The History of our Lord and of his Precursor, St. John the Baptist, with the Personages and Typical Subjects of the Old Testament as represented in Christian Art." In the completion of this labour she had revisited Italy and passed several months in Rome and other continental cities. As an art critic Mrs. Jameson was almost unrivalled. She appreciated and expounded not only technical excellence but the inward meaning of works of art; the relations they bear to the history of art itself, and the history of nations among whom they were created. She also took a keen interest in all social and moral questions, as evidenced in her printed lectures on "Sisters of Charity at Home and Abroad" and the "Communion of Labour," in which she considers the practical side of English life—treating of labour, charity, education, the condition of her own sex, our criminal laws and reformatory institutions. She took an active interest in the meeting of the Association for the Promotion of Social Science at Bradford in October last, and the observations she made in the sections were received with marked respect.

Mr. Joseph Miller, F.R.S., the distinguished civil engineer and mechanician, died at Charleston, South Carolina, on the 23rd of February, in his 63rd year. He had for a number of years been obliged by the infirm state of his health to withdraw from his profession, yet he still continued to enjoy among the members of it a very high degree of consideration. He was a native of Carlisle, and when a young man went to Birmingham, where he served his apprenticeship at the celebrated Soho Foundry of Messrs. Boulton & Watt. He then became chief engineer at the Butterley Iron Works, and there commenced that career as a marine engine maker which, continued and extended under the names of "Barnes & Miller," and "Miller & Ravenhill," acquired for him a world-wide reputation. He had an important share in those efforts at simplicity in design, elegance and lightness in proportion, and soundness of workmanship which have brought the marine engine to its present excellence. His firm worked extensively in the formation not only of our own steam fleet, but those of many foreign Governments, and on the Thames, and between Dover and Calais, and on the Rhone and the Soane, the Danube, and the Rhine, some of the earliest and most successful efforts at rapid steam navigation were made by vessels supplied with his engines.

Births.—On the 1st inst., Lady Ercho, of a son—15th inst, in Mansfield Street, the Lady Click Browne, of a daughter—14th inst, at Broughton Castle, Banbury, the Lady Augustus Fiennes, of a daughter—14th inst, at 16, Eccleston Square, the Hon. Mrs. Frederic Hobart, of a son—15th inst, the Hon. Mrs. Harbord, of a son—17th inst, at 1, Hyde Park Place, the Hon. Mrs. Hughes, of a daughter—12th inst, at Barland, Radnorshire, the wife of George Henry Warrington Carew, Esq., of Crowcombe Court, Somersetshire, of a son and heir.

Marriages.—On the 15th inst, at Bishop Lydeard, Somersetshire, Major Hercules Walker, of the Rifle Brigade, to Julia Decima, daughter of Sir John Hesketh Lethbridge, Bart., of Sandhill Park, in that county—17th inst, at Dawlish, Colonel John Graham, of Barnstaple, late of the H.E.I.C.S., son of the late Captain Charles Graham, of Grimston, Scotland, to Jane, daughter of Vice-Admiral Thomas Dick, of Dawlish, South Devon—13th inst at St. Peter's Church, Dublin, Paulus Æmilius Singer, rector of Stackallan, to Cherry, eldest daughter of the Right Hon. Joseph Napier.

Deaths.—On the 5th inst, at Beauchamp, near Bray, county of Dublin, Sir Lovelace Stamer, Bart., aged 62—11th inst, at Hastings, Lady Payne, relict of the Rev. Sir Coventry Payne, Bart., and third daughter of the late Peter Wright, Esq., of Hatfield Priory, in the county of Essex, aged 62—17th inst, at Sussex Place, Regent's Park, Mrs. Sophia Onslow, widow of the late General Denzil Onslow, of Staughton House, Huntingdonshire, and daughter of the late Sir Stephen Lushington, Bart., aged 81—13th inst, at 29, Upper Fitzwilliam Street, Dublin, Wilhemina, relict of the late Right Hon. Judge Moore—13th inst, at Kinblethmont House, near Arbroath, William Fullerton Lindsay Carnegie, Esq., of Spynie and Boysack, Vice-Lieutenant of Forfarshire—19th inst, at Newland Park, Wakefield, Henry Tempest, Esq., aged 64—19th inst, Lieut.-Colonel Gustavus B. Hippisley, of Camely and Leigh Court, Somersetshire—21st inst, at 69, Portland Place, Charles Ross, Esq., a Commissioner of her Majesty's Audit Board, aged 69—14th inst, at 13, Great Stuart Street, Edinburgh, Helen, wife of Major-General Swinburne, of Mamus and Pollon Hall—7th inst, Rus[illegible] Sewell, Esq. of Little Oakley Hall, Essex, aged 72—15th inst, after a few hours' illness, at the Cloisters, Westminster, Florence Musgrave, youngest child of the Rev. G. H. and Lady Cecilia Rebton, aged two years—14th inst, at Oxford, respected and beloved, the Rev. John Baker, M.A., Chaplain of Christchurch, and Head master of the Cathedral School, aged 34—18th inst, at the Paragon, Blackheath, Martha Rose, daughter of the Rev. James Sherman, aged 21—14th inst, at 16, Lansdown Place, Brighton, Andrew Redmond Prior, Esq., late Accountant-General of H.M.'s Post Office in Ireland.

Markets.

COVENT GARDEN.—March 24.

Vegetables are still scarce and realising high prices. Pine Apples and Grapes are somewhat dearer than they were last week. Good Apples and Pears are scarcely to be had. The former consist of Golden Knob, Bess Pool, and Wyken Pippin, and the latter of Ne Plus Meuris and Beurré Rance. Oranges are plentiful and cheap. Good Cobs realise 1*s.* to 1*s.* 6*d.* per lb. Rhubarb, Asparagus, and Seakale are furnished in small quantities. Parsley is still dear. Green Peas may be obtained at high prices. Potatoes realise 4*s.* 6*d.* a bushel. A few new frame ones may be had at from 3*s* to 5*s* per pound. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, Geraniums, and Roses.

FRUIT.

Pine Apples, per lb., 8*s* to 12*s*	Pears, per doz., 6*s* to 10*s*
Grapes, per lb., 12*s* to 20*s*	Oranges, per 100, 6*s* to 10*s*
Strawberries, p. oz., 1*s*6*d* to 2*s*6*d*	Lemons, per 100, 5*s* to 8*s*
Melons, each, 2*s.* to 4*s*	Filberts, p. 100 lbs., 50*s* to 60*s*
Apples, per doz., 2*s* to 6*s*	Cobs, do., 100*s*

VEGETABLES.

Asparagus, p. bundle, 6*s* to 10*s*	Cucumbers, each, 1*s* to 3*s*
Seakale, per basket, 2*s* to 3*s*	Artichokes, per doz., 2*s* to 3*s*
Rhubarb, per bundle, 6*d* to 1*s*	Beet, per doz., 1*s* 6*d* to 2*s*
F. Beans, per 100, 2*s* to 3*s*	Celery, per bundle, 1*s* 6*d* to 2*s*
Peas, p. half sieve, 15*s* to 20*s*	Onions, p. half sieve, 1*s* to 1*s* 6*d*
Brocoli, per doz., 4*s* to 8*s*	— Portugal, each, 2*d* to 4*d*
Greens, per dozen bunches, 4*s* 6*d* to 6*s*	Shallots, per lb., 6*d* to 8*d*
Cabbages, do., 2*s* to 3*s*	Garlic, per lb., 6*d* to 8*d*
Potatoes, p. ton, 90*s* to 100*s*	Lettuces, Cabb., per score, 1*s* to 1*s* 6*d*
— per bus., 3*s* to 4*s* 6*d*	Endive, p. score, 1*s* to 2*s*
— per cwt., 6*s* to 8*s*	Horse Radish, p. bun., 1*s* 6*d* to 4*s*
Carrots, per bunch, 6*d* to 8*d*	Mushrooms, p. pott., 2*s* to 2*s*6*d*
Turnips, per bunch, 5*d* to 7*d*	Parsley, p. 12 bunches, 4*s* to 8*s*
Spinach, p. sieve, 4*s* to 5*s*	Savory, per bunch, 2*d* to 4*d*

POTATOES.—Southwark, Monday, March 19.

During the past week the arrivals have been more than equal to the demand, and trade continues dull, particularly for all second-rate sorts. The following are this day's quotations:—Yorkshire Regents, per ton, 90*s.* to 140*s.*; Lincolnshire do., 80*s.* to 95*s.*; Dunbar do., 100*s.* to 120*s.*; do. Reds, 90*s.* to 100*s.*; Perth, Forfar, and Fifeshire Regents, 80*s.* to 100*s.*; do. Rocks, 75*s.* to 85*s.*; do. Reds, 70*s.* to 80*s.*; French Whites, 70*s.* to 80*s.*; Belgian do., 60*s.* to 70*s.*

HOPS.—Borough Market, Friday, March 23.

Messrs. Pattenden & Smith report a steady demand for most descriptions of Hops at firm rates.

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, March 22.

Prime Meadow Hay	75*s* to 80*s*		Clover	90*s* to 105*s*	
Superior do. (old) ..	84	90	New Clover	—	—
Inferior do.	60	70	Second cut do. ..	75	88
New do.	—	—	Straw	27	32
Rowen	55	70		Davis & Co.	

Cumberland Market, Thursday, March 22.

Sup. Meadow Hay ..	86*s* to 92*s*		Inferior Clover ..	80*s* to 92*s*	
Inferior do.	70	80	New do.	—	—
New do.	—	—	Straw	31	35
Superior Clover ..	98	105		Joshua Baker.	

Whitechapel, Thursday, March 22.

Fine old Hay	85*s* to 90*s*		Fine old Clover ..	100*s* to 105*s*	
Inferior do.	63	72	Inferior do	84	95
Prime New Hay ..	—	—	Fine New Clover ..	—	—
Inferior do.	—	—	Fine 2d cut	83	90
Straw	25	29	Inferior do.	60	75

METROPOLITAN CATTLE MARKET

Monday, March 19.

The number of Beasts is smaller than on Monday last, and consequently prices are maintained although trade is slow. There are a few more Sheep, and the demand is limited. There is a very slow sale for the shorn Sheep at prices considerably lower than last week. Good Calves are scarce and dear. From Germany and Holland there are 190 Beasts, 1350 Sheep, and 71 Calves; from Scotland, 210 Beasts; from Ireland, 200; from Norfolk and Suffolk, 2500; and 109 from the northern and midland counties.

	s	*d*	*s*	*d*		*s*	*d*	*s*	*d*
Best Scots, Herefords, &c. ..	4	6	to 4	10	Best Long-wools.	5	4	to 5	6
Best Short-horns	4	4	— 4	8	Do. Shorn ..	4	4	— 4	8
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	4	4	— 4	6
Best Downs and Half-breds ..	5	6	to 5	8	Do. Shorn		—	..	
Do. Shorn ..	4	10	— 5	0	Lambs		—	..	
					Calves	4	8	— 5	8
					Pigs	4	0	— 5	0

Beasts, 3840; Sheep & Lambs, 21,070; Calves, 96; Pigs, 370.

Thursday, March 22.

The number of Beasts is not larger, but the demand is small, consequently they cannot all be disposed of. Prices on the average are lower. The supply of Sheep exceeds the demand; very little business is transacted, and that at lower rates. Calves are selling about the same as on Monday. Our foreign supply consists of 470 Sheep and 94 Calves. The number of Milch Cows is 155.

Best Scots, Herefords, &c. ..	4	6	to 4	8	Best Long-wools .	5	4	to 5	6
Best Short-horns	4	4	— 4	6	Do. Shorn ..	4	4	— 4	6
2d quality Beasts	2	8	— 3	8	Ewes & 2d quality ..		—	..	
Best Downs and Half-breds ..	5	6	— 5	8	Do. Shorn ..	4	4	— 4	6
Do. Shorn ..	4	8	— 4	10	Lambs		—	..	
					Calves	4	8	— 5	8
					Pigs	4	0	— 5	0

Beasts, 945; Sheep & Lambs, 4460; Calves, 146; Pigs, 170.

MARK LANE.—Monday, March 19.

The supply of Wheat from Essex and Kent to this morning's market was better than of late, and taken at an improvement of 1*s.* per qr. upon the rates of Monday last. The attendance was good, and foreign met an increased inquiry at prices which of late have not been obtainable, or in some instances 1*s.* per qr. more than last week. Barley was in good demand at the extreme prices lately current. Beans and Peas are fully as dear. The Oat trade is quiet, and prices are unchanged. There is no alteration in the value of town-made Flour, but country marks are held for a trifling advance.

Per Imperial Quarter	*s.*	*s.*		*s.*	*s.*
Wheat, Essex, Kent, & Suffolk ..	White	44—48	Red	40—45	
— —	fine selected runs ..	ditto	46—50	Red	42—48
— —	Talavera		46—54		
— Norfolk			—	Red	—
— Foreign			38—56		
Barley, grind. & dist., 24*s* to 30*s*. .	Chev.	38—44	Malting .	35—40	
— Foreign . .	grinding and distilling		23—31	Malting .	35—41
Oats, Essex and Suffolk			19—24		
— Scotch and Lincolnshire . .	Potato		23—29	Feed ..	19—26
— Irish	Potato		21—28	Feed ..	19—24
— Foreign	Poland and Brew		23—26	Feed ..	17—24
Rye			35—38	Foreign .	—
Rye meal, foreign			—		
Beans, Mazagan	30*s* to 40*s*	Tick	33—43	Harrow .	33—43
— Pigeon	36*s* — 47*s* . .	Winds	48—54	Longpod	—
— Foreign		Small	38—46	Egyptian	—
Peas, white, Essex and Kent . .	Boilers		36—38	Suffolk .	36—40
— Maple	—*s* to —*s*	Grey	31—33	Foreign .	30—37
Maize		White	—	Yellow . .	—
Flour, best marks delivered . .	per sack		37—43		
— 2d do.		ditto	27—37	Country.	27—37
— Foreign		per barrel	18—27	Per sack	30—37

Friday, March 23.

The weather since the 16th inst. has been generally fine and favourable for spring sowing, with occasional driving showers of rain and hail, and a white frost or two; wind strong from

S.W. The accounts we receive respecting the Wheat plant lead us to believe that although backward it has not generally suffered to any extent that may not be recovered by favourable weather, but it is thought that the breadth sown is less than usual. The free importation of grain into Portugal has been suddenly rescinded, and we understand that some purchases of Wheat and Flour made on the Continent and United States for that country have been ordered to England. The Wheat trade throughout the kingdom during the past week has developed increased activity, which has enabled holders to obtain an improvement in price of 1s per qr. The previous rates for Spring Corn were also well maintained, and in some instances a slight advance was obtained. A rise of 6d. to 1s. per sack in the value of Flour has also been pretty general, accompanied by a better sale. From the South of Europe the arrivals during the week amount to 5 cargoes of Wheat, 6 of Maize, 3 of Barley, 1 of Beans, 1 of Rye, and 6 of Linseed. The sale continues liberal. The arrivals of grain of all kinds this week have been very small, and of Oats (either English or foreign) there are none. This morning's market was moderately attended, and the little English Wheat on offer was taken at an advance of 1s. per qr. Foreign was also held for higher prices, and on the sales effected an improvement of 1s. per qr. was realised. There was also some inquiry for Wheat free on board on speculation, for which better rates were obtained than of late. The Barley trade is very firm at the extreme prices of Monday. Beans and Peas are unaltered in value. For Oats there is a fair demand at fully late rates.

ARRIVALS FROM MARCH 19 TO MARCH 23.

	Wheat.	Barley.	Oats.	Flour.
English ..	1420 qrs.	1130 qrs.	— qrs.	1090 sks.
Irish	— ,,	— ,,	4230 ,,	— ,,
Foreign ..	2800 ,,	2710 ,,	— ,,	40 ,, 300 brls.

LIVERPOOL, Tuesday, March 20.—At our Corn Exchange this day there was a moderate sale for Wheat at full 2d. per cental advance on the week. Indian Corn met a retail inquiry at former prices. Flour was held for 6d. per barrel and sack advance, but this checked business.

FRIDAY, March 23.—The grain market was moderately attended, and a fair business transacted in Wheat at 1d. above Tuesday's rates. Flour was also in fair demand and a turn dearer. Indian Corn and Beans without change. Oats and Oatmeal in good request at a slight advance.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Feb. 11..	43s 6d	34s 11d	21s 11d	29s 9d	38s 4d	36s 0d
— 18..	43 11	34 11	21 11	31 10	38 6	36 3
— 25..	44 5	35 7	22 7	35 8	38 11	36 11
March 3..	44 9	36 6	22 11	32 0	39 1	37 8
— 10..	45 0	36 3	22 9	30 5	39 6	37 3
— 17..	45 2	36 5	23 1	34 10	39 7	37 7
Agg. Aver.	44 5	35 9	22 6	32 4	39 0	36 11

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Feb. 11.	Feb. 18.	Feb. 25.	March 3.	Mar. 10.	Mar. 17.
45s 2d	..	..	..	..	..	
45 0	..	..	..	..		..
44 9	..	..	..		..	..
44 5	..	..		..	..	..
43 11	..		..	..	..	..
43 6		..	..	..	..	..

BRITISH WOOLS.—LONDON, FRIDAY, March 23.

The state of this market is rather sluggish, neither buyers nor sellers being disposed to make concessions. The consequence is that transactions take place merely for present requirements and at late rates.

	s.	d.	s.	d.		s.	d.	s.	d.
South-down Hoggets..	1	8	to 1	9	Leicest. Wethers	1	5	—	—
Half-bred ditto..	1	8	—	—	Ditto Hoggs ..	1	7	—	—
Down Ewes ..	1	6	—	—	Combing Skins	1	2	to 1	6
Kent Fleeces ..	1	6	—	1 6½	Blanket ditto ..	0	6	—	10½
					Flannel Wool ..	1	2	—	1 6

COLONIAL WOOL SALES.—The fine wool series concluded on Tuesday at extreme rates, the prices having maintained an upward tendency as the sales progressed. The low wool sales were held on Wednesday and Thursday, and fully maintained the prices of the Liverpool January and February series.

COAL MARKET.—MARCH 21.

Bell's Primrose, 13s.; Chilton Hartley Steam, 15s.; Hollywell, 16s.; Tanfield Moor, 12s. 9d.; Tanfield Moor Butes, 12s. 9d.; Wylam, 16s. 6d.; Walls End Harton, 19s. 3d.; Northumberland, 17s. 6d.; Walls End Bell, 19s.; Walls End Braddyll's Hetton, 20s. 6d.; Walls End Framwellgate, 19s. 6d.; Walls End Haswell, 21s. 6d.; Walls End Lambton, 21s. 6d.; Walls End Cassop, 21s.; Walls End Heugh Hall, 19s. 6d.; Walls End South Hartlepool, 20s. 3d.; Walls End South Durham, 19s. 6d.; Walls End Trimdon Thornley, 17s. 3d.; Walls End Thorpe, 20s. 6d.—39 ships at market.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

G. CLARKE is in want of a Man who understands the management of MOSSES and FRUITS. A married man preferred.—Streatham Place Nursery, Brixton Hill, S.

WANTED, an active working Man as KITCHEN GARDENER. Wages 15s. per week.—Apply to JOHN CAVE, Market Place, Spalding.

TO GARDENERS.

WANTED, a MAN who thoroughly understands his profession to look after, keep in order, and supply with seeds and flowers the Garden and Grounds attached to the Blind School, St. George's Fields, Southwark. Persons willing to contract for the discharge of this office for one year may send in a Tender to Rev. B. G. Johns, Blind School, S., on or before March 29. The Garden may be seen by applying to Mr. Nichols at the School B. G. JOHNS, Chaplain.

SEED TRADE.

WANTED, for a large Provincial House, an UNDER CLERK (good penman). Also a JUNIOR SHOPMAN, or one who has been a few years at the business.—Address E. S. C., Messrs. Hurst & M'Mullen, Seedsmen, Leadenhall Street, London, E.C.

WANTED, A COW AND STOCKMAN, under a Bailiff, for a large Farm. Wages, 16s. a week and a house.—Apply by letter, addressed to M. P., at Mr. Laking's, 26, Half-Moon Street, Piccadilly, London, W.

WANTED IMMEDIATELY, in a gentleman's family, in Berks, a strong, active, and industrious LAD, to Milk Cows and make himself generally useful in the Stables and Garden. Wages, 6s. a week and furnished lodgings.—T. W., Hill House, Windsor.

WANTED, a steady, respectable, thoroughly good-tempered CARMAN, to drive a one horse Cart for a London Nurseryman. Wages 16s. per week, to be raised to 18s. after the second year.—Address Z., *Gardeners' Chronicle* Office, W.C., with testimonials. No application will be attended to above 40 miles from London.

WANT PLACES.—Letters to be Post Paid.

GARDENER (FOREMAN).—Understands Pines, Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants.—A. B., Mr. S. Crawley's, near the Rose and Crown, Leyton, Essex, N.E.

GARDENER (FOREMAN).—Has been nearly four years in his present situation as Under Gardener, and wishes to engage where he can gain experience. Would give a Premium if desired. A good satisfactory character.—W. G., Windmill Lane, near the Railway Bridge, Brentford, Middlesex, W.

GARDENER (HEAD).—Age 39, married; has a thorough practical knowledge of his profession. Upwards of five years' character from his present situation.—A. B. C., Mr. Perch, News Agent, Wimbledon, S.W.

GARDENER (HEAD).—Age 27, single; understands the Forcing of Vines, Peaches, Melons, Strawberries, &c. No objection to a single-handed place. Upwards of seven years' good character.—X. Y. Z., Post Office, Hoddesdon, Herts.

GARDENER (HEAD).—Age 26, single; can be highly recommended by his present employer. Two and a half years' character. No single-handed place accepted. W. S. GROVE, Hurst Lodge, Pembury, Kent.

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GARDENER (HEAD).—Age 30, married; has a thorough knowledge of his profession; understands Early and Late Forcing if required. Good character.—W. B., Grove Park, Watford, Herts

GARDENER (HEAD).—Age 33, married; practically understands his profession in all its various branches. Seven years' good character from present employer.—B. C., Post Office, Lymington, Hants.

GARDENER (HEAD).—Age 40, no incumbrance; qualified in every department, Forcing, Propagation, and Plant culture in general, as well as Kitchen Garden. References and testimonials.—D. M., 13, Pond St., Hampstead, N.W.

GARDENER (HEAD).—Middle-aged, married, two children; possesses great skill in Gardening, is a quick Accountant, and a willing and thorough good workman. Can undertake the care of Grass Land. Good character.—D. B., Post Office, Southgate, Middlesex.

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GARDENER (HEAD).—Age 28, single; a native of Scotland; thoroughly practical; understands his profession, including Forcing Fruits, Flowers, and Vegetables, the Culture of Stove and Greenhouse Plants, and management of Fruit, Flower, and Kitchen Gardens.—F. G., Mr. Forsyth's Nursery, Rectory Road, Stoke Newington, N.

GARDENER (HEAD).—Age 43, married, no incumbrance; has a practical knowledge of Forcing in all its branches, the Culture of Stove and Greenhouse Plants and Fruit, and Management of Flower and Kitchen Gardens; also Woods and Plantations. Can be well recommended.—H. H., Post Office, Leytonstone, Essex, N.E.

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GARDENER.—Age 32, married, no incumbrance; understands Kitchen and Flower Gardens, Greenhouse and Vinery; also Laying-out Gardens. Two years and nine months' good character.—C. LODGE, Highfield House, Lydney, Gloucestershire.

GARDENER to any nobleman or gentleman requiring the services of a first-class practical Gardener, who is well versed in all kinds of Early and Late Forcing, is an excellent Kitchen Garden Crosser, and well acquainted with the general management of Fruit Trees, Flower Garden, &c.—E. D., Royal Kitchen Gardens, Hampton Court, S.W.

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The Gardeners' Chronicle Newspaper.

SATURDAY, MARCH 31, 1860.

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By order of the Committee of Council on Education

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Rev. OLIVE HOLLINGWORTH ..	Turnham Green, W.
Sir WM. and Lady HOOKER ..	Kew, W.
Professor HUXLEY, F.R.S. ..	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. MARTYN.. ..	7, Bennett St., St. James's, S.W.
Dr. and Mrs. LINDLEY.. ..	Acton Green, W.
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THE LATE CHARLES BARTER.—The friends of this enthusiastic Naturalist, late Botanist to the Niger Expedition, are desirous of raising a fund to assist in the support and education of his two orphan children, a girl seven, and a boy five years of age. Both are at present entirely dependent on their grandfather, who resides at Basingstoke, Hampshire, but it is felt that many would gladly assist, if they were aware of their circumstances, particulars of which may be had of Mr. KENNEDY, Covent Garden, W.C., or Mr. MATTHEWS, Publisher of the *Gardeners' Chronicle*, 5, Upper Wellington Street, Covent Garden, W.C., both of whom will be happy to receive subscriptions in their behalf

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THE EDINBURGH REVIEW, No. CCXXVI., is published this day.
CONTENTS.
I. COMMERCIAL RELATIONS OF ENGLAND AND FRANCE
II. THE YOUTH OF MILTON.
III. EXPENSE OF PUBLIC EDUCATION.
IV. ENGLISH LOCAL NOMENCLATURE.
V. CIVIL CORRESPONDENCE OF THE DUKE OF WELLINGTON.
VI. DE BROGLIE'S CHURCH AND ROMAN EMPIRE.
VII. THE ALLEGED SHAKSPEARE FORGERIES.
VIII. DARWIN'S ORIGIN OF SPECIES.
IX. FRANCE, SAVOY, AND SWITZERLAND.
London: LONGMAN & Co. Edinburgh: A. & C. BLACK.

News of the Week.

IN the House of Commons on Friday the CHANCELLOR of the EXCHEQUER, in Committee of Ways and Means, moved his resolution for an Income-tax of 10*d.* in the pound on all schedules but schedule B, and on schedule B 5*d.* in the pound for England, and 3½*d.* in the pound for Ireland and Scotland. Sir H. WILLOUGHBY moved as an amendment that the tax be fixed at 9*d.* On a division the amendment was negatived by 187 to 132, and after some further discussion the resolution was agreed to. The resolutions imposing a stamp duty of 1*d.* on contract notes, 3*d.* on dock warrants, and other duties on delivery orders, bills, heritable bonds, and agreements, were also agreed to. On Monday Lord J. RUSSELL stated that it had been determined to abolish the legation at Florence, and to raise the legation at Turin to the rank of a first-class mission. Mr. HORSMAN called attention to the foreign policy of the Government, and especially to the annexation of Savoy. He denounced the policy of the EMPEROR OF THE FRENCH as a policy of deceit, and asserted that he had deceived HER MAJESTY'S Ministers, and had made them his tools for deceiving Parliament. Lord JOHN RUSSELL, in reply, said that there were important matters connected with the question of annexation distinct from that of Savoy. The independence of Switzerland had been guaranteed by all the great Powers of Europe, and as a part of Savoy had been declared to be neutral, HER MAJESTY'S Government intended to call upon those Powers to pronounce whether Switzerland would be safe under the Treaty which had been concluded between France and Sardinia. He admitted that the conduct of the EMPEROR OF THE FRENCH had produced great distrust both in this country and all over Europe; but he doubted whether strong resolutions or strong language on the part of the House of Commons would have produced any great effect on the ultimate issue of the question. He felt, however, that an act of annexation such as that of Savoy to France was calculated to encourage a nation so warlike as the French in calling upon their Government to commit other acts of aggression. However desirous, therefore, we might be to continue our friendly relations with the French Government, he felt that we ought not to keep ourselves apart from the other nations of Europe, but that, when future questions arose, we should be ready to act with others, and to declare, in moderate and friendly, but still firm, language, that the settlement and the peace of Europe were considerations dear to this country, and that they could not be secure if they were liable to perpetual interruption, to constant fears, to doubts and rumours, respecting the annexation of one country or the union or absorption of another; but that the Powers of Europe, if they desired to maintain peace, must respect each other's rights and limits, and endeavour to restore, and not to disturb, that commercial confidence which was the result of peace, which tended to peace, and which ultimately formed the happiness and wealth of nations. The CHANCELLOR of the EXCHEQUER moved the second reading of the Refreshment Houses and Wine Licences Bill. Mr. WYLD moved as an amendment the adjournment of the debate. After a short discussion, the House divided, when the amendment was negatived by 150 to 122. Mr. AYRTON then moved the adjournment of the House; but the CHANCELLOR of the EXCHEQUER yielded, and the debate was adjourned. On Tuesday Capt. L. VERNON moved that the compact between the Admiralty and Mr. CHURCHWARD for the conveyance of the Dover mails be fulfilled in spite of the recommendation of the Packet and Telegraphic Contracts Committee, that it be rescinded on the ground of political corruption. After a long debate the motion was negatived by 162 to 117. Mr. KINGLAKE stated that the declaration of Lord JOHN RUSSELL on the previous night in reference to the annexation of Savoy had superseded the motion of which he had given notice, and he should not ask for the interference of the House so long as HER MAJESTY'S Ministers carried out the policy which Lord J. RUSSELL had announced. On Wednesday on the motion for going into committee on Sir John TRELAWNY'S Church Rates Abolition Bill, Mr. NEWDEGATE moved as an amendment, that, in lieu of Church-rates, a charge should be established on all hereditaments in respect of which Church-rates have been paid within the last seven years; such charge to be levied with the county rate, at an uniform rate of poundage—the occupier being, in all cases, entitled to deduct the amount from his rent. After considerable discussion the amendment was negatived on a division by a majority of 173, the numbers being 222 to 49. The House then went into committee, when Sir G. GREY moved three new clauses, the first of which substituted pew rents for Church-rates. This clause was negatived without a division, and the others were withdrawn. The Bill then passed through committee. On Thursday after a debate on the maintenance of a native army in India, Mr. LINDSAY moved an address to HER MAJESTY praying her to enter into negotiations with the EMPEROR OF THE FRENCH, with the view of making a treaty for the reciprocal abrogation of all discriminating duties levied upon the vessels and their cargoes of either of the two nations in the ports of the other, and for procuring such alterations in the navigation laws of France as might tend to facilitate the commercial intercourse and strengthen the friendly relations between England and France. Mr. M. GIBSON on the part of the Government assented to the motion, which was agreed to. Mr. CARDWELL obtained leave to bring in the Government Bill to amend the law relating to the tenure and improvement of

land in Ireland. The ATTORNEY-GENERAL for Ireland obtained leave to bring in a Bill to consolidate and amend the law of landlord and tenant in Ireland; and Mr. WISE obtained a select committee to inquire into the expenditure for miscellaneous services, and to report as to the possibility of their reduction.

The *Moniteur* of yesterday published the treaty by which the KING OF SARDINIA consents to the annexation of Savoy and Nice to France, subject to the approval of the Sardinian Chambers. Prussia has replied to the French note expressing her disapproval of the annexation, and stating that as Switzerland, whose rights were reserved by Sardinia, has appealed to the great Powers, those rights must be examined and protected. It is said that Russia has proposed a congress for the settlement of the question, and that Austria, while declining to interfere in the case of Savoy, has notified to the Federal Diet her protest against the annexation of the Italian Duchies to Sardinia. A telegraphic despatch from Rome announces that a proclamation was published in that capital on Thursday, by which the POPE pronounced the major excommunication against "all actors, promoters, councillors, and supporters of the rebellion, usurpation, and invasion of the States of the Church." A despatch from Madrid announces that an armistice was concluded with the Moors on the 25th inst., and that preliminaries of peace have since been signed on terms highly advantageous to Spain.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Buckingham Palace. On Friday morning the Queen rode on horseback in the riding-house. The Prince Consort, accompanied by Prince Alfred, rode on horseback. In the afternoon the Queen held a Court, at which Baron Bentinck, the Netherlands Minister, had an audience of her Majesty. Lord John Russell also had an audience. A deputation, consisting of Lord Ashburton, the Rev. Vernon Harcourt, and Mr. Henry Thomas Hope, a Committee of the Horticultural Society, with Mr. Joseph Durham, had an interview with the Prince Consort on the subject of the memorial of the Great Exhibition of 1851. In the evening the Queen and Prince Consort, accompanied by the Princess Alice and Prince Alfred, honoured the performance at the Olympic Theatre with their presence. On Saturday morning the Queen, accompanied by the Princesses Alice and Helena, took a drive in an open carriage and four. The Prince Consort rode out on horseback, accompanied by Prince Alfred. The Duchess of Kent arrived at Buckingham Palace from Frogmore on a visit to the Queen. In the afternoon the Queen held her first Drawing-room this season in St. James's Palace. In the evening her Majesty had a dinner party. On Sunday morning the Queen and Prince Consort, the Duchess of Kent, Prince Alfred, Prince Arthur, the Princesses Alice, Helena, and Louisa attended Divine service in the private chapel of Buckingham Palace; the Dean of Windsor officiated. On Monday morning the Prince Consort, accompanied by Prince Alfred, rode on horseback, and visited the Duke of Cambridge at St. James's Palace. In the afternoon the Queen held a Court and Privy Council at Buckingham Palace. At the Court the Hon. G. S. Stafford Jerningham, Her Majesty's Minister to Sweden, had an audience of her Majesty. Viscount Palmerston, Lord John Russell, and Viscount Sydney had audiences of her Majesty. In the evening the Queen and Prince Consort, accompanied by Prince Alfred and Princess Helena, honoured the performance at the Haymarket Theatre with their presence. On Tuesday morning the Prince Consort, accompanied by Prince Alfred, rode on horseback. Prince Leopold and the Princesses Helena and Louisa visited the Zoological Gardens. The Duke de Nemours and the Duke de Montpensier visited the Duchess of Kent at Buckingham Palace. In the evening the Prince Consort dined at Clothworkers' Hall, in Mincing Lane. The Queen, accompanied by Prince Alfred, Prince Arthur, and the Princess Helena, honoured the performance at the Adelphi Theatre with her presence. On Wednesday morning the Queen, accompanied by Prince Leopold and the Princess Louisa, took a drive in an open carriage and four. The Prince Consort rode on horseback, accompanied by Prince Alfred. In the afternoon the Queen held a Levee in St. James's Palace. In the evening her Majesty had a dinner party. On Thursday morning the Prince Consort rode on horseback, accompanied by Prince Alfred. In the afternoon the Queen and Prince Consort, accompanied by the Princess Alice and Prince Alfred, went to Claremont and visited the Countess de Neuilly. The Duchess of Kent left Buckingham Place for Frogmore. In the evening her Majesty had a dinner party.—It is understood that the Queen, Prince Consort, and the Royal family will leave Buckingham Palace on Monday next for Windsor for the Easter holidays.

THE PRINCE OF WALES.—During the Easter vacation the Prince of Wales will pay a visit to his uncle the Duke of Saxe-Coburg, and also to his grandmother, the Dowager-Duchess of Saxe-Coburg. The Duke of Cambridge paid a visit to his Royal Highness on Tuesday, and after visiting the Gymnasium, the New Museum, Christ Church, and other objects of interest in the University, returned to town in the afternoon.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury, in Downing Street. Another Council was held on Wednesday.

MINISTERIAL APPOINTMENT.—Mr. Herman Merivale, now permanent Under-Secretary for the Colonies, has been appointed Under-Secretary for India, in the room of Sir George Clerk, appointed Governor of Bombay.

KNIGHTHOOD.—At the Levee on Wednesday the Queen conferred the honour of knighthood on Colonel Henry James, Royal Engineers, Director of the Ordnance Survey; and on Edward Shepherd Creasy, Esq., Chief Justice of Ceylon.

THE ARMY.—General the Right Hon. Lord Seaton, G.C.B., G.C.M.G., Colonel of the 2d Life Guards, has been promoted to the rank of Field Marshal.

PARLIAMENTARY MOVEMENTS.—The Berwick-upon-Tweed Election Committee have reported that Mr. D. C. Marjoribanks was duly elected; that six persons were bribed, but that it was not proved that such bribery was committed with the knowledge or consent of Mr. Marjoribanks or Mr. Hodgson; that William M'Gall in his evidence before the Committee was guilty of wilful and corrupt perjury; and that the Committee have reason to believe that bribery extensively prevailed at the last election for Berwick. The election for Roscommon took place on Monday, when the O'Connor Don was elected without opposition. The election for Norwich took place on Thursday, when Sir W. Russell and Mr. E. Warner, the Liberal candidates, were returned by large majorities over Mr. Furlonge and Mr. Lewis. The numbers at the close of the poll are said to have been as follows:—Mr. Warner, 2093; Sir W. Russell, 2057; Mr. Furlonge, 1635; Mr. Lewis, 1631. There is a vacancy for Harwich, caused by the accession of the Hon. W. F. Campbell to the House of Peers in right of his mother's barony of Stratheden. The Hon. R. T. Rowley is a candidate for the vacant seat in the Conservative interest, and Mr. D. Thompson, Mr. A. Brett, and Mr. Montagu Chambers, Q.C., are mentioned as candidates in the Liberal interest. Mr. Robartes has announced his intention to retire from the representation of East Cornwall after the passing of the Reform Bill.

AUDIT OFFICE.—A commissionership of audit has been placed at the disposal of Lord Palmerston by the death of Mr. Charles Ross; but as it is thought possible to reduce the number of commissioners, the vacancy will not be filled up.

QUEEN'S PRINTERS PATENT.—The Select Committee of the House of Commons on the Queen's Printers Patent for Printing the Bible have presented their report recommending that the patent be not renewed, and that no exclusive privilege of printing the Scriptures be allowed henceforth to exist.

Foreign.

FRANCE.—The *Moniteur* of Sunday contained an article announcing the signature of the treaty for the annexation of Savoy, and the same official organ of yesterday published the treaty itself. The following is a summary of these documents:—

"The treaty by which the King of Sardinia consents—subject to the approval of the Chambers—to the annexation of Savoy and the district of Nice to France was signed on Saturday, the 24th inst., at Turin. This annexation will be effected without any constraint on the wish of the population. The two Governments will concert the best means of obtaining a manifestation of this wish. The King has transferred the neutralised portions of Savoy with the same conditions under which he possessed them. The Emperor promises to come to an understanding on the question with the Powers who signed the treaties of Vienna of 1815 and with Switzerland. The Sardinian subjects who are natives of Savoy will enjoy for one year the privilege of claiming the maintenance of the Sardinian nationality. A mixed commission of French and Sardinian commissioners will determine the future frontiers of the two countries. A mixed commission will also determine what Savoy and Nice shall contribute to the payment of the public debt of Sardinia, and to the execution of several public contracts. The Sardinian Government reserves to itself to finish alone the boring of Mount Cenis. The treaty will become executive for Sardinia after receiving the sanction of Parliament."

The *Moniteur* also announces that the Senate has rejected, by passing to the order of the day and by 116 to 16 votes, several petitions requesting the intervention of the Senate in favour of the temporal power of the Pope. The *Constitutionnel* publishes an article by M. Grandguillot on the satisfactory attitude of Europe towards France in reference to the question of Savoy. "Until now," it says, "two Powers only have protested—namely, Switzerland at Paris, and England at Turin, which gives to the act almost a friendly character. France will reply to this protest in the same manner as Austria did when France protested against the annexation of Cracow—viz., by simply acknowledging the receipt of the protest." M. Grandguillot further endeavours to prove that the interests of France and Piedmont are alone concerned in the question of Savoy and Nice. In a subsequent article M. Grandguillot endeavours to prove that the counsels of England at Turin necessitated the annexation. Two companies of the 30th Regiment entered Chambery on Wednesday morning, and were received with enthusiastic acclamations for France and the Emperor. The *Patrie* states that all the French regiments in returning from Italy will stop successively at Chambery and Nice, but that a military occupation will only take place when the necessary formalities of the treaty have been fulfilled. The districts of Chablais and Faucigny will provisionally receive no garrison. All the Municipalities were about to vote an address of adhesion to the annexation. The Paris papers contain the following:—In Pont de Beauvoisin, Savoy, the election of a deputy for the Sardinian Chambers has resulted as follows.—Total number of voters, 218; for Napoleon, 214. At Nice also the elections of representatives to the Sardinian Parliament have had no result, the number of voters being insufficient. General Garibaldi only obtained 400 votes. General Dufour, who has arrived in Paris on a special mission from Switzerland, has had an interview with the Emperor, and it is confidently stated that he expressed himself satisfied with the assurances which his Majesty offered him, to the effect that he is disposed to give the most solemn guarantees to Switzerland and Europe, while still retaining Chablais and Faucigny. The French squadron which has been revictualling at Toulon received orders to be ready to sail on Saturday. A French frigate has already arrived off Nice, and several regiments were expected on Monday. The inhabitants of Nice are said to be signing a petition against the representatives of the Municipality. It is rumoured that the Emperor's architect will shortly proceed to Nice for the purpose of selecting a site for the erection of a palace. It is thought not improbable that Nice will replace Biarritz as a sea-bathing place for the Emperor and Empress. The *Pays* contains an article, expressing regret on account of the angry words pronounced on Monday by Lord John Russell. The same paper gives a denial to the rumour that the Pope and the King of Naples have quitted their capitals. Baron Gros has reported himself ready to embark for China by the 12th of April. Lord Elgin will accompany his Excellency.

SPAIN AND MOROCCO.—Accounts from Madrid state that as the Moors would only consent to pecuniary sacrifices as the conditions of peace, the military operations were resumed on the 23d inst. The Moors awaited the Spaniards in a position difficult of access. A battle took place in which the Spaniards gained a complete victory, though they lost as many as 1267 men killed and wounded. The Moors took to flight precipitately, breaking up their encampment, in order to prevent its capture by the Spanish. On the 25th an armistice was concluded, and preliminaries of peace have since been signed on the following conditions:—

"Morocco cedes to Spain the whole territory from the sea to the hollow road of Anghera, and also a certain portion of territory at Santa Cruz. The convention of 1859, referring to the Melilla, Penon, and Albucenas, is ratified. An indemnity of twenty millions of piastres is to be paid to Spain. Tetuan will be kept by Spain until this payment is effected. A treaty of commerce is also to be concluded guaranteeing privileges to Spain as to the most favoured nation. A representative of Spain and a missionary establishment to be permitted at Fez. The treaty of peace is to be signed at Tetuan before April 25. All hostilities to cease. The Spanish army, however, to be allowed to chastise the Kabyles."

FRANKFORT.—The Legislative body of the free town of Frankfort has unanimously resolved to give its representative the following instructions:—viz., he may propose at the Federal Diet that a Central Power in Germany, increased by a national representation, should be established. The motive given for this resolution is the threatening attitude assumed by France.

ELECTORAL HESSE.—At a Committee meeting of the Federal Diet on Saturday the question of re-establishing the constitution of Electoral Hesse was taken into consideration. The proposal of the majority of the commission on this question was agreed to by 12 votes, the minor States voting collectively, as is usual in committee sittings of the Diet. Electoral Hesse abstained from voting. Luxembourg declared she would neither vote for the proposal of the majority of the Commission, nor join in the opinion of the minority. The free towns voted that the question be referred back to the Commission for further deliberation. Prussia and another vote declared in favour of the opinion expressed by the minority of the Commission. Prussia, besides, expressly declined to be bound by this resolution of the Federal Diet. On the proposal of Austria, acting as President, the Federal Diet then declared that all Federal Governments are obliged to recognise the resolution of the Diet. Prussia has since repeated her reserve, and the Federal Diet, in reply, has referred to its resolutions on the question.

SWITZERLAND.—The negotiations at Paris having failed, a popular assembly took place on Friday at Geneva, at which 3000 persons resolved to send addresses to the Federal Council and to the population of Upper Savoy. The Grand Council of Berne has since informed the Federal Council that it is ready to make every sacrifice to maintain the rights of Switzerland. The Helvetic Society, the members of which are very numerous, have also resolved to send a deputation to the President of the Federal Council, to express their protest against the annexation of Savoy to France, and to demand prompt, energetic, and military demonstrations in order to support the protest. It is stated that the Federal Council has re-

ceived two verbal communications from France and Sardinia, in which Sardinia has informed Switzerland that the latter Power must negotiate with France relative to the annexation of Savoy, and France has declared that should Switzerland take military measures, she would be obliged to do the same. It is asserted that France has proposed to submit the stipulations in the treaties of 1815, relative to the neutralised provinces, to a Congress of the Powers, to which, according to these treaties, Switzerland will be also admitted. Another note was received on Tuesday from M. Thouvenel tending to tranquillise Switzerland by citing the reservations in favour of the latter country which are contained in the treaty of cession of Savoy and Nice. The Federal Council, however, has directed the Ministers of Switzerland at Paris and Turin to repeat the protest against any occupation of the neutralised provinces. The following is a summary of the report addressed by the Federal Council to the Federal Assembly, which has appointed a commission of 23 members to examine and report upon it:—

"The interests, the safety, independence, and neutrality of Switzerland demand that her rights in reference to the neutralised provinces of Savoy should not be encroached upon by their annexation to France. Even admitting that the neutrality of these provinces should continue, their annexation would still be against the treaties, and would threaten the rights and interests of Switzerland. The expectation of the good offices of the Powers concerning these questions reassures Switzerland, on condition that no occupation of those provinces by France previously takes place, and that the *status quo* shall be respected. The following are, therefore, the proposals made by the Federal Council:—That the Assembly may ratify the resolution which have been adopted, and grant the necessary credits. The Assembly should request the Council to continue to protect energetically the rights and interests of Switzerland in regard to the neutralised provinces of Savoy, and to obtain that the *status quo* shall be respected. It may also authorise the President to take all necessary measures to that effect. The Federal Assembly will be again convoked in the event of its becoming necessary to call out the troops, or should other grave circumstances require it."

Prussia.—The answer of Prussia to M. Thouvenel's note in reference to the annexation of Savoy has been despatched to Paris. It is said to disapprove of the annexation of Savoy, and to contain a distinct reservation of the rights, and to energetically support the demands, of Switzerland. It says that Switzerland, whose rights were reserved by Sardinia, has made an appeal to the Powers, and that those rights must be examined and protected. Prussia concludes by announcing that she will treat the question of Switzerland in a separate note. It is expected that England and Prussia will take steps in concert especially for the maintenance of the rights of Switzerland. The report that Prussia is about to place a corps of observation on the Rhine is said to be without foundation. The Chamber of Nobles of Prussia on Saturday, after having discussed petitions against the admission of Jewish landowners to the States of the Circles, adopted by 55 votes to 41 a resolution on the matter hostile to the Government. The Chamber of Representatives on the same day adopted a Bill for fixing new electoral districts.

Austria.—The Cabinet of Vienna has notified to the Federal Diet the protest of Austria against the annexation of the Italian Duchies to Sardinia.—Accounts from Vienna state that the new Austrian Loan amounts to 200,000,000 florins. The current interest is fixed at 5 per cent. The bonds are of 500 florins each, and are to be repaid within 57 years, by lottery drawings, to take place every six months. The highest prize in the lottery will be 300,000 florins, the lowest 600 florins. The issuing price of the loan will be 100 florins. The bonds of the national loan will be accepted by the Government at par as payment of one-fifth of the amount subscribed. Payment is to be made in 10 instalments, the last of which is fixed for the 10th of October, 1861. The subscription list is to be kept open till the 7th of April.—The Appeal Court of Vienna has confirmed the decision of an inferior tribunal that M. Richter, director of the Crédit Mobilier, shall be brought to trial on the charge of bribing a public functionary to commit an abuse of power. From this it would appear that money was given to General Eynatten to sign for supplies that were never sent in.

Italy.—The Grand Duke of Tuscany is preparing a protest, to be addressed to the Powers of Europe, showing why the annexation of Tuscany to Piedmont is a flagrant violation of the treaties guaranteed by Europe. He is also preparing a manifesto to the people of Tuscany. The Duchess Regent of Parma, who resides in Zurich, has addressed herself to the Queen of Spain, in her character of chief of the Spanish Bourbons, requesting her Majesty to support before the Great Powers her protest against the annexation of the Duchies of Parma and Piacenza to Piedmont. The Duke of Modena has returned to Vienna from Italy, whither he had gone to inspect his troops in the neighbourhood of Mantua, but now removed to healthier quarters at Bassano. Accounts from Turin state that a proclamation of the King to the people of Central Italy has been published, of which the following is a summary:—

"Your wishes are satisfied. You are united under one monarchy, a reward well merited by your unity and perseverance. It is however necessary to continue the virtues of which you have given such an admirable example to the world. Above all things persevere in the firm resolution to make such sacrifices as are indispensable for accomplishing and establishing great enterprises. We are now bound by an indissoluble pact of honour to our common country and to universal civilisation. I have exposed my life for the independence of Italy, and I have given my people an example of loyalty. I now claim from my new peoples the same affection as from my former subjects. I desire to strengthen the Italians in the unanimity of their resolution to resist aggression, and to prepare continually for better things."

The result of the election of representatives to the Parliament is very favourable to the Liberal cause. At Florence the Chevalier Buoncompagni, Baron Ricasoli, Count Cavour, and Signor Peruzzi have been elected; at Bologna Count Cavour, the Marquis Pepoli, Signori Berti, Pichol, and Oudinot; at Turin Count Cavour, Baron Ricasoli, and Signor Farini; at Milan Count Cavour and Signori Farini and Cattaneo; at Genoa Count Cavour. The concourse of electors was everywhere very great. The official *Gazette* publishes various decrees relative to the administration of the province of Tuscany. Prince Carignan is appointed Lord-Lieutenant of the King and Commander of the Naval and Military Forces, with power to exercise, in the name of the King, the right of pardon, &c. The Administrative centre will remain provisionally at Florence. Baron Ricasoli is appointed Governor-General. The Tuscan Ministry is dissolved, and the army of Tuscany will be incorporated with the Sardinian army. Although the new frontiers of France and Piedmont are to be fixed by a mixed commission, the two Governments have agreed to the following line:—In the north the boundary which separates Savoy from Switzerland is to be preserved. In the east the frontier will extend to the summit of Mont Cenis, the western slopes of which, as well as Fort Bramant (which is the key to that mountain pass), will be included in the French Empire. The line will follow the chain of the Alps to Monte Viso and to the defile of the Tenda, and the course of the river Roya, the mouth of which is at Ventimiglia, a strongly fortified port in the Mediterranean. A squadron, with Sardinian troops, has left Genoa for Tuscany. Prince Carignan has arrived at Leghorn, and has met with an enthusiastic reception. His Royal Highness was expected to enter Florence on Thursday evening, where a splendid reception awaited him.—Accounts from Rome of the 24th inst. state that a Consistory was held on the previous day. The allocution which was delivered by the Pope on the occasion was kept secret till the 29th, when a proclamation, dated March 26, was posted up in five different quarters of Rome, by which the Pope hurls the major excommunication, and other ecclesiastical penalties, against all actors, promoters, coadjutors, councillors, and supporters of the rebellion, usurpation, and invasion, of the States of the Church. On Tuesday last the Papal Government forwarded to the whole of the diplomatic corps a protest against the annexation of the legations to Sardinia. The Pope has appointed General Lamoriciere, the well-known general of the French Republic, to be his Minister of War, and has conferred a Cardinal's hat on M. Dupanloup, Bishop of Orleans. On the 19th a party of students of the Roman University intoned a *Te Deum* in their church, in honour of the birthday of General Garibaldi, and of the annexation of Central Italy to Piedmont. In the evening an enormous crowd assembled on the Corso, consisting partly of politicians and partly of persons usually promenading there on Sundays. The gendarmes arrested several. The crowd hissed, and then insulted the police. The gendarmes unsheathed their weapons and dispersed the crowd. It is said that 40 persons, among them several spectators, including an English clergyman, two French officers, and three French soldiers, were wounded. The crowd shouted, "Garibaldi for ever." Mounted Pontifical gendarmes succeeded at last in dispersing them, and the city was afterwards traversed by French patrols. Five merchants belonging to the highest class of manufacturers, both as to wealth and social position, all connected with the most important industrial enterprises of the country, Signori Silvestrelli, Titoni, Ferri, Mastricola, and Sant' Angeli, were subsequently ordered to leave the Papal States within 24 hours without trial or reason given. The prevalent belief at Rome is that an arrangement is in progress under which the French troops are to quit Rome, which will henceforth be protected by the Pontifical troops, while Neapolitan forces will be authorised to enter the Marches. The Papal Carabineers have taken off the escocheon of the King of Sardinia from the house of the Sardinian Vice-Consul at Pesaro.

Turkey and Servia. Accounts from Constantinople of the 26th inst. state that the Sublime Porte, anxious for the welfare of the Servians, has appointed Michael Obrenovitsch successor to Prince Milosch.

India.—By the Calcutta mail we have accounts from that Presidency to the 24th Feb. The following are the details:—

Calcutta.—The following is an abstract of Mr. Wilson's financial statement, made to the Legislative Council on the 18th inst. He commenced by saying that the financial position, so far from being rectified, was even worse than he had expected. The statement of September, accepted in England with so much pleasure, had turned out a delusion, the deficit being underestimated by 3,000,000*l*. The expected receipts from new taxes, 775,000*l*., had never been collected. The omission of the railway account involved an undue credit of 832,000*l*. The home charges were under-estimated by 640,000*l*., and there had been errors amounting to 900,000*l*. in the military accounts of Madras and Bombay. The income of the year, therefore, amounted to 37,707,269*l*., against charges to the extent of 41,770,008*l*. These charges were reducible by the balance of railway receipts, 573,000*l*., over working expenses and guaranteed interest; but when these sums had been deducted the total Indian deficit still amounted to 3,783,109*l*. To this must be added the home expenditure, 5,507,020*l*., raising the gross deficit of 1859-60 to 9,290,129*l*. He calculated the actual deficit of the ensuing year 1860-61 at 6,500,000*l*., making the total cost of the mutinies 37,000,000*l*., or, with interest, 40,000,000*l*. sterling. It was essential, he said, for the Council to comprehend the magnitude of the danger involved in this statement, for until that was fully appreciated nothing adequate could be done. Such a deficit was wholly unknown in Indian history. The one with which Lord W. Bentinck had to deal amounted only to 14 millions, spread over five years. Even the deficit which in 1842 enabled Sir Robert Peel to introduce a new policy was only, after five years, 10 millions in all. Nor could the position be regarded altogether as exceptional, or produced solely by the fruitful scenes the country had passed through. Deficit was the normal condition of Indian finance. Out of the 26 years since 1834-35, 19 have been years of deficiency. Out of the 59 years of the present century debt has been incurred in 44, while diminutions have taken place in only 15. The opium revenue was in a permanently precarious condition, and of late production had been limited for the sake of prices till competition became possible or imminent. He therefore held that 'a great effort, involving extensive administrative reforms as well as great sacrifices, had become imperative. Never, perhaps, had there been a nobler opportunity. India had been growing rich for years. The trade had increased from thirteen millions in 1833 to sixty millions in 1859. Sales of land for arrears of rent had almost disappeared. The rate of wages had been notoriously doubled within three years. It was the direct interest of all classes to re-establish by sacrifices a sympathy between the prosperity of the people and the credit of the State. At present India was the most lightly taxed country in the world. Excluding the land-tax, which was rather a rental than an impost, the population paid head for head only 1*s*. 4*d*., while that of Great Britain paid 2*l*. 3*s*. After quoting Munoo to prove that by Hindoo religious law the Sovereign had a right to very heavy taxes, he passed on to his remedial plans. He proposed, first, some alterations in the tariff. The measure of last year had partly succeeded, the Customs' revenue having increased from 2,075,000*l*. to 3,430,000*l*.; but some of the duties were injuring trade. He gave details of the injury, and proposed to abolish the 20 per cent. scale, except upon tobacco, and replace it by a uniform 10 per cent. *ad valorem* duty on imports, liquors alone remaining liable to specific imposts. He should also remove the export duties at once from wool, hides, hemp, jute, flax, tea, and prints and maps: but, on the other hand, he wished to place a duty of 2*r*. a maund (5*l*. 10*s*. a ton) on saltpetre, raise the duty on cotton twist to 10 per cent., and introduce a new and uniform system of valuations throughout India. The general revenue result of all these changes would be a gain of 350,000*l*. a year. He then analysed the original Licence Bill, and declared that an income-tax with exemptions could not be justified. He should, therefore, introduce two Bills, one for a licence-tax, the other for an income-tax; the first would fall on traders alone. Every artisan would be called on to pay one rupee a year, every small trader four rupees, and every large trader or professional man 10 rupees. This tax would be arbitrary, and independent of income. He should then, for the purposes of the income-tax, divide society into two classes. All receiving from 2*l*. to 5*l*. a year would pay 2 per cent. per annum; all above that 4 per cent. No exemptions whatsoever would be allowed. He proceeded to notice the claims to exemption, and showed that the zemindars had been distinctly made liable at the Perpetual Settlement, and, as the nobility of the land, could not be exempted. The peasant zemindars of the North-West might, from the enormous taxes they already paid, be entitled to have their tax calculated on their real profits only, on the rough estimate of half the jumna. He condemned severely the conduct of Madras and Bombay, which, with heavy deficits and increasing expenditure, pleaded for sectional exemptions. The Government would allow simply none. Of the 4 per cent levied, one would be locally expended on public works. One more tax he should propose, being eight annas a seer (6*d*. a pound), on unmanufactured tobacco, but he had not quite decided on the mode of levying the tax; he might raise it on the land. Lastly, he pledged Government to large military reductions, hoped that the native army would never be re-created, but be superseded entirely by an armed constabulary, under the control of the civil power, and refused peremptorily to recommend a British guarantee. He could say nothing as to the produce of his taxes. He had no data, but he believed he should at least restore a financial equilibrium. He should in any case not resort to the discreditable expedient of open loans. Later in the day Mr Wilson promised to introduce a Bill for a convertible State paper currency.

Singapore.—The telegraphic communication between this place and Batavia has been restored. General Montauban and Staff landed at Singapore on the 16th Feb. under a salute.

China.—There is little news in reference to the China expedition, except that there was no chance of the force being collected at Shanghai till the middle of July, and that all the officials connected with the expedition looked forward to a campaign of at least two years. Her Majesty's ships *Imperieuse* and *Pioneer* arrived at Hong Kong on the 31st of January, and on the 12th inst. the Adventure, steam transport, arrived from Calcutta with her Majesty's 99th Regiment. All was quiet in Canton, and the health of the troops continued excellent.

Cochin China.—The French Admiral Le Page had arrived at Hong Kong from Saigon, where, on the 2d inst., he published a proclamation, declaring the city and territory of Saigon under French authority. The blockade would doubtless be removed, and a good trade was likely to be done with that section of Cochin China, where rice, &c., is largely cultivated.

United States.—A portion of the Hungarian's mails had reached Portland wet, but uninjured. The Senate had rejected the treaty with Nicaragua. A Bill for the suppression of polygamy in Utah had been introduced in the House of Representatives. The overland mail from the Pacific had reached New York. War in Rio Grande had been officially reported. There was a good prospect of an extension of the telegraph to the Pacific. Stephens and Hazlitt, who were engaged in the affair of Harper's Ferry, had been executed at Charlestown, Virginia. The theatre and Union Cotton Press in Mobile were burnt down on the 13th.

Mexico.—Three American war steamers were before Vera Cruz. Miramon on the 3d inst. was before the city with 5000 men. The Liberals had dismantled and abandoned Alvarado and blockaded the port. A conspiracy in favour of Miramon had been discovered and defeated, which would probably cause him to abandon the siege. Casvagal's men had cut off 1000 of Miramon's troops, and Miramon's communication with the capital was entirely cut off. All non-combatants had left the city. The Juarez Government had declared the expedition from Havannah piratical. It was reported that Lord John Russell had proposed to the

contending parties an armistice of several months, to enable a Mexican Congress to arrange matters.

CUBA.—It was rumoured at Havannah that the Captain-General of Cuba had tendered his resignation to the home government. The *New York Courier and Enquirer* gives prominence to a paragraph, stating, on the authority of a satisfactory source in Paris, that the French Government were advised that Spain had agreed to sell Cuba to the United States. Everything was arranged except the price, about which there was some little difference of opinion.

BRITISH COLUMBIA.—The excitement relating to the alleged invasion of British territory arose out of the fact that Lieut. McKibben, of the United States boundary survey at Semiahmoo, on British soil, by consent went over to Fort Langley, and arrested two deserters from his company. Some of the papers now assume a moderate tone, and exculpate the American officer from any blame.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Annexation of Nice.*—In answer to the Marquis of CLANRICARDE, Lord WODEHOUSE said that her Majesty's Ministers had not received any communication from the Sardinian or French Governments of the recent vote of the municipality of Nice against the cession of that town and its county by Sardinia to the French empire.—On the second reading of the *Mutiny Bill*, Lord PANMURE called attention to the present state of promotion in the army by the sale and purchase of commissions. He contended that the system now in existence had worked satisfactorily, and that it would not only be unjust to restrict the sale and purchase of commissions to the rank of major, but that the alterations contemplated by the Government would introduce the apple of discord into the army, would impose an invidious task upon the Commander-in-Chief, and would destroy that valuable regimental system which had hitherto contributed to the real success of the army.—Earl DE GREY and RIPON admitted that there were evils inherent in the present system, but expressed his opinion that they might be remedied by abolishing purchase altogether on attaining the rank of field officer. At present, in the higher appointments in the army, it was almost the invariable rule to adopt the principle of selection, and all the new regulations would do would be to render the present discretionary system imperative.—The Earl of LUCAN said the purchase system had worked satisfactorily, and had rendered the British army the finest in the world.—The Duke of SOMERSET thought it intolerable that the lives of men and the honour of the country should be intrusted to an incapable officer simply because he possessed money instead of brains, and because there was a dislike to interfere with the present system of promotion.—Earl GREY contended that it was impossible, under a system of selection, to get rid of the influences of favour and interest.—The Duke of CAMBRIDGE said he still retained the opinions he had expressed before the royal commissioners, but, whatever decision the Government might arrive at on the subject, he would do his utmost to carry it out frankly and fairly.—After some observations from Lord HARDINGE in favour of the present system, the Bill was read a second time. The *Marine Mutiny Bill* was read a second time.

MONDAY.—*Indian Finance.*—The Earl of ELLENBOROUGH called attention to the financial scheme of Mr. Wilson as Chancellor of the Indian Exchequer, and more particularly to the Income-tax recommended by him, which would press with great severity upon the army. He inquired whether her Majesty's Ministers had received any official information on the subject.—The Duke of ARGYLL said he had not yet received any information from the Secretary of State for India; and expressed his hope that their lordships would abstain from discussion on the subject untill the details of the scheme were before the House.—The Earl of DERBY asked whether it was true that the *Army Estimates* were to be withdrawn, in order that other and larger estimates might be substituted.—The Duke of NEWCASTLE said it was certainly true that the army estimates were to be withdrawn, but only with a view to their modification, not increase. The *Mutiny Bill* and the *Marine Mutiny Bill* passed through committee.

TUESDAY.—*Spain and Morocco.*—In reply to the Earl of CARNARVON, Lord WODEHOUSE said that the Government had received information that the preliminaries of peace had been signed between the Moors and the Spaniards; but upon what terms was not stated. Information had also been received that the Spanish army had returned, which showed that the forward march of the Spaniards had been stopped. The production of further papers would be inconvenient, as the negotiations for peace had only just commenced. *Annexation of Savoy.*—The Marquis of NORMANBY gave notice that he should postpone until after Easter the resolution of which he had given notice expressing an opinion on the absence of all official record of certain diplomatic communications relating to the intentions of the French Government as to the cession of Savoy and Nice.—The *Mutiny Bills* were read a third time and passed.—**The *Consolidated Fund* (850,000*l.*) *Bill* was read a second time.**

THURSDAY.—The *Bill for Improving the Dwellings of the Labouring Classes in Ireland* passed through committee.—The *Marriage (Extra Parochial Places) Bill* was read a second time.—In reply to the Earl of CARNAVON, Earl DE GREY and RIPON said that it had been decided to exempt the *Yeomanry Cavalry* from the payment of duty on their horses.—The Earl of ELLENBOROUGH called attention to Mr. Wilson's *Financial Scheme for India*, and said that though some advantage might accrue from it, he feared that the imposition of an income-tax was not likely to be satisfactory, especially as there was no machinery in India for collecting it.—The Duke of ARGYLL said that the official despatches would be produced as soon as possible, so that the whole matter might be brought under the consideration of their lordships. Mr. Wilson was most anxious to promote harmony in India, but how were they to provide for a deficiency of 9,000,000*l.* without opening some new source of revenue?

FRIDAY.—*The China Expedition.*—Earl GREY moved for an estimate, as far as it could be made out, of the probable cost of the expedition to China, up to the close of the financial year 1860-61, including the pay and supplies of her Majesty's naval and land forces, and all charges for freight, transport, military stores, and coals. He complained that the expedition had been undertaken without consulting Parliament, and that the treaty would be dearly purchased at a cost of five or six millions sterling.—The Duke of SOMERSET said it was the duty of the Admiralty to send out forces after the alarming reports received last year.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*Savoy and Nice.*—Lord J. RUSSELL stated, in answer to Mr. STIRLING, that he could not consent to lay upon the table of the House any portion of his private correspondence with Earl Cowley on the subject of the annexation. He had received only that morning an appeal from Switzerland upon the subject, which, however, he could not produce, as negotiations were still pending.—Mr. DISRAELI said the House was quite willing to extend its forbearance to the Government so long as negotiations were pending, but he protested against a system by which the foreign policy of the country was conducted through the medium of private letters, of which no record remained in the Foreign Office, although those letters were referred to in public despatches.—Lord PALMERSTON defended the conduct of Lord John Russell, and said that the letters referred to by Mr. Disraeli were confidential communications, which it was his duty to write, and the contents of which it was equally his duty to keep secret.—Mr. HORSMAN said that an expression of opinion on the part of the House would have probably caused France to hesitate in her views upon Savoy.—Mr. GLADSTONE in reply asked if the House had not already expressed its opinion in repeated discussions, very often in stronger language than was consistent with our relations with foreign Powers. *Indian Affairs.*—Sir C. WOOD said, in reply to Col. SYKES, that there was no foundation for the report that the native regular army of India was to be abolished. *Spain and Morocco.*—In reply to Colonel DUNNE, Lord J. RUSSELL said that the Spanish Government had agreed that any occupation of Tangier during the present war with Morocco should not lead to the permanent annexation of that city, and that he had no reason to doubt their good faith in the matter. *Income Tax.*—The House went into committee of ways and means, when the CHANCELLOR of the EXCHEQUER moved a resolution that there be charged for one year, commencing on the 6th day of April, 1860, upon any assessment on the annual value of property, profits, or gains, the rate of 10*d.* in the 1*l.*, and on the occupation of lands, tenements, hereditaments, and heritages, the rate or duty of 5*d.* in the 1*l.* in England, and of 3½*d.* in the 1*l.* in Scotland and Ireland.—Mr. W. MARTIN gave a qualified support to the resolution, on the understanding that the tax was to be imposed for one year only.—Sir C. NAPIER warned the committee against indulging in the delusive hope that the cost of the navy would be less next year than this. He believed, on the contrary, that the expenditure would be far greater, because it might become necessary to substitute an iron for a wooden navy.—Sir S. NORTHCOTE expressed his disapproval of the practice which had been adopted by the Chancellor of the Exchequer of obtaining votes in supply before providing ways and means.—Sir H. WILLOUGHBY moved as an amendment that the income-tax be reduced from 10*d.* to 9*d.* in the pound. The tax was in his opinion, unjust, unequal, and odious, and it was the duty of those who proposed it to make out a fair case for its increase. He saw no reason why a million and a half should be sacrificed on the paper duty.—The CHANCELLOR of the EXCHEQUER resisted the amendment, and said that Sir H. Willoughby proposed to forego 800,000*l.* or 900,000*l.* per annum without suggesting any mode of meeting the large deficit which would then exist. He knew of no way in which provision could be made for the service of the year without resorting to the income-tax in the manner proposed.—Mr. VANSITTART protested against the continuance and increase of the tax at a moment when two and a-half millions of revenue were about to pour into the Treasury by the falling in of the Long Annuities.—Sir F. BARING regarded the tax as the very worst that could possibly be imposed, and therefore felt it to be his duty to support the amendment. On a division the amendment was negatived by 187 to 132. The original resolution was then agreed to. *Stamp Duties.*—Resolutions imposing the stamp duties, viz, on contract notes, 1*d.*; on dock warrants, 3*d.*; on delivery orders, 1*d.*; on extracts of registers of births, &c., 1*d.*; on notes authorising entries in a cost-book of transfers of shares, 6*d.*; also on bills of exchange, draughts, or orders; heritable bonds; agreements; agreements for leases; powers of appointment, and declarations in lieu of affidavit, were then agreed to. *Reform Bill.*—The CHANCELLOR of the EXCHEQUER said that it was intended to postpone the adjourned debate on the Reform Bill to Friday, and to take the wine duties and the report on the income-tax on Monday, in order to get the necessary Bill passed before Easter.—Lord PALMERSTON said if the Reform Bill were got through on Friday, they would go on with the Scotch and Irish Bills.. The *Endowed Schools* (*No.* 3) *Bill* was read a third time and passed

MONDAY.—*The Florence Legation.*—Lord H. LENNOX asked what steps it was intended to take with regard to the diplomatic establishment at Florence, and what change would be made in the position of the Queen's representative at Turin in consequence of the recent aggrandisement of Piedmont.—Lord J. RUSSELL replied that he had advised her Majesty to abolish the diplomatic establishment at Florence, and to raise the mission at Turin to one of the first class after the annexation of Lombardy to Piedmont. The *Consolidated Fund Bill* was read a third time and passed. *Annexation of Savoy.*—On the Report of the Committee of Ways and Means, Mr. HORSMAN called attention to the foreign policy of the country. After referring to various subjects of importance, respecting which the House had abstained from pressing for information from a desire not to embarrass the Government, he reviewed the course of transactions concerning the annexation of Savoy, and complained that the recent despatch of M. Thouvenel was still kept back. He acknowledged the prudence of the rule that when political complications arose it was right to leave the Government unfettered; but it was a different thing when an opposing Power was acting. The question of Savoy had gone through successive phases, every one of which was an act, while our Government thought they were negotiating. He vindicated the right of that assembly to freedom of speech, and he denounced the recent policy of the Emperor of the French in Italy as a policy of deceit, which had deceived the English Ministers, and made them his tools for deceiving Parliament. He had treated them with a duplicity which they had not the candour to avow, adding insult to injury and perfidy to injustice.—Lord J. RUSSELL said that the Government did not complain of the House for speaking of foreign affairs. With regard to Savoy, he had told the House what our Ambassador in France had said, and what had been said by our Minister at Turin on the subject; and the moment that he had learnt what the Emperor of the French meant by referring the question to the great Powers he had communicated it to the House. He had expressed his opinion that if there was an unanimous declaration against the annexation, it would not be persevered in. But the great Powers had made no such declaration. Austria had intimated her indifference on the matter, and Russia had said that Sardinia was free to give away her provinces if she thought proper, and France was free to accept them. He assured the House that her Majesty's Government would not be ashamed of its answer to M. Thouvenel's despatch. There were, however, important matters connected with this question distinct from that of Savoy. The independence of Switzerland had been guaranteed by the great Powers, and as a part of Savoy had been declared to be neutral it was obvious that its transfer to France was a great change in the condition of that territory, and Switzerland had applied to the great Powers to preserve its neutrality intact. This subject required, in the opinion of her Majesty's Government, that the sentiments of the Courts of Vienna, Berlin, and St. Petersburg should be ascertained, and they would be called upon to say whether the neutrality of Switzerland would be safe after this transfer. This was a negotiation which could not be carried on by that House. For these reasons, and with a view of giving more information to the House than he could at present, he had withheld the papers. With regard to the Emperor of the French, it was obvious that the course he had pursued had, as he (Lord John) predicted, already produced great distrust. Had an open bargain between France and Sardinia been declared at the beginning, he would not say what amount of indignation would have been expressed; but looking to the circumstances with which it had been attended, especially after the declaration of the Sardinian Government that they would neither sell, exchange, nor surrender that territory, the course that had been pursued had produced great distrust in this country, and he believed it would produce great distrust all over Europe. It had been declared, from the beginning of these discussions, although strong language might have been used in Parliament on the subject, that there was no intention to go to war for Savoy. Now, if there had been entire liberty to the Government to negotiate on the subject—although certainly they would not have threatened war—although they would still less have pledged the Government and the country to go to war, still it was different not saying anything on the subject, and declaring from the commencement of the negotiations that whatever may be the issue we would not go to war. "Sir," said his lordship, in conclusion, "my opinion, as I declared it in July and January, I have no objection now to repeat—that such an act as the annexation of Savoy is one that will lead a nation so warlike as the French to call upon its Government from time to time to commit other acts of aggression; and, therefore, I do feel that, however we may wish to live on the most friendly terms with the French Government—and certainly I do wish to live on the most friendly terms with that Government—we ought not to keep ourselves apart from the other nations of Europe; but that, when future questions may arise—as future questions may arise—we should be ready to act with others and to declare, always in the most moderate and friendly terms, but still firmly, that the settlement of Europe, the peace of Europe is a matter dear to this country, and that settlement and that peace cannot be assured if it is liable to perpetual interruption—to constant fears, to doubts and rumours with respect to the annexation of this one country, or the union and connection of that other; but that the Powers of Europe, if they wish to maintain that peace, must respect each other's rights, must respect each other's limits, and, above all, restore and not disturb that commercial confidence which is the result of peace, which tends to peace, and which ultimately forms the happiness of nations."—Lord JOHN MANNERS said he had heard the high-spirited and statesmanlike speech of the noble lord with much pleasure, as he regarded it as an augury of the return of this country to those alliances which should never have been disturbed.—Mr. BRIGHT said that those who were so anxious to introduce this question had failed in showing what interest this country had in it. Sardinia, by the cession of a province politically worthless, had paid France for her services during the late war, which was better for this country than a perpetual alliance between the two nations. It was admitted that France had acted throughout with perfect good faith, and England herself had urged forward that state of things which rendered the cession of Savoy inevitable. He trusted that England would continue to adopt a policy of non-intervention, and that under no circumstances short of peril to the national honour and independence would the advisers of the Crown be induced to commit the country to a course which might plunge it into the horrors of war.—Lord C. HAMILTON protested against Mr. Bright's doctrines on political grounds.—Mr. KINGLAKE expressed his satisfaction at the concluding statement of Lord J. Russell.—A lengthy and discursive debate ensued in relation to the *Financial Scheme* of the Government, and more especially with reference to the income-tax and its bearing upon direct and indirect taxation.—Mr. DISRAELI expressed his disapprobation of the policy of the Chancellor of the Exchequer, which, in connection with the approaching transfer of political power to the masses, would have the inevitable tendency of substituting direct for indirect taxation. The report was ultimately agreed to.—The CHANCELLOR of the EXCHEQUER then moved the second reading of *the Refreshment Houses and Wine Licensing Bill.* He said that he proposed the measure, not so much on fiscal as on moral and social grounds. Nothing could be more anomalous than the present law. It allowed 63,000 to sell spirits, but out of these not more than 28,000 had the right of selling wine. The consequence of the limitation of that right was that adulterated compounds of the most abominable kind were sold instead of wine. There was no efficient or proper control, and the most immoral acts were practised in houses not licensed to sell wine. While nature joined eating and drinking, the law separated them. You could eat where you could not drink, and you could drink where you could not eat. People were, in consequence, driven perforce to places of which the chief business was the sale of drink. Moreover, it was shown by experience that no nation which drank good wine was a drunken nation. Against all these evils his Bill provided a remedy. By extending the privilege of selling wine to eating-houses, it established places of refreshment where the sale of drink was not the only business, and where good wine would be sold. The Bill further provided a system of most efficient control, very stringent powers being given to the magistrates in regard to the intervention of the police, the renewal of licenses, and penalties. He confidently expected a great increase of sobriety from his measure, and believed that, apart from its fiscal merits, it would prove of the utmost benefit in its social and moral bearing.—Mr. WYLD moved the adjournment of the debate.—Mr. AYRTON seconded the motion and argued that, as this was a taxing Bill, there should be a resolution in committee, which would afford an opportunity of discussing its fiscal merits.—The CHANCELLOR of the EXCHEQUER denied that it was a taxing Bill. After some discussion the House divided, when the motion for adjourning the debate was negatived by 150 to 122.—Mr. GLADSTONE then said that he had no wish to prevent the House from expressing its opinion, and proposed to take the debate on Thursday at 12. This proposal to have morning sittings before Easter excited an angry discussion, and the Opposition protested against the mismanagement of the Government which had thrown the business of the country into such a state as to induce so unprecedented and, as Mr. DISRAELI called it, so unconstitutional a demand.—Ultimately Lord PALMERSTON agreed that the debate should be adjourned to Monday.—The House then went into committee on the *Customs Acts*, when certain resolutions were agreed to.

TUESDAY.—*Annexation of Savoy.*—Mr. COCHRANE asked Mr. Kinglake when he would bring forward his motion respecting the annexation of Savoy and Nice.—Mr. KINGLAKE said the statement made by Lord J. Russell on the preceding night had superseded the motion of which he had given notice, and he should not feel it to be his duty to ask for the interference of the House so long as he continued to believe that her Majesty's Ministers were faithfully labouring to carry out the policy they had announced. *The Churchward Contract.*—Captain VERNON called attention to the report of the Packet and Telegraphic Contracts Committee, and moved a resolution, "That the contract entered into on the 26th of April, 1859, between the Admiralty and Joseph George Churchward ought to be fulfilled." He contended that the report of the committee had exonerated Mr. Churchward and the late Government from any corrupt motive in relation to it, and if the contract were to be rescinded, not only would an enormous injury be inflicted upon a defenceless individual, but confidence would be shaken in the Administration in its dealings with the public if it were known that they allowed political feeling to interfere with mercantile transactions.—Mr.

Vansittart seconded the motion.—Sir F. Baring defended the committee which had recommended the rescinding of the contract, and assured the House that he had not arrived at that conclusion without protracted and anxious consideration. The contract was neither a wise nor a good one, and there appeared to be no doubt in the minds of the committee that Mr. Churchward had used his political influence with the view of obtaining the renewal of his engagement with the Government.—Sir S. Northcote defended the contract, and said that the late Government had consented to renew it because that they were assured that Mr. Churchward intended to improve the postal service between England and France, and that it was for the interest of the public that he should be afforded facilities for so doing.—Mr. Laing said the question was narrowed to a very simple issue. If the House believed the evidence of Captain Carnegie, they could arrive at no other conclusion than that Mr. Churchward had made a corrupt use of his influence in Dover to bribe the Government to renew his contract.—Mr. Malins supported the resolution, and declared that the recommendation of the select committee to rescind the contract was indefensible upon either moral, political, or commercial grounds.—The Solicitor-General, Lord Paget, and Mr. Bouverie supported the report of the committee; Lord Lovaine, Sir F. Kelly, and Mr. Whiteside opposed it.—The Chancellor of the Exchequer expressed his opinion that the House ought not, by consenting to the motion, to pass a vote of censure upon the committee to whom the matter had been referred. In his opinion it had been clearly proved that the conduct of Mr. Churchward showed an intention to corrupt the Government in order to have his contract renewed.—Sir J. Pakington vindicated his own conduct in reference to the matter, and solemnly denied that he had the slightest knowledge or suspicion of any impropriety on the part of Mr. Churchward. With regard to his private secretary, Mr. Murray, he confessed that he was deeply pained at the unjust censure which had been cast upon that gentleman by the committee; for he felt that he was altogether blameless of the accusation of corruption made against him. Mr. Murray however regarded the censure of the committee with as much indifference as he (Sir John) would have done had the committee presumed to censure him.—Sir F. Baring said he was not of opinion that Mr Murray had been a party to corruption, though he considered that he had been guilty of great impropriety in mixing up a contract and an election at the same time.—Mr. Hope considered the late Government free of all blame in reference to the Churchward contract. The House divided, when the motion was negatived by 162 to 117.—Mr. Pigott obtained leave to bring in a Bill to improve the position of *Medical Officers*, and to insure more efficient medical relief to the poorer classes. The *Herring Fisheries (Scotland) Bill*, and the *Benefit Societies Rules Amendment Bill* were read a second time. The report on the *Customs Acts* was brought up and agreed to. The *Customs Bill* went through committee. The *Income Tax Bill* was read a second time.

Wednesday.—*Church-Rates.*—After the presentation of a vast number of petitions on the subject, Sir J. Trelawny moved the order of the day, that the House do resolve itself into a Committee upon the Church rates' Abolition Bill.—Mr. Packe opposed the Bill, and taunted Lord Palmerston and Lord John Russell as converts to abolition.—Mr. Newdegate moved, as an amendment, that "the House resolve itself into Committee to consider the propriety of establishing, in lieu of church-rates, thenceforth to be abolished, a charge on all hereditaments in respect of the occupancy of which church-rates have been paid within the last seven years, to be levied with the county rate at a uniform rate of poundage, the occupier being entitled to deduct the amount of the charge levied on his occupation." He insisted that church-rates were a charge upon property, and by proposing to assess owners instead of occupiers he had, he said, followed a principle adopted by the House of Lords.—Mr. Cross seconded the motion, and urged that the House could not with justice to the Church of England abolish church-rates without finding a substitute.—Mr. Horsman expressed his opinion that the Government ought to have dealt with a question of this magnitude, and not have left it in the hands of an independent member.—Sir J. Trelawny said he had from the beginning urged the Government to deal with this question, but their measures would not have settled the question any more than Mr. Newdegate's proposition, his objections to which he stated.—Mr. Henley and Mr. Philipps supported the amendment, and Lord Henley opposed it.—Sir S. M. Peto, representing the Dissenters, said that nothing but unconditional abolition would satisfy them, although they were not desirous of taking away from the Church a single shilling which rightly belonged to it.—Mr. Watlington said the Bill would give a relief and an advantage to the few by inflicting an injustice upon the many. He could not, however, support the amendment.—Mr. Evans, though not wedded to any particular measure, supported the Bill, desiring that this vexatious and annoying question, which kept alive an agitation injurious to the country, should be settled.—Lord J. Manners was not disposed to support any of the amendments of which notice had been given for committee. He thought that the wisest course would be to send the Bill to the House of Lords as they found it.—Mr. Mellor and Mr. Walter supported the Bill, Mr. A. Mills supported the amendment.—After a few words from Admiral Walcott, the House divided, when the amendment was negatived by 222 to 49. The House then went into Committee upon the Bill, the clauses of which having been agreed to, Sir G. Grey moved three new clauses, authorising the charging of appropriated pews with rents, to be applied to the repair of the fabric of the church, and to other purposes to which church-rates would have been applicable. The proposal encountered a very strong opposition from Mr. Estcourt, Mr. Walpole, Lord J. Manners, Mr. Horsman, and other members, and the first of the clauses having been negatived without a division, the other two were withdrawn. In committee of supply a vote of a million and a half was taken on account of the *Army Estimates*. The *Income Tax Bill* passed through committee. The *Stamp Duties Bill* was read a second time.

Thursday.—*Indian Army.*—Colonel Sykes moved for the production of the report of the Military Committee of the Council of India and other documents relating to the reorganisation of the Indian army, and expressed a strong opinion that it was absolutely necessary to maintain a local European force at the disposal of the Governor and Council of India, altogether independent of the Secretary for War in this country.—Mr. Buxton seconded the motion.—Sir C. Wood said that the Government had not arrived at any final decision on the subject, although their opinions had undergone some change in consequence of recent circumstances.—Mr. Bright thought that the native army should be maintained and objected to increase the patronage of the Horse Guards.—Sir H. Willoughby hoped that the Government would pause before they consented to substitute an European for a native force.—Lord A. Tempest also approved the native force.—Mr. A. Mills and other members deprecated any further delay in the settlement of the question.—Lord Palmerston said that the question was one which not only affected the state of India, and military men in India, but involved imperial considerations of the utmost magnitude. He hoped, as the Government had not yet decided on what course it would be their duty to recommend to Parliament, that Colonel Sykes would not press his motion. The motion was ultimately negatived without a division. *British Shipping.*—Mr. Lindsay moved an address to her Majesty, praying her to enter into negotiations with the Emperor of the French with the view of making a treaty for the reciprocal abrogation of all discriminating duties levied upon the vessels, and their cargoes, of either of the two nations in the ports of the other; and for procuring such alterations in the navigation laws of France as may tend to facilitate the commercial intercourse, and strengthen the friendly relations, between England and France. He characterised the protectionist policy of France as ungenerous towards the people of that country and unjust to the British shipowner, and urged upon the House the desirability of making representations to the Government of France to induce it to abolish all differential duties on goods coming from our colonies to France in British ships.—Mr. Horsfall seconded the motion.—Mr. M. Gibson, on the part of the Government, agreed to the motion, and said that they would, at a fitting opportunity, use their utmost endeavours to effect the object in view. With regard to the indirect trade with France, he trusted that country would be induced to give the shipping of England similar facilities to those which we had extended to hers, and which had been conceded to us by all other countries except Spain and Portugal. After some discussion the motion was agreed to.—Mr. Cardwell then moved for leave to bring in a Bill to amend the law relating to the *Tenure and Improvement of Land in Ireland*. He proposed, he said, to deal with the land in three categories; first, lands in the hands of the landlord; second, lands in the hands of the tenant protected by lease; and third, lands in the hands of the tenant who had no lease. He then proceeded to explain in detail the provisions it was proposed to apply to each of these conditions. These proposals were in effect that limited owners (tenants for life) might, on giving three months' notice to the successor, obtain from the chairmen of counties a charging order, under which the improvements might be effected, and the cost charged as an annuity for a given number of years, at the rate of 7*l.* 2*s.* per cent. It was also proposed that improvement leases of 40 years should be granted, subject to the conditions of immediate possession, without fine, and certain covenants to secure the *bonâ fide* nature of the improvements. After full consideration, the Government had resolved not to recommend the principle of retrospective compensation. The Bill would be prospective only, and with respect to prospective improvements, he believed it was absolutely necessary that the landlord should have a right to object; but he thought the improving tenant might be assured of a certainty of compensation by a cheap and simple process, the machinery of which he explained.—Lord Fermoy, The O'Donoghue, Mr. Maguire, Mr. Monsell, and other Irish members stated objections to the Bill; Mr. Longfield, Mr. Malins, and Mr. Deasy supported it. After a desultory discussion leave was given to introduce the Bill.—Mr. Deasy obtained leave to bring in a Bill to consolidate and amend the law of *Landlord and Tenant in Ireland*; and Mr. P. Urquhart had leave to introduce a Bill to amend the *Law of Emblements in Ireland*.—Mr. Horsfall moved the second reading of the *Pawnbrokers' Act Amendment Bill*.—Mr James moved to defer the second reading for six months.—The second reading of the Bill was supported by Mr. Mellor, and was carried on a division by 178 to 32.—On the order for considering the *Income-tax Bill*, as amended, a desultory conversation arose as to the course of public business, and Colonel Dunne moved the adjournment of the debate.—The Chancellor of the Exchequer said that if the House would consent to take the present stage *pro formâ* the third reading might be taken as the first order on Friday. A division was then called for, upon which the Government gave way, and the adjournment of the debate was agreed to. The *Stamp Duties Bill* passed through committee after much discussion.—On the motion of Mr. Wise, a select committee was appointed to inquire into the *Expenditure for Miscellaneous Services*, and to report to the House whether any reduction can be effected in that branch of the public expenditure.

Friday.—*The Reform Bill.*—Sir G. C. Lewis stated that it was not the intention of the Government to propose the resumption of the adjourned debate on the Reform Bill that evening, but to postpone it until after Easter. *San Juan.*—In answer to Mr. Hadfield, Lord J. Russell said that communications were going on with the American Government with reference to the San Juan question. *Electoral Corruption at Wakefield.*—Mr. E. Ellice asked what were the intentions of Government with reference to the report of the commissioners appointed to inquire into corrupt practices at elections for Wakefield.

[Left sitting.]

City Intelligence.

Bank Rate of Discount.—The Bank of England on Thursday raised their rate of discount from 4 per cent., at which it was fixed on the 31st of January, to 4½ per cent.

Money Market, Friday.—British Funds: Consols closed at 94⅛ to ¼ for Money, and 94¼ to ⅜ for the 11th April; India Stock, 219½ to 220½; Indian Five per Cent. Stock of 1859, 104½ to ¾; Five per Cent. Enfaced Rupee Paper, 98; Indian Four per Cent. Debentures of 1858, 96⅞ to 97; Exchequer Bills, 19*s.* to 16*s.* prem.—Foreign: Chilian Six per Cents., 103, ex div.; Mexican Three per Cents., 21⅛ to 21; Peruvian Three per Cents., 72; Russian Five per Cents., for Acct., 96½; Ditto Three per Cents, 1859, 64⅜; Sardinian Five per Cents., 84 to 83½; Spanish Three per Cents., 45⅝ to 45⅝; Ditto for Acct., 45½; Ditto New Deferred Three per Cents., 34⅛; Ditto Passive, 14⅜; Turkish Six per Cents., 1854, 78½ to 79; Ditto for Acct., 79; Ditto for 1858, 60½ to 60¾; Ditto for Acct., 61 to 60⅝; Ditto Guaranteed Four per Cents., 101¼ to 101½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,063,040	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	14,588,040
		Silver Bullion	—
	£29,063,040		£29,063,040

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£10,221,190
Rest	3,755,413	Other Securities	23,955,189
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	10,384,110	Notes	8,682,685
Other Deposits	13,556,014	Gold and Silver Coin ..	683,661
Seven day and other bills	694,088		
	£42,942,725		£42,942,725

29th day of March, 1860.

M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—T. A. Freeth, 3, Edward Street, Hampstead Road, Middlesex, Pianoforte Manufacturer—J. L. Morland, Lidford and Heinton, Somersetshire, Grocer, Draper, and General Shop Keeper—R. Tanner 3, Maryland Street, Stratford, Essex, Tea Dealer and Grocer—D. N. Vericchio, 7, Wellington Terrace, Paddington, Upholsterer and Furniture Dealer—T. J. R. Wallis, Colchester, Essex, Draper.

BANKRUPTCY ANNULLED—P. Andrew, Swansea, Glamorganshire, Brewer.

SCOTCH SEQUESTRATIONS—J. Craig, Baidlands, Ayrshire—J. Bruce, Glasgow, Salesman—Law, White and Co., Glasgow, Merchants—N. Macneil, Carrochy, Ross-shire, Farmer—J. Richardson and T. Crichton (as partners and individuals), Drapers—J. Veith, Edinburgh, Hotel Keeper.

FRIDAY—BANKRUPTS—H. Corey, Townsend Road, Regent's Park, Builder—J. Elgar, Fletton, Huntingdonshire, Grocer—C. A. Gibson, Bristol, Timber Merchant—C. Langridge and J. Midgley, Manchester, Drysalters—J. Legge, Warsall, Staffordshire, Beer Retailer—T. Mills, Leicester, Web Manufacturer—G. W. Neales, New Oxford Street, Middlesex, Upholsterer—C. Noble, Northampton, Builder—J. Oldroyd, Batley, Yorkshire, Blanket Manufacturer—W. Sharp, jun., New Broad Street, Underwriter—T. Simmons, Cheapside, City, Warehouseman—H. J. Smith, Newbury, Berkshire, Corn Dealer—P. Taylor, Saffron Walden, Essex, Licensed Victualler—A. Wootton, Walsall, Stafford, Timber Merchant.

Metropolis and its Vicinity.

The Evangelical Alliance.—A numerous deputation of the friends of the Evangelical Alliance had an interview with Lord John Russell on Monday, on the subject of the recent persecutions practised against Protestants in Turkey. The deputation consisted of General Sir G. Pollock, Sir C. E. Eardley, Bart., Mr. Baines, M.P., Mr. Richardson, M.P., Mr. Adam Black, M.P., &c. Sir Culling Eardley stated the case to Lord John Russell, and said that a certain priest belonging to the Greek Church, who resided at Soiud, a place about 70 miles from Broussa, had embraced the Protestant faith, an act of heresy which had brought down upon him the resentment and persecution of the bishop, by whose orders he was manacled and imprisoned. Several vizierial orders for the protection of the priest had been issued from Constantinople without effect; and, although nominally at liberty, he was subject to great persecution from the Greek population. The deputation therefore prayed the aid of the Government in protecting the convert, and urged the noble lord to use his endeavours to obtain the fulfilment of the promises made by the Sultan. Lord John Russell in reply said he should be quite ready to inquire into the case, and to use the influence of the British Government for obtaining that protection which was required. The Turkish Government had always been ready to listen to the British representative, but in the state in which the Turkish provinces were placed, it was very often very difficult for the Government at Constantinople to hold control over the governors of them. But the deputation might rely upon it he would do all in his power to protect the freedom of religious opinions in that country.

The Paper Trade.—An influential meeting of the manufacturers of paper was held a few days since, Mr. Joynson in the chair, when, with one dissentient, it was determined to canvas parliamentary support in favour of the motion of Mr. Puller, the object of which is to impose a customs duty of 1*d.* per lb. on paper of foreign manufacture so long as the French Government tax the export of rags—the raw material of paper. The meeting was called in consequence of the rumour that the French Government intended to charge upon the export of rags a duty of from 8*l.* to 10*l.* per ton, which would be from 60 to 100 per cent. on the value of the article, and would practically be an actual prohibition. The whole tone of the meeting was in favour of perfect free trade—the manufacturers present expressing their confidence in their ability to compete with the world, provided only they were placed upon the same footing in regard to the supply of the raw material. They also scouted the idea of any other fibre being introduced into the manufacture, and agreed to present a memorial to the Chancellor of the Exchequer, explanatory of their views.

The Lord Lyons Memorial.—On Saturday afternoon a meeting of the subscribers to the fund for erecting a monument to the memory of the late Lord Lyons in St. Paul's was held in the library at Bridgwater House, Lord Clarence Paget in the chair. A number of noblemen and gentlemen, friends of the late lord and subscribers to the fund, attended. In the room was a small model of the proposed memorial, the execution of which has been entrusted to Mr. Noble, who has undertaken the whole work for the sum of 1000*l.* General Sir George Brown moved, and Admiral Walcott, M.P., seconded, a formal resolution approving the form and style of the memorial statue, as shown to the meeting. The resolution was unanimously adopted, as was another moved by Mr. Thomson Hankey, M.P., and seconded by Mr. Layard, that the time for the subscription list remaining open for additional subscriptions should be extended. In the course of the meeting it was stated that a most eligible site for the proposed monument in St. Paul's had been granted gratuitously by the Dean and Chapter.

Cultivation of Indian Fibres.—A deputation of gentlemen interested in the cultivation of Indian fibres had an interview with Sir Charles Wood on Tuesday at the India House. The deputation consisted of Mr. Ewart, M.P., Mr. Wyld, M.P., Mr. Bradbury, Captain Strickland, Mr. Bonney, Mr. Holroyd, Mr. Arrowsmith, Mr. Spensley, Mr. Hardwick, &c. A company has been formed with a view of obtaining cotton flax, hemp, and jute from India, and also to make use of certain fibres which it is expected will produce materials of great value to the silk, linen, mohair, and paper trades. The fibres have been sent to different manu-

facturers and subjected to their processes, and in all cases with satisfactory results. One house asked for 50,000 tons this year and 100,000 tons for five succeeding years, and others for very large supplies; 40,000 acres of land had been offered to the company in one part of India and 15,000 acres in another part, and many thousand more could be obtained if the Indian Government would grant facilities. The principal fibres referred to are the rheea of Assam, one of the strongest and best fibres known; the Neilgherry nettle, the aloe, the pine apple, and the plaintain. The most important is the rheea, which can be grown to any extent, and imported into this country at highly remunerative prices. The company propose to turn their attention in the first place more particularly to the Punjaub and North-Western Provinces of India for flax and hemp, and to Assam and the Sunderbunds for rheea and cotton. Mr. Ewart said the principal object of the deputation was to show Sir C. Wood the fibres out of which paper could be made. Mr. Spensley then presented various portions of the rheea fibre, both in its raw and manufactured state, and explained the mode adopted in preparing it. Various specimens of paper, lace, hemp, substitutes for horsehair, &c., were exhibited, and it was stated that if the fibre was operated upon while young 80 per cent. of flax could be obtained. The great difficulty was also said to be the cost of transit. Sir Charles Wood said that operations were already going forward in the construction of railways and canals, and as it was the interest of the Indian Government to increase the amount of its exports, they were fully alive to the importance of facilitating communication between the interior and the coast.

SALE OF THE VIENNA MUSEUM.—The celebrated collection of works of art and vertu, known as the Vienna Museum, the property of Messrs. Löwenstein, of Frankfort, has just been dispersed under the hammer of Messrs. Christie & Manson. It was formed in the 16th century by the Emperor Maximilian I., and was continued and considerably increased by his grandson, the Emperor Rudolph II. It continued imperial property until 1780, when the building at Prague in which the museum was contained being required for barracks, it was sold to the Chevalier Von Schönfeld, a distinguished amateur of the time, who, after having increased it by the addition of his own collection, opened it to the public under the title of the Technological Museum of Vienna. The sale commenced on the 12th and ended on the 23d inst. The 10 days' sale realised 7691*l.* 12*s.*

THE GREAT EASTERN.—On Monday a number of men commenced work on board the Great Eastern, and on Tuesday another batch of experienced shipwrights left London for Southampton. The task of fitting her out for sea, which will now proceed as rapidly as possible, has been intrusted to Mr. Charles Lungley, of Deptford, and his brother, Mr. George Lungley, of Southampton. The firm of Summers & Day, of Northam Ironworks, will execute such work as may be required in the machinery department.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the mortality of London, which, from 1397 deaths in the first week of the current month, rose to 1563 in the following week, made a further advance in the week that ended on Saturday, March 24, in which the number was 1611. In the corresponding weeks of the 10 years 1850-59 the average number, raised in proportion to the increase of population, was 1367. The return of last week was therefore 244 above the average. During the week the births of 918 boys and 927 girls, in all 1845 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1702.

Provincial.

CARLISLE.—The key to the coffin mystery has been discovered in Greenock. On the 17th of March last a young woman, apparently well educated and wearing a profusion of rings, arrived in that town, and took lodgings at 14, East Quay Lane. She called herself Mrs. Loudon, and said she had come from Dumfries, and she had a female child with her, which was in a sickly state. In the morning she woke up the landlady, and told her the child was dead. On that day she went to the registrar and reported the death of her child, stating that the body would be interred at Dumfries. She afterwards got a coffin, which was then inclosed in a box similar to that found at Carlisle. It was addressed to Dumfries; but her landlady states that after its arrival at the lodgings, she took off the address, and substituted one to an inn at Carlisle, where she said she was going to join her husband, whom she described as a draper in Hartlepool. The woman was never seen afterwards in Greenock, but it has been ascertained that her maiden name was Janet Young, and that she was the daughter of a farmer in Upper Nithsdale. She went into service in Newcastle, and there had an illegitimate child which was kept by an uncle in Ayrshire, while she removed to Glasgow, and there became acquainted with the tradesman to whom she was soon afterwards married. The husband seems to have been unaware of the existence of the child till after the marriage, when he refused to take charge of it. The mother then went to Dumfries to ask her relatives to keep it for a few weeks, but on their declining to do so she left to return to Glasgow, and on passing through Greenock the child suddenly died. This occurred in March, and in the following month the mother and her husband left England for New Zealand. At the inquest held on the body, the medical gentleman stated that, from its decomposed state, it was impossible to tell the cause of death.

LANCASTER.—Two hundred and thirty-nine of the magistrates of this county have signed a requisition to Lord Stanley, asking him to allow himself to be put in nomination for the chairmanship of Quarter Sessions, vacant by the death of the Right Hon. M. T. Baines. His lordship, in acknowledging the receipt of the requisition, says:—

"To the expression of a wish so generally entertained, and so gratifying to myself, there is only one answer which I can give. I accept with pleasure the proposed nomination, and, if elected, will serve the county to the best of my powers."

PORTSMOUTH.—The launch of the Frederick William, screw, 86, took place at this dockyard on Saturday with perfect success in the presence of a large concourse of spectators. The ceremony of naming the vessel was performed by the Countess Bernstorff, wife of the Prussian Ambassador.

SOUTHAMPTON.—Another case of excessive mortality on board a transport ship which sailed a short time since from this port is reported in the Indian papers, and has naturally excited attention, following so closely after the affair of the Great Tasmania at Liverpool. The Dudbrook on her arrival in Bombay harbour had on board 255 souls. The number embarked at Southampton was 296, and there were two births on board. The number of deaths, therefore, was 43—one adult female, 30 children between one and 12 years of age, being 15 per cent. of the whole number, and six infants—all the infants, in fact, under one year who were on board. The Euxine had shortly before arrived at Madras, having lost 76 women and children during the voyage.

STAMFORD.—A few days since Miss E. Pulley, an eccentric but highly accomplished lady of 63, who devoted the bulk of her income to charitable purposes, was found dead in her house in High Street, Stamford, having apparently been burnt to death by setting fire to her clothes. It appears that she was a regular attendant at church, and as she did not make her appearance on Sunday week and had not been seen since the previous Wednesday, and as no smoke had issued for a few days from the chimneys of her house, in which she lived alone without any servant, fears were entertained that something serious had happened to her. On an entry being made a fearful sight was presented. The body of the unfortunate lady was on the floor, with the head near the grate, a black and charred mass, resembling in appearance a burnt log of wood. Her clothes, which were burnt to tinder, lay on the floor around. The right hand and arm to the elbow were burnt nearly to a cinder. The materials for kindling a fire were laid in the grate, and a candlestick (the candle burnt to the socket) was standing near the grate by the side of the corpse, from which it was supposed that she came down stairs on Thursday morning and was going to light the fire, when she fell down in a fit, her clothes caught the flame, and she was burnt to death. Search was made to ascertain if there had been any robbery or violence, but nothing was discovered to lead to a suspicion that any property had been stolen. The jury thereupon returned a verdict of "Accidentally burnt to death," and the body was buried in due course. Circumstances have since come to the knowledge of the police which have excited suspicion of foul play, and led to the apprehension of a cabinet maker called Henry Corby, residing in the neighbourhood of Miss Pulley's house. It appears that a young man named Marsh, in the prisoner's employ, while looking round the workshop for some tools, noticed on an upper shelf a lady's writing desk, and curiosity prompting him to open it he saw inside a number of gold coins and several rings, one of the latter bearing an inscription, "James and Elizabeth Pulley." Two or three days elapsed before Marsh mentioned this, when the fact coming to the ears of Corby, he repeatedly urged the young man not to say anything further about the matter, remarking that as he had been in trouble before (alluding to a robbery of which he had been convicted), it might be awkward for him if he was known to be in possession of the articles named. This and other suspicious circumstances—such as the prisoner paying a number of old debts and exhibiting a considerable sum in gold—coming to the knowledge of the superintendent of police, he apprehended Corby; but when his house was searched neither the writing-desk nor the rings could be found. Stains of blood have been discovered on the hearthstone in the kitchen, where the body of deceased was found, and it is understood that other facts have come to light which seem to indicate that the unfortunate lady came to a violent death. In pursuance of an order received on Sunday from the Secretary of State, the body was exhumed on Monday, and subjected to a *post mortem* examination by two surgeons. On Thursday, at the adjourned hearing before the magistrates, the surgeons stated, as the result of their examination, that the unfortunate lady had been knocked down, strangled, and then burnt, and that the body presented appearances which proved that fire had acted upon it before life was extinct. The prisoner was then remanded to Wednesday next.

STROUD.—A crowded and influential meeting of the Liberal electors of this borough was held in the Subscription Rooms on Tuesday, "to consider the course of their representative, the Right Hon. E. Horsman, in Parliament during the present session." The attendance included the leading men of all sections of Liberals. The meeting was called in consequence of the general feeling that Mr. Horsman has not represented the opinions of the borough in Parliament. Mr. S. S. Marling, manufacturer, occupied the chair, and read an invitation he had given to Mr. Horsman to be present at that meeting, and Mr. Horsman's reply, declining. He said that there was one almost universal feeling of dissatisfaction with the course which Mr. Horsman had pursued upon the budget and the treaty, and, as Mr. Horsman had always evinced an anxiety to know the feelings and opinions of his constituents, they had assembled openly and straightforwardly to express that opinion. Mr. A. M. Flint, manufacturer, proposed the following resolution:—"That it is the opinion of this meeting that the Right Hon. E. Horsman has not, by his votes or speeches in the House of Commons, in reference to the commercial treaty with France and the budget, represented the opinions and feelings of the borough of Stroud." This resolution, which was seconded by Mr. D. Ricardo, was carried with only four dissentients. Another resolution, condemning the course adopted by Mr. Horsman in rather stronger terms, was proposed by Mr. M. Bridges, but as it did not meet with general concurrence, it was withdrawn.

Ireland.

THE POPE'S IRISH BRIGADE.—The annexation of the Romagna to Sardinia has caused great excitement among the Irish Ultramontanes. The *Nation* suggests that all Christendom should combine in a crusade against "that vicious Monarch," that "sacrilegious robber, Victor Emmanuel," who has taken possession of the property "which belongs to the Church of God and to the Catholics of the world." "That robber must be forced to give up his prey," and the *Nation* hopes that Irishmen will take an active part in the recovery of the Papal provinces. The *Dundalk Democrat* also insists that the country should long since have sent something more than mere money to the Pope, and that as the Sovereign Pontiff requires aid from other lands to oppose the "robbers and cut-throats" who are despoiling the Church, "at least 20,000 Irishmen should be sent with all speed to restore peace to the States of the Church, and wrest from the plunderer's grasp the spoils on which he has sacrilegiously laid his hands."

Law.

WESTERN CIRCUIT: DEVIZES.—*Serafin Manzano*, a Spaniard, was charged with the wilful murder of Anastasia Trowbridge at Ashcombe, on the 3d November last. The prisoner claimed the privilege of being tried by a mixed jury. The deceased and her husband had lived many years in a cottage at a lonely place called Ashcombe, in the parish of Tollard Royal. On the morning of the 3d November, they breakfasted at half-past 6, and at 7 the husband, who was employed on the roads about half a mile from his cottage, left his home for the purpose of going to his work. He stayed at that work until about 1 o'clock, when he returned home to his dinner, and found the cottage locked up, and his wife lying on the floor of a back room quite dead, her face covered with blood, and her head lacerated with a saw and razor, the latter of which had been broken in the struggle and left by the murderer in the cottage. The house had also been robbed, and among other things stolen was a coat which had been presented to the husband by an agricultural society. For some weeks previous to the murder the prisoner had been wandering about the country seeking employment. He had been seen in possession of a razor like that with which the murder was committed. A man resembling the prisoner was seen by two men to leave the cottage on the morning of the murder, and the prisoner was proved to have afterwards had in his possession and to have offered for sale every article of dress which had been stolen from the cottage. The defence was that the clothes had been given to him in exchange for his own by a man he met accidentally about two miles from the house. After a trial of two days, the jury after deliberating about half an hour returned a verdict of *Guilty*. Baron Martin immediately put on the black cap and passed sentence of *Death*, holding out no hope of mercy.

OXFORD CIRCUIT: SHREWSBURY.—*The Ludlow Murder.—John M'Donough*, a young gipsy, was charged with the wilful murder of William Pearce, at Ludlow, in August last. The grand jury ignored the charge of murder, and returned a bill for the manslaughter. The prisoner was found *Guilty*, and sentenced to 12 months' imprisonment. *Poaching.—Owen Edwards*, 19, labourer, was charged with having, in company with others, armed with guns, engaged in poaching on lands of Mr. Ormsby Gore, near Whittington, on the night of the 4th of December last. The jury returned a verdict of *Guilty*, with a recommendation to mercy. The prisoner was sentenced to 12 months' imprisonment. *Samuel Brown* and *William Jeffreys* were found *Guilty* of poaching with a third man not in custody, on the lands of Lady Brinckman, of Sundorne Castle, near Uffington, on the night of the 7th of January. The prisoners were met by the gamekeepers, who had known them from their boyhood, when the prisoner Jeffreys struck the assistant keeper a stunning blow on the head with a bludgeon, and knocked him down. The prisoner Brown had a double-barrelled gun, which he cocked and pointed at the head keeper, telling him to stand back, or he would blow his brains out. By this time Jones, one of the watchers, had got the third man down, and Brown then went up to him, and pointing the gun at him, threatened to blow his brains out, unless he let the man go. The assistant keeper said he knew all the lot, and told Jones to loose the man, which he accordingly did, and all the party walked together several hundred yards on the road to Shrewsbury. The keepers and watcher positively swore to the identity of both the prisoners, and said it was a bright moonlight night. The jury, without hesitation, found both prisoners *Guilty*. His lordship, in passing sentence, said it was well for Brown that he had not used his gun, though invited by Jeffreys to do so. In consideration of his using no violence his sentence would be only six months' imprisonment, with hard labour. But as to Jeffreys, his was a bad case, for he had struck the keeper a blow which had stunned him, and his sentence would be five years' penal servitude.—WORCESTER.—*Manslaughter by an Innkeeper.—John Pearn* was

charged with the manslaughter of John Westwood, on the 3d of November, at Worcester. It appeared that deceased, with a man named Collins, was drinking at the Angel Inn, kept by the prisoner, when Collins quarrelled with some soldiers, and the prisoner ordered him to leave the house. Collins thereupon challenged the prisoner to fight, and rushed at him to strike him, on which the prisoner knocked him down with a poker. Westwood, the deceased, then came up, and said he would not have his companion struck. Collins was at this time lying on the ground insensible, and Westwood stepped over his prostrate body towards the prisoner, who again raised his poker and knocked him down. Westwood was afterwards taken to the station, and was found dead in the cell next day. Mr. Jeffery, surgeon, attributed death to the effusion of blood between the *dura mater* and the skull, which was the thinnest he had ever seen. The skull was not fractured. The poker was produced. It was bent, it was said, by the blow at Collins. For the defence it was contended that the prisoner was attacked, and had no other weapon to defend himself with; that his intention was not to kill, but to temporarily disable the deceased. The jury expressed an opinion that deceased was not attacking the prisoner at the time when the blow was struck, and found him *Guilty*. He was sentenced to one year's imprisonment.

Home Circuit: Lewis.—*Child Murder.*—*Caroline Mate*, 28, an unmarried woman, was charged with the wilful murder of her female illegitimate child. The coroner's jury returned a verdict of manslaughter only against the prisoner, but she was subsequently committed by the magistrates upon the charge of wilful murder, and the grand jury having returned a true bill, she was put upon her trial for the more serious offence. The jury returned a verdict of *Manslaughter*, and the prisoner was sentenced to four years' penal servitude.—*Hannah Moore*, 25, a diminutive girl, was placed at the bar to plead to an indictment which charged her with the wilful murder of her illegitimate child, Alfred James Moore, while an inmate of the Petworth Union. There was a second indictment against the prisoner which charged her with the capital offence of feloniously administering to the same child a large quantity of deadly poison, called white precipitate, with intent to murder it. When the prisoner was first called upon to say whether she was guilty or not guilty, she replied in a low voice, "Guilty." Chief Justice Erle told the prisoner that if she would take his advice, she would plead not guilty, and he gave her the advice because he thought it probable that she did not understand the precise nature of the charges that were made against her. The prisoner then pleaded not guilty to both the charges. The indictment for murder was not proceeded with, but the prisoner was given in charge to the jury for the offence of feloniously administering poison to the deceased child with intent to murder. The jury, after deliberating for about a quarter of an hour, returned a verdict of *Guilty*. The prisoner was then asked in the usual form whether she had anything to urge why judgment of death should not be recorded against her, and she made no reply. The learned Judge addressed her and said she stood convicted upon perfectly clear evidence of a crime of the most aggravated character. Sentence of *Death* would be recorded against her, but he did not intend it to be carried out, and it would probably be commuted to penal servitude for life. The prisoner, who cried bitterly and exhibited the deepest anguish during the trial, was then removed from the bar.

Midland Circuit: Warwick.—*Passing Forged Bank Notes.*—*Sebastian Du Pont*, aged 58, pleaded *Guilty* to a charge of having at Birmingham, on the 22d of January last, uttered a forged 10*l.* Bank of England note, with intent to defraud, and also with having in his possession five other forged 10*l.* notes and three forged 5*l.* notes. The prisoner further pleaded *Guilty* to several previous convictions. This was the man who had been staying at the Queen's Hotel, Birmingham, and represented himself as an officer in the Prussian army. He was sentenced to 14 years' penal servitude.

Sporting.

The Forthcoming Prize Fight for the Championship.—In consequence of the activity displayed by the police authorities on the occasion of some of the late prize fights, and their contemplated interference in the projected contest between Sayers, the champion of England, and Heenan, the American pugilist, on the 16th April, the backers of the men, it is understood, have arranged to cancel the articles of agreement, so far as relates to the appointed day of fighting, with the intention of bringing off the "event" at an earlier and unexpected date; the place and time of meeting to be confided to a limited number of "amateurs" of pugilism the evening previous to the day fixed for the contest. On Tuesday evening considerable excitement was caused at the Euston Square station by the assembling of a large number of persons to witness the arrival of upwards of 150 sporting men from the United States, who reached London by the Liverpool mail-train. The visitors consisted principally of the backers and friends of Heenan, and included, amongst others Morrissey, the conqueror of Heenan in a prize fight in America, on the only occasion on which the latter has contended in the prize-ring.

Obituary.

The Earl of Longford died on the 27th inst in his 42d year. He was born at Pakenham Hall in 1817, succeeded his father as 3d Earl in 1835, and became a captain in the 2d Life Guards in 1848. He is succeeded in the title and estates by his brother the Hon. W. Lygon Pakenham, C.B., a colonel in the army, who served as Adjutant General of the Forces in Turkey in 1855, and was appointed Adjutant-General of the Forces in India in 1858.

Lady Strathedon, the wife of Lord Chancellor Campbell died on Sunday from bronchitis in her 65th year. She was the eldest daughter of the late Lord Chief Baron, Lord Abinger, better known, perhaps, as Sir James Scarlett, and was created a Peeress in her own right in 1857, when the present Lord Campbell was Attorney General. By her death the Hon. W. Campbell, M.P. for Hawick, attains a seat in the House of Lords as Baron Stratheden.

The Baroness de Teissier died on the 22d inst. at Hastings, whither she had gone for the benefit of her health. She was the daughter of the late Mr. Henry Poyntz Lane, of Alresford, Hants, and of Broadwater, Sussex, and married in 1814 Mr. James De Teissier, of Woodcote Park, near Epsom, a magistrate and deputy lieutenant for Surrey, who in 1849 received the permission of the Prince Regent to assume the title of Baron de Teissier, conferred on him by Louis XVIII. of France. The De Teissier family were originally settled at Nice, and came to England from Languedoc at the close of the last century. The Baroness leaves a family of five sons.

Lady Napier, widow of the late General Sir William Napier, K.C.B., died on Monday last at Scinde House, Clapham Park, aged 70, having survived her husband only six weeks. She was the daughter of the late General the Hon. Henry Edward Fox.

Sir Thomas Noel Harris, K.C.H., an old Waterloo officer, died at his residence, Eastry, near Sandwich, Kent, on the 23d inst., at the age of 75. He was a son of the Rev. Hamlyn Harris, vicar of Chipping Campden, Gloucestershire, and was born in 1785. He entered the army in 1810, and served in Flanders and Holland. He was the first officer who brought to England the news of the surrender of Paris to the Allies in 1814, and in the following year he lost an arm at Waterloo. He was a colonel unattached, a groom of her Majesty's Privy Chamber, a magistrate and deputy lieutenant for Kent, and a Knight Commander of the Hanoverian Guelphic Order. He was thrice married; his second wife was the widow of the 11th Earl of Huntingdon, his third wife survives him.

Sir Charles Montolieu Lamb, Bart., Knight Marshal of the Royal Household, died on the 21st inst. at Beauport his seat in Sussex. He was born in 1785, and married first, in 1815, Lady Mary Monteith, née, widow of Archibald Lord Montgomerie, and daughter and heir of the 13th Earl of Eglinton; and secondly, the eldest daughter of the Rev. W. Margesson, of Oakhurst, Sussex. He succeeded to the baronetcy in 1834, on the death of his father, Sir James Bland Burges, who in 1821 assumed by royal sign manual the name of Lamb. He was made knight marshal of the royal household in 1825, and had consequently held that office during the reign of three sovereigns. He was a deputy-lieutenant of Ayrshire and of Sussex, a D.C.L., and for some years major of the Ayrshire Yeomanry Cavalry. He is succeeded in the baronetcy and estates by his grandson, Archibald, now in his 15th year.

Sir Wm. J. H. Browne Folkes, Bart., died on the 24th inst. at Hillington Hall, his seat in Norfolk. He was born in 1786, and was son of Sir Martin Browne by the daughter and co-heiress of the late Sir John Turner, Bart. He was educated at Jesus College, Cambridge, at which university he graduated B.A. in 1810 and M.A. in 1813. In 1818 he married the daughter of Mr. Dominic G. Browne, of Castle MacGarrett, County Mayo, Ireland. He is succeeded in the baronetcy by his grandson, now in his 13th year, his eldest son having been killed by lightning 11 years since.

The Rev. David Williams, D.C.L., Warden of New College, died at Oxford from bronchitis on the 22d inst., in his 74th year. He was formerly Head Master of Winchester school, and in 1840 he succeeded Dr. Shuttleworth, on his being appointed to the see of Chichester, as warden of New College. He was also a canon of Winchester, a pro vice chancellor, delegate of estates, and member of the Hebdomadal Council.

Mr. Charles Ross, one of the Commissioners of the Audit Board, whose death was announced briefly last week, had played a long, if not a distinguished, part in political and ministerial life. He was the only son of the late General Alexander Ross, by the daughter of the late Sir Robert Gunning, Bart., and was born in 1799. He had scarcely attained his majority when he entered Parliament on a casual vacancy as M.P. for the since disfranchised borough of Orford, which he represented from 1822 to 1826. In the next Parliament he sat for St. Germans, and continued to represent that borough in the Conservative interest until it was extinguished by the Reform Act. He was then elected for Northampton, and was re-chosen in 1835, both times after a severe contest, but was defeated by Mr. R. Currie at the general election of 1837. He held the post of a Lord of the Admiralty for a short time in 1850, and was a Lord of the Treasury under the short-lived Administration of Sir R. Peel in 1834-35. He married in 1825 the Lady Mary Cornwallis, daughter of the late Marquis Cornwallis, by whom he has surviving issue. Mr. Ross lost one of his sons, a most promising officer, before Sebastopol in 1855.

Mr John Stewart, formerly for many years M.P. for Lymington, died a few days since at his residence in Tyburnia, at the age of 70. He was well known in City circles as one of the directors of the London and Westminster Bank, and deputy chairman of the Universal Life Assurance Society; he was also an extensive West India proprietor. He was first elected for Lymington in the Conservative interest in December, 1832, and was re-chosen in 1835, 1837, and 1841. He lost his election, however, at the dissolution of 1847, being defeated by the present Earl of Albemarle, and did not afterwards return to public life. Though a staunch Conservative in politics, he steadily supported the free trade measures of Sir Robert Peel.

Mr. Henry Tempest, who died on the 19th inst. at Newland Park, near Wakefield, was a Roman Catholic gentleman of great wealth and high connections, next brother of Sir Charles Tempest, Bart., of Broughton Hall, and heir presumptive to his estates, and to his claim to the ancient barony of De Scales, which is now before the House of Lords. He married in 1829 the second daughter of the late Sir Thomas Joseph De Trafford, Bart, by whom he had a family of three sons and three daughters. His eldest son, Charles Henry, born in 1834, now becomes heir presumptive to his uncle's estates in Yorkshire and Lincolnshire.

Wills.—The will of Lieut.-Gen. Sir William Napier has been sworn under 40,000*l.* personalty.; Capt. Moorsom, R.N., 30,000*l.*; Colonel Thomas Wood, 25,000*l*; the Right Hon. Henry FitzRoy, M.P., 40,000*l.*; the Right Hon. Charlotte Proby, of Elton Hall, Huntingdon, 45,000*l.*

BIRTHS.—On the 23d inst, the Lady Nigel Kennedy, of a son—22d inst, at 5, Lower Berkeley Street, Portman Square, the wife of General Dyson, of a son—25th inst, at Manor House, Farnham, the wife of Captain J. Hornby Buller, of a daughter—24th inst, at Whitchurch, Oxon. the wife of Alexander C. Forbes, Esq., of a daughter.

MARRIAGES.—On the 22d inst, at Denton, John Richard Homfray, Esq., only son of John Homfray, Esq., of Penllyn Castle, Glamorganshire to Mary Elizabeth, eldest surviving daughter of Sir Glynne Earle Welby, Bart., of Denton Hall, Lincolnshire—20th inst, at Charlton, Kent. Henry P. Goldsmith, Esq., to Helen, eldest daughter of Richard Bullen, Esq., and niece of the late Admiral Sir Charles Bullen, G.C.B., G.C.H.—20th inst, at Enniscoffy Church, Charles Pole Stuart, of Langley Broom House, Buckinghamshire, Esq., second son of William Stuart, of Aldenham Abbey, Hertfordshire, Esq., to Anne, eldest daughter of Robert Smyth, of Gaybrook, Westmeath, Esq.—15th inst, at St. Peter's Church, Dublin, Godfrey S. Peacocke, Esq., eldest son of the late Major Peacocke, of Port Lina, county Limerick, and nephew of Charles Leslie, Esq., Carraigmagreine, to Arabella, only daughter of John P. Harvey, Esq., of Fitzwilliam Place.

DEATHS.—On the 20th inst, at York Street, Portman Square, Mrs Freeman, daughter of Sir Thomas Apreece, Bart., of Washingley, Huntingdonshire, aged 88—21st inst, Onslow Loraine Baker, second son of the late Vice-Admiral Sir Henry Loraine Baker, Bart., of Dunstable House, Richmond, aged 17—22d inst, at 34, Albion Street, Arthur Lambert, Esq., late Bengal Artillery, son of Vice-Admiral Sir George Lambert, K.C.B., aged 33—20th inst, at Meadow Cottage, Moffat, Frederick, youngest son of the late Sir Alexander Grierson, of Lag, Bart.—14th inst, at Stuttgardt, Wurtemberg, Julia Frances Jane Hanwell, eldest surviving daughter of Major-General Hanwell, R.A., aged 23—25th inst, at Bath, Brigadier General John Austin K.C.T.S., of the Portuguese Service, late Lieut.-Colonel in her Majesty's service, aged 84—19th inst. at 4, St. Andrew's Terrace, Plymouth, Rear-Admiral Richard Devonshire, aged 75—19th inst, at Charlton Kings, near Cheltenham, Colonel William Long, late 71st Highland Light Infantry—22d inst, at the Manor House, Bushy, Herts, Sarah, wife of Mr. Alderman Copeland, M.P.—25th inst, Henrietta Vansittart, youngest daughter of the late George Vansittart, Esq., of Bisham Abbey, Berks, aged 74—24th inst, at 22, Hanover Square, the Hon. William Irvine Wilkinson, one of her Majesty's Judges of the Island of Jamaica—22d inst, at Cuddapa, Madras, St Leger Murray Grenfell, Assistant Judge, second son of Pascoe St Leger Grenfell, Esq., Maesteg House, Swansea, aged 30—24th inst, at 5, Crescent, Ardrossan, Mary Bogg, relict of Lieutenant-Colonel John Dalziel, Madras Army, and daughter of the late Rev. Robert Bogg, D.D., 50 years Minister of the Abbey Church, Paisley—21st inst, at St. Leonard's, Sussex, Isabella wife of Captain Moorsom, C.E., of Satis House, Rochester—23d inst, at his residence, Landscape Cottage, Wootton, Isle of Wight, Mr. George Brannon, author of "Vectis Scenery," and other works, aged 76.

Markets.

COVENT GARDEN.—March 31.

Vegetables are still scarce and realise high prices. The prices of Pine Apples and Grapes have not altered since our last report. Some new Grapes can be had, as will be seen from a paragraph in another column. Good Apples and Pears are scarce. The former consist of Golden Knob, Bess Pool, and Wyken Pippin, and the latter of Ne Plus Meuris, Beurré Rance, and Easter Beurré. Oranges are plentiful and cheap. Good Cobs realise 1s. per lb., and Spanish Hazel Nuts for planting 16s. per bush. Rhubarb, Asparagus, and Seakale are furnished in tolerable quantities. Parsley is still dear. Green Peas may be obtained at high prices. Potatoes realise 4s. 6d. a bushel. A few new frame ones may be had at from 3s. to 5s. per pound. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, Geraniums, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Pears, per doz., 6s to 10s
Grapes, per lb., 12s to 20s	Oranges, per 100, 2s 6d to 8s
Strawberries, p. oz., 1s 6d to 2s 6d	Lemons, per 100, 5s to 8s
Apples, per doz., 2s to 6s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 6s to 10s	Cucumbers, each, 1s to 3s
Seakale, per basket, 2s to 3s	Artichokes, per doz., 2s to 3s
Rhubarb, per bundle, 6d to 1s	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Peas, p. half sieve, 15s to 20s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen bunches, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., per score, 1s to 1s 6d
— per bus., 3s to 4s 6d	Endive, p. score; 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d

POTATOES.—Southwark, Monday, March 26.

During the past week the arrivals have been large, and with the exception of top samples less money had to be submitted to. The following are this day's quotations:—Yorkshire Regents, per ton, 90s. to 140s.; Lincolnshire do., 80s. to 95s.; Dunbar do., 100s. to 120s.; Perth, Forfar, and Fifeshire Regents, 80s. to 100s.; do. Rocks, 75s. to 85s.; do. Reds, 75s. to 85s.; French Whites, 70s. to 80s.; Belgian do., 60s. to 70s.

BRITISH WOOLS.—London, Friday, March 30.

The demand for fleeces and fleece sorts has been only a small scale for immediate consumption, as political matters have been disquieting, and money tending higher in value. Skin wool has met with a ready sale at late rates.

	s.	d.	s.	d.		s.	d.	s.	d.
South-down Hoggets	1	8	to 1	9	Leicest. Wethers	1	5	—	—
Half-bred ditto	1	8	—	—	Ditto Hoggs	1	7	—	—
Down Ewes	1	6	—	—	Combing Skins	1	2	to 1	6
Kent Fleeces	1	6	—	1 6½	Blanket ditto	0	6	—	10½
					Flannel Wool	1	2	—	1 6

COAL MARKET.—March 28.

Bell's Primrose, 13s.; Byass's Bebside West Hartley, 16s 3d; Chilton Hartley Steam, 15s.; Davison's West Hartley, 16s.; Hollywell, 16s.; Tanfield Moor, 12s. 6d.; Tanfield Moor Butes, 12s 6d.; Wylam, 16s. 6d.; Walls End Acorn Close, 19s.; Walls End Eden, 19s; Walls End Gosforth, 19s. 3d.; Walls End Riddell, 19s. 3d.; Walls End Braddyll's Hetton, 20s. 3d.; Walls End Framwellgate, 19s.; Walls End Haswell, 21s. 3d.; Walls End Hetton, 21s. 6d.; Walls End Kepier Grange, 20s. 3d.; Walls End South Hetton, 21s. 3d.; Walls End Cassop, 20s. 3d.; Walls End Hartlepool, 21s. 3d.; Walls End Heugh Hall, 19s.; Walls End South Durham, 19s. 6d.; Walls End South Hartlepool, 20s. 3d.; Walls End Trimdon Thornley, 18s.; Walls End Thorpe, 20s.; Walls End Whitworth, 16s.—116 ships at market.

HOPS.—Borough Market, Friday, March 30.

Messrs. Pattenden & Smith report rather more inquiry for Mid Kents, Wealds, and Sussex at very firm rates.

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, March 29.

Prime Meadow Hay	78s to 84s	Clover	90s to 110s	
Superior do. (old)	86	95	New Clover	—	—
Inferior do.	60	70	Second cut do.	80	90
New do.	—		Straw	27	34
Rowen	60	70			

Davis & Co.

Cumberland Market, Thursday, March 29.

Sup Meadow Hay	90s to 96s	Inferior Clover	80s to 92s	
Inferior do.	70	84	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover	100	108			

Joshua Baker.

Whitechapel, Thursday, March 29.

Fine old Hay	85s to 90s	Fine old Clover	100s to 108s	
Inferior do.	70	76	Inferior do	90	96
Prime New Hay	—	—	Fine New Clover	—	—
Inferior do.	—	—	Fine 2d cut	84	90
Straw	26	29	Inferior do.	65	75

METROPOLITAN CATTLE MARKET

Monday, March 26.

The supply of Beasts is rather shorter than on Monday last; consequently trade is more active, and prices have a little advanced. The number of Sheep is about the same; but the demand has increased, and although prices cannot be quoted much higher a better clearance is effected, and on the average at higher rates. From Germany and Holland there are 85 Beasts, 1290 Sheep, and 53 Calves; from Scotland, 190 Beasts; from Ireland, 190; and 2000 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	5	to 5	0	Best Long-wools.	5	4	to 5	6
Best Short-horns	4	6	— 4	10	Do. Shorn	4	6	— 4	8
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	4	6	— 4	8
Best Downs and Half-breds	5	6	to 5	8	Do. Shorn			—	
Do. Shorn	4	8	— 5	0	Lambs			—	
					Calves	4	8	— 5	8
					Pigs	4	0	— 5	0

Beasts, 3380; Sheep & Lambs, 21,240; Calves, 95; Pigs, 310.

THURSDAY, March 29.

The supply of Beasts, although not large, is quite equal to the demand; indeed, several remain unsold. Prices are nearly the same as on Monday. The number of Sheep is about as usual; trade for them is very slow at Monday's quotations. There is no alteration in the Calf trade. Our foreign supply consists of 34 Beasts, 210 Sheep and 70 Calves. The number of Milch Cows is 135.

Best Scots, Herefords, &c.	4	8 to 5 0	Best Long-wools	5	4 to 5 6
Best Short-horns	4	6 — 4 10	Do Shorn	4	6 — 4 8
2d quality Beasts	3	0 — 4 0	Ewes & 2d quality	4	6 — 4 8
Best Downs and Half-breds	5	6 — 5 8	Do. Shorn	..	.. — ..
Do. Shorn	4	8 — 5 0	Lambs	..	.. — ..
			Calves	4	8 — 5 8
			Pigs	4	0 — 5 0

Beasts, 1015; Sheep & Lambs, 4400; Calves, 106; Pigs, 170.

MARK LANE.—MONDAY, March 26.

The supply of English Wheat to this morning's market was small, and disposed of at an advance of 2s per qr. upon the prices of this day se'nnight. The market was fairly attended, but the business transacted in foreign Wheat, either f. o. b. or from the stands, was not large; however, we raise our quotations of Monday last 2s. per qr. Barley is scarce, and brings an advance of 1s. per qr. Beans and Peas sell at the extreme rates of last Monday. There is no change in the nominal top price of town-made Flour, but country marks are held for an advance of 2s. per sack.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	46	—50	Red	43	—47
— — fine selected runs..ditto	48	—54	Red	46	—50
— — Talavera	48	—56			
— Norfolk	—		Red	—	
— Foreign	44	—58			
BARLEY, grind. & dist., 24s to 30s..Chev.	38	—44	Malting.	35	—40
— Foreign..grinding and distilling	23	—32	Malting.	35	—41
OATS, Essex and Suffolk	19	—24			
— Scotch and Lincolnshire..Potato	23	—29	Feed ..	19	—26
— Irish .....Potato	24	—28	Feed ..	19	—24
— Foreign.....Poland and Brew	23	—26	Feed ..	17	—24
RYE	35	—38	Foreign.	—	
RYE-MEAL, foreign.....	—				
BEANS. Mazagan....30s to 40s....Tick	33	—43	Harrow.	33	—43
— Pigeon .....36s — 47s..Winds	48	—54	Longpod	—	
— Foreign ..... Small	38	—46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	36	—38	Suffolk .	36	—40
— Maple .... —s to —s ..... Grey	31	—33	Foreign	30	—37
MAIZE .... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	37	—43			
— 2d do. ..... ditto	29	—39	Country.	29	—39
— Foreign .....per barrel	18	—27	Per sack	30	—37

FRIDAY, March 30.

Since the 23d inst. the weather has been showery, with strong cold W. winds, until the 28th, when the temperature became warmer, and the wind has since blown from the S.W. The Wheat trade has been more active than for some months past, and purchases to some extent have been made on speculation. The rise during the week amounts to 2s. per qr. on English and 1s. to 2s on foreign, but here on Wednesday only a very limited demand was experienced, and chiefly for Irish account. The return of the sales of English Wheat for the week ending the 24th of March amounts to 120,939 qrs. against 86,217 qrs. for the corresponding week of last year; this would appear to indicate that the stocks still held by the farmers are greater than estimated by many in the trade. Fine Barley has improved 1s. per qr. and Oats 6d. in many of the country markets, where Flour is also quoted 1s to 2s. per sack and 6d. to 1s. per barrel higher. From the South of Europe the arrivals during the week are confined to a cargo or two of Maize and Wheat, and the sales consist chiefly of cargoes to arrive, including Odessa Ghirka Wheat at 49s. and Berdiansk at 50s. per 480 lbs; Ibrail Maize at 34s. and Salonica at 32s 9d per 480 lbs.; Ibrail Barley at 2 s. and Danube at 23s 3d. per qr. imp. The arrivals of English grain this week have been very small, and of foreign unusually so. The attendance at this morning's market was small. English Wheat met a slow sale at about the prices of Monday last; the business transacted in foreign was limited, and in some instances purchases might have been made on rather easier terms. Spring Corn of all descriptions is a steady sale at late quotations.

ARRIVALS FROM MARCH 26 TO MARCH 30.

	Wheat.	Barley.	Oats.	Flour.
English ..	1680 qrs.	1140 qrs.	60 qrs.	1340 sks.
Irish	— ,,	— ,,	50 ,,	— ,,
Foreign ..	430 ,,	290 ,,	240 ,,	70 ,,
				— brls.

LIVERPOOL, Tuesday, March 27.—We had a good attendance of both town and country millers and dealers at our Corn Exchange this morning, and a healthy business resulted in Wheat both for consumption and to hold over at an advance of 2d. to 3d. per cental over the rates of Friday last. Flour was held for 1s. per barrel and sack more money, but did not move so freely. Indian Corn met a good inquiry, but the advance of 1s. per qr. demanded checked business. Oats steady, and Oatmeal the turn dearer, but not much dealt in. Beans brought fully 6d. per qr. more money, and Peas and Barley full prices. The market closed very steady at the advanced rates.

FRIDAY, March 30.—The grain market was very firm at the full advance, but the high prices check business. Wheat in fair speculative and consumptive demand. Flour firm, but quiet. Indian Corn and Beans held for full rates, without buyers. Oats, Oatmeal, and Barley unchanged.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Feb. 18..	43s 11d	31s 11d	21s 11d	31s 10d	38s 6d	36s 3d
— 25..	44 5	35 7	22 7	35 3	38 11	36 11
March 3..	44 9	36 6	22 11	32 0	39 1	37 8
— 10..	45 0	36 3	22 9	20 5	39 6	37 3
— 17..	45 2	36 5	23 1	34 10	39 7	37 7
— 24..	45 6	36 11	23 4	32 0	39 3	37 7
Agg. Aver.	44 9	36 1	22 9	32 8	39 2	37 3

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Feb. 18.	Feb. 25.	March 3.	Mar. 10.	Mar. 17.	Mar. 24.
45s 6d	..	..	..	..	..	
45 2	..	..	..	..		
45 0	..	..	..			..
44 9	..	..			..	..
44 5	..			..	..	..
43 11 —		..	..	..	..	..

WANTED, a good GARDENER. Wages, 20s. per week.—Apply to D. C., 25, Bishopsgate Street, E.C.

WANTED, AS GARDENER, an experienced Man, with good recommendation from last employer, who thoroughly understands the Nurture, Cultivation, and Growth of Vines and Pines.—Apply at Hampton House, Warley, Brentwood, Essex, inclosing testimonials of ability and reference to last employer, and stating wages required.

TO SEEDSMEN.

WANTED, for one of the largest existing Establishments, a SHOPMAN, whose qualifications, character, and general antecedents are alike unexceptionable. He must be smart in person, of agreeable address, have abundance of tact, write a good hand, be not under middle age, and be quick at his duties, for which an adequate salary will be given. It is exceedingly desirable, although not absolutely indispensable, that he should be of the Established Church. Papists need not apply, and a preference will be given, *cæteris paribus*, to persons who have not been employed in the London Trade.—Letters in the first instance to D., care of Mr. Henry Lamden, Spa Wharf, Gloucester.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

G. CLARKE is in want of a Man who understands the management of ROSES and FRUITS. A married Man preferred.—Streatham Place Nursery, Brixton Hill, S.

TO SEEDSMEN.

WANTED, as ASSISTANT, in an improving and central town in the South Western counties, an active trustworthy business Man, who can Write a good hand, and Keep Accounts correctly. Wages 25s. per week. Or a PARTNER would be treated with, and any one wishing to enter the business would find it a prosperous one.—Apply by letter to J. S., Messrs. Hurst & M'Mullen, 6, Leadenhall Street, London, E.C.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 26, single; has a good knowledge of his profession in all its branches. Good references.—R. L., Mr Sorrel, Grocer, Lower Tooting, Surrey, S.

GARDENER (HEAD).—A nobleman wishes to recommend his Head Gardener, who has lived with him 10 years; understands his profession in all its branches.—Y. Z., Post Office, East Moulsey, Surrey.

GARDENER (HEAD).—Age 32, married, no incumbrance; has a thorough practical knowledge of Pines, Vines, Peaches, Cucumbers, and Melons; Flower and Kitchen Gardens.—J. R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD).—Age 40, no incumbrance fully qualified in every department, capable of managing a first-class establishment. Testimonials and references of the highest order.—D. M., Bedford Nursery, Haverstock Hill, N.W.

GARDENER (HEAD).—Age 35, married; thoroughly experienced in every branch of Gardening. References of the highest order.—M. B., Mr. W. Davidson, 2, Randolph Road, Maida Hill, W.

GARDENER (HEAD, or good Single-handed where assistance is allowed when requisite).—Middle-aged, married. First-rate references.—J. D., 114, Charlton Street, Euston Road, N.W.

GARDENER (HEAD or good SINGLE-HANDED).—Age 27, single; well experienced in Forcing and Management of Kitchen and Flower Gardens. Two years' good character. Wages 1*l*. per week.—A. Z., Post Office, Ladbrook Grove, Notting Hill, London, W.

GARDENER (HEAD).—Age 36, married, no incumbrance; understands Early and Late Forcing of Vines, Cucumbers, &c.; Stove and Greenhouse Plants; of Wall Fruit, Kitchen and Flower gardens.—E. C., Thackra, Henley-on-Thames.

GARDENER (HEAD).—Age 39, single; has a thorough practical knowledge of his profession, having lived five years with the late Sir John Hay Williams, Bart., Bodelwydden, as Head Gardener, and at other places.—W. S., The Gardens, Worsley, New Hale, near Manchester.

GARDENER (HEAD).—Age 28, married, no incumbrance; has a practical knowledge of Vines, Pines, Peaches, Melons, Cucumbers; Stove and Greenhouse Plants; Fruit, Flower, and Kitchen Gardens.—T. A., 1, Torriano Grove, Kentish Town, N.W.

GARDENER (HEAD).—Age 43, married; thorough knowledge of Gardening in all its branches; can have good character from the gentleman he has left, and can be recommended by his former employer, with whom he lived 15 years.—A. B., Messrs. Fraser's, Lea Bridge Road Nurseries, N.E.

GARDENER (HEAD).—Age 35, married, no incumbrance; understands his profession in all its branches, also the Management and Improvement of Land, Stock, Woods, and Plantations. Wife could take the care of Dairy, Poultry, and Baking if required. Good characters for capability, sobriety, and industry.—A. B., Mr. Glass, Offwell, near Honiton, Devon.

GARDENER (HEAD).—Age 40, married, no incumbrance; thoroughly understands Forcing of all kinds, Fruit, Flower, and Kitchen Gardens, &c. Has no objection to the Superintendence of Land. Five years' character from present employer.—J. B., Mr. W. Barnes, Camden Nursery, Camberwell, S.

GARDENER (HEAD).—Age 42, married, no incumbrance; practically experienced in Forcing Pines, Vines Vines in Pots, Peaches, Strawberries, Cucumbers, Mushrooms, &c.; has a thorough knowledge of his profession in all its branches.—K. W., Mr. J. Green, Gardener to Sir Edmund Antrobus, Bart, Cheam, Surrey, S.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Married, without incumbrance; has practical knowledge from 30 years' experience in the management of Vines and all kinds of Early Forcing; also Stove and Greenhouse Plants; Flower and Kitchen Gardens. Can have 6 years' good character from his last situation. No single-handed place accepted.—R. B., Post Office, Enfield Town, Middlesex, N.

GARDENER (HEAD).—Age 31, married; native of Scotland; thoroughly understands his profession in all its branches, including Pines, Vines, Stove and Greenhouse Plants, Laying out Flower and Kitchen Gardens; can undertake the Management of Plantations and Land if required. No single handed place accepted. No objection to Ireland. The highest testimonials from present and former employers.—W. M., 21, Chancel Street, Pickleton Walk, Leicester.

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TO NURSERYMEN.

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GARDENER.—Mr. GEORGE MILLS, F.H.S., Uxbridge Road, Ealing, Middlesex, W., for 19 years gardener to the late Baroness de Rothschild, Gunnersbury Park, wishes to recommend a Young Man (married, with 3 children). He has a general knowledge of Gardening, is sober, industrious, and obliging, and can have an excellent character from his present and late employers.—W. M., as above.

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The Gardeners' Chronicle Newspaper.

SATURDAY, APRIL 7, 1860.

MRS. ARTHUR HENFREY, Widow of the late Professor Henfrey, F.R.S., F.L.S., &c., of King's College, London, continues to receive a limited number of young Gentlemen under 12 years of age, to be educated with her own Sons, in all the branches of a liberal education. French is constantly spoken, Mrs. Henfrey having resided on the Continent, and a Parisian Lady assists her to teach Music, Singing, and Drawing. The house is healthily situated, and provided with a large Garden. Pupils will have the comfort of a private family, and unremitting attention will be paid to their health and morals. References are permitted to—

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Rev. Lawford W. T. Dale ..	Chiswick Vicarage, W.
Rev. Olive Hollingworth ..	Turnham Green, W.
Sir Wm. and Lady Hooker ..	Kew, W.
Professor Huxley, F.R.S. ..	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. Martyn.. ..	7, Bennett St., St. James's, S.W.
Dr. and Mrs. Lindley.. ..	Acton Green, W.
Dr. and Mrs. Hooker	Kew, W.
Dr. and Mrs. Tuke	Manor House, Chiswick, W.

For terms apply to Mrs. Arthur Henfrey, 12, Heathfield Terrace, Turnham Green, W.

THE LATE CHARLES BARTER.—The friends of this enthusiastic Naturalist, late Botanist to the Niger Expedition, are desirous of raising a fund to assist in the support and education of his two orphan children, a girl seven, and a boy five years of age. Both are at present entirely dependent on their grandfather, who resides at Basingstoke, Hampshire, but it is felt that many would gladly assist, if they were aware of their circumstances, particulars of which may be had of Mr. Kennedy, Covent Garden, W.C., or Mr. Matthews, Publisher of the *Gardeners' Chronicle*, 5, Upper Wellington Street, Covent Garden, W.C., both of whom will be happy to receive subscriptions in their behalf.

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V. CIVIL CORRESPONDENCE OF THE DUKE OF WELLINGTON.
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VIII. DARWIN'S ORIGIN OF SPECIES.
IX. FRANCE, SAVOY, AND SWITZERLAND.
London: Longman & Co. Edinburgh: A. & C. Black.

News of the Week.

Both Houses of Parliament adjourned on Tuesday for the Easter holidays—the Lords to Tuesday, the 17th, and the Commons to Monday, the 16th inst. In the Lords on Friday, Earl Grey moved for estimates of the probable cost of the Chinese war, against which he protested as having been undertaken by the Government without consulting Parliament, declaring that all the injury we might inflict upon China would in reality be inflicted upon ourselves. The Duke of Somerset replied that it was necessary to punish the premeditated insult on the Peiho, and that the cost for the present year would not exceed 850,300*l.* The Earl of Malmesbury, in defence of the late Government, impugned the precipitancy of Mr. Bruce in pressing forward the ratification of the treaty. The Earl of Elgin declared that Mr. Bruce could not, without incurring the gravest responsibility, have acted otherwise. He urged the policy of our maintaining an embassy at Pekin, and expressed his opinion that the cost of the expedition had been exaggerated, and that without resorting to hostilities we should be able to induce the Chinese to make due concessions. The Earl of Ellenborough expressed the utmost confidence in the ability of Lord Elgin to conduct the negotiations to a successful issue without bloodshed. On Saturday the Income Tax and Stamp Duties Bills were read a first time; on Monday they were passed through their remaining stages; and on Tuesday they received the Royal assent.—In the Commons on Friday, after a speech from Sir R. Peel on the effect of the annexation of Savoy on the independence of Switzerland, the adjourned debate on the Income Tax as amended was resumed. Colonel Dunne moved as an amendment that the rate be reduced from 10*d.* to 9*d.* in Ireland. The Chancellor of the Exchequer opposed the amendment, which was negatived without a division. Mr. Williams then moved an amendment to exempt all incomes under 150*l.* per annum. The Chancellor of the Exchequer opposed the amendment, but, in reply to several members, said that he would not oppose the appointment of a committee to inquire into the inequalities of the tax, if the House desired it, though he did not intend to propose such a committee himself. After some discussion the amend-

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LONDON: LOVELL REEVE, 5, HENRIETTA STREET, COVENT GARDEN, W.C.

ment was negatived by 174 to 24. On the consideration of the Stamp Duties Bill, as amended, Mr. BENTINCK moved the omission of the clause repealing Sir JOHN BARNARD'S Act on the subject of time bargains. The CHANCELLOR of the EXCHEQUER ultimately withdrew the clause, for the purpose of introducing it in the form of a separate Bill. Sir G. GREY stated that the Government intended to propose the suspension of the writs for Wakefield and Gloucester during the present Parliament, and Sir G. LEWIS announced the postponement of the second reading of the Reform Bill to the 20th of April. On Saturday the Income Tax Bill and the Stamp Duties Bill were read a third time and sent up to the Lords, and the CHANCELLOR of the EXCHEQUER obtained leave to bring in a Bill to repeal Sir JOHN BARNARD'S Act. On Monday Lord J. RUSSELL moved that on Thursdays after Easter, and till Whitsuntide, Government orders of the day have precedence of notices of motions. The motion was opposed by the leading members of the Opposition, and ultimately Sir G. GREY proposed to meet their objections by adding words to the motion making Thursday instead of Friday a Government night, and giving Friday to private members, and moved an amendment to that effect. After a protracted discussion, the House divided on this amendment, which was carried by 150 to 126. Some further discussion ensued, and the House again divided on the original motion as amended, which was carried by 142 to 117. Lord JOHN RUSSELL laid on the table further papers and despatches relating to Italian affairs, with the reply of HER MAJESTY'S Government to M. THOUVENEL'S despatch in reference to the annexation of Savoy. His lordship also announced that he had advised HER MAJESTY to recognise the recent acquisitions of the KING OF SARDINIA in Central Italy as forming part of his dominions. The second reading of the Reform Bill was again postponed from the 20th to the 23d inst. The House then went into committee on the Customs Acts, when the CHANCELLOR of the EXCHEQUER moved his amended resolutions. The first resolution imposing a penny duty on packages, entries, and animals per head was agreed to after considerable discussion. The second, charging 10*s.* per 100*l.* on the warehousing and removal of goods from bonded warehouses, was met by an amendment that it be postponed for six months. On a division the amendment was negatived by 64 to 50, and the resolution was agreed to. The adjourned debate on the second reading of the Refreshment Houses and Wine Licenses Bill was then resumed by Mr. CROOK, who moved that the Bill be read a second time that day six months. Mr. DIGBY SEYMOUR seconded the motion. Mr. KER SEYMER supported the Bill, Mr. HARDY opposed it, and on the motion of Mr. AYRTON the debate was again adjourned until after Easter. On Tuesday Mr. HENNESSY obtained leave to bring in a Bill to facilitate the improvement of land in Ireland, and Mr. E. BOUVERIE obtained leave to bring in a Bill to abolish the jurisdiction of the Ecclesiastical Courts in Ireland in cases of defamation, and in England, Scotland, and Ireland in cases of brawling.

Accounts from Madrid announce that a Carlist insurrection has been attempted at Tortosa, near Valencia, by General ORTEGA, Governor of the Balearic Islands. The attempt has proved a signal failure. The troops, who had been deceived as to the object of the movement, refused to march, and General ORTEGA immediately took to flight, closely pursued by his own men. An insurrectionary movement has also taken place in Sicily. The insurgents attacked the troops at Palermo, but were repulsed with loss, and tranquillity was speedily restored. The Sardinian Parliament was opened on Monday by the KING in person. His Majesty, in the speech from the throne, referred to the late events in Central Italy, and said that in return for his acquisition of territory it had been necessary to make some sacrifice, and he had therefore concluded a treaty for the "reunion" of Savoy and Nice to France. He declared that he was, like his ancestors, firm in the Catholic religion and in the respect due to the Supreme Chief of that religion, but if the ecclesiastical authority should make use of spiritual arms for temporal interests, he should in safe conscience and in the traditions of his ancestors find strength to maintain entire the civil liberty and authority for which he was only indebted to God and to his people. He concluded by saying "Italy must no more be the Italy of the Romans nor that of the middle ages: it must no more be left a field open for foreign ambition, but it must, on the contrary, be the Italy of the Italians."

The Revenue Returns for the year and quarter ended the 31st March were published on Monday. The general result is an increase of 5,612,386*l.* on the year, and an increase of 5,019,200*l.* on the quarter.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family left town on Monday for Windsor for the Easter holidays. On Friday morning the Queen and Prince Consort, accompanied by Prince Alfred and the Princess Alice, took a drive in an open carriage and four, and visited the Zoological Gardens. The Prince Consort afterwards rode on horseback. In the afternoon the Right Hon. T. E. Headlam, Judge-Advocate-General, had an audience, and submitted to her Majesty the proceedings of some courts-martial. The Prince Consort presided at a meeting of the Fine Arts Commission. The Prince of Wales arrived at Buckingham Palace from Oxford. In the evening the Queen and Prince Consort, accompanied by the Prince of Wales, Princess Alice, and Prince Alfred, honoured the Olympic Theatre with their presence. On Saturday morning the Queen rode on horseback with the Princess Alice in the riding-house. The Prince Consort visited the New Regimental Hospital of the Grenadier Guards in Rochester Row, and in the afternoon went to the South Kensington Museum. In the evening the Queen had a dinner party. On Sunday morning the Queen and Prince Consort, the Prince of Wales, Prince Alfred, Prince Arthur, the Princesses Alice, Helena, and Louisa, attended Divine service in the private chapel of Buckingham Palace; the Rev. Dr. Vaughan preached the sermon. On Monday afternoon the Queen and Prince Consort, accompanied by the Prince of Wales, Princes Alfred, Arthur, and Leopold, the Princesses Alice, Helena, Louisa, and Beatrice, left Buckingham Palace for Windsor, travelling from Paddington by a special train of the Great Western Railway. Soon after their arrival at the castle, the Queen and Prince Consort visited the Duchess of Kent at Frogmore. The Princess Alice also visited her Royal Highness. On Tuesday morning her Majesty and the Prince Consort, accompanied by the Prince of Wales, Princess Alice, and Prince Alfred, walked in the Home Park, and visited the Duchess of Kent. In the afternoon her Majesty and the Prince Consort rode out on horseback, accompanied by the Prince of Wales, Princess Alice, and Prince Alfred. On Wednesday morning the Queen and Prince Consort, accompanied by the Prince of Wales, walked in the Home Park, and visited the Duchess of Kent. Princess Alice visited the Princess of Leiningen. Princess Helena rode on horseback. In the afternoon the Queen, with Princess Alice, drove out in an open carriage. The Prince Consort, accompanied by the Prince of Wales, rode out on horseback. The Duchess of Cambridge and the Princess Mary, the Duke of Cambridge, Prince Edward of Saxe Weimar, the Archbishop of Canterbury, the Dowager Duchess of Norfolk, Viscount Palmerston, and Captain Tarleton, R.N., arrived on a visit to her Majesty. On Thursday morning the Queen and Prince Consort, accompanied by the Prince of Wales, the Princesses Alice and Helena, the Duchess and Princess Mary of Cambridge, and the Duke of Cambridge, visited the tomb of the late Duchess of Gloucester, which has recently been erected by command of her Majesty in the south aisle of St. George's chapel. In the afternoon the Queen, Prince Consort, and the Royal family were present at the confirmation of Prince Alfred in the private chapel of the castle. After the ceremony all the visitors took their departure. This evening there will be a grand performance of Haydn's Passion music at the castle. The orchestra, in addition to her Majesty's private band, will be composed of the leading members of the Philharmonic Society; and the choruses will be under the superintendence of Mr. Leslie. It is understood that the Court will visit Scotland at a much earlier period this year than usual, as her Majesty does not intend to go to Osborne at the customary summer season.

THE QUEEN'S VISIT TO PRUSSIA.—It is now considered to be certain that her Majesty will visit Berlin in the course of next month, in order to be present at the *accouchement* of the Princess Frederick William, which is expected to take place about the end of May.

THE CONFIRMATION OF PRINCE ALFRED took place on Thursday in the private chapel of the castle, his Royal Highness having been examined on the previous day by the Rev. W. L. Onslow, Chaplain of her Majesty's ship Euryalus, in the presence of the Queen, Prince Consort, the Archbishop of Canterbury, and the Dean of Windsor. The ceremony was attended by her Majesty, the Prince Consort, the Duchess of Kent, and the other members of the Royal family, several of her Majesty's Ministers and great officers of State, and a large number of visitors who had been invited to be present. The Bishop of Oxford read the preface, and the Archbishop of Canterbury performed the remainder of the service. At the conclusion of the ceremony the Queen proceeded to the Green Drawing-room, and there received the congratulations of the company. Luncheon was afterwards served to the visitors in the dining-room.

PRINCE FREDERICK OF THE NETHERLANDS and suite arrived at St. Katherine's Wharf on Sunday evening by the steam-ship Cologne, from Rotterdam.

COURT ARRANGEMENTS.—Notice has been given from the Lord Chamberlain's Office that the Queen will hold a Levée at St. James's Palace on Saturday, the 21st April, a Drawing Room on Saturday, 28th April, and a Drawing Room on Friday, 18th May, to celebrate her Majesty's birthday. Her Majesty will also hold another presentation Drawing Room and another Levée in the month of June. The precise dates will be announced hereafter.

THE CABINET.—A Cabinet Council was held on Friday at the official residence of the First Lord of the Treasury, in Downing Street. Another Council was held on Saturday, and another on Tuesday.

PARLIAMENTARY MOVEMENTS.—The official declaration of the poll at Norwich was made on Friday, when the Under-Sheriff announced the numbers to be as follows:—For Mr. Warner, 2083; Sir W. Russell, 2045; Mr. Forlonge, 1636: Mr. Lewis, 1631. The election for Londonderry terminated on Saturday in the return of Mr. M'Cormick, the Conservative candidate; the numbers being for Mr. M'Cormick, 326; Mr. Greer, 207; Mr. Skipton, 82.

THE CHINESE MISSION.—The departure of the Earl of Elgin on his mission to China, which was fixed for Wednesday last, has been postponed in consequence of the death of his lordship's mother.

BISHOPRIC OF ANTIGUA.—Her Majesty has conferred the bishopric of Antigua, which became vacant nearly a year ago by the death of the Right Rev. Dr. Rigaud, on the Rev. W. W. Jackson, Chaplain of the Forces at Barbadoes and to the Bishop of that diocese. Mr. Jackson is a native of Barbadoes, and was educated at Codrington College, through which he passed with great distinction. He belongs to the Low Church party, and is described as being a very energetic clergyman and very popular in the colony which he is leaving.

THE CHANNEL FLEET has returned this week from Lisbon. The first division, consisting of the screw steamship Royal Albert, 121, bearing the flag of Admiral Sir Charles Fremantle; the Donegal, 101; Aboukir, 90; and Melpomene, 51, arrived at Plymouth on Tuesday morning; and the second division comprising the screw steamship Edgar, 91, bearing the flag of Rear-Admiral Erskine; the Queen, 86; Algiers, 91; Mars, 80; and Mersey, 40, arrived at Spithead on Wednesday. The third division of the fleet stationed at Plymouth, consisting of the Conqueror, 101; Trafalgar, 90; Centurion, 80; and Diadem, 82, received orders on Saturday to prepare for sea immediately. Their destination is unknown, but Gibraltar and Malta are spoken of.

THE REVENUE.—The Revenue Returns for the year and quarter ended March 31 show an increase of 5,612,386*l.* on the year, and an increase of 5,019,200*l.* on the quarter. The year's account shows an increase in the Customs of 342,959*l.*; Excise, 2,459,000*l.*; Stamps, 37,829*l.*; Taxes, 70,000*l.*; Property Tax, 2,912,519*l.*; Post Office, 110,000*l.*; Crown Lands, 4439*l.*; the only item which shows a decrease being Miscellaneous, 324,360*l.* The quarter's account shows an increase in the Excise of 1,320,000*l.*; Stamps, 66,617*l.*; Taxes, 1000*l.*; Property Tax, 3,519,000*l.*; Post Office, 85,000*l.*; Crown Lands, 2400*l.*; Miscellaneous, 388,860*l.*; and a decrease in the Customs of 363,677*l.*

Foreign.

FRANCE.—The following is the answer of Lord John Russell to M. Thouvenel's despatch respecting the annexation of Savoy and Nice:—

"Foreign Office, March 22.

"My Lord,—I transmit to your Excellency herewith copy of a despatch addressed by M. Thouvenel to the Comte de Persigny, which was placed in my hands by the latter on the 15th inst. The Emperor of the French pledged himself, in his Imperial Majesty's speech to the Legislative Chambers, that he would submit the question of the annexation of Savoy and the county of Nice to France to the wisdom and equity of Europe; and the accompanying despatch—communications similar to which have, no doubt, been made to the other great Powers—purports to have been written in redemption of that pledge. M. Thouvenel's despatch explains the reasons on account of which the Imperial Government makes claim to the cession of Savoy and Nice, and it states the principles upon which the French Government considers itself justified in making that claim. It is with great regret that her Majesty's Government feel obliged to say that they cannot admit the force of those reasons, and that they are unable to subscribe to the justice of those principles. M. Thouvenel adverts to the events of the last 12 months in support of his arguments. Her Majesty's Government would wish shortly to advert also to those events. The immediate cause of the war which broke out in Northern Italy in the spring of last year was the invasion of the Piedmontese territory by the Austrian army. The Emperor of the French marched a large force to

the assistance and support of his ally, the King of Sardinia. The declarations which his Imperial Majesty, upon several occasions, made as to his intentions, and as to the objects of the war, led the Powers of Europe to believe that the war was undertaken without any view to acquisition of territory by France, and that its object was to restore Italy to herself, and to solve in favour of Italy that question which it was alleged the conduct of the Austrian Government had brought to an issue—namely, whether Austria should have dominion up to the foot of the Alps, or whether Italy should be free from the Mediterranean to the Adriatic. M. Thouvenel says that solemn acts, freely concluded after a campaign which had been successful for the arms of France, are an irrefragable proof that the French Government had not for its object any territorial aggrandisement when it was led by the force of events to interfere in the affairs of Italy. But he adds that though the French Government could not but foresee hypothetical circumstances in which disinterestedness would have to give way to prudence, the treaties of Villafranca and of Zurich entirely shut out such a contingency. **This statement seems to explain the** assurance given to your Excellency by Count Walewski in July, 1859, when the Count being asked as to the truth of rumours that notwithstanding the declarations and proclamation of the Emperor there was a negotiation on foot for the cession of Savoy to France, asserted that, if such a scheme had ever been entertained, it had been then entirely abandoned. Her Majesty's Government are led to infer from M. Thouvenel's despatch that the hypothetical contingency to which he alludes was the conquest of Venetia by France, and its transfer to Piedmont, and that in such case it had been contemplated that Savoy should be demanded by France; but that, the agreement of Villafranca and the Treaty of Zurich having left to Austria the possession of Venetia, the idea of a cession of Savoy to France, which it now appears had been entertained, was given up, as stated by Count Walewski. M. Thouvenel, however, goes on to say that combinations in Central Italy different from those which the French Government had fruitlessly laboured to bring about, compelled the French Government to consider the injury which new arrangements in Italy might carry with them to the interests of France; and he proceeds to argue that when Sardinia, by acquisitions of territory in Central Italy, was about to increase her population from 4,000,000 to three times that amount, it became necessary, for the security of France, that Savoy should be ceded to her, in order that she might have in her own hands the northern slopes of the Alps. The new danger to which M. Thouvenel alleges that France would thus be exposed would be invasion from Sardinia alone, or from Sardinia acting as a member of a confederation of hostile Powers. But her Majesty's Government would beg to observe that to imagine that Sardinia, even with a population of 12,000,000, would ever think of invading France with a population of 36,000,000, is to suppose that which amounts to a moral impossibility. Sardinia, so augmented, will become a respectable State, capable of attaining a great degree of internal prosperity, and sufficiently strong to defend herself against any other Italian Power; but that the French Empire, the first military Power of the continent, with a vast, compact territory, full of natural resources, and with a population characteristically warlike, should be in danger of being attacked by her far weaker neighbour, is not in the nature of things. There are, besides, many political considerations which go to show that the tendency of Sardinia must always be towards maintaining the most friendly relations with France. We may, then, at once dismiss the notion that France can require any other guarantee than her own inherent strength affords her against any attack from Sardinia, acting alone. But M. Thouvenel conceives that Sardinia might be a member of a confederacy arrayed against France, and by having both sides of the Alps she might open the road for other Powers to make an invasion of the territory of France. Now, on this her Majesty's Government would observe that there never can be a confederacy organised against France unless it be for common defence against aggressions on the part of France, and that, therefore, France has it at all times in her own power to prevent the formation of any such confederacy. There is no Power in Europe that does not wish to maintain friendly relations with France, and there is none that could hope to reap any advantage from a voluntary and unprovoked rupture with so powerful a State. But the chances of Sardinia becoming an instrument of such a confederacy have been diminished by the events of late years, and by the new arrangements of Northern and Central Italy. Till within the last 15 years the Government of Sardinia was swayed by the influence of Austria, and might have been supposed to be likely, in the event of a war between Austria and France, to give passage through Savoy to any Austrian force which might have wished to enter France in that direction; but of late years Sardinia has broken away from her connection with Austria, and has looked to France, and not in vain, for friendship and support. Sardinia, therefore, is less likely than ever willingly to give passage to a hostile force wishing to enter France; and it is obvious that Sardinia, increased in strength, while the Austrian frontier is thrown back to the Mincio, is less likely than when she was much weaker, and when the Austrian frontier was on the Ticino, to yield on compulsion that passage to Austrian troops which she would not concede of her own free will. We may, consider, therefore, as groundless the apprehension that Sardinia, retaining possession of Savoy, might open a passage through that province into France to the troops of a hostile confederacy. It seems, then, to her Majesty's Government that the argument in favour of the annexation of Savoy to France, founded on the assumed insecurity of the French territory bordering upon Savoy, falls to the ground when it comes to be fairly examined. M. Thouvenel says that this demand for the cession of Savoy to France ought not to give umbrage to any Power; that it is founded on a just balance of forces, and is especially pointed out by the nature of things, which has placed the French system of defence at the foot of the western slopes of the Alps. But her Majesty's Government must be allowed to remark that a demand for the cession of a neighbour's territory made by a State so powerful as France, and whose former and not very remote policy of territorial aggrandisement brought countless calamities upon Europe, cannot well fail to give umbrage to every State interested in the balance of power and in the maintenance of the general peace. Nor can that umbrage be diminished by the grounds on which the claim is founded, because, if a great military Power like France is to demand the territory of a neighbour upon its own theory of what constitutes geographically its proper system of defence, it is evident that no State could be secure from the aggressions of a more powerful neighbour; that might, and not right, would henceforward be the rule to determine territorial possession; and that the integrity and independence of the smaller States of Europe would be placed in perpetual jeopardy. But M. Thouvenel appeals to historical precedents in support of the claim now made. Her Majesty's Government will not enter into an examination of what took place in regard to the succession to the throne of Spain, or in regard to the succession to the throne of Austria, because the transactions of those periods have no practical applicability to the present state of European affairs; but with regard to the later transaction to which M. Thouvenel adverts—viz., the arrangements of the treaty of 1814—her Majesty's Government would beg to observe that the arrangements of that treaty by no means bear out the claim now made by France, and that it cannot be with reference to the stipulations of the treaty of 1814 that the demand for the cession of Savoy and of the county of Nice can be termed by France a 'revendication.' It is to be observed, with regard to the term 'revendication,' that it is stated that 'la revendication a lieu lorsqu'on réclame une chose à laquelle on prétend avoir droit.' Now, the arrangements of the treaty of 1814 were of short duration, and, having been superseded by those of the treaty of 1815, they cannot be appealed to as the foundation of any right to be claimed by France. But the treaty of 1814 did not give either Savoy or the county of Nice to France. Article III. of the treaty of 1814 did indeed leave to France a very small portion of Savoy; but that portion was immediately contiguous to the French frontier, and was at a distance from the slopes of the Alps. The words of Article III. on this point were as follows:—'In the department of Mont Blanc France acquires the Sub Prefecture of Chambery, with the exception of the cantons of l'Hôpital, St. Pierre d'Albigny, la Rocette, and Montmelian; and also the Sub-Prefecture of Annecy, with the exception of the portion of the canton of Faverges situated to the east of a line passing between Ourechaise and Marlens on the side of France, and Marthod and Ugine on the opposite side, and which afterwards follows the crest of the mountains as far as the frontier of the Canton of Thones. This line, together with the limit of the cantons before mentioned, shall, on this side, form the new frontier.' It follows, therefore, from what is thus stated, that if France claims Savoy and Nice on the principle of a 'revendication'—that is to say, on the principle of claiming that which she has at any time had a right to—her claim cannot be founded on the treaty of 1814, but must go back to the time of the first French Empire; and it is needless to point out what just alarm the whole of Europe must feel at a claim which, however limited in its present application, is susceptible of being extended to such vast and dangerous dimensions. M. Thouvenel, indeed, records the declaration spontaneously made by his Imperial Majesty on ascending the throne, that the governing rule of his relations with Europe would be respect for treaties concluded by preceding Governments of France, and M. Thouvenel declares that this is a principle of conduct to which his Imperial Majesty will always make it to himself a law to remain faithful. The declaration referred to by M. Thouvenel was no more than might have been expected from the just and enlightened Sovereign by whom it was made; and the assurance given by M. Thouvenel that it will be strictly and inviolably observed must be gratifying to the allies of France and satisfactory to the whole of Europe. But M. Thouvenel alleges that the present is an exceptional case, that changes which have taken place, and which are about to take place, in Italy involves changes in the territorial arrangements established by existing treaties, and that those treaty arrangements ought not to be altered to the detriment of France. Her Majesty's Government think they have shown that no detriment or danger to France would be the result of the changes now in progress in Italy; but there is a State in whose integrity and independence all Europe takes a deep interest, and whose integrity and independence France, among other Powers, has pledged herself by treaty to respect and maintain, and that State would suffer the most serious detriment, and would be exposed to the most serious danger, by the proposed transfer of Savoy from Sardinia to France. It is needless to say that this State is Switzerland. By the treaties of Vienna of 1815 the Powers of Europe, France included, acknowledged and guaranteed the integrity and the perpetual neutrality of Switzerland, and as a security for that integrity and that neutrality it was stipulated that the provinces of Chablais and of Faucigny, and all that portion of Savoy which is north of Ugine, shall form part of the neutrality of Switzerland, as acknowledged and guaranteed by the contracting Powers; and it was further stipulated that, in consequence thereof, whenever the Powers, neighbours of Switzerland, should be actually at war, or whenever there should be an imminent danger of war between them, the troops of the King of Sardinia, the Sovereign of Savoy, which may happen to be in those provinces, shall retire therefrom, passing, if necessary, through the Valais, and that no armed troops of any other Power shall either traverse or be stationed in those provinces and territories, except such troops as the Swiss Confederation shall think proper to place therein. It is plain that these engagements about Savoy to which France is a party were intended as a security to Switzerland against danger coming from France; but what would become of that security if Savoy were annexed to France, and if the very Power against which this access to Switzerland has been barred should become the owner of the barrier thus erected for the protection of the Confederation? It is indeed implied in the despatch of M. Thouvenel that France, in taking Savoy, would accept also the engagements by which the King of Sardinia is bound in regard to the neutralised portion of that country; but it is no disparagement to France to say that neither Switzerland nor the Powers of Europe could consider such an arrangement as affording to the integrity and neutrality of the Swiss Confederation that security which the above mentioned stipulations of the treaty of Vienna are calculated to afford; and her Majesty's Government contend that it is not competent for France and Sardinia, by the compact between them, and without the consent of the other States of Europe, so materially to impair, as the proposed cession of Savoy would do, an element of security which a great European compact has provided for a State which independence is an object of European concern. Nor can it be for the well understood interest of France herself to break down the barriers by which the neutrality of Switzerland is secured. It must surely be acknowledged that the neutrality of Belgium at the northern and of Switzerland at the southern extremity of the eastern frontier of France is of advantage to her, as well as to Europe. The neutrality of those two States narrows the line of frontier along which hostilities between France and Germany can take place, and, adding to the security of both, it tends to give stability to the general peace. M. Thouvenel alleges that the proposed cession of Savoy and the county of Nice to France raises no question incompatible with the best established and most rigorous rules of public law. He points to similarity of character, of language, of habits; to the geographical configuration, and to commercial intercourse, as having prepared and adapted the people of those countries for annexation to France; and he says that the Alps ought to be the line of separation between France and Italy, and that thus the new boundary which it is proposed to establish between France and Piedmont finds its sanction in the force of things. This statement, indeed, opens a wide field for conjecture as to the future, and though it is immediately followed by the somewhat inconsistent assurance that it is not upon the ground of ideas of nationality, nor upon that of natural frontiers, that the cession of Savoy and of Nice is demanded, those arguments cannot fail to give rise to the most serious reflections. Her Majesty's Government, then, would beg to submit that no case has been made out to justify this cession on the ground of necessary defence for France, and that this cession would most unjustly, and in violation of treaty engagements, materially weaken a defensive arrangement which united Europe has provided as a security for the neutrality and integrity of Switzerland. Great Britain has no direct interest of her own in this matter, and it is from no unfriendly feeling towards France that her remonstrances on this subject have proceeded. Her Majesty's Government, indeed, are deeply impressed with the conviction that any territorial advantage which France might gain by the proposed annexation would be far more than counterbalanced by the distrust with which it would inspire the other States and Powers of Europe. The calamities which overspread by turns almost every part of the continent of Europe during the closing years of the last and the early years of the present century are still fresh in the memory of mankind; their renewal would indeed, be a deplorable misfortune, and it cannot be surprising that the attention of nations and of their rulers should be directed, with anxious solicitude, to events which have a bearing both on the interests of the present and on the destinies of the future. Your Excellency will read and give a copy of this declaration to M. Thouvenel.

"I am, &c.

"J. Russell."

In acknowledging this despatch M. Thouvenel expresses to Count de Persigny his very lively feeling of regret that he has not succeeded, as he desired, in modifying an opinion which was already known to him through the previous communications of the English Ambassador. He states that the prolongation of any discussion on the subject would have no practical result, and he prefers, rather than provoke a fresh exchange of explanations equally painful to both countries, to confine himself to asserting that Lord John Russell's despatch has not the character of a protest. "In a word," he says, "the Government of her Britannic Majesty declares that it does not share the opinion of the Government of the Emperor; but this divergence does not constitute an opposition of a nature to affect the relations of the Cabinets of Paris and London." Dr. Kern, the Swiss Minister in Paris, has placed in the hands of M. Thouvenel a new protest on the part of his Government against all or any execution of the treaty concerning the cession of Savoy to France, and against the taking possession, in any form, of the neutralised provinces until a previous understanding with the Powers and with Switzerland, which, in accordance with the principles of international law, is absolutely necessary, and which by the second article of the treaty is expressly reserved, be effected. The *Moniteur* of Friday published the text of the treaty, which is as follows:—

"In the name of the Most Holy and indivisible Trinity, the Emperor of the French having explained the considerations which, in consequence of the changes made in the territorial relationships between France and Sardinia, made him desire the annexation of Savoy and of the *arrondissement* of Nice to France, and the King of Sardinia having shown himself disposed to accede thereunto, their said Majesties have decided to conclude a treaty to that effect, and have named the undersigned Plenipotentiaries, &c, who have agreed upon the following articles:—Art. 1. The King of Sardinia consents to the annexation of Savoy and of the *arrondissement* of Nice to France, and renounces for himself and all his descendants and successors his rights and claims to the said territories. It is agreed between their Majesties that this *reunion* shall be effected without any constraint upon the wishes of the populations, and that the Governments of the Emperor of the French and of the King of Sardinia shall concert together as soon as possible on the best means of appreciating and taking note of the manifestations of those wishes. Art. 2. It is also understood that the King of Sardinia cannot transfer the neutralised portions of Savoy except upon the conditions upon which he himself possesses them, and that it will appertain to the Emperor of the French to come to an understanding on that subject as well with the Powers represented at the Congress of Vienna as with the Helvetic Confederation, and to give them the guarantees which result from the stipulations alluded to in the present article. Art. 3. A mixed commission will determine, in a spirit of equity, the frontiers of the two States, taking into account the configuration of the mountains and the necessity of defence. Art. 4. One or more mixed commissions will be charged to examine and to resolve, within a brief delay, the divers incidental questions to which the annexation will give rise—such as the decision of the contribution of Savoy and of the *arrondissement* of Nice to the public debt of Sardinia, and the execution of the obligations resulting from contracts entered into with the Sardinian Government, which, however, engages to terminate itself the works commenced for cutting a tunnel through the Alps (Mont Cénis). Art. 5. The French Government will take into account, as regards functionaries of the civil and military order belonging by their birth to the province of Savoy, or to the *arrondissement* of Nice, and who will become French subjects, the rights which they have acquired by services rendered to the Sardinian Government; they will especially enjoy the benefits of life appointments in the magistrature and of the guarantees assured to the army. Art. 6. Sardinian subjects originally of Savoy, or of the *arrondissement* of Nice, or domiciled actually in those provinces, who would wish to maintain the Sardinian nationality, will enjoy during the period of one year, dating from the exchange of the ratifications, and in virtue of a previous declaration made to the competent authorities, the faculty of removing their domicile to Italy and settling there, in which case their qualifications as Sardinian citizens will remain to them. They will be at liberty to keep their landed property situate on the territory annexed to France. Art. 7. For Sardinia the present treaty will become law as soon as the necessary legislative sanction has been given by the Parliament. Art. 8. The present treaty shall be ratified and the ratifications exchanged at Turin within the delay of 10 days, or earlier if possible. In faith of which the respective Plenipotentiaries have signed it and affixed their seals thereunto. Done in duplicate at Turin the 24th day of March, 1860.

"Talleyrand, Benedetti, Cavour, Farini."

The *Moniteur* of Sunday contained the following statement in reference to the Pope's bull of excommunication, with the view of preventing its publication in France:—

"The Government, under existing circumstances, considers it to be its duty to recall the following articles of the Concordat—viz., that no bull, brief, rescript, mandate, provision, or other document from the Court of Rome, even regarding private persons, can be received, published, printed, or otherwise put into execution without the authorisation of the Government."

The *Moniteur* formally denies the report that the effective strength of the infantry regiments is about to be reduced by two companies per regiment. M. Louis Veuillot, the late editor of the *Univers*, has returned to Paris from Rome. On the day after his arrival the police received information from one of their secret agents, who had accompanied him to and from Rome without exciting his suspicion, that M. Veuillot was the bearer of despatches and other documents from the Papal Court to the Nuncio in Paris. A search was accordingly made at his residence, which has resulted in the seizure of papers, which have been placed in the hands of justice. The statement that M. Veuillot had been arrested is untrue.—The Mediterranean squadron left Toulon on the 31st ult. for Italy, and the Brest

squadron of three line-of-battle ships, under the command of Admiral Paris, sailed on the 29th ult. from that port for the Mediterranean.—The Abbé Huc, formerly a missionary in China and Thibet, and well known for his excellent work on the last-named country, has just died in Paris, after a short illness.

SPAIN.—A revolutionary movement has taken place, in Spain, and Don Carlos, the Count de Montemolin has been proclaimed king by the title of Charles VI. It appears that after a recent meeting in Paris between the Count de Montemolin, Gen. Cabrera, Gen. Elio, and others of less note, General Ortega, Governor of the Balearic Islands, embarked the troops under his command, and disembarked them at Tortosa, near Valencia. As soon as the troops obtained knowledge of his project they refused to follow him, and General Ortega was obliged to take to flight, pursued by his soldiers, who have remained faithful to the Queen. General Ortega is still at large, but is closely pursued. Perfect tranquillity prevails everywhere. Private advices say that General Concha sent troops against General Ortega, and that other troops were also despatched from all parts of Spain to suppress the movement. The insurrection has met with little sympathy. The Deputies have assembled to protest against the rebellion, and even private persons have offered their services. Several loyal addresses have been forwarded to the Queen, and the Bank of Barcelona has offered 40,000,000 to the Government.

PORTUGAL.—The Cortes, by a vote of 123 to 12, have granted to M. Salamanca the privilege of constructing the new Portuguese Railway.

SWITZERLAND.—Accounts from Berne of the 4th inst. state that the National Council, by 106 votes to 3, and the Council of State unanimously, have voted the extraordinary powers demanded by the Federal Council. In reply to the request addressed by Switzerland to the Powers who signed the Treaty of Vienna, Russia, England, Austria, and Prussia have pronounced themselves in favour of the immediate assembling of a Congress. The Federal Council has now addressed a similar request to the Powers who signed the Treaty of Aix-la-Chapelle. The Federal Council is also about to address another note to the Powers requesting them to determine whether it is in the interest of Europe that the road of the Simplon, which, according to Article 80 of the Final Act of Vienna, is to be possessed by the King of Sardinia, should be ceded to France, who by this road could penetrate into the very heart of Switzerland. About 150 Radicals from Geneva on the 29th ult. seized the steam-boat Aigle and made for Thonon, with the intention of attacking Chablais and Faucigny, but were repulsed by the Savoyards and taken back as prisoners to Geneva. The Federal Council has taken measures to bring the whole of them to trial.

BADEN.—In the sitting of the Chamber of Deputies of the Grand Duchy of Baden, on the 30th ult., the motion proposed by the committee for the rejection of the concordat was, after an animated debate of two days, adopted by 45 votes to 15.

BELGIUM.—A despatch has been addressed by the French Government to its diplomatic agents abroad, in order to reassure the Powers as to the intentions of France in respect of Belgium and the left bank of the Rhine. It states that the annexation of Savoy was an incident of an exceptional nature, which cannot occur again with respect to any other country; that the kingdom of the Low Countries was constituted, on the fall of the first Empire, to serve as a check on France, but that their separation in 1830, by the Belgian revolution, removed what was objectionable in its character; that Belgium is now an independent kingdom, of which the neutrality is guaranteed by the European Powers; that this neutrality effectually protects the French frontier, and that consequently there is no ground whatever for apprehending anything on the part of France against that country.

HANOVER.—The Hanoverian Government has raised fresh difficulties with respect to the redemption of the Stade Dues. The 14th of May next has been fixed by England as the final term for Hanover to give in her declaration.

AUSTRIA.—The Austrian Cabinet has resolved to protest solemnly against the annexation of Tuscany, Parma, and Modena to Piedmont. A note to this effect dated the 24th ult. has been directly addressed to the Cabinet of Turin, and a copy has been sent to all the foreign Cabinets, to whom also a circular note has also been addressed, in which it is said "that Austria, in confining herself at the present time to protesting against the said annexation, hopes that Europe will recognise in this proceeding a most convincing proof of her moderation and of her desire to maintain the peace of the world." The Cabinet of Vienna has replied to the protest of Switzerland by stating that while still maintaining a "passive and reserved attitude," Austria is ready to join the other Powers in promoting the legitimate wishes of Switzerland in regard to the neutralised districts of Chablais and Faucigny. The Archduke Ferdinand Maximilian, who has returned to Trieste from the Brazils, will proceed with his wife to Vienna, having been summoned by the Emperor to sit in the Council of the Empire.

ITALY.—The Pope's Bull of Excommunication was published on the 29th ult., by being affixed to the doors of St. Peter's, St. John Lateran, the Cancelleria and the Curia Innocentiana on Monte Citorio, and on the walls of the Campo di Fiore. It is of enormous length, and in the most verbose Latin. The following is a brief summary of its contents:—

After a recital of the titles and authority of the Pontiff, it proceeds to state the injuries to which the enemies of the Holy See and true religion, and especially Piedmont ("Sub-Alpium Gubernium") have subjected the Papacy for a long time past, referring especially to the anti-ecclesiastical laws of Sardinia, the encroachments on the power of the Church in that kingdom, and the protest of Count Cavour at the Congress of Paris. It then states that when the late war broke out between the Emperor of Austria and the allied Sovereigns of France and Sardinia, no wicked art ("nihil scelleris") was omitted by the latter to stir up hatred against the Pope, and seduce his subjects from their allegiance. It enumerates the various warnings and remonstrances made by the Holy See, and describes how they all failed in their effect, while its enemies have continued their wicked machinations, till at last the people of the Romagna have been threatened and cajoled into an impious renunciation of the rule imposed on them by God for St. Peter and his successors. Taking all these things into consideration, and having implored the aid of the Holy Spirit, and taken council with the cardinals, the Pope says he has resolved to exert his full powers, and therefore anathematises and excommunicates all those who, whether as principals, accomplices, or sympathisers, have taken part in the rebellion of the Romagna. This excommunication consigns them to everlasting perdition, abrogates all indulgences or absolutions received by them from the present or past Popes, or from any priest of the Church—and can only be removed either by the free will of the Pontiff or of his apostolical successors, and even then only on the devout penitence of the offenders, after making full restitution to the Holy See. The document warns all persons from rendering themselves liable to the terrors of this sentence, and concludes with the remark that, as it is obviously unsafe to publish this sentence of excommunication in the rebellious provinces, where it is most needed, it is to be affixed to the five buildings mentioned above, and that all persons whom it concerns will be equally liable as if it had been presented to them individually and by name.

It is asserted that the Pope has since written to King Victor Emmanuel, declaring that his Holiness will be compelled to interrupt all relations with the Royal family, and threatening to employ the most extreme severities of the Church, should the King persist in occupying the Legations.—The Sardinian Chambers were opened on Monday by the King in person. His Majesty entered the hall of the Senate amidst indescribable applause, and delivered the following speech:—

"GENTLEMEN, SENATORS, AND DEPUTIES,

"The last time I opened Parliament, amid the troubles of Italy and the dangers of the State, faith in Divine justice encouraged me to augur well of our destiny. In a very short time an invasion was repulsed. Lombardy was freed by glorious deeds of heroism, and Central Italy became free by the marvellous virtue of its inhabitants, and thus to-day the representatives of the rights and the hopes of the nation are assembled around me. For such a benefit we are indebted to a magnanimous ally, to the valour of his and our soldiers, to the assistance of volunteers, and to the persevering concord of the people. We ascribe the merit of it to God, as without superhuman aid such memorable enterprises cannot be accomplished. The gratitude of present and future generations is due to France for the welfare of Italy, and for consolidating the union of the two nations, who have some community in origin, principle, and destiny. It was necessary to make some sacrifice, and I have made that which was dearest to my heart. Reserving the vote of the people and the approbation of Parliament, and reserving also in regard to Switzerland the guarantee of her international rights, I have concluded a treaty for the reunion of Savoy and the surrounding territory of Nice with France. We have still many difficulties to overcome; but, assisted by public opinion and by the love of my people, I shall never permit any one to offend or forget any right or liberty. Firm, like my ancestors, in the Catholic religion and in the respect due to the supreme chief of that religion, I shall, if the ecclesiastical authority makes use of spiritual arms for temporal interests, in safe conscience and in the traditions of my worthy ancestors find strength to maintain entire the civil liberty and authority for which I am only indebted to God and to my people. The provinces of the Æmilia have been arranged as in former times; but with Tuscany, who has her own laws and her own rules, a special temporal provision was necessary. The short time since, and the rapidity of the event, have impeded the preparation of the laws which are necessary to assist and strengthen the new estate. For the first period of legislation you will only have to discuss the most urgent measures, and my Ministers will prepare with due deliberation the projects upon which you will have to deliberate for the second period. Based on the statute of the country, the political, military, and financial unity, and the uniformity of the civil and penal laws, the progressive administrative liberty of the provinces and communes will renew in the Italian people that splendid and vigorous existence which, at the time of another form of civilisation and of other territorial arrangements of Europe, was the fruit of the municipal autonomy which is to-day opposed to the constitution of strong States and to the genius of the nation. In entering upon the new order of things, and without regarding the old political parties in any other way than remembering the services rendered to the common cause, we call for a noble co-operation and the expression of every sincere opinion, in order to obtain our principal object—the welfare of the people and the greatness of the country, which is no longer the Italy of the Romans nor that of the middle ages. It must no more be left a field open to foreign ambition, but it must, on the contrary, be the Italy of the Italians."

The King of Sardinia has issued a proclamation in which he releases the inhabitants of Savoy and Nice from continuing subjects of his Majesty, and says that "France and Italy are two sister nations, whose destiny is to march at the head of civilisation." By arrangements between France and Sardinia the civil and military functionaries of the provinces ceded to France, on passing under the French dominion, will preserve their rank and pay as under the Sardinian Government. General Garibaldi would therefore obtain the grade of General of Division in the French army; but he has already declared his choice to be Italy, and his intention to remain a subject of King Victor Emmanuel. The elections of Savoy for the Parliament of Turin have terminated in the following results,—out of 17 deputies elected, 15 have openly declared in favour of the union of the province to France; and in the provinces claimed by Switzerland five have declared for France and one for Switzerland. The entry of the French troops into Nice took place on Sunday. The attitude of the population, according to the Italian accounts, was cold, and in the evening there were some disturbances which were suppressed. The French accounts, on the other hand, assert that the troops met with an enthusiastic reception, that the population went to meet them and strewed flowers on their path, and that all the houses were decorated with tricoloured flags. Private letters state that the Italian version of the reception is the correct one.—Accounts from Naples mention an insurrectionary movement in Sicily. A body of insurgents attacked the troops in Palermo, but the soldiers repulsed the insurgents, of whom a great number were killed. The *Patrie*, Paris journal, attributes this movement to English agents, who are trying to bring about the annexation of Sicily to England.

TURKEY AND THE PRINCIPALITIES.—There is great agitation among the Panslavists in Servia and the Principalities of the Danube; but no immediate rising is expected. The French representative at Belgrade has advised this party to use moderation. A *corps d'armée* has left Monastir to encamp between Montenegro and Servia. The son of Prince Milosch has refused to come to Constantinople to receive his investiture. The Porte has obtained from Russia the recall of Prince Dolgorouki. Prince Couza detains as prisoner Prince George Stirby, who is accused of high treason. The Roumains are much attached to Prince Stirby, and demand that he shall be brought to trial.

CANDIA.—The Sultan has granted an amnesty to the Candiotes. The Governor of Candia has imprisoned 42 Greek priests who had declared themselves Catholics. The Ambassador of France has interceded in their behalf, and has invoked religious liberty, which has been promised.

INDIA.—Telegraphic despatches have been received with accounts from Bombay to the 13th March. The following is an abstract:—

Calcutta.—Mr. Wilson on the 3d March explained in the Legislative Council his scheme for a convertible paper currency for all India. Notes of 5, 10, 20, 50, 100, and 1000 rupees are to be issued, to the aggregate value of 5,000,000*l.* sterling, the issue being effected through commissioners, and the notes, for the purpose of guarding against forgery, being printed at the Bank of England. The convertibility of the paper will be provided for by one-third of the amount of the notes in circulation being kept in coin. Two-thirds are to be invested in Government securities. The notes are to be issuable only in exchange for coin. The gold standard is condemned. The present issue of notes by the Bank of Bengal, the Bank of Madras, and the Bank of Bombay is to cease.

Bombay.—The following troops have sailed or were about to sail for China:—Her Majesty's 31st Regiment, 3d Native Infantry, 100 of the 5th Native Infantry, the remainder of the 5th Native Infantry, and No. 3 Battery Royal Artillery. The Punjaub Infantry were to sail from Kurrachee on the 13th March; 600 horses and 600 mules were also to be despatched to China as early as possible.

Peshawur.—The Viceroy has reached the north-west limit of British India. He arrived at Peshawur, accompanied by the Commander-in-Chief, on the 22d of February, and was received with great distinction by the natives and Government authorities. On arriving at the residence of the Commissioner, the Viceroy received an address, written in letters of gold, from the chiefs and residents of Peshawur.

Nepaul.—The rebels have melted away. With the exception of Feroze Shah, Adil Mahomed, and a few others, all the leaders have been captured. The Terai may be said to be clear. The Begum and her son, Birjis Kudr, are at Nya Kote, and it is thought that Jung Bahadoor will allow them to remain there. The survivors among the women who fled with the rebels into Nepaul have been sent into the interior, and will doubtless intermarry with the Nepaulese, as there is a lack of women among the hill men. The Nepaul troops still send in parties of rebels—sickly, wretched, and covered with vermin.

Baroda.—A small force of 150 British and 100 Guicowar's troops, with four guns, has marched from Baroda to Rajpeepla, to reduce Damjee of Sagbarra, who has given trouble for some time past.

Cawnpore.—The *Bombay Gazette* announces that Miss Emily Wheeler, the daughter of General Wheeler, of Cawnpore, is still alive. Captain Harvey, superintendant of the department for the abolition of Thuggee, has had communication with the unfortunate young lady, who is so utterly broken in spirit that she entreats her friends not to seek to bring her back again, but to leave her to her wretched fate.

Kurrachee. — The ship Clifton Bell, from London, with soldiers' families, arrived at Kurrachee on the 6th of March. The steamer attached to Bourne's Indus Steam-train foundered outside the bar of Kurrachee harbour. Endeavours were making to raise her.

CAPE OF GOOD HOPE.—The Cape Parliament has been further prorogued until March 21. The disease in the vine has not been so extensive as was first expected. The haanepool and muscatel have suffered most. In the Graaf-Reinet division alone the loss of stock by the late drought is estimated at 100,000*l.* Much squabbling exists among the projectors of the Cape Town and Wellington Railway, and little progress, comparatively, has been made. The proposed Wyneberg Railway and the line from Port Elizabeth to Graham's Town are as yet in abeyance. The Supreme Court has declared Mahomedan marriages solemnised without banns to be illegal—a decision which will affect a large portion of the colonial population.

AUSTRALIA.—Accounts from Melbourne of Feb. 17 state that the Land Bill was progressing in Parliament. The estimates were nearly voted, and the Bill to authorise the purchase of the Geelong Railway was to be brought in on the evening of the departure of the mails. The Government had agreed to the alteration in the mail route on the condition of other colonies sharing the expenses. The gold receipts had decreased 30,000 ounces as compared with the same period last year. Accounts from Sydney state that the Parliament of that colony met on the 24th January. Mr. Cooper, the Speaker, had resigned, and Mr. Murray had been unanimously elected in his place; the bringing forward of the estimates had been postponed. Extensive frauds had been discovered in the storekeeper's department, and the officials had been suspended in consequence. An increased subsidy for the alteration

of the mail route had been refused. Great floods had caused the destruction of a large amount of property. The railway works were progressing satisfactorily. Advices from Adelaide to the 18th February state that Parliament had been prorogued to the 3d April.

United States.—In Congress, on the 21st ult., the Senate passed the House Bill providing for the protection of female passengers on board emigrant ships, and the Bill only awaited the President's signature to become law. A resolution calling on the President to inform the Senate if any instructions have been given to the naval officers by which the United States' naval forces were to take part in the civil war in Mexico, and by what authority the Mexican war steamers were recently captured, was adopted. A derelict sloop had been picked up in the Lower Bay of New York. On examination it was discovered to have been the scene of a cruel and bloody contest, ending in the murder of every member of the crew. The suspected murderer is in custody. The Indians were still murdering and plundering the Texans. The Governor was actively engaged in raising men, and 500 rangers were already in the field.

Mexico.—Gen. Miramon commenced the siege of Vera Cruz on the 5th of March with 6000 men and a strong siege train. An attack was made on the city on the 7th, but was repulsed, and Miramon was about to bombard the place on the night of the 13th of March. During the siege two war steamers, bought by Miramon at Havannah and commanded by Marin, appeared before the city, and refused to show their flag to the American squadron, the commander of which thereupon sent two American steamers to inquire their nationality. One of the American steamers was fired into by the two steamers, which immediately hoisted the Spanish flag. The Saratoga then fired broadsides, and Miramon's steamers were boarded with the bayonet. The American loss amounted to 3 wounded; that of the Mexicans was 15 killed and 25 wounded. Great excitement prevailed at Vera Cruz. The American Minister had been instructed to land a force for the protection of American citizens. The Washington Administration has approved the act, and has ordered more vessels from the Gulf squadron to proceed to Vera Cruz. It was reported that Lord John Russell had proposed to the contending parties an armistice of several months, to enable a Mexican Congress to arrange matters.

Parliament.

HOUSE OF LORDS.

Friday.—*The China Expedition.*—Earl Grey in moving for an estimate of the probable cost of the expedition to China, up to the close of the financial year 1860-61, expressed his opinion that it would cost five or six millions sterling, and that every blow aimed at China would be more or less felt by this country; and he asked what benefit our trade and commerce could derive from the destruction of Chinese cities and the indiscriminate slaughter of the Chinese people.—The Duke of Somerset denied that the Government were responsible for the recent occurrences in China, but thought that when the news reached this country they would have laid themselves open to severe censure if they had not taken prompt steps to obtain reparation for the outrage to which the British flag had been subjected. With regard to the probable cost of the expedition, it was impossible to form an estimate at present; but so far as the Admiralty were concerned he did not anticipate that the cost of the naval operations during the present year would exceed the 850,000*l.* already voted by Parliament.—The Earl of Malmesbury defended the policy of Lord Derby's Government in reference to China, and accused Mr. Bruce of having acted with undue precipitation in his endeavour to obtain the ratification of the Treaty of Tien-Tsin.—The Earl of Elgin contended that it was impossible for Mr. Bruce to have acted otherwise than he did. Had he retired from the Pei ho, the time for the ratification of the treaty would have expired, and he would have been held responsible for the consequences. For his own part he confessed that he would not have accepted a new mission to China if he believed that it involved any slight to Mr. Bruce. With regard to the expenses of the war, he believed that a very aggravated idea had been formed of the probable cost of the expedition, and he expressed a hope that concessions on the part of the Chinese would render recourse to hostilities unnecessary.—The Earl of Ellenborough thought the new mission could not be entrusted to more able hands than those of Lord Elgin, and he sincerely trusted that his noble friend would be enabled to secure peace with honour to this country without entailing further bloodshed and the expenditure of millions of money. He viewed the probable outbreak of a new war with China with horror and alarm, and he held it to be not only unjust, but absolutely unlawful, to make war for the purpose of making money. After a few words from Earl Grey in reply, the motion was withdrawn.—In reply to a question from the Earl of Camperdown, Earl De Grey and Ripon said the attention of the Government had been called to *Mr. Whitworth's Fire-arms and Projectiles*, and that a trial would shortly be instituted at Shoeburyness, under the superintendence of the officer especially appointed by the Government for that purpose.

Saturday.—The *Royal Assent* was given by commission to the Consolidated Fund (850,000*l.*) Bill, the Mutiny Bill, Marine Mutiny Bill, Endowed Schools Bill, Benefit Societies of England Amendment of Rules Bill, and the Silverdale and Newcastle Railway Bill.—The *Income Tax* and *Stamp Duties Bills* were read a first time; and the Duke of Newcastle said he would on Monday move the suspension of the standing orders, so that they might be passed through the other stages, and receive the Royal assent on Tuesday.

Monday.—Lord Cranworth laid upon the table a Bill for shortening deeds relating to the *Conveyance of Property*. The *Dwellings for Labourers (Ireland) Bill* was read a third time and passed. *The Irish Reform Bill.*—The Marquis of Clanricarde, in moving for returns relating to the population and rating of towns in Ireland, condemned the meagre measure of Parliamentary reform which the Government had proposed for that country.—The Duke of Newcastle admitted that the measure was a mild one, but when it came regularly before the House he should be prepared to defend it.—Lord Monteagle objected to the clause which enabled Irish peers to represent Irish constituencies. The motion was then agreed to. The *Stamp Duties Bill* and *Income Tax Bill* were read a second time, and subsequently passed through all their stages.—The Duke of Newcastle intimated that the Government would be prepared to discuss their financial propositions upon the Customs Bill after Easter.

Tuesday.—The *Royal Assent* was given by commission to the *Income Tax Bill* and the *Stamp Duties Bill*. The business on the paper was disposed of, and their lordships then adjourned to Tuesday, the 17th inst.

HOUSE OF COMMONS.

Friday.—*Electoral Corruption.*—In answer to Mr. E. Ellice, Sir G. Grey said the Government were prepared to recommend that no new writs should be issued either for Gloucester or Wakefield during the present Parliament, as they were of opinion that the most effectual means of checking corrupt practices at elections would be to pass a law enacting that for a given term of years constituencies reported as guilty of such offences should be prevented from returning members to Parliament.—Mr. Adderley inquired the intentions of the Government as to a better apportionment of expenses for the *Defence of Colonies* between the Imperial and Colonial Treasuries, observing that, besides the unequal burden borne by the Imperial Government for the protection of the colonies, the injury arising from the scattering of our forces, and from inducing the colonies not to look to their own resources, and being thus at the mercy of an enemy, there were anomalies in the system calling for remedy.—Mr. S. Herbert said he had already stated his opinion upon the system, which had occupied the attention of the Government, and he would not object to produce a report on the subject.—Mr. Whiteside called attention to the recent appointment of Mr. Lyle, Receiver General in Chancery in Ireland, to the dignity of *Lord Lieutenant of Londonderry*, and contended that the appointment of a Master in Chancery to such an office was unprecedented, and an insult to the aristocracy of the county.—Mr. Cardwell stated that as there was no peer resident in the county eligible for the office, the Lord Lieutenant had chosen the commoner whom he considered most competent to discharge its duties. *Annexation of Savoy.*—Sir R. Peel brought under the notice of the House the position of Switzerland with reference to the recent annexation of Savoy to France. His object was not, he said, to embarrass her Majesty's Government, but rather to strengthen their hands in dealing with a difficult and critical question, involving the independence of a small but heroic State. There was a rumour that her Majesty's Government had sent "a spirited answer" to the circular of M. Thouvenel. It would, however, have been more satisfactory to the country if Lord J. Russell had placed his despatch on the table of the House. He did not believe that the Government had connived at the late aggrandising policy of France, but appearances were strongly against them. They admitted they were grossly deceived by a Power whose sincerity, however, they were bound to acknowledge after the many assurances of good faith which they had received. With regard to the policy of France in reference to her war with Austria, it might have been generous to Italy, but it was fatal to the independence of Switzerland. Mr. Bright had said, "Perish Savoy; the silk of Lyons will double your income." The hon. gentleman might "shunt" his loyalty in that fashion, but he could little appreciate the loyalty and devotion of half a million of people, who for eight centuries had been the mainstay and the rock of defence of the dynasty of Savoy. He did not wish to see active interference, but what he desired was a generous and vigorous protest in vindication of the liberties and interests of an ancient and loyal Republic. Such a step might have the effect of curbing the aggressive policy of France, as it had on a former occasion checked the ambition of the First Napoleon. The adjourned debate on the consideration of the *Income Tax Bill* as amended, was then resumed.—Colonel Dunne moved an amendment to reduce the tax from 10*d.* to 9*d.*, as far as Ireland was concerned.—The Chancellor of the Exchequer opposed the motion, pleading as upon previous occasions, the exigency of the Exchequer. The motion was negatived.—Mr. W. Williams then moved an amendment to exempt incomes under 150*l.*—Sir H. Willoughby urged the unequal pressure of the tax on small incomes, and asked whether the Government contemplated the appointment of a committee to inquire into its inequalities.—Mr. Hubbard asked for information respecting the future policy of the Government in regard to the tax.—Mr. Roebuck complained of its pressure upon poor clerks and poor gentlemen.—The discussion was continued by Alderman Salomons, Mr. Barrow, Mr. P. Urquhart, Sir M. Farquhar, and other members.—The Chancellor of the Exchequer said he would not propose an inquiry into the operation of the tax, but that if the House desired it he would not throw any obstacle in its way. With regard to the exemption of incomes under 150*l.* per annum, he could not accede to the motion, because it would involve a sacrifice of revenue of 600,000*l.* or more upon the financial year.—Mr. Disraeli said, the whole subject of the income-tax had been exhausted by a committee which had sat for two years, and modifications had been made in it, recognising the distinction between permanent and casual incomes. But the Chancellor of the Exchequer had denounced the tax as an immoral enormity, and called for its termination, and the Government of 1852 had been turned out of office because they did not deal with this tax properly. Yet in spite of a kind of compact he had entered into with the country, and with 2,000,000*l.* at his disposal, the same Minister had ostentatiously applied it to other purposes. The Chancellor of the Exchequer had stigmatised the tax as immoral and intolerable, and proposed that steps should be taken for its gradual abolition, and now came forward in 1860 virtually to double it. On a division Mr. Williams's amendment was negatived by 174 to 24.—On the consideration of the *Stamp Duties Bill*, Mr. Bentinck moved the omission of the 17th clause, which repealed the Act 7th George II., passed to prevent gambling in the funds by time bargains, which he denounced as immoral as well as mischievous.—Mr. James said that the clause repealed an Act which was self-repealed, and did not repeal another, which made it perpetual.—After some discussion the Chancellor of the Exchequer consented to the omission of the clause, designing to introduce it in the form of a separate Bill. The clause was then excluded from the Bill. The *Bankrupt Law (Scotland) Amendment Bill* passed through Committee.

Saturday.—On the third reading of the *Income-tax Bill*, Mr. Henley protested against the introduction of a clause which had not been printed, and of which nobody knew anything; and Mr. Griffith complained of the thrusting of clauses into Bill in this manner.—The Chancellor of the Exchequer gave an explanation of the matter and the Bill passed. On the third reading of the *Stamp Duties Bill*, Sir H. Cairns suggested that the stamp duty imposed by the Bill on contracts for the sale of stock was not warranted by the resolution. The suggestion gave rise to considerable discussion, and the difficulty was at length got over by recommitting the Bill and amending the schedule by omitting contract notes, which will be the subject of another Bill. The Bill then passed.—The Chancellor of the Exchequer moved for leave to bring in a Bill to repeal the Act of George II., commonly called "*Sir John Barnard's Act.*"—Mr. James asked whether the Chancellor of the Exchequer's object was to obtain a revenue from contract notes for wagering transactions; if so, the 8th Victoria would prevent him.—The Chancellor of the Exchequer replied that Sir John Barnard's Act had placed persons in the Stock Exchange under a peculiar law, affecting not only wagering transactions, but the ordinary and regular business, and his object was to repeal this exceptional law, and to leave all wagering transactions subject to the general provisions of the Act of Victoria. Leave was given to introduce the Bill.

Monday.—*Italy and Savoy.*—Lord J. Russell laid upon the table some further correspondence on the affairs of Italy, and stated that the correspondence closed with the despatch of M. Thouvenel and a brief reply on the part of her Majesty's Government, in which the latter stated that they intended to keep the question of the neutralised parts of Savoy separate from the general question of annexation. There were also papers from Switzerland containing an appeal to the great Powers who signed the treaty guaranteeing the neutrality of Switzerland to hold a conference on that subject. Her Majesty's Government had replied that there would be no objection to enter upon a conference, if that should be considered the best way of dealing with the question. There were also papers in reference to the Treaty of Turin, in the second article of which it was stated that it would be for the Emperor to come to an understanding with the Powers as to the neutralised portions of Savoy. Her Majesty's Government concluded, therefore, that there would be a serious examination of this important question—one that it was to be hoped would be satisfactory to Switzerland, and which would at the same time meet with the approval generally of the Powers of Europe.—In reply to Mr. Hennessy, Lord John Russell said that the Government had advised her Majesty to recognise the annexation of the Romagna, Tuscany, Modena and Parma to the kingdom of Sardinia. *Public Business.*—Lord John Russell moved that on Thursdays after Easter, and until Whitsuntide, Government orders of the day have precedence of notices of motion. An animated discussion ensued, in the course of which several members took exception to the proposition, on the ground that it was an assault on the privilege of private members, and that unless a bold front were offered to the Government a precedent fatal to the privileges of the House would be established.—Lord Palmerston said the Government had no wish to monopolise the time of the House to the exclusion of independent members. It was in the interest of the public and of the House itself that the motion was made, and its object was to enable the Government to get through a large and exceptional amount of business.—Mr. Disraeli thought the Government had failed to make out a case in favour of the motion.—Mr. Walpole admitted that the time had arrived when it became absolutely necessary to do something to facilitate the course of business; at the same time he questioned whether it would be wise for the Government to insist upon the present motion.—Sir M. Farquhar suggested that ample time would be afforded to the Government if Lord John Russell would consent to abandon his Reform Bill, for the untimely fate of which it was quite evident there would be no sympathy either in the House or the country.—Sir G. Grey moved, as an amendment, the addition of the words, "and that notices of motion have precedence of orders of the day on Fridays," the object of this amendment being to give the Government Thursdays in exchange for Fridays. On a division Sir G. Grey's amendment was carried by 150 to 126, and the original motion, as amended, was then carried by 142 to 117. The House then went into committee on the *Customs Acts*, when the Chancellor of the Exchequer moved an amended resolution imposing a duty upon all articles (except corn, grain, or flour, and timber and wood goods) of 1*d.* per package or parcel, and a dnty of 1*s.* 6*d.* upon bills of lading. The right hon. gentleman explained that the alteration which he had introduced would cause a falling off of 100,000*l.* from the 300,000*l.* which he had originally anticipated to arise from these sources. After some discussion the resolutions imposing the 1*d.* charge upon imported packages and 1*s.* 6*d.* upon bills of lading were agreed to.—On the next resolution, imposing a customs due of 10*s.* 6*d.* per cent. on the warehousing and removal of goods in bond, Mr. Dalglish moved, as an amendment, that the charges should not apply to goods removed from bond. The amendment was negatived on a division by 64 to 50. The resolution was then agreed to.—The Chancellor of the Exchequer postponed until after Easter the resolutions imposing charges on operations in warehouses. The adjourned debate on the second reading of the *Refreshment Houses and Wine Licenses Bill* was resumed by Mr. Crook, who moved an amendment that the Bill be read a second time that day six months. He said that he was induced to adopt this course in the interest of temperance, and not out of any sympathy for the licensed victuallers. He considered that the Bill was unnecessary, that it would have a demoralising effect upon the habits of the people, and that as a fiscal measure it would disappoint the expectations of the Chancellor of the Exchequer.—Mr. Digby Seymour seconded the amendment, urging that the measure could not be justified either upon fiscal, social, or moral grounds, and that it would introduce with French wine a French police.—Mr. Ker Seymer supported the Bill. In his opinion the question was narrowed to a very simple issue, namely, through what path should the public reach cheap wine? The Chancellor of the Exchequer had decided that it should not be through the gin palace. He contended that the time had arrived for abolishing the monopoly of the licensed victuallers, who had enjoyed that privilege too long, and if they now complained of interference they had no one to blame but themselves.—Mr. Hardy admitted that he was not prepared to defend the present system of licensing; at the same time, he could not consent to increase to an unlimited extent the facilities for the sale of nervous stimulants. There were already 121,336 beer houses, independently of public houses and gin-shops, and if a Bill passed for the sale of light wines it would be necessary to go much further and to open the door to free-trade in spirits also. As he considered the Bill would strike a fatal blow at public order and social morality, he would offer it a determined resistance.—Mr. Ayrton moved the adjournment of the debate.—The Chancellor of the Exchequer said he felt that so many members wished to speak on the question that he could not oppose the motion. The debate was then adjourned to Thursday, the 19th inst. *Net Fishing in Fresh Water.*—Mr. Cochrane obtained leave to bring in a Bill to extend the Act to prevent fishing for trout or other fresh-water fish by nets in the rivers and waters of Scotland.—On the motion of Lord Elcho, leave was given to bring in a Bill to amend the *Police and Towns Improvement Act*, so as to enable towns and populous places in Scotland to avail themselves of its provisions for sanitary and other improvements, without at the same time adopting its provisions as regards the establishment and maintenance of a police force.—Mr. Hardcastle brought in a Bill to facilitate the appointment of new *Trustees to Public Charities*.

Tuesday.—*Indian Affairs.*—In answer to Lord Stanley, Sir C. Wood said that it was his intention to bring in a Bill in the course of the present session for the reconstruction of the council of the Governor-General of India, a Bill for the amendment of the law, and a Bill for the amalgamation of the Sudder and Supreme Court. *Newspaper Stamps.*—In reply to Mr. Ewart, Mr. Laing said that it was intended to continue the impressed stamp upon newspapers as a matter of convenience, but that the privilege of retransmission would not be retained. *Reform Bill Returns.*—On the motion that the House, at its rising, adjourn until the 16th inst., Sir J. Pakington asked in what manner the numbers of houses at various amounts of "gross estimated rental" in the cities and boroughs of England, as given in the recent return were ascertained.—Mr. Villiers explained the manner in which the returns had been collected,

City Intelligence.

Money Market.—Stocks firmer. Consols closed at [illegible] for money. The Directors' Committee closed at [illegible] per cent. Bills, [illegible] per cent. Bullion in the Bank of England has increased £[illegible] during the week. Exchanges on Paris, [illegible] per cent. short; Hamburgh, [illegible] per cent. short; Amsterdam, [illegible] per cent. short; Rotterdam, [illegible] per cent. short; Antwerp, [illegible] per cent. short; Frankfort, [illegible] per cent. short; Vienna, [illegible] per cent. short; Trieste, [illegible] per cent. short; Madrid, [illegible] per cent. short; Cadiz, [illegible] per cent. short; Bilboa, [illegible] per cent. short; Barcelona, [illegible] per cent. short; Seville, [illegible] per cent. short; Valencia, [illegible] per cent. short; Malaga, [illegible] per cent. short; Lisbon, [illegible] per cent. short; Oporto, [illegible] per cent. short; Rio de Janeiro, [illegible] per cent. short; Buenos Ayres, [illegible] per cent. short; Montevideo, [illegible] per cent. short; Valparaiso, [illegible] per cent. short; Lima, [illegible] per cent. short; Mexico, [illegible] per cent. short; Havana, [illegible] per cent. short; New York, [illegible] per cent. short; Boston, [illegible] per cent. short; Philadelphia, [illegible] per cent. short; Baltimore, [illegible] per cent. short; New Orleans, [illegible] per cent. short; Charleston, [illegible] per cent. short; Savannah, [illegible] per cent. short; Mobile, [illegible] per cent. short; Galveston, [illegible] per cent. short; Texas, [illegible] per cent. short; Arkansas, [illegible] per cent. short; Missouri, [illegible] per cent. short; Illinois, [illegible] per cent. short; Indiana, [illegible] per cent. short; Ohio, [illegible] per cent. short; Kentucky, [illegible] per cent. short; Tennessee, [illegible] per cent. short; Mississippi, [illegible] per cent. short; Louisiana, [illegible] per cent. short; Alabama, [illegible] per cent. short; Georgia, [illegible] per cent. short; South Carolina, [illegible] per cent. short; North Carolina, [illegible] per cent. short; Virginia, [illegible] per cent. short; Maryland, [illegible] per cent. short; Delaware, [illegible] per cent. short; New Jersey, [illegible] per cent. short; Pennsylvania, [illegible] per cent. short; New York, [illegible] per cent. short; Connecticut, [illegible] per cent. short; Rhode Island, [illegible] per cent. short; Massachusetts, [illegible] per cent. short; Vermont, [illegible] per cent. short; New Hampshire, [illegible] per cent. short; Maine, [illegible] per cent. short; Canada, [illegible] per cent. short; Nova Scotia, [illegible] per cent. short; New Brunswick, [illegible] per cent. short; Prince Edward Island, [illegible] per cent. short; Newfoundland, [illegible] per cent. short; Labrador, [illegible] per cent. short; Greenland, [illegible] per cent. short; Iceland, [illegible] per cent. short; Faroe Islands, [illegible] per cent. short; Shetland Islands, [illegible] per cent. short; Orkney Islands, [illegible] per cent. short; Hebrides, [illegible] per cent. short; Ireland, [illegible] per cent. short; Isle of Man, [illegible] per cent. short; Channel Islands, [illegible] per cent. short; Gibraltar, [illegible] per cent. short; Malta, [illegible] per cent. short; Ionian Islands, [illegible] per cent. short; Crete, [illegible] per cent. short; Cyprus, [illegible] per cent. short; Rhodes, [illegible] per cent. short; Smyrna, [illegible] per cent. short; Constantinople, [illegible] per cent. short; Black Sea, [illegible] per cent. short; Sea of Azof, [illegible] per cent. short; Caspian Sea, [illegible] per cent. short; Aral Sea, [illegible] per cent. short; Lake Baikal, [illegible] per cent. short; Lake Ladoga, [illegible] per cent. short; Lake Onega, [illegible] per cent. short; Lake Peipus, [illegible] per cent. short; Lake Ilmen, [illegible] per cent. short; Lake Chudskoe, [illegible] per cent. short; Lake Pskof, [illegible] per cent. short; Lake Ladoga, [illegible] per cent. short; Lake Onega, [illegible] per cent. short; Lake Peipus, [illegible] per cent. short; Lake Ilmen, [illegible] per cent. short; Lake Chudskoe, [illegible] per cent. short; Lake Pskof, [illegible] per cent. short.

Bank of England.

[illegible]

Courts at the Black [illegible]

Principles and its Family.

[illegible]

Provincial.

[illegible]

Cannel coal. Two men and two boys were killed, several persons were seriously hurt, and about 200 men will be thrown for some time out of employment by the accident. The second explosion occurred on Monday morning at the Seaton Burn Colliery, belonging to Messrs. Bowes and Co., killing the two stokers on the spot, and severely injuring several of the men and boys who were assembled at the pithead waiting to descend the mine. The jury in the case of the first accident returned a verdict to the effect that the explosion was caused by want of water, and that if there had been some alarm attached to the boiler, it would probably not have taken place.

SOUTHAMPTON.—Another fatal boat accident in connection with the Great Eastern occurred on Sunday. A boat capsized soon after leaving the ship, when the foreman of the carpenters who had been at work on board was unfortunately drowned. The other persons in the boat were saved.

Ireland.

THE O'CONOR DON ON THE POPE AND HIS SUBJECTS.—At the recent election for Roscommon the O'Conor Don, who holds the honorary office of Chamberlain of the Pope, in returning thanks for his election made the following remarks on the Pope as a temporal sovereign:—

"An objection has been raised to my address because I have expressed sympathy with the Holy Father. That is an objection that never could have come from the men of Roscommon; and therefore it is one that I might very well pass over without notice. I sincerely think that the Holy Father should be left in possession of his dominions. I wish that he should be free from all foreign intervention, and I would even go so far as to say—using the words of a certain gentleman in this county—that he should be left perfectly at liberty 'to wallop his own niggers.' I say so, because I place implicit reliance upon the benevolence and kindness of one of the most paternal rulers in Europe. But even if I did not place that confidence and reliance upon the Pope, I should still I think adhere to that opinion, because, to tell you the truth, I believe that a little walloping would do the said niggers no great harm."

A MAGISTERIAL DELINQUENT.—Mr. R. W. Hall Dare, J.P. of the county of Sligo, was tried at the Quarter Sessions of Ballymote, on Saturday, on a charge of having indecently assaulted Elizabeth Montagu, an Englishwoman, the wife of his under-gamekeeper. The jury took a long time to deliberate, but eventually they brought in a verdict of guilty of common assault. In passing sentence, the Assistant-Barrister (Mr. Harstonge Robinson) said that his brother magistrates and himself considered it their duty to impose upon him a punishment that would mark their disapprobation of his conduct, and show to the public that, no matter how high the position of a party guilty of such an offence, the law must take its course with regard to him. For these considerations they felt it to be their duty to sentence him to one month's imprisonment, and that he pay a fine of 5*l.*, together with 10*l.* which had been incurred as expenses by the prosecutrix. Mr. Hall Dare, who had risen from his seat to receive the sentence of the Court, made no observation, and shortly afterwards, in company with the sub-sheriff, walked across to the gaol. Mr. Dare formerly represented an English county in Parliament, and a few years ago became the purchaser, under the Encumbered Estates Court, of the Perceval property in the county of Sligo, since which he has resided constantly in Ireland. The whole affair has, of course, created great interest in the county of Sligo.

Sporting.

THE UNIVERSITY BOAT RACE.—This great race took place on Saturday from Putney to Mortlake, in the presence of many thousands of spectators, and terminated in the success of Cambridge by a length and a half over Oxford. The distance, 4¼ miles, was rowed in 25 minutes.

THE FORTHCOMING PRIZE FIGHT.—On Saturday afternoon Colonel Robertson chief constable of the Hertfordshire police, applied to the justices in petty session for a warrant to apprehend Sayers and Heenan, in order that they might be bound over to keep the peace. Colonel Robertson stated that he had received information that the fight was appointed to come off in the county of Hertford. If the assemblage were likely to be an ordinary one the force at his command would be ample to prevent a breach of the peace, but he had reason to believe that not less than 8000 persons would accompany the pugilists to the spot fixed upon for the encounter, and he therefore felt it necessary to take the precaution of binding the parties over to keep the peace. The Bench said the matter was one of great importance, as there was no knowing what mischief might be done by the irruption of 8000 persons of the class likely to assemble at a prize-fight into a quiet agricultural county. The warrant was immediately granted, and signed by three magistrates. It was understood that the warrant would be at once executed, and the parties required to find sureties to a heavy amount.

Law.

OXFORD CIRCUIT: GLOUCESTER.—*The St. Briavel's Murder.—Joseph Webb*, 21, was charged with the wilful murder of John Hughes, a man aged 76, on the 14th of January last, at St. Briavel's, in the Forest of Dean. It appeared that the prisoner had been for about three months employed as an out-door servant of William Kear, a small farmer and cidershop-keeper at St Briavel's, during the illness of the regular servant, George Hughes, who returned to his employment on the 4th of January last. George Hughes was asked to look at a sick calf, which was kept at a farm about 300 yards from the house, and the prisoner made some objection to this, and became somewhat excited when Hughes went. The prisoner began to tease and pull the hair of his master's son, Richard Kear, a boy 13 years of age, and when the boy called for assistance his grandfather and one of his sisters succeeded, after some difficulty, in releasing him from the prisoner. In the scuffle the sister, a girl 19 years of age, struck the prisoner with a stick, upon which he knocked her down, then the grandfather, and then deceased, John Hughes, who was the father of his fellow-servant, George Hughes. The boy went out and fetched a spade, and told the prisoner that, if he struck his grandfather Kear again, he would hit him with the spade. The prisoner at once knocked old Kear down, upon which the boy struck the prisoner with the spade, and ran away out of the house. Being followed by the prisoner, the boy dropped the spade and escaped. Old Kear kicked the spade, and, as he said, was about to throw it away, when the prisoner, who was a very powerful man, rushed upon him, wrenched the spade out of his hand, and knocked him down with his fist. The deceased, John Hughes, at this time came out of the house, and was crossing the yard when the prisoner, who was in a state bordering on fury, came behind him and struck him down with the spade. The old man's hat flew off, and while he was on the ground the prisoner struck him several times on the bare head with the spade, and proceeded in a state of frenzy to attack several other persons, dislocating the shoulder of one, breaking the arm of another, and cutting open the head of a woman who held a child in her arms. Mr Cripps addressed the jury for the prisoner, contending that the assaults made on the prisoner with the stick and spade were sufficient to reduce the offence to manslaughter only. The jury *Acquitted* the prisoner of murder, and found him *Guilty* of manslaughter. Mr Justice Keating made some strong remarks on the atrocity of the prisoner's offence, and sentenced him to penal servitude for life. *Poaching.—Edwin Chandler*, 24, labourer, *Thomas Hawling*, 18, labourer, and *George Stanley*, 31, labourer, were charged with entering certain enclosed land at Toddington, in the occupation of Lord Sudeley, armed with a gun, on the night of the 7th of February, for the purpose of taking game. It appeared that on the night in question the keepers of Lord Sudeley were out watching. They saw five men come out of a wood, one of whom, Chandler, struck one of the keepers with the stock of a gun. Chandler and Hawling, two of the men, were taken into custody on the spot, and the game recently killed was found upon them. The other men escaped, but the prisoner Stanley was afterwards taken, and identified as being of the party by a witness who said he had known him for several years, and saw him on the night in question, which was moonlight, at a distance of only 11 yards. The jury found the prisoners *Guilty*. The prisoner Stanley was then tried upon another indictment, for a similar offence, committed with others unknown, on the night of the 7th of January, on the same estate. On the night in question three keepers were out watching game, and heard the sound of a gun in Burbury Wood, and on going to the spot they saw five men come out into the road. One of the men had a gun, and as a keeper named Pomfrey seized hold of him the prisoner took up his stick and knocked him down insensible. This was proved by a keeper named Wood, who said he was within two yards of him at the time, it being moonlight. The keepers being overpowered retired, leaving their companion on the ground, and the poachers escaped. Wood saw the prisoner again on the 4th February, and then gave information which led to his being taken into custody. He said he had known the prisoner for years, and knew where he lived. The jury found the prisoner *Guilty*. Mr Justice Keating sentenced Stanley, a very powerful man, and Chandler to five years' penal servitude, and Hawling, in consideration of his having abstained from violence, to six months' imprisonment with hard labour. MONMOUTH.—*The Tredegar Murder.—Martha Taylor*, 30, was indicted for the wilful murder of Elizabeth Taylor on the 26th August last. Deceased was the step-daughter of the prisoner, and was about 14 years of age. She had been subjected to very cruel treatment at the hands of the prisoner, who had deprived her of clothes and food, and had several times said she would not mind taking away her life any more than the life of a mouse. On the 2 th of August deceased was seen going towards a pond and that was the last time she was seen alive. The prisoner was also seen at the pond shortly after deceased was seen there, and the body was afterwards found in it. Several witnesses were examined who deposed to great acts of harsh treatment on the part of the prisoner to deceased. In cross-examination it was proved that deceased went to the pond to fetch water, and that the vessel she took was found broken in the water. Mr Baron Bramwell, in summing up, expressed his opinion that it was not probable that the prisoner would have selected an exposed place, in which many people resided, for the committal of an act of murder. It might be that the prisoner's harsh conduct to deceased had goaded her to an act of self-destruction, in which case the prisoner would be morally but not legally responsible for the death. Or it might be that deceased had accidentally fallen into the pond. The jury returned a verdict of *Not Guilty*, and the judge said that was a very proper verdict. His lordship then ordered the prisoner to be indicted for cruelty to the deceased girl, and being found *Guilty*, she was sentenced to two years' imprisonment.

Railways.

THE LATE ACCIDENT ON THE EASTERN COUNTIES.—The adjourned inquest on Mr. George Alexander Falconer, who died on the 11th ult. from injuries sustained by the accident at Tottenham on February 20, was concluded on Tuesday, when the jury returned a verdict that death was caused by the upsetting of a locomotive engine, and that the upsetting was caused by a wheel being used with a defective tire.

Obituary.

THE COUNTESS DOWAGER OF ELGIN died on Sunday in Paris, after a protracted illness. Her ladyship was second wife of the sixth Earl of Elgin, and mother of the present peer. She was the youngest daughter of Mr. James T Oswald, and married in 1810 the late earl by whom she leaves surviving issue the Earl of Elgin, Colonel the Hon Robert Bruce, C.B., and the Hon Frederick W. A. Bruce, her Majesty's Minister in China.

THE VERY REV. LORD FITZGERALD AND VESCI, Dean of Kilmore, LL.D., &c., died on the 30th ult., at Danesfort, county Cavan, in his 74th year. His lordship married in 1825 the daughter of the late Standish O'Grady, Esq., and succeeded his brother the Right Hon. Vesey Fitzgerald in 1843. The title, which is a barony in the peerage of Ireland, was conferred upon the late peer's mother; her eldest son received also a seat in the House of Lords in right of a barony of the United Kingdom, which became extinct at his death. The late lord having died without male issue, the present title has also become extinct.

THE HON CHARLES FOX KINNAIRD, "Master of Kinnaird," eldest and only surviving son of Lord Kinnaird, died on the 30th ult. at Naples, of fever. He had been recently on a tour in Sicily, accompanied by the Rev. R. Moorsom, and was on his way back to Rome when seized with a violent and fatal attack of malaria. Lord and Lady Kinnaird were travelling up from Perthshire with the intention of hastening to the assistant when the news of their son's illness met them on their arrival in London. Their son was born in May, 1840, and consequently had not completed his 20th year.

COLONEL MURE, of Caldwell, the historian of "The Literature of Ancient Greece," died on the 1st inst. at 1, Kensington Park Gardens, in his 61st year. He was the son of the late Colonel William Mure, of Caldwell, and of the eldest daughter of the late Sir James Hunter Blair, Bart., of Dunskey, and grandson of another William Mure who was M.P. for Renfrewshire from 1742 to 1761. He was born at Caldwell in 1799; and having received his early education at Westminster proceeded to the University of Edinburgh, and completed his course of studies in Germany, where he imbibed that taste for criticism which in after years made his name known among the scholars of modern Europe. It was about 20 years ago that he first came before the public as an author, having published a "Journal of a Tour made in Greece in 1838," which was followed after an interval by a more strictly learned and elaborate disquisition on "The Calendar of Ancient Egypt." About 10 years ago he published the first portion of a still more learned work, "The Critical History of the Language and Literature of Ancient Greece." Only five volumes of this work have yet appeared, and it is understood to have been left imperfect by his death. In 1841 he was an unsuccessful candidate for Renfrewshire against the late Mr. Patrick Maxwell Stewart; but was elected for that county on Mr. Stewart's death shortly before the close of the same Parliament. He was again returned to Parliament in 1847 and in 1852, on each occasion without opposition; but finding his health growing weak, he retired from public life in 1855. In politics he was a moderate Conservative, and supported all the free trade measures of the late Sir R. Peel. He held the office of Lord Rector of the University of Glasgow during the year 1847-48, and was for many years Colonel Commandant of the Renfrewshire Militia. He also took an active interest in Scottish agriculture, and was Vice-Lieutenant of the county of Renfrew. Colonel Mure married in 1825 the second daughter of Mr. William Markham, of Becca Hall, Yorkshire, and granddaughter of the late Archbishop of York, by whom he leaves issue. His eldest son and heir, who is a lieutenant colonel in the Scots Fusilier Guards, was recently married to the Hon. Constance Elizabeth Wyndham, third daughter of Lord Leconfield.

WILLS.—The will of the Right Rev. Dr. Murray, Lord Bishop of Rochester, has been sworn under 35,000*l.* personalty; Rev. William Canning, canon of Windsor, 30,000*l.*; Mr. Murphy, son of the Irish cattle salesmaster, 150,000*l.*; Mr. Collard, the celebrated pianoforte manufacturer, 140,000*l.*

BIRTHS.—On the 30th ult, at 35, Hill Street, Lady EMILY WALSH, of a daughter—28th ult, the Lady OLIVIA FITZPATRICK, of a son—28th inst, at Adlestrop Rectory, the wife of the Hon. and Rev. H. P. CHOLMONDELEY, of a son—28th ult, at St. Petroc Minor Rectory, prematurely, Lady MOLESWORTH, of a daughter, stillborn—1st inst, at Larchfield, near Farnham, the wife of Major General LAWRENCE, of a son—28th ult, at 42, Leeson Street, Dublin, the wife of the Hon. Mr. JUSTICE CHRISTIAN, of a son.

MARRIAGES.—At St. Petersburg, Sir JOHN FIENNES T. CRAMPTON, Bart., K.C.B., her Majesty's Minister at the Court of Russia, to Mademoiselle VICTOIRE BALFE, the celebrated vocalist—31st ult, at Abergwilly Church, A. H. SAUNDERS DAVIES, Esq., of Pentre, Pembrokeshire, to FRANCES, fourth daughter of the late GRISMOND PHILLIPS, Esq., of Cwmgwilly, Carmarthenshire—1st inst, at Harrow-on-the-Hill, the Rev. FREDERICK RENDALL, Assistant Master of Harrow School, to JEAN MARY RICKETTS, third daughter of BENJAMIN TAYLER, Esq., late of the B.C. service—3d inst, at St. John's Church, Clifton, WILLIAM CHARLES MACREADY, Esq., the tragedian, of Sherborne House, Dorset, to CECILE LOUISE FREDERICA, fourth daughter of the late HENRY SPENCER, Esq., and grand-daughter of the late Sir William Beechey.

DEATHS.—On the 28th ult, in Dorset Place, Dorset Square, of influenza, ELEANOR ALBINIA PERY, youngest daughter of the Hon. Edmond Sexton Pery, and granddaughter of the late Earl of Limerick, aged 21—30th ult, at Wherstead Park, Lady HALLAND, relict of Sir Robert Harland, Bart., aged 82—30th ult, while on a visit to her son-in-law, the Rev. John F. Fenn, [illegible], Lady LIGNORI, wife of Sir Samuel Bignold, of Norwich, aged [illegible]—3d inst, at 27, Cornwall Street, Belgrave Square, MARY, daughter of the late Hon. Colonel David Leslie Anstruther, and widow of F. S. G. FARRER, Esq., of Bradfield House, Bucks—22d inst, at Market Jew Terrace, Penzance, Miss KITTY DAVY, only surviving sister of the late Sir Humphrey Davy, aged 81—9th inst, at Howard Charlotte, youngest and only surviving daughter of the late Right Rev. JACOB MOUNTAIN, D.D., and sister to the present Lord Bishop of Quebec—31st ult, at 20, Queen Street, Mayfair, suddenly, JULIAN CUNNINGHAME, only child of MOUNTSTUART E. GRANT DUFF, Esq., M.P., aged three months—29th ult, at her residence, 17, York Terrace, Regent's Park, HELEN, relict of WILLIAM KAY, Esq., formerly of Tring Park, Herts—27th inst, at his residence, Keynsham, near Bath, HENRY EDEN MYNORS, Esq., a Justice of the Peace for the counties of Worcester and Somerset, aged 68—21st ult, at Blaendyffryn, Cardiganshire, JOHN LLOYD DAVIES, Esq., a magistrate and deputy-lieutenant for the counties of Carmarthen and Cardigan, and late M.P. for the Cardigan Boroughs, aged 59—28th ult, at Eccleston, Chester, CHARLOTTE, widow of the Rev. W HODGSON D.D., late Master of St. Peter's College Cambridge, aged 59—25th ult, at Christ Church, Oxford, Miss OGILVIE, sister of the Rev. Dr. Ogilvie, Canon of Christ Church, aged 64—30th ult, at Cheltenham, Major General JOHN J. HOLLIS, on the retired full pay of the 25th Regiment, aged 76—23d inst, at Nice, Colonel HODGE, K.H. (late 20th Regiment), of Gloucester Place, Hyde Park, and of Aylsham, Norfolk, aged 73—1st inst, at his residence, 9, Devonshire Terrace, Hyde Park, THOMAS KNOOP, Esq., Secretary to the Board of Inland Revenue, aged 64—30th ult, at 16, Clarendon Road, Kensington, Professor NARRIEN, F.R.S., late of the Royal Military College, Sandhurst, aged 77—28th ult, at Chiswick House, Chiswick, Mrs. CATHERINE HUGHES, for 56 years housekeeper in the Duke of Devonshire's family, aged 82.—1st inst, at Paradise Nursery, Holloway, Mrs. JANE PARKER, mother of Mr. Robert Parker, in the 76th year of her age, after a long and painful illness.

Markets.

POTATOES.—SOUTHWARK, MONDAY, April 2.

During the past week the arrivals coastwise have been moderate, but more than equal to the demand; the trade continues heavy. The following are this day's quotations:—York Regents, per ton, 90s. to 150s.; Lincolnshire do., 80s. to 95s.; Dunbar do., 100s. to 120s.; Perth, Forfar, and Fifeshire Regents, 80s. to 100s.; do. Rocks, 75s. to 85s.; do. Reds, 75s. to 85s., French Whites, 70s. to 80s.; Belgian do., 60s. to 70s.

BRITISH WOOLS.—LONDON, FRIDAY, April 6.

The demand for fleeces and fleece sorts has been on only a small scale for immediate consumption, as political matters have been disquieting, and money tending higher in value. Skin wool has met with a ready sale at late rates.

South-down Hoggets	1	8	to 1	9	Leicest Wethers	1	5	— —
Half bred ditto	1	8	—	—	Ditto Hoggs	1	7	— —
Down Ewes	1	6	—	—	Combing Skins	1	2	to 1 6
Kent Fleeces	1	6	—	1 6½	Blanket ditto	0	6	— 10½
					Flannel Wool	1	2	— 1 6

COAL MARKET.—APRIL 4.

Bowers West Hartley, 16s.; Byass's Bebside West Hartley, 16s.; Hastings Hartley, 16s; Howard's West Hartley, 15s. 9d.; Tanfield Moor, 12s. 6d; Tanfield Moor Bates, 12s. 6d.;

Wylam, 16s.; Walls End Acorn Close, 19s. 3d.; Walls End Eden, 19s. 3d.; Walls End Kepier Grange, 19s. 3d.; Walls End Heugh Hall, 19s. 3d.; Walls End Kelloe, 19s. 6d.; Walls End North Hartlepool, 15s. 6d.; Carway and Duffryn Malting, 23s.; Walls End Firth's Robin Hood, 14s. 9d.—25 ships at market.

COVENT GARDEN.—April 7.

Vegetables are still scarce and dear. Pine Apples and Grapes have not altered since our last report. Good Apples and Pears are scarce. The former consist of Golden Knob, Bess Pool, and Wyken Pippin, and the latter of Ne Plus Meuris, Beurré Rance, and Easter Beurré. Oranges are plentiful and cheap. Good Cobs realise 1s. per lb., and Spanish Hazel Nuts for planting 16s. per bush. Rhubarb, Asparagus, and Seakale are furnished in tolerable quantities. Parsley is still very dear. Green Peas may be obtained at high prices. Potatoes realise 4s. 6d. a bushel. A few new frame ones may be had at from 3s. to 5s per pound. Mushrooms can still be had in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, Geraniums, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Pears, per doz.; 6s to 10s
Grapes, per lb., 12s to 20s	Oranges, per 100, 2s 6d to 8s
Strawberries, p.oz., 1s6d to 2s6d	Lemons, per 100, 5s to 8s
Apples, per doz., 2s to 6s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 6s to 10s	Cucumbers, each, 1s to 3s
Seakale, per basket, 2s to 3s	Artichokes, per doz., 2s to 3s
Rhubarb, per bundle, 6d to 1s	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Peas, p. half sieve, 15s to 20s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d

HOPS.—BOROUGH MARKET, WEDNESDAY, April 4.

Messrs. Pattenden & Smith report a rather better demand for Mid and East Kents, as well as for Wealds and Sussex; old Hops are also in fair request. Prices for fine-coloured samples of both new and old are the turn dearer.

METROPOLITAN CATTLE MARKET

MONDAY, April 2.

We have a larger supply of Beasts and consequently prices are lower for all descriptions. The number of Sheep is nearly the same as on Monday last, and the quotations of that day are well supported, although trade is by no means so brisk. There is a considerable demand for good Lambs and Calves at full rates. From Germany and Holland there are 170 Beasts, 1550 Sheep, and 95 Calves; from Spain 25 Beasts; from Scotland, 150; from Ireland, 50; from Norfolk and Suffolk, 2300; and 200 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	8	to 4	10	Best Long-wools.	5	4	to 5	6
Best Short-horns	4	6	— 4	8	Do. Shorn	4	6	— 4	8
2d quality Beasts	2	8	— 3	8	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds	5	6	to 5	8	Do. Shorn	..	..	—	..
Do. Shorn	4	8	— 5	0	Lambs	..	..	..	— ..
					Calves	..	..	5 0	— 5 10
					Pigs	..	..	4 0	— 5 0

Beasts, 3810; Sheep & Lambs, 22,070; Calves, 130; Pigs, 330.

THURSDAY, April 5.

The supply of Beasts is moderate, and trade is about the same as on Monday. We are not overdone with good Sheep, and late prices are maintained although trade is slow. Lamb is the principal feature of this day's market, this being accounted the commencement of the season. The show is not so good as on former occasions. Choice small Lambs are very dear. Calf trade is brisk. Our foreign supply consists of 50 Beasts, 560 Sheep and 103 Calves; from Norfolk and Suffolk, 400 Beasts; about 400 Lambs from the Isle of Wight; and 142 Milch Cows.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	8	to 4	10	Best Long-wools.	5	4	to 5	6
Best Short-horns	4	6	— 4	8	Do. Shorn	4	6	— 4	8
2d quality Beasts	2	8	— 3	8	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds	5	6	— 5	8	Do. Shorn	..	..	—	..
Do Shorn	4	8	— 5	0	Lambs	..	..	6 8	— 7 8
					Calves	..	..	5 0	— 5 8
					Pigs	..	..	4 0	— 5 0

Beasts, 862; Sheep & Lambs, 7170; Calves, 253; Pigs, 140.

MARK LANE.—MONDAY, April 2.

The supply of Wheat from Essex and Kent to this morning's market was moderate, and the stands were eventually cleared at the prices of this day se'nnight. Holders of foreign continue firm in their demands, and in the business transacted, which was not large, last Monday's quotations were realised. Barley is scarce, and brings an advance of 1s. per qr. Beans and Peas sell at the extreme prices of this day week. Oats are firm, without alteration in value. Country and American Flour is held for a slight advance.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	46	50	Red	43	47
— — fine selected runs..ditto	48	54	Red	46	50
— — Talavera	48	56			
— Norfolk	—		Red	—	
— Foreign	44	58			
BARLEY, grind. & dist., 24s to 31s..Chev.	38	45	Malting.	36	41
— Foreign..grinding and distilling	23	32	Malting.	35	43
OATS, Essex and Suffolk	19	24			
— Scotch and Lincolnshire..Potato	23	29	Feed ..	19	26
— Irish .....Potato	24	28	Feed ..	19	24
— Foreign.....Poland and Brew	23	26	Feed ..	17	24
RYE	35	38	Foreign.	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....30s to 40s....Tick	33	43	Harrow.	33	43
— Pigeon .....36s — 47s..Winds	48	54	Longpod	—	
— Foreign .....Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	36	38	Suffolk .	36	40
— Maple .... —s to —s ..... Grey	34	33	Foreign.	30	37
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	37	43			
— 2d do. ..... ditto	29	39	Country.	29	39
— Foreign .....per barrel	24	30	Per sack	30	37

WEDNESDAY, April 4.

The weather in the neighbourhood of London since last Monday has been more settled than for a long time past, with a more seasonable temperature of the air. Vegetation is very backward—about three weeks behind ordinary seasons. Wind southerly. The attendance of the trade in Mark Lane to-day was very small, the tone quiet; prices of most articles of the trade without alteration. The supply of home-grown grain was small, and of country-made Flour moderate. The imports of foreign grain into London since Monday were reported this morning as small of Flour, very small of Wheat, and none of Barley or Oats. Wheat: English retail trade at about last Monday's rates; for foreign the demand was quiet at last Monday's prices. Flour was in retail demand at about last Monday's quotations. Barley was scarce, quiet in demand, but firmly maintained upon last Monday's rates, viz., about 1s. per qr. over last week's currency. Oats: quiet trade at the quotations of last Monday. English and Egyptian unaltered in value. Peas quiet at late rates.

ARRIVALS FROM April 2 TO April 4.

	Wheat.	Barley.	Oats.	Flour.
English ..	1460 qrs.	810 qrs.	1030 qrs.	1040 sks.
Irish	— ,,	— ,,	— ,,	— ,,
Foreign ..	300 ,,	— ,,	600 ,,	30 ,, / 100 brls.

LIVERPOOL, Tuesday, April 3.—We have a fair attendance of buyers at our Corn Exchange this morning. Wheat has met only a retail sale, and there is no change to notice in quotations compared with last market day. Flour moves slowly, and the late advance is with difficulty maintained. Indian Corn has a fair consumptive inquiry at previous rates. Oats steady; Oatmeal fully as dear. Beans a shade easier. Peas and Barley are without change. The day is very fine, with a rising barometer, and the market partakes quite of a retail character, but prices are steady.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Feb. 18..	43s 11d	31s 11d	21s 11d	31s 10d	38s 6d	36s 3d
— 25..	44 5	35 7	22 7	35 3	38 11	36 11
March 3..	44 9	36 6	22 11	32 0	39 1	37 8
— 10..	45 0	36 3	22 9	30 5	39 6	37 3
— 17..	45 2	36 5	23 1	34 10	39 7	37 7
— 24..	45 6	36 11	23 4	32 0	39 3	37 7
Agg. Aver.	44 9	36 1	22 9	32 8	39 2	37 3

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Feb. 18.	Feb. 25.	March 3.	Mar. 10.	Mar. 17.	Mar. 24.
45s 6d	..	..	..	..	..	
45 2	..	..	..	..		..
45 0	..	..	..		..	..
44 9	..	..		..	..	..
44 5	..		..	..	..	..
43 11 —		..	..	..	..	..

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, April 5.

Prime Meadow Hay	78s	to 84s	Clover	90s	to 110s
Superior do. (old) ..	86	95	New Clover	—	—
Inferior do.	60	70	Second cut do. ..	80	90
New do.	—	—	Straw	27	34
Rowen	60	70		DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, April 5.

Sup. Meadow Hay..	92s	to 98s	Inferior Clover ..	78s	to 92s
Inferior do.	70	86	New do.	—	—
New do.	—	—	Straw	33	36
Superior Clover ..100		108		JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, April 5.

Fine old Hay	85s	to 90s	Fine old Clover ..100s		to 108s
Inferior do.	70	76	Inferior do	90	96
Prime New Hay	—	—	Fine New Clover ..	—	—
Inferior do.	—	—	Fine 2d cut	84	90
Straw	26	29	Inferior do.	65	75

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

TO NURSERY FOREMEN.

WANTED, A FOREMAN, who understands the Propagation of Hardy Trees and Shrubs, Budding, Grafting, and Laying, Growing Forest Trees, Fruit Trees, and general Nursery work, and who could take charge of a number of men.—Apply to J. G. S., *Gardeners' Chronicle* Office, W.C.

WANTED, AS GARDENER, an experienced Man, who has a thorough knowledge of the Cultivation of Pines, Pot Vines, and Stove Plants upon the most approved system, indispensable with good taste for Flower Garden arrangements. Wages, 65*l.* per annum. No perquisites. One assistant kept.—Address, post-paid, Box 141, Post Office, Wolverhampton.

WANTED, AS UNDER GARDENER, a young Man, who can take the charge of two small Cows and make himself generally useful.—Letters stating age, if married, last situation and how long there, and wages expected, addressed to A. B., 28, Great James Street, London, W.C., will be attended to.

TO SEEDSMEN.

WANTED, as ASSISTANT, in an improving and central town in the South Western counties, an active trustworthy business Man, who can Write a good hand, and Keep Accounts correctly. Wages 25*s.* per week. Or a PARTNER would be treated with, and any one wishing to enter the business would find it a prosperous one.—Apply by letter to J. S., Messrs. Hurst & M'Mullen, 6, Leadenhall Street, London, E.C.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 35, married, no incumbrance; understands his profession in all its branches, also the Management and Improvement of Land, Stock, Woods, and Plantations. Wife could take the care of Dairy, Poultry, and Baking if required. Good characters for capability, sobriety, and industry.—A. B., Mr. Glass, Offwell, near Honiton, Devon.

GARDENER (HEAD).—Age 31, married; is a first class Cultivator of Plants, including Orchids; has had extensive practice in the growth of all kinds of Fruits both in Pots and others; also the laying-out and improvement of Pleasure Grounds. Character unexceptionable.—A. A., Post Office, Hersham, Esher, Surrey.

GARDENER (HEAD).—Age 37, married; perfectly understands his profession; including Early and Late Forcing, the Management of Stove and Greenhouse Plants, &c., Kitchen and Flower Gardens. Will be shortly disengaged. Highly recommended and good character.—A. B., care of Mr. Allen, Ashfordby Railway Station, near Melton Mowbray.

GARDENER (HEAD).—Age 33, married; practically understands his profession in all its various branches, including Orchids, Stove, and Greenhouse Plants, the Early and Late Forcing of Vines, and all kinds of Fruits and Vegetables. Seven years' excellent character from last place, where he has had four men under him.—W. B., 10, Edward's Place, D'Eynesford Road, Camberwell, S.

GARDENER (HEAD).—G. WATSON, age 44, gardener to the late Sir William Amcotts Ingilby, Bart., Ripley Castle, and the present owner of the Castle for more than six years, is at liberty to engage with any nobleman or gentleman requiring a thorough practical Gardener, having had extensive experience in every department of Early Forcing, Tropical Fruits, &c., Plans of Hothouses, Laying-out of Grounds, Formation of Vine and other Fruit Tree Borders on the most improved principle.—Care of Mr. JAMES VEITCH, Royal Exotic Nursery, King's Road, Chelsea, London, S.W.

GARDENER (HEAD).—Married; thorough practical knowledge of his profession in all its branches. Eight and a half years' good character.—G. E., Messrs. Rollissons' Nursery, Tooting, Surrey, S.

GARDENER (HEAD).—Age 36, married, no incumbrance; understands Forcing, the Culture of Stove and Greenhouse Plants, the management of Fruit, Flower, and Kitchen Gardens. Good references.—ETON, Badgemore Park, Henley-on-Thames.

GARDENER (HEAD).—G. HOSKINS, Gardener to H. Grisewood, Esq., Daylesford House, Chipping Norton, Oxon, can with confidence recommend his Foreman (aged 29), who has had great experience in the general routine of Gardening both in England and Scotland, to any nobleman or gentleman requiring a thorough practical man.—Address as above.

GARDENER (HEAD, or good SINGLE-HANDED).—Age 27, single; well experienced in Forcing and Management of Kitchen and Flower Gardens. Two years' character.—A. B., 24, Prince's Road, Notting Hill, London, W.

GARDENER (HEAD, or good SINGLE-HANDED).—Age 40, single; well experienced in Forcing and management of Kitchen and Flower Garden. Good character. Wages, 1*l.* per week.—J. B., 1, Philip Torres, Philip Lane, Tottenham, Middlesex, N.

GARDENER (FOREMAN or SECOND, in a large Establishment).—Understands Pines, Vines, &c., also Kitchen and Flower Gardens.—A. B., Bayman's Library, Lewisham, Kent, S.E.

GARDENER.—Age 33, married; can have a good character from his last place.—A. B., Post Office, Hadlow Down, Uckfield, Sussex.

GARDENER.—Age 32, married, no incumbrance; thorough practical knowledge of Pines, Vines, Cucumbers, and Melons; Flower and Kitchen Gardens.—J. R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER.—Age 38, married; understands Pines, Early Forcing of Grapes, Melons, Flowers, Fruit Trees, and Kitchen Garden. Three years' good character.—J. H., 6, Albert Road, Norwood Newtown, S.

GARDENER.—Age 32, married, no incumbrance; understands Greenhouse, Vines, Flower and Kitchen Gardens, Early and Late Forcing; also Laying-out Gardens. Two years and nine months good character.—C. LODGE, Highfield House, Lydney, Gloucestershire.

GARDENER.—JOHN DAWSON (age 39, married, one child), upwards of five years gardener to J. Churchill, Esq., will be at liberty by the end of the month; has a thorough practical knowledge of his profession. Wages, 65*l.*, a year, with house and firing.—J. DAWSON, Oakfield, Wimbledon Park, S.W.

GARDENER (SECOND).—Age 25; well acquainted with Plant Forcing, and has a good general knowledge of his profession. Can be well recommended.—H. C., care of Mr. Morse, Epsom Nursery, Epsom.

GARDENER (UNDER).—Age 20; has had four years' experience in Early and Late Forcing, Flower and Kitchen Gardening. Highest testimonials of character can be obtained.—R. R., Eardiston Gardens, Tenbury, Worcestershire.

GARDENER (UNDER, where two or three are kept).—Age 26. Four years' good character from a nobleman he is about to leave.—L. M., Post Office, East Moulsey, Surrey.

GARDENER, JOBBING MAN, or anything else.—A good judge of work, and a first-rate Knifeman, Nurseryman, and understands Plants well. Wages 1*l.* 1*s.* per week. A. B., 24, Prince's Place, Norland Square, Notting Hill, W.

GARDENER, or GARDENER AND GROOM.—Has no objection to make himself generally useful. Two years' good character from his present employer.—Y. Z., Broughton, Newport Pagnell.

TO NURSERYMEN.

PROPAGATOR, OR FOREMAN AND PROPAGATOR.—Understands Roses and Coniferæ, Grafting, Budding, Laying, and Inarching, and Plant Growing in all its branches.—E. F. BUTLER, Watford Nursery, Watford, Herts.

PROPAGATOR, CULTIVATOR, &c.—Well up in Trade experience.—A. Z., *Gardeners' Chronicle* Office.

LAND STEWARD in England or Ireland.—A young Man, of good education, who has been engaged in the different operations of Agriculture and Sheep Management for several years in the West of Scotland. Can produce satisfactory references as to character and ability.—W. W., Office of the *North British Agriculturist*, 377, High Street, Edinburgh.

TO NOBLEMEN AND GENTLEMEN.

STEWARD AND BAILIFF.—Age 38, married, no incumbrance; well understands his profession in all its branches. Fifteen years' good character from the gentleman he has just left.—E. W., 73, White Hart Place, Kennington Lane, London, S.

FARM BAILIFF OR STEWARD.—Native of Scotland. Has farmed both in England and Ireland. Accustomed to the management of all descriptions of Live Stock, Buying and Selling Farm produce, and is thoroughly competent in all the branches of his profession. Testimonials from employers. Moderate salary.—D. M. G., Messrs. Thos. Gibbs & Co., Seedsmen to the Royal Agricultural Society of England, corner of Half-Moon Street, Piccadilly, London, W.

BAILIFF, OR BAILIFF AND STEWARD.—Well qualified; has had great practical experience, and can be highly recommended.—THOS. STURGESS, Esq., Penshurst, near Tunbridge, Kent.

FARM BAILIFF.—Middle-aged, married; about leaving his present situation; has a thorough knowledge of his profession, including Buying and Selling all kinds of Stock, Draining and Improving Land; a good Accountant. Can take charge of a Garden, Woods, and Plantations. Wife can Manage a Dairy and Poultry. Unexceptionable references, and security if required.—W. T., Duffryn Home Farm, Neath, Glamorganshire; or Plymouth Seed Company, Plymouth.

BAILIFF.—Age 31, single; thoroughly conversant with every branch of practical Farming on the most approved system, Breeding, and Fattening of every description of Stock; has been engaged on a nobleman's Estate, and Farmed extensively in various counties. Sister would Manage Dairy or Poultry. Unexceptionable references.—W. C., Mr. Scott's, 18, Parliament Street, London, S.W.

TO GARDENERS.

IMPROVER.—Age 23; has been two years and a half in his present situation. A small Premium will be given.—A. B., Mr. Fairchild, Florist, West Street, Farnham, Surrey.

The Gardeners' Chronicle Newspaper.

SATURDAY, APRIL 14, 1860.

AT A MEETING OF THE BURIAL BOARD for the Parish of Liverpool, held at Mr. Cuthbert's Rooms, Clayton Square, on Monday, April 2, 1860, the Board awarded the PREMIUMS for the DESIGNS for laying out the NEW CEMETERY at Anfield Park, Walton, as follows :—

1st Premium (100*l.*) to Mr. T. D. Parry, of Liverpool, author of the design bearing the motto "Industria."

2d Premium (50*l.*), to Mr. G. H. Stokes, of Pall Mall East, London, author of the design bearing the motto "Sydenham.'

3d Premium (30*l.*), to Mr. John Wimble, of Union Court, Old Broad Street, London, author of the design bearing the motto "I try to win."

It was unanimously resolved that there are many points of excellence in the designs bearing the respective mottoes of "Charon," "Utinam ut Obtineam," "Gottesacker," "Spero Meliora," and "Perseverando," which, in the opinion of the Board, deserve to be highly commended.

The unsuccessful designs now await the instructions of their respective authors; but it is proposed by the Board to submit all the designs sent in to public inspection, if the consent of the author can be obtained. They are, therefore, requested to communicate their consent, or otherwise, together with their respective addresses, to Mr. ENOCH HARVEY, No. 12, Castle Street, Liverpool, the clerk to the Board, on or before WEDNESDAY, April 11th, after which date, in the absence of any instructions, the Board will consider themselves at liberty to open the sealed envelopes, and deal with the designs at their discretion.

ROYAL HORTICULTURAL SOCIETY OF IRELAND.—The Prize offered through the Society by the Proprietors of the "Dublin Weekly Agricultural Review," for the best ESSAY on the CULTIVATION OF THE VINE, for which Sixteen Papers were sent in, has been awarded to the one having for its motto "Opus secundum Artem." On breaking the Seal of the accompanying envelope the Author was found to be Mr. Caulfield, Managing Superintendent at Messrs. Fergus Farrell & Son's, Richmond, and formerly Head Gardener to Lord Plunket, Bishop of Tuam.

The Scrutineers having also reported most favourably of the Essay signed "Daibhidh," and also of the one having "Spero ut Fidelis" for its motto, the Council of this Society at the Meeting held on Saturday, April 7 (in consequence of the merits of those Essays and independent of the Prize offered by the "Agricultural Review"), unanimously awarded on behalf of the Royal Horticultural Society a Prize of THREE SOVEREIGNS to the writer of the first-mentioned, who appears to be Mr. David Thomson, Archerfield Gardens, Direlton, Haddingtonshire, N.B, and a Prize of TWO SOVEREIGNS to the writer of the second, found to be Mr. George Blake, Gr to T. B. M. Baskerville, Esq., Clyro Court, near Hay, South Wales.

The writers of the other papers can have them returned on intimating a wish to that effect, and sending their address.

By Order, A. BALFE, Assistant Secretary.

Council Rooms, 28, Westland Row, Dublin.

MRS. ARTHUR HENFREY, Widow of the late Professor Henfrey, F.R.S., F.L.S., &c., of King's College, London, continues to receive a limited number of young Gentlemen under 12 years of age, to be educated with her own Sons, in all the branches of a liberal education. French is constantly spoken, Mrs. HENFREY having resided on the Continent, and a Parisian Lady assists her to teach Music, Singing, and Drawing. The house is healthily situated, and provided with a large Garden. Pupils will have the comfort of a private family, and unremitting attention will be paid to their health and morals. References are permitted to—

Dr. JELF	Principal of King's College
Rev. LAWFORD W. T. DALE ..	Chiswick Vicarage, W.
Rev. OLIVE HOLLINGWORTH ..	Turnham Green, W.
Sir WM. and Lady HOOKER ..	Kew, W.
Professor HUXLEY, F.R.S. ..	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. MARTYN.. ..	7, Bennett St., St. James's, S.W.
Dr. and Mrs. LINDLEY.. ..	Acton Green, W.
Dr. and Mrs. HOOKER .. .	Kew, W.
Dr. and Mrs. TUKE	Manor House, Chiswick, W.

For terms apply to Mrs. ARTHUR HENFREY, 12, Heathfield Terrace, Turnham Green, W.

News of the Week.

DESPATCHES from Madrid confirm the report received last week, that the Carlist insurrection has proved a signal failure. General ORTEGA has been captured and sent to Tortosa for trial. General ELIO has also been captured; and two other personages of importance, who have been supposed to be the Count DE MONTEMOLIN and his brother DON FERNANDO, are now prisoners of state in Fort Morella. The Madrid *Gazette*, however, does not mention the names of these princes in the official list of the persons arrested, and though great efforts have been made to apprehend them, the statement of their capture is supposed to be at present without foundation. The latest news states that, simultaneously with Gen. ORTEGA's attempt at Tortosa, similar movements in favour of the Count DE MONTEMOLIN were made in the provinces of Biscay and Burgos, but were almost immediately suppressed. The insurrection appears to have excited a strong feeling of indignation throughout Spain, and there is no reason to believe that the tranquillity of the country will be again disturbed. The QUEEN has approved of the preliminaries of the Treaty of Peace, the bases of which have already been ratified by the EMPEROR OF MOROCCO. It is expected that the indemnity will be paid immediately, and that the value of the territory ceded to Spain in the neighbourhood of Ceuta will amount to 300 millions of reals. — The insurrection in Sicily, in spite of the assertion of the official journals that it has been effectually suppressed, appears to be gradually assuming the character of a national movement. The rising at Palermo was not put down without much bloodshed. After the attack of the insurgents on the troops, they barricaded themselves in a convent, the monks of which fraternised with them. This position was maintained for some time against the troops of the line, but the artillery at last opened a breach, and the convent was taken by assault, most of the insurgents being killed at the barricades. Palermo has since been proclaimed in a state of siege, and measures have been taken to reinforce the army in Sicily to the strength of 30,000 men. Meanwhile, the insurrection has spread to Messina and Catania; and on the 6th inst., in the city of Naples its lf, an immense crowd, estimated to number 80,000 persons, assembled before the residence of the Papal Nuncio in the Toledo, and raised shouts in favour of the Constitution. The latest news from Sicily states that on the 5th inst. the English residents at Palermo embarked on board the ships of war in the harbour—a step not likely to have been taken if tranquillity had been restored as represented by the organs of the Government.—The answer of Austria to the Note of M. THOUVENEL on the annexation of Savoy to France has been sent to Paris. It raises no objection to the fact of annexation, as long as it is represented as being the result of a cession freely consented to by Piedmont, and not as the effect of an appeal to universal suffrage. As regards the neutrality of Switzerland and the neutralised districts of Chablais and Faucigny, Austria expresses the hope that the French Government, in accordance with the promises already given, will maintain the guarantees stipulated by the treaties.—The Swiss Federal Council on Thursday despatched a note to the Powers, stating that, as Switzerland had not been consulted on the occasion of the vote of Savoy, she protests against any violation of her rights which may result from that vote.

A telegraphic despatch from Calcutta has been received, with intelligence to the 16th March, six days later than the date of the Mail. There is no news of any political interest from India, but the China accounts mention that some uneasiness had been caused by the departure of four English war steamers for the north under sealed orders. It was reported that the Court of Pekin had become alarmed at the preparations of the allies, and that the Chinese authorities had removed the guns from the Taku forts to those of Tien-tsin in order to strengthen them against the apprehended attack.—The New York papers state that the terms proposed by the British Government for an arrangement of the San Juan difficulty have been respectfully declined.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Good Friday morning the Queen and Prince Consort, the Prince of Wales, Prince Alfred, Prince Arthur, the Princesses Alice, Helena, and Louisa, and Princess Leiningen attended Divine service in the Private Chapel; the Dean of Windsor and the Rev. W. L. Onslow officiated, and administered the Sacrament. On Saturday, being the birthday of Prince Leopold, the Duchess of Kent and the Princess of Leiningen paid her Majesty an early congratulatory visit. The Queen and Prince Consort, accompanied by Prince Alfred, walked in the grounds of the castle. In the afternoon the Duchess of Kent and the Princess of Leiningen again visited the Queen. Her Majesty and the Prince Consort, with the Prince of Wales, Princess Alice, and Prince Alfred, afterwards rode out on horseback. In the evening the Queen, Prince Consort, and Royal family were present at a grand performance of Haydn's Passion music at the castle. The band and chorus, consisting of nearly 200 performers, were selected from her Majesty's Theatre, the Royal Italian Opera, the Philharmonic and Sacred Harmonic Societies, the Choir of St. George's Chapel, and her Majesty's private band. On Easter Day the Queen and Prince Consort, the Prince of Wales, Prince Alfred, Prince Arthur, Princesses Alice, Helena, and Louisa, the Duchess of Kent and Princess of Leiningen attended Divine service in the private chapel; the Dean of Windsor officiated, and administered the Sacrament. In the afternoon the Queen and Prince Consort, accompanied by the Prince of Wales, Princes Alfred, Arthur, and Leopold, Princesses Alice, Helena, Louisa, and Beatrice, walked on the East Terrace. On Monday morning the Queen, with Princess Alice, walked and drove in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort, accompanied by the Prince of Wales and Prince Alfred, visited the Wellington College. In the afternoon the Duchess of Kent and the Princess of Leiningen visited her Majesty. On Tuesday morning the Prince of Wales left Windsor for the Continent. The Queen and Prince Consort walked in the Home Park, and visited the Duchess of Kent at Frogmore. In the afternoon the Queen and Prince Consort, accompanied by Princess Alice, Prince Alfred, Prince Arthur, and the Princess of Leiningen, left the castle for Aldershott, escorted by a detachment of Horse Guards. On Wednesday morning the Queen left the pavilion on horseback, and reviewed the troops. The Prince Consort, Princess Alice, and Prince Alfred rode with the Queen; and Prince Arthur and the Princess of Leiningen followed in an open carriage. In the afternoon the Queen drove out, accompanied by Princess Alice and the Princess of Leiningen. The Prince Consort and Prince Alfred rode on horseback. In the evening her Majesty had a dinner party to which General Knollys, the Generals in command of brigades, and the Colonels commanding regiments were invited. On Thursday morning the Queen, accompanied by Princess Alice and the Princess of Leiningen, drove round the camp, and visited the hospitals and some of the officers' and soldiers' quarters. The Prince Consort and Prince Alfred rode out on horseback. Yesterday afternoon her Majesty and the Prince Consort, accompanied by the Princess Alice, the Princess of Leiningen, Prince Alfred, and Prince Arthur, left the Pavilion, and returned by special train to Windsor.—According to present arrangements the Queen, Prince Consort, and Royal family will leave Windsor on Monday next for Buckingham Palace.

COURT ARRANGEMENTS.—Her Majesty will give a juvenile ball at Buckingham Palace, on Tuesday, May 1; a concert on Friday, May 4; and a state ball on Wednesday, May 9. Another concert and a state ball will be given in June.

DEPARTURE OF THE PRINCE OF WALES FOR GERMANY.—The Prince of Wales left Windsor Castle on Tuesday morning at 6 o'clock for Dover, on his way to Germany. His Royal Highness embarked at Dover immediately on his arrival, landed at Ostend soon after 3 o'clock, and arrived at Brussels at half-past 6 in the evening. The Count de Flandres met the Prince at Ostend and escorted him to the palace at Brussels, where his Royal Highness was received by the King of the Belgians. The Prince slept at the palace on Tuesday night, and on Wednesday morning left Brussels for Coburg.

PARLIAMENTARY MOVEMENTS.—The Clare election has terminated in the return of Mr. Calcutt by a majority of 1849 over Capt. White.

THE VACANT JUDGESHIP.—It is understood that the vacant judgeship will be conferred on Mr. James Wilde, Q.C.

EAST INDIA COMPANY.—At a General Court of Proprietors on the 11th inst., Colonel Sykes, M.P., and Major-General George Moore were re-elected directors of the East India Company; and on the following day, at a Court of Directors, Colonel Sykes was unanimously elected chairman.

COLONIAL APPOINTMENTS.—The Queen has appointed Major-General Pringle Taylor, K.H., to be Lieut.-Governor of Jamaica; James Walker, Esq., to be Lieut.-Governor of Trinidad; and Edward Bullock Andrews, Esq., to be Governor of the Gold Coast.

DIPLOMATIC APPOINTMENTS. — The Queen has appointed Charles Alison, Esq., now Secretary of Embassy at Constantinople, to be Minister Plenipotentiary to the Shah of Persia; and George Fagan, Esq., now Secretary of Legation to the Argentine Confederation, to be Chargé d'Affaires and Consul-General to the Republics of Guatemala, Nicaragua, Costa Rica, Honduras, and Salvador.

CONSULAR APPOINTMENTS.—The Queen has appointed Sir Robert Fraser Turing, Bart., late Vice-Consul at Rotterdam, to be her Majesty's Consul at that port; Edmund Yates Peel, Esq., late Vice-Consul at Oran, to be Consul at Mahon; Arundel Mackenzie, Esq., to be Consul at Geneva; John A Longworth, Esq., Consul at Monastir, to be Consul-General in Servia; Charles John Calvert, Esq., late Consul at Salonica, to be Consul at Monastir; Richard Wilkinson, Esq., jun., late Vice-Consul at Durazzo, to be Consul at Salonica; William Richard Holmes, Esq., late Consul at Diarbekir, to be Consul in Bosnia; James Grignon, Esq., late Consul at Portland, to be Consul in the Canary Islands; Henry John Murray, Esq., late Consul in the Canary Islands, to be Consul at Portland; and Alfred Dick, Esq., to be Consul at the Society Islands.

GENERAL POST OFFICE.—In consequence of some statements which have recently been made public respecting the inefficient working of the circulation department of the General Post Office, the Postmaster-General has appointed a commission to inquire into the facts of the case. The commissioners sit daily during the hours of duty at the chief department in St. Martin's-le-Grand for the purpose of collecting information by personal inspection and by association with the officers, the whole of whom have been invited to furnish information.

Foreign.

FRANCE.—It is stated that the Cabinet of the Tuileries is about to address a memorandum to the Powers who signed the final act of Vienna. The aim of this memorandum is said to be to establish, by strategical considerations, the unimpeachable proof that, if France ever had an intention of menacing the neutrality of Switzerland, she could do so notwithstanding all the guarantees stipulated in the treaties of 1815, since the military road leading from France to Germany through Switzerland now no longer exists, neither in the territory of Faucigny nor of Chablais, but at another point not included in the neutralised districts. The Cabinet of the Tuileries hopes by that to show that the annexation of Savoy to France does not virtually deprive Switzerland of her strategical position, neither does it involve any of the dangers put forward beforehand by the Federal Council of Berne.—The *Moniteur* of Saturday announces that the Minister for Foreign Affairs, M. Thouvenel, had informed the Municipality of Thonon of the intention of the Emperor to protect the commercial interests of Faucigny and Chablais by establishing a commercial zone in their favour similar to that existing for Gex. The *Moniteur* publishes addresses presented to the Emperor from the municipalities and communal councils of the following towns of Savoy in favour of annexation to France:—Bonneville, Laus-le-Villard, Bramans, Termignon, and Sollières. The Government has sent the following official communication to the *Pays* and *Patrie*, which last week charged England with having excited the Sicilian and Spanish insurrections:—"On the occasion of the attempts at insurrection in Sicily and Spain, the *Pays* and *Patrie* contained lamentable imputations against a neighbouring Power. These papers ought so much the less to have accepted these imputations knowing that they are devoid of authenticity." An official decree in the *Moniteur* of Thursday notifies that the Superior Council of Commerce, Agriculture, and Industry will enter on an inquiry for the purpose of investigating the average prices of the objects admitted into France by the Treaty of Commerce with England, and in order to fix an *ad valorem* duty upon them. Another official note in the *Moniteur* points out the happy influence exercised on the French export trade by the Treaty of Commerce with England, especially for productions of the South, wines, spirits, and *articles de Paris*.—The *Constitutionnel* publishes an article by M. Grandguillot, stating that the effect of a Papal excommunication is to immediately break off diplomatic relations between the Sovereign Pontiff and the Prince excommunicated. Nothing similar, it says, has taken place in reference to the Cabinet of the Tuileries, and therefore the object of the recent note in the *Moniteur* was not to provide against the effects of the excommunication, but only to recall the principles of the civil independence, and to re-establish the true doctrines of the Church of France.—It is believed that the Government has taken into consideration the proposition of a treaty of navigation with Great Britain. The Government is likewise actively engaged with the construction of railways in Algeria. It proposes to contract with public companies for the completion of three lines:—1, from the sea to Constantine; 2, from Algiers to Blidah; 3, from St. Denis-du-Sig to Oran, with a continuation to the port; the capital not to exceed 58,000,000f., of which the Government will advance 6,000,000f. as a bonus to the contracting company. The Government will further guarantee 5 per cent. on the capital subscribed, to commence 10 years after the date of the concession. The Government will, moreover, grant a lease of 99 years to the contracting company.—An eminent shipwright of Bordeaux has presented to the Emperor the model of a gunboat constructed on a system to be propelled without steam. The Emperor has approved the model, and has ordered the inventor to build a gunboat according to his plan. General Frossard, aide-de-camp to the Emperor, has been sent to Nice with a commission to study that city and the "new department of the Maritime Alps," with a view to the fortification of that part of the annexed territory, which by its geographical position has for France a particular interest. The reported negotiations for the conclusion of an offensive and defensive treaty between France and Denmark are contradicted by the fact that the resident Ministers of the two countries were recalled some weeks ago, and their successors have not yet entered upon their functions.

SPAIN.—General Ortega has been arrested at Calanda and sent a prisoner to Tortosa, where his trial will take place. It was reported in Madrid that Count Montemolin and his brother Don Fernando were also arrested at the moment of their disembarking, but there is reason to believe that the report is without foundation. General Elio has been captured by the Alcalde of Vinaroz. The Cabecilla Carrion is also a prisoner, but his son has been killed. On Friday evening a small body of insurgents was defeated at Bilboa before they had time to act. Accounts from Burgos state that a band of 30 horsemen raised the standard of insurrection on behalf of Count de Montemolin at Arenda del Duero, in that province, the Captain-General of which, had arrested, by way of precaution, two noted Carlist chiefs, brothers, named Hierros, who had long been resident in the city. Arenda del Duero is in the north of Spain, at a considerable distance from the place in which General Ortega attempted a rising. The Madrid journals of the 6th state that the Infante Don Sebastian, brother of the Count de Montemolin (who lately, it will be remembered, made his submission to the Queen), no sooner heard of the Carlist rising in Valencia than he went to her Majesty "to offer his sword to defend her legitimate rights," declaring at the same time that he was ready, if need were, to shed his blood to prove his fidelity. Some arrests of noted Carlists had been made at Madrid, and in other places. The Official Gazette promulgates the Concordat concluded with Rome.

SPAIN AND MOROCCO.—The *Madrid Gazette* of the 29th ult. publishes a despatch from Marshal O'Donnell enclosing the text of the preliminaries of peace with Morocco. The despatch gives a brief account of the conference with Muley el Abbas, and says that the latter accepted all the points proposed, except that which regarded the compensation. On that point he begged that instead of the 500,000,000 reals claimed, only 400,000,000 reals should be fixed; and the Marshal says that "the strong desire he manifested for peace, his elevated position as Caliph, and the dignity with which he supported his unfortunate fate, caused him to reduce the demand to 400,000,000 reals, feeling that it would not have been generous in Spain to humiliate still further an enemy who, though admitting himself to be defeated, could not in any way be despised." The preliminaries of peace are in nine articles, and are to the effect already stated by telegraph. In the preamble Marshal O'Donnell is described as Duke de Tetuan and Count de Lucena, and Muley el Abbas as Caliph of the Empire of Morocco and Prince of Algarve. The *Gazette* announces that the Queen, by the advice of the Council of Ministers, approved of the preliminaries, and the latest news from Morocco states that the Emperor has ratified the bases of the treaty, and will, it is believed, immediately pay the indemnity stipulated in the conditions. The boundaries of Ceuta have been amicably settled, and the value of the territory ceded to Spain is estimated at 300,000,000 reals.

PORTUGAL.—Accounts from Lisbon state that the Spanish Government has sent as a present to the King of Portugal the cannons taken from the Portuguese by the Moors on the occasion of Don Sebastian's unfortunate expedition in the 16th century, and which the Spanish army found at Tetuan. They will no doubt find a place in the Lisbon Museum.

BELGIUM.—A discovery of some interest has just been made at Ghent. The famous Van Artevelde, of that city, was interred in the church of La Byloque; and according to historians, his tomb was destroyed in the 16th century, and his ashes cast to the wind. But a few days back, some men, in digging for the foundation of a new building in the dependencies of the hospital of La Byloque, found a large flat stone, which turned out to be the upper part of a large vault. On the stone was a metal plate, much eaten away by rust, but on which could be read the inscription, "Jacob Van Artevelde Upperhoofman. Hooymaend A. 1345;" and in the vault was a skeleton. No doubt is entertained that the mortal remains so found are those of Van Artevelde.

BADEN.—A manifesto of the Grand Duke has been published, promising that the Concordat with Rome which the Parliament by a vote of 45 to 15 refused to accept, shall be submitted to the lawful sanction of the constitutional authorities. He proclaims the principle of the independence of the Catholic Church, and adds that its laws are placed under the protection of the constitution, that guarantees shall be given for the sure foundation of the legal position of the Church, and that the contents of the Concordat shall be lawfully sanctioned by special laws and other ordinances. The manifesto also promises the free development of the Protestant Church, as well as other public requirements. The Minister of Finance, Regenauer, has been pensioned. M. Vogelmanne has been appointed as his successor. Other changes of high functionaries are expected.

PRUSSIA.—The *Kreuz Zeitung* of Thursday says that in well-informed circles it is believed that a union will be effected between Prussia, England, and Austria, in reference to the threatened interests of Switzerland; but it is expressly stated that no hopes are entertained that Russia will join this alliance.

AUSTRIA.—The answer of Austria to the Circular Note of M. Thouvenel of March 13, on the annexation of Savoy and the district of Nice to France, has been sent to Paris. This answer is very similar to the despatch of Russia on the same subject. The Austrian Cabinet, like that of Russia, does not raise any objection to the fact of annexation as long as this annexation is represented as being the result of a cession freely consented to by Piedmont, and not as the effect of an appeal to universal suffrage. As regards the neutrality of Switzerland and the neutralised districts of Chablais and Faucigny, Count Rechberg expresses a desire that the French Government, in accordance with the promises given by M. Thouvenel in his despatches, should maintain the guarantees stipulated by the treaties. The following is an analysis of the protest of Austria against the annexation of Central Italy to Sardinia:—

"In this note Austria first establishes, by historical and legal considerations developed at great length, her positive and incontestable right to oppose an act which, in despoiling legitimate Princes of the States guaranteed to them by European treaties, would also destroy the rights of succession and reversion which these same treaties secure to the House of Hapsburg with respect to the said States. Austria then proceeds to demonstrate that Sardinia has participated in the engagements contracted by France, who, in consideration of the treaty of 1735, has guaranteed the possession of Tuscany to the House of Lorraine, in order to indemnify this dynasty for the cession of her ancestral heritage. The note further recalls that, by virtue of the treaty concluded in 1753 by the mediation of George II., King of England, and countersigned by him in his quality of head of the House of Este, the right of succession to the Modenese States was conferred, in case of the extinction of the male line, upon the third son of the Emperor Francis and Maria Theresa, whom it was designed to unite to the granddaughter of the Duke of Modena. With respect to the Duchy of Parma and Piacenza, the treaty of June 10, 1817, concluded between Austria, France, Great Britain, Prussia, Russia, and Sardinia, explicitly confirms in favour of Austria the rights of reversion stipulated by the treaty of Aix-la-Chapelle, dated May 20, 1815. These rights of reversion have received a fresh sanction by the treaty of Florence, concluded on November 28, 1844, between the Courts of Lucca, Modena, Tuscany, Sardinia, and Austria. Thus, then, the King of Sardinia, in accepting the annexation of the Italian Duchies, openly violates not only the public treaties of 1815 but also the treaties which he has signed as a direct contracting party with Austria. Such a violation is so much the more flagrant from having been accomplished upon the morrow after the Peace of Villafranca and Zurich, of which the essential condition was the restoration of the legitimate Princes. Induced by all these motives, Austria protests in the most peremptory manner against this most illegal annexation made by the King of Sardinia, and appeals to the conscience of all Europe on the subject."

SWITZERLAND.—The Federal Government is still employed in urging the great Powers to protect the engagements of 1815 touching Chablais and Faucigny. On the 12th inst. the Federal Council despatched a note to the Powers, stating that, as Switzerland had not been consulted on the occasion of the vote of Savoy, she protests against any violation of her rights which may result from such vote. Professor de la Rive has been appointed Minister Extraordinary at London for the Swiss Confederation.

RUSSIA.—An Imperial ukase has been promulgated extending to Poland the principal enactments of the laws relative to the obtaining of hereditary and life nobility which are in force in the rest of the empire. Instructions for carrying out the abolition of serfdom have been addressed to the authorities. Among other things, the Emperor has ordered that traders, burgesses, and in general all the inhabitants of towns, shall pass into what is called the class of free cultivators, which has hitherto not been permitted. Several persons have recently been arrested at St. Petersburg, Kiew, and Moscow, on the charge of endeavouring to subvert the fundamental principles of the empire, and to replace them by a constitutional form of government, similar to that of many European States. The police on searching their houses found several documents, among others the project of a constitution regularly drawn up.

ITALY.—The Duchess of Parma, as Mother, Guardian, and Regent, in the name of her son Duke Robert I. has published a protest addressed to all the Powers who signed the treaties of 1815 and 1817 against the annexation of the States of Parma to Sardinia. The Grand Duke of Tuscany has also published a protest against the annexation of his dominions to Sardinia. He protests "against acts, the very principles of which make them null and void, against the violation of treaties, against unworthy manœuvres, against the employment of these new means of usurpation of the votes of popular assemblies. He appeals to the sovereigns of Europe, to the justice of the Emperor of the French, and to the Tuscans themselves, who have enjoyed a prosperity of which they were justly proud for more than a century under his family. He states that if the Italian Confederation had been formed, the lead would have devolved upon Tuscany; but as it is, Florence will be no more than the chief town of a Piedmontese department. He hopes that the reason of his people may not remain perverted, and concludes by saying that the day may come when the injustice of which he is the victim shall have reached its end, and that day will find him ready to devote to them all the power of his existence."—Accounts from Turin state that Signor Lonza has been elected President of the Chamber of Deputies by 129 votes against 90 at the second ballot. In the sitting of the Chamber on Thursday last, General Garibaldi affirmed that the voting of Nice will be effected under French pressure. He censured the action of the Provisional Government of Nice as attacking the liberty of the vote, and concluded by proposing the adjournment of the vote in that province. After the rejection of several orders of the day, implying disapprobation of the Government, the following order of the day was adopted by a great majority:—"The Chamber, hoping that Government will maintain the constitutional guarantees, and efficaciously provide for the liberty of the vote in Savoy, passes to the order of the day."—The French troops continue to evacuate Lombardy. The 4th division, commanded by General de Failly, was expected in France on Thursday. The 3d, commanded by General Bazaine, is to be quartered in Paris. General Ulrich's division will come next. The 1st and 5th divisions will be the last to quit Italy. They will occupy Savoy and Nice. It is understood that Marshal Vaillant quitted Milan on Sunday last. All the letters received from the army of Italy state that the troops are delighted at returning to France, being heartily sick of Italy and of the Italians. The Government has received reports from MM. Laity and Pietri, senators, commissioned by the Emperor to ascertain the state of the public feeling in Savoy and in

the county of Nice. They state that the annexation to France is popular throughout Savoy. Some apprehension prevails at Nice that the fashionable visitors who used to make that town their residence in winter will abandon it now that it is annexed to France, and that the tradespeople will consequently be ruined by the departure of their best customers. The Legations of England and France at Florence have taken down their escutcheons.—General Lamoricière was received on the 2d inst. at the Vatican, and the *Giornale di Roma* of Saturday contains his appointment as Commander-in-Chief of the Papal troops. It is asserted that the King of Sardinia has claimed the political prisoners belonging to the Legations. The ex-Duke Francis of Modena landed at Ancona on the 26th ult. with General Lamoricière, and has made arrangements for his troops to join the Papal troops. The French Government has assured the Pope that the army of occupation which has so long protected his Holiness will not be withdrawn from Rome for the present.—Letters from Naples state that on the evening of the 6th an immense crowd, estimated to number 80,000, blocked up the Toledo, at Naples, and raised numerous shouts of "*Viva la Costituzione*" before the residence of the Papal Nuncio. The street was quickly cleared by the patrols. At a meeting of Neapolitan refugees, held at Turin on the 8th inst., it was resolved, by a majority of 80 to 4, that the annexation of the kingdom of Naples to the constitutional government of Victor Emmanuel was a proposition deserving of support, and a committee was appointed to carry out the views of the meeting. Among the members are MM. Poerio, Dufacca, Maucinin, and Conforto, members of the new Italian parliament, Le Farina, president of Italian National Safety, Pinia, and Interdonato, M. Platino, a Neapolitan of large fortune, who has lived in Rome since 1848, La Masa, an eminent military writer, Pornasi, a well-known medical professor, and the poet Miraglia.

Sicily.—The insurrection in Sicily appears to be spreading. The insurgents at Palermo, according to the official accounts, attacked the Royal troops at 5 o'clock in the morning, then re-formed and shut themselves up in a convent, which they barricaded. A battalion of the 6th Regiment of the Line made a sudden assault upon the insurgents, but were driven back with considerable loss. The Royal Artillery then opened a breach, and the convent was taken by assault. The insurgents and their arms and several of the monks were captured. Several bands of rebels having risen in the environs, in order to create a diversion, they were beaten and pursued in all directions. An insurrection is said to have subsequently broken out in Messina and Catania. The official journal does not speak of the insurrection in Messina, but announces that General Salzano has placed Palermo in a state of siege, and also adds a telegraphic despatch, received on the afternoon of the 6th, which affirms that all the other provinces of Sicily have been tranquil, and that the inhabitants of Palermo had not taken part in the contest of the 4th. According to news from Naples to the 10th, the insurgents, numbering about 10,000 well-armed men, were concentrated in the Sicilian Islands, and had interrupted the canals communicating with Palermo. The troops quartered in that city were attacked every night. The Neapolitan fleet was cruising along the coast, and the Government had sent reinforcements. The English residents at Palermo embarked on board the ships of war in the bay on the 5th inst. Count Cavour has sent two notes to the Neapolitan Government—one exhorting it to adopt the same line of policy as Piedmont, and the other insisting that the escutcheons of the Legations of Tuscany, Modena, and Parma, at Naples, shall be taken down.

Turkey.—The Duke of Brabant arrived at Constantinople on the 9th inst., and was received by the Sultan at the Tophana Palace. On the following day the Duke visited the British Ambassador, Sir Henry Bulwer.

India.—A telegraphic despatch has been received from Calcutta with accounts to the 16th March, six days after the departure of the mail. The following are the details:—

Calcutta.—Outrages by the ryots of Lower Bengal have taken place. The Lieutenant-Governor has issued a notification, which, it is hoped, will be effective. There has been a panic among the holders of Bengal Bank shares, which have fallen 150*l.* a share since Mr. Wilson's speech.

Bombay.—The indignation of the whole Anglo-Indian public had been excited by the frightful mortality which had occurred on board the various vessels which had arrived at Madras and Bombay with the wives and children of soldiers.

China.—Accounts from Shanghai to Feb. 20 state that business was active, but uneasiness was felt at the departure of four war steamers. Trad was uninterrupted at all the ports. The ships Actæon, Sampson, Algerine, and Dove, proceeded northward under sealed orders on the 16th February. It is rumoured that the Chinese have withdrawn the guns from the Taku forts, to strengthen with them the Tien-tsin forts. Kweeliang, Chief Imperial Commissioner, has been refused permission to retire into private life. The Court of Pekin is alarmed at the preparations of the allies. General Montauban has arrived at Hongkong on his way to Shanghai, and Sir Hope Grant left Singapore for Hong Kong on the 7th of March.

Japan.—Affairs in Japan are still in a very unsettled state. A native interpreter employed by the British Minister has been murdered, and the Government are pursuing a course of action likely to lead to complications. The Japanese Ambassadors were to leave for the United States on the 10th inst.

United States.—The *New York Herald* says that the offer of the British Government for an arrangement of the San Juan difficulty has been respectfully declined. It is said that the offer proposed that the United States should acknowledge the claim of Great Britain to the island, and receive in exchange a tract of territory elsewhere. Mr. Cobb has unconditionally withdrawn his name from the Presidential canvass. The President has sent a message to the House of Representatives firmly protesting against its resolution for an inquiry into the abuses of power. The President takes as ground for his protest that Congress can only act under impeachment. The President had sent to Congress the official despatches received from American officers in the Gulf concerning the seizure of Spanish vessels by the American squadron off Vera Cruz. Great excitement prevailed at Philadelphia, in consequence of a fugitive slave case. The slave had been ordered to return to his master.

British Columbia.—From British Columbia we have advices to the 29th of February. Her Majesty's ship Topaze, 50, had reached Esquimalt. The following despatch had been received by Governor Douglas from the Duke of Newcastle:—

"Downing Street, Oct. 21, 1859.

"I have received your despatch of the 17th of August, forwarding a memorial to the Queen from certain inhabitants of Vancouver Island, expressing their feelings on the subject of the occupation of San Juan by the American troops. This address has been laid before the Queen, who has been pleased to receive the same very graciously, and to command me to express her satisfaction at the spirit of loyalty and patriotism evinced by the memorialists. It is Her Majesty's hope that the Governments of the respective nations will be able to settle this question in a spirit conciliatory to the adjoining country and satisfactory to the colonist. "Newcastle."

Mexico.—Advices from Vera Cruz are to the 22d ult. The endeavours to bring about an armistice had failed. The siege had been renewed with considerable effect. The reported flight of Miramon and the dispersion of his forces is unfounded. It is reported that Miramon has ordered the Americans to quit the country.

City Intelligence.

Bank Rate of Discount.—The Bank of England on Thursday raised their rate of discount from 4½ per cent., at which it was fixed on the 29th ult., to 5 per cent.

The New Stamp Act.—The Act imposing new stamp duties came into operation on the 5th inst. Henceforth not only all cheques drawn upon bankers must be stamped, but also every letter to a banker directing payments to be made, stock to be sold, purchased, or transferred, or money to be forwarded, must have affixed to it an adhesive 1*d.* stamp (not a postage stamp), which stamp must be cancelled by the writer with his name or initials, and the date on which the stamp is used. A penalty of 20*l.* is attached to the non-observance of these directions. It is also enacted that the person who shall make, sign, or issue any instrument chargeable with the duty of 1*d.* and 3*d.*, shall affix an adhesive stamp, and obliterate the same by his name or initials and the date of the day and year; and any person refusing or neglecting to give such receipt, or any person taking any document without requiring the same to be properly stamped, shall forfeit a sum of 20*l.* The Act also imposes a duty of 1*d.* on a certified copy, or extract of, or from, any register of births, baptisms, marriages, deaths, or burials, the duty to be paid by the party requiring any such copy or extract.

Money Market, Friday.—British Funds: Consols closed at 94⅜ to ½ for Money, and 94½ to ⅝ for the 9th of May; Bank Stock, 224 to 226; Reduced and New Three per Cents., 92⅞ to 93; New Two and a Half per Cents, 78; Indian Five per Cent. Stock of 1859, 105½; Five per Cent. Enfaced Rupee Paper, 98⅛ to 98; Ditto Five and a Half per Cents., 103¾; Indian Four per Cent. Debentures of 1859, 96⅞ to ¼; India Bonds, 5*s.* dis.; Exchequer Bills, 8*s.* to 12*s.* pm.—Foreign: Brazilian Old Five per Cents., 100 ex div.; Dutch Two and a Half per Cents., 65¾; Ditto Four per Cent. Certificates, 100 to 100¼ ex div.; Mexican Three per Cents., 21½ to 21⅝; Peruvian Uribarren Four and a Half per Cents., 82; Ditto Three per Cents., 69⅛ ex div.; Russian Five per Cents., 108; Spanish Three per Cents., 16½; Turkish Six per Cents., 1854, 76 to 76½; Ditto for 1858, 61½; Ditto Guaranteed Four per Cents., 101¼.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,389,340	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	13,914,340
		Silver Bullion	—
	£28,389,340		£28,389,340

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)	£9,725,943
Rest	3,210,497	Other Securities	23,544,788
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,578,130	Notes	1,922,085
Other Deposits..	14,071,717	Gold and Silver Coin ..	722,762
Seven day and other bills	705,829		
	£38,908,178		£38,908,178

12th day of April, 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—E. Aydon and T. W. Ferguson, Newcastle-upon-Tyne, Grocers and Tea Dealers—F. J. Fowler and H. Hunter, St James Street, Hatcham, Surrey, and 15, Rood Lane, City, Oil and Soap and General Merchants and Manufacturers—G. Oldfield, R. Oldfield, and J. Clarke, Lichfield, Millers and Corn Dealers.

SCOTCH SEQUESTRATIONS—R. Dempster, Forres, Elgin, Surgeon—J. Napier, Stirling, Coal Agent.

FRIDAY—BANKRUPTS—J. Ashby, Carlisle Street, Soho Square, Builder—J. B. Booth, Elland, Yorkshire, Draper—M. J. Bowry Birmingham Manufacturer of Patent Beds—C. F. Boyce, Epsom, Livery Stable Keeper—E. Eastwood, Manchester, Frontierer—N. M. Grose, Wadebridge, Cornwall, Wine Merchant—T. Lysolett, Covent Garden, Grocer—J. E. Morris, Bristol, Grocer—W. E. Prichard, Borough, Licensed Victualler—H. Pyke, Edgeware Road Middlesex, Tailor—G. Royle Sutton, Lancashire, Flint Glass Manufacturer—H. Turner, Rotherhithe, Grocer—J. Williams, Horsely Heath, Tipton, Chemist.

SCOTCH SEQUESTRATIONS—J. Barton, Rowantree Hall, Dumfries-shire, Farmer—W. Begg, Glasgow, Typefounder—W. Davie, Duntocher, Dumbartonshire, Carter—A. Milne and Co., Edinburgh, Jewellers.

Metropolis and its Vicinity.

The Duke of Cambridge on the Army and Volunteers.—At the Easter dinner at the Mansion House on Monday, the Duke of Cambridge in responding to the toast of the Army and Navy made the following remarks on the Army and Volunteers:—

"My Lord Mayor, I beg to acknowledge the compliment which you have been pleased to pay the British Army. I always regard it as a high privilege to be permitted to respond to this toast, and, although I have the honour to be at the head of that army, I trust it will not be deemed unbecoming in me to say that, notwithstanding we are not reputed to be a military nation, I flatter myself there is no army in Europe which, when called into action, can beat us in any respect. It is the fashion rather to decry this country as a military Power; but the nation has always done the army the justice to admit that, when summoned to show what it can do in the field, it has always come up to its expectations. That is the state of the service at the present day, and I hope it will long continue so. The notice taken of the army on occasions like the present tends in a great measure to keep up that high spirit without which it cannot be efficient. Believe me, that the troops stationed in distant lands look with anxiety to see the estimation in which they are held in England. The first feeling that prevades all ranks is 'What will they think of us at home?' and the public acknowledgment which their efforts receive from their countrymen produces a most beneficial effect on all branches of the service. Although most of those whom I have the honour of addressing are not immediately connected with the army, I am persuaded you all agree with the remark of the Lord Mayor, that the riches of this great and influential empire are, in a great measure, owing to the army and navy. For if it were not for the security in which you all live and pursue your daily avocations—if it were not for the safety in which you individually and collectively feel that your ships and your trade can go to every part of the globe, this great empire and its commerce could not thrive as they now do, and as they have done for a lengthened period. We all, of course, wish that that security may for ever continue. Believe me, gentlemen, its continuance depends very much on yourselves. If the liberality hitherto shown in supporting the army and navy is still displayed, you may rest in security both now, and, I trust, for many ages to come. But you must not shut your eyes to the fact that great efforts are necessary to attain this result. You cannot relax your exertions without to a certain extent deteriorating your national position. Nobody in this country, I am convinced, can wish to see any declension in that position. This is, I believe, a great and glorious empire, at the head of the civilised world. We give the tone to civilised society in every part of the globe. This is a position which a great nation ought to strive to maintain. May you ever maintain it! Viewing the army and navy in this light, I trust you will never allow their efficiency to be impaired. No doubt it is a very expensive thing to keep up those services; but that is the effect of the very improvements which are taking place from day to day. The scientific advancement in all departments calls for a greater outlay than used to be requisite. That is a natural consequence of the march of intellect in modern times. Why, the very means of locomotion, the facility with which you can move vessels and troops, our railways and our steamships—all these advantages, which none can appreciate more fully than the merchants and citizens of this metropolis, tend greatly to alter our position relatively to the rest of the world. Therefore, although in former times, owing to our insular position, we were very secure in our daily life and occupations, we cannot disguise from ourselves the fact that the improved modes of communication now existing have called for greater vigour in all our defensive preparations. All that we desire—all that, I am confident, the country desires—is to be placed in a proper state of defence. Nothing can be more objectionable, nothing can be more lamentable, than a constant succession of panics. Believe me, these panics are the most costly things that can happen. The extravagance which ensues from them it is impossible to estimate. A wise and judicious annual expenditure is far less burdensome and much more effective for its object. I trust I shall be forgiven for making these observations, but they involve matters which ought to be generally known. I cannot sit down without expressing my sense of the admirable spirit evinced by the country in the recent Volunteer movement. I have said before that if that movement is well and judiciously organised I believe it will be found most valuable. But much—indeed everything—depends on the manner in which it is conducted. If it is conducted as a great auxiliary to the army and navy, nothing can be more advantageous to the general interests of the country. If, on the other hand, it is intended to displace those services, the result will be most unfortunate. As an adjunct to the regular forces, however, these volunteer corps are capable of rendering good service to the State."

The Great Eastern.—Though little has been heard of the great ship for the last few months the preparations for sea are going on with the utmost activity. The Board of Trade, it may be remembered, required the directors to make several alterations to the machinery after the vessel had made her trial trip. All these demands, will, of course, be implicitly complied with, though, as they involve extensive work in the fitting, shipwrights', and engineers' departments, they will only be taken in hand in turn. The report of the surveyor appointed to inspect what is wanting in shipwrights' work has been adopted, and the contract has already been entered into. Messrs. Penn and Field have made several minute surveys of all the engines—screw, paddle, and auxiliary—and their suggestions as to alterations and improvements will form the basis of a contract, which will be issued to some engineering firm, to which the final completion of all the machinery will then be intrusted. Both these contracts will require about two months for their completion, and the cost will be far short of what was originally anticipated, not being expected to exceed 20,000*l.* The shipwrights' contract includes, among other minor items, the building of new store-rooms, iron stanchions to support the cargo deck,

refixing the boat davits, a screw tunnel, additional support to the sides of coal bunkers, and taking out the india-rubber packing between the flanges of the iron masts. The latter is one of the positive requirements of the Board of Trade, as the india-rubber was found, during the short trips of the Great Eastern, to allow an amount of "play" to the masts that would certainly be dangerous in a heavy sea. The india-rubber will therefore be withdrawn, and the space between the flanges filled up with wedges of hornbeam, so as to render the mast as rigid as if of one entire piece. Another demand of the Board of Trade is the fitting of at least two additional boats of the largest kind. They will be the largest boats ever carried by any vessel, as they are intended to be no less than 50 feet long by 13 feet wide, and nearly 7 deep—the dimensions of a 60 or 70 ton cutter. With the engines and machinery generally a good many alterations and adjustments will be made, though, from the care which has been exercised during the past winter by the company's chief engineer, Mr. M'Lennan, an immense amount of improvement in the way of working details has been already effected. Among the most important improvements is that of fitting the main engines, both screw and paddle, with feed pumps. By this change those most objectionable pieces of machinery, the donkey engines, are at once dispensed with as regards supplying the boilers. They will, however, still be kept in the ship for washing decks, pumping out the bilge, and for fire hose, though henceforth they will have no more to do with the main engines. As regards the paddle-engines, it is anticipated that by means of an improved adjustment of the slide valves a gain of at least a knot an hour may be obtained upon the next trial of speed. It appears that there is ample steam for the engines, at full work, but the cylinders inhale, so to speak, more than they can easily expel afterwards. It thus remains in the way of the down stroke of the piston, and a loss of power is produced by the engines having to overcome the resistance offered by their own steam. The most important change necessary in the screw engines is slightly raising the screw shaft, in order to allow the aftermost bearing to be removed. From this bearing all the patent white metal on which the shaft revolves has worn out. For this an ordinary gun metal bearing, faced with *lignum vitæ*, will be substituted; and the shaft, it is found, can be raised sufficiently from the inside to admit of this alteration without much trouble or expense. Tunnels fitted with water-tight doors are to be cut through all the coal bunkers, which are also to be better ventilated, and fitted with thermometer tubes to test the temperature of the fuel at all times. This latter is an important improvement, and removes one cause for anxiety among those who feared the imminent danger which might arise from an absence of proper means to ascertain at all times that the heat in the bunkers was never excessive. Numerous as are the alterations which have to be made they are none of them of a nature to occupy a great length of time, and it is confidently hoped that the vessel will be ready for sea in the beginning of June, and will accompany the Prince of Wales on his trip to Canada.

MR. SPURGEON'S TABERNACLE.—A public meeting was held a few days since in New Park Street Chapel, for the purpose of hearing a statement as to the progress of the building fund for the erection of the metropolitan tabernacle for the Rev. Mr. Spurgeon, now in progress, and for adopting measures to obtain additional subscriptions. The meeting was presided over by Mr. Spurgeon. The secretary read a statement of the building fund up to the present time, from which it appeared that there had been received 18,904*l.* 18*s.* 2*d.*, and they had still to make up a sum of 12,000*l.* to complete the erection. The sum of 610*l.* was contributed in the course of the meeting.

RENEWAL OF THE RIOTS IN ST. GEORGE'S-IN-THE-EAST.—The Easter services of Sunday last were attended by a renewal of the disturbances in the parish church. The rioters in the morning appeared to be satisfied with simply interrupting the clergy during the progress of the service, but in the evening they commenced a series of the most disgraceful outrages ever perpetrated in any church. The conduct of the mob was perfectly brutal, but it certainly was not entirely without provocation. At the morning service the gates were kept closed until 10 minutes after the usual time, the churchwardens themselves being denied admission, and in the evening the same course was repeated, some hundreds of persons professing to be parishioners being kept out in the rain until 20 minutes to 7, while persons who avowedly had no connexion with the parish were allowed to pass through the private gate of the rectory into the church. The consequence was that when the mob was admitted they rushed into the church in the worst possible humour, and began howling and yelling with all their force. Nor were they rendered more pacific when they saw the decorations of the altar. It was covered with a white cloth filled with crosses and emblematical devices, and surmounted by a number of crosses of various sizes, formed of red roses, white roses, and red and white roses mixed. There were also vases of flowers on the altar. Over the *quasi* altar hung the chandelier, at which hassocks, Prayerbooks, and Bibles were freely thrown a few Sundays ago. On this occasion it had two circles of wax candles—altogether about 32 in number—festooned with evergreens and red and white roses. About 10 minutes after the congregation had been admitted a white-robed chorister came forth from the vestry, and, with a long rod with a taper attached, began to light the candles. This was the signal for a terrific uproar, where it is needless to describe, for it was of precisely the same character as that which has been so often reported. It was so intense, however, that the churchwarden was sent for, and accordingly went to the vestry-room. At 10 minutes past 7 the churchwarden came out of the vestry-room, and, approaching the altar, told the people who were crowding round it to take their seats. The mob shouted, "Where?" To which Mr. Thompson replied, "Anywhere!" and 40 or 50 people at once broke through the altar rails. A friend of the rector attempted to drive them back, but was ultimately himself ejected from the church by two policemen. Mr. Thompson then went within the altar rails and cleared out the intruders. It was now about 20 minutes past 7 o'clock, and a passage having been made through the mob a procession of priests and choristers moved from the vestry-room door towards the altar. Two of the choristers fought their way to the rails, but the remainder, with Mr. Bryan King, the rector, Mr. Dove, the curate, and Mr. M'Donald, the appointed preacher, were hemmed in by the mob, who were labouring under the deepest excitement, and then driven back to the vestry in the most insulting manner. At half-past 7 another attempt was made by the priests and choristers to get to their places in order to commence the service, and this time they were more successful. After considerable struggling, Mr. Dove and Mr. M'Donald and the choristers made their way to the altar, and Mr. King to the reading-desk, his ascent to which was the signal for another display of howling, yelling, hissing, and slamming of pew-doors. Amidst a succession of similar interruptions he went on with the service until he came to "the Belief," when he turned round to the altar, with his back to the congregation, who, in their ignorance, hissed at the red lining of his Master of Arts' hood. This was the signal for a fearful clamour, during which the police, who had long odds to contend against, turned several of the principal offenders out of the church. When Mr. King descended from the desk there was more howling, and this process was renewed when the Rev. Mr. M'Donald went into the pulpit. There was a loud shout that he wore a huge cross upon his back, but this was a mistake, as he wore nothing but a white fur University hood. The Easter hymn, which was sung by the choir after the sermon, was travestied by the congregation with disgusting profanity. As the rector and his staff left the altar for the vestry a violent outrage was committed upon them, and it will be no matter of surprise to hear that some of them have been seriously injured. So savage was the conduct of the mob who attacked them that Mr. Superintendent Howse, who had been waiting outside, rushed in with a large body of police, and, having first guarded the altar furniture, succeeded in course of time in clearing the church, many parts of which have suffered serious injury. Some hundreds of persons afterwards amused themselves by walking about the neighbourhood singing the Doxology with more strength than harmony or propriety. On Monday an elderly man called Dickinson, a journeyman clockmaker, was charged at the Thames Police Court with being one of the rioters on this occasion. The charge was laid under the Act 1 Mary which imposed a penalty of 100 marks for the first offence, 400 marks for the second offence, and the forfeiture of all his goods and chattels and imprisonment for life for the third offence. After a long investigation Mr. Selfe said that a mark being 13*s.* 4*d.*, the prisoner was liable to be fined 56*l.*, a rather dear payment for hissing in church. Whenever a case of a bad character was made out a very severe fine or a lengthened imprisonment would be inflicted, but in the present instance he thought the justice of the case would be answered by fining the prisoner two marks, or 1*l.* 6*s.* 8*d.*, and in default of payment six months' imprisonment, and no less. The fine was collected by subscription among the people in and about the court, several boys and girls contributing, and in three minutes the prisoner was liberated. On Tuesday Mr. C. Warren Adams, a young gentleman, the son of the late Mr. Sergeant Adams, for many years assistant-judge of the Middlesex Sessions, applied to Mr. Selfe for a summons against Mr. W. J. Thompson, the senior churchwarden, for having seized him by the collar, and with the assistance of several of the rioters, kicked him from the altar steps in order to force a passage for the mob. Mr. Selfe granted the summons without comment. The case was heard yesterday at great length, and after the examination of numerous witnesses, Mr. Yardley, in a long judgment, expressed his opinion that what Mr. Thompson had done was simply in discharge of his duty as churchwarden. It did not appear that he had used any violence,—on the contrary, it seemed that he had sent away all the persons who had invaded the altar, Mr. Adams included. He thought it his duty, under these circumstances, to dismiss the summons.

THE SUNDAY TRADING BILL.—On Good Friday afternoon a great meeting of the working classes was held in the Britannia Fields, in order to oppose the Sunday Trading Bill now before Parliament. Mr. Osborne, a working man, was called to the chair. Mr. M'Sweeney moved the following resolution:—"That the Bill now before the House of Lords is uncalled for, unnecessary, and unjust to those who are least able to protect themselves. This meeting therefore pledges itself to use every exertion to oppose the Sunday Trading Bill." Mr. Joyce seconded the motion. Mr. Grove (a tradesman) moved the following amendment:—"That this meeting, believing that one day in seven is absolutely necessary as a day of rest for both man and beast, is of opinion that the Bill now before Parliament relating to Sunday trading ought not to be opposed but advocated." Mr. Winter seconded the amendment. After some discussion the amendment was put and negatived, the original resolution, opposing the Bill, being carried by a large majority. The meeting, which had been of a very noisy character, then quietly separated.

THE PURIFICATION OF THE THAMES.—The Board of Works has this week received tenders for the supply of perchloride of iron in quantities not exceeding 5345 gallons a day, for the deodorisation of the Thames. The quantities are to be delivered at 39 stations on the north side of the river, and at 15 on the south. The Fleet sewer is expected to require 718 gallons daily; the London Bridge sewer, 544 gallons; the King's Scholars' Pond sewer, 497 gallons; the Ranelagh sewer, 382 gallons; and the Duffield sewer, Bermondsey, 414 gallons. The perchloride is to be tested by a chemist for the Board, and is intended to be used from year to year during the hot months until the main drainage works are completed. The *Lancet*, however, states that the Board have been led into an error by their chemists, who have mistaken "Dale's muriate of iron" for perchloride of iron. It says that Dale's fluid certainly contains an excess of perchloride of iron, but that it has other ingredients which give it chemical properties very different from simple perchloride of iron, which has proved to be perfectly useless for deodorising purposes. "The result," says the *Lancet*, "will be, that thousands of pounds will be wasted, and the Thames will stink worse than ever."—At a recent meeting of the French Academy of Sciences a communication was received from M. Grimaud of Caux, in which a plan is proposed for improving the sanitary condition of London. M. Grimaud begins by remarking that the Lagoon of Venice is bordered by a narrow belt, the Lido, which extends from the mouth of the Piave to those of the Adige and Po, an extent of 61 kilometres (38 miles). The banks of the lagoon on the land side are at a distance of from 7 to 15 kilometres. The whole space thus comprised between the Lido and the mainland is covered with salt water which enters it through five narrow inlets, with a tide which at Venice causes the water to rise from 3 to 5 feet. It was from no motives connected with sanitary principles that the Venetian Government executed gigantic works to turn all the rivers away from the lagoon. They considered, the latter in the light of a precious means of defence and were therefore careful to prevent its being gradually filled up by the alluvial deposits of rivers. Unintentionally, however, they by so doing took the most effectual means of maintaining the sanitary condition of their city in a satisfactory state. Venice never had any other sewers than its canals. Everything is directly thrown into them, and yet the mud of these canals is never tainted; nay, when the dredging machine is put into requisition in order to maintain the canals at their proper depth, the mud taken out is conveyed to a spot beyond the Giudecca, in order to form new building ground for future extension. Now, in the small space covered by Venice there once lived 200,000 human beings; they are now 120,000; and yet its salubrity is unquestioned. At Venice the proportion of those who reach the ages of 60—80 is one in 116; at Paris, one in 200; at Venice, those who live to the ages of 80—100, are one in 400; at Paris, one in 900. M. Grimaud does not hesitate to ascribe such a result to the sea-water of the lagoon, or, in other words, to the antiseptic properties of the salt it contains. Could not a similar advantage, he asks, be secured to London? The Thames is but a small river above London, and it is only within the city that it acquires a depth of 12 feet and a width of 1200 feet. At Deptford it will hold large men-of-war. Now, so large a bed is not owing to the small slow river above described, but to the erosion of the sea; on the other hand, the latter, in driving the sweet water back at every tide, necessarily creates a point where the water neither goes backward nor forward; and it is exactly at that point of stagnation that the city is built. Now, if we consider that it is this sort of stagnant pool which becomes the general sewer of 300,000 houses, peopled with 3,000,000 of inhabitants, and receiving 92,000,000 of gallons per day of fermentable and miasmatic matter, it may safely be predicted that at no distant period a frightful pestilence must be the consequence. M. Grimaud proposes, therefore, to remedy the evil by constructing two sewers parallel to the river's course and down to the point where the water is perfectly salt. A bar should be constructed across the Thames, above London; and the sewers should communicate by flood-gates with the water above the bar, so that they may be flushed every day at low water. By this means the Thames will receive no more elements of infection. As for those which it already contains, they had better not be stirred up without special precautions for the absorption of the miasmatic effluvia.

FRAUDULENT TRADE MARKS.—A deputation from the manufacturing towns of the north, accompanied by Mr. Roebuck, M.P., Mr. Bazley, M.P., Mr. Scholefield, M.P., and Mr. Brown Westhead, M.P., had an audience with Mr. Milner Gibson a few days since at the Board of Trade, to complain of the practice of putting false labels upon goods. Mr. Brook, jun., referred especially to the

custom of giving short lengths on reels of cotton, and handed to Mr. Gibson a reel of cotton marked as containing 100 yards, but in which there were only 45; and also reels marked 300 yards,but containing only 200 yards. Mr. Gibson asked if the law did not deal already with the short measures? Mr. Roebuck said it did, but by a very roundabout process, and they wished to obtain an enactment enabling them to proceed summarily as a fraud. They could not ascertain who manufactured them. Mr. Ashworth said there were reels sold in which the maker's name, the length, and the quality were false. If they asked the dealer, he would say he did not know the length was short, as he never measured it, and they therefore thought this should be rendered compulsory. The question was not an insignificant one, involving two or three thousand pounds, but hundreds of thousands of pounds were invested in that trade. There was another branch in which this system was carried on—the jaconnets for lining coats; these were rolled up very tight, and tied in parcels labelled 20 or 24 yards, but in reality there were only 18 yards; this was sometimes reduced even to a still lower number, and there was nothing to prevent its going on further. There was no individual remedy, and therefore they came to the Government to ask them to make a law which would protect the honest trader. It was customary for many houses to give orders for goods purporting to be of certain lengths, but to contain a less quantity, and if one manufacturer did not do it another would. After some conversation, Mr. Roebuck said there was a man in America named Collins, who had a great reputation for the axes he made; every one used Collins's axes, and the Birmingham manufacturers consequently made similar axes, which they stamped with the name of Collins, and sent to America for sale. This was done by every house in Birmingham, excepting three. Mr. M. Gibson said he thought they had established their case, and if they would prepare a Bill to meet it, it should be considered; but he saw some difficulties in the way; he could fancy that 100 yards of bobbin could be made which did not contain 100 yards, but which, by common consent or understanding in the trade, had come to be considered as such, without any imputation of fraud. After some conversation it was arranged that a draught of a Bill should be prepared to be submitted to the law officers of the Crown, with a view of meeting the case.

The Brunel Memorial.—A meeting of the friends of the late Mr. Brunel was held a few days since, to consider the design of the memorial to be adopted and the site of its erection. The chair was occupied by the Earl of Shelburne. Two model casts were exhibited—one intended to represent a full-length colossal figure, on a high pedestal, in the act of unrolling a scroll, suitable alone for out-door erection; the other, a bust, on an elevated pedestal, with two full-length allegorical figures in front, suitable for in-door erection. It was stated that upwards of 2000*l.* had been subscribed, but had not yet been fully paid up. Some of the committee were in favour of an in-door statue in St. Paul's, but it had been found that this was not in accordance with the wishes of the late Mr. Brunel's family. A letter had been received by the committee from Mr. Digby Wyatt, stating that the taste of the deceased in the erection of such a structure as proposed would have been to have it executed in variegated marble. Mr. Horsley, a relative of the family, stated that they wished the memorial or statue to be a visible one, and to be erected in the neighbourhood of the Canning statue at Westminster. He denied that the taste of Mr. Brunel would have advised such an erection as stated by Mr. Digby Wyatt, but, on the contrary, that the structure in every respect should be of the gravest kind, such as may be seen over his father's tomb in Kensal-green. After several expressions of opinion, it was moved and seconded that a statue of bronze be erected in one of the public thoroughfares, if an eligible site could be procured. An amendment was moved, but failed in being seconded, that a marble statue be erected in St. Paul's. The motion was then carried unanimously. It was estimated that the work could be erected in St. Paul's for 1500 guineas, and that it could be executed in bronze for about the same sum.

The Zoological Gardens.—Following close upon the great Salamander of Japan, the arrival of which we recently reported, a second novelty of no less singular a character has just arrived at the Zoological Society's Gardens. This consists of two living specimens of the celebrated bird of the White Nile, first made known to naturalists in 1851 through the exertions of the Abyssinian traveller, Mr. Mansfield Parkyns, and named by Mr. Gould balæniceps rex. The whale-head, as its name imports, is a large stork, provided with an enormous pelican-like bill, and further resembling the latter bird in its capacity for devouring fish. Mr. Petherick, her Majesty's Vice-Consul at Chartoum, at the junction of the White and Blue Niles, has the credit of first introducing this extraordinary creature into Europe in a living state. In the month of June of last year Mr. Petherick assembled at Chartoum two elephants, two rhinoceroses, four hippopotami, and nine rare birds for conveyance to Europe. Of this noble collection the present pair of the balæniceps and one young male hippotamus alone have survived the nine months' journey to London. The balæniceps inhabits the reedy marshes on the banks of the White Nile, beyond the 4th degree of north latitude, where it was obtained by Mr. Petherick during his arduous explorations into those regions, of which he has lately given an account before the Royal Geographical Society. The Zoological Society's specimens are suffering from the rough usage they met with during the bad passage from Alexandria to Southampton, but there is a prospect of their speedy recovery.

Health of London. — The Registrar-General's Weekly Return states that the deaths registered in the week that ended Saturday, April 7, were 1439, showing a great decrease on the 1708 returned in the previous week. The average number of deaths in the corresponding weeks of the ten years 1850-59, when corrected for increase of population, is 1288. The rate of mortality therefore continues high; for the deaths in the present return exceed the estimated number by 151. During the week the births of 838 boys and 755 girls, in all 1593 children, were registered in London. In the ten corresponding weeks of the years 1850-59 the average number was 1617.

Provincial.

Carlisle.—The Town Council have granted upon very liberal terms to Mr. M'Dougall, of Manchester, the use of the sewage of Carlisle for 15 years, and Mr. M'Dougall has commenced his operations upon the Willow Holme, which he has leased from the Duke of Devonshire for the purpose. The *Carlisle Journal* states that the area of the holme is about 80 acres, divided by the Caledonian Railway into two portions of 60 and 20 acres. The outlet of the main sewer is in the lesser portion; near the entrance from Caldewgate to the larger holme an engine-house has been erected, and a tank constructed by the side of the main sewer, with a sluice so arranged that as much of the sewage can be diverted into it as may be desired as it flows down in its course to the river. Adjoining this tank a smaller receptacle is constructed, in which is mixed a strong disinfecting fluid, which is allowed to run through a small pipe into the larger tank, and there disinfect the sewage as it accumulates. A powerful pump worked by the engine then forces the sewage thus disinfected and deodorised through an iron pipe about 10 inches in diameter, which carries it to the holme, where the following mode of irrigation is adopted:—A small canal, about a foot wide and a foot deep, covered with grass sods on the sides and bottom, and with a proper descent, is constructed to run all round the holme. This is the main canal, and from it run at right angles lesser canals connected at the ends, and thus formed into parallelograms. The whole holme is thus divided into plots, surrounded by canals; the sewage can be let at pleasure into any one of the series or into the whole, and thus any one plot or the whole number can be surrounded by streams of sewage. It is intended, however, only to surround one or two plots at a time. As soon as the canals are filled breaches are made in their sides, which allows the sewage to overflow the whole of the enclosed plot until every part of it has been inundated. This is allowed to be absorbed, and it will then be left undisturbed until the grass has grown. Another plot is meanwhile proceeded with, and the rotations will be so arranged that there will always be some parts of the holme where the grass is growing, others where it is ready for the scythe, and others again where the process of irrigation is in progress. The fluid used as the disinfectant is one patented by Mr. M'Dougall, and manufactured by him at his chemical works at Chadderton, in Lancashire. This diluting process will be carried on in the small tank referred to, and it is estimated that 1 gallon of the concentrated essence as it leaves the chemical works will be sufficient to disinfect from 10,000 to 20,000 gallons of sewage.

Cockermouth.—The mystery connected with the murder at Embleton, noticed in our last Number, has been dispelled by the confession of George Cass, Mr. Fearon's husbandman, that he was guilty of the crime. Suspicion pointed to Cass from the first, as, according to his own account, confirmed in some material points by other witnesses, he was about the house at the very time when the murder was committed. So far, however, the case was only one of suspicion, there being no positive evidence to implicate him, for although the clothes which he wore on the day in question had been sent to Professor Taylor in order that certain suspicious-looking spots might be analysed, the examination had not yet been concluded. Cass was therefore kept under the strictest surveillance, day and night, until last Friday, when Mr. Dunne, the chief constable, deemed it his duty to direct his apprehension. As soon as it became known that he was to be apprehended the greatest excitement was manifested in this town and the neighbourhood. Mr. Dunne left Cockermouth, accompanied by some of his officers, at an early hour, and many persons had then gathered on the road to Embleton in order to see Cass as he was taken to the station. He was apprehended and brought to Cockermouth in a close conveyance after dusk. Crowds of people had by this time gathered along the route, and their hisses and groans as the carriage passed showed how great was their sympathy for the girl, and their horror at the crime. Soon after the prisoner had been lodged in the lock-up he expressed a desire to see the chief constable. Mr. Dunne went to him, when Cass told him he wished to make a statement about the murder. Mr. Dunne sent immediately for the magistrates' clerk and his assistant, and in the presence of these three, Cass confessed that he had murdered Ann Sewell. He said that when he returned from the field for his mare, the girl asked him something about mending her clog for her. He would not comply with her request; she therefore called him names and threw the tableknife at him, the handle of which struck him on the face, under the eye. He threw it back at her and it struck her throat and cut it. She then told him that since he had gone so far he had better finish it and murder her altogether. He seized the knife again, and setting upon her cut her throat. After he had murdered the girl he robbed her. A sovereign and a half-crown have been found along with the girl's purse, the two latter bearing marks like blood stains. The half-crown was obtained from the landlady at the publichouse at Eaglesfield, where the prisoner and his father spent a shilling of it on the Wednesday after the murder. The sovereign was found in the possession of the prisoner's mother; and the purse was discovered buried 12 inches below the ground at Sosgill, Bramley Moss, near Lowe's Water. From this it would seem that the murderer had rifled the box of his victim while his hands were still wet with her blood. On Saturday the prisoner was brought up before the Cockermouth magistrates, when Mr. Dunne formally charged him with wilful murder, and applied for a remand. The prisoner was remanded until Thursday. The coroner's inquest terminated on Tuesday in a verdict of Wilful Murder against the prisoner.

Devizes.—The Spaniard, Serafin Manzano, who was convicted at the recent assizes for the murder of Anastatia Trowbridge at Ashcombe, was executed on Wednesday in front of the new prison, in the presence of about 4000 persons. He continued to protest his innocence to the last.

Durham.—The Durham Wear Anglers' Association have, in compliance with a resolution passed at a recent meeting, taken steps to introduce fresh varieties of fish into the Wear. A few days ago about a dozen fine tench, in healthy condition, were put into the Wear in the neighbourhood of this city.

Hemel Hempstead.—The investigation of the recent poaching affray at Beechwood was concluded by the magistrates on Saturday, when two men called Cane and Bliss were committed for trial for the murder of John Seabrook, the gamekeeper. From the evidence of the surgeon, who had made a *post mortem* examination of the body, it appeared that the death of the gamekeeper was caused by a gunshot wound on the right side of the chest, against the collarbone. The carotid artery, the jugular veins and nerves, and part of the windpipe were carried away, so that death must have been instantaneous. Some of the shot dropped into the lower part of the chest, where it lay loose. It was proved that the prisoner Cane had taken his gun to be repaired on the evening before the murder, and that a staple had been put upon it which could not have been broken by fair usage. Some rather curious evidence transpired in regard to the prisoner Bliss. A small piece of paper was picked up in the wood near the scene of the murder. It proved to be the corner of a summons, having on it, besides some printed words, the letters "ough" in writing. It is supposed to have been part of a summons which had been served upon Bliss about a week previously, and in which the word "Houghton," of which the letters "ough" formed a part, had been entered by mistake as his residence.

Hull.—A few days since as some members of the Hull Volunteer Artillery were practising ball firing at a target in the Citadel, a young man called Kirke shot Corporal Richardson, of the Northumberland Militia, who was standing about 20 yards from the target and noticing where the balls struck it. The ball hit the ground, rebounded, and struck the corporal on the right side of the chest, breaking through the seventh rib, which was partially torn away; passing through a small portion of the base of the right lung, and along the inside of the ribs, and lodging in the muscles just beneath the shoulder blade. The sufferer was at once removed to the infirmary, where the ball was extracted, and with it also a portion of his jacket and brace, which had been forced into the wound by the ball. He still lies in a very dangerous state, but there is some prospect of his recovery.

Liverpool.—Within the last few days two of the soldiers who came home from India in the Great Tasmania have died in the Liverpool workhouse, the former from dropsy and the latter from dysentery, induced by their sufferings on board that vessel. According to the calculations of the governor of the workhouse there has been, including the men above-mentioned, one death in every 13 of the soldiers who embarked on board the ship.

Manchester.—A meeting of the Lancashire Reformers' Union was held at the Free Trade Hall on Thursday evening to consider the question of Reform, with especial reference to Lord John Russell's Bill. Mr. G. Wilson presided, and there were about 5000 persons present. After addresses from Mr. Bazley, M.P.; Mr. Peter Ryland, of Warrington; and Mr. Henry Ashworth, of Bolton, Mr. Bright spoke to the following effect:—

"Looking back to the last two months in Parliament, he was glad to be able to say that what we beheld was highly satisfactory. If it had not been for the enormous, the needless, and he might say the guilty military expenditure, he would have been willing to express unmixed approbation of Mr Gladstone's Budget. We should probably have had a good Budget from Mr. Gladstone even if there had been no commercial treaty with France, but that treaty made it doubly valuable. By means of the two every vestige of Protection had been swept from the tariff. The treaty would come into full

operation in three years from that time. He believed we should find the tariff of France much more liberal than the present tariff of the United States. How were this Budget and treaty received? The treaty was received with marked coldness by both Houses, and hotly opposed by a large party in the Commons. They said it was not according to precedent: that the chief apostle of free trade did not know his own business; that the French tariff ought to be lower, and come into operation at once; that the treaty had not received the sanction of the French Chamber, but was carried into effect on the sole will of the Emperor; that the duties were chiefly taken off luxuries; and that we ought to have left the treaty to be negotiated by an experienced diplomatist. We had diplomatists in all parts of the world receiving enormous salaries, yet we should look in vain for any service rendered by them to English industry equal to the service done by the unpaid and inexperienced diplomatist, Mr. Cobden. But the true reasons against the treaty had not been given in the House of Commons. The Budget abolished several sources of indirect taxation, and had tied up the military expenditure by a tax from which hereafter there would be no escape. Henceforth these two things would go together. If Parliament raised the military expenditure to 20 or 30 millions that increase must be defrayed by an income-tax, or by an income-tax coupled with a property tax. He (Mr. Bright) thought it a most happy thing that this result should have been brought about. This treaty promised peace and confidence with France, but there were persons connected with the oligarchy and the military service who wished for a different policy. Out of the 125 years previous to 1815 we were at war with France during 68 years. When the system began our taxation amounted to 2,000,000*l*. In 1815 it had reached to 72,000,000*l*., and we had an accumulated debt of 800,000,000*l*. All this took place under a system in which only the 'select' were allowed to vote, in which the great aristocratic republic stood supreme, uninterfered with by the breath of public opinion. The treaty concluded with France menaced this patrimony of taxation, and hence the concealed opposition to its being carried into effect. Besides those questions of the Budget and commercial treaty, Parliament had been called upon to consider the question of Reform. Lord J. Russell's Bill must be taken for what it was—viz., a Bill for the extension of the franchise. It only remotely touched upon the redistribution of seats, and did not comprise the ballot. The borough voters in England and Wales now on the register numbered 440,000, and he believed the new Bill would only add 167,000. Was that a measure likely to give an ignorant and excited mob a preponderant power in all the boroughs of England? In 1832 it was said the new voters enfranchised by the proposed Reform Bill would swamp the old constituencies, and the same argument was used at the present time; yet the 10*l*. householders had never conspired, so far as he knew, to swamp the power of persons of property and education. Mr. Whiteside in a recent debate had tried to frighten the House by reference to the strike of the London builders. Now, it had never been proved that strikes were bad. A strike was the reserve power in the hands of the working man. He (Mr Bright) would tell working men never to surrender their right to combine with their fellow men in support of their interests. He believed Mr Disraeli would be glad to allow the present Bill to pass, so that the question of Reform should no longer obstruct his battles with his old antagonists, the Whigs. Others among the Tory Opposition would also willingly give it their support, but he feared the policy of lukewarm Liberals. He, however, gave credit to Government for bringing forward the measure, and hoped they would take care it was not damaged in its passage through the House. If it should not be passed this session, or was much longer delayed, he would recommend the working classes throughout the country to appoint delegates from their trades unions and societies to sit permanently in London, to act upon Parliament, and to tell it that they will not longer intend to be put off and trifled with, and cheated of their just expectations. Mr. Bright then drew a parallel between the present time and that of Mr. Pitt with regard to the Reform Bill and commercial treaty with France. In 1784 Mr. Pitt's Reform measure was rejected, and his commercial treaty was got rid of by war with France. He warned the people to see that the same course was not adopted now. There was a party in this country who systematically endeavoured to arouse an ill-feeling against the French nation. *The Times* was following in the wake of the *Morning Advertiser*, not in the same pot-valiant style, perhaps, but with a malignity if possible more satanic, trying to arouse a spirit against the French nation. From week to week and from month to month it published leaders, one day insulting France, next day alarming Germany, and another time exciting England. He knew what would be said in reply to this, but he was not writing anonymously. He was an Englishman like themselves, caring nothing for the revilings of the press, but caring dearly for the solemn interests of his country. His warnings were not unnecessary. He spoke not to the Court, for though honest, his speech was scarcely tuned to Courtly ears. He spoke not to the aristocracy who, wrapt in luxury, cared not to listen to his appeals; but he addressed the great body of his fellow-countrymen. In a few years this treaty would become a bond of perpetual peace. Stick to it. It might yet be wrested from their hands. With peace the progress of Reform could not be arrested, and political power in this land would be transferred from a clique of families to a great nation."

NEWCASTLE-ON-TYNE.—The local papers state that the old apple tree which has stood so long on the remains of the Roman wall at Denton Burn has ceased to exist. When Hutton made his itinerary of the wall in 1801 it was then vigorous, and a drawing of it is given in his "Roman Wall." When Dr. Bruce, who also gives an accurate drawing of it, published the first edition of his work on the same subject in 1851 the tree was in a state of decay. It has at last been blown down during a heavy gale of wind.

OXFORD.—The encœnia or celebration of founders and benefactors will take place on Wednesday, June 20, in the Sheldonian Theatre; and, on the same day, it is rumoured that her Majesty will open the New Museum, in the parks, in person, accompanied by the Chancellor, the Earl of Derby, and many others of the most distinguished members of the university, both resident and non-resident. The British Association for the Advancement of Science will meet on the following week, when it is expected that the Prince Consort will be present, and will resign the office of president of the Association into the hands of his successor, the president elect.

PENRITH.—A German gardener, called Simon Manassa, lately residing at Newcastle-on-Tyne, was cruelly murdered on Monday night in the neighbourhood of this town. He had been struck down by the blow of a bludgeon on the head, and after his skull had been fractured by beating it against a stone wall, the body was thrown into a neighbouring brook. The unfortunate man appears to have afterwards recovered himself, for he had crawled from the stream to the corner of the adjoining field and was still alive when discovered the next day, though unable to articulate. A man called Sowerby, who had been seen in his company about the time of the murder, has been apprehended, and from the marks of blood upon his clothes there is little doubt that he was the perpetrator of the crime.

PORTSMOUTH.—A serious disturbance took place on board the Edgar, line-of-battle ship, on Tuesday evening at Spithead on the question of leave, and five of the ringleaders, comprising two Marines, one Marine artilleryman, and two seamen, were sent on board the Victory as prisoners. The affair, it is reported, must terminate in a court martial.

READING.—Mrs. Elizabeth Ledger, the wife of a musician and dancing-master in this town, was recently committed for trial on the charge of shoplifting on a most unprecedented scale. Her detection was very remarkable. It appears that she had visited the shop of Mr. Steward, a bacon-factor, and made purchases to a moderate extent. Her conduct while there excited the suspicion of Mr. Steward, and, as she wore a large cloak, her bulky appearance led him to fancy that she had committed some dishonest act. As she was about to quit the shop he intimated his suspicions to her, and expressed a desire to see whether she had anything concealed beneath her cloak. She affected to be greatly annoyed and surprised at the intimation, but, as Mr. Steward was firm, and expressed his determination that she should not quit the place without his being satisfied as to whether she had anything, she yielded to an examination, which resulted in the discovery, not only that she had some of Mr. Steward's goods which she had not purchased, but that she had in her possession some gown pieces, bearing the private marks of the drapers from whose shops they had been stolen. She was thereupon given into the custody of a police officer, and removed to the station. A more minute search was then made, and articles were found conclusively proving that she had not honestly obtained the goods. She was lodged in the Bridewell for the night, and on the following day officers were employed in making inquiries at the different drapers' shops. The property found upon her was soon identified, and as several losses had been previously reported at the station, it was deemed advisable that search should be made at her lodgings, where she was living separate from her husband. On examining her bedroom the officers found an immense quantity of goods, the produce of robberies for months past. The articles found comprised stair covering, measuring above 20 yards, ladies' boots, table cloths, cotton prints and other dresses, shawls, merino, linsey woolsey, flannel, patent socks for boots, and perfumery to a considerable extent. In another room were discovered 200 yards of cotton print, and a great variety of other articles, including fancy stationery and things of a similar description. The prisoner, it appeared, carried on the business of a dressmaker and milliner; she visited drapers' shops to buy articles in her business, and the robberies were committed while the shopmen had left her at the counter to get the articles she required, all of which were carefully concealed under her cloak. Her respectable appearance disarmed suspicion, and though the articles were soon missed she was never suspected.

SALFORD.—On Thursday morning an old man named Scholes and his son, living at Irlams-o'-th'-Height, were found dead in their cottage under circumstances which leave no doubt that they were murdered by strangulation by some member of the family living in the house. The second son and a daughter have been taken into custody to await the result of a coroner's inquest, but the impression is that the murder was committed by the daughter, who is subject to fits and considered to be of weak mind.

England.

THE IRISH CHURCH.—The deanery of Kilmore, vacant by the death of Lord Fitzgerald and Vesey, has been conferred by the Lord-Lieutenant upon the Rev. Dr. Carson, rector of Cloon.

THE EXODUS.—For nearly two years it has been generally supposed that the exodus of the Irish peasantry was accomplished, and that until another generation arose we should hear no more of that marvellous decrease in the population which followed the famine of 1845-6. The accounts however which have come from the provinces since the opening of the emigration season have entirely dissipated that idea. A few days since at Cork upwards of 300 passengers embarked at Queenstown in one day for New York, and another large number for Portland. Many of the emigrants were attended as far as Queenstown by their relatives and friends, and the scene presented on the piers and quays as they parted was one of great animation and interest. From the port of Sligo it is stated that during the past month there has been a regular flight of emigrants from the west of Ireland. Nearly 200 passed through that town for Liverpool one day last week on their way to America, while others took the line from Galway. The great majority of them came from Belmullet, in the county of Mayo, but a considerable number belonged to the county of Sligo. The Clonmel papers state that the trains on their local railway are daily crowded with passengers on their way to America, and the steamers are doing a brisk trade in conveying them over from Waterford. All the papers agree in stating that the tide of emigration has set in in right earnest from the western province.

NATIONAL EDUCATION.—The Archbishop of Dublin has published a postscript to a reissue of the address delivered to his clergy at the time of his withdrawal from the Board, emphatically stating that if the national system had been administered all along as it is now conducted he would still be a commissioner. The Right Hon. Joseph Napier has published a pamphlet expressing his views on the education question, which are in entire accordance with those of the Lord Primate. A meeting has been held in Derry at which it was resolved to co-operate with the Ulster National Education Society in upholding the principle of united education, and opposing denominational grants in Ireland. The requisition calling the meeting was signed by 2 members of Parliament, 2 high sheriffs, 3 baronets, 28 magistrates, 23 Episcopalian ministers, 21 Presbyterian ministers, 4 ministers of other Protestant denominations, 81 laymen of the Established Church, and 44 Presbyterians and others. A letter from the Bishop of Derry was read at the meeting commending the "good and righteous" cause for which the meeting was convened, and expressing his thorough persuasion that the national system has already been productive of great good to the country at large, and that it is founded on the righteous principle of "doing to others as we would they should do unto us." The Archdeacons of Cork and Cloyne, and a large number of the clergy of the united dioceses of Cork, Cloyne, and Ross, have adopted an address thanking the Lord Primate for the counsel and advice contained in his recent address on the subject of education, and expressing their hope that it may lead to a satisfactory settlement of this long-disputed question. The Bishop of Ossory, on the other hand, has published a letter to his clergy lamenting the advice which the Primate has given to members of the Church Education Society to join the National Board under certain circumstances, and urging them not to seek for aid from the Commissioners of National Education, under any circumstances, to enable them to carry on their schools, so long as such aid can only be had upon the terms of submitting to the distinctive rule of the national system. Upwards of 50 clergymen of the diocese of Ossory have signed an addressed to the bishop supporting him in his opposition to the national system.

Scotland.

EDINBURGH UNIVERSITY.—The installation of the Right Hon. W. E. Gladstone, as Rector of Edinburgh University, is appointed to take place on Monday next, the 19th inst., in the Music Hall. The installation of Lord Brougham as Chancellor is deferred till the Whitsuntide holidays, the noble lord, who is at present at Cannes, being unable to visit Edinburgh at this season. His lordship has just accepted the office of President of the Philosophical Institution, vacant by the death of Lord Macaulay.

ABERDEEN UNIVERSITY.—On the 3d inst. the Earl of Airlie was reinstalled Lord Rector of Marischal College and University, Aberdeen, in the presence of a large assemblage of the students and citizens. His lordship addressed the audience at considerable length, and was afterwards entertained by the students at a banquet in the college buildings.

THE BUCCLEUCH ESTATES.—The *North British Mail* states that scarcely have the inhabitants of the Border country recovered from the surprise caused by the Countess Home disentailing her estates, when the announcement is made that the Duke of Buccleuch has commenced a similar process, extending over 10 counties, all south of the Forth. As far as can be judged from the intimations, the Queensbury estates, situated chiefly in Dumfriesshire, are not included. Within the last two or three years some others of his baronies were similarly disposed of. One effect of a disentailment will be that the duke can grant feus and the like to all the other towns over the estate, which he has hitherto refrained from doing.

EXTRAORDINARY BEQUESTS.—An old miserly woman called Agnes Hamilton, who for about 40 years has kept a small grocer's shop in Commercial Road, Glasgow, has just died at the age of 81, leaving no less than 23,000*l*. She was in every respect a miser. She was never married, and studiously avoided parting with a single farthing that she could avoid. In this way, and by dint of half starvation, she succeeded in realising this large sum, which she has bequeathed in 4*l*. annuities to destitute people of good moral character who are natives of and have lived in the Gorbals parish of Glasgow 40 years, and have attained the age of 65. As the parish is small very few qualified claimants exist or can exist. She has left nothing to any of her relatives.

Sporting.

NEWMARKET CRAVEN MEETING.

MONDAY.—*Craven Plate.* Mr. J. H. C. Wyndham's Cynricus beat Mr Godding's f, Lord Clifden's g, and North Lincoln.—*Match.* Mr. R. Ten Broeck's Pomona beat Desdemona.—*Handicap Plate.* Mr Bentley's Flimsy beat Marseillaise, Bastion, and 10 others.—*Handicap.* Mr. Savile's Parmesan beat Gorsehill, Newstead, Harry, Harry Stanley, Pomona, and Jewish Maid.—*Match.* Lord Coventry's Postage beat Plum.—*Sweeps.* Mr. Alexander's Thunderbolt beat Maggiore, Busy Bee, Fravola,

and Lord W. Powlett's c.—*Bennington Stakes.* Baron Rothschild's King of Diamonds beat Desmond.—*Sweeps.* Count Batthyany's Rose Middleton beat Lord Glasgow's b f and Eda.—*Sweeps.* Lord Annesley's Sweetsauce beat Paleface, Apollyon, Richmond, Cavriana, and Jason.

Tuesday.—*Newmarket Handicap.* Mr. Mundy's Confectioner beat Man-at-Arms, Remunerator, and 19 others.—*Second Newmarket Biennial Stakes.* Mr. T. Parr's Avalanche beat Brother to Rainbow, King of Diamonds, and 13 others.—*Match.* Lord W. Powlett's Delusion beat Philomela.—*Fourth Sale Stakes.* Baron Rothschild's b. c. beat Rattlebone and Egbert. *Sweeps.* Baron Rothschild's Restes beat Baron Munchausen.—*First Newmarket Biennial Stakes.* Lord Strathmore's Mouravieff beat Defender, Sir Hercules, and 7 others.—*Match.* Mr. F. Robinson's Apollo received forfeit.

Wednesday.—*Handicap Sweeps.* Sir Joseph Hawley's Gallus beat Mavourneen and Mr. Savile's b. c.—*Plate.* Lord Stamford's Lava beat Caliban, Baron Rothschild's b. f., and 4 others—*Subscription Plate.* Sir J. Hawley's Gallus beat Cynricus, Starke, Man Friday, and 3 others.—*Sweeps.* Mr. Barrett's Lady Kingston beat Orlando, Arbour, and Dove.—*Column Stakes.* Lord Derby's Sagittaria beat Lord Ailesbury's ch. c., Le Prochain, Rope Dancer, and Vicar of Bray.

Thursday.—*Handicap Plate.* Lord Stamford's Tyrant beat Blue Jacket, Bevis, Athos, and 5 others.—The *Hurstone Stakes.* Lord Fitzwilliam's Richmond beat Loiterer.—*Aske Produce Stakes.* Colonel Towneley's Sparrow Hawk beat Sabreur.—*Sweeps.* Duke of Bedford's Vicar of Bray beat Drum Major and Merryman.—*Subscription Plate.* Mr. Newland's Philomela beat Athos, Desmond, Gracchus, Woodburn, and Egbert.—*Match.* Duke of Bedford's Plum received forfeit.—*Sweeps.* Mr. Locke's Man Friday walked over.—*Sweeps.* Lord Stamford's Little Lady beat Sparkle and Postage.—The *Claret Stakes.* Mr. W. Day's The Promised Land walked over.

Friday.—*Port Stakes.* Gamester walked over.—*Sweeps.* Br. c. Rainbow walked over.—*Queen's Plate.* Newcastle beat Mazzini, Bevis, and another.—*50l. Plate.* Neophyte beat Vulture, and 6 others.—*Match.* Cock-a-Hoop beat Adulation.—*Sweeps.* Trovatore beat Thunderbolt and another.—*Sweeps.* Sparta walked over.—*Match.* Pomona beat Middleton.—*Free Handicap Sweeps.* Cape Flyaway beat Dulcibella and 2 others.—*Mowbray Stakes.* Lady Bird beat Ivanhoff and 9 others.—*Sowerby Plate.* Layton beat Donati, Trothplight, and 9 others.—*Members Plate.* Weardale beat Knapton.—*Hunt Stakes.* Roscrea beat The Monk.

Arrest of John Heenan.—John Heenan, the Benicia Boy' was arrested by the Derbyshire police at the village of Trent Lock, close to Burton on Trent, on Friday morning. On the following day he was taken before the magistrates at Derby and bound over to keep the peace in his own recognizance of 50*l*, and two sureties of 25*l*. each. After the sureties were signed, Heenan, who stated that he had been hunted out of eight counties, left the court with his friends. A great crowd assembled outside the hall, and remained there for several hours. Heenan was quietly taken the back way, and a cab being in readiness, he drove off with his friends, intending to leave for London by the next train. Under these circumstances there will be no alternative but to break off the contest, for the magistrates intimated that the sureties entered into extended to every county in England. After Heenan's case had been disposed of, a rumour was current that Sayers was also in the county. A warrant was immediately issued for his apprehension, and placed in the hands of a county police officer. In addition to the steps taken by the magistrates of Hertfordshire last week articles of the peace have been exhibited before the magistrates of Leicestershire, Buckinghamshire, and Warwickshire against Sayers and Heenan, the chief constables having received information which led them to suppose that the fight between them was intended to take place on the borders of one or other of those counties.

Theatres.

The Opera Houses.—Her Majesty's Theatre in the Haymarket and the Royal Italian Opera in Covent Garden were both opened for the season on Tuesday evening, the former with Flotow's *Martha*, the latter with Meyerbeer's *Dinorah*. Both houses were well filled, and the performance at each gave promise of a brilliant and successful season. Mr. E. T. Smith, the lessee of Her Majesty's Theatre, surprised the frequenters of the old Opera House by the extraordinary beauty of the decorations which he has introduced throughout the building with such profusion that the house is not only thoroughly renovated, but thoroughly changed. The whole of the interior has been newly painted and papered, the prevailing colours in the upper part of the house being white and gold, and those in the basement crimson and red, while in every niche huge mirrors reaching from floor to ceiling have been introduced, the large stone hall being literally lined with them. The grand staircase, reaching from the vestibule, is of itself an imposing object, covered, as it is, with a velvet carpet, which stretches across the steps. The iron balustrade is painted a deep mazarine blue, alternated with gold, while the hand-rails are covered with crimson velvet, set off with fringe of the same colour. On the first landing of the staircase leading from the western extremity of the stone hall is placed a large vase, filled with aquatic flowers, from which a jet of water is springing, in front of a mirror. Nor does the aspect of the interior disappoint the spectator who has passed through all these preliminary splendours. The paint and gilding have been thoroughly cleaned and restored, the boxes have been hung as before with amber satin curtains, the old leather chairs have been removed from the stalls, and their place supplied by a number of crimson satin couches, which have entirely changed the general effect.

Obituary.

Viscount Guillamore died on the 10th inst. in Dover Street, at the age of 27. His lordship, who was an officer in the Royal Navy, was the eldest son of the second viscount by a daughter of the Hon. Berkeley Paget, and grandson of the Right Hon. Standish O'Grady, many years Chief Baron of the Exchequer in Ireland, who was raised to the Irish peerage in 1831. He was born in 1842, succeeded to the family honours in 1843, and married in 1858 the daughter of the late Mr. Arthur Blennerhasset, some time M.P. for the county of Kerry.

Lady Audley died on the 1st inst. at Kensington, after a short illness, in her 31st year. Her ladyship was the daughter of the late eminent geographer and explorer of Australia, Sir Thomas Livingstone Mitchell, K.H. She married in 1858 the present Lord Audley, by whom she has left two infant daughters, the latter born in Normandy only a few weeks since.

Sir James Forrest, Bart., died on the 5th inst. at Plymouth, where he had gone on a visit to his son, Captain Forrest. He was born in 1780, and was therefore in his 80th year. His father was a writer to the Signet, and his mother, of the same name, was the only child of Mr. Forrest, of Comiston. By the death of his mother and grandfather, he succeeded to the property of Comiston when only two years old. He passed as Advocate in 1803 and at his death stood seventh on the list of the Faculty. In politics he was a steady adherent of the old Whig party, and in 1837, through the influence of that party, he was chosen Lord Provost of Edinburgh. At the coronation of her Majesty in 1838 he was created a baronet. He occupied the civic chair for six years, and it was during his provostship that her Majesty paid her first visit to Edinburgh. At the disruption, in 1843, Sir James, who had for several years previously held the office of a ruling elder in the Kirk of Scotland, joined the Free Church, of which he remained ever after a conscientious member. He served for many years as director of many public companies and benevolent institutions, but during his latter years he withdrew by degrees from all of them with one or two exceptions. He retained the chairmanship of the Life Association of Scotland to the time of his death, and held for some time the office of Grand Master of the Grand Lodge of Freemasons in Scotland, now held by the Duke of Atholl. He married the third daughter of Alexander Horsburgh, Esq., of Horsburgh, in Peebles-shire, by whom he leaves two daughters and two sons, the eldest of whom succeeds him in the title and estates.

Colonel Irwin, K.H., formerly of the 63d Foot, and many years commandant of the troops in Western Australia, died at Cheltenham a few days since, at an advanced age. He entered the army in 1808, and served in the Peninsula from April, 1809, to February, 1814, including the capture of Oporto, battles of Talavera and Fuentes d'Onor, siege and storm of Ciudad Rodrigo, siege of Badajoz and capture of the castle by escalade, battle of Salamanca, capture of Madrid and the Retiro, battles of Vittoria and the Pyrenees, besides various affairs and skirmishes on the advance and retreat of the army. He also served in the Kandyan campaigns in 1817 and 1818 in Ceylon. He was gazetted commandant of the troops in Western Australia in 1839, where he remained until he retired from the army in 1855. He has received the war medal and nine clasps for his services.

Mr. W. Sloane Stanley died on Wednesday at Paultons, the family seat, near Romsey. He was for many years well known as a zealous supporter of the turf. He married in 1804 Lady Gertrude Howard, daughter of the fifth Earl of Carlisle, by Lady Margaret Leveson Gower, second daughter of the first Marquis of Stafford.

Mr. Jelinger Cookson Symons, one of her Majesty's inspectors of schools, died at Malvern House, Great Malvern, of rapid decline, on the 7th inst., in his 51st year. For the last 20 years his name has been widely known in connection with the great educational and reformatory movement which has marked the middle of the present century. He was the son of the late Rev. Jelinger Symons, Rector of Radnage, Bucks, and Monklands, Herefordshire; grandson of the Rev. Jelinger Symons, Rector of Whitburn, Durham, and for many years officiating minister at Hackney; and nephew of the late Rev. Dr. Henry J. Symons, D.C.L., Vicar of All Saints, Hereford, who, in his capacity of chaplain to the forces, read the burial service at the funeral of Sir John Moore at Corunna. He was born at Hackney in 1809, and received his education at Corpus Christi College, Cambridge, where he graduated B.A. in 1831. At an early age he became connected with the metropolitan press in an editorial capacity, and was for some time editor of the "True Sun," the "News," and other journals. He was afterwards appointed one of the Assistant Commissioners to inquire into the condition of women and children in mines and factories, and into the condition of the handloom weavers. In 1843 he was called to the bar at the Middle Temple, but soon began to combine with his professional duties an attention to literary questions, and more especially to the statistics of education, crime, &c. His writings attracted the attention of her Majesty's Government, by whom he was nominated in 1847 one of the inspectors of schools. The various pamphlets, speeches, lectures, &c., and more elaborate treatises on social subjects which he published in the interval between that date and the present year fill upwards of six pages of the new catalogue of the British Museum. Mr. Symons is also known and remembered for a controversy which he carried on respecting the revolution of the moon upon its own axis, and for an elaborate essay on the authorship of "Junius." He was also a frequent contributor of amusing papers to "Once a Week." Soon after the passing of the Reform Bill, Mr. Symons offered himself as a candidate in the Liberal interest for the Parliamentary representation of Strand, but withdrew to make room for Lord John Russell, who had lost his seat for South Devon. He married in 1845 Angelina, daughter of Mr Edward Kendall, late of Davy Park, and formerly high sheriff of Brecknockshire, by whom he has left an infant family. As we learn from the "Book of County Families," Mr. Symons represented a younger branch of the ancient house of Symons, of the Hutt, near Stratton, Cornwall, a family who came over with the Conqueror, but afterwards returned to Normandy, though one of their descendants afterwards became one of the earliest members of the Order of the Garter.

Wills.—The will of Mr Stephens Lyne Stephens has been sworn under 700,000*l*. personalty; Sir W. Carpenter Rowe, Chief Justice of Ceylon, 25,000*l*.; Major-General Russel, R.A., 11,000*l*.

BIRTHS.—On the 7th inst., at Norfolk House, the Duchess of Norfolk, of a daughter—8th inst., at Guestling, Sussex, Lady Ashburnham, of a daughter—9th inst., at 79, Rue de Lille, Paris, the Lady Charlotte Locker, of a son, stillborn—At Dawlish, the wife of Rear-Admiral Thomas Henderson, of a daughter—3d inst., at Chichester, the wife of Prof. Buckman, of a son.

MARRIAGES.—On the 11th inst., at the Church of the Holy Trinity, Sloane Street, the Rev. Edward Cheese, Domestic Chaplain to the Bishop of Carlisle, to Amy Maria, eldest daughter of the Hon. and Right Rev. Dr. Villiers Lord Bishop of Carlisle—10th inst., at St. James's, Piccadilly, William E. Oakley, Esq., of Maple Hayes, Staffordshire, to the Hon. Mary Russell, second daughter of the Baroness de Clifford—11th inst., at St. George's, Hanover Square, Sir Henry Edward Francis Lambert, Bart., to Eliza Catherine, second daughter of the late Lionel Charles Hervey, Esq.—Jan. 17, at Christchurch, New Zealand, John Barton A. Acland, Esq., son of Sir Thomas Dyke Acland, Bart., of Killerton, Devon, to Emily Weddell Harper, eldest daughter of the Bishop of Christchurch; also Charles Percy Cox, Esq., son of the late Captain Cox, of the First Life Guards, and of Sandford Park, Oxfordshire, to Sarah Shephard Harper, fifth daughter of the Bishop of Christchurch—7th Feb., at Poonah, Bombay, G. W. Elliot, Esq., C.S., Judge of Darwar, and nephew of G. W. Elliot, Esq., C.S., Judge of Darwar, and nephew of Lord Elphinstone, the Governor of Bombay, to Fanny Mary, daughter of C. Staunton Cahill, Esq., of Kensington, formerly of Riverston, county Clare, J.P., and grandniece of the late Sir Francis F. Staunton, C.B., First Commandant of Ahmednuggur, and Honorary Aide-de-Camp to the Governor-General of India—27th ult., at the parish church of Stoke Damerel, Devon, Hamilton Sabine Pasley, Esq., H.M.'s Cape Mounted Rifles, fourth son of Rear-Admiral Sir Thomas Sabine Pasley, Bart., to Catherine Anne, eldest daughter of Lieut.-Colonel the Hon. Richard Hare—12th inst., at Kensington Church, Captain Campbell, R.N., of Ardpatrick (on the Campbells of Islay and Shawfield), to Harriet, youngest daughter of Henry William Vincent, Esq., of Thornwood Lodge, Kensington, and Lily Hill, Bracknell.

DEATHS.—On the 7th inst., at Rutland Gate, Gertrude Mary Keppel, infant daughter of Viscount and Viscountess Bury, aged 5 months—4th inst., at Bagshot, the Hon. Sidney Montagu, third son of the Right Hon. the Earl of Sandwich, aged 17—8th inst., at Ampthill House, George John Wingfield, Esq., second son of the late Hon. and Rev. Edward Wingfield, aged 38—4th inst., at Brighton, Anna Maria, widow of Samuel Le Fevre, Esq., and second daughter of the Hon. Peter Boyle de Blaquière—7th inst., at Abbeytown, Roscommon, the residence of her son, Henry Moriarty, Esq., Eliza, Lady Moriarty, widow of Sir T. Moriarty, M.D., aged 77—28th ult., at 5, Dean Street, Park Lane, Mrs. C. P. Ottley, daughter of Sir John Coghill, Bart.—5th inst., at Geneva, Maj.-Gen. Orlando Felix—1st inst., at Eaton Banks, Cheshire, Arabella Egerton, relict of the late Lieutenant-General R. Egerton—9th inst., at 29, Grosvenor Square, Emma Matilda, wife of Charles Douglas Harford, Esq., of Grosvenor Square, and of West Lodge, Suffolk—6th inst., suddenly, at Picton Villa, Surbiton Hill, Colonel Thomas Lowth Harington, of the 5th Regiment Bengal Light Cavalry, second son of the late Henry Hawes Harington, formerly of Madras, aged 49—4th inst., Mr. Serjeant Wallinger, aged 62—8th inst., at Brighton, Robert Francis Jenner, Esq., of Wenvoe Castle, Glamorganshire, aged 58—5th inst., Stephen Wilson, Esq., of Streatham and Bexhill, one of H.M.'s Justices of the Peace for the counties of Surrey and Sussex, aged 82—6th inst., at Cambridge, Catherine Montagu, wife of William Webster Fisher, Esq., M.D., Downing Professor of Medicine in the University, and daughter of the late Henry Edward Hymore Woodham, Esq., of Newbury, Berks, aged 30.

Markets.

COVENT GARDEN.—April 14.

The supply of Vegetables is somewhat improving, and prices are becoming more moderate. Pine Apples and Grapes have not altered since our last report. Good Apples and Pears are scarce. The former still consist of Golden Knob, Bess Pool, and Wyken Pippin, and the latter of Ne Plus Meuris, Beurré Rance, and Easter Beurré. Oranges are plentiful and cheap. Good Cobs realise 1s. per lb., and Spanish Hazel Nuts for planting 16s. per bush. Rhubarb, Asparagus, and Seakale are furnished in tolerable quantities. Parsley is cheaper. Green Peas may be obtained at high prices. Potatoes realise 4s. 6d. a bushel. New frame ones may be had at from 3s. to 5s. per pound. Mushrooms can still be obtained in small quantities. Cucumbers are dear. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, Geraniums, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Pears, per doz., 6s to 10s
Grapes, per lb., 12s to 20s	Oranges, per 100, 2s 6d to 8s
Strawberries, p. oz., 1s6d to 2s6d	Lemons, per 100, 5s to 8s
Apples, per doz., 2s to 6s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 6s to 10s	Cucumbers, each, 1s to 3s
Seakale, per basket, 2s to 3s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 6d to 1s	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Peas, p. half sieve, 15s to 20s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 160s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, April 12.

Prime Meadow Hay	78s	to 84s	Clover	90s	to 110s
Superior do. (old)	86	95	New Clover	—	—
Inferior do.	60	70	Second cut do.	80	90
New do.	—	—	Straw	27	34
Rowen	60	70		Davis & Co.	

Cumberland Market, Thursday, April 12.

Sup. Meadow Hay	94s	to 100s	Inferior Clover	80s	to 92s
Inferior do.	70	88	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover	100	110		Joshua Baker.	

Whitechapel, Thursday, April 12.

Fine old Hay	88s	to 92s	Fine old Clover	105s	to 108s
Inferior do.	72	78	Inferior do.	90	96
Prime New Hay	—	—	Fine New Clover	—	—
Inferior do.	—	—	Fine 2d cut	90	95
Straw	26	31	Inferior do.	65	75

MARK LANE.—Monday, April 9.

The Wheat plant though backward is generally represented as improving; the trade in the country was firm but inactive. The supply of English Wheat to this morning's market was moderate, and disposed of (partly for Ireland) at fully the prices of this day se'nnight. Foreign met a fair inquiry, but the prices insisted upon by holders caused the sale to be limited, and we cannot alter our quotations. Barley brings an advance of 1s. per qr. Beans and Peas support their late value. With a fair arrival of Oats fresh up there was a good demand at full prices. There is no alteration in the value of Flour.

Per Imperial Quarter.	s.	s.		s.	s.
Wheat, Essex, Kent, & Suffolk	White 46	50	Red	43	47
— — fine selected runs	ditto 48	54	Red	46	50
— — Talavera		48	56		
— Norfolk		—	Red		—
— Foreign		44	58		
Barley, grind. & dist., 24s to 31s.	Chev. 38	45	Malting	36	41
— Foreign	grinding and distilling 23	32	Malting	35	43
Oats, Essex and Suffolk		19	24		
— Scotch and Lincolnshire	Potato 23	29	Feed	19	26
— Irish	Potato 24	28	Feed	19	24
— Foreign	Poland and Brew 23	26	Feed	17	24
Rye		35	38	Foreign	—
Rye meal, foreign		—			
Beans, Mazagan	30s to 40s	Tick	39	43	Harrow 33 43
— Pigeon	36s — 47s.	Winds	48	54	Longpod —
— Foreign	Small		38	46	Egyptian —
Peas, white, Essex and Kent	Boilers		36	38	Suffolk 36 40
— Maple —s to —s	Grey		31	33	Foreign 30 37
Maize	White		—		Yellow —
Flour, best marks delivered	per sack		37	43	
— 2d do.	ditto		29	39	Country. 29 39
— Foreign	per barrel		24	30	Per sack 30 37

Friday, April 13.

Since Monday the weather has been very cold with occasional showers, and a severe frost on Tuesday night. Excepting in Leith, where supplies of foreign Wheat appear to be rather in excess of the demand, the Wheat trade throughout the country this week has exhibited great firmness, and here as well as in several markets of the interior the tendency of prices continues to be upwards, caused in some measure by purchases for Ireland. The value of Spring Corn of all descrip-

tions is well supported, that of Oats and Barley being rather higher than last week. Flour has been in fair demand at fully former rates. From the South of Europe we have to report the arrival for the week of 4 cargoes of Wheat, 5 of Barley, 5 of Maize, 1 of Rye, 3 of Linseed, and 1 of Rapeseed. The sales consist of Ibrail Wheat at 44s. per 480 lbs.; Odessa Maize at 36s. 6d. per qr. imp.; Ibrail Barley at 2 s. 3d. per qr. imp.; Egyptian Beans at 32s. 6d. per qr. imp., all c. f. and i. to U. K.; Calcutta Linseed at 50s. 6d. per qr. delivered. The arrivals of foreign Barley this week have been large, of Wheat, Oats, and all English grain moderate. English Wheat is still inquired after for Ireland, and commands an advance on Monday's prices of fully 1s. per qr. The demand for foreign was not extensive, but all low priced qualities must be written 1s. per qr. dearer. For Barley there is a fair inquiry at fully late rates. Beans and Peas are unaltered in value. Oats are in request at the extreme prices paid on Monday.

ARRIVALS FROM April 9 TO April 11.

	Wheat.	Barley.	Oats.	Flour.
English ..	1940 qrs.	1590 qrs.	750 qrs.	1910 sks.
Irish	— ,,	— ,,	250 ,,	— ,,
Foreign ..	4060 ,,	8330 ,,	22910 ,,	229 ,, — brls.

LIVERPOOL, Tuesday, April 10.—We have had a fair attendance of both millers and dealers at our Corn Exchange this morning, and a moderate consumptive business has resulted in Wheat at the quotations of this day se'nnight, the demand running chiefly on American. Flour had a steady sale at full rates. Indian Corn was little dealt in, but holders were not disposed to make any abatement on the advance established up to yesterday, *i. e.*, 1s. per qr. on the week. Oats advanced 1d. per bushel, but Oatmeal does not bring any higher prices yet. Beans have improved 6d. and Peas 1s. per qr., and Barley 1d. per bushel. The market may be called on the whole steady though quiet.

FRIDAY, April 13.—Grain market numerously attended. Good business in Wheat at further advance of 1d. Flour in fair demand at full rates. Indian Corn in active demand at 1s. advance since Tuesday.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
March 3..	44s 9d	36s 6d	22s 11d	32s 0d	39s 1d	37s 8d
— 10..	45 0	36 8	22 9	30 5	39 6	37 3
— 17..	45 2	36 5	23 1	34 10	39 7	37 7
— 24..	45 6	36 11	23 4	32 0	39 3	37 7
— 31..	46 5	37 2	24 1	36 9	39 11	38 7
April. 7..	47 9	36 4	23 7	31 8	40 2	38 3
Agg. Aver.	45 9	36 7	23 4	32 11	39 7	37 10

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	March 3.	Mar. 10.	Mar. 17.	Mar. 24.	Mar. 31.	April 7.
47s 9d	..	..	..	..	..	
46 5	..	..	..	..		..
45 6	..	..	..		..	..
45 2	..	..		..	..	..
45 0	..		..	..	..	..
44 9 —		..	..	..	..	..

HOPS.—BOROUGH MARKET, FRIDAY, April 13.

Messrs. Pattenden & Smith report an improved demand for the best sorts of Mid and East Kents, as well as fine Weald Kents and Sussex; old Hops are also in good request at higher prices. Currency:—Mid and East Kents, 70s. to 100s. to 140s. per cwt.; Weald Kents, 65s. to 75s. to 84s. do.; Sussex, 60s. to 70s. to 80s.

BRITISH WOOLS.—LONDON, FRIDAY, April 13.

There have been some rather large sales of wool made within the last few days of fleece and skin both in the north and in the south, and at full rates—in fact, for long descriptions at an advance. The death of large numbers of sheep and the starvation of more leads to the expectation of a very light clip.

	s. d.	s. d.		s. d.	s. d.
South-down Hoggets..	1 8	to 1 9	Leicest. Wethers	1 5 —	—
Half-bred ditto..	1 8 —	—	Ditto Hoggs ..	1 7 —	—6
Down Ewes ..	1 6 —	—	Combing Skins	1 2	to 1
Kent Fleeces ..	1 6 —	1 6½	Blanket ditto ..	0 6 —	10
			Flannel Wool ..	1 2 —	1 6

BUTTER.—April 14.

Best Fresh Butter . .. 15s. per dozen lbs.
Second do. do. .. .. 14s. ,, ,,
Pork, 4s. 4d. to 5s. 4d. per 8 lbs.

METROPOLITAN CATTLE MARKET

MONDAY, April 9.

The supply of Beasts is considerably shorter than on Monday last, consequently prices have improved on all descriptions. The number of Sheep is also much smaller. It being holiday week the demand is not very great, yet late prices are fully maintained. Lambs and Calves are selling about the same as on Thursday. From Germany and Holland there are 60 Beasts, 2000 Sheep, and 97 Calves; from Scotland, 120 Beasts; from Ireland, 12; from Norfolk and Suffolk, 2000; and 200 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools.	5	4	to 5	6
Best Short-horns	4	8	— 4	10	Do. Shorn ..	4	6	— 4	8
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds ..	5	8	to 5	10	Do. Shorn ..	..	..	—	..
Do. Shorn ..	4	8	— 5	0	Lambs	6	8	— 7	8
					Calves	5	0	— 5	8
					Pigs	4	0	— 5	0

Beasts, 8240; Sheep & Lambs, 18,870; Calves, 119; Pigs, 330.

THURSDAY, April 13.

We are but moderately supplied with Beasts, and the weather is favourable, consequently trade is active at full prices. The number of Sheep is small; they are readily disposed of, and on the average at higher rates. Good Lambs and Calves are scarce and dearer. Our foreign supply consists of 42 Beasts, 260 Sheep, and 89 Calves; from Norfolk and Suffolk, 400 Beasts; and 136 Milch Cows.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools .	5	4	to 5	8
Best Short-horns	4	8	— 4	10	Do. Shorn ..	4	8	— 5	0
2d quality Beasts	3	4	— 4	4	Ewes & 2d quality	5	0	— 5	4
Best Downs and Half-breds ..	5	8	— 6	0	Do. Shorn ..	4	0	— 4	6
Do. Shorn ..	5	0	— 5	2	Lambs	6	4	— 7	8
					Calves	5	0	— 5	8
					Pigs	4	0	— 5	0

Beasts, 846; Sheep & Lambs, 5270; Calves, 136; Pigs, 190.

COAL MARKET.—APRIL 11.

Byass's Bebside West Hartley, 15s. 9d.; Chilton Hartley Steam. 15s.; Hastings Hartley, 15s 9d.; Howard's West Hartley, 15s. 9d.; Tanfield Moor, 12s. 6d.; Tanfield Moor Butes, 12s. 6d.; Wylam, 16s.; Walls End Acorn Close, 18s. 9d.; Walls End Eden, 18s. 9d.; Walls End Gosforth, 18s.; Walls End Riddell, 18s.; Walls End Braddyll's Hetton, 19s.; Walls End Haswell, 20s; Walls End Hetton, 20s.; Walls End Kepier Grange, 19s.; Walls End Russell's Hetton, 19s.; Walls End South Hetton, 20s.; Walls End Heugh Hall, 18s. 9d.; Walls End Kelloe, 19s. 3d.; Walls End North Hartlepool, 15s. 3d.; Walls End South Hartlepool, 19s.; Walls End Thornley, 17s.; Walls End Trimdon Thornley, 17s. 3d.; Walls End Thorpe, 19s. 3d.; Walls End Whitworth, 15s.; Walls End Auckland Park, 18s.; Carway and Duffryn Malting, 23s.—108 ships at market.

POTATOES.—SOUTHWARK, MONDAY, April 9.

During the past week the arrivals coastwise have been to a fair extent. The trade still continues in a dull and languid state. The following are this day's quotations:—York Regents, per ton, 90s. to 150s.; Lincolnshire do., 80s. to 100s.; Dunbar do., 100s. to 120s.; Perth, Forfar, and Fifeshire Regents, 80s. to 100s.; do. Rocks, 75s. to 85s.; do. Reds, 75s. to 85s.; Irish Rocks, 70s. to 80s.; French Whites, 70s. to 80s.; Belgian do., 60s. to 70s.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

TO AGRICULTURISTS.

WANTED, BOARD AND LODGING, for a Single Gentleman, on a large Farm, where a practical knowledge of High Farming may be obtained.—Address, stating terms, &c., P Q., 10, Undercliff, St. Leonard's-on-Sea, Sussex.

TO SHOPMEN.

WANTED, by the Advertiser, a person who is thoroughly acquainted with every department of the Seed Trade to Take Charge of an extensive Wholesale and Retail SEED BUSINESS in a large town in one of the western counties. A liberal salary will be given.—Applicants are requested to address their communications in the first instance to A. B., care of Messrs. Wrench & Sons, 39, King William Street, London, E.C.

WANTED, A FOREMAN, who thoroughly understands the Forcing of Vines and the general work of a Nursery. He will be required to take the entire management and live on the grounds. A middle-aged man would be preferred, and a first class recommendation indispensable.—Apply to Z. B., John Phillips, Bookseller, Worthing, Sussex.

WANTED, GARDENER, an industrious practical married Man. Wages 20s. to 23s. per week.—Apply to G. H., 25, Bishopsgate Street Within, E.C.

WANTED, by a MARKET GARDENER, a MAN who thoroughly understands FORCING GRAPES and STRAWBERRIES for Market, and understands Cutting and Pruning all kinds of Trees. Wages, 16s. per week.—Apply to Mr. WHITING, Bath Road, Hounslow, W.

WANTED, in a provincial Nursery, a PROPAGATOR in the House department, where a general collection of Hard and Soft-wooded Plants are grown.—Application, stating age, where last employed, wages required, &c., to be addressed A. B., *Gardeners' Chronicle* Office, W.C.

WANTED, three young MEN, industrious and sober, accustomed to Plants and Garden work.—Apply to H. T. LITTLE, Florist to her Majesty, 99, King's Road, Chelsea, London, S.W.

WANTED, a young MAN, who understands the Growing of Plants generally for the Trade.—Apply to Stanhope Nursery, North End, Fulham, W.

WANTED, an active FARM BAILIFF or WORKING BAILIFF. A middle-aged married Man without children would be preferred. He must be well acquainted with the management of Clay Lands, and have modern practical knowledge of the Breeding and Fatting of Cattle and Sheep, and all details of Farm Labour. Security will be required, and he must be able to Keep Accounts if necessary. Applications to this advertisement must give all particulars of previous employment, and in what capacity employed, and no application need be made by parties who cannot produce undoubted testimonials of practical Farming knowledge, honesty, and sobriety.—W. B., Mr. Lee, 9 A, Billiter Sq., E.C.

WANTED, AS WORKING BAILIFF, an active, intelligent, married Man, without incumbrance, who thoroughly understands his profession, and able to keep his Accounts correctly, on a small Farm of about 150 Acres (Arable and Meadow), 6 miles from London, Surrey side. One with knowledge of modern Farming and Implements preferred. A Cottage on the Farm.—Address, with particulars, age, wages, &c., in own writing to A. B., Post Office, Balham, Surrey, S.

WANT PLACES.—Letters to be Post Paid.

FOREMAN AND PROPAGATOR.—Experienced in all requirements pertaining to his profession.—L. M., *Gardeners' Chronicle* Office.

GARDENER (FOREMAN).—Age 25, single; has a good practical knowledge of Forcing Stove and Greenhouse Plants, and the management of Fruit, Flower, and Kitchen Gardens. Five years' good character.—Y. Z., Polley's Library, High Street, Wandsworth, S.W.

GARDENER (HEAD).—Age 28; has a thorough practical knowledge of his profession, including Early and Late Forcing; also Stove and Greenhouse Plants. Two years' good character. No single-handed place accepted.—A. Z., 2, Napier Road, Addison Road, Kensington, W.

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The Gardeners' Chronicle Newspaper.

SATURDAY, APRIL 21, 1860.

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III. MADAME RECAMIER.
IV. THE BAR OF PHILADELPHIA.
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News of the Week.

Both Houses of Parliament have re-assembled this week after the Easter recess. In the Lords on Tuesday, on the motion of the Lord Chancellor, the Divorce Court Bill, the object of which is to give to the Judge Ordinary the power of pronouncing a dissolution of marriage without the assistance of the Common Law Judges, and giving the right of appeal in certain cases to the full Court, was read a second time. The Oxford University Bill and the Municipal Corporations Mortgages, &c., Bill were also read a second time, and the several Bills for the consolidation of the criminal law were referred to a select committee. On Thursday Earl Grey moved for a select committee to inquire into the probable increase in the number of borough electors caused by the reduction of the franchise, as proposed by the Reform Bill now before the House of Commons—what change is likely to take place in their character—the difference between large and small constituencies in respect to the proportion of electors who actually vote—and the means whereby elections in large

constituencies are practically determined. He contended that the returns upon which the Government had based their calculations for the Bill were most inaccurate, and that a searching and dispassionate inquiry ought at once to be made into the consequences of the contemplated change. He expressed his belief that unless all parties concurred in framing a measure founded on wisdom and experience, they were in danger of the overthrow of the balance of parties, and of the establishment of an unbridled democracy. He warned the House of the consequences of adopting the representative system, which had worked so ill in the United States, and of its duty to refuse its sanction to any measure which it did not believe, in its deliberate judgment, conducive to the future interests of the country. The Duke of ARGYLL defended the Bill, and said that it neither advocated the ballot nor universal suffrage. At the same time he was perfectly willing, on the part of the Government, to refer the returns to a select committee on the distinct understanding that it was not to be a means for completely shelving the Bill. After some remarks by Lord VIVIAN on the inaccuracy of the Government returns, the Earl of DERBY said that if the Bill came up in its present form he should feel it his duty to oppose it as the most unsatisfactory, unstatesmanlike, and inconclusive measure which had ever been submitted to Parliament. He believed that its effect would be to place the whole of the boroughs throughout the country under the control of the working classes, and that there was a serious risk of the preponderance of this class ending in the establishment of democratic institutions, and the subversion of the Throne and the constitution. Earl GRANVILLE said that he did not share in these apprehensions, believing that the institutions of the country would be strengthened rather than impaired by a judicious extension of the franchise. After a brief reply from Earl GREY, the motion was agreed to.

In the Commons on Monday Mr. MASSEY gave notice that if the Reform Bill were read a second time, he should move that it be referred to a select committee. On the motion for going into committee on the navy estimates, Sir C. NAPIER, in a speech of great length, called attention to the general management of the navy. A long discussion on naval matters ensued, after which the House went into committee and agreed to several of the votes. Mr. CLIVE obtained leave to bring in a Bill for taking the census in 1861. On Tuesday the Adulteration of Food and Drink Bill was read a third time and passed. On Wednesday Mr. COLLIER moved the second reading of the Conveyance of Voters, &c., Bill, the object of which is to render illegal the payment made on account of conveying voters to the poll. Mr. NEWDEGATE opposed the Bill, and moved that it be read a second time that day six months. Sir G. LEWIS suggested that the best course would be either to read the Bill as a matter of form and refer it to the select committee on corrupt practices at elections, or to adjourn the debate until after the select committee had reported. Mr. HENLEY concurred in this suggestion, and Mr. NEWDEGATE having withdrawn his amendment, the House divided on the question of adjourning the debate, which was carried on a division by 94 to 81. The debate was then adjourned for a month. Mr. MURRAY moved the second reading of the Attorneys', Solicitors', Proctors', and Certified Conveyancers' Bill. Mr. KNIGHT moved, as an amendment, that the Bill be read a second time that day six months. After considerable discussion, the House divided, when the amendment was negatived by 191 to 29, and the Bill was read a second time. Mr. T. DUNCOMBE moved the second reading of the Jews' Act Amendment Bill. Mr. NEWDEGATE moved, as an amendment, that it be read a second time that day six months. On a division, the amendment was negatived by 117 to 75. The Bill was then read a second time. On Thursday Mr. HORSMAN called attention to the state of our foreign relations, dwelling particularly on the aggressive policy of France, and contending that the alliance of this country with France would last no longer than suited the views of France, who had begun by making us her dupe and would end by making us her victim. Lord JOHN RUSSELL said that HER MAJESTY'S Government had expressed to the KING of SARDINIA that the transfer of Chablais and Faucigny would be injurious to the interests of Europe, and a disturbance of the settlement of 1815; but they were not entitled to say to him that he should not cede his territory to the EMPEROR OF THE FRENCH, or to the latter that he should not accept it. This was also the opinion of Russia, who had stated that it was a matter that entirely concerned the two Sovereigns. The question now at issue was how to maintain the neutrality of the ceded territory in the sense in which the great Powers wished to establish it, and France had consented to submit that point to the decision of a Conference. It would then be settled what precaution and guarantee should be established for the neutrality of Switzerland, towards which HER MAJESTY'S Government would use their most earnest endeavours, assuring the House that in all the negotiations they would be found not unmindful of the honour and dignity of the country. After some further discussion the House went into committee of supply, and various items were voted on the navy estimates. On the order of the day for the second reading of the Bill for the repeal of Sir J. BARNARD'S Act, and for legalising time-bargains, two motions for adjournment were negatived on division, but the adjournment was ultimately agreed to. Sir JOHN TRELAWNY then moved the third reading of the Church Rates Abolition Bill. Lord JOHN MANNERS moved the adjournment of the debate, which was negatived by 131 to 76. It was, however, ultimately agreed that the debate should be adjourned.

A despatch from Madrid announces that General ORTEGA was condemned to death by the court martial at Tortosa, and executed in that city on Wednesday last.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family arrived at Buckingham Palace on Thursday from Windsor. On Thursday week the Queen left the Pavilion at Aldershott on horseback, accompanied by the Prince Consort, the Princess Alice, and Prince Alfred, and inspected the different brigades quartered in the camp on their respective parades. The Princess of Leiningen and Prince Arthur followed in an open carriage and four. In the evening the Queen had a dinner party. Her Majesty received late at night the intelligence of the death of Prince Hohenlohe Langenbourg, brother-in-law to her Majesty. On Friday afternoon her Majesty and the Prince Consort, accompanied by the Princess Alice, the Princess of Leiningen, Prince Alfred, and Prince Arthur, left the Pavilion, and returned by special train to Windsor. Shortly after her Majesty's arrival the Queen and Prince Consort, with Princess Alice and the Princess of Leiningen, visited the Duchess of Kent at Frogmore. On Saturday morning, the day being the birthday of the Princess Beatrice, the Duchess of Kent and the Princess of Leiningen paid an early visit to her Majesty. The Queen and Prince Consort walked in the grounds of the Castle. In the afternoon M. De La Rive had an audience of her Majesty to deliver his credentials as Minister from Switzerland. On Sunday morning the Queen and Prince Consort, the Princesses Alice, Helena, and Louisa, Princes Alfred, Arthur, and Leopold, and the Princess of Leiningen, attended Divine service in the private chapel; the Dean of Windsor officiated. On Monday morning the Queen accompanied by Princess Alice, walked and drove in the Home Park, and visited the Duchess of Kent at Frogmore. On Tuesday the Duchess of Kent and Princess of Leiningen visited her Majesty. On Wednesday morning the Queen and Prince Consort walked in the grounds of the Castle. The Duchess of Kent and the Princess of Leiningen visited her Majesty. On Thursday morning the Queen visited the Duchess of Kent at Frogmore. In the afternoon the Queen and Prince Consort, accompanied by Princes Alfred, Arthur, and Leopold, and the Princesses Alice, Helena, Louise, and Beatrice, left Windsor Castle for Buckingham Palace, travelling to town by a special train on the South Western Railway. In consequence of the deep mourning her Majesty and the Royal family came up to London quite privately, and the usual guards of honour and escorts were dispensed with.

THE PRINCE OF WALES left Brussels on Wednesday, the 11th inst., for Cologne, and arrived at Magdeburg on the following morning at half-past 4 by the express train, and was driven to the Government House in that town. The Princess Frederick William had previously arrived there from Berlin. The Prince of Wales remained with her Royal Highness until 11 o'clock, and then left Magdeburg for Halle, on his way to Coburg. The Princess returned to Berlin in the afternoon. Prince Frederick William met the Prince of Wales at the station at Magdeburg on his arrival there in the morning, and soon afterwards returned to Potsdam, where his presence was required at an inspection of troops. The Prince of Wales is expected to return to Buckingham Palace on Tuesday next, and at the close of the week, according to present arrangements, his Royal Highness will take his departure for Canada.

COURT MOURNING.—In consequence of the death of the Prince of Hohenlohe Langenbourg, brother-in-law to the Queen, the Court went into mourning on Thursday for a fortnight.

COURT ARRANGEMENTS.—In consequence of the death of the Prince of Hohenlohe Langenbourg, the following changes have been made in the dates of the Court arrangements which have been lately announced:—The Levée will take place on Tuesday, the 24th inst., instead of Saturday, the 21st inst. The Drawing Room will be held as already announced, on Saturday, the 28th inst. Court mourning will be worn on these occasions. The juvenile ball will be postponed from Tuesday, the 1st May, to Friday, the 11th May; the concert from Friday, the 4th May, to Wednesday, the 9th May; and the State ball from Wednesday, the 9th May, to Wednesday, the 16th May. The Drawing Room to celebrate her Majesty's birthday will take place on the 18th May, when the Knights of the several orders are to appear in their collars.

COURT APPOINTMENTS.—The Queen has appointed Lord Harris to be a Lord in Waiting in Ordinary in the room of Lord Byron, appointed an Extra Lord in Waiting; General Sir Frederick Stovin, K.C.B., to be Extra Groom in Waiting; and John Francis Campbell of Islay, Esq., to be a Groom in Ordinary, in the room of the late Sir T. N. Harris.

THE EX-ROYAL FAMILY OF FRANCE.—The Prince of Joinville, accompanied by his sister, the Princess Clementine of Saxe-Coburg, arrived at Brussels on Sunday from Germany. Their Royal Highnesses were met at the railway station by the Duchess of Brabant and the Count de Flandres, who conducted them to the palace, where they had an audience of his Majesty, who had come to Brussels to meet them. After breakfast the Prince and his sister left for Ostend, where they embarked in the evening for England.

THE CABINET.—A Cabinet Council was held on Wednesday at the official residence of the First Lord of the Treasury, in Downing Street.

DEANERY OF RIPON.—The Queen has appointed the Rev. William Goode, Rector of St. Margaret, Lothbury, to the Deanery of Ripon, in the room of the Rev. Thomas Garnier, now Dean of Lincoln.

THE CHINESE MISSION.—It is understood that the Earl of Elgin will leave London on Monday next for Paris, on his way to China, on his second mission to that Empire.

DIPLOMATIC APPOINTMENTS.—The Queen has appointed John Savile Lumley, Esq., now Secretary of Legation at St. Petersburg, to be Secretary of Embassy at Constantinople; the Hon. Edward Morris Erskine, now Secretary of Legation at Stockholm, to be Secretary of Legation at St. Petersburg; Edwin Corbett, Esq., Secretary to the late Legation at Florence, to be Secretary of Legation at Stockholm; and Loftus Charles Otway, Esq., C.B., late Minister to Mexico, to be Consul-General at Milan.

THE JUDICIAL BENCH.—The Queen has directed letters patent to be passed under the Great Seal, granting the office of one of the Barons of her Majesty's Court of Exchequer to James Plaisted Wilde, Esq., Serjeant-at-Law.

THE ARMY.—Lieut.-Gen. William Cator, C.B., has been appointed Colonel-Commandant of the Royal Artillery.

PARLIAMENTARY MOVEMENTS.—There is a vacancy for Berkshire caused by the death of Captain Leicester Vernon. The third seat proposed to be created in South Essex under the new Reform Bill will, it is stated, be contested in the Conservative interest by Mr. John Davis, of Cranbrook Park, Ilford. There are still four candidates for the vacancy at Harwich, occasioned by the elevation of the Hon. W. F. Campbell to the peerage—Mr. Montagu Chambers, Mr. Brett, and Mr. Thomson, in the Liberal interest; and the Hon. R. T. Rowley in the Conservative interest.

THE TREATY WITH FRANCE.—A commission has been appointed, consisting of Mr. Cobden, Mr. Ogilvie of the Customs, and Mr. Malet of the Board of Trade, to proceed to Paris, to arrange with the French Government certain practical details in the working of the Treaty of Commerce, on which the opinion of the mercantile interests has lately been asked. Deputations from the chambers of commerce throughout the kingdom have been invited by the Board of Trade to meet the commissioners in London before they set out for Paris.

THE RED RIVER SETTLEMENT.—It is stated that her Majesty's Ministers intend during the present session to introduce a Bill constituting the Red River settlement, founded by the Earl of Selkirk, in the centre of British North America, one of the ordinary colonies of the Crown.

COMMITTEE OF COUNCIL ON EDUCATION.—It is announced that arrangements in the Education Office will render it unnecessary to fill up the Inspectorship of

Schools which has become vacant by the death of Mr. Jelinger Symons.

Foreign.

France.—M. Thouvenel has informed the representatives of the Powers who signed the Final Act of Vienna of the nature of the reception France will give to the circular note of the Swiss Federal Council of the 5th of April respecting the convocation of an European Conference. It was not until the King of Sardinia had formally taken possession of Lombardy and the treaties of Zurich had been signed and ratified that France and Austria jointly addressed an invitation to the Powers who had signed the treaties of Vienna to assemble at a Conference, in order to make known to them the territorial arrangements which had resulted from the cession of Lombardy to Piedmont, which cession was freely consented to by Austria. No Power having then objected, France will follow the same course. When, therefore, the cession of Savoy and Nice, freely consented to by Piedmont, shall have been sanctioned and ratified by universal suffrage of the inhabitants, and by the vote of the Sardinian Parliament, France will take possession of those provinces. Immediately afterwards she will consent to the assembling of a Conference for the purpose of receiving a communication of the treaty concluded on March 24th last, between Napoleon III. and King Victor Emmanuel. France will likewise be willing that the said Conference shall examine the following question,—"In what manner are the rights of France, irrevocably acquired through the cession of Savoy and Nice by the King of Sardinia, to be reconciled with the guarantees stipulated by the treaties in favour of Switzerland?" It being, however, well understood that the Conference shall leave the treaty of March 24 intact.—The *Moniteur* of Tuesday gives the following as the definitive result of the voting in the city of Nice:—For annexation to France, 6810; against it, 11. Nearly all the communes of the mountains have voted unanimously for annexation. The number of voters will exceed 20,000. The voting of 70 communes is known. Up to the present time only 160 negatives have been registered. The *Constitutionnel* denies the existence of direct negotiations between France and Switzerland on the question of the neutralised districts of Savoy, and adds that the negotiations are only between the Powers who signed the treaties of Vienna. The Legislative Body has agreed to the Contingent of 100,000 men for the present year, by 238 to 6 votes, and a decree has been published reducing by one centimetre the *minimum* height required for recruits.

Spain.—General Ortega has been tried at Tortosa, by court-martial, and condemned to death. His son presented a petition to the Queen requesting her Majesty to spare the life of his father, but the appeal was ineffectual, and the General was shot on Wednesday evening. It is believed that the Count de Montemolin and his brother have been conducted to the frontier by special order from Madrid, and allowed to escape to France. A search is making for fugitives in the north-west provinces. General Elio is to be tried by a civil court, and it is understood that the Queen has ordered his life to be spared in the event of his being condemned to death.

Switzerland.—England, Russia, and Prussia have replied to the Swiss note of the 5th of April, relative to the assembling of a Conference by consenting to the demand of the Federal Council. England proposes Brussels as the place where it should be held, while France insists upon Paris, in which she is supported by Russia. The agitation upon the question of Savoy is increasing. On Saturday and Sunday numerous meetings took place at Thun, Winterthur, and other places. The most important were those held at Olten and Lausanne. The Canton de Vaud has been supplied with war *matériel*. On Saturday evening a Genevese deputation, representing all parties, presented Sir Robert Peel with a testimonial, consisting of a cup and a rifle. The most cordial expressions were exchanged. Sir Robert Peel promised the support of England for the preservation of the independence and neutrality of Switzerland. The deputation expressed their thanks to the English Ministry and Parliament.

Savoy.—M. Laity arrived at Aix and Annecy on the 17th ult. At the banquet given in the evening by the Governor of Annecy, a toast was drunk to the Emperor and France. M. Laity appeared at the balcony of the Governor's house, and read a despatch announcing that the Emperor and Empress will visit Savoy in May or June next. Several houses were illuminated. General Canrobert, accompanied by several officers of Engineers, has visited the fort of Les Rousses, on the frontier of Switzerland.

Frankfort.—In the sitting of the Federal Diet on Thursday, Electoral Hesse declared her readiness to conform to the resolutions taken by the Federal Diet on the 24th of March. The protest of the Grand Duke of Tuscany against the annexation of Tuscany to Piedmont has been laid before the Diet.

Prussia.—A letter from Berlin announces the arrest of the Director of Police, Stieber, by order of the Procureur-General. He had been dismissed from his post some time since, and will now be brought up for trial for having abused the power intrusted to him, which was almost unlimited. A Universal Exhibition of objects of art by living artists, either Prussian or foreigners, will be opened at the Royal Academy of Berlin this year on 1st September, and close on 1st November. A grand celebration of the anniversary of the birthday of the renowned German Protestant Reformer, Melancthon, was opened at Wittenberg on the 19th inst., at which the Prince Regent and Prince Frederick William were present.

Austria.—A despatch from Vienna dated Sunday last says that the assembling of a Congress, as demanded by Switzerland, is very doubtful, as without France Russia and Austria decline to enter any Conference, Austria adding that if a Congress takes place its programme must be determined beforehand. The following are the ideas of Austria on that question:—The fundamental intention of the Congress of Vienna, in neutralising the districts of Chablais and Faucigny, was to protect Switzerland and Sardinia from the preponderance of France. The moment the whole of Savoy is incorporated with the French empire there is no further reason for the neutralisation of Chablais and Faucigny, and the guaranteed stipulation by the treaties of Vienna can no longer be applied. The only real way by which the difficulties of the question could be removed is by a direct understanding between France and Switzerland, for which the other Great Powers would offer their good offices.—The attempt to float an Austrian loan of 200,000,000 florins has proved a failure. The subscription lists closed on Saturday last, when a total of only 75,000,000 florins was found to have been applied for.—M. Robert, director of the Bank, and one of the greatest manufacturers in the empire, shot himself dead with a pistol on the 12th inst.

Hungary.—The suicide of Count Szechenyi is the universal topic of conversation among all classes in Hungary. It is generally reported that the immediate cause of the desperate act was a domiciliary visit which he received on the 3d of March, when his papers were taken from him by the chief of the Vienna detective force. That he died by his own hand there is little doubt; but it is considered a mystery how he, being resident in a lunatic asylum, in which for years he had been under medical treatment, could possibly have possessed himself of pistol and ball; and this mystery has caused imputations to be cast on the Austrian Government, because it alone had an interest in his death. Field-Marshal Benedek has been appointed governor of Hungary, in the room of the Archduke Albert.

Russia.—Prince Gortschakoff in his reply to the Note of Switzerland states that Russia, like the other Powers who signed the treaties of 1815, recognises the neutrality and inviolability of Switzerland, and that it is the true political interest of Europe to preserve Switzerland from all foreign influence. But France having manifested an intention of negotiating either with the Great Powers or with the Swiss Confederation, and the Federal Council having expressed a similar desire, Russia gives her complete adhesion to the assembling of a Conference, being convinced that the Federal Council does not doubt of her solicitude to efficaciously ensure the neutrality of Switzerland.

Italy.—In the sitting of the 14th inst. the Sardinian Senate voted the address in reply to the King's Speech by a majority of 68 to 2. The Bill for the annexation of Tuscany was passed by 70 votes to 2. The Bill for the annexation of the Emilian provinces met with somewhat more opposition, the numbers being 62 for, and 10 against it. In the sitting of the Chamber of Deputies on Saturday a discussion took place on the late events in Sicily. Count Cavour in his reply said that he considered a discussion on the subject both useless and dangerous. He further stated that the Neapolitan Government was occupied in the interior, and concluded by saying "our fellow-citizens are continuing the struggle." On the report of the committee in reference to a petition from some inhabitants of the Northern Province of Savoy, requesting liberty and latitude in voting upon the question of annexation, the Chamber by a large majority passed to the order of the day. The Chamber was then prorogued until the 1st of May. The following official article has been received by telegraph:—

"The cession of Nice to France was an absolute necessity for Piedmont, in order to obtain from Napoleon III. the guarantee of Lombardy and the Duchy of Parma. This guarantee appears to be expressed in a secret article of the treaty of the 24th March last relative to the cession of Savoy and Nice. France has, however, refused to guarantee to Piedmont the other annexed provinces—viz., Tuscany and the Legations.

King Victor Emmanuel, accompanied by Count Cavour, arrived at Florence on Monday on his tour through Central Italy and the Legations, and was received with great enthusiasm. Upwards of 100 deputies accompanied the King. His Majesty afterwards received the Archbishop and the clergy of Florence. A deputation from Rome met him at Florence, and presented to his Majesty a sword of honour offered by the city of Rome. The archives of the Legations of Prussia Russia, and England have been transferred from Florence to Turin. A great manifestation took place at Rome on the 12th inst. in commemoration of the Pope's return in 1850. In the morning the Pope, accompanied by a crowd of persons, went to the Church of St. Agnes beyond the walls of Rome, where his Holiness celebrated mass, and gave the communion to 500 persons. On the return of his Holiness to the Vatican he was received with applause. In the evening the city was illuminated. Cardinal Antonelli has addressed a note to all the foreign representatives accredited to the Papal Government, protesting against the incorporation of the Legations with Piedmont. England having no official representative at Rome, Cardinal Antonelli has sent a copy of the protest to Mr. Odo Russell. The Papal protest expresses a hope that the Powers of Europe will not only refuse to recognise the annexation of the Legations to Piedmont, but that they will also co-operate to put an end to this iniquitous spoliation. The Duke de la Rochefoucauld has given 12 rifled cannon to the Pope, and has proposed to serve as a volunteer in the Papal army, and to place at the Pope's disposal three years of his income, amounting to 500,000f. a year. General Lamoricière, in his quality of Commander-in-Chief of the Papal troops, only relieves the Pope, and not Cardinal Antonelli, of the Presidency of the War Department. The Cardinal having, however, insisted on leaving the military administration, is about to be replaced by a French General, a friend of General Lamoricière. The Pope has resolved to take no initiative in a war in the Romagna, and General Lamoricière is only to concentrate a corps in Umbria between Rome and Ancona. It is said that the Prince of Monaco has refused to annex his principality to France, as proposed to him by the French government. The principality was founded by the Emperor Otho, in the year 968, in favour of Count Grimaldi, whose descendants possess it at present. This dynasty is consequently one of the oldest in Europe. The reigning prince, who bears the title of Charles III., was born in France in 1828, and remained there until the death of his father in 1854. It is stated that France offered to create the prince a French senator with an income of 200,000 fr. a year. His father and grandfathers were peers of France. Accounts from Naples state that the marriage of Count Trani, younger brother of the King of Naples, with the Princess Matilda, fourth daughter of the Duke Maximilian of Bavaria and sister of the Empress of Austria, has been officially sanctioned by the King of Naples. A popular demonstration has taken place at Aversa in favour of Victor Emmanuel, in consequence of which the town has been declared in a state of siege. Several arrests have been made at Naples. On Thursday week a large bomb was thrown before the Palace. The explosion shattered all the windows, but no person was injured.

Sicily.—According to advices from Sicily the revolutionary movement, which the Government journals represent as suppressed in the towns is increasing in the country, which is full of armed men. The Royal Intendant, Celeste, has made common cause with the revolutionists. The revolutionary attempt of the 8th at Messina commenced by the killing of two sentinels. A French postal agent, and three sailors who accompanied him, were exposed to a fire of musketry while returning to the steamer Meandre from the Consulate. One of the sailors was wounded. The party, however, were fortunately able to regain the steamer by swimming. During the night from the 8th to the 9th the fire of guns and musketry was incessantly heard. The Governor threatened to bombard the city should resistance continue to be offered. The principal inhabitants of the city then interfered and obtained the removal of the police, the principal cause of the popular irritation. The troops made themselves masters of all the positions in the town, and part of the insurgents withdrew to the mountains, pursued by flying columns of 10,000 men. The insurrection has now spread to Trapani, where the Provisional Government and the National Guard have joined the insurgents. The Royal troops still occupy Palermo, which is destitute of everything. The members of a revolutionary committee, amongst whom are several eminent persons, have been condemned to death. The King has ordered their execution to be delayed. The embarkation of troops from Naples continues, and the *corps d'armée* in the Abruzzi has been recalled. Since the insurrection commenced the Government has sent into Sicily four battalions of infantry, two battalions of artillery, and a regiment of lancers. The Governor of Sicily has written that no more reinforcements need be sent, his forces being sufficient.

Turkey.—Religious disturbances took place at Constantinople on Easter Sunday and Good Friday, when the Greek procession was insulted, and several of the Greek and Catholic Churches were invaded by gendarmes. Eggs were thrown from the windows, and a Catholic house which was suspected was destroyed. Further disturbances were expected on the following Sunday, and the police had taken precautionary measures. The latest news states that France and Austria will make the Porte responsible for the damage done, and that the resident Christians have protested against the breach of their privileges. The Duke of Brabant has been brilliantly fêted at Constantinople. The Sultan, acting upon the advice of the Capitan Pasha, has recalled Omar Pasha from exile, and intends to appoint him to the command of the army in Roumelia, with a view to the events which may take place in the Slavonian provinces. Numerous protests have arrived from the inhabitants of Bulgaria and from the Greek clergy. The Representative Assembly of the Rouman provinces is about to discuss proposals relating to projected railways, to the Commercial Bank, and to loans on landed property. The proposals referring to the two latter questions have been favourably received by the people. It is certain that the Ulemas have signed petitions in favour of Morocco.

INDIA.—The Bombay mail has arrived with news to the 27th March, and a telegraphic despatch was received yesterday with news from Calcutta to the 1st inst. The following are the details :—

Wuzeerabad.—The Governor-General continues his progress in the north-west, having received the Maharajah of Cashmere, and a deputation from our old ally and enemy, Dost Mahomed Khan of Cabul.

Bareilly.—The sentence of death on Khan Bahadoor Khan has been confirmed, and he will be hanged in front of the Kotawali at Bareilly, on the very spot where he sat and watched the murder of his European victims.

Ferozepore.—A serious fire has broken out in Dacca, which destroyed half the town. Six thousand families have been reduced to destitution. Subscriptions have been commenced to relieve the sufferers.

Bengal.—The Lieutenant-General of Bengal reports that he has every reason to believe that the excitement in the indigo districts in the Kishnaghur is passing off, and that he has no apprehension of serious disturbances anywhere. The magistrates' powers have been enlarged by a temporary law, and a special commission of inquiry will be issued.

UNITED STATES.—According to a letter from Washington, the Judiciary Committee of the House of Representatives would report on the President's Message at an early day, fully sustaining Mr. Covode's resolution and the power of the House to order any investigation affecting the executive or other department of Government. Despatches had been received at the Navy Department from Captain Jarvis, enclosing communications addressed to him by the commanding officers of the French and Spanish ships of war at Vera Cruz, inquiring under what law of nations he captured the Mexican steamers. He declined giving any reply, but referred them to the authorities at Washington for an answer. The question is likely to prove embarrassing hereafter, because the Administration now asserts as a right what was emphatically denied when claimed by England in the Gulf two years ago, and at some hazard of collision. The elections in Connecticut had resulted in a great victory for the Republicans

MEXICO.—Accounts received by the United States mail state that the siege of Vera Cruz had been abandoned by Miramon after six days' bombardment. The Liberals defeated the 4th Regiment of Cavalry, belonging to Miramon, on the 5th ult., near Jalapa. General Villalba (Liberal) defeated 500 Reactionists at San Martin, near Puebla, taking seven pieces of artillery, arms, and ammunition. General Publitta (Liberal) was besieging Legarde at Huyaham, 50 miles north of the city of Mexico. Puebla was threatened. It was reported that the city had been taken, but the statement wants confirmation.

Parliament.

HOUSE OF LORDS.

TUESDAY.—*Case of the Medina.*—The Earl of MALMESBURY asked what compensation was to be granted to the crew of the Medina, who had suffered at Leghorn through the misconduct of the police.—Lord WODEHOUSE replied that the late revolution had interrupted the negotiations on the subject, but there was a disposition on the part of the Tuscan Government to meet the demand in a fair spirit.—The LORD CHANCELLOR moved the second reading of the Bill for the better constitution of the *Divorce Court*. He said that the object of the measure was to provide that the judge in ordinary shall have the power of pronouncing a dissolution of marriage in cases where he did not think it necessary to call in the assistance of the Common Law Judges. The difficulty of obtaining the assistance of those judges had thrown serious impediments in the way of the Court, and caused a most inconvenient accumulation of arrears.—Lord ST. LEONARDS and Lord CRANWORTH expressed doubts as to the safety of this proposal, and suggested that the Bill should be referred to a select committee.—Lord REDESDALE also strongly objected to facilitating the opportunities of divorce.—Lord LYNDHURST supported the Bill, and said that the whole arrangements of the Court required revision. Under existing arrangements, it would take years to decide the cases at the present moment entered at the Court. After some further discussion the Bill was read a second time. The Bills of the LORD CHANCELLOR for the *Consolidation of the Criminal Law* were referred to a select committee. The *Oxford University Bill* and the *Municipal Corporations, Mortgages, &c., Bill*, were read a second time.

THURSDAY.—*The Reform Bill.*—Earl GREY moved that a select committee be appointed to inquire what would be the probable increase of the number of electors in the counties and boroughs of England and Wales from a reduction of the franchise, and whether any or what change is likely to be made in the character of the constituencies by such increase. He said it was manifest that their lordships had not sufficient information before them to deal satisfactorily with the question of Parliamentary reform should it ever reach their House. The returns which had been published as to the number of voters were in many respects incorrect; and if a select committee were appointed, it could call the officers of the Poor-law Board before it, and elicit from them the most trustworthy information. He was afraid that the tendency of the Reform Bill, as introduced in the other House, would be to create enormous constituencies, like those in the metropolis, and that a small number of electors only would exercise the franchise. A committee might be able to ascertain how it came to pass that at metropolitan elections so many voters abstained from voting. He was willing to extend the franchise to the working classes; but he was not prepared to give them pre-eminence over all others. Having illustrated the evils of democracy as exhibited in the United States, he expressed a hope that their lordships would pause before they gave their sanction to any proposition which might establish an unbridled democracy and derange that balance of power which ought to be maintained between all classes in the community.—The DUKE of ARGYLL said that Government would not oppose the appointment of the committee if there were a distinct understanding that the inquiry was to be *bonâ fide*, and not intended for the purpose of delaying the Reform Bill when it reached that House. He defended the accuracy of the statistical returns impugned by Earl Grey, which, he said, were derived from the most authentic sources, and which had since been verified. He was astonished that the noble earl should object to lowering the borough franchise to 6*l*., as in 1852 he had been member of a Cabinet which proposed to lower it to 5*l*.—The EARL of DERBY thought her Majesty's Ministers were not sufficiently alive to the importance of the subject with which they had undertaken to deal; nor did they, in fact, appear to have any very decided convictions as to the truth of their own statistics, or the effect which their Bill would have in increasing the constituencies. He did not object to an extension of the franchise in favour of the working classes, nor did he care how many new voters were placed upon the register, as long as they were fit persons to be admitted to the privilege. With regard to the proposed committee, it seemed to him that there would be no use in appointing it at all if it was not to guide their lordships as to the direction in which they should legislate. If a session or two were lost in awaiting the result of the inquiry, the delay would be amply compensated for by the improvement which would be effected in the measure. Much as he should regret to see any Bill on such a subject thrown out or materially altered in their lordships' House, still, if the Bill of the Government came up in its present shape he should think its rejection preferable to the adoption of that, which he considered the most unsatisfactory measure that had ever been laid before Parliament by any Government at any time.—Earl GRANVILLE said that the Reform Bill of the Government was framed upon the principle of admitting as many persons as possible to the possession of the franchise consistently with the qualification of character and intelligence.—Earl GREY, in reply, explained that he had given his approval to a 5*l*. franchise in 1852 with very great reluctance, and only because he knew the difficulties which then surrounded the Government, and believed that the measure would not pass. The motion was then agreed to.

FRIDAY.—The *Oxford University Bill* passed through committee and was reported. *Diplomatic Correspondence.*—The Marquis of NORMANBY postponed until Monday his motion relating to private correspondence between ambassadors and foreign secretaries, as Lord Cowley had arrived from Paris in order to take part in the discussion on that day. The *Municipal Corporation Bill* passed through committee. The *Marriages (Extra Parochial Places) Bill* was read a third time, and passed. The committee on *Election Franchise in Counties and Boroughs* was nominated.

HOUSE OF COMMONS.

MONDAY.—*Reform Bill.*—Mr. MASSEY gave notice that, in the event of the Reform Bill being read a second time, he should move that it be then referred to a select committee. *State of the Navy.*—On the order for going into Committee of Supply on the Navy Estimates, Sir C. NAPIER called attention to the state of the navy, commenting especially on the alterations and changes of ships; the Channel fleet, which, he said, had not been properly used, and was indifferently manned; the want of good petty officers, and the shabby treatment of warrant officers' widows; the mutinies in certain ships; corporal punishment, which, he contended, though it could not be abolished, might be diminished, and should be carried out in a different manner; the mode of paying off ships, occasioning a waste of stores; the block ships, of which he spoke with contempt; the Coastguard and Coast Volunteers, the insufficiency of the reserve, and other miscellaneous matters. He made various suggestions for improving the condition of the Navy, by an economical augmentation of the number of ships, by strengthening their armament, and effectually manning them.—Sir J. ELPHINSTONE called attention to the case of the post captains on the reserved list, entering into minute details on the subject, and arguing that they had been disappointed of what they considered their just claims by a quibble.—Mr. LINDSAY complained of the increasing expenditure for the Navy, and asked the meaning of these enormous armaments. Whom were we arming against? Why, against France, who was increasing her war expenditure because she was afraid of us, as we of her; and this in the face of professions of friendship on both sides. He thought something could be done to stop this mutual expenditure if right means were adopted. He insisted upon the extravagance of the dockyards' expenditure, and the unnecessary cost of ships in the Royal yards.—Sir M. SEYMOUR supported the claims of the post captains and those of the widows of warrant officers. He adverted shortly to some of the matters dwelt upon by Sir C. Napier and Mr. Lindsay, urging the very serious importance of the question as to the manning of the navy.—Sir J. PAKINGTON, with reference to the case of the post captains, expressed his opinion that their request was well founded, and that, looking at the whole transaction, the view they took of the Order in Council rested upon a better ground than that of the Admiralty.—Sir F. BARING, who had drawn up the Order in Council, explained its intention, and contended that it would not bear the construction which the officers put upon it.—Mr. HENLEY referred to various statements in evidence as to the quality of the timber used in the dockyards, and the insufficient store of properly seasoned material, urging the importance of this question, which, in his opinion, founded upon details which he stated to the House, had not been met by the Admiralty in a proper manner. The Admiralty had come to the conclusion that 60,000 loads of timber would suffice to keep up the supply; but he contended that it was demonstrable by figures that this amount would not furnish a sufficient quantity of seasoned timber of proper dimensions, but leave a deficiency which no outlay of money could repair in an emergency.—Mr. W. WILLIAMS inveighed against the enormous amount of our naval expenditure.—Sir H. LEEKE was of opinion that the reserved captains had been very hardly treated; their case was likewise advocated by Admiral WALCOTT.—Mr. BENTINCK attributed the extravagant expenditure for the navy to the system which rendered the Board of Admiralty a political body. The abuses in the public dockyards, he said, were beyond the control of the Board as at present constituted.—The House then went into Committee, when Lord C. PAGET, after moving the first vote, for the Admiralty Office, was proceeding to reply to the preceding speeches; but Sir H. WILLOUGHBY interposed an objection on the point of order, contending that the noble lord was precluded from continuing a debate then concluded.—This objection gave rise to a discussion, and, the point of order being pressed, Lord C. PAGET gave way, and after some debate the vote was ultimately agreed to, the amount being 160,280*l*. The following votes were also agreed to, after much discussion: —287,725*l*. for the Coastguard Service, Naval Coast Volunteers, and Naval Reserve; and 64,322*l*. for the scientific branch. The Chairman was then ordered to report progress. *The Census.*—Mr. CLIVE obtained leave to bring in a Bill for taking the census in 1861.

TUESDAY.—*Mortality on Board Transport Ships.*—In reply to Sir D. L. EVANS, Sir CHARLES WOOD said that the mortality which had occurred on board various vessels which had lately arrived at Madras and Bombay with the wives and children of soldiers should be inquired into. It appeared, however, at present that the mortality had been caused by contagious diseases which had broken out among them, but that the mortality among the children had been below the average.—Mr. HADFIELD, referring to the *Fight for the Championship*, asked whether the police were present at the contest, whether, if present, they had interfered to prevent it, whether they had made any report of the circumstance to the Home Secretary, and whether the Government intended to take any steps to punish the parties implicated.—Sir G. LEWIS said he had simply heard that the fight had taken place that morning in Hampshire, but that he had no information on the subject beyond mere hearsay. He could not therefore tell whether the county police were present or not; but the metropolitan police had no jurisdiction at the scene of the conflict. With regard to what steps the Government might take in the matter it would be premature to make any statement until they were in possession of the facts.—In answer to Mr. T. DUNCOMBE, Lord PALMERSTON said that the *Navy Estimates* would be proceeded with on Thursday, and that the second reading of the *Reform Bill* would be taken on Monday next.—Mr. PAULL obtained leave to bring in a Bill to amend the Act relative to malicious injuries to property. *Salmon Fisheries in Ireland.*—Mr. M'MAHON obtained leave to bring in a Bill to assimilate the law of Ireland to that of England as to the mode of fixing the close season for salmon and trout. The *Adulteration of Food and Drink Bill* was read a third time and passed.

WEDNESDAY.—*Mr.* COLLIER moved the second reading of the *Conveyance of Voters Bill*, the object of which was to prohibit the payment of the expenses of conveyance of voters to the poll, under colour of which he said acts of bribery were constantly committed.—Mr. NEWDEGATE opposed the Bill, which would practically disfranchise a large number of non-resident county voters, who were amongst the most independent portion of the constituency. He moved, as an amendment, that the Bill be read a second time that day six months.—Sir G. LEWIS suggested that the Bill should be referred to the select committee on corrupt practices at elections, or the discussion deferred until the committee had made its report. With regard to the principle of the Bill, he thought it involved many inconveniences.—Mr. HENLEY likewise thought that the Bill ought to be postponed till the report of the committee was forthcoming, and moved that the debate be adjourned. —Mr. NEWDEGATE having withdrawn his amendment, some discussion took place as to whether the Bill should be read a second time previously to its being referred to a select committee. Ultimately, on a division, the motion for adjournment was carried by 94 to 81. The further consideration of the Bill was then adjourned for a month.—Mr. MURRAY moved the second reading of the *Attorneys, Solicitors, Proctors, and Certificated Conveyancers Bills.* These Bills had come down from the Lords, and their object was to provide that graduates of the universities should be admitted as solicitors after three years' service instead of four, and that managing clerks who had during ten years acted to the satisfaction of their employers should be admitted as attorneys after a service under articles of three years. The general object of the Bill was to promote education amongst the class to which it referred.—Mr. KNIGHT moved as an amendment that the Bill be read a second time that day six months. It gave undue powers to the Incorporated Law Society, and practically repealed the act by which practising solicitors were prohibited from acting as Justices of the Peace. He had no objection to the educational clauses, but these were embodied in another Bill then before the other House.—Mr. LOCKE and Mr. JAMES opposed the Bill as intended simply to promote the interests of the Law Society, from which it emanated.—Mr. M. SMITH defended the Law Society, whose proceedings entitled it to the confidence of the public. It had been introduced into the other House by the Lord Chancellor; it would increase the respectability of the profession, and contained enough good to be read a second time.—Mr. B. OSBORNE opposed the Bill, thinking that it would be difficult to improve it into a good measure.—Mr. A. MILLS admitted that the Bill contained objectionable clauses, but thought that the measure would raise the character of the profession, and ought to be properly considered.—Mr. LOWE said that all the important clauses in the Bill were contained in a Bill sent up from the Commons to the other House. The Lords hung up that Bill, but framed the present, containing almost word for word the clauses of the Commons Bill, with the addition of some objectionable clauses of its own.—Mr. BOVILL supported the Bill, which was sanctioned by the law lords, and might be considered as their Bill. It contained many valuable provisions, considering how much the public was interested in the high standard of the education of their legal advisers—The SOLICITOR-GENERAL would give his consent to the second reading of the Bill, believing that it could be amended in committee.—Mr. HADFIELD objected to entrust to the Law Society the large powers given to it by this Bill.—Mr. S. ESTCOURT recommended the House to adhere to the Bill sent up from that House; and Mr. HENLEY, without expressing an opinion as to the machinery of the Bill, supported the second reading, admitting that there was much which ought to be modified in committee. On a division the amendment was negatived by 191 to 29. The Bill was then read a second time.—Mr. T. DUNCOMBE moved the second reading of the *Jews Act Amendment Bill*, admitting Jews to take the Jewish oath without previous resolution.—Mr. NEWDEGATE moved that the Bill be read a second time that day six months, considering that it was a breach of the engagement entered into between the two Houses of Parliament.—Mr. KNIGHTLEY did not think it worth while to reopen the question and thus bring the two Houses into collision. On a division the amendment was negatived by 117 to 75. The Bill was then read a second time.

THURSDAY.—*Foreign Relations.*—On the order for going into a Committee of Supply, Mr. HORSMAN called attention to the state of our relations with foreign Powers, and asked some explanation on the subject to show, he said, that the Parliament and the Government of the country were of one mind, and cordially united in a direct, clear, and unmistakable announcement of the policy which England, from a regard to her own interest and honour, was determined to pursue. He suggested certain points upon which he desired specific information, especially the exact state of the question respecting the annexation of Savoy. He commented upon the despatch of M. Thouvenel and the reply of Lord J. Russell, contending that this reply should have embodied a protest, on the part of England, against the principle that a small State had a right to make a cession of territory to an absorbing neighbour without European sanction, and affirming that the treaties of 1815 had been over-ridden and trampled under foot by an act of pure aggression. He referred to indications of a policy on the part of France calculated to inspire apprehension in Germany, and urged the wholesome effect which a protest by England would have upon that policy, with reference to France on the one hand, and the German Powers on the other. If the Government of this country were not prepared to rouse themselves and adopt a manly English policy, we must expect, he said, to see Europe make its own terms with the conqueror of the world.—Mr. DUFF was of opinion that at this critical moment we were not adequately represented at Paris.—Lord J. RUSSELL thought that Mr. Horsman had not sufficiently weighed the responsibility of uttering a warlike speech, and asked what was to be the object of war. The question of the cession of Savoy by Sardinia, and the question as to the neutralised portion of Savoy, in relation to Switzerland and the great Powers of Europe, were, he observed, entirely distinct. Mr. Horsman had said that we had not protested against this cession; but it was not always necessary to protest in such cases; we did not protest in the case of Cracow. We were not entitled to say to the King of Sardinia, "You shall not cede the territory," nor to the Emperor of the French, "You shall not accept it." The cession was a matter which concerned the two Governments only. But the other question connected with it was a complicated one, respecting which there had been discussion, and which must be further discussed—namely, how the neutrality of Switzerland could be maintained. But, so far from this being a question of war, it was one which demanded the coolest heads and the maturest deliberation. It depended not upon England merely; it required that the Powers of Europe should agree as to the precautions requisite to give to Switzerland an effectual guarantee of her neutrality. Her Majesty's Government felt the utmost desire to preserve to Switzerland everything that could secure the maintenance of her independence, and if the House left to them the conduct of the negotiations, he trusted they would not be forgetful of

the honour of England or the interests of Europe.—Lord Palmerston defended our Ambassador at Paris from the imputations cast upon him by Mr. Duff, and asserted that her Majesty had no more judicious or efficient public servant than Lord Cowley.—Mr. Kinglake agreed generally with all that had fallen from Mr. Horsman, but objected to a protest, on the ground that it was an indication rather of weakness than of strength.—After a few words from Mr. S. Fitzgerald, who wished not to be considered as acquiescing in the observations made by Lord J. Russell, the subject dropped. *Bank of England.*—In repiy to Mr. Alderman Salomons, the Chancellor of the Exchequer said that the diminution of notes in the hands of the Bank of England, as published in the return of Friday last, had not been occasioned by the ordinary operations of trade, although he could not say that it had been brought about by combination. In his opinion the Bank of England had acted with great propriety. *Naval Reserve.*—In answer to an inquiry by Sir C. Napier, Lord C. Paget said he did not consider the progress of enrolling for the naval reserve force unsatisfactory; on the contrary, in his opinion, it promised well.—Mr. W. D. Seymour and Sir J. Elphinstone pressed upon the Government the expediency of extending the means of naval instruction by schoolships.—Mr. Whitbread made a short reply, and the House went into a Committee of Supply on the remaining *Navy Estimates*, when the following votes were agreed to, after discussion:—172,778*l.* for establishments at home; 30,953*l.* for establishments abroad; 1,440,681*l.* for wages to artificers at home; 63,680*l.* for the same abroad; 3,204,434*l.* for naval stores, for building and repair of ships. In moving the last vote, Lord C. Paget gave a detailed reply to a charge made on a preceding night by Mr Henley, against the Government, of neglect in not keeping up a proper stock of seasoned timber in the dockyards, stating reasons why, in his opinion, it would be unwise in the Admiralty to increase the establishment of timber.—On the order for the second reading of *Sir John Barnard's Act, &c., Repeal Bill*, Mr. Bentinck moved to adjourn the debate, but the motion was negatived on a division.—The motion for adjournment of the House was then moved and negatived on a division. The adjournment of the debate was then again moved, and, after a rather sharp discussion, the Government yielded to this motion, and the debate was adjourned.—On the order for the third reading of the *Church-rates Abolition Bill*, Lord J. Manners, protesting against proceeding with the Bill at so late an hour (nearly half-past 1 o'clock), moved that the debate be adjourned. On a division, this motion was negatived by 131 to 76.—The adjournment of the House was then moved, and this motion was likewise negatived, on a division. The motion for adjourning the debate was then repeated, and at length was agreed to.

Friday.—*The Prize Fight.*—Mr. W. Ewart inquired what was the state of the law with respect to prize fighting. He objected to these fights as a national institution.—Mr. V. Scully said that if two men had been allowed to pommel each other for two hours in Ireland, the proceeding would have been denounced by the London press. He had indeed heard that both Sayers and Heenan were Irishmen, but they certainly were a disgrace to England.—Sir G. Lewis said that it had been held that prize-fighters adopted a better system than the bowie knife or the stiletto, or perhaps than the shillelagh in Ireland. He had however no doubt that such a fight was illegal, and that the people assembling there were guilty of an unlawful act. A prosecution could be instituted in the ordinary way, and brought before the grand jury. *The Reform Bill.*—In answer to Mr. E. James, Lord J. Russell said the adjourned debate on the Reform Bill would come on next Monday, and after that he should move for the appointment of a committee of the whole House. With regard to Mr. Massey's motion, to refer the Bill to a select committee, he considered it tantamount to a motion for adjournment for six months, and he should, therefore, resist it. [Left sitting.]

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 94¾ for Money, and 94¾ to ⅞ for the 9th May; Bank Stock, 225 to 223½; Three per Cents. Reduced, 93¼ to ⅛; New Three per Cents., 93⅜ to ½; New Two and a Half per Cents., 79½; Indian Five per Cent. Stock, 1859, 106⅜ to ½; Five per Cent. Enfaced Rupee paper, 98¼ to ½: Ditto Five and a Half per Cent., 104; Indian Four per Cent. Debentures, 1858, 96⅞ to 97; India Bonds, 4*s.* dis.; Exchequer Bills, 11*s.* to 8*s.* pm.—Foreign: Brazilian Old Five per Cents., 99 ex div.; Ditto Four and a Half per Cents., 1858, 90; Ditto for 1860 (scrip), par; Chilian Four and a Half per Cents., 85½; Dutch Two and a Half per Cents., 65¾; Portuguese Three per Cents., 1853, for Acct., 43¾ to ½; Russian Five per Cents., 108; Ditto Four and a Half per Cents.. 96¾; Spanish Three per Cents., 47; Ditto Passive, 16; Turkish Six per Cents., 1854, for Acct., 76¾ to ⅞ ex div.; Ditto for 1858, 61½; Do. for Acct., 61½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,365,225	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	13,890,225
		Silver Bullion	—
	£28,365,225		£28,365,225

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£9,728,943
Rest	3,211,769	Other Securities	22,790,338
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,838,581	Notes	6,548,560
		Gold and Silver Coin ..	734,461
Other Deposits..	15,512,425		
Seven day and other bills	686,537		
	£39,802,312		£39,802,302

19th day of April, 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. Axford and C. Greenslade, Bridgwater, Timber Merchants—W. Brettell, Oldbury, Plumber and Glazier—J. Culverwell, Washford Mills, Somersetshire, Miller—W. Jackson, Brewer Street, Somers Town, Surgeon and Apothecary—J. Linley, Sheffield, Edge-tool Manufacturer—G. T. Lund, Manchester, Commission Agent—J. M'Alpine, Cheltenham, Ironmonger—S. Parry, Queen Street Cheapside, Lodging House Keeper—W. Proctor, Leeds, Linendraper—J. R. Roberts, Crispin Street, Spitalfields, Potato Salesman—M. Shield, Great Queen Street, Westminster, Shipowner—R. Turner, Stoke upon-Trent, Cabinet Maker

BANKRUPTCY ANNULLED—T. J. B. Wallis, Colchester, Draper.

FRIDAY—BANKRUPTS—G. Allen, Bardney, Lincolnshire, Grocer—D. B. Crick, Leicester, Builder—J. Kelsey and E. Kelsey, Nuneaton, Tailors—W. Kirk, J. Walk, and J. Kirk, Mountsorrel, Leicestershire, Coal Merchants—F. Newell, Huddersfield, Bootmaker—J. Southward, Liverpool, Printer—A. Waite, Berwick-upon-Tweed, Draper—A. Wilson, Aldershot, Surgeon.

BANKRUPTCY ANNULLED—W. J. Watson, Upper Holloway, Builder.

SCOTCH SEQUESTRATIONS—J. Brown, Edinburgh, Musicseller—A. M'Murtrie or M'Murtrie, Glasgow, Joiner.

Metropolis and its Vicinity.

International Exhibition of 1862.—The council of the Society of Arts are engaged in forming a guarantee fund, in order to carry out the International Exhibition of 1862. The principal conditions of the guarantee agreement are:—1. That no subscriber will incur any liability until at least 250,000*l.* have been guaranteed. 2. That no calls will be made unless it should happen that, contrary to the experience of the Exhibition of 1851, when there was a surplus of nearly 200,000*l.*, there should be a loss, when the call will be *pro rata*. 3. Any surplus will be at the disposal of the guarantors, for the promotion of arts, manufactures, and commerce. 4. The trustees and managers of the Exhibition named are—The Earl Granville, K.G., Lord President of the Privy Council, Vice-President of the Society of Arts; the Marquis of Chandos, chairman of the London and North Western Railway; Thomas Baring, Esq., M.P.; C. Wentworth Dilke, Esq., (Royal Commissioners for the Exhibition of 1851); Thomas Fairbairn, Esq., chairman of the Manchester Art Treasures Exhibition. The council do not propose to limit the fund to the 250,000*l.* named, but, having secured that sum, they will endeavour to increase it as much as possible. Already a few members of the society, and other bodies, have promised their names as guarantors to the amount of 170,000*l.* A circular letter has been addressed to the members of the society, drawing their attention to the importance of filling up the guarantee list as soon as possible, and those members and their friends who are desirous of giving their assistance to this undertaking are requested to send in their names to the Secretary of the Society of Arts as early as possible, with the sums they are willing to guarantee. The amounts guaranteed by individuals vary from 10,000*l.* to 100*l.*

The Sunday Riots in St. George's-in-the-East.—On Sunday last the services at St. George's-in-the-East were more pacific than on Easter Sunday, although there were not more than a dozen policemen to keep order. A large number of persons who sympathised with the rector were in attendance, and eompletely overpowered those who attempted to interrupt the service by saying the responses in opposition to the choir. The Second Commandment and other portions of the service which referred to graven images were coughed and jeered at, but no serious interruption was offered to the prayers. The sermon, which was preached by the Rev. F. G. Lee, encountered a good deal of opposition and hissing on account of its personal allusions to the opposition of the civil and ecclesiastical authorities to the rector. In the evening a dense crowd had assembled in Cannon Street, and when the church was opened it was completely filled in a few minutes. The galleries were chiefly occupied by boys and girls, while in the body of the church there were fewer roughs than on any previous occasion. As soon as the rector and his choristers emerged from the vestry-room there was much hissing and howling, and this was renewed when the rector appeared at the reading-desk for the purpose of proceeding with the service. He went on without much further interruption until he came to the Belief, when he turned his back upon the congregation, for which he was greeted with loud groans, which completely drowned his voice. The Rev. F. G. Lee again preached, and was occasionally loudly hissed, but the sermon was listened to with more than ordinary attention. At the close of the service there were the same tumultuous proceedings as before. People rushed towards the altar, but did not make their way within the rails. They sung the Doxology after the rector and clergy had retired, and it was some time before the few police who were in attendance succeeded in clearing the chancel. The altar was decorated with flowers as on the preceding Sunday, but the corona was not lighted.

The Police Courts.—Mr. Broughton has retired from the office of police magistrate at Marylebone. Mr. Secker will be transferred from Greenwich to Marylebone, and Mr. D. Maude, police magistrate at Manchester, will succeed Mr. Secker at Greenwich.

The Public Health.—The Registrar-General's Weekly Return states that the mortality last week was high, though, as in the previous week, it was considerably lower than it had been in the last three weeks of March. The deaths in the week that ended Saturday, April 14, were 1407. In the corresponding weeks of the 10 years 1850-59 the average number was 1119, which, if corrected for increase of population, becomes 1231. The deaths of last week were therefore 176 above the average. During the week the births of 932 boys and 934 girls, in all 1866 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1694.

Provincial.

Cheadle.—The Earl Talbot's inheritance of the estates of the earldom of Shrewsbury has been made the occasion of much festivity in Staffordshire. The *fêtes* commenced on Tuesday, and terminated on Friday evening of last week. The Earl of Shrewsbury and Talbot's family mansion at Ingestre was so full with visitors that extra accommodation had to be sought in the county institutions and private mansions. Many of the guests were accordingly lodged at the Coton Hill Lunatic Asylum, the county gaol, and other neighbouring establishments. Lord Hatherton, the lord-lieutenant of the county, received a large party at Teddesley, as did also the Earl of Lichfield, at Shugborough; Mr. Salt, at Weeping Cross; the Hon. and Rev. Hervey Bagot, at Blithfield; and Colonel R. Levett, at Milford. On Tuesday all the visitors were the guests of the Earl and Countess of Shrewsbury and Talbot at a ball and supper given by them at Stafford, and to which the chief county residents were invited. For this ball his lordship had obtained from the magistrates at quarter sessions permission to use the Shire Hall, the assize courts, and the judges' residence adjoining; and almost every part of those buildings was appropriated to the occasion. On Wednesday the festivities were resumed with another ball at the Shire Hall, to which Lord Shrewsbury's Staffordshire and Welsh tenantry and tradesmen were invited to meet his lordship and his guests. On Thursday Mr. Meynel Ingram's foxhounds met in front of the mansion, and the field must have numbered 300, including most of the visitors, the members of the hunt, and some of the residents in the neighbourhood, the ladies joining the field in carriages, of which there were about 12. After the hunt the labourers on the estate and the school children from seven adjoining parishes, amounting together to between 1600 and 1800, were entertained with a dinner in the farm buildings adjoining the Hall, and afterwards with a series of old English games and a display of fireworks. On Friday the *fêtes* terminated with a vast public cavalcade to celebrate the Earl of Shrewsbury's taking formal possession of Alton Towers. His lordship made a public entry into Alton, in compliance with a requisition from a large number of the tenantry and yeomanry. The Earl and his party arrived at Blount's Green, at 11 o'clock, and the cavalcade proceeded to Uttoxeter. His lordship, his relatives, and immediate personal friends occupied nine carriages, each drawn by four horses with postillions. Two outriders and a detachment of yeomanry cavalry headed the procession. The high sheriff of the county, accompanied by the under sheriff, drove before the foremost carriage. The carriage in which the Earl and Countess rode was preceded by the mounted tenantry and a number of the yeomanry, and three heralds with silver trumpets. A strong body of the yeomanry closed the procession. Uttoxeter presented a very enlivening appearance as the procession entered it. Crowds thronged the streets and the windows, banners floated from the houses, the bells rang, and the people cheered. After receiving an address from the inhabitants, congratulating him upon his succession to the premier earldom of England, his lordship briefly replied, and the cavalcade started for Alton, a distance of eight miles. The first gun which signalised the arrival of the procession on the estate was fired at 1 o'clock, but it was a quarter to 2 before the head of the procession reached the entrance hall. His lordship and Viscount Ingestre were loudly cheered as their carriages passed through the grounds. When Lord Shrewsbury alighted he was presented amidst loud cheers with a silver key by the high sheriff, and was thus given official and formal possession. His lordship and party were then conducted through the armoury and the picture gallery, and from the octagon, through the conservatory, to the garden, and thence to the flag tower, where, amidst the firing of a salute from a park of field artillery, his lordship first ran up his flag. The Earl and his party then proceeded through Lady Shrewsbury's garden to a platform covered with scarlet cloth, erected near the entrance hall. Here addresses were delivered to his lordship from his tenantry in some six counties, and from some of the surrounding Staffordshire townships, congratulating him upon his accession to his new title and lands. The noble Earl returned thanks in a few appropriate words. His lordship and his party then returned into the mansion, where luncheon had been provided for them. In different companies upwards of 23,000 visitors partook of refreshment during the afternoon. For the accommodation of the general public, respectable tradespeople had been allowed to pitch refreshment booths upon the ground. The Bishop of Lichfield, Lord Hatherton, the lord-lieutenant of the county, Lord Chelmsford, and Sir Watkin and Lady Wynn were present during the *fête*.

Hemel Hempstead.—The coroner's inquest on Sir T. Sebright's gamekeeper, who was killed by poachers at Beechwood, was brought to a close on Saturday, when the jury returned a verdict of Wilful Murder against Cane and Bliss, who had previously been committed by the magistrates for trial on the capital charge. Some additional evidence was adduced proving that the prisoners were seen together on the night of the murder; that a piece of paper had been taken out of the body of deceased, on which the words "Houghton Regis" were printed; and that the corner of the summons which was found in the wood having the words "ough" written on it was evidently a portion of the same document. It was also proved that one of the keepers struck the gun when raised at him by the prisoner Cane, which accounted for the breakage of the staple put upon it on the evening before the murder. A doubt has been raised whether the murder was committed in the county of Herts or Beds, the parish of Flamstead, in which the mansion of Sir Thomas Sebright and much of his preserves are situated, being in Herts, and other parts of the woods in the parish of Whipsnade, in Beds. The keepers were in the county of Beds when

they were shot at, and Seabrook fell with his head in Herts and his feet in Beds.

SALFORD.—The adjourned inquest on the bodies of William Scholes, aged 75, and William Edward Scholes his son, of Irlams-o'-th'-Heights, was brought to a close on Tuesday. The surgeons, who had made a *post mortem* examination of the bodies, deposed that the father had died from suffocation caused by strangulation, and the son from the effects of a stab wound in the neck. Both were very infirm, and very little violence would cause death. A police officer who had charge of Sarah Scholes, the female prisoner, stated that she had confessed to him that she had committed the murder. She said that her father and brother entered her bedroom and beat her with a stick, and that she killed them in defending herself. She said that she knocked her brother down with the stick, and then throttled him, and that afterwards she served her father in a similar manner, and then fell in a fit on the top of them. A pocket knife, with the large blade open, covered with blood, was found on the mantel-piece. The medical attendants, who had known the woman for same years, considered that she was not of sound mind. The jury were of opinion that violence had been used to her in the first instance, and returned a verdict of Manslaughter against her. The magistrates on Wednesday committed the prisoner for trial for the Murder of her father and the Manslaughter of her brother.

STAMFORD.—The excitement occasioned by the murder of Miss Elizabeth Pulley was brought to a climax on Thursday by the announcement that Henry Corby, the man charged with the crime, had committed suicide in his cell. It appears that the conduct of the prisoner whilst in custody had been such as to disarm any suspicion that he was likely to make an attempt upon his life, and that he was therefore allowed to sleep alone. Corby was visited by the governor several times in the course of Wednesday, and was last seen alive about 8 o'clock in the evening, when he was locked up for the night. On Thursday morning it was discovered that he had hung himself by tearing up one of the sheets of his bed, and suspending himself to an iron stanchion in the window of his cell. When found the body was not quite cold, but it was supposed by the gaol surgeon that life had been extinct about two hours. The adjourned examination was to have taken place on that day, but instead of that an inquest was held over the body of the deceased. Previous, however, to the coroner's inquiry, the Mayor and magistrates assembled at the Town Hall, when some additional evidence was adduced, bringing home the crime of murder to the prisoner in the most conclusive manner. After hearing the evidence of the governor of the prison, the turnkey, and the surgeon, the jury returned the unanimous verdict of *Felo de se*.

Law.

CONSISTORY COURT.—*The Office of the Judge promoted by the Rev. Bryan King* v. *Robert Rosier*.—This case was heard some time ago before Dr. Twiss, Q.C., the judge of the Consistory Court, when evidence was adduced on behalf of the plaintiff and Mr. Rosier. Judgment was given on Tuesday, when Dr. Twiss said—This is a suit for brawling in a church, instituted by the rector of St. George's-in-the-East, in the diocess of London, against Mr. Rosier, a parishioner of that parish. The defendant is charged with brawling and chiding in the church of St. George's-in-the-East, on Sunday the 14th August, and Sunday, the 6th November, 1859. The proceeding is instituted under the general ecclesiastical law, but the charge is laid in the words which were adopted by the Legislature in the statute 5th and 6th Edward VI., chap. 4., entitled 'An Act against quarrelling and fighting in churches and churchyards.' By that statute it is enacted that 'if any person shall by words only quarrel, chide, or brawl in any church or churchyard, it shall be lawful for the ordinary of the place where the same shall be done, and proved by two lawful witnesses, to suspend any person so offending—if he be a layman, from the entrance of the church, and if he be a clerk, from the ministration of his office for so long as the said ordinary shall think meet and convenient, according to the fault" The statute enacts severe penalties against any person who shall smite or lay violent hands upon another in any church or churchyard. The purpose of this statute was to repress the disturbances which, in the early period of the Reformation of the Church of England, were too apt to break out in places consecrated to the solemn offices of Divine worship between the more ardent supporters of the Reformed order of Divine service and the equally zealous adherents to the Latin ritual. It had in later times been applied to repress quarrels and offences violating the sanctity of places set apart from profane uses, and dedicated to the service of Almighty God. The jurisdiction exercised by the Ecclesiastical Courts did not, however, depend on the statute, as it was passed for the purpose of aiding, not creating, the jurisdiction of the Ecclesiastical Courts, and the offence of brawling in a consecrated place subsisted by the common law long before the statute was enacted The object of the general law as well as of the statute was evidently to protect the sanctity of places set apart for the worship of the Supreme Being, and for the repose of the dead, in which nothing but religious reverence and Christian good will ought to prevail, and to prevent them from being converted with impunity into scenes where human passion vented itself either in words of malice or acts of violence The judge then reviewed the evidence in support of the first charge, in which Mr. Rosier was accused of shouting "in a brawling, chiding, and irreverent manner," on the occasion of the officiating minister having fainted, at the afternoon service of the 14th of August last,—"It is a judgment of God upon him;" "God has struck him dead;" "Down with Bryan King;" and was of opinion that it was not proven. The judge remarked, in reference to the statement of one of the witnesses, Captain Hall, a non-parishioner, that he went to the church on the 14th of August last to assist in keeping order, that that duty did not devolve on the rector or minister of the church The minister is responsible for the performance of Divine service, and the churchwardens and their assistants are authorised by law to keep order, and the rector not having a concurrent authority with the churchwardens cannot devolve upon strangers an authority which he does not possess himself. The interference of strangers with the congregation was liable to promote that disorder which it might be their intention to prevent. A stranger who interfered without lawful authority and laid violent hand upon any other person in the church was liable on complaint being made to the Ecclesiastical Court to imprisonment for a period not exceeding six months. The learned judge then went over the evidence in support of and against the second charge, which was that on Sunday, the 6th of November last, immediately upon the afternoon service being concluded, and before the congregation had dispersed, Mr. Rosier approached Capt. Hall, and pointing at him said in an irreverent and brawling tone and manner, "This thing calls himself a captain: he is a disgrace to the army; he is a greasy swell," and that he also said to a member of the congregation in a brawling manner that Captain Hall "is the man who is going to swear I spit upon him in Wellclose Square." The Judge held that the second charge was proved. The Court therefore admonished Mr. Rosier to refrain from brawling, quarrelling, and chiding in the parish church of St. George's-in-the-East, and condemned him in the sum of 10*l*. *nomine expensarum*. Dr. Phillimore requested the court to intimate to the defendant that if he did not fulfil the judgment he would be guilty of contempt, and be liable to other penalties. The Court having done so, Mr. Rosier, with much warmth: I appeal against this decision as an innocent man, and I hereby declare this to be a malicious prosecution. The Judge: Mr. Rosier, you have in this case been allowed the utmost latitude, and, as you must be well aware. I am only here to administer the law. Mr. Rosier: I appeal from your decision to the British public, as I am convinced that if this case had been brought before a jury of my countrymen, it would instantly have been dismissed. The Judge: If you are dissatisfied with the decision of the court, you can appeal against it to the proper tribunal. Mr. Rosier. I appeal against it to the people of this Protestant nation. The Judge: You can appeal if you please, and I should be most happy if my judgment could be reconsidered. Mr. Rosier: The late proceedings before the police magistrate bear testimony to the animus of the Rev. Bryan King against his parishioners. The Judge: It is not in my power to deal with that matter. Mr. Rosier: In the presence of this court and my God I declare that I am innocent of this charge. The court then adjourned. Mr. Rosier, as he left the court, was loudly cheered by the spectators, who were far more numerous than at any previous stage in the case. It was said that the 10*l*. would be raised in the parish by a penny subscription.

Sporting.

THE FIGHT FOR THE CHAMPIONSHIP.—Notwithstanding the efforts of the police to prevent it the fight between Sayers and Heenan took place on Tuesday morning on the borders of Surrey and Hampshire. All relating to the day and place fixed for the match was, of course, kept a profound secret. A special train was hired, which started from London Bridge at 4 o'clock in the morning. The train was one of immense length, containing some thousand persons, all of whom were muffled up to the eyes in shawls and wrappers. All along the line police were posted, with mounted patrols, at regular distances; but the train turned off at Reigate, and after a long run came out in the Farnborough station, close to Aldershott. In an instant after, all were out in the fields, following the men who with the ropes and stakes led the way across a most difficult piece of country, and finally formed the ring on the Hampshire side of the Blackwater which divides that county from Surrey. The instant the enclosure of ropes and stakes, 24 feet square, was formed, Sayers stepped into it, and was cheered tremendously. Heenan, who followed, was greeted in the same manner, and the two men, who there for the first time met, warmly shook hands, and then stepped back to take a long and careful survey each of the other. There was a toss for corners, which Heenan won, and chose that in which he would have the highest ground and with his back to the sun, leaving Sayers the spot where the glare was full in his face. Umpires for each man were appointed, and a referee for both, and these preliminaries being over Heenan proceeded to strip to his waist. It seemed impossible to restrain a murmur of admiration at the appearance which he then presented. In height he is about 6 feet 2 inches, with extraordinarily long arms, deep chest, and wide and powerful shoulders. His appearance was truly formidable. Exercise and long training had developed the immense muscles of his arms and shoulders till they appeared like masses of bone beneath the thin covering of skin. There seemed not an ounce of superfluous flesh. Sayers looked at him long and earnestly, and as one who saw in his every movement a dangerous customer, and he too stripped in turn. The contrast between the men was then still more marked than before. Sayers is only about 5 feet 8 inches; his chest is not broad, nor are his arms powerful, and it is only in the strong muscles of the shoulders that anything is seen to account for his tremendous powers of hitting. Sayers, too, looked hard as flint, but his deficiencies in regard to his antagonist in height, weight, and strength, and above all length of arm, made it almost a matter of surprise how he could hope to contest with him at all When to these disadvantages are added the superior height of the ground on which Heenan stood and the light of the sun full in Sayers's eyes, it will be seen how tremendous were the obstacles with which he had to contend. As the men stripped the spectators sat down outside the ropes, about 6 feet distant, in an outer ring, in which were gentlemen of all ranks, including numerous members of both Houses of Parliament, authors, poets, painters, soldiers, and even clergymen. There was a minute's pause after the final shaking hands, when the seconds retired and left the antagonists face to face at last. Both instantly put themselves into position—the right hand held close across the body, the left advanced at length, and kept moving gently out as if to feel its way. Both seemed very cautious, and as each avoided the other with more or less agility neither could help laughing. At last Sayers caught a slight blow on the mouth, which he returned heavily, drawing first blood from Heenan, amid shouts of congratulation. Both seemed still more cautious, and after much sparring and warding off an intended blow with the speed of thought, both stopped and looked at each other with hands down. After a little rest, they again sparred and closed, when Sayers gave his adversary some heavy body blows, and got down easily. Each man was instantly attended by his seconds, who carefully sponged his body and face, and rinced out his mouth with a little cold water Again they advanced Each seemed then to know his antagonist better; the sparring was quicker, and the huge muscular arm of Heenan went backwards and forwards with immense rapidity. Three times he hit at Sayers, but out of distance, and apparently as if to put the Champion off his guard; at last he darted forward like lightning, and dealt Sayers a blow in the mouth which sent him reeling. Sayers, however, as if to show how little he cared for it, at once ventured close to his huge antagonist—too close as it proved, for the long arm of Heenan was shot out like a dart, and with a heavy blow on his forehead Sayers was knocked almost into his own corner. Here he was sponged for a minute, and returned with a deep red lump across his forehead, and his mouth slightly disfigured, though with far less punishment in appearance than could have been expected, owing to his skill in jumping back ere the blow reached, and thus weakening half its force. He was smiling, and seemed quite at ease as he again approached the American in his own corner, who was very careful not to leave it, in order to keep Sayers with the glare of the sun full in his face. This seemed to perplex Sayers much, and he again presented an opening, of which the Benicia Boy instantly availed himself, and with one blow dashed Sayers to the ground Those who had backed Sayers now seemed rather depressed; the betting gradually became even, Heenan being almost as much in favour as the Champion. There were loud cries of "Time," at which Heenan advanced to the centre of the ring, and waited for Sayers, retiring as the latter advanced, till the American again had the benefit of the higher ground and the sun in Sayers's eyes. The latter now found it was useless attempting out-fighting with a man of such enormous strength and length of arm as the American; he therefore tried to dash in and got a slight blow at Heenan, who returned it with a very heavy one, which sent Sayers staggering back, and after some further exchanges, all in favour of the American, Sayers got down. Again the men were attended to, and again Sayers came forth much marked and with a heavy cut over his eyebrow, to cope with Heenan in his own corner. This time the sparring was so long and cautious that at last both men put down their hands and laughed. Again they began, and after a few feints Heenan dashed out his left and for the fourth time fairly struck Sayers to the ground with a very heavy blow. The effect of these repeated blows seemed almost greater on the spectators than on Sayers. The latter tried to treat them lightly, but around the ring a very different opinion was entertained, and Heenan was backed to win, and was cheered and encouraged to the utmost. Both men were duly wiped down, and Sayers's head and face, which were now smeared with blood and horribly bruised and bumped, was held close pressed between cold sponges to keep down the contusions, which had now altered his deep sallow hue. Shouts now went round the ring that Sayers had already lost, and indeed the punishment he had received was so much more severe than that bestowed upon his antagonist, who seemed always smiling and always fresh, that matters really began to look serious for the Champion. Apparently roused by these shouts to stronger efforts, Sayers came on again, and, watching his man cautiously, stepped back from a dreadful blow aimed at him, sprang in before the American could recover himself, and gave Heenan a terrific smash full in the eye, splitting up the cheek and sending his huge antagonist reeling like a drunken man back into his corner. The effect of this blow was so tremendous that even before half a minute had elapsed Heenan could scarcely be recognised as the same man, so swollen, disfigured, and blood stained were his features. There were loud cheers for Sayers, who now let no time slip, but catching a most formidable blow of Heenan's on his right arm, again dashed in, and gave in return a still worse blow to the American, following it up with another, which seemed to smash his nose, and almost knocked Heenan off his legs in turn, so that he required the most careful attention from his seconds to make him fit for the next round. The betting now changed again, and if Sayers was not a decided favourite, there at least seemed nothing to choose between the two. All the rounds had been long and cautiously fought, but the hitting had been dreadful, and both men began to show signs of fatigue, and after long sparring, in the seventh encounter, both paused, rested, and at last retired to rince out their mouths, which were very bloody, with water. As they came up again Sayers at once dashed in and gave another terrific blow to Heenan, which sent the blood pouring down over his broad chest, and seemed to make his huge form tremble like a child's. Heenan paused for a moment and then darted in, but Sayers got under his guard, closed, and, after giving him some heavy body blows, both fell, Sayers under. It had been noticed in the last two rounds that Sayers made not the least use of his right hand, with which in all his previous contests he had administered such terrific punishment that a full blow from it may almost be said to decide the fate of a battle. The reason of this was now painfully apparent on his again stepping into the ring. In stopping one of Heenan's tremendous blows some of the tendons of his right arm were broken, and the muscles so much contused and injured that it became powerless, and he could only manage to support it across his chest. From this time, therefore, Sayers fought the rest of the battle with his left hand, only seeking every opportunity to ease the evident pain of the injured limb by opening the hand and resting it on his chest or ribs. He, however, advanced smiling, as did also Heenan, though the features of the latter were so distorted and swollen that it was hard to say what he was doing. Sayers, notwithstanding the loss of his right arm, still pushed in, and gave the American another fearful blow, which sent him staggering back to have the blood wiped from his gashed features. The blow, however, though dreadful to look at, seemed to have no effect on the strength of the American, who was quickly out, and after some slight sparring again launched forth his powerful arm, and striking Sayers on the nose with a blow that was heard all over the meadow, felled him like an ox. This round lasted 13 minutes, and the men seemed so distressed at its close that each had to be carried to his corner. The seconds had much to do with sponging their faces and washing over the marks of their wounds, though some of Heenan's seemed too deep to be meddled with in this way. Time was loudly called by the umpires, and the American instantly rose; Sayers was much longer coming up, though he seemed almost fresher of the two, but not nearly so strong. As soon as Sayers was in reach Heenan gave him a heavy blow over the eye, and almost immediately after a still more fierce one on the mouth and nose, which seemed all knocked into one. There was slight sparring and both exchanged hits, all the profit being on the side of the American. Sayers drew back to spit the blood from his mouth, and was laughed at by some of Heenan's supporters. An imprudent ebullition, inasmuch as Sayers seemed stung by the taunts of the Americans, and again springing in, gave Heenan a blow which sent him tottering back, following it up with another and another, and a fourth tremendous one in the mouth. Heenan seemed staggered by these fearful blows, and reeled like a drunken man, leaving himself so unguarded that if Sayers had had the use of the right arm the fight would have ended there and then. As it was, however, Sayers dared not trust himself in the grip of an antagonist so immensely his superior in height, weight, strength, and length of arm, and he could only follow up his advantage by giving another heavy blow with his left in the mouth, and a most tremendous smash into the American's ribs, which sounded all over the meadow as if a box had been smashed in. In a minute after, however, Heenan came up trying to laugh, but only to receive a still worse blow in the face, which covered him with blood, and sent Sayers himself reeling back from the force of his own blow There was a short pause, and both went at it again, each exchanging heavy blows till both were covered with blood—especially the Benicia Boy, who in the end rallied and hit out fiercely, knocking Sayers down with an awful smash. The powerlessness of Sayers's right arm was more than ever manifest in this round, which lasted nearly 20 minutes. He seemed unable even to move it from his side, and it was fortunate indeed for him that Heenan himself makes very little use of his right. Both now seemed much distressed, and Heenan presented an awful sight. His face was gashed with apparently very deep flesh wounds, and the whole of the right side of his face, eye, nose, and mouth was simply one huge blue lump. Sayers, too, was badly punished about the mouth, but his face and head, though bloody, swollen, and much discoloured, were almost natural when compared to those of his antagonist. Both were very slow to the call of time. The Benicia Boy was first out. Sayers then came out, and Heenan at once, bringing his gaunt muscular left into play, reached over Sayers's guard like lightning, and knocked him down with a tremendous blow. Again Sayers was out, though weak, and Heenan rushed to force the fighting;

each hit the other hard, and after a slight struggle Sayers got down, laughing. Another round followed with much the same result as to hitting; but in the close Heenan lifted Sayers from the ground with ease and flung him down heavily. Sayers was evidently distressed and had not the least chance in closing with his powerful antagonist. Again there was a little struggle, and Sayers at last got a heavy blow on Heenan's left eye, the only one with which he could now see, receiving in return a blow in the chest, when he managed to get down. Both were very slow in coming up again, and Sayers being dodged round as usual, with his face to the sun, seemed dazzled: again the terrific long arm of the Benicia Boy came in, and Sayers was knocked down and apparently half stunned. He required much care from his seconds before he came up again, though when he did so it at once seemed to revive all his vigour, for he made straight at Heenan and dealt him a blow in the face that was heard all over the field. His antagonist seemed nothing loth to close for all this, and gave Sayers almost as bad a blow in return, till they both closed, when Sayers had all the best of it, and for the first and only time, threw Heenan heavily. In a minute both, though distressed, were at it again, and Heenan, with a fearful blow, knocked Sayers half across the ring. Another round ended, after a few exchanges, with the same result, except that Sayers was even harder hit, and seemed quite stunned. Strange to say, after these tremendous rounds Sayers still came up fresh, and showed not half the awful marks of punishment visible all over Heenan, who was now a disgusting object. His left hand was much swollen and puffy, and his left eye was fast threatening to close as irremediably as his right had done long before. His friends shouted to him from all parts of the ring to go in and finish Sayers by closing with him, as the latter could now only use one hand: but Heenan in turn was getting cautious, and did not seem to like the look of running into Sayers, who, always cool and wary, never now threw a chance away. Several rounds were fought after this with success more or less varying, each taking and giving heavy blows. In all the closes Heenan's immense strength prevailed, and he threw the Champion easily till in both the 21st and 22d rounds Sayers was knocked off his legs. Still he came up gaily, though carefully, and generally managed in most of the struggles to give one or more of his heaviest blows on Heenan's left eye, which was now almost gone like the other. The scene gradually became one of the most intense and brutal excitement. There were shouts to Heenan to keep his antagonist in the sun,—to close with him and smash him, as he had only one arm, while the friends of Sayers called to him to take his time, as the American was fast flinching and must give in. The bets were even on both men, and then again varied with every round. When Sayers was knocked down almost senseless under a tremendous blow there were cheers from the Americans till the fields echoed again, which were retorted by the English whenever their Champion sent his huge opponent reeling back from the tremendous blows which were always dealt on the eyes. At this time several policemen came upon the scene, and did their best to force their way into the ring; but the crowd, which now amounted to some 3000, kept them back by rushing on the ropes, shouting and cheering the combatants to the utmost. During all this the men fought on with varying success, the heavy "thuds" upon the face of one or the other being clear above all the din. Sayers seemed getting weaker each time he was knocked off his legs, and Heenan more and more blind. It appeared all a chance whether the English Champion would be struck senseless or Heenan remain sightless, and at his mercy. Sayers now tried getting away, and leading his opponent round the ring. In one of these runs he got a heavy blow on the neck, which enabled his antagonist to overtake him, when they closed, and Sayers fell, Heenan striking him a heavy blow on the head while on the ground. An appeal of foul play was made, but it was overruled, as the blow was supposed to be struck in the heat of fighting, and Heenan could scarcely see what part of his antagonist was under him. The fighting was still very quick, Heenan almost as strong as ever, and, though apparently much distressed, trying to get it over before he quite lost his sight. In the 38th round Heenan got Sayers's head under his left arm, and supporting himself by the stake with his right held his opponent down, as if he meant to strangle him. Sayers could no more free himself than if a mountain was on him. At last he got his left arm free, and gave Heenan two dreadful blows on the face, covering them both with the blood, but Heenan, without relaxing his hold, turned himself so as to get his antagonist's neck over the rope, and then leant on it with all his force. Sayers rapidly turned black in the face, and would have been strangled on the spot but that the rules of the ring provide for what would otherwise be fatal contingencies, and both the umpires called simultaneously to cut the ropes. This was done at once, and both men fell heavily to the ground. Sayers nearly half strangled. The police now made a determined effort to interfere, which those present seemed equally determined to prevent, and the ropes of the ring having been cut the enclosure itself was inundated by a dense crowd, which scarcely left the combatants six square feet to fight in. Umpires, referees, and all were overwhelmed, and the whole thing became a mere close mob round the two men fighting. Four other rounds were fought in the midst of this dense mass of partisans. This, however, was unfair to Sayers, whose only chance now lay in avoiding the tremendous blows of his antagonist, against whom he contended with only one hand, and who, though now as blind as a bat, was still possessed of nearly all his immense strength, and, to a little man like Sayers, very nearly as formidable as ever. In these rounds sometimes Sayers got awful blows upon the head and body, and sometimes he managed to give in return his tremendous lunges full in the disfigured face of his antagonist. At one time caps were thrown up, and cheers given for Heenan as having won, when he knocked down Sayers, who would spring to his feet and give the American such staggering blows that he in turn was hailed as conqueror. At length the police forced their way to where they were fighting, in a space not much larger than an ordinary dining table, and the referee ordered them at once to discontinue. Heenan was now so blind that in the last round he could not see Sayers, but hit his second a tremendous blow in the face, which knocked him head over heels. Both men then left what had been the ring, Sayers, though much blown and distressed, walked firmly and coolly away, with both his eyes open and clear. His right arm, however, was helpless, his mouth and nose were dreadfully beaten, and the side of his head and forehead much punished. Heenan was almost unrecognisable as a human being, so dreadful had been his punishment about the face and neck. Yet he was still as strong on his legs, apparently, as ever, and, after leaving the field, ran as nimbly as any of the spectators and leaped over two small hedges. This, however, was a final effort, and he almost instantly after became so utterly blind that he was obliged to be led by the hand to the train. How the fight would have terminated but for the interference of the police it is impossible to say. At any moment Sayers might have got a blow which would have struck him almost senseless, while if Heenan could have closed with him the Champion's chance would have been, perhaps, a poor one. On the other hand, Sayers was carefully avoiding this, and Heenan's sight was so far gone that in two or three minutes more he would have lain at the mercy of a child, while his hand was so swollen that it could have inflicted little mischief on such a seasoned frame as that of Sayers. The only impression left is one of astonishment that Sayers, with one arm, should have so long contended, with success, with such a formidable antagonist, and that Heenan should have borne his terrific punishment without his strength or courage giving way.

The fight lasted two hours and 20 minutes, having commenced at 25 minutes past 7, and being concluded at a quarter to 10.

EPSOM SPRING MEETING.

Thursday.—*London Bridge Stakes.* Mr. Parr's Avalanche beat Weatherbound, Fravola, and 5 others.—*City and Suburban Handicap.* A dead heat between Sir H. des Voeux's Comforter and Lord Nelson, beating Apollyon, Tocher, and 32 others. Deciding heat won by Comforter by 20 lengths.—*Heathcote Plate.* Captain Christie's Brandy Ball beat Niger, Joyeuse, and 8 others.—*Two-year-old Stakes.* Mr. Merry's Folkestone beat Little Lady, Neighbour, and 12 others.—*Paddock Stakes.* Mr. T. Brown's The Norman beat Tomo, Sister to Electric, and 6 others.—*Inkermann Plate.* Captain Christie's Miss Julia beat Flimsy, Carlotta, and 7 others.

Friday.—(By Electric Telegraph.)—*Waterloo Plate.* Bel Esperanza beat Soothsayer, Ryton, and 8 others.—*Two-year-old Stakes.* Cantab beat Biddy Nutts and 13 others.—*Beaufort Stakes.* Mountebank beat Fawn, Gentle, and 7 others.—*Metropolitan Handicap.* Bribery beat Wallace, Clydesdale, and 13 others.—*Walton Stakes.* Promised Land beat Eskdale, Red Eagle, and 2 others.—*Welter Stakes.* Gorsehill beat Niger and Mazzini.

Obituary.

Lady Boston died on the 14th inst., at the family mansion in Berkeley Square, after a long illness. She was the eldest daughter of Mr. William Hopkins Northey, of Oving House, Bucks, and married the present Lord Boston in 1830.

Lieut-General Sir Henry E. Bunbury, Bart, K.C.B., died on the 13th inst., at Barton Hall, Suffolk, in his 82d year. He entered the army at a comparatively early age, served in Holland in 1799, and in the expedition to Naples and Calabria in 1805-6, being present at the battle of Maida, for which he received the gold medal. In 1814 he obtained the rank of Major-General, and in 1850 he was promoted to that of Lieut-General, when he retired from the army. In 1815 he was nominated a Knight Commander of the Bath, in recognition of his military services. From December 1809, up to April, 1816, he was Under Secretary of State for the War Department, and for some years represented Suffolk in the House of Commons. He succeeded to the family honours and estates on the death of his uncle, the 6th baronet, in 1821. He was twice married—first, in 1807, to the daughter of General the Hon. Henry Edward Fox, and secondly, in 1850, to the daughter of the late Colonel the Hon. George Napier. The eldest son of the general by his first marriage, Charles James Fox Bunbury, succeeds to the baronetcy.

Captain Leicester Vernon, M.P., died suddenly on Saturday at his residence, 51, Great Cumberland Street, Hyde Park. He left the Carlton Club in his carriage at about 4 o'clock in the afternoon in his usual health and spirits, accompanied by a friend. In driving up St. James's Street his horses became restive, when he got out of the carriage to ascertain the cause of the disturbance. In struggling with the horses he fell, but soon recovered himself, and directed that the horses and carriage should be taken to some livery stables in the neighbourhood, following them himself on foot. He then walked to the top of St. James's Street, and got into a cab, giving orders that he might be driven to his residence. At that time he complained of a slight pain in his chest, but still seemed to be in his usual spirits. On reaching the middle of Regent Street he made further complaints of being unwell, and upon his friend's suggesting that he should go to some medical man, he requested that he might rather be driven home. On reaching his house medical advice was immediately summoned, but before it could arrive he had expired. The cause of death is ascertained to have been internal hæmorrhage, produced by the rupture of a bloodvessel. Captain Vernon was one of the members for Berkshire, and was an active and able member of the House of Commons.

Vice-Admiral the Hon. Charles Orlando Bridgeman died on the 15th inst. at his residence, Knockin, near Oswestry. He was the second son of Orlando, first Earl of Bradford, by the Hon. Lucy Elizabeth Byng, eldest daughter of the fourth Viscount Torrington, and was born in 1791. He married in 1818 the eldest daughter of Sir Henry Chamberlain, Bart., by whom he leaves a family, being father of Lady Londesborough and Lady Corbet, wife of Sir Vincent Rowland Corbet. He entered the navy at an early age, attained the rank of rear-admiral in 1862, and that of retired vice-admiral in 1857.

Sir Thomas M'Mahon, Bart., G.C.B., Colonel of the 10th Foot died on the 16th inst. at his town residence in Great Cumberland Street, in his 81st year. He was a son of the late Mr. John M'Mahon, controller of the port of Limerick, his mother being one of the Stackpoole family, of the county of Cork. He was born in 1779, and entered the army towards the close of the last century. He saw active service in almost every quarter of the globe, and was Commander of the Forces at Bombay from 1839 to 1847. He was appointed to the colonelcy of the 10th Foot in 1847, became a K.C.B. in 1827, and a G.C.B. in 1856. He succeeded in 1817 to the baronetcy which had been conferred by the Prince Regent upon his brother, the late Right Hon. John M'Mahon, with a special remainder to himself. He married the daughter of Mr. Michael Robert Westropp, and had issue five daughters and four sons. His eldest son, Colonel Thomas Westropp M'Mahon, C.B., of the 5th Dragoon Guards, who served with distinction in the Sutlej campaigns, and afterwards in the Crimea, succeeds to the title and estates.

Major General Orlando Felix died on the 5th inst. at Geneva, from bronchitis. He served during the campaign of 1815, and was wounded at Quatre Bras. He entered the army as ensign in 1810, and attained the rank of major general in 1857.

Mr. Fulwar Craven, a gentleman long known in the sporting world, died on the 17th inst. at Brickhampton Park, his seat in Gloucestershire, in his 78th year. He was the elder of the two sons of the late Rev. John Craven, of Chilton House, Wilts, and represented a younger branch of the family of the Earl of Craven. He was a magistrate and deputy-lieutenant for Wilts and Berks, and a magistrate for Wilts, Berks, and Gloucester. He married in 1809 the daughter of the late George Vansittart, Esq., of Bisham Abbey, Berks, by whom he has left issue. His eldest son, George Fulwar Craven, Esq., inherits his large estates in Gloucestershire, Wiltshire, and Berkshire.

Mr. John Finlaison, the late Actuary of the National Debt and President of the Institute of Actuaries, died on the 18th inst. at his residence at Notting Hill, in his 77th year, nearly 50 of which were spent in the Government service. He was a distinguished calculator and mathematician, and enjoyed a European celebrity in the particular branch of science with which he was connected. For many years he had been engaged in an elaborate work upon the chronology of Scripture, and had completed it, we believe, for publication, a short time previous to his death.

Wills.—The will of Lady Cowley has been sworn under 12,000*l.* personalty; that of Sir W. H. Watson, Baron of the Court of Exchequer, 500*l.*

Births.—On the 15th inst, at 57, Portland Place, the Lady Petre, of a daughter—15th inst, at Corrig Avenue, Kingstown, the Hon. Mrs Somerset Ward, of a daughter—14th inst, at Longhnevale, the wife of Major General Gough, C.B., of a son—17th inst, at 7, Cleveland Terrace, Hyde Park, the wife of Colonel Langley, of a son.

Marriages.—On the 17th inst, at St. Mathias' Church, Richmond, Surrey, Alexander Matheson, Esq., of Ardross, M.P., to Eleanor Irving, daughter of the late Spencer Perceval, of 21, Portman Square, London—12th inst, at St. Mary's Church, Bury St. Edmund's, Arthur William Blomfield, third surviving son of the late Bishop of London, to Caroline Harriet, third daughter of Charles Case Smith, Esq., of Bury St. Edmund's—12th inst, at Overton, Flintshire, Henry, son of the late Vice-Admiral Thomas Wolley, to Sophia, youngest daughter of the late Rev. Rowland Egerton Warburton, of Norley, Cheshire—11th inst, at the parish church of Chingford, Essex, the Hon. William Proby, second son of the Earl of Carysfort, to Charlotte Mary, eldest daughter of the Rev. R. B. Heathcote, of Chingford, Essex — 10th inst, at Whitchurch, in the county of Glamorgan, the Rev. J. C. Cyril Stacey, eldest son of the Rev. Thomas Stacey, precentor of Landaff, and rector of Gelligaer, to Mary, only surviving daughter of the late T. W. Booker Blakemore, of Velindra, Esq., M.P. for the county of Hereford—10th inst, at Dunfermline, Dr. R. Beveridge, Lecturer on Botany in Marischal College and University, Aberdeen, to Isabel Smith, eldest daughter of John Whitelaw, Esq., Dunfermline—10th inst, at Plympton St. Mary Church, John, son of George Soltau, Esq., of Little Efford, in the county of Devon, to Florence, widow of Sir William Young, Bart., and daughter of Erving Clark, Esq., of Efford Manor, in the same county—16th inst, at Bremen, Dr. Reinhold Pauli, of Tübingen, to Marie Elizabeth, daughter of the late C. B. Ulrichs, Esq., of Bremen.

Deaths.—On the 14th inst, at Hoe Court, Malvern, Lady Mary Turner Hay—10th inst, at Dromoland, the Hon. Ellen Geraldine O'Brien, fourth daughter of the Right Hon. Lord Inchiquin, aged 16—12th inst, at his residence, Weston, Bath, Major-General John Home, H.M.'s Indian Army—30th ult, at London, Canada West, the Hon. Mrs. Maurice Portman—12th inst, Miss Frances Nicholas, daughter of the late Robert Nicholas, Esq., of Ashton Keynes, Wilts, and granddaughter of the late Admiral Sir Thomas Frankland, Bart., of Thirkleby Park, Yorkshire, aged 72—1st inst, at Eaton Banks, Tarporley, Cheshire, Mrs. Egerton, widow of Lieutenant-General Richard Egerton, C.B., Colonel 46th Regiment—16th inst, in Gloucester Place, Portman Square, Lieutenant-Colonel Gunning, formerly of H.M.'s 69th Regiment, aged 78—12th inst, at Athlone, Richard Temple, only child of the Hon. Richard Handcock, aged 4½ months—11th inst, at Sedbury Park, Gloucestershire, Sarah, wife of George Ormerod, D.C.L., of Tyldesley, and Sedbury Park, aged 75—2d inst, at Heane, in the county of Devon, Penelope, eldest daughter and co-heiress of the late Christopher Harris, of Heane, aged 88—14th inst, at 118, Western Road, Brighton, Olive Yates, widow of the late Thomas Yates, Esq., M.D., of Brighton, aged 73—12th inst, at Teignmouth, Mary Ann Wrangham Harris, only child of the late Dr. Harris, of New College, St. John's Wood, aged 17—11th inst, at Lawpark, St. Andrew's, the Rev. Dr. Buist, second minister of St. Andrew's, and Professor of Ecclesiastical History in the University of St. Andrew's—8th inst, at Tenterden, Maria Goodhew, second daughter of the late Rear Admiral Ricketts, of Knockholt, Sevenoaks.

Markets.

COVENT GARDEN.—April 21.

Vegetables continue to improve both in quality and quantity, and prices are becoming more moderate. Pine Apples have not altered since our last report. Grapes are a trifle cheaper. Good Apples and Pears are scarce. The former still consist of Golden Knob, Bess Pool, and Wyken Pippin, and the latter of Ne Plus Meuris, Beurré Rance, and Easter Beurré. Oranges are plentiful and cheap. Good Cobs realise 1s per lb., and Spanish Hazel Nuts for planting 16s. per bushel. Rhubarb is furnished in large quantities. Parsley is cheaper. Green Peas may be obtained. Potatoes realise 4s. 6d. a bushel. New frame ones may be had at from 3s. to 5s per pound. Mushrooms can still be obtained in small quantities. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, Geraniums, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Pears, per doz., 6s to 10s
Grapes, per lb., 12s to 20s	Oranges, per 100, 2s 6d to 8s
Strawberries, p.oz., 1s6d to 2s6d	Lemons, per 100, 5s to 8s
Apples, per doz., 2s to 6s	Cobs, do., 1s

VEGETABLES.

Asparagus, p. bundle, 6s to 10s	Cucumbers, each, 1s to 3s
Sea kale, per basket, 2s to 3s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 6d to 1s	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Peas, p. half sieve, 1s to 12s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d.

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, April 19.

Prime Meadow Hay	80s	to 90s	Clover	100s	to 115s
Superior do. (old) ..	92	100	New Clover	—	—
Inferior do.	60	70	Second cut do. ..	85	94
New do.	—	—	Straw	27	32
Rowen	70	75		Davis & Co.	

Cumberland Market, Thursday, April 19.

Sup. Meadow Hay ..	94s	to 100s	Interior Clover ..	84s	to 92s
Inferior do.	80	88	New do.	—	—
New do.	—	—	Straw	33	37
Superior Clover ..	100	110		Joshua Baker.	

Whitechapel, Thursday, April 19.

Fine old Hay	95s	to 100s	Fine old Clover ..	108s	to 112s
Inferior do.	80	90	Inferior do	95	100
Prime New Hay ..	—	—	Fine New Clover ..	—	—
Inferior do.	—	—	Fine 2d cut	92	98
Straw	28	32	Inferior do.	80	88

POTATOES.—Southwark, Monday, April 16.

During the past week the arrivals coastwise have not been large, but the trade continues very heavy, and last week's prices barely maintained. The following are this day's quotations:—York Regents, per ton, 90s. to 150s.; Lincolnshire do., 80s. to 100s.; Dunbar do., 100s. to 120s.; Perth, Forfar, and Fifeshire Regents, 80s. to 100s.; do. Rocks, 75s. to 85s.; do. Reds, 70s. to 85s.; Irish Whites, 70s. to 80s.; French Whites, 70s. to 80s.; Belgian do., 60s. to 70s.

BRITISH WOOLS.—LONDON, FRIDAY, April 20.

Our trade continues healthy and transactions moderate at former rates.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	8	to 1	9		Leicest. Wethers	1	5	—	—	
Half-bred ditto	1	8	—	—		Ditto Hoggs	1	7	—	—6	
Down Ewes	1	6	—	—		Combing Skins	1	2	to 1		
Kent Fleeces	1	6	— 1	6½		Blanket ditto	0	6	—	10	
						Flannel Wool	1	2	— 1	6	

COAL MARKET.—APRIL 19.

Howard's West Hartley, 16s.; Tanfield Moor Butes, 12s. 9d.; Wylam, 16s.; Walls End Acorn Close, 20s. 6d.; Walls End Eden, 20s. 6d.; Walls End Belmont, 19s.; Walls End Framwellgate, 20s. 3d.; Walls End Haswell, 21s. 6d.; Walls End Hetton, 21s. 6d.; Walls End Lambton, 21s. 3d.; Walls End Hartlepool, 21s.; Walls End Heugh Hall, 20s. 3d.; Walls End Hunwick, 16s.; Walls End Kelloe, 20s. 9d.; Carway and Duffryn Malting, 23s.—21 ships at market.

HOPS.—BOROUGH MARKET, FRIDAY, April 20.

Messrs. Pattenden & Smith report that the bine at present has made but little progress, and is unusually backward. This was the case at this time in 1840 after a similar wet winter, and the Hop duty only paid 34,000*l*. The market is firm at late prices, and but very few Hops are offering.

BUTTER MARKET.—April 20.

Best Fresh Butter . .. 15s. per dozen lbs.
Second do. do. .. .. 14s. ,, ,,
Pork, 4s. 4d. to 5s. 0d. per 8 lbs.

METROPOLITAN CATTLE MARKET

MONDAY, April 16.

The supply of Beasts is considerably larger than on Monday last, yet the demand is active, and late prices are well supported. Sheep are also more plentiful; trade for them is slow, and prices on the average are scarcely as good as on Thursday. Good Calves and Lambs are selling about as of late. From Germany and Holland there are 160 Beasts, 1200 Sheep, and 100 Calves; from Scotland, 80 Beasts; from Norfolk and Suffolk, 2700; and 100 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	10	to 5	0	Best Long-wools.	5	4	to 5	8
Best Short-horns	4	8	— 4	10	Do. Shorn	4	8	— 5	0
2d quality Beasts	3	4	— 4	4	Ewes & 2d quality	4	10	— 5	2
Best Downs and Half-breds	5	8	to 6	0	Do. Shorn	4	0	— 4	4
Do. Shorn	5	0	— 5	2	Lambs	6	4	— 7	8
					Calves	5	0	— 5	8
					Pigs	4	0	— 5	0

Beasts, 4240; Sheep & Lambs, 23,610; Calves, 126; Pigs, 320.

THURSDAY, April 20.

We have a short supply of Beasts, and consequently trade is active at fully late rates. There are a few more Sheep and Lambs, and trade is slow. Prices are on the average rather lower. Calves and Lambs are not so much in demand, and are sold at rather lower rates. Our foreign supply consists of 20 Beasts, and 280 Sheep, and 140 Calves; and 120 Milch Cows.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	10	to 5	0	Best Long-wools	5	4	to 5	8
Best Short-horns	4	8	— 4	10	Do. Shorn	4	8	— 5	0
2d quality Beasts	3	4	— 4	4	Ewes & 2d quality	5	0	— 5	4
Best Downs and Half-breds	5	8	— 6	0	Do. Shorn	4	0	— 4	6
Do. Shorn	5	0	— 5	2	Lambs	6	4	— 7	4
					Calves	5	0	— 5	6
					Pigs	4	0	— 5	0

Beasts, 810; Sheep & Lambs, 6410; Calves, 240; Pigs, 160.

MARK LANE.—MONDAY, April 16.

The supply of English Wheat to this morning's market was moderate, and must be written 2s. per qr. dearer than on this day se'nnight. The demand for foreign was less active than on Friday; the prices realised were 2s. per qr. above those of Monday last in most instances. Barley is a free sale at the extreme prices of this day week. Beans and Peas bring fully late rates. Oats are in good demand at an advance of fully 6d. per qr. The top price of town-made Flour is raised 3s. per sack, and country marks are 2s. per sack dearer.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	48	54	Red	48	50
— — fine selected runs..ditto	50	57	Red	50	54
— — Talavera	50	60			
— Norfolk	—		Red	—	
— Foreign	44	60			
BARLEY, grind. & dist., 24s to 31s..Chev.	38	45	Malting.	36	41
— Foreign..grinding and distilling	30	34	Malting.	35	43
OATS, Essex and Suffolk	19	24			
— Scotch and Lincolnshire..Potato	23	29	Feed ..	19	26
— Irish .....Potato	24	28	Feed ..	19	24
— Foreign.....Poland and Brew	24	26	Feed ..	20	25
RYE	35	38	Foreign.	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....30s to 40s....Tick	33	43	Harrow.	33	43
— Pigeon .....36s — 47s..Winds.	48	54	Longpod	—	
— Foreign .....Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	36	38	Suffolk .	36	40
— Maple .... —s to —s ..... Grey	31	33	Foreign.	30	37
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	40	46			
— 2d do..... ditto	32	40	Country.	32	40
— Foreign .....per barrel	24	30	Per sack	30	37

FRIDAY, April 20.

The weather has undergone but little change since the 13th, and continues to be unsettled, with occasional frost, snow, and hail showers. The Wheat trade this week has lost some of the excitement which existed during the previous eight days; nevertheless, a moderate business has been transacted at an improvement generally of about 2s. per qr. for the above period. The value of spring corn has continued to tend upwards, and Oats in the majority of markets are quoted 6d. to 1s. per qr. higher, Flour 6d. per barrel and 1s. to 2s. per sack, the top price of which was raised here 3s. per sack on Monday. The advance in the value of Wheat in the Baltic ports has been such as almost to put a stop to purchases there at present, and the business transacted in f. o. b. sales this week has consequently been limited. Oats continue to be in good demand, and a fair extent of business has been transacted at advanced prices for immediate and future shipment. The supplies from the South of Europe this week are very trifling, as was consequently also the sale in arrived cargoes, which was confined to 1 of Marianopoli Wheat at 55s. per 492 lbs.; 1 of Odessa Maize at 39s. per qr. imp.; 1 of Lagos Barley at 28s. 3d. per 400 lbs. The supply of English grain this week has been small, of foreign Oats moderate, and large of foreign Wheat and Barley. The attendance at to-day's market was small. English Wheat (of which there was scarcely any on sale) must be written the same as on Monday. Foreign was without inquiry, and its value nominally as last quoted. Barley, Beans, and Peas are unaltered in value. For Oats there is a good demand at the extreme prices of Monday.

ARRIVALS FROM April 16 TO April 19.

	Wheat.	Barley.	Oats.	Flour.
English ..	1880 qrs.	1560 qrs.	50 qrs.	1750 sks.
Irish	— ,,	— ,,	— ,,	— ,,
Foreign ..	2290 ,,	9820 ,,	24610 ,,	310 ,, and — brls.

LIVERPOOL, Tuesday, April 17.—We had a fair attendance of both millers and dealers at our Corn Exchange this morning, and Wheat met a moderate consumptive demand at an improvement of 1d. per cental. Flour had a good sale, and the advance established up to yesterday was well supported. Indian Corn is held firmly at Friday's prices, but buyers act cautiously. Oats and Oatmeal steady at extreme rates. Beans are 6d. per quarter dearer. Peas and Barley bring fully former prices. The market on the whole may be described as quiet, but very steady.

FRIDAY, April 20.—Grain market very firm. There was a good business in Wheat at 1d. advance since Tuesday. Flour realising extreme rates. Indian Corn in fair inquiry at 37s. 3d. to 37s. 6d. for Galatz, and 36s. for Ibraila Egyptians. Beans, 37s. Oats, Oatmeal, and Barley firm at full prices.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Mar. 10..	45s 0d	36s 3d	22s 9d	30s 5d	39s 6d	37s 3d
— 17..	45 2	36 5	23 1	34 10	39 7	37 7
— 24..	45 6	36 11	23 4	32 0	39 3	37 7
— 31..	46 5	37 2	24 1	36 9	39 11	38 7
April. 7..	47 9	36 4	23 7	31 8	40 2	38 3
— 14..	49 1	37 2	24 2	36 10	39 9	38 3
Agg. Aver.	46 6	36 9	23 6	33 9	39 8	37 11

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Mar. 10.	Mar. 17.	Mar. 24.	Mar. 31.	April 7.	Apr. 14.
49s 1d						
47 9	..	..	..	..	..	..
46 5	..	..	..	..	..	..
45 6	..	..	..	..	..	..
45 2	..	..	..	..	..	..
45 0 —	..	..	..	..	..	..

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

WANTED, A GERANIUM GROWER AND PROPAGATOR in a London Nursery.—Apply by letter, stating the situations previously held as such, to W. N., *Gardeners' Chronicle* Office, W.C.

WANTED, A GARDENER (Single).—He must understand Flower and Kitchen Gardens, and take charge of a Pony and three Cows. Must be well recommended.—Address Rev. L. BAGOT, Leigh Rectory, Cheadle, Staffordshire.

TO GARDENERS.

WANTED, a middle aged married Man (without incumbrance), as single handed GARDENER, and to take charge of a Furnished House a portion of the year.—Apply to Messrs. SIMSON and GROOMBRIDGE, Booksellers and Stationers, Hertford, Herts.

TO SHOPMEN.

WANTED, by the Advertiser, a person who is thoroughly acquainted with every department of the Seed Trade to Take Charge of an extensive Wholesale and Retail SEED BUSINESS in a large town in one of the western counties. A liberal salary will be given.—Applicants are requested to address their communications in the first instance to A. B., care of Messrs. Wrench & Sons, 39, King William Street, London, E.C.

WANTED.—The present UNDER GARDENER AND SHEPHERD at the Island of Ascension, having been invalided, a successor is required to fill the vacancy. The terms of agreement are as follows, viz.:—Period of service: one year certain, and further at the option of either of the contracting parties. Rate of pay, &c., 55*l*. per annum with rations. A passage out and home with rations—an intermediate mess to be provided, and a reasonable proportion of such mess expenses to be paid by Government. An advance of pay will be granted, if wished, upon application being made by the party who may be selected.—Apply by letter only, enclosing testimonials, post paid, to Professor LINDLEY, 41, Wellington Street, W.C.

WANTED, A COW AND STOCKMAN, married or single, able to take charge under a Bailiff of a number of Cows, &c. Wages, 16s. per week and a house.—G. G., Mr. Donaldson, 12, Curzon Street, May Fair, W.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 34; thoroughly practical in Early Forcing, all kinds of Fruit, Flowers, and Vegetables. Five years' character from the nobleman he is about to leave.—C. G., Post Office, Thames Ditton, Surrey.

GARDENER (HEAD).—Age 32, no incumbrance; has a thorough practical knowledge of Pines, Vines, Melons, and Cucumbers, Flower and Kitchen Gardens.—T. K., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD).—Age 33, married, no incumbrance; has a good practical knowledge of his profession in its various branches, and can have six years' most excellent character.—A. B., Post Office, Hornchurch, Essex.

GARDENER (HEAD).—Age 30, single; thoroughly understands his profession. Character unexceptionable. No single-handed place accepted.—A. B., Mr. Jackson's Nursery, Kingston, Surrey.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; thoroughly understands his profession in all its branches; the management of Meadow Land and Stock. Left on account of his employer, with whom he lived six years, giving up his country residence.—J. C., 45, New Street, St. John's Wood, N.W.

GARDENER (HEAD).—Age 27, single; understands the Early and Late Forcing of Vines, Peaches, Melons, &c., and the management of Flower and Kitchen Gardens. Can have an excellent character.—X. Y. Z., Post Office, Hoddesdon, Herts.

GARDENER (HEAD).—Age 34, married; is a thorough practical grower of Stove and Greenhouse Plants, Orchids, Ferns, &c.; understands Early and Late Forcing of Flowers, Fruits, and Vegetables.—T. B., The Gardens, Fern House, Upper Clapton, N.E.

GARDENER (HEAD).—Age 28; has a thorough practical knowledge of his profession, including Early and Late Forcing; also Stove and Greenhouse Plants. Two years' good character. No single-handed place accepted.—A. Z., 2, Napier Road, Addison Road, Kensington, W.

GARDENER (HEAD).—Age 40, married; possesses a practical and scientific knowledge of his profession in all its departments, including Pines, Grapes, Peaches, Figs, Strawberries, Melons, Cucumbers, &c.; and is one of the best of Plant growers. He has also a good knowledge of Scotch Farming, Hedging, Draining, applying manures, and Improving Waste Lands.—J. D., Messrs. L., Pince, & Co.'s Nursery, Exeter, Devon.

GARDENER (HEAD).—Age 40, no incumbrance; thoroughly competent in every branch, including Forcing Fruit and Flowers, Laying Out and Managing Grounds, and the general routine of Kitchen and Flower Gardens and Pleasure Grounds. References and testimonials.—D. M., 19, Princes Terrace, Haverstock Hill, N.W.

GARDENER (HEAD).—Age 35, married, no incumbrance; understands his profession in all its branches, also the Management and Improvement of Land, Stock, Woods, and Plantations. Wife could take the care of Dairy, Poultry, and Baking if required. Good characters for capability, sobriety, and industry.—A. B., Mr. Glass, Offwell, near Honiton, Devon.

GARDENER (HEAD).—Age 31; lived as Second Gardener with some of the leading noblemen and gentlemen in Scotland and England; 14 years' practical knowledge of Flower and Kitchen Gardens, the Growing of Pines, Vines, Peaches, Melons, Cucumbers, &c., Orchids, Ferns, and all kinds of Plants for showing, Formation of Vine and other Fruit Tree Borders, on the most improved principle. Character from present and former employers unexceptionable.—A. B., J. & C. Lee, Nurserymen, Hammersmith, W.

GARDENER (HEAD) or GARDENER AND BAILIFF, in or out of the house.—Thoroughly understands his profession, Management of Land and Stock. Highly recommended.—L. L., Post Office, Battersea Rise, S.W.

GARDENER.—Age 28, single; understands his profession. Eight years' good references.—W. W., 9, Brecknock Place, Camden Town, London, N.W.

GARDENER, in a gentleman's garden.—Age 18; active. A small Premium would be given.—J. C., Evedon, Sleaford, Lincolnshire.

GARDENER (SINGLE-HANDED).—Age 22, single; understands Flower and Kitchen Gardens. Best references can be given.—J. S., Post Office, Chiselhurst, Kent, S.E.

GARDENER.—Age 34, married, without incumbrance; thoroughly practical; understands the cultivation of Land and Rearing and Breeding of Stock. Wife could take charge of Dairy and Poultry. Unexceptionable character.—W. H., Mr. Jones, Scouls Farm, near Coleford, Gloucestershire.

GARDENER.—Age 45, married; no objection to drive a horse and brougham. Thoroughly understands each business in all its branches. Eight years' good character, and willing to make himself useful.—J. H., 23, Somerstown, Reading, Berks.

GARDENER (FOREMAN).—Age 24; has had considerable experience in all kinds of Forcing, Kitchen and Flower Gardening. Good Plantsman. Has been under a good gardener. Can be recommended by a six years' good character.—X. Y. Z., Post Office, Upper Clapton, N.E.

GARDENER (UNDER or FOREMAN).—Age 24, single; has had good experience in Plant Growing, Forcing, &c, in first-class establishments. Two years' character from last place.—E. H., Bollington's, Bookseller, 3, High Street St. John's Wood, N.W.

GARDENER (UNDER).—Age 19; wishes to improve himself under a Head Gardener. No objection to take charge of Cows, Pigs, and Poultry.—A. B., 1, Crayford Place, Coldharbour Lane, Camberwell, S.

GARDENER (UNDER).—Age 21. Four years' good character.—D. C., Mr. W. Kent's, Burlington Road, Fulham, Middlesex, S.W.

GARDENER, OR GARDENER AND BAILIFF.—Age 45, married; has a thorough practical knowledge of the various branches of his profession in the Garden and on the Farm, the management of Woods, &c.—R. W., Post Office, Muswell Hill, Hornsey, Middlesex, N.

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SATURDAY, APRIL 28, 1860.

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CONTENTS:

I. LABOURERS' COTTAGES.
II. BRITISH & CONTINENTAL NOBILITY
III. MADAME RECAMIER.
IV. THE BAR OF PHILADELPHIA.
V. *NOTES ON NURSING.*
VI. FOX HUNTING.
VII. *RECOLLECTIONS OF C. R. LESLIE, R.A.*
VIII. THE BUDGET AND THE REFORM BILL.

JOHN MURRAY, Albemarle Street, W.

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News of the Week.

IN the House of Lords on Monday the Marquis of NORMANBY moved a resolution to the effect that the absence from the papers laid before Parliament of the private correspondence which had taken place between HER MAJESTY'S Ambassador at Paris and the Secretary of State for Foreign Affairs on the annexation of Savoy was injurious to the public service, and that the practice of corresponding privately on diplomatic affairs was calculated to withhold important matters from the full and free control of Parliament. Earl COWLEY, who had obtained leave of absence from Paris for the purpose of being present at the debate, stated that the correspondence in question related to unofficial conversations which took place between Count WALEWSKI and himself in the summer and autumn of last year, and that it was not until the 10th of February last that he received from the French Government any official communication of their intention to annex Savoy. This communication was at once forwarded to the Home Government, which had not withheld any important information on the subject. Earl GRANVILLE moved the previous question, which after a short discussion was agreed to. On Tuesday the Law and Equity Bill was read a second time and referred to a Select Committee. On Thursday the Union of Benefices Bill was read a second time, and the Divorce Court Bill passed through committee.

In the House of Commons, on Friday, Lord J. RUSSELL announced that the Government would oppose the motion of which Mr. MASSEY had given notice for referring the Reform Bill to a select committee. Mr. LOCKE KING'S motion for an Address to the Queen praying for a revision of the Proclamation for the encouragement of piety and the prevention of vice, was carried, on a division, by 112 to 75. On the motion for going into committee on the Paper Duty Repeal Bill, Mr. BOVILL moved as an amendment that a drawback should be allowed to printers and publishers of the duty upon their stock purchased and printed after the passing of the Bill. The

Mr. Newdegate opposed the Bill. Sir G. Pechell, Mr. H. Berkeley, Mr. Thompson, and Mr. Bowyer supported it, the latter giving

Mr. Lindsay moved by Mr. Lindsay for extending the inquiry as to the best mode of levying the Metropolitan assessment on the Bill for the second reading of the London Corporation Bill. Mr. Lindsay opposed the Bill, and proposed that no action with reference to it be adopted by a select committee with instructions to consider and report upon the propriety and means of the Corporation undertaking the construction of a system of local sewerage, and the expediency of establishing the metropolis a county of itself for all purposes of local management, and for the administration of justice. After some discussion Mr. T. Duncombe moved the adjournment of the debate. After some further discussion the debate was adjourned.

Home News.

The Court.—The Queen, Prince Consort, and the Princess Alice, accompanied by the Princess Alice and Prince Arthur, took a drive in carriages and four. The Prince Consort, with the Prince of Wales and Prince Alfred, were on horseback in the evening. Her Majesty and the Royal family attended Divine service in the private chapel of Buckingham Palace. The Dean of Windsor officiated. On Monday the Queen held a Court, at which Lt.-Commander Forgues, the Minister of Marine, and Count de Flahault, the French Ambassador, had an audience of her Majesty. Prince Arthur left Windsor for Ireland on Tuesday morning, to join his regiment, the 7th Hussars, now quartered at Dublin. The Prince Imperial has left Paris for Biarritz, where he will be joined by the Empress Eugenie. The Prince Imperial is to be accompanied by Admiral Count Reille, Aide-de-Camp to the Emperor, and Colonel Count Piennes, Equerry to the Empress. The Prince Imperial will be absent from Paris about a month. The Queen and Prince Consort, accompanied by the Princess Alice, Princess Alfred, Arthur, Leopold, the Princesses Alice, Helena, and Louisa, attended Divine service in the private chapel of Buckingham Palace. The Dean of Windsor officiated. On Monday the Queen held a Court, at which Lt.-Commander Forgues, the Minister of Marine, and Count de Flahault, the French Ambassador, had an audience of her Majesty. The Duke de Montpensier visited the Prince Consort on Tuesday

tory or exciting the peoples by the idea of nationality; and lastly, of aiming at the re-establishment of natural boundaries. Baron Mandcrström distinctly makes a reservation against principles, the application of which would only be justified by exceptional circumstances. In conclusion he particularly supports the claims of Switzerland, which are founded on existing treaties, and pronounces himself in favour of the neutralisation of the districts of Chablais and Faucigny.

Prussia.—A great debate took place in the Prussian Chamber of Deputies on the 20th and 21st inst. on a motion by M. de Vincke approving the course adopted by the Prussian Government on the question of the constitution of Hesse. The interest taken in the debate was very great. Long before the doors were opened every approach was thronged by persons eager to get in. Prince Frederick William was present on both days, and the gallery set apart for the diplomatic corps was quite full; the English ambassador being among those present. The first division taken was on an amendment moved by M. de Reichensperger, to the effect that as in the actual political state of Europe the safety of the common country depends upon the union of all German States, the Chamber expresses its confidence that the Government will effect a reconciliation on the subject of the difference caused by the constitutional question of Hesse. This amendment was rejected by a large majority. The resolution proposed by the Committee on M. de Vincke's motion, implying confidence in the Government in its conduct on the question of Hesse, and expressing the hope that it would continue firm in adhering to it, was then carried by 207 votes to 68. The result of the vote was received with loud cheers. As the vote implied a vote of confidence in the Government, the Ministers abstained from voting.

Austria.—A despatch from Vienna on Tuesday announced that Baron Bruck, the Austrian Minister of Finance, had been attacked by congestion of the brain on the previous day and died in the course of the afternoon. It now appears that he had been dismissed for complicity in the system of frauds which seems to have extended over the whole Empire, and that he has expiated his offence by cutting his throat, after having, it is suspected, swallowed poison. When the body was judicially examined on Wednesday a cut, which extended from the jugular vein to the fore part of the throat, was found, and wounds had also been inflicted on the inner part of both wrists. The contents of the stomach are now undergoing analysis by sworn medical authorities.—The reply of Austria to the note of Switzerland, while drawing a distinction between the annexation of Central Italy to Sardinia and that of Savoy and Nice to France, expresses a hope that France will entirely fulfil the assurances by which she engaged herself not to violate in the neutralised districts of Savoy any rights formerly acquired by others. Austria further trusts that France will settle all questions which might come under consideration with Switzerland and with the Great Powers who have guaranteed her neutrality.

Hungary.—It is stated that General Benedek, the new Governor of Hungary, is commissioned to regulate the municipal laws, to reorganise the comitats on the basis of the old institutions, to submit his propositions for a central Diet in Hungary, and to unite the five administrative sections into one single administration at Buda. The Emperor has resolved to abolish the five great subdivisions of Hungary, which have existed since 1848, and to re-establish the comitats, which will be called upon to make propositions destined to bring about the assembling of a Diet, composed according to ancient custom. Orders have been given to settle immediately the question of the communes. The appointment of General Benedek is said to be very popular in Hungary, and the Imperial decrees will, it is hoped, be well received by the Hungarians. It appears certain that the Emperor Francis Joseph will be crowned King of Hungary.

Russia.—Advices from St. Petersburg state that Russia has ordered her diplomatic agents to quit Pekin during the approaching hostilities. The reason given is that she desires to avoid being accused either by England or France of aiding or counselling the Chinese. A large Crystal Palace, on the model of that of London, is about to be built opposite the Alexander Palace, at St. Petersburg, by the Horticultural Society, and arranged for a permanent exhibition of plants and flowers.

Italy.—Accounts from Turin state that the King of Sardinia, following the friendly advice of France, has for the moment abandoned the idea of taking the title of "King of Italy." The Court of the Tuileries represented that such a change of title would only complicate the existing international difficulties without giving any practical advantage to Piedmont. The King visited Leghorn on Monday, Pistoja and Lucca on Tuesday, Siena on Wednesday, and Arezzo on Thursday. Count Cavour returned to Turin on Monday.—Accounts from Rome state that the Pope has appointed Monsignor Count Merode, of Belgium, Minister of War, which ministry was provisionally directed by Cardinal Antonelli. The New Four and a Half per Cent. Roman Loan for 50,000,000f. has been contracted in Belgium at 90. The official *Giornale di Roma* announces the appointment of a commission for receiving voluntary contributions to be applied for the defence of the country. This commission consists of Cardinals Villecourt, Wiseman, and Reisach, under the presidency of the Minister of Finance. General Lamoricière, after having rapidly taken the necessary measures for the organisation of the Papal forces, left Rome on the 19th inst. for Ancona and the provinces, where he will reside for some time.—Letters from Venice inform us that during the night of April 16, Mr. G. P. R. James, the well-known novelist, had an attack of paralysis in that city, where he is Consul-General.—From Naples we learn that a letter dated April 3 has been addressed by the Count of Syracuse to his nephew, the King of Naples, relative to the policy to be followed under existing circumstances. This letter states that the realisation of the principle of Italian nationality is inevitable, Piedmont having invited and developed that idea; that France and England are endeavouring to obtain influence in the Peninsula, that Austria has lost her preponderance, and that an alliance with France is impossible. The Count therefore argues that the present policy of the King of Naples is very dangerous, and advises his Majesty to grant a constitution to his people, and to conclude an alliance with Piedmont. The report of a popular movement in Calabria had been denied. A grand military review had taken place at Naples, after which banquets were given to the generals and officers. The troops enthusiastically cheered the King, who afterwards traversed the streets of the capital at their head.

Sicily.—The affairs of Sicily continue to occupy the Government. General Salzano has demanded reinforcements in order to operate against the insurgents, who are still fighting in guerilla bands. A flying column of troops which had left Palermo was obliged to fall back upon the town of Termini, having met with insurgents in strong positions. Thirteen individuals have been shot at Palermo. From Messina the emigration of the inhabitants is considerable. During the insurrection the citadel was obliged to cannonade four large Calabrian barques which attempted to pillage.

Turkey.—The house which was pillaged and demolished by the Greek inhabitants during the Catholic procession of Easter week belonged to the widow of a French merchant named Dumas. The Greek consul and the archbishop, cross in hand, attempted in vain to arrest the fury of the people. The troops arrived too late. The widow and her daughters escaped by a ladder. The French Embassy is about to institute an inquiry. The Duke of Brabant has given a *fête* to the diplomatic corps. A review of the troops and manœuvres of the fleet will take place in his honour. The Duke is about to visit Borussia, whence he will return to take leave of the Sultan. It is rumoured that the Porte will deprive Prince Milosch of his dignity.

Egypt.—The Viceroy of Egypt has been attacked by vomiting of blood, and is in a dangerous state.

India.—Despatches have been received with news from Calcutta to the 23d; Canton, 14th; and Shanghai, 8th March. The following are the details:—

Simla.—Lord Canning has held his last durbar, and intended, after a short rest at Simla, to return to Calcutta, where he will be joined by Lord Clyde.

Cabul.—Disturbances are reported to have broken out in Cabul among the wild tribes, who, enraged at the stoppage of their black mail by the order of Dost Mahomed, had closed the passes against him, and so prevented his attendance at the Viceroy's durbar at Peshawur.

Bombay.—Sir Henry Somerset left India on the 27th ult., after a five years' command of the Bombay army. Sir Hugh Rose has assumed the command as a temporary measure.

Poona.—The trial of Mr. James Hunt, late Sergeant-Major of the 14th Light Dragoons, for "shooting with intent to kill" Cornet Sandys Browne, of the same regiment, for the seduction of his wife, has resulted in a verdict of "Guilty of shooting with intent to do grievous bodily harm," accompanied with a very strong recommendation to mercy. The Court stated its full concurrence with the jury, and sentenced Mr. Hunt to one year's imprisonment, and a week's solitary confinement every three months of the period.

China.—Sir Hope Grant and his staff have arrived at Hong Kong. It is rumoured that the four vessels which proceeded to Pecheli River carried an *ultimatum* to the Chinese Government, and that two of them, the frigates Dove and Algerine, have been sunk by the guns of the forts on the Peiho River. The Sampson, which accompanied them, has returned to Hong Kong, the bearer of important despatches. The Chinese are making great preparations for the defence of the country, and are endeavouring to enlist European artillerymen. The rebel disturbances are increasing throughout China.

Japan.—A despatch has arrived at the Dutch Consulate confirming the precarious situation of foreigners in Japan. The foreign community are living in great apprehension, two Dutch captains having been murdered in the streets of Hakodadi without giving any offence to the Japanese.

Ceylon.—The *Colombo Observer* states that Mr. Wilson's Indian budget, with the single exception of his refusal to extend an imperial guarantee, has given general satisfaction in Ceylon, and that the development of his paper currency scheme was looked for with much anxiety. If, it says, he makes gold a legal tender, the benefit to Australia and to Ceylon will be immense. India grown tea and coffee will henceforth have the advantage over Ceylon coffee, of being exported duty free, which will be a bonus of 3 per cent. to the coffee planters of Wynaad.

Cape of Good Hope.—Great excitement prevailed at the Cape in consequence of the landing of 30 men from Western Australia, who had received a conditional pardon, and a determination was expressed to pass an act excluding such persons. Plans had been invited for new Houses of Parliament, the estimated cost of which was 50,000*l*. The Maine liquor law had been applied in the Paarl district. A letter had been received from Mr. John Moffatt, stating that the mission to the Zambesi territory met with great difficulties. No news had been received from Dr. Livingstone.

United States.—Accounts from New York to the 10th inst. state that the Senate had instructed the Committee on Foreign Affairs to inquire by what authority the United States' naval forces had captured the Mexican war steamers near Vera Cruz. Meanwhile the Government had decided to hold the steamers and allow the Federal courts at New Orleans to deal with them according to the law of nations and the evidence presented, recognising at the same time the interests of the naval commanders who were engaged in the capture. A Bill has been reported for the more effectual suppression of the slave trade. The House of Representatives had called on the President to give full information relative to the slave trade. The majority of the committee on the President's recent message, protesting against the action of the House in ordering an investigation into the conduct of the administration, had made a report dissenting from the President's views, and asserting the right of the House to make the contemplated investigation. The minority of the committee had also made a report sustaining the President's position. The negotiations relative to the San Juan question were making slow progress. A Japanese corvette had arrived at San Francisco, and the Powhattan, with the Japanese Ambassadors, was hourly expected. Mr. James K. Paulding, one of the oldest writers of the United States, died on the 4th inst. at New York in his 81st year.

Mexico.—Advices from Vera Cruz to April 1 state that the city was quiet, and that Miramon, having abandoned the siege, had left for the capital. The amount of damage by the bombardment of Vera Cruz was estimated at 5,000,000 dollars, but this was considered an exaggeration. The United States' steamer Indianola had captured a bark belonging to Miramon's expedition while under Spanish colours. A Mexican schooner had also been captured. The decree banishing the American residents and confiscating their property had been published at the capital.

Parliament.

HOUSE OF LORDS.

Monday.—*Diplomatic Correspondence.*—The Marquis of Normanby moved a resolution with reference to the annexation of Savoy and Nice, declaring the opinion of the House that while fully recognising the necessity of a private correspondence between the Secretary of State and her Majesty's representatives abroad, all facts of international importance ought to be made matter of official correspondence, and, as such, to remain on record for the use not only of the Government of the day but of their successors in office, to be produced to or withheld from Parliament by the Ministers of the Crown on their responsibility; and, that the absence of any such record, more especially if such private correspondence is referred to in public despatches, is injurious to the public service, unjust alike to the Foreign Minister who made the communication and to official colleagues at home, and calculated to withhold important matter from the full and free control of Parliament. He contended that the papers laid before Parliament showed that the French Minister had stated that the intention of the Emperor to take possession of Savoy, under certain contingencies, had been made known to her Majesty's Ambassador at Paris, and by him communicated to Lord John Russell, on more than one occasion between the 12th of July, 1859, and the 25th of January, 1860, in private letters. He disclaimed being influenced by any hostile feeling towards Ministers, but he charged Earl Granville with giving erroneous answers to questions which had from time to time been put to him on the subject of the motion.—Earl Cowley said that as the resolution related personally to himself, he had thought it necessary to obtain leave of absence from Paris in order to be present at the debate. He then described the diplomatic proceedings of the past year in reference to the Savoy question. In March, 1859, he first heard of the terms of the treaty under which the province of Savoy was agreed to be ceded by the King of Sardinia to the Emperor of the French. In July following, without waiting for instructions, he entered into communications with Count Walewski on the subject, and had been informed by him that discussions had taken place with regard to the cession of Savoy. On the 12th of that month he received instructions from the Foreign Office on the subject, and these he had implicitly followed. Subsequently, in August and November, Count Walewski privately expressed to him his conviction that the annexation of the Duchies of Central Italy to the kingdom of Sardinia would be followed by a demand for Savoy on the part of France. This expression of opinion he deemed it his duty to communicate to her Majesty's Government, but his own position justified him in not referring to such private conversations in public despatches. Indeed, at the time at which he was informed of such intended annexation, he entertained a very strong belief that Sardinia would never consent voluntarily to abandon the most ancient possession of her House. Upon returning to Paris after a short absence he found the cession of Savoy the subject of general conversation; he consequently felt it incumbent on him to ask an explanation from M. Thouvenel, from whom, however, he was unable to obtain precise information for some time, and it was not until the 16th of February last that the intention of the French Government to annex Savoy was officially notified to him. In then sending a despatch to the Foreign Office on the subject, he felt it would be singularly incomplete had he not referred to his private communication. In conclusion, the noble earl assured their lordships that no information had been withheld, and that in all his acts he had solely kept in view the interests of his country.—Earl Granville, finding an indisposition on the part of any noble lord to support the motion, felt that the proper course would be to move the previous question. He defended himself from the imputation of having given imperfect information in his Parliamentary replies, and suggested that Lord Normanby's sole object during the session had been to turn the present Government out of office.—The Earl of

MALMESBURY, whilst readily admitting that no blame attached to Lord Cowley, thought that Lord John Russell was open to censure for not having asked Lord Cowley to put the extracts from his private letters in an official form.—After some observations from Lord WODEHOUSE and the Marquis of NORMANBY, the previous question was agreed to

TUESDAY.—*Law and Equity Bill.*—The LORD CHANCELLOR moved the second reading of this Bill, stating that its object was to empower Courts of Common Law, when a question of equity should incidentally arise in cases tried before them, to decide the point without putting the suitors to the expense and trouble of going to a Court of Equity. He moved the second reading of the measure previously to its being referred to a select committee.—Lord ST. LEONARDS objected to the Bill, considering that it would deprive the Courts of Equity of functions which they very satisfactorily discharged, and transfer them to a body entirely incompetent to exercise them. —Lord CRANWORTH agreed with the main object of the Bill, trusted that it would be read a second time, and suggested that the clauses objected to should be altered in the select committee.—Lord KINGSDOWN said whether the measure was right or wrong it was one of the most important that had ever been introduced into their Lordships' House, as it sought entirely to subvert the system of law which had been so long in force throughout this country. Although he hoped that the Bill in its present state would not go down to the other House, he thought that what was called the fusion of law and equity might be brought about by other means.—Lord WENSLEYDALE said that, although he did not concur entirely with the Bill, he should not oppose the second reading.—Lord CHELMSFORD entirely agreed with the opposition with which the Bill had been encountered. He thought it would be better to reject the Bill altogether, in order to give the framer of it the opportunity of bringing forward a new measure, embodying only the clauses of the present Bill to which no objection had been made.—After a few remarks from the LORD CHANCELLOR in reply, the Bill was read a second time, and referred to a select committee. The *Marriages (England and Ireland) Bill* was read a second time.

THURSDAY.—*Union of Benefices Bill.*—The Bishop of LONDON, in moving the second reading of this Bill, said that its object was to provide that a wealthy parish with a small population should contribute to the necessities of its poorer neighbours. It proposed that churches in certain instances which were at present useless should be taken down altogether, in such a manner as to prevent any desecration in the removal of any building consecrated by the reminiscences of the past Many of the city churches, which had neither beauty nor antiquity to recommend them, might be removed into districts teeming with population with the greatest benefit. Before any church could be removed, however, it would be necessary to obtain the consent of the Secretary of State for the Home Department, the Archbishop of Canterbury, and the Bishop of the diocess. When any change was proposed to be made it was provided in the Bill that a commission should be previously issued, consisting of three clergymen and two laymen, the latter in the City of London to beappointed by the Corporation.—The Earl of CARNARVON was of opinion that measures of this nature ought not to be sanctioned by the Legislature without the most careful consideration. It seemed to him that the powers sought to be given by the Bill were too extensive.—The Bishop of OXFORD said he still entertained a strong objection to any measure which involved the sale of places of worship and consecrated graveyards. —Lord REDESDALE was in favour of restricting the operation of the Bill to the City proper, where there were many churches which might with advantage be removed.—After some discussion, in which Earl GRANVILLE, the Bishop of EXETER, and the Earl of DERBY took part, the Bill was read a second time. The *Divorce Court Bill* passed through committee.

FRIDAY.—*Ecclesiastical Commission.*—Viscount DUNGANNON presented a petition complaining that large portions of the revenues of the diocese of Durham had been abstracted by the Ecclesiastical Commissioners to the prejudice of the spiritual interests of the inhabitants —The Bishop of CARLISLE said that no injustice had been done to the Diocese of Durham, and that great good had been effected by the money withdrawn from it by the Ecclesiastical Commissioners.—Earl GREY said that the Ecclesiastical Commissioners had been withdrawing revenues which had only been made considerable by the exertions of the populations, who were thus deprived of the benefits they had earned.—Lord RAVENSWORTH entirely concurred with Earl Grey and pointed out the many hardships which had been occasioned by the conduct of the Ecclesiastical Commissioners.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Reform Bill.*—Lord J. RUSSELL said that it was the intention of the Government to resist Mr. Massey's motion to refer the Bill to a select committee, considering that it would be tantamount to a motion for adjournment for six months.—Mr. MILLER complained of the administration of the Police Act, whereby young children were imprisoned for *Playing in the Streets.*—Sir G. LEWIS replied that he had communicated with the Commissioners of Police, who had assured him that the regulations were not severe, and not put in force with greater strictness than formerly. Still it was necessary for the personal protection of foot passengers that the law should not remain a dead letter. *Examinations for Direct Commissions.*—In answer to Mr. C. WYNNE, Mr. S. HERBERT said that some of the examination papers had been stolen for the purpose of being communicated to the candidates for direct commissions in the Army, but their abstraction was not to be attributed to any want of vigilance on the part of the Council of Military Education, as t had been ascertained that they had been stolen from the printing-office of Messrs. Eyre and Spottiswoode. It was the intention of the War Office to pay the expenses of those candidates who, having returned to their homes, would be required to come up for another examination in London. *Navigation Laws of Spain.*—In answer to Mr. LYALL, Lord J. RUSSELL said that her Majesty's Government had represented to the Spanish Government the advantages which Spain would derive from the new commercial legislation of England, and that it was his intention to use every effort to induce Spain to adopt a more liberal course of policy.—Mr. MELLOR obtained leave to bring in a Bill to remove doubts as the eligibility of certain persons to be *Trustees of certain Charities.*—Mr. LOCKE KING moved an address to the Crown praying that the *Proclamation for the encouragement of Piety and the Prevention of Vice* should be revised or discontinued at assizes and quarter sessions, &c.—Mr. ESTCOURT objected to the latter part of the motion, and Mr. L KING having modified the motion so as to confine it to the revision of the proclamation, it was carried by 111 to 75.—The CHANCELLOR of the EXCHEQUER obtained leave to bring in a Bill to amend the law relating to the *Postage of Newspapers.* The *Duchy of Cornwall (Limitation of Actions) Bill* passed through committee. On the motion for going into committee on the *Paper Duty Repeal Bill*, Mr. BOVILL moved as an amendment that a drawback should be allowed to printers and publishers of the duty paid upon their stock of paper purchased and printed after the passing of the Bill, and remaining in sheets unbound at the time the duty is to cease.—Mr BLACK seconded the motion.—The CHANCELLOR of the EXCHEQUER said that out of the many claimants for drawbacks none were less entitled to drawbacks than the publishers, who placed a fixed price upon their books not affected by the change. The cases of the stationer and wine merchant, where the articles could be positively identified, were not analogous. It would be impossible to avoid fraud if the drawback was allowed, and therefore they could not take into consideration the possible contingency of the loss of employment by the working printers. The amendment being negatived without a division, the House went into committee on the Bill.—Mr. BLACKBURN moved that the abolition of the duty be postponed till the 31st March next.—The CHANCELLOR of the EXCHEQUER opposed the motion, which was not pressed to a division.—Mr. AYRTON moved to repeal the duty on paper-makers' licenses.—The CHANCELLOR of the EXCHEQUER resisted the proposition, on the ground that although the tax was but a small one, and would not produce more than 2000*l.* or 3000*l.* a year, it was a fair tax, and would not impede the manufacture of paper. On a division the amendment was negatived by 147 to 39. The remaining clauses were agreed to, and the Bill was reported to the House. The *Petitions of Right Bill* passed through committee.—In committee on the *Customs Bill*, Mr. HALIBURTON moved an amendment to exempt deals, battens, and boards from the operation of the new duty. He made an emphatic appeal in favour of the timber trade of the British North American colonies, and contended that if the proposed change was made without notice it would cause serious discontent among, and inflict deep injury upon, a people who had always been conspicuous for attachment to the Crown and institutions of the mother country.—The CHANCELLOR of the EXCHEQUER said that the interests of the timber trade of British North America, which was well aware of the tendency of all British legislation to remove differential duties, was, he believed, quite reconciled to the present proposal. On a division the motion was negatived by 91 to 24. Some of the clauses were then agreed o, and the House resumed.

MONDAY.—*The Reform Bill.* Mr. MASSEY, in answer to a question from Mr. Osborne, said that as Lord J. Russell had stated that he regarded the notice which he had given to refer the Reform Bill to a select committee as tantamount to moving its rejection, he had no alternative but to withdraw it —The *Adjourned Debate* on the second reading of the Bill was resumed by Mr. EDWIN JAMES, who characterised the measure as a "skeleton bill," prepared in a slovenly and careless manner, and totally unworthy of a great statesman. He objected to it because it did not recognise the principle of disfranchisement, because it made the payment of poor-rates a condition of the franchise, because it created no educational franchise, because it did not contain any amended system of registration, and because, in consequence of these defects, it could not be regarded as a final measure. The returns upon which it had been based were, he contended, utterly fallacious, because the Compounding Acts had been entirely overlooked. The result was that the increase in the number of electors in the metropolitan boroughs alone would be upwards of 109,000, instead of 13.000 as represented by Lord J. Russell. In his opinion the Bill of Lord Derby was a far better measure, because it proposed to disfranchise 19 boroughs and to give a lodger and education franchise. He did not believe that Parliament would undertake the responsibility of opposing the second reading of the Bill, but he hoped that when it arrived at committee it would be amended in such a manner as not to disappoint the just expectations of the people.—Mr. HARDY taunted Mr. James with the inconsistency of denouncing the Bill, and yet declining to move an amendment inviting the House to reject it. The support which Mr. Bright gave to the measure was a suspicious circumstance, and certainly gave the colour of truth to the rumour that he it was who was the guiding genius of the Cabinet He considered that the tendency of the Bill would be to swamp the small constituencies and to place property and intelligence at the feet of the masses. It was a miserable abortion, and the conduct of the majority who supported it was contemptible by its insincerity. —Sir G LEWIS defended the returns, which he said were prepared in strict conformity with the rate-books, the only data upon which the Government could proceed to legislate. The extension of political power to the working classes, which the present measure proposed, would give to the nation the strength of a united people As to the question of the disfranchisement of boroughs, he felt that the Act of 1832 had rendered unnecessary any further legislation in that direction. He could not understand how the same Bill could be called revolutionary on the one side, and insignificant on the other. From calculations which he had himself made, after a most careful consideration he did not estimate the addition to the borough constituency under the Bill at more than 160,000, and believed that it had been over-estimated by Lord J. Russell. The addition to the county constituency, all deductions being made, would not, he asserted, be more than 157,000. At the very utmost, the entire increase to the constituency would be under 400,000. The present session was especially fitted for a tranquil settlement of the subject without popular agitation, and he trusted that the House would set about it in earnest. —Lord R. MONTAGU deprecated the vesting of political power in a class of the community at once large and low. The Bill, he contended, was not required by the country, as the existing constituencies did not exercise their privilege.—Mr. H BERKELEY denied that the Bill, in the common acceptation of the term, could be called a Reform Bill. It was a forward measure, and as such he was, in consistency, compelled to support it. but he protested against its being considered a conclusive or a final measure. He took it as a homœopathic globule, calculated to do him neither good nor harm —Lord R. CECIL apprehended that the result of the present Bill would place the chief power in the hands of the poor and ignorant, to the injury of the wealthy and intelligent —Mr. MILNES expressed his willingness to vote for the Bill; but gave notice that in committee he would introduce a clause to establish an educational franchise. —Mr. PEACOCKE opposed the Bill, considering that if carried it would destroy the influence of the small boroughs, and ultimately lead to electoral divisions —After a few words from Mr THOMPSON in favour of the measure Mr. NEWDEGATE found fault with the Bill, because it made no adequate provision for increasing the county representation.—On the motion of Mr. BLACK the debate was adjourned until Thursday, Lord PALMERSTON expressing a hope that the House would on that evening come to a division.—Mr. DISRAELI objected to giving any pledge that the debate should terminate on Thursday The amendments in committee to the *Paper Duty Repeal Bill* were considered and agreed to. The report of *the Committee of Supply* was brought up and agreed to The *Bankruptcy and Insolvency Bill* was committed *pro formâ*, and the further progress postponed until Monday week. The *Registration of Births, &c., Scotland Bill* and the *Fisheries (Scotland) Bill* were read a second time.

TUESDAY.—*Foreshores* —Mr. A. SMITH moved for a select committee to inquire into the rights of the Crown as connected with the foreshores, tidal rivers, estuaries, and bed of the sea round the coasts of the United Kingdom, and the manner in which the Commissioners of Woods and Forests are dealing with the same.—The ATTORNEY GENERAL opposed the motion, on the ground that the House of Commons had no power to inquire into the rights of the Crown, which were in fact the rights of the public, and the foundation of all private rights. He contended moreover that the Commissioners of Woods and Forests were in the position of guardians of the public interest, and that in the execution of their administrative functions they had uniformly kept that object in view. After a brief discussion the motion was negatived by 134 to 117. *British Museum.*—Mr. GREGORY moved for a select committee to inquire how far and in what way it may be desirable to find increased space for the extension and arrangement of the various collections of the British Museum, and the best means of rendering them available for the promotion of science and art. He urged that although the trustees of the British Museum had, by a majority of one, decided to disperse the contents of the Museum, all the heads of the departments, all men of science and literature, and the public generally, had expressed a strong opinion against it. If the Government were to lend their authority to removing any portion of the collection they would incur much unpopularity, for the public were unanimously opposed to the tendency in certain quarters to bring everything to Brompton.—Sir G. LEWIS said he would not oppose the motion, but he was certainly of opinion that it would be expedient to remove a portion of the collection to some other part of the metropolis, although to what part he was not prepared to say. He believed this to be preferable to purchasing increased room in the immediate neighbourhood of the Museum.—After a few words from Mr. KINNAIRD in favour of the motion, Mr. TURNER entered into the details of the comparative cost of removing a portion of the collection from Bloomsbury to South Kensington, or enlarging the present building. His own impression was that by purchasing a row of houses on the south side of Montague Place, ample accommodation might be found for the heavier objects, while light and spacious galleries would afford room for the natural history collection.—Colonel SYKES gave his hearty concurrence to the motion, believing that the present site was the most central and convenient to the working classes.—Lord PALMERSTON said the question was one wholly of expense, a circumstance which accounted for the attendance, on a recent occasion, of so many trustees who were also members of the Government. If the present building could be adapted for the exhibition of the whole of the collection, then, unquestionably it would be better not to divide it. The trustees were, however, of opinion, after due deliberation, that the enlargement of the present museum would involve an additional expenditure of 200,000*l.* more than if the collections were separated.—Mr. JACKSON complained of the limited scale of salaries paid to the officers of the museum, which he described as a disgrace to the country. —The CHANCELLOR of the EXCHEQUER emphatically denied that the officers of the museum were under paid; on the contrary, he could show that, regard being had to the duties they had to perform, their remuneration was quite on a par with that of other public servants. The motion was then agreed to.—Colonel SMYTH obtained leave to bring in a bill to amend the law relating to the *Liability of Innkeepers*, and to prevent certain frauds upon them.—Mr. JACKSON moved that an humble address be presented to her Majesty, praying that she would be graciously pleased to issue a royal commission to inquire into the system of *Control and Management of her Majesty's Dockyards*, the purchase of materials and stores, the cost of building, preparing, altering, fitting, and refitting her Majesty's ships.—Mr. KINNAIRD seconded the motion.—Mr. CORRY hoped that the motion had not been brought forward with any desire to impugn the conduct of the committee of dockyard inquiry appointed by the late Government —Mr. BENTINCK approved of the motion, but feared that it would not go to the root of the evil, which was the constitution of the Board of Admiralty.—Mr. LINDSAY moved, as an addition to the motion, that the commissioners be instructed to inquire into the best mode of keeping the dockyard accounts —Lord C PAGET admitted that the inquiry, to be satisfactory, must be full and searching. He had therefore no objection to the addition proposed. The motion with the addition was then agreed to. The *Pawnbrokers' Act Amendment Bill* passed through committee.—On the order of the day for the second reading of the *London Corporation Bill*, Mr. AYRTON moved that it be referred to a select committee, with instruction to inquire into and report upon the charges and taxes on the metropolis, and the expediency of constituting the metropolis a county of itself for all purposes of local management, and for the administration of justice. He contended that the taxes levied by the corporation—the metage dues, the coal dues, and other impositions—were illegal, uncalled-for, and should no longer be tolerated, now that the relations between the City and the metropolis had undergone so complete a change. The corporation had altogether ceased to care for its constituents, and had become nothing but the miserable shadow of its former self. He proposed to substitute for the present corporation a really effective metropolitan municipality, consisting of aldermen and common councillors elected by the districts now represented at the Board of Works, and to improve the administration of justice by making the metropolis a county in itself, and by instituting a commission of the peace for the entire metropolis. —Mr. WILLIAMS said that of all the Bills which had been brought in to reform the Corporation of London this was undoubtedly the worst, as it did not propose to carry out a single recommendation of the Royal commission of which the Secretary for the Home Department, whose name was on the Bill, had been a member. He hoped the measure would be either withdrawn or rejected, for it was idle to suppose that it could reform anything, much less the Corporation of London.—Sir G. LEWIS said that the Bill had been framed in deference to the report of a select committee of the House of Commons, and not in accordance with the recommendations of the Royal commission. He admitted that it was a small measure of reform, but he hoped the House would not object to it on that account.—Alderman CUBITT said that the corporation were willing that the Bill should oe read a second time, in order that it might be amended in committee.—Mr. JOHN LOCKE moved the adjournment of the debate. This was opposed by Government and negatived on a division by 82 to 37. The Bill was then read a second time, on the understanding that Mr. Ayrton's motion, which could not be put as an amendment to the second reading, would be submitted on going into committee.—The *Census (England) Bill* was read a second time after a protest from Mr. BAINES against the power it contained of inquiring into every man's religious belief.—The *Public Improvements Bill*, the *Duchy of Cornwall (Limitation of Actions) Bill*, and the *Petition of Rights Bill* were read a third time and passed.

WEDNESDAY.—*Reform Bill.*—Mr. EDWIN JAMES gave notice that, in committee on the Reform Bill, he would propose a clause to confer what is termed a "lodger franchise." The House then went into committee on the *Law of Property Bill*, which occupied several hours in discussion. A division was taken on the first clause, which was ordered to stand part of the Bill by 120 to 50. Clause 12 was rejected, and the Bill ultimately passed through committee. The *Masters and Operatives Bill* was read a second time, and referred to the Select Committee on Masters and Operatives. The *Jews' Act Amendment Bill* passed through committee.

THURSDAY.—*The Insurrection in Sicily.*—Lord J. RUSSELL stated, in answer to Mr. SHERIDAN, that orders had recently been given that a British ship-of-war should be stationed at Palermo, and another at Messina, with instructions to give assistance to all persons who rightly claimed the protection of the British flag. *The Reform Bill* —The adjourned debate on the second reading of the Representation of the People Bill was resumed by Mr. BLACK, who opposed the measure, on the ground that it would give undue influence to a majority at the expense of the intelligence and wealth of the country. He deeply regretted being compelled to vote against the Government, but he felt that he could not, in justice to his own feelings, support a measure which he believed would transfer political power to those who were unprepared to receive it.—Sir E. B. LYTTON asked whether it might not be possible to agree upon some broad principle upon which the elective system could be based. It seemed to him that

the tendency of the present measure would be to give the poor and less intelligent class the lion's share of political power, and thus enable them to obtain control over the capital which employed and the mind which directed them. The Bill would introduce a new and democratic element into the constitution, and cramp and distort the national suffrage into the monopoly of a single class. It was said that this was an age of progress, but it did not follow because we had railways and steam that we must also have a 6*l.* franchise. Progress surely could not mean handing over power to men who were the reverse of learned and the opposite of rich. For his own part, if he thought the question could be settled, he would consent to a more comprehensive measure, which would establish some security for the fair representation of intelligence and property. If they were to alter their House, it would be better to get rid of all the inconvenience at once, instead of being every year in the hands of the architect. He apprehended that if they were to pass the Bill in its present shape, they would not be a jot nearer to the settlement of the question. It would double the expense of county elections, and open the door to increased corruption; it would settle nothing, and please nobody; in fine, it would only place the prosperity and destinies of the country upon bases so artificial that, if once destroyed, they could never be restored to their former greatness. Referring to the inconvenient period at which the change was about to be made, he criticised the conduct and policy of the Emperor of the French, and asked whether this was a moment to dismiss a Parliament which, in a different crisis, had done so much to preserve the peace of Europe, and to maintain untarnished the honour of the country, in order to exchange it for another to be selected by the *minimum* intelligence of the people. He was aware that he, and those with whom he was in the habit of acting, might be met with the taunt thrown out by the Chancellor of the Duchy of Lancaster, "Why not move an amendment?" His reply was, that such an amendment might be carried if hon. gentlemen on the opposite benches would but vote in public according to the opinions they had expressed in private. He concluded by recommending the Government to withdraw the Bill on the obvious and unanswerable ground that it had failed to give satisfaction to the country.—Mr. Marsh expressed his intention to vote against the Bill in its present shape, as he believed it would give too large a balance of power to one class of the community, without providing any constitutional element of Conservatism as an equipoise.—Sir J. Fergusson also spoke against the Bill. In the course of his observations an attempt was made by the Opposition to count out the House, which was very nearly successful, only 25 members being present when the minute-glass was turned.—Mr. Denman supported the Bill, and adduced a variety of statistics to show that the working classes were, by their intelligence and conduct, fully entitled to share in the privileges which it was proposed to confer upon them. He believed that a large class of eligible persons were now excluded from the franchise because they were not householders, and he should therefore vote for a clause conferring a lodger franchise.—Sir J. Walsh congratulated Lord J. Russell upon having at length found a supporter. He should himself oppose the measure, which he said was nothing more nor less than a Household Suffrage Bill under another name.—Lord J. Russell said that similar arguments to those which had been adduced that evening about the evils to be apprehended from establishing a democracy had been urged with equal pertinacity 30 years ago against the last Reform Bill. Nevertheless, since that period the corporations had been reformed, tithes had been abolished, slavery in the West Indies done away with, free trade established, and the tenure of our Indian empire changed and consolidated. He denied that the Bill would place the franchise in the hands of the poorest and least educated class of the community. While it was far more liberal than the measure introduced last year by the Earl of Derby, it was at the same time more constitutional, and the House might adopt it without endangering the institutions of the country. He did not believe that the flood of the 6*l.* householders would swamp the other classes of electors. On the contrary, he maintained that property would continue to have its due weight and influence. He called upon the House to place confidence in the good sense and intelligence of the people, and to strengthen the institutions of the country by admitting a numerous and deserving class to the privilege of the franchise.—On the motion of Mr. Bentinck, the debate was again adjourned to Monday. The remaining clauses of the *Customs Bill* were gone through, and the *Common Lodging-House (Ireland) Bill* passed through committee

Friday.—*Metropolitan Tolls.*—In answer to Mr. Ingram, Sir G. Lewis stated his opinion that some of the tolls adjoining the metropolis ought to be removed, but he did not expect to be able to introduce a Bill on the subject during the present session. *Poor Law Returns.*—In answer to Sir M. Farquhar, Mr. Villiers said that further returns had been obtained, and would probably be laid on the table that evening.—Sir J. Pakington repeated his objections to the returns.—Lord Stanley thought the whole subject ought to be fully inquired into.—Mr. Bright feared that the number of votes put upon the register by the Reform Bill would be smaller than the House believed, and smaller than he wished. [Left sitting]

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 94⅞ for Money, and 94⅞ to 95 for 9th May; Bank Stock, 226; Three per Cents. Reduced, 93¼ to ⅜; New Three per Cents., 93⅜ to ½; India Stock, 219; Indian Five per Cent. Stock, 1859, 106¼ to ⅛; Five per Cent. Enfaced Rupee Paper, 98⅜; Ditto Five and a Half per Cent., 103⅞; Indian Four per Cent. Debentures, 1859, 96⅜; India Bonds, 10*s.* dis.; Exchequer Bills, 6*s.* prem.—Foreign: Brazilian Four and a Half per Cents., 1860, ⅛ dis.; Mexican Three per Cents., 21⅜; Portuguese Three per Cents., 1853, 43½ to 44; Russian Three per Cents., 1859, 66⅝; Sardinian Five per Cents., 85; Spanish Three per Cents., 47½; Ditto New Deferred Three per Cents., 36⅝; Ditto for Acct., 36⅝; Turkish Six per Cents., 1854, 76½ ex div.; Ditto for Acct., 77 ex div.; Ditto for 1858, 61⅜; Ditto Guaranteed Four per Cents., 101¼.

Gazette of the Week.

Tuesday—Bankrupts—H Bach, Sheffield, Yorkshire, Hosier—J. England, 56, Upper Charlotte Street, Fitzroy Square, Middlesex, Photographic Apparatus Manufacturer—A. Hammond and J. Nevard, of Lee, Kent, Builders—W. D. Hoad, Watchbell Street, Rye, Sussex, Ship Builder and Merchant—J. Underhill, Plymouth, Ironmonger—A. Waite, Berwick-upon-Tweed, Draper and Clothier

Bankruptcy Annulled—T. Irving, Nottingham, Travelling Draper.

Scotch Sequestrations—T. Byers, Glasgow, Builder—P. A. Carter, Glasgow, Commission Agent—A. M. Copland, Dundee, Commission Merchant and Shipbroker—R Duncan, Teablair, Ross-shire, Farmer—A. Hay, Stockley, Banffshire, Farmer—W. W. Johnstone, Barnbollar, Clackmannanshire, Cattle Dealer and Grazier—H. P. Plowman, Linlithgow—J. Somerville, Glasgow, Muslin Manufacturer and Warehouseman—J. Tait, Edinburgh, Merchant.

Friday—Bankrupts—J. Ansell, North. Ockendon, Essex, Draper—R. S. Beggie, Great Winchester Street, City, Merchant—W. Birt, Liverpool, Boot and Shoemaker—W. Black, Prospect House, Charles Street, Holloway, Builder—J. Brimelow and R. & S. Daniels, Bedford, Lancashire, Silk Manufacturers J. Cope, Longton, Staffordshire, China Manufacturer—J. Eyre, Chowbent, Leigh, Lancashire, Silk Manufacturer—T. Lambert, jun, Stowupland, Stowmarket, Steam Thresher—J. Lord, Halifax, Dyer—S. J. Meanet, Liverpool, Newspaper Proprietor—J. T. Russell, Northampton, Linendraper—E. H. Spark, Heathcote Street, Gray's Inn Road—J. Wenham, Swaffham, Norfolk, Watchmaker.

Scotch Sequestrations—H. S. Brown, Perth, Potato Merchant—A. Moore, formerly of Regent Street, Middlesex, now of 62, Nicholson Street, Edinburgh, Photographer—Smith, Roger, and Smith, Glasgow, Merchants.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,448,710	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	13,973,710
		Silver Bullion	—
	£28,448,710		£28,448,710

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£9,728,943
Rest	3,218,346	Other Securities	22,070,236
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	6,251,582	Notes	6,813,465
		Gold and Silver Coin ..	713,410
Other Deposits..	14,602,278		
Seven day and other bills	700,848		
	£39,326,054		£39,326,054

26th day of April, 1860. M. MILLER, Deputy Cashier.

Metropolis and its Vicinity.

International Exhibition of 1862.—The following letter has been addressed to the Secretary of the Society of Arts by command of the Prince Consort, president of the society, expressing the readiness of his Royal Highness to place his name on the list of guarantors for the sum of 10,000*l.* so soon as the sum of 240,000*l.* has been subscribed:—

"Windsor Castle, April 9, 1860.

"Dear Sir,—I am commanded by his Royal Highness the Prince Consort to inform you that his Royal Highness has given his best attention to the proposal made by the council of the Society of Arts for the formation of a guarantee fund, in order to enable them to give effect to the wish of the Society to hold another Great International Exhibition in 1862. As President of the Society, it is ever the wish of his Royal Highness to assist, as far as it is in his power to do so, any well considered plan proposed by the Society which has for its object the advancement of art and science as applied to industrial pursuits. But feeling at the same time that the favour of the public to any such plan should be due to the merits of the proposal alone, he has in general made it a rule to decline giving his name to any undertaking which had not already received such an amount of public support as would ensure its ultimate success. In the present case, however, considering the conditions under which it is proposed to raise the guarantee fund—one of which provides that 'no liability shall be incurred by any person subscribing the agreement, unless the sum of 250,000*l.* be subscribed within six calendar months'—his Royal Highness will so far depart from his ordinary practice as to intimate his readiness, when the public interest in the proposed Exhibition shall have manifested itself to the extent of subscribing 240,000*l.* to contribute the further sum that shall be necessary to complete the full amount of the proposed guarantee.—I am, &c.,

"C. Grey."

Frauds on the Union Bank.—The directors of the Union Bank of London have issued a report to their proprietors announcing that frauds have been committed upon the establishment by Mr. Pullinger, their chief cashier, amounting to no less a sum than 263,000*l.* The frauds have been effected by a forged pass-book, Mr. Pullinger keeping one for the Bank of England and another for the ledger clerk of the Union Bank. He had been in the establishment for 21 years, and had held his present post for five years, throughout the greater part of which latter period his misappropriations are believed to have been carried on. In order to meet the loss, the directors propose to write off 2*l.* a share, in other words to re-transfer the sum of 120,000*l.* which in July last was transferred from the reserve to the capital account as a bonus, and to add to it the existing reserve fund of 100,000*l.* This will leave a balance of 40,000*l.* to be provided, which, it is hoped, will be obtained from the profits of the current year, whilst a dividend of 5 per cent. may be declared in July, making, with that paid in January last, 12½ per cent. for the year, the capital remaining perfectly intact. It is generally believed that Pullinger could not have carried on the frauds for so extended a period of time without the aid of accomplices; and this impression is strengthened by the apprehension and examination at the Mansion House on Wednesday of a junior cashier called Lyttleton, on the charge of having embezzled a sum of 1240*l.*, either for the use of himself or some other party.

St. George's-in-the-East.—The attempt to renew the riots in this church on Sunday evening was cut short by the accidental failure of the gas. After the first lesson the gas suddenly went out and left the church in total darkness. The mob immediately became riotous, and began to sing profane songs instead of the doxology, and in the midst of a terrific uproar Mr. King left the desk and his choristers retired from the altar with him to the vestry. The parish clerk shortly afterwards made his way into the church with a lighted taper, and announced that the service would not be continued. Mr. Inspector Alison at the same time entered the church with a body of police and commenced clearing the place, a difficult process, it may be imagined, the church being at this time in total darkness and densely crowded. In about half an hour the mob was got out into the street, where the favourite amusement of singing the doxology up and down Cannon Street was again resorted to.—At the Thames Police Court on Friday, Mr. Selfe stated that on looking into the Act of Uniformity he had found that he had made a mistake in convicting a few days since a man named William Dickenson, for disturbing the minister, and hissing in the parish church, and fining him two marks. He now found that he had no jurisdiction in the case, as the proceeding ought to have been by indictment at the quarter sessions or assizes. As therefore the conviction was null and void, and the mistake was entirely his own, he had determined, under all the circumstances, instead of fining William Dickenson two marks, or 26*s.* 8*d.*, to mulct himself. The sentence therefore was, that he (Mr. Selfe) be mulct in two marks of 13*s.* 4*d.* each, the penalty imposed by mistake on William Dickenson.

Cardinal Wiseman on the Papal Question.—On the two last Sundays, by direction of Cardinal Wiseman, a collection was made in all the Roman Catholic churches and chapels of the metropolis in aid of the fund now raising for the Pope. A pastoral letter from the cardinal was read in which he entered fully into the past and present position of the papal question. The document, which was dated from Rome, is of considerable length, and was by direction divided into two portions, one of which was read on each of the two Sundays. It stated that the sudden cutting off of resources from the insurgent provinces and the extraordinary expenses entailed on the Papal Government, would naturally suggest the contributions of all the faithful towards a "benevolence" in favour of the Holy Father. It referred to the example of Ireland as being worthy to be followed in this respect, and expressed a hope that a favourable loan would be immediately set on foot, and that it would find success even in England; but in the meantime they must exert themselves to lay a filial tribute at the feet of his Holiness, whose blessing his eminence especially communicated to his flock.

The Great Eastern.—Captain Vine Hall, F.R.A.S., has been appointed to the command of the great ship, in the room of the late Captain Harrison. Captain Hall has had a large amount of experience in the command of ships of the first class in the Mediterranean, South America, Australia, and India.

Health of London.—The Registrar-General's Report states that the deaths in London in the week that ended Saturday, April 21, were 1284, being a decrease on the number of the previous week, which was 1407. In the corresponding weeks of the 10 years 1850-9 the average number was 1073; which, if raised in proportion to the increase of population, will become 1180. The present return is therefore 104 above the average. During the week the births of 923 boys and 834 girls, in all 1757 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1685.

Provincial.

Birmingham.—A young girl named Sarah Pratt, a servant in an inn at Deritend, was murdered a few days since by a man named Price, who had been paying his addresses to her without success. He induced her, by a false message, to go to the house of a neighbour, where he cut her throat. Just as the mistress of the house was returning home she met the murderer rushing out at the door. He was, however, pursued by a tradesman who heard the cry of murder, and conveyed to the station, where on being searched a nearly new and extremely sharp shoemaker's knife, smeared with blood, was found upon him. The murderer subsequently admitted that a feeling of jealousy had prompted the crime. The jury at the inquest returned a verdict of Wilful Murder against the prisoner, who has since been committed by the magistrate for trial at the next Warwickshire assizes.

Gosport.—On a recent examination of the gunboats built for the navy during the Crimean war and since laid up on the slips at Haslar, it has been discovered that several of them have scarcely a sound piece of wood about them, every part bearing the marks of "sap," while the pressure of the hand upon their frame crumbles it into dust. The contract price of these vessels is said to have been about 5000*l.* for each hull alone, and the cost of repairing them is expected to amount to about 3500*l.* The copper bolts, too, in one of the boats, which ought to have gone clean through and been clinched on each side, were found to have been changed into short ends, of about 2 inches, driven in on each side. Two of the boats, the Earnest and the Escort, which have been declared by the authorities to have been constructed in a manner creditable to their builder, both as regards labour and material, were built at Bristol by Mr. Patterson, the builder of the Great Western, who sustained a considerable loss by the contract.

Hull.—On Monday morning a widow named Elizabeth Ann Parke, aged 25, residing with her mother in Darley's Court, New George Street, was murdered by Thomas Kirkwood, a deserter from the 29th Regiment. Kirkwood, it appears, got leave of absence about five months ago and has had his furlough twice renewed. He lodged with a sister-in-law until about six weeks ago, when he left, and went to lodge at the house of deceased's mother, remaining there till he was forced to leave for non-payment of the rent. He has since been existing by victimising the public, from whom he has obtained by false representations sufficient

to keep himself. On Monday morning after breakfast he went to deceased's house, and putting his arm round her neck as if for the purpose of giving her a kiss, cut her throat with a razor. The prisoner had only nine months to serve before being entitled to his discharge. He was apprehended shortly afterwards and taken to the Mansion House, where he acted like an infuriated madman, stoutly protesting his innocence. The woman died about 5 o'clock in the afternoon. The prisoner was too drunk to be taken before the magistrate on Monday, and was consequently remanded until the next day, when he was committed for trial at the York assizes.

LIVERPOOL.—Within the last few weeks it has been rumoured in this town that Mr. W. Statham, Registrar of the Liverpool County Court, was deficient in his accounts to the enormous amount of 15,000*l*. During the past week or two the accounts have been investigated, and, though the investigation is as yet by no means complete, the deficiency already ascertained is between 3000*l*. and 4000*l*. Mr. Statham has, of course, not appeared in court in his official capacity since the discovery of his defalcations, but until within the last few days it was understood that he was in the town. It is now however believed that he has left Liverpool for Australia, a sheriff's officer who has been on the look-out for him during the past week, in order to arrest him for a very large amount, having been unable to trace him. The career of Mr. Statham as regards pecuniary matters appears to have been most reckless. Though the emoluments of his office amounted to 1000*l*. a year, he has not only contrived to abstract an enormous amount from the funds of the court, but, in addition to private liabilities amounting to several thousand pounds, he has involved several of the officers of the court, including the cashier, whom he has induced to borrow money for him from insurance companies, loan societies, and private individuals to the extent of nearly 4500*l*.! The sums thus borrowed were at once handed over to Statham, and now the cashier, finding himself inextricably involved through accommodating his superior officer with his name, has petitioned the Insolvent Court, and set forth in his schedule the various loans which he contracted on Statham's account. The circumstances have excited much astonishment in the town, and the greatest indignation is felt on the part of the public that one who has so grievously committed himself should not have been dismissed from office and subjected to a criminal prosecution. It is understood however that Statham being a servant of the Crown, it is for the Government to take the initiative, as any loss caused by the defalcations will fall upon the country.

OXFORD.—The election of a warden of New College, in the room of the late Dr. Williams, took place on the 19th in the College Chapel, when the Rev. James Edwards Sewell, M.A., Fellow, Bursar, and Librarian, was duly elected. Of the 60 fellows no less than 57 were present and voted. The numbers were as follows:—For the Rev. J. E. Sewell, 38; the Rev. W. B. Heathcote, Precentor of Salisbury, 14; Dr. Moberly, Head Master of Winchester College, 5.

PENRITH.—Thomas Sowerby, who stands charged with the wilful murder of a Jew named Simon Manassa, or Levi Davidson, at Penrith on Easter Monday, made a confession of his guilt on Saturday. The substance of his statement is that he had been asked by deceased to find him lodgings for the night, as he had been locked out of the house where he had engaged a bed; that he took him to some outhouses near the scene of the murder, when they quarrelled and fought, and that the old man having thrown his stick at the prisoner, the latter knocked him down, and seizing the stick struck him several times over the head. The prisoner did not think then that he had done him any very material mischief. He left him lying on the ground and returned to the town. The magistrates on Wednesday, after hearing some additional evidence, committed the prisoner for trial at the Carlisle assizes on the charge of Wilful Murder.

PORTSMOUTH.—A series of court-martials has been held this week on board the Victory, for the trial of several of the Marines concerned in the recent disturbances on board the Edgar at Spithead. The first, which took place on Monday, was held on a private of Marines, who was charged with having endeavoured to delay and discourage the service by falling in with the wrong watch, and by afterwards denying that he knew to which watch he belonged; and secondly, for misconducting himself and disobeying orders while being conveyed in the Edgar's cutter to her Majesty's ship Victory. The Court found the prisoner guilty on both charges, and sentenced him to two years' imprisonment, with hard labour, at Winchester, and at the conclusion of that period to be dismissed from the Royal Marines with disgrace. The Court then proceeded to try two other privates of Marines, on charges of having prevented the sergeant and corporal from putting Clarke, the prisoner in the last case in irons, in the fore-cockpit, and for having rescued him from their custody. The Court found that the charges were not proved against the prisoners, who were acquitted accordingly. On Tuesday the Court re-assembled for the trial of 10 privates of Marines, and a gunner of the Marine Artillery, on two charges of not coming on deck when the starboard watch was piped to fall in, and disobedience of orders, &c. The Court found the whole of the prisoners, with the exception of one, guilty on both charges, and the one guilty on the second charge; they therefore sentenced the prisoners found guilty on both charges to 12 months' imprisonment at Winchester, and the other to nine months' imprisonment in the same gaol. On Wednesday the Court re-assembled and proceeded to try an able seaman for inciting one of the ordinary seamen to disobey the orders of his superior officers, and to unship the ladders on the lower deck. The Court found the charges proved, and sentenced the prisoner to two years' imprisonment at Winchester with hard labour, and at the expiration of that period to be dismissed her Majesty's service with disgrace. The Court was then re-sworn, and preceeded to try an ordinary seaman, on charges of having incited one of his messmates to disobey the orders of his superior officers by telling him not to go on deck when his watch was piped to fall in, and also for remaining below himself when his watch was piped on deck. The Court found both charges proved, and sentenced the prisoner to six months' imprisonment, with hard labour, at Winchester. On Thursday the Court reassembled and tried a private of Marines, on a charge of refusing with an oath, when ordered by his corporal to the upper deck, to work for him or any one else. The Court found the charge proved, and sentenced the prisoner to two years' imprisonment at Winchester, with hard labour; and at the expiration of his sentence to be dismissed the service with disgrace. The Court then proceeded to try 15 privates of Marines and 4 gunners in the Marine Artillery, on the charge of assembling on the main deck of the Edgar instead of at once proceeding to the upper deck when ordered by the commanding officer to do so. The Court found that sufficient evidence had not been adduced to support the charge against the prisoners, and they were therefore acquitted. The prisoners in this last case were a remarkably fine body of men. Several of them wore medals—one had four on his breast—eight wore good conduct badges, and one had only a few months to serve to complete his time for a pension.

Ireland.

THE POPE'S TRIBUTE.—On Sunday last a meeting in aid of the Irish contribution to the Pope's treasury was held at Cork, Dr. Delany the Roman Catholic bishop, in the chair, when the sum of 1000*l*. was subscribed in hard money before the close of the meeting. Bishop Cantwell has forwarded to the papers a list of the contributions collected in the diocess of Meath. The sum total amounts to 5507*l*. 2*s*. 4*d*., which is considered a very handsome remittance, considering the universal complaints of agricultural pressure and ruinous prices of food for cattle.

THE PHŒNIX CONSPIRACY.—The Lord-Lieutenant has ordered the discharge from prison of Daniel Sullivan, one of the leaders of the Phœnix conspiracy, who was convicted and sentenced to penal servitude when the general body was tried, a year ago.

Scotland.

UNIVERSITY OF EDINBURGH.—The installation of the Right Hon. W. E. Gladstone, as Rector of the University of Edinburgh, took place on the 16th inst. in the Music Hall. There was a crowded attendance, the priority of admission being given to the students, who are the constituents of the Rector, and next to the members of the General Council. There were about 200 ladies in the audience and orchestra galleries. The members of the University Commission, the University Court, the Curators of the Patronage, the Senatus, and the distinguished persons on whom the degree of LL.D. had been or was to be conferred met in the Assembly Rooms. There were first conducted to the platform the following gentlemen, who were not in academic costume—namely, the Earl of Haddington, Lord Belhaven, Lord Ardmillan, Mr. Stirling, of Keir, M.P., Sir W. Gibson-Craig, Sir W. Dunbar, M.P., Mr. Dunlop, M.P., Mr. Mure, M.P., &c. Then followed in procession the following gentlemen, in academic robes:—Sir David Brewster, Principal and Vice-Chancellor; the Rector, the Right Hon. W. E. Gladstone; the Solicitor-General, the Lord Provost, Sir John Melville, Professor Christison, Bailie Grieve, Dr. Brown, the Lord-Advocate, the Lord Justice-Clerk, Principal Forbes, Dean Ramsay, Professor Mansel, Oxford; Lord Neaves, and the members of the Senatus Academicus. Professor Crawford opened the proceedings with prayer. Professor Campbell Swinton, as Dean of the Faculty of Law, then severally presented the different persons upon whom the Senate had conferred the honorary degree of Doctor of Laws—the Right Hon. W. E. Gladstone, Principal Forbes, of St. Andrews; Lord Neaves, the Solicitor-General, the Very Rev. Dean Ramsay, and the Rev. Edward Mansel, Professor of Moral and Metaphysical Philosophy at Oxford—pronouncing a brief and appropriate *éloge* in each case. Mr. David Hall, as representing the students, then presented to the Vice-Chancellor the Right Hon. Mr. Gladstone, as the Rector elected by the students under the powers conferred on them by the Scottish Universities Act. The Rector, who was received with immense enthusiasm, then addressed the audience in a speech which fills about four columns of the daily papers. He traced at great length the history and progress of Universities, showing that they were from their very commencement Christian institutions, and entitled to rank among the greater lights and glories of Christendom. He showed that they bore, and indeed still bear, a character at once conservative and progressive; that if not uniformly, yet in general their influence tended to mitigate extreme opinions; that the Papal power, for example, knew no more formidable curb than the great University of Paris; and that in England it was the special privilege of Oxford to rear up many centuries ago very eminent men of the class who have been well described by a German writer as Reformers before the Reformation. "At one time," he said, "we find nobles, at another country gentlemen, at another burgesses, engaged in the struggle against arbitrary power; but nowhere in the ancient history of this country is more deeply engraven her unconquerable love of freedom than in the constitution and history of her Universities. Each of them, as a brotherhood, bound together by the noble bond of learning, was a standing and living protest against the domination of mere wealth and of force in all their forms; and they strengthened themselves for their conflict by the freedom of their arrangements both of teaching and of discipline." He concluded his address, which was listened to throughout with the utmost attention, with the following peroration:—

"Man is to be trained chiefly by studying and knowing man; and we are prepared for knowing man in life by learning him first in books, much as we are taught to draw from drawings before we draw from nature. But if man is to be studied in books, he will best be studied in such books as present him to us in the largest, strongest, simplest—in a word, the most typical forms. These forms are principally found among the ancients. Nor can the study of the ancients be dissociated from the study of their languages. There is a profound relation between thought and the investiture which it chooses for itself; and it is as a general rule most true that we cannot know men or nations unless we know their tongue. Diversity of language is, like labour, a temporal penalty inflicted on our race for sin; but, being like labour originally penal, like labour it becomes by the ordinance of God a fertile source of blessing to those who use it aright. It is the instrument of thought, but it is not a blind or dead instrument; it is like the works in metal that Dædalus and Vulcan were fabled to produce, and even as the limping deity was supported in his walk by his nymphs of so-called brass, in like manner language reacts upon and bears up the thoughts from which it springs, and comes to take rank among the most effective powers for the discipline of the mind. But more important than the quest of professional knowledge, more vital than the most effective intellectual training, is the remaining question of the temper and aim with which the youth prosecutes his work. The mountain-tops of Scotland behold on every side of them the witness, and many a one of what were once her morasses and her moorlands now blossoming as the rose, carries on its face the proof that it is in man and not in his circumstances that the secret of his destiny resides. For most of you that destiny will take its final bent towards evil or towards good, not from the information you imbibe, but from the habits of mind, thought, and life that you shall acquire during your academical career. Could you with the bodily eye see the moments of it as they fly, you would see them all pass by you, as the bee that has rifled the heather bears its honey through the air, charged with the promise, or it may be with the menace, of the future. In many things it is wise to believe before experience until you may know, and in order that you may know; and believe me when I tell you that the thrift of time will repay you in after life with an usury of profit beyond your most sanguine dreams, and that the waste of it will make you dwindle, alike in intellectual and moral stature, beyond your darkest reckonings. I am Scotchman enough to know that among you there are always many who are already, even in their tender years, fighting with a mature and manful courage the battle of life. When they feel themselves lonely amidst the crowd—when they are for a moment disheartened by that difficulty which is the rude and rocking-cradle of every kind of excellence—when they are conscious of the pinch of poverty and self-denial, let them be conscious, too, that a sleepless eye is watching them from above, that their honest efforts are assisted, their humble prayers are heard, and all things are working together for their good. Is not this the life of faith which walks by your side from your rising up in the morning to your lying down at night—which lights up for you the cheerless world, and transfigures all that you encounter, whatever be its outward form, with hues brought down from heaven? The considerations are applicable to all of you. You are all in training here for educated life, for the higher forms of mental experience, for circles limited, perhaps, but yet circles of social influence and leadership. Some of you may be chosen to greater distinctions and heavier trials, and may enter into that class of which each member while he lives is envied or admired. And, the hope of an enduring fame is, without doubt, a powerful incentive to virtuous action, and you may suffer it to float before you as a vision of refreshment, second always, and second with long interval, to your conscience and the will of God. For an enduring fame is one stamped by the judgment of the future, that future which dispels illusions and smashes idols into dust. Little of what is criminal, little of what is idle, can endure even the first touch of the ordeal; it seems as though this purging power following at the heels of man and trying his work were a witness and a harbinger of the great and final account. So, then, the thirst of an enduring fame is near akin to the love of true excellence. But the fame of the moment is a dangerous possession and a bastard motive; and he who does his acts in order that the echo of them may come back as a soft music in his ears plays false to his noble destiny as a Christian man, places himself in continual danger of dallying with wrong, and taints even his virtuous actions at their source. Not the sublime words alone of the Son of God and His apostles, but heathenism too, even while its vision was limited to this passing scene, testifies with an hundred tongues that the passing scene itself presents to us virtue as an object and a moral law, graven deeply in our whole nature, as a guide. But now, when the screens that so bounded human vision had been removed, it were sad, indeed, and not more sad than shameful, if that being should be content to live for the opinion of the moment who has immortality for his inheritance. He that never dies, can he not afford to wait patiently awhile? And can he not let faith, which interprets the present, also guarantee the future? Nor are there any two habits of mind more distinct than that which chooses success for its aim and covets after popularity, and that, on the other hand, which values and defers to the judgments of our fellow men as helps in the attainment of truth. But I would not confound with the sordid worship of popularity in after life the graceful and instinctive love of praise in the uncritical period of youth. On the contrary, I say, avail yourselves of that stimulus to good deeds, and, when it proceeds from worthy sources and lights upon worthy conduct, yield yourselves to the warm satisfaction it inspires; but yet, even while young, and even amid the

glow of that delight, keep a vigilant eye upon yourselves; refer the honour to Him from whom all honour comes, and ever be inwardly ashamed for not being worthier of His gifts. But, gentlemen, if you let yourselves enjoy the praise of your teachers, let me beseech you to repay their care, and to help their arduous work by entering into it with them, and by showing that you meet their exertions neither with a churlish distrust nor with a passive indifference; but with free and ready gratitude. Rely upon it they require your sympathy, and they require it more in proportion as they are worthy of their work. The faithful and able teacher, says an old adage, is *in loco parentis*. His charge certainly resembles the mother's care in this, that, if he be devoted to his task, you can measure neither the cost to him of the efforts which he makes, nor the debt of gratitude you owe him. The great poet of Italy—the profound and lofty Dante—had had for an instructor one whom, for a miserable vice, his poem places in the regions of the damned; and yet this lord of song—this prophet of all the knowledge of his time—this master of every gift that can adorn the human mind—when in those dreary regions he sees the known image of his tutor, avows, in language of a magnificence all his own, that he cannot, even now, withhold his sympathy and sorrow from his unhappy teacher, for he recollects how, in the upper world, with a father's tender care, that teacher had pointed to him the way by which man becomes immortal."

Grand Banquet to the 78th Highlanders.—The Edinburgh banquet to the gallant 78th Highlanders took place on Tuesday evening in the Corn Exchange, the Lord Provost in the chair, supported by Viscount Melville, Sir J. Douglas, K.C.B., Sir Hew Dalrymple, Sir John Richardson, Vice-Admiral Hope Johnstone, Sir James Baird, and numerous military officers and civilians of distinction. Upwards of 1400 persons sat down to dinner and a large number of ladies occupied the gallery. The speeches delivered by the Lord Provost, Admiral Hope Johnstone, Lord Melville, Sir John Douglas, K.C.B., Colonel Ewart, Lieut-Colonel Hamilton, and Sergeant Major Pocock, were received with great enthusiasm by the company.

Destruction of Auchen Castle by Fire.—On Tuesday the 17th inst. the mansion of Auchen Castle, the residence of the Hon. Butler Johnstone, M.P. for Canterbury, took fire, and was completely gutted. By the labours of the tenantry and the inhabitants of Moffat and the neighbourhood a good many articles were saved.

Railways.

Fatal Accident on the Great Northern.—On Monday morning the Manchester and Leeds express train, which left King's Cross at 10 o'clock, met with a terrible accident in passing through the Hatfield station, by which two persons lost their lives, Mr. Francis Pym, son of a late director of the company, and a platelayer named Venables. The train comprised mostly first-class carriages, 10 in number, with two break vans, one in front and the other at the rear. It left London punctually at the time appointed, and proceeded at the usual express speed until it was about entering the Hatfield station. A number of platelayers had been engaged during the morning in repairing the down line near the crossing, and after the engine and four carriages had passed, one of the rails started from its chair, and broke into several pieces. The fifth carriage was immediately thrown off the line, dragging with it the remainder of the train in the most frightful confusion. Some of the carriages being partly thrown across the road came in contact with the loaded trucks of a coal train which was passing at the same moment, and then mounted the platform of the down station, and traversed nearly the whole length of the platform, carrying away some of the roof. The coupling of the sixth carriage then broke, and the hinder portion of the train was thrown over on the line, the carriages being shattered. The foremost part of the train still dashed on at little reduced speed; and the sixth carriage coming in contact with the water crane, broke it away, and was thrown end uppermost. At the same moment the wheels and axles of the fifth carriage were carried away, and the body of the carriage was hurled on its side, and in that state dragged a distance of more than 200 yards, when it, with the fourth carriage, which was also off the rails, got disconnected from the forward portion of the train, and was brought to a stand still by the side of the line. The engine, tender, break, and three carriages, which kept the rail, were stopped soon afterwards; the distance altogether from where the carriages first left the metals being 703 yards. The scene, as may be imagined, was most terrible. The permanent way was ploughed up nearly the whole distance, rails were twisted and bent, and the wrecks of the shattered carriages were strewn over the line in all directions. The body of Mr. Pym was found lying across the metals behind the carriage in which he was travelling, and there is reason to believe that he had tried to escape from the carriage, and had been killed by its falling on him. Of the other passengers, about 50 in number, those who were in the hindermost carriages were all more or less seriously hurt, many bleeding from scalp wounds and other contusions. The Rev. W. Tweddle, a dissenting minister, was the most injured, but he was able to be removed to London, and is doing well. Mr. Thomas Williams, the inspector of the line, was in the fourth carriage, which nearly shared the same fate as the fifth carriage, the fore wheels having been driven partly through the decring. At the moment when the train left the line a fragment of the broken rail was hurled forward in a slanting direction, and striking George Venables, one of the platelayers, in the side killed him on the spot. He was a young man, and had been recently married.

Sporting.

NEWMARKET FIRST SPRING MEETING.

Monday.—*Queen's Plate.* Mr. R. Ten Broeck's Dove beat Lady Kingston.—*Sweeps.* Mr. R. Ten Broeck's Rattlesnake beat Watersprite and Buttercup.—*Handicap Plate.* Mr. Gratwicke's Error beat Grand Secret, Neoptolemus, and 7 others.—*Sweeps.* Baron Rothschild's King of Diamonds beat Tuccio and Bivouac. *Match.*—Duke of Bedford's Ida beat Lord Glasgow's f.—*Plate.* Mr. J. Stephenson's c. beat Dove, Merry May, and Tyburn.—*Handicap Sweeps.* Mr. Payne's ch. c. beat Bentinck, North Lincoln, and 4 others.—*Free Handicap Sweeps.* Mr. R. H. Neville's f. beat Parmesan.—*Match.* Mr. R. Ten Broeck's Cock a-hoop beat Wanderer.—*Sweeps.* Mr. Merry's Trovatore walked over.

Tuesday.—The *Coffin Room Stakes.* Mr. H. Savile's Parmesan beat Rope Dancer and Petruchio.—*Handicap Plate.* Count Batthyany's Suburban beat Athos, Wanderer, and 4 others.—The *Two Thousand Guineas.* Mr. A. Nichol's The Wizard beat Traducer, King of Diamonds, and 11 others. Won by three lengths, half a length between the second and third. King of Diamonds was an indifferent fourth, Lupellus fifth, Brother to Rainbow sixth, Wamba, Ebony, and Merrimac next. Grenadier and Tom Bowline, close together, were the last two.—*Sweeps.* Mr. Dixon's Neophyte beat Tidlywinks and Confusion.—*Sweeps.* Lord Stamford's Lava beat Baron Rothschild's b. f., Archeress, Lord Clifden's f., and Foxhead.—*Free Handicap Sweeps.* Lord Strathmore's Marsellaise beat Comforter.—*Match.* Mr. Blake's c. beat Mr. Legg's c.—*Sweeps.* Lord Stamford's Little Lady walked over.—*Sweeps.* Duke of Bedford's Luff received forfeit.

Wednesday.—*Jockey Club Plate.* Lord Stamford's Newcastle walked over.—*Handicap Plate.* Mr. Saxon's Tom Thumb beat Mr. R. Stephenson's f., The Archer, and 4 others.—*Plate.* Mr. Swindell's Weatherbound beat Bentinck, Largesse, Philomela, and Suburban.—*Match.* Sir Joseph Hawley's Gallus beat Lord Glasgow's f.—*Selling Handicap Sweeps.* Mr. Alexander's Tyburn beat Mr. H. Savile's c., Antonio, and Tidlywinks.—*Sweeps.* Mr. R. Stephenson's Chanoine beat Buttercup, the Benicia Boy, and others.—*Match.* Sir J. Hawley's Polyolbion beat Ianthe.—*Sweeps.* Lord Stamford's Emily beat Actæon.—*Sweeps.* Mr. C. Alexander's Thunderbolt walked over.—*Free Handicap Sweeps.* Baron Rothschild's North Lincoln and Mr. W. S. S. Crawford's Tightrope divided the forfeit. *Sweeps.* Mr. A. Nichol's The Wizard received forfeit of the Duke of Bedford's Orlando.

Thursday.—*Handicap Sweeps.* Mr. R. Ten Broeck's Pomona beat Busy Bee, Carlotta, and 4 others.—*Match.* Baron Rothschild's North Lincoln beat Actæon.—*Handicap Sweeps.* Mr. Dixon's Neophyte beat Error, Montebello, and 6 others.—*Sweeps.* Mr. Ten Broeck's Rattlesnake beat Confusion, Antonio, and Buttercup.—The *One Thousand Guineas Stakes.* Lord Derby's Sagitta beat Aurora, Sir J. Hawley's f., Golden Pippin, and 9 others.—*Handicap Plate.* Mr. G. Bryan's Precursor beat Starke, The Tocher, Plumper, and 8 others.—The *Newmarket Two Years Old Plate.* Mr. Saxon's Big Ben beat Walloon, Polyolbion, and 20 others.—*Sweeps.* Mr. Merry's Special License beat Princess.—*Sweeps.* Mr. Merry's Trovatore walked over.—*Match.* Mr. Savile's Parmesan received forfeit from Vicar of Bray.

Friday.—(By Electric Telegraph.)—*Sweeps.* Archeress beat Buttercup and 4 others.—*Match.* King of Diamonds beat another.—*Handicap Sweeps.* Mr. Merry's beat Henry Stanley and 7 others.—*Newmarket Stakes.* St. Albans beat Brother to Rainbow, Hartley Wintney, and 3 others.—*Sweeps.* Grenadier beat 2 others.—*Free Handicap Sweeps.* Mouravieff beat 2 others.—*Optional Selling Stakes.* Buttercup beat 3 others.

The Late Fight for the Championship.—It is understood that both parties are willing to renew the fight, and that a medical certificate is to be obtained as to the time necessary for Sayers to recover the use of his arm. Large sums of money have been received from various parts of the kingdom for a testimonial to Sayers, and on Saturday he visited the Stock Exchange, to receive a purse of £200 presented by the members. Nearly 200*l* has been subscribed for him in Liverpool, and the American captains of that port have commenced a subscription in favour of Heenan, which already reaches about 150*l*. It is understood that Sayers and Heenan will be invited to go down to Liverpool together and receive their respective testimonials personally.

Visit of the All England Eleven to Australia.—It is understood that a liberal offer has been sent from Melbourne to the All England Eleven, who last year gained such honours in America, inviting them to play a series of matches in the Australian colonies.

The Great Boat Race for £200.—This rowing match between Harry Clasper of Newcastle and George Drewitt of Chelsea took place on Tuesday on the Tyne, and terminated in favour of Drewitt, who came in first by two lengths. Betting at starting was nearly level.

Obituary.

The Dowager Lady Kerrison died on the 20th inst. at her residence in Norfolk Street, Park Lane, in her 75th year. She was the daughter of the late A. Ellis, Esq., and married in 1819 the late General Sir Edward Kerrison, Bart., M.P., many years M.P. for Eye, who died in 1853. She was therefore the mother of Sir Edward C. Kerrison, the present baronet.

Lieut.-General Home Home, Colonel of the 56th Foot, died during the night of the 21st inst. very suddenly. He was apparently in perfect health in the evening of that day, but was found dead in his bed the next morning. General Home formerly served in the Guards, and was only appointed to the Colonelcy of the 56th Regiment within the last few months.

Professor Andrew Amos, Downing Professor of Common Law in the University of Cambridge, died on the 18th inst. at Downing College, Cambridge, at the age of 66. He was a son of the late Mr. James Amos, by the daughter of the late General Bonté. He was born in 1794, and received his early education at Eton, after which he proceeded to Trinity College, Cambridge, where he graduated B.A. as 14th wrangler in 1815, Sir John Herschel and the late Dean Peacock being senior and second wranglers; he was subsequently elected fellow, and for many years held the auditorship of the estates belonging to his college. In 1818 he was called to the bar at Lincoln's Inn, and for some years went the Midland Circuit. At various times he held the Recorderships of Oxford, Newcastle, and Banbury, and was one of the commissioners for the amendment of the criminal law. He also held for some years the post of legal member of the Supreme Council of India, in which he succeeded the late Lord Macaulay. Soon after his return to England he became professor of Law in the University of London, and for the last few years of his life held the Downing Professorship of Common Law in the University of Cambridge. He married in 1826 the daughter of the Rev. Professor Lox, by whom he has left issue. He resided at St. Ibbs, near Hitchen, and was an active magistrate for the county of Herts.

BIRTHS.—On the 19th inst, at Packhall, the Countess of Dartmouth, of a son, stillborn—18th inst, at Woolaston, the Countess of Verulam, of a son—14th inst, at 80, Princes Gate, the Lady Ulrica Thynne, of a son—21st inst, at Arklow House, Connaught Place, Lady Mildred Beresford Hope, prematurely, of a daughter, who only survived a short time—25th inst, at 7, Hamilton Place, the wife of the Hon. and Rev. Francis Byng, of a son—19th inst, the Hon. Mrs. Beauchamp, of a son—22d inst, at Ince Blundell, Lancashire, the wife of T. W. Blundell, Esq., of a son.

MARRIAGES.—On the 23d inst, by special license, at St. Mary's Church, Bryanston Square, Lieutenant Colonel Lord Adolphus Vane Tempest, M.P., to the Lady Susan Pelham Clinton, only daughter of his Grace the Duke of Newcastle—24th inst, at St. George's, Hanover Square, the Rev. William Vincent, to Lady Margaret Erskine, youngest daughter of the late Earl of Buchan—19th inst, at Melksham Church, the Hon. Henry George Roper Curzon, only son of Lord Teynham, to Harriet Anne Lovell, youngest surviving daughter of the late Rev. Thomas Heathcote, of Shaw Hill, Wilts—19th inst, at St. James's Church, Flockton cum-Delby Grange, Faulkiner Chute Sandes, Esq., Co. Kerry, Ireland, to Amelia, third daughter of Sir John Lister Kaye, Bart., of Denby Grange, Yorkshire—24th inst, at St. Peter's Church, Eaton Square, Charles Elphinstone Dalrymple, Esq., fourth son of the late Sir Robert Dalrymple Horn Elphinstone, Bart., of Horn and Logie-Elphinstone, to Christian, eldest daughter of the late William Cuming-Skene-Gordon, Esq., of Pitlurg and Parkhill, Aberdeenshire—24th inst, at St. James's, Piccadilly, the Rev. John R. Errington, M.A., vicar of Ashburne, Derbyshire, to Charlotte Georgiana Amelia, only daughter of Sir Francis Shuckburgh, Bart., of Shuckburgh, Warwickshire—19th inst, at Trinity Church, Chelsea, Frederick S. Corrance, Esq., eldest son of Frederick Corrance, Esq., of Parkham Hall, Suffolk, to Frances Maria, second daughter of the late Captain Du Cane, R.N., of Braxted Park, Essex—24th inst, at Bovey Tracey, Devon, George F. Carlyon Simmons, Esq., of the East Kent Regiment of Militia, and of Trevella House, Cornwall, to Elizabeth Caroline Elliott Manning, youngest daughter of the late Major Manning, Bengal Army, and only child of Lady Farrington.

DEATHS.—On the 19th inst. at 38, Upper Grosvenor Street, Percy Windsor, the infant son of the Hon. Robert Charles Herbert, aged 5 months—15th inst, at Warsop Rectory, Nottinghamshire, the Rev. Alleyne FitzHerbert, third son of the late Sir Henry FitzHerbert, Bart., aged 44—13th inst, at Lowesby Hall, Leicestershire, of scarlet fever, Mary Elizabeth Audrey, eldest child of Sir Fred. Fowke, aged 9—15th ult, whilst on the march from Belgaum to Poonah, after a few hours' illness, Captain Fox Maule Ramsay, H.M.'s 56th Regt., son of the late Sir Alexander Ramsay, Bart., of Balmain, in the county of Kincardine, aged 35—19th inst, at Louth, Lincolnshire, Margaret Boswall Loft, widow of Thomas Capel Loft, Esq., 92d Highlanders, and daughter of the late William Alexander Martin, Esq., W.S., Edinburgh—15th. inst, at Overton House, Shropshire, Charlotte Margaretta, wife of Richard Betton, Esq., and youngest daughter of the late Colonel Salwey, of Moor Park, aged 51—21st inst, at King William Street, Strand, of bronchitis, Charles Frederick Molini, the Italian bookseller, aged 71.

Markets.

COVENT GARDEN.—April 28.

Vegetables improve—but slowly—both in quality and quantity. Pine Apples and Grapes have not altered since our last. Good Apples and Pears are very scarce. Oranges are plentiful and cheap. Spanish Hazel Nuts for planting fetch 16s. per bushel. Cobs realise 1s per lb. Rhubarb from the open ground is now furnished in large quantities. Parsley is cheaper, but still dear. Green Peas may be obtained. Potatoes realise 4s. 6d. a bushel. New frame ones may be had at from 3s. to 5s. per pound. Mushrooms can still be obtained in small quantities. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, Geraniums, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Pears, per doz., 6s to 10s
Grapes, per lb., 12s to 20s	Oranges, per 100, 2s 6d to 8s
Strawberries, p. oz., 1s 6d to 2s 6d	Lemons, per 100, 5s to 8s
Apples, per doz., 2s to 6s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 6s to 10s	Cucumbers, each, 1s to 3s
Seakale, per basket, 2s to 3s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 6d to 1s	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Peas, p. half sieve, 10s to 12s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
	Garlic, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
Potatoes, p. ton, 90s to 100s	Endive, p. score, 1s to 2s
— per bus., 3s to 4s 6d	Horse Radish, p. bun., 1s 6d to 4s
— per cwt., 6s to 8s	Mushrooms, p. pott., 2s to 2s 6d
Carrots, per bunch, 6d to 8d	Parsley, p. 12 bunches, 4s to 8s
Turnips, per bunch, 5d to 7d	Savory, per bunch, 2d to 4d
Spinach, p. sieve, 4s to 5s	

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, April 26.

Prime Meadow Hay	80s	to 90s	Clover	100s	to 115s
Superior do. (old) ..	92	100	New Clover	—	—
Interior do.	60	75	Second cut do. ..	85	94
New do.	—	—	Straw	27	32
Rowen	70	75			

Davis & Co.

Cumberland Market, Thursday, April 26.

Sup. Meadow Hay ..	95s	to 105s	Interior Clover ..	80s	to 94s
Inferior do.	80	92	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover ..	100	11			

Joshua Baker.

Whitechapel, Thursday, April 26.

Fine old Hay	95s	to 100s	Fine old Clover ..	106s	to 112s
Inferior do.	70	84	Inferior do	92	100
Prime New Hay ..	—	—	Fine New Clover ..	—	—
Inferior do.	—	—	Fine 2d cut	95	100
Straw	27	32	Inferior do.	80	90

POTATOES.—Southwark, Monday, April 23.

During the past week the arrivals coastwise have been small, but the trade continues dull. The following are the quotations: York Regents, per ton, 90s. to 150s.; Lincolnshire do., 80s. to 100s.; Dunbar do., 100s. to 120s.; Perth, Forfar, and Fifeshire Regents, 80s. to 100s.; do. Rocks, 75s. to 90s.; do. Reds, 75s. to 90s.; Irish Whites, 70s. to 80s.; French Whites, 70s to 80s.; Belgian do., 60s. to 70s.

BRITISH WOOLS.—London, Friday, April 27.

We have no alteration to report in our market either as to supply or demand, consumers continuing to buy to meet their immediate requirements, and at former rates.

South down Hoggets	s.	d.	s.	d.	Leicest. Wethers	1 5 — —
	1	8	to 1	9	Ditto Hoggs ..	1 7 — —
Half-bred ditto	1	8	—	—	Combing Skins	1 2 to 1 6
Down Ewes	1	6	—	—	Blanket ditto .	0 6 — 0 10
Kent Fleeces	1	6	—	1 6½	Flannel Wool ..	1 2 — 1 6

Liverpool Foreign Sales.—The low wool sales have terminated; the high qualities at late rates, and the medium descriptions at an advance of from ½d. to 1d. per lb., and low wools in proportion.

COAL MARKET.—APRIL 26.

Tanfield Moor, 14s.; Walker Primrose, 14s.; Wylam, 16s.; Walls End Acorn Close, 21s.; Walls End Eden, 21s.; Walls End Northumberland, 17s. 6d.; Walls End Bell, 20s. 3d.; Walls End Belmont, 20s. 3d.; Walls End Braddyll's Hetton, 21s.; Walls End Framwellgate, 21s.; Walls End Haswell, 22s.; Walls End Hetton, 22s.; Walls End Hartlepool, 21s. 9d.; Walls End Heugh Hall, 21s.; Walls End Hunwick, 16s.; Walls End Kelloe, 21s. 3d.; Walls End South Hartlepool, 20s. 9d.; Walls End Thornley, 18s. 6d.; Walls End Trimdon Hartlepool, 21s. 6d.; Walls End Trimdon Thornley, 18s. 6d.; Walls End Thorpe, 21s. 3d.; Carway and Duffryn Malting, 23s.—60 ships at market.

HOPS.—BOROUGH MARKET, FRIDAY, April 27.

Messrs. Pattenden & Smith report that the market is very firm, with a tendency to advance; the bine is still very backward, on account of the wet winter and cold spring.

BUTTER MARKET.—April 27.

Best Fresh Butter .. .. 15s. per dozen lbs.
Second do. do. .. .. 14s. ,, ,,
Pork, 4s. 4d. to 5s. 4d. per 8 lbs.

METROPOLITAN CATTLE MARKET

MONDAY, April 23.

The supply of Beasts is rather shorter than on Monday last; trade is active, and full prices are readily obtained. Sheep are more plentiful; trade is slow, but there is not much alteration in prices. Good Calves are in demand. Lamb is lower. From Germany and Holland there are 220 Beasts, 1300 Sheep, and 89 Calves; from Scotland, 120 Beasts; from Norfolk and Suffolk, 2600; and 200 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools.	5	4	to 5	6
Best Short-horns	4	8	— 4	10	Do. Shorn ..	4	6	— 4	10
2d quality Beasts	3	4	— 4	4	Ewes & 2d quality	4	8	— 5	0
Best Downs and Half-breds ..	5	6	to 5	8	Do. Shorn ..	3	10	— 4	4
Do. Shorn ..	4	10	— 5	0	Lambs	6	0	— 7	4
					Calves	5	0	— 5	8
					Pigs	4	0	— 5	0

Beasts, 4050; Sheep & Lambs, 25,820; Calves, 160; Pigs, 350.

THURSDAY, April 27.

We have a few more Beasts than on Thursday last, and trade is not quite so brisk; prices are consequently scarcely so good. There is very little alteration either in the supply or in demand for Sheep. On the average quotations are rather lower. Lambs and Calves are selling about as on Monday. Our foreign supply consists of 120 Beasts, 1030 Sheep, and 278 Calves; and 125 Milch Cows.

Best Scots, Herefords, &c. ..	4	8	to 4	10	Best Long-wools . ..	..	to	..	
Best Short-horns	4	6	— 4	8	Do. Shorn ..	4	8	— 4	10
2d quality Beasts	3	4	— 4	4	Ewes & 2d quality ..	..	—	..	
Best Downs and Half-breds ..	5	6	— 5	8	Do. Shorn ..	4	0	— 4	4
Do. Shorn ..	4	10	— 5	0	Lambs	6	4	— 7	9
					Calves	5	0	— 5	6
					Pigs	4	0	— 5	0

Beasts, 1015; Sheep & Lambs, 6720; Calves, 355; Pigs, 160.

MARK LANE.—MONDAY, April 23.

The supply of English Wheat to this morning's market was moderate, and sold slowly at last Monday's prices. There was a tolerably fair attendance, but the bulk of the foreign arrivals being for millers' account, the demand was inactive, and prices remain nominally the same as last quoted. Barley is a slow sale at the prices of this day se'nnight. In the value of Beans and Peas there is no alteration. The Oat trade is quiet at the rates lately current. There is no alteration in the value of Flour.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	48	54	Red	48	50
— — fine selected runs..ditto	50	57	Red	50	54
— — Talavera	50	60			
— Norfolk	—		Red	—	
— Foreign	44	60			
BARLEY, grind. & dist., 24s to 31s..Chev.	38	45	Malting .	36	41
— Foreign..grinding and distilling	30	34	Malting .	35	43
OATS, Essex and Suffolk	19	24			
— Scotch and Lincolnshire..Potato	23	29	Feed ..	19	26
— Irish .....Potato	24	28	Feed ..	19	24
— Foreign.....Poland and Brew	24	26	Feed ..	20	25
RYE	35	38	Foreign .	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....30s to 40s....Tick	33	43	Harrow .	33	43
— Pigeon .....36s — 47s..Winds.	48	54	Longpod	—	
— Foreign ..... Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	36	38	Suffolk .	36	40
— Maple .... —s to —s ..... Grey	31	33	Foreign .	30	37
MAIZE .... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	40	46			
— 2d do..... ..... ditto	32	40	Country.	32	40
— Foreign .....per barrel	24	30	Per sack	30	37

FRIDAY, April 27.

The severity of the weather during the last eight days has continued unameliorated; on the 24th we had heavy snow and sleet; the wind which was previously westerly changed on that day to N.E., from whence it has since blown heavily; under such circumstances vegetation necessarily makes little progress, otherwise we hear few complaints. The accounts from Germany represent the crops as looking well on the ground, but in France they are less favourably reported of. The Wheat trade although somewhat inactive in the majority of markets has been generally firm, and prices unaltered. The high prices of hay and cattle food and want of grass, particularly in the North of England, in Scotland and Ireland, continue to affect favourably the value of spring corn, which has still an upward tendency, especially Oats; these are nearly everywhere quoted higher. Flour has been in steady demand at the rates of last week. From the South of Europe we have to report the arrival for the week of only 2 cargoes of Wheat, 5 of Maize, 1 of Barley, 1 of Rye, 1 of Linseed. The sales are equally trifling, and comprise Cavalla Maize at 38s. 6d. per 480 lbs., Danube Barley at 30s, Odessa at 29s. 6d, both per 400 lbs.; also 1 new Odessa Ghirka Wheat at 53s. 6d. per 492 lbs, all c. f. and i. to the United Kingdom. The arrivals of foreign Barley continue to be large, but of other grain they have been very small this week. The attendance at to-day's market was moderate. The English Wheat offered for sale was disposed of at Monday's prices; for foreign the demand was limited, but in the business transacted former rates were insisted upon. Barley, Beans, and Peas are unaltered in value. The Oat trade steady at the quotations of Monday last.

ARRIVALS FROM April 23 TO April 27.

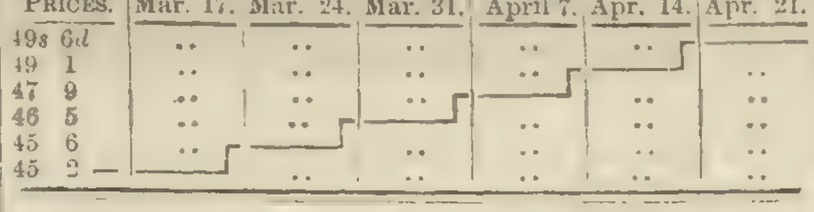
	Wheat.	Barley.	Oats.	Flour.
English ..	1550 qrs.	300 qrs.	60 qrs.	1310 sks.
Irish	— ,,	— ,,	110 ,,	— ,,
Foreign ..	3650 ,,	7080 ,,	3520 ,,	730 ,,
				— brls.

LIVERPOOL, Tuesday, April 24.—We had a good attendance of both town and country millers and dealers at our Corn Exchange this morning, and Wheat met a fair consumptive demand at the extreme rates of last market day. Flour also steadily supported previous quotations. Indian Corn was held firmly at the advance of fully 6d. to 9d. per qr. established yesterday, which had the effect of checking business. Oats were the turn dearer with a good inquiry, but Oatmeal was not much looked after. Beans, Peas, and Barley each commanded a fair share of attention at fully previous rates. The market ruled steady throughout.

FRIDAY, April 27.—The grain market is firm without much activity. Wheat in steady demand at Tuesday's rates. Flour was also in good request. Oats 1d. dearer. Indian Corn and Beans quiet, and prices a shade easier. Other articles without change

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Mar. 17..	45s 2d	36s 5d	23s 1d	34s10d	39s 7d	37s 7d
— 24..	45 6	36 11	23 4	32 0	39 3	37 7
— 31..	46 5	37 2	24 1	36 9	39 11	38 7
April. 7..	47 9	36 4	23 7	31 8	40 2	38 3
— 14..	49 1	37 2	24 2	36 10	39 9	38 3
— 21..	49 6	37 6	24 2	32 11	42 0	39 2
Agg. Aver.	47 8	36 11	23 9	34 2	40 1	38 3

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.



WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

TO SHOPMEN.

WANTED, by the Advertiser, a person who is thoroughly acquainted with every department of the Seed Trade to Take Charge of an extensive Wholesale and Retail SEED BUSINESS in a large town in one of the western counties. A liberal salary will be given.—Applicants are requested to address their communications in the first instance to A. B., care of Messrs. Wrench & Sons, 39, King William Street, London, E.C.

WANTED.—A young man of some practice to take the Management of a Collection of Stove Plants and Ferns.—Apply personally or by letter, stating terms, to MILNE & CO., the Nursery, Wandsworth Road, S.

WANTED, an experienced WORKING GARDENER, married, to undertake the care of Greenhouse, Vines, Flower and Kitchen Gardens, Pasture Land, Woods, Cows, and Sheep. Good character indispensable.—Apply to Miss COPLESTON, Offwell House, Honiton, Devon.

WANTED, A GARDENER, who understands Flower and Kitchen Gardens, Forcing, &c. A young man preferred; if married, could rent a cottage in the parish near his work. Must be a Churchman and have received a good plain education.—Apply by letter to J. G. H., Princes Gate, London, S.W.

WANTED, IMMEDIATELY, a single young Man well up in the PROPAGATION and MANAGEMENT of SOFT-WOODED PLANTS and ROSES, to take charge of a few small houses in a large Nursery. Wages 15s. per week, with lodgings, to commence with.—B. C., Offord House, Barnsbury Park, Islington, N.

WANTED, in a large Garden, a young MAN acquainted with Gardening, requiring further improvement; also a handy LABOURER.—Apply to O. H. W., Mr. Limbs, Stationer, Worksop, Notts.

WANTED, A Lad, from 16 to 18, to fill the office of JUNIOR CLERK, in a Nurseryman's Counting House.—Apply by letter only, stating the wages required, to J. F., 82, Bishopsgate Street Within, E.C.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 30, single; thoroughly understands his profession. No single-handed place accepted. Character unexceptionable.—A. B., Mr. Jackson's Nursery, Kingston, Surrey, S.W.

GARDENER (HEAD).—Age 26, single; understands Early and Late Forcing of Pines, Vines, Flower and Kitchen Gardens. Three years' good character.—B. L. S., J. Petchey, Turnford, Hoddesdon, Herts

GARDENER (HEAD).—Age 27, married, no incumbrance; thoroughly understands his profession; Wife can take Poultry and Dairy. Good character can be given.—M. P. Post Office, Barnet, Herts, N.

GARDENER (HEAD).—Age 32, no incumbrance; has a thorough practical knowledge of Pines, Vines, Melons, and Cucumbers, Flower and Kitchen Gardens.—J. R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD).—Age 28, married, without incumbrance; has a thorough knowledge of Pines, Vines, Peaches, Melons, Cucumbers, and the various branches of Gardening.—G. F., 1, Alfred Place, Camden Road Villas, N.W.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; understands his profession in all its branches. Can undertake and manage Meadow Land. Has four years' character.—G. B., Mr. L. Anderson's Nursery, Teddington, Middlesex, S.W.

GARDENER (HEAD).—J. BLACKWELL (age 28), Gardener to the Hon. C. C. Neville, Heydon House, Royston, begs to offer his services to any nobleman or gentleman wanting a good Practical Working Gardener. Good character. Wages 60l. a year, without a cottage.

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The Gardeners' Chronicle Newspaper.

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THE QUARTERLY REVIEW, No. CCXIV., is published THIS DAY.

CONTENTS:

I. LABOURERS' COTTAGES.
II. BRITISH & CONTINENTAL NOBILITY.
III. MADAME RECAMIER.
IV. THE BAR OF PHILADELPHIA.
V. NOTES ON NURSING.
VI. FOX HUNTING.
VII. RECOLLECTIONS OF C. R. LESLIE, R.A.
VIII. THE BUDGET AND THE REFORM BILL.

JOHN MURRAY, Albemarle Street, W.

News of the Week.

IN the House of Lords on Friday, on the motion for the second reading of the Charitable Uses Bill, the object of which was to amend the law of mortmain by abolishing certain obsolete provisions, Lord ABINGER moved, as an amendment, that the Bill be read a second time that day six months. After a short discussion the amendment was adopted without a division, and the Bill was consequently lost. On Monday the Earl of CLANCARTY's motion for the copy of the address presented to the Lord-Lieutenant in 1859 by the Irish Roman Catholic Prelates in opposition to the system of national education was agreed to, after a declaration from the Earl of CARLISLE that it is the intention of the Government to adhere firmly to the system, their great object being to give a good secular education, with the opportunity, but without the compulsion, of religious teaching. The Marriages (England and Ireland) Bill and the Divorce Court Bill were read a third time and passed. On Tuesday Lord LYNDHURST called attention to the state of the naval reserve, and asked from the Government a statement of its present condition and probable progress. The Duke of SOMERSET, in reply, stated that during the last eight months more men had been employed at the dockyards than at any previous period, not excepting that of the great Continental war. Exclusive of block ships or sailing vessels, we had afloat 50 ships of the line, 30 frigates, 17 corvettes, 88 sloops, and 26 smaller vessels, 24 special gunboats and 340 ordinary gunboats. The French had 33 ships of the line, and 8 building, 38 frigates, and 12 building, and about 140 sloops. As to the reserve, the naval volunteers already amounted to 1000 men, and the number was rapidly increasing; the Coastguard now numbered 6862; and the Coastguard volunteers numbered 7000 men, all in a state of the highest efficiency. The actual available reserve at the present moment was 14,850 men, in addition to which upwards of 8000 boys were educating for the Navy, and would in time become first-rate seamen. On Thursday Lord CHELMSFORD moved that the House go into committee on the Selling and Hawking Goods on Sunday Bill, the object of which is to put a stop to Sunday trading in the metropolis after 9 in the morning. The Earl of ST. GERMANS moved as an amendment that the House go into committee on the Bill that day six months. After some discussion the amendment was negatived by 54 to 25. The House then went into committee, after which the further consideration of the clauses was postponed till Monday.

In the House of Commons on Friday, on the order of the day for reading the Church Rates Abolition Bill, Mr. WHITESIDE moved as an amendment that the Bill be read a third time that day six months. Mr. BRIGHT opposed the amendment; Mr. DISRAELI supported it. On a division the amendment was negatived by a majority of 9, the numbers being 234 to 226. The Jews Act Amendment Bill was read a third time and passed. On Monday the adjourned debate on the Reform Bill was resumed by Mr. BENTINCK in opposition to the Bill, which was also opposed by Lord J. MANNERS, Col. P. HERBERT, Mr. B. COCHRANE, and Mr. DU CANE, and supported by Mr. HODGKINSON, Mr. CAIRD, Mr. P. URQUHART, Mr. CLAY, and Mr. JOHN LOCKE; while Mr. WALTER and Mr. A. MILLS, without supporting the Bill, expressed their opinion that an endeavour should be made to improve it in committee. The debate

was then again adjourned. On Tuesday Sir C. NAPIER moved an address to the QUEEN, regretting the incompleteness of the present naval reserve, and praying HER MAJESTY to give directions that the coast-guard should at once be completed to 12,000 seamen, as recommended by the Royal Commission. A long discussion on the state of the Navy ensued, in which Lord C. PAGET made a statement similar to that made by the Duke of SOMERSET on the same evening in the House of Lords, and elicited from Sir J. PAKINGTON, Mr. CORRY, Sir M. SEYMOUR, and other members an expression of their satisfaction at the steps taken by the Board of Admiralty for carrying out the recommendations of the Royal Commission. Sir C. NAPIER also declared himself satisfied with the result of the debate, and withdrew his motion. Mr. F. PEEL, as chairman of the Berwick election committee, moved an address for a Commission of Inquiry into the bribery alleged at that election. After some discussion the motion was agreed to, as was also another motion, directing the prosecution of one of the witnesses before the Committee for perjury. Mr. CARDWELL obtained leave to bring in a Bill for taking the census of Ireland; and the Customs Bill was read a third time and passed. On Wednesday Lord RAYNHAM moved the second reading of the Aggravated Assaults Acts Amendment Bill, the object of which is to give the magistrate a discretionary power to order corporal punishment to the extent of 50 lashes for the first assault perpetrated on women and children, with 12 months' imprisonment and 150 lashes on a repetition of the offence. Mr. CLIVE moved, as an amendment, that the Bill be read a second time that day three months. After some discussion the amendment was negatived, on a division, by 109 to 85, and the Bill was read a second time. The Malicious Injuries to Property Act Amendment Bill was also read a second time. On Thursday the adjourned debate on the Reform Bill was resumed by Mr. MACAULAY in opposition to th Bill, which was also opposed by Mr. GREGORY, Mr. LONGFIELD, Mr. KENDALL, Sir J. RAMSDEN, Mr. WALPOLE, and Mr. COLLINS, and supported by Mr. D. SEYMOUR and the CHANCELLOR of the EXCHEQUER. The second reading was then put and carried without a division. Lord J. RUSSELL thereupon stated that in the present state of public business the committee on the Bill could not take place before Whitsuntide, and fixed for that purpose the 4th of June.

A despatch from Madrid announces that a general amnesty to all concerned in the late Carlist insurrection has been published, and that the Count de MONTEMOLIN has consented to abandon his pretensions to the throne, on the understanding that the QUEEN restores him to his rank at the Court of Madrid as an Infante of Spain.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Buckingham Palace. On Friday morning the Queen and Prince Consort, accompanied by Prince Alfred, Princesses Alice and Helena, visited the Gallery of the Society of Water Colours in Pall Mall. The Queen and Prince Consort, accompanied by Prince Alfred and the Princess Alice, afterwards rode on horseback. In the evening her Majesty had a dinner party. On Saturday morning the Queen, accompanied by Prince Arthur and Princess Alice, took a carriage drive. In the afternoon her Majesty held the second drawing room of the season in St. James's Palace, at which 170 ladies had the honour of being presented. The Queen afterwards took a drive in a carriage and four, accompanied by Prince Arthur and the Princess Alice. The Prince Consort rode on horseback. The Duchess of Kent, accompanied by the Princess Helena, took a carriage drive. In the evening her Majesty had a dinner party. On Sunday morning the Queen and Prince Consort, Princes Alfred and Arthur, the Princesses Alice, Helena, and Louisa attended Divine service in the private chapel, Buckingham Palace. The Rev. W. H. Brookfield preached the sermon. On Monday morning the Queen and the Prince Consort, accompanied by the Princess Alice, rode on horseback. Professor Owen delivered the third of his series of lectures on "Natural History" at Buckingham Palace before the Prince Consort and the Royal family. Prince Alfred visited Woolwich dockyard and the private shipbuilding yards at Blackwall. In the afternoon the Queen and Prince Consort, accompanied by the Princess Alice and Prince Leopold, took a drive in an open carriage and four. In the evening her Majesty had a dinner party. On Tuesday the birthday of Prince Arthur was kept privately at Buckingham Palace, owing to the mourning for the late Prince of Hohenlohe Langenbourg. The Prince Consort rode on horseback. The Duke de Nemours, accompanied by the Princesses Marguerite and Blanche, visited the Queen and the Duchess of Kent. In the afternoon the Queen and Prince Consort, accompanied by the Princess Louisa, took a drive in a carriage and four. In the evening the Princess Alice, Prince Alfred, and the Princesses Helena and Louisa attended the performance at the Haymarket Theatre. Prince Arthur and Prince Leopold attended the performance at the Olympic Theatre. On Wednesday morning the Queen and Prince Consort, accompanied by the Princess Alice, Prince Alfred, and the Princesses Helena and Louisa, visited the Exhibition of the New Society of Painters in Water Colours in Pall Mall. The Prince Consort afterwards rode on horseback. In the afternoon the Queen, accompanied by the Princess Alice and Prince Alfred, took a drive in a carriage and four. The Prince Consort rode on horseback. In the evening her Majesty had a dinner party. On Thursday morning the Queen and the Prince Consort, accompanied by Princes Alfred and Arthur, and the Princesses Alice, Helena, and Louisa, visited the Exhibition of the Royal Academy. Professor Owen delivered at Buckingham Palace his fourth lecture on Natural History before the Prince Consort, Prince Alfred, the Princess Alice, and other members of the Royal family. In the afternoon the Queen, accompanied by the Princesses Alice and Helena, took a drive in a carriage and four. The Prince Consort rode on horseback. Prince Alfred left the Palace for Portsmouth to rejoin his ship. In the evening the Queen and Prince Consort honoured the performance at the Haymarket Theatre with their presence.

PRINCE ALFRED arrived at Portsmouth on Thursday afternoon and rejoined the Euryalus, which proceeds immediately to the Cape of Good Hope.

COURT ARRANGEMENTS. — According to preseut arrangements the Court will return to Windsor on Saturday, the 2d of June. Her Majesty will honour with her presence the Ascot races, which take place in the following week, and the usual hospitality of the Court will be dispensed to a large circle of visitors who will be invited on the occasion.

THE EX-ROYAL FAMILY OF FRANCE.—On Thursday the 26th ult., the members of the ex-royal family of France met at Orleans House, Twickenham, for the purpose of celebrating the 79th birthday of the Countess de Neuilly. Later in the day all the family assembled at Claremont. The Duke de Montpensier and suite took their departure from Southampton on Tuesday in the Peninsular and Oriental Company's steamer Euxine, on their return to Cadiz.

MINISTERIAL ARRANGEMENTS.—The Duke of Argyll will for the next three weeks discharge the duties of Postmaster-General, in addition to those which already devolve upon him as Lord Privy Seal. The arrangement is intended to meet the contingency that Lord Elgin may receive in Egypt the intelligence that the Emperor of China has acceded to the demands of the allied Powers, as proposed to him by the resident Ministers. In that case Lord Elgin will return to England and resume his duties at the Post Office. If at the expiration of three weeks Lord Elgin has proceeded on his mission to China, a successor will be appointed to the office of Postmaster-General.

PARLIAMENTARY MOVEMENTS. — The election for Berkshire, vacant by the death of Capt. Vernon, took place on Wednesday, when Mr. Richard Benyon was elected without opposition.

VICTORIA CROSS.—The Queen has conferred the Victoria Cross on Mr. George Bell Chicken, of the Indian Naval Brigade, for his great gallantry at Suhejnee, near Peroo, during the Indian mutiny in September, 1858.

NATIONAL RIFLE ASSOCIATION.—The Queen has given 250*l.* as a prize to be competed for by Volunteers at the meeting of the Association, to be held on Wimbledon Common on the 2d July; and the Prince Consort has given 100*l.* as a prize to be competed for by all comers of all nations. There are to be six ranges, one of 300, one of 500, one of 600, one of 800, one of 900, and one of 1000 yards. The shooting at 300 yards is to be off the shoulder; at the remaining five ranges it is to be from the knee—the Hythe position.

Foreign.

FRANCE.—The *Moniteur* of Wednesday published a note of M. Thouvenel of April 7, relative to the neutralisation of Savoy. In this note M. Thouvenel contests the pretensions of Switzerland, and declares that France fully accepts the execution of Article 92 of the Final Act of Vienna. The *Moniteur* of Thursday published a note of M. Thouvenel, dated April 16, proving that the annexation of the neutralised districts of Savoy to France will not change the situation of Switzerland. The *Moniteur* has also published a telegraphic despatch from Chambéry announcing that the definitive result of the vote of Savoy was proclaimed on Sunday, by the Court of Appeal, in the midst of the most enthusiastic cheers of the population. The numbers for annexation were 130,533 against 235; 4610 having abstained from voting, and 71 bulletins were null. Another telegraphic despatch from Nice states that the Royal Court has in like manner proclaimed the result of the vote there, the numbers being as already stated. It is understood that the journey of the Emperor and Empress to Savoy will be undertaken sooner than was expected, and orders have already been given to the Mediterranean Railway Company to prepare the imperial train. The Emperor had at first intended to embark at Toulon, but it is now said that their Majesties will embark at Marseilles in the Aigle yacht and proceed direct to Nice, where preparations have been already made for their reception. From Nice the Emperor and Empress will proceed to Puget-Theniers and Guillaume. The entrance into Savoy will be by Modena or Lanslebourg, after which the Court will proceed to St. Jean de Maurienne, Aiguebelle, Albertville, and Moutiers, and return to Chambéry, Aix-les-Bains, Annecy, and perhaps Bonneville and Thonon, returning by Lyons. This journey will be made with a certain degree of pomp; several packets with numerous invited guests on board will accompany the imperial yacht from Marseilles, and escort her as far as Nice.—A debate of some interest took place in the Senate on Friday, on a proposition of Count Segur d'Aguesseau, with a view to modify the 38th article of the internal rules of the House, giving the Senate power, when it so desires, to publish its debates and report the speech in the first person. The motion was carried, on a division, by 78 votes to 22. The project of law concerning the tariff for wools, cottons, and raw materials was adopted by the Legislative Body on Wednesday by 249 to 4 votes. Mr. Cobden has arrived in Paris, where he will remain during the negotiation of the convention referred to in the Treaty of Commerce with England. He will be assisted by the two other Commissioners, Messrs. Ogilvie and Malet.—The Emperor had approved the model of a gunboat constructed on a system to be propelled without steam, and has ordered boats to be built on the plan. The power which is intended to be substituted for steam is hot air; and it is said that it will produce as much rapidity and be far more economical than steam. It is calculated that the yearly saving in the cost of fuel for the French navy will be about 80,000,000f., and that the combustible used for cooking on a voyage will nearly suffice to propel the vessel, and boilers will be dispensed with. The experiments are said to have succeeded so well that in addition to the gunboats now nearly completed a large vessel, the Reine Hortense, will be fitted to receive the new machinery. The inventor of this power, which may effect another revolution in navigation, is a French engineer employed at Lyons. The machinery, which has been made at Lyons, is soon expected in Paris, and great results are anticipated from the invention.

SPAIN.—A decree granting a general amnesty has been published, the only condition attached to it being that parties who avail themselves of it must take the oath of allegiance to Queen Isabella. Count de Montemolin and his brother Ferdinand are to take their departure from Spain, and by taking an oath of fidelity to the Queen, are to resume their rank as princes of the blood royal at the Court. The Cortes have been convoked for May 25. The son of General Ortega, after having petitioned in vain for his father's life, has left Spain for Rome, to take service under General Lamoricière. The remains of Vice-Admiral Don Gabriel Ciscar were removed on the 21st ult. with great pomp from the cemetery of Gibraltar to the Spanish corvette Villa de Bilbao, for the purpose of being conveyed to Spain in accordance with the request of the Spanish Government. His Excellency Gabriel Ciscar was well known in the literary warld for his numerous valuable writings, which obtained for him the various high offices he held in Spain from the age of 18 till that of 63. He served in the Spanish navy from the class of midshipman to that of its highest rank, and for many years filled the office of Chancellor of State to his Catholic Majesty.

SPAIN AND MOROCCO.—The official *Gazette* announces that the treaty of peace between Spain and Morocco was signed on the 26th inst. Morocco is to pay the indemnity for the expenses of the war during the course of the year. Being desirous of regaining possession of Tetuan, she has decided to accelerate the time of payment. The Basque Division will meanwhile remain at Tetuan. Marshal O'Donnell left Tetuan on the 27th and has arrived at Aranjuez on his return to Madrid.

PORTUGAL.—The new Ministry has been formed as follows:—President of the Council, Senhor Aguilar; Minister of War, Viscount da Luz; Minister of Marine, Senhor Vargaz; Minister of Finance and Foreign Affairs, Senhor Cazal Ribeiro.

HANOVER.—In the sitting of the Hanoverian Diet on Tuesday the Military Committee moved that the plan proposed by Government for the fortification of the coast should be rejected, and the necessary supplies refused.

SWITZERLAND.—The *Bund* contains a statement to the effect that a proposal had been made by France to Switzerland for the latter Power to relinquish her rights in reference to the neutralised districts of Savoy in consideration of an indemnity of 50,000,000f. The same journal also states that the Federal Council has

received no official notification of the assembling of a Conference at Paris after the ratification of the Treaty of Turin by the Sardinian Parliament. Two thousand men of the Federal troops occupying Geneva will be disbanded on the 10th inst, but will be replaced immediately. The Federal Council has resolved on the instructions to be sent to M. Kern, in reference to the Conference.

Prussia.—The Military Commission of the Chamber of Deputies resolved at its last sitting to propose the granting of a credit of 5,500,000 thalers for one year, to be applied to army reforms.

Austria.—A report is current at Vienna that the Emperor intends to undertake rather a long journey abroad, and confide the regency during his absence to the Archduke Maximilian, who is to possess extraordinary powers. The rumour has lately assumed a more precise character; and has acquired a certain degree of credit from the fact that the Archduke has just been recalled to Vienna. It is also reported that the Archduke Stephen, who in 1847-9 was Palatine in Hungary, and for 11 years has been residing in Nassau, will shortly return to Austria, and resume his office of Palatine. The official *Gazette* of Friday publishes some additional facts in connexion with the death of Baron Bruck. It states that in the evening of the 20th ult. Baron Bruck was heard as a witness in the process relative to the frauds of the late General Eynatten. His examination gave rise to further inquiries, which would probably have led to his confrontation with other witnesses and other accused parties. Under these circumstances the Emperor issued an autograph letter on the 22d ult., in which his Majesty said:—"I temporarily remove you from office, according to your request, and provisionally transfer the charge of the Ministry of Finance to the Councillor of State von Plener." This autograph letter was delivered to Baron von Bruck on the evening of the 22d ult., and on the following morning the Baron was found in bed bleeding from wounds in his throat and wrists. On the 25th a judicial *post mortem* examination took place, the result of which was the conclusion that Baron Bruck, being in a state of great distress of mind and of despondency, committed suicide. The question whether he had previously taken strychnine or some other poison, as suspected, was reserved till the contents of the stomach had been analysed by sworn medical authorities. The body lay in state on the 25th and the two following days, in an open coffin, in the principal Protestant church at Vienna. It was dressed in his minister's uniform, and all his decorations were placed on two cushions at the foot of the coffin. A great crowd assembled to see the body of the ex-Minister removed from the church to the cemetery, but very few of his friends were present. In the church was the Turkish Ambassador, but no other member of the diplomatic corps. None of the Ministers attended the funeral, and the *employés* in the different Government offices received orders not to appear at it in uniform. When the *cortége* arrived at the cemetery it was found that some friendly hand had covered the bottom of the grave with beautiful flowers. Since the death of Baron Bruck the Emperor has been carrying on the investigation into the late frauds with great energy. Though the details of the frauds are still kept strictly secret by the Government, it is already known that the amount is enormous; that they extended over the greater part of the Empire; and that the parties implicated are numerous and of every station in every department of Government, from the Chancellor of the Exchequer at Vienna to the meat-contractor who drove the same oxen five times within the walls of Verona. The Chevalier Revoltella, an intimate friend of Baron Bruck, and the leading merchant of Trieste, with Messrs. Brambilla and Mandolino, two other commercial magnates, have been apprehended. Arrests have been made in other parts of the Empire, and everywhere the accused have been treated with extreme severity. Commissions sit in Vienna, Prague, and Trieste to examine the documents which can throw light on these transactions, and it is said that for weeks before the apprehension of Revoltella and his companions their books and papers were under the scrutiny of emissaries from Vienna. The *Wiener Zeitung* of Wednesday contains an autograph letter of the Emperor, dated the 26th ult., decreeing that the ecclesiastical affairs of the Evangelical portion of the army shall be under the management of military chaplains of both the Augsburg and Helvetic confessions, and that in time of war two Evangelical military chaplains are to be added to the clerical establishment in the hospitals of the operating armies. Prince Czartoryski has just died at Vienna. He was the brother of the prince of the same name living in Paris, and, as it is known, had claims to the throne of Poland. He was 87 years of age, and had lived for some years at Vienna in strict retirement.

Hungary.—Accounts from Pesth of the 30th ult. state that the requiem of the late Count Szechenyi has taken place without disturbance in the presence of 10,000 persons. An Imperial decree, dated the 22d ult., has been published in execution of Paragraph 4 of the Imperial Patent for the Settlement of Hungarian Protestant affairs. This decree orders that the branch of the Ministry of Public Worship, which is to consist of Evangelical co-religionists, shall be established immediately. All questions relating to Protestant, religious, and scholastic matters in other provinces are also to be referred to this branch of the Ministry, which will provisionally consist of three Councillors, who are already appointed.

Italy.—The King of Sardinia continues his progress in Central Italy. His Majesty arrived at Pistoja on Monday, and on the following day proceeded to Lucca and Bologna, where he was met by Count Cavour and M. Fanti. The inhabitants of the country everywhere gave the king an enthusiastic reception during his progress. The civil and military authorities of Bologna went to meet his Majesty, who was afterwards received by the clergy at the cathedral, where an immense crowd was assembled. *Te Deum* was celebrated, and in the evening the city was illuminated.—On Wednesday a splendid ball was given at the Theatre of Bologna in honour of the King, who was most enthusiastically received. A hymn was sung by 100 of the principal lady inhabitants. The number of persons present was about 4500. On the same day the Syndics of the Romagna presented addresses to the King, adding five millions of francs, as a voluntary contribution, towards the expenses of the state. The clergy of Bologna also presented an address to his Majesty. On Thursday his Majesty reviewed the troops and received two other addresses from the clergy of the Romagna. The assembling of the Chambers is to be adjourned until after the *fête* in commemoration of the establishment of the Constitution. The treaty of the 24th of March will be discussed after the boundaries of the two States have been regulated with France.—Pisa has just been the scene of a curious ceremony. In honour of the annexation of Tuscany, the municipality of Genoa made a present to the city of Pisa of the chains taken by the Genoese gallies from her ancient port, some 300 years ago, in the days when both Pisa and Genoa were free Republics. The rusty chains have now been hung up in the Campo Santo in company with the chains which in 1848 Florence gave up in like manner to her old rival.—Letters from Rome state that Prince Chigi, Colonel of the Papal Guard, had tendered his resignation, in order to take service as a private gunner. General Lamoricière returned to Rome on the 3d inst. The correspondent of the *Journal des Débats*, whose expulsion from Rome had been commanded by his Holiness, has obtained a delay of 20 days. It is believed that towards the end of June or the beginning of July the French troops will have completely evacuated Rome and the Roman territory.

Sicily.—The accounts from Sicily continue both serious and contradictory. After the recent execution of the 13 insurgents at Palermo, 26 Neapolitan soldiers were surprised and hanged by a band of insurgents at Carini. On the 18th the Royal troops attacked the insurgents who had intrenched themselves in that town. The fighting was most desperate, and continued during the 19th, 20th, and 21st. Reinforcements having then reached the Royal troops, they compelled the insurgents to retire to Partenico, leaving 250 killed behind them. The Royal troops had 300 killed; the number of wounded on both sides was considerable. The town of Carini, after having been pillaged, was set on fire. The Royal troops then returned by steamer to Palermo, upon which the insurgents were meditating an attempt. A fight between the insurgents and the soldiers has taken place at Alcano, and a column which left Messina on the 20th ult. was engaged in serious combat with the insurgents on the 21st and 22d at Galati, which town was destroyed. The Royal troops fell back upon Messina. Another column, under the command of General Letizia, had left Palermo in order to subdue Trapani, supported by two frigates. The latest news states that a Neapolitan General had been captured by the insurgents, that the seat of Government was about to be transfered to Messina, and that the garrison of Palermo, although numbering nearly 20,000 men, apparently feared to proceed into the interior, where the insurrection has again broken out.

Russia.—It appears from an official despatch from St. Petersburg that a conspiracy has lately been organised against the life of the Emperor, or at all events with a view of obliging his Majesty to abandon his policy of the emancipation of the serfs. 150 or 200 persons have been arrested at St. Petersburg, chiefly amongst the Noble Guard. Certain suspected regiments were sent out of the city, and replaced by other troops, while artillery was planted in various quarters of St. Petersburg, in order to check if necessary this planned military revolt.

The Crimea.—The following are the particulars of the outrages committed on the graves of our countrymen in the Crimea, and alluded to by Sir C. Wood on Friday in the House of Commons. On Cathcart's Hill, the beautiful large black marble cover on the tomb of Sir Robert Lydstone Newman, Captain of Grenadier Guards, has been removed by some parties, doubtless seeking for jewellery or other articles of value. The hinges on the gates have been partly hacked off, evidently for the paltry value of the copper: and the shot and shell placed over and around several of the graves by relatives and friends who had visited the spot, together with the large shot surmounting the corners of the wall enclosing the cemetery, and on each side of the gate, have all been stolen. In the Artillery graveyard they have disturbed the tablet from the tomb of Capt. W. K. Atlix, Aide-de-Camp to General Sir De Lacy Evans, and broken down the walls around the cemetery. In the graveyard of the Naval Brigade, the slabs that covered the grave of Commander Lacon Usser Hammett, of her Majesty's ship Albion, have been turned over and the body so entirely exhumed, that the bones as well as some remaining portions of the uniform were found scattered around the grave, which evidently had been opened only a few days before. Several other graveyards were found more or less in a very dilapidated state—the walls broken down in many places, and in some instances so much so that even the cattle have been found grazing within the inclosures. Lieut.-Colonel Gowen, the American contractor with the Russian Government for raising the sunken ships in the harbour, has entirely at his own expense and trouble already repaired and restored many of the English graves and cemeteries, as well as several of the French and Sardinian, and preserved them from further violation and decay.

Turkey.—The Grand Vizier Ruchadi is about to resign his post to Ali Pacha. Riza Pacha has caused the disgrace of Osman Pacha, Chief of the Palace, who in compensation has been appointed marshal. France claims 200,000fr. as indemnity for the widow Dumas, the innocent victim of the late popular aggression. France and England have also presented to the Porte a note drawn up in energetic terms, claiming 3,000,000fr. as indemnity for the massacres of Djedda. An immediate answer has been demanded, in default of which the Powers will obtain justice for themselves. The Duke of Brabant has been decorated with the Order of the Medjidie, and has received the diamonds of the decoration. His Royal Highness left on the 30th ult. for Venice in an English steamer which was offered to him by Sir Henry Bulwer. It was reported at Constantinople that Belgium had offered the Porte 40,000,000fr, for the Island of Cyprus.

India.—Telegraphic despatches reached town yesterday with news from Calcutta to the 7th and from Bombay to the 11th April. The following are the particulars:—

Calcutta.—The Bank of Bengal has reduced its rate of discount 1 per cent. all round. The disturbances among the indigo planters appeared to be subsiding. The Act enabling the Governor-General to exercise certain powers during his absence from Council is continued in force for three months.

Simla.—The Governor-General's camp was to break up on April 10, and the Governor-General and Commander-in-Chief were to reach Simla on the 11th.

Bareilly.—Khan Bahadoor has been hung.

Bombay.—It is reported that orders had been given in Bombay and Madras to suspend the despatch of troops to China, hopes being entertained of an amicable arrangement of the pending difficulties.

Japan.—The Japanese Ambassador arrived at San Francisco on the 28th ult., in the United States' steamer Powhattan, and was shortly to leave in the Roanoke for Washington, where Congress had voted 50,000 dols. for the reception of the Embassy. A Japanese servant of the British Minister at Jeddo was murdered shortly before the Powhattan left. The Minister took no official notice of the deed.

Australia.—Accounts from Melbourne to March 17 state that the state of trade was very unsatisfactory. Several failures had taken place, including Messrs. W. M. Bell & Co., Rae, Dickson, & Co., Henriquez Brothers, and Tickle. 118,000 ounces of gold had been shipped during the month. From Sydney the accounts state that the new goldfields were very productive, and attracting diggers from Victoria. Trade was brisk and the supply of wool plentiful. From Adelaide we learn that Parliament has been dissolved, and the election of new members was proceeding.

Mexico.—News from Mexico is to the 28th ult. The British Minister had proposed a truce for six months, and the election of a Congress by the different States, to be held at Jalapa, which is neutral ground, under the protection of the British Government. The Congress to frame a new Constitution, which should then be enforced. The clergy oppose this proposition. If his proposal is not acceded to, the British Minister will demand his passports to Vera Cruz, and will recognise the Government of Juarez.

United States.—President Buchanan had written a letter positively and peremptorily declining the use of his name for re-nomination. A resolution had been passed in the Senate at Washington for inquiring into the expediency of raising the Sardinian Mission to one of the first class. The President had transmitted to the Senate copies of additional correspondence with foreign Governments concerning the rights of American naturalised citizens abroad. It is conducted throughout in good temper, the United States in all cases repudiating the doctrine of perpetual allegiance. It appears from these documents that 12 years ago the British Government, at the instance of Mr. Bancroft, released two naturalised Irishmen, who were suspected of aiding in the rebellion, and engaged in treasonable practices. Lord Palmerston, however, declared that foreign born subjects of Great Britain who may have become naturalised in a foreign country, but who return to the United Kingdom, are as amenable as any other of her Majesty's subjects to any laws which may be in force either of a permanent or temporary nature. According to the Washington correspondent of the *New York Herald*, the San Juan affair was approaching a settlement, but on what basis is not stated. The Attorney-General, Mr. Black, had received and declined a challenge from ex-Governor Walker. A duel between Mr. Pryor and Mr. Potter, of the House of Representatives, had been prevented, the latter being bound over to keep the peace. The Charleston Democratic Convention was the topic which absorbed public attention

The treaty which had been concluded with Spain provides for the ascertaining and settling of all pending claims. Tornadoes in the west had done much damage to property. Several persons were also injured.

Parliament.

HOUSE OF LORDS.

FRIDAY.—Lord CRANWORTH moved the second reading of the *Charitable Uses Bill*, by which certain obsolete provisions were repealed of the Statute of Mortmain.—Lord ABINGER moved that the Bill be read a second time that day six months. After a short debate, the amendment was agreed to, and the Bill lost. The *Oxford University and the Enclosures Bills* were read a third time and passed. The *Marriages (England and Ireland) Bill* passed through committee. The *Irish Militia*.—In reply to Lord CLANRICARDE and CLANCARTY, the Earl DE GREY and RIPON stated that the Irish Government had communicated with the various lords-lieutenant in Ireland, and had ascertained that it was not necessary to postpone the training of the militia in consequence of the backward state of agricultural operations in that country.

MONDAY.—*Site of Smithfield*.—Lord GRANVILLE, in reply to Lord EBURY, stated that her Majesty's Government had entered into negotiations with the Corporation of London concerning the vacant site of Smithfield, the result of which negotiations, he said, would form a basis for a measure which would be soon laid before Parliament.—The *Church Rate Bill* was brought up and read a first time, when the Duke of MARLBOROUGH gave notice that he would oppose its further stages. *National Education in Ireland*.—The Earl of CLANCARTY moved for copies of the correspondence which has taken place between the Irish Roman Catholic prelates and the Lord-Lieutenant on the system of national education in Ireland. He contended that the system had proved a failure, and that its results were not commensurate with the expenditure incurred in maintaining it, and that the whole plan required the reconsideration of Parliament.—The Earl of CORK defended the system; and the Bishop of CASHEL warmly thanked the Government for their efforts to maintain it.—The Earl of CARLISLE said that it was the firm intention of the Government to adhere to the principle of the system, and to do everything in their power to give a good secular education to all who were willing to receive it, at the same time affording them the opportunity of obtaining religious instruction if they desired it.—The Earl of DONOUGHMORE thought that there were some inconveniences in the system, but that they arose rather from the opposition which it had encountered than from any inherent defect.—After some further observations from the Bishop of DERRY and Lord LIFFORD, the motion was agreed to. *Affairs of Savoy*.—Lord WODEHOUSE, in reply to Lord CLANRICARDE, stated that the Conference regarding the question of Savoy and the affairs of Italy was not yet agreed to, nor was it as yet definitely settled when it should meet, or what should be its basis. The *Trustees, Mortgages, &c., Bill* passed through committee. The *Marriages (England and Ireland) Bill* and the *Divorce Court Bill* were read a third time and passed.

TUESDAY.—*State of the Navy*.—Lord LYNDHURST called attention to the state of the naval reserve, and invited the Government to give an account of its present condition and probable future progress. It appeared that foreigners were better acquainted with the state of our navy than we were ourselves. Since the great continental war our navy had been comparatively neglected, and it was only from alarm at the enormous efforts of France that our Government at last roused itself from its supineness. Comparing the British with the French naval force, he contended that at present our own scarcely exceeded that of France. After enumerating the naval stations in which it was necessary that we should sustain our supremacy at sea, he observed that a disaster in the Channel could be repaired by France, but would be ruinous to England. The country could not rest satisfied while matters remained in their present position. He also quoted the authority of successive Lords of the Admiralty to show the difficulty which had been experienced in finding men for the navy without resorting to impressment. The regulations of the service also tended to discourage seamen from joining, for they were so numerous and complex that a lawyer even could not understand them. If he himself were of the proper age, and prepared to enter the navy, his first step would be to call in a respectable conveyancer to prepare an abstract of those regulations. He reprobated the efforts of political economists to keep down the expenditure of the army and navy in the vain hope of a perpetual alliance with France.—The Duke of SOMERSET trusted that it would not be supposed from the speech of the noble and learned lord that the present Government had reduced the naval strength of the country. During the last eight months more men had been employed in the dockyards than during any previous period—not excepting those of the great continental war. Exclusive of blockships or sailing vessels we had afloat 50 ships of the line, 30 frigates, 19 corvettes, 88 sloops, 26 smaller vessels, and 24 special and 350 ordinary gunboats. The French had 33 ships of the line and eight building, 38 frigates and 12 building, and about 140 sloops. As for our naval reserve, the coastguard now numbered 6862 men, and it was intended to increase it to 12,000. The naval coastguard volunteers amounted to upwards of 7000. There were but 1000 men in the naval reserve, but the scheme could scarcely be said to have as yet come into operation. The actual available reserve was 14,850 men. As to the regulations, they referred to different classes, and all that applied to the common seamen could be comprised in a single sheet of paper. He concluded by praising the high spirit of the navy, which, however it might show itself dissatisfied with petty expeditions, would never be found wanting upon great occasions.—After some observations by the Earl of HARDWICKE and Lord COLCHESTER in favour of impressment in case of need, the Duke of SOMERSET expressed his opinion that it would be only under circumstances of the direst emergencies that the Government would be justified in recommending such a course to her Majesty.—The LORD CHANCELLOR briefly stated that there was no doubt that, although the custom had fallen into disuse, the law in regard to impressment was as much in force as ever.

THURSDAY.—*Selling and Hawking of Goods on Sunday Bill*.—Lord CHELMSFORD moved that the House go into committee on this Bill, the object of which is to prohibit the sale of goods in certain portions of the metropolis after nine o'clock in the morning.—The Earl of ST. GERMANS objected to the Bill on the ground that it would produce a state of things worse than the present, and moved, as an amendment, that the committee be postponed for six months.—Lord TEYNHAM supported the amendment, and pointed out the evils which in his opinion would result from the partial action of the Bill.—Viscount DUNGANNON supported the Bill, as likely to check a practice which now prevented a great many persons from attending Divine Service.—The LORD CHANCELLOR recommended going into committee in order that the Bill might be reduced to a practical shape.—The Duke of MARLBOROUGH expressed himself in favour of the principle of the Bill, whether viewed in a moral, social, or physical aspect.—Lord CRANWORTH was not indisposed to go into committee; at the same time he could not consent to give the police the arbitrary power of seizing goods exposed for sale after 9 o'clock.—After a few words from the Earl of ELLENBOROUGH and the Bishop of LONDON in favour of the Bill, Earl GRANVILLE referred their lordships to an opinion expressed by Sir R. Mayne, Chief Commissioner of Police, that the provisions of the Bill never could be enforced, except at the cost of constant riots and conflicts between the police and the people. He was therefore opposed to any legislation of the description proposed.—The Earl of DERBY thought the Bill was deserving of support, as it was evident that the present law was altogether insufficient to suppress Sunday trading.—After a few words from Earl GREY, who suggested that the Bill should be referred to a select committee, the House divided, when the amendment was negatived by 54 to 25. The Bill was then committed *pro formâ*, on the understanding that the discussion would be taken a week hence.

FRIDAY.—The *Llandaff and Coulon Markets Bill*, after some opposition from Lord CHELMSFORD was read a second time. *The Army*.—The Earl of LUCAN called attention to the organisation of the infantry. Though at one time the navy obtained so great a preponderance that it was thought scarcely necessary to have a military force at all, he thought that it was now generally recognised that to ensure the safety of the country it was absolutely necessary to have an efficient army.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The China Telegram*.—In reply to Mr. DALGLISH, Lord C. PAGET said he had no reason to believe, from the last despatch received from Admiral Hope, that there was any truth in the telegram stating that two British frigates had been fired upon and sunk by the Chinese batteries at the mouth of the Pei-ho. *The Overland Passengers at Cairo*.—In answer to Mr. MILDMAY, Sir C. WOOD said that a very gross outrage had taken place in the mosque of the citadel at Cairo by British subjects, who had openly insulted the rites of the Mohammedan religion. The Pacha was present on the occasion, and he and his officers had acted in the most admirable manner. They had calmly requested the offenders to desist, and when the request was disobeyed, quietly removed them from the citadel, and, what was more difficult, protected them from the fury of the justly irritated mob. The consul had made an apology the next day, and proper means had been taken to prevent a repetition of the outrage. A despatch had also been sent to India ordering an inquiry for the purpose of ascertaining whether the offenders belonged to the Indian service.—In reply to Mr. D. GRIFFITH and Mr. S. FITZGERALD, Lord J. RUSSELL said, that with regard to the neutralised portions of Savoy, it was proposed that there should be a Conference of the Powers who had signed the Treaty of Vienna with the addition of Switzerland and Savoy; but the only question which France consented to submit to it was the reconciling of the 92d article of the Treaty of Vienna with the 2d article of the Treaty of Turin. The French Government certainly would not consent to the dismemberment of Savoy; but other measures might be adopted which it would be time enough to discuss when the Conference assembled. With regard to the time of assembling, France had objected that it would be premature to meet before the treaty was ratified by the Parliament of Sardinia, until which time it was not valid. With regard to the possession of the neutralised portion of Savoy, her Majesty's Government had expressed their opinion that there should be no civil or military occupation of those portions until the Conference was held. To this the French Government objected that such a course would not be in accordance with the treaty; that for every practical purpose there would not be any specific possession taken of the territory; but some authority must be established. Negotiations on that subject were still in progress. The Government of Russia took the same view with that of her Majesty.—In reply to another question, Lord J. RUSSELL said that he was sorry to state that many shocking violations had occurred of the *Graves of British Officers at Sebastopol*.—In reply to Mr. P. URQUHART, Mr. CARDWELL said that a Bill was in preparation to remedy the admitted evils of the present law of *Removal of Paupers from England to Ireland*.—On the order of the day for the third reading of the *Church Rate Abolition Bill*, Mr. WHITESIDE moved that the Bill be read a third time that day six months. He protested against any attempt to subvert the parochial system of England, which lay at the root of the social state of the country. The opposition to church-rates was due to the political, not to the religious, Dissenters. The old Dissenters had shown no hostility against the rate. The movement began in Manchester, and was continued on the narrow principles of that school. Its real enemies were those who looked to the destruction of the Church of England as a national church, and its total separation from the State.—Mr. BRIGHT argued, from the vast number of petitions which had been presented in favour of the Bill, that it was popular in its character, and not the result of the exertions of a few busy, meddling agitators. He contended that, if the voluntary principle were adopted by the Church, it would attain a much better position than it at present enjoyed, and that the contest which had been so long protracted should at length be put an end to.—Mr. DISRAELI said that so long as scruples of conscience had been the guiding motive of those who were opposed to church-rates, the House of Commons had shown an anxiety to remove a grievance and provide a practical remedy. But an experience of 30 years, during which the question had been agitated, had proved these pleas insincere, and rendered unavailing the remedies devised. The policy of Parliament at the present crisis in the world's history should be to refrain from tampering with the existing institutions of the country, and thereby weakening the social elements of society.—Sir J. TRELAWNEY replied, and the House divided, when the amendment was negatived by 235 to 226. The Bill was accordingly read a third time and passed.—Mr. BOVILL obtained leave to bring in a Bill to repeal so much of the *Statutes relating to Stockjobbing* as prevent persons selling and disposing of stock or other securities of which they are not possessed. The *Jews' Act Amendment Bill* was read a third time and passed.

MONDAY.—*Public Business*.—Lord PALMERSTON suggested that as there was now very little private business to dispose of, it would be desirable in future to commence public business at a quarter-past four o'clock.—Mr. DISRAELI intimated his assent to the suggestion, on the understanding that Ministers were to be in their places at the latter hour to answer questions. *Reform Bill*.—The adjourned debate on the second reading of the Bill for Improving the Representation of the People was resumed by Mr BENTINCK, who said that the Bill contained none of the elements of a Reform Bill. It did not attempt to deal with that enormous evil which had been revealed so frequently before election committees, nor did it propose to confer a franchise upon intelligence. It had been framed as if the whole country consisted of nothing but great towns and railways. It altogether ignored the rural districts, upon which every measure of reform must really hinge. In his opinion the county franchise ought to be lower than that in the towns, because the class who would be enfranchised would be better qualified for the privilege than the same class resident in boroughs. He recommended the Government to withdraw the Bill, as it was idle to attempt to legislate upon the subject until the House was in possession of full and reliable information.—Mr. WALTER denied that the labouring classes laboured under any of the grievances which Mr. Bright had represented, or that a reformed Parliament could do anything to improve their condition. They paid no direct, little local, taxation, and rather less than more than their share of indirect. He did not, however, wish to be understood as opposed to reform, and he thought it would be undesirable to disappoint the expectations of the public that some measure would be carried. He expressed his hope that the Bill might be so amended that, in the end, it would prove creditable to the fame of its author and worthy of a deliberative assembly like the House of Commons.—Lord J. MANNERS objected generally to the Bill, which he characterised as mischievous and abominable, and the effect of which, he believed, would be to lower the franchise to the level of bribery and corruption. It bore upon the face of it the evidence of carelessness and haste, and it could scarcely be otherwise when its author had undertaken to revise the constitution, and at the same time direct the foreign policy of the country in a period of the greatest political difficulty. He advised the noble lord to abandon the impossible task of endeavouring to do two things at once, and either to resign the seals of the Foreign Office or withdraw the Reform Bill.—Mr. HODGKINSON said that the measure was, in his opinion, wise and temperate, although he admitted that it might be improved by the introduction in committee of clauses giving the franchise to the ratepaying classes, whether householders or not.—Colonel P. HERBERT thought that there was no necessity for the Bill at all; but that, if there was to be a Bill, the measure before the House was about the very worst that could be devised.—Mr. CAIRD complained that justice had not been done to Scotland in the Bill, and that while little English boroughs like Cockermouth, with a population of 8000, had two members, great towns like Aberdeen and Dundee, with 80,000 or 90,000 inhabitants, had but one member.—Mr. B. COCHRANE opposed the Bill.—Mr. P. URQUHART was willing to accept the measure as a step in the right direction, although he considered it susceptible of improvement in many details, especially with reference to the redistribution of seats.—Mr. DUCANE expressed much mental bewilderment as to who were the supporters of the Bill, and asked Lord John Russell if he would point out who was to blame for the dead lock in which the question was now placed? The easy solution was, perhaps, to be traced to the circumstance that the House had refused to allow Lord Derby's Bill to go into committee. Had that Bill not been rejected, some concessions, including perhaps a 6*l*. franchise, might have been introduced which would have led to a settlement of the question. The present Bill was, in his opinion, a dangerous and revolutionary measure, the effect of which would be to establish a democracy to overpower property and intelligence.—Mr. CLAY said he could not quarrel with a Bill which would add from 1500 to 2000 electors to the borough which he had the privilege of representing. He was therefore prepared to accept the measure for what it was worth. The Bill did not, however, go as far as he wished.—Mr. A. MILLS thought the time had come when, instead of attempting to destroy the Bill, they should endeavour to make something of the miserable materials of which it was composed. He denied emphatically that the Conservative party were afraid of the working classes, or were indisposed to concede them political privileges; on the contrary, they were willing to give them the utmost political influence compatible with the safety of the constitution.—Mr. J. LOCKE, as one of the representatives of the working classes, vindicated their right to an extension of the suffrage, and said that they were satisfied with the 6*l*. franchise proposed by the Government.—On the motion of Mr. MACAULAY, the debate was adjourned, Lord PALMERSTON expressing a hope that it would be resumed on Tuesday evening. Several Irish members with business on the paper, however, declined to give way, and, after some discussion, the debate was fixed for Tuesday, with the understanding that it should, if possible, be proceeded with. Some other Bills were forwarded a stage.

TUESDAY.—*Stade Dues*.—Lord J. RUSSELL, in reply to Mr. Fenwick, said that negotiations were now in progress respecting the abolition of the Stade toll, but he could not at present produce the papers.—In reply to Mr. S. FITZGERALD, Lord J. RUSSELL said that *the Conference* relative to Savoy had not been postponed, as the time for its assembling had never been fixed. *State of the Navy*.—Sir C. NAPIER moved an address to her Majesty, expressing the regret of the House that, instead of a reserve of 70,000 men, contemplated by the Manning Commission, there existed only 6362 coastguardmen, 1900 district ships' companies, 1400 revenue men and 600 cruisers' men, and 5000 or 6000 coast volunteers not to be depended upon; and praying her Majesty to give directions that the coastguard should be completed to 12,000 seamen, as recommended by the commission, ready to be placed in efficient ships at the several ports, instead of the present block ships, thus constituting a reserve of 10 sail of the line, ready for any emergency; that the number of naval volunteers, now under 1000, should be completed as soon as possible, and the other recommendations of the commission complied with. In the course of a long speech he threw out many hints for improvements of the navy, and for rendering it popular, accusing the Admiralty, among other shortcomings, of tardiness in adopting his suggestions.—Sir J. ELPHINSTONE seconded the motion.—Lord C. PAGET said that the enrolment of the naval volunteers, in spite of various obstacles, was proceeding satisfactorily, and that all the important recommendations of the Manning Commission had been carried out as far as practicable. One of the most important related to boys for the navy, and the number which in 1857 was 1898 in 1859 was 5147, and now the number of boys educated for the navy was 8535, who would become first-rate seamen, and this was considered to be an ample supply. He entered into various details relating to matters bearing on the present condition of the navy, and complained of the motion as implying a direct censure of the Admiralty, who were doing their best for the public service.—Sir J. PAKINGTON was glad that the motion had been made, as it was important to know what exertions the Admiralty were making to obtain a sufficient reserve force for the navy, and as it had elicited an answer which he had heard with great satisfaction. He hoped it was the intention of the Admiralty to carry out all the recommendations of the Royal Commission.—The discussion was continued by Sir M. SEYMOUR, Mr. CORRY, Sir G. PECHELL, Admiral WALCOTT, and other members, and it ended in the motion being withdrawn. *Berwick Election*.—Mr. F. PEEL moved that an humble address be presented to her Majesty praying that she would appoint a commission to inquire into the existence of corrupt practices at the last election for the borough of Berwick. Although the inquiry before the select committee had not been completed, still there was reason to believe that gross and systematic bribery had been carried on.—Mr. MARJORIBANKS said that he and his constituents were quite willing to meet the most searching investigation.—Mr. MACAULAY thought there was not sufficient evidence of extensive bribery to warrant the House in acceding to the motion.—Lord ROBERT CECIL, as a member of the Berwick Committee, gave it as his opinion that enough had been proved to justify inquiry. At the same time, he feared that a commission of inquiry would do little good in this or other cases, as the only remedy would be to deprive the offending boroughs of representation for a whole generation.—Mr. BRIGHT expressed himself in favour of issuing the commission, as, if not, the Corrupt Practices Prevention Act might as well be repealed.—The ATTORNEY-GENERAL supported the motion, and said he had already given instructions for the prosecution of some of the persons engaged in corrupt practices at the late election for Berwick.—Mr HUNT suggested that the expense of the inquiry should fall upon the inhabitants as a penalty for their offence.—Lord PALMERSTON said that, in his opinion, the motion was a very proper one, more especially at the present time, when the House was engaged in the duty of endeavouring to improve the represen-

tation of the people. He hoped that for the character of the House the motion would be agreed to, and that no weight would attach to the flimsy arguments of those who wished to prevent the exposure and punishment of the guilty parties. After some further discussion, the motion was agreed to without a division; as also a motion that the Attorney-General be directed to prosecute William M'Gall for bribery.—Mr. Cardwell obtained leave to bring in a Bill for taking the *Census of Ireland*.—The *Attorneys, Solicitors, Proctors, and Certified Conveyancers Bill* was considered in committee, and several verbal amendments introduced. On the motion for proceeding with the adjourned debate on the *Representation of the People Bill*, Lord Palmerston hoped that the debate would be concluded on Thursday next. If any further adjournment should be proposed, he should feel it to be his duty to take the sense of the House against it. The debate was then adjourned till Thursday. The *Customs Bill* was read a third time and passed.

Wednesday.—*Aggravated Assaults Act Amendment Bill.*—Lord Raynham moved the second reading of this Bill. After adverting to the insufficiency of the actual law, under which the maximum punishment was six months' imprisonment, and which was insufficient to prevent assaults upon women and children, he explained the details of the proposed measure, by which the magistrate had the power of inflicting 50 lashes for the first offence and 150 for the second, with 12 months' imprisonment.—Mr. Clive opposed the Bill. Its provisions were of that nature that under it the public would not prosecute and magistrates would not convict. He moved, as an amendment, that the Bill be read a second time that day three months.—Mr. E. James seconded the amendment.—Mr. D. Griffith called attention to the disgrace of inflicting corporal punishment on the defenders of the country, and protecting those who assaulted women and children.—Mr. Vance thought that there was good enough in the Bill to warrant its being permitted to go into committee.—Mr. Henley denied that there was that increase in offences of this kind to warrant this Bill, to the principle of which he objected. The proper course would be to send aggravated cases before a jury.—Mr. Dillwyn had not the same objection to corporal punishment, and thought that it was the only means by which such brutal offences could be prevented.—Mr. S. Estcourt believed that the Bill would be rather mischievous than useful.—Sir G. Lewis said that no case had been made out to justify further legislation in this direction. It was neither proved that offences had increased, nor that the present law was inoperative. Applications were constantly made to the Home Office for mitigation of punishments inflicted on husbands for brutality to their wives. After some further discussion, the second reading was carried by 109 to 85. The *Malicious Injuries to Property Act Amendment Bill* was read a second time. The *Fisheries (Scotland) Bill* passed through committee.—Mr. Hennessy moved the second reading of the *Law Improvement (Ireland) Bill*. The Bill was founded on the same principles as the Landlord and Tenant Bill of the Government, but it was brought forward because so many delays interfered with the progress of the Government Bill that there was little hope of its passing into law this session. The hon. member was explaining his Bill, when he was cut short by the arrival of the hour for adjournment. The *Bank of Ireland Bill* was read a second time.

Thursday.—*Wakefield Election.*—The Attorney-General, in reply to a question put by Mr. E. James, said he had that morning given instructions that criminal informations should be filed against Mr. Leatham and Mr. Charlesworth, the candidates at the recent election for Wakefield; and also against the principal persons who had aided and abetted them.—*The San Juan Question.* In answer to Mr. Fitzgerald, Lord J. Russell said that he could add but little to the information which was already in possession of the House on the subject of the San Juan negotiations. Her Majesty's Ministers in August last made a proposition to the United States Government which they had declined, and again asserted the claim to the channel which they had originally set up. To that claim an answer had been returned; and, according to the last intelligence, it appeared that General Cass had received instructions from the President to prepare a rejoinder. It would depend, however, upon the nature of that despatch whether the correspondence could be produced or not. *Reform Bill.*—The adjourned debate on the second reading of the Bill for Improving the Representation of the People was resumed by Mr. Macaulay, who took exception to the Bill because it was of a uniform character, and applied exclusively to the working classes. He could not vote for a measure which would have the effect of transferring political power to classes whose numbers were not regulated by intelligence, and whose influence, if the Bill were carried, would overwhelm the fair and legitimate claims of property and education.—Mr. Gregory gave a sketch of his own experience of the workings of democratic institutions in the United States, which he said had occasioned him to alter his views materially with reference to a large extension of the franchise to the working classes. He warned the House and the Government that the political doctrines which were now showing themselves upon the surface of society in the United States might spring up in other places, and that it behoved all who desired to see the fabric of English and European society maintained on a constitutional basis, to take care how they lightly interfered with a system under which the Old World had attained to a position of so much prosperity and grandeur.—Mr. Longfield also opposed the Bill, and adduced statistics to show that if it were to become law 150 seats would be handed over to the 6*l.* householders, who would constitute a mob of unreflecting persons with no adequate means of controlling the power with which they would find themselves invested. [During the learned gentleman's speech another attempt was made to count out the House, which, however, was frustrated by the timely arrival of a sufficient number to constitute a House]—Mr. D. Seymour supported the Bill; Mr. Kendall opposed it.—Sir John Ramsden said he would be no party to an inadequate and unsatisfactory measure, for he considered it would be better not to pass any measure at all than one which would be delusive in its character, discreditable to Parliament, and dangerous to the national interests.—Mr. Walpole complained that the Bill did not provide any guarantee of fitness in the elector to exercise the franchise. It would double the franchise in boroughs, while it would lower the quality of the electors. Moreover, by enabling the landlord to compound for his tenants at two-thirds of the value, he would obtain enormous influence by the pressure which he could bring to bear upon an impoverished and consequently easily assailable class. He also objected to the new constituency which would be called into existence in the counties. He feared that if they passed the Bill in its present form they would descend to an uneducated democracy—put ignorance at a premium and reduce intelligence to a discount. Under these circumstances, it was extremely difficult to know what was the best to be done. On the one hand he was anxious to redeem the pledges given by Parliament, and on the other he was hostile to any measure which could not be regarded as a permanent settlement of the question.—The Chancellor of the Exchequer denied that the 6*l.* franchise would swamp the constituencies by the introduction of an overwhelming class of voters, immense in quantity, bad in quality, and able to outweigh and overawe the property and intelligence of the country. The addition to the borough constituencies would not, according to the most reliable returns, exceed 200,000, and he believed it would fall short of 150,000. Of the 1600 parishes which formed the Parliamentary cities and boroughs of the country, 1300 had replied to an inquiry as to whether the gross estimated rental corresponded with the real rental or fell short of it. Nine hundred of those returns had been examined and tabulated, and they embraced 377,000 of the male occupiers out of 566,000, which formed the total in all the cities and boroughs in England and Wales. Of the 900, no fewer than 708 had returned for answer that the gross rental was equal to the clear annual value. In the 192 parishes remaining the rating fell short of the annual value by about 18 per cent., which would give an addition to the franchise of 2400 persons—scarcely sufficient to alarm the most timid gentleman on the Opposition benches. Mr. Disraeli and Sir B. Lytton had recommended the withdrawal of the Bill, but they well knew that any Government which should adopt such a course would cover itself with irretrievable disgrace. But if they wished to get rid of the Bill, the remedy was in their hands. Let those who thought the Bill was a bad measure express their opinion through their votes, and reject the measure altogether. That would be a manly and intelligible course, and would be far preferable to interposing delays which would make all legislation impossible. Of all the difficulties before them none were so great as dallying with a great and vital question, which might endanger the institutions of the country and destroy much of that capacity for good which was supposed to exist in the House of Commons.—Mr. Collins said that the Bill did not amend the representation of the people, but on the contrary aggravated the inequalities of the existing system. The Speaker then put the question that the Bill be read a second time, which was carried without a division, amid loud cheers from the Ministerial side of the House.—Lord J. Russell intimated that, as it would be inconvenient to proceed with the Bill in committee before the Whitsun holidays, he proposed to go into committee on Monday, the 4th of June. The *Bank of Ireland Bill* passed through committee. The *Ecclesiastical Courts Jurisdiction Bill* was read a third time and passed.

Friday.—*The Commercial Treaty.*—In answer to Mr. Palk, Lord J Russell said that Mr. Cobden had gone again to Paris, on a special division, to carry out the 13th article of the Treaty. He was one of three commissioners who had gone to treat with the French Ministry, but they did not act as plenipotentiaries. No salary was to be paid, but the expenses of the mission would be defrayed by the Government. *The China Expedition.*—In answer to Mr. Baillie, Lord J. Russell said that there was no truth in the rumour that orders had been sent out to stop the China Expedition until the arrival of Lord Elgin. [Left sitting.]

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 95¼ to ⅜ for Money, and 95½ to ⅝ for the 6th June; Reduced and New Three per Cents., 93⅝ to ½; Indian Five per Cent. Stock, 1859, 106¾ to ½; Five and a Half per Cent. Enfaced Rupee Paper, 104¼; Indian Four per Cent. Debentures, 1859, 96⅞ to 97⅛; Exchequer Bills, 6*s.* to 10*s.* prem.—Foreign: Anglo-Austrian Five per Cents., 81; Brazilian Old Five per Cents., 100½; Ditto Four and a Half per Cents., 1852, 91½; Ditto for 1858, 91½; Mexican Three per Cents., for Acct., 22 to 21⅞; Peruvian Four and a Half per Cents., for Acct., 92 to ¼; Portuguese Three per Cents., 1853, 45⅝ to ⅜; Russian Five per Cents., 108; Ditto Four and a Half per Cents., 97¾ to 98¼; Sardinian Five per Cents., for Acct., 85¾ to 86; Spanish New Deferred Three per Cents., for Acct., 38½ to 38; Turkish Six per Cents., 1854, for Acct., 77 to ¼; Ditto, 1858, for Acct., 61⅞ to 62; Venezuela One and a Half p. Cts., 13¼.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,593,585	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	13,118,585
		Silver Bullion	
	£28,593,585		£28,593,585

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£9,728,943
Rest	3,224,701	Other Securities	21,900,666
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	6,871,698	Notes	6,366,505
Other Deposits..	13,433,223	Gold and Silver Coin ..	764,726
Seven day and other bills	678,208		
	£38,769,840		£38,769,840

3d day of May, 1860. M. MILLER, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—T. Brookes, Birmingham, Boot and Shoe Manufacturer—J. E. Claridge, Hill Croome, Worcestershire, Cattle Salesman—R. D. Clegg and F. Angerstein, Friday Street, Cheapside, Dealers in Atmospheric Clocks—W. Cooper, Cheriton, Hants, Builder—J. Dowell, Birmingham, Licensed Victualler—R. B. Foster and J. Fraser, Liverpool, Commission Agents—S. Gestling, Castle Acre, Norfolk, Butcher—W. P. Goose, Downham Market, Norfolk, Builder H. Haywood, Coventry, Ribbon Manufacturer—J. Lafferre, Plymouth, Chemist and Druggist—J. Lancey, Barnstaple, Linendraper—H. W. Lazard, Hull, Jeweller—W. H. Merrick, Halesowen, Innkeeper—W. Smith, South Shields, Shipowner E. H. Spark, late of Heathcote Street, Gray's Inn Road, Jeweller.

BANKRUPTCY ANNULLED—J. Hewitt, Halvergate, Norfolk, Miller.

SCOTCH SEQUESTRATIONS—P. Brown, Aberlady, Wright—R. Buchanan, Glasgow, Newspaper Proprietor—A. Christie, Edinburgh—J. J. D. Coutts, Kilsyth, Wright—D. M'Callum, Glasgow, Wright—W. J. Smith, Portobello, Commission Merchant—W. Wright, Edinburgh, Boot and Shoemaker.

FRIDAY—BANKRUPTS—B. Abraham, Taunton, Jeweller—W. Bedford, Middlesex Street, Whitechapel, Baker—C. S. Duggan, Bridgehouse Place, Newington Causeway, Surrey, Wholesale Stationer—I. Hanson, Halifax, Innkeeper—W. Harris, Stoke Prior, Worcestershire, Cattle Dealer—B. Kurz, Rathbone Place, Oxford Street, Jeweller—T. Moore, Morland, Westmoreland, Grocer—T. Oakshott, Portsea, Brewer—J. Stanley, Walsall, Staffordshire, Draper—H. Tarster, Ipswich, Butcher.

BANKRUPTCY ANNULLED—J. Long, Leeds, Spirit Merchant.

Metropolis and its Vicinity.

Proposed New Road across Hyde Park.—A meeting of noblemen and gentlemen was held on Tuesday at the Society of Arts, for the purpose of promoting a communication between the districts lying north and south of Hyde Park. Earl Grosvenor, M.P., took the chair, and in opening the proceedings, said, that having recently purchased a house at Kensington Gore, he had become deeply impressed with the inconvenience inflicted upon the public by the want of a thoroughfare across the park. At present the public, proceeding by cab or other conveyance, had to travel three miles round, whereas if such a road as the one contemplated were made the distance would be only half a mile. The necessity for this communication was recognised by a committee of the House of Commons in 1855, and it was then shown that a road could be constructed within the space of 12 months which should present no obstruction to the enjoyment of the public either in Hyde Park or Kensington Gardens. The advantage to be derived from such a road would be the connection of Westbourne Terrace and of the Great Western terminus, as also of the districts adjoining thereto, extending even to the Regent's Park on the north, with the Kensington Gore estate to the south, its Public Museums and the gardens of the Horticultural Society by the Exhibition Road to Brompton and Chelsea, and with various railway stations south of Hyde Park and the bridges in that locality across the Thames to Surrey.—Earl Ducie moved the first resolution to the effect that it is desirable to establish a more direct communication between the districts lying north and south of Hyde Park, and that a committee of noblemen and gentlemen be appointed to promote the object. He thought the government would do well to take the advice given to them on Monday, and having withdrawn the Reform Bill, the next best thing they could do was to direct their attention to this subject. He believed, however, that they were anxious to further the object this meeting had in view, and they were only waiting for a little agitation to justify their taking it in hand.—Mr. W. M. Thackeray seconded the resolution, which was carried unanimously.—Mr. Long moved the second resolution, requesting the committee to organise deputations to the Duke of Cambridge, the Prime Minister, the First Commissioner of Works, and the President of the Council.—Alderman Lawrence, in seconding the resolution, said there could be no doubt that such a road would be a great public convenience, while it was equally clear that it could be accomplished at an economical cost. Her Majesty had set her ministers an excellent example, and shown her anxiety for the accommodation of her subjects by allowing a public road to pass in front of her own palace. That example might well be urged in furtherance of the present object; for a road was as much required from the south to the north of Hyde Park as from St. James's to Pimlico, and it only needed a little pressure from without to secure it.—Mr. Vance thought they ought to be prepared with a scheme to submit to the authorities. He had had a conversation with Mr. Page on the subject, and he understood that gentleman was prepared with a plan of a tunnelling nature, which was estimated to cost 30,000*l.*—The Chairman said it would be best to leave the plan to the Government.—Mr. Pratt Barlow suggested that it might be a sunk road, which could be open for the use of the public at night.—Mr. Wentworth Dilke believed the committee would find when they got to the Board of Works that there was a plan already cut and dried.—Mr. Mackinnon, M.P., said that two years ago he had a conversation with Lord John Manners relative to some such communication as this. The objection to it then was the expense; it was estimated that it would cost 45,000*l.*, and no doubt the difficulty now would be the money.—Mr. Westmacott, R.A., hoped the meeting would not be frightened at Government estimates. If there was a disposition on the part of the Government to do it the thing could be done easily and cheaply enough, but he was very much afraid the Commissioners of Works would look to the effect the road would have upon the turnpike rates, which were let annually for very large sums. The resolution was then put and carried unanimously. On the motion of Mr. W. Dilke (who hinted at the propriety of an immediate subscription to meet expenses), seconded by Mr. Cole, it was also resolved that petitions in favour of the object be presented to both Houses of Parliament.

Great Fire at the Euston Hotel.—On Wednesday evening, about 5 o'clock, a fire broke out in the Euston Hotel, in Euston Square, and was not extinguished until 62 rooms were partially destroyed, and the roof right round the building burnt off. The building contained 93 sleeping apartments, and a splendidly appointed coffee-room. All the 93 beds had been engaged for the night, and if the outbreak had taken place at an advanced hour it is impossible to form an idea as to what might have been the consequences, not only to property, but also to human life.

The Great Eastern.—It is reported that the Government have signified their willingness to negotiate for the Great Eastern to take out the telegraph cable about to be laid between Singapore and Rangoon, and it is expected that the directors will accept the offer on any reasonable terms.

Westminster Palace Hotel.—A meeting of the Westminster Palace Hotel Company was held on Tuesday at St. James's Hall, Lord Chelsea in the chair, to consider the expediency, or otherwise, of carrying out the proposed arrangement for letting about half the building to the Secretary of State for India. A resolution approving of the steps taken by the directors having been moved by the Chairman and seconded by Sir C. Russell, Mr. S. C. Hall moved an amendment, protesting against the arrangement with the India Board, which was seconded by Mr. Neale. A long discussion ensued, in which Alderman Copeland, Mr. C. Freshfield, Mr. Brooke, Mr. Graham, Mr. Newmarch, Mr. Morton, Mr. Butler, Mr. Cobbett, and others took part. The amendment was then put and negatived

by an immense majority, only 17 hands being held up in its favour. The original resolution was then carried; whereupon a poll was demanded, which was appointed to take place on Monday next, to which day the meeting adjourned.

ST. GEORGE'S-IN-THE-EAST.—On Sunday evening there were the usual yellings, howlings, hissings, and other profanities in the parish church. The reading of the lessons was interrupted by loud cries of "hear, hear," "hurrah," and "bravo." The Rev. J. D. Jenkins, who wore a huge beard and moustache, preached the sermon, and was assailed with a shout or derisive laughter, loud cries of "Nanny," and imitations of the cry of a goat, and scarcely a sentence of his discourse was distinctly heard. The Rev. Bryan King pronounced the benediction from the altar, and was mocked and hissed in a most disgraceful manner. The Evening Hymn, which was sung prior to the blessing, was parodied by "Hot codlins," and similar pieces of profanity. The police had the usual obstructions in clearing the church; but Inspector Alison having issued the word of command to his men, the mob fled before them, and the doors of St. George's were once more closed. The Bishop of London has refused to licence the Rev. Thomas Dove Dove, M.A., of Emmanuel College, Cambridge, to the curacy of this church, to which he had been nominated by the rector. Mr. Dove was for some time curate to the Rev. W. J. E. Bennett, M.A., vicar of Frome, and joined Mr. King about three months since. During the intervening time he has been assisting Mr. King in the services of St. George's, but not as a licensed curate.

THE FRAUDS ON THE UNION BANK.—Pullinger, the cashier of the Union Bank, was re-examined at the Mansion House, when the Lord Mayor, after hearing additional evidence, committed him for trial at the Central Criminal Court. He professes to have answered frankly all inquiries put to him, but it is believed that an accomplice remains to be discovered, while there is also entire mystery as to the manner in which the greater part of the money has been made away with.

THE POLICE.—Mr. John Wray has resigned the office of Receiver-General of the Metropolitan Police, which he has held from the establishment of the force, and has been succeeded by Mr. Maurice Drummond, who has been one of the clerks in the Treasury for 17 years, having been appointed to a junior clerkship on the death of his uncle, Mr. Edward Drummond, who lost his life by the hand of an assassin, who mistook him for Sir Robert Peel, whose private secretary he was. Mr. Maurice Drummond acted as private secretary successively to the Chancellor of the Exchequer, to the Earl of Derby when Prime Minister, and lately to Sir George Lewis at the Home Office.

ROYAL DRAMATIC COLLEGE.—It is announced that the Prince Consort has consented to lay the foundation-stone of the Dramatic College, at Maybury, near the Woking station of the South-Western Railway. The first brick of this institution was laid last week by its master, Mr. Benjamin Webster, assisted by several officials connected with the college.

POLYTECHNIC INSTITUTION.—The organ of the Polytechnic Institution has been sold to the Dean and Chapter of St. Paul's for 1050*l*. The original cost was upwards of 3000*l*.

THE SWANS ON THE THAMES.—A statement having appeared in the daily papers that the Conservators of the Thames are about to cause the removal of the swans from the river, it has been announced on authority that there is not the slightest foundation for such a representation.

ACCIDENT TO THE DUKE OF HAMILTON.—On Friday night as the Duke of Hamilton was crossing Piccadilly opposite his own residence in Arlington Street his foot slipped on the pavement, and in the fall he fractured his right leg just above the ancle. The bone was immediately set, and the latest bulletin states that his Grace is going on favourably.

THE LATE MURDER ON THE HIGH SEAS.—The state of suspense to which the prisoner Charles Annois has been for so many months subjected since his conviction for the murder of his captain on the high seas has at length been brought to a conclusion by a respite during her Majesty's pleasure being sent to the governor of Newgate. The result of the inquiries instituted by the Government has left no doubt that the prisoner was twice confined at Rio de Janeiro as a lunatic, and that he was only discharged from a lunatic asylum a very short time before he shipped on board the vessel in which the murder was committed. These facts have led the Government to grant a respite during her Majesty's pleasure, the effect of which is that his life will be spared. The capital sentence will, in all probability, be commuted to one of penal servitude for a long period, probably for life.

THE PAPAL TRIBUTE.—An account has been opened for the receipt of offerings for the Pope at the London Joint-Stock Bank in the names of the Vicar-General and Lord Petre. Among the members of the committee appointed for Westminster are the Vicar-General, the Duke of Norfolk, E.M., Lord Petre, Lord Feilding, the Hon. Charles Langdale, Sir John Acton, M.P., Count de Torre Diaz, Mr. Fullerton, &c. A sum of 1500*l*. has been transmitted to Rome from Birmingham, and it is expected that this amount will be considerably increased when the entire offering of the diocese is completed. The collection for the diocess of Shrewsbury commenced on Sunday last. The amount subscribed at St. Werburg's, Birkenhead, exceeded 100*l*.

THE PUBLIC HEALTH.—The Registrar-General's Report states that the deaths in London in the week that ended Saturday, April 28, were 1268, showing a slight decrease on those of the previous week, and a more considerable decrease on those registered in the earlier half of April, when the weekly number was above 1400. In the corresponding weeks of the ten years, 1850-59, the average number was 1075; which, if raised in proportion to the increase of population, will become 1183. The present return is therefore 85 above the average. During the week the births of 914 boys and 885 girls, in all 1799 children, were registered in London. In the ten corresponding weeks of the years 1850-59 the average number was 1650.

Provincial.

CHATHAM.—The somewhat extraordinary circumstance of trying a private of the Royal Marines by "drum-head court-martial," with the subsequent infliction of corporal punishment, occurred at Chatham on Monday morning to a private of the Royal Marine Light Infantry, named Joseph Wakefield, for a most gross act of insubordination. The prisoner, who is a man of exceedingly bad character, was tried a few days since by district court-martial for deserting and making away with his regimental necessaries; and, the finding of the court having been approved by the Major-General commanding, the officers and men of the division were drawn up in the barrack square to hear the sentence promulgated. The prisoner having been marched to the centre the sentence was read, the Court adjudging him to be branded with the letter "D" and to be imprisoned for 168 days. The instant the prisoner heard his sentence he turned round to Lieut.-Colonel M'Killop and shouted out with an oath that he would not do it, but that Colonel M'Killop "might do it himself," and there is no doubt he would have rushed at that officer had he not been prevented by the escort. As this act of insubordination took place in the presence of the entire division, the Commandant, Col. Rea, felt it his duty to make a prompt example of the prisoner, and gave orders for what is termed a "drum-head court-martial" to immediately assemble on the parade-ground, when the officers who were selected to form the court-martial sentenced the prisoner to receive 50 lashes. The full number of lashes was then inflicted, the prisoner bearing his punishment without uttering a word of complaint. On being released from the triangles he was removed to Melville Hospital, and as soon as he is able will be sent to Fort Clarence to undergo the first portion of his sentence. On the same morning the sentence of the general court-martial held on privates Henry Cartlidge and John Sullivan was promulgated to the corps, having been approved by the Lords of the Admiralty. The prisoner Cartlidge was tried for having assisted in rescuing a prisoner from the custody of the garrison picket and for having, when a prisoner, violently assaulted Sergeant Knott, 73d Regiment, who had giving evidence against him. Sullivan was tried for having cut off the buttons from his jacket while a prisoner in the cells, for having struck Sergeant Knott, and behaved with gross disrespect to Capt. Nepean, on the occasion of that officer visiting him in the cells. Both the prisoners are men of exceedingly depraved character, and have been several times tried by court-martial. In consequence of their threats and the general violence of their character it required 12 marines to convey them from the guard house to the court-martial room, and during their trial they were hand-cuffed and in charge of a double escort. They also treated the Court with great contempt. The Court sentenced Cartlidge to be kept in penal servitude for 14 years, and Sullivan to be kept in penal servitude for 6 years, after which they will be both dismissed her Majesty's service.

CLIFTON.—Another project has been started for completing the Suspension Bridge across the Avon, which was commenced by the late Mr. Brunel more than 20 years ago, and upon which upwards of 40,000*l*. were expended up to 1843. It appears that the Hungerford Suspension Bridge over the Thames is shortly to be taken down, to be replaced by a railway bridge from the Surrey side of the river to Charing Cross; and Mr. Hawkshaw, the engineer, proposes to apply the chains and materials of the old structure to the long-suspended work at Clifton. The roadway of the proposed bridge is 850 feet in length, and 220 feet above high-water mark.

EASTBOURNE.—Mr. Thomas Hopley, master of a boarding school on the Grand Parade, in this town, has been committed by the magistrates for trial on the charge of manslaughter, in having flogged one of his pupils with such cruelty that the poor boy died from loss of blood. It appeared from the evidence that deceased, Reginald Channel Cancellor, the son of the Rev. Mr. Cancellor, of Barnes, Surrey, was flogged by the prisoner with great severity in the pupil room, on the evening of the 20th ult., and that he lost so much blood that the prisoner had to carry or push him upstairs to his bedroom, where he again flogged him. During the night the servants heard the slushing of water and emptying of basins. On the following morning they found marks of blood on the carpets and floor which had been attempted to be washed out, as had also the boy's drawers, trowsers, and socks. Shortly afterwards the prisoner told the servants that he had found Master Cancellor dead in his bed. The medical evidence proved that there was nothing in the structure of the vital organs to lead to the idea that deceased had died from natural causes, and that his body was covered with lacerations and bruises. It also appeared that an inquest had been held, and that the jury had returned a verdict that deceased was found dead, but that there was no evidence to show the cause of death. After a hearing of upwards of seven hours the magistrates decided on committing the prisoner to take his trial at the assizes, bail being accepted, himself in 1000*l*. and two sureties in 500*l*. each.

FROME.—A few days ago an explosion of fire damp occurred at the Vorsten Colliery, near this town, by which three men lost their lives, and a fourth was so much injured that his life is despaired of.

HALVERGATE.—The village of Tunstall, near this town, has been the scene of a sad casualty, causing the death of one man and serious injury to two other persons. An agricultural steam-engine belonging to Mr. John Gillett, a farmer in the village, was engaged in threshing out wheat, when the engineman reduced the fire and regulated the safety-valve before going to his breakfast. While he was absent from the engine a man who had been engaged in bringing water for the engine noticed that the fire was burning fiercely, and in order to check the combustion threw some water on the coals. He then went away a short distance, leaving three men named Marshall, Ward, and Walters near the engine. Shortly afterwards the engine exploded, killing Marshall on the spot, while Ward and Walters were dreadfully scalded and otherwise injured. The engine, which was in good repair, was constructed in 1853 by Messrs. Clayton and Shuttleworth, of the Stamp-end Ironworks, Lincoln. At the inquest a verdict of "Accidental Death" was returned, the coroner remarking that there was nothing to show that the boiler had been improperly tampered with, while the engineman stated that the valves were in good working order.

LIVERPOOL.—The Sailors' Home in this port was totally destroyed by fire on Sunday morning. When the fire broke out there were about 120 persons in the dormitories; all of whom have turned up but three, and hopes are yet entertained that these may still be found. A constable who ascended a long ladder with a hose, received a fall by its breaking which caused his death, and a man who entered the building in order to save the books and money in the Seamen's Bank, was buried beneath the ruins by the falling in of the roof, but was rescued four hours afterwards through the exertions of a draught of men from her Majesty's ship Hastings, under the command of Captain Mends, the police force, and the fire brigade. The building and fittings were only insured for a third of their cost.

OXFORD.—Mrs. Strickland, widow of the late Hugh Edwin Strickland, Esq., F.R.S., sometime deputy reader in geology in the University of Oxford, and Henry E. Strickland, Esq., of Apperley Court, Gloucestershire, have offered to present to the University his large and valuable collection of birds, subject to the conditions that it shall be called the Strickland Collection; that it shall at no time be mounted; that it shall be kept separate and in its present arrangement, in a dry and well-aired room, and shall be carefully attended to and frequently inspected, as to state of conservation, by competent persons; and shall be always accessible on proper recommendation and under suitable precautions to students in ornithology. A Convocation will be held on Thursday next, at which it will be proposed to accept the offer on the conditions stated.

RAYLEIGH.—Considerable sensation was caused in this part of Essex on the morning of the 26th ult. by the announcement that Mr. Chapman, the landlord of the King's Head Inn, and contractor of the mail, had been fired at on his return journey from Ingatestone. It appears that on the mail cart reaching Rayleigh about half-past 1 in the morning, a gun was fired from a field by the road side, and the horse at the same moment suddenly stopped, turned round and backed into the ditch, when a second discharge was fired, apparently close to the driver. Mr. Chapman jumped out to the horse's head, when the animal immediately sprang forward, drew the cart out of the ditch, and started off. Mr. Chapman succeeded in getting in again and proceeded on his journey. On arriving at Rochford he delivered his bags, and reported the matter to the inspector of police, who immediately drove to the spot, accompanied by Mr. Chapman. On arriving there, they found a waggon rope tied twice, one part of which was broken, and the other on the ground, suspended to elm trees on each side of the road. Suspicion immediately fell on two men, one of whom was formerly driver of the mail but was discharged by Mr. Chapman. His shoes corresponded exactly with the footprints near the spot. The other man, who, is a carrier, had borrowed a gun and powder flask, which were found concealed under the straw in an outhouse, and some wadding which exactly fits the gun was discovered on the spot where the outrage was committed. The police authorities in London have sent down a detective officer from Scotland Yard to assist the local police.

Ireland.

KIDNAPPING IN DUBLIN.—Three cases relating to the kidnapping of children which bear some analogy to that

of the Jewish boy Mortara in the Papal States have just been brought before the Court of Queen's Bench in Dublin. The facts of the first case are briefly as follows. About eight months ago a sailor named Sherwood died, leaving behind him, in the City of Dublin, a widow and eight children, with little or nothing to support them. The deceased was a Protestant, and it is believed that the mother was a Protestant also; for, in the troubles consequent upon her bereavement, she applied to a benevolent lady in Dublin to assist her in getting some of her little ones into a Protestant Orphanage. This was done, and in the course of March last five or six of the children were taken to the railway station, and given in charge to the guard to be handed over to Mrs. Harnett, at Galway, who is the Superior of a Protestant Refuge for Orphans in that neighbourhood. In the same carriage with the children travelled an attorney's clerk called M'Robins, who is connected with a Roman Catholic Dormitory in Dublin, and two men named O'Connor. These men state that the children, in the course of the journey, told them that they were Roman Catholics, and that they were being sent against their will to a Protestant Orphanage. The three men therefore resolved to capture the children in a lot at the close of the journey. On the train reaching Galway, Mrs. Harnett was in waiting to receive her charges; but the O'Connors forced four of them, two girls and two boys, into a covered car, and bodily abducted them; and they have not since been heard of. The Court of Queen's Bench issued an attachment against the three men, and despatched an officer of the Court to carry it into execution. He returned to Dublin with one of the O'Connors in his custody; but the other and M'Robins had succeeded in eluding his vigilance. The prisoner was brought before the Court on Friday, and ordered to be committed to the Four Courts' Marshalsea until he had entered into the requisite recognisances, himself in 100*l.* and two sureties in 20*l.* each, to answer the interrogatories. On Wednesday, Mr. Denis O'Connor presented himself before the Court, to answer the writ issued against him. On being interrogated by the Chief Justice, he expressed his regret that it was not in his power to produce the minors, as it was another person who removed them. One of the other Judges then informed him that he was in custody for contempt, and he was finally ordered, being a man of respectable class of life, to find sureties, himself in 100*l.* and two sureties of 50*l.* each, to answer certain interrogatories which were to be exhibited to him. He was finally removed in custody. In the same case on Monday, an absolute order for a writ of *habeas corpus*, directed to the Rev. Jeffrey Lynch, P.P. of Westland Row Chapel, and also to the grandmother of the infants, and Catherine Davis, was obtained from the Lord Chief Justice, directing them to bring up the bodies of the four infants, by whatsoever name they might now be called or known. The affidavit on which the order was obtained stated grounds for believing that the children were in the custody, power, or procurement of the parties named. A return was handed in by the Rev. Jeffrey Lynch, in which he stated that he has not the children, and had them not, and that he does not know where they are, and therefore cannot comply with the mandate of the writ.—In the second case, it appears that a man called Matthews died about two years ago in Dublin, leaving a daughter in care of a woman where he lodged, the mother being at the time in England. The woman gave the child in charge to Miss Aylward, the mistress of a Roman Catholic establishment, without any legal authority. Miss Aylward sent it to be nursed in the country. The mother came to Dublin, and claimed her child in person, after due notice. Miss Aylward refused to give up the child, or to tell the name of the nurse, or the new name which she had received for the purpose of concealment. When the writ was issued from the Court she had the child in her custody. She evaded answering it for nine months, and in the meantime the child was removed, where she refused to tell, professing not to know. The case stood over from term to term, and now at the end of two years the mother, feeling herself as far as ever from getting possession of her daughter, has again applied to the Court of Queen's Bench. A writ of *habeas corpus* was accordingly issued, in answer to which the only return made was that the child was carried away unknown to Miss Aylward to America, or to some place beyond the narrow seas. The Court decided that this return was insufficient and evasive, and ordered an attachment to issue against Miss Aylward, who was in the meantime required to enter into recognisances in 100*l.* and two sureties of 50*l.* each to answer interrogatories. On Friday last Miss Aylward attended in the Court of Queen's Bench with her attorney, and entered into the recognisances. Her sureties were Sir John Bradstreet (President of the Society of St. Vincent de Paul), whose appointment to the commission of the peace a short time since created a good deal of newspaper controversy, and Mr. Michael Errington, an English gentleman residing at Kingstown.—The third case was brought before the Court of Queen's Bench on Tuesday, when an application was made for an absolute writ of *habeas corpus*, directed to Henry Corr, of Donnybrook, ordering him to bring up the bodies of Patrick and Alicia Murphy within the usual period. The motion was grounded on the affidavit of the mother of the children, Mrs. Alicia Murphy, of Eccles Lane, Dublin, who stated that she is a widow, her husband having died in November, 1856. She has two children—Alicia, 11 years, and Patrick, eight years of age. At the solicitation of several gentlemen, she was induced to allow her daughter to go to a school in Wellington Street, called the Josephian Female Orphan House. The child was placed in that establishment in October, 1857, and the mother was permitted to have access to her till September, 1858. Since that time, according to her affidavit, she has sought in vain to see her child—the matron of the institution, Miss Byrne, always telling her that she was not there, and could not be seen, as she had gone to the country with a monk. With regard to the boy, the mother stated that the Rev. Dennis Hefferman, of Phibsborough Chapel, went to her house on the 28th July, 1858, and persuaded her to go and see a school to which he wanted her to send him, and which she had previously refused to do repeatedly. To get rid of the priest's importunities, she consented to go with him to inspect the school, and during her absence her son was stolen. She went to the residence of the priest at Phibsborough; but, instead of giving her any satisfaction, he threatened to give her in charge of the police. It was not till November last that she discovered that her two children were in possession of a person named Henry Corr, at Simmon's Court, Donnybrook, who stated that he had become their guardian under a will of the father, of which the widow never heard, and which, if such a thing exists, is probably a forged document. The Court granted an absolute order, the writ to be returnable in two days.

St. Patrick's Cathedral.—Mr. Benjamin Lee Guinness, the head of the great firm of Guinness & Co., has undertaken to provide the necessary funds—about 18,000*l.*—for the complete restoration of the ancient cathedral and collegiate church of St. Patrick, Dublin, according to the plans long published by the Dean and Chapter.

Scotland.

Trial for Murder.—At the Perth Circuit Court, on the 12th inst., Bridget Kiernon, of Dundee, was charged with the murder of her child, a girl aged 7 months, by poisoning it with vitriol. The alleged motive for the crime seemed to be that the child was a burden to her, and she was in receipt only of 5*s.* 9*d.* a week, out of which she paid 2*s.* 6*d.* a week for lodging and the nursing of her child. The defence set up was that although the vitriol was administered by the hand of the prisoner, it was not administered with any murderous design, but by mistake. The jury, by a majority, found the prisoner guilty as libelled; but, on the ground of her ignorance and previous affection for her children, they unanimously recommended her to mercy. Sentence of death was pronounced by Lord Deas, the execution being fixed for Tuesday, May 8. The sentence has since been respited during her Majesty's pleasure.

Great Failure in Aberdeen. — The *Scotsman* mentions the failure of the legal firm of John and Anthony Blaikie, of Aberdeen, and the flight of the senior partner. The deficiencies, which are rumoured to have occurred under circumstances of the gravest kind, are stated at 200,000*l.* or 300,000*l.*, and it is feared that many families will suffer.

Railways.

The late Accident on the Great Northern.—The adjourned inquest regarding the cause of this accident was concluded on Wednesday, when the jury, after an absence of two hours returned the following verdict:

"The jury find a verdict of 'Accidental death,' but they think that the rail, in consequence of its being cracked, and of the flange of the rail having been partially knocked off, was unsafe, but that the crack was not visible, and was not known to the company or their servants, and that the ballast had not been removed sufficiently to effect the safety of the line; but they nevertheless think that the platelayers should have had instructions to signal to every train, especially express trains, while the points and crossings were under repair. The jury also wish to state that a more careful examination should be made by a superior officer before a rail is turned at the crossing."

Obituary.

Lady George Beresford died on the 20th ult. at Gillingham Hall, near Beccles. She was daughter of the late Mr. Schutz, and married in 1805 Lord George T. Beresford, G.C.H., son of the first Marquis of Waterford, who died in 1839.

The Dowager Lady Langford died at her residence in Berkeley Square on the 30th ult. She was the only daughter and heir of the Hon. Clotworthy Rowley, brother of the first Viscount Langford. She married in 1794 the first Baron Langford, great grandfather of the present peer. Lady Langford was mother of Colonel the Hon. R. Rowley, M.P., and of the Hon. Mrs Ferguson of Pitfour.

Vice-Admiral Sharpe, C.B., died on Monday last at his residence at Stockwell. He was midshipman in the Kent in the expedition to the Helder in 1799; and of the Hercule, at Cape François and siege of Curaçoa, in 1804; Lieut. of the Topaze in action with two French frigates near Corfu in 1809, and commanded the Scout at the destruction of three French armed ships and some batteries in Sagone Bay in 1811. In 1815 he was nominated a Commander of the Bath. He attained the rank of Vice-Admiral in 1857, and had a pension for his services

Lieut.-Col. Brandling, C.B., of the Horse Brigade of the Royal Artillery, died on the 16th inst. at Woodsley House, Leeds, the residence of his brother-in law, Sir Peter Fairbairn, aged 39. In his 40th year he served during the Crimean campaign of 1854 and 1855 in command of a troop of the Royal Horse Artillery, and was present at the affairs of Bulganac and Mackenzie's Farm; the battles of the Alma, Balaklava, capture of Balaklava, the siege and fall of Sebastopol, for which he received the medal and clasps. He was made a Companion of the Bath in 1855, and had received the decoration of the Turkish Order of the Medjidie of the 5th class. He attained the rank of Lieut.-Colonel in 1860.

Sir Wm. F. Middleton, Bart., of Shrubland, Suffolk, died on Wednesday morning at his town residence in Grosvenor Place, after a short illness. He was born in 1784, and succeeded to the baronetcy on the death of his father in 1829. He married in 1824 the youngest daughter of the first Lord Brownlow, by the daughter and co-heir of the late Sir Thomas Drury, Bart.; and, dying without issue, the baronetcy becomes extinct.

BIRTHS.—On the 29th ult, at 11, Queen's Terrace, Queen's Gate, Viscountess Hardinge, of a daughter—25th ult, at 14, Hereford Street, the Lady Saltoun, of a daughter—26th ult, in Stephen's Green, Dublin, the Lady Hester Carew, of a son—25th ult, at Baden-Baden, the Hon. Mrs. Eden, of a daughter—24th inst, at South Terrace, Surbiton Hill, Mrs. St. Vincent Jervis, of a daughter, still-born—27th ult, at 52, Harley Street, the wife of John Rolt, Esq., M.P., of a son—30th ult, at 32, Gloucester Square, Hyde Park, the Lady Elizabeth Arthur, of a son.

MARRIAGES.—On the 24th ult, George De la Poer Beresford, eldest son of the Bishop of Kilmore, to Mary Annabella, youngest daughter of the Rev. William Vernon Harcourt—26th ult, at Bridekirk, Cumberland, William Moncreiff, Esq., third son of the late Sir James Wellwood Moncreiff, Bart., of Tullibole Castle, Kinross-shire, to Susan Ballantine, youngest daughter of the late J. Dykes Ballantine Dykes, Esq., of Dovenby Hall, Cumberland—28th ult, at St George's, Hanover Square, the Hon. Fleetwood John Pellew, second surviving son of the late Right Hon Pownall Bastard, second Viscount Exmouth, of Canonteign, Devon, to Emily Sarah, youngest daughter of the late Thomas Fergusson, Esq., of Greenville, Co Down, Ireland, and Ryde, Isle of Wight—26th ult, at Grey Abbey, F. C. Donne, Esq., H.M.'s 3d Bombay European Regiment, youngest son of W. B. Donne, Esq., of Mattishall Hall, Norfolk, Deputy Lieutenant for that county, to Annie, second daughter of Wm. Parsons, Esq., J.P., of Grey Abbey, Co. Down, Ireland—27th ult, at Kensington, William Boyd Mushet, M.B., son of the late John Mushet, Esq., of Scarborough, and nephew of the late Lady Crawfurd Pollok, to Agnes, daughter of the late James Gibson, Esq., of Heathfield Hall, Staffordshire, and great grand-daughter of James Watt—1st inst, at the Cathedral Church, Lichfield, the Rev. Peter Sclater King Salter, of Gorieston, Suffolk, to Julia Maria, eldest daughter of the Hon. Henry Edward John Howard, Dean of Lichfield.

DEATHS.—On the 21st ult, Lady Murray, wife of Sir Robert Murray, of Ardeley Bury, Herts, Bart—25th ult, at Hastings, Mrs. Whately, wife of his Grace the Archbishop of Dublin—27th ult, at Boulogne-sur-Mer, after two months' illness, Bertram Leopold Augustine Wellesley, sixth surviving son of the Hon. William Towry Law, aged 7—29th ult, at Canterbury, Caroline, widow of Lieutenant-Colonel Charles Dashwood, C.B., formerly of the 3d Foot Guards fourth daughter of Admiral Sir Robert Barlow, G.C.B.—26th ult, at Swanbourne, Buckinghamshire, Captain Stephen Grenville Fremantle, R.N., youngest son of the late Vice-Admiral Sir Thomas Francis Fremantle, G.C.B., H.M.T., &c., aged 49—1st inst, at 33, Lower Grosvenor Street, after a long illness, Isabella, wife of Sir Culling Eardley, Bart—1st inst, at the Rectory, Oddington, Emma, wife of the Rev. William Wiggin, and daughter of the Hon. and Very Rev. the Dean of Gloucester—18th ult, at Brighton, Mary Ann, relict of the late Joshua Scholefield, Esq., M.P., aged 79—20th ult, at St. Leonard's-on-Sea, Lieutenant-Colonel Nathaniel Cameron, of Dan-y-graig, near Swansea, Glamorganshire, late of the 79th (or Cameron) Highlanders, and 1st surviving son of the late General Sir Alan Cameron, K.C.B., of the Enacht branch of the House of Lochiel, aged 72—20th ult, on his passage home from India, on board the steamship Pera, off Malta, William P. Waddy, Captain in the Bengal Artillery, and youngest son of the late Cadwallader Waddy, formerly M.P. for the county Wexford, aged 38—26th ult, at the Rev F. Durnford's, Eton College, John Egerton Leigh, second son of Major Egerton Leigh, of High Leigh, Cheshire, aged 15—27th ult, at 17, Princes Gate, Louisa, the wife of Thomas Hankey, Esq., and eldest daughter of the late Thomson Hankey, Esq., aged 57—28th ult, at Karsfield, near Exeter, Robert Pinhey, Esq., F.R.C.S., late Surgeon-General of the Bombay Army, aged 66—27th ult, at his residence, West Cliff Terrace, Ramsgate, Alexander Ross, Esq., late Surveyor-General of H.M.'s Customs, aged 74—25th ult, Mr. Frederick Dent, of 61, Strand, and 34 and 35, Royal Exchange, maker of the great clock at the Houses of Parliament.

Markets.

COVENT GARDEN.—May 5.

Vegetables improve—but still slowly—both in quality and quantity. Pine Apples and Grapes have not altered since our last. Good Apples and Pears are very scarce. Oranges are plentiful and cheap. Strawberries are coming in in tolerable abundance. Spanish *Hazel Nuts* for planting fetch 16*s.* per bushel. Cobs realise 1*s.* per lb. Rhubarb is now furnished in large quantities. Parsley is cheaper, but still dear. Green Peas, and even Broad Beans of foreign growth, may be obtained. Potatoes realise 4*s.* 6*d.* a bushel. New frame ones may be had at from 3*s.* to 5*s.* per pound. Mushrooms can still be obtained in small quantities. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, Geraniums, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Pears, per doz., 6s to 10s
Grapes, per lb., 12s to 20s	Oranges, per 100, 2s 6d to 8s
Strawberries, p. lb., 4s to 8s	Lemons, per 100, 5s to 8s
Apples, per doz., 2s to 6s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 6s to 8s	Cucumbers, each, 1s to 3s
Seakale, per basket, 2s to 3s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Peas, p. half sieve, 8s to 10s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d

POTATOES.—Southwark, Monday, April 30.

During the past week the arrivals coastwise have been moderate, and the weather cold and unseasonable; towards the end of the week a considerable rise took place. The following are this day's quotations:—York Regents, per ton, 120s. to 180s.; Flukes, 120s. to 150s.; Lincolnshire Regents, 100s. to 130s.;

Dunbar do., 120s. to 140s.; Perth, Forfar, and Fifeshire do., 110s. to 130s.; do. Reds, 100s. to 120s.; Irish Whites, 90s. to 100s.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, May 3.

Prime Meadow Hay	80s	to 90s	Clover	100s	to 115s
Superior do. (old) ..	92	100	New Clover	—	—
Inferior do.	60	70	Second cut do. ..	84	85
New do.	—	—	Straw	27	32
Rowen	70	75		DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, May 3.

Sup. Meadow Hay..	105s	to 114s	Inferior Clover ..	90s	to 100s
Inferior do.	90	98	New do.	—	—
New do.	—	—	Straw	33	38
Superior Clover ..	110	118		JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, May 3.

Fine old Hay	95s	to 100s	Fine old Clover ..	110s	to 114s
Inferior do.	84	92	Inferior do	98	105
Prime New Hay ..	—	—	Fine New Clover ..	—	—
Inferior do.	—	—	Fine 2d cut	98	105
Straw	28	34	Inferior do.	80	90

BRITISH WOOLS.—LONDON, FRIDAY, May 4.

Our trade continues healthy, with but little doing.

	s.	d.		s.	d.
South-down Hoggets..	1	8 to 1	9	Leicest. Wethers 1	5 — —
Half-bred ditto..	1	8 —	—	Ditto Hoggs .. 1	7 — —
Down Ewes ..	1	6 —	—	Combing Skins 1	2 to 1 6
Kent Fleeces ..	1	6 — 1	6½	Blanket ditto .. 0	6 — 0 10
				Flannel Wool .. 1	2 — 1 6

COLONIAL WOOL SALES.—These sales commenced last night, at an average reduction from the last series of about 1d. per lb.

COAL MARKET.—MAY 3.

Bell's Primrose, 13s.; Byass's Bebside West Hartley, 16s. 3d.; Davison's West Hartley, 16s. 3d.; Hastings Hartley, 16s. 3d.; Holywell, 16s.; West Hartley, 16s. 3d.; Wylam, 16s.; Walls End Acorn Close, 19s. 6d.; Walls End Byron, 20s.; Walls End Eden, 19s. 6d.; Walls End Riddell, 18s. 6d.; Walls End Wharncliffe, 18s. 9d.; Walls End Framwellgate, 19s. 6d.; Walls End Hunwick, 16s.; Walls End South Durham, 19s. 6d.; Walls End South Whitworth, 16s.; Carway and Duffryn Malting, 23s.—36 ships at market.

HOPS.—BOROUGH MARKET, FRIDAY, May 4.

Messrs. Pattenden & Smith report that the market is very firm, and but few Hops on offer.

BUTTER MARKET.—May 4.

Best Fresh Butter . .. 15s. per dozen lbs.
Second do. do. .. .. 13s. ,, ,,
Pork, 4s. 4d. to 5s. 0d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, April 30.

We have a large supply of Beasts; yet the choicest qualities cannot be quoted lower than on Thursday. Sheep are not quite so plentiful; and prices are well supported, although trade is not brisk. Good Lambs and Calves are in demand. From Germany and Holland there are 330 Beasts, 2600 Sheep, and 71 Calves; from Scotland, 50 Beasts; from Norfolk and Suffolk, 2900; and 100 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8 to	4	10	Best Long-wools. ..	to	..		
Best Short-horns	4	6 —	4	8	Do. Shorn ..	4	8 —	5	0
2d quality Beasts	3	4 —	4	2	Ewes & 2d quality ..	—	—	..	
Best Downs and Half-breds ..	5	6 to	5	8	Do. Shorn ..	4	2 —	4	6
Do. Shorn ..	4	10 —	5	2	Lambs	6	4 —	7	4
					Calves	5	0 —	5	6
					Pigs	4	0 —	5	0

Beasts, 4530; Sheep & Lambs, 24,250; Calves, 115; Pigs, 360.

THURSDAY, May 3.

There is a considerable increase in the number of Beasts; trade is dull, and prices on the average are lower. There are not many more Sheep, but the demand has decreased; a clearance cannot be effected. Lambs are rather lower. Good Calves are in demand. Our foreign supply consists of 190 Beasts, 850 Sheep, and 180 Calves; and 132 Milch Cows.

Best Scots, Herefords, &c. ..	4	6 to 4	10	Best Long-wools . ..	to	..		
Best Short-horns	4	4 — 4	8	Do. Shorn ..	4	8 — 4	10	
2d quality Beasts	3	4 — 4	0	Ewes & 2d quality ..	—	—	..	
Best Downs and Half-breds ..	5	6 — 5	8	Do. Shorn ..	4	0 — 4	4	
Do. Shorn ..	4	10 — 5	0	Lambs	6	0 — 7	0	
				Calves	5	0 — 5	8	
				Pigs	4	0 — 4	10	

Beasts, 1342; Sheep & Lambs, 7260; Calves, 270; Pigs, 210.

MARK LANE.—MONDAY, April 30.

The supply of Wheat from Essex and Kent to this morning's market was moderate, and its value must be written 1s per qr. lower than on Monday last, a large proportion remaining unsold at a late hour; holders of foreign insisting upon former prices caused buyers to refrain from purchasing, and little business resulted. Barley is scarce and fully as dear. Beans and Peas are 1s. per qr. dearer. For Oats there is a good demand, at the extreme prices of this day sennight. There is no alteration in the value of Flour.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk.. White	48	54	Red	48	50
— — fine selected runs..ditto	50	57	Red	50	54
— — Talavera	50	60			
— Norfolk	—		Red	—	
— Foreign	44	60			
BARLEY, grind. & dist., 24s to 31s.. Chev.	38	45	Malting .	36	41
— Foreign..grinding and distilling	30	34	Malting .	35	43
OATS, Essex and Suffolk	19	24			
— Scotch and Lincolnshire. Potato	23	29	Feed ..	19	26
— Irish ..... Potato	24	28	Feed ..	19	24
— Foreign..... Poland and Brew	24	27	Feed ..	22	26
RYE	35	38	Foreign .	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....32s to 40s.... Tick	34	43	Harrow .	34	43
— Pigeon .....36s — 47s.. Winds.	48	54	Longpod	—	
— Foreign ..... Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent .. Boilers	38	40	Suffolk .	36	41
— Maple .... —s to —s ..... Grey	32	34	Foreign .	30	40
MAIZE .... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	40	46			
— 2d do. ..... ditto	32	40	Country	32	40
— Foreign .....per barrel	24	30	Per sack	30	37

FRIDAY, May 4.

The weather since Monday has continued fine and dry, the sun bearing great power during the day, with the wind from the N.E. and E., and blowing very heavy; the nights cold and occasionally frosty. The apparent fineness of the weather has had its effect upon the Wheat trade throughout the kingdom, and English, with few exceptions, has declined about 1s. per qr.; whilst foreign, of which the supplies increase, the Baltic ports being open, has become for the moment more difficult of sale. Malting Barley, owing to the season closing with the warm weather, has declined 2s. per qr.; grinding sorts, Beans, and Peas continue to command fully late rates, and Oats have advanced in the English markets 6d. per qr, while advices from Scotland report business slow in this article. The Flour trade was restricted, prices tending downward. The arrivals of grain and seed-laden vessels from the South of Europe off the coast for orders continue very moderate, and the sales for the week in arrived cargoes are confined to 1 of Odessa Ghirka Wheat at 52s. 6d. per 492 lbs., 1 of Ibrail Barley at 29s. 6d., and 1 of Odessa at 30s., both per 400 lbs. In cargoes now shipping or shipped, however, the business done has been on a more liberal scale. The arrivals of foreign Barley this week have been large, of English Wheat good, of Barley and Oats small, and fair of foreign Wheat and Oats. This morning's market was very badly attended. The English Wheat left over from Monday being held for that day's prices remained unsold towards the close of the market. Foreign was neglected, and late rates were unobtainable. For spring corn of all descriptions there is a fair demand at Monday's quotations.

ARRIVALS FROM April 30 TO May 4.

	Wheat.	Barley.	Oats	Flour.
English ..	2890 qrs.	370 qrs.	10 qrs.	1350 sks.
Irish	— ,,	— ,,	880 ,,	— ,,
Foreign ..	11840 ,,	8990 ,,	21710 ,,	1000 ,, — brls.

LIVERPOOL, Tuesday, May 1.—We had a good attendance of millers and dealers at our Corn Exchange this morning, but the business passing has been quite on a retail scale, at a reduction of 1d. to 2d. per cental on Wheat, 6d. per sack and barrel on Flour, and fully 6d. per qr. on Indian Corn, compared with Friday last. Oats and Oatmeal slow sale at previous rates. The same remark applies also to Beans, Peas, and Barley.

FRIDAY, May 4.—The grain market was dull and declining. Wheat 2d. cheaper without buyers. Flour equally neglected. Indian Corn and Beans 1s. lower. Oats, Oatmeal, and Barley also cheaper, and difficult to move.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Mar. 24..	45s 6d	36s 11d	23s 4d	32s 0d	39s 3d	37s 7d
— 31..	46 5	37 2	24 1	36 9	39 11	38 7
April 7..	47 9	36 4	23 7	31 8	40 2	38 3
— 14..	49 1	37 2	24 2	36 10	39 9	38 3
— 21..	49 6	37 6	24 2	32 11	42 0	39 2
— 28..	51 2	37 11	24 5	31 5	41 6	38 1
Agg. Aver.	48 3	37 2	23 11	33 7	40 5	38 4

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Mar. 24.	Mar. 31.	April 7.	Apr. 14.	Apr. 21.	Apr. 28.
51s 2d	..	..	..	..	..	
49 6	..	..	..	..		..
49 1	..	..	..		..	..
47 9	..	..		..	..	..
46 5	..		..	..	..	..
45 6 —		..	..	..	..	..

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

WANTED, A YOUNG MAN who understands the Cultivation of Ferns and the Management of a Garden —Apply, JOSEPH WOOD, the Nursery, Bowness, Windermere

WANTED, an active YOUNG MAN who has some knowledge of Gardening.—Apply personally to JAMES CUTHILL, Denmark Hill, Camberwell, S.

WANTED, A MAN of unexceptionable character, who thoroughly understands the Management of Sheep and Cattle, and a good Accountant, to go to one of the Australian colonies. He would have to attend to some Live Stock on his way out. A married Man with family preferred, and his Wife must be active and understand Dairy work. As it will be for a permanency the strictest inquiry will be made as to his character and capabilities. No one need apply who does not answer to this description.—Address, stating full particulars, as to wages required where last employed, and the age of himself and family, to Mr. THOMAS, care of Mr. Brooks, News Agent, 24, Old Cavendish Street, London, W.

WANTED.—The present UNDER GARDENER AND SHEPHERD at the Island of Ascension, having been invalided, a successor is required to fill the vacancy. The terms of agreement are as follows, viz.:—Period of service: one year certain, and further at the option of either of the contracting parties. Rate of pay, &c., 55l. per annum with rations. A passage out and home with rations—an intermediate mess to be provided, and a reasonable proportion of such mess expenses to be paid by Government. An advance of pay will be granted, if wished, upon application being made by the party who may be selected.—Apply by letter only, enclosing testimonials, post paid, to Professor LINDLEY, 41, Wellington Street, W.C.

WANTED, AN UNDER GARDENER, a young Man, for experience. Wages, 15s. per week. Apply D. D., 25, Bishopsgate Within, E.C.

WANTED, A SHOPMAN of some experience, to take the Management of a Retail Seed and Vegetable Business in a large town in one of the Midland Counties.—Apply J. H. R., the *Gardeners' Chronicle* Office, stating salary.

WANTED, A MAN AND WIFE, without incumbrance; good character, middle aged The Woman to take charge of the Dairy and Poultry. Cottage and utensils will be found.—Apply, Mr Ross, Mersham.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—J. BLACKWELL (age 28), Gardener to the Hon. C. C. Neville, Heydon House, Royston, begs to offer his services to any nobleman or gentleman wanting a good Practical Working Gardener. Good character. Wages 60l. a year, without a cottage.

GARDENER (HEAD).—Age 28; thoroughly understands Early and Late Forcing, Pines, Vines, Fruits, Flowers and Vegetables, Stove and Greenhouse Plants, Flower and Kitchen Gardens; Meadow Land and Plantations if required. Wife competent to manage Poultry or Dairy. Seven years' unexceptionable character.—G. R., Messrs. Lee's Nursery, Hammersmith, W.

GARDENER (HEAD).—Age 30; practically experienced in Early and Late Forcing, Pines, Vines, Peaches, Melons, Cucumbers, &c.: cultivating Orchids, Ferns, Stove and Greenhouse Plants, Formation of Vine and other Fruit Trees, Borders, and management of Flower and Kitchen Gardens. Character unexceptionable.—J. C., Mr. Page, Gardener to W. Leaf, Esq., Park Hill, Streatham, Surrey, S.

GARDENER (HEAD).—Age 32, no incumbrance; has a thorough practical knowledge of Pines, Vines, Melons, and Cucumbers, Flower and Kitchen Gardens.—J. R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD).—Age 30, single; thoroughly experienced, and competent in the management of a nobleman's or gentleman's establishment.—B. C., Mr. William Clark, Seedsman, 25, Bishopsgate Street Within, London, E.C.

GARDENER (HEAD).—Age 34; thoroughly practical in Early Forcing and all kinds of Fruit, Flowers, and Vegetables. Five years' character from the nobleman he is about to leave.—C. G., Post Office, Thames Ditton, Surrey.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; has a practical knowledge of his profession in all its branches, with good reference.—A. R., Mr. Anderson's Nursery, Teddington, Middlesex, S.W.

GARDENER (HEAD).—Age 40, single; has a practical knowledge of Greenhouse, Vinery, Flower and Kitchen Gardens. Has lived in noblemen's and gentlemen's families. Two years' character.—S. DUNYER, 52, Eastcheap, E.C

GARDENER (HEAD).—Age 30, single; thoroughly understands his profession. No single-handed place accepted. Character unexceptionable.—A. B., Mr. Jackson's Nursery, Kingston, Surrey.

GARDENER (HEAD).—Age 35, married, no incumbrance; wishes to engage where a competent practically experienced active hand in all the various branches of the profession is required.—S. E., Thackra's, Henley-on-Thames.

GARDENER (HEAD).—Age 40, no incumbrance; competent in every branch, Forcing Fruit, Flowers, Laying Out Grounds, Kitchen and Flower Gardens and Pleasure Grounds. References and Testimonials.—D. M., 19, Princes Terrace, Haverstock Hill, N.W.

GARDENER (HEAD).—Middle-aged, married, family small; Scotch; willing and obliging; thoroughly understands the whole system of Gardening, care of Meadow Land, &c. A quick Accountant. Good character. Wages moderate.—A. B., Post Office, Finchley, Middlesex, N.

GARDENER (HEAD).—Age 38, married, two children; has a thorough practical knowledge of his profession, including Early and Late Forcing, the management of Stove and Greenhouse Plants, Exotic Orchids, Flower and Kitchen Gardens, &c. Good character.—A. B., care of Mr. Allen, Asfordby Railway Station, near Melton Mowbray.

GARDENER (HEAD, or GARDENER AND BAILIFF).—In or out of the house; thoroughly understands his profession, Stock, and Land. Highly recommended from his late master.—D. M., Post Office, Battersea Rise, S.W.

GARDENER.—Age 34, single; understands Kitchen and Flower Gardens, Greenhouse, Hothouse, and Forcing Out door place preferred.—Gardener, Dashwood, Bexley, Kent.

GARDENER.—Steady, married, small family; understands his profession, and can take charge of Cows. Good character.—A. B., Mr. Peters, Sion Nursery, Thornton Heath, Croydon, Surrey, S.

GARDENER (SINGLE-HANDED).—Age 26, married, one child; has a practical knowledge of his profession Three years' good character.—G. M., Post Office, Uckfield, Sussex.

GARDENER (SINGLE-HANDED, or where one or two are kept).—Middle-aged, married, no incumbrance; understands his profession in all its branches. Can undertake the management of Meadow Land. Five years' good character.—R. D., Post Office, Midford, near Bath.

GARDENER.—Age 25, single; thoroughly understands the management of Greenhouse, Vinery, and Flower and Kitchen Gardens; also the growth of Cucumbers and Melons. Three years' good character.—J. C., Post Office, Purton, Wilts.

GARDENER.—Middle-aged, married; can be very well recommended for industry, honestry, and sobriety. He is capable of undertaking the charge of Kitchen and Flower Gardens of a moderate size: and understands also the management of Vines, Greenhouse Plants, Pits, &c. The neighbourhood of London would be preferred.—E. R., Post Office, Chertsey.

GARDENER (FOREMAN in a good establishment).—Age 23, single; thoroughly understands the Forcing of Fruit, and has good practice in the growth of Orchids and Stove and Greenhouse Plants. Good reference —A. B., Mr. Foster, Bookseller, &c., High Street, Peckham, S.E.

TO NURSERYMEN AND OTHERS.

PLANT FOREMAN, or Orchid, Stove Plant, and Fern Grower.—Young; good practical experience. Five years' good character from present employer.—State terms, &c., to W. K. GOWER, Messrs. Jackson's Nursery, Kingston, S.W.

PLANT GROWER, PROPAGATOR, OR FOREMAN, &c.—Age 38; lengthened experience in Propagation and Culture.—HORATIO, 9, Arragon Terrace, King Henry Street Kingsland, N.

PROPAGATOR.—First-rate; satisfactory references to French and German Nurserymen if required.—W. G., *Gardeners' Chronicle* Office

GARDENER, or GARDENER AND GROOM.—Age 29, married, no incumbrance; thoroughly understands his profession in both capacities. First-class character from present employer —E. C. STANSTEAD, Post Office, near Bishop's Stortford, Essex.

LAND OR FARM MANAGER.—Age 35, single; a thoroughly qualified Scotch farmer of high respectability. A liberal Premium would be given for an introduction. First class certificates and security if required.—Mr. SCOT, General Post Office, Leith.

MANAGER OR SHOPMAN.—Age 24; has a good knowledge of the Nursery and Seed business.—F., Messrs. Hurst & McMullen, Seed Merchants, 6, Leadenhall Street, London, E.C.

SHOPMAN.—A young Man of respectable connections; is desirous of engaging himself in a first-class Nursery and Seed Business; is of good address, writes an excellent hand, well acquainted with Book keeping, the Seed and Nursery Trade, also In and Out-door Propagating and Growing Plants. Wages not so much importance as an engagement in a respectable well-disciplined establishment. A provincial house preferred.—E. F., R. White, Esq., 2, Fish Street Hill, London, E.C.

GAMEKEEPER (UNDER).—Age 20. Writes a clear hand, can Keep Accounts very well, and has plenty of pluck. Recommended by a gentleman with whom he has been some years.—F. W., Post Office, East Cowes, Isle of Wight.

The Gardeners' Chronicle Newspaper.

SATURDAY, MAY 12, 1860.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY

BEING ABOUT TO RESUME THE

IMPORTATION OF SEEDS AND PLANTS

by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. A knowledge of Spanish or Portuguese would be desirable. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

NEXT OF KIN, HEIRS, &c., WANTED, being exact Copies of Advertisements from the *Times, Gazette, Post, Chronicle, Herald,* Provincial, Colonial, and American newspapers, for the past 60 years, relating to many thousand names and descriptions of persons wanted to claim property in various parts of the world. Sent post free for 12 penny stamps, per return post punctually, by the publisher, FISHER & SON, Kingsland, London, N.E. "Worth its weight in gold." —*Times*, Nov. 26, 1859.

ALL DOMESTIC SERVANTS' ADVERTISEMENTS, Coachmen, Gardeners, &c., INSERTED in *The Times* for 1*s.* 9*d.*, in the *Morning Post* for 1*s.* 3*d.*, or stamps by post.—W. DEEKS, News Agent, 22, Market Street, Mayfair, W.

News of the Week.

In the House of Lords on Tuesday Lord EBURY moved the resolution of which he had given notice, for a commission to revise the rubrics and services of the Church of England. The Archbishop of CANTERBURY opposed the motion on the ground that it would lead to no useful result, and was calculated to endanger the peace of the Church. The motion was also opposed by Lord LYTTELTON, Earl STANHOPE, the Bishops of LONDON, OXFORD, and CASHEL, and at the suggestion of Earl GRANVILLE was ultimately withdrawn. On Thursday the Paper Duties Repeal Bill was read a first time, Lord MONTEAGLE giving notice that on the motion for the second reading he should move that the Bill be read a second time that day six months. The Customs Bill was read a second time, after an intimation from the Earl of DERBY that, though neither he nor his friends acquiesced in the policy of the Government as represented by the Bill, they would not disturb the financial arrangements of the year by endeavouring to reject it, but would reserve their opposition for the Paper Duties Repeal Bill, in the hope of thereby saving the country from the sacrifice of a considerable revenue.

In the House of Commons on Friday Mr. H. B. SHERIDAN moved for leave to bring in a Bill to reduce the duty on fire insurances from 3*s.* to 1*s.* per cent. The CHANCELLOR of the EXCHEQUER opposed the motion, which was negatived on a division by 108 to 84. Sir J. PAXTON moved for a Select Committee to consider the best means of providing for the increasing traffic of the metropolis by the embankment of the Thames. Mr. COWPER, on the part of the Government, assented to the motion. Mr. BLACKBURN moved, by way of amendment, to add words instructing the committee to inquire how the funds are to be provided from the districts benefited. In the debate which followed, Lord PALMERSTON said it must be clearly understood that it would be the duty of the committee to collect all possible evidence to show how the embankment could be made and paid for by metropolitan dues or private enterprise, without any demand on the Imperial exchequer. The amendment was then negatived, and the motion agreed to. On Monday the adjourned debate on the second reading of the Refreshment Houses and Wine Licenses Bill, and the amendment to defer the second reading for six months, was resumed by Mr. AYRTON in opposition to the Bill, which was also opposed by Mr. LIDDELL, Mr. PALK, Mr. SCULLY, Mr. JAMES, Mr. HENLEY, and Mr. BUXTON; and supported by Alderman SALOMONS, Mr. VILLIERS, Sir M. PETO, and the CHANCELLOR of the EXCHEQUER. On a division the amendment was negatived by 267 to 193. The Bill was then read a second time. On Tuesday Mr. BOVILL's Stock Jobbing Bill was lost, without a division, on the question of the second reading. On the order of the day for the third reading of the Paper Duty Repeal Bill, Sir STAFFORD NORTHCOTE moved as an amendment that the present state of the finances of the country rendered it undesirable to proceed further with the repeal of the duty on paper. Mr. BALL, Sir M. FARQUHAR, Mr. DISRAELI supported the amendment; Mr. M. GIBSON, Lord H. VANE, Mr. ELLICE, Mr. T. BARING, Mr. PULLER, and the CHANCELLOR of the EXCHEQUER opposed it. After a long debate the amendment was negatived on a division by the narrow majority of 9, the numbers being 219 to 210, and the Bill was read a third time. On Wednesday the adjourned debate on the second reading of the Piers and Harbours Bill was resumed by Mr. LINDSAY, who moved that the Bill be read a second time that day six months. After some discussion the amendment was negatived on a division by 99 to 80, and the Bill was read a second time. On the order for going into committee upon the Bleaching and Dyeing Works Bill, Mr. BAZLEY moved as an amendment that the Bill be referred to a select committee. On a division the amendment was negatived by 184 to 147. The House then went into committee and discussed the clauses of the Bill during the remainder of the sitting. On Thursday the House having resolved itself into a Committee of Ways and Means, the CHANCELLOR of the EXCHEQUER moved resolutions charging rates and duties upon licenses for refreshment houses and wine-shops. After considerable discussion the first resolution, imposing a license of 10*s.* 6*d.* on refreshment houses rented under 20*l.*, was carried on a division by 173 to 103. On the next resolution, imposing a license of 1*l.* 1*s.* on refreshment houses above 20*l.* rental, Mr. AYRTON moved as an amendment to reduce the charge to 10*s.* 6*d.*, thus establishing a uniform license. The CHANCELLOR of the EXCHEQUER opposed the amendment, which was negatived on a division by 159 to 88. The resolution was then agreed to, as were also the resolutions for granting licenses to retail wine to be consumed on the premises or otherwise. On the motion that the House go into committee on the Wine Licenses Bill, Mr. PALK moved as an amendment that the House go into committee on that day six months. The amendment was negatived without a division, and the House went into committee, when some of the clauses were gone through, after much discussion and many amendments. The CHAIRMAN was then ordered to report progress.

Accounts from Sicily announce that the insurrection continues to gain ground, and that General GARIBALDI has sailed from Genoa with three steamers and a body of 1400 men for the purpose of aiding the insurgents. The Prussian Government has announced its intention to interfere again in the affairs of the German Duchies, and has submitted to the Chamber of Deputies two projects of law with the view of obtaining a grant of extraordinary supplies for military purposes. The Count DE MONTEMOLIN embarked at Tortosa with his brother on Monday last, after publishing a formal act renouncing his right to the throne of Spain. Another insurrection broke out on Tuesday at Alcala de Henares, and was suppressed by the civic guard, but not without a serious loss of life. A despatch from Constantinople states that the relations of Russia and Turkey are again in an unsatisfactory state. It is said that 45,000 Russians have been concentrated on the Pruth, and that the Turkish Government has consequently assembled a force of 30,000 men at Widdin.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Buckingham Palace. On Friday morning the Queen and Prince Consort, accompanied by the Princess Alice, rode on horseback. The Duchess of Kent left Buckingham Palace for Frogmore. In the afternoon the Prince Consort, accompanied by Prince Arthur, went to Woolwich and visited the Armstrong gun factories. The Queen, accompanied by the Princesses Alice and Beatrice, took a drive in a carriage and four. Prince Arthur and Prince Leopold visited Mr. Mayall's photographic exhibition, in Regent Street, and sat for their portraits. In the evening her Majesty had a dinner party. On Saturday morning the Queen and Prince Consort, accompanied by the Princess Alice, rode on horseback. In the afternoon the Queen, Prince Consort, and the Princess Alice visited the Botanical Gardens in the Regent's Park. Her Majesty, accompanied by the Princess Alice, afterwards took a carriage drive. The Prince Consort rode on horseback. In the evening her Majesty and the Prince Consort, accompanied by the Princess Alice, honoured the Royal Italian Opera with their presence. On Sunday morning the Queen, Prince Consort, the Princesses Alice, Helena, and Louisa, and Princes Arthur and Leopold, attended Divine service in the private chapel of Buckingham Palace. The Bishop of London preached the sermon. On Monday the Queen and Prince Consort, accompanied by the Princess Alice, rode on horseback. In the evening her Majesty had a dinner party. On Tuesday morning the Prince Consort rode on horseback and visited the National Portrait Gallery. In the afternoon the Queen and Prince Consort, accompanied by the Princesses Alice, Helena, and Louisa, visited the collection of works by the late Sir William Ross, R.A., now exhibiting at the Society of Arts in John Street, Adelphi. The Queen and Prince Consort afterwards took a carriage drive. In the evening her Majesty and the Prince Consort honoured the performance at the Princess's Theatre with their presence. The Princesses Alice, Helena, and Louisa, attended the performance at the Royal Italian Opera. On Wednesday morning the Queen and Prince Consort, accompanied by the Princess Alice, rode on horseback. In the afternoon the Queen, accompanied by the Princess Alice and Prince Arthur, took a drive in a carriage and four. In the evening her Majesty gave a concert. On Thursday the Queen held a Privy Council at Buckingham Palace. Lord Palmerston and Earl Granville had audiences of her Majesty. Professor Owen delivered his fifth lecture at Buckingham Palace, before the Prince Consort, the Princess Alice, and other members of the Royal family. The Prince and Princess of Leiningen visited her Majesty. The Prince Consort rode on horseback. In the afternoon the Queen and Prince Consort, accompanied by the Princess Alice and Prince Leopold, took a drive in a carriage and four. In the evening the Queen and Prince Consort, with the Princess Alice, honoured the performance at the Royal Italian Opera with their presence.

PRINCE ALFRED sailed from Portsmouth in the Euryalus on Saturday for the Cape of Good Hope. In her passage down Channel some derangement of the machinery occurred, which rendered it necessary to put into Plymouth Sound on Sunday morning. In the afternoon the Prince landed at Mount Wise, and after taking luncheon with the Port Admiral, paid a visit to the Earl of Mount Edgcumbe at his winter villa. On Monday his Royal Highness visited the dockyard, the steam yard at Keyham, and Mount Edgcumbe. It is expected that the Euryalus will be detained some days by the necessary repairs.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Tuesday, and another on Wednesday.

ORDER OF THE BATH.—The Queen, on the recommendation of Lord Palmerston, has conferred upon Mr. Erskine May, clerk assistant of the House of Commons, a Civil Companionship of the Bath, in recognition of his public services.

THE ARMY.—The colonelcy of the 27th Foot, vacant by the death of General Fleming, has been conferred on Major-General Geddes; the colonelcy of the 46th Foot, vacant by this promotion, has been conferred on Major-General T. G. Ball; the colonelcy of the 56th Foot, vacant by the death of General Home, has been conferred on Major-General Breton; the colonelcy of the 3d Foot, vacant by the death of General Berkeley Drummond, has been conferred on Major-General the Hon. Charles Grey; and the colonelcy of the 32d Foot, vacant by the death of Sir Willoughby Cotton, has been conferred on Major-General Sir J. E. W. Inglis, K.C.B. The Commander-in-Chief has issued an important Memorandum on Light Infantry Drill, which will effect a new organisation of the British Army, by the establishment of new military principles, in conformity with the progress of military science and the novelties of modern armament. The memorandum applies the system of light infantry drill to the whole army, and desires that in future no pains may be spared to make every man in the British Infantry "a thorough and efficient light infantry soldier."

DIPLOMATIC APPOINTMENTS. — The Queen has appointed William Doria, Esq., now Secretary of Legation in Persia, to be Secretary of Legation at Parana; and Edward B. Eastwick, Esq., formerly in the service of the Government of India, to be Secretary of Legation in Persia, in the room of Mr. Doria.

GOVERNORSHIP OF MADRAS.—Sir Charles Trevelyan has been recalled from the office of Governor of Madras, and will be succeeded by Sir Henry Ward, now Governor of Ceylon. This step has been taken by the Government in consequence of Sir Charles Trevelyan having published a minute in opposition to the financial scheme proposed by Mr. Wilson as Finance Minister for India.

ARCHBISHOPRIC OF YORK.—It is understood that Dr. Longley, the Bishop of Durham, will succeed the late Dr. Musgrave as Archbishop of York.

CHURCH OF SCOTLAND.—The Queen has appointed

Lord Belhaven to be her Majesty's High Commissioner to the General Assembly of the Church of Scotland.

THE COMMAND IN THE PACIFIC.—Rear-Admiral Sir Thomas Maitland, C.B., has been appointed Commander-in-Chief in the Pacific, in the room of Rear-Admiral Baynes, whose period of service has expired.

THE VOLUNTEER MOVEMENT.—The grand review of the Rifle Corps Volunteers by the Queen in person, which was announced for the 18th of May in Hyde Park, will not take place till later in the summer. The Prince of Wales has accepted the honorary Colonelcy of the Civil Service Corps, her Majesty and the Prince Consort having been graciously pleased to consider a corps formed of the civil servants of the Crown as an exceptional case, and to approve his Royal Highness becoming the honorary Colonel of the corps. The City of London Brigade, about 1200 strong, was on Saturday inspected by the Duke of Cambridge, as colonel of the brigade, on the parade ground in front of the Horse Guards, in the presence of many thousand persons. On Wednesday that portion of the second Metropolitan brigade, which consists of the Westminster, South Middlesex, West Middlesex, and St. George's Regiments, with detachments from the Volunteer Guards and Volunteer Engineers, numbering together about 2000 men, had a field day in Lord Holland's Park at Kensington, in the presence of a distinguished assemblage of noblemen, ladies, and gentlemen, who were admitted to the Park by tickets. The Queen and the Princess Alice were on the ground at the commencement of the manœuvres. On Thursday the Inns of Court Volunteers, numbering from 300 to 350 men, mustered in front of King's Bench Walk, Temple, and marched over Blackfriars Bridge to the Waterloo Station, whence they proceeded by train to Mortlake. They then marched over Sheen Common to Richmond Park, where they had a field day in the presence of an immense concourse of spectators.

COLONIAL POST-OFFICES.—The expediency of calling upon the colonies to manage their own post-offices has been affirmed. After the 1st May (or the 1st June in Jamaica) the British Post Office will no longer have direction over any colonial post-office, except those at the military stations at Gibraltar and Malta.

Foreign.

FRANCE.—A Bill for improving the navy, approved by the Council of State, has been presented to the Legislative Body. By this Bill the number of Vice-Admirals is increased to 12, and that of Rear-Admirals to 24. The *Moniteur* announces that a decree modifying the project of law concerning sugars and coffee has been submitted to the Legislative Body. It also publishes a decree fixing the individual payment for exemption from military service at 2300fr., and the bounty on re-engagement for seven years' service at 2000fr. The operations for establishing the boundary line between France and Sardinia commenced on the 1st of May, and are now nearly completed, owing to the activity of the engineers employed in the operation. The fort on Mont Cenis alone gave rise to some difficulty. The Emperor is said to have demanded that the fort should be comprised in the French possessions, on the ground that it was the French Government which had originally constructed it at its own expense. M. Cavour persisted in claiming it as being necessary to the defence of Piedmont. To put an end to the dispute it has been determined to demolish the fort. It is understood that the departure of the Emperor for Nice is postponed until the treaty between Sardinia and France shall be ratified. It is asserted that Marshal M'Mahon will take the command of the camp of Chalons at the beginning of June next. The *Moniteur* announces that the Superior Council of Commerce, which has been appointed to make investigations relative to the execution of the Treaty of Commerce with England, assembled on Monday last, and will in future regularly meet on Monday, Thursday, and Friday in each week. The British commissioners for the negotiation of the French tariff have their office at 82, Rue de l'Université, Paris. The shipowners of Dieppe have presented a petition to the Emperor, praying him to maintain the differential duties on articles imported into France in foreign ships. The shipowners of Marseilles are preparing a petition to the same effect, in which they state that the adoption of Mr. Lindsay's proposition would inflict fatal injury on all the French seaports. Defensive works on an extensive scale are still carried on with great activity on the coast of Brittany and Normandy. It is reported that the official returns show that the number of seamen inscribed in the maritime inscription is 68,000. The *Constitutionnel* has an article by its chief editor, M. Grandguillot, severely condemning the efforts which are making to cause the fall of Count Cavour. It details the difficulties which have been successfully overcome by Piedmont, and points out the political importance which she has acquired by the consent of Europe. It extols the policy of Count Cavour, and commends him for resisting the efforts of those who would exceed the limits of that policy. This article also clearly declares that Europe, and France particularly, will energetically disapprove of aggression, and that the work of Piedmont is no more to extend her boundaries but to assimilate herself with the annexed provinces.

SPAIN.—The *Madrid Gazette* of the 2d, besides a decree of general amnesty, contains a royal order to the effect that "the ex-Infantas Carlos Luis of Bourbon and his brother Fernando are to be conveyed, in a vessel of the State appointed by the Minister of Marine, to the foreign port they themselves may indicate." The two Princes received the amnesty with much satisfaction and embarked at Tortosa on the 7th inst. for Cette. Notwithstanding the contradiction by some Legitimist journals, the following act of renunciation of his right to the throne of Spain by the Count de Montemolin is said to be authentic:—

"I, the undersigned, Charles Louis de Bourbon and de Bragance, Count of Montemolin, declare, in the face of the world, publicly and solemnly, that, intimately convinced of the futility of the various attempts which have been made in favour of the claims which I think to have to the succession to the throne of Spain, and desiring that, neither for myself nor in my name, public tranquillity shall be further disturbed nor the calm and quiet of my country, whose happiness I have at heart, from my own free will, and by spontaneous and unshackled desire—so that the detention I am now suffering may prove no obstacle—I solemnly renounce now and for ever the said claim, protesting that this sacrifice, which I lay upon the altar of my country, is the result of the conviction which I have acquired in the last abortive attempt, that the efforts which might be made in my favour would always lead to civil war, which I wish to avoid at all price. Consequently, I pledge my word of honour henceforth never to consent to my flag being hoisted in Spain or in its States, and I declare that if unhappily some one should at a future time make use of my name with that object I should regard him as an enemy of my honour and reputation. I also declare that, as soon as I am restored to the full enjoyment of my liberty, I will renew my present voluntary renunciation, so that at no time my free will in making it may be called in question. May the happiness and prosperity of my country be the reward of this sacrifice! Done at Tortosa, April 23, 1860.—CARLOS LUIS DE BOURBON ET DE BRAGANCE."

Accounts from Madrid of the 9th inst. mention another insurrectionary movement which took place on the previous day at Alcala de Henares. 300 men belonging to the disciplinary companies rose, but the civic guard re-established order, though not without lamentable incidents. Marshal O'Donnell has arrived at Madrid, and has been received with enthusiasm. The army of Africa was to enter Madrid yesterday.

PORTUGAL.—A report is current that the King of Portugal is about to marry the Princess Marie of Hohenzollern Sigmaringen, the youngest sister of his late Queen, and that the Hereditary Prince of Hohenzollern, now aged 25, is to be married to Donna Antonia, the youngest sister of the King of Portugal. The two Princesses are in their 15th year.

SWITZERLAND.—The Federal Council has again insisted upon the least possible delay in the assembling of the Conference, and has issued a fresh Circular Note demonstrating the strategic importance of the neutralised provinces for the maintenance of the neutrality of Switzerland. The Federal Council has received a note from the French Government respecting maltreatment and insults offered to Frenchmen in Switzerland, and requesting that steps should be taken for the prevention of them. Official inquiries are said to have proved these allegations to be absolutely false. Prince Napoleon arrived at Geneva *incognito* on Sunday, accompanied by M. E. de Girardin, and left again on Monday. This excursion of his Imperial Highness is said to have no political object. The Cabinet of Turin has made a proposal to the Federal Council for the construction of a railway through Switzerland to connect Italy and Germany.

HANOVER.—The Treaty between Hanover and England will be prolonged after the 14th May, but perhaps for a period of less than three months.

BAVARIA.—The ex-King Ludwig will leave Munich on the 15th inst. for Vienna. It is believed that this journey of the aged Prince is not entirely without political motive.

PRUSSIA.—In the sitting of the Chamber of Deputies on the 3d inst. a debate took place in reference to the Schleswig-Holstein question, in which the minister of Foreign Affairs, Baron von Schleinitz, said that "having in view the present state of things in Schleswig, the Federal Diet could hardly any further neglect its duty of examining what Germany is entitled to demand in consequence of the Conventions concluded in 1851 and 1852. We cannot accept the acts of Denmark as a fulfilment of the obligations she had undertaken. Prussia takes the interest of the German Duchies to heart, and both as a Federal and a European Power, she will do for them all that lies in her power." In the sitting of the 4th, after a discussion on the intended interference of Prussia in the affairs of Schleswig-Holstein, the Minister for Foreign Affairs said that no alliance existed between Prussia and Austria. In the sitting of Saturday the Minister of Finance, in introducing two projects of law with the view of obtaining from the Chamber a grant of extraordinary supplies for military purposes, said:—

"By these measures the provisional condition of the army, after the mobilisation of last year, is to be maintained. Their execution requires a credit of 9,000,000 thalers for the Minister of War from the 1st of May, 1860 to the 30th of June, 1861. In order to meet these expenses, the additional tax of 25 per cent. hitherto paid is to be continued until July 1, 1861, and the surplus from 1859 is to be used. The Ministry for the present requests the Chamber to vote the said amount without requiring a special account; such an account will, however, be laid before the next Landtag. The State Reserve Fund of 12,000,000 thalers will remain untouched. The question whether the Landwehr is to be liable to two or three years' reserve duty is not considered in the present projects of law."

AUSTRIA.—A despatch from Vienna states that in reply to the proposals of France, England consents to adopt as the basis of the Conference Article 92 of the Final Act of Vienna, which refers to the neutralisation of the districts of Chablais and Faucigny. England reserves, however, the right of making at the said Conference proposals relative to the mode of this neutralisation. This declaration of England is likely to increase the probabilities of the assembling of the proposed Conference. The inauguration of the newly-organised Council of the Empire will take place in the course of this month, and the protocols of its sittings will be regularly published in the official *Gazette*. The Privy Councillor Count Apponyi and Count Barkoczy have refused to become members of the Council of State. Count Hartig, the late Minister of the Conferences, who is considered the real chief of the liberal party in Austria, has also declined the post of Councillor of the Empire for life on account of ill health. The chief command of all the Austrian *corps d'armée* in Italy is said to have been intrusted to Prince Alexander of Hesse.

ITALY.—The King of Sardinia after his triumphant reception at Bologna proceeded to Modena and went to the cathedral, where he assisted at the celebration of a *Te Deum*. A great concourse of persons were assembled, by whom the King was heartily cheered. His Majesty returned to Turin on Tuesday, and was met by the inhabitants, by whom he was warmly received. The Sardinian Parliament on Thursday commenced the examination of the annexation question. The result of the elections to the present time shows a considerable majority in favour of the Ministry. General Garibaldi has only obtained 35 votes at Turin, and Signor Laurenti only 14. A proclamation of the Pope was published on the 3d, in which his Holiness makes an appeal to the Catholic world on behalf of the subscription to the new Roman loan of 50,000,000fr., bearing interest at 5 per cent. The bonds are of three categories, viz., 100fr., 500fr., and 1000fr. each. The subscription has been opened in the capitals of Europe. Belgium has already subscribed 15,000,000fr. The statements of the Sardinian journals that the French troops will have entirely evacuated the Papal States before the end of June appear to have been premature. It is now said that the Duke de Grammont, in accordance with instructions received from Paris, has declared to the Holy See that the French garrison will not leave the Papal territory until the Pope himself shall have acknowledged that the departure of the French troops can take place without any danger to the tranquillity and safety of his States. The Sardinian Government is also said to have been induced by the representations of France to recognise the right of the Pope to claim, eventually, the assistance of the King of Naples to maintain order in the Papal States. It is therefore asserted that if, after the departure of the French troops, the Papal army were increased by Neapolitan soldiers, Sardinia would raise no objection, provided the Papal army should not attempt the conquest of the Legations. General Oudinot has given a denial to the report that he intended to take service in the Papal army. One thousand Irishmen have left Trieste for Ancona in order to be enrolled in the army of the Pope. Advices from Naples state that the export duty on oil has been increased two ducats per cantaro, which is almost equivalent to a prohibition.

SICILY.—The insurrection continues to make head throughout the island, and is spontaneous and general. The Royal troops are in possession of the towns, and are blockaded between the sea and the interior, which is entirely in the hands of the insurgents, their head-quarters being at Cefalu, 15 leagues from Palermo. One regiment had refused to march from Palermo, as the soldiers, immediately on leaving the city, would be exposed to the fire of the insurgents. General Garibaldi left Genoa on the 5th inst. with three steamers and 20 cannon to co-operate with the insurgents. These steamers had on board 1400 men, consisting principally of the former Chasseurs des Alpes, Romagnols, Lombards, and several Genoese. A fourth vessel, it is said, left Leghorn for the same destination as the others, and three vessels have started from different points, all of which were to join the division out at sea. In order to mislead the Piedmontese authorities, all these vessels had taken their papers for Malta. The expedition is reported to be organised on a very grand scale, being provided with arms, ammunition, provisions, and materials for a campaign—in fact, with all necessary resources for sustaining a contest of several months. The carrying out of the expedition has required an expenditure which will exceed several millions, and it is said that the subscriptions collected in England and Italy are not considerable enough to cover the expenses. General Garibaldi, in order to replace the arms which he feared would be seized by the Sardinian Government, had received other arms, which had not passed through Piedmont. The different vessels belonging to the expedition were to rendezvous off the Island of Capraja, and then direct their course towards Sicily. The Sardinian Government has sent two Sardinian vessels to Sicily to oppose with armed force any attempt which may be made by Garibaldi or others in vessels hoisting the Sardinian flag, and has ordered all arms and ammunition which had been deposited at Quarto, near Genoa, to be seized, and has also given orders for the port of Genoa to be watched. The Neapolitan Government had raised the state of siege at Palermo, but the court-martial was to sit permanently, and General Balzano had demanded a reinforcement of 5000 men, in consequence of Garibaldi's expedition

The journals publish a letter from General Garibaldi, in which he says:—

"It is the duty of all to encourage, aid, and to augment the number of combatants against oppression It is not the insurrectionary party in Sicily whom we are assisting, but Sicily herself, where there are enemies to contend with. It was not I who advised an insurrection in Sicily; but from the moment that our Sicilian brethren threw themselves into the struggle I considered it my duty to assist them. Our battle cry will be, 'Italy and Victor Emmanuel!'"

RUSSIA AND TURKEY.—Advices from Constantinople to the 2d inst. assert that 45,000 Russians were collected upon the Pruth, and that the Porte had assembled a *corps d'armée* of 30,000 men at Widdin. A change in the Ministry was still expected.

SERVIA.—The Porte has resolved upon declaring to the Servian deputation at Constantinople that, in principle, it by no means acknowledges the hereditary rights of the family of Prince Milosch.

EGYPT.—Said Pacha has nominated several officers chosen from among the native Christians. This example of tolerance has produced a sensation. M. Auguste Marriette, an eminent French archæologist, has discovered the remains of a large palace, in granite, in the immediate vicinity of the Sphinx, which he believes to be that of Chephrem, who built the great pyramid. No less than seven statues of this prince have been found in the palace.

UNITED STATES.—The Democratic Convention at Charleston had elected the Hon. Caleb Cushing as permanent chairman. The report on credentials was presented on the 25th ult., and upon a division the Wood delegation was excluded. This vote was understood to decide the question as to the nomination for the Presidency, and Mr. Douglas is now regarded as the inevitable candidate, none but the extreme Southern Ultraists having any further intention of opposition. Up to the 30th ult., however, it appears by telegram that no nomination had taken place. The sittings of the Convention were very riotous. The town was filled with delegates. It was reported that the reply of Lord John Russell to Mr. Cass on the subject of the slave trade, just received, discusses points of international law at great length, and that its tenour is very severe on the course of the United States. Mr. Cass is said to have been very irate after its perusal.

MEXICO.—Accounts from Mexico state that General Miramon, accompanied by 1800 men, had arrived at the capital on the 17th ult., where he was received by a salute of guns and other demonstrations. The Government was suffering from want of money, and forced loans had been levied in every direction. A revolution, headed by General Mosquera, had broken out in New Granada. News from Brownsville to the 19th ult. states that it was rumoured that Cortinas had reorganised his forces and crossed the river.

ST. DOMINGO.—News from St. Domingo to the 16th ult. reports a severe shock of earthquake on the 8th, which caused considerable damage.

VENEZUELA.—Advices from Venezuela state that the rebel forces were confident of success. The British Vice-Consul Stacey had been convicted of conspiracy, and sentenced to perpetual banishment.

NEW ZEALAND.—Accounts from Auckland mention an insurrection of the natives in the province of Tarawaki, who had taken up arms against the Queen's forces to prevent the survey of a portion of land at Waitara by by the Government agents. Martial law had been proclaimed by Colonel Murray, commanding the troops at New Plymouth, but no collision had taken place.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*The Army.*—The Earl of LUCAN, in calling attention to the organisation of the infantry, said that he considered it essential that a more complete regimental system should be substituted for the present exceptional organisation. The waste of force under the present system was enormous, the consolidated depôts in different parts of the country having amounted on the 1st of February last to no less than 28,000 men. He made certain suggestions, including the addition of another battalion to every regiment, which in his opinion would make the service more effective for the defence of the country.—Earl DE GREY and RIPON said the subject was so purely technical in its character that it would be impossible to discuss it with advantage in that House Any suggestion for improving the organisation of the army would receive the careful attention of the Government.—The Duke of CAMBRIDGE concurred with Earl De Grey, but said he entirely differed from the noble and gallant earl who had introduced the subject as to the advisability of establishing second battalions. After a short conversation the subject dropped. The *Pawnbrokers' Act Amendment Bill* was read a second time.

MONDAY.—*Affairs of Savoy.*—Earl GRANVILLE, in reference to a motion on the paper by the Marquis of Clanricarde, stated that her Majesty's Government were not prepared to produce the papers or to give any information relating to the neutralised portions of Savoy. Under these circumstances he hoped the marquis would withdraw his motion.—The Marquis of CLANRICARDE said he was willing to withdraw it, but expressed a hope that the papers would be produced before the Conference was fixed. Some formal business was then disposed of

TUESDAY.—The *Duchy of Cornwall (Limitation of Actions) Bill* was read a second time, as was also the *Bankrupter Law (Scotland) Bill*, the object of which is to prevent persons bankrupt in England from availing themselves of the Scotch law to get released from their obligations. *Revision of the Prayer Book.*—Lord EBURY moved a resolution to the effect that an address be presented to her Majesty praying for the appointment of a commission to prepare such alterations and amendments in the canons as may seem desirable, and to consider other matters which in their judgment may best conduce to those ends. The Prayer Book had already been partially revised last year by the omission of certain services, and there was no reason why a more complete revision should not take place. It would destroy the spirit of party, and reconcile differences throughout the various sections in the Church. Individual clergymen had already introduced innovations, which had caused great scandal and dissensions. The points he proposed to bring under the discussion of the commission would be the revision of the rubrics, the shortening of the morning service, the removal of the damnatory clauses of the Athanasian Creed, the revision of the baptismal, marriage, and ordination services, and the subscription to the Articles.—The Archbishop of CANTERBURY was convinced that the object which Lord Ebury had in view was to benefit the Church, but he was also convinced that the mode by which he proposed to confer that benefit would only result in injury. Although he had met many who desired alterations, he had seldom found any two persons who agreed as to what alterations should be made in the Prayer Book, and he therefore could not help considering that the proposed alterations might seriously damage the peace of the Church. He therefore felt bound to oppose the motion.—Lord LYTTELTON also opposed the motion.—The Bishop of LONDON said that the question was a practical one, and he should much like to know what was the practical grievance complained of, and what was the practical good to be obtained He examined briefly the portions of the rubric and the burial service brought forward by Lord Ebury, and showed that the grievances of which he complained either did not arise from those causes or would not be remedied by the means proposed. Adverting to the Book of Canons, he showed that it was perfectly competent for Convocation, with the consent of the Crown, to alter these canons, and he therefore asked what use could there be in applying for a commission in order to do that which could be done already without it.—Earl STANHOPE said that the large majority of the bench of Bishops and of the clergy opposed to the motion was a sufficient proof of the great unpopularity and small need of the revision of the Liturgy.—Earl GRANVILLE thought it would be desirable, as the expression of opinion had been all on one side, that the motion should be withdrawn.—The Bishop of OXFORD wished to understand whether Lord Ebury intended by this motion to alter the doctrines of the Church of England or to abbreviate certain prayers which he deemed too long. It had been an argument in favour of the motion that a revision of the Liturgy would conciliate the Dissenters. Now, he did not think for a minute that the alterations in the Prayer Book would bring back Dissenters to the Church, and even if he had any reasons for thinking so he should grieve, much as he desired to bring them back, to allure them back by any such means. He protested vehemently against the alterations of "only a few words here and there," as it would, in his opinion, be striking at the belief of the great body of the English people. The man who proposed to make alterations in the Prayer Book for any but the greatest results was, in his opinion, rash and unadvised. The objection to the length of the services was a mere bugbear. In his own diocess, the services which had in some instances been shortened had been subsequently resumed at their full length at the request of those very persons who had begged they might be shortened. In conclusion, he briefly refuted the remarks of Lord Ebury concerning the burial service, and renewed his strong protest against the motion.—After some remarks from the Bishop of CASHEL, Lord LYTTELTON, and Lord EBURY, the motion was negatived without a division.

THURSDAY.—The *Paper Duty Repeal Bill* was brought up from the Commons and read a first time.—Lord MONTEAGLE gave notice that on the motion for the second reading of the Bill he should move that it be read a second time that day six months.—The Earl of WICKLOW disapproved of the Bill, but thought it would be establishing a dangerous precedent to reject such measures coming up to them from the House of Commons The *Public Improvement Bill* and the *Petitions of Right Bill* were read a second time.—On the second reading of the *Customs Bill*, the Earl of DERBY said that the reason why the Conservative party in the House of Commons had offered no substantial opposition to this measure was because they felt that its rejection would have the effect of upsetting the arrangements which had been entered into by the commercial interests of the country upon the faith of the scheme receiving the sanction of Parliament The treaty which had been entered into with the French Government was a most important act, and the course which the Government had adopted since they were armed with the power which the treaty conferred upon them, showed that they were disposed to use it with moderation. With regard to the Paper Duties Repeal Bill, however, his party could fairly meet that question without materially affecting the principal proposals of the Government; and he assured their lordships that no exertion on his part would be wanting to save the Exchequer a million and a half of revenue. A series of Bills for the *Consolidation of the Criminal Law* passed through committee.

FRIDAY.—*Central America.*—In answer to the Earl of MALMESBURY, Lord WODEHOUSE said that the Bay Islands had been ceded to Honduras under conditions which would ensure the security of her Majesty's subjects residing there. The treaty by which this cession was accomplished had been ratified both by the governor of Honduras and by her Majesty. With regard to Nicaragua, a treaty had been agreed on, but it had not yet been ratified. If the conditions of this treaty were to some extent different from those which had been discussed when the noble earl held the seals of the Foreign Office, they were, nevertheless, of a highly satisfactory nature.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*Japan.*—In reply to Mr. COCHRANE, Lord J. RUSSELL said that despatches of considerable interest and importance had lately been received from Mr Alcock, our Minister in Japan, from which it appeared that the difficulties arising out of the state of the Japanese currency had been satisfactorily arranged, and that there was every probability of friendly relations being re-established with the Government of that empire. *Claims of British subjects on Brazil.*—In answer to Sir H. CAIRNS, Lord J. RUSSELL said that the Brazilian Government had applied to have the mixed commission on British subjects renewed; but before acceding to the request her Majesty's Government had determined upon placing the papers relating to the question before the law officers of the Crown. The question being one of very great delicacy, he could not promise to produce the correspondence at present. *Indian Roots.*—In answer to Mr. KINNAIRD and Mr. VANSITTART, Sir C. WOOD said that considerable difficulty had arisen in consequence of a combination on the part of the ryots in certain districts of Bengal to refuse to fulfil their contracts with the indigo planters. A Bill was about to be introduced into the Legislative Council, not to make the refusal a criminal offence, but to give summary jurisdiction to the magistrates. —*Wine Duties.* In answer to Lord H. THYNNE the CHANCELLOR of the EXCHEQUER said that there was no foundation for the report that the final reduction of the wine duties was to take effect in August or September, and that he intended to adhere to his original proposal that the reduction should take effect on January 1, 1861.—*Papal States.* In answer to Sir J ACTON, Lord J. RUSSELL said that the information the British Government obtained in reference to the condition of the Papal States was not dependent solely on the reports of diplomatic agents, and he would endeavour to ascertain whether there were any despatches which would throw light upon the subject, observing that he had great respect for the person a character of the present Pope, who was a very benevolent man; but there were incidents in ecclesiastical government which were ill-calculated to secure the benefit of the people. As to Italian politics generally, the state of Naples and of Italy, which might bring on complications in Europe, justified, he thought, friendly intervention on our part. *The Serpentine.*—In answer to Mr. J. LOCKE, Mr. COWPER explained the steps which had been taken for the purification of the Serpentine, and denied that there had been any wasteful expenditure of the public money on experiments for cleansing the lake.—Mr. H. B. SHERIDAN moved for leave to bring in a Bill to amend the law relating to the duty now chargeable on *Fire Insurances*, stating that his object was to reduce the duty on all insurances, the premiums on which should not exceed 5*s.* per cent., from the present scale of 3*s.* to 1*s.* per cent. The insurable property of the country was valued at 3,000,000,000*l.*, of which but 900,000,000*l.* was insured. He contended that the existing duty of 200 per cent. upon the premium had the effect of discouraging provident habits on the part of the people, and that, as far as the revenue was concerned, it was positively injured by the present prohibitory rates.—The CHANCELLOR of the EXCHEQUER admitted that there was a good deal to be said in favour of the arguments adduced by Mr. Sheridan; at the same time he denied that a case had been made out to induce the House to enter upon a pernicious course of experimental legislation at a peculiarly inconvenient period. The proposition would take away 430,000*l.* of revenue, for which no substitute could be found, for there was no reasonable ground for supposing that the increased number of insurances would fill up the chasm created in the revenue by the loss of nearly half a million. After some discussion the motion was negatived on a division by 108 to 84 *Embankment of the Thames.*—Sir J. PAXTON moved for a select committee to consider the best means of providing for the increased traffic of the metropolis by the embankment of the Thames The thoroughfares of London, he observed, were almost impassable; and not only was communication obstructed, but property was deteriorated in value. If a road were made from that House to near London Bridge by means of an embankment, it would give very great relief to the traffic. The scheme of an embankment of the Thames had been repeatedly recommended; and now, owing to the railway bridges already projected, the question must be settled or it might never be carried out The difficulty was to find the means; but he argued that this was an imperial as well as a local question, and that the imperial Exchequer should assist the undertaking.—Mr. COWPER, on behalf of the Government, assented to the motion, but it could not be expected that Parliament could look with favour upon the scheme except as one affecting the local interests of the metropolis.—Mr BLACKBURN moved, as an amendment, to add words to the motion empowering the commission to inquire how funds might be raised by the districts benefited.—Lord J. MANNERS held that the appointment of a commission would be chiefly beneficial if it were to take into inquiry the whole subject in connection with metropolitan railways, sewers, &c., by which London would otherwise be cut up and disfigured.—Mr. AYRTON repeated his arguments in favour of the establishment of some central authority to watch over municipal affairs.—Lord PALMERSTON said that the Board of Works practically exercised, with the aid of the House, whatever control was necessary. It ought to be clearly understood that the committee was not to draw on one farthing of the public money in support of the project, but it might beneficially inquire whether it could not be aided by private enterprise. After some discussion, the amendment was negatived, and the motion was agreed to. Several Bills were advanced a stage.

MONDAY.—*Affairs of Turkey.*—In reply to Mr HADFIELD, Lord J. RUSSELL said that endeavours had frequently been made to obtain improvements in our commercial relations with Turkey, but hitherto without success. *China Expedition.*—Mr. S. HERBERT stated, in reply to Sir S. Northcote, that the troops despatched to China amounted to 13,850 men of all arms, but that it would be impossible as yet to state what force would ultimately have to be sent there. Should there be any protracted hostilities timely notice would be given to the House of any additional vote of credit that might be required on account of the expedition *Trade Marks.*—In answer to Mr. CRUM EWING, Mr. M GIBSON stated that the Government had proposed a Bill which they hoped to introduce shortly with reference to spurious trade marks and false markings of measurements. *Mr Horsman and the Times.*—Mr. WALTER moved the adjournment of the House for the purpose of making a personal explanation relative to himself and Mr Horsman. In his recent speech on the Reform Bill he had recommended that the passing of the Bill should not involve an immediate dissolution Mr. Horsman had given him notice that he should on Thursday call the attention of the House to this part of his speech, coupling it with an article in the *Times* to the same purport. Mr Horsman had not done as he had said, and in consequence he had himself written to Mr. Horsman, stating his own intention of bringing the matter before the House. He had no knowledge of or connection with the article in question. He was, it was true, greatly interested in the prosperity of the *Times*, but he was not its principal proprietor, and was in no way connected with it in an editorial capacity, and he warmly deprecated the allusions made in that House to articles in newspapers, as derogatory to the dignity of Parliament and injurious to the tone and character of their debates.—Mr. HORSMAN said that on entering the House on Monday last he was informed that a compromise had been entered into with respect to the Reform Bill, on the basis of a 15*l.* franchise in counties, and 8*l.* franchise in towns, and a condition that there should be no dissolution for two years. This last suggestion had been made by Mr. Walter in his place, and by the *Times* in a leading article, which article further contained a violent attack on himself. This was a proceeding, in his opinion, unworthy of a member of the Legislature, and which he felt bound to bring before the notice of the House of Commons. He then commented at length on the connection of Mr. Walter with the *Times*, and read letters from him to Mr Walter containing lengthened attacks upon that journal and noticing, among other things, the personal attraction exercised by Lord Palmerston over Mr. Delane the editor, and the anomalous position of Mr. Lowe on the Treasury Bench. He attacked the assumed irresponsibility of the press; admitting that it should be independent, but denying that it ought to be irresponsible. Mr. Walter paid the writers in the *Times*, and employed a secret agency in writing the articles of that journal, whereas Mr. Bright, whom Mr. Walter had assailed for speeches made by him out of doors, had at least spoken openly, and on his own responsibility.—Lord PALMERSTON said that he had been the object of the sustained and bitter hostility of the *Times*, and for some years he had the honour of being one of the best abused men in the kingdom. He had, however, made it a point to submit to those attacks with patience, as he was content to rely upon his public conduct as an answer to such aspersions. Mr Horsman appeared anxious to know what were the influences which had drawn Mr. Delane towards him. If by that the right hon. gentleman meant to imply that any attention paid to Mr. Delane could influence the *Times*, he could only say with Mrs Malaprop that he would be very glad to plead guilty to the soft impeachment. The only influence which led Mr Delane to him was the influence of society. He had met that gentleman frequently in society, and he had invited him to his house, as he had invited Mr Disraeli, Mr. Walpole, the Earl of Derby, and other friends, whose object in mixing together was to participate in that rational enjoyment to be derived from the society of educated

and intellectual persons.—Mr. DISRAELI said that the practice of relying upon newspaper articles as authority, instead of depending upon the force of argument and the information which the House was itself possessed of was, in his opinion, calculated to degrade the dignity of the House and to lower the tone of the debates. With regard to the manner in which the noble lord at the head of the Government had been abused by the press, it did not seem that in a physical sense it had done him any harm. He (Mr. Disraeli) had likewise come in for his share of abuse, but he was now indifferent to any attacks of the kind, and for his own part he cared very little what degree of malignity pervaded them, as there were few criticisms from which a public man might not derive some profit. The subject then dropped.—The adjourned debate on the second reading of the *Refreshment Houses and Wine Licenses Bill* was resumed by Mr. AYRTON, who opposed the measure on the ground that it would abrogate the ancient law of the country, and increase the facilities for obtaining intoxicating liquors.—Mr. LIDDELL, Mr. PALK, and Mr. V. SCULLY also opposed the Bill, urging that its tendency would be to demoralise the public by encouraging habits of intemperance.—Alderman SALOMONS supported the Bill, which he considered would supply a great public want.—Mr. JAMES condemned not only the corruptive influence of the Bill, but its injustice to vested interests, and to the large class of persons who had invested their money in existing establishments.—Mr. VILLIERS defended the Bill, and argued at length against the evils of the existing system. He thought it would be a wise policy to accustom the lower classes to eat where they drank, and break through the habit of using strong liquors.—Mr. HENLEY said that the provisions of the Bill were directly opposed to the unanimous report of the committee, of which the right hon. gentleman who spoke last was chairman. He had no objection to the proposition that every person who sold wine should sell food also; but the Government had taken the converse of that proposition by insisting that all persons who sold food should be subjected to the surveillance of the police in order to compel them to take out wine or beer licenses.—Mr. BUXTON said that the London brewers had all refused to join the agitation against the Bill. He was at first disposed to support the Bill, but he now believed that the Bill would lead to the universal sale of ardent spirits without any check on the abuses which it would entail. As the measure was manifestly prepared without due consideration, he hoped the Government would withdraw it and bring in another next session which would apply the same system of precaution to the sale of wine and spirits.—Sir MORTON PETO supported the Bill, as his own experience convinced him that the populations of wine-growing countries were among the most steady and sober in the world.—The CHANCELLOR of the EXCHEQUER replied in detail to the arguments adduced against the Bill, and expressed his willingness to introduce a clause exempting from the visits of the police the shops of bakers and confectioners. He denied that the Bill was disapproved by the public opinion of England. The real question was whether the House would attempt to modify and improve the present licensing system, which had been so generally condemned. The measure had been drawn in strict conformity with the spirit of the recommendations of the committee on licensing, and he hoped the House would by a decisive majority support that committee. On a division the amendment was negatived by 267 to 193. The Bill was then read a second time. The *Exchequer Bills Bill* was read a third time and passed. The *Irish Census Bill* was read a second time.

TUESDAY.—*New Zealand.*—In reply to Lord CHURCHILL, Mr. C. FORTESCUE said that disturbances had occurred in New Zealand on a account of a territorial dispute, but it had not reached that point in which it could be called an armed contest, and he trusted that it would be settled without hostile proceedings. *The Graves at Sebastopol.*—In reply to Lord BURGHLEY, Lord J. RUSSELL said that an appeal had been made to the Russian Government on behalf of the graves of British officers and men in the Crimea, and that Government had replied by an assurance that it was most anxious to respect and to preserve them.—Lord NAAS moved for leave to introduce a Bill for the uniform *Registration of births, deaths, and marriages in Ireland.*—Mr. CARDWELL was glad that the noble lord had taken up this subject, but objected to the machinery of the constabulary for collecting registration. He should himself shortly introduce a Bill providing for the employment of the civil officers in such duties. Leave was then given to bring in the Bill. *Civil Service Examinations.*—Mr. BENTINCK moved for copies of the examination papers and the answers thereto, for the appointments of factory boys, before the Civil Service Commissioners at Portsmouth, in January last. He instanced a particular case in which the commissioners had acted with much unfairness.—The CHANCELLOR of the EXCHEQUER said that the duties of the commissioners were judicial, and not subject to the control of the House. He, therefore, opposed the motion.—Lord R. CECIL said that the matter was of high importance. It involved the question whether the whole patronage of the Crown should be vested in the irresponsible hands of these commissioners.—Sir G. LEWIS said that the commissioners had no such patronage. The Crown nominated the candidates, and the commissioners selected them. After some debate, the motion was negatived by 80 to 50.—Mr. GARNETT obtained leave to introduce a Bill for regulating the use of *Locomotives on Turnpike and other Roads*, and the tolls to be levied on such locomotives, and on the waggons and carriages drawn or propelled by the same.—Mr. BOVILL moved the second reading of the *Stock-jobbing Bill*, stating that his object was to legalise *bonâ fide* transactions on the Stock Exchange, while the Bill of the Government adopted the objectionable principle of legalising the gambling transactions.—Mr. COLLIER moved, as an amendment, that the Bill be read a second time that day six months After a brief discussion the amendment was carried without a division.—On the motion for the third reading of the *Paper Duty Repeal Bill*, Sir S. NORTHCOTE moved as an amendment that, in the present state of the public revenue, it was not desirable to proceed further with the repeal of the excise duty on paper. It was impolitic to agree to this, the most important of the financial proposals of the Government, till they had proceeded further with the estimates of the year. The resolution passed two years ago did not pledge the House to an immediate repeal, and though justifiable when the expenditure of the country was but 63½ millions, would not be entertained when it reached 70 millions. He entered at length into the financial scheme of the Government, objected to the surrender of so large an amount of indirect taxation, said that further estimates had already increased the expenses of the year as calculated in the Budget, and that those estimates, though he did not question their accuracy, were yet to be explained.—Mr. M. GIBSON protested against the postponement from session to session of a measure to which the House was long pledged. The question was not a financial one; it belonged to the literature, the education, and the intellect of the country.—Mr. BALL objected to the Bill as throwing away a large and certain revenue, which could not be repaired except by an additional income-tax, taking money from the public to put in the pockets of the foreigner, and imperilling the interests of our great domestic trade.—Mr PULLER said that the financial question resolved itself into confidence or distrust of the Government. On that ground he was ready to support the Bill.—Sir M FARQUHAR said that other taxes had a much more urgent claim to repeal, and that since the passing of the resolution of 1858 there had been a material change in the feelings of the country.—Lord H. VANE thought that it would be imprudent at such a moment to part with so large a revenue.—Mr. ELLICE dreaded the jeopardy into which the country was thrown by the Budget of the Chancellor of the Exchequer, which, under the circumstances, was unprecedented, and certain materially to embarrass their proceedings next year. He admitted the odious nature of the tax, and he would support its repeal the first moment he could do so without robbing the revenue.—Mr. HOPE likewise, on financial grounds, opposed the motion, though he had voted for the second reading.—The CHANCELLOR of the EXCHEQUER said that all these reasons might be good, but they were urged too late. The pledge of the House had already passed. It was no longer a serious question of the tea and sugar duties. The new taxes proposed by the Budget had already received the approval of the House, and an equivalent for the paper duty had been thereby provided. To refuse it now would be contrary to all precedent and would involve the utmost inconvenience. Every description of trading arrangements had been made, and the reversal of the vote already given would give the most serious shock to public confidence. Even in a fiscal point of view they had already gone too far, and by retaining the tax they would only obtain a small gain at the cost of vast individual distress and commit a direct breach of a legislative promise and of the pledges of the House of Commons.—Mr. T. BARING denied that the House was bound by the proposal of any Government, or that in the present instance any great trading preparations had been made whereby the interests of the trade would be seriously injured. There was ground for hesitation when they looked at the uncertainties of the future expense of the present year, and of the taxation of the year to come.—Mr DISRAELI said that the real issue was whether under the existing uncertainties of their position they ought not to reconsider the repeal of this tax. This issue, he contended, had not been answered by the Chancellor of the Exchequer. It was not true that all the new taxes proposed by the Budget had been adopted by the House; some had disappeared altogether from the paper, and this, together with the admitted excess of expenditure over the original estimate, would make up a sum nearly equal to the entire amount of the tax. The first and greatest consideration ought to be the establishment of a sound and healthy revenue, and to that they were bound to postpone all others. As for the resolution of 1858, it was altogether subordinate to the policy of the Government of that year, which involved the extinction of the income-tax, and the reduction of the duties on tea and sugar. As for the argument of Mr. Gladstone, that they were precluded from rejecting the Bill on the third reading, it meant nothing less than that the forms of the House were to be abolished on financial matters. He quoted instances where, on measures of finance of far more importance than the paper duty, the House of Commons had revoked its decisions; it was its duty on the present occasion to reconsider an imprudent, premature, and precipitate vote, and to mitigate their previous folly, incurred in the delirium of the French Treaty, by an act of prudence, especially necessary in a state of Europe which made the boldest quake and the wisest tremble. After some explanations from Mr. GLADSTONE and Mr. S. HERBERT the House divided, when the amendment was negatived by 219 to 210, amid cheers and counter-cheers from both sides of the House. The Bill was then read a third time and passed.

WEDNESDAY.—*Piers and Harbours Bill.*—The adjourned debate on the second reading of this Bill was resumed by Mr. LINDSAY, who opposed it on the ground that it conferred powers upon the Board of Admiralty which could not be satisfactorily discharged, and moved that it be read a second time that day six months. After a short discussion the House divided, when the second reading was affirmed by a majority of 99 to 80.—On the order of the day for going into committee on the *Bleaching and Dyeing Works Bill*, Mr. BAZLEY moved that the Bill be referred to a select committee. He believed that a mutual understanding could be arrived at between masters and operatives without the interference of Parliament.—Lord ASHLEY said the House already possessed sufficient information upon the subject, and it would be a waste of time to refer the Bill to a select committee.—Col. PATTEN opposed the amendment because he believed the re-opening of the inquiry would inevitably shelve the Bill for the present session.—Lord J. MANNERS thought the question was ripe for settlement, and that it would be inexpedient to delay legislation.—Sir J. GRAHAM supported the amendment, and stated that in so doing he had no desire to shelve the Bill; but he thought that before any legislation took place some satisfactory settlement ought to be arrived at with regard to the details of a measure which affected most materially the operations of an important branch of national industry.—Mr. FENLEY said he would support the amendment, provided the inquiry of the select committee was confined to a settlement of the provisions of the Bill.—After some further discussion, Sir G. LEWIS recommended that the Bill should be referred to a select committee, upon the understanding that their inquiry should not be unnecessarily protracted.—Sir H. CAIRNS supported the amendment, which was rejected on a division by a majority of 184 to 147. The House then went into committee, and the first clause was under discussion when the hour of adjournment arrived.

THURSDAY.—*The Abstraction of Examination Papers.*—In answer to Major SIBTHORP, Mr. S. HERBERT said that the War-Office had been in communication with the police on the subject of the late abstraction of the army examination papers, and that they were not without hope of detecting and punishing the offenders. In committee of ways and means—the CHANCELLOR of the EXCHEQUER moved resolutions charging rates and duties on *Licences to Refreshment Houses and Wine-shops.*—Mr. AYRTON objected to the proposed system, and complained that the committee was left without any explanation as to what was intended to be conveyed by the term "refreshment-houses."—The CHANCELLOR of the EXCHEQUER said that the only question then before the committee was whether licenses should be granted to refreshment-houses other than those in which strong drinks were sold. The Bill would define what those houses were, and by agreeing to the resolutions no one would be pledged to any particular description of house.—Lord J. MANNERS asked for an estimate of what the new licensing system was likely to contribute to the revenue.—The CHANCELLOR of the EXCHEQUER said that if Ireland and Scotland were included the Exchequer would probably obtain 70,000*l* per annum, the greater portion of which would accrue from wine licenses.—A discussion of some length ensued as to the description of houses which the term "refreshment-houses" was to include, and the proposal to place those establishments under the control of the police. On a division the first portion of the resolution charging half-a-guinea for a license to keep a refreshment-house where the rent is under 20*l*. a year, was agreed to by 173 to 103.—On the next item in the resolution, fixing the price of a license for a refreshment-house the rental of which exceeded 20*l*. at one guinea, Mr. AYRTON moved the substitution of "half-a guinea," in order to create a uniform rate of duty. On a division the amendment was negatived by 159 to 88.—The resolution was then agreed to, and, at the suggestion of the CHANCELLOR of the EXCHEQUER, reported to the House and ordered to be inserted in the Bill. The House then went into committee on the *Refreshment Houses and Wine Licenses Bill*, when Mr. PALK moved as an amendment to postpone the further progress of the measure for six months.—The amendment was seconded by Mr. PACKE, and negatived without a division. Clauses to 11 inclusive were agreed to, and at midnight the CHAIRMAN reported progress The *Sheriffs Court Houses (Scotland)* and the *Prisons (Scotland) Bill* were read a second time. The *Highland Roads and Bridges Bill* was read a third time The *Labourers' Cottages (Scotland) Bill* was read a second time The Committee on the *Bleaching and Dyeing Works Bill* was postponed until the 27th of June. The *Marriages (Extra Parochial Places) Bill* passed through committee.—Mr. CARDWELL obtained leave to bring in a Bill to provide for the *Registration of Births, Deaths, and Marriages in Ireland. Irremoveable Poor.*—Mr. VILLIERS obtained a select committee on the operation of the Act which provides that no poor person shall be removable who shall have resided five years in any parish; and of the Acts which enact that the relief given to such irremovable persons shall be charged upon the common fund of the union.

FRIDAY.—*Forgery of Trade Marks.*—In answer to Mr. BASS, Mr. M. GIBSON said that a measure would be introduced to prevent the forgery of trade marks. *The Gunboats.*—In answer to Mr. EWART and Sir J. PAKINGTON, Lord C. PAGET said that a certain number of boats had been found more or less decayed, and the Admiralty intended taking proceedings at law in reference to the improper fastenings which had been discovered. The number of boats at Haslar which had not been examined was 16, the others being afloat, so that the vessels were not in so defective a state as might have been supposed.

[Left sitting.]

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England on Thursday lowered their rate of discount from 5 per cent., at which it was fixed four weeks back, to 4½ per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 95⅛ to ¼ for Money, and 95⅜ for the 6th June; Bank Stock, 227½; Three per Cents. Reduced, 93⅝ to ½; New Three per Cents., 93½; Thirty Years Annuities expiring in Jan. 1880, 13⅝; Ditto in April 1885, 17 7-16; Indian Five per Cent. Stock, 1859, 106¾; Five and a Half per Cent. Enfaced Rupee Paper, 104¾; India Bonds, 5*s*. dis.; Exchequer Bills, 8*s*. to 6*s*. prem.—FOREIGN: Buenos Ayres Deferred, 25; Dutch Four per Cent. Certificates, 101; Portuguese Three per Cents., 1853, for Acct., 45¾; Russian Three per Cents., 1859, 65⅜ ex div.; Sardinian Five per Cents., for Acct., 86½; Spanish New Deferred Three per Cents., for Acct., 37½; Turkish Six per Cents., 1854, for Acct., 76¾; Ditto for 1858, for Acct., 61¼ to 60¾; Venezuela Three per Cents., for Acct., 26¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,063,780	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion	14,588,780
		Silver Bullion	
	£29,063,780		£29,063,780

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weigh Annuity)	£9,728,943
Rest	3,264,464	Other Securities	20,739,025
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,284,448	Notes	7,182,845
Other Deposits	12,608,269	Gold and Silver Coin	784,546
Seven day and other bills	725,178		
	£38,435,359		£38,435,359

10th day of May, 1860.

M. MILLER, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—V. ALLEN, Newport, Monmouthshire, Draper—J. S. BEALE, 17, Paddington Green, Middlesex, Surgeon and Apothecary—J. BELL, Liverpool, Shipwright and Boat Builder—G. DRAKE, 17, Eversholt Street, Camden Town, Middlesex, Jeweller and Dealer in Watches and Clocks—E. JONES, 1, Woodbine Villas, Bridge Road West, Battersea, Middlesex, Hosier—F. MILLER, 11, Poland Street, Oxford Street, Middlesex, Lead and Glass Merchant—T. MILLS, Ashton-under-Lyne, Lancashire, Chemist and Druggist—J. NEWNS and J. H. WILKINSON, Wolverhampton, Staffordshire, Drapers and Dealers—J. PALMER, Gloucester, Ironmonger—J. SMITH, Fareham, Hants, Grocer and Provision Merchant—J. WILSON, John Street, Sunderland, Shipowner and Trader.

SCOTCH SEQUESTRATIONS—H. ANDERSON, Renfield Street, Glasgow, Apparatus Manufacturer—P. D. DENHOLM (deceased), Edinburgh, Contractor—J. HUTTON, Dysart, Accountant—W. MOFFATT, Stobcross Street, Glasgow, Butcher—A. STEVEN and SON, Glasgow, Wine and Spirit Merchants—T. TORRANCE, Airdrie, Surgeon—A. J. WAITT and G. STEWART, Glasgow, Wholesale Stationers.

FRIDAY—BANKRUPTS—C. DAWSON, Wisbeach, St. Peter, Cambridgeshire, Dealer in China—J. FOX, Norwich, Furrier—J. HELLING, Edgeware Road, Paddington, Cowkeeper—T. LEE, George Yard, Lombard Street, City, Merchant—J. MOREHOUSE, jun, New Mill, Huddersfield, Woollen Cloth Manufacturer—H NEWLAND, Newcastle-under-Lyme, Miller—J. PARNELL, Oxford Street, Linen Draper—W. PORTEOUS, Brighton, Linen Draper—H. POWNCEBY, Leman Street, Whitechapel, Printer—W. RAY, Stockwell, Surrey, Shipowner—T. C. RICHARDSON, West Auckland, Druggist—E. R. SHERREN, Westbourne Grove North, Bayswater, Builder—C. STANBRIDGE, Cheapside, City, Merchant—T. STURLEY, Harbury, Warwickshire, Licensed Victualler—S. WRIGHT, Manchester, Hotel Keeper.

SCOTCH SEQUESTRATIONS—S. H. FYFE, Glasgow, Ship Chandler—J. GRANT, Edinburgh, Commission Agent—R. KEDDIE, Elie, Fifeshire, Coalmaster—W. LOTHIAN, Wishart, Lanarkshire, Ironmonger—A. ROWAN, Glasgow, Engraver.

Metropolis and its Vicinity.

ROAD ACROSS HYDE PARK.—An influential deputation, including the Duke of Rutland, Earl Grosvenor, General Sir John Burgoyne, Sir M. Wyatt, Admiral Bethune, General Delamotte, Mr. Tite, M.P.; Mr. Kinnaird, M.P., &c., had an interview with Mr. Cowper, the First Commissioner of Public Works, on Monday to call his attention to the necessity for some means of direct communication between the districts north and south of Hyde Park. Earl Grosvenor, who introduced the deputation, said that five years had now elapsed since a committee of the House of Commons had recommended that means should be adopted in order to effect a better and more direct communication between the districts north and south of Hyde Park. During that interval both districts had increased immensely, both in size and importance, and it was necessary that some steps should be taken towards the formation of a new road at once. The Horticultural Gardens were advancing fast, the Kensington Museum had been established, and there was to be the Great Exhibition of 1862—all objects of immense interest to the population of the metropolis, and which would attract such numbers to the western districts that the formation of some new road across the park would become indispensable. They did not come forward with any plan of their own, the

formation of which, they were sure, would be much better left in the hands of the First Commissioner. The object of the deputation was merely to show the necessity for the road being made. There were two miles' distance between Kensington and Park Lane, and the chief road to and from these places across the Park was entirely closed at night, and not open to cabs at any time. It was the earnest wish of the inhabitants of the district that steps should be taken at once to remedy this state of things. Mr. Cowper said he could see by the deputation before him how general was the interest taken in the subject. What his lordship had said as to the distance between Park Lane and Kensington, and the closing of the best road at night, which only left open the present inconvenient and devious route round by Church Lane, showed the necessity for some improvement in the means of communication. He supposed that such an improved road, if carried out, would, of course, be open to omnibuses and cabs, and in order to be of any use it must also be open during the night as well as day. At the same time, while admitting the great convenience of such a road, it must not be forgotten that an immense multitude now resorted daily to the Parks for rest, quiet, and recreation, and that their comfort and pleasure would be seriously interfered with by the dust and noise of such a thoroughfare through the Park. On the part of the public, therefore, who frequented the Park he could say that if it was hoped to form a broad thoroughfare across the Park from Park Lane to Kensington Gardens, such a scheme could not be listened to. But the deputation had very wisely not come forward to advocate any particular plan, and the one that had been mentioned of carrying a road under the level of the Park seemed certainly worthy of consideration. Such a sunken road could be made easily from the Uxbridge Road to Kensington Gore. With regard to the expense of the project, he could say nothing at present, as there were such large works going forward in connection with the main drainage scheme that it might be very difficult to spare the money. However, he could assure the deputation that the proposal they had laid before him should be fully considered, and receive all the attention which the importance and interest of the subject warranted.—Mr. Tite, M.P., said that the present thoroughfare between Prince's Gate and the Marble Arch was only open till 10 o'clock at night. It would be a great convenience if during the session a little more time was given. If the road was only left open till 11 o'clock, it would be a great boon. —Mr. Cowper replied that it was not in his power to grant the request, but he would lay it before the Ranger, the Duke of Cambridge, from whom he was sure it would receive every attention.—Mr. R. Westmacott said that it would be a great convenience if public vehicles were allowed to use the excellent road known as Kensington Palace Gardens.—Mr. Cowper said that road was private property, and he had no control whatever over it.—Mr. Westmacott urged that the decision of the Government should be as prompt as possible, as it was of importance the road should be ready for the opening of the Great Exhibition of 1862.—Mr. Cowper said no doubt that circumstance rendered the matter more urgent.—The Duke of Rutland hoped that, if the road should be made, there would be an easy ascent from it to the upper level at the Rotten Row Tunnel, else a gentleman who, coming from Paddington, wanted to get to the Row would have to go out upon the Kensington Gore Road, and then ride round through Prince's Gate before he could get there.—Mr. Cowper said that, in the event of the road being made, the suggestion should not be lost sight of.—Lord Alfred Churchill called attention to the necessity of having safer footpaths across Rotten Row, and said it would be desirable to have gravel walks on both sides of that promenade.—Mr. Cowper assured his lordship that the convenience of the public in the use of the Park should engage his serious attention. The deputation having thanked the right hon. gentleman for the courtesy with which he had received them, then passed over to the Horse Guards to have an interview with the Duke of Cambridge in his capacity of Ranger of the Park, in reference to the same subject. Earl Grosvenor having introduced the deputation to the Duke, and placed before him a statement similar to that which he had submitted to the Chief Commissioner of Works, his Royal Highness, in reply, said that the subject was one of those which required to be well considered on both sides—first, in regard to the convenience of the inhabitants of the district, and secondly, as to how far it would interfere with that of the general public. It was essential to have large open spaces in which the public could recreate and exercise themselves, and in the case of Hyde Park nothing should be allowed to interfere with so great an advantage. He thought, however, that by considering the matter fairly in both these aspects they might be able to arrive at some intermediate course which would meet the views of all parties. He would admit that there was an inconvenience in the present state of things, and he thought there would be much difficulty experienced in getting rid of it. He himself had thought that as regards the making of a new road the levels were difficult, but he heard that such was not the case. Another difficulty was the water. They would have to cross the Serpentine, and as the present bridge would not accommodate the traffic, it was obvious they would have to increase its width and strength. He did not see how they would be able to meet that expense, for it was his impression that the public would not sanction any outlay of the rates for purposes purely local. Indeed, he thought it very improbable that the public would at all go with them in their proposal if they did not make it perfectly clear that they would not interfere with the free circulation of air in the Park, and that the road if constructed would be open to every class of vehicles. — Mr. Tite, M.P., explained that as the proposed road would very likely be a sunken one, they could go under the Serpentine instead of over it.—His Royal Highness could assure the deputation that he should be most happy to meet their wishes with the one reservation, that the general public should not be interfered with.—Mr. Tite, M.P., then called his Royal Highness's attention to the convenience of keeping the carriage-way between the Marble Arch and Prince's Gate open up to 11 o'clock at night during the "season."—His Royal Highness saw no objection to it, except that as the gates had to be opened very early in the morning for the use of the workmen, the gatekeepers had to go to bed at a corresponding early hour. The deputation thanked his Royal Highness for the courtesy and attention with which he received them.

The late Lord Macaulay.—In compliance with a suggestion contained in a letter from the Lord Chief Baron, a committee is in course of formation for the purpose of collecting a fund for the erection of a statue of the late Lord Macaulay in Trinity College, Cambridge.

Proposed New Bishopric for Cornwall.—An influential deputation, consisting of landowners, magistrates, gentry, and clergy of Cornwall, had an interview with Lord Palmerston on Tuesday, on the subject of a proposed new bishopric for Cornwall, to be formed out of the present diocese of Exeter. The Earl of St. Germans having introduced the deputation, the Earl of Devon, Mr. Kekewich, M.P., Rev. Chancellor Martin, Mr. Kendall, M.P., Lord John Thynne, and other gentlemen addressed Lord Palmerston, and said, that the diocese of Exeter is by far the most extensive, and, with the exception of those of London and the great manufacturing districts, the most populous diocess of any in England and Wales, standing seventh in the list of dioceses arranged according to population, and containing within it 693 benefices and 252 curates; that the county of Cornwall, part of this diocess, is more than 80 miles in length, exclusive of the Isles of Scilly, with a population at the last census of 355,558, with 243 benefices; that the city of Exeter, the site of the episcopal residence, is distant 40 miles from the nearest point of Cornwall, and about 145 miles from the extremity of the county, the western portion of which is much the most populous; that the division of this enormous diocess, by the erection of a separate see in Cornwall, has been frequently recommended, especially in 1847, when a Bill was introduced into Parliament for the erection of four new episcopal sees, of which Cornwall was named as one; and in 1855 when her Majesty's commissioners appointed to inquire into the state and condition of cathedral and collegiate churches in England and Wales recommended in their second report the restoration of a bishopric to Cornwall; that the present bishop is 82 years of age, and has repeatedly expressed his anxious desire for the subdivision of the diocess, and in 1855 offered to resign at once to a Bishop of Cornwall the episcopal preferment within the county. The deputation urged that they had good ground for believing that after no very long period the episcopal property within the county would, in the hands of the Ecclesiastical Commissioners, be more than adequate to the endowment of this additional see, and they thought that until such property were available the income for a see in Cornwall might be provided from the surplus funds of episcopal property in the hands of the commissioners. They expressed their conviction that the residence of a bishop in Cornwall would materially advance the highest interests of the people, and they therefore most earnestly asked her Majesty's Government at once to introduce a Bill into Parliament, according to the recommendation of the Cathedral Commissioners in 1855, empowering her Majesty to divide the present see of Exeter, and to erect a bishopric in Cornwall as soon as a sufficient surplus shall be at the disposal of the Ecclesiastical Commissioners. The preferment in Cornwall which the Bishop of Exeter offers to give up amounts to about 8000*l.* a year—the best livings being the vicarage of Kenwyn, worth about 700*l.* a year; the vicarage of Probus, worth about 550*l.* a year; the vicarage of Lelant, worth about 450*l.* a year; the rectory of Lawhitton, worth about 450*l.* a year; the rectory of Lezant, worth about 440*l.* a year; and the vicarage of Teinton-Regis, worth about 400*l.* a year. He also proposes to give up preferment worth about 2600*l.* a year, to which he has alternate presentation with the Crown.—After listening to the details which were laid before him, Lord Palmerston said that if the Ecclesiastical Commissioners localised their funds in the way suggested he feared there might be some jealousy in the House of Commons, as there appeared to be a general desire that the surplus funds of the Ecclesiastical Commissioners should be made applicable as far as possible to the augmentation of small livings throughout the country. Personally he should prefer that a general measure should be introduced into Parliament, as he was of opinion that, in consequence of the increase of the population, and the changed condition of the Church, an extension as well as a redistribution of the episcopate had become necessary. The question was simply one of funds, and he did not know how funds for such a purpose could be raised. If, by voluntary contributions, a sufficient sum could be raised for the endowment of the new bishopric of Cornwall, he should have no objection. Her Majesty's Government felt anxious on the question of the episcopate, and the information which had been laid before him would have their best attention, and they would, moreover, give every facility in their power towards accomplishing the object in view. The Earl of St. Germans thanked his lordship for his kind reception of the deputation.

Great Northern Crystal Palace.—In consequence of sufficient capital not having been subscribed to carry out the proposed Great Northern Palace at Muswell Hill, the promoters have announced that there will be no allotment of shares at present, though it is added that arrangements are in progress for insuring the construction of the building on such terms as will leave no doubts as to the results.

Site of Tyburn Gallows.—Mr. Beresford Hope has addressed a letter to the *Times*, stating that the site of Tyburn gallows, which has been a frequent subject of discussion among London antiquaries, has been discovered at the corner of the Edgware Road. In the course of some excavations connected with the repair of a pipe in the roadway, close to the foot pavement along the garden of Arklow House, at the extreme south-west angle of the Edgware Road, the workmen came upon numerous human bones, which were obviously the relics of the unhappy persons buried under the gallows. Mr. J. W. Slade has replied to this statement that the site of Tyburn gallows is now occupied by No. 46 Connaught Square, and that the bones discovered near Mr. Hope's residence were probably those of persons who were buried in one of the pest fields of that neighbourhood during the great plague.

The London Banks.—The committee of London bankers have resolved to close for business at 3 o'clock on Saturdays on and after Saturday next, the 19th inst.

Royal Academy.—The annual dinner to inaugurate the opening of the Academy Exhibition took place on Saturday in Trafalgar Square. The company, which was much larger than on any previous occasion, comprised most of her Majesty's Ministers and several of the leading members of the late Government.

Red Sea Cable.—Up to the 25th of April the injury to the Red Sea telegraphic cable had not been repaired, and consequently telegraphic communication between Aden and Suez remained interrupted.

St. George's-in-the-East. — There was renewed rioting at this church on Sunday, both at the morning and evening services. One of the pew doors was torn off, and in the course of the evening a fight took place in the churchyard.

The Union Bank Frauds.—At the Mansion House on Friday William George Pullinger, the late cashier of the Union Bank, after pleading guilty to the charges brought against him, stated that the junior cashier Lyttleton, who was placed at the bar with him, was entirely innocent of all participation in the frauds, and had simply acted under his orders, as his superior officer. The Lord Mayor ordered Lyttleton to be discharged, telling him that he left the bar without the slightest stain on his character. The grand jury on Tuesday found a true bill against Pullinger for felony, and on being placed at the bar he pleaded guilty to all the charges preferred against him. The committee of the Stock Exchange are now busily occupied in the investigation of Pullinger's dealings with the house, and so far as his operations can be traced, they are said to establish a loss of 117,000*l.*, of which 57,000*l.* was done through an "outsider," who is now dead, and 60,000*l.* through a firm which failed a year since. None of the large respectable members have had anything to do with him in any shape to call their names in question, and it is believed that he must have lost the money in other directions, if he has not made provision elsewhere.

Church Extension in the Metropolis. — The Bishop of London has addressed a pastoral letter to the laity of the metropolitan diocess, bringing under their notice the claims of the London Diocesan Church Building Society. His lordship states that the diocess contains, as nearly as can be calculated, 2,500,000 inhabitants, and is divided into 433 parishes or parochial districts, which are served by 855 clergy. Three parishes in the diocess have populations exceeding 35,000, four have between 30,000 and 35,000, five have between 25,000 and 30,000, six have between 20,000 and 25,000, 16 have between 15,000 and 20,000, and 32 have between 10,000 and 15,000. The sums contributed to the London Diocesan Society during the past year have been as follows:—Landowners' subscriptions, 2330*l.*; Annual subscriptions, 288*l.* 14*s.* 6*d.*; Donations, 693*l.* 2*s.*; Donations for specified objects, 976*l.* 5*s.* 5*d.*; Collections in churches, 584*l.* 1*s.* 5*d.*; making a total of 24,872*l.* 3*s.* 4*d.* This sum is of course exclusive of munificent donations to individual objects not contributed through the Society. But no amount or separate private exertion, says his lordship, can dispense with the necessity for a central fund.

"The great majority of the schemes of parochial extension set on foot by private munificence still require some addition from a public source. Without the encouragement which the grants from such a fund afford, it is found practically that subscriptions languish, and there are districts so poor and neglected and with so little claim, except from their poverty, upon any of the rich, that little can be hoped from them unless such

a society as ours undertakes the whole direction of the schemes intended to benefit them. The present state of the society's funds entirely precludes the possibility of its undertaking any extensive works of this description on its own responsibility. The whole aggregate of what is done falls very short of what ought to be done, and I am justified in urging all seriously to consider before God what are their duties in this matter. Since I came to the see of London I have consecrated 29 new churches, whereby a new parochial organisation has been supplied capable of reaching the wants of at most 90,000 persons; but, according to the Registrar-General's calculation, the population of the diocess has meanwhile increased by 140,000. Allowing, for argument's sake, that the Dissenters and Roman Catholics have been as active in this matter as ourselves, and that we should be justified in considering their efforts, it will be found that we have but kept pace with the increase of population, without applying any remedy for the fearful aggregate of neglect accumulated during past years. Lastly, it is often urged that churches will do little good without faithful men to minister in them. This is most true; but as good parochial arrangements are at best powerless instruments without the right men, the best men must be powerless without proper parochial arrangements. The difficulty of finding an adequate supply of fit men, whose hearts are touched and guided by the Holy Spirit of God, can be no reason for hesitating to contribute out of our abundance to strengthen their hands when they are found, or prepare the way for their ministrations. It only reminds us that we ought to add to our charity our hearty prayers that, while we are using all secondary means, God will be graciously pleased to supply the primary means, and Himself prepare and send forth fit labourers to give life and spiritual energy to the outward machinery by which we seek to advance His kingdom."

THE LATE MURDER ON THE HIGH SEAS.—Charles Annois, the Portuguese sailor, upon whom sentence of death was passed at the Old Bailey for murder on the high seas, and who had been respited for six months, has had his sentence commuted to penal servitude for life.

THE REPAVING OF FLEET STREET.—The repaving of the carriage way of Fleet Street with new Aberdeen granite cubes, three inches wide, was completed on Saturday. The immense traffic had worn the old stone, which, when laid down in 1846, was 9 inches in depth, to 4½ inches. About 6000 yards of pavement have been renewed, and the weight of granite removed and replaced amounts to about 7000 tons. Although on a previous occasion the repaving necessitated the closing of this important thoroughfare for eight weeks, the present work has been accomplished in the short space of a fortnight.

THE CLERK OF ARRAIGNS.—The office of Clerk of Arraigns to the Central Criminal Court has suddenly become vacant by the death of Mr. Straight, who committed suicide by hanging himself on the 3d inst. in his bed-room. It appeared from the evidence at the inquest that his mind had been in an unsound state for several months, and that he had latterly been subject to melancholy and delusions. The jury at the inquest returned a verdict of Temporary Insanity. It is expected that the office, which is worth about 1500*l.* a year, will be conferred on Mr. Goodman, chief clerk at the Mansion House, who was for years under Mr. J. Clarke, who preceded Mr. Straight at the Old Bailey.

THE STATISTICAL CONGRESS.—A Circular Note has been addressed by the Board of Trade to Foreign Governments, inviting them to send their official delegates to London to attend a preparatory meeting, which will take place on the 13th July, three days before the regular opening of the fourth International Statistical Congress.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that in the week that ended Saturday, May 5, the number of deaths registered in London was 1205. In the corresponding week of the 10 years 1850-9 the average number was 1072, which, if raised in proportion to the increase of population, will become 1179. The present return is therefore 26 above the average. During the week the births of 903 boys and 900 girls, in all 1803 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1683.

Provincial.

HARWICH.—A petition praying for the total disfranchisement of this borough is now in course of signature in the town. The petitioners observe that, while attaching great value to the elective franchise, they are convinced that in Harwich it conduces neither to the morality, happiness, nor prosperity of the place, but, on the contrary, to very great demoralisation and ill-feeling. They also state that they have good reason to believe that the corruption for which Harwich has long been notorious not only still exists, but increases; and that, consequently, elections are not decided by the honest votes of true men of either party, but by the votes of such men as are open to undue influence.

BIRMINGHAM.—The local papers state that new difficulties have arisen seriously affecting the prospects of Aston Hall and Park. Some time ago the Aston Hall Company arranged to pay to the proprietors of the estate 24,000*l.* by yearly instalments extending over 10 years. It was hoped that the increasing attractiveness of the park, aided by exhibitions, flower-shows, and other sources of income, would have rendered it at least possible to carry out this agreement. The failure of last year's exhibition, the absence of profit in the refreshment department, and other circumstances, have destroyed this hope. An instalment of 3000*l.* is now over-due, and as the company cannot pay it, the proprietors may, if they think fit, re-enter into possession of the property, in which case the 7000*l.* already paid, and the 4000*l.* or 5000*l.* spent in improvements would be lost. It is therefore feared that after all the labour, time, and money expended in the effort to acquire the hall and park for the public the project will fail and the opportunity be entirely lost.

CHATHAM.—The result of the survey of the gun vessels and mortar boats in this dockyard has proved to be much more serious than was at first supposed. Two of the mortar boats have been subjected to an extended examination of their timbers and frames. Both these vessels were built about five years since towards the close of the Russian war, and were constructed by contract at private establishments, without, as it would now appear, the slightest supervision on the part of the Admiralty to insure good workmanship and sound materials. Notwithstanding the short time they have been built and the fact that they have seen little or no service, the materials of both the vessels are found so seriously rotten and the boats altogether so defective that on the receipt of the report made by the dockyard officials, the Lords of the Admiralty forwarded an order for both the vessels to be broken up, their condition being such as to render them altogether unfit for any service whatever. Not only are some of the timbers covered with "sap," but, from certain unmistakeable symptoms now exhibited, this fact, it is said, must have been known to the builders at the time. These two vessels were taken promiscuously from the lot hauled up at the dockyard, and as the first two are found to be so rotten as to require to be taken to pieces, fears are naturally entertained that the greater part, if not the whole, of that costly fleet of gun and mortar vessels may upon survey prove equally unfit for further service.

IPSWICH.—Serious defalcations have been discovered in the accounts of Mr. Henry Watson, rate and tax collector of this town. As regards the last year's poor rate, a deficiency appears of 216*l.*; but the authorities, in extending their inquiries back to former years, estimate the total defalcations at about 1000*l.* The commissioners of land, assessed, and property taxes for the division have also discovered a deficiency in Mr. Watson's accounts of 469*l.*, and as he has failed to make good this amount, they ordered a warrant to issue to seize his person and estate. In pursuance of this order Mr. Watson has been apprehended and placed in the borough gaol.

REIGATE.—On Wednesday last about noon the large sand cave belonging to the premises of the Red Cross Inn fell in with a shock like that of an earthquake, carrying with it portions of five cottages which had been erected over it. Fortunately most of the inmates were absent at their work, and the few who were in the cottages escaped without injury. Two dogs who were in the garden were buried in the ruins.

STAMFORD.—The interest excited by the recent murder of Miss Pulley, which began to subside with the suicide of the supposed murderer, Henry Corby, has been again revived by the discovery of a portion of the plate which was stolen from the house of the unfortunate victim. This discovery took place under the following circumstances:—Two men were fishing in the back water of Hudd's Mills, on the outskirts of the town, when one of them perceived something glittering at the bottom of the stream which he at first supposed to be shells—a supposition, however, which further observation dispelled. Throwing in a snaphook, he drew out a piece of wash-leather. This stimulated further search. Entering the water, which at the spot in question is about 7 feet in depth, the man succeeded in recovering 30 pieces of silver, consisting of tablespoons, forks, and several plated articles. Information was then communicated to the police, and another raking of the bed of the stream brought to light five more pieces of silver. Some of the articles are marked with the initials of the deceased lady and other members of her family. It is intended to dam up the stream and pump out the water, with a view to a more careful examination of the bottom, as it is not improbable that Miss Pulley's rings, which were seen in a small writing desk in Corby's possession, were disposed of in the same way. On the morning of his apprehension Corby was seen going in a direction towards the Mills, and in a plantation which he passed on the way has been found a plated cream ewer, which from its shape could not conveniently be packed in the wash-leather in which the other articles were wrapped previous to their being cast into the water. There is reason to believe that the heavier portion of the silver which Miss Pulley was known to possess was disposed of at Peterborough on the day on which Corby was traced thither with a weighty basket.

WAKEFIELD.—On Thursday this town was thrown into a state of great excitement by the arrival of a number of writs, for the prosecution of the parties charged with bribery and corruption at the late election. The two candidates are included in the charge, as well as several persons of influence in the borough.

WIGAN.—A mysterious affair has occurred near this town. Hugh Ainscough, a tenant farmer, of Wrightington, 62 years of age, left his home on Tuesday week for the purpose of paying his rent, it being the half-yearly rent day. This he did, and afterwards dined with his brother farmers at the Chapel public-house, at Bispham. After dinner, instead of going direct home, he called at the Farmers' Arms Inn, where he had a considerable quantity of liquor. He was well known to most of the company, among whom was a widow, named Ellen Fisher, to whom he was to have been married in the course of a few weeks. Three young men, named Benson, Hart, and Cubbin, were also at the Farmers' Arms. As it drew near the hour for closing, Ainscough, who was then advanced in liquor, and Mrs. Fisher, went together along a footpath through some fields leading to Newborough. They had not got more than 50 yards when they heard some men on the opposite side of the hedge, and Ainscough was hit by a large sod. He became much irritated, but his remonstrances were only answered by a volley of sods, clay, &c. He then pulled off his coat and hat, and offered to fight any of his assailants. Mrs. Fisher now left him, and went on her way home, expecting that he would overtake her. But he did not, and was not afterwards seen alive by any but those concerned in his death. On the following morning, about half-past 4 o'clock, as a man was proceeding to his work through the fields mentioned, he found, near the path, a hat and coat. Shortly afterwards he came upon a mound of earth, which appeared to have been very recently formed. Examining it, he was horrified to find a man's head and face very much disfigured, protruding from the heap at one side, at the other the feet being just visible. He immediately raised an alarm, and the assistance of the police having been procured, the body, which proved to be that of Ainscough, was extricated. It was then discovered that the assailants of the old man had not been content with heaping the earth upon him, but had actually filled his mouth, nostrils, and ears with excrement—to such an extent, in fact, that death must have immediately resulted from suffocation. The police immediately apprehended Cubbin, Hart, and Benson, and at the inquest on Friday the jury returned a verdict of Wilful Murder against them.

Ireland.

THE KIDNAPPING CASES.—On Saturday Mr. Corr, against whom a writ of *habeas corpus* had issued in the case of the Murphys, made a return showing that he had been acting under the will of the father, who had directed him to educate the children as Roman Catholics. The Court accepted the explanation as a good and valid return, and it was agreed by Mr. Corr that the mother should have free access to the children on condition of her not attempting to interfere with their education. Both the orphans were brought into Court, and were present during the proceedings. The case of the Sherwoods was next taken up, and attachments were ordered to be issued against Ellen Blake and Catherine Davis (the grandmother of the children) for not having put in answers to the writs of *habeas corpus*, but as it transpired that the orders of the Court were not duly served on the parties, fresh writs were ordered to be issued. On Monday, in the case of the Henrys, the Solicitor-General announced that, having consulted with his learned brethren, they had all come to the conclusion that it was not a case in which a court of law could properly interfere. The question was a very serious one, as it affected the religion of the children, and was one for another tribunal. Under these circumstances it was not necessary to read the affidavits, as he thought the return made by the other side was legally sufficient. After a brief discussion Mr. Serjeant Fitzgibbon, counsel for the Rev. Mr. Shone, the Protestant clergyman whose conduct was impugned, said he was instructed that whenever the children were required they would be brought up. The facts of the case were rather curious. The contending parties were both the maternal aunts of the children, but one of them was a Catholic, and the other a Protestant. The Protestant had possession of the children, and the Catholic sought to get them. It is said to be the intention of the prosecutrix to apply to the Court of Chancery to have the children educated as Roman Catholics.

THE POPE'S TRIBUTE.—The collection in Cork on Sunday realized 1050*l.* and some odd shillings and pence, which, added to the sum posted on the day of the preliminary meeting, makes a grand total of about 2500*l.* from the capital of Munster.

THE EXODUS.—The *Cork Reporter* says that on all sides expressions of wonder and regret are heard at the fearful rapidity with which the country is becoming depopulated by emigration; and adds that by neither party in the State are the slightest efforts made to investigate the causes from which it results, or any suggestions offered as to the most effectual mode of staying it.

Scotland.

FRAUDS ON THE BRITISH LINEN COMPANY'S BANK.—Mr. James Turnbull, cashier and accountant to the British Linen Company's Bank at Melrose, recently absconded from that town after plundering the bank of a very large sum, and taking some of the bank books away with him. He was supposed to have arrived in the metropolis to take shipping for Australia or America, having the chief part of the cash with him. A warrant was accordingly placed in the hands of the metropolitan police for his apprehension, and a large reward was offered for his capture. He has since been captured by the police and handed over to the chief constable of Roxburghshire to be conveyed back to Scotland.

Railways.

Destruction of the Tyne Railway Bridge.—On Wednesday afternoon the bridge of the Newcastle and Carlisle Railway across the Tyne at Scotswood was totally destroyed by fire. The company have a branch line running into Gateshead, and, as the Scotswood chain bridge closely adjoins the one destroyed, there will be little difficulty in keeping the traffic open.

The Salisbury and Yeovil Line.—The opening of this line to Sherbourne took place on Monday amid great festivity and rejoicing.

Sporting.

DONCASTER SPRING MEETING.

Tuesday.—The *Trial Stakes* Mr. Richmond's Stockton beat Ripon, Beethoven, Hetty, and Balnamoon.—The *Stand Stakes.* Mr. Dixon's Neophyte beat King Edward, Andy, Simla, and Vixen.—The *Hopeful Stakes.* Lord Stamford's Little Lady beat Ivanhoff, Lopcatcher, and 4 others.—The *Doncaster Spring Handicap.* Mr. Byrne's Desmond beat Weatherbound, First Lord, and 6 others.—The *Municipal Stakes.*—Mr. Newland's Buttercup beat Mr. J. Osborne's f., and 2 others.—The *Lowther Plate.* Mr Coleman's Amsterdam beat Black Cloud, and 6 others.

Wednesday.—The *Betting Room Stakes.* Mr. Buckley's b c beat Hetty, Lady Bird, and 5 others.—The *Innkeepers' Stakes.* Mr. S. Jacobs' King Edward beat Mr J. Osborne's f and Knayton.—The *Gascoigne Plate.* Lord Stamford's Little Lady beat Viscount Brignall and Limeflower.—The *Scurry Stakes* (handicap). Mr Dixon's Neophyte beat The Norman, Plumper, Gammon, and Vixen.—The *Chesterfield Plate.* Mr. Coleman's Amsterdam beat Rescue, Mellor, and 5 others.

Law.

Central Criminal Court: *Conspiracy.*—*Edward Welzenstein*, 28, *Eliza Welzenstein*, 28, *Herman Frick*, 30, and *Madeline Jourdan*, a fashionably dressed woman, who surrendered to take her trial, were charged with unlawfully conspiring together to obtain 300*l* from Joseph Stohwasser by means of false pretences. They were also charged with conspiring together to impede the course of justice by giving false evidence on a recent trial in the Court of Queen's Bench, in which the present prosecutor, Mr. Stohwasser, was defendant. The case, which occupied the Court for four days, was one of a very unusual and extraordinary character. The prosecutor, Mr. Stohwasser, a German, is a tailor in Conduit Street, and is connected with several German charitable institutions in this country, and bears the reputation of being a very philanthropic person among his countrymen. It seemed that in June, 1857, an application was made by letter to Count Apponyi, the Austrian Ambassador, by a person who signed the name of Sternfeldt, on behalf of Eliza von Welzenstein, who was represented to be the wife of an Austrian officer who had gone to America, and who with her child was in a state of the greatest distress and misery. This letter was transmitted to the prosecutor to make inquiries, and he proceeded to No. 1 Charlotte Street, Fitzroy Square, when he saw the defendant Eliza Welzenstein and child, and she confirmed the statement relative to her being in a state of destitution, and stated that the gentleman who had written to the Austrian Ambassador was a brother officer of her husband, and on that account he had interested himself on her behalf. The prosecutor gave her some temporary assistance, and she wanted him to purchase a number of pawnbrokers' tickets relating to silk and other articles, which she said would be useful to her in her business, but he declined to do so, and eventually he consented to redeem the various articles; and it was arranged that, if they fetched more than the amount he advanced, the balance should be handed over to her. It appeared that, after this, the prosecutor continued to take an interest in her affairs, and that the defendant Edward Welzenstein, who was her husband, was subsequently introduced to him as Sternfeldt, and he confirmed the statements she had made, and said that he was acquainted with her husband, and was anxious to set her up in business, but he could not do so until he received remittances from Austria. Upon the faith of these representations the prosecutor advanced at various times considerable sums of money both to Welzenstein and his wife, and a house was taken in Eccleston Terrace, Pimlico, where the female defendant was to have carried on the business of a Court milliner, Mr. Stohwasser advancing money for the purpose of purchasing furniture. About this time prosecutor received information that he had been imposed upon, and that Eliza Welzenstein and the pretended Sternfeldt were man and wife, and that the child he had seen had been borrowed for the purpose. The defendant Madeline Jourdan, who at this time, passed as Madame Polinska, and who was on very intimate terms with all the other defendants, was appealed to by Mr. Stohwasser, and she declared that the original story told by the defendant Eliza Welzenstein, was the truth. Subsequently, however, it appeared that the defendant Edward Welzenstein admitted that Eliza Welzenstein was his wife, and he at the same time said he was an Austrian nobleman, and that he had been compelled to quit his own country on account of his having interfered in political matters, and he also said that he would give him a short history of his life, to show that he was an honourable man, and that he might rely upon having any money he might advance restored to him. The suspicions of the prosecutor were allayed to some extent by these proceedings, but at length he became satisfied that he had been imposed upon, and resolved to have nothing more to do with any of the parties. It should be stated that in September, 1857, very shortly after the prosecutor's first interview with Mrs. Welzenstein, upon his going to her lodging one day, she fell upon her knees and seized his hands and kissed them, and at the same moment her husband and the other defendant, Frick, suddenly entered the room, and there was a sort of scene, which attracted the particular attention of Mr. Stohwasser, but the matter was afterwards explained, and he thought no more upon the subject. After the prosecutor had expressed his determination not to advance any more money, a number of imploring letters were sent to him entreating assistance, and when it was found that these produced no effect, others, in which threats were hinted at, were sent with the like result, and at length, finding that all these proceedings were not attended with the desired result of obtaining more money, an action was brought against the prosecutor in the names of Edward Welzenstein and his wife, to recover 300*l*. for goods sold and delivered, and for money alleged to have been advanced to him, and they also claimed damages for an assault alleged to have been committed by the prosecutor upon the female plaintiff in September, 1857, under the circumstances above stated. The trial came on in the Court of Queen's Bench, when all the defendants were examined as witnesses, and Jourdan and Frick gave evidence in support of the claim that was set up, and swore to a variety of circumstances that were utterly disclaimed and contradicted by the prosecutor, and after he had given his evidence the jury at once returned a verdict in his favour, and the present charge was upon this preferred against the defendants. After four days' trial the jury returned a verdict of *Guilty* against all the defendants. Application was then made to the Court to assign error on the part of Madame Jourdan, on the ground that the Crown had not joined issue to her plea. She had been out on bail, and had not pleaded until Monday last, when the court was without a Clerk of Arraigns, or any legally appointed deputy to make the necessary replication. The Recorder deferred passing sentence.

Obituary.

The Dowager Marchioness of Ormonde died on the 3d inst. at Drumcondra Castle, near Dublin, after a brief illness. She was the second daughter of the Right Hon. John Staples by his third wife, the daughter of the third Viscount Molesworth, and was married in 1807 to the 19th Earl of Ormonde, created at the coronation of George IV. a peer of the United Kingdom, as Baron of Llanthony, in the county of Monmouth, and in 1825 advanced to the dignity of Marquis of Ormonde, in the peerage of Ireland.

The Countess of Strathmore died on Saturday last. She was the daughter of Mr. Millner, of Standrop, Durham, and married in 1820 the 10th Earl of Strathmore, who died the day following the marriage. Her ladyship married secondly, in 1831, the Right Hon. Wm. Hutt, M.P. for Gateshead.

The Dean of Londonderry (Very Rev. Thomas Bunbury Gough) died on Tuesday morning. He was appointed to the deanery in 1851, and had nearly completed his 74th year.

Mr. William Ormsby Gore, for upwards of 12 years M.P. for the northern division of Shropshire in the Conservative interest, died on the 4th inst. at his seat, Porkington, Salop, in his 82d year. He was the head of a family of Gore who for many years monopolised the representation of Leitrim, for which county his father, Mr William Gore, was M.P. in the Irish Parliament from 1769 to 1774. His mother was a daughter of the late Sir H. E. Morres, Bart. He was born in 1779, and was educated at Eton and at Merton College, Oxford. He sat for Carnarvon in the short Parliament of 1830-31, and was returned for North Salop at every election from 1835 to 1847, when he retired from public life. He married in 1815 the only child of the late Mr Owen Ormsby, whose name he assumed. He is succeeded in his Shropshire estates by his eldest son, who was lately a groom in waiting on her Majesty, and sat for Carnarvonshire in the Parliament of 1837-41. The Irish property devolves on his second son, William Richard Ormsby Gore, M.P. for county Leitrim, and formerly M.P., for county Sligo, who is married to a daughter of Admiral Sir George Seymour, K.C.B.

BIRTHS.—On the 3d inst, at Bedfords, Essex, the Hon. Mrs. H. W. Petre, of a daughter—2d inst, at Prideaux Place, Cornwall, the Hon. Mrs. Charles Prideaux Brune, of a daughter—5th inst, at 8, Chesham Street, the wife of George Lyall, Esq., M.P., of a son.—5th inst, at Draycott Cottage, Draycott Place, Cadogan Terrace, the wife of Robert Cadogan Rothery, Esq., of a son.

MARRIAGES.—On the 9th inst, at St. George's, Hanover Square, William, eldest son of Henry L. Wickham, Esq., to Sophia Emma, youngest daughter of Henry F. Shaw Lefevre, Esq.—8th inst, at St George's, Hanover Square, Horace, only son of Major General Brooke, to Charlotte, eldest daughter of Brampton Gurdon, Esq., M.P., of Letton, Norfolk—3d inst, at the church of St Mary-le-bone, Major-General Ball, to Charlotte, third daughter of the late William W. Mason, Esq, of Beverley—2d inst, at Parsonstown Church, Rev. Milward Crooke, Chaplain to the Forces, to Emily, daughter of Thomas Hackett, Esq., D.L., Moorpark, Parsonstown, King's County, and Riverstown, county Tipperary—1st inst, at Frankfort-on-the-Maine, Charles Victor, eldest son of F. W. Benecke, Esq., of Denmark Hill, Surrey, to Marie, eldest daughter of the late Dr. Felix Mendelssohn-Bartholdy, of Leipsic.

DEATHS.—On the 4th inst, at 56, Green Street, Grosvenor Square, Matilda Catherine, eldest surviving daughter of the late Right Hon. Sir Edward Knatchbull, Bart., and the Hon. Lady Knatchbull, aged 34—6th inst, at Dover, Dame Louisa, wife of Sir John Scott Lillie, C.B.—27th ult, at Boulogne-sur-Mer, Bertram Leopold Augustine Wellesley, sixth surviving son of the Hon. William Towry Law, aged 80—8th inst, at his residence, 14, Upper Wimpole Street, Horace Hayman Wilson, Esq., Boden Professor of Sanscrit, Oxford, aged 75—24th ult., at the rectory, the Rev Charles Dyson, M.A., rector of Dogmersfield, Hants, and formerly Professor of Anglo-Saxon in the University of Oxford, aged 73—3d inst, at St. George's Place, Hyde Park Corner, Maria, widow of the late General John Murray, of Glenalla, Ireland, aged 87—29th ult, Colin Alexander Campbell, 40 years rector of Widdington, Essex, fourth son of the late General Colin Campbell, aged 67—30th ult, Lieut.-Colonel Thos James Barrow, formerly of the Coldstream Guards, aged 73—4th inst, at Cheltenham, Harriot Mary, relict of the late Ven. Richard Francis Onslow, Archdeacon of Worcester, aged 83—2d inst, at 10, Cleveland Terrace, Hyde Park, Fanny Anne, wife of Lieutenant-Colonel James Wood, and eldest child of the Ven. Archdeacon Burney, D.D., Rector of Wickham Bishops, Essex—At Olverstone Vicarage, Mary, daughter of Henry Moseley, Canon of Bristol—4th inst, at 8 Upper Harley Street, Gertrude, daughter of F. H. Dickinson, Esq., aged 16—30th ult, at Bagnères de Bigorre, Henry, son of T. M. Wegellin, Esq., of Goldings, Herts, aged 10 years—5th inst, at Gorton Hall, Norfolk, Samuel Bircham, Esq., aged 87—6th inst, Thomas Boult, Esq., of Wanstead Hall, Essex—5th inst, highly respected, John Cattell, Nurseryman, Westerham, Kent, aged 73.

Markets.

POTATOES.—Southwark, Monday, May 7.

During the past week the arrivals coastwise have been limited, but the weather has been milder and trade rather heavy at the following quotations:—York Regents, per ton, 120s. to 180s.; do. Flukes, 120s. to 150s.; Lincolnshire Regents, 100s. to 130s.; Dunbar do., 120s. to 150s.; Perth, Forfar, and Fifeshire do., 110s. to 130s.; do. Reds and Rocks, 100s. to 120s.; Irish Whites, 90s. to 110s.

COVENT GARDEN.—May 12.

A few early Cabbages now begin to make their appearance. Pine Apples and Grapes have not altered since our last. Good Apples and Pears are very scarce. Oranges are plentiful and cheap. Strawberries are coming in in tolerable abundance. Spanish Hazel Nuts for planting fetch 10s. per bushel. Cobs realise 1s per lb. Rhubarb is now furnished in large quantities. Parsley is cheaper, but still dear. Green Peas, and even Broad Beans of foreign growth, may be obtained. Potatoes realise 4s. 6d. a bushel. New frame ones may be had at from 3s. to 5s. per pound. Mushrooms can still be obtained in small quantities. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, Geraniums, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Pears, per doz., 6s to 10s
Grapes, per lb., 12s to 20s	Oranges, per 100, 2s 6d to 8s
Strawberries, p. lb., 4s to 8s	Lemons, per 100, 5s to 8s
Apples, per doz., 2s to 6s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 6s to 8s	Cucumbers, each, 1s to 3s
Seakale, per basket, 2s to 3s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Peas, p. half sieve, 8s to 10s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d

MARK LANE.—Monday, May 7.

The supply of Wheat from Essex to this morning's market was small, from Kent good; the former was disposed of at about the rates of Monday last; but these not being obtainable for the Kent, the great bulk remained unsold towards the close. The market was tolerably well attended, and foreign Wheat met an improved inquiry at our late quotations. Barley is firm at the prices of this day se'nnight. Beans and Peas are scarce, and bring fully late rates. The Oat trade is steady, and in some instances a slight advance was obtained. In the value of Flour there is no alteration.

Per Imperial Quarter.	s. s.		s. s.
Wheat, Essex, Kent, & Suffolk..White,	48—54	Red	48—50
— — fine selected runs..ditto	50—57	Red	50—54
— — Talavera	50—60		
— Norfolk	—	Red	—
— Foreign	44—60		
Barley, grind. & dist., 24s to 31s..Chev.	38—45	Malting.	36—41
— Foreign..grinding and distilling	30—34	Malting.	35—43
Oats, Essex and Suffolk	19—24		
— Scotch and Lincolnshire..Potato	23—29	Feed ..	19—26
— Irish .....Potato	24—28	Feed ..	19—24
— Foreign.....Poland and Brew	24—27	Feed ..	22—26
Rye	35—38	Foreign.	—
Rye-meal, foreign.....	—		
Beans, Mazagan....32s to 40s....Tick	34—43	Harrow.	34—43
— Pigeon .....36s—47s..Winds.	48—54	Longpod	—
— Foreign ..... Small	38—46	Egyptian	—
Peas, white, Essex and Kent ..Boilers	38—40	Suffolk .	36—41
— Maple .... —s to —s ..... Grey	32—34	Foreign.	30—40
Maize ..... White	—	Yellow..	—
Flour, best marks delivered..per sack	40—46		
— 2d do. ..... ditto	32—40	Country.	32—40
— Foreign .....per barrel	24—30	Per sack	30—37

Friday, May 11.

The weather from the 4th to the 8th was fine, with sunny days and a sharp night frost or two. The wind blew strong from the N.E., but changed on the 8th to S.W. and W., and has so continued with the exception of a few hours yesterday morning, when it was S.E. Although prices for Wheat in Liverpool and a few markets in the interior have undergone a slight depression, nevertheless extreme firmness continues to pervade the trade here, and in the majority of the country markets, where business for the most parts has consequently been inactive; but in London on Wednesday higher prices were realised for foreign Wheat in many instances than have hitherto been obtainable. The malting season being pretty well over Barley is neglected, and has been generally written 6d. to 1s. per qr. cheaper. Quotations of Beans and Peas have also for the most part undergone a similar decline, but the value of Oats has been well supported and full prices realised. Flour was inactive, and in some markets a decline of 1s. per sack has been submitted to. Late prices in the Baltic continue to be well maintained for all descriptions of grain, those of Wheat rising. The arrivals of grain-laden vessels from the South of Europe off the coast for orders this week have been more numerous than of late, and consist of 15 cargoes of Wheat, 6 of Barley, 2 of Rye, and 2 of Linseed. The arrivals of all grain this week have been moderate. To day's market was not largely attended, nevertheless English Wheat was in request at the full prices of Monday. Foreign was generally held for a slight advance on that day's quotations, and business from the stands was consequently limited. Baltic Wheat c. f. and i. has been in demand, and during the week rather large business was transacted at rising prices. Barley, Beans, and Peas are unaltered in value. For Oats there is a good inquiry at an advance of 6d. per qr.

Arrivals from May 7 to May 11.

	Wheat.	Barley.	Oats.	Flour.
English ..	1420 qrs.	330 qrs.	20 qrs.	1650 sks.
Irish	— ,,	— ,,	90 ,,	— ,,
Foreign ...	5050 ,,	1790 ,,	13040 ,,	100 ,, / 1000 brls.

Liverpool, Tuesday, May 8.—There was only a small attendance of millers and dealers at our Corn Exchange this morning, and the business passing has been quite of a retail character. Wheat and Flour must each be noted a shade easier than on Friday last. Holders, however were by no means anxious to force sales. Indian Corn was little dealt in, and may be written 3d. per qr. cheaper. Oats and Oatmeal remain nominally unchanged in value. Egyptian Beans declined 6d. per qr., ex ship. Peas and Barley are without alteration. Notwithstanding its dull inactive character the market displayed a tolerably firm appearance.

Friday, May 11.—The corn market has been very quiet. Holders of Wheat and Flour, however, do not yield, and the few retail sales effected have been at former terms. Indian Corn and Egyptian Beans have been rather easier to purchase. All other articles steady.

Averages.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Mar. 31..	46s 5d	37s 2d	24s 1d	36s 9d	39s 11d	38s 7d
April 7...	47 9	36 4	23 7	31 8	40 2	38 3
— 14..	49 1	37 2	24 2	36 10	39 9	38 3
— 21..	49 6	37 6	24 2	32 11	42 0	39 2
— 28..	51 2	37 11	24 5	31 5	41 6	38 1
May 5..	52 6	37 5	25 5	34 0	42 4	39 9
Agg. Aver.	49 5	37 3	24 4	33 11	40 11	38 8

Fluctuations in the Last Six Weeks Averages.

Prices.	Mar. 31.	April 7.	Apr. 14	Apr. 21.	Apr. 28	May 5.
52s 6d	..	..	..	..	..	
51 2	..	..	..	..		..
49 6	..	..	..		..	..
49 1	..	..		..	..	..
47 9	..		..	..	..	..
46 5 —		..	..	..	..	..

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, May 10.

Prime Meadow Hay	80s to 90s		Clover	100s to 115s
Superior do. (old) ..	92	100	New Clover	— —
Inferior do.	60	70	Second cut do. ..	85 94
New do.	—	—	Straw	27 32
Rowen	70	75		DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, May 10.

Sup. Meadow Hay..	100s to 108s		Inferior Clover ..	90s to 100s
Inferior do.	80	92	New do.	— —
New do.	—	—	Straw	32 36
Superior Clover ..	100	117		JOSHUA BAKER.

WHITECHAPEL, THURSDAY, May 10.

Fine old Hay	96s to 100s		Fine old Clover ..	115s to 120s
Inferior do.	84	92	Inferior do	100 110
Prime New Hay ..	—	—	Fine New Clover ..	— —
Inferior do.	—	—	Fine 2d cut	95 104
Straw	30	34	Inferior do.	80 90

BRITISH WOOLS.—LONDON, FRIDAY, May 11.

Our trade continues healthy, with but little doing.

	s.	d.		s.	d.
South-down Hog-gets..	1	8	to 1	9	
Half-bred ditto..	1	8	—	—	
Down Ewes ..	1	6	—	—	
Kent Fleeces ..	1	6	— 1	6½	
Leicest. Wethers	1	5	—	—	
Ditto Hoggs ..	1	7	—	—	
Combing Skins	1	2	to 1	6	
Blanket ditto ..	0	6	— 0	10	
Flannel Wool ..	1	2	— 1	6	

COAL MARKET.—MAY 10.

Byass's Bebside West Hartley, 15s. 9d.; Hastings Hartley, 15s. 9d.; Holywell, 15s. 6d.; Howard's West Hartley, 15s. 9d.; Tanfield Moor, 13s. 3d.; Tanfield Moor Butes, 13s. 6d.; Tynedale West Hartley, 15s.; Wylam, 16s.; Walls End Acorn Close, 17s. 6d.; Walls End Eden, 17s. 6d.; Eden Main, 17s.; Walls End Braddyll's Hetton, 17s. 9d.; Walls End Framwellgate, 17s. 6d.; Walls End Haswell, 18s. 3d.; Walls End Pensher, 16s.; Walls End Russell's Hetton, 17s. 9d.; Walls End South Hetton, 18s. 6d.; Walls End Stewarts, 18s. 6d.; Walls End Tunstall, 17s.; Walls End Heugh Hall, 17s. 6d.; Walls End Kelloe, 18s.; Walls End South Hartlepool, 17s. 6d.; Walls End South Whitworth, 15s. 9d.; Walls End Thornley, 16s.; Walls End Thorpe, 17s.—85 ships at market.

HOPS.—BOROUGH MARKET, FRIDAY, May 11.

Messrs. Pattenden & Smith report that the market continues firm at fully late prices, and but few Hops on offer. The bine is making but slow progress.

BUTTER MARKET.—May 11.

Best Fresh Butter . .. 15s. per dozen lbs.
Second do. do. .. .. 13s. ,, ,,
Pork, 4s. 4d. to 5s. 0d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, May 7.

The supply of Beasts is considerably shorter than on Monday last, and consequently prices have advanced a little There are a few more Sheep; trade is rather slower, but late prices are fully maintained. Good Calves and Lambs are in demand. From Germany and Holland there are 320 Beasts, 3600 Sheep, and 101 Calves; from Spain 40 Beasts; from Scotland, 40; from Norfolk and Suffolk, 2800; and 100 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 5	0	Best Long-wools. ..	to	..		
Best Short-horns	4	6	— 4	10	Do. Shorn ..	4	10	— 5	0
2d quality Beasts	3	4	— 4	4	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds			to	..	Do. Shorn ..	4	6	— 4	8
Do. Shorn ..	5	0	— 5	2	Lambs	6	0	— 7	0
					Calves	5	0	— 5	8
					Pigs	4	0	— 5	0

Beasts, 3740; Sheep & Lambs, 25,350; Calves, 149; Pigs, 520.

THURSDAY, May 10.

We are but moderately supplied with Beasts, and Monday's quotations are well supported. There is about a usual supply of Sheep. Trade remains unaltered. Good Lambs are not plentiful. They are readily disposed of at rather higher rates. Good Calves are also in demand. Our foreign supply consists of 70 Beasts, 450 Sheep, and 195 Calves; and 115 Milch Cows.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 5	0	Best Long-wools . ..	to	..		
Best Short-horns	4	6	— 4	10	Do. Shorn ..	4	10	— 5	0
2d quality Beasts	3	4	— 4	4	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds			—	..	Do. Shorn ..	4	6	— 4	8
Do. Shorn ..	5	0	— 5	2	Lambs	6	4	— 7	4
					Calves	5	0	— 5	8
					Pigs	4	0	— 5	0

Beasts, 895; Sheep & Lambs, 6250; Calves, 271; Pigs, 140.

HORTICULTURAL AGENT AND VALUER.

MR ALFRED CHANDLER, (of the late firm of CHANDLER & SONS,) 28, Priory Road, Wandsworth Road, S.

TO NURSERYMEN, FLORISTS, &c.

MR. STEPHENS, AUCTIONEER and VALUER of NURSERY STOCK, 79, City Road, London, E.C., begs to inform the Trade that he has succeeded to the Business of Mr. Haslam, and is prepared to advance Cash on property intended for absolute Sale.

MRS. ARTHUR HENFREY, Widow of the late Professor Henfrey, F.R.S., F.L.S., &c., of King's College, London, continues to receive a limited number of young Gentlemen under 12 years of age, to be educated with her own Sons, in all the branches of a liberal education. French is constantly spoken, Mrs. HENFREY having resided on the Continent, and a Parisian Lady assists her to teach Music, Singing, and Drawing. The house is healthily situated, and provided with a large Garden. Pupils will have the comfort of a private family, and unremitting attention will be paid to their health and morals. References are permitted to—

Dr. JELF	Principal of King's College
Rev. LAWFORD W. T. DALE ..	Chiswick Vicarage, W.
Rev. OLIVE HOLLINGWORTH ..	Turnham Green, W.
Sir WM. and Lady HOOKER ..	Kew, W.
Professor HUXLEY, F.R.S. ..	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. MARTYN.. ..	7, Bennett St., St. James's, S.W.
Dr. and Mrs. LINDLEY.. ..	Acton Green, W.
Dr. and Mrs. HOOKER .. .	Kew, W.
Dr. and Mrs. TUKE	Manor House, Chiswick, W.

For terms apply to Mrs. ARTHUR HENFREY, 12, Heathfield Terrace, Turnham Green, W.

TO PARENTS AND GUARDIANS.—The Widow of the late Mr. JOSEPH SHILLING, Nurseryman, of Winchester, Hants, is anxious to receive into her family one or two little GIRLS to EDUCATE with her own children. An experienced and kind Governess is kept, and every care would be taken to secure to them the comforts of home. Respectable references given and required.—Further particulars may be obtained by addressing Mrs. J. SHILLING, Southgate Nursery, Winchester, Hants.

TO JOBBING GARDENERS.

WANTED, a few good JOBBING HANDS. A personal application and a reference required.—Apply to Mr. CLINGO, Nurseryman and Seedsman, 14, Portland Place, St. John's Wood, N.W.

WANTED, A GARDENER, married, but without incumbrance, or only one child; single-handed, with aid at certain periods of the year and once a week. He must be active, intelligent, industrious, and neat in his work. He must thoroughly understand the Culture of Vines on the spur-system, and the Management of Wall and other Fuit Trees; no early forcing allowed, and frames limited to Seeds and Striking Plants. The work consists of a walled garden of an acre, where a constant succession of Vegetables is indispensable, a small piece of Pleasure Ground, and Shrubbery Walks, two late Vineries, and an Orchard House. Wages 17s. per week, with coal and candle, milk, and vegetables, with a lodge partly furnished.—A. B., care of Messrs. Cartwright, Law Stationers, Chancery Lane, London, E.C., with ages, length of services, and reasons for leaving present situation.

WANTED IMMEDIATELY, in a gentleman's family, near Reigate, a MAN and his WIFE, without children. The Man to give assistance in the Garden and Farmyard; the Woman to undertake the entire charge of a Dairy and Poultry Yard, and must perfectly understand the duties of both. None need apply who cannot produce satisfactory references as to character.—Apply to Mr. Ross, Merstham.

WANTED, a steady respectable MAN who thoroughly understands Glazing, Painting, and Nursery Carpenters' Work, also to make himself useful in Packing and Nursery Work. State wages and references.—M. HONEY, 71, Bank Street, Maidstone.

WANTED, a single young Man as GROOM and GARDENER; must have at least two years' character.—V. C. F, Lantwit Major, near Cowbridge, Glamorganshire.

WANTED, A COWMAN.—A respectable married Man, who can Milk well and attend to about 20 cows. Wages, 1l. a week. A fast Milker is required.—Address to Mr. NARD's, Southend, Eltham, Kent.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 34, married; thoroughly practical in every branch of his profession.—S. H., J. Bennett, Seedsman, Dulwich, S.

GARDENER (HEAD).—Age 38, single; has a thorough knowledge of his profession. Can have a good character.—A. B., Beeton, Baker, Forest Hill, S.E.

GARDENER (HEAD).—Married, without incumbrance; has a thorough knowledge of his profession in every department. Can be well recommended by his last employer.—A. B., Mr. Francis, Nursery, Hertford.

GARDENER (HEAD).—Age 31, single; understands Early and Late Forcing of Pines, Vines, Melons, and Cucumbers; also Flower and Kitchen Gardens. Unexceptionable character.—E. W. LACEYS, Stationer, Eltham, S.E.

GARDENER (HEAD).—Age 35; understands Forcing Pines, Peaches, Cucumbers, and the management of Fruit, Flower, and Kitchen Gardens. Can be highly recommended.—A. B., Pearch, News Agent, Wimbledon, Surrey.

GARDENER (HEAD).—Age 27, no incumbrance; has a good practical knowledge of his profession in all its branches. Three years' good character.—G. S., Post Office, Bolsterstone, Sheffield.

GARDENER (HEAD).—Age 30; practical knowledge of Gardening in all its branches, Forcing and Plant Department, Fruit, Flower, and Kitchen Gardening. First-class references.—J. R., Sir Clifford Constable, Bart., near Hull.

GARDENER (HEAD).—Age 39, married, no incumbrance; 18 years' good practice in all branches. Wife will take charge of Dairy and Poultry if required. Good character.—E. P., Post Office, Chingford, Essex, N.E.

GARDENER (HEAD).—Age 32, married; thoroughly understands his profession in all its branches. First-class experience. Seven years' unexceptionable character.—W. B., Post Office, Camberwell Green, Surrey, S.

GARDENER (HEAD).—Age 32, no incumbrance; has a thorough practical knowledge of Pines, Vines, Peaches, Melons, and Cucumbers, Flower and Kitchen Gardens.—J. R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD), in or out.—Single; has had good practice and management of Plants, Forcing, &c., likewise Kitchen Garden, &c.; good references as to character and ability.—S. M., 1, Dartmouth Cottages, Lewisham, S.E.

GARDENER (HEAD) in or out of the House.—Has a thorough knowledge of his profession in all its branches. Highly recommended.—M. M., Mr. Neal, Seedsman, High Street, Wandsworth, S.W.

GARDENER (HEAD).—Married, without incumbrance; of first-class practical experience in the various branches of his profession; and also a general knowledge of the Management of Grass Land, Woods, &c.—BETA, Messrs. E. G. Henderson & Son, Wellington Nursery, St. John's Wood, N.W.

GARDENER (HEAD).—Age 37, married, no incumbrance; has a practical knowledge of Gardening in all its various branches, and Early Forcing of Fruits, Flowers, and Vegetables. Can be well recommended. Wife good Cook, and willing to assist in anything.—T. T., Messrs. Flanagan & Son, 9, Mansion House Street, London, E.C.

GARDENER (HEAD).—Married, no incumbrance; thoroughly experienced in Early and Late Forcing Vines, Cucumbers, Melons, and Peaches, the culture of Stove and Greenhouse Plants, and management of Fruit, Flower, and Kitchen Gardens Six years' good character.—C. E., 4, Alleyn Terrace, Hamilton Road, Lower Norwood, S.

GARDENER (HEAD).—Age 40, married; possesses a practical and scientific knowledge of his profession in all its branches, including Pines, Grapes, Peaches, Figs, Melons, Cucumbers, &c., and is a first-class Plant grower. He has also a good knowledge of Scotch Farming, Hedging, Draining, applying Manures, and improving Waste Lands.—J. D., Post Office, Wilmington, near Honiton, Devon.

GARDENER (HEAD).—Age 36, married; has been most successful in the cultivation of Pines, Grapes, and Peaches; Late and Early Forcing of Vegetables, also of Hothouse and Greenhouse Plants, Fruit, Flower, and Kitchen Gardens, with Woods, Lands, and Stock. Wife can take charge of Dairy and Poultry.—A. B., Messrs. Drummond, Nursery, Bath, Somerset.

GARDENER (HEAD.)—W. KEELE (age 36, no incumbrance), late with J. Butler, Esq., is at liberty to re-engage. Has had 20 years' experience, and grown plants that have taken first prizes at the Royal Botanic Gardens, &c., but has no desire himself to show; is acquainted with Forcing in all its branches on the most improved principles; also the superintendence of Horticultural Building of the best description. Testimonials and good character for steadiness and ability.—W. KEELE, 6, Cumberland Place, Kew, Surrey, W.

GARDENER (HEAD).—Thoroughly understands Forcing Pines, &c.; also Flower and Kitchen Gardening in all its branches. Two and a half years' good character from his last situation.—R. H., Mr. Barnes, Camden Nursery, Camberwell, S.

GARDENER (HEAD).—Age 34, married, no incumbrance; has a thorough knowledge of Early and Late Forcing of Pines, Vines, Melons, Cucumbers, and Strawberries, and understands the management of Flower, Fruit, and Kitchen Gardens. Wife can take charge of Dairy or Poultry. Two years' good character.—A. B., Post Office, Leytonstone, Essex, N.E.

GARDENER (HEAD).—Age 42, married, no incumbrance; experienced in Forcing Pines, Vines, Vines in pots, Peaches, Strawberries, &c.; a good Cultivator of Stove and Greenhouse Plants, and has a thorough knowledge of his profession. Three years' character.—K., Mr. Green, Gardener to Sir E. Antrobus, Bart., Cheam, Surrey, S.; or 102, Union Street, Borough, S.E.

GARDENER (HEAD).—Age 30; practically experienced in Early and Late Forcing, Pines, Vines, Peaches, Melons, Cucumbers, &c.; cultivating Orchids, Ferns, Stove and Greenhouse Plants, Formation of Vine and other Fruit Trees, Borders, and management of Flower and Kitchen Gardens. Character unexceptionable.—J. C., Mr. Page, Gardener to W. Leaf, Esq., Park Hill, Streatham, Surrey, S.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Middle aged; has been engaged principally during the last three years in laying out a Flower Garden at Dynevor Castle; has a thorough knowledge of his profession, well skilled in the cultivation of the Grape Vine, for which he holds numerous Medals awarded to him from the Royal Botanic Society of London; he is active and energetic in the discharge of all his duties, and will be disengaged on the 21st of June, 1860.—T. BOYD, Dynevor Castle, Llandilo.

GARDENER (HEAD) OR GARDENER AND BAILIFF.—Age 30, single; practical, and qualified to carry out any Alterations and Improvements on an Estate. Salary no object.—A. L., Messrs. Jackson & Son, Kingston, S.W.

GARDENER.—Age 27, single; understands his profession in all its branches. Above two years' good character.—H. G., Post Office, Teddington, S.W.

GARDENER.—Age 36, single; understands Flower and Kitchen Gardens, Forcing, &c. Good reference.—J. B., Mrs. Bryant, King Street, Maidstone, Kent.

GARDENER.—Age 34, single; understands Kitchen and Flower Gardens, Greenhouse, Hothouse, and Forcing. Out-door place preferred.—E. G., Mr. Fryer, Nurseryman, Camberwell New Road, S.

GARDENER.—A gentleman can with confidence recommend his Gardener (age 33, married). Can manage Land and Stock. Six years in present situation.—W. DALTON, St. John's, Sutton, near Dartford, Kent.

GARDENER.—Age 35, married; has had 20 years' practical experience. Wife can take charge of Laundry or Dairy if required. Good character.—H. C., W. Barker, Esq., 32, South Bank, London, N.W.

GARDENER.—Age 38, married, without incumbrance; thoroughly understands his profession in all its branches. Can have a good character from present situation.—A. M., Valentine House, Ilford, Essex.

GARDENER.—A gentleman wishes to obtain a situation for an experienced Gardener (age 34, married), competent to take charge of Flower and Kitchen Gardens, and Forcing houses; good character.—F. M., Mr. Don, Botanical Gardens, Regent's Park, N.W.

GARDENER.—Married, without incumbrance; understands the Management of Cows and Horses; can Drive, Wait at Table, and Shave well. Wife a good Cook, thoroughly understands Dairy, Baking, and Poultry. Either as In or Outdoor Servants.—C. B., Post Office, Portswood, near Southampton.

GARDENER.—Age 40, no incumbrance; well acquainted with the modern system of Flower Gardening, Laying-out Grounds, the Culture and Propagation of Stove and Greenhouse Plants, Forcing of all kinds, and supplying a large family with Vegetables.—D. M., 19, Princes Terrace, Haverstock Hill, N.W.

GARDENER (UNDER).—Age 22; can be well recommended. Three years' good character.—Y. Z., Botanical Gardens, Manchester.

GARDENER AND BAILIFF.—No incumbrance; has a good knowledge of both departments. The Wife can undertake the Dairy and Poultry. Good character.—J. S., The Cottage, Edwardes Square, Kensington, W.

PROPAGATOR, OR FOREMAN AND PROPAGATOR.—Good practical experience in both departments. References from one of the leading metropolitan firms.—A. B., Messrs. Milne, Arnott, & Co., Vauxhall Nursery, Wandsworth Road, S.W.

LAND OR FARM MANAGER.—Age 35, single; a thoroughly qualified Scotch farmer of high respectability. A Liberal Premium would be given for an introduction. First-class certificates and security if required.—Mr. SCOT, General Post Office, Leith.

TO NURSERYMEN, SEEDSMEN, AND SEED-GROWERS.—The Advertiser, having travelled for many years through England, Ireland, and Scotland, and having a thorough knowledge of the Nursery and Seed Business, as also a great connection amongst the nobility, gentry, and trades, is desirous of making an engagement with a first-rate House to represent them, and sell on commission or salary.—Apply by letter to BRASICA, Mr. John Weeks, Horticultural Builder, King's Road, Chelsea, London, S.W.

CLERK, OR ASSISTANT TO A STEWARD.—Age 26; good Accountant, and has considerable practical knowledge of Agriculture. Willing to make himself useful on a Farm. Salary not so much an object as occupation. Testimonials and first-rate references.—BETA, Post Office, Bolton, Lancashire.

GAMEKEEPER (UNDER).—Age 20. Writes a clear hand, can Keep Accounts very well, and has plenty of pluck. Recommended by a gentleman with whom he has been some years.—F. W., Post Office, East Cowes, Isle of Wight.

SHEPHERD.—NOAH BELSHAM (married) begs to offer his services to any nobleman or gentleman requiring a thoroughly experienced Man in the above capacity. Four years' unexceptionable character.—Whitwell, near Reedham, Norfolk.

DAIRYMAID, in a nobleman or gentleman's family.—Thoroughly understands her business, with two years' good character.—S. B., 15, Market Street, Curzon Street, Mayfair, W.

The Gardeners' Chronicle Newspaper.

SATURDAY, MAY 19, 1860.

MRS. ARTHUR HENFREY, Widow of the late Professor Henfrey, F.R.S., F.L.S., &c., of King's College, London, continues to receive a limited number of young Gentlemen under 12 years of age, to be educated with her own Sons, in all the branches of a liberal education. French is constantly spoken, Mrs. Henfrey having resided on the Continent, and a Parisian Lady assists her to teach Music, Singing, and Drawing. The house is healthily situated, and provided with a large Garden. Pupils will have the comfort of a private family, and unremitting attention will be paid to their health and morals. References are permitted to—

Dr. Jelf	Principal of King's College
Rev. Lawford W. T. Dale ..	Chiswick Vicarage, W.
Rev. Olive Hollingworth ..	Turnham Green, W.
Sir Wm. and Lady Hooker ..	Kew, W.
Professor Huxley, F.R.S. ..	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. Martyn	7, Bennett St., St. James's, S.W.
Dr. and Mrs Lindley	Acton Green, W.
Dr. and Mrs. Hooker .. .	Kew, W.
Dr. and Mrs. Tuke	Manor House, Chiswick, W.

For terms apply to Mrs. Arthur Henfrey, 12, Heathfield Terrace, Turnham Green, W.

NEXT OF KIN, HEIRS, &c., WANTED, being exact Copies of Advertisements from the *Times, Gazette, Post, Chronicle, Herald*, Provincial, Colonial, and American newspapers, for the past 60 years, relating to many thousand names and descriptions of persons wanted to claim property in various parts of the world. Sent post free for 12 penny stamps, per return post punctually, by the publisher, Fisher & Son, Kingsland, London, N.E. "Worth its weight in gold." —*Times*, Nov. 26, 1859.

HOW TO BREW SPLENDID STRONG ALE, at 7*d.* per Gallon, fine as Sherry, and an aroma equal to Burton Tenpenny. This new Practical Treatise is by a Derbyshire man of 28 years' attendance at the spigot and tun in the best brewery in the county. No brewing utensils required, only those for household use. This is guaranteed to be the best and cheapest mode to produce fine Ale ever made public. The above, beautifully printed in large type, can be had of the Publishers for 12 Penny Post stamps. Sent post free to any address—Direct to Fisher & Son, Kingsland, London, N.E.—Established 1847.

LIVE FISH FOR STOCKING PONDS, AQUARIUMS, &c.—Carp, Tench, Roach, Dace, Perch, Chub, Gudgeon, Minnows, Gold and Silver Fish, Eels, &c. To be had at Charles Wright's, Fishing Tackle Manufactory, 376, Strand, W.C. Aquariums sold.

GLENFIELD PATENT STARCH, used in the royal laundry, and pronounced by her Majesty's laundress to be the Finest Starch she ever used. Sold by all chandlers, grocers, &c., &c.
Wotherspoon & Co., Glasgow and London.

PIESSE AND LUBIN'S SWEET SCENTS.—
"The kisses of a thousand flowers,
Stolen from them while they sleep."
2, New Bond Street, London, W.

HANDSOME BRASS AND IRON BEDSTEADS.—Heal & Son's Show-rooms contain a large assortment of brass bedsteads, suitable both for home use and for tropical climates; handsome iron bedsteads with brass mountings and elegantly japanned: plain iron bedsteads for servants; every description of wood bedstead that is manufactured, in mahogany, birch, walnut-tree wood, polished deal and japanned, all fitted with bedding and furniture complete, as well as every description of bedroom furniture.

HEAL AND SON'S ILLUSTRATED CATALOGUE, containing designs and prices of 100 bedsteads, as well as of 150 different articles of bedroom furniture, sent free by post. —Heal & Son, Bedstead, Bedding, and Bedroom Furniture Manufacturers, 196, Tottenham Court Road, W.

ALLEN'S PATENT PORTMANTEAUS and TRAVELLING BAGS with square openings.
LADIES' DRESS TRUNKS, DRESSING BAGS, with silver fittings.
DESPATCH BOXES, WRITING and DRESSING CASES, and 500 other articles for home or continental travelling, illustrated Catalogues for 1860. By post for two stamps.
J. W. ALLEN (late J. W. and T. Allen), Manufacturer of Officers' Barrack Furniture and Military Outfitter (see separate Catalogue), 18 and 22, Strand, London, W.C.

DRESSING CASES, DRESSING BAGS, and highly finished elegancies for presentation in great variety; Ivory-handled Table Cutlery: every requisite for the Toilet and Work Tables.—Mechi & Bazin, 112, Regent St., W.; 4, Leadenhall Street, E.C.; and Crystal Palace, Sydenham, S.

News of the Week.

In the House of Lords on Monday the Earl of Hardwicke moved for a return of the gunboats built by contract since 1852, the names of the contractors, and the present condition of the vessels, in order to ascertain who were the parties responsible for the actual condition of these boats. The Duke of Somerset said that he was perfectly willing to grant the returns, and assured the House that all the information in the power of the Government should be produced. The number of defective vessels was less than had been supposed, and the Admiralty were taking legal advice as to whether they had the power to prosecute the parties who had been guilty of fraud. The Marquis Townshend and the Earl of Shrewsbury said that the inquiry was most necessary, and ought to be full and searching. The motion was then agreed to. On Tuesday the Marquis of Clanricarde, in moving for returns respecting the treatment of natives by European planters in India, presented a petition from natives of India praying for legal reforms and for admission to higher offices than are now open to them, for the promotion of education and public works, and for the appointment of a Royal commission to inquire into their case. After a discussion of some length, in which the Earl of Ellenborough, the Duke of Argyll, and Lord Lyveden took part, the motion was agreed to.

In the House of Commons on Friday, Sir C. Wood stated, in answer to Mr. Danby Seymour, that the Government had felt it necessary to recall Sir Charles Trevelyan from the governorship of Madras. This step had been adopted with great regret, but it had been rendered unavoidable by the act of insubordination committed by Sir C. Trevelyan in publishing a minute appealing to the public opinion of India against the financial measures of the Government. On the motion of Colonel North an address to the Queen was agreed to praying for a reconsideration of the warrant granting pensions and allowances to officers of the land forces limited to wounds and injuries received in action. On Monday, in answer to Mr. Baines, the Chancellor of the Exchequer said that in consequence of the illness of Sir Rowland Hill, the Newspapers Conveyance Bill would not be proceeded with this session. In reply to Mr. A. Steuart, Mr. Cardwell said that the attention of the Government had been called to the enlistment of subjects of her Majesty for the Papal service, and that steps would be taken to prevent it. The House then went into committee on the Wine Licenses Bill, when Mr. Baines moved an amendment on clause 24, prohibiting refreshment houses from opening on Sundays. After some discussion the amendment was negatived on a division by 117 to 82. Mr. Hardy moved the omission of the exemption of the Vintners' Company. The motion was negatived on a division by 97 to 90. On clause 12, one of the reserved clauses, considerable discussion took place on the proposal to give the power of granting licenses to the police magistrates. The Chancellor of the Exchequer ultimately said that as the feeling of the House was in favour of the county magistrates, he would undertake to alter the clause to that effect on the report. The clause was then agreed to, and the House resumed. On Tuesday Mr. Slaney moved a resolution that the Government or Parliament ought to take steps to provide recreation grounds in the vicinity of our increasing populous towns. Sir G. Lewis opposed the motion, which was negatived without a division. Lord Haddo moved that the schools of art in which females wholly unclothed are exhibited as models ought not to receive the sanction of a grant of public money. Sir G. Lewis, Mr. Adderley, and Lord Palmerston opposed the motion; Mr. Spooner supported it. On a division the motion was negatived by 147 to 32. Lord Emlyn obtained leave to introduce a Bill for the better management and control of the roads in South Wales. Mr. Alcock moved for a royal commission to inquire and report how far it may be practicable to substitute an equitable system of assessment in lieu of the present mode of maintaining the turnpike roads and bridges in England and Wales by tolls. Sir G. Lewis opposed the motion, which was negatived on a division by 78 to 12. On the order for the second reading of the Tenure and Improvement of Land (Ireland) Bill, Sir J. Walsh moved, as an amendment, that the Bill be read a second time that day six months. After some discussion the debate was adjourned. The Landlord and Tenant (Ireland) Bill was read a second time. On Wednesday on the order for the second reading of the Annuity Tax Abolition (Edinburgh) Bill, Mr. Hadfield moved that it be read a second time that day six months. After some discussion the amendment was withdrawn, and the Bill was read a second time. On Thursday, after a desultory discussion on the legality of raising money by public subscription in this country to assist General Garibaldi and the insurgents in Sicily, the House went into committee on the Refreshment Houses and Wine Licenses Bill, and resumed the consideration of the postponed clauses. On clause 12 Mr. Edwin James moved an amendment assimilating the powers of the magistrates in granting or refusing the new wine licenses to those now exercised by them in reference to spirit licenses. On a division the amendment was negatived by 154 to 117. Several new clauses were agreed to, and the Bill was ordered to be reprinted.

Despatches from Sicily inform us that General Garibaldi and his expeditionary corps effected a landing at Marsala on the 11th inst., and immediately marched into the interior, abandoning their steamers to the King's frigates, which had offered no opposition to their landing. It is said that Messina and Syracuse have since fallen into their hands, and that the whole island is in a state of revolt. It is reported at Naples that insurrections in connection with Garibaldi's movement have broken out in Calabria and the Abruzzi, and that the state of affairs had become so precarious that the King had requested foreign intervention. Accounts from St. Petersburg state that Prince Gortschakoff, a few days ago, convoked the principal members of the Diplomatic corps, with the exception of the Turkish Minister, and declared to them that the position of the Christians in Turkey had become so intolerable that Russia was on the point of addressing strong representations to the Porte in their behalf, and hoped to obtain the support of the other Powers. The British Ambassador, Sir John Crampton, received this communication under reserve, by stating that he intended to refer to his Government in order to obtain instructions upon the subject.

Home News.

The Court.—The Queen, Prince Consort, and the Royal family continue at Buckingham Palace. On Friday morning the Queen and Prince Consort, accompanied by the Princess Alice, rode on horseback. The Duchess of Hamilton visited her Majesty in the afternoon. The Queen, accompanied by the Princess Alice, took a drive in a carriage and four. The Prince Consort rode on horseback. In the evening the Queen gave a juvenile ball at Buckingham Palace to about 260 children, between 6 and 14 years of age, accompanied by their parents or relatives. On Saturday the Queen held a Court, at which Senor Gutierrez had an audience and delivered his credentials as Minister from Honduras, and Count Ludolf had an audience and delivered his credentials as Minister from Naples. Lord John Russell had an audience of her Majesty. The Prince Consort presided at a meeting of the Council of the Duchy of Cornwall. In the afternoon the Queen and Prince Consort, accompanied by the Princess Alice and the Princesses Helena and Beatrice, left Buckingham Palace for the Camp at Aldershott, travelling to the Farnborough station by a special train of the South Western Railway. The Royal party arrived at the Pavilion at 20 minutes before 5. In the evening the Queen gave a dinner party to the Generals in command and the Colonels commanding regiments. On Sunday morning her Majesty, the Prince Consort, and the Princesses Alice and Helena attended Divine service in the camp. On Monday morning the Queen left the Pavilion on horseback and reviewed the Aldershott division in the Long Valley. The Prince Consort, Princess Alice, and the Duke of Cambridge accompanied her Majesty on horseback. Princess Helena and Princess Beatrice followed in an open carriage. At the conclusion of the review her Majesty and the Royal party returned to the Pavilion, and afterwards went in an open carriage to see the rifle practice by detachments of Guards, accompanied by the Prince Consort, Princess Alice, and Princess Helena. The Royal party returned to the Pavilion at 5 o'clock, and immediately left for Farnborough station on their return to London, arriving at Buckingham Palace at 20 minutes before 7. In the evening her Majesty had a dinner party. On Tuesday the Queen held a Court, at which the Prince and Princess of Waldeck and Pyrmont were presented to her Majesty. Lord John Russell had an audience of the Queen. The Countess de Neuilly and the Duke de Nemours visited her Majesty. In the afternoon the Queen, accompanied by the Princess Alice and Prince Arthur, took a drive in a carriage and four. The Prince Consort rode on horseback. In the evening her Majesty and the Prince Consort, accompanied by the Princess Alice, honoured the Royal Italian Opera, Covent Garden, with their presence, entering the theatre by the new Floral Hall. On Wednesday morning the Queen and Prince Consort rode on horseback. The Prince of Wales arrived at Buckingham Palace from Oxford. In the afternoon the Queen, accompanied by the Prince of

Wales and the Princess Alice, took a drive in a carriage and four. The Prince Consort presided over a meeting of the Royal Commissioners of the Patriotic Fund, held at the Palace of Westminster. In the evening the Queen gave a State Ball, to which a party of 1811 were invited. On Thursday the Queen held a Court at which Count Platen, the Swedish Minister, had an audience, and delivered a letter from the King of Sweden and Norway. Lord John Russell had an audience of her Majesty. The Princess of Waldeck and Pyrmont visited the Queen. The Prince of Wales left the Palace for Oxford. Professor Owen delivered his sixth lecture on Natural History before the Prince Consort, Princess Alice, and other members of the Royal family. Mr. Mayall attended at Buckingham Palace and took photographs of her Majesty, the Prince Consort, the Princes, and Princesses. In the evening the Queen and Prince Consort, accompanied by the Princess Alice, honoured the performance at her Majesty's Theatre with their presence. Yesterday afternoon the Queen held a Drawing-room at St. James's Palace to celebrate her Majesty's birthday.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

GOVERNORSHIP OF MADRAS.—Sir Charles Trevelyan has been recalled from the office of Governor of Madras, and will be succeeded by Sir Henry Ward, now Governor of Ceylon. This step has been taken by the Government in consequence of Sir Charles Trevelyan having published a minute in opposition to the financial scheme proposed by Mr. Wilson as Finance Minister for India.

ARCHBISHOPRIC OF YORK.—It is understood that Dr. Longley, the Bishop of Durham, will succeed the late Dr. Musgrave as Archbishop of York.

BISHOPRIC OF DURHAM.—It is reported that the Rev. Dr. Thompson, Provost of Queen's College, Oxford, and preacher at Lincoln's Inn, will be appointed Bishop of Durham.

CONSECRATION OF THE BISHOPS OF ROCHESTER AND ANTIGUA.—The consecration of Dr. Wigram as Bishop of Rochester, and of the Rev. W. W. Jackson as Bishop of Antigua, took place on Thursday in the parish church of St. Mary, Lambeth. The Archbishop of Canterbury officiated, assisted by the Bishops of Bath and Wells, Oxford, Carlisle, and Bangor.

DEANERY OF RIPON.—The Queen has granted to the Rev. William Goode, M.A., the Deanery of Ripon, void by the cession of the Very Rev. Thomas Garnier, now Dean of Lincoln.

THE VOLUNTEER MOVEMENT.—Earl Grosvenor and Lord Elcho have addressed letters to the *Times* in favour of the Saturday half-holiday in the interest of the Volunteer movement. They suggest that if the public at large, and especially the ladies, would abstain from shopping after 2 P.M. on Saturdays, the young men would be enabled to devote the whole afternoon to their military exercises. Lord Elcho adds that the suggestion expresses the views of all the officers commanding Volunteer corps in London, and also of many of the large firms in the west-end of London.

THE FRENCH TREATY.—The following letter has been addressed by Mr. Cobden to a friend in Manchester:—

"Paris, 82, Rue de l'Université, May 12, 1860.

"My dear Sir,—I will answer your inquiries as briefly as possible. I am as strongly in favour of the principle of *ad valorem* duties as any one in Manchester. But nearly all the countries of Europe have, from motives of convenience, or to avoid frauds, preferred specific rates, and the French Government cannot be induced to take for its rule the *ad valorem* system. Nor, indeed, is it invariably desirable; for instance, in the case of iron and some other articles, the English producer prefers specific rates. In goods of a simple and uniform nature, admitting of easy classification, such as yarns and plain cotton, though *ad valorem* duties would be preferable, the adoption of specific rates will not be attended with great inconvenience. If there are other articles of so mixed and varied a character as to defy classification, the treaty has made provision for dealing with them in an exceptional manner. England is really not in a position to dogmatise on this question. The French Government are of course aware that our own tariff hardly contains an *ad valorem* duty, and that even in recent years we have been engaged in substituting specific for *ad valorem* rates. At this moment the wine growers of Burgundy are holding meeting to protest against our specific duties on wine, which owing to the alcoholic test, impose 50 per cent. more duty on their common qualities, costing perhaps half-a-crown a gallon, than on the rarer kinds of claret, which are often worth more than 5*s.* a bottle in the cellars of the Gironde. My answer to these complaints is that the evil is inevitable, owing to the exigencies of our revenue system. The French Government plead, with equal good faith, the necessities of their Customs service in defence of their specific duties. With respect to your other inquiry, there is not the slightest foundation of truth for the reports in question. The commissioners now sitting in Paris are not engaged in correcting the imaginary blunders to which you refer. We have no more power than yourself to negotiate for the alteration of a word of the treaty. Our duties are limited to the carrying out of the provisions of the 17th article, in the manner contemplated from the first, and by the only mode in which it could have been accomplished. The task on which the Commission has just entered will call for the exercise of much patient labour; and they who wish to pass a fair judgment on its conduct will wait for the result. Speaking only of the past, I will say that from the time when I was first brought into communication with the French Government, now more than six months since, to the present day, I have experienced from them nothing but frankness, straightforwardness, and good faith. They have never professed to carry out at once a free trade policy to the advanced stage at which we have arrived in England. They are rather at the point of departure from which Mr. Huskisson started in 1825, with the great advantage of having had our experience to guide and encourage them, and of having to deal with protected interests very much in advance of ours of that time. The French Government has begun with the repeal of duties on raw materials, giving notice that after a certain time the prohibitive system will cease, and foreign manufactures be admitted at revenue duties which will operate as a protection to home producers. This is precisely the course pursued by Mr. Huskisson, and we know with what happy consequences. The French Government have entered upon this new commercial policy, not for the benefit of England, but from an enlightened appreciation of the advantages it will confer on the people of France; and were I to doubt the success of the experiment, or fear that they will not persevere in the career on which they have entered, I should be faithless to those principles the application of which has conferred such incalculable advantages and blessings on my countrymen. The present treaty will inaugurate a new era in the commercial intercourse of France and England, and it will only require a few years to develop that state of mutual dependence which forms the solid basis for the peace and friendship of nations. Can it be true that there are sinister influences at work in England, to mar, if possible, this fair prospect? If so, I trust the mercantile, manufacturing, mining, and trading interests of the country will prove true to themselves, for in the present case their interests are eminently those of humanity and civilisation.—Believe me, &c. RICHARD COBDEN."

Foreign.

FRANCE.—The Grand Duke Nicholas of Russia landed at Marseilles on Sunday from a Russian frigate, and arrived in Paris on Monday. The Grand Duke was received by the Emperor on Tuesday morning. It is believed in Paris that the visit of his Imperial Highness to the French Court is connected with the contemplated interference of Russia in behalf of the Christian populations of Turkey. Count de Montemolin and his brother have arrived in Paris. The Mediterranean squadron received orders last week to re-enter Toulon, in order to set out again on a more distant mission, respecting which no particulars were known. It was however, supposed that, if not destined for the coasts of Sicily, the squadron would cruise in the Levant, where political and religious agitations, which have recently arisen, may again at no distant period necessitate the interference of the Western Powers. The *Patrie* of Thursday asserts that the squadron was intended for Naples, but that its departure has been provisionally suspended. The *Opinion Nationale*, on the contrary, announces that Admiral Jehenne has left for Naples with four steamers on the demand of Baron Brenier, the French Ambassador, who apparently foresees the approach of a revolution. The Emperor's visit to his newly-acquired possessions will not take place, it is said, so soon as expected. He goes on the 20th to Fontainbleau, then to Plombières, then to Biarritz, and in the autumn to Nice. Preparations are in progress for a voyage which Prince Napoleon intends to make to all the principal ports of the Mediterranean and Constantinople. In order to arrange the question of the annexation of Savoy, M. Thouvenel has added the following declaration to the programme which has been drawn up by France on the subject of a Conference:—"For better preserving to the districts of Chablais and Faucigny the character of neutrality stipulated by Article 92 of the Final Act of Vienna, France consents that the said districts shall remain without the line of the French Customs, and that they shall form a separate commercial zone under special regulations." It is officially announced that the statement published in the *Bund* that the Court of the Tuileries proposes, or has proposed, to Switzerland any pecuniary indemnity is unfounded. It is said that France will now consent less than ever to any cession whatever of the territory of Savoy in favour of Switzerland, and the *Presse* of Saturday contains an article to the effect that, if Naples is to be incorporated in an Italian kingdom, France will require compensation in the shape of a fresh extension of territory. The *Constitutionnel* publishes an article signed by M. Grandguillot, on the expedition of Garibaldi, from which the following are extracts:—

"The reply of Count Cavour to M. Thouvenel proves that Piedmont, as well as France, energetically blames the audacious attempt of Garibaldi. If the expedition of Garibaldi is contrary to the interests of Piedmont, it nevertheless responded to the sentiment of a part of the people of whom Garibaldi is the hero. Piedmont could not constrain the man who represents so large a popular force. Such an act would raise a dangerous reaction in Italy. If the enterprise of Garibaldi is censured by Europe, the state of things in the Two Sicilies is so critical that the success of the enterprise would astonish no one. Without foreseeing the issue of the expedition, we cannot admit the supposition that it may lead to a European conflagration." With regard to the reports that England wishes to possess Sicily it says:—"It would be no more easy for England to take Sicily than for Russia to occupy Constantinople. France and England have always acted in concord as regards Neapolitan policy. No one ought therefore to suppose that to-day they oppose one another. We still hope that the Neapolitan question will not be unravelled by revolution, but, in case it should, it is only by union, and not by antagonism and rivalry, that the Great Powers, particularly France and England, could meet its dangers."

The *Presse* has received a second warning for an article which appeared in that journal on the 13th inst., representing France as an accomplice of the foreign coalition which overthrew the first Empire. The warning states that this article is a calumny on the country, and is wounding to the national feeling. The *Opinion Nationale* has opened a subscription for the defenders of Italian independence, but in compliance with the invitation of the Ministry of the Interior has suspended the publication of any statements relative to the subscription. The *Moniteur* announces the nomination of General Goyon as Grand Cross of the Legion of Honour, and states that on Monday next the Senate will discuss the petition concerning the import duties on foreign iron.

SPAIN AND MOROCCO.—The news that another civil war had broken out in Morocco is confirmed from several quarters. The Spanish Plenipotentiaries have returned from Tetuan. General Prim has published a declaration stating that, notwithstanding his adhesion given to the general policy of Marshal O'Donnell, he nevertheless intends to maintain a complete political independence.

PORTUGAL.—Considerable sensation and suspicion had been caused at Lisbon by Count Bolhao having disappeared on the night of the 4th inst., and consequently not being found when the police were posted round his residence to await him at daybreak next day, on a charge connected with false coining in the Criminal Court at Oporto. Reports unfavourable to the count had long prevailed, and connivance at his escape was suspected, though it is supposed he was still hid at Lisbon notwithstanding his having taken out his passport for Belgium.

SWEDEN AND NORWAY.—The coronation of the King and Queen of Sweden and Norway took place at Stockholm on the 3d inst. with much pomp and solemnity.

BELGIUM.—The Duke de Brabant arrived at Trieste on the 14th inst. from Zara, and left again on the 17th for Venice and the Tyrol on his return to Brussels.

HANOVER.—The Anglo-Hanoverian treaty of July, 1844, respecting the Stade dues was prolonged on the 14th for a further period of six months.

PRUSSIA.—In the sitting of the Chamber of Deputies on Tuesday the Government project for an extraordinary credit of 9,500,000 thalers, with the amendment of the committee to add the words "for temporarily placing the army upon a war footing," was agreed to by 315 against 2 votes. The rumour that the Emperor of the French is to have an interview with the Prince Regent towards the end of this month does not appear to rest on any good foundation.

FRANKFORT.—A despatch from Frankfort of Wednesday last says that the probabilities of the assembling of a Conference have lately diminished, the German Powers being of opinion that it would not in any way influence French policy, nor arrange any real guarantee in favour of Switzerland. The following are their reasons:—The annexation of Savoy to France having practically done away with the guarantees contained in Article 92 of the Final Act of Vienna, that article could not form the basis of a Conference. The cession of the *littorale* of the Lake of Geneva to Switzerland would not constitute any guarantee of military importance. It is not likely that at the Conference the opposition of the Great Powers to the annexation of Savoy would be unanimous. Even if it were, France having accomplished the annexation, notwithstanding the opposition of public opinion in Europe, she would also not be influenced by the opinion of the Great Powers, more especially as they have resolved upon acting with moderation, and without coercion, towards France.

AUSTRIA.—Accounts from Vienna confirm the statement received from Frankfort in regard to the views of the German Powers on the proposed Conference. It is the general opinion in Vienna that France being determined not to accede to the claims of Switzerland, although they are supported by the Powers, the assembling of a Conference would only be a fresh triumph for French policy. The few concession which France is ready to make could be procured for Switzerland by way of diplomacy. Should England, however, retain her opinion that Switzerland would derive more advantages from a Conference, Austria would be willing to send a representative as well as the other Powers. If, however, the Conference should take place it is the intention of Austria to refuse to allow Sardinia to take part in it. It founds this refusal on the avowal of Count Cavour that Piedmont is no longer interested in the question, and states that after this avowal Sardinia cannot claim the right of participating in the deliberations of the Conference by virtue of the Protocol of Aix-la-Chapelle of 1818, and can only take part in a conference under the title of a Great Power; but the right of Sardinia to such a title is contested, not only by Austria, but also by the other Great Powers. In consequence of Garibaldi's expedition to Sicily, the Austrian Government has sent a flotilla to cruise off the coasts of the island.

HUNGARY.—An autograph letter of the Emperor was to be published at Pesth on Thursday, allowing the constituted superintendents to assemble in conventions, in order to discuss the question of sending deputies to a general conference, and to make proposals for a synod; granting a free choice of superintendents and curates, and suspending all the trials pending against Protestants. The Hungarian Protestants Zsedenyi and the curate Maday were released on Tuesday from the prison at Caschau. A general amnesty is spoken of. General Benedek is endeavouring to bring about an arrangement between the Government and the six Hungarians who declined their appointment to the Council of the Empire, tending to reassure the latter and determine them to sit in the Council.

ITALY.—The treaty of cession of Savoy and Nice was presented to the Chamber of Deputies at Turin on the

11th, with an *exposé des motifs*, of which the following was the most important passage:—

"France, who took so great a share in the late struggle, gave the King's Government to understand that it was not expedient that the kingdom of Sardinia should, after acquiring so great an accession of territory and subjects, preserve the same line of frontier which Europe had fixed between the two countries in the treaties of 1815. The French Government, therefore, required the cession of our provinces situated beyond the Alps as a rectification of the frontier line. However serious the sacrifice thus required of us, the King and his Ministers did not think it advisable to refuse the demand. Convinced, even by recent experience, that ingratitude is the worst of political systems, we would not give France any motive for regretting the assistance granted to us, or for thinking herself less secure because she had the Italy of the Italians for a neighbour, instead of Italy in her former state of weakness and division." After this allusion to Austria's conduct towards Russia, the document proceeds to state the conditions on which the Sardinian Government consented to the cession, and then concludes as follows:—"In laying this serious matter before you for deliberation, it will be enough to remark that, if every cession of territory is painful, it is much less so when it is not the result of humiliating defeats but the consequence of a glorious war; not a concession to a victorious enemy but a solemn testimony to the gratitude of a regenerated nation towards its generous ally."

The committees of the Chamber have commenced the examination of the treaty, and the members of the Opposition have signified their intention to ask for an adjournment of the discussion, and will make proposals to that effect to the Chamber. The Parliamentary Committee will demand further explanations from the Ministry. The Commissaries who have been appointed are favourable to the Government.—A reactionary movement has commenced at Florence. The garrison has been reinforced by troops summoned by telegraph from the frontier, the National Guard has been called out, and great agitation prevails. Several placards bearing the inscriptions, "Ferdinand for ever!" "Our Second Leopold for ever!" have been posted up by some partisans of the ex-Grand Duke, to whom rumours attribute an intention of attempting the recovery of his power, taking advantage of the agitation created by the expedition of Garibaldi. A Peter's pence subscription has been opened at Florence, Leghorn, Bologna, and Ravenna; and a section of the clergy of Florence has refused to chant a *Te Deum*, as ordered by the authorities. Accounts from Rome state that nothing justifies the reports again in circulation of an approaching resignation of Cardinal Antonelli, whose Ministerial position remains unshaken. Some members of the Sacred College have suggested to the Pope the convocation of an assembly at Rome in which every Catholic Power should be represented by some political or administrative person of note. This assembly, after examining the real state of affairs in the Papal States, would point out what reforms could be carried out and what could not. The Pope is said to be much pleased with the idea, which, if realised, would make the Catholic world co-operate in the administration of the States of the Church. Cardinal Viale died at Bologna on the 15th inst. A party of Irish volunteers has arrived at Ancona. The King of Naples has sent 5,000,000f. to the Pope as a loan, bearing no interest, and 1,500,000f., the produce of the Peter's pence collected in England and America, were transmitted to the treasury of the Pope on the 11th inst. A Pontifical corvette has brought eight cannon, the gift of the Duchess of Parma, and other cannon, the gifts of other Princes, are expected. General de Lamoricière continues to concentrate the Papal troops at Gubbio. It is asserted that General Allegrino, the commanding officer at Ancona, has been reduced to the non-effective, and that several thousand Romagnols have threatened to enter the Marches in order to prevent the concentration of Papal troops. It was rumoured at Naples that an insurrectionary movement had taken place in Calabria, and another in the Abruzzi. The Court, the Government, and the people were in a state of great agitation, the plate, jewels, and other valuable articles belonging to the Royal family, had been packed up; and the King and Royal family had gone to Portici, where a great number of troops were assembled. It was even reported that the King had requested foreign intervention, and that a treaty of alliance, offensive and defensive, has been concluded between Naples, Rome, Austria, and all the deposed Italian Sovereigns. Vessels with troops had left Naples and several battalions were returning from the frontier. Notes of the Banks of Palermo and Messina had ceased to circulate at Naples.—A shocking case of clerical depravity has occurred at Turin. Don Gurlino, second curate of the church of San Carlo, described as a remarkably handsome man 40 years of age, has been convicted of seducing 33 young women connected with the most respectable families in that capital. He availed himself of the opportunities given him by the confessional to corrupt their minds by books and prints of an obscene character, and then made them the victims of his passions. The Court sentenced him to seven years' solitary confinement.

SICILY.—Part of Garibaldi's expedition disembarked at Marsala on the 11th inst. from two steamers, the Lombardo and the Piemonte. Three Neapolitan frigates which were present offered no opposition to the landing, but after the expeditionary corps had abandoned the steamers the three frigates fired into them, sank one, and captured the other. The frigates also fired at the people assembled on the Mole, and then proceeded, without any previous notice or warning whatsoever, to bombard the defenceless town of Marsala, and the wine factories of Messrs. Woodhouse, Ingham, and other British subjects. The accounts from Naples state that the firing of the Royal ships had been prevented during two hours by English steamers, and could not be resumed until the English officers had returned from the shore to their vessels; but this statement is now known to be without foundation. The volunteers who had landed were fighting with the Royal troops at the moment of the mail's departure. The latest news states that red flags were flying at Marsala, that Syracuse is taken, that the electric wires are cut, that Garibaldi has succeeded in raising the interior of Sicily, and that Messina is in the hands of a Provisional Government. Accounts from Palermo of Saturday last state that tranquillity had not yet been restored in the town and surrounding country. On Saturday in five churches at the termination of mass shouts of "The Immaculate Virgin for ever!" "Italy for ever!" "Liberty for ever!" were raised. In the evening the populace, to the number of about 10,000, assembled on the promenades. The police were unable to disperse them, and the troops, being summoned, fired on the people, killing three and seriously wounding 10. On the following day four police agents were poignarded. The Neapolitan soldiers are discouraged, as since 38 days they have been fighting on the same ground. Palermo and Messina were destitute of provisions, and a steamboat service had been organised for the supply of necessaries to those places. Disembarkations of insurgents coming from different parts of Sicily and Calabria had taken place at Trapani. The journals publish a proclamation of Garibaldi to the Italians, in which he calls upon the inhabitants of the Marches, Umbria and Sabina, and the Neapolitans to revolt in order to divide the forces of the enemy. Another proclamation addressed to the Romans recals the insurrection of 1849, and urges the Romans to act like their brethren who fell in defending Rome. Another proclamation calls upon the Neapolitan army to join him against the enemies of Italy; and another calls upon the inhabitants of Naples to rise against "the most impious of tyrannies." Letters from Genoa to the 11th inst. state that Colonel Medici, the friend of Garibaldi, was making preparations for a second expedition, under his command, and for which 6000 volunteers have already been enrolled. All the arms have been purchased of the manufacturers. Great excitement prevails at Genoa and in Lombardy, from which quarters almost all the volunteers have come. It is asserted, however, that the energetic diplomatic representations made to Sardinia will decide the Government to prevent the departure of a second expedition.

RUSSIA.—A despatch from St. Petersburg of Monday last says that the principal members of the Diplomatic Corps, excepting the Minister for Turkey, were a few days ago convoked by Prince Gortschakoff, who declared to them that the position of the Christians in Turkey has become so intolerable that Russia is on the point of addressing strong representations to the Porte in favour of them, and hopes to obtain a Conference of the great Powers to investigate the question whether Turkey has fulfilled the obligations undertaken by the Treaty of 1856 in regard to the Christians in the Ottoman empire. The British Ambassador, Sir John F. Crampton, received this communication under reserve, by stating that he should refer it to his Government in order to obtain instructions on the subject. It is asserted that the journey of M. de Budberg to Paris, where he will replace Count Kisseleff as Russian Ambassador, has brought about an understanding between France and Russia in reference to Asia Minor, where the agitation is continually increasing.

IONIAN ISLANDS.—The Lord High Commissioner has warned the inhabitants of Corfu against disquieting rumours.

TURKEY.—A despatch from Constantinople dated Monday last says that the Marquis de Lavalette, the French Ambassador, is said to be the bearer of a note demanding the carrying out of the Hatti-Humayoun. The Bulgarians have drawn up a monster petition requesting a complete separation from the orthodox Church. An inquiry has been instituted respecting the charge of appropriation of 28,000,000 piastres against the Sultan's late Chamberlain, whose property has been confiscated.

THE BLACK SEA.—The Russian Government has collected near Nicolaieff a great number of transport ships, among which are many merchant steamers.

INDIA.—The following telegrams were received at the India Office in the course of Friday night:—

Simla.—Lord Clyde will return to England by the first steamer in June from Calcutta. The Governor-General was to leave Simla for Calcutta on May 7.

Peshawur.—The disturbance at Peshawur respecting taxes, but founded on a misapprehension, had been greatly exaggerated by the newspapers. All was quiet on April 24, and the people were satisfied

Madras.—Sir Charles Trevelyan and all the members of the Madras Government strongly oppose Mr. Wilson's financial scheme, and have published minutes to that effect.

CHINA.—The ultimatum was delivered to the Chinese on the 8th March, and an answer was expected in the course of the week. Sir Hope Grant was to leave shortly for Shanghae, and the allies were to occupy Chusan immediately. The import trade was paralysed, and virtually suspended, in consequence of the movements of the rebels, who were reported to have taken Hang-chow. It was also rumoured that a collision had taken place between the Russians and Chinese on the frontier.

JAPAN.—Accounts from Japan to the 16th March state that the two murdered Dutch captains had been buried with much pomp, some of the high Japanese officials being present. Affairs, however, were still in an unsatisfactory state. All foreigners were obliged to go about armed, and a guard from a Russian corvette had been landed at Kanagawa for their protection.

UNITED STATES.—The committee of the Democratic Convention at Charleston adopted on the 26th ult., by a vote of 18 to 15 (New York, Oregon, and California voting with the South), a series of resolutions to the effect that neither Congress nor the Territorial Legislature has power to abolish slavery in the Territories, to prohibit the introduction of slaves, or to destroy or impair the right of property in slaves by any legislation whatever; that the enactments of State Legislatures to defeat the faithful execution of the Fugitive Slave Law are hostile in character, subversive of the constitution, and revolutionary in their character; that it is the duty of the Federal Government to protect the rights of person and property on the high seas, in the Territories, or wherever else its jurisdiction extends; to acquire Cuba at the earliest practicable moment; and to offer protection to naturalised citizens from foreign countries. The minority then moved the adoption of the Cincinnati platform, with an additional resolution, referring all questions of slavery in the Territories to the decision of the Supreme Court. This was rejected by a vote of 17 against 16, New York voting Ay. The "platform" adopted by the majority not being satisfactory to the South, nine Southern States seceded and formed another convention. On the night of the 1st inst. the regular Convention had two ballots for candidates for the Presidency, Mr. Douglass receiving at the last ballot 150½ out of 251 votes—202 votes being necessary for a choice. The Convention being unable to nominate a candidate for the Presidency, adjourned to Baltimore for June 18. The Southern Convention adjourned to Richmond, for the 11th June, without formally expressing any preference for the Presidency. Both Houses of Congress were in session. In the Senate a memorial was presented from the Board of Trade of Oswego, complaining of the manner in which the reciprocity treaty between the United States and Great Britain, as regards the commerce with Canada, was carried out. The paper was referred to the committee on foreign relations. Two fugitive slaves from Maryland had been arrested at New York and sent back into slavery. Captain Farnham, of the slave yacht Wanderer, had been forcibly rescued from gaol. Captain Brayley, of the British schooner Alice Rogers, had been found guilty in the United States Court of attempting to sell free negroes, and sentenced to three years' imprisonment in the penitentiary.

BRITISH COLUMBIA.—Letters from Vancouver of the 22d March inform us that provisions and wages had then reached the following extraordinary prices. Housemaids 1*l.* per week, and none to be had; butchers' meat, chiefly coarse beef, 1*s.* per lb.; cheese, 2*s.*; flour, 7½*d.*; Indian meal and rice, 3*d.*; tea, very good, 3*s.*; treacle, 5*s.* per quart; butter, 3*s.* per lb.; apples, 6*d.* each. Nothing indeed could be had for less than 6*d.*; and as for eggs or milk they were luxuries not to be thought of by any except the richest settlers. Labour, male and female, was a great want, gentlewomen having to perform the most menial offices, even down to scrubbing saucepans! Yet they were happy and thriving.

MEXICO.—The British and French Ministers were busy with plans of a compromise, and seeking to draw Mr. Lane into the Government at Vera Cruz. An attempt was to be made to re-organise the Liberal army in the north. It was reported that the troops of Tamaulipas, Coahuila, and Nueva Leone were about to unite with those of other States and make a descent upon Mexico, which, it is believed, will be consummated by July.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Isthmus of Panama.*—The Earl of MALMESBURY asked if in the recent treaties with the States of Central America there had been any recognition of the right of passage over the Isthmus of Panama.—Lord WODEHOUSE replied in the affirmative. The *Ecclesiastical Courts Jurisdiction Bill* was read a second time after some discussion, in the course of which the Bishop of LONDON and other right rev. prelates animadverted upon the recent dissensions in the parish church of St. George's-in-the-East.—The report of amendments on the Bills introduced by the LORD CHANCELLOR for the *Consolidation of the Criminal Law* was brought up and agreed to. The *Exchequer Bills Bill* (15,230,000*l.*) and the *Customs Bill* passed through committee.

MONDAY.—*General Garibaldi's Expedition.*—Lord WODEHOUSE, in answer to a question from the Marquis of NORMANBY, said the Government had no objection to produce any despatch which had been received relating to the departure of General Garibaldi's expedition to Sicily. *The Gunboats.*—The Earl of HARDWICKE moved for a return of all the vessels or gunboats below 1000 tons built by contract since 1852, with the names of the contractors, the year of their construction, the price contracted for, and their present condition as to seaworthiness. He asked for the information in consequence of the statements which had appeared relative to the defective structure of the gunboats and mortar-vessels; his object being to get at the really responsible parties. He had been assured that the 16 vessels which had been hauled up on the slip at Haslar were absolutely rotten, and that those which were under repair would cost as much money as had been originally expended in their construction. If the returns were granted, he promised their lordships that the matter should not be allowed to rest, but that he would follow it up so that

such culpable proceedings should not again occur in the British navy.—The Duke of SOMERSET said that the system under which the ships of the navy were built had worked well and efficiently upon the whole, and though Sir Baldwin Walker, the Surveyor of the Navy, was not a practical shipwright, he was a very competent and experienced person, and had discharged the duties of his office with an ability deserving of the highest praise. In one or two cases where a portion of the copper connecting-bolts had been ut away, the Admiralty had directed that legal proceedings ho uld be instituted, with the view of discovering the guilty parties and bringing them to justice. He had no objection to furnish the returns, so far as the information in his possession would enable him; but as many of the gun-boats were scattered over distant parts of the globe it would be difficult to give them as fully as he could wish.—After some observations from the Marquis TOWNSHEND and the Earl of SHREWSBURY, in favour of a full and searching inquiry, the motion, with some slight modification, was agreed to. *New Road Across Hyde Park.*—Earl DUCIE presented a petition for establishing a means of communication between the districts lying on the north and south of Hyde Park.—Some discussion ensued, in the course of which Lord EBURY, Lord LLANOVER, and the Earl of POWIS expressed themselves favourable to the suggested communication as a valuable metropolitan improvement. The *Selling and Hawking Goods on Sunday Bill*, the *Bankrupt Law (Scotland) Bill*, and the *Public Improvement Bill*, passed through committee. The *Common Lodging-houses (Ireland) Bill*, the *Larceny Bill*, the *Malicious Injuries to Property Bill*, the *Coinage Offences Bill*, and some other measures for the consolidation of the criminal law were read a third time and passed.

TUESDAY.—*Indian Affairs.*—The Marquis of CLANRICARDE moved for a despatch from Mr. E. H. Lushington to the Commissioner of the Nuddea District, dated October 23, 1859, relating to the treatment of natives by European planters in India; also the report of Mr. Reid to the Lieut.-Governor, referred to in the above-mentioned despatch; and presented a petition from certain natives of India praying for legal reforms, for their admission into higher offices of Government than are now open to them, for a reduction in the public expenditure, an equitable settlement of the rights and claims of native princes, the construction and completion of public works, the promotion of education, the reconstruction of the Legislative Council, and the appointment of a Royal Commission to inquire into and report upon the facts of their case. He then briefly referred to the recall of Sir Charles Trevelyan from the governorship of Madras, and expressed his opinion that, under all the circumstances, the Secretary of State for India had no alternative but to supersede him.—The Earl of ELLENBOROUGH thought that, in order to ensure good government in India, the Governor-General and Council should have the power of passing instanter any measures they might deem necessary, and that they should also have the power of taking the opinion of a consultative council on all measures affecting the laws, customs, and religion of the people of India. He deeply deplored the loss which India would sustain from the recall of Sir C. Trevelyan.—The Duke of ARGYLL promised that the document referred to should be produced. With regard to the suggestion made by the Earl of Ellenborough, he reminded him that the present form of the Legislative Council had been agreed upon after careful consideration, and that his recommendations would fall very far short of satisfying those who sought to effect a change in the government of India.—Lord LYVEDEN regretted that Indian subjects were brought before the House in a form that could lead to no practical result. He was of opinion that some alteration must be made in the constitution of the Legislative Council, and he trusted that the Secretary for India would introduce some measure defining the powers of the councillors.—Lord STANLEY OF ALDERLEY presented a petition from merchants, traders, and other inhabitants of Calcutta, having reference to the finances of India, and containing suggestions for the equalisation of taxation and expenditure. The *Public Improvement Bill* and the *Common Lodging-houses (Ireland) Bill* passed through committee.

THURSDAY.—To-day, being Ascension-Day, the House, as usual, did not sit.

HOUSE OF COMMONS.

FRIDAY.—*The Gunboats.*—In answer to Sir J. PAKINGTON, Lord C. PAGET said that the decay did not extend to the entire number of gunboats. It was fair to the contractors to state that the boats were prepared in a great hurry, owing to the expectation of the naval campaign in the ensuing spring, and the contractors fairly told the Government at the time that they had no seasoned timber. The Admiralty however intended taking proceedings at law in reference to the short bolts which had been discovered.—Sir C. NAPIER denounced, in indignant language, the flagrant conduct of the contractors, and called upon the noble lord to give up their names.—Admiral DUNCOMBE said that two years ago he found the boats in such a state that he pushed his umbrella through them.—Sir F. SMITH gave notice that he should move for a select committee to inquire into this wholesale destruction of our ships.—Mr. WHITBREAD said that there was no wish on the part of the Government to screen any person, and the question of instituting legal proceedings was then under the consideration of the law officers of the Crown. If such proceedings could not be taken, it would be a question whether a commission should not issue for inquiry into the subject.—Mr. D. SEYMOUR called attention to the state of the law with regard to *Collisions at Sea*, where foreign vessels were concerned.—Mr. M. GIBSON said that the Government were most anxious to bring about an assimilation of the laws of various nations on the subject, and the matter was at present under consideration.—Mr. HALIBURTON called attention to the *French fortifications of St. Pierre*, and asked whether there was any objection to produce copies of all questions submitted to the law officers of the Crown? He adduced a multitude of instances to show the unfair conduct of the French settlers on this rock to British subjects.—Lord J. RUSSELL, in declining to furnish copies of the questions referred to by the hon. and learned gentleman, said that the law officers of the Crown had reported that the fortifications in question were not of a nature to amount to an infraction of treaty engagements. *Reform Bill.*—In answer to Mr. E. JAMES and Mr. SCULLY, Lord J. RUSSELL said that the object of postponing the committee on the Reform Bill until the 4th June was to allow other measures of great urgency with relation to customs and excise to be proceeded with, as nothing could be more inconvenient to the trade and commerce of the country than delay in such matters. It was the intention of the Government to proceed with the committee on the 4th of June, but it would not be in their power, for obvious reasons, to introduce clauses in the English Bill to make it applicable to Ireland. *The Savoy Question.*—Mr. GRIFFITH inquired whether the noble lord was now able to give any assurance that no French troops would be moved into the provinces of Chablais and Faucigny until the dispositions to be adopted as to those neutralised provinces were determined by diplomatic agreement.—Lord J. RUSSELL said he had already informed the House on a former occasion that the French Government had refused to enter into any engagement upon the point, but had given an assurance that they would not send any troops into the neutralised provinces until after the vote of the Sardinian Parliament had confirmed the treaty of the 24th of March. *The Sicilian Insurrection.*—Mr. DUFF called attention to an advertisement announcing that a subscription had been opened in London in aid of the Sicilians and asked the Solicitor-General whether persons in this country who contributed to the fund would be liable to legal proceedings.—The SOLICITOR-GENERAL said that the advertisement merely invited subscriptions of money to be transmitted to Genoa, and expressed his opinion that by what was proposed to be done no law of this country would be violated. *Recall of Sir C. Trevelyan.*—Mr. DANBY SEYMOUR asked whether it was true that Sir Charles Trevelyan had been recalled from the governorship of Madras. He charged the Government with having treated a most valuable public servant with gross injustice.—Sir C. WOOD said that the circumstances which had led to the recall of Sir C. Trevelyan were to be traced to want of discretion in sending open telegrams, and to insubordination, in having appealed to the public opinion of India against the financial measures of the Government. He passed a high eulogium upon the private character of Sir C. Trevelyan; but appealed to the House whether, after the perils which we had escaped in India, it could be tolerated for a moment that one Government was to be in open mutiny against another. The successor of Sir Charles would be Sir Henry Ward, the present Governor of Ceylon, whose early presence in Madras would be expedited as much as possible.—Mr. BRIGHT said the question was a painful one, and placed the House in a position of great difficulty. Indian finances were in a state of chaos, occasioning enormous perplexity to every one engaged in dealing with them. Mr. Wilson's scheme was able, and bold even to rashness. He objected to it, nevertheless, that it sought to establish a balance by increasing taxation instead of diminishing expenditure. He thought the income tax objectionable, and, in fact, impracticable. He approved of the principles laid down in Sir C. Trevelyan's minute, but thought the publication of that document not only contrary to official etiquette, but dangerous to the country, and that his recall was justifiable. He believed, indeed, that before the recall reached him Sir Charles would have already resigned. He regretted more than he could express the necessity of dismissing so valuable a functionary. The moral of the affair was that the whole system of government in India should be altered; every Presidential Governor should be made equal and independent among themselves, and responsible only to the Government at home. A discussion followed, in which regret at the loss of the services of Sir C. Trevelyan was mingled with admissions of the necessity of his recall.—Lord PALMERSTON said that the step was most painful, but one which it was the bounden duty of the Government to take, after the insubordination shown by Sir C. Trevelyan, and when, in remembrance of the late Indian revolt, conduct of this kind required to be especially checked. In saying this, he bore ample testimony to the high merits of the late governor, who might have expressed his opinion in private to any member of the Government, instead of venturing on a course so contrary to duty, to public policy, and to his official experience—a course which distracted the peace of India, and endangered the constituted authority. If they had reprimanded Sir Charles, the reprimand must have been as open as the offence, and the consequences to all parties would have been more serious than his recall.—*Pensions for Wounds.*—Colonel NORTH moved an address to her Majesty praying for a reconsideration of the warrant granting pensions and allowances to officers of the land forces, limited to wounds and injuries received in action.—Sir C. NAPIER seconded the motion.—Mr. S. HERBERT admitted that there were imperfections in the rules necessarily laid down and applied to cases under the warrant, but recommended that the motion should not be pressed.—Lord PALMERSTON also pointed out the difficulty of dealing with the subject, and recommended that it should be left in the hands of the war authorities. The motion was ultimately agreed to.—Mr. F. RUSSELL obtained leave to bring in a Bill to amend the provisions of the Act for the regulation of Municipal Corporations in Ireland, with respect to the *Appointment of Coroners* in Irish boroughs. The Select Committee upon the *Thames Embankment* was nominated, after a good deal of discussion. The orders of the day were then disposed of, and the House adjourned to Monday.

MONDAY.—*Newspapers Conveyance Bill.*—The CHANCELLOR of the EXCHEQUER, in reply to a question from Mr. BAINES, said that as it would be undesirable to proceed with the Newspaper Conveyance Bill without inquiring into the objections urged against it by those who would be affected by its provisions, and as the Secretary to the Post Office was in such a state of health as to require six months' leave of absence, he intended to withdraw the measure, reserving to himself the right of introducing it, if necessary, in a future session. The Bill was then withdrawn. *Irish Enlistments for the Pope.*—Mr. STEUART asked whether the attention of Government had been called to collections of money being made in Ireland and other parts of the empire for the use of the Pope; whether such funds might be used, or other means adopted, for enlisting subjects of her Majesty for the army of that foreign Power; and whether, if such be illegal or irregular, Government would take measures to check any agents in the matter, or to warn those who might enter into such engagements.—Mr. CARDWELL said there could be no doubt that the Foreign Enlistment Act was directed against such cases as that referred to, and that the Irish Government would take steps to prevent any infraction of the Act.—The House then went into committee on the *Refreshment Houses and Wine Licenses Bill.* On clause 24 Mr. BAINES moved an amendment that the new class of refreshment houses should not be opened on Sundays. A lengthened discussion ensued, in the course of which it was urged by the advocates of the amendment that to allow refreshment-houses to retail wine on Sundays would increase the facilities for intoxication and immorality. On the other hand, it was contended that it would be absurd to shut up the wine-houses while gin-palaces and beer-houses were open to all comers. On a division, the amendment was rejected by 117 to 82.—Mr. HARDY moved an amendment to omit the exemption in favour of the Vintners Company, which was, he said, open to abuse.—The CHANCELLOR of the EXCHEQUER stated that the subject would be dealt with in the London Corporation Bill. On a division, the amendment was negatived by 97 to 90. On clause 12, one of the reserved clauses, a long discussion took place relative to the proposal to confer licensing powers on the metropolitan police magistrates. It was urged that this power was given to the county magistrates in other counties, and there was no reason why there should be a special exception in Middlesex. The CHANCELLOR of the EXCHEQUER ultimately yielded to the strongly expressed opinion of the House in favour of the county magistrates, and undertook to make the requisite alterations in the report. The clause was then agreed to, and the chairman ordered to report progress. The *Marriages (Extra parochial Places) Bill* and the *Malicious Injuries to Property Act Amendment Bill* were read a third time and passed.

TUESDAY.—*Wine Licenses.*—The CHANCELLOR of the EXCHEQUER stated, in reply to Mr. DUFTON, that by the existing law the holders of ten guinea wine licenses were allowed to sell by retail, and that there was no intention to deprive them of that privilege. *France and Sardinia.*—In answer to Mr GRIFFITH, Lord J. RUSSELL said that the French Government had not made any communication, public or private, to Lord Cowley, to the effect that, in the event of contingencies which might affect the present distribution of power in Southern Italy, France would feel it her duty to claim further territorial compensation. *Russia and Turkey.*—In answer to Mr JOHN LOCKE, Lord J. RUSSELL said that her Majesty's Government were not in possession of any intelligence to the effect that Russia had concentrated a considerable army on the Prath or that the Ottoman Government had assembled a *corps d'armée* at Widdin. He had however received yesterday a telegram from her Majesty's Minister at St. Peterburg stating that Prince Gortschakoff had assembled the representatives of all the Powers except Turkey, and had informed them that the condition of the Christians in the Turkish dominions was every day becoming less supportable, and that his Government hoped to obtain the concurrence of the other Powers in making a strong remonstrance to Turkey upon the subject. He had also received a despatch from Lord Cowley stating that he had had a conversation with M. Thouvenel to the effect that, if any action were to take place, it ought to be not by Russia alone, or by France and Russia alone, but by the five great Powers.—In answer to Mr. HADFIELD the CHANCELLOR of the EXCHEQUER stated that the Government were prepared to bring in a Bill to authorise *In'and Bonding Warehouses. The Derby Day.*—Mr. E. JAMES asked whether the House would meet on Wednesday next, the Derby Day.—Lord PALMERSTON, amid general cheers, replied that the adjournment over the Derby Day was a portion of the unwritten law of Parliament, and that he would not ask the House to depart from so salutary a custom. His lordship added that it had usually been the habit for a private member to move the adjournment, but that he meant to do it himself this year. *Recreation Grounds.*—Mr. SLANEY moved a resolution that it was expedient that her Majesty's Government or Parliament should take steps to inquire in what manner adequate open spaces in the vicinity of our increasing populous towns, as public walks and places of exercise and recreation, might be provided and secured; and to encourage and direct efforts, by private subscriptions, voluntary rates, or public grants, to carry out such objects.—Sir G. LEWIS reminded the hon. gentleman that an inquiry by Parliament into the subject was unnecessary, as the obvious course was for large towns to take the initiative to make provision out of the local funds under the control of town councils or other municipal bodies for the establishment of recreation grounds. The motion was negatived without a division. *Female Models.*—Lord HADDO moved that the exhibition in schools of art of females wholly unclothed ought not to receive the sanction of a public grant of money to the schools in which such practice was adopted. He urged that the practice of drawing from nude models was a dissolute mode of study which tended to immorality, and was unnecessary for the purposes of art.—Sir G. LEWIS recommended the noble lord not to press the motion, as it was well known that the practice of drawing from life models was a necessary means of instruction.—Mr. ADDERLEY defended the practice, and charged Lord Haddo with wishing to obtain the results of art, while he condemned the process by which it was achieved.—Mr. SPOONER supported the motion, and contended that drawing from nude figures was contrary to the direct spirit of the Word of God.—Lord PALMERSTON regarded the motion as an endeavour to interfere inquisitorially with matters which were not within the province of Parliament. On a division, the motion was negatived by 147 to 32. *Welsh Highways.*—Viscount EMLYN obtained leave to bring in a Bill for the better management and control of the highways in South Wales.—Mr. ALCOCK moved that a Royal Commission be issued to inquire and report how far it might be desirable and practicable to substitute an equitable system of assessment in lieu of the present mode of maintaining the *Turnpike Roads and Bridges* in England and Wales.—Sir G. C. LEWIS opposed the motion, which, on a division, was rejected by 78 to 12. *Order of the Bath.*—Sir H. STRACEY moved for copies of the correspondence which has taken place between the Indian Board and the Secretary for War on the subject of officers recommended by the Governor-General of India and Lord Clyde for the Companionship of the Bath.—Sir C. NAPIER supported the motion, although at the same time he feared that those honours were distributed with too lavish a hand. As far as the navy was concerned, it was a common saying that there were more C.B.'s than A.B.'s in the service.—Mr. S. HERBERT explained that there were so many officers now holding this distinction that the Government had resolved not to refuse Lord Clyde's recommendations, but to record them, and to appoint the officers named as vacancies occurred. The motion was negatived without a division. *The Gunboats.*—Sir C. NAPIER moved for a return of the names of the gun and mortar boats with the short bolts, and the names of the builders.—Lord PALMERSTON said that the Admiralty were taking measures to make the offenders amenable to the law, and that it would be undesirable to prejudice the case by producing the returns moved for. The motion was withdrawn.—Mr. CLIVE obtained leave to bring in a Bill to confirm certain provisional orders under the *Local Government Act* (1858), and for other purposes in relation thereto. *The Fight for the Championship.*—Lord LOVAINE moved for the production of the correspondence between the Home Office and the directors of the South-Eastern Railway relating to the conveyance of persons intending to commit a breach of the peace. He censured that company for granting facilities for prize-fighting, by which, he said, thousands of the greatest ruffians in the metropolis were precipitated upon some quiet country district quite unprepared for such an invasion.—Lord PALMERSTON denied that the persons who usually accompanied the combatants in a prize-fight were the *canaille* of society, and observed that as far as the contest itself was concerned it was regarded as a manly demonstration of strength and endurance, in which the combatants did not inflict any permanent injury upon each other, and which, as a spectacle, was certainly not more dangerous than a balloon ascent.—Sir W. JOLLIFFE said that in the county of Surrey the magistrates had run some personal risk in preventing breaches of the peace being committed, and that they would be much discouraged by finding that prize-fighting was countenanced by the Government. After some further discussion the motion was agreed to.—On the motion for the second reading of the *Tenure and Improvement of Land (Ireland) Bill*, Sir J. WALSH moved that it be read a second time that day six months, on the ground that Government interference between landlord and tenant was objectionable, and that, as the country was rapidly progressing in material prosperity it would be far better to allow the remedial process to go on undisturbed.—Mr. MAGUIRE made an earnest appeal to the Government to legislate in a wise and comprehensive spirit towards the tenantry of Ireland, and by that means give them some inducement to remain in the land of their birth.—Mr. GEORGE, Mr. P. URQUHART, and other hon. gentlemen having spoken, the debate was adjourned.—Mr. DEASY moved the second reading of the *Landlord and Tenant (Ireland) Bill*, the object of which was to simplify the existing law.—Mr. WHITESIDE objected to the Bill that it did not deal with many important subjects. After a short debate the Bill was read a second time.

WEDNESDAY.—The Lord ADVOCATE moved the second reading of the *Annuity Tax Abolition (Edinburgh) Bill.*—Mr. HADFIELD objected to the principle of the Bill, believing that it would perpetuate the tax in another shape, and moved that the Bill be read a second time that day six months.—After some remarks by Mr. CAIRD, Sir J. FERGUSON, and other members, the LORD-ADVOCATE intimated that when the Bill came into committee he intended to move the insertion of clauses to provide that, instead of accumulating a fund of 120,000*l.*, as proposed by the present Bill, a permanent rate should be levied, in order to secure the salaries of 13 ministers. Care would be taken that there should be ample security for the payment of the rate.—Mr. HADFIELD then withdrew the amendment, and the Bill was read a second time. The order for the second reading of the *Charity Trustees Bill* was discharged. The *Consolidated (9,500,000l.) Bill* was read a second

time. On the motion of the ATTORNEY-GENERAL, the *Court of Chancery Bill* was referred to a select committee.

THURSDAY.—*The French Treaty and the Paper Duties.*—Lord PALMERSTON having moved that the House at its rising adjourn to Monday. Mr. STANSFELD asked how far the Commercial Treaty would be affected by the rejection of the Paper Duties Repeal Bill?—The CHANCELLOR of the EXCHEQUER replied that it was not for him to anticipate the rejection of the Bill by the House of Lords. Our obligations towards France, however, were perfectly clear, and we were bound by the Treaty not to levy a higher rate of Customs duty upon French paper than the Excise duty at home. *Garibaldi's Expedition.*—Mr. HENNESSY called attention to the statement made on a previous debate by the Solicitor-General with reference to the advertisement for raising subscriptions in aid of the insurgents in Sicily, and to a decision of the Court of Common Pleas as to the illegality of such proceeding. He quoted a variety of authorities to prove that such subscriptions were contrary to the common law of England and the law of nations, and that the offence was punishable by fine and imprisonment.—The SOLICITOR-GENERAL said that what he meant to say on Friday was that a person reading the advertisement, and simply subscribing his money, was not guilty of a criminal offence. To that opinion he still adhered. But he did not deny the criminality of persons enlisting men for the purpose of serving against foreign Powers; and he gave no opinion as to the liability of the person who inserted the advertisement in question. The law, as it stood in the Foreign Enlistment Act, was clearly insufficient to meet the present case. —Mr. WHITESIDE controverted the law of the Solicitor-General. It was impossible to separate any action from its avowed intents and objects. Those who evidently aided and abetted a conspiracy were liable for the consequences.—Mr. JAMES said that the law, as it stood, was quite sufficient to punish these offences. He asked Mr. Hennessy, amid much cheering, how he proposed to apply the law to the enlistment of men in Ireland to serve under General Lamoricière for the purpose of massacring the subjects of the Pope? In this case the Foreign Enlistment Act was clearly applicable.—The ATTORNEY-GENERAL said that no doubt the law made it illegal to raise money for the purpose of exciting to revolt the subjects of a foreign Power. But the enunciation of the law and the carrying it into effect were very different things. In this case the parties subscribing were foreigners resident in England, whom it was very difficult to bring within the scope of the tribunals. —Sir H. CAIRNS and Mr. BOVILL could not understand how a more overt act of conspiracy could be committed than the raising money for the purpose of subverting the throne of a friendly Power.—Mr. HOPE asked the Attorney-General for an explanation of his opinion as to the liability of foreigners to the English law.—The ATTORNEY-GENERAL said that foreigners, though amenable to the English law, were not to be considered as subjects of the Crown. If a British subject had forwarded 1000*l.* to Garibaldi for the purposes of the insurrection, it would be clearly illegal, but the illegality was not so clear if a Sicilian refugee were to do the same thing.—Mr. MONSELL said that the Government should make known their intentions, and not afford to foreign revolutionists the moral support of their present inaction.—Mr. MALINS thought that if foreigners could combine to bring this country into difficulties with friendly powers, the anomaly of the law should be removed without delay.—Mr. NEWDEGATE declared that those who assisted Garibaldi and those who enlisted for the Pope were equally guilty, and ought to be equally checked.—Mr. B. OSBORNE said that the illegality of the subscription had been clearly proved. If the Government countenanced this movement, with what face could they blame the filibustering expeditions of America? He wished to know how far it was true that the expedition of Garibaldi had been forwarded by English vessels?—The O'DONOGHUE said that there was great difference between assistance afforded to a legitimate sovereign in maintaining order, and assistance given to rebels against their lawful sovereign.—Lord J. RUSSELL said that he had that morning received a letter from Captain Marriner, of the Intrepid, one of the vessels sent to Marsala for the protection of British property. That letter stated that the merchant steamers conveying Garibaldi arrived soon after himself, and the expedition disembarked. Two Neapolitan vessels of war were in the neighbourhood, but they did not fire. After all the men had left Garibaldi's vessels, the Neapolitan commander asked Captain Marriner to take possession of those vessels, which he very properly refused to do. He did not contradict the statement that he had assisted the landing, because he had never heard it; but the clear inference was that he had done nothing of the kind, nor anything not in strict accordance with his duty. As to the subscription for Garibaldi, to prosecute its promoters would involve great difficulty, and he never remembered a successful prosecution instituted on any such grounds. He himself had subscribed in favour of the insurrectionists of Greece, and no one had prosecuted him. After all, cases of this kind must be judged on their own merits. What of the filibustering expedition that landed in England in November, 1688? These attempts deserved close consideration before they were either approved or condemned. He declined to give any pledge on the part of the Government to undertake prosecutions against those who had forwarded money to the Sicilian insurgents.—*After some remarks from* Mr. WYLD *in* defence of Garibaldi, Mr. MAGUIRE defended the Pope, and stigmatised the attempt of the two royal robbers, who professed to liberate Italy, as pure humbug.—Mr. DANBY SEYMOUR complained of the speech of Lord John Russell, as tending to encourage the expedition of Garibaldi.—Lord J. RUSSELL said that he had carefully abstained from giving any opinion as to the expedition. *The Gunboats.*—Sir F. SMITH called attention to the decayed gunboats, and begged that they might not be broken up till they had been more thoroughly examined.—Sir J. ELPHINSTONE confirmed, from personal observation, the statements respecting their rotten condition.—Lord C. PAGET said that the boats certainly would not be broken up at present, nor till they were exhibited to the contractors. After some further conversation, the motion for adjournment till Monday was agreed to. The House then went into Committee on the reserved clauses of the *Wine Licenses Bill.*—On clause 12, Mr. JAMES moved an amendment assimilating the regulations under which licenses were granted by the magistrates to those now in force in licensing public-houses. In support of this amendment it was urged that there were now three systems—one for the public-houses, another for the beer-houses, and a third proposed by the present Bill. This would lead to much inconvenience. It was contended, on the other hand, that of the three systems the one under the Bill was the best. The amendment was negatived by 154 to 117.—After a long discussion on the other points of the clause, Sir W. JOLLIFFE complained of the absence of all power of appeal from the decision of the magistrates.—The CHANCELLOR of the EXCHEQUER agreed to add words conferring the right of appeal. The clause, as well as the others reserved, and some additional clauses, were then agreed to.—Mr. W. MARTIN moved the repeal of the Act commonly called the Tippling Act, which was productive of much vexation, and was now useless. —Mr. HARDY opposed the motion, as did the CHANCELLOR of the EXCHEQUER and other members.—The motion was withdrawn. —Mr. J. LOCKE proposed to repeal the liberty now permitted to theatres to sell intoxicating liquors.—The CHAIRMAN having ruled that the proposition could not then be entertained, it was withdrawn. Some further clauses were agreed to, and the Bill passed through committee. The remaining business was then disposed of, and the House adjourned to Monday.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 94⅜ to ½ for Money, and 94⅜ for the 6th June; Bank Stock, 226½ to 227½; Reduced and New Three per Cents., 92¾ to 93; Thirty Years Annuities, expiring in April, 1885, 17 7-16, 5-16; India Stock, 220; Indian Five per Cent. Stock, 1859, 106½ to ⅜; Ditto for Acct., 106½; Five per Cent. Enfaced Rupee Paper, 97⅞; Ditto Five and a Half per Cent., 102¾ to 103⅛; Indian Four per Cent. Debentures, 1859, 96¾; Exchequer Bills, 4*s.* to 7*s.* pm.—FOREIGN: Mexican Three per Cents., for Acct., 20⅞ to ¾; Portuguese Three per Cents., 1853, for Acct., 44; Sardinian Five per Cents., for Acct., 84⅝; Spanish Committee's Certificates, 4⅜; Turkish Six per Cents., 1854, for Acct., 73¾ to 74⅛; Ditto for 1858, for Acct., 57 to ½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,227,655	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	14,752,655
		Silver Bullion	—
	£29,227,655		£29,227,655

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)	£9,728,943
Rest	3,271,422	Other Securities	20,.66,040
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,585,343	Notes	7,022,590
Other Deposits	12,225,682	Gold and Silver Coin ..	774,095
Seven day and other bills	756,821		
	£38,392,268		£38,392,268

17th day of May, 1860. M. MILLER, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. BOX and H. J. LEWIS, Gloucester, Corn Merchants—E. CLAYTON, Openshaw, near Manchester, Grocer and Provision Dealer—S. FREEMAN and J. CLIFFORD, Leicester, Elastic Web Manufacturers—A. HASLAM, Manchester, Coach Proprietor—C. JONES, 117, Deansgate, Manchester, and 5, Stockport Road, Altrincham, Chester, Boot and Shoemaker—S. MOSS and W. ASHWORTH, Wood Mill, Stansfield, Yorkshire, Fustian Cutters, Dyers, and Finishers—H. MAGGRIDGE, 5, St. George's Place, Brixton Road, Surrey, Builder—G. P. SIMCOX, Hendham Vale Colyhurst, Manchester, Carpet Manufacturer—T. SUTER, Weymouth and Melcombe Regis, Dorsetshire, Confectioner—T. THORP, Surrey House, Clapham Road, Surrey, Linendraper and Hosier—D. WINDOWSON, Nottingham, Lace Manufacturer—J. WILLIAMS, Pontypool, Monmouthshire, Surgeon and Apothecary.

SCOTCH SEQUESTRATIONS—W. ABBOTT, Argyle, Agent and Dealer—C. H. C. F. M. DRUMMOND, Edinburgh—E. A. FALCONER, Edinburgh, Grocer and Spirit Dealer—J. FLEMING, Campbeltown, Commander in the Royal Navy P. HAY, Paisley, Dyer—R. MACDONALD, Hawick, Grocer and Spirit Merchant.

FRIDAY—BANKRUPTS—C. BRAY, Alfred Terrace, Bayswater, Ironmonger—T. COATES, Lambeth, Linendraper—J. EALES, East Butterwick, Lincolnshire, Stone Mason—H. HARVEY, Hatton Garden, Lamp Manufacturer—G. J. T. LEPSE and W. H. BRADBURY, Longton, Staffordshire, China Manufacturers—W. G. MARTIN, Chepstow, Upholder—R. W. SEXTON, Norwich, Builder—G. SMITH, Wittlesey, Isle of Ely, Cambridgeshire, Ironmonger—E. SMITH, Birmingham, Printer—T. YORK Portsea, Confectioner—M. WARREN, Shoreditch, Middlesex, Haberdasher—W. WRIGHT, Fulshaw, Cheshire, Cattle Dealer.

BANKRUPTCY ANNULLED—B. T. OAKSHOTT, Portsea, Brewer.

Metropolis and its Vicinity.

THE QUEEN'S BIRTHDAY.—Yesterday being her Majesty's birthday, the bells of the various churches rang forth a peal at an early hour. The Royal Standard was hoisted at the Post Office, Tower, Custom House, Somerset House, and other Government offices, as well as at the churches of Kensington, St. Martin's-in-the-Fields, St. John's and St. Margaret's, Westminster; and the vessels in the river were dressed in colours. The intended review of the household troops by the Prince Consort and Duke of Cambridge did not take place in consequence of the rain. The review of the Greenwich Pensioners was also postponed. In the evening the houses of her Majesty's tradesmen, the club-houses, and theatres were illuminated.

THE CENSUS OF NEXT YEAR.—Four deputations of Dissenters waited upon Lord Palmerston at Cambridge House, a few days since, to lay before him the objections of some Dissenters to the questions as to religious profession included in the inquiries of the next census. There were altogether four deputations, representing the Dissenting Deputies, the Congregational Union, the board of Congregational Ministers, and the executive of the Liberation Society. Their object was to acquaint his lordship, as the head of the Government, with the strong objections entertained by the Dissenting body to that part of the Census Bill now before Parliament which compels every householder, under a penalty, to state the "religious profession" of every one sleeping in his house on the night of the Census Sunday. The four deputations met his lordship jointly, and it was stated that, if time had permitted, other bodies would have availed themselves of the opportunity of stating their views. Mr. Frank Crossley, M.P., and Sir S. M. Peto, M.P., introduced the deputations. Mr. Hall Terrell, the Rev. George Smith, the Rev. H. Mudge, and Mr. Carvell Williams stated the case of the bodies they respectively represented; other gentlemen also taking part in the discussion. They stated that, instead of the people co-operating, as they should do, with the Government in obtaining statistics affecting the social interests of the people, large classes, including many thoughtful and patriotic men, would, at all risk, decline giving information which they thought could not properly be asked for. They said that in many cases householders would do injustice to the inmates of their houses, by giving, either from carelessness or partisanship, incorrect information respecting the religious opinions of servants, lodgers, and others. Many also would be unable satisfactorily to define their own ecclesiastical position, and would make a return in so general or doubtful a shape that it would be utterly valueless. To state the religious professions of the hundreds of thousands of the community who really had none would be a mockery. The power given to the enumerators to ask questions, under a penalty, might, in respect to this matter, also prove a source of great annoyance. Lord Palmerston, in reply, said that he should acquaint his colleagues with the strong feelings existing among the bodies represented by the deputations. He thought that any census was necessarily open to some of the objections urged, for inquiries as to occupation and age might equally be denounced as impertinent. He should have thought that there would not have been the difficulty described in defining the ecclesiastical position of individuals, and that, at any rate, there was the same difficulty in saying to whom the places of worship belonged. [It was replied to this that they were already registered as regards denomination.] He thought that the statistics obtained at the last census were of less value than had been represented; for the numbers of attendants at places of worship on a particular Sunday were affected by weather, by sickness, and by other accidental circumstances. If there was to be a departure from the plan pursued in 1851, perhaps it would be better to take only the amount of religious accommodation, and to abandon the number of attendants. But the whole subject should be considered, and the Bill should not be pressed forward too hastily. (It appeared to be the impression of the gentlemen present that his lordship's suggestion to take only the amount of accommodation, and to abandon the attendances and personal profession, would be an acceptable alteration). After his lordship had been thanked for his attention to the matter, the deputies explained to him the object of the Charitable Trusts Bill, with a view to obtaining the support of the Government.

THE GREAT EASTERN is announced to sail on Saturday, the 9th of June, for New York. The directors have decided on sending the ship to New York instead of Portland, as was originally intended, the municipal authorities of New York having offered great inducements to the board to send the vessel to that city. The number of passengers to be taken out is limited to 300 first class. The fares will be 25*l.* for the voyage out, or 40*l.* for the voyage out and home. A large number of the berths has already been taken, and the limited number fixed by the board will, it is expected, be taken in the course of a few days. The time which the vessel will remain at New York will depend, of course, upon the amount of attraction for visitors, from which source the company hope to derive a large revenue. In addition to this, negotiations are going on with Government for chartering the ship for the laying of the submarine cable between Rangoon and Singapore—a link which, it supplied, will place Calcutta within six days from London.

THE REMOVAL OF WESTMINSTER SCHOOL.—A meeting of old Westminsters was held in the Jerusalem Chamber, on Wednesday, to take into consideration the proposed removal of Westminster School. The meeting was very numerously attended. Lord Ebury advocated the retention of the school on its present site, but proposed that it should be recast into a middle-class day-school, and thus meet a great educational want. Lord Charles Russell, as one of those who still retained his connection with the school by sending his children there, was convinced that the most desirable course to be pursued was to remove the school. Lord Llanover opposed Lord Ebury's proposition, and saw no reason why the school, if removed to a suitable distance from the metropolis, should not revive, retain its old connection with the nobility and gentry of England, and vie with any public school. The Dean of Christ Church thought, considering the bad position of many of our public schools—Eton notoriously unhealthy, Winchester in a swamp, Harrow and Rugby without water—that it would be possible to find a position which should combine every advantage for the new Westminster School when transplanted to fresh soil; but of one thing he was convinced, that if an angel from Heaven were to come down and undertake the charge of the school, he would find it impossible to revive it on its present site. The Master of Trinity said that if the school, as Lord Ebury suggested, were made a mere middle-class day-school, the connection existing between it and Trinity would be materially weakened; nor could it be expected that under such a system many additions would be made to those glorious names of poets, judges, and statesmen, who, having been educated at Westminster, had been transferred to Trinity and enrolled in the archives of that college. The Dean of Westminster declared it to be his decided conviction that it was desirable to remove it before the old Westminster connection was entirely snapped. The Duke of Richmond, who saw before him in Sir James Graham his fag of bygone days, called on the Head Master to state his opinion. The Rev. C. B. Scott, in reply, said that though the school had not fallen off much of late years, it still languished, and seemed gradually to decline. There were great difficulties attending the moral supervision of boys in the metropolis, great risk in pursuing the favourite sport of Westminsters on the water, and, above all things, want of space even for educational purposes. He thought that Lord Ebury's proposition was not feasible, but he was sanguine of the success that would attend removal if it were properly and influentially carried out. The Bishop of St. Asaph then moved a resolution to the effect that the meeting thought it desirable, if possible, to remove

the school. Sir David Dundas and Sir James Graham pleaded for delay. Lord Broughton followed still more decidedly against the motion. Sir Walter James declared that he was decidedly opposed to Lord Ebury's scheme, and thought it the school were removed it might reasonably be expected to revive. The Duke of Richmond then moved as an amendment that the meeting should stand adjourned to Wednesday, the 13th of June. The Bishop of St. Asaph therefore withdrew his motion, and the amendment was unanimously carried. On the day named it is expected that every information to enable the meeting to arrive at a clear expression of their opinion will be laid before the old Westminsters who take part in it.

MURDER IN SHOREDITCH.—On Monday night a married woman named Hart was murdered by a man named Raddon, a pipe-maker, with whom she had been living for some time at 40, Phillip Street, Kingsland Road. On the previous evening they had been drinking together in the neighbourhood, and were both the worse for liquor when they went to bed. No noise or disturbance was heard by the other persons in the house during the night, but in the course of the morning the woman was found lying upon the bed in her day clothing, with her head nearly severed from her body. The bedding was saturated with blood, and by her side was lying a razor which had been recently wiped. The weapon was lying close to her right hand, which was perfectly free from any spots of blood, and it was quite evident that the wound had been inflicted while the deceased was sound asleep. The murderer absconded, and no clue whatever could be traced of him until about 10 o'clock on Wednesday, when his body was dragged up by the towing rope of a barge passing through the Regent's Canal. His hands were firmly tied with a pocket-handkerchief, and the arms were lying upon the breast, as if he had bound them round to prevent his struggling, and to hasten his death. The body was conveyed to the dead house at the rear of the Shoreditch Workhouse, where it was immediately identified as being that of the murderer. His cap had been found floating in the canal some distance from the spot where the body was discovered, and there is no doubt that he committed suicide by leaping off the bank near the coal wharf, which is easily to be reached from the main road. On Wednesday evening an inquest was opened on the body of the murdered woman, but was ultimately adjourned for the purpose of collecting the necessary evidence.

Provincial.

CHATHAM.—The Powerful, 84-gun line-of-battle ship, which was ordered to be converted into a screw steam-ship, in this dockyard, has been surveyed, and her timbers found to be so exceedingly rotten that she has been put out of dock, and the order for her conversion cancelled. The shipwrights have completed the breaking up of two more of the defective mortar-vessels, the work having been accomplished with little difficulty, owing to the exceedingly slight way in which the framing and other parts have been put together, and the very insecure state of the bolts and fastenings, particularly in the lower parts of the vessels. Neither of the mortar-vessels which are now in course of being destroyed ever saw an hour's service, which is considered a subject for congratulation; for the most experienced shipbuilders who have inspected them have stated their conviction that if they had been called upon to sustain the shock and rebound of their heavy mortars, they would have gone to the bottom before they had fired a dozen shells.

OXFORD.—Mr. Max Müller, M.A. of Christ Church, Taylorian Professor of Modern European Languages, and Mr. Monier Williams, M.A. of University College, late Professor of Sanscrit at Haileybury, are candidates for the Boden Professorship of Sanscrit, vacant by the death of the late Professor H. H. Wilson.

PETERBOROUGH.—Considerable excitement has been created in this city and neighbourhood by the proceedings of a coroner's jury, which has held three sittings during the past 10 days to inquire into the death of a fine young woman, 18 years of age, named Mary Jane Pope, the daughter of respectable parents. It appears that on Sunday week she attended the Baptist Chapel, and during the service was taken ill, lost the use of her legs, and was convulsed. Being removed home, a surgeon was sent for, and afterwards a physician. Both these gentlemen came to independent conclusions that the girl had been poisoned. She, however, denied having taken anything. Death ensued in a short time after the seizure, and the symptoms of the attack and the rigidity which set in directly after death confirming the suspicions of poisoning, an inquest was held. The *post mortem* examination strengthened the opinion of the medical men, and led them to conclude that she had died from the effects of strychnine. It was ascertained that on the previous Saturday she purchased six-pennyworth of Buttle's vermin powder, but no motive for suicide seem to exist. From the evidence given to the jury it appeared that in 1854 an infant of the same family died suddenly of convulsions, that in April last another child died after a short illness showing similar symptoms, and that last week a boy, 8 years of age, was seized with convulsions exactly corresponding to those under which the deceased girl laboured; but prompt medical assistance being obtained, he recovered. It is also known that of a family of 11 children, four only are now living. Under these circumstances the coroner and jury submitted the intestines and other portions of the body to Dr. Letheby for analysis. The result was the discovery of strychnine in considerable quantities, but superficially deposited, being found accompanied by a vegetable substance which is supposed to be tea leaves; it is presumed that the poison was administered in these leaves. No further evidence has been obtained, and the inquest closed with the verdict that deceased came by her death by strychnine, but by whom administered and for what cause there is no evidence to show. The general impression is that deceased died by her own hand, after having tried the powder upon her brother.

SUNDERLAND.—A few days ago an inquest was held in this town on the body of Ensign Elsdon P. H. Everard, aged 20 years, the only son of an ancient family, and heir to a large property in the south of England. He had joined the 29th Regiment since its return from India, and belonged to the depôt lying in Sunderland Barrack. On the 26th ult. he was marching with a party of soldiers, on their return from ball-practice at Hendon, along the Seaham and Sunderland Londonderry Railway, when he was struck by the buffer of a passing train and knocked down. When taken up he was insensible and severely injured on the head, and he expired some time afterwards. The jury at the inquest returned a verdict of Accidental Death. The funeral took place on Monday week with military honours, and was attended by upwards of 14,000 persons.

WINCHESTER.—On Saturday morning an attempt at murder was made in this city by Robert Simpson, a private in the 60th Rifles, who inflicted a dreadful wound with a razor on the person of a female with whom he had been living, and immediately afterwards attempted to commit suicide by similar means. The woman is not expected to live, and the mayor has accordingly taken her deposition, in which she states that the man cut her throat at her own request and that she gave him the money to buy the razor with.

Ireland.

PROCLAMATION AGAINST ENLISTMENTS FOR THE POPE.—The agents of the Papal Government have for some days been picking up large numbers of recruits in various parts of Ireland. About 50 men, mostly from Killarney, and chiefly shoemakers, tailors, butchers, boatmen and runners, left that town by train on Monday morning for Rome, to enter the Pope's army. They were accompanied by two priests, and went under the designation of navvies, every seven men being under a "ganger." Last week 200 other recruits left Kilkenny, 150 went from Drogheda, and a considerable number of others have set out from Cork and Kerry. The matter has now become so serious, that in order to prevent the Pope's recruiting officers from enlisting the men on the breaking up of the militia regiments, which will take place in about a fortnight, the Government has resolved to put the law in force in reference to foreign enlistments. Accordingly on Thursday the commissioner of police and inspector of the constabulary issued proclamations cautioning all concerned against enlisting under a foreign Prince in any military capacity, under pain of being guilty of misdemeanour, punishable by fine and imprisonment, and stating that masters of ships knowingly taking such persons on board are liable to a penalty of 50*l*. for each person.

THE IRISH CHURCH.—The Deanery of Derry, one of the prizes of the Irish Church, has been conferred by the Lord-Lieutenant on the Very Rev. Hugh Usher Tighe, Dean of Ardagh and the Chapel Royal, and first chaplain to the Lord-Lieutenant.

Railways.

ACCIDENT ON THE NORTH LONDON.—On Wednesday afternoon, as the passenger train from Camden Town was proceeding from the Bow station to Fenchurch Street up the curved incline which connects the North London with the Blackwall, the engine ran off the line and fell over on its side completely across the down line and the road used by the Tilbury, Woodford, North Woolwich, and other trains. The guard's break and two second-class carriages were dragged off the line and much shattered, but all the passengers escaped serious injury with the exception of an elderly lady, Mrs. Sutherland, who sustained a serious contusion on the face.

Law.

CENTRAL CRIMINAL COURT.—*The Case of the R v. Mr. Hatch.*—The trial of *Mary Eugenia Plummer*, a little girl 11 years old, the daughter of Mr. and Mrs. Plummer, of Holcroft House, Wiltshire, on an indictment preferred against her by the Rev. Mr. Hatch, charging her with the offence of wilful and corrupt perjury, commenced last week before Mr Baron Channell, and terminated on Monday after occupying the Court for five entire days. The case in all its features was perhaps one of the most extraordinary which has ever been brought before a court of justice, and the interest which it excited was so great that the Court and avenues leading to it were crowded during each day of the trial. It will be remembered that in December last the Rev. Henry John Hatch was tried and found guilty of grossly indecent conduct towards two little girls under his charge. Mr. Hatch, who had been educated at Eton and Cambridge, was appointed in 1851 Chaplain of the Wandsworth House of Correction. In 1856 he took charge of an orphan girl, who was thenceforward treated as his adopted child, and passed by the name of Lucy Hatch. In 1859 he wished to have some young lady scholars, and an advertisement of his was answered by Mr. and Mrs. Plummer, who live at Holcroft House, Wiltshire. Terms were agreed upon, and it was arranged that Mr. Hatch should receive into his family Mr. Plummer's two little girls—Mary Eugenia, about 11 years old, and Stephanie Augusta, about eight years old. Subsequently, the elder child only was brought by the parents, and was placed under Mr. Hatch's charge on the 11th August. At this time there were staying in his house his wife, to whom he was married in 1845, a governess whom he had engaged specially, two French ladies, who were on a visit, and two servants. Eugenia resided here for about a fortnight, when her mother brought her younger sister, Stephanie, and left them both under Mr. Hatch's roof. The next day, August 26, the mother returned, saying that the thunderstorm which had taken place during the night of the 25th was a judgment upon her for leaving her children, and that she had come to fetch them away. She was accompanied on both days by her husband, and they all four left Mr. Hatch's house on the evening of the 26th. It was not till October 25th that Mr. Hatch became aware of the reports which were circulated against his character. In consequence of a letter which he received from the Bishop of Winchester he consulted the governor of the gaol, and resigned his appointment, and for some days he kept himself concealed for fear of being apprehended. He was however taken at an hotel in Holborn, and was afterwards tried at the Old Bailey on the charge of having behaved to the little girl Eugenia Plummer with indescribable wickedness, sometimes in the presence of Lucy, the adopted daughter, who was also represented as the victim of his profligacy; and Stephanie was said to have been so once. On one occasion the garden by daylight was said to be the scene of these proceedings; on every evening, Eugenia's bedroom was the scene. He was also charged with outrages upon Eugenia in the morning, when, in accordance with their daily custom, she and Lucy were brought to Mr. and Mrs. Hatch's bed before any of them were dressed. At the trial in December last, Mr. Serjeant Ballantine, who defended Mr. Hatch, called no witnesses to disprove these accusations, but contented himself with severely cross-examining the witnesses for the prosecution, and summoning a great number of unimpeachable persons to speak to Mr. Hatch's good character. The jury found Mr. Hatch guilty, and he was sentenced to four years' imprisonment. Great interest was taken in the case; further evidence in his favour was stated *ex parte* on affidavit; and even the jury who had brought him in guilty were induced subsequently to reconsider their decision, and to publish a declaration in the public journals, one of them withholding his signature apparently on technical grounds. The result was that Mr. Hatch was advised to bring an action for perjury against the children who had sworn that he had committed the crime imputed to him. Accordingly, an indictment was drawn up against Eugenia Plummer, which contained five distinct allegations of perjury. It is impossible to describe the particulars of this second case, the details of which are such as to admit of nothing more than this general reference to their character. While in these particulars lay the most important points of the case, the evidence was so absolutely contradictory, and the discrepancies so hopelessly irreconcilable, that the judge declared in summing up that no theory of explanation could be propounded which could be considered at all satisfactory. On the one hand, it was difficult to believe that the two girls, Eugenia and Stephanie Plummer, should of their own accord have concocted and persistently maintained a series of atrocious falsehoods against a clergyman whom they had no motive to injure. On the other hand, the acquaintance which they showed with ideas not childlike attracted remark even on the first trial; and that portion of the case appeared still more extraordinary on the new trial. It also seemed incredible that a clergyman who was dependent for his subsistence upon his own labours should have run the risk of ruining his prospects for life by committing an assault upon a little child before she had been an hour in his house, and that he should continue these offences every night without intermission, and on one occasion, as she said, under the very eyes, and in the full view of his wife. It is important to mention that the witnesses who appeared for Mr. Hatch presented a much more favourable appearance than those for the defendant. All the members of his family were called, and they denied in the most emphatic manner that Mr. Hatch was in any way culpable, so far as their knowledge went. On the other hand, when Mrs. Plummer, the mother of the children, appeared in the witness box and was asked if she drank porter with the cabman who drove her from the court at the former trial, she replied, "Porter is my beverage." When pressed, in cross examination, on the subject of brandy-and-water, she said she should be very glad to see Mr. Edwin James at Holcroft House, and to give him some of that liquor. She also admitted that she did not take the children to church or give them any religious instruction whatever, and that the youngest could not read, though they were both said to be entitled to many thousand pounds in their own right. The judge, in summing up, more than once called the attention of the jury to Mrs. Plummer's demeanour in the witness box, and said that although her conduct was certainly very extraordinary, the jury ought not to allow this to operate too much to her prejudice, but should weigh her evidence fairly and dispassionately, and allow it to have its due weight in influencing their decision. His lordship then read the remainder of the evidence, and in conclusion said that the defendant was now upon her trial, and if the evidence established her guilt, it was their duty to say so by their verdict, but if the evidence left any reasonable doubt upon their minds, she was entitled to the benefit of that doubt, and ought to be acquitted, although that result might involve very serious consequences so far as Mr. Hatch was concerned. The jury, however, had nothing whatever to do with that; they were bound to decide this case as they would any other, and if the guilt of the defendant was not satisfactorily established they ought to say so by their verdict, without any reference to the consequences to other parties. The summing up of the learned judge occupied seven hours and three-quarters in its delivery, and at a quarter to 6 o'clock on Monday afternoon the jury retired to deliberate. They returned into court at 8 o'clock, and gave a verdict of *Guilty*. The foreman at the same time handed to the judge a written paper, which his lordship directed to be read. It was in the following terms:—"We find the prisoner Mary Eugenia Plummer Guilty, and while we recommend her to the utmost extent of mercy, we venture at the same time to express a hope that your lordship, if you have the power to do so, will direct that any imprisonment to which she may be subjected may be accompanied by a proper course of training and education, of which she has hitherto been deprived, and probably would still be deprived at home." There was a burst of applause when the verdict was delivered, and it was not without difficulty that it was stopped by the officers of the Court. A great number of persons had assembled outside the building, by whom the news of the result was received with loud cheering. Baron Channell said he should consult Mr. Justice Keating with regard to the sentence to be pronounced, and in the meantime the defendant might go at large upon the same recognisances of 500*l*. as before. On Tuesday the defendant was called upon to surrender, and

having been taken into custody was placed at the bar. She did not appear to exhibit any concern at her position. Baron Channell addressing her said that the jury, after a very long and patient trial, had found themselves compelled to find her guilty of a crime of perjury, but they had, at the same time, not only recommended her to mercy, but to the very fullest extent of mercy the Court could award in reference to the nature of the offence. The Court had considered the case with the most anxious attention. It was most lamentable to see a young child of her tender years standing at the bar of a court of criminal justice convicted of such an offence, but as he understood the verdict of the jury, they were of opinion that her position was in a great measure to be attributed to her want of moral and religious education. The crime of perjury was one of the most serious character, for it placed in jeopardy not only the property but the liberty and lives of her Majesty's subjects, but he thought in her case she had made a statement that was not true for a particular purpose, and he should not enter into the question whether her parents were justified in believing that statement, and in preferring the charges they subsequently did against Mr. Hatch. She certainly was not responsible for that proceeding, and there was good reason to believe that she was labouring under a want of education, both religious and moral, and had imbibed habits of untruthfulness which, if not checked, might lead to great mischief. His impression was that she had told this story originally for the purpose of being taken away from Mr. Hatch's and not being sent back, and that she had afterwards been led to persist in it by the interrogatories that had been put to her by others, and that she did not scruple at last to make the same statement while under the sanction of an oath. The Court was desirous to deal with her as leniently as possible, and the sentence that would be passed upon her, therefore, would be, that she be imprisoned in the gaol at Holloway for three weeks, and that she then be sent to a reformatory school; but he believed a proposal had been made by her friends for her being placed in a position where she would receive a proper education, and if this was secured by sufficient guarantees which were, he believed, undertaken to be given, the latter part of the sentence would be a nominal one merely. The Court could not, however, act judicially in this matter, and the formal sentence that would be passed upon her, therefore, would be three weeks' imprisonment, and then to be sent to a reformatory school for two years, which was the lowest period allowed by the statute, and any alteration that would take place in this sentence must be made by the Secretary of State under the guarantees to which he had alluded, and if such guarantees were not given the original sentence would then be carried out. The prisoner, was then removed to Holloway Gaol.

The Frauds on the Union Bank.— William George Pullinger, the late cashier to the Union Bank, was placed at the bar to receive the judgment of the Court, having previously pleaded "Guilty" to two indictments for larceny. An intimation was given that Mr. Scrimgeour, the manager of the bank, was in attendance, and would give the Court every information that might be required of him. Mr. Scrimgeour was accordingly sworn, and in answer to questions put by Baron Channell said that the prisoner had been for five years in the employ of the Union Bank as chief cashier, but he had been altogether in the service of the bank for 21 years. His salary originally was about 300*l.* or 400*l.* a year, but when he was appointed cashier his salary was raised to 500*l.*, and about four months before these transactions were discovered it was again raised to 600*l.* a year. Baron Channell asked if the two indictments to which he had pleaded guilty, one charging him with stealing the sum of 350*l.*, and the other the sum of 3000*l.*, was the total amount of his defalcations? Mr. Scrimgeour —Oh no, my lord, there are other defalcations to a very large amount. Baron Channell —What amount do you suppose has been misappropriated altogether? Mr. Scrimgeour. —About 200,000*l.* The whole amount is 263,000*l.*, the first defalcation having taken place about the month of January, 1855. The prisoner was then asked whether he wished to put any questions to Mr. Scrimgeour, or to address any observations to the Court. The prisoner said he did not wish to put any questions to Mr. Scrimgeour, but he desired to say a few words before his lordship passed sentence. He then addressed the Court as follows:—"I wish to make a statement to the Court to inform them what my conduct has been since the discovery of these frauds. The moment the directors mentioned the suspicion that was entertained I at once confessed that I was culpable, and gave them every information as to the extent of the frauds, and gave all the assistance in my power to realise securities for the benefit of the bank. Myself and my wife have also assigned everything we possessed in the world with the same object, and in order that as much restitution as possible might be made. If it had not been for the bad faith of a broker who died last year I should have restored a much larger amount. From the first it has been my determination to plead 'Guilty,' and, although my friends have endeavoured to dissuade me from doing so, I persisted in that determination. It has gone forth to the world that I had made up a purse for my wife, but it is only due to her to say that from the first she has always urged me to make full restitution, and expressed her readiness to give up everything and retire to another land upon a small pittance allowed her by her friends, and there hide her grief. (The prisoner was here a good deal affected.) If what I have just stated should be considered by your Lordship to afford any ground for mitigating the horrors of my imprisonment, I shall be deeply grateful, but if your Lordship, like the bank, should feel that you can show me no mercy, I shall still bow cheerfully to your decision." (There was a slight attempt at applause when the prisoner concluded.) Baron Channell then addressed the prisoner in the following terms:—William George Pullinger, you have pleaded guilty to two indictments, one of which charges you with stealing 350*l.*, and the other with stealing 300*l.*, the moneys of your employers—the Union Bank. It appears that you had been in the employ of the bank for many years, and that for the last five years you had been appointed to a situation of great trust and confidence, and that you were remunerated by a large salary. The Court only had the power of dealing with the precise charges before it, but it was my duty to inquire into all the circumstances surrounding the offence, in order that I might be in a position to award an adequate punishment, and the result of the inquiries I felt it my duty to make appears to be that during the five years you have acted as cashier to this bank the total amount of your defalcations appears to be the enormous sum of 263,000*l.* It is impossible, therefore, for the Court not to see that your guilt is not limited to the two charges to which you have pleaded 'Guilty,' but that from week to week, from month to month—nay, even from day to day—you have been persisting in a course of dishonesty to your employers, you being at the time in the receipt of a large salary from them. The case before me, therefore, is one involving a long career of guilt. The utmost punishment to which you are liable for one offence of this description is that of 14 years' penal servitude; but it is open to the court in its discretion, when there are two indictments, to pass an additional sentence upon the second one; and, after an anxious consideration of the depositions and all the facts of the case, the Court feels itself compelled to adopt that course. The sentence, therefore, which I feel bound to pass upon you will be, that you be kept in penal servitude for the space of 14 years upon the first indictment, and that you undergo a further period of 6 years' penal servitude upon the second—in all 20 years. I have listened to the observations you have made to the Court, but I find nothing in them that ought to influence me; but if there is any matter that admits of verification, and which you consider entitles you to ask for any remission of your sentence, you must apply to the Secretary of State for that purpose." The prisoner, who appeared quite overwhelmed at the sentence, was then removed.

Obituary.

LADY NOEL BYRON, widow of Lord Byron the poet, died on Wednesday last at 11, St. George's Terrace, Regent's Park, in her 65th year. She was born in 1794, and was the only daughter and heir of Sir Ralph Milbanke Noel, Bart., by the sister and co-heir of the second Viscount and ninth Baron Wentworth. On the death of the other co-heir, Lord Scarsdale, in 1856, she succeeded to the barony of Wentworth by writ, the viscounty becoming extinct. She was married to the great poet in 1815, but the union, as is well known, was a most unhappy one for both the husband and wife. Their only child, Ada, was married to Earl Lovelace, and died in 1852.

THE RIGHT HON AND MOST REV. DR. MUSGRAVE, ARCHBISHOP OF YORK, died on the 4th inst. at his residence in Belgrave Square. About a fortnight previously his Grace complained of dizziness, after entertaining some friends at dinner; and though no importance was attached at the time to his indisposition, he gradually became worse. His Grace was the son of a draper and tailor in Cambridgeshire, where he was born in 1788. After an elementary education he entered as student at Trinity in 1806, and was 14th Wrangler in 1810. In 1811 he obtained the second member's prize for Middle Bachelor, proceeded M.A. in 1813, became Lord Almoner's Professor of Arabic in 1821, and was Senior Proctor in 1831. In 1837 he was appointed by the late Lord Melbourne Bishop of Hereford, and on the death of Archbishop Harcourt in 1847 he was translated to the archiepiscopal see of York. He was Primate of England, a Governor of the Charterhouse and of King's College, Visitor of Queen's College, Oxford, a Commissioner for Building Churches, and Elector of St. Augustine's College, Canterbury. He married in 1839 the Hon Catherine Cavendish, youngest daughter of the late Lord Waterpark, and sister of the present peer.

SIR LAWRENCE VAUGHAN PALK, Bart., died on the 16th inst., at Haldon House, near Exeter, in his 67th year. He was the son of the second baronet by his second wife, the daughter of the first Earl of Lisburne. He was born in 1793 and married the eldest daughter of Sir Bourchier Wrey, Bart., relict of Edward Hartopp, Esq., of Dalby House, Leicestershire, who died in 1846. He sat in Parliament for several years as member for Ashburton, and was well known in South Devon as the principal landowner of the rising watering-place and town of Torquay. He is succeeded by his eldest son, now Sir Lawrence Palk, Bart., born in 1818, and M.P. for South Devon since 1854.

SIR JOHN MELVILLE, Lord Provost of Edinburgh from 1854 to 1859, and who last autumn received the honour of knighthood from her Majesty in Holyrood, died at his residence in Edinburgh on the 5th inst. in his 58th year, after a week's illness, of fever, caused by cold caught in a recent journey to Oxford, whither he had gone to place his only son for education. While holding the office of Lord Provost he was instrumental in promoting many public works and improvements in the city. Shortly before leaving office he was appointed Crown Agent in Scotland, or agent for the Lord-Advocate as public prosecutor—a political office in so far as it depends on the Ministry of the day. For many years he was chairman of the Whig committee. On the reconstitution of the Scottish Universities he was appointed by Lord Brougham, as Chancellor of Edinburgh University, to be his assessor in the general council.

SIR CHARLES BARRY, R.A., the architect of the Houses of Parliament, died very suddenly a little before midnight on Saturday night at his residence near Clapham Common. Within two or three hours of his decease he was in the enjoyment of as sound health as often falls to the lot of men who are approaching their 70th year. On Friday he was at the Houses of Parliament and transacted business as usual and on Saturday so little did any change betoken his approaching dissolution that he appeared even better than usual and passed the greater part of the day at the Crystal Palace. Between 8 and 9 in the evening, however, he was seized with a fit of what appeared to be paralysis, the worst symptoms of which progressed with such fatal rapidity that in little more than two hours he had ceased to exist. Sir Charles Barry was born in Westminster in 1795, and was a Royal Academician and a Fellow of the chief architectural institutions in England and Europe. The Dean and Chapter of Westminster, on the application of the President of the Royal Institution of British Architects, have granted permission for the body to be interred in Westminster Abbey, and the funeral will accordingly take place in the Abbey on Tuesday next, at one o'clock.

PROFESSOR H. H. WILSON, Boden Professor of Sanscrit in the University of Oxford, died on the 8th inst, at his residence in Wimpole Street. His death will be felt as a great loss to Sanscrit literature, of which he was the most distinguished ornament and expounder in Europe. Mr. Wilson was educated for the medical profession, and entered the service of the East India Company in 1808. At Calcutta he devoted his leisure time to the study of Sanscrit, the importance of which was then beginning to be felt both in India and Europe, Schlegel's celebrated essay on the "Wisdom and Learning of the Hindoos" having had the effect of directing German scholarship to the subject. Professor Wilson's works are numerous, but his Sanscrit dictionary will remain the most useful record of his industry and well-directed learning, for by it more has been done to promote the study of Sanscrit in England than by any other work that can be mentioned. His translation of the "Rig Veda" is also a contribution towards a knowledge of Hindoo mythology and philosophy of the highest value, being the oldest authority for the religious and social institutions of the Hindoos. The third volume of this work was published in 1857, and the whole was intended as an accompaniment to the edition of the "Rig-Veda," undertaken by Dr Max-Muller, under the patronage of the East India Company. Three volumes of the original have appeared in quarto from the University Press, and the whole will be completed in six volumes. It is hoped that Professor Wilson has left materials for the continuation of his translation in a sufficiently perfect state for printing. His version of the Dramas of the Hindoos; in three volumes, was one of his earliest contributions to our knowledge of India, and his continuation of Mill's "History of British India" is of high value to historical students. Professor Wilson took a deep interest in the social and moral improvement of the Hindoos, and in making them acquainted with the progress of Europeans in the arts and sciences.

WILLS.—The will of Lord John Scott has been sworn under 16,000*l.*; Lady Dover, 25,000*l.*; Mr. Joseph Miller, C.E., 50,000*l.*

BIRTHS.—On the 14th inst, at 10, St James's Square, the Duchess of MARLBOROUGH, of a daughter—15th inst, at 41, Upper Brook Street, the Viscountess BOYLE, of a son—6th inst, at Westbury Hill, near Bristol, Lady CAMPBELL, of Barcaldine, of a daughter—12th inst, at Hollybrook, Lady ERSKINE, of Cambo, of a son—8th inst, at Wood Hall, Yorkshire, the wife of the Hon. J. C. DUNDAS, of a son—15th inst, at the Ranger's Lodge, Hyde Park, the Hon. Mrs. MACDONALD, prematurely, of a son, still-born—4th inst, at Boulogne-sur-Mer, the Hon. Mrs. HENRY GRAVES, of a son—10th inst, at 72, South Audley Street, the Hon. Mrs. AUGUSTUS HALFORD, of a son, stillborn—12th inst, at 42, Heriot Row, Edinburgh, the Hon. Mrs. WALKER, of Dalry, of a daughter—11th inst, at Kirtlington Park, Oxfordshire, the wife of CHARLES GEORGE CHOLMONDELEY, Esq., of a daughter—12th inst, at Durham Place, Chelsea, the wife of G. E. MEAD, Esq., of a son—10th inst, at 1, Gilston Road, Brompton, the wife of R. FORTUNE, Esq., of a daughter.

MARRIAGES.—On the 15th inst, at St. George's, Hanover Square, Captain PILKINGTON BLAKE, only son of James Bunbury Blake, Esq., of Thurston House, Suffolk, to ADELINE, third daughter of JAMES KING KING, Esq., M.P., of Staunton Park, Herefordshire—10th inst, at Avington, Berks, Captain C. C. PYE, 63d Regiment, second son of H. J. Pye, Esq., of Clifton Hall, Staffordshire, to BARBARA WILBERFORCE, eldest daughter of the Rev. J. James, rector of Avington—8th inst, at Trinity Church, Marylebone, Captain WALLACE HOUSTOUN, Royal Navy, son of Sir Robert Houstoun, of Clerkington, N.B., to CAROLINE FREDERICA, only surviving child of Lieut.-General Monteith, K.L.S., and Mrs. Monteith — 15th inst, at St. George's Church, Hanover Square, Captain DEARDEN, late 13th Light Dragoons, of The Hollins, Yorkshire, to HENRIETTA MARIA, eldest daughter of Major EDWARDS, M.P., of Pyenest, in the same county—12th inst, at St. George's, Hanover Square, Colonel JOHN HENRY LEFROY, Royal Artillery, to CHARLOTTE ANNA MOUNTAIN, daughter of Colonel DUNDAS, Carron Hall, widow of Colonel Armine Mountain, Adjutant-General to H.M.'s Forces in India—10th inst, at Christ Church, Luton Vale, Kent, EDMUND A. GRATTAN, Esq., H.B.M. Consul at Antwerp, to MARY CAWTHORNE, youngest daughter of the late J. A. HUNTER, Esq., of Ormeley Lodge, Ham, Surrey, and granddaughter of the late Sir Jonah Barrington.

DEATHS.—On the 8th inst, at Torquay, WILLOUGHBY BERTIE, third son of the Hon. and Rev. Frederic Bertie—8th ult, at Walmer, Lady LEE, widow of the late Vice-Admiral Sir Richard Lee, K.C.B., aged 92—11th ult, at Madeira, Sir FRANCIS Hopkins, Bart., of Athboy, county Meath, and Rochfort, Westmeath, aged 46—11th inst, at Hastings, WILLIAM EDMUND CURTIS, Esq., late of the 1st Royal Dragoons, and eldest son of Sir Wm. Curtis, Bart.—9th inst, at Poyntzfield House, Cromarty, GEORGE GUNN, eldest son of the late Sir George Gunn Munro, of Poyntzfield and Udale—6th inst, at Garry Cottage, Perth, Miss MADALINE MURRAY, last surviving daughter of Sir Robert Murray, Bart., of Clermont, aged 90—20th ult, at Ivinitza, in the south of Russia, LUCY, Baroness DE CHANDOR, and daughter of the late Sir Alexander Crichton—10th inst, at the Queen's Hotel, Norwood, ROSA EDWYNA, wife of Lieut.-Colonel POWELL, M.P., of Nanteos, Cardiganshire, aged 42—14th inst, at 59, Portland Place, ANGELICA HELEN, youngest daughter of the Hon. Sir THOMAS JOSHUA PLATT—8th inst, at Gloucester Lodge, Margate, Major-General HENRY RICHARD WRIGHT, late of the Royal Artillery—11th inst, at 14, Regent's Park Terrace, Regent's Park, Lieut.-Colonel S. R. BAGSHAWE, late of the Bengal Army, aged 58—10th inst, at 28, Old Burlington Street, Lieutenant-Colonel HERBERT BLOUNT, late of the 68th Light Infantry—29th March, at Deyrah Dhoon, in the East Indies, Colonel JOHN ANGELO, late of the Bengal 3d Light Cavalry, aged 66—17th March, at Gondah, Oude, of cholera, FREDERICK GOWLAND HORN, Esq., Lieutenant in H.M.'s 20th Regt. of Infantry, eldest son of the late Henry Horn, Esq., Recorder of Hereford, aged 21,—1st ult, at Dacca, Bengal, Lieutenant REGINALD TRAVERS, second in command of the Kamroop Regiment, son of the late Benjamin Travers, Esq., of Green Street, Grosvenor Square, aged 26—11th inst, at Elm Grove, Barnes, ALEXANDRE TERXEIRA, Baron DE SAMPAYO, Attaché to the Portuguese Embassy, aged 65—2d inst, the Chevalier THOMAS CORNER STONE, Attaché at the Portuguese Embassy in London, eldest and only surviving son of the late Rear-Admiral Thomas Stone, K.T.S., of His Most Faithful Majesty's Service—9th inst, at Bretforton Hall, JAMES ASHWIN, Esq., Deputy-Lieutenant for the county of Worcester, and Magistrate for the counties of Worcester and Gloucester, aged 55—13th inst, RICHARD FERGUSON, Esq., of Harker Lodge, a Justice of the Peace, and a Deputy-Lieutenant for the county of Cumberland, aged 75—12th inst, at 12, Bolton Row, May Fair, CHARLES A. HAMILTON, son of the late William R. Hamilton, aged 50.

Markets.

COVENT GARDEN.—May 19.

A few early Cabbages now begin to make their appearance, but still vegetables are very scarce. Pine Apples and Grapes have not altered since our last report. Good Apples and Pears are very nearly over. Oranges are plentiful and cheap. Strawberries are now coming in in tolerable abundance. Spanish Hazel Nuts for planting fetch 16s. per bushel. Cobs realise 1s. per lb. Rhubarb is now furnished in large quantities. Parsley is cheaper, but still dear. Green Peas, and even Broad Beans of foreign growth, may be obtained. Potatoes realise 4s. 6d. a bushel. New frame ones may be had at from 3s. to 5s. per pound. Mushrooms can still be obtained in small quantities. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Camellias, Azaleas, Heaths, Primulas, Geraniums, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Pears, per doz., 6s to 10s
Grapes, per lb., 12s to 16s	Oranges, per 100, 2s 6d to 8s
Strawberries, p. lb., 4s to 8s	Lemons, per 100, 5s to 8s
Apples, per doz., 2s to 6s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 2s to 6s	Cucumbers, each, 1s to 3s
Seakale, per basket, 2s to 5s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Peas, p. half sieve, 8s to 10s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen, 1s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott, 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d

HOPS.—BOROUGH MARKET, FRIDAY, May 18.

Messrs. Pattenden & Smith report that the market continues firm with but few Hops on offer. The bine is more growing, but the land is very wet.

BUTTER MARKET.—May 18.

Best Fresh Butter .. .. 14s. per dozen lbs.
Second do. do. .. .. 12s. " "
Pork, 5s. 6d. to 5s. 4d. per 8 lbs.

COAL MARKET.—MAY 17.

Bell's Primrose, 13s. 3d.; Byass's Bebside West Hartley, 16s.; Davison's West Hartley, 16s.; Hastings Hartley, 16s.; Tanfield Moor, 13s. 3d.; Tanfield Moor Butes, 13s. 3d.; Walker Primrose, 13s.; West Hartley, 16s.; Wylam, 16s. 6d.; Walls End Acorn Close, 16s. 6d.; Walls End Byron, 17s.; Walls End Eden, 16s. 6d.; Walls End Harton, 16s. 3d.; Walls End

Braddyll's Hetton, 17s.; Walls End Framwellgate, 16s. 9d.; Walls End Hetton, 18s.; Walls End Kepier Grange, 17s.; Walls End Cassop, 17s.; Walls End Heugh Hall, 16s. 9d.; Walls End Hunwick, 15s. 3d.; Walls End Kelloe, 17s. 3d.; Walls End South Whitworth, 15s. 3d.; Walls End Thornley, 16s.; Walls End Thorpe, 17s.; Carway and Duffryn Malting, 22s. 6d.; Llangennech, 21s.—65 ships at market.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, May 17.

Prime Meadow Hay	75s	84s	Clover	95s	115s
Superior do. (old) ..	90	95	New Clover	—	—
Inferior do.	60	70	Second cut do. ..	84	92
New do.	—	—	Straw	25	32
Rowen	60	70		DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, May 17.

Sup. Meadow Hay..	88s	95s	Inferior Clover ..	80s	92s
Inferior do.	74	80	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover ..	100	114		JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, May 17.

Fine old Hay	94s	98s	Fine old Clover ..	112s	118s
Inferior do.	80	90	Inferior do	98	108
Prime New Hay ..	—	—	Fine New Clover ..	—	—
Inferior do.	—	—	Fine 2d cut	98	102
Straw	28	33	Inferior do.	84	92

BRITISH WOOLS.—LONDON, FRIDAY, May 18.

Our market continues about the same for anything wanted, but just now it is between the seasons, and it is useless to give any quotations until some arrivals of the new clip shall have settled prices.

COLONIAL WOOL SALES.—These sales are progressing with great spirit, and the foreign buyers continue to take large quantities of the first-class clips.

POTATOES.—SOUTHWARK, MONDAY, May 14.

During the past week the arrivals coastwise have not been large, but as the weather has been fine there were enough for the demand at the following quotations:—York Regents, 120s. to 150s.; do. Flukes, 120s. to 150s.; Lincolnshire Regents, 100s. to 130s.; Dunbar do., 120s. to 150s.; do. Reds, 120s. to 130s.; Perth, Forfar, and Fifeshire do, 110s. to 130s.; do. Reds and Rocks, 100s. to 120s.; Irish Whites, 90s. to 110s.

METROPOLITAN CATTLE MARKET.

MONDAY, May 14.

We have a short supply of Beasts, and consequently trade is brisk at higher rates. The number of Sheep is also smaller and prices are higher. Good Calves and Lambs are in demand, but quotations remain unaltered. From Germany and Holland there are 240 Beasts, 2900 Sheep, and 103 Calves; from Norfolk and Suffolk, 2700 Beasts; and 100 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	2	Best Long-wools. ..		to	..	
Best Short-horns	4	8	— 5	0	Do. Shorn ..	5	0	— 5	4
2d quality Beasts	3	8	— 4	4	Ewes & 2d quality		..	—	..
Best Downs and Half-breds			to	..	Do. Shorn ..	4	6	— 4	10
Do. Shorn ..	5	4	— 5	6	Lambs	6	4	— 7	4
					Calves	5	0	— 5	8
					Pigs	4	0	— 5	0

Beasts, 3440; Sheep & Lambs, 22,160; Calves, 135; Pigs, 400.

THURSDAY, May 17.

There are a few more Beasts than on Thursday last; however the demand is large, and Monday's quotations are well supported. The supply of Sheep is about as usual: the demand has increased, and prices have advanced. Good Calves and Lambs are scarce and dear. Our foreign supply consists of 93 Beasts, 900 Sheep, and 223 Calves; from Norfolk and Suffolk there are 600 Beasts; and 120 Milch Cows.

Best Scots, Herefords, &c. ..	4	10	to 5	2	Best Long wools . ..		to	..	
Best Short-horns	4	8	— 5	0	Do. Shorn ..	5	4	— 5	6
2d quality Beasts	3	8	— 4	4	Ewes & 2d quality		..	—	..
Best Downs and Half-breds			—	..	Do. Shorn ..	4	8	— 5	0
Do. Shorn ..	5	6	— 5	8	Lambs	6	4	— 7	4
					Calves	5	0	— 5	10
					Pigs	4	0	— 5	0

Beasts, 1050; Sheep & Lambs, 6130; Calves, 318; Pigs, 160.

MARK LANE.—MONDAY, May 14.

The supply of English Wheat to this morning's market was moderate, and disposed of at the full prices of Monday last; foreign was in improved demand, and in some instances 1s. per qr advance on our quotations was realised. Barley is a slow sale, and rather cheaper. Beans and Peas bring fully last week's rates. The Oat trade is firm at an advance of 6d. per qr. Flour is unaltered in value.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	48—54		Red	48—50	
— — fine selected runs..ditto	50—57		Red	50—54	
— — Talavera	50—60				
— Norfolk	—		Red	—	
— Foreign	44—60				
BARLEY, grind. & dist., 24s to 31s..Chev.	38—45		Malting.	36—41	
— Foreign..grinding and distilling	30—37		Malting.	35—43	
OATS, Essex and Suffolk	19—26				
— Scotch and Lincolnshire..Potato	23—30		Feed ..	19—27	
— Irish ..... Potato	24—30		Feed ..	19—25	
— Foreign..... Poland and Brew	26—29		Feed ..	24—29	
RYE	35—38		Foreign.	—	
RYE-MEAL, foreign	—				
BEANS, Mazagan....32s to 40s.... Tick	34—42		Harrow .	34—43	
— Pigeon .....36s — 47s..Winds	48—54		Longpod	—	
— Foreign ..... Small	38—46		Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	38—40		Suffolk	36—41	
— Maple .... —s to —s ..... Grey	32—34		Foreign	30—40	
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	40—46				
— 2d do. ..... ditto	32—40		Country	32—42	
— Foreign ..... per barrel	24—30		Per sack	50—57	

FRIDAY, May 18.

The weather during the last eight days has been unusually wet, with S.W. wind and high temperature, which has been very forcing to vegetation; wind to-day S.E. The high prices insisted upon by holders of Wheat have caused the trade to be less active than would otherwise have been the case, and in the majority of markets a further improvement of 1s. per qr. has been exacted. Business in Barley has been dull, and prices the turn lower. In three or four of the importing markets Oats have also been sold at a slight decline, but here, and in the majority of those in the interior, rather higher rates were realised. In Liverpool and the Scotch markets Beans and Peas have been disposed of at about 1s per qr decline; here and in other places late rates were well supported. The value of Flour is maintained, and in the few sales of American barrels former rates were slightly exceeded. Wheat c. f. and i. from the Baltic has been in tolerably active demand at advancing prices, 44s to 45s per qr paid for red, and 54s. to 60s. for Dantzic; the latter was even exceeded for very superior quality. The arrivals of grain and seed-laden vessels from the South of Europe off the coast for orders this week are to a fair extent, as are also the sales, which latter include Egyptian Saidi Wheat at 42s. 9d. per qr., and Marianopoli at 38s. per 492 lbs.; Danube Barley at 29s. 9d. per 400 lbs., and Ibrail Maize at 35s. 6d. per 480 lbs. The arrivals of English Wheat and foreign Barley this week have been to a fair extent, of all other grain very small. The quantity of English Wheat offering this morning was very small, and eagerly taken at an advance of 1s per qr. on the prices of Monday. In foreign from the stands a considerable business was transacted, partly on speculation, at a similar improvement, and the sale would have been much larger but for the greatly enhanced pretensions of holders. Barley, Beans, and Peas sell at Monday's prices. Oats are very scarce, and rather dearer.

ARRIVALS FROM May 14 TO May 18.

	Wheat.	Barley.	Oats.	Flour.
English ..	1930 qrs.	370 qrs.	— qrs.	1180 sks.
Irish	— ,,	— ,,	430 ,,	— ,,
Foreign ..	4860 ,,	4740 ,,	5020 ,,	250 ,, 340 brls.

LIVERPOOL, Tuesday, May 15.—We have had only a small attendance of millers and dealers at our Corn Exchange this morning, and the demand for both Wheat and Flour has been on the most retail scale, at the rates of last market day. Indian Corn was neglected, and all descriptions might have been bought 6d. per qr. cheaper. Oats and Oatmeal dull sale, and the turn lower. Beans were scarcely inquired after, and prices are somewhat irregular. Peas and Barley remain without alteration. Notwithstanding the dull inactive character of the market prices of both Wheat and Flour showed a tolerable degree of firmness at the close.

FRIDAY, May 18.—The grain market has been very steady, with a good consumptive trade in Wheat at 1d. to 2d. advance. Flour in better request. Indian Corn still drooping. Galatz 35s. 6d., Egyptian 33. Beans steady; old Egyptian, 34s., new 36s. Oats, Barley, and Oatmeal in fair request at Tuesday's quotations.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
April 7..	47s 9d	37s 4d	23s 7d	31s 8d	40s 2d	38s 3d
— 14..	49 1	36 2	24 2	36 10	39 9	38 8
— 21..	49 6	37 6	24 2	32 11	42 0	39 2
— 28..	51 2	37 11	24 5	31 5	41 6	38 1
May 5..	52 6	37 5	25 5	34 0	42 4	39 9
— 12..	52 6	37 7	25 10	34 1	43 8	40 3
Agg. Aver.	50 5	37 4	24 7	33 6	41 7	39 0

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	April 7.	Apr. 14.	Apr. 21.	Apr. 28	May 5.	May 12.
52s 6d	..	..	..	..		
51 2	..	..	..		..	..
49 6	..	..		..	..	..
49 1	..		..	..	..	..
47 9		..	..	..	..	..
..	..	..	..	..	..	..

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

TO PARENTS AND GUARDIANS.—The Widow of the late Mr. JOSEPH SHILLING, Nurseryman, of Winchester, Hants, is anxious to receive into her family one or two little GIRLS to EDUCATE with her own children. An experienced and kind Governess is kept, and every care would be taken to secure to them the comforts of home. Respectable references given and required.—Further particulars may be obtained by addressing Mrs. J. SHILLING, Southgate Nursery, Winchester, Hants.

THE BURIAL BOARD for the Parish of Liverpool, in the County of Lancaster, are desirous of receiving applications from persons (qualified by experience) to undertake the office of SURVEYOR and MANAGER. The duties will be as follows:—

To prepare the necessary drawings, specifications, plans, and sections for, and to superintend the construction of the new Cemetery, at Anfield Park, Walton, the works and buildings (except the Chapels, Entrance Gates, and Lodges); to arrange for letting the works; to certify the amounts due to contractors; to conduct the correspondence relating to the construction of the works; to give reports and attend meetings when required; to prepare plans, sections, books, &c., for working the Cemetery after completion; and generally to be responsible for the operations until the Cemetery is in complete working order. Applicants are to state the remuneration required, the amount of time that will be devoted to the duties of the office, and to specify what works they have designed and carried out of a similar nature.—Free offices and a residence exist on the site.—Applications to be addressed to ENOCH HARVEY, Esq., the Clerk of the Board, No. 12, Castle Street, Liverpool, and to be sent to him on or before May 25.

WANTED, a person who understands GROWING CUCUMBERS and STRAWBERRIES.—Apply at WARREN'S Gardens, Isleworth, Middlesex, W.

WANTED, AS GARDENER, a single Man, who understands his business, and can take charge of a Horse.—Apply, by letter, with particulars, to J. H. I., 34, Dowgate Hill, City, E.C.

WANTED, A FARM BAILIFF; one who understands GROWING ROOTS, or has some knowledge of MARKET GARDENING as well, would be preferred. Must understand Stock and Farming well, and keep proper Accounts.—Address C. W., Post Office, Nantwich.

WANTED, a single young Man as GROOM and GARDENER; must have at least two years' character.—V. C. F., Lefont Manor, near Cowbridge, Glamorganshire.

WANTED, by a gentleman, a respectable sober and active Man, as COWMAN. He must thoroughly understand the care of Cows, Poultry, Pigs, &c., and be willing to make himself generally useful where required. A married Man under 40 years of age preferred. Cottage on the estate.—Apply by letter to E. S., Trenchard's Library, Uxbridge, Middlesex, W.

WANT PLACES.—Letters to be Post Paid.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Middle-aged; has been engaged principally during the last three years in laying out a Flower Garden at Dynevor Castle; has a thorough knowledge of his profession, is well skilled in the cultivation of the Grape Vine, for which he has numerous Medals awarded to him from the Royal Botanic Society of London; he is active and energetic in the discharge of all his duties, and will be disengaged on the 21st of June, 1860.—T. BOYD, Dynevor Castle, Llandilo.

GARDENER (HEAD.)—W. KEELE (age 36, married, no incumbrance), late with J. Butler, Esq., Kent; has had 22 years' experience, and can have many unexceptionable testimonials. Is well acquainted with Forcing in all its branches; has grown plants and Orchids that have gained first prizes at the Royal Botanic Gardens, &c., London. Letters to be addressed to himself to show; is well acquainted with the best mode of Constructing and Heating various Horticultural Buildings.—6, Cumberland Place, Kew, Surrey, W.

GARDENER (HEAD).—Age 32; well understands his profession in all its branches. Seven years' good character.—J. N., Mr. Dods, Epsom Nursery, Surrey.

GARDENER (HEAD).—Age 39, single; understands Forcing, Kitchen and Flower Gardens in all branches. Good character.—T. S., Mrs. Conway's Nursery, Old Brompton, S.W.

GARDENER (HEAD).—Age 26, single; understands Kitchen, Fruit, and Flower Gardens, Forcing Vines, Cucumbers, Melons, &c. Good character.—S. H. Mr. Bunney's, Post Office, Acton, W.

GARDENER (HEAD).—Age 28, single; thoroughly understands his profession, having had great experience in Early and Late Forcing, and management of Flower and Kitchen Gardens. Five years' good character from last situation. Country preferred.—T. M., Post Office, Tottenam, N.

GARDENER (HEAD).—Age 32, no incumbrance; has a thorough practical knowledge of Pines, Vines, Peaches, Cucumbers, and Melons, and the management of Flower and Kitchen Gardens.—S R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD).—JOHN BRICE, age 40, married, no incumbrance, for the last five years gardener to G. Chapman, Esq., Paul's Cray Hill, Kent, begs to offer his services to any lady or gentleman in want of a good practical Gardener.—Mr. W. BARNES, Camden Nursery, Camberwell, London, S.

GARDENER (HEAD).—Single; understands the cultivation of Stove and Greenhouse Plants, Forcing Grapes, Cucumbers, Vegetables, &c., and the management of Flower and Kitchen Gardens. Good character.—A. B., Mr. Dickenson, Nurseryman and Florist, Westerham, Kent.

GARDENER (HEAD).—Married, no incumbrance; has a thorough practical knowledge of his profession; understands the management of Land, and his Wife can take charge of a Dairy. Ten years' good character.—C. C., Post Office, Lower Sydenham, Kent, S.E.

GARDENER (HEAD).—Age 43, married, no incumbrance; first-class Forcer of Pines, Vines, Vines in Pots, Peaches, Strawberries, Cucumbers, &c.; cultivator of Orchard, house Trees, Stove and Greenhouse Plants. Has a thorough knowledge of his profession in all its branches.—A.B., Mr Henderson's Nursery, Pine-apple-Place, Edgeware Road, N.W.

GARDENER (HEAD).—Age 33, married, no incumbrance; has a thorough knowledge both of Early and Late Forcing, Pines, Vines, Peaches, Melons, Cucumbers, Strawberries, Pleasure Grounds, Greenhouse, Flower, Fruit, and Kitchen Gardens, &c. Can be highly recommended by his late employer.—J. C., T. Picton's, Forest Lane, Leytonstone, Essex, N.E.

GARDENER (HEAD).—Age 40, married; possesses a practical and scientific knowledge of his profession in all its branches, including Pines, Grapes, Peaches, Figs, Melons, Cucumbers, &c., and is a first-class Plant grower. He has also a good knowledge of Scotch Farming, Hedging, Draining, applying Manures, and improving Waste Lands.—J. D., Post Office, Wilmington, near Honiton, Devon.

GARDENER (HEAD).—Age 36, married; has been most successful in the cultivation of Pines, Grapes, and Peaches; Late and Early Forcing of Vegetables, also of Hothouse and Greenhouse Plants, Fruit, Flower, and Kitchen Gardens, with Woods, Lands, and Stock. Wife can take charge of Dairy and Poultry.—A. B., Messrs. Drummond, Nursery, Bath, Somerset.

GARDENER (HEAD).—Middle-aged, no incumbrance; is acquainted with Forcing in all the various branches; is an extensive Orchid and Plant Grower, and can carry out their cultivation to any extent; has lived in the neighbourhood of London, and is acquainted with all modern appliances and improvements. Many high references for undeviating steadiness and ability. Comfort and a hope of permanency the highest consideration. Salary, about 70l., with cottage and firing.—G. H., 3, Grove Place, Old Charlton, Kent, S.E.

GARDENER.—Age 36, single; understands Flower and Kitchen Gardens, Forcing, &c. Good reference.—J. B., Mrs. Bryant, King Street, Maidstone, Kent.

GARDENER.—Age 40, married, youngest child 12 years old; well understands his profession in all its branches. Can have a good character of 2 years and 6 months.—J. H. B., Advertising Office, Andover.

GARDENER.—Age 33, married; six years in his present situation. Can Manage Land and Stock. Can with confidence be recommended by a gentleman.—W. DATTON, St. John's, Sutton-at-Hone, near Dartford, Kent.

GARDENER (SINGLE-HANDED).—Married, without incumbrance: will be at liberty the first week in June. Can undertake the Management of Kitchen, Flower, and Fruit Gardens; also the Propagation of Bedding Plants, Melons, Cucumbers, &c.—Five years in last situation.—R. D., Midford, near Bath.

GARDENER (SECOND or THIRD, in a moderate-sized establishment).—Age 27, single; practically acquainted with the several branches of his profession, and would be willing to make himself useful.—A. Z., Burford Bridge, Dorking, Surrey.

GARDENER (UNDER).—Age 24; would not object to look after a horse as well. Two and a half years' good character.—Z. B., 6, Marches Place, Putney, S.W.

GARDENER (UNDER, in a nobleman or gentleman's Garden).—Age 22; has been accustomed to glass. Good character.—W. S., Post Office, Chester.

GARDENER, OR GARDENER AND STEWARD.—Thoroughly practical in every branch of his profession.—For inquiries can refer to Mr. Green, gardener to Sir Edmund Antrobus, Bart., Lower Cheam, Surrey, S.; and to Mr. Dods, Nurseryman and Seedsman, Epsom Nursery, Epsom, Surrey.

FARM BAILIFF AND GARDENER.—Age 30, single; has a practical knowledge of both, having had great experience in Norfolk Farming, likewise in Early Forcing of all kinds of Fruits and Flowers, and management of Flower and Kitchen Gardens. Five years' good character from last situation. Further references can be given and security, if required.—J. S., Post Office, Tottenham, N.

FOREMAN.—Mr. D. T. FISH, Gardener at Hardwicke, Bury St. Edmunds, Suffolk, can with confidence recommend his Foreman to any lady or gentleman requiring the services of an active energetic young Gardener of good character.

FOREMAN, PROPAGATOR, OR SALESMAN.—Married; first-class; long experience in all branches; steady, active. Good reference.—M. D., Post Office, Stratford, Essex, E.

The Gardeners' Chronicle Newspaper.

SATURDAY, MAY 26, 1860.

SCHOOL OF PRACTICAL AGRICULTURE ARITHMETIC, BOOK-KEEPING, AND MENSURATION. —Terms and particulars on application to Mr. W. ASHBY, Lockley Farm, Welwyn, Herts.

News of the Week.

IN the House of Lords on Monday, on the motion for the second reading of the Paper Duties Repeal Bill, Lord MONTEAGLE moved as an amendment that the Bill be read a second time that day six months. A long discussion ensued, in which the Bill was supported by Earl GRANVILLE, Lord DUFFERIN, the Marquis of CLANRICARDE, Lord CRANWORTH, and the Duke of ARGYLL, and opposed by Lord LYNDHURST, the Duke of RUTLAND, Lord CHELMSFORD, and the Earl of DERBY. On a division the second reading was negatived by a majority of 89, the numbers being 193 to 104. On Tuesday the Adulteration of Food and Drink Bill was read a second time and referred to a select committee. Lord DUNGANNON called attention to the disturbances occurring weekly in the church of St. George-in-the-East, and moved a resolution that sufficient decision had not been shown in putting down those disturbances, and in bringing the offenders to punishment. The Bishop of LONDON expressed his belief that the rector could still, if he pleased, restore tranquillity to the parish. After some further discussion the motion was withdrawn. On Thursday the Union of Benefices Bill and the Ecclesiastical Courts Bill passed through Committee. Lord BELMORE called attention to the appointment of Mr. LYLE to the Lord-Lieutenancy of Londonderry, and asked for explanations. The Earl of CARLISLE defended the appointment, and asserted that Mr. LYLE was in every way qualified to fill the office. Last night the Royal Assent having been given by commission to several public and private Bills, the House adjourned for the Whitsun holidays to Monday the 4th June.

In the House of Commons on Monday the Refreshment House and Wine License Bill was recommitted, when certain amendments brought up by the CHANCELLOR of the EXCHEQUER were considered and agreed to. The Bankruptcy and Insolvency (Salaries) Bill passed through Committee. The House then went into Committee on the Bankruptcy and Insolvency Bill, and after two divisions, agreed to the first 25 clauses without any substantial alteration. On Tuesday Lord PALMERSTON, in moving that the House at its rising adjourn to Thursday on account of the Derby Day, referred to the rejection of the Paper Duty Repeal Bill by the House of Lords on the previous night. He disclaimed on the part of the Government any intention of taking a step that would place the two Houses in a state of hostility, and gave notice of his intention to move for a Committee to inspect the journals of the Lords in relation to their proceedings on the Bill, and afterwards to move for a Committee to search for precedents. Sir J. TRELAWNY obtained leave to bring in a Bill to establish County Financial Boards, for the assessing of county-rates, and for the administration of county expenditure, in England and Wales. Mr. BAXTER moved a resolution that the annual grant called the Regium Donum made to Non-conforming Ministers in Ireland should cease on the death of the present recipients. Mr. CONOLLY moved as an amendment that the grant, instead of being annually voted, should be permanently placed upon the Consolidated Fund. After some discussion the amendment was negatived without a division, and the original motion was then negatived on a division by 217 to 58. On Thursday Lord PALMERSTON moved, amid much laughter, that a committee be appointed to inspect the journals of the Lords in relation to their proceedings on the Paper Duty Repeal Bill. The committee was appointed, and immediately after Lord PALMERSTON, amid the continued amusement of the House, appeared at the bar with the report, consisting of an extract from the Lords' journals recording the rejection of the Bill. Lord PALMERSTON then gave notice that he should on Friday move for a committee to search for precedents on the subject. The amendments to the Wine Licenses Bill were considered and agreed to with the addition of some new clauses. On the motion for going into Committee of Supply Mr. LAING moved that 400,000*l.* be voted on account of the Civil Service Estimates, stating that the financial business of the session had been so long delayed that the balances were exhausted. After some discussion on the precedent which would be established by the vote, the House divided on the motion for going into Committee of Supply, which was carried by 135 to 107. The sum of 400,000*l.* was then voted on account of education, the Irish constabulary, and other Civil Service items. The adjourned debate on the second reading of Sir John Barnard's Act, &c., Repeal Bill was resumed by Mr. BENTINCK, who moved that the Bill be read a second time that day six months. On a division the amendment was negatived by 181 to 58, and the Bill was read a second time. The Locomotive Bill was read a second time, and the Piers and Harbours Bill was referred to a select committee. Sir J. DUKE obtained leave to bring in a Bill to establish a metropolitan meat market in Smithfield. Last night Lord PALMERSTON moved the appointment of a select committee to search for precedents in reference to the late vote of the House of Lords on the Paper Duty Repeal Bill. Mr. T. DUNCOMBE moved as an amendment that the House should not adjourn before November next, in order to give the Lords another opportunity of agreeing to the Bill. Mr. BRIGHT moved, as an amendment, the adjournment of the debate to Thursday. After some discussion both amendments were withdrawn, and the original motion was then agreed to.

Despatches from Sicily announce that General GARIBALDI has gained two important victories over the Royal army, and that the evacuation of Palermo, by the King's troops was hourly expected. That part of GARIBALDI's force which landed in Tuscany has been defeated near Montefiascone, in the Papal States, by the POPE's gendarmes, and driven back into Tuscany with the loss of 6 killed, including the brother of ORSINI, and about 25 wounded. The Treaty of Zurich has been approved by the Sardinian Chambers by a majority of 215 to 16, and the committee on the treaty of cession of Savoy and Nice to France have presented a report recommending the Chambers to adopt it. Accounts from St. Petersburg state that Baron BRUNNOW, the Russian Ambassador in London, has telegraphed to his Government that Lord JOHN RUSSELL will most probably make no opposition to an inquiry into the situation of the Christians in the Turkish empire. The SULTAN however has informed his Ambassadors at Foreign Courts that he questions the competency of the Powers to institute the proposed inquiry.

A private telegram from China has been received through Bombay, announcing that the EMPEROR OF CHINA has rejected the Anglo-French ultimatum, and that the northern ports have consequently been placed in a state of blockade.

Home News.

THE COURT.—The Queen and Prince Consort, accompanied by Princes Arthur and Leopold, and the Princesses Alice, Helena, Louisa, and Beatrice, left Buckingham Palace on Saturday afternoon for Osborne, travelling to Gosport by a special train of the South-Western Railway. Before the Queen's departure from London Lord Palmerston had an audience of her Majesty. On Sunday morning the Queen, Prince Consort, and the Royal family attended Divine Service at Osborne. The Rev. G. Protheroe officiated. On Monday morning the Queen, Prince Consort, and the Princess Alice went out walking. The younger branches of the Royal family took carriage airings. In the afternoon her Majesty, the Prince Consort, the Princess Alice, and Princess Helena drove in the *char-à-banc* through Cowes to Newport. On Tuesday morning the Queen and Prince Consort walked in the grounds at an early hour. The Duchess of Kent and the Princess of Leiningen arrived on a visit. In the afternoon the Queen, Prince Consort, the Princess Alice, and the Princess of Leiningen went out in the small *char-à-banc*, the Prince Consort driving. In the evening the Queen had a dinner party. On Wednesday morning the Queen and Prince Consort walked in the grounds. The Duchess of Kent and the Princess Helena took a drive. In the afternoon the Queen, Princess Alice, the Princess Leiningen, and Prince Leopold, drove in the *char-à-banc*. The Prince Consort, with the Prince of Leiningen, rode on horseback. The Prince of Wales arrived from Oxford. In the evening the Queen had a dinner party.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Tuesday, and another on Thursday.

GOVERNORSHIP OF MADRAS.—The *Gazette* of Tuesday officially announces the appointment of Sir Henry George Ward, G.C.M.G., as Governor of Madras.

PARLIAMENTARY MOVEMENTS.—The election for Lymington, vacant by the retirement of Sir J. R. Carnac, terminated on Thursday, when Lord George Lennox, the Conservative candidate, was returned by a majority of 26 over Mr. H. Riversdale Grenfell, the numbers being 148 to 122.

ORDER OF THE BATH.—The Queen has conferred the dignity of Knight Grand Cross of the Bath on

Admiral of the Fleet Sir John West, Admiral Sir William Hall Gage, Knt., Admiral Sir Francis W. Austen, General Sir James Douglas, General Sir George Scovell, General Lord Downes, Admiral Sir Thomas J. Cochrane, Admiral Sir George F. Seymour, General Sir Frederick Stovin, General Sir James Fergusson, and Lieut.-General Sir John Bell.

Her Majesty has also conferred the dignity of Knight Commander of the Order on

Charles Lennox Wyke, Esq., her Majesty's Minister to the Mexican Republic; General the Hon. Henry Murray, Lieut.-General Philip Bainbrigge, Lieut.-General Thomas Erskine Napier, Lieut.-General the Hon. Charles Gore, Lieut.-General Edward C. Whinyates, Lieut.-General Samuel B. Ellis, of the Royal Marines; Vice-Admiral Arthur Fanshawe, Vice-Admiral P. W. Parry Wallis, Lieut.-General G. J. Harding, Rear-Admiral Robert Lambert Baynes, Frederick J. Halliday, Esq., late Lieut.-Governor of Bengal; Sir Robert N. C. Hamilton, Bart., late Political Agent in Central India; Major-Gen. Richard J. Holwell Birch, C.B., Secretary to the Government of India in the Military Department; Col. Peter Melvill Melvill, Secretary to the Government of Bombay in the Military and Naval Departments; Col. Alfred Hastings Horsford, C.B.; and Lieut.-Col. Herbert B. Edwardes, Commissioner of Peshawur.

Her Majesty has also conferred the dignity of Companion of the Bath on

P. E. Wodehouse, Esq., Governor of British Guiana; J. Walker, Esq., Colonial Secretary of Barbadoes; Col. Stephen J. Hill, Governor of Sierra Leone; E. Jordan, Esq., President of the Council of Jamaica; Major M. Richmond, formerly Superintendent at Wellington and Nelson, in New Zealand; James Ranald Martin, Esq., Examining Physician to the Secretary of State for India; E. A. Reade, Esq., Member of the Sudder Board of Revenue; D. F. M'Leod, Esq., Financial Commissioner, Punjab; J. C. Wilson, Esq., Judge of Moradabad; E. Thornton, Esq., Commissioner of the Jhelum Division, Punjab; H. C. Tucker, Esq., Commissioner of Benares; G. Udny Yule, Esq., Commissioner of Bhaugulpore; E. A. Samuells, Esq., Commissioner of Patna; R. Alexander, Esq., Commissioner of Rohilcund; F. B. Gubbins, Esq., Commissioner of Benares; A. A. Roberts, Esq., Commissioner of Lahore; G. C. Barnes, Esq., Commissioner of the Cis Sutlej States; A. H. Cocks, Esq, Judge of Mynpoorie; C. J. Wingfield, Esq., Commissioner of Goruckpore; S. Wauchope, Esq, Commissioner of Police, Calcutta; B. Sapte, Esq., Magistrate of Bolundshuhur; A. Money, Esq., Magistrate of Shahabad and Gya; F. O. Mayne, Esq., Magistrate of Banda; G. E. W. Couper, Esq, Secretary to the Chief Commissioner, Oude; R. H. Dunlop, Esq., Magistrate of Meerut; W. A. Forbes, Esq., Deputy Commissioner, Oude; F. H. Cooper, Esq., Deputy Commissioner, Umritsur; G. H. Mildmay Ricketts, Esq., Deputy Commissioner, Loodianah; J. H. Bax, Esq., Joint Magistrate, Ghazeepore; T. D. Forsyth, Esq, Deputy Commissioner, Umballah; A O Hume, Esq., Magistrate of Etawah; H. C. Wake, Esq., Magistrate of Shahabad; Brigadier.-Gen. G. St. P. Lawrence, Political Agent in Rajpootana; Col. Sir Richard C. Shakespear, Knt., Resident at Baroda; Lieut.-Col. C. Davidson, Resident at Hyderabad; Lieut.-Col. F. C. Marsden, Deputy Commissioner, Ferozepore; Major W. C. Erskine, Commissioner of Saugor; Major J. R. Becher, Deputy Commissioner, Hazara; Major H. Ramsay, Commissioner of Kumaon; Major G. W. Williams, Commanding Meerut Volunteers; Major R. C. Lawrence, Commanding the Lahore Police and Cashmere Contingent; Major J. W. Carnegie, Deputy Commissioner, Oude; Major W. W. H. Greatned; Capt. H R. James, Deputy Commissioner, Peshawur; Capt. B. Henderson, Deputy Commissioner, Kohat; R S. Ellis, Esq., Deputy Commissioner, Nagpore; Major S. C. Macpherson, Political Agent, Gwalior; Major F. W. Pinkney, Commissioner of Jhansi; Capt. W. H. Crichton, Deputy Commissioner, Nagpore; Capt. C. Elliot, Deputy Commissioner, Nagpore; Lieut. J. W. W. Osborne, Political Agent in Rewah; J. N. Rose, Esq., Chief Civil Officer, Sattara; and Major W. L. Merewether, Political Agent, Scinde Frontier.

Foreign.

FRANCE.—M. Thouvenel, the French Minister of Foreign Affairs, has declared to the Austrian Ambassador that the Cabinet of the Tuileries has seen with regret that Russia has prematurely brought forward the Oriental question; but, as the question has thus been officially raised, France considers that she acts in conformity with the interests of Europe by associating herself with the proposal of Russia, as otherwise a pretence would be given to that Power to assume the exclusive protectorate of the Christian subjects of the Sultan. M. Thouvenel adds that during his embassy at Con-

stantinople he became convinced that the Hatti Humayoun of 1856 will long remain a dead letter unless the Porte changes its system of government. Without recognising the urgency of the inquiry proposed by Russia, France is disposed to acknowledge its principle, and she invites the other great Powers to do the same, leaving, however, to their agents in the East to ascertain the exactitude of the facts which have been brought forward by Prince Gortschakoff.—The Corps Législatif has adopted the project of law relating to sugar and coffee by 233 to 3 votes, and the law has since been agreed to by the Senate. The *Moniteur* publishes the order of the day of matters to be discussed in the next sitting of the Senate, among which are petitions in reference to the import of iron, and to the execution of the Treaty of Commerce between France and England. It is said that negotiations for the conclusion of commercial treaties between France and several other States will shortly be opened at Paris. The Emperor returned to the Tuileries on Saturday from Motte Beaudron, and presided on Sunday at a Council of Ministers. On Friday his Majesty went to his domain of La Motte de la Grillière, and the plain of Misabran, which only a short time ago was a desert waste, but is now transformed and covered with vegetation. In the evening the Mayor of La Motte Beaudron had the honour of dining with the Emperor, and his Majesty afterwards received the municipal council and deputations from the neighbouring villages, with all of whom he left marks of his munificence. Having been informed that an additional tax for eight years had been voted by the commune of La Motte for the construction of a mairie and a school, the Emperor ordered that the whole expense should be paid from the privy purse. The *Patrie* says the statement that the division Bazaine, which was on its way back from Italy, had received counter orders is incorrect, and that the division will enter Paris to-day, the 26th inst. The *Opinion Nationale* publishes an article signed "Guerolt," protesting against the underhand intervention of Austria in the States of the Church.—A marriage has just taken place between the Prince de Polignac and the daughter of M. Mirès, the great capitalist. It is said that by the marriage contract M. Mirès has settled on his daughter and son-in-law 120,000f. a year, two carriages, with horses and servants, and an apartment in his hotel in the Rue Neuve des Mathurins.

SPAIN AND MOROCCO.—The Absolutist journals assert that General Elio has refused to take the oath of allegiance to the Queen, and embarked on the 19th for France. The report that Government will propose, and the Senate vote, the abrogation of the law excluding Count de Montemolin from the throne of Spain is contradicted.

PORTUGAL.—The volunteers for the African expedition are collecting in the various districts throughout the country. The force will consist of artillery and infantry, the latter supplied with the Enfield rifles. A commission from the Government has been forwarded by this packet for the purchase of rifles for the entire army. The Duke of Oporto will accompany the expedition, but the new Governor and Commander-in-Chief are not yet announced.

DENMARK.—The Danish Government has lodged a protest at Berlin against the discussion in the Chamber of Deputies respecting Schleswig, and against the attitude assumed by the Minister for Foreign Affairs, Baron von Schleinitz, upon that subject.

PRUSSIA.—The Prussian Chambers were closed on Wednesday by the Prince Regent, with a speech from the Throne. The following is a summary of the speech:

"Government is most seriously endeavouring to bring about such solutions of the questions which at present engage the attention of the European Cabinets as will be adequate to the maintenance of the balance of power. The principles which guide the Government in its relations with the Germanic Confederation and the German Diet in regard to the present highly important affairs have been explained during this session. The Government also will in future adhere to these principles, and will continue to regard the maintenance of the recognised rights of others as necessary for the maintenance of its own rights. Notwithstanding the difference of opinion existing in reference to important questions, in one feeling all the German Governments and people are unanimous with myself and the Prussian people—that is, in unshaken fidelity to the common Fatherland, and in the strong conviction that the independence of the nation and the integrity of the national territory are matters of importance before which all internal affairs and dissensions disappear." The speech concluded by treating of questions respecting internal matters.

It is asserted that the Ambassadors of the Foreign Powers are about to demand explanations respecting the speech of the Government Councillor Mathis on the 21st inst., in which the Councillor recommended an intimate alliance between Prussia and England, in consideration of the Franco-Russian alliance. The Prince Regent left Berlin on Thursday, *viâ* Kreuznach and Saarbruck, for Treves, to be present at the opening of the Rhine, Nahe, Saarbruck, and Treves Railway. According to the *Kreuz Zeitung* Marshal M'Mahon, Commander-in-Chief of the Camp at Chalons, had received orders to welcome the Prince Regent, in the name of the Emperor of the French, on his arrival at the French frontier. The Prussian Ambassador at Paris, Count Pourtalès, was also to go to Saarbruck to meet the Regent.

AUSTRIA.—The Vienna papers state that on the declaration of France that she would not oppose the assembling of a Conference, the English Cabinet confidentially communicated a project to the northern Courts, according to which France should cede to Switzerland such a portion of Chablais and Faucigny as would ensure to Switzerland the exclusive possession of the Lake of Geneva, the neutrality of which would be proclaimed and guaranteed. Invited by the English Cabinet to give its opinion on this project, Austria first thought it indispensable to institute inquiries in Paris, in order to discover if and to what point France would consent to a dismemberment of Savoy. Having obtained the certainty that the Court of the Tuileries will not consent to any cession of the territory of Savoy, the Austrian Cabinet endeavoured to obtain information whether England or Switzerland was decided to pursue, at the risk of a war with France, the project of a territorial cession on the part of France. Austria is convinced that England, as well as Switzerland, too greatly desires the peace of the world to compromise it on account of the annexation of Savoy. Under these circumstances Count Rechberg has declared that the English project had no chance of success, considering that it would be supported neither by Russia nor by Austria, and would fail against the inevitable resistance of France. The inauguration of the monument recently erected in honour of the late Archduke Charles, the victor of the battle of Aspern, took place on Tuesday last. Notwithstanding the reports current to the contrary, the French Ambassador was present at the ceremony. Count Thun, the Austrian Ambassador at St. Petersburg, has arrived at Vienna. It is not true that the Emperor will deliver a speech at the opening of the Council of the Empire. The Austrian flotilla under the command of Commodore von Willersdorff has been ordered for the present to confine its cruise off the Neapolitan coast to the Adriatic, without crossing the Straits of Messina.

ITALY.—The Treaty of Zurich has been approved in the Sardinian Chambers by 215 against 16 votes. The report of the Committee on the treaty for the cession of Savoy and Nice to France concludes by proposing its approval by the Chambers. Before agreeing to their report the committee had a conference with Count Cavour, the explanations given by the Minister not being satisfactory to the Opposition party. The Minister, on being requested by the Committee to communicate the diplomatic correspondence, replied that he had no other documents than those already published. As regards the questions of the boundary, the public debt, and the railways of Savoy, Count Cavour declared that negotiations were still pending with France, but that nothing had been definitively settled. The committee then demanded the purpose and the influence of the treaty upon the future position of Italy. The Minister replied that the treaty was a grievous necessity. Besides the Bishop of Faenza and the Vicar-General of Bologna proceedings have been taken against the Bishops of Imola and Forli, for suspending the priests who officiated at the *Te Deum* in honour of the constitution. The Archbishop of Pisa, having refused to submit to the orders of the Government, has been arrested and taken to Turin. — M. de Carafa, the Neapolitan Minister, has forwarded a circular to the diplomatic corps, bitterly accusing the Piedmontese Government of having, notwithstanding its promises, allowed bands of volunteers to be enrolled, armed, and despatched to Sicily. M. de Carafa adds, that this violent attack against international law exposes Italy to sanguinary anarchy, and compromises the whole of Europe. He throws the responsibility on the authors and accomplices of such criminal actions. The Marquis de Villamarina has, in the name of Sardinia, protested against this accusation, which, he says, is false and injurious, the Sardinian ships of war having had orders to prevent a landing, but being able to do no more than the Neapolitan vessels which were cruising in the Sicilian waters. A Piedmontese brigade has been sent to Tuscany, and the steamer Tenaro has been sent to cruise before Orbitello. Advices from Rome state that General Lamoricière entered that city on the 13th inst. On the following day he despatched the 2d Regiment of Infantry, two cannon, and detachments of mounted Gendarmes. The cause of the movement was the march of Garibaldians on Orbitello, the news of which had caused great agitation at Rome. On Saturday an engagement took place in a grotto near Montefiascone between 60 Pontifical Gendarmes and 350 insurgents coming from Tuscany; 25 of the rebels were wounded and 56 killed, among whom was the brother of Orsini, who attempted the assassination of the Emperor Napoleon. The Gendarmes had three killed and two wounded. During the conflict a battalion of Pontifical Chasseurs fired upon each other in error in consequence of the darkness of the night, whereby a captain, lieutenant, and five soldiers were killed. The volunteers subsequently re-entered Tuscany under the command of Lambianchi, but were arrested, and will be brought to trial. Papal troops were to immediately leave Rome for the frontier. An order of the day published at Rome orders all officers to recognise General Lamoricière as military chief, but prohibits them to obey any orders of General Lamoricière relative to the administration, which rests with the Ministry. Advices from Naples to the 16th inst. state that the 6th Regiment refused to fire on the people on the occasion of the demonstration of the 13th inst.

SICILY.—The volunteers who landed at Marsala had an engagement with the Royal troops at Calatafimi on the 15th and 16th, which is stated by the official journals to have ended in the total rout of the insurgents, with the loss of one of their chiefs and many men killed and wounded. Subsequent despatches are far from being in accordance with these statements. They state that the advantage was on the side of Garibaldi's troops, who totally defeated the Neapolitan army and afterwards invested Monreale, a town about two miles from Palermo and commanding that city. A second engagement afterwards took place in which, according to the official journals, the insurgents were driven from their positions and pursued to Partenico with very considerable loss; while the French papers assert that Garibaldi attacked the Royal troops who were strongly intrenched, and completely defeated them. The Neapolitan troops after their reverse abandoned the provinces of Palermo and Trapani, and retired within the towns. Great disorder prevailed at Palermo, and the troops were passing over to the insurgents. A proclamation by the committee of Palermo had been posted up in all parts of that city, announcing the victorious march of Garibaldi, and that Sicily would soon become independent. "Even the Neapolitan police" it said, "are commencing to desert their master," and it terminated with "Viva il Re Emmanuel," "Viva Garibaldi." Two considerable disembarkations of volunteers had taken place at San Stefano de Camestra to the right, and at Santo Veto, to the left of Palermo. The rising at Messina had not yet taken place. The proclamation of General Lanza concerning an amnesty and a viceroyalty had had no effect. Popular manifestations were repeatedly taking place, and it was believed that Palermo would shortly be evacuated by the Royal troops; indeed rumour is already current that part of the city is in the hands of the populace. Marshal Riviera had demanded reinforcements of Marshal Russo, who, being unable to diminish the garrison of Messina, had refused. News from Messina to the 14th inst. states that the commander of the Piedmontese frigate Governolo had landed there, and was received with applause. According to the last advices the insurrection was extending in many directions, and when the detachments which are organising have joined the volunteers who disembarked at Marsala, the whole body will number about 12,000 men, well armed and well provisioned. A proclamation has been issued by Garibaldi, in which he takes upon himself all the responsibilities of the Dictatorship of Sicily.

RUSSIA.—Prince Gortschakoff has sent instructions to the Russian Ministers at the Courts of the great Powers explaining why the Turkish Ambassador was not invited with the Ambassadors of Austria, France, Great Britain, and Prussia to receive the proposals of Russia relative to an inquiry into the condition of the Christians in Turkey. The Prince says:—

"The condition of the Christians in the Turkish Empire is a question of general interest, reserved for the consideration of a European Conference, which, for nearly 50 years has consisted of the five great Powers exclusively, among which Turkey is not included. If it had been necessary to call the representative of the Porte to this assembly of the Ambassadors because she signed the Treaty of March 30, 1856, the same claim could have been made by Sardinia, whose participation in the negotiations in question would have been opposed by Austria. It was therefore necessary to exclude the Porte, in order to avoid the admission of Piedmont, and to confine the deliberations to the great Powers only."

A despatch from St. Petersburg of Friday states that a telegram from Baron Brunnow, the Russian Ambassador at London, has been received by the Russian Government, announcing that Lord John Russell would in all probability make no opposition to an inquiry into the situation of the Christians in the Turkish empire. This supposed acquiescence of England has given great satisfaction in St. Petersburg. It is said that Russia has remitted to Turin a decided protest against any attack on the Kingdom of the Two Sicilies by the Piedmontese.

THE PRINCIPALITIES.— The Austrian Government, having sent orders by telegraph to its agents in the Danubian Principalities to verify whether Russian troops were really concentrated on the Pruth, has obtained the certainty that there is no concentration of Russian forces on that river.

TURKEY.—Austria, Prussia, and England are said to agree to the following:—1. As to the maintenance of the integrity of the Ottoman Empire. 2. Should an inquiry into the situation of the European Christians in Turkey take place, it is by no means to be instituted exclusively upon the basis of the facts given by Russia, but in an independent manner, and upon the facts reported by the different Ambassadors and Consuls in the East. The Marquis de Lavalette was received at a solemn audience by the Sultan on Monday. The Marquis has addressed the principal French residents in Constantinople in a speech which had produced a sensible effect on the Bourse, and caused a considerable rise in the quotations of foreign exchange. Instructions had been forwarded to the Turkish diplomatic agents abroad informing them that the Sultan questions the competency of the Powers to institute the inquiry proposed by Russia. The Sultan invokes Article 9 of the Treaty of Paris, dated March 30, 1856.

SYRIA.—Advices from Aleppo, to the 28th April, state that an address had been posted up at the gates inciting the inhabitants to massacre the Christians. The Governor, who has 800 men and cannon, had interfered and arrested the principal leaders. The garrison was considered insufficient. The Christians, being unarmed, feared a fresh explosion of fanaticism.

Egypt.—Heavy rains have carried away a portion of the railway between Cairo and Suez. Travellers to and from India have thereby been delayed two days. The official French mission for the exploration of the Red Sea has been well received by Said Pasha.

India.—Telegraphic despatches were received on Wednesday, of which the following is a summary:—

Bombay.—The prevailing topic of discussion is Mr. Wilson's budget and Sir Charles Trevelyan's minute. In the Legislative Council on the 14th ult., Mr. Wilson, in moving the second reading of the Income-tax Bill, entered into fuller explanation of the general principles of the measure. With reference to the minute of the Governor of Madras, he said that the members of the Government had felt deep and painful astonishment at seeing documents conceived and expressed in such a tone emanating from a subordinate government. It was an opposition without parallel in Indian history. However the Government had no doubt what course to pursue. They were precluded on public grounds from entering into controversy on the subject, but they had taken such steps as were due to the public interests and their own position to obviate the mischief which might be caused by this act of "wanton indiscretion."

Simla.—The Governor-General and the Commander-in-Chief were still at Simla, but were to return to Calcutta on the 7th May. The Governor-General held a Durbar at Simla on the 3d April for the reception of the Hill Chiefs.

Lucknow.—Cholera has been prevalent in Oude, but is now disappearing.

Shapoor.—On the morning of the 20th ult. the Wuzurees attacked Colonel Lumsden's column, with some damage to the cattle and camp followers; but they were driven out with heavy loss, and pursued for three miles over the hills, and, to all appearances, were broken up. On the 20th the force under General Chamberlain joined that under Colonel Lumsden, whereupon the Wuzurees gave up their intention of holding Shapoor and Petray, and retreated.

Calcutta.—Sir Cursetjee Jamsetjee, the Parsee Baronet, is coming to England by this mail with a large retinue. His visit has created no small sensation among the natives, and great are the expectations of the reception he will meet with in England.

China.—An important telegram has been received this week from Messrs. Jardine, Matheson, & Co., of China, stating that the Chinese Government has rejected the Anglo-French ultimatum, and that in consequence the northern ports had been blockaded. Previous advices from Hong Kong of the 29th March stated that two regiments of infantry, one battery of artillery, and one company of Royal Engineers, were to proceed on the 31st to Chusan, and that Mr. Bruce was to receive a final answer from the Emperor on the 10th of April. The 1st, 3d, 31st, 44th, 67th, and 99th Regiments and the 1st battalion of the Military Train were at Hong Kong. Sir Hope Grant was to take a trip to Chusan and Shanghai in a few days. The only fear expressed was that there might be no fighting. General Sir C. Van Straubenzee returns to England by the next mail. No horses had arrived yet from India. The whole army was to be ready to move about the 15th of April.

United States.—The Baltimore Union Convention has nominated Mr. Bell and Mr. Everett as candidates for the Presidency. The House of Representatives has passed the Tariff Bill. Accounts from New York to the 9th inst. state that a resolution inviting the Prince of Wales to visit New York had at the suggestion of some of the most eminent merchants of New York been adopted by the Board of Aldermen by nine to three votes, and that a resolution was also passed to send to the Councilmen for their concurrence. A resolution had passed the Senate authorising a vessel to be provided to transport the astronomers to a point where the eclipse of the sun in July next might be best observed.

Canada.—A preliminary meeting of the citizens of Hamilton, Canada West, was lately held, to take measures for the erection of a monument to her Majesty, to be erected by subscription. The Mayor and a number of other gentlemen were appointed a committee to that effect. The Great Western Railway Company was building a state carriage for the Prince of Wales.

Mexico.—Advices from Vera Cruz to the 1st inst. state that the Constitutional Government had rejected the mediation of England, and that Miramon was defeated on all sides. Subsequent advices state that Miramon had accepted the basis for adjustment as proposed by the English and French ministers.

Cuba.—On the 19th ult. a fire in the valley of Trinidad swept over 18 miles of ground. The loss is estimated at 500,000 dollars, and a reduction in the sugar crops of 8000 hogsheads was expected.

Parliament.

HOUSE OF LORDS.

Monday.—*Paper Duty Repeal Bill.*—Earl Granville moved the second reading of this Bill. He referred to the condemnations of the Duty in the other House, and to the abstract resolution adopted there with the concurrence of the late Government; and said that the present Government had decided to propose its repeal in the Bill now before their lordships. The report of the Board of Inland Revenue had condemned the tax. This report had been said to have been got up to order; but he had ascertained by personal inquiry that it had been founded on the testimony and examination of their most active and trustworthy officers. He urged the injurious effects of the tax upon the trade and the consumers of paper, and the impediments it offered to the publication of cheap works of utility, while it did not check licentious publications. As to the financial question, and the objection that the Government were improvident in giving up this tax, he appealed to details showing the probable condition of our finances next year, and said that the Government had ground for saying they saw no danger whatever in our position. Approaching the constitutional question, he professed his inability to understand how the rejection by that House of a Bill passed by the Commons to repeal a tax was not, to all intents and purposes, imposing a tax. It was proposed, for fiscal objects, to reject a measure for the repeal of this tax which had been submitted by the advisers of the Crown and adopted by the other House, and he believed there was no instance of the rejection by that House of a Bill remitting taxation which formed part of the whole financial scheme of the Government. Was this course fair to the people? Was it right towards the Board of Inland Revenue, upon whose character for perfect fairness reliance must be placed for the administration of the law which they had condemned as unjust? Was it wise or prudent to take so unusual and exceptional a course with reference to the House of Commons? Their lordships stood at present higher than ever in popular favour, and it was impolitic to do so invidious an act as the rejection of this Bill.—Lord Lyndhurst said he should confine himself to the practical point—the privileges of that House, contrasted with those of the House of Commons. This could be no party question; all their lordships had to do was to ascertain what their privileges were. A doctrine had been laid down at a recent meeting, that for the Lords to reject a Money Bill passed by the other House was unconstitutional and insulting to the House of Commons. In these circumstances he had felt it his duty to state his views and conclusions upon the subject. He did not intend to dogmatise, but to lay down plainly and simply, facts, principles, and precedents which would lead them, without doubt, to a clear conclusion. It was not to be disputed that their Lordships had no right to amend or to originate a Money Bill. They had abandoned the claim, because they had no power to enforce it. Precedents had been relied upon occurring in 1671 and 1678, to prove that that House had no power to reject a Money Bill; but they only showed that their lordships had no power to amend or originate such a Bill; and he complained of the want of fairness and candour on the part of those who cited these precedents that, on the very next page in the very book from which the documents were taken, was a direct and deliberate admission in 1689 that the House of Lords had not only the power but the right to reject such a Bill, and that this precedent had not been quoted. This right had been acted upon without dispute in numerous instances; but this was a Bill for relieving taxation, which, it was said, created a distinction This was a novel doctrine, and at variance with the practice. He cited an instance of a Bill being rejected by the Lords, without complaint by the Commons, which both relieved and imposed taxation. If, then, their lordships had not only the power, but the right to reject this Bill, and if they conscientiously believed it would increase our financial difficulties in the present state of Europe, he had no doubt what their conclusion would be.—Lord Monteagle warned their lordships that the question they were called upon to determine was, not whether they should adopt the Bill for the repeal of a million and a half of taxation, but whether they would diminish the security for the payment of the charges on the Consolidated Fund, which would strike at the whole credit of the country, and deteriorate the value of public securities. This Bill, moreover, would establish a precedent which no honest man would imitate in dealing with his creditors. It was an advance in the reckless policy of substituting direct for indirect taxation, which could not be resorted to without peril. The financial statement of the Government showed a surplus of 464,000*l.*; but had we this surplus? No such thing. It had vanished into thin air, and he prognosticated a clear deficit of revenue next year of 11,033,000*l.* He moved that the Bill be read a second time that day six months.—Lord Dufferin said that the precedents cited by Lord Lyndhurst did not appear to him to be applicable to the present case, in which the tax proposed to be repealed formed part of the financial scheme of the Government.—The Marquis of Clanricarde was of opinion that there was not the slightest constitutional doubt that their Lordships had a right to vote freely upon this question; but, the House having passed the Income-tax Bill, he did not think it consistent with equity or honour to refuse to pass this Bill.—The Duke of Rutland could not agree that, because they had passed the Income-tax Bill, they were therefore bound to pass this Bill. Even if there was a surplus revenue, he did not think the paper duty ought to be the first repealed; other taxes, especially the malt-tax, should have the preference. Looking at the state of the revenue and to the probable amount of the deficiency next year, he hoped their lordships would not assent to the Bill.—Lord Cranworth said the constitutional question was one which involved the House in very great difficulty. Such a step as that of refusing to concur in the repeal of a tax under the circumstances of the present case had never been taken by that House. The legal precedents cited by Lord Lyndhurst were inapplicable to the case of a Bill repealing a tax which formed part of the Budget.—Lord Chelmsford maintained that the precedents cited by Lord Lyndhurst were in point, and applicable to the present case. If the House had the power and the right to reject this Bill there devolved upon them a corresponding duty, and if they believed that the taking off this tax, at the same time that the tea and sugar duties were retained, was inexpedient, they were bound to reject it.—The Duke of Argyll entered upon a defence of the Commercial Treaty and of the Budget, and denied that the Government intended to break down the great system of indirect taxation and impose undue burdens upon property, expressing his conviction that our direct taxation had arrived at a point at which it could not be maintained with safety to the country in time of peace. This was the opinion of all the members of the Government, and he proceeded to show how this declaration was reconcileable with their present financial policy. He justified the taxes they had repealed by asserting that they all came under one or another of the conditions of Sir R. Peel, the Paper Duty included, which interfered with processes. It was clear, he said, that this duty stood in the same category with the Excise duties on soap, glass and bricks, and he insisted that its repeal was in strict consistency with the principles of finance adopted by Parliament. He did not deny the legal power or right of that House to refuse its assent to any Bill sent up from the other House; but legal power and legal right were wholly different from constitutional practice, and he suggested reasons why their lordships should not exercise their legal power in this case, which would, he said, go to the very heart and root of the constitutional privileges of the House of Commons, there being no instance on record since the Revolution where their lordships had thrown out a Bill of the nature of supply proposed by the Government and adopted by the other House.—The Earl of Derby said, with respect to the constitutional question, he should be satisfied to leave it on the footing on which it had been placed by Lord Lyndhurst, notwithstanding the difference of opinion expressed by Lord Cranworth and other Lords. The Duke of Argyll had stated that there had been no instance in which that House had rejected a Supply Bill; but there was an instance in which a Bill of Supply had been rejected; and, more than this, the present, he said, was not a Supply Bill. The main question, however, was the abolition of the Paper Duty and the objection to its repeal, and in supporting the amendment he performed only what he deemed a solemn duty, with no desire to embarrass the Government, still less to overthrow it. He did not theoretically defend the Paper Duty, and he thought it would be desirable to part with it if the finances permitted its repeal; but he contended that, circumstanced as the country now was, the surrender of this tax was an improvident and reckless act. He then proceeded to discuss the financial part of the question, observing that he had listened to Mr. Gladstone's financial statement with the conviction that the House of Commons had been blinded to its defects by the brilliancy of his rhetoric. He analysed that statement, and the process by which Mr. Gladstone had converted a large deficit into an apparent surplus of 464,000*l.*, which had already disappeared without any provision to meet the serious deficiency of the ensuing year; and in this state of things he was throwing away upwards of a million. Excess in the military expenditure for the China war and the outlay for fortifications had to be added to the Budget, and, taking the Chancellor of the Exchequer's own figures, he contended that in the present year there would be no surplus whatever, but a very considerable deficiency, which in 1861-62 would amount to 2,600,000*l.* He read copious extracts from the financial speeches of Mr. Gladstone, commenting upon the promises they contained and the expectations they held out, especially the pledge to relieve the tea and sugar of the working man, and declaring that he objected to the Bill on political as well as financial considerations.—After a reply from Lord Granville, their lordships divided, when the numbers were:—Content—Present, 90; Proxies, 14—104; Not Content—Present, 161; Proxies, 32—193; Majority against the second reading, 89. The House adjourned at 10 minutes to 2 o'clock.

Tuesday.—The *Petition of Right Bill* passed through committee. The *Weights and Measures Bill* and the *Adulteration of Food and Drink Bill* were read a second time. The *Bankrupt Law (Scotland) Amendment Bill* was read a third time and passed.—Viscount Dungannon called attention to the continued disturbances taking place on each succeeding Sunday in the *Church of St. George's-in-the-East*, and moved a resolution that sufficient power and energy had not been displayed in putting them down and bringing the offenders to punishment.—Earl Granville denied that any want of energy had been shown by the executive, considering the difficulties and peculiarities of the circumstances with which they had to deal.—The Earl of Wicklow was of opinion that the police authorities and the police had neglected their duty. His lordship was about to read a letter of the Rev. Bryan King, the Rector of the parish, reflecting on the character of the Rev. Hugh Allen, the late afternoon lecturer at the church, when Earl Granville and Lord Chelmsford deprecated importing any personal discussion into the debate.—The Bishop of London declared his disbelief in the accusations which had been made against the Rev. Mr. Allen, and, reprobating the disgraceful scenes which had taken place, expressed his opinion that the rector could still, if he pleased, restore tranquility to the parish. If the rev. gentleman would exert himself to that end, he might depend upon all the assistance which the bishop of the diocese could give him.—The Bishop of Cashel bore testimony to the high moral character of Mr. Allen. After some further discussion the motion was withdrawn.—In answer to the Earl of Carnarvon, the Duke of Newcastle entered into a statement of the position of the *Ceylon Railway*, and explained that the works had been suspended in consequence of the latest report of the engineer raising the estimate from 856,000*l.* to upwards of 2,000,000*l.* Another estimate was therefore necessary, and he had directed it to be made.

Thursday.—The *Union of Benefices Bill* and the *Ecclesiastical Courts Bill* passed through committee. The *Adulteration of Food and Drink Bill* was referred to a select committee. The *Consolidated Fund (9,500,000l.) Bill* was read a third time and passed. *Lieutenancy of Londonderry.*—The Earl of Belmore called attention to the recent appointment of Mr. Acheson Lyle, Receiving Master in the Court of Chancery in Ireland, to the office of Lord-Lieutenant of Londonderry, and asked for explanations.—The Earl of Carlisle defended the appointment, and explained the circumstances under which Mr. Lyle had been nominated. As there was no resident peer in the county eligible for the office, the Irish Executive was perfectly justified in appointing Mr. Lyle, who was a gentleman peculiarly qualified by social position and property for the office.—Lord Leitrim intimated his intention of bringing before the House in proper form the recent appointments of Sheriffs and Lieutenants in Ireland by the present Government.

Friday.—The *Royal Assent* was given by commission to the Consolidated Fund (9,500,000*l.*) Bill, Oxford University Bill, Marriages Extra Parochial Places Bill, and several Railway and private Bills. Several Bills having been brought up from the Commons, the House adjourned to Monday, June 4.

HOUSE OF COMMONS.

Monday.—*The Sicilian Insurrection.*—Mr. Dalglish asked whether the officers of British ships at Naples were instructed to receive all those who might apply for protection, whether refugees or otherwise.—Lord J. Russell replied that the instructions issued in 1849 by Lord Palmerston still remained in force. Accordingly protection would be afforded in British ships of war to political refugees, but not to persons under criminal accusation.—In reply to Mr. Kinglake, Lord J. Russell said that he would not undertake to give any opinion as to the views of foreign Powers on the Sicilian insurrection. He was informed that ships had been sent by Austria into Neapolitan waters, but only for the protection of her own subjects. He did not believe that any Power at present proposed to take steps against the Sicilian insurrection.—In a Committee of the whole House, the amendments on the *Refreshment Houses and Wine Licenses Bill* were considered, and, after a long discussion and some verbal alterations, adopted. The clauses proposed to be incorporated in the Bill were postponed until the report of the Bill be brought up.—The *Bankruptcy and Insolvency Salaries, &c., Bill* passed through committee.—On the motion for going into committee on the *Bankruptcy and Insolvency Bill*, Mr. Vance objected to the extension given by the Bill to the jurisdiction of the County Courts, as, in his opinion, it would bring many important claims before judges not accustomed to adjudicate on such matters. The denial of the right of appeal was also open to the gravest objections.—Mr. Briscoe thought an act of injustice would be committed on the messengers of the Court of Bankruptcy unless they were adequately compensated.—After a few words from Mr. Lesley and Colonel Sykes the House went into Committee on the Bill.—Mr. Walpole moved the omission of certain words in Clause 2 relating to the future duties of the Commissioners of Bankruptcy as district commissioners.—The Attorney-General agreed to restrict their employment to the London districts.—Sir F. Kelly thought the Commissioners ought not to have duties imposed on them which they had never contracted to discharge.—Mr. Walpole withdrew his amendment.—Mr. Bowyer, on clause 7, entered a strong protest against any new courts of justice with only one judge.—The Attorney-General, on clause 13, in reply to Mr. Henley, explained the reasons why the new judge was to have 5000*l.* a year, and his deputy for three months only 400*l.* An animated discussion took place on the system of compensation and pensions for the retiring officers of the Courts.—In a subsequent clause, Mr. Walpole proposed that the Judge of Bankruptcy should be chosen from one of the present Commissioners.—The Attorney-General could give no pledge on the point, as he was not consulted on such appointments.—A division arose on Mr. Bouverie's amendment of clause 22, as to the expediency of reducing the salaries of the successors of the present district Judges from 1800*l.* to 1500*l.* a year. The motion, however, was negatived, the numbers being 69 to 68. Clause 22 was agreed to on a division by 118 to 38.—Clause 24, on the transfer of the bankruptcy jurisdiction to the County Courts, gave rise to much discussion on an amendment of Mr. Bouverie, that the jurisdiction proposed should not be extended to County Courts, which was, however, ultimately negatived.—The Chairman then reported progress, and the House resumed. The *Consolidated Fund (9,500,000l.) Bill* was read a third time and passed. The other orders of the day were then disposed of.

Tuesday.—*The House of Lords and the Paper Duty.*—Lord Palmerston, in moving the adjournment of the House over the Derby Day, gave notice that he should on Thursday propose the appointment of a select committee to examine the journals

of the House of Lords with reference to the proceedings of that House on the Bill for repealing the paper duty; and that on Friday he should move the appointment of another committee to search for precedents on the subject. He thought it important to ascertain the facts, but he disclaimed, on behalf of the Government, any intention to bring the two Houses into collision.—Mr. WHALLEY inquired whether the proposed committee to search for precedents was the only step which the Government intended to take with reference to the unconstitutional and unusual interference of the House of Lords in rejecting the Bill.—Sir G. LEWIS said he had nothing to add to the statement already made by the noble lord at the head of the Government.—Mr. D. SEYMOUR took exception to the apathy of the Government with regard to the vote of the previous night, and suggested that the House should meet on the Derby Day to discuss the question.—Lord PALMERSTON said he saw no reason for departing from the course he had proposed.—In reply to Lord NAAS, Sir G. C. LEWIS said that no doubt the confinement of so many prisoners in the *Convict Hulks at Bermuda* was very objectionable, but the question was one of expense, and the proper time for discussing it would be when the vote for the maintenance of prisons came before the House in committee of supply. The motion for adjournment to Thursday was then agreed to. *Public Business.*—On the motion of Lord PALMERSTON, it was resolved that on Thursdays, after Whitsuntide, Government orders of the day have precedence of notices of motions, and that notices of motions have precedence of orders of the day on Fridays.—Sir J. TRELAWNY obtained leave to bring in a Bill to establish *County Financial Boards* for assessing county rates and for the administration of county expenditure in England and Wales. *Regium Donum.*—Mr. BAXTER moved a resolution that the annual grant to non-conforming ministers in Ireland, known as the Regium Donum, should cease and be extinguished as speedily as is consistent with the just expectations of the recipients thereof, and that no further grant be made on account of "new congregations," nor to any existing congregations after the present ministers shall have ceased to be the ministers of such congregations.—Mr. CROSSLEY seconded the motion.—Mr. CONOLLY moved as an amendment that the charge, instead of being abolished, should be removed from the estimates and placed upon the Consolidated Fund.—Mr. DAWSON seconded the amendment.—Mr. CARDWELL defended the grant, and denied that the Synod of Ulster was favourable to its abolition. The House had already by a signal majority expressed its intention not to disturb the religious endowment in the case of Maynooth, and he hoped that it would in an equally emphatic manner reject the proposition now made to deprive the Presbyterian ministers of the north of Ireland of a provision which they had enjoyed from the time of the Commonwealth. The amendment of Mr. Conolly was negatived without a division, and the original motion was negatived on a division by 217 to 58.—Mr. COBBETT drew attention to the report of the select committee on the *Office of Coroner*; and obtained leave to bring in a Bill in conformity with the recommendations in the report of the committee. *The Gunboats.*—Sir F. SMITH moved for a select committee to inquire into the circumstances which have caused the alleged defective state of a considerable number of the gun and mortar-boats and vessels of the royal navy. He was speaking in support of the motion when the House was counted out.

THURSDAY.—*The Lords and the Paper Duty Bill.*—Lord PALMERSTON moved the appointment of a Select Committee to inspect the journals of the House of Lords with relation to any proceedings upon the Bill to repeal the excise duty on paper, and to report thereon to the House. The motion was agreed to without discussion, and the Committee proceeded forthwith to discharge their duty. After an interval of a few minutes, Lord Palmerston appeared at the bar and presented the report of the Committee, which was read by the Clerk at the table. It stated that the Committee had inspected the journals of the House of Lords, and it recited the terms in which the rejection of the Paper Duties Bill had been recorded.—Lord PALMERSTON announced, amid cheers from the Ministerial benches, that he would on Friday move for a Select Committee to search the journals for precedents as to the practice of the two Houses on the subject. *The Refreshment Houses and Wine Licenses Bill*, as amended, was considered and agreed to. On the motion for going into Committee of Supply on the *Civil Service Estimates*, Mr. LAING explained the reasons for asking a vote on account, the balances having become exhausted. The sum he asked was 400,000*l.*, distributed over 10 votes.—Mr. A. Smith and Mr. W. WILLIAMS objected to the course proposed by the Government.—Mr. WALPOLE hoped the subject would be minutely scrutinised in the committee.—Lord H. VANE thought the proposal was a reasonable one.—Sir S. NORTHCOTE said that, though the vote was moderate, the principle was important, and the precedents cited were not in point.—Lord FERMOY considered that no special case had been made out, and that the principle of the proceeding was bad.—Mr. DISRAELI admitted that the proposal was a small one, but the precedent which the House was called upon to make was very large. If the House placed this confidence in the Government, would Ministers pledge themselves that the House should have a fair and timely opportunity of exercising its constitutional right of criticising the Estimates?—Lord PALMERSTON said there was a financial necessity for the vote, a Parliamentary authority being wanting for the application of money, and there was nothing unconstitutional in asking for a vote on account for the Civil Service any more than for the Army or Navy. The delay of the Estimates was no fault of the Government, and the House had in its own hands the means of controlling the Estimates. On a division the question that the Speaker leave the chair was carried by 135 to 109. The House then went into a Committee of Supply, when the several resolutions, making up the vote of 400,000*l.*, were agreed to. *Switzerland and Savoy.*—In answer to Mr. KINGLAKE, Lord J. RUSSELL said that up to that day the Swiss Confederation had continued to ask for the meeting of the Conference on the subject of the neutralized provinces, and her Majesty's Government had supported this demand from the first. *Lord C. Paget and Messrs. Green.*—Mr. LYGON called attention to a report that Lord C. Paget was a partner with Messrs. Green, of Blackwall, at the time when the gunboats were built.—Lord C. PAGET declared upon his word of honour that the report was utterly without foundation. He had formerly held a few shares in some of Messrs. Green's Australian ships, but he sold the shares at a loss before he took office at the Admiralty, in order that it might not be said that he was influenced by private considerations.—Lord C. PAGET then moved a supplementary vote of 2500*l.* for further improving the *Harbour of Malta*. After a long discussion the motion was agreed to.—In Committee of Ways and Means it was agreed that makers of *British Wines* for sale, and dealers in such wines in quantity above two gallons, should be charged a license of five guineas.—On the motion for the second reading of *Sir J. Barnard's Act Repeal Bill*, Mr. BENTINCK, saying that the Act had existed for a century and done no harm, and alleging the injury to public morality by the legalisation of Stock Exchange gambling, moved as an amendment that the Bill be read a second time that day six months.—The SOLICITOR-GENERAL, Mr. T. HANKEY, Mr. JOHN LOCKE, Mr. HUBBARD, Mr. MALINS, and Mr. BUTT supported the Bill, on the ground that it was a needless impediment in the way of commercial transactions.—Mr. E. JAMES, Mr. BOVILL, Mr. HENLEY, Sir H. WILLOUGHBY, and Mr. VANSITTART opposed the Bill on the ground that it was a bargain between the Government and the Stock Exchange, and that it abolished a measure of real use in checking gambling. On a division, the second reading was carried by 181 to 58.—In committee on the *Excise and Assessed Taxes Act*, the CHANCELLOR of the EXCHEQUER proposed resolutions that persons should be allowed to take out game certificates at 2*l.* for half the season, and for bringing deer under the operation of the Game Laws.—After considerable discussion, the Chairman was ordered to report progress. The *Locomotive Bill* was read a second time, after a short discussion.—On the order of the day for going into Committee on the *Piers and Harbours Bill*, Mr. PAULL moved that the Bill be referred to a Select Committee.—Mr. E. P. BOUVERIE opposed the Bill altogether, objecting to the powers given to the Board of Admiralty.—Mr. M. GIBSON supported the motion. After some discussion the motion was agreed to. The adjourned debate upon the second reading of the *Metropolis Local Management Act Amendment Bill* was resumed, and after some discussion the Bill was read a second time. *Smithfield Market.*—Sir J. DUKE obtained leave to bring in a Bill to establish at Smithfield a metropolitan market for meat, poultry, and other provisions, and for other purposes.

FRIDAY.—*The Lords and the Paper Duty Repeal Bill.*—Lord PALMERSTON moved that a select committee of 19 members be appointed to search the journals of both Houses of Parliament, in order to ascertain and report on the practice of each House with regard to several descriptions of Bills imposing or repealing taxes. He should abstain from entering at present into detail, and he trusted the House would accept the resolution without discussion. The resolution would not pledge the House to anything beyond a desire for information.—Mr. T. DUNCOMBE moved that as the Bill had been postponed by the House of Lords for six months, Parliament ought not again to adjourn beyond November next, in order that another opportunity may be afforded to the House of Lords of considering whether the Bill may not be advantageously agreed to.—Mr. BRIGHT moved the adjournment of the debate to Thursday. After considerable discussion both amendments were withdrawn, and the original motion, amended by making the committee to consist of 21 members instead of 19, was agreed to, to meet after the Whitsun recess. [Left sitting.]

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England on Thursday lowered their rate of discount from 4½ per cent., at which it was fixed a fortnight back, to 4 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 95 to ⅛ for Money, and 95⅛ to ¼ for the 6th June; Bank Stock, 227; Three per Cents. Reduced, 93½ to ⅝; New Three per Cents., 93⅜ to ½; Indian Five per Cent. stock, 1859, 106¾ to ⅞; Ditto for Acct., 106⅝; Ditto Four per Cent. Debentures, 1858, 96⅝ to ½; Ditto 1859, 96⅜ to ½; India Bonds, 6*s.* to 10*s.* dis.; Exchequer Bills, 9*s.* to 6*s.* prem.—FOREIGN: Brazilian Four and a Half per Cents., 1860 (scrip), ¼ dis.; Mexican Three per Cents., for Acct., 21¼; Portuguese Three per Cents., 1853, 44¾; Russian Four and a Half per Cents., 97½; Spanish Three per Cents., 47¾; Ditto for Acct., 48⅛; Turkish Six per Cents., 1854, for Acct., 75¼; Ditto for 1858, for Acct., 58½ to 58; Ditto Guaranteed Four per Cents., for Acct., 101¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,569,390	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,094,390
		Silver Bullion	—
	£29,569,390		£29,569,390

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£9,728,943
Rest	3,278,026	Other Securities	19,236,674
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,666,533	Notes	8,346,100
Other Deposits..	12,569,848	Gold and Silver Coin ..	749,805
Seven day and other bills	694,115		
	£38,761,522		£38,761,522

24th day of May, 1860. M. MILLER, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—W. BOUND, jun., Paradise Street, Poole, Corn and Seed Merchant—L. COOK, 42, Great Cambridge Street, Hackney Road, Boot and Shoe Manufacturer—W. V. DAVIES, Cardiff, Glamorganshire, Draper—H. ELLIOTT, Bay Wharf, Maidenhead, Berkshire, Timber Merchant—J. S. FERGUSON, Nottingham, Builder—E. GARDNER, Primrose Hill, Northampton—F. GIBSON, Tottenham Road, Kingsland Road, also of Balls Pond Road, Islington, and of King Street, Turk Street, Bethnal Green. Baker—J. R. GREGG, Whitehaven, Cumberland, Grocer—T. HOLLAND, 25, Rheidol Terrace, Islington, Manufacturer of Hosiery—G. V. JACKSON, 6, New Broad Street, City, Commission Merchant—F. A. PIZZALA, and M. C. GREENE, 19, Hatton Garden, Looking Glass Manufacturers—J. POOLEY, Liverpool, and of Peterborough, Northamptonshire, Contractor and Builder—P. SAMPSON, Hythe, Kent, Boot and Shoemaker—W. WENHAM, 71, Cannon Street West, City, Dealer in Foreign Fancy Goods.

SCOTCH SEQUESTRATIONS—W. FAIRWEATHER, Balluderon, Forfar deceased;—J. FERGUSON, Dumfries, Grocer—J. HAY, Glasgow, Builder—A. KINLOCH, Alexandria, Dumbarton, Carter—J. MERRY, jun., and P. M'GREGOR, Kilmarnock, Shawl and Garment Printers—J. H. WILSON, Ardrossan, Ship Store Dealer and Grocer.

FRIDAY—BANKRUPTS—A. D. BELL and E. BRASSERT, City, Trimming Manufacturers—J. HODGE, Helston, Cornwall, Silversmith—S. HOOK, Farnaghan, Kent, Grocer—W. HUNTER, Limehouse, Middlesex, Ship Joiner—J. JOHNSON and C. S. GILMAN, Red Cross Street, City, Merchants—E. M'SWINEY, Fenchurch Street, City, Merchant—G. H. PERKER, High Street Borough—M. PERRY, Bloomsbury Market, Oxford Street, Passe Partouts Manufacturer—A. ROBBINS, Newport, Monmouthshire, Builder—H. W. STATON, Norwich, Builder—F. H. TOOTAL, Manchester, Wine Merchant—R. L. TYLER, Spalding, Wine Merchant—G. WEST, Wapping, Middlesex, Shipowner—G. WILSON, Lincoln, Watchmaker—T. WINWOOD, Neath, Glamorganshire, Grocer.

SCOTCH SEQUESTRATIONS—J. ADAMS, Dundee, Watchmaker—J. BLAIKIE, Aberdeen, Advocate—J. LOCKHART, Wishaw, Lanarkshire, Carrier—R. MARSHALL, Renfrew, Coal Merchant—J. MITCHELL and Co., Glasgow, Distillers.

Metropolis and its Vicinity.

THE HOUSE OF LORDS AND THE PAPER DUTY.—A numerous deputation had an interview on Saturday with the Earl of Derby, at his residence in St. James's Square, to present to his lordship a memorial adopted at a public meeting held at St. Martin's Hall on the previous Tuesday, protesting against the course which his lordship had intimated it to be his intention to take in reference to the Government proposal of the abolition of the paper duty. Mr. Serjeant Parry having presented the memorial and added some remarks, his lordship was further addressed by Mr. Ewart, M.P.; Alderman Towle of Oxford, Mr. Petter, Mr. F. Evans, Alderman Baldwin of Birmingham, Mr. Hargreaves, Mr. J. Burke, and Mr. Lucas. The Earl of Derby in reply said:—

"He hoped he should not be considered disrespectful, if, notwithstanding what had been said, he declined to enter into a discussion upon either the commercial or the political questions involved in this subject. He was of course quite aware of the inconvenience and disadvantage to the trade of prolonged uncertainty in this matter. As regards the abstract merits of the paper duties, however, considerable difference of opinion prevailed. He had just had entrusted to him some petitions from newspaper proprietors and editors in Ireland, praying that the House of Lords would not sanction the repeal of the duty. In 1858 and 1859 he expressed, as he had been reminded, his own opinion that this tax was objectionable and that it was desirable it should be repealed as soon as the state of the revenue would permit it; and the question between himself and the deputation was whether the present state of the revenue and the financial prospects of the country admitted of the legislature taking a step which he would assume for the sake of argument to be beneficial in itself. The paper duties he might mention, however, instead of having diminished, as was generally the case with duties very objectionable and oppressive to the trade, doubled between 1840 and 1860. His lordship, having adverted to the connection of the question with the increase of the income-tax and the continuance of the sugar duties, said he thought the reduction of the income-tax and of the tea and sugar duties was far preferable to taking off the paper duties, and that the House of Lords would be thoroughly justified in taking the step which was contemplated. "I don't know," he continued, "what may be the opinion of some gentlemen present with regard to the constitutional functions of the House of Lords. It may be the opinion of some gentlemen that the House of Lords itself is an 'anomaly' in a free constitution—but having been for 38 years in parliament, 22 years in the House of Commons and 16 in the House of Lords, I have, I think, acquired during that period some little knowledge of the relative duties and obligations of one House towards the other. Clearly, if the House of Lords has no right to deal with a matter of this kind, *cadet questio*; but in that case I do not know why any Bill involving taxation should ever be sent up to the House of Lords. I will deal first with the question of revenue. The Chancellor of the Exchequer, in his budget, stated that according to his calculations there would be this year a surplus of 460,000*l.* That will be a very small surplus supposing all his calculations to be verified, and in the present state of affairs at home and abroad, it is of course essential that there should be the means of maintaining the credit and honour of the country. I will abstain from asking for any vote on this subject in the House of Lords, if it shall not be made out that upon the Chancellor of the Exchequer's own showing, supposing we are unable to reduce the expenditure, there will be in the year 1861—1862, not the small surplus of 460,000*l.*, but a deficit approaching, if it does not exceed, 2,000,000*l.*, even supposing we continue the 10*d.* income-tax, and also continue the taxes upon tea and sugar at war rates. Now, I think it is very desirable that in matters of this kind we should be careful to look forward; that in a year in which the revenue and the expenditure are so nearly balanced we should be extremely cautious in sacrificing, until we see the means of replacing it, a source of permanent revenue reaching so large an amount as a million and a half, and it is upon that ground and upon that ground only—the present state of the revenue—that the House of Lords, who are as much interested as the House of Commons—for we are all in one boat together in the maintenance of the honour, independence, and liberties of the country—I say it is on that ground alone that I think the House of Lords would be justified in point of discretion in adopting the resolution of Lord Monteagle. Now, the deputation have done me the honour of ascribing to me that motion, On that point I can only say it was brought forward in a manner which deprives it of anything like a party character. It was brought forward by an individual who is generally a supporter of the present government. It was brought forward without the slightest concert with me. I was not aware of his intention to introduce the motion, but when he did announce it, I stated that I should, upon financial grounds, feel it my duty to support him. Now as regards the constitutional question, I was very glad to hear Serjeant Parry to-day somewhat modify the principles which appear to be laid down in the memorial. Serjeant Parry admits that the Lords have a perfect right to do that which is proposed. I thought the argument had been that their doing so would be a high breach of the privileges of the House of Commons—that the House of Commons are the sole persons who have a right to impose taxes, and further, that for the House of Lords to refuse the repeal of a tax is equivalent to the imposition of a new tax. If this be so, Serjeant Parry's proposition cannot be true, that the Lords have the right to act as it is supposed they contemplate doing. But I take issue with those who hold that opinion. I think I understand tolerably well what are the relations between the House of Lords and the House of Commons. Nobody disputes that the House of Commons must originate all taxes that are to be imposed, and that the House of Lords has no right to modify a tax in the slightest degree. If the House of Commons vote a tax for one year the House of Lords has no right to change the period to two years, and I believe the converse is true, that if the House of Commons vote a tax for two years, the House of Lords have no right to reduce the period to one year. If there were the slightest modification of the tax as proposed, the House of Commons would vindicate their privilege. But how? Simply by refusing to pass the measure, the House of Lords and the House of Commons disagreeing on the subject, the law would remain unaltered. It is stated that a refusal on the part of the House of Lords to repeal a duty is equivalent to the imposing of a new tax, and in the memorial before you there is something about a loose practice having prevailed of passing duties for a term of years definite or indefinite. I must protest against this being termed a loose practice, because it is a practice which, if discontinued, would destroy the very essence of our constitution." The noble earl then dwelt on the necessity for the sake of the country of having permanent sources of revenue, and compared the case of the paper duty to that of a deed of annuity, which the two houses of parliament had granted for revenue purposes. He maintained that the House of Lords in rejecting the Government proposal would not in the slightest degree be usurping the privileges of the House of Commons, and said there had been not unfrequent instances, even in the present century, in which the House of Lords had refused its assent to bills brought in for purposes involving taxation, and in which no question had been raised as to their perfect competency to take that course. The noble lord concluded by expressing his conviction that in the course of a couple of years, even those whom he was addressing, having regard to the financial position of the country, would be satisfied that in refusing at the present time to repeal the paper duty the House of Lords had not done an injustice to the House of Commons, and had not done an injury to the country; but, on the contrary, had conferred

on the country a signal benefit. He was sorry to differ from those whom he addressed, but he hoped they would admit that he had expressed his opinions fairly and honestly, and while he gave them entire credit for sincerity, they must on the other hand permit him in his legislative capacity to act in the manner which he considered best for the country.

Several gentlemen expressed a wish to reply to his lordship, but the noble earl declined to enter into further discussion, observing that they would no doubt reply to him very fully elsewhere.

Funeral of Sir Charles Barry.—The remains of Sir Charles Barry were interred on Tuesday in the nave of Westminster Abbey, at the foot of the coffin of Mr. Robert Stephenson, and side by side with that of Mr. Telford. The arrangements inside the Abbey were better than on the recent occasions of the burial of Mr. Stephenson or Lord Macaulay. Though the nave was much more full than during those solemnities, there was apparently less crowding, while the effect was not marred by a number of spectators in bright dresses, as none were admitted near the grave who were not in mourning. All, too, were early in their allotted stations, and the appearance of the hushed sombre assemblage round the narrow open grave was mournful and impressive in the extreme. All the gentlemen who were to take part in the procession, and who numbered between 400 and 500 representatives of the great societies of arts and science in England, assembled in places adjoining the cloisters, and there waited the arrival of the procession. The hearse reached Dean's Yard a few minutes before 1 o'clock, and the coffin was borne through the old cloisters to the side entrance of the nave, where the Dean and Chapter, headed by the choir, were waiting. The procession was then formed, and to Purcell's solemn anthem, "I am the resurrection and the life," moved slowly up the nave. It was headed by the High Bailiff of Westminster, with the beadsmen, vergers, and choir, followed by the Dean and Chapter, and the coffin. There were eight pall-bearers—Sir Charles Eastlake, President of the Royal Academy; the Right Hon. W. Cowper, M.P., Chief Commissioner of Works; Mr. Bidder, President of the Institute of Civil Engineers; Lieut.-General Sir E. Cust, Mr. Beresford Hope, President of the Architectural Museum; the Dean of St. Paul's, Mr. C. R. Cockerell, President of the Royal Institute of British Architects, and Mr. Tite, M.P. Immediately following the body the five sons of the deceased walked as chief mourners, with the Dean of Chichester and other private friends. To these succeeded a procession of immense length, which took nearly a quarter of an hour to file slowly into the Abbey, and for which there was scarcely sufficient accommodation either in the choir or in the nave. It included several members of the House of Commons, the Royal Academy, Royal Society, the Institute of Civil Engineers, the Council of the Architectural Museum, and the Institute of British Architects. There were also present the Earl of Carlisle, the Duchess of Sutherland, the Hon. Arthur Gordon, Archdeacon Hale, &c. As many as could be accommodated in the choir having taken their seats, the service proceeded by the choir chanting Handel's "I know that my Redeemer liveth," and Purcell's 90th Psalm. Lord John Thynne then read the lesson, after which the choir again sang, "When the ear heard," &c. The procession was then re-formed, and moved slowly to the side of the grave amid the most solemn silence. At the edge of this the coffin was deposited while the choir chanted Croft's anthem, "Man that is born of woman has but a short time to live," and "In the midst of life we are in death." The coffin was then slowly lowered to its last resting-place. The Dean then proceeded with the rest of the service, which was listened to with the most profound silence, broken only by the rattle of the earth as it was strewed on the coffin. The choir then chanted "I heard a voice from Heaven," and the anthem, "His body is buried in peace, but his name liveth for evermore." The ceremony concluded with the benediction pronounced by the Dean, and the solemn music of the Dead March rang through the Abbey while the relatives and friends pressed forward to take a last glimpse of the coffin, which was of polished oak with a raised cross on the lid. A flag was hoisted in the Victoria Tower half-mast high during the day, and as long as that tower stands its founder will need no other memorial of his fame.

Presentation of the Freedom of the City to Sir Leopold M'Clintock.—On Saturday, in accordance with a resolution of the Court of Common Council agreed to on the 19th January last, the freedom of the City, in a box of the value of 50 guineas, was presented to Captain Sir Leopold M'Clintock, R.N., in admiration of his having, after many years of unsuccessful search, ascertained the fate of Sir John Franklin and the officers and crews of the Erebus and Terror in the Arctic regions.

The Union Bank Frauds.—The committee of the Stock Exchange terminated their inquiry on the Pullinger frauds on Monday, and unanimously resolved that three of the four members who acted for him as brokers—Messrs. Robert Johnston, Theodosius Uzielli, and Sheldon, be suspended from admission to the House till the 25th of March next, when the annual election takes place, and they can be again admitted or rejected at the pleasure of the members; and that the fourth, Mr. Braddock, be suspended for three months, his case being rendered less serious in the eyes of the committee by some exceptional circumstances. These resolutions were unanimously confirmed by the committee on Tuesday. It is understood that the evidence did not show that more than a fifth part of the stolen funds was lost in the Stock-Exchange; and that the only person who had a guilty knowledge of his real position was an outsider, who, from a man of straw, rose in a very short time to be worth nearly 100,000*l*. By what means he obtained this money is now notorious. In one transaction alone he realised a sum of about 15,000*l*., which he refused to pay to his client, with a threat of exposure if the demand were attempted to be enforced.

Threatened Renewal of the Builders' Strike.—Within the last few days the workmen in the building trade in different parts of the metropolis have shown an unmistakeable desire to renew the struggle with their employers. At the Westminster Police Court on Saturday two complaints were made; the one involving a charge of conspiracy, and the other of assault, against men employed by different firms in that quarter. In the first case it appeared that the complainant went to work at the establishment of Messrs. Myers in November last. Previous to that time he had belonged to a union, but had retired from it before going to work at the Messrs. Myers. From his account all went on smoothly till February, when he began to be subjected to a series of annoyances from the union or society men who were employed at the same establishment. This state of things continued until the end of last month, when the society men demanded in a body that he and certain others of the workmen should be dismissed. In consequence of this demand he was discharged by the foreman. On the next day, however, Mr. Myers told him that he might return to his work if he pleased. He did return accordingly, but the union men immediately declared, in the presence of a foreman, that if he was allowed to work not one of them would remain in the establishment. The result was, that he had to leave his employment solely because he had ceased to belong to a trades-union. Mr. Paynter, the magistrate, immediately issued his warrant for the apprehension of two of the leading men on the charge of conspiracy. In the second case two men were summoned for threatening and assaulting a fellow-workman in the employment of Mr. Geo. Smith, Pimlico. It appeared that the complainant had signed the "document" at Christmas last, since which time he had been subjected to insult and annoyance, and particularly on the part of the two defendants. He had been hissed that morning as he came to the Court, and on the previous night he was surrounded by 100 men, and had to get a policeman to see him safely home. The defendants were remanded, and ordered to find two good sureties to appear when called upon, and keep the peace meanwhile. It is further stated that at an establishment in the City formal notice has been given to the masters that, unless all the men employed in the establishment who have signed the "document" are dismissed within a specified number of days, the remainder of the men will strike work. It is said that no final answer has been yet given to this demand, and that negotiations are still pending upon the subject.

Houses of Parliament.—A sum of 3517*l*. 10*s*. 11*d*. has been paid since the year 1853 for "indurating or preserving" the external stonework and the iron roofs of the Houses of Parliament. The price per yard varies considerably. The cost for the preservation of the iron fluctuates between 1*s*. 10*d*., and 2*s*., to 2*s*. 2*d*. per yard; while the cost for the induration of the stone remains fixed at 1*s*. Of the above sum, 107*l*. 14*s*. 2*d*. was paid to Mr. Daines, and the remainder to Mr. Szerelmey. Appended to the return from which these figures are taken is a correspondence between the Office of Works, Sir C. Barry, Mr. Szerelmey, Mr. Daines, and Mr. Ransome on the most efficient process of induration and preservation; the result of which was that Sir C. Barry, who was ordered to report on the relative advantages of the three processes, gave his verdict in favour of Mr. Szerelmey. Mr. Ransome, however, not satisfied with this decision, has obtained permission to make a further experiment on one of the bays of the members' entrance to the terrace from the Commons court. A similar bay has been assigned to Mr. Szerelmey, in order that the two processes may be fairly tested.

The Charges against the Rev. Mr. Bonwell.—On Sunday last, the Rev. James Bonwell was served in the vestry of the church, with a prohibition from the Bishop of London, ordering him not to continue to minister to the congregation of St. Philip's, Stepney, during the proceedings now pending against him concerning the birth of a child in the school-room of the schools belonging to that church. The document delivered to him also called upon him to appear and answer certain charges contained in the articles exhibited against him in the Arches Court, at the instance of the Bishop of London. In obedience to these articles, Mr. Bonwell appeared in Court on Tuesday, and prayed articles of the charges against him. The Court directed the proctor for the Bishop to bring in the articles, and monished the defendant to attend on the 6th June, and either admit them or give notice that he should oppose their admission.

The Rev. Mr. Hatch.—The Secretary of State has advised her Majesty to grant a free pardon to the Rev. Mr. Hatch, and the rev. gentleman was accordingly released from prison on Monday after an imprisonment of nearly six months. This course was the natural result of the conviction for perjury of Eugenie Plummer, the chief witness against Mr. Hatch; and Baron Channell, who presided at the late trial, on being referred to by the Secretary of State, expressed his entire concurrence in the propriety of a free pardon.

The late Murder in Shoreditch.—The jury at the inquest on Friday returned a verdict that Ellen Hart was wilfully murdered by Joseph Radden; that he was found dead in the Regent's Canal by drowning; and although there was no evidence on that point the jury believed that he destroyed his own life.

The Main Drainage Scheme.—At the last meeting of the City Commissioners of Sewers, Dr. Ross called attention to a statement which had been made in the House of Commons that it was the intention of the Metropolitan Board of Works to construct their great intercepting sewer along Fleet Street instead of along the banks of the Thames as at first intended a change which would, in his opinion, be absolutely ruinous to the very heart of the City of London Fleet Street was the great route from the City to the west-end; and to stop the traffic for so long a time as must be necessary for the completion of the works, when there was no other route except Holborn Hill, would be most prejudicial to the City. He therefore moved that it be referred to the Improvement Committee to inquire into the alleged intention of the Metropolitan Board to run their intercepting sewer along Fleet Street, in order that they might, if necessary, take steps to prevent the execution of the plan.—Deputy Lott, in seconding the motion, said that great danger must necessarily attend the construction of the sewer along Fleet Street from the great age of the houses there. Some years ago he assisted in getting up a petition in favour of constructing a sewer along the bank of the river; and although that scheme had been laid on the shelf he was still convinced a sewer along the river, with a wharf over the sewer and a road over the wharf, would be a most important improvement to the City of London. With regard to the construction of an intercepting sewer along Fleet Street, he had heard that the works would occupy two years, and to block up Fleet Street for such a period would be absolute ruin to the neighbourhood.—Dr. Abraham suggested that the motion was too limited, and that the reference to the committee should be general as to the course of the sewer through the city instead of being local as to Fleet Street. It was a question of very great public importance, and one about which there was no secret, since a Minister of the Crown had stated in Parliament that the sewer was to go along the Strand, Fleet Street, and sufficiently near to St. Paul's to excite apprehension for the safety of that cathedral.—Deputy Farrar also insisted upon the expediency of making the reference general as to the course of the sewer, and the national importance of preserving St. Paul's from injury.—Deputy Obbard reminded the Court that Sir J. Paxton had obtained a select committee for inquiring into the expediency of embanking the Thames; and that if that project were carried out the opportunity would be favourable for the construction of a sewer.—Deputy Harrison said that a report by Mr. Bazalgette and Mr. Haywood was some time since laid before the Metropolitan Board in favour of combining the construction of a sewer with the embankment of the river—a question, however, which was attended with great difficulties. He might, however, say that the line of the intercepting sewer was not yet a settled line, for the board were waiting to see whether they could not by negotiation arrange for carrying it along the river, which was the best of all routes. Eight or nine months ago the board appointed a committee to wait on the Conservators of the Thames and the Board of Admiralty, to see whether they would co-operate in carrying out that great object; but the conservators had no funds with which to enter upon an embankment, and he believed the question was still before them. When their answer had been received the committee would apply to the Admiralty, but what their answer might be it was impossible for him to say. The motion, which was enlarged so as to make the reference general as the route of the sewer through the City, was then unanimously agreed to.

Defalcations at Paddington.—At a special meeting of the Paddington Vestry, convened by the Finance Committee, it has been resolved by a majority of 26 to 19 to prosecute Charles Fox Thatcher, rate collector of No. 4 Ward, and resident in Park Place, Maida Hill, as a defaulter. His salary was about 400*l*. a year, and the amount of his defalcations was stated to be 1527*l*. 1*s*. 1*d*. Thatcher has absconded, and the police have not yet succeeded in tracing him.

The Public Health.—The Registrar-General's weekly returns exhibit a considerable reduction in the deaths of London for the two weeks that ended Saturday, May 13 and 20. In the previous five weeks they ranged from about 1200 to 1400; in the week ended on the 13th they declined to 1111, and in that ended on the 20th to 1090. Comparing these returns with the corresponding weeks of the 10 years 1850-59, raised proportionally to the increase of population, the first return was 63, and the last 53 below the average. During the week ended on the 13th the births of 786 boys and 819 girls, in all 1605 children, and in the week ended on the 20th 867 boys and 835 girls, in all 1702 children, were registered in London. In the corresponding weeks of the years 1850-59 the average numbers were 1627 and 1601.

Provincial.

ALDERSHOTT.—Two men of the Military Train are in custody of the civil power at Aldershott, on the charge of having murdered one of the "unfortunates" who form the principal attraction of the numerous soldiers' public-houses in the neighbourhood of the camp, by throwing her into the canal on Saturday night.

ASHTON-UNDER-LYNE.—On Monday an inquest was held on a lad, aged 11 years, who was killed a few days since by the explosion of a boiler on the premises of Mr. Benjamin Swire, clog-iron and cut-nail manufacturer in this town, when the jury unanimously returned a verdict of Manslaughter against Mr. Swire, and recommended that in every case where high pressure steam was used there should be periodical inspections at least every 12 months. Mr. Swire was committed for trial at the assizes, but was admitted to bail.

FARNHAM.—On Sunday week, during the recent visit of the Queen to Aldershott, her Majesty, the Prince Consort, and the Court rode over on horseback and paid another visit to Farnham Castle, the residence of the Bishop of Winchester. Her Majesty examined the garden on the top of the keep of the old castle, the lawns formed in the moat, and the hothouses and greenhouses filled with choice plants, ferns, and orchids, of which she expressed her admiration to Mr. Lawrance, the gardener. Prince Albert and a portion of the royal party entered the castle and inspected the large hall, but the Queen remained in the garden, and after about an hour's stay the Royal visitors mounted their horses and returned to Aldershott without entering the town. For a long time a report has been current that at the removal of the present owner the castle and grounds will become royal property.

LEICESTER.—A shocking case of poisoning by a servant girl, which has proved fatal to one person and very nearly occasioned the death of several others, has just been investigated before the county coroner. On the 4th inst. Mr. Samuel Wells, an elderly man, a farmer living at Seagrave, a village about 8 miles from this town, died after a week's illness, under circumstances which led to a suspicion that he had been poisoned by his servant girl, named Hannah Holmes. She was accordingly taken into custody, and remanded by the magistrate at Loughborough. A coroner's inquest was also formally opened some days since, when a large amount of evidence was adduced, showing that she had obtained from the son of deceased some offal wheat and arsenic under the pretence that her master had sent her for it for the purpose of poisoning sparrows and rats; that the old man died from the effects of arsenic administered to him in his gruel; that the daughter-in-law and her child, who had partaken of the gruel, narrowly escaped death; that several chickens who had eaten the remains of the gruel after it had been thrown away died almost immediately afterwards; and that on analysing the intestines of deceased and the chickens, arsenic was found abundantly in all. It was also proved that after the prisoner was in custody she wrote a letter to her father and mother, which contained a confession that she had poisoned her master, and hoped to be forgiven for it. The jury returned a verdict of "Wilful Murder" against her, and she was committed on the coroner's warrant to take her trial at the next assizes. The coroner, in summing up, commented very strongly upon the fact that the arsenic, the remainder of which was produced at the inquest, was sold in an uncoloured state. The law required that arsenic sold in smaller quantities than 10 lbs. should be coloured with indigo or soot, and the seller who did not comply with that requirement was liable to a fine of 10*l*. He thought, if ever there was a case in which legal proceedings ought to be taken, this was one.

SANDOWN.—On Friday morning Sergeant Whitworth, of the Coast Brigade of Royal Artillery, stationed at Sandown Fort, in the Isle of Wight, murdered his wife and six children by nearly severing their heads from their bodies, and then attempted to cut his own throat. He afterwards rushed into the presence of the commanding officer, and stated what he had done. Three non-commissioned officers were despatched to his quarters, and on entering them they found the unfortunate wife and six children quite dead, one of the children's heads being severed from the body, and all presenting a horrid spectacle from the dreadful nature of the wounds. Whitworth was at once made a prisoner, and is likely to recover. The jury at the inquest on Saturday returned a verdict of Wilful Murder against him, at the same time expressing their opinion that he was insane. The prisoner was then committed on the coroner's warrant for trial at the next assizes at Winchester. The bodies of the wife and six children were interred on Sunday in Brading churchyard. Many rumours have been current in the village concerning remarks which are stated to have fallen from the children for some days previous to the murder, and also respecting the murderer's intention to have fired the magazine in the fort, but nothing was adduced at the inquest with reference to any of these rumours, with the exception that the key of the magazine was found in the room with the bodies, and that the powder in the magazine was all piled together in its centre. The most unaccountable part of the affair is that in a small block of buildings, with only 35 paces between them, seven out of 16 human beings should have been murdered without any cry or noise of any kind being heard.

WAKEFIELD.—The Lord-Lieutenant of Yorkshire has received a communication from the Home Secretary, informing him that the Yorkshire Assize business is to be divided, and that the West Riding portion is to be transacted in some town in the West Riding; and the Lord-Lieutenant has been directed to take the opinions of the magistracy as to which town in the Riding is best adapted for the purpose. The Lord-Lieutenant has sent the communication to the deputy-clerk of the peace at Wakefield, who will take the opinions of the magistrates individually by circular. Wakefield and Leeds are the only towns that are competitors for the honour of being the assize town, and the inhabitants of each are bestirring themselves to make their respective claims heard. Wakefield lays claim to the assizes on the ground that it is the ancient capital of the Riding, and that it possesses every requisite convenience; and Leeds bases its claim on the ground of its being the great commercial centre of the district.

SOUTHAMPTON.—An explosion from fire-damp took place on Thursday afternoon in the coal bunkers of the Peninsular and Oriental Company's steamer Orissa, lying in Southampton docks. The deck cabins, bulkheads, &c., were blown to atoms. Five men were injured and sent to the infirmary.

WEDNESBURY.—An explosion, attended with loss of life, took place on Saturday week in one of the pits of Messrs. Aston and Grazebrook, at Gospel Oak, near this town. For some time previously it had been known that one of the workings contained "fire damp," and precautions were adopted to avert the mischief which it threatened. On the morning in question, a collier, named Cadman, observed that the water which had run along a hollow dividing the safe from the unsafe portion of the pit was rapidly draining off, and knowing that the fire damp would rush in he immediately extinguished the light which he carried, as did also one or two other men in his vicinity. He then ran along the workings, a distance of 20 or 30 yards, and shouted to a man named Ward to put out his candle; but the latter, from some cause or other, failed to obey the warning, and the accident ensued. Fortunately there were only four men in the pit at the time, or the consequences would have been still more disastrous. Cadman was severely burnt about the head and face, but hopes of his recovery are entertained. His brother was so much injured that he died on Sunday morning; and of the two others one is not expected to survive. A man and a girl, who were standing at the top of the shaft, which is 160 yards in depth, were blown up into the air, but escaped falling down the pit. They were seriously bruised, and the latter in addition received a compound fracture of the leg.

WOLVERHAMPTON.—Another of those disgraceful outrages for which South Staffordshire has of late become notorious occurred in the outskirts of this town on Saturday week, a woman named Elizabeth Evans having been murdered by a man called Edward Humphreys, a boatman with whom she lived, assisting him in the management of his boat. As usual among their class, they lived in the boat, which was moored at the bottom of Canal Street. About 10 o'clock the deceased left the boat in company with some female acquaintance, and the man suspecting with truth that they were gone to get drink, about which he had had a quarrel with her earlier in the night, followed them. He overtook them near the railway-bridge on the Cannock Road, and, accosting the unfortunate woman, asked her with an oath how she would like his fists. She replied that she was not aware she had done anything to induce him to strike her, upon which he beat her so savagely that she reeled and fell against the fence. A companion of deceased expostulated with him, on which looking at his victim, he cursed her, and, declared that if she were not yet dead, he would kill her. When he got her to the boat he gave her a violent kick on the side. She gave a faint scream, and showed no signs of life afterwards. The murderer was taken into custody about two hours afterwards, and has been committed for trial both by the coroner and the magistrates on the charge of wilful murder.

Ireland.

ENLISTMENT FOR THE POPE.—The ultramontane organs throughout Ireland express great indignation and contempt for the Government proclamation against the enlistments for the Pope. They now regularly republish the diatribes of the French press against England, with the object of encouraging in Ireland the idea that the Emperor of the French will restore the country to "the Church." The following placard on the subject has been posted in different parts of the town of Longford:—

"Irishmen do not intend to be put down or bullied over by the placards of English cut-throat Saxons, for we will join the Pope's army, despite of all their infernal dodgings! Let that Saxon look out, for John Bull will shortly get harder bones to pick than ever he had to pick before. The man that wrote this will be in Italy before a week, and back in arms on the heights of Ballinamuck before 52 weeks!"

ROMAN CATHOLIC LOTTERIES.—Notwithstanding the announcement recently issued by the authorities declaring religious lotteries to be illegal, a "grand drawing" took place at Cork last week for the purpose of raising funds for the completion of a chapel, and the Roman Catholic journals continue to announce others of the same kind. The Crown Solicitor, therefore, has given notice to the *Morning News*, which has published the advertisements relating to the lotteries, that persons who print or publish such advertisements subject themselves to penalties.

THE EXODUS.—The provincial journals continue to record the progress of the emigration mania. An Athlone paper says that considerable numbers of the peasantry are frequently passing through that town on their way to America, and that the desire of the people to leave their native shores, instead of diminishing, appears to grow stronger every day. The numbers flying from the agricultural county of Roscommon exceed, according to a local paper, those of any past year. Nearly every day groups of comfortable, well-dressed, people, of the small farming class, with their large red boxes, may be seen at the railway station, *en route* for America, by way of Galway and Cork. In Carlow, too, a thriving district, large numbers of persons, principally belonging to the farming classes, natives of Carlow and the adjoining district of the Queen's County, leave the Carlow and Athy Railway stations on their way to the "Far West."

Scotland.

INSTALLATION OF THE CHANCELLOR OF EDINBURGH UNIVERSITY.—On Friday the 18th the crowning ceremonial of the new constitution of Edinburgh University was consummated in the Music Hall by the formal installation of Lord Brougham as Chancellor. The Solicitor-General opened the proceedings in a few brief but appropriate observations, introducing the Chancellor to the asssmblage; after which the chair was vacated by Sir David Brewster, and taken by Lord Brougham amidst loud and long-continued cheering. The Chancellor then delivered his address, of which the following is an abstract:—

"After paying a brief tribute to the teachers and celebrities of other days connected with the University, and referring to the peculiar system adopted at Edinburgh as compared with other seats of learning, he strongly urged the advantages of pursuing some special branch of science or knowledge. It may be thought, he said, that there are some particular subjects deserving consideration; but these may safely be left to the care of the learned persons who in various departments are charged with the duties of this University. On one or two matters I would ask their and your permission to dwell, and but for a few minutes; not that I can suppose these subjects to be neglected by the teachers, but that I would earnestly join my voice to theirs, and inculcate the closest attention to them. The study of Attic oratory is one matter which cannot be too strongly pressed upon the pupil; that of the ancient analysis is another. The tendency of mathematical studies in the present day is to disregard the Greek geometry; that of classical studies is well to cultivate Greek learning, but rather to exalt the poets above the orators. The immeasurable superiority of the Greek to the Roman oratory is not only evinced by the devotion of the greatest master of the latter to the Attic models, by his constant study of them, by his not ceasing, even in advanced life, to practise Greek declamation, by his imitating—nay, translating from them in his finest passages; but one consideration is decisive on this head—the Greek oratory is incomparably better adapted to our modern debating, business-like habits; and, while it may be truly affirmed that, with all this excellence, hardly one of Cicero's orations could, even in parts, ever be borne either by the Senate or the Forum in our times, there is hardly one of the Greek which might not, in circumstances like those for which they were composed, with a few alterations, be delivered before our tribunals or our public assemblies. He next dwelt upon the necessity of written preparation for the highest order of oratory, adducing examples in proof of his position. Eloquence can only in these times be worthily employed in furthering objects little known to, and, if dimly perceived, little cared for by the masters of the art in ancient days—the rights of the people, the improvement of their condition, their advancement in knowledge and refinement—above all, for maintaining the cause, the sacred cause, of peace at home and abroad. Suffer me to dwell somewhat upon the intimate connection of this last-mentioned important subject with the education of youth, the formation of their opinions, the cherishing of right feelings, upon the merits of those whose history is taught, or who are known as contemporaries, at least as having flourished in times near our own. Historians and political reasoners, the instructors of the people, have ill discharged their duty in this most important respect, partaking largely in the illusions of the vulgar which they were bound to dispel. Dazzled by the spectacle of great abilities, and still more of their successful exertion, they have held up to admiration the worst enemies of mankind, the usurpers who destroyed their liberties, the conquerors who shed their blood—men who, in the pursuit of power or of fame, made no account of the greatest sufferings they could inflict on their fellow creatures. The worst cruelty, the vilest falsehood, has not prevented the teachers of the world from bestowing the name of great upon those scourges, as if themselves belonged either to the class of ambitious warriors and intriguing statesmen, or to the herd of ordinary men whom successful crimes defrauded at once of their rights and their praises; and to this must be ascribed by far the greater part of the encouragement held out to unprincipled, profligate conduct in those who have the destinies of nations in their hands. What but the proneness of man to succumb under great genius, wickedly used, can be urged in extenuation of Napoleon's usurpation, by which he made France pay for her delivery from the anarchy and bloodshed of the Republic by the utter loss of her freedom. From the height to which his crimes had raised him of all but Emperor of the West, and from the eminence so dearly purchased by the French of having dictated terms to all the sovereigns in their own capitals, he and they were hurled. Twice they had the bitter mortification of receiving the law in their own capital from those whom they had once trampled upon; and his fate and their humiliation was the work of headstrong passions blinding his reason after extinguishing his human feelings. The latest and best historian of his reign (M. Thiers) though filled with admiration of his genius, and, as is natural to human weakness, leaning towards the hero of his tale, has been compelled to account for his downfall by six capital errors committed through a lust of dominion which no conquest could satiate, and through the caprices which sooner or later are sure to spring up on the soil of despotic power uncontrolled. Of these six errors any one would have sufficed to shake, almost to subvert his power; and every one of them had caused the destruction of thousands, the wretchedness of millions. It would only be by the perversion of all right feelings that the spectacle of his fate could excite our pity, or

that we could regard his expulsion from France amid the execrations of the people whom he had plunged into slavery, misery, and discomfiture, his attempt at self-destruction, his wretched end, a solitary prisoner in a remote island, as her than the just retribution by unexampled suffering for unexampled crimes; by the pride which had for self-indulgence humbled all others, being laid prostrate in its turn; by that wretchedness, falling at length on himself, which, whensoever he had a purpose to serve, he never hesitated to make others undergo. Let it be remembered that in every war which he waged, from his assumption of supreme power until his banishment to Elba, he was the aggressor; that each one was undertaken for his personal aggrandisement, with a thin disguise of national glory—the glory of France, of which he was not a native—and we have the measure of his guilt. The history of later times, indeed of our own country, affords a contrast to the failings and the vices which we have been viewing, and the contemplation of which may well excite sorrow for the great genius which they perverted, and abhorrence of the mischievous uses to which they turned it. Of our own illustrious captain and statesman, who defeated all Napoleon's marshals in the cause of his country and her allies, and who ended by overcoming Napoleon himself, it might not be fit to speak in this way, because, though no one can have the least doubt how he would have acted in a like position, yet he never had the opportunity of declining an assumption of power beyond the law. But in Washington we may contemplate every excellence, military and civil, applied to the service of his country and of mankind—a triumphant warrior unshaken in confidence when the most sanguine had a right to despair, a successful ruler in all the difficulties of a course wholly untried; directing the formation of a new government for a great people, the first time so vast an experiment had ever been tried by man; voluntarily and unostentatiously retiring from supreme power with the veneration of all parties. But though the offence is great of passing over the crimes of eminent men without duly expressing the abhorrence or contempt which they raise in all rational and virtuous minds, care must be taken to describe fully their merits, to set forth their great qualities, and to aid those good ones which are sometimes found even in wicked and wholly unprincipled men, and much more in those whose crimes are an exception to their general character. Take even the worst of rulers, those who cruelty and profligacy are the detestation of all mankind, our own Richard III. and the Borgias—the former is believed upon light evidence to have committed many crimes besides those of which there can be no doubt, while just praise is not given to his capacity, his courage, and his improvement of our jurisprudence, and the mildness of his government to all but the nobles; and the latter (the Borgias) have not been generally noted as they deserved for their talents in Government, their protection of learning, and especially their promotion of the important study of jurisprudence. The ordinary qualities which diligent study and a fixed desire to excel may place more or less within the reach of all, are most fit to be recommended by the example and the success of distinguished individuals. Of these Napoleon possessed two in an eminent degree: they can never be sufficiently kept in mind, and they are of universal application—the strict economy of time in compliance with the maxim, "take care of the minutes, the hours will take care of themselves;" and the habit of invariably mustering the whole of whatever subject, or part of a subject, he considered himself interested in being acquainted with. The captain who conveyed him to Elba expressed to me his astonishment at his precise, and, as it were, familiar knowledge of all the minute details connected with the ship. My illustrious friend, the Duke of Wellington, had a like consummate acquaintance with whatever subject he was called upon to consider practically; among others may be mentioned his regimental economy and discipline, which Napoleon did not so well know, because he cared not so much for the comforts of his men, nor was he at all sparing of their lives (a principal object at all times with the Duke); but he had a knowledge almost preternatural of the place where each corps or even company of his vast armies was to be found at any given time, because this was ultimately connected with the use he might make of what he somewhat unfeelingly termed 'the raw material.' These examples of the rule which forbids superficial knowledge absolutely, and prescribes going to the bottom of every subject, or with part of any subject, as we intend to learn, give it the sanction of the example of both those eminent men, and show that it is a cause of their invariable success. The multitude are in a measure the accomplices if not the instigators of those who, for selfish objects, betray their interest and work their misery or their ruin, seduced by the spectacle of triumphant force. Surely a most sacred duty is imposed upon the teachers of mankind, whether historians who record or reasoners who comment upon events, to exert all their powers for weaning them from this fatal delusion; to mark, as their worst enemies, those who would cherish the feelings of mutual aversion or jealousy between nations connected by near neighbourhood, which makes hostility most pernicious and friendly intercourse most beneficial; and, above all, unceasingly to impress upon their minds the contrast between the empty renown of war, with its unspeakable horror and the solid glory of peace, as real as its blessings are substantial. It is said that the present ruler of France returned from his successful campaign impressed with a deep sense of its horrors, and that his wise devotion to the peaceful improvement of the country has been stimulated by the recollection of the scenes he had witnessed. After referring to the injury done to the cause of truth by the writings of David Hume, he said that the late discoveries in fossil osteology afford additional proofs of Mr. Hume's hasty assumptions both on the question of a Providence or that of miracles. It is now proved by evidence, which he must have admitted to be sufficient, that at one remote period in the History of our globe there was an exertion of creative power to form the human and certain other races not before existing; so that he must have believed in the miracle of creation—that is, the interposition of a Being powerful enough to suspend the established order of things, and make a new one. The argument rests on the same grounds as to a future state, in so far as he denies the proof of a power to continue the soul apart from the body. But there is this material difference in the evidence, that an induction is conclusive as to the existence of the Deity, and the independent and separate nature of the soul, but only proves the probability of its continued existence. Nothing can be more groundless than the jealousy sometimes felt, but oftener professed, of natural religion by the advocates of revealed. It is most desirable that a line of demarcation should not be drawn by the teachers of revealed religion so as to exclude from their province the great truths of natural religion, as the subject of deep and continual attention; and the teachers of the latter, and of moral philosophy generally, ought to be less shy than they too often are (not Paley, however) of a reference to the truths of the Gospel dispensation. But most important, and to our feeble nature most consolatory, is the impression which all our study of this vast subject leaves of perfect wisdom being accompanied by constant benevolence. This is declared by all the works around us, and is deeply felt in all the sentiments of our mind. We find everywhere proofs that we live under a ruler who, unlike human lawgivers, far oftener proclaims rewards than denounces punishment. Furthermore, it is a general rule, and would be found absolute and universal, if our knowledge embraced the whole system, that while pleasure is held out to induce much more than pain to deter, the pleasure is beyond what would suffice—there is some gratification more than requisite. And this can only be because the Giver of Good delights in the happiness of his creature. Such contemplations at once gratify a scientific curiosity, and afford a moral indulgence. They prove that the awful Being, of whose existence we are made certain, and whom we know as our Creator, is the good Being by whose preserving care we are cherished, and sentiments of piety and devotion arise to fill our minds which he only can reject who has the faith of Epicurus and the feelings of a Stoic. The thorough exposing of these truths, and dwelling incessantly upon them, is not required for supporting the character of this famous university; but it must afford pure delight both to the teacher and the student. Above all is the necessity of making upon the mind of early youth an impression which never can wear out by lapse of time, or be effaced by the rival influences of other contemplations, or be obliterated by the cares of the world. The lessons thus learned, and the feelings engendered or cherished, will shed their auspicious influence over the mind through life; protecting against the seductions of prosperous fortune, solacing in affliction, preparing for the great change that must close the scene by habitual and confident belief in the King, eternal, immortal, invisible, the only wise God, and the humble hope of immortality which the study of His works has inspired, and which the gracious announcements of His revealed will abundantly confirm."

Sporting.

EPSOM RACES.

TUESDAY.—The *Craven Stakes*. Sir Joseph Hawley's Gallus beat Clydesdale, Gaspard, and 9 others. — The *Brighton Stakes*. Mr. G. Hodgman's Harry beat Clio, Lava, Drogheda, and 9 others.—The *Woodcote Stakes*. Mr. Merry's Dundee beat Blisworth, Walloon, Dr. Nicholl, and 12 others.—The *Rous Stakes*. Mr. Murland's Benbow beat Horace, White Rose, and 9 others.—The *Horton Stakes*. Mr. Hudson's Miss Emma beat Annan, Chanoine, and 11 others.—The *Heathcote Plate*. Lord Stamford's Little Lady beat Louise Leclercq, Miss Julia, and 8 others.

WEDNESDAY.—*Epsom Town Plate*, of 50 sovs. (Handicap) Mr. Savile's Parmesan beat Yooicks, Bel Esperanza, and 7 others. —The *Derby Stakes* of 50 sovs each. Mr. Merry's Thormanby beat the Wizard, Horror, Dangu, and 26 others. The ringing of the bell announced the start even before a large majority of the spectators were prepared for it, and the clamour in the Grand Stand Enclosure became hushed in an instant. Bentinck took a clear lead as the horses ascended the hill, followed directly by Man-at-Arms, Nutbourne, Rising Sun, and Restes. In the extreme rear were Sutton, Largesse, and Loiterer. Bentinck increased his lead half a dozen lengths on going up the hill, but before reaching the mile post he disappeared from the front, and Restes, who had been heading the ruck, took up the running, with Nutbourne, Horror, Rising Sun, Man-at-Arms, Buccaneer, Brother to Rainbow, Thormanby, the Wizard, Dangu, and Umpire taking their places at the head of the ruck. On coming round Tattenham Corner the front lot were in close company, Nutbourne next the rails, having a slight lead, with Restes, the Wizard, Umpire, Buccaneer, Thormanby, Brother to Rainbow, and Horror well up in his stride. On crossing the road Nutbourne broke down and was pulled up, and soon after Restes was beaten. The Wizard then came to the front and running in the middle of the course took a clear lead, followed by Thormanby, Dangu, and Horror. At the distance Thormanby passed the Wizard without an effort, and Horror took third place half way up. From the moment that Thormanby's colours were seen in advance, however, the issue of the race was not in doubt. He ran home an easy winner, by a length and a-half, four lengths separated the second from the third, and four lengths the third from the fourth. The "running-up" horses were Sir William, Umpire, Buccaneer, Man-at-Arms, Cape Flyaway, and Restes, who passed the post nearly in the order named; Loiterer and Wallace were the last two. Thormanby was twice nearly knocked on his head, and Wallace had a narrow escape of falling the instant the flag was dropped. The value of the stakes, deducting the money to be paid to the second horse, the judge, and towards expenses, is 6050*l*. Mr. Merry was warmly congratulated on the success of his horse, and it is said that he wins, in bets alone, upwards of 70,000*l*. The defeat of Umpire was a great discouragement to the American party, who had calculated with much confidence upon being enabled to carry the Champion's belt and the Blue Riband of the turf to America. Prior to the race the owner of Nutbourne lodged an objection against Umpire, on the ground that the horse was not of the age described. *Manor Plate.*—Mr. T. Parr's Nerio beat Pescatore, Watersprite, and 6 others. *Bentinck Plate.*—Mr. Drummond's Yooick beat White Rose, Lava, and 7 others. *Burgh Stakes.*—Mr. Merry's f. beat Reaction, Chanoine, and 11 others.

THURSDAY.—*Two-year-old Stakes.* Mr. Saxon's Brown Duchess beat Walloon and Caliban.—*South-Western Stakes.* Sir J. Hawley's Gallus beat Curlew, Soothsayer, and 11 others.—*Walton Stakes.* Mr. W. Smith's Fanscombe beat Royal Oak.—*Epsom Cup.* Lord Stamford's Newcastle beat Wild Rose.—*Grand Stand Plate.* Mr. Williams's Convivialist beat Doeskin, Lord Nelson, and 7 others.—*Her Majesty's Plate.* Mr. W. Day's Petra beat Cecilia, Jenny Longlegs, and 8 others.—*Epsom Four-year-old Stakes.* The Duke of Bedford's Luff walked over, and divided the stakes with Mr. Ten Broeck.

FRIDAY.—The *Oaks*. Butterfly beat Avalanche, Contadina, and 10 others.—*Durdans Stakes.* Tyrant beat Precursor and 4 others.—*Headley Stakes.* Lavu walked over.—*Glasgow Plate.* Miss Julia beat Apollo and 14 others.—*Ewell Plate.* Gorsehill beat Chanune and 12 others.—*Derby and Oaks Stakes.* Wee Polly beat Chain Pier and 9 others.—*Surrey Foal Stakes.* Ebony beat South Australian and 3 others.

THE FIGHT FOR THE CHAMPIONSHIP.—The great dispute about the belt and the championship was brought to a satisfactory termination on Friday. Both Sayers and Heenan met, by previous arrangement, at the office of the editor of *Bell's Life*, and had a lengthened interview with the referee in their late encounter. Various modes of resuming and deciding the fight were discussed, but, on account of the determination of the authorities to prevent it, the following proposition of the referee was accepted and agreed to by both men. The present belt is to remain in the hands of the referee, Heenan to have the right of contending against the first challenger who comes forward to claim it, and Sayers to retire from the ring. Sayers and Heenan are to be "measured," and have each a new belt made, which will be the exact counterpart of the old one. The stakes of 200*l*. a side will be drawn, and all bets upon the event will be declared null and void. It is proposed that the friends of each man shall subscribe for the belt to be given to the opponent. It is not unlikely that a Cheshire man named Hurst, much taller and stouter than Heenan, and known in sporting circles by the sobriquet of the "Staleybridge Infant," will put in a claim, and challenge Heenan. The American papers received this week describe the excitement caused by the accounts of the late fight as far surpassing that produced by the question of the Presidency or any other political subject. The newspaper offices never had such a run before. The *New York Herald* printed above one hundred thousand copies. The general feeling was that Heenan had won the fight fairly, and that the ring had been broken by Sayers's friends in order to save their money. A subscription had been opened for a testimonial to Heenan, which was expected to reach 5000 dollars.

Obituary.

SIR FORTUNATUS DWARRIS died on the 20th inst., at his house in Eccleston Square, in his 74th year. He was the eldest son of the late Mr. William Dwarris, a gentleman of some standing and position at Warwick. He was born in 1786, and was educated at Rugby, and afterwards at University College, Oxford, where he took his bachelor's degree in 1808. Three years later he was called to the bar at Lincoln's Inn, and for many years went the Midland Circuit. He received the honour of knighthood in 1838, on the occasion of the passing of an Act of Parliament for the reform of the colonial courts of law in conformity with the suggestions of a report of a commission of inquiry conducted mainly by himself. He was elected a bencher of the Middle Temple in 1850, and for some years held the post of one of the Masters in the Court of Queen's Bench, and also the Recordership of Newcastle-under-Lyne. He was the author of a "New Theory as to the Authorship of Junius," and of a legal work on the "Construction of Statutes." He married, in 1811, the daughter of Mr. Robert Brereton, but was left a widower in 1856.

MAJOR MACPHERSON, political agent at the court of the Maharajah of Gwalior, died on the 16th of April. As a political officer he possessed great abilities, and was one of the foremost among those who rendered important services to Government during the most critical period of the mutiny. Prior to his appointment at the Court of Scindia, he had rendered important services in the Cole districts, where he exercised an influence by force of character, similar to that of the late General Nicholson among the tribes of the Punjaub frontier.

COLONEL BOULTBEE, Colonel of the 1st Regiment of Warwickshire Militia was accidentally killed at Warwick on Thursday during a review of that regiment. He was riding at the head of his regiment, on an Arabian charger, when it started, and struck against the horse of Lord Leigh, the lord lieutenant. The colonel lost his stirrup, and the horse dashed away with him towards Stratford, and threw him. By the fall he sustained concussion of the brain, and died in the course of the afternoon.

MR. PLOWDEN, Her Majesty's Consul in Abyssinia, has died of wounds received in an attack made upon him by one of the chiefs under Negoussi, the rebel Governor of Tigré, while he was travelling through that province on his way from Gondar to Massowa. He was ransomed by King Theodore for 1000 dollars, but was already in a dying state.

MR SPENCER DE HORSEY died on Sunday last at his residence at Cowes. The deceased, who was formerly well known as a member of the House of Commons, married in 1824 Lady Louisa Rous, youngest daughter of the first Earl of Stradbroke, and sister to the present earl, by whom he leaves two sons, Captain de Horsey, R.N., and Lieut-Colonel de Horsey, of the Grenadier Guards, and a daughter, the Countess of Cardigan.

MR. F. H GLOVER, F.S.A., librarian to the Queen, died on Wednesday at his residence adjoining the Palace, from carbuncle in the back of his neck. He had been librarian to her Majesty for upwards of 20 years, and was much respected by a large circle of literary and antiquarian friends.

MR. ALBERT SMITH died on Wednesday morning at his residence at North End, Fulham. On Monday evening he appeared as usual in his entertainment at the Egyptian Hall, and afterwards had a sudden attack of bronchitis which prevented his re-appearance on Tuesday, as announced. A few months since he had a seizure which excited grave apprehensions for him at the time, but his speedy reappearance encouraged the hope that his health had not been permanently affected, and the cause of his ultimate death would appear to have had no connection with that attack. Mr. Albert Smith was born in 1816 at Chertsey, and was educated at Merchant Taylors' School. He became a member of the College of Surgeons in 1838, after which he repaired to Paris and attended the hospital of the Hôtel Dieu. In September of that year he visited Chamouni. He then returned to England, and commenced practice with his father at Chertsey. His literary tastes were early developed. These he first gratified by some contributions to the "Medical Times," in which appeared "Jasper Buddle, or Confessions of a Dissecting-room Porter." Not being entirely satisfied with his position as a surgeon, he prepared views of the scenery of the Alps, together with a descriptive lecture, with which he visited most of the small towns in the vicinity of the metropolis during 1839 and 1840. In 1841 he settled in London and commenced writing for the magazines, in which appeared among a variety of miscellaneous articles several of his novels, "The Adventures of Mr. Ledbury," "The Scattergood Family," "The Marchioness of Brinviliers," "Christopher Tadpole," and "The Pottleton Legacy," all of which were published subsequently as separate works, and were very successful. During 1847-49 he wrote a series of sketches, comprising "The Natural Histories of Stuck-up People," "The Ballet Girl," "The Gent," "The Flirt," "The Idler upon Town," and "Evening Parties." In 1849 he visited the East, and on his return published "A Month at Constantinople," in which the exaggerated notions respecting its romance and beauty were cleverly ridiculed; and in 1850 he produced an entertainment called "The Overland Mail," wherein he was the only performer, and, with the aid of scenery, he graphically described that route. He also in this year wrote two or three operatic burlesques. In the autumn of 1851 he revisited Switzerland and Savoy, and succeeded with much difficulty in gaining the summit of Mont Blanc, a feat which afterwards became one of every-day occurrence. On March, 1852, he produced at the Egyptian Hall his entertainment of "The Ascent of Mont Blanc," wherein his rapid but distinct utterance, his humour, the scenery, and his careful attention to the comfort of his auditors, enabled him to achieve an unprecedented success. This entertainment continued a standard favourite for several years, when Mr. Smith determined on introducing the British public to an entirely new field of observation. In the autumn of 1858, therefore, he went to China, and after remaining there a sufficient time to make himself acquainted with the manners, customs, and national peculiarities of the inhabitants of the Flowery Land, he returned to London, and commenced a series of pictorial and descriptive Chinese entertainments, always delighting his overflowing audiences. About a year ago the deceased married the eldest daughter of Mr. Robert Keeley, the comedian. His pictorial entertainments are believed to have enabled him to realise a considerable fortune.

WILLS.—The will of the Dowager Lady Leigh has been sworn under 14,000*l*., personalty; General Sir Thomas M'Mahon, G.C.B., 35,000*l*.; Major-General Law, 14,000*l*.

BIRTHS.—On the 21st inst, at Hanover Square, the Countess of HAREWOOD, of a daughter—19th inst, at East Close, Christchurch, the wife of Sir GEORGE JERVIS, Bart., of a daughter—19th inst, at Ballygawley House, county Tyrone, Lady STEWART, of a daughter—20th inst, at Hollinwood Parsonage, Manchester, the Hon. Mrs. J. A. ATKINSON, of a son—10th inst, at Braddon Tor, Torquay, the wife of Vice-Admiral Sir M. STOPFORD, of a son—11th inst, at Gibraltar, the wife of Captain FREDERICK SAYER, of a son—7th inst, at 2, Smithgrove Terrace, Cork, the wife of Major the Hon. WILLIAM YELVERTON, Royal Artillery, of a son—16th inst, at Wythenshawe, the wife of T. W. TATTON, Esq., of a daughter, stillborn.

MARRIAGES.—On the 16th inst, at St. James's Church, Piccadilly, Sir CHARLES WILLIAM ATHOLL OAKELEY, Bart., to

ELLEN, only child of JOHN MEESON PARSONS, Esq., of Angley Park, Cranbrook, and Raymond's Buildings, Gray's Inn—19th inst, at All Souls', Langham Place, the Rev. J. WILLIAMS, Vicar of Gringley, Notts, to MARY, daughter of Vice-Admiral the Hon. ALEXANDER JONES—17th inst, at St. James's, Paddington, NATHANIEL TERTIUS LAWRENCE, Esq., of 6, New Square, Lincoln's Inn, to LAURA, only daughter of JAMES BACON, Esq., Q.C., of 1, Kensington Garden Terrace.

DEATHS.—On the 16th inst, at 19, Eaton Place, the Hon. AUGUSTUS BARRINGTON, second surviving son of George, fifth Viscount Barrington, aged 61—13th inst, at Castlegar, Ahascragh, the Hon. CATHERINE FITZGERALD, sister of the late Lord Fitzgerald and Vesey, aged 70—22d inst, Lieut.-Colonel Sir ARCHIBALD MURRAY, Bart., late of the 3d Fusilier Guards, aged 67—14th inst, at Portobello, near Edinburgh, WILLIAM CARR DE LA POER, only surviving son of Sir GEORGE DE LA POER BERESFORD, Bart, aged 2—21st inst, at his residence, North Villa, Regent's Park, Major-General WILLIAM MILES, H.E.I.S, and of Cheshunt, Herts—19th inst, at Voelas, Denbighshire, SARAH, wife of C. W. G. WYNNE, Esq, aged 69—14th inst, at St. Helier's, Jersey, Colonel RICHARD VYVYAN, late of Trewan Park, Cornwall, Magistrate and Deputy-Lieutenant of that county—15th inst, at Kilcumney Glebe, the Rev. MICHAEL DE COURCY, D.D., for 43 years rector of the parish of Dumcree, and Precentor of Ardfert, in the diocese of Limerick, eldest son of Vice-Admiral the Hon. Michael De Courcy, aged 72—19th inst, Mr. ROBERT MONTGOMERY, of Woolwich, brother of the late James Montgomery, the poet, aged 85.

Markets.

COVENT GARDEN.—May 26.

Early Cabbages and other spring vegetables make their appearance but slowly. Pine Apples and Grapes have not altered since our last. Apples and Pears are all but over. Oranges are plentiful and cheap. Strawberries are now coming in in tolerable abundance. Spanish Nuts fetch 16s. per bushel. Cobs realise 1s. per lb. Rhubarb is still furnished in large quantities. Parsley is cheaper, but still dear. Green Peas, and even Broad Beans of foreign growth, may be obtained. Potatoes realise 4s. 6d. a bushel. New frame ones may be had at from 3s. to 5s. per pound. Mushrooms may be obtained in small quantities. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Azaleas, Heaths, Primulas, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Pears, per doz., 6s to 10s
Grapes, per lb., 12s to 16s	Oranges, per 100, 2s 6d to 8s
Strawberries, p. lb., 4s to 8s	Lemons, per 100, 5s to 8s
Apples, per doz., 2s to 6s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 3s to 6s	Cucumbers, each, 1s to 3s
Seakale, per basket, 2s to 3s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Peas, p. half sieve, 8s to 10s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 2s to 3s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d

HOPS.—BOROUGH MARKET, FRIDAY, May 25.

Messrs. Pattenden & Smith report the market about the same as on Monday. There is a bare supply of fine Weald Kent and Sussex Hops on offer. A few flies have made their appearance in Kent and Sussex.

BUTTER MARKET.—May 25.

Best Fresh Butter .. .. 14s. per dozen lbs.
Second do. do. .. 12s. to 13s. „ „
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

COAL MARKET.—MAY 24.

Bell's Primrose, 13s.; Byass's Bebside West Hartley, 15s. 9d.; Davison's West Hartley, 15s 9d.; Howard's West Hartley, 15s. 9d.; Tanfield Moor Butes, 13s. 3d.; Walker Primrose, 13s. 3d.; Wylam, 16s. 6d.; Walls End Acorn Close, 16s. 9d.; Walls End Eden, 16s. 9d.; Walls End Harton, 16s.; Walls End Hilda, 15s. 6d.; Eden Main, 17s.; Walls End Braddyll's Hetton, 17s. 3d; Walls End Framwellgate, 16s. 9d.; Walls End Haswell, 18s.; Walls End Hetton, 18s; Walls End Russell's Hetton, 17s. 3d.; Walls End South Hetton, 18s.; Walls End Heugh Hall, 16s. 9d.; Walls End Hunwick, 15s. 6d.; Walls End Kelloe, 17s. 6d.; Walls End South Hartlepool, 17s. 3d.; Walls End South Durham, 17s; Walls End South Whitworth, 15s. 6d.; Walls End Thorpe, 17s.; Carway and Duffryn Malting, 22s. 6d.; Llangennech, 21s.—95 ships at market.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, May 24.

Prime Meadow Hay	75s	to 84s	Clover	95s to 115s
Superior do. (old) ..	90	95	New Clover	— —
Inferior do.	60	70	Second cut do. ..	84 92
New do.	—	—	Straw	25 32
Rowen	60	70		

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, May 24.

Sup. Meadow Hay ..	88s	to 95s	Inferior Clover ..	88s to 100s
Inferior do.	72	80	New do.	— —
New do.	—	—	Straw	32 36
Superior Clover ..	108	115		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, May 24.

Fine old Hay	90s	to 96s	Fine old Clover ..	108s to 114s
Inferior do	80	88	Inferior do	98 105
Prime New Hay ..	—	—	Fine New Clover ..	— —
Inferior do.	—	—	Fine 2d cut	90 98
Straw	26	30	Inferior do.	75 85

BRITISH WOOLS.—LONDON, FRIDAY, May 25.

Our market is in a state of expectancy relative to the new clip. Our trade is healthy, but no disposition on the part of the manufacturers exists to speculate, and they only purchase for present requirements. The farmers generally seem disposed to hold for high prices.

POTATOES.—SOUTHWARK, MONDAY, May 21.

During the past week the arrivals coastwise have been large for the season, and the weather mild, trade slow, and most sorts 10s. to 15s. per ton cheaper. Quotations:—York Regents, 120s. to 140s.; do. Flukes, 120s. to 140s.; Lincolnshire Regents, 100s. to 120s.; Dunbar do., 120s. to 140s.; do. Reds, 115s. to 120s.; Perth, Forfar, and Fifeshire do, 100s. to 120s.; do. Reds and Rocks, 100s. to 120s.; Irish Whites, 90s. to 100s.

MARK LANE.—MONDAY, May 21.

The supply of English Wheat to this morning's market was moderate, and the great bulk of it was sold at an advance of 1s. to 2s. per qr. upon the prices of last Monday; business in foreign was less active than on Friday; holders, however, were very firm, and insisted upon the extreme prices of that day, being the same improvement as upon English. Barley is a dull sale, and 1s. to 2s. per qr. cheaper. Beans and Peas bring fully the prices of this day se'nnight. The supplies of Oats continue very short, and the trade is firm at rather over last week's rates. The top price of town-made Flour is raised 4s. per sack; Norfolk is 2s. per sack, and American 1s. per barrel dearer.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	50—56	Red	50—52
— — fine selected runs..ditto	51—60	Red	52—56
— — Talavera	56—62		
— Norfolk	—	Red	—
— Foreign	48—63		
BARLEY, grind. & dist., 24s to 31s..Chev.	38—45	Malting .	36—41
— Foreign..grinding and distilling	29—34	Malting .	35—42
OATS, Essex and Suffolk	19—26		
— Scotch and Lincolnshire..Potato	23—30	Feed ..	19—27
— Irish .....Potato	24—30	Feed ..	19—25
— Foreign.....Poland and Brew	26—29	Feed ..	24—29
RYE	35—38	Foreign.	—
RYE-MEAL, foreign	—		
BEANS, Mazagan....32s to 40s....Tick	34—43	Harrow .	34—43
— Pigeon .....36s—47s..Winds	48—54	Longpod	—
— Foreign .....Small	38—46	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	38—40	Suffolk .	36—41
— Maple .... —s to —s ..... Grey	32—34	Foreign .	30—40
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	44—50		
— 2d do. ..... ditto	35—44	Country.	35—44
— Foreign .....per barrel	25—31	Per sack	30—37

FRIDAY, May 25.

The weather during the past eight days has been very fine and favourable for the growing crops. The wind was chiefly westerly, yesterday S.W. and to-day N.W. Notwithstanding the above, the Wheat trade has been unusually firm, and an advance of 1s. and 1s. to 2s. per qr. upon the week has been nearly everywhere realised, but in the markets held during the last two or three days less activity was observable. Spring Corn of all descriptions is a slow sale at declining prices; Oats in this and a few other markets being the exception. The Flour trade was inactive, caused perhaps in some degree by the top price here being raised to 50s., and the proportionate advance which is usual in such markets is still regulated by the London top price. From the South of Europe 25 grain and seed-laden vessels have arrived off the coast during the week, including 4 of Wheat, 10 of Maize, 1 of Barley, 1 of Rye, and 1 of Linseed. The sales concluded are as follow:—Odessa Ghirka Wheat at 53s., Taganrog Ghirka at 52s. 6d., Marianopoli at 54s., all per 492 lbs.; Egyptian Barley at 28s. 3d., Danube at 28s. 4½d., Ibrail at 28s. 6d., all per 400 lbs.; Odessa Maize at 35s. 7½d. per qr., and 37s. per 492 lbs. The arrivals of English Wheat this week have been larger than of late, and good of all foreign grain. The attendance at to-day's market was small. English Wheat met a slow sale at Monday's prices; holders of foreign being very firm in their demands but few sales were effected, on some of which a slight concession was made in order to clear vessels coming in demurrage. Barley is a slow sale and rather cheaper Beans and Peas are unaltered in value. The Oat trade is quiet, and in some instances a decline of 6d. per qr has been accepted.

ARRIVALS FROM May 21 TO May 25.

	Wheat.	Barley.	Oats.	Flour.
English ..	3980 qrs.	450 qrs.	— qrs.	1220 sks.
Irish	— „	— „	900 „	— „
Foreign ..	21120 „	13950 „	29140 „	1120 „ / — brls.

LIVERPOOL, Tuesday, May 22.—We had a fair attendance of millers and dealers at our Corn Exchange this morning, but the demand for both Wheat and Flour proved quite in retail; prices, however, must be noted fully as good as on Friday. Indian Corn had a moderate consumptive inquiry at previous rates. Oats and Oatmeal were both dull of sale. Egyptian Beans declined 6d. per qr. Peas and Barley unchanged. English Linseed cake is down from 5s. to 10s. per ton. Notwithstanding the inactivity of the market prices close steady.

FRIDAY, May 25.—The grain market has been quiet but steady; Wheat firm at 1d. advance. Flour unchanged. Indian Corn and Beans continue firm. Oats and Oatmeal unaltered.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
April 14..	49s 1d	36s 2d	24s 2d	36s 10d	39s 9d	38s 3d
— 21..	49 6	37 6	24 2	32 11	42 0	39 2
— 28..	51 2	37 11	24 5	31 5	41 6	38 1
May 5..	52 6	37 5	25 5	34 0	42 4	39 9
— 12..	52 6	37 7	25 10	34 1	43 8	40 3
— 19..	52 1	36 6	25 3	36 2	44 3	39 5
Agg. Aver.	51 2	37 4	24 10	34 3	42 3	39 2

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Apr. 14.	Apr. 21.	Apr. 28.	May 5.	May 12.	May 19.
52s 6d	..	..	..			..
52 1	..	..	..	..	..	
51 2	..	..		..	..	..
49 6	..		..	..	..	..
49 1		..	..	..	..	..
.	..	.	..	..	..	..

METROPOLITAN CATTLE MARKET.

MONDAY, May 21.

The number of Beasts is rather larger than on Monday last, yet an increased demand has caused a considerable rise in price. The supply of Sheep is about the same as last week. There is, however, an extraordinary increase in the demand, and an almost unprecedented rise in price. Good Calves and Lambs are dearer. From Germany and Holland there are 300 Beasts. 4000 Sheep, and 86 Calves; from Norfolk and Suffolk, 2200 Beasts; and 200 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	5	4	to 5	6	Best Long-wools	..	..	to	..
Best Short-horns	5	0	— 5	2	Do. Shorn	5	6	— 5	8
2d quality Beasts	4	0	— 4	8	Ewes & 2d quality	..	..	—	..
Best Downs and Half-breds	..	..	to	..	Do. Shorn	4	10	— 5	2
Do. Shorn	6	0	— 6	4	Lambs	7	0	— 7	6
					Calves	5	4	— 6	0
					Pigs	4	8	— 5	2

Beasts, 3480; Sheep & Lambs, 22,920; Calves, 180; Pigs, 420.

THURSDAY, May 24.

There is a large increase in the number of Beasts, and trade is dull, consequently prices are lower. The high quotations of Monday last have induced many to send to market who otherwise would not have done so. We have consequently a reaction. Trade is very heavy, and several remain unsold. Calves and Lambs were also lower. From Germany and Holland there are 200 Beasts, 1000 Sheep, and 224 Calves; from Norfolk and Suffolk, 500 Beasts; from the northern and midland counties 160, and 140 Milch Cows from the home counties.

Best Scots, Herefords, &c.	5	0	to 5	4	Best Long-wools	..	..	to	..
Best Short-horns	4	10	— 5	0	Do. Shorn	5	2	— 5	4
2d quality Beasts	3	8	— 4	6	Ewes & 2d quality	..	..	—	..
Best Downs and Half-breds	..	..	—	..	Do. Shorn	4	6	— 5	0
Do. Shorn	5	8	— 6	0	Lambs	6	8	— 7	4
					Calves	5	0	— 5	8
					Pigs	4	4	— 5	0

Beasts, 1330; Sheep & Lambs, 11,280; Calves, 460; Pigs, 160.

TO PARENTS AND GUARDIANS.—The Widow of the late Mr. JOSEPH SHILLING, Nurseryman, of Winchester, Hants, is anxious to receive into her family one or two little GIRLS to EDUCATE with her own children. An experienced and kind Governess is kept, and every care would be taken to secure to them the comforts of home. Respectable references given and required.—Further particulars may be obtained by addressing Mrs. J. SHILLING, Southgate Nursery, Winchester, Hants.

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The Gardeners' Chronicle Newspaper.

SATURDAY, JUNE 2, 1860.

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HORTICULTURAL GARDENS.—The *Gardeners' Chronicle* of May 12, containing Mr. NESFIELD'S COLOURED PLAN for the NEW GARDEN at Kensington Gore, is still on Sale at the Office, 41, Wellington Street, Covent Garden, W.C. and will be sent by post on receipt of six stamps.

News of the Week.

IN the House of Commons on Friday, after the appointment of the Select Committee to search for precedents in reference to the recent vote of the House of Lords on the Paper Duty Repeal Bill, a Select Committee was appointed to inquire into the alleged decay of the gun-boats and mortar boats of the Royal Navy, and the Refreshment Houses and Wine Licenses Bill was read a third time and passed. The House then adjourned to Thursday for the Whitsun Holidays. On Thursday, on the order of the day for going into Committee of Supply on the Army Estimates, a discussion of six hours' duration ensued on a great variety of military topics, including the Yeomanry Cavalry, the distinctions between officers of the Guards and the Line, the Militia and Volunteers, the Land Transport Corps, the interference of the War Office with the Irish Fisheries, the appointment of Gen. GREY to the colonelcy of the 3d Regiment, and the military defences of the colonies. Mr. S. HERBERT in reply said that the omission to call out the Yeomanry was caused by motives of economy in a year of great pressure. As to the Land Transport Corps he entirely agreed in the opinion of the committee which had examined their claims, and pronounced them to be unfounded, believing that the Government had strictly performed the conditions under which the men were engaged. Adverting to the colonial question, he said that the Government would be imprudent if they proposed any plan till the colonies themselves had been fully consulted. With regard to the appointment of General GREY to the colonelcy of the 3d Buffs, he defended it on the ground that General GREY, so far from never having been out of Hyde Park, as had been alleged, had commanded the 71st Regiment in Canada for nine years. During the entire time that General GREY was in the army there were only two foreign expeditions, one to Portugal and the other to Quebec, and he happened to be in both. His appointment had been approved by the Commander-in-Chief, not because he had accepted an office at Court, but because his previous military services and standing entitled him to it. Mr. DISRAELI also defended the appointment, and said that if persons in the position of General GREY were to be deprived of the fair rewards of their profession because they had been selected to offices in the Royal household, a very inferior class of military men would be found about the person of the Sovereign and the other members of the Royal family. The House then went into Committee of Supply, when a supplemental vote was taken for 1907 officers and men for the army, with a vote of 3,236,701*l.* for pay and allowances. The Chairman then reported progress. Sir JOHN BARNARD'S Act Repeal Bill was read a third time and passed.

Despatches from Sicily announce the capture of Palermo by General GARIBALDI. The attack commenced on the morning of the 27th ult., and after a sanguinary combat of several hours, during which the city was bombarded by the Royal forces by sea and land, GARIBALDI, at the head of his volunteers, penetrated, flag in hand, into the centre of the city, and established his headquarters there. Before night the insurgents were masters of all parts of the city south of the Strada di Toledo, and the KING'S Palace had been captured and burnt down. Other towns in Sicily have since risen, the inhabitants everywhere shouting, "Italy for ever!" "VICTOR EMMANUEL for ever!" The fall of Palermo has caused great agitation at Naples. The Ministers have tendered their resignation, and though it is rumoured that a Liberal Ministry will be formed, the KING and Court are evidently preparing to secure their safety by flight. The Sardinian Chamber of Deputies on Tuesday approved the Treaty of Cession of Savoy and Nice by a majority of 196, the numbers being 229 to 33, 23 members having abstained from voting. A despatch from Constantinople confirms the illness of the SULTAN, and states that his brother has been confined in the Seraglio, a reactionary plot in his favour having been discovered. KIPRISLI MEHEMED PASHA has been appointed Grand Vizier in place of MEHEMED RUSCHDI PASHA, and OMAR PASHA has been recalled to Constantinople for the purpose of repressing the agitation among the Sclavonic population.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family arrived at Buckingham Palace on Thursday from Osborne. On Thursday morning, the 24th ult., being her Majesty's birthday, the band of the Royal Marines played a matinale at 7 A.M. The Queen, Prince Consort, the Prince of Wales, and the junior members of the Royal family afterwards walked in the grounds. In the afternoon her Majesty and the Prince Consort, accompanied by the Princess Alice, the Prince of Wales, and the Princess of Leiningen, drove in a *char-à-banc* and four. The Princesses Helena and Louisa, Prince Arthur, and the Ladies in Waiting followed in a second carriage. In the evening her Majesty had a dinner party and a dance in the Council Chamber. On Friday morning the band of the Royal Marines played at her Majesty's breakfast, to celebrate the birthday of the Princess Helena. The Queen and the Prince Consort afterwards walked in the grounds. The Prince of Wales left Osborne for Southampton, on his return to Oxford. The Hon. Captain Denman arrived on a visit. In the evening the Queen had a dinner party. On Saturday morning the Queen and Prince Consort walked in the grounds. The Prince and Princess of Leiningen and

the Hon. Capt. Denman left Osborne for Portsmouth. On Sunday morning the Queen, Prince Consort, the Duchess of Kent, and the elder members of the Royal family attended Divine service in the Palace. The Rev. G. Prothero officiated. On Monday morning the Queen walked in the grounds. The Prince Consort went to Portsmouth in the Fairy and visited the fortifications. The Duchess of Kent took an airing. On Tuesday morning the Queen, Prince Consort, Princesses Alice, Helena, and Louisa, and Prince Arthur, went to Whippingham, where her Majesty laid the first stone of the new church. The Duchess of Kent left Osborne for Frogmore. In the afternoon the Queen, the Prince Consort, the Princess Alice, and Princess Helena took an airing, the Prince Consort driving. On Thursday afternoon the Queen and Prince Consort, accompanied by the Princesses Alice, Helena, Louisa, and Beatrice, Princes Arthur and Leopold, left Osborne for Buckingham Palace, travelling to the private station at Vauxhall by a special train on the South-Western Railway.

BISHOPRIC OF DURHAM.—The Hon. and Rev. Dr. Montagu Villiers, Bishop of Carlisle, has been translated to the see of Durham, vacant by the promotion of Dr. Longley to the Archbishopric of York. By this translation Dr. Wigram, the new Bishop of Rochester, will obtain a seat in the House of Lords, and the new Bishop of Carlisle will remain out of Parliament until a vacancy occurs in the Episcopal Bench, other than the two Archbishops or the Bishops of London, Durham, and Winchester.

KNIGHTHOOD. — The Queen has directed letters patent to be passed under the Great Seal, granting the dignity of a Knight of the United Kingdom to William Martin, Esq., late Chief Justice of New Zealand; Francis Brady, Esq., Chief Justice of Newfoundland; James Hurtle Fisher, Esq., President of the Legislative Council, South Australia; Christoffel Josephus Brand, Esq., Speaker of the House of Assembly of the Cape of Good Hope; Francis Murphy, Esq., Speaker of the House of Assembly of Victoria; Redmond Barry, Esq., Senior Puisne Judge of Victoria; Thomas Maclear, Esq., Astronomer Royal at the Cape of Good Hope; and Walter Currie, Esq., Commandant of the Armed Mounted Police at the Cape of Good Hope.

THE CHANNEL FLEET, consisting of the Conqueror, 101; Donegal, 101; Algiers, 91; Aboukir, 91; Trafalgar, 91; Centurion, 80; Mars, 80; and Diadem, 32, has arrived in the Downs from Portland, and the Royal Albert, 121, bearing the flag of Rear-Admiral Sir Charles Fremantle, left Plymouth on Tuesday to join it. It is reported that the fleet will visit the coasts of Ireland and Scotland.

INCOME-TAX.—It appears from a statistical abstract, published by order of Parliament, that more than 125,000,000*l.* have been paid as income-tax since it was re-established by the late Sir R. Peel.

Foreign.

FRANCE. — The *Moniteur* of Thursday announces that the session of the Corps Législatif has been adjourned until June 30. The Senate has discussed the petitions relative to the legal position of religious congregations and associations. M. Dupin, in making the request in the name of the Committee, proposed to refer the petitions to the Ministers of the Interior, of Justice, and of Public Worship. In the discussion which followed several Senators proposed the order of the day, which was rejected by 69 votes against 28. The petitions have been sent to the Ministers of the Interior and Public Worship, but will not be referred to the Minister of Justice. The *Moniteur* of yesterday contained the following article :—

"The Government believes it its duty to protest against the malevolent suppositions and accusations, and the thoughtless interpretations which have been produced by the annexation of Savoy and Nice. It recalls the circumstances which brought about the cession of two provinces separated from Piedmont by the highest mountains in Europe, and says:—The French Government, far from having a design to provoke or to give rise to complications in Europe, in order to find an occasion for further aggrandisement, is animated by thoughts of quite an opposite character. The Government deplores the manœuvres destined to propagate daily impressions the least exact as regards its real intentions. The Emperor has made every effort to re-establish in Europe the confidence which has been shaken. His sole desire is to live in peace with other sovereigns, his allies, and to use all his endeavours to actively develope the resources of France."

Prince Jerome, the Emperor's uncle, had a severe attack of congestion of the brain on Tuesday. On Wednesday morning the health of his Imperial Highness had slightly improved, but on Thursday the amendment was not maintained, and there is now little hope of his recovery. The Grand Duchess Marie of Russia has arrived in Paris; and the Emperor and Empress left Paris yesterday for Lyons to meet the Empress-Mother of Russia, who was to arrive in that city last evening from Marseilles on her return from Nice. Her Majesty on landing at Marseilles yesterday morning was received by Count Kisseleff and the authorities, and immediately set out for Lyons, where she was to remain last night, intending to proceed to-day to Geneva. A despatch from Marseilles states that six vessels of the fleet were recalled to Toulon on the 24th ult., and ordered to complete provisioning. Three of these vessels will be stationed off the Isles of Hyères; the other three will proceed to Genoa and bring back troops. A large number of English shipwrights recently discharged from Portsmouth dockyard are now working in the French dockyards, where there is plenty of work at their command. One of the effects of the late treaty of commerce with England is already visible in Paris. Several shops are crowded with English porcelain of a quality very superior to that hitherto used in France. The *Moniteur* of Tuesday publishes a speech delivered by M. Fould, Minister of State, at an agricultural meeting at Tarbes, of which the following is an abstract :—

"After having shown the material progress which has been obtained, the Minister said: The economical course which has recently been inaugurated will create a fruitful era of wealth and prosperity. He recalled the moderation of the Emperor shown after the late war, and said, this moderation in the past is a certain guarantee for the future. The Emperor has several times proclaimed that he only wished to insure to France the rank which belonged to her. M. Fould advised people not to be lead away by the feeling of uneasiness which 'parties' are strenuously endeavouring to spread. Notwithstanding the events which disturb some States, notwithstanding the agitation and mistrust which those parties attempt to excite in the public mind, France, quiet and prosperous, can devote herself with safety to public works. She knows the Emperor to be strong enough to inspire all with respect for her rights, and to be too loyal a neighbour, and too faithful an ally, to menace the rights of others."

SPAIN.—The Cortes were opened on the 25th ult. by the Queen in person. The Royal speech recalls the war with Morocco, which it says has ended in a glorious peace, and in a treaty compensating as much as possible for the expenses of the Treasury. The relations of Spain with all the Powers are satisfactory. The convention with Rome will tranquillise the public conscience and facilitate progress. The Pope has thus received a token of the attachment of the Queen and the nation. The Queen deplores the Carlist attempt; but, the danger being removed, is happy to accord an amnesty. The Chamber will shortly receive the budget and political and administrative projects of law. The Queen, in conclusion, reckons upon the union of the nation, which will insure stability to the throne and happiness to the country. Senor Martinez de la Rosa has been elected President of the Cortes, which have unanimously resolved to consider the proposal declaring the army of Marshal O'Donnell and the Navy to have deserved well of their country for their conduct in the African campaign. Don Juan, the youngest brother of Count de Montemolin, has adhered to the Act by which the heirs of Don Carlos renounce all claim to the throne.

DENMARK.—The news of an approaching interview between the Kings of Denmark and Sweden is confirmed. The interview is to be of a very friendly and unceremonious character, and is to take place at the fortress of Kronborg, near the Sound. The King of Sweden declines all official reception, even that of a grand dinner at Court. From Kronborg the King of Denmark will proceed to the head-quarters of the Swedish army, and assist at its summer manœuvres, which are to take place under the command of King Charles XV. during the latter half of June.

SWITZERLAND.—The Federal Council on Sunday transmitted a Note to Paris refuting the arguments contained in M. Thouvenel's despatches of the 7th and 16th ult. The Federal Council maintains the actual validity of the treaties, and shows that the neutrality of Switzerland by no means depends on the consideration and goodwill of the Powers. The Federal Council has, under conditions of reciprocity, proposed to the Cabinet of Turin to apply to the Italian territories annexed to Sardinia the treaties of commerce, extradition, and other international conventions existing between Switzerland and the former Sardinian kingdom. The voting at St. Galle for the acceptance or rejection of the new constitution terminated on Monday, when an Ultramontane tendency caused its rejection by 20,669 to 18,330 votes.

PRUSSIA.—The Prussian journals are engaged in a discussion as to the means whereby the contents of a despatch from the Prince Regent to the Prince Consort of England have been brought to the knowledge of the French Government. They state that thefts of despatches have been discovered, and one of them asserts that the contents of the despatch in question can only have become known through an indiscreet communication in ministerial circles on the English side of the Channel. A Dusseldorf paper has the following account of an interview between Baron Schleinitz and the French Ambassador on the subject, which it states it has received from a good source, though the *Prussian Gazette* denies its authenticity :—

"At the latter end of April the French Ambassador at Berlin, the Prince de la Tour d'Auvergne, called on Baron von Schleinitz, Minister of Foreign Affairs, and after some civil reference to the value which the Emperor placed upon the friendship of Prussia, requested Baron Schleinitz to give him any information he possessed as to the authenticity of a document the copy of which he presented. It purported to be a letter sent from the Prince Regent to the Prince Consort of England, in which family matters were spoken of, and then some remarks on the politics of the day were added, in which the Emperor Napoleon III. happened to be mentioned. Baron Schleinitz replied that he could give no information respecting the document, since he was not acquainted with the private correspondence of that high personage. His Excellency, however, urged that he must receive explanations upon the matter. The Emperor had always entertained the best wishes towards Prussia, and had believed that his sentiments were reciprocated by that country, and yet Prussian assurances and the expressions contained in the letter he produced were opposed to that belief. Baron Schleinitz hereupon answered that he was Minister in a constitutional state, and that the ministry of his country were responsible for all official negotiations and correspondence with foreign countries; and that, if an inquiry on the matter should take place, he would not withhold the information sought, in case reasons of state did not forbid such a communication to be made. Respecting the correspondence which the Prince Regent personally had with his august friends or relations, the Minister of a constitutional country had not the right to control the private communications of the Prince Regent, especially since they had no official character. These reasons, and the respect which must be most carefully preserved in a constitutional country towards the highest personage, forbade the Minister to initiate the investigation, or to hold an inquiry whether the document were genuine or not. The French Ambassador, apparently prepared for this objection, replied that his inquiry was purely of a formal nature, and could in no way interfere with the political importance of a good understanding between France and Prussia; but as the official assurances and the contents of the letter were so widely opposed, it would be plainly seen and pointed out by Baron Schleinitz that the copy of the document was not genuine. Baron Schleinitz answered that it was no question for him whether the copy were forged, as he naturally could not decide that point, since he neither knew anything of the private correspondence of the Prince Regent, nor could he be concerned in it. What necessarily came next for his consideration was that he possessed no authority, and that he must decidedly decline to institute an inquiry or an investigation into the contents of the letters which his Royal Highness exchanged with his august connections. However, Prussia was convinced of the high value of a good understanding with France, and nothing had taken place on the part of the former country in opposition to that feeling, while France had no reason to doubt the genuineness of the assurances of the Prussian Cabinet. On this the Prince de la Tour d'Auvergne replied that if Baron Schleinitz so decidedly declined to give him the wished for information, nothing remained for him but to await further instructions. The Prince then renewed his request for information from Baron Schleinitz, and signified to him that in case he continued to decline to grant the explanation, no other way remained to convince the Emperor of the genuineness of the sentiments of the Prussian Cabinet than a personal interview between the Emperor Napoleon III. and the Prince Regent."

BAVARIA.—King Maximilian II. intends to visit shortly the Court of Wurtemberg, and probably other Courts of Southern Germany.

HESSE CASSEL. — The official *Gazette* publishes a constitution granted to the country by the Elector. This constitution is dated May 30, and is based upon the resolutions of the Federal Diet of the 24th March and of the Diet of Electoral Hesse of 1857.

AUSTRIA.—The enlarged Council of the Empire was opened on Thursday by a short speech from the President, the Archduke Reinier, to whom Count Apponyi replied, in order to explain the particular position of the Hungarians in relation to the Council of the Empire. Count Androssy added a few words, expressing the loyalty of the Hungarians. The members of the Council were to be received yesterday by the Emperor, who was to address them in a cordial speech. This first session, according to the programme of the Cabinet, will be merely of a preparatory character, and will simply deliberate on the organic bases of the future governmental edifice. The Council will then be formally constituted by the deputies of the provincial diets, and by those archdukes who will take their seat in the Council by order of the Emperor. It is supposed that the Archduke Ferdinand Maximilian will ultimately be appointed President of the Council.

HUNGARY.—Counts Antoine Szecheny and Andrassy and the prelate Covachevich have been chosen by the Government to replace the three Hungarians who declined their appointment to the Council of the Empire. They have formally consented to their nominations, which have accordingly been signed by the Emperor.

ITALY.—The Sardinian Chamber of Deputies on Tuesday approved the Treaty of Cession of Savoy and Nice by 229 to 33 votes; 23 members abstained from voting. Immediately after the adoption of the treaty Signor Ratazzi said that he must again demand whether it was not owing to the counsels of France that the self government of Tuscany had been granted. "I also," he said "am a partisan of the French alliance, but to maintain this alliance the cession of Savoy suffices. At the same time I believe that the cession of two provinces, instead of strengthening the alliance, and causing the Emperor to guarantee to us the annexation of Central Italy, will have a contrary result, or none at all." He concluded by saying:—"We may be asked at a future time to make fresh territorial sacrifices, and it is to protest against such a system that I abstain from voting." Count Cavour in reply expressed his regret at having been compelled to say very delicate things, but the responsibility attached to his remarks upon the question must rest with S. Ratazzi. "We have," he said, "no guarantees from France in favour of the annexed provinces of Italy, as we have not asked for any. We have considered the declarations of France that she would ensure a policy of non-intervention on the part of the foreign Powers to be sufficient. France has not exercised the least pressure respecting the autonomy of Tuscany. She has limited herself to simple non-official diplomatic conversations, in which we have declared that the self-government of Tuscany must disappear. To this France has not made the least objection." From Naples we learn that great agitation prevails at Court and in the Ministry. After a Cabinet Council the Ministers tendered their resignation, and it is rumoured that a Liberal Ministry will be formed. It is alleged that large consignments of treasure have been made by Messrs. Rothschild from Naples to Marseilles, supposed to be on account of the King of Naples. At Venice it is said that a palace is preparing for the reception of his Majesty.—The Austrian Government is concentrating in the fortresses of the quadrilateral a *corps d'armée* of 70,000 men, to await the development of events in Italy. The

cavalry will be assembled in the plain of Pordenona, and the artillery in Verona. The latter will be provided with rifled cannon.

SICILY.—Garibaldi, having collected all his forces and military *matériel*, attacked the south side of Palermo at 10 o'clock on the morning of the 27th ult. A desperate combat ensued, which lasted six hours. The people made themselves masters of all parts of the town south of the Strada di Toledo. A terrible bombardment was opened by the Royal forces by sea and land, notwithstanding which the people continued to fight. The troops retired within the Royal Palace, the Custom-house, and the Castle. Hostilities were suspended from 10 to 12 o'clock, when the struggle recommenced with greater desperation. The Royal Palace was taken by the people, and in the evening was burnt down. The loss in killed and wounded was considerable. Other towns in Sicily have since risen, the inhabitants everywhere shouting, "Italy for ever!" "Victor Emmanuel for ever!" A few days previous to the capture of Palermo the Royal troops had a small success at Parco, where two strong columns, provided with artillery, placed the Garibaldians between two fires, causing a loss of 160 men. The insurgents fell back upon Piana. Garibaldi was not in this action, but at Misilmeri, enrolling recruits. The King had recalled four old generals from Sicily, including General Landi, and had sent General Marra and other younger generals in their place. Garibaldi will now declare Sicily annexed to the Italian kingdom, reserving the ratification of his resolution to universal suffrage. A provisional government under the presidency of Garibaldi will then direct the insurrection. The proclamation of Gen. Lanza concerning an amnesty and a viceroyalty had had no effect, and a very conciliatory proclamation which the General had issued to the army had been coldly received. The English and French residents had embarked on board the steamers of their respective nations; and all other strangers had taken refuge under their national flags. The authorities had ordered the doors of the public buildings to be built up to half their height. There was a panic among the public functionaries, and the director of the official journal had taken to flight. The churches were deserted. The greater part of the bankers and Neapolitan merchants had sent their money and valuables out of the kingdom.

TURKEY.—Letters from Constantinople announce the illness of the Sultan from an intermittent gastric fever, and the imprisonment of his brother in the Seraglio, a reactionary plot in his favour having been discovered. Kibrisli Mehemed Pasha has been appointed Grand Vizier, in place of Mehemed Ruschdi Pasha. The Greek Patriarch Cyrillus has tendered his resignation, which has been accepted by the Porte. The Sultan had transmitted a complimentary message to the Marquis de Lavalette, the French Ambassador. Everybody was impressed with the importance of his mission, and was awaiting his course of action, and the speech which, it was said, he would address to the Sultan. Omar Pacha has arrived at Constantinople, and it was said that he would be commissioned to repress the agitation among the Slavonic population. The Sultan had received the decoration of the Order of King Leopold at a private audience.

SERVIA.—The Porte has deferred replying to the Servians until after having consulted with the Powers. England is said to persist in her opposition to the hereditary rights of Prince Milosch.

THE PRINCIPALITIES.—A Democratic Ministry has been appointed in Moldavia. The senate has impeached the former Ministers. The Ministry of Wallachia is said to be on the point of dissolution.

CAPE OF GOOD HOPE.—The Colonial Parliament was appointed to assemble on the 27th April, six days after the departure of the mail. The arrival of Governor Sir George Grey, in the flagship Forte, was looked for with much interest. Owing to disunion very little progress is making with the new railroads. A Bill is preparing to prohibit the importation of convict emigrants from Australia. The reduction of duties on French wines by Mr. Gladstone is expected to tell against the South African grower, especially as it is necessary to use much alcohol, by which the duty is increased. Notwithstanding the disease, the produce of the Vine this year is an average.

CHINA.—The correspondence between Mr. Bruce and Pan-wan-chang, the Chinese senior Secretary of State, in reference to the British ultimatum was published yesterday. The ultimatum demanded a formal apology for the affair in the Peiho, accompanied by a restoration of the guns, material, and abandoned ships that fell into the hands of the Chinese on that occasion; the immediate ratification at Pekin of the Treaty of Tien-sin, with provision for the conveyance thither of the British Envoy with proper dignity and honour, including his passage in a British vessel up the river to Tien-tsin; and the payment of the sum of four millions taels, stipulated by that Treaty, as indemnity for the expenses of the last war. These demands were accompanied by the usual statement of facts and *exposé* of motives. To this communication the Great Council returned the following extraordinary reply:—

DECREE.—"The Great Council writes a reply to the Commissioner Ho, which he is to transmit. The Council received yesterday (or a short time since) a despatch from the Commissioner, and with it a communication he had forwarded from the British Minister Bruce, the contents of which have occasioned the Council the greatest astonishment. He states (1), for instance, that Peh-tang was never alluded to by the Imperial Commissioners Kweiliang and his colleagues. It appears that last year the Imperial Commissioners, Kweiliang and his colleagues, waited for the British Minister at Shanghai for the express purpose of considering with him in person all the conditions proper to an exchange of treaties. On ascertaining that the Minister Bruce had arrived at Wu-sung, they wrote to him several times to engage him to meet them; their object being, in fact, to acquaint him that Taku was fortified (or that arrangements had been made for keeping people out of Taku), and that he must go by way of Peh-tang. He, however, repelled them, refusing them an interview. The Imperial Commissioners Kweihang and his colleagues, moreover, informed him that vessels of war must on no account (2) cross the bar; but the British Minister Bruce paid no attention to these words; and when, on arriving off the Tien-tsin coast (or, the port or ports of Tien-tsin) Hang, Governor-General of Chih li, despatched an officer with a communication to the effect that he was to proceed by way of Peh tang, and sent him a present of provisions, he would receive nothing, but suddenly brought his vessels into Taku, and (commenced) destroying the defensive apparatus there placed. How can he allege that he never received the slightest intimation that he was to go by Peh-tang? And, as he was coming to exchange treaties, why did he bring with him ships of war? It was plainly his intent to pick a quarrel. How, then, can he (when the blame is all his own) charge China with shortcoming towards him. The defences prepared at Taku are not either (as he implies) prepared to keep out the British (3). Suppose that some other nation's ships of war were to go to the length of presenting themselves under British colours, could it be left to them to commit any breach of propriety they pleased? Well, then, the defences of Taku cannot possibly be removed, even when the treaty shall have been exchanged. (Then the demand for) indemnity under different heads and for the restitution of guns, arms, and vessels, is yet more against decorum (4). The war expenses of China have been enormous. The cost of defending the coast from Kwang-tung and Fuh-kien up to Tien-tsin from first to last has not been short of several millions of money. Were she to demand repayment of England, England would find that her expenses do not amount to the half of those of China. As to restoring ships and guns, the year before last England destroyed the forts at Taku, and obtained possession of a number of guns belonging to China; ought she not, then, on her part to be considering how to make these good? But, besides this, half the British ships and guns (demanded) were sunk in the sea; they are not in the possession of China at all. The question may be dropped, therefore, by both parties alike. Then there is (the announcement that) the compromise by which, the treaties once exchanged, (the Minister) was to have resided somewhere else, is at an end. The compromise by which once the treaties were exchanged, (the Minister) was either to select some other place of residence, or to visit (the capital) whenever there might be business of importance to transact, was definitely settled by the British Minister Elgin in negotiation with the Imperial Commissioner Kweiliang and his colleagues. The revocation of this compromise now (announced) is even more unreasonable (than all the other propositions). Last year when, after the Americans had exchanged their treaty, there was an alteration in the rate of tonnage dues, and the ports of Tai-wan and Chengchow (Swatow) were opened to trade, the British Minister earnestly prayed for a like arrangement (in his favour). The English had not exchanged their treaty, but his Majesty the Emperor, liberal to foreign nations, and full of tender consideration for the interests of commerce, graciously sanctioned an extension of the boon to the English, for which they should be equally grateful (5). But, if the compromise duly negotiated is to be annulled, there will be no impropriety on the part of China if she cancel the arrangement by which she has conceded to the English (the same advantage of) the improvements in tonnage dues and trade that accrues to the Americans under their treaty. To come to the (British Minister's) request to be treated wih courtesy when he comes north to exchange treaties. If he be sincere in his desire for peace, let the Commissioner, when he shall have thought over all the details of the treaty, those which it will be proper to give effect to, and those respecting which compromise (or arrangement) is to be made, negotiate (with the British Minister), and when both parties shall be perfectly agreed, if he will come north without vessels of war, and with a moderate retinue, and will wait at Peh-tang to exchange the treaties, China will not take him to task for what is gone by. He must be directed to acquaint himself with the rules (observed or laid down) at the exchange of the American treaties, and the course to be pursued will be further discussed with him (by the Commissioner). But if he be resolved to bring up a number of vessels of war, and if he persist in proceeding by way of Taku, this will show that his true purpose is not the exchange of treaties, and it must be left to the high officer in charge of the coast (or port) defences to take such steps as shall be thereby rendered necessary (*lit.*, as shall accord with reason). The despatch written on this occasion (by the British Minister) is, in much of its language, too insubordinate and extravagant (for the Council) to discuss its propositions more than superficially (*lit.*, to go deep into argument). For the future he must not be so wanting in decorum. The above remarks will have to be communicated by the Commissioner to the British Minister, whom it will behove not to adhere obstinately to his own opinion, as, so doing, he will give cause to much trouble hereafter. A necessary communication."

UNITED STATES.—The Japanese Embassy arrived at Washington on the 14th inst., and were received with grand military and civic display, seeming greatly delighted. Their interview with the President took place on the 17th inst., and the reception is said to have been magnificent. The Republicans of Chicago had nominated Mr. Lincoln for the Presidency. The Illinois Convention had nominated Mr. Hamlin as President, and Mr. Maine as Vice-President. Great enthusiasm prevailed. Mr. Seward had determined upon closing his Senatorial career. Another instance of political malversation has just transpired, Mr. J. V. Fowler, the postmaster of New York, having just absconded leaving a deficit of 31,000*l*. He had held office for seven years, an unusually long term for any American functionary, and is described as a highly popular politician.

CALIFORNIA.—Letters from San Francisco of April 19 report that there is immense excitement throughout the State about the Washoe silver mines. Two or three leads are as rich as they well can be, but whether the whole district is argentiferous is yet to be seen; there is too much snow to allow of more than the most partial "prospecting." Meantime every one is bound to Washoe, and in a month or two I fully expect nearly every one will be running away from Washoe. The whole country is "staked out," and "unprospected" claims sell at from 1 to 50 dollars a foot.

CANADA.—The Canadian Parliament has passed resolutions for abolishing canal tolls, and the House has been prorogued. Extensive preparations are making throughout the provinces for the reception of the Prince of Wales.

Parliament.

HOUSE OF COMMONS.

FRIDAY.—*Convocation.*—In answer to Mr. KINNAIRD, Sir G. C. LEWIS said that the Convocation of the province of Canterbury at its last sitting memorialised the Crown to be allowed to meet to revise the 29th canon, which prohibits a father from standing as sponsor to his own child. Such permission had been given, but the amended canon would be of no force until the Crown assented to it. *The Lords and the Paper Duty Repeal Bill.*—Lord PALMERSTON moved that a select committee of 19 members be appointed to search the journals of both Houses of Parliament, in order to ascertain and report on the practice of each House with regard to several descriptions of Bills imposing or repealing taxes. He should abstain from entering at present into detail, and he trusted the House would accept the resolution without discussion. The resolution would not pledge the House to anything beyond a desire for information.—Sir J. PAKINGTON said that after what had occurred it was impossible to feel any surprise at the course which the noble lord was prepared to adopt. For his own part he was quite prepared to assent to the proposition, inasmuch as the noble lord had already given an assurance that the Government had no intention to precipitate a collision between the two Houses.—Mr. E. JAMES said that it was due to the privilege of the House, and to the dignity and personal respect of the Administration, that the Government should state in distinct terms what course they intended to take in the matter.—Mr. T. DUNCOMBE moved that as the Bill had been postponed by the House of Lords for six months, Parliament ought not again to adjourn beyond November next, in order that another opportunity may be afforded to the House of Lords of considering whether the Bill may not be advantageously agreed to.—Mr. WHALLEY seconded the amendment.—Mr. BRIGHT, after urging the great importance of this question, and accounting for the absence of any strong expression of public opinion upon it by the misrepresentations of the "dear" press of London, complained of the vagueness of the reference under which the committee would act. The use of terms so wide, he said, might cause the real grievance to be lost sight of. He should have proposed to ascertain whether the House of Lords had, in recent periods, refused to give effect to any Bill passed by the House of Commons for the repeal of a tax no longer deemed necessary for the service of the Crown, or for which a substitute had been provided. He thought the amendment offered a mode of getting out of the difficulty consistent with the dignity and honour of all parties; at the same time, as delay was a great reconciler of differences, he moved that the debate be adjourned to Thursday.—Lord J. RUSSELL opposed the amendment and the proposal of Mr. Bright, and justified the terms of the reference. Precedents, he observed, might be found of various kinds, and the question would be whether the House of Lords had gone beyond them. The Lords were jealous of their privileges, and reasonably so, and the House of Commons should be furnished with every kind of information on the subject. The amendment proposed by Mr. Duncombe went beyond, and far beyond, the occasion. While it would not be respectful to the other House, it would interfere with the prerogative of the Crown in proroguing Parliament.—Mr. CLAY objected to the amendment that it provided no means of vindicating the privileges of that House. After considerable discussion both amendments were withdrawn, and the original motion, amended by making the committee to consist of 21 members instead of 19, was agreed to, to meet after the Whitsun recess.—On the motion for the adjournment of the House to Thursday next, Mr. T. DUNCOMBE asked the Secretary for the Home Department whether, in consequence of the bribery and corruption reported to prevail at *Elections for Gloucester and Wakefield*, the Government had anything to propose upon the subject; and, if not, by what right and for what purpose he delayed the issue of new writs to those places.—The ATTORNEY-GENERAL repeated the statement he had already made on a former occasion, the substance of which was that he had directed prosecutions to be instituted against the principal delinquents, and that he had made the selection with great impartiality, having named four persons from each side.—Considerable discussion ensued, in the course of which Mr. WALPOLE, Mr. BRIGHT, and other members deprecated any criminal proceedings, on the ground that the persons whom it was now proposed to prosecute (including Mr Leatham, the late candidate for Wakefield) had made disclosures before the commissioners in the full reliance that they would be indemnified in the usual manner from the consequences of their admissions.—Sir G. LEWIS said that the Government had been charged with supineness in instituting proceedings founded upon these commissions, and nothing could be more embarrassing than when the first step of a prosecution had been taken for a debate to be raised in that House, in which admonitions were indirectly conveyed to the Attorney-General, without any distinct resolution or positive facts to guide him. With respect to the writs, the Reform Bill now pending would affect the constituencies of the two places, and the Government had thought it a right course to propose the suspension of the writs during the present Parliament. *The Census.*—In reply to Mr. DILLWYN, Sir G. LEWIS said that if any general opinion were expressed against the inexpediency of inflicting a penalty under the provisions of the Census Bill for refusing to fill up the column describing the religion of the inmates, the Government would not insist upon it. *Papal Enlistment in Ireland.*—The O'DONOGHUE brought under notice the recent proclamation issued by the Irish Government against the enlistment of troops for the Pope, and complained that it was oppressive and tyrannical, not justified by reason or precedent, but, on the contrary, an attempt to fetter freedom of action, and to give a triumph to the Protestants of England at the expense of the Catholics of Ireland.—Mr. CARDWELL defended the conduct of the Irish Government, and explained that all they had done was to issue a notice (not a proclamation) calling the attention of the people to the terms of the Act of Parliament which made foreign enlistments illegal. *State of Naples and Sicily.*—Mr. BOWYER complained of a despatch of Mr. Elliot, dated Naples, the 2nd of March last, and charged that gentleman with having used violent and insulting language towards the Government and King of Naples. In his opinion the course adopted by Mr. Elliot was calculated to subvert the ordinary principles upon which diplomacy was based, and must in the end alienate two Governments which were supposed to be on terms of amity.—LORD PALMERSTON replied that the Government had not expressed any disapprobation of the despatch which was the subject of Mr Bowyer's censure. The chief characteristic of that despatch was that it stated the truth; for it was well known that constitutional government was a dead letter in Naples, and that the whole power and authority of the State was vested in a despotic and irresponsible power. The adjournment of the House until Thursday was then agreed to.—Mr. WALPOLE obtained leave to bring in a Bill to extend the provisions of the *Charter Acts and Colonial Validity Act* (1865).—On the motion of Sir F. SMITH, a Select Committee was appointed to inquire into the circumstances which have caused the alleged

defective state of a considerable number of the *Gun and Mortar Boats* of the Royal navy.—Mr. S. ESTCOURT obtained leave to bring in a Bill to amend the *Friendly Societies Act*, and a Bill to amend the *Lands Clauses Consolidation Acts* in regard to sales and compensation for land by way of an annual rent-charge. The *Savings Banks and Friendly Societies' Investments Bill* was committed *pro formâ*. The *Spirits Bill* and the *Municipal Corporations (Ireland) Act Amendment Bill* were read a second time. Some discussion took place in committee on the *Innkeepers' Liability Bill*, the further progress of which was opposed on the ground of the violent and unnecessary alteration in the law which it involved. A motion that the chairman leave the chair was carried by 40 to 34. The *Refreshment Houses and Wine Licenses Bill* was read a third time and passed, amid some cheering. *Sir J. Barnard's Act* passed through committee. The Report of the Committee of Supply was brought up and agreed to. The House then adjourned to Thursday next.

THURSDAY.—*Army Estimates.*—The House re-assembled after the Whitsun holidays. On the motion for going into committee of supply on the Army Estimates, Major EDWARDS asked for copies of the correspondence between the War Office and the Treasury, respecting the omission of the usual vote for the annual training of the *Yeomanry Cavalry*.—Sir JOHN TRELAWNY called attention to the effect of selection of lieutenant-colonels of regiments upon the relative positions of the *Guards and Line* in cases of exchange.—General PEEL urged upon the Government the necessity of maintaining the *Militia* in a state of the most perfect efficiency, regard being had to the peculiar circumstances of the country. He congratulated the Secretary for War on the success of the *Volunteer Movement*, which he described as a "magnificent army," but he expressed an earnest hope that it would not be allowed to supersede the old constitutional reserve of the kingdom.—Mr. J. LOCKE advocated the claims of the artificers of the *Land Transport Corps*, organised during the Crimean war, for the non-fulfilment of the conditions upon which their services had been enlisted.—Alderman SALOMONS and Colonel NORTH also supported their claims.—Mr. CONOLLY brought before the House the subject of claims put forward by the officers of Engineers to certain *Rights of Fishery* in Ireland upon grounds which, he contended, were a violation of private rights.—Sir D. L. EVANS called attention to the recent appointment of *General the Hon C. Grey* to the colonelcy of a regiment, and said that his claims, tried by the tests specified by high military authorities, did not appear to entitle him to this distinction and reward in preference to other officers who had rendered distinguished services. He added a few remarks on our military expenditure, and on the volunteer movement, with especial reference to its extension to Ireland.—Mr. ADDERLEY called attention to the report of the committee on the *Military Defences of the Colonies*, inquiring whether the Government intended to act upon that report. He contended that the colonies ought not to be exempted from liability to contribute their share towards the expenses of their defence.—Lord R. CECIL was in favour of extending protection to the colonies, and instanced the Cape colony, where, he stated, a number of independent or republican States had been created, contrary to the wish of the colonists, and against which the imperial Government was bound to provide some protection. He deprecated any suggestions which would have the effect of weaning the colonies from the mother country.—Mr. C. FORTESCUE agreed with the observations of Lord R. Cecil and said that the reason for keeping up a military force in the colonies was not the problematic risk of a great European war, but the danger which might ensue from the pressure of hostilities with formidable native tribes.—Mr. A. MILLS thought the subject of military defences for the colonies was a proper one to be considered by a select committee of the House.—General UPTON asked if it were the intention of Government to recommend to her Majesty a revision of the warrant dated July 1, 1848, with a view to increase the rates of pension of non-commissioned officers and soldiers discharged the service in a helpless condition.—*After some further remarks by Mr. W. WILLIAMS, Col. KNOX, Sir C. NAPIER, Sir F. SMITH, Sir L. PALK, and Mr. BENTINCK,* Mr. S. HERBERT rose to reply on the multifarious subjects which had been under discussion for the preceding six hours, taking them in the order in which they were debated. The Yeomanry, he said, was a most valuable force, but the pressure of the military expenditure had compelled him to omit the vote. He replied in some detail to the questions put by Sir J. Trelawny, and to the remarks on the Militia and reliefs by General Peel. The Land Transport Corps, he insisted, had not a shadow of a claim, the Government having honestly adhered to their bargain. He stated the principle which regulated the appearance of the colonial charges in the estimates, remarking that the question raised by Mr. Adderley required the most careful and deliberate consideration, and that the Government would not be justified in announcing their adoption of any particular plan. He pointed out the peculiar advantages enjoyed ordinarily by artillery officers; at the same time, he thought they had, in some circumstances, a fair claim for consideration, and the subject was before the Commander-in-Chief. After a brief explanation of the matter referred to by Mr. Conolly, he proceeded to justify the appointment of General Grey, describing his services in Canada as well as at home, and observing that it would be a mean, shabby, and cowardly course to refuse him a reward to which he was entitled because he held an appointment at Court.—Mr. DISRAELI said that the question put by Sir D. L. Evans involved a question of importance, independent of the merits of the individual, although he thought the answer of Mr. S. Herbert had justified the appointment of General Grey. If the House were to lay down a rule that, when an officer held an appointment in the Royal Household, he was not to be looked upon as entitled to promotion, it would have the effect of introducing an inferior class of persons into the Court, instead of persons of station.—The House at length went into Committee of Supply, when Mr. S. HERBERT moved certain votes, which were agreed to, after discussion, when the Chairman was ordered to report progress. *Sir John Barnard's Act, &c., Repeal Bill* was read a third time and passed. The *Nuisances Removal and Diseases Prevention Bill* passed through Committee.

FRIDAY.—*Paper Duties Bill.*—In answer to Lord FERMOY and Mr. STEWART, the CHANCELLOR of the EXCHEQUER said that the time had not come for declaring his opinion on the rejection of the Paper Duties Bill by the House of Lords. It was a most important question which had arisen, and he thought that until the committee which had been appointed had reported the Government should not be called upon to state what course they should adopt. At present, therefore, he was not prepared to say whether he would remit the tea or sugar duty, or whether he would not.—Mr. BRIGHT thought that the Government had taken the right course in referring the matter to a committee. If it should be shown that the just constitutional rights of the House of Commons had been intringed, he should feel ashamed of the House if a large majority of members did not determine upon taking steps to resist such an infringement of their privileges.

[Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 94⅞ to 95 both for Money and the 6th inst.; Bank Stock, 228 to 229½; Reduced and New Three per Cents., 93¼ to ⅜; New Two and a Half per Cents., 79; Indian Five per Cent. Stock, 1859, 106⅜ to ⅝; Ditto Four per Cent. Debentures, 1858, 96⅜; India Bonds, 7*s.* to 2*s.* dis.; Exchequer Bills, 7*s.* to 10*s.* prem.—FOREIGN: Brazilian Five per Cents., 1839 and 1859, 99; Buenos Ayres Six per Cents., 85½; Ditto for Account, 86¼; Chilian Six per Cents., 102½; Mexican Three per Cents., for Acct., 21⅜; Portuguese Three per Cents., 1853, 44½; Spanish Passive, 16; Committee's Certificates, 4¼; Turkish Six per Cents., 1854, for Acct., 74½; Ditto for 1858, 57; Ditto for Acct., 57½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,620,550	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,145,550
		Silver Bullion	—
	£29,620,550		£29,620,550

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£9,729,943
Rest	3,218,848	Other Securities	19,833,431
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,489,290	Notes	8,173,055
Other Deposits..	12,551,247	Gold and Silver Coin ..	746,562
Seven day and other bills	669,606		
	£38,481,991		£38,481,991

31st day of May, 1860. M. MILLER, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. A. AXTELL, W. R. KNIGHTS, and W. AXTELL, Bermondsey, Tanners—R. BARNES, Norwich, Shoe Manufacturer—E. BROOK, Charsfield, Suffolk, Cattle Dealer—H. EDWARDS, Birmingham, Merchant—J. HYNDMAN, Newport, Monmouth, Beer and Porter Merchant—W. LONG, Newport, Monmouth, Innkeeper—C. ROACH, Devizes, Wiltshire, Hosier—T. SPENCER, Woolwich, Tailor—W. TYSON, Liverpool, Flour Dealer—J. W. WELCH, Manchester, Warp Sizer—J. WILLIAM, Cardiff, Glamorgan, Draper—P. WILLIAMSON, jun., Salford, Grocer—E. WORTLEY, Willesden, Middlesex, Builder.

BANKRUPTCY ANNULLED—S. ADAMS, Ware, Hertfordshire, Banker.

SCOTCH SEQUESTRATIONS—J. NORWELL and SON, Glasgow, Auctioneers—J. PETRIE, Auchinblae, Fordoun, Kincardineshire, Farmer.

FRIDAY—BANKRUPTS—S. BAXTER, Minories, Ship's Smith—J. P. EDWARDS, Birmingham, Merchant—W. FENN, New Broad Street, City, Underwriter—A. GIBSON, Suffolk Street, Liverpool, Factor—J. KIRK and G. RAYNER, Manchester, Silk Dealers—S. LANGFORD, Myddelton Street, Clerkenwell, Leather Seller—K. NOBLE, Ambler Thorn, Northowram, Yorkshire, Joiner and Carpenter—T. PALMER, Wellesbourne, Warwickshire, Maltster—D. SWIFT, Deeping Saint James, Lincolnshire, Butcher—A. WALE, Nottingham, Hosier—G. H. WALTON, Somerton, Somersetshire, Grocer.

SCOTCH SEQUESTRATIONS—D. DORNING or DORNIN, Glasgow, Steamboat Steward—J. KILGOUR, Forfarshire, Baker—G. KING, Edinburgh, Wine Merchant—J. MACLEAN, Dundee, Spirit Merchant—J. PAUL, Dundee, Shipowner—A. WILSON, Kilncadzow, Lanarkshire, Cattle Dealer.

Metropolis and its Vicinity.

METROPOLITAN SUBWAYS.—The first of the subways which have so often been proposed to the public boards of the metropolis, as the most effectual means of laying down pipes for gas, water, &c., by the construction of arches and vaults, and so rendering unnecessary the frequent breaking up of the streets for those purposes, is about to be constructed along the new street leading from Coventry Street into Covent Garden. At the meeting of the Board of Works on Monday, a report was received from the Streets Improvement Committee submitting a specification for the formation of a subway along the Covent Garden approach, and after a long discussion, the report was adopted by a majority of 20 to 6.

DEFENCE OF THE COLONIES.—The report of the commissioners, Mr. G. A. Hamilton, Mr. J. R. Godley, and Mr. T. F. Elliot, appointed last year, at the suggestion of General Peel, to consider and report on the principle upon which England should defend the colonies, has just been submitted to Parliament. It appears that the expenditure of this country for the military defence of the colonies (not including the Mediterranean stations and military posts) exceeded 2,000,000*l.* in the last year for which the accounts are complete, employing about 27,000 regular troops. The Dutch colonists contribute about 2,500,000*l.* to the home exchequer, and the Spanish colonies above 1,000,000*l.*; while the colonies of Great Britain, speaking generally, have been free from the obligation of contributing, either by personal service or money payment, towards their own defences. But there are grave doubts whether this system is wise, whether Imperial garrisons in every part of the empire can possibly be sufficient to resist hostile expeditions, and whether the predominance of our navy is not the true safeguard of those colonies which have not inherent powers of resistance from their nature or remote situation, or the character and number of the population. It is also felt that such a division of our forces weakens our means of defence at home, and tends also to prevent the development of a spirit of self-reliance among the colonists and to enfeeble their national character. With some of the colonies there are definite arrangements on the subject of expenditure,—Malta, Mauritius, the Ionian Islands, and Ceylon pay a contribution into the Exchequer in aid of military funds; and New South Wales, Victoria, and South Australia pay for military buildings and defences, and the expense of any troops they may require beyond a specified number. When General Peel was in office he proposed that the principle should be extended to all the colonies, laying down these two general rules:—1. That England should assist in their defence against aggression on the part of foreign nations, and, in a less proportion, of formidable native tribes, but not assume the whole of such defence; 2d, that military expenditure for purposes of internal police should be defrayed from local funds. The Commissioners in their report on this scheme discuss the whole subject very fully. Mr. Elliot is not for so much change in the present system as his colleagues. Mr. Hamilton and Mr. Godley propose, for all the colonies proper (not being mere military posts), that two principles should be gradually adopted—colonial management, and joint contribution at a uniform rate. Each colony should decide on the nature of its own defences and the amount of its garrison, and the Imperial Government should bear a share about one half of the cost, not exceeding a certain *maximum*. It should not be that we defend them with their assistance, but that they defend themselves with ours. Some colonies would form local corps, like the Canadian Rifles, at a joint expense, while others would apply for troops of the line; as to which, however, the Imperial Government must have the right to decide whether it could spare them, and the right to withdraw them in case of emergency requiring it. This majority of the committee consider that there should be an uniform rate of joint contribution applicable to all colonies. Mr. Elliot thinks it should vary with the circumstances of each colony. He does not agree that the colonial defences ought to be placed generally under local management. He thinks the amount of imperial force to be allotted to the different colonies should be determined by the Home Government. All the members of the committee concur in calling especial attention to the Cape of Good Hope, where we maintain not a garrison but an army, at a cost which has been as much as 800,000*l.* in a single year, and yet find the colony not, comparatively speaking, of any considerable advantage either as a field for emigration, a supply of our wants, or a market for our produce.

ROYAL ACADEMY.—Mr. Augustus Egg has been elected R.A., in the room of the late Sir W. Ross, by a majority of 5 over Mr. Boxall, the portrait painter. Mr. Sidney Smirke, R.A., has been elected Professor of Architecture, the chair of which has been unoccupied for more than a year. The vacancy caused by the death of Sir Charles Barry has not yet been filled up.

THE EXHIBITION OF 1862.—The Council of the Society of Arts announce that the sum of a quarter of a million, which was the minimum fixed for ensuring the Exhibition of 1862, has been guaranteed. The amount already promised (including the subscription of the Prince Consort for 10,000*l.*) is 292,000*l.*, and is daily increasing. The Society of Arts have therefore applied to the commissioners of 1851 for a lease of 16 acres of the land at South Kensington, purchased out of the surplus arising from the Great Exhibition of 1851, on which it is proposed to erect at least a portion of the new building in a permanent form.

FLOATING POPULATION OF THE CITY.—The Commissioner of the City Police, at the request of Alderman Cubitt, M.P., Chairman of the Police Committee, has caused an account to be taken of the number of persons entering the city within a given period. The result shows that the amazing number of 706,621 individuals passed into the city by its various entrances during the 24 hours tested; and as the day selected for the enumeration was free from any extraordinary attraction to the city, there can be no doubt that the return furnishes a fair estimate of the average daily influx. Of the 706,621, the aggregate of this census of a day, 49,242 only, or less than one-fourteenth, entered during the night—viz., between the hours of 11 P.M. and 7 A.M. It is hardly necessary to add that these numbers are altogether irrespective of the resident population.

THE ELLISON GALLERY.—A new gallery for water-colour paintings under this title was opened to the public on Saturday at the South Kensington Museum, to which it has been presented by Mrs. Elizabeth Ellison, widow of Richard Ellison, Esq., of Sudbrooke Holme, Lincoln, who intended to have bequeathed them to the nation. It consists of 50 works of the highest class, including specimens of Messrs. G. Barrett, C. Bentley, G. Cattermole, G. Chambers, David Cox, Sydney Cooper, P. Dewint, Copley Fielding, C. Haag, L. Haghe, Hills and Barrett, W. Hunt, W. L. Leitch, S. P. Jackson, C. F. Lewis, F. Mackenzie, John Martin, Nesfield, S. Oakley, S. Palmer, T. M. Richardson, D. Roberts, T. S. Robins, G. F. Robson, C. Stanfield, F. W. Topham, J. M. W. Turner, W. Turner, J. Varley, Carl Werner, and J. M. Wright. The main conditions annexed to this gift are that the pictures shall be deposited in the national collection of water-colour paintings at Kensington, commenced by the Department of Science and Art, until a separate and permanent room or rooms shall be erected for the purpose; that the professional adviser for the preservation of the said water-colour paintings shall be the president of the Water-colour Society for the time being; that they shall be exhibited to the public as constantly as the oil paintings in charge of the Science and Art Department, and that they shall not be exhibited on Sundays.

ROYAL GEOGRAPHICAL SOCIETY.—Earl De Grey and Ripon has been compelled by the pressure of his official duties to resign the presidency of this Society. Lord Ashburton has been elected in his stead, and will immediately enter upon the duties of the office. At the anniversary meeting on Monday the founder's gold medal was awarded to Lady Franklin for the purpose of testifying to the fact that Sir John Franklin was the first to discover a North-West Passage, and of expressing the admiration of the Society of her noble and self-sacrificing perseverance in sending out at her own cost several searching expeditions, until the fate of her husband had been finally ascertained. The council's gold medal was awarded to Captain Sir F. L. M'Clin-

tock, R.N. for the skill and fortitude with which, in the Fox yacht, he and his gallant companions had not only enlarged our acquaintance with Arctic geography, but had also brought to light the precious "record" which has revealed to us the voyage and final abandonment of the Erebus and Terror.

KEW GARDENS.—The tender of Messrs. Cubitt & Co., of Pimlico, for the erection of the great conservatory and winter garden in the pleasure-grounds and arboretum adjoining the Botanic Gardens, at Kew, has been accepted by the First Commissioner of Works, and the work commenced. It will be a trifle short of 700 feet in length, covering somewhat about the same space as the Great Eastern steam-ship, and will probably be the largest purely horticultural building in the world. It will occupy an extensive area on the right-hand side of the grand lawn avenue, leading from the Palm House to the Pagoda.

PNEUMATIC DESPATCH. — A prospectus has been issued of the Pneumatic Despatch Company, to be established for the construction of pneumatic tubes for the conveyance of despatches and parcels between various stations in the metropolis. The system has for several years been privately in operation, the Electric and International Telegraph Company having employed it between their central station in Lothbury and the subsidiary stations at Cornhill and the Stock Exchange, the original despatches being sent to save a repetition of each message. It is now proposed to lay down a complete and extended series of public lines in London, on a scale which will receive not merely papers and packets, but parcels of considerable bulk, including the mail bags of the Post Office between the railways and the district offices. It is considered, also, that it will be found desirable to connect the various Government establishments. The capital is to be 250,000*l.*, in 10*l.* shares, but, as it is intended in the first instance to lay down a short central line, which will not cost more than 14,000*l.*, the first issue of shares will be limited to a total of 25,000*l.*, the subscribers having a pre-emptive claim to the remainder, which, however, will not be put forth until the success of the first short line shall have been satisfactorily established. The Marquis of Chandos is the chairman of the new company, and the board of directors is composed of gentlemen well known in connection with railway and other public works.

THE CHURCH-RATE QUESTION.—Archdeacon Hale, the Archdeacon of London, held his visitation last week, and in the course of an elaborate charge to the clergy referred as follows to the present position of the church-rate question:—

"Twelve months ago the destruction of church-rates was by some thought not improbable. Happily that state of things had passed away, and there were many who thought that the important principles involved in the union of Church and State should not be abandoned without a struggle. In the great city in which they had assembled there had been a union of clergy and laity for common purposes of defence, and one result of their exertions had been the change in public feeling which they had lately witnessed in regard to church-rates. This union had been brought about mainly by an eminent London banker, and there could be no doubt it was to him that the Church was indebted for having been enabled to put forth her strength throughout the country, and thus defeat the scheme for which her opponents had so strenuously laboured. He had no hesitation in saying that if the prospects of the Church were better than they were 12 months ago, it was to the laity they owed the change. On the subject of church-rates, for example, a committee of laymen had been appointed, and it was to their exertions that they owed the committee of the House of Lords, named in July last, to inquire into that question. That committee, under the presidency of the Duke of Marlborough, had brought about the most important and the most unexpected results. Prior to that inquiry many Churchmen were willing to give way to the Dissenters on the plea of conscience, and this feeling was strengthened in the minds of some by the fact that a portion of the revenues of this country was spent in promulgating the idolatries and superstitions of the Church of Rome. He did not profess to be acquainted with the political movements out of which the committee of the House of Lords arose, but he had reason to believe that it was formed, not to consider the question of abolition of church-rates, but to ascertain how a compromise could be effected in the best manner. But the investigation had relieved the country from grave and imminent peril, and he could not help thinking it a providential circumstances that such men as Dr. Foster and Mr. Morley had been examined. They had fully developed the whole of the objects and designs of the Liberation Society, and no one could read their evidence without seeing that they believed that they had obtained so firm a hold of public opinion, that they might scout any propositions which Churchmen might make for a settlement. Among these gentlemen, however, were not mere noisy talkers, but earnest and thoughtful men, who were at work in all our large towns, and their avowed object was the separation of the Church from the State. They had avowed, moreover that it was their desire to take away the Regium Donum which was granted to the Protestant Dissenters in Ireland. It was to the openly expressed views of these gentlemen that they owed the altered feeling of the country and Parliament on the subject of church-rates; for it was now evident to all that their designs were of the most violent and revolutionary character. The evidence taken before the committee of the House of Lords showed that relief of conscience had very small weight with them, and that their ultimate object was to level to the ground every ecclesiastical establishment. Against these designs the Church, if she proved true to herself, would succeed. Churchmen had become united, and this union, being one of self-defence, he trusted that it would be observed everywhere in a true Christian spirit, and that nothing would be done to encourage bitterness of feeling. The church-rate question was not one affecting clergy only, or even the Church alone, but it was a great social and national question affecting the whole community, and involving the maintenance of the national religion. Whatever might be the law of the land the Church would be bound by it, but churchmen claimed at the hands of our legislators that they should not wilfully and ignorantly destroy it. What had taken place should be a warning to churchmen, showing as it did what could be done—what a few thoughtful, earnest men in large constituencies could effect—and what influence they could bring to bear upon the Legislature. Those who had been earnest in their efforts for the abolition of church-rates would prove earnest for something else not less dangerous to the Church, so that their designs should be guarded against, churchmen at the same time viewing their opponents as Christian brethren, and showing by their conduct that nothing can be more painful to them than these public contests between Dissenters and the Church."

THE RENEWED STRIKE IN THE BUILDING TRADE.—The apprehensions expressed last week that a revival of the strike in the building trade was in immediate contemplation are but too likely to be realised. A memorial signed by Mr. G. Potter, who directed the movement of the men in their last struggle, has been presented by the Conference of the United Building Trades to the Central Association of Master Builders, in which the intentions of the former to renew the nine hours' movement are formally declared. The following is an abstract of this document:—

After dwelling strongly on the obligations of society to aid, by all means in its power, in the great work of elevating and improving the working classes, it asserts that a curtailment of the hours of labour is absolutely necessary to this end. "We have to urge," it says, "the manifest tendency of the age towards the reduction of daily toil in every branch of employment; the wide spread and constantly increasing cravings of the working classes for a higher intellectual and a purer moral condition of existence; the immense difficulty and, in the majority of cases, the absolute impossibility of administering to this desire for mental improvement, so far as the operative builders are concerned, without a diminution of the hours of toil; and the determination on our part, as well as on the part of our fellow workers throughout the country, not to cease the prosecution of the present agitation until the boon of the nine hours is conceded." "This last fact," it adds, "we submit to your attention, not in any boastful or defiant spirit, but lest you should be so far deceived as to imagine that the operative builders are to be diverted from the demand for the nine hours' movement. Rest assured that the determination to achieve this amelioration of our condition is too deeply rooted in our hearts for any amount of resistance to turn us from our purpose."

DESTRUCTIVE STORM.—On Sunday night the metropolis was visited by a violent gale, accompanied at intervals with heavy rain. On Monday morning between 4 and 5 o'clock the rain fell heavily, and the temperature was rather that of January than May. Snow and hail fell during the storm, causing much injury to fruit and other trees. The river was so rough that some of the steam-boats were unable to reach their destinations. At Lambeth, Battersea, and other places on the Surrey side of the river, several houses were partially inundated. In various parts of the suburbs houses were unroofed and stacks of chimneys blown down, and many of the trees in the parks were injured. The storm was felt throughout the greater part of England from Cornwall to Northumberland, and was in many places accompanied by a heavy snow storm. It raged with great violence among the shipping at Plymouth, Portsmouth, and other ports upon the coasts of the English, Irish, and Bristol Channels, and on the whole of the east coast of England. About 150 wrecks have already been reported, several steamers are missing, and on the east and north-east coast several ships were seen to go down with all hands without the possibility of rendering assistance. During the height of the gale eight ships went down off Yarmouth beach, in the sight of thousands of spectators, and not a soul of the 40 or 50 men on board was saved. In Filey Bay 13 yawls were wrecked, and at Redcar no less than 25 vessels were driven ashore. The storm was also severely felt at Lewes, Malling, Lincoln, Manchester, Northallerton, Liverpool, Lowestoft, Winterton, Scarborough, York, Ripon, Thirsk, Pickering, Whitby, and Bradford.

ST. GEORGE'S-IN-THE-EAST.—The disturbances which have so long prevailed in this church were checked on Sunday evening by the decisive course adopted by the churchwardens of refusing admittance to every boy and girl who came unprovided with a prayer-book or had the appearance of a rioter—boys and girls having been the principal disturbers of the services. About 400 young persons were turned away, and there was no crowding in the body of the church, as directly the pews were filled no other persons were allowed to enter, all new comers being directed to the galleries, which were kept in something like order by the chief constable of the parish, and a small body of police. The choristers were refused admission within the altar rails, directions to that effect having been given by the Bishop, and were consequently placed in the organ loft, five clergymen occupying the apse, the rector being among them. There was no procession of priests and choristers, the Bishop having issued a prohibition against that part of the ceremonial; but when the Rev. F. G. Lee entered the reading-desk he was assailed with a loud howl, which was kept up at intervals during the prayers. The sermon was preached by the Rev. Carew Blacker, curate of St. Mary's, Lambeth Butts, and was received with derisive cheers. There were the usual disturbances at the close of the service, but they were far less violent than on any other evening during the last six months.

THE WHITWORTH GUN.—On Saturday afternoon a series of interesting experiments was carried out at the Nore for the purpose of testing the efficiency of Mr. Whitworth's 80-pounder rifled guns, as opposed to wrought iron plates several inches in thickness. The gun was placed in position on board the Carnation, screw gun vessel, tender to the Cumberland guardship at Sheerness, and the firing took place against the steam floating battery Trusty, which had been fitted up with iron plates of extraordinary thickness. The experiments were witnessed by the Lords of the Admiralty and a large number of naval and military officers and scientific gentlemen, and the result clearly demonstrated the extraordinary power of the elongated shot when discharged from Mr. Whitworth's heavy rifled ordnance. The first shot fired with a 12 lb. charge of powder struck on the edge of two plates, passing clear through the 4½ inches of wrought iron, and starting both plates 1½ inch in an outward direction. After passing about 11 inches into the oak, the head of the projectile glanced against a massive bolt, which turned it up at a right angle to its former course, where it remained buried in the framing between the plates and the inside of the ship. Had it been a shell, and burst in this position, it would have ripped the plate off or blown the main-deck timbers in. The second shot was fired with a 14 lb. charge, and hit a small white target in the centre of an armour-plate. This went completely through the side into the main deck of the Trusty. The hole it made in the plate was a clean hexagon, precisely the size of the shot. It passed not only through the wooden side, but through one of the ribs of the ship, tearing off and smashing the iron knee, and covering the main deck with splinters of wood and iron. The shot, when found, was so hot that no one could touch it. It scarcely showed any sign of damage beyond being compressed to about an inch shorter, and consequently increased in its diameter at the head by about half an inch. The third shot, owing to a mistake with regard to the elevation of the distance-sight, passed clear over the vessel. The fourth struck obliquely, passing through the iron and sides, and striking the end of a deck beam, in which it buried itself. The fifth shot pierced through the centre of a plate and into the main deck of the ship, driving before it a mass of splinters and an immense iron bolt, which, from the position in which it was found—among the fragments of wood on the main deck, had evidently been dashed through and whirled about with a force only inferior to that of the projectile itself. It was noticed that at the instant of concussion between this shot and the vessel's side a broad sheet of intensely bright flame was emitted, almost as if a gun had been fired from the Trusty in reply. The Lords of the Admiralty then went on board the floating battery, and after minutely inspecting the results of the trials as shown by the perforations in the iron and timbers, expressed themselves completely satisfied with the experiments.

UNIVERSITY OF LONDON. — Her Majesty has nominated the Right Hon. Robert Lowe, Dr. Richard Quain, M.D., and Mr. James Paget, F.R.S., to vacancies in the Senate of this University, caused by the deaths of Bishop Maltby, Lord Macaulay, and Mr. M. T. Baines.

ROYAL DRAMATIC COLLEGE.—The foundation stone of this institution was laid yesterday at Maybury, near Woking, by the Prince Consort. A fancy fair was afterwards held, at which the principal actresses of the metropolitan theatres attended the stalls, and the principal comedians superintended the games and sports, with a variety of appropriate amusements. The Artillery Company, of which his Royal Highness is captain-general, provided a guard of honour, and the bands of both the Grenadier and Coldstream Guards were in attendance. All the minor details were provided for on a judicious scale, and the South-Western Company ran special trains for the convenience of visitors.

SOCIETY OF ANTIQUARIES.—Mr. C. Knight Watson, M.A., F.S.A., has been unanimously elected Secretary of this Society, in the room of Mr. J. G. Akerman, who has retired on account of ill health.

THE GREAT EASTERN.—The works remaining to be completed before the Great Ship is ready for sea have now been brought within such a compass as to leave no doubt of her being prepared to start on Saturday next, the 9th inst. A large body of engineers and smiths from Swindon went on board on Monday to assist in carrying out the alterations in the machinery, which will be finished by Wednesday next. Mr. Yates, the secretary to the Company, sails for New York to-day to make arrangements for the reception of the ship on the other side of the Atlantic, and the last steamer brought over a pilot for her from New York. There is a very fair demand for berths, but as the number will be limited to 300 passengers only, there is no doubt of the ship having her full complement. The crew signed articles on Saturday last, and almost the whole of the hands are now on board. Mr. Bold, the manager, will accompany the ship to New York, and remain with her during her stay in America. Some insurances have been effected at Lloyd's by individual proprietors in the Company to the value of their shares. The rate charged for the voyage to America out and home is 6 per cent., or about four times the usual terms.

THE PUBLIC HEALTH. — The Registrar-General's Weekly Return states that in the week that ended Saturday, May 26, the total number of deaths registered in London was 1087, being nearly the same as that of the previous week. In the corresponding weeks of the 10 years 1850-9 the average number, corrected for increase of population, was 1133. The present return is therefore 16 below the average. During the week the births of 842 boys and 838 girls, in all 1680 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1606.

Provincial.

ALDERSHOTT.—The coroner for Surrey held an inquest on Saturday at Aldershott on the body of Anne Read, a fine young woman of 18, who had been

brutally murdered on the previous Saturday night by two privates of the Military Train, named John Farrell and Martin Conway. From the evidence adduced it appeared that deceased, who was one of the unfortunate class living upon the camp, had been in company with the men at their quarters, and was seen proceeding with them late at night towards the common, in the direction of the Basingstoke Canal. A female acquaintance of deceased left her in their company; and shortly afterwards, in passing over Bateman's Hill, heard loud screams of "Murder!" in a woman's voice, coming from the canal, and cries of "Oh Lord, oh Lord! do let me alone!" and then a sudden plash in the water and all was silent. The lock-keeper, who found the body in the canal, stated that her clothes were torn to pieces, as if she had been engaged in a fearful struggle, and that marks of extreme violence were visible on the body. The police constable who apprehended the accused told them he charged them with murder, when Conway replied, "And a good thing, too;" and Farrell added, "And so say I." He searched them, and found on Conway a purse and some other articles belonging to the murdered woman. Other evidence left no doubt that the prisoners maltreated and plundered the woman, and then threw her into the canal. The jury returned a verdict of Wilful Murder against both the prisoners, and the coroner issued his warrant, committing them to take their trial on the capital charge.

BRADFORD.—On Wednesday week a boiler, of the multitubular form, exploded at Thompson's Mill, Goit Side, in this town. A youth of 15, named William Binns, was at the time throwing coals into the furnace, and was in a moment so dreadfully blinded and scalded by the sudden rush of steam, that he fell on the ground. His father, the engine-tenter, ran to his assistance, and after much difficulty seized the boy, whom he found lying scalded almost to death upon a heap of coal, and bore him off, though almost blinded and severely scalded himself. They were both removed to the Bradford Infirmary. The youth died on the same night, and the father lies in a precarious condition. The explosion arose from a boiler plate under the furnace having given way.

BIRMINGHAM.—On Wednesday night a town meeting on the subject of the Government Reform Bill was held in the Town Hall, convened by the Mayor, on a requisition signed by about 1500 persons. The meeting was attended by about 5000 persons. Resolutions having been adopted to the effect that though the Bill is not sufficiently comprehensive and does not provide a lodger franchise, it is entitled to the candid support of all friends of Parliamentary Reform, another resolution was adopted expressive of confidence in Messrs. Scholefield and Bright, and of condemnation of the unjust imputations and cowardly attacks which had been from time to time made upon Mr. Bright, in consequence of his fearless advocacy of the cause of the people. Mr. Bright, M.P., in acknowledging the compliment spoke as follows:—

"With reference to the borough franchise, as proposed under the Government Bill, it would cheat the people to substitute a higher one, and destroy what faith remained in those who were thought to be the leading men in the government. His highest estimate in the increase of the constituency under the new measure was 350,000. This small number out of 7,000,000 some of Lord Derby's friends regarded as 'dangerous and revolutionary.' He alluded to speeches of Mr Disraeli and Sir B. Lytton on this question. With reference to that of the last, he designated it as a speech of elaborate eloquence, but wanting in the kernel and soul of true eloquence—it wanted one particle of truth. It contained everything about the fancy democracies of 2000 years ago, but nothing with regard to the character and rights of the population of this country of the present day. He spoke of an expression used by one whom he designated as 'one of the titled feeble of the House of Commons,' who had expressed an opinion that if the Reform Bill passed the working classes might meddle with the 'incidence of taxation.' He referred to the circumstances attendant upon the rejection of the Reform Bill of the Derby Government last year, and said that that party appeared disposed to behave as honourably now as they did 30 years ago. In reference to this question elaborate and unfounded slanders were circulated against the people, of which some day they might take advantage. He paid a tribute to the spirit of endurance and other high qualities displayed by the industrial population of this country. He remarked on their obedience to the laws, and expressed an opinion that nothing could equal the blindness of those who charged such a class with meditating the overthrow of the constitution under which their forefathers had lived; but the vast industry of the people the governing class valued only because it afforded the means by which a vast amount of taxes might be raised. He next alluded to the recent conduct of the House of Lords on the Paper Duty Bill. There, he said, was an irresponsible hereditary body, famed for no deeds or services to the State, who neither attended on platforms nor issued addresses, nor received votes, seeking to be their masters, and exercising a power in 1860 unknown and unrecognised by their forefathers for centuries. It was in 1860 that this new monster made its appearance, and it was for the people to extirpate it at once, to put such a ban upon it at once that it might never be heard of again. No duty could be worse than the paper duty which it was sought to retain; it was a tax on their books, on their amusements, on their hours of leisure and intellectual culture. The treaty with France would be productive of the greatest advantage to both countries. A Government which could inaugurate such a policy and a Chancellor of the Exchequer who would make it the pivot of his budget, were entitled to the moral support of the whole of the industrial population. Certain newspapers had contained comments of a hostile character in reference to the treaty and the repeal of the Paper Duty. One, the most powerful, had been doing all the mischief it could in the matter, and at that moment, when the House of Lords was endeavouring—he would not say to recover a power, but to obtain a power hostile to the rights and liberties of the people of this country, the journal to which he referred had done as much as it dared to urge the rejection of the Paper Duty Bill, at the same time pretending not to do anything. The *Times* had a paramount interest in this matter. It might be fairly estimated that it paid in paper duty 25,000*l.* a year. If the duty was repealed, it might have to come down to 3*d.* If to 3*d.*, that would be so much less the paper duty loss to the proprietors; so that The *Times* newspaper was selling the dearest interests of its country for its own gain. He next passed an eulogy on the low-priced press, said he looked for the day not distant when a daily paper would be found in every cottage, and glanced at it as a means of political power for the people. He referred to the conduct of the House of Lords and former circumstances of antagonism with the House of Commons and the people. He expressed a hope that in this question of the remission of taxes the people would never submit to men who had exercised a power which they did not derive from the greatest of all rights—the confidence of a free people. He concluded with expressing a hope that the people were not so degenerate as to allow this inherent right to be wrested from their hands. He hoped that Birmingham would be true to its ancient character, speaking with no uncertain voice, standing up for those rights they prized so highly, and which its people had made such magnanimous efforts to maintain."

BRIDGEWATER.—The local papers contain long accounts of some extraordinary proceedings which have again taken place at the Agapemone. It appears that about six years ago Mr. Lewis Price, a Welsh clergyman, joined the establishment, and afterwards married one of three Miss Nottidges, who are said to have taken with them to the Agapemone 6000*l.* each, the whole of which was secured to Mr. Prince, the head and lord of the community. Another Miss Nottidge was married to an inmate, and a third died lately under distressing circumstances. The brother of the deceased lady has taken legal proceedings against Mr. Prince, for the recovery of the 6000*l.* which his sister possessed, and the case will it is understood come before the Judges next term. Mr. Price appears at one time to have been a zealous advocate of the system, and was one of those who attended a meeting held some time since in this town, to persuade the inhabitants that Mr. Prince was a prophet and redeemer. About three months ago Mr. Price, having been deprived of his wife for six weeks, got tired of his lord's assumptions, and left the house, after vainly endeavouring to take his lady with him. With the late Mr. Waterman, of Castle House, Enmore, he resided for a short time, and subsequently stayed at the Lamb Inn, Spaxton, adjoining the Agapemone, devoting his time and energies to procure the release of his wife. Various have been his plans and contrivances to attain this end; but they have hitherto proved unavailing. Application was made to the police to remove Mrs. Price by force, her husband alleging that he had reason to believe that she was detained against her will, but as the constables had no power to intrude themselves into the place and remove one of its members by force, another plan had to be devised. It was arranged that when the lady was walking on the terrace in the rear of the dwelling Mr. Price should jump the barriers dividing the grounds from a neighbouring field, seize his wife, and trust to the protection of the police to prevent the gentlemen of the Agapemone rescuing her. This scheme however turned out to be difficult of execution. Whenever Mrs. Price made her appearance in the gardens and on the terrace, she was guarded by a Princeite on either side, or was accompanied by one only with others at hand. Recourse was consequently had to law, and a solicitor of Bridgewater, in company with Mr. Price, demanded the lady at the gates of the Agapemone itself. The gates were locked against them when their business was known, and access to the lady denied. Affidavits were next laid before the judges detailing the circumstances of the case, and declaring that the lady was detained against her will. A writ of *habeas corpus* was therefore issued, the return to which was made last week before a Judge in Chambers, Sir F. Slade appearing for Mr. Price, and Mr. Lovibond on the part of the founder of the Agapemone, producing Mrs. Price *in propriâ personâ*. The lady deposed that she was not detained in defiance of her inclination, and that she was desirous of remaining in the establishment. This reply defeated the aim of the husband, the judge at once declining to make an order for the restoration of the lady. Further proceedings are to be taken in reference to the question of money. Mr. Price being shut out from the enjoyment of any portion of his wife's 6000*l.*, as well as from the fortune he owned himself prior to his joining Mr. Prince. It is stated that all the inmates of the Agapemone transfer their property to their chief, and sign a deed by which they agree to forfeit all on discontinuing to reside at the place and separating themselves from the association. By the same deed provision is made that members absenting themselves three months shall be excluded. The people of the village of Spaxton allege that 17 or 18 Agapemonites have quitted the place within 12 months, and they say for seven or eight years no children have been born to the many couples living in the mysterious establishment.

CAMBRIDGE.—The Queen has appointed the Rev. Charles Kingsley, Rector of Eversley, and author of many popular works, to be Professor of Modern History in the University of Cambridge.

LIVERPOOL.—An inquest was opened on Saturday, and continued by adjournment on Monday, on the body of Martin Mors, a Dutch seamen, who died at the Northern Hospital last week, under circumstances which led to the belief that he had died from the treatment he had received on board the American ship Ocean Monarch during the voyage from New Orleans to Liverpool. Several of the crew deposed that while the vessel lay in the Mersey, and after she had been docked, they had seen the second officer, Philander Hall, and the third mate, Daniel Devonport, repeatedly knock deceased down with belaying pins and kick him. The surgeon at the Northern Hospital said he had made a *post mortem* examination, and was of opinion that the cause of death was inflammation of the lungs, which might be the result of such violence as that described. One of the ribs on the left side was broken, but this he believed was an old fracture. The jury, after only a few minutes' consideration, found a verdict of Manslaughter against Hall and Devonport; and the coroner issued a warrant for their apprehension.

MANCHESTER.—The adjourned meeting of the council of the Lancashire Reformers' Union on the steps to be taken in reference to the alleged aggression by the House of Lords was held on Tuesday in this city. Mr. Bright, M.P., was present, and addressed the meeting at great length, after a resolution had been adopted expressing great satisfaction at the steps taken by the House of Commons to maintain inviolate its right to determine the sum of the taxes to be laid upon the people, and pledging the meeting to support the House by every means in its power.

RUGBY.—A rifle corps has been formed in Rugby school, under the superintendence of the Rev. Dr. Temple, after the example already set by Eton and Winchester. So many volunteers have already sent in their names that it has been found necessary to have twice the number of drills originally intended, and it is expected that at least four companies will be raised with two officers to each.

SANDHURST.—An annual nomination to Addiscombe has been given to Wellington College by Sir James Weir Hogg, and two additional nominations for next year. The immediate erection of a chapel is rendered necessary by the unforeseen increase of numbers, which will shortly require the large dormitory used as a temporary chapel to revert to its original purpose. Mr. Gilbert Scott is preparing plans for the new chapel, towards the cost of which the governors have appropriated 2500*l.*, and it is expected that this sum will be doubled by the liberality of parents and others interested in the college.

WOLVERHAMPTON.—Within the eight days ending on Thursday the 24th ult. no fewer than four steam boilers exploded in South Staffordshire, two of which caused the death of one man each, and serious personal injury to others. On the last occasion two boilers exploded, one at the works of the Chillington Iron Company in this town; the other at Birchells, near Walsall, the proprietor of which is uncle to the chief proprietors of the Chillington Works, and was once a partner in that concern. These two explosions happened within half an hour one of the other. The inquiry into the death of the man killed by the Chillington explosion showed a state of things in connection with steam boilers by no means calculated to increase the public security. The boiler was one of a range of five tubular boilers, each 28ft. long by 17ft. 6in. in diameter, constructed with the approved breeches flues, and worked by three engines. All the five were connected by a range of steam piping over them, and had no fewer than five safety valves, any one of which was of sufficient dimensions to allow the escape of all superfluous steam from any one boiler, and all of which would come into operation directly there was an unnecessary production of steam in any one of the boilers. It appeared however from the evidence of Mr. E. T. Wright, engineer of this town, that there were several minute cracks in the boiler, extremely difficult to be detected by the eye, and not likely to be noticed unless their existence were suspected. To the existence of these insidious cracks he attributed the greater number of boiler explosions of which it had hitherto been impossible to explain the cause. Mr. Stephen Thompson, boiler-maker, of Bilston, a man of considerable experience, confirmed these views. The coroner remarked upon the very serious state of things which Mr. Wright's evidence disclosed, as it must greatly increase the feeling of insecurity in the public mind in connection with the use of steam boilers; and his opinion was concurred in by the jury when he said it was high time that some other method of inspection was adopted than was now generally practised. A verdict of Accidental Death was then recorded.

Ireland.

RETURN OF THE LORD LIEUTENANT.—The Earl of Carlisle and suite arrived at Kingstown on Saturday night from Holyhead, after a visit of some weeks to London.

THE POPE'S IRISH BRIGADE.—In spite of the Government warning measures are in progress for raising a cavalry brigade in Ireland for the Pope's service, and "proclamations" denouncing the "Government Caution" continue to be posted up in various parts of the country. The *Nation* suggests as a means of defeating the government notice, that the Irish constabulary and others who wish to enlist in the Pope's army should declare their intention to enter the Papal police, as "the laws against 'foreign enlistment' do not affect or apply to persons about to enter the police force or other civic employment of a foreign State." It is said that 250 of the Limerick County force have already resigned for this purpose, and that the force in Clare, Cork, and Kerry are disposed to follow the example. The statement of a Limerick paper that 6000 of the constabulary are willing to resign with a view of emigrating to Rome is considered an exaggeration. Fifty young men from Tipperary passed through Kilkenny a few days since for Dublin. They said

hey were "emigrating to Newfoundland," and were accompanied by two priests. It is believed that their real destination was the Papal States.

THE DUKE OF MANCHESTER'S IRISH SCHOOLS.—It is stated by an Armagh paper that, after full consideration of the importance of the step, the Duke of Manchester has decided upon placing the numerous schools on his grace's large estates in that county under the National Board of Education.

ARREST IN THE NORTH.—A large number of persons, said to be implicated in some illegal conspiracy, was arrested on Saturday in Dundalk; but whether connected with the old Riband confederation or the more recent Phœnix plot is not yet clear. The arrest was made with such precision and quietness that the townspeople knew nothing of the affair until Monday evening. The authorities are said to be in possession of information regarding the ramifications of the conspiracy, in which persons holding rather a respectable station in life are implicated. Mr. Fitzmaurice, the resident magistrate, is taking information against the conspirators, and it is believed that several more warrants are in the hands of the police.

AID FOR GARIBALDI.—The American ship Charles B. Truitt, which has been lying in Cork harbour for the last five or six months, sailed with a cargo of rifles from Queenstown on the 24th ult. for Liverpool. She was freighted by the Garibaldi Committee in New York, but, having arrived at Cork after the war had terminated, she lay at Queenstown awaiting orders from the States. It is supposed that Garibaldi's recent movements have occasioned her departure.

Sporting.

TATTERSALL'S, TUESDAY. — *The Epsom Settling.* — The final settling to-day was heavy, but was conducted with the utmost regularity; only one absentee of importance being reported, whose liabilities are said to amount to upwards of 7000*l*. The "Ring" did not seem to be very heavily hit, Thormanby having held his position in the betting almost from first to last with much firmness. It is said that Mr. James Merry wins in bets and stake nearly 100,000*l*. and that his "commissioner" nets 10,000*l*., and his trainer about 1000*l*.

PRESENTATION OF THE BELTS TO SAYERS AND HEENAN.—On Wednesday evening the two belts prepared by the friends of Sayers and Heenan were presented at the Alhambra, in Leicester Square. There was a large audience, including several noblemen and gentlemen. Shortly after nine o'clock Sayers and Heenan, accompanied by Mr. Dowling, of *Bell's Life*, and Mr. Wilkes, of the New York *Spirit of the Times*, and other gentlemen, entered the ring. A preliminary speech was delivered by Mr. Caldwell, who said he was there to introduce 'the two bravest men in the world since the time of Wellington and Napoleon." Sayers and Heenan shook hands upon the introduction as heartily as if they had never seen each other before. Mr Dowling read an address to Heenan, after which he presented him with a highly ornamented silver mounted belt, the exact copy of the belt he had come from America to win. Mr. Wilkes then rose and presented an address to Sayers, in which he said that "thousands on both sides of the Atlantic joined in the testimonial. The belt he now presented to Mr. Sayers would remind him of that other he had not lost, but had maintained in 16 hard battles. Should Sayers visit America, he would find the warmest welcome. The late contest was one of a worthy character; it revived the spirit of chivalry among the knights of old, for it was fought with the graceful bearing of knights. Upon neither Sayers nor Heenan did the blame rest for the contest being unfinished. He was now authorised to say that had Heenan won the belt, though he might have asked for a loan of it for a few weeks, it was his intention to have returned it to Sayers." The belts were then buckled on, and Sayers and Heenan passed round the circle, arm-in-arm, amid loug cheering. Addressing himself to the audience, Heenan said: "These are the proudest moments of my life." Sayers added, "I return my sincere thanks to one and all of you." Both men looked in admirable condition, and their visages bore no perceptible traces of the terrible punishment they mutually underwent on the 17th April. The ceremony of the presentation was repeated at the same place yesterday, and is to be repeated to day. Sayers and Heenan are afterwards to go on a tour through the provinces to give their country admirers an opportunity of witnessing the happy termination of their rivalry.

Railways.

FRIGHTFUL ACCIDENT ON THE GREAT NORTHERN.—An accident of a most extraordinary character, but as yet unattended by any fatal results, took place on Wednesday evening at the King's Cross terminus of the Great Northern, to a return excursion train, conveying passengers from Liverpool, Manchester, Sheffield, Huddersfield, and other large towns in the north of England. The train, which consisted of 35 carriages, two of them being luggage-vans, was due at King's Cross at 6.40 P.M., and was pretty punctual in its arrival. The engine, however, instead of slackening its speed, as usual on entering the station, dashed at full pace through the station, leaped the platform at the end of it, a height of between 5 and 6 feet, carrying with it the tender, the break, and one or two carriages, and, proceeding on in its fearful course, ran down the inclined plane immediately under the clock tower and across the Old St. Pancras Road, burst through the enclosure of the Metropolitan Railway Works, and but for the immense quantity of earth lying there (the stuff excavated from the New Road tunnel), would have buried itself in the shaft of that undertaking. In passing under the archway the funnel and steam-cap of the engine came in contact with the strong iron girder, and were smashed off the engine. Fortunately, the pitch of this girder was a few feet higher than the body of the engine itself, else it would have been torn from the abutments of brickwork which sustain it, involving the demolition of a large portion of the roof of the building, with the probable destruction of every person in the train. It is almost needless to say that the engine, tender, and break were, in fact, completely destroyed. The other carriages were more or less injured, many of the passengers sustaining serious wounds and contusions. The fireman, Church, on finding that the train was rushing to destruction, leaped from the tender, and falling flat upon the ground escaped unhurt. The driver, Thomas Annis, however, remained firm at his post, and escaped unhurt! The news of the accident quickly spread over the metropolis, and in an incredibly short space of time all the thoroughfares leading to the station became so crowded that it required the assistance of 150 men of the metropolitan police force to keep the way open for the ordinary traffic. The injured passengers were removed from the carriages and received every attention from the officers of the company, who sent off for medical assistance, and in the course of a few minutes four surgeons were in attendance, actively administering to the wants of those who stood in need of their assistance. It appears from an inquiry which took place at Clerkenwell Police Court on Thursday, that the accident was caused by the drunkenness of the under guard, who neglected to apply the breaks when the driver signalled to him to do so, and was found after the accident lying on his back in the van quite drunk. The magistrate committed him to prison for two calendar months, with hard labour, expressing his hope that this would act as a caution for the future to other railway servants.

COLLISION ON THE LONDON AND NORTH-WESTERN.—On Thursday evening a collision occurred on the line of the London and North-Western Railway, by which two passengers were severely injured one a woman and the other a corporal. The express train left London at 2.15, and when between Stafford and Crewe, and near Basford, it ran into a ballast train, which was just rounding a curve, and was consequently hid from the view of the express until it was too late to prevent a collision. Several waggons in the ballast train were destroyed, in the break-van of which the woman was riding. The passengers of the London train, excepting the corporal, escaped with a good shaking and the fright. Among them were the Marquis of Stafford, one of the directors of the company; Mr. James M'Connell, the locomotive superintendent at Wolverton; Mr. Cawkwell, the general manager; and Mr. Thomas Fairbairn, Mr. R. N. Phillips, Mr. J. T. Johnson, of Manchester. The line was blocked up for some time, and the train reached Crewe about two hours after its time.

ACCIDENT ON THE LIVERPOOL AND MANCHESTER.—On Monday afternoon the train from Southport was passing the Sandhill station, where there is a great curve, when the engine ran off the line, and turned over with two of the carriages filled with passengers. Fortunately however only the fireman was injured. The traffic on the line was stopped for several hours.

ACCIDENT ON THE BRISTOL AND EXETER.—A collision of an extraordinary character, and likely to have been attended with disastrous consequences, occurred on Tuesday week near the village of Stoke, about four miles from Exeter, where some farmers have a right of crossing the line with their produce. It appears that a farmer named Batten and a carrier named Strong, with their two drivers, were conveying some elm trees across the railway on a timber-waggon drawn by five horses. A lad was sent up the line to signal to them that the way was clear. Instead of doing this, on seeing the Parliamentary train coming, the boy held up his hand for the train to stop. The parties, thinking that this meant all right, proceeded to cross the line with the trees. The train came on, and the driver, seeing something in the way, sounded the alarm whistle, but being so close did not check the speed of the train by putting on the break, believing that the only chance of safety to the passengers consisted in keeping up the speed, so as to be able to cut through the obstacle. This proved correct, for the train went clean through the tree, which was 18 inches in diameter and projected from the waggon across the line. The engine was much damaged, but no injury was done to any of the passengers. The parties were summoned to the Castle at Exeter on the following day, and fined 5*l*. each, it being proved that the farmer knew the time the train was due.

Obituary.

LORD HEYTESBURY, G.C.B., one of the oldest diplomatic servants of the Crown, died on Thursday morning at his seat in Wiltshire, after a protracted illness, in his 81st year. He was the eldest son of Sir William P. Ashe A'Court, many years M.P. for Aylesbury, by the daughter of Mr Henry Wyndham, of Salisbury. He was born in 1779, and married in 1808 the second daughter of the late Hon W. Bouverie, by whom he leaves a son, the Hon. W. H. Ashe A'Court Holmes, who succeeds to the barony, and the Hon. Cecilia Maria, married to the Hon Robert Bligh. The diplomatic services of the late Lord extended over nearly 60 years. In 1801 he was appointed Secretary of Legation at Naples. He was secretary to the special mission at Vienna in 1807, and was the First Commissioner for the affairs of Malta in 1812. In 1813 he was appointed Ambassador to the Barbary States. He was afterwards appointed Ambassador successively to the Courts of Naples, Madrid, Berlin, and St. Petersburg, which he resigned in 1832. While on his mission to the Russian capital he opened the campaign considered to have caused the ... upon to fill high civil offices. Sir Robert Peel coming into office in 1834 he was selected as Governor General of India, but the Admiralty declined to ... the departure of the Lord England. On the resignation of Earl Grey, in 1841, he was appointed Lord-Lieutenant of Ireland, which office he held up to July, 1843, when the late Sir Robert Peel finally quitted the Government. For his distinguished diplomatic services he was nominated a Grand Cross of the Bath, and was afterwards raised to the peerage by the title of Lord Heytesbury. For many years he had enjoyed a pension of 1700*l*. a year, and down to 1857 was Governor and Captain of the Isle of Wight and Governor of Carisbrook Castle. He is succeeded in the title by his only son, born in 1809, and married in 1833 the eldest daughter of the late Sir Leonard Worsley Holmes, Bart., of Westover, Isle of Wight. He was educated at St. John's College, Cambridge, and was M.P. for the Isle of Wight from 1837 to 1847.

MR S G. GOODRICH, whose versatile and popular writings for youthful readers have made the name of "Peter Parley" familiar wherever the English language is spoken, died a few days since at his residence in New York. He commenced life as a publisher in Hartford, and after a visit to Europe in 1824 removed to Boston, where he continued the same business in an enlarged form. The series of juvenile books issued under the name of Peter Parley was begun soon after his removal to Boston. They at once attracted attention, and shared largely in the favour of the public. Although chiefly engaged in literature, Mr. Goodrich took an active part in public and political life. He was at one time a member of the Massachussetts Senate, and a candidate for Congress from that State. During the Administration of President Filmore he held the office of United States Consul at Paris.

MR JOHN HOLMES, OF COTHAM, one of the most munificent of the long list of Bristol worthies, died a few days since in that city. Living the greater part of his life in Bristol, although not a native of it, he distributed his means with no scanty hand to many of the local charities, and also towards the erection of numerous places of worship, both Church of England and Non-conformist, as well as to schools, and innumerable other more private objects, thus dispensing in his lifetime a large portion of a handsome fortune, amounting to little less than 80,000*l*. Among the munificent donations given by him in recent years were 5000*l*. to Mr. Spurgeon's new chapel; 3000*l*. to Mr. Doudney's church, at Bedminster; 3000*l*. to Gideon chapel, Newfoundland Street; 2300*l*. to Arley chapel, Cheltenham Road; and 500*l*. each to the Infirmary and General Hospital. It is said also that the orphan house on Ashley Down has profited by his liberality to the extent of several thousands, and that many other pious and benevolent societies have received liberal gifts from him.

MR. WILLIAM GIBSON, clerk of the peace for the county of Essex, died suddenly last week from an attack of paralysis with which he was struck while in the discharge of his official duties. He had been engaged in the business of the Court during the whole of Tuesday, and had retired to his office adjacent to the Court to sign some papers for the allowance of expenses of prosecutions. He had signed one of them, and was in the act of signing the other when the pen fell from his hand. He picked it up, and again attempted to sign his name, but in vain. Medical assistance was immediately sent for, but he soon became unconscious and died early the next morning. Mr. Gibson had suffered from disease of the heart; but the immediate cause of death was a paralytic affection.

BIRTHS.—On the 31st ult, Lady CONSTANCE GROSVENOR, of a son—24th ult, at 42, Rutland Gate, the Hon. MRS. FREDERICK PEEL, of a daughter—24th ult, at 8, Wilton Crescent, Belgrave Square, the Hon. Mrs. NUGENT BANKES, of a son—24th ult, at Dover, the wife of the Hon. W. W. ADDINGTON, of a son—28th ult, at Stone Lodge, Ipswich, the Hon. Mrs. GEORGE DASHWOOD, of a son—23d ult. at the Rectory, Shobdon, Herefordshire, the wife of the Hon. and Rev. A. A. B. HANBURY, of a daughter—22d ult, at 6, Stanhope Street, Hyde Park Gardens, the wife of the Rev. BADEN POWELL, Savilian Professor of Geometry in the University of Oxford, of a son—25th ult, at Kew, the wife of Dr. HOOKER, F.R.S., of a son.

MARRIAGES.—On the 30th ult. at St. George's, Hanover Square, JOHN A. BURN CALLANDER, Esq., of Preston Hall, Midlothian, to Miss COVENTRY, eldest daughter of the Hon. Henry Coventry—24th ult, at St. Clement's, Hastings, WM. HALLIDAY COSWAY, Esq., only son of the late Sir William Richard Cosway, Knt., to MARIA, youngest daughter of the late Sir THOMAS HARVIE FAIRCHAR, Bart.—24th ult, at Christ Church, Brixton, HENRY CHEVALLIER, son of JOHN C. COBBOLD, Esq., M.P., Ipswich, to LOUISA, only daughter of CHARLES M. POCOCK, Esq, of Montague House, Brixton—22d ult, at Wrawby, ARTHUR TENNYSON, Esq., brother of the Poet Laureat, to HARRIET, sister of the Vicar of the parish, and eldest daughter of the late Rev. JOHN WEST, Rector of Chettle and Farnham—23d ult, at Prestbury Church, Captain IVAN HERFORD, of H.M.'s 90th Regiment of Light Infantry, only son of the late Lieutenant Colonel Herford, C.B., formerly of the 23d Welch Fusiliers, to MARION JANE CALDWELL, fourth daughter of the late Dr. ANTHONY TODD THOMPSON.

DEATHS.—On the 25th of March last, at Calcutta, FRANCIS, only son of the Hon. ALGERNON and Mrs. CHICHESTER, aged seven months — 21st ult. Major-General WILLIAM MILES, H.E.I.S., of North Villa, Regent's Park, and Cheshunt, Herts—25th ult, at his residence, Waltscote House, near Reading, Vice-Admiral ROBERT MERRICK FOWLER, aged 79—18th ult., at the Curragh Camp, Captain JOHN COLLINS, of H.M.'s 26th Cameronian Regiment, having been mortally wounded by a stray bullet while in the performance of his duty at rifle practice, aged 28—24th ult, at Impington Hall, Cambridgeshire, ALEXANDER COTTON, of Landwade, in that county, Lieutenant R.N., aged 51—24th ult, at his residence, in the Albany, ARTHUR BRISCO, Esq., of Newtown Hall, Montgomeryshire, late of the 11th Hussars, and second son of Wastel Brisco, Esq., of Belmont, near Hastings—14th April, at Lahore, India, on his way to join the head-quarters of H.M.'s 46th Regiment, Ensign FRANCIS LLOYD PRIESTLEY, fourth son of John Priestley, Esq., of Hirdrefaig, Isle of Anglesey, aged 19—28th ult, at Pau, MARIA SARAH, wife of WALTER HORE, Esq., and only daughter of the Lord Bishop of Lismore, aged 34—29th ult, at St. Leonard's, WILLIAM BUTTERWORTH BAYLEY, Esq., for many years a Director, and at one time Chairman, of the Hon. East India Company, aged 78—26th ult, at Tenby, drowned while bathing, JOHN COCKBURN, youngest son of the late Dr. ANTHONY TODD THOMSON.

Markets.

BRITISH WOOLS.—LONDON, FRIDAY, June 1.

The state of our trade is unaltered. We still await the arrival of the new clip to determine the value of our several descriptions of wool. The spinners and manufacturers have supplied themselves for their immediate requirements, and [illegible] when a larger quantity comes to the market, [illegible] to by the farmers at present, who [illegible] their rates for high prices, without, however, any [illegible] to hold their wool at even the present rates, [illegible] to buy the finest, and we think that to all present [illegible] the coming clip will be brought up more rapidly [illegible]

Colonial Wool Sales.—The wool sales terminated last [illegible] with much spirit, the concluding ones having realised [illegible] prices than those at the commencement. The low wool sales begin to-day and finish to-morrow.

POTATOES.—SOUTHWARK, MONDAY, May 28.

During the past week the arrivals coastwise and by rail have been large for the season, which, combined with fine mild weather, has caused a great reaction in the trade. The following are this day's quotations:—Yorkshire Re-

gents, 90s. to 120s.; do. Flukes, 90s. to 120s.; Lincolnshire Regents, 80s. to 100s.; Dunbar do., 100s. to 120s.; do. Reds, 100s. to 110s.; Perth, Forfar, and Fifeshire do., 80s. to 100s.; do. Reds and Rocks, 90s. to 100s.; Irish Whites, 80s. to 90s.

COVENT GARDEN.—June 2.

Cabbages and other vegetables are becoming more plentiful. Importations of French produce are now much on the increase. Pine Apples and Grapes have altered but little since our last. Apples are all but over. Oranges are plentiful. Strawberries are now coming in in tolerable abundance. Spanish Nuts fetch 16s. per bushel. Cobs realise 1s. per lb. Rhubarb is still furnished in large quantities. Green Peas, and Broad Beans of foreign growth, may now be obtained. Potatoes realise 4s. 6d. a bushel. New frame ones may be had at from 1s. to 2s. per pound. Mushrooms may be obtained in small quantities. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Azaleas, Heaths, Primulas, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Melons, each, 10s to 15s
Grapes, per lb., 8s to 13s	Apples, per doz., 2s to 6s
Strawberries, p. lb., 4s to 8s	Oranges, per 100, 2s 6d to 8s
Peaches, per doz., 21s to 36s	Lemons, per 100, 5s to 8s
Nectarines, do., 18s to 24s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 3s to 6s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 2s to 3s
Peas, p. half sieve, 8s to 10s	Onions, p. half sieve, 1s to 1s 6d
Broccoli, per doz., 4s to 8s	— Portugal, each, 2d to 4d
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Endive, p. score, 1s to 2s
— per cwt., 6s to 8s	Horse Radish, p. bun., 1s 6d to 4s
Carrots, per bunch, 6d to 8d	Mushrooms, p. pott., 2s to 2s 6d
Turnips, per bunch, 5d to 7d	Parsley, p. 12 bunches, 4s to 8s
Spinach, p. sieve, 4s to 5s	Savory, per bunch, 2d to 4d
Cucumbers, each, 9d to 1s 6d	

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, May 31.

Prime Meadow Hay	75s to 84s		Clover	95s to 115s
Superior do. (old) ..	90 95		New Clover	— —
Inferior do.	60 70		Second cut do. ..	84 92
New do.	— —		Straw	25 32
Rowen	60 70			DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, May 31.

Sup. Meadow Hay ..	88s to 96s		Inferior Clover ..	90s to 98s
Inferior do.	70 80		New do.	— —
New do.	— —		Straw	32 36
Superior Clover ..	108 115			JOSHUA BAKER.

WHITECHAPEL, THURSDAY, May 31.

Fine old Hay	90s to 96s		Fine old Clover ..	112s to 117s
Inferior do.	80 88		Inferior do	100 108
Prime New Hay	— —		Fine New Clover ..	— —
Inferior do.	— —		Fine 2d cut	95 100
Straw	27 32		Inferior do.	80 90

METROPOLITAN CATTLE MARKET.

MONDAY, May 28.

We have a larger supply of Beasts and trade for them is not so brisk as on Monday last, consequently prices are rather lower. The number of Sheep is considerably larger and trade is dull. A clearance cannot be effected, although prices are lower. Lambs and Calves are selling about the same as on Thursday. From Germany and Holland there are 220 Beasts, 4600 Sheep, and 72 Calves; from Spain, 140 Beasts; from Norfolk and Suffolk, 2000; and 150 from the northern and midland counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 0	to 5 2	Best Long-wools.	..	to ..
Best Short-horns	4 8	— 5 0	Do. Shorn	5 0	— 5 4
2d quality Beasts	3 8	— 4 4	Ewes & 2d quality	..	— ..
Best Downs and Half-breds	.. ..	to ..	Do. Shorn	4 6	— 4 10
Do. Shorn	5 8	— 5 10	Lambs ..	6 8	— 7 4
			Calves ..	5 0	— 5 8
			Pigs ..	4 4	— 5 0

Beasts, 3930; Sheep & Lambs, 18,500; Calves, 130; Pigs, 270.

THURSDAY, May 31.

Good Beasts are scarce; indeed there is a shorter supply of all descriptions; trade has consequently recovered the slight depression experienced on Monday. The same remarks apply also to Sheep. Lambs are selling about the same as on Monday. Calves are rather dearer. Our foreign supply consists of 158 Beasts, 550 Sheep, and 128 Calves; and 125 Milch Cows.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 2	to 5 4	Best Long-wools .	..	to ..
Best Short-horns	4 10	— 5 2	Do. Shorn	5 4	— 5 6
2d quality Beasts	4 0	— 4 6	Ewes & 2d quality	..	— ..
Best Downs and Half-breds	.. ..	— ..	Do. Shorn	4 8	— 5 0
Do. Shorn	5 8	— 6 0	Lambs ..	6 8	— 7 4
			Calves ..	5 0	— 6 0
			Pigs ..	4 4	— 5 4

Beasts, 1055; Sheep & Lambs, 7910; Calves, 261; Pigs, 60.

MARK LANE.—MONDAY, May 28.

The supply of Wheat from Essex and Kent to this morning's market was small, and met with a slow sale at the prices of Monday last. The sale of foreign was also limited, and we observe no alteration in its value. The Barley trade is slow, and prices are 1s. to 2s. per qr. lower. Beans and Peas bring last week's rates. For Oats there is a better demand than on Friday last at a decline of 6d. to 1s. per qr. upon the prices of this day se'nnight. Flour is unaltered in value.

PER IMPERIAL QUARTER,	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk .. White	50—56	Red	50—52
— — fine selected runs .. ditto	51—60	Red	52—56
— — Talavera	56—62		
— Norfolk	—	Red	—
— Foreign	48—63		
BARLEY, grind. & dist., 24s to 31s .. Chev.	38—45	Malting .	36—41
— Foreign .. grinding and distilling	28—36	Malting .	35—40
OATS, Essex and Suffolk	19—26		
— Scotch and Lincolnshire .. Potato	23—30	Feed ..	19—27
— Irish ..... Potato	24—30	Feed ..	19—25
— Foreign ..... Poland and Brew	26—29	Feed ..	22—28
RYE	35—38	Foreign .	—
RYE-MEAL, foreign	—		
BEANS, Mazagan .... 32s to 40s .... Tick	34—43	Harrow .	34—43
— Pigeon ..... 36s — 47s .. Winds	48—54	Longpod	—
— Foreign ..... Small	38—46	Egyptian	—
PEAS, white, Essex and Kent .. Boilers	38—40	Suffolk .	36—41
— Maple .... —s to —s ..... Grey	32—34	Foreign .	30—40
MAIZE ..... White	—	Yellow ..	—
FLOUR, best marks delivered .. per sack	44—50		
— 2d do. ..... ditto	35—44	Country .	35—44
— Foreign ..... per barrel	25—31	Per sack	30—37

FRIDAY, June 1.

The weather during the past eight days has been of a very stormy character, with showers of snow, hail, and rain; wind variable, chiefly westerly: yesterday S.E., to-day S.W. The accounts we receive of the growing Wheat and Barley crops are far less favourable than heretofore. The Wheat trade has been dull throughout the kingdom, and although great firmness has been generally manifested by holders in several markets, the extreme rates of the previous week were not supported. The tendency in the value of all spring corn has been towards a decline. In Flour business was inactive, but prices unaltered. Business in the Baltic has also been quiet, but prices there continue to be out of proportion to our own. The latest accounts from America are dated 19th ult., and Flour in New York, Montreal, and Quebec was rather lower. The arrivals of grain-laden vessels from the South of Europe off the coast for orders this week are to a moderate extent, as are also the sales, which include Odessa Ghirka Wheat at 52s. 4½d., Marianopoli at 53s. 6d., both per 492 lbs.; Ibrail Maize at 34s. per 548 lbs.; Danube Barley at 29s., Galatz at 27s. 4½d., and Odessa at 28s. 1½d., all per 400 lbs., Ibrail at 26s. per imp. qr. The arrivals of foreign Wheat and Barley this week are good; of Oats and English grain small. The English Wheat left over from Monday being held at the extreme prices of that day remained unsold till a late hour. Foreign was in rather improved demand, but the inquiry was chiefly confined to floating or f. o. b. cargoes. On the business done from the stands fully late rates were realised. Barley is a slow sale and the turn cheaper. Beans and Peas are unaltered in value. Oats are steady at Monday's prices.

ARRIVALS FROM May 28 TO June 1.

	Wheat.	Barley.	Oats.	Flour.
English ..	910 qrs.	70 qrs.	— qrs.	1090 sks.
Irish	— ,,	— ,,	2600 ,,	— ,,
Foreign ..	12270 ,,	4930 ,,	8380 ,,	1620 ,, / — brls.

LIVERPOOL, Tuesday, May 29.—We have only a small attendance of millers and dealers at our Corn Exchange this morning, and the demand for both Wheat and Flour proved is quite in retail at the quotations of Friday last. Indian Corn met rather a better inquiry for fine qualities, which being scarce brought extreme rates; other descriptions dull. Oats and Oatmeal were no lower than on Friday, but very difficult of sale. Egyptian Beans steady at Friday's decline; Peas 6d. to 1s. per qr., and Barley 1d. per bushel lower. The market partook of a quiet character throughout.

FRIDAY, June 1.—For Wheat there was a moderate consumptive demand at Tuesday's rates. Indian Corn and Beans pressed, and 6d. per qr. lower. Oats and Oatmeal without change. The attendance at market was limited.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
April 21..	49s 6d	37s 6d	24s 2d	32s 11d	42s 0d	39s 2d
— 28..	51 2	37 11	24 5	31 5	41 6	38 1
May 5..	52 6	37 5	25 5	34 0	42 4	39 9
— 12..	52 6	37 7	25 10	34 1	43 8	40 3
— 19..	52 1	36 6	25 3	36 2	44 3	39 5
— 26..	52 6	36 2	26 6	37 3	44 8	40 9
Agg. Aver.	51 8	37 2	25 3	34 4	43 1	39 7

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Apr. 21.	Apr. 28.	May 5.	May 12.	May 19.	May 26.
52s 6d	..	..			..	
52 1	..	..				
51 2	..		..	..		..
49 6 —		..	..	..	..	..
..	..	..	..	..	..	..
..	.	..	..	..	..	..

HOPS.—BOROUGH MARKET, FRIDAY, June 1.

Messrs. Pattenden & Smith report that the market is firm. The bine in many places is weak and unkind; the fly slightly on the increase.

BUTTER MARKET.—June 2.

Best Fresh Butter . .. 14s. per dozen lbs.
Second do. do. .. .. 12s. .. ,,
Pork, 5s. 0d. to 5s. 4d. per 8 lbs.

COAL MARKET.—MAY 31.

Byass's Bebside West Hartley, 15s. 9d.; Davison's West Hartley, 15s. 9d.; Holywell, 15s. 6d.; Howard's West Hartley, 15s. 6d.; Lambert's West Hartley, 15s. 9d.; South Peareth, 12s.; Tanfield Moor, 13s.; Tynedale West Hartley, 15s.; Walker Primrose, 12s. 6d.; West Hartley, 15s. 9d.; Wylam, 16s. 6d.; Walls End Acorn Close, 16s.; Walls End Eden, 16s.; Eden Main, 16s.; Walls End Braddyll's Hetton, 16s. 3d; Walls End Framwellgate, 16s.; Walls End Haswell, 17s. 6d.; Walls End Hetton, 17s. 6d.; Walls End Stewarts, 17s. 6d.; Walls End Cassop, 16s. 3d.; Walls End Heugh Hall, 16s.; Walls End Hunwick, 15s; Walls End Kelloe, 16s. 6d.; Walls End South Hartlepool, 16s.; Walls End South Whitworth, 15s.; Walls End Thornley, 14s. 6d.; Walls End Thorpe, 16s. 6d.; Walls End Whitworth, 15s.; Carway and Duffryn Malting, 22s. 6d.; Llangennech, 21s.—71 ships at market.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

WANTED IMMEDIATELY, steady active Men as GARDENERS, in the Jobbing line, who understand their profession. Constant employment. Good references required.—Apply to J. WEST, Nurseryman, Green Lanes, Newington Green, Middlesex, N.E.

WANTED, by a Market Gardener, a Young MAN who perfectly understands the management of Vineries, Conservatories, Wall Trees, &c. He must be well up to growing for market, must be civil and obliging in his department, and produce a good character from his last situation. Preference given to one who is a teetotaller and member of a Christian Church.—Address, in own handwriting, E. T., Mr. Jones, Ironmonger, Woolton, near Liverpool.

WANTED, A GARDENER.—A Man and his Wife, without incumbrance; he must be steady and of good character, and perfectly understand his business, and also have a knowledge of Stock; he will have assistance. Wages, 15s. per week, with a Cottage, &c. Situation a few miles from London.—For address, apply at Mr. Warren's, Stationer, 18, London Street, Fitzroy Square, W.

WANTED, in the Midland Counties, an active respectable Married Couple, without incumbrance, or with a Lad, 13 or 14 years of age. The Man must be a good Gardener, take charge of small Greenhouse, Horse, Cow, &c.; the Woman must be a good Laundress.—Apply, A. A., W. H. Smith & Son, Advertising Agents, 23, Union Street, Birmingham.

WANTED, an active, steady Man, who understands Glazing, Painting, and Nursery Carpenters' work; also a man who understands Market Gardening in a Nursery.—Apply, stating wages and reference for character, to Mr. HONEY, 71, Bank Street, Maidstone.

WANTED, A GROOM AND GARDENER, at Northfleet, Kent, to take charge of One Horse and to Drive. Must understand Gardening thoroughly, and have at least one year's good character.—Apply at TERRY'S, Saddler, New Road, Gravesend.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 42, married; thoroughly experienced. Twelve years' unexceptionable character.—C. COOPER, Coombe Wood, Kingston, Surrey.

GARDENER (HEAD).—Age 32; well understands his profession in all its branches. Seven years' good character.—J. N., Mr. Dods, Epsom Nursery, Surrey.

GARDENER (HEAD).—Age 32, married, no family; has a thorough practical knowledge of Pines, Vines, Cucumbers and Melons, Flower and Kitchen Gardens.—J. R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD).—Understands his profession in all its branches; capable of managing a gentleman's or nobleman's estate. Highly recommended, country preferred.—M. B., Mr. Southby, Nurseryman, High Street, Clapham, S.

GARDENER (HEAD).—Age 36, single; understands Early and Late Forcing, Vines, Flower, Fruit, and Kitchen Gardens. Unexceptionable character.—A. B., 5, Mark House Common, Walthamstow, Essex, N.E.

GARDENER (HEAD).—Middle-aged, married, without incumbrance; thoroughly understands Forcing, Flower and Kitchen Gardens. Fifteen years' good character.—J. K., 17, Wright's Lane, Lower Edmonton, N.

GARDENER (HEAD).—Age 32; has a thorough knowledge of his profession. Testimonials of the first class. No single-handed place accepted. Wife an experienced Laundress.—J. C., care of the Rev. J. B. Hayley, the Rectory, Brightling, Sussex.

GARDENER (HEAD).—Age 32, single; is thoroughly experienced in all the branches of his profession, and competent to undertake the management of a nobleman or gentleman's gardens. Good character.—E. G., Post Office, Wateringbury, Kent.

GARDENER (HEAD).—Age 30, single; understands the Cultivation of Stove and Greenhouse Plants, Grapes, Cucumbers, Melons, Vegetables, &c., with Management of Flower and Kitchen Gardens. Good character.—C. E., Mrs. Jeffries, Smallbury Green, Isleworth, London, W.

GARDENER (HEAD).—Single; understands Stove and Greenhouse Plants, Forcing Early Grapes, Cucumbers, Melons, &c., and all kinds of Vegetables and Flower Gardens. Good character.—A. B., Mr. Dickinson, Nurseryman and Florist, Westerham, Kent.

GARDENER (HEAD).—Mr. D. T. FISH, Gardener at Hardwicke, Bury St. Edmunds, Suffolk, can with confidence recommend his Foreman to any lady or gentleman requiring the services of an active energetic young Gardener of good character.

GARDENER (HEAD).—The Advertiser, who is leaving his present situation at his own request, and can have upwards of 11 years' character, is wishful to procure another situation.—Every particular will be furnished upon application to JAMES DICKSON & SONS, the "Newton" Nurseries, Chester.

GARDENER (HEAD).—Age 34, married, one child; thoroughly understands his profession, including Early and Late Forcing of Fruits, Flowers, and Vegetables. Understands Land and Stock. Wife can take charge of Dairy and Poultry. Comfort, and a hope of a permanency, the highest consideration.—H. W., Post Office, Roehampton, Surrey.

GARDENER.—Thoroughly understands Kitchen and Flower Gardens, Forcing, &c.—A. B., Post Office, Fulham.

GARDENER.—Age 38, married, without incumbrance; thoroughly understands his profession in all its branches. Can have a good character from his last situation.—C. M., Post Office, Whips Cross, Walthamstow, Essex, N.E.

GARDENER.—Age 30, single; thoroughly understands Kitchen and Flower Gardens, Stove and Greenhouse Plants, &c. Wages expected, 1l. 1s. per week with lodging.—H. H., Post Office, Petersham, Surrey.

GARDENER.—JOHN CARTER, Jun., Nurseryman, Keighley, wishes to recommend a young Man to any lady or gentleman in want of a good practical Gardener: he has had considerable experience in Pines, Vines, and every other branch of Gardening, and J. C. has every confidence that he will give satisfaction.

GARDENER (SINGLE-HANDED, in or out of doors).—Age 21; understands Forcing.—W. A., Dartford, Kent, E.

GARDENER (SINGLE-HANDED or UNDER in a good establishment).—Age 26, single; well experienced in the various branches of Gardening. Wages 16s. per week.—F. B., Post Office, Maidstone.

GARDENER (UNDER, or Improver in a gentleman's Garden.)—Three years' good character.—A. B., Post Office, Chester.

GARDENER (FOREMAN in a large establishment).—Age 24, single; well versed in every branch of his profession. Testimonials of the highest character.—Mr. NICKSON, Hale Hall, Warrington.

GARDENER (FOREMAN).—Has a practical knowledge of Forcing and Plant Department; also Kitchen and Flower Gardens.—A. B., Mr. Maller, Nurseryman, Granville Terrace, Lewisham, S.E.

FOREMAN (or good SINGLE-HANDED).—Age 22, single; thoroughly practical. Good character.—A. B., Post Office, Lower Mitcham, Surrey, S.

PROPAGATOR, OR FOREMAN AND PROPAGATOR.—A Man of first-class experience. Reference to one of the best metropolitan firms.—A. B., Messrs. Milne & Co., Vauxhall Nurseries, Wandsworth Road, London, S.W.

STEWARD, BAILIFF, OR GARDENER, or the three offices combined.—Middle aged; experienced; held a similar situation for some years; thoroughly conversant with Estate Management, the Designing and Erection of Farm Buildings according to modern improvements, and has also formed Gardens of the first-class—ALPHA, 5, Wellington Street, Strand, London, W.C.

FARMING BAILIFF.—Understands Buying, Selling and Rearing of Stock. Can have a good reference.—F. CHURCH, Moreton, Essex.

FARM BAILIFF.—Middle aged, married; has a thorough knowledge of his profession. Can manage a Kitchen Garden and take charge of Woods and Plantations. Is a good Accountant. His wife can manage a Dairy. Good references. Security if required.—W. X., Mr. Hutchins, Medical Hall, Wind Street, Neath.

SHEPHERD.—NOAH BELSHAM (married) begs to offer his services to any nobleman or gentleman requiring a thoroughly experienced Man in the above capacity. Four years' unexceptionable character.—Whitwell, near Reepham, Norfolk.

The Gardeners' Chronicle Newspaper.

SATURDAY, JUNE 9, 1860.

MRS. ARTHUR HENFREY, Widow of the late Professor Henfrey, F.R.S., F.L.S., &c., of King's College, London, continues to receive a limited number of young Gentlemen under 12 years of age, to be educated with her own Sons, in all the branches of a liberal education. French is constantly spoken, Mrs. HENFREY having resided on the Continent, and a Parisian Lady assists her to teach Music, Singing, and Drawing. The house is healthily situated, and provided with a large Garden. Pupils will have the comfort of a private family, and unremitting attention will be paid to their health and morals. References are permitted to—

Dr. JELF	Principal of King's College
Rev. LAWFORD W. T. DALE ..	Chiswick Vicarage, W.
Rev. OLIVE HOLLINGWORTH ..	Turnham Green, W.
Sir WM. and Lady HOOKER ..	Kew, W.
Professor HUXLEY, F.R.S. ..	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. MARTYN.. ..	7, Bennett St., St. James's, S.W.
Dr. and Mrs. LINDLEY.. ..	Acton Green, W.
Dr. and Mrs. HOOKER .. .	Kew, W.
Dr. and Mrs. TUKE	Manor House, Chiswick, W.

For terms apply to Mrs. ARTHUR HENFREY, 12, Heathfield Terrace, Turnham Green, W.

NEXT OF KIN, HEIRS, &c., WANTED, who have been Advertised for—Being exact Copies of Advertisements from the *Times, Gazette, Chronicle, Herald, Post, Melbourne Argus, Sydney Herald, Hobart Town Mercury, South Australian Register, Cape Mail* and *Monitor, New Zealand Gazette, West India Record*, Indian, Canadian, and American Papers for the last 60 years, relating to many thousand names, descriptions, and last residences of persons of all classes entitled to money and property of several Millions value, and now laying dormant for want of claimants. This prized and valuable book is sent post free to any part of the United Kingdom for 12 post stamps by the publishers, FISHER & SON, Kingsland, London, N.E. Established 1847. "Worth its weight in gold."—*Times*, Nov. 26, 1859.

News of the Week.

IN the House of Lords on Monday the Refreshment Houses and Wine Licenses Bill and the Repeal of Sir John Barnard's Act Bill were brought up from the Commons and read a first time. On Tuesday, on the motion for the third reading of Lord CHELMSFORD'S Sunday Trading Bill, Lord TEYNHAM moved that it be read a third time that day six months. After some discussion the third reading was carried on a division by 40 to 29. The Wine Licenses and Refreshment Houses Bill was read a second time, on the understanding that the discussion would be taken on the motion for going into committee. On Thursday Lord TEYNHAM moved a series of resolutions in favour of manhood suffrage and vote by ballot. Earl GRANVILLE opposed the motion, which was negatived without a division.

In the Commons on Friday Lord J. RUSSELL stated, in reference to the communication made by Russia to the five great Powers respecting the condition of the Christians in Turkey, that, at the suggestion of France and England, the Turkish Government had instituted an inquiry by means of the SULTAN'S officers, and that the Grand Vizier, REDSCHID PASHA, had already left Constantinople for Roumelia and the other Turkish provinces to superintend the investigation. The House then went into Committee of Supply on the remaining army estimates, when the various votes underwent much discussion, and were ordered to be reported. On Monday, on the order of the day for going into committee on the Reform Bill, the SPEAKER ruled that the instructions which had been put upon the paper by Mr. HUNT, Mr. GRIFFITH, Mr. BENTINCK, Mr. ENNIS, and Mr. HASSARD, directing the committee to provide for an increase of facilities for polling at elections, to give a larger share in the representation to counties, and to establish a uniform Parliamentary oath, were irregular. Mr. BENTINCK then moved that it be an instruction to the committee that they have power to make provision for the better prevention of bribery and corruption at elections. After some discussion the motion was agreed to. Lord J. RUSSELL then moved that the Speaker leave the chair, stating that it was the intention of the Government to go into committee on the English Reform Bill, but not to proceed with the Irish or Scotch Bills in the present session. Mr. DISRAELI objected to a partial reform applied to one section of the United Kingdom, and condemned the course proposed by Government as unprecedented and impolitic. Mr. MACKINNON moved as an amendment that, in order to obtain a safe and effective reform, it would be expedient to wait for the results of the forthcoming Census. After a protracted discussion the debate was adjourned to Thursday. On the motion for going into committee on the Sheriffs' Court (Scotland) Bill, a discussion arose on the question whether this and some other Scotch Bills should be proceeded with at a morning sitting on Tuesday the 12th inst. On a division, the motion for the morning sitting was carried by a majority of 102 to 89. On Tuesday Mr. LINDSAY'S motion for a Select Committee to inquire into the organisation and management of the transport branches of the Admiralty, War Office, India Office, and Emigration Board, was assented to by the Government and agreed to. Mr. B. COCHRANE'S resolution requiring the Civil Service Commissioners to publish, with their annual report, all the examination papers submitted to candidates, was opposed by Government and negatived without a division. Capt. JERVIS moved a resolution for abandoning the prosecutions in connection with the Wakefield election, and was proceeding with his motion when the House was counted out. On Wednesday on the order of the day for the second reading of the Ecclesiastical Commission Bill Mr. SELWYN moved that the Bill be read a second time that day six months. After considerable discussion the debate was adjourned for a fortnight. The Masters and Operatives Bill passed through committee. On Thursday, on the order for resuming the adjourned debate on Mr. MACKINNON'S amendment for postponing the Reform Bill till the results of the Census have been ascertained, Sir J. FERGUSSON moved the adjournment of the debate, with the view of postponing the committal of the Bill til the Scotch and Irish Bills have been read a second time. After a long discussion, the motion for adjourning the debate was negatived on a division by a majority of 21, the numbers being 269 to 248. Mr. B. COCHRANE then moved the adjournment of the House. On a division this motion was negatived by a majority of 45, the numbers being 267 to 222. Mr. D. GRIFFITH then moved the adjournment of the debate. Lord PALMERSTON assented to the motion, and the debate was adjourned to Monday. The orders for the second reading of the Irish and Scotch Reform Bills were then discharged.

Accounts from Sicily state that a capitulation was signed on the 30th ult. on board HER MAJESTY'S ship Hannibal in the Bay of Palermo between General LANZA and GARIBALDI, in accordance with which the Neapolitan army, 25,000 strong, was to quit Palermo on Monday with all the honours of war, and embark with their *matériel* on board the Neapolitan squadron. The King of NAPLES subsequently refused to sanction these conditions and ordered the bombardment to be resumed. In consequence, however, of the representations of his own Generals that the army would refuse to fight, and that officers and men had already gone over in large numbers to the popular cause, the order for renewing the bombardment was revoked, and General LETIZIA was sent back to Palermo with authority to renew the armistice to the 12th inst. The latest news, dated yesterday from Genoa, states that a new capitulation has been concluded between General LANZA and GARIBALDI, the conditions of which are not yet known, and that GARIBALDI has constituted a Ministry and appointed a Governor of Palermo and of the province.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal Family are at Buckingham Palace. On Friday the Queen held a Court at which the Sovereign Prince of Lichtenstein, and the Prince Louis and Prince Henry of Hesse, had an audience of her Majesty. Lord John Russell had an audience, and the Judge-Advocate-General also had an audience and submitted to her Majesty the proceedings of some Courts-Martial. The Prince Consort went to Maybury, near Woking, and laid the foundation stone of the Central Hall of the Royal Dramatic College. In the afternoon the Queen, accompanied by the Princess Alice, took a drive in a carriage-and-four. The King of the Belgians and the Count of Flanders arrived at Buckingham Palace on a visit to the Queen. In the evening her Majesty gave a concert, at which the Yorkshire Choral Union, comprising the Leeds Festival Choral Society, the Halifax Choral Society, and the Huddersfield Choral Society, had the honour of performing. On Saturday morning the Prince Consort presided at a meeting of the Council of the Duchy of Cornwall, and afterwards visited the South Kensington Museum. In the afternoon his Royal Highness visited the Princes Louis and Henry of Hesse, and the Prince of Lichtenstein. The King of the Belgians, accompanied by the Count of Flanders, visited the Duchess of Cambridge at her residence in St. James's Palace, and the Duke of Cambridge at Gloucester House. In the evening the Queen had a dinner party. On Sunday morning the Queen and Prince Consort, the King of the Belgians, Prince Arthur, the Princesses Alice, Helena, and Louisa attended Divine service in the private chapel of Buckingham Palace. The Dean of Windsor officiated and administered the Sacrament. The King of the Belgians visited Prince Louis and Prince Henry of Hesse, and Prince Edward of Saxe-Weimar. On Monday morning the Queen and Prince Consort, accompanied by the Princess Alice, rode on horseback. The Countess de Neuilly and the Duke de Nemours visited the King of the Belgians at Buckingham Palace. In the afternoon the Queen, accompanied by the Princess Alice and Prince Arthur, took a drive in a carriage and four. The Prince Consort rode on horseback. In the evening the Queen and Prince Consort, accompanied by the King of the Belgians and the Princesses Alice and Helena, honoured the concert of the Philharmonic Society at the Hanover Square Rooms with their presence. On Tuesday the Queen held a Court at which the Prince Jules and Prince John of Schleswig-Holstein Glucksbourg, accompanied by Count Bernstorff, had an audience of her Majesty. Their Serene Highnesses afterwards visited the King of the Belgians. Lord John Russell had an audience of the Queen. In the afternoon the Queen and Prince Consort accompanied by the King of the Belgians, Prince Arthur, the Princesses Alice, Helena, Louisa, and Beatrice, and the Count de Flandres, left Buckingham Palace for Windsor Castle, travelling from London by a special train on the Great Western Railway. Prince Leopold also arrived at the Castle from Buckingham Palace. The Queen, shortly after arriving at Windsor, visited the Duchess of Kent at Frogmore. The King of the Belgians, accompanied by the Count of Flanders, also visited her Royal Highness. Prince Louis and Prince Henry of Hesse, the Duchess of Atholl, the Earl of St. Germans, Viscount Sydney, the Marquis of Ailesbury, and Earl Spencer arrived on a visit. In the evening the Queen had a dinner party. On Wednesday morning the Queen and Prince Consort walked in the Home Park, accompanied by Princess Alice, Princess Helena, Princess Louisa, and the Princes Louis and Henry of Hesse. In the afternoon the Prince of Wales arrived from Oxford. The Duchess of Cambridge, the Princess Mary, and the Duke of Cambridge, the Dukes of Rutland and Newcastle, the Prussian Minister and Countess Bernstorff, the Earl and Countess of Dalkeith, the Earl and Countess of Clarendon, the Earl and Countess of Bessborough, Viscount and Viscountess Palmerston, and Major-General the Hon. R. Bruce arrived on a visit to her Majesty. In the evening the Queen had a dinner and evening party. On Thursday morning the Queen and Prince Consort, accompanied by the Prince of Wales, the Princesses Alice, Helena, and Louisa, the Count of Flanders, Princes Louis and Henry of Hesse, the Prince and Princess of Leiningen, the Duchess, Duke, and Princess Mary of Cambridge, and a numerous suite, honoured Ascot Races with their presence. The Royal party proceeded from the Castle to the course in 11 carriages and four. The King of the Belgians honoured M. and Madame Van de Weyer with a visit at New Lodge. In the evening the Queen gave a grand dinner in St. George's Hall, on the service of gold plate. Her Majesty afterwards had an evening party. Yesterday afternoon the Queen, Prince Consort, and the Royal family, accompanied by the King of the Belgians and the Count of Flanders, returned to Buckingham Palace from Windsor. Her Majesty will hold a Privy Council this afternoon at Buckingham Palace. Her Majesty will give a concert on Wednesday, the 13th inst., and a State ball on Friday, the 22d inst.

THE KING OF THE BELGIANS, accompanied by the Count of Flanders and their suite, landed at Dover on Friday from Ostend, and travelled to London by a special train of the South-Eastern Railway. The Royal party proceeded from the Bricklayers' Arms Station in several of the Queen's carriages to Buckingham Palace, where they arrived at 20 minutes before 6. His Majesty accompanied the Queen to Windsor on Tuesday, and returned yesterday with the Court to Buckingham Palace.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

PARLIAMENTARY MOVEMENTS.—There is a vacancy at Belfast caused by the retirement of Mr. Davison on account of ill health. Mr. Getty, the mayor, is a candidate for the vacant seat, and a requisition is in course of signature inviting Mr. Serjeant O'Hagan to come forward as a candidate in the Liberal interest. The Londonderry Election Committee resolved yesterday that Mr. W. M'Cormick, the sitting member, was duly elected to serve in the present Parliament. It is

announced that the petition presented against the return of Mr. Warner and Sir W. Russell, the Liberal sitting members for Norwich, is not to be proceeded with on account of want of means to prosecute the inquiry.

THE NEW BISHOP OF CARLISLE.—The Hon. and Rev. S. Waldegrave, formerly curate of St. Ebbe's, Oxford, and latterly rector of Barford St. Martin's, Wilts, and Canon of Salisbury, has been appointed to succeed Dr. Villiers as Bishop of Carlisle. His views are said to be those of a sound Churchman, without leaning to the Tractarian party.

CONVOCATION.—On Thursday morning both Houses of Convocation of the province of Canterbury assembled at Westminster for the despatch of business. In the Upper House the Bishop of Oxford's motion for sending down to the Lower House the alterations made in the draught report from the joint committee of both Houses on the subject of occasional services, was carried after considerable discussion. In the Lower House Canon Selwyn presented a *gravamen* against the Divorce Bill, which had been twice presented before, in 1858 and 1859, and sent to the Upper House as an *articulus cleri*, a course which he proposed should be adopted on that occasion. After some discussion, permission to discuss the matter was refused.

THE PLYMOUTH COMMAND.—Vice-Admiral Sir Arthur Fanshawe, K.C.B., late Commander-in-Chief in the Mediterranean, has been appointed Commander-in-Chief at Plymouth, in the room of Vice-Admiral Sir Barrington Reynolds, whose period of service has expired.

THE GUNBOATS FOR CHINA.—Intelligence has been received at the Admiralty of the safe arrival at Singapore of the gunboats Grasshopper, Bouncer, Havoc, Weazel, Hardy, Cockchafer, Flamer, and Snap, all of which sailed from England in the early part of November last.

THE VOLUNTEER REVIEW.—It is announced that the grand review of the volunteers by her Majesty is fixed for Saturday, the 30th of June.

Foreign.

FRANCE.—The *Moniteur* of Wednesday announces the departure of their Imperial Majesties for Fontainebleau, where they will remain for several weeks. The *Moniteur* further states that, as the health of Prince Jerome continues to improve, no more daily bulletins will be published. On Tuesday morning the Emperor reviewed the division of General Bazaine, on its return from Italy. At an early hour the division assembled on the Place du Carrousel, with the exception of the 1st Regiment of Zouaves. The people assembled in great crowds, and discussed in a lively manner the events in which the gallant division bore so distinguished a part. The Emperor bestowed the Military Medal and Cross of the Legion of Honour with liberality, and the division defiled with cries of "Vive l'Empereur!" "Vive l'Impératrice!" "Vive le Prince Impérial!" in which they were joined by the people. Captain Russell, of the Imperial navy, who was charged with a mission to Abyssinia, had a private audience of the Emperor before his departure for Fontainebleau. Captain Russell presented the treaty concluded with the King of Abyssinia, by which the port of Adoulis and the Island of Dyssa are ceded to France. The commissioners appointed by the King of Sardinia to fix the boundaries between Savoy and Nice and Piedmont have arrived in Paris, to come to an understanding with the French commissioners, so as to bring the affair to a conclusion. Immediately after the annexation of Nice and Savoy, France will address a note to the Powers, notifying the fact, and demanding a reply as a recognition of the annexation by Europe. The Abbé Maret has been named by the Emperor Bishop of Vannes and the Abbé Duquesney, who preached during Lent at the Tuileries, has been appointed Bishop in Partibus, and governor of the "children of France." The Abbé Maret was Professor at the Sorbonne, and is reported to be the author of a pamphlet against the temporal power of the Pope, which appeared immediately after the famous one "*Le Pape et le Congrès.*" The *Constitutionnel* publishes an article, signed by M. Grandguillot, paraphrasing the recent speech of M. Fould at Tarbes, with the object of proving that the French are loyal neighbours to all frontier Powers. The following is a summary of the article:—

"Acting with England the Emperor opposed the attempts of Russia to exercise undue preponderance over the East, and as soon as that object was accomplished he made peace, and sought no more to molest that Power. The undue preponderance exercised by Austria in Italy called him again into the field, and as soon as he had achieved the object of the war, he refrained from pushing advantages to excess. Were he a Sovereign watching for opportunities of striking blows at his neighbours for the sake of gratifying a senseless ambition, would he have acted as he did towards England when she found herself involved in a contest with her own Indian empire? Yet Great Britain possesses a preponderance over the seas, which he has not sought to dispute. There is a certain kind of preponderance in the sense of legitimate influence which belongs justly to all great States. Austria and Prussia exercise such influence, the one over southern and the other over northern Germany; and England and Russia have their own well defined fields of recognised superiority. It was not so with France: The avowed purpose of the treaties of 1815 was to cripple her means, and place her in a position of relative interiority as regards the other Powers. So humiliating a state of things was put an end to by the two successive campaigns of the Crimea and of Italy. France has asserted her right, in connection with England, to save the Turkish Empire from being disposed of according to the will of the Czar. She has settled with Austria the old struggle for ascendancy in Italy in so moderate a way as to retain the moral influence due to a benefactor. Having regained her position in the councils of Europe, France is content, and the more so because the days for coalition and exclusive alliances are at an end. There will be no more isolated interventions in the affairs of States, because difficulties as they arise will be considered and settled by the common consent of the Great Powers."

SPAIN.—The Infante Don Juan has decided on not adhering to the renunciation of all claim to the Spanish Crown lately made by his brother the Count de Montemolin. His Royal Highness has transmitted a manifesto to the London journals for publication, in which while reserving his rights he announces his determination not to appeal to arms to enforce them. The treaty with Morocco has been published. The first payment of the indemnity by Morocco will take place on the 1st July. It was reported that Cardinal Wiseman was about to visit Spain "to promote a subscription on behalf of the Holy See, and to stimulate the faithful to take part in the loan opened by his Holiness." The Government has decided on enlarging the port and city of Barcelona, and on not rebuilding its fortifications.

BELGIUM.—The French Government has requested the Belgian Cabinet to make proposals with the object of concluding a commercial treaty.

HOLLAND.—The storms which caused such devastation on the English coast were felt with equal severity in the Netherlands. In the wood of the Hague about 300 trees were uprooted, and proportionate damage has been done throughout the whole extent of the country. Immense losses have also been sustained by the marine assurance offices, and portions of wrecked vessels, the crews of which have disappeared, are driving hourly on the shores.

PRUSSIA.—It is said that an understanding between Prussia and the Middle States of Germany will be brought about by an interview at Baden Baden between the Prince Regent of Prussia and several German Sovereigns. The Prince Regent has just visited the Rhenan province to inaugurate the railways from Bingen to Sarrebruck and from Sarrebruck to Treves. At Sarrebruck the Regent delivered a patriotic speech, in which he declared that Prussia would never consent to the cession of the smallest portion of Germany territory. After his return from the eastern provinces the Regent will proceed to the Rhenish frontiers, where it is said that his Royal Highness will have an inteview with the Emperor Napoleon.

SWITZERLAND.—The task of defining the new frontiers between Sardinia, Switzerland, and France may be considered as concluded, except as to some details yet to be arranged. The assembling of a Conference on the claims of Switzerland has become more and more improbable for some time past. The Dowager Empress of Russia left Geneva on Monday for Zurich, attended by the Princess Marie Eugénie of Leuchtenberg.

AUSTRIA.—At the formal opening of the Council of the Empire on the 30th ult. Counts Apponyi and Adrossy both declared that the political programme of the Hungarians does not tend in any way to a separation from, but to an intimate union with, the Austrian monarchy, on the basis of common liberal institutions. The members of the Council were received on Friday in the throne-room by the Emperor, who read a speech mentioning important projects to be submitted to the Council, by which a provincial government will be granted to the different parts of the empire, without disturbing the unity of the State, and without specially favouring any single province.

HESSE CASSEL.—It is announced that the Government of the Elector will demand guarantees of the Federal Diet for the constitution granted on the 30th ult. Prussia will oppose the demand, and refuse her consent to any guarantee.

RUSSIA.—The *Gazette du Nord* states that the measures proposed respecting the emancipation of the serfs have been adopted by the majority of the deputies of the nobles, and that the general enfranchisement will be realised in the course of the ensuing autumn. The Emperor has permitted Jewish soldiers to enter the guards.

THE CAUCASUS.—A Russian journal states that the subjection of the Caucasus has been marked by a considerable increase in the progress of Christianity and civilisation amongst the mountain tribes, and that there is good hope that Christianity may be now firmly planted in the country; the more so as traces of Christian temples are still to be found, indicating that Mahometanism had only supplanted the purer faith int recent times.

ITALY.—The news of the bombardment of Palermo has produced a feverish agitation among the people of Naples, and a conflict has taken place at the Café de l'Europe between citizens and officers, the former shouting in favour of "Emmanuel!" "Garibaldi!" and "Sicily!" It is asserted that the Government has demanded from the five great Powers a guarantee for the territory of the Two Sicilies, and has also demanded the intervention of France and the other maritime Powers on the basis of a separate Government for Sicily, and has ordered the Council of State to prepare a constitution in conformity with French institutions. The Commendatore Martino, the Neapolitan Minister at the Court of the Holy See, left Rome on the 1st inst. for Naples, having been summoned thither by the King. The Ambassador, before taking his departure, had a long conference with the Pope. Rome was tranquil, but the inhabitants were agitated by the serious news from Palermo, and strong patrols traversed the streets. His Holiness is said to have expressed his opinion that the Emperor Napoleon and the King of Sardinia had resolved upon the execution of the programme contained in the pamphlet, '*Le Pape et le Congrès.*' Signor Castellani, the Roman patriot, had been exiled.

SICILY.—General Garibaldi is master of Palermo and a capitulation has been signed by the General commanding the Royal Army. It appears that Garibaldi had by a skilfully pretended retreat drawn off the troops, upon which the people rose in their rear; when by a well-managed return into the city, Garibaldi became master of all the positions abandoned by the military, which the insurgents determined not to let them reoccupy. The citizens and even the women took part in the combat and threw valuable furniture at the troops. The victory was complete when the ships of the Neapolitan navy opened a bombardment of the town. At this time the barracks of San Giacomo had been taken by the people; several houses in the Strada di Toledo had been burnt down, and the people had opened a breach in the houses surrounding the Custom House. The political prisoners had been set at liberty; a park of artillery had been captured; General Salzano and other Neapolitan officers had been made prisoners, and it was reported that a large sum of money had been found by the insurgents in the Treasury. On the 30th ult. Admiral Munday, the English admiral, having assembled on board the Hannibal the officers of all the foreign vessels of war (including those of Austria) off Palermo, they unanimously resolved to request the commander of the Neapolitan squadron to cease firing on the town, which had already sustained enormous damage from the bombardment. A capitulation was subsequently signed on board the Hannibal between General Lanza and Garibaldi and the Revolutionary Committee. This capitulation stipulated that the Neapolitan army, 25,000 strong, should quit Palermo with all the honours of war, and embark with their *matériel* on board the Neapolitan squadron, the evacuation to commence on Monday last. The Neapolitan troops were then concentrated in the Royal Palace and Castle, situated at the two extremities of Palermo. The city was barricaded, and part of the Royal troops were surrounded by the insurgents. The King of Naples subsequently refused the conditions of the capitulation, and ordered hostilities to recommence. General Letizia however having arrived at Naples with a new capitulation, is said to have pointed out to the King that the soldiers would refuse to fight, and that desertions were already numerous among officers and men, one of the King's generals being among the number who have gone over to the popular cause. In consequence, it is presumed, of these representations General Letizia returned to Palermo on Sunday with authority to renew the armistice to the 12th inst. A despatch from Genoa, dated yesterday the 8th inst., states that a new capitulation has been concluded between General Lanza and Garibaldi, but the conditions are not known. It was hoped by the mediation of the commanders of the foreign ships of war to arrive at an honourable arrangement between the parties engaged, who had displayed equal bravery. Garibaldi shows great kindness to the Neapolitan officers whom he has taken prisoners, and has published a letter commending the valour of the Neapolitan troops, who were, he says, more determined in their resistance than the Austrians last year in Lombardy. The enthusiasm for Garibaldi was gradually gaining the army, many of whom had gone over to him with arms and ammunition, and the clergy were publicly preaching a crusade against the Government. Garibaldi had constituted a Ministry, and had appointed a Governor of Palermo and of the province. He had likewise ordered an extraordinary levy, and had issued many decrees for energetically carrying on the war. One of his proclamations threatened with heavy punishments those who should commit thefts or assassinations. The Supreme Committee of Palermo had announced that a vote will be taken on the question of annexation to Sardinia. Accounts from Messina state that that city was deserted, that all merchandise had been embarked, and that all the Consuls had left, excepting M. Boulard, the French Consul, who was transporting his effects to the French ship-of-war, to which he would retire as soon as the city should be besieged or become the theatre of fighting. Girgenti had declared for the insurgents, and the inhabitants of other towns in insurrection had requested the neighbouring communes to send in provisions. Four thousand insurgents, having several pieces of cannon, attacked Catania on Friday, but were repulsed by General Clacy with the 5th Chasseurs, one regiment of Lancers, and some pieces of artillery. After a combat of eight hours the insurgents were dispersed, losing three cannon and two flags, the loss of the Royal troops being 200 men. The city has since been declared in a state of siege. Garibaldi has written to Genoa for arms and ammunition, the want of which is said to have induced him to grant the armistice. An English steamer had arrived at Marsala from Queenstown with 60 volunteers, 4000 rifles, and 1000*l.* for his use, and a Sardinian steamer had landed 80 volunteers, 2000 rifles, and 100,000 cartridges. Another steamer was to leave Genoa on the 3d inst. with arms and ammunition, and from 700 to 800 picked men, consisting of Italians and old soldiers. The report of Bixio's death is unfounded.

as the journal of the expedition, written by Bixio himself up to May 26, has just been published. A letter from Marsala, dated the 23d, states that the arms belonging to the British residents there, which had been taken from them, have been given up in consequence of a remonstrance addressed by Admiral Mundy to General Lanza.—The Sardinian Senate in its sitting of the 1st voted the Bill for the cession of Nice and Savoy unanimously, the members present being 83.

TURKEY.—By order of the Sultan the newly appointed Grand Vizier has proceeded to the provinces of Turkey in Europe to superintend the inquiry which has been instituted relative to the complaints of the Christian inhabitants. Aali Pasha has been appointed to replace the Grand Vizier during his absence. According to the most recent explanations of Prince Gortschakoff to the great Powers of Europe, Russia only proposed the assembling of a Congress on the subject of the situation of the Christians in the East in case an inquiry should confirm the justice of the complaints against the Porte. The inquiry as proposed by Russia was to be conducted by the Consuls of the great Powers, with the aid of Commissioners appointed by Turkey. As however the Porte has itself taken the initiative in the inquiry under the direction of a member of the Ottoman Cabinet, the great Powers have agreed to await the result before entering into ulterior negotiations on the Russian proposition.

SYRIA.—Letters from Beyrout to the 24th ult. state that disturbances have broken out in the Lebanon. The Christians and the Druses had assumed a hostile attitude towards each other, and the Pasha of Beyrout has not sufficient troops to re-establish order.

INDIA.—By the arrival of the Overland Mail we have received accounts from Bombay to May 4, Calcutta May 8. A fierce controversy about the budget was raging at both places. The following are the details:—

Calcutta.—The Governor-General, whose return to Calcutta was necessitated by Sir C. Trevelyan's minute, was expected on the 20th April. Lord Clyde will follow a few days later, and will leave Calcutta for England the first week in June. Sir Hugh Rose was expected from Bombay to assume the command of the Indian army in his room. General Mansfield has already been gazetted to succeed Sir Hugh at Bombay, where he has been commanding in virtue of his seniority.

Madras.—The publication of Sir Charles Trevelyan's minute has had a very bad effect upon the natives of India. Prior to its publication Sir Robert Montgomery, Lieutenant-Governor of the Punjab, Mr. Edmonstone and Mr. Wingfield, the rulers of the North-West Provinces and Oude, had reported to Government that the natives in their respective provinces were prepared to accept the measure. Their reports subsequent to the publication state that the language used by Sir C. Trevelyan had unsettled the minds of many who were previously resigned, and had produced a strong impression on the natives generally that they might yet escape taxation altogether, and nothing but the summary recall of Sir C. Trevelyan by the Home Government could have arrested the mischief.

Bombay.—Sir G. R. Clerk had arrived at Bombay as Governor of the Presidency. Cholera is committing fearful ravages in some parts of the country, the mortality in Baroda having risen as high as 3000 within a few days. The troops have suffered comparatively little, but the disease has proved fatal to Captain Brodie, of the 7th Regiment; Captain J. G. Forbes, Military Auditor General; and Mr. Henry Lee Pennell, a merchant.

Punjaub.—The force under General Chamberlain assembled at Tauk at the foot of the hills occupied by the Mushoods on the 14th April, and entered those hills on the 16th. It consisted of 250 cavalry, 4500 infantry and 17 guns. It marched two days after on Kotee Shunger, the stronghold of the Mushoods. These, however, had not the courage to defend it, but evacuated it after some slight skirmishing on the approach of our troops. A further advance was looked for every hour, it being the intention of the General to inflict condign punishment on these tribes for their wanton invasion of our territory.

Delhi.—A proceeding something similar to the circulation of the mysterious chupatties from village to village, though less extensive, has been discovered to have taken place in the Delhi and neighbouring districts. It seems that a *gharra* or earthen pot was sent round from village to village in which all or one of the community were to drop something, a stone or a piece of money, and then pass it on. It has been traced to the neighbourhood of Jhansee; but where it originated or what is its object is involved in mystery. The Political Agent at Gwalior has been directed to investigate the matter.

CHINA.—Some commercial houses of Marseilles are said to have received fresh news, by a supplementary mail from Hong Kong to the 25th of April, stating that the *ultimatum* had not been absolutely rejected, and that the Plenipotentiaries had remitted a second *ultimatum*, omitting the demand for an indemnity, to which they intended to await the answer of the Chinese Court.

JAPAN.—The accounts from Japan are still unsatisfactory, and the foreign residents at Yokohama still consider themselves unsafe. The Regent had been attacked and wounded by the retainers of the Prince of Meto, who is a pretender to the position of Tycoon, and said to be unfriendly to foreigners.

UNITED STATES.—The Republican National Convention at Chicago has nominated Mr. Abram Lincoln, of Illinois, for President, and Mr. Hannibal Hamlin, of Maine, for Vice-President. The "platform" adopted by the Convention is eminently conservative in tone. It declares for the immunity of sovereign States from interference with their domestic institutions, condemns the treason of John Brown, advocates an exalted tariff, and a relaxation of the naturalisation laws. It is stated that Mr. Lincoln used, as a youngster, "bare-footed, and with ragged trousers, to drive his father's oxen and spend his days in splitting rails." His nomination was so little the effect of preconcert, and so little anticipated by the Convention, as to have excited there as much surprise as it has unquestionably excited in the public mind elsewhere. It created an intense *furore* in Chicago; and the Republicans of New York, Albany, Rochester, and other places exhibited their enthusiasm by extraordinary explosions of gunpowder and other noisy demonstrations. A crowded meeting of Democrats was held at New York on the 22d ult., at which resolutions were passed in favour of the nomination of Senator Douglas, whose friends are confident of his nomination at Baltimore. A feeling of disappointment prevailed at New York at the non-success of Mr. Seward, who has been wholly set aside by Mr. Lincoln's nomination by his party. The barque William, late of New York, had been taken into Key West with 550 negroes on board, having been captured by the United States steamer Wyandotte off the Isle of Pines, on the south coast of Cuba. A Bill providing for the shipment of all negroes captured in slavers to their homes in Africa has since been passed, and the President has entered into an arrangement with the Colonisation Society for the return of those captured by the Mohawk and Wyandotte. The sum of 50,000 dollars is to be paid to the society for this service.

MEXICO.—Advices from Vera Cruz contain the important intelligence that Zuloaga issued a decree on the 1st ult. deposing Miramon, and assuming the Presidency of Mexico himself. It is stated that this movement had caused great alarm. Uraga, at the head of 6000 Liberal troops, was at Guanajuato on the 5th ult., preparing to attack the capital.

Parliament.

HOUSE OF LORDS.

MONDAY.—*The Bank of Ireland Bill* was read a second time. The *Public Improvements Bill* was read a third time. The *Trustees, Mortgagees, &c., Bill* was recommitted, when some verbal amendments were agreed to. The report of amendments in the *Ecclesiastical Courts Jurisdiction Bill* was received. The *Refreshment Houses and Wine Licenses Bill* was brought up from the Commons, and read a first time. The *Repeal of Sir J. Barnard's Act Bill* was also brought up from the Commons, and read a first time.

TUESDAY.—*Sunday Trading.*—Lord CHELMSFORD moved the third reading of the Selling and Hawking on Sundays Bill.—Earl ST. GERMANS opposed the Bill, on the ground that though it prohibited Sunday trading in the afternoon, it legalised it during certain hours in the morning, and would therefore virtually compel tradesmen to open their shops contrary to their will.—Lord TEYNHAM moved that the Bill be read a third time that day three months.—Lord CHELMSFORD denied that any desecration of the Sabbath would occur by sanctioning the Bill. The penalties of the Bill were not by any means excessive, and if they were to be made less they would entirely fail to accomplish the object for which they were imposed.—Earl GRANVILLE opposed the Bill.—The Bishop of LICHFIELD opposed the Bill, on the ground that it was the first Bill proposing to legalise trading on Sunday.—The Bishop of CASHEL was willing to support the Bill, if the clause legalising the sale of newspapers and other publications up to 10 o'clock on Sundays should be withdrawn. The House then divided on the question whether the word "now" should stand part of the motion, when the numbers were,—Content, 40; not content, 29; majority for the Bill, 11. After some further discussion, the Bill was read a third time and passed.—Earl GRANVILLE moved the second reading of the *Refreshment Houses and Wine Licences Bill.*—The Earl of HARRINGTON thought it would be better to postpone the second reading to a further day, as they had not had sufficient notice of the second reading of the Bill.—Earl GRANVILLE promised that a full opportunity should be given for discussing the measure on the motion for going into Committee on Friday. The Bill was then read a second time.

THURSDAY.—The *Trustees, Mortgages, &c., Bill* was read a third time and passed. Sir *John Barnard's Act Repeal Bill* was read a second time. The *Sale of Gas Act Amendment Bill* passed through committee. *Manhood Suffrage.*—Lord TEYNHAM submitted a resolution to the effect that the House, greatly desiring the settlement of the question of Parliamentary Reform, was willing to give its most careful consideration to the petitions which had been presented to it in favour of manhood suffrage and vote by ballot. In a speech of great length he pointed out the reasons which induced him to bring forward such a proposition. He believed that if the criminal, vagrant, and poor laws were revised and improved, the very largest extension of the franchise, accompanied by vote by ballot, might be safely conceded to the people.—Earl GRANVILLE said he could not give any countenance to the scheme of manhood suffrage, as recommended by the resolution, and expressed his opinion that universal suffrage, more than any other system, tended to the destruction of liberty and the introduction of despotism. The motion was then negatived without a division.

FRIDAY.—*Bombardment of Palermo.*—In answer to Lord BROUGHAM, who expressed warm sympathy with the Sicilian insurrection, Earl GRANVILLE said that the Government had received intelligence of the bombardment of Palermo. *Diplomatic Relations with Rome.*—The Earl of STANHOPE moved for a copy of the despatch from the Secretary for Foreign Affairs, to regulate the diplomatic relations with the Court of Rome since the cessation of her Majesty's Legation at Florence.

[Left sitting].

HOUSE OF COMMONS.

FRIDAY.—Mr. H. D. SEYMOUR called attention to the state of our *Relations with Persia*, and asked for papers relating to the recall or resignation of Sir Henry Rawlinson. He entered very copiously into the history of Persian politics and of our diplomatic intercourse with the Court of Teheran.—Mr. WYLD asked for information respecting the trial at Hongkong of the master of a British barque for the murder of a Chinese at Swatow: and Mr. D. FORTESCUE made inquiries relative to certain statements in a pamphlet published in Paris of the proceedings of the police authorities in Sicily.—Mr. OSBORNE, recurring to the subject of the Persian Mission, inquired what was its precise position, and whether it had been transferred to the exclusive direction of the Foreign Office—a question which, he thought, would be found to have some connection with the recall of Sir H. Rawlinson.—Lord C. HAMILTON defended Mr. Murray in relation to Persian diplomacy.—Mr. S. FITZGERALD, adverting to the communication made by the Minister of Foreign Affairs at St. Petersburg to the Ministers of the five great Powers at the Court of Russia, respecting the condition of the *Christian subjects of Turkey*, inquired what were the exact terms of the proposition, and what course with reference to the Russian Government; what course with reference of it had been pursued by that of France; what answer it was proposed to give by her Majesty's Government, and as to other matters connected with the communication.—Lord JOHN RUSSELL replied to these various questions. He observed that the story which had reached Mr. Seymour, that differences of opinion had arisen between the Government and Sir H. Rawlinson, and that in consequence Sir Henry had been recalled, was altogether fabulous. On the contrary, his policy had been entirely approved by her Majesty's Government; and the sole cause of his resignation was that he disapproved of the transfer of the administration of Persian affairs from the Indian Board to the Foreign Office. With regard to the policy of her Majesty's Government in Persia, it was to maintain the independence and integrity of that country, but at the same time to recommend to Persia not to make aggressions upon other independent States. Our present relations with the Shah of Persia were of the most satisfactory and friendly character. There was, however, one point upon which the position of the English Government might be peculiar—namely, that there had been a sort of rivalry between Great Britain and Russia at Teheran; and persons who were in favour of England complained of the conduct of Russia, while those who were in favour of Russia, complained of England. It was the wish of the English Government to discourage that rivalry, and he had written to St. Petersburg, and had told the Russian Minister here that so long as Russia would maintain the independence and integrity of Persia, the English Government would cordially assist in that object. The answer he had received from Russia was that that Power had always intended to show the same disposition. With respect to Mr. Wyld's question about China, he said he had not received any despatch from Hong Kong concerning the transaction referred to. As to the inquiry of Mr. Fortescue, the statements, he observed, rested upon the responsibility of the party who published them; but there were reports in the Foreign Office from our Consuls of cruelties and even tortures perpetrated by the police in Sicily, and no one who knew the state of that island could, he thought, be at all surprised at what had occurred there. In reply to Mr. Fitzgerald's question respecting Turkey, he stated that, at the end of April, the Minister of Foreign Affairs for Russia informed the Turkish Ambassador at the Court of St. Petersburg that the accounts received from the different Christian provinces under the dominion of the Sultan were such that, if an insurrection were to take place, and should produce a massacre on the part of the Sultan's troops, the Emperor of Russia could not remain a tranquil spectator. On the 5th of May the representatives of the five Powers were assembled by Prince Gortschakoff, who made a similar statement to them. Three propositions were then agreed to—first, that the present state of these provinces had become intolerable; secondly, that an inquiry should be made, and that such inquiry ought to be conducted by the officers of the Sultan, and that they should be assisted by the consuls of the five Powers; thirdly, that the Hatti-Humayoun having failed as a security for the protection of the Christians in the Porte, the Powers would deem it to be necessary to have a new organisation of the government of those provinces. When her Majesty's Government received these propositions they replied that they could not pronounce the condition of the provinces to be intolerable, although they could not speak in favourable terms of the government of the Sultan. With regard to the third proposition, providing for a new organisation, her Majesty's Government said that they could not agree to a new organisation on the principle of the Treaty of Paris of 1856. They therefore consulted with the other Powers, and gave it as their opinion that, while they could not give any consent to the first and third propositions, it might be proper to make inquiries as to the state of the Christian provinces of the Sultan. Austria took time for consideration, but the French Minister suggested that remedies might be pointed out which might provide for the security of the Christians as well as for the authority of the Sultan. Her Majesty's Government said that, if the Sultan thought that Christian agents might participate in the inquiry without a diminution of his authority, they might do so; but that, if his Majesty thought it would impair his authority, they would not press it upon him. Ultimately the Sultan had directed his Grand Vizier to proceed to the provinces and institute the inquiry. The adoption of this course might preserve unimpaired the authority of the Sultan, while it would hold out some hope for the future. No one could tell what would be the future destiny of the Turkish provinces, but during the last few years there had certainly been a great change for the better. At present he had every reason to hope that no difference would arise between the great Powers of Europe on the subject. *The Strike.*—Mr. HUBBARD asked whether the attention of the Government had been called to the renewed agitation of the metropolitan operatives for a diminution of the time of labour to nine hours; and whether the Government would be prepared to protect independent labourers against the coercion and violence practised towards them on a former occasion, should similar illegal proceedings be attempted by the men on strike.—Sir G. LEWIS replied that he had no information on the subject beyond that possessed by other members of the House. He considered it to be the duty of the Government to hold itself impartial with regard to these unfortunate movements, which told with the greatest severity on the men themselves. The motion for the adjournment of the House to Monday was then agreed to.—Mr. WHITESIDE obtained leave to bring in a Bill to consolidate and amend the laws relating to the powers of *Leasing and Improving Land in Ireland.* The *Universities and College Estates Bill* was read a second time. The House then went into committee of supply on the *Army Estimates*, and the remainder of the evening was passed in their discussion. Certain Bills were forwarded a stage

MONDAY.—*The China War.*—The CHANCELLOR of the EXCHEQUER stated, in reply to a question from Sir J. ELPHINSTONE, that the provision already made for the war in China consisted of the sums of 850,000*l.*, and 500,000*l.*, but that circumstances having since altered, it would become necessary for the Secretary for War to submit a further supplemental estimate on an early day. *The Reform Bill.*—On the order of the day for going into committee on the Representation of the People Bill, Mr. HUNT moved that it be an instruction to the committee that they have power to provide increased facilities for polling at elections in the United Kingdom.—The SPEAKER stated that it was not competent for the hon. gentleman to persist in his motion, as Bills were already before the House designed to remedy the evil of which he complained. The SPEAKER also ruled that certain amendments of which Mr. GRIFFITH and Mr. BENTINCK had given notice were out of order, being "mandatory in form."—Mr. BENTINCK then moved "that it be an instruction to the committee that they have power to make provision for the better prevention of bribery and corruption at elections."—Mr. HUME seconded the motion.—Mr. WHITESIDE supported it, and urged that strong measures to check bribery and corruption should precede an extension of the franchise, as otherwise, to enlarge the franchise would only be to increase corruption.—Mr. WYLD submitted that the only way to purify the representation of the people would be to introduce the ballot, and moved an amendment to that effect.—The SPEAKER held that this amendment was not in order.—Mr. MELLOR hinted that the object of Mr. Bentinck's motion was merely to delay the measure, and that he had no *bonâ fide* desire to purify the electoral system.—Mr. KNIGHTLEY supported the motion and stated that it was not his intention to press the motion of which he had given notice, that the poll be taken by means of voting papers.—Lord R. CECIL, Sir J. HANMER, Mr. A. MILLS, Sir M. FARQUHAR, Mr. BERKELEY, and other members, supported the motion; Mr. BOUVERIE and Lord J. MANNERS opposed it.—After some further discussion, Lord J. RUSSELL said he was quite willing that the subject should be taken up in committee

although he thought there was no necessity for the formal resolution proposed by Mr. Bentinck.—The instruction was then agreed to.—The SPEAKER ruled that the amendments proposed by Mr. HASSARD and Mr. ENNIS, that one uniform oath should be taken by each member of the House, were out of order—a separate Bill being necessary to establish any change in the oath.—Lord J. RUSSELL then moved that the Speaker leave the chair, and stated the course which the Government proposed to take with respect to the three Reform Bills. In their opinion, the English Bill should go into Committee and its provisions be assented to by Parliament before the other Bills were considered, and it was not to be expected that the Scotch and Irish Bills, under those circumstances, could be proceeded with this session. With regard to the English Bill, two questions arose, one as to the substance of the measure, and the other as to the time it was proposed to proceed with it. In respect to the first question, the Government had proposed a franchise for the boroughs which they did not think lower than it was proper to carry it; but this was a question of degree, and he was therefore justified in asking the House to go into committee, when any propositions for amending the Bill could be fairly considered. If the reduction of the franchise were objected to, the House should not have assented to the second reading. With respect to the question of time, it was to be proposed to wait the results of the Census, but this would postpone a Reform Bill for three years, which was equivalent to putting it off indefinitely upon a very hollow pretence. Then it was said that this was the 4th of June, and that it was too late to proceed with the Bill, considering that the Estimates had not passed the House. Looking at the importance of this Bill, however, he thought this no reason for not proceeding with it, and, if the Government alleged this reason, it would be attributed to a desire to get rid of the Bill without the manliness to avow it. No time was fixed for the prorogation of Parliament, and, if important business was before it, there was no reason why their sittings should not be prolonged.—Mr. DISRAELI vindicated the fairness and consistency of his party in relation to the measure, observing that the policy which Lord J. Russell had recommended that night was in strange and startling contrast to that which he had recommended from the Opposition benches, and to the tone and temper with which the Bill had been introduced. He pointed out the difficulties and embarrassments which would attend the course the Government proposed to adopt. If the English Bill only was to be proceeded with, was there to be a partial dissolution of Parliament, or must that House meet as a condemned House of Commons, the English members not competent to their duties? Meanwhile that was going on in Europe which should excite the anxiety and engage the deep attention of the country; and was that a period when the House should be left in the state which Lord J. Russell contemplated? In his opinion it was most impolitic at this moment to attempt such a settlement of this question as that undertaken by Lord John, who, after all, had come forward with no policy, but with a compromise which might be justly called paltry and in such a course he saw no safety to the country.—Mr. MACKINNON moved as an amendment that in order to obtain a safe and effective reform it would be inexpedient and unjust to proceed further with the proposed legislative measure until the House had before it the results of the Census of 1861. He urged various objections to proceeding with the Bill, as well as the indifference of the couutry, even of the working classes, towards it, insisting upon the danger of lowering the franchise so as to import into the borough constituencies a large number of operatives whose organisation might be easily rendered available for political objects.—Sir G. LEWIS declined to follow Mr. Mackinnon into arguments often urged and often answered. The postponement of the Bill till the Census had been taken would render legislation upon this subject next session impossible; and the results of the Census would have no bearing upon the borough franchise, the main subject of the Bill, nor would they affect the relative position of the boroughs in respect to population. If the House had the option, it would be better, in his opinion, to adopt a Census when there was no prospect of a Reform Bill, and no useful object could be gained by delay.—Sir H. STRACEY supported the amendment, which was supported by Mr. BARROW, Mr. BOVILL, and Sir M. FARQUHAR, and opposed by Mr. GREGSON, Sir F. GOLDSMID, and Mr. BAINES.—On the motion of Mr. HUNT, the debate was, at midnight, adjourned to Thursday. The proposition to fix *the Sheriffs' Court (Scotland) Bill* and another group of Scotch Bills for a morning sitting on Tuesday, the 12th inst., led to a lively discussion, in the course of which Mr. DISRAELI recommended the House not to agree to the suggestion, as no frank understanding had been come to upon the subject between the Government and the Opposition. Ultimately, on a division, the proposition was carried by 102 to 89.—Mr. CLIVE obtained leave to bring in a Bill to amend and further extend the Acts for the *Commutation of Tithes in England and Wales*.—Mr. LOWE obtained leave to bring in a bill for confirming a scheme of the Charity Commissioners for the administration of *Archbishop Tenison's Charity* in St. Martin's-in-the-Fields. Certain Bills were forwarded a stage.

TUESDAY.—*The North Sea Telegraph.*—Lord PALMERSTON, in reply to Mr. Wyld, stated that the Government had no objection to furnish ships to survey the North Sea, in order to test the possibility of laying the telegraphic cable to America by way of Scotland, the Faroe Islands, Greenland, and Labrador. *Transport Service.*—Mr. LINDSAY moved for a select committee to inquire into the organisation and management of those branches of the Admiralty, War Office, India Office, and Emigration Board, by which the business of transporting troops, convicts, emigrants, materials of war, stores, and any other similar services by means of shipping, is now performed, with a view of adopting some uniform system by which such services may be economically and efficiently conducted, under the authority of one consolidated and responsible department. —Sir M. SEYMOUR seconded the motion.—Lord C. PAGET said that the Government had no objection to the motion, but he feared that there would be great difficulty in carrying out the proposed plan.—Mr. BAILLIE advocated a separate department, to be charged with the control of the transport service. After some discussion, Sir J. PAKINGTON declared his satisfaction at the consent given by the Government to the inquiry, and deprecated further discussion under the circumstances. The motion was then agreed to.—*Civil Service Examinations.*—Mr. B. COCHRANE moved a resolution, that for the future the Civil Service Commissioners shall publish, with their annual report, all the examination papers submitted to candidates; specifying the proportion in which the maximum of marks assigned to each branch of knowledge is divided among the questions contained in each paper. He attacked the entire system of examination, which deprived the Crown, he said, of many valuable servants; but if it was to be carried on, it should only be under complete publicity. He complained that the absence of publicity had led to many instances of terrible hardship, in which persons, after many years of service, in the event of promotion or transfer, had been subjected to examination and defeated by younger men crammed for the occasion. He excited the laughter of the House by citing some of the questions put to candidates.—The CHANCELLOR of the EXCHEQUER said the motion was open to great objection, and could not be considered apart from the speech of Mr. Cochrane, the *animus* of which could not be mistaken; he appeared to regard the idea of examining candidates for the civil service by commissioners as mischievous and absurd; and the real question, which should have been avowed, was whether the system should be maintained or abolished. He justified the mode of examination, and even the questions cited, and suggested the unfair stratagems which would be prompted by the course Mr. Cochrane had recommended. The motion was of the nature of a censure and discouragement of the Commissioners, and it was an attempt to force the House to interfere at a time when a Committee had been appointed to inquire into the very subject.—Sir F. SMITH made some observations as to the manner of distributing the marks allotted to candidates.—Mr. BENTINCK declared that examination was more necessary for members of the Treasury bench than anywhere else. So long as the Treasury exercised its patronage without responsibility, there would be that feeling of dissatisfaction which gave rise to the present motion.—Lord STANLEY defended the present system, entering at some length into the advantages of competitive examination in bringing out the merits of the several candidates. Those who had been rejected had failed in the lowest elements of the examination—in spelling and arithmetic. He opposed the motion because a committee on the entire subject had just concluded its labours, and was about to issue a report, which would throw much light upon the subject. The information that report would furnish would enable them to discuss the matter to much greater advantage.—Mr. BOWYER entered into details, to prove the imperfections of the present system, which constantly demanded knowledge from the candidates totally inconsistent with their future duties.—Sir G. LEWIS said that there was no attempt to adapt the examinations to the future duties of the candidate; the object was, in a general examination, to ascertain that they had a liberal education.—Lord R. CECIL objected to the high pressure system, which brought in clever and worthless men to the exclusion of persons really fitted for their duties.—Sir S. NORTHCOTE urged the House to wait till the evidence of the committee was brought forward, whose inquiries had been searching and extensive.—Mr. B. COCHRANE replied, declaring that he had heard no valid reason against his motion. Still, as the report of the committee was about to issue, he should not press it. The motion was then negatived without a division. *Criminal Law.*—Mr. DENMAN obtained leave to introduce a Bill for the amendment of the proceedings on trials for felony and misdemeanour, the object of which was to assimilate the criminal to the civil law, in enabling the counsel for the prisoner to comment upon the evidence after it had been given.—Captain JERVIS rose to move a resolution for abandoning the prosecutions of certain persons at *Wakefield* for offences against the Corrupt Practices Prevention Act, when the House was counted out, at 20 minutes before 8 o'clock.

WEDNESDAY.—*Ecclesiastical Commission Bill.*—Sir G. LEWIS moved the second reading of this Bill, the object of which is to transfer to the Ecclesiastical Commissioners the management of the estates of the deans and chapters.—Mr. SELWYN moved, as an amendment, that the Bill be read a second time that day six months. It was a measure which virtually confiscated the estates of the cathedral churches. The result of carrying out the centralising principle adopted by the commissioners had been to allow the business of the department to fall into the hands of the subordinate officials, and the accounts to go unaudited, in contravention of the Act of Parliament. Moreover, these unaudited accounts were admitted by the secretary, before a committee of the House of Lords, to be unintelligible. He quoted from the accounts, to show the great, and, as he believed, unnecessary expenses the commission had incurred.—Alderman COPELAND seconded the amendment. — Mr. FREELAND contended that the Bill was requisite in order to secure the administration of the estates of church lessees on one uniform principle.—Sir G. LEWIS said the Bill was based upon the report of a select committee. All that it did was to carry into effect an opinion already expressed by both Houses of Parliament, that the whole of the ecclesiastical property of the country should be vested in the Ecclesiastical Commission, and that the bishops and deans and chapters should be stipendiaries upon the fund — Mr. MOWBRAY supported the second reading of the Bill, but intimated that he should oppose some of its provisions in committee. He thought the Government had mixed up too many questions in the Bill, and that on the whole it might be a more desirable course to recast the measure and divide it into three short Bills dealing with the different branches of the subject.—Lord H. VANE was unwilling by opposing the Bill to jeopardise the loss of any good that might be in it. He was of opinion that there ought to be some fixed principle of enfranchisement and some means of arranging between the Church and the lessees.—Lord J. MANNERS contended that the principle of the Bill was that the powers of the Ecclesiastical Commissioners were not sufficient, that their powers should be increased, that the Commission should be made permanent, and that ultimately the whole property of the Church should be vested in an all but irresponsible committee. He should therefore give his cordial support to the amendment.—Mr. INGHAM said that if the Bill were now rejected, an opportunity would be lost of doing a great public good.—Mr. C. HOWARD gave notice that, should the Bill go into committee, he would introduce clauses to enable the Commissioners to augment small livings in the country.—Mr. NEWDEGATE condemned the Bill as a measure which nobody approved of. He could not recognise the argument, that as something must be done it was desirable to pass a defective measure.—After some observations from Mr. LIDDELL in opposition to the Bill, Mr. DEEDES defended the conduct of the Commissioners, who had, he said, endeavoured to discharge their duties conscientiously and to the public satisfaction, but had met the fate of most persons similarly situated.—On the motion of Mr. HENLEY, the debate was adjourned for a fortnight.—The *Masters and Operatives Bill* passed through committee.—The *Tramway (Scotland) Bill* was read a second time.

THURSDAY.—*Reform Bill.* — Mr. BLAKE and Mr. BRADY asked whether a dissolution was to follow the passing of the Reform Bill, and what was to be done with Ireland and Scotland if the English Bill passed by itself.—Lord J. RUSSELL said that after the passing of a Reform Bill it was usual to dissolve, but he could not say what course the Crown might be advised to take in the present instance. All he could say was that England, Ireland, and Scotland would be dissolved together.—On the order of the day for resuming the adjourned debate on Mr. Mackinnon's amendment to defer legislation on the subject of Reform till the results of the Census had been obtained, Sir J. FERGUSSON complained of the course which the Government intended to adopt with reference to the Irish and Scotch Bills, and urged that the interests of Ireland and Scotland were about to be sacrificed in order that progress might be made with the English Bill. He urged that the better course would be to deal with the whole of the United Kingdom in one measure; and that, regard being had to the lateness of the session, it would be desirable to withdraw all three Bills at once. He moved, as an amendment, that the debate on going into committee be adjourned.—Colonel DICKSON, on behalf of the Irish members, seconded the motion.—Sir G. GREY complained that members who professed to be reformers, after having deliberately affirmed the principle of the Bill by reading it a second time, should now stop its progress by dilatory and obstructive motions. If the Opposition wished to save themselves from the imputation of being obstructives, they would adopt the manly course, and submit a motion for the rejection of the Bill. — Lord J. MANNERS said the Government were only making a colourable attempt to proceed with the Bill for England, and that they had no *bonâ fide* intention of urging the measure on the acceptance of the House or the country.—After considerable discussion, in which Sir T. COLEBROOKE, Mr. LONGFIELD, Mr. INGRAM, Mr. WALLINGTON, Mr. ALCOCK, Mr. C. BRUCE, Mr. BAXTER, Mr. GEORGE, Mr. PEASE, Mr. STIRLING, the LORD-ADVOCATE, and Mr. WHITESIDE took part, Mr. BRIGHT denounced the interminable amendments and frivolous delays which had been interposed to the progress of the Bill. The question was, whether the House was willing to pass any reform of any sort during the present session. He discussed the general question, and cited facts showing the advance of the working classes in education and intelligence, and even in wealth. Those classes had, he believed, generally expressed their satisfaction with the Bill brought in by the Government, and he implored the House to pass a measure which was in every way safe and moderate.—Sir H. CAIRNS reverted to the question whether the Scotch and Irish Bills should be proceeded with at the same time as the English, and contended that the measures ought not to be dissevered.—Lord PALMERSTON, after reviewing the course that had been adopted towards the Bill, said that the measure had been delayed entirely by a superabundant use of the "gift of tongues" by its opponents. He asked the House to answer the plain question whether it was intended to pass a Bill for reforming the representation during the present or in any future session. The Opposition had themselves adopted the principle of Reform, and their conduct was not straightforward in trying to defeat it by delay. All their objections related to matters of detail, and ought in common consistency to be discussed in committee. The motion then under discussion for adjourning the debate was one of the series of dilatory pleas designed only to frustrate the progress of the measure. It was based upon the assumption that the Government had abandoned the Scotch and Irish Reform Bills. This was altogether untrue, and he contended that no inconvenience would ensue from postponing those Bills until another session, as there was no time to pass them this year. The course pursued by the Opposition with regard to the Bill was, he maintained, unworthy of a great political party. He hoped that the Bill would, nevertheless, be successfully carried to completion before the close of the session.—Mr. DISRAELI congratulated Lord Palmerston on the first speech he had made on the Reform Bill. The conduct of the measure had been left to others, and consequently his speech had been characterised by a total misconception of the business of the House. He had accused the Opposition of delay; but the motion for going into Committee was only made on Monday. Was their not opposing the second reading of the Bill a cause of delay? The majority of the speeches had been made by the supporters of the Government, and if Lord Palmerston really desired to know whether this Reform Bill was desired he recommended him to inquire of some of those who sat behind him. He had said scarcely a syllable of the question immediately before the House; yet he could not lay down as a principle that when the Government had introduced a measure of Parliamentary Reform, and withdrew the portions relating to Ireland and Scotland, the House ought not to consider their new position and its constitutional consequence. — Lord J. RUSSELL said that the question was whether this motion was a real, substantial objection to proceeding with the Bill, or for the mere purpose of delay, and briefly vindicated the course adopted by the Government. On a division, the motion of Sir J. FERGUSSON for adjourning the debate was negatived by 269 to 248.—Mr. COCHRANE then moved that the House do adjourn. This motion was negatived, on a division, by 267 to 222. The motion for the adjournment of the debate was then renewed, upon which Lord PALMERSTON gave way, and the debate was then adjourned to Monday. — Mr. CARDWELL moved that the order for the second reading of the Irish Reform Bill be discharged. The motion was opposed, but ultimately agreed to, and the Bill was withdrawn. The same course was taken with the Scotch Bill, and, the remaining business having been disposed of, the House adjourned at five minutes past 3 o'clock.

FRIDAY.—In answer to Mr. LOCKE KING, Sir G. LEWIS said that the royal proclamation for the encouragement of piety and virtue, and for the prevention of vice, profaneness, and immorality had been revised with the approbation of the Lord Chancellor and would be submitted to her Majesty in council to-morrow *Corrupt Practices Prevention Act.*—In answer to Mr. HUNT, Sir G. LEWIS said it was his intention to introduce a Bill this session based upon the report of the Committee upon the Corrupt Practices Prevention Act. *National Defences.*—In answer to Sir F. SMITH, Lord PALMERSTON said it would be his duty, in the course of a few days, to state to the House the course which her Majesty's Government intended to recommend in reference to national defences.

[Left sitting.]

City Intelligence.

CITY BANKS.—It was announced on Thursday that a fusion has been arranged between the influential banking firms of Messrs. Robarts & Co. and Sir John Lubbock & Co., and that on the 30th inst. Mr. Weguelin will retire from the former in consequence of ill health.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 94⅞ to 95 for Money, and 95¼ to ⅜ for the 10th July; Three per Cents. Reduced, 93⅛ to ¼; New Three per Cents., 93⅜ to ½; Five per Cent. Annuities, 112⅞; Indian Five per Cent. Stock, 1859, 106¾ to ½; Five per Cent. Enfaced Rupee Paper, 98; Ditto Five and a Half per Cent., 102½ to 103; Indian Four per Cent. Debentures, 1858, 96⅝ to ¾; Ditto 1859, 96¾ to ⅝; India Bonds, 3s. to 8s. dis.; Exchequer Bills, 9s. prem.—FOREIGN: Brazilian Old Five per Cents., 99½; Belgian Four and a Half per Cents., 97¼; Mexican Three per Cents., 21⅜; Ditto for Acct., 21½; Peruvian Three per Cents., for Acct., 70; Turkish Six per Cents., 1854, for Acct., 76¼; Ditto for 1858, for Acct., 59⅛ to ½; Venezuela Three per Cents., 25.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,655,635	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,180,635
		Silver Bullion	—
	£29,655,635		£29,655,635

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£9,759,803
Rest	3,226,268	Other Securities	19,463,341
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,752,799	Notes	3,398,805
Other Deposits..	12,180,599	Gold and Silver Coin ..	782,467
Seven day and other bills	680,150		
	£38,392,816		£38,392,816

7th day of June, 1860.

M. MILLER, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. ADDINELL, Stockton-upon-Tees, Durham, Druggist and Confectioner—W. BAYLEY, junior, and R. B. NEWSOM, 79, White Lion Street, Pentonville, Gold Beaters, and of Rosemary Branch Wharf, Hoxton, Wood Cutters—R. CARRUTHERS and G. CARRUTHERS, Liverpool, Drapers—W. G. GOODWIN, 17, Upper Marylebone Street, Draper—G. J. HEALD, Manchester, Money Scrivener—W. HERRING, Liverpool, Confectioner and Spice Merchant—C. L. KING, 4, Pier Terrace, Ryde, Isle of Wight, Tailor and Hatter—J. G. SHEPPARD, Towcester, Northamptonshire, Brewer and Wine Merchant—T. TOYNDER, 4, Southwick Street, Hyde Park, Hotel Keeper—J. YATES, Oldbury, Worcestershire, Grocer.

SCOTCH SEQUESTRATIONS—J. CLARK, Glasgow, Provision Merchant—J. FERGUSON, Glasgow, Boat Builder—J. GUTHRIE, Glasgow, Wright—W. LAING, Milnathort, Kinross-shire, Innkeeper and Tablers—W. MILNE, Aberdeen, Grocer.

FRIDAY—BANKRUPTS—S. A. AULTON, Nottingham, Smallware Dealer—A. B. BIOXAM, Strand, Wine Merchant—S. A. BUTTERWORTH and H. BUTTERWORTH, Dyers, Dealers, and Chapmen, in the county of York—G. GREGG, Sheffield, Currier—W. HASTED, Alresford, Hants, Butcher—W. M'HAFFIE, jun., Austin Friars, Merchant—T. W. MILNER, City, Builder—E. H. OLD and J. PEARSON, Kingston-upon-Hull, Hatters—G. PADMORE, jun., Northampton, Shoe Manufacturer—T. PALMER, Wellesbourne, Warwickshire, Maltster and Beershop Keeper—T. E. WRIGHT, Wandsworth Road, Surrey, Grocer.

SCOTCH SEQUESTRATIONS—J. CAMERON, Lower Muckovie, Inverness-shire, Farmer—M. LOCKHART, Ardshiel, Quarry Master—L. MACBEAN, Inverness, Grocer.

Metropolis and its Vicinity.

EXHIBITION OF 1862.—A meeting of the Guarantee Committee of the Society of Arts was held at the Society's house on Tuesday, the Marquis of Salisbury in the chair, when it was announced that the sums already subscribed amounted to 302,000*l.*

NATIONAL RIFLE ASSOCIATION.—A meeting of this Association was held on Saturday at Willis's Rooms, the Right Hon. Sidney Herbert, Secretary for War, in the chair. The report stated that rooms had been taken in Trafalgar Square, and a secretary appointed. The gross amount of subscription received had been 3308*l.*, and the number of volunteers now enrolled was 120,000 effective members. The first meeting is to be held on Wimbledon Common in July, when there will be two descriptions of prizes—one for volunteers and another open to comers of all nations, the weight of the rifle to be limited to a maximum of 10 lbs., and no hair triggers to be allowed. The Government had agreed to provide 25,000 rounds of ammunition, which would be brought direct from Woolwich and sold on the ground to the volunteers. At the match for all nations it is expected that competitors will attend from Switzerland and Belgium, who will also be entitled to shoot for the prize of 100 guineas given by the Prince Consort. On the 9th of July will take place the competition for the Queen's prize of 250 guineas, and on that day it is expected that her Majesty will be present. In a letter read at the meeting Lord Lyndhurst said that "a free people, if worthy of their character, must be ready at any moment to defend their freedom," and a resolution moved by Lord Fielding, commending the association as deserving of encouragement and support, was carried unanimously. Lord Elcho having explained in detail the proposed arrangements for the competition in July, General Sir John Burgoyne (who was received with general cheering), in proposing a vote of thanks to the Chairman, spoke as follows:—

"In his opinion no great advantage would ensue from allowing inventors to compete with rifles of their own construction, because it did not follow that the rifle which made the best shot was the one best adapted to the public service. Uniformity in the style of weapon was essential. Unless all the corps were supplied with rifles that held the same sort of ammunition much confusion would ensue, and there would be great danger of their not being supplied with ammunition of a proper quality. Then a rifle might make excellent practice, and yet be too refined and complicated in its construction, too delicate, or too expensive for general use. It required a great deal of research to discover which was the best rifle, and he thought the association had better not undertake so difficult a task. They could always rely on the Government using every means in their power to ascertain and provide the army with the most efficient weapon. He had seen some little active service, and he was satisfied that much depended on the handling of the weapon. Even with the old Brown Bess better shooting might have been obtained and the waste of ammunition prevented by taking aim properly. In a short memoir which he wrote on this subject, he stated that, in order to hit a man at 600 yards, it was necessary, with Brown Bess, to aim at a point 6 feet above him. With the present rifle, if one aimed at the feather in a man's cap, he would be hit somewhere. At Maida he was very much struck with the efficiency of our fire against the French. An English and French division were advancing against each other, and when they came within a moderate distance the front line of the French were mowed down as if by a sickle. The reason why our men were able to inflict such deadly execution on the enemy was that they had been trained by their officers when practising never to fire without aiming at something. That gave them not only precision of aim but steadiness in firing. It was very desirable that riflemen should be accustomed to make 'snap' shots at birds and objects in motion. Mere target practice must not be thought too much of. A man might be a very good shot at a target and yet be comparatively useless in the field. A good rifleman should be a proficient in both forms of practice. As competitive examinations for commissions were now so much in vogue, he suggested that skill in rifle shooting should have very high marks assigned to it." The gallant officer concluded by moving a vote of thanks to the chairman, which was carried by acclamation, as was another vote of thanks, proposed by Lord Radstock, to Lord Elcho for his services in organising the association.

EARLY CLOSING ASSOCIATION.—A public meeting was held on Wednesday at St. James's Hall, for the purpose of promoting the earlier closing of retail establishments on Saturdays, so as to render the rifle volunteer movement more generally practicable. Lord Elcho, M.P., took the chair, and among those present were the Earl of Shaftesbury, Earl Grosvenor, M.P., Lord Radstock, Mr. Arthur Mills, M.P., Lord Ranelagh, the Marchioness of Cholmondeley, Lady Rivers, Lady Elcho, Lady Radstock, the Dowager Lady Radstock, the Countess of Shaftesbury, the Countess of Tankerville, the Marchioness of Londonderry, Lady Jocelyn, the Countess of Macclesfield, the Marchioness of Kildare, Lady Cremorne, Lady Wensleydale, the Marchioness of Westminster, the Countess of Durham, and several principals of the great houses in the drapery and silk trades. The chairman addressed the meeting at great length, and said that the object of the meeting was to lead to the gradual closing of shops on Saturday afternoons so as to give the assistants an opportunity of joining the volunteer movement and attending the necessary drills. A large number of ladies had consented to refrain from shopping on Saturday afternoon, and most of the West End houses were favourable to the proposal, believing that its results would be beneficial both to employer and employed. The Earl of Shaftesbury, Mr. A. Mills, M.P., Lord Radstock, Rev. Mr. Landells, Mr. B. Shaw, Mr. Jay, Mr. W. Locke, and Mr. Daniell addressed the meeting, and the following resolutions were unanimously carried:—

"That this meeting views with much satisfaction the progress of the Saturday half-holiday among the trading and commercial establishments of the metropolis and many important towns of the United Kingdom, and trusts that the efforts made for the extension of the movement wherever practicable will meet with success." "That, while generally approving the objects of the Early Closing Association, the meeting is deeply impressed with the peculiar importance of the Saturday half-holiday as an auxiliary to the Volunteer Rifle Corps movement." "That the meeting, believing that a willingness exists on the part of the principal retail firms of the West-end of London to adopt some earlier hour of closing on Saturday, desires to render every facility for that purpose, and pledges itself not to make purchases at so advanced an hour on the Saturday as may interfere with such an arrangement."

VOLUNTEER FIELD DAY IN HYDE PARK.—In spite of the tempestuous weather a brigade drill of the Volunteers took place on Saturday evening in Hyde Park. The companies present were from the Queen's, South Middlesex, Highgate, Pancras, North Middlesex, Barnet, West Middlesex, Hampstead, Westminster, and Volunteer Engineers. Lords Radstock, Ranelagh, and Earl Spencer were among the commanding officers present, and the force under arms was estimated at between 1500 and 2000 men.

THE CENSUS.—On Wednesday afternoon a meeting, attended by about a dozen members of Parliament and several Nonconformist ministers, was held at Fendall's Hotel, to consider the provision in the Census Bill requiring persons to state their religious profession. The chair was taken by Sir M. Peto. On the motion of Mr. A. Pellatt, seconded by Mr. Pease, M.P., the following resolutions were adopted, together with a petition founded on them, to be presented to the House of Commons by Mr. Baines, M.P.

"That the provision in the Bill for taking the next census of the population, proposing to compel, by means of a penalty, a statement of the 'religious profession' of every inhabitant of the country, is regarded by this meeting as an unwarrantable exercise of authority, and as repugnant to the spirit of modern legislation. That the replies obtained would inevitably be to a large extent defective, ambiguous, and inaccurate, and that the proposed withdrawal of the penalty, instead of mitigating the evil, would, by inducing a numerous section of the community to withhold the desired information, render the returns still more inconclusive. That, as no useful purpose can possibly be served by such returns, the meeting is constrained to believe that it is intended to further the designs of an ecclesiastical party who seek to cast discredit on the census of 1851. That, looking upon this uncalled-for departure from the plan adopted in 1851 as a deliberate attempt to inflict political injury on Dissenters by means of deceptive official statistics, the meeting urges the necessity for such an expression of opinion throughout the country as will induce her Majesty's Ministers to abandon so indefensible a scheme, and for a distinct intimation that, if it be persisted in, neither they nor the members of the House of Commons who may support it can retain the confidence of the Dissenting body."

GREENWICH HOSPITAL.—The report of the Commissioners (Mr. Ingham, M.P.; Mr. Hutt, M.P.; and Captain Hay, R.N.), appointed to inquire into the management of Greenwich Hospital, and to report whether its resources could be better applied for the benefit of seamen who have served in the royal navy, has just been published in the form of a blue book. The following is an abstract of its most important portions:—

It commences with a short sketch of the history of the institution, stating that Queen Mary had seen with pain the difficulty of providing good shelter and attendance for the brave men who had come home wounded after the great battle of La Hogue, and that she proposed the scheme of converting the Palace at Greenwich into a retreat for seamen, which was carried out after her death. The design of the hospital was to lodge, clothe, and feed, between 3000 and 4000 meritorious seamen, expressly selected on account of their age, wounds, or bodily infirmities, to provide for their widows, educate their children, and lastly make the institution the means of promoting that nautical skill which is the chief foundation of British supremacy. The revenue of the hospital for the year 1859 amounted to 148,198*l.* 9*s.* 2*d.*, and if the calculations of the commissioners are correct, an addition of no less than 32,440*l.* should be made, so that the total annual revenue should be at least 180,000*l.* Large, however, as these resources are, and splendid as are the buildings, it is a striking fact that for the last 12 years the number of vacancies has been gradually increasing. The authorised number for whom accommodation is provided is 2642, whereas the actual residents are now fewer than 1660. Indeed, since the year 1848 the number of vacancies has increased from 11 to the enormous number of 1124. The commissioners distinctly declare that respectable old seamen of the royal navy will not submit to ask admission to the hospital under the present arrangements. When a seaman enters the hospital all distinctions of rank are effaced. Badges of good conduct are indeed retained; but, unlike the practice of the royal navy, these badges carry with them neither emolument nor consideration. Men who have attained the rank of petty, even of warrant officers, are practically disrated, and mingled indiscriminately with ordinary seamen and the refuse of the naval service. Distinguished men of long standing who have been wounded or maimed in action are confounded with others who have never seen active service at all, and who are rather to be regarded as labourers or as domestic servants than as seamen. The food of the pensioners seems to be good and abundant, and the system of messes not objectionable; but the dress appears to be unsatisfactory to the men. "At the time of the foundation," say the commissioners, "the dress now in use there was the mark of a superior condition in life, and was doubtless adopted on that account." Now it is antiquated; it has no resemblance to the uniform of the navy, and "its grotesque appearance not unfrequently attracts a notice little complimentary to the wearer." On admission the pensioner is made to relinquish any pension he may have gained in the service. Under the name of tobacco-money he receives the sum of 1*s.* a week, which is understood to be a provision for various humble comforts, as well as for pocket allowance. This allowance has not been increased for more than a century and a half. Even for unmarried men it is far from adequate; for the married it is painfully scanty. The only privilege which married men have is to be allowed to receive a money payment instead of provisions—less than 10*d.* a day—part of which they can give their families. Some act as servants, but no assistance is afforded the pensioner to enable him to reach his friends, or to maintain him when away, or to defray the expense of his return. The commissioners say "the wives are wholly ignored, and their circumstances are deplorable." From the hospital they receive nothing but the broken meat of the hall, and the rations of men on short leave of absence. For it should be observed that when the pensioner is away his allowance is stopped. The 10*d.* a day and 1*s.* a week is wholly inadequate to supply clothing, lodging, and the necessaries of life to a wife and family. In short the wives are reduced to extreme wretchedness, and sometimes even become chargeable on the parish. But if the condition of the wives is bad, that of the children is, if possible, worse. For them there is, in fact, no school at all. The lady who fills nominally the office of schoolmistress is superannuated, and the produce of the sale of grease from the kitchen, which supplied the means of supporting a good school, has been stopped. One witness says:—"It does not bear to be spoken of as a school. Yesterday morning I think there were six boys in boys' clothes, and four or five in petticoats; and in the girls' school, reckoning the little infants, I should think there were 17. It is, in fact, gone." It is not difficult to predict how this must operate upon the minds of seamen. A husband or a father will hesitate long before he enters a hospital upon the condition of abandoning his wife and children to starvation, the workhouse, or casual benevolence. Many a worn-out sailor would sternly reject a berth at Greenwich under such circumstances. It is admitted that in some cases sailors do enter the hospital in order to get rid of their families; but the commissioners assert that of the affection of the married pensioners for their families the evidence is abundant and incontrovertible. The craving, we are told, of some of them, when separated from their families, to send them relief out of their little savings, is displayed to an extent that is truly touching. The concluding paragraph of this section of the report says:—"But more touching still is the spectacle often exhibited by pensioners who have brought their wives with them to Greenwich, and whose own sufferings require that they should become inmates of the infirmary, and thereby forfeit the advantage of the 'money list.' In such circumstance there is, in fact, nothing for the family. Dr. Wilson assures us that, rather than abandon their wives to the destitution which thus ensues, pensioners even in the last stage of life will refuse all the benefits of the infirmary, and will persist in this abnegation till actually on the point of death." Whilst the sum allowed to each pensioner—the seamen for whom the hospital was founded—remains almost as it was at the end of the 17th century, the sum absorbed by the officers has increased. The expense of the establishment now is absolutely more than double its cost at its foundation, whilst relating to the number of pensioners it is more than treble its previous charge. Whilst the expense of the individual pensioner has not been increased during 55 years, and whilst the aggregate number of pensioners has been diminished by 30 per cent., the cost of the establishment has during that period been considerably more than doubled. It may be interesting to add that, upon comparing the sums spent in the Invalides at Paris in 1848 with the sums spent in Greenwich in 1805, each pensioner cost nearly the same, from 26*l.* to 28*l.*, but the administration cost 5*l.* 5*s.* and 9*l.* 1*s.* In the year 1859, however, the Greenwich pensioner cost 30*l.*, whilst the administration, instead of 5*l.* 5*s.*, like the Invalides, or 9*l.* 1*s.*, like the Greenwich of 1805, cost the enormous sum of 28*l.* 18*s.* 4*d.*"

DRINKING FOUNTAINS.—The first annual meeting of the Metropolitan Drinking Fountains Association was held a few days since at Willis's Rooms, Mr. Samuel Gurney, M.P., in the chair. The report stated that the first fountain erected in London, at St. Sepulchre's, Snow Hill, was used about 7000 times daily; and that the total receipts of the association during the past year have amounted to 2609*l.*, and the expenditure to 2346*l.*, leaving a balance of 263*l.* The Middlesex Water Company had agreed to supply water without charge to a few fountains, and the Lambeth Water Company had agreed to the reduced charge of 3*d.* per 1000 gallons, but the remainder of the companies adhere to the usual charge of 6*d.* per 1000 gallons. Application was next made to the Metropolitan Board of Works, and to the district boards, and the majority of the latter responded favourably, so that free grants of water were made to about 90 fountains. Among the fountains in preparation were instanced a beautiful fountain for the Royal Exchange, the donation of Mr. Samuel Gurney; a very handsome and costly fountain, of pure Gothic design, intended for Palace Yard or some other site contiguous to Westminster Abbey, the gift of Mr. Charles Buxton, M.P.; a beautiful fountain of classic design, to be placed in the Strand, presented by Mr. Robert Hanbury, M.P.; and a fountain of very chaste design, to be given by Mr. Noble, for which Mr. Theed, the sculptor, is preparing statues. Another fountain has just been erected at St. George's Hospital, Hyde Park Corner, after a design by Mr. Westmacott, R.A.; Mr. John Bell has prepared some handsome designs of both standard and mural fountains, and other designs are in preparation by Messrs. Wills. A turncock has been appointed, whose exclusive duty it is to visit the fountains at regular intervals, for the purpose of keeping them clean and in good order and to make a daily return to the central office. The plan of attaching money-boxes to the fountains has been adopted at the fountain on Snow Hill. So far as the experience of four weeks justifies an opinion, it is very encouraging, a sum of 8*d.* a day having been deposited in small

coins, varying from farthings to two-shilling-pieces. The experiment is to be extended to five other fountains, when, if successful, it is proposed to supply every fountain with a money-box, when the erection will be more than self-supporting. The Earl of Shaftesbury, in moving the adoption of the report, said that in respect of a supply of water as a beverage this metropolis presented an unfavourable contrast with continental cities. A glass of gin could sometimes be procured more readily than a glass of water. He hoped that such a state of matters would no longer exist, and that a glass of water would be placed within the reach of the poorest of the working class. Mr. Slaney seconded the resolution, which was carried unanimously.

THE NINE HOURS MOVEMENT.—A public meeting in furtherance of this object was held on Friday evening at St. Martin's Hall. Upwards of 2000 persons were present. Mr. Wheeler, plasterer, was called to the chair, and after reading the bill convening the meeting observed that the intention of its being called was to secure the object which workmen of various trades had been labouring with greater or less earnestness to obtain since 1855. He denied that the present was a revival of the movement. The question of the nine hours movement had not been settled, and the sacrifice made had been too great to give it up now. The agitation was not kept up by a few, but extended to 8000 or 10,000 persons. The attitude they had taken towards their employers was respectful, and while they considered that every legal means should be adopted in labouring to secure their object they had reason to believe that they would ultimately be successful. In Scotland the amount of work performed had not been lessened by the adoption of the "nine hours movement." In conclusion he urged the adoption of no coercive means, and repelled the assumption that the movement was kept up by paid agitators. Mr. Potter, who was received with much applause, moved the first resolution:

"That the object of this movement is not to injure the master builders, but to benefit the men; that the desired reduction in the hours of labour, while it will materially contribute to the physical health, the social improvement, and the mental development of the operative builders, is not calculated to inflict the slightest loss, either social or financial, on their employers; and that the concession of this boon is certain to beget a better understanding between them and their workmen than that which, unhappily, at present prevails."

After referring at considerable length to the general laws of labour, and combating the views of modern political economists, he urged the necessity of a higher appreciation of labour and a corresponding advance of wages. He further denied the utility of workmen labouring longer than nine hours daily, and instanced the testimony of Mr. Thomas Piper, an influential master builder, that the only intention of the latter class in resisting their demand was not from any loss that they might sustain, but because the question was a public one, and they did not wish to give in. On the previous agitation the case was not fully known in the provinces. Now it was different, and support had been promised to the nine hours movement from 40 towns, besides different societies. Mr. Quirk seconded the resolution, and alluded to the large amount of destitution caused through the late strike in the metropolis during the past winter, and expressed his belief that through the discontinuance of emigration and other causes the labour market at home would continue overstocked, and thus a very important social problem arise. He had learned that the joiners had acceded to the nine hours movement, and advised not only union among the members of one trade, but a thorough union among all trades, in continuing to keep their claims before the public mind. The motion was carried unanimously. Mr. Stacey, printer, moved the second resolution:—

"That the meeting is fully convinced that the desired reduction is no more than is justly due to the manifold requirements of the operative builders, and therefore pledges itself, by the use of all the just and lawful means at its disposal, to persevere in the present agitation until the nine hours movement has been granted."

The motion was duly seconded and carried unanimously.

THE GREAT EASTERN.—In consequence of the late tempestuous weather having much retarded the completion of the upper-deck fittings and rigging of this vessel, her departure for New York has been postponed. The start now is not likely to take place before the 20th inst., though it will certainly not be delayed beyond the 23d, as longer detention would again lose the high tides over the bar at New York. It is understood that the day of sailing will not be advertised until after the trial trip, which is to take place to-day. Her paddles were tried on Monday last, and her paddles and screw together on Tuesday, and the run to-day will consist of 12 hours' full steaming down Channel.

NORTH ATLANTIC TELEGRAPH.—In consequence of an interview which took place about a fortnight since between Lord Palmerston and an influential deputation, respecting a projected line of telegraph to America *viâ* the Faroe Islands, Iceland, and Greenland, his lordship has responded to the request then laid before him by granting the steamship Bulldog for the purpose of making a complete survey and soundings of the proposed route, and Sir Leopold M'Clintock has been appointed by the Admiralty to command that vessel. As however this expedition will only survey the deep sea line of route, it has been determined by the promoters of the enterprise to despatch a private expedition in the late Arctic cruiser Fox, under the command of Captain Allen Young, to survey the overland route as well as the northern shores, and to determine the most suitable points of landing the cable, as well as the best locality for a terminus in the north of Scotland. The Fox is expected to be ready to sail about the 1st of July.

THE PROPOSED CEMETERY AT CLAPTON.—During the last few months most vigorous attempts have been made by certain capitalists to establish a cemetery at Upper Clapton, in the parish of Hackney. The City Commissioners of Sewers a short time since protested against the measure, considering that such a cemetery was not only unnecessary, but extremely unfair to the City ratepayers—who are highly assessed to the consolidated rate, in consequence of their having had to purchase a cemetery for the City parishes at Ilford; and local committees were formed in opposition to it. In consequence of these strong expressions of opinion Sir George Lewis, the Home Secretary, has declined to sanction the formation of the cemetery.

DEPARTURE OF MR. SPURGEON FOR GERMANY.—The friends and admirers of Mr. Spurgeon met at New Park Street Chapel on Monday evening to take leave of him for a short time, as he is about to make a tour through Germany and Switzerland for about two months. Mr. Spurgeon has for some time complained of great weariness, brought on no doubt by his ministerial labours, the amount of which may be estimated by the fact that for the last seven years he has preached on an average 10 sermons a week, always to large congregations, but sometimes to as many as 30,000 souls at one time, besides other public duties. It appears that his physical and mental energies greatly need a relaxation from such excessive toil. He has however several engagements to attend to in some of the principal cities in Germany while absent from England.

FORGED BANK-NOTES.—A large number of forged notes, bearing date February 15, 1860, are in circulation. They are so admirably executed that the most experienced persons are likely to be deceived by them. The paper is of a deeper colour than a good bank-note, but the vignette at the head of the notes defies detection, and the water-mark is not only a perfect imitation of the paper manufactured for the Bank, but it cannot be removed or obliterated by damping—a test hitherto supposed to be infallible for discovering the genuineness of bank-notes.

THE UNION BANK FRAUDS.—The Stock Exchange Committee concluded their investigations regarding the transactions of Pullinger on Friday, and resolved to suspend Messrs. R. S. and J. S. Scrimgeour and Co. until the 25th of March, when the next annual election will take place. Messrs Scrimgeour are the brokers to the Union Bank and near relatives of the manager. They appear to have executed speculative orders for Pullinger in June, 1856, and to have continued them to the period of his apprehension, but these were all of comparatively small amount, and were chiefly in Turkish Stock and Sambre and Meuse, North of Europe Steam, and Grand Russian Railway shares. The committee report that the balance paid by Pullinger on speculative accounts on the Stock Exchange only amounted to 53,285*l.*, leaving no less than 200,000*l.* to be accounted for, of which 57,000*l.* is stated to have passed through the hands of a person, now dead, named Nathan, who, however, was never a member of the Stock Exchange. The committee comment on the laxity of the system of check which has existed in the Union Bank, and accuse the directors of keeping back from the knowledge of the committee the fact that Messrs. Scrimgeour, the brokers of the bank, had speculative dealings with Pullinger, while giving up the names of other brokers who had had such transactions with him.

MR. RAREY'S FINAL LECTURES.—Mr. Rarey, who after an absence of several months has just concluded at the Alhambra Palace what was intended to be his final series of lectures on horse taming, previous to his departure for America, has at the request of numerous gentlemen announced his intention to commence another series on Monday next, the 18th inst. His inducement for the renewal of the series is his possession of an entire horse said to be a second Cruiser for viciousness, named Burndale, which has been sent to him from Wales. His sire was Lanercost, one of the best racehorses of his day, and his dam, the dam of Ellington, the winner of the Derby in 1856. He has very superior action and symmetry, but though sound and clear of hereditery blemishes, he is so dangerously vicious that the only means of reducing him to subjection has been by starvation. During the series which has just concluded, Mr. Rarey tried his system successfully on three animals of extraordinary viciousness. The first was on a bay mare, which had been sold to the present owner, Mr. Case, of a cavalry regiment, in consequence of being incurable, and was so dangerous to approach in any way that she could not be ridden, would strike with her forefeet like a pugilist, and kick as well with her hind feet. So savage was she that no horseman had been able to ascertain her age by looking at her teeth, yet Mr. Rarey not only tamed her but opened her mouth and put his hand into it several times; and told his audience that, in his opinion, she was eight years old. The second was a thoroughbred, high-spirited Arabian stallion, extremely vicious, perfectly uncontrollable, biting at every one that approached him, and would not suffer himself to be bridled except blindfolded. He was brought from Wellington, in Shropshire, and on his arrival at the railway-station knocked down his groom by kicking him on the head; and on being taken into the ring at the Alhambra nearly broke the arm of the man who led him in by striking him with his forefeet. Mr. Rarey, however, succeeded, after a desperate struggle, which lasted for about an hour, in rendering him as tractable as a lamb. The third subject was an immense cart horse, "Captain," 19 hands high, perhaps the largest horse in England. There was some curiosity to see this animal, which was certainly a ferocious giant; but in the hands of Mr. Rarey he soon became quite quiet and submissive.

ROYAL DRAMATIC COLLEGE.—In the notice of the opening of this college in our last Number, we omitted to mention the exertions of Mr. Robert Donald, the eminent nurseryman, of Goldworth, near Woking, who will ultimately have the laying-out of the grounds when the buildings are erected, in levelling the ground and arranging the floricultural department. No less than 2000 American plants, in full bloom, were put into the ground in the short space of two days, the plants having been in the most liberal manner lent by Mr. Donald for the occasion.

ANOTHER DESTRUCTIVE STORM.—On Saturday afternoon the metropolis and suburbs were visited by another storm of a very destructive character. During the night it increased to a perfect hurricane, causing great damage to the roofs of houses, trees and shrubs in the parks and gardens, and the shipping in the river. It was also felt severely at Portsmouth and other places on the southern coast. At Brighton, which escaped the effects of the previous storm, two vessels were wrecked, and great damage was done to property in the town and neighbourhood. In the previous storm of last week, it appears from the registers at Lloyds, that nearly 400 vessels were wrecked.

THE CASE OF MARY EUGENIA PLUMMER.—It is announced that her Majesty has granted a pardon to this child, on condition of her being placed in the care of a lady selected by her friends, and that she has accordingly been taken into that lady's care.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended on Saturday, June 2, declined to 1004. In the corresponding weeks of the 10 years 1850-9 the average number, corrected for increase of population, was 1088. The return of last week was therefore 84 below the average. During the week the births of 766 boys and 751 girls, in all 1517 children, were registered in London. In the 10 corresponding weeks of the years 1850-9 the average number was 1509.

Provincial.

BIRMINGHAM.—A charge of forgery was preferred at the public office last week against John Plimley Edwards, a bankrupt in the East India trade, who recently absconded from this town. The application was made on behalf of Mr. Joseph Bull, of the Fenton Ironworks at Tunstall, for a warrant to apprehend the bankrupt upon a charge of forging a bill for 200*l.* on the 30th of April last. The stipendiary magistrate granted the warrant, which was immediately placed in the hands of the police. On Monday a telegram was received from Stockholm announcing that Edwards has been taken into custody in that city, and that a large portion of the money he obtained prior to his departure has been recovered.

DEAL.—A fatal accident has occurred at the village of Sholding, about a mile and a half to the west of this town, from the bursting of a shell fired from Sandown Castle. It appeared from the evidence at the inquest that some of the Royal Artillery were practising with shell firing, when one of the shells fell and burst near some coastguard men who were engaged in piling shot near No. 1 Battery, when one of them called John Oxford was struck by a piece of shell and killed on the spot. The other men escaped uninjured. The jury after a brief consultation returned a verdict that deceased was accidentally killed, coupled with the expression of their opinion that shell should not be fired except in the direction of the sea.

OXFORD.—During the past year an interesting feature has been added by the zeal of Dr. Daubeny and his assistant, Mr. Baxter, sen., to the botanic establishment of this University. Specimens illustrative of the structure, functions, and uses of vegetables, together with the products, useful or ornamental, which have been obtained by art from their several parts, having been arranged in a separate apartment on the plan of the museum at Kew, a soirée was given by Dr. Daubeny on the 28th ult. to commemorate the opening of the museum. The meeting was attended by the Vice-Chancellor, the heads of colleges, most of the professors and other celebrities both of the University and city, and numerous ladies. The large laboratory, decorated with greenhouse plants, formed the refreshment room. The herbarium opposite the garden was provided with books of prints and other attractive objects, while a new electrical light, microscopes, and stereoscopes were exhibited in the upper rooms. The museum itself was used as the reception room. In this room a large number of wall and table cases are now occupied with the botanic specimens above alluded to, arranged according to their natural order; and on entering the apartment a small pamphlet, giving a description of the museum, was presented to each visitor. As an example, we quote the short account of one or two of the order, showing the nature of the collection:—"Order 55: Flax tribe. Amongst the useful

products of this family are samples of flax, of paper, of linen, rendered incombustible by being impregnated with certain salts of linseed oil." "The Nightshade family. Curious spinous seed vessels, of Datura; bladder-like pods of Physalis. Among the products are henbane, stramonium, tobacco, and nicotine; the vegetable alkali extracted from the last highly poisonous. Engraving taken from an old MS. of Dioscorides, representing the physician receiving the mandrake root from Euresis, the goddess of Discovery." Our readers, both botanical and horticultural, will no doubt perceive from this account that a most instructive addition has been made to the "lions" of Oxford.

PLYMOUTH.—On Tuesday week, Miss Luke, daughter of a boot and shoe maker in George Street, committed suicide under very distressing circumstances at a branch establishment in Union Street, which was under her charge. It appears that for some time past an ill-feeling has subsisted between the father and daughter, and that there had been a dispute in relation to the sale of a pair of boots, which were found to be too small, and were returned by the purchaser, a sailor, to Miss Luke, with an offer of one-half the amount realised by the second sale. The circumstance so exasperated Mr. Luke, whose temper is generally ungovernable, that in the evening he went to Union Street, and, although his daughter is 19 years of age, beat her most severely with a double rope. He then left the house, but returned in a short time, took the rope, and threatened to repeat the infliction, when she rushed upstairs to her bedroom in the second floor in the rear of the house, opened the window, and jumped out. She fell on a porch, and thence on the pavement, a height of 25 feet. Her skull was fractured so frightfully that the brain protruded through her nostrils, and she died in the course of two or three hours. It is stated that before the father attempted to beat her the second time she had two black eyes, the result of his previous violence. The father has since been in a state of frenzy. After the death of the girl mobs have collected around the house, and have been all trying the means in their power to drag him into the street. At the inquest deceased's sister made an extraordinary statement to the effect that circumstances had occurred between deceased and the shopman, in consequence of which the latter had been discharged, and that about 10 days or a fortnight before this happened deceased showed her sister a bottle of oxalic acid and a bottle of laudanum, saying that she should take it if her father were told what had happened. On Tuesday evening before her father thrashed her she told witness that she had taken a large dose of oxalic acid at dinner time, and was surprised that it had taken no effect. The witness added that she saw a bottle of poison taken from her pocket after she jumped from the window. The jury returned the following verdict:—

"That deceased having been severely beaten by her father became excited, and while labouring under temporary derangement jumped from the bedroom window to the ground, whereby her skull was fractured, of which she died, and that her father's conduct was marked by undue severity."

SALISBURY.—On Sunday week the fine old mansion known as Brickworth House, the country seat of Mrs. Strangways, to the left of the road leading from this city to Southampton, was almost totally destroyed by fire. It was the property of Earl Nelson.

Ireland.

THE POPE'S IRISH BRIGADE.—The double tide of emigration flowing from the shores of Ireland is the all-absorbing theme of the Irish papers. The flight towards Rome, however, seems for the moment to be more attractive than that to the United States. The Pope's recruiting sergeants have been so successful at Limerick that a fourth batch of 62 left that city on Monday for Waterford, 15 left Cork on Friday for Bristol on their way to the Papal States, and 350 others were enrolled at the North Chapel in that city on Tuesday. Accounts from Ancona state that 46 Irishmen arrived at that port on the 29th ult., and were disgusted both with their quarters and the ragged fellows they were required to consort with. In order to quiet them, they were sent to an inn instead of to the barracks; but they, nevertheless, applied to the British Consul for his intervention, who, however, told them plainly they were no longer British subjects, since they had taken service under the Pope.

Railways.

THE FARRINGDON STREET EXTENSION.—The Committee of the House of Commons on Thursday rejected the Bill promoted by the London, Brighton, and South Coast for the construction of a line to connect the Brighton with the South-Western and North-Western, and passed the opposition Bill, promoted by the London, Chatham, and Dover. The latter measure includes the extension of the London, Chatham, and Dover to Farringdon Street.

ACCIDENT ON THE GREAT NORTHERN.—On Tuesday morning an accident occurred on this line which was fortunately unattended with injury to any of the passengers. Very exaggerated rumours were current about London as to the magnitude of the accident, and, coming so close upon the late disaster, created some alarm. It appears that the Scotch train, which is due at King's Cross at 9.15 A.M., while passing Colney Hatch received a shock, the tire of the front wheel of one of the carriages came off, throwing the carriage off the line. Some of the passengers were shaken a good deal, but nothing more serious took place. The carriage was removed from the train, which then proceeded on its journey to London.

Law.

COURT OF EXCHEQUER.—*Beatson* v. *Skene.*—In this case, in which the plaintiff asked for a new trial, judgment was given on Saturday by the Lord Chief Baron. His Lordship stated that the court were unanimously of opinion that the jury were justified in giving their verdict for the defendant, that all the grounds for a new trial had failed, and that the rule must be discharged. Counsel for the plaintiff then applied for leave to appeal from this decision. The Court took time to consider, and on Tuesday his lordship stated that it was the unanimous opinion of the Court that there were no grounds for an appeal, and that it would be an improper exercise of their discretion to grant an appeal where they entertained no doubt whatever on the question. The application was therefore refused.

Sporting.

ASCOT RACES.

TUESDAY.—The *Trial Stakes.* Mr. R. Ten Broeck's Cock-a-Hoop beat Rouge Dragon, Maid of Peru, Amsterdam, and 18 others.—*Third Year of the Eighth Ascot Triennial Stakes.* Mr. Bowes's Mouravieff beat St. Clarence, The May Morning, Little Mat, and Bastion.—The *Gold Vase.* Capt. Christie's Horror beat Avalanche, Magnum, and Rupee.—*A Handicap Plate.* Captain Little's General Hesse beat Baron Munchausen, Speculation, Predictor, and 25 others.—*First Year of the Third Ascot Biennial Stakes.* Lord Stamford's Diophantus beat Lupus, Wing, Copernicus, and 10 others.—The *Ascot Stakes.* Lord Strathmore's Mouravieff beat Mr. Payne's colt, Clydesdale, and 13 others.—The *Ascot Derby Stakes.* Mr. A. Nichols's The Wizard beat Ebony and Ingestre.—The *Queen's Stand Plate.* Baron Rothschild's b f beat Duchess, Satellite, Lady Clifden, and 13 others.—*Plate.* Mr. T. Parr's Eccola beat Count Horn, Lord Clifden's c, and 5 others.

WEDNESDAY.—*Sweeps* Mr. Lumley's Lucy walked over.—*Coronation Stakes.* Mr. Gratwicke's Allington beat Seclusion, Contadina, Emily, and Sir J. Hawley's f.—*Second Year of the Second Ascot Biennial Stakes.* Mr. Hamilton's Rupee beat the Rap, Merrimac, Viatka, Northern Light, and Wamba.—*Visitors' Plate.* Neoptolemus beat Feodorowna, Courier, and 8 others.—*Royal Hunt Cup.* Mr. Sargent's Crater beat Cheesecake, Cock-a-Hoop, and 24 others. Won by half a length, three lengths between the second and third; Suburban a bad fourth, and Man-at-Arms fifth; the others were pulling up when they passed the post.—*Fernhill Stakes.* Baron Rothschild's f. beat Thunderbolt, Big Ben, Little Lady, and Mountebank.—*Plate.* Baron Rothschild's f. beat Blisworth, Lord Clifden's c., and 19 others.—*Second Year of the Ninth Ascot Triennial Stakes.* Mr. A. Nichol's The Wizard walked over.—*Sweeps.* Lord Portsmouth's King of the Forest beat Ticket of Leave, Neophyte, and 5 others.

THURSDAY.—The races to-day were honoured by the presence of the Queen and Royal family, who came to the course in state, with all the ceremonials observed on such occasions; but the heavy rain deprived the Cup day of its usual attractions. Her Majesty was cordially cheered on arriving on the course, and a separate cheer was given to the Prince of Wales. *Sweeps.* Lord Stamford's Stockade beat Count Batthyany's Barabbas and Desmond.—*Plate.* Mr. J. Thellusson's Confusion beat Leontes, Oreus, and 2 others.—*Plate.* Mr. S. Jacobs's Amsterdam beat Precursor, Tyrant, Ingestre, and 4 others.—*Gold Cup.* Mr. Hamilton's Rupee beat Butterfly, The Promised Land, Newcastle, and 3 others. Won by a head; four lengths between the second and third, bad fourth.—*New Stakes.* Mr. Saxon's Brown Duchess beat Wing, Lisbon, Lord Ailesbury's c. and 10 others.—*Royal Stand Plate.* Captain Christie's Horror beat Avalanche, Ben Webster, Cock-a-Hoop, and 3 others.—*Plate.* Mr. Angell's c, beat Wee Polly, Billy Banks, Astarte, and 12 others.—*St. James's Palace Stakes.* Lord Derby's Tom Bowline beat St. James, Catawba, and Northern Light.

FRIDAY.—(By Electric Telegraph).—*Third-Class Wokingham Handicap.* Suburban beat Philomela, Convivialist, and 3 others.—*Sweeps.* Trovatore walked over.—*Visitor's Plate* (run on Wednesday). Plumper disqualified, and Neoptolemus gets the stakes.—*First-Class Wokingham Handicap.* Prelude beat Predictor, White Rose, and 11 others.—*South-Western Plate.* Amsterdam beat Sneer filly, South Australian, and 9 others.—*Second-Class Wokingham Handicap.* Horace beat Mentmore, Penalty, and 9 others.—*Queen's Plate.* Avalanche beat Promised Land and Congreve.—*Sweeps.* The Wizard walked over.—*Grand Stand Plate.* Plumper beat Jenny Longlegs, Courier, and another.—*Englemere Plate.* Ticket-of-Leave beat Niger and 4 others.—*Cup Course Plate.* Romeo beat Desmond and 2 others.

Obituary.

FIELD-MARSHAL THE EARL OF STRAFFORD, G.C.B., G.C.H., Colonel of the Coldstream Guards, died at his residence in Lower Grosvenor Street on the 3d inst., after an illness of a few hours. He was the third son of Mr George Byng, of Wrotham Park, Middlesex, and grandson of the Hon. Robert Byng, third son of the first Viscount Torrington, and had reached the advanced age of 88 years, being, with the exception of Lord Sinclair, the oldest member of the House of Peers. The gallant earl had achieved an honourable reputation in the army. He entered the 33d Regiment in 1793, and served in Flanders, Holland, Hanover, Copenhagen. Walcheren, Spain, Portugal, and France, down to the close of the war in 1815, being present at the sieges and battles of Cuidad Rodrigo, Vittoria, the Pyrenees Pampeluna, the Nivelle, the Nive, Bayonne, Orthes, Aire, Toulouse, Waterloo, and Paris, of which he obtained possession by occupying the heights of Belle Ville and Montmartre. In 1812 he was appointed Governor of Londonderry and Culmore, and was made a Privy Councillor in 1827. In 1831 he was nominated a Grand Cross of the Bath, having in 1828 been made a Knight Grand Cross of the Hanoverian Order. From 1831 up to 1837 he represented Poole in the House of Commons. In 1837 he was elevated to the House of Lords by the title of Baron Strafford, and was subsequently created an earl in 1847. He was appointed Colonel of the 2d West India Regiment in 1822; in 1828 he was removed to the 29th Regiment, and in 1850 he was appointed Colonel of the Coldstream Guards, in the room of the late Duke of Cambridge. His lordship, who had frequently received the thanks of Parliament for his military services, had received the Grand Cross and one clasp for Vittoria, Pyrenees, Nivelle, Nive, and Orthes; and the silver war medal, with one clasp, for Toulouse; he was also Knight of the Order of Maria Theresa of Austria and of St. George of Russia. In addition to other staff appointments, he had commanded the forces in Ireland. He is succeeded in the earldom by his eldest son, Viscount Enfield, born 1806, who, after sitting in the House of Commons successively from 1831 for Milbourne Port, Poole, and Chatham, to 1852, was in 1853 summoned to the House of Lords by the title of Baron Strafford of Harmondsworth. He married first, in 1829, Lady Agnes Paget, fifth daughter of the late Marquis of Anglesey, who died in 1845; and secondly, in 1848, the second daughter of Lord Chesham. The present peer has held several appointments during the Whig Administrations, having been a Lord of the Treasury in 1844, Controller of the Queen's Household, and afterwards Treasurer of the Household; and in 1846 Secretary to the Board of Control.

MAJOR LEOPOLD VON ORLICH, of the Prussian Guards, a knight of several orders, died suddenly on Saturday in the house of Admiral Hamilton, in Wimpole Street, in his 55th year. He was the son of the officer whose desperate defence of Konigsberg against Marshal Ney is matter of history. He was not only distinguished in the Prussian service, but took an active part in the operations of the British army in India, where he was sent on a military mission by the King of Prussia after our disasters in Afghanistan. As the result of this mission he published, in German and in English, two interesting volumes of his personal experiences, and was engaged during the latter years of his life in a laborious "History of British India," of which two volumes have already appeared in Germany, and for the completion of which he leaves behind him large materials. He was also the author of the "Life of the Great Elector," and the "War in Silesia," which rank high among the military histories of his country. He married the only daughter of Mr. George Mathew, of Fowler's Hall, Kent, and sister of her Majesty's Secretary of Legation in Mexico.

GENERAL SIR DAVID LEIGHTON, K.C.B., the senior officer on the Bombay establishment, died at Bafford House, near Cheltenham, on the 1st inst., in his 86th year. He entered the service of the East India Company in 1795, served in the Mysore campaign of 1799, and was present at the siege and capture of Seringapatam. He accompanied the force under the Duke of Wellington (then Colonel Arthur Wesley) in the operations against the Mahratta freebooter, Dondia Waugh, in 1800, and took part in the storming of the forts of Dummul, Rollebad, and Syrhingy. He served in Malabar during the rebellion in that province in 1803, and commanded a brigade in the Deccan field force in 1815. He took part in the expedition to Arabia, under Sir Lionel Smith, in 1821, which resulted in the subjugation of the Arab tribe of Beni Boo Ali. He held for many years the office of Adjutant-General to the Bombay Army, and gave general satisfaction by the firmness, regularity, and impartiality which characterised his administration.

BIRTHS.—On the 30th ult, at Croston Hall, Lancashire, Lady ADELAIDE DE TRAFFORD, of a son, who only survived a few hours—31st ult, at the Rectory, Bedale, the Hon. Mrs. T. J. MONSON, of a son—4th inst, at 93, Eaton Square, the Hon. Mrs. MOSTYN, of a son—2d inst, at Dorchester House, Park Lane, Mrs. HOLFORD, of a son and heir—2d inst, at Brandeston Hall, Suffolk, Mrs. AUSTIN, of a son.

MARRIAGES.—On the 5th inst, at the parish church, Pinner, ALEXANDER WILLIAM ADAIR, Esq., Captain 52d Light Infantry, eldest son of Alexander Adair, Esq., of Heatherton Park, Somerset, and Colehouse, Devon, to CAROLINE MARIA, eldest daughter of J. G. TURNBULL, Esq., and granddaughter of the late General Sir Peregrine Maitland, G.C.B.—31st ult, at St. Paul's Church, Sketty, JOHN COLE NICHOLL, Esq., of Merthyrmawr, Glamorganshire, eldest son of the late Right Hon. John Nicholl, to MARY DE LA BECHE, eldest daughter of LEWIS LL. DILLWYN, Esq., M.P., of Hendrefelin, in the same county.—5th inst, at Kingscote, Gloucestershire, ARTHUR HOLME SUMNER, Esq., of Hatchlands, Surrey, to GEORGIANA EMILY, second daughter of Colonel KINGSCOTE—29th ult, at St. Stephen's, Paddington, HUMPHRY SANDWITH, Esq., C.B., D.C.L., Colonial Secretary of Mauritius, to LUCY ANN, youngest daughter of the late ROBERT HARGREAVES, Esq., of Accrington, Lancashire—5th inst, at St. Margaret's, Westminster, GEORGE P. BIDDER, Esq., eldest son of G. P. Bidder, Esq., C.E. President of the Institution of Civil Engineers, to ANNIE, second daughter of J. R. M'LEAN, Esq., C.E., of 2, Park Street, Westminster.

DEATHS.—On the 7th April, at Mussoorie, Bengal, THOMAS HARVEY, youngest son of the late General Sir MARTIN HUNTER—31st ult, at Belmont Street, Aberdeen, MARY, second daughter of the late General Hay, of Rannes, and relict of Major MITCHELL, of Asbgrove—2d inst, at 32, Sussex Gardens, Hyde Park, Major-General F. S. HAWKINS, of the Bengal Army, aged 61—1st inst, at Painswick, Gloucestershire, Colonel GEORGE STUART, aged 75—2d inst, at 16, Porchester Terrace North, Kensington Gardens, JOHN SAMUEL TORRENS, Esq., late Judge of the Sudder Court, Bengal—29th ult, at 3, Southwick Street, Hyde Park Square, HUGH ALEXANDER EMERSON, Esq., late Solicitor General of Newfoundland, aged 66—1st inst, at Leamington, JOHN HARVEY THURSBY, late of Abington Abbey, Northamptonshire, aged 67—31st ult, at The Paddock, Thetford, Mrs. BIDWELL, relict of the late Thomas Bidwell, Esq., of the Foreign Office, and of Gloucester Place, Portman Square, aged 80—30th ult, at 20, Eldon Road, Kensington, GEORGE WOOLLEY, Esq., M.D., upwards of 40 years Hon. Medical Attendant at the Royal Humane Society's Receiving House, Hyde Park, aged 77—26th ult, MARY, wife of JAMES WYON, Esq., of the Royal Mint—2d inst, at Frognal, Hampstead, SMITH SARAH, youngest daughter of the late THOMAS NORTON LONGMAN, Esq.

Markets.

COVENT GARDEN.—June 9.

Vegetables are now becoming more plentiful. French produce still continues to be largely imported. Grapes are considerably cheaper. Oranges are plentiful. Forced Strawberries are now abundant. Spanish Nuts fetch 16s. per bushel. Cobs realise 1s. per lb. Green Gooseberries fetch 3d. a quart. Peas and Broad Beans of foreign growth may now be obtained. Potatoes realise 4s. 6d. a bushel. New frame ones may be had at from 1s. to 2s. per pound. Mushrooms may be obtained in small quantities. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Azaleas, Heaths, Primulas, Geraniums, Lily of the Valley, and Roses.

FRUIT

Pine Apples, per lb., 8s to 12s	Green Figs, per doz., 3s to 12s
Grapes, per lb., 4s to 10s	Melons, each, 6s to 10s
Strawberries, p. lb., 4s to 8s	Apples, per doz., 2s to 6s
Peaches, per doz., 24s to 36s	Oranges, per 100, 2s 6d to 8s
Nectarines, do., 18s to 24s	Lemons, per 100, 5s to 8s
Cherries, p. lb., 1s to 3s	Cobs, do., 1os

VEGETABLES.

Asparagus, p. bundle, 2s to 3s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 2s to 3s
Peas, p. half sieve, 3s to 6s	Onions, p. bushel, 1s to 1s 6d
Cauliflowers, each, 6d to 8d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabbage, p. score, 1s 6d to 2s 6d
— per bus., 2s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 6d to 8d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d to 7d	Mushrooms, p. pott, 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 3s
Cucumbers, each, 9d to 1s 6d	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, June 7.

Prime Meadow Hay	75s to 84s	Clover	95s to 115s	
Superior do. (old) ..	90 95	New Clover	— —	
Inferior do.	60 70	Second cut do. ..	84 92	
New do.	— —	Straw	25 32	
Rowen	60 70		DAVIS & Co.	

WHITECHAPEL, THURSDAY, June 7.

Fine old Hay	94sto 98s	Fine old Clover ..	115s to 120s
Inferior do.	80 85	Inferior do	100 110
Prime New Hay ..	— —	Fine New Clover ..	— —
Inferior do.	— —	Fine 2d cut	96 100
Straw	28 32	Inferior do.	80 88

POTATOES.—SOUTHWARK, MONDAY, June 4.

During the past week the arrivals coastwise have been more than equal to the demand, and prices have again fallen. The following are this day's quotations :—Yorkshire Regents, 90s. to 120s.; do. Flukes, 90s. to 120s.; Lincolnshire Regents, 80s. to 100s.; Dunbar do., 100s. to 120s.; do. Reds, 100s. to 110s.; Perth, Forfar, and Fifeshire do., 80s. to 90s.; do. Reds and Rocks, 80s. to 90s.; Irish Whites, 70s. to 80s.

BRITISH WOOLS.—LONDON, FRIDAY, June 8.

The state of our trade is unaltered. We still await the arrival of the new clip to determine the value of our several descriptions of wool. The spinners and manufacturers have supplied themselves for their immediate requirements, and hope to do better when a larger quantity arrives on the market, but this is not responded to by the farmers at present, who have made up their minds for high prices, without, however, any determination to hold their wool at even the present rates, but merely to try the market; and we think that to all present appearances the coming clip will be bought up more rapidly than any preceding one.

COAL MARKET.—JUNE 7.

Byass's Bebside West Hartley, 16s.; Davison's West Hartley, 16s.; Howard's West Hartley, 16s.; Tanfield Moor Butes, 13s. 3d.; West Hartley, 16s.; Wylam, 15s. 6d.; Walls End; Acorn Close, 16s. 3d.; Walls End Eden, 16s. 3d.; Eden Main, 16s. 3d.; Walls End Bell, 15s. 9d; Walls End Brandon, 16s. 6d.; Walls End Framwellgate, 16s. 3d.; Walls End Haswell, 18s.; Walls End Heugh Hall, 16s. 3d.; Walls End Whitworth, 15s.; Carway and Duffryn Malting, 22s. 6d.; Llangennech, 21s.—19 ships at market.

BUTTER MARKET.—June 9.

Best Fresh Butter .. .. 12s. per dozen lbs.
Second do. do. .. .. 11s. " "
Pork, 5s. 0d. to 5s. 4d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, June 4.

The supply of Beasts is about the same as on Monday last. Trade is active, and the prices of that day are rather exceeded. There are a few more Sheep and Lambs; however, the demand is good, and late rates are well maintained on the average. Calves are not quite so dear as on Thursday. From Germany and Holland there are 350 Beasts, 4800 Sheep, and 147 Calves; from Spain, 40 Beasts; from Norfolk and Suffolk, 2700; and 200 from the northern and midland counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	.. 5	2 to 5 6	Best Long-wools.	.. to ..	
Best Short-horns	5	0 — 5 4	Do. Shorn	.. 5	4 — 5 6
2d quality Beasts	4	4 — 4 6	Ewes & 2d quality	.. — ..	
Best Downs and Half-breds	.. ..	to ..	Do. Shorn	.. 4	8 — 5 0
Do. Shorn	.. 5	8 — 6 0	Lambs ..	.. 6	8 — 7 4
			Calves ..	.. 5	0 — 5 10
			Pigs ..	.. 4	4 — 5 4

Beasts, 3880; Sheep & Lambs, 29,280; Calves, 224; Pigs, 300.

THURSDAY, June 7.

The supply of Beasts is small and the demand has increased, consequently prices are higher. There is a considerable increase in the number of Sheep and Lambs; trade is very dull and a clearance cannot be effected, although prices are much lower than on Monday. A large arrival of foreign Calves has materially affected the trade in that department. Our foreign supply consists of 180 Beasts, 3000 Sheep, and 270 Calves; and 135 Milch Cows.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	.. 5	4 to 5 8	Best Long-wools .	.. to ..	
Best Short-horns	5	2 — 5 6	Do. Shorn	.. 5	2 — 5 4
2d quality Beasts	4	6 — 5 0	Ewes & 2d quality	.. — ..	
Best Downs and Half-breds	.. ..	— ..	Do. Shorn	.. 4	6 — 4 10
Do. Shorn	.. 5	6 — 5 8	Lambs ..	.. 6	4 — 7 0
			Calves ..	.. 4	8 — 5 4
			Pigs ..	.. 4	0 — 5 0

Beasts, 1005; Sheep & Lambs, 11,300; Calves, 492; Pigs, 110.

MARK LANE.—MONDAY, June 4.

The supply of Wheat from Essex and Kent to this morning's market was small; the latter and part of the former was disposed of at an advance of 2s. per qr., but some proportion being held early for a greater improvement remained unsold towards the close. A tolerable business was transacted in foreign, at 2s. over the rates of this day se'nnight. The Barley trade is steady, and prices unaltered. Beans and Peas bring last week's quotations. Oats are a fair sale at the prices of Monday last. There is no change in the top price of town-made Flour, but country marks are 1s. per sack dearer.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	52—58	Red	50—54
— — fine selected runs..ditto	52—62	Red	54—58
— — Talavera	56—62		
— Norfolk	—	Red	—
— Foreign	48—63		
BARLEY, grind. & dist., 24s to 31s..Chev.	38—45	Malting.	36—41
— Foreign..grinding and distilling	28—36	Malting.	35—40
OATS, Essex and Suffolk	19—26		
— Scotch and Lincolnshire..Potato	23—30	Feed ..	19—27
— Irish .....Potato	24—30	Feed ..	19—25
— Foreign.....Poland and Brew	26—29	Feed ..	22—28
RYE	35—38	Foreign.	—
RYE-MEAL, foreign	—		
BEANS, Mazagan....32s to 40s....Tick	34—43	Harrow.	34—43
— Pigeon .....36s — 47s..Winds.	48—54	Longpod	—
— Foreign .....Small	38—46	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	38—40	Suffolk .	36—41
— Maple .... —s to —s ..... Grey	32—34	Foreign.	30—40
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	44—50		
— 2d do. ..... ditto	35—44	Country.	35—44
— Foreign .....per barrel	25—31	Per sack	30—37

FRIDAY, June 8.

The weather since the 1st inst. has been very wet and boisterous, with a low temperature, and is considered to have a prejudicial effect upon the growing Wheat and Barley crops. The wind, excepting on the 4th, when it was N.W., was southerly, varying from east to west. The inactivity reported of the trade last week has disappeared, and a further rise of 1s. per qr., and in many markets of 1s. to 2s. per qr. has again been established for Wheat, both English and foreign. An extensive business was also transacted here in f. o. b. and c. f. and i. cargoes from the Baltic, red at 54s. 6d. to 60s. c. f. and i.; Konigsberg and Dantzic at 58s. to 63s. Business in spring corn continues inactive, and the tendency of prices being towards a decline, any change that has occurred was in that direction. Flour has an upward tendency, and in some markets an improvement of 1s. per sack was established. The arrivals of grain-laden vessels from the South of Europe this week are small; the transactions concluded, which are to moderate extent, include Galatz Wheat at 50s. to 50s. 3d. per 480 lbs.; Marianopoli at 53s. 6d. and Odessa Ghirka at 51s. 3d., both per 492 lbs.; Ibrail Maize at 33s. 6d.; Danube Barley at 25s. 9d., Ibrail at 26s. 7½d., both per 400 lbs.; Calcutta Linseed at 48s. 3d. to 48s. 6d. per imp. qr., all c. f. and i. to the U.K. The arrivals of foreign grain this week have been to a fair extent, but of English very little has come to hand. Some of the English Wheat left over from Monday being held above the views of buyers, and proportionately dear, remained unsold towards the close of the market. Foreign has been in active demand, and a considerable business transacted at an improvement of 1s. to 2s. per qr. upon Monday's prices. Barley, Beans, and Peas bring Monday's quotations. The Oat trade is firm, and the extreme prices are realised. Country Flour is held for an advance of 2s. per sack.

ARRIVALS FROM June 4 TO June 8.

	Wheat.	Barley.	Oats.	Flour.
English ..	780 qrs.	50 qrs.	— qrs.	1570 sks.
Irish	— "	— "	1700 "	— "
Foreign ..	10570 "	2180 "	26320 "	760 " / 3080 brls.

LIVERPOOL, Tuesday, June 5.—We have had a numerous attendance of local millers and dealers at our Corn Exchange this morning, and several from the interior. A good consumptive business resulted in Wheat at an improvement of 1d. to 2d. per cental on most descriptions over last market day; sellers of American, however, were found at previous rates. Flour had a moderate inquiry, but no actual advances obtainable. Indian Corn attracted little attention, and both American and Egyptian were a trifle easier.

FRIDAY, June 8.—There was a good consumptive demand for Wheat at rather better prices than were obtainable on Tuesday. Flour in fair request at a slight advance. All other articles remain quiet.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
April 28..	51s 2d	37s 11d	24s 5d	31s 5d	41s 6d	38s 1d
May 5..	52 6	37 5	25 5	34 0	42 4	39 9
— 12..	52 6	37 7	25 10	34 1	43 8	40 3
— 19..	52 1	36 6	25 3	36 2	44 3	39 5
— 26..	52 6	36 2	26 6	37 3	44 8	40 9
June 2..	53 4	35 10	26 8	39 3	44 1	41 0
Agg. Aver.	52 4	36 11	25 8	35 5	43 5	39 10

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Apr. 28.	May 5.	May 12.	May 19.	May 26.	June 2.
53s 4d	..	..	..	..	..	
52 6	..			..		..
52 1	..	..	..		..	..
51 2 —		..	..	..	..	..
..	..	..	..	..	..	..
..	.	..	..	..	..	..

PARTNERSHIP.

WANTED, A PARTNER with a moderate capital for a NURSERY AND SEED BUSINESS. The advertiser has been an Assistant many years in some of the most respectable Nursery and Seed Establishments in England, and is now in treaty for a Nursery situated in a good locality in the immediate neighbourhood of London.—Apply by letter to J. S. & Co., Messrs. Williams & Lloyd, Stationers, 29, Moorgate Street, London, E.C.

WANTED, by a gentleman in the County of Oxford, an ARTICLED PUPIL. A limited number of Boarders are taken. Terms moderate.—Apply to ALPHA, Kingham, Oxon.

WANTED, A FOREMAN in a large MARKET GARDEN and NURSERY; he must be well up to growing for the northern markets. The situation is a responsible one, and security to the amount of 20*l.* will be required for fulfilment of duties and honesty.—Address, enclosing testimonials and wages required, to G. H., Post Office, Newcastle-on-Tyne.

WANTED, AS WORKING FOREMAN in a Market Garden, one who thoroughly understands his profession in all its branches. None need apply whose character will not bear strict investigation as to sobriety, honesty, and industry. Wages, 1*l.* per week.—Apply to MR. WHITING, Bath Road, Hounslow, W.

WANTED, AS HEAD GARDENER, by a clergyman in the country, an intelligent practical Gardener who takes an interest in his profession, and is well able to Force Pines, Grapes, Peaches, Melons, Cucumbers, and other fruits usually grown in Hot-houses, Conservatories, and Orchard-houses, and to manage seasonably and well the Kitchen and Flower Gardens. He must be a Churchman and able to give good references as to his knowledge, ability, and activity in his profession, and as to his character for honesty, sobriety, and general good conduct. As the situation is permanent, great care will be taken in filling it up.—Address, stating whether married or single, and wages expected, with references as to ability and character, to the Rev. D. D., care of Messrs. Sawyer & Sons, News Agents, 1, Castle Court, Birchin Lane, Cornhill, London, E.C.

WANTED, AS GARDENER, Single-handed, an active steady Man, in a gentleman's family. Would have the care of Cows, Poultry, &c, and be expected to make himself generally useful. Wages 18s. per week. None need apply without good references.—Address with full particulars to O. P., Post Office, Fenchurch Street E.C.

WANTED, AS GARDENER, in Hants, a respectable married Man, without incumbrance, not over 40 years of age. He will be required to take charge of a Cow and must quite understand Flower and Kitchen Gardens, also a small Greenhouse, Cucumbers, Melons, &c. He will have a Lad to assist him during the summer months, and a Cottage to live in; and all the winter during the absence of the family he and his wife will be required to take charge of and keep clean the gentleman's house. Wages during the time the family are in town, Gardener, 16s.; Wife, 4s. During the summer months, 16s., with Cottage to live in.—B.C., Post Office, Stockbridge, Hants.

WANTED, A GOOD GARDENER AND LAUNDRESS (married, without incumbrance), in the West of England, in June or July. Flower and Kitchen Gardening, Conservatory, Lawn Mowing, and ordinary Frame Forcing. Under Gardener kept. Laundress must be experienced and equal to the Washing of a large family. Laundry, Cottage, and Garden found. Any party applying is requested to give full particulars, and to name references as to character and capability, which, before any engagement, will be searchingly inquired into.—Address "Layman," Mr. Maye, 244, High Street, Exeter.

WANTED, AS APPRENTICE, a strong, active LAD; one who will devote his time and energy to learn Gardening will be preferred.—Apply by letter to RICHARD NICHOLSON, Gardener, Sharrow Lodge, Ripon, York.

WANTED, at St. Peter's Market Garden, near Margate, an active industrious MAN. He must be well up to Growing for Market and Tilling, obliging in his deportment, and produce a good character for capability and honesty from his last situation.—State wages required, and address to Mr. HOWARD, 2, Rosehill, Ramsgate.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 26, single; has a good practical knowledge of his profession. Can have a good character.—W. H. WALKER, Stationer, Leyton, Essex, N.E.

GARDENER (HEAD).—Age 32, no incumbrance; has a thorough practical knowledge of Pines, Vines, Peaches, Cucumbers, and Melons, also Flower and Kitchen Gardens.—J. R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD).—Age 33, married, no incumbrance; active and industrious; has had several years' experience in all parts of his profession, and lived with families that required large supplies. Can have excellent character for ability and steadiness of conduct.—A. B., Mr. Dubber, Printer, Westow Street, Upper Norwood, S.

GARDENER (HEAD).—The Advertiser, who is leaving his present situation at his own request, and can have upwards of 11 years' character, is wishful to procure another situation.—Every particular will be furnished upon application to JAMES DICKSON & SONS, the "Newton" Nurseries, Chester.

GARDENER (HEAD).—Thoroughly understands his profession, Early and Late Forcing of Pines, Vines, Peaches, Melons, and Flowers; and is a good Kitchen Gardener. No objection to the charge of Land. Good character from his late employer.—W. LAD, Messrs. Lee's, Nurseryman, Hammersmith, Middlesex, W.

STEWARD, BAILIFF, OR GARDENER, or the three offices combined.—Middle-aged; experienced; held a similar situation for some years; thoroughly conversant with Estate Management, the Designing and Erection of Farm Buildings according to modern improvements, and has also formed Gardens of the first-class.—ALPHA, *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Age 40, married; possesses a practical and scientific knowledge of his profession in all its branches, including Pines, Grapes, Peaches, Figs, Melons, Cucumbers, &c., and is a first class Plant Grower; with Woods, Land and Stock. Has had 200 prizes for Fruit and Vegetables. Wife can take charge of Dairy and Poultry.—J. D., Messrs. Drummond's Nursery, Bath, Somersetshire.

GARDENER (HEAD WORKING).—Age 30, no incumbrance; understands his profession in all its branches, Plants and Forcing, Pines, Grapes, Melons, Cucumbers, Peaches, &c., also Kitchen, Flower, and Fruit Departments. First class character.—J. R., The Gardens, Sir Clifford Constable, near Hull.

GARDENER (HEAD).—H. MITCHELL (age 26, single,) Quex Park, wishes to engage with any nobleman or gentleman in want of a practical gardener. Has lived in situations in Scotland and England, where Gardening has been carried on extensively.—For character and ability, apply to Mr. Hutchison, Quex Park, Margate, Kent.

GARDENER (in or out of the house).—Age 40; thoroughly understands his business, also Stock and Land. Can be highly recommended from his late employer.—Y. Z., Post Office, Battersea Rise, S.W.

GARDENER (SINGLE-HANDED).—Age 21; understands Forcing Vines, Melons, &c. Indoors or out.—W. A., Dartford, Kent.

GARDENER (SECOND).—Age 27; has held responsible situations in the above capacity in some of the best conducted establishments in the kingdom. Unexceptionable references can be obtained either of last or former employers.—X. Y., 8, Highland Vale, Durdham Down, Bristol.

GARDENER (SINGLE-HANDED or UNDER in a large establishment).—Age 24, single; well experienced in the various branches of Gardening.—J. H., Post Office, Wanstead.

GARDENER (UNDER) in any first-class establishment. Experienced. Good testimonials.—B., Post Office, Kings- on-Thames. S.W.

FOREMAN OR JOBBING MAN.—Active, business like, one of the old school, a first-class hand at Training, Laying, Budding, or anything else. Wages required, 1*l.* 1s. per week.—S. S. CAVE, Mr. Palmer, 4, Campden Hill, West Kensington, W.

PROPAGATOR OR PLANT GROWER, in the Florist Department of a Nursery.—Middle-aged; has had great experience in Growing for Exhibition and general purposes in some of the best nurseries round London. Three years and six months in present situation.—R. CATLEUGH, 5, Crown Terrace, Prince of Wales Road, Camden Town, N.W.

TO LANDED PROPRIETORS AND OTHERS.

STEWARD OR BAILIFF.—Small incumbrance; thoroughly acquainted with Norfolk Farming in all its branches. Wife an excellent Dairywoman. Can have 9 years' first-rate character.—MR. PARTRIDGE, Shouldham, Downham.

STEWARD OR BAILIFF.—Middle-aged, of energetic business habits; is practically acquainted with every branch of Farming, Heavy and Light Soils on a large scale; the Management of Labourers on the most economical system; Erecting Buildings, &c.; Breeding, Buying, and Selling all kinds of Stock. The highest reference can be given. Is leaving present situation on account of farm being left.—R. S., Mr. Sutton's, Royal Berks Seed Establishment, Reading.

FARM AND WORKING BAILIFF.—No incumbrance; Wife a good Dairywoman. Good characters.—Y. Z., Mr. Wills, Grocer, 34, Great Windmill Street, Haymarket, S.W.

BAILIFF OR GENERAL MANAGER.—Has been extensively engaged on a nobleman's estate, where Agricultural pursuits have been carried out on the most economical system; is conversant with Heavy and Light Soils, the Management of Woods, Breeding and Selling of Shorthorns and other Stock. Satisfactory reasons furnished for leaving present situation, and the highest references given.—W. C., Messrs. Gibbs & Co., corner of Half-Moon Street, Piccadilly, London, W.

IMPROVER, where he may improve his knowledge of Farming.—Age 20; has been nearly four years under a Farm Bailiff and Land Steward; thoroughly acquainted with the duties of an Accountant, and would take his part in any of the work upon the Farm. Board, lodging, and a salary of 20*l.* required. He can produce the highest testimonials from his late employer.—J. W., 15, Somers Terrace, Clarendon Square, London, N.W.

The Gardeners' Chronicle Newspaper.

SATURDAY, JUNE 16, 1860.

MRS. ARTHUR HENFREY, Widow of the late Professor Henfrey, F.R.S., F.L.S., &c., of King's College, London, continues to receive a limited number of young Gentlemen under 12 years of age, to be educated with her own Sons, in all the branches of a liberal education. French is constantly spoken, Mrs. HENFREY having resided on the Continent, and a Parisian Lady assists her to teach Music, Singing, and Drawing. The house is healthily situated, and provided with a large Garden. Pupils will have the comfort of a private family, and unremitting attention will be paid to their health and morals. References are permitted to—

Dr. JELF	Principal of King's College
Rev. LAWFORD W. T. DALE ..	Chiswick Vicarage, W.
Rev. OLIVE HOLLINGWORTH ..	Turnham Green, W.
Sir WM. and Lady HOOKER ..	Kew, W.
Professor HUXLEY, F.R.S. ..	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. MARTYN.. ..	7, Bennett St., St. James's, S.W.
Dr. and Mrs. LINDLEY.. ..	Acton Green, W.
Dr. and Mrs. HOOKER	Kew, W.
Dr. and Mrs. TUKE	Manor House, Chiswick, W.

For terms apply to Mrs. ARTHUR HENFREY, 12, Heathfield Terrace, Turnham Green, W.

NEXT OF KIN, HEIRS, &c., WANTED, who have been Advertised for—Being exact Copies of Advertisements from the *Times, Gazette, Chronicle, Herald, Post, Melbourne Argus, Sydney Herald, Hobart Town Mercury, South Australian Register, Cape Mail* and *Monitor, New Zealand Gazette, West India Record*, Indian, Canadian, and American Papers for the last 60 years, relating to many thousand names, descriptions, and last residences of persons of all classes entitled to money and property of several Millions value, and now laying dormant for want of claimants. This prized and valuable book is sent post free to any part of the United Kingdom for 12 post stamps by the publishers, FISHER & SON, Kingsland, London, N.E. Established 1847. "Worth its weight in gold."—*Times*, Nov. 26, 1859.

News of the Week.

IN the House of Lords on Friday Earl STANHOPE moved for copies of despatches regulating our diplomatic intercourse with Rome, with the view of showing the expediency of establishing direct diplomatic relations with the POPE. After some discussion the motion was agreed to. The House then went into committee on the Refreshment Houses and Wine Licenses Bill, when certain clauses were objected to by the Earls of SHAFTESBURY, DONOUGHMORE and HARRINGTON. The Bill was supported by the Earl of WICKLOW and Earl GRANVILLE, who stated that the Government proposed to extend the measure to Ireland and Scotland, with modifications suited to their circumstances. The Bill ultimately passed through committee without amendment. On Monday on the order of the day for the third reading of the Bill, Lord DENMAN moved that it be read a third time that day six months. After some discussion the House divided, when the third reading was carried by 36 to 2. The Bill then passed. Sir J. Barnard's Act Repeal Bill was also read a third time and passed. On Tuesday Lord REDESDALE moved the second reading of the Light Weights Racing Bill, the object of which was to prevent race-horses from being weighted below six stone. The Duke of BEAUFORT moved as an amendment that the Bill be read a second time that day six months. The Earl of WINCHILSEA, Earl GRANVILLE, and the Earl of DERBY opposed the Bill; the Marquis of CLANRICARDE supported it. After some further discussion Lord REDESDALE withdrew the Bill. On Thursday the Duke of NEWCASTLE, in answer to the Earl of CARNARVON, said that despatches had been received from the Governor of New Zealand confirming the accounts of serious collisions with the natives in the neighbourhood of New Plymouth, and stating that every effort was making to suppress the outbreak. Earl GRANVILLE, in answer to Lord MONTEAGLE, said that HER MAJESTY'S Government had no reason to believe that the reduction of duties on foreign wines would occasion any loss of revenue upon malt, hops, and British spirits.

In the Commons on Friday Lord JOHN RUSSELL stated that Spain by the agency of the slave trade annually landed 40,000 slaves in the island of Cuba in direct contravention of her treaties with this country. The subject had engaged the attention of the Government, and he had now in preparation a despatch which he intended to send to the various Powers, including Spain and the United States. Mr. H. B. SHERIDAN obtained leave to bring in a Bill to enable cities, towns, and boroughs of 30,000 inhabitants and upwards, to appoint stipendiary magistrates; and Mr. LYGON obtained leave to bring in a Bill to amend the law relating to the hiring of agricultural servants. Sir J. ELPHINSTONE was moving for leave to bring in a Bill for establishing a test for anchors and cables in the merchant service, when the House was counted out. On Monday on the order of the day for resuming the debate on the Reform Bill, Lord JOHN RUSSELL said that in the present state of public business the Government had felt bound seriously to consider the position of the Bill. They had in the first place determined that it was impossible to accede to the amendment moved by Mr. MACKINNON to defer legislation till the results of the Census could be obtained, because such a delay would postpone a Reform Bill to an indefinite time. As however it was apparent from the recent division that 260 members desired the postponement of the Bill; as there was other important business to dispose of; and as there was not that earnest demand for the measure out of doors which would justify them in prolonging the session, the Government had come to the conclusion that it was not their duty to proceed with the Bill in the present session. They were persuaded that a reduction of the borough franchise was required for the future safety of the State and for the improvement of the representation, and it was their intention to introduce another Bill at the earliest opportunity. Mr. DISRAELI and Mr. BRIGHT approved of the course taken by the Government; Lord FERMOY, Mr. E. JAMES, and other members opposed it. After a desultory discussion Mr. MACKINNON withdrew his amendment, whereupon Lord J. RUSSELL withdrew the Bill, and the order for going into committee was discharged. On Tuesday at a morning sitting the House went into committee on the Edinburgh Annuity Tax Bill, and agreed to the first 14 clauses with amendments. At the evening sitting, in answer to Mr. H. B. SHERIDAN, Lord PALMERSTON said that the Court of Naples had applied to the Great Powers to guarantee to the KING the possession of the two Sicilies. Austria, however, had positively refused to interfere, and he had reason to believe that a similar reply had been made by France. The British Government would of course return a similar answer, and at the same time, express its abhorrence of the atrocities committed at Palermo, which were a disgrace to the age. In reply to Sir C. DOUGLAS, Sir G. LEWIS said that the Government did not intend to insist upon the clause in the Census Bill imposing penalties on those who refused to declare their religious belief. Admiral DUNCOMBE moved for a select committee to inquire into the constitution of the Board of Admiralty, and the various duties devolving thereon. The motion was opposed by Government, and, after some discussion, was withdrawn. Sir C. WOOD moved for leave to bring in a Bill to repeal the Act establishing a local army in India, and to enable the Government to carry out the amalgamation of the Indian army with the Queen's army. After a short discussion the debate was adjourned for a week. On Wednesday the House went into committee on the Mines Regulation and Inspection Bill, and agreed to the first two clauses after two divisions, in which amendments were negatived by large majorities. On Thursday Mr. LINDSAY'S motion, calling upon the Admiralty to adopt more prompt and effective measures to complete the reserves of marines and seamen for the navy, was negatived without a division. Mr. WHALLEY called attention to the mode of assessing the Property and Income-tax, and complained that the Government had made no effort to remove its manifold inequalities and injustice. The CHANCELLOR of the EXCHEQUER admitted that there were many inequalities in the tax, but the Government had arrived at the conclusion that no readjustment could be made of the distinction between permanent and precarious incomes without inflicting greater injustice than that complained of. The House then went into committee of supply, when the sum of 670,000*l.* was voted on account of the civil service estimates, and several votes were agreed to on account of the NAVY.

The PRINCE REGENT of Prussia left Berlin on Wednesday for Baden Baden, to attend a Conference of the German Sovereigns, consisting of the KINGS of SAXONY, BAVARIA, HANOVER, and WURTEMBERG, the Grand Dukes of BADEN and HESSE DARMSTADT, and the Duke of SAXE-COBURG. The EMPEROR OF THE FRENCH left Paris yesterday for Baden Baden, to meet the PRINCE REGENT of Prussia, but it is not yet known whether the other German Sovereigns will be admitted to the interview. Accounts from Sicily state that in accordance with the conditions of the new capitulation entered into between General LANZA and GARIBALDI, the whole of the Royal army at Palermo, numbering 15,000 or 20,000 men, have embarked for Naples, leaving the capital of Sicily in the possession of the insurgents. Catania has since been abandoned by the Royal troops after having been bombarded and pillaged, and the only place of importance which now holds out for the KING is Messina, which will be invested by GARIBALDI as soon as he has organised his plans.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family, with their Royal visitors, continue at Buckingham Palace. On Friday evening the Queen and Prince Consort, accompanied by the King of the Belgians and the Princess Alice, honoured the performance at the Olympic Theatre with their presence. On Saturday the Queen held a Court and Privy Council at Buckingham Palace. At the Court Dr. Longley, Archbishop designate of York, was sworn a Privy Councillor; Arthur Helps, Esq., was sworn as Clerk of the Council, in the room of the Hon. William Bathurst, who retired; and Edmund Stephen Harrison, Esq., was sworn as Deputy Clerk of the Council. The Right Rev. Dr. Wigram had an audience and did homage on being appointed Bishop of Rochester; the Bishop of Antigua had an audience; General Dupuy, Minister from the Republic of Hayti, had his first audience; Mr. Wyke, her Majesty's Minister to Mexico, had an audience on his return from a special mission to the States of Central America. Earl Granville, Lord John Russell, Viscount Palmerston, and Sir G. C. Lewis had audiences of her Majesty. The Princes Louis and Henry of Hesse had luncheon with her Majesty, and took leave previous to their departure. In the afternoon the Duke and Duchess d'Aumale visited the King of the Belgians. The Prince Consort and the Count of Flanders visited the South Kensington Museum. In the evening the Queen and Prince Consort, accompanied by the King of the Belgians, the Princess Alice, and the Count of Flanders, honoured the performance at the Royal Italian Opera with their presence. On Sunday morning the Queen and Prince Consort, the King of the Belgians, Prince Arthur, the Princesses Alice, Helena, and Louisa, attended Divine service in the private chapel of Buckingham Palace. The Rev. H. M. Birch preached the sermon. On Monday morning the Queen and Prince Consort, accompanied by the Princess Alice and the Count of Flanders, rode on horseback. The Prince and Princess Frederick of the Netherlands, accompanied by the Princess Marie, visited her Majesty at Buckingham Palace. In the afternoon the Queen held an investiture of the Order of the Bath. Her Majesty afterwards took a drive in a carriage and four, accompanied by the Princesses Alice and Louisa. The Prince Consort rode on horseback. In the evening her Majesty had a dinner party. On Tuesday the Queen held a Drawing Room in St. James's Palace. After the Drawing Room her Majesty and the Prince Consort, accompanied by the Princesses Alice and Louisa, visited the Prince and Princess Frederick of the Netherlands at Claridge's Hotel. Her Majesty and his Royal Highness also paid a visit to the Hereditary Grand Duchess of Mecklenburg-Strelitz at her residence in St. James's Palace. The Queen, accompanied by the Princesses Alice and Helena, afterwards took a drive in a carriage and four. The Prince Consort rode on horseback. The King of the Belgians visited Prince and Princess Frederick of the Netherlands. In the evening the Queen and Prince Consort, accompanied by the King of the Belgians, the Princess Alice, and the Count of Flanders, honoured the Royal Italian Opera with their presence, visiting the Floral Hall previous to entering the theatre. On Wednesday the Queen, accompanied by the Princess Alice, took a drive in a carriage and four. The Prince Consort, accompanied by the Count of Flanders, rode on horseback. In the evening the Queen gave a concert, to which a party of about 400 were invited. On Thursday the Prince Consort visited the British Institution in Pall Mall, and the Crystal Palace. The King of the Belgians, accompanied by the Count of Flanders, went

to Tunbridge Wells, and visited the Countess de Neuilly. In the afternoon the Queen, accompanied by the Princess Alice and Prince Leopold, took a drive in a carriage and four. In the evening the Queen and Prince Consort, accompanied by the Count of Flanders, honoured the performance at the Haymarket Theatre with their presence.

THE HEREDITARY GRAND DUCHESS OF MECKLENBURG-STRELITZ landed at Dover at 4 A.M. on Monday morning from Calais, and after resting for a few hours at the Ship Hotel, proceeded by midday train for London.

THE PRINCE AND PRINCESS FREDERICK OF THE NETHERLANDS, accompanied by their daughter, the Princess Marie, left London on Thursday by the Eastern Counties Railway for Harwich, where they embarked the same evening for Rotterdam. The Princess Frederick has been sojourning for some months past at Torquay for the benefit of her health, which has been materially improved by her residence in this country.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

PRIVY COUNCIL.—The Queen has appointed Mr. Arthur Helps, the well-known author of "Friends in Council," and other works, to be Clerk of the Privy Council, in the room of the Hon. W. Bathurst, who has retired.

CONVOCATION.—Both Houses of Convocation met again on Friday, and after despatching some business of the usual character, were prorogued to the 28th August.

THE ARMY.—The colonelcy of the 78th Foot, vacant by the death of Sir W. Chalmers, has been conferred on Lieut.-General Macneil; and the colonency of the 8th Foot, vacated by this promotion, has been conferred on Major-General Monins.

THE CHANNEL FLEET, consisting of 9 ships of the line and 5 frigates and corvettes, steamed up the Frith of Forth on Friday morning, and anchored in the roadstead of St. Margaret's Hope, 8 or 10 miles above Leith roads. It is expected that the fleet will remain there about a week.

THE SHEERNESS COMMAND.—Vice-Admiral W. J. Hope Johnstone has been appointed to succeed Vice-Admiral Edward Harvey as Commander-in-Chief at Sheerness.

THE DOCKYARD COMMISSION. — The Queen has directed letters patent to be passed under the Great Seal, appointing John Lewis Ricardo, Esq., the Earl of Gifford, Sir Henry P. Willoughby, Bart., Capt. R. S. Robinson, R.N., and Robert Dalglish, Esq., to be her Majesty's Commissioners to inquire into the system of control and management of her Majesty's Dockyards the purchase of materials and stores, the cost of building and repairing, altering, fitting, and refitting the ships of her Majesty's Navy, and the best mode of keeping the accounts thereof.

NATIONAL DEFENCES COMMISSION.—The Report of the Commissioners on the Defences of the United Kingdom was published on Wednesday. It commences by stating that, while the Commissioners fully recognise the importance of an efficient Channel fleet, they have come to the conclusion that a fleet alone is insufficient for the defence of the United Kingdom; that our regular army is, and must always be, small; and that the volunteers could not at first be able to meet the regularly disciplined soldiers of continental armies on anything like equal terms. Having carefully weighed these considerations they have been led to the opinion that neither our fleet, our standing army, nor our volunteer forces, nor even the three combined, can be relied on as sufficient in themselves for the security of the kingdom against foreign invasion. They have therefore directed their attention to the question of fortifications. On this point they mention the simple fact that, of the 900 miles of coast from the Humber to the Land's End, 500 miles admit of a landing under ordinary circumstances, to show the impossibility of fortifying these islands. The commissioners have consequently confined their inquiries to the defence of the dockyards, Woolwich arsenal, and the metropolis. They recommend the construction of new works or the completion of those already in progress, the expense of which, including purchase of land, is estimated at 2,800,000*l.* for Portsmouth and the Isle of Wight, 3,020,000*l.* for Plymouth, 765,000*l.* for Pembroke, 630,000*l.* for Portland, 180,000*l.* for the Thames, 450,000*l.* for the Medway and Sheerness, 1,350,000*l.* for Chatham, 700,000*l.* for Woolwich, 335,000*l.* for Dover, and 120,000*l.* for Cork. The armament of these works they estimate at 500,000*l.*, and add 1,000,000*l.* for floating defences. The total is 11,850,000*l.*; of which about a million and a half has been already authorised, though not voted. It is the intention of Government to proceed promptly and vigorously on a great portion of the Report, but to abandon the attempt to defend Woolwich and the metropolis for the present. It is proposed to expend in all only eight and a half millions, instead of the eleven and three quarter millions of the Report. This includes 1,885,900*l.* for the purchase of land, which it is proposed to acquire at once under the Defences Act. As only a small portion of the land will be wanted for the works, and the remainder will merely be kept clear from buildings, the latter will be let out, and need not be an unprofitable investment. The Government propose to commence the works immediately, and the Commissioners have pointed out how they may be available for defence in three or four months, even while far short of completion. It is intended to raise the money by terminable annuities, so that the whole sum may be absorbed in 25 years. With regard to the nature of the works proposed, the Commissioners state that, with the new artillery now in use as means both of offence and defence, it will be necessary to advance the fortifications of our dockyards and arsenals so as to command the approaches to a much greater distance. They propose to place works at every weak point of the Isle of Wight, and wherever a gun can be brought to bear on the channel to Portsmouth either by Spithead or the Needles. On various points on the shore, or on shoal ground they propose to erect batteries with one, two, or even three tiers of guns, like those that baffled us at Cronstadt, and did our fleet so much damage at the entrance of Sebastopol. Works consisting of forts, with lines of communication, are to be carried inland, in order to keep at a distance any force that might be landed on another part of the shore. The Commissioners propose the improvement and enlargement of the existing fortifications of all the other harbours and dockyards in the same manner. They propose a guard of moveable floating batteries, and suggest means of stopping the channels, to be ready in case of emergency. They recommend that all the new works shall be supplied with the most approved guns, and that the guns of obsolete fashion or irregular calibre they have found about the country shall be disused. They reserve the question of an internal arsenal for a subsequent report, and they submit to her Majesty these unanimous recommendations "with a firm conviction that their adoption will place the power of this country for self-defence on a par with its other elements of greatness and strength; will give security to its industry and commerce; afford a guarantee to the maintenance of peace, and add a new glory to her Majesty's reign." The report is signed by Major-General Harry D. Jones, Major-General D. A. Cameron, Rear-Admiral Geo. Elliott, Major-General F. Abbott, Capt. A. Cooper Key, R.N.; Colonel J. H. Lefroy, R.A.; Mr. Jas. Fergusson, and Major Wm. F. Drummond Jervois, R.E., Secretary.

THE VOLUNTEERS.—It is officially announced that her Majesty has intimated her intention to review the Volunteer Corps in and about London in Hyde Park on Saturday, the 23d inst., at 4 P.M. As some applications have been received at the War Office from volunteer corps formed beyond the metropolitan district to be permitted to attend the review at their own expense, it has been decided that such applications shall be taken into consideration, with a view to the admission, so far as space and numbers will allow, of such corps as may be at an easy distance from London, provided their applications are received at the War Office on or before Monday next, the 18th inst., immediately after which each corps will be informed whether it will be possible to accept the offer.—On Tuesday Mr. Paynter decided, at the Westminster Police Court, in a case of toll dispute, that a volunteer in uniform was, to all intents and purposes, a soldier so far as tolls were concerned, and entitled to claim the same exemption.—The following instructions have been issued to the station-masters on the western lines with regard to the charges to be made to the Volunteer Riflemen when travelling by railway:—

"Tickets at Government fares may be issued to the Volunteer Rifle Corps on the following conditions;—The applicant must be in the uniform of his corps, and must give a verbal assurance that he is going to attend or is returning from drill, exercise, inspection, or review. First-class tickets only must be issued to the officers. First or second-class tickets, as may be required, may be issued to the other members of the corps."

Foreign.

FRANCE.—The *Moniteur* of Tuesday published an Imperial decree, promulgating the treaty concluded with Sardinia for the cession of Savoy and Nice. In a report which preceded the promulgation of the treaty M. Thouvenel explains the exceptional character of this new acquisition of France. M. Thouvenel says, "The Imperial policy has not been directed by an ambitious thought, but by a sentiment of foresight which sought for a guarantee. This acquisition has not been obtained by force, but only by the gratitude and friendship of a Sovereign, increased by the spontaneous and unanimous enthusiasm of the populations, who will afterwards be its guardians." On Thursday France took official possession of the two provinces, and on the same day the Emperor held a grand review of the troops and National Guard to celebrate the event; a *Te Deum* was sung in the Cathedral of Nôtre Dame, and all the public edifices were illuminated. The *Moniteur* of Thursday contains several decrees regulating the Customs' administration and the military organisation of Savoy and Nice; and according to a project of law which has been submitted to the Corps Legislatif, Savoy will form two departments. The French laws and constitution, however, will not come into operation in the annexed provinces until the 1st of January, 1861. The Commander de Martino, the Neapolitan Minister at Rome, arrived in Paris on Monday, and has since been received in private audience by the Emperor at Fontainebleau. Lord Cowley, the Chevalier Nigra, and Prince Metternich, the British, Sardinian, and Austrian Ambassadors, were at Fontainebleau during the interview. It is said that the Commander de Martino was not very well satisfied with what he heard from his Majesty, who is reported to have told him some home truths, and declared that the King and Government were alone responsible for whatever might take place. In consequence of this attempt of the Court of Naples to negotiate directly with the Emperor, Count Cavour, the Sardinian Minister for Foreign Affairs, has addressed an official despatch to Paris expressing a hope that France will not in any way interfere in the affairs of Sicily. He reminds the French Cabinet that the principle of non-intervention in Italy, as contained in the celebrated note of Lord John Russell, has been officially accepted by the French Government, and he requests the Cabinet to adopt in regard to Sicily the policy followed in reference to Tuscany, Parma, Modena, and the Legations. The Emperor left Paris yesterday for Baden Baden, to meet the Prince Regent of Prussia. His Majesty intended to sleep at Kehl, opposite Strasbourg, last evening, and to pass the whole of to-day and probably to-morrow with the Prince Regent and the Grand Duke of Baden, returning to Fontainebleau at the close of the interview. In official quarters it is stated that the interview was proposed by the Emperor with the object of calming the distrust and uneasiness of the German people, and of re-establishing the international relations of France and Germany on a basis of mutual and absolute confidence. Prince Jerome had a shivering fit on Monday, which was followed by a slow and difficult reaction. He had an agitated and sleepless night, but since Tuesday morning his Imperial Highness has been calmer. A decree in the *Moniteur* dated the 9th inst. appoints Count de Morny President of the Legislative Body, MM. Schneider and Reveil Vice-Presidents, and MM. Hébert and General Perrot Questors. The *Moniteur* also announces that the Government has withdrawn the project for a railway from Graisserac to Beziers. Great preparations are making at the Palais de l'Industrie, in the Champs Elysées, for opening the agricultural exhibition, which is to commence to-morrow. The immense building was too small to contain all the objects to be exhibited, and it was consequently necessary to build temporary additions and to erect tents for the reception of a multitude of machines and agricultural implements. Other buildings have been prepared in the Champs Elysées for the reception of horned cattle and horses. The jurors were to be occupied on Thursday, yesterday, and to-day in preparing their report. The ships-of-the-line Bretagne, Eylau, Impérial, and Rédoutable have sailed from Toulon for Naples to afford protection to the French subjects established in that city.

SPAIN.—The *Madrid Gazette* contains a royal decree enacting that the child to whom the Duchess de Montpensier is about to give birth shall, in addition to the title of Infante or Infanta, already accorded, receive, on being baptised, the Grand Cross of the Order of Charles III., if a boy, or the decoration of the Order of Noble Ladies of Maria Luisa, if a girl. The Cortes has rejected by a majority of 200 to 26 the amendment to the address proposed by the Progresista party, in reference to the amnesty and the law decreeing the banishment of the family of Don Carlos. The discussion of Signor Olozaga's amendment took place on Monday, when General Dulce gave personal explanations to the Chamber. In a preliminary meeting of the political friends of General Ortega, the conduct of General Dulce was approved as having been perfectly honourable.

BELGIUM.—The *Levant Herald* recently stated that the Duke of Brabant, on leaving Constantinople, took away with him 17 pipe sticks which the Sultan had lent him for his use, several of which had the costliest mouth-pieces mounted in diamonds, the total value being 7000*l.* The *Journal de Constantinople* officially contradicts this statement and says that the Sultan requested his Royal Highness, like all other princes who have visited Constantinople, to accept the pipes as a *souvenir* of his visit to the Kiosk of the Sweet Waters of Asia.

SWITZERLAND.—It is said that there is no truth in the rumour that France is about to send a corps of observation to the Swiss frontier. The Austrian Cabinet, in reply to the note of the Federal Council dated May 25, says that the general state of affairs does not permit Austria to take the initiative in the Conference.

ITALY.—The King of Naples has not only addressed the Western Powers, but has also invoked the simultaneous intervention of the five great Powers, in order to obtain from their collective action a guarantee for the integrity of his States. He has also particularly claimed the mediation of the Emperor of the French for the pacification of Sicily, and has promised to grant immediately a liberal constitution for the whole kingdom. His Majesty has also requested the five great Powers to employ their authority and influence to restrain Piedmont from favouring any revolutionary movement on the mainland of the kingdom of Naples. As regards the collective action of the great Powers, the English Cabinet was the first to reply that it did not intend to interfere in any other way in the conflict between the Neapolitan troops and Garibaldi than to stop, if possible, the effusion of blood, without siding with either party. Lord John Russell has, however, promised to recommend to Piedmont not to ferment any disturbances in the Neapolitan possessions in the Peninsula.

After this answer given by England the other great Powers likewise, in more or less positive terms, declined any direct intervention. The Emperor Napoleon was at Lyons when M. Thouvenel transmitted to his Majesty by telegraph the demand of the mediation made by the King of Naples. His Majesty replied immediately that a mediation was only possible between two Powers, and, unless officially recognising the Sicilian Revolution, no Power could place itself as a mediator between the King of Naples and his subjects. The French Minister in communicating this reply is reported to have added that, between the cowardice of a capitulation and the barbarity of a bombardment, advice was impossible, and that there only remained to express regret that the Neapolitan Government did not follow the advice given to it for the last 10 years. Had it done so, Southern Italy would have acted as a counterpoise to Northern Italy; whereas now the North threatens to swallow it up entire. The Commander de Martino, the Neapolitan Minister at Rome, has since been sent to Paris after having had a conference with the Ambassadors of France and Russia. It is said that he is charged, on the part of the King of Naples, to submit the bases and the guarantees of the personal mediation invoked from the Emperor by his Majesty; to state that his Majesty is ready to engage himself to grant a liberal constitution, on the broadest basis, to Sicily, to be also applied to the whole kingdom; and further, if the Sicilians should desire a distinct and independent existence, to extend his concessions so far as to place Sicily in a position similar to that of the Duchy of Luxembourg. In allowing himself to be appealed to as a mediator, the Emperor, it appears, considers that by ratifying an armistice between General Lanza and Garibaldi the King of Naples has removed the principal obstacle which prevented foreign mediation. From the moment that the King of Naples treated with the Sicilian revolutionary party as one Power with another, mediation became possible without infringing upon diplomatic formalities. Although, however, the Emperor authorised the Commander de Martino to go to Paris, the Emperor reserved to himself the liberty of not coming to a decision until after having received positive overtures from the Neapolitan envoy. At all events the Court of the Tuileries does not wish to undertake any mediation unless in concert with England and with the other great Powers. At Naples it was reported that the promulgation of a constitution framed according to that of France might be expected shortly, and that the Count of Aquila, uncle of the King, strongly insists that an Italian policy and liberal institutions shall be carried out. M. Brenier, the French Minister at Naples, has telegraphed to Paris for more vessels of war, anticipating the necessity of affording a refuge to French subjects. Captains Acton and Caracciolo, of the two Neapolitan frigates which failed to prevent Garibaldi's landing at Marsala, have been tried by court-martial at Naples and acquitted. Accounts from Rome state that fresh bands were also menacing the frontiers, to which General Lamoricière had sent more troops. An official decree had extended the delay for the subscription to the new loan until the 15th of July next. The Cardinals had held an extraordinary meeting, and subscribed 30,000 crowns, but the public revenues were diminishing daily. The Peter's pence had only produced 500,000 crowns. Numerous families were arriving from Naples. The health of Cardinal Wiseman inspires great uneasiness, as, notwithstanding the occasional appearance of favourable symptoms, successive relapses leave little hope of his recovery. The official *Giornale di Roma* announces the definitive fusion of the railway companies, and defers until the end of 1861 the construction of the railway to the Neapolitan frontier. The capital of the Pio Centrale Company is to remain at 175,000,000f. A despatch from Turin of the 10th inst. state that the Sardinian senate finally approved the Treaty of cession of Savoy and Nice by a majority of 92 to 10. The Minister has presented a project for a new loan of 150,000,000f. Marshal Vaillant, commander of the French army in Italy, has arrived at Turin on his return to France, and is lodged in the Royal Palace. The Marquis Forrearra, Marquis Rocaforte, and Count Manzoni, Sicilian exiles, have left Turin for Palermo. 3000 volunteers left Genoa on the evenings of the 8th and 9th inst. for Cornigliano, a villa on the coast in the neighbourhood, to join Garibaldi, and there embarked in five steamers, which were waiting for them.

SICILY.—Accounts from Palermo state that in accordance with the conditions of the new capitulation entered into between Garibaldi and the General commanding the Royal Army, the Neapolitan army of 18,000 men evacuated on the 9th with all military honours the whole city of Palermo, with the exception of the fort of Castellamare, and withdrew to the Mole and Monte Pellegrino, where they encamped till they embarked for Naples and Gaeta with their arms and baggage. Many wounded and much of the *matériel* had been previously embarked. The fort of Castellamare was to be evacuated after the embarkation of the troops and the exchange of prisoners. The English Admiral had consented to occupy the fort until the troops should have completely evacuated the place according to the terms of the capitulation, but the occupation was not carried out. The official journals state that two steamers, having on board troops and ammunition, have since been captured by Neapolitan ships of war. The damage done by the bombardment was immense, and the Treasury was destroyed. The Neapolitans had committed great atrocities, and the burnt bodies of women and children had been found in the streets. It is positive that Garibaldi has found 24,000,000f. in the Treasury and *caisses de depôt*. The Neapolitan Government had decided upon concentrating all its military forces at Syracuse, Messina, and Agosta, because, by preserving these strategic positions it still hoped to appear in the eyes of Europe as master of Sicily. It seems to fear that the revolution would be recognised as an accomplished fact should the Neapolitan army abandon Sicily. Accounts from Messina state that Catania had been bombarded and pillaged by the Royal troops, and then abandoned. It is understood that Garibaldi will not undertake anything against Messina for some days to come, as he is organising his plans. The *Official Journal* of the Provisional Government publishes numerous decrees, all signed by Garibaldi, who takes the title of Commander-in-Chief of the National forces in Sicily. One of these documents calls to arms all Sicilians between the ages of 17 and 50 years. Another orders that the revenue derived from imposts and customs be paid over to the insurrectional authorities.

PRUSSIA.—The Prince Regent, accompanied by the President of the Council of Ministers, the Prince of Hohenzollern, his Chamberlain and military suite, left Berlin on Wednesday evening for Baden-Baden, reviewing the troops of the Frankfort garrison on his way. Before the Regent's departure the King of Hanover arrived at Berlin, and had an interview of several hours' duration with his Royal Highness. At Baden the Regent was to be met by the Kings of Saxony, Hanover, Bavaria, and Wurtemberg, the Grand Dukes of Baden and Hesse-Darmstadt, and the Duke of Saxe-Coburg. The Emperor of the French is expected to arrive to-day, to have an interview with the Regent. The arrangement of this congress of German Sovereigns is attributed to the King of Bavaria, whose object is to remove the difficulties which divide the States of the Confederation into two distinct camps of principles and tendencies. Prayers for the safe accouchement of the Princess Frederick William were commenced on Tuesday in the churches of Berlin. A Royal decree orders that the whole Prussian army shall for the future wear on their helmets the motto hitherto inscribed on those of the Landwehr, "With God for the King and the Country."

AUSTRIA.—The Council of the Empire has, from its first sitting, claimed the privilege of examining the projected budget for 1861, in accordance with the principles of the representative system. This motion having been agreed to by 47 against 13 votes, the Emperor consented that a committee of 21 members, in which all the provinces of the empire were represented, should be appointed to examine the budget. The committee has presented to the Emperor a general report on the state of the whole public debt of the empire, which will be published shortly. The organic statutes of the Provincial Diets are ready for promulgation, and only await the approval of competent persons of the different provinces to whom they have been confidentially communicated by Government. An Imperial decree has been published ordering that the Stadtholdership of Hungary shall come into effect on the 1st of July, when the five existing departments of the Central Government, which were entrusted with the administration of Hungary, will be abolished. Another decree suspends the district authorities of Moravia and the Provincial Government of Troppau. Silesia is to be subordinate to the Stadtholdership of Moravia, but the provincial status of Silesia, with a separate provincial representation, will be maintained. Another decree extends the authority of the Central Congregation in Venetia, granting to that body a deliberative instead of a mere consultative vote on a large number of administrative questions. The decisions of this Congregation will become law on being signed by its President. As regards judicial affairs, on which the Congregation can now only decide in a subordinate capacity, it will in future fulfil its functions without any further appeal. The only reservation made in favour of the Central Administration is the approbation of the proposed expenditure and the revision of the provincial treasury accounts. In order to re-establish the national character of the municipal system in Venetia, all the franchises and immunities granted by the patent of the 26th of April, 1815, are confirmed.

MALTA.—It is said that the English fleet, commanded by Admiral Martin, was to leave Malta on Saturday last for Besika Bay. Several English men-of-war have been sent to Naples.

TURKEY.—Sir Henry Bulwer has firmly pointed out to the Porte the necessity of repressing abuses, and said that upon such repression would depend the support of England. The Sultan has received these representations favourably, and has sent his portrait to the Ambassador.

INDIA.—Letters from Madras state that before Sir Charles Trevelyan decided on publishing his minute on the financial scheme of Mr. Wilson, he wished to bring his views before the Supreme Council of Calcutta in the first instance, and instructed the proper officer at Madras so to do. Mr. Wilson got about him and made him act contrary to Sir Chas. Trevelyan's instructions, saying that he *courted discussion*—while he took care to suppress it. Sir Chas. Trevelyan then published his minute in desperation and reckless of consequences to himself. All this is to come out in the papers to be laid before Parliament.

NEW ZEALAND.—A native insurrection has broken out in the district of New Plymouth, where the tribes have taken offence at the manner in which the land has been disposed of by the chiefs. In the early part of last year some of them came to a determination to sell no more land to the British, and to coerce those who were willing to do so. A chief offered to sell his land to the British Government, upon which another chief, while acknowledging that the other had a good title to the land which he desired to sell, declared that he would not be permitted to sell it. The Government, however, surveyed and took possession; and a collision on two occasions ensued, in which, most unfortunately, a considerable amount of blood was spilt on both sides. The following extracts from a letter from the Sydney correspondent of the *Times* contains the most complete account of the affair which has yet reached England:—

"The immediate cause of the quarrel was the sale of a smal piece of land by Te Teira. Wirimu Kingi forbade the sale and obstructed the survey, though without offering personal violence. The Governor could not admit this opposition, as the seller was anxious to sell, and his title was undisputed on any valid grounds. The interrupted survey was completed, under the protection of the troops, on the 13th and 14th of March, the seller being present, and pointing out the boundaries. The rebel natives offered no opposition beyond erecting a slight 'pah' that commanded the road between the land and the town, and threatening interruption to the carts carrying supplies to the troops. The firmness of the mounted escort, however, overawed resistance, and there was no collision brought about. Shortly afterwards the pah was evacuated on a summons to that effect from the Governor. This, however, was the last act of submission, and from that time Kingi assumed a position that made a conflict inevitable. On the night of the 15th he built another pah, of considerable strength, in a corner of the purchased land about a mile from the camp, and his followers performed the war dance. A further act of defiance was exhibited by them next day, when they began to pull up the survey pegs and make fires along the line. On the 17th the officer in command of the troops sent a written summons to the pah, but its reception was refused, and the messenger was warned off. Patience had now reached its limit, and it was resolved to drive the natives from their pah. They thus succeeded in causing the first shot to be fired by the Europeans—a point to which they attach great importance. Shortly after noon Colonel Gold, who was in command, opened fire. He had with him two 24-pounder howitzers, one 12-pounder howitzer, and one rocket tube. He had also with him 300 soldiers of the 65th, 25 men from the Niger, and a mounted escort of colonists. As the troops advanced, the natives blew a horn in token of defiance. The artillery opened at the respectful distance of 800 yards, on the north-west angle of the pah. After a few discharges, the natives ran up a red flag on their flagstaff, indicative of their determination to resist. The guns were then moved round to the west side, and planted this time within 200 yards, the distance being gradually reduced to 150 yards. A fresh move was subsequently made round to the north side. While this last movement was being effected some natives were seen to be leaving, and, under the impression that they were cowed and beating a retreat, some of the mounted escort rode close up, but were received with a volley that killed one of them on the spot; and two privates, who were in the rush to the rescue, were wounded, of whom one died subsequently. The men were with difficulty restrained from making a rush at the pah. It was now evening, and the ammunition was expended. The pah had been greatly knocked about, but not destroyed or rendered untenable. The guns were withdrawn, breastworks thrown up, and the troops camped under arms on the seaward side of the pah. For a long time during the darkness the natives kept up an incessant fire, which did no harm. After breakfast Colonel Gold advanced his guns to within 30 yards of the stockade, and opened a heavy fire with shell and common case-shot. When at length a small breach was made a rush took place immediately, when, lo! the pah was found empty. The natives had retired during the night on the side that remained unguarded, having left only two or three behind to keep up a deceptive firing. The pah, on investigation, was found to consist of 10 chambers excavated in the clay and communicating with each other, and capable of holding 250 men, though not more than 150 were lodged in it. The chambers were overlaid with rafters and a layer of fern and earth about 2 feet thick. The whole was surrounded by a double fence, filled in with earth and fern, and loopholed for musketry. Provisions for two months were found stored up. Though rifle-proof, this native fortification had been considerably knocked about by the artillery. It was destroyed by the troops, who then returned to camp. The news that the natives had all escaped capture was heard with dismay by the colonists, who loudly condemned the commanding officer for not bringing his artillery into close quarters at first, and 'rushing' the pah over night, or, at least, surrounding it so as to prevent escape. From the testimony of one of the natives who has since been into the camp, it appears that they were terribly frightened at the effect of the artillery on their defences, and that though none were killed a great many were wounded. The natives, after recovering from their fright, began to construe the engagement as a victory, and the effect of this indecisive action on the native mind was soon seen. Manahi, a Taranaki chief, who had quite recently taken the oath of allegiance, began with his men to plunder the neighbourhood. A party of 100 volunteers, supported by a company of 200 of the 65th, were sent out to look after him, and halted within half a mile of his encampment. But Colonel Murray, who was in command of the regulars, declined to take his men into the bush; and the volunteers, though anxious to advance, would not do so unsupported, and so they returned to town without doing anything. Natives now began to muster round Manahi, and two days after this ineffective reconnoitre news arrived that three settlers and two lads had been found murdered. Great anxiety was then felt for several families, numbering about 35 souls in all, who were still in the bush, and who, it appears, had congregated in the house of Mr. Brown, the Episcopalian clergyman. An expedition was organised to bring them in, and this led to a second and more decisive engagement, that takes rank as the battle of Waireka. The expedition consisted of about 80 Volunteer Rifles, 70 Militia, 50 of the Naval Brigade, and the light company of the 65th,—in all about 250 men, under the command of Colonel Murray. The two first parties followed the beach, the two latter took the road. Starting at about 1 o'clock, the first named, after a short march, perceived the natives on the opposite side of a stream in front of them, principally in the valley of a small affluent, their pah being on the ridge between them and the sea. The Europeans advanced in skirmishing order, and soon began to engage the natives, principally in the flax gullies at the mouth of the little stream and on the flat above, in which the attacking party made up by their superiority in weapons for their inferiority in point of numbers. After about an hour of this irregular firing the Naval Brigade, who had come by the road, appeared on the

inland side of the gully, and, getting into pretty close quarters, did considerable execution. In another hour they were joined by a detachment from the 65th, who also proved very useful. The greater portion of the regulars were halted about three-quarters of a mile off, and did not take part in the engagement. Notwithstanding their losses, the natives were so numerous that they managed to enclose the Volunteers and militia on two sides. The ammunition these latter had brought with them was nearly expended, and their position was getting critical. They sent a messenger to Colonel Murray to tell him how they were situated, but without getting either sympathy or help. He returned answer that his orders were to be home before dark, and that, as they had got into a mess without his orders, they might get out of it; and he forthwith sounded the recall, taking back with him the Naval Brigade, whose commander, Lieutenant Blake, had been wounded at the commencement of the action. The Volunteers, thus left to themselves, and expecting every moment to be "rushed," reserved what little ammunition they had left, and, thinking a retreat dangerous in the face of an expected attack, hastily protected their position as well as they could by a low breastwork of logs and straw. Shortly after dark they heard a great cheering, and could manage to see the flag in the pah was down. They were preparing to join the rush, but, there being no response to their own cheer, their leader thought the whole thing a *ruse* to withdraw them from their cover. It was, however, no *ruse*, but a most fortunate diversion effected by Captain Cracroft, of the Niger, which arrrived from Manakau after the expedition had started from Taranaki. Captain Cracroft finding what was going on, landed at once with 50 of his men, and hastened to the scene of action, and though it was dark on his arrival resolved at once on storming the pah. Having harangued his men, and promished 3*l*. to the man that pulled down the rebel flag, and finding the practice of a rocket tube he had brought with him altogether unsatisfactory it was left behind in charge of a small party, and the pah was 'rushed' with cutlass, bayonet, and revolver. No single man could claim the honour of seizing the flag, the rush was so instantaneous. Four of the men were severely wounded, but great execution was done among the natives, who were shot and bayoneted as they tried to hide themselves in the chambers of their pah. Capt. Cracroft and his party then returned on the road and overtook the troops, reaching town with them at about half-past 6. The natives had been so astonished by the sudden assault of Captain Cracroft that they quitted their attack on the Volunteers, and returned in haste to the defence of their little stronghold. The Volunteers finding themselves no longer assailed, began, at 7 o'clock, cautiously to effect their retreat, bringing their wounded with them, and reached home a little after midnight. About half a mile from home they met a relief party, which had been rather tardily despatched in search of them. The number of the natives engaged in this contest is estimated at from 500 to 600. It is thought at least 100 were killed, and it is known that 10 influential chiefs fell. On the European side the loss was only two killed and 11 wounded. The effect of the engagement was in this respect very decisive, though the immediate object of bringing in the settlers was not achieved. That, however, was effected safely on a subsequent day, the natives having fallen back into the bush. The want of harmony between the regulars and the Volunteers has created a very bitter feeling in the small community of New Plymouth. The latter complain that while bearing the brunt of the fight they were cruelly abandoned, and but for the timely and unexpected assistance of Captain Cracroft they would have been cut off to a man; while the military men complain that the Volunteers, from their rashness and ignorance of the art of war, are always getting into useless scrapes and expecting the soldiers to get them out again. The Volunteers declare they will not serve under Colonel Murray again, and ask to be enrolled with the Naval Brigade. The Governor, in order to moderate the vehemence of the prevalent feeling, has personally besought the editors of the local journals not to discuss the subject. Meanwhile he has sent to Australia for help, and his request has been promptly attended to. All the vessels of war on that station have left for Taranaki; the City of Sydney has started from Sydney with 120 men of the 12th Regiment, 40 artillerymen, and six sappers, with a large supply of ammunition. The City of Hobart has also been chartered to take 215 soldiers from Melbourne. The force thus concentrated will, it is hoped, be sufficient to bring the war to a speedy conclusion."

AUSTRALIA.—Accounts from Sydney of April 24 state that another rich goldfield had been discovered near Twofold Bay, and advices from Adelaide state that large emigrations to Snowy River were taking place. 210,000 ounces of gold had been shipped from Australia during the month.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Diplomatic Relations with Rome.*—The Earl STANHOPE, in moving for a copy of the despatch from the Secretary for Foreign Affairs to regulate the diplomatic relations with the Court of Rome since the cessation of her Majesty's Legation at Florence, said that in the present position of affairs in Italy it was most important that England should be represented at Rome by an Ambassador. England, as matters now stood, could not receive an ecclesiastic as a representative of the Pope, and, as the Pope would not send a layman, no Papal Envoy could be accredited to the English Court, but this need not prevent our sending a representative to the Court of Rome. In conclusion, he urged the propriety of establishing an Academy of Art at Rome for English artists, and stated that a resident Mission would be a valuable and necessary adjunct to such an institution.—Lord WODEHOUSE said that the question was simply one of time and opportunity. The Government would have no objection to send a Minister to Rome, if so requested by the Pope; but if, under present circumstances, they made the request themselves, they would probably be refused. The business was most skilfully managed by Mr. Odo Russell, and the present system occasioned neither inconvenience nor delay.—The Earl of MALMESBURY thought that, at a crisis like the present, it was especially necessary that the country should be represented at Rome.—The Marquis of NORMANBY concurred in the propriety of establishing an embassy at Rome. The motion was then agreed to. *English Shipwrights in France.*—The Duke of SOMERSET, in reply to Lord DUNGANNON, said that a good many workmen had been discharged from Portsmouth Dockyard since the commencement of the year, but he had every reason to believe that there was no foundation for the report that those discharged had found employment at Cherbourg and other ports of France. He had also heard that the French authorities, instead of employing extra hands, had very recently discharged 400 shipwrights from Cherbourg.—On the motion for going into Committee on the *Refreshment and Wine Licences Bill*, the Earl of SHAFTESBURY drew attention to the clause of the Bill which gave the police power to visit the houses of confectioners and others licensed under this Act at all times and hours, and denounced it as tyrannical and unjust. In the present state of feeling, however, he should not make any motion on the Bill, as he did not wish to complicate still further the question of privilege between the two Houses of Parliament.—The Earl of WICKLOW thought the measure ought to be extended to the whole of the United Kingdom.—The Earl of DONOUGHMORE condemned the Bill, and said that he should move an amendment on clause 10 to give the licensing power to the magistrates.—The Earl of HARRINGTON opposed the Bill in the interests of teetotalism, and contended that the introduction of wine would be far more injurious to the community than the present use of beer, which was less alcoholic and less poisonous.—Earl GRANVILLE defended the Bill, and expressed his hope that Lord Donoughmore would not persist in his amendment, which would only create a monopoly and act prejudicially to the interests of the consumers. With regard to the clause giving the police power of entering the licensed houses by day, the Government proposed to remedy that defect by means of a separate Bill. They also proposed, if the Bill passed, to extend a similar measure to Ireland and Scotland, with modifications suited to the circumstances. The House then went into Committee on the Bill, which after a very brief discussion was passed without an amendment.

MONDAY.—The *Ecclesiastical Courts and Registries (Ireland) Bill* and the *Church Temporalities Acts (Ireland) Abandonment Bill* were read a second time. The *Bank of Ireland Bill* passed through committee. The *Prevention of Cruelty to Animals Bill* was withdrawn. The *Sir John Barnard's Act Repeal Bill* was read a third time and passed. On the order of the day for the third reading of the *Refreshment Houses and Wine Licenses Bill*, Lord DENMAN objected generally to the principle of the Bill, and moved that it be read a second time that day six months.—The Earl of DONOUGHMORE seconded the motion, and after a brief discussion, in which Earl GRANVILLE, Lord REDESDALE, and other peers took part, the House divided, when the amendment was rejected by 36 to 2. The Bill was then read a third time and passed.

TUESDAY.—*Light Weights Racing Bill.*—Lord REDESDALE, in moving the second reading of this Bill, alluded to the opposition which had been raised against it by a portion of the Jockey Club, and explained the object which it had in view. It was, he said, notorious that the custom of placing low weights on horses had been carried to a ridiculous extent in the present day, and that while it furnished no fair test of what the horses could do, it was dangerous to the boys employed as jockeys, and detrimental to the breed of horses. He therefore proposed to raise the weight sanctioned by modern practice to a *minimum* of six stone, and thereby to strike a blow at a great deal of gambling that took place by means of light-weight handicaps.—The Duke of BEAUFORT moved that the Bill be read a second time that day three months. He denied the inferences of Lord Redesdale, that the Bill would improve the breed of horses, prevent rascality, or dispense with the employment of boys. A heavy weight would destroy half the horses before they arrived at maturity; nor could he understand how a difference of weights would prevent the rascality complained of. If heavy weights were to be put on good horses no man would run them.—The Earl of WINCHILSEA also opposed the Bill, seeing no reason why the turf should be interfered with by the State.—Lord CLANRICARDE hoped the Bill would pass, as it was terrible to see the children who were put upon horses and exposed to fearful accidents for the mere pleasure of the lookers-on.—Earl GRANVILLE thought that the details of our great races had better be left to the Jockey Club, as that Club was composed of men not likely to be opposed to the advantages which this Bill proposed to confer on them, if they were truly advantages. He did not think that the subject was one on which their lordships ought to legislate—first, because he deemed any such interference as proposed by the Bill with the liberty of the boys ought not to be adopted; and, secondly, because he did not think that the Bill would be able to prevent gambling on the turf by regulating what weights horses were to carry. As to the deterioration of horses, he had consulted with persons well skilled to give an opinion on the subject, and they had stated to him that they did not believe a word about it. He thought their lordships would do well to remember the legal maxim, "*de minimis non curat lex*," and to translate it, "do not legislate for feather weights."—Lord DERBY partly concurred with the objects which Lord Redesdale had in view, but did not think that the Bill he had introduced was calculated to attain them. Unless a very strong case were made out, this was not a subject for Parliamentary interference, and in the present instance there was hardly a case at all. The gambling which the Bill sought to suppress did not depend upon the more or less weight carried by the horses. He proceeded to examine in detail the arguments of Lord Redesdale on handicapping, and pointed out the fallacies involved in them. He denied that any deterioration had taken place in the breed of horses, although he regretted the way in which animals were forced forward owing to the preponderance of two year old races. It would be much better to legislate against such an evil as that, if legislate they must, than to raise the weights of jockeys.—After some further discussion Lord REDESDALE withdrew the Bill. The *Duchy of Cornwall (Limitation of Actions) Bill* passed through committee. The *Petition of Rights Bill*, the *Ecclesiastical Courts Jurisdiction Bill*, and the *Malicious Injuries to Property Act Amendment Bill* were read a third time and passed.

THURSDAY.—The *Royal Assent* was given by commission to several Bills.—The *Fisheries (Scotland) Bill* was read a second time. *The New Zealand Insurrection.*—In reply to the Earl of CARNARVON, the Duke of NEWCASTLE said that despatches had been received from New Zealand, confirming the accounts of the insurrection at New Plymouth. There had likewise been a movement amongst the natives further north, and the Governor had gone to Auckland to ascertain its cause and extent. Reinforcements had been sent in considerable numbers from Australia. *Berwick Election.*—On the motion of Earl GRANVILLE, it was agreed that the House should concur in the address of the Commons for a commission to inquire into the corrupt practices at Berwick-upon-Tweed. *Wine Duties.*—Lord MONTEAGLE, in moving for returns, asked if foreign Governments had made any alteration in their scale of duties in consequence of the reduction by England of the wine duties.—Earl GRANVILLE replied that certain fiscal alterations had been made by Portugal which would be advantageous to the wine trade of both countries, but no communication on the subject had been received from Spain.

FRIDAY.—*Cast Iron Rifled Guns.*—In answer to the Earl of CAMPERDOWN, Earl DE GREY and RIPON said there were obvious reasons why he should not state the exact number of guns supplied to the navy. No cast-iron rifled cannon had been delivered to the navy, as Sir William Armstrong's guns were not constructed of cast iron.—*Furious Driving.*—The Marquis of WESTMEATH moved the second reading of his Bill for preventing furious riding and driving.—The LORD CHANCELLOR opposed the Bill.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Indian Mutiny.*—In reply to Mr. VANSITTART, Sir C. WOOD said that it was proposed to erect a Memorial to the Bengal Civilians who had perished during the late mutiny, and that Haileybury would be a fit place for the purpose.—In reply to Mr. KINNAIRD, Sir C. WOOD said a misconception existed as to the rewards given to the officers of the Bengal Native Army. All who had been recommended by the Indian Government had been rewarded, whether their regiment had been faithful or not.—In reply to Mr. WHITESIDE and Mr. HENNESSY, Mr. CARDWELL explained the proceedings of the Government with regard to the *Irish Prosecutions* undertaken by the late Government. He was sorry to admit that 11 persons had been arrested at Dundalk as Ribbon conspirators. He further detailed the efforts made by the guardians of the poor to relieve the distress in the west of Ireland.—Mr. CAVE asked whether any fresh communication had been made to or received from the Government of the United States on the subject of the Slave Trade. That Government seemed at present anxious to put down the trade, which Spain was carrying on in defiance of civilisation.—Lord J. RUSSELL said that Spain unquestionably carried on the slave trade in direct violation of her treaties with this country, thereby transporting annually 40,000 slaves to Cuba. The American flag was seriously abused by Spanish traders, and in consequence of the imperfections of the American law, neither British nor American cruisers were able to check it. A proposition was now under the consideration of the American Government that British and American vessels in concert should be allowed to search suspected vessels under either flag. He did not believe that America would consent to pass more stringent laws for the repression of the trade. *English Shipwrights in France.*—In reply to Mr. B. JOHNSTON, Lord C. PAGET said that there was no truth in the statement that English workmen were employed at Cherbourg. It was not likely that they would leave a pay of six shillings a day for one of four francs.—Mr. BAILLIE moved for papers regarding the *disarming of the natives of India*, and expressed his opinion that the Indian Government in relation to that measure had acted with unjustifiable severity. He complained that it had been carried out indiscriminately and in territories where the people had shown no hostility to the Government.—Colonel SYKES seconded the motion.—Sir C. WOOD offered no objection to the production of the papers. He defended the measure of disarming the natives, which was, he said, not one of punishment, but of prevention. After a few remarks by Mr. VANSITTART and Mr. J. B. SMITH, the motion was agreed to.—Mr. H. B. SHERIDAN obtained leave to bring in a Bill to enable cities, towns, and boroughs of 30,000 inhabitants and upwards to appoint *Stipendiary Magistrates.*—Mr. LYGON obtained leave to bring in a Bill to amend the law relating to the *Hiring of Agricultural Servants.*—Sir J. ELPHINSTONE was moving for leave to bring in a Bill to establish a test for *Anchors and Chain Cables in the Merchant Service*, when the House was counted out shortly before 9 o'clock.

MONDAY.—*The Reform Bill.*—On the order of the day for resuming the adjourned debate on going into committee on the Representation of the People Bill, Lord JOHN RUSSELL said it was impossible that the Government could agree to the motion of Mr. Mackinnon to stay the progress of the measure until the result of the next census had been ascertained. Nor could they—looking to the fact that 250 members had voted in favour of postponing the measure—insist any longer on urging it forward. Looking also to the impossibility of carrying the Bill through both Houses of Parliament in the present session, without sacrificing the other business of the country, the Government had arrived at the conclusion that it would be idle, and perhaps culpable, for them to go into committee for four or five nights, and then make the obstacles which might then interpose the reason for abandoning the Bill. The number of amendments also, of which notice had been given, showed the impossibility of carrying the Bill within the period usually assigned to the Parliamentary session. The Government were likewise bound to consider the general state of the public business. Many important questions remained to be considered. There were the estimates, the demands which the Chinese war would necessarily entail, and the important questions of coast fortifications arising out of the report of the commissioners on national defences. It might perhaps have been possible to carry the Bill if the Government had protracted the session to an inordinate length, but they did not think there was that immediate urgency, nor that demand on the part of the public out of doors, which would justify them in adopting any extraordinary course in that respect. Such being the case, they were of opinion that it was not their duty to proceed further with the measure in the present session. He was aware that he was open to the accusation of having delayed the committee until the 4th June; but his answer to that charge was that the French treaty and the commercial changes arising out of it were so important to the trade of the country, that he had no alternative but to give way to the Chancellor of the Exchequer. As to the Bill itself, the Government was convinced that a further reduction of the franchise was necessary to the safety of the State, and he denied the statements which had been put forth impugning the character and fitness of the working classes. At the very earliest opportunity next session he should introduce a Bill reducing the franchise, but all that he could do at present was to ask Mr. Mackinnon to withdraw his amendment, and on that he should move that the order for going into committee be discharged.—Mr. MACKINNON expressed his willingness to withdraw his amendment, and congratulated the country on the settlement of the question. For his own part he believed Lord John Russell could employ his time much better in managing our diplomatic relations than in attempting to carry such a measure to the exclusion of far more important business.—Mr. DISRAELI said the Government had taken a wise and not undignified course in withdrawing the Bill, for otherwise it would have been impossible to have carrried on the business of the country. He had heard the announcement of Lord J. Russell with perfect approbation, and he assured the Government that the Opposition would afford them every possible assistance in disposing of the remaining business to which the attention of Parliament might be invited.—Mr. BRIGHT considered that the reasons which had induced the Government to withdraw the Bill were to be traced, not to the amendment of Mr. Mackinnon, who had never succeeded in carrying anything, but to the hostility of the Conservative party to anything in the shape of Reform. The session of 1860 had not, however, been an idle one, for it had seen the removal of 400 obstacles to the trade and commerce of the country. The treaty with France was also a great fact in the history of the country, and he had reason to believe that its results would exceed even the most sanguine expectations of its most enthusiastic friends. He was glad the Government had withdrawn the Reform Bill; for he thought it far more desirable that it should be withdrawn at once than be tampered with in committee. Any proposal to increase the rating in boroughs from 6*l*. to 8*l*. would be received with great dissatisfaction out of doors, and he warned the Government that in any future Bill which might be brought forward there must be no compromise on this point.—Mr. NEWDEGATE objected to the reduction of the county franchise to 10*l*., and expressed his intention to oppose any future Bill that might be introduced based upon that principle.—Mr. E. JAMES complained of the imperfect form in which the Bill had been introduced; in particular of the absence of a system of registration. In his opinion the Government ought to go on with the Bill, and if they persevered it might be carried.—Lord FERMOY said that he had heard Lord J. Russell's announcement with disappointment and dismay. If ever there had been a Government whose sole mission was to carry a Reform Bill, it was the present, and he was unable to discern in the reasons assigned by Lord John any good ground for withdrawing the Bill.—Mr. OSBORNE thought the conclusions of the two members for Marylebone were unjust and ungenerous, and that Lord

John Russell was not responsible for giving up the Bill; the responsibility rested upon the House, which was offering a premium to out-of-door agitation. There had not been a fair stand up fight upon the question, which had been got rid of by a species of Parliamentary asassination, and there had been no other course open to the Government than to drop the Bill. —Mr. HORSMAN said that an examination of the 90 amendments would show that 70 had been given by Liberal and only 20 by Conservative members. As to the promise given by Lord J. Russell to introduce another Reform Bill, he warned him that it was no light thing for a Minister of England to discredit its old constitution, and to promulgate the doctrine that it was a legitimate function of the State to make a new distribution of political power, giving less to intelligence and property and more to numbers. The House was now aware that this measure did not emanate from without, but from official rivalry and a desire to bid for the support of a political minority, which ruled the Cabinet, the House and the country, because its support was a political necessity.—A desultory conversation ensued, in the course of which Mr. ANGERSTEIN, Mr. SLANEY, and Mr. WARNER expressed their regret at the withdrawal of the Bill, and Mr R. LONG and Mr. W. E. DUNCOMBE their satisfaction.—The amendment of Mr. Mackinnon was then withdrawn; and, on the motion of Lord JOHN RUSSELL, the order for the committee was discharged, and the Bill itself was withdrawn.—The SOLICITOR-GENERAL, in moving the second reading of the *Offences against the Person Bill*, said it was one of a series of Bills which had passed the House of Lords, and gave a history of the scheme of consolidation and amendment of the law embraced in the Bills, which assimilated the law of England and Ireland.—Mr. WHITESIDE suggested certain amendments for consideration in committee.—Mr. COLLIER was of opinion that the proper mode was to consolidate and expurgate the statute law, civil and criminal, as a whole; and that, under a Board whose sole attention was applied to the subject, it might be done in two or three years.—M. M'MAHON objected to enactments in the Bills that were in his opinion not merely matters of detail.—Mr. AYRTON wished for a statement of the existing law, that the House might know what were the alterations made by the Bills.—After some remarks by Mr. GEORGE and Mr. EWART, the ATTORNEY-GENERAL said he hoped, before the session closed, to lay before the House a measure for expurgating the statute law, which would be a step to its consolidation and codification. The Bill, after some further discussion, was read a second time, as well as the following:—the *Malicious Injuries to Property Bill*, the *Coinage Offences Bill*, the *Accessories and Abettors Bill*, the *Forgery Bill*, the *Larceny, &c., Bill*, and the *Criminal Statutes Repeal Bill*. The *Highways, Roads, &c., Bill*, and the *Tithe Commutation Bill* were likewise read a second time.—Mr. WHITESIDE moved the second reading of the *Landlord and Tenant (Ireland) (No. 2) Bill*, which, he said, consolidated all the Acts constituting the existing law on the subject. After a brief discussion, the Bill was read a second time. *Tenure and Improvement of Land (Ireland) Bill.*—The adjourned debate on the amendment, moved by Sir J. WALSH, to defer the second reading of this Bill for six months, was then resumed.—The O'DONOGHUE said that the Bill, so far as regarded the interests of the tenants, was useless; but he should vote for the second reading in order that an opportunity might be afforded for amending it in committee, and making it a *bond fide* measure.—Mr. LONGFIELD said that the best feeling was growing up between landlord and tenant, and that the emigration was not caused by the conduct of landlords. He approved the principles of the Bill, though its machinery admitted of improvement.—Mr. MACEVOY would vote for the second reading, though he did not approve all the provisions of the Bill.—Mr. WHITESIDE explained in detail his objections to the Bill, which in his opinion never could become law.—Mr. HENNESSY spoke in defence of the landlords of Ireland.—After some observations from Mr. BLAKE, and a brief reply by Mr. CARDWELL, the amendment was negatived, the Bill was read a second time, and afterwards committed *pro formâ*. Other Bills were forwarded a stage.

TUESDAY.—*Edinburgh Annuity Tax.*—At the morning sitting the Bill for abolishing the annuity-tax in Edinburgh was committed, and 13 clauses having been disposed of, the chairman reported progress.—The House resumed at six o'clock. *Naples and Sicily.*—In reply to questions from Mr. H. B. SHERIDAN, Lord PALMERSTON said that the Government had despatched one ship-of-war to Marsala, one to Messina, and four to the Bay of Naples, to afford protection to such persons as might claim the protection of the British flag. The Government of Naples had despatched a diplomatic agent to Paris and London for the purpose of making some communication to the two Governments. Whenever he arrived her Majesty's Government would express their opinion on the barbarities which had been committed at Palermo, and which were a disgrace to the age and to civilisation. He could not, however, hold out any expectation that such representations would have any beneficial effect upon the future government of Naples, or that the officers engaged in those atrocities would not, instead of being punished, be rewarded and promoted, as were those who were engaged in the massacre at Perugia. The Neapolitan Government had applied to its allies to guarantee to his Majesty the possession of the Two Sicilies. Austria had positively and peremptorily refused to interfere, and he had reasons to believe that the Government of France was equally unwilling to move in the matter. He need scarcely say what was the feeling of the British Government upon the subject. It was characteristic of bad Governments, like those of Rome and Naples, that they first drove their subjects to desperation, and having compelled them to revolt, hurried to friendly Powers and demanded succour against the authors of revolt—forgetting that they were the real authors of the revolution of which they complained, and of which the only remedy would be their own removal. *Military and Naval Attachés.*—In answer to Mr. O. STANLEY, Lord PALMERSTON said that the Government of France had appointed a military *attaché* to all the principal foreign Courts, and that her Majesty's Government had long since appointed a military *attaché* to Paris. A similar addition had lately been made to the British Embassy at Berlin, but he could not say to what extent the Foreign Secretary intended to carry appointments of that nature.—Sir J. PAKINGTON asked whether it was a fact that a naval *attaché* had recently been appointed by the French Government to the Embassy at London, and whether it was intended to appoint a naval *attaché* at Paris.—Lord PALMERSTON replied that a naval *attaché* had been appointed to London, but that he was unable at that moment to state whether the Secretary for Foreign Affairs intended to make a similar appointment in connection with the British Embassy at Paris. *The Census.*—Sir C. DOUGLAS inquired whether the Government intended to withdraw the clause in the Census Bill relating to the collection of statistics with regard to the religious opinions of the people.—Sir G. LEWIS said that the penalty clause would be withdrawn, so that it would be optional with the public to state, not their religious "opinions," but their professions. *The Admiralty.*—Admiral DUNCOMBE moved for a select committee to inquire into the constitution of the Board of Admiralty, and the various duties devolving thereon. He disclaimed any desire to throw blame upon any particular Administration, his object being to improve the efficiency of the service, and to render its operation less burdensome upon the country. With this view he suggested that the Board should consist of naval officers, with the exception of the first Lord and that the Comptroller-General of the Navy should be added to the Board.—Lord C. PAGET opposed the motion, although he was not prepared to say that the constitution of the Board of Admiralty was as satisfactory as he could desire to see it. There were already no fewer than four inquiries in progress with relation to various branches of the department, all of which had received the approbation of the Board—a proof that there was no desire to avoid inquiry.—Mr. OSBORNE supported the motion, and said that the charges which Lord C. Paget had himself brought against the Admiralty had done much to engender that distrust which now existed in the public mind with regard to the administration of that department.—Sir J. PAKINGTON said he was inclined to agree in some of the suggestions of Admiral Duncombe; at the same time he thought it more desirable that whatever inquiry should be made should be conducted, not by a committee of the House, but by a royal commission.—Sir C. NAPIER warmly supported the motion.—A protracted discussion ensued, in the course of which Sir C. WOOD took occasion to defend himself from the charge of having been a party to the building of unseaworthy gun-boats.—Ultimately, Admiral DUNCOMBE withdrew the motion, on the distinct understanding that he should be at liberty to renew it next session, should he consider it necessary. *Indian Army.*—Sir C. WOOD moved for leave to bring in a Bill to repeal so much of the Act of Parliament as enabled the Secretary of State for India to raise men in this country for her Majesty's local European Forces in India. The measure which he proposed consisted of a simple repealing clause, and he had adopted this course from a desire to obtain the opinion of the House upon the question of principle involved. He thought it right to state that the Council for India had not given its approval to the scheme, for it was but natural that they would be indisposed to part with the power they now possessed; but they had stated frankly and fairly that if the views of the Government were confirmed by the decision of Parliament they would faithfully endeavour to carry them out. The question, therefore, on which he now desired to take the opinion of the House was, whether a separate European force should be maintained for local service in India, or whether the whole of the troops in that country should form part of the Queen's army for general service? The recent disaffection amongst the Company's European forces in India, and the consequent peril which it occasioned to our Empire in the East, were no doubt mainly attributable to the fact that the troops were irremovable. To prevent such dangerous combinations in future, therefore, and for military efficiency and political safety, he had arrived at the conclusion that the European army of India ought to be one with the Queen's. He explained at great length the changes which his measure would entail in the organisation of the Indian army, and concluded by expressing a hope that the House would allow him to bring in the Bill and take the discussion on the second reading.—Lord STANLEY, Mr. HORSMAN, and several members, however, objected, on the ground that the Bill was of far too much importance to be disposed of in a summary manner.—On the motion of Mr. H. SEYMOUR the debate was eventually adjourned until Thursday week.—Mr. FENWICK obtained leave to bring in a Bill to abolish *Passing Tolls*.—Mr. H. HERBERT was permitted to bring in a Bill to amend the *Burial Grounds (Ireland) Act (1856)*. The orders of the day were then disposed of.

WEDNESDAY.—*The Mines Regulation and Inspection Bill* was considered in committee. On the first clause, by which it was proposed that no children under 12 years of age should be employed in mines except upon the production of a certificate that they could read and write, Mr. PAGET moved as an amendment to insert 13 instead of 12, on the ground that children of the latter age were too young to be employed in such an occupation.—Mr. CLIVE opposed the amendment on the part of the Government, and it was eventually negatived by 178 to 71.—Mr. LIDDELL moved the omission of the clause.—Lord VANE TEMPEST seconded the motion, which was negatived on a division by 180 to 91, and the clause was agreed to. On the second clause Mr. KINNAIRD moved an amendment to the effect, that after the 31st December next it should not be lawful to employ any boy under the age of 14 in any colliery or ironstone mine longer than 8 hours a day.—After considerable discussion the amendment was negatived by 146 to 77. The CHAIRMAN then reported progress.—The *Local Boards of Health, &c., Bill*, the *Local Government Supplemental Bill*, the *Lands Clauses Consolidation Act (1845) Amendment Bill*, and the *Friendly Societies Act Amendment Bill* were read a second time.—Sir J. ELPHINSTONE obtained leave to bring in a Bill for testing *Anchors and Chain Cables in the Merchant Service*.—Mr. SOTHERON-ESTCOURT obtained leave to bring in a Bill to amend the act for regulating measures used in the *Sale of Gas*.

THURSDAY.—*The New Zealand Insurrection.*—In answer to Alderman SALOMONS, Mr. C. FORTESCUE said that it was not intended to send out reinforcements from England to New Zealand, as there was already a considerable force in the colony, and both military and naval reinforcements had been sent from Australia. *Naval Reserves.*—On the motion for going into Committee of Supply, Mr. LINDSAY called attention to the state of the Naval Reserve, and moved as an amendment that, with a view to greater efficiency in war and less expenditure in peace, it is the opinion of this House that more prompt and effective measures should be adopted to complete the reserves of marines and seamen for her Majesty's navy.—Mr. LIDDELL advocated the establishment of school-ships as the only means of obtaining a due supply of men.—Lord C. PAGET said that the system of school-ships had been partially tried, and he thought that they should proceed no further till the result had been seen. With regard to the reserve, the excellence of the force was shown by the desire of the shipowners to obtain the service of seamen of the reserve. At present the total reserve of all kinds numbered 23,831. The St. George and the Bacchante had just been put into commission, and were already half manned, and if the public would only wait patiently they would find the navy on a satisfactory footing.—Admiral WALCOTT urged the necessity of improving the treatment both of men and officers.—Sir C. NAPIER urged the necessity of maintaining an effective Channel fleet, and of supplying the navy with boys, out of which men might be made, rather than spend money in fortifications, which an invader would take good care to avoid.—Mr. BENTINCK also expressed his opinion that vast sums spent in fortifications would be so much money thrown into the sea.—Mr. WHITBREAD said that many of the means suggested for filling up the reserve would end by ruining the fleet.—Admiral DUNCOMBE said that the merchant service could not always obtain seamen, and urged the policy of promoting by all possible means the entry of boys into the service. The amendment of Mr. LINDSAY was then put and negatived without a division. *Income Tax.*—Mr. WHALLEY called attention to the inequalities in the present mode of assessing the income-tax, and urged the adoption of a more equitable mode of adjustment.—Mr. POLLARD-URQUHART, Sir F. GOLDSMID, and Mr. WESTHEAD likewise protested against the present mode of imposing the tax.—The CHANCELLOR of the EXCHEQUER said that the relief of one class involved additional burdens on another. Admitting the faults and inequalities of the income-tax, he remarked that they were more prominent in the income-tax from the very nature of its arrangement, and many of the proposals for its rearrangement would cause more injustice than it would remedy. It must be remembered that persons under schedule A paid, practically, for more than their income; while those assessed under other schedules paid commonly for much less. He believed that the public, impressed with the difficulty of remodelling the tax, were now more willing to acquiesce in its inequalities. He could not, therefore, indulge any sanguine expectations of reform, though he would gladly listen to any proposals to that end.—Sir H. WILLOUGHBY regretted to find that it was impossible to reform the tax, and therefore hoped that the House would sanction as little of it as possible. *Civil Service Estimates.*—The House then went into committee of supply, when a vote of 654,000*l.* was taken on account of the civil service. The Committee then proceeded to discuss the *Navy Estimates*.—Lord C. PAGET explained a proposed scheme of retirement, increased half-pay, and promotion, of officers in the navy, comprehending captains, commanders, and lieutenants.—Sir J. PAKINGTON disapproved the scheme, and wished the complicated questions involved in it to be referred to the consideration of a commission.—The scheme was discussed at some length by naval members, and ultimately the vote, which would have carried the adoption of the scheme, was withdrawn, and another vote of reduced amount substituted. Other votes having been agreed to, the Chairman was ordered to report progress.—The *Phœnix Park Bill* was read a second time, after a short explanation by Mr. COWPER. Several other Bills were advanced a stage.

FRIDAY.—*Edinburgh Annuity Tax Abolition Bill.*—The House went into committee on this Bill, and agreed to the remaining clauses with the exception of clause 16, providing for the rebuilding of Trinity College Church after the lapse of five years, which was postponed.—A proviso moved by Mr. MURE relative to the future incomes of ministers was added to clause 14.—Mr. BRUCE's amendment to clause 28, giving an additional 50*l.* a year to the minister of Montrose, was negatived by 70 to 42. *Annexation of Savoy.*—At the evening sitting Lord J. RUSSELL said, in answer to Mr. GRIFFITH, that a communication would be received next week from the French Government respecting the annexation of Savoy, but he could not, of course, say what would be the nature of it. [Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93½ for the Account; Three per Cents. Reduced, 93¼ to ⅛; New Three per Cents., 93¼ to ⅜; Thirty Years Annuities, expiring in April, 1885, 17; Five per Cent. Enfaced Rupee Paper, 97½ to ¾; Ditto Five and a Half per Cent., 102½; Indian Four per Cent. Debentures, 1858, 96½; India Bonds, 7*s.* dis.; Exchequer Bills, par, 4*s.* prem.—FOREIGN: Brazilian Four and a Half per Cents., 1860, 87¾; Ditto Scrip, ⅜ dis.; Buenos Ayres Deferred, 25¼; Chilian Six per Cents., 104; Mexican Three per Cents., for Account, 21⅛; Portuguese Three per Cents., 1853, 45; Ditto for Account, 45; Spanish New Deferred Three per Cents., for Acct., 38¾; Turkish Six per Cents., 1854, for Account, 77¾; Ditto for 1858, 60 to ¼; Venezuela Three per Cents. for Account, 24¼.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,909,910	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,434,910
		Silver Bullion	—
	£29,909,910		£29,909,910

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£9,764,106
Rest	3,236,519	Other Securities	12,819,863
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	8,429,226	Notes	8,942,475
Other Deposits	12,411,115	Gold and Silver Coin ..	759,669
Seven day and other bills	659,243		
	£39,286,103		£39,286,103

14th day of June, 1860. M. MARSHALL, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. BAILES, Newcastle-upon-Tyne, Leather Seller—J. T. BURGON, 35, Bucklersbury, City, Wholesale Hardwareman and Gun Flint Manufacturer—J. CASWELL, Mare Fair, Northamptonshire, Boot and Shoe Manufacturer—J. COOKE, Stainchffe, Yorkshire, Joiner and Cabinet Maker—E. H. COLEMAN, Wolverhampton, Staffordshire, Surgeon, Apothecary, and Ironmaster—J. COOPER, Hanging Ditch, Manchester, Butter Merchant and Commission Agent, and at Oxford Street, Manchester. Illuminated Glass Manufacturer—T. CRIGHTON, South Sea Peter Street, Manchester, Machinist—R. CROWLEY, 53, Waterloo Street, Brighton, Sussex, Builder—S. FAVELL, Bourn, Lincolnshire, Coach Builder—J. W. FERGUSON, 11, Paternoster Row, City, and of New Court, Middle Temple, Bookseller and Publisher—C. H. GILES, 3, Union Row, Tower Hill, and 327, Wapping, Ironmonger and Gun Manufacturer—S. HALL, Oldswinford, Worcestershire, Carpenter and Builder—J. HALL, Monmouth, Innkeeper, and Newland, Gloucestershire, Brickmaker—G. W. B. KIALLMARK, Puriton, Somersetshire, Cement Manufacturer—J. MURLEY, St. Chad's Wells, Gray's Inn Road, Carriage and Cab Builder—W. NOAH, J. NOAH, and J. B. CLARK, Droitwich, Worcestershire, Salt Manufacturers—T. SWEETLOVE, Great Bridge, Staffordshire, Chemist and Druggist.

BANKRUPTCIES ANNULLED—H. CLEMERSON, Loughborough, Leicestershire, Ironmonger and Brazier—W. G. MARTIN, Chepstow, Monmouthshire, Upholder.

FRIDAY—BANKRUPTS—C. ALLEN, Risca, Monmouthshire, Grocer—H. P. BALLARD and S. NEWSOME, Ribbon Manufacturers—M. COHEN, Landport, Hants, Dealer in Glass—H. COOPER, 10A, Great Cambridge Street, Hackney Road, Shoe Manufacturer—C. ENGLAND, Barton-upon-Humber, Lincolnshire, Currier—J. FULFORD, Manchester, Brewer—J. MOWBRAY, Sherwood Rise, Radford, Nottingham, Baker—G. SEATON, Kingston-upon-Hull, Currier—W. A. STAPLEY, Old Compton Street, Soho, Shoe Mercer

BANKRUPTCY ANNULLED—C. S. DUGGAN, Newington Causeway, Surrey, Wholesale Stationer.

SCOTCH SEQUESTRATIONS—J. GILLAN and Co., Banffshire, Wine and Spirit Merchants—J. SMITH, Stewarton, Ayrshire, Innkeeper—R. D. SULLIVAN, lately of Suffolk, now residing in Edinburgh, Shipowner.

Metropolis and its Vicinity.

THE REMOVAL OF WESTMINSTER SCHOOL.—The adjourned meeting of Old Westminsters to consider this subject was held on Wednesday in the Jerusalem Chamber, Westminster Abbey. The attendance however was so numerous that the meeting was at once adjourned to the Schoolroom, where the chair was taken by the Dean of Westminster. Among those present were the Archbishop of York, the Marquis of Lansdowne, the Marquis of Westminster, Earl Amherst, the Earl of Mayo, the Earl of Albemarle, the Earl of Stradbroke, Lord Llanover, Lord Broughton, Lord Ebury, Lord John Russell, Lord Charles Russell, the Rev. Lord John Thynne, the Dean of Christ Church, the Master of Trinity, Sir David Dundas, Sir Walter Stirling, Dr. Cureton, the Bishop of Moray and Ross, and many other personages of distinction. The Dean

of Westminster in opening the business of the meeting repeated the assurance given on the former occasion, that the Dean and Chapter, without in the least abdicating their responsibility as guardians of the School, were desirous to express no conclusion of their own on the subject, but solely to elicit a final utterance of opinion on the subject from Old Westminsters. The Archbishop of York then resumed the discussion, and after acknowledging the benefits which he had derived from Westminster, strongly advocated the removal of the school as the only means of restoring it to its pristine vigour. Sir George Rose in a speech full of classical allusions deprecated the removal as likely to violate the *religio loci*. A long and animated discussion followed, in which Dr. Willson, M.D., declared that the site of the school was pre-eminently healthy, and that the neighbourhood in this respect had much improved of late years. The Marquis of Lansdowne, though inclining to removal, thought that further information and inquiry was necessary, in order that no step might be taken in the dark. The Marquis of Westminster was against removal; Lord John Russell was for removal, but thought a committee of Old Westminsters should be appointed to consider and report on the subject. Lords Stradbroke and Llanover and Lord Charles Russell followed in favour of removal, while Sir David Dundas and Sir Walter Stirling opposed it. Dr. Cureton, as one of the canons and as rector of St. Margaret's, thought that the School could not be removed without injury to the vested rights of the city, created by the statutes of the Royal Foundress. Lord Ebury, after giving some statistics of other London public schools, drew this conclusion from them, that if the school were to be kept in London, and were to be full, it must be suited to the requirements of day boarders; but that if it were intended for boarders only, it must be removed from London. A resolution moved by the Archbishop of York, to the effect that the subject of the removal should be entertained, was met by Sir David Dundas with an amendment for appointing a committee to consider the state and condition of the School, with a view to improve it on the present site, and also to ascertain where a fit and proper site may be obtained elsewhere should the removal be found necessary. On a division, the amendment was carried by a large majority. The committee was then appointed, to consist of the Archbishop of York, Marquis of Westminster, Earl of Stradbroke, Earl of Devon, Lord Llanover, Lord Charles Russell, Sir D. Dundas, Sir G. Rose, Mr. H. Chester, Mr. James Mure, and Mr. Henry Bull. The meeting lasted four hours.

THE CENSUS OF 1861.—A deputation, consisting of upwards of 150 gentlemen, had an interview with Lord Palmerston on Tuesday, in support of the provision for a religious census proposed in the Bill brought in by Government, as being preferable to the fallacious test of 1851. Among those present were the Right Hon. B. Disraeli, M.P., Lord Robert Montagu, M.P., the Earl of Dartmouth, the Right Hon. Sotheron-Estcourt, M.P., Sir Stafford Northcote, Bart., M.P., Lord John Thynne, Lord Lyttelton, and Mr. Howells Davies, Secretary to the Church Institution. The other gentlemen present represented the London Union on Church Matters, the English Church Union, the Church Institution, and the Church Defence Associations of Manchester, Liverpool, Kidderminster, Bath, Bristol, Shrewsbury, Cambridge, and Mossley. Lord R. Montagu introduced the deputation, and urged Lord Palmerston to adhere to the decision deliberately taken by the Government in reference to the Census Bill, in order that a correct return might be obtained. Mr. Beresford Hope expressed his opinion that if the Government stood firmly to the Bill they would have the support of a large number of independent Dissenters. Mr. Disraeli said that the Government might depend upon the cordial support of a very large party if they considered it their duty to maintain the opinion they had formerly expressed, and which he believed had been most wisely adopted. Sir James Fergusson, M.P., Mr. H. Hoare, the Rev. Dr. Molesworth, vicar of Rochdale, the Hon. Colin Lindsay, the Rev. Dr. Hume, of Liverpool, the Rev. T. D. Gregg, and the Rev. Canon Owen having expressed their views, Lord Palmerston made the following reply:—

"He had in the first place to thank the deputation for coming there to state their opinions and also to assure the Government of their support in maintaining the Bill as it now stood. Perhaps the best way in which he could explain to them his opinions was by telling them that he had not very long ago the honour of receiving a deputation representing the other side of the question—namely, the Dissenters, who stated that it was a great violation of conscience to require of any man to state what his religious opinions were. They urged that these were matters between a man and a higher authority and that the Bill provided that if these questions were not answered, fines and penalties would be inflicted which would lead to a system of religious persecution, especially if fines and penalties were imposed upon those who from conscientious motives refused to state to what particular sect they belonged. They had requested that the Bill might be framed on the model of the last census, which merely provided for a return of the attendance of the different denominations on a given day. He told the gentlemen who formed that deputation that this was really not a matter assuming a religious aspect, but a question how they should obtain statistical information for legislative purposes. He told them that in all nations, in all countries, statistical returns were obtained showing, for purposes of legislation and administration, what were the proportions of persons entertaining various religious opinions; and that course was never considered an infringement of religious liberty, being adopted merely for legislative and government action. No doubt the whole of a census, beyond mere numbers of the population, was an impertinent interference with the affairs of private life. A man might say, and possibly with justice: What business have you to ask me whether I am a bricklayer, a farmer, a tradesmen, or anything else? and the softer part of the community might certainly with much more reason object to being asked what their age was. The gentlemen who had waited upon him had stated that many of the Dissenters would say that they did not belong to any particular sect, but that they were general Christians. Well, then, he thought that the ladies, when they made their returns, might say that they were of no particular age. The return obtained by the last census merely gave a statement of the number of persons who, on a particular day, attended religious worship, and this was of course liable to fluctuations, the relative state of health and sickness for example, fine weather or bad—in fact, it indicated nothing but the accidental presence of persons at particular places of worship. If it should be thought right to add to the enumeration of persons belonging to the different religious denominations a statement of the number of sittings at each place of worship, he was not prepared to say that that might not be a very great addition. It might also show what was the zeal of each denomination in regard to establishing means of worship in proportion to their actual numbers. It certainly might be a question whether penalties should be inflicted upon those who from conscientious motives did not wish to have their religious opinions inquired into, but he had always understood that men were proud in acknowledging the sincere convictions by which they were animated. It must be recollected that the last census, by requiring a statement of the buildings of the different denominations, did to some extent enter upon an inquiry as to religious opinions, because each building was returned as belonging to one or other of the religious denominations. He saw no reason for departing from the proposed form of enumeration, and it appeared to him that no religious person could have any good reason for taking offence at it. The object was simply to ascertain a fact which would be of great importance as the foundation of legislative action. The only other points which he thought they had to consider were, first, that mentioned by the Home Secretary a few evenings since, namely, whether it might not be expedient to exempt from penalties conscientious persons who had objections to answer inquiries; and, secondly, whether, in addition to the enumeration of persons belonging to different sects, it might not be useful to know the number of sittings in the different buildings employed for religious worship."

TRIAL TRIP OF THE GREAT EASTERN.—The fourth trial trip of this vessel previous to her departure for New York took place during Saturday and Sunday. The trial only extended to a run of 12 hours out to sea and 12 hours back, and was undertaken more to ascertain the completeness of the various changes that have been made in the machinery than with any view to test the vessel's speed. The speed, however, was tested, and showed, as every one anticipated, from the very foul state of the vessel's bottom, a considerable diminution in the rate attained in the trips of last year, the average speed being only 12½ knots with screw and paddles, and the highest with full steam being only 16 knots. It is definitively announced that the ship will sail for New York to-day, the 16th, and it is confidently anticipated that the voyage will be made in less than 10 days. It is intended to take the ship over the bar, and moor her in the river in the very middle of New York. The company on board during this trial trip, in addition to the directors, included the Earl of Shelburne, Lord Colville, Lord Willoughby de Eresby, Lord Dunsany, Hon. James Howard, Hon. Ralph Dutton, M.P.; Mr. Saunders, of the Great Western Railway; Mr. Appold, Captain Heath, R.N.; Mr. Henry Brunel, Professor Froude, Captain Mangles, chairman of the South-Western Railway; Mr. G. Train and Colonel Baker. Captain Robertson, R.N., chief surveyor of the Board of Trade, with Mr. Murray and Mr. Ruby, were also present on behalf of the Board of Trade, to watch the result of the trial previous to the vessel receiving her passenger certificate.

RENEWAL OF THE BUILDERS' STRIKE.—At the Clerkenwell Police Court on Saturday John Goffin, William Walsby, and William Trimlett were summoned by Mr. Philip Anley, builder, of Whitecross Street, on the charge of endeavouring by threats to force him to discharge two men who were at work for him under the "Declaration." Prosecutor produced a document signed by the accused and others, of which the following is a copy:—"At a meeting of the joiners in the employ of Mr. Anley, on Tuesday evening, May 15, 1860, it was resolved that Mr. Anley be given to understand that unless the men who are working under the 'declaration' in his shop be discharged, and we have a definite answer by dinner time to that effect, we shall cease to work immediately." The accused and another man, who could not be found, were the deputation, and complainant gave them half-an-hour to consider what they were about. At the end of that time they all came and took away their tools, and had not been to work since; and John Goffin and Walsby had been instrumental in stopping other men from entering Mr. Anley's employ, and picketting other men about his premises to do so. Mr. Sleigh submitted that there had been no infraction of the Act of Parliament and intimidation by the accused, and they were entitled to their discharge. Mr. Corrie entirely differed with Mr. Sleigh on the point, so far as two of the accused were concerned, and said, while he discharged Trimlett he should convict the defendants Goffin and Walsby, and send them to prison for one calendar month, with hard labour. Notice of appeal was at once given, and, bail having been put in, the defendants left with their friends.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in the week that ended Saturday, June 9, were 969. In the corresponding weeks of the 10 years, 1850-59, the average number, after correction for increase of population, was 1079. The present return is therefore 110 below the average. During the week the births of 842 boys and 849 girls, in all 1691 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1560.

Provincial.

BIRMINGHAM.—It appears that John Plimly Edwards, who lately absconded from this town with liabilities now estimated to exceed 100,000*l.*, was captured at Stockholm 10 days ago; but that, owing to the absence of an extradition treaty with Sweden, there is some doubt as to his being brought back. The case is in bankruptcy, and it is understood that accommodation bills figured largely in his transactions.

CHESTER.—An inquest was held on Monday at the Queen's Ferry Hotel, in this city, on the body of a well-dressed man, who was found in a ditch at Queen's Ferry in a state which left little doubt that he had been murdered. The jury returned an open verdict. The gentleman's name is unknown.

HEMEL HEMPSTEAD.—During the last few weeks placards have been published offering a reward of 50*l.* for the apprehension of the third man present at the Beechwood murder. On Thursday week a police constable of Wilden succeeded, in the disguise of a butcher, in apprehending William Hawkins, a native of Ivinghoe (who was at the time working on the underground railway in London), on a charge of being implicated in the murder. The prisoner is supposed to be the man who was seen by Cook and Burgess with the two other men at the time of the murder.

LIVERPOOL.—The Town Council have unanimously agreed to appropriate 1000*l.* towards the expense of opening the Free Public Library in this town. The opening is expected to take place in October, and it is hoped that her Majesty may be present at the ceremony.

NORWICH.—On Monday afternoon the magistrates of this city were occupied with a case of considerable interest and importance in reference to a charge of Roman Catholic proselytism. The Rev. Canon Dalton, priest of the Roman Catholic chapel in St. John's, Maddermarket, Norwich, two jewellers named Beha, and an auctioneer named Foulsham, were charged with being concerned in an attempted flight from Norfolk to the metropolis of a young gentleman named William Henry Vansittart, son of Mr. Vansittart, M.P. for Windsor. It appeared from the evidence that the young gentleman in question is an only son, and that he was intended for the Navy, but was unable to pass the mathematical branch of his examination, and so lost his nomination. He was then placed with a Mr. Jansen, who kept a military seminary at Brighton, and had been successful in preparing his pupils for the army. Mr. Jansen was in the habit of taking some of his pupils abroad with him during the summer vacation, charging 50*l.* for the trip; and as Mr. Vansittart thought it would be advantageous that his son should see the Continent, acquire a pure French accent, with, perhaps, a smattering of German, besides seeing the French army, he permitted him to go. On his return from the Continent the boy spent last winter in Ireland with some relations. When he came back to his father's house he seemed restless and uncomfortable, and on his returning to Mr. Jansen's he showed evident symptoms of having imbibed Roman Catholic principles, to the great grief of his father, who was a staunch Protestant and a Low Churchman. Mr. Jansen immediately telegraphed to Mr. Vansittart to go down to Brighton, where he found that the boy had been secreted somewhere in a place known to a Mr. Clery, a Roman Catholic priest. He called on the priest, and insisted on his son being restored to him, threatening him with a mandamus in case of refusal. After some hesitation, Mr. Clery gave up his son, and after looking about for a good Protestant clergyman in the country, Mr. Vansittart heard of the Rev. Mr. Hodgson, rector of Rackheath, Norfolk, with whom he placed his son, for the purpose of being educated, and in order that he might be out of the way of the priests. He arrived at Mr. Hodson's on the 25th of May, and eleven days afterwards, when his tutor had just left the house on clerical duty, he descried a man stealthily creeping up the drive which led to the rectory. The stranger wore a small Italian hat, and was muffled up in a large cloak, which half concealed his features. For a moment or two he crouched down under the hedge to escape notice, but at length he approached the house, and was recognised by young Vansittart as an old Italian priest, who had seen him at Brighton, had tracked him to Norfolk, and had dogged his steps up to the precincts of Rackheath rectory. After saluting the young gentleman he produced a "holy relic," on which he swore him to secrecy, and then, with an apology for the vulgarity of the expression, advised him to "cut and run, for what he did was for the glory of God," and seek an asylum in some Catholic chapel, of which, he observed, there were "plenty about." Young Vansittart followed this counsel, and on Saturday last, between 5 and 6 in the morning, decamped from the rectory, and went to the house of Canon Dalton of the Catholic chapel in St. John's, Maddermarket, who gave him a glass of wine from which he felt rather stupefied, with a little relic of the Immaculate Conception, and afterwards took him to the defendants, Beha, to dispose of his watch and pencilcase; but the Behas being unwilling to buy, they went out and sold them to an auctioneer, Foulsham, another of the defendants.

While they were negotiating the sale of these articles, young Vansittart was told to walk close behind the Canon through the streets, but not to keep open company with him for fear of attracting notice. Canon Dalton then gave the young gentleman a letter to Father Thomas connected with the Catholic Cathedral in St. George's, Southwark, commending him to the care of Bishop Grant. One of his schoolfellows, however, having seen him in the streets, Canon Dalton advised him to remain quiet at Beha's, where he was having his dinner when a police inspector arrived and took charge of him. The Mayor, after consulting with the other members of the Bench, stated that they considered the case a very serious one. They should remand it for a week, and in the meantime issue a warrant for the apprehension of Father Giugini. All the persons summoned were admitted to bail, in the case of Foulsham his own recognisance only being required. The inquiry excited great interest, and the Court was crowded throughout the proceedings. At the close of the investigation Master Vansittart was recommitted to the guardianship of the Rev. Mr. Hodgson, at Rackheath, and a warrant for the apprehension of the "Italian priest," was placed in the hands of the superintendent of the Norwich police. On Wednesday evening Master Vansittart was directed by telegram to proceed with all expedition to town for the purpose of identifying a person supposed to be Giugini, but the result of his journey has not transpired.

WAKEFIELD.—The prosecutions for bribery, in connection with the late election for this town, will come on for trial at the ensuing assizes for the county. Criminal informations were filed last week at the Crown Office by the Attorney-General against Mr. J. C. D. Charlesworth, the Conservative candidate at the late election; Mr. J. B. Charlesworth, his cousin; Mr. J. Jubb; and Mr. Archibald Crowther, spirit merchant, Conservatives; Mr. W. H. Leatham, the Liberal candidate; Mr. Marsland, of the Black Swan; Mr. E. Hinchcliffe, plumber and glazier; and Mr. Godfrey Noble, Liberals. In pursuance of these informations, writs of subpœna were issued by the Lord Chief Justice of the Queen's Bench, in accordance with which the several parties on Friday put in an appearance at Westminster Hall, and gave bail, to appear and take their trials at the assizes.

WINDSOR.—During the recent races at Ascot a thief walked into the Castle Hotel, in this town at 6 o'clock in the morning, proceeded up the principal staircase to the bedroom of Sir John Thorold, and stole from the dressing-table a gold watch and chain, several valuable rings and pins, nine sovereigns, and some silver, with which he got clear off. He was respectably dressed in black, and had dark moustachios and whiskers. The barmaid, seeing him enter the hall so early in the morning, locked the bar door and followed him upstairs, but as he entered the bedroom she considered he was one of the gentlemen who attended the races and had taken the apartments for the week. Sir John was awake at the time, and thought it was his valet who had entered the room. The thief, therefore, quietly left it, and coolly following the ostler, who at the time was going downstairs, made his escape. Immediately after the discovery of the robbery information was given to the borough police, and telegraphed to the different stations and Scoland Yard. By a fortunate oversight the thief left on the table a diamond pin worth 60 guineas.

Ireland.

THE KIDNAPPING CASES.—The Court of Queen's Bench on Tuesday gave judgment in the case of Mary Matthew's infant, declaring unanimously that Miss Aylward, the nun, had not given satisfactory answers, and had been guilty of a gross act of contempt. The Court also impounded the documents in the matter, with a view of affording ground for ulterior proceedings under the Act making child stealing a felony, and bound over Miss Aylward in recognisances of 500*l*., and two sureties of 220*l*. each, to appear on the first day of term in November next, when the Court will be prepared to pass sentence. The Galway kidnapping case also came before the Queen's Bench on Tuesday, when the solicitor for Mrs. Sherwood, the mother of the children kidnapped by the monk at Galway, applied for the usual four-day rule, for the purpose of having interrogatories submitted to the two O'Connors, who were then in custody. After the decision in the case of Miss Aylward, he believed there was a chance that the children might be given up. The Court made the rule, and the two O'Connors having been sworn to give true answers to the interrogatories, they were again delivered into custody.

REVIVAL OF THE REPEAL AGITATION.—The Ultramontane party is endeavouring to arouse a new agitation in Ireland. The *Morning News*, which is its organ, publishes a long petition from Youghal praying for "an Irish Parliament," and states that a petition identical in sentiments has already received a vast number of signatures throughout the country.

THE ENLISTMENTS FOR THE POPE.—It is now certain that the enlistments are carried on by a regular and efficient organisation, and that a regular crusade is preached throughout the country from the Roman Catholic altars. This accounts for the enthusiasm of the people, who are doubtless excited to enlist by the most extravagant stories as to the social and spiritual benefits that will follow such a step. The Drogheda papers report the departure of another batch of recruits, marshalled by a priest, and the Cork papers state that volunteers for Rome are openly enrolled in the chapel of that town. 200 athletic young men left Cork for Bristol on Tuesday, and 100 others left Sligo on the same day for Liverpool on their way to Rome. In Dublin great caution is exercised by the Romish agents; and though a few young men, in better position in society, have left Dublin for Italy, the chief portion of the Irish Brigade, as it is called, is derived from the rural districts—the counties of Limerick and Louth supplying the larger number. The constabulary however is beginning to thin, and the Dublin police has recently lost several members by resignations. Sir Thomas Ross of Drogheda, who recently prevented one of his servants from embarking for Rome, in the face of a threatening mob, has published a letter in the Dublin papers expressing his belief that means sufficiently energetic have not been adopted to prevent the movement from spreading. In three months, he says, there will not be an able-bodied young man in the provinces, so great are the efforts made by the Roman Catholic clergy, unless the Government bestirs itself. Meanwhile the accounts from Ancona state that the Irish who have already arrived there are highly dissatisfied with the treatment they receive, and that their demands upon the Delegate are so unbounded that the Papal Government is not unlikely to request them to go back to Ireland.

THE RIBBON ARRESTS.—A private investigation by the magistrates of Dundalk into the charges of Ribbonism, has resulted in the committal of the twelve accused for trial at the assizes. They were allowed out on bail, the labouring portion in two sureties of 5*l*., and the trades portion in two of 20*l*. each. It is rumoured that the evidence is very strong, and that, in addition to the oral testimony of the informers, important documentary evidence will be produced.

Law.

COURT OF CHANCERY.—*Simpson* v. *The Westminster Palace Hotel Company*.—The Lords Justices of Appeal on Monday delivered judgment on this appeal from Vice-Chancellor Wood's decision dismissing the plaintiff's bill. The suit related to an arrangement entered into by the directors in January last for leasing a portion of the hotel to the Secretary of State for India for three years certain, with the option of an additional term of one or two years, at an annual rent of 6000*l*., the company reserving to themselves a monopoly for the supply to the India Board during their tenancy of provisions, wine, &c., and refreshments. A meeting of shareholders having been called in May last, it was resolved by a majority of 345 that the arrangement should be carried into effect. This suit was then instituted for an injunction on behalf of the minority, and the question raised was whether the proposed arrangement, if carried out, was an employment of a portion of the building for objects consistent with hotel and tavern business, for the purpose of carrying on which on a large scale the company was formed. Lord Justice Knight Bruce was of opinion that, considering the business had not yet been commenced by the company, and having regard to the amount of means of the company, the magnitude of the undertaking, and the extent of the portion of the building now complete, not included in the arrangement, it was competent for the directors and a majority of the shareholders, acting, as they had done, in good faith, to enter into the agreement with the India Board, and that therefore the appeal should be dismissed. Lord Justice Turner said he was not satisfied upon the evidence that the whole of the hotel might not now be opened, and still less that it might not be so before the expiration of the proposed term of the India Board. Assuming the directors and a majority of the shareholders to have a discretion to deal *ad interim* with a portion of the building before the whole was opened, still it would not be competent to them to deal with it in such a manner as to interfere with the ultimate purposes of the company; as he thought the grant of so long a term in the way proposed was not a carrying out of the purposes of the company, *i. e.*, the transacting of the usual business of an hotel and tavern. With all deference, therefore, to the contrary conclusions of his learned brother and of the Vice-Chancellor, he was of opinion that the bill ought not to have been dismissed. The effect of the appeal is that the bill for an injunction stands dismissed.

COURT OF EXCHEQUER.—*Swinfen* v. *Lord Chelmsford*. — The Lord Chief Baron on Saturday delivered the judgment of the Court in this case, in which the plaintiff had obtained a rule for a new trial against the defendant, on the ground that, while acting as her counsel as Sir Frederic Thesiger, he entered into terms of compromise on her behalf, without her authority, and against her will, and contrary to her instructions. After describing the details of the case at great length, his lordship said that the Court were unanimously of opinion that there were no grounds for charging the defendant with neglect of duty or with wrongfully and fraudulently agreeing to the compromise, and it was therefore their judgment that the rule for a new trial be discharged. Mr. Kennedy applied to their Lordships for leave to appeal. The Lord Chief Baron said that it was understood that liberty to do so was reserved to the plaintiff.

CENTRAL CRIMINAL COURT.—*Embezzlement.—Henry Francis Richardson*, 49, solicitor, was tried on Thursday on the charge of embezzling three sums of 3, 10, and 11 guineas each, the property of the London Rifle Brigade, of which he was the secretary. It appeared from the evidence of Alderman Rose that the total amount of his defalcations was 70*l*. The jury, after deliberating about half an hour, returned a verdict of *Guilty*, and Baron Bramwell sentenced him to five years' penal servitude.

Obituary.

LADY CHARLES SOMERSET died on the 11th inst. at her residence in Piccadilly. She was the widow of the late General Lord Charles Somerset, second son of the fifth Duke of Beaufort, and sister to the present Earl Poulett.

LIEUTENANT-GENERAL SIR WILLIAM CHALMERS, C.B., and K.C.H., colonel of the 78th Foot, died on the 1st inst. at his residence near Dundee, in his 78th year, after 57 years of active service. He served in Sicily in 1806-7 in the campaigns of 1809-10 in Portugal and Spain, the expedition to Walcheren, the succeeding Peninsular campaigns, and the Netherlands in 1814-15, including the battle of Waterloo and the capture of Paris. He was severely wounded at Sarre, and has had nine horses killed or wounded under him in action—three of them at Waterloo. For his conduct in the field he was twice promoted, first to the brevet rank of major at the battle of the Pyrenees, and secondly to that of lieut.-colonel at the battle of Waterloo. In 1837 he was nominated a Knight Commander of Hanover, in 1838 he was made a Companion of the Bath, and in 1847 was made a Knight Bachelor by letters patent. He had received the silver war medal and eight clasps for Barossa, Ciudad Rodrigo, Badajoz, Salamanca, Vittoria, Pyrenees, St. Sebastian, and Nivelle.

MAJOR ARTHUR VANDELEUR, R.A., died at Woolwich on the 6th inst. at the early age of 21. He entered the Royal Artillery in 1847; served in the Eastern campaign of 1854-5, including the affairs of Bulganac and M'Kenzie's Farm; the battle of the Alma, and siege of Sebastopol, for which he was rewarded with the Crimean medal and clasp, and the rank of Major in 1856.

THE REV. WILLIAM STREATFEILD, Vicar of East Ham, died on Sunday evening while in the performance of the duties of his office. He was preaching in the National Schoolroom, which is used for Divine service on Sunday evenings, when he was seen to lean forward and stop in his address. He was removed into the vestry room, but died before medical aid could be obtained. Mr. Streatfeild had been Vicar of East Ham for 33 years, and till recently was rural Dean.

MR. G. P. R. JAMES, the well-known novelist, who was last year appointed British Consul-General in the Adriatic, died at Venice on Saturday last from an attack of apoplexy, in his 60th year.

BIRTHS.—On the 7th inst, at 10, Gloucester Crescent North, the Lady NORTH, of a daughter—8th inst, at Weir House, near Exeter, Lady DUCKWORTH, of a daughter—7th inst, at 2, Upper Hyde Park Gardens, the wife of Sir JOHN LAWRENCE, of a daughter—At Scottow Vicarage, Norfolk, the Hon. Mrs. NELSON, of a son—8th inst, at 9, Chesterfield Street, May Fair, the Hon. Mrs. OKEOVER, of a daughter—6th inst, at Cefn, near St. Asaph, the wife of Lieutenant-Colonel WILLIAMS WYNN, M.P., of a son.

MARRIAGES.—On the 12th inst, at All Saints' Church, Knightsbridge, the Hon. JAMES FITZWALTER BUTLER, eldest son of the Right Hon. Lord Dunboyne, to MARION, only daughter of Colonel MORGAN CLIFFORD, M.P., of 1, Queen's Gate, Hyde Park, and Llantilio Crossenny, Monmouthshire—5th inst, at Wimpole Church, Cambridgeshire, HENRY JOHN ADEANE, Esq., M.P. for Cambridgeshire, to the Lady ELIZABETH PHILLIPPA YORKE, eldest daughter of the Earl and Countess of Hardwicke—6th inst, at Trinity Church, Bath, FRANCIS STANIER BROADE, Esq., of Silverdale and Fenton Vivian, Staffordshire, to CAROLINE J., daughter of Major-General WILLIAM JUSTICE, Madras Army, Bath—23d April, at Mynpoorie, N.W. Provinces, India, HENRY E. WHISH, Esq., son of the late Major-Gen. Sir William Whish, K.C.B., of the Bengal Artillery, to MARGARET WEMYSS, daughter of JAMES BLACK, Esq., of Joy Lodge, Fifeshire.

DEATHS.—On the 7th inst, at Bishton Hall, in the county of Stafford, the residence of her sister, Lady CHETWYND, aged 80—9th inst, at Leamington, Lady CARNEGIE, aged 96—6th inst, at Updowne, Sandwich, Lady HARRIS, relict of the late Sir Thomas Noel Harris, K.C.H., aged 59—5th inst, at Barton-under-Needwood, REBECCA, wife of Sir REYNOLD A. ALLEYNE, Bart.—8th inst, at Holmwood House, Surrey, the BARON DE HOCHEPIED LARPENT, aged 77—5th inst, at the Lord Warden Hotel, Dover, of bronchitis, Major-General FREDERIC THOMAS BULLER, late of the Coldstream Guards—8th inst, at 26, Marine Parade, Brighton, Admiral HAWKER, of Ashford Lodge, Petersfield, Hants, aged 78—29th April, at Bombay, Captain JOHN GEORGE Forbes, Acting Military Auditor-General, Bombay Army, second son of the late John Forbes Mitchell, Esq., of Thainston, Aberdeenshire, aged 45—11th April, at Saharunpore, Upper Bengal, FREDERICK A. CARLETON, Major in H.M.'s Indian Army, retired, youngest son of the late Very Rev. Dean Carleton, Rector of Killyleagh, county Down, aged 62—11th inst, at 6, Stanhope Street, Hyde Park Gardens, the Rev. BADEN POWELL, Savilian Professor of Geometry in the University of Oxford—8th inst, at 14, Blandford Street, Portman Square, the Rev. EDWARD SCOBELL, M.A., Incumbent of St. Peter's, Vere Street, and Vicar of Turville, Bucks, aged 75—5th inst, at Seend, Wilts, the Rev. GEORGE WILLIAM DAUBENY, L.L.B., eldest son of the late Archdeacon Daubeny, aged 75.—12th inst, Mr. ROBERT MACKAY, of Eden Nursery, Stoke Newington, from disease of the heart, aged 56.

Markets.

MARK LANE.—MONDAY, June 11.

The supply of Wheat from Essex and Kent to this morning's market was small, and being held for an advance of 2s. per qr. upon Friday's prices, the greater part remained unsold at a late hour. The holders of foreign generally insisted upon a similar improvement, but buyers not being disposed to exceed the rates of last day the business transacted was limited. Barley of all descriptions is a free sale, Black Sea qualities at a reduction of 6d. per qr. Beans and Peas sell at last week's rates. Oats are in fair demand at the quotations of this day se'nnight. The top price of town-made Flour is raised to 54s. per sack; country marks are held for 2s. to 3s. per sack more money, and American barrels are 1s. dearer.

PER IMPERIAL QUARTER.		s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk	White	55—61	Red	53—57
— —	ditto	55—62	Red	56—61
— —	fine selected runs	58—63		
— —	Talavera			
— Norfolk		—	Red	—
— Foreign		52—65		
BARLEY, grind. & dist., 24s to 31s.	Chev.	38—45	Malting	36—41
— Foreign	grinding and distilling	28—36	Malting	35—40
OATS, Essex and Suffolk		19—26		
— Scotch and Lincolnshire	Potato	23—30	Feed ..	19—27
— Irish	Potato	24—30	Feed ..	19—25
— Foreign	Poland and Brew	26—29	Feed ..	22—23
RYE		35—38	Foreign	—
RYE-MEAL, foreign		—		
BEANS, Mazagan	32s to 40s.	Tick	34—43	Harrow	34—43
— Pigeon	36s — 47s.	Winds	48—54	Longpod	—
— Foreign		Small	38—46	Egyptian	—
PEAS, white, Essex and Kent		Boilers	38—40	Suffolk	36—41
— Maple	—s to —s	Grey	32—34	Foreign	30—40
MAIZE		White	—	Yellow	—
FLOUR, best marks delivered		per sack	48—54		
— 2d do.		ditto	40—48	Country	40—48
— Foreign		per barrel	25—32	Per sack	30—37

FRIDAY, June 10.

Since the 8th inst. the weather has continued cold and unsettled, with heavy rains at intervals, which is considered prejudicial to the future crop of Wheat; complaints of its backwardness are general, and from many important districts it is represented by persons of experience as being thin on the ground and having a sickly appearance. In many localities Barley is said to have suffered even more than Wheat. The wind was very high from S.W. and N.W., excepting on the 12th, when it blew from the S.E., accompanied with heavy rain the whole day. Wheat throughout the kingdom is quoted 1s. to 2s. per qr. higher than on the previous week. In f. o. b and floating cargoes a large business has been transacted at rising prices, the current rates being 56s. to 57s. f. o. b. for red Baltic, up to 62s. for fine Rostock afloat, 55s. to 62s. f. o. b. for

Dantzic qualities, Konigsberg touching 64s. c. f. and i. Where any change has occurred in the value of Barley it has been against the sellers. Oats in three or four markets have declined 6d. to 1s. per qr., owing to good supplies, but the value of Beans and Peas was generally supported. The top price of town-made Flour was raised here 4s. per sack on Monday; country and foreign marks improved 2s. to 3s. per sack, and American barrels, 1s. As usual at such periods, great excitement prevailed in the Baltic markets, and proportionably higher rates paid there than here. The business done in floating cargoes from the South of Europe, principally of Wheat, has been very large this week. The arrivals of English and foreign Wheat are good, also of foreign Oats; other English grain small, and very large of foreign Barley. The English Wheat left over from Monday has met a slow sale at that day's prices, some portion remaining unsold at a late hour. Foreign was held very firmly at fully Monday's prices, but the amount of business transacted was limited. Barley is steady at Monday's quotations. Beans and Peas are unaltered in value. Oats are a slow sale and rather cheaper.

ARRIVALS FROM June 11 TO June 15.

	Wheat.	Barley.	Oats.	Flour.
English ..	2920 qrs.	150 qrs.	40 qrs.	2130 sks.
Irish	— ,,	— ,,	1480 ,,	— ,,
Foreign .	16830 ,,	17050 ,,	31990 ,,	2120 ,, 4900 brls.

LIVERPOOL, Tuesday, June 12.—We had a good attendance of both millers and dealers at our Corn Exchange this morning, and Wheat has met a fair amount of inquiry both from consumers and speculators, at an advance of about 3d. per cental over the rates of last market day. Flour established an improvement of 6d. per barrel and 1s. per sack, with a good demand. Indian Corn was irregular in value, some low sales being made in quantity ex quay; parcels in store, however, were nominally unchanged, with the exception of Egyptian, which recovered fully 6d. per qr. of the late depression. Oats and Oatmeal are more saleable at late rates. Beans must be noted 6d. to 1s. per qr. dearer. Peas and Barley are without alteration. The market closed steady at an advance.

FRIDAY, June 15.—Grain market firm, with a good consumption in Wheat and Flour, at extreme rates. Indian Corn 6d. dearer. Beans quiet. Oats, Oatmeal, and Barley firm. Weather fine.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
May 5..	52s 6d	37s 5d	25s 5d	34s 0d	42s 4d	39s 9d
— 12..	52 6	37 7	25 10	34 1	43 8	40 3
— 19..	52 1	36 6	25 3	36 2	44 3	39 5
— 26..	52 6	36 2	26 6	37 3	44 8	40 9
June 2..	53 4	35 10	26 8	39 3	44 1	41 0
— 9..	54 2	35 0	27 8	38 1	45 9	40 8
Agg. Aver.	52 10	36 5	26 3	36 6	44 1	40 4

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	May 5.	May 12.	May 19.	May 26.	June 2.	June 9.
54s 2d	..	..	..	..	..	
53 4	..	..	..	..		..
52 6			..		..	..
52 1½	..	..		..	..	..
..	..	..	..	..	..	..
..	..	..	.	..	..	..

COVENT GARDEN.—June 16.

Vegetables are now becoming still more plentiful, more especially spring Cabbages, which are now excellent in quality. French produce continues to be largely imported. Grapes have not altered since our last report. Oranges are tolerably plentiful. Forced Straw- berries are abundant. Spanish Nuts fetch 16s. per bushel. Cobs realise 1s. per lb. Green Gooseberries fetch 3d. a quart. Peas and Broad Beans may now be obtained. Potatoes realise 4s. 6d. a bushel. New ones may be had at from 4d. to 8d. per pound. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Azaleas, Heaths, Primulas, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Green Figs, per doz., 8s to 12s
Grapes, per lb., 4s to 10s	Melons, each, 6s to 10s
Strawberries, p. lb., 4s to 8s	Apples, per doz., 2s to 6s
Peaches, per doz., 21s to 36s	Oranges, per 100, 2s 6d to 8s
Nectarines, do., 18s to 24s	Lemons, per 100, 5s to 8s
Cherries, p. lb., 1s to 3s	Cobs, do., 100s

VEGETABLES.

Asparagus, p. bundle, 3s to 6s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 2s to 3s	Celery, per bundle, 2s to 3s
Peas, p. half sieve, 3s to 6s	Onions, p. half sieve, 3s
Cauliflowers, each, 6d to 8d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 6d to 8d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d to 7d	Mushrooms, p. pott., 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 3s
Cucumbers, each, 9d to 1s 6d	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, June 14.

Prime Meadow Hay	75s to 84s	Clover	95s to 115s	
Superior do. (old) ..	90	95	New Clover	—	—
Inferior do.	60	70	Second cut do. ..	84	92
New do.	—	—	Straw	25	32
Rowen	60	70		DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, June 14.

Sup. Meadow Hay..	92s to	98s	Inferior Clover ..	84s to	100s
Inferior do.	68	84	New do.	—	—
New do.	—	—	Straw	33	38
Superior Clover ..	112	120		JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, June 14.

Fine old Hay	92s to	98s	Fine old Clover ..	114s to	118s
Inferior do.	80	85	Inferior do	100	105
Prime New Hay ..	—	—	Fine New Clover ..	—	—
Inferior do.	—	—	Fine 2d cut	95	100
Straw	28	32	Inferior do.	80	84

HOPS.—BOROUGH MARKET, FRIDAY, June 15.

Messrs. Pattenden & Smith report that the market continues firm, with no alteration in prices since last quotations.

POTATOES.—SOUTHWARK, MONDAY, June 11.

During the past week the arrivals coastwise have been more than equal to the demand, and prices have again fallen. The following are this day's quotations:—Yorkshire Regents, 90s. to 120s.; do. Flukes, 90s. to 120s.; Lincolnshire Regents, 80s. to 100s.; Dunbar do., 100s. to 120s.; do. Reds, 100s. to 110s.; Perth, Forfar, and Fifeshire do., 80s. to 90s.; do. Reds and Rocks, 80s. to 90s.; Irish Whites, 70s. to 80s.

BRITISH WOOLS.—LONDON, FRIDAY, June 15.

In consequence of the inclement weather our arrivals are very small. The clips are very short both in number and weight.

South-down Hoggets..	s. d. 1 8	s. d. to 1 9	Leicest. Wethers	1 6	to 1 7
Half-bred ditto..	1 8	— 1 9	Ditto Hoggs ..	1 7	— 1 8
Down Ewes ..	1 6	— 1 7	Combing Skins	—	— —
Kent Fleeces ..	1 6	— 1 7	Blanket ditto ..	0 6	— 0 9
			Flannel Wool ..	1 0	— 1 7

COAL MARKET.—JUNE 14.

Byass's Bebside West Hartley, 16s. 3d.; Davison's West Hartley, 16s. 3d.; Hastings West Hartley, 16s. 3d.; Tanfield Moor Butes, 13s. 3d.; West Hartley, 16s. 3d.; Wylam, 15s. 9d.; Walls End Hetton, 18s.; Walls End Kepier Grange, 18s. 3d.; Walls End Russell's Hetton, 18s. 3d.; Walls End Cassop, 18s. 3d.; Walls End Kelloe, 18s. 3d.; Walls End North Hartlepool, 15s. 6d.; Walls End Shincliffe, 17s. 3d.; Wall End South Hartlepool, 17s. 9d.; Walls End South Kelloe, 18s. 3d.—21 ships at market.

BUTTER MARKET.—June 16.

Best Fresh Butter .. .. 12s. per dozen lbs.
Second do. do. 10s. 6d. to 11s. ,, ,,
Pork, 5s. 0d. to 5s. 4d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, June 11.

The supply of Beasts is short; trade is brisk, and in some instances our highest quotation is exceeded. We have a fair supply of Sheep; the demand has decreased; lower prices are taken, and a clearance cannot be effected. Lambs are lower. Calves are about the same as on Thursday. From Germany and Holland there are 340 Beasts, 6000 Sheep, and 239 Calves; from Spain, 250 Beasts; from Norfolk and Suffolk, 2400; and 200 from the northern and midland counties.

Best Scots, Herefords, &c. ..	s. d. 5 6	s. d. to 5 8	Best Long-wools. ..	s. d. to ..
Best Short-horns	5 4	— 5 6	Do. Shorn ..	5 0	— 5 4
2d quality Beasts	4 8	— 5 0	Ewes & 2d quality ..	— .
Best Downs and Half-breds	to ..		Do. Shorn ..	4 4	— 4 8
Do. Shorn ..	5 4	— 5 8	Lambs	6 0	— 6 8
			Calves	4 8	— 5 4
			Pigs	4 0	— 5 0

Beasts, 3760; Sheep & Lambs, 29,570; Calves, 335; Pigs, 410.

THURSDAY, June 14.

We have a larger supply of Beasts than on Thursday last, but the demand is good, consequently Monday's prices are maintained. The number of Sheep is about the same as last week; the average quality is, however, inferior, and choicest kinds are rather dearer. Our foreign supply consists of 260 Beasts, 3890 Sheep, and 228 Calves; and 125 Milch Cows.

Best Scots, Herefords, &c. ..	5	6 to 5 8	Best Long-wools . ..	to ..
Best Short-horns	5	4 — 5 6	Do. Shorn ..	5	2 — 5 4
2d quality Beasts	4	8 — 5 0	Ewes & 2d quality ..	— ..
Best Downs and Half-breds	— ..		Do. Shorn ..	4	6 — 4 10
Do. Shorn ..	5	6 — 5 8	Lambs	6	0 — 7 0
			Calves	4	8 — 5 4
			Pigs	4	0 — 5 0

Beasts. 1145; Sheep & Lambs, 11,120; Calves, 396; Pigs, 170.

PARTNERSHIP.

WANTED, A PARTNER with a moderate capital for a NURSERY AND SEED BUSINESS. The advertiser has been an Assistant many years in some of the most respectable Nursery and Seed Establishments in England, and is now in treaty for a Nursery situated in a good locality in the immediate neighbourhood of London.—Apply by letter to J. S. & Co., Messrs. Williams & Lloyd, Stationers, 29, Moorgate Street, London, E.C.

TEMPLEMOYLE SEMINARY AND EGLINTON ACRICULTURAL NATIONAL MODEL SCHOOL.

WANTED for this Institution, a PRACTICAL AGRICULTURIST, competent to conduct to operations incidental to the Management of 170 Statute Acres of Land, farmed on the most improved principles. It is necessary he should be acquainted with the Rudiments of Chemistry, so far as relates to Soils and Manures; with Book-keeping, as connected with all Farm Accounts; and also with the structure of Cattle and their Diseases. He will be required to explain the foregoing subjects to the pupils. Salary to commence at 80*l.* per annum, with residence and rations, heretofore valued at 20*l.* per year. This salary may be increased in the event of the person selected as head agriculturist being found efficient. **Candidates will have to stand an examination, by persons to be appointed by the Managing Committee.** Copies of testimonials to be forwarded, with a letter, in applicant's own handwriting, **setting for his age, antecedents, and present position, to**

PITT SKIPTON, Honorary Secretary.

Derry, June 16.

WANTED IMMEDIATELY, for a Nursery in Scotland, a Man to act as General FOREMAN. He must be well acquainted with Budding, Grafting, and the General Propagation and Management of Nursery Stock; and must be a good Salesman.—Apply in own handwriting, stating where previously employed, and wages expected, to A. B., *Gardeners' Chronicle* Office, W.C.

WANTED, AS FOREMAN, in a Garden near London, where Herbaceous and Greenhouse Plants are chiefly grown, a young MAN of steady industrious habits, with some knowledge of and taste for plants. Good references must be given. Wages, 15s. per week, and lodgings. Apply by letter, in applicant's own handwriting, to X. X., at the *Gardeners' Chronicle* Office, W.C.

WANTED, A GARDENER and his Wife without incumbrance; must be clean, industrious, and of good character; **wages 18s. per week with rooms in cottage, coals** and vegetables.—Apply by letter to Mr MARTIN, at Mr. Keeley's, 8, Green Street, Theobald's Road, W.C.

WANTED, AN ASSISTANT GARDENER, for a Private Square.—Apply at Mr. NEWSON'S Offices, 38, Grosvenor Mews, New Bond Street, W.

WANTED, AN UNDER GARDENER, in a first-**rate Establishment in the north of England, where Pines, Grapes, Melons, Cucumbers, &c., are grown to a large** extent, a single Man, practically and thoroughly acquainted with the Management of the above. To such a liberal salary will be given.—Address by letter only, Y. Z., Mr. B. Wheeler, Exchange Arcade, Manchester.

WANTED, A GARDENER AND GROOM (to live in the house) in Bucks, 35 miles from London, perfectly competent to manage a small Kitchen Garden and Lawn; he will have charge of a Pony and Chaise, to Milk a Cow, Drive occasionally, clean boots, knives, &c. A sober, honest, and well conducted man (single preferred) only need apply, by **letter, stating length of service and other particulars to "Gardener," Mrs. Kimpton, 68, Great Russell Street, Bloomsbury, W.C.**

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD), where two or three are kept.—Capable of taking entire management; understands the whole of his profession in all its branches. Unexceptionable character.—W. Y., Post Office, Battersea Rise, S.W.

GARDENER (HEAD) in or out of house.—Single; understands his profession in all its branches. Stock and Land if required. Nine years' character.—M. N., Mr. Muskett, Nurseryman and Seedsman, High Street, Clapham, S.

GARDENER (HEAD).—Age 36, single; understands Early Forcing, Stove and Greenhouse Plants, Vines, Pines, Kitchen Garden, &c. Unexceptionable character.—T. Q., Post Office, 40, Goswell Road, E.C.

GARDENER (HEAD).—Age 36, married, no incumbrance; well versed in all the branches of his profession. Can take charge of Cattle and Pasture Land if required.—H. B., 4, Central Hill, Upper Norwood, Surrey, S.

GARDENER (HEAD).—Single; a successful cultivator of Stove and Greenhouse Plants; Forcing Early Fruits and Vegetables, Flower and Kitchen Gardens. Eleven years' good character.—A. B., Dickenson's Nursery, Westerham, Kent.

GARDENER (HEAD).—Age 32, married, no incumbrance; has a thorough practical knowledge of Pines, Vines, Peaches, Cucumbers, and Melons, and the management of Flower and Kitchen Gardens.—J. R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD).—Age 37, single; has a good practical knowledge of Early and Late Forcing of Fruit, Flowers, Vegetables, Flower and Kitchen Gardens. Four-and-a-half years' good character from a family of distinction.—S.H., J. & J. Fraser, Lea Bridge Nursery, Leyton, Essex, N.E.

GARDENER (HEAD). — Age 38, married, two children; thoroughly understands his profession in all its branches, including Early and Late Forcing of Vines, Pines, Cucumbers, Melons, &c., the management of Stove and Greenhouse Plants, Flower and Kitchen Gardens, &c. Has a good character and can be highly recommended.—H. B., 14, Oxford Street, Southampton.

GARDENER (HEAD).—G. THOMAS (age 33, married), late Gardener to Joseph Baxendale, Esq., is at liberty to engage with any nobleman or gentleman in want of a first-class Gardener. Wishes for a situation where there is scope for energy. Seven years' irreproachable character.—Mr. Kay's, Florist, Finchley, Middlesex, N.

GARDENER (HEAD).—Age 33, married, no incumbrance; has had several years' practical experience with families that required all kinds of Early and Late Forcing, Flowers, Fruit, and Vegetables. Steadiness, ability, and character will bear the strictest inquiry.—A. B., Mr. Dubber, Stationer, Westow Street, Upper Norwood, S.

GARDENER (HEAD).—Age 40, married; possesses a practical and scientific knowledge of his profession in all its branches, including Pines, Grapes, Peaches, Figs, Melons, Cucumbers, &c., and is a first class Plant Grower; with Woods, Land and Stock. Has had 200 prizes for Fruit and Vegetables. Wife can take charge of Dairy and Poultry.—J. D., Messrs. Drummond's Nursery, Bath, Somersetshire.

GARDENER (HEAD WORKING).—Age 30, no incumbrance; understands his profession in all its branches, Plants and Forcing, Pines, Grapes, Melons, Cucumbers, Peaches, &c., also Kitchen, Flower, and Fruit Departments. First class character.—J. R., The Gardens, Sir Clifford Constable, near Hull.

GARDENER.—Age 38, married, no incumbrance; thoroughly understands his profession in all its branches. Can have a good character from his last situation.—Y. Z., Clarissa Cottage, Beulah Road, Walthamstow, Essex.

GARDENER.—Middle-aged, married, no incumbrance; practically acquainted with Gardening in all its branches. Good character.—A. B., J. H. Brown's Nursery, Albion Road, Stoke Newington, N.

GARDENER (SINGLE-HANDED or otherwise).—Age 21; has a practical knowledge of his profession. Four years' good character.—Z. Y., Post Office, Harlow, Essex.

GARDENER (SINGLE-HANDED), or WORKING FARM BAILIFF.—Single. References permitted to present and last employers and others.—T. R., The Royal Nurseries, Slough, Bucks.

GARDENER (UNDER).—Age 23; has served six years in a nobleman's gardens, and wishes for further Improvement under a competent Gardener in a large establishment. Character unexceptionable.—B. A., Lower Clapton, N.E.

GARDENER (UNDER) or FOREMAN.—Age 24, single; has had good experience in Plant Growing, Forcing, and the profession generally in first-class establishments, from whence he can be well recommended.—E. H., 9, Cochrane Terrace, St. John's Wood, London, N.W.

TO NURSERYMEN.

FOREMAN, or PROPAGATOR AND FOREMAN.—A practical Man who has had 20 years and upwards in the Nursery business, and a good Exhibition Plantsman, Striker, and Grafter. First class reference as to character and abilities.—W. E. T., Post Office, Lower Clapton, London, N.E.

PROPAGATOR, or FOREMAN AND PROPAGATOR.—**A man of first-class abilities. Good references.**—A. B., Messrs. Milne & Co., Vauxhall Nurseries, Wandsworth Road, London, S.W.

TO LANDED PROPRIETORS AND OTHERS.

STEWARD OR BAILIFF.—Small incumbrance; thoroughly acquainted with Norfolk Farming in all its branches. Wife an excellent Dairywoman. Can have 9 years' first-rate character.—Mr. PARTRIDGE, Shouldham, Downham.

STEWARD OR BAILIFF.—Middle-aged, of business habits; is practically acquainted with Farming on a large scale; the Management of Labourers on the most economical system; Erecting Buildings, &c.; Breeding, Buying, and Selling Stock. The highest reference can be given. Is leaving present situation on account of farm being let.—R. S., Messrs. Sutton's, Royal Berks Seed Establishment, Reading.

FARM BAILIFF.—Middle-aged; married; has a thorough knowledge of his profession. Can manage a Kitchen Garden and take charge of Woods and Plantations. Is a good Accountant. His wife can manage a Dairy. Good references. Security if required.—W. X., Mr. Hutchins, Medical Hall, Wind Street, Neath. No objection to Ireland.

The Gardeners' Chronicle Newspaper.

SATURDAY, JUNE 23, 1860.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY
BEING ABOUT TO RESUME THE
IMPORTATION OF SEEDS AND PLANTS
by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

NEXT OF KIN, HEIRS, &c., WANTED, who have been Advertised for—Being exact Copies of Advertisements from the *Times, Gazette, Chronicle, Herald, Post, Melbourne Argus, Sydney Herald, Hobart Town Mercury, South Australian Register, Cape Mail* and *Monitor, New Zealand Gazette, West India Record*, Indian, Canadian, and American Papers for the last 60 years, relating to many thousand names, descriptions, and last residences of persons of all classes entitled to money and property of several Millions value, and now laying dormant for want of claimants. This prized and valuable book is sent post free to any part of the United Kingdom for 12 post stamps by the publishers, FISHER & SON, Kingsland, London, N.E. Established 1817. "Worth its weight in gold."—*Times*, Nov. 26, 1859.

WHAT WILL THIS COST TO PRINT? is a thought often occurring to literary minds, public characters, and persons of benevolent intentions. An immediate answer to the inquiry may be obtained on application to RICHARD BARRETT, 13, Mark Lane, London, E.C. R. B. is enabled to execute every description of Printing on very advantageous terms, his office being furnished with a large and choice assortment of Types, Steam Printing Machines, Hydraulic and other Presses, and every modern improvement in the Printing Art. A Specimen Book of Types, and information for Authors, sent on application, by
RICHARD BARRETT, 13, Mark Lane, London, E.C.

LIVE FISH FOR STOCKING PONDS, AQUARIUMS, &c.—Carp, Tench, Roach, Dace, Perch, Chub, Gudgeon, Minnows, Gold and Silver Fish, Eels, &c. To be had at CHARLES WRIGHT'S, Fishing Tackle Manufactory, 376, Strand, W.C. Aquariums sold.

NOTICE.—"BEWARE OF IMITATIONS."

LEA AND PERRINS' "WORCESTERSHIRE SAUCE" is pronounced by connoisseurs to be a most agreeable to every variety of dish. *** See the name of LEA & PERRINS upon every Label, Bottle, and Stopper. Sold by Messrs. CROSSE & BLACKWELL, London; and by dealers in Sauces generally. Sole manufacturers, LEA & PERRINS, Worcester.

J. AMADIO'S STUDENTS' BOX OF MICROSCOPIC PREPARATIONS, containing Six dozen beautiful specimens in polished Mahogany Box, fitted with racks, brass lock and key, &c., produced under J. AMADIO'S immediate superintendence, specially adapted for the Student. Price 3*l.* 18*s.* 6*d.*
Just published, 2d ed., an Illustrated Catalogue, with the names of 1500 Microscopic objects, free for 6 stamps.
7, Throgmorton Street, E.C.

METCALFE, BINGLEY, AND CO.'S NEW PATTERN TOOTH BRUSHES, Penetrating Unbleached Hair Brushes, genuine Smyrna Sponges, and every description of Brush and Comb and Perfumery for the toilet. METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box.

THE FAIRY BOUQUET.—This delicious perfume was originally discovered by one of Titania's principal attendants. It is made from wild flowers, culled by fairy hands from "the bank whereon the wild Thyme grows." The authenticity of the recipe is vouched for with the same degree of certainty as is the existence of Titania herself. It is now prepared solely by METCALFE, BINGLEY, & Co., Perfumers, &c., 130 B and 131, Oxford Street, London, W.—In bottles, 2*s.*, 3*s.* 6*d.*, and 5*s.* each.

WHITE AND SOUND TEETH are indispensable to personal attraction and to health and longevity by the proper mastication of food. ROWLANDS' ODONTO, or Pearl Dentifrice, compounded of oriental ingredients, is of inestimable value in improving and beautifying the teeth, strengthening the gums, and in rendering the breath sweet and pure. It eradicates tartar from the teeth, removes spots of incipient decay, and polishes and preserves the enamel, to which it imparts a pearl-like whiteness. As the most efficient and fragant aromatic purifier of the breath, teeth, and gums ever known, ROWLANDS' Odonto has for a long series of years occupied a distinguished place at the toilets of the sovereigns and the nobility throughout Europe: while the general demand for it at once announces the favour in which it is universally held.—Price, 2*s.* 9*d.* per box. CAUTION.—The words "ROWLANDS' Odonto" are on the Label, and "A. ROWLAND & SONS, 20, Hatton Garden," engraved on the Government stamp affixed on each box.—Sold by them and by Chemists and Perfumers.

DR. DE JONGH'S
(KNIGHT OF THE ORDER OF LEOPOLD OF BELGIUM)
LIGHT-BROWN COD LIVER OIL
administered with the greatest success in cases of CONSUMPTION, BRONCHITIS, ASTHMA, COUGHS, RHEUMATISM, GOUT, GENERAL DEBILITY, DISEASES OF THE SKIN, RICKETS, INFANTILE WASTING, AND ALL SCROFULOUS AFFECTIONS.
Extensive experience, and the recorded testimony of numberless eminent medical practitioners prove that a half-pint of DR. DE JONGH'S Oil is equal in remedial effects to a quart of any other kind. Hence as it is incomparably the best, so it is likewise far the cheapest.
Palatableness, speedy efficacy, safety, and economy unitedly recommend this unrivalled preparation to invalids.

OPINION OF A. B. GRANVILLE, ESQ., M.D., L.R.C.P., F.R.S. *Author of* "The Spas of Germany," "On Sudden Death," *&c.*
"Dr. Granville has found that DR. DE JONGH'S Cod Liver Oil produces the desired effect in a shorter time than others, and that it does not cause the nausea and indigestion too often consequent on the administration of the Pale Newfoundland Oils. The Oil being, moreover, much more palatable, Dr. Granville's patients have themselves expressed a preference for DR. DE JONGH'S Light Brown Cod Liver Oil."

Sold ONLY in IMPERIAL half pints, 2*s.* 6*d.*; pints, 4*s.* 9*d.* quarts, 9*s.*, capsuled, and labelled with DR. DE JONGH'S stamp and signature, WITHOUT WHICH NONE CAN POSSIBLY BE GENUINE, by respectable Chemists.

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ANSAR, HARFORD, & CO., 77, Strand, London, W.C.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
CANTERBURY MEETING, STAND 38.
READ'S IMPLEMENTS.—PATENT FIRE and GARDEN ENGINES, which for power, portability, and simplicity of action, surpass anything of the kind hitherto invented.

PATENT VETERINARY INJECTING INSTRUMENTS. Improved HOLLOW PROBANGS, for relieving Hoven or Choked Bullocks, Calves, Sheep, &c.

Garden Engines, Machines, and Syringes, of every description, upon the most improved principle.

Manufactured only by the Patentee, RICHARD READ, 35, Regent Circus, Piccadilly, London, W.

IMPERIAL WIRE WORKS AND WINDOW-BLIND MANUFACTORY, 370, Oxford Street, W., conducted by W. RICHARDS. Just opened, four New Show Rooms for the display of his Improved and Elegant Designs in Flower Stands, Flower Baskets, and every description of Wire Work for Conservatory, both useful and ornamental. Several fine Aviaries on Show, &c.

200 CUCUMBER AND MELON BOXES, AND LIGHTS, AND 500 LIGHTS of all Sizes kept in Stock, Glazed and Painted complete, ready for immediate use. Packed and sent to all parts of the kingdom.
JAMES WATTS & Co., Hothouse Builders and Hot-water Apparatus Manufacturers, near the Green Man, Old Kent Road, London, S.E.

SLATE WORKS, ISLEWORTH, MIDDLESEX, W.
EDWARD BECK MANUFACTURES in SLATE a variety of articles for Horticultural purposes, all of which may be seen in use at Worton Cottage, on application to the Gardener, Sundays excepted. PRICED LISTS of PLANT TUBS and BOXES forwarded on application.

ENGINE OIL of superior quality as supplied to the various Railways for Locomotive purposes, suitable for all Agricultural Machinery.—May be had in 10-Gallon Cans by forwarding a Post Office-order for 3*l.* to H. R. BRIGGS & Co., City Oil Mills, Primrose Street, Bishopsgate, E.C.

OIL PAINT NO LONGER NECESSARY.
HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.
Sold in casks of about 30 gallons each at 1*s.* 6*d.* per gallon at the manufactory, or 1*s.* 8*d.* per gallon paid to any station in the kingdom.—Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, from whom only it can be obtained.

FERNERIES, AQUARIUMS, WARDIAN CASES, &c.
ROBERT KENNEDY respectfully invites attention to his fine stock of objects appropriate for Ornamental purposes, such as Gold and Silver Fish, British Fishes in great variety, Insects, Water Plants, as Aponogeton, Distachyon, the richly-scented Cape Lily, Vallisneria, Pontederia, &c.; Water and Land Tortoise, Green Lizards, Tree Frogs, and Salamanders. Wardian Cases and Aquariums tastefully arranged with Rockwork or otherwise. A choice collection of BRITISH AND EXOTIC FERNS, of which an ILLUSTRATED CATALOGUE is just published, and may be had on application for six postage stamps. Established A.D. 1846.
The Conservatories, Covent Garden, W.C.

GLENFIELD PATENT STARCH, used in the royal laundry, and pronounced by her Majesty's laundress to be the Finest Starch she ever used. Sold by all chandlers, grocers, &c., &c.
WOTHERSPOON & Co., Glasgow and London.

News of the Week.

In the House of Lords on Friday the Marquis of WESTMEATH moved the second reading of the Furious Riding and Driving Bill. Lord PORTMAN moved as an amendment that it be read a second time that day three months. At the suggestion of Lord DENMAN the Bill was ultimately withdrawn. On Monday, on the motion for going into committee on the Highland Roads and Bridges Bill, Lord REDESDALE moved the rejection of the Bill, and the debate was adjourned. In answer to Lord BROUGHAM, Earl GRANVILLE said that there was no foundation for the report that a large military force was about to be despatched from France to Naples. On Tuesday Lord LYVEDEN moved the second reading of the Church-rates Abolition Bill. The Duke of MARLBOROUGH moved as an amendment that the Bill be read a second time that day three months. The Bill was supported by Earl DE GREY and RIPON, the Earl of AIRLIE, the Duke of SOMERSET, and the Duke of NEWCASTLE; and opposed by Lord WENSLEYDALE, the Archbishop of CANTERBURY, the Duke of RUTLAND, and the Earl of DERBY. On a division the amendment was carried by a majority of 97, the numbers being 128 to 31. The Bill was therefore lost. On Thursday the Plea on Indictment Bill was read a second time, and the Adulteration of Food and Drink Bill passed through committee.

In the Commons on Friday at a morning sitting the Edinburgh Annuity Tax Abolition Bill passed through committee. On the order for the second reading of the Selling and Hawking Goods on Sunday Bill, sent down from the Lords, Mr. DIGBY SEYMOUR suggested that one of the clauses of the Bill constructively lessened the charge upon the Consolidated Fund by imposing penalties which might go in aid of the revenue, thereby making it a money Bill and interfering with the privileges of that House. The SPEAKER on being appealed to thought the distinction was a nice one, and required consideration; and on the motion of Mr. BRIGHT the debate was adjourned for a fortnight. On Monday Mr. EDWIN JAMES called the attention of the House to the enlistments now going on in Ireland for the army of the POPE. Mr. CARDWELL said that the Government had given fair notice of what the law prohibited and the penalties attached to its infraction, and had given directions that it should be enforced whenever a case occurred in which it was possible to institute a prosecution. The House then went into committee of supply, and agreed to several votes on account of the army estimates. On Tuesday Mr. LINDSAY moved a resolution, declaring it to be the duty of HER MAJESTY'S Government to carry into effect the recommendations of the Commissioners appointed in 1858 to inquire into the formation of harbours of refuge. Mr. BAXTER moved as an amendment the previous question. The amendment was supported by Government, but was negatived, on a division, by 145 to 128. The original resolution was then agreed to. Mr. DEASY obtained leave to bring in a Wine Licenses and Refreshment Houses Bill for Ireland; and on the motion of Mr. LOWE, a select committee was appointed to inquire and report what buildings are necessary for the South Kensington Museum. On Wednesday the Professional Oaths Abolition Bill, after some discussion, was read a second time. On the order for going into committee upon the Aggravated Assaults Act Amendment Bill moved by Lord RAYNHAM, Lord ENFIELD moved an amendment that the Bill be committed that day three months. On a division the amendment was carried by 174 to 57; the Bill is therefore lost. On the order for the second reading of the Valuation of Lands (Scotland) Bill, moved by Mr. BLACKBURN, Mr. BLACK moved that the Bill be read a second time that day three months. On a division the amendment was carried by 116 to 69; so the Bill is lost. The Felony and Misdemeanour Bill was read a second time. The adjourned debate on the second reading of the Ecclesiastical Commission Bill was resumed by Mr. HENLEY, who defended the Commissioners, and supported the second reading of the Bill. Mr. G. BENTINCK followed in opposition to the Bill, but the debate was ultimately cut short by the arrival of the hour for adjournment. On Thursday the adjourned debate on the motion for leave to bring in the European Forces (India) Bill was resumed by Lord STANLEY, who opposed the Bill on the ground that the maintenance of a local European Force in India was inevitable, and that the dangers which had been apprehended from its existence were greatly exaggerated. After considerable discussion leave was given to bring in the Bill. On the order for the third reading of the Caledonian and Crinan Canal Bill, Mr. WILLIAMS moved an amendment that it be read a third time that day six months. On a division the amendment was negatived by 98 to 47, and the Bill was read a third time and passed. On the order of the day for resuming the adjourned debate on the Roman Catholic Charities Bill as amended, Mr. HENLEY moved the recommittal of the Bill, in order that its provisions might be further considered. The motion was agreed to, and the House having gone into committee on the Bill, a long debate arose upon the wording of the first clause, which the ATTORNEY-GENERAL ultimately undertook to amend, so as to obviate any ambiguity. The first clause, as it stood, was therefore formally negatived, and the other clauses were agreed to.

The Conference at Baden between the EMPEROR OF THE FRENCH and the PRINCE REGENT of Prussia took place on Friday evening, and on Saturday morning the EMPEROR attended a Conference of the German Sovereigns, consisting of the PRINCE REGENT of PRUSSIA, the KINGS of SAXONY, BAVARIA, HANOVER, and WURTEMBERG, the Grand Dukes of BADEN, SAXE WEIMAR, and HESSE DARMSTADT, and the Dukes of NASSAU and SAXE-COBURG. The *Moniteur* states that the EMPEROR in these Conferences "explained freely to the united

sovereigns that his policy would never deviate from the principles of right and justice, and that all who desire the re-establishment of confidence, and the continuation of friendly international relations, should felicitate themselves upon a conference which consolidates the peace of Europe." A despatch from Baden dated Wednesday last states that the final Conference between the PRINCE REGENT and the German Sovereigns before their departure has brought about a decisive agreement on all questions which refer to the relations of Germany with foreign Powers. The French Government on Thursday addressed a Circular Note to the Powers that signed the Final Act of Vienna, demanding their recognition of the new settlement of the French frontiers, resulting from the annexation of Savoy and Nice to France. After reminding the Powers that the annexation has been accomplished by the spontaneous cession of those provinces by the King of SARDINIA and the free expression of the wishes of the inhabitants by universal suffrage, the Note states that France intends to assume the obligations resulting from Article 92 of the Final Act of Vienna, referring to the neutralised districts of Faucigny and Chablais, but will not consent to any diminution of the Savoy territory in favour of Switzerland, although she accepts the European Conference on the question. Accounts from Naples state that the Commander DE MARTINO, whom the KING had sent to Paris and London on a special mission, to submit to the French and English Governments the guarantees upon which HIS MAJESTY invoked their mediation in the affairs of Sicily, returned to Naples on the day after his interview with the EMPEROR OF THE FRENCH, having renounced his intention of going to London, from the conviction that his mission would, at the present moment, be of no avail at the Foreign Office. It was reported on Monday that an insurrection had broken out in Calabria, but there appears at present to be no foundation for the statement. The KING has dismissed General LANZA, General LETIZIA, and three other generals lately in command of the troops in Sicily, and has banished them to the island of Ischia. Colonel MEDICI has joined General GARIBALDI at Palermo with 3000 volunteers, and all the communes in the island, headed by the clergy and aristocracy, have presented addresses requesting annexation to Sardinia.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family, with their Royal visitors, continue at Buckingham Palace. On Saturday morning the Queen and Prince Consort, accompanied by the Count of Flanders, rode on horseback. In the afternoon the Queen, accompanied by Prince Arthur and the Princess Helena, took a drive in a carriage and four. The Prince Consort and the Count of Flanders rode on horseback. In the evening the Queen, accompanied by the Count of Flanders, honoured the performance at the Olympic Theatre with her presence. The Prince Consort presided at the 200th anniversary dinner of the officers of the Grenadier Guards, in the Banquet Hall of St. James's Palace. The Princess Alice honoured the performance at the Princess's Theatre with her presence. On Sunday morning the Queen and Prince Consort, the King of the Belgians, Prince Arthur, the Princesses Alice, Helena, and Louisa, attended Divine service in the Private Chapel of Buckingham Palace. The Rev. J. W. Reeve preached the sermon. On Monday morning the Prince Consort presided at a meeting of the Governors of Wellington College. In the afternoon the Queen, accompanied by the Princess Alice, took a drive in an open carriage and four. The Prince Consort and the Count of Flanders rode on horseback. In the evening the Queen and Prince Consort, accompanied by the Princess Alice, dined with the Duke of Cambridge at Gloucester House, Piccadilly. On Tuesday the Queen gave audience to Nah-ne-bah-wee-quay, Mrs. Catherine B. Sutton, of Owen Sound, Canada West, accompanied by Mrs. Christine R. Alsop, and to two New Zealand chiefs, Wiremu (William) Totoe, from Rang-a-whia, Province of Auckland, and Hemara (Samuel) Reheran, from Mooku, Province of Auckland. The Duke of Newcastle, Secretary of State for the Colonies, and Lord John Russell had an audience of the Queen. The Countess de Neuilly and the Duke de Nemours visited the King of the Belgians at Buckingham Palace. In the afternoon the Queen, accompanied by the Princess Alice, Prince Arthur, and Prince Leopold, took a drive in an open carriage and four. In the evening her Majesty and the Prince Consort, accompanied by the Princess Alice, honoured the Royal Italian Opera with their presence. On Wednesday morning the Prince Consort, the King of the Belgians, Prince Arthur, the Princesses Helena and Louisa, and the Count of Flanders, visited the Flower Show at the Royal Botanic Gardens, Regent's Park. In the afternoon the Queen held a Levee in St. James's Palace in honour of her Majesty's Accession, at which about 470 noblemen and gentlemen were presented. After the Levee the Queen, accompanied by the Princess Alice, took a drive in a carriage and four. The Prince Consort and the Count of Flanders rode on horseback. The Prince of Wales arrived at the Palace from Oxford. In the evening the Queen and Prince Consort, accompanied by the Prince of Wales, the Princess Alice, and the Count of Flanders, honoured the Duke and Duchess of Wellington with their presence at a grand concert at Apsley House. On Thursday morning the Prince Consort, accompanied by the Prince of Wales, rode on horseback. The Prince of Wales visited the Duchess of Cambridge at her residence in St. James's Palace. In the afternoon the Prince Consort, the Prince of Wales, and the Count of Flanders rode on horseback. In the evening Vice-Admiral Arthur Fanshawe was invested by the Queen with the insignia of a Knight Commander of the Bath, at a private audience at Buckingham Palace, having previously received the honour of knighthood from her Majesty. The Queen afterwards had a dinner party.

THE PRINCE OF WALES will lay the first stone of the New School of Art, in the parish of St. Mary the Less, Lambeth, on Wednesday next, June 27, at 4 o'clock.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

THE ARMY.—The colonelcy of the Coldstream Guards, vacant by the death of Field Marshal, the Earl of Strafford, has been conferred on General Lord Clyde.

KNIGHTHOOD.—At the Levee on Wednesday the Queen conferred the honour of knighthood on Major-General Charles Van Straubenzee, late Commander of the troops in China; Colonel William Lockyer Freestun, formerly M.P. for Weymouth; and Mr. James Ranald Martin, C.B., examining Physician to the Council of India. The Queen has also directed letters patent to be passed under the Great Seal, granting the dignity of a Knight of the United Kingdom to John Nodes Dickinson, Esq., First Puisne Judge of the Supreme Court of New South Wales.

ORDER OF THE BATH.—At the investiture of the Order of the Bath on the 11th inst., the following officers and gentlemen were invested by her Majesty with the insignia of the Order:—

KNIGHTS GRAND CROSSES.—Admiral of the Fleet, Sir John West, Admiral Sir William Hall Gage, General Sir George Scovill, General Lord Downes, Admiral Sir Thomas John Cochrane, Admiral Sir George F. Seymour, General Sir Frederick Stovin, General Sir James Fergusson, and Lieut.-General Sir John Bell.

KNIGHTS COMMANDERS (having previously received the honour of Knighthood):—*Military*: Colonel Alfred H. Horsford, late Rifle Brigade; Lieut-General Philip Bainbrigge, Lieut-General Thomas E. Napier, Lieut-General the Hon. Charles Gore, Lieut-General Samuel B. Ellis, Vice-Admiral Provo W. P. Wallis, and Lieut-General George J. Harding. *Civil.*—Mr. Rowland Hill, Mr. Frederick J. Halliday, Sir Robert N. C. Hamilton, Bart.; Colonel Peter M. Melvill, Lieut-Colonel Herbert B. Edwardes, and Mr. Charles Lennox Wyke. (General H. Murray was unable to attend this investiture from severe illness, but received from her Majesty a dispensation to assume the rank and privileges of a Knight Commander; and on Thursday evening at a private audience at Buckingham Palace, the Queen conferred the honour of Knighthood on Vice-Admiral Arthur Fanshawe and invested him with the insignia of a Knight Commander.)

COMPANIONS.—*Military.*—Lieut.-Colonel J. A. Ballard, Bombay Engineers; Lieut.-Colonel A. Seudamore, 14th Light Dragoons; Colonel G. Le Grand Jacob, 5th Bombay Light Infantry; Colonel M. G. Dennis, 60th Rifles; Lieut.-Colonel W. Payn, 53d Regiment; and Lieut. Colonel E. Hocker, Royal Marines. *Civil.*—Mr. J. Ranald Martin, Examining Physician to the Secretary of State for India; Mr. T. Erskine May, Clerk-Assistant of the House of Commons; Colonel S. J. Hill, Governor of Sierra Leone; Mr. D. F. McLeod, Bengal Civil Service, Financial Commissioner, Punjab; Mr. E. Thornton, Bengal Civil Service, Commissioner of the Jhelum division, Punjab; Mr. H. C. Tucker, Bengal Civil Service, Commissioner of Benares; Mr. R. Alexander, Bengal Civil Service, Commissioner, Rohilcund; Mr. R. H. Dunlop, Bengal Civil Service, Magistrate of Meerut; Mr. W. A. Forbes, Bengal Civil Service, Deputy Commissioner, Oude; Mr. G. H. M. Ricketts, Bengal Civil Service, Deputy Commissioner, Loodianah; Mr. H. C. Wake, Bengal Civil Service, Magistrate of Shahabad; Colonel G. S. Lawrence, Bengal Cavalry, Agent to the Governor-General in Rajpootana; Lieut.-Colonel F. C. Marsden, late Bengal Army, Deputy Commissioner, Ferozepore; Major J. R. Becher, Bengal Engineers, Deputy Commissioner, Hazara; Major B. C. Lawrence, Bengal Infantry, commanding the Lahore Police and Cashmere Contingent.

PARLIAMENTARY MOVEMENTS.—Mr. Samuel G. Getty, Mayor of Belfast, has been elected for that borough without opposition, in the room of Mr. Davison.

DIPLOMATIC AND CONSULAR APPOINTMENTS.—The Queen has appointed John Hay Drummond Hay, Esq., C.B., now Chargé d'Affaires and Consul-General in Morocco, to be Minister Resident to the Emperor of Morocco; William Perry, Esq., now Consul at Panama, to be Consul-General at Venice, in the room of the late Mr. James; Charles Alan Henderson, now Consul in Paraguay, to be Consul at Panama; and Sir Francis Hastings Gilbert, now Vice-Consul at Scutari, in Albania, to be Consul for the province of Scutari.

THE VOLUNTEER REVIEW.—The great review of the Volunteers by the Queen will take place this afternoon at 4 o'clock in Hyde Park, and is expected to be one of the most brilliant sights of the season. The Courts of Law, the Stock Exchange, the Bank of England, and the public establishments, will be closed at an early hour; and the private banks and other great commercial houses and trading firms will close at 12, in order to enable the young men in their establishments, who are members of volunteer corps, to assemble on their respective parades in time to march to the Park according to order. It is expected that about 30,000 Volunteers will be under arms on the occasion. The force will be arranged in two divisions. The first division, commanded by Lieut.-General Sir J. F. Love, will include the 1st Huntingdonshire Mounted Rifles under the Duke of Manchester, the 1st Surrey Mounted under Capt. Meller, the London Artillery Company under Lord Colville, the 1st Middlesex Engineers, and the 32d Middlesex, the Artillery Brigade under Colonel Tulloh, R.A., the 1st Brigade under the Duke of Wellington, the 2d Brigade under Lieut.-Colonel Hicks, the 3d Brigade under Lord Ranelagh, and the 4th Brigade under Lord Elcho. The second division, commanded by Major-General Lord Rokeby, will include the 1st Brigade (Essex and Kent Corps) under Col. Thorold, the 2d Brigade (Gloucester, Somerset, Warwick, Berks, Oxford, Northampton, Bucks, Wilts, and London Irish corps) under the Marquis of Donegal; the 3d Brigade (Lancashire and Nottingham corps) under Brigadier-General Russell; and the 4th Brigade (Surrey, Kent, Sussex, Stafford, Worcester, West Riding, and Cheshire Corps) under Brigadier-General Taylor. The Queen will leave Buckingham Palace at half-past 3, attended by the usual Staff, and will enter the Park at Hyde Park Corner gate. Galleries have been erected for the accommodation of the diplomatic body, the members of the two Houses of Parliament, &c., admission to which will only be by tickets. Persons without tickets will be admitted, as far as there is room, to a place for standing formed by hurdles in front of the galleries, from the end nearest the Marble Arch to the saluting point.

THE GREAT RIFLE MATCH AT WIMBLEDON.—Her Majesty has announced her intention of inaugurating the first great Prize Meeting of the National Rifle Association on Wimbledon Common on the 2d of next month, on which occasion addresses will be presented to her Majesty and the Prince Consort by the President of the Association. The competition will commence immediately afterwards, the opening being announced by her Majesty firing a rifle from a fixed mechanical rest.

THE CHANNEL FLEET will leave St. Margaret's Hope at an early hour this morning for Yarmouth Roads.

Foreign.

FRANCE.—The Emperor arrived in Paris on Monday morning at 10 o'clock from Baden. The Ministers and many other personages of importance were in attendance at the railway station to greet his Majesty on his return. A crowd as usual assembled outside and cried "Vive l'Empereur!" Very soon after it was reported that his Majesty on alighting from the carriage said aloud, "Gentlemen, I bring you peace for many years," or, as another version states, "I have reason to believe that the interview will tend to consolidate peace." The Emperor presided at a Council of Ministers immediately after his arrival. His Majesty afterwards went to Villegenis, and visited Prince Jerome, who is rapidly sinking. At a Council of Ministers, held on Wednesday at Fontainebleau, under the presidency of the Emperor, M. Thouvenel, Minister for Foreign Affairs, read the circular note which the French Government is about to address to the Powers who signed the final Act of Vienna, in order to demand their recognition of the new settlement of the French frontiers, resulting from the accomplished fact of the annexation of Savoy and Nice to France. The following is a telegraphic summary of this note:—

"After summarily recalling the circumstances under which the annexation was accomplished—viz., the spontaneous cession of those provinces by the King of Sardinia and the free expression of the wishes of the inhabitants by universal suffrage, M. Thouvenel expresses his confidence that such an act, accomplished in conformity with the generally admitted principles of public right and international law, will obtain the adhesion of all Europe—the more so because France is ready to renew before the European Areopagus the assurance that she intends to assume the obligations resulting from Article 92 of the final Act of Vienna, referring to the neutralized districts of Faucigny and Chablais. He then says that—'the good faith of the policy of France, and the friendly interest which she has always shown in regard to Switzerland, offer the best guarantees for the faithful accomplishment of such an engagement.' M. Thouvenel, in conclusion, distinctly hints that the Court of the Tuileries will not consent to any lessening of Savoyard territory in favour of Switzerland, although France accepts the European conference on the question. This circular note was despatched on Wednesday evening to London, and on Thursday to Vienna, Berlin, and St. Petersburg, for communication by the representatives of France to the different Ministers for Foreign Affairs. It will also be communicated to the Cabinets of Stockholm, Madrid, and Lisbon."

A few hours before the Emperor's arrival at Baden the well-known M. About brought out a pamphlet with the ominous title of "*L'Empereur Napoleon III. et la Prusse.*" As it has hitherto been a part of the Imperial policy to put forth a pamphlet preparatory to any important design, the public received the pamphlet as bearing the impress of authority, and concluded that M. About's name on the title-page was all that was in reality his; though the *Constitutionnel*, in an article signed by its chief editor, strongly refutes the opinion that it emanated from official inspiration.

The object of the production was, in the first place, to show the value of the friendship of France to Prussia, and in the second to suggest the importance of making Prussia the sovereign state of Germany and of annexing to her many of the minor principalities. At the same time it urged that the general mistrust of French policy in Germany, and the reiterated clamour that France has a plan for annexing the Rhenish provinces and encroaching on the German soil, might suggest to her bad thoughts if she were less just, but France will take no offence, and faithful to her generous traditions, will sacrifice her private susceptibilities to the general good, and to the future of peace, "for European order cannot be solidly established except on the day when there shall be no longer nationalities oppressed nor kings insupportable to their people." Two other pamphlets have since appeared, in both of which the affairs of Ireland are discussed in a tone of great malignity towards the English Government, and in extreme ignorance of the facts. The last of these productions asserts that there is wanting at this moment in Ireland but one man, and this man Providence seems to have specially marked out in "Marshal Mac Mahon, King of Ireland." The *Moniteur* publishes the following article on the Baden Congress:—

"The rapid journey which the Emperor has just made will, we doubt not, be attended with the most favourable results. There wanted nothing less than the spontaneousness of so significant a step to put an end to that unanimous concert of malevolent rumours and false appreciations which has of late been remarked. In fact, the Emperor, by going to Baden to explain frankly to the sovereigns assembled there that his policy would never make him depart from right and justice, must have carried to minds so distinguished and so exempt from prejudice that conviction which a true sentiment, explained with good faith, cannot fail to inspire. There has been, therefore, more than courtesy in the reciprocal relations of the members of this august assemblage. The sovereigns passed almost the whole of Sunday together. After the Emperor had returned to his residence most of the sovereigns went there to take leave of his Majesty, and a second farewell greeting was exchanged at 9 o'clock, at the residence of the Princess Mary, Duchess of Hamilton, who had invited them all to take tea with her. Thus all those who desire the re establishment of confidence and the continuance of good international relations must congratulate themselves on a conference which consolidates the peace of Europe." The article concludes with an enumeration of all the sovereigns and princes who were present at Baden.

The Commander De Martino, the Neapolitan Envoy, left Paris on the 14th inst. on his return to Naples, having renounced his intention of going to London, from a conviction that his mission would at the present moment be of no avail at the English Foreign Office. In honour of the proclamation of the annexation of Savoy, the Emperor has granted to M. Thouvenel the Grand Cordon of the Legion of Honour, as a token of his high satisfaction. M. Thouvenel is concerting with Count Cavour the line of policy to be followed by the Governments of France and Sardinia in common in reference to Sicilian affairs. Marshal Vaillant, commander of the French troops in Italy, has arrived in Paris. The weather is exercising a depressing influence on the French funds.

SPAIN.—The Senate has unanimously refused to receive the manifesto of Don Juan. The draught of the budget for the ensuing year has been presented to the Cortes. The Ministry has requested the ratification of the payment of arrears which was made on the demand of England, and the Minister for Foreign Affairs has given explanations to the Cortes on the note sent by Lord John Russell at the commencement of the war with Morocco. The cholera is confined to Malaga. The friendly feeling between the Moors and the Spaniards increases. The Government has presented projects of law for the sale and replacing of the landed property of the Church, and has announced its intention of introducing projects for reforming the tariff.

MOROCCO.—The brother of the Emperor of Morocco, with the Moorish Ambassador and a suite of 15 persons, disembarked at Marseilles on Sunday, and were received with military honours. They left for Paris on Wednesday. Accounts from Ceuta state that Brigadier Manetti and a Captain in the Spanish army, while on their way to visit the Moorish Commissioner, have been attacked at Cape Negro by two Moors, by whom the former was wounded and the latter killed. The perpetrators of the crime are to be pursued, and 11 huts belonging to the tribe have been burnt. The Moors are indignant at this crime.

SWITZERLAND.—The Sardinian Cabinet having officially communicated to the Federal Council the cession of Savoy and Nice to France, a new note has been addressed by Switzerland to the different Powers, protesting against the cession of Northern Savoy to France. A public subscription has been opened at Berne to send arms to Garibaldi.

BELGIUM.—The Belgian Chamber of Representatives has adopted, by a majority of 57 to 54, an amendment of M. de Brouckère, postponing to 1861 the equalisation of the duties on sugar made from cane and beetroot.

BADEN.—The German Sovereigns who attended the Conference at Baden held their first meeting on Friday morning. It is asserted that at this preliminary conference an agreeable unanimity was manifested on all questions referring to the relations of Germany with foreign Powers, whereby the principal object of the meeting of the German Princes has already been obtained. In the evening the Emperor Napoleon arrived in private dress. He was received by the Grand Duke, who conducted him to the villa of the Grand Duchess Stephanie. In passing through the town and the promenade the Emperor met with a warm reception, the Frenchmen saluting him with shouts of *Vive l'Empereur*. Soon after his arrival his Majesty dined with his suite. At about 8.30 P.M. the Prince Regent, who on the previous day had paid the first visit to the German Sovereigns, sent Lieutenant Von Loen to present his compliments to the Emperor. It was the Emperor's intention to visit the Prince Regent first. The Prince Regent, however, came at 8.30 P.M. to the Villa Stephanie, and remained with the Emperor till 9.15 P.M. The Emperor then intended to surprise the Duchess of Hamilton, daughter of the Grand Duchess Stephanie, but did not find her at home. He thereupon took tea with the Grand Duke of Baden, the Dukes of Weimar and Coburg, who reside in the Duke's palace, only being present. On Saturday the Emperor, the Prince Regent, and the other Sovereigns breakfasted at the Grand Duke's palace. At 9 o'clock the Emperor, while taking a promenade on foot, was surrounded by a great number of persons. In the evening there was a meeting of the Princes at the Palace, which was illuminated. The Kings of Saxony, Bavaria, and Hanover again visited the Emperor. At 5 P.M. they all dined at the Grand Duke's palace. On Sunday afternoon a Conference was held at the residence of the King of Bavaria, and was attended by the Kings of Saxony, Hanover, Wurtemberg, and Bavaria, and by the Grand Dukes of Hesse-Darmstadt and Nassau. At 5 o'clock a grand dinner took place in the Ducal Palace of Baden. Before dinner the Emperor Napoleon presented the Grand Cordon of the Legion of Honour to the King of Hanover, the Prince of Hohenzollern-Sigmaringen, and Duke William of Baden. In the evening there was an *assemblée* at the villa of the Duchess of Hamilton. At this *assemblée* the Emperor took leave of the Sovereigns, all of whom were present, and departed at 10 P.M. for Strasburg. It is stated on good authority that the Emperor Napoleon, in his conversations with the German Sovereigns, repeated his pacific assurances, without alluding to questions regarding the interior or exterior policy of Germany, or to the Italian question. On Monday afternoon the Prince Regent of Prussia assembled the German Sovereigns in the Castle to thank them for having been present at his meeting with the Emperor of the French, in order to receive together the peaceful assurances of his Majesty. His Royal Highness spoke as follows:—

"The maintenance of the integrity of Germany will always be my principal care. In pursuance of this object I shall not allow myself to be influenced even by the consideration that my ideas on the progress and aims of the Prussian and German policy are not shared by some confederate Princes. In order to come to some understanding, Austria has taken some steps, to which I attach great value. Should an understanding be brought about, I shall communicate it to the German Princes. I shall continue the line of policy which I have pursued till now in reference to Prussia and Germany, and I hope that other German Governments will join me in this course of policy."

The King of Wurtemberg, in the name of the Federal Government, returned thanks for the patriotic representation of the interests of Germany by Prussia, and expressed a desire that an understanding should be brought about between Prussia and Austria. The Sovereigns offered their good offices for that purpose. The King of Wurtemberg informed the Prince Regent that the German Governments were occupied in drawing up a military convention, which adopts as nearly as possible the Prussian views on military organisation, and her proposals respecting reforms. His Majesty, in conclusion, said that the Federal Governments on their part expected that Prussia would take conciliatory steps in reference to German policy. The Grand Duke of Baden then said that this declaration of the King of Wurtemberg could not be made in the name of all the Federal Governments, as several important Governments had not taken part in the discussions relative to the said military convention, and Baden could not give her adherence to the Prussian proposals. According to reliable information, another and a final conference took place between the Prince Regent and the German Sovereigns before their departure, which brought about a decisive agreement on those questions which refer to the relations of Germany with foreign countries. It is also said that the Prince of Prussia insisted on the presence of the reigning Duke of Saxe Coburg Gotha at the conferences because, as a German Sovereign, intimately connected with the Royal family of England, he would inform the court of St. James's of all that passed, and would be enabled to state that the interview, far from being a subject of mistrust for the other great Powers, was a fresh guarantee for the peace of the whole of Europe.

AUSTRIA.—The Council of Ministers has unanimously approved the re-establishment of the Ministry of Commerce and Public Works. The Commission appointed to examine the Public Debt has presented to the Emperor a general report on the state of the whole public debt of the empire. The official *Gazette* of Wednesday contains an Imperial decree granting to the Central Lombardo-Venetian Congregation a decisive instead of a deliberative vote upon all matters, except, however, upon such administrative questions as affect the rights of the Government, viz., the approbation of the proposed expenditure, and the revision of the provincial Treasury accounts. The official papers also state that there is no intention to reinforce the army, which since the peace of Villafranca has, for economical reasons, been reduced by more than two-fifths. It is however asserted that, owing to their perfect regimental organisation, Austria would be able, in a fortnight, to bring into the field 600,000 men under arms. The artillery alone, which is at present undergoing a complete re-organisation, has been augmented on a large scale. The Ban of Croatia, Count Coronini Cronberg, has been pensioned at his own request and the Grand Cross of the Order of St. Stephen has been conferred upon him. He has been replaced by General Sokesevits. The statement that Austria is about to reinforce her flotilla in the Neapolitan waters is without foundation. Rear-Admiral Fantz will only sail for the Adriatic in order to exercise the crew of the newly-built ship Kaiser.

RUSSIA.—The Dowager Empress of Russia has resolved on celebrating her next birthday (13th July) with the Royal family of Prussia. Her Majesty will therefore leave Wildbad on the 10th July, so as to arrive at Potsdam on the evening of the 12th.

ITALY.—Accounts from Naples state that on the receipt of the news that the Commander de Martino had signally failed in his mission to Paris and had renounced his intention of visiting London, a Council of the Royal family was held to deliberate on the course to be adopted. It was reported on the 12th inst. that 2000 Garibaldians had landed at Catanzaro, in Calabria, but the rumour has not been confirmed. It is said however that the Neapolitan Government had sent General Nunziante to Calabria as *alter ego*, and that General Pianelli, the commander of the army in the Abruzzi, had also been summoned to act in that province, where the agitation is so great that large reinforcements have been sent there. The capture of the two steamers with 800 volunteers on board is confirmed, but their seizure is likely to be productive of trouble to the Neapolitan Government, as one of them carried the American flag, and was commanded by Siccoli, an officer who was formerly in the service of the United States; and the other was a steamtug carrying Sardinian colours. They were captured off the island of Ustica, on the high seas, and by cruisers whose papers it is said were not in good order, and who deceived the adventurers by hoisting the English flag. The captains of the two vessels have claimed an indemnity of 26,000 ducats from the Government; and the Sardinian Ambassador has demanded the restitution of the steamers and their passengers, all of whom had passports for Malta. It was said that Mr. Elliott, the English Ambassador, had supported this demand, but there seems to be no foundation for the statement. It is asserted that the King has dismissed General Lanza, General Letizia, and three other generals in Sicily, and has exiled them to the island of Ischia.—Letters from Rome to the 16th inst. confirm the news of the concentration of the Piedmontese army at Ferrara. The statement published by some French journals, that the Holy See would invite the Court of St. James to accredit an official representative at Rome, is said to be entirely without foundation. The police had found on some of the walls of Rome placards bearing the inscription, "Vive Henry V." They are supposed to emanate from enemies of the papal government, who hope to compromise it by leading France to believe that Rome is the centre of a legitimist conspiracy. —Two steamers under the American flag, the Washington and the Oregon, having on board volunteers for Sicily, entered the harbour of Cagliari on the 12th inst. The Washington had 1400 men, and the Oregon between 300 and 400. With the exception of the American captain and an American artist, the vessels had no communication with the shore. According to the statement of the captain of the Oregon, these steamers were awaiting the arrival of another, which had a large sailing vessel in tow, containing together 3000 more volunteers. "Garibaldi's Englishman" was on board the Washington. The ardour and zeal with which these men have taken up the cause of Sicily may be estimated by the privations to which they had subjected themselves. Though many of these were men of wealth and family, they were huddled together in such a way that they had scarcely sitting room, and it is said that no slaveship during her middle passage ever presented such a scene.

SICILY.—Advices from Palermo state that Colonel Medici, with 3000 volunteers, has arrived at Palermo, and that important desertions from the Neapolitan army have taken place. All the communes in Sicily have presented addresses requesting annexation to Piedmont. The clergy and aristocracy are at the head of the movement. The evacuation of Palermo continues, but Messina is being fortified. One hundred more dead bodies have been discovered in the ruins of the houses of Palermo which were destroyed by the bombardment. Carini, Manin, and Palizzolo are recovering from their wounds. Garibaldi has organised a division under the command of Colonel Turr, and has re-established the property-tax on its former footing. He has also issued a decree fixing the 18th inst. for the levy of men furnished by the conscription, and the 20th inst. for the departure of the conscripts for Palermo and Catania. Another decree ordered the collection of horses and military stores. These decrees were caused by the necessity of energetically pushing on the war in favour of Italian unity. Some cannon had been cast, and thousands of pikes had been distributed among the inhabitants. The Council of Defence of the town had ordered the barricades to be carefully kept up. The Archbishop of Palermo had paid a personal visit to Garibaldi, and the Secret Committee of Messina was in correspondence with him. The convocation of a Sicilian Parliament according to

the laws of 1848 was shortly expected, for the purpose of ratifying the proclamation which decrees the forfeiture of the rights of the Bourbons, and the union of Sicily to the kingdom of Sardinia, under Victor Emmanuel. The forces of Garibaldi at Palermo are estimated at 4000 men. Seven persons found plundering had been shot by order of Garibaldi. The order for the evacuation had greatly discouraged the Royal troops. Garibaldi had opened a national subscription on behalf of the war. The Archbishop and all the noble families in Sicily had subscribed. A letter from Catania says that the sack of that city took place on the 31st of May. The Royal troops contended for eight hours with about 500 insurgents, whom they succeeded in driving out of the city. The troops then pillaged a great number of shops and the University library, and set fire to several houses. The foreign consuls' houses were spared, but the Biscari palace and its celebrated museum, and the palaces of Giuliano, Gioieni, Arcidiacono, Guerrera, Tragala, Demitri, and others were destroyed. The report that Mazzini had landed in Sicily was without foundation. It appears that he contemplated a voyage to the island, but did not undertake it as he did not expect a favourable reception.

TURKEY.—The Sultan has sent fresh instructions to the Grand Vizier in reference to the inquiry into the condition of his Christian subjects. The Grand Vizier had arrived at Schumla, and on his journey thither he had dismissed or imprisoned several Turkish and some Greek functionaries for abuse of their authority. One thousand five hundred houses had been burnt in the Turkish quarter of Constantinople.

ALBANIA.—It was reported at Constantinople that sanguinary disturbances had taken place in Albania, and that the dragoman of the Austrian Consulate had been assassinated at Scutari. The Albanians, in virtue of their privileges, dating from the time of Iskander, had refused to pay the taxes or to contribute to the conscription, both of which the Christians refused to bear alone.

SYRIA.—Advices from Beyrout state that 36 villages had been burnt on Mount Lebanon. The Turkish Governor had sent some forces to Dar el Kamor, to put a stop to the attacks of the Druses on that locality, but at Saidi the Turkish soldiers supported the Druses, and participated in the massacre of the Christians. The French Consul at Saidi is reported to have entrenched himself within the *enceinte* of the Khan with all the Europeans. On the receipt of this news the Porte sent Vely Pasha to Beyrout an Extraordinary Commissioner, in order to institute an inquiry, and appointed Namick Pasha commander of the forces in the Lebanon, to which district two steamers were to have transported troops, but want of money caused the project to be abandoned, the army being so exasperated at not having received its arrears of pay, that a military revolt was apprehended. The Ambassadors had concerted and sent identical instructions to the different consuls in Syria, in order to prevent fresh disasters. It was rumoured that a despatch had been received announcing the outbreak of an insurrection at Smyrna and the assassination of public functionaries, but the correctness of this news was doubted.

INDIA.—The Calcutta mail has arrived with accounts from that presidency to May 15. The following is a summary of the news:—

Calcutta.—The Maharajah of Burdwan has sent in his adhesion to Mr. Wilson's programme. In a letter dated the 3d of May he expresses the sense he entertains of the obligations under which he lies to the British Government, and states that this feeling has induced him to tender his humble support to the effort made to relieve the financial difficulties of the State; the immediate cause of his coming forward being the attempt which had been made to oppose Mr. Wilson's system. He combated the idea that the Permanent Settlement was ever intended to exempt the zemindars from taxation, and himself, as the greatest zemindar in Bengal, disclaims such exemption. He concludes by expressing a hope that his example may induce his countrymen to believe that it is their true policy to surrender a portion of their wealth for the security of the whole, and by announcing his belief that the system introduced by Mr. Wilson will endear his memory to India. The Governor-General was expected at Calcutta in a week; Lord Clyde a few days later. His Excellency will leave by the first steamer in June; before that time Sir Hugh Rose was expected to arrive.

Bombay.—Letters from Bombay state that before his departure the late Governor of that Presidency wrote a minute in support of Sir C. Trevelyan's views, though, unlike him, he did not publish it. It has transpired, however, chiefly by means of certain revelations made to the papers at Bombay, that the minute was based upon errors in the accounts amounting to nearly four millions sterling.

Shapoor.—A portion of General Chamberlain's force after the capture of the deserted strongholds was suddenly attacked by the Wuzeerees, who, after a severely contested fight, were beaten off. General Chamberlain immediately made arrangements to follow them up, and on the morning of the 4th May found himself in front of the Barrah Pass, the heights on either side of which had been very strongly fortified. About 10 A.M. the General attacked the heights, and having cleared them after about two hours' determined fighting, forced the pass. The Wuzeerees, who were 7000 or 8000 strong, were completely beaten, and fled in two bodies eastward and westward. Our loss consisted of 29 men killed and 26 wounded; among the former was Lieutenant Ayton, doing duty with the 5th Punjab Infantry.

UNITED STATES.—The Japanese Commissioners took leave of the President on the 5th inst, and expressed themselves highly gratified with the treatment they had experienced. The President, in reply, said that he considered their visit as historically important. A Bill has since passed the Senate carying into effect the Asiatic treaties. Mr. Sumner has delivered a speech in Congress denouncing slavery, and all who abet or take part in it, in terms of such violence and indignation that it is expected to extinguish the Kansas Bill for this session, and to damage Mr. Lincoln's chances for the Presidency, inasmuch as it contradicts entirely the spirit of the resolutions which his party (the Republican) have just adopted in convention at Chicago. General Walker and a few officers had gone to Central America. The United States steamer Crusader had captured a barque off Cape de Verde having over 500 negroes on board. A resolution had been adopted in the Senate for an inquiry into the circumstances of the arrest of Father Lanza, an Italian patriot, on board an American vessel at Palermo. A fearful and destructive tornado swept over Iowa and Illinois on Sunday, the 3d inst. Three towns were demolished, and many of the inhabitants buried in the ruins.

CANADA.—The preparations for the Prince of Wales were making rapid progress. The residence of the Commander of the Forces at Montreal had been redecorated for the residence of the Prince during his stay in that city, which was not expected to exceed four days. While at Quebec the residence of his Royal Highness will be the Parliament House, which is to be suitably fitted up for his reception. At a public meeting held in Quebec resolutions were adopted expressive of the great satisfaction with which the approaching visit of the Prince was regarded, and a committee was appointed to confer with the Common Council of the city relative to the adoption of proper measures for his reception.

MEXICO.—Advices from Vera Cruz to the 30th ult. state that the Diplomatic Corps had suspended relations with Miramon's Government. Miramon was surrounded by Juarez's troops, without a chance of escape. The American Minister intended to return home if the Mexican treaty were not ratified.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Furious Driving.*—On the Marquis of WESTMEATH'S motion for the second reading of his Bill for preventing furious riding and driving, Lord PORTMAN moved as an amendment that the Bill be read a second time that day three months.—On the recommendation of Lord DENMAN, Lord WESTMEATH withdrew the Bill. The *Bank of Ireland Bill* was read a third time and passed.—In reply to the Earl of CARNARVON, the Duke of NEWCASTLE said that the Government did not think right to contribute to the expense of *Acclimatising animals in Australia.* The report of the amendments on the *Duchy of Cornwall (Limitation of Actions) Bill* was brought up and received. The *Union of Benefices Bill,* after an amendment to the first clause, proposed by the Bishop of LONDON, extending the operation of the Bill to the suburbs of any town, was read a third time and passed.

MONDAY.—*Public Business.*—Lord REDESDALE moved the annual resolution, that the House should not read any Bill a second time after Tuesday, the 17th July, except Bills of aid and supply, or such Bills as the House might please to exempt from this rule by a special resolution. — Earl GRANVILLE acquiesced, and the motion was agreed to. *Cathedral Commission.*—Lord LYTTELTON asked whether the Government intended to bring in any Bill founded on the report of the Commissioners of Inquiry into the condition of cathedrals and collegiate churches, or on that from the Select Committee of the Lords for inquiring into the means of supplying the deficiency of means for religious worship in populous places and the metropolis?—The Duke of NEWCASTLE, in reference to the report of the Commissioners, declined to pledge the Government. With regard to the second subject, he observed that it had already been dealt with by the Union of Benefices and Ecclesiastical Commission Bills. The *Ecclesiastical Courts and Registries (Ireland) Bill,* and the *Church Temporalities (Ireland) Acts Amendment Bill,* went through committee.—On the motion for going into committee on the *Highland Roads and Bridges Bill,* Lord REDESDALE moved the rejection of the Bill. The debate was ultimately adjourned. *France and Naples.*—Lord BROUGHAM alluded to a report that a large force of French troops was about to be despatched to Naples. This rumour, he observed, had caused much excitement both in this country and in France, and he asked whether the Government had any information to give on the subject?—Lord GRANVILLE assured the House that there was no foundation of any sort for the rumour in question, and he was assured that the French Government had no intention of the nature alluded to, as such a course would be inconsistent with the declaration of the Emperor of the French that his policy in regard to Naples was one of non-intervention.

TUESDAY.—*Church Rates.*—Lord LYVEDEN moved the second reading of the Church Rates Abolition Bill. After repudiating the notion that in wishing to abolish church-rates he was actuated by any hostility to the Church, he said that the present position of affairs was much worse for the Church than for the Dissenters, because wherever the rate was contested it strengthened the ranks of the Dissenters. In conclusion, he called attention to the numbers, position, and weight of the numerous statesmen who objected to church-rates in the present day, and appealed to the bench of Bishops to wipe off from the Church every unjust reproach of seeking unlawful gains, assuring them that if the measure were passed it would make the Church more popular, the Dissenters more peaceful, and tend to the better consideration of the highest interests of the community.—The Duke of MARLBOROUGH could not understand why to conciliate a few the many should be offended. The numerous petitions which had been sent up to Parliament against church-rates were merely the result of an active organisation of their opponents. He admitted the great results produced from the voluntary efforts of the Church of England, to which much of the influence of the Church and spread of religious education were owing; but if another item were added to those voluntary efforts it would greatly lessen the funds now raised for those and other purposes. The arguments which had been put forth in favour of this measure were scarcely, he thought, calculated to satisfy their lordships' sense of justice, and he therefore trusted that on grounds of public policy they would not consent to the second reading of the Bill. He concluded by moving that the Bill be read a second time that day six months.—Lord WENSLEYDALE considered the question from its legal point of view. What their lordships decided in the Braintree case was, first, that it was not possible for the churchwardens of a parish to make a rate in the absence of the parishioners; and secondly, that a majority of the parishioners in vestry assembled could make a rate which was binding on the minority of the ratepayers of the parish. The omission to make a rate was, nevertheless, punishable by ecclesiastical censure to this day. It was an error to suppose that the majority of the parish in vestry assembled had a right to decide whether or not they were legally bound to make a church-rate.—Lord DE GREY and RIPON said that the existence of a grievance had been admitted by statesmen of all parties, and various compromises had been proposed, but rejected. He denied that the opponents of church-rates were influenced by any ulterior motives. In his opinion, church-rates were a hardship on the Dissenters, inflicting an injury on the Church and tending to destroy that harmony which ought to prevail among Christian communities. He should, therefore, support the motion for the second reading of the Bill.—The Archbishop of CANTERBURY did not believe the voluntary system would be a benefit to the Church, as stated by the Churchmen who supported this Bill. It was a strange coincidence that the Liberation Society, whose objects were far more violent than those of the supporters of the Bill, should have used exactly the same argument. The voluntary system ought properly to be called the begging system. It was a system which would much degrade the character of the clergy, as it would put them in a less independent position. For these reasons he should oppose the second reading of the Bill, though he was willing to accept any compromise which would secure an adequate provision for the maintenance of the church fabrics.—Lord GREY was opposed to compromise on the matter, as he thought that by so doing they would be admitting the principle of the abolition of church-rates. The law, in his opinion, as it now stood, was just, right, and proper. Formerly this was not so, but the decision of the highest legal authority, that the majority of a parish may tax themselves for the repairs of the church, had made the law perfectly just. He knew that church rates gave cause to acrimonious discussions, but was of opinion that those very discussions occasioned a more lively interest to be taken in the affairs of the Church. The law as it stood at present answered its purpose in the great majority of parishes, and he therefore would not, especially after the revelations of the designs of the Dissenters, made before the committee, be a party to the alteration of that law.—After a few words from Lord AIRLIE in support of the Bill, the Duke of RUTLAND supported the amendment, as he did not think the Bill would produce peace, but would encourage increased opposition to the Church, and would deprive the poor man of a right handed down to him from time immemorial.—The Duke of SOMERSET said he should vote in favour of the second reading, as the agitation and ill-will created by this matter were not worth the paltry amount of money involved.—The Duke of NEWCASTLE had intended to vote as he did two years ago, but his former convictions had been much shaken by what had taken place in the other House and in their lordships' House during the present session. If church-rates were to be maintained as at present, he saw no other remedy but to pass the second reading of the Bill, and to amend it afterwards in committee.—Lord DERBY denied the imputation that the supporters of church-rates had not pursued a conciliatory course, and thought that that reproach ought to be on the other side, as the opponents of the church-rates had rejected all compromise. If Lord Lyveden had only seen the overwhelming majority of their lordships against this Bill last year, or had considered the decreasing majorities of the House of Commons, he would have hesitated before he had asked the House to again express their opinions by voting on this subject. He denied that the committee had practically abandoned the principle of church-rates by acknowledging the principle that the majority of the parish should have the right of taxing themselves to maintain the parish church. They had by that course endeavoured to maintain the principle, but to modify the practice—a vast difference from practically assenting to the principle of church-rates' abolition. The supporters of the existing law, then, had not been backwards in conciliation, but had been met in the most uncompromising spirit by their opponents.—After a few words in reply from Lord LYVEDEN, the House divided, when the numbers were for the second reading:—Content, 31, Non-content, 128, Majority 97. The Bill was therefore lost. The other orders of the day were then disposed of.

THURSDAY.—*Reported Occupation of Sicily.*—Lord GRANVILLE, in reply to Lord NORMANBY, said that the Government had received no information in regard to the rumour brought by telegraph that Mr. Elliot had taken steps for the occupation of Sicilian territory by a British force.—The *Pleas on Indictment Bill,* on the motion of Lord BROUGHAM, was read a second time.—The *Adulteration of Food and Drink Bill* passed through Committee.

FRIDAY.—*Law and Equity Bill.*—On the motion of the LORD CHANCELLOR, this Bill was referred to a select committee consisting chiefly of law lords. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Commercial Treaty.*—In answer to Mr. BAINES, Mr. M. GIBSON said that there was no truth in the report that certain commercial men had been sent to Paris with the object of impressing a more liberal policy on the French Commissioners. When it was arranged that specific duties should be substituted for the *ad valorem* duties of the treaty, it was thought necessary to obtain the best information from the French Chambers of Commerce, and those chambers were requested to communicate with the Board of Trade to that end. It was likewise thought that delegates should proceed to Paris for purposes of information, without which the Commissioners could not proceed satisfactorily with their duties. The statement that the treaty was a failure was perfectly new to him. On the contrary, he believed that its commercial value had been greatly underrated, and that, with the assistance of the supplementary treaty, the result would be fully to carry out the original designs and intentions of the treaty.—In reply to Mr. STANLEY, Sir G. C. LEWIS said that now the Reform Bill was withdrawn, he was prepared, if necessary, to bring in a Bill for the establishment of a uniform *Valuation of Lands and Tenements in England,* but he did not believe that it would have much chance of passing in the present session.—Lord A. CHURCHILL called attention to the recent disasters in *New Zealand,* and expressed a hope that the land of the rebellious chiefs would be forfeited.—Mr. C. FORTESCUE said the soldiers and the Volunteers had not acted in concert, but this evil would, he trusted, not again recur. The tenure of land in the colony was very complicated, and had led to this difficulty, in which the appeal to arms was unhappily necessary. He saw no necessity for interference on the part of the Government, as he had every hope that the mischief would not extend beyond its present limits.—Mr. ADDERLEY said that what had occurred was a further proof of the policy of leaving the colonists to defend themselves. The troops had not only been of no use—they had been positively mischievous; and all that had been done was by the efforts of the Volunteers.—Mr C. FORTESCUE said that the safety of the colony depended on the troops. The Volunteers were a mere handful.—Captain JERVIS, Mr. CHILDERS, and Mr. SIDNEY HERBERT defended the conduct of the troops, which they declared was deserving of all praise.—In reply to Mr. E. JAMES, Lord PALMERSTON said that the report of the *Committee on Tax Bills* might be expected next week. Its labours had hitherto been unremitting. *Poor Law in St. Pancras.*—Mr. LANIGAN called attention to the deportation of an Irish pauper by the poor-law officials of St. Pancras.—Mr. MONSELL urged upon the Government the necessity of bringing in without delay some measures to remedy the present state of the law on this point.—Mr. DISRAELI also urged an immediate amendment of the law affecting the removal of Irish paupers. Much cruelty was practised towards those unfortunate persons, especially by the

authorities of the Metropolitan parishes.—Sir G. Lewis promised to institute some inquiries respecting the case referred to.—Colonel Lindsey moved an address praying her Majesty to reconsider the 11th clause of the *Army Medical Warrant* of October, 1858, as far as relates to its retrospective application to the medical officers at that time serving in the ranks affected having due regard to the efficiency of the public service.—Mr. S. Herbert opposed the motion and after a few words from Colone. Dickson, the motion was withdrawn.—Mr. Butt obtained leave to bring in a Bill to amend and declare the law relating to votes to be given to a disqualified candidate a *Parliamentary Elections*. On the order of the day for the second reading of the *Selling and Hawking Goods on Sunday Bill* sent down from the Lords, Mr. W D. Seymour interposed on a question of privilege. The Bill originated in the Lords, but contained a clause respecting penalties, which he maintained related to money, and the measure ought, therefore, in accordance with the privileges of the Commons, to have originated in that House.—Mr. Bright moved that the order should be adjourned.—The Speaker said that as the question raised was one of privilege, he thought the best course to adopt would be to postpone the order.—Lord R. Montagu, who had charge of the Bill, consented, and the order for the second reading was postponed for a fortnight. The *Tithe Commutation Bill* passed through committee. The *Law of Property Bill*, as amended, was considered. On the order for going into Committee on the *Tenure and Improvement of Land (Ireland) Bill* a long discussion took place, embracing the history of the abortive attempts at legislation on this subject. At a late hour the House went into committee, and on reaching the 10th clause the Chairman was ordered to report progress. Other Bills were advanced a stage, and the House at 1 o'clock adjourned to Monday.

Monday.—*The Garibaldi Fund.*—Mr. Maguire asked whether a statement made in a Dublin newspaper to the effect that the Lord Lieutenant of Ireland had subscribed to the Garibaldi Fund was true.—Mr. Cardwell said that no such statement had appeared in the newspaper in question, and that the reference was not to the present Viceroy, but to a former one. *The Tax Bills Committee.*—Mr. Beamish asked when the report of the committee to inquire into the practice of each House of Parliament with regard to the bills imposing or repealing taxes, might be expected to be presented.—Mr. Walpole said that the committee had completed its examination and classified the analysis of precedents, and the report might be expected to be presented on Friday.—Mr. Hunt asked what were the intentions of Government as to the introduction of a measure for the prevention of *Corrupt Practices at Elections.*—Sir G. Lewis said that a Bill on the subject, founded on the report of the committee, had been in preparation, but there could be no hope of passing it in the present session. *Public Business.*—Lord Palmerston moved that on all future Fridays during the session Government orders of the day should have precedence of notices of motions. The motion was agreed to. *Promotion from the Ranks.*—On the motion that the House go into Committee of Supply, Mr. MacEvoy moved an address to her Majesty, praying that those officers in the army who have been promoted from the ranks may be allowed to reckon their previous services in the ranks, in the same manner as is now permitted to paymasters and quartermasters.—Colonel Dunne seconded the motion.—Mr. S. Herbert, in opposing the motion, pointed out the many advantages now enjoyed by commissioned officers rising from the ranks. They had no examination to pass, and were in receipt of liberal allowances. The motion was negatived without a division. *Cavalry Officers.*—Mr. Griffith moved a resolution that it is unjust to the officers of cavalry to make a stoppage from their pay for the forage supplied to the horses which they are required to keep for the performance of their regimental duty.—The Speaker ruled that the decision on the previous motion would not allow the motion to be put. *Ordnance Survey.*—Mr. Digby Seymour called attention to the position and pay of the civil assistants employed in the ordnance survey, and said that they were not paid with the same liberality used towards other persons similarly engaged in the service of the state.—Mr. S. Herbert questioned the accuracy of that statement, and contended that, all things considered, the men had been adequately paid. *The Papal Enlistment.*—Mr. E. James called attention to the enlistments now going on in Ireland to furnish the Pope with troops in Italy, and ask the Government what measure they had adopted to prevent this flagrant violation of the law. He protested against the open and indecent manner in which the Irish priests avowed their allegiance to the Pope, and set Government and Parliament equally at defiance. The terms of the Foreign Enlistment Act were clear and express; the Act itself had occasionally been suspended, but it had never before been directly and openly set at nought. The matter was exciting the attention both of this country and of Europe, and the Ministry were bound to declare that they intended to sanction the proceedings, or else to admit their incompetency to check them.—Mr. Cardwell said that when the movement was first made known to the Government, they issued, not a proclamation, but a police notice as to what the law really was, and what her Majesty's subjects were prohibited from doing. At the same time they gave orders to the constabulary to enforce the law. Reports had been regularly received by the Government, and as regularly submitted to the law officers of the Crown. But there had not been a single case on which those officers thought that a prosecution could be founded. The Government had done all that was possible for them under the circumstances.—Mr. V. Scully said that the Irish recruits had been so sumptuously treated in Italy, and had in consequence become so magnificent in their demands, that the Pope would probably end by requesting them to go home again. As to the question itself he protested against interference on either side, and against the insulting language held by Lord J. Russell towards the Papal Administration. The Government should act with impartiality, and pass proper measures for Ireland, and they would hear no more of Irish emigration.—Mr M'Mahon called on the Government, if they put down enlistment for the Pope, to put down at the same time the equally illegal subscription to Garibaldi.—Colonel Dunne called attention to the proceedings of the *Weedon Commission*, and complained of the expense attending it.—Mr. Turner, one of the commissioners, defended their conduct, and complained of getting nothing in return for their labour but the character of involving the country in unnecessary expense. He did not think the commissioners had been fairly treated either by the late or the present Government.—Mr S Herbert said that the Government entertained the fullest sense of the importance of the labours of the commissioners, and admitted that the payment of the expenses of their proceedings would be justified by the circumstances. The House then went into committee of supply, and agreed to a further series of votes on account of the *Army Estimates.*—In the discussion which ensued on the vote for *Small Arms*, Mr. S. Herbert stated that if the Whitworth were substituted for the Enfield rifle, the country must be prepared to incur an expenditure of ten millions; inasmuch as the former would cost 10*l* each, and the latter but 2*l*. 18*s*. As to the relative merits of the Armstrong and the Whitworth rifled ordnance, the Government had made an offer to Mr. Whitworth for the purchase of his invention.—On the vote for *Military Hospitals* Sir S. Northcote called attention to the Hospital at Netley. The total estimated cost of that hospital he said was 292,911*l*, the amount already voted was 235,000*l*.; the sum now proposed to be voted was 45,000*l*., and the further amount required was 25,299*l*., showing that the expense would exceed the estimate by 70,000*l*.—Sir J. Paxton said that the Hospital at Netley "was the most miserable and mismanaged public affair in the country." It was meant to accommodate 1000 men, and it would cost 400*l*. per man, while in a sanitary point of view it was a most improper site for a hospital.—Mr. S. Herbert admitted that Netley Hospital had not been spoken of a bit too severely. The building was as bad as the site. There were long corridors, deep rooms with windows at one end turning towards the north-east, and no side ventilation. Three years ago, when the plan was proposed, he protested against it, and a commission, of which he was then a member, reported against it, and he brought the matter before the House.—On the vote for *Barrack Accommodation*, Mr. B. Osborne moved that it be reduced by the sum of 5000*l*., proposed to be taken for gymnasiums and recreation grounds. The motion was rejected on a division by 154 to 18. The Chairman then reported progress. The *Phœnix Park Bill* passed through committee. In committee upon the *Anstruther Union Harbour Bill*, the Chairman was ordered to report progress.—Mr. Lowe, in moving the second reading of *Tenison's Charity Bill*, briefly explained its object. The Bill was read a second time. The *Criminal Lunatic Asylum Bill* was also read a second time. The consideration of the *Roman Catholic Charities Bill*, as amended, gave rise to a debate, which was ultimately adjourned. Leave was given to introduce certain Bills.

Tuesday.—At the morning sitting the *Tenure and Improvement of Land (Ireland) Bill* was considered in committee. On clause 10, giving a reference in case of disputes respecting improvements to the Court of Quarter Sessions, Lord Naas moved an amendment giving the reference to the Encumbered Estates Court. The Government consented to adopt the amendment, which was opposed by Colonel French, but after a division was adopted. Clauses up to 20 were then agreed to, and the Chairman reported progress. *The China War.*—At the evening sitting, in answer to Mr. Ayrton, the Chancellor of the Exchequer said that he had not as yet seen the supplemental estimate for China, but that as soon as it was brought under his notice he would lose no time in making a statement to the House.—In reply to Mr. Finlay, the Lord Advocate said that it was the intention of the Government to extend the provisions of the *Refreshment Houses and Wine Licenses Bill* to Scotland.—*Annexation of Savoy.*—In answer to Sir R. Peel, Lord J. Russell said that the despatch of M. Thouvenel might be expected in the course of the present week, and that until it was received he could not say whether or not a Congress would take place on the affairs of Switzerland. *Harbours of Refuge.*—Mr. Lindsay moved a resolution to the effect that, in the opinion of the House, it was the duty of her Majesty's Government to adopt at the earliest possible period the necessary measures to carry into effect the recommendation of the commissioners appointed in 1858 to inquire into the formation of harbours of refuge on the coasts of Great Britain and Ireland.—Mr. Farrer seconded the motion.—Mr. Baxter opposed it on the ground that it would be inexpedient for the House, without further consideration, to recommend a project which would involve, at the lowest estimate, an expenditure of 2,365,000*l*. He moved as an amendment the previous question.—Mr. Dodson said the loss of coasting vessels was attributable to the circumstance that the vessels were badly found and insufficiently manned. If the House were to agree to the present motion it would be called upon to protect the agricultural interest from hailstorms.—Mr. W. C. Talbot, Mr. Beecroft, Sir H. Verney, Mr. H. D. Seymour, Mr. H. Taylor, and Mr. Kendall, supported the motion; Mr. A. Smith opposed it.—Sir J. Pakington expressed his surprise that no member of the Government had risen to state the course they were prepared to adopt on this important subject. It was all very well to rejoin that there was no money applicable for the purpose; but, surely, if they could afford to reduce the duty on champagne and rich silks, they could find the means to prevent so lamentable a loss of life and property.—Mr. M. Gibson said that the Government were not indifferent to the subject, and that a Bill had been prepared with the view of carrying out some of the recommendations of the commissioners by the provisions of which the commissioners would be enabled to raise funds for the improvement of piers and harbours. The number and urgency of other measures had prevented him from introducing the Bill in the present session; but if any opportunity should occur he would bring it under the notice of the House.—Sir F. Smith said that, as an engineer, he was persuaded that the works could be carried out for the sums reported by the Commissioners. If these works could not be undertaken he recommended that, at all events, the bars at Carlingford and Waterford should be removed.—Sir M. Peto agreed with Sir Frederick Smith that the works recommended by the Commissioners were of a nature which could be very easily carried out.—Sir J. Elphinstone suggested that, as the Government was about to ask the country for 12 millions for fortifications, they might as well ask for 15 and make the harbours of refuge.—Lord Palmerston said that the Government objected to the motion, not from any indifference which they felt on the subject, or because they had not made up their minds upon it, but because it would commit the House blindfolded to all the recommendations of the committee, upon which a great difference of opinion existed. He assured the House that the subject had occupied and was occupying the attention of the Government, and that in the next session they would bring it forward in a shape ripe for practical consideration. On a division the previous question was rejected by 145 to 128.—Mr. Lindsay's motion was then put and agreed to. *Diplomatic Service.*—Mr. Duff moved for a select committee to inquire into the present condition of the diplomatic service and the best means of increasing its efficiency.—The motion was opposed by Lord J. Russell, and after some discussion was withdrawn.—Mr. Serjeant Deasy obtained leave to bring in a Bill for granting certain duties on *Wine Licenses and Refreshment Houses in Ireland*, and for regulating the licensing of such houses.—Mr. Lowe moved for a select committee to inquire and report what buildings are necessary for the *South Kensington Museum.*—Mr. John Locke thought the wording of the motion ought to be altered, and that the question referred to the committee should be whether the Museum should not be done away with altogether.—Mr. Dillwyn moved that the debate be adjourned; but after some discussion this motion was withdrawn, and the original motion, modified in its terms, was agreed to. The orders of the day were then disposed of.

Wednesday.—Mr. Ewart moved the second reading of the *Professional Oaths Abolition Bill*, the object of which was to abolish unnecessary oaths, particularly in reference to members of the legal profession.—Mr. Newdegate said he entertained strong objections to the Bill, and should move its rejection on the motion for going into committee.—Mr. A. Mills and Mr. Denman supported the Bill.—Sir G. Lewis said he attached very little importance to promissory oaths, and should therefore vote for the second reading.—Mr. S. Estcourt hoped that before the Bill was committed it would be submitted to the law officers of the Crown.—After a short conversation, in which Mr. Mellor and Mr. Henley and other members took part, the Bill was read a second time.—Lord Raynham moved that the House go into committee on the *Aggravated Assaults Act Amendment Bill*.—Lord Enfield said that the present law had not proved inoperative, and doubted whether, if a degrading punishment were awarded to a husband in cases of wife-beating, the injured persons would be willing to prosecute. He moved, as an amendment, that the Bill be committed that day three months.—Mr Hardy seconded the amendment, which was supported by Mr. Paull.—Mr. Ewart, as an opponent of the punishment of flogging altogether, said he should vote against the Bill.—After a few words from Colonel North, Sir G. Lewis said the Bill was contrary to the spirit of modern legislation, which had been to diminish rather than to increase the severity of punishment for criminal offences. Several of the metropolitan magistrates had expressed to him strong opinions as to the inutility of flogging, and believed that it would be most injudicious to protect the woman by degrading the man.—Mr. B. Carter said that if the Bill went into committee he should move that the punishment of flogging should only be inflicted in case of a second offence. After some further discussion the House divided, when the Bill was rejected by 74 to 57. The *Highways (South Wales) Bill* was read a second time.—Mr. Blackburn moved the second reading of the *Valuation of Lands (Scotland) Act Amendment Bill.*—Mr Black opposed the Bill, and moved that it be read a second time that day six months.—The Lord Advocate supported the amendment, and after some discussion the second reading was negatived on a division by 116 to 69.—Mr. Denman moved the second reading of the *Felony and Misdemeanour Bill*, the object of which was to assimilate the procedure in criminal cases to that now adopted in civil proceedings, and entitle counsel to sum up the evidence.—After a short discussion, in which the Bill received the support of the Solicitor-General and the Home Secretary, it was read a second time.—The adjourned debate on the second reading of the *Ecclesiastical Commission, &c., Bill*, was resumed by Mr. Henley, who supported the Bill and replied to the attacks made upon it on a previous day by Mr. Selwyn. He considered that it was neither a centralising nor a confiscatory measure, and denied that the amount of compensation which it would necessitate was so great as had been stated, or that the commissioners had been wasteful or extravagant in the management of the estates entrusted to their care.—Mr. G. C. Bentinck opposed the Bill, and was speaking when the hour for adjournment arrived. The debate was therefore again adjourned. The *Tramways (Scotland) Bill* passed through committee. The *Stipendiary Magistrates Bill* and the *Inland Bonding Bill* were read a second time.—The Chancellor of the Exchequer obtained leave to bring in a Bill to enable the *University of Oxford* to make statutes for the better regulation of professorships therein, and for other purposes.

Thursday.—*Indian Army.*—The adjourned debate on the motion for leave to bring in the *European Forces (India) Bill*, repealing so much of the Act of Victoria as enables the Secretary for India to raise men for the local European forces in that country, was resumed by Lord Stanley, who admitted that the Government had raised the question of the fusion of the Indian with the Imperial army in the simplest form, but complained that they had to discuss the subject before they were in possession of the details. In the course of a long speech he pointed out the impossibility that soldiers of the line should devote themselves to Indian service, the element of uncertainty which would be introduced, and the consequent danger that India would be deprived of those defenders best capable of serving her. He could not believe that officers new to the country could avoid giving offence to the natives and involving themselves in difficulties. So far from the existence of an Indian army being a course of discontent, they would be a source of trust and confidence to both countries. Should any dissatisfaction show itself it was far less likely to extend over two distinct forces than over a single force. He dwelt on the military knowledge and experience acquired in a long Indian service, which moreover, if kept separate, would attract to itself the men best fitted it. Adverting to the argument for the amalgamation, that jealousies existed between the two services, he admitted their existence, but contended that they were due to causes which could well be removed.—General Peel said that the evidence both for and against the question was very evenly balanced and Lord Derby's Government, of which he was a member, had decided in favour of a local force, but since that time his opinions had changed, from the force of late occurrences. He should therefore not only vote for the introduction of this Bill, but give it his cordial support.—Colonel Sykes and Sir D. L. Evans opposed the Bill; Mr. Peacock and Capt. Jervis supported it. Leave was then given to bring in the Bill. The *Poor Relief (Ireland) Bill* was read a second time. The *Local Board of Health Bill* and the *Local Government Supplemental Bill* were read a third time and passed. The *Anstruther Union Harbour Bill* and the *Inland Bonding Bill* passed through committee. On the order for the third reading of the *Caledonian and Crinan Canals Bill* Mr. W. Williams objected to the improvident outlay of public money which the measure would sanction, and moved that the Bill be read a third time that day three months.—The Chancellor of the Exchequer said that the Bill authorised no grant of public money, but on the contrary would relieve the public revenue from an annual drain of money for the canal in question. After some further discussion, the House divided, when the amendment was negatived by 98 to 47. The Bill was then read a third time, and passed. The *Law of Property Bill* was read a third time and passed. The *Burial Ground (Ireland) Act Amendment Bill* was read a second time. The *Criminal Lunatic Asylums Bill* was passed through committee. On the order for resuming the debate on the *Roman Catholic Charities Bill* as amended, the Attorney-General gave a detailed explanation of the legal effect of the amendments which had been introduced in the measure.—Mr. Henley said that no opportunity had been afforded for discussing the Bill, and moved that it should be recommitted. The motion was agreed to, and the House again went into Committee. Some discussion then took place on clause 1, the operation of which, it was urged, would have the effect of exempting Roman Catholic charities from the laws affecting the charitable institutions of other denominations.—Ultimately, on the Attorney-General agreeing to bring up a clause to meet the objection, the first clause was postponed, and the remaining clauses were agreed to.

Friday.—*Mines Regulation Inspection Bill.*—The House went into committee on this Bill, when Mr. Kinnaird proposed to insert in clause two words limiting the labour of children employed in mines to 10 hours daily.—Sir G. Lewis opposed the amendment, which was negatived on a division by 79 to 61.—Lord Lovaine moved the insertion of words which would allow coalowners to employ boys under 10 years of age till July 1, 1861.—Sir G. Lewis assented to the amendment, which was agreed to. Mr. Paget moved an amendment that five hours should be devoted to the education of boys on two, not consecutive, days in every week.—Mr. Clive opposed the amendment, which was negatived on a division by 131 to 69.—Mr. Bruce moved an amendment that the five hours might be taken at different times during the week. The amendment was negatived by 100 to 84. [Left sitting.]

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 93¼ to ⅜ for the Account; Three per Cents. Reduced, 93 to ⅛; New Three per Cents., 93 to ¼; Indian Five per Cent. Stock, 1859, 104⅝ to ¾ ex div.; Ditto Four per Cent. Debentures, 1858, 96½; Ditto 1859, 96½; India Bonds, 12*s*. to 7*s*. dis.; Exchequer Bills, par to 2*s*. prem.—Foreign: Brazilian Four and a Half per Cents., 1852, 87¼; Ditto for 1858, 88¼; Dutch Two and a Half per Cents., 66; Ditto Four per Cent. Certificates, 101⅛; Russian Four and a Half per

Cents., 97 to 96½; Ditto Three per Cents., 1859, 64; Sardinian Five per Cents., for Acct., 81½; Ditto New Deferred Three per Cents., for Acct., 39⅛; Ditto Passive, 18; Turkish Six per Cents, 1854, for Acct., 77¾ to 78; Ditto for 1858, for Acct., 60½ to 61.

Gazette of the Week.

TUESDAY—BANKRUPTS—J BAMFORD, Stainland, near Halifax, Yorkshire, Grocer—H. BOUGHEN, Norwich, Chemist and Druggist—J. G. BRETT, Hornchurch, Essex, Grocer and Draper—W. S. CHALKLEY, Liverpool, Shipowner, Coalowner, and Coal Merchant, Agent, and Money Scrivener—D. FRYER, Great George Street, Bermondsey, Jeweller, formerly of Crooked Lane, City, Umbrella and Parasol Manufacturer—J. GIBSON, Todmorden, Yorkshire, Manufacturer—J. HEALD, sen., and J. HEALD, jun., Eckington, Derbyshire, Shoemakers, Tea Dealers and Grocers, and Farmers—J. HUGHES, Liverpool, Licensed Victualler—H. MARSON, Ecclesfield, Yorkshire, Butcher—C. MAIDLOW, Alma Square, Hill Road, St. John's Wood, Builder, late of the Ponsford Arms, Hill Road, St. John's Wood, Beer Retailer—J. PAGET, Brierley Hill, Staffordshire, Licensed Victualler—W. G. SHARP, late of Northwich, Chester, Timber Merchant and Boat Builder, now of Edge Hill, Lancashire—M. J. STACEY, Leeds, Dealer in Tea and Tobacco.

BANKRUPTCY ANNULLED—W. NOAK, J. NOAK, and J. B. CLARK, Droitwich, Salt Manufacturers.

SCOTCH SEQUESTRATIONS—BANNERMAN and Co., Edinburgh, Drapers—M. M'TURK, Ayr, Contractor—R. WARNOCK, Dumbarton, Grocer.

FRIDAY—BANKRUPTS—J. B. BLACKBURN, Norwich, Currier—J. CHILTON, Stone, Staffordshire, Shoemaker—G. CURTIS, Landport, Hants, Licensed Victualler—J. FAULKNER, Commercial Road, Surrey, Cab Proprietor—T. HARRISON, Henley-upon-Thames, Oxfordshire, Tailor and Draper—W. HILLIARD, otherwise H. BEVIS, Burghclere, Southampton, Maltster—J. HOLLAND and S. H. HOLLAND, Birmingham, Printers—E. J. HOPKINS, Fishponds, Gloucestershire, Draper—J. MORGAN, Manchester, Clay and Mineral Merchant—W. REVILL, Sheffield, Cutler—J. TOMBS, Church Street, Westminster, Builder—J. YOUNG, Highbridge, Somersetshire, Draper.

BANKRUPTCIES ANNULLED—W. BEDFORD, Middlesex Street, Whitechapel, Baker—A. HASLAM, Manchester, Coach Proprietor.

SCOTCH SEQUESTRATIONS—J ARNOTT and Co., Glasgow, Warehousemen—D. CORMACK, Wick, Merchant—A. MILNE, Hilton, Dundee, Baker.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£30,150,985	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion	15,675,985
		Silver Bullion	
	£30,150,985		£30,150,985

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weigh Annuity)	£9,764,106
Rest	3,240,081	Other Securities	15,325,818
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	8,688,191	Notes	9,321,060
Other Deposits	12,115,000	Gold and Silver Coin	822,516
Seven day and other bills	640,228		
	£39,236,500		£39,236,500

21st day of June, 1860. M. MARSHALL, Deputy Cashier.

Metropolis and its Vicinity.

BI-CENTENTARY FESTIVALS OF THE GUARDS.—The 200th anniversary of the Grenadier Guards was commemorated on Saturday evening by a banquet in St. James's Palace under the presidency of the Prince Consort, as colonel of the regiment. His Royal Highness was supported by the Duke of Cambridge and nearly 200 noblemen and gentlemen who either are, or have been, officers of the regiment. In proposing the toast of "Prosperity to the Grenadier Guards," the Prince Consort pointed to the remarkable fact that the household troops have now for 200 years formed the permanent garrison of London, and have always been at the command of the civil power to support law and order; but have never themselves disturbed that order, or given cause of complaint either by insolence or licentiousness. The non-commissioned officers and privates are to be entertained at the Crystal Palace on an early day, depending on the arrival of the battalion stationed in Dublin.—The 200th anniversary of the Scots Fusilier Guards was commemorated on Tuesday evening by a dinner of the officers at Willis's Rooms, under the presidency of the Duke of Cambridge, colonel of the regiment, and on Wednesday by a dinner, given at the expense of the officers, to the non-commissioned officers and privates, in the centre transept of the Crystal Palace.

DEPARTURE OF THE GREAT EASTERN FOR NEW YORK.—The Great Eastern left Southampton on Sunday morning on her first voyage to New York, her intended departure on Saturday having been countermanded by a telegraphic message from London. She slipped her moorings at 8 A.M., and although the weather was both thick and stormy she proceeded rapidly down the Solent and through the Needles, the pilot leaving her three miles outside the Needles at 10.20. At 7 o'clock in the evening she passed Plymouth, and was apparently in a line with the Eddystone lighthouse at 20 minutes after 8. She then had four or more funnels smoking, both paddles and screw going, and no canvas set. After leaving in sight she seemed to hug the land so as to be better observed, and then steered a more southerly course, which took her three miles at least outside the Eddystone. She passed Falmouth about midnight, and was last seen at half-past 3 on Monday morning, about 14 miles from the Scilly Islands, "going ahead majestically and very fast."

WESTMINSTER BRIDGE.—The temporary wooden footway which has been constructed over the central arches of Westminster Bridge, to enable the entire removal of those arches to be effected, and to facilitate the works of the new bridge, is now open to the public, but is of course entirely confined to foot passengers.

VISIT OF THE FRENCH ORPHEONISTS TO ENGLAND.—Three thousand members of the Orphéon, an association of 170 Choral Societies of France, numbering more than 30,000 musical amateurs, and extending its branches through every department of France, will visit England next week to hold a great musical festival at the Crystal Palace, accompanied by the band of the Guides, which the Emperor has permitted to come over for the purpose. As this opportunity of impressing so large a body of our neighbours, many of whom come from the most remote parts of France, with correct, and it is hoped favourable, ideas of this country, may not soon recur, a highly influential committee, consisting of members of Parliament and others, has been formed to afford facilities for their visiting the public and other institutions of the metropolis. The committee will endeavour to obtain the admission of the Orphéonists to the principal public institutions on the production of their passports; and, as many of them are interested in commercial and industrial pursuits, to enable such of their number as may desire it to visit the most important industrial establishments in the metropolis. They will also endeavour to procure from the various railway companies facilities for excursions in the neighbourhood of London, and possibly to some of the manufacturing districts; and they hope to succeed in making the stay of the Orphéonists agreeable and instructive to themselves, and productive of good feeling towards this country when they return to their respective homes. The Orphéonists will arrive in London on the 24th inst., and remain till the 31st. The days fixed for the performances being Monday, the 25th, Tuesday, the 26th, and Thursday, the 28th, Wednesday, Friday, and Saturday will be unoccupied by the immediate object of their visit, and available for inspecting some of the features of interest in London and its vicinity.

CITY CHURCHES.—The inspectors of burial grounds, Messrs. Grainger and Holland, have sent in a report to the Home Secretary relating to the City churches. They state that the proposal for removing some of them, which has been made by the Rev. Charles Hume, is not to disturb any of the burial-grounds, but simply to take down such of the least used as may be determined upon. Messrs. Grainger and Holland are of opinion that if it be proposed to take down any church, and build warehouses, dwellings, or schools upon its site, the most satisfactory plan would be to remove the human remains beneath the churches to be taken down entirely, and reinter them in some appropriate place of sepulture. This course, they say, is not free from objection, and great care and expense would be needed to prevent danger and annoyance to the public and just cause of complaint to the friends of the dead. But with very careful management they believe that it would be possible to guard against them.

OPPOSITION TO THE PROPOSED MEAT MARKET IN SMITHFIELD.—A numerous meeting of carcase butchers, doing business in Newgate Market, was held a few days since to consider the provisions of the Bill now before Parliament for establishing at Smithfield a metropolitan market for meat, poultry, and other provisions. The chairman stated that the great objection to the Bill was the clause which imposed a toll upon all articles sold in it. A petition to Parliament was then unanimously adopted and signed by every carcase butcher in the market, expressing alarm and dismay at the provision which imposed a toll upon all articles brought to the market, the petitioners believing that such toll was unnecessary, inasmuch as the source from which the market should be supported should be from the rent paid by the occupiers and tenants; that the toll would be unjust and partial to such of the petitioners as became tenants or occupiers of shops in the market, as they would have to pay it in addition to a heavy rent on all the meat brought to their shops for sale. A public meeting of the meat salesmen and butchers of the metropolis has since been held, at which it was resolved to make every effort to prevent the imposition of the tax.

THE ENGLISH SHIPWRIGHTS IN FRANCE.—At the Thames Police Office on Monday a respectable mechanic waited upon Mr. Selfe, and stated that he was a shipwright who not being able to obtain work in England had obtained a recommendation for a passport at that court, and gone to Cherbourg in expectation of obtaining employment at 8*s.* per day. He was grievously disappointed. There were no ships building at Cherbourg, and not an English shipwright in the place. The British Vice-Consul had told him that the report of there being plenty of work for English artisans was a false one, and that he had relieved two destitute shipwrights from England, who had come over there on a similar errand, and sent them back again at the expense of the consulate. Mr. Selfe thanked him for the information, and said that he should not grant any more passports for English shipwrights to France.

DESTRUCTIVE THUNDERSTORM.—On Thursday evening, shortly after 6 o'clock, a terrific thunderstorm burst over the metropolis, and although short in its duration occasioned a considerable amount of damage, particularly in Clerkenwell and the northern suburbs. The storm lasted for about an hour.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London, which had fallen to 969 in the first week of the present month, rose to 1064 in the week that ended Saturday the 16th June. In the corresponding weeks of the 10 years 1850-9 the average number, after correction for increase of population, was 1070. The return of last week was therefore 6 below the average. During the week the births of 879 boys and 873 girls, in all 1752 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1495.

Provincial.

BRISTOL.—A large open-air meeting, principally of working men, convened by operatives in the employ of the Bristol and Exeter Railway Company and the Bristol United Gas Company, was held on the 13th inst. on Brandon Hill, to consider the best means to be adopted for lowering the present exorbitant prices of butchers' meat. The attendance was estimated at from 12,000 to 15,000, the great majority of whom, however, were spectators. The chair was taken by Mr. Gotheridge of the Red Cross Street Pottery, who stated that they were met to endeavour to do away with what they considered a painful monopoly. Mr. J. Thompson, one of the conveners of the meeting, moved the first resolution, declaring the opinion of the meeting "that the present high price of butchers' meat requires the careful consideration of every thinking man, and that some strong measures ought to be taken to reduce it to a fair and reasonable price." This resolution was seconded by Mr. E. Valentine, and unanimously carried. Mr. Godding moved the next resolution,—"That the working men of Bristol abstain altogether from purchasing any butchers' meat until the price of it is much reduced." This resolution was seconded by Mr. Gridley, jun., and also unanimously carried. Mr. W. Nott next addressed the meeting and denounced "jobbers" in general—the chandlers, the corn merchants, potato jobbers, &c. Mr. Wadge, who followed, moved a resolution to the effect that "the system of butchers contracting with persons annually, at a given price, for joints indiscriminately, is injurious to the working man; because when the price for meat rises beyond such contract prices they have only a choice of the coarsest joints; and while the working classes are deprived of their general necessary quantity of animal food, the parties contracting feel not the daily wants at their board consequent upon the present market prices, which have now risen to near a famine point as far as the labouring portions of society are concerned." Mr. John Hayward seconded the motion, and it was carried unanimously. The chairman next put a motion to the effect that a committee be appointed, consisting of a certain number of persons, including the chairman, with power to draw up a petition, and make the proper arrangements for its presentation to both Houses of Parliament, praying them to pass an Act prohibiting the slaughter of lambs or calves for sale before they had attained the age of eight months. This resolution having been carried it was unanimously resolved "to abstain from flesh meat until the price of prime joints was reduced to 7*d.*, second cuts 6*d.* and 5*d.*"

NORWICH.—The inquiry into the attempted proselytism of Master Vansittart was to have come on for further hearing on Monday, but, on Friday, on the application of Mr. Vansittart's solicitor, the magistrates ordered a further remand to the 25th inst., in order to give the police time to apprehend Father Euguiné, who is a Spanish Jesuit, and who can be identified by several persons in the village who saw him when he visited Master Vansittart at Rackheath. A special meeting of the Norwich magistrates was held on Wednesday to receive an important communication from the Chief Constable who had just returned from Brighton, where he had been in search of Father of Father Euguiné. The magistrates received the communication in private, and then announced that nothing had arisen to justify any departure from the course of proceeding already laid down, and the case would therefore come on again, as arranged, on Monday.

NOTTINGHAM.—Newstead Abbey, the celebrated home of Lord Byron, was offered for sale last week, at the auction mart, by direction of the executors of the late Colonel Wildman. The estate contains 3226 acres, a baronial residence, parks, lakes, terrace-gardens, the celebrated Abbey, an abundance of game, possesses great mineral wealth, and yields an annual income of 4185*l.* The first offer was 100,000*l.*; the biddings, by 1000*l.* at a time, gradually increased to 121,000*l.*, and, no higher offer being made, the sale was withdrawn, the reserved price being declared at 180,000*l.*

OXFORD.—The commemoration commenced on Saturday with the recitation of the Stanhope and Ellerton prize essays, by the successful competitors, Mr. Magrath, of Oriel, and Mr. Moberly, B.A., of Corpus. In the evening the University Amateur Musical Society gave a concert in the Town Hall, which was honoured by the presence of the Prince of Wales. On Monday a morning concert was given by Dr. Corfe in the Sheldonian Theatre, under the patronage of the Prince of Wales, who was present with his suite. The annual procession of racing boats took place on the Isis in the evening, when some thousands of spectators lined the banks on each side of the river. The Masonic ball to the Prince of Wales took place afterwards, and was one of the most brilliant gatherings of the kind ever seen in Oxford. His Royal Highness opened the ball with Miss Bowyer, daughter of Captain Bowyer, Provincial Grand Master for Oxfordshire and in the course of the evening the Prince danced with Viscountess Valletort, Miss Marsham, daughter of the Warden of New College, Mrs. Liddell, daughter of the Dean of Christ Church, Miss Gladstone, Hon. Miss Stanley, Miss Barclay, and Hon. Miss Barrington. On Tuesday morning the annual sermon in aid of the Radcliffe Infirmary was preached in St. Mary's Church by the Rev. Canon Stanley. In the afternoon the Oxfordshire Horticultural Society gave

its annual fête in Worcester College Gardens, to which additional interest was given to the show by a series of prizes given by the Prince of Wales for the best collection of vegetables grown by cottagers. In the evening the members of Christ Church gave a ball at the Town Hall, which was honoured with the presence of the Prince of Wales, and a private dress concert took place in Exeter College Hall. On Wednesday the Encœnia, or Commemoration of Founders and Benefactors, the great event of the week, took place in the Sheldonian Theatre, which was thronged at an early hour by members of the University, ladies, and strangers. At 11 o'clock the procession entered the theatre, the Prince of Wales, by virtue of his rank, taking precedence, followed by the Vice-Chancellor, the noblemen of Christ Church, in their full-dress gowns, the heads of houses, doctors, professors, and proctors. The Vice-Chancellor opened the proceedings in the usual way, and was only slightly interrupted by occasional cries from the Undergraduates, who cheered the Queen, the Prince of Wales, Lord Derby, the Bishops of Oxford and Exeter, Lord Palmerston, the Proctors, Charles Kingsley, the ladies, &c., and groaned at the names of the Pope, the King of Naples, the Emperor, Lord John Russell, Mr. Gladstone, Mr. Bright, the Radicals, the present Ministry, the Bishop of London, the *Times* newspaper, the *Record*, and the Penny Press. The honorary degree of D.C.L. was then conferred upon Count Platen, the Swedish Ambassador; Lord Brougham, who was received with great applause; Count Strzelecki, Sir R. Bethell, Sir Leopold M'Clintock, and Mr. Mottley, the American historian. An honorary M.A. degree was also conferred on the Rev. J. P. Harris, chaplain at Lucknow during the siege. The Crewian Oration was then recited by Mr. Arnold, the Professor of Poetry, and the prizes were then rehearsed in the following order:—the English Essay, by Mr. Holland, of Exeter; the Latin Essay, by Mr. Broughton, of Balliol; the Newdegate, by Mr. Symonds, of Balliol; and the Garsford (verse) prize, by Mr. Chute, of Balliol. The proceedings closed with the Masonic Musical Fête in St. John's Gardens.

PENZANCE.—Some extraordinary catches of mackerel have been made recently on the Cornish coast. In Mount's Bay in one night about 60 boats took about 1000 per boat, making a total of 60,000. They were the finest fish that have been caught this season. On another night the average was still larger—1500 per boat, some of the fish weighing 3 lbs. each. The quantity of fish at St. Ives' for one week has been estimated at about 3000*l.* value. At Porthleven the driving boats during the week have brought on shore about 5000 fish.

PORTSMOUTH.—The Granger transport from the Cape of Good Hope, with 169 invalided soldiers from various regiments serving at the Cape and from the Indian hospital depôt there, 17 women, and 39 children, after entering the Needles passage late on Saturday evening, ran ashore nearly opposite Hurst Castle. The greater number of the women and children, with five men, were landed during the night and sent round to the village of Yarmouth. The troops on board, with the remainder of the women and children, arrived at Portsmouth on Sunday afternoon in a steam-tug, which also brought the cabin passengers and invalids consisting of Lieut. Rourke, Cape Mounted Rifles, in military charge of the troops on board; Surgeon Montgomery, in medical charge; Mrs. Montgomery and four children; Mrs. Thompson, widow of the late Lieut. Thompson, 19th Regiment, and two children; and Mr. Rourke.

ROCHESTER.—The ceremony of enthroning the Right Rev. Dr. Wigram, the newly consecrated Bishop of Rochester, was performed in the cathedral of his diocess on Monday the 11th inst., in the presence of a large number of the clergy and laity. His lordship, on arriving at the cathedral, was conducted to the chapter-room, where he was invested in his episcopal robes, and a procession formed, consisting of the choristers, lay clerks, minor canons, the Chapter, and the Bishop, who was attended by his apparitor, registrar, and secretary. After leaving the chapter-room, the procession crossed St. Edmund's Chapel, and passed down the south aisle, to the great doors at the western entrance, and after passing up the middle aisle entered the choir in the same order, the Bishop being conducted to his throne by the capitular body. Prior to taking his seat on the throne the oaths of allegiance and abjuration were administered to his Lordship, as well as the oath to maintain the rights and privileges of the cathedral. The usual afternoon service was then proceeded with. It is said that Dr. Wigram is the first Bishop who has been enthroned at Rochester for nearly 100 years, the records of the cathedral showing that the former holders of the see were in the habit of being enthroned by proxy.

SHEFFIELD.—The present high prices of butchers' meat have given rise to much dissatisfaction in this as in many other towns, and advertisements have been inserted requesting the inhabitants to "discontinue the consumption of meat until it is reduced to a reasonable price." The workmen of the following firms have signified their determination to "abstain from the use of meat until there is a reasonable reduction in the price of it":—Messrs. Cammell & Co., Cyclops Steel Works; Messrs. Kenyon & Co., Middlewood Works; Messrs. Stanley & Co., Midland Works; and Messrs. Round & Son, Tudor Works. The number of men employed at these works amounts to upwards of 3000.

WINCHESTER.—Robert Simpson, a private in the 60th Rifles, was brought before the Mayor on the 6th inst. from the military hospital, charged with cutting and wounding Sophia Rowe with a razor on the 12th May, with the intent to murder her. The prosecutrix, a young woman who has been from that date an inmate of the County Hospital, deposed to the main facts as they were reported at the time, admitting that she brought the razor at the prisoner's request, and asked him to cut her throat. The evidence showed an extraordinary amount of profligacy on the part of the prisoner and the prosecutrix, as well as of a girl who slept with them at a public-house called the Painters' Arms in Sussex Street. The prisoner when called upon for his defence said he did not know what he was doing at the time. He was fully committed for trial at the assizes, but before being removed was allowed to shake hands with all the parties concerned, which he did apparently to their satisfaction.

YORK.—At the recent monthly meeting of the City Council, the project of removing the West Riding business of the Yorkshire Assizes from York to either Leeds or Wakefield was brought under consideration. Alderman Leeman moved that a memorial be presented to the Home Secretary by a deputation from the Council against the removal of the assizes from York. Alderman Husband seconded the resolution, and it was adopted unanimously.

Ireland.

THE PAPAL ENLISTMENTS.—The *Nation*, "on authority," advises that for the present the agents of the Papal movement through the country should suspend their operations. It says that a greater number of "emigrants" have already arrived at Ancona than the Pope's officers can accommodate or reduce to a state of discipline. Irregularities have occurred in consequence, and to bring matters into order it is declared to be absolutely necessary to send no more men from Ireland for the present. In spite of this order the volunteering shows no sign of abatement in several parts of the country. The movement has extended to the western province, and it is announced that about 100 young men of Galway are preparing to leave. Some of them have written to Rome to know whether the Irish soldiers in the Pope's service will form an Irish brigade and be drilled and manœuvred in the English or Irish language. They desire, if possible, to make this a condition of joining the Papal army. The total strength of the Irish recruits now in Italy is said to be 900, the remaining portion of the Irish in the Papal ranks being American. The city of Dublin has supplied above 200, and Limerick has furnished the largest contingent among the counties.

ORDER OF ST. PATRICK.—The Lord-Lieutenant held a chapter of the Order of St. Patrick on the 13th inst. in Dublin Castle, when the Earl of Cork was invested with the insignia of a Knight Companion. The new knight, who is an officer of the Cork Militia Artillery, is the most youthful member of the Order.

Law.

JUDICIAL COMMITTEE OF THE PRIVY COUNCIL.—*The St. Barnabas Dispute.*—An application was made yesterday to the Lords of the Privy Council, the object of which is to ensure the carrying out of the judgment pronounced by the Court in the case of "Liddell *v.* Beal," with regard to the altar and ornaments in the church of St. Barnabas, Pimlico. It was stated that a monition was issued on the 5th April, 1857, to the then churchwardens, Messrs. Parke and Evans, who had failed to carry out its directions. These gentlemen had ceased to be churchwardens, but as the churchwardens were a corporation, it was contended that the monition was directed to them in their corporate capacity, and not as private individuals, and that therefore it should be amended by the insertion of the names of the existing churchwardens. Their lordships granted the application, the effect of which is that the monition referred to will now be addressed to the present churchwardens of St. Barnabas.

Obituary.

GENERAL SIR ROBERT JOHN HARVEY, Colonel of the 2d West India Regiment, died on the 18th inst. at his residence, Mousehold House, near Norwich. He entered the army 57 years since, his commission as ensign being dated in 1803. He served as Assistant Quartermaster General of the British and Portuguese armies in Portugal, Spain, and France, from 1809 to the close of the Peninsular war in 1814, and was present at the passage of the Douro, the action at Busaco, at the second siege and storming of Badajoz, at the sieges of Ciudad Rodrigo and Burgos, and at the battles of Salamanca, Vittoria, the Pyrenees, Nivelle, Nive, Orthes, and Toulouse. From 1809 to 1811 he was employed in procuring intelligence of the enemy's movements in advance of the army in organising nine Portuguese militia regiments, and in resisting the attempts of the enemy to pass the Lagos at Ciudad Rodrigo, and from 1811 to 1814 he was the organ of communication between the Duke of Wellington and the Portuguese troops. In 1815 he was appointed Colonel and the Portuguese troops. In 1815 he was appointed Colonel of the 2d West India Regiment. He received the gold medal for the battle of Orthes, the silver Peninsular medal with nine clasps, and was also a Commander of St. Bento d'Avis and Knight of the Tower and Sword of Portugal.

GENERAL JOHN MACKENZIE, the oldest officer in the British army, died on the 14th inst. at Inverness, in his 97th year. He entered the army in his 15th year, as lieutenant in the 73d Foot, and in 1782 became a captain. On the 73d and the 78th Highlanders, or Ross-shire Buffs, in 1793, he obtained the appointment of captain, and in two years rose to be major and lieutenant-colonel. He served in the campaigns on the Continent, including the actions on the Meuse, the Rhine in 1794 and 1795. He afterwards served in Sicily, Egypt, India, and Spain. In 1802 he attained the rank of brevet-colonel, in 1809 that of major-general, and in 1814 that of lieutenant-general. In 1837 he became a general officer. He was a brave impetuous soldier, and was known among his companions at arms by the *sobriquet* of "Fighting Jack."

REAR ADMIRAL EDWARD HAWKER died on the 8th inst, in his 78th year. He entered the navy as a midshipman when 10 years of age, and was made a lieutenant at the early age of 13. He saw a great deal of service during the French war, in the Channel, the West Indies, the Cape of Good Hope, the coast of Spain, and North America. He was present at the capture of Guadaloupe, and was afterwards captain of the Bellerophon and Salisbury line-of-battle ships, bearing the flag of Sir Richard Keats. In 1827 he was appointed flag captain to the Earl of Northesk, Commander-in-Chief at Plymouth, first in the Britannia, 120, and then in the St. Vincent, 120. In 1830 he went on half-pay, and attained flag rank in 1837. In 1858 he accepted the "good service pension," vacant by the death of Admiral Lord Aylmer.

THE REV. BADEN POWELL, Savilian Professor of Geometry in the University of Oxford, died at his residence in Stanhope Street, Hyde Park Gardens, on the 11th inst. He was educated at Oriel College, Oxford, and graduated in 1817, when he was first-class in mathematics. He was appointed Savilian Professor in 1827. He was well known in Oxford and elsewhere on account of the freedom of his views on religious matters, and was an active member of the National Anti-Sunday League Society, established under the presidency of Sir Joshua Walmsley, for promoting the opening of museums, the Crystal Palace, and similar places of amusement on Sundays. He was a voluminous writer, his principal works being "Essays on the Spirit of the Inductive Philosophy," "The Unity of Worlds and the Philosophy of Creation," "Christianity without Judaism," "Revelation and Science," "The Connection of Natural and Divine Truth," "Free Inquiry and Religious Liberality," "The Law and the Gospel;" and various articles in Kitto's "Cyclopædia of Biblical Literature." He married the eldest daughter of Rear-Admiral Smyth, by whom he has left a family of 11 children, the youngest of whom was born little more than a week before his death.

BIRTHS.—On the 3d ult, at Rome, the Viscountess KYNNAIRD (Marchioness Bandini Giustiniani), of a son and heir—3d inst, at Killeen Castle, the Lady KILLEEN, of a daughter—17th inst, at 3, Hamilton Place, the Lady ADELIZA MANNERS, of a son—15th inst, at 61, Fitzwilliam Square, Dublin, the Lady CAREW, of a son and heir—11th inst, at Acton Reynell, Shropshire, Lady CORBET, of a daughter—20th inst, at 23, Thurloe Square, the Lady ANNE SHERSON, of a son—17th inst, at Portugal Street, Grosvenor Square, Lady KATHLEEN TIGHE, of a son—18th inst, at Hastings, the Hon. Mrs. ADOLPHUS GRAVES, of a son—19th inst, at 20, Manchester Square, the Hon. Mrs. MITFORD, of a son—17th inst, at Duffryn, Aberdare, the wife of H. A. BRUCE, Esq., M.P., of a daughter.

MARRIAGES.—On the 14th inst, at St. Peter's Church, Pimlico, RICHARD HENRY MAGENIS, Esq., Brevet-Major and Captain 32d Light Infantry, eldest son of the late Colonel Magenis, to Lady LOUISA ANN LOWRY-CORRY, eldest daughter of the late Earl of Belmore—7th inst, at St. Paul's Church, Valetta, the Hon. VICTOR HOULTON, Chief Secretary to the Government, to HYACINTHE HARRIETTE, only daughter of the late RICHARD WELLESLEY, and granddaughter of the late Marquis Wellesley—10th inst, at St. George's, Hanover Square, THOMAS F. SCRYMSOURE FOTHRINGHAM, Esq., of Fothringham and Powrie, in the county of Forfar, to the Lady CHARLOTTE CARNEGIE, daughter of the late Sir James Carnegie, Bart., and sister of the Earl of Southesk—14th inst, at St. John's Church, Hyde Park, the Baron VON BARNEKOW, to ANNA YOUNG, sister of the Right Hon. Sir John Young, Bart, of Bailieborough Castle, county Cavan—13th inst, at St. Andrew's Church, Aberdeen, CHARLES MURRAY BARSTOW, Esq., to ELIZABETH CAIE, second daughter of the late Sir ALEXANDER RAMSAY, Bart., of Balmain—14th inst, at St. George's, Hanover Square, RICHARD BENYON BERENS, Esq., of Kevington, in the county of Kent, to FANNY GEORGINA, daughter of ALEXANDER ATHERTON PARK, Esq., of Wimpole Street.

DEATHS.—On the 18th inst, at 13, Campden Grove, Kensington, Major-General GRANTHAM, late of the Royal Artillery, aged 73—14th inst, at 19, Fitzroy Square, Lieut.-General SAMUEL GOODFELLOW, of the H.E.I.C.'s Bombay Engineers, aged 85—15th inst, at Brompton, Chatham, Kent, Major JAMES MACDONALD, late Paymaster of East India Depots, aged 86—14th inst, at Stevenson, Haddington, ANNE ELIZABETH, eldest daughter of Vice-Admiral Sir JOHN GORDON SINCLAIR, Bart.—12th inst, suddenly, at Paris, MARIA DOLORES, wife of Vice-Admiral GRENFELL, I.B.N., Consul-General of Brazil, of 15, Wellesley Terrace, Liverpool—15th inst, at Tyringham, Bucks, ELIZABETH, widow of the late Captain RICHARD HOARE, R.N., and daughter of the late William Praed, Esq., aged 71—7th inst, at Naples, LEWIS JOHN BARBAR, Esq., her Britannic Majesty's Consul for the Island of Candia, aged 37—10th inst, at Canterbury, WILLIAM PIERS ORMEROD, Esq., F.R.C.S., late one of the Surgeons of the Radcliffe Infirmary, Oxford, and fifth son of Geo. Ormerod, Esq., D.C.L., of Sedbury Park, Gloucestershire, aged 42—18th inst, at his residence, 53, Eaton Square, SETH SMITH, Esq., aged 68—14th inst, at 1, Heathcote Street, Gray's Inn Road, the Rev. THOMAS BAGNALL BAKER, for many years Incumbent of Woburn Chapel, St. Pancras, aged 54—17th inst, at 32, Chesham Place, ELIZABETH SARAH, the wife of ABRAHAM GEORGE ROBARTS, Esq.—15th inst, at Dunoon, MARGARET M'LACHLAN, wife of DAVID ROBERTS, Esq., R.A.

Markets.

POTATOES.—SOUTHWARK, MONDAY, June 18.

During the week the arrivals coastwise have been light, and trade better, at the following quotations:—Yorkshire Regents, 90s. to 130s.; do. Flukes, 110s. to 140s.; Lincolnshire Regents, 90s. to 110s.; Dunbar Reds, 110s. to 120s.; Perth, Forfar, and Fifeshire Regents, 90s. to 100s.; do. Reds 90s. to 100s.; Irish Whites, 70s. to 80s.

COAL MARKET.—JUNE 21.

Byass's Bebside West Hartley, 10s. 6d.; Buddle's West Hartley, 16s. 6d.; Howard's West Hartley, 16s. 6d.; Tanfield Moor, 13s. 6d.; Ward's West Hartley, 15s. 6d.; Wylam, 16s. 6d.; Walls End Harton, 17s. 6d.; Walls End Branton, 18s.; Walls End Hetton, 19s.; Walls End Cassop, 18s. 6d.; Walls End North Hartlepool, 16s.; Walls End Stanclife, 17s. 6d.; Walls End South Hartlepool, 17s. 6d.; Walls End South Kelloe, 18s. 6d.; Wall End South Whitworth, 17s. 6d.—83 ships at market.

BUTTER MARKET.—June 16.

Best Fresh Butter .. .. 15s. per dozen lbs.
Second do. do. .. .. 12s. .. "
Pork, 5s. 6d. to 6s. 4d. per 8 lbs.

COVENT GARDEN.—June 20.

Cabbages are now excellent in quality, and the market is overstocked with Lettuces. Prices for Vegetables generally are becoming more moderate. French produce continues to be imported. Grapes have not altered since our last report. Apricots, Pears, and other fruits from the South of France have just made their appearance. Strawberries are tolerably plentiful. Cob Nuts realise 1s. per lb. Green Gooseberries fetch 6d. a quart. Peas and Broad Beans may now be obtained. New Potatoes may be had at from 2d. to 4d. per pound

Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Azaleas, Heaths, Primulas, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 9s	Cherries, p. lb., 1s to 3s
Grapes, per lb., 4s to 10s	Green Figs, per doz., 3s to 12s
Strawberries, p. lb., 4s to 8s	Melons, each, 6s to 10s
Peaches, per doz., 15s to 24s	Apples, per doz.. 2s to 6s
Apricots, per doz., 2s to 4s	Oranges, per 100, 2s 6d to 8s
Nectarines, do., 12s to 18s	Lemons, per 100, 5s to 8s

VEGETABLES.

Asparagus, p. bundle, 2s to 4s	Artichokes, per doz , 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 1s to 1s 6d	Celery, per bundle, 2s to 3s
Peas, p. bush., 4s to 6s	Onions, p. half sieve, 3s
Cauliflowers, each, 6d to 8d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 6d to 8d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d to 7d	Mushrooms, p. pott., 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 3s
Cucumbers, each, 9d to 1s 6d	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, June 21.

Prime Meadow Hay	76s	to 80s	Clover	95s	to 118s
Superior do. (old) ..	84	100	New Clover	—	—
Inferior do.	60	70	Second cut do. ..	84	95
New do.	—	—	Straw	28	34
Rowen	60	70			

DAVIS & Co.

WHITECHAPEL, THURSDAY, June 21.

Fine old Hay	95s	to 100s	Fine old Clover ..	115s	to 120s
Inferior do.	80	90	Inferior do	80	100
Prime New Hay ..	—	—	Fine New Clover ..	—	—
Inferior do.	—	—	Fine 2d cut	95	100
traw	28	32	Inferior do.	80	84

BRITISH WOOLS.—LONDON, FRIDAY, June 22.

There has been some business transacted with the farmers by the woolstaplers and country dealers during the last few days. The prices have been on the advance, occasioned by the serious deficiency both in the number and weight of the fleeces shorn in comparison with previous years, which circumstances have operated towards raising the views of buyers and sellers. 1s. 8d. to 1s. 9d. have been currently paid for flocks, and many farmers refuse to sell under 1s. 10d. to 2s. per lb. These prices are considered exorbitant by the purchasers and are resisted, although no one can shut his eyes to the probability of scarcity before another clip should anything like the present rate of consumption continue throughout the coming year. The deficiency is calculated by some at 30 per cent., but if we take 20 per cent. we shall, perhaps, be nearer the mark, and this would make more than 10 weeks' ordinary consumption deficient. In conclusion, it is evident that for the present season the price of wool must rest with the farmers themselves. With a short supply they may command good prices if they have wisdom to supply the manufacturers as their requirements demand; but if this year's clip is all to be pushed into the market in July at the wool fairs, it must be bought at a price to pay speculators to hold it for the wants of the coming year.

METROPOLITAN CATTLE MARKET.

MONDAY, June 18.

The number of Beasts is about the same as Monday last. Quotations remain unaltered. The supply of Sheep is much shorter, rather higher prices are consequently obtained. Trade, however, is not very brisk. Calves and Lambs are selling about the same as on Thursday. From Germany and Holland there are 340 Beasts, 5100 Sheep, and 241 Calves; from Scotland, 26 Beasts; from Norfolk and Suffolk, 2800; and 150 from the northern and midland counties.

	s	d	s	d
Best Scots, Herefords, &c. ..	5	6	to 5	8
Best Short-horns	5	4	— 5	6
2d quality Beasts	4	8	— 5	0
Best Downs and Half-breds			to ..	
Do. Shorn ..	5	6	— 5	10

	s	d	s	d
Best Long-wools. ..			to ..	
Do. Shorn ..	5	4	— 5	6
Ewes & 2d quality ..			— .	
Do. Shorn ..	4	8	— 5	0
Lambs	6	0	— 7	0
Calves	4	8	— 5	4
Pigs	4	0	— 5	0

Beasts, 3730; Sheep & Lambs, 25,080; Calves, 319; Pigs, 620.

THURSDAY, June 21.

We have again a very short supply of Beasts, and trade for them is brisk; late prices are consequently well supported. Although the number of Sheep is not much larger, trade is depressed, and it is difficult to realise Monday's quotations. Good Calves and Lambs are not very plentiful, and meet with a ready sale. Our foreign supply consists of 240 Beasts, 2530 Sheep, and 280 Calves; from Norfolk and Suffolk, 400 Beasts; and 140 Milch Cows.

Best Scots, Herefords, &c. ..	5	6 to 5	8	Best Long-wools . ..	to ..
Best Short-horns	5	4 — 5	6	Do. Shorn ..	5 0 — 5 4
2d quality Beasts	4	8 — 5	0	Ewes & 2d quality ..	— ..
Best Downs and Half-breds		—	..	Do. Shorn ..	4 6 — 4 8
Do. Shorn ..	5	6 — 5	8	Lambs	6 4 — 7 0
				Calves	4 10 — 5 6
				Pigs	4 0 — 5 0

Beasts, 1090; Sheep & Lambs, 11,660; Calves, 509; Pigs, 210.

MARK LANE.—MONDAY, June 18

The supply of Wheat from Essex and Kent to this morning's market was small, and being held for higher rates little progress was made with the sale up to a late hour. The market was well attended by country millers, whose transactions appeared to be curtailed by the fineness of the weather, and only a retail business resulted in foreign at our last week's quotations. Barley is a steady sale at last week's rates. Beans are scarce and rather dearer Peas unaltered in value. The Oat trade is quiet, and inferior or out-of-condition parcels are 1s. per qr. cheaper. In Flour there is but little doing, and country marks are rather easier.

PER IMPERIAL QUARTER.

		s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..	White	55	61	Red	53	57
— —	fine selected runs..ditto	55	62	Red	56	61
— —	Talavera	58	63			
— Norfolk		—		Red	—	
— Foreign		52	65			
BARLEY, grind. & dist., 24s to 31s..	Chev.	38	45	Malting.	36	41
— Foreign..grinding and distilling		28	36	Malting.	35	40
OATS, Essex and Suffolk		19	26			
— Scotch and Lincolnshire..	Potato	23	30	Feed ..	19	27
— Irish	Potato	24	30	Feed ..	19	25
— Foreign.....Poland and Brew		26	29	Feed ..	22	28
RYE		35	38	Foreign.	—	
RYE-MEAL, foreign.....		—				
BEANS, Mazagan....32s to 40s....	Tick	34	43	Harrow.	34	43
— Pigeon .....36s — 47s..	Winds	48	54	Longpod	—	
— Foreign	Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent ..	Boilers	38	40	Suffolk .	36	41
— Maple .... —s to —s	Grey	32	34	Foreign.	30	40
MAIZE	White	—		Yellow..	—	
FLOUR, best marks delivered..	per sack	48	54			
— 2d do.	ditto	40	48	Country.	40	48
— Foreign	per barrel	25	32	Per sack	30	37

FRIDAY, June 17.

The weather during the last eight days has again been wet, but less so northward than here. The Wheat crop is generally represented as two or three weeks later than usual, and as looking, thin, yellow, and sickly in many important districts. Barley is also much complained of. The trade having generally purchased Wheat very largely during the past fortnight there has been less activity during the present week; and although holders resist a decline in prices, the extreme rates previously realised have not been obtainable, either here or in several other important markets of the kingdom. In the different kinds of spring corn no alteration of value requiring comment has occurred, but in a few markets there has been a slight tendency to decline. Flour has also been in limited request, and prices for country marks are rather easier. Very little f. o. b. business from the Baltic has been transacted this week, prices there being quite out of proportion to ours, and confidence supported by the receipt of orders from France and Belgium. The arrivals of English grain this week are very small, of foreign Wheat good, and of Oats and Barley considerable. A part of the English Wheat left over from Monday has been sold at that day's prices, and factors declining to take less a portion remained unsold late in the day.

ARRIVALS FROM June 18 TO June 22.

	Wheat.	Barley.	Oats.	Flour.
English ..	780 qrs.	50 qrs.	— qrs.	2730 sks.
Irish	— ,,	— ,,	1910 ,,	— ,,
Foreign ..	23190 ,,	7760 ,,	82370 ,,	5280 ,,
				— orls.

LIVERPOOL, Tuesday, June 19.—We had a good attendance of both millers and dealers at our Corn Exchange this morning, and Wheat has met a steady consumptive sale at the currency of last market day. Flour on the contrary had less favour, and may be called a trifle easier. Indian Corn was only in retail demand, and all sorts may be written 6d. per qr. cheaper than on Friday, with the exception of white, which being now less freely offered was the turn better. Oats and Oatmeal had each a steady retail sale at previous rates. No alteration to notice in Beans, Peas, or Barley. There were one or two anxious sellers of Wheat at the commencement of market, but these being cleared out we closed with a firmer tone.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
May 16..	52s 6d	37s 7d	25s 10d	34s 1d	43s 8d	40s 3d
— 19..	52 1	36 6	25 3	36 2	44 3	39 5
— 26..	52 6	36 2	26 6	37 3	44 8	40 9
June 2..	53 4	35 10	26 8	39 3	44 1	41 0
— 9..	54 2	35 0	27 8	38 1	45 9	40 8
— 16..	54 11	35 3	26 11	37 0	46 2	40 4
Agg. Aver.	53 3	36 1	26 6	37 0	44 9	40 5

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	May 12.	May 19.	May 26.	June 2.	June 9.	June 16.
54s 11d	..	..	..	..	..	
54 2	..	..	..	..		..
53 4	..	..	..		..	..
52 6				..	..	..
52 1	..		..	..	..	..
..	.	..	..	..	..	..

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PITT SKIPTON, Honorary Secretary.

Derry, June 16.

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News of the Week.

IN the House of Lords on Monday Lord STRATHEDEN moved an address to HER MAJESTY for the appointment of a Consul at Mozambique, for the purpose of promoting the interests of commerce, and the execution of the treaties between this country and Portugal for the suppression of the slave trade. Lord WODEHOUSE opposed the motion, which was carried, on a division, against the Government by a majority of 5, the numbers being 11 to 6. On Tuesday the Archbishop of YORK moved the second reading of the Ecclesiastical Commission Bill, the object of which is to provide that the money paid by the see of Durham to the Ecclesiastical Commissioners shall be expended for the benefit of the miners and poorer classes of that diocess, instead of being applied to the ecclesiastical purposes of the whole kingdom. After a long discussion the Bill was read a second time. On Thursday the Marquis of CLANRICARDE moved for a committee to inquire whether breakwaters and harbours cannot be constructed on a plan less costly and better adapted for certain localities than the system of solid masonry hitherto in use, and whether any such plan can be rendered serviceable for our national defences. Earl GRANVILLE said that the Government had no objection to the committee if the motion were renewed in a more formal manner

and after the usual notice. Lord CLANRICARDE adopted this suggestion, and withdrew his motion for the purpose of renewing it on a future day.

In the Commons on Friday the Mines Regulation and Inspection Bill was further considered in committee. On clause 2 Mr. KINNAIRD moved to restrict the labour in mines of children between 10 and 12 years of age to 10 hours a day. On a division, the amendment was negatived by 79 to 61. On the order for going into committee on the Savings Banks and Friendly Societies Investments Bill, Mr. COLLINS moved that the Bill be committed that day three months. On a division, the amendment was negatived by 92 to 65, and the House went into committee on the Bill. Sir H. WILLOUGHBY then moved the postponement of the first clause. After a prolonged discussion the motion was negatived on a division by 73 to 49. The Chairman was, however, ordered to report progress before the clause was finally agreed to. On Monday the report from the committee on the Bankruptcy and Insolvency Salaries Bill having been brought up, Sir H. WILLOUGHBY moved as an amendment that the word "compensation" should be struck out of the Bill. On a division the amendment was carried by a majority of 111 to 98. The ATTORNEY-GENERAL then said that after this decision it would be impossible to proceed with the Bankruptcy and Insolvency Bill, which was the next order of the day, but he was willing to give the House an opportunity of reversing its vote. After some discussion on the inexpediency of withdrawing the Bill, the debate, at the suggestion of Sir G. GREY, was adjourned. The Refreshment Houses and Wine Licenses (Ireland) Bill was read a second time. The adjourned debate on the second reading of the Ecclesiastical Commission Bill was resumed, when Mr. SELWYN withdrew his amendment with the intention of renewing it in committee, and the Bill was read a second time. The consideration of the Mines Regulation and Inspection Bill was resumed in committee, when the remaining clauses were agreed to. On Tuesday Mr. CONOLLY moved two resolutions censuring the recent appointments made by Lord CARLISLE as Lord-Lieutenant of Ireland, referring especially to that of Mr. LYLE to the lieutenancy of Londonderry, and that of Mr. TENISON to the lieutenancy of Roscommon. After considerable discussion the motion was negatived without a division. Mr. HENNESSY moved an address to HER MAJESTY praying that steps may be taken to relieve the distress in Erris, and other parts of Ireland. The motion was negatived on a division by 84 to 49. Mr. S. HERBERT obtained leave to bring in a Bill to amend the laws relating to the Militia; Sir G. LEWIS obtained leave to bring in a Bill to make better provision for preventing corrupt practices at elections; and Mr. CLIVE obtained leave to bring in a Bill to amend the Local Government Act. On Wednesday the Labourers' Cottages (Scotland) Bill, and the Bleaching and Dyeing Works Bill passed through committee. On Thursday, on the motion for the second reading of the European Forces (India) Bill, Mr. A. MILLS moved as an amendment that the Bill be read a second time that day three months. After a long discussion Mr. RICH moved the adjournment of the debate. On a division the motion was negatived by a majority of 262 to 83. Mr. DANBY SEYMOUR then moved the adjournment of the House, which was negatived on a division by 229 to 51. Mr. HENNESSY then moved the adjournment of the debate, which was negatived by 190 to 43. Mr. A. MILLS then moved the adjournment of the House. Lord PALMERSTON said that from consideration for the Speaker he would not prolong the contest, and the debate was then adjourned.

A despatch from Naples announces that the KING, on the recommendation of the Council of State, has granted a constitution, a general amnesty, an offensive and defensive alliance with Sardinia, the adoption of the tricolour flag, a new Ministry under Commander SPINELLI, and analogous institutions for Sicily under a Royal Prince as Viceroy. The announcement of these reforms has been followed by a gross outrage on Baron BRENIER, the French Ambassador, who while passing through the Strada di Toledo in open day was struck senseless to the ground by several blows on the head from a loaded cane. It was hoped, however, that his wounds would not prove serious. As Baron BRENIER was known to have counselled liberal measures the attempt on his life was attributed to the anti-reform party. From Sicily we learn that General GARIBALDI held a council of war on the evening of the 21st inst., at which it was unanimously resolved to march on Messina as soon as the necessary forces were collected.

Accounts from Canton to May 6th state that the allied forces occupied Chusan on the 21st April without opposition from the Chinese. No answer had been received from the Chinese Government to the second communication from the British Minister, and the Chinese were making extensive preparations for resistance. The Malabar, with Lord ELGIN and Baron GROS on board, was wrecked in Galle Harbour on the 22d of May. All the passengers and crew with a portion of the mails were saved, but the two Ambassadors lost their credentials and papers.

The great Review of the Volunteers by the QUEEN took place on Saturday in Hyde Park, and was in every respect a complete success. About 20,000 riflemen were on the ground, and it will be seen from the details in another column that no such sight has been witnessed in this country for half a century.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family, with their Royal visitors, continue at Buckingham Palace. On Friday morning the Prince Consort, accompanied by the Prince of Wales, visited the National Gallery. His Royal Highness afterwards inspected the Hon. Artillery Company, of which he is Captain-General and Colonel, at the Artillery ground. The Count of Flanders went to Tunbridge Wells and visited the Countess de Neuilly. The Queen held a Court at Buckingham Palace at which his Excellency Sidi Mahomed il Shamee, Ambassador from the Emperor of Morocco, and Hadjee Abderrahman i'l Augee, Envoy, had an audience of her Majesty. Professor Henslow has had the honour of delivering a course of lectures on botany at Buckingham Palace. The last of the series was given on Friday in the presence of the Prince Consort, the Prince of Wales, the Princess Alice, and other members of the Royal family. In the afternoon the Queen, accompanied by the Princess Alice and Prince Arthur, took a drive in a carriage and four. The Prince of Wales visited the French Exhibition in Pall Mall In the evening the Queen gave a State ball, to which a party of 1219 were invited. On Saturday morning the Prince of Wales visited Prince Victor of Hohenhole and the Princes of Holstein Glucksburg at their respective residences. In the afternoon the Queen went in state to Hyde Park and reviewed the Volunteer Rifle Corps, Her Majesty was accompanied by the Prince Consort, the King of the Belgians, the Prince of Wales, the Princesses Alice, Helena, and Louisa, Princes Arthur and Leopold, the Count of Flanders, and other members of the Royal family. In the evening the Prince Consort presided at a dinner at the Trinity House, of which corporation his Royal Highness is Master. The Queen, accompanied by the Princess Alice, the Prince of Wales, and the Count of Flanders, honoured the Italian Opera with her presence. On Sunday morning the Queen and Prince Consort, the King of the Belgians, the Prince of Wales, the Princess Alice, Prince Arthur, the Princesses Helena and Louisa attended Divine Service in the private chapel of Buckingham Palace. The Rev. H. Drury, Chaplain to the House of Commons, preached the sermon. In the afternoon the Prince Consort and the Prince of Wales visited the Grand Duchess of Leuchtenberg, at Claridge's Hotel. On Monday morning the Queen and Prince Consort accompanied by the Princess Alice, the Prince of Wales, and the Count of Flanders, left Buckingham Palace for the Camp at Aldershott, travelling to Farnborough by a special train on the South-Western Railway. The King of the Belgians left town for Frogmore, on a visit to the Duchess of Kent. In the afternoon the Queen rode on horseback, accompanied by the Prince Consort, Princess Alice, the Prince of Wales, and the Count of Flanders, and visited the different encampments, and the new Cavalry Barracks. In the evening the Queen had a dinner party at the Royal Pavilion, to which General Knollys and the colonels commanding regiments were invited. On Tuesday morning the Duke of Saxe-Coburg and the Duke of Cambridge arrived at the Pavilion on a visit to her Majesty. After breakfast the Queen, accompanied by the Prince Consort, the Princess Alice, the Prince of Wales, the Count of Flanders, the Duke of Saxe-Coburg, and the Duke of Cambridge, rode on horseback to the Long Valley, and reviewed all the troops in camp. At the conclusion of the review, which lasted three hours, the Queen and Royal party returned to Buckingham Palace. The King of the Belgians arrived at the Palace from Frogmore. In the evening the Prince of Wales and the Count of Flanders honoured the performance at the Haymarket Theatre with their presence. On Wednesday the Judge-Advocate-General had an audience of the Queen, and submitted to her Majesty the proceedings of some Courts Martial. The Prince Consort went to Oxford, and attended a meeting of the British Association. In the afternoon the Queen, accompanied by the Princesses Alice and Helena, took a drive in an open carriage and four. The Prince of Wales, the Count of Flanders, and the Duke of Saxe-Coburg rode on horseback. In the evening the Queen had a dinner party and a concert. On Thursday the Duke and Duchess d'Aumale visited the Queen and took luncheon with her Majesty. The Prince Consort went to the Provident Institution in St. Martin's Place, and afterwards presided at a meeting of the Royal Commission for the Exhibition of 1851. The King of the Belgians visited the Duke of Cambridge at Gloucester House. The Prince of Wales rode on horseback. In the afternoon the Queen, accompanied by the Princesses Alice and Beatrice, took a drive in a carriage and four. The Prince Consort, the Prince of Wales, the Count of Flanders, and the Duke of Saxe-Coburg rode on horseback. In the evening the Queen, accompanied by the Princess Alice, the Prince of Wales, and the Count of Flanders, honoured the performance of the Opera with her presence. The Prince Consort and the Duke of Saxe-Coburg honoured the performance at the Haymarket Theatre with their presence. Her Majesty will hold a Privy Council to-day at Buckingham Palace.

COURT ARRANGEMENTS.—The Queen and Prince Consort, accompanied by the youthful members of the Royal family, according to present arrangements, will leave Buckingham Palace on Saturday next, the 7th July, for Osborne. The Queen and Royal family will remain about six weeks at Osborne, and will then return to town to prorogue Parliament, after which her Majesty will proceed to Balmoral for the autumn.

VISIT OF THE PRINCE OF WALES TO CANADA.—It is officially announced that the arrangements for the visit of the Prince of Wales to Canada are now completed as follows:—His Royal Highness will embark at Plymouth on the 10th of July, in the line-of-battle ship Hero, Captain G. H. Seymour, which will be accompanied by the steam frigate Ariadne, Captain Vansittart, and the steam corvette Flying Fish, Captain C. W. Hope, and escorted for some distance across the Atlantic by the Channel fleet. The Prince will be attended by the Duke of Newcastle, Secretary of State for the Colonies; the Earl of St. Germans, Lord Steward of her Majesty's Household; Major-General the Hon. R. Bruce, his Royal Highness's Governor; by Major Teesdale, R.A., and Captain Grey, Grenadier Guards, Equerries in Waiting; and by Dr. Acland, of Oxford, his Royal Highness's physician. Mr. Engleheart, Private Secretary to the Duke of Newcastle, will accompany his Grace. The Prince of Wales will first land at St. John's, Newfoundland, then visit Nova Scotia, and thence proceed to New Brunswick and Prince Edward's Island, and will reach Quebec by the route of the St. Lawrence. He may be expected at Montreal about the 23d of August, and the opening of the Victoria Bridge will take place a few days later. His Royal Highness will represent her Majesty on this important national occasion, and will hold levees and receive addresses in the capitals of the different colonies. It is intended that the Prince should visit the principal towns in both the Canadian provinces. On his return from the western districts his Royal Highness will drop all Royal State, and assuming the title of Lord Renfrew, under which he has before travelled on the continent of Europe, will visit some of the most important and interesting localities of the United States. It is understood that the President, Mr. Buchanan, having in an autograph letter to the Queen expressed his personal desire to receive the Prince at Washington, his Royal Highness will pay him a visit in that city, and that his Royal Highness has also accepted an invitation from the city of New York. His Royal Highness may be expected back in this country about the middle or end of October.

THE PRINCESS ALICE.—The *Prussian New Gazette* states that a marriage is projected between Prince Louis of Hesse, nephew and heir presumptive of the Grand Duke of Hesse, and the Princess Alice.

THE CABINET.—A Cabinet Council was held on Wednesday evening at the official residence of the First Lord of the Treasury, which was attended by all the Ministers.

THE ARMY.—The Colonelcy of the 93d Foot, vacant by the promotion of Lord Clyde to the Coldstream Guards, has been conferred on Lieut.-General Sutherland, and the Colonelcy of the 53d Foot, vacated by this promotion, has been conferred on Major-General Maunsell.

PARLIAMENTARY MOVEMENTS.—The death of Sir E. S. Hayes, Bart., has caused a vacancy in the representation of the county of Donegal. Mr. Alex. J. R. Stewart of Ards, and Lord Hamilton, son of the Marquis of Abercorn, are candidates for the vacant seat.

THE CHINA WAR.—An order in Council was

published in Tuesday's *Gazette*, directing that in the event of hostilities in China the flag of any neutral Power shall cover the enemy's goods, with the exception of contraband of war.

THE CHANNEL FLEET.—Commodore Hastings Yelverton, C.B., has been appointed to hoist his broad pendant in the Colossus, 80, as Commodore of the Reserve Channel Fleet, about to assemble in Torbay, and which will consist of 10 line-of-battle ships and one frigate. Rear-Admiral Stopford has been appointed Captain of the Channel Fleet, in the room of Rear-Admiral G. Elliott, who has resigned.

THE GREAT RIFLE MATCH.—The Council of the National Rifle Association have made arrangements by which all members of the Association at the great meeting on Wimbledon Common on Monday next will be accommodated within the reserved space prepared for the presentation of the addresses to her Majesty and the Prince Consort. Members of the Council and all officers connected with the Association are requested to appear in uniform. Her Majesty is expected to arrive on the ground at 3 P.M., when the addresses will be presented by Mr. Sidney Herbert or Lord Elcho, and the active business of the meeting will commence as soon as the Queen has fired the first rifle from a fixed stand. The Council of the Association have extended the time for the entry of volunteers who desire to compete for the prizes to this day, Saturday, the 30th inst.

BERWICK ELECTION COMMISSION.—The Queen has appointed James Vaughan, Esq., Thomas Unwin Barstow, Esq., and Franklin Lushington, Esq., to be Commissioners for making inquiry into the existence of bribery at the last election for Berwick-upon-Tweed.

Foreign.

FRANCE.—The *Moniteur* publishes the Convention between France and England relative to the division of captures in China, and contains a decree proroguing the session of the Legislative Corps until the 14th of July. In consequence of the death of Prince Jerome, which took place on Sunday evening, the Emperor has gone into mourning for 21 days. All the guests of their Majesties left Fontainebleau on Monday, but the Court will remain there until the end of June. During July the Emperor and Empress will take up their residence at St. Cloud. The Emperor has renounced his intended journey to Plombières, and has postponed his visit to Nice and Chambery until September. Prince Jerome was embalmed on Monday at Villegenis, was brought to Paris on Tuesday, and will lie in state at the Palais Royal till Tuesday next, when he will be buried in a grave next that of his brother Napoleon I. in the chapel of the Invalides. It appears that the Emperor, who has an old partiality for St. Denis, the ancient burial-place of the Kings of France, at first intended that Prince Jerome should be buried at St. Denis, and that the body of Napoleon I. should be removed to that royal resting-place at the same time and with great pomp, but as on reading the will of his Imperial Highness it was found that the Prince expressed a desire to be buried in the Invalides, near the remains of Napoleon I., the Emperor has commanded that Prince Jerome's desires should be in every way carried out. It is rumoured however that the Emperor is in correspondence with the Count de Chambord and with the Orleans family for the purpose of bringing the remains of Charles X. and of Louis Philippe to St. Denis.—The *Moniteur* states that the rumour which has been circulating that the Government intended to negotiate a loan is completely without foundation. The Emperor has given orders that the Papal loan shall be quoted at the Bourse like all other loans. Since the return of the Emperor from Baden orders have been given by the Minister of War to send the regiments concentrated on the eastern frontier of France to their several depôts. General Ulrich, commanding a division in the department of the Ain, received a telegram on the 17th inst., which instructed him to divide his corps, composed of the 18th, 26th, 80th, and 82d Regiments of Infantry, between the towns of Cahors and Cambrai, the opposite extremities of France.—Great preparations are making at Toulon for trying an experiment with the steel-plated frigate Gloire, which is to be impelled by steam against a ship of the line, in order to cut her in two with her bronze bow. The steam-engines of the Gloire are enveloped with mattresses, to protect them from being too much shaken by the force of the shock, and every precaution against accidents has been adopted by her engineers. The experiment is to be tried against the ship-of-the-line Montebello, which is now old. Should it succeed, several large steamships will be built on the plan of the Gloire.—M. Prevost Paradol, author of the pamphlet *Les Anciens Partis*, has been sentenced by the Police Correctionnelle to one month's imprisonment and 3000f. fine. The editor is fined 3000f., and the publisher 500f.—The *Opinion Nationale* and the *Courrier de Paris* have received a warning—the latter for having given a speech made by M. Victor Hugo at a recent meeting in Jersey on the Sicilian insurrection.—M. Charles Gruel d'Indreville, of Nesle, Normandy, the tallest man in France, has just died near Rouen, at the age of 71. He founded, and for many years carried on, some very extensive glassworks at that place. His stature was nearly 7 feet 6 inches English, and his body was stout in proportion. In early life he entered the Imperial army, and was present in the battles of Wagram and Moscow. His glassworks were of such importance that King Louis Philippe several times visited them. He was a member of the Legion of Honour, and had filled several local offices.

SPAIN.—Don Juan de Bourbon has addressed a new communication to the Cortes, protesting against the exclusion of his family from the throne, and stating that the "spirit of reform, and the sad experience of the evils occasioned by the succession of women to the throne of Spain, called forth the *Auto Acordado* of Philip V." The Count de Montemolin and Don Fernando have since, with the counsel of their legal advisers, cancelled the renunciation of their pretensions, which was signed by them at Tortosa. The Spanish Government, through its Chargé d'Affaires at Turin, has presented a protest to Count Cavour against the assistance indirectly given by Sardinia to the Sicilian revolutionary party. Should the remonstrance of Spain remain without any effect the Spanish Legation will be ordered to quit Turin.

PORTUGAL.—Accounts from Lisbon of the 17th inst. state that the Bill for the increase of taxation was before the House, and violent debates had taken place on the subject, the Bill extending taxation to the extreme with every class of society, profession, and trade. It was thought probable that the Bill would pass the Lower House, but it was expected it would be rejected by the Peers. If carried in both Houses and put into execution it was thought that Portugal would have another revolution, as in 1846, when Cabral enforced his Sanitary Regulation Bill, which immediately threw the northern provinces into revolt.

SWITZERLAND.—In view of an approaching Conference on the annexation of Savoy, the Federal Council has confidentially proposed to the great Powers a new combination, to be substituted for the stipulations of Article 92 of the Final Act of Vienna. The proposition commences by stating that, after the annexation of Savoy to France, the neutralisation of Faucigny and Chablais would be of no practical use whatever for the maintenance of the neutrality of Switzerland. In order to attain this object, Switzerland claims such a portion of territory as might be traversed in a two hours' march, and which, surrounding the Lake of Geneva, would form a bulwark between Switzerland and France. The Swiss diplomatic agents abroad are charged to recommend a similar combination for adoption by the Great Powers, and more especially by England, which has already taken the initiative in a similar proposal, but which demanded a far more considerable territorial cession. The note also points out that France has taken military occupation of the neutralised provinces. Switzerland therefore declares that she persists in her views on the question, and maintains her protest before the Powers against the annexation of those provinces to France. She also asks for an immediate convocation of the Conference. To this note England has replied that she accepts the first proposal of France,—namely the meeting of a Conference. M. Thouvenel, the French Minister for Foreign Affairs, has since declared to the Swiss Ambassador in Paris that as Switzerland by her note of the 23d of May last rejected the French proposals, France entirely withdraws them, and will henceforth merely place herself in the position formerly occupied by Sardinia, in reference to the obligations resulting from the neutralisation of Faucigny and Chablais. M. Thouvenel is said to have further declared that the Emperor Napoleon would not give up any portion of the territory of Savoy.

DENMARK.—Count Moltke, the Danish Ambassador in Paris arrived at Copenhagen on Sunday, having been summoned by the Government on account of the affairs of the German Duchies. The King of Sweden visited the King of Denmark on the 10th inst. at the Palace of Kronborg, returning to his own country in the evening; and on the 17th the King of Denmark visited the Swedish camp at Ljungby accompanied, by the Crown Prince Ferdinand, Prince Christian of Denmark, Prince Frederick and their consorts, Prince Frederick of Hesse, and a large military suite.

BADEN.—It is stated that at the last Conference of the German Sovereigns the Prince Regent directed the attention of the assembly to the state of affairs in Italy. The Prince is said to have declared that the Sardinian Government was already overrun by revolution, and that if no attention were paid to the further course of events all Europe might be threatened by revolutionary agitation.

AUSTRIA.—Further interviews between Sovereigns are announced. The Emperor of Austria is shortly to have one with the King of Bavaria, and the Prince Regent with the Emperor of Russia. The interview at Baden has brought about an understanding between Austria and Prussia as regards the re-organisation of the military constitution of the Confederation. The Prince Regent of Prussia has invited the Austrian Cabinet to send a military representative to the Conference on that question, which will take place at Baden. Austria has sent a Colonel of the General Staff. Besides Colonel Löwenthal, who already discharges the functions of Military Commissioner at the Austrian Embassy in Paris, a Chef d'Escadron of the Staff will be added as military *attaché*. It is said that great improvements are about to be introduced into the Austrian army, after the French system. The Budget contains the following items:—Ministry of Police, 2,600,000 florins; Ministry of Foreign Affairs, 2,400,000 florins; Ministry of Public Worship, 4,000,000 florins.

HUNGARY.—The inauguration of the statue of the late Archduke Joseph, Palatine of Hungary, will take place on the 20th of August next, the fête of St. Stephen, the patron saint of Hungary.

RUSSIA.—It is said that Count Stackelberg, the Russian Minister at Turin, has been instructed to declare that if the Sardinian Government does not henceforth prevent the departure for Sicily of the expeditions in course of organisation in the different ports of Sardinia, Count Stackelberg, with the whole *personnel* of the Legation, will quit Turin.

ITALY.—A despatch from Naples states that on the the 22d inst. the Council of the Kingdom adopted by a majority of 9 to 3 the following resolutions: 1. The adoption of a Constitution; 2. A general amnesty; 3. A total change of Ministry; 4. An offensive and defensive alliance with Piedmont; 5. The adoption of the Italian tricolour flag, with the arms of Naples. 6. Analogous institutions for Sicily, with a Royal Prince as Viceroy. These propositions have since been submitted to the King, who has accepted them and by a sovereign act, dated 25th of June, has granted constitutional and representative institutions on national and Italian principles to the whole kingdom of Naples. The Royal decision was immediately communicated to the diplomatic corps, and favourably received. The Ministers have since resigned, and the Commander Spinelli has been intrusted with the formation of a new Ministry. In execution of the orders of the King, the constitutional Neapolitan tricolour flag has been hoisted at Fort St. Elmo, and saluted by the whole artillery of the forts and the city has been illuminated in honour of the event. On Wednesday however, a deplorable affair occurred in connection with these reforms. The French Ambassador, Baron Brenier, while passing through the Strada di Toledo, where much agitation was prevailing, received several blows on the head with a loaded cane. He fell senseless and was carried to the palace of the Legation, where he received the necessary attention. Baron Brenier having counselled liberal reforms, the attempt on his life was attributed to the anti-reform party. It was hoped that his wounds would not prove serious. It was said to be the intention of the Government to restore the two captured vessels. The American Minister, however, desired reparation for the insult offered to his national flag. The King was seriously ill, and was staying at Portici. 20,000 more soldiers were to leave for Sicily, and the Government had despatched three columns from Naples—viz., one to Basilicata, another towards Salerno, and a third to the Abruzzi. The Castle of St. Elmo had been fortified. On the occasion of the recent mission of the Commander de Martino to Paris, no interchange of autograph letters took place between the King of Naples and the Emperor of the French, but in order to give a motive for his mission, the Commander de Martino was instructed to recall that, when the Court of the Two Sicilies was in 1852 the first to recognise the re-establishment of the empire in France, Napoleon III. declared that he would never forget the friendly step of the King of Naples. It is also stated that the Commander de Martino received from the Emperor the formal assurance that France will not recognise the annexation of Sicily to Piedmont, and that his Majesty drew particular attention to the fact that the Court of the Tuileries has not recognised the annexation of Tuscany and the Romagna to Piedmont. Accounts from Rome state that General Goyon, the Commander-in-Chief of the French forces in that city, has demanded a reinforcement of two regiments of infantry and one of cavalry. General Lamoricière was making preparations as if he expected shortly to be attacked. Cardinal Wiseman's health is said to be visibly declining, and very little hope is entertained of saving his life. Dr. Manning had been appointed Prelate. Letters from Venice announce that the Austrian Government is making vast preparations for war. The quantity of ammunition which arrives daily by Trieste is enormous. Four *corps d'armée* are already complete, and a fifth is shortly expected. There are 70,000 men established in an intrenched camp at Peschiera, and 40,000 are in position on the frontiers of the Papal States.

SICILY.—A despatch from Palermo states that on the 21st Garibaldi held a council of war, at which it was unanimously decided that the insurrectionary army, after having collected all the necessary military forces, should march on Messina on the 28th inst. The Dictator has published an electoral law, and decreed the demolition of Fort Castellamare. He has also issued a proclamation inviting the clergy to second the revolution. The first division of the revolutionary forces has been directed towards Catania, and another towards Syracuse. The Municipality of Palermo has sent an address to the Dictator, requesting the immediate annexation of Sicily to the Italian kingdom. The Dictator replied that such annexation was his wish, that he was a great admirer of King Victor Emmanuel, and that he believed the annexation would be accomplished by him, and with him; but that at present the annexation of Sicily alone would not be advisable; besides, in the event of immediate annexation, he would then be under the necessity of retiring. Garibaldi is said to have sent an agent to London, in order to negotiate there a loan of 30 millions of francs, the revenues of Sicily

being offered as a guarantee. He has bought four steamers of about 800 tons each from a French company, and two tugs. The Count de Torrearsa has been appointed President of the Council of Ministers during Garibaldi's absence from Palermo. The official journal of that city has published a proclamation by the son of the Neapolitan General Benedetti, calling upon the army to rise against the Bourbons. The barricades had been taken up, and the insurgent bands had been sent back to their homes for reorganisation. Accounts from Messina state that the famous Bosco, who undertook to assassinate Garibaldi for 25,000 fr., has not had the courage to commit the crime, but has, on the contrary, had an audience of the General, to whom he has made important revelations. The latest news states that Garibaldi has issued the following decree:—

"Considering that a free people should abolish every custom which calls to mind the old state of slavery:—Art. 1. The title of 'excellency' is abolished without respect of persons. Art. 2. Doing homage by kissing hands is prohibited."

This decree, if acted upon, is in itself a social revolution. In Sicily the lower orders call almost every well-dressed man his excellency, and kissing the hand is a common compliment paid by a tenant to his landlord.

TURKEY.—The Sultan has established a Council of Finance, charged with drawing up the regulations necessary to good administration, and with arranging the details of the receipts and expenditure of the State. The presidency of this council has been conferred on Ruchdi Pacha. Hassan Bey has been sent on a tour through the empire in order to institute inquiries. The Marquis de Lavalette has given 3000 francs to the sufferers from the fires which have lately desolated Constantinople. On the 20th inst. the fires recommenced for the 11th time since the first broke out, but now show signs of subsiding.

SYRIA.—On the 19th inst. 2000 soldiers were sent to Beyrout. The garrison of Damascus have committed acts of pillage. The governors of Damascus, Aleppo, and Smyrna have been deprived of office. The Christians received with joy the intelligence that the Porte was instituting an inquiry into the recent disturbances. The troops sent to restore order are, however, insufficient, and massacres are feared. The Christian inhabitants of Cyprus are emigrating *en masse* to Greece.

ALBANIA.—The report that disturbances have broken out in Albania is said to be without foundation.

CAPE OF GOOD HOPE.—Much gratification was expressed at the Cape at the approaching return of Sir George Grey and the expected visit of Prince Alfred. Preparations were making to give the Prince a loyal welcome. A Parliamentary Finance Committee had been appointed, to consider whether the Government of the colony can be carried on with the present revenue. Some method of direct taxation was expected. A motion had been made in the House of Assembly for instituting a responsible Government. The dissolution of the House was expected to take place at the close of the session. The Convict Exclusion Bill had passed both Houses. The population on the Caffre border was very unsettled. Major-General Bolton, of the Royal Engineers, died on the 16th May, aged 67, after a service of 49 years.

CHINA.—Account from Hong Kong to May 7 state that ships and troops continued to arrive. The Queen's Royals, from the Cape, were among the most recent comers, and preparations for the general move to the north were rapidly completing. Chusan was occupied by the allied forces on the 21st April, without the slightest show of resistance on the part of the Chinese. Sir Hope Grant after the occupation went to Hong Kong; but the French naval and military commander-in-chief remain in the north. No answer had been received from the Chinese Government to the second communication from the British Minister, but the Chinese were making extensive preparations for resistance. The rebel disturbances were over, and trade had improved. It is evident from this news that the accounts which had previously been received from the United States by the overland route through California to the 10th April, stating that the Chinese had consented to pay the English and French Governments their expenses, and to accede to their demands, were without foundation.

JAPAN.—An attempt was made to assassinate the Emperor of Japan on the 15th of March. While on his way to the palace he was attacked by 14 Japanese dressed as travellers. The Emperor was dangerously wounded, and six of his guards were killed and several wounded. Thirty suspected persons had been beheaded, and two Princes of high rank were permitted to disembowel themselves. An insurrection was threatened.

UNITED STATES.—In the Senate the majority and minority reports from the Harper's Ferry investigating committee had been presented. The committee recommended the discharge of Thaddeus Hyatt, and a resolution in accordance with the suggestion was adopted. The Tariff Bill had been finally postponed by a vote of 25 to 23. The Pacific Telegraph Bill had passed both Houses of Congress.

CENTRAL AMERICA.—The ratification of the treaty between Great Britain and Honduras, recognising the sovereignty of the latter over the Bay Islands, and the exchange of the ratifications at Comayagua on May 21, was announced to the people of Ruatan in a public meeting held at Port M'Donald on the same day. The acting Lieutenant-Governor Thomas Price afterwards read to the people the Queen's proclamation, announcing the separation of the islands from the British Crown, and stating that the Honduras Government had given guarantees for the civil and religious liberty of the inhabitants, for their freedom from forced military service and from the use of passports, and for their being governed by resident officers of their own choosing. A large majority of the inhabitants, however, are unwilling to become the subjects of any other Power, and it is understood that the British Government will agree to their request for a free passage in one of her Majesty's ships to one of the West India islands.

BRITISH COLUMBIA.—The affair of San Juan again threatens to create misunderstanding between England and the United States, in consequence of General Harney's determination to force matters to extremities. It will be remembered that General Scott, feeling it is supposed some difficulty in absolutely overruling General Harney's aggression, offered a joint occupation of the Island of San Juan, an offer which, though at first declined, was afterwards acted upon. In consequence of this arrangement the northern point of the Island of San Juan has since been occupied by a British and the southern by an American force, with an interval of fifteen miles between them, and the officers of both forces have for months enjoyed the interchange of mutual civilities and good offices. General Harney however, disapproving of this good understanding, has removed the American officer in command, on the ground that he has "English proclivities," and has replaced him by the officer whom he selected as his instrument when he first seized upon the island, and who seems to have been removed from his post by General Scott at the request of the British authorities. He has also issued instructions, a copy of which he has transmitted to the English Admiral, in which he repudiates altogether the proposition of Gen. Scott for a joint occupation. He asserts that our troops were "permitted" to land on the island, whereas it is notorious that the superiority of force was entirely on our side, and declares that inasmuch as the Legislature of Washington Territory has thought fit to include the island within the county of Whatcom, any attempt to ignore this sovereignty "will be attended with deplorable consequences." These proceedings, it is said, are in direct contradictiou to the instructions of the Commander-in-Chief, and to the sentiments of the President himself, who wishes that the *status* of either party should remain unchanged until the question as to the property in the island shall be finally decided.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Law and Equity Bill.*—The LORD CHANCELLOR moved that this Bill be referred to a select committee. The object of the Bill was to secure the fusion of law and equity by enabling the common-law judges in certain cases to deal with questions of equity in order that the expense and inconvenience of a double course of procedure might be avoided.—Lord LYNDHURST supported the Bill.—Lord ST. LEONARDS, on the contrary, expressed his disapprobation of the principle of the measure, which he considered to be unsound. It would, he thought, throw more labour upon the common-law judges than they would have time to discharge.—Lord BROUGHAM thought, as there was a division of opinion between the common-law and equity judges, the proper course was to refer the Bill to a select committee.—Lord CHELMSFORD hoped the Bill would be much altered before it became law, but concurred in referring the Bill to a select committee.—Lord KINGSDOWN thought, if the Bill were referred to a select committee, it could not become law during the present session. The motion was then agreed to. *The English Shipwrights in France.*—In reply to Viscount DUNGANNON, the Duke of SOMERSET stated that the wages of shipwrights at Cherbourg were only 3fr. a day, that no English workmen were employed there, and that the only ship now building was a transport.—The *Duchy of Cornwal (Limitation of Actions) Bil* and the *Fisheries (Scotland) Bill* were read a third time and passed.

MONDAY.—*The Slave Trade at Mozambique.*—Lord STRATHEDEN moved an address to her Majesty, praying for the appointment of a Consul at Mozambique, with a view to promote the interests of commerce and the execution of the treaties between Great Britain and Portugal for the suppression of the slave trade.—Lord WODEHOUSE opposed the motion in the name of the Government, thinking that the suppression of the slave trade depended more upon developing the resources of the country, and imbuing the natives with a love of trade and commerce, than either upon ourselves or the Portuguese. To further these objects the Government thought that it would be better to forward the objects of Dr. Livingstone's expedition, which they had done by proposing a grant of public money to assist him, than by appointing a Consul at Mozambique. The real source of the evil, however, was not on this, but on the other side of the Atlantic, at Cuba.—Lord BROUGHAM said that until the Portuguese honestly carried out the engagements by which they had bound themselves, so long would the development of the resources of the east coast of Africa, in spite of any efforts on our part, be retarded. He strongly denounced the insincerity of Spain in suppressing the slave-trade in Cuba, and contrasted with it the conduct of Brazil, which had done its best to do away with this inhuman traffic by admitting emancipated negroes to the highest public trusts and to an equality with the whites in social life.—The Bishop of OXFORD was much disappointed at the announcement that it was not the intention of the Government to appoint a Consul at Mozambique. He agreed in the importance of Dr. Livingstone's expedition, but thought it would be of small avail if not backed by the influence of a British Consul at Mozambique. He trusted that the decision of the Government on this subject was not final.—The Duke of SOMERSET wanted to know how the appointment of a Consul at Mozambique would tend to the suppression of the slave trade. As long as vessels carrying an American flag were exempt from examination it would be impossible to stop the traffic in human flesh. The only place where it would be possible to affect the slave trade was at Cuba. He was glad to see that the United States had co-operated lately with us in suppressing this trade by sending a squadron to the west coast of Africa.—Lord GRANVILLE trusted that Lord Stratheden would withdraw his motion, as, if persisted in, he should feel bound to oppose it. That course might lay the Government open to a false charge of lukewarmness in the suppression of the slave trade, than which nothing would be more unfounded.—The Bishop of OXFORD hoped Lord Stratheden would not agree to Lord Granville's suggestion.—After a few words from Lord STRATHEDEN, who declined to withdraw the motion, the House divided, when the motion was carried by 11 to 6.

TUESDAY.—The *Church Temporalities (Ireland) Acts Amendment Bill* was read a third time and passed.—The Archbishop of YORK moved the second reading of the *Ecclesiastical Commission Bill*, explaining that its object was to amend the existing law so as to provide spiritual instruction in those dioceses from which the commissioners derived revenue before applying that revenue to the wants of other districts.—The Earl of CHICHESTER opposed the Bill, and observed that a more satisfactory measure had been introduced in the other House of Parliament.—Earl GRANVILLE suggested the postponement of the Bill until the measure now in the Commons came before them.—Earl GREY said that a similar Bill, founded on the report of a select committee, had in a former session passed their lordships' House, but too late to pass the Commons. The subject was a most important one, and some assurance should be given that it would not be abandoned.—Lord PORTMAN said that, as a novel principle was involved in the Bill, it ought not to be adopted without careful consideration.—Lord RAVENSWORTH denied that the principle was a novel one, having been already accepted by the House.—The Earl of DERBY supported the second reading of the Bill, which met his entire approval.—After some remarks by Lord BROUGHAM, Lord WENSLEYDALE, and Earl GRANVILLE, the Bill was read a second time. The *Ecclesiastical Courts and Registries (Ireland) Bill* was read a third time and passed.

THURSDAY.—The *Adulteration of Food and Drink Bill* was read a third time, and passed. *Breakwaters and Harbours.*—The Marquis of CLANRICARDE moved for a select committee to inquire whether breakwaters and harbours cannot be constructed on a plan less costly and better adapted for certain localities than the system of solid masonry hitherto in use; and whether any such plan appears likely to be also serviceable for the improvement of our national defences.—The Duke of SOMERSET said that there was great difference of opinion among scientific persons as to the best materials to be used for breakwaters and similar works, and that for all practical purposes stone was the cheapest material that could be used. He did not think that the appointment of a select committee would lead to any beneficial result.—The Earl of HARDWICKE was of opinion that floating breakwaters might be cheaply constructed in many localities, and would prove very useful under certain circumstances. The result was at any rate sufficiently probable to justify an inquiry by a select committee, and the institution of a few inexpensive experiments.—The Earl of DERBY inquired when the intentions of the Government would be announced with regard to the important question of national defences.—Earl GRANVILLE replied that the announcement would be made in the first instance in the House of Commons, but he could not then name the exact day.—The Marquis of CLANRICARDE said that he should leave the responsibility in the hands of the Government.—Earl GRANVILLE said that if the motion were renewed in a more formal manner, and with the usual notice, the Government would agree to the committee. The suggestion was accepted, and the motion was for the present withdrawn.—Lord BROUGHAM introduced a Bill for the purpose of enabling defendants to be examined in certain cases in *Criminal Prosecutions*. The Bill was read a first time.—The Duke of NEWCASTLE laid on the table a Bill for the better *Government of New Zealand*, and for the management of crown lands.—The Bill was read a first time.

FRIDAY.—*Trotman's Anchors.*—The Earl of HARDWICKE called attention to the anchors in use by the British navy, and asked if the Government intended to use Trotman's anchors in the Navy.—The Duke of SOMERSET said that the Admiralty were satisfied with their own anchors, which had during the late gales held when others said to be Trotman's, attached to merchant ships, had dragged. He understood also that Trotman's anchors were too light for heavy ships of war.—The Earl of HARDWICKE said that as these anchors were alleged to be so bad, he presumed the noble Duke would have the one which was hanging over the bows of her Majesty's yacht removed to-morrow, and an Admiralty anchor substituted.

[Left sitting].

HOUSE OF COMMONS.

FRIDAY.—*Capture of Garibaldi's Steamers.*—On the motion for adjournment till Monday, among other subjects discussed, Mr. GRIFFITH asked whether the Government had received any account of the capture of two vessels by a Neapolitan frigate hoisting English colours.—Lord J. RUSSELL said that the Government had received information that two vessels supposed to be carrying reinforcements to Garibaldi had been captured by a Neapolitan ship of war. Whether the latter hoisted English colours he could not say; but if it were so, it would certainly be a most unwarranted use of our flag. *Savoy and Nice.*—Sir R. PEEL, after censuring in very strong terms the foreign policy of the Secretary of State, which he characterised as weak, vacillating, and very shameful and humiliating to this country, adverted to a recent note of M. Thouvenel in relation to the annexation of Savoy and Nice to France, which, he said, was at variance with the assurance given by the Emperor of the French, and confirmed by M. Thouvenel himself, that the great Powers of Europe should be consulted before the annexation took place. He protested against the conduct of the Emperor of the French and against the lax manner in which the foreign affairs of this country were conducted. He complained that the neutrality of Switzerland was at an end, that the way in which the annexation had been effected was opposed to the distinct understanding of the Treaty of Turin, that Switzerland had not been consulted in the matter, and that her rights were menaced by the cruel hypocrisy of France.—Lord J. RUSSELL said that the note of M. Thouvenel, which he had received only that afternoon, did not contain the passage upon which Sir Robert had founded his remarks. He detailed the substance of the note, the object of which was to reconcile the second article of the Treaty of Turin with the 92d article of that of Vienna in regard to the neutralised territory. He recounted the different propositions made with a view to that end, observing that France had not consented to the proposition which her Majesty's Government had thought would afford an equivalent security to Switzerland. He hoped that he should very soon be able to place a portion of these voluminous papers upon the table.—Colonel DICKSON called attention to the present *State of the Army* in the United Kingdom, contending that, in the present state of Europe, we required a larger force, and suggesting means by which the additional force could be raised.—Mr. S. HERBERT in reply explained in much detail the state of the army, and the measures taken for its improvement in number and condition. The motion for adjournment was then agreed to. On the order for going into committee upon *the Savings Banks and Friendly Societies' Investments Bill*, Sir H. WILLOUGHBY called attention to the main principle of the Bill, and to the report of the Select Committee on Savings Banks of 1858 relating to the investments of the moneys of the savings banks, contending that the management of the savings banks' funds should be placed in a commission specially appointed, and that no sales, purchases, or exchanges of the stocks or securities should be made except

or the purposes of the banks.—Mr. HANKEY opposed the Bill, which ignored, he said, the recommendations of the Committee of 1858, and did not treat the funds as trust property.—Mr. S. ESTCOURT objected to the Bill that it dealt only with investments, leaving the other important portions, which vitally affected savings banks and called loudly for settlement untouched.—Colonel SYKES and Mr. MALINS argued that the savings banks' money should be treated as a trust fund.—The CHANCELLOR of the EXCHEQUER said that the Commissioners for the Reduction of the National Debt were in fact bankers on a large scale; but that by the bill now under consideration an entirely new system would be introduced. A perfect title would be given in law to depositors in savings banks upon the security of all the assets held by the commissioners, the State deposit account, and the fund of the State itself. A true account would also be given of the national debt, which nobody had as yet ever seen, and it would bring the savings banks under the annual revision of the House.—Mr. T. BARING could not see that the Bill would give increased security to the depositors, or benefit them in any way. He therefore protested against the necessity of the measure, and expressed his hope that the Chancellor of the Exchequer would withdraw it.—Mr. AYRTON opposed the bill as a dangerous innovation.—Mr. COLLINS thought that as no one had been found to support the bill but the Chancellor of the Exchequer, the best thing to be done would be to move a direct negative. He accordingly moved that the House go into committee that day three months. On a division the motion was negatived by 92 to 65. The House then went into committee, and Sir H. WILLOUGHBY having moved that the first clause be postponed, the motion was resisted by the CHANCELLOR of the EXCHEQUER, and on a division was negatived by 73 to 49. The CHAIRMAN then reported progress. The *University and College Estates Bill* passed through committee. The *Railway Cheap Trains Bill* was read a second time. The *Criminal Lunatic Asylums Bill* was read a third time and passed. The *Vote for Disqualified Candidates Bill* was read a second time.—The LORD ADVOCATE obtained leave to bring in a bill to extend the *Refreshment Houses and Wine Licenses Bill* to Scotland

MONDAY.—*Bankruptcy and Insolvency Salaries Bill.*—On the report of the resolution of the committee upon this Bill, Sir H. WILLOUGHBY objected to the charge of 21,000*l.* which the Bill proposed to throw upon the Consolidated Fund for compensations to persons who had no claim upon that fund, and moved to omit from the resolution the word "compensations."—The ATTORNEY-GENERAL said that these compensations had been transferred from the Fee Fund to the Consolidated Fund, in accordance with the recommendation of a commission, and that they were a penalty on the country for former errors in legislation.—After a brief discussion, in which Mr. BARROW, Colonel FRENCH, and Mr. HADFIELD took part, the House divided, when the amendment was carried by 111 to 98. —On the announcement of the result of the division, the ATTORNEY-GENERAL said it would be impossible for him to go on with the *Bankruptcy and Insolvency Bill*, the committee on which was the next order of the day.—Mr. MALINS thought the Attorney-General was perfectly right in giving up the Bill, as its value was now entirely destroyed. —Mr. BRIGHT recommended the Attorney-General to withdraw his resolution, and not add to the disasters of the session by withdrawing the Bill.—Mr. BOUVERIE added his entreaty to the same effect. There were, he said, other funds applicable to these compensations.—Mr. MOWBRAY said he had voted with the majority because he knew the enormous amount of charge saddled upon the Consolidated Fund for large compensation to individuals in the prime of life.—The ATTORNEY-GENERAL was most unwilling to throw away many months' labour, and would be ready to give the House one more opportunity of expressing its opinion.—After some observations by Mr. ELLICE, Mr. COLLINS, Mr. HEADLAM, and Mr. HENLEY, Sir G. GREY suggested that the House should not come to a hasty decision, and moved that the debate on the resolution as amended be adjourned. — Sir H. CAIRNS trusted that the Attorney-General would not come to the conclusion to abandon the Bill, believing the proposal to transfer the compensations to the Consolidated Fund to be founded in justice. The debate was then adjourned till Thursday. The House then went into committee upon the *Excise and Assessed Taxes Acts*, when resolutions were agreed to for imposing duties on game certificates. The report on the *Anstruther Union Harbour Bill*, after a division upon one of the clauses, was agreed to. The *Tithe Commutation Bill* was read a third time, and passed. The *Spirits Bill* passed through committee. The *Oxford University Bill*, the object of which is to confer upon the University certain powers already granted to the University of Cambridge, was read a second time. The *Refreshment-houses and Wine Licenses (Ireland) Bill* was likewise read a second time, after an attempt on the part of Irish members to delay the stage.—The adjourned debate on Mr. SELWYN'S amendment on the second reading of the *Ecclesiastical Commission, &c.*, Bill was resumed by Mr. G. BENTINCK in support of the amendment. He opposed the Bill, he said, because it proposed to transfer all chapter property to the hands of the Commissioners without any provision for persons whose services were recognised, and who were not to be heard in support of their claims.—Mr. HOWES and Mr. MALINS opposed the Bill.—Lord JOHN RUSSELL said that the object of the Bill was to ensure a more equitable distribution of Church revenues, so that the excess of income from capitular estates should go to the augmentation of small livings. He had always been of opinion that it was desirable that the bishops and deans and chapters should hold landed property. He was ready to admit that if the estates of the Church were sold and the money invested in the funds, the dignitaries of the Establishment might have more certain incomes; but then they would not have that dependence on the land and that fixed stake in the country which it was desirable they should possess. — Mr. S. ESTCOURT was opposed to the measure, because it made use of the machinery of the Ecclesiastical Commission alike for the sale and future management of the estates. The ancient system of management was, in his opinion, preferable to that which it was proposed to substitute by modern legislation. He thought, however, that the objections which had been urged against the measure could be better discussed in committee.—Mr. SELWYN ultimately withdrew the amendment, and the Bill was read a second time. The House then went into committee upon the *Mines Regulation and Inspection Bill*, and some of the clauses were agreed to after much discussion, the Chairman being ordered to report progress. The *Inland Bonding Bill* was read a third time and passed. The *Union of Benefices Bill* was read a second time. —The adjourned debate on going into committee on the *Municipal Corporations (Ireland) Act Amendment Bill* was resumed, when Colonel DICKSON moved to defer the committee for six months. This motion, after a short discussion, was negatived on a division by 61 to 24, and the House went into committee on the Bill.—Mr. VILLIERS obtained leave to bring in a Bill to continue the *Poor-law Board* for a limited period.

TUESDAY.—*Tenure and Improvement of Land (Ireland) Bill.*—The morning sitting was occupied with the further consideration of this Bill in committee, when some further clauses were agreed to. A discussion took place on the position of the lender of money with regard to former incumbrances. It was at last decided that the loan for improvements should take precedence of all other charges.—In the evening sitting, the LORD ADVOCATE brought up the *Refreshment and Wine Licenses (Scotland) Bill*, which was read a first time. *The Irish Government.*—Mr. CONOLLY moved two resolutions censuring the recent appointments made by the Lord Lieutenant of Ireland. He demanded that the charges against Lord Carlisle should be fairly examined, and that if they were true he should be removed from a position which he was unfit to hold. The Lord Lieutenant was returning to the exploded policy of exciting the north against the south, and attempting to govern the country by means of patronage, upholding by these unfair means the Whig influence among the constituencies. Never had a grosser insult been offered to the magistracy of a free country than by the appointment of Mr. Lyle, the taxing-master to the Court of Chancery, to the lieutenancy of Londonderry. The magistrates of the county were Conservative, and Mr. Lyle was the only black sheep among them. Lord Carlisle had, by this step, done more harm than by any of his previous follies. Then there was the transfer of Mr. Tenison from the lieutenancy of Leitrim to that of Roscommon, another mischievous step, founded as it was on a most incautious use of the Royal prerogative. He cited other instances at great length, contending that in every instance Lord Carlisle had endeavoured to promote Whig interests, without regard to fitness or justice, and in defiance of every principle of prudence and decency. It was time that a vigorous remonstrance was offered in the House of Commons against such shameless conduct. It was a fearful thing that the destinies of Ireland should be entrusted to such hands, unless these imputations could be fairly explained.—Mr. AGAR ELLICE seconded the motion.—Mr. GREGORY said that he had in the first instance disapproved of the appointment of Mr. Lyle, but on further information he was satisfied with the explanations of Lord Carlisle, and was convinced that the Government was not open to censure. Such appointments could not generally be defended, but Londonderry, owned as it was by the great English companies, was an exception to the general rule.—Mr. CARDWELL asserted that Lord Carlisle had in his appointments regarded the public interests. He had already sufficiently vindicated his appointment of Mr. Lyle, which was made purely on the merits of the man. As to Mr. Tenison, the appointment had been made during the former tenure of the Lord Lieutenancy by Lord Carlisle, and had received the entire sanction of Lord Derby.—Colonel FRENCH declared his earnest wish that the Lord-Lieutenancy should be abolished altogether. —The discussion was continued by Mr. M'MAHON, Mr. ORMSBY GORE, Sir G. GREY, Mr. M'CANN, Lord PALMERSTON, and Captain ARCHDALL.—Mr. HORSMAN said that personal fitness had always been the primary consideration of the present Lord-Lieutenant when selecting functionaries for any vacant office in Ireland. If any unfit appointment had been made, the fault must lie with the Chief Secretary, whom Lord Carlisle made it an invariable rule to consult on all these matters. After some further discussion the motion was negatived without a division.—Mr. HENNESSY moved an Address to the Crown, praying that steps might be taken to relieve the *Distress in Erris* and other parts of Ireland.—The motion was seconded by The O'DONOGHUE.—Mr. CARDWELL said that the local administrators of relief under the Poor-law had done everything which was possible or necessary for the alleviation of the distress in Erris and elsewhere.—After some remarks by Mr. M'EVOY, Lord FERMOY, Lord C. HAMILTON, Mr CLIVE, and other members, the motion was negatived on a division by 84 to 49. *The Militia.* —Mr. S. HERBERT moved for leave to bring in a Bill to amend the laws relating to the militia, by giving power to unite regiments in maritime counties for the purpose of forming artillery corps, providing buildings for the permanent staff, regulating the mode and time of training, and increasing the force in Scotland and Ireland in the same proportion in times of danger as was now the case in England. This would raise the entire force in the United Kingdom to 180,000 men. —After a few words from Lord ENFIELD, Colonel GILPIN, Colonel DICKSON, and General UPTON, in favour of the proposed measure, leave was given.—Mr. CLIVE obtained leave to bring in a Bill to amend the *Local Government Act.*—Sir G. LEWIS obtained leave to bring in a Bill to make better provision for preventing *Corrupt Practices at Elections* for members of Parliament. The House then went into committee on the *Locomotive Bill*, but, before the clauses were gone through the Chairman was ordered to report progress. The *Sale of Gas Act Amendment (No. 2) Bill* was read a second time, and referred to a select committee. Other Bills were advanced a stage.

WEDNESDAY.—The *Labourers' Cottages (Scotland) Bill* passed through committee. The House then went into committee on the *Bleaching and Dyeing Works Bill*, and resumed the discussion of the first clause, to which Sir H. CAIRNS moved an amendment for the exemption of linen, linen yarns, and cambric works. On a division, the amendment was carried by 190 to 48.—Mr. A. EGERTON next moved, as an addition to the clause, that females and young persons might be employed in bleaching and dyeing works for 12 hours a day, exclusive of two hours for meals, and for eight hours on Saturdays, exclusive of an hour and a-half for meals. After a long discussion the motion was negatived by 256 to 42. The remaining clauses were agreed to, and the House resumed. The *Dealers in Marine Stores Bill* was read a second time. The *Tramways (Scotland) Bill* was read a third time and passed. The *Metropolis Building Act (1855) Amendment Bill* was read a second time. —Mr. M. GIBSON obtained leave to bring in a Bill for amending and making perpetual the *Railway (Ireland) Act (1856).*—Mr. COWPER obtained leave to bring in a Bill to confer powers on the Commissioners of her Majesty's Works and Public Buildings to acquire certain property in Edinburgh, for the erection of an *Industrial Museum for Scotland.*—Mr. H. B. SHERIDAN obtained leave to bring in a Bill to amend the Act of the 22d and 23d years of her Majesty for regulating *Measures used in the Sales of Gas.*

THURSDAY.—*Indian Army.*—On the order for the second reading of the European Forces (India) Bill, Mr. A. MILLS moved as an amendment that the Bill be read a second time that day three months. He objected to the proposed change on financial, sanitary, and political grounds, and urged that the real question at issue was whether they should annihilate and utterly abolish an ancient and valuable machinery which had been tried and not found wanting during the vicissitudes of a hundred years.—Sir E. COLEBROOKE seconded the amendment, and read a letter written by Lord Cornwallis in the year 1787, in favour of maintaining a local European army in India. —Mr. T. G. BARING contended that the principle of the measure was correct, namely, that the British troops in India should be governed and organised on British principles, and the native troops on native principles. The military arguments were altogether in favour of the scheme; the political arguments against it had not been supported; and no one had ventured to assert that it would interfere with the rights of the army of Bengal. With regard to the letter of Lord Cornwallis, it should be remembered that it had been written only five months after he arrived in India, and that the noble lord had subsequently prepared a plan for offering an amalgamation of the two armies in India.—Mr. H. BAILLIE, Sir H. VERNEY, Sir J. ELPHINSTONE, Sir KINNAIRD, Sir M. FARQUHAR, Mr BUXTON, and Mr. HORSMAN opposed the Bill; Mr. VANSITTART, Sir W. RUSSELL, and Col. PERCY HERBERT supported it.—Mr. S. HERBERT confessed that it was not without some hesitation that he had come to the conclusion that it would be desirable to amalgamate the two armies. The subject was of a most complicated nature, and the authorities on either side were almost evenly balanced; but, on mature consideration, he felt that he was bound to give his adhesion to the project.—Mr. [illegible] moved the adjournment of the debate.—Lord PALMERSTON resisted the motion as unreasonable after the ample discussion which had taken place.—Sir H. WILLOUGHBY protested against an attempt to hurry on the measure pending the production of the papers which had been moved for.—On a division, the adjournment was negatived by 262 to 83.—Mr. DANBY SEYMOUR then moved the adjournment of the House, which was negatived by 229 to 51.—Another attempt, by Mr. HENNESSY, to adjourn the debate, was negatived by 190 to 43.—Mr. A. MILLS then moved the adjournment of the House.—Lord PALMERSTON said, that as it was then past 2 o'clock, he should out of regard for the Speaker, who had to take the chair at a morning sitting, give up the contest. The adjournment of the debate was then agreed to. Certain Bills were advanced a stage.

FRIDAY.—*Tenure and Improvement of Land (Ireland) Bill.*—The House went into Committee on this Bill, and resumed the consideration of clause 27, which was agreed to. Clauses 28 to 36, inclusive, were agreed to with certain verbal amendments. —On clause 37 Mr. MAGUIRE moved an amendment, to ensure to the tenant compensation for improvements, although made without the consent of the landlord, provided they were sanctioned by the chairman.—Mr. DEASY believed that the amendment would, if adopted, prove fatal to the measure.—After a very long discussion the amendment was negatived by 140 to 48. The clause was then agreed to. *Tax Bills Committee.* —Mr. WALPOLE brought up the report of this Committee, which was ordered to lie on the table. [Left sitting.]

City Entelligence.

THE RUSSIAN LOAN.—The proposals for the new Russian loan were issued on Monday by Messrs. Baring. The total is 8,000,000*l.* of 4½ per cent. stock, at 92 (which will amount to 7,360,000*l.*), and the dividends are to be payable on the 1st June and 1st December at Messrs. Baring's in London, or Messrs. Hope's at Amsterdam. The instalments are divided over each month of the current year, commencing with 10 per cent. two days after the allotment. The loan is stated to be issued in lieu of 5,000,000*l.* of the 3 per cent. loan of 1859 unissued, and about 7,000,000*l.* of the inscriptions of the 6 per cent. loan of 1818, received by the Government from the Loan Bank and Bank of Commerce in exchange for the money raised by the 3 per cent. loan which was applied in strengthening those banks.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols for Account closed at 93¼ to ⅜; Bank Stock, 229 to 230½; Three per Cents. Reduced, 93⅛ to 93; New Three per Cents., 93 to ⅛; Indian Four per Cent. Debentures, 1859, 96½; India Bonds, 12*s.* to 7*s.* dis.; Ditto Stock, 218¼; Exchequer Bills, par.—FOREIGN: Brazilian Four and a Half per Cents., 1858, 88; Belgian Four and a Half per Cents, 95½; Dutch Four per Cent. Certificates, 101⅛; Mexican Three per Cents., 20⅞; Peruvian Four and a Half per Cents., 92½; Portuguese Three per Cents., 1853, 45⅛; Spanish New Deferred Three per Cents., 39½; Turkish Six per Cents., 1854, 77½ to ⅜; Ditto for 1858, 59½ to 60.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£30,245,485	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,770,485
		Silver Bullion	—
	£30,245,485		£30,245,485

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£9,814,106
Rest	3,252,539	Other Securities	20,263,535
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	9,327,313	Notes	9,285,705
Other Deposits..	12,353,700	Gold and Silver Coin ..	781,545
Seven day and other bills	658,339		
	£40,144,891		£40,144,891

28th day of June, 1860. M. MARSHALL, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—R. BAKER, Ipsley, Warwickshire, Needle Dealer—T. BONSER, Plungar, Leicestershire, auctioneer—J. W. CRAWFORD, Lincoln, Grocer—T. and W. T. FERN, Fore Street, Cripplegate, Boot and Shoe Manufacturers—W. FRYER, Norwich, Boot and Shoe Manufacturer—C. GANNETT, Cardiff, Outfitter—H. and R. W. HOLDEN, Sheffield, Cattle Dealers—G. H. LILLE, Black Swan Yard, Bermondsey, Currier—E. J. PICKSLAY, Wakefield, Scrivener — G. J. SANDFORD, Clerkenwell Green, Linendraper—T. W. VERNON, Bilston, Ironmaster.

SCOTCH SEQUESTRATION—J. LOCKHART, Glasgow, Cattle Salesman.

FRIDAY — BANKRUPTS — J. ASHTON, St. Paul's Road, Highbury, Builder—R. BARKER, Maldon, Boot and Shoe Manufacturer—H. DOWSON, Newcastle-upon Tyne, Draper—J. B. DUNN and E. F. A. BOYER, Spring Gardens, Middlesex, Commission Agents—R. ELLIS, Northampton, Chemist —H. GUISFORD, Stepney, Builder—G. GRIDLEY, Islington, Coach Maker—J. A. HURST, Ludgate Street, City, Mantle Manufacturer—J. M'ALPINE, the younger, Bath's Pond, Bleacher—A. PENNY, Richmond Villas, Holloway, Underwriter—T. RYDER, Jun, Leadenhall Street, Merchant—A. SUTTON, Cowley Vale, near St. Helen's, Lancashire, Corn Miller.

SCOTCH SEQUESTRATION—A. BINNIE, Camlachie, Brickmaker.

Metropolis and its Vicinity.

THE REVIEW OF VOLUNTEERS.—On Saturday afternoon, the Queen, accompanied by the Prince Consort, the King of the Belgians, the Count of Flanders, and the Royal family, reviewed an army of about 20,000 volunteer riflemen, or about one-sixth of the whole force, in Hyde Park. The streets of the metropolis presented a singular spectacle during the morning. The lines of route taken by the respective corps were crowded with people, while the windows and house-tops were filled with persons of both sexes, who vigorously cheered the volunteers as they passed. At every railway station there were crowds of people to see the country corps come in; Oxford Street was like a fair; the City, Fleet Street, and the Strand were crowded; the steamboats on the river going west were all packed, while

the omnibuses from the outskirts, though charging double fares, were filled with passengers. From 12 to 2 o'clock all London seemed pouring in the direction of Hyde Park, the suburbs being silent and deserted. The park itself, from an early hour in the day till long after the review was over, was like Epsom Downs on a Derby Day. The Government had provided a series of stands extending about half the length of Park Lane, to which about 15,000 persons were admitted by tickets. But for these 15,000 tickets there were no less than 150,000 applicants, and from the moment the War Office announced their issue to the last one given away, an incessant crowd besieged their doors. Then came the temptation to those who had obtained them to sell their prizes to the less fortunate applicant, and one guinea, two, and even five guineas were offered and given for a place in the stands. The Hon. Artillery Company, 400 strong, with their splendid band, started from Finsbury at 1 o'clock, and marched through the City and up Fleet Street. This was the first rolling in of the military tide, that swelled as it proceeded with the 1st and 2d battalions of the City of London Rifles, who started from Guildhall, 600 strong; the 4th, 5th, 6th, 7th, 39th and 40th Middlesex; and the 2d City of London, who started from Gray's Inn at the same hour, 600 strong in the aggregate, with another division from Finsbury Square, also at 1 o'clock, and of the same strength; the 2d and 3d Tower Hamlets, the 33d Middlesex (Tottenham), the 1st Essex (Romford), 2d Essex (Cranbrook), 3d Essex, (Brentwood), 4th Essex (Chelmsford), and the 7th Essex (Rochford). This force, numbering 2800 men, took up at Somerset House 400 of Lord Bury's 21st Middlesex (the Civil Service Regiment), the 38th Middlesex (the Burlington House Corps) consisting of artists; while the 23d Middlesex (the Inns of Court Corps) just preceded them, having filed out from the Temple Gardens to the number of 400. Passing the opening from Waterloo Bridge, this long line was joined by the head of another column, consisting of 909 men; three Surrey regiments—the 5th (Reigate), 14th (Dorking), 16th (Egham); five Kentish regiments—the 5th (Canterbury), 9th (Chatham), 19th (Rochester), 26th (Maidstone), and 31st (Leeds Castle); five regiments of the Cinque Ports—1st (Hastings), 2d (Ramsgate), 3d (Rye), 4th (Hythe), 5th (Margate), with two from Sussex—the 1st (Brighton) and 7th (Horsham). At the Adelphi the Scottish (19th Middlesex) fell in with 450 men, and thus, with 4509 men, Charing Cross was reached. Here the 1st Kent (Gravesend), the 5th Kent (Blackheath), the 9th Kent (Plumstead), the 10th Kent (Royal Arsenal, Woolwich), starting from Westminster Bridge at half-past 1, joined the line with 500 men, while an additional body which came up from Fenchurch Street of three more Essex regiments, the 5th (Plaistow), 8th (Stratford), and 9th (Silvertown)—the latter from the factory of Messrs. Silver, making an aggregate of 630, joined soon afterwards. On entering the Mall, on the way to Constitution Hill, 14 Kentish corps, starting from the back of the Poor Law Board, added 1560 to the line—viz., the 3d (Lee), 4th (Woolwich), 6th and 7th (Kidbrooke), 8th (Sydenham), 9th (Chatham), 13th (Greenwich), 18th (Bromley), 21st (Lewisham), 25th (Blackheath), 27th and 34th (Deptford), 28th (Charlton), 32d (Eltham), and two battalions of the 26th—from the Royal Arsenal, Woolwich. At Carlton Terrace Lord Grosvenor's regiment, the 22d Middlesex (Queen's), marched up to the number of 950. At Buckingham Palace 690 men from St. George's Barracks, constituting six Surrey regiments—the 2d (Croydon), 4th (Brixton), 6th (Esher), 8th (Epsom), 9th (Richmond), and 11th (Wimbledon)—joined the line; and at the top of Piccadilly, Colonel the Hon. C. Lindsay's 3d battalion, consisting of the 11th, 12th, and 13th Middlesex, comprising 600 men, and Captain the Earl Spencer's 4th battalion, comprising the 28th Middlesex (the Irish), about 400 strong, completed the line. This body of 9000 men in one line then entered Hyde Park by the Apsley House Gate. From the New Road, from Paddington, from the North-Western, Great Western, and Great Northern Stations, came men from the west, the midland counties, and the north. Manchester alone sent nearly 2000. The Manchester men were drilled in Manchester at 5 in the morning, arrived in London at 2, and by half-past had taken up their position in the western side of the park. Of other corps who arrived from that side of the metropolis were the 1st Gloucester (Bristol), 3rd (Gloucester), 6th (Stroud); 1st, 2d, and 17th Somerset (Bath); 1st Warwick (Birmingham), 2d (Coventry, Warwick, and Stratford); 1st Berkshire (Reading), 3d (Newbury), 4th (Abingdon), 5th (Maidenhead), 6th (Wokingham); 2d Oxford (Oxford), 1st Dorset (Bridport). These were joined by the 28th Middlesex (Irish), 1st, 4th, and 5th Northamptonshire (Northampton), 4th Bucks (Aylesbury), and the 1st Huntingdonshire Mounted Rifles. Altogether this army of volunteers was composed of two divisions of four brigades each, the whole being formed of 34 battalions. By half-past 3 o'clock the whole force, numbering about 20,000 men, of whom the metropolitan corps supplied 13,226, had brigaded in battalion order, the line extending from the Serpentine nearly to the Bayswater Road. The force was arranged in two divisions, the first commanded by Lieut.-General Sir J. F. Love, and the second by Major-General Lord Rokeby. At 4 o'clock, the first gun of the Royal salute and a succession of cheers from the extreme left announced that her Majesty was entering the Park. A detachment of Life Guards headed the procession, which passed from left to right along the front of the galleries. Her Majesty was in an open carriage, with the King of the Belgians, the Princess Alice, and Prince Arthur. The Prince Consort, in uniform, rode by the side of the carriage, near which were also the Prince of Wales and Prince Jules of Holstein-Glucksburg. Aides-de-Camp, Equerries, the Adjutant-General, and other high military officials preceded the carriage. It was immediately followed by the venerable Lord Combermere, who was present at the opening of the war in 1793, and was old in service before most of the soldiers on the ground were born. His horse was led, and every attention was paid to the veteran warrior, who wore his Order of the Bath and the uniform of his regiment, the Life Guards. In the two other carriages were the Princess Louisa, the Princess Mary of Cambridge, and Mr. S. Herbert, Secretary at War; Prince Leopold, Princess Helena, the Duchess of Cambridge, and the Grand Duchess of Mecklenburgh Strelitz. In the line of the procession followed the Lords-Lieutenant of the counties to which the several corps of volunteers belong. The *cortège* passed nearly to the extreme left of the line of volunteers, then turned and proceeded slowly along the front to the extreme right, and turning again drew up on the open ground in front of the Royal standard. The three bands of the Household Brigade were stationed opposite the Royal carriages; through the intervening space the volunteer companies marched, those on the right of the line of columns coming up first. It was half-past 4 o'clock when the 1st Huntingdonshire Mounted Rifles passed her Majesty; and at a few minutes to 6 o'clock the 25th Cheshire closed the review, which lasted without intermission for quite an hour and a half. The general impression produced by the appearance and bearing of the Volunteers was very favourable, and there was but one opinion of their efficiency—that it did infinite credit both to the men and officers. The Huntingdonshire Mounted Rifles, commanded by the Duke of Manchester, all men of mark, with beards and moustaches, with swords in hand and rifles slung at their shoulders, were much admired for the beauty of their horses, which were finer animals than any of our regular cavalry regiments can show. The City Artillery Company was the first body of infantry that passed, and might easily be mistaken for the Foot Guards; but they are an ancient corps, with a long training. Some of the best known companies were cheered as they passed. Lord Elcho and the Highland Company, the London Irish, the Inns of Court Companies, and the Nottingham Robin Hoods were among many thus distinguished. Her Majesty left the ground at 6 o'clock, in the same order as she arrived, but some time elapsed before the public could get clear of the enclosures. When the review terminated, the Duke of Cambridge expressed to the officers of the Volunteers the gratification of Her Majesty at the display on the field; and it was communicated to the different companies before they were dismissed. The difficulty of getting a large body of troops out of the Park has almost become a military axiom, but the event of Saturday proved that the difficulty is not insuperable. The Volunteer officers solved the problem without confusion, except a little crushing at the gates; but the crushing was more among the spectators than the troops. Notwithstanding the immense multitude in the Park, and the pressure of the crowd at different points, the whole proceedings passed off without any serious accident. Indeed, there were only two mishaps on the field; the Duke of Newcastle and Lord Otho Fitzgerald were both thrown from their horses, but without severe injury. The following general order has since been issued from the Horse Guards by the Commander-in-Chief:—

"His Royal Highness the Duke of Cambridge has received the commands of the Queen to convey to the several Volunteer Corps reviewed by her Majesty on Saturday, the 23d inst., the very great satisfaction with which she observed the rapid progress they have made in military discipline, and the degree of perfection at which they have arrived. The steadiness and precision with which they performed the parade movements leave little doubt in her Majesty's mind, that, if they continue to be actuated by the same zeal they have hitherto evinced, a moderate degree of drill, interfering as little as possible with their usual avocations, will render them a most valuable auxiliary to her regular forces for the defence of the country. Much as her Majesty's admiration was excited by the soldier-like bearing of the various corps passed in review, a still deeper impression has been made on her mind by the proof which the Volunteer movement throughout the country affords of their devotion and loyalty to the Throne, and their anxiety to second her endeavours to insure the security, and thereby the prosperity, of the kingdom. The General Commanding-in-Chief is further directed by her Majesty to mark especially her sense of the zeal displayed by the officers of Volunteers commanding brigades of corps, and to notice particularly those battalions and companies which, regardless of personal inconvenience and expense, came from distant counties to join the display of loyalty and patriotism, which will render the 23d of June, 1860, memorable in the annals of our times. The General Commanding-in-Chief having thus given expression to her Majesty's sentiments regarding the Volunteer force, commendation on the part of his Royal Highness would be superfluous; but he desires to offer his thanks for the support and co-operation he has received on this occasion from the officers of the regular army employed during the day, and, more particularly, to refer to the excellent arrangements made by the Inspector of Volunteers and his assistants, which were so well seconded by the intelligence and orderly conduct of the various corps present."

LOSS OF THE MALABAR.—The Peninsular and Oriental Company's steamship Malabar, with Lord Elgin and Baron Gros, the English and French Ambassadors to China, on board, was totally wrecked in the harbour of Point de Galle on the 22d May. She parted her hawsers in a gale of wind, bumped heavily against the rocks, and went ashore on the sand. The passengers and a portion of the mails were saved, but the Ambassadors, who were the last of the passengers to leave the vessel, lost their credentials and papers, and all the bullion and baggage sank with the ship. She was lying with her stern deeply imbedded in the sand and was certain to become a total wreck. Divers were endeavouring to recover the specie on board, the amount of which was 282,446*l*. The Malabar was a comparatively new ship of 916 tons and 200-horse power. The Peninsular and Oriental Company are their own insurers, and will consequently lose the value of the ship, which is estimated at 40,000*l*.

THE FRENCH ORPHEONISTS AT THE CRYSTAL PALACE.—The first performance of the Orpheonists took place on Monday, the second on Tuesday, and the third on Thursday, with a success which so entirely surpassed all previous expectation, that a fourth performance will take place this afternoon at the usual Saturday price of half-a-crown, when the 3000 French musicians and the band of the Guides will bid adieu to their English friends. The excellence of their performances and the knowledge that they have come over to England without pay, for the sole purpose of establishing the alliance of the two countries by the bonds of art, naturally secured for them the most enthusiastic welcome, and they manifested their feelings for the cordiality of their reception by singing "God Save the Queen" at the commencement and end of each performance. The audience acknowledged this compliment by unanimously demanding "Partant Pour la Syrie." This was grandly played by the Guides' band, the audience and Orpheonists joining heartily in the chorus, and then exchanging another volley of cheers. The first day's performance was attended by 10,615 visitors, the second by 10,429, and the third, which was by far the most attractive of the three, by 16,700. Last evening the Sacred Harmonic Society entertained the Orpheonists at a special performance of Handel's music at Exeter Hall, and Sir Joseph Paxton, in accordance with a suggestion made in many influential quarters, has undertaken to make arrangements and receive subscriptions for entertaining them at dinner in the Crystal Palace after their farewell performance this afternoon. The band of the Guides will give a farewell concert this evening in St. James's Hall for the benefit of the French Charitable Association, under the patronage of the French Ambassador.

STATUE OF JOHN HUNTER.—At a recent meeting of the Hunterian Committee at the College of Surgeons, it was decided that the execution of the statue of John Hunter should be intrusted to Mr. Weekes, A.R.A.; and that, when completed, it should be placed in the museum of the College.

THE GREAT EASTERN.—The Marco Polo, which arrived at Queenstown on Tuesday, passed the Great Eastern at noon on the 20th inst. in lat. 47° 50′ North, long. 22° 50′ West. She was then steaming very fast, and that if the same speed were maintained she would have arrived at New York on Thursday.

ELECTION OF SHERIFFS.—At a Common Hall held on Monday in Guildhall, Alderman Abbiss and Mr. Andrew Lusk were elected Sheriffs of London and Middlesex for the year ensuing.

SUNDAY OPEN AIR SERVICE.—On Sunday afternoon Lord Wriothesley Russell preached to a tolerably large congregation in Covent Garden Market, being the first service for the season of the series originated last year under the auspices of the London Diocesan Mission. The northern avenue, in which the pulpit was erected, was well filled with visitors, who listened throughout with marked attention to the service. Many soldiers and volunteers were amongst his lordship's auditory.

CHURCH-RATES IN ST. CLEMENT DANES.—On Monday night, at the close of the poll which has taken place in this parish on the question of a church-rate of 2*d*. in the pound, the numbers were declared to be 210 for and 13 against, leaving a majority of 197 for the rate.

REJECTION OF THE FREE LIBRARIES ACT IN MARYLEBONE.—The electors of Marylebone have rejected the Act for the establishment of free libraries. Only 10 votes were given in its support.

ATTEMPTED SUICIDE IN THE HOUSE OF LORDS.—On Thursday afternoon as the House of Lords was sitting with the Judges to hear appeals, it was startled by a sudden yelling. An Indian, who was standing among the spectators, was seen to draw out a small knife, which he drew across his throat. The messengers of the House, with the aid of the police, immediately seized him and took him to the Westminster Hospital. It is said that the wound is not likely to prove dangerous.

ST. GEORGE'S-IN-THE-EAST.—On Sunday evening the rioters in this church, not content with interrupting the intoning of the prayers and the delivery of the sermon from beginning to end, followed the choristers into the streets, and hunted them through the lanes and alleys of Wapping and Whitechapel. The choristers were pursued by several hundreds of people, who pelted them with dirt and stones, beat them, met them at the ends of the narrow streets down which they had run for safety, forced the proprietor of a coffee-house where they had taken refuge to give them up, and only abandoned their pursuit after a desperate

conflict with the police. On the previous Sunday evening the Rev. Mr. Ibbetson, curate of Morpeth, who took part in the service, was followed in a similar manner, and took refuge in a public-house in Bethnal Green, from which he was ejected upon the demand of the mob. He at length escaped by jumping into a Hansom cab, which was passing at the time. In consequence of the continuance of these riots, a public meeting of the parishioners was held on Monday evening, when an address to the Bishop of London was unanimously agreed to, calling upon him to put a stop to "the Popish practices which prevailed in the parish church, as well as in two district chapels, in which unsound doctrine was also taught."

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, June 23, were 965. In the corresponding weeks of the 10 years 1850-9 the average number, corrected for increase of population, was 1098. The present return is therefore 133 below the average. During the week the births of 837 boys and 851 girls, in all 1688 children, were registered in London. In the 10 corresponding weeks of the years 1850-9 the average number was 1606.

Provincial.

BRADFORD.—The masons of this town have recently struck for a curtailment of the hours of labour and have carried their point. They have forced all their employers, with the exception of six, to sign a document, fixing 51½ hours as the regular amount of weekly labour for the future. The six recusants are not unwilling to concede the 51½ hours, but they declare that under no circumstances will they consent to the "odious document." This is an exact reversal of the position which the operatives and masters occupied in the London "lock-out."

CAMBRIDGE.—In the Court of Common Pleas on the 19th inst. Mrs. Cattaway, the wife of an engine-driver on the Eastern Counties Railway, obtained a verdict, with 50*l.* damages, against the Rev. Barnard Smith, one of the pro-proctors of this University, for having allowed his "bull-dogs" to apprehend and imprison her in the Spinning-house, for talking in the streets to two girls of improper character.

LINCOLN.—The existence of iron in Lincolnshire has now been established by discoveries of considerable interest and importance. In the neighbourhood of Caistor ironstone has been found in abundance, and also limestone, an essential element in the process of smelting. Borings to the depth of nearly 500 feet have also been made in the parish of St. Martin, Stamford, the result being the discovery of valuable beds of ironstone, pyrites, and coal.

MANCHESTER.—On Friday morning the extensive cotton mill of Messrs. Mayall, called the Britannia Cotton Mill, at Mossley, about midway between this city and Huddersfield, was destroyed by fire. It was the most extensive spinning mill in the country, having about 120,000 spindles, most with the latest improvements. The loss is estimated at 120,000*l.* to 150,000*l.* A great number of workpeople will, of course, be thrown out of work by the occurrence.

WORCESTER.—A public meeting has been held at the Guildhall of this city, at which it was resolved wholly to abstain from the use of butchers' meat until a reasonable reduction in its price be obtained. About 1000 persons are said to have signed an "abstinence pledge." The workmen engaged at Messrs. Wright & Sons' railway carriage works at Salthill numbering upwards of 1000 men, have agreed to a similar resolution.

Obituary.

PRINCE JEROME BONAPARTE, the youngest brother of Napoleon I. and uncle of the Emperor of the French, died on Sunday afternoon at Villegénis, in his 76th year. By his death the elder branch of the Bonaparte family has become extinct. He was born at Ajaccio, Corsica, on the 15th November, 1784, the year in which his elder brother Napoleon, a student at Brienne, quitted that school to enter the Military Academy of Paris, which he soon after left as an officer of artillery. As soon as he was old enough to leave the paternal roof, Jerome proceeded to France, where he pursued his studies at the College of Juilly. In 1798 General Bonaparte, then commanding in Italy, was consulted as to his young brother's future career; and the victor of Arcola, who at that time directed his attention particularly to the power of Great Britain, recommended that his brother should choose the navy as a profession. In 1799, in accordance with this recommendation, he entered the French navy as a midshipman; his first cruise was in the Mediterranean; and as if fortune meant to favour the views of his brother, the first combat in which he was engaged was with an English vessel. By an act of gallantry connected with the English ship Swiftsure, which had attacked the French frigate Indivisible, he won the rank of lieutenant and the command of the Epervier. A year afterwards, being charged by the Governor of the Island of St. Domingo with a mission to the First Consul, he acquitted himself with a tact and ability scarcely to be expected from so young a man; and having returned to the Antilles, he continued for some time cruising before the port of St. Pierre de la Martinique. It was at this period that the young commander of the Epervier, having visited Philadelphia, made the acquaintance of Miss Patterson. He could not foresee the mighty destinies that awaited his family, and consequently felt no hesitation in demanding the hand of the heiress of one of the richest merchants in America in marriage. He did not however inform his brother, now become the head of his family, of this alliance, which he was ultimately compelled to dissolve. Napoleon I permitted him, though annulling the marriage, to recognise the son born to him by Miss Patterson, and one of the children of this son is at this moment an officer in the French army, and took part in the campaign in Italy a year ago. In 1805 Prince Jerome was promoted to the rank of capitaine de vaisseau, and commissioned to claim the French and Genoese prisoners from the Dey of Algiers. He completely succeeded in this difficult mission; and in recompense of his services Napoleon I. appointed him to the command of the squadron destined for the revictualling of the French ports in the Antilles. During the voyage the squadron was dispersed by a storm of terrific violence, and Prince Jerome, striving to reassemble his scattered ships, fell in with and captured several of a convoy of British merchantmen; but on his return he was nearly taken prisoner by the cruisers of Admiral Keith. He however escaped, and his vessel was stranded off the coast of Brittany. On reaching Paris he received the cordon of the Legion of Honour, was promoted to the rank of admiral, and created a Prince of the Empire. Here the maritime career of the Prince terminated, and he followed his Imperial brother into Germany as a general of division. After the battle of Jena the new general put himself at the head of the 9th corps of the Grand Army, at the head of which he achieved the conquest of Silesia. In August, 1807, he married the eldest daughter of the King of Würtemberg, and a few days afterwards was proclaimed King of Westphalia—a kingdom which was formed of the duchies of Brunswick, Hanover, Hesse Cassel, together with Magdeburg, Osnaburg, and other principalities. After a peaceful reign of a few years, devoted to the internal organisation of his new kingdom, he entered into his brother's colossal plans of conquest, and accepted the command of the right wing of the Grand Army in the campaign of Russia; he was present at the operations on the Niemen, and on his return he took part in the battle of Leipsic. The force of events lost him a throne, but Prince Jerome, far from indulging in idle regrets for his departed splendours, hastened to place his sword at the service of the Emperor. Napoleon I however had abdicated, and Prince Jerome retired for a season to Trieste. On the return from Elba, the ex King of Westphalia rushed to Paris and took the command of the army intended to operate on the Sambre. He overthrew the Prussians, entered Charleroy, and received a wound at the affair of Quatre Bras. On the 18th June he was at Waterloo, and distinguished himself particularly at Hougoumont. When all was lost, he demanded hospitality from his father-in-law, the King of Würtemberg, who detained him for a while in captivity. In 1815 however he had established himself in Austria, in 1823 he was at Rome, and he settled in Florence in 1830. During his exile he lost his wife, his eldest son, and his two elder brothers, Joseph and Louis, the latter of whom was the father of Napoleon III. Actuated by his desire to revisit France, he solicited permission from the Chamber of Deputies to reside on French territory, promising to live peacefully with the Government, and demanding employment in the French army for his son and nephew. This permission having been granted while he was at Brussels, he at once proceeded to Paris, and had the happiness of once more breathing the air of France after an exile of 50 years. A few months later witnessed the Revolution of February, and the Bonapartes were no longer exiles. Prince Jerome was now created a Marshal of France, and at his own desire appointed Governor of the Invalides, that he might in person watch over the tomb of his illustrious brother, and notwithstanding his advanced age he became one of the most confidential advisers of the present Emperor. At the outbreak of the war in Italy last year he was present (sitting in the saddle he occupied at Waterloo) when the troops defiled on their march to conquer the Austrians at Magenta and Solferino. The Emperor on his departure called him to the Council of the Regency. The Prince leaves two surviving children—the Princess Mathilde, born at Trieste in 1820, and married in 1841 to Prince Anatole Demidoff de San Donato; and Prince Napoleon, born in 1822, who was lately married to the Princess Clothilde, daughter of Victor Emmanuel, King of Sardinia.

MR SERJEANT MURPHY, one of the Commissioners of the Insolvent Debtors' Court, died at his residence at Kensington on the 17th inst., from congestion of the brain caused by a tumour in the throat which could not be reduced. He was called to the English bar in 1833, and represented the county of Cork in Parliament for upwards of 16 years; his connection with the House of Commons only ceasing in September, 1853, when he was appointed a Commissioner of the Insolvent Court.

BIRTHS.—On the 26th inst, at Bath House, Lady ASHBURTON, of a daughter—25th inst, at 10, Langham Place, the Lady MONCASTER, of a daughter—19th inst, at Willesley Hall, Ashby de la Zouch, the Lady EDITH ABNEY HASTINGS, of a son—21st inst, at Headford House, Lady JOHN TAYLOUR, of a son—24th inst, at Aikenhead House, Lanarkshire, the Lady ISABELLA GORDON, of a son—25th inst, at Glenview, Llanwrtyd-Wells, Brecconshire, the wife of D. PRYSE DAVIES, Esq., of a daughter.

MARRIAGES.—On the 26th inst, at St. Paul's, Belgravia, Captain CHARLES B. WYNNE, 90th Regiment, to EMILY F. G. GORE BOOTH, eldest daughter of Sir R. Gore, Bart., M.P.—25th inst, at St. Peter's, Pimlico, Colonel FREDERICK WILLIAM HAMILTON, C.B., of the Grenadier Guards, sixth son of the late William Richard Hamilton, Esq., to LOUISA, fourth daughter of the late Sir ALEXANDER ANSTRUTHER, of Thirdpart, Fife—21st inst, at St. Peter's Church, Pimlico, Colonel MACDONALD, Commandant Staff College, Sandhurst, and only son of Colonel Sir Duncan MacGregor, K.C.T., to ADELAIDE, youngest daughter of the late P. J. MILES, Esq., of Leigh Court, Somerset, and of Kingsweston, Gloucestershire—1st inst, at Wyke Regis, Dorsetshire, HORATIO BEAUMAN YOUNG, Captain in the Royal Navy, fourth son of the late Sir Samuel Young, Bart., to ELIZABETH, only daughter of S. PRETOR, Esq., of Wyke House, county of Dorset—19th inst, at Woodley Church, Captain WILLOUGHBY, 7th Dragoon Guards, second son of the late Thomas Loraine Willoughby, Esq., of Cotterstock Hall, Warmington, to CHRISTINA MARY, youngest daughter of GODFREY WENTWORTH, Esq., of Woolley Park, near Wakefield—21st inst, at Saint James', Hastings, CHARLES EDWARD KING-LOCKE BUTLER, of Oulton Speire, eldest son of Charles Sainsbury Butler, Esq., M.P., of Cuckfield, Middlesex, to MARY ANN, second daughter of the late WILLIAM BRADSHAW, Esq., of Upper Homerton, Middlesex.

DEATHS.—On the 21st inst, at 78, Upper Berkeley Street, Lieut.-General DYNELEY, C.B., Royal Artillery, aged 78—14th inst, at Slebech Park, Pembrokeshire, the Baroness DE RUTZEN, the wife of the Baron de Rutzen, and sister of the Countess Dowager of Lichfield—21st inst, at the residence of his sister, Lady Dunalley, Monkstown, Dublin, the Hon. and Rev. J. C. MAUDE, Rector of Limavaddy, county Londonderry—19th inst, at Cheveney House, by a carriage accident, Lucy Mary Elizabeth, widow of the late Sir Robert Moubray, of Cockle Park, K.H., aged 72—15th inst, at Plumstead, Kent, Lady PERRETT, wife of Sir E. Bindloss Perrett, Bart., and daughter of the late Colonel N. Bayly, M.P., formerly of the 1st Life Guards (Greys-Eaters), and the R.W.M.M., aged 71—14th inst, at Inverness, General John Mackenzie, of Gruinard, second son of Sir Alexander Mackenzie, of Gairloch, Bart., aged 97—Supposed to have perished on board the Bark [illegible] November, ROGER, fourth son of the late THOMAS BROWNE-CAVE, Esq., of Repton Lodge, Derbyshire, and grandson of the late Sir William CAVE, Bart., of Stretton-en-le-Field, aged 12—April 24 [illegible] Surrey, Lieutenant FITZ ELGIAS GOLDSWORTHY [illegible] 1st Regiment Bengal N.I., and Brigade-Major at Lucknow, aged —15th inst, at Holyoke, Oxon, Hugo the Chevalier [illegible] —15th inst, at Holyoke, Oxon, HUGO THE CHEVALIER [illegible] a carriage accident, SARAH ANN CHAPMAN, [illegible] of the Rev. Joseph Chapman, D.D., formerly President of Trinity College, in the University of Oxford, aged 70—21st inst, at his residence, Beresford Lodge, Peel Terrace, Brighton, LUKE THOMAS FLOOD, Esq., Justice of the Peace for the counties of Sussex and Herts, also of Middlesex, of which he was a Deputy Lieutenant, aged 86—24th April, at Melbourne, Victoria, EDWARD MACDOWELL, Esq., late Attorney-General of Hobart Town, eldest son of the late John Macdowell, Esq., of Merton, county Wicklow—21st inst, WILLIAM SIMMS, Esq., F.R.S., of Carshalton, Surrey, and of Fleet Street—26th inst, EMILY ANNE, second daughter of TOWNLEY PARKER, Esq., Cuerden Hall, Lancashire—25th inst, the Rev. HENRY GARRETT NEWLAND, Vicar of St. Mary Church, Rector of Westbourne, and Chaplain to the Bishop of Exeter, aged 55—27th inst, at his residence, 28, Park Crescent, Portland Place, WILLIAM PARRY RICHARDS, Esq., second son of the late Sir Richard Richards, formerly Lord Chief Baron of the Exchequer, aged 71.

Markets.

COVENT GARDEN.—June 30.

English Pine Apples are coming in very abundantly, and a large importation of W. India ones in tolerably good condition has also arrived. Grapes are plentiful, as are likewise Cherries. Apricots, Pears, and other fruits from the South of France have just made their appearance. Strawberries are tolerably plentiful. Cob Nuts realise 1s. per lb. Green Gooseberries fetch 3d. a quart. Peas in excellent condition may now be obtained at a cheap rate. New Potatoes range from 12s. to 16s. per cwt. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Azaleas, Heaths, Primulas, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb.,	5s to 8s	Cherries, p. lb.,	1s to 3s
Grapes, per lb.,	4s to 10s	Green Figs, per doz.,	8s to 12s
Strawberries, p. lb.,	1s to 3s	Melons, each,	6s to 10s
Peaches, per doz.,	12s to 24s	Apples, per doz.,	2s to 6s
Apricots, per doz.,	2s to 4s	Oranges, per 100,	2s 6d to 8s
Nectarines, do.,	10s to 15s	Lemons, per 100,	5s to 8s

VEGETABLES.

Asparagus, p. bundle,	2s to 4s	Artichokes, per doz.,	6s to 8s
Rhubarb, per bundle,	4d to 6d	Beet, per doz.,	1s 6d to 2s
F. Beans, per 100,	1s to 1s 6d	Celery, per bundle,	2s to 3s
Peas, p. bush.,	4s to 6s	Onions, p. half sieve,	3s
Cauliflowers, each,	6d to 8d	Tomatoes, per doz.,	2s to 3s
Greens, per dozen,	4s 6d to 6s	Shallots, per lb.,	6d to 8d
Cabbages, do.,	1s to 2s	Garlic, per lb.,	6d to 8d
Potatoes, p. ton,	90s to 100s	Lettuces, Cabo., p. score,	1s 6d to 2s 6d
— per bus.,	3s to 4s 6d	Lettuces, Cos, p. score,	6d to 1s
— per cwt.,	6s to 8s	Endive, p. score,	1s to 2s
Carrots, per bunch,	6d to 8d	Horse Radish, p. bun.,	1s 6d to 4s
Turnips, per bunch,	5d to 7d	Mushrooms, p. pott,	1s to 1s 6d
Spinach, p. sieve,	2s to 3s	Parsley, p. 12 bunches,	2s to 3s
Cucumbers, each,	6d to 1s	Savory, per bunch,	2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, June 28.

Prime Meadow Hay	70s	84s	Clover	95s	126s
Superior do. (old) ..	88	105	New Clover	—	—
Inferior do.	55	60	Second cut do. ..	90	95
New do.	36	80	Straw	26	36
Rowen	60	70		DAVIS & Co.	

WHITECHAPEL, THURSDAY, June 28.

Fine old Hay	100s	to less	Fine old Clover ..	120s	to 128s
Inferior do.	84	92	Inferior do	105	112
Prime New Hay ..	—	—	Fine New Clover ..	—	—
Inferior do.	—	—	Fine 2d cut	108	112
Straw	30	36	Inferior do.	86	95

COAL MARKET.—JUNE 28.

Walls End Byron, 16s. 6d.; Walls End Harton, 16s. 3d.; Walls End Gosforth, 16s. 3d.; Walls End Tanfield Moor, 13s. 3d.; Walls End Stewarts, 18s. 6d.; Walls End South Hetton, 18s. 6d.; Walls End Haswell, 18s. 6d.; Walls End Belmont, 16s. 6d.; Walls End Hetton, 18s. 6d., Walls End Framwellgate, 17s.; Walls End Hough Hall, 17s., Walls End North Hartlepool, 15s. 6d.; Walls End Whitworth, 16s.; Tanfield Moor Bites, 13s. 6d.; Walker Primrose, 13s. 6d.; West Hartley, 16s.; Wylam, 16s.; Bedside Hartley, 16s.; Davison's Hartley, 16s; Hastings Hartley, 16s.; Howard's Hartley, 16s.; Lambert's Hartley, 16s.; North Holywell Main, 16s.—72 ships at market.

BUTTER MARKET.—June 29.

Best Fresh Butter . ..	13s. per dozen lbs.
Second do. do.	12s. " "
Pork, 5s. 0d. to 5s. 4d. per 8 lbs.	

POTATOES.—SOUTHWARK, MONDAY, June 25.

During the week the arrivals coastwise have been small, and a rise in price was the consequence. As the old Potatoes are nearly finished, this will be our last report for the season. The following are this day's quotations:—Yorkshire Flukes, 130s. to 170s.; Perth, Forfar, and Fifeshire Reds, 120s. to 140s.; Irish Whites, 100s. to 120s.

METROPOLITAN CATTLE MARKET.

MONDAY, June 25.

The supply of Beasts is again short, and consequently prices are not much altered although trade is slow. The number of Sheep is about the same as on Monday last; the demand has been good, and prices on the average are higher. Lambs are [illegible] lower. From Germany and Holland [illegible] Beasts, 320 Sheep, and 200 Calves; from Scotland, 70 Beasts; from Norfolk and Suffolk, 2000; and 150 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	5	4	to 5	8	Best Long-wools.	5	0	— 5	2
Best Short-horns	5	2	— 5	6	Do. Shorn			to ..	
2d quality Beasts	4	6	— 4	10	Ewes & 2d quality	4	6	— 4	8
Best Downs and Half-breds ..	5	4	to 5	6	Do. Shorn			— ..	
Do. Shorn		—	..		Lambs	6	0	— 6	8
					Calves	4	8	— 5	0
					Pigs	4	0	— 5	0

Beasts, 3500; Sheep & Lambs, 24,000; Calves, 294; Pigs, 440.

THURSDAY, June 28.

The number of Beasts is considerably larger than on Thursday last. The demand is [illegible] slow, and prices cannot be quoted higher. The supply of Sheep and Lambs is large; trade is very dull, but Monday's quotations are [illegible], we have a large number of Foreign Calves on sale. Cows are in fair demand. The entire supply consists of 2100 Beasts, 1500 Sheep, 407 Calves, and 10 Pigs; and 142 Milch Cows.

Best [illegible], Herefords &c. .	5	4	to 5	8	Best Long-wools .	5	0	— 5	2
Best Short-horns	5	2	— 5	4	Do. Shorn . .			— ..	
2d quality Beasts	4	4	— 4	8	Ewes & 2d quality	4	6	— 4	8
Best Downs and Half-breds ..	5	4	— 5	6	Do. Shorn			to ..	
Do. Shorn ..		—	..		Lambs	6	0	— 6	8
					Calves	4	6	— 5	6
					Pigs	4	0	— 5	0

Beasts, 1,42; Sheep & Lambs, 9500; Calves, 608; Pigs, 220.

MARK LANE.—MONDAY, June 25.

The supply of Wheat to this morning's market was very small from Essex, and from Kent moderate, and must be written 1s. to 2s. per qr. cheaper than on this day se'nnight. The market was fairly attended, and on the business transacted in foreign Wheat, which was limited, last week's prices were fully supported. Barley is in fair demand at fully last week's rates. Beans and Peas bring late prices. With a very large arrival of Oats the trade is dull at a decline of 1s per qr. upon good qualities, and 1s. to 2s. per qr. upon inferior and out-of-conditioned parcels. For Flour there is no demand, and prices are nominal.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	55—61	Red	53—57
— — fine selected runs..ditto	55—62	Red	56—61
— — Talavera	58—63		
— Norfolk	—	Red	—
— Foreign	52—65		
BARLEY, grind. & dist., 24s to 31s..Chev.	38—45	Malting.	36—41
— Foreign..grinding and distilling	28—36	Malting.	35—40
OATS, Essex and Suffolk	19—24		
— Scotch and Lincolnshire..Potato	23—28	Feed ..	19—27
— Irish .....Potato	24—28	Feed ..	19—24
— Foreign.....Poland and Brew	23—27	Feed ..	20—27
RYE	35—38	Foreign.	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....32s to 40s....Tick	34—43	Harrow.	34—43
— Pigeon .....36s — 47s..Winds.	48—54	Longpod	—
— Foreign .....Small	38—46	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	38—40	Suffolk .	36—41
— Maple .... —s to —s ..... Grey	32—34	Foreign.	30—40
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	48—54		
— 2d do. ..... ditto	40—48	Country.	40—48
— Foreign .....per barrel	25—32	Per sack	30—37

FRIDAY, June 29.

We are unable to report any amelioration in the weather for the past week; it continues to be of a wet and stormy character. Temperature slightly warmer, but very cold for the season of the year. The wind was high and chiefly from the S.E. and S.W. As regards the appearance of the crops, we can add little to our report of last week, excepting that the hay is suffering, and there appears but too little probability of its being well got. The Wheat trade has been dull throughout the kingdom, and in many markets a decline of 1s. per qr. is reported, but few holders appear disposed to submit to a reduction, rather looking with confidence for an advance. Oats in several markets are quoted 6d. to 1s. per qr. lower. In other descriptions of spring corn no alteration worthy of comment has occurred. The demand for Flour is exceedingly limited, and country marks have been purchaseable at a reduction of 1s. to 2s. per sack. Few f. o. b. sales from the Baltic have taken place, quotations being generally out of proportion to our own, but large purchases of Wheat represented to be for account of the French Government have been made there, also in Hamburgh and Marseilles. There have been very few arrivals of grain-laden vessels from the South of Europe this week, and the sales are likewise to a small extent. The arrivals of English Wheat this week have been small, fair of foreign Wheat and Barley, and large of Oats. A portion of the English Wheat left over from Monday has been sold at that day's prices. The demand for foreign improves, and where sales are effected former rates are realised. Barley is in fair demand at the extreme prices of Monday. The value of Beans and Peas is unaltered. The Oat trade is very heavy, and sales of all but the finest qualities difficult.

ARRIVALS FROM June 25 TO June 29.

	Wheat.	Barley.	Oats.	Flour.
English ..	1010 qrs.	— qrs.	— qrs.	1930 sks.
Irish	— ,,	— ,,	1560 ,,	— ,,
Foreign ..	12740 ,,	4390 ,,	36770 ,,	3650 ,, 5070 brls.

LIVERPOOL, Tuesday, June 26.—We had only a small attendance of buyers at our Corn Exchange this morning, and the business passing in Wheat has been on a very restricted scale, at a reduction of 1d. to 2d. per cental. Flour though difficult of sale cannot be quoted lower. Indian corn was little inquired for, and all descriptions declined 6d. per qr. Oats and Oatmeal were tolerably steady at late rates. In Beans, Peas, and Barley there is no alteration to notice. The day is fine and sunny, and buyers act on the reserve.

FRIDAY, June 29.—There was a good consumptive business in Wheat; French the turn dearer. Flour a fair trade at late rates. Indian Corn rather more in demand at the late decline. Beans without change. Oats and Oatmeal dull sale. Rather better attendance.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
May 19..	52s 1d	36s 6d	25s 3d	36s 2d	44s 3d	39s 5d
— 26..	52 6	36 2	26 6	37 3	44 8	40 9
June 2..	53 4	35 10	26 8	39 3	44 1	41 0
— 9..	54 2	35 0	27 8	38 1	45 9	40 8
— 16..	54 11	35 3	26 11	37 0	46 2	40 4
— 23..	57 0	34 7	27 5	38 9	45 10	41 4
Agg. Aver.	54 0	35 7	26 9	37 9	45 2	40 7

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	May 19.	May 26.	June 2.	June 9.	June 16.	June 23.
57s 0d	..	..	..	..	..	
54 11	..	..	..	..		
54 2	..	..	..		..	..
53 4	..	..		..	..	..
52 6	..		..	..	..	..
52 1 —		..	..	..	..	..

BRITISH WOOLS.—LONDON, FRIDAY, June 29.

The quantity of new wool in this market is not large as yet. The prices keep up with spirit in all parts of the country.

WANTED, A PARTNER, in the occupation of a large tract of land. A good House, and a share in the Shooting over 2000 acres may be had.—For particulars, apply to Mr. JAMES KING, Land Agent, Winslow.

TO GARDENERS, &c.

WANTED, an industrious, orderly MAN, with character from last place, to keep in order (assisted by Labourers) ORNAMENTAL PLEASURE GROUNDS and KITCHEN GARDEN. No Hothouse.—Apply by letter, in first instance, to Mr. ESTALL, Office, Oatlands Park Hotel, Walton-on-Thames; or any person willing to undertake the work by Yearly Contract, may apply as above. A Lodge may be had if a Married Man.

WORKING GARDENER AND BAILIFF.

WANTED, a WORKING GARDENER, to attend to a moderately-sized Garden and small Vinery, and capable of superintending the management of 30 acres of Land. He must be a thorough practical Farmer and good Haymaker. A man between 30 and 40 years of age, without children, preferred. — Wages 15s. a week with corn, furnished cottage, vegetables, and milk when it can be spared. Address (stating references) to E. R., Rock Hills, Sydenham, S.E.

WANTED, A GARDENER, and his WIFE as LAUNDRESS.—Without incumbrance; the Man strong, and a practical Gardener, about 30 years of age, willing to make himself useful in a small family.—Apply at 4, Strand, near Charing Cross, W.C.

WANTED, a respectable Man of good address to call upon country gentry on commission. One having a good connection among agents and stewards will be liberally treated.—Address, with references, B., Post Office, Moss Lane, Manchester.

WANTED, a steady obliging MAN, who can take charge of a Horse and Gig, manage a very small Garden, clean Knives and Shoes, and be willing to make himself generally useful. State age, former services, and wages expected, without Board or Lodging.— Address, H. J. TURNER, Land Agent, Richmond, Yorkshire.

WANTED, an experienced person as CLERK AND SHOPMAN at a large Nursery. He must Write a good hand, be a good Accountant, and of unexceptionable character for integrity, sobriety, and industry.—Apply to Mr. SKILLING, Walton Nursery, Liverpool.

WANTED, a single young Man to act as Shopman (and occasionally travel) in a Seed and Corn establishment. Satisfactory references required.—Apply by letter, stating terms, to THOS B. THOMSON, 20, High Street, Birmingham.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 28, single; has a thorough practical knowledge of his profession in all its branches.—A. B., Mr. Robson's Library, Lower Norwood, Surrey, S.

GARDENER (HEAD).—Age 30, married, one child; understands Forcing, Fruit, Flower and Kitchen Gardening. Two years' good character from his present employer.—J. Mc. P, Rosebank, Tunbridge Wells, Kent.

GARDENER (HEAD).—Age 39, married, no incumbrance; has a thorough practical knowledge of his profession in all its branches. Wife a good Dairy Woman, if required.—A. B., 31, Cockrane Terrace, Portland Town, St. John's Wood, N.W.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; thoroughly understands his profession in all its branches, with management of Meadow Land and Stock. Left on account of his employer, with whom he lived six years, giving up his country residence.—J. C., 45, New Street, St. John's Wood, N.W.

GARDENER (HEAD).—Age 32, married, no incumbrance; has a thorough practical knowledge of Pines, Vines, Peaches, Cucumbers, and Melons; Flower and Kitchen Gardening.—J. R., 3, Hargrave Place, James Street, Camden Town, N.W.

GARDENER (HEAD).—Age 37, single; strong, active, working man; understands Forcing Fruit, Flowers, and Vegetables, and the management of Flower and Kitchen Gardens; also Land and Stock. Six years' character.—B. C., Mr. Muskett, Nurseryman, High Street, Clapham, S.

GARDENER (HEAD).—Age 38, married, two children; has a thorough practical knowledge of his profession in all its various branches, including Early and Late Forcing of all kinds of Fruits, Flowers, and Vegetables, Growing of Stove and Greenhouse Plants, Orchids, &c.; the management of Kitchen and Flower Gardens. Good character and references.—H. B., 14, Oxford Street, Southampton.

GARDENER (HEAD).—Age 40, married; possesses a practical and scientific knowledge of his profession in all its branches, including Pines, Grapes, Peaches, Figs, Melons, Cucumbers, &c., and is a first class Plant Grower; with Woods, Land and Stock. Has had 200 prizes for Fruit and Vegetables. Wife can take charge of Dairy and Poultry.—J. D., Messrs. Drummond's Nursery, Bath, Somersetshire.

GARDENER (HEAD).—HENRY MAY begs respectfully to offer his services to any lady or gentleman requiring a Gardener. He lived under his brother four years while with the late Mrs. Laurence at Ealing Park, and he has subsequently been foreman in the plant department of a Nursery. In addition to his experience in the cultivation of plants and flowers, H. M. feels himself quite competent to undertake the charge of a Kitchen or Fruit Garden, and other matters connected with the duties of a gardener.—HENRY MAY, New Road, Barnet, Herts, N.

GARDENER (HEAD).—ALEX. LAMBIE, thoroughly experienced in every department of Gardening, of long and extensive practice, has just left the service of the Earl of Effingham (who has changed his residence), in whose family he has been many years, and to whom reference can be made as to character, at 57, Eaton Place, London, S.W.; Mr. Henderson, Gardener to the Earl Fitzwilliam, Wentworth, Rotherham; Mr. Robert Wilson, Head Steward to the Duke of Norfolk, Sheffield, formerly Gardener at Arundel; Mr. Law, Gardener to Lord Wharncliffe, Wortley Hall, Sheffield; or to Messrs. Fisher, Holmes, & Co., Nurserymen, Sheffield.—Address, Blackburn, Rotherham.

GARDENER (HEAD), or GARDENER AND BAILIFF.—Age 30, married; thoroughly understands his profession; also the Management of Cattle, &c. Three and a half years' good character.—A. B. C., 6, Devonshire Street, Hammersmith, W.

GARDENER.—Middle-aged, single; active, sober, and industrious; thorough good Flower, Fruit, and Kitchen Gardener. Good character. Will be disengaged on the 30th inst.—B. A., 3, Leigham Road, Streatham, S.

GARDENER.—Married, without incumbrance; understands Vineries, Greenhouses, Propagating, and Bedding-out Plants. Wife can manage Laundry, if required. Good reference.—A. B, Post Office, Deveridge, near Uttoxeter, Staffordshire

GARDENER.—J. B. WHITING, Gardener to H. T. Hope, Esq, at the Deepdene, Dorking, Surrey, can highly recommend a Man (age 26, married, no incumbrance), who has worked under him 11 years, to any gentleman who may require a skilful and industrious Gardener.

GARDENER.—JOHN CARTER, Jun., Nurseryman, Keighley, wishes to recommend a young Man to any lady or gentleman in want of a good practical Gardener; he has had considerable experience in Pines, Vines, and every other branch of Gardening, and J. C. has every confidence that he will give satisfaction. Wife a good Laundress.

GARDENER.—Age 38; married, no family; thoroughly understands Forcing Grapes, Melons and Cucumbers, &c.; also a thorough knowledge of Plants, Kitchen and Flower Gardens. Good character from last employer.—A. B., 2, Clarissia Cottage, Beulah Road, Walthamstow, Essex, N.E.

GARDENER.—A gentleman wishes to obtain a situation for a Man who understands the Management of Cows and Stock. He is a good workman, and would be found a very useful and valuable servant. His Wife could undertake the management of a Dairy.—A. B., care of Messrs. Gates & Bellamy, 2, Moorgate Street, City, E.C.

GARDENER.—Age 30, single; practical knowledge of Growing Vines, Peaches, Greenhouse, and Bedding-out Plants, Melons and Cucumbers; also the Flower and Kitchen Gardens. Satisfactory testimonials.—J. H., Post Office, Redland, Bristol.

GARDENER (FOREMAN OR SECOND, in a gentleman's family)—Age 23, single; thoroughly understands the management of the Greenhouse, Hothouse, Fruit and Flower Gardens. Three years' good character.—H. C., 3, Hyde Place, Royal Hill, Greenwich.

GARDENER (SINGLE-HANDED),—Understands the Growing of Fruits and Flower in or out of the house.—W. A., 1, West Street, Dartford, Kent.

GARDENER (UNDER, where Forcing is carried on).—Age 20; has been accustomed to Gardening for several years.—A. Z., Royal Botanic Gardens, Regent's Park, London, N.W.

NURSERY FOREMAN.—Thoroughly understands Roses, Fruit, and Ground work in general. Has lived in some of the first Nurseries in England, where satisfactory testimonials may be had. Six years' character from the place he is now leaving.—B. C., Messrs. Rollisson, the Nursery, Tooting, S.

PLANT GROWER, PROPAGATOR, OR FOREMAN, &c.—Long experience in the Trade.—G. G., Mr. Tolman's, Alphington Cross, Exeter.

TO ESTATE AGENTS, SOLICITORS, &c.

LAND STEWARD.—High character; wishes for a change of situation. A liberal Premium will be given to any person who can introduce him to a suitable appointment. A., care of Publisher. *Gardeners' Chronicle* Office, W.C.

TO LANDED PROPRIETORS AND OTHERS.

STEWARD OR BAILIFF.—Small incumbrance; thoroughly acquainted with Norfolk Farming in all its branches. Wife an excellent Dairywoman. Can have 9 years' first-rate character.—Mr. PARTRIDGE, Shouldham, Downham.

BAILIFF OR GENERAL MANAGER.—Has been extensively engaged on a nobleman's estate, where Agriculture has been carried out most economically; is conversant with all Soils, the Management of Woods, Breeding and Selling Short-horns and other Stock. Satisfactory reasons furnished for leaving present situation, and the highest references given.—W. C., Messrs. Gibbs & Co., corner of Half-Moon Street, Piccadilly, London, W.

TO THE NOBILITY AND GENTRY.

LAND STEWARD, BAILIFF, OR GENERAL MANAGER to a nobleman or gentleman wishing to farm his Estate on the most improved modern system—Age 36; is about leaving a situation in Norfolk. Has had great experience in Cultivating both Light and Heavy Soils, the Drainage of Lands, the Breeding, Rearing, and Fattening of Stock, the Manufacture and Use of Artificial Manures, Growing of Green Crops, the Working of every description of Improved Machinery, the Planning of Farm Buildings, and the Purchase and Sale of Live Stock and other Farm Produce. He can be highly recommended by several large landed proprietors and eminent agriculturists.—A. P., *Norfolk News* Office, Norwich.

BAILIFF, or BAILIFF AND GARDENER.—W. P. AYRES having completed his engagement in the formation of the Forcing and Pleasure Gardens to the new mansion at Orchardleigh Park, will shortly be at liberty to enter upon a similar engagement. During his residence (four years) at Orchardleigh W. P. A. has had the general supervision of the Estate Improvements, Draining, Re-modelling of Farms, Receiving Rents, &c. He has also Designed and erected a Farm residence and covered Homestead of the first class; is thoroughly conversant with the principles of Construction and Artificers' and Ground work of all kinds. Liberal remuneration expected. *** W. P. A. has been known to Professor Lindley, the learned Editor of the *Gardeners' Chronicle*, for upwards of 20 years, and has the honour to refer to him as to his professional capabilities.—Orchardleigh Park, Frome.

WHAT WILL THIS COST TO PRINT? is a thought often occurring to literary minds, public characters, and persons of benevolent intentions. An immediate answer to the inquiry may be obtained on application to RICHARD BARRETT, 13, Mark Lane, London, E.C. R. B. is enabled to execute every description of Printing on very advantageous terms, his office being furnished with a large and choice assortment of Types, Steam Printing Machines, Hydraulic and other Presses, and every modern improvement in the Printing Art. A Specimen Book of Types, and information for Authors, sent on application, by

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SAUCES.—Connoiseurs have pronounced LEA and PERRINS' "WORCESTERSHIRE SAUCE" one of the best additions to Soup, Fish, Joints, and Game. The large and increasing demand has caused unprincipled traders to manufacture a spurious article; but the "GENUINE" all bear LEA & PERRINS' name on Bottle, Label, and Stopper.—Sold by CROSSE & BLACKWELL, London, and all respectable Oilmen and Grocers. Sole Manufacturers—LEA & PERRINS, Worcester.

GLENFIELD PATENT STARCH, used in the royal laundry, and pronounced by her Majesty's laundress to be the Finest Starch she ever used. Sold by all chandlers, grocers, &c., &c.

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PRIZE MEDAL, PARIS EXHIBITION 1855.

METCALFE, BINGLEY, AND CO.'S New Pattern and Penetrating Tooth Brushes, Penetrating unbleached Hair Brushes, Improved Flesh and Clothes Brushes, and genuine Smyrna Sponges; and every description of Brush, Comb, and Perfumery for the Toilet. The Tooth Brushes search thoroughly between the divisions of the Teeth and clean them most effectually—the hairs never come loose. M., B., & Co.'s new and delicious perfumes the Fairy Bouquet and the Oxford and Cambridge Bouquet, in bottles 2s., 3s. 6d., and 5s. METCALFE'S celebrated Alkaline Tooth Powder, 2s. per box.—Sole Establishment, 130B and 131, Oxford Street, 2d and 3d doors west from Holles Street, London, W.

The Gardeners' Chronicle Newspaper.

SATURDAY, JULY 7, 1860.

MRS. ARTHUR HENFREY, Widow of the late Professor Henfrey, F.R.S., F.L.S., &c., of King's College, London, continues to receive a limited number of young Gentlemen under 12 years of age, to be educated with her own Sons, in all the branches of a liberal education. French is constantly spoken, Mrs. HENFREY having resided on the Continent, and a Parisian Lady assists her to teach Music, Singing, and Drawing. The house is healthily situated, and provided with a large Garden. Pupils will have the comfort of a private family, and unremitting attention will be paid to their health and morals. References are permitted to—

Dr. JELF	Principal of King's College
Rev. LAWFORD W. T. DALE ..	Chiswick Vicarage, W.
Rev. OLIVE HOLLINGWORTH ..	Turnham Green, W.
Sir WM. and Lady HOOKER ..	Kew, W.
Professor HUXLEY, F.R.S	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. MARTYN.. ..	7, Bennett St., St. James's, S.W.
Dr. and Mrs. LINDLEY.. ..	Acton Green, W.
Dr. and Mrs. HOOKER .. .	Kew, W.
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BONUS OF 1861.—All Policies effected prior to the 1st July, 1861, on the Bonus Scale of Premium, will participate in the next Division of Profits.

ROBERT TUCKER, Secretary and Actuary.

NOTICE OF DIVIDEND.

BANK OF DEPOSIT (Established A.D. 1844), 3, Pall Mall East, London, S.W.—The WARRANTS for the HALF-YEARLY INTEREST, at the rate of 5 per cent. per annum, on Deposit Accounts, to the 30th inst., will be ready for delivery on and after July 10, and payable daily between the hours of 10 and 4.

PETER MORRISON, Managing Director.

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News of the Week.

THE Revenue Returns for the year and quarter ended on Saturday show an increase of 5,727,014*l*. on the year and an increase of 326,918*l*. on the quarter. The only branches of revenue which show a decrease on the year are the Customs and Miscellaneous, the decrease in the former being 262,061*l*., and the decrease in the latter, 413,351*l*. The only branch which shows a decrease in the quarter is the Customs, in which there is a decrease of 375,641*l*.

In the House of Lords on Friday, on the motion of the Marquis of CLANRICARDE, a select committee was appointed to devise some plan for the construction of breakwaters and harbours less costly than solid masonry. On Monday the Duke of MARLBOROUGH, in spite of appeals from Lords DERBY, GRANVILLE, SHAFTESBURY, and other Peers, who urged him to delay his motion, moved a resolution expressing the opinion of the House that the authoritative exclusion of the Bible from the Government colleges and schools in India ought to be removed. Lord BROUGHAM moved, as an amendment, the previous question, which was carried without a division and without discussion. On Tuesday Lord ST. LEONARD'S moved the second reading of the Masters' and Operatives' Bill, the object of which is to establish Courts of Conciliation to decide disputes between masters and their workmen. Lord RAVENSWORTH moved that the Bill be read a second time that day six months. After some discussion the Bill was read a second time on the understanding that it should be referred to a select committee. On the motion of the Duke of NEWCASTLE the New Zealand Bill, the object of which is to establish a native Council, under the authority of the Crown, to which all disputes in reference to land may be referred, was read a second time. On Thursday, on the order for the third reading of the Highland Roads and Bridges Bill, Lord REDESDALE moved as an amendment that the Bill be read a third time that day three months. On a division the amendment was negatived by 35 to 33, and the Bill was read a third time and passed.

In the Commons on Friday the SOLICITOR-GENERAL said that the Government intended to proceed with the Bankruptcy Bill during the present session. The House then went into Committee of Supply, and after considerable discussion agreed to the votes for the salaries and expenses of the Customs departments, the Inland Revenue, and the Post-office service. On Monday the second reading of the European Forces (India) Bill was carried on a division by a majority of 229, the numbers being 282 to 53. On Tuesday the Mines Regulation and Inspection Bill and the Tenure and Improvement of Land (Ireland) Bill, were again considered in committee, and several clauses were agreed to. Colonel LINDSAY's motion for a select committee to inquire into the claims of seven Major-Generals to the pay of General officers was opposed by Mr. S. HERBERT, but was carried on a division against the Government by 108 to 94. Captain ESMONDE's motion for a select committee to inquire into the present system of nomination to cadetships in the Royal Navy was negatived on a division by 81 to 24. The House was shortly afterwards counted out. On Wednesday Mr. HUBBARD withdrew his Church Rates Law Amendment Bill for the present session. On the order for the second reading of Sir G. LEWIS's Highway Bill, Mr. HODGKINSON moved that the Bill be read a second time that day three months. On a division the amendment was negatived by 203 to 120, and the Bill was read a second time. The House then went into committee on the Dealers in Marine Stores Bill, when in deference to the general wish of the House, Mr. SPOONER consented to withdraw the Bill, on the understanding that the subject would be inquired into by Government. On Thursday Lord J. RUSSELL announced that in consequence of the violent proceedings of General HARNEY in the island of San Juan, the PRESIDENT of the United States had ordered General HARNEY to be recalled, and matters to be restored to the state in which General SCOTT had left them. Lord PALMERSTON moved a series of resolutions in reference to the recent rejection of the Paper Duties Repeal Bill by the House of Lords, declaring that the right of granting aids and supplies to the Crown is in the Commons alone, as an essential part of their constitution; that the exercise by the Lords of their power of rejecting Bills relating to taxation is regarded by the Commons with peculiar jealousy; and that, to guard for the future against an undue exercise of that power, the Commons have in their own hands the power so to impose and remit taxes, and to frame Bills of supply, that their right as to the matter, manner, measure, and time may be maintained inviolate. Mr. COLLIER and Mr. E. JAMES having withdrawn the amendments of which they had given notice, the CHANCELLOR of the EXCHEQUER said that he should support the resolutions as a simple declaration of the privileges of the House, but at the same time he thought it desirable to vindicate its right by action, and he reserved to himself entire the freedom to adopt any mode of vindicating that right which might appear to him desirable. Mr. DISRAELI said that the resolutions moved by Lord PALMERSTON were wise, calm, impartial, and statesmanlike, and would receive the entire support of the Conservative party. Lord J. RUSSELL admitted that the technical right belonged to the Lords of rejecting a Money Bill, but expressed his opinion that the rejection of the Paper Duties Repeal Bill was a rash and unjustifiable act, which might be followed by others if the Commons did not assert their constitutional rights. On the motion of Mr. D. SEYMOUR, the debate was then adjourned.

Accounts from Naples state that an insurrectionary movement took place in that city last week, in which the commissariats of the 12 districts were ransacked and pillaged, the archives burnt, and the agents murdered. The city was immediately declared in a state of siege. A telegram dated Wednesday last has since been received, stating that the state of siege has been raised, that the Constitution of 1848 has been proclaimed, the press laws of 1848 and 1849 have been re-established, and the Chambers convoked for the 1st of September. The Madrid papers announce that, in conformity with the counsel of their legal advisers, the COUNT DE MONTEMOLIN and DON FERNANDO have cancelled the renunciation of their pretensions to the throne of Spain which was signed by them at Tortosa.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family left town on Wednesday for Osborne, where they will remain for several weeks. On Friday Prince Jules and Prince John of Schleswig-Holstein-Glucksburg visited the Queen. The French Imperial Band of the Guides had the honour of attending at the Palace, and performing several pieces in the Grand Hall during her Majesty's luncheon. In the afternoon the Queen, accompanied by the Princess Alice and Prince Arthur, took a drive in a carriage and four. The Prince Consort, the Prince of Wales, and the Count of Flanders rode on horseback. In the evening her Majesty had a dinner party. On Saturday morning the King of the Belgians and the Count of Flanders took leave of the Queen on their return to Belgium. The Prince Consort and the Prince of Wales accompanied the King to the Bricklayers' Arms station, and there took leave of his Majesty. In the afternoon the Queen held a Court and Privy Council. At the Court Sir John Crampton, her Majesty's Minister at St. Petersburg; Sir Thomas Wyse, her Majesty's Minister at Athens; Sir Andrew Buchanan, her Majesty's Minister at Madrid; and Sir William Gore Ousely, her Majesty's Minister to Central America, were presented to the Queen at an audience by Lord Palmerston. Earl Granville and Lord Palmerston had an audience of her Majesty. The Queen, accompanied by the Princess Alice and Prince Leopold, afterwards took a drive in a carriage and four. The Prince Consort, the Prince of Wales, and the Duke of Saxe-Coburg rode on horseback. The Prince of Wales visited the Exhibition of the New Society of Painters in Watercolours, in Pall Mall. In the evening her Majesty and the Prince Consort, accompanied by the Princess Alice, the Prince of Wales, and the Duke of Saxe-Coburg, honoured the performance of the Royal Italian Opera with their presence. On Sunday morning the Queen and Prince Consort, the Prince of Wales, Princes Arthur and Leopold, the Princesses Alice, Helena, and Louisa, attended Divine service in the private chapel of Buckingham Palace. The Archbishop of York preached the sermon. On Monday morning the Queen and Prince Consort, the Princess Alice, the Prince of Wales, and the Duke of Saxe-Coburg rode on horseback. In the afternoon the Queen and Prince Consort, accompanied by the Prince of Wales, the Princesses Alice, Helena, and Louisa, Princes Arthur and Leopold, and the Duke of Saxe-Coburg, went to the first prize meeting of the National Rifle Association on Wimbledon Common. The Queen and Prince Consort received addresses from the Council of the Association, and her Majesty inaugurated the meeting by firing the first shot. In the evening the Queen and Prince Consort, accompanied by the Princess Alice, the Prince of Wales, and the Duke of Saxe-Coburg, honoured the performance at the Olympic Theatre with their presence. On Tuesday the Queen stood sponsor in person to the infant son of Colonel and the Hon. Mrs. T. M. Biddulph, in the private chapel at Buckingham Palace, the Princess Alice representing the Princess Frederick William of Prussia as the other sponsor. Lord John Russell had an audience of her Majesty. In the afternoon the Queen, accompanied by the Princesses Alice and Helena, took a drive in an open carriage and four. The Prince Consort went to Wimbledon. The Prince of Wales went to Windsor Castle, where he entertained a party of noblemen and gentlemen at luncheon and played cricket in the Home Park. In the evening the Queen and Prince Consort, accompanied by the Prince of Wales, the Princess Alice, Prince Arthur, and the Duke of Saxe-Coburg, honoured the Royal Italian Opera with their presence. On Wednesday morning the Duchess of Cambridge, the Hereditary Grand Duchess of Mecklenburgh-Strelitz, and the Princess Mary visited the Queen. Mr. John Watkins attended at Buckingham Palace, and had the honour of taking photographic portraits of the Prince

of Wales and the noblemen and gentlemen who will accompany him to Canada. In the afternoon the Queen and Prince Consort, accompanied by the Prince of Wales, Princes Arthur and Leopold, the Princesses Alice, Helena, Louisa, and Beatrice, and the Duke of Saxe-Coburg, left Buckingham Palace for Osborne, travelling to Gosport by a special train on the South-Western Railway. The Royal party arrived at Osborne at 7 o'clock in the evening.

THE PRINCE OF WALES will embark at Plymouth on Tuesday next in the Hero line-of-battle-ship for Quebec, and is expected to arrive there on Monday from Osborne in the Royal yacht Victoria and Albert. The Channel fleet is expected to arrive at Plymouth to-day for the purpose of escorting his Royal Highness for some distance across the Atlantic. As a special compliment to his title of Duke of Cornwall, the Cornish corps of Volunteer Rifles have obtained permission to act as guard of honour to the Prince when he arrives at Plymouth.

THE CABINET.—A Cabinet Council was held on Saturday afternoon at the residence of Lord John Russell, in Chesham Place. Another Council was held on Monday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

PARLIAMENTARY MOVEMENTS.—The death of Sir E. Hayes has caused a vacancy for the county of Donegal. The death of Sir G. Pechell has caused a vacancy for Brighton; Mr. F. D. Goldsmid, brother of Sir F. Goldsmid, and Mr. James White are candidates for the vacant seat.

GOVERNORSHIP OF CEYLON.—Sir Charles M'Carthy, late Colonial Secretary of Ceylon, has been appointed to succeed Sir Henry Ward in the Government of the island.

THE CHINA WAR.—An estimate of the sum required to be voted towards defraying the expenses of naval and military operations in China, beyond the ordinary grants for army and navy services for the year 1860-61, has been published. Including 443,896*l.* to be repaid to the Government of India for advances on account of former expeditions to China, it amounts to 3,800,000*l.*

THE PRIVILEGES OF THE HOUSE OF COMMONS.—The Select Committee appointed to search the journals of both Houses of Parliament, in order to ascertain and report on the practice of each House with regard to the several descriptions of Bills imposing or repealing taxes, prsented their report on Friday. The following is an abstract of its contents:—

"The Committee commence by stating that they have searched for precedents in the Journals, from the year 1628 to the present time, in order that they might ascertain and report on the practice pursued by either House with regard to the several description of Bills imposing and repealing taxes; and that they commenced their search with the year 1628, for two reasons—first, because the previous cases are most ably commented on in the great precedent of 1671; and, secondly, because the year 1628 is the year in which the present form of granting the supplies may be said to have been practically established. They have classified the precedents they discovered chiefly under one or other of the following heads:—1. Bills of Supply and Tax Bills; 2. Bills for appropriating Supplies; 3. Public Bills, which are not strictly Bills of Supply or Tax Bills, but which operate as a tax or charge on the people; and 4. Bills for altering or repealing Acts which relate to Supply Taxes, or Charges; and they have thought it necessary to call the attention of the House to those cases only in which the Lords have interfered. They have discovered cases wherein the Lords have rejected Bills which went to repeal duties; though none of these cases seem in distinctness to come quite up to the case which has now occurred; but they have found no precedent of action taken by the House of Commons upon any one of these rejections. They adduce instances in which it was distinctly laid down that the office of the Commons is to grant, and that of the Lords is to assent. They quote the declaration of the Lords at a Conference held in 1640, that "My Lords would not meddle with matters of subsidy, which belong naturally and properly to you—no, not to give you advice therein;" and they show the establishment of the practice of returning the Supply Act to the House of Commons in order that, having been assented to by the Lords, it may be presented for the Royal assent by the Speaker. They quote a warning given by the Commons to the Lords in 1678:—"The Commons, therefore, leave the Bills and the amendments with your lordships, together with the ill consequences that attend the not passing this Bill." They state that in 1708 the Lords rejected a Supply Bill to lay a duty upon foreign woollens, and that in 1752 a Bill to fix a license-tax upon brokers was lost upon a prorogation. In 1714 the Lords rejected a Bill for relieving merchants from part of the duties due on tobacco and wine; and in the next year the same Bill was sent up again, and was again rejected. In 1767 a Bill to allow free importation of—that is, to suspend or repeal the duties upon—salted meat and butter was postponed to a day after the prorogation. In 1781 a Bill for reducing the duties on salt used for manure was, in like manner, lost by postponement. There are several other precedents which go to a similar extent. The most important, however, is the rejection in 1808 by postponement of a Supply Act founded upon a resolution of the whole House repealing the existing coal duties, and granting other duties in lieu thereof. This is all that can be discovered, and so far as it goes it proves that the usage has been uniform, that the Lords have never been allowed to originate, and never allowed to amend, any Bill imposing or repealing a tax; but that whenever they have chosen to reject such a Bill the Commons have submitted to the rejection, satisfied with, in one instance, fixing upon the Lords 'the ill consequences that attend the non-passing of the Bill.' The Committee in reporting these precedents state that they have refrained from offering any opinion and making any comments upon them, and have abstained from any statement of the practice of each House, except in so far as such practice appears from the entries in the Journals."

THE REVENUE.—The Revenue Returns for the year and quarter ended June 30 show an increase of 5,727,914*l.* on the year, and an increase of 326,918*l.* on the quarter. The Year's Account shows an increase in the Excise of 2,309,000*l.*; Stamps, 269,277*l.*; Taxes, 52,000*l.*; Property Tax, 3,636,710*l.*; Post Office, 130,000*l.*; Crown Lands, 5439*l.*; and a decrease in the Customs of 262,061*l.*; Miscellaneous, 413,351*l.* The Quarter's Account shows an increase in the Excise of 169,000*l.*; Stamps, 107,660*l.*; Taxes, 5000*l.*; Property Tax, 306,710*l.*; Post Office, 40,000*l.*; Crown Lands, 1500*l.*; Miscellaneous, 72,689*l.*; and a decrease in the Customs of 375,641*l.*

Foreign.

FRANCE.—The funeral of Prince Jerome took place on Tuesday in the chapel of the Invalides. Prince Napoleon officiated as chief mourner, and all the details were carried out with imposing magnificence, and with that strict regard to etiquette which is so peculiar a characteristic of the Court of the Tuileries. An immense crowd of people assembled to witness the procession, and all places of public business and amusement were closed throughout the day.—The Emperor and Empress with all the Court, left Fontainebleau on Thursday morning for St. Cloud.—It is stated by the Paris correspondent of the *Times* that the Emperor Napoleon at Fontainebleau expressed his opinion in the most unequivocal and positive terms, "that it had become a matter of necessity that both the Bourbon of Naples and the Pontiff of Rome should decamp," and added that it was possible the Pope might inhabit the Island of Sardinia, with the nominal sovereignty over the island, but allowing it the full enjoyment of its present free institutions, the Pope enjoying a civil list of 10,000,000f., of which 3,000,000f. would be contributed by France, the rest by other Catholic States. The Emperor professed the utmost admiration for Garibaldi's exploits, and said that France would never be a hindrance to the furtherance of his future achievements.—The *Moniteur* announces the presentation to the Corps Législatif of the project of law relative to the calling out of 100,000 men of the class 1860. It also states that the report on the Budget of 1861 has been laid before the Corps Législatif, together with a project of law demanding its approval of the convention for the establishment of a submarine telegraph between France and the United States. The session, which was to be concluded on the 14th inst., will be prolonged to the 21st July, on account of the amount of business still remaining for discussion. The *Moniteur* also announces the appointment of the Duke de Grammont, M. Benedetti, and M. de Talleyrand-Perigord as Grand Officers of the Legion of Honour.—The Treaty to arrange the boundaries between France and Sardinia has been signed at Paris. The French Government has communicated to the Powers that it is willing to accept one of the three following modes for settling its differences with Switzerland:—1. To negotiate direct with the Federal Government. 2. To admit to this negotiation the Powers who signed the final Act of Vienna. 3. To assemble in Conference. If a Conference shall be determined on, it will very probably take place at Paris. It is quite certain that France will make no cession of territory whatever.—All the important journals of Paris contain articles on the recent visit of the Orpheonists to London, in which the hospitality and good feeling bestowed on them in England are fully acknowledged and recorded with infinite satisfaction. The *Presse* says:—"The campaign of the Orphéonistes in London assumes almost the dignity of a political event, through the cordial demonstrations of which they were the object. The English nation has justified on this occasion its old renown for hospitality, and has testified its desire to live on good terms with us."—Two new pamphlets have just been published entitled "Of the Administration of the Empire," and "The Empire of the Rhine and the Kingdom of Poland." The author of the last establishes the balance of power in Europe on the following foundation:—1. The creation of an Empire of the Rhine in place of the petty States which, by their impotency, endanger the independence of Germany. 2. The re-establishment of the kingdom of Poland. 3. The complete emancipation of Ireland, with a Catholic Prince. 4. The expulsion of the Turks from Constantinople, and the creation of a neutral eastern kingdom, to be placed, like Greece, under the guarantee of the Powers. 5. The return of the Ionian Islands to Greece, the restitution of Gibraltar to Spain, and a viceroyalty in Hungary.

PORTUGAL.—The Ministry has been dissolved, and the Marquis de Loulé has been charged to form a new Cabinet.

SPAIN.—The Emperor of Morocco has paid one instalment of the indemnity. The *Madrid Gazette* of the 25th publishes an official account of the birth of the daughter of the Duchess of Montpensier. The infant was at once baptised, and received the name of Maria de las Mercedes, and a great many others, including among them "Holy Trinity," and "All Saints." The Queen and King acted as sponsors, and immediately after the ceremony the child was decorated with the Royal Order of Maria Louisa. The Paris *Constitutionnel* gives the following as the text of Count de Montemolin's retractation, and states that Don Fernando's retractation is in the same terms. It adds that the Count de Montemolin has forwarded the retractation to the Queen of Spain, accompanied by a very affectionate letter, in which he explains his conduct:—

"Considering that the Act of Tortosa of the 23d April of the present year, 1860, was caused by exceptional and extraordinary circumstances; that, meditated in a prison, and signed at a moment when all communication was prohibited to us, it fulfils none of the conditions necessary for its validity; that, consequently, it is null and illegal, and cannot be ratified; that the rights to which it refers can only profit the persons who hold them by the fundamental law from which they emanate, and who are called on by the said law to exercise them according to their rank and when the moment comes; taking also into consideration the opinion of competent jurisconsults whom we have applied to, and the disapprobation which our best servants have several times expressed to us, we retract the said act of the 23d April of the present year, 1860, and declare it null in every respect, and void. Given at Cologne, the 15th June, 1860—CARLOS LOUIS DE BOURBON and DE BRAGANZA, COUNT DE MONTEMOLIN."

GIBRALTAR.—Martin Escalante, a British subject, has returned to Gibraltar after 13 months' imprisonment in Cadiz. In May of last year he was sentenced by the Judge of Chinchilla to nine years' penal servitude for attempting to change the religion of Spain by distributing copies of the New Testament.

DENMARK AND SWEDEN.—Letters from the Swedish camp at Bonarp state that the King of Denmark has returned to Schleswig after having spent a week in the camp with the King of Sweden in the closest intimacy. A report was prevalent that the two Scandinavian sovereigns had concluded a treaty of alliance, offensive and defensive, in case the independence of Denmark should be compromised in a struggle arising from the Schleswig question.

SWITZERLAND.—The British Minister at Berne has informed the President, in the name of Lord John Russell, that England has given her adhesion to the proposal of a European Conference. The Minister also expressed the firm intention of England to support the right of Switzerland to new guarantees for the maintenance of her neutrality. It is asserted that Switzerland will submit to the Conference the following question only:—Is it in the interest of Europe and the neutrality of Switzerland to leave the Simplon Pass perfectly accessible to France without demanding any fresh guarantees? Should this question obtain a solution unsatisfactory to Switzerland she would confine herself to taking cognisance of the declarations in which France engaged herself to assume all the military obligations resulting from Article 92 of the final Act of Vienna. Switzerland would, besides, claim the right, in case of war, of militarily occupying the neutralised districts of Chablais and Faucigny. Switzerland would also state her reserves, the insertion of which in the protocols of the Conference she would demand, and would maintain in principle all the rights which are guaranteed to her by treaties. The report of the Federal Council to the Federal Assembly on the Savoy question concludes by requesting the renewal of the powers conferred upon the Council on the 4th of April last to follow up the affair.

PRUSSIA.—Since the meeting of German Sovereigns at Baden, the Prussian Ambassador, Baron Werther, has had several conferences with Count Rechberg with the object of bringing about a perfect understanding between Austria and Prussia. The fact that Austria no longer insists upon a guarantee of the integrity of her dominions will greatly facilitate such an understanding.

AUSTRIA.—Accounts from Vienna of the 30th ult. state that the leading men in the Reichsrath have held repeated meetings in private during the past week, and have agreed to advise the Emperor to grant a constitution to his subjects. The mode of operation has not yet been definitively determined on, but it is probable that at the next meeting of the Council of the Empire one of its members will move that the assembly express to his Majesty its conviction that a representative form of government is necessary to the welfare of the empire. Should the Archduke-President permit the motion to be made, it will be supported by almost all the newly-appointed members of the Reichsrath, as they are aware that the present system cannot be longer maintained except by force of arms.—On Monday the Austrian Ambassador in Paris paid an official visit to M. Thouvenel, in order to give the reply of the Court of Vienna to the despatch of the French Government in reference to the annexation of Savoy. Immediately on the receipt of this despatch Count Rechberg ascertained by telegraph the views of the Court of Berlin, which replied that it was about to thoroughly examine the question whether, under present circumstances, a European Conference would be advisable, or whether preference should be given to the ordinary diplomatic course, or to direct negotiations between France and Switzerland. Austria, although ready to attend a Conference, would not take the initiative, not being directly interested in the question. She therefore leaves to France the task of inducing a majority of the Powers to agree to one of the three combinations proposed by M. Thouvenel, and accedes beforehand to the decision of the majority. The official *Vienna Gazette* of June 28 says that strict military inquiries relative to the embezzlements of the late General Eynatten have proved that no charge of dishonesty can be raised against any other functionary in his department. The convention between England, Austria, and the Porte, for the establishment of a submarine telegraph line from Ragusa to Alexandria, was signed at Vienna on Friday.

RUSSIA.—The Russian Ambassador at Paris has officially informed M. Thouvenel that the Court of St. Petersburg, having examined the three proposals of France for the definitive settlement of the question of the annexation of Savoy, has resolved upon giving preference to the assembling of a European Conference.

ITALY.—A telegram from Naples, dated Wednesday evening, announces the promulgation by the King of the Constitution of 1848; the re-establishment of the laws on the press of 1848-49; the convocation of the Chambers for the 1st September; the promise of the Constitution of 1812 for Sicily, with a separate Government; the raising of the state of siege, declared on the 26th ult., and the provisional re-establishment of the National Guard. The city has again become tranquil and indifferent, but the public at large believe that the concessions so tardily made by the King will not save the Crown, and the general state of things inspires great fears of anarchy and of conflicts between the lazzaroni and the middle classes. It appears that assemblages of the populace commenced on the evening of the 26th ult., the people shouting "Garibaldi for ever!" "Annexation for ever!" "Death to the police!" On the following day a panic took place, the police were maltreated, and disappeared as soon as the same cries were repeated by the populace. On the 28th ult. all the police stations were pillaged in open day; 40 of the agents were surprised, and either killed or wounded. The archives were burnt, and the spoils carried about in triumph by the mob. The King who had been ill at Portici returned to Naples, and ordered the immediate formation of a National Guard, appointed the Advocate Romano Prefect of Police, and issued a proclamation prohibiting seditious shouts, and recommending the military to disperse assemblages of the population with moderation. The troops who were stationed in the environs of Naples were concentrated in the city, and the garrison of St. Elmo was filled with foreign soldiers. In other parts of the kingdom the police were maltreated in the same manner as those at Naples. Twelve thousand visits of condolence have been paid to Baron Brenier, whose health is improving, and it is hoped that he will soon be able to resume his functions as Ambassador. The King sends to the Embassy twice a day to inquire about his health, and has instructed the Marquis Antonini to express to the French Government his most sincere regret at the cowardly insult offered to the Baron, and promising severe retribution upon the guilty parties, who, however, have not yet been discovered, having succeeded in escaping immediately after committing the assault. The new Ministry is formed as follows:—Commander Spinelli, President of the Council; Commander de Martino, Foreign Affairs; Signor Del Ré, Interior; Signor Manna, Finance; Prince Torella, Ecclesiastical Affairs; Signor Morelli, Public Works; Marshal Lestucci, War; Admiral Garofalo, Marine. The fundamental point of the programme of the new Cabinet is the formation of an Italian Confederation, as recommended by the Emperor of the French. This Confederation to be essentially of a defensive character, the independence of every State to be maintained although national unity may be favoured. The new Ministry have ordered the captured vessels to be restored to Garibaldi, and all on board set at liberty. The marriage of the Count of Trani with the Duchess Helene of Bavaria is postponed. The Swiss Colonel Von Mehel, who burnt down nearly a whole faubourg of Palermo with its inhabitants, has been promoted to the rank of General, and sent into Calabria at the head of a division. Lieut.-General Clary, who commanded the sacking of Catania, has been made a full General. Signor Frescobaldi, the representative of the Grand Duke of Tuscany at Naples, has taken down the escocheon of the Grand Duchy.—Letters from Rome, of July 8, assert that a crisis is imminent, and that the attitude of parties towards each other is provocative of a collision. The fermentation has been increasing since the agitation commenced at Naples. General Lamoricière has returned to Rome in haste after having concentrated troops on the frontier of Tuscany, to cover the Pope's retreat to Ancona, in case of necessity. The reforms which the Papal Government has decided upon granting are to be promulgated shortly in a *motu proprio*. Among other concessions the Pope will grant to the Consulta of State a deliberate vote on all financial questions, on which until now it had only a consultative vote. But these reforms are to be granted on condition of the integrity of the patrimony of St. Peter being guaranteed. On the occasion of the anniversary of his installation, the Pope commuted the punishment of 70 out of a total of 212 political prisoners. On the previous day two battalions of Irish volunteers entered the barracks of Rome. The desertions from the Swiss regiments continue.—Accounts from Turin state that Baron Talleyrand has been instructed by the Austrian Government to insist that Count Cavour should give due consideration to the overtures of the King of Naples, and the more so, as these overtures were counselled by France. The Sardinian Chamber of Deputies has voted the new Loan by 215 against 3. Baron Poerio and Signor Mancini made interpellations relative to the state of affairs at Naples. Both speakers opposed any arrangement with the Bourbons. The Minister Farini replied in a manner favourable to the idea of national unity, but with reserve.

SICILY.—Advices from Palermo state that a new Ministry has been appointed by Garibaldi for Sicily, as follows:—Signor Natolio, Foreign Affairs; Signor Daita, Interior; Signor Orsini, War; Signor Laporta, Public Safety; Don Lanza, Benedictine, Religion; Signor Loggio, Public Instruction; Signor Giovanni, Finance. A skirmish took place on the 30th ult., near Messina, between some detachments of Garibaldians and a portion of the Royal troops. The universal suffrage of the people and the army was to be taken on the question of the annexation of Sicily to Piedmont. Orders have been given for the conversion of the greater parts of the bells into cannon. After the departure of the last Neapolitan soldiers from Palermo, the prisoners detained in the fortress as hostages were set at liberty. They were—Baron Giovanni Riso, Duke Salvatore di Monteleone, Prince Francesco Garadinelli, Prince Corrado Niscemi, Chevalier Giovanni di S. Giovanni, Duke Leopoldo Cæsaro, D. Ottavio Lanza of the Princes of Trabia, and the ecclesiastic Olivetano. Fresh massacres of the *sbirri* had taken place. Garibaldi had sent some columns to re-establish order in the interior of the island. Notwithstanding the dissensions between the towns and the villages, and the resistance offered to the levying of the imposts, the same ardour to drive the Neapolitans out of the island continued to prevail. Mazzini landed at Palermo on the 23d ult. Mardini, Mario, and his wife (Miss White) had preceded him.

TURKEY.—Advices from Constantinople to the 27th ult. state that the Sultan had written to the Grand Vizier, congratulating him on the results of his mission, and had assembled the Ministers, to whom he declared that he would support them against all rivalry. Judgment had been pronounced against Hassib Pacha, ex-Minister of Finance. His property was declared sequestrated. The property of Osman Pacha, the ex-favourite, had also been confiscated. Cyprus was agitated in favour of annexation to Greece, and the Turkish Customs authorities had seized a bundle of proclamations in favour of the re-establishment of the Byzantine Empire. The agents in whose possession they were found had been arrested.

SYRIA.—Advices from Beyrout to the 21st ult. state that the Druses, reinforced by hordes of plundering Kurds and Bedouins, had attacked the town of Zahli, the last refuge of the Christians. The town was entirely burnt down, and 1000 Christians were murdered. Deril Kamar, in consequence of the inhabitants having been unarmed, was plundered and deserted. Other acts of incendiarism, pillage, and murder had been perpetrated in the "anti" Lebanon. It was said that the children at the school Malahala had been killed, though they were under the protection of the French flag, and the French Consul had sent to withdraw the children from the Catholic colleges. The Turkish military reinforcements had not arrived at Beyrout.

UNITED STATES.—Accounts from New York to the 25th ult. state that a split had occurred in the Baltimore Convention, the Northern Democratic Convention having nominated Mr. Douglas for the Presidency, while the Southern Democrats have nominated Mr. Breckenridge. Both Houses of Congress were actively winding up the business of the session, which would terminate on the 25th ult. The Senate had been engaged in discussing the slave trade, in a tone of considerable hostility to England. The debate took place on the 16th on the Navy Appropriation Bill, and the following is a summary of the leading speeches:—

Mr. Gavin proposed that the President be authorised to ask the British Government to enter into a Convention to make provisions for the return of each captured African, as long as the eighth article of the Ashburton Treaty remains in force; and if the British Government refuse to enter into such a Convention, then the President shall signify the wish of this Government to have that treaty abrogated. He said the British Government did not send back the Africans, but kept them and made them useful.—Mr. Wilson said the slave trade was increasing. It was a fact that vessels were fitted out at New York, and left that port with the knowledge of the United States' officers, who received money for permission. He thought it his duty to try to put a stop to it.—Mr. Green thought that the Government had no right to put a police force upon the coast of Africa. It had no right to interfere with the slave trade between Africa and Brazil or Cuba, but only to prevent the importation to our own shores. We might well call on the British Government to end a treaty compelling any such action.—Mr. Hemphill, of Texas (Democrat), opposed the amendment of the Senator from California. He thought there was no information that the British Government made slaves of captured Africans.—Mr. Fessenden, of Maine (Republican), said if gentlemen wished to abrogate the treaty with Great Britain let them say so, but not try to dodge the question in any way.—Mr. Mason, of Virginia (Democrat), said the question of the African slave trade was presenting itself in a new light. He could not account for the increasing activity in the slave trade. Legislation might possibly act to increase the trade, and he thought we should be very careful. He trusted that at the proper time the American Government would abrogate that article of the treaty, but was opposed to both these propositions. He could not conceive a greater cruelty than sending these Africans back to Africa. The proposition was rejected by 25 to 19. On the 18th the debate was continued, and an amendment providing for three steamers for the suppression of the African slave trade was moved by Mr. Wilson, of Massachusetts (Republican).—Mr Malloy, of Florida (Democrat), was opposed to the United States interfering in the suppression of the slave trade between Cuba and Africa, although he was opposed to the trade between the United States and Africa.—Mr. Collamer, of Vermont (Republican), said that the time had come to have some understanding with the British Government in relation to the slave trade. The British Government, finding that emancipation had not worked well in her West India colonies, captured Africans and sent them to Sierra Leone or St. Helena, where they were induced to become voluntary labourers for the West India Islands. The British Government gave 25 dols. a head for them, and the effect was that the British and American cruisers had an inducement to stop as many slaves as they could to get the prize money, while the United States, on their side of the treaty, had to furnish ships, hire men, and to pay 100 dols. for every African captured, and 100 dols. each to send them back. So long as this was the case, so long would the slave trade continue.—After some remarks by Mr. Mason, Mr. Wilson said he would not defend Great Britain; she might be false and hypocritical in relation to the slave trade, but assailing her did not justify them. He knew of nine vessels which had sailed within the last six months from New Orleans, to engage in that trade. They wanted for its suppression small steamers that could enter the bays and rivers of Africa, and sail swiftly, and not large 80-gun vessels.—Mr. Mallory denounced the conduct of Great Britain in reference to the treaty, as a fraud practised under the name of philanthropy. She could stop the slave trade with Cuba any day, if she chose to do it. He said that no prominent man in the South was in favour of the slave trade.—Mr. Seward said that a year ago he had introduced a proposition to increase the naval force and police, to prevent the escape of slavers, and Southern Senators opposed to the slave trade had approved his Bill. He was not prepared to abrogate the treaty with Great Britain, which required us to keep a squadron on the African coast, but he preferred not making Great Britain a police for them. England had enough to do to take care of herself. The slave trade that we should abolish was our own trade. We should prevent our own merchants from fitting out ships, and our citizens from buying Africans. After further debate a vote was taken on the amendment, which was lost by a vote of 18 to 25. The Navy Appropriation Bill was then passed.

A Bill has been passed in Congress for a loan of 21,000,000 dols. The Japanese embassy had reached New York. A report was current that the Mormons had offered to sell their possessions in Utah, and remove to the British territory. California news to the 1st ult. announced skirmishes with the Indians at Western Utah. A great battle was expected. The destination of Walker was said to be the Bay Islands, belonging to Honduras. Dr. Hayes's Arctic expedition was to sail from Boston on or about the 26th ult. The Prince de Joinville, who has been making a tour in Canada, has returned to England by this packet.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Irish Mail Packets.*—The Duke of SOMERSET, in reply to Lord DUNGANNON, said that the Admiralty had nothing to do with the appointment of the officers of the Holyhead and Kingston packets. The *Endowed Charities Bill*, the *Local Board of Health Bill*, the *Tithe Commutation Bill*, and the *Spirits (Ireland) Bill*, were read a second time.—On the motion of the Marquis of CLANRICARDE, a committee was appointed to devise some plan for the construction of *Breakwaters and Harbours* less costly than solid masonry.

MONDAY.—*Christianity in India.*—The Earl of SHAFTESBURY, Lord HARRIS, Earl GRANVILLE, Lord BROUGHAM, and the Earl of DERBY joined in a request to the Duke of Marlborough to postpone for the present his motion with regard to the exclusion of the Scriptures from the scheme of National Education in British India.—The Duke of MARLBOROUGH deemed to comply with the request, and moved a resolution to the effect that the British Government in India, as the representative of a Christian nation, was charged with the duty of promoting the moral as well as social welfare of the people of that country; and that, in order effectually to further such objects, it was the opinion of the House that the authoritative exclusion of the Word of God from the course of education afforded in the Government colleges and schools ought, under suitable arrangements, to be removed. He contended that the introduction of the Scriptures in the educational institutions of India was the bounden duty of a Government which professed itself Christian, and that such a measure would be neither a violation of the royal proclamation nor an interference with the religious freedom of the natives.—Lord BROUGHAM said he was quite ready to admit that the subject was one of great importance; but he was so convinced of the impolicy of discussing it at the present moment that the only course open to him was to move the previous question. No further debate ensuing, the amendment of Lord Brougham was carried without a division. The original resolution was therefore lost. The *Councillors of Burghs and Burgesses (Scotland) Bill* was read a second time and passed. The *Caledonian and Crinan Canal Bill*, the *Inland Bonding Bill*, and the *Criminal Lunatic Asylums' Bill* were read a second time. The *Spirits (Ireland) Act Amendment Bill* passed through committee.

TUESDAY.—The *Royal Assent* was given by commission to various Bills. Earl ST. GERMANS brought up a message from the Queen assuring the House that the appointment of a *Consul at Mozambique* should receive due consideration.—Lord TEYNHAM moved the recommittal of the *Weights and Measures Bill*.—Lord CHELMSFORD opposed the motion, moving as an amendment that the Bill be committed that day three months. The amendment was carried without a division.—Lord ST. LEONARDS moved the second reading of the *Masters and Operatives Bill*, of which the object was to establish courts of conciliation between masters and workmen. Although they could not hope by this means to prevent disputes altogether, they might expect that it would promote better feeling between the two parties.—Lord RAVENSWORTH moved, as an amendment, that the Bill be read a second time that day six months. He did not believe that it would have the beneficial effect it proposed, and its principle had been condemned by all the witnesses examined on the subject before the House of Commons.—The Earl of DERBY said that a question so important as the present ought to be read a second time, though he would probably require amendment.—Earl GRANVILLE could not approve of the Bill in its present form, but did not wish the impression to go abroad that their lordships were unwilling to deal with the subject, and therefore proposed that the Bill be referred to a select committee.—The Lord CHANCELLOR said that, if the Bill passed in its present imperfect form, it would produce serious injury.—Lord STANLEY OF ALDERLEY expressed much dissatisfaction with the Bill, but consented to the second reading upon the understanding that it should be referred to a select committee.—Lord RAVENSWORTH having assented to this arrangement, the Bill was read a second time.—The Duke of NEWCASTLE moved the second reading of the *New Zealand Bill*, which was intended to prevent the recurrence of those disputes respecting the right of the natives to land which had been productive of so much mischief.—Lord LYTTELTON feared that the effect of the Bill would be to establish a separate administration, which could not fail to cause collision. The Bill was read a second time. The *Tithe Commutation Bill*, the *Local Board of Health Bill*, the *Inland Bonding Bill*, and the *Criminal Lunatic Asylums' Bill* were read a second time. The *Spirits (Ireland) Act Amendment Bill* passed through committee.

THURSDAY.—*Affairs of Sicily.*—The Marquis of NORMANBY asked if it was true that a representative from Sicily had been received at the Court of King [illegible] such a person could only be considered as the representative of General Garibaldi.—Lord WODEHOUSE said that there was no truth in the report. He took the opportunity of stating that the Sardinian vessels seized by the Neapolitan authorities had been released.—Lord BROUGHAM observed that 999 out of every 1000 Englishmen rejoiced in the success of Garibaldi.—The Earl of ELLENBOROUGH added that if the Sicilian representative was the representative

of Garibaldi, he could not represent a better man.—Lord WODEHOUSE said that from the official account it appeared that Garibaldi had acted throughout with the greatest generosity and humanity.—On the order of the day for the third reading of the *Highland Roads and Bridges Bill*, Lord REDESDALE moved that the Bill be read a third time that day three months. After some debate the House divided, and the third reading was carried by 35 to 33. The Bill then passed. The *Endowed Charities Bill* and the *Inland Bonding Bill* were also read a third time and passed. The Commons' Amendments of the *Law of Property Amendment Bill* were considered and agreed to. The *Ionian Islands Marriages Bill* was read a second time.

FRIDAY.—*The Jews Act Amendment Bill*, on the motion of Lord LYNDHURST, was read a second time. *St. George's-in-the-East.*—In answer to Lord DUNGANNON, the Bishop of LONDON said that it would be quite impossible to carry on the services in this Church without the presence of a strong body of police. He had issued a circular to the clergy of the diocese, forbidding any alteration in chancels for the future without the consent of the faculty of the Bishop's Court, but as to whether the service should be a musical one or read he had no power to interfere.—Earl GRANVILLE said that there was already a larger number of police on duty at this church than had for years been employed except at large open air meetings. The Government deeply deplored the continuance of these riots, but could not do more than it was doing. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*Indian Army.*—In reply to Colonel SYKES, Sir C. WOOD explained the cause of the delay in printing the papers relating to the local European force in India, which was commented upon the preceding night. He stated that the papers, which were voluminous, had been laid on the table and ordered to be printed in March, but they had been sent back to the Military Secretary for revision; that 500 pages had been printed, 300 remaining to be printed, which would be done without further delay.—On the motion for adjournment till Monday, Lord PALMERSTON proposed that the adjourned debate on the second reading of the *European Forces (India) Bill*, which was the first order of the day, should be postponed till Monday, when the greater part of the papers would be in the hands of members, upon the understanding that the committee on the Bill should be deferred till all were printed.—Mr. HORSMAN assented to this suggestion. He remarked that, although Sir C. Wood had on the preceding night attributed the delay of the papers to the printer, it now appeared that they were at the time in the hands of a subordinate of his own department. He trusted that the papers when delivered would be the real papers asked for.—Sir C. WOOD denied that he had either directly or indirectly been concerned in the delay, and stated in the strongest terms consistent with Parliamentary language that the charges brought against him by Mr. Horsman were entirely unfounded.—Mr. E. JAMES inquired what course the Government intended to adopt with reference to the *Bankruptcy and Insolvency Bill*.—The SOLICITOR-GENERAL stated that it was the intention of the Attorney-General to proceed with the bill, and that he hoped it would become law in the course of the present session.—Mr. KEKEWICH called the attention of the Secretary for the Home Department to the disturbances which took place on Sunday last in the neighbourhood of the *Church of St. George's-in-the-East*, and asked what measures he had taken to prevent their recurrence.—Sir G. LEWIS said he had caused inquiry to be made as to the extent of the disturbances referred to, and had been informed that the statements which had appeared in print on the subject were much overcharged. No actual breach of the peace had occurred, and a force of upwards of 70 constables were on duty every Sunday in the vicinity of the church to maintain order. *Trotman's Anchors.*—Mr. MILDMAY asked if it was true that no Trotman's anchor had been supplied to the Navy, except the one used by the Royal yacht.—Lord C. PAGET said that he did not consider Trotman's anchor a good one, and that it had a great many disadvantages, there being a great difficulty in fishing it; still the Admiralty desired to give it a fair chance, and had offered to order a trial of it on board two of her Majesty's ships, but Mr. Trotman had declined this offer; nothing would satisfy him but a committee. With regard to the cost of Trotman's anchors, he stated that instead of being cheaper than the Admiralty anchors they were dearer.—The other subjects discussed included the case of a Publican at Nottingham, fined for removing a soldier billeted upon him in a state of extreme sickness to the Union Hospital; Mr. St. George's refusal of a site for a suitable house of worship to the Catholic inhabitants of Headford, in the county of Galway; the new harbour and works at Holyhead; the salubrity of Netley and the adjacent district, with reference to the position of the hospital; and the taking possession by the sheriff of the county of Leitrim, supported by a large armed force, of a Roman Catholic chapel in that county, for the Earl of Leitrim. —Mr. CARDWELL, in reference to the Irish questions, expressed his regret that Mr. St. George and Lord Leitrim had not endeavoured to conciliate their Roman Catholic neighbours, and hoped that no exceptional legislation would be necessary upon such a subject. The motion for adjournment was then agreed to, and the House went into a Committee of Supply upon the estimates for *Mail Packet and Revenue Departments*, when certain resolutions were agreed to, after a protracted discussion, and ordered to be reported.—Mr. LAING stated, with reference to the office of *Postmaster-General*, that the Duke of Argyll had been nominated, and would continue to hold the office of Lord Privy Seal, but would only receive 2500*l.* a year as Postmaster-General.—The House having resumed, the *Registration of Births (Scotland) Bill* passed through committee. Several Bills were forwarded a stage.

MONDAY.—Lord PALMERSTON gave notice that on Thursday next he should call attention to the report of the select committee appointed to search for precedents on tax bills, and propose a resolution founded thereon, which he would lay on the table in the course of the evening. He hoped, therefore, that Mr. E. James and Mr. Collier would not press the motions of which they had given notice. Mr. E JAMES and Mr COLLIER assented. *State of Naples.*—In answer to Mr. H B. SHERIDAN, Lord JOHN RUSSELL stated that it was true that a party of lazzaroni had recently attacked and wounded Baron Brenier, the French Ambassador at Naples, and that her Majesty's Minister at Naples had received instructions to demand assistance from the commanders of our ships of war for the protection of British residents in the event of any attack from the lazzaroni. *Switzerland and Savoy.*—In answer to Sir R. PEEL Lord J. RUSSELL said that the Government had agreed to the first of M. Thouvenel's three proposals for referring the question of the neutralised territory of Savoy to a conference of the European Powers, and that Russia had given a similar answer.—The adjourned debate on the order of the day for the second reading of the *European Forces (India) Bill* was resumed by Mr. RICH, who opposed the measure on the ground that the reasons which had been assigned for disbanding the present European force in India were not founded on fact. The measure was, moreover, contrary to the opinion of all the authorities to which the House ought to look, and had been introduced in defiance of the Governor-General in Calcutta and the Council for India at home.—Mr. TORRENS, Sir D. L. EVANS, Mr. MILNES, Mr. H. D. SEYMOUR, Sir F. SMITH, Colonel SYKES, and Major PARKER opposed the Bill; Mr. AYRTON and Mr. GREGSON supported it.—After a few words from Colonel NORTH, Sir C. WOOD said that after the events of last summer her Majesty's Government, after much doubt and hesitation, had arrived at the conclusion that the safe and proper course would be to amalgamate the two armies. To that determination they adhered, and for his own part he confessed that he had heard nothing in the course of the debate to shake the opinion which he had formed. It had been urged against him that he had not consulted the Council collectively. That statement was technically accurate, but he had freely and fully communicated with them individually upon this and every other subject connected with the business of his department. He would however give the Indian Council the same opportunity of recording their dissent which he had offered them some weeks ago, and would lay it upon the table as soon as possible.—Mr. A. MILLS and Mr. HORSMAN expressed their satisfaction at this declaration, and the motion for the adjournment having been negatived, the House divided on the motion that the Bill be read a second time. The numbers were 282 for the motion, and 53 for the amendment, giving a majority of 229 for the second reading. The Bill was then read a second time. The report of the *Committee on Supply* was brought up and agreed to. The order for the committee on the *County Prisons (Ireland) Bill* was discharged. The *Poor Law Board Continuance Bill* was read a second time. The *Militia Bill* was read a second time. The *Local Taxation Returns Bill* passed through committee. Several other Bills were advanced a stage.

TUESDAY.—At the morning sitting the *Mines Regulation and Inspection Bill* and the *Tenure and Improvement of Land (Ireland) Bill* were again considered in committee, and several clauses were agreed to, with an amendment, moved by Mr. FREELAND, that magistrates interested in mines should not be allowed to adjudicate on questions connected with such mines. —In the evening sitting Sir G. LEWIS, in reply to Mr. WICKHAM, agreed to refer the *Parochial Assessment Bill* to a select committee.—Mr. CAYLEY inquired if it was competent for officers in the *Yeomanry and Militia* to accept commissions in the Volunteers.—Mr. S. HERBERT said that as the raising of volunteer corps was attended with great expense, militia or yeomanry officers incurring the expense might receive volunteer commissions, but if the force was called out, they must choose to which they would belong.—In reply to Mr. DISRAELI, Lord J. RUSSELL said that the terms of the proposed *Resolution on Tax Bills* would be in the hands of members that evening. *The Army.*—Colonel LINDSAY moved for a select committee to inquire into and report upon the claims of seven major-generals to the pay of general officers, who are now receiving only the half-pay of brevet-majors, and who accepted substantive rank upon half-pay upon the terms and engagements contained in the Horse Guards memorandum of the 25th March, 1826, and general order of the 25th April, 1826.—Colonel NORTH seconded the motion.—Mr. S HERBERT denied that these officers had any ground for the claims preferred.—General PEEL expressed a contrary opinion. After some debate the motion was carried by 108 to 94.—Captain ESMONDE moved for a select committee to inquire into the present system of nomination to *Cadetships in the Royal Navy.*—Lord C. PAGET opposed the motion as unnecessary, and said that the appointments were already made with due regard to the claims of the navy.—Mr. LINDSAY asserted that these appointments were commonly made upon political grounds.—Mr. TAYLOR corroborated this statement by an instance within his own knowledge.—After some remarks from Sir F. BARING against the motion, the House divided, when the motion was negatived by 81 to 24.—Mr. M. GIBSON obtained leave to bring in a Bill to facilitate the *Unshipment of Goods*, and secure the shipowner's lien for freight.—The ATTORNEY-GENERAL for Ireland obtained leave to introduce a Bill to amend the provisions of the *Common Law Procedure (Ireland) Act Amendment Bill* relating to Charging Orders.—Mr. MASSEY obtained leave to bring in a Bill to enable the Ecclesiastical Commissioners for England to apply certain funds towards the repairs of the *Cathedral Church of Manchester.* The House then went into committee on the *Solicitors, Proctors, and Certified Conveyancers' Bill*, but before any progress was made the House was counted out.

WEDNESDAY.—*Church Rates.*—Mr. HUBBARD withdrew his Bill for the amendment of church-rates for the present session.—Sir G. C. LEWIS moved the second reading of the *Highways Bill.* —Mr. HODGKINSON objected to the measure both in principle and detail, and moved, as an amendment, that the Bill be read a second time that day six months.—Mr. KER SEYMER supported the Bill, and expressed his acknowledgments to the Government for introducing it.—Mr. FREELAND, on the contrary, thought the measure altogether unnecessary and uncalled for, as no case had been made out to show that the present system of managing highways required alteration.—Mr. KNIGHT said he was indisposed to interfere with a system under which England possessed the best roads in the world. He saw no reason for changing the present parochial system for one of centralisation.—Mr. HENEAGE, Mr. WALTER, Mr. DEEDES, and Colonel THOMPSON spoke in favour of the measure.—Sir G. LEWIS reminded the House that the Bill was simply of a permissive character. On a division the amendment was negatived by 203 to 120, and the Bill was then read a second time.—The House then went into committee on the *Marine Store Dealers' Bill*; but the general impression of the committee being that the Bill could not be carried into operation in its present shape, Mr. SPOONER, in deference to the feeling of the House, consented to withdraw it on the understanding that the subject would be inquired into by the Government. The *Metropolitan Buildings Act* (1855) *Amendment Bill* and the *Friendly Societies' Act Amendment Bill* passed through committee. The *Medical Act* (1858) *Amendment Bill* was read a second time. The *Sale of Gas Act Amendment (No. 3) Bill* was also read a second time and referred to a select committee.—On the order for going into committee on the *Highways, Roads, &c., Bill*, Mr. SPOONER moved that the Bill be committed that day three months. The amendment was agreed to without a division, and the Bill was lost.—Lord RAYNHAM obtained leave to bring in Bills to amend the Act for consolidating and amending the laws in England relating to *Larceny* and other offences connected therewith; and to amend the Act for the better regulation of *Metropolitan Stage and Hackney Carriages.*

THURSDAY.—*Sicily and Naples.*—In reply to Colonel STUART, Lord J. RUSSELL said that her Majesty's Government had addressed a strong remonstrance to that of Naples as soon as they heard of the bombardment of Palermo; and he had reason to believe that similar atrocities would not again be repeated either in Sicily or at Naples. *Island of San Juan.*—In reply to Mr. WILLIAMS, Lord J. RUSSELL stated that General Harney had been recalled by the United States Government from the Island of San Juan, for issuing orders entirely at variance with his instructions. The conduct of that Government, he added, had been perfectly satisfactory. *Privileges of the House on Tax Bills.*—Lord PALMERSTON then rose to move the following resolutions:—"1. That the right of granting aids and supplies to the Crown is in the Commons alone, as an essential part of their constitution, and the limitation of all such grants as to matter, manner, measure, and time, is only in them. 2. That although the Lords have exercised the power of rejecting Bills of several descriptions relating to taxation by negativing the whole, yet the exercise of that power by them has not been frequent, and is justly regarded by this House with peculiar jealousy, as affecting the right of the Commons to grant the supplies, and to provide the ways and means for the service of the year. 3. That to guard for the future against an undue exercise of that power by the Lords, and to secure to the Commons their rightful control over taxation and supply, this House has in its own hands the power so to impose and remit taxes and to frame bills of supply, that the right of the Commons as to the matter, manner, measure, and time may be maintained inviolate." After adverting to the importance of the subject, and tracing the history of the Parliamentary struggle against the undue exercise of the royal prerogative, he stated the result to have been the exclusive right of originating money Bills vested in the Commons, while the Lords possessed an undoubted right to reject such Bills. That right had been repeatedly allowed in conferences between the two Houses. The case, however, which had not clearly arisen was that of the rejection of Bills repealing taxes. Admitting all the claims of the Lords to assent to or dissent from money Bills, the present instance presented features of a peculiar character. It was the special duty of the Commons to provide for the ways and means of the year, and no case could be found where the Lords had interfered with the financial scheme intended to that end, so as to render necessary an entire revision of that scheme. Yet, such was the effect of their vote in the present instance. On the other hand, it was maintained that in this case the Lords looked not alone at the financial question, but at the general interests of the country. Looking broadly at the question, in his opinion the Lords would not have interfered as they had done under ordinary circumstances; nor could he believe that they desired to encroach upon the privileges of the Commons, until a second instance of the same kind offered a more decisive proof. Until that occurred, he adjured the House not to enter into a contest with the other branch of the Legislature. All must admit that the conduct of that House with regard to the Paper Duty Repeal Bill afforded a direct encouragement to the proceedings of the Lords, who would not have rejected it but for the small majority by which it passed its third reading in the Commons. He had, he contended, stated the case fairly on both sides. He had shown that the Lords would not be justified in interfering with the financial scheme of the year, and he believed it had no intention of so doing. He believed, therefore, that the House ought to be satisfied by a declaration of its constitutional rights and privileges. When the time arrived it was not by words, but by actions, that their rights were to be vindicated, and it would be most disrespectful to the House to assume that it did not know how to maintain its privileges when they were really attacked. A declaration was requisite, lest silence should be construed into submission; but he earnestly deprecated an unnecessary quarrel with the Lords, which would present to the world the spectacle of a disunited Legislature, at a time when it was essential to the dignity and honour of the country to show to foreign nations a harmonious unity of action between all the estates of the realm.—Mr. COLLIER said that if the conduct of the House of Lords was not illegal, it was yet clearly unconstitutional, as directly interfering with the right of that House to decide upon the manner and time of taxation. As however it was desirable that they should come to an unanimous vote on this question, he would not press the amendment of which he had given notice.—Mr. CONINGHAM, Mr. LEATHAM, and Mr. OSBORNE thought the resolutions insufficient; Mr. SCULLY approved of them.—Mr. E. JAMES also disapproved of the resolutions, but said he should not press the amendment of which he had given notice.—The CHANCELLOR of the EXCHEQUER reproached the Opposition with their prudent silence, when they were in reality the partisans of a gigantic innovation, the most gigantic which had been attempted in their time. There were two modes of proceeding—either by words or action. If the former, the resolutions of the Government were good and sufficient. But the House had a right to vindicate its privileges by action; and he reserved to himself the power so to vindicate them if he saw fit to do so hereafter. Amidst all the instances adduced, there was not one which showed a shred or a rag of precedent in favour of the course now adopted by the Peers, who had interfered with a financial measure in a manner which had been unprecedented for at least two centuries. The example was fraught with the most injurious inferences. It would warn all future Finance Ministers to cultivate popularity, and postpone the measures which they believed to be right to those which seemed at the moment to be expedient.—Mr. WHITESIDE, in reply to the taunt of the Chancellor of the Exchequer, said that the speech of Lord Palmerston was such as became the First Minister of the country, and admitting, as it did, distinctly and emphatically, the right of the House of Lords to resist the repeal of a tax, the speech was satisfactory to the Opposition side of the House.—After some further discussion in which Lord FERMOY, Mr. DILLWYN, Sir J. SHELLEY, and other members joined, Mr. DISRAELI complimented Lord Palmerston upon his patriotic speech, and, on behalf of the Opposition, gave their adhesion to his resolution. On the general question, he maintained that the privilege which the Peers had exercised in rejecting the Paper Bill was justified by law and sanctioned by policy. As however after the discussions that had taken place, and the formal report of a committee, it was necessary for the House to express some definite opinion on the question, he thought this was sufficiently accomplished by the resolutions brought forward by the Prime Minister, which, in his opinion, expressed a temperate and wise course on the part of the House, and had been proposed in a spirit suited to the occasion.—Lord J. RUSSELL said that Mr. Disraeli had misrepresented the Prime Minister's speech, and misinterpreted his resolution. Of the technical right of the Peers to negative a money Bill there could be no question, but they had not exercised it for 200 years, and he denied that the proceeding was sanctioned by precedent, or justified in policy. The repetition of such an act would disturb the foundation of the constitutional system, and occasion irremediable confusion in the finances and commerce of the country.—On the motion of Mr. D. SEYMOUR, the debate was then adjourned. Various Bills were advanced a stage.

FRIDAY.—*Edinburgh Annuity Tax Abolition Bill.*—The House went into committee on this Bill, and agreed to the remaining clauses, an amendment moved by Mr. DUNLOP to Clause 7 having been negatived by 66 to 11.—An additional clause moved by Mr. STIRLING to transfer the patronage from the Town Council of Edinburgh to the Kirk Session, as in the case of Montrose, was negatived by 87 to 25.—Two clauses moved by Mr. BUCHANAN and Mr. MILLER were also added to the Bill. The House went into committee on the *Herring Fisheries (Scotland) Bill*, when several clauses were agreed to, and the Chairman reported progress. [Left sitting.]

City Entelligence.

THE LEATHER TRADE.—For the last two or three months the leather trade has been in an exceedingly depressed state. Last week matters reached a crisis, and Messrs. Draper & Co., Messrs. W. Frances & Co., Mr. Joseph Hooper, Messrs. Hooper & Parkinson, Messrs. Smith, Patient, & Smith, Messrs. J. H. Smith & Co., and Messrs. Gibson & Co., suspended payment. The liabilities of these parties are comparatively small, but their failure was immediately followed by that of Messrs. Streatfeild, Lawrence, & Mortimore, one of the largest houses in the trade, with liabilities stated to be about 1,100,000*l.* On the announcement of this failure a complete panic took place in the trade, and the additional stoppages were announced of Messrs. W. &

C. Mundy for 70,000*l.*, Mr. Hacker for about 40,000*l.*, Mr. A. Waring for 30,000*l.*, Messrs. Lawrence, Mortimore & Co., of Liverpool, for 300,000*l.*, Mr. T. H. Mortimore of Andover, Mr. John Baker of Heathfield, and Mr. Gibson of Godalming; the latter with liabilities estimated at 140,000*l.*

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols for Account, 93 7-16 to 9-16; Reduced and New Three per Cents., 93½ to ⅝; Indian Five per Cent. Stock, 1859, 104¼ to ½; Five per Cent. Enfaced Rupee Paper, 96⅞; Ditto Five and a Half per Cent., 102; Indian Four per Cent. Debentures, 1858, 96½; India Bonds, 3*s.* dis.—FOREIGN: Brazilian Old Five per Cents., 99¼; Dutch Two and a Half per Cents., 65⅜ ex div.; Greek, 5; Russian Four and a Half per Cents., 93 ex div.; Ditto Three per Cents., 1859, 64; Spanish Three per Cents., for Acct., 49 ex div.; Ditto New Deferred Three per Cents., for Acct., 40 to ¼ ex div.; Committee's Certificates, 4½ to ⅝; Turkish Six per Cents., 1854, for Acct., 77⅞; Ditto for 1858, for Acct., 61.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£30,227,150	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion	15,752,150
		Silver Bullion	—
	£30,227,150		£30,227,150

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weigh Annuity)	£9,817,883
Rest	3,500,175	Other Securities	21,670,170
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	8,209,369	Notes	8,265,485
Other Deposits	13,748,126	Gold and Silver Coin	741,780
Seven day and other bills	687,648		
	£40,493,318		£40,493,318

5th day of July, 1860. M. MARSHALL, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—W. S. C. W. BASSETT, Sheerness, Kent, Grocer and Tea Dealer—C. T. COLLINS, Worcester, and Fenchurch Street, City, Wine Merchant — G. GRIDLEY, Matilda Street, Caledonian Road, Coachmaker and Cab Proprietor—W. HORSFIELD, Manchester, Merchant and Commission Agent—W. S. KLISZEZEWSKI, Cardiff, Glamorganshire, Watchmaker and Jeweller—J. LORD, Birmingham, Commission Agent—E. MAIGNOL, Newgate Street, Photographic and Stereoscopic Agent—S. PERRY, Woodfield, Salop, Manure Dealer—T. A. PICKERING, Pigott Street, Limehouse, Manure Dealer—D. PLANE, King's Lynn, Norfolk, Draper—W. WHITTINGHAM, St. Helen's, Lancashire, Corn Miller.

SCOTCH SEQUESTRATIONS—A. DRUMMOND, Glasgow, Commission Agent—J. G. M'LEAN, Glasgow, Merchant.

FRIDAY — BANKRUPTS — J. AUSTEN, Pierrepont Row, Islington, Leather Seller—B. CHERRINGTON, Donington, Lincolnshire, Printer—B. CLAYTON, Ketton, Rutlandshire, Stone Merchant — E. CONNREICH, A. CONNREICH, and I. CONNREICH, Commercial Road East, Boot and Shoe Manufacturers—B. GIBBS, Bermondsey Street, Southwark, Leather Merchant—W. HOUNSFIELD, Manchester, Merchant—J. LORD, Birmingham, Merchant—H. POTTER and S. J. J. BIND, Sutton, Surrey, Builders—S. SANDER, 58, St. Mary Axe, Merchant — L. P. SUTTON, Glamorganshire, Spirit Dealer—J. WALLER, Hitchin, Hertfordshire, Dealer in Oilcake.

BANKRUPTCY ANNULLED — E. R. SHERREN, Westbourne Grove North, Bayswater, Builder.

SCOTCH SEQUESTRATIONS—J. WILSON, Glasgow, Silversmith—W. WILSON, Stonefield, Blantyre, Brickmaker.

Metropolis and its Vicinity.

NATIONAL RIFLE ASSOCIATION.—The grand rifle match of this association commenced on Monday on the ground on Wimbledon Common under the highest auspices and the most favourable circumstances. The fineness of the day, which was the first genuine day of summer we have had, attracted an immense number of persons from London, and at an early hour in the afternoon the enclosure was filled with company. There were 10 pairs of targets on the ground, each pair supported by a butt of earth, and separated by a space of 80 yards. The ranges varied from 200 to 1000 yards. At the lesser distances the targets were 6 feet by 2 feet, with a bull's-eye of 8 inches; and at the greater ranges the targets were 6 feet square, with a 2 feet centre and no bull's-eye. The following code of signals was adopted to indicate the results of the firing:—When a bull's-eye was hit, a red and white flag was shown and three points were scored; when a centre was hit, a dark blue flag was shown, and two points were scored; when an outer—that is, the target outside the centre—was struck, a white flag was shown and one point was scored. All comers were permitted to shoot as they liked, except that they could not use an artificial rest. Previous to the arrival of her Majesty the various competitors of the day were drawn up in line in the vicinity of the Royal marquee, the ground between which and the Queen's shooting tent was lined, at short intervals, by a deputation of some 60 Swiss riflemen, 20 of whom had come over from their native valleys to compete for the prizes offered by the association. Shortly before 4 o'clock the Duke of Cambridge arrived, having driven from town in an open phaeton and pair. Her Majesty, who had been expected about half-past 3, did not reach the ground until a few minutes after 4, having been delayed in Wimbledon Park by the badness of the roads. The Royal party occupied seven of the Queen's carriages, and were escorted by a detachment of the 10th Hussars. Her Majesty, who was accompanied by the Prince Consort, Prince of Wales, Princes Arthur and Leopold, the Princesses Alice, Helena, and Louisa, and the Duke of Saxe-Coburg, was received, on her arrival, by the Right Hon. Sidney Herbert, M.P., Earl Spencer, Lord Elcho, the Hon. A. Kinnaird, M.P., and Captain E. St. John Mildmay, by whom the Royal party were conducted through the Royal marquee to the dais overlooking the practice ground. The Queen, on presenting herself to the assembled visitors within the lines, was received with loud cheers, which her Majesty graciously acknowledged. Advancing to the front of the dais, the Royal group for a few moments surveyed with apparent interest the arrangement of the ground and the position of the butts, the different ranges of which were explained by Captain Mildmay. The formal business of the day commenced with the presentation of addresses from the members of the Association to her Majesty and the Prince Consort. The Queen and the Prince Consort, standing a little forward from the remainder of the Royal group, were approached by a deputation of members of the Association, headed by its president, the Right Hon. Sidney Herbert, M.P., Secretary for War, who read the Address to her Majesty as follows:—

"May it please your Majesty,—We, the President and Council of the National Rifle Association, humbly approach your Majesty with sentiments of devoted attachment to your throne and person. We tender to your Majesty our grateful acknowledgments for the patronage and encouragement so graciously extended by your Majesty and your illustrious and Royal Consort to our Association, which has been formed to give permanence to the Volunteer force. This force, of which a small portion had recently the honour of being reviewed by your Majesty, has sprung from the intuitive loyalty and patriotism of your Majesty's people. We hope that, wide as is the present development of the Volunteer force, it may yet attain to much larger proportions. To aid in this development, and to give permanence to this force by fostering and diffusing a taste for rifle-shooting, are the objects of the National Rifle Association. These, we think, can best be effected by establishing a great annual meeting for competition in rifle shooting similar to the Tir Fédéral of Switzerland, where every two years prizes to the value of 10,000*l.* are competed for, and where riflemen from the different cantons meet together in friendly rivalry. The use of the longbow and the cloth-yard shaft was once the pastime of the English people, and at the same time the terror of England's foes. The spirit which animated our fathers still lives in their descendants, and the National Rifle Association hope, by establishing rifle-shooting as a national pastime, to make the rifle what the bow was in the days of the Plantagenets—the familiar weapon of those who stand forth in the defence of their country. Such being the objects of our Association, it has been honoured in a special degree with your Majesty's favour and countenance; for not only has your Majesty been graciously pleased to express your approval of our undertaking, and munificently founded a prize which will be the highest honour that can be gained by the competitors, but your Majesty has even condescended to inaugurate in person this the first prize meeting of the Association. We most cordially and respectfully thank your Majesty for this special mark of your favour, and we fervently pray that health and happiness may long attend your Majesty, your Royal Consort, and every member of your illustrious family."

Her Majesty rose from her chair, and in a very clear and distinct manner made the following reply:—

"I receive with sincere satisfaction the sentiments of attachment to my throne, person, and family which have been expressed by the President and Council of your Association; and I assure you that I, together with my Royal Consort, have gladly given encouragement to a body whose object it is to render permanent an armed force, limited exclusively to defensive purposes, and founded upon voluntary exertions. I have witnessed with pleasure the manner in which the ancient fondness of the English people for manly and sylvan sports has been converted by your Association to more important ends, and has been made an auxiliary instrument for maintaining inviolable the safety of our common country."

Mr. Sidney Herbert then read the following address to the Prince Consort:—

"May it please your Royal Highness,—We, the President and Council of the National Rifle Association, humbly approach your Royal Highness, and eagerly embrace this opportunity of expressing to your Royal Highness our grateful acknowledgment for the patronage and support which you have been graciously pleased to extend to our Association. Your Royal Highness is ever found either originating or giving your enlightened and discriminating support to such schemes as have for their object the advancement of the public good and the prosperity of the United Kingdom. To this Association your Royal Highness has, however, shown a special mark of favour by deigning to become its patron, and no further proof is wanted of the value and importance of the objects we have in view. We thank your Royal Highness for the active interest you have shown in our undertaking, and for the valuable counsel and assistance which we have frequently received at your hands, as well as for the prize which your Royal Highness has generously offered for competition by all nations. We trust that the National Rifle Association, honoured as it is by the favour of her Majesty, and patronised by your Royal Highness, will meet throughout these realms with that countenance and support which its national and patriotic character may be found to justify."

To which his Royal Highness replied as follows:—

"Gentlemen, I thank you sincerely for your kind address, and beg you to be assured that I am very sensible of the flattering manner in which you speak of any support which it may have been in my power to afford to objects of national interest. Fully appreciating the value and importance of the National Rifle Association as a means of encouraging the Volunteers in their endeavour to acquire that skill in the use of their weapon on which their whole efficiency depends, it is with peculiar pleasure that I have accepted your invitation to become its patron; nor can I doubt, when I look around me and see the manner in which the call of the Council has been responded to, that the result will answer the most sanguine expectations of those who set the present movement on foot. In establishing a prize open to the competition of all nations, my object was to give our British marksmen an opportunity of comparing their own arms and their own skill with those of other countries; and I am convinced the result will be to show that, as the British manufacturer is already second to none in the fabrication of the arm itself, so the people of this country are not to be surpassed by any in the knowledge how to use it."

At the conclusion of this ceremonial, her Majesty and the Royal party were conducted from the reception marquee along a raised platform, covered with crimson cloth, to the Royal shooting tent, where Mr. Whitworth was presented to the Queen, and had the honour of explaining the mode in which her Majesty was to fire the first shot from one of his own rifles. The Queen appeared to be somewhat amused at Mr. Whitworth's assurance that she might rely upon hitting the centre of the target set up at 400 yards distance. Her Majesty lost no time, however, in testing the accuracy of his statement, by pulling the silken cord attached to the trigger of the rifle, the sharp snap of which was almost instantaneously followed by the exhibition of a red and white flag, showing that the bullet had hit the bull's eye. Her Majesty expressed her admiration of the accuracy of his weapon to Mr. Whitworth, who expressed his regret that the fresh wind then blowing across the common would probably prevent a series of bullets fired from the rifle used by the Queen successively striking exactly the same mark on the target. After examining Mr. Whitworth's long range gun, which carried a 5½ lbs. ball more than five miles at the recent trials at Southport, the Queen and the Royal party returned to their marquee, where several presentations were made to her Majesty. After a short interval, during which the Prince Consort, the Duke of Saxe-Coburg, and the Prince of Wales examined a collection of arms laid out for inspection in an adjoining tent, the Royal carriages were ordered round, and her Majesty re-entering made the circuit of the shooting ground amidst enthusiastic cheering from the spectators and Volunteers. The Royal party left Wimbledon about 6 o'clock on their return to Buckingham Palace. After the Queen's departure the trial shooting commenced. The ranges were all at the comparatively short distance of 300 yards, and the results were not therefore considered important. The number of volunteers who had entered themselves for the match was 331; but only 320 took part in the firing, there being a few absentees. The following were the successful competitors out of five rounds to which the trials were limited:—

Sergeant Tomalin, 4th Northampton, 8 points; Lieut. Dear, 9th Middlesex, 8; Mr. Edward Paut, 5th Kent, 8.

The company lingered on and about the common until after 7 o'clock, when an apparently interminable line of carriages divided on the Wandsworth Road, and made it almost impassable in two directions—city-wards and to Wimbledon, making the resemblance to the Derby day complete in dust, puzzled driving, and confusion.—On Tuesday the actual business of the meeting commenced; the Volunteers began their work at 9 o'clock, and continued till half-past 5. The first prize contended for was one given by the Association—20 Whitworth rifles, one to each of the best 20 shots, and a silver medal in addition to the best shot of the 20. This band of victors will be entitled to compete for the Queen's prize of 250*l.*, and the honour of being admitted to the same competition is also extended to the 20 next best shots to those who win the rifles. The conditions were that each competitor was limited to five shots at each range, of 300, 500, and 600 yards. The rifle used was the Enfield, of the Government pattern of 1853. At the range A (of 300 yards) the target was 6 feet by 4, with an 8-inch bull's-eye and 2 feet centre; at ranges B and C (500 and 600 yards) the target was an exact square of 6 feet, with a 2 feet centre, and no bull's eye. All ties in the competition at these three ranges to be decided on Wednesday by those who scored equally firing one shot each at the longest distance—600 yards. The following list of the volunteers who made the greatest number of points for this prize and on these conditions gives the result of the firing. The number of points include all that were made at all three ranges:—

Bainbrigge, 1st West York, 17 points; Henry, Edinburgh, 17; Sharp, 9th Sussex, 17; Collinson, 6th North York, 16; Pant, 5th Kent, 16; Burgh, 10th Glocester, 15; May, 5th Sussex, 15; Cocks, 11th Middlesex, 14; Jenkins, 5th Glamorganshire, 14; Jackson, 32d Kent, 14; Caiger, 21 Middlesex, 14; Fielding, 4th Flintshire, 14; Phillips, 1st Shropshire, 14; Wood, Edinburgh, 14; Baker, Bristol, 14; Gibbs, Bristol, 13; Lawley, Derby, 13; Howard, Essex, 13; Blackburn, Edinburgh, 13; Heaton, 5th Manchester, 13; Russel, Edinburgh, 13; Tinley, 2d Lancashire, 13; Beard, 4th Surrey, 13; Owen, 2d Glamorganshire, 13; Ross, 7th North York, 13; Cowan, 1st Lanark, 13; Wylie, 1st Lanark, 13; Marshall, 1st Lanark, 13; Fenton, 9th Middlesex, 13; Batey, 9th Surrey, 13; Potter, 5th Surrey, 13; Sanford, St. George's, 13; Johnson, Victoria Rifles, 13; Placket, 21st Middlesex, 13; Williams, Bucks, 12; Turpie, Derby, 12; Coulburn, 1st Lanark, 12; Dear, 9th Middlesex, 12; Bridgeman, 9th Middlesex, 12; Cleaver, 23d Middlesex, 12; Gosnell, 1st Norfolk, 12; Cripps, Oxfordshire, 12; Murray, Perthshire, 12; Lyster, 9th Surrey, 12; Brookes, 12th Middlesex, 12; Marriott, 4th West York, 12; Pipon, 7th West Sussex, 12.

For "all comers of all nations" there are four separate series of prizes, increasing in value from 20*l.* to 50*l.* according to the distances, seven sums of 20*l.* for the best seven shots at 200 yards; 30*l.* each for the best seven at 300 yards; 40*l.* each for the best seven at 500 yards; and 50*l.* each for the best five at 600 yards, with the *Army and Navy Gazette* prize of 20*l.*, and the rifle given by Mr. Egan to the other two. Only the prizes of the first two ranges, 200 and 300 yards, were decided on Tuesday. The Swiss were, of course, competitors in this contest. Any rifle was allowed to be used, provided it did not exceed 10 lbs. in weight, and had not a hair trigger. The following were the highest scores made at 200 yards:—

Sergeant Newman, Royal Marines, 12 points: Piece, Switzerland, 12; Ross, 7th West Riding, York, 11; Peter, Switzerland, 11; Chessex, Switzerland, 11; Knecht, Switzerland, 11; Johnson, Sherwood Foresters, 10; Nourisson, Switzerland, 10; Mauler, Switzerland, 10; Collins, Victoria Rifles, 10; Prince, St. George's, 10; Thorel, Switzerland, 10; Thoman, Switzerland, 10; Sergeant Wilson, Hythe, 9.

The following were the highest at 300 yards:—

Ross, West Riding, 9 points; Nourisson, Switzerland, 9; Ingram, Glasgow, 9; Sergeant Wilson, Hythe, 9; Forbes, 2d Derby, 8; Sergeant Dillon, Hythe, 8; Colonel Lindsay, St. George's, 8; Captain Marriott, West York, 8; Heil, Switzerland, 8; Jackson, 8; Knecht, Switzerland, 8.

From this it will be seen that the best shots at the two ranges were Mr. Edward Ross (20), M. Knecht (19), M. Nourisson (19), and Sergeant Wilson (18). The first pair of targets on the left have been set apart for "Aunt Sally" firing for "pool" prizes. A shilling is paid for each shot by any one so inclined, and the sum

produced is divided in the evening between those who have struck the bull's eye. The range is only 200 yards; but the eye is also reduced in size to 4 inches' diameter. These targets have been very attractive throughout the week; on Tuesday Lord Vernon made five hits in this open competition. Prince Albert was on the ground during the afternoon. The number of spectators was of course much less than on Monday, but the attendance was quite equal to what the Association expected. The Volunteers were paraded and dismissed at 6 o'clock.—On Wednesday the proceedings were of a very business-like character. The ranges were with few exceptions 500 and 600 yards, and in spite of a cross wind blowing in gusts which made it difficult to make the proper allowance, and a good deal of ground haze which hung about near the horizon, our volunteer riflemen showed their superiority over their Swiss competitors, who broke down completely at the long range. The firing was stopped at half-past 6, when still short of the decision point, and many of the ties for the Association prizes have still to be determined; but the following 15 may be considered winners of prize rifles:—

Henry, City of Edinburgh, 17 points; Sharpe, 9th Sussex, 17; Bainbrigge, 1st West York, 17; Collinson, 6th North York, 16; Pout, 5th Kent, 16; Burgh, 10th Gloucestershire, 15; May, 5th Sussex, 15; Baker, Bristol, 14; Wood, Edinburgh, 14; Fielding, Flintshire, 14; Jenkins, 5th Glamorgan, 14; Jackson, 32d Kent, 14; Caiger, 2d Middlesex, 14; Cocks, 11th Middlesex, 14; Phillips, 1st Shropshire, 14.

The other prize decided was that given by Mr. Gye, as a commemoration of the Volunteer ball in Covent Garden Theatre, viz., 100*l.* to the best shot, and four sums of 25*l.* to the next highest number of points. The conditions were—five rounds each person, at the three ranges of 300, 500, and 600 yards. The following are the names of the winners:—

Whomes, 4th Kent, 20 points, 100*l.* prize; Sandford, St. George's, 19, 25*l.*; Robertson, 10th Perth, 19, 25*l.*; Dove, 91st Lanark, 18, 25*l.*; Murray, 1st Perth, 18, 25*l.*

The result of this match left four ties to be "shot off," but the result will not affect the prize, and will merely place the winners in an order of precedence. In the evening the ties standing over from Tuesday were shot off at 200 and 300 yards. The 300 yards' competition brought about the most interesting contest of the whole day—that, namely, between M. Nourisson, the crack shot of Switzerland; M. Knecht, a Swiss also; Mr. Edward Ross, Sergeant Wilson, the best shot at Hythe, and Mr. Ingram, of Glasgow. Each had to fire one shot at 300 yards; and, as may be imagined when so much depended on one chance, each did his best. The results were as follows:—

Wilson, Outer, 1 Point; Nourisson, Centre, 2; Ross, Centre, 2; Knecht, Centre, 2; Ingram, Centre, 2. Hence, according to the results of this shooting, Wilson was put *hors de combat*, and the other four were tied. The contest now became very exciting. M. Nourisson advanced, deliberately fired, and scored one. Mr Ross levelled his Whitworth and snapped, the cap exploded but gave no result, an accident which frequently occurred during the day, the communication between nipple and chamber being too narrow. M. Knecht followed and missed the target. M. Nourisson, Mr. Ross, and Mr. Ingram were now three final ties. M. Nourisson made a blank; Mr. Ross sent his shot plump into the bull's-eye and scored two; Mr. Ingram only scored one. Mr. Ross was therefore the victor.

On Thursday the firing commenced at half-past 9, and was continued till sunset without intermission. The following was the result of the competition, at 500 yards, for a Whitworth rifle given by Mr. Fairbairn for foreigners:—

Thorel, 9 points; Von Matt, 7; Thormann, 6; Roth, 6; Van Berchen, 5; Piece, 4; De Gendre, 4; Knecht, 3; Wessel, 3; Chessex, 3; Peter, 3; Staub, 3; Heit, 1.

The following were the five additional winners of Whitworth rifles:—

Plasket, 21st Middlesex, 13 points; Wylie, 1st Lanark 13; Blackburn, Edinburgh, 13; Russell, Edinburgh, 13; Ross, 7th North York, 13.

The winners of these 20 Whitworth rifles, and the undermentioned 20 second-best shots will shoot to-day for her Majesty's prize, at 800, 900, and 1000 yards:—

Owen, Glamorgan, 13 points; Cowan, 1st Lanark, 13; Marshall, 1st Lanark, 13; Sandford, St. George's, 13; Lawley, Derby, 13; Howard, Essex, 13; Tinley, 2d Lancashire, 13; Heaton, 3d Manchester, 13; Fenton, 9th Middlesex, 13; Beard, 4th Surrey, 13; Stearn, 6th Suffolk, 13; Baty, 9th Surrey, 13; Potter, 5th Surrey, 13; Johnson, Victoria Rifles, 13; Williams, Buckingham, 12; Gosnell, 1st Norfolk, 12; Murray, Peebles shire, 12; Mariott, 4th West York, 12; Bridgman, 9th Middlesex, 12; Brooks, 12th Middlesex, 12.

The contest for the series of prizes "open to all comers," which commenced on Wednesday, was concluded on Thursday. It was necessarily a long one, there being four different ranges—200, 300, 500, and 600 yards. There were seven prizes at each range, increasing in amount according to the distance—20*l.*, 30*l.*, 40*l.*, and 50*l.* The following were returned as the winners at the four ranges:—

At 200 Yards.—Piece, Switzerland; Newman, Royal Marines; Ross, 7th North York; Knecht, Switzerland; Peter, Switzerland; Chessex, Switzerland; Mawler, Switzerland. *At 300 Yards.*—Ross; Ingram, Glasgow; Nourisson, Switzerland; Wilson, Hythe; Heil, Switzerland; Dillon, Hythe; Forbes, 2d Derby. *At 500 Yards.*—Brooks, 12th Middlesex; Tinley, 2d Lancashire; Stapylton, Hythe; Dove, 91st Lanark; Forbes, 2d Derby; Peter, Switzerland; Roth, Switzerland.—*At 600 Yards.*—Rowland, Wright, Linley, Holloway, Saddler, Cocks, 11th Middlesex; Hodder.

The 28 winners at these four ranges, and the five second-best shots at each, are qualified to compete for the Prince Consort's prize of 100*l.*, for the silver cup given by the London Rifle Brigade, and a rifle given by Mr. Smith. For these three prizes the distances will be 800, 900, and 1000 yards. The shooting for Miss Coutts's prize of 50*l.*, for all comers, with any rifle, firing from a rest at 1000 yards, commenced on Thursday, but was not concluded. The rest was a sandbag on a kind of tripod, and the competitors fired sitting or crouching. As none of the rifles had been sighted for this long range, five trial shots were allowed each person before beginning the five that would count. This prolonged the contest till the evening, without any decision.

SHAM FIGHT OF VOLUNTEERS.—Mr. Strode, of Camden Park, Bromley, having placed his grounds at the disposal of Lord Ranelagh, Colonel-Commandant of the South Middlesex Corps, a sham fight has been fixed to take place there on the afternoon of Saturday next, the 14th inst. The railway companies have made most liberal arrangements for the conveyance of the Volunteers to Southborough station and back, from Pimlico and London Bridge, and it is announced that the actual expense to each Volunteer attending is not to exceed 2*s.* per man, including railway fare to the field of evolution and back again to town. It is understood that the Volunteers will assemble on the ground on the afternoon of Friday, when a sort of rehearsal of what is to be done on the next day will take place. The War Office will provide the tents, cooking and other necessary apparatus, and as evening approaches the various corps will pitch their tents, and the contending armies are to form their own encampments. Every movement is to be carried out by the sound of the bugle, and the sham fight will commence about 11 o'clock on Saturday morning, and conclude by about 3 in the afternoon, so as to enable the Volunteers to reach town again before evening. Officers commanding Volunteer corps in any part of the country can participate in the fight by signifying their intention in due time to Lord Ranelagh.

GREAT ROBBERY OF JEWELS.—The Duchess of Mecklenburg-Strelitz, who arrived last week from Germany on a visit to her mother, was plundered during her journey of a case of costly jewels set with diamonds of the most valuable description. Her Royal Highness travelled through Hanover, Berlin, and Paris, landed at Dover, and proceeded to London by railway. On reaching Buckingham Palace the jewel case was discovered to be missing, and though several of the most experienced detectives have been investigating the matter, they have failed to discover it. The articles abstracted, independent of their intrinsic worth, said to exceed 3000*l.*, are valuable as family relics and presents from friends. A large reward is offered for their recovery, but the officers engaged in the inquiry are of opinion that the case was stolen before the Duchess reached this country.

THE ORPHEONISTS.—The exertions of Sir Joseph Paxton to get up a dinner to the Orpheonists after their farewell performance proved successful. The total amount of subscriptions received up to Saturday afternoon was nearly 1000*l.*, which enabled the committee to entertain about 2500 Orpheonists at a dinner consisting of innumerable pieces of cold roast and boiled beef, hams, veal and ham pies, salads, tarts, puddings, &c., three dozen of pale ale and eight bottles of claret being allowed to every 24 guests. Sir Joseph Paxton presided, having by him M. Delaporte, the leader of the Orpheonists, and supported by Mr. Bright, M.P., Mr. Joseph Locke, M.P., Mr. E. Ewart, M.P., Mr. John Locke, Mr. H. Ingram, M.P., Mr. Jackson, M.P., Mr. Langton, M.P., Mr. Walter, M.P., Mr. W. Dilke, and other gentlemen. The toasts were few but appropriate, and were received with great enthusiasm by the visitors, "the Queen," and "the Emperor of the French," especially being loudly cheered. Sir J. Paxton then gave "The Health of our Friends the Orpheonists," and expressed the high appreciation entertained of their musical talents by those in England whom they had come so long a distance and at so great a sacrifice of time to instruct and delight. M. Delaporte returned thanks for the toast in his native tongue, and said that the Orpheonists would feel themselves amply recompensed if they had succeeded during their visit in giving satisfaction to their English friends, and in contributing in the slightest degree to cement the alliance which, he was happy to say, at present subsisted between the two nations. The Chairman then announced the last toast on his list to be "The Alliance of France and England," and in proposing it took occasion to observe that no one who reflected for a moment on the vast interests which depended on the continuance of friendly relations between the two greatest nations in the world could fail to entertain the heartfelt desire that no rivalry should henceforth exist between them save in the peaceful paths of commerce, science, and the arts, and in the endeavour to excel in those inventions and productions which accorded with the peculiar aptitude of the people of each. To the furtherance of that great object he expressed a hope that the present visit of the Orpheonists to England would tend, adding that in the cultivation of mutual feelings of goodwill and respect lay the best security that no intrigues or temporary causes of difference would be of avail in endangering, much less severing, an alliance based upon so solid a foundation. Loud cheers followed the interpretation of these sentiments. The excited Frenchmen seized upon every available point of elevation, and shouted "*Vive l'Alliance!*" "*Vive la Reine!*" and "*Vive l'Empereur!*" until they could no longer shout anything. When the loud *vivas* had toned down to something like moderation Mr. Bright rose to acknowledge the toast, and said that there was at the present moment a very intimate friend of his in the French capital negotiating a treaty of commerce between the two countries which he trusted, when fairly set on foot, would do more to cement the alliance between England and France than all the diplomacy of past or present times. He then proceeded to impress on the Orpheonists the expediency of telling their countrymen, on their return to their native land, that Englishmen were not the enemies of France, and that whatever might be the occasional differences between the Governments of the two nations, the peoples of both were one at heart. Cries of "*Vive l'Angleterre!*" "*Vive la France!*" followed the conclusion of Mr. Bright's address, and M. Delaporte having given the "Health of Sir J. Paxton, the Parliamentary Committee, and the Managers of the Crystal Palace," which was duly responded to, Mr. Joseph Locke, M.P., wound up the proceedings, so far as the dinner was concerned, by proposing in French the "Health of the Guides." The toast having been cordially drunk, Sir J. Paxton vacated the chair. After a brief interval, the Orpheonists gradually found their way out of the dining room in a continuous stream, as they had entered it, and passed along a regular lane formed by the spectators outside, through the corriders of the palace, to the railway platform. On the route they shook hands with everybody and everybody shook hands with them in the most affectionate manner. The Volunteers, who in large numbers were present in uniform, came in for a considerable share of their notice. Two or three Orpheonists, more enthusiastic than their brethren, seized upon an equal number of Volunteers, and insisted in drinking on the spot to the perpetual alliance of the two great peoples of which they were the representatives. The entire procession to the railway platform, marked as it was by cordial *adieux*, reiterated cries of "*bon voyage*," "*au revoir*," and a thousand other forms of bidding farewell, assumed the appearance rather of a parting between old friends than the first step towards the return of the sojourners of a few days among us to their native land. Shortly after 10 o'clock the Orpheonists had all arrived safely in town, and on Sunday morning they returned to France. During their stay the committee obtained permission for them to visit free, on presentation of their passports, Westminster Abbey, St. Paul's, the Tower, Greenwich Hospital, Zoological Gardens, and the Surrey Gardens, Hampton Court Palace, Windsor Castle, the Park, St. George's Chapel, and the Royal Stables, the Bridgewater Gallery, the *Times* Printing Office, Messrs. Barclay and Co.'s Brewery, Messrs. Broadwood's Pianoforte Manufactory, the United Service Institution, Messrs. Penn and Co.'s Works, the Royal Mint, Houses of Parliament, South Kensington Museum, Kew Gardens, Bank of England, and many other places of interest. About 50 of the leaders of the undertaking had tickets for the galleries at the Volunteer Review, and they were admitted in relays to the gallery of the House of Commons during a debate. The only drawback to the enjoyment of their visit was the wretched accommodation provided for them in the way of lodgings, and the sufferings which those who refused to remain in such quarters subsequently endured from the "ignoble rapacity" of innkeepers, or the objections of cautious lodging-house keepers to the badges or insignia which they wore at their button holes. Happily however the blame of their first night's reception in London lies with a compatriot of their own, who having undertaken to lodge them comfortably, considered he had fulfilled the contract liberally by engaging two waste buildings erected for public-houses in Islington Cattle Market, and furnishing them with a thousand straw mattresses laid on the floor, with pillows of the same material. In the morning they found that their countryman had not considered any toilette appliances necessary in the bedrooms, so that they could neither wash nor shave. The band of the Guides gave a farewell concert on Saturday evening in St. James's Hall for the benefit of the French Charitable Association, under the patronage of the French Ambassador.

THE EMPLOYMENT OF WOMEN.—A *conversazione* of the Society for Promoting the Employment of Women, in connection with the National Association for the Promotion of Social Science, was held at 19, Langham Place, on the evening of the 29th ult. The Earl of Shaftesbury took the chair, and in an opening address, explained the principles of the Society, congratulated the members on the success which had attended their efforts during the first year, and enforced the necessity of still further extending their operations. Mr. Cookson urged law engrossing as a suitable occupation for women, described the office established by the Society, which is already supported by several solicitors, and gave an interesting account of the work done there. Mr. Hastings spoke of printing as peculiarly well adapted for women, and read a paper contributed by Miss Emily Faithfull, on the introduction of women into the printing trade. Mr. Mackenzie read a paper by Miss J. Boucherett, on bookkeeping, stating that a want of knowledge of accounts was one great reason of the disinclination to employ women in shops, showing how they might be fitted for the offices of cashiers and bookkeepers, and announcing that a school to supply these deficiencies had been opened by the Society. Vice-Chancellor Wood spoke of other occupations for women, and recommended that they should be employed as clerks in post offices, managers of hotels, hairdressers, &c. He read a paper by Miss Parkes on the

same subject, and concluded with an appeal for further subscriptions. The audience were then introduced into a lower room, where an interesting collection of women's work in law engrossing, printing, designing, &c., was exhibited, and excited much admiration.

High Price of Butchers' Meat.—A numerous meeting of the operative classes residing at Stratford and its vicinity was held a few days since, when a resolution was adopted to the effect that the present high price of butchers' meat places that portion of their daily food beyond the reach of the operative classes, and strongly urging the necessity of abstaining from such food until it is sold at a more reasonable price. A committee was formed to arrange for holding an aggregate meeting on the same subject at Manby Park, Stratford Grove.

The Approaches to Covent Garden.—The houses at the south-east angle of Covent Garden, adjoining the Old Hummums, the sites of which are required for the formation of the new street in continuation of Burleigh Street, Strand, are now in process of demolition. The Imperial Hotel, situate in the angle, and its extensive range of buildings in the rear, have already been razed to the ground. This approach, when completed, will be of the greatest importance to market gardeners.

Fire at Figgins's Type Foundry.—On Wednesday night a fire broke out in the type foundry of Messrs. Figgins, in West Street, Smithfield, and destroyed a great quantity of metal and nearly the whole of the floors in that part of the premises in which it occurred. The cause of the fire is not known.

The Public Health.—The weekly return of the Registrar-General states that the deaths registered in London in the week that ended Saturday June 30 were 1001. In the corresponding weeks of the 10 years 1850-9 the average number was 1106, which if raised in proportion to the increase of population will become 1217. The present return is therefore 216 below the average. During the week the births of 859 boys and 872 girls, in all 1731 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1634.

Provincial.

Bilston.—The bank of Messrs. J. Foster & Co., in this town suspended payment on the 16th ult., causing a good deal of consternation in the neighbourhood, the transactions of the bank having been chiefly with the shopkeeping class of the South Staffordshire iron district. Mr. Foster, the surviving partner, commenced the business with a capital of 15,000*l.*; and does not possess any landed property; and Mr. Cross, the cashier, is a debtor to the bank to the amount of 15,000*l.* The accounts show the liabilities to be about 2200*l.*, and the assets about 800*l.*, viz. 600*l.* debts and 200*l.* stock.

Norwich.—The magistrates of this city resumed last week the inquiry into the extraordinary charge preferred against the Rev. Canon Dalton, a Roman Catholic priest, and the two Messrs. Beha, of conspiring to assist in keeping Master Vansittart from the care of his father after he had run away from school. Foulsham, the auctioneer, who was also summoned before the bench when the case was first gone into, and who purchased the watch offered for sale by the young gentleman, was now called as a witness, and consequently was not included in the charge preferred against the other parties. The matter excited great interest, the court being crowded throughout the proceedings. Master Vansittart was the first witness called, and in the course of a long cross-examination admitted, in the coolest manner, that all he had stated at the former examination respecting his having been visited by an Italian priest at Rackheath was false, and that all the information he had giving to the chief constable who had been endeavouring to trace this priest was false likewise. After hearing evidence from other parties showing that Canon Dalton had assisted the boy in carrying out his wish to become a Roman Catholic, the magistrates retired to consult, and on returning into court after an absence of 25 minutes, the Mayor said that the bench considered the conduct of Canon Dalton exceedingly reprehensible, in that, knowing that the boy had clandestinely left a school where he had been placed by a Protestant parent, he did not at once advise him to return, but on the contrary did what he could to facilitate his leaving school. At the same time there were difficulties connected with the case, both in regard to law and evidence, and also as to the manner in which the evidence had been brought forward. The magistrates had therefore determined not to send the matter for trial, but to dismiss it. As the assizes were close at hand, it would be in the power of Mr. Vansittart, if he thought proper, to prefer an indictment against the parties.

Oxford.—The 30th Annual Meeting of the British Association was opened on the 27th ult. in the Sheldonian Theatre, when the Prince Consort laid down his office as President and resigned the chair to Lord Wrottesley. His Royal Highness, who was greeted with prolonged applause, briefly addressed the meeting, expressing a hope that the interests of science had not suffered in his hands, and paying a graceful compliment to his successor in the presidency. Lord Wrottesley, having been duly installed in the chair, delivered his inaugural address, after which the Earl of Derby proposed, and Dr. Whewell, Master of Trinity, seconded, a vote of thanks to his lordship for his address. The general committee had previously met in the Convocation House, under the presidency of Dr. Whewell, to transact the general business, and appoint the presidents, vice-presidents, and officers for the different sections. On the 28th ult. the sections assembled in the rooms appointed for them, for reading and discussing reports and other communications. The sections were as follows:—

Mathematical and Physical Science.—President, Rev. B. Price, Professor of Natural Philosophy, Oxford. Chemical Science.—President, B. C. Brodie, Esq., Professor of Chemistry, Oxford. Geology.—President, Rev. A. Sedgwick, Professor of Geology, Cambridge. Zoology and Botany.—President, Dr. Daubeny, Professor of Botany, Oxford. Physiology.—President, Dr. G. Rolleston, M.D., Professor of Physiology, Oxford. Geography and Ethnology.—President, Sir R. I. Murchison, Director of the Geological Survey. Economic Science and Statistics.—President, Nassau W. Senior, Esq., late Professor of Political Economy, Oxford. Mechanical Science.—President, W. J. Macquoin Rankine, Esq., Professor of Engineering, Glasgow.

On the evenings of the 28th, 29th, and 30th there were *conversazioni* in the University Museum. On Monday last the general committee met for the purpose of deciding on the place of meeting for 1861, when it was resolved that it be held at Manchester towards the close of August under the presidency of Mr. W. Fairbairn, and that the Earl of Ellesmere, Lord Stanley, Sir B. Heywood and Mr. Bazley be the Vice-Presidents. On Tuesday evening there was a microscopical *soirée* in the Museum, and the concluding general meeting took place in the Theatre on Wednesday, when the proceedings of the general committee and the grants of money sanctioned by it were announced, the total amount voted being 1390*l.* In a Convocation held on Monday in the Theatre, the honorary degree of D.C.L. was conferred on M. Auguste de la Rive, Minister Plenipotentiary of the Helvetic Confederation; Lord Wrottesley, M.A., V.P.R.S.; and the Rev. Adam Sedgwick, M.A., F.R.S., Fellow of Trinity, and Woodwardian Professor of Geology, Cambridge. Professor Sedgwick was very warmly and loudly applauded.

Ireland.

The Pope's Irish Recruits.—A letter from the King's County states that the cautionary notice of the Government has been completely set at defiance in that quarter, and that the Papal emissaries are still actively engaged in enlisting recruits for the Pope's service.

Garibaldi Burned in Effigy.—General Garibaldi was burnt in effigy by the Roman Catholics of Limerick on St. John's eve. The effigy was placed upon a long pole, attired in shabby military uniform, with outstretched arms, and the name "Garibaldi" being conspicuously displayed in large letters on the front and back of the figure.

Law.

Court of Exchequer.—*Manser* v. *the Eastern Counties Railway. The Tottenham Accident.*—This was an action brought by the plaintiff, a miller at Hoddesdon, in Hertfordshire, to recover compensation for the injuries sustained in the accident at Tottenham on the 25th February by reason of the alleged negligence of the defendants' servants. The evidence of the plaintiff was to the effect that the flaw in the tire of the wheel could and ought to have discovered before the accident: while the defendants said that the flaw was wholly imperceptible from the surface, and could not have been ascertained while the wheel remained entire, and that all proper means of examination had been adopted. After three days' trial the jury after an absence of nearly two hours found a verdict for the plaintiff, on the ground of insufficient care on the part of the company—damages 2000*l.*

Court of Queen's Bench.—*Podmore* v. *the Great Northern Railway. The Hitchin Accident.*—The plaintiff, Mr. J. J. Podmore, a member of the firm of Hester and Podmore, wholesale tea-dealers in Fenchurch Street, sued the Great Northern Railway Company to recover damages for very serious injuries which he had sustained in the accident which took place at Hitchin on the company's line on the 8th of September, 1859. At the close of the evidence for the plaintiff, the defendants agreed to a verdict for the plaintiff—damages 2000*l.*

Rolls Court: *Bridewell Hospital.*—The Master of the Rolls gave judgment in this case, which was in the form of a summons to the court to vary the scheme approved by the Attorney General for the future destination of a part of the property of Bridewell Hospital. By the scheme it was proposed to establish a reformatory with the property; on the other hand, the City unions were desirous to devote it to the establishing and support of a house or houses of refuge for the houseless poor. His Honour, after referring to the object of the founders of the charity, observed that reformation of idlers, of the character described in the ordinance for the government, 1557, by means of compulsory labour, appeared to form its main feature—a purpose laudable indeed, but one proved by experience to be well nigh impracticable, and he thought the scheme of the Attorney-General, by educating and training to virtuous habits the children of the class to which those whose benefit was contemplated belonged, altogether better adapted than the plan of the City unions to promote the views of the founders. The scheme of the Attorney-General would therefore be adopted, and the summons dismissed, but without costs.

Obituary.

Vice-Admiral Sir George R. Brooke Pechell, M.P. for Brighton, died on the 29th ult., at his house in Hill Street, Berkeley Square, after a short illness. He was the second son of Major-General Sir T. B. Pechell, and was born in 1789. He entered the navy in 1803, and was midshipman of the Medusa at the capture of the Spanish treasure-ships in 1804; and of the Revenge at the capture of four French frigates in 1806; also of the Venus at the defence of Vigo. When lieutenant of the Mace Ionian he brought out with her boats a burger from under the batteries of the Ile D'Aix in 1812; was commander of the Colibri and Recruit off New York and Charlestown in 1814 and of the Tamar on the North American station. On obtaining his post rank he retired upon half pay. He became a rear-admiral in 1852, and vice-admiral in 1858. In 1830 the late baronet was nominated Gentleman of the Privy Chamber, and in April of the following year was appointed one of the Equerries of Queen Adelaide, and a Groom in Waiting to the Queen, but declined that honour from the position he held in the Dowager Queen's household. He had represented Brighton in Parliament for 25 years, having been first returned for that borough in 1835. During his Parliamentary career he uniformly supported the Whig administration, and displayed a strong interest in the efficiency of the navy. He married in 1826 the Hon. Katherine Annabella Bishopp, daughter of the late Lord De la Zouche, and co-heiress with her sister, the present Baroness De la Zouche. He succeeded to the baronetcy on the death of his elder brother, Sir John R. Pechell, in 1849. The baronetcy, in default of surviving male issue, devolves on his cousin, George Samuel, eldest son of the late Captain Samuel G. Pechell, R.N., born in 1819, and married in 1842 to Miss Brenner, daughter of Colonel Brenner, of the Madras army. He has served in the 47th Madras Native Infantry, and is now a Captain in the Shropshire Militia.

Sir Henry Allen Johnson, Bart., died at his residence at Southlands, Isle of Wight, on the 27th ult. He was the son of the first baronet, who was a distinguished military commander. Sir H. A. Johnson was born at Shelbourn, Nova Scotia, in 1785, and was educated at Christ Church, Oxford, where he took his B.A. degree in 1807, and M.A. three years afterwards. He was created a Knight of the Order of Wilhelm, by the King of the Netherlands, for his services as aide-de camp to the Prince of Orange during the Peninsular war. He is succeeded in the baronetcy by his son, Henry Franks Frederick, who became a captain of the 5th Fusiliers in 1843.

Sir George Bowyer Bart., died on the 1st inst. at Dresden, in his 78th year. He succeeded on the death of his father, Admiral Sir George Bowyer, to two titles—one conferred on Sir William Bowyer, of Denham Court, Bucks, in 1660, for services during the Civil War and at the Restoration; and the other granted to Admiral Bowyer, after Lord Howe's victory on the 1st June, 1794, in which engagement he was severely wounded. The deceased baronet formerly represented Malmesbury and Abingdon in Parliament, and was a friend and supporter of Pitt and Canning. By his wife, the daughter of Sir Henry Snape Douglas, who was captain of Lord Howe's flagship the Queen Charlotte and also severely wounded at the victory on the 1st June, he leaves three sons and two daughters. He is succeeded in his titles and estates by his eldest son, Mr. Bowyer, M.P. for Dundalk, now Sir George Bowyer, of Radley Park, Berks.

Mr. Broughton, the metropolitan police magistrate, died on the 29th ult. at his residence in Dorset Square from an attack of paralysis. He was for some years one of the magistrates of Worship Street Police Court, and on the death of Mr. Rawlinson, he was appointed to Marylebone Court, where he remained up to about a month ago, when he retired on a pension. He was upwards of 80 years of age, and was universally respected as one of the best magistrates on the metropolitan bench.

BIRTHS.—On the 2d inst, at 2, Lyall Street, Belgrave Square, Lady Skipwith, of a son—1st inst, at Hampstead, the Hon. Mrs. M. Drummond, of a daughter—27th ult, at Worplesdon Lodge, near Guildford, the wife of William Bovill, Esq., M.P., of a son—2d inst, at High Elms, the wife of John Lubbock, Esq., of a daughter.

MARRIAGES.—On the 30th ult, at St George's, Hanover Square, Colonel George Campbell, C.B., late of the 52d Regt., to Emma, widow of Evan Hamilton Baillie, Esq., and youngest daughter of the late Major-General Sir William Do[illegible], K.C.B., of Timpendean, Roxburghshire—26th ult, at St. Paul's, Knightsbridge, Charles B. Wynne, Captain H.M.'s 90th Light Infantry, to Emily Frances Graham, eldest daughter of Sir Robert Gore Booth, Bart, M.P., of Lissadell, Sligo, and 44, Eaton Place, Belgrave Square—26th ult, at Walcot Church, Bath, the Rev. Horace Mann Blakiston, Vicar of Benhall, Suffolk, second son of Sir Matthew Blakiston, Bart., to Charlotte, second daughter of the Rev. W. H. G. Mann, late Vicar of Bawden, Cheshire—3d inst, at St. George's, Hanover Square, Charles Edward Ratclyffe, only son of the Rev. Charles Edward Ratclyffe, of South Sydenham, to Constance Albuera, daughter of Colonel and Lady Maria Saunderson, of Charges Street, London, and Northbrook House, Hampshire—24th ult, at St. John's Church, Cardiff, John Partridge Booker, Esq, youngest son of the late T. W. Booker Blakemore, Esq., M.P., to Clara Georgina, youngest daughter of the late J. H. Langley, Esq.

DEATHS.—On the 25th ult, at his residence, Woodville, Lucan, county Dublin, Sir Hopton Stafford Scott, K.C.B—26th ult, at Frankfort, Henry Chester Lighton, Esq., son of the late Sir Thomas Lighton, Bart.—27th ult, at Rhyl, Flintshire, Catherine, widow of the late Rev. John Hanmer, M.A., and daughter of the late Sir Thomas Whichcote, Bart., of Aswarby, Lincolnshire, aged 64—30th ult, the infant son of Admiral Sir Thomas and Lady Cochrane—22d May, on board the P and O. steamer Nemesis, Rose Frances, wife of C. W. Moore, Esq, of the Bengal Civil Service, and second daughter of Colonel Sir Samuel Falkiner, Bart., aged 20—21st ult, at Cheltenham, Vice-Admiral Rowland Money, C.B., son of the late William Money, Esq., of Homme House, Herefordshire, and brother of the late General Sir James Kyrle Money, Bart.—20th ult, at Hyères, France, Joseph Mullings, Esq., of Eastcourt, Wilts, eldest son of the late J. R. Mullings, Esq., formerly M.P. for Cirencester, aged 23—27th ult, at 7, Campden Hill Road, Colonel George James Muat MacDowell, C.B., late commanding 16th Lancers, aged 59—27th ult, at Long Lodge, Merton, Surrey, Sarah Jane, wife of Lieut Colonel James Robert Colebrooke, of the Royal Artillery, aged 69—25th ult, at Florence, William Somerville, M.D., formerly one of the principal inspectors of the Army Medical Board, and Physician to the Royal Hospital at Chelsea—19th ult, at Brighton, Thomas Addison, M.D., of 51, Berkeley Square, late Consulting Physician to Guy's Hospital.

Markets.

METROPOLITAN CATTLE MARKET.

Monday, July 2.

The supply of Beasts is again very short. Trade is not brisk owing to the high prices, but we cannot quote lower. The number of Sheep is about the same as on Monday last, and prices remain unaltered. Trade is heavy for Lambs at rather lower rates. Good Calves are rather dearer. From Germany and Holland there are 720 Beasts, 4360 Sheep, and 242 Calves; from Spain, 350 Beasts; from Scotland, 50; from Norfolk and Suffolk, 1800; and 200 from the northern and midland counties.

	s	d	s	d
Best Scots, Herefords, &c.	5	6	to 5	8
Best Short Horns	5	2	— 5	6
2d quality Beasts	4	6	— 4	10
Best Downs and Half-breds	5	4	to 5	8
Do. Shorn	..	..	—	..

	s	d	s	d
Best Long-wools	5	2	— 5	6
Do. Shorn	..	..	to	..
Ewes & 2d quality	4	6	— 4	10
Do. Shorn	..	..	—	..
Lambs	..	6	0 — 6	6
Calves	..	4	6 — 5	8
Pigs	..	4	0 — 5	0

Beasts, 3770; Sheep & Lambs, 24,460; Calves, 296; Pigs, 360.

Thursday, July 5.

We have a very short supply of Beasts. Trade is not brisk, but prices are still very high. There are a few more Sheep; the

average quality is very indifferent, consequently choicest descriptions are readily disposed of at full rates. Lambs and Calves are selling about the same as on Monday. Our foreign supply consists of 264 Beasts, 900 Sheep, and 288 Calves; and 120 Milch Cows.

Best Scots, Herefords, &c.	5	6 to 5	8	Best Long-wools	5	2 — 5	6
Best Short-horns	5	2 — 5	6	Do. Shorn	..	.. —	..
2d quality Beasts	4	6 — 4	10	Ewes & 2d quality	4	6 — 4	10
Best Downs and Half-breds	5	6 — 5	8	Do. Shorn	..	.. to	..
Do. Shorn	..	.. —	..	Lambs	..	.. 6 0 — 6	6
				Calves	..	.. 4 6 — 5	6
				Pigs	..	.. 4 0 — 5	0

Beasts, 940; Sheep & Lambs, 10,500; Calves, 474; Pigs, 200.

COVENT GARDEN.—July 7.

English Pine Apples are very abundant, and consequently much reduced in price. Plums, Pears, and Figs are now received in addition to other articles from France. Grapes are plentiful, as are likewise Cherries. Strawberries maintain good prices. Cob Nuts realise 1s. per pound. Gooseberries fetch 3d. a quart. Peas in excellent condition are now abundantly supplied. New Potatoes range from 8s. to 12s. per cwt. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Azaleas, Heaths, Primulas, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 3s to 6s	Cherries, p. lb., 1s to 3s
Grapes, per lb., 4s to 10s	Green Figs, per doz., 8s to 12s
Strawberries, p. lb., 1s to 3s	Melons, each, 3s to 6s
Peaches, per doz., 10s to 20s	Apples, per doz., 2s to 6s
Apricots, per doz., 2s to 4s	Oranges, per 100, 6s to 15s
Nectarines, do., 6s to 12s	Lemons, per 100, 5s to 10s

VEGETABLES.

Asparagus, p. bundle, 2s to 4s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 1s to 1s 6d	Celery, per bundle, 2s to 3s
Peas, p. bush., 4s to 6s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 6d to 8d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 6d to 8d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d to 7d	Mushrooms, p. pott., 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 4s
Cucumbers, each, 6d to 1s	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, July 5.

Prime Meadow Hay	70s to 84s		Clover	95s to 126s	
Superior do. (old)	88	105	New Clover	—	—
Inferior do.	55	60	Second cut do.	90	95
New do.	36	80	Straw	26	36
Rowen	—	—			

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, July 5.

Sup. Meadow Hay	118s to 126s		Inferior Clover	90s to 110s	
Inferior do.	90	110	New do.	—	—
New do.	60	72	Straw	38	45
Superior Clover	118	130			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, July 5.

Fine old Hay	100s to 108s		Fine old Clover	120s to 126s	
Inferior do.	84	92	Inferior do	100	108
Prime New Hay	—	—	Fine New Clover	—	—
Inferior do.	—	—	Fine 2d cut	100	115
Straw	32	36	Inferior do.	80	90

HOPS.—BOROUGH MARKET, FRIDAY, July 6.

Messrs. Pattenden & Smith report that the accounts from the plantations come more unfavourable. Market very active, at an advance of 2s. to 3s. since Monday. Duty 160,000*l.*

BUTTER MARKET.—July 6.

Best Fresh Butter .. .. 14s. per dozen lbs.
Second do. do. .. .. 13s. " "
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

BRITISH WOOLS.—LONDON, FRIDAY, July 6.

The prices of all descriptions of wool keep up high in the country. The fineness of the weather tends to support the disposition of the dealers to purchase at full rates.

MARK LANE.—MONDAY, July 2.

The supply of Wheat from Essex and Kent to this morning's market was small; in order to proceed with sales a reduction of 1s. to 2s. per qr. upon the rates of this day se'nnight had to be submitted to. Foreign was generally held at last week's prices; holders not being disposed to press sales, only a limited business resulted. For Barley there is a good demand at an advance of 6d. per qr. Beans bring rather more money. Peas are unaltered in value. Oats are a dull sale, and all but the finest qualities are 6d. to 1s. per qr. cheaper. Flour is a slow sale at late rates.

PER IMPERIAL QUARTER.		s. s.		s. s
WHEAT, Essex, Kent, & Suffolk	White	55—60	Red	53—58
— —	fine selected runs ditto	55—60	Red	56—60
— —	Talavera	58—63		
— Norfolk		—	Red	—
— Foreign		52—65		
BARLEY, grind. & dist., 24s to 31s.	Chev.	38—45	Malting	36—41
— Foreign	grinding and distilling	28—36	Malting	35—40
OATS, Essex and Suffolk		19—24		
— Scotch and Lincolnshire	Potato	23—28	Feed	19—26
— Irish	Potato	24—28	Feed	19—24
— Foreign	Poland and Brew	23—27	Feed	20—27
RYE		35—38	Foreign	—
RYE-MEAL, foreign		—		
BEANS, Mazagan 32s to 40s	Tick	34—43	Harrow	34—43
— Pigeon 36s — 47s.	Winds	48—54	Longpod	—
— Foreign	Small	38—46	Egyptian	—
PEAS, white, Essex and Kent	Boilers	38—40	Suffolk	36—41
— Maple —s to —s	Grey	32—34	Foreign	30—40
MAIZE	White	—	Yellow	—
FLOUR, best marks delivered	per sack	48—54		
— 2d do.	ditto	40—48	Country	40—48
— Foreign	per barrel	25—32	Per sack	30—37

FRIDAY, July 6.

After five successive weeks of very wet and ungenial weather we are enabled to report the one ending to-day as having been fine, and highly beneficial for the growing crops. During this latter period the wind blew from the N.W. Great inactivity has prevailed in the Wheat trade throughout the kingdom, and on the business transacted a concession of 1s. to 2s. per qr upon the rates of the previous week has been general. Barley has been in fair request and, in some instances, at 6d. to 1s. per qr. advance. The former value of Peas and Beans was also supported. Oats here and in several other markets have declined 6d. to 1s. per qr. Flour has been greatly neglected, and purchaseable here and in some of the provincial markets on lower terms. From the South of Europe we have no grain-laden vessels arrived this week. The business done has been trifling, including 6000 qrs. of Marianopoli Wheat for forward shipment at 56s. per 492 lbs.; Lagos Maize 32s., Ibrail 31s. 6d., both per 480 lbs.; Odessa 33s. per 492 lbs.; Danube Barley at 25s. 6d. per 400 lbs. all c. f. and i. to U. K.; Taganrog Linseed at 50s. per qr. delivered. Accounts from Galatz state that the crops have a magnificent appearance, and the yield will be very abundant of all kinds of grain. The arrivals of English grain this week have been small, of foreign Barley moderate, and of Wheat and Oats unusually large. The attendance at to-day's market was small; both English and foreign Wheat were neglected, and their value consequently nominal, but to have forced sales, for which there appeared to be no disposition, lower prices must have been submitted to. Barley is in fair request at Monday's quotations. Beans and Peas bring late rates. With a very large arrival of Oats trade is exceedingly heavy, and sales difficult even at a decline of fully 1s. per qr.

ARRIVALS FROM July 2 TO July 6.

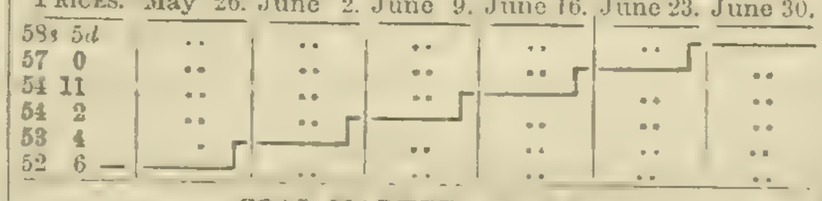
	Wheat.	Barley.	Oats.	Flour.
English	1020 qrs.	30 qrs.	— qrs.	1080 sks.
Irish	— "	— "	150 "	— "
Foreign	44980 "	3500 "	109150 "	1920 ", 7030 brls.

LIVERPOOL, Tuesday, July 3.—We have a fair attendance of millers and dealers at our Corn Exchange this morning, but the business passing has been on the most retail scale, and quotations may be considered as in a great degree nominal at a reduction of 1d. per cental on Wheat and 6d. per barrel and sack on Flour. Indian Corn gave way fully 6d. per qr., and some forced sales of mixed American were made even as low as 30s. per 480 lbs. ex ship. Oats and Oatmeal dull without change in value. Beans declined 6d. per qr. Peas and Barley are nominally unaltered. The day is very fine, and the market closes with a depressed tone.

FRIDAY, July 6.—The corn market was quiet. Wheat and Flour difficult of sale, unless at a reduction of last week. Oats and Egyptian Beans lower. Barley and Peas firm. Indian Corn steady; American mixed, 30s. to 30s. 3d.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
May 26..	52s 6d	36s 10d	26s 6d	37s 3d	44s 8d	40s 9d
June 2..	53 4	35 2	26 8	39 3	44 1	41 0
— 9..	54 2	35 10	27 8	38 1	45 9	40 8
— 16..	54 11	35 0	26 11	37 0	46 2	40 4
— 23..	57 0	34 3	27 5	38 9	45 10	41 4
— 30..	58 5	32 10	25 5	41 9	47 1	41 8
Agg. Aver.	55 0	34 11	26 9	38 8	45 7	41 0

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.



COAL MARKET.—JULY 5.

Byass's Bebside West Hartley, 15s. 6d.; Davison's West Hartley, 15s. 6d.; Hastings Hartley, 15s. 6d.; Howard's West Hartley, 15s. 6d.; Lambert's West Hartley, 15s. 6d.; Tanfield Moor, 13s.; Tanfield Moor Butes, 13s.; Walker Primrose, 13s.; West Hartley, 15s. 6d.; Wylam, 16s.; Walls End Acorn Close, 17s.; Walls End Eden, 17s.; Walls End Gosforth, 16s.; Walls End Harton, 16s.; Walls End Braddyll's Hetton, 17s 3d.; Walls End Framwellgate, 16s. 9d.; Walls End Haswell, 18s. 6d.; Walls End Hetton, 18s. 6d.; Walls End South Hetton, 18s 6d.; Walls End Stewarts, 18s. 6d.; Walls End Cassop, 17s. 6d; Walls End Hartlepool, 18s; Walls End Hough Hall, 16s. 9d.; Walls End Kelloe, 17s. 9d.; Walls End North Hartlepool, 15s. 6d.; Walls End Shincliffe, 16s. 3d; Walls End South Hartlepool, 17s.; Walls End Trimdon Thornley, 15s; Walls End West Hetton, 17s.; Walls End Whitworth, 16s.; Carway and Duffryn Malting, 22s. 6d.—104 ships at market.

WANTED, A PARTNER, in the occupation of a large tract of land. A good House, and a share in the Shooting over 2000 acres may be had.—For particulars, apply to Mr. JAMES KING, Land Agent, Winslow.

WANTED, a TRAVELLER, in the Nursery and Seed Trade, of good address, well informed in all the departments, and with unexceptionable references.—Apply by letter to Mr. WM. BAXTER SMITH, 27, Great George Street, Westminster, S.W.

WANTED, A PROPAGATOR AND SALESMAN. Middle-aged. Married man preferred.—Apply, T. & G. SWAILES, Nurserymen, Beverley, Yorkshire.

WANTED IMMEDIATELY, for the Budding Season, or as a permanent situation, a MAN who thoroughly understands the Cultivation of Roses.—Apply, stating wages required and reference, to W. H. DAVIS, Rose Nurseries, Newbury.

WANTED, in a Nursery near London, a steady MAN, to Grow Plants for Market and make himself useful in and out of the houses. Wages 20s. per week.—A. M., Mr. Cuthbert's, Salesman, Covent Garden, W.C.

WANTED, a steady single MAN, with general knowledge of Gardening. Good character.—Address, prepaid, G. L., Mr. H. S. Cuthbert, Salesman, Covent Garden, W.C.

WANTED, a strong active Man, accustomed to a Market Garden, and whose character will bear the strictest investigation. A married man and teetotaller preferred. Work for a LAD 12 or 14 years of age.—Apply, stating Wages with Cottage, to THOMAS ELLAM, Market Gardener, Woolton, Liverpool.

WANTED, AS GARDENER, a Young Man, not exceeding 25, who thoroughly understands the care of Vineries, and is a good Mower. Wages, 18s. per week, increasing to 20s. in six months if found to suit.—Apply to A. B., 57, Coal Exchange, London.

WANTED, a single Man to take charge of a small Garden and Orchard, and a couple of Cows.—Apply to Mr. W. B. SMITH, 27, Great George Street, Westminster, S.W.

WANTED, AS UNDER GARDENER, a competent young Man, to look after the Fires and Air in a Forcing Establishment where there are Pines, Grapes, Peaches, Melons, &c.; must be steady and trustworthy. Wages, 16s. per week, and lodging, without vegetables.—Address, B. F., Post Office, Stockport, Cheshire.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 36, married; wishes to engage with any nobleman or gentleman requiring a first-class Gardener. Unexceptionable references as to character, &c.—J. PRINO, Gardener, Dunorlan Park, Tunbridge Wells, Kent.

GARDENER (HEAD).—Age 37, single; understands Early Forcing, Stove and Greenhouse Plants, Vines, Strawberries, Melons, Kitchen Garden, &c. Unexceptionable character.—R. P., Post Office, 40, Goswell Road, E.C.

GARDENER (HEAD).—Age 36, married, without incumbrance. No objection to take charge of Cows and Pasture Land if required. Three years' good reference.—H. B., Windmill Gardens, Upper Norwood, Surrey, S.

GARDENER (HEAD) in or out of house.—Age 40; thoroughly experienced in his profession. Also the management of Stock. Highly recommended.—M. N., Post Office, Battersea Rise, S.W.

GARDENER (HEAD, in a gentleman's family).—Understands the Forcing of Peaches, Pines, Vines, Cucumbers, and Melons, and the management of Flower and Kitchen Gardens. Can have four years' good character, and be strongly recommended as trustworthy.—W. G., Post Office, Ripley, Surrey.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 30, married; native of Scotland; thoroughly experienced and practical in every branch of his profession. Leaving his present situation in consequence of the death of his employer. Four years' excellent character. No single-handed place accepted.—The Gardener, Wanstead Hall, Essex, N.E.

GARDENER (HEAD).—Age 42, married, no incumbrance; has had 20 years' practical experience in all branches of his profession, including the Forcing of Pines, Vines, Peaches, Strawberries, &c.; is a first-class Plant Grower. Could manage Land if required. Three years' unexceptionable character.—K. A., Mr. Henderson's Nursery, Pine-apple Place, Edgeware Road, W.

GARDENER, (HEAD).—Age 38, married, two children; has a thorough practical knowledge of his profession in all its various branches, including Early and Late Forcing of Fruit, Flowers, and Vegetables, Growing of Stove and Greenhouse Plants, Orchids, &c.; also the general routine of Kitchen and Flower Gardens. Good character from last employer, and highly recommended.—H. B., 14, Oxford Street, Southampton.

GARDENER (HEAD).—Age 40, married; professes a practical and scientific knowledge of his profession in all its branches, including Pines, Grapes, Peaches, Figs, Melons, Cucumbers, &c.; and is a first class plant grower. Has had 200 prizes for Fruits and Vegetables. With Woods, Land, and Stock. Wife can take charge of Dairy and Poultry.—J. D., A. Henderson's, Pine-apple Place, Edgeware Road, London, W.

GARDENER (HEAD).—HENRY MAY begs respectfully to offer his services to any lady or gentleman requiring a Gardener. He lived under his brother four years while with the late Mrs. Laurence at Ealing Park, and he has subsequently been foreman in the plant department of a Nursery. In addition to his experience in the cultivation of plants and flowers, H. M. feels himself quite competent to undertake the charge of a Kitchen or Fruit Garden, and other matters connected with the duties of a gardener.—HENRY MAY, New Road, Barnet, Herts, N.

GARDENER.—Middle-aged, single; experienced. Two and a half years' character. No objection single-handed or to live in the house.—Address, stating wages given, Z. K., Mr. Sexton's, Marriages Square, Chelmsford, Essex.

GARDENER (Single-handed or otherwise).—Age 33; has a thorough practical knowledge of his profession. Character satisfactory.—S. T., Mr. Higgs, Builder, 14, Fuller Street, Bethnal Green Road, London, N.E.

GARDENER (SINGLE-HANDED, or where one is kept).—Age 28, married, two children; understands Kitchen, Flower, and Fruit Gardens, Propagation of Bedding Plants, Melons, and Cucumbers. Three years' unexceptionable character.—A. B., Mr. Cripps, Nurseryman, Tunbridge Wells.

PLANT GROWER, PROPAGATOR, OR FOREMAN, &c.—Long experience in the Trade.—G. G., Mr. Tolman's, Alphington Cross, Exeter.

GARDENER (UNDER) or FOREMAN.—Age 26; has a practical knowledge of his profession, Flower and Kitchen Gardens, Plants, &c. Nine years' good character.—A. B., Mr Hannam, Bookseller, High Street, Knaresborough.

GARDENER (UNDER), or GROOM AND GARDENER.—Age 25, single.—G. E. P., Mr. R. Clark, Pocock Place, Tottenham, Middlesex, N.

GARDENER (UNDER).—Age 20; has been accustomed to Gardening in all its branches for severa years.—A. Z., Royal Botanic Gardens, Regent's Park, N.W.

GARDENER (UNDER).—Age 26, single; has had considerable experience in the Culture of Plants; wishes to improve himself in the Forcing Department where it is carried on to a large extent. Can be highly recommended.—T. H. Walker, Stationer, Leyton, Essex.

STEWARD, or FORESTER AND GARDENER, or the three offices combined.—Middle-aged, experienced; held a similar situation for several years; thoroughly conversant with Estate Management, the Erection of Farm Buildings, Draining, Fencing, &c.; has a practical knowledge of Gardening and Foresting. No objection to Ireland. Unexceptionable testimonals and references to present employer.—A. B., 44, St. Ann's Street, Chester.

BAILIFF, or BAILIFF AND GARDENER.—W. P. AYRES having completed his engagement in the formation of the Forcing and Pleasure Gardens to the new mansion at Orchardleigh Park, will shortly be at liberty to enter upon a similar engagement. During his residence (four years) at Orchardleigh W. P. A. has had the general supervision of the Estate Improvements, Draining, Re-modelling of Farms, Receiving Rents, &c. He has also Designed and erected a Farm residence and covered Homestead of the first class; is thoroughly conversant with the principles of Construction and Artificers and Ground work of all kinds. Liberal remuneration expected. *** W. P. A. has been known to Professor Lindley, the learned Editor of the *Gardeners' Chronicle*, for upwards of 20 years, and has the honour to refer to him as to his professional capabilities.—Orchardleigh Park, Frome.

BAILIFF OR GENERAL MANAGER.—Has been extensively engaged on a nobleman's estate, where Agriculture has been carried out most economically; is conversant with all Soils, the Management of Woods, Breeding and Selling Short-horns and other Stock. Satisfactory reasons furnished for leaving present situation, and the highest references given.—W. C., Messrs. Gibbs & Co., corner of Half-Moon Street, Piccadilly, London, W.

WOOD FORESTER, and could undertake the management of a Home Farm.—A Scotchman, who has been six years in England with his present employer. Good reference can be given.—J. W., Westminster Arms, Holywell Street, Westminster, London, S.W.

The Gardeners' Chronicle Newspaper.

SATURDAY, JULY 14, 1860.

CRYSTAL PALACE.—GRAND ARCHERY MEETING.—The SECOND ANNUAL MEETING of the ARCHERS of the UNITED KINGDOM will take place in the Grounds on WEDNESDAY and THURSDAY, July 18 and 19. Ladies and Gentlemen desirous of competing are requested to make immediate application to the Manager of the Meeting, Mr. N. MERRIDEW, Crystal Palace, Sydenham; or to Mr. THOMAS ALDRED, Hon. Local Secretary, Crystal Palace, Sydenham, S.E., who will furnish every information in reference to the Meeting. Shooting will commence each day at 11 o'clock by the Gentlemen, and 2 by the Ladies. Display of the Great Fountains and Entire Series of Waterworks on WEDNESDAY, at 5 o'clock.—Open at 10. Admission each day, 1*s.*

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News of the Week.

IN the House of Lords on Monday, in answer to the Marquis of NORMANBY, Lord WODEHOUSE said that every effort had been made, and severe measures adopted by General GARIBALDI to stop all violence and outrage among the Sicilians. On the motion of the Duke of SOMERSET the Naval Discipline Bill was read a second time. The rep rt upon the amendments of the Criminal Lunatics Bill was brought up and received, and the Law and Equity Bill passed through committee. On Tuesday Lord STRATFORD DE REDCLIFFE called attention to the recent massacre of Christians in Syria, and insisted on the necessity of some decided step being taken by the British Government on the subject. Lord WODEHOUSE said that her Majesty's Government had instructed Admiral MARTIN to take the Mediterranean fleet to the coast of Syria, and to adopt such steps as he might consider necessary for the protection of the Christians. HER MAJESTY'S Government had also been in communication with Turkey, Russia, Prussia, Austria, and France as to the measures which would become necessary, and that it was the wish of both the French Government and our own that Turkey should repress these disorders herself, and take securities against any repetition of them. On Thursday the Jews Act Amendment Bill passed through committee. Lord MAYO moved for a select committee to inquire into the efficiency of the new Harbour of Refuge at Holyhead. The Duke of SOMERSET opposed the motion, and after some discussion it was withdrawn.

In the Commons on Friday the adjourned debate on Lord PALMERSTON'S Privilege resolutions was resumed by Mr. D. SEYMOUR, who contended that the resolutions were insufficient for the occasion. Mr. HORSMAN supported the resolutions; Mr. BRIGHT recommended the House to give the Peers an opportunity of reconsidering their decision, by sending up another Bill. The first resolution was then agreed to without a division. On the second resolution Mr. MELLOR moved a verbal amendment, which was opposed by Lord PALMERSTON, and negatived on a division by a majority of 317, the numbers being 369 to 52. Mr. WHALLEY then moved the adjournment of the debate, which was negatived on a division by a majority of 397, the numbers being 433 to 36. The resolution was then agreed to. On the third resolution being put Lord FERMOY renewed the motion for adjournment. After some discussion the motion was withdrawn, and the resolution was adopted without a division. On Monday on the order of the day for resuming the debate on the Report upon the Bankruptcy and Insolvency Salaries, &c., Bill, the ATTORNEY-GENERAL intimated his assent to the recent vote by which the House had disallowed the proposal to charge the compensations on the Consolidated Fund. He explained the means by which he proposed to provide a fund for these compensations, and which consisted principally in a slight augmentation of the County Court fees, the salaries of the judges of those courts being equalised and placed on the Consolidated Fund. After some discussion the report as amended was agreed to. The House then went into committee on the Bankruptcy and Insolvency Bill, and agreed to about 50 clauses. On arriving at clause 77, the Chairman was ordered to report progress, and the House resumed. Lord PALMERSTON then moved that the committee on the Bill should sit again on Thursday morning. This motion was opposed, but was carried on a division by 135 to 66. On Tuesday the adjourned debate on the consideration of the Nuisances Removal and Diseases Prevention Bill was resumed, and eventually the Bill was recommitted. Some progress was made in committee on the Savings Banks and Friendly Societies' Investments Bill. Mr. COCHRANE moved that the House resolve itself into a committee to consider an address to Her Majesty to place the officers and men of the fleet in China on the same footing as the troops with respect to extra pay and allowances. Lord C. PAGET said that it was his intention in the course of a few days to propose a vote as an extra reward to the officers and men engaged in the last operations in China, and that when the present operations were concluded a further reward in the shape of batta would be distributed among them. Mr. COCHRANE thereupon withdrew his motion. Mr. WYLD obtained leave to bring in a Bill to alter and amend the law and practice relating to the taking of votes at elections for members to serve in Parliament. The House then went into committee on the Gas (Metropolis) Bill, when Mr. STANILAND made a statement in behalf of the gas companies and moved that the Chairman leave the chair After some discussion the Bill, at the suggestion of Mr. S. ESTCOURT, was referred back to the select committee. The Smithfield Market, Streets, and Improvements Bill passed through committee. The House then went into Committee on the Roman Catholic Charities Bill, when the third and fourth clauses, after a protracted discussion, were agreed to, and the Chairman was ordered to report progress. On Wednesday the House went into committee on the Census Bill for England and Wales. On clause 4, which raised the question as to religious profession, Mr. BAINES, in the interests of the Dissenters, moved as an amendment that the words "religious profession" be struck out of the clause. Sir G. LEWIS condemned the opposition made by the Dissenters to the clause, but said that as the returns would probably be incomplete if the words objected to were retained, he would assent to the amendment. After considerable debate the amendment was agreed to, as were also the remaining clauses. The Bill then passed through committee. The House next went into committee on the Census (Ireland) Bill, when Mr. CARDWELL said it was the intention of the Government to take the religious census in Ireland, where the people were unanimously in favour of it. All the clauses were then agreed to, and the Bill passed through committee. On Thursday in answer to Sir R. PEEL, Lord J. RUSSELL said that it had been the policy of HER MAJESTY'S Government during the late events in Sicily and Italy to leave the people of Sicily, Naples, and he would add the Roman States, to decide for themselves the form of government under which they chose to live. On the order for going into committee of supply, Sir J. TRELAWNY moved as an amendment that the House postpone the consideration of further supplies until the Paper Duty Repeal Bill should have become law. On a division the amendment was negatived by 198 to 13. The House then went into a Committee of Supply, when Mr. S. HERBERT moved a vote of 3,800,000*l.* for the expenses of naval and military operations in China beyond the ordinary grants for the year 1860-1, which included, he said, the sum of 443,896*l.* due to the Indian Government for advances on account of former expeditions to China. After considerable discussion the vote was reduced, at the suggestion of Sir H. WILLOUGHBY, by the sum of 443,896*l.*, to be voted separately. The vote of 3,356,104*l.* was then agreed to, and the Chairman was ordered to report progress. On the order for the third reading of the Annuity Tax Abolition (Edinburgh) Bill, Mr. DUNLOP moved as an amendment that the Bill be read a third time that day three months. On a division the amendment was negatived by 204 to 17, and the Bill was read a third time and passed.

Accounts from Beyrout confirm the telegraphic announcement of the massacre of the Christians of Zahleh, Hassebaya, Rachaia and Der-el-Kamar, and state that the Christians of Beyrout, Damascus, Aleppo, Jerusalem, and other places in Syria, were in imminent danger of becoming the victims of similar atrocities at the hands of the Druses, aided it is said by the Turkish soldiery. At Beyrout nearly the whole of the Frank inhabitants had taken refuge on board the English, French, and Russian men-of-war in the roads, and parties of marines had been landed from the ships to assist in maintaining order in the town. The latest news announces that the arrival of ISMAEL PACHA, one of the heroes of Kars, with 2500 men, had tended in some measure to restore confidence. From Constantinople we learn that the Turkish Government has also sent FUAD PACHA to Beyrout with full powers and with reinforcements which will raise the troops at his command to 16,000 men.—A despatch from Cagliari announces that the Neapolitan steam corvette, Veloce, of 6 guns, has gone over to Garibaldi.—Accounts from Canton announce the defeat of the Imperialists by the rebels, and confirm the report that extensive forts had been erected at Taku. The British force had left for the Peiho, and hostilities were considered inevitable.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Osborne. On Thursday the 5th the Prince and Princess of Leiningen and Prince William of Baden visited the Queen, and remained to luncheon. In the afternoon her Majesty and the Prince Consort, accompanied by the Duke of Saxe-Coburg and Princess Alice, drove to Ryde in an open carriage and four. On Friday the Queen and Prince Consort, with the Prince of Wales, Princess Alice, Princess Helena, and the Duke of Saxe-Coburg, drove to Ventnor, and returned to Osborne by the Undercliff and Shanklin. On Saturday the Queen drove in an open carriage to Carisbrook Castle, accompanied by Princess Alice, Princess Louisa, and Prince Arthur. The Prince Consort, with the Prince of Wales and the Duke of Saxe-Coburg, rode on horseback. On Sunday morning the Queen, Prince Consort, the Prince of Wales, Prince Arthur, Princesses, Alice, Helena, and Louisa, and the Duke of Saxe-Coburg attended Divine service at Osborne. The Rev. G. Prothero officiated. In the afternoon the Duke of Saxe-Coburg took leave of her Majesty and the Prince Consort, and left Osborne for Buckingham Palace, on his return to Germany. The Duke of Newcastle arrived on a visit to her Majesty. On Monday morning, at 9 o'clock, the Prince Consort and the Prince of Wales left Osborne for Plymouth, where her Majesty's ship Hero was in waiting to convey the Prince of Wales to Canada. The Queen, accompanied by the Princess Alice and Prince Arthur, embarked at Trinity Wharf with the Princess Consort and Prince of Wales in the Fairy, which conveyed their Royal Highnesses to the Victoria and Albert in Cowes Roads. Her Majesty, with the Princess Alice and Prince Arthur, remained in the Fairy, which followed the Royal yacht for some distance, and then returned to Trinity Wharf, where her Majesty and the Royal party landed, and returned to Osborne. On Tuesday morning the Queen and the Royal family walked in the grounds. In the afternoon the Prince Consort landed at Osborne pier from Plymouth. Her Majesty, with Princess Alice, drove down to the pier to meet his Royal Highness. On Wednesday the Duchess of Kent arrived at Osborne from Frogmore on a visit to her Majesty. The Duchess drove out in the grounds in the afternoon.

DEPARTURE OF THE PRINCE OF WALES FOR CANADA.—The Royal yacht Victoria and Albert arrived at Plymouth on Monday evening at 7 o'clock, with the Prince of Wales and Prince Consort on board. Sir Charles Fremantle's squadron, which had arrived off the port in the morning, formed two lines to receive the Royal yacht, which was saluted by the Impregnable and other ships in Hamoaze. On rounding the west end of the Breakwater the yard-arms of the Hero, 91, St. George, 91, Emerald, 51, and Ariadne, 26, were manned, and the three latter and Plymouth Citadel saluted. Shortly after their arrival the Corporation of Devonport went on board the Royal yacht and presented the Prince of Wales with a congratulatory address, which was graciously received and replied to by his Royal Highness. About 2 P.M. the Prince went on board the Hero,

under a Royal salute from the Emerald and the Citadel. On Tuesday morning at 4 o'clock the Royal yacht, with Prince Albert on board, left the Sound for Osborne, and at 7 o'clock the Hero, with the Prince of Wales, and the screw steam-frigate Ariadne, weighed anchor, and sailed for Quebec. On leaving the port the Prince was saluted by the St. George and Emerald; by the Citadel, and by the Cornish Royal Volunteers from a field battery near the ruins in Mount Edgcumbe Park. About a league and a half south-east of the Eddystone the Hero was joined by the Channel fleet. At half-past 6 in the evening the Hero was passed and saluted by the Hawke, 60, coastguard screw steamship, 25 miles south of the Scilly Islands. She was then proceeding very fast under steam and canvas. Admiral Fremantle's Channel squadron had just parted from her, and was steering under easy sail for the coast of Ireland. The suite which accompanied the Prince consisted of the Duke of Newcastle, Secretary of State for the Colonies; the Earl of St. Germans, Lord Steward of her Majesty's Household; Major-General the Hon. R. Bruce, governor to the Prince; Major Teesdale, R.A., and Captain George Grey, Equerries; and Dr. Acland, physician to his Royal Highness.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

PARLIAMENTARY MOVEMENTS.—Mr. J. A. Wise has announced his intention to retire from the representation of Stafford, and the Right. Hon. J. Wynne is about to retire from the representation of Sligo. Mr. Stewart has retired from the contest for Donegal, and Lord Hamilton will therefore be unopposed. Mr. Moor has announced himself as a candidate for Brighton in opposition to Mr. Goldsmid and Mr. White.

THE BISHOPRIC OF NATAL.—The Right Rev. Dr. Colenso, who was appointed in 1853 the first Bishop of Natal, has intimated his intention of resigning his see for the purpose of proceeding as a missionary to the country of the Zulus, in order to plant the Gospel in that territory.

Foreign.

FRANCE.—It is announced that the Conference for the settlement of the question of Savoy will not take place till October, and that the Powers have agreed to be represented by their ordinary Ambassadors at the Court of the Tuileries. It will meet at Paris under the presidency of M. Thouvenel. By the mail steamer which left Marseilles on Sunday, M. Thouvenel sent instructions to the Marquis de Lavalette, directing him to inform the Porte that France, from feelings of humanity, as well as in consequence of former conventions concluded with Turkey, is bound to put a stop to the horrible massacres of the Christians in Syria. The Turkish authorities not being capable of protecting the Sultan's own subjects, France will concert with the other Powers the most efficacious means for preventing the bloody scenes of which Syria has become the theatre. Orders were also sent to Admiral Jehenne at Naples, directing him to proceed to Beyrout with the Donawerth and Eylau, in order to protect the Christians, and two men-of-war left Toulon on Sunday to replace these ships at Naples. In order however not to obstruct the free action of the Turkish Government, as well as to leave to it a complete responsibility, the French Cabinet has instructed Admiral Jehenne to abstain from all intervention, and confine himself to protecting the French Consuls and to offering refuge to all Christians who may apply for it. It is positively stated that a perfect understanding exists between the Governments of England and France in reference to the affairs of Syria. On Monday afternoon Prince Metternich had a long conference with M. Thouvenel in reference to the initiative which France has taken in favour of the Syrian Christians and in claiming the concurrence of the Great Powers on the same subject. In consequence of this conference, Count Hoyos, Secretary of the Austrian Embassy at Paris, left on Monday evening with despatches from Prince Metternich for the Austrian Cabinet at Vienna. —By an Imperial decree, Vice-Admiral Romain-Desfosses has been promoted to the rank of Admiral; Rear-Admiral Count Bouët-Willaumez to that of Vice-Admiral; and Captains Lugeol, Maussion de Candé, Bouët, Jaurès, Labrousse, and D'Aboville, to that of Rear-Admiral. The Duke de Grammont has completed his cure at the waters of Vichy, and has left Paris to resume his functions as Ambassador at Rome. — The Marquis d'Antonini, the Neapolitan Ambassador, has officially announced to M. Thouvenel and to the members of the Diplomatic Corps that he has sent his resignation to Naples. Signor Ajossa, the ex-director of the Neapolitan police who took refuge at the French embassy during the recent riots, has arrived in Paris.—The manœuvres which will take place this year at the Camp of Châlons are intended to decide upon the expediency of transforming all the heavy cavalry of the French army into light cavalry. Several foreign Courts will send military delegates, and it is expected that several German Sovereigns will also be present to witness the experiments. The Emperor has authorised the formation of a National Rifle Association like that in England, to be under the direction of M. Jules Gerard, the famous lion-killer. It is expected that the National Guards, and such of the public as join the Association, will soon become expert sharpshooters under his training. A circular has been addressed to the Prefects of France by the Minister of the Interior, requiring them to take vigilant measures to suppress the *feuilletons* published in the French journals.

"The *feuilleton* romance," it says, "that outrages proper feeling in the lower columns of a journal is even, perhaps, more hurtful than the dangerous articles in the upper columns that tend to unsettle public opinion. This easy species of literature, which only aspires to success through the cynicism of the scenes it represents, the immorality of its intrigues, and the singular perversity of its heroes, has latterly acquired a sad and dangerous development. Invading, as it does, almost all the periodical publications, profiting even by this method of publicity to keep in suspense and super-excite the morbid curiosity of readers, it unceasingly disseminates its inexhaustible and meretricious conceptions; and must now be put down by the salutary penal laws which are in existence for the protection of public morals."

PORTUGAL.—Accounts from Lisbon of the 10th inst. state that the Portuguese press enthusiastically supports the new Ministry.

SPAIN.—A royal decree prorogues the session of the Cortes. The *Official Gazette* announces that an exhibition of the fine arts will be held at Madrid at the end of October. Senor Zabala has been appointed Minister of Marine, and General Mac Rohon has been appointed Captain-General of the Philippine Islands. General Rios has died at Tetuan; but his body will be transported to Barcelona. Large quantities of provisions have been stored at Tetuan and Ceuta.

SWEDEN.—Immediately after the return of the King from the camp of Schonen, his Majesty dissolved the interim Government. Much sympathy has been shown in Sweden for Garibaldi, and a fund collected for his use at Gottenburg had reached 1046 thalers on June 26, including the gross receipts of a *soirée*, which produced 365 thalers.

BAVARIA.—The Emperor of Austria and the King of Bavaria will be present at the inauguration of the opening of the railway between Salzburg and Munich, which will take place on the 15th August. The sovereigns will meet at Salzburg, whence they will proceed to Munich, where several other German sovereigns are expected.

PRUSSIA.—Accounts from Baden state that notwithstanding the denials of some newspapers, it is certain that the Prince Regent during the recent Conference drew the attention of the other sovereigns to the state of things in Italy. The King of Naples had directed the Marquis d'Antonini, the Neapolitan Ambassador at Paris, who is well known to the Prince, to request his Royal Highness to defend in the Conference the monarchical interest threatened in Sicily. The Prince Regent, in reply, gave the Marquis to understand that he acceded to his request, and not only remarked on the state of affairs in Italy, but also caused an exchange of views on that question to take place between the Powers in the ordinary diplomatic course.

FRANKFORT.—The German Sovereigns have renounced their project of holding special conferences at Baden, considering that a definite understanding would be more easily brought about by confiding the negotiations to their ordinary representatives at the Federal Diet. Frankfort moreover being a more central point, the Plenipotentiaries accredited to the Diet are much better informed than special envoys would be. In the meantime there is a frequent exchange of views between the German Courts, with the object of concerting the instructions to be given to their representatives at Frankfort.

AUSTRIA.—Count Rechberg has instructed Prince Metternich to declare to M. Thouvenel, in the name of the Austrian Government, that Austria intends to maintain that Piedmont can show no title to be admitted to the Conference. The rumour that the Austrian Government intends to contract a new loan is without foundation. The official *Gazette* publishes the report of the National Debt Committee, stating that the entire national debt amounted at the beginning of 1860 to 2,268,000,000fl., Austrian currency. The annual interest required amounts to 99,500,000fl. The Committee propose the gradual conversion into 5 per cent. securities, Austrian currency, of all bonds of Konventionsmünze not belonging to the category of lottery shares, and that the further redemption of the bonds be suspended until the surplus of the public revenue offers sufficient means for their partial redemption. The opinion of the Minister of Finance on this report, which is also published, is adverse to a forced conversion of the national debt. The budget of the Austrian War Department, which has just appeared at Vienna, contains an item of 1,000,000 florins for the troops of the Duke of Modena, whom he took with him from Italy. It is believed that this item will be energetically protested against in the Council of the Empire.

RUSSIA.—An Imperial ukase has appeared, ordering that for the future in all the 41 governments of the empire magisterial investigations in criminal cases shall be no longer carried on by the police, but shall be confided to certain officers belonging to the Ministry of Justice. These investigating magistrates will receive a yearly stipend of 1000 silver rubles. A code of laws for their guidance and for the police has also appeared. Several addresses have been presented to the Emperor from the nobles expressing approval of this reform.

GREECE.—The Greek Government has commanded General Kalergis, Minister Plenipotentiary at Paris, to announce officially to M. Thouvenel that Greece will pay 900,000f. yearly to France, England, and Russia, until the debt of the protecting Powers is liquidated.

ITALY.—Accounts from Naples state that the Ministry has obtained the Royal assent to the removal of General Nunziante and the Court Camarilla of the former reign. The commissary of police, Campagna, has been arrested, in order to give explanations relative to the attack on the French Ambassador, Baron Brenier; and the two Manettas, father and son, have also been arrested on suspicion of having been concerned in the attack. They were taken on the 5th inst. in the Island of Ischia, and sent to Naples the next day. A grand *fête* is to take place at the San Carlo in honour of the Constitution at which the King, Queen, the King's brothers, and other members of the Royal family will be present. —A despatch from Rome says that General Lamoricière having withdrawn his troops into the interior, insurrectionary movements have broken out at Sant' Agata, Montefeltro, and near Cattolica. The Papal troops stationed at Pesaro were ready for departure, but their destination was not known. Fifteen hundred Austrians had been sent to Urbino. Five hundred and fifty-seven Irish volunteers had disembarked at Ancona, and committed disorders at Sinigaglia, which were repressed by the Papal Carabiniers. The Irish Volunteers who had arrived at Rome had been ordered to march to Spoleto, where a corps of 10,000 men is to be concentrated before the fortress. The total number of Irish who had arrived, or were expected, amounted to 400. The Papal army was paid at the same rate as when on service in the field.—Accounts from Trieste state that the Austrian Government is undertaking gigantic works, in order to render the famous quadrilateral perfectly impregnable. At Verona the works are directed by 14 engineer officers, who have under their orders an entire regiment of engineers. The fortress of Mantua has recently received a large supply of heavy guns, and heavy artillery has also been sent to Verona and Venice. There are now four *corps d'armée* in Venetia, but it is said that only one of them is on a full war footing. New gunboats have been placed on the Po as well as on the Lake of Garda. One thousand five hundred volunteers embarked on the 9th inst. at Genoa for Sicily. Another embarcation was to take place on the following evening, and volunteers continued to arrive. The municipality of Pavia has forwarded 14,000f. to Garibaldi, with an announcement that they will soon send more.

SICILY.—A despatch from Cagliari states that the Neapolitan steam corvette Veloce, 6 guns, had gone over to Garibaldi. Advices from Messina to the 8th inst. state that Colonel Medici was at the village of Barcellona, awaiting volunteers. He had reconnoitred the heights of Messina and Melazzo. The attack on Melazzo was fixed for the 10th inst. Assassinations took place at Messina on the night of the 7th. The Neapolitan army was demoralised and the soldiers were deserting. Signor Cosenz arrived at Palermo on the 6th inst., and was received with joy by General Garibaldi.

MALTA.—The English fleet, which left Malta in June last, is cruising in the Levant. A division is at Navarino.

SYRIA.—Accounts from Beyrout confirm the telegraphic despatch announcing the massacre of the Christians of Zahleh, Hassebaya, Rachaïa, and Der-el-Kamar, and there is reason to believe that these atrocities have been committed with the connivance of the Turkish authorities, and the co-operation of Moslems, Metwalis, and the Druses. The village of Dheis-el-Kamar was sacked, burnt, and every Christian male, to the number of 2000 put to the sword by the Druses, who a fortnight before had disarmed them, in cold blood. The women and children escaped and reached the mouth of the Damoor river, whence they were rescued to the number of 1100, by H.M. ships Gannet and Mohawk. Of the men of Dheis-el-Kamar, not more than 30 escaped. The refugees say that the Turkish soldiers assisted the Druses, and were the only people who insulted the women. The Christians of Damascus, Aleppo, Naupulas, Jerusalem, and all other places throughout Syria are in imminent danger of losing their women, children, property, and lives, while about 16,000 families are already homeless, many of whom will doubtless die of hunger. The agitation at Damascus was so great that cannon had been placed in position, and Abd-el-Kader had come forward to use his influence for the protection of the Christians. There was such a general panic at Beyrout, that nearly the whole Christian population had taken refuge on board the English, French, and Russian men-of-war, which had landed marines to assist in maintaining order. Her Majesty's steamer Exmouth had embarked the cash, books, and *personnel* of the Ottoman Bank, and as many of the other English residents as possible. It was reported that the French consul at Beyrout had received a blow on the head from a yataghan, but there is at present no confirmation of the rumour, though it is certain that the Christian inhabitants were taking to flight. The French Government have since received the important intelligence that Ismail Pacha had arrived from Constantinople, with 2500 men, to put a stop to the massacres. Ismail Pacha is the general who during the Crimean war, made himself illustrious by the defence of Kars. His arrival in a great measure restored confidence. The following

letter from that town of the 21st ult. gives a detailed account of the outbreak :—

"I have already informed you that Jahir Pasha had gone to Der-el-Kamar in order to compel the Druses to abandon the attack on that place. Since then we have learnt that he could not obtain that result, except by giving the latter the assurance that the Christians would not leave it on any pretence. Being tranquillised on that score they turned their attention towards the two towns of Hassebaya and Rachaïa, and made a vigorous attack on them, and the former fell into their hands. The inhabitants took refuge in the barracks, but they were not admitted without depositing their arms. Rachaïa having resisted, the Druses were compelled to conclude a treaty of peace, but which, notwithstanding all formalities had been gone through with the idea of making it lasting, did not continue in force for more than 24 hours, the town being again attacked at the expiration of that time. The Christians being taken unawares were massacred, and their houses pillaged and burnt. After completing their work at Rachaïa the Druses returned to the barracks of Hassebaya. The unfortunate people in it experienced the same fate as their neighbours: they were all slaughtered, and with them the Mussulman Governor and 32 members of his family, because they were descendants of the Chehab family, and protected the Christians against those horrible attacks. After the destruction of these two towns the Druses, accompanied by a great number of the Bedouins of the plain, Metualis, Mussulmans, and other non-Christian sects, went to the town of Zahlé, which could not offer any effectual resistence. After the massacre of all the inhabitants, a French Jesuit convent at the gates of the town was set fire to. Having accomplished this work, there only remained for them Der-el-Kamar to put the finishing stroke to their atrocities. They attacked it with the greatest fury, and there now remains of it neither houses nor inhabitants. At the present time the country which formed the Druse Kaimakanate does not contain a Christian, and the general expectation is that the Druses, reinforced by Mussulmans of all sects, will soon attack the other Christian countries—Maten, Beckfeya, Castrawan, &c. Unless assistance be sent from abroad, the Christians of this country will soon be completely annihilated."

Coast of Africa.—Accounts from Sierra Leone to the 21st ult. state that on the 14th the town of Maybeli was attacked and plundered by a party of Kossohs. The mission premises were sacked, and Mr. and Mrs. Wiltshire, the missionaries, narrowly escaped with their lives. The war between the two kings of Akim had been put an end to by mutual consent.

India.—The Bombay mail has arrived with news from that presidency to the 7th June :—

Bombay.—Lieut.-General Sir James Outram, President of the Council of India, has issued a very lengthened minute, protesting against the proposed amalgamation of her Majesty's Indian forces with the British army. He bases his protest in 75 different articles, and expresses his belief that if the measure is carried out it will prove most injurious to India, and inflict a great grievance on the servants of the late East India Company.

Calcutta.—Lord Canning returned to Calcutta on the 21st May, and Lord Clyde returned on the following day. On the 26th Mr. Wilson presented to the Legislative Council the report of the select committee on the Income-tax Bill, approving of its main principles, but introducing changes and improvements in the details with the view of simplifying its machinery and bringing it into harmony with the theory and practice of the existing revenue system. The License Bill had been postponed.

Banswarra.—Disturbances have taken place at Banswarra, and troops have been ordered out from Mhow, Neemuch, Ahmedabad, and Baroda to assist in their suppression. Banswarra is a Rajpoot State 45 miles long by 33 wide, on the route from Mhow to Deesa. The State pays a small tribute to the Supreme Government, and maintains a force of 500 or 600 soldiers, exclusive of its military police. The cause of the disturbances has not transpired.

Persia.—The aspect of affairs is hostile. In the Persian Gulf the Governor of Bahrein has hoisted the Persian flag, and ordered us off the island. Captain Jones went over in the Semiramis to remonstrate; but the Governer refused to listen to him. Captain Jones, therefore, returned to Muscat. Bahrein originally belonged to independent chiefs, and it is just possible, if they are supported by the Shah, that if we aid the cause of the Muscat Prince, to whom the island now belongs by right of conquest, the result may be another Persian war.

Ceylon.—Lord Elgin and Baron Gros have left Galle for China. About 100 boxes of specie have been recovered from the wreck of the Malabar, with a small quantity of luggage, including among the latter Her Majesty's autograph letter to the Emperor of China, Lord Elgin's credentials and instructions, and his orders of the Thistle and the Bath. The letter is legible, though much discoloured, while the credentials are in very fair preservation. Baron Gros has also recovered his papers, but the ink is all but obliterated, and the autograph letter of the Emperor is a blank sheet. The luggage is utterly ruined by the salt water and bilge.

China.—Accounts from Canton of May 22 state that trade was almost at a standstill, the insurgents having defeated the Imperial troops. The British force had left for the Peiho, and a collision was considered inevitable. Sir Hope Grant was to sail north on May 27. At Shanghai great excitement prevailed among the Chinese owing to the progress of the rebels. At Nankin the Imperialists had been forced to raise the the siege, with the loss of their guns. Chusan had been placed in charge of the allied Commission. The French were settling at Cheefoo, in the Gulf of Pecheli. The reported erection of extensive forts at Taku was confirmed.

United States.—The Great Eastern arrived at New York on the 28th June after a passage of 11½ days. She reached the dock without the least trouble. An immense crowd assembled, and much enthusiasm was manifested. The greatest distance which the ship ran in one day was 333 miles. The shortest was 254 miles. The greatest speed attained during the voyage was 14½ knots per hour. The New York journals are almost entirely filled with descriptions and incidents of the voyage, and the *New York Herald* publishes nearly 20 columns of particulars. On the 25th of June, the Thirty-sixth Congress of the United States was brought to a close, with the usual ceremonies. On the 26th the Senate met again for a Special Executive Session, when the extradition treaties with Switzerland and Sweden were ratified; and Treaties of Commerce were ratified with Bolivia, Venezuela, Honduras, and Nicaragua. The Treaty with Nicaragua was amended, so that an American force cannot be used without the previous consent of the United States Congress. The Mexican Treaty and the Treaty with Spain, for the settlement of the claims of the two countries on Mexico, were rejected. The special session was brought to a conclusion on the 28th ult., and the Senate adjourned *sine die*. The San Juan question is said to be no nearer a solution than when the negotiations first commenced. Commodore Vanderbilt had refused to carry any more mails for the United States, Congress having adjourned without making any appropriation for that purpose. Mr. Douglas, in formally accepting his nomination to the Presidency, has strongly reiterated non-intervention doctrines. The Japanese Ambassadors took their departure on the 30th ult. in the United States' frigate Niagara.

Mexico.—The English had blockaded the port of San Blas, and had landed troops, who kept possession of the mouth of the river. They evacuated the town on the 28th. The cause of these proceedings was belived to be the imprisonment of the British Consul on a charge of smuggling.

Australia.—Accounts from Sydney of May 18 state that the export duties on gold will be abolished at the end of the year. Accounts from Melbourne state that the Appropriation Bill and the Land Bill had been read a second time in Council. The committal of the Land Bill was opposed and the debate adjourned. The general feeling was adverse to deferred payments and commonage.

New Zealand.—A letter from the Governor of New Zealand, dated Auckland, April 6, says that there is reason to believe that the chiefs will be brought to reason, and that the town and district of Auckland is perfectly secure against any attack which could be made by the largest force the Maoris could bring into the field. The following, received by way of Melbourne, is the latest intelligence of the war :—

"We have news from Taranaki to the 3d May, nearly a month later than was contained in our last summary. There had been no more bloodshed, but the aspect of affairs was still extremely unsatisfactory. Large reinforcements had arrived, and there were at Taranaki above 800 troops of the line, composed of detachments of the 12th Regiment from Sydney, the 40th from Melbourne and Hobart Town, and the 65th stationed in New Zealand, in addition to 45 artillerymen, together with the local militia and volunteers, some engineers, the marines and blue jackets of the Pelorus, Iris, Elk, Cordelia, and the crew of the Victorian sloop of war Victoria. There was some reason to apprehend that the Waikatos near Auckland would take part in the war, and a portion of the 65th Regiment and her Majesty's ship Niger were retained at the capital. The powerful tribes at Wanganui and Wellington had promised to preserve their neutrality; but a very uneasy feeling prevailed. Meanwhile the natives had possession of the interior, and all the women and children had been sent away from Taranaki. Rumours had prevailed that, at the suggestion of Bishop Selwyn, the Government would make great concessions to Wiremu Kingi; but this policy was violently opposed by the settlers. Great complaints were made of the incompetency of Colonel Gold, who was in command of the troops; and there was great reason to apprehend a general rising of the natives on the northern island. The amount of injury to the property of the settlers must be enormous. Meanwhile, Wiremu Kingi remains in his pah; professes himself ready for the soldiers whenever they choose to attack them; and has formally given the land in dispute to the Maori king."

Parliament.

HOUSE OF LORDS.

Friday.—*St. George's-in-the-East.*—In answer to Lord Dungannon, the Bishop of London said that there had been great difficulty in dealing with the riots in this church, but an Act had been passed during the present session enabling the churchwardens to take any brawler in a church before a justice of the peace, who could fine him 5*l*., or award, in default of payment, two months' imprisonment, which would perhaps remedy the evil. Further legislation however, in his opinion, was also required in order that those who were the cause of the riots should be punished. Earl Granville said that the Government keenly deplored the continuance of these riots, but could not do more than it was doing. The Earl of Ellenborough suggested that the church should be closed.—The Lord Chancellor said that neither the Queen in Council nor the Government had power to pass an order to close a church. *Christianity in India.*—The Bishop of Oxford presented a petition on the introduction of the Bible into the Government schools in India, and urged the Government to repeal the measure which excluded the Bible from those schools.—A short discussion ensued on the subject between Lord Galloway, the Duke of Marlborough, Lord Granville, and Lord Brougham. The *New Zealand Bill* and the *Criminal and Crown Rates Bill* passed through committee.

Monday.—*Peel and Sicily.*—The Marquis of Normanby corrected a misapprehension of some remarks made by him a few nights since regarding Sir Henry Elliot's correspondence and the excesses committed by those acting under the command of Garibaldi. He reiterated his assertion that atrocities had been committed by the revolutionary party, but exonerated General Garibaldi from complicity in them.—Lord Brougham defended Garibaldi from the charges brought against him, and expressed the conduct of the revolutionists and of General Garibaldi, and hoped that the promise of a constitution would be given to Sicily "the detestable tyrant of Naples."—Lord Wodehouse said that, from the latest intelligence which had been received by the Government, it was manifest that General Garibaldi had adopted the severest means to check excesses. If the people had committed atrocities, were the Royal troops blameless?—The Duke of Somerset moved the second reading of the *Naval Discipline Bill*, the object of which he explained was not to make any extensive changes, but to regulate a number of minor offences and to consolidate the existing law, in which there had been no alteration for the last century.—After a short discussion, in which the Earl of Hardwicke and other noble lords took part, the Bill was read a second time. The *Law and Equity Bill* passed through committee. Several other Bills were advanced a stage.

Tuesday.—*The Massacres in Syria.*—Lord Stratford de Redcliffe asked what steps had been taken by the Government in reference to the massacre of the Christians in the Libanus, either singly or in concert with other Powers; and whether the Government had received information that France had determined to put a stop to the atrocities.—Lord Wodehouse was sorry to confirm the accounts which had been received from Syria, than which nothing could be more distressing. The principal places in which these massacres had been perpetrated were Hasbeeyeh and Zahleh. At the former place the Christians, under fair promises, were persuaded to lay down their arms, and were massacred the next day by the Druses, before the Turkish troops, who had not, it seemed, interfered to prevent such an atrocious crime. At Zahleh the people, after defending themselves, were overpowered. In both places however great numbers of Christians, he was glad to say, had escaped. The whole country was in a state of the direst confusion, the Turkish authorities being much to blame for their insolence in suppressing the outbreaks. Her Majesty's Government had despatched Admiral Martin with a squadron to the coast of Syria for the protection of British subjects. France and Russia had also sent vessels of war for the same purpose. Her Majesty's Government had been in communication with those two Powers, as well as with the Governments of Turkey, Prussia, and Austria on the subject. No intelligence had been received from Paris that France meditated taking strong measures if the Porte was unable to suppress these disasters. The attention of all the great Powers had been directed to this point, as it was considered absolutely necessary that some decided step should be taken, one of the Consuls having reported that there were 20,000 women and children wandering in the mountains without shelter, liable at any moment to be murdered by the infuriated Druses. The *Railway Cheap Trains Bill* was read a second time. The *Local Boards of Health Bill* was read a third time and passed. The *Amalgamation of Small Benefices in Ireland Bill*, the *Universities and Colleges Estates Bill*, and the *Phœnix Park Bill* were read a second time.

Thursday.—Lord Lyndhurst moved that the House resolve itself into Committee on the *Jews' Act Amendment Bill*, the object of which was to prevent the necessity of a separate resolution when a Jew took his seat in the House of Commons, by making that resolution a standing order.—Lord Chelmsford opposed the Bill, urging that the Act as it stood precisely fulfilled the intentions of the Legislature.—Lord Brougham urged the House not to reject this measure, which seemed a fair and reasonable mode of carrying out the wishes of the House of Commons. He took the opportunity of asserting the right of their lordships to reject any Bill whatever whenever they thought fit. The motion was agreed to, and the Bill passed through committee. The *Indemnity* and the *Local Taxation Bill* were read a second time. The *Railway Cheap Trains Bill*, the *Augmentation of Small Benefices (Ireland) Bill*, the *Universities and Colleges Estates Bill*, passed through committee. The *Law and Equity Bill* was read a third time and passed.—The Earl of Mayo moved for a select committee to inquire into the state of the *Harbour at Holyhead* and the cause of the numerous wrecks which have occurred there.—The Duke of Somerset said that the present harbour had been erected under the advice of a commission, and he could not take on himself the responsibility of constructing a new one. The present works ought to be completed before any further steps were taken. As to the committee, he saw no practical use in its appointment. After a short discussion, the motion was withdrawn.

Friday.—*Scottish Drainage and Improvement Company's Bill.*—On the motion for the third reading of this Bill, Lord St. Leonards moved that the further consideration of the Bill be postponed for a fortnight. He opposed the Bill on the ground that it enabled the company to lend money on mortgage for improvements on lands already mortgaged, without regard to the extent of its previous encumbrance or its rental, and further because it gave the company priority over the mortgagees who had preceded it in advancing money on the land.

[Left sitting.]

HOUSE OF COMMONS.

Friday.—*Collection of Taxes.*—In reply to Mr. Norris, the Chancellor of the Exchequer said that the boards of land tax commissioners had reported, in answer to a circular which had been sent to them, in favour of a transfer of the duties of the collection of the income and assessed taxes to the officers of Inland Revenue, especially in country districts. *Gale and Tenement.*—Mr. Baillie asked if it was the intention of Government to continue to compel the Indian and Australian packets to use the harbour of Galle, or would allow them to use for the future the harbour of Trincomalee?—Lord C. Paget said that no alteration would be made in the present arrangements.—In reply to Mr. Crawford, Lord Palmerston said that he intended to persevere with the *Bankruptcy Bill*, however late it might prolong the session. *Poor Law in St. Pancras.*—In answer to Mr. Langan, Sir G. Lewis said that the proceeding of the magistrates in setting the order of removal of a poor Irishwoman called Mary Carter was unquestionably irregular, and that the magistrates would be instructed to be more careful in future. *The Privilege Resolutions.*—Lord Fermoy asked if, in the event of the resolutions on Tax Bills being carried, the Government were prepared to collect taxes up to the 5th, in accordance with the declaration of the Chancellor of the Exchequer.—Lord Palmerston said he was perfectly satisfied with the resolutions, and that they were carried he did not intend to go further.—The adjourned debate upon the resolutions was then resumed by Mr. Digby Seymour, who moved an additional clause, setting forth "that the rejection by the Lords of the bill for repealing the Paper Duty is a violation of the constitutional rights of the Commons."—Mr. Horsman reminded the House that he and others had opposed the repeal of the paper duty at a period when there was a deficiency in the exchequer. The act of the House of Lords was not, in his opinion, the exercise of a money Bill but the repeal of a taxation which appertained to the regulation of trade, commerce, and manufactures. It was the duty of the Commons to [illegible] every encroachment on their privileges. It was [illegible] the House of Lords was not a [illegible] representative body. It was said as the House of Commons was an integral portion of the legislature, and a trustee for the national interest; it represented a large majority of the people of the country; it was responsible to the same council of public opinion, and it was especially appointed to exercise those constitutional functions peculiarly necessary for Parliamentary government. In matters of taxation the consent of a second chamber was [illegible] necessary. So far the money Bill stood [illegible] Commons. So far from seeking to limit the authority of the House of Lords, he was rather in favour of extending [illegible] a large share of authority in the general legislation of the country. In his opinion the rejection of the Paper Duty Bill was but the exercise of an undoubted legal and constitutional right, and he would therefore give the resolutions a sincere and cordial

support.—Mr. BRIGHT did not feel himself called upon to attack or defend the resolutions, but in his view they were not worthy of the occasion. They bore the marks of being prepared by more than one hand, and, if they expressed all the House was to express under the circumstances of the moment, he thought that posterity would say that they were the resolutions of a somewhat degenerate House of Commons. He did not think that they were taking a sufficiently bold and decided course by agreeing to the resolutions, because the House of Lords had reversed in a moment the fundamental principle, so long asserted by the Commons, that taxation and representation should be inseparable in this kingdom. The House of Commons was the best judge of what was necessary for the trade of the country, and of what financial measures should be passed for its maintenance, yet it was now asked, in the most unblushing and audacious manner, to abdicate its functions, and leave the control in the hands of 400 inexperienced and irresponsible gentlemen. The House of Lords had committed two offences which would not raise its character in the eyes of the people. In rejecting the Bill for the repeal of the paper duty it had strangled a great branch of industry, while, by increasing the income-tax by a million, it had trampled upon the confidence and abused the faith of the House of Commons. The course he would recommend, and which he believed would be consonant with the dignity of the House, would be to pass another Bill for the repeal of the paper duty, and he believed the Lords would accept it. He reminded the House of the great obligations which it owed to the wise and beneficent policy of the Chancellor of the Exchequer, and he warned the Administration of the consequence which would result from the loss of so sagacious and far-seeing a statesman. The position in which the House was placed was humiliating, for it had abased itself before an irresponsible and hereditary chamber. He at least would be free from the shame which he feared would attach to the chief actors in these proceedings, for he would do all in his power to maintain the honour of the House, and to preserve inviolate the sacred trust confided to him by his constituents. The first resolution was then agreed to.—On the second resolution being put, Mr. MELLOR said that it expressed more than the precedents proved, and moved to amend it by inserting, after "relating," the words "among other matters."—Lord PALMERSTON objected to the insertion of the words. The wording of the resolution, he observed, had been the subject of a good deal of consideration. — Mr. WHALLEY moved the adjournment of the debate, but the motion was negatived on a division by 433 to 36. The House next divided upon Mr. Mellor's amendment, which was negatived by 369 to 52. The resolution was then agreed to.—The third resolution having been put, Lord FERMOY moved that the debate be adjourned; but the motion was negatived, after some discussion. The resolution was then agreed to. The other orders of the day having been gone through, and certain Bills forwarded, the House adjourned at 3 o'clock to Monday.

MONDAY.—*The Paper Duties.*—In reply to a question from Mr. DISRAELI, the CHANCELLOR of the EXCHEQUER stated that it was his intention to move a resolution for equalising the customs and excise duties on paper; and would give full notice of the form in which he would make the proposal.—Sir J. TRELAWNY expressed his determination to oppose all motions for going into committee of supply until the question of the paper duty was finally settled. *The Census Bill.*—In answer to Sir C. DOUGLAS, Sir G. LEWIS said that he would state the intentions of the Government with reference to this measure on Wednesday.—On the order of the day for resuming the debate on the report upon *Bankruptcy and Insolvency Salaries*, the ATTORNEY-GENERAL explained the means by which he intended to repair the "mischief" done by the vote of the House for omitting the word "compensation" from the Bill. He proposed to leave the additional salaries of the county court judges on the Consolidated Fund, but to give the Consolidated Fund a large compensation in lieu thereof. He would fix the salaries of the county court judges at the uniform rate of 1500*l.* a year. The fund from which he proposed to pay the other salaries and compensations would be raised from an augmentation of fees in the county courts. He frankly admitted that unless there was a general disposition to put confidence in the Government, in the attention and care of those who had framed the Bill, and in the approbation expressed of the measure by the mercantile classes throughout the country, he must give up the attempt to legislate on the subject as a hopeless task. In conclusion he moved that the report as amended be agreed to.—Sir H. WILLOUGHBY denied that the vote of the House refusing to transfer the salaries and compensations of the new Court of Bankruptcy to the Consolidated Fund had been attended with any mischief. All the House had done by that vote was to leave them chargeable upon the Suitors' Fee Fund, as before.—Mr. BARROW doubted the justice of raising a fund to pay the officers of one court by increasing the fees payable by suitors in another, and that other the poorest court in the kingdom.—Mr. BOUVERIE defended the vote which he had given with the majority on a previous evening, and said that the Attorney-General could scarcely expect the House to pass a Bill of 550 clauses on his simple *ipse dixit*.—After some observations from Mr. HENLEY and Mr. MALINS, the report was agreed to.—The House then went into committee on the *Bankruptcy and Insolvency Bill*, the clauses of which up to the 77th underwent a very full discussion, more than one amendment adverse to the views of the Attorney-General having been carried upon a division, much to his apparent dissatisfaction.—On the question that the Chairman report progress, Mr. MALINS, adverting to the number of clauses remaining for consideration, and to the rate of progress made, recommended the withdrawal of the Bill, a suggestion however which was not favourably received by the House.—Lord PALMERSTON moved that the committee sit again on Thursday at 12 o'clock. This motion was opposed, but was carried upon a division by 135 to 66. On the report upon the *Registration of Births, &c. (Scotland) Bill* several new clauses were added and other alterations made in the Bill. Amendments were likewise made in the *Local Government Act* (1858) *Amendment Bill* on the report. The *Common Law Procedure (Ireland) Act* (1853) *Amendment Bill* and the *Queen's Prison Bill* were read a second time. The *Parochial Assessments Bill* was withdrawn. The *Postage (Army and Navy) Bill* passed through committee. The *Husband and Wife Relation Law Amendment (Scotland) Bill* was withdrawn. Other Bills were advanced a stage.

TUESDAY.—At the morning sitting the adjourned debate on the *Nuisances Removal Bill* was resumed, and the Bill was recommitted. The House then went into committee on the *Savings Bank and Friendly Societies Bill*, when some progress was made with the clauses. *The Massacres in Syria.*—In answer to Lord C. HAMILTON, Lord J. RUSSELL said that unfortunately the Government was in possession of information confirming the reported disturbances in the Lebanon. The ambassadors of the foreign Powers had urged the Sultan to take immediate steps to arrest these crimes, and Fuad Pasha had been despatched as the commissioner for that purpose. Part of our Mediterranean squadron had been ordered to the spot. *National Defences.*—In answer to Sir J. SHELLEY, Lord PALMERSTON said that on Friday, when the China vote was demanded, he should state to the House the amount of money the Government proposed to raise for the national defences, and in what manner it was proposed to raise it.—In reply to Mr. A. MILLS, Lord J. RUSSELL said that arrangements were in progress between France and England for the regulation of the *Newfoundland Fisheries*. The details would not be given till the report of the commission was produced. *France and Sardinia.*—In answer to Mr. GRIFFITH, Lord J. RUSSELL said he had no reason to believe that any pressure had been put upon the Government of Sardinia by that of France, to induce the former to enter into alliance with the Government of Naples, on the strength of the promise of a constitution. *The Conference.*—In answer to a further question Lord J. RUSSELL said that the object of the Conference on the annexation of Savoy would be to reconcile the articles of the Treaty of Vienna referring to this matter with that of the Treaty of Turin. Her Majesty's Government would submit a proposal for that purpose, to which, of course, it would be open for France to object. *The Fleet in China.*—Mr. COCHRANE moved that the House resolve itself into a committee to consider an address to her Majesty, praying that the officers, marines, and seamen of the fleet serving in China may be placed on the same footing as her Majesty's troops with respect to extra pay and allowances. — Sir M. SEYMOUR seconded the motion, which was supported by Admiral WALCOTT, Colonel NORTH, Sir C. NAPIER, Sir J. ELPHINSTONE, and opposed by Mr. S. HERBERT and Lord C. PAGET, who said that, by the regulations, our naval forces could not be paid their extra allowance as events went on, like the land troops. They were paid by a specified vote when the operations were closed. A vote would be proposed for the seamen under the command of Sir M. Seymour in China, and votes would hereafter be proposed for future operations.—Mr. COCHRANE hoped the Government would not delay the promised batta, and withdrew the motion.—Mr. MACAULAY withdrew his motion for a select committee on Danish claims.—Mr. WYLD moved for leave to bring in a Bill to alter and amend the law and practice relating to the taking of *Votes at Elections* for members to serve in Parliament, briefly explaining its object.—After a few words from Sir C. LEWIS and Lord PALMERSTON, repudiating all responsibility for the Bill on the part of the Government, the motion was agreed to, and leave given to bring in the Bill.—Mr. BRADY moved for a select committee to inquire into the *Dismissal of Dr. Macloughlin* from the Government medical service.—Mr. S. HERBERT said that the question was a very simple one. When Dr. Macloughlin, being on half-pay, was called upon to serve, he refused to serve. He therefore declined to accede to the motion, which was negatived without a division.—Sir C. WOOD obtained leave to bring in a Bill to provide for the transfer and management of *East India Stock* at and by the Bank of England.—Mr. CLIVE obtained leave to bring in three Bills relating to *Turnpike Roads and Trusts*. The *Union of Benefices Bill* was committed *pro formâ* and in order to being reprinted with amendments. The House then went into committee on the *Gas (Metropolis) Bill*.—Mr. STANILAND moved that the Chairman leave the chair, and entered into a long explanation of the position of the Gas Companies of the metropolis, the contracts which he considered the Legislature had made with them, and the manner in which the Bill, by cutting down dividends, would invade the rights of a very large property embarked in gas works.—Mr. S. ESTCOURT, Chairman of the Select Committee to which the Bill had been referred, suggested, after the statement of Mr. Staniland, that the Bill should be referred back to the same select committee. — Sir G. LEWIS approved of this suggestion, and the Bill was referred back to the select committee. The *Smithfield Markets and Streets Improvements Bill* passed through committee. The House then went into committee on the *Roman Catholic Charities Bill*, and some further progress was made with the clauses after a protracted discussion. The third and fourth clauses having been agreed to, the Chairman was ordered to report progress, and the House resumed. The remaining business was then disposed of.

WEDNESDAY.—*Census (England) Bill.*—The House having resolved itself into a committee upon this Bill, Mr. BAINES moved to amend the fourth clause by leaving out the words "religious profession." He objected to an inquiry into religious opinions or professions, not as a Dissenter, but upon general grounds, in which many Churchmen concurred, believing that the civil Government went beyond its legitimate province, and infringed upon religious liberty, in instituting such an inquisition.—Sir G. LEWIS said that almost every civilised country required from its citizens a statement of their religious belief. Even in Ireland no objection was raised by the many denominations there existing. Of all nations and people the Mussulmen alone opposed it, and even their opposition had been overcome in India. The objection of the Dissenters rested rather on an unreasoning instinct than on any real ground of complaint. At the same time, as the discontent of any portion of the people would affect the accuracy of the returns, he was willing to acquiesce in the amendment.—Mr. B. OSBORNE said that this declaration would only offend those whom it was intended to conciliate.—Lord R. CECIL attributed the opposition of the Dissenters to their dread of the result, which would be less favourable to them than former returns.—Mr. NEWDEGATE said that the Church of England would be perfectly satisfied with a complete system.—Sir J. PAKINGTON, on behalf of the Church, and Mr. MONSELL, on behalf of the Roman Catholics, declared their readiness to abide by the result of the census, and taunted the Nonconformists with being afraid of it.—Lord PALMERSTON could not understand on what tangible grounds the Dissenters opposed the clause, now that the penalty was withdrawn, and the fulfilment of the clause rested solely on that voluntary principle on which they so much prided themselves.—Mr. WHITESIDE regretted that the Government had been frightened by the Dissenters out of their original intention. The position of the Church of England was clearly shown by the fact that 80 per cent. of the marriage were solemnised in church.—Mr. CARDWELL said that the Government would persevere in requiring the religious census in Ireland, where the people were in its favour.—Mr. PEEL DAWSON heard this declaration with great satisfaction.—Mr. BAINES complained of the contemptuous and discourteous insinuations of Sir G. LEWIS, who treated the Dissenters as an unreasoning class. Such conduct came badly from a Minister in reference to five millions of men who formed the back-bone of his own party. The Dissenters were not afraid to avow their opinions, but they objected to compulsion. After some further debate, the clause, as amended, was agreed to.—An amendment moved by Mr. CHILDERS, to insert in the same clause the word "education," was negatived.—In reply to a question by Mr. HENLEY, Sir G. LEWIS said it was not the intention of the Government to make any inquiry not expressed in the Bill. The other clauses were agreed to without amendment, and the Bill passed through committee. The House then went into committee on the *Census (Ireland) Bill*.—On clause 3 Mr. CARDWELL declared that he should not give up the census column requiring a statement whether persons could read and write. Clauses 4 to 6 were agreed to, as was clause 7, imposing a penalty for refusal to make the return. The Bill then passed through committee. The *Corrupt Practices Prevention Act* (1854) *Amendment Bill* was withdrawn. On the order for going into committee upon the *Metropolis Local Management Act Amendment (No. 2) Bill*, moved by Sir J. SHELLEY, Mr. T. MILLER moved to defer the committee for three months, urging objections to the Bill.—Sir J. SHELLEY shortly replied to the objections. The discussion was not concluded when the hour for adjournment arrived. The remaining orders were then gone through without debate.

THURSDAY.—*Bankruptcy and Insolvency Bill.*—The morning sitting was occupied with the consideration in committee of this Bill. Some progress was made with the clauses up to clause 128, clause 102 being struck out, and others postponed. In the evening in reply to Mr. CORRY, the CHANCELLOR of the EXCHEQUER said that the Government had refused to sanction the arrangement by which the Galway steam-packet contract had been transferred to the Montreal and Ocean Company. *The Syrian Massacres.*—In answer to Sir C. NAPIER and Sir J. FERGUSSON, Lord J. RUSSELL said he agreed that very great caution must be used in imputing blame to either the Druses or the Maronites; but, whatever be the cause of the disturbances, the European Powers were bound to use their efforts to put a stop to the massacres, and he stated the measures already taken with that view. *Malt Credits.*—In reply to Mr. HODGKINSON, the CHANCELLOR of the EXCHEQUER said that it was his intention to proceed with his proposal for shortening the time of the malt credits, but not at present to propose any discount on the duty. If the importation of foreign malt was sanctioned, it was intended to modify the existing excise instructions.—On the motion for going into Committee of Supply Mr. COWPER, in reply to Admiral WALCOTT, explained that the delay in the completion of the *Nelson Monument* was the anxiety of Sir E. Landseer to make the lions at the base worthy of the subject and of the British lion. *Italy, Sicily, and France.*—Sir R. PEEL moved for an Address for copies or extracts of papers relating to the threatened annexation of Sicily to Piedmont, and of any information received by her Majesty's Government as to the probable demands of France consequent upon the event of that annexation taking place; also for any papers showing that her Majesty's Government have within the last few weeks intimated to the Government of Turin that the continued aggressive policy of that Government would not be viewed with indifference by Great Britain. After giving a sketch of the history of Sicily from the period when the island was in the possession of the House of Savoy down to the present time, he expressed his apprehension that the aggrandising policy of Sardinia, which he characterised as merely the tool of France, would in reality give an immense increase of territory to the latter Power, and give her a dangerous preponderance in the councils of Europe. He hoped that her Majesty's Government would not consent to the island of Sicily being joined to the crown of that Sardinian monarch who had bartered the liberty and betrayed the interests of Savoy and Switzerland.—Lord J. RUSSELL said that her Majesty's Government had consistently urged upon the late and the present King of Naples the necessity of carrying out reforms, and acting the part of constitutional sovereigns. The object of Lord Minto's mission had been to bring the influence of England to bear in the settlement, but it had failed, as all subsequent efforts had failed. Even a few months ago the King might have saved both Naples and Sicily, but he neglected to avail himself of the counsel of his well-wishers, and the result was that his concessions came too late. If, however, the people of Sicily chose to live under the constitutional Government so tardily offered them by their Sovereign, it would not be for her Majesty's Government to find fault with them; but, on the other hand, they would never lose sight of the sacred principle that the people of every country were the best judges of their own internal affairs. It was for the people of Italy, Sicily, and the Roman States to declare what was the form of government under which they wished to live; and if their determination was such as to lead to their future happiness, he should rejoice at it, not only for the cause of liberty, but for the balance of power in Europe, for which there could be no greater security than an independent Italy.—Mr. KINGLAKE expressed his satisfaction at the observations which had fallen from Lord John Russell, but declared that his opinion with reference to the insincerity of the Emperor of the French remained unchanged. He feared that the policy of France in strengthening and extending the sceptre of Victor Emmanuel was animated by the sinister desire of raising up a Power to be used hereafter in his designs against Germany. In proof of the correctness of the conclusion at which he had arrived he said that at the second interview between the two Emperors at Villafranca the Emperor of France proposed to give back Lombardy on condition that Austria would acquiesce in the operations which he then intended to attempt upon the Rhine. The answer of the Emperor of Austria on that occasion was worthy of a great Sovereign—"No; I am a German Prince." It was notorious that all along the eastern frontier of France agencies were at this moment at work to sow the seeds of discontent. He had seen a letter from a gentleman of high character, residing in one of the states so threatened, who had had an interview with one of those French emissaries, who told him that there was not a country which France did not hold in her hand—nor a country without some internal question on which it was possible to found a strong and immediate intervention—in Prussia, there was Denmark, and the hostility of the smaller states; in Austria, there was Hungary; in Russia, Servia; and in England——(Here the hon. member paused, and several gentlemen on the opposition side below the gangway exclaimed "Ireland.") Mr. Kinglake said he had paused in reading this letter, because the truth was that this French emissary mentioned, as the ground on which the French government founded its hopes in England, the name of an hon. member of that House who was not now present in his place. But it was unnecessary to say that the emissary did not at all mean that the hon. member referred to was engaged in any sort of intrigue which would bring upon him any kind of blame; all he meant was that the policy pursued by that hon. member was of such a kind as to give the French Government great gratification.—After some remarks by Mr. WHITESIDE, Mr. MONSELL, Mr. GRIFFITHS, and Mr. V. SCULLY, the motion was negatived without a division.—On the motion that the Speaker should leave the chair, Sir J. TRELAWNY objected to going into committee of supply until the House had vindicated its privileges, which had been compromised by the rejection of the *Paper Duty Bill* by the House of Lords. On a division, the question that the Speaker leave the chair was carried in the affirmative by 198 to 13.— The House having gone into committee of supply, Mr. SIDNEY HERBERT moved a vote of credit for 3,800,000*l.* on account of the *War in China*. He declined to discuss the policy of the war, and said that at one time there was every reason to hope that the dispute would have come to an end by an imposing demonstration of force, and that redress would have been obtained from the Chinese for the outrage committed at the mouth of the Pei-ho. But those who were best acquainted with China maintained that until the Tartar chief who was at the head of the war party experienced a defeat, there was little chance of an alteration in the policy of the Chinese Government. The course of events now appeared to make hostilities inevitable; and this being the case, it was the duty of the Government to make the force acting against China as efficient as possible, so that the war might be brought to an easy and successful issue.— Sir H. WILLOUGHBY censured with some severity the policy and conduct of the war, and proposed that the vote should be divided into two sums, so that the 443,896*l.* which it was proposed to pay to the East India Company for the balance due to them on account of the last Chinese war might appear as a separate item.—A debate ensued, in the course of which Sir S. NORTHCOTE, the CHANCELLOR of the EXCHEQUER, Sir J. PAKINGTON, Lord J. RUSSELL, and Mr. DISRAELI took part; and ultimately Mr. S. HERBERT expressed his willingness to accede to the suggestion of Sir H. Willoughby, and the vote for the 443,896*l.* was omitted, to be made the subject of a separate vote hereafter. The vote of 3,356 104*l.* was then agreed to. The House having resumed, the third reading of the *Annuity Tax (Edinburgh) Abolition Bill* was opposed by Mr. DUNLOP, but was carried on a division by 204 to 17. The

Heritable Securities (Scotland) Bill passed through committee. Other Bills were forwarded a stage.

FRIDAY.—The *Isle of Wight (Eastern Section) Railway Bill* was read a third time and passed. The *Tenure and Improvement of Land (Ireland) Bill* as amended, was considered, and some clauses having been added, was agreed to in its main provisions. The "retrospective clause," proposed by Mr. BUTT, led to a division, when there appeared—for the clause, 26; against it 102. The clause was therefore lost. [Left sitting.]

City Intelligence.

THE LEATHER TRADE.—Some more failures in the leather trade have been announced during the week, including Messrs. D. and J. Mackintosh, of London, tanners, with liabilities to about 25,000*l.*; Messrs. Barton and Son, of Liverpool, with liabilities to about 180,000*l.*; Messrs. Rider and Co., leather factors in Paris, with liabilities estimated at 45,000*l.*; and Mr. R. Mortimer, tanner, of Chippenham, with liabilities to 34,400*l.* The amount of the liabilities of the entire body of failures in this branch of the trade is estimated at 2,500,000*l.*

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93¼ to ⅜ for Money, and 93⅜ to ½ for the 9th of August; Reduced and New Three per Cents., 93⅛ to ¾; Indian Stock, 219½ to 221; Indian Four per Cent. Debentures, 1858, 96¾ to ⅝; Five per Cent. Enfaced Rupee Paper, 97¼ to ½; India Bonds, 3*s.* dis.; Exchequer Bills, 1*s.* pm. 1*s.* dis.—FOREIGN: Buenos Ayres Six per Cents., for Acct., 83½ ex div.; Dutch Two and a Half per Cents., 64¾ ex div.; Peruvian Four and a Half per Cents., for Acct., 95; Portuguese Three per Cents., 1853, for Acct., 44½ ex div.; Russian Four and a Half per Cents., 93¾ ex div.; Spanish Three per Cents., for Acct., 49⅛ to ¼ ex div.; Turkish Six per Cents., 1858, for Acct., 60⅜; Ditto Guaranteed Four per Cents., 102.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,937,825	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,462,825
		Silver Bullion	—
	£29,937,825		£29,937,825

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,714,574
Rest	3,335,113	Other Securities	19,616,568
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	4,120,050	Notes	8,033,980
Other Deposits..	15,388,935	Gold and Silver Coin ..	769,985
Seven day and other bills	738,009		
	£38,135,107		£38,135,107

12th day of July, 1860. M. MARSHALL, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—T BEESLEY, Thames Bank, Pimlico, Bottle Crate Manufacturer — T. BROOKES, Birmingham, Innkeeper — H. R. KNIGHTS, Bermondsey Street, Leather Merchant—J. NUTT, Leadenhall Street, Jeweller—T. PAYNE, Birmingham, Grocer—J. PHILLIPS, Penton Street, Pentonville, Dealer in Watches—T. STREITBERG, Wilson Street, Finsbury, Fancy Wood Merchant—E. WHERRY, Market Deeping, Provision Dealer—W. T. WILLIAMS, Gregory's Bank, near Worcester, Tea Dealer.

BANKRUPTCY ANNULLED—J. GIBSON, Todmorden, Manufacturer.

SCOTCH SEQUESTRATIONS—J. DUNNET, Thurso, Shipmaster—R. EDWARD, Skair, nea. Forfar, Cattle Dealer—D. KING, Glasgow, Manufacturing Chemist—W. RODGER, Glasgow, Tobacconist—G. TURNBULL and J. MURRAY, Hawick, Accountants—G. T. TWEED, Linlithgow.

FRIDAY—BANKRUPTS—J. A. ALEXANDER, Exeter, China Dealer—A. B. HARRIES and W. A. HARRIES, Pembroke Dock, Pembrokeshire, Timber Merchants—J. LAMB, Pendleton, Lancashire, Grocer—C. LE BATT, Exeter Barracks, Messman—F. G. ORCHARD and G. F. CUNNINGTON, Brick Lane, Old Street, St. Luke's, Tent Manufacturers—T. PORTER, Kingsland, Cabinet Maker—O. REWMAN, 24, Martin's Lane, Cannon Street, City, Merchant—J. T. ROGERSON, Salford, Lancashire, Cotton Waste Dealer—P. WAMSLEY, T. HAMMERSLEY, and F. HAMMERSLEY, Leek, Staffordshire, Silk Manufacturers—J. WINKS, Newcastle-upon-Tyne, Spirit Merchant—W. G. YOUNG, Bangor, Brewer.

SCOTCH SEQUESTRATION—A. MURRAY, Edinburgh, Hotel Keeper.

Metropolis and its Vicinity.

NATIONAL RIFLE ASSOCIATION.—On Friday two series of prizes, seven in all, were opened and decided at Wimbledon. They were the Prince Consort's prize of 100*l.*; the Silver Cup given by the London Rifle Brigade, value 50 guineas; and a rifle given by Mr. Smith, value 35*l.* The competition for these three prizes was restricted to the winners of the "all comers" series, who are 28 in number, and to the 20 second best shots made in that contest. There were, therefore, 48 competitors, to fire 10 rounds each, at the three longest ranges, 800, 900, and 1000 yards There were 1440 shots fired for this series alone, with the following results:—

Prince Albert's prize of 100*l.* was gained by Lieutenant Lacy, 12th Regiment, who made 22 points at the three ranges, using an ordinary Westley Richards rifle, the barrel of which is on Mr. Whitworth's principle. The second prize, the Silver Cup given by the London Rifle Brigade, was gained by Sergeant Lawley, of the 2d Derbyshire Volunteers, and one of Lord Vernon's gamekeepers. He made 18 points. The third prize, the rifle given by Mr. Smith, value 35*l.*, was won by M. Peter, one of the Swiss champions, with 18 points. In the shooting for the tie Lawley won. The next series of prizes were four in number, open to all comers, for breech-loading rifles only, not exceeding 10 lb. in weight, five rounds, at the long ranges of 800 and 1000 yards. The first prize was 50*l.*, given by the Duke of Cambridge; the second, third, and fourth, 30*l.*, 20*l.*, and 11*l.* 11*s.*, were given by Mr. W. Richards. The first prize, the Duke of Cambridge's 50*l.*, was gained by M. Knecht, a Swiss, who at all the ranges made 10 points. The second prize, 30*l.*, was won by Lieut. Lacy, the winner in the preceding match. He made 9 points, again with the Westley Richards rifle. The third prize, 20*l.*, was won by Turner, 1st Berkshire, 8 points; and the fourth, 11*l.* 11*s.*, by Edwards, 4th West York, 8 points. Peter in this contest also made 8 points, but on the shooting for the ties Turner and Edwards won. Miss Burdett Coutts' prize was withdrawn, owing to the large number of entries, and the consequent difficulty of concluding the competition before the termination of the meeting.

On Saturday the meeting was brought to a close by the great match for the *Queen's Prize of* 250*l.* and the Gold Medal of the Association. The competition was restricted to Volunteers; the 20 winners of the Whitworth rifles given by the Association, and the 20 second best shots of that contest, now contended between themselves for the higher distinction. The distances were 800, 900, and 1000 yards, each competitor firing five shots at each without any artificial rest. Of the 40 qualified four withdrew; the remaining 36 were placed as follows:—

Edward Ross, 7th North York, 24 points; Lord Feilding, 4th Flintshire, 21; Williams, 2d Bucks, 20; Tinley, 2d Lancashire, 18; Hidton, 3d Manchester, 18; Jenkins, 5th Glamorgan, 17; Blackburn, Edinburgh, 17; Baker, Bristol, 16; Henry, Edinburgh, 15; Cowan, Lanark, 14: Plaskett, 21st Middlesex, 14; Potter, 5th Surrey, 14; Sandford, St. George's, 13; Gosnald, Norfolk, 13; Collinson, 6th North York, 12; Lawley, Derby, 11; Wylie, 1st Lanark, 11; Phillips, 1st Shropshire, 10; Marryat, 4th West York, 10; Caiger, 2d Middlesex, 9; Cocks, 11th Middlesex, 9; Owen, 2d Glamorgan, 8; Marshall, 1st Lanark, 8; Burg, 10th Gloucester, 7; Jackson, 32d Kent, 7; Penton, 9th Middlesex, 7; Pout, 5th Kent, 6; Batty, 9th Surrey, 6; Johnson, Victoria Rifles, 6; Howard, Essex, 5; May, 5th Sussex, 5; Sharp, 9th Sussex, 5; Brooks, 12th Middlesex, 5; Wood, Edinbro, 3; Russell, Edinbro, 1; Beard, Edinbro, 1; The second match of the day was for the *Duke of Wellington's prize* of 50*l.*; the conditions five rounds at 1000 yards. This contest was also decided early in the day. The winner was Lieutenant Archibald, 33d Regiment, an instructor of musketry. But he was very closely pressed by M. Knecht, one of the Swiss; they each made three points, and on the deciding shot of the tie Lieut. Archibald won. M. Knecht was awarded as a second prize a watch given by Mr. Bennett, value 30 guineas. *The Swiss Prize.*—In return for the prize Whitworth rifle, offered by Mr. Fairbairn for the competition of the Swiss only, they had given a Swiss rifle, to be fired for only by Volunteers, but excluding those who were entitled to compete for the Queen's prize. This was gained by Mr. Dear, 9th Middlesex, who in five rounds at 500 yards made seven points.

At 6 o'clock several of the Volunteer companies from London and the suburbs marched on the ground with their bands, and closed the proceedings of the week with more military "pride and circumstance" than had even marked their opening. The distribution of the prizes took place on Monday in the Crystal Palace in the presence of 20,000 persons. Earl de Grey and Ripon officiated as President, in the absence of Mr. Sidney Herbert, who was detained in town by official business. In opening the proceedings his lordship spoke as follows:—

"Eighteen months ago no one could have foreseen the extent of the present movement, or that the rifle was likely to become a national weapon. How short a time had sufficed for such important changes. Great, however, as had been the Volunteer movement, the late exhibition at Wimbledon had opened the way to larger views. That exhibition was not confined to Volunteers; it was open to all comers, though every effort was made to connect it with the volunteer movement The Volunteer should remember that, as the rifle was inefficient without drill, so the drill was imperfect without the rifle. The Minister for War had felt that he was only discharging a duty in sanctioning the movement. But the Volunteers did not wish to be dependent on Government, they preferred total independence, and reliance on the aid of the British public, to whom alone they looked for support and maintenance. He trusted that the time would come when every Englishman would use the rifle. This time, however, they had an interest of another kind. Several gentlemen had visited them from Switzerland, and he congratulated them on their success. The English and Swiss had a common object, which was solely for defence, not for aggression, and their efforts were the best security for the maintenance of peace. He was still able to congratulate his countrymen on having shown themselves so worthy of their opponents. Their success was all the more marked as it had been attained after such short practice. The reputation they had acquired he hoped they would maintain so long as the Volunteer movement lasted, which he trusted would be for many years. The events which had occurred from the day when the Volunteers passed in review before the Queen in Hyde Park to the late contest in Wimbledon had been most satisfactory, and it rested with the people of England to decide whether their motto should be fulfilled—'*Sit perpetua.*'"

The presentation of the prizes immediately followed his lordship's address. Lord Elcho read the list; every winner was called upon the platform separately, the Volunteers and regulars saluting in military fashion as they advanced, the civilians with a bow. The prizes were handed to the President by Colonel Kennedy, and given by the President to the winners, who then crossed the platform and descended on the opposite side. They were all cheered as they passed, especially Mr. Ross, the hero of the day, and MM. Peter and Knecht, the most successful among the Swiss. When Mr. Ross came forward to receive the Queen's prize, the band struck up "See the Conquering Hero comes." Lord Elcho said that though Mr. Ross was put down in the official lists as belonging to the 7th North York, and the President had flattered himself that the grand prize had been won by a Yorkshireman, the winner was really much "further north" than Yorkshire—he was a Scotchman. If the English Volunteers next year allowed a Scotchman to take the gold medal, it would be a disgrace to them. To this the President rejoined, that if it took a Scotchman to win the prize it had required Yorkshire to train him, which Lord Elcho rebutted by asserting that the youthful Ross had been trained by his father, one of the most skilful deer-stalkers in Scotland considerably north of the Tweed. Mr. Ross bore his honours with great quietness of manner, receiving the prize just as coolly as he shot for it. He is tall, slight, and very youthful in appearance. He was congratulated on his skill and success by the President, the different members of the Council, and a knot of friends—among them was his father, Captain Ross, the famous deer-stalker. Most of the winners were congratulated by the President, the Swiss gentlemen receiving marked attention. They appeared much more excited than the English victors; some of them could not resist a flourish of the prize-rifle over their heads as they carried it off—most of the Volunteers shouldered the arm, and disappeared at the marching step. The presentation of the prizes occupied rather more than an hour, and at its close Lord Elcho announced that her Majesty has expressed her intention to make the prize she has given an annual one as long as the Association exists. He concluded the ceremony with an appeal in favour of the Association. Owing to the state of the weather the expenses at Wimbledon had been enormous. The Swiss distributed 10,000*l.* every two years, and it would be a disgrace to England if she did not do as much? He urged every one—ladies and all—to come forward, and at once enter their names. In the evening the Volunteers assembled on the ground to join in the various athletic games for which prizes had been offered, while the Council of the Association entertained at dinner in the Crystal Palace the Swiss riflemen who had competed for the prizes and the gentlemen of the School of Musketry at Hythe who had assisted in carrying out the arrangements. Lord Elcho presided, and among the company present were Earl Spencer, Colonels Kennedy and Bewes, M. de la Rive, the Swiss Minister, the Swiss officers who accompanied the riflemen to England, Captain Archibald, 58th Regiment, and Lieut. Lacy, 12th Regiment. All the speeches were delivered in the French language. Lord Elcho proposed the first toast:—

"La Reine, la première carabinière d'Angleterre" which was followed by that of "Prince Albert, the Patron of the Association." Lord Elcho then proposed "The Health of their Swiss Guests," expressing the pleasure they had had in welcoming them to England, and of meeting them that evening to bid them farewell. Had time permitted the Crystal Palace might have been filled with an audience desirous to do them honour and to testify to the sympathy which existed between England and Switzerland, both alike the homes of freedom. The Association had in their first experiment endeavoured to carry out the Swiss model, which had made every man a skilful marksman and every citizen a soldier, and had caused Switzerland to be respected throughout Europe. It had given him great pleasure to see that their worthy friends had succeeded in carrying off prizes, at the same time they had an opportunity of seeing the superiority of English weapons, although they had maintained their ancient reputation by the way they had handled them. He trusted their visit would encourage a repetition next year, and in far greater numbers. M. Wessel responded on behalf of the Swiss, in a speech remarkable for taste and good feeling, expressing their sense of the high honour that had been done them. He could not express the delight they felt at their reception, and of what they had seen in England. At Wimbledon they had seen a shooting-ground unequalled in their own country, and they had fired for the first time with arms which had astonished them Such weapons used with skill would make any invasion hopeless M. Wessel spoke in eloquent terms of the proud position of England and of the hospitality they had experienced as evidencing the true sympathy which existed between the two countries, and in proposing the health of Lord Elcho he thanked him for the courtesy and kindness he and all his companions had received from his lordship. Lord Elcho returned thanks. M. De La Rive proposed "England, and the development of her military spirit." To accomplish this only two things were wanted—men and arms. Of English courage, and endurance, and energy it was unnecessary to speak, and when the country could produce Armstrong and Whitworth guns and rifles there was no fear but that England would maintain her pre-eminence among the nations.

THE VOLUNTEER SHAM FIGHT.—It is officially announced that the trains for the conveyance of the Volunteers to Camden Park near Chiselhurst will leave the London Bridge and Pimlico stations this afternoon at 3.30 P.M., and that the evolutions will commence at 5 o'clock. The force will be divided into two divisions, one for attack and the other for defence, under the respective commands of Lieutenant-Colonels Hicks, Thorold, Lindsay, and Lords Radstock and Bury. Maps of Camden Park have been prepared by Mr. Wyld, of Charing Cross, and Captain McGregor, of the London Scottish, showing the direction of the various manœuvres and instructions for placing carriages, &c., of visitors. Captain Grant's apparatus for cooking and the field telegraph are to be used for the occasion. It is not intended for the Volunteers to pass a night under canvas, and they will return between 9 and 10 o'clock this evening. The northern slope of Bickley Park, which commands a good view of the scene of the sham fight, will be thrown open by Mr. Dent to the public. The entrance will be on the public road from Bromley to Chiselhurst, about a mile from Southborough Road station, on the Mid Kent Railway.

BRASS BAND CONCERT.—A great concert of brass bands commenced on Monday at the Crystal Palace and presented features of uncommon interest. From 10 o'clock no less than 44 bands of brass instruments, divided into six compartments, performed in succession, before appointed judges, on platforms erected in various parts of the building. At 3 o'clock the members of these 44 bands, numbering 1200 performers, assembled together in the Handel Orchestra, and played the following selection:—"Rule Britannia," Handel's "Hallelujah," Mendelssohn's "Wedding March," "The Heavens are Telling," by Haydun, and "God Save the Queen." After this colossal display, 12 bands, selected by the judges as the most worthy to contend for the prizes, appeared in the Handel Orchestra, and alternately exhibited their strength. These were the Saltaire Band, maintained by Mr. Titus Salt, of Bradford; the Cyfarthfa Band, supported by Mr. Crawshay; the Deighton Mills Band, the Witney Band, the Stanhope Band from the wilds of Cumberland, the Chesterfield

Band, in the costume of the Chesterfield Rifles, regiment of Sir Joseph Paxton; the Staleybridge Band, the Dewsbury Band, the crack band of Yorkshire; the Black-dyke Mills Band, a subscription band, supported by the wealthy proprietor of the mills; the Ackrington band, the champion band of Lancashire, which has carried off all the prizes in the county; the Holmfirth Temperance Band, and the Darlington Saxhorn Band, generally known as the Catholic band, and which plays sacred music exclusively. At 8 o'clock the judges awarded the first prize consisting of 40*l.* in money, a splendid silver cup for the band-master, and a "champion" contra basso in E flat, value 35 guineas, presented by Mr. Henry Distin, to the Blackdyke Mills Band; 2d prize, 25*l.* in money, to the Saltaire; 3d prize, 15*l.* in money, to the Cyfarthfa; 4th prize, 10*l.* in money, to the Darlington Saxhorn; 5th prize, 5*l.* in money, to the Dewesbury. On Wednesday the contest was resumed in the presence of about 20,000 persons, when the following 12 bands were selected as worthy to contend for the prizes:—The Brighouse, Chesterfield, Heywood Amateur, Goldshill Saxhorn, Keighley, Huddersfield, Darwen Temperance Band, Dawley Green, Cyfartha, Dewsbury, Mossley, and Meltham Mills. The first prize consisting of 30*l.* in money, with a silver cup for bandmaster, also a perfect set of Boosey's "Brass Band Journal," 16 volumes, bound, value 12 guineas, was adjudged to the Cyfarthfa; the second prize, 20*l.* in money, to the Goldshill Saxhorn; the third, 15*l.*, to the Dewsbury; the fourth, 10*l.*, to the Chesterfield; the fifth, 5*l.*, to the Meltham Mills. In addition there were two splendid prizes, a beautiful electro-plated cornet-à-pistons, by Antoine Courtois, to be presented to the best soprano or cornet player of the two days' contests, awarded to the first cornet player of the Goldshill band; and one of Boosey's best B flat euphonions, presented to the best bass player of the two days' contests, awarded to the first ophicleide player of the Cyfarthfa band.

WRECK OF THE SAPPHIRE.—The Admiralty have received information that of the persons wrecked in October last in the Sapphire, near Torres Straits, the following have reached Port Curtis in safety:—

R. Western, Captain, Madras Native Infantry, England; W. Beveridge, mate, Scotland; John Walker, Dublin; H. J. Sampson, Mudgee, New South Wales; Thomas C. Clark, Birmingham; W. Reid, Scotland; J. Crawford, Ireland; — Mitchell, Corfu: J. M'Denmole, Liverpool; and R. Law, American, picked up from lifeboat. The following are missing:—John M'Kinlay, from Greenock; Joel Bowden, Plymouth; Joseph Watson, Dublin; Charles F. Schmallfuss; David Dougall, Greenock; John Conquest, Sweden; William Warren and Ebenezer Tibby, England; Isaac Devereaux, Wales; John Morris, Dublin; James Allian, Saltcoats, Scotland; Charles Campbell, Elgin: Jubus Julif, London; William Twig, Glasgow; William Charleton, Newcastle; James Connell, Cork; Michael M,Kenna, Ireland; and Henry Armstrong, England. The persons on board the Sapphire left her in two boats, one containing Schmallfuss and all the survivors except Law, and the other containing Law and all the missing persons except Schmallfuss. The boats parted company, and were both attacked by savages. In one Schmallfuss was killed. In the other there can be no doubt that all on board were murdered except Law, who threw himself into the water, and was eventually picked up by the boat which escaped.

HIGH PRICE OF BUTCHERS' MEAT.—On Saturday evening a numerous open-air meeting, chiefly composed of the operative classes, was held at Manby Park, Stratford, for the purpose of considering the best means to be adopted to obviate the present high price of butchers' meat. The chair was occupied by Mr. Nash, and after the delivery of various addresses, a resolution was adopted to abstain from purchasing butchers' meat until the present exorbitant prices are reduced to a reasonable limit.

ST. GEORGE'S-IN-THE-EAST.—On Sunday night there was a considerable disturbance in the parish church of St. George's, although the churchwardens had extensively circulated the provisions of the late Act, and there were a great many policemen present to enforce order. On the two or three previous Sundays the church services had been less disturbed than for many months, while the riots in the streets were of a most serious character. On Sunday night there was a reversal of proceedings. The disturbance was in the church, while the streets were kept comparatively quiet by the police. The prayers and singing were disturbed with hissing and coughing, and there was considerable disturbance in the church at the close of the service, but the lights were put out, and the congregation soon afterwards dispersed. Large crowds of persons assembled in the streets for the purpose of having the usual attack upon the choristers, but the police compelled them to move away before the choristers came out. It is understood that communications have passed, emanating from the Rev. Bryan King, the rector, which are likely to be productive of good results. Mr. King has made proposals for the exchange of his living with one near Colchester, which will, if accepted, put an end to the riots which have so long prevailed in the parish.

THE PUBLIC HEALTH.—The Weekly Return of the Registrar-General states that the deaths in the week that ended Saturday, July 9, were 919. In the corresponding weeks of the 10 years 1850 59, the average number, after correction for increase of population, was 1115. The present return is therefore 196 below the average. During the week the births of 879 boys and 788 girls, in all 1667 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average was 1467.

Provincial.

BARNARDCASTLE.—On Sunday afternoon a man named Thomas Dixon, employed as a sawyer on the works of the South Durham and Lancashire Union Railway, residing in Galgate, a low part of this town, murdered a woman named Mary Ann Wilson, who passed as his wife. A young woman who was his niece lived with them in the same house. Saturday was the pay-day on the line, and it would appear that Dixon and Wilson had been drinking after the pay, and had wandered about the town and neighbourhood nearly all the night in a state of intoxication. After their return to the house on Sunday the woman and the niece quarrelled as to who should do the household work. Dixon having gone out and returned again in the afternoon, and finding the women still quarrelling, said that he would soon settle their disputes, and seized a poker and felled Wilson to the ground by a fearful blow with it on the head; after which he kicked her with his strong navvy's boots on the face and body. The niece ran out to alarm the neighbours, and as they came to the dwelling they saw the man running out of the town. On entering the house they found the woman quite dead, and her face and head beaten in in a fearful manner. The county constabulary were despatched in search of the murderer in all directions, but no tidings were heard of him until early on Monday morning, when he was seen to approach the town; but he fled again before the police were able to capture him. He has, however, been apprehended at Brignal, in Yorkshire, by the Greta Bridge police; and the jury at the inquest having returned a verdict of Wilful Murder against him, he has been committed for trial at the Durham assizes.

BIRKENHEAD.—An inquest was held last week on the body of Mrs. Patterson, the wife of a chemist and druggist, residing in Limekiln Lane, near this town, who had died under circumstances which induced the coroner to have her body exhumed, and a *post-mortem* examination made by two surgeons. From the evidence of these gentlemen there was reason to believe that deceased had been injured about the head, and the husband was in consequence ordered into the custody of the police, the inquiry being in the meantime adjourned.

FROME.—A shocking tragedy occurred four miles from this town on the morning of the 30th ult. Mr. S. Savill Kent, one of the Government Inspectors of Factories, lives in a retired house standing in its own grounds at Road. On Saturday morning, about 7 o'clock, one of his sons, a fine boy just four years of age, was missing from the cot in his nurse's room, and after an hour's search his body was found stuffed down the seat of a privy on the premises, the throat being cut from ear to ear, with a large stab in the region of the heart, evidently inflicted after death. The child was wrapped in the blanket belonging to its bed, and appeared to have been killed while asleep. The murderer must have been in the house overnight, for all the fastenings were untouched, just as they had been left on the previous night when examined by Mr. Kent, with the exception of the drawing-room window opening on the lawn; this was found partially open, and the shutters unfastened, but no violence had been used either there or to the drawing-room door, which was locked on the outside overnight. The wounds were inflicted apparently with a large table-knife, but no such weapon or any clothes stained with blood have been found in the house or premises. The knife, it is supposed, was wiped on a piece of newspaper, which has been found. The family consists of Mr. and Mrs. Kent and seven children—three girls and one boy by a former wife, and two girls and the deceased by the present wife. About three years ago the two youngest children of the first wife, Constance and William, conceiving themselves to be ill-treated, started off, both dressed in boys' clothes, and were not discovered for two days. They have now just returned from school. An inquest was held on Monday before the coroner for Wilts. The nursemaid out of whose room the deceased was abstracted, the housemaid who examined the drawing-room fastenings the night before the murder and found them undone, and the persons who discovered the dead body, were examined, but no fresh facts of any kind were elicited. Constance and William Kent, the half-sister and half-brother of the deceased, were also examined, but no new information was gained. The superintendents of police from Frome, Trowbridge, and Devizes, and the chief constable of the Wilts force, were in attendance, but could throw no light on the affair. After a five hours' inquiry the jury returned a verdict of "Wilful murder against some person or persons unknown." The magistrates of the Trowbridge division, assisted by Messrs. Sinkins and Sheppard, of the Frome division, the chief constables of the counties of Wilts and Somerset, and the superintendents of police of the districts of Frome and Trowbridge have since held private meetings at Road for the purpose of investigating the case. A great many witnesses have been examined, including Mr. and Mrs. Kent, the father and mother of the murdered child, the three maid servants, the man servant, the boy who cleaned the knives, the washerwoman of the family and her daughter, and several other persons. On Saturday night, at the request of Mr. Kent, Superintendent Summers searched two uninhabited houses at the bottom of the lawn of Mr. Kent's residence, but nothing was discovered tending to throw any light on this mysterious affair. Mr. Kent has suggested that the servants who formerly lived with him might have secreted themselves in the house and committed the murder, and at his request the police have instituted inquiries which prove this supposition to be groundless. On Tuesday evening, the nursemaid was apprehended on suspicion and remanded.

LEEDS.—The masons of this town are agitating for the reduction of an hour's labour on the Monday. At present they are obliged to be at work at 6 o'clock in the morning, and as many of them live at a distance from their work they are obliged to leave their families on the Sunday night, as no train arrives in Leeds on the Monday morning early enough for the commencement of work. They are now asking the masters to allow them to begin at 7 on the Monday morning instead of 6; and with the object of promoting this alteration, a large meeting was held on Friday evening at Briggate. Whether the masters will make the concession remains to be seen.

LIVERPOOL.—A man named Thomas Winslow, 45 years of age, has been apprehended on the charge of having poisoned Mrs. Ann James, a widow, and keeper of a boarding-house in Vauxhall Road, with whom the prisoner had lived for some years as manager Deceased, it appeared, was 42 years of age, and the prisoner was aware that she had made a will disposing of her property to a sister (Mrs. Townsend) who lived with her and her children, the prisoner being appointed residuary legatee. In September, 1859, Mrs. Townsend was attacked with vomiting and purging, and died; in December her daughter was seized in a similar way and died; and in January last her son was attacked with the same symptoms, and died. In January last Mrs. James was herself attacked with vomiting and purging, but being promptly attended by a medical man, she recovered. In March she was again attacked, but recovered, and towards the end of May she was again attacked by the same symptoms. Dr. Cameron, her medical attendant, having his suspicions aroused by the frequency of these attacks analysed some of the discharges, and discovered the presence of antimony. He persuaded Mrs. James to go into the hospital, which she did about a fortnight ago, but notwithstanding every care and attention she died. A quantity of cooked sago which had been prepared by the prisoner was found by her bedside before she was removed, and it was stated that she had partaken of it two or three hours before she was attacked on the last occasion. A portion of this sago was analysed and found to contain antimony, whereas the uncooked sago found in the house did not contain any. These facts having been laid before the magistrates, the prisoner was apprehended, and has been remanded to allow time for the bodies to be exhumed, and an analysis made of the contents of the stomach. The jury at the inquest however were so satisfied with the general evidence that without waiting for the analysis they returned a verdict of Wilful Murder against the prisoner, who has been committed for trial. During the inquiry the coroner stated to the jury that the case was one which could only be paralleled by the memorable one of Palmer, and those of Dove and Smethurst, of still more recent occurrence. On Monday the prisoner was again brought up before the magistrate, when the solicitor for the prosecution applied for a further remand on the ground that the scientific and other examinations had not yet been completed. He said that on Friday last the three bodies of the sister and two nephews of Mrs. James had been disinterred, and that poison had been found in each of them. Under these circumstances, it became necessary to have the assistance of the best analysts to perfect the investigation, which he considered would occupy about a fortnight. The solicitor for the prisoner said he should not offer any objection to the application. The prisoner was then remanded for a week.—At the recent quarter sessions for this town, two London thieves, named Thomas Lee and James Joy, with a number of *aliases*, who, it is believed, belonged to a gang of bank robbers who have committed considerable depredations in the metropolis, were convicted of stealing bank bills to the amount of 11,000*l.* from the person of Mr. Haigh, of the firm of Haigh & Co., cotton brokers, Liverpool. The circumstances of the case as well as the capture of the thieves were of a remarkable character. The prosecutor lost the parcel of bills on the way from his office to Heywood's bank, a distance of only a few hundred yards. He gave information to the police, but the prisoners had already been apprehended as suspicious characters by a Liverpool detective, who saw them leaving the Post Office, and who, assisted by a London officer, followed and apprehended them. It was afterwards ascertained that Joy had sent a registered letter to "Martha Wilde, 7, Friendly Place, Bancroft End, Mile End Road, London," and on the following morning the London officer attended at the address, and when the letter was delivered apprehended the woman, who, although she had signed "Martha Wilde" to the receipt for the letter, afterwards admitted that her name was Martha Lee, and that she was the wife of the male prisoner Lee, whose likeness was found in the house. The letter was found to contain the whole of the stolen bills. The jury found them guilty, and the Court sentenced Lee to 10 years' penal servitude, and Joy to 7 years. The police have every reason to

believe that the [illegible] of a man, [illegible] of the name of Lee, who has recently been [illegible] at the Mansion House on a charge of being found in banking houses in Lombard Street for an unlawful purpose. There are three others of the gang in custody—a man and a woman in Paris and a man in Bristol. The extent of robberies committed in the London banks of late has been very great, and it is understood that the police are in possession of information to show that all these parties are implicated in the depredations.

NORWICH.—Master Vansittart, who recently appeared so prominently before the public in connection with an attempt to effect his conversion to Roman Catholicism, has been remitted to the care of the Rev. F. Hodgson, rector of Rackheath, from whose house he ran away to Norwich. Canon Dalton has threatened one of the local papers, the *Norfolk Chronicle*, with an action for alleged defamation of character, and Father Cobb, a Roman Catholic priest in this city, has published a defence of Canon Dalton's conduct.—The High Sheriff of Norfolk has offered a cup of the value of 50*l.* to the best rifle shot among the enrolled Volunteers of the county. The prize will be shot for on the Norwich range, in the third week of September. Three rounds will be fired by each man, at distances of 300, 400, 500, and 600 yards, according to Hythe regulations.

OXFORD.—The trustees of the late Dr. Radcliffe have appointed the Rev. Robert Main, M.A., first assistant at the Royal Observatory, Greenwich, to succeed the late Rev. M. J. Johnson as Radcliffe Observer at this University. Amongst the candidates for the office were [illegible] astronomers of the day.

WORCESTER.—At a recent meeting of the Midland Archæological Association, Sir E. A. H. Lechmere in the chair, a discussion took place on the proposed demolition of the Gueston Hall in the cathedral precincts of this city, when the following resolution was unanimously adopted and transmitted to the Dean and Chapter:—

"That this meeting looks on the Gueston Hall as a most valuable record of ancient architecture, and believing that the interests of art and the honour of the city of Worcester alike require its preservation and restoration, resolves that the following [illegible] be signed on its behalf and presented to the Dean and Chapter. That the present precincts consider that the Gueston Hall [illegible] is a rare specimen of ancient architecture, and an historical relic most interesting to the city of Worcester; they have heard with pain and dismay of the possibility that the hall may either be destroyed or suffered to perish from decay, and they believe that either of such events would be deeply deplored by all lovers of art. They therefore most respectfully implore you to take such steps as shall secure the preservation and future protection of this valuable building."

YORK.—In consequence of the general report that the Queen had it in contemplation to hold a review of the Rifle Volunteers of the northern districts in the city of York during the ensuing autumn, a special meeting of the Council was held last week, when it was unanimously resolved to present a memorial to her Majesty, inviting her to visit York for the purpose of reviewing the different Volunteer Corps of the north of England.

Ireland.

PARTY RIOT IN ARMAGH.—It was hoped that the 1st and 2d days of July would have passed over this year of "revival" in the north of Ireland without a party collision; but as far as Armagh is concerned, this anticipation has not been realised. A serious conflict occurred in that city on the night of the 2d inst., and appears to have been originated on very slight provocation by the Roman Catholic population. When the streets were cleared of the rioters, the ground presented a startling appearance. The pathways and channels were covered with stones and brickbats, and the houses were without even a vestige of doors or windows. The windows of several unoffending citizens were left without a pane. The riot lasted till nearly 1 o'clock in the morning, and the police patrolled the streets during the whole night, in anticipation of the renewal of the disturbances.

THE GALWAY LINE.—The Galway Mail-packet Company has sold to the Canadian Government, for the sum of 200,000*l.*, the large subsidy which it obtained for carrying the mails to the United States and Canada, but still retains the Newfoundland contract. The Canadian authorities intend the service to be conducted by the Montreal Ocean Steam Company, the port of departure to be Galway, and the ports of arrival Quebec in summer and Portland in winter.

Railways.

FATAL ACCIDENT ON THE EDINBURGH, PERTH, AND DUNDEE.—On Sunday afternoon an accident of a very melancholy nature occurred between Trinity and Granton, by which four lives were lost and five or six persons were seriously injured. The engine and tender of the Sunday evening passenger train were returning with six persons on them to the station in Scotland Street, after having safely conveyed the train to Granton, and were proceeding rapidly along the line, which at that point runs close to the sea on a high embankment, when they ran off the rails into the sea, a distance of about 30 feet, carrying with them the railing of a bridge, which at that point crosses the road, and a portion of the low parapet wall skirting the line. The engine-driver, his son, and brother-in-law, and the pointsman, were killed on the spot; the stoker had a dislocated shoulder, and the porter was severely bruised and scalded by the steam from the engine. Several persons who happened at the time to be sitting on the [illegible] bulwarks beneath the railway also narrowly escaped with their lives.

Obituary.

The Countess of [illegible] died on Sunday, at the family residence in [illegible] Square, daughter of the late Marquis of Abercorn, grandfather of the present marquis, by [illegible] and Rev. George Hamilton, of Abercorn. She was born in 1795, and married in 1816 the Earl of Wicklow, by whom her ladyship had a large family. [illegible] Lady Katherine, married to the Hon. A. Petre.

MR. JOHN JERVIS, Associate of the Court of Common Pleas, died suddenly on Monday morning. He had previously been in his usual health, and was found dead in the water-closet. He was the son of Sir John Jervis, the late Chief Justice of the Court, and was appointed Associate on his father being raised to the [illegible] vacant on the death of [illegible] under [illegible] Mr. Jervis and the Associate of the other Courts were appointed for life.

MR. [illegible] Bentley, well known as a humorous writer for the stage and for the [illegible] periodicals, died on the 26th ult. at [illegible] He had been a long sufferer, and was on his way to Llangollen for change of air, when [illegible] continuing his journey beyond Manchester.

WILLS.—The will of Sir W. F. Middleton, Bart., has been sworn under 45,000*l.*; the Most Rev. Dr. Musgrave, Archbishop of York, 60,000*l.*

Miscellaneous.

THE ECLIPSE OF THE SUN ON WEDNESDAY NEXT.—The screw steamship Himalaya left Plymouth Sound on Saturday morning with the Astronomer Royal and staff, consisting of about 60 persons, and arrived at Bilboa at noon on Monday. From Bilboa Professor Airy intended to take the chief portion a distance of 160 miles, to secure a clear atmosphere and a cloudless sky for the observation of the eclipse. The rest were to proceed to Santander. At both these places the eclipse will be total for about four minutes. In this country it will be large, but will not approximate to totality. The Superintendent of the *Nautical Almanack* states that it will begin at Birmingham at 1.28,4; Bristol, 1.25,7; Cambridge, 1.39,0; Dover, 1.46,9; Durham, 1.27,2; Exeter, 1.21,6; Liverpool & Manchester, 1.25,1; Norwich, 1.44,9; Oxford, 1.32,4; Portsmouth, 1.34,4; York, 1.30,8. Mr. Hind writes that in London the eclipse will begin, at 1h. 39m. P.M., a little below the sun's centre, on the right hand. "The greatest eclipse will take place at 2h. 49m. P.M., when 82·10ths of the diameter will be covered. Nothing like darkness, or even obscurity, can, however, be expected at this time, 18-100ths being too large a portion of the sun still visible to allow of a very sensible diminution of daylight. At 2h. 49m. P.M. the sun will appear as a crescent, with the convexity towards the zenith. A dark glass will serve as well as the telescope to exhibit this, the most interesting feature of the eclipse in England. The moon will finally separate from the sun, or the eclipse will end, at 3h. 51m. P.M., a little north of his centre, on the left hand."

THE NEW COMET. A comet, visible to the naked eye, has been visible during the last fortnight in the N.W.; it resembles that of Donati, except that this one, instead of having been indicated three months beforehand, was, in consequence of the unfavourable state of the weather, not discovered until it had acquired considerable brilliancy. It may be seen in the evening as soon as the twilight is weakened, and again early in the morning. The nucleus is well defined, growing brighter and brighter towards the centre, and of a reddish colour. It has the appearance of a star of the second magnitude, and has a bright narrow tail, extending vertically upwards 5 or 6 degrees in length. Mr. Hind, the astronomer, has addressed a letter to the *Times* giving the results of his calculations of the elements of the comet's orbit, from which the following is an extract:—

"It appears that the comet is receding from the sun, but is approaching the earth, which it will continue to do until the middle of the month. It crossed the ecliptic from north to south very near to the orbit of Venus on the 11th inst., the planet being at the time about 21° further advanced in longitude. There is no similarity between the elements of this comet and those of any other at present computed. Though the position by the Paris observation of June 22 was precisely that which the comet of Charles V. should occupy, if in perihelion on the 26th, the opposite motion of the comet now visible soon indicated that it could not be identified with the one so long expected. Dr. Donati considered the nucleus on the 22d ult. as bright as a star of the first magnitude, and judged the length of the tail to be 15 deg. As the comet was then 84,000,000 of miles from the earth, and about 53,000,000 from the sun, the true length of the tail would be rather more than 22,000,000 of miles. There is nothing remarkable in the comet's general appearance; the tail is thrown off in the more usual form without bifurcation, so far as the state of the atmosphere has enabled me to judge."

BIRTHS.—On the 3d inst, Lady ROBERT CECIL, of a daughter—5th inst, at Edinburgh, Lady FRANCIS TREMAYNE, of a daughter—7th inst, at 1, 7, Westbourne Terrace, Hyde Park, the wife of Sir HENRY ORLANDO R. CHAMBERLAIN, Bart., of a daughter—3d inst, at 6, Upper Hyde Park Gardens, Lady STEPHENSON, of a stillborn son—4th inst, at Hendon, Middlesex, the wife of Rear-Admiral EDWARD STANLEY, of twin daughters—2d inst, at Ralnor Place, Gloucester Square, the wife of Captain F. R. CLAYTON EAST, 8th Madras Light Cavalry, of a daughter.

MARRIAGES.—On the 7th inst., at St. Peter's Church, Dublin, [illegible], GEORGE HUMPHREY LYONS, H.M.'s Indian Army, to the Hon. ADELAIDE MATILDA YELVERTON, second daughter of the Viscount Avonmore—3d inst, at Witham, Essex, Sir WM. O'MALLEY, eldest son of Sir Samuel O'Malley, Bart., of Rose Hill, co. Mayo, to LOUISA MARY, second daughter of the late Rev. HENRY DU CANE, of the Grove, Witham—26th ult, at St. George's, Hanover Square, Captain DANIEL PEPLOE WEBB, of the 4th Dragoon Guards, to ELIZA THEOPHILA METCALFE, youngest daughter of the late Sir Theophilus Metcalfe, Bart.—[illegible] at St. James's Church, Colonel LEITH HAY, C.B., 93d Highlanders, to CHRISTINA GRACE AGNES, eldest daughter of the late W. C. HAMILTON, Esq., of Craighlaw, Wigtonshire—[illegible] at the Parish Church of Rowler, the Rev. DIXON BROWN, of Unthank Hall, Northumberland, to GEORGINA [illegible], granddaughter of the late General LOFTUS—28th May, Sir JOSEPH ARNOULD, one of the Judges of the Supreme Court, Bombay, to [illegible], daughter of Major J. W. CARNEGIE, C.B.

DEATHS.—On the 6th inst, at [illegible], the Dowager [illegible], C.B., [illegible] Right Hon. the late Mr. Justice VAUGHAN—6th inst, at The Esplanade, Plymouth, ANNE LÆTITIA, eldest and last surviving child of the late Rev. Sir HARRY TRELAWNY, Bart., of Trelawny, Cornwall—7th inst, at 86, Jermyn Street, St. James's, Lady GEDDES MACKENZIE, of Avoch, Scotland, aged 62—10th inst, in London, after a few days' [illness], Major-General G. C. MOSBY, Lieut. Governor of [illegible], eldest son of the late General [illegible] Mundy—[illegible] inst, at 13, Lytton Square, Notting Hill, Major General W[illegible], K.H., K.C.S., F.R.S., aged 7[illegible]—31 inst, at Bilston, Staffordshire, WILLIAM TAYLOR, Esq., formerly M.P. for Barnstaple, lately residing at Titley Cottage, Herefordshire, aged 78—6th inst, at The Oaks, Leamington, Colonel WALTER [illegible], aged 46—3d inst, at the Pigeon House Fort Barracks, near Dublin, after [illegible], Lieutenant Colonel COLLINGWOOD FENWICK, of the 76th Regiment, fourth son of the late Christopher Fenwick, Esq., of Newcastle-on-Tyne—7th inst, at his residence, 19, Portland Place, Major JOHN ARTHUR MOORE, aged 69—5th inst, at Chester, Mrs. WRANGHAM, widow of the late Ven. Archdeacon Wrangham, aged 8[illegible]—29th ult, suddenly, at Bath, ROBERT MANNERS CROFT, late of the 1st Royal Dragoons, eldest son of the Archdeacon of Canterbury, aged 45—29th ult, at Crowcombe Cottage, near Taunton, JOHN FRANCIS CAREW, Esq., a magistrate for Somerset, aged 60—9th inst, at Walmer, after a long illness, G. J. GUNNELL, Esq., for many years of the House of Commons.

Markets.

COVENT GARDEN.—July 14.

We have still to report heavy supplies of English Pines, Peaches, and Nectarines. Plums, Pears, and Figs are also received from France in large quantities. Grapes are plentiful, as are likewise Cherries. Best samples of Strawberries maintain fair prices. Cob Nuts realise 1s. per pound. Gooseberries fetch 3d. a quart. Peas in excellent condition are now abundant. New Potatoes range from 6s. to 8s. per cwt. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Heaths, Kalosanthes, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 3s to 5s	Cherries, p. lb., 1s to 3s
Grapes, per lb., 4s to 8s	Green Figs, per doz., 8s to 12s
Strawberries, p. lb., 1s to 3s	Melons, each, 2s to 4s
Peaches, per doz., 10s to 20s	Apples, per doz., 2s to 6s
Apricots, per doz., 2s to 4s	Oranges, per 100, 6s to 15s
Nectarines, &c., 6s to 12s	Lemons, per 100, 5s to 10s

VEGETABLES.

Asparagus, p. bundle, 5s to 6s	Artichokes, per doz., 6s to 8s
Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 1s to 1s 6d	Celery, per bundle, 2s to 3s
Peas, p. bush., 4s to 6s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 2d to 4d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 6d to 8d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d to 7d	Mushrooms, p. pott., 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 4s
Cucumbers, each, 6d to 1s	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, July 12.

Prime Meadow Hay	70s	to	84s	
Superior do. (old)	88		105	
Inferior do.	55		60	
New do.	36		80	
Rowen	—		—	
Clover	95s	to	126s	
New Clover	—		—	
Second cut do.	90		95	
Straw	26		36	

DAVIS & CO.

CUMBERLAND MARKET, THURSDAY, July 12.

Sup Meadow Hay	110s	to	120s	
Inferior do.	84		100	
New do.	65		84	
Superior Clover	120		130	
Inferior Clover	100s	to	110s	
New do.	65		100	
Straw	42		46	

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, July 12.

Fine old Hay	100s	to	108s	
Inferior do.	85		95	
Prime New Hay	63		76	
Inferior do.	—		—	
Straw	32		38	
Fine old Clover	120s	to	126s	
Inferior do	100		110	
Fine New Clover	80		90	
Fine 2d cut	110		116	
Inferior do.	84		94	

HOPS.—BOROUGH MARKET, FRIDAY, July 13.

Messrs. Pattenden & Smith report that the market is very active, and the accounts from the plantations worse. Duty 130,000*l.* to 140,000*l.*

BUTTER MARKET.—July 13.

Best Fresh Butter . . 14s. per dozen lbs.
Second do. do. . . . . 13s. " "
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

BRITISH WOOLS.—LONDON, FRIDAY, July 13.

The trade continues healthy at former prices. The rates paid at the fairs to the farmers in the country continue exorbitant compared with the expectations of many. The consumers and their agents, however, are the highest buyers on these occasions, and as all transactions are for cash our business is on a safe basis.

	s.	d.		s.	d.
South-down Hoggets	1	8	to 1	9	
Half-bred ditto	1	8	— 1	9	
Down Ewes	1	6	— 1	7	
Kent Fleeces	1	6	— 1	7	
Leicest. Wethers	1	6	to 1	7	
Ditto Hoggs	1	7	— 1	8	
Combing Skins	—	—	—	—	
Blanket ditto	0	6	— 0	9	
Flannel Wool	1	0	— 1	7	

MARK LANE.—MONDAY, July 9.

The supply of Wheat from Essex and Kent to this morning's market was small even for the season, and held firmly for the rates of this day se'nnight. The attendance was larger than of late, and more disposition evinced on the part

of millers to effect purchases, which gave an improved tone to the trade, and on the sales effected the prices obtainable last week were generally realised. Barley brings fully last week's rates. In the value of Beans and Peas there is no alteration. The Oat trade is heavy, and all but the best conditioned parcels are 1s. to 2s. per qr. cheaper. For Flour there is scarcely any demand, and prices are rather easier.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	55—60	Red	53—58
— — fine selected runs..ditto	55—60	Red	56—60
— — Talavera	58—63		
— Norfolk	—	Red	—
— Foreign	52—65		
BARLEY, grind. & dist., 24s to 31s..Chev.	38—45	Malting.	36—41
— Foreign..grinding and distilling	28—36	Malting.	35—40
OATS, Essex and Suffolk	20—24		
— Scotch and Lincolnshire..Potato	26—28	Feed ..	24—26
— Irish .....Potato	26—28	Feed ..	21—24
— Foreign.....Poland and Brew	21—26	Feed ..	17—26
RYE	35—38	Foreign.	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....32s to 40s....Tick	34—43	Harrow.	34—43
— Pigeon .....36s — 47s..Winds.	48—54	Longpod	—
— Foreign .....Small	38—46	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	38—40	Suffolk .	36—41
— Maple .... —s to —s ..... Grey	32—34	Foreign.	30—40
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	48—54		
— 2d do. ..... ditto	40—48	Country.	40—48
— Foreign .....per barrel	25—32	Per sack	30—44

FRIDAY, July 13.

The weather during the past week has continued dry, the sky cloudy with little exception, the nights cold, the wind from the E. and N.E. The inactivity noticed in our last circular in the Wheat trade throughout the kingdom continues, and we have to quote a further depreciation of 1s. to 2s. per qr. in the country markets for English, and of 1s. per qr. on foreign; this reduction rather stimulating the demand in Scotland. Flour has been neglected, and prices receded 6d. to 1s. per barrel and 1s. per sack without inducing purchases. Beans and Peas remained firm. Grinding Barley advanced 6d. to 1s. per qr., while Oats, owing to the large supplies and more genial weather, receded 1s. to 2s. per qr. From the South of Europe we continue without arrivals off the coast, and the sales for the week are confined to a cargo of Egyptian Barley on passage at 25s. 6d, and 5000 qrs. of Danube Barley to be shipped at 25s., both per 400 lbs. The arrivals of English grain this week consist only of 590 qrs. of Wheat; those from abroad are less than of late. The attendance at to-day's market was small, and confined to buyers of retail quantities; in the sales effected both of English and foreign Wheat Monday's prices were realised. Barley is in good demand at Monday's quotations. For Oats there is a fair inquiry at an advance of 1s. per qr. upon the depressed sales lately made.

ARRIVALS FROM July 9 TO July 13.

	Wheat.	Barley.	Oats.	Flour.
English ..	590 qrs.	— qrs.	— qrs.	2450 sks.
Irish	— ,,	— ,,	— ,,	— ,,
Foreign ..	8990 ,,	3920 ,,	26840 ,,	1150 ,, 1770 brls.

LIVERPOOL, Tuesday, July 10.—The grain market was largely attended to-day. Wheat and Flour in fair request at late rates. Indian Corn in active demand at 6d. advance. American mixed 31s.; Ibrail and Foxanian, 30s. 9d. Beans steady and a turn dearer. Oats, Oatmeal, and Barley quiet.

FRIDAY, July 13.—The corn market was steady. Wheat in good request at full rates. Flour dull. Indian Corn rather easier. Galatz, 31s. 6d. Mixed American the same. Beans unchanged and neglected. Oats, Oatmeal, and Barley quiet.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
June 2..	53s 4d	35s 2d	26s 8d	39s 3d	44s 1d	41s 0d
— 9..	54 2	35 10	27 8	38 1	45 9	40 8
— 16..	54 11	35 0	26 11	37 0	46 2	40 4
— 23..	57 0	34 3	27 5	38 9	45 10	41 4
— 30..	58 5	32 10	25 5	41 9	47 1	41 8
July 7..	57 9	34 0	26 5	41 3	46 6	41 4
Agg. Aver.	55 11	34 7	26 9	39 4	45 11	41 1

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	June 2.	June 9.	June 16.	June 23.	June 30.	July 7.
58s 5d	..	..	..	..		..
57 9	..	..	..	..	..	
57 0	..	..	..		..	..
54 11	..	..	..	..	..	..
54 2	.		..	..	..	..
53 4 —		..	..	..	..	..

METROPOLITAN CATTLE MARKET.

MONDAY, July 9.

The number of Beasts is about the same as on Monday last, and the prices of that date are pretty well supported. Good Sheep are by no means plentiful; trade is not brisk, but quotations are not lower. Trade is very heavy for Lambs; the quality of the supply is inferior, prices are lower. Calves are not selling quite so well. From Germany and Holland there are 897 Beasts, 5000 Sheep, and 232 Calves; from Spain, 60 Beasts; from Scotland, 26; from Norfolk and Suffolk, 1800; and 400 from the northern and midland counties.

	s d	s d
Best Scots, Herefords, &c. ..	5 6	to 5 8
Best Short-horns	5 2	— 5 6
2d quality Beasts	4 6	— 4 10
Best Downs and Half-breds ..	5 6	to 5 8
Do. Shorn	—	..
Best Long-wools.	5 2	— 5 6
Do. Shorn		to ..
Ewes & 2d quality	4 6	— 4 10
Do. Shorn		— ..
Lambs	5 8	— 6 4
Calves	4 4	— 5 6
Pigs	4 0	— 5 0

Beasts, 3720; Sheep & Lambs, 25,900; Calves, 298; Pigs, 240.

THURSDAY, July 12.

We have a very middling supply of Beasts both as regards numbers and quality. Consequently in choicest descriptions there is a slight advance. Sheep and Lambs are rather more plentiful; however, there is a considerable demand, and prices are not lower. Trade is rather brisk for choice Lambs at rather higher rates. For Calves trade remains as on Monday. From Germany and Holland there are 320 Beasts, 2730 Sheep, 420 Calves, and 20 Pigs; from Spain 90 Beasts; from Ireland, 51 Calves; and 105 Milch Cows from the home counties.

Best Scots, Herefords, &c. ..	5	6 to 5	10	Best Long-wools .	5	4 — 5 6
Best Short-horns	5	4 — 5	8	Do. Shorn		— ..
2d quality Beasts	4	8 — 5	0	Ewes & 2d quality	4	6 — 4 10
Best Downs and Half-breds ..	5	6 — 5	8	Do. Shorn		to ..
Do. Shorn	—	.. —	..	Lambs	5	8 — 6 6
				Calves	4	4 — 5 6
				Pigs	4	0 — 5 0

Beasts, 855; Sheep & Lambs, 12,340; Calves, 675; Pigs, 60.

COAL MARKET.—JULY 12.

Burnhope Gas, 13s. 6d.; Clark's West Hartley, 15s. 3d.; Davison's West Hartley, 15s. 6d.; Holywell, 15s. 6d.; Howard's West Hartley, 15s. 6d.; Straker's West Hartley, 15s. 9d.; Tanfield Moor, 13s.; Tanfield Moor Butes, 13s.; West Hartley, 15s.; Wylam, 16s.; Walls End Acorn Close, 17s.; Walls End Eden, 17s.; Walls End Riddell, 16s. 6d.; Walls End Wharncliffe, 16s. 6d.; Eden Main, 16s. 9d.; Walls End Framwellgate, 17s.; Walls End Haswell, 18s. 9d.; Walls End Hetton, 18s. 9d.; Walls End Kepier Grange, 17s. 6d.; Walls End Russell's Hetton, 17s. 6d.; Walls End South Hetton, 18s. 9d.; Walls End Auckland Park, 16s.; Walls End Cassop, 17s. 9d; Walls End Heugh Hall, 17s.; Walls End North Hartlepool, 15s. 6d.; Walls End South Hartlepool, 17s. 3d.; Walls End Thorpe, 17s. 6d.; Walls End Whitworth, 16s.; Carway and Duffryn Malting, 22s. 6d.—56 ships at market.

THE OFFICE OF CURATOR to the Botanic and the other Public Gardens in Liverpool is now VACANT. The salary is 100 guineas per annum, with house, taxes, coals, water, and gas.

A competent knowledge of Scientific Botany, as well as practical skill in Gardening, is indispensable.

Applications to be made by letter, enclosing testimonials, addressed to the Chairman of the Gardens' Committee, Town Hall, Liverpool, on or before the 25th instant.

WANTED, AS WORKING FOREMAN, in the Plant Department, in a Market Garden, where Plants are grown in quantities for the market, a steady active Man. References as to character and ability will be required.—Apply, personally, to J. G. BRUCE, Park Nursery, Richmond Road, Kingston, Surrey, S.W.

WANTED, in the County of Pembroke, a sober and steady Man as GARDENER, who can also Superintend a Small Farm, chiefly Pasture. Wages 50*l.* per annum, with Cottage and Garden.—Apply, with full particulars of age, family, situation held, and to whom references are to be made, to JAMES JAMES, Esq., North Sodston, Narberth.

WANTED, AS GARDENER, an active Man, who perfectly understands the management of a Greenhouse and Vines, and the Cultivation of a small Garden. Wages, 22*s.* per week.—Apply by letter to 16, Temple Street, Wolverhampton.

WANTED, a MAN who has a good knowledge of Roses; he must be an industrious Working Man, and an expert Budder.—Apply, stating where having lived, amount of wages expected, &c., to JOHN CRANSTON, King's Acre Nurseries, near Hereford.

WANTED, A GARDENER, and his Wife as Laundress, &c., without incumbrance. The Man must be strong and a Practical Gardener, about 30 years of age, willing to make himself useful in a small family.—Apply at 4, Strand, W.C.

WANTED, AN UNDER GARDENER, one who has been accustomed to Nailing and the General Work of a Kitchen Garden. No one need apply who cannot be well recommended for being a good workman, and also for sobriety and activity. Wages 12*s.* per week.—Apply to Mr. HARLAND, the Gardens, Bedwell Park, Herts.

WANTED, AS FARM STEWARD, and also to superintend a Garden, an active married Man to manage a light Land Farm; his Wife to have the care of the Dairy and Poultry.—Address W. N., Post Office, Thetford.

WANTED, A PROPAGATOR AND SALESMAN. Middle-aged. Married man preferred.—Apply, T. & G. SWAILES, Nurserymen, Beverley, Yorkshire.

WANTED IMMEDIATELY, a Young Man well accustomed to the Retail Seed Trade, as SHOPMAN.—Apply in own handwriting, stating terms and reference, to EDWIN COOLING, 42, Queen Street, Derby.

WANTED, a BOY, in a Nursery in the North of England. He must be a good Writer, as he will have to Assist in the Seed Shop. He will live with the family. One about 15 years of age, and to remain till 21.—Apply, with full particulars, to T., 41, Wellington Street, Covent Garden, London, W.C.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 30, married; understands Greenhouse and Hothouse, Flower and Kitchen Gardens. Three and a half years' character.—W.B., Post Office, West Wickham, Bromley, Kent, S.E.

GARDENER (HEAD).—Married; has a thorough practical knowledge of his profession in all its branches. Has no objection to the superintendence of Land. First-rate references.—A. B., Mr. Cutbush, Barnet Nurseries, Herts. N.

GARDENER (HEAD).—Age 30, married; perfectly understands Early and Late Forcing, Fruit, Flower, and Kitchen Gardening. Will be disengaged in a month.—JOHN WINWOOD, the Gardens, Brailes House, Shipston-on-Stour.

GARDENER (HEAD).—Age 38, married, two children; has a practical knowledge of his profession in all its various branches, including Early and Late Forcing of Fruit, Flowers, and Vegetables; Growing of Stove and Greenhouse Plants, Orchids, &c. Also the general routine of Flower and Kitchen Gardens Good character from last employer.—H. B, 14, Oxford Street, Southampton.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Married, no incumbrance; 30 years' experience; has a thorough practical knowledge of Vines, Stove and Greenhouse Plants, Early and Late Forcing, and the management of Flower and Kitchen Gardens. Six years' good character. No single-handed place accepted.—R. B., Mr. Myers's Library, Enfield, Middlesex, N.

GARDENER (HEAD).—Age 40, married; professes a practical and scientific knowledge of his profession in all its branches, including Pines, Grapes, Peaches, Figs, Melons, Cucumbers, &c.; and is a first class plant grower. Has had 200 prizes for Fruits and Vegetables. With Woods, Land, and Stock. Wife can take charge of Dairy and Poultry.—J. D., A. Henderson's, Pine-apple Place, Edgeware Road, London, W.

GARDENER (HEAD).—HENRY MAY begs respectfully to offer his services to any lady or gentleman requiring a Gardener. He lived under his brother four years while with the late Mrs. Laurence at Ealing Park, and he has subsequently been foreman in the plant department of a Nursery. In addition to his experience in the cultivation of plants and flowers, H. M. feels himself quite competent to undertake the charge of a Kitchen or Fruit Garden, and other matters connected with the duties of a gardener.—HENRY MAY, New Road, Barnet, Herts, N.

GARDENER (HEAD).—Age 40, married, no incumbrance; thorough knowledge of his profession in all its branches.—F. C., 13, Campden Grove, Kensington, W.

GARDENER (HEAD).—Single; understands the Management of Stove and Greenhouse Plants, Forcing Early Fruits and Vegetables; Flower and Kitchen Gardens. Good character.—A. Z., Dickers, Westerham, Kent.

GARDENER (HEAD).—Age 36, married, one child; is about leaving his present situation; thoroughly understands his profession in all its branches. Early and Late Forcing. Two years' good character.—J. B., at the Lodge, R. Edmund's, Esq., New Cross, Surrey, S.E.

GARDENER (HEAD).—Single; has a thorough practical knowledge of his profession in all its branches. Five and a half years' character. Good testimonials. No objection to Superintend a Farm.—T. M., 2, Argyle Street, Regent Street, London, W.

GARDENER (HEAD, to any nobleman or gentlman).—Age 36, married; has extensive experience in every department of his profession; also a good Botanist. No objection to the Management of Land if required. The highest references for character and ability, &c.—J. PRING, Gardener, Dunorlan Park, Tunbridge Wells, Kent.

GARDENER (HEAD).—Age 42, married; 27 years' experience in his profession, 16 of which in the capacity of Head Gardener; a clever and intelligent Plant Grower, including Ferns, &c., and well skilled in the routine of Forcing, Fruits, Cropping, &c. Testimonials highly satisfactory.—ALPHA, Messrs. E. G. Henderson & Son, St. John's Wood, London, N.W.

GARDENER (HEAD or good SINGLE-HANDED).—Age 34, married,: experienced; of good character.—Y. Z., 2, Bowling Green Passage, High Street, Stoke Newington, N.

GARDENER (HEAD, or SECOND). — Single; Thoroughly understands his profession. First-class reference.—X. Y., 14, Chandos Street, Strand, W.C.

GARDENER.—Married; perfectly understands the Management of the Vinery and Greenhouse, Wall Trees, Kitchen and Flower Gardens; also Early Forcing. Has no objection to the care of Meadow Land. Good character and reference given.—H. D., 40, Ebury Street, Eaton Square, Pimlico, S.W.

GARDENER.—Age 40, married; sober, active, and industrious, a native of London; has had 25 years' practical experience in the Management of the Kitchen and Flower Gardens, Growing of Stove and Greenhouse Plants, Forcing of Grapes, Peaches, Cucumbers, Melons, &c. Can keep the Conservatory gay with Flowers throughout the year.—A. B., Spring Cottage, Great Cheatham Street, Higher Broughton, Manchester.

GARDENER (PRACTICAL WORKING). — HENRY GIBSON (age 36, married, small incumbrance), seven years' Gardener to the late Sir Henry Lambert, at Aston House, near Tetworth, Oxfordshire, and with the present Sir Henry up to the time that he disposed of his property in Oxfordshire. Is now at liberty to engage with any nobleman or gentleman.—Direct as above.

GARDENER (FOREMAN).—Age 22; understands Pines, Vines, Peaches, Melons, and Cucumbers; and Stove and Greenhouse Plants.—G. L., Messrs. Rollissons, Nursery, Lower Tooting, Surrey, S.

GARDENER (FOREMAN).—Age 26; acquainted with Plant Growing and Early and Late Forcing, &c. Highest testimonials given.—J. W., Pine Apple Nursery, Edgeware Road, London, W.

GARDENER (UNDER) or FOREMAN.—Age 26; has a practical knowledge of his profession, Flower and Kitchen Gardens, Plants, &c. Nine years' good character.—A. B., Mr. Hannam, Bookseller, High Street, Knaresborough.

TO NOBLEMEN'S AND GENTLEMEN'S GARDENERS.

FOREMAN. — W. TAYLOR, Gardener, Shrubland Park, Suffolk, will be glad to recommend a young Man who has lived under him nearly two years and is a most competent and trustworthy Man.—Address as above.

FOREMAN (in a nobleman or gentleman's establishment).—Age 24, single; has a thorough knowledge of Orchids, Stove and Greenhouse Plants, the Forcing of Early and Late Fruits, &c.; has had great experience in Specimen Plant Growing, also with exhibiting at the Metropolitan and Provincial Shows. Character will bear the strictest investigation.—A. B., Mr. Geirr, Grecian Villa, Norwood, Surrey, S.

GENERAL FOREMAN OR GROUND FOREMAN in a NURSERY.—Thoroughly understands the Propagation and Growth of Fruit and Forest Trees, Shrubs, Roses, and Coniferæ. Good references as to character, ability, &c.—A. B., Mr. Heale's, 9, Boston Place, Brook Street, Upper Clapton, N.E.

GENERAL FOREMAN, SALESMAN, OR PLANT GROWER.—Extensive practical experience and knowledge of plants, also Designing and Landscape Gardening.—FRUTEX, Catleigh Nursery, Hans Street, Chelsea, S.W.

PROPAGATOR (SOFT-WOODED).—Age 22. Satisfactory references can be given.—G. H., Mr. Goring, Memel Cottage, Oatlands Park, Walton, Surrey.

IMPROVER (UNDER, in a nobleman or gentleman's Garden).—Age 18. Good character. A Premium will be given if required.—A. B., Post Office, Ashford, near Staines, Middlesex.

ASSISTANTS.—Two young Scotch Gardeners wish for situations as above where not less than three are kept. One of them has been Foreman in his present situation for three years.—J. M., Sundrum Gardens, Ayr, N.B.

BAILIFF, or BAILIFF AND GARDENER.—W. P. AYRES having completed his engagement in the formation of the Forcing and Pleasure Gardens to the new mansion at Orchardleigh Park, will shortly be at liberty to enter upon a similar engagement. During his residence (four years) at Orchardleigh W. P. A. has had the general supervision of the Estate Improvements, Draining, Remodeling of Farms, Receiving Rents, &c. He has also Designed and erected a Farm residence and covered Homestead of the first class: is thoroughly conversant with the principles of Construction and Artificers and Ground work of all kinds. Liberal remuneration expected.

*** W. P. A. has been known to Professor Lindley, the learned Editor of the *Gardeners' Chronicle*, for upwards of 20 years, and has the honour to refer to him as to his professional capabilities.—Orchardleigh Park, Frome.

COACHMAN, in the Country.—Age 35, single; 4½ years' good character.—A. B., Printing Office, Bolton St Nicots, Herts.

The Gardeners' Chronicle Newspaper.

SATURDAY, JULY 14, 1860.

CRYSTAL PALACE.—GRAND ARCHERY MEETING.—The SECOND ANNUAL MEETING of the ARCHERS of the UNITED KINGDOM will take place in the Grounds on WEDNESDAY and THURSDAY, July 18 and 19. Ladies and Gentlemen desirous of competing are requested to make immediate application to the Manager of the Meeting, Mr. N. MERRIDEW, Crystal Palace, Sydenham; or to Mr. THOMAS ALDRED, Hon. Local Secretary, Crystal Palace, Sydenham, S.E., who will furnish every information in reference to the Meeting. Shooting will commence each day at 11 o'clock by the Gentlemen, and 2 by the Ladies. Display of the Great Fountains and Entire Series of Waterworks on WEDNESDAY, at 5 o'clock.—Open at 10. Admission each day, 1s.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY BEING ABOUT TO RESUME THE IMPORTATION OF SEEDS AND PLANTS by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

News of the Week.

IN the House of Lords on Monday, in answer to the Marquis of NORMANBY, Lord WODEHOUSE said that every effort had been made, and severe measures adopted by General GARIBALDI to stop all violence and outrage among the Sicilians. On the motion of the Duke of SOMERSET the Naval Discipline Bill was read a second time. The report upon the amendments of the Criminal Lunatics Bill was brought up and received, and the Law and Equity Bill passed through committee. On Tuesday Lord STRATFORD DE REDCLIFFE called attention to the recent massacre of Christians in Syria, and insisted on the necessity of some decided step being taken by the British Government on the subject. Lord WODEHOUSE said that her Majesty's Government had instructed Admiral MARTIN to take the Mediterranean fleet to the coast of Syria, and to adopt such steps as he might consider necessary for the protection of the Christians. HER MAJESTY'S Government had also been in communication with Turkey, Russia, Prussia, Austria, and France as to the measures which would become necessary, and that it was the wish of both the French Government and our own that Turkey should repress these disorders herself, and take securities against any repetition of them. On Thursday the Jews Act Amendment Bill passed through committee. Lord MAYO moved for a select committee to inquire into the efficiency of the new Harbour of Refuge at Holyhead. The Duke of SOMERSET opposed the motion, and after some discussion it was withdrawn.

In the Commons on Friday the adjourned debate on Lord PALMERSTON'S Privilege resolutions was resumed by Mr. D. SEYMOUR, who contended that the resolutions were insufficient for the occasion. Mr. HORSMAN supported the resolutions; Mr. BRIGHT recommended the House to give the Peers an opportunity of reconsidering their decision, by sending up another Bill. The first resolution was then agreed to without a division. On the second resolution Mr. MELLOR moved a verbal amendment, which was opposed by Lord PALMERSTON, and negatived on a division by a majority of 317, the numbers being 369 to 52. Mr. WHALLEY then moved the adjournment of the debate, which was negatived on a division by a majority of 397, the numbers being 433 to 36. The resolution was then agreed to. On the third resolution being put Lord FERMOY renewed the motion for adjournment. After some discussion the motion was withdrawn, and the resolution was adopted without a division. On Monday on the order of the day for resuming the debate on the Report upon the Bankruptcy and Insolvency Salaries, &c., Bill, the ATTORNEY-GENERAL intimated his assent to the recent vote by which the House had disallowed the proposal to charge the compensations on the Consolidated Fund. He explained the means by which he proposed to provide a fund for these compensations, and which consisted principally in a slight augmentation of the County Court fees, the salaries of the judges of those courts being equalised and placed on the Consolidated Fund. After some discussion the report as amended was agreed to. The House then went into committee on the Bankruptcy and Insolvency Bill, and agreed to about 50 clauses. On arriving at clause 77, the Chairman was ordered to report progress, and the House resumed. Lord PALMERSTON then moved that the committee on the Bill should sit again on Thursday morning. This motion was opposed, but was carried on a division by 135 to 66. On Tuesday the adjourned debate on the consideration of the Nuisances Removal and Diseases Prevention Bill was resumed, and eventually the Bill was recommitted. Some progress was made in committee on the Savings Banks and Friendly Societies' Investments Bill. Mr. COCHRANE moved that the House resolve itself into a committee to consider an address to Her Majesty to place the officers and men of the fleet in China on the same footing as the troops with respect to extra pay and allowances. Lord C. PAGET said that it was his intention in the course of a few days to propose a vote as an extra reward to the officers and men engaged in the last operations in China, and that when the present operations were concluded a further reward in the shape of batta would be distributed among them. Mr. COCHRANE thereupon withdrew his motion. Mr. WYLD obtained leave to bring in a Bill to alter and amend the law and practice relating to the taking of votes at elections for members to serve in Parliament. The House then went into committee on the Gas (Metropolis) Bill, when Mr. STANILAND made a statement in behalf of the gas companies and moved that the Chairman leave the chair After some discussion the Bill, at the suggestion of Mr. S. ESTCOURT, was referred back to the select committee. The Smithfield Market, Streets, and Improvements Bill passed through committee. The House then went into Committee on the Roman Catholic Charities Bill, when the third and fourth clauses, after a protracted discussion, were agreed to, and the Chairman was ordered to report progress. On Wednesday the House went into committee on the Census Bill for England and Wales. On clause 4, which raised the question as to religious profession, Mr. BAINES, in the interests of the Dissenters, moved as an amendment that the words "religious profession" be struck out of the clause. Sir G. LEWIS condemned the opposition made by the Dissenters to the clause, but said that as the returns would probably be incomplete if the words objected to were retained, he would assent to the amendment. After considerable debate the amendment was agreed to, as were also the remaining clauses. The Bill then passed through committee. The House next went into committee on the Census (Ireland) Bill, when Mr. CARDWELL said it was the intention of the Government to take the religious census in Ireland, where the people were unanimously in favour of it. All the clauses were then agreed to, and the Bill passed through committee. On Thursday in answer to Sir R. PEEL, Lord J. RUSSELL said that it had been the policy of HER MAJESTY'S Government during the late events in Sicily and Italy to leave the people of Sicily, Naples, and he would add the Roman States, to decide for themselves the form of government under which they chose to live. On the order for going into committee of supply, Sir J. TRELAWNY moved as an amendment that the House postpone the consideration of further supplies until the Paper Duty Repeal Bill should have become law. On a division the amendment was negatived by 198 to 13. The House then went into a Committee of Supply, when Mr. S. HERBERT moved a vote of 3,800,000*l.* for the expenses of naval and military operations in China beyond the ordinary grants for the year 1860-1, which included, he said, the sum of 443,896*l.* due to the Indian Government for advances on account of former expeditions to China. After considerable discussion the vote was reduced, at the suggestion of Sir H. WILLOUGHBY, by the sum of 443,896*l.*, to be voted separately. The vote of 3,356,104*l.* was then agreed to, and the Chairman was ordered to report progress. On the order for the third reading of the Annuity Tax Abolition (Edinburgh) Bill, Mr. DUNLOP moved as an amendment that the Bill be read a third time that day three months. On a division the amendment was negatived by 204 to 17, and the Bill was read a third time and passed.

Accounts from Beyrout confirm the telegraphic announcement of the massacre of the Christians of Zahleh, Hassebaya, Rachaia and Der-el-Kamar, and state that the Christians of Beyrout, Damascus, Aleppo, Jerusalem, and other places in Syria, were in imminent danger of becoming the victims of similar atrocities at the hands of the Druses, aided it is said by the Turkish soldiery. At Beyrout nearly the whole of the Frank inhabitants had taken refuge on board the English, French, and Russian men-of-war in the roads, and parties of marines had been landed from the ships to assist in maintaining order in the town. The latest news announces that the arrival of ISMAEL PACHA, one of the heroes of Kars, with 2500 men, had tended in some measure to restore confidence. From Constantinople we learn that the Turkish Government has also sent FUAD PACHA to Beyrout with full powers and with reinforcements which will raise the troops at his command to 16,000 men.—A despatch from Cagliari announces that the Neapolitan steam corvette, Veloce, of 6 guns, has gone over to Garibaldi.—Accounts from Canton announce the defeat of the Imperialists by the rebels, and confirm the report that extensive forts had been erected at Taku. The British force had left for the Peiho, and hostilities were considered inevitable.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Osborne. On Thursday the 5th the Prince and Princess of Leiningen and Prince William of Baden visited the Queen, and remained to luncheon. In the afternoon her Majesty and the Prince Consort, accompanied by the Duke of Saxe-Coburg and Princess Alice, drove to Ryde in an open carriage and four. On Friday the Queen and Prince Consort, with the Prince of Wales, Princess Alice, Princess Helena, and the Duke of Saxe-Coburg, drove to Ventnor, and returned to Osborne by the Undercliff and Shanklin. On Saturday the Queen drove in an open carriage to Carisbrook Castle, accompanied by Princess Alice, Princess Louisa, and Prince Arthur. The Prince Consort, with the Prince of Wales and the Duke of Saxe-Coburg, rode on horseback. On Sunday morning the Queen, Prince Consort, the Prince of Wales, Prince Arthur, Princesses, Alice, Helena, and Louisa, and the Duke of Saxe-Coburg attended Divine service at Osborne. The Rev. G. Prothero officiated. In the afternoon the Duke of Saxe-Coburg took leave of her Majesty and the Prince Consort, and left Osborne for Buckingham Palace, on his return to Germany. The Duke of Newcastle arrived on a visit to her Majesty. On Monday morning, at 9 o'clock, the Prince Consort and the Prince of Wales left Osborne for Plymouth, where her Majesty's ship Hero was in waiting to convey the Prince of Wales to Canada. The Queen, accompanied by the Princess Alice and Prince Arthur, embarked at Trinity Wharf with the Princess Consort and Prince of Wales in the Fairy, which conveyed their Royal Highnesses to the Victoria and Albert in Cowes Roads. Her Majesty, with the Princess Alice and Prince Arthur, remained in the Fairy, which followed the Royal yacht for some distance, and then returned to Trinity Wharf, where her Majesty and the Royal party landed, and returned to Osborne. On Tuesday morning the Queen and the Royal family walked in the grounds. In the afternoon the Prince Consort landed at Osborne pier from Plymouth. Her Majesty, with Princess Alice, drove down to the pier to meet his Royal Highness. On Wednesday the Duchess of Kent arrived at Osborne from Frogmore on a visit to her Majesty. The Duchess drove out in the grounds in the afternoon.

DEPARTURE OF THE PRINCE OF WALES FOR CANADA.—The Royal yacht Victoria and Albert arrived at Plymouth on Monday evening at 7 o'clock, with the Prince of Wales and Prince Consort on board. Sir Charles Fremantle's squadron, which had arrived off the port in the morning, formed two lines to receive the Royal yacht, which was saluted by the Impregnable and other ships in Hamoaze. On rounding the west-end of the Breakwater the yard-arms of the Hero, 91, St. George, 91, Emerald, 51, and Ariadne, 26, were manned, and the three latter and Plymouth Citadel saluted. Shortly after their arrival the Corporation of Devonport went on board the Royal yacht and presented the Prince of Wales with a congratulatory address, which was graciously received and replied to by his Royal Highness. About 2 P.M. the Prince went on board the Hero,

done that day to a simple soldier returned from the performance of his duty." His lordship, who was accompanied by Major Alison and Colonel Stirling, his aides-de-camp, shortly afterwards left for London, amid further demonstrations of respect.

PARLIAMENTARY MOVEMENTS.—The Brighton election terminated on Monday in the return of Mr. White by a large majority. The numbers were, for Mr. White, 1588; Mr. Moore, 1242; Mr. Goldsmid, 548.—Lord Hamilton has been elected for Donegal without opposition.—A meeting of the electors of Galway has been convened for the purpose of calling upon Mr. Lever to resign his seat.

THE CHANNEL FLEET, consisting of 11 sail-of-the-line, arrived in Bantry Bay on Saturday.

CANADIAN BISHOPRICS.—The Queen has directed letters patent to be issued, under the Great Seal, appointing the Lord Bishop of Montreal and his successors to be Metropolitan Bishops of Canada.

THE CANADIAN ARMY.—The Queen has appointed Col. the Hon. Sir Alan Napier Macnab, Bart., Commanding 7th Military District, Upper Canada, and Col. the Hon. Sir Etienne Paschal Taché, Commanding 2d Military District, Lower Canada, to be Aides-de-Camp to her Majesty with the hon. rank of Colonel in the Army.

BIRTHS, MARRIAGES, AND DEATHS.—During the last 15 years—that is to say, since 1845—9,178,621 births, 6,163,403 deaths, and 2,285,520 marriages have been officially registered in England and Wales. The population, which amounted to about 16,720,000 in 1845, was estimated at about 19,740,000 in 1859, being an increase of about 18.06 per cent. or 1.20 per cent. annually. This increase, it should be remembered, has taken place notwithstanding a considerable emigration and several wars of more or less magnitude. In France the population, notwithstanding a comparatively feeble emigration, has only increased in the same period from 3 to 4 per cent.

Foreign.

FRANCE.—The *Moniteur* of yesterday publishes the following article in reference to a military intervention in Syria:—

"In presence of the deplorable events of which Syria is the theatre, and which have caused deep emotion throughout Europe, the Government of the Emperor has deemed it its duty to communicate its views without delay to the cabinets of the other Great Powers, and to the Porte, in order to concert the measures which circumstances demand."

The Emperor has already despatched General Trochu as Envoy Extraordinary to Syria. He is to embark in the new steamship of the line Fontenoy, at Toulon, and it is said that he will be followed by a division of troops, to be drawn from the army of Lyons. Six steam gunboats have also been despatched from Toulon to Syria, at the request of Commodore de la Ronciere le Nourry, who commands the French fleet in the Levant.—The *Constitutionnel* contains an article by its chief editor, M. Grandguillot, against the false rumours which are current concerning the acts and intentions of the Emperor, and stating that a treacherous conspiracy is plotting against him by the parties of the old *régime*. The article states that the malignity of these parties is endeavouring to sow mistrust between France and England, Spain, Portugal, Germany, Belgium, and Italy, by attributing false designs to the Emperor, who would treat such inventions with contempt had they not, unhappily, found too ready a credence in Europe, thus encouraging a distrust which is injurious to the progress of affairs. It dwells on the facts that, in the event of Russia seizing Constantinople and holding the Dardanelles, England must necessarily fall to the rank of a second-rate Power; that there is now no serious ill-will on the part of France against Russia, for Russia has inspired France with esteem, and France returns it; that the conquest of Turkey by Russia would rather strengthen France than weaken her; that Germany must soon understand that she must be on good terms with France; that Germany is too divided and too weak to be relied upon by England; that whereas England is indifferent to, or not alarmed by the encroachments of Austria, the moment France obtains "a few glaciers necessary for her defence" she at once cries out and protests; and that if England does not change these sentiments, "the alliance with France is but a word; it is too onerous." Another pamphlet has appeared under the significant title of *La Politique Anglaise*. Its object is to show that if the policy of England, inspired by hatred to France, inclines her to rely on Germany, she commits a grievous fault. England, it says, should, on the contrary, maintain the alliance with France, for the danger she apprehends will not come from Brest or from Cherbourg, but rather from New York and Cronstadt. It considers that it is a piece of folly for England to be always thinking and dreaming about French invasion. France need not take the trouble of invading, for a single naval battle lost by England would be sufficient to annihilate English preponderance; a defeat at sea would be her ruin; but a naval battle lost by France would have no greater consequence than the loss of a fleet. It concludes by saying:—

"In fact, a sincere peace between France and England would be the continuation of England's maritime grandeur; it would be the West driving back Islamism to Asia. Justice for France would be France on the Rhine, but the Bosphorus free. If the contrary take place—that is, the German instead of the French alliance—it would mean France aggrandised and the Czar at Constantinople; the route would be closed against England, and her maritime royalty would be suppressed for ever."

In consequence of the determination of the Legislative Body to insist on an amendment to the Bill for reducing the export duty on rags and other raw materials of paper, in order to render their exportation more difficult, the Government has withdrawn the Bill for the present, but with the intention of bringing it forward again at the earliest period of next session. Meantime the question will undergo the fullest discussion, and English manufacturers are invited to contribute any arguments or evidence which their experience enables them to furnish upon the subject.—The *Moniteur* announces that the project of law for the purchase of the canals has been adopted, and contains the appointment of Admiral Rigault de Genouilly as Senator. The Marquis La Greca has arrived in Paris from Naples on a special mission to the Governments of France and England, with the view of obtaining their support in inducing Sardinia to form an alliance with Naples.—The steel-plated frigate Gloire was floated at Toulon on the 9th inst., after having been plated with steel of the thickness of 13 centimetres. The operation has perfectly succeeded. The Gloire will be armed with 36 rifled cannon, carrying shot 30 lbs. weight. The machines are of 900 horse-power, and it is believed that a crew of 600 men will be sufficient to navigate her. The screw ships-of-the-line Massena and Castiglione lately launched are to be prepared for sea as quickly as possible.

BELGIUM.—The Belgian Senate has terminated the discussion of the Bill abolishing the octroi dues. It rejected an amendment to give the law a temporary character, and to subject it to a revision at the end of five years. The final vote on the bill was 37 votes in its favour to 15 against it. There are therefore no more octroi duties in Belgium.

HAMBURGH.—In the sitting of the Commonalty of Citizens on the 13th inst. the constitution, as proposed by the Senate and with the alterations already known, was adopted by 116 to 23.

PRUSSIA.—The official journals announce that the Emperor of Austria and the Prince Regent will hold a conference next week at Töplitz, and that an interview will take place between the Emperor of Russia and the Prince of Prussia, in September next, at Warsaw. Several Vienna journals state that some other German Sovereigns, especially the Kings of Bavaria and Saxony, will take part in the conference at Töplitz. The Prince Regent has granted a sum of 10,000 crowns for the monument to Goethe, which is to be similar to that which is now erecting to the memory of Schiller. The Government intend to send a ship of war and several steam transports to Naples.

AUSTRIA.—The Emperor has addressed an autograph letter to the President of the Reichsrath notifying his resolution that all questions relating to taxation, excise and stamp duties, and the concluding of new loans, shall in future be subject to the assent of the enlarged Council of the Empire. From the explanations furnished by the new Minister of Finance to the Budget Committee of the Council it results that, were the hopes for the maintenance of peace to be confirmed, the Government would make fresh reductions in the army, with the view of confining the expenses of the War Department to 80,000,000 florins. By this economy, which would amount to 20,000,000 florins in the budget of the current year, the Minister of Finance would have the certainty of being able to present an equilibrium in the budget for 1861. The frigate Radetzky has been ordered to proceed to Syria in order to co-operate with the vessels of the other Powers for the protection of the Christians.

ITALY.—A conflict took place at Naples on the 15th inst. between the troops and the people, in consequence of a popular manifestation in favour of the refugees who had disembarked at Naples. The conflict was provoked by soldiers of the Royal Guard, who shouted, "The King for ever!" "Down with the Constitution!" while other soldiers in the Pizzofalcone barracks raised cries in favour of Prince Luigi, the eldest son of the Queen Dowager. The troops fired upon the people, killing several and wounding 50 others The Ministry immediately resigned, the Commander de Martino alone remaining in office; but on the King disavowing all knowledge of the proceedings of the troops, and professing his adhesion to Constitutional principles, the Ministers consented to remain in office. They have since ordered the removal of the Royal Guard from Naples, and the departure of the other troops to the fortresses, all the posts being intrusted to the National Guard. Count de Cutrofiano, military commandant of Naples, has resigned and been succeeded by Gen. Viglia Patrols were constantly traversing the streets, and the moderate party was full of apprehensions concerning the future course of events. An inspector of the former police was stabbed a few days since in the Strada di Toledo. Proclamations of Garibaldi and Settembrini against the Bourbon dynasty had been distributed in Naples. The first one says, "I am a Royalist, but prefer Victor Emmanuel, who will lead us against the Austrians."—Accounts from Turin state that Signor Amari has arrived from Sicily, and that Signori Manna and Winspeare, the Neapolitan Plenipotentiaries on a special mission, were received on the 17th by Count Cavour. They were to proceed from Turin to Paris and London.—Letters from Rome state that the revolutionary movement in Umbria had assumed so much importance at Todi that the Sardinian escocheon had been erected and tricoloured flags hoisted. A detachment of Pontifical troops arrived there and imposed a fine on the commune, to be reimbursed however by the rioters. A secret Consistory was held on the 13th, in which the Pope pronounced an allocution against the arrest and condemnation of the Bishops of Pisa, Imola, Faenza, and Piacenza by the Sardinian Government, approving the conduct of those Bishops, and designating the annexation of the Duchies and the Legations to Piedmont as a usurpation. The Duke de Grammont, the French Ambassador, had a long audience of his Holiness on the 14th. There is no foundation in the rumours that the French army of occupation in Rome will be reduced by a brigade, or that General Goyon has been re-called. Cardinal Wiseman has undergone a painful surgical operation, and his illness has since become more serious.

SICILY.—Advices from Palermo to the 8th inst state that Signori La Farina, Griselli, and Totti, who arrived at Palermo on the 7th, were immediately sent away from Sicily by order of the Dictator. Griselli and Totti are Corsicans, affiliated to the police of the Continent. The official journal says that the three were expelled for having conspired against order, and that the Government, which watches over public tranquillity, could not tolerate the presence of such individuals. The National Society, it adds, whose resources have been reduced since Garibaldi declined the presidency, "has been rather a hindrance than an assistance to the Sicilian cause." In consequence of the expulsion of these persons the Ministry sent in their resignations, which were accepted. This example was followed by the other authorities. A new Ministry has been formed, La Loggia, Saporta, and Orsini remaining in it, and Signor Interdonato, Amari the historian, and Signor Erranti being among the members. Sanguinary combats have taken place near Messina between the Neapolitan Colonel Bosco and the advanced guard of the Sicilian army. An engagement between the two armies was imminent. Garibaldi had joined Colonel Medici at the village of Barcellona with 3000 volunteers. The vessels which have passed over to Garibaldi are mercantile steamers employed as transports by the Government. Admiral Mundy had left Palermo for Naples, and there were scarcely any but Sardinian vessels in the roads of Palermo. Garibaldi has ordered the assassin of Colonel Puglisi to be arrested.

TURKEY.—A despatch from Constantinople states that nothing has yet been decided respecting the interference of the great Powers in Syria. Negotiations are in progress, however, on the subject. The Sultan has addressed the following letter to the Emperor of the French, and it is said that a similar one has been sent to Queen Victoria:—

"I have it at heart that your Majesty should know with what grief I have learnt the events in Syria. Let your Majesty be convinced that I shall employ all my powers for establishing security and order in Syria, and that I shall severely punish the guilty parties, whoever they may be, and render justice to all. In order to have no doubt whatever of the intentions of my Government, I have intrusted this important mission to my Minister for Foreign Affairs, with whose principles your Majesty is acquainted."

THE CAUCASUS.—Another battle was fought on the 15th ult., between the Circassians and the Russians. A strong Russian detachment was escorting a large remittance of specie to a military station, when they were assailed by the mountaineers, and, after an obstinate fight, defeated, with the loss of the whole convoy of roubles. The prize being so considerable, the struggle is said to have been proportionately bloody, with corresponding loss on both sides. Six days before a general exchange of prisoners had taken place at Soujak.

SYRIA.—The state of things in Syria continues to be of the gravest character. A fearful massacre has taken place at Damascus. On the evening of the 9th inst., the Druses attacked the Christians of that city, putting 500 men to the sword, and carrying off the women for the harems. The Dutch Consul was among the murdered, and the American Consul was wounded. All the Consulates were burnt down, with the exception of the English. The French, Russian, and Greek Consuls took refuge in the house of Abd-el-Kader, who had done everything in his power to arrest the atrocities of the Druses, and had led 1200 Algerians to the support of the French Consul, who had displayed the greatest energy, and had proceeded along the coasts supplying provisions to the refugees, and defending the port of Sayda. The attitude of the Turkish authorities had been indecisive, and rather injurious than usefu to the Christians. The Pacha affected to negotiate for peace, but the Maronite tribes were claiming indemnities. Accounts from Beyrout to the 5th inst. state that a Christian having killed a Turk from whom he had received provocation, the inhabitants took to arms, ill-treated the Christians in the streets, and compelled the authorities to behead the murderer. The presence of the ships of war prevented greater misfortunes, but there was an enormous immigration of Christians into the town from other places, and thousands of Maronites and many wounded encumbered the streets, being fed and nursed by the French Sisters of Charity. 3000 Turkish soldiers arrived on

the 11th. The fears of the Christians were somewhat allayed, but the Commissioners Vely and Namick Pachas were expected with impatience. Great agitation prevailed at Aleppo and at Killis, and fears were entertained for the Christian inhabitants of those places. The Metualis at Balbeck, in the Pashalik of Acre, appeared very ill-disposed. The Catholic Bishop of Latakia had taken refuge on board a French steamer, with all the monks of the Convent of Ziaret. Serious apprehensions were felt for the safety of the Patriarch of Antioch, who was making a tour in the neighbourhood of Damascus. Tyre was very nearly being the scene of excesses similar to those at Damascus, but the energetic conduct of an Englishman, Mr. Harvey, with the crew and guns of his yacht Claymore, saved the town and population from a band of Druses and Metualis who were marching on it. M. Portalis, a French cotton-twist manufacturer in the Lebanon, had saved the Christian inhabitants of the neighbouring villages, having granted a refuge to 1800 persons, and driven back the enemy. It was believed that the originators of the disturbances had connections with some other points of the Ottoman territory. The Count de Paris, who was at Damascus with his brother, the Count de Chartres, when the massacres on Mount Lebanon commenced, embarked in the first steamboat which sailed from Beyrout for Athens.

INDIA.—The Calcutta mail has arrived with news to June 4. The following are the most important items :—

Calcutta.—Lord Canning has given his strong adherence and support to Mr. Wilson's measures, and there is no doubt they will be carried, with a few modifications, in detail. The tobacco tax is to be levied in the form of a license tax. Lord Clyde has returned to England by this mail, and his successor Sir H. Rose has reached Calcutta.

Oude.—The dissatisfaction among the people of Oude, consequent on the imposition of an income-tax, is reported to have subsided.

Madras.—A large meeting of the natives has been held to vote an address of sympathy to Sir Charles Trevelyan.

Zanzibar. — News has been received at Bombay from Zanzibar that a French frigate, on being refused certain concessions, fired upon the town and landed marines. The Imaum then surrendered.

UNITED STATES.—The American Secretary of the Legation to China had arrived at Washington bearing the ratification of the treaty, and an autograph letter from the Emperor of China. The bark Kate, Captain Otto, had been seized off New York on suspicion of being a slaver. The case of the capture of Miramon's two steamers, the Marquez and the Habana, which was recently tried at New Orleans, had been decided, the judge having declared these steamers not to be lawful prizes, and ordered their restitution. The claim for indemnity was withdrawn. The Japanese Ambassadors took their final departure from the United States on June 30, in the frigate Niagara. The Great Eastern having been cleaned and renovated was opened for public exhibition on the 3d inst., and was visited by 1500 persons at a dollar a head. The 84th anniversary of the independence of the United States was celebrated on the 4th inst. with great enthusiasm. Madame Emile Zulavsky Kossuth, the sister of Louis Kossuth, died at Brooklyn on the 29th June. A large meeting of the Democratic party was held in Tammany Hall, New York, on the 2d inst., to ratify the nomination of Mr. Douglas for the Presidency and Mr. Johnson for the Vice-Presidency. The administration and the secession movement were strongly denounced.

MEXICO.—The latest advices from Mexico state that the clerical party had been defeated by the Liberals, and that Miramon had been taken prisoner near Salamanca.

HONDURAS.—Advices from the Bay Islands, dated Ruatan, the 20th June, state that the cession of the islands to Honduras was unfavourably looked upon. Fifty troops had arrived from Belize to maintain order. The people objected to the treaty, and it would probably be amended.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Scottish Drainage and Improvement Company's Bill.*—On the motion for the third reading of this Bill, Lord ST. LEONARDS moved that the further consideration of the Bill be postponed for a fortnight. After a long discussion, in which Lord STANLEY of ALDERLEY, the Earl of DERBY, the Duke of BUCCLEUGH, the Duke of MARLBOROUGH, and other peers took part, the motion for the adjournment was negatived by 39 to 36. The Bill was then read a third time and passed. The *Galway Harbour Bill*, the *Criminal Lunatics Asylum Bill*, the *Ionian Islands (Marriages) Bill*, the *Railway Cheap Trains, &c., Bill*, the *Phœnix Park (Dublin) Bill*, *Tenison's Charity Bill*, and the *Local Government Supplemental Bill* were read a third time and passed. The *Indemnity Bill* passed through committee.

MONDAY.—Earl GRANVILLE, in postponing the second reading of the *New Zealand Loan Bill*, took the opportunity of stating that the reports of the outrages by the natives in that colony had been much exaggerated. *The Conference.* — The Marquis of CLANRICARDE moved for certain papers connected with the Treaty of 1815, respecting the military boundary of Nice and Savoy. He entered at some length upon the general question of Italian affairs, and stated that the late annexation of Savoy to France had violated the international law of Europe, unsettled the minds of men in Europe, and produced a feeling of uneasiness which the late Conference at Baden had only increased. He thought that the Government should, at the approaching Conference, seek some assurance from France that this principle of annexation, as sanctioned by the Treaty of Turin, would not be carried further.—Lord WODEHOUSE, while concurring in the motion, stated that the Government were ready to support the independence of Switzerland. He was of opinion, however, that it would be inexpedient to seek any assurance from France on this subject. In entering the Conference her Majesty's Government did not necessarily admit the Treaty of Turin, while they might find the means there of allaying the fears of Switzerland.—The Marquis of NORMANBY said he anticipated good results from the Conference.—Lord STRATFORD DE REDCLIFFE had no faith whatever in the Conference, unless it would secure guarantees for the independence of Switzerland. He thought it would place Switzerland in a painful position, which might end in producing coolness between France and this country, which was as undesirable on the one hand as too close an alliance on the other.—Lord BROUGHAM expressed his approval of the Conference, as the manly conduct of the Swiss had attracted to them the sympathies of Europe. He did not believe that France had gained, either territorially or strategically, by the annexation of Savoy and Nice as much as she had lost in the opinion of Europe by that proceeding. He could not agree with Lord Stratford de Redcliffe's opinion on the French alliance, believing that it was of the greatest importance to the interests of the two countries and the surest guarantee for the peace of the world. The motion was then agreed to.

TUESDAY.—*The Cunard Line.*—Lord BROUGHAM called attention to the fact that persons of colour, free citizens of the United States, had been refused a first-class passage on board one of the Cunard steamers.—Earl GRANVILLE was not sorry that the attention of the House had been called to the case, but it was one in which the Government could not interfere.—Lord BROUGHAM said that in a similar case which took place some years ago an action had been brought against the captain of the vessel, but though damages could have been recovered the case was compromised.—The *Annuity Tax Abolition (Edinburgh and Montrose) Bill* and the *Titles to Land (Scotland) Act* (1858) *Amendment Bill* were read a second time.—The LORD CHANCELLOR called the attention of the House to the *Law of Marriage in Scotland*, and laid on the table a Bill to assimilate the marriage law of that country to those of England, and especially in rendering decrees of divorce in the Scotch Courts binding in England.—Lord WODEHOUSE, in reply to Lord STRATFORD DE REDCLIFFE, was sorry to confirm the intelligence in the morning papers relating to the *Massacre of Christians at Damascus.* About 500 persons had been massacred, among whom was the Dutch Consul. The American Consul had been wounded, and the houses of all the consuls, with the exception of the British, had been burnt.

THURSDAY.—The *Annuity Tax Abolition (Edinburgh and Montrose) Bill* passed through committee.—The Earl of DERBY called attention to the mode of conducting the *Business of the House.* After six months' toil only 36 Bills had been passed, and 13 were waiting for the Royal assent. He therefore urged the necessity of improving the system, which was more at fault than the Legislature itself. He owned that the House of Commons was better fitted for originating, and the House of Lords for revising, Bills; but he could not approve of the manner in which the Lower House treated measures which were sent down to them from the Lords. Confusion was the result, and a large number of Bills had to be regularly abandoned at the close of every session. He could not himself venture to suggest a remedy unless, perhaps, that it would be judicious to regard the prorogation as an adjournment, so that measures might be resumed in a succeeding session at the same stage at which they were left off in the preceding session. At all events, the subject was one that might be fairly referred to a select committee, and he made a motion to that effect.—Earl GRANVILLE, while admitting the existence of the evil, confessed that he was unable to suggest a remedy. It was desirable, perhaps, that inquiry should be made, but he thought the best way of accomplishing that object would be by the appointment of a joint committee of the two Houses. At present, however, no steps could be taken, in consequence of the advanced period of the session and the soreness felt by a section of the House of Commons at the recent proceedings of their lordships.—After some discussion, in which Lord BROUGHAM, Lord REDESDALE, and other lords took part, the motion was withdrawn. Several Bills were forwarded a stage.

FRIDAY.—*South-Western Railway.*—Lord WYNFORD presented a petition of local interest complaining of certain conduct of the South-Western Railway Company. He objected to a private Bill entitled the London and South-Western Railway (Kingston Extension, &c.).—A prolonged discussion arose in which Lord EBURY, Earl GRANVILLE, Lord REDESDALE, and other lords took part. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Conference.*—Mr. KINGLAKE asked what Powers were expected to take part in the Conference relative to Savoy and Switzerland?—Sir R. PEEL declared that it was not from France, but from Switzerland, that the proposal for the Conference had come. He warned the House that the test of universal suffrage, as applied to the annexation of Savoy was most fallacious.—Mr. B. OSBORNE said that after reading the despatches he was quite willing to leave the management of our foreign affairs in the hands of Lord J. Russell. He wished to know whether the statement of Mr. Kinglake, made on the preceding evening, as to the proposals of the Emperor of Austria at Villafranca to the Emperor of the French, were correct?—Lord J. RUSSELL recapitulated the three modes proposed by the French Government for reconciling the Treaties of Vienna and Turin. Of these three her Majesty's Government had chosen a Conference. But no direct answer had been received from other Powers, so that at present nothing had been decided. With respect to the statement made by Mr Kinglake, he said that what had occurred at the conference at Villafranca could have passed only between the two Sovereigns, no other person being present, and, though the Government had received various accounts, more or less official, as to the general substance of the conference, they had not received any information that the proposal alluded to was made. *Galway Packet Contract.*—In answer to Sir S. NORTHCOTE, Mr. LAING said that the proposed purchase of the Galway contract by the Canadian company had only recently assumed a definite shape. The assent of the Home Government and of Parliament was still required. The subject was under consideration by her Majesty's Ministers, and if the negociation went forward, the question would be duly submitted to the House.—Lord PALMERSTON added that he had been obliged to give a negative to the conditions of the transfer of the contract when put into his hands on Wednesday, because an answer "aye" or "no" was required on the spot.—Sir F. BARING hoped that the Government would enter into no fresh engagements until the House had formally discussed and decided the vote for the Galway contract.—*Volunteers in Ireland.*—In answer to Mr BRADY, Lord PALMERSTON said that the Government, without intending any imputation upon the loyalty of the Irish, did not think it expedient to alter the law respecting the enrolment of volunteers in Ireland. *The Treaty of Tien-tsin.*—On the order for going into a Committee of Supply, Mr. COCHRANE moved a resolution that, in order to remove one great obstacle to peace with China, the British Plenipotentiary be instructed not to insist on the fulfilment of the third article of the Treaty of Tien-tsin, by which the Emperor of China agreed that a British Minister may reside permanently at the capital, or visit it occasionally, at the option of the British Government.—Lord J. RUSSELL opposed the motion and said that so far from the residence of a British Minister at Pekin being considered by the Chinese Government as a degradation, they did not object to a Russian Minister, whom they had received with great distinction, and who had been resident many months at Pekin. This had entirely changed the question: the Chinese Government could not refuse to Great Britain what had been readily granted to Russia. The motion was negatived without a division. *The China War.*—The House then went into a Committee of Supply, when the vote of 446,896*l.*, for repayment to the Government of India of advances on account of former expeditions to China, was agreed to, after a long discussion, which ranged over a great variety of topics relative to the policy of the present and past wars with China and to the financial incidents of the vote.—In the course of the discussion Mr. ROEBUCK asked the Chancellor of the Exchequer how it was that he, who had denounced in indignant terms the war with China in 1857, was now an advocate of such a war.—The CHANCELLOR of the EXCHEQUER replied that the nature of the two wars was entirely different. With regard to the present war, he deeply regretted it, and it had been undertaken by the Government only in conformity with a sense of public duty.—Lord J. MANNERS and other members asked what were the real objects of the war, in which he said no member on either side of the House expressed any sympathy, but an earnest hope that it might be brought to a speedy termination.—Lord J. RUSSELL said that if any members ought to be informed of the objects of the war, those who had been connected with the late Government should be. The present Government deeply regretted this war, but after the calamity at the Peiho it was their duty to protect the lives and property of our countrymen exposed to danger: that duty they were bound to perform and would perform.—Mr. T. BARING condemned the war in very strong terms, and said that the merchants of England wanted commerce with China and not war.—Lord PALMERSTON justified the policy of the Government. He was satisfied, he said, that we should receive from the Emperor of China a full and formal ratification of the Treaty, and, so far from this act destroying his empire, it would in his opinion, rather add to its security. The Government had had no choice, and the only question would be whether they had adopted means adequate to procure redress, and those means had been properly applied. The *Game Certificates, &c., Bill*, and the *Common Law Procedure (Ireland) Act* (1853) *Amendment Bill* passed the Committee. On the order for going into Committee upon the *Poor Law Board Continuance Bill*, Lord E. HOWARD moved an instruction to the Committee that they have power to introduce clauses requiring that a creed register be kept both in workhouses and district schools, and providing that access shall be had to every inmate by the minister of the religious persuasion to which he or she belongs.—Mr. VILLIERS said that the Bill was simply for the continuance of the Poor Law Board, and that a Bill was under consideration in which a provision like that proposed, which was full of difficulties, might be introduced.—Mr. JAMES moved the adjournment of the debate.—This motion, after some discussion, was negatived upon a division by 97 to 40.—Lord E. HOWARD withdrew his motion, and the House went into Committee upon the Bill. Several other Bills were advanced a stage.

MONDAY.—*The New Bronze Coinage.*—In reply to Mr. HOPWOOD, the CHANCELLOR of the EXCHEQUER stated that the form of the new copper coinage had been agreed upon, and that in two months from the present time the Mint would be in a condition to supply the public. *Late Sittings.*—Mr. NEWDEGATE called attention to the recent protracted sittings of the House, and moved a resolution that the rule applied to the Wednesday sittings should also be applied to the ordinary evening debates, so that no disputed business should be proceeded with after 1 o'clock A.M.—A desultory conversation ensued, in which Lord PALMERSTON and Mr. DISRAELI expressed an opinion that the suggestion of Mr. Newdegate would but aggravate the evil.—Sir G. GREY and Mr. BOUVERIE concurred, and Mr. NEWDEGATE withdrew his motion. *The China War.*—On the report of the Committee of Supply of the vote of 446,896*l.* for arrears due to the Indian Government on account of the last China war, Mr. ROEBUCK condemned the war as utterly indefensible as regarded either the interests or the honour of England. It began by an attempt to force opium upon the people of China, and he asked whether the people of this country would tolerate the forcible introduction of arrack into Liverpool. We bombarded Canton, and compelled the Chinese Government to agree to a treaty stipulating, among other things, to allow a British Minister to reside at Pekin, and we were now sending a large force and spending millions of money to enforce a treaty the result of that unjust war.—The CHANCELLOR of the EXCHEQUER reminded the House that the question really at issue was, whether the treaty which had been concluded and approved by the Emperor of China should or should not be ratified at Pekin. *Ways and Means.*—The House then went into Committee of Ways and Means, when the CHANCELLOR of the EXCHEQUER stated the provision which the Government proposed to make to meet the expenditure incurred on account of the war with China. Having referred to the provision made in February last on account of the war, amounting to 850,000*l.*, and a further sum of 1,700,000*l.* charged upon the ways and means of 1860-1, making a total of 2,550,000*l.*, he said that he had no reason to depart from the estimate of receipts and expenditure made when the budget was brought forward. The revenue for the quarter ended in June last exceeded the expectation of the Government, but it was not his intention to take into account any excess to be derived from that source. Presuming that the paper duty would be retained for the year, he believed that 700,000*l.* would be made available out of the 1,000,000*l.* which represented the year's duty. Taking credit therefore for the sum of 700,000*l.* derivable from paper, the sum remaining to be provided would be 2,336,000*l.* Of this sum it was proposed to take part from taxation, and part from other sources. The sum which the Government proposed to raise by taxation was in round numbers 1,000,000*l.*, and it was proposed to raise it by an immediate duty upon ardent spirits of 1*s.* 11*d.* per gallon. The effect, then, would be to leave British spirits chargeable at 10*s.* per gallon, colonial at 10*s.* 2*d.*, and foreign at 10*s.* 5*d.* The conclusion at which the Government had arrived was that there was no reason why the duty should not be fixed at the permanent standard of 10*s.* per gallon. He did not apprehend that the increase of 20 per cent. in the price of spirits consequent upon the proposition would increase illicit distillation, as the experience of progressive additions to the duty had not produced that result. The increased duty of 1*s.* 11*d.* was estimated to raise 2,252,000*l.* but as the collection would not be for the whole year, and as it was but reasonable to suppose that there would be a diminution in consumption of about 11 per cent., he calculated upon receiving 1,050,000*l.* only. Deducting, therefore, 1,050,000*l.* from the net deficit of 2,336,000*l.* the sum of 1,286,000*l.* would remain to be raised. He was pleased to say that the balances in the exchequer would allow of that sum, or a larger, being withdrawn, and therefore he proposed, instead of paying those balances to the credit of the national debt and borrowing them again, to apply the portion required in aid of the service of the year. With regard to the national fortifications, it was the intention of the Prime Minister on a future day to make a statement, in which, however, he would not propose any further demand on the taxation of the year. He concluded by moving a formal resolution raising the duty on home-made, colonial, and foreign spirits in the ratio proposed in his speech. After a brief discussion the resolution was agreed to, as was also a series of resolutions with reference to malt and hop credits, "theory," contract notes, assignments of leases, and insurance policies.—The House then resumed the consideration in committee of the *Bankruptcy and Insolvency Bill.* On the 123d clause, which provides that, if the funds in which the securities be

longing to the Court are invested should be depreciated in value, the deficiency should be made good by Parliament, Mr. BOUVERIE, Mr. BARROW and others objected to making the country responsible for such deficiency. On a division, the clause was carried by 85 to 20. Another division took place on clause 135, which provides that the commissioners might, after a certain term of service, retire on full salary.—Mr. PAGET moved that the compensation should be restricted to two-thirds; but the amendment was negatived by 77 to 43. On the 152d clause, which proposes to abolish the distinction between trading and non-trading debtors, Mr. HENLEY proposed an amendment to continue the distinction. A debate ensued, in the course of which a strong opinion was expressed by Sir F. KELLY, Mr. M. SMITH, and other members, against the principle involved in the clause, and eventually the Chairman was ordered to report progress.—On the order for going into committee on the *Refreshment Houses and Wine Licences (Ireland) Bill*, Mr. HENNESSY moved that the Bill be committed that day three months.—Colonel DUNNE seconded the motion.—The CHANCELLOR of the EXCHEQUER justified his proceeding with the Bill, and a motion for the adjournment of the debate being negatived, the House divided on Mr. Hennessy's amendment, which was negatived by 136 to 38. The House then went into committee upon the Bill, but the Chairman was soon ordered to report progress. The *Prisons (Scotland) Bill* passed through committee; and the remaining orders of the day, 47 in number, having been disposed of, the House adjourned at 3 o'clock, A.M.

TUESDAY.—Mr. ADDERLEY moved the second reading of the *Education Bill*.—Mr. PEASE said that the Bill contained no machinery by which it could be brought into operation, and moved that it be read a second time that day three months.—Sir G. LEWIS and the CHANCELLOR of the EXCHEQUER supported the amendment, the latter stating that they might as well attempt to abolish the House of Commons as to pass such a Bill at that period of the session.—After considerable discussion in which Mr. HENLEY, Mr BUXTON, Mr. BAYLEY, and others joined, the amendment was carried on a division by 122 to 51; so the Bill is lost. The *Spirit Duties Bill* was recommitted, in order to introduce the provisions of the Ministerial proposal of the previous evening. In committee on the *Game Act*, a clause was agreed to, imposing a charge of 2*l*. for a license to deal in game in Scotland and Ireland, as well as in England. *The Party Riots in Ireland.*—Mr. COGAN asked what steps the Government had taken in consequence of the riots and shooting of several persons near Lurgan on the 12th of July?—Mr. CARDWELL said that he had received a telegraphic message stating that some further disturbance was apprehended at Lurgan, but not to any serious extent. The police force on the spot had been increased. *National Education in Ireland.*—Mr. BUTT moved an address to her Majesty representing that the House had learnt with regret that many of her Majesty's subjects in Ireland are prevented by conscientious objections from availing themselves of the benefit of the funds voted for the promotion of National Education in Ireland, and praying that inquiries may be made whether such changes might not be made in the rules under which that grant is distributed as would enable all classes in Ireland to enjoy the advantages which that grant is intended to secure to the Irish people. He said that though the object of the National system was to give a combined education to all classes, including Roman Catholics and Protestants, the combination was only apparent, the system being really separate. He contended that the Roman Catholics and Protestants in Ireland should be put in the same position as in England, and that the conscientious scruples of those Protestants who regarded instruction in the Scriptures as interwoven with education should be consulted.—Mr. KENNEDY seconded the motion.—Mr. WHITESIDE, who had a similar notice on the paper, cordially supported the present motion. He urged in detail the objections felt by the Protestant clergy and laity to the system, and claimed for their objections the same respect shown for those of Dissenters in England.—Mr. CARDWELL said that the National system as now existing in Ireland had enjoyed a most successful and beneficial existence of 30 years. All previous attempts to educate the people of Ireland had failed, but this had succeeded in disseminating the blessings of instruction over the country, and had produced the most happy effects upon the rising generation of Irishmen. These statements he proceeded to support by citing various returns and entering at considerable length into the details of the system. He insisted upon the inexpediency of disturbing an establishment which had produced so many benefits, because the rules of the National Board were sometimes violated, or because some defects might be detected in its details.—Mr. LEFROY opposed the resolution. The "mixed" principle might be open to criticism, but he regarded the denominational principle as much more objectionable.—Mr. P. HENNESSY moved that the debate be adjourned.—The O'DONOGHUE seconded the motion, which was opposed by Mr. B. OSBORNE.—Lord PALMERSTON also opposed it as unnecessary and unreasonable. On a division the motion was negatived by 177 to 66.—The House then divided on Mr. BUTT's motion, which was negatived by 196 to 62.—Lord FERMOY moved a resolution, "That the rejection by the House of Lords of the Bill for the repeal of the *Paper Duties* is an encroachment on the rights and privileges of the House of Commons; and it is therefore incumbent upon this House to adopt a practical measure for the vindication of its rights and privileges."—Sir J. TRELAWNY seconded the motion.—Lord PALMERSTON said that the subject had already been amply debated, and there was no occasion to disturb the decision then arrived at. He therefore moved the previous question.—Mr. CLAY thought the motion ill-advised, and that a large majority out of doors approved of the financial sagacity of the House of Lords.—The CHANCELLOR of the EXCHEQUER regretted that the constitutional question had been re-opened in the present shape and at the present time. He concurred with Lord Palmerston, and intended to vote for the previous question, objecting to the resolution that it was combative in language, but destitute of any practical action.—Mr. B. OSBORNE said that the Chancellor of the Exchequer himself had formerly urged the House to "action," but he did not believe that either he or Lord Fermoy, whose resolution he thought singularly ill-timed, were at all anxious to act.—After some remarks from Mr. CONINGHAM, Mr. DISRAELI commented sarcastically upon the inconsistent conduct, the contrary opinions, and distracted councils of different members of the present Government and the great Liberal party. It was, he contended, a paltry though perhaps convenient method of evading the real issue by moving the previous question, and he challenged the Government to meet the present motion by a bold and direct negative.—Sir G. GREY justified the course adopted by the Prime Minister. On a division the previous question was carried by 177 to 138.—Mr. FENWICK moved an address to her Majesty for a Commission of Inquiry into the *Salmon Fisheries of England and Wales*, with a view of increasing the supply of a valuable article of food for the benefit of the public.—Sir G. LEWIS assented to the motion, which was agreed to.

WEDNESDAY.—The *Highways (South Wales) Bill* passed through committee.—Mr COBBETT moved the second reading of the *Coroners' Bill*, the object of which is to provide payment for coroners by salaries instead of fees.—Sir G. LEWIS assented to the motion, as the select committee had adopted the principle of the Bill. He thought, however, that coroners should be removable, and that their appointment should be vested in the lords-lieutenant. The Bill was read a second time, and committed *pro formâ*. The *County Rates and Expenditure Bill* and the *Agricultural Servants Bill* were withdrawn. The Lords' amendment of the *Duchy of Cornwall (Limitation of Actions) Bill* was agreed to. The adjourned debate on the motion for going into committee on the *Metropolis Local Management Act Amendment (No. 2) Bill* was then resumed.—The amendment which had been moved by Mr. T. MILLER, to defer the committee for three months, was supported by Mr. SANDILANDS and Sir F. GOLDSMID, the Bill being supported by Mr. JAMES, Mr. W. WILLIAMS, and Mr. JOHN LOCKE.—Sir G. LEWIS stated reasons why, in his opinion, there should be some control over the action of the Metropolitan Board of Works, and, although the powers proposed to be given by the Bill were very extensive, he did not object to go into committee to consider its provisions.—After further discussion, the House divided upon Mr. Miller's amendment, which was negatived by 78 to 68, and the House went into committee upon the Bill, the clauses of which were agreed to with amendments.—The Lords' amendments of the *Adulteration of Food or Drink Bill* were agreed to. Further amendments on the report of the *Tenure and Improvement of Land (Ireland) Bill* were taken into consideration, and occupied the House during the remainder of the time allotted to debate. In Committee of Ways and Means, on the motion of the CHANCELLOR of the EXCHEQUER, a resolution was agreed to imposing a *Stamp Duty on Promissory Notes*. The report on ways and means relative to the increase of *Duty on Spirits* was brought up and the resolutions agreed to. The resolutions as to *Malt and Hops* and the *Stamp Duty* were also agreed to. The *Copyhold and Inclosures Commissions Bill*; the *Turnpike Trusts Arrangements Bill*; the *Highway Rates Act Continuance Bill*; and the *Oxford University (No. 2) Bill* were read a third time and passed.—Mr. DEEDES obtained leave to introduce a Bill to repeal the Act of 1859 for regulating measures used in the *Sale of Gas*.

THURSDAY.—The House at the morning sitting went into Committee on the *Landlord and Tenant (Ireland) Bill*, and agreed to the clauses up to 35. In the evening the House resolved itself into Committee on the *Bankruptcy and Insolvency Bill*, resuming the consideration of the 152d clause.—The ATTORNEY-GENERAL said that this clause, which abolished the distinction between traders and non-traders, was likely to produce so much controversy that it was hopeless to expect the House to give the measure the consideration it required, and send it up to the House of Lords in time to pass in the present session. He had therefore, with the approval of the Government, reluctantly determined to withdraw it. He hoped, however, that the time spent upon it thus far would not be thrown away, and that early next session they might hope to carry a measure which would become the law of the land.—Sir H. CAIRNS, Mr. MALINS, Sir J. PAKINGTON, and Mr. HENLEY expressed their opinion that the Attorney-General had arrived at a judicious conclusion in withdrawing the Bill. The order for the committee was then discharged, and the House resumed. *National Defences.*—In reply to Mr. DISRAELI, Lord PALMERSTON said that it was his intention the first thing on Monday to make a statement with reference to the recommendations of the commission on national fortifications.—Sir G. LEWIS announced that, regard being had to the state of public business, it was not his intention to proceed with the Bill for the *Reform of the Corporation of London* during the present session. The Bill was consequently withdrawn. *Indian Affairs.*—Mr. HORSMAN protested against proceeding with the *Indian Army Bill*, and attacked Sir C. Wood for his conduct in withholding papers on the subject necessary for its discussion.—Sir M. FARQUHAR, Mr. VANSITTART, and Sir J. ELPHINSTONE expressed great alarm at the proposal of the Secretary for India to introduce a Bill affecting the *Civil Service in India*.—Sir G. GREY and Lord J. RUSSELL, in the absence of Sir C. Wood, reminded the House that it had it in its power to proceed with the Indian measures or not as it pleased, and that Sir C. Wood was only performing a public duty in submitting them for consideration.—Sir C. NAPIER brought under notice the report of the committee on *Greenwich Hospital*, and, having dwelt at some length upon the necessity of acting upon their recommendations, moved that the report be carried into effect.—Lord C. PAGET said that the Government were not prepared to advise the adoption of all the recommendations made by the commissioners. If, however, the gallant admiral would word his motion so that the report should be considered with a view to its being carried out, he would gladly give it his assent.—After some discussion, Sir C. NAPIER consented to modify his motion, but not so as to meet the suggestion of the Government, and it was negatived without a division. The House then went into a Committee of Supply upon the *Navy Estimates*, when the remaining two votes, viz., 12,000*l*. for the new system of retiring allowances, and 33,000*l*. for the pay of seamen on special service in China were agreed to. The *Tenure and Improvement of Land (Ireland) Bill* was read a third time and passed.—The *Prisons (Scotland) Bill* and the *Herring Fisheries (Scotland) Bill*, as amended, were considered and agreed to. Several other Bills were advanced a stage.

FRIDAY.—*Savings Banks and Friendly Societies Bill.*—The House went into Committee on this Bill. On clause 1, Mr. S. ESTCOURT opposed the clause and moved as an amendment its omission from the Bill.—The CHANCELLOR of the EXCHEQUER supported the clause. On a division, the amendment was carried by 116 to 78.—The CHANCELLOR of the EXCHEQUER then moved that the Chairman leave the chair, as the loss of the first clause entirely destroyed the Bill.—The Chairman then left the chair and the House resumed, but immediately went into Committee on the *Refreshment Houses and Wine Licenses (Ireland) Bill*. Clauses 1 to 5 inclusive were agreed to. On clause 6, Lord NAAS moved an amendment that the clause should not apply to night-houses of a humble class, and a concession was offered by government to exempt houses under a rental of 20*l*. a year, in towns with a population not exceeding 10,000.—Mr. HENNESSY moved that the Chairman report progress. On a division this motion was negatived by 79 to 28.

(Left sitting.)

City Intelligence.

UNION BANK.—A bill in Chancery was filed on Monday against the directors of the Union Bank of London by Mr. Fawcett, a shareholder, praying, first, an injunction to restrain the directors from paying any dividend out of the capital of the bank; and secondly, that the liability of the directors to make good the losses caused by the frauds of Pullinger (263,125*l*.) may be ascertained under the direction of the court. This course was adopted in consequence of the recent annual meeting having resolved, on the recommendation of the directors, to meet the loss occasioned by these frauds by appropriating 120,000*l*. of the paid-up capital, the reserve, and a portion of the profits, leaving sufficient of the latter to enable a dividend to be paid at the rate of 5 per cent. for the past half-year. On Thursday Vice-Chancellor Kindersley refused the injunction on the ground that as the dividend had been legally declared at a public meeting of the shareholders, it must now be paid, but reserved for a future hearing the question whether future dividends may not be restrained, together with the question of costs and the liability of the directors to make good the Pullinger loss.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93¼ to ⅜ for Money, and 93⅜ for the 9th August; Bank Stock, 230 to 228½; Three per Cents. Reduced, 93⅜ to ½; New Three per Cents., 93⅜ to ½; New Two and a Half per Cents., 76½; India Stock, 220 to 218; Ditto Five per Cent. Stock, 1859, 96⅞ to 97; Ditto Bonds, 6*s*. dis.; Five per Cent. Enfaced Rupee Paper, 97⅜ to ¾; Exchequer Bills, 4*s*. pm.—FOREIGN: Brazilian Old Five per Cents., 100½; Ditto Four and a Half per Cents., 1858, 88 to 88¼; Dutch Two and a Half per Cents., 65 to ½; Ditto Four per Cent. Certificates, 101¾; Russian Four and a Half per Cents., 93⅜; Ditto Three per Cents., 1859, 64; Committee's Certificates, 5; Turkish Six per Cents., 1858, 60¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,711,365	Government Debt	£11,015,10
		Other Securities	3,459,900
		Gold Coin and Bullion	15,236,365
		Silver Bullion	—
	£29,711,365		£29,711,365

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weigh Annuity)	£9,721,445
Rest	3,382,850	Other Securities	19,419,147
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	3,485,507	Notes	7,595,200
		Gold and Silver Coin	771,478
Other Deposits	15,265,312		
Seven day and other bills	760,601		
	£37,447,270		£37,447,270

19th day of July, 1860. M. MARSHALL, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. W. ARMSTRONG, Manchester, Yarn Agent—J. COOPER, Commercial Road, Newport, Monmouthshire, Outfitter—W. H. EDMONDS, Wroughton, Wiltshire, Horsedealer, Miller, and Baker—G. HOLGATE, Halifax, Grocer—B. JAMES, Brierley Hill, Staffordshire, Currier and Shoemaker—G. F. JAMES, Manchester, Elastic Web and Small Ware Manufacturer—W. KILBY, Church End, Willesden, Contractor and Builder—C LE BATT, Exeter, Messman—L. LEVY, formerly of Savannah, in the United States of America, and late of Gravel Lane, City, Merchant—F. B. J. READ, Leadenhall Market, and Upper North Street, Bethnal Green, Butcher—J. G. SULLIVAN, Blackman Street, Southwark, Boot and Shoe Manufacturer.

SCOTCH SEQUESTRATION—W. MILLER, Yonderfield, Ayrshire, Farmer.

FRIDAY—BANKRUPTS—W. APPLEYARD, Kingston-upon-Hull, Plumber—G. DIXON and J. C. ADCOCK (by the name of C. J. ADCOCK), Aldersgate Street, City, Coach Lace Manufacturers—H. DUNINGTON, Nottingham, Glove Cloth Manufacturer—J. GREEN, Philpot Lane, City, Commission Agent—W. HUGHES, Leicester, Grocer—J. JUKES, Eyton Lodge, Denbighshire, Iron Master—M. L. J. LAVATER, Strand, Indiarubber Manufacturer—J. MUIR, Kingston-upon-Hull, Draper—R. K. PHILP, Great New Street, Fetter Lane, Publisher—J. RAVEN, Fish Street Hill, Stationer—E. RUSSELL, Long Lane, Bermondsey, Leather Merchant—W. SWORD, Dewsbury, Yorkshire, Draper—J. WALKER and J. NEAVE, Southwark Bridge Road, Builders—A. F. WHITBURN, Enfield, Brewer—T. YOUNG, Liverpool, Tea and Coffee Dealer.

Metropolis and its Vicinity.

DINNER TO HER MAJESTY'S MINISTERS.—On Wednesday night the Lord Mayor entertained at the Mansion House the leading members of the Cabinet, the foreign Ministers, and many of the delegates from foreign countries and the colonies to the International and Statistical Congress. In acknowledging the toast of "Her Majesty's Ministers" Lord Palmerston spoke as follows:—

"My Lord Mayor,—You have been pleased to draw a comparison between the daily labours we have to perform and those which fall to your own lot. It would be difficult, I think, to say which of the two, the Lord Mayor or her Majesty's Ministers, during their respective mayoralties lead the most laborious lives. But when the Lord Mayor adverts to the noxious influences which our avocations may have on our health, I beg leave to say there might be a course of life suggested to me by the entertainment now before us which might be still more deleterious; and that would be if every day of the week, every week of the month, and every month of the year, we were to indulge in the same splendid and luxurious repasts as that of which we have just partaken. It is the abstinence which we are compelled to practise which enables us to get through our work. I can assure you it must always afford to those who are charged with the responsible duty of conducting the affairs of this country the greatest satisfaction to withdraw themselves from the labours, turmoil, and contests of political life to enjoy the social and splendid hospitality of the chief magistrate of this great city. It must always be a pleasure to find ourselves in the greatest commercial centre of the greatest commercial nation in the world, and I trust that in addressing this assembly we may take some credit for having in the course of the present session been able to devise and execute several measures which we hope will greatly contribute to the commercial prosperity of the country. It has sometimes been the fashion to say that commerce enervates the mind of a nation; that it destroys the manly vigour to be found in nations not commercial. The history of the world is full of examples which demonstrate the fallacy of that opinion; and if any further proof to the contrary were wanting, that proof was supplied in the present year, when we saw 130,000 of the youth of this nation, most of them engaged in commercial pursuits, all of them employed in the civil avocations of life, submitting to privations and labours to which their previous habits had not accustomed them, and devoting all the energies with which nature has endowed them to the defence of their native land. I think that this is the noblest spectacle ever exhibited in any nation of the world. Precedents are not wanting where nations, when danger imminently threatens, when the enemy is knocking at their gates, have risen like one man, and, tearing themselves away from everything that constitutes the pleasures, enjoyments, and business of civil life, have prepared to shed their blood in the defence of their common country. But this is not an instance of that kind. It is said that the lion of the forest snuffs danger from afar, and prepares for resistance; and so it has been with the youth of England. An instinctive feeling has possessed them that circumstances might arise which would show that the means of defence previously existing were perhaps not equal to the emergency, and with a spirit almost prophetic—though I trust the prophecy may not be accomplished in an evil sense—they have proved their manly energy by arraying

themselves in the numbers I have already stated, which, if there were need, could be doubled, trebled, or even quadrupled. It is an old saying that to preserve peace you should be prepared for war. Now, that is both true and untrue. It is untrue if it be meant that a nation assuming an aggressive attitude should create larger military and naval establishments than are necessary for its defence, and which, being evidently intended for encroachment on its neighbours, excite suspicion, distrust, and alarm. Instead of affording a security for peace, they are more likely to be a provocation to war. But far different is it when a nation acts as we are doing, and contents itself with possessing such an army and making such preparations as are necessary for simple defence, abjuring, not only by words, but by its conduct, all aggressive designs on others. I say that such preparations for a contest purely defensive constitute the best guarantee for peace. I trust we shall long continue to enjoy that security, and be in a situation to declare that peace we will have; because he who attacks us will rue the day when he made the attempt. What I have now said I hope will be taken in its proper sense, and viewed as a compliment to that noble body of Volunteers, who, I maintain, may be regarded as most active and valuable members of the Peace Society."

International Statistical Congress. — The Fourth Session of the International Statistical Congress was opened in London on Monday last, under the presidency of the Prince Consort, and the sittings have been continued over the five succeeding days. The meetings have been held in Somerset House, the council of King's College having placed their large hall and other portions of that establishment at the disposal of the Commission, while the Society of Antiquaries, the Geological and Astronomical Societies have allowed their apartments to be used for the sectional meetings. On Monday before his Royal Highness arrived a preliminary meeting was held, at which Mr. Milner Gibson took the chair, and on the part of the Government, expressed to the delegates from foreign nations and the British colonies its acknowledgment of the service they had rendered in coming from such distant countries to attend the Congress, and stated that the Government would do all in its power to assist their deliberations. Baron Czœrnig proposed, in French, that the executive committee, which had so ably discharged its duty, should be requested to continue its services as the committee of the Congress, and that the Rt. Hon. M. Gibson, M.P., and the Rt. Hon. W. Cowper, M.P., should be requested to act as the vice-presidents. The Prince Consort, in opening the Congress, delivered an address which fills upwards of two columns of the daily papers, and was received with loud applause. On the motion of Lord Brougham, a vote of thanks was given by acclamation to his Royal Highness for his able address. M. de Carvalho Moreira, the Brazilian Minister, on behalf of the foreign delegates, begged to express their profound admiration of the address to which they had listened; in the most elevated language it pointed out with precision, and defined with clearness, the objects the Congress had in view. To that tribute of admiration he begged to add the warmest expression of their obligation and thanks. The Prince Consort then declared the Congress opened. On his return to Buckingham Palace his Royal Highness received the delegates from foreign countries and the colonies, who were severally introduced by the Belgian Minister and Mr. Milner Gibson. On Tuesday the Prince Consort visited each of the six sections into which the Congress was divided, and the sections then proceeded to elect their officers and consider the various subjects included in the programme—namely, Section I., Judicial Statistics; II., Sanitary Statistics; III., Industrial Statistics—two branches, Agriculture and Mining; IV., Commercial Statistics; V., Census, and Military and Naval Statistics; and VI., Statistical Methods. Lord Brougham, Lord Shaftesbury, Lord Stanley, M.P., Mr. N. W. Senior, Earl Stanhope, and M. Quételet were elected presidents of these sections. The business of the sections was then proceeded with, and continued regularly up to last evening, many of the papers read being of great interest. On Thursday the foreign and colonial delegates were entertained at a banquet at the Freemasons' Tavern, by the President and Council of the Statistical Society, the Society of Actuaries, and the Actuaries' Club, under the presidency of Colonel Sykes, M.P. Among the foreign delegates who were deputed by their respective Governments to attend the Congress were the following:—From Austria, his Excellency Baron de Czœrnig; from Bavaria, Dr. Hermann, Councillor of State; from Belgium, M. Quételet, Director of the Royal Observatory, M. Henschling, and M. Visschers; from Brazil, his Excellency S. Carvalho Moreira; from Denmark, Dr. David, Councillor of State; from France, M. Legoyt, Chief of the Statistical Bureau, Paris; from Hamburgh, Bremen, and Lubeck, Dr. Asher; from Hanover, Professor Wappäus, from Holland, Dr. Baumhauer; from Mecklenburgh-Schwerin, Dr. Ackersdyck and Baron de Maltzahn; from Norway, Professor Daa; from Prussia, Dr. Engel and Professor Schubert; from Russia, MM. Wernadski and Von Buschen; from Saxe-Coburg and Saxe-Meiningen, M. G. Hopf; from Spain, Count de Ripalda; from Sweden, Dr. F. T. Berg; from Switzerland, M. Vogt and M. Kolb; from Turkey, Agassi Effendi; and from United States, Judge Longstreet and Dr. Edward Jarvis. Several of our own colonies also had representatives. For the Australian Colonies—New South Wales, Messrs. James MacArthur, Edward Hamilton, and Stuart A. Donaldson; Queensland, Mr. M. Marsh, M.P.; Victoria, Mr. W. Westgarth; South Australia, Mr. E. Stephen; Tasmania, Mr. J. A. Youl; New Zealand, Mr. J. E. Fitzgerald; British Guiana, Mr. W. Walker, Colonial Secretary; Canada, Mr. J. T. Galt, Finance Minister; Cape of Good Hope, Mr. W. Field; Ceylon, Sir C. M'Carthy; Jamaica and Barbadoes, Mr. S. Cave, M.P.; British Guiana, Mr. W. Walker, Mauritius, Mr. G. Fropier; and the Ionian Islands, Mr. Drummond Wolff.

Encroachment in Kensington Gardens.—On Saturday at a meeting of the Marylebone vestry, the new ride through Kensington Gardens, which has been commenced by Mr. Cowper, the Chief Commissioner of Works, was the subject of discussion. Mr. Mitchel strongly urged the interference of the vestry and moved the appointment of a committee on the subject. Mr. Nicolay denounced the intended ride, and considered that the board would not be doing their duty to the ratepayers unless it sent up to the Government a strong protest against this usurpation of the rights of the people. Mr. Smart thought the board should confine itself to an indignant protest against the step taken by the Chief Commissioner. He reminded the meeting that Kensington Gardens formed one of the royal parks, and were only open by Royal permission. The ride was not yet formed but simply laid out. A lengthened discussion ensued, in which many gentlemen took part for and against the motion. At length the terms of the resolution were altered and agreed to as follows:—"That this vestry desires to express its disapprobation at the attempt which has been made to form an equestrian ride in Kensington Gardens, since, in its present condition, it is peculiarly adapted, and would otherwise, as designed, be specially dangerous, to the comfort and convenience of children, invalids, and pedestrians generally." On Tuesday the Paddington vestry unanimously adopted a resolution condemning the encroachment as destroying the beauty and repose of the gardens; and convening a public meeting, to be held in the Vestry Hall, to receive an expression of public opinion. On Thursday a numerous deputation from the vicinity of Kensington and Bayswater, headed by Lord Enfield, M.P., Sir John Shelley, M.P., and Mr. Edwin James, M.P., and the Recorder of London, waited upon the Chief Commissioner and presented a memorial, signed by 1500 inhabitants of those districts, praying that the new ride may be immediately abolished, and the gardens restored to their original state. Mr. Cowper said he had made the road on the principle of giving pleasure to all classes, but if a good case were made out, he had no objection to make such alterations as would obviate any supposed inconvenience or danger to the public. On the same day a deputation, consisting of the Earl of Harrington and other inhabitants of Kensington, favourable to the continuance of the ride, had an interview with the Commissioner.

International Exhibition of 1862.—The guarantee fund now subscribed amounts to 335,300*l*. It is understood that the Royal Commissioners for the Exhibition of 1851 are willing to grant the use of a part of their estate of South Kensington for the Exhibition, and that a portion of the buildings to be erected will be permanent, available for future exhibitions of art and industry.

The Volunteer Sham Fight took place on Saturday in Camden Park, between Bromley and Chiselhurst. 25,000 persons were conveyed safely by railway to the scene of action, but the difficulty of conveying such a concourse of people was so great that considerable delay took place in the arrival of the regiments, and the fight did not commence until two hours after the appointed time. The companies of the corps of attack were posted in and behind Bickley Wood; those of the defence in the western portion of the grounds, where they were kept under cover till the moment of action.

The *defending division* included the following corps and companies, under the command of Colonel Hicks:—1st and 2d Battalions London Rifle Brigade, 1st Middlesex Engineers, 32d Middlesex (Six Feet) Guards, 1st Kent; making a total of 1044 men.—The *attacking division*, commanded by Lord Ranelagh, comprised the following corps:—2d Middlesex, 11th Middlesex, 15th London Scottish, 12th Middlesex, 19th Middlesex, 21st Civil Service, 36th Middlesex, 38th Middlesex (Artists'), 46th Middlesex (Gray's Inn), 4th Tower Hamlets, 3d Tower Hamlets, 4th Surrey, 7th and 10th Surrey, 8th Surrey, 9th Surrey, 16th Kent, 1st Battalion of Kent R. V., Captain Wilkinston's Battalion consisting of Highgate, Hornsey, Hampstead, and Railway, and the 9th West Middlesex; making a total of 3300, the entire force being 4344.

General Eyre, commanding at Chatham, was deputed by the Duke of Cambridge to act as inspecting officer on the occasion, the Inspector of Volunteers, Colonel M'Murdo, being absent on duty. Of the Volunteers, unattached, who attended in uniform, many were engaged in keeping the ground. A portable telegraph was laid across both hill and vale, from the headquarters tent to the attacking position. At 7 o'clock the action commenced. The company of Engineers of the City Brigade, under Captain M'Leod, conspicuous by their red uniform, appeared on the right of the defended position, and, advancing, lined the hedge of the wood, through which the enemy was approaching. The Engineers opened fire on them, and it was returned from the wood. A light, dropping fire continued for a few moments, then the Engineers fell back in skirmishing order on the open field, loading and firing rapidly. They were followed up by the enemy's skirmishers, who were also soon on the clear ground. When they had nearly driven their opponents to the stream in the centre of the vale, the main body of the attack suddenly issued from the wood, formed in line, advanced, and fired a volley. The skirmishers of the defence crossed the stream rapidly, and the attacking line pressed forward, keeping up a quick fire. As the wood from which they had issued here makes a bend the ground was not wide enough for the whole line. In the centre it was four deep. This first appearance and advance of the attacking force was one of the best portions of the spectacle, particularly the dash out of the wood which had concealed their forward movement. On the other side, while the skirmishers were retreating, the main body of the defence had been forming on the level to the right of the lime kilns, their front defended by the little stream. Pressed still more sharply by the advance of the attacking line, the defence made a stand in the cover of the lime kilns The firing was heavy on both sides, volley following volley in quick succession; but the position soon became untenable. Part of the attacking line crossed the stream, and took its defenders on the right flank; assailed on two sides by superior numbers nothing could be done but retire. The defence drew out of the cover and the chalk pits, and formed on the slope of the hill, the summit of which was crowded by spectators. They were followed up by the left wing of the attack, the right wing keeping in the valley, in a line parallel with the stream, gradually closing on its retiring foe, and keeping up a heavy fire on his front and flank. The defence again retired up the hill, and formed in position along the slope. The attack, which had hitherto been made in line, was now made in two columns; but in this form was repulsed by the longer line of fire concentrated on its masses. The columns stopped, turned, and descended the hill at the double, partially disordered. It looked so much like real running away that some of the uninstructed spectators hissed disapprobation; but were themselves discomfited by the burst of laughter that told them the true state of the case. The columns were formed again very quickly, and returned to the charge, this time successfully. The defending line broke, and retired to their last position, their left on Camden House and their right towards Chislehurst Common, at which point of the action hostilities terminated. It was a smart engagement of rather more than a hour. The firing, while it lasted, was heavy, and was made as varied as possible; there was the continued fire from the whole line, from right to left, volleys by companies, and volleys from the line again. Some of them were given with great precision, as if fired by one pull of the trigger—others left a straggling spatter of shots in arrear of the time. But as the first field-day on which the several corps had been out for such practice together, the proficiency shown was very creditable to all, and it was considered doubtful if any regiments of the line, so soon after their first drill, would have acquitted themselves so well. The arrangements for the *bivouac*, which was announced to follow the fight, completely broke down, Captain Grant's cooking apparatus not being on the ground in consequence, it is said, of the authorities having refused the use of Government horses for the occasion. The presence of artillery from Woolwich was also refused by the Duke of Cambridge. During the whole evening the roads were crowded in all directions with carriages and equestrians and regiments marching. The railway up to a late hour continued to discharge hundreds of impatient passengers at the London Bridge terminus. It was past midnight when the West Middlesex marched across London Bridge and down Cannon Street, with their band playing the "British Grenadiers."

St. George's-in-the-East.—The services in this church on Sunday were interrupted with the usual outrages, and Mr. Rosier, whose name is familiar to the public in consequence of his having already been fined by the Consistory Court for brawling, took so prominent a part in the interruption that the churchwarden had him turned out of the church. In the streets, after the service, Mr. Rosier collected large crowds about him by distributing a reprint of an article denunciatory of Mr. King which had appeared in the *Times*; and there would, in all probability, have been a riot, had it not been for the dexterity with which the police cleared the streets. Some hundreds of persons assembled to receive the clergy and choristers, but they were disappointed, as these gentlemen did not appear among them. On Thursday Mr. Rosier was brought before Mr. Elliott, on a summons charging him under the recent act with "disturbing, vexing, and troubling" the minister. Mr. Elliott said he was of opinion that every incumbent had a right to prescribe the mode of celebrating Divine service, and whether it should be a choral service, or otherwise. If a clergyman thought fit to order that the responses should be sung, and people read the responses in a loud voice, to prevent the singing of them, as directed by the minister, that was an offence within the meaning of the act. He therefore fined the defendant 3*l*. Mr. Rosier gave notice of appeal.

Vere Street Chapel.—The Rev. T. C. Maurice, formerly Theological Lecturer at King's College, and latterly Chaplain of Lincoln's Inn, has been appointed by the Rt. Hon. W. Cowper, Chief Commissioner of Works, to the incumbency of the district church of Vere Street, Marylebone.

The Saturday Half-Holyday.—A meeting of the china and glass trade was held on Tuesday, at which it was resolved, in compliance with the strong feeling expressed by the public generally that business should cease at an early hour on Saturdays, to close their establishments on and after Saturday, the 4th of

August next, at 2 o'clock. An influential meeting of West End tradesmen in the silk and haberdashery trades was held a few days since in St. James's Hall, where it was unanimously resolved to close at 4 o'clock in summer, and at 5 in winter.

DESTRUCTION OF THE VALENTINE MILLS BY FIRE.—On Wednesday morning the "Valentine Steam Flour and Spice Mills," in Webber Street, Blackfriars Road, belonging to Messrs. Neville and Co., the patentees and manufacturers of "Arabica food," were totally destroyed by fire. The building was three floors high, and contained a large quantity of flour, wheat, lentils, peas, and spices, as well as the patent food.

THE PUBLIC HEALTH. — The Registrar-General's Weekly Return states that the number of deaths registered in London in the week that ended Saturday, July 14, was 1015. In the corresponding weeks of the 10 years 1850-59 the average number, after correction for increase of population, was 1104. The present return is therefore 89 below the average. During the week the births of 935 boys and 819 girls, in all 1754 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1488.

Provincial.

COVENTRY.—In consequence of the present depressed state of the silk trade and the increased competition with foreign markets, the ribbon manufacturers have announced their inability to adhere to the old "list of prices" drawn up in 1843. The weavers have refused to accept any reduction and have consequently struck work, and more than 10,000 operatives are now out of employment. A few nights ago a large body of the discontented weavers proceeded from Coventry and Bedworth to Attleborough, and attempted to force an entrance into Mr. Townsend's factory, one of the few where the reduced price is in operation. The workpeople, headed by Mr. Townsend, were able to defeat their object, but the mob vented their fury upon the windows of the factory, and afterwards did considerable damage to Mr. Townsend's private residence. Ten of the ringleaders have been arrested, and will be brought to justice. Great distress prevails among the weavers, and a committee has been appointed to raise a relief fund, to which Sir J. Paxton and the Right Hon. E. Ellice have contributed 50*l.* each. The ribbon manufacturers say that they are determined to spare no expense in procuring the best machinery, and are determined to overcome all foreign competition if the hands will but help to do their part; but if the present obstructions continue, they must shut up their factories and go elsewhere.

FROME.—After the arrest of the housemaid on Friday the magistrates proceeded to Mr. Kent's house and examined several of the inmates. The nature of their statements was not permitted to transpire; but it may be assumed that nothing was elicited tending to criminate the nursemaid, as at the close of the day the magistrates liberated her on her father and cousin becoming responsible for her being forthcoming on Monday. The girl, however, did not avail herself of the offer, but voluntarily preferred returning to Trowbridge and remaining at the house of the Superintendent of police during the interval. On Saturday Sir G. Lewis, the Home Secretary, sent down Inspector Whicher, of the metropolitan detective police, for the purpose of investigating the case. The inspector reached Trowbridge on Sunday evening, and proceeded on Monday to Road, where he had an interview with the magistrates by whom the inquiry has been conducted. In the course of the conference Elizabeth Gough, the nursemaid, was brought before the Bench and liberated. After sitting for about two hours with closed doors, reporters were admitted, when the Rev. R. Crawley said the magistrates had little to communicate beyond the fact that Inspector Whicher had been sent down from London, and that the investigation was now placed in his hands. A reward would be immediately offered, 100*l.* by the Government and 100*l.* on the part of Mr. Kent, to any person giving such information as should lead to the conviction of the perpetrator of the crime, together with a free pardon to any accomplice not being the actual murderer. The nursemaid had been discharged, and had been informed that she was at liberty to go where she liked, and she had stated her intention of returning to her duties at Mr. Kent's house. It was then announced that the inquiry would be adjourned to Friday, and that in the event of any evidence being then taken on oath the public and the reporters would be admitted, but that at present the magistrates were unable to say what course would be pursued. Mr. Ludlow, magistrate, wished it to be known that the house had been re-examined and re-searched in every possible way; and that every inmate, except the infant, had been called on to state what they knew in reference to the matter. The best superintendants of the force had been engaged in the investigation, and it was only an act of justice to the police and to the magistrates to state that they had used their utmost exertions in endeavouring to trace out the guilty party. The two servants mentioned by Mr. Kent as having formerly lived in his employ, and as being parties likely to have had an ill-will against him, had both been found out by the police, and it was proved that they were many miles distant from the scene of the murder on the night of its occurrence. At the conclusion of the sitting Inspector Whicher, accompanied by the superintendants of the county constabulary, proceeded to Mr. Kent's residence, and made a further search of the premises. The practicability of removing a child about the age of deceased from its bed without waking it or disturbing the persons sleeping in the same and adjoining rooms has been tested by the police, and has been accomplished in three instances. A minute inspection of the premises leaves little doubt that the object of the murderer in selecting the spot where the crime was committed was that the body might completely disappear. The cover of the water-closet has been removed, and the splashboard being taken away a large open space has been disclosed, containing water several feet deep, so that had the body passed through this aperture it would have been entirely concealed from observation. Three years since when the two children of the first marriage ran away from the house, the daughter, after cutting off her hair and dressing herself as a boy, threw her own clothes into this water-closet after assuming male attire.

Ireland.

PARTY RIOT AT LURGAN.—An encounter took place on the 12th inst at Derrymacast near Lurgan between the Orangemen and the Roman Catholics while the former were celebrating the anniversary of the battle of the Boyne. It is said that one of the Orange party discharged a pistol at the chapel cross, whereupon the Roman Catholics, who were present in unusually large numbers on account of a fair in the town, attacked the Orangemen and soon brought on a general riot. The disturbance having continued for some time, some of the Orangemen returned to a Protestant house in the neighbourhood, and there procured fire-arms, with which they returned to the spot, and fired at the Roman Catholics, 16 of whom were wounded, and two are not expected to survive. The police made a number of captures, but grave apprehensions appear to be entertained of another outbreak between the rival factions.

THE IRISH BRIGADE IN ROME.—Accounts from Rome state that several affrays in which the Irish brigade have taken a prominent part have occurred since their arrival in Rome. In the latest of these disturbances the acting British Consul, although an Irishman, was subjected to offensive language, with threats of personal violence, at the barracks of the brigade here, and on the same evening another person was actually a sufferer from the violence of the recruits. A still more serious affray took place on June 27, between the Papal troops and a portion of the Brigade. It appears that one of the recruits objected to be a simple private and put on his private clothes for the purpose of walking about the city. The captain ordered the sergeant to arrest him, but the sergeant appealed to the other Irishmen, who took part with the discontented private. A row took place, in which some one called out a Belgian troop of recruits to restore order. This exasperated the Irish to such a degree that one of them struck one of the Belgian soldiers to the ground with a blow of his fist, declaring that the Belgians would sell the Pope to the highest bidder and go over to Garibaldi. The officer of the Belgians ordered his men to load and fire, but before they could carry out the order the major of the Irish regiment rushed between them and succeeded in preventing bloodshed. During this riotous scene some of the Irish took refuge in the Irish College, and on the Papal troops appearing at the gates to apprehend them, they were resolutely refused admittance by the priests. The latest news states that the whole of the Irish recruits had been removed to Spoleto.

Scotland.

REVIEW OF SCOTCH VOLUNTEERS BY THE QUEEN.—Her Majesty has intimated her intention to hold a review of volunteer corps in Edinburgh on the 7th of August. The commanding officers of corps desiring to attend are to intimate their wish to the Secretary of State for War through the Lord-Lieutenant of their respective counties before the 1st of August, and they will then be admitted as far as space and numbers will permit. Immediately after receiving this application each corps will be informed whether it will be possible to accept the offer.

Law.

VICE-CHANCELLOR'S COURT: *The Attorney-General* v. *the Great Northern Railway Company.—Injunction against Dealing in Coal.*—This information was filed by the Attorney-General on the relation of Thomas North, for the purpose of obtaining an injunction restraining the company from dealing in coal. It appeared that since 1852 the Great Northern Railway Company has engaged in business as coal merchants, and has formed an immense traffic in that particular branch of business. Some of the shareholders took exception to this diversion from the original purpose of the company, and sought the intervention of Chancery by this suit. Vice-Chancellor Kindersley in giving judgment said that, by a crafty and tricky contrivance, the company had thought to blind the transaction by taking the profits they derived from the coal into the railway traffic, and saying it was so much they had gained by their business as railway carriers; but even if 99 shareholders out of 100 agreed to carry on a different business from that which they were incorporated to carry on, however beneficial to the company that different business might be, a single shareholder had a right to say, "That is not our contract among ourselves," and he might come to that Court and get an injunction. Here was a railway company having in its hands the traffic from the principal coal fields in the north of England, and exercising the power of dealing with all the coal in a large district. And if they could do this, they might on the same principle become dealers in agricultural produce, and supply London with the agricultural produce of their district. In fact, he did not know, if this principle were admitted, where it was to stop. There would, therefore, be great detriment to the interest of the public in allowing such a practice. It had been said that so far this practice of the Great Northern had been not to the prejudice of the public, inasmuch as coals had been cheaper, but he confessed he had no faith in the morality of any joint stock company, and especially in that of a company which had contrived so cunning a device as this company had for the purpose of concealing its proceedings. He was therefore of opinion that the injunction must be granted and with costs, on the understanding that the injunction was not to prevent the company from disposing of their stock of coal on hand.

THE ASSIZES.

NORTHERN CIRCUIT: YORK.—*Regina* v. *Leatham.—The Wakefield Election.*—This was an information on the part of the Crown, under the Corrupt Practices at Elections Act, charging Mr. William Henry Leatham with corrupt and illegal practices at the last election for Wakefield, at which he was returned as member. The court was densely crowded, and for a length of time it was exceedingly difficult to hear the address of the Solicitor-General, who stated the case on the part of the Crown, owing to the buzz and noise in court. After a long trial the jury returned a verdict of *Guilty*. There are yet seven other cases of this description to dispose of, three against persons on the Liberal side at Wakefield, and four against persons on the Conservative side, and two against persons implicated in charges of bribery at the Beverley election. *The Hull Murder.—Thomas Kirkwood*, a soldier, aged 30, was indicted for the wilful murder of Elizabeth Ann Parker, a widow, at Hull, on the 23d April, under the circumstances noticed at the time in our Provincial news. The jury, after an absence of nearly an hour, returned a verdict of *Not Guilty*, on the ground of insanity. The prisoner was ordered to be confined during her Majesty's pleasure.

HOME CIRCUIT: HERTFORD.—*The Murder of Sir T. Sebright's Gamekeeper.—George Cain*, 23, *Henry Bliss*, 28, and *James Norwood*, 32, three powerful looking young men, were indicted for the wilful murder of John Seebrook, head gamekeeper to Sir Thomas Sebright, at his estate at Beech Wood, near Dunstable, on the 28th March. The facts of this case are already familiar to our readers, and the only question was as to the identity of the prisoners. The jury, after deliberating about a quarter of an hour, returned a verdict of *Not Guilty*. *Night Poaching.*—The prisoners were then charged with being unlawfully upon Sir T. Sebright's land for the purpose of night poaching. Norwood pleaded "guilty" to this charge, and the jury, without any hesitation, returned a verdict of *Guilty* against the others. Norwood was recommended to the merciful consideration of the Court, on the ground that it was believed he had taken the least active share in the fatal transaction, and had made a statement which had tended to assist the interests of justice. Mr. Justice Blackburn, in passing sentence, said the prisoners had had a very lucky escape in not being convicted of the crime of murder, and that if they had been he should certainly have left them for execution. There was another indictment against them charging the capital offence of wounding the under keeper, the companion of the unfortunate deceased, with intent to murder him, and he had great doubt whether he ought not to have proceeded with it. They were now however only convicted of night poaching, but taking into consideration the other circumstances connected with the offence, he felt it his duty to pass upon two of them, Cain and Bliss, a very severe sentence, which was that they be kept in penal servitude for the space of 14 years. The other prisoner, Norwood, he should sentence to be imprisoned and kept to hard labour for 12 months.

WESTERN CIRCUIT: WINCHESTER.—*Murder at Gosport.—Michael Hynes*, a serjeant in the 16th Foot, aged 32, was indicted for the wilful murder of Anne Shein. The prisoner, a fine-looking man, was stationed with his regiment at Aldershott, and in March last, being on furlough, he went with one of his children to the house of his father-in-law, John Clark, a waterman residing at Gosport. A few months ago he received an injury to his head on board the Himalaya, and since then was much affected by drink. On the 9th March he was out drinking with some marines of the Euryalus, and afterwards with his father-in-law, and he eventually returned home much intoxicated. As he would not be quiet, angry words ensued, and the disturbance became so great that the neighbours came in to endeavour to quell it, including deceased, a woman 64 years of age, who tried to pacify him, whereupon he forced his mother-in-law out of the room, locked the door, and was then seen by a person who looked through the window hacking with his drawn sword something upon the floor. He ran from the house when further assistance arrived, his sword and clothes covered with blood, but was at last disarmed and handed over to the police. Mrs. Shein was found lying on the floor, her skull fractured, and with many dreadful wounds upon her head and body. The surgeons found that she had received two parallel gashes on the temple, reaching to the nose; a third cut on the left temple, a cut beneath the left eye, a serious jagged fracture of the skull, two cuts on the left arm, and some minor wounds and bruises. These shocking injuries caused inflammation, followed by an abscess on the brain, in consequence of which paralysis ensued, and at the termination of a few weeks the unfortunate woman died. For the defence it was urged that there was no previous malice on the part of the prisoner, and that the wounds were inflicted by him when he was in a state of temporary mental derangement, in consequence of drinking, he being previously a sober well-conducted man. Three officers of his regiment, who had known the prisoner from 5 to 14 years, gave him an excellent character. The jury, after a lengthened deliberation, and after repeated application to the judge to know if they could return a verdict of manslaughter, found the prisoner *Guilty*, with the strongest possible recommendation to mercy. Mr. Justice Keating then put on the black cap, and passed sentence of *Death* in the usual form. The prisoner appeared much prostrated on hearing the sentence, and had to be assisted from the bar. *The Aldershott Murder.—Morton Conway*, aged 24, and *John Farrell*, 23, were indicted for the wilful murder of Mary Ann Rowe, at the camp of Aldershott. The evidence in this case, which was noticed at the time in our Provincial news, was entirely circumstantial. The prisoners were the last persons seen with the deceased on the night before she was found drowned in the canal, and her purse was found in the possession of one of them. The dress of deceased had been partly torn from her body, which was covered with bruises; and the surgeon's opinion was that the girl was reduced by a heavy blow to a state of fainting, and in that state was thrown into the canal. Next morning the dress which she had worn was found at some distance from the canal at a place where there were marks of a violent struggle; and the supposition was that the girl was there attacked, that she fainted, and that she was then dragged to and thrown into the canal. The defence was that the evidence was not sufficient to warrant a conviction, and that deceased might have committed suicide. The jury returned a verdict of *Not Guilty*. *The Isle of Wight Murder.—William Henry Whitworth*, a serjeant of artillery, was indicted for the wilful murder of Martha, his wife, and his six children, at Sandown Fort, in the Isle of Wight. It having been stated that the prisoner was insane, and not in a fit state to plead, the jury were sworn to determine the fact, and having found that the prisoner was

not in a fit state to plead, he was directed to be detained during her Majesty's pleasure. *The Attempted Murder and Suicide at Winchester.*—*Robert Simpson*, a private in the Rifles, was indicted for cutting and wounding Sophia Rowe, with intent to kill and murder her, at Winchester. It will be remembered that the prisoner, while in bed with the woman, cut her throat with a razor at her request, and then attempted to commit suicide. A girl who had been sleeping with them gave an alarm, and prompt surgical aid having been procured their lives were saved. The judge, in summing up, said that if the woman had died the prisoner would have been guilty of murder. He supposed they had been reading novels. It was a most shameful and wicked act. Even if the girl had asked him to take her life he had no right to do so. The jury found the prisoner *Guilty*, and judgment of *Death* was recorded.

MIDLAND CIRCUIT: LEICESTER.—*Hannah Holmes*, 16, domestic servant, was indicted for the wilful murder of her master, Samuel Wells, 60 years of age, a farmer, on his own land at Seagrave, by administering arsenic in his food in April last. The details of this case were noticed at the time in our Provincial news. The medical evidence proved that deceased had died from the effects of arsenic, and letters were put in, written by prisoner, expressing sorrow for what she had done, and stating that she did not mean to kill her master. For the defence it was urged that the prisoner was young and did not know the consequences of her act, so that it could only be considered a case of manslaughter. The jury found a verdict of *Guilty*, with a strong recommendation to mercy. Mr. Justice Wightman then put on the black cap and pronounced the sentence of *Death* in the usual form. The prisoner was conveyed from the dock in a fainting fit

NORFOLK CIRCUIT: AYLESBURY.—*Attempted Murder.*—*Jesse Harding*, 29, was charged with shooting at Sarah Harding, his wife, with intent to murder her, at Winslow, on the 21st February. The prisoner was a labouring man at Winslow, and had been married eight years, having a family of four children. On the night in question he returned home very late, having been drinking in the town, and commenced threatening and abusing his wife, complaining that she would not remain at home, and had spent money he had given her. He then followed her to the bed-room, and levelling a gun at her, lodged the contents in her body. She was fortunately in a stooping position at the time, and the charge entering at the side passed beneath the skin of the abdomen and was left at the back of the upper part of the thigh. He then struck her with the butt-end of the gun until she became senseless. Becoming alarmed, he then undressed her, and admitted to some neighbours that he intended to kill her, that he had given her an hour for repentance, that he meant for some time past to have her life, and had borrowed the gun on purpose. For several weeks her life was in imminent danger. Upon being called on for his defence, the prisoner, crying violently, said his wife had been a very bad wife to him and a bad mother to his children; that he was so drunk at the time he did not know what he was doing, and that he would as soon have shot himself as his wife. The jury found him *Guilty* of the intent to murder, but recommended him to mercy, because they believed he had received great provocation. The Lord Chief Justice sentenced him to penal servitude for life.

OXFORD CIRCUIT: OXFORD.—*Attempted Child Murder.*—*Ann Barkers*, servant, aged 22, was charged with throwing her child, 13 months of age, into a well at Ipsden, on the 18th April last, with intent to murder him. On Wednesday, the 17th April, the prisoner, who had been staying with her child at the house of a relative, Mrs. Prior, of Berrin's Hill, Ipsden, left with her child, as she represented, to visit her aunt at Henley. About an hour after she was seen by two witnesses on the road to Henley without her child. On reaching Henley, in reply to a question by her aunt how her child was, she stated that she had put it out to nurse with a person named Prior, at Hetheridge Hill, as she was anxious to go to service again. She stopped the night with her aunt, and returned the next evening by train from Twyford, when a young woman who knew that she had a baby, asked her where it was, when she replied that it was dead, and had been for two months. In the meantime, late on Thursday evening, two men were at the old well at Ipsden, one being a stranger and wishing to see it. While there, they out of curiosity threw some stones down the well, and immediately heard the cry of a child proceeding from it. Having procured ropes and a rail, they let a boy down with a lantern, and he found the child, and brought it up in his arms. It was alive, but cold, and bleeding from wounds on the head. Owing to the great and prompt attention paid to it, it ultimately recovered. It was produced in court, and looked well and full of animation. The prisoner was taken into custody on the 20th April, when she admitted that she had stumbled over a stump near, and that the child had fallen out of her arms into the well; that she remained there two hours, heard the child cry, and then left. The judge in summing up remarked on her extraordinary conduct, if the child had fallen by accident down the well, in not obtaining assistance, but allowing it to remain there for two days without saying a word about it. The jury found her *Guilty* of the capital charge, and Mr. Justice Byles ordered sentence of *Death* to be recorded against her, but said he should take time to consider what punishment he should award her. ABINGDON.—*George Woolton*, 16, shoemaker, was convicted of wilfully and maliciously placing a piece of iron upon the Great Western Railway, with intent to obstruct an engine on the line, and to endanger the lives of the passengers, on the 5th of April, at Bray, and was sentenced to five years' penal servitude.

CENTRAL CRIMINAL COURT.—*Eliza Harriett Mary Feltham*, a well-dressed woman, the wife of the manager of a city bank, surrendered to take her trial upon an indictment charging her with stealing four doyleys and a pair of mittens from the stall of Lady Emily Peel at a fancy fair held in the Crystal Palace on the 9th June for the benefit of the Warehousemen and Clerks' school. The jury found her *Guilty*, recommending her to mercy, in which the prosecution joined. Mr. Justice Crompton sentenced her to six months' imprisonment in Newgate. *Criminal Assaults.*—*John Spencer*, 60, Roman Catholic priest, was tried on three indictments charging him with feloniously assaulting three boys who had been placed with him as scholars. He was acquitted on the first two charges and found *Guilty* on the third. The Lord Chief Baron ordered sentence of *Death* to be recorded.

Obituary.

THE RIGHT HON LORD ELPHINSTONE, G.C.B., and G.C.H., died on Thursday at 29, King Street, St. James's, in his 53d year. He was the 13th Baron Elphinstone in the peerage of Scotland, and succeeded his father in 1813. After having filled the office of Governor of Madras from 1837 to 1842, he returned to England; but shortly afterwards again visited India in a private capacity, and travelled through Hindostan as well as in Cashmere. Having again returned to England he was appointed a Lord in Waiting to the Queen, which office he held till 1853, when he was appointed Governor of Bombay. During the latter part of his tenure of this office the outbreak of the Indian mutiny took place, and Lord Elphinstone displayed an amount of tact and resolution which obtained for him the thanks of Parliament for his services, the distinction of a Grand Cross of the Bath, and a Barony in the Peerage of the United Kingdom. His lordship only recently returned to England, having prolonged his stay in India at the express request of the Government. That delay, however, proved fatal to a constitution already enfeebled by a tropical climate and worn out with work. Lord Elphinstone returned to England only to die from sheer exhaustion. As his lordship was never married, the Scottish barony descends to his cousin, Mr. John Elphinstone Fleming, eldest son of the late Admiral the Hon. Charles Elphinstone Fleming, son of the 11th baron, born in 1819, and formerly captain in the 17th Lancers.

LIEUT-GENERAL LORD SANDYS, Colonel of the Scots Greys, died on the 16th inst., at his seat, Ombersley Court, Worcestershire, in his 62d year. He entered the army in 1809, accompanied the 10th Hussars to the Peninsula in 1812, and was present in the action of Morales, and battles of Vittoria and Pampeluna. He served also in the campaign of 1815, as an aide-de-camp to the Duke of Wellington, and was present at Waterloo. He received the silver war medal with one clasp for Vittoria. He became a lieut-general in 1854, and Colonel of the Scots Greys in 1858.

LIEUT.-GEN. SIR GEORGE JUDD HARDING, K.C.B., died on the 5th inst. in his 74th year, at Belmont Lodge, Guernsey, of which island he was formerly Lieut-Governor. He obtained his commission as Second Lieut. in the Royal Engineers in 1802. He served with the army in Sicily in 1812, and the following year joined the forces in the Peninsula, where he saw much active service. In 1815 he served as Commanding Engineer with the Prussian army, under Prince Augustus of Prussia, at the sieges of Maubeuge, Landrecies, Marienburg, Philippeville, and Recroy, and continued with the army of occupation till 1818. For several years he filled the office of Lieut.-Governor of Guernsey. In 1838 he was nominated a Companion of the Bath, and in May last was made a Knight Commander of the Order

MAJOR-GENERAL GODFREY CHARLES MUNDY, Lieutenant-Governor of Jersey, who died on the 5th inst. after a few days' illness, had seen service in India, where he was aide-de-camp to Lord Combermere as Commander-in-Chief, and was present at the siege and storming of Bhurtpore in 1825-26. For some years he was Under-Secretary of State for War, under the Duke of Newcastle and Lord Panmure. He was afterwards appointed Lieut.-Governor of Jersey. He was the eldest son of the late General Godfrey Basil Munday, by the Hon. Sarah Rodney, youngest daughter of the celebrated Admiral Lord Rodney, and was brother of Admiral George Rodney Mundy.

Miscellaneous.

THE ECLIPSE OF THE SUN.—The eclipse of Wednesday was seen from all parts of London and the suburbs without interruption from clouds sufficient to disappoint the general observer, but the sky was too much obscured in the direction of the sun to enable the astronomers to ascertain the times of beginning and ending satisfactorily; indeed, at the ending the sun was quite invisible. Mr. Hind reports that with adequate magnifying power on Mr. Bishop's 10-feet equatorial, inequalities on the preceding and following limbs of the moon were very distinct; and were great enough to render pretty certain the visibility of Baily's beads in the line of totality. Three solar spots were visible to the naked eye. At 2h. 30m. the sky had the appearance of a November sky just before a snow storm. At 2h. 37m. it was similar to that of a summer's morning about half an hour before sunrise. At 2h. 49m. (the time of the greatest eclipse), Highgate Church, visible at the commencement, could not be discerned. At 1h. 40m. the thermometer stood at 70.3°; at 2h. 30m., at 69.3°; and at 4h., 68.8° Thus, towards the time of greatest phase the temperature fell 1° in 50 minutes, but only 0.5° in the next hour and a half. A telegram from Ciranda, in Spain, sent by one of the party who left England to observe the complete obscuration of the sun, says:—

"The success was complete. We have two photographs of red flames, which prove that they belong to the sun, and many photographs of other phases."

BIRTHS.—On the 12th inst, at Dromoland, the Lady INCHIQUIN, of twin daughters—15th inst, at 12, Chester Square, the Lady ROSE LOVELL, of a daughter—28th ult, at Pau Basses, the Lady ROSE LOVELL, of a daughter—28th ult, at Pau Basses, Pyrenées, the wife of the Hon. GEORGE ANNESLEY, of a daughter, who only for a short time survived her birth—9th inst, at Leamington, the Hon. Mrs. ST. JOHN METHUEN, of a daughter—13th inst, at Meggetland House, near Edinburgh, the wife of the Hon. A. YELVERTON BINGHAM, of a daughter—12th inst, at 12, Nottingham Place, Regent's Park, the wife of Sir CHARLES H. J. RICH, Bart, of a daughter—7th May, at Sydney, New South Wales, the wife of Sir WILLIAM M. MANNING, of a son—12th inst, at 15, William Street, Lowndes Square, the wife of Captain Sir F. NICOLSON, Bart, of a daughter—11th inst, at 36, Park Road, Stoke Newington, NAHNEBAHWEEQUAY (CATHERINE B. SUTTON, wife of William Sutton, of Owen Sound, Lake Huron, Upper Canada), the Envoy of the Ojibway Indians, of a son,

MARRIAGES.—On the 19 inst. in Westminster Abbey, JOHN GILBERT TALBOT, Esq, eldest son of the late Hon. John Chetwynd Talbot, and nephew of the Earl of Shrewsbury and Talbot, to the Hon. MERIEL SARAH, eldest daughter of Lord LYTTELTON—17th inst. at St. George's, Hanover Square, Lieut.-Col. JOHN CAMPBELL, of her Majesty's Indian Army, to the Princess VICTORIA GOORAMMA, daughter of the late ex-Rajah of Coorg—12th inst, at Great Marylebone Church, the Hon. RALPH PELHAM NEVILL, second son of the Earl of Abergavenny, to LOUISA MARIANNE, second daughter of Sir CHARLES FITZROY MACLEAN, Bart.—11th inst, at St. Michael's Church, Chester Square, the Hon. REYNOLDS MORETON, brother to the Earl of Ducie, to CHARLOTTE CONSTANCE, only daughter of the late Sir JOHN DUNLOP, Bart—14th inst, at St. George's, Hanover Square, FITZWARRINE CHICHESTER, Esq., second son of the Right Hon. Lord Edward Chichester, and nephew to the Marquis of Donegal, to ELIZABETH JULIA, only child and heiress of S. A SEVERNE, Esq., of Poslingford, Suffolk—14th inst, at St. George's, Hanover Square, SIR BEVERLEY HENNIKER, Bart., of Newton Hall, Essex, to LOUISA, third daughter of THOMAS HUGHAN, Esq., of Airds, N.B., and the late Lady Louisa Hughan—12th inst, at Leamington Priors, EDWARD, youngest son of the late Admiral Sir ROBERT WALLER OTWAY, Bart., G.C.B, late Captain Scots Fusilier Guards, to ADELAIDE, daughter of ROBERT HASSALL SWAFFIELD, Esq, of Westtown Lodge, Dorsetshire—12th inst, at Theydon Garnon, WALTER B. PERSSE, Esq, Adjutant Royal Wiltshire Militia, and late Captain 2nd Regt., only son of the late Colonel Persse, C. B, 15th Lancers, to ANNE JANE, third daughter of JOHN C. WHITEMAN, Esq, of Theydon Grove, Essex—11th inst, at St. Thomas's, Portman Square, GEORGE COX BOMPAS, eldest surviving son of the late Mr. Serjeant Bompas, to MARY ANN SCOTT BUCKLAND, eldest daughter of the late Very Rev. WILLIAM BUCKLAND, D.D., Dean of Westminster—17th inst, at Higham Church, Kent, CHARLES COLLINS, Esq., of Clarence Terrace, Regent's Park, to KATE MACREADY, second daughter of CHARLES DICKENS, Esq, of Gad's Hill Place.

DEATHS.—On the 13th inst, at Trafalgar Terrace, Kingstown, Sidney, relict of the late Hon. and Rev. ARTHUR VESEY—9th inst, at Wells, CHARLOTTE, youngest daughter of the late Colonel the Hon. SAMUEL KNOLLYS, aged 80—16th inst, the infant son of Mr. and the Hon. Mrs. FREDERICK WEBB—13th inst, at Horkstow, ANN, widow of the late Colonel TUFNELL, and previously relict of the late Admiral the Hon. Thos. Shirley—15th inst, at 59, Portland Place, GEORGIANA, fifth daughter of the Hon. Sir THOMAS J. PLATT—12th inst, GEORGE SOANE, Esq., A.B., youngest son of the late Sir John Soane, R.A., aged 69—5th inst, at Cheltenham, Major-General FREDERIC BLUNDELL, C.B., Madras Artillery, aged 62—13th inst, at Donaghadee, county Down, FLORENCE CHARLOTTE HESTER, eldest daughter of the late NATHANIEL ALEXANDER, Esq., of Portglenone, county Antrim, and formerly M.P. for that county—10th inst, at Corstorphine Lodge, Ryde, I.W., JAMES PLAYER LIND, Esq., M.D, late of Wadham College, Oxon, a J.P. for the county of Hants, and many years Chairman of the Bench of Magistrates at Ryde, aged 70—7th inst, at the Vicarage House, Salehurst, Sussex, the Rev JACOB GEORGE WRENCH, D.C.L., F.S.A., of Trinity Hall, Cambridge, and Vicar of the above parish, aged 70—16th inst, at Upper Norwood, the Rev. JOSEPH SORTAIN, minister of North Street Chapel, Brighton, aged 50—16th inst, at 78, Westbourne Terrace, Hyde Park, JOHN COTTON, Esq., late Director of the East India Company, aged 76—15th inst, at Parkfield House, Devon, FRANCIS GARRATT, Esq., aged 77—17th inst, at New Grove, Bow Road, Middlesex, EMMA, wife of Mr. THOMAS ALEXANDER MORRIS, and second daughter of the late HENRY GROOM, Esq., of Clapham Rise, Surrey, aged 29—30th of April last, at Bendigo, Victoria, killed by a fall from his horse, EDWARD, third son of Mr. JOHN COATES, Castletown, Isle of Man—18th inst, at his residence, Eynsham, Oxon, SAMUEL DRUCE, Esq., aged 72—May 23d, at Secunderabad, CLARA FRANCES, wife of THOMAS CRAWFORD, M.D., 18th Royal Irish Regiment, and daughter of the late Richard Morrison, Esq., of Dublin.

Markets.

COVENT GARDEN.—July 21.

Trade is falling off, and, in the face of heavy importations from the Continent, prices are receding. English Pine Apples, Peaches, and Nectarines are still plentiful, as are also Plums, Pears, and Figs. Grapes are abundant, as are likewise Cherries. Best samples of Strawberries maintain fair prices. Cob Nuts realise 1s. per pound. Gooseberries fetch 3d. a quart. Peas in excellent condition are abundant. New Potatoes range from 6s. to 8s. per cwt. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Heaths, Kalosanthes, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 3s to 4s	Gooseberries, per qt., 3d to 6d
Grapes, per lb., 3s to 6s	Currants, per qt., 3d to 6d
Strawberries, p. lb., 6d to 1s6d	Green Figs, per doz., 8s to 12s
Peaches, per doz., 10s to 20s	Melons, each, 2s to 4s
Apricots, per doz., 2s to 4s	Apples, per doz., 2s to 6s
Nectarines, do., 6s to 12s	Oranges, per 100, 6s to 15s
Cherries, p. lb., 1s to 3s	Lemons, per 100, 5s to 10s

VEGETABLES.

Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 1s to 1s 6d	Celery, per bundle, 1s 6d to 2s
Peas, p. bush., 3s to 4s 6d	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 2d to 4d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 6d to 8d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d to 7d	Mushrooms, p. pott., 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 4s
Cucumbers, each, 6d to 1s	Savory, per bunch, 2d to 4d
Artichokes, per doz., 6s to 8s	

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, July 19.

Prime Meadow Hay	75s	to 90s	Clover	90s to 120s
Superior do. (old) ..	95	105	New Clover	80 95
Inferior do.	60	70	Second cut do. ..	— —
New do.	57	84	Straw	36 44
Rowen	—	—		

DAVIS & CO.

CUMBERLAND MARKET, THURSDAY, July 19.

Sup. Meadow Hay ..	105s	to 114s	Inferior Clover ..	98s to 110s
Inferior do.	90	98	New do.	70 100
New do.	60	84	Straw	50 54
Superior Clover ..	120	130		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, July 19.

Fine old Hay	100s	to 108s	Fine old Clover ..	120s to 126s
Inferior do.	90	95	Inferior do	100 108
Prime New Hay ..	75	80	Fine New Clover ..	95 100
Inferior do.	60	70	Inferior do.	60 72
Straw	38	42	Fine 2d cut	— —

COAL MARKET.—JULY 19.

Hastings Hartley, 15s. 9d.; Holywell, 15s. 9d.; Howard's West Hartley, 16s.; Wylam, 16s.; Walls End Acorn Close, 17s. 3d.; Walls End Eden, 17s. 3d.; Walls End Harton, 16s 9d.; Walls End Braddyll's Hetton, 17s. 9d.; Walls End Haswell, 18s. 9d.; Walls End Hetton, 18s. 9d.; Walls End Cassop, 17s. 9d; Walls End Kelloe, 17s. 9d.; Walls End South Hartlepool, 17s. 3d.; Walls End Thorpe, 17s. 9d.; Carway and Duffryn Malting, 22s. 6d.; Cowpen Hartley, 16s.—21 ships at market.

HOPS.—BOROUGH MARKET, FRIDAY, July 20.

Messrs. Pattenden & Smith report the accounts from the Hop plantations much worse; the greater portion of Mid and East Kent and Worcester are fast going into blight. The market is very active at advancing prices. Duty 135,000*l*.

BUTTER MARKET.—July 20.

Best Fresh Butter .. .. 14s. per dozen lbs.
Second do. do. .. .. 13s. .. ..
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, July 16.

The supply of Beasts is considerably larger: the demand is, however, good, and choice descriptions are not much lower. The number of Sheep is also much greater than on Monday last, and the prices of that day cannot be maintained throughout. The trade is rather better for Lambs. Calves are selling about the same as on Thursday. From Germany and Holland there are 1600 Beasts, 7500 Sheep, 250 Calves and 80 Pigs; from Spain, 100 Beasts; from Ireland, 30; from Norfolk

and Suffolk, 500; and 1400 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	5	6	to 5	8	Best Long-wools.	5	2	— 5	4
Best Short-horns	5	2	— 5	6	Do. Shorn			to ..	
2d quality Beasts	4	6	— 4	10	Ewes & 2d quality	4	4	— 4	8
Best Downs and Half-breds ..	5	4	to 5	8	Do. Shorn			— .	
Do. Shorn		—		..	Lambs	5	8	— 6	0
					Calves	4	4	— 5	6
					Pigs	4	0	— 5	0

Beasts, 4140; Sheep & Lambs, 29,200; Calves, 309; Pigs, 290.

THURSDAY, July 16.

The number of Beasts is larger than on Thursday last. Trade is not so brisk, and prices are rather lower. There is scarcely any alteration either in the supply of Sheep or in the demand for them; prices consequently are as on Monday. From Germany and Holland there are 327 Beasts, 3000 Sheep, 461 Calves, and 20 Pigs; from Norfolk and Suffolk, 100 Beasts; from the northern and midland counties, 200; and 115 Milch Cows from the home counties.

Best Scots, Herefords, &c. ..	5	4	to 5	8	Best Long-wools .	5	2	— 5	4
Best Short-horns	5	2	— 5	4	Do. Shorn			— ..	
2d quality Beasts	4	4	— 4	8	Ewes & 2d quality	4	6	— 4	8
Best Downs and Half-breds ..	5	4	— 5	8	Do. Shorn			to ..	
Do. Shorn		—		..	Lambs	5	8	— 6	4
					Calves	4	4	— 5	6
					Pigs	4	0	— 5	0

Beasts, 1004; Sheep & Lambs, 12,100; Calves, 681; Pigs, 100.

MARK LANE.—MONDAY, July 16.

The was but a small supply of Wheat at the Corn Exchange this morning from Essex and Kent, which was held firmly for the rates of this day se'nnight. The attendance was larger than of late, and more disposition evinced on the part of millers to effect purchases, which gave an improved tone to the trade, and on the sales effected the prices obtainable last week were generally realised. Barley brings fully last week's rates. In the value of Beans and Peas there is no alteration. The Oat trade is heavy, and all but the best conditioned parcels are 1s. to 2s. per qr. cheaper. For Flour there is scarcely any demand, and prices are rather easier.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	55—60		Red	53—58	
— — fine selected runs..ditto	55—60		Red	56—60	
— — Talavera	58—63				
— Norfolk	—		Red	—	
— Foreign	52—65				
BARLEY, grind. & dist., 24s to 31s..Chev.	38—45		Malting.	36—41	
— Foreign..grinding and distilling	28—36		Malting.	35—40	
OATS, Essex and Suffolk	20—24				
— Scotch and Lincolnshire..Potato	26—28		Feed ..	24—26	
— Irish .....Potato	26—28		Feed ..	21—24	
— Foreign.....Poland and Brew	21—26		Feed ..	17—26	
RYE	35—38		Foreign.	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....32s to 40s....Tick	34—43		Harrow.	34—43	
— Pigeon .....36s — 47s..Winds	48—54		Longpod	—	
— Foreign .....Small	38—46		Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	38—40		Suffolk .	36—41	
— Maple .... —s to —s ..... Grey	32—34		Foreign .	30—40	
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	48—54				
— 2d do. ..... ditto	40—48		Country.	40—48	
— Foreign .....per barrel	25—32		Per sack	30—44	

FRIDAY, July 20.

The weather this week has become unsettled, some quantity of rain having fallen on Monday, Wednesday night, and yesterday morning. The wind has blown chiefly from S.W. The crops are supposed to progress favourably but slowly. Increased firmness has been apparent in the Wheat trade this week throughout the kingdom, enabling holders here and in several markets to realise an advance of 1s per qr. In the value of Spring Corn no alteration of moment has occurred. Flour is neglected, although the small arrivals from the interior have induced factors to hold these descriptions for 1s. to 2s. per sack advance. The arrivals from the South of Europe during the last eight days have been unusually large; they amount to 289 cargoes—say, 68 Wheat, 98 Maize, 9 Rye, 91 Barley, nearly all of which are out of condition, 6 Oats, 13 Linseed, 4 Cotton and Rapeseed. The business done has not been in proportion to the arrivals, and a large number of cargoes remain on hand. The sales comprise Wheat, Odessa Ghirka at 51s. 6d., 52s. 3d., and 53s. 6d., Taganrog Ghirka 51s. 6d., all per 492 lbs.; Maize, Odessa 30s. 6d. and 31s. 4½d. per 492 lbs.; Ibrail 28s. to 30s. 3d. and American 30s. 6d., both per 480 lbs.; Danube Barley on passage and arrived 25s. 6d. nett and less 2½ per cent., Ibrail 26s. nett, and 25s. 6d. to 24s. 9d. less 2½ per cent., all per 400 lbs.; a cargo of Oats was sold at 20s. 6d. per qr. imp., all c. f. and i. The arrivals of English grain during the week have been small, those of foreign were to a fair extent. English Wheat was more inquired after, but the market was bare. Foreign met an improved demand at the full rates of Monday. Barley is 1s. per qr. cheaper. For Oats there is a good demand at the extreme prices of Monday. The Flour trade is steady, and country marks are held for a slight advance.

ARRIVALS FROM July 16 TO July 20.

	Wheat.	Barley.	Oats.	Flour.
English ..	1020 qrs.	— qrs.	— qrs.	1610 sks.
Irish	— ,,	— ,,	20 ,,	— ,,
Foreign ..	11030 ,,	1700 ,,	23950 ,,	{ 1390 ,, 9660 brls.

LIVERPOOL, Tuesday, July 17.—We have a fair attendance of both town and country millers and dealers at our Corn Exchange this morning, who have in some instances obtained American Wheats at a trifling concession ex ship, but other qualities cannot be quoted lower. Flour has met with little inquiry, and is nominally unchanged in value; sack Flour, however, is not to be had on any lower terms. American mixed and yellow corn has had only a small sale, at a reduction of fully 6d. per qr., buyers holding back in the expectation of doing better; other descriptions are held firmly. Oats and Oatmeal have had rather a better inquiry for consumption at full prices. Beans, Peas, and Barley each maintain fully previous rates. The market closed on the whole steady.

FRIDAY, July 20.—The grain market was steady. Wheat in fair request at full rates. Flour steady. Indian Corn in moderate demand, and steady at late decline. Oats and Oatmeal dull.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
June 9..	54s 2d	35s 10d	27s 8d	38s 1d	45s 9d	40s 8d
— 16..	54 11	35 0	26 11	37 0	46 2	40 4
— 23..	57 0	34 3	27 5	38 9	45 10	41 4
— 30..	58 5	32 10	25 5	41 9	47 1	41 8
July 7..	57 9	34 0	26 5	41 3	46 6	41 4
— 14..	57 7	33 5	25 8	41 3	46 6	43 7
Agg. Aver.	56 7	34 2	26 7	39 8	46 4	41 6

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	June 9.	June 16.	June 23.	June 30.	July 7.	July 14.
58s 5d	..	..	..	..	..	..
57 9	..	..	..	..	..	..
57 7	..	..	..	..	..	..
57 0	..	..	..	..	..	..
54 11	..	..	..	..	..	..
54 2 —	..	..	..	..	..	..

BRITISH WOOLS.—LONDON, FRIDAY, July 20.

Our trade continues healthy. The prices in the country are as high as ever.

	s.	d.	s.	d.		s.	d.	s.	d.
South-down Hoggets..	1	8	to 1	9	Leicest. Wethers	1	6	to 1	7
Half-bred ditto..	1	8	— 1	9	Ditto Hoggs ..	1	7	— 1	6
Down Ewes ..	1	6	— 1	7	Combing Skins	—	—	—	
Kent Fleeces ..	1	6	— 1	7	Blanket ditto ..	0	6	— 0	8
					Flannel Wool ..	1	0	— 1	7

COLONIAL WOOL SALES: Thursday evening.—The July series of sales has commenced to-night at about the rates of the last series.

WANTED, AS GARDENER, an experienced Man, who thoroughly understands the management of Grapes and Pines, as well as the Flower and Kitchen Gardens. Assistance given. Salary 70*l.* per annum, no extras. None need apply but those who can be well recommended as having a thorough knowledge of their profession.—Apply at Berry House, Tulse Hill, Brixton, S.

WANTED, a Man and his Wife without incumbrance; the Man as good practical GARDENER and to look after a Cow. The Wife as experienced LAUNDRESS and to attend to Dairy. A Cottage, firing, milk and vegetables found.—Apply, by letter, to A. B., 10, Montpellier Road, Brighton, stating wages, &c., required.

WANTED, AS GARDENER (under a HEAD), a young Man who has been bred under an excellent Gardener in a nobleman's or gentleman's family. A knowledge of Propagating and Bedding Flowers essential. None need apply from a nurseryman.—X. Y. Z., Witney, Oxon.

WANTED, A MAN who has a good knowledge of Roses; he must be an industrious Working Man, and an expert Budder.—Apply, stating where having lived, amount of wages expected, &c., to JOHN CRANSTON, King's Acre Nurseries, near Hereford.

WANTED IMMEDIATELY, a persevering MAN, well up in the Propagation and Management of Roses in pots and Soft-wooded Plants in general. A short distance from London.—Address by letter only to C. D., Mr. May, 53, Widham Street, Regent's Park, N.W.

WANTED, A GARDENER, OR GROOM AND GARDENER, where a farm servant is kept. A short distance from town. No objection to his being married if without incumbrance. Wages liberal and a comfortable house. —F. H., Post Office, Weybridge, Surrey.

WANTED, A FARM BAILIFF.—Apply to JAMES DICKSON & SONS, Seedsmen, &c., Chester.

WANTED, A FARM SERVANT, a short distance from town, who understands Milking, Stock, &c.; one willing to make himself generally useful would receive liberal wages and a comfortable house. If married and without incumbrance, Wife may get employment in Dairy or Laundry.—Apply on Monday next (23d) between 1 and 2 o'clock, at Mr. SCRIPPS's, 13, South Molton Street, Bond Street, W.

WANTED, A DAIRYMAID for 12 Cows, who must thoroughly understand her business.—Apply by letter or personally before the 30th July, to E. G., 70, Portland Place, W.

WANT PLACES.—Letters to be Post Paid.

BAILIFF, or BAILIFF AND GARDENER.—W. P. AYRES having completed his engagement in the formation of the Forcing and Pleasure Gardens to the new mansion at Orchardleigh Park, will shortly be at liberty to enter upon a similar engagement. During his residence (four years) at Orchardleigh W. P. A. has had the general supervision of the Estate Improvements, Draining, Re-modelling of Farms, Receiving Rents, &c. He has also Designed and erected a Farm residence and covered Homestead of the first class; is thoroughly conversant with the principles of Construction and Artificers and Ground work of all kinds. Liberal remuneration expected. *** W. P. A. has been known to Professor Lindley, the learned Editor of the *Gardeners' Chronicle*, for upwards of 20 years, and has the honour to refer to him as to his professional capabilities.—Orchardleigh Park, Frome.

GARDENER (HEAD).—Age 34, married; thoroughly understands his profession in all its branches. Good reference.—A. B., Mr. Parry, 7, High Street, Notting Hill, W.

GARDENER (HEAD).—Understands the Forcing of Pines, Vines, Peaches, Cucumbers, and Melons; Flower and Kitchen Gardens. Four years' good character.—W. G., Ockham, Ripley, Surrey.

GARDENER (HEAD).—A gentleman going abroad is desirous of recommending his Head Gardener; he thoroughly understands his profession in all its branches.—J. R, Post Office, Damerham, Wilts.

GARDENER (HEAD).—Age 36, married; thoroughly understands Forcing, Fruit, Flowers, Vegetables, and General Gardening. Good recommendation.—V. W., Mr. Whur, Chepstow Nursery, Westbourne Grove, London, W.

GARDENER (HEAD), either town or country.—Age 26, single; a practical knowledge of his profession. Nearly three years' good character. Wages 1*l.* per week.—A. B., Post Office, Ticehurst.

GARDENER (HEAD). — Age 33, married, two children, aged 9 and 11 years; understands the cultivation of Pines, Vines, and all other Early and Late Forcing plants. Excellent character.—A. B., 11, Trinity Square, Brixton, S.

GARDENER (HEAD, or good Single-handed).—Age 35, married, no incumbrance; well understands Forcing, Vines, Cucumbers, Melons, and is a good Kitchen and Flower Gardener. Good character.—WM. P., Mr. J. Matthews, Kingsbury, Middlesex, N.W.

GARDENER (HEAD).—Age 30, married, one child; understands Vines and Forcing Fruit, and Vegetables, and the management of Flower and Kitchen Gardens; excellent character and well recommended.—A., Mr, Young's Nursery, Milford, near Godalming.

TO NOBLEMEN, GENTLEMEN, &c.

GARDENER (HEAD).—Age 39, married; thoroughly practical both in Kitchen, Fruit, and Flower Gardens; has had great experience, and can be highly recommended by Mr. Bragg, of the Star Nursery, Slough.—J. Y, Star Nursery, Slough.

GARDENER (HEAD).—HENRY GIBSON (age 36, small incumbrance), begs to offer his services to any nobleman or gentleman in want of a practical Gardener. Seven years Gardener to the late Sir Henry Lambert, at Aston House, near Tetworth, Oxon, and with the present Sir Henry up to the time that he disposed of his property in Oxfordshire. Can have eight years' good character.—Direct as above.

GARDENER (HEAD).—Age 22, single; has a general practical knowledge of his profession in all its branches. Six years' good character.—L. B., Post Office, Dulwich, Surrey, S.

GARDENER (HEAD).—Age 26; thoroughly understands the Cultivation of Flowers, Greenhouse, Hothouse, and Forcing Department in all its branches. Good character. —G. C., 4, Bloomfield Place, Crouch End, Hornsey, N.

GARDENER (HEAD, in or out the house).—Age 32; understands every branch of Gardening, Early and Late Forcing, and is a good Kitchen Gardener. Character will bear strictest investigation.—M. A. Y., Huntsworth Terrace, Portman Market, Paddington, London, N.W.

GARDENER.—Age 34, single; understands Kitchen and Flower Gardens, Greenhouse, Hothouse, Forcing, &c. Good character.—E. G., Mr. Fryers, Nurseryman, Camberwell, S.

GARDENER.—Thirty years' experience; has a thorough practical knowledge of Early and Late Forcing, Vines, Greenhouse, Flower and Kitchen Gardens. Six years' good character; no family.—R. S., Public Library, Enfield, Middlesex, N.

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The Gardeners' Chronicle Newspaper.

SATURDAY, JULY 28, 1860.

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Riflemen and other volunteers, while serving in the United Kingdom, assured at ordinary rates.

FACTS and FIGURES.

Capital paid up and undivided profits ..	£253,224
Accumulated Life Fund	427,432
Annual Revenue from all sources, upwards of	130,000
Amount of Life Insurances in force	2,000,000

The New Life Policies issued during the year ending August 1, 1859, were 522.

Sums insured thereby	£252,740 0 0
Yielding of New Premiums	7814 1 9

The funds of the Company are securely invested, chiefly upon mortgage or real securities, and in the Government and public funds.

Forms of proposals and prospectuses, containing all the necessary particulars, may be had at the office, or from any of the Company's agents. F. G. SMITH, Secretary to the London Board.

37, Cornhill, London.—July 21.

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11, Bouverie Street, E.C.—July 28.

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III.—Mr. Briggs Tries for a Perch.
IV.—Mr. Briggs Catches a Jack.
V.—Mr. Briggs Catches an Eel.
VI. & VII.—Mr. Briggs goes out Fly Fishing.
VIII.—XII.—Mr. Briggs goes Salmon Fishing.

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TO NURSERYMEN AND SEEDSMEN.—NURSERYMEN and SEEDSMEN will oblige by forwarding any alteration in their Address to the Editor of the "Gardeners' Year Book, Almanack, and Directory," for correction in the forthcoming Edition for 1861.

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J. MATTHEWS, 41, Wellington St., Covent Garden, W.C.

HORTICULTURAL GARDENS.—The *Gardeners' Chronicle* of May 12, containing Mr. NESFIELD'S COLOURED PLAN for the NEW GARDEN at Kensington Gore, is still on Sale at the Office, 41, Wellington Street, Covent Garden, W.C. and will be sent by post on receipt of six stamps.

News of the Week.

IN the House of Lords on Monday Lord STRATHEDEN moved the second reading of the Newspapers Bill. Lord CHELMSFORD moved as an amendment that it be read a second time that day six months. After some discussion the amendment was carried on a division by 36 to 10, so the Bill was lost. On Tuesday the House went into committee on the Census (England and Ireland) Bills, when the Earl of ELLENBOROUGH moved the omission from the Irish Bill of the clause requiring the statement of religious profession. Lord MONTEAGLE and Earl GRANVILLE supported the clause, and after some discussion the amendment was withdrawn, and both Bills passed through committee. On Thursday in answer to Earl FORTESCUE, Earl DE GREY and RIPON stated that the Government had it in contemplation to grant an increased allowance to adjutants in Volunteer corps, but did not intend to make any grants for the payment of permanent sergeants, except in corps of mounted Volunteers whose numbers were not sufficient to require the services of an adjutant.

In the Commons on Friday, on the motion for the second reading of the Maynooth College Bill, Mr. SPOONER moved that it be read a second time that day three months. On a division the second reading was carried by 135 to 57. On Monday Lord PALMERSTON made his promised statement on the subject of the National Defences. After referring to the change effected in the position of England as a naval power by the introduction of steam, and to the enormous efforts recently made by France to raise her army and navy to an extent far greater than was necessary for purposes of defence, he said that any Government would deserve impeachment which did not at once place the country, as far as human means are concerned, in a position of complete and efficient security. He proposed, therefore, to carry into effect the recommendations of the Commissioners so far as they related to the defence of the dockyards and the creation of a central arsenal. For these purposes he should ask for the sum of 9,000,000*l.*, to be raised by terminable annuities for a term not exceeding 30 years and chargeable on the Consolidated Fund. He

proposed in the present year to take a vote for only 2,000,000*l.*, to be expended on works which can be completed within the year, and to take the balance, as it may be wanted, next year and the year succeeding. It was not, he said, the intention of Government to make any proposal for the defence of the metropolis, believing that it was too large and too populous to be fortified, and that the real defence of London would be in the open field. Mr. DISRAELI, General PEEL, and Mr. NEWDEGATE expressed their approval of the proposed scheme; Mr. BRIGHT protested against being called upon to vote upon a question of such importance without further deliberation, and moved that the Chairman report progress. Lord PALMERSTON ultimately consented to the adjournment of the debate to that day week. On Tuesday the House went into committee on the Poor-law Board Continuance Bill, when Mr. BAZLEY moved that the period of continuance be reduced from five years to one year, on the ground that an amendment of the whole system of poor-law administration was necessary. After some discussion, the amendment was withdrawn. Mr. DEEDES then moved that the term of continuance should be three years instead of five. On a division the amendment was carried by 147 to 92, and the Bill passed through committee. The Roman Catholic Charities Bill was considered in committee, and some slight progress was made in the clauses. Sir J. PAKINGTON moved an address for a Royal Commission to consider the present system of promotion and retirement in the Royal Navy. The motion was opposed by Government, and negatived on a division by 89 to 56. Mr. DUNLOP, as chairman of the select committee on packet and telegraphic contracts, moved a resolution to the effect that all such contracts extending over a period of years and creating a public charge should in future be brought under the control and supervison of Parliament. The CHANCELLOR of the EXCHEQUER assented to the resolution, which was agreed to. On Wednesday Sir G. LEWIS withdrew the Coroners' Bill, which stood for a second reading. On the order for going into committee on the Ecclesiastical Commission, &c., Bill, Sir G. LEWIS intimated that he should abandon the clause transferring the property of the chapters to the Commissioners. The House then went into committee. On clause 5, Lord JOHN MANNERS moved that it be omitted from the Bill. Sir J. GRAHAM suggested that it be made discretionary instead of compulsory. The suggestion was adopted, and the clause as amended was agreed to. Clause 16, giving the management of the Episcopal property to the Commissioners, gave rise to a long discussion, but was carried on a division by 159 to 41. The subsequent clauses, up to 21 inclusive, were agreed to. On Thursday the CHANCELLOR of the EXCHEQUER stated that he should bring forward the Paper Duties Bill on Monday week. Mr. BRIGHT gave notice that on Monday next, on resuming the adjourned debate on the proposed loan for the National Defences, he will move an amendment postponing the consideration of the question to a future period. Lord J. RUSSELL stated that the Neapolitan Government had sent a special Envoy to London to request the mediation of England with GARIBALDI for the purpose of obtaining an armistice and preventing any attack on the mainland of Naples, and to propose that in the event of the mediation being refused by GARIBALDI, the forces of France and England should be employed to impose such an armistice upon him. To that proposition HER MAJESTY'S Government had declined to accede. Lord PALMERSTON moved that on all Tuesdays during the session after Tuesday next, Government orders of the day should have precedence of notices of motion. After some discussion the motion was agreed to. On the motion for going into committee on the European Forces (India) Bill, Mr. HENNESSY moved that half the vacancies among the European commissioned officers in India be allotted to the sons or orphans of officers who have served in India in the military and civil services. After considerable discussion the motion was negatived by 73 to 15. Sir J. ELPHINSTONE moved that the committee have power to make provision for the future regulation, discipline, and patronage of the European forces in India. Mr. ROEBUCK moved the adjournment of the debate. Lord PALMERSTON assented, and the debate was adjourned.

Accounts from Syria announce that fresh outrages have been perpetrated at Aleppo, Orfa, and other places, and confirm the report that the Turkish soldiers took part in the massacres. The French Government last week proposed to the Great Powers to send a joint European force to Syria to co-operate with the Turkish authorities for the protection of the Christians. England, Austria, and Russia at once assented to the proposal, on the understanding that the object and extent of the intervention should be settled by a convention to which Turkey should be a party. It was subsequently announced that, in consideration of the gravity of the crisis, France would not wait for the other Powers or for the concurrence of the Porte, but would immediately send an expedition of 8000 men to Syria. The Turkish Ambassador, however, has objected to the intervention of a single Power, and the departure of the French expedition has been countermanded until the formal assent of the Porte has been obtained.—Accounts from Sicily inform us that GARIBALDI attacked the town of Melazzo on the 20th inst. with the bayonet, and after a desperate combat compelled the Neapolitans to withdraw to the citadel. The KING OF NAPLES has ordered the whole of Sicily to be evacuated, but at the latest dates the citadel of Messina was still occupied by a division of the Royal troops. The interview of the EMPEROR OF AUSTRIA and the PRINCE REGENT OF PRUSSIA took place on Wednesday at Töplitz. Count RECHBERG has addressed a Circular to the Austrian Ambassadors at the Courts of the great Powers stating that the EMPEROR OF AUSTRIA requested this interview for the purpose of conferring with the PRINCE REGENT on the general state of Europe and especially on the German question.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Osborne. On Friday the Queen and Prince Consort, accompanied by Princess Beatrice and Prince Leopold, drove out. The Judge Advocate-General had an audience of her Majesty. Prince and Princess Leiningen, and Prince William of Baden, visited her Majesty, and stayed to luncheon. Prince William of Baden took leave of her Majesty previous to his departure for Germany. On Saturday the Queen and the Prince Consort walked out. Earl Granville arrived on a visit to her Majesty. Prince and Princess Leiningen dined with the Queen. On Sunday morning the Queen and Prince Consort, the Duchess of Kent, the Princesses Alice, Helena, and Louisa, and Prince Arthur, attended Divine service at Osborne. The Rev. G. Prothero officiated. On Monday morning Earl Granville returned to London. The Queen and Prince Consort received by telegraph the joyful intelligence of the confinement of the Princess Royal and the birth of a Princess. The Duchess of Kent took leave of her Majesty and returned to Frogmore. On Tuesday the Queen, Prince Consort, and Princess Alice rode on horseback. On Wednesday the Queen and Prince Consort drove and walked. The Princess Alice and the Royal family also drove in the grounds. Lord Clyde arrived from London on a visit to her Majesty.

THE PRINCE OF WALES.—The mail steamer Adriatic, which arrived at Cowes on Tuesday, passed at 11 P.M. on Friday the 20th, in lat. 49 40 N., long. 36 W., a fleet in close order of sailing, supposed to be the convoy of the Prince of Wales.

ACCOUCHEMENT OF THE PRINCESS FREDERICK WILLIAM.—Her Royal Highness the Princess Frederick William was happily delivered of a daughter, at 22 minutes after 10 on Tuesday morning. Her Royal Highness and the Royal infant are doing so well that no bulletin was published on Wednesday.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

THE CHANNEL FLEET arrived at Queenstown on Wednesday from Bantry Bay. It will next visit Dublin, and will then probably proceed to the Clyde. It is supposed that Sir Charles Fremantle will winter in Plymouth Sound.

THE VOLUNTEER MOVEMENT. — The numerical strength of the Volunteers was on Monday for the first time made the subject of a Parliamentary return. The first tabular statement shows the strength of the Volunteers within a circle of 20 miles' radius described around the Post Office. The total number of companies within this circle is 234, the maximum strength being 23,665 men, and the minimum strength 14,170, but the actual number of men on the rolls is not stated. A further return refers to the counties of Kent, Devon, and Hants, in which the maximum strength is 12,191, the number of companies being 113. In addition to these there are 33 companies of artillery, with a maximum strength of 2747 men.—The Surrey Mounted Rifles met at their head-quarters, Battersea Rise, on Saturday, and marched, headed by the band of the Royal Horse Artillery, through Clapham, Brixton, Dulwich, Camberwell, Peckham, and Deptford, to Greenwich, where they dined at the "Ship," Major-General the Hon. Sir James Yorke Scarlett in the chair.—The Lambeth and Southwark or 7th Surrey assembled on Saturday at the Sessions house, Newington Causeway, and marched over Westminster Bridge, accompanied by their band, to the residence of their commander Major Beresford, at St. John's Wood, where they were liberally provided with refreshments.—The Chelmsford and Brentwood Companies were reviewed on Saturday in Boreham Park, the seat of Sir John Tyrell, by Lieut.-General Sir Harry Smith. Some ball practice followed, a regimental sword and silver cup being awarded to the best shots, and the Volunteers were afterwards hospitably entertained at dinner by Sir J. Tyrell.—The 3d West Riding (Bradford) regiment consisting of five companies, with the Eccleshill sub-division attached, were inspected on Saturday in Bradford barracks by Colonel M'Murdo, the Inspector-General.—The 12 companies forming the Birmingham Corps were reviewed on Saturday in Calthorpe Park, by Lord Leigh, the Lord Lieutenant of the county.—On the previous Thursday the 16th Middlesex were inspected in Whitton Park, near Hounslow, by General Tremenheere, when a handsome silver bugle was presented to the corps by the Duchess Dowager of Northumberland.—On Saturday the 1st Surrey assembled at Kennington, and marched down the Clapham Road, Bedford Road, to Tooting Common, where they went through skirmishing drill for about an hour, and then proceeded through Balham to Clapham Common, and thence home by Clapham Road, Stockwell, Vassall Road, and Camberwell New Road, where they were dismissed.—The two battalions of the Edinburgh corps were inspected in Holyrood Park by Colonel M'Murdo, the second on Saturday, and the first on Monday. On both occasions the battalion was put through a variety of field movements, including skirmishing on the adjoining heights.—On Sunday morning the 41st Middlesex (Royal Small Arms Factory, Enfield Lock) made their first appearance in uniform in public, headed by the brass band of the West Essex Artillery, and attended Divine service at St. James's, Enfield Highway.—On Monday the Ipswich Company had a field-day in the grounds of the Chauntry, the residence of Sir F. Kelly, M.P., who provided them with a luncheon on the occasion. In the afternoon a silver bugle was presented to the corps by Mrs. Josselyn, wife of the Mayor of Ipswich, and the proceedings closed with a dinner in the Corn Exchange.—The 8th Hampshire (Bitterne and Botley Companies) assembled on Monday at Bitterne, two miles from Southampton, on the occasion of wearing their uniform for the first time. After going through a few evolutions, the corps marched to church, headed by the band of the Southampton corps, and after hearing Divine service marched to Heathfield, the residence of their commandant, Captain Richardson, where they partook of a collation to which he had invited them.—The Isle of Wight corps consisting of the 1st and 3d or Ryde Companies, with their band, the 2d or Newport Company, the 4th or Nunwell Company, the 5th or Ventnor Subdivision, the 6th or Sandown Company, and the 7th or Cowes Company, mustered on their parade grounds at an early hour on Monday morning, and proceeded to Mersley Down, near the centre of the island, for the purpose of battalion drill, under the command of Colonel Dunsmore, late of the 42d Highlanders.—The 33d Middlesex Rifles received a silver bugle on Tuesday from the ladies of Tottenham. The bugle was presented by Mrs. Hall, the wife of the vicar, in the grounds of Captain Goss, in the presence of a large assemblage. After the presentation a party of about 200 sat down to a dinner, provided by the captain.—A competition open to the Volunteer Rifle Corps of Glamorgan and Monmouth took place at Cardiff on Monday and Tuesday. The prizes were a Lancaster rifle for the best shot at 400 yards, and a short Enfield for the best shot at 300 yards. The first prize was won by Private William J. Jenkins, of the Dowlais Company (2d Glamorgan); the second by Sergeant Nethersole, of the Swansea Company (3d Glamorgan). The winners made seven points each in five shots.—On Tuesday the Stamford and Grantham corps were reviewed by Lord Burghley, on the parade-ground in Burghley Park, in the presence of a large concourse of spectators, after which a set of colours worked in silk, the gift of the ladies of Stamford, were presented to the Stamford corps by Lady Burghley, and the proceedings of the day concluded with a concert and a dance.—On Wednesday the 4th Middlesex Rifles assembled at the parade ground opposite Compton Terrace, Islington, where Lord Truro, Capt.-Commandant of the corps, presented them with a set of colours, the gift of a few young ladies in the district.—The Earl of Derby has

placed Knowsley Park at the disposal of the 4th brigade and other corps within the hundred of West Derby, Liverpool, for a field-day, and it is understood that the review will take place on the last Saturday in August.—It is announced that the review of the Volunteers of Gloucestershire, Worcestershire, Herefordshire, and South Wales will take place in the middle of September, on the Town Ham and Maisemore Ham, near Gloucester.—Sir Alexander Malet, her Majesty's Minister to the German Diet, has presented a silver goblet, with chased cover and gilt inside, to the Salisbury or First Wiltshire Volunteer Rifles as a challenge cup, to be shot for by the members of the corps. The contest took place on Wednesday last, at 300, 500, and 600 yards, and terminated in the following scores:—Mr. John Butler, 18 points; Mr. Henry Wilton, 13; Lieutenant Pinckney, 12; and Mr. Cox (corporal), 12. The two latter being ties shot off at 600 yards, and the result was in favour of the lieutenant, whose last shot hit the very centre of the bull's eye.—Admiral M'Hardy, chief constable of the Essex police, has matured a scheme, in conjunction with Colonel Kinloch, for forming the rural constabulary into artillery and rifle corps, qualified to drill other Volunteers in the rural parishes. By this means it is calculated that without much expense an additional 100,000 Volunteers might be obtained.—In addition to the cup which will be given in September by the Sheriff of Norfolk for the best shot among the Volunteers of that county, Mr. J. Middleton, of Haynford, has offered the sum of 50*l.* for division among the second, third, and fourth shots.

Foreign.

FRANCE.—The *Moniteur* of Sunday says:—

"The proposals made by France, with the object of arresting the effusion of blood in Syria, and of protecting the Christian inhabitants, have been acknowledged by the Great Powers. England is ready to co-operate with ships, and recognizes the expediency of sending a *Corps d'armée*, of which France would furnish the whole or the greater part. Austria and Russia have given the same opinion. The Prussian Minister for Foreign Affairs has gone to receive the orders of the Prince Regent on the subject. A convention is to be signed for determining the character and object of the European intervention. The acquiescence of the Porte only is now awaited."

The French consular reports received from Syria state that the massacres which have taken place are the result of a conspiracy of the Mussulman fanatics, encouraged by the "odious conduct" of the Turkish authorities and of the Governor of Beyrout. The report having spread among the Druses that European diplomacy was about to drive away the Turks from Europe, they determined on exterminating the Christians in Syria. The French Consuls therefore state that the Porte will be unable to repress a rising which has been organised in its own favour. Under these circumstances the Emperor of the French was disposed to send an armed expedition to Syria without waiting for the signature of a Convention, but the opposition offered by the Turkish Ambassador to the intervention of France alone, has induced him to countermand the orders for the immediate departure of the troops until the assent of the Sultan has been received. The *Constitutionnel* expresses doubts as to peace having been concluded between the Druses and Maronites, and hopes that Europe will not allow a sponge to be passed over the blood of Christians, and suffer all that has passed to be thus hushed up. A prompt European intervention, it says, is absolutely necessary to rescue the remaining Christians from being massacred. It adds that a perfect good understanding prevails between France and England, that Lord John Russell has authorised Lord Cowley to come to some arrangement with France respecting the expedition, and that nothing delays its departure except the signature of the Convention for regulating the expedition, which the representatives of the five Great Powers were to have signed on Wednesday. It is understood that the French Government is prepared to send 8000 men, under the command of General Trochu, to those parts of Syria where the Christians are in danger, and to nominate a mixed commission, charged with the adoption of an administrative reorganisation that shall effectually protect them hereafter. Great activity prevails in the camp at Châlons, as well as in the arsenal and forts at Toulon. The Emperor has postponed for the present his journey to Châlons, where he intended to superintend the departure of the troops in person, and the Empress has left for Eaux-Bonnes. Prince Napoleon has arrived at Cherbourg. The *Indépendance Belge* reports from Paris that the French Government propose to give a high military command in Syria to Abd-el-Kader, and employ his influence over the Mahomedan population in favour of the Christians. For the exertions he made to protect them in the late outbreak of fanaticism it is stated that the Arab chief is to receive the Cross of the Legion of Honour. The *Moniteur* contains the promulgation of the Convention between the French and Belgian Governments in reference to the entry of French wines and spirits into Belgium. It also announces that the new loan of the city of Paris has been adopted by 215 against 9; that the Emperor has received Signor La Greca, the Neapolitan Envoy; and that the session of the Corps Legislatif was closed on Friday, and that of the Senate on Tuesday.

SWITZERLAND.—The Federal Council has received information that the Conferences on the neutrality of Switzerland will be indefinitely adjourned, as Austria absolutely refuses to take part in a Conference should Sardinia be admitted to it.

HOLLAND.—At a recent sitting of the Second Chamber of the States General the Minister of Foreign Affairs said that the Government had received official intelligence of the murder of the Dutch Consul at Damascus, and had immediately given orders for vessels of the royal navy to proceed to the Syrian coast and other parts of the Levant to protect Dutch subjects, and maintain the honour of the flag.

BELGIUM.—The Chamber of Deputies on Saturday presented to King Leopold, on the 29th anniversary of his accession to the throne, a remarkable address, in which they made the following allusion to the alleged designs of France for the annexation of Belgium:—

"There are political crimes which enlightened nations have not to fear. In the centre of the civilisation of Europe as she now is, Governments do not trample under foot all that the human conscience respects. In our day the blood of nations is not squandered to shield a throne which millions of men unanimously surround with their veneration and their gratitude. Attempts are not made to assassinate a nationality full of life and strong in its good right, in universal esteem, and in the solemn engagements of all Europe. If one day, Sire, it were possible that all the rights and duties which exist between Governments as between nations could be disregarded, if your crown, our liberties, our holy independence and our native land, were menaced, Belgium, at the summons of the King, would know how to defend her national treasury as a free and virtuous people defends all that it holds most sacred. She has had long enough experience of foreign domination; long enough were her rights, her dignity, her riches, her rank, sacrificed to other interests than her own. Her head will never again bend beneath a yoke she detests and has for ever broken. In the hour of peril her courage will not remain isolated. The faith of treaties, the interest and independence of Europe, are not vain words. A cause to which no honest men of any country can remain indifferent will never be in danger of perishing or of lacking defenders."

AUSTRIA.—The Emperor of Austria left Vienna at 2 o'clock on Tuesday morning for Töplitz, accompanied by Count Rechberg, the Minister for Foreign Affairs, the First Adjutant-General, and M. von Biegeleben, Minister-Councillor. The Emperor arrived at Töplitz at 4 P.M., and was received with the usual honours, while the Austrian, Bohemian, Prussian, Saxon, and Bavarian flags were hoisted on the public buildings. Baron von Werther, the Prussian Ambassador at Vienna, arrived at the same time as the Emperor of Austria, and the Austrian Ambassadors at Berlin and Dresden had arrived previously. The Prince Regent of Prussia arrived on Wednesday at 6 P.M., and was received at the terminus by the Emperor, who shook hands with his Royal Highness. The Emperor wore the Prussian military uniform, and the decorations of the Order of the Black Eagle; the Prince Regent wore the Austrian uniform, and the decorations of the Order of St. Stephen. The two Sovereigns were cheered by crowds at the terminus, and afterwards appeared at the balcony of the Palace and expressed their thanks. On Thursday morning the Prussian inhabitants were received by the Prince Regent, who, in his reply to an address presented by them, said that he intended to keep the path which he had chosen for the welfare of Prussia, Germany, and Europe. The Emperor paid a visit to the Prince Regent, which lasted one hour and a half. Count Rechberg afterwards had a long audience of the Prince Regent, which was followed by a conference between Baron von Schleinitz and Count Rechberg. The Prince of Hohenzollern remained with the Emperor a considerable time in the afternoon, Count Rechberg being also present. In the evening a grand gala dinner took place at the residence of the Emperor, at which Count Rechberg wore the Cordon of the Order of the Black Eagle, which the Regent had conferred upon him, and Baron von Schleinitz wore the Cordon of the Order of St. Stephen. No toasts were proposed. The Emperor and the Prince Regent were to leave Töplitz at 9 A.M. yesterday, the former proceeding to Pilnitz and the latter to Potsdam, by way of Dresden. The Kings of Saxony and Bavaria did not take part in this interview, the Regent having objected to the proposal of the Emperor that they should be invited to attend. Count Rechberg has addressed a circular to the Austrian Ambassadors at the Courts of the great Powers, respecting the object of this interview, and stating that the Emperor of Austria had expressed a wish to confer with the Prince Regent of Prussia, not only on the general state of Europe, but especially on the German question.

ITALY.—The chiefs of the revolutionary movement at Naples have caused an illumination of the whole city to take place. Crowds of people shouted "Garibaldi for ever!" in defiance of the Royalists. About 10 of the late police agents have been killed. General Nunziante, and Messrs. Neraux, Agostino, Debré, and Scaletta, all members of the reactionary party, have been sent away from Naples, and the Constitutional Government has dismissed the Jesuits from the colleges of which they had the direction. The Minister of the Interior has officially received 44 emigrants who arrived at Naples on the 16th inst. The King has ordered the Royal guard to be dissolved, and has convoked the electoral colleges for the 19th of August, to proceed to the election of Deputies. These measures have made a favourable impression, and a manifestation has taken place, some of the inhabitants shouting, "Hurrah for the King! Hurrah for the troops!" The army has taken the oath to the Constitution, on which occasion the King delivered an address. Proclamations of the King to the army and the people have likewise produced a good effect. Some of the officers of the Navy took the oath to the Constitution on condition of not being ordered to fight against Italians; and several officers of the Navy, Artillery, and of Engineer corps, tendered their resignations.—Letters from Turin state that the King had received the Neapolitan Plenipotentiaries, and that after a conference with Count Cavour it was decided that his Majesty should send an adjutant with an autograph letter to Garibaldi, requesting him not to attack the mainland, and proposing a truce for six months between him and Naples.

SICILY.—The King has given orders for the Neapolitan army to evacuate the whole of Sicily, and some of the troops which garrisoned the fortresses have already been transported to Naples in steamers. Messina however is still held by the Neapolitans. General Clary having only evacuated the outposts and the town, and concentrated his *corps d'armée* in the citadel. The remainder of the troops, and especially Colonel Bosco's division, have been dispatched to Calabria, where Garibaldi was expected to land. It is said that when the revolutionary army approached Messina the Neapolitan troops intimated to their officers that they did not intend to fight against the national colours of Italy. This being telegraphed to Naples, the King gave orders to evacuate the island immediately in order to "avoid a civil war." In Colonel Medici's engagement before Melazzo on the 16th and 17th inst. the Neapolitans had 580 men put *hors de combat*. Garibaldi left Palermo in an English steamer on the 18th inst. with from 8000 to 10,000 men, and attacked the town of Melazzo on the 20th with the bayonet. After a desperate combat the Neapolitans withdrew to the citadel. It is said that Garibaldi's force suffered great losses in this engagement, and that Garibaldi himself was wounded in the foot. Garibaldi had ordered several inhabitants of Melazzo to be shot for having fought against him. The Sardinian agent, M. Depretis, arrived on the 21st inst. at Palermo, and proceeded at once to the camp. It was Garibaldi's intention to invest him with the dictatorial authority. The City of Aberdeen has disembarked 1200 volunteers. The vessels which have passed over to Garibaldi are mercantile steamers employed as transports by the Government. Garibaldi has expelled the Jesuits from Sicily and has remitted to the directors of the Naples Bank a sum of 133,000 ducats, owing to the establishment from the Bank of Palermo; and he imposed a war-tax of 2 per cent. on the property of the convents and the clergy. The Duke of Verdura, prætor of Palermo, has published an official list of the corpses disinterred from the ruined houses between the 30th of May and the 12th of June, amounting to 573 bodies up to that day. It is said that these form less than one-half of the total number which perished in the bombardment.

TURKEY.—The Porte has instructed its Ambassadors at Paris and London to officially communicate to the Courts of the Tuileries and St. James's the conclusion of peace between the Druses and Maronites on the 10th inst. In this official communication the Porte, although expressing its satisfaction at this happy event, adds that it will nevertheless pursue with the utmost rigour the authors of the recent massacres, and that Fuad Pasha had to that end been invested with the most ample powers, not only to punish the guilty parties, but also to take such measures as would prevent the recurrence of fresh conflicts between the Druses and the Maronites. The Turkish reinforcements sents to Syria are said not to exceed 6000 men, as it is not possible to withdraw the troops from Roumelia on account of the agitation prevailing there; but it is said that the Porte purposes to ask the Viceroy of Egypt to send an auxiliary contingent of 10,000 men to aid in the pacification of the province. The Turkish squadron under the orders of Vice Admiral Mustapha Pasha left Cyprus on the 18th, for Beyrout. Sir Henry Bulwer has received a telegram from London, and immediately had a long conference with the Sultan.

SYRIA.—The last accounts received by the French Government from Syria announce that violences have been perpetrated at Aleppo, Orfa, and other places, in which the Turkish soldiers took part. 10,000 Druses were marching on Damascus, where the Christians were in the greatest danger. The deepest anxiety was felt at Beyrout as to the fate of the Christians who had fled for refuge to the south of Kes-Rouan, in number 45,000, and who were surrounded by a more numerous body of Druses and Mutualis. Further accounts of the recent massacre at Damascus have been received. It appears that the Druses and Bedouins, in returning to Kaman (?), passed through Damascus, and proposed a general massacre of the Christians to Abd-el-Kader, who refused to countenance it. The inhabitants, however, became accomplices in the murder of the Christians. It is confirmed that some of the Turkish soldiers assisted the assassins. Their General, Ahmed Bey, took to flight, but the other authorities remained in the fortress. The Mahomedans had conducted themselves with great violence at Sayda, Latakia, and St. Jean d'Acre, to each of which places the French Commodore had sent a ship of war to keep them in check. He had also sent envoys to Koukfeya, where the Chief of the Druses was, to put a stop to his designs. In the neighbourhood of Sidon, and near Damascus, Christian priests and villagers have been forced at the point of

the sword to embrace Moslemism by hundreds. It is calculated that between May 29 and June 30 the Druses have murdered in cold blood upwards of 4000 Christians, including more than 100 Catholic and Greek priests and monks, and have burnt down upwards of 150 Christian villages, including more than 100 churches and 16 convents. The plunder of church plate and other valuables, and the damage done to crops, houses, and to the country in general, is said to amount to upwards of six millions sterling. Fuad Pacha arrived at Beyrout on the 22d. The Christian Kaimakan of the Lebanon, his council, and some of the principal inhabitants, had signed a declaration of peace, in which, however, the renunciation of any claim for indemnity was not mentioned. After having discussed this act they went, by order of the Muchir of Saida and of the Turkish authorities, to confer with the chiefs of the Druses.

EGYPT.—The Pasha of Egypt had sent a frigate to Beyrout with provisions and other supplies for the refugee Christians. It was reported that the Viceroy had decided on organising a corps of 5000 troops, and placing them at the disposition of the Porte.

MONTENEGRO.—A report has reached Paris that a quantity of arms and powder has been landed at the small ports in the Adriatic in the direction of Herzegovina and Montenegro. Bosnia and Croatia are also politically agitated, so that troubles may be expected in that direction.

INDIA.—The Bombay mail has arrived with news to June 22, but the news has mostly been anticipated by the last mail. The following are the chief items of news:—

Calcutta.—The illness of Mr. Wilson and the absence from Calcutta of Sir James Outram have delayed the passing of the Income Tax Bill.

Bombay.—A telegram has been received from Muscat giving intelligence of the loss of the Indian navy sloop Elphinstone in the Persian Gulf.

UNITED STATES.—The following correspondence between President Buchanan and Queen Victoria, in reference to the visit of the Prince of Wales, has been published in the New York papers:—

LETTER FROM THE PRESIDENT TO THE QUEEN.

"To Her Majesty Queen Victoria.—I have learnt from the public journals that the Prince of Wales is about to visit your Majesty's North American dominions. Should it be the intention of his Royal Highness to extend his visit to the United States, I need not say how happy I should be to give him a cordial welcome to Washington. You may be well assured that everywhere in this country he will be greeted by the American people in such a manner as cannot fail to prove gratifying to your Majesty. In this they will manifest their deep sense of your domestic virtues, as well as their conviction of your merits as a wise, patriotic, and constitutional Sovereign. Your Majesty's most obedient servant,

"Washington, June 4, 1860." JAMES BUCHANAN."

THE QUEEN'S REPLY.

"Buckingham Palace, June 22.

"My good Friend,—I have been much gratified at the feelings which prompted you to write to me, inviting the Prince of Wales to come to Washington. He intends to return from Canada through the United States, and it will give him great pleasure to have an opportunity of testifying to you in person that these feelings are fully reciprocated by him. He will thus be able at the same time to mark the respect which he entertains for the Chief Magistrate of a great and friendly State and kindred nation. The Prince of Wales will drop all Royal state on leaving my dominions, and travel under the name of Lord Renfrew, as he has done when travelling on the Continent of Europe. The Prince Consort wishes to be kindly remembered to you. I remain ever, your good friend,

"VICTORIA R."

The journals also publish the letters from Mr. Dallas and Lord John Russell accepting the invitation of the Mayor of New York to the Prince of Wales to visit that city, in pursuance of the resolution of the Common Council. The *New York Herald* says:—

"The United States will give the Prince of Wales such a reception as never Prince had in the New World, and which will not fail, both now and hereafter, to cement that friendship which ought always to subsist between the English and Americans, who are allied, not only by ties of interest, but by an affinity of race and language. These last are natural bonds which can never be entirely broken; and we hope the day may never come when they will be found weaker than we find them now."

The schooner United States, with Dr. Hayes and his band of 16 explorers, sailed from Nantucket Roads on the 10th for the Arctic regions. The Rev. Jacob S. Harden, a Methodist minister, was hung at Belvedere, New Jersey, on the 6th inst. for the murder of his wife by poison; and on the 13th Hicks, the murderer of the crew of the oyster sloop E. A. Johnson, was executed on Bedloe's Island, in the presence of fully 10,000 persons, who surrounded the island in steamboats, sailing vessels, and small boats. The price of admission to the Great Eastern had been reduced to half a dollar, and a great increase of visitors had been the result. A rumour was prevalent that the Mormons contemplated emigrating from Utah to one of the East India Islands. Mr. Spurgeon's sermons, some of which contain severe remarks on the slave institutions of the United States, had been burnt in the Virginia Court House.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*South-Western (Kingston Extension) Railway Bill*.—On the motion for the third reading of this Bill Lord WYNFORD opposed it. After a long discussion the third reading was carried by a majority of 1, the numbers being 33 to 32.—The Marquis of CLANRICARDE moved the second reading of the *Tramways (Ireland) Bill*.—Lord REDESDALE opposed the Bill, as introducing a new principle into legislation.—Lord LUCAN likewise opposed the Bill, and moved as an amendment that it be read a second time that day nine months.—After some debate, Lord LUCAN withdrew his amendment, and the Bill was read a second time. The *Local Taxation Returns Bill*, the *Metropolitan Building Act (1855) Amendment Bill*, and the *Annuity Tax Abolition (Edinburgh and Montrose), &c., Bill*, were read a third time and passed. The *Tithe Commutation Bill*, the *Burial Grounds (Ireland) 1856 Amendment Bill*, the *Registration of Births, &c. (Scotland) Bill*, the *Court of Queen's Bench Act Amendment Bill*, and the *Inclosure (No. 2) Bill*, passed through committee.

MONDAY.—*Review of Scottish Volunteers*.—Earl DE GREY and RIPON, in reply to the Marquis of BREADALBANE, said that her Majesty intended to review the Volunteer Corps in Scotland and the adjoining parts of England on the 7th August. The same arrangements would be made for the review as were adopted at the recent review in Hyde Park. Those corps which desired to take part in the review must signify that desire to the Secretary for War through the Lords-Lieutenant of their respective counties before the 1st August.—Lord STRATHEDEN moved the second reading of the *Newspapers, &c., Bill*, the object of which was to free proprietors from the obsolete and vexatious restrictions of the law as it now stood.—After some discussion, Lord CHELMSFORD moved that the Bill be read a second time that day three months. On a division, the numbers were—For the second reading, 10; against it, 31; so the Bill was lost. Several Bills were advanced a stage.

TUESDAY.—The *Bleaching and Dyeing Works Bill*, the *Nuisances Removal and Diseases Prevention Bill*, and the *Lands Clauses Act Amendment Bill* passed through committee. The House then went into committee on the *Census (England and Ireland) Bills*.—The Earl of ELLENBOROUGH moved the omission from the Irish Bill of the clause requiring a statement of religious profession. A similar clause had been struck out of the English Bill, and he did not see why it should be retained in the Irish.—Lord MONTEAGLE supported the clause, which was simply permissive, and which would neither create dissatisfaction nor inflict hardships.—Earl GRANVILLE also supported the clause. After a brief conversation, the amendment was negatived, and the Bill passed through committee. The *Queen's Prison*, the *Offences in her Majesty's Possessions Abroad*, and the *Herring Fisheries (Scotland) Bills* were read a second time. The *Labourers' Cottages (Scotland)*, the *Burial Grounds (Ireland) Act Amendment*, the *Isle of Man Harbour*, and the *Dominica Hurricane Loan Bills* were read a third time and passed. Lord BROUGHAM moved the second reading of the *Felony and Misdemeanour Bill*, of which the object was to give to prisoner's counsel the right of reply now enjoyed by counsel in criminal cases.—Lord WENSLEYDALE opposed the Bill, which was supported by the LORD CHANCELLOR. After some debate the House divided, when the second reading was carried by 13 to 10.

THURSDAY.—The *Prisons (Scotland) Bill*, the *Tenure and Improvement of Land (Ireland) Bill*, the *Postage (Army and Navy) Bill*, the *Party Emblems (Ireland) Bill*, and the *Highway Rates Continuance Bill* were read a second time. The *Titles to Land (Scotland) Act Amendment Bill*, the *Queen's Prison Bill*, the *Herring Fisheries (Scotland) Bill*, the *Felony and Misdemeanour Bill*, the *Census (Ireland) Bill*, the *Census (England) Bill*, the *Tithe Commutation Bill*, and the *Oxford University Bill* were read a third time and passed.—The Earl of CARNARVON called attention to recent statements made by the chaplain of the *Bermuda Convict Establishment*, as to the deplorable state of the moral and sanitary condition of the convicts on board the hulks, and urged the necessity of searching inquiry into the truth of those statements.—Earl GRANVILLE said that an inquiry was now in progress. *The Volunteer Movement*.—In answer to Earl FORTESCUE, Earl DE GREY and RIPON said that the volunteer force now consisted of 130,000 men. The Government had it in consideration to grant an increased allowance to adjutants of volunteers in rural districts, on account of the distances they had to travel. It was not, however, intended to make grants for the payment of permanent sergeants, except in the case of those corps of mounted volunteers whose numbers did not entitle them to an adjutant.—Lord VIVIAN contended that greater encouragement should be given to volunteers in rural districts.—The Earl of ELLENBOROUGH suggested that the magistrates at quarter sessions should be empowered to make a rate of a halfpenny in the pound to meet the expenses of adjutants.—After some observations from Lord HARDINGE and Lord MELVILLE, Earl GRANVILLE said that any attempt to levy rates for the support of the movement would destroy its voluntary character and deprive it of its popularity.

FRIDAY.—*The Militia Bill*.—Earl DE GREY and RIPON moved the second reading of this Bill, and in answer to Lord HARDINGE said that it was intended to give an increased allowance to non-commissioned officers on the permanent staff. The Bill was then read a second time. *Municipal Corporations (Ireland) Act Amendment Bill*.—Lord MONTEAGLE moved the second reading of this Bill. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*State of Syria*.—In answer to Sir J. FERGUSSON, Lord J. RUSSELL said that he had no information that British troops had been placed on board French ships with a view to their being employed in Syria. The French Government was, however, in communication with the great Powers and the Porte for the purpose of considering whether a convention might not be arranged for putting a stop to the massacres in Syria. The matter was still under the consideration of her Majesty's Government and that of France, and he did not believe there was any intention on the part of the latter to act alone. *The Indian Council*.—Sir C. WOOD replied to the attack which had been made upon him on Thursday during his absence by Mr. Horsman. He vindicated himself from the charge of having acted with arrogance and unfairness towards members requiring information respecting India, and denied that he had intentionally suppressed or withheld the necessary papers; and he declared that the intercourse between himself and the Indian Council had been frank, full, and free, and that with very few exceptions all their decisions had been unanimous.—Mr. HORSMAN said he would repeat that since Sir C. Wood succeeded to the administration of Indian affairs there had been great difficulty in getting the information which the House required; that they had been misinformed with regard to the papers in the office; that those which were promised had been withheld; that the right hon. baronet had endeavoured to pass the Bill relating to the amalgamation of the Queen's and the Indian armies without their production; that he had overridden his Council, and had not given them an opportunity of recording their opinion on the Bill. He concluded by declaring that he saw no reason to modify or retract a single syllable which he had uttered in reference to the matter.—Lord PALMERSTON hoped and believed that Mr. Horsman was the only person in the House who would have so conducted himself. He had come down with an unfair and unhandsome attack, and any man of common feeling and generosity, or who knew the social obligations between man and man, would, before he made such an attack, have taken the trouble to ascertain that the person to be attacked was in his place. He imagined that he was in possession of the keyhole of the Indian Council, but he (Lord Palmerston) requested him to confine this mysterious knowledge to the Council, and not give the House to infer that he had his ear also at the keyhole of the Cabinet, for he could assure him that his wonderful information and startling revelations were totally destitute of truth. *Party Riots in Ireland*.—In answer to Mr. COGAN, Mr. CARDWELL said that he intended to bring in a Bill, which he hoped to see passed this session, for preventing the recurrence of party demonstrations, and which might put an end to the fruitful source and origin of an admitted evil.—Mr. JAMES called attention to the new *Equestrian Ride in Kensington Gardens*, protesting against it as a serious inconvenience to the pedestrians who frequented the park. He urged the Government to abandon the innovation.—Mr. BYNG likewise urged the Government to give up this serious invasion of the privacy of the park.—Mr. HUBBARD and Sir J. PAKINGTON approved of the new road, which in their opinion added to the liveliness of the scene, and consequently to the enjoyment of pedestrians, as well as to the convenience of the equestrian.—Mr. COWPER explained that his reason for establishing the ride arose from his experience of the popularity of the scene where equestrian exercise was previously allowed. At the end of the season the ride would be closed, and it would depend on public opinion whether it was to be again opened. For himself, his feeling was strongly in favour of the plan. *The Bible Printing Patent*.—In answer to Mr. BAINES, Sir G. LEWIS said that the exclusive privilege heretofore enjoyed by the Queen's printers, for the printing of Bibles and Prayer-books, had now ceased, and would not be renewed. He thought, however, that under the competition with the university printers the price of the existing editions of the Bible and the Liturgy was as low, and the quality as good, as it was possible to expect. He proposed, therefore, to make no practical change in the present system. *The Paper Duties*.—In reply to Mr. PULLER, Lord J. RUSSELL said, although some of the continental Governments had promised to consider the question as to the taxes or restrictions on the export of rags, nothing had yet been done; that the French Government were favourable to a change of the system of prohibition for a system of duty on the export of rags, and that that Government had not claimed a diminution of the Customs' duty on French paper imported into this country.—Mr. CARDWELL moved the second reading of the *Maynooth College Bill*, the object of which was to enable the trustees of the college to appropriate some portion of the annual grant from Parliament to the repair of the building. Mr. SPOONER moved, as an amendment, that the second reading of the Bill should be postponed for three months.—Sir W. VERNER seconded the amendment.—Mr. I. BUTT, Mr. GEORGE, and Mr. BELLEW supported the Bill; Mr. WHALLEY and Mr. NEWDEGATE opposed it. On a division the second reading was carried by 135 to 57. The *Industrial Museum (Scotland) Bill* passed through committee, and was read a third time and passed.—On the order for going into committee on the *Militia Bill*, Colonel DUNNE opposed the Bill, and moved the adjournment of the debate.—Mr. S. HERBERT resisted the motion for adjournment, which was negatived without a division. The House then went into committee, but the Chairman was ordered to report progress. On the order for the third reading of the *Metropolis Local Management Act Amendment (No. 2) Bill*, Mr. CLAY moved that it should be read a third time that day three months.—Mr. NEWDEGATE moved, as an amendment, that the House should adjourn. On a division this amendment was negatived by 52 to 22.—Mr. B. STANHOPE then moved the adjournment of the debate, which was agreed to.

MONDAY.—*State of Syria*.—In answer to Sir J. FERGUSSON, Lord J. RUSSELL said that her Majesty's Government had instructed Admiral Martin to proceed with the Mediterranean fleet to Syria, and, if necessary, to land marines for the purpose of checking the massacres of the Christians. The Turkish authorities had behaved in a most shameful manner, and the Pasha of Damascus had betrayed a large number of Christians into the hands of the Druses. There was every reason to believe that unless some interference took place the massacres would continue, as it was the general opinion among the Europeans on the coast that the Turks had not done all they could to stay the massacres. The French Government had therefore proposed to the Great Powers to send European troops to Syria. Her Majesty's Government, in common with the other Great Powers, had resolved that, under the pressing circumstances of the case, immediate action against the Druses was necessary, and they had given their assent to it on the understanding that there should be a convention, to which the Porte should be a party. Since that period her Majesty's Government had received a telegram from Constantinople, stating that peace had been signed on the 10th inst. between the Druses and the Maronites, but no confirmation of this report had yet been received. *National Defences*.—The House having resolved itself into committee on fortifications and works, Lord PALMERSTON said he had to propose a resolution, the object of which was to carry into effect the recommendations of the Royal Commissioners on National Defences, with a view to secure by fortifications the dockyards and arsenals, and the ports of Dover and Portland, and also to create a central point at Cannock Chase, to serve as a substitute for or assistance to Woolwich. He felt persuaded that the House and the country were not indifferent to this important subject. As long as the movement of ships depended upon wind and weather, the Channel fleet maintained by Great Britain was sufficient for her defence, but the introduction of steam had completely altered the character of naval warfare, and changed the nature of our insular position. Many years ago the Duke of Wellington in his well known letter to Sir John Burgoyne called attention to the defenceless state of the country, and implored the Government of the day to provide artificial means against possible attack. But that appeal fell on deaf ears, for nations are slow to alter their perception of the state of things. The Government of Lord Derby however, and that which followed it, had done something towards putting the dockyards in a better condition of defence. The Commissioners on National Defences had recommended an expenditure of 11 millions. He thought it absolutely necessary for the safety of the country that these recommendations should substantially be carried out, and completed at the earliest possible moment. The amount requisite for the works might be raised either by setting aside every year a portion of the annual income of the country, or, as he proposed it should be, by raising by means of terminable annuities a sum sufficient to effect the object in three or four years. If the works were necessary, it would, he thought, be folly to postpone them. It was impossible for any one to cast his eyes over the face of Europe without being convinced that the future, charged as it was with clouds, was not free from danger. He would not attempt to disguise the fact that the danger was to be apprehended from our nearest neighbour across the Channel. That neighbour, however, would not be justified in taking offence at any measures which we might take for our defence. We had recently completed a commercial treaty with France, from which he hoped much, but the treaty alone would be a frail security to a nation possessing great wealth, whose shores were more open to attack than the land frontier of any other country. It would be folly therefore to rely upon a commercial treaty while there were many vulnerable points that required artificial defence. At this moment France had an army of 600,000 men, of whom 400,000 were actually in arms and 200,000 on furlough, but ready to join their regiments in a few days. That army was far greater than France could require for any purpose of defence. Nobody would think of attacking France, nor would anything be got by such a proceeding. He did not mean to say that the vast military force of France was raised and maintained for the deliberate purpose of aggression; but it should be remembered that the power to aggress frequently inspired an inclination for aggression. But the armaments of France were not limited to the land. The utmost exertions were making to create a navy as powerful as our own, which could not be required for the purpose of defence, and which we were therefore justified in looking upon

as a possible antagonist. We had no right to rely for security upon the mere forbearance of another Power. For the sake of peace, therefore, it was desirable that we should be able fully and effectually to defend ourselves against attack. There were three motives which might induce a foreign Power to attack us. They were, the hope of conquest; the gaining possession of the metropolis, levying a heavy contribution, and dictating in the capital terms of peace ignominious to the country; and, lastly, a sudden attack by land and sea to take possession of our naval arsenals, and thus destroy at a blow our maritime supremacy. The last of these motives was that which, in his opinion, was most to be apprehended, for the idea of conquest was too absurd for a moment's contemplation. With regard to London, in his opinion it was far too vast to be fortified; it must be defended by an army in the field. If, on the other hand, the dockyards were destroyed, the navy would be cut up at the root, and the trade of the country would be at the mercy of the invader. Let the House imagine what would be the result if Liverpool, Bristol, and the Thames were blockaded. The Government were of opinion that (exclusive of the charge for artillery, which would be met by the annual votes of Parliament) the sum of 9,000,000*l.* would be sufficient for the purpose required. Of this sum 1,835,900*l.* was for land, a part of which would be profitably let, and 7,165,000*l.* for works. The works of defence which the other Powers of Europe had raised might be quoted as a precedent for what the Royal Commissioners had recommended to be done in the United Kingdom. France had expended and was still expending enormous sums in the fortification of Paris, Cherbourg, Toulon, and other places; while Germany, Italy, and Russia had also created fortifications for the purpose of self-defence, some of which had proved so efficient that in the late war against Russia we were unable to make any impression upon them. He was aware of the spirit which animated the country, as proved by the Volunteer movement, and he had entire confidence in the courage and endurance of the troops and the people to repel attack; but looking to the condition of modern warfare, and to the state of Continental Europe, he thought the Government of the day would be guilty of a high crime and misdemeanour, which would deserve the penalty of impeachment, if they failed to take every necessary precaution against foreign invasion. Having stated that 2,000,000*l.* only would be required for the works to be undertaken in the course of the present year, and that an annual application would be made for such portions of the remainder as might be required, he concluded by moving a formal resolution that the sum of 2,000,000*l.* be charged upon the consolidated fund for the construction of the proposed works, and that the Commissioners of the Treasury be authorised to raise the amount by annuities for a term not exceeding 30 years.—Mr. HUBBARD thought it was unadvisable to raise this amount by terminable annuities, which would be throwing away a million sterling.—Mr. BRIGHT complained that a proposition involving the expenditure of so large a sum of money had been brought forward without notice. He believed that the expenditure, so far from being limited to eleven millions, would amount to double that sum. In order to give the House and the country an opportunity of considering the subject, he moved that the chairman report progress.—Mr. S. HERBERT stated in detail the steps which it was proposed to take, and pledged himself that the estimates had been framed on a most liberal scale. The works which it was intended to commence immediately were at Portsmouth, the Isle of Wight, Gosport, Pembroke, Cork, Dover, the Medway, and the Thames.—General PEEL approved of the scheme proposed, but suggested that some competent person should be made responsible to the House and the country for the economical expenditure of the money.—Mr. OSBORNE said that the speech of the Prime Minister opened up new and alarming considerations, and that after such a statement there could be little hope of maintaining friendly relations with France. He thought the House should have a few days to reflect upon the matter.—Lord PALMERSTON said he would consent to the adjournment until Monday next.—Mr. NEWDEGATE gave his cordial approval to the Government proposition.—Mr. DISRAELI entertained grave doubt as to the wisdom of the manner in which the money was to be raised; but with this reservation he was prepared to give his support to the Government.—The CHAIRMAN then reported progress, and the House resumed.—On the motion for going into Committee of Supply, Mr. HENRY SEYMOUR moved that, in the opinion of the House, the state of the *Ecclesiastical Law in England and Ireland*, and of the Courts in which it is administered, and especially the Clergy Discipline Act, required to be amended and reformed; and that it was incumbent on the Government to direct measures to be prepared for that purpose.—Sir G. GREY opposed the motion, which was negatived without a division. The House then went into committee on the *Civil Service Estimates*. A vote of 1200*l.* for the erection of a building for the reception of the *Wellington Car* was withdrawn, in deference to a very unequivocal expression of opinion by the committee. The other votes were agreed to without alteration, but not without much discussion and many objections. The *Maynooth College Bill* and the *Sheriff Court Houses (Scotland) Bill* passed through Committee. The *Heritable Securities, &c. (Scotland) Bill* was read a third time and passed. Some other Bills were advanced a stage.

TUESDAY.—*Poor-law Continuance Bill.*—At the morning sitting the House went into committee on this Bill.—On clause 1, Mr. BAZLEY moved an amendment reducing the term of continuance from four years to one, contending that the whole system of Poor-law administration ought to be amended.—Mr. S. ESTCOURT admitted the necessity of a revision of the system, but opposed the amendment, suggesting that the subject should be referred to a select committee.—After some discussion, Mr. BAZLEY withdrew his amendment.—Mr. DEEDES then moved that the period of continuance be fixed at three years. On a division this amendment was carried by 147 to 92. The Bill then passed through committee, The House then went into committee on the *Roman Catholic Charities Bill*, but made little progress before the sitting was suspended. *Evacuation of Sicily.*—In the evening, Mr. GRIFFITH asked whether it was true that the King of Naples had ordered the whole of Sicily to be evacuated, and that the King of Sardinia had sent an autograph letter to Garibaldi, requesting him not to attack the continental dominions of the King of Naples.—Lord J. RUSSELL replied that a telegram had been received from the British Minister at Naples, stating that the King had ordered the evacuation of Messina and other places occupied by his troops in Sicily. He had also been informed by the Sardinian Minister in London that, after an interview with the Neapolitan envoy at Turin, the King of Sardinia had sent an aide-de-camp to Garibaldi, but he could not state the nature of the message with which he was charged. *Promotion in the Navy.*—Sir J. PAKINGTON moved an address praying her Majesty to issue a royal commission to consider the present system of promotion and retirement in the Navy, and the present pay and position of the several classes of naval officers, and to report what changes therein are desirable, with a view to the increased efficiency of her Majesty's naval service. He grounded his motion on the general discontent now felt by officers of the navy, none of whom were satisfied with their position. Into the reasons for this dissatisfaction he entered in some detail, objecting to many of the measures of the present Administration as injudicious or useless. If these complaints were false they ought to be exposed; if true, they ought to be redressed.—Sir M. SEYMOUR seconded the motion, which was supported by Sir J. ELPHINSTONE, Sir C. NAPIER, Mr. COCHRANE, and Mr. LINDSAY; and opposed by Sir F. BARING, Mr. WHITBREAD, and Lord C. PAGET, who said that the position of the junior officers of the navy had been gradually improved, and that the Admiralty were disposed to do more, especially in making an addition to the allowances of mates, and of officers in command of ships. Nothing would give him greater pleasure than to improve the position of all classes of naval officers, but he could not forget his duty to the country. He would, however, take the matter into serious consideration, and he thought that it had better be left to the Admiralty than to a royal commission, which would unsettle the feelings of the entire navy, and raise hopes which must infallibly be disappointed. On a division the motion was negatived by 89 to 56. *Packet and Telegraph Contracts.*—Mr. DUNLOP, as the chairman of the recent committee on these subjects, moved a series of resolutions, setting forth that in all contracts for packet and telegraphic services a clause should be inserted making it a condition that the agreement shall not be binding until it had lain for at least a month on the table of the House without disapproval, unless approved by a resolution of the House, and that in cases where such contracts require to be confirmed by an act, the measure for that purpose shall not be brought in as a private Bill.—The CHANCELLOR of the EXCHEQUER made no opposition to the resolutions, and thought the committee had adopted the very best expedients which the case admitted. The resolutions were then agreed to. *India.*—Sir C. WOOD obtained leave to bring in a Bill to remove doubts as to the authority of the senior member of Council, the Governor-General &c., in the absence of the President, a Bill to extend to the Indian service in certain cases the provisions of the Superannuation Act, and a Bill to extend certain provisions for Admiralty jurisdiction in the colonies to her Majesty's territories in India.—The *Votes at Elections Bill* was read a second time. The *Local Government Supplemental (No. 2) Bill*, the *Militia Bill*, and the *Poor Relief, &c. (Ireland) Bill* passed through committee. The *Turnpike Acts Continuance Bill*, the *Maynooth College Bill*, the *Weights and Measures (Ireland) Bill*, the *Bank (No. 2) Bill*, the *Police and Towns Improvement (Scotland) Act Amendment Bill*, and the *Stipendiary Magistrates Bill* were read a third time and passed.

WEDNESDAY.—The *Coroners Bill* of the Government was withdrawn by Sir G. LEWIS. The *Gunpowder, &c., Bill* passed though committee. On the order for going into committee on the *Ecclesiastical Commission Bill*, Sir G. LEWIS stated that he should not persevere with the clause transferring the capitular property to the Ecclesiastical Commissioners.—Lord J. MANNERS urged the further withdrawal of the clause giving increased powers to the Commissioners over episcopal property.—Alderman COPELAND recommended that the Bill should be withdrawn altogether till the accounts of the commissioners were examined, which he understood were in a very confused state, and had not been audited for three years.—Mr. WALPOLE defended the Commissioners, and declared that much good had resulted from their labours. The House then went into committee on the Bill.—On clause 5, Lord J. MANNERS protested against further powers being given to the Commissioners, who had entailed great expenses already on ecclesiastical property, and moved the omission of the clause.—Lord J. RUSSELL supported the clause, which could not be omitted without abandoning all further review of ecclesiastical property.—Sir J. GRAHAM recommended that the powers given to the Commissioners should be discretionary, and not compulsory. After a long debate this suggestion was adopted, and the clause as amended was agreed to. The next clause, giving the management of capitular property to the Commissioners, was struck out. Clauses up to 15 were agreed to. On clause 16, entrusting the management of the episcopal property to the Commissioners, considerable discussion arose, but ultimately the clause was carried on a division by 159 to 41. The subsequent clauses, up to 21 inclusive, were agreed to. The *Local Government Act* (1858) *Amendment Bill* and the *Sheriff Court Houses (Scotland) Bill* were read a third time and passed. The Lords' amendments to the *Jews Act Amendment Bill* were agreed to. The *Highways Bill* and the *Larceny Laws Consolidation Act Amendment Bill* were withdrawn.

THURSDAY.—At the morning sitting the *Militia Bill* was read a third time and passed. The *Gas (Metropolis) Bill* and the *Ecclesiastical Commission, &c., Bill* passed through committee. *National Defences.*—At the evening sitting Mr. BRIGHT gave notice of his intention to move, on Monday, as an amendment to the loan for national defences, resolutions to the effect that, as the House had already voted 25 millions for the army and navy for the year, and a further sum of 3,800,000*l.* for the war in China, the consideration of the national defences be postponed to a future period.—The CHANCELLOR of the EXCHEQUER announced that he would move the *Paper Duties Bill* on Monday week. In answer to Mr. BRIGHT, the CHANCELLOR of the EXCHEQUER said that he intended to frame the new Bill for the imposition of the *Spirit Duties* so as to make it a permanent measure. *Naples and Sicily.*—In reply to Mr. GRIFFITH, Lord J. RUSSELL stated that a proposition had been made by the special envoy of the Neapolitan Government, that the British Government should use its offices in mediating between the King of Naples and General Garibaldi, with a view to prevent the latter from invading the mainland; and that, should the armistice be refused, England and France should interfere by force of arms. To that proposition her Majesty's Government had refused their assent. *Public Business.*—Lord PALMERSTON moved that on Tuesday, the 7th of August, and every succeeding Tuesday during the remainder of the session, orders of the day should have precedence of notices of motion, Government orders of the day having priority.—The motion gave rise to a long discussion, in which Mr. DISRAELI, Sir M. FARQUHAR, Mr. BENTINCK, and other members complained of the delay which had taken place with reference to the paper duties, and of the impossibility of obtaining the attendance of a full house on the day fixed for the discussion. The motion was ultimately agreed to.—On the order for going into committee on the *European Forces (India) Bill*, Mr. HENNESSY moved that it be an instruction to the committee that half of all the vacancies in the ranks of the European commissioned officers of her Majesty's line or local troops serving in India be allotted to the sons or orphans of officers, line or local, or the sons or orphans of her Majesty's civil service of India, who shall have passed the prescribed examination, and that the remaining vacancies be filled up by open competition at one of the royal military colleges.—Mr. S. HERBERT opposed the motion, which was negatived on a division by 73 to 15.—Sir J. ELPHINSTONE next moved that it be an instruction to the committee that they have power to make provision for the future regulation, discipline, and patronage of the European forces serving in India.—Sir D. L. EVANS seconded the motion.—Sir M. FARQUHAR supported it, censuring in severe terms the conduct of the Government with reference to the attempt made to transfer her Majesty's Indian forces to the regular army without their consent.—Mr. ROEBUCK moved the adjournment of the debate.—Lord PALMERSTON said he would not oppose the motion, but as the Government attached great importance to the Bill, and, as their patience was inexhaustible, they were quite willing to remain until Christmas to pass it.—Mr. HORSMAN asked how it was that, after so many Bills had been withdrawn, the Ministry should cling with such tenacity in an expiring session to a measure which was as unconstitutional as it was unprecedented.—Mr. J. B. SMITH recommended that the Bill be withdrawn.—Colonel SYKES described the strong feeling of dissatisfaction which pervaded the great mass of British officers in India. The debate was then adjourned. The *East India Stock Transfer, &c., Bill* was read a second time and committed *pro forma*, with the view of being reprinted with amendments. The *Senior Member of Council (India) Bill*, the *Superannuation Act* (1859) *Bill*, and the *Admiralty Jurisdiction (India) Bill*, were read a second time. The *Poor Law Board Continuance Bill* and the *Local Government Supplemental (No. 2) Bill* were read a third time and passed. The *Theatres and Public Houses Bill* was withdrawn.

FRIDAY.—*Landlord and Tenant (Ireland) Bill.*—The House went into committee on this Bill, resuming at clause 36.—The ATTORNEY-GENERAL for IRELAND said he was prepared to amend this clause by reducing the term of imprisonment for disobeying an order of the petty session to restrain waste, from three months to one month. The Clause as amended was then agreed to. Clauses 37 to 42 were agreed to with verbal amendments. In clause 43 Mr. M'MAHON moved the insertion of words limiting the operation of the clause to leases that may hereafter be made.—The ATTORNEY-GENERAL agreed to the amendment, and the words were inserted. The other clauses after two divisions were agreed to. The *Militia Ballot Bill* passed through committee. [Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93¼ for Money, and 93¼ to ⅜ for the 9th of August; Bank Stock, 229½ to 228½; Three per Cents. Reduced, 93½ to ¾; New Three per Cents., 93⅝; Thirty Years Annuities, expiring in April, 1855, 16¾; India Stock, 217½ to 217; Ditto Five per Cent. Stock, 1859, 104⅜; Four per Cent. Debentures, 1858, 97; Ditto 1859, 97; Ditto Bonds, 7*s.* to 3*s.* dis.; Five per Cent. Enfaced Rupee Paper, 97 to ⅜; Ditto Five and a Half per Cents., 102½; Exchequer Bills, 4*s.* pm.—FOREIGN: Brazilian Old Five per Cents., 100⅜; Ditto Four and a Half per Cents., 1860, 88; Russian Four and a Half per Cents., 93½; Spanish Three per Cents., for Acct., 48½; Ditto New Deferred Three per Cents., for Acct., 39⅝; Ditto Passive, 20¼ to ½; Turkish Six per Cents., 1854, 76½; Ditto Six per Cents., 1858, 60.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,614,440	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,139,440
		Silver Bullion	—
	£29,614,440		£29,614,440

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)..	£9,771,445
Rest	3,394,616	Other Securities	19,405,303
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	3,960,021	Notes	7,498,265
		Gold and Silver Coin ..	775,394
Other Deposits..	14,828,614		
Seven day and other bills	712,156		
	£37,448,407		£37,448,407

26th day of July, 1860. M. MARSHALL, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. ATTWOOD, Bull Inn, Newington, near Sittingbourne, Kent, Licensed Victualler and Corn Dealer—W. COOK, 9, King Street, Regent Street, Coachbuilder and Harness Maker—A. CUMMING, junior, Liverpool, Merchant—W. N. EVANS and R. B. EVANS, Colyton, Devonshire, Tanners—J. F. EYLES, 77, North Street, Brighton, Sussex, Printer, Publisher, and Stationer—W. G. GIBSON, Godalming, Surrey, Tanner—F. T. GOODALL, Manchester, Money Scrivener—J. GREEN, 1, Philpot Lane, City, Commission Agent—J. HUGHES, Birmingham, Wire Drawer—D. HUNTER, 69, Cornhill, City, Merchant—A. JACKSON and R. M. EASTMAN, Liverpool, Brokers and Commission Agents—W. JONES, Aldershott, Hampshire, Tailor, Hosier, Hatter, and Outfitter—T. LAURENCE and W. MORTIMORE, St. Mary Axe, City, Leather and Hide Factors—A. M. LEEVERS, Liverpool, Hosier and Dealer—J. MARTIN, Nottingham, Clothier, Outfitter, and General Dealer—W. PALIN and J. C. PALIN, Chester, Maltsters and Dealers in Grain—M. H. ROBINSON, Wolverhampton, Staffordshire, Tailor and Woollen Draper.

SCOTCH SEQUESTRATIONS—J. FLEMING, Newton of Nydie, Fifeshire, Farmer—E. GRANT, Fyfe, or Ducat, Edinburgh—N. MACDONALD, Sheildaig, Ross-shire, Merchant.

FRIDAY—BANKRUPTS—B. AAL, Lambeth Street, Whitechapel, Tailor—S. O. BERMAN, Lower Thames Street, Wine Merchant—S. BENNETT, Nottingham, Tailor—E. HEATHCOTE, Rock Ferry, Cheshire, Grocer—J. HOOPER, Bermondsey, Leather Merchant—C. H. JOSIFFE, Strand, Hotel Keeper—J. LAWSON, Fenchurch Street, City, Ship Broker—W. OSBORNE, Birkenhead, Printer—T. PALMER and S. PALMER, Plymouth, Drapers—T. E. POUNTNEY, Bromsgrove, Worcestershire, Licensed Victualler—F. B. SCHRADER, Liverpool, Leather Factor—G. STEVENSON, Keele, Staffordshire, Shoe Manufacturer—E. WRIGHT, Manchester, Lodging House Keeper—

SCOTCH SEQUESTRATIONS—J. LOVE, Fraserburgh, Shipowner—J. MURRAY, sen., Kilmarnock, Baker—R. SPENCE and SONS, Linlithgow, Tanners—G. R. STEWART, Glasgow, Commission Agent.

Metropolis and its Vicinity.

BRITISH MUSEUM.—Mr. Hawkins has tendered his resignation as Keeper of the Antiquities in the British Museum. It is said that great changes are likely to take place in the administration of the various branches of our antiquarian collections.

THE INCREASED DUTY ON BRITISH SPIRITS.—Since the increase of the duty on British spirits of 1*s.* 11*d.* per gallon the publicans have held meetings in various parts of the metropolis, at which it has been resolved to increase the price of spirits and cordials a penny per quartern, to take effect from Monday last. This addition will raise the price of spirits to 2*s.* 8*d.* per gallon, which will give the publican an extra profit of 9*d.* per gallon.

ST. GEORGE'S-IN-THE-EAST.—The Rev. Bryan King left his parish on Wednesday for a twelvemonth's tour on the Continent. The services at the church were again disturbed on Sunday, but on the whole they passed off more quietly than usual, the announcement that Mr. King was about to retire for a year having probably tended to produce this change for the better. The rioting in the streets was prevented by the presence of a large body of police. During Mr. King's absence his place will be taken by the Rev. Septimus Hansard, who has been long known as a hard-working curate in one of the districts of Marylebone, and whose views are those of a sound and liberal Churchman, unconnected with either of the two parties which have promoted the recent disturbances. At a public meeting of the parishioners on Tuesday, a committee was appointed to

take the necessary steps to raise a "Protestant Defence Fund," in order "to resist the machinations of Puseyite intriguers in the courts of law," and it was resolved that an appeal be made to Protestants throughout the kingdom to aid them in their efforts to vindicate the Protestant reformed faith and stop the progress of heresy in the Church of England.

THE LAST OF THE ATLANTIC CABLE.—The report of Mr. Varley and Capt. Kell on the state of the Atlantic cable, dated St. John's, Newfoundland, July 3, 1860, was received on Wednesday. It appears that although they have on many occasions been able to raise the cable and get on board different lengths, amounting in all to about seven miles, they have invariably found it broken again a few miles off. The iron wires on minute inspection, were found eaten away and rotten; the sewing was decayed, and in some places the wires were coated with metallic copper and much eaten, having probably rested upon copper ore, of which there are veins in Trinity Bay. The gutta percha and copper wire were, however, in as good condition as when laid down. They conclude by stating their deep regret that it was impossible to recover the cable, and that it was consequently necessary to abandon the attempt.

THE PUBLIC HEALTH. — The Registrar-General's Weekly Return states that in the week that ended Saturday, July 21st, the number of deaths registered in London was 975. In the corresponding weeks of the 10 years 1850-1859 the average number, corrected for increase of population, was 1156. The present return is therefore 181 below the average. During the week the births of 809 boys and 827 girls, in all 1636 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1530.

Provincial.

FROME.—On Friday Inspector Whicher applied to the magistrates for a warrant for the apprehension of Miss Constance Kent, the chief actor in the runaway drama four years ago. He took this step on the ground that, on examining the linen of the house subsequently to the discovery of the murder, he found that a bedgown belonging to the young lady was missing; and although a strict inquiry was made, it had not been discovered. The bedgown was seen on the morning of the murder with the family linen arranged for the wash, and appears to be entered in the washing-book; but on the linen reaching the laundress it was missing. The latter immediately sent word to the house, that if the bedgown were not forthcoming she must inform the police of the circumstance, as they were then engaged in searching the house. The reply was that the clothes had been carefully looked at and entered by Miss Kent, and, if anything were missing, the laundress must account for it. The laundress, however, positively affirms it was never sent her. After some consideration the magistrates granted the warrant, which was at once put in force and Miss Kent brought in custody before the justices. She stoutly asserted her innocence, but was ultimately remanded for a week, and at the close of the examination was conveyed by the police to the county gaol. On her removal to Devizes she maintained a dogged silence, not speaking throughout the whole journey, or on her arrival at the gaol. Mr. Kent's present wife, the mother of the murdered child, lived in the family as governess for 13 years during the lifetime of the first Mrs. Kent, and had the entire charge of the children, Mrs. Kent having for several years previous to her death been afflicted in her mind and incapable of attending to her household duties. Mr. Kent was married to the present Mrs. Kent, who is very respectably connected, 16 months after the death of his first wife. It has been ascertained that the grandmother of Constance Kent was of unsound mind as well as her mother, and that one of her uncles has been twice confined in a lunatic asylum, so that should the evidence produced be sufficient to warrant her committal for trial, there is no doubt that the question of hereditary insanity will be raised. It is stated that since she absconded from home disguised in boy's clothes with her younger brother four years ago her conduct has not been considered unusual or extraordinary, but two medical men acquainted with her temperament have given it as their opinion that in a paroxysm of mental aberration she might have committed the murder. Sergeant Williamson, of the metropolitan detective force, has arrived at Road this week, and is actively engaged with Inspector Whicher, Captain Meredith, chief constable, and other officers of the county police, in investigating the affair.

LEWES.—A lamentable case of poisoning has occurred in this town, a lady, Mrs. Ann Bull, having died from the effects of a dose of prussic acid administered by her own son. It appeared from the evidence taken before the coroner that Mrs. Bull had generally very bad health, and was in the habit of taking doses of prussic acid, sometimes administered by her son, Mr. George Bull, a surgeon, who resided with her. In the early part of the day Mrs. Bull had taken her usual dose, and went out for a walk during the evening; on her return she complained of feeling poorly, and another dose of prussic acid was administered by her son. After drinking it she went upstairs without assistance, and in a few minutes fell senseless on the floor, and died in about 20 minutes. A *post mortem* examination was held, when it was proved that death had been caused by an overdose of prussic acid. It appeared that Mr. George Bull is given to habits of intemperance, and that he was not entirely sober when he administered the last dose to the deceased. The jury accordingly returned a verdict that death was caused by an overdose of prussic acid, incautiously given to deceased by her son, while in an intemperate state, and unfit to judge of the proper quantity to be administered; and at the same time expressed their full opinion that he had no intention to destroy his mother. The coroner observed that this was in effect a verdict of Manslaughter, and the prisoner was committed for trial. He was accordingly tried at the Lewes assizes on Tuesday, when the evidence as to the varying strength of prussic acid, and as to the exact amount of the dose administered to the deceased was so unsatisfactory, that the jury returned a verdict of Not Guilty.

LITTLEHAMPTON.—A melancholy accident happened in this place last week. 200 men of the 21st Depôt Battalion are receiving rifle instruction at the fort, and on the 14th inst., after the practice with the long Enfield at 400 yards range, the men were pointing their unloaded rifles and snapping caps at each other while the officers were engaged in comparing the register of the shots made with the target. One of the men, named Dockerell, when directed to unload had not done so, and, to conceal this, when ordered, as usual, to ground arms, had removed the cap. Forgetting what he had done, he joined with his comrades in pointing his rifle at one of the groups who lay around, and having placed a cap on he directed his piece at a comrade named Cotton, who was standing with two others, Dwyer and Green. The rifle, of course, went off immediately, and the shot took effect on the right side of Cotton's face, carrying away part of his jawbone and passing out at the right side of his neck. Dwyer had moved a little on seeing the piece levelled, and so escaped, but the bullet, after passing through Cotton's neck, entered Green's throat, passing out at his mouth, and taking with it several teeth and a portion of the jawbone. Green was not out of danger on Thursday, and but slight hopes are entertained of the recovery of Cotton.

SOUTHAMPTON.—The steam yacht Fox, under the command of Captain Allen Young, sailed from Cowes Roads on the 19th inst., on her surveying voyage to Iceland, Greenland, and Labrador.

Ireland.

THE IRISH BRIGADE.—The Marseilles papers announce the arrival in the steamer Quirinal from Civita Vecchia of 124 Irish volunteers who had been sent away from Rome, the Cardinals, it is said, having subscribed among themselves to pay their expenses back to Ireland. A still larger body of volunteers had previously left Rome to return home. On Saturday 69 of the latter party were landed at Dublin from Liverpool by one of the City of Dublin Company's steamers in a state of great distress. They immediately went to the house of the agent in Abbey Street by whom they had been enlisted, and were greatly disappointed on finding the house locked up. They said that they had been misled, deceived, and ill-treated, that many of them had been almost starved, and that they had come home without money to take them to the places from whence they came. They said that 150 other "emigrants" were "about the docks" in Liverpool in the same unfortunate plight as themselves.

THE ORANGE RIOTS. — On Thursday evening the magistrates committed for trial all the prisoners who had been identified, refusing to take bail for those who used guns. At Belfast on Saturday Judge Fitzgerald sentenced the Armagh Orangemen who pleaded guilty of an illegal procession to six months' imprisonment. The Catholics who pleaded guilty of a riot, in interfering with the illegal procession, were sentenced, the leader to four months', and the other to three months' imprisonment. At a meeting of the Privy Council on Saturday, the Lord Lieutenant presiding, that part of the county of Armagh not already proclaimed was placed under the provisions of the Peace Preservation Act.

THE CORK ELECTION. — The action brought by Alderman M'Carthy, of Cork, against Mr. John Pope Hennessy, M.P., for the balance of expenses incurred on behalf of Lord Campden at the recent election, having been referred, at the request of Mr. Hennessy, to the arbitration of Dr. Leahy, Roman Catholic Bishop of Dromore, The O'Donoghue, M.P., and Mr. John O'Hagan of the Munster Circuit, was decided on Friday, after a long investigation, by an award in favour of Alderman M'Carthy of 1000*l.* (the full amount claimed by him), with costs of cause, of arbitration, and of award. Alderman M'Carthy conducted his own case. Mr. Hennessy was represented by his brother, Professor Hennessy.

THE GALWAY SUBSIDY.—The negotiations between the Canadian Government and the Galway Company have been broken off, the Cabinet having refused to sanction the transfer. Mr. Lever has tendered his resignation as a member of the Galway board of directors.

Scotland.

HER MAJESTY'S APARTMENTS AT HOLYROOD.—The Marquis of Breadalbane has relinquished for the use of her Majesty the apartments in Holyrood Palace which his lordship and predecessors have held for many years. The rooms are on the south side of the palace, and in immediate connection with those of her Majesty. The Dukes of Hamilton and Argyll are now the only noblemen possessing apartments in Holyrood. The Duchess of Kent has taken Lauriston Castle, near Edinburgh, for the summer months, and is expected to take possession shortly.

MONUMENT TO THE ETTRICK SHEPHERD.—A statue to James Hogg, the celebrated Scottish poet, popularly known as the Ettrick Shepherd, was publicly inaugurated on the 28th ult., on the banks of St. Mary's Lake, at the head of the Vale of Yarrow, one of the finest and the most picturesque streams on the Scottish border. There was a large assemblage at the inauguration, at which three daughters of the poet were present. Mr. Glassford Bell, one of the Sheriff-Substitutes of Lanarkshire, delivered an inaugural address, in which he reviewed the life, character, works, and friendships of the poet.

Railways.

LONDON AND SOUTH-WESTERN.—The extension line of this company from Exeter to Yeovil was formally opened on the 18th inst. by the chairman and directors, who passed over the whole line to Exeter. The event was celebrated by public rejoicings in the different towns along the line, and at Yeovil, Axminster, Colyton, and Honiton the inhabitants presented congratulatory addresses to the directors at the stations. At Exeter the Mayor and Corporation presented an address, in which the directors were congratulated that, after 16 years of opposition and difficulty, they had accomplished the construction of the line. The citizens of Exeter observed the day as a general holiday, and the chairman and directors of the line were entertained at a banquet, under spacious marquees, on Northernhay, the Mayor presiding. The line is intended to be extended from the Queen Street Station to the St. David's Station of the Bristol and Exeter, and ultimately a mixed gauge will be laid down thence to Crediton, and on the North Devon Railway to Bideford. The line was opened on the 19th for passenger traffic, and will open for goods traffic on the 1st of August.

RAILWAY TRANSPORT OF TROOPS.—A few days ago an experiment was tried for the purpose of ascertaining the time required to convey a combined force of artillery and cavalry from point to point by railway. The London and North-Western Railway received 20 hours' notice that it would be required to transport a battery of field-pieces, with all their horses, carriages, &c., and about 500 cavalry of the 2d Life Guards and 10th Hussars, a few miles out of London. The trains started from the Caledonian Road station of the North-London, and deposited the troops on a piece of waste ground, near Willesden, where a lane crosses the railway on the level, and where platforms were constructed, sloping towards the ground, down which the horses walked, and the guns and carriages rolled. No less than six trains, consisting each of 30 carriages, were required to transport this force from Islington, the last of them, starting at 11.15, not having completed its task before 4; and it was found that, with all the appliances which the greatest railway in Europe could supply, it took from 30 to 40 minutes to clear each train.

Law.

VICE-CHANCELLOR'S COURT.—*Nottidge* v. *Prince: The Agapemone.*—Vice-Chancellor Stuart on Wednesday delivered judgment in this case, which was argued on the 4th, 5th, 6th, 7th, and 8th of June last. The defendant Henry James Prince was educated at Lampeter College with the view of becoming a minister of the Church of England, and was in due course ordained deacon and priest. In 1840 he became the curate of Mr. Starkey, then rector of Charlinch, Somersetshire, and continued such for about two years, when, in consequence of his interference with neighbouring parishes, he was deprived by the bishop of his license. He then obtained a curacy at Stoke, near Clare, in Suffolk, in the neighbourhood of which place the late Mr. Josias Nottidge lived. Mr. Prince there became acquainted with that gentleman and his family, which consisted of his wife and four daughters, and succeeded in acquiring great influence over the daughters. Of that curacy likewise Mr. Prince was deprived by the Bishop of Ely at the end of 1842. From Stoke he went to Brighton, where he took a chapel, which he called the Cave of Adullam. Thither he was followed by the four Misses Nottidge, with whom he had in the meantime kept up his influence by means of letters written as well to them as to servants of his own whom he had left at Stoke, the letters to his servants having been written by him with the express view of their being read to the Misses Nottidge. He remained at Brighton until May, 1845. In December of that year Miss Louisa Jane Nottidge, who was then about 41 years of age, went to reside in the neighbourhood of Weymouth, where Mr. Prince then lived, in order to be near him. After some difficulty her brother and brother-in-law succeeded in taking her to her mother's, and as she appeared to betray symptoms of insanity they called in medical aid, and the result was, that in November, 1846, she was, on the usual medical certificates, placed in confinement. She remained in confinement until May, 1848, when she was released by the Lunacy Commissioners, who were of opinion that, although she laboured under extraordinary and irrational notions on the subject of religion, she had exhibited no other indications of insanity, and that her bodily health would suffer by her confinement being prolonged. In the meantime Prince and his followers had taken up their abode at the Agapemone, at Spaxton, near Bridgewater. On the day of Miss L. J. Nottidge's release she was met by Thomas, a member of the Agapemone, who took her on the same or the following day to Prince's broker, with a view of making a transfer to Prince of the stock then standing in her name, about 572*l.* Three per Cent Annuities. Not knowing the amount of stock standing in her name she was then unable to make the proposed transfer, and went with

Thomas to the Agapemone on the 16th or 17th of May, 1848. About a fortnight after, she made the transfer of the above amount to Prince, having in the meantime ascertained the amount of stock to which she was entitled. In July, 1858, she died intestate at the Agapemone, where she had continued to reside since her release from the lunatic asylum. The present suit was instituted by the plaintiff as the administrator of the estate of his deceased sister seeking a declaration by the court that the transfer of the stock to Prince had been obtained by his fraudulent misrepresentations and undue influence, while she was incapable of understanding or appreciating the effects of such a transaction. The Vice-Chancellor now gave judgment, declaring that the transfer of stock was improperly obtained, and must be set aside; that the stock must be transferred to the legal personal representative of Miss Louisa Nottidge; that all the dividends accrued since her death must be paid to the plaintiff; and that the defendant must pay the costs of the suit.

THE ASSIZES.

HOME CIRCUIT: LEWES.—*Manslaughter by a Schoolmaster.*—*Thomas Hopley*, 41, a person of gentlemanly appearance, surrendered to take his trial upon a charge of the manslaughter of Reginald Channell Cancellor. This case created the most intense interest, and the court was crowded nearly an hour before the time appointed for the commencement of the proceedings. It appeared from the evidence that deceased was the son of the late Mr. Cancellor, formerly one of the Masters of the Court of Common Pleas, who had died since this unfortunate transaction, and was the godson of the late leader of this circuit, Mr. Baron Channell; and that the prisoner, who was the master of a private school at Eastbourne and had the reputation of being a man of high attainments, was paid 180*l.* per annum for taking charge of his education. The lad, it appeared, was to some extent what was called a slow boy, and in fact was labouring under water on the brain, so that he was stolid and stupid, and could not learn. He was silent when asked to repeat a sum in arithmetic which he had just been taught, and he did not know, or, as the prisoner thought, affected not to know, the difference between a sixpence and a shilling. The prisoner thought it was a case of obstinacy to be broken down by force; he therefore punished him to some considerable extent when he had been only a few months under his charge. The boy went home for a short time at Easter, and then returned to school, and about the middle of April the prisoner wrote to the father of the deceased, stating that he had tried every means in his power to conquer the boy's obstinacy, and induce him to perform his studies, but they were of no avail, and that the only thing that could be done was to resort to strong measures of corporal punishment, and he asked the consent of the father to the adoption of this course. The father permitted the prisoner to act as he thought fit, and the result was that one morning the boy was found dead in his bed. The body was carefully covered over, having white kid gloves upon its hands, and long stockings drawn up over the thighs, nothing being visible but the face. The prisoner suggested that the boy had died of disease of the heart, and wished a certificate from the surgeon in order that the body might be immediately buried. But mysterious stories began to be whispered about. The servants had seen blood upon the linen in the room of the prisoner's wife, and had heard sounds which convinced them that she had spent the night in preparing the body to pass a superficial investigation, and in getting rid of the traces of violence which would testify against her husband. An investigation was therefore set on foot. The gloves and the stockings were stripped off, when the legs and the arms of the corpse were found coated with extravasated blood, "the cellular membranes under the skin of the thighs were (according to the medical evidence) reduced to a perfect jelly; in fact, all torn to pieces and lacerated by the blows that had been inflicted." There were two holes in the right leg about the size of a sixpence and an inch deep, which appeared to have been made by jobbing a thick stick into the flesh. The head was large, and exhibited the appearance of the boy having suffered from water on the brain, and this turned out to be the case when the head was opened. A servant girl who slept in the next room heard the boy crying and screaming under blows and her master talking and beating. She listened at 10 o'clock, when the flogging was going on, and when she awoke at 12 it was still proceeding. Then the cries suddenly ceased, and nothing after was heard during the night but the movements of the wife, who was doing her fearful task of hiding the traces of the tragedy. The jury without hesitation returned a verdict of *Guilty*, and the Lord Chief Justice, after commenting upon the brutal character of the offence, sentenced the prisoner to be kept in penal servitude for four years. *The Storrington Murder.*—*Peter Dewdney*, 55, was indicted for the wilful murder of Samuel Rowland, by shooting him with a gun. The evidence showed that the prisoner, who was formerly a gardener, was a weak-minded man, and that he was very much excited at the time of the occurrence by the seizure of his goods for arrears of rent, and there was reason to believe that he was under the impression that his father-in-law intended to turn him out of his house and send his wife to the lunatic asylum, and that deceased had been acting with his father-in-law against him. After shooting the unfortunate man dead, the prisoner ran away into an adjoining plantation, where he was found shortly afterwards hanging from a tree, and when he was taken down he again got away and afterwards made two attempts to cut his throat. The jury found the prisoner *Guilty* of Manslaughter, but recommended him to mercy on account of the circumstances under which the act was committed. Sentence was deferred.

MIDLAND CIRCUIT: NOTTINGHAM.—*The Walkeringham Murder.*—*John Fenton* was charged with the wilful murder of Charles Spenser. It will be remembered that deceased was a cattle jobber, well known about the country in the neighbourhood of Gainsborough, and lived at Walkeringham, and that the prisoner, a blacksmith, lived in the same village. The deceased who was in the habit of carrying a good deal of money about with him, had on the 6th March been at the Gainsborough market, and before his return over Walkerith Ferry he went, about 6 o'clock, into a public-house on the Lincolnshire side of the Trent. Several persons were in this public-house, with some of whom he walked homewards, the prisoner accompanying them. After crossing the ferry, the deceased wished the rest good night, and took the road to his own house, which was only 200 yards distant. He was however never again seen alive, and various circumstances combined to prove that the prisoner had followed and shot him in the head, and afterwards cut his throat and threw the body into a dyke. Pistols were found close by the body of deceased, which were fitted by the bullets extracted from his head, and the bullets were sworn to have been the property of the prisoner's father, to whose house and property he had succeeded, and similar bullets were found in his pockets, together with caps which exactly fitted the nipples of the pistols. His clothes also were stained with marks which Mr. Herapath proved to be marks of blood, and some of the deceased's hair was found adhering to his leggings. His boots also corresponded with the footmarks traced from the scene of the murder to his house. The jury after deliberating for two hours returned a verdict of *Wilful Murder*. Mr. Justice Wightman put on the black cap, and passed sentence of death, exhorting the prisoner to use the short time left him on earth in preparation for his death. The prisoner, both immediately before and immediately after the sentence was pronounced, said "I am not guilty of this murder."

NORTHERN CIRCUIT: YORK.—After the conviction of Mr. Leatham for bribery at the last Wakefield election the Court proceeded with the other cases. In that of *Regina* v. *Charlesworth*, the trial was postponed on account of the illness of an important witness. The same course was pursued with the cases of *Regina* v. *J. C. D. Charlesworth*, *Regina* v. *Crowther*, and *Regina* v. *Tobb*. In the case of *Regina* v. *Hawcheliffe*, defendant's counsel said he could not resist the charge made, and would withdraw his plea of *Not Guilty*. The jury were therefore discharged from giving a verdict. In the case of *Regina* v. *Marsland*, the jury found the defendant *Not Guilty* on the first count, but *Guilty* on the second (which charged that the defendant offered to forgive a debt in order to induce a man to vote. In the case of *Regina* v. *Noble* the jury found the prisoner *Guilty* on the first count, and not on the others. In the case of *Regina* v. *Boyes*, the jury returned a verdict of *Guilty* on the count charging the giving of a bribe of two sovereigns. *The Beverley Election.*—*Regina* v. *Taylor.*—In this case which was a charge for bribery at the Beverley election, the first witness for the prosecution swore that defendant had bribed him with two guineas, but he objected on cross-examination to state what his principles were, saying that his principles were to get all the money he could, and vote as he liked best. Two other witnesses called to support the case were so drunk when placed in the witness-box that his lordship said it was impossible to go on, and directed an *Acquittal*.

OXFORD CIRCUIT: STAFFORD.—*The Wolverhampton Murder.*—*Edward Humphries*, 28, boatman, pleaded guilty to the manslaughter of Elizabeth Evans, on the 12th May, at Wolverhampton. The prisoner had been committed on the charge of wilful murder, but the grand jury threw out the bill, and found one for manslaughter. The prisoner had been drinking with deceased, who had lived with him for some years, and became enraged because she had told a publican to draw him no more ale. Meeting her after this on the high road in company with other women, he struck her several times on the head with his fists, disregarding her entreaties for mercy, and kicking her with great violence as she lay on the ground. When told that he had killed her, he said that if he had not killed her already, he would do so when he got her in the boat. She died however before she could be lifted from the ground. The post-mortem examination showed that death was caused by extravasation of blood on the brain. The judge sentenced the prisoner to eight years' penal servitude.

NORFOLK CIRCUIT.—*Arson.*—*William Johnson* was charged with setting fire to his dwelling-house, at March, in the Isle of Ely, with intent to defraud the Norwich Union Fire Office. The prisoner kept the White Horse Inn at March, where a benefit society held its meetings, and he was entrusted with the care of the "club box." On the 10th April the house was found to be on fire. The lid of the box had been broken open with some rough instrument, and the box itself, with a large chest in which it was kept, were burning. The cupboard was not in the least injured, and there is no doubt the boxes were set on fire to destroy the evidence of their having been forced and the money abstracted. Upon the prisoner being asked for his tools a chisel was found which accounted for the marks in the lid of the box, the indentations corresponding with the size and shape of the iron. The jury found the prisoner *Guilty*, and the Lord Chief Baron sentenced him to six years' penal servitude.

Sporting.

GOODWOOD RACES.

TUESDAY.—*Craven Stakes.* Mr. Sargent's Crater beat Gaspard and 7 others.—*Lavant Stakes.* A dead heat between Mr. Merry's colt and Lord Stamford's Walloon, beating two others. Deciding heat won easily by the Phemy colt.—*Gratwicke Stakes.* Mr. W. S. S. Crawfurd's Winton beat Sagitta and 3 others.—*Stewards' Cup.* Lord Annesley's Sweetsauce beat Maggiore and 35 others. Betting 6 to 1 against Maggiore. Won by three lengths. Value of the stakes 490*l.*, with the cup, value 30*l.* — *Sweeps.* Mr. Payne's Kingston filly beat Bayard and 5 others.—*Hunt Stakes.* Mr. Payne's filly beat Starlight and 5 others.—*Fifty Pounds*, added to a Sweeps of 5 sovs each. Mr. Sargent's Physician beat Newstead and 2 others.

WEDNESDAY.—A *Handicap Plate.* Captain Christie's Miss Julia beat Fravola and 15 others.—The *Drawing Room Stakes.* Lord Portsmouth's Buccaneer beat Trovatore.—*Handicap Plate.* Sir H. des Voeux's Comforter beat Restes and 4 others.—The *Goodwood Derby.* Mr. Merry's Northern Light beat Ebony and St. James.—The *Goodwood Stakes.* Mr. Gibbs's Wallace beat Satellite and 15 others.—The *Cowdray Stake.* Mr. T. Parr's Parasite beat Billy Banks and 4 others.

THURSDAY.—*Sussex Stakes.* Mr. Merry's Rambler walked over.—*Zetland Stakes.* Mr. Merry's Trovatore beat Fusileer.—*Tenth Bentinck Memorial Stakes.* Mr. Henry's Vergisz-meinnicht beat Knight of St. Patrick and 3 others.—*Racing Stakes.* Mr. Payne's Tuscio beat Ebony.—*Molecomb Stakes.* Lord Stamford's Diophantes beat Parasite, the Phemy Colt, and 2 others.—*Goodwood Cup.* Lord Annesley's Sweetsauce beat Gustave, Zouave, Starke and Optimist (American horses), Butterfly, Highwayman, and Horror.—*Ninth Bentinck Memorial Stakes.* Mr. Merry's Northern Light beat Emily.—*Findon Stakes.* Mr. Merry's Dundee beat Nemesis and 8 others.—*Eighth Bentinck Memorial Stakes.* Lord Strathmore's Mouravieff beat St. Clarence and May Morning.—*Sweeps.* Lord Stamford's Provision walked over.

FRIDAY.—(*By Electric Telegraph*) *Nassau Stakes.* Provision beat Seclusion, Contadina, and 3 others.—*Duke of Richmond's Plate.* The Speaker beat Montebello, Provision, and 12 others.—*March Stakes.* Speedbox beat Pomona, Lady Harriet colt, and 6 others.—*Chesterfield Cup.* Orlanda beat Cecilia, Catawba, and 23 others.—*Queen's Plate.* Crater beat Starke and Tournament.—*Nursery Stakes.* A dead heat between Rouge Dragon and Captain Fortibus, beating Clematis and 13 others. The stakes were divided.

Obituary.

LIEUT.-GENERAL WEMYSS, C.B., Colonel of the 17th Foot, died on the 19th inst. at his residence at Bath. He had nearly completed his 60th year of service in the army. He accompanied the Walcheren expedition in 1809, and the following year proceeded to the Peninsula as Major of Brigade to the brigade under Lord Howard, with which he served during the remainder of the war till 1814. During the war he was present in the actions of Pombal, Redinha, Foz d'Aronce, battle of Fuentes d'Onor, surprise of Marshal Gerard at Arroyo de Molinos, storm of Fort Napoleon and the bridge of Almaraz, Molinos, storm of Fort Napoleon and the bridge of Almaraz, action of Alba de Tormes, defence of Bejar, battles of Vittoria and the Pyrenees; at Maya, Lesaca, and Donna Maria, where he was severely wounded; the battles of the Nivelle, Cambo, St. Pierre (again wounded), Hellette, Garris, St. Palais, Tarbes, Arriverietta, Orthes, Aire, and Toulouse, besides numerous minor affairs. Subsequently he served with the 99th regiment in India, and against the Kandians in Ceylon. In recognition of his services he was made a Companion of the Bath in 1838; received the silver war medal and seven clasps for Fuentes d'Onor, Vittoria, Pyrenees, Nivelle, Nive, Orthes, and Toulouse, and in 1854 was appointed Colonel of the 17th Foot.

BIRTHS.—On the 20th inst, at 9, Upper Grosvenor Street, the Viscountess STORMONT, of a son—21st inst, at 41, Grosvenor Square, the Lady CHARLOTTE WATSON-TAYLOR, of a daughter—20th inst, at 55, Portland Place, Lady HARRIET VERNON, of a son—18th inst, at Kelso, N.B., Lady CUNINGHAM FAIRLIE, of a daughter—18th inst, at Brasted, the Lady AFFLECK, of a son—23d inst, at the Grange, Fareham, Surrey, the Hon. Mrs. HENRY CLIFFORD, of a daughter—18th inst, at Earn Bank, Bridge of Earn, the Hon. Mrs. ROLLO, of a son—15th inst, at Donnington Hall, Herefordshire, the Hon. Mrs. FREDERICK WEBB, of a son—22d inst, at the Victoria Hotel, Euston Square, the Hon. Mrs. FREDERICK HOLLAND, of a daughter, which survived its birth about four hours—22d July, at Clevedon, Somersetshire, the wife of W. J. M. Pocock, Esq., of a son.

MARRIAGES.—On the 24th inst, at St. Paul's, Knightsbridge, HENRY BINGHAM MILDMAY, Esq., to GEORGIANA FRANCES, daughter of the late J. C. BULTEEL, Esq., M.P. for South Devon, and niece of Earl Grey—17th inst, at St. George's Church, Hanover Square, HENRY VERE CHOLMONDELEY, Esq., second son of Lord Henry Cholmondeley, to FRANCES ISABELLA CATHERINE, second daughter; and, at the same time and place, by special license, the Hon. CHARLES MURRAY HAY FORBES, of Brux, Aberdeenshire, second son of Lord Forbes, to CAROLINE LOUISA ELIZABETH, third daughter of Lieut.-Colonel the Hon. GEORGE A. SPENCER—19th inst, at Gormanston Castle, JOHN ARTHUR FARRELL, Esq., of Moynalty, county of Meath, to LUCRETIA, second daughter of the Right Hon. Viscount GORMANSTON—19th inst, at the Church of the Bavarian Embassy, Warwick Street, WALTER GEORGE NUGENT, late Captain in the 33d (Wellington) Regiment, eldest son of Sir Percy Nugent, Bart., county of Westmeath, Ireland, to MARIA, only daughter of the Right Hon. RICHARD MORE O'FERRALL, M.P. for Kildare, and granddaughter of Viscount Southwell—19th inst, at the parish church, Knaresborough, Captain LESLIE, Royal Horse Guards, to EMMA LOUISA CATHERINE daughter of the late CHARLES SLINGSBY, Esq., of Loftus Hill, and sister of Sir Charles Slingsby, Bart., Scriven Park, Knaresborough—19th inst, at St. Mary's, Bryanston Square, ROSS LEWIS MANGLES, V.C., of the Indian Civil Service, to HENRIETTA ANNE, youngest daughter of JAMES MORE MOLYNEUX, Esq., of Loseley Park, Surrey—24th inst, at St. George's, Hanover Square, HENRY LYON, Esq., of Appleton Hall, Cheshire, to VANDA, third daughter of Colonel WILSON PATTEN, M.P.—24th inst, at St. George's, Hanover Square, LENOX PRENDERGAST, Captain Scots Greys, to MARION, eldest daughter of the late NEILL MALCOLM, Esq., of Poltalloch, Argyllshire.

DEATHS.—On the 23d inst, at 22, Grosvenor Place, after a short illness, the Lady MARY PELHAM, eldest daughter of the late Earl of Chichester, aged 56—19th ult, at Burnet, near Bath, Lady WILSON, relict of Maj.-Gen. Sir J. Wilson, K.C.B., aged 74—24th inst, at Brighton, the Hon. Mrs. SILVERTOP, aged 30—18th inst, JANE MARY, wife of KENELM HENRY DIGBY, Esq., aged 42—20th inst, at Green Royd, near Ripon, SARAH BRADNEY, the wife of Captain WILLIAM SLAYTER SMITH, Adjutant of the Yorkshire Regiment of Hussar Yeomanry, and formerly of the 13th Lt. Dragoons and 10th Hussars—17th inst, at 4, St. Alban's Place, Major F. HAMMERSLEY, late King's Dragoon Guards—21st inst, at Dunstan Villa, Trinity, Edinburgh, FRANCIS STUART, Major in the Army, the last surviving officer in Scotland belonging to the Scots Greys present at the battle of Waterloo, where he was a Lieutenant, and severely wounded—17th inst, at 13, Dorset Square, Captain HARRY EYRES, C.B., of Knockwood Park, Tenterden, Kent—18th inst, GEORGE CRAUFURD HEATH, Esq., the Senior Fellow of King's College, Cambridge, aged 76—19th ult, at Ahmedabad, BULKLEY J. MACKWORTH PRAED, of the Bombay Civil Service, second son of Bulkley J. Mackworth Praed, Esq., of Bryanston Square, London, aged 22—14th inst, at Government House, Madras, JANE THEOPHILA, wife of D. F. CARMICHAEL, Esq. (Civil Service), Private Secretary to His Excellency Sir C. E. Trevelyan, K.C.B., aged 25.

Markets.

COVENT GARDEN.—July 28.

English Pines, Peaches, and Nectarines are still plentiful, as are also Plums, Pears, and Figs. Grapes are abundant, as are likewise Cherries. Best samples of Strawberries maintain fair prices. Cob Nuts realise 1s. per pound. Gooseberries fetch 3d. a quart. Peas, first-class varieties, are abundant. New Potatoes range from 6s. to 8s. per cwt. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids Gardenias, Violets, Mignonette, Heaths, Kalosanthes, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 3s to 4s	Gooseberries, per qt., 3d to 6d
Grapes, per lb., 3s to 6s	Currants, per qt., 3d to 6d
Strawberries, p. lb., 6d to 1s6d	Green Figs, per doz., 8s to 12s
Peaches, per doz., 10s to 20s	Melons, each, 2s to 4s
Apricots, per doz., 2s to 4s	Apples, per doz., 2s to 6s
Nectarines, do., 6s to 12s	Oranges, per 100, 6s to 15s
Cherries, p. lb., 1s to 3s	Lemons, per 100, 5s to 10s

VEGETABLES.

Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per 100, 1s to 1s 6d	Celery, per bundle, 1s 6d to 2s
Peas, p. bush., 2s to 3s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 2d to 4d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 6d to 8d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d to 7d	Mushrooms, p. pott., 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 4s
Cucumbers, each, 6d to 1s	Savory, per bunch, 2d to 4d
Artichokes, per doz., 6s to 8s	

BUTTER MARKET.—July 27.

Best Fresh Butter . . 14s. per dozen lbs.
Second do. do. . . . 13s. " "
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, July 26.

Prime Meadow Hay	70s	to 80s	Clover	90s	to 120s
Superior do. (old)	90	100	New Clover	80	100
Inferior do.	50	60	Second cut do.	—	—
New do.	60	80	Straw	34	44
Rowen	—	—		DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, July 26.

Sup. Meadow Hay	100s	to 114s	Inferior Clover	90s	to 110s
Inferior do.	80	92	New do.	70	100
New do.	60	90	Straw	45	50
Superior Clover	120	128		JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, July 26.

Fine old Hay	100s	to 105s	Fine old Clover	120s	to 128s
Inferior do.	80	95	Inferior do.	100	115
Prime New Hay	70	80	Fine New Clover	90	100
Inferior do.	—	—	Inferior do.	—	—
Straw	40	45	Fine 2d cut	—	—

HOPS.—BOROUGH MARKET, FRIDAY, July 27.

Messrs Pattenden & Smith report that the accounts from the plantations continue to come very bad. Duty 120,000*l*. Market 5s. to 10s. per cwt. higher than on Monday last.

METROPOLITAN CATTLE MARKET.

MONDAY, July 23.

The number of Beasts is larger than we have had for a long time past. The trade is not quite so brisk, and prices on the average are lower. The supply of Sheep and Lambs is rather less than on Monday last, and choicest qualities made rather higher prices. Calf trade is the same as on Thursday. From Germany and Holland there are 1789 Beasts, 7000 Sheep, and 280 Calves; from Spain, 430 Beasts; from Ireland, 170; from Norfolk and Suffolk, 300; and 1500 from the northern and midland counties.

	s	d	s	d
Best Scots, Herefords, &c. ..	5	4 to 5	6	
Best Short-horns	5	0 — 5	4	
2d quality Beasts	4	0 — 4	8	
Best Downs and Half-breds ..	5	6 to 5	10	
Do. Shorn		— ..		

	s	d	s	d
Best Long-wools.	5	4 — 5	6	
Do. Shorn		to ..		
Ewes & 2d quality	4	6 — 5	0	
Do. Shorn		— ..		
Lambs	5	8 — 6	4	
Calves	4	4 — 5	6	
Pigs	4	0 — 5	0	

Beasts, 4650; Sheep & Lambs, 28,040; Calves, 330; Pigs, 240.

THURSDAY, July 26.

The supply of Beasts is again very short; choice qualities are scarce, and prices for them are high. All descriptions find a ready sale. Sheep and Lambs are also scarce, and in good demand, consequently on the average Monday's quotations are exceeded. Calves are plentiful, and Monday's prices with difficulty obtained. From Germany and Holland there are 300 Beasts, 2900 Sheep, and 377 Calves; from Spain, 80 Beasts; from Ireland, 50 Calves; and 100 Milch Cows from the home counties.

Best Scots, Herefords, &c. ..	5	6 to 5	8	
Best Short-horns	5	2 — 5	6	
2d quality Beasts	4	4 — 4	10	
Best Downs and Half-breds ..	5	8 — 5	10	
Do. Shorn		— ..		

Best Long-wools .	5	4 — 5	6	
Do. Shorn		— ..		
Ewes & 2d quality	4	8 — 5	0	
Do. Shorn		to ..		
Lambs	5	8 — 6	6	
Calves	4	4 — 5	6	
Pigs	4	0 — 5	0	

Beasts, 1060; Sheep & Lambs, 11,140; Calves, 594; Pigs, 120.

BRITISH WOOLS.—LONDON, FRIDAY, July 27.

Our arrivals are much less than usual at this season of the year, and the prospects of wool maintaining its price continue likely with the present favourable weather, and towards the spring higher rates may be realised than have been heard of lately.

	s.	d.	s.	d.
South-down Hoggets..	1	8 to 1	9	
Half-bred ditto..	1	8 — 1	9	
Down Ewes ..	1	6 — 1	7	
Kent Fleeces ..	1	6 — 1	7	

Leicest. Wethers	1	6 to 1	7	
Ditto Hoggs ..	1	7 — 1	6	
Combing Skins		— —	—	
Blanket ditto ..	0	6 — 0	8	
Flannel Wool ..	1	0 — 1	7	

COLONIAL WOOL SALES.—These sales proceed at full rates, and with the improvement in the weather may be expected o maintain their prices, if not improve, towards the close.

MARK LANE.—MONDAY, July 23.

The supply of Wheat from Essex and Kent to this morning's market was small, and met a ready sale at an advance of 2s. per qr upon the prices of Monday last. A similar improvement was also realised upon Baltic red and white, but we cannot quote Russian more than 1s. dearer. In Baltic Wheat f. o. b. business was limited, being generally held out of proportion to the prices on the spot. Barley is in good demand at a decline of 6d to 1s. per qr. on the rates of this day se'nnight. Beans and Peas bring late rates The Oat trade is firm, and fine qualities bring an advance of 6d. per qr. Country Flour is held for 2s. per sack more money; foreign is also a trifle dearer.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..	White	58—62	Red	56—60	
— — —	fine selected runs.. ditto	58—64	Red	58—62	
— — —	Talavera	60—65			
— Norfolk		—	Red	—	
— Foreign		52—68			
BARLEY, grind. & dist., 24s to 31s..	Chev.	38—45	Malting.	36—41	
— Foreign.. grinding and distilling		28—36	Malting.	35—40	
OATS, Essex and Suffolk		20—24			
— Scotch and Lincolnshire..	Potato	26—28	Feed ..	24—26	
— Irish	Potato	26—28	Feed ..	21—24	
— Foreign.....	Poland and Brew	22—26	Feed ..	18—26	
RYE		35—38	Foreign.	—	
RYE-MEAL, foreign.....		—			
BEANS, Mazagan....32s to 40s....	Tick	34—43	Harrow.	34—43	
— Pigeon .....36s — 47s..	Winds.	48—54	Longpod	—	
— Foreign	Small	38—46	Egyptian	—	
PEAS, white, Essex and Kent ..	Boilers	38—40	Suffolk .	36—41	
— Maple .... —s to —s	Grey	32—34	Foreign.	30—40	
MAIZE	White	—	Yellow..	—	
FLOUR, best marks delivered..	per sack	48—54			
— 2d do.	ditto	48—54	Country.	40—48	
— Foreign	per barrel	25—32	Per sack	30—46	

FRIDAY, July 27.

The weather was very wet during the 21st and 22d, showery on the 23d and 24th, with S.W. wind, changing on the 25th to N.W., since when it has been dry with a cold autumnal temperature; to-day S.W. and warmer. We do not hear that the Wheat is suffering from the effects of the season, excepting that it and also Oats have in various districts of the country been much knocked about and laid by the rains. Complaints of the Potatoes reach us from all parts of Germany, and many of England that the haulm is turning black. During the last eight days the trade has further improved, and a considerable amount of business has been transacted in all its branches at an improvement of 1s to 2s. per qr. upon the prices of the previous week. Although no quotable rise can be noted in the value of Spring Corn generally, nevertheless the tendency of prices has been in favour of holders. The sale of Flour has improved, and some quantity of American (proportionately the cheapest) has found buyers. German and French is the turn dearer, and country marks are held for 2s. per sack advance. The arrivals of grain-laden vessels from the South of Europe off the coast have been to a fair extent; the business done was very considerable, and the greater part of last week's arrivals, as well as a portion of this week's, have been sold. The arrivals of English Wheat are limited to 1030 qrs. of Wheat, but those of all kinds of foreign grain are unusually large. The market was moderately attended, and some disposition was shown to purchase Wheat at a decline, but holders generally being disinclined to submit to a reduction, unless for the purpose of clearing vessels coming on demurrage, the amount of sales was only limited Barley is in fair demand at Monday's prices. Oat trade slow at 1s. per qr. reduction.

ARRIVALS FROM July 23 TO July 27.

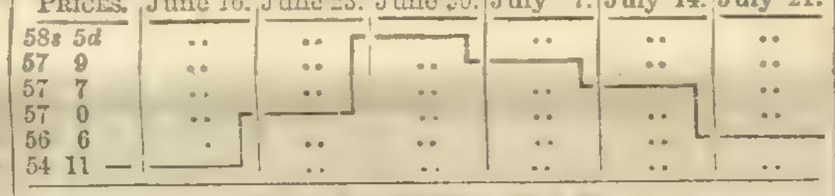
	Wheat.	Barley.	Oats.	Flour.
English ..	1030 qrs.	— qrs.	— qrs.	1860 sks.
Irish	— ,,	— ,,	— ,,	— ,,
Foreign ..	54410 ,,	35050 ,,	138480 ,,	2700 ,, 9850 brls.

LIVERPOOL, Tuesday, July 24.—We had a good attendance of millers and dealers at our Corn Exchange this morning, and with an active demand from the interior sellers of good American descriptions found no difficulty in obtaining the advance of 1d. to 2d. per cental Flour had only a moderate inquiry, but was not to be had under an advance of fully 6d. per barrel and sack. Indian Corn was held firmly for Friday's prices, but the business passing was only in retail. Oats and Oatmeal steady at full prices. Beans were the turn better with a fair demand. Peas and Barley unaltered. The market closed with less briskness.

FRIDAY, July 27.—The grain market is firm. Wheat 1d. dearer, with good consumptive demand. Flour active at full rates. Maize a turn in sellers' favour. Oats and Oatmeal steady. New Saidi Beans scarce, at 35s.

AVERAGES.	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
June 16..	54s 11d	35s 0d	26s 11d	37s 0d	46s 2d	40s 4d
— 23..	57 0	34 3	27 5	38 9	45 10	41 4
— 30..	58 5	32 10	25 5	41 9	47 1	44 8
July 7..	57 9	34 0	26 5	41 3	46 6	41 4
— 14..	57 7	33 5	25 8	41 3	46 6	43 7
— 21..	56 6	32 5	26 4	40 8	46 7	39 4
Agg. Aver.	57 0	33 9	26 4	40 1	46 4	41 3

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.



COAL MARKET.—JULY 26.

Byass's Bebside West Hartley, 16s.; Davison's West Hartley, 16s.; Holywell, 16s.; Howard's West Hartley, 15s. 9d.; Tanfield Moor, 13s. 6d.; Tanfield Moor Butes, 13s. 6d.; West Hartley, 16s.; Wylam, 16s. 6d.; Walls End Acorn Close, 17s. 6d.; Walls End Eden, 17s. 6d.; Walls End Gosforth, 17s.; Walls End Hedley, 17s. 3d.; Walls End Hilda, 16s. 6d.; Walls End Braddyll's Hetton, 18s.; Walls End Framwellgate, 17s. 6d; Walls End Haswell, 19s.; Walls End Hetton, 19s.; Walls End Cassop, 18s.; Walls End Hartlepool, 18s. 9d.; Walls End Heugh Hall, 17s. 6d.; Walls End Kelloe, 18s. 3d.; Walls End South Hartlepool, 17s. 9d.; Walls End Thornley, 16s. 6d.; Walls End Thorpe, 18s.; Walls End Whitworth, 16s.; Walls End Peases West, 15s.; Carway and Duffryn Malting, 22s. 6d.—117 ships at market.

THE ISLAND OF ASCENSION.—Notice is hereby given that the situation of UNDER GARDENER and SHEPHERD at this station is filled up by the appointment of Mr. JAMES DEERING.

WANTED, AS NURSERY FOREMAN AND PROPAGATOR, one who understands growing Soft-Wooded Plants, and can work Roses, Rhododendrons, &c. No others need apply.—Apply by letter to BENJAMIN WHITTAM, The Clough Nursery, Mottram, near Manchester.

WANTED, for a Nursery in Scotland, a Man to act as GENERAL FOREMAN. He must be well acquainted with Budding, Grafting, and the general propagation and management of Nursery Stock, and must also be a good Salesman. Apply in own handwriting, stating where previously employed and wages expected.—A. D., *Gardeners' Chronicle* Office, W.C.

WANTED, A GARDENER, accustomed to grow Forced Strawberries and Flowers for market.—Apply to GEORGE TOYNE & SON, King's Arms Lane, Hounslow, W.

WANTED, A GARDENER, at Michaelmas next, who thoroughly understands the Growing of Grapes, and who is a good Florist. Wages 18s. per week and beer. None need apply whose character for industry, steadiness, honesty, &c., will not bear the closest investigation.—Apply by letter, stating age, to A. B., Post Office, Great Baddow, Chelmsford, Essex.

WANTED, AS GOOD WORKING GARDENER, a strong and willing hand, by a gentleman who has a few Stove and Greenhouse Plants, and a Flower, Lawn, and Kitchen Garden of limited extent. No cottage. Wages 50*l*. per annum, paid weekly. Occasional help. Most respectable references required.—T. I., Villetta, Emsworth, Hants.

WANTED, A SHOPMAN, who must Write a good business hand quick, used to retail trade, strong, and willing to assist at hard work. Say if any knowledge of times of sowing Flower and Garden seeds, &c., and their cultivation. Good character for honesty, sobriety, &c., indispensable.—State wages, age, &c., to H. COTTRELL, 15, Bull Ring, Birmingham.

SEED TRADE.

WANTED, a young Man as UNDER-SHOPMAN, and to make himself generally useful. Apply, stating age, where last employed, and wages expected, by letter only, to DICKSON'S & BROWN, Manchester.

WANT PLACES.—Letters to be Post Paid.

BAILIFF, or BAILIFF AND GARDENER.—W. P. AYRES having completed his engagement in the formation of the Forcing and Pleasure Gardens to the new mansion at Orchardleigh Park, will shortly be at liberty to enter upon a similar engagement. During his residence (four years) at Orchardleigh W P. A. has had the general supervision of the Estate Improvements, Draining, Re-modelling of Farms, Receiving Rents, &c. He has also Designed and erected a Farm residence and covered Homestead of the first class; is thoroughly conversant with the principles of Construction and Artificers and Ground work of all kinds. Liberal remuneration expected. ** W. P. A. has been known to Professor Lindley, the learned Editor of the *Gardeners' Chronicle*, for upwards of 20 years, and has the honour to refer to him as to his professional capabilities.—Orchardleigh Park, Frome.

GARDENER (HEAD).—Age 32, married, no incumbrance; understands his profession in all its branches. Wife competent to take charge of the House or Lodge.—A. B., 36, Northampton Road, Clerkenwell, E.C.

GARDENER (HEAD).—Steady, active; thoroughly experienced in his profession, also to take the Management of Stock, which he thoroughly understands. Highly recommended.—A. B., Post Office, Battersea Rise, Surrey.

GARDENER (HEAD).—Middle-aged, married; understands Early and Late Forcing, Flower and Kitchen Gardens. No objection to superintend Meadow Land, Dairy, and Poultry, &c. Unexceptionable character.—A. B., Mr. Musket, Florist and Seedsman, High Street, Clapham, S.

GARDENER (HEAD).—Age 41; understands Forcing Pines, Grapes, and Flowers; also the Laying-out and full Management of Geometrical Flower Gardens or otherwise. No objection to work. First-class reference with 10 years' good character from present employer.—J. S., Great Baddow, Chelmsford, Essex.

GARDENER (HEAD).—Age 28; has had experience both in noblemen's and gentlemen's places. Good references.—J. S., Post Office, Welwyn, Herts.

GARDENER (HEAD).—Age 34, married; has a thorough practical knowledge of his profession.—BRYEN, Brackley Lodge, Walton-on-Thames, Surrey.

GARDENER (HEAD).—Age 40, single; has taken upwards of 100 prizes at Flower Shows.—A. B., 17, Caledonia Street, Pimlico, W.

GARDENER (HEAD).—Age 26; thoroughly understands the management of Fruit, Flower, and Kitchen Gardens, &c. Character unexceptionable.—L. J., Mrs. Woods, Wood Street, Walthamstow, Essex, N.E.

GARDENER (HEAD).—Age 26, single; well experienced in the cultivation of Vines, Hothouse, Greenhouse, and Gardening; Early and Late Forcing in all its branches. Three years' good character.—G. C., 4, Bloomfield Place, Crouch End, Hornsey, N.

GARDENER (HEAD).—Age 30, married; thoroughly understands the Forcing of Grapes, Peaches, Cucumbers, Melons, Strawberries, Mushrooms, and is a good Flower and Kitchen Gardener, Budder, and Grafter. Five years' character.—J. WINWOOD, the Gardens, Brailes House, Shipston-on-Stour.

GARDENER (HEAD).—Age 30, married, one child; a native of Scotland; understands Early and Late Forcing, also the management of Flower and Kitchen Gardens; has no objection to look after Meadow Land if required. Can have two years' unexceptionable character from his present employer.—G. Mc F., Rosebank, Tunbridge Wells, Kent.

GARDENER (HEAD).—Age 42, married; 27 years' experience in his profession, 16 of them in the capacity of Head Gardener; a clever and intelligent Plant Grower, including Ferns, &c., and well skilled in the routine of Forcing, Fruits, Cropping, &c. Testimonials highly satisfactory.—ALPHA, Messrs. E. G. Henderson & Son, St. John's Wood, London, N.W.

GARDENER (HEAD or SINGLE-HANDED).—Age 34, married; experienced in the management of Vines and Flower and Kitchen Gardens. First-class references.—R. L., 2, Grove Terrace, Grove Lane, Stamford Hill, N.

SHOPMAN (HEAD), or MANAGER.—Age 30; has been 12 years in an extensive Nursery and Seed Establishment, and has for the last three years had the Management of and Travelled for the Seed Department.—Apply by letter to J. D., *Gardeners' Chronicle* Office, W.C.

GARDENER.—Age 36, single; has a thorough knowledge of his profession, including Early and Late Vines, Flower and Kitchen Gardens, Greenhouse Plants, &c. Highly recommended.—J. B., Mr. Sandy, Nurseryman, Stafford.

GARDENER.—Age 24; understands the management of a Greenhouse, Flower, Fruit, and Kitchen Gardens.—M. T., Mr. Pettet, Bookseller and News Agent, Cambridge.

GARDENER, in a nobleman's or gentleman's Garden.—Age 15, of good moral character and industrious habits; has been employed in a gentleman's garden nearly 12 months.—JAMES RIDSDALE, Bilbrough, near York.

GARDENER.—Mr. CRIPPS, Nurseryman, Tunbridge Wells, Kent; can with confidence recommend to any nobleman or gentleman a thoroughly practical Gardener (age 36, married); is thoroughly acquainted with the culture of Pines, Vines, and every description of Early and Late Forcing, Orchids, Ferns, Stove and Greenhouse Plants, Flower and Kitchen Gardens. Has been a successful exhibitor of Plants and Fruits. Can manage Land if required. The highest references for character and abilities.—Direct as above.

GARDENER (SINGLE-HANDED).—Age 29, married; no incumbrance; would not object to look after a horse and brougham. Four and a half years' good character, and can be highly recommended.—D. H., J. Simes, Seedsman, &c., Upper Tooting, Surrey, S.

GARDENER (SECOND, or SINGLE-HANDED).—Age 21; has been seven years in the Garden.—W. A., 1, West Street, Dartford, Kent.

GARDENER (UNDER).—Age 18; has a good knowledge of Flower and Kitchen Garden. Good character from present employer.—W. C., 1, Spring Grove, Hampton Wick, Middlesex, S.W.

GARDENER AND BAILIFF.—E. PAVER (age 35, married, no incumbrance), for the last 10 years with the Rev. C. W. Ethelstone, Rectory, Eplyow, Dorset; has a thorough practical knowledge of the cultivation of Vines, Pines, Peaches, Melons, &c., the general management of the Kitchen, Fruit, Flower Garden, and Pleasure Grounds; also a thorough knowledge of the management of a large Farm in all its branches. Can have 7 years' good character for ability, &c.—E. PAVER, Market Place, Sidmouth.

BAILIFF, GARDENER, OR GENERAL MANAGER.—Middle-aged; practically acquainted with the duties of the above professions; Breeding and Rearing of Live Stock, Sale or Purchase of Farm Produce, Timber, &c. Has had great experience in Forcing generally. Superior reference will be given.—J. K., Arpsten Cottage, Bridge Road, Barnes, S.W.

BAILIFF (WORKING).—Age 32, from Aberdeenshire; understands Light and Heavy soils, Draining, Breeding and Fatting of Stock, Buying and Selling, &c., and can Farm on the Newest Systems. Wife can take the charge of Dairy and Poultry. Can be well recommended by his late employer in Sussex.—B. J., Post Office, Hertford.

FOREMAN, PROPAGATOR, OR SALESMAN.—Age 30, married. First-class references.—T. E. B., 27, Clarence Street, Gravesend.

FOREMAN, or PROPAGATOR AND FOREMAN.—A German, who speaks English and French; has worked in some of the first establishments on the Continent and in England. No objection to go abroad.—G. N., 23, Victoria Terrace, St. John's Wood, N.W.

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SHOPMAN OR ASSISTANT-CLERK.—The Advertiser, age 30, who is about leaving a London Retail House, is open to an engagement as above, either Wholesale or Retail, in town or country. Has a fair knowledge of Plants. Good references can be given.—D. E. A., *Gardeners' Chronicle* Office, W.C.

SHOPMAN (ASSISTANT).—Has been in one of the first London Nursery and Seed Establishments; has a good knowledge of Garden and Flower Seeds. First class reference.—A. T., *Gardeners' Chronicle* Office, W.C.

The Gardeners' Chronicle Newspaper.

SATURDAY, AUGUST 4, 1860.

NOTICE OF DIVIDEND.

BANK OF DEPOSIT (Established A.D. 1844). 3, Pall Mall East, London, S.W.—The WARRANTS for the HALF-YEARLY INTEREST, at the rate of 5 per cent. per annum, on Deposit Accounts, to the 30th June, are ready for delivery, and payable daily between the hours of 10 and 4.

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25 ,, by 12 ,, ..	10 0 0 ..	10 10 0
30 ,, by 12 ,, ..	11 10 0 ..	12 0 0
30 ,, by 15 ,, ..	13 10 0 ..	14 10 0
40 ,, by 15 ,, ..	16 10 0 ..	17 10 0
50 ,, by 15 ,, ..	18 10 0 ..	20 0 0

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No. CCXV., is published THIS DAY.

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I. THE LONDON POOR.
II. JOSEPH SCALIGER.
III. WORKMEN'S SAVINGS AND EARNINGS.
IV. THE CAPE AND SOUTH AFRICA.
V. MRS. GROTE'S MEMOIR OF ARY SCHEFFER.
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News of the Week.

THE EMPEROR OF THE FRENCH has addressed a letter to the French Ambassador in London, expressing an earnest desire for the continuance of the English alliance. The EMPEROR begins by admitting that affairs are complicated in consequence of the mistrust excited everywhere since the war in Italy, but emphatically declares that he wishes to live on the best terms with all his neighbours. He had, he says, renounced Savoy and Nice, and was only induced to resume the question of their annexation by the extraordinary territorial acquisitions of Piedmont. He states that his army is not too large for the requirements of France when the deductions for foreign service are made, and that his navy is not on a scale commensurate with that established under LOUIS PHILIPPE. If other people have seen the bright side of the late war, he himself, who was on the spot, has seen the defects, and is anxious to remedy them. In the East he wishes only for the *status quo*, and that Turkey should live as long as possible. He was, he says, transported with indignation at the Syrian outrage; but he remembers what Algeria has cost in the best blood and money of France, and desires no acquisitions in the East. He has, however, conquests to make, but they are to be made in France, in her interior organisation, her moral

development, and the increase of her resources. He asks, he says, nothing better than to act with England in Syria and in Southern Italy, as to which he is bound by no treaty obligations; and he desires to quit Rome when he can do so without compromising the safety of the POPE. He seeks no new acquisitions abroad, and wishes the frankest interchange of opinion between himself and the eminent men who are at the head of affairs in England.

Accounts from Damascus, to the 17th July, state that the massacres have ceased, and that the Kurds and Bedouins had retired into the interior. The agitation, however, has spread to the European dependencies of Turkey. In Bulgaria and the neighbouring provinces an organised conspiracy for the massacre of the Christians has been discovered, and in Constantinople itself the Christians have been subjected to such outrages that military precautions have been taken to prevent a more serious outbreak.—The Conference of the Great Powers on the proposed intervention in Syria met in Paris on Monday, and agreed to make some essential alterations in the convention on the demand of the Turkish Ambassador. These alterations have since been agreed to by the respective Powers, and the conference reassembled yesterday afternoon to sign the convention.—General GARIBALDI has entered Messina, and has refused to sign an armistice which had been agreed upon between Gen. CLARY and Colonel MEDICI. The latest news states that he was preparing 300 vessels to transport troops to the mainland.

In the House of Lords on Monday several Bills passed through committee, and others were read a third time and passed. On Tuesday, on the order of the day for going into committee on the Local Government Act Amendment Bill, the Earl of DERBY objected to a clause injuriously affecting mining interests, and in committee on the Bill Lord STANLEY of ALDERLEY moved the omission of the clause. On a division the clause was carried by 42 to 24, and the Bill passed through committee. The New Zealand Bill, the Party Emblems (Ireland) Bill, and several other Bills were read a third time and passed. On Thursday the Mines Regulation and Inspection Bill was read a third time and passed. On the order for going into committee on the Tenure and Improvement of Land (Ireland) Bill, Lord DUNGANNON moved that it be referred to a select committee. The motion was negatived on a division by 34 to 30, and after a very long debate on its various clauses, the Bill passed through committee.

In the Commons on Friday the Landlord and Tenant (Ireland) Bill passed through committee, and the Militia Ballot Bill was read a third time and passed. The adjourned debate on the motion for going into committee on the European Forces (India) Bill was resumed, when the instruction moved by Sir J. ELPHINSTONE was negatived without a division. Mr. MILNES then moved an instruction, with the view of vesting all military appointments in India other than staff appointments in the Governor-General and his Council. On the motion of Mr. H. SEYMOUR, the debate was adjourned to Monday. The Endowed Charities Bill, sent down from the Lords, was read a second time and ordered to be committed. On Monday the adjourned debate on the European Forces (India) Bill was resumed. After a desultory discussion the instruction moved by Mr. MILNES was negatived without a division. Sir J. FERGUSSON then moved a resolution declaring that it was inexpedient to proceed further until the whole plan of the Government for regulating the military force of India has been submitted to Parliament. On a division the motion was negatived by 88 to 50. Sir J. ELPHINSTONE then moved the adjournment of the debate. After considerable discussion the motion was withdrawn and the House went into committee. On clause 1, Mr. HENLEY moved the insertion of a proviso securing to the Indian army all the advantages as to pay, pensions, allowances, privileges, promotion, and otherwise, secured by Act of Parliament to the military forces of the East India Company. Sir C. WOOD accepted the proviso, which was agreed to, and the Bill passed through committee. The Ecclesiastical Commission Bill, as amended, was considered and agreed to. On Tuesday the House went into committee on the Refreshment Houses and Wine Licenses (Ireland) Bill, and made some progress with the clauses. Colonel FRENCH moved for leave to introduce a Bill to extend the Volunteer rifle system to Ireland. Lord PALMERSTON and Mr. CARDWELL opposed the motion, which was negatived on a division by 86 to 30. Mr. EWART moved a series of resolutions for regulating the business of the House, but after some discussion the motion was withdrawn. Mr. HENNESSY moved for a return of the salaries, hours of attendance, &c. of the clerks in the Government offices, and was proceeding to explain his motion when the House was counted out. On Wednesday, on the order for going into committee on the Metropolis Local Management Act Amendment Bill, Mr. BRADY moved, as an amendment, that the House go into committee that day three months. On a division the amendment was negatived by 71 to 13. The House then went into committee, and agreed to the clauses of the Bill with amendments. On Thursday the House resumed in committee the debate on Lord PALMERSTON's resolutions on fortifications and works. Mr. LINDSAY moved, as an amendment, that, as the main defence of the country depends on an efficient navy, it is not expedient to enter into a large expenditure on permanent fortifications. The amendment was supported by Mr. BRIGHT, Sir C. NAPIER, Mr. B. OSBORNE, Sir F. SMITH, and other members, and opposed by Lord PALMERSTON, Mr. S. HERBERT, Mr. NEWDEGATE, and Mr. HORSMAN. On a division the amendment was negatived by 268 to 39. The resolution granting 2,000,000*l.* on account of fortifications during the present year having been put from the chair, Mr. MONSELL moved, as an amendment, that it was inexpedient to fortify Portsdown Hill, near Portsmouth. On a division, the amendment was negatived by 165 to 37. The resolution was then agreed to.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family will arrive at Buckingham Palace on Monday morning from Osborne, and will leave town in the evening for Balmoral, travelling to Edinburgh by night by the Great Northern route. On Thursday the 26th, the Queen and Prince Consort, accompanied by Princesses Helena and Louisa and Prince Arthur, rode on horseback. The Belgian Minister and Madame and Miss Van de Weyer arrived on a visit to her Majesty. On Friday the Queen and Prince Consort gave their annual dinner and fête to the seamen and marines of the Royal yachts, the detachment of infantry stationed at East Cowes, the labourers and workmen employed on the Osborne estate, and the Coast Guard and Trinity House men. Dinner was prepared for about 550 persons, and was laid in large tents erected on the lawn. Lord Clyde left Osborne for London. On Saturday afternoon her Majesty and the Prince Consort, accompanied by Princesses Alice, Helena, Louisa, and Beatrice, and Princess Leiningen embarked in the Royal yacht Victoria and Albert, and steamed round the Isle of Wight, returning to Osborne Pier about 7 o'clock. Lord and Lady Palmerston arrived from London on a visit. On Sunday morning the Queen, Prince Consort, Princesses Alice, Helena, and Louisa, and Prince Arthur, attended Divine service at Osborne. The Rev. G. Prothero officiated. On Monday morning the Queen, Prince Consort, and the Royal family walked out. Lord and Lady Palmerston returned to London. In the afternoon the Queen and Prince Consort, accompanied by Princess Alice, and Princess Helena, rode on horseback. On Tuesday the Prince Consort and Prince Arthur went to the Wellington College. The Queen drove to West Cowes and visited the Princess Leiningen. In the afternoon her Majesty, accompanied by Princess Alice, embarked in the Fairy, and went over to Southampton to meet the Prince Consort and Prince Arthur, on their return from the Wellington College. The Hereditary Grand Duke and Duchess and Prince Adolphus of Mecklenberg-Strelitz, and Prince Philip of Wurtemberg arrived on a visit. On Wednesday the Queen held a Privy Council at Osborne, at which Sir Henry Rawlinson and Mr. Augustus Paget had audiences of her Majesty. Lord Palmerston, Lord Granville, and Lord John Russell also had audiences. In the afternoon the Queen and Prince Consort, accompanied by the Hereditary Grand Duke and Duchess of Mecklenberg-Strelitz, Princess Alice, and Prince Philip of Wurtemburg, drove out in an open carriage and four. Prince Arthur and Prince Adolphus of Mecklenburg-Strelitz rode on horseback. On Thursday morning the Hereditary Grand Duke and Duchess and Prince Adolphus of Mecklenburg, and Prince Philip of Wurtemburg left Osborne for London.

ARRIVAL OF THE PRINCE OF WALES AT NEWFOUNDLAND.—Her Majesty's ships Hero and Ariadne arrived at St. John's on the 23d ult. The Prince of Wales landed on the 24th amid great enthusiasm, received a deputation, and addresses, and held a Levee. On the 25th his Royal Highness attended a regatta and state ball. The Prince was to leave St. John's on the 26th. During his presence all business was suspended.

THE DUCHESS OF KENT left Frogmore on Tuesday for Scotland, and will not return from the north before September.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

THE ARMY.—The colonelcy of the 2d Dragoons, vacant by the death of Lord Sandys, has been conferred on Lieut.-General Clark Kennedy; the colonelcy of the 6th Dragoon Guards, vacant by this promotion, has been conferred on Lieut.-General Sir James Jackson, who has been succeeded in the colonelcy of the 6th Dragoons by Major-General Beckwith; Lieut.-General Sir John Mark Frederick Smith has been appointed Colonel-Commandant of Royal Engineers, in the room of the late Sir George J. Harding.

PARLIAMENTARY MOVEMENTS.—The election for Stafford terminated yesterday in the return of Alderman Sidney by a large majority over Lord Sandon.

THE COMMISSION TO SYRIA.—Lord John Russell has appointed Lord Dufferin to be British Commissioner in Syria. Lord Dufferin is intimately acquainted with the country and the people, having recently returned from a prolonged tour in Syria and Egypt.

THE MOORISH EMBASSY.—The Moorish Ambassador arrived at Portsmouth on Monday with his suite, and was received with the usual honours by the garrison and fleet. On Tuesday his Excellency visited the dockyard and public establishments, and on Wednesday embarked in her Majesty's screw frigate, Melpomene, 50, at Spithead, on his return to Morocco.

THE NATIONAL DEFENCES.—The following details showing the total estimated cost of the several new works proposed to be executed, the sum proposed to be taken for each station for the period between the 1st of August, 1860, and the 1st of August, 1861, and also the extra sum, not provided for in Annual Estimates, required for the same period for works already sanctioned by Parliament, were issued by the War Office on Saturday:—

District.	Proposed New Work.	Total Estimated Cost, including Purchase of Land. £	£	Proposed to be taken for Period between August 1, 1860, and August 1, 1861. £
Portsmouth ..	Spithead* ..	840,000		
—	Needles ..	150,000		
—	Isle of Wight ..	130,000		
—	Portsdown† ..	650,000	..	580,000, to include purchase of land.
—	Gosport "Advance" ..	150,000		
		— 1,920,000		
Plymouth ..	Sea defences ..	875,000		
—	Staddon-heights	200,000		
—	Maker-heights..	25,000	..	450,000, ditto.
—	North-East defences ..	600,000		
		— 1,200,000		
Pembroke ..	Bays to southward	100,000		
—	Work at Scoveston ..	120,000	..	60,000, ditto.
		— 220,000		
Thames ..	Four batteries ..	..	180,000	60,000, ditto.
Medway and Sheerness ..	Sea defences and works in front of Mile-town§ .	..	350,000	100,000, ditto.
Chatham ..	Eastern defences	..	650,000	175,000, ditto.
Dover	Work in front of Castle, and other improvements ..	..	170,000	50,000, ditto.
Cork	Defences proposed by Commissioners ..	..	120,000	30,000, ditto.
Central Arsenal	For purchase of a site	..	150,000	150,000, ditto.
Total			4,960,000	1,635,000
Say				1,650,000
For works already sanctioned by Parliament ‖				350,000
Grand total required, irrespective of sum provided in Estimates 1860-61				2,000,000

THE STEAM RESERVE.—The whole of the steam vessels of war now lying in harbour at the Royal Dockyards are to be fitted for the steam reserve ordinary, the Government having decided on every ship belonging to that class being made ready for service, in case a sudden emergency should arise for their immediate use. The steam reserve in the Medway now con-

* Omitting "Spit" and "intermediate" works.

† It is proposed to omit the three "minor works" proposed by the Commissioners on Portsdown, and it is only proposed to construct one work on the Gosport Advance Line.

‡ It is only proposed to execute four works on the north-east side of Plymouth—viz., those at Catdown, at Lipson, at Mount View, and St. Budeaux.

§ It is proposed to place works immediately in front of Mile Town, Sheerness, instead of the advanced works proposed by the Commissioners.

‖ Viz.—Portsmouth, 150,000*l.*; Plymouth, 75,000*l.*; Pembroke, 55,000*l.*; Portland, 30,000*l.*; Dover, 40,000*l.* Total, 350,000*l.*

tains some of the finest line-of-battle ships and other screw steamers, all of which could be brought forward for immediate service at a few days' notice.

The Volunteer Movement.—A memorial, signed by 35 commanding officers of Volunteer Corps between the Trent and the Tweed, having been presented to her Majesty praying her to hold a review in some of the northern counties on her journey to Scotland, the Secretary for War has written to Sir John Fife, of Newcastle-on-Tyne, stating that the Queen's arrangements will not admit of her reviewing the Volunteers of the North of England, either on her way to or from Scotland, but her Majesty hopes that she may at some future day have an opportunity of doing so. It is intended, however, to have the Volunteer Corps of the northern counties strongly represented at the grand review to be held by the Queen at Edinburgh on Tuesday next, which will be observed as a holiday at Edinburgh, Glasgow, Leith, and other towns. The magistrates of Edinburgh have received intimation of upwards of 13,000 Volunteers intending to be present at the review, in addition to 2000 of the Volunteers of Edinburgh and Leith.—On Saturday evening the inauguration dinner of the 19th Surrey (Lambeth) corps was held in the great hall of the Surrey Gardens, Mr. Roupell, M.P., the Major Commandant, in the chair. After dinner Miss Roupell presented the corps with a silver bugle from the ladies of East Surrey, and the Chairman in the name of the corps presented Captain Truman, the acting-adjutant, with a silver salver and a purse of 100 guineas.—The first annual meeting of the 7th Surrey was held on Saturday evening at the Sessions House, Newington Causeway, Mr. Johnson, Chairman of the Quarter Sessions, presiding. It was stated that the number of effective members was 360.—The annual meeting of the 1st Surrey was held on Saturday evening at the head-quarters, Hanover Park, Peckham; the commanding officer, Lieut.-Colonel Macdonald, presided, and stated that the corps now numbered 800 members.—At a meeting of the Royal Irish on Saturday evening in Hungerford Hall the Marquis of Donegal announced that he will present four Whitworth rifles of the value of 25 guineas each to be shot for as at Hythe on the 24th December next; also five silver medals, being one for each company, and a sixth, gilt, to be competed for by the whole corps, on three successive Easter Mondays.—The Six-feet Volunteer Guards were entertained at a dinner on Friday by Mr. Frederick Hodges, a member of the corps, at his distillery, Lambeth. The corps, 100 in number, assembled in Hungerford Hall, and marched to Pall Mall, by the Duke of York's column, across the parade, St. James's Park, through the Horse Guards, thence to Parliament Street, and over Westminster Bridge to the distillery, accompanied by their band.—An influential meeting was held at the Town Hall, Reading, on Saturday, when a committee was appointed to consider the best means of organising a meeting of all the rifle corps in Berkshire, to contest for prizes in rifle shooting and athletic games in September next.—The three town companies of the 1st, 4th, and 5th Leicestershire were reviewed on Leicester racecourse last week by Earl Howe.—The 7th (Birmingham) Battalion of the Warwickshire assembled at Wyddrington, Edgbaston, the residence of Sir John Ratcliff, last week, and competed for several prizes offered by Captain Ratcliff.—The 1st Northumberland Artillery, the 1st Northumberland Rifles, two companies of the Gateshead, the Durham, and the Chester-le-Street corps were inspected last week by Major Harman, Assistant-Inspector of Volunteers, upon the Town Moor.—The Stratford-on-Avon corps were presented with a silver bugle last week, subscribed for by the ladies of that town.—On Friday evening the 5th Cumberland were inspected by Major Fairclough, at Brougham Hall, the seat of Lord Brougham. On the same day the 4th Cumberland or Workington Artillery Corps was presented with a silk flag and a silver bugle, the gift of the ladies of Workington, in the presence of a large number of spectators.—A meeting was held on Saturday at Chipping Ongar, when upwards of 30 volunteers were enrolled, and about 200*l.* was subscribed for the formation of a company. A subdivision has been nearly formed at Epping, and a considerable number of gentlemen have enrolled themselves at Pinistow as a contingent to the South Essex. An additional company is about to be formed at Brentwood among the artisans in the employment of Messrs. Burgess & Key. A corps is also to be formed in the Saffron Walden district.—The members for Colchester, Mr. Miller, and Mr. Papillon, have signified their intention to offer prizes for the best shots among the Volunteers of that town.—At a meeting held at Ipswich on Saturday it was resolved to promote the formation of a "Scotch company" in that town.—Capt. Eckersley, Commandant of the 21st Lancashire, has offered the sum of 250*l.* to such member of the corps as shall succeed in winning the Queen's prize of the National Rifle Association next year.—A movement has commenced in Leeds for the formation of artisan companies, and two large firms, Messrs. Kitson & Co., of the Monk Bridge Ironworks, and Sir Peter Fairbairn & Co., of the Wellington Foundry, have each furnished a sufficient number of men to constitute one company. The Mayor and other gentlemen have subscribed for the purchase of rifles to be offered as prizes for competition among the members of the corps.—A corps of Artillery Volunteers has been formed at Blyth, Northumberland, under the name of the 3d Northumberland Artillery.—The Welshmen resident in London are about to form themselves into a distinct company or corps, under the title of the London Welsh.—The Earl of Derby has received acceptances of his invitation to the review at Knowsley from 4000 Volunteers. His lordship is making very liberal arrangements for their reception.—The Clevedon or 1st Somerset Artillery mustered for their first parade in uniform on the 25th ult., and marched through the principal streets, preceded by the band.—On Monday the Duke of Richmond inspected in Goodwood Park the 10th Sussex (Chichester), 12th Sussex (Westbourne), and 15th Sussex (Bognor); the whole under the command of Lieut.-Colonel Nicolls.—The Ashridge, Berkhampstead, Hemel Hempstead, and Tring companies dined together on Tuesday in the grounds of the old Castle at Berkhampstead. The chair was filled by Lieut.-Colonel Smith Dorrien, supported by Earl Brownlow, the Hon. General Finch, and the gentry and clergy of the neighbourhood. It was announced during the meeting that the companies present, with those of St. Albans and Watford, were about to be formed into the 1st Hertfordshire Battalion.—On Tuesday an artillery volunteer corps was formed at Grays, under the auspices of Mr. R. Wingfield Baker, formerly M.P. for South Essex. There was a muster of Volunteers from various parts of the county, and the officers of the 1st Kent Artillery assisted in the formation of the corps. The visitors numbered upwards of 1000.—An influential meeting was held on Wednesday evening at Blackheath, Major Farnell in the chair, at which it was resolved to form a volunteer rifle corps, composed of the skilled artisans of the district, the corps to form a division of the 3d Kent, and the cost of uniform not to exceed 3*l.* 3*s.*, of which each member shall contribute 1*l.* 8*s.*, by instalments, during 12 months.—It has been arranged between the West Middlesex, North Middlesex, and other corps established in the northern and western districts of the metropolis, to have a field-day and sham fight this afternoon on Hampstead Heath.

Foreign.

France.—The Emperor Napoleon has addressed the following letter to the French Ambassador in London, explaining his policy towards England and his views of the English alliance:—

"St. Cloud, 25th July, 1860.

"My dear Persigny,—Affairs appear to me to be so complicated—thanks to the mistrust excited everywhere since the war in Italy—that I write to you in the hope that a conversation, in perfect frankness, with Lord Palmerston will remedy the existing evil. Lord Palmerston knows me, and when I affirm a thing he will believe me. Well, you can tell him from me, in the most explicit manner, that since the peace of Villafranca I have had but one thought, one object—to inaugurate a new era of peace, and to live on the best terms with all my neighbours, and especially with England. I had renounced Savoy and Nice; the extraordinary additions to Piedmont alone caused me to resume the desire to see reunited to France provinces essentially French. But it will be objected 'You wish for peace, and you increase immoderately the military forces of France.' I deny the fact in every sense. My army and my fleet have in them nothing of a threatening character. My steam navy is even far from being adequate to our requirements, and the number of steamers does not nearly equal that of sailing ships deemed necessary in the time of King Louis Philippe. I have 400,000 men under arms; but deduct from this amount 40,000 in Algeria, 6000 at Rome, 8000 in China, 20,000 gendarmes, the sick, and the new conscripts, and you will see—what is the truth—that my regiments are of smaller effective strength than during the preceding reign. The only addition to the Army List has been made by the creation of the Imperial Guard. Moreover, while wishing for peace, I desire also to organise the forces of the country on the best possible footing, for, if foreigners have only seen the brilliant side of the last war, I myself, close at hand, have witnessed the defects, and I wish to remedy them. Having said this much, I have, since Villafranca, neither done, nor even thought, anything which could alarm any one. When Lavalette started for Constantinople, the instructions which I gave him were confined to this—'Use every effort to maintain the *statu quo*; the interest of France is that Turkey should live as long as possible.' Now, then, on the massacres in Syria, and it is asserted that I am very glad to find a new occasion of making a little war, or of playing a new part. Really, people give me credit for very little common sense. If I instantly proposed an expedition, it was because my feelings were those of the people which has put me at its head, and the intelligence from Syria transported me with indignation. My first thought, nevertheless, was to come to an understanding with England. What other interest than that of humanity could induce me to send troops into that country? Could it be that the possession of it would increase my strength? Can I expend my resources in Algeria in order to open up new advantages, in the case of weakness to France, which for 50 years has devoted to it the purest of its blood and its gold? I said at Bordeaux, and my opinion is still the same—I have great conquests to make, but only in France. Her interior organisation, her moral development, the increase of her resources, have still immense progress to make. There a field exists vast enough for my ambition and sufficient to satisfy it. It was difficult for me to come to an understanding with England on the subject of Central Italy, because I was bound by the peace of Villafranca. As to Southern Italy, I am free from engagements, and I ask no better than to concert with England on this point, as on others, but on Heaven's name let us conduct ourselves with the loyalty of the English Government, for acts petty jealousies and secret mistrusts. Let us understand one another in good faith, as honest men as we are, and let the two countries [illegible] each other. To sum up, this is my invariable thought. I desire that Italy should obtain peace, no matter how, but without foreign intervention, and that my troops should be able to quit Rome without compromising the security of the Pope. I [illegible] very much wish not to be obliged to undertake the Syrian expedition, but in my case, not to undertake it alone, firstly, because it will be a great expense, and secondly, because I fear that this intervention may involve the Eastern question; but, on the other hand, I do not see how to resist public opinion in my country, which will never understand that we can leave unpunished, not only the massacre of Christians, but the burning of our consulates, the insult to our flag, and the pillage of the monasteries which were under our protection. I have told you all I think, without disguising or omitting anything. Make what use you may think advisable of my letter. Believe in my sincere friendship.

"Napoleon."

Official intelligence was received on Saturday in Paris that the Sultan had agreed to the proposal for intervention in Syria, subject to certain modifications of the Convention. A conference of the Ambassadors of the Great Powers and of Turkey was accordingly convened for Monday to consider the Convention. At the request of the Turkish Ambassador a preparatory meeting was held at which he explained that if the Sultan authorised him to adhere to the Convention, under certain reservations, it was only in order not to be the cause of a conflict between France and England. The essential reserve which the Porte wished to make was that, before adopting the convention for regulating foreign intervention in Syria, mention should be made in it of the spontaneous desire of the Sultan to arrest the effusion of blood in Syria, and to accept the co-operation of his allies to that end. M. Thouvenel having adhered to this demand, the conference, in its meeting on Monday, entirely changed the original plan of the convention already agreed to by the great Powers, and the six articles were carefully revised in such a manner as to remove all that might excite the susceptibilities of the Porte, or even indirectly attack the sovereign independence of the Sultan. A protocol was also agreed upon defining the object of the intervention, setting forth that as the co-operation of the great Powers takes place by desire of the Sultan, the foreign troops shall act at all times in unison with the Turkish forces, and remain only as long as the Porte deems it advisable; and further that the French troops already on the point of embarkation shall start without waiting for the contingents of the other Powers. The protocol also stipulates that, as the great Powers, in giving their assistance to the Sultan, do not seek vengeance, but merely wish to discover the guilty parties who are to be punished, no rigorous measures shall be taken except after a common inquiry, in which the commissioners of the great Powers and of the Porte will jointly assist. In consequence of this protocol, the representatives of the great Powers were obliged to refer to their respective Courts before definitively signing the convention; but all the Powers having agreed to the conditions, the conference reassembled yesterday afternoon to sign the convention.—The French Government is said to have entertained favourably the recent proposal of the Neapolitan Envoy to prevent Garibaldi landing on the mainland of Naples, but the project failed in consequence of Lord John Russell's refusal to entertain it.—The *Moniteur* publishes a decree augmenting the number of the officers of the General Staff from 560 to 580. This decree is preceded by an explanatory statement to the effect that the Staff is not even in time of peace sufficient for the necessities of the service created by the increase of the army attendant upon the extension of French territory.—M. Thouvenel has addressed a despatch to the five Great Powers demanding the admission of Spain to their Councils as one of the Great Powers of Europe.—Numerous fugitives from Naples, in the shape of police agents and members of the old Court party, are daily arriving at Paris in disguise, and bearing foreign names. They complain loudly of the "ingratitude of the Bourbons."—The Ambassadors from Morocco left Paris on Thursday. They entrusted the Minister of Foreign Affairs with the sum of 10,000fr. for the poor of the capital, and a similar sum for the relief of the Christians in Syria.

Portugal.—Accounts from Lisbon of the 27th ult. state that the *oidium* had appeared among the vines in the neighbourhood of Figueira, and fears were entertained for the vintage in that district.

Prussia.—The official *Prussian Gazette* states that the hopes which had been entertained in reference to the meeting of the two Sovereigns at Töplitz have not been disappointed, and that the approach to a better understanding between the two Cabinets has been promoted by this meeting in the manner to be desired. "Europe," it says, "will by the Toplitz meeting obtain fresh guarantees for the maintenance of public peace and for the respect of the equilibrium." The Prince Regent on leaving Töplitz was accompanied by the Emperor of Austria and Prince George of Saxony as far as Pirna, where they met the King of Saxony. The Prince Regent arrived at Berlin on the 27th, and after a short stay continued his journey to Potsdam. The Empress Dowager of Russia and the Dowager Grand Duchess of Mecklenburg arrived at Potsdam on the same day.

Bavaria.—The King of Bavaria will leave Munich in a few days for Potsdam, accompanied by his minister in Paris, to pass 10 or 12 days with the Royal Family of Prussia.

Italy.—An insurrection has broken out at Avellino near Naples. The foreign troops fired on the inhabitants and plundered several houses. At Gaeta the soldiers shouted "Down with the Constitution!" "Long live Maria Teresa!" The Minister of War has promised to disband the foreign troops. A Naples paper has assumed the title of "Garibaldi," and the public press is very violent in its language. An ordinance has been published by the Prefect of Police against abuses of the liberty of the press, and the Minister of the Interior has issued a circular authorising the functionaries to use all exceptional means for maintaining public order, as "the welfare of the people was the highest law." Sixteen persons belonging to the Court had

been exiled. Numerous refugees had returned to Naples, among whom are General Ulloa and Signor Davala. The existing municipalities were to be renewed on the 6th inst.—The Pope had decided on not quitting Rome. Bills had been posted up in Rome announcing the approaching outbreak of a revolution.—The Turin journals mention the probability of an interview between the Emperor of the French and the King of Sardinia during the Emperor's approaching visit to Nice. The following is the letter recently addressed by the King to Garibaldi, requesting him not to attack the mainland of Naples :—

"General,—You know that I did not approve of your expedition, and remained a perfect stranger to it, but the serious circumstances in which Italy is now placed impose on me the duty of entering into direct communication with you. In case the King of Naples should consent to the complete evacuation of Sicily, or should voluntarily abandon all kind of action, and formally engage to exercise no pressure whatever on the Sicilians, so that they may be able, in all freedom, to express their will and make choice of the mode of government they prefer, I think it would be wise on your part to renounce any further enterprise against the kingdom of Naples. In the contrary case I expressly reserve my complete liberty of action, and refrain from making any further observations on your projects. "VICTOR EMMANUEL."

SICILY.—The *Official Gazette* of Turin, in giving the details of the action at Melazzo, states that the loss of the Neapolitan troops was 580, killed, wounded, and prisoners. Garibaldi's force lost 50 killed, 100 wounded, and 17 prisoners. After the town was taken, Garibaldi ordered 39 of the inhabitants, among whom were several gendarmes, to be shot, for pouring boiling oil and water on his men during the attack. After the capture of Melazzo Garibaldi marched to Messina and took possession of the town, the Royal troops withdrawing to the citadel. An armistice had previously been agreed upon between General Clary and Colonel Medici, at the suggestion of the King of Sardinia, on the following terms :—

"The Neapolitans to remain in possession of the forts of Syracuse, Agosta, and Messina, and to have liberty of access to all parts of those towns. The citadel of Messina not to fire upon the town. The Garibaldian colours to take equal rank with the Neapolitan flag, and the navigation of the Straits of Messina to be free. Hostilities to cease throughout the island, and the belligerents to retain the positions they now occupy."

Garibaldi refused to sign this armistice, on the ground that he alone could judge concerning the real state of things, adding that he would not pause until the cause of national unity had triumphed. The latest news states that Garibaldi is preparing 300 vessels at Messina to transport troops to the mainland, and that the Neapolitan troops are demoralised, and refuse to fight. Signor Depretis, whom Garibaldi has invested with the dictatorial authority, intends to modify the Ministry by choosing only such members as are favourable to Italian unity. Signor Crispi will re-enter the Cabinet. The Electoral Committees were to enter upon their duties on the 6th inst. Father Gavazzi is said to have arrived at Palermo, and Miss White, of Mazzinian notoriety, is mentioned as being at Palermo, engaged in the superintendence of the hospitals.

TURKEY.—Official intelligence has been received in Constantinople stating that in Bulgaria and in the neighbouring provinces massacres of the Christians have been organised. The Porte has taken all necessary measures for arresting in the most efficacious manner these criminal attempts. Several Christians have been insulted and beaten in Constantinople itself, and a general panic prevails among the Perotes, in consequence of which the Sultan on the advice of Sir H. Bulwer has recalled the Grand Vizier. The troops of the capital have been paid two of the four months' arrears of pay due to them, and great precautionary military measures have been taken. The bridges of Galata and Pera are raised every night, and the Sisters of Charity have dismissed all their pupils. The Marquis de Lavalette has had a conference with the Sultan, which lasted three hours, in which he has notified the resolution of France in reference to an expedition to Syria. It had been resolved to increase the Turkish army in Syria to 26,000 men. The official journal denies the report that the Sultan had requested the Viceroy of Egypt to send a reinforcement of 10,000 soldiers. Disturbances have taken place in Constantinople among the schismatical Armenians. Several thousands of them opposed the burial of Protestant Armenians in their cemetery, which has hitherto been used by the Armenians of both sects. At the request of Sir Henry Bulwer, the military interfered, and killed or wounded 40 persons.

SYRIA.—Despatches from Beyrout state that on the 17th of July the massacres at Damascus had ceased. The Kurds and Bedouins had retired into the desert, but the Christians were still concealing themselves. The Turkish garrison consisted of 5000 men, inactive or hostile. 3000 Christians had taken refuge in the citadel, which was occupied by the Algerines under Abd-el-Kader, who still had the Consuls under his protection, and had given refuge also to several Englishmen. The number of victims in the recent massacres is stated at from 3000 to 4000, but as the massacres lasted for 80 hours it was difficult to ascertain the exact number. It is confirmed that 6000 houses belonging to the Christians have been destroyed, and that the Jewish quarter has been burnt. The Turkish houses in which the Christian women had taken refuge were also burnt, and the soldiers drove the Christians into the flames of the burning houses. Although peace had been signed by the tribes of the Lebanon, several Christian Sheiks refused to give their adherence to the treaty, as they considered it illusory. Some wretched and starving Christians had endeavoured to return to the mountains. The Lazarists, Sisters of Charity, and other women of Damascus, have safely arrived at Beyrout, under an escort furnished by Abd-el-Kader. The new Governor of Damascus had arrived with 1200 soldiers. 3000 Turkish regular troops arrived at Beyrout on the 11th ult. in a line-of-battle ship and two frigates, under Khalid Pacha. On the same day a detachment of 1800 Turkish regulars left Beyrout for Damascus. The Greek, Spanish, and Dutch governments have sent ships to the coast of Syria, and there is no doubt that all the Christian Powers will shortly be represented in that quarter. The French Commodore has gone in a line-of-battle ship to Smyrna, to which place the agitation has now spread. Fuad Pacha, the Extraordinary Commissioner of the Porte, reached Beyrout on the 25th ult., the day after the Turkish squadron, under the orders of Vice-Admiral Mustapha Pacha, arrived from Candia. Before leaving for Syria, Fuad Pacha sent the following message to the Marquis de Lavalette :—

"Tell the Ambassador that, at the risk of my life, I shall wash out the stain upon the honour of our army, and that the soldiers will also do their duty."

EGYPT.—A subscription has been opened in Egypt for the sufferers by the Syrian massacres. The Pacha has headed the subscription with a sum of 5000 fr. A great number of Christian refugees had arrived at Alexandria from Syria. They were well received, and lodged in public buildings.

INDIA.—The Simla with the Calcutta and China mail has arrived at Aden, with her main shaft broken. Her passengers and cargo have arrived at Suez by the Norna, Malta, and Madras.

CHINA.—A great panic has prevailed at Shanghai among the natives, owing to the approach of the rebels. The allied troops had been landed to keep the city. Confidence was partially restored on the 30th May, but the native banks were closed and trade was suspended in consequence of the movements of the rebels. The steam transport Assistance had been totally lost. All on board were saved.

AUSTRALIA.—Accounts from Melbourne to June 19 state that the commercial depression continued, but the crops were promising. The Fidus had been totally wrecked on Kangaroo Island.

NEW ZEALAND.—No active measures have yet been taken against the rebels.

UNITED STATES.—The State Department at Washington had received officially a copy of the Order in Council, stating that it is the intention of her Majesty and the Emperor of the French to act during the hostilities in China in strict conformity with the declaration of maritime law signed by the Plenipotentiaries of Great Britain, Austria, France, Prussia, Russia, Sardinia, and Turkey at the Paris Congress of 1856; and to extend the benefits of the declaration to all Powers which may be neutral in the said hostilities. The papers contain favourable reports of the grain crops in the West, and state that not only has a greater breadth been sown, but a heavier and better yield may be confidently expected than was ever before known.—The Harvard University had invited the Prince of Wales to visit their institution, and, according to the Boston papers, the invitation had been accepted.—The Great Eastern is announced to sail from New York on the 16th inst. on her return to England. Previous to her departure she was to make an excursion to Cape May, with a limited number of passengers, at 10 dols. a head. It was expected that a large number of persons would take passage by her to Europe.—The New York papers state that the 10 days' visit of the Japanese Envoys cost the city 20,000*l*. The bill at the Metropolitan Hotel, where the Envoys were quartered, amounted to 14,000*l*. The item of champagne alone amounted to 3000*l*.

NOVA SCOTIA.—Halifax papers announce the death, on the 16th ult., of the Hon. Brenton Haliburton, Chief Justice of Nova Scotia.

MEXICO.—The Washington correspondent of the *New York Herald* states that England and France had resolved to interfere in Mexico, and had invited the United States to participate in the intervention. The invitation was not likely to be accepted.

BRITISH COLUMBIA.—By the arrival of Captain Lempriere, R.E., we learn that the Royal Engineers under the command of Lieut.-Colonel Hawkins, R.E. have made great progress in surveying and planning the boundary between the British possessions and the United States, both officers and men exerting themselves to the utmost in the prosecution of the work. The chief camp for the present is at Dallas, in the State of Oregon; but the depôt from which the officers and men draw their supplies, and which forms the base of their operations, is at Esquimalt, Vancouver's Island. The mining news is encouraging. The war between the Indian tribes rages furiously, and the Government showed no disposition to interfere in their quarrels.

CENTRAL AMERICA.—Honduras was to take possession of the Bay Islands on the 30th June, and the people intended to resist the transfer by force of arms. General Walker, the filibuster, left on the 27th June, it was supposed for Central America. The yellow fever was raging at Belize.

Parliament.

HOUSE OF LORDS.

FRIDAY.—Lord CHELMSFORD moved the second reading of the *County Coroners Bill*, and explained that its object was to prevent the disputes between coroners and magistrates of quarter sessions with regard to fees for holding inquests, by enacting that the coroners should in future be paid, not by fees, but by salaries calculated on an average of five years' fees. The LORD CHANCELLOR supported the Bill which was read a second time.

MONDAY.—Lord CLYDE took the oaths and his seat.—*The Papal States.*—The Marquis of NORMANBY moved for copies or extracts from the despatches of her Majesty's Minister in Tuscany in 1855, 1856, and 1857, referring to the condition and administration of the Roman States in order to complete the information already produced as to his own conduct and that of Mr. Lyons in their communication with the Papal Government.—Lord WODEHOUSE offered no objection, and the motion was agreed to.—Lord ST. LEONARDS called attention to the state of the law respecting the *Duchy of Cornwall*, especially as regards Crown debts.—The LORD CHANCELLOR said that he should have no objection to any alteration in the law which could be shown to be conducive to the public interest.—Lord BROUGHAM, in moving for certain returns connected with the *County Courts*, remarked upon the enormous amount of business there transacted, and suggested the policy of transferring the county court judges, as vacancies occurred, to the superior courts. The returns were ordered. The *Prisons (Scotland) Bill*, the *Titles to Land (Scotland) Bill*, the *Municipal Corporations (Ireland) Act Amendment Bill*, the *Party Emblems (Ireland) Bill*, and the *County Coroners Bill* passed through committee. The *Highways (South Wales) Bill*, the *Manchester Cathedral Church Bill*, the *Felony and Misdemeanour Bill*, the *Postage (Army and Navy) Bill*, the *Medical Act Amendment Bill*, and the *Highway Rates Act Continuance Bill* were read a third time and passed.—Lord DENMAN, on the order of the day for the second reading of the *Stipendiary Magistrates Bill*, asked the House to consider it of sufficient urgency to suspend the standing order prohibiting Bills after the 17th July from being read a second time.—Lord REDESDALE, Earl POWIS, and Lord STANLEY OF ALDERLEY, opposed the motion, not thinking the Bill of sufficient urgency. The order was discharged.

TUESDAY.—The *Militia Bill*, the *Metropolis Police Force Bill*, the *Bank of Ireland (No. 2) Bill*, the *Common Law Procedure (Ireland) Act Amendment Bill*, the *Railway (Ireland) Act (1851) Amendment Bill*, the *Game Certificate Bill*, and the *Municipal Corporation Bill* passed through committee. The *Militia Ballot Bill* was read a second time. On the order of the day for going into committee on the *Local Government Act Amendment Bill*, the Earl of DERBY objected to a clause injuriously affecting mining interests; and in committee on the Bill Lord STANLEY OF ALDERLEY moved its omission, but on a division the clause was carried by 42 to 24. The Bill then passed through committee. The *Felony and Misdemeanour Bill*, the *Herring Fisheries (Scotland) Bill*, the *Titles of Land (Scotland) Act Amendment Bill*, and the *Party Emblems (Ireland) Bill* were read a third time and passed. On the motion for the third reading of the *New Zealand Bill*, Lord LYTTELTON opposed the measure as contrary to the opinion and motives of the Colonial Legislature. After a short discussion the Bill was read a third time and passed.

THURSDAY.—The *Mines Regulation and Inspection Bill*, after a short discussion on some amendments proposed by Lord KINNAIRD, was read a third time and passed. On the motion for going into committee on the *Tenure of Land Improvement (Ireland) Bill*, Lord DUNGANNON moved that the Bill be referred to a select committee. The motion was negatived by 34 to 30, and the Bill, after a very long debate on its various clauses, passed through committee. Several other Bills were advanced a stage.

FRIDAY.—*The Slave Trade.*—Lord BROUGHAM presented a petition from the Anti-Slavery Society complaining that Spain had not performed her treaty obligations with reference to the slave trade. *Private Business of the House of Commons.*—Lord BROUGHAM moved that the report of the House of Commons Committee on private bills should be reprinted. He commented on the system on which business was now carried on in the House of Commons, and on the bad practice of allowing the motion for adjournment to be the signal for a desultory discussion of all kinds of topics. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Spanish Tariff.*—In reply to Mr. LYALL, Lord J. RUSSELL said that in consequence of the advantages granted to Spain by the recent alterations of our tariff he had called upon the Spanish Government to re-consider its tariff, but as yet had received no intimation of their intention to do so. *Naples and Sicily.*—Lord JOHN RUSSELL corrected a statement made by him on the previous evening respecting the demand of Naples on France and England. The Neapolitan envoy had written to him that morning, stating that his request was to the effect that France and England should use their pressure upon Garibaldi for the purpose of obtaining a real truce with a view to the conclusion of peace, but he had not requested any direct interference in the affairs of Sicily.—Mr. LINDSAY asked what steps had been taken to carry out the unanimous resolution of the House in regard to a *Maritime Treaty with France*.—Lord JOHN RUSSELL said her Majesty's Government had appointed a commission on the subject, but in consequence of the late treaty, and the dread of the introduction of British manufactures great excitement had been produced in French commercial circles, and Lord Cowley found so general an indisposition to alter the present state of things, that he had not pressed the matter on the attention of the French Government. *Harbours of Refuge.*—In answer to Mr. LINDSAY Mr. GIBSON said that the Government would introduce a Bill early next session, relating to harbours of refuge. *Cruelties in American Ships.*—In answer to Mr. MILNES, Sir G. LEWIS said that her Majesty's Government had entered into negotiations with the American Minister on the subject of the crimes committed in American ships, and had prepared the draft of a convention, which they had submitted to Mr. Dallas, but no reply had yet been received from the American Government. *Suspicious Foreigners.*—Mr. BENTINCK called attention to the necessity, in the present state of Europe, for conferring on the Government more stringent powers for dealing with foreigners of suspicious character resident in this country. He pointed out the dangers to be apprehended from the thousands of foreigners now in London—most of them men of the worst description—in the event of hostilities breaking out with the continent of Europe, or of an invasion being attempted, as seemed to be expected from the recent measures of the Government.—Sir G. LEWIS said that it was a mistake to suppose, from any recent act of the Government, that they apprehended invasion. Should war break out, it would then be the time to demand an alien act. The foreigners residing in this country were not generally men of a dangerous class, and certainly were not likely to sympathise with the existing continental Governments.—Mr. HUBBARD called attention to the impolicy of raising money by loan repayable in *Terminable Annuities*. Reverting to previous occasions when loans were wanted, in 1855 and 1856, he contended that when the money was borrowed by the medium of Consols or Exchequer Bonds, the price paid by the country was consider-

ably less than if an equivalent sum had been raised by Terminable Annuities.—The CHANCELLOR of the EXCHEQUER declined to anticipate the discussion which would take place on Monday, and said that Mr. Hubbard had undervalued the cost of borrowing on Consols. *Public Business.*—Mr. HORSMAN called attention to the state of public business, especially with regard to Indian legislation. Much of the financial business of the session remained to be got through. Many important supply votes had to be proposed and discussed, and when supply was finished, 10 days must still elapse before the prorogation. It would be rash to prophesy on what day they might hope to be dismissed for the recess. Besides this mass of business, there were no fewer than 40 Bills still before Parliament; and he enjoined on the Government the propriety of at once withdrawing all those measures which were not absolutely necessary, seeing that it was impossible to give them due consideration and discussion this year. More especially he enlarged upon the expediency of postponing all the measures relating to legislation for India.—Sir C. WOOD explained that of the several Bills relating to India now before Parliament all but one related to trifling but beneficial improvements in details, and required little discussion. The only important measure was the Indian Army Bill, which there was ample opportunity to debate and pass if the House only improved the time still at its disposal.—Mr. T. BARING objected to legislate for India at so late a period of the session.—Lord PALMERSTON said that if the discussion on the Indian Army Bill were not completed that evening he should propose to proceed with it on Monday, postponing for that purpose the question of the national defences.—Mr. DISRAELI contended that the present block of business had arisen from the fault of the Government, who had monopolised the earlier months of the session with Bills which they had since abandoned.—Mr. H. D. SEYMOUR rose to continue the debate, but the SPEAKER interposed, observing that the real question before the House was the motion for adjournment till Monday, from which the discussion had latterly widely diverged. On this appeal the debate was allowed to terminate, and the motion for adjourning to Monday was agreed to. The discussion on the *Indian Army Bill* was resumed by Mr. ROEBUCK, who dilated on the importance of a measure which so materially affected the destinies of 200 millions of human beings. Expressing, and defending, his preference for the old system of the local army, he opposed the Bill chiefly on the ground that it was introduced at too late a period of the session for its due consideration.—Lord JOHN RUSSELL thought that if the House were adverse to the plan of the Government, and was determined to have a local force in India, the proper course would be to reject the Bill of the Government and to bring in a local measure, so that the army in India and the civil authorities might know what Parliament meant and what were its intentions as to the future. He looked upon the proposition of Sir James Elphinstone, that it be an instruction to the committee to make provision for the future regulation, discipline, and patronage of the European forces in India as quite impracticable, and he should oppose it.—Mr. M. MILNES thought that as no one had called for the measure it must be quite unnecessary.—Colonel DICKSON warmly supported the project for amalgamating the two armies.—Sir J. ELPHINSTONE'S instruction was then negatived without a division.—Mr. MILNES next moved that it be an instruction to the committee that all appointments to military command in India and all staff appointments be vested in the Governor-General in Council and other constituted authorities in India.—On the motion of Mr. DANBY SEYMOUR the debate was again adjourned until Monday. The *Superannuation Act* (1859) *Amendment Bill* and the *Admiralty Jurisdiction (India) Bill* passed through committee. The *Clearance Inwards and Lien of Freight Bill*, the *Census (Scotland) Bill*, and the *Corrupt Practices Prevention Act Amendment Bill* were read a third time and passed.—The *Endowed Charities Bill* sent down from the Lords, after some opposition from Mr. KNIGHT was read a second time, and committed *pro formâ*.

MONDAY.—*Affairs of Syria.*—In reply to Mr. B. OSBORNE and Sir C. NAPIER, Lord J. RUSSELL said that Lord Dufferin had been appointed to represent this country as her Majesty's commissioner in Syria for the settlement of the difficulties in that quarter. Lord Dufferin had already been in Syria, and was well acquainted with the people.—On the order of the day for resuming the debate on going into committee on the *European Forces (India) Bill*, Mr. HORSMAN moved the adjournment of the debate, for the purpose of urging the Premier to follow up his late alarming speech by putting the national defences in order without delay.—The SPEAKER interposed, and told him that he was out of order in thus discussing a matter totally foreign to the subject.—Lord PALMERSTON said he was as anxious as Mr. Horsman that the question of the national defences should be settled, and as soon as the important question of the Indian army was settled, no time would be lost in bringing forward that of the defences of the country.—The adjourned debate was then resumed by Mr. DANBY SEYMOUR, who supported the instruction of Mr. Milnes, to the effect that all military appointments in India be vested in the Governor-General in Council.—Colonel SYKES and Sir E. T. COLEBROOKE also supported the instruction.—Sir C. WOOD opposed it, on the ground that the Bill contemplated no change in regard to military patronage.—After some remarks from Mr. RICH, who urged the withdrawal of the various amendments that the House might at once proceed with the committee on the Bill, the motion was negatived without a division.—Sir J. FERGUSSON then moved as an amendment that it is inexpedient to proceed further until the whole plan of the Government for the regulation of the military force of India shall have been submitted to the consideration of Parliament.—Mr. T. BARING seconded the amendment, which was negatived on a division by 88 to 50.—Sir J. ELPHINSTONE then moved the adjournment of the House, condemning the course of the Government as dangerous and unconstitutional.—Sir E. COLEBROOKE seconded the motion.—Sir H. WILLOUGHBY supported it, and opposed the Bill as unsettling everything and settling nothing.—Lord PALMERSTON hoped that the motion would be withdrawn. He put it to the House whether they were not striking at the root of constitutional government, when the decision of the majority was not allowed to prevail? In countries not accustomed to constitutions, minorities used force. The present minority acted upon a similar principle, though differently carried out. He appealed to the country as to the propriety of this course, and declared that he should resist, as long as health and strength permitted, what he must call a factious opposition.—Sir J. ELPHINSTONE immediately withdrew his motion.—Mr. MALINS, disclaiming all factious opposition, objected on constitutional grounds to the measure, because it had been introduced by the Minister without taking the advice of his council, and against their unanimous opinion.—Lord C. HAMILTON, Colonel SYKES, Colonel DUNNE, and Major PARKER opposed the Bill.—Mr. VANSITTART, and Colonel HERBERT supported it. The House then went into committee on the Bill.—Mr HENLEY moved the following proviso:—That the provision made for the sons of persons who have served in India, and the advantages as to pay, pensions, allowances, privileges, promotions, and otherwise, secured to the military force of the East India Company by existing acts, shall continue and be maintained in any plan for the reorganization of the Indian army.—Sir C. WOOD said that all the pledges given to any class of persons on account of the Indian army would be faithfully kept, and as the proviso placed that determination on record, he assented to its introduction. The proviso was then agreed to, and the Bill, which consisted of one clause only, passed through committee. *Public Business.*—On the question that the Chairman leave the chair, a discussion arose on the order of public business, in the course of which Mr. HORSMAN complained that the discussion that evening had been more than once restricted by the manner in which the SPEAKER had put questions from the Chair.—Sir G. GREY said that it was improper, if not irregular, to impugn the conduct of the SPEAKER while the Chairman was in the chair, and the Chairman observed that it was not regular to discuss any question but the one which he had put, that he do leave the chair. This question was ultimately agreed to. The *Senior Member of Council (India) Bill*, the *Superannuation Act* (1859) *Amendment Bill*, and the *Admiralty Jurisdiction (India) Bill* were read a third time and passed. In committee of the whole House a resolution was agreed to respecting the transfer of *East India Stock*. On the report upon the *Ecclesiastical Commission, &c., Bill*, as amended, various amendments were discussed and disposed of. On the order for the third reading of the *Poor Relief, &c., (Ireland) Bill*, Mr. OSBORNE complained of certain strictures having been published in the newspapers by Mr. Senior on a statement made by him in the House on a preceding night, without any previous communication with him.—Mr. NEWDEGATE moved that the Bill be recommitted.—Mr. CARDWELL said he could not justify the terms of Mr. Senior's letter. He opposed the recommitment of the Bill. The amendment was negatived by 100 to 8, and the Bill was read a third time and passed.

TUESDAY.—*The Paper Duties.*—The CHANCELLOR of the EXCHEQUER stated his intention to move on Monday two resolutions,—one relating to the importation of paper from France, under the treaty obligation, the other affirming the same duties in relation to the importation of paper from other parts. On the order for going into Committee upon the *Savings Banks and Friendly Societies' Investments Bill*, the CHANCELLOR of the EXCHEQUER said it was not his intention to proceed with the main substance of the Bill, but simply to amend the 4th clause so as to empower the Commissioners to hold all stocks and securities under Parliamentary guarantee, constituting the national debt under whatever name. The House then went into Committee on the Bill, when the 4th clause as amended and the 17th clause were agreed to. The House then went into Committee on the *Refreshment-houses and Wine Licences (Ireland) Bill*, and made some progress with the clauses. *The Emperor's Letter.*—In answer to Mr. B. COCHRANE, Lord JOHN RUSSELL said that a private letter from the Emperor of the French had been shown to him by the French Ambassador containing assurances of the most friendly description with reference to this country. He had been permitted to submit it to his colleagues in the Cabinet, but as it was a private communication, he could not lay it upon the table of the House. The amendments of the *European Forces (India) Bill*, were considered and agreed to.—Mr. BUXTON withdrew his motion with reference to the encouragement of the *Slave Trade by Spain*. *Irish Volunteers.*—Colonel FRENCH moved for leave to bring in a Bill to extend to Ireland all powers to make rules and regulations for the enrolment and organisation of Volunteer Corps, which are now by law applicable to Great Britain. He expressed his surprise that the Government, which had just invited the House by most alarming statements to vote an enormous sum for national defences, should refuse to the Irish people the means of protecting their lives and property from foreign invasion.—Sir D. L. EVANS seconded the motion.—Mr. CARDWELL, without distrusting the loyalty of the people of Ireland, or their readiness to resist any attempt at invasion, said that considerations of great importance, in connection with the internal state of some parts of Ireland, led the Government to the conclusion that it was not judicious or expedient to agree to the motion.—Mr. MAGUIRE denounced the policy of the Government in not trusting the people of Ireland. This distrust confirmed the disaffection which existed in a large mass of them, who, armed or unarmed, would not meet invaders as foes.—Lord PALMERSTON said that Mr. Maguire had not held out great encouragement to the Government to depart from their intention, and to accept the proposal to place arms in the hands of the people of Ireland. On the part of the people of Ireland, however, he denied the aspersion which Mr. Maguire had cast upon his countrymen. Ireland could not be said to be without means of defence with 60,000 trained men. After some further discussion the motion was negatived on a division by 86 to 30. *Business of the House.*—Mr. EWART moved a series of resolutions for the better regulation of the business of the House. On the first resolution being put to the effect that the discussion on the principle of a Bill be confined to the time of its introduction and second or third reading, Sir G. LEWIS said it would be difficult to lay down an inflexible rule to govern their proceedings; but the subject might with advantage be referred to a select committee. In the meantime it was hardly worth while to discuss the subject. Mr. EWART ultimately withdrew his motion.—Mr. HENNESSY was moving for a return relating to the attendance, salaries, &c., of *Clerks in the Public Offices*, when the House was counted out at half-past 8 o'clock

WEDNESDAY.—The *Attorneys, Solicitors, and Certificated Conveyancers Bill*, the *Augmentation of Small Benefices (Ireland) Bill*, the *Infants' Marriage Act Amendment Bill*, and the *East India Stock Transfer Bill* passed through Committee. On the order for going into committee on the *Metropolis Local Government Act Amendment Bill*, Mr. BRADY moved as an amendment, that the Bill be committed that day six months. The amendment was negatived on a division by 71 to 13. The House then went into committee and agreed to the clauses of the Bill. Some additional clauses, proposed by private members, were rejected.—The Lords, Amendments to the *Nuisances Removal and Diseases Prevention Bill* were considered and agreed to.—The *Votes for Disqualified Candidates Bill* was withdrawn.

THURSDAY.—*National Defences.*—The House went into committee and resumed the debate on Fortifications and Works, when Mr. LINDSAY moved, as an amendment to the proposed resolution, "That, as the main defence of Great Britain against aggression depends on an efficient navy, it is not now expedient to enter into a large expenditure on permanent land fortifications." He warned the House that the proposed works would involve the country in an expense of little less than 60 millions, and ridiculed the notion of an invasion from France. We had a powerful navy; we had a volunteer force, in addition to our army, of 130,000 men, which could be augmented to 1,000,000; and if the French should succeed (which he doubted) in throwing 100,000 men upon our shores, not one of those 100,000 men would ever return to their native country.—Mr. H. BERKELEY, in seconding this amendment, said that with Lycurgus, he preferred walls of men to walls of stone and thought that instead of skulking behind fortifications, we should rely on our wooden walls.—Mr. S. HERBERT acknowledged that our navy was our first and great line of defence; but its effect had been seriously impaired by steam. Adverting to the anxiety expressed in the letter of the Emperor of the French for peace, he said that no nation would attack France, and England was least inclined of all. The Emperor was strengthening the fortifications at Cherbourg, L'Orient, Rochfort, and Brest, and he had no ground to complain of us for protecting our dockyards and arsenals, which were in a far weaker condition. If any country, when once the sea line was broken through, depended upon fortifications, it was England and the public opinion was that we were not in that fit state of defence in which so rich a nation ought to be.—Mr. BRIGHT said the House would deceive itself if it supposed that the estimate of the Government as to the cost of these works could be relied upon. Whenever the Government undertook any work the estimate was never adhered to; the expenditure was doubled before the work was completed, and he had no doubt that, if the House voted for the carrying out of these works to completion, the expenditure would be at least 20,000,000*l*. Millions more would be involved; there must be an increase of the standing army, and the works would be useless without men to man them. He wanted to know by whom this expenditure was urged; was it by a united Cabinet? He believed that if the follies and superstitions of the Foreign Office could be got rid of, we might save three-fourths of our military expenditure, and that whatever was necessary for internal defence might be had at little expense by our volunteers. After a review of the opinions and suggestions of the military authorities upon this question, he asked the Committee whether there was any other thing they would consent to undertake upon such counsel, than which nothing, he declared, could be more confused. He proceeded to argue that the representations as to the naval augmentations and coast fortifications in France were gross exaggerations; but they acted, he said, upon the people, and if the people believed them he charged this to the contemptible cowardice of the Cabinet Ministers of this country. He arraigned in severe terms the policy of the present Administration towards France, characterizing it as grossly inconsistent, and in one particular insulting at once to the people of England and of France. The Emperor of the French had made efforts to meet the wishes of the English Government, and we should act as if we thought him sincere and amicable towards this country. But the speech of Lord Palmerston the other night in bringing forward this resolution was calculated to encourage the panic in England, and to create excitement and distrust in France. France might be our enemy (he did not believe she was), but he could point out an enemy at home in the insane and wicked policy by which this enormous amount of taxation was abstracted from the labour of the people. With all his heart he opposed the resolution.—Mr. NEWDEGATE, Lord R. MONTAGU, Mr. CORRY, and Mr. HORSMAN supported the original resolution; Sir F. GOLDSMID, Mr. WHITE, Sir C. NAPIER, Mr. B. OSBORNE, Sir. F. SMITH, and Sir M. PETO opposed it.—Lord PALMERSTON reminded the committee that the object of the Government was not, as pretended, to line the coast with defences and fortify London, but to protect our dockyards and certain other important points essential to the maintenance of our first line of defence. He had never, he said, varied his opinion that it was necessary to defend those vulnerable points, and he denied that the report of the Commission implied any distrust of a power with which we had concluded a Commercial Treaty. This Commission was appointed more than twelve months ago, before the treaty was thought of. He trusted that the peaceful relations between this country and France would continue for a long time; but he was convinced that the only security was to be strong enough to defend ourselves, and those who were so were the most likely to remain at peace with the world. On a division the amendment was negatived by 268 to 39. On the original resolution being put, Mr. MONSELL moved as an amendment to add to the resolution, "That, in the absence of artillery and engineering information, it is not expedient to incur any extraordinary expenditure in constructing permanent works at Portsdown Hill.—Mr. S. HERBERT could not assent to the amendment, and after a short discussion, extending to the whole scheme, the committee again divided, when the amendment was negatived by 165 to 37.—After some further remarks by Mr. BRIGHT, Sir H. WILLOUGHBY, and Lord PALMERSTON, the resolution was ultimately agreed to, and ordered to be reported.

FRIDAY.—*The Irish Poor Law Commissioners.*—The O'DONOGHUE called attention to the dismissal of the Rev. Mr. Fox from the office of Catholic chaplain to the South Dublin Union by the Irish Poor Law Commissioners, and Lord FERMOY moved that the conduct of the Commissioners relative to the dismissal of Mr. Fox, and the occurrences which gave occasion to it, are not calculated to promote confidence in the administration of the Poor Law or the proper exercise of the powers of the Commissioners. On a division the motion was negatived by 86 to 49. The house went into committee of supply on the *Civil Service estimates*, when the vote of 39,597*l*. for works on the new houses of Parliament, was agreed to. The *Savings Banks and Friendly Societies Investments Bill*, the *East India Stock Transfer Bill*, and the *Landlord and Tenant (Ireland) Bill*, were read a third time and passed. [Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93⅜ to ½ for Money, and 93½ for the 9th inst.; Bank Stock, 230; Three per Cents. Reduced, 93⅜ to 93¾; New Three per Cents., 94 to 93⅝; New Two and a Half per Cents., 77¼; Thirty Years' Annuities, expiring in January, 1880, 13½; Ditto in April, 1885, 16⅞; India Stock, 217; Ditto Five per Cent. Stock, 1859, 101½; Ditto Four per Cent. Debentures, 1858, 97½; Five per Cent. Enfaced Rupee Paper, 97½; Exchequer Bills, 3*s*. pm.—FOREIGN: Brazilian Four and a Half per Cents, 1860, 88 to 87¾; Mexican Three per Cents., for Acct., 21⅛ to ¼; Peruvian Three per Cents., 73⅛; Russian Four and a Half per Cents., 1860 (scrip), 1 to ⅛ prem.; Sardinian Five per Cents., for Acct., 83¾; Spanish Three per Cents., for Acct., 48½; Ditto New Deferred Three per Cents., for Acct., 39⅞ to 40.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,496,420	Government Debt	£11,015,100
		Other Securities	3,469,900
		Gold Coin and Bullion ..	15,021,420
		Silver Bullion	—
	£29,496,420		£29,496,420

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weigh Annuity)	£9,758,795
Rest	3,422,213	Other Securities	19,712,700
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	4,234,969	Notes	7,426,610
Other Deposits	14,717,654	Gold and Silver Coin ..	737,460
Seven day and other bills	707 729		
	£37,635,565		£37,635,565

2d day of August, 1860. M. MARSHALL, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—I. J. BARRETT, Liverpool, Hotel Keeper—W. BOUND, sen., Poole, and Corfe Mullen, Dorsetshire, Farmer, Corn, Seed, and Coal Merchant—J. BUSHELL and A. WALKER, Wood Street, City, and Harpenden, Hertfordshire, Straw Hat Manufacturers—E. R. DAUNT and J. WILSON, Old Broad Street, City, Bill Brokers—S. N. HAYNES, Leek, Staffordshire, Grocer—R. HEAFFORD, Loughborough, Leicestershire, Auctioneer and Comfactor—A. HOLME, late of Old Swan Lane, Upper Thames Street, Shipowner—C. W. HOOPER and H. PARKINSON, Seething Lane, City, Leather Merchants—W. IBBITSON and J. IBBITSON, Yeadon, Yorkshire, Woollen Cloth Manufacturers—J. M'MASTER and S. HAINES,

Abergavenny, Monmouthshire, Drapers and Tea Dealers—T. R. Mitchell, Liverpool, Apothecary—P. H. Payne, Euston Road, formerly of Bush Lane, Cannon Street, Leather Merchant—W. O. Pearson, Gravesend, late of Gresham Street, City, Silk Agent—B. Richards, J. Richards, and T. Richards, West Bromwich, Staffordshire, Ironmasters—I. Shaw, Macclesfield, Cheshire, Joiner and Builder—J. H. Smith, Wyld's Rents, Bermondsey, Tanner—E. Wetherston, Cheltenham, Gloucestershire, Plumber.

BANKRUPTCY ANNULLED—T. Toynbee, Southwick Street, Hyde Park, Hotel Keeper.

SCOTCH SEQUESTRATIONS—W. Ancrum, Edinburgh—D. Leach, Lochgilphead, Merchant—J. Miller, Edinburgh, Merchant—J. A. Smith, Edinburgh, Baker.

FRIDAY—BANKRUPTS—F. Appleyard, Bradford, Tanner—E. Hayman, South Molton Street, Grosvenor Square, Middlesex, Fruiterer—E. Jones, Marlborough, Horse Dealer—J. E. Pillinger, Tredegar, Monmouthshire, Draper—J. D. Wingrave and T. W. Wood, St. Alban's, Herts, Straw Plait Manufacturerers.

BANKRUPTCIES ANNULLED—J. Bamford, Stainland, Yorkshire, Grocer—J. G. Sheppard, Towcester, Brewer.

Metropolis and its Vicinity.

Lord Clyde at Fishmongers' Hall.—The Fishmongers' Company celebrated on Wednesday the return of Lord Clyde to England by a magnificent banquet in their great hall at London Bridge. In acknowledging the toast of his health Lord Clyde spoke as follows:—

"Being totally unaccustomed to the making of speeches, I trust you will pardon me for any omission or any deficiency that may occur on my part. It appears to me that entertainments like the present form an important part of the reward which public servants receive from their fellow countrymen when they return from their services abroad. They are proud of such distinctions, and no one more proud of them than myself. I have received many honours, conferred in the most gracious manner by her Majesty, honours which were far beyond my merits, and far beyond anything which I ever dreamt of receiving. The kind reception I have met with today from my countrymen in this hall—men holding a high position in the metropolis—convinces me that they do not think me altogether unworthy of the honours which her Majesty has bestowed. You speak of soldiers, Mr. Prime Warden. I have been 50 years a soldier, and I can tell you that the men of England, Ireland, and Scotland have not deteriorated; I say it boldly, that they are as obedient soldiers, when properly officered, as ever served in the British army. The Prime Warden has been pleased to pay me some handsome compliments respecting the late war in India, but I must say that to one man above all does England owe a great debt of gratitude, and that man is the present Governor-General. Lord Canning throughout the whole trying period of the war was brave, cool, and self-possessed, exhibiting all the qualities of a great administrator. I had the honour of maintaining intimate relations with his lordship during the whole of the three years I remained in India, and I believe that it was the support which his firmness of character gave me that enabled me to fulfil the expectations which my countrymen had entertained of my mission. Therefore, whilst receiving with gratitude the compliment which is now paid me, I think it only right that Englishmen should know the merits of the great, and I may say gifted, man, whose prudence and calmness in difficulty, whose never-disturbed self-possession, exercised so powerful an influence on the suppression of the mutiny."

Embankment of the Thames.—Sir J. Paxton's select committee on the Thames Embankment have presented their report, which was ordered to be printed by the House of Commons on Friday night. It states that the committee have carefully considered the several plans which have been brought before them, and have received much valuable evidence on the subject. In connexion with the matters referred to them they have considered it necessary to inquire into the mode proposed for constructing the low level sewer about to be made by the Metropolitan Board of Works, and have found that if that sewer were carried under the Strand and Fleet Street it would cause an amount of injury to the trade and traffic of the district, which it is scarcely possible to estimate. The importance of providing for the construction of the low level sewer in connection with the embankment has been recognised by the engineers whose plans have been submitted to them; and provision has been made in all these plans for constructing the low level sewer along the foreshore of the river, and within the embankment. The committee have had many plans before them, out of which they have agreed to select the three presented by Messrs. Bazalgette, Bidder, and Fowler, civil engineers. All of these plans propose to carry the embankment from Westminster Bridge to Queenhithe on the west side of London Bridge, and that of Mr. Fowler comprises a railway and a roadway. They do not propose to interfere with the wharves, but on the contrary, to improve them by the construction of docks and other facilities within the embankment, which would be four feet above the level of high-water, and would be carried out from the bank so as to diminish the width of the river considerably in some places. The committee rejected the propositions to attempt to make it a public company, and recommend that as the legislature have already entrusted the main drainage of the metropolis to the Metropolitan Board of Works, and armed them with powers to deal with the foreshore of the river in connection therewith, the construction of the embankment should also be entrusted to them. They recommend that, in aid of the funds already voted for the sewer, the coal and wine duties, which are to expire in 1862, should be renewed for a limited time, and the proceeds be applied to the expenses of the embankment, the cost of which including sewers, &c., according to the highest estimate would be a million and a half. One fourth of this sum at least would be the cost of the sewer, which would however be much more if it ran under Fleet Street and the Strand. From the renewal of the 8*d.* and the 1*d.* coal tax, and the wine duty of ½*d.*, an annual sum of 180,000*l.* may be expected, and the committee recommend that the cost of the embankment should be a first charge upon these duties. The committee decline to apply for the application of the hackney coach duties to the purpose of the embankment, and do not take into account the rents of surplus lands, or the profits on the railway traffic. They suggest a mode by which the money may be raised without trenching on the general taxation of the country, and they recommend that a public guarantee should be given to secure it.

The New Ride in Kensington Gardens.—The joint committee of the parishes of Marylebone, Paddington, and Kensington, met at the Court House, Marylebone, on Friday, and unanimously resolved to petition the Queen, praying that the new horse ride be at once removed, and the gardens restored to their former state. At a meeting of the vestry of St. James's, Piccadilly, on Friday, on a motion for the appointment of a deputation to protest against the ride, the votes were equal, when the chairman gave the casting vote in favour of the resolution. On the other hand a body of gentlemen favourable to the ride have resolved themselves into a committee, and sit daily at 121, Regent Street, to receive signatures to a memorial requesting the Chief Commissioner to continue the ride. Upwards of 2000 signatures have already been attached to this memorial.

Wesleyan Conference.—The 117th annual Conference was held last week in the Old Chapel, City Road, and was attended by nearly 450 ministers. The Rev. William Wood Stamp, of Liverpool, was chosen President by 186 votes, and the Rev. John Farrar, Governor and Chaplain of the School at Woodhouse Grove, near Leeds, was re-elected Secretary by 288 votes.

Return of Mr. Spurgeon.—This popular preacher, who during the last two months has been on a tour through the Continent for the benefit of his health, returned home last week. During his travels he preached in the Cathedral at Geneva, and, contrary to the Baptist custom, ascended the pulpit in full canonicals. So great was the anxiety to hear him that some came as many as 200 miles for the purpose.

Murder of Four Persons at Walworth.—On Tuesday morning a frightful tragedy was committed at 16, Manor Place, Walworth, near the Surrey Gardens, a man called John Godfrey Youngman, who has recently been in service as a footman and valet, having murdered his mother, his two brothers aged 11 and 6, and Mary Walls Streeter, a young woman from Wadhurst, Sussex, to whom he was paying his addresses. The discovery of the murders was made by the landlord of the house in which the family resided. He was alarmed by hearing some one fall upon the first floor landing, and on proceeding up stairs was horrified at seeing three bodies lying on the floor, with their night clothes saturated with blood. He at once gave information to the police, who instantly proceeded to the house and found the dead bodies of two females and a little boy lying upon the landing in a pool of blood, and the footprints of a man who had been walking through the blood and about the house. In the first-floor front room they found the youngest boy dead upon a bed. Two medical men were promptly in attendance, and on examination they found that each of the murdered persons had received a stab in the breast, and that their heads had been nearly severed from their bodies, the vertebræ of the neck of the youngest boy being entirely cut through. The murderer made no effort at concealment. He was still in his night shirt, which was saturated with blood with one of the wristbands torn off. The officers found the wristband behind a chest and covered with blood, and a new dagger knife 10 inches in length, likewise covered with blood, with the point and one side of the handguard recently broken off, apparently by the force of a blow. On the prisoner being taken into custody, he said he had committed the murders in self-defence. His mother, he said, entered his bed-room, where he slept with his little brother, and with a knife cut the child's throat. The child awoke him by his cries, and while the boy ran to the landing his mother attempted to murder him (the prisoner). He, however, disarmed her, and in the struggle which ensued his wristband was torn off. The prisoner, who is about 25 years of age, and is of short stature, was taken before the magistrate in the course of the day, and remanded. The inquest was opened on Thursday, but the witnesses threw little light on the causes of the tragedy beyond what may be gathered from the evidence of the father, who admitted that the prisoner's mother was opposed to his marriage, and that he expected some money with the young woman. The inquest was ultimately adjourned to Monday.

The Public Health.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended on Saturday, July 28, were the same in number as those of the previous week—viz., 975. The average number in the corresponding weeks of the 10 years 1850-59, corrected for increase of population, is 1206; the present return is, therefore, 231 below the average. During the week the births of 917 boys and 868 girls (in all 1785 children) were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1534.

Provincial.

Frome.—Miss Constance Kent, who was remanded last week to Devizes Gaol, was brought before the magistrates at Road on Friday for re-examination. The nursemaid having described the circumstances under which deceased was missed, and the man who found the body in the water closet having deposed to the manner in which it was discovered, Miss Moody and Miss Hatherick, two young ladies who were at school with the accused at Beckington, stated that they had heard Miss Constance Kent express dislike towards the children of Mr. Kent and his present wife, owing to the partiality shown them by their parents; and that she had also complained that Mrs. Kent would not let her have the coloured dress she liked, but bought the very opposite to that she selected. Mr. Parsons, a surgeon, described the wounds on the throat and body of deceased, and said that he had examined the bedgown of the prisoner, but found no marks of blood upon it. The housemaid deposed to fastening the drawing-room windows and to finding one of them open the following morning, though it did not appear that any one had entered the house; she also spoke to collecting the dirty linen the Monday after the murder, when she received a bedgown from Miss Constance which she placed in the clothes-basket. Shortly after the prisoner asked her to get a glass of water, which she fetched and gave to her upon the landing, close to the room where the clothes were deposited. The washerwoman stated that she removed the clothes from the house the same day, and when she got home she found that a bedgown belonging to Miss Constance was missing. There were three entered in the book, and only two could be found. This was the last witness examined. Mr. Edlin, barrister, then made a most powerful appeal to the bench on behalf of the prisoner, contending that there was not a tittle of evidence against her. The magistrates, after a private consultation, discharged the prisoner on her father entering into 200*l.* recognizances to produce her, if required. The feeling in favour of Miss Kent in the neighbourhood is extremely strong, and the local papers are almost unanimous in their opinion of her innocence, while the hostility manifested against the father is equally strong. Mrs. Kent, the mother of the murdered child, was confined on Saturday morning, the day after her step-daughter was liberated. In consequence of the gossip circulated respecting the character and demeanour of Constance Kent at school, Captain Meredith and Superintendent Woolf last week visited the school at Beckington, and interrogated Miss Williams, the principal, on the subject. Both Miss Williams and her assistant, Miss Scott, spoke in the highest terms of Constance, saying that she was a well-conducted pupil in every respect while in that establishment; and so assiduous in her studies that she became a successful competitor at the half-yearly examination, and carried off the second prize. It appears also that the rumour which has been so industriously circulated, that the deceased child had a strong antipathy to Miss Constance, is entirely untrue. The child was on most affectionate terms with her, and on the evening before the murder, in the course of a childish romp with Constance, he gave her a little bead ring, he himself had made for her.

Leicester.—A communication has been received by the high sheriff of Leicestershire, from the Home Office, stating that the execution of Hannah Holmes, who was convicted at the recent assizes of the Wilful Murder of her master, at Seagrave, has been respited during her Majesty's pleasure.

Nottingham.—The execution of John Fenton for the murder of Charles Spencer, at Walkeringham, took place on Wednesday morning in front of the county gaol in the presence of a vast number of men, women, and boys, many of whom had taken up their position in front of the scaffold early on the previous night. The culprit made no direct confession of his guilt; but admitted that he knew the murderer and had promised not to divulge his name. It was evident, however, from his manner and conversation that he was the guilty man. He scarcely seemed to live half a minute after the drop fell.

Ireland.

The French Emperor and the Irish Press.—The following letter appears in the *Tipperary Examiner*, the editor of which has repeatedly declared his dissent from the charges of enmity to the Pope which were made against the Emperor by many of the Irish Catholic journals:—

"The Emperor's Cabinet, St. Cloud, July 6.

"Sir,—When in a country the press passionately persists in forgetting itself in order to calumniate and misrepresent the intentions of a Foreign Sovereign, nothing can be more pleasing, or even more consoling, than to see a clever and disinterested writer rise up spontaneously to defend him. You, sir, have been that writer; you have had the singular merit, in resisting the general overwhelming impulse, to oppose a conscientious judgment to false interpretation, and a calm voice to the clamours of malevolence; thus success has gradually crowned your efforts, and, if the error be not totally destroyed, it is at least already much enfeebled, so much power does truth bestow on him whom she animates with her inspiration. I have, then, with real satisfaction, submitted various articles published in your esteemed journal to the Emperor, and his Majesty entertains for them the sense of gratitude the sincere expression of which he charges me to address to you. Accept, sir, the assurance [of my most distinguished consideration.—The Emperor's Secretary, Chief of the Cabinet,

"Mocquard."

The Galway Postal Subsidy.—A meeting of the citizens of Dublin in favour of retaining the subsidy granted by the Government was held on Tuesday at the Mansion House, and was well attended. The Earl of Clancarty, Lord Gough, the Hon. G. Handcock, Mr. Pim, Mr. O'Reilly Dease, Mr. P. O'Brien, M.P., Mr. Morris, High Sheriff of Galway, Alderman Roe, and Alderman Reynolds were among the speakers. Reso-

lutions were adopted expressing the just claim of Ireland to have a packet station, and the breach of good faith and sound policy it would be for the present Government to withdraw the grant, which had been conceded upon national grounds by the Government of Lord Derby, to whom the meeting acknowledged the obligations which Ireland owed for so important a concession. Similar meetings have been held at Limerick and Galway.

The Irish Brigade.—Letters from Paris state that troops of Irish continue to arrive in that city from Rome in the most destitute state.

The Peace Preservation Act.—A letter from Armagh states that not a gun, pistol, boyonet, or any other weapon has yet been delivered to the police, although the 4th August was the last day allowed by the proclamation for that purpose. It is said that, in case there are no deliveries, additional police will be sent to the county, and a search made. The two men, M'Cann and Murphy, who were so seriously wounded at Lurgan are still alive, but no hopes are entertained of their recovery.

The Irish Constabulary.—Lieut.-Colonel Roberts, who has been nearly 21 years connected with the Irish constabulary, is about to retire on his pension. The salary of the office is 1000*l.* a year.

The Dungannon Tragedy.—The trial of Holden, the soldier charged with the murder of Sergeant M'Cleland at Dungannon, his intention being to kill Mr. Mathew, the inspector of his corps, has terminated in a verdict of Guilty, accompanied by a recommendation to mercy on account of the good character he had previously borne in the regiment. The judge passed sentence of *Death*, and sentenced him to be hanged on the 27th August. The prisoner was perfectly cool throughout the trial, and requested as a last favour that he might be shot, instead of dying by the rope.

Railways.

Accident on the Blackwall.—On Tuesday morning as the North London train due at Fenchurch Street at 9.25 was passing the Haydon Square junction of the Blackwall, the engine ran off the line, and, after traversing about 20 yards rolled over on its side. Two composite carriages which were next the engine instantly rose upon it, and the remainder were thrown off the line. There were between 300 and 400 passengers in the train. The engine driver and stoker sprang off the engine as it fell over, and escaped unhurt, and the passengers of the two carriages which had mounted on the top of the engine sustained no injury with the exception of being bruised.

Obituary.

General the Hon. Sir Henry Murray, K.C.B., Colonel of the 14th Light Dragoons, died on Sunday last at his residence at Wimbledon. He was one of the few surviving Waterloo officers, and had been 60 years in the army, his commission as Cornet dating as far back as May, 1800. In 1806–7 he served in Naples, Sicily, and Calabria, and in the latter year accompanied the expedition to Egypt as aide-de-camp, and was present at the attack on Alexandria, siege and storming of Rosetta, and on every other occasion where our troops were engaged. He was also in the Walcheren expedition in 1809, and was at the siege and surrender of Flushing. In 1813 he went, as Lieut.-Colonel of the 18th Hussars, to the Peninsula, and was present at the crossing of the Eslar and the action of Morales de Toro. He also commanded that regiment in the campaign of 1815. He commanded the rear regiment of the column in the retreat on the day after the battle of Quatre Bras, and at Waterloo took part in the brilliant charge of his brigade at the conclusion of the action. For his services at Waterloo he was made a Companion of the Bath, and in May last was made a Knight Commander of the order. In 1853 he was appointed Colonel of the 14th Light Dragoons. He was a commissioner of the Royal Military College and of the Royal Military Asylum, and had held for the usual term the military command of the western district. He was the youngest son of the second Earl of Mansfield, and was born in 1784.

Mr. Hammill, the Police Magistrate who was appointed one of the magistrates of Marylebone Police Court in January last on the retirement of Mr Long, died suddenly on Monday evening. He complained of a pain in his side when he arrived at the Court on Monday morning, and after disposing of several night charges he was unable to proceed, and returned home. He immediately went to bed, and on the arrival of his medical attendants they found that he was dead. It is supposed that death was caused by apoplexy or disease of the heart.

BIRTHS.—On the 25th ult, at Burley, near Leeds, the wife of the Hon. Mrs. Beckett Denison, of a daughter—4th, Rutland Gate, the Hon. Mrs. Charles Lindsay, of a son—26th ult, at 2, Chappel Street, Grosvenor Square, the Hon. Mrs. Seymour Dawson Damer, of a daughter—29th ult, at 26, Wilton Crescent, Mrs. Baillie Cochrane, of a son and heir.

MARRIAGES.—On the 31st ult, by special license, at Shortflatt Tower, the Right Hon. Lord Decies, to Catherine Anne, second daughter of Wm. Dent Dent, Esq., of Shortflatt Tower, Northumberland—25th ult, at St. James's, Croydon, by his Grace the Archbishop of Canterbury, St George Tucker, Esq., Bengal Civil Service, to Frances Margaret, only daughter of Major-General Sir Frederick Abbott, C.B., Lieut.-Governor of the Royal Indian Military College, Addiscombe—25th ult, at Aghada, near Cloyne, the Rev. T Palling Little, incumbent of Oxenhall and Pauntley, Gloucestershire, second son of the late John Little, Esq., of Pitchcombe House, in that county, to Anne Esther Maria, second daughter of the late Lieut. General Sir Joseph Thackwell, G.C.B.—26th ult, at St. Paul's, Knightsbridge, Edmund Salisbury, third son of the late Lieut.-Colonel Feilkes, of Erviatt, Denbighshire, to Anne, youngest daughter of the late Sir Thomas Strange, formerly Chief Justice of Madras—24th ult, at St James's, Piccadilly, the Rev. Robert Braithwaite Batty, M.A., Fellow of Emmanuel College, Cambridge, elder son of the late Lieut.-Colonel Batty, of the Grenadier Guards, and grandson of the late Sir John Barrow, Bart., to Beatrice, eldest daughter of the Rev Henry Stebbing, D.D., rector of St. Mary's, Upper Thames Street—25th ult, at St. James's, Dover, William James Smith Neill, Esq., Royal Artillery, of Barnweil and Swinrige Muir, Ayrshire, eldest son of the late Brigadier General Neill, C.B., H.E.I.C.S., to Jessie Gideon, youngest daughter of George Leighton Wood, Esq, Bath.

DEATHS.—On the 31st ult, at the Marine Hotel, Worthing, Lord Burghersh, eldest son of the Earl and Countess of Westmorland, aged 1 year and 10 months—26th ult, at 29, Portland Place, the Rev. Leveson Vernon Harcourt, Chancellor of York, son of the late Edward Harcourt, Archbishop of York, aged 72—17th ult, at Anderton, near Devonport, Rear-Admiral William Frederick Lapidge, aged 67—28th ult, at 31, Lansdown Crescent, Cheltenham, Frances Maria, widow of the late Lieutenant-Colonel John Macdonald, of Summerlands, Exeter, and daughter of the late Sir Robert Chambers, formerly Chief Justice of Bengal, aged 85—25th ult, at his residence in George's Street, Dublin, the Ven. Wm. Wray Maunsell, Archdeacon of Limerick, and Precentor of Cork, aged 77—27th ult, at 110, King's Road, Brighton, Captain Edward Willoughby, of H.M.'s Bengal Artillery, from the effects of wounds received June 23, aged 29—30th ult., Frederick Augustus Carrington, Esq., F.A.S., of Lincoln's-Inn Fields, and Ogbourne St. George, Wilts, barrister, of the Oxford Circuit, Recorder of Wokingham, D.L. for Berks, and J.P. for Wilts, aged 58—27th ult., at Little Efford, Devon, Frances Goddard, wife of George W. Soltau, Esq., and youngest daughter of the late Rev. Thomas Culme, of Totehill, near Plymouth, aged 58—25th ult., at the Vicarage, Doncaster, the Rev. John Sharpe, D.D. for 43 years vicar of that place, and canon of York, aged 69—27th ult, at Cowes, the Rev. Maximilian Genesis, for 28 years Incumbent of Holy Trinity, West Cowes, aged 60—30th ult, at Medburn Lodge, Clapham Park, Harriott, wife of John Thwaites, Esq., chairman of the Metropolitan Board of Works.

Markets.

COVENT GARDEN, Aug. 4.

The supply of most things, both English and foreign, is now abundant. Pines, Peaches, and Nectarines are still plentiful, as are also Plums and Figs. Grapes are abundant, as are likewise Cherries. Strawberries, though getting past their best, still maintain fair prices. Cob Nuts are realising 1s. per pound. Gooseberries fetch 3d. a quart. Peas are abundant. New Potatoes range from 6s. to 8s. per cwt. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids Gardenias, Violets, Mignonette, Heaths, Kalosanthes, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 3s to 4s	Gooseberries, per qt., 3d to 6d
Grapes, per lb., 2s to 5s	Currants, per qt, 3d to 6d
Strawberries, p. lb., 6d to 1s 6d	Green Figs, per doz., 4s to 8s
Peaches, per doz., 8s to 15s	Melons, each, 2s to 4s
Apricots, per doz, 2s to 4s	Apples, per doz., 2s to 6s
Nectarines, do., 5s to 10s	Oranges, per 100, 6s to 15s
Cherries, p. lb., 1s to 3s	Lemons, per 100, 5s to 10s

VEGETABLES.

Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per qrtn, 9d to 1s	Celery, per bundle, 1s 6d to 2s
Peas, p. bush., 2s to 3s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 2d to 4d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 4d to 6d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d	Mushrooms, p. pott., 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 4s
Cucumbers, each, 6d to 1s	Savory, per bunch, 2d to 4d
Artichokes, per doz., 1s to 8s	

BUTTER MARKET.—Aug 3.

Best Fresh Butter . .. 14s. per dozen lbs.
Second do. do. .. .. 13s. ,, ,,
Pork, 5s. 0d. to 5s. 4d. per 8 lbs.

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, Aug. 2.

Prime Meadow Hay	90s	to 105s	Clover	100s	to 120s
Superior do. (old)	105	115	New Clover	80	105
Inferior do.	54	72	Old second cut ..	70	105
New do.	70	90	Straw	36	42
Rowen	—	—			

Davis & Co.

Whitechapel, Thursday, Aug. 2.

Fine old Hay ..	100s	to 108s	Fine old Clover ..	120s	to 126
Inferior do.	90	100	Inferior do	108	118s
Prime New Hay ..	75	80	Fine New Clover ..	95	102
Inferior do.	50	70	Inferior do.	75	84
Straw	38	42	Fine 2d cut	110	116

METROPOLITAN CATTLE MARKET.

Monday, July 30.

We have a shorter supply of Beasts, and consequently trade is brisk at fully late rates. The number of Sheep and Lambs is for the time of year small. They are readily disposed of at rather advanced rates. Calves are selling about the same as on Thursday. From Germany and Holland there are 1600 Beasts, 6300 Sheep, and 230 Calves; from Spain, 90 Beasts; from Scotland, 50; from Ireland, 80; from Norfolk and Suffolk, 150; and 1500 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	5	6	to 5	8	Best Long-wools.	5	4	— 5	8
Best Short-horns	5	2	— 5	6	Do. Shorn			to ..	
2d quality Beasts	4	4	— 4	10	Ewes & 2d quality	4	8	— 5	0
Best Downs and Half-breds	5	8	to 6	0	Do. Shorn			— ..	
Do. Shorn			— ..		Lambs	5	8	— 6	6
					Calves	4	4	— 5	6
					Pigs	4	0	— 5	0

Beasts, 4200; Sheep & Lambs, 24,600; Calves, 304; Pigs, 300.

Thursday, Aug. 2.

The supply of Beasts is again short, and consequently Monday's prices are maintained, although trade is dull. The number of Sheep and Lambs is about the same as of late; the demand has decreased, and prices on the average are lower. Calves are selling as on Monday. Our foreign supply consists of 210 Beasts, and 3100 Sheep; there are 52 Calves from Ireland; the number of Milch Cows is 105.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	5	6	to 5	8	Best Long-wools .	5	4	— 5	6
Best Short-horns	5	2	— 5	6	Do. Shorn			— ..	
2d quality Beasts	4	4	— 4	8	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds	5	8	— 5	10	Do. Shorn			to ..	
Do. Shorn			— ..		Lambs	5	4	— 5	4
					Calves	4	4	— 5	6
					Pigs	4	0	— 5	0

Beasts, 955; Sheep & Lambs, 11,900; Calves, 625; Pigs, 120.

HOPS.—Borough Market, Friday, Aug. 3.

Messrs. Pattenden & Smith report that the accounts from the plantations up to this moment speak of increase of vermin generally, and of mould in the best parts of Mid Kent and East Sussex. Duty 80,000*l.* to 90,000*l.*

BRITISH WOOLS.—London, Friday, Aug. 3.

Our arrivals are much less than usual at this season of the year, and the prospects of wool maintaining its price continue likely with the present favourable weather, and towards the spring higher rates may be realised than have been heard of lately.

	s.	d.		s.	d.		s.	d.		s.	d.
Sout. down Hoggets	1	8	to	1	9	Leicest. Wethers	1	6	to	1	7
						Ditto Hoggs ..	1	7	—	1	6
Half-bred ditto ..	1	8	—	1	9	Combing Skins	—	—	—	—	
Down Ewes ..	1	6	—	1	7	blanket ditto ..	0	6	—	0	8
Kent Fleeces ..	1	6	—	1	7	Flannel Wool ..	1	0	—	1	7

MARK LANE.—Monday, July 30.

The supply of English Wheat to this morning's market was exceedingly small, and being held for very full prices met only a slow sale at last week's rates. Notwithstanding the immense arrival of foreign, it sold freely in retail, having a larger number of country buyers than we have seen for a long time past. For Barley there is a fair inquiry at rather over the prices of this day sennight. Beans are scarce and bring rather more money. Peas are unaltered in value. We have a very large arrival of foreign Oats, chiefly from Russia, the remainder from Swedish and other ports, which are mostly out of condition and very difficult of sale. Russian and inferior sorts are 1s. per qr. cheaper. Flour is unaltered in value.

Per Imperial Quarter.	s.	s.		s.	s.
Wheat, Essex, Kent, & Suffolk .. White	58	62	Red	56	60
— — fine selected runs .. ditto	58	64	Red	58	62
— — Talavera	60	65			
— Norfolk	—		Red	—	
— Foreign	72	68			
Barley, grind. & dist., 24s to 31s .. Chev.	38	45	Malting .	36	41
— Foreign .. grinding and distilling	28	36	Malting .	35	40
Oats, Essex and Suffolk	20	24			
— Scotch and Lincolnshire .. Potato	26	28	Feed ..	24	26
— Irish .... Potato	26	28	Feed ..	21	24
— Foreign .... Poland and Brew	22	26	Feed ..	18	26
Rye	35	38	Foreign .	—	
Rye-meal, foreign	—				
Beans, Mazagan .... 32s to 40s .... Tick	34	43	Harrow .	34	43
— Pigeon .... 36s — 47s .. Winds	48	54	Longpod	—	
— Foreign .... Small	38	46	Egyptian	—	
Peas, white, Essex and Kent .. Boilers	38	40	Suffolk .	36	41
— Maple .... —s to —s .... Grey	32	34	Foreign	30	40
Maize .... White	—		Yellow ..	—	
Flour, best marks delivered .. per sack	48	54			
— 2d do. .... ditto	40	48	Country.	40	48
— Foreign .... per barrel	25	32	Per sack	30	46

Friday, Aug. 3.

On the 28th and 29th we were visited by heavy thunderstorms and rain. The weather has since been cloudy and dull, without sun; during Wednesday night and yesterday morning we had a few slight showers of rain. The late unusually heavy arrivals of foreign grain have caused a general dullness in the trade of the kingdom, notwithstanding which, however, the prices of Wheat have been unusually well supported, importers generally having a strong conviction that the stocks of English are reduced to a low ebb, and the prospects for the new crop rendering it probable that it must be a very long time before it can furnish any great proportion of the consumption of the country, even under favourable circumstances, whereas that proportion would be greatly reduced and deferred by wet. Spring corn has not undergone any noticeable change of value. American Flour being proportionately cheaper than any other description has met a free sale both here and in other ports. We quote extra State 28s. to 29s., prime Ohio 30s. to 31s. Only a limited number of grain-laden vessels have arrived off the coast during the week, most of which have been disposed of. Accounts from the Baltic represent the Wheat crop as being greatly jeopardised by the heavy rain, and holders decline selling unless at higher prices. The arrivals of English grain continue to be very limited, those of foreign exceed 113,000 qrs. The English Wheat left over from Monday being held firmly and above the views of millers remains unsold. We had a large attendance of country buyers at market this morning, but owing to the high prices insisted upon by the holders of foreign the sales effected were limited, and our quotations are consequently unaltered. Grinding Barley is in good demand at fully Monday's prices. The Oat trade is firm, with a fair inquiry at extreme rates lately current.

Arrivals from July 30 to Aug. 4.

	Wheat.	Barley.	Oats.	Flour.
English ..	1280 qrs.	— qrs.	20 qrs.	1270 sks.
Irish	— ,,	— ,,	150 ,,	— ,,
Foreign ..	49910 ,,	11700 ,,	51430 ,,	40 ,, / 11380 brls.

Liverpool, Tuesday, July 31.—We had a good attendance of millers and dealers at our Corn Exchange this morning, and Wheat has commanded a fair consumptive inquiry at the rates of our last market. Flour was more looked after, and American was the turn dearer. Indian Corn was in tolerably fair request, and mixed American brought fully 3d. per qr. more money, there being few sellers. Oats and Oatmeal very steady at full prices. Beans advanced 6d. per qr. Peas and Barley held firmly at extreme rates. The market closed steady; weather looking unsettled.

Friday, Aug. 3.—The grain market is firm for Wheat and Flour, but quay parcels of American much pressed. Indian Corn in active speculative demand, at 6d. advance. Ibrail and mixed American 31s., Galatz 32s. Oatmeal dull, but held for more money. Weather gloomy.

Averages	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
June 23..	57s 0d	34s 3d	27s 5d	38s 9d	45s 10d	41s 4d
— 30..	58 5	32 10	25 5	41 9	47 1	41 8
July 7..	57 9	34 0	26 5	41 3	46 6	41 4
— 14..	57 7	33 5	25 8	41 3	46 6	43 7
— 21..	56 6	32 5	26 4	40 8	46 7	39 4
— 28..	57 0	33 1	26 4	37 5	45 1	41 1
Agg. Aver.	57 4	33 5	26 3	40 2	46 3	41 5

Fluctuations in the Last Six Weeks Averages.

Prices.	June 23.	June 30.	July 7.	July 14	July 21.	July 28.
58s 5d	..		..	..	..	..
57 9	..	..		..	..	..
57 7	..	..	..		..	..
57 0		..	..	..	..	
56 6	..	..	..	..		..
..	..	..	..	..	..	..

COAL MARKET.—Aug. 2.

Byass's Bebside West Hartley, 16s. 3d.; Clark's West Hartley, 15s. 9d; Holywell, 16s.; Lambert's West Hartley, 16s.; Tanfield Moor, 13s. 3d.; Tanfield Moor Butes, 13s. 3d.; Walker Primrose, 13s. 6d.; Wylam, 16s. 6d.; Walls End Byron, 18s.; Walls End Gosforth, 17s. 9d.; Walls End Hilda, 17s. 3d.; Eden Main, 18s.; Walls End Braddyll's Hetton, 18s. 9d.; Walls End Framwellgate, 18s.; Walls End Haswell, 20s.; Walls End Hetton, 20s.; Walls End South Hetton, 20s.; Walls End Caradoc, 18s. 9d; Walls End Cassop, 18s. 9d.; Walls End Heugh Hall, 18s.; Walls End Kelloe, 19s.; Walls End South

Hartlepool, 18s. 6d.; Walls End Trimdon Thornley, 16s. 9d.; Walls End Thorpe, 18s. 6d.; Walls End West Hetton, 18s.; Walls End Whitworth, 16s.; Carway and Duffryn Malting, 22s. 6d.—64 ships at market.

WANTED, AS FOREMAN, in a considerable establishment, a young single Man who understands the management of Pineries, Forcing Houses, &c.; he must also be a good Florist. An excellent character will be required.—Apply for terms, &c, to Mr. AYSON, Oxton House, Henton, Devon.

WANTED, A FOREMAN, in a Market Garden. Must understand the Forcing of Strawberries, &c. A middle aged married Man preferred. One who has been accustomed to the Market Gardening preferred. His character must bear the strictest inquiry as to honesty and sobriety. Wages 1*l.* a week with cottage and garden attached.—Apply by letter to A.B.. Mrs Everley, Stationer, Hounslow, Middlesex, W.

WANTED, FOR THE SEED AND NURSERY TRADE, a person whose chief occupation will be TRAVELLING, but who must be competent for office or shop work when necessary. No one need apply without satisfactory testimonials.—PETER LAWSON & SON, 27, Great George Street, Westminster, W.

TO SEEDSMEN.—SHOPMEN WANTED.

WANTED, A HEAD SHOPMAN, who has had some experience in the Management of an extensive Counter Trade, a single Man of active habits and good address, who writes a good hand, and accurate at Accounts. Also an ASSISTANT SHOPMAN, of good address, and possessing some experience of Counter Work.—Apply to W. DRUMMOND & SONS, Seedsmen, 58, Dawson Street, Dublin, inclosing copies of testimonials, and stating age and salary expected.

WANTED, AS SHOPMAN, in a Retail Seed Business and to attend to the Books and Accounts generally.—Apply in own handwriting, stating, references and terms, to THOMAS JACKSON & SON, Kingston, S.W.

WANTED, A SHOPMAN, who must Write a good business hand quick, used to retail trade, strong, and willing to assist at hard work. Say if any knowledge of times of sowing Flower and Garden seeds, &c., and their cultivation. Good character for honesty, sobriety, &c., indispensable.—State wages, age, &c., to H. COTTRELL, 15, Bull Ring, Birmingham.

WANTED, A GARDENER AND PORTERESS.—The Guardians of the Poor of the Parish of Saint Leonard, Shoreditch, Middlesex, require the services of a respectable married couple, without incumbrance, not less than 25 nor more than 45 years of age, the man as Gardener and his wife as Porteress, at the Industrial School of the Parish, at Brentwood, Essex. The man must be a good Kitchen Gardener, competent to instruct boys in Gardening, and his wife must be able to read and write well. The salary of the man will be 30*l.* per annum, and that of his wife 10*l.* The parties elected will reside in the lodge, which is furnished; and rations, coals, washing, &c., are allowed. The appointments will be made subject to the approval of the Poor Law Board. Applications in the candidates own writing, with testimonials as to character and ability must be sent to the undersigned, at Shoreditch Workhouse, London, N.E., indorsed. "Application for office of Gardener" not later than Tuesday the 21st inst.—By Order of the Board,

August 4. WM. NIGHTINGALE, Clerk.

WANTED, a steady, active MAN, as GROOM and GARDENER, and to make himself generally useful in a Medical man's family. To one upon whom dependence could be placed, liberal wages would be given.—Address, stating full particulars, to L. P. D., Post Office, Ambleside, Westmoreland.

WANT PLACES.—Letters to be Post Paid.

BAILIFF, or BAILIFF AND GARDENER.—W. P. AYRES having completed his engagement in the formation of the Forcing and Pleasure Gardens to the new mansion at Orchardleigh Park, will shortly be at liberty to enter upon a similar engagement. During his residence (four years) at Orchardleigh W. P. A. has had the general supervision of the Estate Improvements, Draining, Re-modelling of Farms, Receiving Rents, &c. He has also Designed and erected a Farm residence and covered Homestead of the first class; is thoroughly conversant with the principles of Construction and Artificers and Ground work of all kinds. Liberal remuneration expected. *** W. P. A. has been known to Professor Lindley, the learned Editor of the *Gardeners' Chronicle*, for upwards of 20 years, and has the honour to refer to him as to his professional capabilities.—Orchardleigh Park, Frome.

BAILIFF, GARDENER, OR GENERAL MANAGER.—Middle-aged; practically acquainted with the duties of the above professions; Breeding and Rearing of Live Stock, Sale or Purchase of Farm Produce, Timber, &c. Has had great experience in Forcing generally. Superior reference will be given.—J. K., Arpsten Cottage, Bridge Road, Barnes, S.W.

GARDENER AND BAILIFF.—E. PAVER (age 35, married, no incumbrance), for the last 10 years with the Rev. C. W. Ethelstone, Rectory, Eplyow, Dorset; has a thorough practical knowledge of the cultivation of Vines, Pines, Peaches, Melons, &c., the general management of the Kitchen, Fruit, Flower Garden, and Pleasure Grounds; also a thorough knowledge of the management of a large Farm in all its branches. Can have 7 years' good character for ability, &c.—E. PAVER, Market Place, Sidmouth.

GARDENER (HEAD).—Age 29, married; thorough knowledge of his profession in all its branches. Four years' good character.—W. W., Post Office, Beckenham, S.E.

GARDENER (HEAD).—Married, one child; understands Early and Late Forcing. Two years' good character.—F. R., 26, Grafton Road, Kentish Town, N.W.

GARDENER (HEAD).—Age 34, married; thoroughly understands every part of his profession. Three years' character.—W. S., Vale Cottage Grove, Vale, Peckham Rye, Surrey, S.E.

GARDENER (HEAD).—Age 39, single; has a good general practical knowledge of his profession; can produce good testimonials. Four and a half years' good character from last employer.—J. H., J. & J. Fraser, Lea Bridge, Essex.

GARDENER (HEAD).—Single; thorough practical knowledge of his profession in all its branches. Above two years' unexceptionable character from his present employer.—C. C., Mr. Lawrence, South Street, Camberwell, S.

GARDENER (HEAD).—Age 26, single; thoroughly understands Vines, Stove and Greenhouse Plants, Forcing and Gardening in all its branches. Three years' good character.—G. C., 4, Bloomfield Place, Crouch End, Hornsey, N.

GARDENER (HEAD).—Age 30, married; thoroughly understands the Forcing of Grapes, Peaches, Cucumbers, Melons, Strawberries, Mushrooms, and is a good Flower and Kitchen Gardener, Budder, and Grafter. Five years' character.—J. WINWOOD, the Gardens, Brailes House, Shipston-on-Stour.

GARDENER (HEAD).—Age 47, married; competent to manage a large or small place, Meadow Land, Dairy, or Poultry. Good character from the place he is leaving.—E. W., Rush House, Lavender Hill, Wandsworth Road, S.

GARDENER (HEAD), to any nobleman or gentleman,—Age 38, married; one child 6 years old. Wife a thorough Dairy-woman. Twelve months' good character from the Lady and Gentleman they are now leaving.—G. R., New Crofts Lodge, Hillingdon, Middlesex.

GARDENER (HEAD), where three or more men are kept.—Age 38, married; well acquainted with his profession in all its branches. No objection to look after land. Seven years' good character.—A. B., care of Mr. Cutbush, Nurseries, Barnet, Herts.

GARDENER (HEAD).—Age 35, no incumbrance; has a thorough practical knowledge of Growing and Forcing Fruit, Flowers, and Vegetables; and of all new ground work either private or public; good character from his present employer.—M., Bonchurch, Isle of Wight.

GARDENER (HEAD).—Age 38, married, 1 child; understands Vines, Forcing Fruit and Vegetables, and the Management of Flowers, Kitchen Garden, &c. Good character and well recommended.—A. B., Walker's Newspaper Office, High Street, Leyton, Essex, N.E.

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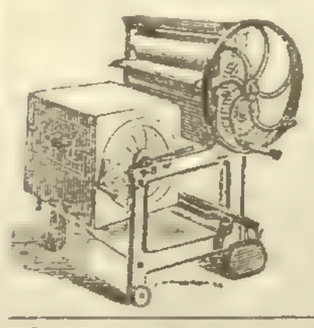

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The Gardeners' Chronicle Newspaper.

SATURDAY, AUGUST 11, 1860.

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Dr. and Mrs. MARTYN.. ..	7, Bennett St., St. James's, S.W.
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HORTICULTURAL GARDENS.—The *Gardeners' Chronicle* of May 12, containing Mr. NESFIELD'S COLOURED PLAN for the NEW GARDEN at Kensington Gore, is still on Sale at the Office, 41, Wellington Street, Covent Garden, W.C. and will be sent by post on receipt of six stamps.

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News of the Week.

IN the House of Lords on Friday in answer to Lord STRATFORD DE REDCLIFFE, Lord WODEHOUSE stated that a protocol had that day been signed by the representatives of the Great Powers and of Turkey, to the effect that 12,000 European troops should proceed to Syria, that France should at once furnish one-half of that number, and that the remainder should be furnished by one of the other Powers when required; that the Porte should furnish them with subsistence and all facilities for their movements, and that the stay of the troops in Syria should not exceed six months. A second protocol had also been signed by which the Great Powers had declared their intention not to seek for any territorial advantage or for any exclusive influence or privileges. On Monday, in answer to the Earl of SHAFTESBURY, Lord WODEHOUSE stated that the object of the expedition was the pacification of Syria, and there was not the slightest intention of meddling in either the civil or religious affairs of the country. On Tuesday the report on the Militia Bill, as amended, was received, with the understanding that a suggestion made by Lord DERBY for reducing the minimum age from 18 to 16 should be considered. On Thursday the European Forces (India) Bill was brought up from the Commons and read a first time. The Ecclesiastical Commission Bill was read a second time, and the Rifle Volunteer Corps Practice Ground Bill passed through committee.

In the Commons on Friday Lord JOHN RUSSELL made a statement in regard to Syria similar to that made by Lord WODEHOUSE in the House of Lords. His lordship also stated that Austria and Russia had objected to the Savoy Conference, on the ground that no advantage was likely to accrue from it, and unless they withdrew their objections, some other arrangements must be made. The resolution on Fortifications was reported and agreed to, and leave given to bring in a Bill founded on it. The House then went into Committee of Supply, and after a long discussion on the subject of the frescoes and other decorations of the Houses of Parliament the vote of 39,597*l.* for the two Houses was reduced by 1600*l.*, the cost of the proposed statues of the last two Sovereigns. Mr. SPOONER moved a further reduction by omitting 1200*l.* for the Commons' Corridor, but the motion was negatived by 67 to 44. Mr. A. SMITH moved a reduction of the vote by 30,000*l.*, on the ground that the vote of last year was unexpended. The motion was negatived by 60 to 32, and the vote, reduced to 37,997*l.*, was then agreed to. On Monday the CHANCELLOR of the EXCHEQUER moved two resolutions for reducing the duty on foreign paper to the level of the Excise duties imposed on home-made paper. The first resolution applied to paper produced in France and Algeria, and had reference to the commercial treaty; the second applied to paper manufactured in other countries. To the first resolution Mr. PULLER moved an amendment, declaring that without desiring to prejudice the question of a reduction of the Customs' duty on paper at a future period, the committee did not at present think fit to assent to such reduction. After a long debate the amendment was negatived on a division by a majority of 33, the numbers being 266 to 233. The resolution was then agreed to. The second resolution extending the equalisation of duty to all other countries having been put, Mr. PULLER moved a similar amendment, but Mr. DISRAELI declining to support it; it was negatived without a division, and the resolution was agreed to. On Tuesday the Roman Catholic Charities Bill and the Industrial Schools Act Amendment Bill passed through committee. On the motion for the third reading of the European Forces (India) Bill, Sir J. ELPHINSTONE moved as an amendment that the Bill be read a third time that day three months. After some discussion the amendment was negatived without a division, and the Bill was read a third time and passed. On the order for considering the report of the Committee on Customs, Sir F. KELLY moved as an amendment that the resolution concerning malt be recommitted, in order to raise the duty on the importation of foreign malt from 25*s.* to 26*s.* per quarter. On a division the amendment was negatived by 86 to 49. The report was then agreed to. The SOLICITOR GENERAL withdrew the Offences against the Person Bill, and six other Bills for the consolidation of the Criminal Law, on the ground that no time was now left for their consideration in the present session. On Wednesday, on the motion for going into committee on the Union of Benefices Bill sent down from the Lords, Mr. GRIFFITH and Mr. HENLEY objected to proceeding with the Bill, on the ground that the period of the session was too late for the consideration of so novel and important a measure. The House ultimately went into committee, when Mr. MALINS moved that the chairman report progress. On a division the motion was negatived by 76 to 16. An amendment restricting the operation of the Bill, which originally extended to five cities, by limiting it to the metropolis was agreed to without a division. An

amendment moved by Mr. C. BENTINCK, excluding from its operation the churches of St. Stephen's, Walbrook; St. Martin's, Ludgate; St. Peter's, Cornhill; and St. Swithin, Cannon Street, and the towers and steeples of the City churches was also agreed to. An amendment moved by Mr. HENLEY, prohibiting the sale of Church sites where burials had taken place, was negatived on a division by 80 to 50. Sir M. PETO moved the insertion of words permitting Dissenters to purchase a church as it stood, if it was decided that the Church of England should give it up. Mr. BOUVERIE promised to take the motion into consideration, and to propose a clause before the Bill was reported. Sir F. BARING, Lord J. MANNERS, and other members opposed the motion, and the discussion was ultimately cut short by the arrival of the hour for adjournment. On Thursday the House went into Committee of Supply on the Civil Service Estimates, when the vote for the Royal parks gave rise to an animated debate on the subject of the new ride in Kensington Gardens. Sir J. SHELLEY, in order to test the opinion of the House on the question, moved that the vote be reduced to the sum of 250*l.* the amount required or the fences of the road. On a division, the amendment was negatived by 71 to 48. On the order for the second reading of the Fortifications (Provision for Expenses) Bill, Mr. E. JAMES moved, as an amendment, that before proceeding further it was desirable to have further information as to the entire cost of the construction and maintenance of the proposed works. After a long debate the amendment was negatived on a division by 143 to 32. The Bill was then read a second time. The House again went into committee of supply, when Mr. LAING moved a vote of 60,000*l.* for the conveyance of the mails between Galway and Newfoundland, stating that the Government had come to the conclusion that they were bound to fulfil their obligations under the contract entered into by the late Government with the Galway Packet Company. Mr. BOUVERIE moved as an amendment that the vote be disallowed. After a long debate the vote was carried by 145 to 39.

The protocols regulating the intervention in Syria were signed on Friday by the plenipotentiaries of the Great Powers and of Turkey, and General BEAUFORT D'HAUTPOUL, the commander-in-chief of the expedition, sailed on Thursday from Toulon with the first division of the French troops. Accounts from Beyrout state that tranquillity has been restored since the arrival of FUAD PACHA at Damascus, but murders were still committed in the surrounding country, and a threatened outbreak has been prevented at Salonica and Aleppo. AHMET PACHA, the late Governor of Damascus, has been degraded and sent for trial; KURCHID PACHA, the Governor of Beyrout, Colonel ALI BEY, and upwards of 400 other influential persons belonging to the Mahomedan party, have been arrested, and an extraordinary commission has been appointed to try them summarily on the charge of having participated in the recent massacres. From Constantinople we learn that a conspiracy against the life of the Grand Vizier has been discovered, and that a great panic still prevails among the European inhabitants.—A despatch, at present unconfirmed, has been received in Paris announcing the unopposed disembarkation of 1500 Garibaldian volunteers in Calabria. GARIBALDI himself is expected to arrive very shortly at Naples, having been summoned by the Garibaldian committee of that city to assume the direction of the Government. The latest news states that he had not left Messina on the 8th inst., but still continued his preparations.

Home News.

DEPARTURE OF THE QUEEN FOR SCOTLAND.—The Queen and the Prince Consort, accompanied by the Princesses Alice, Helena and Louisa, Prince Arthur and Prince Leopold, arrived at Buckingham Palace on Monday afternoon from Osborne, and left town at half-past 8 the same evening by the Great Northern Railway, for Edinburgh, attended by the Right Hon. Sidney Herbert as Secretary of State. The Queen and Prince Consort occupied the state saloon, which was fitted up as a sleeping apartment. The Princesses occupied a second saloon carriage with the lady in waiting. A third saloon was devoted to the accommodation of the young princes. The train left King's Cross at 9 o'clock, and arrived at Edinburgh at a few minutes past 8 on Tuesday morning. On Tuesday afternoon the Queen reviewed the Scottish Volunteers in Holyrood Park. In the evening her Majesty had a dinner party to which the generals who took part in the review were invited. On Wednesday morning her Majesty and suite left Holyrood Palace at 8.15 for Balmoral, travelling to Aboyne, a distance of 180 miles, by rail, and thence by road to Balmoral, where the Royal party arrived at 5 o'clock.

THE COURT.—During the brief stay of the Queen in town on Monday afternoon, her Majesty held a Court at Buckingham Palace, at which Sir G. C. Lewis, Secretary for the Home Department, had an audience, and the Right Rev. Dr. Longley, Archbishop of York, did homage on his translation from the See of Durham to the Archbishopric of York. The Prince Consort visited the South Kensington Museum in the afternoon.

THE PRINCE OF WALES left St. John's, Newfoundland, on the 26th ult. for Halifax, where he was expected to land on Monday the 30th. The following is the reply of his Royal Highness to the addresses of the inhabitants of St. John's and Harbour Grace, and of the various societies of St. John's, presented on his arrival in Newfoundland:—

"Gentlemen,—I sincerely thank you for the addresses which you have presented to me, and for the hearty welcome which I have received from you all on landing upon the shores of this the earliest colonial possession of the British Crown. I trust you will not think me regardless of your zealous loyalty if I acknowledge these addresses collectively. It will afford me the greatest satisfaction to report to the Queen the devotion to her Crown and person which has been so unmistakably evinced by your reception of her son as it is eloquently expressed in the words of the several addresses from various bodies of this town and from the inhabitants of Harbour Grace. I am charged by the Queen to convey to you the assurance of the deep concern which she has ever felt in this interesting portion of her dominions. I shall carry back with me a lively recollection of this day's proceedings and of your kindness towards myself personally, but above all of those hearty demonstrations of patriotism which prove your deep-rooted attachment to the great and free country of which we all glory to be called the sons."

The following is said to be a correct programme of his Royal Highness's movements in Nova Scotia and Canada:—

On leaving St John's the squadron was to proceed to Halifax, calling at St. Peter's on the way. At Halifax a great gathering of mayors and civic dignitaries had already assembled to meet him with becoming state and ceremonial. After a stay of nearly two days at Halifax the Prince will proceed by land to Frederickton, and thence to St. John's, New Brunswick, stopping at each place a day at least. He will then embark on board the Hero, and visit Charlottetown, the capital of Prince Edward's Island, where he will remain the greater part of two days. From Prince Edward's Island he will proceed with the fleet to Gaspé Bay, at the mouth of the St. Lawrence, where the Governor-General of Canada, Lord Lyons, the Minister to Washington, and the [illegible] of the Canadian Government will proceed by [illegible] will proceed by the St. Lawrence to the mouth of the Saguenay River, up which he will steam for the best part of a day, to see the wild magnificence of its rocky shores. From the Saguenay he will proceed straight to Quebec, where he is expected to arrive about the 18th of August. He will, it is believed, remain at Quebec at least five days, during which time there will be a ball and a levee. His Royal Highness will also visit Lorette, the Chaudière Falls, the Falls of Montmorenci and the rocks called the Natural Steps above that cataract. He will leave Quebec on the 23d for Montreal. He will anchor for the night about 30 miles below that city, whence a fleet of river steamers, with visitors, has been arranged to go out and meet him. At Montreal he will remain some days, one day being devoted to opening the Exhibition of Arts and Manufactures, another to opening the Victoria Bridge. On other days there will be levees, banquets, and balls. Two days are set apart for riding out privately and visiting the fine scenery round Montreal, and 15 splendid horses have already been provided for the Prince and his suite for this purpose. Two days are to be devoted to a visit to Brockville, to witness Indian games, and to go thence by water down the rapids of the St. Lawrence to Montreal again. From Montreal the Prince will proceed by water direct up the Ottawa river to Ottawa, the present capital of Canada, where he will remain two days, and lay the foundation stone of the Parliament buildings to be erected there. On the Ottawa river he will be met by a fleet of 100 canoes in which the lumbermen will escort him across Lake Duchesne and back again. From Ottawa he will proceed to Kingston, and remain a day, and make an excursion up the Lake of the Thousand Isles. His next visit will be to the Bay of Quinté, where he will join the Grand Trunk Railway, and go up to Toronto, where he will remain, it is expected, for four days or more. He will thence make an excursion to Lake Simcoe, and to Collingwood, on the shores of Lake Huron. After this he will go to Sarnia, near Lake Huron, where there will be a large muster of the chief Indian tribes in their canoes, to do him homage and show their games of strength and skill. From Sarnia he will visit London for a day, and also Brentford, and so on to Hamilton, where he will rest for a few days, and there open the Agricultural Exhibition of Upper Canada. While at Hamilton he will make a short excursion through the woods in the neighbourhood. From Hamilton the Prince will proceed to Niagara, where he will remain, probably a week. His tour will occupy altogether to the end of September or beginning of October, and after that he will visit both Washington and New York. His route to the former city is expected to be from the neighbourhood of Niagara to Saratoga by rail, and thence by Whitehall to Lakes George and Champlain, and back from Whitehall to Albany and Washington. From Washington he will travel privately as Baron Renfrew to New York, where, it is anticipated, he will remain for a few days. The port of his departure has not been yet fixed. The date is not likely to be much before the middle of October; and, unless his Royal Highness uses great speed, it may probably be even later. He is certain, throughout Canada and the States, to be received with almost boundless enthusiasm.

THE QUEEN'S REVIEW OF THE SCOTTISH VOLUNTEERS.—The great review of the Scottish Volunteers took place on Tuesday afternoon, in Holyrood Park, with the utmost success. It was half-past 3 before the entire line was formed, nearly three-fourths of the Volunteers having had to make the journey from home that morning, and, owing to the immense pressure on the railways, several of the arrivals were very late. The number of the Volunteers under arms was 21,514, being nearly 1000 more than the returns sent in to the War Office. There were also from 2000 to 3000 present as spectators, the latter including numerous men of the London Scottish. Her Majesty left Holyrood at half-past 3, attended by a brilliant retinue. The Duchess of Kent, the Princess Alice, and Prince Arthur occupied the carriage with her Majesty. The Prince Consort and the Duke of Buccleuch rode on either side of the carriage. In attendance on her Majesty were Generals Scarlett, Airey, and Grey, the Marquis of Tweeddale, and other military officers of high rank; and in the suite were Mr. Sidney Herbert, the Earl of Wemyss, the Marquis of Stafford, M.P., Lord Polworth, Lord Belhaven, the Lord Provost of Edinburgh, &c. The Marquis of Breadalbane, the Earl of Rosslyn, and other noblemen were in the ranks of the Volunteers, and Lord Elcho, in the uniform of the London Scottish, was also on the field. Behind the saluting flag was a splendidly-decorated gallery, containing about 4000 spectators; and on the hills there was a gathering of not less than 200,000 persons. The Volunteer army was commanded in chief by General Sir George Wetherall, and the two divisions respectively by Lord Rokeby and General Cameron. There were about 150 different corps on the ground, marshalled into 35 battalions—one of mounted Rifles, six of Artillery, one of Engineers, and 27 of Rifles. There was the utmost variety of uniform, from dark grey—which a large proportion of the earliest formed corps, including the Edinburgh battalions, had adopted—to the light grey, approved by Government, and in which many of the more recently formed corps were clothed. The marching past commenced at 4 o'clock and occupied exactly an hour and 20 minutes. Towards the close and throughout the passing of the second division the clouds of dust to a considerable extent marred the beauty of the display. The marching past being concluded the various corps reformed in line and advanced towards the Queen until the bugle called a halt. The officers then saluted with their swords and the whole line presented arms. The final command given was three cheers for the Queen; the command was instantaneously responded to from one end of the line to the other, and was then caught up with still louder acclamation by the spectators on the hill-side, and continued without intermission for several minutes. At a quarter before 6 her Majesty left the ground, followed by the renewed acclamations of the entire multitude, and saluted, as on her arrival, by a battery of artillery stationed at the foot of Arthur's Seat.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. About 180 members of the House of Commons had an interview with Lord Palmerston on Monday in Downing Street. Lord John Russell, the Chancellor of the Exchequer, the Right Hon. Sidney Herbert, the Right Hon. T. M. Gibson, Sir George Grey, the Right Hon. C. P. Villiers, and the Right Hon. E. Cardwell were present at the interview.

PARLIAMENTARY MOVEMENTS.—The Sligo election has terminated in the return of Mr. Macdonogh, the Conservative candidate by a large majority. Mr. Tenison, the Liberal candidate, having retired from the contest, on account of the division of the Liberal interest by the determination of Mr. Somers to go to the poll. The numbers at the close of the poll were, for Mr. Macdonogh, 160; Mr. Reilly, 5; Mr. Somers, 1.

ORDER OF THE BATH.—The Queen has given orders for the appointment of Colonel George Lloyd Hodges, C.B., Chargé d'Affaires to the Hanse Towns and formerly Consul-General in Egypt and Servia, to be a Knight Commander of the Bath.

THE ARMY.—The Colonelcy of the 17th Foot, vacant by the death of Lieut.-Gen. Wemyss, has been conferred on Major-Gen. Sir Richard Airey, K.C.B.

THE VOLUNTEER MOVEMENT.—The first annual meeting of the London Scottish was held on Friday at the Scottish Corporation Hall in Crane Court. Lord Elcho presided, and in the course of a lengthened speech announced that Lord Clyde had consented to become honorary colonel of the corps.—The 13th Middlesex, or Hornsey Rifle Volunteers, met on Saturday in the grounds of Mr. William Bird, of Crouch Hall, near Crouch End, and were presented with a silver bugle the gift of the ladies of Hornsey.—The 4th, 7th, and 10th Surrey, and a troop of the Surrey Mounted Rifles assembled on Streatham Common on Saturday afternoon, and were put through various evolutions by Colonel Lysons, Deputy Adjutant-General.—The sham fight of the West and North Middlesex corps on Hampstead Heath on Saturday was hampered in all the movements by a crowd of from 50,000 to 60,000 persons, who had assembled to witness the operations.—Mr. Daw, of Threadneedle Street, recently presented a rifle, value 35 guineas, to be contested for by those members of the Victoria Rifle Corps who had provided themselves with rifles of his construction. The competition took place on the 2d inst., over a range of 750 yards, the candidates being Mr. Barnard, Mr. Braithwaite, Mr. Dickins, Mr. Badeley, and Mr. Leverson. Each man fired 10 rounds, and the prize was awarded to Mr. Herbert Barnard, of Portland Place.—At a general meeting of the 38th Middlesex (the Artists') corps, held on the 2d inst., at Burlington House, Captain H. W. Phillips announced his intention of

giving a silver challenge medal, to be contended for annually, and worn by the best shot; and Lieut. Lewis presented a handsome silver-gilt cup to be shot for at the close of the present year.—The Essex corps were reviewed on Saturday in Hylands Park, near Chelmsford, by General Wood, commandant of the camp at Colchester. The Essex and Uxbridge Yeomanry Cavalry and Artillery also took part in the review, as did the Victoria Rifles, the Hon. Artillery Company, the London Brigade, the Tower Hamlets, Truman and Hanbury's, and one or two other metropolitan corps. The various Essex corps were about 400 strong, and altogether about 3000 Volunteers of various classes were collected on the occasion.—The 4th Kent or Woolwich Dockyard Battalion assembled on Wednesday evening on the parade, in a body exceeding 300 men, and were sworn in before the Commodore Superintendent of the yard.—The Skipton and North Craven, with a detachment of the Ingleton Rifle Corps, forming part of the 2d battalion of the West Riding Volunteers, assembled on the 2d inst. at Malham Tarn, near Settle, and shot for a silver bugle, to be held by the winning corps. The prize was won by the North Craven Corps, whose representatives made 39 points—viz., 17 at 200 yards, and 22 at 400 yards; Skipton being second and Ingleton third.—Another artisan company, consisting of persons in the employ of Messrs. Greenwood & Batley, of the Albion Foundry, has been added to the Leeds Corps, and the officers for it were selected on Saturday. The formation of a Volunteer Artillery Corps is making considerable progress in Leeds.—The Colchester Volunteers assembled on Thursday in Alresford Park, near Colchester, the seat of Mr. Hawkins, when a bugle of honour was presented to the corps by Lady de Crespigny, wife of Sir Claude de Crespigny, who commands the Essex battalion, on behalf of the ladies of the town and district.—An artillery corps has been formed at Preston, and already includes a large number of effective members.

Foreign.

France.—The Plenipotentiaries of the Great Powers and of Turkey had another Conference on Friday and signed two protocols respecting the intervention in Syria. The first provides that the force shall consist of 12,000 men, that one-half shall be furnished immediately by France, and the remainder by one or more of the other Powers if necessary; that all its movements shall be in concert with the Porte, which shall facilitate the provisioning and subsistence of the force; that the Great Powers shall send a squadron to co-operate with the military force on the coast; and that the stay of the foreign troops in Syria shall not be prolonged beyond six months. The second protocol declares that none of the Powers, in interfering in the affairs of Turkey, shall seek any addition of territory or any separate commercial advantage, and at the same time expresses the extreme importance attached by the respective Courts to the adoption of serious administrative measures, in accordance with the solemn promises of the Porte for the improvement of the status of the Christian populations, of whatever rite, throughout the Ottoman Empire. The Emperor left Paris on Monday for the camp of Chalons, where he has been joined by Prince William of Baden. On Tuesday his Majesty reviewed the regiments under orders for Syria, and afterwards addressed them as follows:—

"Soldiers—You leave for Syria. France hails with joy an expedition the sole aim of which is to cause the rights of justice and humanity to triumph. You do not go to make war against any foreign Power, but to assist the Sultan in bringing back the obedience of his subjects, who are blinded by the fanaticism of a former century. On that distant land, rich in great reminiscences, fulfil your duty; show yourselves the worthy children of those who once gloriously carried into that country the banner of Christ. You do not leave in great numbers, but your courage and your *prestige* will supply the deficiency, because, wherever the French flag is seen to pass, nations know that a great cause precedes it and a great people follows it."

General Beaufort d'Hautpoul, who is to command the expeditionary corps, has left Toulon for Syria with 1000 men. In an order of the day he reminded the soldiers that they were going to avenge offended humanity in a country where they would find souvenirs of Godefroy, the Crusaders, General Bonaparte, and the first Republic, and concluded by saying that the wishes of the whole of Europe accompanied the expedition. A large number of troops has already left Toulon for Beyrout, and transports have been sent to Algiers to embark others. The Emperor has conferred the Grand Cross of the Legion of Honour upon Abd-el-Kader, as an acknowledgment of his noble conduct in saving 11,000 Christians, and protecting the European Consulates at Damascus. It is announced that the Emperor and Empress will visit Lyons on the 24th inst., and leave it on the morning of the 27th for Savoy, returning again into France through Grenoble, Valence, Orange, Avignon, Marseilles, and Toulon, where they will embark for Algiers, touching at Ajaccio. Prince Napoleon and the Princess Clotilde are about to make an excursion to Switzerland, during which they will visit their estate on the borders of the Lake of Geneva. General Goyon, the French Commander-in-Chief at Rome, arrived on Tuesday at Marseilles. The *Moniteur* publishes a decree allowing the importation of wool through any Customs' station in France, and another creating a special cadre of naval lieutenants, with fixed residence. It also gives the result of the great ploughing match in presence of the Emperor at La Fouilleuse, near St. Cloud. The first prize, a gold medal and 1000f. was awarded to Messrs. Burgess & Key, for their new ploughing machine. This firm also obtained the prize of honour. The second prize, a silver medal and 500f. was won by Mr. Cuthbert, of Bedale; and the third, a bronze medal and 300f. by Mr. Crampton, of London, for a plough invented by Wood. The French winner of a first prize was M. Mazier, of Laigle. There was no successful competitor for the second, and the third was obtained by M. Legendre.

Portugal.—Advices from Oporto confirm the unfavourable accounts of the prospects of the vintage. All the way between Oporto and Coimbra, and to the opposite side of the Mondego, the Vines, it is said, which at the outset promised abundantly, are covered with the oïdium.

Switzerland.—The Federal Council has received a note from the Swedish Government, dated July 18, reiterating the intention of Sweden to support the claims of Switzerland at the Conference on the affairs of Savoy. The annual Federal *fête* has taken place at Geneva. Officers from all parts of Switzerland, to the number of 1200, assembled on the occasion, under the presidency of General Dufaur. The enthusiasm was general. The Duchess of Parma has just purchased for 400,000f. the Wortegg château, near Rorschach, and the Count de Chambord the Wartensee mansion, in the same vicinity. The Bishop of Winchester has fixed Thursday, September 6, for the opening of the English church at Chamounix for Divine service.

Austria.—The Committee of 21 members of the Reichsrath sat on Monday for the purpose of receiving communications from the Ministers. The sitting lasted four hours. The labours of the Committee will require several sittings, at the conclusion of which a general report will be presented to the Council of the Empire, proposing resolutions in reference to pending political questions. The Hungarian members of the Reichsrath intend to present a memorandum demanding reforms on a federal basis. Count Szecsen is said to be the author of this memorandum, which appears to have a prospect of meeting with a considerable majority in its favour.—Immediately on his return from Töplitz the Emperor signified to his Ministers his desire that the whole of the reforms, which for nearly a year after the programme of Laxenburg have been in the course of elaboration, should be finished and promulgated at as early a period as possible. It is believed that this act will strengthen the alliance between Prussia and Austria, the bases of which were concerted in the interview at Töplitz. It is stated that the approaching anniversary of the Emperor's birthday on the 20th inst., will be marked by the solemn promulgation of the reforms which are so impatiently awaited by all classes in Austria. The Cabinet of Vienna has assented to the proposal of France for the admission of Spain to the rank of a Great Power, on the understanding that it is not to be drawn into a precedent by other Powers. The Count of Paris and the Duke of Chartres left Vienna last week for Bavaria on their way to Switzerland and Italy. It is said that an interview is to take place at Warsaw in September next, between the Emperor of Austria, the Emperor of Russia, and the Prince Regent of Prussia.

Italy.—A despatch has been received in Paris announcing the unopposed disembarkation of 1500 Garibaldian Volunteers at Fort Scylla in Calabria, on the eastern side of the Straits of Messina. The same despatch states that Garibaldi was expected to arrive very shortly at Naples, having been summoned thither by the Garibaldian Committee of that city to assume the direction of the Government. The latest news dated Messina, the 8th inst. states that Garibaldi had not yet left for the mainland, but still continued his preparations. Two of the King's regiments—the 1st and the 13th had revolted at Naples, to the cry of "Viva Garibaldi!" 300 soldiers who were on the point of joining Garibaldi had been arrested. The Minister of War had withdrawn the troops from the Abruzzi, in order to concentrate the principal part of the army round Naples. Preparations were making to repulse any attempt at invasion, and improvements were in progress in the Royal army and navy. The Count de Trapani, the King's uncle, had been appointed commander of the Royal Guards; Commander Capecelatro had been appointed Director of the Ministry of Marine, and the renewal of the *personnel* of the different administrative departments was nearly completed. The office of Private Secretary to the King had been suppressed, and the Camarilla had been replaced by persons recommended by the Ministers. The King had visited the head-quarters of the National Guard. Naples was quiet, and it was said that the Government intended to convoke the Parliament. The King, in accordance with the advice of his Ministers, is disposed to add a most important article to the constitution of 1848. By this article, following the example of Piedmont, every Italian will be able to sit in Parliament, even if not a native of the kingdom of Naples, provided that he is legally eligible in other respects.—Accounts from Rome state that a popular movement has taken place at Arpino but has been suppressed. The people shouted for Garibaldi. The inhabitants of Monteporzio, near Frascati, excited by anonymous proclamations, began to divide the landed property of Prince Borghese. Men, women, and children took part in the distribution of lots. A detachment of Gendarmerie reestablished order. Instructions have been sent to the frontier of Naples to seize all inflammatory addresses, proclamations, &c. General Lamoricière has despatched a column of troops to Terracina. The Pope has addressed an energetic letter to the Bishops of Syria lamenting the massacres of the Maronites which have been committed by the Druses, and expressing his horror of the barbarities of the Turks. His Holiness further speaks in high praise of the French expedition, and exhorts the Princes to repress the excesses of the infidels, and to arrest the enemies of morality, justice, religion, and social order.

Sicily.—An official account states that Garibaldi only consented to the terms of the capitulation of Melazzo after representations had been made to him by some Neapolitan officers, to the effect that their soldiers were still brothers of the Sicilians, although fighting against them by order of their superiors. The municipality, the police, and all other branches of the public administration of Messina have been reorganised. The lighthouse and Fort Gonzaga are occupied by the Garibaldians with a battery of 11 guns. Volunteers and siege artillery are daily arriving at Messina. The Royal forces have evacuated Syracuse and Agosta, in accordance with a convention between Garibaldi and General Clary. It is expected that some persons who oppose the Government by proposing an Italian Confederation, and others who are suspected of being foreign agents, will be expelled from the island. The ladies of Palermo are very active in supplying the hospitals of Melazzo with lint, linen, and medicine. Large numbers of Volunteers continue to arrive. The statement that the inhabitants of Melazzo threw boiling oil on Garibaldi's troops, and that Garibaldi ordered 39 of them to be shot, is said to be without any foundation. M. Alexandre Dumas, the French novelist, has arrived at Messina in his yacht, surrounded by his dogs, birds, and monkeys, photographers, secretaries, and amanuenses, with Circassian, Greek, Spanish, and Indian servants; and accompanied by a lady called by the sailors the "she-admiral," wearing lilac velvet uniform, with epaulettes and gold lace.

Russia.—Prince Gortschakoff has addressed a circular to the Russian diplomatic agents abroad on the subject of Turkey, expressing the conviction of the Russian Government that things have now come to such a point in the Christian provinces under Turkish rule, that it cannot continue without shortly leading to a crisis dangerous for the repose of the East, the existence of the Ottoman Government, and consequently for the general interests of Europe. He has therefore, by order of the Emperor, proposed to the representatives of England, Austria, France, and Prussia at St. Petersburg, that the five great Powers shall issue an immediate declaration that they can no longer tolerate the present state of things, and shall demand effectual guarantees calculated to satisfy the legitimate complaints of the Christian provinces of the Porte, and at the same time tranquillise Europe with regard to the possibility of complications which affect her general interests as well as those of Turkey.

Turkey.—Despatches from Constantinople state that a conspiracy against the life of the Grand Vizier has been discovered, and that the revelations comprise persons of high standing. The Grand Vizier has compelled several high functionaries to return public money illegally acquired. Arrears of pay are still due to the army and to public *employés*. A great panic prevails among the European inhabitants, and many have returned from the country to Constantinople. The sale of gunpowder has been prohibited, but the Turks are said to have already bought large quantities. The agitation in Bosnia is increasing.

Servia.—Serious disturbances took place on the 5th inst. at Belgrade between Servians, Turks, and Bosnian sailors. Some Servians were wounded, and some Turks were killed or wounded. The garrison took no part in the affair. On the following day Prince Milosch returned to Belgrade, and the Foreign Consuls, the Pashas, and the Chiefs of the Police had a conference at which measures were taken to preserve public order. The Consuls also visited the hospitals, where 18 wounded Turks were lying, and the wives and children of the Turks took refuge in the Citadel.

Syria.—Ahmet Pacha, Governor-General of the province of Damascus, and Commander-in-Chief of the army of Arabistan, has been degraded and sent to Constantinople for trial, and Kurchid Pacha, Governor-General of Beyrout, has been placed under arrest. Upwards of 400 persons had been arrested by Fuad Pacha for participating in the recent massacres; they are incriminated on the charges of consuls, foreign agents, and natives. Among those arrested are Colonel Ali Bey and other influential persons belonging to the Mahomedan party. An extraordinary commission has been appointed to try them summarily, and those convicted are to be immediately executed. A considerable portion of plunder has been recovered. Damascus is quiet, and the authority of the Sultan has been re-established in the city, but murders are still committed in the surrounding country. Three thousand Christian women have been sold at 25 piastres each, and are detained in the harems. A threatened outbreak has been prevented at Salonica and also at Aleppo.

INDIA.—The Calcutta mail of June 27, has arrived but the news was mostly anticipated by the last mail:—

Calcutta.—The estimated deficit for the current year is 9,000,000*l*, nearly 2,000,000*l*. more than had been expected. Mr. Harington had re-introduced into Council a Bill to effect a general disarming of all classes of Europeans as well as of natives, but it had met with such opposition that it had been postponed for a week, and would no doubt be greatly modified. General Outram had returned from his trip to Singapore and Java, but his health was no better than when he left, and his departure for England could not be delayed further.

Bombay.—Some of the wealthy native gentlemen of Bombay have petitioned the Legislative Council against the income-tax, on the ground of its tendency to oppress the poorer classes.

Madras.—Sir Charles Trevelyan embarked for England on the 24th June, in the presence of a vast concourse of spectators, and amidst the most marked demonstrations of respect. In all the Presidencies sympathetic meetings had been held, and addresses voted to him on his departure from India. The meetings were composed chiefly of natives, and were of the most enthusiastic character.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Retirement of Bishops.*—Lord DUNGANNON called attention to the case of Dr. Hinds, the late Bishop of Norwich, and complained that no provision was made for the past services of bishops.—Earl GRANVILLE said that the subject had been under his serious consideration, but it was a very difficult one, and he had not been able to arrive at any satisfactory conclusion.—Lord STANLEY of ALDERLEY made some remarks on the conduct of the Ecclesiastical Commissioners with reference to the *Dean of York.*—The Earl of DERBY blamed the commissioners for raising the dean's salary without consulting Parliament.—*State of Syria.*—Lord STRATFORD DE REDCLIFFE moved for copies of the despatches, reports, and instructions which have passed between the Government and our Ambassador and consuls in Syria, in reference to the recent disturbances. In a lengthened statement on the subject, his lordship expressed a hope that the measures about to be taken would restore tranquillity to the country, though he felt that as long as Turkey continued in her present course, and did not put in practice the reforms which she had promised, it would be in pain for foreign Powers to patch up the eastern question, which might at any time involve the country again in war. The great war of principles had hitherto been kept in the distance by palliatives, but we were being rapidly brought in presence of that tremendous war which had been so long impending.—Lord WODEHOUSE said that it would be injurious to the public interest to produce the papers. The different European Powers had acted in conjunction on this matter, and the result of their deliberations had been a protocol signed at Paris defining the conditions under which the intervention of an European force ought to take place This protocol had been signed by the five great Powers and the representative of the Porte, and was to the effect that a force not exceeding 12,000 European troops should be sent to Syria, of which France would immediately furnish 6000, that the other 6000 should, in case they were required, be furnished by such one of the Powers as shall be deemed expedient; that the Porte should provide them with subsistence and all facilities for their movements, and that the continuance of European troops in Syria should be limited to six months. The great Powers had also declared their disinterestedness in concluding the arrangement for intervention and their intention not to seek for exclusive advantages, influence, or privileges. He also stated what steps had been taken by the Porte for the suppression of these disturbances. The different Powers had also determined to send a commission to Syria, and Lord Dufferin had been selected to represent England. He was glad to inform the House that the Governor of Damascus was already in custody, and was to be brought to trial. The stability of the Turkish empire was of the greatest importance to Europe, and everything ought to be done to preserve it.—In reply to a question from Lord DERBY, Lord WODEHOUSE stated that the facts concerning the noble conduct of Mr. Harvey, at Tyre, as stated in the newspapers, were quite correct. He also referred, in eulogistic terms, to the spirited and humane conduct of a Mahomedan lady at Hasbeia who had given refuge to 300 Christian women, and prevented their massacre.—Lord CLANRICARDE paid a compliment to the conduct of Abd-el-Kader. He dissented from the plans of the Government and counselled far more vigorous proceedings with the effete Government of Turkey.—Lord GRANVILLE said we ought not because our feelings were roused by indignation at what had occurred, rashly and entirely to change our policy in the East, which had materially contributed to the peace of Europe and the balance of power in the world. The motion was then withdrawn.

MONDAY.—The *Royal Assent* was given by Commission to the *Census* (*England and Ireland*) *Bills*, and several other Bills. The *Industrial Museums* (*Scotland*) *Bill*, the *Tramways* (*Ireland*) *Bill*, and the *Admiralty Jurisdiction Bill* passed through committee. *The Syrian Expedition.*—The Earl of SHAFTESBURY asked if the force about to be sent to Syria was to be employed simply in the preservation of peace, without interfering in civil and religious matters? He trusted that the vigorous policy inaugurated by Lord Stratford de Redcliffe would be maintained, and expressed his distrust of the intentions of the Emperor of the French.—Lord WODEHOUSE replied that there was no further interference contemplated than what was necessary to restore peace and order.—The Marquis of CLANRICARDE trusted that the interference would not stop with the mere restoration of order, but that some settlement would be effected of the country itself. The order for the committee on the *Landed Property Improvement* (*Ireland*) *Bill* was discharged.

TUESDAY.—*Militia Bill.*—On the motion that the report of amendments on this Bill be received, the Marquis of SALISBURY objected to the provision for reducing the age up to which men could be balloted for the Militia from 35 to 30.—Earl DE GREY and RIPON briefly explained that the proposed change was made in order to exclude men of settled position in life from the action of the ballot.—The EARL of DERBY suggested that, as reducing the maximum age would reduce the numbers liable to serve, the loss might be counterbalanced by reducing the minimum age from 18 to 16.—Earl GRANVILLE thought the suggestion very judicious, and promised that it should be attended to. The report was then received.—Earl DE GREY and RIPON moved the second reading of the *Rifle Volunteer Corps Practice Ground Bill*, and stated that the object of the measure was to afford facilities to Rifle Volunteer Corps for acquiring practising grounds.—EARL SPENCER cordially supported the Bill, which was read a second time. The *Naval Discipline Bill*, the *Game Certificates Bill*, the *Senior Member of Council Bill*, the *Admiralty Jurisdiction* (*Ireland*) *Bill*, and the *Superannuation Act* (1855) *Amendment Bill* were read a third time and passed. *Public Business.*—In reply to the Earl of DERBY, Earl GRANVILLE stated that the Government intended to proceed with the Poor Law (Ireland) Continuance Bill, the Ecclesiastical Commission Bill, the Friendly Societies Bill, the East India Transfer of Stock Bill, the Fortifications Bill, the Indian Army Bill, the Land Improvement (Ireland) Bill, the Roman Catholic Charities Bill, and the Industrial Schools Bill.

THURSDAY.—The *European Forces* (*India*) *Bill* was brought up from the Commons and read a first time, the Earl of ELLENBOROUGH giving notice of his intention to oppose at a future stage. The *Local Government Act* (1858) *Amendment Bill* was read a third time and passed. The report of amendments on the *Tramways* (*Ireland*) *Bill* was brought up and agreed to. The *Ecclesiastical Commission Bill* was read a second time, after some discussion on the powers of the Commissioners in regard to the recent increase of the stipend of the Dean of York. The *Rifle Volunteers Bill* passed through committee. *The Industrial Museum* (*Scotland*) *Bill* was read a third time and passed. The *Tenure and Improvement of Land* (*Ireland*) *Bill* was read a third time and passed. Some other Bills were advanced a stage.

FRIDAY.—*Public Business.*—Earl GRANVILLE said, in answer to the Earl of DERBY, that the Government intended to proceed with the Lien and Freights Bill, but if the House strongly objected to the Bill they were ready to abandon it. He could not speak positively with reference to other Bills, but the Government intended in any case to proceed with the Tenure of Land (Ireland) Bill.—Lord REDESDALE protested against the needless delay of the present session. *Poor Relief* (*Ireland*) *Bill.*—Lord WODEHOUSE moved the second reading of this Bill.—Lord REDESDALE opposed it. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Savoy Conference.*—In answer to Lord J. MANNERS, Lord J. RUSSELL said that her Majesty's Government had assented to a conference on the affairs of Savoy, but that Austria and Russia had objected, on the ground that they saw no advantage likely to accrue from it, and, unless they withdrew their objections, some other arrangements must be made. *State of Syria.*—Mr. RICH brought under notice the papers respecting the disturbances in Syria, and inquired what steps the Government intended to take with reference to the present emergency.—Sir J. FERGUSSON said that although the Christians had been the sufferers, they were not without blame, and that the recent outbreak was attributable, in a main degree, to their conduct.—Mr. S. FITZGERALD recommended that, if we interfered in the internal affairs of Syria, great care should be taken not to diminish the authority of the Sultan.—Lord JOHN RUSSELL explained the arrangements which had been made by the five Powers, and stated that the nature and degree of the proposed intervention were laid down in a protocol which had been signed in Paris by the representatives of the contracting Powers. Since the arrival of Fuad Pacha at Damascus the massacres had in a great degree ceased; the Governor had been sent to Constantinople to be tried, and there was no disposition on the part of the Porte to show any lenity to him.—Mr. BRIGHT said that no intervention could be so well excused as that proposed in Syria, which was more of the character of an intervention by a police force than by a body of troops for a political object, and he hoped the course taken by the French Government in this matter would lessen the distrust as to its intentions. He protested, however, against the policy of interfering in support of a Power like Turkey, which was doomed to fall to pieces by a decay which it was impossible to arrest. Lord PALMERSTON said that Mr. Bright took a very limited view of the subject. Although immense progress must be made to bring Turkey up to a level with the civilised nations of Europe, his opinion was that if Turkey was left to herself she would not fall to pieces. *Affairs of Sicily.*—In reply to Mr. GRIFFITH, Lord J. RUSSELL repeated that the Government adhered to the policy of non-intervention. *The Chinese Indemnity.*—In answer to Mr. GREGSON, the CHANCELLOR of the EXCHEQUER said that no sums had been received from China in respect of the late war, as no precise period of payment was stipulated by the treaty of Tien-tsin. The French had, however, succeeded in obtaining the first instalment of the indemnity due to them, as they had introduced a special provision to that effect in their treaty.—The other subjects discussed on the motion for adjournment included the report of the select committee on *Military Organisation*; the British territory on the *Red River and Assiniboine*; the superannuation of *Dockyard Labourers*: the promotion of *Colonels for service in the Crimea*; the *Public Lunatic Asylum at Kingston, Jamaica*; shortening the stocks of *Enfield rifles*; and the appointment of *Mr. George Keogh* Crown prosecutor of the County of Meath. The report on *Fortifications and Works* was brought up and agreed to, and leave was then given to bring in a bill to carry the resolution into effect The House then went into committee of supply. The vote of 39,937*l*. for the *Houses of Parliament* led to a protracted debate on the frescoes, statues, and decorations, in the course of which the old question of the claim of Oliver Cromwell to a statue was debated, and the general opinion appeared to be that the Lord Protector was not entitled to that honour. The vote was ultimately reduced by 1600*l*., the cost of the proposed statues of William IV. and George IV.—Mr. SPOONER proposed to reduce the vote still further by the omission of 1200*l*. for the Commons' Corridor; but this amendment was negatived on a division by 67 to 44. Mr. A. SMITH moved a reduction of the vote by 30,000*l*. upon the ground that the vote of last year under this head was unexpended, and this amendment was likewise negatived by 60 to 32. The vote, now reduced to 37.997*l*., was then agreed to and ordered to be reported. The other orders of the day were then disposed of, and the House adjourned at 20 minutes to 3 o'clock to Monday.

MONDAY.—*The Atlantic Telegraph.*—In answer to Mr. BERKELEY, the CHANCELLOR of the EXCHEQUER said that in consequence of the failure of the Atlantic Telegraph Company in their attempt to lay down a submarine line to America, the agreement entered into between them and her Majesty's Government, though not repealed, had become void. Looking to the small success of deep-sea telegraphs, the Government would exercise great caution in entertaining applications for the construction of any similar telegraphs.—In reply to Mr. CAIRD, the LORD ADVOCATE said that it was the intention of the Government to appoint a commission to inquire into the state of the *Scotch Herring Fisheries*. *Abd-el-Kader.*—In answer to Mr. GRIFFITH, Lord J. RUSSELL, protesting against the repetition of these inconvenient questions, said that the Government had received information that Abd-el-Kaker had saved the lives of several hundred Christians. *The Paper Duties.*—The House went into committee on the Customs Acts, when the CHANCELLOR of the EXCHEQUER moved the two resolutions of which he had given notice for reducing the duties on the importation of foreign paper to the level of the Excise duties imposed on the home-made commodity. The first of these resolutions applied to paper the production of France and Algeria, and the second to that manufactured in other countries. The former had considerations attaching to it which grew out of the late commercial treaty, in addition to those which were matter of policy; whilst the latter was proposed on the ground of policy alone. The question at issue was a minute one as respected the public revenue and the trade to which it related, though, of course, the effect of the diminution of the duty would be to increase the customs revenue and stimulate the manufacture. The exaggerated consequences anticipated by a particular class from the change and the predictions of ruin that must result to the English manufacturers, only showed that if true they had been taxing the consumer to an unjust extent. If he were asked what advantage would be derived by the consumer from the measure, his reply was that he would have the same advantage that was enjoyed by the consumer of every other article—namely, that of calling in the aid of the productive power of his own country, the productive power of foreign lands, and reducing an undue pressure on the market by resorting to other sources for supplying the demand. But the question was one of great importance in connection with other principles, the first of which was the obligation of honour resting upon us to carry out the treaty with France. Further, as a matter of policy, his proposal would test the real opinions and convictions of the present House of Commons in regard to that system of commercial legislation which, triumphing over all resistance, had now become established in this country, and presented a noble example to the world. There were also considerations of justice to particular classes and interests, which would suffer not only under the legislation of foreign countries, but under our own, unless the committee thought fit to adopt the resolutions. With regard to treaty obligations, the treaty with France contained an absolute and indisputable obligation, without reference to whether one or the other party was or was not disposed to carry it out, which bound us to the immediate execution of its provisions. The House had sanctioned that treaty, and had entered into a general engagement to take the steps necessary to give it effect. But it was said that this was done on the understanding that the French Government would remit their export duty on rags. The French Government had done their best to accomplish that object, but unfortunately the protectionists had been too strong for them. He hoped the House would not afford any encouragement to those monopolists, but that it would strengthen the hands of the enlightened statesmen and writers in France who were endeavouring to introduce the great principle of free trade into that country. That rags were cheaper in France than in England was not a fact, for we exported more rags in one year than we could get from France if the export duty were removed. As to postponing legislation on the subject, nothing could be more impolitic than to keep so large a branch of industry in suspense. On the ground, therefore, of humanity to a protected interest it would be well to have the paper question settled at once. The paper manufacturer had no real ground of complaint; on the other hand, he had reason to be specially grateful, for while the manufacturer in foreign counties was taxed in respect of his machinery, chemicals, and all other commodities necessary for the production of paper, the British papermaker had no such disadvantages to contend against. Having referred at some length to the special grounds of exception urged by the British manufacturer, he concluded by expressing his conviction that the House of Commons would once more and once for all give effect to that great principle of free trade which had conferred such signal benefits upon the very class which it was at one time asserted it would annihilate.—Mr. PULLER moved as an amendment "that without desiring to prejudice the question of a reduction at a future period of the customs duty on books and paper, this committee does not think fit at present to assent to such reduction." He contended that, regard being had to the capital embarked in the paper trade, and the number of persons engaged in it, Parliament was not justified in making so important a change as that proposed without previous inquiry before a select committee.—Mr. CHILDERS, Mr. CROSSLEY, and Mr. MARSH supported the resolutions, Mr. MAGUIRE, and Mr. NORRIS opposed them.—Sir HUGH CAIRNS denied that the House was bound to the resolutions either by the provisions of the treaty or by the principle of free trade. The division of the argument by the Chancellor of the Exchequer was suspicious, for, if the House was bound by the treaty, what necessity was there for referring to free trade? It seemed to him that the object of the Government was transparent, and that they had thrown out a double net to catch the admirers of the French treaty, and, should these not be sufficient, to include the Freetraders. He analysed at some length the provisions of the treaty, and argued that according to the true construction of it, and in honour and good faith, France ought to have removed the prohibition on the export of rags. The course, then, for the House to take would be to wait for the fulfilment of the contract. He maintained that if the representations of the paper-makers were true, there was no room for the application of free-trade or protection, and that the House was bound to grant an inquiry. The alternative offered by Mr. Puller was a reasonable one, and he would give it his support.—The ATTORNEY-GENERAL said that looking to the true import of the Commercial Treaty, not in the spirit of a technical lawyer, but as apparent to the intelligence of men of honour, endowed with common sense, he had come to the conclusion that, as between England and France, all Customs duties were to be tariffed on the English side, merely so as to counterbalance the Excise duties charged on the native manufacture. On this understanding, the assimilation of the Customs and Excise taxes on paper was, he contended, directly and incontrovertibly derived.—Mr. HENLEY said that the Attorney-General had evaded the real question at issue. He confessed he could not understand how the Government made the House agree to a differential duty on Hops if the seventh article of the treaty were conclusive.—Lord JOHN RUSSELL said that the difference between the proposal to reduce the customs duty on paper and the question of the export duty on foreign rags was, that one was expressly stipulated for in the treaty, whilst the other was not. He condemned the amendment on the ground that it sought by an evasion to get rid of a treaty obligation, and submitted that if the House gave it their approval they would stand before Europe as an assembly regardless of honour and good faith. He called upon the House, on the ground of wisdom and policy, not to present to the world the discreditable spectacle of a great nation running away from its engagements, and frightened at the hobgoblin of protection.—Mr. DISRAELI said it was idle to contend that if the House rejected the resolutions of the Chancellor of the Exchequer it would be guilty of a breach of faith with France; because the course already taken with regard to hops was a violation of the treaty. France had already taken time to consider the articles respecting iron, steel, yarn, and other commodities; and it would be neither unreasonable, dangerous, nor unjust if the Government were to avail themselves of the same delay which France had claimed for herself.—Lord PALMERSTON expressed his opinion that the House had no alternative but to carry out the engagements of the treaty. It was said that paper was not supposed to be included originally under the provisions of the treaty; but it should be remembered that when the treaty was drawn it was supposed that the excise duty on paper would not be continued. When, however, circumstances occurred which led to the continuance of the duty, paper, as a matter of course, came under the provisions of the 7th article of the treaty. He hoped the House would look at the matter in a plain, English, common-sense manner, and maintain the character of the country for honour and integrity in its relations with foreign nations. The House divided, when the amendment was negatived by 266 to 233. The first resolution was then agreed to. On the second resolution being put, Mr. PULLER moved a similar amendment with respect to it, but Mr. DISRAELI declining to give his support, it was negatived without a division, and the resolution was agreed to. A further resolution, increasing the rate of *Duty on Wine* according to the quantity of proof spirit, was also agreed to. The remaining orders were then disposed of, and the House adjourned at half past 2 o'clock.

TUESDAY.—*Roman Catholic Charities Bill.*—The House went into committee on the clauses of this Bill, which were agreed to after a long discussion with amendments. The clause in the Bill of last year vesting the management of invalid charities in the Charity Commissioners, and, failing these, in the Court of Chancery, was unanimously adopted. The *Industrial Schools Act* (1857) *Amendment Bill* also passed through committee. On the order of the day for the third reading of the *European Forces* (*India*) *Bill*, Mr. DOBSON opposed the Bill, which was also opposed by Sir H. WILLOUGHBY, Sir T. COLE-

BROOKE, Sir D. L. EVANS, Sir H. VERNEY, Sir M. FARQUHAR, and Mr. HORSMAN, and supported by Mr. VANSITTART, and Colonel P. HERBERT. — Sir J. ELPHINSTONE moved as an amendment that the Bill be read a third time that day three months.—Mr. J. B. SMITH seconded the amendment.—Sir C. Wood and Mr. T. G. BARING opposed it. The amendment was negatived without a division, and the Bill was read a third time and passed.—On the order for considering the report from the committee on the Customs Acts as to the duty on *Foreign Malt*, Sir F. KELLY moved as an amendment that the resolution relating to malt should be recommitted with the view of augmenting the import duty on that article from 25*s.* to 26*s.* per quarter. This higher duty was, he contended, the minimum rate which would place the native producer of malt on a par with his foreign rival.—The CHANCELLOR of the EXCHEQUER opposed the motion on the ground that no considerable amount of malt came from abroad, and that the great body of maltsters were satisfied with the arrangement made by the Government under the treaty.—After some remarks by Major PARKER and Mr. BASS, the House divided, when the amendment of Sir F. Kelly was negatived by 86 to 49, and the resolution was agreed to. The report on the Customs duty on *Paper and Wine* was brought up and agreed to, and leave was given to bring in a Bill. The *Titles to Land (Scotland) Act* (1858) *Amendment Bill* was read a second time. The report of the *Committee of Supply* was brought up and agreed to. *Public Business.*—The SOLICITOR-GENERAL moved that the orders for the committal of the Offences against the Person Bill and six other Bills for the Consolidation of the Criminal Law, which had been sent down from the Lords, be discharged, and stated that the Government intended to introduce the Bills in that House next session.—Mr. JAMES, Sir F. KELLY, and Mr. MALINS lamented the fate of these Bills, and Lord PALMERSTON expressed his regret, but had no alternative. The motion was then agreed to, and the Bills were withdrawn.

WEDNESDAY.—*Union of Benefices Bill.*—On the order for going into committee on this Bill, sent down from the Lords, Mr. GRIFFITH objected to proceeding with the Bill at that late period of the session.—Mr. HENLEY also objected that the Bill took good care of the bishops and clergy, but altogether neglected the parishioners. The House then went into committee, but almost immediately after Mr. MALINS moved that the chairman report progress. On a division the motion was negatived by 76 to 16. A long discussion then took place on the provisions of the Bill. Mr. BOUVERIE, who had charge of it, said that the measure, as originally drawn, was intended to include London, Lincoln, Exeter, York, and Norwich, but as the House was opposed to so wide a range he was ready to consent that it should be confined in its operation to the metropolis only. The limited attendance at the City churches formed a leading topic in the discussion, and Sir M. PETO offered to accept, on behalf of the Dissenting body, all the City churches which might be given him, and to undertake to fill them with congregations drawn from the parishes which were now deserted.—Mr. C. BENTINCK moved an amendment prohibiting the pulling down the churches of St. Stephen's, Walbrook, St. Martin, Ludgate Hill, St. Peter, Cornhill, and St. Swithin, Cannon Street, or the towers and steeples of any of the churches within the City specified in the schedule annexed to the Bill.—Mr. BOUVERIE consented, and the amendment was agreed to. On clause 14, Mr. HENLEY moved, as an amendment, the insertion of words prohibiting the sale of any ecclesiastical site in which there had been interments, but it was rejected by 80 to 50.—Sir M. PETO then moved the insertion of words giving power to the ecclesiastical Commissioners to sell the churches to dissenters for purposes of public worship.—Lord J. MANNERS, Sir F. BARING, and other members objected, but Mr. BOUVERIE promised to consider the subject, and bring up a clause on the report. At a quarter to 6 o'clock the chairman quitted the chair without putting the question, and the House resumed. Several Bills passed through their formal stages.

THURSDAY.—*National Gallery.*—On the motion for going into committee of supply, Mr. ADDERLEY called attention to the plans for the improvement of the National Gallery, strongly recommending that of Captain Fowke.—A discussion followed, in which strong protests were made against the retention of the Royal Academy in the present building, contrary to the decision of the committee and a direct understanding with the Government of the day.—Mr. COWPER promised to explain the matter fully when the estimates for the National Gallery were brought forward. *Civil Service Audit.*—Sir F. BARING moved a resolution that the present system of audit and appropriation of the Civil Service expenditure was imperfect and ought to be amended.—Sir G. LEWIS assented to the motion, which was agreed to. The House then went into committee of supply. The first vote of 100,440*l.* for Royal Parks and Pleasure Gardens gave rise to a warm debate, chiefly upon the subject of the *Kensington Garden Ride*, which was condemned by Sir J. SHELLEY, Mr. W. WILLIAMS, Lord J. MANNERS, and Mr. MALINS, and defended by Mr. COWPER, Mr. A. MILLS, Mr. H. SEYMOUR, Mr. J. LOCKE, and General PEEL. Sir J. SHELLEY moved to reduce the vote by 250*l.*, the cost of the fence for the new ride On a division the motion was negatived by 71 to 48. *Spain and the Great Powers.*—In reply to Mr. BAILLIE, Lord J. RUSSELL said that no application had been made by Spain herself to be admitted to the rank of a first-rate Power, but France, Austria, and Russia were in favour of the admission. It appeared, however, to her Majesty's Government to be at present undesirable that Spain should be recognised as one of the great Powers.—On the order for the second reading of the *Fortifications (Provision for Expenses) Bill*, Mr. E. JAMES moved, as an amendment, that before proceeding further it is desirable to possess further information as to the entire cost of the construction and maintenance of the proposed works, distinguishing the expenses of the sea defences and land fortifications.—Sir C. NAPIER seconded the amendment, which was supported by Col. DICKSON, Mr. MONSELL, Sir F. SMITH, Mr. B. OSBORNE, Sir M. PETO and Mr. WHITE, and opposed by Mr. S. HERBERT, Lord ELCHO, Capt. JERVIS, Sir D. L. EVANS and Lord PALMERSTON, who said that the Government were of opinion that permanent defences were the best and the cheapest. He repeated that the proposal was not founded on distrust of any particular Sovereign or nation, but on a deliberate conviction that we ought to be prepared to defend the vulnerable points of the country, and that the best security for the continuance of peace was to be found in the ability to defend ourselves. On a division the amendment was negatived by 143 to 32, and the Bill was read a second time. *Ordnance Survey.*—On the motion that the House resolve itself into a Committee of Supply, Sir M. PETO moved a resolution that it is expedient to discontinue the ordnance survey on the 25-inch scale till the survey on the 1-inch scale shall have been completed and published.—Mr. S. HERBERT said it was the intention of the Government to discontinue this year the survey of new ground on the 25-inch scale, merely finishing the counties begun, and to consider before the next Session the best course to pursue in future. After a short discussion, the resolution was withdrawn and the House went into Committee of Supply. — Mr. LAING moved a vote of 60,000*l.* in accordance with the *Galway Packet Contract*. He entered at great length into the details of the case and the position of the Government in relation to it, and said that the Government had come to the conclusion that there was no other course, under the circumstances, than to fulfil their obligations under the contract entered into by their predecessors.—Mr. BOUVERIE moved as an amendment that the vote be disallowed.—The amendment was supported by Sir F. BARING, and opposed by Mr. WHITESIDE, Mr. CRAUFORD, Mr. DISRAELI and Mr. ROEBUCK. On a division the vote was carried by a majority of 106, the numbers being 145 to 39.—The CHAIRMAN then reported progress, and the House adjourned at 25 minutes to 3.

FRIDAY.—*The Royal Parks.*—The House resolved itself into Committee of Supply, and resumed the consideration of the vote of 100,440*l.* for the royal parks and pleasure grounds.—Colonel DUNNE moved that the sum be reduced by the sum of 18,000*l.*, the cost of the metropolitan parks. He protested against Ireland being called upon to contribute to an outlay which was of no use whatever to that country.—Sir J. SHELLEY again protested against the new ride in Kensington Gardens. After considerable discussion Mr. COWPER said that probably before the end of the session—if ever it did close—the ride would be closed altogether.—On a division Col. DUNNE's motion was negatived by 66 to 15.—Mr. A. SMITH moved the reduction of the vote by 2600*l.*, the amount of items for a well, steam engine, and flowers charged for Battersea Park. The motion was negatived on a division by 55 to 31.—Sir J. SHELLEY moved the reduction of the vote by 400*l.*, part of the cost of draining Richmond Park. The motion was negatived without a division. The orignal vote was then agreed to. [Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93 to ⅛ for Money, and 93⅛ to ¼ for Acct.; Bank Stock, 230 to 231; Three per Cents. Reduced, 93⅜ to ¼; New Three per Cents., 93¼ to ½; Thirty Years' Annuities, expiring in April, 1858, 16⅝; India Stock, 219; Ditto Five per Cent. Stock, 1859, 104⅛; Ditto for Acct., 103¾ to ¼; Ditto Four per Cent. Debentures, 1858, 97 to 96⅞; Ditto Bonds, 4*s.* dis.; Exchequer Bills, 6*s.* prem.—FOREIGN: Austrian Five per Cent. Metallics, 55¼; Chilian Four and a Half per Cents., 82¾; Dutch Two and a Half per Cents., for Acct., 65¼; Mexican Three per Cents., for Acct., 21¼; Portuguese Three per Cents., 1853, for Acct., 44¼; Russian Four and a Half per Cents., 93¾; Spanish New Deferred Three per Cents., 40⅛; Ditto Passive, 21; Turkish Six per Cents., 1858, for Acct., 60¾ to ½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,309,205	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	14,834,205
		Silver Bullion	
	£29,309,205		£29,309,205

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,804,273
Rest	3,513,130	Other Securities	19,483,347
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	4,823,222	Notes	7,601,815
Other Deposits..	14,003,280	Gold and Silver Coin ..	717,339
Seven day and other bills	714,142		
	£37,606,774		£37,606,774

9th day of August, 1860. M. MARSHALL, Deputy Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. ADAMS, Hanley, Staffordshire, Grocer—H. BEESON, Bushey Heath, Hertfordshire, Builder—E. J. BURN, jun., Brighton, Stationer—F. CROCKFORD, St James's Street, Eating House Keeper—E. GANDELL and H. J. TODD, Greenwich Street, Upper Thames Street, and Sise Lane, City, Merchants—J. HART, Crown Street, Finsbury, Boot and Shoe Manufacturer—J. V. HOWES, Chiswell Street, Leather Seller—J. E. NEAL, Leicester, Glove Manufacturer and Soda Water Manufacturer—L. J. PHILP, Plymouth, Butcher and Meat Seller—J PRICE, Abertillery, Monmouthshire, Draper, General Shop Keeper, and Manager of a Ship—G. RAWLE, Porlock, Somersetshire, Tanner—J. L. STEVENS, Fish Street Hill, City, Dealer in Iron.

SCOTCH SEQUESTRATIONS—J. ABERDEIN, Aberdeen, Draper—W. S. GILMAN, Edinburgh, Merchant—T. GREENSHIELDS, Edinburgh, Cabinet Maker—G. C. MONTEATH, Glasgow, Accountant—M. H. SMITH, Glasgow, Ship and Insurance Agent.

FRIDAY—BANKRUPTS—J. ADAMS, Hanley, Staffordshire, Grocer—N. BENJAMIN and E. DIPPLE, New Cut, Lambeth, Gas Fitters—J. D. CHAPMAN, Aldermanbury, Warehouseman—F. DURRANT and G. BROCK, Norwich, Tallow Chandlers—H. FOOT, Spitalfields, City, Silk Manufacturer—F. HOLLOWAY, Paul Street, Finsbury, Engineer—W. JEFFERIES, Harts Hill, Worcester, Ironmaster—L. LEWIS, New Street, City, Trimming Seller—S. S. MAURICE, Great St. Helen's, Bishopsgate Street, City, Merchant—R. MILLER, Winterbourne, Kingston, Dealer—R. OLIVER, Wilmington Street, Clerkenwell, Jeweller—J. PITCHER, Hampstead Road, Leather Seller—G. REEVES, jun., Cheltenham, Riding Master—W. RICHARDS, Upper North Place, Gray's Inn Road, Builder—J. W. SWANN, Manchester, Indiarubber Manufacturer—G. A. WAKEFIELD, and R. BIRT, Swansea, Hotel Keepers—A. L. WARD, Fenchurch Street, City, Ship Brokers—J. B. WIDNELL, Regent Street, Middlesex, Mantle Manufacturer—A. WILLIAMSON, Nottingham, Blacksmith—G. WINTER, Milk Street, City, Warehouseman.

Metropolis and its Vicinity.

OPEN-AIR SERVICE FOR WORKING MEN.—On Saturday evening the Bishop of London preached in the open air to between 1500 and 1600 working men and children, in one of the most uncivilised portions of the outskirts of the metropolis. The place selected for this mission-service lies between Shepherd's Bush and the Great Western Railway, on the east of Wormwood Scrubs. The people who live around it are engaged in making bricks and pottery, while it is dotted here and there with gipsy tents and the temporary habitations of persons who are not able to obtain better shelter elsewhere. Many of the leading employers of labour in the neighbourhood, in compliance with the request of the local clergy, paid their men early in the evening, and vast numbers of them not only attended the service, but took their wives and children with them. The bishop, who was attended by his chaplain, arrived at half-past 7, and having put on his episcopal robes, the service commenced with the 100th Psalm. The litany was then read by the Rev. A. D. Hill, of Trinity Hall, Cambridge, the incumbent elect of a new church dedicated to St. Andrew which it is proposed to erect in the neighbourhood. The bishop selected for his text the 16th chapter of St. Luke, verse 8—"The children of this world are in their generation wiser than the children of light." The latter part of the bishop's address was particularly solemn. Darkness had come on, and the moon had risen, and all around the gipsies' tents were lighted up. Not a sound was heard but the bishop's voice, and now and then a train on the adjacent railway. A deep impression appeared to be made on many unused to such services by the solemnity and peculiarity of the scene. At the close of the sermon the doxology was sung, and the bishop pronounced the benediction. On Wednesday evening the bishop preached to a congregation composed of 400 persons of a similar class in the courtyard of his episcopal palace at Fulham; and on Monday evening his lordship will commence a series of special services for the working classes at St. John's District Church, Walham Green.

EXPERIMENTS WITH WHITWORTH GUNS.—In order to test the facility with which Mr. Whitworth's ordnance can be worked, a series of experiments occupying three days was made a few days since on the sands at Southport. The guns were an 80-pounder and a 12-pounder, rifled breech-loaders, and were worked by two parties of gunners, one of the Royal Artillery, from the North Fort, at Liverpool, under command of Captain Carpenter; the other from her Majesty's ship Excellent, under command of Lieutenant Ward, R.N. The experiments were made with shot, and also with shell of a construction suited to the guns. On the part of the Government there were present Colonel St. George, president of the Ordnance Select Committee; General Bingham, Sir G. Wetherall, Sir John Burgoyne; Captain Moore, R.N., Secretary to the Duke of Somerset; Captain Herbert, R.N.; Captain Marryat, R.N.; Captain Halstead, R.N.; and the Hon. Captain Wrottesley, R.N. There were also present Mr. Bidder, President of the Institute of Civil Engineers; Mr. Vivian, M.P., and a considerable number of the principal residents of Southport and Manchester. The highest range obtained with the 80-pounder firing 55 lb. shell was 5053 yards; the highest obtained with the 12-pounder firing 12 lb. solid shot was 10,100 yards, the greatest range ever yet attained by any gun. Notwithstanding this extent of range the Ordnance Select Committee have reported that Mr. Whitworth's ordnance are ineligible for her Majesty's service. Four causes of objection are said to be especially insisted upon—namely, great irregularity and uncertainty of range; difficulty of extracting the expended cartridge; danger to be apprehended from the launching rearwards of the friction tubes; wildness of ricochet.

OFFICIAL TRIAL OF ARMSTRONG GUNS.—A series of experiments was commenced on Tuesday with three of the Armstrong guns, with the view to test their breaching powers at short ranges. The place selected for the trial was Eastbourne, about seven miles east of Beechy Head, on a plot of ground about a mile from the town, and the object of attack was one of the old Martello Towers, with which that part of the south coast is studded. The Duke of Cambridge and a numerous staff of artillery and other officers were present on the occasion, furnished with a telegraphic and photographic apparatus, which were in constant use. The guns used in the experiments were 40, 70, and 100-pounders, Sir W. Armstrong himself acting as artilleryman. The range was nearly 1000 yards, and the results after each round were photographed. The firing included seven or eight rounds from each gun, and every shot told on the Martello Tower, which is composed of massive brickwork, 6 feet thick on the land side, and 9 feet thick on the sea side. At 4 o'clock the brickwork was pierced through, and the interior of the tower was laid bare. The breach, which was about 15 feet across the tower, and about 7 feet in height, presented the appearance of a rough and jagged archway, growing narrower and narrower inwards, till, at the narrowest point, where the interior was actually visible, it was about 3 feet across, and 1 or 2 feet in height.

THE WALWORTH MURDERS.—The adjourned inquest on the four persons murdered in Manor Place, Walworth, was resumed on Monday, when formal evidence was adduced to show that the prisoner had induced the young woman Streeter to insure her life for 100*l.* a few days before the murder, and had made false representations respecting his means both to her and to her family. It was also stated that the prisoner was convicted, at the spring assizes at Stafford last year, of stealing the plate of his master, Mr. Keate, and sentenced to 12 months' imprisonment with hard labour. He was discharged in March last, and then obtained a situation at Dr. Duncan's, Henrietta Street, Covent Garden, by means of a false character, and was dismissed in the beginning of last month. The policy of insurance payable to the prisoner on the death of Mary Streeter by the Argus Life Office, had been found in a box in his possession, together with a receipt for the payment of the first premium. Several letters which had been addressed by the prisoner to the young woman, and which had been handed by her father at Wadhurst to the officer who had charge of the case, were next read. They were filled with entreaties to her to come to town and complete the insurance; some of them remonstrating with her on her objections to insure her life, and referring to their approaching marriage, and others urging her to keep every thing secret from her friends, and bring all the money she could, as a day or two after their marriage he could get all they wanted. The letters recurred again and again to the insurance of her life, and made it a *sine qua non* to the marriage that the insurance should be effected. Having succeeded in that object, he wrote a letter requesting her to come up on the morning before the murder, at the same time urging her to destroy or burn all his letters to her. The evidence of the medical men showed that the

wounds in the chests and throats of the murdered persons could not have been inflicted by themselves, but must have been the work of a strong determined man, and they accounted for the absence of any noise by the supposition that he used chloroform. They expressed their opinion that the little boy who slept with the prisoner was the first person murdered, that the young woman Streeter was the second, that the mother and second boy were the next, and that the deaths of all must have been instantaneous, with the exception of the youngest boy, with whom there must have been a considerable struggling. The knife produced, and claimed by the prisoner as his property, was declared by the surgeons to be exactly the instrument calculated to produce the injuries of which they died, and the point which had been broken off was in their opinion still in the body either of the young woman or the mother. The jury, after deliberating a few minutes, returned a verdict of Wilful Murder against William Godfrey Youngman in each case. On Tuesday the prisoner was brought up for re-examination at the Lambeth Police Court, when evidence was adduced similar to that given before the coroner, and the prisoner was committed for trial on the capital charge. During the hearing of the case, a young woman from Staffordshire identified the prisoner as the person who had been courting her while in service in that part of the country. She produced the letters which the prisoner had addressed to her some months ago, and it appeared that they agreed word for word with those that he had addressed to Mary Streeter. In these letters the prisoner, who at the time passed under the name of Godfrey, made violent love to the young woman, and as in the case of Mary Streeter, implored her to insure her life. He also told her that he was possessed of independent property, and that he should have plenty of money after his marriage, but that meanwhile she must provide as much as she possibly could to meet the expenses of the wedding. After the wedding ring had been bought and she had consented to accompany him to Australia, the prisoner was sentenced to 12 months' imprisonment for the plate robbery. The young woman visited him in prison and sold the ring for the purpose of providing him with flannel jackets to wear in the prison. On his discharge he disappeared from Staffordshire, and she heard nothing more of him until she saw by the papers that he was in custody for these murders. It is stated that the defence to be set up is that of insanity, on the ground that the disease is hereditary in the family; the prisoner's grandmother on the mother's side, and his grandfather on the father's side having been insane, and one of his uncles having died in a madhouse.

THE PUBLIC HEALTH.—The Weekly Return of the Registrar-General states that the deaths in London in the week that ended Saturday, August 4, were 1047. In the corresponding weeks of the 10 years 1850-59, the average number corrected for increase of population was 1287; the present return is therefore 190 below the average. During the week the births of 921 boys and 831 girls, in all 1752 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1563.

Provincial.

BRISTOL.—On Saturday morning as a man was gathering herbs in Leigh Woods he found a large brooch, which has been identified as belonging to the unfortunate Charlotte Pugsley, whose murder by John William Beale some three years since created so much sensation. The brooch was lying in a hollow covered with weeds. The hair was slightly discoloured by water, which had penetrated it. The pin is missing, and the brooch has the appearance of having been violently torn from the dress of its wearer.

DOVER.—On Thursday evening a fatal accident took place in this town. While the Artillery Volunteer Corps were engaged in gun practice at Archcliff Fort one of the guns burst, killing Lieut. G. T. Thompson and Sergeant Monger on the spot, and seriously injuring several other members of the corps. Mr. Harris, a nephew of Captain Wollaston, who is in command of the corps, is lying in a dangerous condition from concussion of the brain, and among the other persons hurt are Mr. Gilfillen, tailor; Mr. Hadlow, painter; and a young man named Boulding. Lieut. Thompson was the coroner for the borough, and Sergeant Monger was a tobacconist in the town. It is believed that the accident arose from a defect in the gun and not from its being imperfectly loaded, as the ball discharged from it reached within a few yards of its proper range, which would not have been the case had there been any defect in the ramming of the charge.

DUDLEY.—Mr. George Hayes Hinchcliffe, of this town, one of the coroners for the county of Stafford, committed suicide at Bristol on the 5th inst., under circumstances of a melancholy and almost romantic character. The deceased gentleman was married on the previous Wednesday at West Bromwich, to a lady of equal position in society, to whom he had been for some time engaged, and in the course of the day they arrived at the Queen's Hotel, Clifton, on their trip for the honeymoon. Nothing strange was observed in the manner of the bridegroom until night, when he refused to sleep with his wife, and requested to be provided with another bedroom. The house being full he was told that he could not be accommodated, and he then left the Queen's and proceeded to a tavern on the quay, where he passed the night. His wife, alarmed at his strange behaviour, telegraphed for her brother, Mr. Fereday, of West Bromwich, who arrived in the course of the following day, and Mr. Hinchcliffe was sought out and prevailed on to return to his wife. He dined with her and her brother, but in the evening he again left the Queen's, and is believed to have wandered about all night. On Saturday he took lodgings at the house of a grocer in Thomas Street, and on Sunday morning committed suicide by throwing himself from the roof of the house, fracturing his skull and thigh in such a manner as to cause instant death. It appeared from the evidence at the inquest that he was exceedingly nervous and excitable, and that he had been suffering from hernia, which had probably tended to make him still more sensitive. He was about 30 years of age and was described by the witnesses as being of an amiable disposition and high character. The jury without hesitation returned a verdict of temporary insanity.

EXETER.—A subscription has been opened in this city for the benefit of Abraham Cann, the champion wrestler of England, now nearly 70 years of age. When wrestling was at its height Cann was as popular in the sporting world as Sayers and Heenan are at the present time. Many thousands of pounds were won by bets upon him; and although it is a well-known fact that he was offered large sums of money to sell his back he never would consent to do so, and was never thrown in his life. Latterly it has been discovered that the veteran champion was reduced to great poverty and was on the verge of the Union Workhouse. Mr. Langdon, of the Bull Inn, in this city, commenced the subscription on his behalf, and in answer to his appeal a large number of noblemen and gentlemen have liberally subscribed, including Lord Poltimore, Sir T. D. Acland, Sir M. Lopes, M.P., Mr. Kekewich, M.P., Mr. Divett, M.P., Mr. Gard, M.P., and Mr. Sillifant; and Lord Palmerston has sent a donation of 10*l.* out of the Royal Bounty Fund. When sufficient money has been raised it is proposed to purchase an annuity for the old man, so as to place him in comfortable circumstances for the remainder of his life. The subscription, increased last week by the proceeds of a wrestling match in London at which Cann was present, has now reached a goodly sum, but is insufficient to purchase the annuity.

FROME.—Advantage was taken of a private visit of Mr. Edlin, barrister, to the family of Mr. Kent, on Friday last, to hold a conference with him and Mr. Dunn, solicitor, and Mr. Parsons, the surgeon, who was called in within an hour after the discovery of the murder. Superintendents Foley, of Trowbridge, Woolf, of Devizes, and Summers, of Frome, were in attendance, and were present during part of the interview of the professional gentlemen. The local police have since made the most searching investigation of all the inmates of the house and of the persons in the locality likely to afford information on the matter. So minute has been the search that the body of the murdered child has been exhumed, with the sanction of the Home Secretary, at Bayuton, Devizes, under the impression that the missing nightdress might have been secreted in the coffin with the body, as it was not interred for four days after the nightgown was first missed, but nothing was found in the coffin beyond the usual grave clothes. Mr. Inspector Whicher and Sergeant Williamson have returned to London to await further instructions from the Home Secretary. It has been suggested that the investigation should be commenced *de novo*, and that, in addition to the employment of metropolitan detectives and the county constabulary, a London solicitor of experience in criminal cases, with a stipendiary magistrate to assist the local justices as their assessor, should be sent down to conduct the investigation. It has not yet been publicly stated that on the morning of the murder Mr. Parsons, the surgeon, made an examination of all the knives in the house (none of which were missing), and subsequently submitted them to a microscopic inspection, but could discover no traces of blood on any of them. Mr. Parsons also expressed an opinion that the wounds found on the body of the child, and which were inflicted both before and after death, could not have been caused by any of the knives found in the house. The absence of the weapon with which the murder was committed, like the mysterious disappearance of the night-dress of Miss Constance Kent, has hitherto baffled the researches of the police. The two pieces of newspaper which were found stained with blood, and on which it is supposed that the knife was wiped, have been proved to be portions of the *Times* of the 9th of June. They were stated at the inquest to be parts of a paper which was not taken in by Mr. Kent or any other person resident in the house, and from that circumstance the possibility of some person having secreted himself on the premises was suggested. As these fragments, however, are proved to be portions of the journal which was regularly supplied to Mr. Kent, the theory that the murder was committed by some inmate of the house is so far additionally confirmed.

GUILDFORD.—An extraordinary occurrence took place in the Crown court at the Assizes held in this town on Friday. About the middle of the day the grand jury, having concluded their business, came into court with the remainder of the bills, and Mr. Justice Blackburn dismissed them, thanking them in the usual form for the assistence they had rendered to the administration of justice. It appears that the High Sheriff of the county, Mr. Evelyn, had requested the learned Judge to pay a similar compliment to the gentlemen who had attended, but who had not actually served on the grand jury, as many of them had come a considerable distance to perform the duty, but the Judge considered it unnecessary to do so, and it was understood that the High Sheriff expressed his intention of thanking them himself. When the judge had addressed the grand jury he was about to proceed with a trial that was before the Court, when the High Sheriff rose, and, addressing a number of magistrates who were on the bench, said that "he also" — MR. Justice Blackburn interposed, and said that he could not allow the High Sheriff to proceed, and he must request him to desist. The High Sheriff seemed determined to go on, when the judge laid his hand on his shoulder, and said he could not permit him to speak, and he must request him to sit down. The High Sheriff still persisted, and Mr. Justice Blackburn threatened that if he did not desist he would fine him. As the High Sheriff did not sit down, Mr. Justice Blackburn said, "Mr. High Sheriff, I feel myself called upon to fine you 500*l.* His lordship then directed the Deputy-Clerk of Assize to record the fine. The imposition of the fine did not have the effect of inducing the High Sheriff to desist, and Mr. Justice Blackburn then threatened to commit him for contempt of Court, and interfering with the administration of justice. The High Sheriff then resumed his seat, and the event caused great sensation among the magistrates, who were very numerous in the town, and the bar. A correspondence subsequently passed, in which Mr. Justice Blackburn offered to remit the fine, in reply to which Mr. Evelyn sent the Judge a cheque for the money. Afterwards Mr. Scarlett and other gentlemen had a conversation with the Chief Justice in the other court, the result of which was that the High Sheriff came into court and read a written apology, expressing his sorrow for having committed any act which might bear the semblance of a contempt of the Court. Mr. Justice Blackburn stated that he had no personal feeling, but must protect the dignity of the Court, and could not allow any improper interruptions to the business of the assize. He then remitted the fine, and the affair terminated.

LIVERPOOL.—After several remands Thomas Winslow, the man charged with poisoning Mrs. James, her sister, nephew and niece, was brought before the magistrates last week for final examination, the investigation having been continued by adjournment from two days of the previous week. The general evidence added little to the facts already established at the inquest, but the medical evidence founded upon an analysis of the viscera, clearly established the existence of antimony in all the bodies that have been exhumed under the orders of the Secretary of State. Professor Taylor, of Guy's Hospital, deposed to the discovery of antimony in the viscera of Mrs. James, and believed that death had been caused by its administration in presence of a diseased *cæcum*, which had been ruptured in the vomiting which antimony was certain to produce. Dr. Cameron, Dr. Edwards, and other medical men confirmed this evidence, and Mr. Aspinall, for the prosecution, stated that antimony had been found in much larger quantities in the bodies of the other members of the family, but the magistrate declined to receive evidence of the fact in connection with the present charge. Inspector Horne deposed to finding a cup containing a portion of cooked sago, which, on being analysed, was found to contain antimony, although the parcel, uncooked, out of which it had been taken, contained no trace of that poison. He also deposed to finding a printed form of a will, which the prisoner said he had purchased for the purpose of making Mrs. James's will himself. To this witness the prisoner, on being charged with poisoning Mrs. James, admitted that he knew the use of antimony, but said he had not used any for 15 years; and he also pointed out a drawer containing a bank book, showing 135*l.* to the credit of Mrs. James, a receipt for four 25*l.* shares in the Liverpool Gas Company, a gold watch and chain, 35*l.* in cash, and the will of the deceased. After some further evidence the magistrate committed the prisoner for trial at the assizes.—Mr. Jeremiah Chaffers, Manager of the Royal Bank, committed suicide last week by hanging himself at his house, Belle View, Annfield Road. It is said that he had been in depressed spirits for some weeks, caused by the death of his brother at Oxford, and that he was greatly excited by a motion made at a meeting of the bank directors last week for dismissing him from his office for having made large advances to parties in the leather trade who have since failed. It appears, however, from a circular issued by the director to the depositors, that so far as his connection with the bank is concerned, everything has been quite right, and that no embarrassments of any kind exist. The jury at the inquest returned a verdict of Temporary Insanity.—Mr. Robert B. Anderson, of 23, Falkner Square, formerly one of the vice-presidents and general manager of the Northern Hospital in this town, has been taken into custody on a charge of having forged various receipts and embezzled money, the property of that institution, to the extent of 4000*l.* The prisoner, who is in his 67th year, is son of the late Rev. Robert Anderson, Unitarian minister of Park Chapel, Liverpool. He moved in a very high sphere of society, and it was supposed that he was a man of substance, and also that his wife was possessed of good property in Worcestershire; so that no suspicion was excited by his

living in one of the best squares in Liverpool. On being apprehended he admitted his guilt and said that he had only just returned from London, and had landed over 100*l.* to the committee of the institution, and signed over to them his furniture. The prisoner was committed to take his trial at the assizes, the magistrate refusing to accept bail on any terms.

Ireland.

THE ORANGEMEN AND ROMAN CATHOLIC JUDGES.—A few days since Chief Justice Monahan, when addressing the grand jury of Fermanagh, condemned the "evasion of the law in spirit" by the Orangemen of that district. Although they did not attempt to walk in procession, their flags were displayed from the church towers, and the Chief Justice, who has always carefully avoided mixing himself up with any of the party squabbles peculiar to Irish society, declared that this display was offensive to Roman Catholics. The grand jury, on retiring to their room, drew up a protest against the Chief Justice's observations. His lordship, when the document was presented to him, refused to read it. After this occurrence the Chief Justice proceeded to Londonderry, with Baron Hughes, another Roman Catholic judge, to open the assizes in that town. At an early hour in the morning a large Orange flag, having in the centre a representation of William III. crossing the Boyne, was exhibited on Walker's Testimonial, by which the judges had to pass in going to court. The mayor on hearing of this display, sent three or four times to request that the flag should be removed, but the key of the staircase leading to the summit of the pillar on which it was displayed could not be found. About 12 o'clock the mayor ordered the city police to break in the door and remove the flag; whereupon the parties who had charge of the demonstration produced the key, and the constables hauled down the flag.

Law.

NORTHERN CIRCUIT: CARLISLE.—*The Cockermouth Murder.*—*George Cass*, 25, labourer, was indicted for the Wilful Murder of Ann Sewell, at Embleton, on the 20th March last. It will be remembered that prisoner was a farm labourer in the service of Mr. Fearon at Embleton, near Cockermouth, and that deceased was a servant in the same family. On the day on which the murder was committed the prisoner and some fellow labourers had their dinner at their master's house, and were waited on by deceased, both Mr. Fearon and his mother being absent. The other men went away, leaving prisoner alone with deceased, and this was the last time she was seen alive. On the family returning the same evening the house was shut up, and on an entrance being gained through the window deceased was found with her throat cut and a knife loosely placed in her hand. There were evident marks of a severe struggle having taken place. Evidence was adduced to connect the prisoner with a purse and some money which had belonged to deceased, and it was also shown that whereas he had no money before the murder some was seen in his possession afterwards. He had been heard frequently to give utterance to violent expressions and threats towards her. At the conclusion of the evidence the jury returned a verdict of *Guilty*, with a recommendation to mercy. Mr. Baron Martin pronounced sentence of *Death*, holding out no hope of a remission. LANCASTER.—*The Wrightington Murder.*—*Charles Hart*, 21; *Edward Cubbin*, 31; and *Richard Benson*, 36, were charged with the Manslaughter of Hugh Ainscough, at Wrightington, on the 2d May, the grand jury having ignored the charge of murder against them. Deceased, who was 63 years of age, was a farmer at Wrightington, and on the 1st May he had been to pay his rent at Bispham. He was returning home much the worse for liquor, accompanied by Mrs. Ellen Fisher, a widow, and also a tenant of a neighbouring farm, to whom he was engaged to be married. The prisoners followed the old couple for the purpose of annoying them, and at length threw sods from the hedge at them. The old man wished to fight them, and as he would not go on, Mrs. Fisher left him. After her departure the prisoners threw him down on his back and heaped sods and clods of earth upon him to the extent of 10 cwt., and finally stopped up his mouth and nostrils with excrement. He was found next morning at 4 o'clock quite dead, his body covered with earth, and his mouth filled with filth which had evidently suffocated him. The jury *Acquitted* Benson and found Hart and Cubbin *Guilty*. Mr. Baron Martin sentenced them to three years' penal servitude.

MIDLAND CIRCUIT: WARWICK.—*The Birmingham Murder.*—*Francis Price*, 24, shoemaker, was charged with the Wilful Murder of Sarah Pratt, at Birmingham, on the 18th April last. It appeared from the evidence, which was of considerable length, that the prisoner, who is a shoemaker, had been paying his addresses to deceased, who was a barmaid or servant at a small inn at Deriten, near Birmingham, but his attentions did not seem to have been acceptable. However, he persevered, and at an early hour on Monday, the 16th April, he went to the inn before her master and mistress were up, and seeing her cleaning in the bar he endeavoured to kiss her over the counter. She escaped from him and left the house. On the following Wednesday he went to the house of a woman named Holmes, who lived in a court a short distance from the inn. Telling her that he would give her 5*s.*, he sent her to Mr. Jackson's to say that her sister wanted to see Sarah Pratt. This had the effect of bringing the deceased to the house of Mrs. Holmes, who had just reached her door when she met Price rushing out. On entering the house she found the young woman lying in a pool of blood on the floor, and on medical assistance being procured, life was extinct. Mr. Thomas Powell, a young baker, whose bakehouse is near the court, hearing the cry of "murder," ran up to the spot, and prevented the murderer from making his escape. On being searched, a nearly new and extremely sharp shoemaker's knife, smeared with blood, was found upon him. When searched he had about him photographs of himself and the deceased. The unfortunate young woman's head was nearly severed from the body. The jury found the prisoner *Guilty*. He then made a long statement of the causes which induced him to commit the crime, admitting that it was jealousy which prompted him to act as he had done, and stating that deceased had told him on Sunday positively refused his addresses, and that he did not think of murdering her five minutes before he left. Mr. Justice Wilbraham passed sentence of *Death*, holding out no hope of mercy.

OXFORD CIRCUIT: MONMOUTH.—*Sheep Stealing.*—*Howell Powell*, 44, farmer, was charged with stealing 40 sheep, the property of Walter Lewis, on the 4th April, 1860, at Llanwenarth. The prisoner was a farmer, living in the parish of Llantoist, which adjoined the parish of Llanwenarth, where the prosecutor lived. He had a flock of 300 sheep feeding on the mountain near his farm, and when counted it was found that 65 were missing. On the night of the 4th April the prisoner drove 42 sheep through a turnpike gate at Abergavenny, and the next day he sold 10 of them at Ross market. The sheep were clearly identified by a witness who could not write, but who produced a book, in which he had made drawings of the peculiar mode in which the sheep's ears were slit. The prisoner, in his defence, said he had received the sheep from his brother-in-law in discharge of a debt. The jury found him *Guilty*, and it was then proved that he had been convicted in 1851 of a similar offence, and sentenced to seven years' transportation. Mr. Justice Byles said the prisoner's next sentence would be much more severe than the last, viz., seven years' penal servitude.

HOME CIRCUIT: MAIDSTONE.—*Manslaughter at Bexley.*—*John Grainger*, a man about 40 years of age, was charged with having wilfully caused the death of Cordelia Covill, a woman with whom he lived. The evidence proved that the prisoner and deceased had been travelling about the country, and that on the 5th inst. they slept in an open lodge near Bexley. A little girl, 12 years of age, the daughter of deceased, who was with them, deposed that the prisoner quarrelled with her mother, and knocked her down on the night in question, and that she fell into a hedge. The prisoner then kicked her with such violence that she died from the effects of the blows on the next morning. The prisoner was committed originally on a charge of wilful murder, but the grand jury ignored the bill for that offence, and found one for manslaughter only. The jury returned a verdict of *Guilty*, and the prisoner was sentenced to three years' penal servitude.

Obituary.

THE HON. PHILIP STOURTON died on the 3d inst. at Holme Hall, Yorkshire. He was born in 1799, and was the youngest son of the 16th Lord Stourton. He married, in 1829, the eldest daughter of the late Mr. Henry Howard, by whom he leaves a family.

GENERAL SIR HENRY WYNDHAM, M.P. for West Cumberland, died at Cockermouth Castle on the 2d inst. in his 70th year. He was second son of the third Earl of Egremont, who died in 1837, and succeeded to the Lordship of the barony of Egremont and the honour of Cockermouth, as well as to the other estates belonging to his father in Cumberland. He was one of the surviving veterans of Waterloo, where he distinguished himself by an attempt which, though unsuccessful, won him high fame. He was a field officer, and, seeing the carriage of Jerome Bonaparte in the wake of the general retreat, he made a dashing attempt to capture the Emperor's brother. But Jerome was on the alert, and plunged out by one door while young Wyndham opened the other.

REAR ADMIRAL SIR JOHN HINDMARSH, K.H., First Governor of South Australia, and late Lieutenant Governor of Heligoland, died on the 29th ult., after a very short illness, at Denbigh Place, Belgravia, in his 76th year. He entered the Navy in 1793, served in the Bellerophon in Lord Howe's victory of the 1st of June, in Lord Cornwallis's retreat, and at the battle of the Nile. For his conduct in this last action, when in temporary command of the Bellerophon, he received the public thanks of Lord Nelson, and was presented with a sword by the officers of his ship. He served under Sir James Saumarez in the battles of Algesiras and the Straits of Gibraltar, and as Lieutenant at Trafalgar. He also served under Lord Cochrane at the Basque Roads, Flushing, and the capture of the West India Islands. He was the first Governor of South Australia, and was Governor of Heligoland from 1840 to 1856. He had received a medal and seven clasps for his naval services.

GENERAL GUSTAVUS NICOLLS, Colonel Commandant of the Royal Engineers, died on the 1st inst. at his residence near Southampton, in his 84th year. He had seen much active service in early life, having gone out with reinforcements to Gibraltar on the war breaking out with Spain in 1796, and remained blockaded in that fortress two years and a half. In 1799 he proceeded to the West Indies. In 1808 he accompanied Sir George Prevost to Nova Scotia as commanding engineer, and on expectation of hostilities with the United States, and remained there until the war broke out in 1812, and was actively employed in the protection of the frontiers of Nova Scotia and New Brunswick. He was present at the capture of Moose Island, Castine, and Belfast, and was commanding engineer in Canada in 1814 and 1815. In 1851 he was appointed a Colonel Commandant of the Royal Engineers.

MAJOR-GENERAL HASSELL MOOR, of the Royal Artillery, died on the 4th inst. at Fareham, in his 74th year. He served in the Peninsula from 1811 to 1813, and was present at the battles of Busaco, Fuentes de Onor, and Salamanca, at the sieges of Ciudad Rodrigo and Badajoz, the action of Castrajon, and numerous minor engagements. For his services in the Peninsula he had received two silver war medals and five clasps.

MAJOR STOFFORD, R.E., Adjutant of the Royal Engineers, died at Brompton Barracks, Chatham, on the 7th inst., after a very short illness. He had seen a great deal of service, having served during the whole of the Crimean campaign, including the battles of Alma, Balaklava, Inkermann, and Sebastopol. In addition to the Crimean medal he was also decorated with the 4th class of the Medjidie, the Sardinian medal, and the Turkish medal.

WILLS.—The will of the Dowager Lady Langford has been sworn under 60,000*l.*; Lady Boston, 18,000*l.*; General Sir David Leighton, 45,000*l.*; General Berkeley Drummond, 12,000*l.*; Sir William Domville, Bart., 50,000*l.*; Lord Elphinstone, G.C.B., 16,000*l.*; Lady Mary Somerset, 10,000*l.*

BIRTHS.—On the 6th inst, at Talacre, Flintshire, the Hon. Lady MOSTYN, of a son—4th inst, at 45, Rutland Gate, the Hon. Mrs. LOUIS HOPE, of a daughter—5th inst, at 12, Berkeley Square, the wife of GEORGE PEEL, Esq., Secretary to H.M.'s Legation at Hanover, of a son—4th inst, in Portland Place, the wife of J. LEVESON GOWER, Esq., M.P., of a daughter—[illegible], at [illegible], the wife of THOMAS FITZGERALD, Esq., of Ballysaggartmore, High Sheriff of the county of Waterford, of a daughter—at Monaghan House, Tunbridge, county Antrim, the wife of THOMAS MORRIS HAMILTON JONES, Esq., of a son and heir,

MARRIAGES.—On the 7th inst., at St. George's, Hanover Square, Captain the Hon. WILLIAM SACKVILLE WEST, Grenadier Guards, youngest son of the Earl and Countess Delawarr, to GEORGINA, youngest daughter of the late GEORGE DODWELL, Esq., of Knockfert, county of Sligo, Ireland—6th inst., at St Paul's, Knightsbridge, Lieutenant-Colonel HENRY GREEN WILKINSON, Scots Fusilier Guards, to the Hon. LOUISA CATHERINE BATEMAN HANBURY, youngest daughter of the late, and sister of the present Lord Bateman—2d inst., at St. George's, Hanover Square, FREDERICK GEORGE MANNINGHAM BOTHAM, Esq., second son of Sir John and Lady Catherine Botham, of Ketteringham, Norfolk, to LUCY HENRIETTA, eldest daughter of Sir GEORGE and the Hon. Lady NUGENT, of West Harling, in the same county—2d inst., at St. George's, Hanover Square, CHARLES HALLIDAY CAMPBELL, Esq., son of the late Sir George Campbell, of Ellenwood, Fife, to EVELYN, eldest daughter of HENRY STUART, of Newton Stewart, and grand-daughter of the late Rear-Admiral Lord George Stuart.—4th inst, at Trinity Church, Marylebone, HOWARD WARBURTON ELPHINSTONE, only son of Sir Howard Elphinstone, Bart., to CONSTANCE MARY ALEXANDER, third daughter of JOHN ALEXANDER HANKEY, Esq., of Balcombe Place, Sussex—24th ult., at St. James's, Paddington the Hon. JOHN HENRY ROPER CURZON, to HARRIET ANN, eldest daughter of the late Major JOHN HARMAN BROWN, of Salgrave Villa, Cheltenham, and formerly of H.M.'s 90th Regiment.—3d inst, at Trinity Church, St. Marylebone, ANDREW MURRAY LAWSON, Esq., third son of Charles Lawson, Esq., of Berkswell Hall, and Grove House, Edinburgh, to ELIZABETH, second surviving daughter of DANIEL NASH, Esq., of 4, York Gate, Regent's Park.

DEATHS.—On the 30th ult., at [illegible], Belgium, PHILIP FREDERICK [illegible], to the late Sir JOHN COURTENAY HONYWOOD, Bart., of Evington, Kent, aged 44—1st inst, at The Grange, Leamington, Lieutenant-Colonel PRATT, late 17th Lancers, aged [illegible]—[illegible] while gallantly leading his men in an attack upon the rebels at Rajooghur, near Goonah, Central India, Lieutenant W. H. JOHN JENNINGS, H.M.'s 2d European B. L. Cavalry, and [illegible] to Meerut dépôt, youngest son of the late Rev. M. J. JENNINGS, M.A., Chaplain of Delhi, aged 22—30th ult, at Southsea, Hants, the Hon. CHARLOTTE BOWERBANK, R.N.; widow of [illegible], late Deputy Commissary-General of the Fleet, and sister of Admiral Sir Napier Broke Middleton, K.C.B., and of Colonel Middleton, late of the 52nd Regiment, who fell at the battle of Waterloo, aged 69—6th inst, at White Hall, Hants, THOMAS HOLMES, Esq., F.R.S., of Liskeard, Cornwall, and late Chief Clerk in H.M.'s Treasury, aged 82—6th inst, at St. Leonard's, the Rev. EDWARD REPTON, Canon of Westminster, aged 79—6th inst, at St. Olave's Rectory, Hart Street, the Rev. DAVID LAING, aged 59—31st ult, after a short illness, at Birmingham, CHARLOTTE ELIZABETH, wife of THOMAS SKINNER, and only daughter of John Vaudrey, Esq., of North Bank, Regent's Park.

Markets.

COVENT GARDEN, Aug. 11.

In addition to foreign importations the market has this week been supplied with some good Plums, Apples, and Pears of English growth. Notwithstanding that the weather has interfered considerably with home-grown produce, the supply of most things is still abundant. Pines, Peaches, and Nectarines are plentiful. Grapes are abundant, as are best, still maintain fair prices. Cob Nuts are realising 1*s.* per pound. Gooseberries fetch 3*d.* a quart. Peas are abundant. New Potatoes range from 6*s.* to 8*s.* per cwt. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Heaths, Kalosanthes, Geraniums, Lily of the Valley, and Roses.

FRUIT.

Pine Apples, per lb., 3s to 4s	Gooseberries, per qt., 3d to 6d
Grapes, per lb., 2s to 5s	Currants, per qt., 3d to 6d
Strawberries, p. lb., 6d to 1s 6d	Green Figs, per doz., 4s to 8s
Peaches, per doz., 8s to 15s	Melons, each, 2s to 4s
Apricots, per doz., 2s to 4s	Apples, per doz., 2s to 6s
Nectarines, do., 5s to 10s	Oranges, per 100, 10s to 20s
Cherries, p. lb., 1s to 3s	Lemons, per 100, 10s to 15s

VEGETABLES.

Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per qrtn., 6d to 1s	Celery, per bundle, 1s 6d to 2s
Peas, p. bush., 2s to 3s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 4d to 6d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 4d to 6d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d to 7d	Mushrooms, p. pott., 2s to 3s
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 4s
Cucumbers, each, 6d to 1s	Savory, per bunch, 2d to 4d
Artichokes, per doz., 6s to 8s	

BUTTER MARKET.—Aug 10.

Best Fresh Butter .. .. 13*s.* per dozen lbs.
Second do. do. .. .. 12*s.* " "
Pork, 5*s.* 0*d.* to 5*s.* 4*d.* per 8 lbs.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Aug. 9.

Prime Meadow Hay	85*s*	to 90*s*	Clover	90*s*	to 120*s*
Superior do. (old) ..	96	105	New Clover	70	80
Inferior do.	60	70	Old second cut	—	—
New do.	68	95	Straw	32	38
Rowen	—	—		DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, Aug. 9.

Sup. Meadow Hay ..	100*s*	to 110*s*	Inferior Clover ..	90*s*	to 110*s*
Inferior do.	80	100	New do.	70	105
New do.	60	90	Straw	40	47
Superior Clover ..	120	130		JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, Aug. 9.

Fine old Hay	100*s*	to 108*s*	Fine old Clover ..	120*s*	to 126*s*
Inferior do.	90	100	Inferior do	108	118
Prime New Hay ..	75	80	Fine New Clover ..	95	102
Inferior do.	50	70	Inferior do.	75	84
Straw	38	42	Fine 2d cut	110	116

COAL MARKET.—AUG. 8.

Buddle's West Hartley, 15*s.* 6*d.*; Elswick Gas, 14*s.*; Holywell, 15*s.* 9*d.*; Howard's West Hartley, 15*s.* 9*d.*; Lambert's West Hartley, 15*s.* 9*d.*; Tanfield Moor, 13*s.*; Tanfield Moor Butes, 13*s.*; Whitridge Hartley, 15*s.* 3*d.*; Eden Main, 17*s.* 3*d.*; Walls End Durham, 16*s.* 6*d.*; Walls End Hetton, 15*s.* 3*d.*; Walls End Kepier Grange, 18*s.*; Walls End South Hetton, 15*s.* 3*d.*; Walls End Stewarts, 19*s.* 3*d.*; Walls End Caradoc, 18*s.*; Walls End Hartlepool, 18*s.* 9*d.*; Walls End Kelloe, 18*s.* 3*d.*; Walls End North Hartlepool, 15*s.* 6*d.*; Walls End South Hartlepool, 17*s.* 6*d.*; Walls End Trimdon Hartlepool, 18*s.* 6*d.*; Walls End Thorpe, 17*s.* 9*d.*; Carway and Duffryn Malting, 22*s.* 6*d.*; Herwan Merthyr, 15*s.* 6*d.*—55 ships at market.

METROPOLITAN CATTLE MARKET.

MONDAY, Aug. 6.

We have a large supply of Beasts, and trade is slower; there is a reduction in price of all kinds. The number of Sheep and Lambs is larger than on Monday last; there is, however, very little difference in quotations. Calves are selling about the same as on Thursday. From Germany and Holland there are 1700 Beasts, 3510 Sheep, and 280 Calves; from Spain, 350 Beasts; and 1700 from the northern and midland counties.

	s	*d*	*s*	*d*		*s*	*d*	*s*	*d*
Best Scots, Herefords, &c. ..	5	4	to 5	6	Best Long-wools.	5	4	— 5	6
Best Short-horns	5	0	— 5	4	Do. Short	..	..	to ..	
2d quality Beasts	4	2	— 4	6	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds ..	5	6	to 5	10	Do. Shorn	..	..	— ..	
Do. Shorn	..	..	—	.	Lambs	5	4	— 6	4
					Calves	4	4	— 5	6
					Pigs	3	8	— 4	8

Beasts, 4990; Sheep & Lambs, 27,300; Calves, 375; Pigs, 310.

THURSDAY, Aug. 9.

We have a few more Beasts than on Thursday last; however, the demand is pretty good, and Monday's quotations are fully maintained. There are not quite so many Sheep and Lambs, and prices on the average are better. We have a

good supply of Calves; they are not selling quite so well as on Monday. From Germany and Holland there are 300 Beasts, 3150 Sheep, and 406 Calves; from Ireland, 48 Calves; and 1.0 Milch Cows.

Best Scots, Herefords, &c.	5 4 to 5 6	Best Long-wools	5 4 — 5 8
Best Short-horns	5 0 — 5 4	Do. Shorn	—
2d quality Beasts	4 2 — 4 6	Ewes & 2d quality	4 8 — 5 0
Best Downs and Half-breds	5 8 — 5 10	Do. Shorn	to
Do. Shorn	—	Lambs	5 6 — 6 6
		Calves	4 0 — 5 4
		Pigs	3 8 — 4 8

Beasts, 1110; Sheep & Lambs, 10,650; Calves, 639; Pigs, 145.

HOPS.—BOROUGH MARKET, FRIDAY, Aug. 10.

Messrs. Pattenden & Smith report a very active demand for Hops of all descriptions at a further advance of 5s. to 6s. per cwt. The accounts from Mid and East Kent, Farnham, and Worcester come daily more unfavourable. Duty 60,000*l*.

BRITISH WOOLS.—LONDON, FRIDAY, Aug. 10.

Our arrivals of fleeces are still considerably below the usual quantity at this season of the year. Not much business done the last few days. Skin wool sells at a very high price as pulled.

	s. d.		s. d.
South-down Hoggets	1 8 to 1 9	Leicest. Wethers	1 6 to 1 7
Half-bred ditto	1 8 — 1 9	Ditto Hoggs	1 7 — 1 6
Down Ewes	1 6 — 1 7	Combing Skins	— — —
Kent Fleeces	1 6 — 1 7	Blanket ditto	0 6 — 0 8
		Flannel Wool	1 0 — 1 7

COLONIAL WOOL SALES.—These sales keep up in an unprecedented manner, and are now likely to do so to the close.

MARK LANE.—MONDAY, Aug. 6.

The supply of English Wheat to this morning's market was small, and met a slow sale at the prices of this day week. The market was largely attended by country buyers, and foreign Wheat was in fair request at previous rates, a slight concession being acceded to in a few instances where vessels were coming on demurrage, and the owners unable to obtain warehouse room. Barley is in good demand; grinding 6d. per qr. dearer. Beans are scarce and bring rather more money. Peas unaltered in value. Oats are firm, with a fair amount of business doing at an advance of 6d. per. qr. Prices of Flour are unchanged.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	58—62	Red	56—60
— — fine selected runs..ditto	58—64	Red	58—62
— — Talavera	60—65		
— Norfolk	—	Red	—
— Foreign	52—68		
BARLEY, grind. & dist., 24s to 31s..Chev.	38—45	Malting	36—41
— Foreign..grinding and distilling	28—36	Malting	35—40
OATS, Essex and Suffolk	20—24		
— Scotch and Lincolnshire..Potato	26—28	Feed	24—26
— Irish Potato	26—28	Feed	21—24
— Foreign..Poland and Brew	22—26	Feed	18—26
RYE	35—38	Foreign	—
RYE-MEAL, foreign	—		
BEANS, Mazagan....32s to 40s....Tick	34—43	Harrow	34—43
— Pigeon ....36s — 47s..Winds.	48—54	Longpod	—
— Foreign Small	38—46	Egyptian	—
PEAS, white, Essex and Kent..Boilers	38—40	Suffolk	36—41
— Maple ....—s to —s ....Grey	32—34	Foreign	30—40
MAIZE White	—	Yellow	—
FLOUR, best marks delivered..per sack	48—54		
— 2d do. ditto	40—48	Country	40—48
— Foreign ..per barrel	25—32	Per sack	30—46

FRIDAY, Aug. 10.

The weather during the past week has been of a showery character, the atmosphere gloomy, with a low temperature. On the night of the 7th and during the 8th heavy rain appears to have been general. The crops progress very slowly towards maturity; in a few instances the cutting of Talavera Wheat and Oats has commenced, but harvest can scarcely be general before the 20th inst. in the early districts. Complaints of the Potato disease have considerably increased during the present week, and caused greater firmness in the value of Spring Corn, particularly Maize. From Sweden, the Baltic, and South Germany the crops are represented as good, but harvest is delayed, and the crops threatened with considerable deterioration from constant rain. From Petersburg we learn that excessive heat has considerably lessened the yield, in some provinces to the extent of one-half. Prices of Wheat throughout the kingdom have been maintained, but business in many markets limited; in a few, as also here on Wednesday, rather higher rates have been realised. The value of Spring Corn and Flour was fully supported. The arrivals of grain-laden vessels off the coast from the South of Europe continue on a very limited scale. In Paris, eight hours' rain had given great firmness to the trade, and for Flour an advance of 1 fr. has been realised. The arrivals of English grain continue to be small, of foreign Wheat, Barley, and Flour good, of Oats limited. This morning's market was moderately attended. The little English Wheat on sale was realised at the full prices of Monday. Foreign was inquired after both on speculation and for consumption, but buyers being unable to purchase at former prices the quantity sold was limited. Spring Corn of all descriptions is steady at Monday's prices.

ARRIVALS FROM Aug. 6 TO Aug. 11.

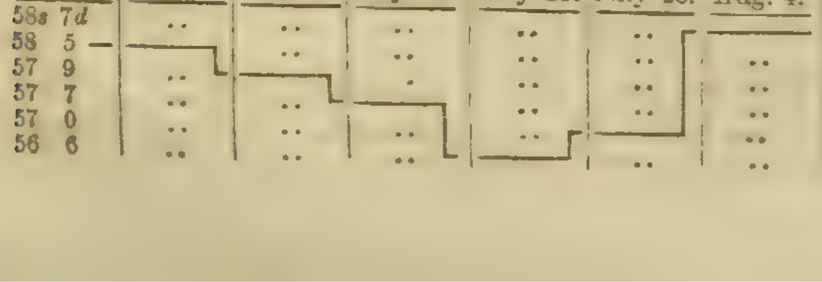
	Wheat.	Barley.	Oats.	Flour.
English	1290 qrs.	— qrs.	— qrs.	1320 sks.
Irish	— ,,	— ,,	280 ,,	— ,,
Foreign	15940 ,,	5460 ,,	9270 ,,	6230 ,, / 7410 brls.

LIVERPOOL, Tuesday, Aug. 7.—We have had a numerous attendance of buyers at this morning's market, and Wheat has attracted a fair consumptive inquiry at the full rates of Friday, the majority of sellers holding for a slight advance. Flour meets a good demand at an improvement of fully 6d. per barrel and sack. Indian Corn is much inquired for, and American mixed must be noted about 1s. per qr. dearer since Friday, whilst other sorts have advanced fully 6d. Oats and Oatmeal are both the turn dearer. Beans, Peas, and Barley each command a fair retail sale at extreme rates. The market closed steady, holders exhibiting much firmness.

FRIDAY, Aug. 10.—The market steady for Wheat and Flour at full quotations. Beans 6*d* cheaper. For Indian Corn and other feeding stuffs there is a fair inquiry at late prices.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
June 30..	58*s* 5*d*	32*s* 10*d*	25*s* 5*d*	41*s* 9*d*	47*s* 1*d*	41*s* 8*d*
July 7..	57 9	34 0	26 5	41 3	46 6	41 4
— 14..	57 7	33 5	25 8	41 3	46 6	43 7
— 21..	56 6	32 5	26 4	40 8	46 7	39 4
— 28..	57 0	33 1	26 4	37 5	45 1	41 1
Aug. 4..	58 7	33 0	26 6	45 6	46 9	41 3
Agg. Aver.	57 7	33 2	26 1	44 4	46 5	41 4

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.



WANTED, at Martinmas next, a LAND STEWARD, to take the General Management of an Estate in the West of Scotland. A middle-aged married Man with no family will be preferred. He must be thoroughly acquainted with the approved modes of Agriculture, the Buying and Selling of Stock, Keeping Books, &c.; and none need apply who have not held a similar situation, and who cannot produce undoubted testimony as to character and qualifications.—Apply, with testimonials, &c., to Mr. KINLOCH, General Register House, Edinburgh.

WANTED, A NURSERY FOREMAN, competent for the general management of a provincial Nursery. Wages good to an experienced person. Also several GARDEN LABOURERS wanted. Wages 13s. per week.—H. W., *Gardeners' Chronicle* Office.

WANTED, in a small provincial Nursery, a Person to Propagate and Grow Greenhouse Plants, Roses, Bedding Plants, &c. He must also have a knowledge of Nursery work, and be willing to assist in any department, and competent to officiate as Salesman in the absence of the Principal. Liberal wages will be given to a competent person. Satisfactory testimonials indispensable.—Apply, in own handwriting, to K. H. VERTEGANS, Chad Valley Nursery, Edgbaston, Birmingham.

WANTED, AS BAILIFF, a steady, active, middle-aged Man, who has been accustomed to the Management of Heavy Land, and is practically acquainted with the Management of Cattle and Sheep. He must produce undoubted testimonials for honesty and sobriety, and general knowledge of modern Farming, and give security if required.—Address W. C., 15, Park Place, Milton Road, Gravesend, Kent, stating all particulars of age, salary required, and of family, if married.

SEED TRADE.

WANTED immediately in a London Seed House, a SHOPMAN and TRAVELLER. A man of experience and good address. Testimonials as to character and ability must be unimpeachable.—Apply by letter only, to F. R., care of Mr. John Wilson, 12, Harp Lane, Lower Thames Street, E.C.

WANTED, A SHOPMAN, who must Write a good business hand quick, used to retail trade, strong, and willing to assist at hard work. Say if any knowledge of times of sowing Flower and Garden seeds, &c., and their cultivation. Good character for honesty, sobriety, &c., indispensable.—State wages, age, &c., to H. COTTRELL, 15, Bull Ring, Birmingham.

WANTED, in the country, a Married Man, without family, or with only one child, as good GROOM and GARDENER; must know how to Milk and make himself generally useful. No one without the most satisfactory references as to character need apply.—N. H., Forbes & Bennett's Library, Southampton.

WANTED, as an APPRENTICE or IMPROVER, under a Head Gardener, a strong, active LAD, one who will take an interest in the general work of a large garden, where he would have an apportunity of seeing the cultivation of Fruits and Flowers, Early and Late Forcing, &c.—Apply, stating particulars, to WM. W. WHITE, Gardener, Church Lane, Chatteris, Cambridgeshire.

WANTED, at a small Dairy, 28 miles from Town, a good DAIRY-WOMAN, with a knowledge of Rearing and the Management of Poultry.—Address, stating Wages required, term of service in last place, with references, &c., to Mrs. PATTERNOSTER, Bucklersbury, Hitchin, Herts. A WOODMAN or FORESTER required upon the Estate, and if a Man and his Wife could undertake the two places it would be preferred.

WANT PLACES.—Letters to be Post Paid.

TO NOBLEMEN AND GENTLEMEN.

GARDENER, OR GARDENER AND BAILIFF.—A person who has had upwards of 20 years' experience in the management of Landed property, Draining, Planting, and Rural Improvements generally, and who is well known as a very superior cultivator both of the Garden and the Farm, is open to an engagement. Has a practical knowledge of Planning, Improving, and Constructing Farm Buildings and Cottages, having recently completed extensive works of that kind, and would not object to take a situation as Clerk of Works, to plan and direct Draining, Building, or Rural Improvements of any kind. Reference is kindly permitted to Dr. Lindley, Acton Green, Turnham Green, London, W. who has known the advertiser for many years.—Letters addressed "Hortus," care of the Editor of the *Gardeners' Chronicle*, 41, Wellington Street, Covent Garden, London, W.C., will meet with immediate attention.

GARDENER (HEAD).—Has a thorough practical knowledge of Plant, Flower, Fruit, and the Management of the Kitchen Garden.—L. D., Post Office, Esher, Surrey.

GARDENER (HEAD).—Single; understands the Management of Greenhouses, Conservatories, Forcing Early and Late Fruits, Flower and Kitchen Gardens. Good character.—Z. Z., Dickers, Westerham, Kent.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 30, married; native of Scotland; thoroughly experienced and practical in every branch of his profession. Leaving his present situation in consequence of the death of his employer. Four years' excellent character. No single-handed place accepted.—The Gardener, Wanstead Hall, Essex, N.E.

GARDENER (HEAD), where two or three men are kept.—Age 38, married; thoroughly understands his profession, Early and Late Forcing, &c. Has been nearly four years in present situation, and will be at liberty on August 24th. Terms 60*l*. per year, and cottage. Satisfactory reasons can be given for leaving present situation.—J. USHER, Gardener to Sir C. Honywood, Bart., Evington Place, Ashford, Kent.

GARDENER (HEAD).—Married, with incumbrance; has served over 14 years in his present situation superintending two establishments; has had 30 years' practical experience as a gardener; has never been disengaged since he was 13 years of age, and his moral character is unsullied. Would engage with any nobleman or gentleman in want of a real gardener and a good servant.—CHARLES SHAW, Gardener, Redding's Park, Alfreton, Derbyshire.

GARDENER (HEAD, to a lady or gentleman).—JAMES STANTON, age 42, married; has had 27 years' experience in his profession, 16 of them in the capacity of Head Gardener, the last 4½ of such to John Waterhouse, Esq., of Well Head, near Halifax, and is recommended as a clever and intelligent Plant Grower, including Ferns, &c., and well skilled in the routine of Forcing Fruits, Cropping, &c. Character and testimonials highly satisfactory. Voluntarily leaving his last position.—ALPHA, Messrs. E. G. Henderson & Son, St. John's Wood, London, N.W.

GARDENER (HEAD).—Middle-aged, single; understands Pines, Vines, Hothouse, Stove, and Greenhouse Plants; a good Kitchen Gardener. Five years' character.—T. E., 7, Queen's Road West, Chelsea, S.W.

GARDENER (HEAD).—Age 26; has a thorough practical knowledge of Gardening in all its branches. Two years' good character.—A. B., 49, Ordnance Terrace, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 34, married, one child; thoroughly understands his profession. Can have most satisfactory character from the gentleman he is now leaving. Wife an excellent Laundress.—A. B., Post Office, Hildenborough, Tonbridge, Kent.

GARDENER (HEAD).—Age 28; understands his profession in all its branches. Has had considerable experience in the management of Kitchen and Flower Garden; the Forcing of Grapes, Peaches, &c. Can be well recommended by his present employer.—Mr. FORSYTH, gardener to Baron L. de Rothschild, Gunnersbury Park, Acton, W.

GARDENER (HEAD or SINGLE-HANDED).—Understands Forcing Grapes, Cucumbers, Melons, and Strawberries; is a good Vegetable and Flower Gardener. Good character.—R. COOPER, Egham Hythe, near Staines, Middlesex.

GARDENER.—Age 23, single; understands his profession. Seven years' good character.—J. W., Victoria Cottage, Middle Road, Brixton, S.

GARDENER.—Middle-aged, married, two children; Scotch; first-rate, active, sober, honest, and a thorough good workman. Wages very moderate.—B., 4, Pleasant Row, Holloway Road, Islington, N.

GARDENER.—Age 47, married; perfectly understands the Management of the Vinery, Greenhouse, Kitchen, Fruit, and Flower Gardens. Wages 16*s*. per week with cottage. Good character and reference given.—H. D., 40, Ebury Street, Eaton Square, Pimlico, S.W.

GARDENER (in a gentleman's family).—Age 28, single; understands the management of Greenhouse, Vinery, and Flower and Kitchen Gardens. Two and a half years' good character.—J. A., 10, Diamond Row, Southampton Street, Camberwell, S.

GARDENER (SINGLE-HANDED).—Age 26, married, one child; has a good practical knowledge of his profession. Can have a good character.—J. W., Post Office, Kingsland (near the gate), Middlesex, N.E.

GARDENER (SINGLE-HANDED OR OTHERWISE).—Age 24; thoroughly understands Fruit, Flower, and Kitchen Gardens, Vines, &c. Excellent character.—H. J., the Gardens, Portnall Park, Egham, Surrey.

GARDENER (UNDER OR SINGLE-HANDED).—Age 23; well acquainted with Forcing and Kitchen Garden.—A. A., Post Office, Beckenham, Kent, S.E.

GARDENER (UNDER).—Age 25; has a good knowledge of Stove and Greenhouse Plants, the Forcing of Early and Late Fruits, &c. Good reference &c.—A. B., Weston Gardens, Shiffnal, Salop.

GARDENER (UNDER, in a nobleman's or gentleman's family).—Age 20. Good character.—L. S., Wood's Nursery, Wandsworth, Clapham, Surrey, S.

GARDENER (UNDER) in a nobleman's or gentleman's family.—Age 20, good character; has been brought up under a first class Gardener.—T. K., Post Office, Osmaston, Derby.

GARDENER AND BAILIFF.—E. PAVER (age 35, married, no incumbrance), for the last 10 years with the Rev. C. W. Ethelstone, Rectory, Eplyow, Dorset; has a thorough practical knowledge of the cultivation of Vines, Pines, Peaches, Melons, &c., the general management of the Kitchen, Fruit, Flower Garden, and Pleasure Grounds; also a thorough knowledge of the management of a large Farm in all its branches. Can have 7 years' good character for ability, &c.—E. PAVER, Market Place, Sidmouth.

TO THE AGRICULTURAL NOBILITY AND GENTRY.

FARM STEWARD OR GENERAL MANAGER, to any nobleman or gentleman wishing to Farm his Estate on the most improved scientific principles.—Age 36; about leaving a situation in one of the most highly cultivated districts of Norfolk. Has had great experience in Cultivating both Light and Heavy Soils, the Drainage of Lands, the Breeding, Rearing, and Fattening of Stock, the Manufacture and Use of Artificial Manures, the working of every description of improved machinery, the Planning of Farm Buildings, the Purchase and Sale of Live Stock and other Farm Produce, and is likewise thoroughly acquainted with Chemistry and Animal and Vegetable Physiology as these sciences relate to agriculture. Can be highly recommended by several large landed proprietors and eminent agriculturists.—A. P., Norfolk News Office, Norwich.

BAILIFF, GARDENER, OR GENERAL MANAGER.—Middle-aged; practically acquainted with the duties of the above professions; Breeding and Rearing of Live Stock, Sale or Purchase of Farm Produce, Timber, &c. Has had great experience in Forcing generally. Superior reference will be given.—J. K., Arpsten Cottage, Bridge Road, Barnes, S.W.

BAILIFF.—Age 38, married, no incumbrance; thoroughly understands his profession. Wife can take charge of Dairy and Poultry. Satisfactory references will be produced.—A. B., *Gardeners' Chronicle* Office.

FOREMAN (in a nobleman's or gentleman's Garden).—Young; thoroughly understands his profession.—T. B., Mr. Taylor, Stanmore, Middlesex, N.W.

FOREMAN, in a good establishment.—Age 26, unmarried, no incumbrance; no objection to a single-handed place.—Apply to A. L., at W. H. Wheeler's, Farnham Nursery, Farnham, Surrey.

DAHLIA GROWER.—Has had the management of the Dahlias 11 years at the Royal Nursery, Slough. Can also undertake the growing of Pansies if required.—H. JOEL, Alpha Road, Slough.

AGENT (UNDER), or ASSISTANT SURVEYOR.—Age 23, single; has a good knowledge of Surveying and the General Management of Estates. Can have five years' good character from former situations.—J. B. SHENBY, Post Office, Barnet, Herts, N.

TO NURSERYMEN.

TRAVELLER OR MANAGER.—Age 30, single; first class references.—ALPHA, Post Office, Worcester.

TO NURSERYMEN AND SEEDSMEN.

CLERK, SHOPMAN, OR WAREHOUSEMAN.—Unexceptionable references.—F., 29, Garden Row, London Road, Southwark, S.

The Gardeners' Chronicle Newspaper.

SATURDAY, AUGUST 18, 1860.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY

BEING ABOUT TO RESUME THE

IMPORTATION OF SEEDS AND PLANTS

by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 8, St. Martin's Place, London, W.C.

VISITORS TO THE SEASIDE, TOURISTS, AND TRAVELLERS will find the application of ROWLANDS' KALYDOR, both cooling and refreshing to the face and skin, allaying all heat and irritability, removing eruptions, sunburn, freckles, and tan, and rendering the skin soft, clear and healthy. Price 4*s.* 6*d.* and 8*s.* 6*d.* per bottle. The heat of summer also induces a dryness of the hair, and a tendency to its falling off, which may be completely obviated by the use of ROWLANDS' MACASSAR OIL, an invigorator and beautifier of the hair beyond all precedent. Price 3*s.* 6*d.*; 7*s.*; family bottles (equal to four small), 10*s.* 6*d.*; and double that size, 21*s.* ROWLANDS' ODONTO, OR PEARL DENTIFRICE, compounded of orientral ingredients, is of inestimable value in improving and beautifying the teeth, imparting a pearl-like whiteness, strengthening the gums, and in rendering the breath sweet and pure. Price 2*s.* 9*d.* per box. Sold by A. ROWLAND & SONS, 20, Hatton Garden, London, E.C., and by Chemists and Perfumers. Beware of spurious imitations.

DRESSING CASES, DRESSING BAGS, and highly finished elegancies for presentation in great variety; Ivory-handled Table Cutlery: every requisite for the Toilet and Work Tables.—MECHI & BAZIN, 112, Regent St., W.; 4, Leadenhall Street, E.C.; and Crystal Palace, Sydenham, S.

LIVE FISH FOR STOCKING PONDS, AQUARIUMS, &c.—Carp, Tench, Roach, Dace, Perch, Chub, Gudgeon, Minnows, Gold and Silver Fish, Eels, &c. To be had at CHARLES WRIGHT'S, Fishing Tackle Manufactory, 376, Strand, W.C. Aquariums sold.

News of the Week.

IN the House of Lords on Friday the Duke of ARGYLL moved the second reading of the European Forces (India) Bill. The Earl of ELLENBOROUGH and the Earl of DERBY expressed their objections to the Bill, which was supported by Earl DE GREY and RIPON, the Duke of CAMBRIDGE, Lord CLYDE, and Earl GRANVILLE. The Bill was ultimately read a second time without a division. On Monday the Duke of ARGYLL moved, in favour of the Savings Banks and Friendly Societies Investments Bill, the suspension of the resolution of the House under which no Bill can be read a second time at the present advanced period of the session except as a matter of "real urgency." Lord MONTEAGLE opposed the motion on the ground that the measure was not of an urgent character, and that it dealt with a subject that demanded preliminary investigation. On a division the numbers were equal, 18 for suspending the resolution, 18 against it. The motion, therefore, fell to the ground, and the Bill was lost. On Tuesday, in answer to Lord STRATFORD DE REDCLIFFE, Lord WODEHOUSE stated that Admiral MARTIN, who had a large force at his disposal on the coast of Syria, had received general directions to render assistance to British subjects at any points where it might be required. As soon as tranquillity was restored, it was intended by the Great Powers to take measures for effecting the necessary administrative reforms in the Government of Turkey. The Chancery Evidence Commission Bill, the European Forces (India) Bill, and the East India Stock Transfer Bill were read a third time and passed. On Thursday Earl GRANVILLE gave notice that he intended on the following day to move the suspension of the standing order prohibiting any Bill which was not a measure of "urgency" being read a second time at the present period of the session, in order to ask the House to reverse their decision of Monday in regard to the Savings Banks and Friendly Societies Investments Bill. The matter had been considered of sufficient importance to warrant the summoning of a special Cabinet Council, and it was the deliberate opinion of the Cabinet that the Bill was one which ought to pass this session.

In the Commons on Friday Mr. BRIGHT called attention to the Excise Duty on Paper, and condemned the course taken by the Government and the House on the subject of the paper duties, suggesting various means by which the Government might even now restore the authority and redeem the credit of the House of Commons. Lord PALMERSTON expressed his opinion that the resolutions which the House had already affirmed by a majority of 400 sufficiently maintained the dignity and asserted the privileges of the House, and that Mr. BRIGHT's suggestions were altogether impracticable. On the motion for the second reading of the Peace Preservation (Ireland Act, 1856) Amendment Bill, Mr. BLAKE moved, as an amendment, that the Bill be read a second time that day three months. After some discussion Mr. HENNESSY moved the adjournment of the debate, which was negatived by 104 to 12. A division was then taken on Mr. BLAKE's amendment, which was negatived by 87 to 27. The Bill was then read a second time. On the motion for the second reading of the Party Emblems (Ireland) Bill, Mr. HENNESSY moved as an amendment, that the Bill be read a second time that day three months. On a division the amendment was negatived by 62 to 29. The Bill was then read a second time. On Monday the House went into committee on the East India Loan, when Sir C. WOOD moved a resolution to enable the Secretary of State of India in Council to raise money in the United Kingdom for the service of the Indian Government. After a long discussion the resolution was agreed to. The House then went into committee on the Fortifications (Provision for Expenses) Bill, when Sir F. SMITH moved to reduce the sum to be voted by 200,000*l.* the estimated cost of the works at Portsmouth. On a division, the amendment was negatived by 79 to 28. The Bill then passed through committee. On the motion for going into committee on the Peace Preservation (Ireland) Act (1856) Amendment Bill, Mr. BLAKE moved as an amendment that the Bill be committed that day three months. On a division, the amendment was negatived by 71 to 15. The Bill then passed through committee. On Tuesday on the order for going into committee of supply, Sir JOHN PAKINGTON moved a resolution to the effect that ragged and industrial schools, which are alone adapted to meet the wants of destitute and neglected children, are entitled to a larger amount of aid than they at present receive from the Committee of Council. On a division the motion was negatived by 41 to 25. The House then went into committee of supply, when the vote for Public Education, the National Gallery, &c., were agreed to. The vote for the South Kensington Museum gave rise to considerable discussion and two divisions, but was ultimately agreed to. The Fortifications (Provision for Expenses) Bill was read a third time and passed. The Defence of the Realm Bill passed through committee. On Wednesday the House disagreed to some of the Lords' amendments to the Coroners Bill and a conference was appointed on the subject. The House then went into committee of supply, and passed a large number of votes for the civil service estimates. On the motion of Mr. T. DUNCOMBE, the resolution of the 24th January last relating to the oath to be taken by members of the Jewish persuasion, was made a standing order, and the standing order of the 14th April, 1859, was repealed. On Thursday the Stamp Duties Bill, the Excise Duties Bill, the Customs Bill, and the Defence of the Realm Bill were read a third time and passed. In committee of supply, on the vote for the British Museum, a discussion was raised by Mr. DANBY SEYMOUR on the propriety of opening the Museum in the evening for the convenience of the working classes. Mr. WALPOLE promised to bring the subject under the notice of his co-trustees, and the CHANCELLOR OF THE EXCHEQUER expressed himself favourable to the proposal. The House went into committee of supply, when Mr. CARDWELL moved a vote of 272,000*l.* for national education in Ireland. After a long discussion on the national system, the vote was agreed to. The East India Loan Bill was read a second time.

A despatch from Naples announces that the KING, at the suggestion of the Court party, has declared that city in a state of siege, and the Genoese journals announce the unopposed disembarkation of GARIBALDI with 8000 men, near Reggio, on the night of the 10th inst., but there is at present no confirmation of this statement. GARIBALDI himself visited Naples on the 4th inst., and had a conference with the principal inhabitants in reference to his future proceedings on the mainland. The Count of SYRACUSE, the uncle of the KING, and the refugees whom the electors are preferring as candidates, have openly declared themselves for the annexation of Naples to Piedmont. —Accounts from Constantinople state that KURCHID and ACHMET PACHAS, the late Governors of Beyrout and Damascus, who had been sent to Constantinople by FUAD PACHA, have, at the earnest remonstrances of the Ambassadors, been sent back to Syria to be tried by a mixed commission. A conspiracy has been discovered at Buyukdère, near Constantinople, the object of which was to plunder the embassies.—Despatches from Syria announce that FUAD PACHA had arrested the principal civil and military authorities and nearly 800 other persons of importance, and had threatened the Lebanon with fire and sword if the Druse Sheikhs did not surrender in two days. Damascus and Aleppo were tranquil, but the Mutualis had pillaged Baalbec and plundered the Christian inhabitants. Prince DANIELO, of Montenegro, was shot on Sunday evening by a Montenegrin exile, and died on the following day from the effects of the wound.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Balmoral. On Thursday, the 9th inst., the Queen walked in the grounds with the Prince Consort. In the afternoon the Prince Consort went out upon Craig Rowan, when the woods were driven for deer. The Queen and Princess Alice accompanied his Royal Highness. Prince Arthur rode to the Falls of Garrwalt. Sir George Grey arrived and succeeded the Right Hon. Sidney Herbert as Minister in attendance on her Majesty. On Friday the Queen, accompanied by the Princess Alice, drove to Altna-Guithsack, and rode home by Glen Gelder. The Prince Consort, accompanied by Prince Arthur, drove to Abergeldie, when the woods were driven for deer. On Saturday the Queen, accompanied by the Princesses Helena and Louisa, drove to the foot of the Falls of Garrwalt. The Prince Consort went out deer stalking. On Sunday the Queen, Prince Consort, and Princess Alice attended Divine service in the parish church of Crathie. The Rev. Dr. M'Pherson officiated. On Monday the Queen, accompanied by Princess Alice and Prince Leopold, drove to Invercauld and honoured Mrs. Farquharson with a visit. The Prince Consort and Prince Arthur went out grouse shooting at Gairnshiel, accompanied by Sir George Grey. On Tuesday the Queen, accompanied by Princess Helena, drove out in the afternoon. The Prince Consort, with Sir George Grey, went out grouse shooting.

THE PRINCE OF WALES arrived at Halifax on the 30th ult., and landed amid the booming of cannon. The inhabitants made a most enthusiastic demonstration. On the following morning the Prince reviewed the troops and partook of luncheon at the Government house, and in the evening attended a ball. On the 1st inst. his Royal Highness held a *levée*, and afterwards went on board the Nile and took luncheon with the Admiral. He then attended a grand regatta given in honour of his visit, and afterwards visited a farm once occupied by his grandfather, the Duke of Kent. In the evening the Prince was present at a dinner and evening party at Government House. On the 2d his Royal Highness left Halifax by rail for Windsor, and afterwards proceeded to Haulsport in the Styx, and was warmly received at both places. He sailed from Haulsport on the same day for St. John's, New Brunswick, where he arrived on the morning of the 3d inst., and met a most enthusiastic reception. 2000 school children, who were drawn up at the gate, sang the national anthem, and afterwards strewed the road with flowers. The members of the Government and several of the Legislature dined with the Prince in the evening. The whole West India squadron was to accompany the Prince to Quebec.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

THE ARMY.—The Colonelcy of the 14th Light Dragoons, vacant by the death of the Hon. Sir Henry Murray, has been conferred on Major-General Allan T. Maclean.

THE CHURCH.—Lord Palmerston has conferred the

canonry of Westminster, vacant by the death of the Rev. Edward Repton, upon the Rev. Evan Nepean, chaplain in ordinary to the Queen, incumbent of Grosvenor Chapel, South Audley Street, and rector of Heydon-with-Irmingland, Norfolk. The Rev. Dr. Vaughan, late Head Master of Harrow School, has been presented by the Archbishop of York to the vicarage of Doncaster.

THE IRISH PEERAGE.—The House of Lords has admitted the claim of the Right Hon. Theobald Fitzwalter Butler to the title of Lord Dunboyne, in the peerage of Ireland, and to vote for representative peers for Ireland. The House has also admitted the claim of Lord Aylmer now resident in Canada to rank among the peers of Ireland.

THE LATE REVIEW OF SCOTTISH VOLUNTEERS.—The following General Order has been issued from the Horse Guards:—

"The Adjutant-General has received the Queen's commands to convey her thanks to the several corps of artillery and rifle volunteers assembled at Edinburgh on the 7th inst., and to assure them of the satisfaction and gratification with which her Majesty beheld the magnificent spectacle there presented to her. Her Majesty could not see without admiration the soldier like bearing of the different corps as they passed before her, and she finds in the high state of efficiency to which they have attained in an incredibly short space of time, another proof that she may at all times surely rely on the loyalty and patriotism of her people for the defence, in the hour of need, of the freedom and integrity of the empire."

THE VOLUNTEER MOVEMENT.—Lord Elcho has addressed a letter to the *Times* stating his objections to a scheme which has been proposed for forming separate artisan corps, and showing that there is no reason why artisans should not enter into existing corps if the expenses be kept within moderate bounds, and the uniform be a cheap, comfortable, working dress, the cost being limited to about 3*l.*, payable by instalments, and the artisans being exempted from the entrance fee. —On Saturday last the members of the London Brigade assembled in Guildhall, and, preceded by their band, marched through Cannon Street, Ludgate Hill, and over Blackfriars Bridge, to the Waterloo station of the South-Western Railway, whence they proceeded by train to Bushy Park, to keep the ground for the Queen's (Westminster) Volunteer Corps during their inspection by Colonel M'Murdo, Inspector-General of Volunteers. The brigade now numbers upwards of 1600 effective members. —On Saturday the Victoria Rifles, now numbering about 800 strong, mustered in great force, under the command of the Duke of Wellington at Kilburn, and were presented by the Duchess of Wellington with two very beautiful silver bugles subscribed for by the wives of the members of the corps.—On Thursday week the 6th Surrey met at West End, Esher, and contended for a silver cup, value 10 guineas, given by the subaltern officers. After five rounds at each of the 200, 250, and 300 yards' ranges Mr. R. Bainbridge was declared the winner, having scored 21 points; Mr. H. Burnett, who represented the corps at Wimbledon, scoring 19 points. The corps again met on Friday and competed for a 12*l.* 12*s.* rifle given by the captain, Sir H. Fletcher. This prize was decided by five rounds at 500, 550 and 600 yards; and the shooting also decided the competition for a prize of a 15*l.* 15*s.* rifle given out of the funds of the corps for the greatest aggregate score at the six ranges above mentioned. Mr. Burnett was again first, thereby winning the 15*l.* 15*s.* rifle; and after a close contest for the 12*l.* 12*s.* rifle between Sir H. Fletcher and Ensign R. H. Few, which ended in a tie, the latter succeeded in winning the prize. On Saturday the corps after some light infantry drill and blank firing marched to Esher Green, where they were presented with a silver bugle, which had been subscribed for by the ladies of Esher and the vicinity.—On Saturday afternoon a battalion composed of the 7th Surrey, 4th Surrey (Streatham) and 10th Surrey (Bermondsey), the whole under the command of Major Beresford, marched from the Sessions House, Newington Causeway, to Kennington, where they were inspected by Colonel Pipon, C.B., Deputy-Assistant Adjutant-General. —On Saturday evening the members of the 1st Kent assembled at the Militia Barracks, Maidstone, under the command of Major Scott, and marched thence to the Mote Park, the seat of the Earl of Romney, where, in the presence of a large company, they were presented with a pair of colours by Mrs. Randall, wife of Mr. Randall, the banker.—On Saturday the ceremony of swearing in the 12th Middlesex (Barnet) by Lord Radstock took place on the lawn at Hadley Hurst, near Barnet, the residence of their captain, Mr. Wilbraham Taylor, after which they went through various military evolutions, and partook of a sumptuous dinner provided by their captain, over which Lord Radstock presided. —On Monday afternoon a large body of the Hon. Artillery Company of the City of London, accompanied by their band, arrived at Portsmouth from London on their way to Sandown, in the Isle of Wight, where it is their intention to establish their head-quarters during the next fortnight, for the purpose of carrying out a course of ball practice on the sands. On alighting at Portsmouth from the train the corps was received by a guard of honour of the 5th Hants Volunteer Rifles, with their band, a portion of the 2d Hants Artillery Volunteers, and the bands of the Royal Artillery and other regiments in the garrison, who had assembled to do them honour.— The Ilford or 2d Essex corps have just had a competition for six prizes,—viz. a Jacob Rifle, given by Mr. John Davis, of Cranbrooke Park, to the best shot in the first class at 700 yards; two silver cups to the best shot in each wing, given from the funds of the corps, the winner of the rifle not being allowed to compete; a silver cup of the value of 5*l.* 5*s.*, given by Lieut. Clifton, for the best shot in the second class, at 400 yards; a silver flask of the value of 5*l.* 5*s.*, given by Mr. Harvey, for the best shot in the first class at 500 yards; and a field glass given by Mr. Doublett, for the best shot in the first class (winners of previous prizes excepted) shooting from the shoulder at 300 yards. The first prize was carried off by Mr. Edward Agar, who obtained four points; the second by Mr. S. W. Fry, who made three points; the third by Mr. Knowles, who made two points; the fourth by Mr. R. Wilson, who made five points; the fifth by Mr. J. Hart, who made five points; and the sixth by Mr. F. Mitchell, who made six points.—On Saturday the Lancashire and Cheshire corps, consisting of 7000 men, gathered from 54 cities, boroughs, and townships, spread over all parts of the two counties to a distance of 40 miles, were reviewed at Newton-le-Willows by Lieut.-General Sir G. Wetherall. —On Friday the Ipswich corps had target practice for a prize cup at Landguard Fort, Harwich. The cup was given by a number of Ipswich gentlemen, and the firing comprised five shots at 650 yards' range, five at 700, five at 800, and five at 900. The competition lasted four hours, and the highest number of points was obtained by Mr. Pretty, jun., who made 12 out of 20. The second was Ensign Josselyn, who made nine points, and the third Sergeant Cresswell, who made eight.—On Thursday week the 5th (Maidenhead) Company of the Berkshire Corps mustered at their parade ground, and headed by the drums and fifes of the Reading Corps, marched through the town to the residence of their Quartermaster, Mr. R. W. Grenfell, where a sham fight on a small scale took place.—On Wednesday week the 16th (Harrogate) Company of the West Riding Corps assembled at High Harrogate, and received a handsome silver bugle, which cost 60 guineas, presented to the corps by Mrs. Reynard, widow of Captain Reynard, of Harrogate.—The 1st, 2d, 7th, 11th, 12th, 15th, and 17th Companies of the Cornwall Corps, from Penzance, Camborne, Helston, Truro, Hayle, and Redruth, under General Tremenheere, assembled on the 7th inst., at Trevethow, near Hayle, the seat of Mr. W. Praed Tyringham, and were inspected by Lord Vivian, the Lord-Lieutenant of the county.— The members of the 19th Cornwall took the oath of allegiance on Friday, at the Town Hall, Camelford. — A meeting of noblemen and gentlemen connected with Gloucestershire and Worcestershire was held a few days since at Northwick Park, at which it was resolved to get up a corps under the name of the "North Cotswold."—The Duke of Beaufort contemplates raising a corps of mounted Volunteers for Gloucestershire, to be armed with rifled carbines.—The arrangements for the great rifle prize meeting and Berkshire Volunteer review, which, by permission of her Majesty, will be held in Windsor Great Park on the 13th of September, are now completed. The shooting will commence at half-past 9 A.M., to be followed by athletic games at 11, the review at half-past 3, dinner at 5, and the whole to conclude at 8 o'clock.— Through the exertions of Mr. Thomas Dyke Acland, son of Sir T. D. Acland, about 40 officers and non-commissioned officers belonging to various Volunteer corps in the West, have assembled during the past week in Exeter for musketry practice and drill, on the principles adopted at Hythe.—The Misses Rawson, of Nidd Hall, ladies of the manor of Bradford, have offered to lease to the Bradford Volunteers, at a nominal rent, a field conveniently situated in that town for the site of an armoury, drill-room, and offices of a permanent character. The buildings will cost about 1000*l.*, and the money is to be raised by a bazaar, to be held in St. George's Hall next spring.—It is stated that the Low Moor Iron Company intend establishing a company of Volunteers, to wear the same uniform as the Bradford Corps and to be attached to that battalion.—On Friday the 12th company of Somerset Volunteers met at Wiveliscombe, and after going through several evolutions, were presented with a set of musical instruments by the ladies of the neighbourhood. The shops were closed and business entirely suspended during the afternoon. In the evening Captain Hancock, their captain, gave a ball and supper to the Volunteers and their friends.—An inspection of the North Staffordshire battalion, comprising eight companies, took place in Trentham Park on Tuesday last, in presence of thousands of spectators from the Potteries, Newcastle, and adjoining places.—The 3d Battalion of the Sussex, comprising the 1st (Brighton), 2d (Cuckfield), 4th (Lewes), 7th (East Grinstead), and 16th (Battle)—met at Brantridge, near Balcombe, and went through 10 rounds of volley and file firing.—The 13th Kent Artillery (Sheerness Dockyard), who are making excellent great-gun practice both with shot and shells, marched, for the first time under arms, several miles up the island on Monday, preceded by their band.—The Portsmouth Civil Service Corps commenced their drill in the dockyard on Tuesday evening. This corps, which is of quite recent formation, already musters 256 effective members, besides 30 Volunteers for the band.

Foreign.

FRANCE.—The Emperor returned to Paris on Wednesday from the camp of Chalons, and his Majesty's fête day was celebrated on the same day with the usual ceremonies. The Prince Imperial joined his Majesty before his departure from the camp, and followed the movements of the troops in an open carriage near the Emperor during the grand manœuvres on Friday. Towards the close of the evolutions, his Imperial Highness mounted a pony and passed in front of the troops, who received him with the warmest acclamations. On Friday a fire broke out in the barracks of the Emperor at the camp, in the part occupied by the Imperial Prince. On the first alarm the Emperor took the young Prince out of bed so gently as not to disturb his sleep, and carried him in his arms to a place of safety. The fire was promptly extinguished, but not until some of the Prince's clothes were burned. The Ambassadors of England, Austria, and Prussia have already received the full powers necessary for converting the protocol of the 3d inst. into a formal convention. It is expected that before the departure of the Emperor for Savoy and Algeria the Ambassadors of Russia and the Porte will have likewise received full powers, and that the convention will be then definitively signed. Prince Metternich and Count Kisseleff will immediately afterwards quit Paris on leave of absence. M. Declard, Consul-General of France at Alexandria, has been appointed commissioner in Syria. Lord Dufferin, the English Commissioner, left Marseilles on Saturday for Beyrout. It is said that he carries with him an order to Admiral Martin to land 1500 seamen and Marines to co-operate with the French troops in maintaining order in the district of Beyrout. The embarkation of troops of all arms is proceeding with the utmost rapidity at Toulon. M. Jules Favre, well known for his opposition to the Government, has been elected *Bâtonnier* (Chief) of the Barristers of Paris. The *Moniteur* publishes an article on the labours of the legislative session, and states that the trial made of the Imperial constitution has been favourable, and that the constitution of France can bear a comparison with the most vaunted organisations.

SPAIN.—The *National Union* of Madrid accuses the Carlists of seditiously intriguing to bring about the annexation of Catalonia to France. Thirty million reals of the indemnity have arrived from Morocco. The Queen has consented to the marriage of the Infante Don Sebastian with the Infanta Christina, and it is reported that her Majesty intends to restore to Don Sebastian his revenues and estates. The Queen and King are about to make an excursion through the provinces, during which they will visit Palma, Minorca, Barcelona, Lerida, Saragossa, Vittoria, and Burgos. The tour will not be completed till the end of October; the Cortes will therefore not be assembled till the 10th of November. Their Majesties will be accompanied by the Duke of Tetuan and the Ministers of Foreign Affairs and the Marine.

PORTUGAL.—The Cortes was closed on the 4th inst., when the King delivered a speech from the throne, in which the following reference was made to the new tariff:—

"The modifications effected in the tariff, which were proposed for the purpose of benefiting the consumer without injuring the legitimate interest of national industry, must tend towards realising among us the advantageous results which reforms of this nature have invariably produced among more advanced nations."

SWEDEN AND NORWAY.—The coronation of their Majesties as King and Queen of Norway took place on the 5th inst. in the cathedral of Drontheim, amidst the enthusiastic acclamations of the people.

DENMARK AND THE DUCHIES.—A treaty is said to have been concluded between Denmark and Sweden by which Sweden binds herself to occupy the Duchy of Schleswig with 10,000 Swedish troops, in case Prussia or the German Confederation should take forcible measures to enforce their claim upon Denmark in respect of Schleswig.

HOLLAND.—At the Royal Agricultural Union, held at the Hague in May last, it was resolved that an international competition for steam ploughs and corn-reaping machines should take place, and by the assistance of the Ambassadors at the different Courts the matter was made fully known to the manufacturers of agricultural machinery. The competition took place at the Wilhelmina marsh, Goes, near Amsterdam, on the 9th inst. Four reaping machines by the following makers were tried:—Messrs. Cuthbert & Co., of Bedale, Yorkshire; Messrs. Burgess & Key, of London (M'Cormick's); Mr. Cranstoun, of London (Wood's machine); and one by Dr. Mazier, of France. After a full trial the awards by the judges were as follows:—First prize of 500 fiorins to Messrs. Burgess & Key; second prize, gold medal, to Mr. Cuthbert; third prize, a silver medal, to Mr. Cranstoun. The French reaper being damaged early in the trial was withdrawn.

PRUSSIA.—The infant daughter of the Princess Frederic William was christened on Tuesday at the new palace at Potsdam, by the Court preacher, Heym, when the young princess received the names of Victoria Elizabeth Augusta Charlotte. It is said that Prussia has refused her consent to the admission of Spain into the category and councils of the great Powers of Europe unless Sweden be admitted also, considering that a Protestant country is necessary to counterbalance a Catholic one. — The *Nord* states that the following engagements were concluded between the Prince of Prussia and the Emperor of Austria at the late interview at Töplitz:—

'1. The Prince Regent and the Emperor undertake to firmly hold together on the Eastern question, on the ground of the

Treaty of Paris; to prevent everything that can affect the integrity of the Ottoman empire, and to confer on this subject with the Cabinet of London. 2. In the home question of Germany, Austria makes some important military concessions, and engaged to make no opposition to the liberal reforms identified with Prussian policy in the internal questions of Germany. 3. With regard to Italian affairs, the Prince of Prussia recognises the possession of Venetia as of real importance to the Austrian empire; but declines all engagement on this head as long as the Italian movement is restricted to the Italians themselves. If, on the other hand, a foreign power takes part in it, the Prince Regent undertakes to lend Austria the support of the Prussian forces. 4. The Prince Regent undertakes to employ all his good offices and personal influence with the Emperor Alexander, to bring about a reconciliation between Russia and Austria."

Austria.—The inauguration of the railway from Salzburg to Munich took place on Sunday. At the dinner given in honour of the event the Emperor of Austria, in proposing the health of the King of Bavaria, said:—

"The sentiments of unity which, as neighbours, we bear towards each other I apply to all German Sovereigns. I cannot but joyfully direct my thoughts to the day on which I grasped the hands of the Prince Regent, to strengthen the unanimity of sentiment which brought us together. Long live the unity of the Princes and peoples of Germany! The health of the King of Bavaria: cheers for the brave people of Bavaria."

The King of Bavaria, in acknowledging the toast, said:

"I hail with joy and full of hope the late friendly meeting of the rulers of Austria and Prussia. That meeting is a guarantee for German unity, for therein lies our power and strength. The health of the Emperor of Austria! Cheers for Austria's true and valiant sons! Cheers for the unity of the two German great Powers!"

On Monday Baron Charles Rothschild, who was present at the inauguration of the Railway, had a long audience of the Emperor of Austria in reference to important financial measures.—Count Rechberg, following the example of Baron Schleinitz, has addressed a circular note to the European Powers, stating in general terms, as the result of the interview at Töplitz, the complete establishment of an understanding between Austria and Prussia on all great questions of European policy, as well as on questions specially referring to the affairs of Germany. It is reported in Vienna, that, since this interview, Count Rechberg has addressed a note to the Sardinian Government, recapitulating all the events that have taken place in Southern Italy since the spring, establishing a complicity on the part of the Sardinian Government with Garibaldi. Count Rechberg declares, in the most formal manner, that if the army of Sicily invades the territory of Naples, Austria will consider it a *casus belli*.—The Committee of the Reichsrath have agreed to draw up the project relative to the political organisation of the Austrian empire in the most simple manner possible, in order to oblige the Government to give its answer affirmative, or negative, in the most decided manner. At a private sitting of the Committee it was resolved by a majority of 18 to 3 that a constitution based upon the federative system demanded by the Hungarian delegates should be granted to all the provinces, thus recognising the intimate union which henceforth must exist between all the provinces of the empire. Archduke Renier and the majority of the Ministers are favourable to the proposals of the Committee; the promulgation of reforms is therefore merely only a question of time. The official Gazette of Vienna on Friday last published a report of the Minister of Finance on the present financial condition of the empire, and the means of covering the different deficits. The Minister states that the deficit of 1861 is estimated at 39,000,000fl, which will be met by the balances in the Treasury, and by the reductions in the expenditure arising from reforms in the administrative and military organization. The Minister concludes his report by saying that the real income and expenditure may, therefore, be considered equalised.

Hungary.—It is stated that General Benedek, in whom the Court party had placed great hopes, finds the task of tranquillising the population impracticable without important concessions, and has consequently expressed a wish to retire from the Governorship.

Russia.—The Emperor of Russia, by imperial rescript addressed to the Senate, has sanctioned an association which has been formed, under the protection of the Empress, with the name of "Society for the re-establishment of the Christian Orthodox Faith in the Caucasus." The rescript states that formerly the Christian faith predominated in the Caucasus, and that though it was set aside by Islamism, numerous traces of it can yet be found there. The society in question consequently proposes to re-establish that faith by "persuasion and the preaching of the Gospel."

Italy.—The King of Naples, in compliance with the demands of the Court party, has issued a proclamation declaring Naples in a state of siege, and exhorting the regular troops and the National Guard to do all in their power to maintain public order. It is also reported that the Electoral Committees have been dissolved. Garibaldi is said to have been in Naples on Saturday the 4th inst., and to have conferred with the principal inhabitants. He left again on Sunday. It was decided to await the assembling of Parliament, the elections to which will take place on the 19th. Refugees are the candidates preferred by the electors. They openly declare themselves for the annexation of Naples to Piedmont. One electoral district has already elected General Cosenz, one of Garibaldi's most distinguished officers, as its representative. The Sardinian Admiral has arrived in his ship from Palermo, and has been visited by the Count of Syracuse, who pronounced himself favourable to annexation, and expressed his readiness to declare himself the first subject of the King of Sardinia. The Count of Aquila, another of the King's uncles, who is said to have been an advocate of liberal institutions, has received his passports and taken his departure. Three Neapolitan journals hostile to the Government have been suppressed. The Garibaldian steamer Veloce on Monday night attempted to surprise and carry off a Neapolitan ship of the line from the port of Castellamare, in the Bay of Naples, the chief naval arsenal in the kingdom. The attempt however was repulsed, and the Neapolitan frigates were sent in pursuit of the aggressor. The Genoese journals publish despatches announcing the unopposed disembarcation of Garibaldi, with 8000 men, near Reggio, on the night of the 10th inst., and the evacuation of the fortress of Scylla by the Neapolitans. The news however has not yet been confirmed. It is also announced by telegram that on Sunday night the Veloce disembarked one battalion of Garibaldian volunteers in Calabria. The Neapolitans kept up a brisk fire during half an hour. On Monday morning the Castiglia attempted, but without success, to capture a Neapolitan steamer in the straits of Messina. The Fulminante fired upon the Castiglia. The Government has sent a diplomatic note warning the various Powers, and particularly Piedmont, that if vessels under the Piedmontese flag shall attempt to land any Garibaldians they will be fired on. A despatch from Venice mentions a report that Garibaldi intends to attack Austria, not on the Venetian, but on the Croatian coast, by attempting a disembarcation at Fiume. The Austrian authorities believe that Garibaldi will first endeavour to provoke a revolution in Croatia and Hungary before proceeding to Venetia. All the coasts are rigorously watched by the cruisers of the Imperial Marine.—The official Gazette of Turin publishes an account of the subscriptions to the new Sardinian loan, according to which the total amount subscribed is 27,591,240 lire of Rentes, about three times the sum required. The Minister of the Interior has addressed a circular to the governors and other functionaries with a view to repress illegal interference in the affairs of the State, and to prevent the undertaking of hostile steps against neighbouring Governments, as well as to punish the instigators of desertion. The same circular announces the formation of a corps of volunteers to join the National Guard.

Sicily.—A despatch from Messina states that a Calabrian has been arrested who has confessed having received money from Count Aquila to assassinate Garibaldi. The constitutional statute of Sardinia has been promulgated in Sicily by Signor Depretis, the Pro-Dictator, countersigned by all the Ministers, and the municipalities of Sicily have expressed their satisfaction with the decree. Signor Depretis has dismissed the Bourbon magistrates who were still in office. The following is published as the reply of Garibaldi to the letter of the King of Sardinia, counselling him to renounce the idea of invading Naples:—

"Melazzo, July 27, 1860.

"Sire,—Your Majesty knows the high esteem and the devotion which I feel towards your Majesty; but such is the present state of things in Italy that, at the present moment, I cannot obey your Majesty's injunctions, much as I should like it. I am called for and urged on by the people of Naples. I have tried in vain with what influence I have to restrain them, feeling, as I do, that a more favourable moment would be desirable. But if I should now hesitate I should endanger the cause of Italy, and not fulfil my duty as an Italian. May your Majesty therefore permit me this time not to obey! As soon as I shall have done with the task imposed upon me by the wishes of the people which groans under the tyranny of the Neapolitan Bourbon, I shall lay down my sword at your Majesty's feet, and shall obey your Majesty for the remainder of my lifetime. Garibaldi."

Turkey.—Fuad Pacha has sent Kurschid and Achmet Pachas, the late Governors of Beyrout and Damascus, to Constantinople. The Marquis de Lavalette and the principal Ambassadors have energetically protested against this proceeding, and have induced the Porte to send them back to Syria, after having been publicly degraded, to be tried by a mixed commission. A conspiracy has been discovered at Bujukderé, near Constantinople. The conspirators had formed the project of plundering the Embassies. Numerous arrests have taken place, and arms have been seized. The Sultan visited the Porte on Thursday, and delivered a speech to the Ministers, expressing his resolution to punish the Syrian offenders most severely, and also his intention to reduce the vast list of sinecure high functionaries, and effect economy generally. The Sultan is about to address another autograph letter to Queen Victoria and the Emperor Napoleon on the subject of Syria, expressing his desire to have the sole punishment of offenders. A local loan of 75,000,000 piastres is negotiating by the Porte.

Syria.—Advices from Damascus to the 5th inst. state that Fuad Pacha had arrested the principal civil and military functionaries, and had surrounded the Lebanon with troops, and threatened fire and sword if the Druse Sheikhs did not surrender in two days. Twenty had already been taken, and nearly 800 other important arrests had been made. A thousand camel loads of plundered property had been recovered. All was quiet at Aleppo, but the Mutualis had pillaged Baalbec and plundered the Christian inhabitants.

Servia.—The Porte has refused to recognise the hereditary succession of the Obrenovitch family, but has consented to the succession of Prince Michael. It has also consented to forbid the residence of Turks in Servia beyond the boundaries of the fortresses, and has agreed to send Commissioners to inquire into the defects of the existing Constitution.

Montenegro.—Prince Danielo was mortally wounded on Sunday evening, at Cattaro, by a Montenegrin refugee named Kadie, who fired a pistol at the Prince as he was going on board a vessel to return to Perzagno. The ball was fired at a distance of two paces, and passed through the lower part of his body. The Prince died on Monday from the effects of the wound. The assassin has been arrested. Nikizza, the son of Mirco Petrovitch, the nephew of the deceased Prince, who is educating at Paris, has been proclaimed his successor.

India.—By the Calcutta Mail we have advices from that presidency to July 5:—

Calcutta.—The Income Tax Bill had passed through committee of the whole council, preparatory to its third reading. The two essential changes in it are that the tax is not to be levied from 1st May last, that is, will not be retrospective; and that the proceeds of the one per cent. intended for local purposes are to be devoted solely to Imperial reproductive works. The Council is now engaged with the sister measure for imposing a licence tax on trades and professions. Great opposition continued to be made to the bill for the renewal of the Disarming Act of 1857. A public meeting had been held, and resolutions carried against it in the Calcutta Town Hall.

China.—Soochow, a town of the greatest importance in connection with the trade of Shanghai, has been sacked and burnt,—the worst of the evil being that it was in the first instance done by disorganized and mutinous Imperialist troops, who are now reported to have joined the rebels. Several high provincial officers have been murdered, the Governor-General of the Two Kiangs has taken refuge in Shanghai, between which place and the interior all communication is cut off, and the greatest anarchy and confusion reigns throughout these districts. Trade in the north is consequently paralysed. Lord Elgin and Baron Gros arrived at Hong Kong on the 21st June, and proceeded for the north. Sir Hope Grant, with troops and transports, has also proceeded northward.

United States.—The only topic of interest in the United States and Canadian journals is the progress of the Prince of Wales. The *New York Herald* states with satisfaction that the Prince will embark for England at New York, and that the royal squadron, and the admiral's fleet also, will probably rendezvous there to see him safely off. The Great Eastern started on the 30th ult. with 2087 excursionists for Cape May. The New York papers contain columns of letters complaining of the mismanagement on board. Three-fourths of the excursionists had to sleep on deck and there was no accommodation below, on account of the intoxication of the stewards. A great indignation meeting against the directors was held on board, at which the affair was denounced as a gigantic swindle. The Great Eastern left New York on the 2d inst. for Old Point, Comfort, and Annapolis, with about 100 passengers. The excitement had already nearly subsided; there were not more than 200 present to witness her departure, and not the slightest enthusiasm was displayed. She was expected back at New York on the 12th, and was to leave for Halifax and England on the 16th. Only 10 berths had been taken for Halifax and only about 20 for Europe.

British Columbia.—Advices by the overland mail from California report further discoveries of gold in Oregon and British Columbia, the former on the tributaries of the Des Chartes River, and the latter in Okonagon and Inseuelle Counties.

Parliament.

HOUSE OF LORDS.

Friday.—*Poor Relief (Ireland) Bill.*—On the motion for the second reading of this Bill, Lord Redesdale moved as an amendment that as the third and fourth clauses related to matters which were not of an urgent nature, and such as ought not to form part of a continuance Bill, they should be struck out. On a division the amendment was carried by 34 to 30, and the Bill in its curtailed form was read a second time. The *Chancery Bridges Commissioners Bill* was read a second time. The *Militia Bill et Bill* was read a third time and passed. The *Gas (Metropolis) Bill* passed through committee.—The Duke of Argyll moved the second reading of the *European Forces (India) Bill*, and stated the reasons for considering the Bill one of urgency.—The Earl of Ellenborough protested against the Bill, which he regarded as unnecessary and calamitous, and as having been inspired by the jealousies which had lately arisen between the local Indian forces and the Queen's troops. So far from producing an amalgamation of the Indian army, its effect would be to give a wider extension to the native levies, and establish a sharper distinction between the Sepoy and the European members of the military system in India.—Earl De Grey and Ripon defended the Bill.—The Duke of Cambridge said that the measure was but the natural and inevitable consequence of the changes that had been lately effected in the Indian administrative system. The maintenance of the old distinction between the local and the British European regiments was now impossible, and the time had come when amalgamation could no longer be postponed.—The Earl of Derby, without intending to vote against the measure, expressed much anxiety and apprehension as to its effects. These doubts were, he observed, much enhanced by the vagueness of the information afforded by the Government touching the nature of the new arrangements which they proposed to base upon the present Bill.—Lord Clyde supported the Bill. From personal observation, he knew that discipline was dangerously lax in the local corps, and he considered the establishment of an united army highly advisable.—After some remarks by Earl Granville, the Bill was read a second time.—In answer to a question from the Earl of Ellenborough, the Duke of Somerset stated that the cost incurred for the *Transport of Troops to China* amounted to 164,000*l.* per month. The *Ecclesiastical Commission Bill* passed through committee.

Monday.—*Naval Retirement.*—The Earl of Shelbourne moved for the correspondence between the Captains on the Reserved List and the Admiralty, and contended that the officers who had conditionally retired in 1851 ought to share in the increased allowances now given by regulation to all captains who retired after 60 years of age.—Lord Chelmsford

supported the motion, as he was convinced of the justice of the officers' claims.—The Duke of SOMERSET vindicated the Board of Admiralty against the charge of having treated their officers with bad faith, and contended that it was neither the intention of the Admiralty, who made the arrangements in 1851, nor the meaning of the Order in Council, to grant captains on the reserved list more than an immediate—certainly not a prospective—advance of pay. He would not however, oppose the motion if it were made to include the correspondence previous to 1850.—The Earl of HARDWICKE thought the noble Duke might have looked at the case from a less narrow point of view.—The motion as amended was then agreed to.—On the motion for the second reading of the *Refreshment Houses and Wine Licences (Ireland) Bill*, Lord DENMAN moved, as an amendment, that the Bill be read a second time that day three months. On a division the amendment was negatived by 27 to 5. The Bill was then read a second time.—The Duke of ARGYLL moved a resolution declaring the *Savings Banks and Friendly Societies Investments Bill* to be one of urgency, briefly with a view to the second reading of the Bill. After some discussion the House divided on the question whether the Bill was a matter of urgency, when the numbers were equal, viz., 18 to 18. The resolution of urgency therefore fell to the ground, and the Bill was lost. The *Census (Scotland) Bill* and the *Corrupt Practices Prevention Act* (1854) *Continuance Bill* were read a third time and passed The *Poor Relief (Ireland) Bill*, the *Chancery Evidence Commission Bill*, the *European Forces (India) Bill*, the *Poor-law Continuance Bill*, the *Local Government Supplemental Bill*, and the *East India Stock Transfer Bill* passed through committee.

TUESDAY: *Syria and Turkey.*—Lord STRATFORD DE REDCLIFFE inquired whether vessels of war were to be sent to Smyrna and other places in Syria, where disturbances were expected, for the protection of British interests and of the inhabitants in general. He had received information touching the great probability of an outbreak at those places, and even at Constantinople itself. He had further received a letter from Constantinople urging the European Governments, and France and England especially, to take the opportunity of bringing about effectual reforms in the Turkish administration. The Syrian disturbances were not due to mere local causes, but to mis-government and weakness.—Lord WODEHOUSE said that no special order had been sent out to station ships-of-war at Smyrna, but Admiral Martin had a large force at his disposal, and had been instructed to afford assistance wherever it was required He was fully alive to the necessity of the reforms attended to, and as soon as tranquillity was restored, the Great Powers would use every effort to obtain an effectual reform of the Turkish administration.—The Marquis of NORMANBY expressed his gratification at this statement. *The Greek Loan* —In reply to a further question from Lord STRATFORD DE REDCLIFFE, Lord WODEHOUSE said that a commission, composed of the representatives of England, France, and Russia, had inquired into the state of the finances of Greece, in reference to the payment of the loan guaranteed by those powers. The report of that commission had been laid before the House of Commons, and would shortly be produced for the information of their lordships. The *European Forces (India) Bill*, the *Chancery Evidence Commission Bill*, and the *East India Stock Transfer Bill* were read a third time and passed.

THURSDAY.—*The Savings Banks Bill.*—Earl GRANVILLE gave notice that he should on Friday move that the standing order on the question of "urgency," be suspended, for the purpose of permitting the Savings Banks and Friendly Societies Investment Bill to be read a second time. The question was one of the greatest importance. A Cabinet Council had been held upon it, and the Government had deliberately come to the conclusion that the House should be asked to reverse their vote of Tuesday night.—The Earl of DONOUGHMORE, Lord REDESDALE, the Earl of DESART, and Lord MONTEAGLE expressed their regret at the course adopted by the Government, as many peers had left town, believing the decision of the other night to be a final one. The *Consolidated Fund (10,000,000l.) Bill*, the *Spirits Bill*, the *Industrial Schools Acts Amendment Bill*, and the *Landlord and Tenant (Ireland) Bill* were read a second time. The *Landed Property (Ireland) Bill* passed through committee. The *Ecclesiastical Commission Bill* was read a third time and passed.

FRIDAY.—*Savings Banks Bill.*— Lord REDESDALE referring to Lord GRANVILLE'S notice suspending the standing orders in favour of this Bill, said that, on full consideration, he had come to the determination not to oppose the motion.—Earl GRANVILLE said that after the representations made to him in regard to the shortness of the notice, he would postpone the consideration of the Bill till Monday. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Paper Duties.*—On the motion for adjournment till Monday, Mr. BRIGHT called attention to the present state of the Excise duty upon paper, and to the effect which the recent action of the House of Lords had produced on the rights and privileges of the House of Commons. He urged Lord Fermoy not to press the motion of which he had given notice for the repeal of the paper duty, feeling that the success of that motion was at the present moment impossible. On the general question he observed that the result of the policy of the House of Lords was to leave the paper-makers subject to the grievance of the Excise, at the same time that they were deprived of all protection, and this had been done not only on the sole authority of the Lords, but in opposition to the opinion of the Board of Inland Revenue and the repeated decisions of the House of Commons. They might have restored the authority of that House, even during the present session. If Lord Palmerston had had the spirit of the great statesmen of former times, he might have called upon the House to suspend the standing orders, and have introduced a second Bill. Even now a clause might be introduced into the Appropriation Bill, or a Bill be passed suspending the collection of the Excise upon paper until April next, or they might adjourn until the time when the six months' postponement of the Bill by the Lords had expired. As the case stood, he felt that they had not done their duty towards the country He believed that if the noble lord had appealed to the country on the subject of the paper duties, he would have had an unprecedented majority in favour of the privileges of the House of Commons. They were bound by all the ties of duty to the present and the traditions of the past; if they asserted the rights bequeathed to them by their forefathers, and he felt sure that if the Minister had taken more active steps to maintain the House in the position it occupied at the beginning of the session, he would have had the unanimous support of his own party and the support of many of those commonly opposed to him.—Lord PALMERSTON had hoped that they had heard the last of the question during the present session. If Mr. Bright felt so strongly, why did he not act when the House was full and the affair recent? For himself, he felt that he had done his duty in taking such steps as the circumstances permitted. If there was one thing less dignified than another, either to an assembly or an individual, it was to utter puling lamentations and useless complaints when action was impossible. He felt assured that the course pursued by the Government had the sanction of the country, as it had already that of the House of Commons, and he denied that the country would support an appeal made to them on such an occasion. As for the suggestions of Mr. Bright, not one of them could be practically entertained for a moment. *State of Syria* —In reply to Mr. SHERIDAN, Lord J. RUSSELL said that intelligence had been received of vigorous measures adopted by Kurschid Pacha for the arrest and punishment of the guilty parties, and of the loyalty of the Turkish troops, which afforded ground for hope that a better state of things would soon be restored. The other subjects brought under discussion on the question of adjournment comprised the enclosure of *Hainault and Epping Forests*; the case of the Rev. Mr. Fox and the constitution of the *Irish Poor Law Board*; the proposed alterations in the *National Gallery*; the authenticity of the letter alleged to have been written by the Emperor of the French to the editor of the *Tipperary Examiner*; the inadequate provision made by the Corporation of the City of London for the *measuring of grain; harbours of refuge*; the reappointment of Sir C. Eastlake to the directorship of the *National Gallery*; and the mode in which Irish business was transacted in that House and patronage dispensed by the *Irish Government*. The motion for adjournment was agreed to.—On the order for the second reading of the *Peace Preservation (Ireland) Act* (1856) *Amendment Bill*, Mr. BLAKE moved as an amendment that the Bill be read a second time that day three months.—Colonel FRENCH, Mr. LONGFIELD, Mr. M'MAHON, Mr. I. BUTT, Mr. MAGUIRE, and Sir G. BOWYER supported the amendment; Mr. CARDWELL, Mr. WHITESIDE, and Mr. DEASY opposed it, the latter stating on his official responsibility that it would be attended with the most mischievous consequences if the House refused to continue this Act, the powers of which had never been abused.—After a long discussion, Mr. HENNESSY moved that the debate be adjourned; but the motion was negatived by 104 to 12. The House then divided on the amendment, which was negatived by 87 to 27, and the Bill was read a second time.—Mr. CARDWELL, in moving the second reading of the *Party Emblems (Ireland) Bill*, sent down from the Lords, shortly explained the object and provisions of the Bill, the existing law upon the subject being defective and requiring amendment.—Mr. HENNESSY moved that the Bill be read a second time that day three months.—Mr. LONGFIELD, Sir W. VERNER, Mr. JAMES, and Mr. MALINS supported the amendment, Mr. DEASY opposed it.—Mr. COGAN moved that the debate be adjourned. —Lord PALMERSTON said that the House was inconsistent in giving such a reception to a Bill for which there had been a universal call. The motion for the adjournment of the debate being withdrawn, the House divided, when the amendment was negatived by 62 to 29. The Bill was then read a second time.

MONDAY.—*India Loan.*—The House (consisting of less than 40 members) resolved itself into committee on the East India Loan, when Sir C. WOOD moved a resolution enabling the Secretary of State in Council of India to raise money in the United Kingdom for the service of the Government of India. Taking the last two years together he had last August estimated the aggregate deficiency at 23,988,000*l.*, and the actual deficit in those years turned out to be 24,168,000*l.*, a difference of only 180,000*l.* The deficiency of Indian revenue for the present year was 6,196,000*l*, or including guaranteed interest on railroad capital 7,472,000*l.* No one could be sanguine enough to suppose that this deficiency could be met by a reduction of the military expenditure, in which, however, there had been a reduction in the last two years of 6,000,000*l.* After reviewing the principal items of charge which had augmented since the year 1856 57, the pattern year before the mutiny, he stated that comparing the estimated amount of revenue with that of charge for the year 1861 62, the estimated deficiency would amount to 6,611,000*l.* The question was how this deficiency was to be met, and, after a careful examination, he had come to the conclusion that it was impossible to effect this by a reduction of expenditure. The Government of India had resolved to meet the exigency by a system of increased taxation, including an income-tax, and, although the result of this experiment might be contemplated with some anxiety, there was no alternative, and he thought the Home Government and Parliament ought to give its best support to the Government of India The next question was the probable produce of the new taxes. Not much could be expected to be obtained in the present year; but, in 1861-62, it was estimated that they would yield 3,500,000*l.*; deducting this from 6,611,000*l*, there would still be a deficiency of 3,111,000*l.* This he believed would be eventually met by a reduction of expenditure, so that at the end of the year 1861-62, the expenditure and the revenue would be equalised. He proposed to provide for the immediate deficiency without having recourse to borrowing money by means of the balances in the Treasury, and from the payments on accounts of railroads in India, which would amount to 7,000,000*l.*, this year, of which 5,000,000*l.* would be disbursed in India; and he moved the resolution empowering him to raise a sum not exceeding 3,000,000*l.* by way of precaution only. He then entered into details regarding a paper currency, railroads, public works and improvements in India, revenue settlements, the new arrangements made in Oude and the Punjab, the treatment of the talookdars, and other matters of a social and economical nature, concluding with a confident anticipation that in time the improvement of the country and the augmentation of its resources would make our rule of India the means of conferring a lasting benefit upon the people.—Mr. H. SEYMOUR considered the statement of Sir C. Wood most unsatisfactory, contending that the Government had not exerted their endeavours to keep down the expenditure to the lowest point. He condemned the proceedings of Sir C. Wood in relation to Sir C. Trevelyan, and complained generally of his mode of carrying on the business of India.—After a long discussion on Indian finance, the reduction of the army, Indian railways, &c, in which Mr. EWART, Mr. GREGSON, Sir H. WILLOUGHBY, Sir D. L. EVANS, Mr. VANSITTART, Mr. CRAWFORD, Mr. AYRTON, Mr. T. G. BARING and other members took part, the resolution was agreed to. The House then went into Committee on the *Fortifications (Provision for Expenses) Bill* —Sir F. SMITH moved, as an amendment, to reduce the proposed expenditure on account of Portsmouth by 200,000*l.* On a division the amendment was negatived by 79 to 28. The Bill then passed through committee. The *Consolidated Fund* (10,000,000*l.*) *Bill*, the *Stamp Duties (No 2) Bill*, the *Spirit Duties Bill*, and the *Excise Duties Bill* also passed through committee. The *Customs (No. 2) Bill* and the *Defence of the Realm Bill* were read a second time. The *Spirits Bill* was read a third time and passed. On the order for going into Committee on the *Peace Preservation (Ireland) Act* (1856) *Amendment Bill*, Mr. BLAKE moved to defer the Committee for three months, but this amendment was negatived on a division by 71 to 15, and the Bill passed through Committee.

TUESDAY.—*India Loan.*—The report of the committee on the East India Loan was brought up, and leave given to introduce a Bill founded upon it. *The Kensington Gardens Ride.*—Mr. JAMES asked the Chief Commissioner of Works whether the report that he had addressed a large assembly in Kensington Gardens in favour of the new ride was true?—Mr COWPER replied that he was strolling through the gardens when he heard a Socialist orator addressing the crowd, and denouncing the aristocracy in general, and himself in particular, especially in reference to his conduct with regard to the new ride. As soon as the orator had finished, he jumped upon the bench and replied to his observations. This, he contended, was the correct and manly course, and he trusted that the House would think with him. The House then went into committee of supply, and passed several votes in the *Civil Service Estimates*, as well as a vote of 1,000,000*l.* to take up *Exchequer Bonds* falling due next November. The *Consolidated Fund* (10,000,000*l.*) *Bill* was read a third time and passed. *Ragged Schools.*—On the motion for going into committee of supply, Sir J. PAKINGTON moved a resolution to the effect that the grants annually made by Parliament for the promotion of education ought to be expended with fair and just regard to the requirements of the different classes of schools recognised by the minutes of the Committee of Council, and that Ragged and Industrial Schools, which are alone adapted to meet the wants of a considerable number of destitute and neglected children, are therefore entitled to a larger amount of aid than they at present receive. Under the present system these schools failed of producing the good which ought to be expected of them, and he urged the Government to take more effectual steps in furtherance of institutions so necessary to the well-being and morality of the population. —Mr. BLACK seconded the motion, pointing out the immense advantages produced by the establishment of these schools in Scotland, and their perfect success wherever fairly tried —Mr. ADDERLEY opposed the motion on the ground that if it was adopted there was no guarantee whatever that the grant would be properly applied.—Mr. BRISCOE, Mr. A MILLS, and Mr. CAVE spoke in favour of the motion.—Mr. HENLEY said that the motion seemed to him to have a wider scope than Sir J. PAKINGTON apprehended. It appeared to him that its object would be to separate the penal element from the Industrial and Ragged Schools, and to give them a distinct *status*, and he should oppose any proceeding that would set up a system of secular education.—Mr LOWE said that the motion would subvert the whole practice of the Privy Council, and introduce a new principle of action. If more money were given to Ragged Schools, there would be a run upon the Government on behalf of schools giving themselves that denomination, and the education vote must be doubled. On a division, the resolution was negatived by 41 to 25, and the House then went into Committee of Supply.—On the first vote of 798,167*l.* for *Public Education in Great Britain*, Mr. LOWE, in moving the vote, said that, though there was an apparent decrease compared with last year of 38,753*l.*, there was, in fact, an increase of about 36,000*l*, though 40,000*l.* short of the estimate had been expended. He then proceeded to explain the details of the vote, the distribution of the grant, &c. After considerable discussion the vote was agreed to.—On the next vote for the *South Kensington Museum*, Alderman SALOMONS moved that it be reduced by 2000*l*, being the expense incurred for photographic apparatus and advertisements. After a long discussion the motion was negatived by 80 to 19. —Mr. AYRTON then moved to reduce the vote by 20,000*l.*, nearly the whole amount of the vote. On a division the motion was negatived by 79 to 13. The vote was then agreed to. The vote for the *National Gallery*, after some remarks on its management by Mr. CONINGHAM, and several other votes were also agreed to. The *Fortifications (Provision for Expenses) Bill* was read a third time and passed. The *Defence of the Realm Bill* passed through committee, with a few amendments. The *Excise Duties Bill*, being considered as amended, received a further amendment with reference to the duty on hops. The *Customs (No. 2) Bill* passed through committee —On the order for the second reading of the *New Zealand Bill*, Sir J. PAKINGTON presented a petition against the Bill, and made an earnest appeal to the Government not to proceed with the Bill, in opposition to the views of the Colonial Legislature.—Lord PALMERSTON said it was not intended then to read the Bill, and when it came on for a second reading, the reasons which had induced the Government to introduce it would be stated. The second reading was deferred till Monday. The *Conjugal Rights (Scotland) Bill* passed through committee.

WEDNESDAY —*County Coroners' Bill.*—The Lords' amendments to this Bill were disagreed to, and a conference was appointed on the subject. The House then went into Committee of Supply on the *Civil Service Estimates.* On the vote of 100,000*l.* for the expenses of prosecutions at *Assizes and Quarter Sessions*, Mr. E. JAMES called attention to the disgraceful state of the courts at Guildford and other parts of the country, instancing the recent *Collision at Guildford* as a reason why better accommodation should be provided.—Sir G. LEWIS said the county magistrates only could deal with the subject, as the Government had no power of remedying the evil. With regard to the recent occurrence at Guildford, however much he regretted that any collision should have taken place between the High Sheriff and the judges, he felt bound to say, from what he knew of the facts, that the judges had exercised a proper discretion in the matter.—Colonel FRENCH thought that more attention and temper ought to have been displayed by Mr. Justice Blackburn, who had, in fact, in the most unwarrantable manner, committed an assault upon the highest officer in the county in a public court.—Sir G. LEWIS said that if a motion were made on the subject, he should be prepared to justify by facts and reasons the opinion he had just expressed.—Mr. JAMES declined to take the initiative to which the Secretary of State invited him, but at the same time, he could not help expressing an opinion that if the Chief Justice had been present such a scene would never have taken place.—On the vote for the *Metropolitan Police*, Sir G. LEWIS in reply to various strictures, declared that the metropolitan police was a most efficient body, and contrasted favourably with the police of the continent, which was held in abhorrence by the whole population. The House then resumed. On the motion of Mr. T. DUNCOMBE, the admission of a Jew on being elected member of the House, to take the *Jewish Oath* without further resolution, was made a standing order.

THURSDAY.—*The Stamp Duties (No. 2) Bill*, the *Excise Duties Bill*, the *Customs (No. 2) Bill*, and the *Defence of the Realm Bill* were read a third time and passed. The House having resolved itself into a Committee of Supply, Mr. WALPOLE moved the *British Museum Estimate*, as trustee, with the usual prefatory statement. A long discussion ensued in which several members urging that greater facilities ought to be given to the working classes to visit the museum in the evening. Mr. WALPOLE promised to bring the matter seriously under the consideration of the trustees, and the CHANCELLOR of the EXCHEQUER expressed himself not unfavourable to the proposition. The vote was then agreed to, as were several others. *Volunteers for Garibaldi.*—Mr. HENNESSY asked if the government had assented to the proceedings of Captain Styles, announcing himself as an agent of Garibaldi, who was now in London for the purpose of obtaining volunteers to join in the Sicilian insurrection.—Sir J. SHELLEY observed that Mr. Hennessy's indignation had not been roused when the Papal recruiting was going on in Ireland. He sincerely hoped that the gallant fellows about to join Garibaldi would be better treated than the Pope's Irish Brigade.—Lord PALMERSTON said that the Government had no knowledge of any enlistment in this country for the service of General Garibaldi. The act of proceeding to Sicily to join Garibaldi was precisely similar to that of Irish volunteers proceeding to join the Pope. Both the one and the other were equally forbidden by the Foreign Enlistment Act. Great difficulties, however, existed in the application of the act; for as the Papal recruits said that they were going to work upon the railroads, the Garibaldian recruits might say they were going to see Mount Ætna. The question, in an international point of view, was no doubt a very grave one, but it was extremely difficult to apply international law in such cases.—Mr. SCULLY condemned alike the enlistment of Irishmen for the Pope, and of Englishmen for Garibaldi. He blamed the Government for giving a moral support to the Italian revolution. *National Education in Ireland.*—The House then went into Committee of Supply, when Mr. CARDWELL moved a resolution granting a sum of 270,722*l.* for the education of the people of Ireland. He accompanied the

motion by details showing the results of the national system; that it had completely taken root in the country; that it was not confined to a particular portion, but that its benefits were in proportion to the requirements of the country; that all religious denominations participated in them; and that in proportion as the population was mixed, so was the number of mixed schools. He alluded to the efforts made to obtain a denominational system of education, and to the reasons which had induced and would continue to influence the Government firmly to resist the proposal.—Mr. Maguire, Mr. Mac O'Ferrall, Mr. Brady, Mr. Hennessy, and the O'Donoghue opposed the national system, Mr. Deasy, Mr. C. Fortescue, Lord Fermoy, and Lord Palmerston supported it. The vote was then agreed to and the House resumed. The *East India Loan Bill* was read a second time, and several other Bills were advanced a stage.

Friday.—*Additional Loan.*—The House went into Committee of Ways and Means, when the Chancellor of the Exchequer moved three resolutions authorising the Treasury to raise a sum not exceeding 2,000,000*l.* by the issue of Exchequer Bonds or Exchequer Bills. The object of these resolutions was to replace 1,000,000*l.* of Exchequer Bonds now in the hands of the Commissioners of the National Debt, which would expire in November; and the Government thought it better to ask for an extra million on account of the bad prospects of the harvest and the high prices of animal food, which would necessarily have an effect on the revenue.—Sir H. Willoughby, Mr. W. Williams, Mr. Henley, and Mr. Malins, complained of this additional burden being brought forward without longer notice. The resolutions were ultimately agreed to and the House resumed. *Red Sea Telegraph.*—In answer to Sir H. Willoughby, Mr. Laing said that the Red Sea telegraph had failed in several places; and that a convention had been signed with the Austrian government, binding this country to pay 15,000*l.* for 25 years for the use of the telegraph to Alexandria.—Mr. H. Seymour hoped that the convention would be broken off in consequence.—The Chancellor of the Exchequer said that the essential condition of the contract was that it should not depend on the success of the undertaking. He doubted the wisdom of such a contract, but it had not been made by the present government. The House then went into Committee of Supply.

[Left sitting.]

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 92⅞ to 93 for Money, and 93 to ⅛ for the 6th of Sept.; Bank Stock, 230½ to 232; Three per Cents. Reduced, 93⅛ to ¼; New Three per Cents., 93 to ⅛; India Stock, 216½ to 218½; Ditto Five per Cent. Stock, 1859, 103¾ to ⅞; Ditto Four per Cent. Debentures, 1859, 96⅝ to ⅞; Ditto Bonds, 4*s.* to 5*s.* dis.; Five per Cent. Enfaced Rupee Paper, 96½ to ⅝; Ditto Five and a Half per Cent., 101¾ to 102¼; Exchequer Bills, 2*s.* to 4*s.* prem.—Foreign: Brazilian Old Five per Cents., for Acct., 100; Buenos Ayres Six per Cents., for Acct., 88; Ditto Deferred, 27; Chilian Six per Cents., 103; Danish Five per Cents., 101; Peruvian Uribarren Four and a Half per Cents., 83; Portuguese Three per Cents., 1853, 43; Ditto for Acct., 43¾ to 44; Russian Four and a Half per Cents., 94¼; Sardinian Five per Cents., for Acct., 82½; Spanish Committee's Certificates, 5⅝ to ½; Turkish Six per Cents., 1854, for Acct., 74 to 73¾; Ditto for 1858, 59¾; Ditto Guaranteed Four per Cents., 100½ ex div.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,282,275	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	14,807,275
		Silver Bullion	—
	£29,282,275		£29,282,275

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,804,273
Rest	3,520,954	Other Securities	19,338,734
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	5,956,219	Notes	7,709,380
		Gold and Silver Coin ..	740,474
Other Deposits..	12,792,434		
Seven day and other bills	770,254		
	£37,592,861		£37,592,861

16th day of August, 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. E. Davies, Newport, Monmouthshire, Innkeeper—J. Dodd, Hexham, Northumberland, Tanner—T. H. Harper, Abingdon, Berkshire, Confectioner and Tobacconist—G. Hasluck, Tetbury, Gloucestershire, Ironmonger and Toy Dealer—J. W. Horn, Penrith, Cumberland, and Newcastle-upon-Tyne, Tobacco and Snuff Manufacturer—W. Kaye, Clayton, West Yorkshire, Grocer and Draper—R. Mitchell, Tunbridge Wells, Draper—J Page, Tong Norton, Shropshire, Licensed Victualler and Farmer—J Rothery, Halifax, Yorkshire, Watchmaker and Jeweller—J R. Teale, Leeds, Cabinet Maker and Upholsterer—J. Thompson (trading as C. Thompson), High Street, Kensington, and Brydges Street, Covent Garden, Licensed Victualler—E. Wherry, Market Deeping, Lincolnshire, Grocer and Provision Dealer—R. G. Wilkinson, Fenchurch Street, City, Ship and Insurance Broker—J. Williams, Roath, Glamorganshire, Builder and Brickmaker J. Z. Williams, Woburn Chambers, Henrietta Street, Covent Garden, Builder.

BANKRUPTCIES ANNULLED—J. Walker and J. Neave, Southwark Bridge Road, Surrey, Builders and Contractors—E. Wherry, Market Deeping, Lincolnshire, Grocer and Provision Dealer.

SCOTCH SEQUESTRATIONS—T. Collier, Lochgilphead, Merchant—R. G. Cumming, Fort Augustus, Proprietor of the South African Museum.

FRIDAY—BANKRUPTS—C. Ballard, Dalston, Shoemaker—J. Bell, and C. Wilson, Bradford, Yorkshire, Stuff Merchants—T. Biscoe, Great James Street, Marylebone, Leather Seller—J. Burton, Colsterworth, Lincolnshire, Brick and Tile Manufacturer—G. Bydder, Swansea, Brewer—M. Cartwright, Longton, Staffordshire, Dealer in Pottery Materials—J. Dales, Old Broad Street, City, Merchant—C. S. Davis, Goswell Street, Bookbinder—F. A Gross, Newcastle-upon-Tyne, Furniture Dealer—J. Hall, Oxford, Builder—G. S. Hubbard, Aldermanbury, City, Warehouseman—H. Kinross and J. Shaw, Kingston upon-Hull, Cab Proprietors—R. Limbrick, Golden Valley Mill, Gloucestershire, Miller—J. S. Lofthouse, Liverpool, Licensed Victuallers—J. M'Nulty and J. M'Nulty, Ashton-under-Lyne, Joiners—T. Miles and R. Miles, Derby, Grocers—F. C. Perry, Stockport, Ironmaster—S. Rogers, Regent Street, Licensed Victualler—A. Smith, Holloway, Builder—W. Smith and W. F. Patient, Bermondsey New Road, Tanners—B. Steward, Great Yarmouth, Norfolkshire, Builder—J. C. Webster, Watling Street, City, Shirt Dresser—G. Wigglesworth, Richardson Street, Bermondsey, Leather Dresser.

SCOTCH SEQUESTRATIONS—J. B. Barclay, Glasgow, Slater—J. Clark, Tayehreggan, Inishail, Argyllshire, Innkeeper—D. and A. Fullerton and Co., Shipbuilders—J. Hay, Whitefield, Forglen, Elginshire, Farmer—T. Kirkland, Falkirk, Draper,

Metropolis and its Vicinity.

The New Ride in Kensington Gardens.—A deputation from Kensington and Bayswater waited on Mr. Cowper on Wednesday, and presented a memorial in favour of the new ride, signed by 5475 persons, including 2793 of the nobility and gentry, 1389 persons connected with trade, 71 members of Parliament, 46 medical men, 253 belonging to the army and navy, 42 clergymen, 56 lawyers, and 825 mechanics. Mr. Cowper, in reply, said he was much pleased with the memorial, as it showed that the residents in the neighbourhood agreed with him that the new ride would prove an enjoyment to the people, while it would improve the property of the surrounding neighbourhood. It was precisely because the opposition to the ride was thoroughly selfish in its ends that it was no less unscrupulous in its means. It had been got up by persons who took an interest in agitation, and he did not think it had much chance of success. Many improvements would be made in the ride if it became permanent.

Proposed Concentration of the Law Courts.—The Report of the Royal Commission on the selection of new sites for the courts of law has just been issued. The Attorney-General's scheme for appropriating the entire space between Carey Street and the Strand is carefully considered by the commissioners, who are unanimously in favour of adopting that scheme. They propose that the different offices, 14 in number, shall all be brought together; that the law courts, instead of sitting at Westminster, Guildhall, Basinghall Street, and Doctors' Commons, shall be domiciled together on the proposed site, which is midway between the Temple, Lincoln's Inn, and Serjeant's Inn, where most of the solicitors and counsel have their chambers. The cost of acquiring the site, the purchase of existing houses, and the erection of other houses will, it is estimated, take an enormous sum, but the commissioners nevertheless recommend the plan, on the ground that the unclaimed suitors' fund, with the exception of about 16,000*l.* to be provided for out of the consolidated fund, will be quite sufficient to cover every expense. All that the House of Commons will have to do will be to pass a short Bill authorising the expenditure of the money, and guaranteeing that in case any of it shall hereafter be claimed the Treasury shall be empowered to make it good. It is proposed, should the plan be adopted by the House of Commons, that the first building to be erected shall be one for the registry of the Court of Probate and for the Divorce Court, as these departments stand more in need of proper accommodation than any other. This the commissioners estimate can be accomplished in two years from this time, if a Bill be passed this session; otherwise it will be more than three years before the first buildings can be erected, because the Office of Works will have to give the usual notice for the acquirement of the property. The scheme of the commissioners has received the support of the Lord Chancellor and all the judges, and the only members of the bar who are opposed to it are those who are either members of Parliament, or largely engaged in Parliamentary practice.

Westminster School.—The committee of old Westminsters appointed to confer with the Dean and Chapter respecting the improvement of the school on its present site or its removal elsewhere, have concluded their labours for the present. The committee consisted of the Archbishop of York, the Marquis of Westminster, the Earls of Stradbroke and Devon, Lord Llanover, Lord Charles Russell, Sir David Dundas (chairman), Sir George Rose, Mr. Harry Chester, Mr. James Mure, and the Rev. Henry Bull. On the question whether the school should be removed to the country the committee have pronounced no conclusion but they were of opinion that the expense of removal, if it were thought desirable to remove, would be considerably greater, and that the means available from the sale of the school property at Westminster would be considerably less than the Dean and Chapter had anticipated. The committee have communicated their report to the Dean and Chapter and to the head master, and intend to communicate it to the old Westminsters in good time to allow of their careful consideration of the subject before they are summoned to give their decision when a fuller meeting can be obtained than at the present time. The report embraces a great variety of questions interesting to those interested in the school, including the appointment of headmasters, the discipline, play, use of college gardens, accommodation of home boarders, and a long list of improvements, which the committee unanimously recommend to the Dean and Chapter, to effect in the school, dormitory, day rooms, cricket-field, and playgrounds. The report, in effect, finds fault with the want of repair, comfort, and convenience of almost every part of the premises of Westminster School; and, as the Dean and Chapter express their concurrence in a great many of the recommendations on this head, and their intention to give effect to them, it is believed that the general appearance and convenience of the whole place will at once be effectually improved.

Loss of the Steamer Ganges.—The new steamer Ganges, belonging to the Oriental Inland Steam Navigation Company, sprung a leak and foundered in a sudden and unexpected manner, on the 29th ult. about 200 miles north of the island of Madeira. She left Liverpool on the 12th of June, bound for India. When the crew abandoned her they divided themselves among three small boats, and steered for Madeira, but in consequence of the high sea running they parted company during the night. The boat in charge of the second officer, which contained seven of the crew, made Madeira after a lapse of four days, and as the mail was leaving the port she passed another of the boats, which was in charge of the chief officer. The lifeboat, containing the captain and nine men, had not been heard of, and much anxiety was felt for her safety, five days having elapsed since the accident. Those saved in the first boat were the master, chief engineer, carpenter, steward, three seamen, and two firemen.

Thunderstorm.—On Saturday morning, between 11 and 12 o'clock, there was a storm of thunder and lightning in the metropolis, accompanied with heavy rain. The storm did not last long, but several persons were injured and much damage done to property. The large dragon on the steeple of Bow Church, Cheapside, and the gilt grasshopper, the crest of Sir T. Gresham, on the clock tower of the Royal Exchange were struck by lightning, and a labouring man was killed at Dagenham, Essex, while in charge of a flock of sheep, several of which were also killed. Several minor accidents occurred at Bethnal Green, Hackney, Kingsland, Dalston, Clapton, Homerton, Bow, Stratford, Ilford, Walthamstow, North Woolwich, Plaistow, West Ham, and other parts, where the grounds of the market gardeners were inundated and much valuable property destroyed.

The Public Health.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, August 11, were 999. If the deaths from epidemic cholera in the 32d week of 1854 are excluded from the calculation, the average number in the corresponding weeks of the 10 years 1850-59 corrected for increase of population was 1227. The present return is, therefore, 228 below the average. During the week the births of 857 boys and 799 girls, in all 1656 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1550.

Provincial.

Bridgewater.—At an early hour on Friday morning the Rev. Mr. Price, accompanied by three men, proceeded from this town to Spaxton for the purpose of forcibly releasing his wife from the Agapemone. Mr. Price was the first to enter the "Abode of Love," and succeeded in finding his wife in one of the conservatories. He was on the point of securing her when she cried "Murder!" and the Princeites then came to the rescue and routed her husband and his companions. Mr. Price was formerly an inmate of the Agapemone, and after leaving that establishment endeavoured to obtain the release of his wife also. The latter was taken before the legal authorities upon a *habeas corpus*, when she stated that she preferred remaining with the "brethren," and was consequently allowed to return to the Agapemone.

Canterbury.—A few days since, about 3 o'clock in the morning, as a man was passing along the New Road from Canterbury to the village of Bridge, he heard a noise which he believed to be the whining of a dog. Having completed his occupation, that of gathering water-cress, he returned about 6 o'clock, and on arriving at the spot again heard the noise, and resolved to ascertain what it was. He discovered it to proceed from a drain, covered over with a flag-stone, used to carry the water from the road into the fields. On raising the stone he found a female infant, about two months old, which he forthwith conveyed to the police station. The child was wrapped in a piece of black coburg, and some white tape was tied tightly round its neck. The child was conveyed to the Canterbury Union, where it has since died. The jury at the inquest returned a verdict of Wilful Murder against some person or persons unknown.

Dover.—The Town Council having appointed a new coroner in the room of Lieut. Thompson who was killed by the late gun accident at Archcliff Fort, the inquest on the bodies of Lieut. Thompson and Sergeant Monger was opened on Wednesday, and adjourned to Tuesday next for the purpose of obtaining scientific evidence as to the cause of the explosion. The funeral took place on Thursday; that of Lieut. Thompson was conducted in the most private manner in the churchyard of Sibertswould, a village about 6 miles from Dover, but that of Sergeant Monger was attended with the fullest military honours, all the Kent Volunteer corps and several from Surrey and the metropolis, as well as the troops in garrison at Dover, taking part in the procession.

Frome.—On Saturday afternoon all the towns in this neighbourhood were thrown into intense excitement by the announcement that a man had been apprehended who confessed to the perpetration of the Road tragedy. Shortly after 3 o'clock a man arrived in the custody of two police officers. He was dressed as a working mason, and appeared to be 40 years of age. He was conducted to the police station, which was immediately surrounded by an immense crowd, and a magistrates' meeting was held, at which only the magistrates and their clerk and Superintendents Foley and Woolf were present. It appeared from the evidence given by the constables, that on Friday afternoon the prisoner came to the railway station at Wolverton, near Stony Stratford, Buckinghamshire, and accosting Sergeant Roden, of the Railway Police, asked him if he knew anything about the Road murder. The policeman said he only knew what he had read, and asked if the prisoner knew anything about it? "Yes,"

replied the prisoner with much composure, "I did it." The policeman then said he must detain him, and with the assistance of a police constable he was conveyed to the nearest town, Stony Stratford. On the way he stated that Mr. Kent had himself handed the child to him out of the drawing room window, and that he then took it away and killed it. He said he was promised by Mr. Kent a sum of money, either 1*l.* or 100*l.*, the officers were not perfectly sure which, but that as he had not been paid, and as he was sure the curse of God was upon him, he had determined to confess. At Stony Stratford the prisoner was taken before the Rev. H. J. Barton, Chairman of Petty Sessions, who, after hearing his statement, remanded him to Trowbridge. He was then locked up, and on Saturday morning was removed to Trowbridge, a distance of about 150 miles, the telegraph anticipating his arrival by messages which excited great interest. In reply to the magistrates the prisoner said his Christian names were Edmund John, but "he should reserve his surname." He spoke in a bewildered manner, and complained greatly of headache. He said he did not know in what town he was; he had never been either in Trowbridge, Frome, or Road in his life. He gave an account of his life during the past few months, specifying the various places where he had worked as a mason since Christmas—in London and elsewhere; but insisted that he had never been in the West of England before. The magistrates ultimately remanded him until Monday. On that day he was again brought up and examined at great length, when he stated, after considerable hesitation, that his name was Edmund John Gagg, that he had been in the employ of Mr. Piper, Mr. Myers, and other builders in London as a mason, and that from an accident received by falling from a scaffold in a fit, he had frequently been an inmate of the London hospitals. He stated that he was at Portsmouth on the night of the murder, and mentioned the inns at which he had lodged in that town, as well as at Portsea and Godalming, to which places he had gone in search of work. He had never been at Road, and should not know Mr. Kent if he saw him. He had confessed that he committed the murder in a fit of desperation, having become sick and tired of his life and feeling that it would be better if he could be hung. The magistrates told him that he had brought this trouble upon himself, but he would not be released until he produced satisfactory evidence to prove where he was on the night of the murder. He was then remanded to Wednesday, and was then again remanded for a week, to give the police time to make the necessary inquiries. Captain Meredith, chief constable of Wilts, Superintendents Foley and Wolfe, and other officers of the force, were engaged nearly the whole day on Tuesday in prosecuting an investigation at Road, the nature of which is, for prudential reasons, not permitted for the present to transpire; but the hope is entertained and expressed that some light will shortly be thrown on this hitherto impenetrable mystery. It is the opinion of the local police that the prisoner is at least partially deranged, and that he has been so influenced by the newspaper reports of the case as to be induced to declare himself the murderer.

GUILDFORD.—A great deal of excitement was occasioned in this town on Monday morning by the following placard being posted upon the outside of Mr. Justice Blackburn's Court, the late affair between the judge and the sheriff in reference to the magistrates summoned to serve on the grand jury naturally tending to increase it:—

"TO THE FREEHOLDERS AND INHABITANTS OF THE COUNTY OF SURREY.

"Gentlemen,—On Friday, August 3d, Mr. Justice Blackburn, in my presence, but without addressing himself to me, ordered that part of the court which is appropriated to the public to be cleared, at a time when perfect quietness prevailed among the public, who were there present according to custom. From that time the public have been barred out from the court where Mr. Justice Blackburn presides, and the prisoners have been tried and causes heard without the possibility of the law being fulfilled which requires that 'so many as will or can' shall 'come so near as to hear.' As your Sheriff, and feeling that the general dissatisfaction is well grounded, it is my duty to record my protest against this unlawful proceeding; and I have given directions that the court shall be opened again to the public, according to the custom and the law. All persons, so long as they conduct themselves with decorum, have a lawful right to be present in court; and I hereby prohibit my officers from aiding and abetting any attempt to bar out the public from free access to the court. I am, Gentlemen, your faithful servant, WILLIAM JOHN EVELYN, Sheriff."

The judges immediately sent copies of the placard to the Lord Chancellor and to the Home Office, and Mr. Evelyn was ordered to be in attendance on Tuesday morning in the court in which Mr. Justice Blackburn presided. Accordingly at 9 o'clock the High Sheriff, in Court dress, came into court, and was soon afterwards followed by Lord Chief Justice Cockburn and Mr. Justice Blackburn in their robes, escorted by their marshals and officers. The Lord Chief Justice then called upon the High Sheriff to state whether the placard that had been posted outside the walls of the court had been placed there by his authority. The High Sheriff replied that it had. The Lord Chief Justice then inquired what explanation he had to give of such a proceeding? The High Sheriff then rose, and, bowing to their lordships and the bar, of whom there was a full attendance, said he was glad to have that opportunity of offering an explanation of the course he had pursued in publishing the placard which was now the subject of remark. That course he had not taken without deliberation, and he was bound, with the greatest respect and deference to their lordships, to affirm that he believed he had discharged his duty to the county of Surrey as the High Sheriff appointed by her Majesty. He proceeded to say that Mr. Justice Blackburn had ordered the court to be cleared of several of the audience, and that the officers effectually executed the command. This, he respectfully contended, was an illegal act, and had the effect of invalidating the verdicts which had been afterwards returned; and, this being so, he considered it obligatory on him to do what he believed the duties of his office required at his hands—viz., to assert the illegality of the course pursued by the learned judge, and to command his officers not again to obey such orders from the Court. The High Sheriff then stated that he had left the town on Thursday with their lordships' sanction, that he had departed on terms of amity and good feeling with their lordships, and he now distinctly disavowed, on his honour as an English gentleman, the least intention to offer any personal insult to Mr. Justice Blackburn. He could only say, in conclusion, that he desired to treat the Court with all respect and submission, and that the step he had taken was taken upon a sound conviction that in ordering an English court of justice to be cleared of the auditory the learned judge had assumed an illegal authority, and one which he felt bound to disobey, as the chief officer of the county. Their lordships having briefly consulted, the Lord Chief Justice, amid breathless silence, spoke as follows:—

The Court had heard with anxiety and sorrow the statement which the High Sheriff had addressed to them, amounting, as it did, to an entire justification of what their Lordships, as her Majesty's Judges of Assize, sitting as the representatives of the Sovereign, felt to be a most improper, unlawful, and unseemly contempt of their office and of the administration of justice. The High Sheriff had most unquestionably mistaken the law to the utmost, and he (the Lord Chief Justice) now declared that the power and authority of her Majesty's Judges, acting in pursuance of her Majesty's commission, were perfectly well defined and established, and that the course taken by his learned brother was one which he had the most undoubted right to adopt. He at once conceded that English courts of justice were open to the public in the fullest sense, and he trusted they ever would remain so; but it was going far beyond either law or necessity to avow, as the High Sheriff had done, that there was no power reposed in the presiding judge to order such modifications of the arrangements of the court as were indispensable to that which it was the office of a judge to carry out, viz, the efficient administration of justice. His Lordship then adverted to the great structural inconvenience of the courts in which the judges had presided, and to the fact that his learned brother had ordered the lower part of the court, open to the street, and not the other parts of the court, to be cleared, because the examination of witnesses in criminal cases, when prisoners were standing on their trial, was inaudible to the Court and jury, and this was surely a transparent necessity for the order which his learned brother had conveyed to the officers of the High Sheriff. The High Sheriff had not made the least complaint or remonstrance before he left the assize town, the Court were nevertheless perfectly assured that the High Sheriff, who was an honourable English gentleman, neither had intended nor was capable of offering any personal indignity to her Majesty's Judges; but the course he had pursued was clearly a painfully contumacious contempt of the Court as such, and a most serious reflection upon the authority of the Judges' commission, which emanated from the Throne, and demanded, especially from the High Sheriff, as one of her Majesty's important officers of justice, obedient and respectful observance. The Lord Chief Justice then fined the High Sheriff 500*l.*, and the fine was immediately recorded.

LINCOLN.—A labouring man, named Dodds, died suddenly at Wrangle a few days ago. He had been attended by a surgeon for a slight illness, and on the 21st ult. his wife went to the doctor to inform him that her husband was better. She received a tonic to complete his convalescence. As she returned home she called at the shop of Mr. Cherrington, druggist, at Leake, and asked for a quarter of a pound of arsenic, stating that her husband was suffering from toothache, and required it to relieve the pain. After some hesitation she was supplied with the arsenic, being well known. Next day the doctor was brought to Dodds, who was ill with purging and vomiting, and in a state of collapse. He thought the man had English cholera, and prescribed accordingly, but the man died the same evening in great agony. A certificate of death from bilious diarrhœa was given, and the body was interred on the following Tuesday. A day or two after the widow called on Mr. Cherrington, who, on finding her husband was dead, expressed surprise, and remembering the purchase of arsenic, made some inquiries. It was then ascertained that deceased and his wife had not lived on very comfortable terms, and that she had been heard to use threats in reference to him. These circumstances still further excited suspicion, and ultimately a communication was forwarded to the authorities, when the coroner ordered the body to be exhumed, and a *post mortem* examination to be made. After this had been done an inquest was held, when the medical evidence proved that death had been caused by arsenic; and other witnesses spoke of the heartless way in which the woman had, in conversation, alluded to the probable death of her husband. The jury returned a verdict of Wilful Murder against the wife, who was committed for trial at the assizes.

SHREWSBURY.—The British Archæological Association held their 17th annual congress in this town last week, under the presidency of Mr. Botfield, M.P., who delivered an inaugural address on the antiquities of Shropshire. The programme of the week included excursions to Ludlow Castle, Stokesay Castle, Tong Castle, Buildwas Abbey, Wenlock Priory, Boscobel, the Royal Oak, Lilleshall Abbey, Shiffnal Church, Roman lead mines at Shelve, Roman villa at Linley, Haughmond Abbey, Battlefield, and the interesting excavations on the site of Uriconium at Wroxeter. Among the papers read at the evening meetings, were one by Mr. Planché on "The Earls of Shrewsbury;" one by the Hon. and Rev. G. Bridgeman on "The Princes of Upper Powys;" one by Dr. Beattie on "Ludlow Castle;" two by Mr. Pettigrew, and one by Mr. Wright on "The Discoveries at Wroxeter."

England.

THE POPE'S BRIGADE.—The local papers continue to chronicle the return of the Irish volunteers from Rome. A second party of 22 arrived in Limerick last week, and 36 also arrived in Cork and have since returned to their homes in Kerry and the neighbouring counties. Their description of the hardships they endured in the Papal service precisely corresponds with the reports of those who preceded them. They state that they were subjected to exhausting marches, the vilest lodgings, and the worst food, and of that only just as much as kept them from actual starvation. The *Cork Reporter* states that of 12 members of the Constabulary force who recently resigned their posts to take service in the Pope's Irish Brigade, only one enlisted on their arrival at Rome. The rest refused to do so after five days' experience, and returned to Ireland. Some of these have since enlisted in the line in Dublin, and others are seeking employment in the London and Dublin police. To those who desired to withdraw their resignations and join the constabulary again, it was answered from head quarters, that "they did not regret having got rid of discontented servants at their own request." The accounts received from Italy this week mention renewed disturbances among the members of the brigade at Spoleto, commencing with a drunken row in the streets, and ending in a fight with the Pope's Italian troops, in which much blood was shed on both sides.

ORANGEISM IN THE CHURCH.—The Bishop of Down and Connor (Dr. Knox) who, as the great patron of the revivals in Ulster, had attained an unexampled popularity among the disciples of that movement, has given deep offence to his late admirers by objecting to political sermons, and inhibiting the Rev. S. G. Potter, whose discourse in the Church of Downpatrick on one of the recent Orange anniversaries had attracted a good deal of public notice, from preaching in the church of the Rev. T. F. Miller, at Belfast, on the celebration of the relief of Derry. Mr. Miller disputed the bishop's authority to interfere with the freedom of his pulpit, and Mr. Potter refused to be bound by the prohibition. The result was that the latter gentleman preached on Sunday in defiance of the bishop's injunction. In Londonderry also, notwithstanding the order of the bishop, Dr. Higgin, that no party flags should be hoisted on the cathedral, a large Orange flag was displayed on the steeple, and continued to float there until a late hour in the evening. A similar display took place in Enniskillen.

ROMAN CATHOLIC PASTORAL.—Archbishop Cullen has addressed a long pastoral to his clergy in the diocese of Dublin, in which he alludes to the massacres in Syria, the revolution in Sicily, and the painful position of the Pope, of whom he says that "the Church and its supreme head" seem doomed to suffer. On the subject of National Education he remarks:—"Mixed education, which unites in the one school teachers and pupils of every creed, and professes to teach the religious doctrines of no church, must be looked upon as unfit for Catholics, and calculated to promote scepticism and infidelity."

THE IRISH CONSTABULARY.—Colonel Wood, C.B., has been appointed Deputy Inspector-General of Constabulary, in the room of Colonel Roberts, retired on full pay.

Railways.

THE HALF YEARLY MEETINGS.—The London and North-Western dividend is at the rate of 5 per cent. per annum out of a disposable balance of 618,150*l.* The Great Northern dividend is at the rate of 4½ per cent. per annum out of an available balance of 109,087*l.* The London and South-Western dividend is at the rate of 4½ per cent. per annum. The London, Brighton, and South Coast dividend is at the rate of 2½ per cent. for the half year. The Great Western dividend is at the rate of 3 per cent. per annum, leaving a balance of about 5100*l.* to be carried over. The Wimbledon and Croydon dividend is 4*s.* per share, or at the rate of 4 per cent. per annum. The Mid-Kent dividend is at the rate of 3 per cent. per annum. The London and Blackwall dividend is at the rate of 3 per cent. per annum. At the meeting of the Charing Cross Company it was stated that considerable progress has already been made in the works connected with the bridge across the Thames. The two cylinders forming the first pier on the Surrey side have been sunk to some depth. At the meeting of the Metropolitan it was stated that the Corporation of London have become shareholders to the extent of 200,000*l.*, and have nominated three of their body directors. Extensive markets for the sale of meat and provisions are proposed in Smithfield, underneath which will be a goods station. The works both at King's Cross and Paddington are in full progress, and a considerable portion of the land has been purchased and cleared. An extension from Smithfield to Finsbury Circus is contemplated. The whole of the vacant ground on the eastern side of Victoria Street has been taken for the station there.

Sporting.

Cricket.—On Saturday the match between the *employés* of Messrs. Thomas Gibbs & Co., Seedsmen, of Half Moon Street, Piccadilly, and Messrs. Minier, Nash & Co., Seedsmen, of 69, Strand, was played in the reserve ground at Battersea Park, and terminated in the firm of Messrs. Thomas Gibbs & Co. being the winners by a large score. The players and their friends dined together in the evening at the Balmoral Arms Tavern, Pimlico; the chair being filled by Mr. David Pullen, head clerk in the firm of Thomas Gibbs & Co., and the vice chair by Mr. P. Wood, head warehouseman in the firm of Minier, Nash, & Co.

Law.

Western Circuit: Wells.—*Charge of Murder.—James Norris*, 19, a farm labourer, was indicted for the wilful murder of Benjamin Rich, at Chewton Mendip, Somerset, on the 19th of July last. The occurrence arose out of a poaching affray. Deceased was game-keeper to Mr Nash, and while engaged in watching his master's estate, he heard the discharge of a gun on a part of the demesne. He hastened to the spot and saw prisoner in the act of preparing to discharge his gun at a rabbit. The deceased demanded by what right or by whose permission he was there. As no answer was returned he stepped forward for the purpose of seizing the gun, when Norris immediately fired at him, striking him on the leg and shattering the bones. The evidence of the surgeons went to show that, although they amputated the leg carefully their efforts proved unavailing, and the unfortunate man died from the effects of the injury. The defence was that the prisoner was not poaching for game, and that the gun went off by accident. The jury returned a verdict of *Not Guilty*. The prisoner and *Eli Norris* were further charged with the manslaughter of Benjamin Rich, on the coroner's inquisition, but as no evidence on this case was offered they were both discharged.

Northern Circuit: Liverpool.—*The Chilian Abduction Case.—Captain Lecor*, who was found guilty at the last assizes on an indictment for falsely imprisoning five Chilian gentlemen, who were political prisoners sentenced to be banished, and who was employed by the Chilian Government to bring them in his ship to this country, and land them in Liverpool, was brought up on Monday for judgment. A case having been reserved for the opinion of the Court of Criminal Appeal, the conviction was affirmed, that Court being of opinion that, although perfectly justified in detaining the prosecutors so long as his ship was in Chilian waters, yet that their detention against their will was unlawful when the defendant had passed out of the boundaries of that country. Mr Baron Martin sentenced the defendant to be fined 1*l.*, and to be discharged. *The Liverpool Murder.—James Halloran*, aged 17, and *Phillip Mack*, aged 18, two shoe-blacks, were indicted for the wilful murder of Patrick Grobacs, a rival shoe-black, at Liverpool, on the 3d of May last, by beating him on the head with a poker and a sling shot, inflicting such injuries that he died three days afterwards from their effects. The jury found them *Guilty* of manslaughter. Baron Martin, in passing sentence, said it was as cruel and as bad a manslaughter as he had ever heard, and that the difference between it and murder was very slight. The sentence of the Court was, that they be sent to penal servitude for the term of their lives. *Child Murder.—Ann Billington* was indicted for the wilful murder of her new-born infant, by cutting its throat with a knife. The prisoner had denied the fact of being with child and was confined during the night the dead body being afterwards found wrapt up in a bundle under the cellar steps. The medical men stated that the wound in the throat was the cause of death, but admitted that at such a moment of pain, shame, and anxiety a woman might be deprived of all judgment, and might destroy her offspring without being conscious of what she was doing. The jury after some deliberation returned a verdict of concealment of birth. In passing sentence, Baron Martin declared it to be a very bad case, and sentenced the prisoner to 18 months' imprisonment. *Wife Murder.—Thomas Rowlinson*, 41, a carter, was indicted on the coroner's warrant with the wilful murder of his wife, on the 15th June last. The prisoner and his wife lived in a cellar, in Mason Street, Wapping. The prisoner was a carter, and deceased was an habitual drunkard. On the day in question, prisoner on going home to dinner found that his wife had been in a helpless state of intoxication since 10 o'clock in the morning. A quarrel ensued in which he struck her on the head with a saucepan, inflicting such injuries that she died on the same day in the hospital to which she had been conveyed. All the witnesses admitted that the prisoner was a steady, sober, and industrious man. The jury returned a verdict of *Guilty* of manslaughter, with a recommendation to mercy. Baron Martin in passing sentence said the jury had found the only verdict they could under the circumstances. There was no doubt deceased came by her death from a blow with a saucepan, under the most miserable circumstances. It was very wrong to use such a weapon, and as he could not look over the offence altogether he should sentence the prisoner to one month's imprisonment. *The Embezzlement case at Liverpool.—Robert Brew Anderson*, 68, formerly manager of the Northern Hospital, Liverpool, pleaded guilty to having forged and uttered several receipts for moneys, with intent to defraud the trustees of that institution, under the circumstances already described in our provincial news. There were two other true bills found against him for similar offences, to each of which he also pleaded guilty. The judge said that it was embezzlement of the worst kind, and sentenced the prisoner to fifteen months' imprisonment with hard labour.

Oxford Circuit: Gloucester.—*Placing Stones on Railways.—James Hyamett*, 15, hammer, was charged with maliciously placing stones and iron upon the Midland Railway, with intent to upset a train, on the 14th July. The jury found him *Guilty*, and Mr. Justice Hill, after pointing out the gravity of the offence, sentenced him to 14 days' imprisonment, to be followed by three years' confinement in a reformatory.

Norfolk Circuit: Ipswich.—*Henry Watson*, rate collector, aged 51, was indicted for embezzling 6*l.* 10*s.*, being money paid by certain inhabitants of the parish of St. Clement's, Ipswich, on the 30th December, 1858. There were six other indictments against him, charging different acts of embezzlement in the same capacity up to February, 1860. The prisoner, by the advice of his counsel, pleaded *Guilty* to the first indictment, and it was stated that the defalcations were believed to amount to nearly 1300*l.* His lordship, in passing sentence, said that the prisoner had been in a situation of public trust, and had betrayed that trust. For the sake of example his sentence would be severe—18 months' hard labour.

Central Criminal Court.—*The Walworth Murders.—William Godfrey Youngman*, 25, described as a tailor, was tried on Thursday for the wilful murder of Mary Wells Streeter. There were three other indictments against the prisoner, charging him with the murder of his mother and his two brothers. The evidence added little to the details already familiar to our readers, and only confirmed the fact which the examinations at the inquest had established, that the single object of the prisoner in inducing the girl to leave her home by a promise of marriage, though he was at the time engaged to another woman in Staffordshire, was to obtain possession of the 100*l.* for which he had persuaded her to insure her life. The subsequent murder of his mother and brothers was evidently a part of a preconcerted scheme, in order to set up the pretence that his mother had murdered the others in a fit of insanity, and that he had killed her in self defence. Dr. Duncan, his late master, was called for the defence, with the view of establishing a plea of "homicidal monomania," and it was also urged that as there were no witnesses of the transaction, the story told by the prisoner as to his mother having committed the murders might possibly be true. Mr. Justice Williams, in summing up, particularly called the attention of the jury to the fact that the prisoner had himself stated that he wrenched the knife from his mother after she had, as he alleged, murdered his sweetheart and his two brothers, and, if his story was true, she was then powerless and might easily have been secured, and there was no necessity to destroy her life. The jury, after 10 minutes' deliberation, returned a verdict of *Guilty*. The learned judge then put on the black cap, and said that the prisoner had been convicted of one of the most heinous murders that was ever committed. His lordship then passed sentence of *Death* in the usual form. The prisoner maintained the utmost coolness throughout the trial, and when the sentence was pronounced turned round deliberately and walked with a firm step out of the dock. *Attempted Child Murder.—Elizabeth Weekstead*, 30, a soldier's widow, was charged with feloniously attempting to drown her illegitimate child in a water-butt, with intent to murder her. She was found guilty, but as the attempt was made while she was in a mad state of drunkenness the jury recommended her to mercy on account of her previous kind treatment of the child. Mr. Justice Williams sentenced her to 3 years' penal servitude. *Cruelty to a Child.—Mary Allen* 40, was charged with unlawfully and maliciously assaulting Caroline Lefevre and ill-using her bodily harm. This was a very shocking case, the prisoner was a shoe-bluestress in Southwark, and had adopted this child, who was the daughter of a labourer in the service of Messrs. Barclay and Perkins. She had beaten her with a cane and stick until the child was one mass of bruises and clotted blood. She had also burnt her with a hot iron, and had compelled her to swallow human excrement. The defence was that she had only treated the child in such a manner in order to correct her of bad propensities. The jury found her "*Guilty*" of the whole charge, and Mr. Justice Williams, in passing sentence said that in all his experience he did not remember any case where one human being appeared to have acted with so much cruelty to another as she appeared to have acted towards this poor child. He accordingly sentenced her to the highest penalty of which the law allowed, namely 3 years' imprisonment with hard labour. *Extorting Money.—David Wingfield Jobson*, author of a "History of the French Revolution," who in 1848 offered himself as a candidate for the Presidency of the French Republic, surrendered to take his trial for misdemeanour in having threatened to publish certain libellous matter charging Sir James Fergusson of the Guards with cowardice in the Crimea, with a view to extort money. The prisoner for the last two years had persecuted Sir J. Fergusson with threats of various kinds, and not content with writing letters to him of the most offensive character, had written similar libels respecting him to Mr. Disraeli, Lady Fergusson, and other persons, accompanied by scraps of doggrel poetry filled with the most scandalous and defamatory insinuations against his public and private character. The case was clearly proved by the evidence of Sir J. Fergusson, Lady Edith Fergusson, Mr. Disraeli, Captain Hill, Governor of the Westminster House of Detention and others, many of whom were subjected by the prisoner to so offensive a line of cross-examination that the Recorder interposed, and said that he would not permit such an infamous abuse of the privilege of cross-examination. The jury returned a verdict of *Guilty*, but recommended defendant to mercy, on account of the state of his health. The Recorder sentenced him to be imprisoned and kept to hard labour for 12 months, and at the expiration of that time to enter into recognizances, himself in *50l.* and two sureties in *40l.* each, to be of good behaviour for 12 months. *Frauds in the Coal Trade.—Henry Jones*, 27, the manager of one of the numerous so called coal companies which profess to be connected with the Great Northern Railway Company, was charged with uttering a forged receipt purporting to be that of the Company. He had previously been indicted with other parties on a charge of conspiracy to defraud the Company by selling coals of inferior quality and defrauding the public by representing them as Wills End coals, and sending out false weights, but was acquitted from some deficiency in the evidence. On the present charge he was found *Guilty*, and sentenced to 18 months' hard labour.

Obituary.

The Grand Duchess Anne of Russia, *née* Duchess Julienne Henrietta of Saxe-Coburg-Gotha, sister of the Duchess of Kent, and King Leopold, and aunt of the Queen died on the 15th inst, at Elfessau, in Switzerland. The deceased grand duchess was born in 1781, and married in 1796, the Grand Duke Constantine of Russia, elder brother of the late Emperor Nicholas. The union proved unhappy, and the prince, disappointed, it is said, in not having a family, treated his wife with indifference, and ultimately divorced her in 1820, having previously resigned his pretensions to the throne of Russia. The grand duke subsequently married the plebeian Johanna Gradzinska, afterwards Princess Loviez. The grand duchess, after the dissolution of her marriage, retired into privacy, and rarely sought society, even among the members of her own family.

BIRTHS.—On the 12th inst, at Slaughorrish, the Countess of Lichfield, of a daughter—11th inst, at The Ness, Shaldon, Devon, the Lady Clifford, of a daughter—9th inst, at Maristow, Plymouth, the Hon. Lady Louis, of a daughter—15th inst, at 7, Queen's Terrace, Hyde Park, the Hon. Mrs Charles Lyon, of a son—12th inst, at 47, Upper Brook Street, the Hon Mrs. Ogilvy, of a son and heir—8th inst, at Windsor, the Hon Mrs Henry Campbell, of a daughter—11th inst, at Ribston Hall, Yorkshire, the wife of John Dent Dent, Esq., M.P., of a son—9th inst, at 35, Charles Street, Berkeley Square, the lady of Major-General Robert Wood, of a daughter.

MARRIAGES.—On the 14th inst, at St. George's, Hanover Square, Lord Conyers, to Mary, elder daughter of the late Reginald Curteis, Esq., and stepdaughter of Lieutenant-Colonel Fitzroy Campbell—7th inst, at St. John's Church, Roundhay, William James Armitage, Esq., second son of James Armitage, Esq., of Farnley Hall, near Leeds, to Emily, eldest daughter of William Nicholson Nicholson, Esq., of Roundhay Park, Yorkshire—11th inst, at the Chapel of the British Embassy in Paris, Arthur Duke Coleridge, Fellow of King's College, Cambridge, and youngest son of the late Francis George Coleridge, Esq., of Ottery St. Mary, Devonshire, to Mary Anne, eldest daughter of the late James Jamieson, Esq., of Montrose, in the county of Dublin, Ireland—9th inst, at Eton College Chapel, the Rev. Henry Prentice, Curate of Barnham, Bucks, to Fanny Catherine, elder daughter, and at the same time and place, the Rev. Geo. R. Dupuis Fellow of King's College, Cambridge, to Annette Letitia, younger daughter of the late Captain John Kyffin Lloyd, of H.M.'s 14th Regiment—9th inst, at the Church of the Holy Trinity, Brompton, the Rev. Francis St John Thackeray, Fellow of Lincoln College, Oxford, and one of the Assistant Masters of Eton College, to Louisa Katherine, daughter of the late Rev. Andrew Irvine, of St. Margaret's, Leicester—10th inst, at St. Paul's, Wilton Place, the Rt. Hon. Lord Skelmersdale, to the Lady Alice Villiers, second daughter of the Earl and Countess of Clarendon.

DEATHS.—On the 13th inst, at Brent Pelham Hall, Herts, Mary Frances Howley, widow of the late Archbishop of Canterbury, aged 78—15th inst, at Weston super Mare, of gastric fever, the Hon. Gerald John Lambart, son of the Earl of Cavan, aged 14 years—4th inst, at 29, Oxford Square, Hyde Park, Lady Smith, widow of Sir David William Smith, Bart., of Alnwick, aged 77—7th inst, at Leamington, Christina Mary Carnegie, eldest daughter of the late Sir David Carnegie, Bart., of Southesk—10th inst, at 27, Chapel Street, Belgrave Square, Frances Caroline Neave, daughter of the late Sir Thomas Neave, Bart, aged 68—8th inst, in Eccleston Square, Margaret Dyce, wife of William Nicol, Esq., M.P.—10th inst, at his residence, 26, Sussex Place, Regent's Park, Baron de Samuel, aged 77—8th inst, at Stratton, Cornwall, John Dicker Inglett Fortescue, Esq., the last male representative of the Buckland Filleigh branch of the Fortescue family—5th inst, at his residence, Drayton House, near Norwich, Francis Green Bradshaw, Esq., a magistrate for the county of Norfolk, and formerly of the 5th Dragoon Guards, aged 75—9th inst, at his residence, Toddington Manor, Beds, William Dodge Cooper Cooper, Esq., Deputy-Lieutenant for the county of Bedford and Justice of the Peace for the counties of Bedford and Middlesex, and the Cinque Ports, aged 78—9th inst, at 2, Portland Place, Thomas Fitzgerald, Esq., of Shalstone House, Bucks, aged 81—8th inst, at Croft-y-Bwla, Monmouthshire, from the effects of sun-stroke, Captain O'Neil S. Segrave, 13th Light Infantry, eldest surviving son of O'Neil Segrave, Esq., of 28, Gloucester Place, Portman Square—11th inst, at the Manor House, Mapperton, after giving birth to a son, Georgiana Charlotte, wife of Lieut.-Colonel Malryat, and daughter of the late Rev Townshend Selwyn, aged 46—11th inst, at the residence of his sister, Vale Lodge, Sutton, Surrey, Theophilus Thompson, M.D., F.R.S., of 3, Upper George Street, Portman Square, late of 3, Bedford Square, aged 52—10th inst, at his residence, King's Road, Clapham Park, Charles May, C.E., F.R.S., of 3, Great George Street, Westminster, aged 59.

Markets.

COVENT GARDEN, Aug. 15.

Plums, Apples, and Pears of English growth are plentifully supplied. Home-grown produce is also still abundant. Pines, Peaches, and Nectarines are plentiful. Grapes are abundant, and still maintain fair prices. Cob Nuts are realising 1*s.* per pound. Gooseberries fetch 3*d.* a quart. Peas are abundant. New Potatoes range from 6*s.* to 8*s.* per cwt. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids Gardenias, Violets, Mignonette, Heaths, Kalosanthes, Geraniums, Lily of the Valley, and Roses.

FRUIT

Pine Apples, per lb., 3s to 4s	Gooseberries, per qt., 3d to 6d
Grapes, per lb., 2s to 5s	Currants, per qt., 3d to 6d
Strawberries, p. lb., 6d to 1s 6d	Green Figs, per doz., 4s to 8s
Peaches, per doz., 8s to 15s	Melons, each, 2s to 4s
Apricots, per doz., 2s to 4s	Apples, per doz., 2s to 6s
Nectarines, do., 3s to 10s	Oranges, per 100, 10s to 20s
Cherries, p. lb., 1s to 3s	Lemons, per 100, 10s to 15s

VEGETABLES.

Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per qrtn., 9d to 1s	Celery, per bundle, 1s 6d to 2s
Peas, p. bush., 2s to 3s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 4d to 6d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Shallots, per lb., 6d to 8d
Cabbages, do., 1s to 2s	Garlic, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per bus., 3s to 4s 6d	Lettuces, Cos, p. score, 6d to 1s
— per cwt., 6s to 8s	Endive, p. score, 1s to 2s
Carrots, per bunch, 4d to 6d	Horse Radish, p. bun., 1s 6d to 4s
Turnips, per bunch, 5d to 7d	Mushrooms, p. pott, 2s to 3s
Spinach, p. sieve, 2s to 3s	Parsley, p. 12 bunches, 2s to 4s
Cucumbers, each, 6d to 1s	Savory, per bunch, 2d to 4d
Artichokes, per doz., 6s to 8s	

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, Aug. 16.

Prime Meadow Hay	85s	to 90s	Clover	90s to 120s
Superior do. (old) ..	90	105	New Clover	70 80
Inferior do.	60	70	Old second cut ..	— —
New do.	68	95	Straw	32 38
Rowen	—	—		Davis & Co.

Cumberland Market, Thursday, Aug. 16.

Sup. Meadow Hay..	112s	to 120s	Inferior Clover ..	95s to 110s
Inferior do.	84	100	New do.	70 105
New do.	50	90	Straw	38 45
Superior Clover ..	120	130		Joshua Baker.

Whitechapel, Thursday, Aug 16.

Fine old Hay	105s	to 110s	Fine old Clover ..	120s to 128s
Inferior do.	90	100	Inferior do	100 110
Prime New Hay ..	80	90	Fine New Clover ..	100 105
Inferior do.	50	70	Inferior do.	80 90
Straw	36	42	Fine 2d cut	105 112

METROPOLITAN CATTLE MARKET.

Monday, Aug. 13.

We have a shorter supply of Beasts, but we cannot quote higher prices, although good qualities are readily disposed of. The number of Sheep and Lambs is also smaller. There is very little alteration in quotations. Sales are readily effected. Calves are selling about as on Thursday. From Germany and Holland there are 1559 Beasts, 8550 Sheep, and 202 Calves; from Ireland, 260 Beasts.

	s	d	s	d
Best Scots, Herefords, &c. ..	5	4 to 5	6	
Best Short horns	5	0 — 5	4	
2d quality Beasts	4	2 — 4	6	
Best Downs and Half-breds ..	5	6 to 5	10	
Do. Shorn	—		—	

	s	d	s	d
Best Long-wools.	5	4 —	5	8
Do. Shorn		to	..	
Ewes & 2d quality	4	8 —	5	0
Do. Shorn		—	..	
Lambs	5	4 —	6	4
Calves	4	4 —	5	4
Pigs	3	8 —	4	8

Beasts, 4420; Sheep & Lambs, 24,250; Calves, 257; Pigs, 300.

Thursday, Aug. 16.

We are only moderately supplied with Beasts, and a large proportion of inferior quality. Late prices are fully maintained. Trade is dull for Sheep and Lambs, but we cannot quote lower. The average quality is very inferior. Calves are selling about the same as on Monday. Our foreign supply consists of 300 Beasts, 2150 Sheep, 466 Calves, and 30 Pigs; Milch Cows, 125.

Best Scots, Herefords, &c. ..	5	4 to 5	6	
Best Short-horns	5	0 — 5	4	
2d quality Beasts	4	2 — 4	6	
Best Downs and Half-breds ..	5	6 — 5	10	
Do. Shorn	—		..	

Best Long-wools .	5	4 —	5	8
Do. Shorn		—	..	
Ewes & 2d quality	4	8 —	5	0
Do. Shorn		to	..	
Lambs	5	4 —	6	4
Calves	4	0 —	5	4
Pigs	3	8 —	4	8

Beasts, 1185; Sheep & Lambs, 10,740; Calves, 652; Pigs, 180.

BUTTER MARKET.—Aug 17.

Best Fresh Butter .. .. 13s. per dozen lbs.
Second do. do. .. .. 12s. ,, ,,
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Aug. 17.

Messrs. Pattenden & Smith report that the accounts received this morning are worse than ever from a great part of the plantations. Duty 50,000*l*. Market very active at a considerable advance in prices.

BRITISH WOOLS.—LONDON, FRIDAY, Aug. 17.

Our arrivals continue on a small scale, but fully commensurate with the demand.

	s.	d.		s.	d.						
South-down Hoggets	1	8	to	1	9	Leicest. Wethers	1	6	to	1	7
Half-bred ditto	1	8	—	1	9	Ditto Hoggs	1	7	—	1	9
Down Ewes	1	6	—	1	7	Combing Skins	—	—	—		
Kent Fleeces	1	6	—	1	7	Blanket ditto	0	6	—	0	8
						Flannel Wool	1	0	—	1	7

COLONIAL WOOL SALES.—These sales keep very uniform in their rates from the commencement until the present time.

MARK LANE.—MONDAY, Aug. 13.

The supply of Wheat from Essex and Kent to this morning's market was small, and met a quick sale at the full prices of Monday last. We had again an increased attendance of country buyers, who took foreign in retail at the extreme rates of last week, and in some instances rather more money was paid. Barley is in fair demand at the prices of this day se'nnight. Beans and Peas are rather dearer. The Oat trade is firm, with a good inquiry, and fine corn brings an advance of 6d. per qr. Flour is unaltered in value.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	58	62	Red	56	60
— — fine selected runs..ditto	58	64	Red	58	62
— — Talavera	60	65			
— Norfolk	—		Red	—	
— Foreign	52	68			
BARLEY, grind. & dist..24s to 31s..Chev.	38	45	Malting .	36	41
— Foreign..grinding and distilling	28	36	Malting .	35	40
OATS, Essex and Suffolk	20	24			
— Scotch and Lincolnshire..Potato	26	28	Feed ..	24	26
— Irish .....Potato	26	28	Feed ..	21	24
— Foreign.....Poland and Brew	22	26	Feed ..	18	26
RYE	35	38	Foreign .	—	
RYE-MEAL, foreign	—				
BEANS, Mazagan....32s to 40s....Tick	34	43	Harrow .	34	43
— Pigeon .....36s — 47s..Winds	48	54	Longpod	—	
— Foreign .....Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	38	40	Suffolk .	36	41
— Maple .... —s to —s ..... Grey	32	34	Foreign	30	40
MAIZE .... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	48	54			
— 2d do. .... ditto	40	48	Country.	40	48
— Foreign .....per barrel	25	32	Per sack	30	44

FRIDAY, Aug. 17.

Since the 10th inst. rain has fallen almost daily. The Wheat crop has made but slow progress towards maturity, and generally is less favourably reported of than a week since. A few forward fields of Oats and Barley have been cut, and we have seen a sample or two of new Wheat grown in the neighbourhood of Reading, but some days must yet elapse before cutting will be general in the earliest districts. It is too early to give an opinion about quality or quantity; the former in all probability will be coarse and uneven, the latter cannot be large, and with a continuance of the present weather a long time must yet elapse before enough to form any important portion of the consumption can be brought to market. The trade has been strong throughout the kingdom, and an advance of 1s. per qr. generally realised. The value of all kinds of Spring Corn has also slightly improved. Rather higher prices are obtained for Flour in Newcastle, Liverpool, Manchester, and Glasgow. The number of grain-laden vessels arrived off the coast from the South of Europe is still very small. The transactions have been limited, and consist to a great extent of parcels not yet arrived. Very bad weather has been experienced in Paris, which causes millers to ask more money, but buyers not being disposed to accede, purchases have only been made to provide for the most urgent requirements. The arrivals of foreign Wheat and Oats this week have been large, of all other grain moderate. The little English Wheat at this morning's market was sold at the full prices of Monday; in foreign transactions were limited, but the late extreme rates were realised. For Spring Corn of all descriptions there is a fair inquiry at Monday's quotations. Flour is unaltered in value.

ARRIVALS FROM Aug. 13 TO Aug. 18.

	Wheat.	Barley.	Oats.	Flour.
English ..	1250 qrs.	— qrs.	— qrs.	820 sks.
Irish	— ,,	— ,,	— ,,	— ,,
Foreign ..	27040 ,,	3350 ,,	39030 ,,	5880 ,, 12390 brls.

LIVERPOOL, Tuesday, Aug. 14.—We have had a large attendance of millers and dealers at our Corn Exchange this morning, and Wheat has met a healthy demand, both for consumption and to held over, at an advance of from 1d. to 2d. per cental on the rates of Friday, whilst Flour must be noted 6d. per barrel and 1s. per sack dearer, with a fair inquiry. Indian Corn being held firmly for an advance of from 6d. to 9d. per qr., only a retail business resulted; 33s. was the current price for mixed American. Oats improved 1s. per bushel, and Oatmeal 6d. per load. Beans, Peas, and Barley were each the turn in seller's favour. The market closed with a strong feeling.

FRIDAY, Aug. 17.—A good attendance, and good country business in Wheat at an advance of 3d. per cental. Flour inactive of sale, and 1s. per sack and barrel advance on Tuesday's rate. Indian Corn in brisk demand. Galatz, 35s.; mixed, 34s. Egyptian Beans a turn dearer. Oats and Oatmeal continue without alteration.

AVERAGES	Wheat.		Barley.		Oats.		Rye.		Beans.		Peas	
July 7..	57s	9d	34s	0d	26s	5d	41s	3d	46s	6d	41s	4d
— 14..	57	7	33	5	25	8	41	3	46	6	43	7
— 21..	56	6	32	5	26	4	40	8	46	7	39	4
— 28..	57	0	33	1	26	4	37	5	45	1	41	1
Aug. 4..	58	7	33	0	26	6	45	6	46	9	41	3
— 11..	59	6	34	0	26	1	44	9	46	5	41	0
Agg. Aver.	57	10	33	4	26	2	41	10	46	4	41	3

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES	July 7.	July 14.	July 21.	July 28.	Aug. 4.	Aug. 11
59s 6d	..	..	..	..	..	
58 7	..	..	..	..	..	..
57 9			..	..	..	..
57 7	..	..	..	..	..	..
57 0	..	..	..	..	..	..
56 6	..	..	..	..	..	..

COAL MARKET.—AUG. 15.

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SATURDAY, AUGUST 25, 1860.

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News of the Week.

IN the House of Lords on Friday the Local Government Supplemental Bill, the Gas Metropolis Bill, and the Consolidated Fund (11,000,000*l.*) Bill, were read a third time, and passed. The Refreshment Houses and Wine Licenses (Ireland) Bill passed through committee. On Monday the Landlord and Tenant (Ireland) Bill passed through committee. The Savings Banks and Friendly Societies Investments Bill was treated as a measure of "urgency," and the standing order having been suspended, the Bill was read a second time. The Refreshment Houses and Wine Licenses (Ireland) Bill was read a third time and passed. On Tuesday the East India Loan Bill was brought up from the Commons and read a first time; the Fortifications Bill, the Rifle Volunteer Corps Bill, the Defence of the Realm Bill, the Landlord and Tenant (Ireland) Bill, and several other Bills were read a third time and passed. On Thursday, on the motion of the LORD CHANCELLOR, the Commons' Amendments to the Conjugal Rights (Scotland) Bill were disagreed with. The Excise Duties Bill was read a third time and passed. The East India Loan Bill and the Spirit Duties Bill were read a second time. The Appropriation Bill and several other measures were brought up from the Commons, and read a first time.

In the Commons on Friday, after the CHANCELLOR of the EXCHEQUER's resolution authorising the Lords of the Treasury to raise any sum of money, not exceeding 2,000,000*l.*, by the issue of Exchequer Bonds or Exchequer Bills, had been agreed to, the House went into committee of supply and agreed to various votes in the civil service and army estimates. On the order of the day for going into committee on the Party Emblems (Ireland) Bill, Mr. HENNESSY moved, as an amendment, that the Bill be committed that day three months. The amendment was negatived by 53 to 22. The House then went into committee, and the Chairman was immediately ordered to report progress. On Saturday the House, in Committee of Supply, resumed the discussion of the remaining estimates, comprising several items for the civil service. On Monday the report of the Committee of Supply having been brought up, Mr. CONINGHAM moved the rejection of the vote for the National Gallery. On a division the vote was carried by 60 to 21. The vote for the Model School at Cork was opposed by Mr. SCULLY, and carried on a division by 58 to 13. The Appropriation Bill was brought in, and read a first time. The East India Loan Bill, the Spirit Duties Bill, and the Law and Equity Bill were read a third time, and passed. The Party Emblems Bill passed through committee, the ATTORNEY-GENERAL FOR IRELAND assenting to an amendment limiting the operation of the Bill to a period of five years. On the motion for the second reading of the Divorce Court Bill, which had come down from the Lords, Mr. HENNESSY moved that the Bill be laid aside, contending that the House of Lords had infringed the rights and privileges of that House by introducing a money clause into the Bill. The SPEAKER said that the Bill was a technical invasion of the privileges of the House, and that he had already protested against it. After some discussion the debate was adjourned. On Tuesday Lord PALMERSTON withdrew the New Zealand Bill, sent down from the Lords. The Naval Discipline Bill passed through committee with amendments. The adjourned debate on the Roman Catholic Charities Bill and the amendment moved by Sir G. BOWYER to leave out clause 1, was then resumed. On a division the amendment was negatived by 70 to 13, and the Bill was ordered to be read a third time. The House then went into Committee on the Court of Chancery Bill, and disposed of the new clauses. The Lords' amendments of the Ecclesiastical Commission, &c., Bill, were agreed to by 35 to 18. On Wednesday the House went into Committee on the Union of Benefices Bill, when Mr. HUBBARD moved as an addition to clause 14, that the scheme for the removal of any church or parsonage shall provide for the erection of another church or parsonage within the limits of the metropolis. The motion was agreed to. Mr. VANCE moved a clause to the effect that no scheme for carrying out the provisions of the Bill should be submitted to her Majesty in Council until it had been laid on the table of both Houses of Parliament for two months. The clause was agreed to. The Metropolis Local Management Act Amendment Bill was withdrawn. On the order for the third reading of the Roman Catholic Charities Bill, Mr. BURT moved as an amendment, that the Bill be recommitted with a view to the amendment of the first clause. Sir G. LEWIS opposed the amendment, which was ultimately withdrawn. The Bill was then read a third time and passed. The Court of Chancery Bill and the Party Emblems Bill were read a third time and passed. On Thursday the Appropriation Bill, the Exchequer Bonds (2,000,000*l.*) Bill, the Endowed Charities Bill, and the Naval Discipline Bill were read a third time and passed. On the order for resuming the debate on Mr. HENNESSY's amendment to the motion for the second reading of the Divorce Court Bill, Lord PALMERSTON reverted to the question of privilege raised in a previous debate. There was no doubt that the introduction of a money clause into the measure by the House of Lords was an invasion of the rights of the Commons. The infringement was, however, slight and accidental;

and as the Bill was an important one, he suggested that the House should content themselves with the protest already made by the Speaker, and not sacrifice the measure altogether for the present session. Sir J. GRAHAM expressed his concurrence in this suggestion, and after a short discussion Mr. HENNESSY's amendment "that the Bill be laid aside" was withdrawn. On the motion for the second reading of the Bill Mr. MALINS moved as an amendment that the Bill be read a second time that day month. On a division the amendment was negatived by 43 to 11. The Bill was then read a second time, and the standing orders having been suspended, the Bill passed through committee. The Church Temporalities (Ireland) Act Amendment Bill and the Union of Benefices Bill were read a third time and passed. Sir DE LACY EVANS moved an address to the Crown praying that the recommendation of the National Defence Commission for the erection of a fortified work on Shooter's Hill be carried into effect. He was arguing in favour of his motion when the House was counted out.

Despatches from Naples announce that GARIBALDI effected a landing in Calabria with 8000 men on the 19th inst. without opposition. His force disembarked at Melito, Capo delle Arme, Bagnara, and other points of the mainland, and then took Reggio, the capital of the province. The latest news states that a revolutionary movement has taken place in the province of Basilicata, and that a provisional government has been proclaimed at Potenza. The Neapolitan army was concentrated at Monteleone, and a general battle was considered imminent.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Balmoral. On Wednesday, the 15th, the Queen and Prince received the intelligence of the death of their aunt, the Grand Duchess Anne of Russia, the eldest and last surviving sister of the Duchess of Kent. On Thursday the birthday of the Duchess of Kent was celebrated quite privately at Balmoral, without any of the usual festivities, in consequence of the death of her Royal Highness's sister. On Friday and Saturday her Majesty and the Prince remained at Balmoral in the strictest retirement. On Sunday the Queen, Prince Consort, and Princess Alice attended Divine service in the parish church of Crathie. The Rev. Dr. Caird officiated, and had the honour of being invited to dinner in the evening. On Monday the Queen, with the Princess Alice, Prince Arthur, and Prince Leopold, drove to the Linn of Dee. The Prince Consort went out deer-stalking.

THE PRINCE OF WALES left St. John's, New Brunswick, on the 4th inst. for Fredericton, the seat of the Government, where he met with a most enthusiastic reception. On the 6th inst. his Royal Highness received an address from the Government of New Brunswick, inaugurated the New Park, and attended a ball at the Government House. The Prince left Fredericton on the 7th inst., and landed from the Hero at Charlottetown, Prince Edward's Island, on the 10th. He was accompanied to the island by the Admiral Milne, in the flag-ship Nile, by the Ariadne, Cossack, Valorous, and Flying Fish, and the French Commodore's ship Pomone. Though the day was stormy and wet, his Royal Highness was received by a great multitude of people, many of whom had come from distant parts, and had to camp out for lack of accommodation. The Prince landed under eight Royal salutes from the ships and battery. He was received on Queen's Wharf by the officers of the Government, members of the public bodies, the clergy and bar, and deputations of the principal citizens. He was conveyed to the Government House in the Governor's carriage, accompanied by a procession along the streets, which were lined by the Volunteer Battalion. Numerous tasteful arches were erected, and the enthusiasm was very warm. The reception was considered a complete success. Lord Mulgrave accompanied the Prince from Nova Scotia, with a guard of honour of regular troops. His Royal Highness was expected at Gaspe on the 12th, and at Quebec on the 17th inst. The Duke of Newcastle had been unwell, but had recovered.

COURT MOURNING.—The *Gazette* of last evening contains an order for the Court to go into mourning on Monday next, for a fortnight, for her Majesty's aunt, the Grand Duchess Anne of Russia.

THE PROROGATION.—The Ministerial whitebait dinner took place on Wednesday, at the Trafalgar Hotel, Greenwich, and the House of Commons will probably adjourn to-day for three or four days to allow the Lords to conclude the remaining business, and to send the commission for proroguing Parliament for the Queen's signature, which will itself take three days. It is therefore calculated that the prorogation will take place on Tuesday next, the 28th inst.

THE IRISH PEERAGE.—The House of Lords has admitted the claims of the Right Hon. Charles Rudolph Joseph Frances Clement to the title of Viscount Taaffe and Baron Ballymote, in the Peerage of Ireland, and to vote at the election of Representative Peers for Ireland.

THE VOLUNTEER MOVEMENT.—A notice has been issued, signed by Lieut.-Colonel Earl Grosvenor, Colonel the Marquis of Donegall, Lieut.-Colonel Hicks, Lieut.-Colonel the Hon. C. H. Lindsay, Colonel Thorold, Major Beresford, Captain Hon. T. Bruce, Captain Templar, Captain Glover, Captain Spottiswoode, and Captain Martineau, being a committee of officers commanding volunteer rifle corps in the metropolitan district, stating that as numerous schemes have been published purporting to be Volunteers' Friendly Societies, &c., they have declined to promise their support to any society for the present, inasmuch as a general scheme for Great Britain, with the patronage of the Secretary of State for War, is under consideration, which the public and the Volunteers will be invited to join.—On Saturday afternoon between 400 and 500 of the London Brigade, accompanied by their band, assembled in review order at the King's Cross terminus, and proceeded by a special train to Colney Hatch, from which they marched about three miles to Southgate to have a field day at Oak Lodge, the seat of Mr. Sugden, but the weather was so unfavourable that it was impossible to attempt any military evolutions. The Regimental Committee of the Brigade has decided that the first of the annual meetings in connection with the corps shall take place in October, when challenge medals and other prizes will be competed for. It has also been determined to form cadet companies, and as the subscription will be almost nominal and the cost of uniform moderate, it is expected the measure will be attended with the same success as in other corps.—On Saturday the 12 companies forming the 1st Kent Battalion, viz.:—3d Lee, 4th Woolwich, 7th Kidbrook, 8th Sydenham, 13th Greenwich, 18th Bromley, 21st Lewisham, 25th Blackheath, 27th Deptford, 28th Charlton, 32d Eltham and 34th Deptford, were reviewed by Viscount Sydney, Lord Lieutenant of the county, in the park of Sir T. M. Wilson, Bart., at Old Charlton.—On Wednesday week the 1st Kent Artillery assembled at the Terrace Pier, Gravesend, and marched to the Cricket Ground, where they were inspected by Viscount Sydney.—On Saturday afternoon the Civil Service Brigade proceeded to Fox Warren, near Cobham, Surrey, for skirmishing practice and field manœuvres.—On Friday the 4th (Lewes) Sussex mustered at their barracks, and marched to the Downs, where they went through various battalion movements.—The Hull Artillery and Rifle corps are to be reviewed on Monday next by Lord Wenlock, at a great demonstration in honour of the Mayor of Hull giving to the town 27 acres of land for a people's park. All the Hull companies, with the exception of the one last formed, have had silver bugles presented to them by the ladies of Hull.—The Nottingham Robin Hood Corps now numbers nine companies, mustering nearly 800 members, and it is proposed to embody a tenth, to be called the "Armstrong" company, and to be composed of artisans and others who are not wholly able to equip themselves.—The Bristol and Gloucestershire Artillery were inspected on Saturday by Colonel M'Murdo, Inspector-General of Volunteer Corps, and Major Hume, inspector for the district. Each battery fired four shots and two shells.—The review in Knowsley Park on the 1st of September promises to be very successful. It will be strictly confined to the Lancashire Volunteers; and already the acceptances amount to 10,500 men. Lieut.-General Wetherall will command.—Lieut.-Colonel Gladstone and Major Tinley, of the 2d battalion Lancashire, are making arrangements for a county rifle contest on their ground at Hightown, near Liverpool. The meeting will commence on the 29th of October, and is likely to last three days. One day will be devoted to all comers. It is intended that on this occasion there shall be a prize for Artillery Volunteers, who will contest with carbines.—Lieut.-Colonel Bousfield's 1st battalion Lancashire are still encamped at Crosby, near Liverpool, and, notwithstanding the very bad weather, are likely to remain there for some time to come.—The Earl of Leicester, Lord Lieutenant of Norfolk, has appointed Tuesday, the 18th of September, for a general review of the Norfolk corps at Norwich. The review will take place on Mousehold Heath, and will be under the command of Major-General Wood, commandant of the camp at Colchester. About 1000 to 1200 Volunteers will be assembled on the occasion, including the Norwich and Yarmouth corps and companies from Lynn, Fakenham, Aylsham, Swaffham, Reepham, Loddon, North Walsham, and other parts of the county.—The Melton Mowbray Corps had a field-day on Thursday week, and were inspected by Lieut.-Col. Turner.—The 5th Lincolnshire, Sleaford, were presented with a set of colours last week, at Leasingham Rectory, by the ladies of the town.—The 2d battalion of Essex Volunteers was officially inspected on Saturday by Lieut.-Col. Ibbetson, Assistant-Inspector of Volunteers.—A match took place on Monday at Reigate, between the 5th Surrey (Reigate) and 14th Surrey (Dorking); 12 men from each corps firing 10 rounds each at 200 yards and 10 at 300 yards. The aggregate score of Dorking was 225 points; Reigate, 221. The highest scores on the part of Dorking were made by Messrs. Shearburn and Fuller, 28 and 27 points; on the side of Reigate Messrs. Porter and Blakeston made 26 and 25 points; Sergeant King, 24.—On Friday evening the 3d Durham Rifle Volunteers were presented with a stand of colours at Sunderland by Lady Susan Vane Tempest.—The 5th Hants paraded on the Governor's Green, Portsmouth, on Tuesday, and were presented with eight silver bugles, subscribed for by the ladies of the town and neighbourhood.—The Ryde Company of Isle of Wight Volunteers were presented with two silver bugles on Wednesday in the grounds of Ryde House Park.—The company formed at Saffron Walden is to be designated the "North Essex Borderers."—The 1st Huntingdon are to be shortly presented with a silver bugle and camp colours by the ladies of that locality.—The 143d Lancashire (Rusholme), the "crack" regiment of Manchester, have agreed to purchase their own arms and clothing, adopting the short Enfield, to build their own butts, maintain their own drill sergeant, and to train up a band (fife and drum) composed of youths, with a competent instructor.—Lord Portman, Lord-Lieutenant of Somerset, is completing arrangements for placing the Volunteer corps of that county on a more complete military footing. For this purpose the county is to be divided into three districts—an eastern district, a western district, and a central district—and a colonel and adjutant will be appointed to each. It is intended to hold occasional divisional parades and reviews in each district.—The Devon County Volunteer Association, which has been formed through the instrumentality of Earl Fortescue, the Lord-Lieutenant of the county, and other noblemen and gentlemen, has announced its intention of offering prizes of 100*l.* and downwards to be competed for in a short time, at some eligible place in the county, by Volunteers connected with the various corps of the West of England.

Foreign.

FRANCE.—The Emperor and Empress left St. Cloud on Thursday on a visit to the new departments of Savoy and Nice. Marshal Vaillant is intrusted with the care of the Imperial Prince during the absence of their Majesties, and will also sit at the Council of Ministers. A French ship of war is about to proceed from Toulon to Tunis to convey the Bey from that place to Algiers, where he will remain during the stay of the Emperor and Empress. A squadron of seven vessels will escort their Majesties to Algiers.—The Count of Aquila, uncle of the King of Naples, and his Countess, have arrived at Marseilles on board a Brazilian corvette, escorted by a Neapolitan steamer. They were to leave on Saturday evening for Paris and London.—The representatives of the great Powers on Wednesday signed the convention regulating the joint intervention in Syria.—The *Constitutionnel* publishes a letter from Turin, bearing the signature of M. Grandguillot, commencing as follows:—

"Italy is now entering the most critical and most decisive period of her regeneration. Henceforth she stakes on a single card either her ruin or her salvation. Engaged as she is in the path upon which she has been thrown by the expedition of Garibaldi, Italy will within two months be either free and completely independent, or Austria will again reign, and this time from Messina to Turin." The letter then details the course of past events, and states that the negotiations between Naples and Piedmont were unsuccessful by reason of Garibaldi's refusal to arrest his course, and on account of the enthusiasm prevailing throughout Italy having paralysed the measures which Piedmont might otherwise have taken to prevent further complications.

An Imperial decree is expected, according to which corn and flour on being imported into France, by land or sea, either in French or foreign vessels, will only be subject to the *minimum* of duty until the end of September, 1861. All vessels laden with corn and flour will be exempt from tonnage dues.—The inquiry relative to the treaty with England is drawing towards its close. The Superior Council of Commerce, presided over by M. Rouher, held five sittings last week, two of which were devoted to matters connected with the silk trade, and the three others to the fabrication of spirits and chemical products. About 150 manufacturers, representing these three branches of French industry, were examined by the Council. The following extract from a private letter, addressed by Mr. Cobden to a friend in England on the subject of the Treaty, has been published in the daily papers:—

"I have still no reason to doubt that matters will be brought to a satisfactory result here. Up to the present moment I have experienced nothing but candour and straightforwardness in my dealings with the French Government, while all the misrepresentation, falsehood, and difficulties which I have had to encounter have come from the English side of the Channel. Nothing disgusts me more than the cowardice and want of honest principles in our politicians. Anything for a momentary cry which may give a triumph over a political opponent, seems to be the motto of our party men. You will see that in less than a couple of years all our politicians will be eager enough to claim the merit of having always been friendly to the French treaty. The paragraph you enclose, I guess, a conversation of mine, is one of those rascally acts of eavesdropping for which American newspaper writers are so notorious. There is a good deal of the paragraph which agrees with what I have thought; but whether I expressed it in private conversation is more than I could swear to, as no one expects to be made responsible for private gossip. There ought to be the punishment of the pillory or the stocks revived for those who publish in newspapers the unguarded remarks which fall from a man in private conversation, when he frequently speaks merely to

provoke a reply and keep people from going to sleep over too serious an interchange of views. No; I did not help the Emperor to prepare his pamphlet about the English and French armies and navies. Take my word for it, however, that there is a vast deal of systematic lying in England about the French armaments. You remember that charming old lady, Mrs. Wolley's landlady, whom we visited, who remarked—'Pauvre John Bull, quand on veut enlever son argent on lui fait peur de nous!' I am quite ashamed of the childish credulity with which Englishmen allow themselves to be imposed upon respecting anything French. You will see a great and sudden reaction in the public mind soon. Common sense, aided by the publication of the new French tariff, will put an end to the panic."

SPAIN.—The Spanish Government has determined to send to the coast of Syria the screw-frigate Princesa de Asturias and steamer Vulcan, two of the best ships in the navy. They will each carry a large force. The Madrid journals state that serious embezzlements have recently been discovered in different Government offices.

PORTUGAL.—Accounts from Lisbon announce the marriage of the Princess Antonia, youngest sister of the King of Portugal, to the Prince Leopold of Hohenzollern-Sigmaringen, brother of the late Queen of Portugal, and son of the President of the Prussian Ministry. The Princess was born in 1845, and is consequently in her 16th year.

SWEDEN.—Three of the Orders in the Swedish Diet, the nobility, the citizens, and the peasantry, have affirmed the proposition for holding the sessions of the Diet annually, instead of every three years, as at present; but the motion has been rejected by the fourth Order, the clergy, which has also negatived a proposal for the abolition of imprisonment for debt, which was affirmed by the three Orders of the laity. The penalty is retained in cases of actions on bills of exchange.

PRUSSIA.—The official Prussian *Gazette* designates the statements of the *Nord* in reference to the points determined upon in the interview at Töplitz as pure inventions. The Prince and Princess Frederick William will leave Berlin on the 1st September for Puttbus, where she is to take sea-bathing. On the 24th of that month the Prince and Princess will go to the Court of Coburg, to meet Queen Victoria.

SWITZERLAND.—A fatal accident happened on the 15th inst. to three English travellers—Mr. J. M. Rochester and Mr. F. Vavassour, of Cardiff, and Mr. B. Fuller, of London, while crossing the Col du Géant from Chamouny to Cormayeur, attended by three guides. Before they reached the summit a thick fog came on, accompanied by a storm of hail and rain. The principal guide advised them to return to Chamouny, which they refused to do. The guide then tied them together by a rope which he fastened also to himself, the two ends being held by the other guides, one of whom preceded, the other followed the party. In descending from the summit across a steep projecting ridge covered with soft snow, one of the travellers slipped and dragged with him his two companions and the three guides. The guides at the end of the rope made every effort to arrest their progress, but in vain, and seeing that they were all upon the point of being lost, they let go the rope, forced their hands and feet into the snow, and stopped themselves at the very edge of an abyss, into which the rest of the party were immediately plunged. The bodies were recovered on the following day and buried in the cemetery at Cormayeur.

HESSE.—A letter from Frankfort of the 12th inst. states that the Elector of Hesse had been stopped on the public promenade at Hanau by some persons, who abused him in the coarsest terms, accused him of breach of faith, and demanded from him the re-establishment of the Constitution of 1831. The Elector was compelled to take refuge in a jeweller's shop,

AUSTRIA.—The Committee of 21 members of the Council of the Empire adopted on Tuesday, by a majority of 18 to 3, the political programme of the Hungarian members for all the provinces of the Austrian Empire. The Ministers also gave their formal adhesion to that programme. The Committee have admitted the justice of the reasons adduced in the memorandum of the Archduke Maximilian against the reduction of the Austrian navy, proposed by the Minister of Finance, and have unanimously decided that the marine budget may be increased by 1,000,000fl. Preparations have been made at Vienna for the reception of the King and Queen of Naples in the event of their being obliged to leave the kingdom, and an Austrian flotilla has been sent to Naples in order to be at the disposal of their Majesties.

HUNGARY.—The national fête of St. Stephen took place on Monday at Pesth, and passed off with the most perfect order. General Benedek was present at the procession, in which the arms of St. Stephen were carried through the streets. Many noblemen and the Primate of Hungary, escorted by young men with drawn swords, also took part in the procession, which was very imposing. General Benedek entertained the principal inhabitants at a grand dinner, to which the Primate was also invited.

RUSSIA.—Despatches from St. Petersburg state that a grand banquet has taken place at the Imperial Court in honour of the birthday of the Emperor of Austria, at which the Austrian Ambassador was present. The Czar, in proposing the health of the Emperor, said, "In honour of my dear brother the Emperor of Austria." The accounts given in all the Russian journals of the prospects of the harvest are very unfavourable. Violent storms of rain and hail, floods, and high winds have damaged the crops in many localities; and, in addition to these causes of destruction, some of the southern provinces have been visited by swarms of locusts. In Bessarabia the population was called out against the advancing swarms as against an invading army. A *cordon* of 20,000 men, under military orders, was drawn round the district in which the locusts had appeared, and the measures taken for the extermination of the pest had to some extent succeeded, when another swarm appeared in the same district, and in the government of Cherson, spreading over the country till it covered an area of 30 miles in length by 12 broad. It crossed the Dniester, and settled down on the forests and fields, devouring every blade of corn and every leaf. The *cordon* of defence extended along 10 miles, and an active war was carried on against the insects, but by the last accounts the result was doubtful, as the locusts had broken through the line and advanced into the interior of Bessarabia. They have also appeared at Odessa in such immense swarms that it was necessary to play fire-engines upon the boulevards and town gardens to drive them away.

NORWAY.—The coronation of the King and Queen, at Drontheim, on the 5th inst., was succeeded by several days of festivity. On the 6th the King held a levee, at which all who took part in the coronation procession were presented, and afterwards the principal officers were entertained at dinner. In the evening the leading inhabitants of the city gave a ball, to which the King and Queen were invited. The ball was held in a building erected for the occasion, which was most elaborately decorated, under the superintendence of M. Schirmer, the chief architect of Christiania, and lighted by 30 glass chandeliers and numerous candelabra. The base of the columns supporting the roof were adorned with the choicest flowers and beautiful ferns. The walls were draped with white, festooned with dark red and blue—the national colours. Prior to the arrival of their Majesties about 1200 assembled. The King and Queen were received by the principal citizens and officers of state; the band playing the English national anthem to words arranged for the occasion. The whole arrangements for the evening were on a scale of unbounded liberality and elegance.

ITALY.—Garibaldi landed in Calabria on the 19th inst., after having visited the island of Sardinia, where an expeditionary force of several thousand men had assembled to meet him. He had left Messina on the 12th inst., after appointing General Sirtori to command the land and sea forces in his absence. His destination was not made public, and it was at first supposed that he had gone to Calabria, where some small parties of his followers had already landed. He proceeded however to Cagliari in Sardinia to obtain his reinforcements, passing before Naples on his way, under the very eyes of the Neapolitan fleet. He left Cagliari on the morning of the 18th at the head of an expeditionary corps of about 5000 men, stating that he was returning to Messina, but it was understood that the statement was made simply to cover his real plans. On the 19th, with a force of 3800 men, he landed at Melito, on the Calabrian coast, 12 miles from Reggio. Another body of 6000 men landed at Capo delle Arme, and another body, conveyed in 130 Sicilian vessels, disembarked at Bagnara. Their united force subsequently attacked and took Reggio, and cut the telegraph lines between Palma and Reggio. The steamer Torino, with another body of 2000 men, ran ashore, but landed her men. The steamer Franklin attempted in vain to get the Torino off, and the Neapolitan cruisers, as at the first landing of Garibaldians at Marsala, fired on the stranded ship after the landing had been effected, but did not fire upon the Franklin. It is said that a revolutionary movement has taken place in the Province of Basilicata, that a Provisional Government has been established at Potenza, and that two companies of Dragoons and several artillerymen at Foggia have joined the insurgents. From Naples the latest news announces that the elections have been adjourned until the end of September, and that the Parliament is to assemble on the 20th of October. 1500 men, with arms and 200 tents, said to have come from Sardinia, had been gradually landed at Naples, but were compelled by the Royal Guard to re-embark. It was suspected that their intention was to assist in the construction of barricades, in the event of an insurrection breaking out. It is said that the Count of Aquila, the King's uncle, who in former times had declared himself in favour of liberal institutions, was banished in consequence of the discovery that he was conspiring to get up a revolution in Naples with the view of seizing his nephew's throne. The Ministry discovered 15,000 portraits of the Prince, with the motto, "Long live the Regent!" and several cases of muskets and revolvers addressed to the Prince, which had been entered at the Custom House as articles of ironmongery. The prince is said to have enrolled several thousand men belonging to the reactionary and Mazzinian parties, as well as an immense number of the priests, all of whom were ready to effect a *coup de main*. The Queen Dowager is said to have at last left the kingdom, having embarked in a Spanish vessel from Gaeta for Spain, accompanied by her daughters and her youngest sons—the elder one, the Count de Trani, remaining at Naples.—Despatches from Rome state that the *fête* of the Assumption on the 15th inst. passed off in tranquillity. It is stated that 3000 soldiers formerly in the service of the Duke of Modena have entered the service of the Pope. Disturbances connected with the enlistments have been suppressed. The official journal announces that the total amount of Peter's Pence which has reached the Pope from different parts of the world, is 1,120,000 Roman crowns (5,992,000 fr.). This sum is only sufficient to maintain an army of 25,000 men for three or four months.—The *Official Gazette* of Turin publishes a circular addressed by the Minister of the Interior to the Governors and Intendants-General in reference to the formation of Volunteer Corps to join the National Guard. The Duc de Chartres has resigned his commission as a cavalry officer in the Sardinian Army, in which he gained distinction. This step is regarded at Turin as a sign that a fresh conflict with Austria is imminent.

SICILY.—Messina was illuminated on the 19th in honour of the departure of Garibaldi for the mainland. Garibaldi, on his return from Sardinia, met and went on board an English vessel. On his arrival at Faro he found another English ship, having on board 30,000 muskets and 15 rifled cannon. He departed again without landing, accompanied by Colonel Bixio and 5000 volunteers. General Cosenz was preparing to leave for another point of the mainland. The installation of the New Sicilian magistracy took place at Palermo on the 9th inst. The members all took the oath to the constitutional statuto of the Sardinian kingdom. Before his embarkation for Calabria Garibaldi addressed the following proclamation to the people of the Neapolitan continent:—

"The opposition of the foreigner, interested in our abasement, and internal factions have prevented Italy from constituting herself a country. Now, however, it appears that Providence has put an end to so many misfortunes. The exemplary unanimity of all the provinces, and Victory smiling everywhere on the arms of the sons of liberty, are a proof that the sufferings of this land of genius are drawing near to their termination. Yet another steps remains. That step I do not fear. If the slight means which have conducted a handful of valiant men to these Straits are compared with the enormous means at our disposal at present, every eye will see that the enterprise is not difficult. I would that the shedding of blood among Italians could be avoided, and therefore I address myself to you. Sons of the Neapolitan Continent, I have proved that you are brave, but I desire not to make further proof of it. Our blood we will shed together on the bodies of the enemies of Italy. But between us let there be a truce. Accept, generous men, the right hand which has never served a tyrant, but which is hardened in the service of the people. I ask of you to constitute Italy without slaughter of her sons, and with you to serve her and die for her.

"G. GARIBALDI."

TURKEY.—Sir Henry Bulwer is said to have made representations to the Sultan respecting the dangers which threaten the Turkish empire, and to have again advised the recall of Kibrisli Pacha from Roumelia, and the transfer of his mission to Omar Pacha.

SYRIA.—The last accounts from the Levant state that great fears are entertained of a general rising of the Mahomedans against the Christians. Fanatical emissaries are traversing the Turkish provinces in every direction, calling on the faithful to rise in the defence of the Crescent. In their wild preaching they do not spare the Sultan, whom they represent as a degenerate Prince making common cause with the Giaours. At Balbeck, the capital of the Mutuali, who inhabit the Anti-Lebanon, the ferocious mountaineers have again attacked the Christians, and murdered a vast number of them.

EGYPT.—The decision of the Indian Government on the late outrage committed by officers of the Indian army in the Mosque at Cairo is, that the two senior officers be dismissed the service, and that the others be severely reprimanded.

INDIA.—The Bombay mail of July 23 has arrived. The following is the only news of public interest:—

Calcutta.—The standing orders having been suspended, the Income-tax Bill has passed. The first quarterly payment is to be due on the 1st November, and the tax is not made retrospective. Closing shops, or doing or incurring any act to evade the enactments of the Bill, is punished by 12 months' imprisonment and a fine. The Disarming Act has also passed, but in a very different shape from that in which it was originally presented to the Council. The Government carried their point of not specially exempting Europeans, but the act gives permission to magistrates to exempt whomsoever they please, whether native or European, and gives the Governor-General and subordinate governors power to exempt whole districts. Mr. Wilson has explained in the Legislative Council that India will have to bear her share of the expenses of the Chinese war. The Governor-General in Council has appointed a committee to inquire into "the large and rapid increase in civil expenditure of various branches which has occurred within the last four years."

Bombay.—The Bombay Chamber of Commerce have passed, by a large majority, resolutions condemnatory of Mr. Wilson's proposed Paper Currency for India. Their opinion is in favour of a private bank framed upon the model of the Bank of England, with a capital of at least five millions.

CHINA.—Accounts from Shanghai of June 29, state that Lord Elgin and Baron Gros had arrived there, and that Sir Hope Grant and Admiral Hope had left for Pecheli. The city was protected by the Allies, and the rebels were making progress, all trade being stopped. At Canton on the 8th July matters appeared more settled. 100 war vessels and transports were in Foochien Bay on the 24th of June. The Mandarins had been ordered to furnish no supplies.

UNITED STATES.—The President visited the Great Eastern at Annapolis on the 9th inst, accompanied by a large party of ladies and gentlemen. The President was received with a salute both on his arrival and departure, and expressed himself much gratified with his visit, which lasted two hours. The ship left the

Chesapeake on her return to New York on the 10th, and the 16th was named as the day of her departure for England. The reported resignation of Secretary Cass was without foundation. The foreign residents in New York were making arrangements to give a grand reception and ball in honour of the Prince of Wales.

SOUTH AMERICA.—The interior of Salvador had been visited by a severe earthquake, which was said to have destroyed St. Vincent. A serious insurrection of the negroes was reported in the guano island of Sombrero.

MEXICO.—A Spanish frigate had arrived off Vera Cruz with despatches from the Spanish Minister. Miramon was at Lagos, unable to effect his escape from that country. An attack on the capital was expected. The Bishop of Guadalajara had been seized.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Volunteer Reviews.*—The Earl of MALMESBURY called the attention of the Government to the expense and inconvenience of calling out detached corps of volunteers in rural counties to a distance from their headquarters, for the purpose of inspection during times of peace.—Earl DE GREY and RIPON said the Government had no power to call out the volunteers for drill or inspection except in case of invasion, and if they were put to inconvenience by going out of their districts it was entirely of their own free will. The *Refreshment Houses and Wine Licenses (Ireland) Bill*, the *Industrial Schools Act* (1857) *Amendment Bill*, and the *Spirits Bill* passed through committee. The *Local Government Supplemental Bill*, the *Gas (Metropolis) Bill*, and the *Consolidated Fund* (10,000,000*l.*) *Bill* were read a third time and passed.

MONDAY.—The *Royal Assent* was given by commission to various Bills. The *Landlord and Tenant (Ireland) Bill* passed through committee. On the motion of the Duke of ARGYLL, the *Savings Bank and Friendly Societies' Investments Bill* was treated as a measure of "urgency," and the standing order having been suspended, the Bill was read a second time.—Earl GRANVILLE moved the second reading of the *Fortifications (Provision for Expenses) Bill.*—The Earl of ELLENBOROUGH regarded this important Bill with the greatest satisfaction. For many years he had attempted to call the attention of successive Governments to the almost defenceless state of the country, as he earnestly desired that England should not remain unarmed and defenceless in the midst of an armed world. He regretted that further measures had not been taken with regard to the fortification of Sandown, in the Isle of Wight, and in providing defences for the dockyards. The state in which Woolwich would be left would materially affect the success of any expedition which might be made with a view of attacking London. Woolwich ought to be the citadel of London, and the arsenal, if properly fortified, would make an attack on London impossible. Highly as he thought of the Volunteers and of the spirit which animated them, they could not, he feared, act as well as regular troops in the field, and he therefore regretted that no enlargement of the regular army was contemplated. Such an enlargement was imperatively necessary, and the sooner it was made the better for the security of the country.—Earl DE GREY and RIPON was glad that the Government scheme had met with Lord Ellenborough's approval, and stated, in reply, that the fortification of Woolwich, if carried out, would absorb too large a sum of money. In regard to the enlargement of the regular army, that army had not for several years been so large as at present; besides which it might now rely upon the Volunteers, many battalions of whom, he had been informed on military authority, would be well able to take the field with a regular army. The Bill was then read a second time. The *Defence of the Realm Bill*, the *Customs (No. 2) Bill*, the *Stamp Duties (No. 2) Bill*, and the *Peace Preservation (Ireland) Act Amendment Bill* were read a second time. The *Refreshment Houses and Wine Licenses (Ireland) Bill*, the *Poor Relief (Ireland) Bill*, and the *Industrial Schools Act* (1857) *Amendment Bill* were read a third time and passed.

TUESDAY.—The *Rifle Volunteer Corps Bill*, the *Landlord and Tenant (Ireland) Bill*, the *Fortifications (Provision for Expenses) Bill*, the *Customs (No. 2) Bill*, the *Stamp Duties (No. 2) Bill*, and the *Defence of the Realm Bill* were read a third time and passed. The *Excise Duties Bill* was read a second time. The Commons' amendments to the Lords' amendments on the *Crown Debts and Judgments Bill*, the *County Coroners Bill*, and the *Weights and Measures (Ireland) Bill* were considered and agreed to. The *East India Loan* (3,000,000*l.*) *Bill* was brought up from the Commons and read a first time.

THURSDAY.—The Commons' amendments to the *Conjugal Rights (Scotland) Bill* were disagreed with, and a committee appointed to state the reasons for so doing. The *Excise Duties Bill* was read a third time and passed. The *East India Loan Bill* and the *Spirit Duties Bill* were read a second time. The *Consolidated Fund Appropriation Bill* and several other Bills were brought up from the Commons and read a first time.

FRIDAY.—*Law Reform.*—The Lord CHANCELLOR laid on the table of the House a Bill for the repeal of several statutes, and moved its first reading, not, he said, with a view to its passing this session, but simply for the purpose of having the matter fully discussed next session. He then called the attention of the House to the measures of law reform that had been brought before them during the present session, expressing his opinion that whether regarded in its administrative or judicial character the House had done all in the way of law improvement and reform that could reasonably be expected of them. After a few words from Lord ST. LEONARDS, the Bill was read a first time.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—The House went into Committee of Supply, and agreed to several votes of the *Civil Service Estimates*. *The Irish Magistracy.*—Colonel FRENCH called attention to a report that the Lord-Lieutenant of Ireland had transferred to the Inspector-General of Constabulary the appointment of one-third of the resident magistrates, to be selected by him from the force under his command, stating his objections to such a measure.—Mr. CARDWELL said that by the act of 1839 the appointments of magistrates were thrown open, and Lord Carlisle had adopted the course, on every third appointment, of consulting the inspector of police. In reply to Mr. SCULLY, he said that there was no intention of appointing a second commissioner. *Human Sacrifices in Africa.*—Lord FERMOY called attention to the intended sacrifice of 2000 human beings according to a barbarous custom by the present King of Dahomey, in memory of his father, and suggested that measures should be taken to dissuade the King from this terrible slaughter.—Mr. C. FORTESCUE said the Government had reason to know that the intention attributed to the King of Dahomey was too true; that instructions had been sent to the Admiral on the station to forward a message of remonstrance and warning to the King, but he feared it would be of no avail.—Lord PALMERSTON said the matter had for a long period of time engaged the attention of the Government, and endeavours had been made to persuade the King of Dahomey to abandon his inhuman customs. The great obstacle to the success of these endeavours was, however, the slave trade carried on by the citizens of civilised countries. *The Syrian Massacres.*—Mr. KINNAIRD asked whether the Government had made any representations to the Porte, or taken any steps to cause the restoration of the Christian women carried off and sold by the Druses.—Mr. MONSELL inquired what were the instructions given to Lord Dufferin, as Commissioner in Syria; and commented in strong terms upon the conduct of the Turkish authorities in that country.—Lord PALMERSTON said that Lord Dufferin had instructions to take steps for procuring the liberation of the Christian women, and her Majesty's Ambassador at Constantinople would exert his efforts for the same object. The state of Syria was the result of the absence of a direct authority. One of the duties of Lord Dufferin was to ascertain, in concert with his colleagues, the state of the country, and to suggest what system of government would conduce to the happiness of the people and prevent the recurrence of these collisions. Discussions were likewise raised relating to the *Roman Catholic Charities Bill*, the *Bursting of the Gun at Dover*, and other topics. The House then went into committee of supply, and agreed to the votes for the militia, fortifications at home and abroad, and the remaining items in the *Army Estimates*. The *Metropolitan Police Force (Dockyards) Bill* and the *Naval Discipline Bill* were read a second time. The *Ecclesiastical Courts and Registries (Ireland) Bill* was withdrawn. The *East India Loan Bill* passed through committee. The *Conjugal Rights (Scotland) Bill* was read a third time and passed. On the order for going into Committee on the *Party Emblems (Ireland) Bill*, Mr. HENNESSY moved as an amendment that the Bill be committed that day three months. After considerable discussion the amendment was negatived on a division by 53 to 22, and the House went into committee on the Bill, when the Chairman was ordered to report progress. The *Report of the Committee of Supply* was brought up and agreed to.

SATURDAY.—The House had a morning sitting for the purpose of getting through the remaining votes on the *Civil Service Estimates*. Long discussions took place on the vote for the *Mediterranean and Red Sea Telegraphs*, which was opposed on the ground that the lines were not in working order. The vote was ultimately agreed to. The votes for the *Historical Portrait Gallery* and the *National Gallery* were opposed by Mr. SPOONER and Mr. CONINGHAM, and defended by Lord PALMERSTON. Both votes were carried, after divisions—the latter by 31 to 23. The vote for the *Kensington Museum* was likewise passed. The vote for the *Ecclesiastical Commission* was opposed by Sir H. WILLOUGHBY and other hon. members; and Mr. CONINGHAM gave notice that he would, on bringing up the report of supply, give the House another opportunity of rejecting the vote. The report of the Committee of Ways and Means and the Report of the Committee of Supply, were brought up and agreed to.

MONDAY.—*Westminster Improvement Commission.*—Sir W. GALLWEY asked if the Government would next Session grant a Committee to inquire into the proceedings of the Westminster Improvement Commission, with especial reference to the condition of Victoria Street.—Mr. COWPER acknowledged that the condition of the street was disgraceful, and said that next Session he would offer no objection to a committee of inquiry.—Mr. LINDSAY complained of the enormous *Increase of Expenditure*; that little or nothing had been done during the Session but spending money; and that this had been altogether a most unsatisfactory Session—Mr. SCULLY and Mr. NEWDEGATE made some observations to the same effect.—Mr. JAMES objected to the law charges for drawing the Reform Bill of the late Government, and for collecting statistics to serve as the basis of the Reform Bill of the present Government.—Mr. MALINS said that the preparation of Reform Bills was a very expensive amusement. No one wanted reform but some score of gentlemen below the gangway, and yet the two last Bills had cost 6000*l.* in money, and several months of public time.—Mr. BASS inquired whether it was the intention of the Government to legislate on the subject of *Trade Marks.*—Mr. M. GIBSON said the Government had prepared a Bill, but that they had found it impossible to proceed with it this session.—*General Post Office*—Mr. DANBY SEYMOUR expressed a hope that the advent of a new Postmaster-General would lead to some acceleration in the conveyance of letters in the country, and that the Post-office authorities would no longer neglect availing themselves of railways for the conveyance of the mails.—Mr. MONSELL referred to the recent outrages upon the *Christians in Syria*, and censured in terms of severity the conduct of the Turkish authorities, whom he accused of openly abetting the Druses in their attack upon the Christians. He thought there should be active intervention in the affairs of Turkey, which was weak and paralytic, and denied that the Maronites were the aggressors in the recent outrages.—Lord PALMERSTON regretted to find Mr. Monsell the advocate of the dismemberment of the Turkish empire. Grave complaints might no doubt be made against Turkish rule, but any one who had paid the slightest attention to such matters knew that the Turkish empire could not be partitioned without a European conflict, or without endowing other States with territory to the prejudice of Great Britain. He explained the steps which had to be taken to bring the Druses to justice, and stated that the Turkish Government was doing all in its power, in conjunction with France and other European Powers, to make its authority respected, and to prevent a recurrence of such scenes for the future. The report of the Committee of Supply was then considered. On the vote of 15,000*l.* for the alterations in the *National Gallery*, Mr. CONINGHAM reiterated his objection to the vote.—Lord PALMERSTON said that the alterations were absolutely necessary, whatever might be the ultimate decision as to the National Gallery and the Royal Academy. After a brief conversation, in which Mr. JOHN LOCKE, Mr. H. SEYMOUR, and Lord H. LENNOX took part, the vote was agreed to.—On the vote of 17,000*l.* for the *South Kensington Museum*, Mr. CONINGHAM moved that the resolution be not agreed to. On a division the vote was affirmed by 60 to 21. A further attempt was made by Irish members to negative the vote of 2000*l.* for a *Model School at Cork*, which was defeated, on a division, by 58 to 13. The report of the *Committee of Ways and Means* was brought up and agreed to. The *Consolidated Fund (Appropriation) Bill* was brought in and read a first time.—On the order for the third reading of the *East India Loan Bill*, Mr. BUXTON complained of the unnecessarily large army maintained in India, and Colonel SYKES characterised the expenditure as extravagant.—Sir C. WOOD said that the Government in India, who were best able to decide what was the amount of force necessary, thought that 80,000 was the *minimum* number of European troops, and he was not prepared, in the face of their opinion, to withdraw any portion of the force now in India. He had, he said, repeatedly urged upon the Indian Government the necessity of economy and the reduction of all expenditure not absolutely required.—The Bill was then read a third time and passed. The *Spirit Duties Bill* was read a third time and passed. The *Militia Pay Bill* was read a second time. The *Party Emblems (Ireland) Bill* passed through Committee after considerable opposition, in the course of which the ATTORNEY GENERAL FOR IRELAND consented to limit its operation to five years. The *Local Government Act* (1858) *Amendment Bill* passed through Committee. The *Law and Equity Bill* and the *Titles to Land (Scotland) Act* (1858) *Amendment* (*No. 2*) *Bill* were read a third time and passed. On the order for the second reading of the *Divorce Court Bill*, Mr. HENNESSY raised a question whether the House of Lords, which had passed the Bill, had not trenched upon the privileges of the Commons. He concluded by moving that the Bill be laid aside.—The SPEAKER gave his opinion at some length that the question was open to doubt; and, on the motion of Mr. JAMES, the debate was adjourned. Several Bills received from the Lords were read a second time. The *Metropolitan Police Force (Dockyards) (No. 2) Bill* passed through Committee. The *Companies Bill* was withdrawn. The *Sale of Gas Act Amendment Bill* was read a third time and passed.

TUESDAY.—*The Consolidated Fund (Appropriation) Bill* and the *Exchequer Bonds* (2,000,000*l.*) *Bill* were read a second time. The *Enforced Charities Bill* and the *Militia Pay Bill* passed through committee. The House then went into committee on the *Court of Chancery Bill*, and agreed to several of the clauses. On the order of the day for the second reading of the *New Zealand Bill*, Lord PALMERSTON said that the object of the Bill was to protect the interests of the aborigines. It appeared, however, that the constitution of New Zealand already gave the Crown sufficient power for that purpose. Under these circumstances, and at that late period of the session, he thought it best to withdraw the Bill.—Sir J. PAKINGTON complained of the conduct of the Government in reference to this Bill. It was a most objectionable measure, and the Government ought long before to have made up their minds upon the subject.—Mr. HADFIELD defended the Bill, and the conduct of the Government in introducing it.—Mr. C. FORTESCUE also defended the principle of the Bill, and explained the reasons of the Government for adopting a measure which was in accordance with the interests of the colony.—Sir G. LEWIS said that when the Bill first came down from the Lords, the Government felt some difficulty as to the course they should pursue. It was only on the previous evening that, after examining the powers of the Crown, they had come to the decision that those powers were sufficient, and that they would withdraw the Bill.—Mr. ADDERLEY declared that if the Government had proceeded with the Bill they would have been unable to pass a measure so dangerous and subversive of our previous colonial policy.—The order for the second reading of the Bill was then discharged. The House then went into committee on the Naval Discipline Bill, when Lord C. PAGET explained that it was intended to modify the naval code of laws, which was now two centuries old, and of extreme severity. It was proposed to make the presence of three ships necessary for holding courts martial, instead of five as heretofore, and to facilitate their holding by allowing lieutenants to sit upon such courts. The Bill limited the power of the courts to pronounce sentence of death to certain cases really deserving of such punishment, and gave them the power of awarding punishments of different grades. It also gave power to deal with offences committed on shore, the absence of which at present caused much inconvenience. It did not abolish the punishment of flogging, but checked it and brought it under due control. It was also intended to copy the regulation introduced into the army, so that sailors placed for good conduct in a particular class would not be liable to corporal punishment. Moreover, when any sailor was accused, the Bill made it necessary in the first instance that inquiry should be made by one or more officers, who should report to the captain, with whom would lie the ultimate decision.—Sir J. PAKINGTON expressed his gratification at the introduction of the measure, in the provisions of which he generally concurred. He thought the Admiralty were entitled to great credit for having grappled with a question of such importance, and he had no doubt it would prove in a high degree satisfactory to the service.—Sir J. GRAHAM, Sir C. NAPIER, and other members also expressed a general approval of the Bill, which passed through committee with some verbal amendments. The adjourned debate on the *Roman Catholic Charities Bill*, as amended in committee, was resumed. A division took place on the question whether the first clause, which had been introduced in opposition to the wishes of the original framers of the measure, should stand part of the Bill. This was decided in the affirmative by a majority of 70 to 13.—Sir G. BOWYER complained that the Attorney-General had broken faith with him, and that the effect of the clause just agreed to would be to render the Bill a penal statute, inasmuch as it declared as superstitious the prayers for the dead, which were an essential portion of the Roman Catholic religion. He called upon the Government to add a proviso which would remove this grave objection.—The ATTORNEY-GENERAL said he had tried to frame a clause which would be acceptable to all parties, but that he found, like others who essayed the difficult task of pleasing everbody, that he had pleased no one. In a moment of weakness he undertook to prepare a clause, and he gave it as his opinion that that which the House had just affirmed would not affect the present disposition of the law on the subject of superstitious uses.—Sir G. BOWYER stigmatised the clause as mischievous, insulting, and injurious to the Roman Catholic body. The Bill, however, would have to be referred back to the House of Lords, and he trusted that, despite of the jeers and laughter of the Treasury Bench, the large class of her Majesty's subjects who would be injuriously affected by the Bill would receive more consideration in that place than in the House of Commons.—Lord PALMERSTON emphatically denied that the Government had been guilty of any breach of faith, inasmuch as the clause, as originally proposed, had been agreed to without a division. There was, therefore, not the shadow of a ground for the violent vituperation in which Sir G. BOWYER had indulged.—Mr. HUTT (whose name was on the back of the Bill) said that the provisions of the measure as they now stood were perfectly satisfactory to the large body of Roman Catholics in the North of England, who had requested him to bring the subject under the notice of the House. The Bill was then ordered to be read a third time on Wednesday.—The *Court of Chancery Bill* passed through committee. On the order for the consideration of the Lords' amendments to the *Ecclesiastical Commission Bill*, Mr. BERNAL OSBORNE condemned the recent addition made to the salary of the Dean of York, and moved as an amendment that all schemes proposed by the Ecclesiastical Commissioners by which the income of any ecclesiastical dignitaries are altered or increased, shall be laid before Parliament six weeks at least before they are submitted to her Majesty in council.—Sir G. LEWIS opposed the motion, on the ground that it was not relevant to the amendments of the Lords.—The SPEAKER ruled that the motion was irrelevant, and the Lords' amendments were ultimately agreed to by 35 to 18.—The report on the *Party Emblems (Ireland) Bill*, as amended, was considered and agreed to.

WEDNESDAY.—*The affair at Guildford.*—Mr. COCHRANE asked whether, having regard to the high character of Mr. Evelyn, the High Sheriff of Surrey, and the misapprehension under which he issued the placard blaming the conduct of Judge Blackburn, it was the intention of the Government to remit the fine of 500*l.* inflicted by the Judges?—Sir G. LEWIS said that the only way by which Mr. Evelyn could obtain remittance of the fine was by petitioning the Crown, showing that he had acted under misapprehension. Having seen the placard in question, he considered the steps taken by the Judges as perfectly justifiable. The *Appropriation Bill* and the *Consolidated Fund* (2,000,000*l.*) *Bill* passed through committee. The *Militia Pay Bill* and the *Metropolitan Force (Dockyards) No. 2 Bill* were read a third time and passed. The House resumed the committee on the *Union of Benefices Bill*. On clause 14, Mr. HUBBARD moved an amendment providing that the scheme for the removal of any church or parsonage shall provide for the erection of another church or parsonage within the limits of the metropolis. The clause motion was agreed to after some discussion. The clause itself, authorising the sale and removal of churches, was

then agreed to. A clause proposed by Mr. VANCE, that no scheme for carrying out the provisions of the Bill should be submitted to her Majesty in council till it had lain on the tables of the two Houses of Parliament two months, was likewise agreed to. The Bill then passed through committee. The order for the second reading of the *Metropolis Local Management Act Amendment Bill* was discharged, on the motion of Mr TITE. The *Endowed Charities Bill* and the *Naval Discipline Bill* as amended, were considered. On the order of the day for the third reading of the *Roman Catholic Charities Bill*, Mr. BUTT moved that the Bill be recommitted, alleging, that as it stood, it was a penal measure, and that the law of superstitious uses might be injuriously applied in consequence.—Sir G. LEWIS opposed the motion and denied that the Bill was of a penal character.—Sir G. BOWYER apologised for the warmth with which he had spoken on the previous night, and Lord PALMERSTON and the ATTORNEY-GENERAL expressed their satisfaction. —Mr. BUTT having withdrawn his motion, the Bill was read a third time and passed. The *Court of Chancery Bill*, and the *Party Emblems (Ireland) Bill* were read a third time and passed. The House went into committee on the *Church Temporalities Bill*, when Mr. CARDWELL abandoned the first clauses referring to the constitution of the Ecclesiastical Commission. Clause 38, permitting the Commissioners to apply money to the augmentation of small livings, was agreed to with an amendment.—Mr. VANCE moved a clause, giving the regulation of the salaries of the clerks of the Ecclesiastical Commission to the Commissioners of the Treasury.—Mr. CARDWELL contended that the control of the salaries should be left to those who had the control of the funds, namely, the Ecclesiastical Commissioners. —Mr. VANCE, on the understanding that the claims of these underpaid officials would be duly considered, withdrew his clause. The Bill then passed through committee. The *Debtors and Creditors Act Amendment Bill*, the *Coast of Africa Act Amendment Bill*, and the *Offences within her Majesty's Possessions Abroad Bill* were read a third time and passed.

THURSDAY.—*The Suez Canal.*—In answer to Mr. DANBY SEYMOUR, Lord PALMERSTON stated that the Pacha of Egypt had been induced to take a great number of shares in the Suez Canal scheme, one of the greatest delusions of modern times, and that on his refusal to take more shares, M. Lesseps had pledged the Viceroy's credit without his knowledge or consent. Communications on the subject had passed between her Majesty's Government and that of the Emperor of the French, and the latter had declared that they had nothing whatever to do with the project. Mr. Cobden had not received any instructions to negotiate with the French Government on the subject. *The French Treaty.* — Mr. SPOONER asked whether Mr. Cobden was now her Majesty's representative at Paris.—Lord PALMERSTON replied that Mr. Cobden, in conjunction with Lord Cowley, was fully authorised to negotiate whatever might remain to be settled of the treaty. The *Consolidated Fund (Appropriation) Bill*, the *Exchequer Bonds (2,000,000l.) Bill*, the *Endowed Charities Bill*, and the *Naval Discipline Bill* were read a third time and passed.—On the order for the adjourned debate on Mr. HENNESSY's amendment to the second reading of the *Divorce Court Bill*—viz., that the Bill be laid aside, Lord PALMERSTON called attention to the remarks made by the Speaker on Monday on the question of privilege involved in the fifth clause of the Bill, which had been introduced by the House of Lords contrary to the privileges of the House of Commons. Considering that the object of the Bill was to improve the jurisdiction of a most useful court, he hoped the House would be satisfied with a protest against the interference of the Lords, and consent to read the Bill a second time.—Sir J. GRAHAM said that, although he was an ardent supporter of the rights and privileges of the House, he thought it would be unduly magnifying the circumstance complained of if the House were to lay the Bill aside. After a short discussion the amendment was withdrawn. On the motion that the Bill be read a second time, Mr. MALINS moved as an amendment that the Bill be read a second time that day month, contending that the law of 1857 had been most disastrous in its results.—Sir G. BOWYER seconded the amendment, which was supported by Mr. SPOONER and Mr. HENNESSY, and opposed by Mr. E. JAMES and the ATTORNEY-GENERAL. On a division the amendment was negatived by 43 to 11, and the standing order having been suspended, the House went into committee on the Bill, and agreed to the clauses with some verbal amendments.—Mr. MALINS moved that the Bill continue in force for two years only.—The ATTORNEY-GENERAL having assented, a clause to that effect was added to the Bill.—The *Trustees, Mortgagees, &c., Bill* passed through committee. The *Church Temporalities (Ireland) Acts Amendment Bill* was read a third time and passed. The *Poor Law Officers Superannuation Bill* was withdrawn. The *Union of Benefices Bill* was read a third time and passed. *Defence of London.*—Sir D. L. EVANS moved an address to her Majesty, praying that the recommendations of the National Defence Commission for the construction of a fortified work on Shooter's Hill for the protection of Woolwich Arsenal be carried into effect, and that a Royal Commission be appointed to examine and report on the lines of march available to an invading army advancing against London. He was arguing in support of his motion, when the House, consisting of 16 members only, was counted out.

FRIDAY.—*Austria and Sardinia.*—In answer to Mr. BUTT Lord PALMERSTON said that the statement that Austria had informed the Sardinian Governmet that she would treat the landing of Garibaldi in Naples as a *casus belli* was totally devoid of any foundation. The Austrian Government had invariably stated that they did not intend to interfere by force of arms beyond their own frontier, but that they intended to defend it if it was attacked. The *Divorce Court Bill* and the *Trustees, Mortgagees, &c. Bill* were read a third time and passed. *Switzerland and Savoy.*—In answer to Mr. KINGLAKE and Sir G. BOWYER, Lord PALMERSTON said that the independence of Switzerland ought to be maintained, and that the annexation of Savoy was not creditable to the parties engaged in it, especially when it was remembered that Faucigny and Chablais were to be ceded, of which there appeared to be no intention.—Mr. GRIFFITH proceeded to call attention to the outrages at Damascus, when Mr. E. JAMES moved that the House be counted. There were not more than 16 or 17 members present, and the House adjourned at a quarter past 6.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 92¾ for Money, and 92¾ to ⅞ for Account; Three per Cents. Reduced, 93¼ to ⅜; New Three per Cents., 93⅜ to ¼; Thirty Years' Annuities, expiring in April, 1885, 16⅝ to 16¾; Indian Five per Cent. Stock of 1859, 103⅝; Indian Four per Cent. Debentures, 1858, 96⅞; India Bonds, 8*s.* to 4*s.* dis.; Exchequer Bills (small), 3*s.* prem.—FOREIGN: Dutch Two and a Half per Cents., 61⅞; Mexican Three per Cents., for Acct., 20⅞; Portuguese Three per Cents., 43½; Ditto for Acct., 43⅝; Russian Five per Cents., 108; Ditto for Acct., 107½; Ditto Four and a Half per Cents., 93¼ to ½; Sardinian Five per Cents., 82¼ to ½; Spanish New Deferred Three per Cents., for Acct., 40; Turkish Six per Cents., for Acct., 60⅜.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,422,630	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	14,947,630
		Silver Bullion	
	£29,422,630		£29,422,630

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,643,398
Rest	3,582,936	Other Securities	19,816,415
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	5,598,755	Notes	8,062,050
Other Deposits..	13,846,364	Gold and Silver Coin ..	733,210
Seven day and other bills	724,018		
	£38,255,073		£38,255,073

23d day of August, 1860.

M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — J. M. ANDREW, Dewsbury, Innkeeper—P. and J. ARNOLD, Luton, Bedfordshire, Straw Plait Merchants—J. BELL, and C. WILSON, Bradford, Yorkshire, Stuff Merchants — J. CHADWICK, Wellington Wharf, Augustus Street, Regent's Park, Stone Merchant—J. CLARKE, Kidderminster, Tanner—C. CROSS, Gutter Lane, Silk Warehouseman—W. DICKINS, Daventry, Shoe Manufacturer—H. C. HAYLOCK, Linton, Cambridgeshire, Chemist and Druggist—H. HORTON, Fenchurch Street, Merchant—J. HYAMS, Spencer Street, Clerkenwell, Watch Manufacturer—D. T. M'PHERSON, Noble Street, City, Straw Hat Dealer—F. REDDALL, Philpott Lane, City, Merchant—D. TEARLE, Houghton Regis, Bedfordshire, Straw Plait Dealer—W. M. TOWNSON, Liverpool, Victualler—J. WILSON, Sunderland, Boot and Shoemaker.

FRIDAY—BANKRUPTS—J. BARBER, Manchester, Machine and Roller Maker - C. BRADLEY, Deepfields, Bilston, Staffordshire, Iron Dealer and Iron Broker—A. BUHRER, Skinner Street, Snow Hill, Importer of Foreign Glass, and Merchant—J. CROSS, Windsor, Draper—G. A. DRAGE, Olney, Buckinghamshire, Shoe Manufacturer—J. J. R. EYKE, George Yard, Milton Street, Cripplegate, Carman—W. FRANCIS and J. HOOPER, New Leather Market, Bermondsey, Leather Factors—J. HESELTINE, Norwich, Hotel Keeper and Postmaster—R. HORROCKS, Liverpool, Baker and Flour Dealer —J. HUGHES, Basinghall Street, and Gresham Terrace, Dalston, Woollen Warehouseman and Commission Agent—E. JOBBINS, Gloucester, Currier and Leather Seller—T. R. LEWIS, Gould Square, Crutched Friars, City, Merchant—T. SPICER, Little Britain, City, Oil and Colourman—F STEVENS and G. ABBOTT, Earls Barton, Northamptonshire, Curriers and Leather Sellers—J. H. WATTS and J. WATTS, Woolwich, Ironmongers, Plumbers, Painters, and Glaziers.

Metropolis and its Vicinity.

THE CITY TOWERS AND STEEPLES.—A meeting of the Council of the Royal Institute of British Architects was held last week on the top of St. Paul's, for the purpose of examining the various towers and steeples, with the view of determining which should be preserved. The meeting found few spires to the destruction of which they were willing to assent, and resolved to present a memorial to the House of Commons on behalf of the following towers and steeples, in addition to the four which the Select Committee have already recommended for preservation:—

"St. Alban's, Wood Street; Allhallow's, Bread Street; Allhallow's, Lombard Street; Allhallow's, Thames Street; St. Andrew's, Holborn; St. Antholin, Watling Street; St. Augustin's, Watling Street; St. Bartholomew's the Great; St. Benet's, Thames Street; St Bride's, Fleet Street; Christchurch, Newgate Street; St. Dionis' Backchurch; St. Dunstan's-in-the-East; St. Dunstan's-in-the-West; St. Edmund the King's; St. George's, Botolph Lane; St. Giles's, Cripplegate; St. James's, Garlick Hill; St. Lawrence's, Jewry; St. Magnus's, London Bridge; St. Margaret's, Lothbury; St. Margaret Pattens'; St. Mary's, Abchurch; St. Mary's, Aldermary; St. Mary's-le-Bow; St. Mary's Somerset; St. Mary Magdalen's, Old Fish Street Hill; St. Michael's, Cornhill; St. Michael's, Queenhithe; St. Michael's Royal; St. Mildred's, Bread Street; St. Mildred's, Poultry; St. Sepulchre's; St. Vedast's, Foster Lane."

THE KENSINGTON GARDENS RIDE.—On Thursday a deputation from the three parishes of Kensington, Marylebone, and Paddington had an interview with Sir G. Lewis at the Home Office, and placed in his hands a petition to the Queen in opposition to the new ride in Kensington Gardens. The petition was signed by 43,268 persons, exclusive of a separate petition from Paddington to her Majesty of 705 persons. The signatures filled 1099 sheets, and the petition was upwards of 41,000 feet, or over half-a-mile in length. Sir G. Lewis, in reply, said that it was the most numerously signed petition which had been presented since that of Feargus O'Connor on behalf of the Chartists. It would be duly presented to her Majesty, but he understood the matter was now adjourned, as the ride was closed for the present, the season having terminated.

MR. SPURGEON AND THE METROPOLITAN TABERNACLE.—A large meeting was held on Monday in the Tabernacle now erecting near the Elephant and Castle, to hear an account of the Rev. C. H. Spurgeon's tour on the Continent, the object being to obtain funds to proceed with the undertaking. According to the statement of the treasurer, 22,196*l.* 19*s.* 2*d.* has already been expended on the building, and about 5500*l.* more is required to complete it. In a preliminary speech Mr. Spurgeon remarked that he should feel himself a "guilty sneaking sinner" if he came into the place with a 100*l.* debt upon it. The ground had been as much given to them by the Lord as if an angel had come down from heaven and cleared it. He eulogised the design of the building, but said he would have no towers upon it, unless some of the brethren wished to hang him on them. Before the promised lecture on the Continental tour numerous ministers of different denominations addressed the meeting, Mr. Spurgeon having announced that he would not begin until 1000*l.* had been collected. By 7 o'clock 960*l.* was raised, and Mr. Spurgeon then delivered his narrative, of which the following is an abstract:—

"He said that as in the early part of the day some of the speakers had mentioned some points of divergence from his creed, he felt it right at once to aver that he was a 'Calvinist Proper;' that he could forgive his rev. brethren for differing with him; that for himself he preferred a seventeen ounce to a fifteen ounce Calvinist; that he had read every one of the works of Calvin, and, with one exception—which was Calvin's opinion, expressed when very young, as to the Reformation—he endorsed fully every word and every opinion which that great man had written. He was proud to stand in the new Tabernacle as sincere a follower of Calvin as he hoped he was of Jesus Christ. He had no objection to tell plainly what he was, and he hoped others would deal as plainly with him; he liked to be hit right and left, and he would take care to hit right and left too, as hard as he could. With regard to his Continental tour he had, he said, received offers from two well-known publishers to issue a book, containing a description of his journey; but the fact was, he had taken no notes. However, he would give them a few rough sketches. In the vessel which took him to Antwerp were a number of Irishmen who were going out as the Pope's Brigade. He felt thankful to the captain for taking such a lot out of the country. They were the most irregular-looking brutes he ever saw, and the captain said they were not fit to cut up for mops. They had the smallest amount of luggage a vessel ever carried with passengers—among the whole lot there was not more than one pocket-handkerchief and some cold potatoes. At Aix-la-Chapelle he saw some more of the Pope's Irish guard, and a beautiful lot they looked. They seemed as if it would be necessary for others to guard them soon. He hoped the day would come when Ireland's brave sons would find a nobler occupation than the attempt to prop up a rotten throne, which he prayed might fall, and might Garibaldi be the means of shaking it. This observation was received by the audience with repeated rounds of applause. He then proceeded to give cursory notes of the chief facts of interest in his tour, many of his remarks exciting loud laughter. Antwerp he considered the most religious place on the face of the earth, in a bad sense —it was full of Virgin Marys and superstition. He saw articles for sale there which were horribly indecent and vulgar. He blushed to recollect them. In Belgium he was glad to find that Louis Napoleon was much disliked. He thought the day would come when the people of this country would regret that they had not allied themselves to Prussia instead of to France. Our natural alliance was with a Protestant and free country, united to us by ties of marriage, and not with a tyrant. Brussels did not please him much, but there was a man preached a sermon there in a Catholic church which gratified him. Throughout the country the women did the work while the men looked on and smoked their pipes. Had he been one of the great strapping women he saw at work, and had the husband been sitting down smoking his pipe, he would have broken any Act which might be in existence for giving two months' imprisonment to a woman who beat her husband. It made him quite indignant to see women sweeping the streets and doing all kinds of work. As to Boulogne he never wanted to go there again. He had a more vivid recollection of what he smelt than what he saw. Every half yard gave something more terrible than he had ever smelt before—he did not know whether it was Popery or not. At Baden he went to see the gaming-table, and thought it the most frightful spectacle he ever saw. Women sat up all night at it. He would warn people that the worst thing that could happen to them at such places would be to win. If they lost, serve them right; but if they won the Devil would have them."

REMOVAL OF THE EAST INDIA BOARD.—The work of removing from the old India House, in Leadenhall Street, to the Victoria Hotel, Westminster, will commence on the 1st of September. The rent to be paid for the portion of the hotel to be occupied by the new offices is 6000*l.*, in addition to half the rates and taxes.

THE LOSS OF THE MALABAR.—The Board of Trade have received a report from the officers appointed to institute an inquiry into the loss of the Peninsular and Oriental Company's steamer Malabar, in the harbour of Point de Galle. They are of opinion that "the loss of the Malabar was attributable to the extreme violence of the squalls, and that the evidence tends to prove that nothing could have been done to prevent the calamity during the short time that elapsed between the bursting of the squall and the striking of the ship." A despatch was received on Wednesday by the company intimating that the whole of the specie in the vessel had been recovered.

TOWER OF LONDON.—Lord De Ros, the High Constable of the Tower, has been making great improvement there, by cultivating the ditch. Among other shrubs that have been planted is a cutting presented by Colonel Palmer, of Nazing Park, from the vine planted by the great Napoleon at St. Helena shortly before his death. This Vine was brought to England soon after, and was given by Colonel Palmer a few months since to the Governor of the Invalides, at Paris, after having had some cuttings struck from it.

MURDER AND BURGLARY AT STEPNEY.—On Friday morning Mrs. Mary Emsley, a widow lady aged about 70, the owner of landed property producing an income of 5000*l.* a year at Stratford, Bow, Bethnal Green, Victoria Park, and other parts of the east end of the metropolis, was found murdered at her residence, No. 9, Grove Road, Stepney, a short distance from the Tower Hamlets Cemetery in the Bow Road. She lived alone and had no servants, but was well known as of miserly habits, although she carried on extensive dealings with energy and acuteness. It was also well known that she had a number of agents and collectors who were in the habit of carrying her large sums of money weekly, arising from rents and other property which she had held since the death of her husband, a large contractor and brickmaker, well known at the east end of London for his eccentric habits. The deceased had not been seen by the neighbours for some days, and as no answer could be obtained by knocking at the door, her solicitor with a policeman forced an entrance into the house on Friday, and found her lying dead with the back part of her head forced in, in one of the rooms on the second floor where she kept her stock of paperhangings for papering her houses. There was a large wound of the scalp, from which blood had flowed copiously, and which had evidently been inflicted by some hard substance. She was fully dressed, and there were no signs of the house having been broken into, or of any lights having been burning in the room. It is inferred therefore that she was killed in open day by some one who had called about the paper and had been admitted by herself at the front door, and who murdered her in order to get her money, her boxes and drawers having been ransacked, and a sum supposed to be from 50*l.* to 100*l.* removed. The police have satisfied

themselves that the murder was committed by some person well acquainted with the premises and with the habits of deceased, and it is said that they have obtained a clue which is likely to lead to the apprehension of the murderer. A coroner's inquest was opened on Monday and adjourned for a week. The police, in searching the premises on Monday, found a sum of 48*l.* secreted in the coal cellar, under a ton of coals—32*l.* in gold, being wrapped in a piece of wash-leather, and 16*l.* 2*s.* in silver, in a tin case; the whole being rolled in a piece of dirty printed cotton. It is believed that this money was secreted by her own hands, and the fact of its concealment is regarded as a proof that she was apprehensive that the knowledge of her wealth might lead to an attempt at robbery or violence. It is said that in all probability the whole of the property belonging to the deceased will lapse to the Crown for want of kindred, assuming that she has died intestate, which there is every reason to believe, since a careful search among her papers for any testamentary document has been wholly fruitless. Since the death of a sister, about four years ago, whose legitimacy was questioned, she is said to have denied the existence of a single blood relation, and expressed the intention of disposing of her wealth to found an almshouse after her death.

Great Fire near London Bridge.—On Friday night between 11 and 12 a fire broke out in the extensive premises of Messrs Hartley, corn and provision wharfingers, at West Kent Wharf, on the Surrey side of London Bridge and adjoining the Hibernia wharf of Alderman Humphrey, which was not long since the scene of a similar catastrophe. Notwithstanding the exertions of two floating steam engines, and of land engines almost innumerable, the whole building, with its contents, consisting chiefly of grain, hops, bacon, oil, cheese, &c., forming a mass of inflammable materials, was wholly destroyed in an incredibly short space of time; nothing remaining but a bare mass of blackened walls. For some time the corn stored in the upper stories of the premises poured out of the windows like an avalanche, and literally sunk by its weight several barges laden with tea and other merchandize in the adjoining creek of St. Mary Overy. The cause of the fire is said to have been the negligence of a clerk who set fire to some bales of jute in lighting the gas. The damage is estimated at 200,000*l.*, and it is feared that not one quarter of the property destroyed was insured.

Great Fire in Shadwell.—On Saturday night the Phœnix Mills, in Ratcliffe Highway, occupied by Messrs. Parkinson & Salmon, wholesale biscuit bakers to the army and navy, were totally destroyed by fire. The premises, which were 150 feet long, comprised steam boilers, engines, and other valuable machinery, and an immense stock of flour and other articles used in the manufacture of biscuits. Several of the adjoining houses were damaged by fire and water.

The Public Health.—The Registrar-General's weekly return states that the deaths in London rose to 1029 in the week that ended Saturday, August 18. Excluding the deaths from epidemic cholera in the 33d week of 1854, the average number of deaths in the corresponding weeks of the last 10 years, corrected for increase of population, was 1200; the present return is therefore 171 below the average. During the week the births of 829 boys and 856 girls, in all 1685 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1589.

Provincial.

Bridgewater.—The Rev. Lewis Price has made two further attempts this week to recover his wife from the Agapemone. On Tuesday he went to Spaxton accompanied by about 30 or 40 men and his legal adviser, and found the Agapemone strongly barricaded by chairs, tables, and other articles of furniture, behind which the Princites were stationed with firearms, threatening to shoot any one who attempted to force an entrance. After a long parley, Mr. Price and a party of six were allowed to enter and search the premises, but no trace of the lady could be found. On the following morning Mr. Price and his party made a similar descent on three farmhouses belonging to Mr. Prince at Aisholt, Chilton Trinett, and Blackmoor Lane, within a few miles of the principal "Abode of Love," and occupied by his disciples, but after a careful search the lady could not be discovered. It is believed that she is still in the neighbourhood, and that she is concealed in the house of one of Prince's adherents, of whom there are many in the villages of West Somerset.

Cambridge.—This University is to be honoured by the presence of the Prince of Wales at the commencement of the ensuing Lent Term on the 13th of January next. It is understood that Madingly Hall, the seat of the Cotton family, situate about three miles from Cambridge, has been engaged for his reception, there being no available place within the limits of the University capable of accommodating his Royal Highness and his numerous suite.

Carlisle.—The execution of George Cass for the wilful murder of Ann Sewell, at Embleton, on the 26th March last, took place at the county gaol on Monday, in the presence of many thousands of spectators, including a great number who had come up to witness it by the trains from the west, in which district the murder was committed. The prisoner made a full confession of his guilt, and stated that a quarrel arose between him and the girl about a half-crown which he had lent her, and that a scuffle ensued in which he murdered her.

Dover.—The coroner's inquest on the bodies of Lieut. Thompson and Sergeant Monger, of the Volunteer Artillery Corps, who were killed by the late explosion of a gun at Archcliff Fort, was resumed on Tuesday, when the jury, after hearing the evidence of Capt. Noble, Inspector of Artillery, from Woolwich, and other scientific witnesses, returned the following verdict:—

"That death was caused by the bursting of a gun while at ball practice, and that the accident was accelerated by the long use of the gun, and from the metal not being of a quality suitable for the casting of guns for artillery practice. The jury are unanimously of opinion that a periodical inspection of all guns used in forts should take place."

Frome.—Another child murder has been committed in this neighbourhood. On Sunday morning the body of a male child was found in the river Frome, quite naked, and with part of a staylace which which it had been strangled, tied round its neck. The medical man on examination, pronounced the corpse to be that of a fully grown child, who had lived some hours after birth. The murder was evidently perpetrated by the mother, as some of the customary duties of a midwife had not been attended to. An inquest was opened on Wednesday and adjourned to the 30th inst.—On Wednesday Edmund John Gagg, the prisoner who gave himself up as the murderer of Francis Saville Kent, was brought before the magistrates at Trowbridge, when letters were read in corroboration of his statement that he was at Portsmouth on the night in which the murder was committed. The prisoner further stated that he had never been to Road before his apprehension, that he had never seen Mr. Kent or any of his family or servants in his life, and that he could not tell what had induced him to make the statement he had made. The magistrates ultimately resolved to send him to his parish in Westminster, expressing their regret that they had no power to punish him severely for his conduct. To show how contagious are freaks like those of the man Gagg, it is stated that another party has written to the police from Ireland, stating that he has the missing night-gown, that Miss Constance Kent committed the murder, and that he is ready to produce the missing article if money be sent over to enable him to come to England!

Kirkdale.—The first stone of the Industrial School in this town was laid on Saturday by the Earl of Derby, who delivered a long address on the occasion, from which the following are extracts:—

"Years ago the vast increase of the population was looked upon with triumph and satisfaction, as adding to the power and wealth of the country; but it was looked at without any due appreciation of the great moral, social, and religious consequences which must flow from an increase of the ill-educated and the irreligious population. I do not say that this has been the case in any of the country districts, where any great increase of the population has not taken place, and where there is great room for the exercise of those kindly sympathies between the upper and the lower classes which are the surest bond of union between the various classes in this country; but it is the case in great towns, in the great hives of industry to which the redundant population flock for employment, where the influx of the population and the increase of buildings has caused the population to increase beyond the possibility of the means of moral and religious instruction. In those great towns there is, comparatively speaking, little room for social intercourse between the high and the low, between the rich and the poor; and thus the immense size of the parishes and of the townships, and the immense number of the population, baffle the efforts of the most zealous ministers, whether belonging to the Established Church, or whether belonging to those numerous dissenting sects of whom, greatly as I differ from them, I wish to speak with the greatest and the deepest respect for their exertions in the cause of education and religion; but here a population, I say, has grown up which has mocked all our efforts, which has defeated all our activity, and has outgrown all our means, moral and pecuniary; and though it is quite true that the present generation are awakening to a painful and active consciousness of this great evil, and are alive to the necessity of applying some remedy, our difficulties in doing so are so much the greater inasmuch as a longer time has elapsed, and we are not combating now the origin or even the first stages of the disease, but we are contending against a chronic and systematic disease, which is gaining strength almost exceeding that which it will be in our power to apply as a remedy to prevent it. From these causes—from this vast population which, in our great towns and in the suburbs of those great towns, is growing up in a state of practical heathenism—I am afraid I must say in the indulgence of the grossest sensuality, and in the indulgence of that intemperance which statesmen, judges, magistrates, all concur in stating to be the predominant cause which fills our gaols, and loads us with a criminal population. It is painful to say that as far as the adult criminals are concerned—so far as those are concerned who have been practised in the habits of vice and crime—the best directed efforts and the wisest discipline are comparatively insufficient to restore them to a better state; and few of those advanced in life who are subjected to this discipline are permanently and in heart brought to a true sense of their guilt, to a sincere and an earnest reformation. But with regard to the younger classes—to those who are not hardened in crime, to those who are seduced by a bad example, and encouraged by idleness and vicious habits to enter on the paths of crime, a more hopeful path is opening, a more cheerful prospect is entertained, from those invaluable institutions which, under the name of reformatories, are combining for the young criminal the advantages of penal imprisonment, and connecting with that a Christian, moral, and industrial education. Again, as to the absolutely destitute classes of the community, the workhouse schools furnish no compatible amount of discipline and training; but there is a class, highly untainted with crime, above the condition of the absolutely destitute poor, yet below the scale of what may be called decent poverty, for which the reformatories are not fitting receptacles, nor the workhouses, to which they are either not admitted or unwilling to enter. In neither is there any provision, and except for the instrumentality of such institutions as this of which we are now laying the first stone to day, they must grow up from ignorance to vice, and from vice probably to swell the lists of the criminal population. It is for that population, for that portion of the community which, I must repeat again, are untaught by vice hitherto, who have at home no prospects, who see at home nothing but the deepest poverty and the deepest degradation, in too many cases who see before them nothing but examples of squalid poverty, of intemperance, and profligacy; it is for them, with such a home—if home it can be called—in the night and in the day time exposed to all the idleness and all the temptations of a great, a dissolute population, trained, as it were, to be the prey of those who go about to seek whom they may devour, to bring them into the paths of wickedness which they have so long trodden themselves. I say, it is for those poor children, many of them the children of honest poverty—and yet the children of dishonest parents are still more the objects of compassion—it is for them that these well called ragged schools—the name is significant, and I should be sorry that it should be changed—it is for them specially that the hand of well directed and well devised charity has contrived these invaluable institutions, in which they may be rescued from the fate, which, otherwise, would too certainly depend over them, and in which they may receive, in the strictest sense of the world, a truly moral and religious education. And when I use the word education, I wish to bear in mind what is the true meaning and the true object of that important word. It is not the learning to read and to write; they have nothing more to do with education than learning to speak, and are the mere means by which education and instruction may be afforded; but, according to what you speak and what you hear, according to what you read and what you write, will be the effect this elementary part of education will have upon the future conduct of the child, and consequently of the man. Nor is it desirable that in these institutions the children should be brought up in a state of society to which they are never likely in their future lives to attain. The object of all fitting education is to suit the child, and afterwards the man, for fittingly discharging his duty in that state of life to which it has pleased God to call him, and fitting him to be a good and faithful subject here, a useful member of society and worthy, through the mercy of God, to enter upon a higher and holier state of existence hereafter. Wisely, then, you do not in these schools attempt any wide flights of knowledge or any great extension of science, but wisely, most wisely, do you devote a considerable division of each day, not to the acquisition of material knowledge, but to the acquisition of those habits of industry which are to form the future means of subsistence of those whom you are bringing up. But it is also proposed, and more than proposed, for it has been attempted, with success, to combine with the education of the children a room which shall serve for the religious instruction of the parents of the children, and any others who may be induced to attend in the same class of life. It is intended to combine with the education of the children the religious and moral training of the parents, and to bring together a large portion of that population into a church for the worship of Almighty God, absolutely free and open to everyone, without money and without price. Now, it is a remark often made, and it is one of painful significance, that, even among the respectable portion of the working classes and mechanics of this great country, there is a large proportion who never enter a House of God, and know nothing of the truths or comforts of religion; and various causes, no doubt, there are for this lamentable state of things, for this total absence of a large portion of the population from the service of God, whether according to the principle of the Established Church or the Dissenting body. But I believe, apart from hostility to religion, apart from what is more common still, absolute indifference and absolute ignorance—there are two prevailing causes which tend to drive from the churches even the best disposed, I will not say of the pauper, but of the poorer population. The one is the appropriation of the greater portion of the seats in our churches—and above all, of all the best seats—to the richer and the easier classes—to the exclusion of the poor man, or to his relegation into the most inconvenient, the most distant, and the most inadequate seats. This is, I am afraid, an evil inherent in human nature, and it is an evil of such antiquity that it formed a ground for rebuke on the part of the Apostles themselves. I need not remind many of those who hear me that St. James distinctly points to this ungracious and invidious distinction, in the earliest Christian churches, between the rich and the poor. He notices it not only as a fact, but as a fact for condemnation and amendment. The other cause is, I believe, an honest shame of parading the wretched garments in which the poorer classes are clad in immediate contiguity to the better clothed, and the richer garments of the wealthy and more easy-to-do population of the town. I do not say that is a feeling to be altogether vindicated, but it is a feeling not unnatural, and a feeling for which we must make every indulgence. Nor do I condemn absolutely and entirely, for some reasons, the appropriation of particular seats, provided a sufficient amount be set apart for the use of those who are not able to pay for such accommodation. On the contrary, I believe it tends to the solemnity, regularity, and order of the parochial worship. I am sure it tends much to the inculcation of the best feelings where father, mother, and children can enter the House of God with a knowledge that there is a seat for them, where they can go united to offer up their prayers and praise, and hear the word of God. And I am far from condemning the appropriation of certain seats to those who are able to increase the means of the Church, providing that it is not granted to the exclusion of those who have no such means of paying for such accommodation, and who are equal—who, by the law of the land and the constitution of the Church, have absolutely an equal right, with the richest of the rich, to enter and worship God in that parish church, which is not for the rich but for every parishioner. Well, then, in this case we have to deal with a mixed population. We have to deal with a population all of whom are of the poorest class—few of whom could afford anything—none of whom could afford any considerable sum for separate accommodation for themselves. We are providing the means of religious worship for those who are clad in rags, and who will not be shocked by a comparison with the silks and satins of their richer neighbours; and in this case I say it is most important, not that there should be some free seats, but that every seat in this church school which is about to be built—every seat should be free and open, without payment of money or without payment of price; and that no amount of poverty of clothing, no amount of squalid destitution, should be sufficient to exclude the very poorest of the poor, who are willing to enter and worship in His house in whose eyes the rich and poor are alike, and the distinctions of rank and title are as nothing."

Plymouth.—The line-of-battle ship Gibraltar was launched on Friday from this dockyard in the presence of an immense concourse of spectators. Miss Edgcumbe, daughter of the Hon. George Edgcumbe, performed the ceremony of naming the ship. The French ambassador and the Countess de Persigny arrived in this town last week from Pencarrow, Cornwall, the seat of Lady Molesworth, and after paying a visit to Mount Edgcumbe proceeded to the Hoe to witness the regatta.

Warwick.—Francis Price, who was convicted at the recent assizes of the murder of his sweetheart, Sarah Pratt, at Birmingham, on the 18th of April last, was

executed on Monday morning over the entrance of the new gaol in this town, in the presence of about 1500 persons. To his spiritual adviser, a Wesleyan minister, he confessed that he had been guilty of almost every crime but drunkenness; that he had made three separate attempts to kill three different girls from disappointed feelings; that he had enlisted as a soldier and deserted three times, and that he had witnessed many public executions.

Ireland.

THE IRISH QUESTION.—Mr. Smith O'Brien has addressed a letter to M. Marie Martin, of Paris, the author of the pamphlet entitled "La Question Irlandaise," thanking him for his advocacy of the cause of Ireland. The following are extracts:—

"I can assure you that though I am not one of those who desire to witness an invasion of this country by France (believing that such an invasion would be disastrous to both France and Ireland), I yet ardently desire that friendly sympathies and active intercommunication should continually exist between the French nation and the people of Ireland. Whether it be our destiny to remain politically incorporated with England, or to re-establish a domestic Parliament in connection with the Crown of England, or to acquire an independent existence as a nation, under any of these contingencies it is desirable that we should find in the French people sympathizers and allies. We are habitually misrepresented and calumniated in the English press, and, as foreigners seldom see the Irish newspapers, it is of the utmost importance to us that foreign writers who, like you, take the trouble to investigate facts, should be ready to vindicate our character and our claims, and thus induce the public opinion of Europe to render justice to us. * * * There are many points of affinity between the French and the Irish character, and the traditions of this country lead a large portion of my countrymen to entertain towards France sentiments of affection and gratitude."

DESTRUCTIVE FLOODS.—The local papers in all parts of Ireland, especially in Meath, Westmeath, and Kildare, are filled with disastrous accounts of the weather and the floods. Whole tracts of country have been laid under water, hay and cattle have been swept away, while in some instances the farmers have found safety only on the tops of the stacks which they had vainly attempted to save. Bridges have given way under the pressure of the current; fields of Wheat have been laid flat as if with a roller, and acres of soil have been covered by a deposit from the inundations which it will take months to remove. A single week has changed the whole face of the country, and inflicted an amount of damage in certain districts which they will not recover during the present year. The Curragh camp has been for some days under water, and the state both of men and horses is described as deplorable.

Scotland.

RUMOURED PURCHASE OF AN ESTATE FOR LORD CLYDE.—It is reported that Government, in consideration of Lord Clyde's services in the Crimea and India, have determined to present him with an estate in his native country, as an expression of the national gratitude, and are negotiating for the purchase of the estate of Harviestoun and Castle Campbell, at present the property of Sir Andrew Orr, who is now in London arranging as to the terms of sale.

MURDER IN HOLYROOD PARK.. — On Sunday morning, about 4 o'clock, the body of a girl named Elizabeth Slater was discovered in the Queen's Park, near Holyrood, bearing marks of violence which left no doubt that she had been murdered. The deceased was respectably connected, having resided with her uncle, Mr. Andrew Slater, a slater by trade, in St. John Street, Canongate. She left her home, unknown to her relatives, about 4 o'clock on Saturday afternoon, carrying a bundle of her clothing, and her absence from home that night led to an anxious but unavailing search on the part of her friends, aided by an officer of police. According to her uncle's statement, she was only 11 years of age, though her appearance would have led to the belief that she was 14 or 15. Her motive in leaving home has not been explained, her friends asserting that no quarrel or misunderstanding of any kind had taken place. The first trace made of her after leaving home was her being seen about 9 o'clock in the High Street with a soldier of the 13th Light Dragoons, from Piershill Barracks. She was next seen shortly after midnight in the company of two Dragoons, one of them a corporal. She was also seen about 2 o'clock on Sunday morning by the sentries on duty in the front of Holyrood Palace and at the south gate of the Palace Gardens; and lastly, she was seen in the company of three soldiers in the park behind the Palace by a man whom she accosted and asked the way to Musselburgh. This man saw one of the soldiers striking her with his switch, which caused her to cry, and supposing that she wished to part company with them, he pointed out to her the way leading out of the park at Croft-an-righ. She followed him for a short distance in the direction which he had indicated, but suddenly she turned again and rejoined the soldiers, and was seen to go away with them, taking one of them by the arm, and proceeding with them towards that part of the park where the body was found. Her face was blackened and disfigured, the bridge of her nose was broken, and marks of attempted strangulation were found on her throat. Whether any criminal assault was made on her person remains to be cleared up by the *post mortem* examination. At 2 o'clock on Sunday the regiment were paraded at Piershill Barracks in presence of several witnesses who had seen the girl in the soldiers' company, but no one could be identified by them. Four men were at this time absent, and for these an immediate search was made throughout the town by the police, and between 3 and 4 o'clock two of the absentees were apprehended. One of them, named John Tanner, was identified as having been one of the Dragoons seen in company of the deceased, and he has been committed for trial on the charge of murder, and the other, John Quin, who was not so identified, has been handed over to the military authorities and placed under arrest on the charge of absenting himself from the barracks without leave. No trace has yet been discovered of the "corporal" whom some of the witnesses saw in company with the girl; nor of the two absentees still missing from Piershill. A shift, a printed cotton bedgown, and a white worsted stocking, have been found among the loose stones at the east end of the park, and have been identified by the members of Mr. Slater's household as having formed part of the contents of the bundle which the girl carried with her from the house.

Law.

NORTHERN CIRCUIT: LIVERPOOL.—*The Antimony Poisonings.*—*Thomas Winslow* was indicted for the wilful murder of Ann James at Liverpool on the 24th of June last, by administering to her the poison of antimony. It will be remembered that the prisoner had for some time lived with the deceased as the manager of her business, and that several of her relations who had also been living with her had died after short illnesses, the symptoms of which were precisely those of poisoning by antimony. The prisoner, and he alone, knew deceased to be possessed of funds beyond those which she had in the house. He had taken steps to make himself master of these funds but a short time previously by inducing her to make a will in which the furniture and goodwill of the house and business were left to himself, the residue of the property being left to be divided among her relations. It was proved that he was acquainted with the effects of antimony, and that he more than once sent to a chemist's for a supply; that he had been seen to give white powder mixed in water to a dog, which was seized with the same symptoms as Mrs. James; that he had been observed to throw a white powder on bread and butter intended for her; and that antimony was traced in the remains of sago placed by him at her bedside on the night of the 9th of June. On the following day deceased was removed to the hospital by the order of her physician, who suspected foul play, and it was remarkable not only that the vomiting and purging abated very shortly after the preparation of her food was carefully guarded, but that the traces of antimonial poison in the evacuations gradually decreased from that very day. When the idea of poison had been raised, the prisoner endeavoured to cast suspicion on a niece of deceased, the only one of her relatives who was present during her attack, and more than once made use of the expression that Mr James was "Palmerised." On the death of deceased in the hospital, antimony was found in large quantities in various parts of her body, but it was also found that she was labouring under cancer of the cæcum,—a natural disease which had perforated the bowels and caused her immediate death. The charge against the prisoner therefore was that by administering to her small doses of antimony he had hastened her death by aggravating her disease and so reducing her strength and system that she was unable to resist it so long as she would otherwise have done. There was no doubt that antimony had been administered by some one, and the questions left by Baron Martin to the jury were whether antimony was administered to deceased in order to cause her death; whether that antimony was administered by the prisoner, and whether it led to or accelerated her death? The jury almost immediately returned a verdict of *Not Guilty.*—*Wife Murder.*—*Thomas Gallagher* was indicted for the wilful murder of his wife, at Liverpool, on the 8th June last. The prisoner was separated from his wife, and had called to see her at the house of his daughter by a former marriage, who was ill in bed. He asked her to give him tea, when she said she had not got any. A quarrel ensued in which the prisoner stabbed her with a large table knife, inflicting four incised wounds, one on the cheek, one on the left collar-bone, one penetrating into the left shoulder joint and injuring the head of the bone, and one right through the palm of the right hand. Inflammation of the shoulder joint ensued, consequent on the wound, abscesses formed in various parts of the body, and the woman died on the 6th August. The prisoner made a statement that he was drunk, and that he was aggravated by his wife refusing to live with him. The jury found the prisoner *Guilty*, and Mr. Baron Martin having put on the black cap, passed sentence of *Death* in the usual form, entreating him to use the time the law allowed him to make his peace with God, for so sure as he was then a living man so surely would the sentence be carried out.

BIRTHS.—On the 15th inst, at the Palace, Salisbury, the wife of the Bishop of SALISBURY, of a daughter—16th inst, at Kingston, Notts, Lady BELPER, of a daughter—16th inst, at Woodrising Hall, Norfolk, the Lady CATHERINE WEYLAND, of a [illegible]th inst, at Swainston, Isle of Wight, Lady SIMEON, of a daughter—[illegible]st, at 7, Queen's Terrace, Hyde Park, the Hon. Mrs. CAVE LYON, of a son—20th inst, in Grafton Street, Westminster, the wife of JOHN M. COBBETT, Esq., M.P., of a son—14th inst, at Edinburgh, the wife of EDWARD CHARLES BULLER FFINNISTON, Esq., of a son—12th inst, at Kensal Manor House, the wife of Major-General R. P. DOUGLAS, of a daughter.

MARRIAGES.—On the [illegible]th inst, at the parish church, Tarrant, Hawkes Crossett Wake, C.B., fourth son of Sir Charles Wake, of Courteen Hall, Bart., to Lucy, fourth daughter of the late Sir George SITWELL of Renishaw, Bart.—15th inst, at All Souls', Paddington, the Rev. JOHN GODDING incumbent of Hampton, Middlesex, to AGNES SOPHIA, eldest daughter of General Sir JAMES WALLACE SMITH, K.C.B., Colonel of H.M.'s [illegible] Lancers—21st inst, at St. George's, Hanover Square, JOHN EDWARD WISHARD HILLYARD, Esq., of Horsley, in the county of Durham and of Hutton-Bonville Hall, in the county of York, to MARY BLANCHE, eldest daughter of Sir DIGBY NEAVE, Bart., of Dagnam Park, in the county of Essex—22d inst, at New Park Street Chapel, the Rev. JAMES ARCHER SPURGEON, Minister of Portland Chapel, Southampton, to EMILY GEORGINA, youngest daughter of General Sir JOHN F. BURGOYNE, Bart.—14th inst, at Doddington, Kent, WILLIAM, younger son of the late Sir WILLIAM MARJORIBANKS, Bart., of Lees, Berwickshire, to FRANCES ANN, daughter of the late BALDWIN DUPPA DUPPA, Esq., of Hollingbourne House, Kent—15th inst, at St. Luke's Church, Cheltenham, Captain GEORGE ALEXANDER ARBUTHNOT, H.M.'s 8th Regiment Madras Light Cavalry, eldest son of Colonel George Bingham Arbuthnot, H.M.'s Madras Light Cavalry, to FANNY ISABELLA, eldest daughter of Lieutenant-Colonel HERBERT WILLIAM WOOD, late of H.M.'s Madras Army—21st inst, at St. Mark's Church, Regent's Park, ROBERT [illegible], Esq., of the Middle Temple, Barrister-at-Law, to MARGARET MOLLY, eldest daughter of FREDERICK MULLETT EVANS of Queen's Road West and Whitefriars—16th inst, at St. [illegible], Paddington, CLARMONT JAMES DANIELL, Esq., Bengal Civil Service, to FANNY LOUISA, second daughter of WILLIAM PRINSEP, Esq., of Albury, Surrey.

DEATHS.—On the 17th inst, at Wroxton Hall, Warwickshire, the Dowager Lady SMYTH, aged 70—16th inst, at Clarence Terrace, St. Helier's, Jersey, Vice Admiral Sir W. HAWKINS MORRISON—14th inst, at 8, Palace Garden Villas, Kensington, HENRIETTA RANDOLPH, youngest and only surviving daughter of John, Lord Bishop of London, aged 68—19th inst, at Upper Norwood, HENRY MOSTYN, Esq., of 10, Portman Square—20th inst, at Margate, HENRY WM. TANCRED, Esq., Q.C., Bencher of Lincoln's Inn, and late M.P. for Banbury—17th inst at Birkby Lodge, Huddersfield, after a painful illness of six weeks, JOSEPH ARMITAGE, Esq., J.P., and Deputy-Lieutenant for the West Riding of the county of York, and a Magistrate for Lancashire, aged 82—15th inst, at Apedale Hall, Staffordshire, ANNA MARIA KENNEDY, daughter of the late Hugh Alexander Kennedy, M.D., and sister of the late Sir Robert Hugh Kennedy, Commissary-General-in-Chief under the Duke of Wellington in the Peninsula—17th inst. LYS PARKER, Esq., of Prescott House, Gloucestershire, and Little Cawthorpe Manor House, Lincolnshire, aged 74.

Markets.

COVENT GARDEN, AUG. 25.

Foreign importations are heavy and trade dull. The last cargo of West India Pines is reported to have arrived for this season. Pears consist of Jargonelle, Windsor, and Beurré d'Amanlis. Peaches and Nectarines are plentiful. Grapes are abundant, and still maintain fair prices. Cob Nuts are realising 1s. per pound. Gooseberries fetch 3d a quart. Peas are abundant. Potatoes are for the most part badly diseased; for sound samples there is a good demand. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Heaths, Kalosanthes, Geraniums, Lily of the Valley, and Roses.

FRUIT

Pine Apples, per lb., 3s to 4s	Currants, per qt., 3d to 6d
Grapes, per lb., 2s to 5s	Green Figs, per doz., 3s to 6s
Strawberries, p. lb., 6d to 1s 6d	Melons, each, 2s to 4s
Peaches, per doz., 8s to 15s	Plums, p. ½ sieve, 3s to 4s 6d
Apricots, per doz., 2s to 4s	Pears, per doz., 1s to 3s
Nectarines, do., 5s to 10s	Apples, per doz., 6d to 1s 6d
Cherries, p. lb., 1s to 3s	Oranges, per 100, 10s to 20s
Gooseberries, per qt., 3d to 6d	Lemons, per 100, 10s to 15s

VEGETABLES.

Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per qrtn., 9d to 1s	Celery, per bundle, 1s 6d to 2s
Peas, p. bush., 2s to 3s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 4d to 6d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Veg. Marrows, p. doz., 6d to 1s
Cabbages, do., 1s to 2s	Shallots, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Garlic, per lb., 6d to 8d
— per bus., 3s to 4s 6d	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per cwt., 6s to 8s	Lettuces, Cos, p. score, 6d to 1s
Carrots, per bunch, 4d to 6d	Endive, p. score, 1s to 2s
Turnips, per bunch, 5d to 7d	Horse Radish, p. bun., 1s 6d to 4s
Spinach, p. sieve, 2s to 3s	Mushrooms, p. pott., 2s to 3s
Cucumbers, each, 6d to 1s	Parsley, p. 12 bunches, 2s to 4s
Artichokes, per doz., 4s to 6s	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Aug. 23.

Prime Meadow Hay	75s	to 85s	Clover	95s	to 120s
Superior do. (old) ..	96	105	New Clover	80	100
Inferior do.	60	70	Old second cut ..	—	—
New do.	60	90	Straw	30	36
Rowen	—	—			

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Aug. 23.

Sup. Meadow Hay ..	112s	to 120s	Inferior Clover ..	95s	to 110s
Inferior do.	84	100	New do.	70	110
New do.	84	95	Straw	39	45
Superior Clover ..	120	130			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Aug. 23.

Fine old Hay	105s	to 110s	Fine old Clover ..	120s	to 126s
Inferior do.	90	100	Inferior do	105	115
Prime New Hay ..	88	92	Fine 2d cut	100	110
Inferior do.	40	60	Fine New Clover ..	105	110
Straw	36	42	Inferior do.	70	80

METROPOLITAN CATTLE MARKET.

MONDAY, Aug. 20.

We have a large increase in the supply of Beasts; in consequence trade is heavy, and prices are rather lower, but there is not much reduction in the choicest kinds. There are also several more sheep, but the average quality is very indifferent. Best descriptions are not lower, and a very fair clearance is effected. There is no alteration in the Calf trade. From Germany and Holland there are 1650 Beasts, 6000 Sheep, and 189 Calves; from Scotland, 50 Beasts; from Ireland, 300; from Norfolk and Suffolk, 200; and 1800 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	5	2	to 5	4	Best Long-wools.	5	4	— 5	8
Best Short-horns	5	0	— 5	2	Do. Shorn	..	..	to ..	
2d quality Beasts	4	0	— 4	4	Ewes & 2d quality	4	8	— 5	0
Best Downs and Half-breds ..	5	6	to 5	10	Do. Shorn	..	..	— ..	
Do. Shorn	..	—	..		Lambs	5	0	— 6	4
					Calves	4	0	— 5	4
					Pigs	3	8	— 4	8

Beasts, 4870; Sheep & Lambs, 27,500; Calves, 229; Pigs, 270.

THURSDAY, Aug. 23.

We have a shorter supply of Beasts, and demand active; consequently on the average prices are rather better than on Monday last. The number of Sheep and Lambs is about the same as of late. Trade is dull, but there is very little alteration in quotations. Calves are selling about the same as on Monday. From Germany and Holland there are 330 Beasts, 2400 Sheep, and 310 Calves; and 120 Milch Cows.

Best Scots, Herefords, &c. ..	5	4	to 5	6	Best Long-wools .	5	4	— 5	6
Best Short-horns	5	2	— 5	4	Do. Shorn	..	..	— ..	
2d quality Beasts	4	2	— 4	6	Ewes & 2d quality	4	4	— 5	0
Best Downs and Half-breds ..	5	6	— 5	8	Do. Shorn	..	..	to ..	
Do. Shorn	..	—	..		Lambs	5	4	— 6	4
					Calves	4	0	— 5	4
					Pigs	3	8	— 5	0

Beasts, 1030; Sheep & Lambs, 10,250; Calves, 520; Pigs, 140.

COAL MARKET.—AUG. 22.

Bowers West Hartley, 16s.; Davison's West Hartley, 16s.; Hastings Hartley, 16s.; Holywell, 15s. 9d.; Howard's West Hartley, 15s. 9d.; Lambert's West Hartley, 15s. 9d.; Tanfield Moor Butes, 13s. 6d.; Walls End Acorn Close, 17s.; Walls

End Harton, 16s. 9d.; Walls End Hedley, 16s. 6d.; Walls End Wharncliffe, 17s.; Eden Main, 17s. 3d.; Walls End Braddyl's Hetton, 17s. 9d.; Walls End Durham, 16s.; Walls End Hetton, 19s.; Walls End Kepier Grange, 17s. 9d.; Walls End South Hetton, 19s.; Walls End Caradoc, 17s. 9d.; Walls End Cassop, 17s. 6d.; Walls End Heugh Hall, 17s.; Walls End Hunwick, 16s.; Walls End Kelloe, 18s.; Walls End Shincliffe, 17s.; Walls End South Hartlepool, 17s. 6d.; Walls End South Durham, 16s. 9d.; Walls End Trimdon Thornley, 16s.; Walls End Thorpe, 17s. 9d.; Carway and Duffryn Malting, 22s. 6d.—101 ships at market.

BUTTER MARKET.—Aug 24.

Best Fresh Butter .. .. 13s. per dozen lbs.
Second do. do. .. 11s. to 12s. ,, ,,
Pork, 5s. 0d. to 5s. 4d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Aug. 24.

Messrs. Pattenden & Smith report that the accounts from the Hop plantations if possible come worse. The Market is very active, and fine Weald Kent and Sussex 1859's keep advancing. Duty 50,000*l.* to 60,000*l.*, but few in favour.

BRITISH WOOLS.—LONDON, FRIDAY, Aug. 24.

Our supplies are still small, and the amount of business transacted during the past week has been more than the previous one, although by no means large, as the consumers purchase merely to meet their weekly requirements. The stock of long wool in the north of England has become larger than wanted, and a reduction must be submitted to there if sales must be made of that description of wool. Skin wool sells here at full rates.

	s.	d.		s.	d.
South-down Hoggets..	1	8 to 1	9		
Half-bred ditto..	1	8 — 1	9		
Down Ewes ..	1	6 — 1	7		
Kent Fleeces ..	1	6 — 1	7		
Leicest. Wethers	1	6 to 1	7		
Ditto Hoggs ..	1	7 — 1	9		
Combing Skins	—	—	—		
Blanket ditto ..	0	6 — 0	8		
Flannel Wool ..	1	0 — 1	7		

COLONIAL WOOL SALES.—These sales proceed more uniformly than any large series was ever observed to do before. Good classes of wool keep fully up to late rates, but the opinions relative to inferior and dirty parcels vary, as some buyers think they also maintain their rates, and others that they sell on slightly easier terms; but such differences of opinion may be referred more to the estimate of the amount of dirt present in the various marks than to any alteration in the actual value of the clean wool when divested of its needless and damaging accessories.

MARK LANE.—MONDAY, Aug. 20.

The supply of English Wheat to this morning's market was very small; the bulk of the Essex was disposed of at fully 2*s.* per qr. over the prices of this day se'nnight, but the Kent factors quoted no improvement. The market was numerously attended by country buyers, who appeared to be restricted in their operations by the sun, and only a retail business was transacted in foreign at an advance of 1*s.* per qr. Barley is in good demand at 6d. and 1*s.* per qr. advance. Beans and Peas are scarce and rather dearer. The Oat trade is firm, and fine corn brings an advance of 6d. per qr. Norfolk Flour is 1*s.* per sack dearer, and American barrels are held for a similar improvement.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	59	62	Red	56	60
— — fine selected runs..ditto	60	65	Red	58	62
— — Talavera	60	68			
— Norfolk	—		Red	—	
— Foreign	52	68			
BARLEY, grind. & dist., 24*s* to 31*s*..Chev.	38	45	Malting.	36	41
— Foreign..grinding and distilling	28	36	Malting.	35	40
OATS, Essex and Suffolk	20	24			
— Scotch and Lincolnshire..Potato	26	28	Feed ..	24	26
— Irish .....Potato	26	28	Feed ..	21	24
— Foreign.....Poland and Brew	22	26	Feed ..	18	26
RYE	35	38	Foreign.	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....32*s* to 40*s*.... Tick	34	43	Harrow.	34	43
— Pigeon .....36*s* — 47*s*..Winds.	48	54	Longpod	—	
— Foreign .....Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	38	40	Suffolk .	36	41
— Maple .... —*s* to —*s* ..... Grey	32	34	Foreign	30	40
MAIZE .... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	48	54			
— 2d do. .... ditto	40	48	Country.	40	48
— Foreign .....per barrel	28	33	Per sack	36	46

FRIDAY, Aug. 24.

The weather has been exceedingly wet and stormy since the 17th inst., but with the exception of an occasional slight shower was fine yesterday until the evening, when rain fell again in torrents; to-day it is very wet. The growing crops are suffering from the same, and its continuance would be disastrous. The cutting of Oats and Barley is becoming general on early lands, but as yet little has been done with Wheat. Our accounts from all parts of the Continent express great alarm for the crops, which in places have already suffered irremediably. Business in Wheat this week has been both active and extensive at an advance of 1*s.* to 2*s.* per qr. Barley has been in request at an advance of 6d. to 1*s.* per qr. Beans and Peas must be noted 1*s.* and Oats 6d. per qr. dearer. Flour has been in demand, but owing to comparative cheapness of American barrels the business has been principally confined to them, and they are consequently 1*s.* to 1*s.* 6d. per barrel dearer. The nominal top price of town-made Flour was advanced on Wednesday, 3*s.* per sack. The arrivals of grain-laden vessels from the South of Europe off the coast have been more extensive this week, but a large portion were sold before arrival. The arrivals of foreign grain and Flour this week have been large, and small of English. The little English Wheat on sale this morning was disposed of at an advance of 2*s.* per qr. over Monday's prices; in foreign a fair extent of business was transacted at a similar improvement, and in some instances 1*s.* per qr more was obtained. Barley is 1*s.* per qr. dearer. Beans and Peas are held for more money. The top price of town-made Flour is to-day raised to 60*s.* per sack. American barrels are 1*s.* to 2*s.* dearer.

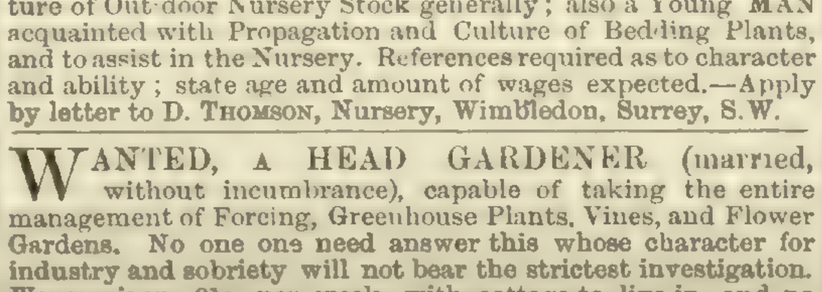
ARRIVALS FROM Aug. 20 TO Aug. 25.

	Wheat.	Barley	Oats.	Flour.
English ..	1240 qrs.	20 qrs.	20 qrs.	1730 sks.
Irish	— ,,	— ,,	— ,,	— ,,
Foreign ..	32770 ,,	5380 ,,	42810 ,,	2530 ,, 15930 brls.

LIVERPOOL, Tuesday, Aug. 21.—We have had a large attendance of country buyers at our Corn Exchange this morning, but the day being fine, and the pretensions of holders above their ideas, only a moderate amount of business resulted, and the advance established in the interval since Friday could not be maintained. Wheat may be written nominally 2d per cental, and Flour 1*s.* 6d. per barrel and sack dearer, the latter article being held with great firmness. Indian Corn was held for the advance of from 6d. to 1*s.* per qr. made yesterday, but the demand was quite in retail. Oats and Oatmeal bring full prices. Beans, Peas, and Barley have each improved 1*s.* per qr. The market closed without animation.

AVERAGES	Wheat.		Barley.		Oats.		Rye.		Beans.		Peas	
July 14..	57*s*	7*d*	33*s*	5*d*	25*s*	8*d*	41*s*	3*d*	46*s*	6*d*	43*s*	7*d*
— 21..	56	6	32	5	26	4	40	8	46	7	49	4
— 28..	57	0	33	1	26	4	47	5	45	1	31	1
Aug. 4..	58	7	33	0	26	6	35	6	46	9	41	3
— 11..	59	6	34	0	26	1	44	9	46	5	41	0
— 18..	59	6	32	10	28	2	41	9	47	1	44	0
Agg. Aver.	58	1	33	0	26	6	41	11	46	5	41	9

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.



NEW ZEALAND.—A Gentleman who has had extensive experience in Farming and in the Management of Sheep Stock in the South-west of Scotland, is desirous of meeting with a Gentleman possessed of some Capital, who may wish to go to New Zealand, and who would be disposed to enter into PARTNERSHIP with the Advertiser in the Lease of a Sheep Farm, for the Management of which the Advertiser possesses every necessary qualification, and is well suited to conduct all business transactions connected with the concern.—Apply, stating references, to "M.," office of the Wigtownshire Free Press, Stranraer, N.B. Stranraer, August 25.

"PINE."—The applications received by the Advertiser, under the above signature, being far too numerous to reply to by letter, he takes this means of saying the Situation is filled.

WANTED, A SUPERINTENDENT TO THE LAMBETH CEMETERY.—The Burial Board for the Parish of Lambeth will receive applications for the Situation of Superintendent to the Lambeth Cemetery at Garratt Lane, Tooting. Salary 1*l.* 16*s.* per week and firing, with separate residence free of rent and taxes. Candidates are to be from the age of 25 to 45 years.—For information as to the duties apply to the Clerk at the Vestry Hall, Kennington, with whom written applications and testimonials are to be left on or before 12 o'clock on September 11. By order.
C. M. BARKER, Clerk to the Board.

WANTED, A PROPAGATOR AND FOREMAN, thoroughly acquainted with the Propagation and Culture of Out-door Nursery Stock generally; also a Young MAN acquainted with Propagation and Culture of Bedding Plants, and to assist in the Nursery. References required as to character and ability; state age and amount of wages expected.—Apply by letter to D. THOMSON, Nursery, Wimbledon, Surrey, S.W.

WANTED, A HEAD GARDENER (married, without incumbrance), capable of taking the entire management of Forcing, Greenhouse Plants, Vines, and Flower Gardens. No one one need answer this whose character for industry and sobriety will not bear the strictest investigation. Wages given, 21*s.* per week, with cottage to live in, and no extras.—Apply on Tuesday morning, between 10 and 12 o'clock, at 12, Aldermanbury, City, E.C.

WANTED, A GARDENER to conduct a small Garden establishment.—Five compartments or Glass Houses for Forcing Fruit; the Culture of Stove and Greenhouse Plants for the supply of a Conservatory; also a Kitchen Garden and Pleasure Ground. Six Garden Men are employed. None need apply whose moral character will not bear the strictest investigation; a Wesleyan and "Member of Society" will be preferred.—JAMES P., *Gardeners' Chronicle* Office, W.C.

WANTED, at Martinmas next, a LAND STEWARD, to take the General Management of an Estate in the West of Scotland. A middle-aged married Man with no family will be preferred. He must be thoroughly acquainted with the approved modes of Agriculture, the Buying and Selling of Stock, Keeping Books, &c.; and none need apply who have not held a similar situation, and who cannot produce undoubted testimony as to character and qualifications.—Apply, with testimonials, &c., to Mr. KINLOCH, General Register House, Edinburgh.

TO SEEDSMEN.—SHOPMAN WANTED.

WANTED, A HEAD SHOPMAN, who has had some experience in the Management of a Wholesale and Retail Business, and to assist in Accounts. Good character for honesty and sobriety indispensable. State references, wages, age, &c., to A. PONTEY, Nurseryman and Seedsman, Plymouth.—August 18.

WANTED, in a London Seed Business, a Young MAN, who is intimately acquainted with Bulb, Vegetable, and Flower Seed departments.—Address, B. C., *Gardeners' Chronicle* Office, stating salary, &c.

WANTED, AS GROOM AND GARDENER, an active and intelligent single Man, of light weight, and from 30 to 45 years of age. He will be required to live in the house, and a well conducted servant would be liberally treated. There is no glass.—Apply by letter only, with references, 736, *Herald* Office, Birmingham.

WANTED, A MAN AND WIFE without incumbrance. Man must understand Land and Stock; Wife—Dairy, Poultry, and Laundry.—H. B., at Scadding's Library, Belgrave Road, Pimlico, S.W.

TO LAUNDRESSES.

WANTED, 20 miles from London, a LAUNDRESS fully capable of undertaking the washing of a large family, including the getting up of fine Linen, &c. A cottage and garden, with utensils, are provided. The situation will well suit a widow and daughter, or agricultural labour would be found also for a husband.—Apply by letter, with name, address, and references, to X. Y. Z., 20, Parliament Street, London.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD, to a lady or gentleman).—JAMES STANTON, age 42, married; has had 27 years' experience in his profession, 16 of them in the capacity of Head Gardener, the last 4½ of such to John Waterhouse, Esq., of Well Head, near Halifax, and is recommended as a clever and intelligent Plant Grower, including Ferns, &c., and well skilled in the routine of Forcing Fruits, Cropping, &c. Character and testimonials highly satisfactory. Voluntarily leaving his last position.—ALPHA, Messrs. E. G. Henderson & Son, St. John's Wood, London, N.W.

GARDENER (HEAD, where two or more are kept).—Age 26, single. Unexceptionable reference as to character and ability.—W. L., Post Office, Ticehurst, Sussex

GARDENER (HEAD).—Age 26, single; thoroughly understands his profession. Two years' good character.—L. J., 49, Ordnance Road, St. John's Wood, N.W.

GARDENER (HEAD).—Age 29, married; has a good practical knowledge of Forcing Fruits, &c., and the management of Kitchen, Fruit, and Flower Gardens. Good references given.—R G., Kensington Hall, North End, Fulham.

GARDENER (HEAD).—Age 36; first-class grower of Stove and Greenhouse Plants, Orchids, &c.; Pines, Vines, and Cucumbers. Early Forcing and the management of Orchard Houses.—W.P., Messrs. Rollinson's, Tooting, Surrey.

GARDENER (HEAD).—Age 27, single; practically understands the Forcing of all kinds of Fruits and Vegetables, the Culture of Stove and Greenhouse Plants, and the management of Fruit, Flower, and Kitchen Gardens. Good references.—H. M., 1 James's Terrace, Hornsey Road, Holloway, N.

GARDENER (HEAD).—Age 27, single; thoroughly understands Forcing Pines, Vines, Cucumbers, Melons, &c., management of Stove and Greenhouse Plants, Flower and Kitchen Gardens; four years' excellent character.—J. F., Messrs. Osborn & Sons, Nurserymen and Seedsmen, King's Road, Fulham, London, W.

GARDENER (HEAD).—Age 31, married; practical knowledge of Gardening in all its branches, Forcing and Plant Department, Fruit, Flower, and Kitchen Gardening; and can do Glazing, Painting, and put up Hot-water Apparatus if required. Two-and-a-half years' good character.—R. P., Mr. Payne's, 32, Archer Street, Kensington Park, W.

GARDENER (HEAD).—Aged 32, married, no incumbrance; thoroughly understands Forcing in all its branches, and the culture of Hard and Soft-wooded Plants; also a good knowledge of Ferns. Good references to past and present employers. No single-handed place accepted.—P. H., Post Office, Wallington, Surrey, S.

GARDENER (HEAD).—Age 30, married, one child, a native of Scotland; understands Forcing, the management of Flower and Kitchen Gardens. Has no objection to look after Meadow Land if required. Two years' unexceptionable character from his present employer. Expected wages, 21*s.*, and cottage.—J. Mc F., Rosebank, Tunbridge Wells, Kent.

GARDENER (HEAD).—WM. RANDALL (age 35, married, no incumbrance), Gardener to Lieut.-General Sir Thos. Wiltshire, Bt., Hill House, Wingfield, Windsor, begs to offer his services to any nobleman or gentleman requiring a thorough practical Man in every branch of his profession. Unexceptionable reference as to character and ability.—Address as above.

GARDENER (HEAD) or GARDENER AND BAILIFF, in or out of the house.—Age 40; thorough knowledge of his profession. First-class reference.—J. F., Post Office, Battersea Rise, S.W.

GARDENER OR FOREMAN (in a Forcing Establishment, for either private or marketable purposes).—Age 35, married; has a thorough knowledge of his profession.—T. C., Mrs. Catleugh's Nursery, Hans Street, Chelsea.

GARDENER, to any nobleman or gentleman.—R. DRUMMOND, seven years Gardener to the late S. Lyne Stephens, Esq., and also six years Gardener at Pontypool Park; has Designed and Superintended the Erection of extensive Forcing Houses.—Address as above, The Grove, Roehampton.

GARDENER (SINGLE OR UNDER).—Good character from Mr. E. Hamp.—G. CROSS, Fruiterer, Sanfield Street, Dartford, Kent.

GARDENER (UNDER).—Young; wishes to engage himself as the above to any nobleman or gentleman. Can have 2½ years' good character from his last employer.—T. C., Post Office, Southborough.

GARDENER (UNDER).—Age 18; has had good experience in the Flower department. Four and a half years' good character.—J. C., Hally's Nursery, Granville Park, Lewisham, S E.

TO NOBLEMEN AND GENTLEMEN CONTEMPLATING LAYING-OUT NEW OR RE-ARRANGING EXISTING GROUNDS, &c.—The Advertiser, who has had great experience in carrying out every description of work connected with the Park, the Pleasure Ground, the Kitchen Garden, and the general improvement of Estates, wishes for an engagement where taste and practical skill are required in conducting such operations.—Reference kindly permitted to W. A. NESFIELD, Esq., under whom the advertiser has executed important and extensive works.—A.B., 2, Lansdowne Place, Fulham Road, S.W.

TO SEEDSMEN AND FLORISTS.—An energetic young man, possessing extraordinary facilities for the introduction of business, wants a situation in the above trade where his services would be appreciated; is well up in Bookkeeping and cultivation.—A. B., Mr. Dubber's, Upper Norwood, S.

LAND MANAGER OR FARM FACTOR.—Age 36, single, Scotch; a steady, active, and thoroughly experienced farmer, who is most intimately conversant with all the various duties and departments pertaining to improved Agricultural practice and management. Most satisfactory certificates with security if required.—A. B., North British News Rooms, Edinburgh.

FARM STEWARD OR BAILIFF to a gentleman.—Accustomed to both Light and Heavy Land. Wife if required could take charge of Dairy, &c.—B. B., Post Office, Staines, Middlesex.

BAILIFF.—Age 43, married; is thoroughly practical in the most modern systems of Farming both Heavy and Light Land. Is a good judge of all kinds of Stock, and fully competent to undertake the entire management of a large Farm.—B. C., Post Office, Tunbridge Wells, Kent.

BAILIFF.—Middle-aged, married, without incumbrance; practically acquainted with the duties of his profession, Breeding and Rearing of Live Stock, Sale or Purchase of Farm Produce, Timber, &c.; has had 25 years' experience on both Heavy and Light Soils, with great practice in draining. First-rate reference will be given.—P. C., Mr. E. Tiley, Nurseryman, 14, Abbey Church Yard, Bath.

SHOPMAN.—Young; has had eight years' experience. A Wholesale Business preferred.—X. Y., 4, Fair Street, Horsleydown, S.E.

SHOPMAN (SECOND) in a Seed Establishment.—Young; of good address, who writes a good plain hand. Well accustomed to the trade. Good character.—T. H., Post Office, Macclesfield, Cheshire.

The Gardeners' Chronicle Newspaper.

SATURDAY, SEPTEMBER 1, 1860.

A COLLECTOR OF SEEDS AND PLANTS REQUIRED.

THE HORTICULTURAL SOCIETY BEING ABOUT TO RESUME THE IMPORTATION OF SEEDS AND PLANTS by means of Collectors in Foreign Countries, the Council are desirous of finding a well informed active Gardener, familiar with Garden Plants, who is ready to engage in this undertaking. Salary in proportion to attainments.

Apply immediately by letter only, inclosing testimonials, to the Secretary of the Horticultural Society, 3, St. Martin's Place, London, W.C.

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BONUS OF 1861.—All Policies effected prior to the 1st July, 1861, on the Bonus Scale of Premium, will participate in the next Division of Profits.

ROBERT TUCKER, Secretary and Actuary.

News of the Week.

PARLIAMENT was prorogued on Tuesday by Commission. The QUEEN's Speech, after a brief reference to the "long and laborious session," expresses the hope that the peace of Europe is in no danger of interruption, and adds that if no foreign Powers interfere with the Italians in the settlement of their affairs, the tranquillity of other States will remain undisturbed. The Speech mentions that the proposed Conferences on the cession of Savoy and Nice have not yet been held, but HER MAJESTY trusts that in any negotiations which may take place, adequate arrangements will be made to secure the neutrality and independence of Switzerland. HER MAJESTY states that the Syrian massacres have inspired her with the deepest grief and indignation, and she has entered into a Convention with the Great Powers for the purpose of rendering temporary assistance to the SULTAN in restoring order. The speech next announces that China has rejected our pacific overtures, and that the Allies have advanced towards the northern provinces of that Empire, with Lord ELGIN as HER MAJESTY'S Special Ambassador. HER MAJESTY thanks the House of Commons for the liberal supplies they have granted for the service of the year, and for the provision they have made for the defence of the dockyards and arsenals. HER MAJESTY expresses her gratification and pride at the rapid progress of the Volunteers, and refers with satisfaction to the Bill for amalgamating the European Forces in India, to the additional freedom given to commerce, to the Irish Landlord and Tenant Bill, to the new Act for the Discipline of the Navy, to the Bills for the better management of Endowed and Roman Catholic charities, and to the several Acts of legal reform which have passed during the Session HER MAJESTY states that she has observed with deep satisfaction the spirit of loyalty, order, and obedience to the law, which prevails among her subjects, both in the United Kingdom and in her dominions beyond sea; and that she has witnessed with heartfelt pleasure the warm and affectionate reception given to the PRINCE OF WALES by her North American subjects. The Speech concludes by expressing a hope that on returning to the important duties which await them in their several counties, the Members of both Houses of Parliament will, with the blessing of Providence, be guided to the attainment of the objects of HER MAJESTY'S constant solicitude—the welfare and happiness of her people. The writ for the prorogation of Parliament was then read, by which Parliament stands prorogued to Tuesday, the 6th of November.

In the House of Commons on Friday, in answer to Mr. KINNAIRD, Lord PALMERSTON stated that no period had yet been fixed for the proposed Conference of European Powers, and that the cession of Savoy and Nice had not yet been formally acknowledged by any of the Powers, and therefore did not at present form part of the public law of Europe. On Saturday, in answer to a question by Mr. B. COCHRANE relative to the reported intention of France to erect a fort on the Lake of Geneva, Lord PALMERSTON said that her Majesty's Government were of opinion not that it was not competent to the KING OF SARDINIA to cede and the EMPEROR OF THE FRENCH to accept Savoy, but that it was not competent to them to effect the transfer freed from conditions contained in a treaty to which France herself was a party.

The EMPEROR OF THE FRENCH on Saturday delivered a Speech at Lyons, in reply to the addresses of the civic authorities, in which he said that being solely occupied with the general interests of the country, he scorned all that which might place obstacles in the way of their development. The unjust distrust excited abroad, as well as the exaggerated alarm and selfish interests at home, would therefore not affect him, and nothing would make him deviate from the path of moderation and justice which he had followed, and which maintained France on the height of grandeur and prosperity that Providence had assigned her in the world. They might, therefore, give themselves up with confidence to works of peace.—Despatches from Naples state that on Monday last, the Neapolitan generals assembled in council, and with the single exception of General Bosco, unanimously resolved to advise the KING to take his departure from the city. It has since been reported that the officers of the army and navy had tendered their resignation in a body, and that the KING had embarked for Trieste. Despatches from Calabria announce the triumphant march of General GARIBALDI towards Naples. Reggio, the capital of Calabria, capitulated on the 21st. Two Neapolitan brigades have surrendered at discretion to General COSENZ, who had crossed the Straits with a considerable force at Fiumicino, and the insurrection has since spread with great rapidity to various important cities in the immediate neighbourhood of the capital. Disturbances have also occurred at Civita Vecchia and Benevento in the Papal States, the reinforcements sent by the Government to the latter place having been driven out and obliged to return to Rome.—Accounts from Beyrout state that FUAD PACHA has executed 180 persons convicted of having taken part in the late massacres, and has compelled 3000 inhabitants of Damascus to enter the army. 4500 soldiers of the French expedition have disembarked at Beyrout.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Balmoral. On Tuesday week the Queen, accompanied by the Prince Consort, Princess Alice, and Princess Helena, drove to Loch Bulig, and rode round by Inchrorie and Dee Side. Prince Arthur and Prince Leopold went to Loch Muich. Lord and Lady John Russell dined with the Queen in the evening. The Right Hon. Sidney Herbert arrived at the castle, in succession to Sir George Grey, as Secretary of State in attendance on her Majesty. On Wednesday the Queen, accompanied by Princess Alice and Princess Louisa, drove to the Linn of Muich, and rode up the Coils, returning to the castle by Birkhall, where her Majesty honoured Sir James and Lady Clark with a visit. The Prince Consort went out deer-stalking. On Thursday the Queen, accompanied by Princess Louisa and Prince Leopold, rode with the Prince Consort to the Moss of Monaltrie, where his Royal Highness shot grouse. Prince Arthur went to fish in the Gelder. On Friday the Queen and Prince Consort, accompanied by Princess Alice and Princess Helena, drove to the Derrie Sheel, and rode up to the top of Muich Duie, and visited Loch Avon on their way down. The Royal party left Balmoral at half-past 9 A.M., and returned at 10 in the evening. Prince Arthur and Prince Leopold drove to Laich Culleter. On Saturday the Queen, accompanied by Princess Alice and Prince Arthur, drove round by the Bridge of Dee, and then walked round by the Falls of Garrawalt back to the Castle through the Balloch Bhuie. The Prince Consort went out deer-stalking. Mr. Arthur Helps arrived in the Castle to attend the Privy Council on Monday. On Sunday morning the Queen, Prince Consort, and Princess Alice attended Divine service in the parish church of Crathie. The Very Rev. Dr. Barclay, Principal of the University of Glasgow, officiated. It being Sunday the Prince Consort's birthday was celebrated quite privately. On Monday morning the Queen held a Privy Council, which was attended by the Prince Consort, Lord John Russell, and Mr. Sidney Herbert. Her Majesty, accompanied by Princess Alice, afterwards left the castle for Alt-na-Guissach. The Prince Consort went out deer stalking, and joined her Majesty at Alt-na-Guissach in the evening. Princess Helena and Princess Louisa rode to the Garr-walt. On Tuesday morning the Queen, accompanied by Princess Alice, left Alt-na-Guissach and returned to the castle in the evening, having ridden round by Loch Callater. The Prince Consort went out deer stalking. The Prince and Princess of Leiningen arrived at the castle on a visit to her Majesty.

THE PRINCE OF WALES on the 11th ult. held a levee at the Government House, Charlottetown, Prince Edward's Island, and afterwards proceeded to the Colonial Buildings and received an address from the Legislature, to which he returned a suitable reply. His Royal Highness afterwards embarked for Gaspé, where he arrived on the 12th ult., and was met by the Governor-General of Canada and his Cabinet. He remained at Gaspé for the night, and proceeded westward the next day. On entering the Saguenay River the Hero grounded on the bar, but was got off with little damage. The Prince made two excursions up the Saguenay in Canadian steamers, and was much pleased with the grandeur of the scenery. His Royal Highness arrived at Quebec on the 18th ult., and was received with a salute from the fleet, the citadel, and the town. The shipping were dressed with flags and their yards manned. The fortifications and roofs of the houses were covered with spectators, and the city was crowded with visitors from all parts of the British possessions and the United States, who received his Royal Highness with great enthusiasm.

THE EX-ROYAL FAMILY OF FRANCE.—The Countess de Neuilly, the Duke de Nemours and family, and the Princess of Wurtemburg, have returned to Claremont from Tunbridge Wells. The Count de Paris and the Duke de Chartres returned last week from their Continental tour, and are now staying at Claremont. The Duke and Duchess d'Aumale and family are on a tour in Scotland.

THE COUNT D'AQUILA, uncle of the King of Naples, embarked at Calais on Saturday for Dover. His stay in England did not exceed a few hours, and he returned to Calais on Sunday morning, and left for Paris at noon by the express train.

COURT MOURNING.—The *Gazette* of Friday contains an order for the Court to go into mourning for a fortnight, for her Majesty's aunt, the Grand Duchess Anne of Russia.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Tuesday.

CONVOCATION.—The Convocation of the province of Canterbury was prorogued on the 23d ult. by commission to the 23d of October.

THE PEERAGE.—The Queen has bestowed on Lord Kinnaird the grant of an English barony, by the title of Lord Kinnaird of Kinnaird, with a special remainder to his lordship's brother, the Hon. Arthur FitzGerald Kinnaird, M.P. for Perth.

PARLIAMENTARY MOVEMENTS.—The Hon. Percy Wyndham, second son of Lord Leconfield, was returned for West Cumberland on Tuesday, without opposition, in the room of the late General Sir H. Wyndham. A new writ was issued on Tuesday for the election of a member for Ludlow, in the room of Colonel Percy Herbert, who has accepted the Chiltern Hundreds.

THE ARMY.—The Colonelcy of the 11th Light Dragoons, vacant by the death of General Sir H. Wyndham, has been conferred on Major-General the Earl of Cardigan, and the Colonelcy of the 5th Dragoon Guards, vacated by this promotion, has been conferred on Major-General the Hon. Sir James Yorke Scarlett.

THE CHURCH AND THE HARVEST.—The Bishops of London, Oxford, and Rochester, have addressed letters to the clergy of their dioceses, requesting them to use the appointed prayer for fine weather at all the public services of the Church, and to call the attention of the congregations to the importance of earnest prayer at the present season of anxiety to agriculturists and to the country.

GOVERNORSHIP OF CEYLON.—The Queen has appointed Sir Charles Justin M'Carthy, Knt., to be Governor of Ceylon and its dependencies.

GOVERNORSHIP OF JERSEY.—The Queen has appointed Major-General Robert Percy Douglas to be Lieutenant-Governor of Jersey, in the room of the late General Mundy.

KNIGHTHOOD.—The Queen has directed letters patent to be passed under the Great Seal, granting the dignity of a Knight of the United Kingdom to Stuart Alexander Donaldson, Esq., formerly Principal Secretary to the Government of New South Wales.

THE VOLUNTEER MOVEMENT.—On Saturday the 3d Middlesex (Hampstead) celebrated the opening of their rifle range and butt, situated in the fields of Child's

Hill, two miles from the Regent's Park. The butt is 50 feet wide, with two 12-feet wings, and 40 feet high; the range is 600 yards.—The 20th Middlesex, five companies, and 39th Bloomsbury, two companies, went to St. Alban's a few days since, where they were joined by the Watford, St. Alban's, Ashridge, and Berkhamstead (Hertfordshire) Corps, the whole forming 11 companies, which were put through battalion and light infantry exercise.—The 26th Middlesex (Her Majesty's Customs) Volunteers marched last week from the Custom House Quay to the Tower, where, by direction of the Secretary of State for War, they were inspected by Major Nelson, assistant-inspector of the district.—The Woolwich Royal Arsenal Volunteers, consisting of the 10th Kent Artillery, and the 26th Kent Rifles, numbering about 1500 men, and forming a brigade, were reviewed on Saturday by Lord Sydney, the lord-lieutenant of the county, on Woolwich Common.—The gun division of the Hon. Artillery Company paraded at the Armoury House, Finsbury, on Sunday, and after attending Divine service at Bow Church, Cheapside, returned to head-quarters and fired a Royal salute in honour of the birthday of the Prince Consort, the Captain-General and Colonel.—The 2d Kent Artillery (Faversham) had a set of musical instruments for their band presented to them last week on the Faversham Recreation Ground.—The Reigate, or 5th Surrey, mustered on Friday in the Market Place and marched to Horley, where they went through various manœuvres, and fired 20 rounds of blank cartridge in skirmishing order.—The Eye, Stradbroke, and Botesdale (Suffolk) companies were reviewed last week in Oakley Park, and were afterwards entertained at dinner by Sir Edward Kerrison, M.P., and Lord Henniker, M.P.—The 1st, 3d, 4th, 5th, and 8th companies of the Worcestershire Volunteer Corps were inspected on Saturday in the grounds of Spring Grove, by Lord Lyttelton, Lord Lieutenant of the county.—The 2d Hampshire was inspected last week in the Western Park at Southampton, by Lieut.-Col. Luard, district inspector of Volunteers.—The 5th Hants was presented with eight silver bugles last week by the ladies of Portsmouth on the garrison parade ground.—The 2d or Wycombe sub-division of the Buckinghamshire corps was inspected last week by Lieut.-Colonel Ibbetson in the park of Wycombe Abbey, the seat of Lord Carrington, Lord-Lieutenant of the county.—The Holbeach Corps assembled for ball practice a few days ago, when the number of points obtained by the three successful competitors was 30, 19, and 18, the average number of each member being 15½.—The 1st and 3d Companies of the Isle of Wight Corps paraded last week in the grounds of Ryde Home Park, and were presented with silver bugles by the ladies of Ryde.—The Plymouth, Devonport, and Stonehouse corps were inspected on Thursday week at Mount Wise, by Colonel M'Murdo, Inspector-General, accompanied by Major Hume, Inspector for the Western District.—The 10th Sussex (Chichester) were inspected on Thursday week in the Priory Park by Sir John Lawrence, Bart., G.C B.—On Monday the Bungay and Harleston corps had a meeting in the grounds of Denton Lodge, and went through various evolutions.—The 1st battalion of Cornwall, consisting of companies from Truro, Falmouth, Helston, Redruth, Camborne, Hayle, and Penzance, were inspected on Tuesday week in Clowance Park by Major-General Tremenheere.—The 1st South Hants Artillery assembled at Woolston on Saturday, and placed their guns in position in a battery they have erected on a piece of ground the use of which has been granted them by Mr. H. Buchan, of Southampton.—On Saturday a rifle contest took place near Rottingdean, Sussex, on the property of Mr. Eliot Macnaghten, of her Majesty's Indian Council. The prizes were two silver cups, presented by Mr. Ravenhill, the engineer, and Mr. James Allan, a director of the Peninsular and Oriental Company. The competitors were members of the West Kent, Middlesex, Queen's, Westminster, Cambridge University, Surrey, and Sussex. Mr. Ravenhill's cup was won by private Hackett, of the 1st Kent, and Mr. Allan's cup was a tie between Captains Rucker and Morris, also of the 1st Kent battalion, the deciding shot being in favour of Captain Rucker. A second prize in the latter match, consisting of a statuette, presented by Captain Vacher, of the Queen's Westminsters, fell to Captain Morris. The ranges were 200, 300, and 400 yards.—On Saturday upwards of 800 Volunteers, from Lancashire and Cheshire, accepted the invitation of the Manchester, Sheffield, and Lincolnshire Railway Company, who gave them free conveyance to Hull and Grimsby and back, with hospitable entertainment during their visit.—The 1st battalion of Lancashire, which for the last month has been encamped at Blundell Sands, Crosby, near Liverpool, broke up their camp on Saturday, and returned to quarters.—Four battalions of the Artillery and Rifle Corps of Yorkshire and Lincolnshire took part in the festivities at Hull on Monday, on the occasion of planting the first tree in the People's Park, and were afterwards reviewed by Lord Wenlock. The 1st battalion comprised the 1st East York Artillery (Bridlington and Flamborough), 2d East York Artillery (Filey), 1st and 2d Lincolnshire Artillery (Boston and Grimsby). The 2d battalion consisted of the 4th East Riding (Hull Brigade), eight companies; and the 1st West Riding Artillery, from Leeds. The 3d battalion included the 1st, 2d, 4th, 6th, 9th and 12th Lincolnshire, from Lincoln, Louth, Boston, Grimsby, Horncastle, and Barton. The 4th battalion comprised the five companies forming the Hull battalion, the whole numbering about 1600 men.—A large and influential meeting was held at Keighley, in the West Riding, on Monday, for the purpose of considering the propriety of establishing a Volunteer Rifle Corps for that town and district under the title of the Airedale Corps. Some opposition was made, but the proposition was carried by a large majority.—On Saturday the first and second companies of the Macclesfield Corps were presented with silver bugles in the Public Park, one a present from the mayor, and the other a present from the ladies of Macclesfield.

Foreign.

FRANCE.—The Emperor and Empress have been received with great enthusiasm in their journey to Savoy and Nice. On arriving at Dijon the Mayor delivered an address in which he said, "The Government of your Majesty has carried the prestige of the country to a dazzling height. When Europe affects to be always afraid of the power of your armies, she really fears much more the sympathies which you have brought forth among peoples." The Bishop of Dijon in his speech extolled the expedition to Syria, "an enterprise undertaken notwithstanding the distrustful exigencies of diplomacy," and expressed a hope that the Emperor will likewise triumph over the difficulties, almost impediments, which the same diplomacy in departing from the path of right and justice pretends to impose upon the eldest son of the Church, upon the Emperor, the successor of Pepin and Charlemagne. The Bishop concluded by expressing a hope that the Emperor would succeed in arresting the revolutionary flood which menaced the patrimony of the Holy Father. Their Majesties proceeded from Dijon to Lyons, where they met with an enthusiastic reception. The following speech was delivered by the Emperor in reply to the addresses of the civic authorities of Lyons:—

"I thank you for the manner in which you appreciate my efforts to increase the prosperity of France. Solely occupied with the general interests of the country, I scorn all which may place obstacles in the way of their development. Therefore the unjust distrust excited abroad as well as the exaggerated alarms of selfish interests at home will not affect me. Nothing will make me deviate from the path of moderation and justice which I have to this day followed, and which maintains France on the height of grandeur and prosperity that Providence has assigned her in the world. Therefore give yourselves up with confidence to works of peace. Our destinies are in our own hands. France gives in Europe the impulse to all great and generous ideas. She only suffers from evil influence when she is degenerating. Believe that, with the assistance of God she shall not degenerate under my dynasty."

The Emperor afterwards inaugurated the Palais du Commerce, and conferred the decoration of the Legion of Honour on the most eminent manufacturers of the city. On Sunday the Emperor and Empress went to hear Divine service at Notre Dame de Fourvières, a well-known place of pilgrimage in the neighbourhood of Lyons. On Monday their Majesties left Lyons for Chambery, the Emperor having previously given directions that as a memorial of his visit the tolls on the bridges of the Rhone should be immediately suppressed. On arriving at Chambery their Majesties were received with enthusiasm. The Mayor, in the speech he addressed to the Emperor, recalled the ardour and national feeling which carried the inhabitants of Savoy towards France. In the evening a grand dinner took place, and the town was splendidly illuminated. On Tuesday the Emperor and Empress received the public authorities and the principal inhabitants of the department of Savoy. Their Majesties then paid a visit to the principal church, and afterwards rode out in the neighbourhood of Chambery. In the evening a grand ball was given in the theatre. On Wednesday their Majesties received Signor Farini and General Cialdini, who had come from Turin to compliment them in the name of the King of Sardinia. Their Majesties afterwards proceeded to Aix and Annecy, and were enthusiastically received at both places.—The *Moniteur* contains a decree ordering the establishment of a port at the city of Thonon, on Lake Leman, and the improvement of the already existing port of Evian, on the same lake, as works of public utility. It also contains a decree ordering the construction of a section of railway between Toulon and Nice, to connect the two departments of the Var and Nice, as a work of public utility. The *Constitutionnel* publishes an article, signed Grandguillot, stating that the relations between France and Austria are excellent, and congratulating the latter Power on having frankly entered on the path of reform. The news published in some German papers that the Emperor Napoleon has proposed a Congress for the settlement of the affairs of Italy is totally unfounded.—The Count de Persigny, in his capacity of President, opened on Tuesday the sittings of the General Council of the Department of the Loire with a speech on the foreign relations of France, of which the following is a summary:—

"The Emperor's programme of Bordeaux has not been changed. Without pretending to abolish war, the Emperor has, however, repudiated the inheritance of mere fighting for the sake of vengeance for the defeats of the first Empire. Before the inauguration of the present Empire two extraordinary questions were pending—viz., the question of the East, and that of Italy—neither of which could be resolved by means of diplomacy. Although the wars resulting from these questions could not be avoided, they were carried out with promptitude, and the Emperor succeeded in realising the object for which they were undertaken. The destruction of Sebastopol prevented Russia from taking possession of Constantinople, and the Eastern question was confided to the charge of united Europe. As regards the war in Italy, the Italian States were delivered from Austrian domination, and the principal object of the war was thus obtained. Although the Italians now jeopardise the independence which they acquired in consequence of the war, the principle of non-intervention, now a recognised rule of international policy, exercises a dominating influence over the further development of the question. These are the only questions which occupy the attention of Europe at the present moment. The apprehensions entertained in Germany respecting the Rhine frontiers, and the fears of an invasion current in England, do not merit serious discussion. The Rhine is no longer a strategic frontier. France, being much stronger when Germany is divided, will never support the project of German unity for any compensation she might obtain. As to England, I have always been astonished that men of authority in that country can have appeared to have given credit to the possibility of an attack on our part. I could understand that fear in certain minds of a concourse of extraordinary circumstances which might bring about some serious misunderstanding between the two countries; and that, looking to this, it might be deemed useful on both sides to place the military defences on a level with the progress of science; but to believe seriously that either of the two Governments could be disposed voluntarily to bring about between the two greatest nations of the world that terrible and frightful struggle, where we both should have everything to lose and so little to gain, would be the height of madness. Assuredly no one in France would for one instant admit the existence of such a disposition in the mind of the Emperor or of his Government. Well, it is the same thing in England. There, apart from certain fractions of parties whose attitude tends, from different causes, to envenom our relations, but who only derive an accidental importance from the present equality between the forces of the two principal parties—the eminent men of all opinions, like the august and virtuous princess who does honour to the throne of Great Britain—only wish for peace and good harmony between the two countries. The whole English people, notwithstanding so many contrary excitations, desire nothing else. Deceived, or deceiving itself, as to our intentions—persuading itself, on the faith of false information, that we have been wanting in loyalty, a portion of the English public bestirred itself and thought itself justified in taking precautions against us. But the calm and worthy attitude of that host of young volunteers who came forward so generously to offer their services to the country, their noble motto, 'Defence not Defiance;' lastly, the manner in which the Treaty of Commerce was received, all prove that no hostile passion agitates the nation against us; that far from that, it only desires to be enlightened as to our sentiments; and that thus, when the truth shall have shone forth, the two peoples will only have to engage exclusively in the struggle of emulation to which the Treaty of Commerce invites them. In view of so many great results obtained by France, and the lustre which they throw around the French nation, it is natural that uneasiness and distrust should have arisen in Europe. France, however, did not create the complications in Italy, neither did she counsel Austria to follow the fatal policy which led to the rising of the Italians, nor is she responsible for the treaties which Austria concluded with the Italian Princes. France used every possible effort to prevent the conflict. If the Emperor kept silence before the outbreak of the war in reference to his promises to repulse the attacks of Austria upon Italy, it was with the motive of leaving the Italians in ignorance of his powerful assistance, which, had they been aware of it, would have spread increased excitement among them. Thus the silence with which the Emperor has been reproached was disadvantageous to himself alone. The same can be said in reference to the cession of Savoy and Nice to France. The Italians, after the conclusion of the peace of Villafranca, having acted in violation of that treaty on the other side of the Alps, France could not renounce her Alpine frontiers, seeing that a great Italian kingdom had been constituted. France has never concealed her intentions, either from Sardinia or from England. She has deceived nobody. The Emperor has certainly replaced France in her legitimate position, without shaking the confidence of Europe. Taken as a whole, his policy was pure and honest. If he has made war in Italy, it was only because the other Powers were not willing to engage their own responsibility. As soon as it was possible to arrive at a definite result he concluded the peace desired by the world. Since 1815 France has been forced to follow the *rôle* imposed upon her by the treaties of Vienna. Another spirit now reigns, and the political system of 1815 has been subverted by Europe herself. This system was the result of a violent transition, which by two great convulsions entirely disturbed the European equilibrium. Since then it has been the great interest of Europe that a general reconciliation should be effected between the different Powers, and that France should, by common consent, reassume the position which belonged to her in the Councils of the Powers. She no longer threatens nor is threatened. Her work is achieved, and the mission of the new Empire is accomplished. The military *rôle* of France in Europe is at an end. It affords me great happiness to be conscientiously able to say that an era of peace and prosperity is now opening for Europe."

SPAIN.—Letters from Madrid state that the Emperor of the French, on his return journey from Algeria, will stop at Barcelona, where he wishes to have an interview with Queen Isabella II.

SWITZERLAND.—It is stated that the Federal Council, having been solicited by the French Government to send a deputation to Thonon to greet the Emperor, replied that there was no occasion to take such a step.

HOLLAND AND BELGIUM.—Letters from Wiesbaden mention the meeting of the Kings of Belgium and Holland in that city. The meeting lasted more than two hours, and the most friendly declarations were made on both sides. At a very early date the King of the Netherlands will become the guest of the King of the Belgians at Brussels, and before Christmas this visit will be returned by King Leopold, who wishes to consolidate the good feeling now existing between the Royal families and the people of Belgium and Holland by visiting the King at the Hague.

PRUSSIA.—Letters from Berlin state that although during the interview at Töplitz an understanding was, in principle, brought about on all pending questions, the Prince Regent expressly declared to the Emperor that Austria, since 1850, had been committing a positive infraction of the Federal Act, which distinctly state that all the States of the German Confederation shall receive a constitution on the representative system, and that until Austria enters upon the path of con-

stitutional reforms there can be no hope of a real and durable alliance.

AUSTRIA.—Letters from Vienna state that although the Ministers declared in the last sitting of the Committee of 21 members that the Government had no objection to the Hungarian programme being discussed, the German party, backed by the military aristocracy, have prepared a counter programme to be submitted to the Council at the full meeting on Monday. In order to avoid a rupture in the Council on the subject of these two programmes, and also to leave to the Emperor the merit of spontaneously adopting the proposed reforms, the ministers have resolved to propose to his Majesty, that at the opening of the full meeting on Monday the President shall read to the assembly an autograph letter from his Majesty, stating the sincerity of his intentions to give satisfaction to the legitimate wishes of the people, and promising to take into serious consideration the views expressed in the two programmes. But while waiting a means to reconcile the opposite tendencies of the majority and minority of the committee, the Emperor, in order not to adjourn the political regeneration of the empire, considers that in his sovereign capacity he should grant the statutes of the provincial diets, and fix beforehand their precise privileges, thus assuring and guaranteeing the autonomy of each province. The promulgation of these statutes is not in any way to prejudice the right of the diet to claim changes and modifications of proved necessity and utility. The autograph letter is likewise to announce the immediate promulgation of the electoral law both as regards the formation of the provincial diets, and the definitive constitution of the enlarged Council of the Empire. The Ministers hope that such an autograph letter will prevent political debates in the Reichsrath, and allow the Government to tranquilly close the session with the increased confidence of the country. Notwithstanding the positive announcement made by several German journals of an approaching interview between the Emperor of Austria, the Czar, and the Prince Regent of Prussia, it is understood that no steps have been taken with that object up to the present time either by the Emperor of Austria or the Emperor of Russia. Out of consideration to France both Emperors will carefully abstain from taking any steps which might be interpreted as an act of coalition against her.

HUNGARY.—At the recent festival on St. Stephen's Day at Pesth, the Prince-Primate, in the presence of General Benedek, the Governor-General, proposed the health, not of the Emperor of Austria, but of "the King of Hungary," thereby implying that Hungary by her constitution acknowledged no Emperor, but only a King governing by an ancient constitution and well-known laws. A magnate, the head of the Lutheran confession, declared that all classes were unanimous in the view expressed by the Prince-Primate, and a Roman Catholic and an Israelite expressed their entire accord. In consequence of these demonstrations of nationality, General Benedek returned to Vienna, at the close of the festival, and requested the Emperor to relieve him of his functions in Hungary, where his position had become untenable, on account of the continually increasing agitation in the country. General Benedek is said to have expressed his opinion that the wishes of his countrymen are legitimate, and to have refused to carry out any coercive measures against the national tendencies of the Hungarians. The Emperor, however, has induced him to remain at the head of the Hungarian Administration until the closing of the Extraordinary Session of the Council of the Empire.

THE TYROL.—A spirit of disaffection to the Austrian Government has for some time been exhibited in the Tyrol. More than 300 of the inhabitants have quitted it without passports. The Innspruck *Gazette* publishes their names, and formally summons them to appear before the authorities. Sixty-nine of the number, belonging to the middle class, who have not appeared to the first citation, are declared illegally absent from the State, and their property is confiscated. This measure, however, has not checked the emigration.

THE ADRIATIC.—In case Garibaldi should attempt a disembarkation on the Austrian coast, the Archduke Ferdinand Maximilian, as Commander-in-Chief of the Austrian army, will assume the personal and direct command of the naval forces destined to repel the attack.

POLAND.—Accounts from Poland state that the harvest in that country is this year a total failure.

ITALY.—On Monday last the Neapolitan generals assembled in Council, and with the exception only of General Bosco, unanimously resolved to advise the King to take his departure from the city. The officers of the army and navy had previously tendered their resignations *en masse* to his Majesty. It is believed that the King left Naples on Tuesday evening on board the Stromboli. The triumphant progress of Garibaldi and the refusal of the Neapolitan army to fight for the Royal cause sufficiently explain this step. The city of Reggio capitulated to Garibaldi on the 21st ult., the Neapolitan garrison being allowed to leave with muskets and personal baggage only. After a short fight the Garibaldians next took the town of Villa San Giovanni, while two Neapolitan brigades, Melandez and Briganti, surrendered at discretion to General Cosenz, who had landed with a considerable force at Fiumicino. The Garibaldians thereby became masters of their artillery, arms, horses, and materials of war, and of Fort del Pizzo. Meanwhile the insurrection had spread from the Basilicata to the province of Capitanata and the important towns of Foggia, Calento, Campobasso, Avellino, and Salerno, situated only a few miles from the capital, were in full revolt. The Pro-Dictator at Potenza had furnished arms to 10,000 inhabitants of the province of Basilicata, the insurgents of which were advancing towards Salerno, to join Garibaldi and march against Naples. The Neapolitan troops were attacked at Piale by the Garibaldians, by whom they were surrounded and defeated. An armistice was then proposed. The commanding officer referred this proposition to the General-in-Chief, in order to obtain his decision. In the meantime the Neapolitan troops became disorganised and dispersed, leaving the batteries without any defenders. Colonel Deflotte, the French Republican and one of Garibaldi's officers, was killed in the engagement before Reggio. Garibaldi ordered splendid obsequies in his honour.—From Naples we learn that several Neapolitan journals have published an appeal to the population to rise in insurrection. Fifty Sardinian Bersaglieri having disembarked at Naples from Sardinian war steamers, a desperate combat ensued between them and the Royal Guard, in which several Bersaglieri were killed and others wounded. The Bersaglieri finally re-embarked. The Marquis de Villamarina, the Sardinian Ambassador, is said to have declared that the Neapolitans were the aggressors, and has demanded immediate satisfaction. Baron Brenier, the French Ambassador, has also demanded of the Neapolitan Government the satisfaction due to him on account of the assault recently committed on his person. Baron Brenier pointed out that the best means of doing an act of justice and of showing him courtesy would be to proceed immediately to the liquidation of the indemnity due to the French subjects who had suffered through the bombardment of Palermo by the Neapolitans, and to appoint a special Ambassador to Paris with the mission of making fitting apologies for the affront offered to France in his person. Negotiations to that effect are still carried on, and it is not yet known whether Baron Brenier will remain at Naples.—Accounts from Rome state that a detachment of gendarmes which the Papal Government had sent as reinforcements to the garrison of Benevento, after having crossed the Neapolitan territory without arms, according to existing treaties, were insulted, driven out of Benevento, and finally obliged to return. The Governor of Benevento has taken increased military measures of precaution at the fortress. A political manifestation took place at Civita Vecchia on the occasion of the obsequies of Alibrandi, chief of the Revolutionary Committee. Several arrests were made. Monsignor Merode has refused to permit the departure of the Volunteers under Cathelineau, and the latter has left Rome. General Lamoricière has sent a military column to watch the Tuscan frontier.—Kossuth arrived at Bellagio on the Lake of Como on the 25th ult., and was received with great enthusiasm, the whole town and the neighbouring heights being illuminated in his honour.

TURKEY.—Notwithstanding the representations of the Ambassadors, Kurschid Pasha remained at Constantinople until the Marquis de Lavalette again insisted on and obtained his departure, in order that he might be brought to trial in Syria. The Mussulman inhabitants of Constantinople are assuming a threatening attitude. The garrison has been increased, but the soldiers' pay is still in arrear.—The Sultan, in authorising his Ambassador at Paris to sign the protocol of the 3d ult., which is to be converted into a Convention, imposed the condition that the protocol should contain nothing which might involve the idea of foreign intervention in the interior affairs of Turkey. It was for that reason that the wishes of the Great Powers respecting the measures to be taken for improving the condition of the Christian subjects of the Porte were embodied in a second and separate protocol. This protocol, by the distinct reserve of the Turkish Ambassador, was not to be inserted in the Convention. Russia, nevertheless, insisted that the Convention should recall and confirm the promises given by the Porte at the Congress of Paris in favour of the Christians. The Divan refused to accede to this demand, which it declared would constitute an act of intervention in the interior administration of Turkey. The Porte, however, declares that, acting in the full exercise of its sovereign independence, it will use every effort to fulfil the wishes of the Christian Powers. These preliminaries have delayed the signature of the Convention, upon which, however, all the Powers have now come to an agreement. Six copies have been drawn up, one of which is destined for each of the contracting Powers. The Austrian and Russian Ambassadors signed their copies before quitting Paris on leave. The date of these copies will be filled up and signed by the other Ambassadors as soon as the Turkish Ambassador has affixed his signature.

SYRIA.—Fuad Pasha on the 20th ult. hanged 57 Moslems of different classes, who had been convicted of having taken part in the late massacres and shot 110 policemen and Bashi Bazouks at the great Meidan. He has also compelled 3000 inhabitants of Damascus to enter the army. Forty-five hundred soldiers of the French expedition have disembarked at Beyrout. General Beaufort, in a proclamation, has prohibited the Maronites from renewing the conflict. The Sultan has sent to Abd-el-Kader the decoration of the Medjidiè, of the highest class, in acknowledgment of his courageous conduct during the massacres at Damascus.

UNITED STATES.—The politicians of the United States are actively preparing for the coming Presidential campaign. Elections for State officers have taken place in several of the States. Lady Franklin is staying at New York, where she is the guest of Mr. Minturn, who took so prominent a part in the search made for her husband. She will shortly leave New York for Canada. Gen. Walker was last heard of on the 1st August. He was then off Ruatan, with five vessels and 500 men, bound for Costa Rica or Nicaragua. The people of Kansas are on the borders of starvation, owing to the total failure of their crops, the consequence of drought, no rain having fallen there for months. A sanguinary fight has taken place on the Solomon river between the Delawares and Cheyennes and Arrapahoes. The fight was witnessed by two pioneers, who were at the time hunting buffalo, and is described by them as being a fearful scene. The combatants numbered some thousands, were all mounted, and kept constantly circling, lying down in their saddles, and firing over their horses' necks as they approached the enemy. The fight lasted two hours, and at the end of that time after many had been killed, the Pawnees broke and ran, with the Cheyennes after them. A party who passed over the battle-field subsequently found about 300 dead bodies, all of which were scalped.

MEXICO.—Miramon's army had been routed by the Liberals while trying to escape from Lagos. The latest accounts reported Miramon at Leon, surrounded by the victorious Liberals. Robles had abandoned Jalapa. The Spanish Minister had threatened a bombardment of Vera Cruz, Miramon's Government having refused to accede to his demands. Juarez has surrendered the Spanish barque Maria Conception, which the Commodore demanded. Bishop Espinosa had been unconditionally released, in the hope that it would induce Miramon to release Uragua, but that hope had not been realised.

CAPE OF GOOD HOPE.—Accounts from the Cape to the 21st ult., state that her Majesty's ship Forte, Admiral Keppel, with Sir George Grey, arrived out on the 4th ult. Prince Alfred had not arrived, and it was supposed the Euryalus had broken down. The preparations for his reception had been completed, but it was feared that he would not be able to go through the colonial visiting programme, his stay being limited to October 23. Parliament was prorogued on the 17th. In the session, which lasted 80 days, 31 Bills had been passed, and nearly a million sterling voted. The excavations for a breakwater in Table Bay had been commenced. No news of Dr. Livingstone's expedition. The missionaries in Mosilikatses had been badly treated.

Parliament.

HOUSE OF LORDS.

FRIDAY.—The *East India Loan Bill* and the *Savings Banks and Friendly Societies Investments Bill* passed through committee. The *Roman Catholic Charities Bill*, on the motion of the LORD CHANCELLOR, was read a second time, on the understanding that no amendments should be introduced. The *Spirits Bill* was read a third time and passed. The Commons amendments to the *Party Emblems (Ireland) Bill*, and the *Debtor and Creditor Acts Amendment Bill*, were agreed to. The *Consolidated Fund (Appropriation) Bill*, the *Exchequer Bonds or Bills (2,600,000l.) Bill*, and the *Militia Pay Bill* were read a second time.

SATURDAY.—On the motion for the third reading of the *Roman Catholic Charities Bill*, Lord MONTEAGLE proposed an amendment to one of the clauses, which was eventually negatived without a division. The Bill was then read a third time and passed. The *Spirits Bill*, the *Savings Banks and Friendly Societies' Investments Bill*, the *Peace Preservation (Ireland) Bill*, the *East India Loan Bill*, the *Militia Pay Bill*, and *Exchequer Bonds or Bills Bill* were read a third time and passed. The Commons' amendments to the *Tenure and Improvement of Land (Ireland) Bill* led to a lengthened discussion, but they were agreed to on a division by 7 to 6. Some other formal business was disposed of, and their lordships adjourned to Tuesday, when the prorogation will take place.

TUESDAY.—The *Royal Assent* was given by commission to the Consolidated Fund (Appropriation) Bill; Exchequer Bonds or Bills (2,000,000*l.*) Bill; Refreshment Houses and Wine Licenses (Ireland) Bill; Fortifications (Provision for Expenses) Bill; Customs (No. 2) Bill; Stamp Duties (No. 2) Bill; Excise Duties Bill; Spirits Duties Bill; Spirits Bill; Defence of the Realm Bill; County Coroners Bill; Militia Ballot Bill; Endowed Charities Bill; Naval Discipline Bill; Ecclesiastical Commission, &c Bill; Gas Metropolis Bill; Party Emblems (Ireland) Bill; Union of Benefices Bill; Rifle Volunteer Corps Bill; Savings Banks and Friendly Societies Investments Bill; Peace Preservation (Ireland) Act (1856) Amendment Bill; East India Loan Bill; Roman Catholic Charities Bill; Divorce Court Bill; Tenure and Improvement of Land (Ireland) Bill; Landlord and Tenant (Ireland) Bill; Tramways (Ireland) Bill; and other public and private Bills.—The Queen's Commission for the prorogation of Parliament was then read, after which the LORD CHANCELLOR read the Royal Speech, as follows:—

"MY LORDS AND GENTLEMEN.

"We are commanded by her Majesty to release you from further attendance in Parliament, and at the same time to convey to you her Majesty's acknowledgments for the zeal and assiduity with which you have applied yourselves to the performance of your important duties during the long and laborious session of parliament now about to close.

"Her Majesty commands us to inform you that her relations with foreign powers are friendly and satisfactory; and her Majesty trusts that there is no danger of any interruption of the general peace of Europe. Events of considerable importance are, indeed, taking place in Italy; but if no foreign powers interfere therein, and if the Italians are left to settle their own affairs, the tranquillity of other states will remain undisturbed.

"The proposed conferences on the subject of the cession of Savoy and of Nice to France have not yet been held. But her Majesty confidently trusts that in any negotiations which may take place, full and adequate arrangements will be made for

securing, in accordance with the spirit and letter of the Treaty of Vienna of 1815, the neutrality and independence of the Swiss Confederation. That neutrality and independence were an object to which all the powers who were parties to the treaties of Vienna attached great importance, and they are no less important now than then for the general interests of Europe.

"Her Majesty commands us to assure you that the atrocities which have been committed upon the Christian population in Syria have inspired her Majesty with the deepest grief and indignation. Her Majesty has cheerfully concurred with the Emperor of Austria, the Emperor of the French, the Prince Regent of Prussia, and the Emperor of Russia, in entering into an engagement with the Sultan, by which temporary military assistance has been afforded to the Sultan, for the purpose of re-establishing order in that part of his dominions.

"We are commanded by her Majesty to inform you that her Majesty greatly regrets that the pacific overtures which, by her Majesty's directions, her envoy in China made to the Imperial Government at Pekin did not lead to any satisfactory result; and it has, therefore, been necessary that the combined naval and military forces which her Majesty and her ally the Emperor of the French had sent to the China seas should advance towards the northern provinces of China, for the purpose of supporting the just demands of the allied powers.

"Her Majesty, desirous of giving all possible weight to her diplomatic action in this matter, has sent to China, as special ambassador for this service, the Earl of Elgin, who negotiated the treaty of Tien-tsin, the full and faithful execution of which is demanded from the Emperor of China.

"GENTLEMEN OF THE HOUSE OF COMMONS,

"Her Majesty commands us to convey to you her warm acknowledgments for the liberal supplies which you have granted for the service of the present year, and for the provision which you have made for those defences which are essential for the security for her dockyards and arsenals.

"MY LORDS AND GENTLEMEN,

"Her Majesty commands us to express to you the gratification and pride with which she has witnessed the rapid progress in military efficiency which her volunteer forces have already made, and which is highly honourable to their spirit and patriotism.

"Her Majesty has given her cordial consent to the act for amalgamating her local European forces in India with her forces engaged for general service.

"Her Majesty trusts that the additional freedom which you have given to commerce will lead to fresh development of productive industry.

"Her Majesty has given her ready assent to several measures of great public usefulness.

"The acts for regulating the relations between landlord and tenant in Ireland will, her Majesty trusts, remove some fertile causes of disagreement.

"The act for amending the law which regulates the discipline of her Majesty's navy has established salutary rules for the administration of justice by courts-martial, and for maintaining good order in the naval service. The act bearing upon endowed charities will give means for a less expensive administration of the property of charities, and for the speedy and economical settlement of disputes affecting such property; while, by another act, relief has been afforded to her Majesty's Roman Catholic subjects with regard to their charitable endowments.

"Several other acts have been passed for legal reform, which must lead to the more satisfactory administration of justice.

"Her Majesty has observed with deep satisfaction the spirit of loyalty, of order, and of obedience to the law, which prevails among her subjects, both in the United Kingdom and in her dominions beyond sea; and her Majesty has witnessed with heartfelt pleasure the warm and affectionate reception given to his Royal Highness the Prince of Wales by her North American subjects.

"You will, on returning to your several counties, have duties to perform scarcely less important than those which have occupied you during the session of parliament, and her Majesty fervently prays that the blessing of Almighty God may attend your efforts and guide them to the attainment of the objects of her constant solicitude—the welfare and the happiness of her people."

The LORD CHANCELLOR then declared the Parliament prorogued until Tuesday the 6th of November.

HOUSE OF COMMONS.

FRIDAY.—Mr. JAMES gave notice that next session he should move for a select committee to inquire into the operations of the *Board of Works*.—Mr. WHALLEY asked whether it was intended next session to introduce a Bill to remedy the inequalities of the *Income Tax?*—The CHANCELLOR of the EXCHEQUER said that no Bill was contemplated for the reconstruction of the income tax, but he might, perhaps, introduce some modification in the mode of imposing it.—Mr. CARDWELL stated, in answer to a question by Mr. Osborne with reference to the condition of the cavalry at the *Curragh Camp*, that Sir G. Brown had reported to the War Office that no serious mischief had yet occurred to the health of the troops or the horses by reason of the present inclement weather.—*The Conference.*—In answer to Mr. KINNAIRD, Lord PALMERSTON said that the proposed Conference of European Powers had been delayed, and no period had yet been fixed for its assembling. The Treaty of Turin had not received the formal acknowledgment of any of the Powers, and could not therefore be considered a part of the public law of Europe. The cession of Savoy and Nice was attended with peculiar circumstances, and France held them on the same conditions as the King of Sardinia. The denial at one time, the avowals at another, the promise made by the French Government that whenever the cession should be completed Faucigny and Chablais should be ceded to Switzerland—a promise which was afterwards retracted, and apparently never intended to be performed—must create a painful impression in the mind of every one in regard to all parties concerned. The feeling of distrust thus produced had proved to the other States of Europe that hereafter forethought and precaution were the duty of every Power.—The House was counted out at a quarter past 6.

SATURDAY.—*The Militia*.—Mr. B. COCHRANE gave notice that on Tuesday he should move that, on account of the state of the weather the militia be not called out until after the harvest *Abd-el-Kader*.—In reply to Mr. GRIFFITH, Lord PALMERSTON said that her Majesty's Government had directed the British Consul to convey to Abd-el-Kader and the sister of Said Bey, a Druse chief, their thanks for the humane services they had rendered to the Christian population. *France and Switzerland*.—In answer to Mr. B. COCHRANE, Lord PALMERSTON said he had seen the statement in the *Moniteur*, ordering the construction of a fort and other permanent works on the Lake of Geneva, but that the Government had not received any official information on the subject. Her Majesty's Government did not hold that the King of Sardinia was not competent to cede, or the Emperor of the French to accept, the transfer of Savoy; but they held that neither party was competent to make that transfer if thereby the neutralised territory was to be freed from the conditions which were imposed upon it as a portion of the Sardinian dominions by a treaty to which France herself had been a contracting party.—Mr. CRAUFURD called attention to the correspondence relative to the *Deanery of York*, and asked what course her Majesty's Government intended to adopt in the matter of the proposed increase of the salary of that deanery.—Sir G. LEWIS said that in consequence of the absence of the President of the Council, on account of a severe domestic affliction, that attention was not paid to this special case which it would otherwise have received, and it had consequently received the sanction of an order in Council. In reply to Sir F. SMITH, Mr. WHITBREAD stated that the Government had considered the project of the late Mr. Rennie for the improvement of the *Navigation of the Medway and of Chatham Dockyard*. Part of these plans had received the sanction of the Admiralty, but circumstances were now so changed that it was no longer considered advisable to adopt them. *The Paper Trade*.—In reply to Mr. WHITE, Sir G. LEWIS said that he was not aware that the papermakers had sustained any loss in consequence of the decision of the House of Lords, or were thereby entitled to claim compensation.—Lord PALMERSTON, in moving that the House on its rising adjourn to Tuesday, called special attention to the labours of the committees on petitions, in order that the public might know how much business was disposed of by members of that House which did not appear in the published debates. The House then adjourned to Tuesday.

TUESDAY.—*Legislation for Ireland*.—Mr. V. SCULLY gave notice that, next session, he should move a resolution that identical legislation for England and Ireland would strengthen the union between the two countries, and remove Ireland from the condition of a province.—Sir G. BOWYER gave notice that next session he should introduce a Bill declaratory of the *Law of Superstitious Uses*.—Mr. COCHRANE asked whether it was intended to call out *The Militia* before the harvest was over, if indeed there was to be any harvest at all.—Lord PALMERSTON replied that he hoped there would be a harvest, if not a good one. As for the militia, there were but thirteen regiments to be called out, and their movements depended upon the arrangements of the Lords Lieutenant. The House was then summoned to the House of Peers to hear the commission read. On their return the Speaker read the Speech at the table to the 30 or 40 members present, and the Session of 1860 closed.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,589,495	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,114,495
		Silver Bullion	—
	£29,589,495		£29,589,495

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,643,398
Rest	3,481,910	Other Securities	19,996,726
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,949,005	Notes	8,447,710
Other Deposits..	14,168,176	Gold and Silver Coin ..	799,358
Seven day and other bills	735,601		
	£38,887,692		£38,887,692

30th day of August, 1860.

M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—G. ALMOND and R. MANLOVE, Luton, Beds, Straw Hat Manufacturers—F. BEARD, Weston-super-Mare, Builder—W. BELL, Urpeth Mill, near Chester-le-Street, Miller—M. H. BURROWS, Wakefield, Worsted Spinner—F. CASTELLI, Bury Court, St Mary Axe, Commission Merchant—J. CORNS, Stourbridge, Soda Water Manufacturer—J. COTTOM, Smethwick, Boot and Shoe Maker—M. MULRENAN, Great Dover Street, Southwark, Leather Dealer—R. NEWTON, Derby, Silk Throwster—W. and P. PERRIN, Wellingborough, Boot and Shoe Manufacturers—L. R. POOLE and S. BRYAN, New Oxford Street, Boot and Shoe Manufacturers—T. WALKER, Birmingham, Provision Dealer

SCOTCH SEQUESTRATIONS—G. LAWSON, Glasgow, Cabinet Maker—W. Ross, Glasgow; J. MITCHELL, Edinburgh; and J. FISKIN, Toronto, Canada West, Merchants—W. STRUTHERS, Uddingston, Joiner.

FRIDAY—BANKRUPTS—J. CLARKE, Kidderminster and Bewdley, Tanner, Currier, Leather Factor, and Japanner—W. T. P. GREEN, Northampton, Currier and Leather Seller—W. HILLS, Sandgate, Kent, Draper—W. JONES, Nottingham, Grocer and Provision Dealer—J. C. LENCH, Dale End, Birmingham, Leather Seller—T. MANRING, Aldershott, Hotel Keeper—D. SMITH, Hertfordshire, Straw Plait Manufacturer—W. THOMAS, Cardiff, Glamorganshire, Publican.

BANKRUPTCY ANNULLED—G. BLEACKLEY, Salford, Lancashire, Common Brewer.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93 to ⅛ for Money, and 93⅛ to ¼ for the 11th Oct.; Three per Cents. Reduced, 93¼ to ½; New Three per Cents., 93⅛ to ⅜; India Stock, 218; Ditto Five per Cent. Stock, 1859, 103⅜; Ditto Bonds, 8*s*. dis.; Five per Cent. Enfaced Rupee Paper, 96; Exchequer Bills, 4*s*. to 1*s*. prem.—FOREIGN: Anglo-Austrian Five per Cents., 79; Buenos Ayres Six per Cents., for Acct., 92; Ditto Deferred, 29; Greek Bonds, 9½ to 10; Mexican Three per Cents., for Acct., 21½ to ⅝; Peruvian Four and a Half per Cents., 96½; Ditto for Acct., 97; Ditto Three per Cents., 73¼; Ditto for Acct., 73½; Portuguese Three per Cents., 1853, for Acct., 43½ to 44; Russian Four and a Half per Cents., 1860 (scrip), ⅞ prem.; Spanish Committee's Certificates, 6; Turkish Six per Cents., 1854, for Acct., 73¾ to 74; Ditto for 1858, 60⅝; Ditto for Acct., 60⅝ to ⅞; Venezuela Three per Cents., for Acct., 22¼.

Metropolis and its Vicinity.

THE BRITISH MUSEUM.—The Select Committee appointed to inquire how far and in what way it may be desirable to find increased space for the extension and arrangement of the various collections of the British Museum, and the best means of rendering them available for the promotion of science and art, have published their report, of which the following is a summary:—

"The first point of the inquiry was the provision of additional space for the various collections; and, in connection with it, the suggested removal of the Natural History collections. The evidence taken was almost unanimous against the removal of the natural history collections, which are the most numerously visited. The committee state that the removal would excite much dissatisfaction, not merely among a large portion of the inhabitants of the metropolis, but among the numerous inhabitants of the country who from time to time visit London by railway, and to whom the proximity of the British Museum to most of the railway termini, as compared with the distance of the localities to which it has been proposed to transport such collections, is of great practical importance. Similar evidence shows that the proposed removal of these collections from the British Museum has excited grave and general disapprobation in the scientific world, and that a memorial against it was signed by 114 persons, including many eminent promoters and cultivators of science in England, and presented to the Chancellor of the Exchequer in 1848. The report asserts the necessity of retaining these different collections in connexion with the library; and says that if they should be removed, the purchase of a special library of reference would be indispensable. The estimates of the expense of the construction of a new Natural History Museum and the transfer of the collections to it are next given. Of the three sites which have been proposed, one is a portion of the land in the neighbourhood of Kensington, belonging to the Royal Commissioners for the Exhibition of 1851; the second the site of Burlington House; the third a plot of ground near Victoria Street, Westminster. The cost of the first site would be 53,750*l*.; the site of Burlington House covers an area of only three acres, and the new Museum would require 5½ acres; in Victoria Street more than sufficient space might be obtained at the rate of 7000*l*. per acre. Ground enough might also be obtained in the immediate vicinity of the present Museum, but at a cost of 240,000*l*. The formation of a special library of reference for the natural history collections would be about 30,000*l*., and the addition of all new works would be constantly required. The nation would have to support two librarians and a double staff of attendants. As to the building, according to the system of arranging the collections approved by Professor Owen, who states that "varieties are now as important as species," and that all comparisions are best made by "stuffed specimens," the edifice would cover 10 acres, if containing galleries on one floor; if on two floors, five acres. With this eminent exception, all the other scientific naturalists who have been examined, including the present keepers of all the departments, think that an exhibition on so large a scale would be needlessly bewildering and fatiguing to the public, and be an impediment to the studies of the scientific visitor. They therefore recommend a limited, though liberal, exhibition of the collections, on the principle of arrangement technically described as "typical." The expense of a building for this purpose covering 5½ acres would probably amount to 567,000*l*. With regard to the British and Mediæval collections the report states that the evidence received on the subject of their retention or removal has been most conflicting, both proposals having received the approbation of high authority. But, having considered the arguments on both sides, the Committee observe that the British Museum is a repository in which objects of historical or archæological interest ought to find a place without limitation to any particular time or country; that there is no more reason for keeping mediæval antiquities separate from those of Greece and Rome than for placing the latter apart from the remains of Egypt and Assyria; that if space were assigned, and a fair proportion of the public grant were allotted to it, the department of mediæval antiquities would soon become one of great interest to the public and of great value to the student of history, and probably be enriched by valuable bequests and gifts. With regard to the collection of antiquities the keeper of the department requires 61,469 additional superficial feet of floor space for exhibition, assuming that the ethnographical collection, which will require a space of 10,600 feet, will be retained in the Museum. The Committee have come to the conclusion that the total amount of space required for the various collections is 81,268 superficial feet, exclusive of the unascertained space required for the Department of Zoology, and for studies and working rooms. They state that the ground immediately surrounding the Museum, within the adjacent streets on the east, west, and north sides, comprises altogether about 5¼ acres, valued by Mr. Smirke at about 240,000*l*., that as the proprietary interest in all this ground belongs to a single owner, it would be a convenient, and possibly even a profitable, arrangement for the State at once to purchase that interest, and to receive the rents of the lessees in return for the capital invested. The State would then have the power, whenever any further extension of the Museum became necessary, to obtain possession of such of the houses as might best suit the purpose in view, whereas if only a limited portion of the land required be now purchased, the price of what remains would probably be enhanced. The cost of the land and buildings required to carry out the plan for the removal of the Natural History Collections to Kensington, according to the estimate contained in the report of the Special Committee of Trustees, which was founded on the assumption that 5½ acres of land are necessary, would amount to 620,000*l*. To this sum would have to be added the expense of a departmental library, of packing and removing the collections, and of the extensive fittings and cases required in the new Museum—expenses all forming part of the first cost of this plan, and independent of the additional annual charge for augmentations of the departmental library, and for the maintenance of the requisite staff both for that library and for the greatly enlarged public galleries of exhibition. If, however, the limited principle of exhibition for the natural history collection should be adopted, less land would be required, and the estimate for buildings might be greatly reduced. But neither of these arrangements would obviate the necessity of providing the additional space required for the department of antiquities at the British Museum. Under all these circumstances, and on a full consideration of the evidence adduced, the Committee have arrived at the conclusion that sufficient reason has not been assigned for the removal of any part of the valuable collections now in the Museum, except that of ethnography and the portraits and drawings, which might be removed to a building to be erected on the north side. With regard to the means by which the collections in the Museum may be made most available to the interest of science and art, it has been suggested that lectures should be delivered in connexion with the Museum; but the Committee are of opinion that, though it would be of the greatest advantage that the meaning of the various collections should be rendered as intelligible as possible to the public, they consider it questionable whether the conversion of the Museum into an educational institution would not be a departure from the principle on which it rests. The Committee look on the British Museum as primarily being a great consultative repertory, and have, therefore, come to a conclusion decidedly against the proposal for giving lectures in the Museum.

RETURN OF THE GREAT EASTERN.—The Great Eastern arrived at Milford Haven, at half-past 6 on Sunday evening, with 67 passengers, after a successful passage of 10 days. She left New York at 4.40 P.M. on the 16th ult., and arrived at Halifax at 4.40 on the 18th, the shortest passage ever made. She started from Halifax for England at 9.10 A.M. on the 19th, and arrived at Milford at 6.30 P.M. on the 26th. The total distance of 2980 miles was run in 212 hours, 54 minutes, giving an average speed of nearly 14 knots an hour. The machinery both of the paddle and screw engines worked admirably, and no one who witnessed her performance during the trip doubts that, under favourable circumstances, she would make the run from New York to Liverpool, in less than eight days. On Tuesday she was thrown open to the inspection of the public for a few days, after which she will have her bottom cleaned on a "gridiron" which has been in course of construction for two months, giving employment to about 200 men, both day and night. It is formed on the northern shore of the Haven, a few hundred yards from the terminus of

the South Wales Railway, and fronting the Royal dockyard. The beach, to the distance of 550 feet, has been excavated and levelled to within a few feet of low water mark at spring tides, having at each end a "grid" 150 feet long, constructed of 40 strong transverse beams of 45, 35, 30, and 25 feet long, which are laid down in four lots—10 of each length, and firmly fixed in their places by iron-shod piles. The Great Eastern being 650 feet long, she will thus when in position be supported by 550 feet of her length, viz., 300 on the two "grids," and 250 on the levelled beach, leaving only 50 feet at her bow and stern projecting beyond the timbers and excavation. It is announced that she will again sail for New York on Wednesday, the 17th October.

LORD CLIVE'S FUND is now the subject of a contention which is not unlikely to come into our courts of law. The fund was formed in 1770 by a donation from Lord Clive of 62,833*l.*, the amount of a gift from the Nabob of Bengal, and the interest was to be distributed in pensions to officers obliged by wounds or sickness to retire from the service of the Company, or to their widows. In the deed granting the money, the Company covenanted with Lord Clive that in case they ceased to employ an army, and ceased to have ships for commerce, they should repay the money to Lord Clive or his executors and assigns, subject only to the pensions payable to persons living at the time or cessation. As the Company ceased last year to have any control over India, and no longer possesses either an army or a navy, the Baroness Windsor and Earl Powis, as the descendants of Lord Clive, have claimed the fund; but the Crown, having taken the opinion of counsel on the subject, decline to give it up.

SOUTH KENSINGTON MUSEUM.—The report of the select committee on this museum has recently been issued. It states that the committee have arrived at the conclusion that the museum in respect of its action as well throughout the United Kingdom as in the metropolis is exercising a beneficial influence, and that it is fully deserving of continued parliamentary support. Having turned their attention to the state of the buildings at South Kensington, the committee arrived at the conclusion that additional space for the accommodation and exhibition of the art collections should be provided at once. Captain Fowke states that the cheapest mode of obtaining this space would be to complete the quadrangle of brick buildings, which was commenced for the Sheepshanks, Vernon, and Turner Galleries, and to glaze it over. He estimates that this might be done for 17,000*l.*, and by doing so the art collections now in the Iron Museum would be placed in safety, others not properly shown would be efficiently exhibited, while space would be provided in the Iron Museum to receive and exhibit the architectural casts procured as models for the Houses of Parliament, which at present lie unexhibited in buildings at Thames Bank, costing an annual rent of 490*l.* The danger arising from the use of the wooden schools and dilapidated houses renders it equally necessary to remove these buildings, and to provide at once in their stead safe buildings for official residences and the art training schools. The cost is estimated by Captain Fowke at 27,000*l.* The committee recommend these works as matters of extreme urgency, the completion and covering in of the quadrangular court as a means of rescuing much valuable public and private property from a receptacle quite unfit for it, the removal of the wooden schools and the dilapidated houses from considerations of safety and therefore of real economy. The iron building and the temporary brick buildings the committee see no occasion to disturb at present; they can be usefully employed, and may well be allowed to stand for some years to come. The committee state that they "are by no means anxious to involve the revenue in large expenses for mere ornament. The museum is yet in course of formation, and they think it unwise to commit the country to a heavy expense in anticipation of its wants. The committee recommend that any plan which may be adopted for the buildings to be erected should be capable of being worked into a general plan which would at once fully occupy the ground, and be susceptible of a proper amount of decoration. Such a plan has been laid before the committee by Captain Fowke. The sum required to provide permanent accommodation for the collection in accordance with this report, appears, from a return just published, to be 17,000*l.*

NEW TELEGRAPH COMPANY.—A prospectus has been issued of the United Kingdom Electric Telegraph Company for introducing a system of electric communication on the Post Office principle of a uniform charge irrespective of distance. The rate proposed is 1*s.* for a short message to any part of the United Kingdom. Mr. Allen's patents are to be used, effecting a saving in labour which will greatly reduce the working expenses. The capital of the company is to be 150,000*l.*, in shares of 5*l.* each.

GAS LEAKAGE.—Dr. Letheby, Medical Officer of Health for the City of London, has presented a report to the City Commissioners of Sewers on the injurious effects of gas leakage on the street earth. For some time past the attention of the New River Company has been directed to the serious damage done to the street mains by the rapid corrosion of the iron, and its conversion into a soft plumbago-like substance. This change has been observed only in those localities where the soil has become tainted with gas, and where the earth has acquired those black and fetid qualities so well known to the inhabitants of London. The attention of the Commissioners of Sewers having been recently called by the New River Company to the subject, they requested Dr. Letheby to examine and report upon it. After describing the chemical conditions and circumstances to which the rapid corrosion of the metal of street mains is due, Dr. Letheby says the subject is not one that alone concerns the water companies, whose property is so seriously affected by it, but it concerns also the public, for it may soon become a dangerous nuisance. The quantity of coal gas, he says, which escapes into the street earth in the metropolis amounts to no less than 386,000,000 of cubic feet per annum; and in the city alone it is as much as 25,000,000 of cubic feet in the year, or nearly 70,000 cubic feet a day. Mr. Spencer, who has, he says, "devoted much time to the subject," has calculated the total loss by leakage into the streets at nearly twice this amount, or about nine per cent. of all the gas distributed, whereas Dr. Letheby had set it down, on the authority of Mr. Wright, at only 5 per cent. In round numbers, according to Mr. Spencer, 630,000,000 cubic feet of gas are annually absorbed into the street earth of the metropolis. In every way, he says, this is a nuisance, for it not only darkens the soil and makes it so offensive that the emanations from it can hardly be endured, but it also impregnates the atmosphere of the sewers, and renders the basement rooms of houses uninhabitable from the poisonous action of the gas, and even dangerous from explosion. It likewise often taints the water of the street mains with the odour of gas. Even on the score of waste, he adds, it is a matter for consideration, for at the rate of 1*s.* 6*d.* a thousand, the cost price of gas, it is a loss of more than 47,000*l.* per annum. The remedy for the mischief, he states, is two-fold—first, the supply of gas freer from ammonia and sulphur; and, secondly, the use of tighter joints. Already in Liverpool, Manchester, and Leeds the latter remedy has been applied. The ends of the pipes are turned and bored, and fitted into each other by grinding, like a stopper in a bottle, and thus the leakage from the joint has been prevented. Even at the present, he says, the condition of the subsoil of the streets, from the leakage of gas into it, is most offensive, but when it is considered that the mischief is progressive, and therefore accumulative, it is not improbable that the soil may at last become so foul as to be dangerous to the public health.

MAGISTERIAL CHANGES.—Mr. Tyrwhitt, of the Clerkenwell Police Court, has succeeded Mr. Bingham at Marlborough Street Police Court; Mr. D'Eyncourt, of Worship Street, has succeeded Mr. Tyrwhitt at Clerkenwell; Mr. Mansfield, of Worship Street, has succeeded Mr. Hammill at Marylebone. Mr. John Henry Barker and Mr. Alexander A. Knox have been appointed to succeed Mr. D'Eyncourt and Mr. Mansfield at Worship Street.

NEW CHURCH IN MAY FAIR.—A committee, consisting of the Duke of Devonshire, the Earl of Shaftesbury, Earl Powis, Lord Foley, Lord Calthorpe, Lord Ebury, Lord Crewe, Sir G. E. Phillips, Sir E. Antrobus, Admiral Duncombe, M.P., the Hon P. Bouverie, M.P., the Hon. P. S. Pierrepoint, the Dean of York, Mr. H. T. Hope, and other gentlemen, has been formed for the purpose of promoting the erection of a new church in May Fair for a portion of the parish of St. George, Hanover Square. Towards this object the Duke of Devonshire has subscribed 500*l.*, the Marquis of Westminster, 200*l.*; Mr. John Malcolm, 300*l.*; the Earl Powis, 100*l.*; Lord Ebury, 100*l.*; Mr. J. W. Thrupp, 100*l.*; Mr. R. S. Holford, 100*l.*; Lord Foley, 50*l.*; Mr H. T. Hope, 50*l.*; the Hon. P. Bouverie, 50*l.*; the Dowager Duchess of Norfolk, Lady Willoughby de Broke, the Earl of Romney, the Earl of Bessborough and Lady Holland 10*l.* each, the Rev. H. Howarth (rector of the parish), 25*l.*; &c. The affairs of the new church are to be entrusted to three trustees, Lord Calthorpe, Lord Ebury, and Mr. Thrupp.

WOOLWICH ARSENAL.—It has been reported this week that Sir William Armstrong has resigned the Superintendence of the Rifled Ordnance Department; and that the office of Director-General of Artillery, as recommended by the Military Organization Committee, is to be re-created. It appears however that there is no foundation for the statement. Sir W. Armstrong writes to the *Times* that he has "neither tendered his resignation nor had the slightest communication with the War Office on the subject; but though his engagement with the Government is for a term of years, he has no intention of retaining either the office or the emolument longer than his services may be required for perfecting the system of artillery which he has been the means of introducing."

DESTRUCTION OF ST. MARTIN'S HALL.—This well-known building, erected by Mr. Hullah for his singing classes, has been totally destroyed by a fire which broke out at 4 o'clock on Sunday morning in the adjoining coach factory of Messrs. Kesterton, situated at the junction of Long Acre and Endell Street. The fire broke out in the upper floor of the factory containing a considerable amount of turpentine, varnishes, and other inflammable materials, and rapidly extended downwards from floor to floor until the entire building was reduced to ruins. The stock of carriages on the ground floor were, however, fortunately removed before the flames had descended to that part of the premises. Great efforts were made to save St. Martin's Hall, but the fire speedily gained entire possession of the concert-room, and completely destroyed it, with the fine organ by which it was adorned, and the valuable library containing many thousand musical works by the ancient masters. During the fire one of the galleries fell upon one of the firemen, partially burying him under the fragments, and while in this position a mass of melted lead poured from above upon his face and neck, severely burning him, and rendering it necessary to remove him to the hospital. It is understood that all the property destroyed, as well as the adjacent houses, which were damaged by fire and water, were insured.

VOLUNTEERS AND AID FOR GARIBALDI.—Soon after the first landing of Garibaldi at Marsala, a subscription was opened in this country for the purpose of sending him assistance in the form of muskets and ammunition, and a Ladies' Association was formed under the presidency of the Countess of Shaftesbury, for the purpose of raising money for the relief of his sick and wounded, and the widows and orphans of his followers. By means of the organisation thus established, large quantities of rifled cannon, shells, rifles, and revolvers, with medical stores, hospital tents, air beds, and other necessaries, have already been sent to Sicily, and great efforts are making to raise a fund of 3000 guineas. Captain Styles, a member of Garibaldi's staff, is now in Scotland actively enlisting volunteers from Edinburgh, Glasgow, and other towns, who will shortly join a similar body already enlisted in London under the name of "Excursionists." The following letter from General Garibaldi has been received by Lady Shaftesbury, as President of the Ladies' Association:—

"Southern Army, Messina, Aug. 12, 1860.

"Dear and gracious Lady,—Among the greatest fortunes of my life the most surpassing assuredly is that of having secured for my country the sympathy of the generous ladies of England. May I beg of you, most courteous lady, to be the interpreter of my gratitude to those most valued and most dear friends to whom Italy owes so much?—With all the feelings of my heart, I am your most devoted servant,

"Lady Shaftesbury." "G. GARIBALDI."

THE MURDER AT STEPNEY.—Her Majesty's Government have offered a reward of 100*l.* for the discovery and apprehension of the murderer or murderers of Mrs. Emsley, and a free pardon to any one who may have been privy to the crime, short of the person by whom it was actually committed. Mr. Whittaker and Mr. Faith, two of the relatives of deceased by marriage, have offered a reward of 200*l.*, in addition to that of the Government. The murderer is still undiscovered, and it remains to be seen what effect the offer of 300*l.* may have in solving the mystery. The inquest was resumed on Monday, and after the examination of some unimportant witnesses was adjourned to yesterday, when it was again adjourned *sine die*, the coroner stating that there was at present no other evidence to be adduced.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended on Saturday, Aug. 25, were 937. Excluding the deaths from epidemic cholera in the 34th week of 1854 the average number of deaths in the corresponding weeks of the last 10 years, corrected for increase of population, was 1175. The present return is therefore 200 below the average. During the week the births of 827 boys and 780 girls, in all 1607 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1563.

Provincial.

ALDERNEY.—On Monday evening her Majesty's ship Emerald arrived in this harbour from Spithead, and landed two batteries of Royal Artillery, taking up her moorings inside the breakwater. On the following morning she embarked two batteries of the 15th Brigade for conveyance to Spithead. The frigate slipped her moorings, when, to the surprise of all hands, it was found that she was aground. The pilot declared that no rock was in the way, and that her screw must have fouled the moorings. It was, however, soon discovered that the finest 51-gun frigate in her Majesty's service was hard and fast on a rock, right underneath her funnel. The engines were turned astern at full speed, the foremost guns run aft, all boats hoisted out, and every possible means taken to free the ship, but without effect. Every precaution that good seamanship could suggest was then taken to prevent the ship from falling over on her beam ends. The tide fell rapidly, and she soon heeled over 4½°. On the turn of the tide the ship got off, and as some parts of the machinery had received injury, she proceeded under sail to Spithead, where she anchored on Wednesday morning and disembarked her troops.

BIRKENHEAD.—The street railway or horse tramway which has been for some time constructing in this town under the superintendance of Mr. G. F. Train of Boston, on the plan of those at New York, Boston, Philadelphia and other chief cities in the United States, was formally opened on Wednesday for public traffic. The line of railway extends from the Woodside Ferry, the landing place at Birkenhead, just opposite the centre of Liverpool, by the Shore Road, and through Angle and Conway Streets, to the entrance to Birkenhead Park, the whole distance being little more than a mile and a quarter. Each train was drawn by two horses at the rate of about four miles an hour, which might without difficulty be increased to six or seven miles an hour, turning one or two extremely sharp curves with the utmost facility, and landing the passengers at their

several destinations in perfect security. The trains continued throughout the day to ply for hire with complete success, and their progress was, at different points along the route, watched by some hundreds of spectators.

BRIDGEWATER.—In consequence of the recent invasion of the Agapemone by the Rev. Mr. Price, Mr. Thomas, who acts as the deputy of Mr. Prince during his absence, applied to the magistrates of this town on Monday for protection. The Mayor stated that if such a scene again occurred he would issue warrants against any number of offenders. Mr. Browne, one of the magistrates, observed that, whatever the magistrates had done, and whatever the public might do, he considered that Mr. Prince's conduct in the matter was disgraceful.

COVENTRY.—A meeting of the operative riband weavers was held on Monday in the Corn Exchange to receive certain proposals from the vicar of St. Michael's, the Rev. Sidney H. Widdrington, with a view to putting an end to the strike. Five thousand persons were present in the building, while many hundreds who were unable to obtain admission were collected in the street in front of the Exchange. Mr. Widdrington addressed the meeting at some length, and concluded by submitting the following resolutions:—

1. "That this body of weavers form themselves into an Association for the Protection of Labour. 2. That such association appoint a body of arbitration, if the consent of the manufacturers can be obtained to form a part of such body, or that otherwise a body of standing consultees be appointed, whose office shall be to collect the best information, and every month to advise the operatives whether any, and what changes have taken place in the value of labour, and on what terms they advise the operatives to offer their labour. 3. That in the event of any special circumstances, or in all offers made of special work, varying from the list of prices, the weavers shall fall back on the board of arbitration, or on their consultees, for advice. 4. That in accordance with the above resolution, each weaver is requested to enter his name in a district book to be kept for this purpose, pledging himself to abide by the list of prices agreed on by the arbitration proposed, or by the consultees. 5. That, subject to the above resolutions, the strike is this night declared to be at an end."

All these resolutions were unanimously adopted, but at the suggestion of a member of the Operatives' Committee, it was resolved that they should not take effect for three days, and a deputation was appointed to wait upon the manufacturers with the view of obtaining their co-operation in forming what is designated in the second resolution as "a body of arbitration." The three days expired on Wednesday, and the strike is now declared to be at an end.

FROME.—The following memorial to the Secretary of State praying for a special commission to investigate the recent child murder at Road, has already received numerous signatures in Bath:—

"TO THE RIGHT HON. THE SECRETARY OF STATE FOR THE HOME DEPARTMENT.

"The memorial of the Mayor and other inhabitants of the City of Bath, being magistrates, clergymen, bankers, commissioned officers in her Majesty's two services, members of the legal and medical professions, &c., sheweth,—That an extraordinary crime and as far as we know a crime unique and unparalleled in the annals of this country was committed on the 29th of June last at Road, in the adjoining county of Wilts. That as living in the immediate neighbourhood our attention has been specially directed to it. That a miscarriage of justice has occurred through the defective manner in which the coroner's inquest was conducted, that inquest having been closed after one sitting without any attempt to ascertain and name the murderer. That in consequence of this Samuel Saville Kent, his family, and household have never been examined and cross-examined. That the condition of the doors, windows, and fastenings of the house proved that Road House was not forcibly entered from outside during the night. That, therefore, the murderer was an inmate of that house, or was secreted there for the purpose, and that his accomplices before and his accessories after the fact are to be sought in that mansion. That Mr Kent's household are, therefore, collectively responsible for that murder, and that the innocence of no one of them is to be assumed. That, nevertheless, the inmates of that house have never been examined. That we, therefore, humbly pray you to grant a special commission for the investigation of this crime, as the ordinary means have entirely failed. That a special commission is an unusual procedure, but that the crime is extraordinary and unparalleled in its character and circumstances. We, therefore, pray you to grant such special commission."

HULL.—A great demonstration took place in this town on Monday, on the occasion of planting the first tree in the people's park. The land, 27 acres in extent, had been given to the town by Z. C. Pearson, Esq., the mayor of Hull, and for some time past the festivities in connection with the ceremony had been anticipated with great interest. The town was thronged by an immense number of persons, and the flags and banners were innumerable. The corporate bodies and most of the Artillery and Rifle corps of Yorkshire and Lincolnshire assembled near the Town Hall about noon, and the streets round about for a considerable distance were occupied by the friendly societies with their flags, banners, and insignia. These formed a procession estimated to extend over an area of about three miles, and proceeded to the park ground, headed by the park committee, and the band of the East York Militia. On the procession arriving in the park, the brigade was marched round the review ground, and formed in line in front of the platform, where they remained during the ceremony of the presentation of the park. The Mayor then planted the first tree, a Wellingtonia gigantea, which had been purchased by Captain Wharton, of the screw steamer Eugenie, and presented to the park committee. A review, which lasted nearly half an hour, then took place, after which, the mayor's guests, to the number of 200, adjourned to the Station Hotel, where a sumptuous banquet had been provided for them.

LIVERPOOL.—The grand jury at Liverpool last week handed in a presentment pointing out the evils which have arisen from the reduced scale of allowances to witnesses. The effect of Sir George Grey's orders, they say, is visible in the strong disinclination manifested, "in the great majority of instances," to aid in the apprehension and conviction of offenders, persons naturally objecting to take steps which would only result in serious pecuniary loss, in addition to the personal inconvenience arising from attendance at sessions and assize courts. A large number of criminals are thus permitted to escape; the floating criminal population swells to most serious proportions; and "the natural consequence appears to be the extension in this county, and probably elsewhere, of the graver class of offences." The jury are of opinion that unless a more liberal scale of fees be adopted, "all efforts for the diminution of crime and for the amelioration of society will be rendered comparatively unavailing."

OXFORD.—The colossal statues of Lord Chancellor Eldon and Lord Stowell, Judge of the High Court of Admiralty, which attracted so much notice in the Great Exhibition of 1851, have arrived in Oxford, and are to be placed in the New Library of University College, of which the two brothers were members on the foundation.—The Society for the Propagation of the Gospel has resolved on the establishment of two exhibitions, one at Oxford and one at Cambridge, for the purpose of securing the services of clergymen well qualified, by real study and preparation, for missionary work in India. The election of the first two missionaries will take place on the 8th Feb., 1861. The exhibitions are to be of the annual value of 150*l.* each, tenable for two years, and are to be open to all candidates under 30 years of age who shall have passed the examination for their B.A. degree. The exhibitioners will be required, as a condition of their appointment, to go out at the expiration of their two years of study as missionaries to India in connection with the society. The subjects of examination will be theology, Church history from the Christian era to the rise of Mahometanism, moral and mental philosophy, the history of the religious and philosophical systems of India, the elements of Hebrew and of either Sanscrit or Arabic.

YARMOUTH.—The fund raised for the relief of the relatives of the fishermen of the East Coast who lost their lives in the gale of May last now amounts to between 9000*l.* and 10,000*l.* Hitherto the 88 widows who are objects of charity have been allowed 5*s.* each, and the 166 children 2*s.* 6*d.* each a week; but the committee for managing the fund have determined that the relief permanently given shall only consist of 2*s.* 6*d.* a week for each widow, and 1*s.* a week for each child, with 6*d.* additional for each eldest member of a family. The smallness of the allowances has excited some surprise, but, little as the pittances proposed to be doled out are, they will absorb 1000*l.* per annum; and as the interest on the amount invested in Consols will not be more than 300*l.* per annum at first, the principal will be exhausted in a few years.

Ireland.

THE IRISH BRIGADE.—Accounts received from Italy this week state that the Papal authorities, having got tired of sending home the discontented Irish recruits, are now treating them in a less lenient fashion. Those who refused to sign the oath of allegiance to the Pope are placed in prison till they repent, and then handed over to General Lamoricière, who seems to entertain a peculiar dislike to the Irish brigade.

FATAL ACCIDENT IN DUBLIN.—During the performance of M. Blondin on the tight rope at Portobello Gardens, Dublin, on Thursday week, the rope and two poles at one end supporting a small platform, on which two men were stationed for the purpose of holding lights, gave way, precipitating the men to the ground. Both men were killed on the spot, but M. Blondin escaped uninjured. The jury at the inquest returned a verdict expressing the opinion that sufficient diligence had not been used by M. Blondin and his agent M. Morel in testing the rope before the performance. The coroner said that this was a verdict of manslaughter against M. Blondin and M. Morel, and they were accordingly removed in custody.

LORD PALMERSTON'S ESTATES IN SLIGO.—The following interesting remarks relative to improvements that have been effected by Lord Palmerston in his property at Sligo, are copied from a Dublin journal:—

"When the great famine came, some 13 years since, it was believed, and the result of experience proves that the belief was right, that, by draining off the lodged and stagnant water, we could both employ our labouring poor and reimburse ourselves from the additional increase of our crops. Money was lent out by the State at a trifling interest. The principal was to be repaid at the rate of 6½ per cent. per annum. The works were placed under the control of the Board of Works—that board which the theorists of centralisation wish to transfer to London. In those 13 years 189,000 acres have been improved or reclaimed by drainage and subsoiling. The average number of acres now annually drained and cleared is 5550, at an expense of 4*l.* 17*s.* per acre. All those who have obtained loans testify that they have obtained benefits much beyond the actual outlay, and some proprietors, who employed their poor in drainage merely from philanthropic motives, have been amply remunerated by the benefits that have resulted. Lord Palmerston figures among the borrowers, and his estate in the county of Sligo exhibits what can be done by energy and perseverance. The surge of the Atlantic beat upon the shore and scalded the herbage: the wild winds, laden with saline particles, stunted the growth both of animal and plant. Annually the sand was thrown up, and was gradually converting the estate into a rabbit warren. But the careful planting of the 'bent grass' has stopped the blowing sand, and the *Pinus maritima* obtains a footing there when all other trees have failed, and acts as an effectual screen for more tender growths. Gradually the bogs have been reclaimed and converted into meadow land, and the bleak shore, once the home of the sealark and the plover, is covered with luxuriant crops. 'Nothing,' says the report, 'but the most unremitting care for a succession of years, backed by the proprietor's personal exertions during his occasional visits to his estates, could have accomplished this.' It is pleasant to meet Lord Palmerston, after all the trials of State are over, superintending the planting of 'bent grass,' and sea pine, and winning from the sea those acres which, as if already its own, the ocean had covered with sand. Lord Palmerston has done this amid his multifarious duties. Far more leisure and the same facilities are offered to all, yet how little is done."

EXECUTION OF HOLDEN.—On Monday morning the convict Holden was executed at Omagh for the murder of Constable M'Clelland; the Lord Lieutenant, in answer to the applications made to him for a remission of the sentence, having decided that the law must take its course.

Scotland.

THE LATE MURDER IN HOLYROOD PARK.—On Saturday morning an order was issued for the liberation of the prisoner Tanner, no evidence sufficient to justify his committal having been obtained. The *post mortem* examination of the body has confirmed what was previously only a suspicion—that the murder of the unfortunate girl was preceded by a criminal assault. A button belonging to the 13th Light Dragoons has been picked up within a few yards of the foot of the tree near which the body was discovered, and is now in the hands of the authorities. Evidence is still wanting to connect any soldier of the regiment directly with the deed, but the authorities are actively engaged in the investigation of the matter. The body of the deceased was buried on Saturday.

MURDER AT GLASGOW.—On Saturday afternoon as a fine little boy, two years of age, the son of Mr. and Mrs. Smith, respectable persons living in the Commercial Road, was walking along the pavement to meet his father on his return to dinner, he was picked up by a young man about 20 years of age, named John M'Fayden, and taken away up the bank of the river. On the arrival of the father without the boy, the fears of both parents were aroused for his safety. A long search resulted in nothing satisfactory; but at length the mother, in going up the Clyde, met M'Fayden carrying what she immediately recognized to be the clothes of her missing child. On questioning the young man as to where her boy was, he replied with the greatest unconcern, that the boy was drowned, and that he had got his clothes and was going to sell them. Just at this moment several parties came up and charged M'Fayden with drowning the child, having observed him in the very act. He was then of course, taken into custody. It appears that M'Fayden had led the child up the river side till he arrived opposite Higginbotham's works, where he stripped him of his clothes for the purpose of appropriating and selling them. It is thought that his original intention did not extend beyond this, but, according to his own subsequent confession, the child began to cry for its mother, and then the idea suggested itself that by destroying the child he should prevent detection. As soon, therefore, as the boy was stripped he lifted him in his arms and threw him into the water. Fearful that his object would not be accomplished, he then got a stick about 3 feet long, and as his little victim was struggling close to the shore M'Fayden held him down with the stick till life was extinct. The murderer then walked off with the child's clothes towards the city. The Sheriff has committed him for trial on the charge of wilful murder. It is supposed that he is insane.

Railways.

COLLISION ON THE SHREWSBURY AND HEREFORD.—On Monday morning the passenger train from Shrewsbury ran into a goods train which had broken down near Woofferton, a short distance from Ludlow. As the line is a single one the break down had been telegraphed to the different stations, and places appointed at which the trains should pass each other, so as to enable the traffic to be carried on with as little delay as possible. In consequence of some misunderstanding of the telegraphic message the passenger train proceeded under the impression that it was to pass the goods train at Onibury, and while travelling at the rate of about 30 miles an hour, down a steep incline, near Wistanstow, the driver passing round a sharp curve, saw the goods train, which he had expected to meet at Onibury approaching within a distance of 300 yards. He immediately shut off the steam, reversed the engine, and applied the break, but such was the impetus of the train down the descending gradient that it ran with great force into the goods train, which was ascending the incline at a speed of about eight miles an hour. The collision did great damage to the carriages of the passenger train, and several of the passengers were injured. Among them were Mr. Jobson, corn merchant, of Shrewsbury, who is lying in a dangerous state at the Craven Arms; Mr. Edward Tipton, secretary to the Shropshire Fire Office; a porter in the company's service, who sustained a severe scalp wound; a lady whose name has not transpired, and

seven or eight others. The driver of the passenger train jumped off the engine just before the collision, and escaped with a severe shaking. The persons in charge of the goods train jumped off and were unmjured. Mr. Findlay, the traffic manager of the line, was riding in the guard's van, but escaped without injury.

THE VICTORIA LINE AND STATION AT PIMLICO.—This line, which forms a connection between all the railways south of the Thames and the Victoria station, now in erection at Pimlico, will be opened in a few days to the public. It forms an important feature in the metropolitan communications, as affording access from all the railways south of the Thames to the western and central districts of London. The chief work on the line is the bridge over the Thames, which consists of four openings of 175 feet each, and is entirely composed of wrought iron, with stone piers and abutments. The design is exceedingly light and equal, and when quite completed it will be one of the most beautiful of the metropolitan bridges. On the north side of the river the line descends by a steep gradient to the Grosvenor canal, the course of which it follows to the terminus, passing under Ebury Street, St. George's Road, and Eccleston Road, where it enters the station now constructing for the accommodation of the Brighton, Great Western, and London, Chatham, and Dover companies. This station, when completed, will be of larger area, and afford more accommodation than any of the existing metropolitan stations. This important line was commenced in the autumn of 1858; the first stone of the viaduct over the Thames was laid in June, 1859; so that the time occupied in erecting it has been exactly 12 months.

Law.

COURT OF ARCHES.—*The Case of the Rev. Mr. Bonwell.*—On Wednesday morning Dr. Lushington pronounced judgment in this case, the hearing of which took place in July. It was not necessary, he said, to cite the evidence at any great length, because there was no conflict of testimony, none whatever having been produced on the part of Mr Bonwell. All he had to do was to ascertain the effect of the evidence. He then analysed at considerable length all the evidence with which the public are already familiar, and concluded as follows:—"On a review of this evidence, entirely uncontradicted, the conclusions to which I must necessarily come are—that Mr. Bonwell seduced this young lady; that he, being a married man, promised her marriage; and that he had the almost inconceivable boldness to carry on that pretence before the Chancellor of the Diocess of Llandaff and other respectable persons; that the consequence of their intercourse becoming apparent he concealed his victim under a feigned name in lodgings; then in his own house, he being the curate of the parish; that she was delivered of a child at his own school house, and that at the birth and burial of the child he conducted himself as its father; for no man of sane mind would have acted as he had except under the belief that the child was his. No one of common sense can entertain a rational doubt that this evidence establishes the fact that adultery has been committed, although it may be that the precise time and place are not distinctly proved; but the doctrine of law is, that proof of time and place is not necessary. On that point, in addition to several other cases, there is the case of Trotter *v.* Trotter, decided about 60 years ago, in which the rule was laid down after great consideration. These are the facts established by the evidence, and, in my opinion, they prove all the most important allegations in the articles. I do not, however, decide this case upon the ground that any specific act of adultery has been proved either within or without the diocess of London, but I decide it on the following ground,—that Mr. Bonwell so conducted himself, more especially in the latter part of these transactions, as to cause it to be believed that he was the father of the child of which Elizabeth Yorath was delivered, for no sane man, unless he had deemed himself to be the father of the child, could so have behaved, and of course he could not have believed himself to be the father of the child unless he had committed adultery. The adulterous connection is manifestly and, I will add, necessarily the motive of all those parts of his conduct which were proved after Miss Yorath came to Llandaff. That Mr. Bonwell has committed the very gravest of ecclesiastical offences, seduction and adultery, fraud and deception, cannot be doubted. The proof is overwhelming. The necessary consequence must be grave—public scandal, and the worst example has been set to the parishioners whose spiritual interest he was bound to watch over. I have pondered carefully what decree it is my duty to pronounce under these circumstances. I have carefully considered whether there are any circumstances of extenuation. I can find none. There is not the plea of early youth; there is not the strength of temptation which might possibly have misled a single man; there is not a merely accidental deviation from the rules of propriety. This is the case of a married man with a family, his wife at the head of a ladies' college, who seduces the daughter of a deceased clergyman, a seduction deliberately carried on under the pretence of marriage. There is one thing most disgraceful in Mr. Bonwell's conduct, and that is his attempt to throw the blame upon the victim of his passions. Mr. Bonwell put this question to Mr. Yorath,—"Did I not inform you that I never should have gone to Newport unless it had been at Miss Yorath's earnest request?" The answer is "No, I am not aware that you did." That question was manifestly put for the purpose of throwing the blame on this unfortunate woman. Now, there is one further consideration to which this Court is most especially bound to pay attention. The scene of some of these discreditable occurrences is the school-house of the parish. The place where this most unfortunate lady is concealed and harboured, where she is delivered of an illegitimate child the offspring of the incumbent of the parish, having been brought to that place by his instrumentality, is the school house, where the principles of religion were to be inculcated and the foundations of sound morality laid. That very place has been polluted, the ministry of the parish has been disgraced, and all the moral and religious persons in the parish have been scandalised. What natural hope is there that Mr. Bonwell should ever again fulfil his spiritual duties to the parishioners of that parish to their edification? None. The sentence I pronounce is deprivation and condemnation in costs." The crowd in court made an attempt to applaud at the conclusion of the judgment. Mr. Bonwell, in the usual form, gave notice of an appeal to the Privy Council.

Obituary.

THE EARL OF LAUDERDALE died at his seat, Thirlestane Castle, Berwickshire, on the 22d ult., in his 76th year. He was the son of the eighth earl, by the daughter and co-heir of Mr. Anthony Todd, Secretary to the Post Office, and was born in Wimpole Street in 1781. He succeeded to the earldom on the death of his father in 1839, and was heritable Standard-bearer of Scotland, and Marshal of the Royal Household in Scotland; Lord-Lieutenant of Berwickshire, and a Deputy-Lieutenant of Haddingtonshire.

VICE ADMIRAL ISAAC HAWKINS MORRISON died on the 15th ult. at St Helier's, Jersey, at an advanced age. He entered the Navy in 1795, in the Melampus, 54, and in 1796 was present at the surrender of the Dutch settlements of Demerara, Essequibo, and Berbice. He subsequently served in the West Indies and in the Channel, and was present at two or three actions with French frigates. From 1824 to 1831 he was inspecting-commander in the Coast Guard at Tralee, county Kerry, and he became a Vice Admiral in 1856.

COLONEL ARTHUR JOHN REYNELL-PACK, C.B., died suddenly on the 17th ult., at Cork, at the early age of 43. He served in the Eastern campaign in 1855, was present at the siege of Sebastopol with the 7th Fusiliers, and was severely wounded when commanding that regiment at the assault of the Redan on the 18th June, for which he received the medal and clasp, was created a C.B., Knight of the Legion of Honour, and 5th class of the Medjidie. He was the eldest son of the late Major-Gen. Sir Denis Pack, K.C.B., and at the time of his death held the post of Deputy Quartermaster-General of the South-West District of Ireland.

THE REV. CHANCELLOR MARTIN, Chancellor of the diocese of Exeter, committed suicide at Harberton, near Totness, on Monday, by cutting his throat. He was well known in clerical circles as an active member of the Lower House of Convocation, and as belonging to the moderate Church party. He was educated at New College, Oxford, where he graduated in 1813, and was shortly afterwards ordained by Dr Cornewall, Bishop of Worcester, in whose diocese he filled several minor offices in the Church. In 1816 he was appointed a canon residentiary of Exeter Cathedral, worth 734*l.* a year, and four years afterwards became Chancellor of the diocese, which is worth 420*l.* a year. Shortly after this he was nominated by the Dean and Chapter of Exeter, of which body he was a member, to the vicarage of Harberton, near Totness, which he held for 40 years. He was a man of quiet and studious habits, and was much respected throughout the diocese. The jury at the inquest returned a verdict of temporary insanity.

MR. JESSE HARTLEY, engineer of the Liverpool Docks, died a few days since at his house, Derby Road, Bootle. He was upwards of 80 years of age, and was a native of the North Riding of Yorkshire, in which county his father held the position of bridge-master. After receiving an ordinary education, he served his apprenticeship as a stonemason, and worked at the building of Borough Bridge. Subsequently he succeeded his father as bridge-master in the North Riding, until his removal to Liverpool, on receiving the appointment of engineer to the Dock Committee. During the long period in which he held that office he altered or entirely constructed every dock belonging to the port. He was also the engineer of the Bolton and Manchester railway and canal, and consulting engineer of the Dee Bridge at Chester, the centering for which was considered a triumph of engineering skill.

BIRTHS.—On the 21st ult, at 4, Rutland Square, Dublin, the Countess of GRANARD, of a daughter—27th ult, at Fitness Park, Sunning Hill, Lady MARGARET CHARTERIS of a daughter—28th ult, at 37, Green Street, Lady HARRIET WENTWORTH, of a daughter—28th ult, at Somerleyton Hall, Suffolk, Lady PEEL, of a daughter—22d ult, at West Court, Berkshire, Lady PERRY, of a daughter—23d June, at Secunderabad, the wife of Sir W. GORDON, Bart., of the 17th Lancers, of a daughter, who survived her birth only a short time—31st ult, at Heath Lodge, the wife of Colonel POULETT SOMERSET, M.P., of a son—21st ult, at Blyth Hall, near Coleshill, Warwickshire, the wife of J. D. WINGFIELD DIGBY, Esq., of a daughter—20th ult, at Chiddingstone, the wife of H. D. STREATFIELD, of a son.

MARRIAGES.—On the 29th ult, at Ashridge, Lieut.-Colonel the Hon. PEREGRINE CUST, uncle of the Earl Brownlow, to FRANCES, widow of AUGUSTUS FREDERICK, late Earl of ALBEMARLE—25th ult, at St. Peter's Church, Pimlico, Lieut.-Colonel CHARLES BARING, Coldstream Guards, to HELEN, youngest daughter of the Right Hon. Sir JAMES GRAHAM, Bart., M.P.—28th ult, at Trinity Church, Marylebone, HERBERT, younger son of the late Lord JAMES STUART, to FANNY ADELAIDE, third daughter of JOHN LABOUCHERE, Esq., of Broom Hall, Surrey—23d ult, at St. George's, Hanover Square, GEORGE SHOLTO DOUGLAS PENNANT, Esq., eldest son of Colonel the Hon. Douglas Pennant, of Penrhyn Castle, to PAMELA BLANCHE, second daughter of Sir CHARLES RUSHOUT BUSHOUT, Bart., and the Hon. Lady Rushout—28th ult, at Pitlochrie, N.B., WILLIAM FRANCIS KEMPE, M.A., of the Inner Temple, Barrister-at-Law, to JULIA LANE GRACE SANDFORD, daughter of the late Sir Daniel Kete Sandford, D.C.L. Oxon—28th ult, at the Parish Church of Walditch, Captain JAMES CHARLES STILL, late 3d Dragoon Guards, second son of the late Rev. Peter Still, of Cattistock, Dorset, to ELIZA MARGARET, only daughter of JOSEPH GUNDRY, Esq., of the Hyde, Dorset.

DEATHS.—On the 24th ult, at Swainston, Isle of Wight, JANE MARIA, wife of Sir JOHN SIMEON, Bart.—28th ult, at Roselle, Tunbridge Wells, FRANCES MARGARETTA, relict of the late THOMAS READ KEMP, Esq., of Kemp Town, Brighton, and sister of the late Sir Charles Shakerley, Bart., of Somerford Park, Cheshire—21st ult, at Escrick, near York, the Rev FREDERICK PEEL, M.A., of Trinity College, Cambridge, brother of the late Sir Robert Peel, Bart., Prebendary of Lincoln Cathedral, and formerly rector of Willingham, in the same county, aged 70—25th ult. at Clapham Common, the Rev. HENRY WORSLEY, LL.D., rector of Hayes, Middlesex, aged 75—21st ult, at Ludgate Lodge, Ratho, the Rev. WILLIAMS REES, M.A., Fellow of St. John's College, Cambridge—26th ult, in Woburn Place, ELIZABETH, widow of the late RICHARD ESTCOURT CRESSWELL, Esq., of Pinkney Park, Wilts—13th ult, at Biarritz, from the effects of a severe accident, ISABELLA, second daughter of the late WILLIAM RICHARDSON, Esq., of Rich Hill, county Armagh, many years M.P. for that county—9th July, accidentally drowned from the Candia, in the Red Sea, Commander EDMUND WEBBER, R.N., son of the late Rev. Simon Webber, rector of Fonthill Bishop, Wilts—27th ult, the Rev. JAMES THOMAS ROUND, B.D., rector of All Saints', Colchester, and formerly Fellow and Tutor of Baliol College, Oxford, aged 62—27th ult, at Clifton Terrace, Margate, SOPHY, daughter of Lieut.-Colonel and Mrs. JAMES OLIPHANT, of Wimbledon, aged 19.

Markets.

HOPS.—BOROUGH MARKET, FRIDAY, AUG. 31.

Messrs. Pattenden & Smith report that the first pocket of new Hops arrived at market yesterday (Aug. 30), it has been sold at 25*s.* per cwt.: many of the new growths are likely to arrive in a similar manner. If a fair specimen of the crop of 1860, yearlings and old Hops must advance considerably in price; a more miserable specimen of the genus Hop has not been seen for many a year.

COVENT GARDEN, Sept. 1.

Foreign importations continue heavy and trade dull. West India Pines are over for this season. Pears still consist of Jargonelle, Windsor, and Beurré d'Amanlis. Peaches and Nectarines from hothouses are nearly over; very few as yet have come in from open walls. Grapes are abundant, and still maintain fair prices. Cob Nuts realise 1s. and Filberts 9d. to 1s. per lb. Gooseberries fetch 3d. a quart. Peas are comparatively plentiful. Potatoes are for the most part badly diseased; for sound samples there is a good demand. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Heaths, Kalosanthes, Geraniums, Lily of the Valley, and Roses.

FRUIT

Pine Apples, per lb., 3s to 4s	Currants, per qt., 3d to 6d
Grapes, per lb., 2s to 5s	Green Figs, per doz., 3s to 6s
Strawberries, p. lb., 6d to 1s 6d	Melons, each, 2s to 4s
Peaches, per doz., 8s to 15s	Plums, p. ½ sieve, 3s to 4s 6d
Apricots, per doz., 2s to 4s	Pears, per doz., 1s to 3s
Nectarines, do., 5s to 10s	Apples, per doz., 6d to 1s 6d
Cherries, p. lb., 1s to 3s	Oranges, per 100, 10s to 20s
Gooseberries, per qt., 3d to 6d	Lemons, per 100, 10s to 15s

VEGETABLES.

Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per qrtn., 9d to 1s	Celery, per bundle, 1s 6d to 2s
Peas, p. bush., 2s to 3s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 4d to 6d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Veg. Marrows, p. doz., 6d to 1s
Cabbages, do., 1s to 2s	Shallots, per lb., 6d to 8d
Potatoes, p. ton, 90s to 100s	Garlic, per lb., 6d to 8d
— per bus., 3s to 4s 6d	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per cwt., 6s to 8s	Lettuces, Cos, p. score, 6d to 1s
Carrots, per bunch, 4d to 6d	Endive, p. score, 1s to 2s
Turnips, per bunch, 5d to 7d	Horse Radish, p. bun., 1s 6d to 4s
Spinach, p. sieve, 2s to 3s	Mushrooms, p. pott., 2s to 3s
Cucumbers, each, 6d to 1s	Parsley, p. 12 bunches, 2s to 4s
Artichokes, per doz., 4s to 6s	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Aug. 30.

Prime Meadow Hay	75s	85s	Clover	95s	120s
Superior do. (old)	96	105	New Clover	80	100
Inferior do.	60	70	Old second cut	—	—
New do.	60	90	Straw	30	36
Rowen	—	—		DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, Aug. 30.

Sup. Meadow Hay	115s	120s	Inferior Clover	90s	110s
Inferior do.	70	110	New do.	80	110
New do.	65	100	Straw	40	45
Superior Clover	120	130		JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, Aug. 30.

Fine old Hay	105s	110s	Fine old Clover	120s	126s
Inferior do.	—	—	Inferior do	—	—
Prime New Hay	86	92	Fine 2d cut	—	—
Inferior do.	40	63	Fine New Clover	105	110
Straw	34	40	Inferior do.	84	90

METROPOLITAN CATTLE MARKET.

MONDAY, Aug. 27.

We have a shorter supply of Beasts; trade is active, and prices remain unaltered. The number of Sheep is about the same as on Monday last. Trade is dull, and it is difficult to obtain that day's quotations. The demand for Lamb has considerably decreased, and prices are lower. Calves are selling about as on Thursday. From Germany and Holland there are 967 Beasts, 6000 Sheep, and 170 Calves; from Ireland, 700 Beasts; and 2000 from the northern and midland counties.

	s	d	s	d
Best Scots, Herefords, &c.	5	4 to 5	6	
Best Short-horns	5	2 — 5	4	
2d quality Beasts	4	2 — 4	6	
Best Downs and Half-breds	5	4 to 5	8	
Do. Shorn	—		—	
Best Long-wools	5	2 — 5	6	
Do. Shorn			to	
Ewes & 2d quality	4	0 — 5	0	
Do. Shorn	—		—	
Lambs	5	4 — 6	0	
Calves	4	0 — 5	4	
Pigs	3	8 — 4	8	

Beasts, 4470; Sheep & Lambs, 27,850; Calves, 220; Pigs, 350.

THURSDAY, Aug. 30.

We have a large supply of Beasts, and consequently a reduction in prices. Several of inferior quality remain unsold. The number of Sheep and Lambs is about the same as of late; trade is exceedingly dull and prices on the average are lower. Calves are not selling quite so well. From Germany and Holland there are 770 Beasts, 2850 Sheep, and 300 Calves; and 120 Milch Cows.

Best Scots, Herefords, &c.	5	0 to 5	2		
Best Short-horns	4	10 — 5	0		
2d quality Beasts	3	10 — 4	4		
Best Downs and Half-breds	5	2 — 5	6		
Do. Shorn	—		—		
Best Long-wools	5	0 — 5	4		
Do. Shorn			to		
Ewes & 2d quality	4	0 — 4	8		
Do. Shorn			to		
Lambs	5	0 — 6	0		
Calves	4	0 — 5	0		
Pigs	3	8 — 4	8		

Beasts, 1670; Sheep & Lambs, 11,200; Calves, 560; Pigs, 100.

COAL MARKET.—AUG. 29.

Buddle's West Hartley, 17s.; Byass's Bebside West Hartley, 17s.; Hastings Hartley, 17s.; Howard's West Hartley, 17s.; St. Cuthbert's Hartley, 15s.; Tanfield Moor Bates, 13s. 3d.; Washington Hartley, 16s.; Wylam, 16s. 6d.; Walls End Byron, 17s.; Walls End Hedley, 17s.; Eden Main, 17s. 3d.; Walls End Braddyl's Hetton, 17s. 9d.; Walls End Framwellgate, 17s.; Walls End Hetton, 19s.; Walls End Kepier Grange, 17s. 9d.; Walls End South Hetton, 19s.; Walls End Stewarts, 19s.; Walls End Cassop, 18s.; Walls End Haugh Hall, 17s.; Walls End Kelloe, 18s. 3d.; Walls End Shincliffe, 17s. 3d.; Walls End South Hartlepool, 17s. 6d.; Walls End Thornley, 16s. 6d.; Walls End Thorpe, 18s.; Walls End West Hetton, 17s.; Walls End Peases West, 15s.; Carway and Duffryn Malting, 22s. 6d.—86 ships at market.

BUTTER MARKET.—Aug. 31.

Best Fresh Butter	..	13s. per dozen lbs.
Second do. do.	.. ..	12s. " "

Pork, 5s. 4d. to 5s. 8d. per 8 lbs.

BRITISH WOOLS.—LONDON, FRIDAY, Aug. 31.

The supplies continue small, and the amount of business transacted during the past week has been more than the previous one, although by no means large, as the consumers purchase merely to meet their weekly requirements. The stock of long wool in the north of England has become larger than wanted, and a reduction must be submitted to there if sales must be made of that description of wool. Skin wool sells here at full rates.

	s.	d.		s.	d.		s.	d.		s.	d.
South Down Hoggets	1	8	to	1	9	Leicest. Wethers	1	6	to	1	7
Half-bred ditto	1	8	—	1	9	Ditto Hoggs	1	7	—	1	9
Down Ewes	1	6	—	1	7	Combing Skins	—	—	—	—	
Kent Fleeces	1	6	—	1	7	Blanket ditto	0	6	—	0	8
						Flannel Wool	1	0	—	1	7

MARK LANE.—MONDAY, Aug. 27.

The supply of Wheat from Essex and Kent to this morning's market was small, and disposed of at an advance of 5s. per qr. upon the prices of this day se'nnight. The market was well attended by country buyers, and the prices obtained for foreign were 4s. above the rates of Monday last. Grinding Barley is in good demand at an advance of 2s. per qr. Beans are 1s. and Peas 2s. per qr. dearer. The Oat trade is firm at

an advance of 6d. to 1s. per qr. Norfolk Flour is held for 40s per sack, and American barrels are 2s. dearer.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	60—65	Red	60—65
— — fine selected runs..ditto	66—70	Red	62—68
— — Talavera	65—74		
— Norfolk	—	Red	—
— Foreign	72—74		
BARLEY, grind. & dist., 24s to 31s..Chev.	38—45	Malting.	36—41
— Foreign..grinding and distilling	30—38	Malting.	35—40
OATS, Essex and Suffolk	20—24		
— Scotch and Lincolnshire..Potato	26—28	Feed ..	24—26
— Irish .....Potato	26—28	Feed ..	21—24
— Foreign.....Poland and Brew	24—27	Feed ..	20—27
RYE	35—38	Foreign.	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....31s to 40s....Tick	36—43	Harrow.	36—43
— Pigeon .....40s — 47s..Winds	—	Longpod	—
— Foreign .....Small	38—46	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	40—42	Suffolk .	36—43
— Maple .... —s to —s ..... Grey	36—38	Foreign	30—43
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	54—60		
— 2d do. ..... ditto	42—52	Country.	42—52
— Foreign .....per barrel	28—34	Per sack	48—52

FRIDAY, Aug. 31.

Since the 24th inst. heavy rain has fallen almost daily. The lowness of the temperature has caused the moisture probably to have a less injurious effect upon the corn than would otherwise have been the case. Harvest operations are naturally much retarded by this state of the weather, and its continuance cannot fail to be most disastrous. A good business has been transacted in Wheat at about 2s. per qr. advance on the week, and would have been more extensive but for the firmness of holders and the high rates generally insisted upon. A little parcel of new red Wheat of good quality from the south of France was sold here on Wednesday, and realised 66s. per 496 lbs. Spring corn has commanded an advance throughout the kingdom. We quote Barley 1s., Oats 6d. to 1s., and Beans and Peas 1s. dearer. American Flour is here sold for an advance on the rates of Friday last, and in other markets sacks have been quoted 1s. to 2s., but no improvement is quoted on barrels, the arrivals being large. Our accounts from the Baltic to the 28th ult. represent the new crop of grain to be in a deplorable condition, Wheat weighing 55 to 60 lbs. There has been a fair arrival and a free sale this week of grain and seed arrived off the coast from the South of Europe. The arrivals of English grain continue very small this week, those of foreign are large, as also of barrel Flour. To-day's market was very thinly attended, and the little English Wheat on sale being held for Monday's prices remained unsold. Very little business was transacted in foreign, and on the few retail sales effected 1s. per qr. less money was generally accepted. Barley meets a fair inquiry at Monday's quotations. The Oat trade is quiet and prices are unaltered. Flour is a slow sale, but holders are not disposed to take less money.

ARRIVALS FROM Aug. 27 TO Aug. 31.

	Wheat.	Barley.	Oats.	Flour.
English ..	1180 qrs.	— qrs.	— qrs.	1020 sks.
Irish	— ,,	— ,,	— ,,	— ,,
Foreign ..	21270 ,,	5580 ,,	41310 ,,	980 ,, / 26730 brls.

LIVERPOOL, Tuesday, Aug. 28.—With a large accession of American supplies of Wheat, and a decided improvement in the weather, our market has been free from excitement, but a good consumptive trade has been done, and very full prices made. At this morning's market there was a fair attendance of buyers, but they were indisposed to operate to any large extent, and only the extreme rates of last Tuesday were obtainable. Flour a slow sale at late prices. Oats and Oatmeal the turn dearer, as are also Beans and Barley. Indian Corn was rather more freely offered at about the prices of this day week, say 31s. 9d. for mixed American and Ioraila, 35s. Galatz, and 39s. for white per 480 lbs.

FRIDAY, Aug. 31.—Grain market firm. Wheat and Flour in good request at full prices. Maize steady. Beans quiet. All other articles in moderate demand, at unchanged rates. Weather fine.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
July 21..	56s 6d	32s 5d	26s 4d	40s 8d	46s 7d	39s 4d
— 28..	57 0	33 1	26 4	47 5	45 1	41 1
Aug. 4..	58 7	33 0	26 6	35 6	46 9	41 3
— 11..	59 6	34 0	26 1	44 9	46 5	41 0
— 18..	59 6	32 10	28 2	41 9	47 1	44 0
— 25..	60 1	34 9	27 1	40 4	47 7	43 9
Avg. Aver.	58 6	33 4	26 9	41 9	46 7	41 9

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	July 21.	July 28	Aug. 4.	Aug. 11.	Aug. 18.	Aug. 25.
60s 1d	..	..	..	..	..	
59 6	..	..	..			..
58 7	..	.		..	..	..
57 0	..		..	..	..	..
56 6		..	..	..	..	..
..	..	..	..	..	..	..

NEW ZEALAND.—A Gentleman who has had extensive experience in Farming and in the Management of Sheep Stock in the South-west of Scotland, is desirous of meeting with a Gentleman possessed of some Capital, who may wish to go to New Zealand, and who would be disposed to enter into PARTNERSHIP with the Advertiser in the Lease of a Sheep Farm, for the Management of which the Advertiser possesses every necessary qualification, and is well suited to conduct all business transactions connected with the concern. —Apply, stating references, to "M.," office of the Wigtownshire Free Press, Stranraer, N.B. Stranraer, Sept. 1.

A PARTNER WANTED.

WANTED, in a large Nursery and Seed Trade in one of the largest Agricultural Counties in England, a thorough business Man, well acquainted with either; there has been a large Seed Trade carried on for more than half a century, and is capable of very great extension. Any one wishing to enter into a first rate business, this offers an opportunity rarely to be met with.—For particulars inquire of Messrs. HURST & M'MULLEN, Seedsmen, 46, Leadenhall Street, London, E.C.

WANTED, A SUPERINTENDENT TO THE LAMBETH CEMETERY.—The Burial Board for the Parish of Lambeth will receive applications for the Situation of Superintendent to the Lambeth Cemetery at Garratt Lane, Tooting. Salary 1*l.* 16s. per week and firing, with separate residence free of rent and taxes. Candidates are to be from the age of 25 to 45 years.—For information as to the duties apply to the Clerk at the Vestry Hall, Kennington, with whom written applications and testimonials are to be left on or before 12 o'clock on September 11. By order.

C. M. BARKER, Clerk to the Board.

WANTED, a PERSON thoroughly Qualified to take the Management of an Extensive Nursery and Seed Business, and conduct the Sales thereof. Security for intromissions will be required.—Apply to CHARLES MCINTOSH, Esq., Murrayfield.—Edinburgh, Sept. 1.

WANTED, a good single-handed GARDENER, where Vines, Melons, Flowers, &c. are cultivated on a small scale. Wages, 1*l.* per week.—Address, Rev. H. THORPE, Aston le Walls, Daventry.

WANTED, for a Farm of about 200 acres, a WORKING BAILIFF, married, and if without incumbrance preferred; he must be practically acquainted with the Management of Land and Stock. None above 40 need apply. Wife to Manage Poultry, and possibly a small Dairy.—Address, stating wages, age, qualifications, &c., to C. B. A., *Gardeners' Chronicle* Office, W.C.

TO SEEDSMEN.—SHOPMAN WANTED.

WANTED, A HEAD SHOPMAN, who has had some experience in the Management of a Wholesale and Retail Business, and to assist in Accounts. Good character for honesty and sobriety indispensable. State references, wages, age, &c., to A. PONTEY, Nurseryman and Seedsman, Plymouth.—Sept. 1.

SEED TRADE.

WANTED IMMEDIATELY, in a London Seed House, a SHOPMAN and TRAVELLER. A man of experience and good address. Testimonials as to character and ability must be unimpeachable.—Apply by letter only, to F. R., John Wilson, 12, Harp Lane, Lower Thames Street, E.C.

WANTED, A SHOPMAN, in a retail business in the country and to attend to Books and Accounts. —Apply, stating terms and particulars, to L. S. A., Messrs. Hurst & Co., Seed Merchants, 6, Leadenhall Street, London, E.C.

WANTED IMMEDIATELY, AN APPRENTICE in a large Garden, where he can make himself acquainted with the management of the Orchard House, Pineries, Vineries, Stove and Greenhouse, Flower and Kitchen Gardens, &c. —Apply to Wm. W. WHITE, Church Lane, Chatteris, Cambridgeshire.

WANTED, two strong LADS to work in a large Garden where Forcing is done to a great extent. Wages 10*s.* per week, and Lodgings.—Address L. M., Post Office, Rudgwick, Sussex.

WANTED, A GROOM AND GARDENER who has been used to a Greenhouse and General Gardening; will have to take care of a Horse and Chaise and drive occasionally. One year's character required.—Apply to G. S., The Mount, Northfleet, Kent.

WANTED, a respectable FARM LABOURER, age 30, a Married Man, without family; he must be a good Ploughman and capable of taking the lead in the General Work of a small Farm. He will be required to carry out properly the orders he will receive, and in the absence of the Bailiff to take the oversight of any other labourers employed and all things on the Farm. There is a thorough good Lodge to live in, which the Woman will be required to keep clean. To find their own furniture. State wages required. No person to apply who cannot produce a first-class character.—Address, Mr. PAYNE, Wimbledon House, S.W.

WANT PLACES.—Letters to be Post Paid.

TO NOBLEMEN AND GENTLEMEN CONTEMPLATING LAYING-OUT NEW OR RE-ARRANGING EXISTING GROUNDS, &c.—The Advertiser, who has had great experience in carrying out every description of work connected with the Park, the Pleasure Ground, the Kitchen Garden, and the general improvement of Estates, wishes for an engagement where taste and practical skill are required in conducting such operations.—Reference kindly permitted to W. A. NESFIELD, Esq., under whom the advertiser has executed important and extensive works.—A.B., 2, Lansdowne Place, Fulham Road, S.W.

TO LAND AGENTS.—A young Engineer and Surveyor of several years experience, and a good Correspondent and Accountant, being desirous to extend his acquaintance with the Valuation of Landed Property, wishes to meet with a Land Agent in good practice with whom he could arrange to assist for a few months on terms of mutual advantage. Unexceptionable testimonials and references.—Full particulars and real address to N. R., Messrs. Davies & Co., Advertising Agents, 1, Finch Lane, City, E.C.

GARDENER (HEAD). Age 25, single; understands his profession in all its branches. Can have a good character and be well recommended; leaving through his employer giving up his establishment.—F. H., The Gardens, Rose Hill, Dorking.

GARDENER (HEAD).—Single; thorough knowledge of his profession. Fifteen years' experience in first-class places in Scotland and Ireland. Satisfactory reference as to character and ability.—A. B., 20, New Street, St. John's Wood, N.W.

GARDENER (HEAD).—The Advertiser would be glad to engage with any nobleman or gentleman, having had great experience in all its branches in some of the first noblemen's families in Cheshire; no objections to land. Testimonials undeniable.—S. P., 13, Sessay Street, Bangor Street, Hulme, Manchester.

GARDENER (HEAD, where two or more are kept). —Age 26, single; has a thorough practical knowledge of his profession. Two years' good character.—L. J., 49, Ordnance Road, St John's Wood, N.W.

GARDENER (HEAD).—Age 33, married, without incumbrance; thoroughly understands his profession in all its branches, and has had great experience in Pine and Grape Growing. Leaves his present situation, which has been famous as a forcing establishment, in consequence of the gardens being broken up. Can produce unexceptionable testimonials as to character and abilities.—J. T., Mr Veitch, Royal Exotic Nursery, King's Road, Chelsea, S.W.—Sept. 1.

GARDENER (HEAD), to any Lady or Gentleman requiring a confidential servant.—Age 42, married, no incumbrance; thoroughly practical, including the Culture of Pines, Vines, Peaches, Flowers, and Vegetables; has lived upwards of five years in present situation; can produce testimonials from previous employer; satisfactory reasons for leaving. No single-handed place accepted.—W. P., Post Office, Leytonstone, Essex, N.E.

GARDENER (HEAD, to a lady or gentleman).—JAMES STANTON, age 42, married; has had 27 years' experience in his profession, 16 of them in the capacity of Head Gardener, the last 4½ of such to John Waterhouse, Esq., of Well Head, near Halifax, and is recommended as a clever and intelligent Plant Grower, including Ferns, &c., and well skilled in the routine of Forcing Fruits, Grapping, &c. Character and testimonials highly satisfactory. Voluntarily leaving his last position.—APPLY, Messrs. E. G. Henderson & Son, St. John's Wood, London, N.W.

GARDENER (HEAD).—J. TEGG, age 31, single, is desirous to engage himself to any gentleman requiring a good experienced Gardener; well acquainted with Forcing all Fruits, Flowers, and Vegetables; likewise a good Kitchen and Flower Gardener. Good references can be obtained from his late employer.—JOHN TEGG, Messrs. Lee's Nursery, Hammersmith, W.

GARDENER (HEAD).—Age 22, married, energetic; has a thorough practical knowledge of Fruit, Kitchen, and Flower Gardening, and the general Forcing of Fruit, Vegetables, and Flowers. Four years' unexceptionable character.—G. ELLIS, Euston Gardens, Thetford, Norfolk.

GARDENER (HEAD).—Age 35; well experienced in Early and Late Forcing, Plant Growing, Flower, Kitchen, and Fruit Gardens, Pleasure Grounds, &c. Thoroughly competent to take charge of a nobleman's or gentleman's establishment. State all particulars. Good reference.—J. G., Mr. Dubbers, Stationer, Upper Norwood, Surrey, S.

GARDENER (HEAD), OR GARDENER AND BAILIFF.—Age 35, married, no incumbrance. W. RANDALL, gardener to Lieut. Gen. Sir T. Wiltshire, Bart., Hill House, Wingfield, Windsor, begs to offer his services. Conversant with every branch of his profession. Two years and three months' good character.—Address as above.

GARDENER.—Well experienced; offers his services to any lady or gentleman wishing to make their gardens self-supporting, or would like to rent a good garden.—G. A., Mr. Boult, Acton, W.

GARDENER.—Married; perfectly understands the Management of the Vinery, Greenhouse, Kitchen and Flower Gardens. Good character. Wages 52*l.* per year and Cottage.—H. D., 40, Ebury Street, Eaton Square, Pimlico, S.W.

GARDENER.—Age 27, single; competent to take charge of the Flower, Fruit, and Kitchen Gardens. Forcing, &c. Can be well recommended.—T. C., Royal Botanic Gardens, Regent's Park, N.W.

GARDENER to any nobleman or gentleman.—R. DRUMMOND, seven years Gardener to the late S. Lyne Stephens, Esq., and also six years Gardener at Pontypool Park; has Designed and Superintended the Erection of extensive Forcing Houses.—R. DRUMMOND, 6, Devonshire Street, Hammersmith, W.

GARDENER (SINGLE-HANDED).—Middle-aged, thoroughly understands his profession. First class character.—W. H., Charles Southby, Nurseryman, &c., Clapham.

GARDENER (SINGLE-HANDED).—Middle-age, married, no incumbrance; understands his profession. No objection to a Cow.—J. W., 2, Fort Cottage, Merton Street, Highbury Vale, N.

GARDENER, (SINGLE-HANDED or otherwise).—Has a thorough practical knowledge of his profession. Good character.—F. P., Mr. G. Higgs, 14, Fuller Street, Bethnal Green Road, London, N.E.

GARDENER (UNDER, or SINGLE-HANDED).—Well acquainted with Forcing and Kitchen Garden. 18 months' character.—A. D., Post Office, Beckenham, Kent.

GARDENER (UNDER).—Aged 21.—Mr. WINGFIELD, Donnington Park, near Derby.

GARDENER (UNDER).—Age 20; wishes to engage with some good gardener where he can improve himself. Good character from present situation.—E. R., W. Hawe, Esq., Architect, Register Square, Beverley.

GARDENER (UNDER).—Age 22; five years' experience in his profession. Three years' good character from his present employer.—Apply, stating terms and particulars, to A. Z., Post Office, Newcastle, Staff.

GARDENER (UNDER), in a nobleman's or gentleman's establishment.—Aged 21; has received a good education, is strong, active, and obliging. Character and testimonials can be obtained on application.—Letters pre-paid to Mr. TOMKINSON, Bookseller, High Street, Coventry.

TO FLORISTS. The Advertiser seeks a situation of trust, is educated, intelligent, quick at correspondence; Grows Roses, Soft-wooded Plants, &c.; would make himself useful.—A. B. O., Post Office, Teignmouth, Devon.

DAHLIA GROWER.—Has had the management of the Dahlias 11 years at the Royal Nursery, Slough, and can undertake the growing of Pansies if required. Can have a good character.—H. JOEL, Alpha Road, Slough.

TO NOBLEMEN AND GENTLEMEN'S GARDENERS.—A respectable Youth, age 18, of good education and character, wishes for a situation where he would have an opportunity of learning the profession in its various branches. A premium will be given.—Address, stating particulars, A. L., Post Office, Pocklington, Yorkshire.

FARM STEWARD, OR BAILIFF.—Single; perfectly understands his profession in every department; can be highly recommended by his last employers.—D. G., Thos. Scott, Esq., Land Agent, 18, Parliament Street, Westminster, S.W.

TO NURSERYMEN.

SALESMAN OR GENERAL MANAGER.—C. J. DYER offers his services to any one that may require them; has had 18 years' experience in two of the principal Nurseries in England; is well acquainted with his profession in all its branches, and can have a good character from present employer.—15, Stamford Road, Fulham, S.W.

FOREMAN AND SHOPMAN, in a Nursery where he would have to devote a part of his time to the Seed Trade.—Age 22; has occupied the place of Foreman in a Nursery, and can have a good recommendation from his late employer.—A. B., Mr. G. Fish, Great King Street, Hockley, Birmingham.

SEED TRADE.

SHOPMAN OR CLERK.—Age 26; of active business habits, and thoroughly acquainted with the duties of his profession. Being about to terminate an engagement in one of the principal London houses is desirous of a re-engagement. Is a good Correspondent and Book-keeper. —SHOPMAN, *Gardeners' Chronicle* Office.

TO THE SEED TRADE.

SHOPMAN OR WAREHOUSEMAN.—Age 23; who has had 7 years' experience in the seed business.—H. A. W., *Gardeners' Chronicle* Office.

TO THE SEED TRADE.

SHOPMAN.—A Young MAN who has been six years at the Seed Trade.—M. M., 46, Queen Street, Glasgow.

SHOPMAN (UNDER), in the Wholesale Seed Trade.—8 years' experience.—T. H., *Gardeners' Chronicle* Office, W.C.

The Gardeners' Chronicle Newspaper.

SATURDAY, SEPTEMBER 8, 1860.

BANK OF DEPOSIT (Established A.D. 1844), 3, Pall-Mall East, London.—Capital Stock, 100,000*l.*

Parties desirous of Investing Money are requested to examine the Plan of the Bank of Deposit, by which a high rate of interest may be obtained with ample security.

Deposits made by special agreement may be withdrawn without notice.

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HENRY FOWLER, Esq (H. & R. Fowler), St. Saviour's Dock,

THOMAS WILLIAM KOUGH, Esq. (Jones Brothers) Upper Thames Street.

SAMUEL LLOYD STACEY, Esq., (Corbyn, Stacey, & Co.), Holborn.

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Medical Referee—J. EDWARD POLLOCK, Esq., M.D.

Solicitors—Messrs J. & J. W. SEWELL.

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SPECIAL FEATURE—Non forfeiture of Policies. The insurer has the right, on an ordinary Life Policy, after three years, to cease his payments, and obtain a free Policy, for the total amount of Premiums paid, and whatever Bonus may have been added.

FIRE DEPARTMENT.—The rates of Premium vary according to the nature of the risk, and will be found as moderate as those of other first-class offices.

Application for Agencies requested.

W. P. CLIREHUGH, Manager.

H. B. TAPLIN, London Secretary.

JOHNSON AND SHAW'S FARMERS' ALMANAC FOR 1861.—This long-established work which is annually nearly rewritten, and contains a digest of the chief agricultural improvements of the previous year, will be published as usual on November 1. Corrections and suggestions for its improvement are earnestly requested, addressed to the Publisher.

Advertisements intended for insertion in the Advertising columns, not later than October 1.

JAMES RIDGWAY, Piccadilly, W.

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HORTICULTURAL GARDENS.—The *Gardeners' Chronicle* of May 12, containing Mr. NESFIELD'S COLOURED PLAN for the NEW GARDEN at Kensington Gore, is still on Sale at the Office, 41, Wellington Street, Covent Garden, W.C. and will be sent by post on receipt of six stamps.

News of the Week.

GARIBALDI landed at Salerno on Wednesday last and proceeded inland to Eboli, and it is expected that by this time he has arrived at Naples. At a meeting of the Annexionist Committee of that city on Monday a letter from him was read, stating that, as the condition of the country required a definitive solution, he would arrive in Naples about the 8th inst., to assume the Dictatorship of the Two Sicilies in the name of VICTOR EMMANUEL. The whole province of Salerno was then in a state of insurrection, and the Terra di Lavoro, which may be considered the metropolitan province, was in full revolt. The KING OF SARDINIA had been proclaimed at Sala and other important towns, and placards had been posted on the walls of Naples itself bearing the words "Long live VICTOR EMMANUEL," a demonstation rendered the more remarkable by the fact that the Lazzaroni, hitherto so loyal, attacked the troops who attempted to remove the placards. Meanwhile the KING, whose reported departure last week was without foundation, has resolved to resist the advance of GARIBALDI, and has concentrated his army for that purpose between Capua and Nocera. There is, however, a general impression that the Royal army will either not fight or offer but a feeble resistance, and that the KING will retire to Gaeta before the issue of the expected battle, and there embark for Spain where he has been offered an asylum by QUEEN ISABELLA.—Despatches from Rome announce that great agitation prevails in all parts of the Papal States. Ancona has been declared in a state of siege, and the Papal Delegate has been recalled. Pontecorvo and Benevento are in a state of insurrection, and all the other provinces are more or less disturbed. General LAMORICIERE has massed his forces on the frontier for the purpose of opposing the advance of GARIBALDI, and General DE NOUE, the new commander-in-chief of the French army at Rome, has announced to his officers that the EMPEROR has ordered him to defend the provinces of Rome, Civita Vecchia, Comarca, and Viterbo.—A despatch from Venice informs us that on account of the rapid progress of GARIBALDI'S army in the kingdom of Naples, four batteries have been sent from Vienna to the great artillery depôt at Venice, and that the 7th and 8th Austrian corps d'armée have received orders to join the army of Venetia at the first summons. On the other hand, Hungary, Croatia, Bohemia, and the other nationalities which compose the Austrian Empire, are anxiously looking for the reforms expected from the Council of the Empire; and it is confidently believed that if the Government fail to bring the present crisis to a solution, grave complications will result.—The EMPEROR OF THE FRENCH arrived at Grenoble on Wednesday, after having visited Thonon, Sallenches, Chamouni, Chambéry, and other towns in Savoy, in all of which he is said by the Government journals to have been received with great enthusiasm.—Despatches from Constantinople state that the SULTAN has addressed a letter to the GRAND VIZIER, ordering him to return immediately without visiting Bosnia and Herzegovina, though there is still agitation in those provinces. The accounts from Syria state that FUAD PACHA had struck terror into the inhabitants of Damascus by the recent executions, and that tranquillity had been completely restored in that part of the province. It is, however, again asserted that Christians have been massacred at Baalbec, Bekaa, Cofarbaram, and in the villages near Jean d'Acre, and that the Christians in Palestine are in a state of great alarm.

By the Bombay mail of the 8th August, we learn that Sir HENRY WARD died of cholera at Madras on the 2d ult. The British forces in China were ready for attack, but the French had protested against commencing hostilities, on account of having lost all their harness in the vessel which was wrecked at Amoy, and having also 2000 men less than the British. On the 26th June Lord ELGIN induced Baron GROS to withdraw the protest, and the attack was to commence immediately.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Balmoral. On Wednesday week the Queen rode in the neighbourhood of the castle, accompanied by the Princess of Leiningen, Princess Alice, and Princess Helena. The Prince of Leiningen went out shooting. The Right Hon. Sidney Herbert left the castle, and was succeeded by the Duke of Argyll as Secretary of State in attendance on her Majesty. The Bishop of Durham arrived at the castle and did homage to her Majesty on his appointment to the see of Durham, the oath being administered by Lord John Russell as Secretary of State. On Thursday the Queen, accompanied by the Princess of Leiningen, Princess Alice, and Prince Arthur, went to the falls of the Garrawalt, and then rode to Craig Clunie. The Royal party afterwards drove to Castletown. The Prince Consort went out deer stalking. The Prince of Leiningen went out grouse shooting. On Friday the Queen, Prince Consort, the Prince and Princess of Leiningen, and Princess Alice walked in the neighbourhood of the Castle. In the afternoon her Majesty and the Prince gave a dinner in celebration of the Prince Consort's birthday to the tenantry of the Balmoral, Abergeldie, and Birkhall estates, the keepers, servants, and gillies upon the three properties. In the evening the Queen and Prince gave a ball to the tenantry and gillies, with their wives and families. Her Majesty honoured both the dinner and the ball with her presence. On Saturday the Queen, accompanied by the Prince and Princess of Leiningen, and the Princesses Alice, Helena, and Louisa, and Prince Arthur, drove to Alt na Guissach, and rode to the Falls of Glasshalt. The Prince Consort went out deer-stalking. On Sunday the Queen and Prince Consort, accompanied by the Prince and Princess of Leiningen and the Princess Alice, attended Divine service in the parish church at Craithie; the Rev. A. Anderson officiated. On Monday the Queen, accompanied by the Princess of Leiningen, the Princesses Alice and Helena, and Prince Arthur, drove to Invercauld, and afterwards rode over Craig Noarty. The Prince Consort went out deer-stalking. On Tuesday morning the Queen and Prince Consort left the Castle on an excursion. The Prince and Princess of Leiningen left Balmoral for Blair Castle. The Princesses Alice, Helena, and Louisa, drove and rode in the grounds. Prince Arthur went to the Falls of Quoich.

THE PRINCE OF WALES landed at Quebec on Saturday, the 18th August, and was received with the greatest enthusiasm, though the day was wet and disagreeable. The usual address was presented on his landing, after which a procession was formed which escorted him to the Government House. The procession, owing to the state of the weather, was rather a failure, but the illumination of the city at night was

very fine. On the 19th the Prince attended Divine service at the English Cathedral, after which he visited the Plains of Abraham, Wolfe's Monument, and the Governor-General's residence at Cataraqui. On the 20th, in spite of the rain, the Prince paid a visit to the Chaudière Falls, which occupied the whole day. On the 21st the Prince held a grand *levée* in the Parliament House, and after receiving and replying to the addresses of the two Houses of Parliament, his Royal Highness conferred the honour of Knighthood on Mr. Narcisse Belleau, the Speaker of the Legislative Council, and on Mr. Henry Smith, the Speaker of the Commons. An address was then presented from Bishop Mountain and the members of the Anglican Church, to which the Prince made an appropriate reply. After the *levée* his Royal Highness visited the Falls of Montmorenci. In the evening the Prince entertained a large party at a banquet, and afterwards went to a grand ball given by the Mayor and citizens of Quebec. His Royal Highness danced 22 out of the 24 dances, and remained till half-past 4 in the morning. A slight accident occurred during one of the polkas. A little midshipman who had whirled his partner into too close proximity to the Prince, tripped up his Royal Highness, who was dancing with Madame Cartier, wife of the Canadian Premier. The Prince fell on one knee, but immediately recovered himself and proceeded with the dance. The most exaggerated accounts of the incident have since been published in the American papers. On the 22d the Prince visited the Laval University, and received and replied to addresses from the Bishops of the Roman Catholic Church and the members of the University. His Royal Highness afterwards visited the Ursuline Convent, from which, by a rule of the establishment, all males but those of Royal birth are excluded. The nuns presented an address to the Prince, who read a brief reply, thanking them for their kindness, and expressing the hope that their well-known exertions in the cause of education may long continue to exert a beneficial influence upon the population of their interesting country. His Royal Highness next visited the citadel, and on his return had a State dinner at the Parliament House. In the evening there was a grand display of fireworks. On the 23d the Prince left Quebec by the steamer Kingston, and arrived the same evening at Three Rivers, where he was received by the city authorities, Government officials and citizens, who presented an address. The town was illuminated at night. On the 24th the Prince arrived at Montreal, but, owing to the unfavourable weather, did not land till the morning of the 25th. He was met on the wharf by the Mayor and Corporation, the members of the Government, the members of Parliament, the Commander of the Forces, attended by a numerous staff, and the Anglican and Roman Catholic Bishops and clergy, &c. A guard of honour and escort were furnished by the Volunteer Corps. It was estimated that 40,000 persons were present. After receiving and replying to the address of the Mayor and City Council, the Prince drove in procession through the principal streets to the Exhibition, which was opened with great *éclat*. His reception was very enthusiastic, and the line of route was beautifully decorated. His Royal Highness proceeded in the afternoon to lay the corner stone of the Victoria Bridge. A considerable number were invited to witness the ceremony, after which the Prince partook of luncheon at the buildings of the Grand Trunk Railway Company, and returned to the residence of the Commander of the Forces, which was specially fitted up for himself and suite. The city was illuminated in the evening, and a magnificent display of fireworks took place on the Victoria Bridge. On the 30th the Prince visited Aberbrook, St. Hyacinth, and Lennoxville. He started for Ottawa on the 31st, and was to visit Boston about the 14th October.

PARLIAMENTARY MOVEMENTS. — The Hon. Capt. George Windsor Clive, was elected for Ludlow on Wednesday without opposition, in the room of the Hon. Colonel Percy Herbert.

THE ARMY.—Major-Gen. Sir Harry David Jones, K.C.B., has been appointed Col.-Commandant of the Royal Engineers, in the room of the late Gen. Nicolls.

NEW BISHOP FOR THE PACIFIC ISLANDS.—The Rev. John Coleridge Patteson, M.A., formerly Fellow of Merton College, Oxford, son of the Right Hon. Sir John Patteson, late Judge of the Queen's Bench, has been nominated Bishop of the Islands of the Pacific, acting under the direction of the Bishop of New Zealand. He graduated in 1848, and served for some time as curate of St. James's, Ottery St. Mary, Devon. He afterwards went to New Zealand, where he became chaplain to Bishop Selwyn, and missionary of the Northern Mission of that diocese. He will be consecrated at Christmas next, and will exercise episcopal supervision over 70 or 80 islands of the Pacific not under the British crown. Mr. Patteson has been for the last five years in the habit of visiting these islands, has made himself acquainted with six or seven of the principal languages prevailing there, and has always been gladly welcomed by the natives.

COMMERCIAL MISSION TO THE UNITED STATES.—It was reported last week that Mr. W. S. Lindsay, M.P. for Sunderland, was about to be despatched on a mission to the United States in order to negotiate our admission into the American coasting trade, to arrive at a mutual understanding respecting belligerent rights at sea, and to settle the law of the two countries with regard to collisions. The *Globe* is authorised to state that there is no truth in this report, and that Mr. Lindsay has received no authority to enter into negotiations with the United States on behalf of her Majesty's Government.

THE VOLUNTEER MOVEMENT.—The great Review of Lancashire Volunteers took place on Saturday at Knowsley, the seat of the Earl of Derby, in the presence of nearly 200,000 persons. More than 11,000 Volunteers accepted his lordship's invitation, and at the close of the review, which passed off with immense spirit and success, Sir G. Weatherall addressed the troops, expressing his admiration of the discipline and progress they had displayed, and concluding by calling upon them to give three cheers for Lord Derby, to whose kindness and hospitality they were indebted for that splendid spectacle. The whole line of Volunteers responded to this appeal by a prolonged and ringing cheer, which was taken up and repeated by the spectators. Lord Derby acknowledged the compliment paid him by two or three times taking off his hat. The Volunteers were subsequently supplied by Lord Derby with refreshments on a scale of princely liberality. At the rear of the plateau on which they had formed line 10 large tents were erected, each being divided into two compartments, and each compartment containing refreshments for the number of men in a battalion, of which 20 went to compose the five brigades which took part in the review. The number of each brigade and battalion was attached to the tents and divisions of tents thus allotted to the purposes of the commissariat, so that all confusion in serving out the refreshments was avoided. The refreshments consisted of 11,340 meat pies, one for each man, and 59 hogsheads of beer, brewed at the hall. Nor were the wants of the general public forgotten. Tents for their accommodation were erected at convenient points throughout the park, and refreshments supplied to them by Mr. Morrish of Liverpool, at a reasonable and regulated rate of charge. Waterbutts for their use were also placed at intervals along the ground. The troops shortly afterwards marched out of the park in the most perfect order and without crowding or confusion of any kind.—The Southwark and Lambeth, or 7th Surrey, assembled in great force on Saturday at the Sessions House, Newington Causeway, and marched along the Walworth Road, Camberwell Park, and Denmark Hill, to the Greyhound, Dulwich, where they piled arms. After a halt of about two hours they returned to head-quarters. —The 1st Surrey mustered on Saturday at Kennington Oval, whence, attended by their band, they marched through Clapham to Streatham, Brixton and Camberwell, where they were dismissed.—The Workmen's Volunteer Brigade had their first parade and drill on Saturday evening in an enclosed yard, Botolph Lane, lent by the parish authorities for the purpose. About 250 men fell in, in two divisions, and the drill was superintended by Captain Cameron Geddes, late of the 96th Regiment, acting adjutant to the corps. After each of the drills the men were marched round, the full band of fifes and drums of the regiment playing popular and patriotic airs. — A public meeting has been held at Mile End, at which it was resolved to take steps to further the objects of the 2d Company of Tower Hamlets Rifles, and more especially to increase the effective strength of the 3d Company.—The 12th (Chatham) Kent Artillery was inspected on Saturday at Fort Amherst by Viscount Sydney, the Lord-Lieutenant, who afterwards went to Sheerness and inspected the 4th (Sheerness) and the 13th (Sheerness Dockyard) companies of Artillery.—The 13th Kent, or Greenwich and Deptford Corps, is raising a company of cadets between the ages of 12 and 16. A similar company is forming for the Hatcham (New Cross) Corps, the ages being fixed at between 14 and 16. When formed this company is to be attached to the 1st Surrey.—At the opening of the public recreation ground at Faversham, a few days since, the ladies of that town and neighbourhood presented a set of drums and fifes to the 2d Kent Artillery.—The Cheltenham Volunteers were inspected last week in the College grounds by Colonel M'Murdo, Inspector-General, and Colonel Dick, Assistant Inspector of the district.—The Bath Volunteers, comprising the 1st, 2d, 17th, and 18th companies of the Somerset Corps, have also been inspected by Colonel M'Murdo.—On Monday the members of the Stourport corps were officially inspected by Lord Lyttelton, the Lord-Lieutenant of the county.—The 1st Suffolk has just completed its annual course of musketry drill and target practice, with the following results: Average points obtained in the first period, 15.61; in file firing, 9.43; in volley firing, 8.25; in skirmishing, 4.57; total, or "Figure of Merit," 37.86.—On Friday the 3d Suffolk or Wilford Corps were inspected by Colonel Ibbetson on Bromeswell Heath, three miles from Woodbridge.—The first-class shots in the 6th Suffolk or Stourmarket corps competed on Friday at Landguard Fort for a silver cup presented by the officers. The firing was at 800 and 900 yards, and the cup was won by Sergeant Armourer Colson, who make 11 points. Sergeant Betts scored 10 points, the next best number. — 104 of the workmen belonging to the Elswall Ordnance works have joined the Newcastle Corps, and will form a detachment to be called the Eswick Engineers.—The Bristol Rifles and the 1st Gloucestershire or Bristol Artillery were inspected on Saturday on Clifton Down, after which a silver bugle and colours were presented to the Rifle Corps by the ladies of Clifton and its vicinity, and a silver trumpet, also the gift of the ladies, was presented to the Artillery Corps.—On Friday a silver bugle was presented by Mrs. Silver, of Norton, on behalf of the ladies of that parish, to the 2d Shropshire (Market Drayton) Corps. A copper bugle and trumpet, and a drum, which had been in the battle of the Alma, were at the same time presented to the corps by Mr. Spencer Silver.—On Tuesday the 1st Wolverhampton (5th Staffordshire) was inspected by Lieut.-Colonel Vernon, with a view to their commencing rifle practice.—On Tuesday the 1st company of the 1st West York Corps presented to Lady Mary Thompson, wife of Mr. Leonard Thompson, of Sheriff Hutton Park, near York, a set of waist and cross-belts and pouch of blue velvet, in the same style as the belts of the corps, and mounted with silver emblems, as an acknowledgment of the compliment paid the corps by her ladyship having enrolled herself as one of its earliest members.—An influential meeting has been held at Salisbury, at which it was resolved to establish a County Rifle Association for Wiltshire on the principle of the National Association, recently inaugurated by Her Majesty at Wimbledon.—The first Scottish national "tir" was held last week at Montrose. On the first day the chief prize, "Scotland's Cup," value 50*l*., open to all Scotland, was contested by 67 competitors, and after an exciting contest, which lasted the whole day, three of the competitors were found equal, viz.:—Mr. Blackburn, Advocate, Edinburgh; Captain Moir, Stirling; and Dr. A. Irvine, Aberdeen. These gentlemen then shot off the ties, when Captain Moir won the cup; Dr. Irvine winning the second prize, a Richards rifle, value 21*l*.; and Mr. Blackburn the third prize, a Lancaster rifle, value 10*l*. 10*s*. The winner shot with Mr. Edward Ross's Whitworth rifle, the others with a Lancaster and a Whitworth. "The Ladies' Cross" was won by Mr. John Gibb, Forfarshire, who made 13 points out of six shots at 150 yards. On Wednesday the Counties Cup for skirmishers, value 25*l*., open to Volunteers of the neighbouring counties, was won by Mr. Mills, Forfar; the Mearns Gold Medal, was won by Mr. William Thomson, 5th Kincardine Corps; the Angus and Mearns Cup, value 32*l*., was won by Sergeant Francis, Dundee; the Ladies Mearns Cross, was won by Mr. Brown, of the 5th Kincardine; and the Montrose Cup, value 25*l*., open to all Scotch Volunteers, after a severe contest was won by Captain Macgregor, of the Leith Rifles, who made 15 points out of 20.—Two members of the 4th Kent (Woolwich), Mr. Herbert Whomes, who won Mr. Gye's 100*l*. prize at Wimbleton, and Mr. Muller—were present at the grand rifle match which has just taken place at Cologne, and were both successful in competition for prizes. In the English match Mr. Muller won the first prize—a silver cup—having made 21 points in two shots; and Mr. Whomes the second prize, having made 18 points. Mr. Muller also won the first prize in another match, having shot the wing off a wooden bird placed on a pole.—The Colchester Volunteers competed on Thursday last in Wyvenhoe Park, near Colchester, for a prize cup, given by Mr. Gurdon Rebow. The ranges were at 600 yards, five rounds being fired, and the ties were shot off at 900 yards. The cup was won by Mr. Taylor, wine merchant, of Colchester, to whom it was presented by Lady Georgiana Rebow. The grounds were then thrown open to the public, for whom various rustic sports were provided.—On Tuesday Lady Ward presented to the Dudley Volunteers a silver bugle, purchased by the ladies of the town and neighbourhood. The ceremony took place in the grounds attached to Dudley Castle, and was witnessed by upwards of 2000 persons.—On Monday a prize of 10*l*. 10*s*., offered by the members for Great Yarmouth, Sir H. J. Stracey and Sir E. H. K. Lacon, was competed for by the Volunteer corps of the town. At first the number of competitors was considerable, but at 400 yards' range only two remained, viz., Lieutenant Browne and private Fenner. At 500 yards private Fenner made eight points, and Lieut. Browne six points, and the former was accordingly adjudged the winner.

Foreign.

FRANCE.—The *Moniteur* of Sunday contained the following article respecting the Muratist intrigues at Naples:—

"Prince Murat has published a letter disavowing those who would in his name excite troubles at Naples. The Government of the Emperor can only applaud this declaration; but the hope which the Prince expresses in that letter of being one day able to go to Naples with the consent and support of France is too much opposed to the wishes of the Emperor to allow such a supposition to pass without an official disavowal."

To this article Prince Murat immediately replied in the following letter to the Editor:—

"Sir,—I have to protest against the interpretation given to my letter in yesterday's *Moniteur*. I never had the presumption to engage beforehand either the policy of the Emperor or the alliance of France; but I think, and I wished to say, that if, free from all foreign influence, universal suffrage should express itself in my favour, the wish of the populations would doubtless not be less respected by Naples than it has been by other parts of Italy.—I remain, &c., L. MURAT."

The Emperor and Empress arrived at Thonon on Friday and made an excursion on the Lake of Geneva as far as Evian. On Saturday they proceeded to Sallanches, and were enthusiastically greeted by numerous inhabitants of the mountains scattered in groups along the

road. Their Majesties arrived at Chamounix on Sunday, and were enthusiastically received, the whole town being illuminated. After visiting the Mer de Glace, the Emperor and Empress proceeded to Bonneville, travelling by the road on the right bank of the Arve through Marignier, the usual road having been rendered impassable by the heavy rains. In passing through Cluses, their Majesties visited the large watch-making school in that place. On Tuesday morning the Emperor and Empress left Bonneville for Chambéry, where they passed the night, and on Wednesday morning proceeded to Grenoble, where they were received with enthusiasm. The Bishop of Grenoble, in addressing their Majesties, said:—"It is a great consolation to see that wherever there exists a just and holy cause the banner of France is raised to support or to avenge it. The armies of the Emperor are serving the sacred interests of Christian civilisation in the Far East, they maintain the chief of the Church on the throne which they have re-established, and the security of which is now so menaced; and they also avenge in Syria the outrages against religion and humanity." The Emperor during his progress through Savoy has granted various large sums for purposes of local utility—300,000f. to the towns and communes of the department for the most urgent local improvements; 200,000f. for the opening of a new street at Chambéry; 500,000f. to Chambéry as purchase money of its barracks and military buildings; 400,000f. to a lunatic asylum at Bassens; 500,000f. to make Aix-les-Bains a first-class watering-place, and the old castle of Chambéry is to be transformed into an Imperial residence.—The *Pays* states that there is no foundation for the rumour that Signor Farini had requested the Emperor to send French regiments to garrison the different towns of Lombardy.—The *Patrie* says that there is no intention of increasing the garrison at Rome, and that the regiment which has been dispatched to that capital has merely been sent to replace another regiment which will return to France. The same journal says:—"The report that Austria is about to occupy the Marches and Umbria is without foundation. Austria will confine herself to repelling any attack which may eventually be made upon Venetia. France will protect Rome alone, as the army of General Lamoricière suffices for the defence of the Pontifical provinces."—The speeches made by the various members of the Government at the meetings of the Councils-General have been most pacific. Marshal Magnan announced to the Council-General of the Bas-Rhin that he had an assurance of the maintenance of peace from the Emperor himself. "It would be," he said, "contrary to the intentions and to the wishes of the Emperor were the good relations broken which now exist between the European Powers." M. Michel Chevalier, at the Council-General of the Hérault, extolled the exploits and wisdom of the Emperor, and expressed his conviction that the abandonment of the prohibitive system in France and the commercial treaty with England will open a new career of prosperity to France, draw nations closer together, and confirm the peace of the world.—It is said that Prince Napoleon and the Princess Clotilde are about to visit the coasts of England, Scotland, and Ireland, in their yacht, the Prince being desirous of pursuing some agricultural investigations.—The Gloire, iron-cased frigate, lately launched at Toulon, has made several trial trips which have fully confirmed the success of this new description of vessel. Vice-Admiral Tréhouart, M. Dupuy de Lôme, and some superior officers of naval engineers, were present at the trial, and fully approved of the rate of speed attained.—Mr. John Mitchell, one of the convicted Irish rebels of 1848, according to the *Limerick Chronicle*, has left Richmond, his adopted country, for France, at the invitation of the Emperor, who has conferred upon him a Government appointment.

SPAIN.—The Queen of Spain has offered the King of Naples a refuge in Spain, in the event of his leaving his States, and the offer has been accepted by his Majesty. The Spanish Minister at Vienna, who is also accredited to the Court of Munich, has just negotiated a treaty between Spain and Bavaria for the mutual extradition of criminals.

SWITZERLAND.—The Ambassadors of Switzerland at the Courts of Paris, London, Berlin, and Turin assembled at Berne on Monday for a Conference with the Federal Council.

PRUSSIA.—The Prince Regent of Prussia and all the Royal Princes have been invited by the Emperor of Russia to a grand hunting party at Warsaw. The Prince Regent will probably proceed there in the middle of the present month, after the conclusion of the manœuvres of the Prussian troops. This visit may be officially considered as made in return for the last visit of the Emperor Alexander to Breslau.

RUSSIA.—The Emperor left St. Petersburg on the 23d ult. on a tour of inspection, accompanied by the Minister of War and other Generals, proceeding first to Tver, and thence to Moscow and Toula. The Emperor will be absent about 10 days, and will then join the Empress at Tsarskoë-Selo. A widow about 40 years of age committed suicide a few days since at Moscow by burning herself to death on a funeral pile. She had repeatedly declared that in these times the sacrifice of human victims was necessary to appease the wrath of God against sinners, and the Moscow journals state, that self-cremation, from motives of religious fanaticism, not rare in the Russian empire. In the province of Olonetz, last spring, 15 persons, men and women, burnt themselves to death in the belief that they were performing an act pleasing to God.

AUSTRIA.—Count Nadasdy, the Minister of Justice, who has already twice tendered his resignation, insists upon leaving the Cabinet at the close of the extraordinary session of the Reichsrath, the first plenary sitting of which is now fixed for the 10th inst. His retirement will bring about, if not a complete change, at least essential modifications, in the present Ministry. During his stay at Vienna, Prince Metternich has not ceased to urge the Government to enter frankly upon liberal reforms, which he stated to be the only efficacious means of establishing the influence of Austria abroad. The Prince was present on Saturday last at a Cabinet Council at Schönbrunn, presided over by the Emperor.

HUNGARY.—Letters from Pesth state that although tranquillity continues to prevail in Hungary, it is less to be attributed to the measures taken by the Government than to the perfect unity with which the national movement is organised throughout the country. The instructions for this course of action have been given by secret chiefs, and are observed by the masses with an admirable discipline. It is therefore believed that unless the Government brings the present crisis to a solution, grave complications will result.

THE ADRIATIC.—The Archduke Ferdinand Maximilian is now coasting the shores of the Adriatic, in order to inspect the means of defence ordered along the Austrian coasts against any attack by Garibaldi. In the event of the King of Naples embarking on board a Spanish vessel, the Austrian squadron at Naples has orders to return immediately to Trieste.

ITALY.—The Annexation Committee assembled at Naples on Monday and received a letter from Garibaldi, stating that, as the state of the country requires a definite solution, he will arrive at Naples about the 8th inst., and will then in the name of Victor Emmanuel assume the Dictatorship of the Two Sicilies. The Committee is making preparations for his reception, and the city is to be illuminated for three nights. Another reactionary conspiracy was discovered on the 1st inst., when a mass of proclamations was seized. In consequence of this discovery the Ministers tendered their resignations, but the King declined to accept them, Prince Ischitella having refused to undertake the Presidency, and nobody else daring to accept it. General Catrofiano, who had been appointed Commander-in-Chief at Naples, had assembled the General Staff of the National Guard, and declared to them that he reckoned on their assistance, but that he would shoot all traitors and the heads of secret societies. The Chiefs of the National Guard have since entered the Royal Palace and demanded from the King the dismissal of Generals d'Ischitella and Catrofiano. This demand has been complied with, and General Viglia has now been appointed Commander-in-Chief of the Army, and General Desanjeto Commander of the National Guard. The confusion is increasing in the city. The King had presided at a Council of Ministers, at which resistance was resolved upon, but his Majesty promised that he would not bombard the city. The foreign Ambassadors were subsequently applied to for the purpose of guaranteeing the neutrality of Naples with the view of preserving from hostilities the territory of the capital itself, but the Ambassadors unanimously declined to accede to the proposition. The pictures, the furniture of the palace, and the baggage of the King, have been embarked on board a Spanish vessel, and his Majesty was expected to leave Naples for Gaeta on Thursday. The Minister Pianelli had assembled 20,000 men at Capua, under the command of Generals Bosco and Barbalonga, and another military camp had been formed at Avellino. Four thousand men, under the command of General Torre, have disembarked at Sapri. Garibaldi landed on the coast near Salerno on the 5th inst., and proceeded immediately to Eboli on the high road to Naples. Several corps were to join on the following day. A battle was expected on the 7th between Capua and Nocera. The Royal troops occupied strong positions, and had been visited by the King and his brother. Part of the Royal troops at Salerno have fraternised with the insurgents, and part have been dispersed. The district of Sala and the province of Terra di Lavoro have risen in insurrection to the cry of "Long live Victor Emmanuel!" At Naples also placards have been posted up with the words, "*Viva Vittore Emmanuele!*" The soldiers attempted to tear them down, but the Lazzaroni interfered and blows were exchanged on both sides. Lord Llanover is now at Naples. Mr. Edwin James, M.P., the Hon. Mr. Ashley, and other Englishmen have also arrived and left in a Sardinian vessel to pay a visit to Garibaldi at Salerno. The Count of Syracuse, the King's uncle, left Naples on Friday in a Sardinian steamer, having been summoned to Turin by the electric telegraph, and is now residing in the Royal Palace of that city. He will shortly proceed to Florence to visit Prince Carignan, and will remain there ten days. Two Sardinian vessels with troops arrived at Naples on the morning of the 3d inst., and it is said that, should anarchy ensue, a disembarkation of Sardinian troops may be expected. Other advices say, that as soon as the revolution takes place, Sardinian troops will occupy the States of the Church. Letters from Reggio state that General Briganti, whose brigade was one of the two which surrendered last week to General Cosenz, had been guilty of treason, in massing his division together in such a way that they were surrounded, and that in consequence of their indignation he was shot at Monteleone by the soldiers of his own regiment. After the surrender of these brigades Garibaldi was surrounded by the Neapolitan troops, who cheered and embraced him, and their delight was unbounded when he told them that all who desired to do so might return home. About 2000 availed themselves of this offer. In accordance with Baron Brennier's demand for satisfaction for the assault recently committed on him, the Duke of Canajello has been sent to Paris to express officially to the Emperor the profound regret of the King of the Two Sicilies at the assault, and at the inability of the Government to discover the individuals guilty of it. The demand of the Sardinian Minister for satisfaction on account of the late attack of the troops on the Sardinian Bersaglieri has also been successful. The Neapolitan Government has ordered the soldiers engaged in the affray to be brought to a court-martial, and has paid 25,000f. to be distributed to the families of the five victims of the outrage.—A great conspiracy, organised by secret agents, with the object of provoking manifestations in favour of Garibaldi, has been discovered at Udine. Numerous arrests have taken place at Udine, as well as in other Venetian towns. The Austrian Government, foreseeing an attack on Venetia, is actively carrying on the works for the completion of a branch line to connect the Venetian railways with those of Germany. On the 5th inst. the line from Nabresina to Udine will be inaugurated. This railway will enable Austria to transport a considerable force to Venetia in a few days.—Accounts from Rome state that General Lamoricière, in an order of the day, has directed his troops to plunder any town which, on the approach of the enemy, should rise in insurrecton.—General De Noue, the commander of the French army at Rome, has announced to his officers that he has received orders from the Emperor to defend the provinces of Rome, Civita Vecchia, Comarca, and Viterbo. All political manifestations have been prohibited. Ancona has been declared in a state of siege, and the Papal delegate has been recalled. Pontecorvo and Benevento are almost in a state of insurrection. Agitation likewise prevails in all the other provinces.

SICILY.—The official journal of Sicily contains a decree by the pro-Dictator Depretis, opening a loan by subscription for the amount of 3,400,000fr. 5 per cent. *rente*, representing a capital of 68 millions of francs. The bonds of the old Sicilian *rente* are to be withdrawn, and issued again on the same model as the new ones. By another decree the old Sicilian debt contracted by the Parliament of 1848-49, which had been repudiated by the Bourbon Government, is to be paid off.—Garibaldi has decreed the adoption of the decimal system for the coinage in Sicily. The new pieces bear the head of his Sardinian Majesty, with the legend "Victor-Emmanuel, King of Italy."

TURKEY.—The Porte has refused to allow the convention regulating the intervention in Syria, to contain any allusion to the Hatti-Humayoun of 1856, as suggested by the Ambassadors of the Great Powers. Vekif Effendi has therefore received formal instructions not to sign the convention until the allusion be removed. The Sultan has addressed a letter to the Grand Vizier, ordering him to return immediately without visiting Bosnia and Herzegovina, although agitation continually prevails in those provinces. An *émeute* has occurred at Tirnova, and another of a more serious character is apprehended at Philippopoli, where the Russian propaganda is very active. Austria is said to have offered to assist the Porte in the event of an outbreak in Bosnia. Constantinople is tranquil, but armed Montenegrins arrive there daily.

MONTENEGRO.—Letters from Dalmatia in the Austrian journals state that the Princess Darinka, widow of Prince Danielo, is about to marry his nephew and successor, Prince Nicolas, though he is some years her junior; and it is rumoured that the assassination of the Prince was planned by the Princess herself in order to accomplish this marriage.

SYRIA.—It is again asserted that Christians have been massacred at Baalbec, Bekaa, Cofarbaram, and in the villages near Saint Jean d'Acre. Some anxiety is manifested by the Christians in Palestine. Letters from Damascus state that the late executions have struck terror into the inhabitants of that city, which remained tranquil. Those condemned to hard labour and detention were about to be taken, under a strong escort, to Beyrout, to be embarked for Constantinople. Among the persons hanged were brothers, sons, and parents of the first men in the country. No attention was paid to their rank or dignity. All the other principal persons compromised are to be arrested and tried, and the sentences are to be enforced immediately after they are pronounced.—The *Patrie* and *Pays* give a positive denial to the report that Prussia and Russia are about to send 6000 men each to Syria.

EGYPT.—Saïd Pacha is taking strong measures against the Druses who are coming into Egypt for concealment. A few days ago he started himself in great haste on hearing of some Druses having crossed the Desert with a number of Christian slave girls; he succeeded in intercepting them, liberated the Christians, and beheaded a number of Druses on the spot.

INDIA.—The Bombay mail of the 8th August has arrived. Sir Henry Ward died of cholera at Madras on

the 2d ult., and was buried on the following day in St. Mary's Church, Fort St. George. The Hon. W. A. Morehead succeeds provisionally to the Governorship.—The Income-tax came into operation on the 1st August. Extraordinary revelations have taken place in a libel case as to the manner in which taxes have been collected in Oude. It appears that an Oude newspaper charged Ram Dyal, one of the Extra-Commissioners for collecting the Income-tax, with great oppression and cruelty. Ram Dyal brought his action against the paper for libel, and the defendants pleaded in justification that insults were offered to the zenanas of persons who were unwilling or unable to pay the tax; that persons were compelled to contribute who were not liable to the tax; and that women were stripped of their jewels, which were their own property, to pay the tax due from the male members of the family. Captain Chamberlain, Commandant of the Police at Lucknow, was examined in support of these pleas, and stated that having read the charges in the local paper, he had inquired into them, and found their truth to be notorious; and that he had directed Lieutenant Scott, who commanded under him, to make further inquiries. Captain Chamberlain has since been dismissed from his appointment, and Lieutenant Scott suspended. The trial was not concluded at the departure of the mail.

CHINA.—The British forces were ready for attack, but the French had protested against commencing hostilities, on account of having lost all their harness in the vessel which was wrecked at Amoy, and having also 2000 men less than the British. On the 26th June Lord Elgin induced Baron Gros to withdraw the protest. The attack was to commence immediately.

UNITED STATES.—The correspondence between the British and American Governments on the trade in slaves and coolies has been published. President Buchanan will not accede to the propositions of Lord John Russell, because, in his opinion, to do so would be to violate the principle of non-intervention by which the United States Government has been animated ever since 1793, when Washington was President. He says that until the terms of the treaty between England and Spain for the suppression of the slave trade are carried out in good faith, that trade can never be suppressed, and he denounces the Coolie trade as being open to the same objections that are laid to the doors of the negro traders.—General Houlston has declined to become a candidate for the Presidency, and urges a union of the Conservatives, and the Union men against Lincoln. Mr. Victor G. Audubon, son of John James Audubon, died on the 11th ult. at New York, at the age of 51. He assisted his father in getting up his works on ornithology, and was an artist of considerable talent.—General Walker, with his Filibusters, has attacked and taken Truxillo, in Honduras, after a very brief resistance. His schooner, the Clinton, had previously been seized by the British Consul at Belize. It is said that he intends to establish a slaveholding Republic that will encourage and legalise the importation of slaves into the Southern States, and that his scheme has the approbation of Mr. Douglas, the Democratic candidate for the American Presidency.

BRITISH COLUMBIA.—Advices from British Columbia to the 1st ult. report that four small steamers were building at Victoria to run on Fraser River and other inland waters. Several brick buildings were erecting in Victoria, with an increased disposition to invest in real estate. The mining news states that the Chinese continued to flock to the diggings, already outnumbering the whites five to one. Her Majesty's ship Satellite had sailed from Victoria for England.

City Intelligence.

EAST INDIA STOCK.—Under the provisions of the recent Act of Parliament all business connected with East India Stock will in future be transacted at the Bank of England.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93⅛ to ¼ for Money, and 93⅜ to ½ for the 11th of October; Bank Stock, 232½ to 231; Reduced and New Three per Cents., 93½ to ⅜; Five and a Half per Cent. Enfaced Rupee Paper, 102½; India Bonds, 4*s.* dis.; Exchequer Bills, 4*s.* prem.—FOREIGN: Buenos Ayres Six per Cents, for Acct., 95; Ditto Deferred, 31; New Granada Active, 15⅜; Ditto Deferred, 5¼; the Spanish Committee's Certificates, 5⅝; Turkish Guaranteed Four per Cents., for Acct., 100¾; Venezuela Three per Cents., for Acct., 24¼ to 24.

Gazette of the Week.

TUESDAY—BANKRUPTS—C. BOTTEN, Crawford Passage, Clerkenwell Brass founder—F. T. BRASSINGTON, Burslem, Staffordshire, Boot and Shoe Maker—R. BUTTLE, 54, Long Acre, Tailor—J. CLARKE, Kidderminster and Bewdley, Worcestershire, Tanner, Currier, Leather Factor, and Japanner—C. DENES, 49, North John Street, Liverpool, Importer of Foreign Merchandise and Wine Merchant—J. F. KENT, Croydon, Surrey, Builder—P MILNS, Stamford, Lincolnshire, Bootmaker and Leather Cutter—S. F. L. PEREIRA, and J. GRANT, 91, Great Tower Street, City, Wine Merchants—J. SEASON, Leeds, Yorkshire, Cabinet Maker and Furniture Broker—W. P. WATSON, 19, Hampstead Road, Draper.

SCOTCH SEQUESTRATIONS—W. INGLIS, jun., Leith, Merchant—D. C. MARTIN, Dundee, Rope and Sail Maker.

FRIDAY—BANKRUPTS—J. FELL, New Compton Street, Soho, Currier—R. FREELAND, Manchester, and J. FREELAND, Kirkintilloch, Scotland, Merchants—T. L. HOLDICH, Hinckley, Leicestershire, Ironmonger—G. JOHNSON, Durham Place, Hackney Road, Shoe Manufacturer—J. O. KENT, Limehouse, Draper—T. J. SMITH, Luton, Bedfordshire, Tailor—C. SPIKINS, Duke Street, Portland Place, Beer Merchant—JAMES THOMSON, JOHN THOMSON, and S. WOODHOUSE, Birmingham, Warehousemen—J. YORINS and W. HURD, Chelsea, Horticultural Builders—M. A. WOOD, Luton, Bedfordshire, Straw Hat Manufacturer.

BANKRUPTCY ANNULLED—G. DIXON and J. C. ADCOCK, Aldersgate Street, City, and Coventry, Coach Lace Manufacturers.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,914,375	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion	15,439,900
		Silver Bullion	—
	£29,914,375		£29,914,375

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£9,663,511
Rest	3,777,723	Other Securities	20,101,934
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,496,821	Notes	8,484,285
Other Deposits	13,431,519	Gold and Silver Coin	730,672
Seven day and other bills	721,339		
	£38,980,402		£38,980,402

6th day of Sept., 1860. M. MARSHALL, Chief Cashier.

Metropolis and its Vicinity.

METROPOLITAN BOARD OF WORKS.—The annual report of this Board has just been issued, from which the following are extracts:

"The Northern High Level Sewer is fast approaching completion. The line will extend from near the foot of Hampstead Hill to a point on the River Lee, near Old Ford, being with the branches about eight miles in length. When finished it will complete the interception of the waters descending from the high grounds of Highgate and Hampstead, and, while effecting a general improvement in the local drainage throughout its entire length, it will relieve Hackney and the adjacent districts from the evils arising from the foul condition of the open watercourse by which they were intersected. The high level sewer south of the Thames was commenced on the 26th of December, 1859. This work will extend from High Street, Clapham, to Deptford Creek, a length of about 9 miles, 2,940 feet, traversing in its course Stockwell, Camberwell, Peckham, and New Cross. The course which will be ultimately selected for the low level sewer north of the Thames will depend upon the decision at which Parliament may arrive with respect to the embankment of that river. The Board have on former occasions expressed the opinion that it would be most important to construct this sewer in conjunction with a Thames embankment, but whether that can be accomplished or not depends on the provision which may eventually be made by Parliament for defraying the cost of the embankment. As the period within which the main drainage works are to be finished is fixed by Act of Parliament—viz., the 31st of December, 1863, it becomes of extreme urgency that an early solution of this important question should be arrived at. The Board have directed their attention to the disposal and utilisation of sewage-matter, and, though nothing has been submitted to them which enables them to speak with any definiteness upon the subject, they are willing to hope that the period may not be far distant when some satisfactory results may be arrived at which may augment the means at present available of adding to the fertility of the soil, and at the same time become a source of revenue to the ratepayers. As regards the Southwark and Westminster communication, the Board have proceeded with as much expedition as was practicable for obtaining possession of the property required for the improvement. The sum paid or agreed to be paid for the property in the locality in question during the year ending the 25th of March for the purposes of the street was 110,374*l.* 17*s.*, making the total expenditure under this head up to the same date, 222,232*l.* 11*s.* 8*d.*, the claims amounting to 306,512*l.* 8*s.* 1*d.* These included 102 freehold and copyhold estates, and 71 leasehold interests and goodwills. The ground for the Covent Garden approach has, with one exception, been entirely cleared. The claims for this property amounted to 157,725*l.* 17*s.* 8*d.*, which have been settled for 92,849*l.* 14*s.* 8*d.* Towards the end of this year the new offices for the Board will be finished, and the improved passage into St. James's Park from Spring Gardens completed. The receipts of the Board during the year ending 25th March, 1860, amount to 670,193*l.* 14*s.* 7*d.*, while the payments during the same period amounted to 594,288*l.* 14*s.* 8*d.*"

THE GREAT BELL.—A Parliamentary paper has been issued containing reports on the condition of the great bell by Dr. Tyndall, Dr. Percy, and the Astronomer Royal. These reports relate principally to the cavities, cracks, and composition of the bell, and to other matters of a technical or scientific character. They all agree that there is as yet no sensible alteration in the quality of the sound which the bell gave out before the crack was discovered, and Mr. Turle, the organist of Westminster Abbey, has expressed an opinion to the same effect. It appears from the general tenor of these reports that there is some probability of another attempt being made to use the bell.

UNIVERSITY OF LONDON.—The Council of this university have given notice that the second examination for the new degree of Bachelor of Science, will commence on Monday, the 22d of October, at Burlington House. Candidates will be examined in mechanics, natural philosophy, organic and inorganic chemistry, animal physiology, geology, palæontology, logic, and moral philosophy. The examination for honours, in connection with this degree, will take place in the following week. The examination for the degree of Doctor of Science will take place annually within the first fourteen days of June.

PACKET CONTRACTS.—The Committee on Government Contracts with the Steam packet Companies for the conveyance of mails by sea have made their first report, leaving telegraphic contracts for a second, which is to follow. The Committee state that the Admiralty enter into these contracts, but the Treasury have the power of prescribing their terms and of communicating with the Post Office and Colonial Office on the questions involved, but there is no proper concert between these departments, each of which has acted in several important cases without a knowledge of what the others have done or sanctioned. In the case of the Dover contract, the Committee state that it was extended in 1855 by the Admiralty without the sanction of the Treasury, which was essential as the only legitimate authority for such an act; but when the Committee came to investigate the grounds of the renewal, "the minute and other important papers were missing!" With regard to the Canadian and United States contracts, of which full details are given, the Committee state that the result of the arrangements entered into with the Cunard, the Lever, and the Montreal Companies, is that England and Canada are subsidising rival lines. They consider that these and other defects of administration must be remedied in future transactions, and that the responsibility of the Treasury should be complete and effective. Lastly, they record their conviction that it is quite practicable to dispense with large subsidies in cases where ordinary traffic supports several lines of steamers, and that, in the circumstances which have for some years existed in regard to the communication between this country and North America, no such subsidies are required to secure a regular, speedy, and efficient postal service.

ANCIENT COINS.—The finding of gold, silver, and copper coins, ornaments, and other relics, having led to considerable confusion and dissatisfaction among the persons finding and those claiming a right to them, her Majesty's Government have issued, through the Secretary of State for the Home Department, the following instructions to the chief constables in the provinces:—

"Whitehall, Aug. 27.

"Sir,—I am authorised by Secretary Sir George Lewis to inform you that the Lords Commissioners of the Treasury have been pleased to authorise the payment to finders of ancient coins, gold or silver ornaments, and other relics of antiquity in England and Wales, of the actual value of the articles on the same being delivered up for behoof of the Crown, and I am to request that you will instruct the police officers of your county to give notice of the instructions of her Majesty's Government, and to inform all persons who shall hereafter make discoveries of any such articles, that on their delivering them to the sheriff they will receive from the Treasury rewards equal in amount to the full intrinsic value of the articles. In all cases where it shall come to the knowledge of the police that such articles have been found, and that the persons having found them refuse or neglect to deliver them up, Sir George Lewis desires that measures may be taken for their recovery, and that information may be forwarded to him.—I am, &c.,

G. CLIVE.

NORTH ATLANTIC TELEGRAPH.—A letter from Captain Allen Young, dated Haldersvig, Aug. 7th, states that the Fox was on the point of starting for Iceland, after a successful survey of the Faroe Isles. All well on board.

SIR BENJAMIN BRODIE has lately undergone an operation on his eyes, which had become impaired either from advancing cataract or glaucoma. It is understood that the operation on at least one eye has failed.

NEW LONDON CHURCHES.—In addition to the new church about to be erected in Mayfair, as stated in our last Number, several others are in progress of completion in different parts of the metropolis. The new church of All Saints, Kensington Park, is to be consecrated on Thursday, November 1. The Rev. John Light, M.A., late curate of Ashton-under-Lyne, has been appointed to the incumbency.—A new church, dedicated to St. Luke, is erecting near King's Cross in one of the worst districts of the parish of St. Pancras. The Rev. C. H. Andrews, late curate of St. Pancras, has been nominated incumbent.—In the parish of Paddington a new church is to be erected for the extensive district of St. John. The Rev. G. F. Prescott, M.A., formerly curate of Little Marsden, Lancashire, will be the incumbent.—Two new churches are to be erected in Westminster, one of them, dedicated to St. Peter, being at present in progress in Great Windmill Street, at the top of the Haymarket, in the centre of a very poor district. A site has been secured, and plans prepared for another new church, to be dedicated to St. James the Less.—A new church is rapidly approaching completion in Onslow Square, of which the Rev. Capel Molyneux, M.A., chaplain of the Lock Hospital, has been nominated the incumbent.—In the parish of Clerkenwell a new church (Christ Church) has just been commenced in Penton Street, Pentonville, of which the Rev. Dr. Courtenay will be the incumbent.—Another church is to be erected in Baldwin's Gardens, Gray's Inn Lane, the poorest part of the parish of St. Andrew, Holborn.—Holy Trinity Church, Knightsbridge, will be shortly consecrated, the Rev. Dr. Wilson, head master of St. Peter's Collegiate School, Eaton Square, being the incumbent.—A new church is to be built in Penn Street, Hoxton, as soon as a district can be constituted from the parish of St. John's, Hoxton, containing at present about 25,000 people, with two churches and five clergymen.—New churches are also to be commenced, as soon as circumstances will admit, in Poplar (at the junction of North Street and the East India Road), and in Bethnal Green.

THE PREFERMENT OF THE REV. F. D. MAURICE.—On the incumbency of St. Peter's Church, Vere Street, becoming vacant a few weeks since by the death of the Rev. Edward Scobell, the Right Hon. W. Cowper, First Commissioner of Works, to whose department the appointment belongs, nominated the Rev. Frederick Denison Maurice, M.A., of Exeter College, Oxford, and chaplain of Lincoln's-Inn, to the vacant benefice. The appointment was strongly condemned by a considerable body of the clergy, on the ground that Mr. Maurice had taught unsound doctrines at King's College, and a memorial numerously signed was presented to the Bishop of London to refuse him institution. His lordship declined to adopt this course, and Mr. Maurice is now in full possession of his benefice. An address is about to be presented to him, signed by clerical and lay members of the Church of England, expressing their

gratification at his appointment, and stating that though they differ from him in some of his views as they do from each other, they consider him not only as one of the most learned theologians of the day, but more particularly as a wise and benevolent co-operator with the working classes of the community. The address is signed by the Chancellor of the Exchequer, Earl de Grey and Ripon, Lord Richard Cavendish, the Bishops of St. David's and Labuan, the Deans of Westminster, Canterbury, Ely, Hereford, and Chichester, Canon Stanley, Mr. Alfred Tennyson, Sir J. Kay Shuttleworth, Bart., Sir E. Strachey, Bart., Lord Lyttelton, the Earl of Airlie, Lord Monteagle, Mr. Chichester Fortescue, M.P., Mr. Bazley, M.P., Mr. Cavendish Bentinck, M.P., Mr. C. Buxton, M.P., Mr. Malins, M.P., Mr. Puller, M.P., Mr. O. Ricardo, M.P., Mr. Rich, M.P., Mr. Stirling, M.P., Sir Lawrence Peel; the Rev. Dr. Jacobson, Regius professor of divinity in the University of Oxford; the Public Orator at Cambridge, the Head Masters of Harrow, Rugby, Shrewsbury, Marlborough, Kidderminster, Leeds, Nottingham, Hereford, Worcester, and other schools; the Sub Dean of her Majesty's Chapel Royal; the Rev. Charles Kingsley, Regius professor of modern history at Cambridge; the masters of Downing and Sidney Colleges, Cambridge, Mr. Tom Taylor, Canon Cureton, Prebendaries Cook, Coleridge, Sedgwick, Thompson, Heaviside, Musgrave and Melvill; Professor Perowne; Sir F. Palgrave, deputy keeper of the public records; Mr. Pollock, master of the Exchequer; Mr. Nassau Senior, late professor of political economy at Oxford; and a large number of college tutors and beneficed clergymen.

MEMORIAL TO MR. PUGIN.—The Dean of Canterbury, Sir Edward Cust, Bart., Archdeacon Thorp, Mr. Charles Barry, Mr. T. D. Acland, Mr. Beresford Hope, and other gentlemen, have been appointed a committee for the purpose of founding a travelling studentship in architecture to commemorate the services of the late Mr. Pugin in the promotion of true principles of mediæval architecture. It is proposed that the interest of the fund shall be awarded to an architectural student in such manner and at such periods as may hereafter be decided, and be expended in travelling in the United Kingdom, and in examining and illustrating its mediæval architecture, sculpture, and painting. About 300*l.* has been subscribed. Mr. Beresford Hope and Mr. Gilbert Scott will act as treasurers of the fund, and the Royal Institute of British Architects will be its trustees.

EXECUTION OF THE WALWORTH MURDERER.—The execution of William Godfrey Youngman for the murders of his mother, two brothers, and sweetheart, took place on Tuesday morning in front of Horsemonger Lane gaol in the presence of 30,000 persons. Since the execution of the Mannings, nearly 11 years ago, at the same place, no crowd half so vast has assembled in London at a similar spectacle. The great bulk of the people stood in a compact mass in the limited area in front of the prison, in all the little adjacent streets which commanded a view, however remote, of the gallows, and hundreds clustered on the house tops. A considerable number were half-grown men, boys, and women of the lowest class, many of whom had assembled in front of the prison so early as 9 o'clock on the previous evening, and passed the night upon the spot. As the morning advanced the crowd continued to augment, until it reached proportions with which the police, numerous though they were, were but little able to cope; but the general demeanour of the mob on the whole indicated an improvement upon that of kindred gatherings for some years past. For some time after his trial the convict appears to have been buoyed up with the hope that his sentence would be commuted, and it was not until Saturday, when an answer to a memorial he had addressed to the Home Secretary arrived, to the effect that the law must take its course, that he regarded his fate as irrevocable. On Saturday evening during the temporary absence of one of his keepers, he rushed out of his cell, shutting the door upon the other keeper, but the lock did not catch, and the keeper whom he thought he had locked in having given an alarm, he was caught at the end of the corridor and taken back to his cell. On being asked why he had so conducted himself, he replied merely for a "spree;" but on mentioning the circumstance to his father, brother and two sisters who visited him on Monday, he stated that he had intended to destroy himself, if possible, by throwing himself over the balustrades. The opinion of the prison authorities is that he had an idea of being able to effect an escape. The interview with his father, brother and sisters took place in the presence of the governor and the chaplain, and was for some time extremely painful, from an unseemly altercation in which the convict and his father became involved He upbraided his father in bitter language with having treated him ill, and with having been a bad husband to his mother and a bad father, lashing himself at last into an ungovernable rage. The father retorted upon him, and a scene of mutual recrimination ensued, which became so fierce that the Governor was obliged to interfere by recommending the father to leave the cell. He also complained with intense bitterness of the evidence given against him at the trial by Mr. Spice, landlord of a public-house in Bermondsey Street, adding that the only thing he wished was that he could get hold of him and strike off his head. In answer to the questions of his family, he reiterated the declaration he made from the first, that his mother murdered his two brothers and his sweetheart, and that he killed her in self-defence. After their departure the governor and the chaplain spent a considerable time in vain endeavours to induce him to relieve himself by confessing the crime, upon which he did not, as before, assert his innocence, but, on the contrary, maintained a strict silence, leaving an impression on the minds of the governor and the chaplain that it was a tacit assent to the justice of his sentence. On being pinioned for execution a death-like pallor suffused his countenance, but he was nevertheless quiet and collected, and ascended the drop with a firm step. There, on confronting the vast mass of human beings, he looked wild and startled, but, recovering his composure, he allowed himself to be placed on the drop, and, with evident fervour and an audible voice, he followed the chaplain in a prayer, clasping his hands in unmistakeable devotion. For a moment he paused to request the executioner, who was adjusting the noose, to pinion his legs, which was done; and after thanking the chaplain for his kindness and requesting him to give his love to his brother and all at home, the drop fell and he died in a few minutes. At 10 o'clock the body was cut down and buried, towards evening, within the precincts of the prison.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday the 1st September were 1018. Deducting from the returns the deaths from cholera that occurred in the 35th week of 1854, the average number of deaths in the corresponding weeks of the 10 years 1850-9, corrected for increase of population, was 1149. The present return is therefore 131 below the average. During the week the births of 944 boys and 905 girls, in all 1849 children, were registered in London. In the 10 corresponding weeks of the years 1850-59, the average number was 1586.

Provincial.

BLACKPOOL.—Mr. John Greigg, surveyor for this town and district, was arrested on Saturday in one of the New York liners at Liverpool, on the charge of embezzlement. Mr. Scott, of the Liverpool detective force, having gone on board the liner in search of another party, was struck with some suspicious appearances on the part of the prisoner, who was passing on board under the name of Morton. Having ascertained in the course of conversation that he came from Blackpool, the officer telegraphed to this town, and in reply was directed to arrest the prisoner. On being taken into custody, he appeared astounded at the suddenness of the capture, but at once admitted that his name was Greigg. It was then found that, in addition to the first-class passage taken for himself for New York in the name of Morton, there was another for Mrs. Morton, who turned out to be a Miss Nickson, the keeper of a boarding-house in Blackpool, a young lady 18 years of age, and of attractive appearance. The prisoner has a wife living in Blackpool.

FROME.—The memorial from Bath praying for a special commission to investigate the Road murder has been presented to Sir George Lewis, the Home Secretary, by Mr. Tite, one of the members for that city. Sir G. Lewis, in reply, stated that looking to the grave importance of the subject and the influential names attached to the memorial, he would give the matter his most anxious and patient consideration. Another memorial praying for a special commission has been extensively signed at Frome, Trowbridge, Warminster, Westbury, and the adjacent villages. The first person to whom this memorial was presented for signature was Mr. Kent himself, who at once expressed his willingness to sign it, and added that his whole household would be glad to sign it also. His solicitor, however, advised that, considering his position as a Government officer, it would be inexpedient for him to do so, especially as it was Mr. Kent's intention to proceed to London, in company with his solicitor, personally to urge its prayer. Meanwhile Sir G. Lewis has communicated to the memorialists that there is a difficulty in complying with their prayer for the issuing of a special commission, as such commissions are accompanied with an indemnity to the witnesses examined under them. In these circumstances Messrs. Slack & Simmons, solicitors, of Bath, have been instructed to re-examine the witnesses who were produced before the coroner and magistrates, and to report the result of their inquiry to the Home Secretary. The inquiry was commenced on Monday, and is conducted in private.

NORTHAMPTON.—An extraordinary case of courtship by a married woman passing as a man has been brought to light within the last few days at Moulton, in this county. About seven years ago a girl of 16, named Catherine Coome, married her first-cousin, a painter of the same name, at Cheltenham, of which town they were both natives. After some time they went to reside at Bedford, where the wife assumed male attire and the name of Fred, and passed as the son of her husband, working with him at his trade. In the same house with them lodged a Miss Smith, a straw bonnet maker, who fell in love with Fred, who reciprocated the affection, and passed himself off and was received as Miss Smith's sweetheart. The intimacy lasted five months, Fred sleeping every night with the painter, and Miss Smith entertaining no doubt whatever that her lover was a man. Three weeks ago they removed to Moulton, whither they were followed by Miss Smith's father, who had received a letter from Cheltenham stating that his daughter was keeping company, not with a man, but with a woman, and that the supposed father of the latter was in reality her husband. On being taxed with the deception she admitted the truth of the charge. The police then took her into custody, and escorted her to this town, when she was brought before the county magistrates and remanded. She is 23 years of age, of middle height, slender, and of handsome features. Her hair was closely cropped, and she was dressed in a black glazed cap, cloth coat, grayish vest and trousers, and Balmoral boots. The motives for her conduct are hitherto inexplicable, and even the husband, who brought her food to the station-house, did not attempt to unravel them.

NOTTINGHAM.—Mr. E. G. Shipley, colliery proprietor, of Giltbrooke, near this town, who served the office of sheriff in 1856, was on Tuesday last committed by the Mayor and magistrates for trial at the assizes on the charge of forging a bill of exchange for 67*l.* 16*s.* upon Mr. Thomas Pacey, coal merchant, of Fiskerton, near Newark. The magistrates refused to take bail, and bound each of the two principal witnesses in 500*l.* to prosecute. On Thursday he was again charged with five other cases of forgery, and was fully committed for trial on all the charges.

PONTEFRACT.—A shocking murder was perpetrated at Upton, a village half-way between this town and Doncaster, on Sunday afternoon. The murdered person was a young woman named Elizabeth Mitchell, a farm servant of Mr. Spink, of Upton farm. Mr. and Mrs. Spink were from home on Sunday, and on returning in the evening they found the poor girl lying upon the floor of the coal-house quite dead, death being the result of a gunshot wound in the back of her head. A young man named Thorpe, a farm servant in the same house, who had been quarrelling with deceased on the evening of the murder in the presence of a young woman who took tea with them, has been apprehended on suspicion, and one of Mr. Spink's guns to which he had access was found to have been recently fired. The prisoner's smock was also found to be stained with blood. A post mortem examination of the body has been made, and a large number of shot have been extracted from the brain corresponding with some which had been removed from Mr. Spink's drawer. The position in which the body was found favours the supposition that after the departure of the young woman the prisoner again quarrelled with deceased; and having possessed himself of the gun, she became alarmed by his threats, and attempted to escape by rushing out of the back door. Unfortunately, she was not sufficiently rapid in her movements, and the murderer must have deliberately shot her in the back as she was entering the coal-house in her attempt to get away from him. The deceased on receiving the shot fell upon her face, upon which her murderer coolly left her, and returned the gun to the place where he had obtained it. At the inquest on Wednesday the jury, after an investigation of five hours, returned a verdict of Wilful Murder against the prisoner, who was committed for trial at the assizes.

Ireland.

MR. SMITH O'BRIEN ON THE VOLUNTEER MOVEMENT.—Mr. Smith O'Brien has published a letter advocating the extension of the Volunteer movement to Ireland. He complains that his fellow-countrymen "are to be treated as children, to whom sharp-edged implements are denied, lest they should injure each other, and that whilst the population of England and Scotland are encouraged to prepare themselves for the defence of their country." He suggests that the Government in withholding from Ireland the liberty to form volunteer corps, purposely design to leave Ireland defenceless in order to attract the invader, and make that part of the kingdom the battle-ground. He recommends a great Volunteer physical force demonstration in order to overawe the Government into a repeal of the Arms Act. "The existing law does not prevent individuals, except in proclaimed districts, from learning the use of arms. The law prohibits regimental training, but it does not impose a penalty upon the practice by individuals of the art of rifle shooting, and I conceive that any number of persons may meet to try their skill as marksmen. The organization of such marksmen into military companies would be effected in a few days. If any effort should be made by the Legislature to put a stop to such training, I venture to hope that Irishmen of all persuasions would resent such an attempt, and would show that, as it is impossible to imprison a whole nation, so is it dangerous to contravene the wishes of a united people."

NATIONAL EDUCATION.—A document has been signed by 66 incumbents and 35 curates of the united dioceses of Derry and Raphoe—more than two-thirds of the united dioceses, declaring that, as ministers of the Church, it is their duty to co-operate with the State in the work of educating the poor, so far as they can do so without violation of duty, and that this is the more incumbent on them at the present crisis, when declarations and demands have been put forward on the subject which appear to them unreasonable in themselves, and opposed to the truest interests of the people.

EXECUTION IN THE COUNTY CLARE.—A man named Hederman was executed last week in the county Clare

for murder. This is the second execution in Ireland in less than a month.

Scotland.

THE QUEEN'S PARK MURDER.—The officers, non-commissioned officers, and privates of the 13th Light Dragoons have offered a reward of 100*l.* to any person giving such information as shall lead to the apprehension and conviction of the person or persons who murdered Elizabeth Slater on the 19th ult. in the Queen's Park.

Railways.

FATAL COLLISION ON THE LANCASHIRE AND YORKSHIRE.—About 1 o'clock on Tuesday morning a terrible accident occurred on the East Lancashire section of this railway, near Helmshore station, about 18 miles north of Manchester. On the previous day a great number of excursionists had gone to Manchester from Colne, Burnley, Accrington, and other towns on the line to attend a *fête* at the Bellevue Gardens, and three heavy trains were necessary to convey them back again. They started from Manchester before 11 o'clock at night, with about 2500 passengers in the three trains. The first consisted of about 14 carriages and arrived safely. The second train, which had 31 carriages, arrived safely at the Helmshore station, where some of the passengers alighted. Helmshore is situated on a steep incline, rising in some places one yard in 52, which extends nearly from Ramsbottom to Haslingden, a distance of four to five miles. As the train was again put in motion at Helmshore the coupling chains of a Birkenhead Company's carriage (which had been lent to the Lancashire and Yorkshire Company) gave way from some defect in the iron, and owing to the fracture 14 of the carriages began to move backwards down the incline, at first slowly, but with gradually accelerating force, towards Manchester. Immediately the backward movement was observed one of the guards jumped again on his van, and applied his break, but the other guard, being at the front of the train assisting the passengers to alight, was of course unable to apply the break under his charge. One break being insufficient to arrest the 14 detached carriages, they rolled back 400 yards, when they came into collision with the third train, which had left Manchester 20 minutes after the second. Three carriages of the second train were smashed to atoms, and several of the succeeding ones were much shattered. The engine-driver and stoker, having done all they could to reverse the third train, lay down upon the bed of the engine and escaped without injury, though some portion of the *débris* of the first carriages they ran into passed over their heads. In the ruins of the three carriages 10 persons were found killed, and 42 severely injured with fractured limbs and contusions, the total number who suffered injuries more or less severe being nearly 100. The unfortunate persons were all of the operative class, from Burnley, Accrington, Baxendale, Butterfield, Barrowfield, Haslingden, Symondstone, and Nelson. The inquest was opened on Wednesday at Helmshore, and after the bodies had been identified, was adjourned for a few days.

THE LATE COLLISION ON THE SHREWSBURY AND HEREFORD.—Mr. Jobson, corn merchant of Shrewsbury, died on Sunday night from the effects of the injuries he sustained in the collision of Monday week between a passenger train and a goods train at Woofferton, near Ludlow. He received a concussion of the brain, and it was feared from the first that the consequences would be fatal.

PREVENTIBLE RISK IN FAST RAILWAY TRAVELLING.—Colonel Yolland's report to the Board of Trade on the accident at Hatfield in April, when a Great Northern train after passing over a rail that had been turned got off the line, and Mr. Pym, a passenger, lost his life, has recently been published, and is of peculiar interest at this time, when a similar want of break power on an incline has led to the disastrous accident on the East Lancashire, described above, though the report singularly enough refers to that line as being supplied with an amount of break power which had made it an example to all other lines in the kingdom. The report states that the whole weight of the train was about 100 tons, and the total weight on the wheels to which break blocks could be applied was but about 26 tons. Now a train at Hatfield, travelling down an incline of 1 in 200 at the rate of 60 miles an hour (a frequent rate of that train at that point), could not have been stopped by these breaks in less than three-quarters of a mile. Colonel Yolland says this is a very unsatisfactory condition attending fast railway travelling, and that such quick trains ought to be furnished with an amount of break power which will enable them to be stopped in a third of that distance, and that this can be done by means of continuous breaks, which augment the retarding power three or four fold. Two years ago the Board of Trade sent to all railway companies a report of the successful working of such breaks on the East Lancashire Railway, where a train of 90 tons, supplied with 80 per cent. of break power, travelling at the rate of 53 miles an hour down an incline of 1 in 120, was stopped after running 235 yards. The carriage in which Mr. Pym rode was not thrown over on its side until it was 408 yards from the spot where the accident occurred.

Obituary.

HIS EXCELLENCY SIR HENRY GEORGE WARD, G.C.M.G. died of cholera at Madras on the 2d ult, a few weeks only after he had succeeded Sir C. Trevelyan as Governor of that Presidency. He was the only son of the late Mr. Robert Plumer Ward, of Gilston Park, Herts, by his first wife, daughter of Mr. Maling, of West Henningham, Durham. He married in 1824 the second daughter of Sir J. E. Swinburne; was Minister Plenipotentiary to the Mexican Republic; Secretary to the Admiralty from 1846 to 1849; Lord High Commissioner of the Ionian Islands from 1849 to 1855, when he was appointed Governor and Commander-in-Chief of Ceylon. He was also proprietor of the *Weekly Chronicle* from its establishment up to 1849, and took an active share in railway enterprise. He was M.P. for St. Alban's from 1832 to 1837, and for Sheffield from 1837 to 1849.

THE DOWAGER COUNTESS OF CRAVEN died on the 26th ult at her residence, Hampstead Marshall, near Newbury, in her 78th year. She was, with the single exception of Lady Essex, the last of the coronetted ladies who were formerly connected with the public stage and was well known on the London boards, half a century ago as one of the most popular favourites of the day, under her maiden name of Miss Louisa Brunton. She was the daughter of Mr. Brunton, long connected with the theatre at Norwich, and in 1807 she married the late Earl of Craven, by whom she had three sons and one daughter, of whom the present Earl of Craven and his youngest brother are the only survivors.

LADY ADELA IBBETSON, youngest daughter of the Countess Dowager of Jersey, and sister of the late Princess Nicholas Esterhazy and Lady Clementina Villiers, died on Tuesday at Osterley Park, the Countess of Jersey's seat, near Hanwell, in her 32d year. She was the youngest of the family of the late Earl of Jersey; was born in 1828, and married, in 1845, Captain Charles Parke Ibbetson, then of the 11th Hussars.

MRS. ABBOTT LAWRENCE, widow of the late Hon. Abbott Lawrence, formerly Minister of the United States at the Court of St. James's, died on the 20th ult. at Boston, United States, after an illness of three weeks.

LIEUT.-GENERAL HORATIO GEORGE BROKE, Colonel of the 88th Foot, died on the 30th ult. in his 71st year. He had seen much service, having taken part in the expedition to Copenhagen in 1807, and in that of the following year to Portugal, and being present at the battle of Vimiera, the advance into Spain, and retreat under Sir John Moore. In 1809 he served on the Walcheren expedition. In 1811 he joined the Light Division on the retreat of Massena from the lines of Lisbon, and served in Spain till the end of the war. In 1812 he joined Sir H. Clinton as Aide-de-Camp at the siege of Burgos, and was severely wounded, being shot through the lungs while serving with him at the battle of Orthes. He also served with the Army of Occupation in France from 1815 to 1818 as Aide-de-Camp to Sir H. Clinton, and received the war medal with four clasps for his services at Vimiera, Salamanca, Nive, and Orthes.

MAJOR-GENERAL LOCKYER, C.B., K.H., died on the 30th ult., while on his way home from Ceylon, of which colony he was Commander-in-Chief and acting Lieut.-Governor. He entered the army in 1813, and served in the Peninsular campaign with the 71st Regiment from 1813, to the end of the war, including the battles of Nivelle, Nive, Orthes, Aire (where he was severely wounded), and Toulouse, besides all the minor affairs after the army entered France. In 1854 he sailed for the Piræus, in command of the British contingent directed in conjunction with a French force for the occupation of Greece. In the November following he joined the army in the Crimea, and was placed in command of the 2d Brigade, 2d Division, and remained with the army the whole of the winter and spring of 1854-55. He received the war medal with three clasps for his services in the Peninsula, the Crimean medal and clasp for Sebastopol, the decoration of the Legion of Honour, and the order of the Medjidie of the 3d class.

MAJOR THOMAS MOORE, R.M., died on the 27th ult. in his 75th year. He entered the Royal Marines in 1801, and served in the Amphion frigate from 1803 to 1811; was at the capture of four Spanish frigates off Cape St. Mary's; in an action with a flotilla of gun-boats in Gibraltar Bay: in cutting out a schooner in Corsica; and in a severe action with a French frigate in the Bay of Rosas in 1808. He served at the capture of Pescara, Cortelazza, and Grao, and was present at the capture of several other towns in the Adriatic. He was senior officer of marines in the action off Lissa in 1810, and was twice severely wounded and twice rewarded from the Patriotic Fund. He had been in upwards of 30 successful actions with the enemy, and was frequently mentioned in the despatches for his gallantry. He had received the war medal with three clasps.

COMMANDER EDWARD GARRETT, R.N., died suddenly on Sunday morning at Greenwich Hospital. He was lieutenant of the Mars, 74, at Trafalgar, where he was wounded, and was in the same ship at the capture of the frigate Rhin and four others. He was at the taking of Copenhagen in 1807, and senior lieutenant of the Onyx at the capture of the Dutch brig-of-war Manly in 1809. He was appointed a commander in Greenwich Hospital in 1844.

WILLS.—The will of Lady Noel Byron has been sworn under 60,000*l.* personalty; the Dowager Lady St. John (Lady Vaughan), 45,000*l.*; Baron de Hochepied Larpent, of Holmwood, 5000*l.*; Gen. Sir G. J. Harding, K.E., 900*l.*; Mr. Charles Few, solicitor, of Henrietta Street, Covent Garden, 45,000*l.*; the Hon. John William Fortescue, formerly M.P. for Barnstaple, and second son of Earl Fortescue, 12,000*l.*; Sir William Horne, Q.C., 30,000*l.*

Miscellaneous.

THE CENTRAL ARSENAL.—The following details of the investigations of the National Defence Commissioners respecting the central arsenal which it is intended to establish on Cannock Chase in Staffordshire, will be read with interest. Towards the end of November last, the Government decided that it was desirable that the store of guns and warlike *matériel* should no longer be concentrated in a place so exposed as Woolwich, and requested the Commissioners to report upon a suitable site, pointing in particular to Weedon, which had been recommended by a previous commission. The Defence Commissioners, after a visit to Weedon and a careful examination of the Government establishments and the surrounding country, came to the conclusion, which they reported to the Secretary for War, that the place did not afford facilities for such defence by intrenchment as would be necessary to give security to the valuable public property which it was proposed to deposit there; that the defensive works would be divided into four detached portions, in as many deep valleys, and that the fall of any one part would give an enemy fatal command of the proposed arsenal. On the eastern and western sides, they said, it could not be defended from bombardment without such a development of fortification as would be justified only on the score of defending a place of most vital importance. Besides, they added, the buildings now existing at Weedon are of second-rate consideration, and the place is difficult of access from the sea. A new arsenal, they said, involving considerable outlay in fortification, as well as the maintenance of a large garrison, should be so situated as to form a rallying point for the defenders of the country in the event of London falling into the hands of an enemy. The commissioners subsequently reported their opinion that the proposed secondary arsenal should be complementary to Woolwich, that it should possess those properties in which the latter is deficient, that it should be situated nearly in the centre of the country, and, as far as possible, out of the reach of an enemy making a descent on our shores from any quarter. The district of Cannock Chase, in Staffordshire, is in their opinion the best that could be selected as regards its strategical position; besides possessing all the requirements for an internal arsenal in a very remarkable degree. The particular spot to which they direct attention is the highest plateau of that open moorland district, containing about 3000 acres, principally common land, having few enclosures, and possessing every capability for defence. It is divided, they say, from a district rich in coal, only by a "fault" on the upper side of which no minerals are found, and the land being gravel and sand, without any loam on the surface, is wholly unsuited for agricultural, and almost equally so for even grazing purposes, and may, therefore, they assume, be obtained at a moderate cost. The district, they add, is healthy, well supplied with water, and possesses excellent stone for building purposes; limestone is also abundant in the locality, and excellent clay for making bricks. It is, moreover, near to Wolverhampton, Walsall, Birmingham, and other great centres of the iron manufacture, and thus able to command an almost unlimited supply of skilled labour on an emergency. Being in the middle of Staffordshire they point to its central position with reference to seaports, while it is, at the same time, well retired from the coasts. They remark, also, on its being in the centre of an extensive system of railways and canals, requiring only to be connected by short branches to afford easy communication with every part of the kingdom. A locomotive railway, might, if desired, be carried round the enclosure. "On the west side the site would thus be connected with the Cannock Mineral Railway of the London and North-Western system, and by means of it with the Trent Valley Railway, near Rugeley, which runs to the ports of London, Liverpool, and Holyhead. On the east side the line will connect the proposed works with the South Staffordshire Railway, and by means of it will have another independent communication with the Trent Valley at Lichfield, and also with the Midland Railway, running to the ports of Bristol and Morecambe Bay on the west coast, and Hull and Great Grimsby on the east coast of England, and, by means of it and the Great Northern, with London and Edinburgh. On the south side it will join the Norton branch of the South Staffordshire Railway, and by means of it will form a junction with the London and North-Western and Grand Junction lines, and thus form another route to Liverpool and London. By means of the South Staffordshire it will form a junction with the mixed gauge lines of railway at Wednesbury, and thus secure another independent route to the north, south, and west of England. At Dudley it will join the Oxford, Worcester, and Wolverhampton Railway, which opens another route to the west and to South Wales. A canal may also be run round the enclosure, and join by means of locks with the Birmingham Canal, which is connected either by basins or branch canals with nearly every work in the manufacturing district of South Staffordshire, and is on the same level from Cannock Chase to Wolverhampton, Olbury, Smethwick, and Birmingham. It also communicates with the other canals of England, and affords access to London, Liverpool, Gloucester, and Hull."

SIR BENJAMIN BRODIE ON TOBACCO.—The following interesting letter from Sir B. Brodie on the use and abuse of tobacco appears in the *Times*:—

"Sir,—Having been applied to some time since to join in a petition to the House of Commons that they would appoint a committee to inquire into the effects produced by the prevailing habit of tobacco smoking, I declined to do so; first, because it did not appear to me that such a committee would be very competent to discuss a question of this kind; and secondly, because even if they were so, I did not see that it would be possible for Parliament to follow up by any act of legislation the conclusions at which they might have arrived. Nevertheless I am ready to admit that the subject is one of no trifling importance, and well worthy the serious consideration of any one who takes an interest in the present and future well being of society. From these considerations it is that I now venture to address to you the following observations. The empyreumatic oil of tobacco is produced by distillation of that herb at a temperature above that of boiling water. One or two drops of this oil (according to the size of the animal) placed on the tongue, will kill a cat in the course of a few minutes. A certain quantity of the oil must be always circulating in the blood of an habitual smoker, and we cannot suppose that the effects of it on the system can be merely negative. Still I am not prepared to subscribe to the opinion of those who hold that, in all circumstances, and to however moderate an extent it be practised, the smoking of tobacco is prejudicial. The first effect of it is to soothe and tranquillise the nervous system. It allays the pains of hunger, and relieves the uneasy feelings produced by mental and bodily exhaustion. To the soldier

who has passed the night in the trenches before a beleaguered town, with only a distant prospect of breakfast when the morning has arrived; to the sailor, contending with the elements in a storm; to the labourer, after a hard day's work; to the traveller in an uncultivated region, with an insufficient supply of food, the use of a cigar or a tobacco pipe may be not only a grateful indulgence, but really beneficial. But the occasional use of it under such circumstances is a very different matter from the habit of constant smoking which prevails in certain classes of society at the present day. The effects of this habit are indeed various, the difference depending on difference of constitution, and difference in the mode of life otherwise. But from the best observations which I have been able to make on the subject, I am led to believe that there are very few who do not suffer harm from it, to a greater or less extent. The earliest symptoms are manifested in the derangement of the nervous system. A large proportion of habitual smokers are rendered lazy and listless, indisposed to bodily and incapable of much mental exertion. Others suffer from depression of the spirits, amounting to hypochondriasis, which smoking relieves for a time, though it aggravates the evil afterwards. Occasionally there is a general nervous excitability, which, though very much less in degree, partakes of the nature of the *delirium tremens* of drunkards. I have known many individuals to suffer from severe nervous pains, sometimes in one, sometimes in another part of the body. Almost the worst case of neuralgia that ever came under my observation was that of a gentleman who consulted the late Dr. Bright and myself. The pains were universal, and never absent; but during the night they were especially intense, so as almost wholly to prevent sleep. Neither the patient himself nor his medical attendant had any doubts that the disease was to be attributed to his former habit of smoking, on the discontinuance of which he slowly and gradually recovered. An eminent surgeon, who has a great experience in ophthalmic diseases, believes that in some instances he has been able to trace blindness from amaurosis to excess in tobacco smoking; the connection of the two being pretty well established in one case by the fact that, on the practice being left off, the sight of the patient was gradually restored. It would be easy for me to refer to other symptoms indicating deficient power of the nervous system to which smokers are liable; but it is unnecessary for me to do so, and indeed there are some which I would rather leave them to imagine for themselves than undertake the description of them myself in writing. But the ill effects of tobacco are not confined to the nervous system. In many instances there is a loss of the healthy appetite for food, the imperfect state of the digestion being soon rendered manifest by the loss of flesh and the sallow countenance. It is difficult to say what other diseases may not follow the imperfect assimilation of food continued during a long period of time. So many causes are in operation in the human body which may tend in a greater or less degree to the production of organic changes in it, that it is only in some instances we can venture to pronounce as to the precise manner in which a disease that proves mortal has originated. From cases, however, which have fallen under my own observation, and from a consideration of all the circumstances, I cannot entertain a doubt that, if we could obtain accurate statistics on the subject, we should find that the value of life in inveterate smokers is considerably below the average. Nor is this opinion in any degree contradicted by the fact that there are individuals who in spite of the inhalation of tobacco smoke live to be old, and without any material derangement of the health; analogous exceptions to the general rule being met with in the case of those who have indulged too freely in the use of spirituous and fermented liquors. In the early part of the present century tobacco smoking was almost wholly confined to what are commonly called the lower grades of society. It was only every now and then that any one who wished to be considered as a gentleman was addicted to it. But since the war on the Spanish peninsula, and the consequent substitution of the cigar for the tobacco pipe, the case has been entirely altered. The greatest smokers at the present time are to be found, not among those who live by their bodily labour, but among those who are more advantageously situated, who have better opportunities of education, and of whom we have a right to expect that they should constitute the most intelligent and thoughtful members of the community. Nor is the practice confined to grown-up men. Boys, even at the best of schools, get the habit of smoking, because they think it manly and fashionable to do so; not unfrequently because they have the example set them by their tutors, and partly because there is no friendly voice to warn them as to the special ill consequences to which it may give rise where the process of growth is not yet completed, and the organs are not yet fully developed. The foregoing observations relate to the habit smoking as it exists among us at the present time. But a still graver question remains to be considered. What will be the result if this habit be continued by future generations? It is but too true that the sins of the fathers are visited upon their children and their children's children. We may here take warning from the fate of the Red Indians of America. An intelligent American physician gives the following explanation of the gradual extinction of this remarkable people:—One generation of them became addicted to the use of the fire water. They have a degenerate and comparatively imbecile progeny, who indulge in the same vicious habit with their parents. Their progeny is still more degenerate, and after a very few generations the race ceases altogether. We may also take warning from the history of another nation, who some few centuries ago, while following the banners of Solyman the Magnificent, were the terror of Christendom, but who since then, having become more addicted to tobacco smoking than any of the European nations, are now the lazy and lethargic Turks, held in contempt by all civilised communities. In thus placing together the consequences of intemperance in the use of alcohol and that in the use of tobacco, I should be sorry to be misunderstood as regarding these two kinds of intemperance to be in an equal degree pernicious and degrading. The inveterate tobacco smoker may be stupid and lazy, and the habit to which he is addicted may gradually tend to shorten his life and deteriorate his offspring, but the dram-drinker is quarrelsome, mischievous, and often criminal. It is under the influence of gin that the burglar and the murderer become fitted for the task which they have undertaken. The best thing that can be said for dram-drinking is, that it induces disease, which carries the poor wretch prematurely to the grave, and rids the world of the nuisance. But, unfortunately, in this, as in many other cases, what is wanting in quality is made up in quantity. There are checks on one of these evil habits which there are not on the other. The dram-drinker, or, to use a more general term, the drunkard, is held to be a noxious animal. He is an outcast from all decent society, while there is no such exclusion for the most assiduous smoker. The comparison of the effects of tobacco with those of alcohol leads to the consideration of a much wider question than that with which I set out. In all ages of which we have any record, mankind have been in the habit of resorting to the use of certain vegetable productions, not as contributing to nourishment, but on account of their having some peculiar influence as stimulants or sedatives (or in some other way) on the nervous system. Tobacco, alcohol, the Indian Hemp, the kava of the South Sea Islanders, the Paraguay tea, coffee, and even tea, belong to this category. A disposition so universal may almost be regarded as an instinct, and there is sufficient reason to believe that, within certain limits, the indulgence of the instinct is useful. But we must not abuse our instincts. This is one of the most important rules which man, as a responsible being, both for his own sake and for that of others, is bound to observe. Even such moderate agents as tea and coffee, taken in excess are prejudicial. How much more so are tobacco and alcohol, tending, as they do, not only to the degradation of the individual, but to that of future generations of our species. If tobacco smokers would limit themselves to the occasional indulgence of their appetite, they would do little harm either to themselves or others, but there is always danger that a sensual habit once begun may be carried to excess, and that danger is never so great as in the case of those who are not compelled by the necessities of their situation to be actively employed. For such persons the prudent course is to abstain from smoking altogether. Trusting that you and your readers will excuse me for having occupied so large a space in your columns, I am, sir, your obedient servant, "B. C. BRODIE."

BIRTHS.—On the 1st inst. at Dunskey, Scotland, Lady HUNTER BLAIR, of a son—28th ult, at the Rectory, Stoke-upon-Trent, Lady STAMER, of a son—28th ult, the Baroness DE ROEBECK, of a daughter—3d inst, at 5, Oxford Square, Hyde Park, the residence of her mother, Lady Grant, the wife of CLINTON F. HENSHAW, Esq., Rifle Brigade, of a daughter—26th ult, at Pamflete, Devon, Mrs. BULTEEL, of a son—31st ult, at 33, Pultney Street, Bath, the wife of T. K. BATEMAN, Esq., of a son and heir.

MARRIAGES.—On the 30th ult, at Uffculme, Devon, Capt. WILLIAM ARMYTAGE, Royal Navy, second son of the late John Armytage, Esq., to JANE SARAH, third daughter of Lord Bridport, and widow of the late Capt. Sir CHARLES HOTHAM, R.N., K.C.B.—28th ult, at West Ashton, CHARLES WILLIAM FORBES, of Moniack Castle, Inverness-shire, to JANE AGNES, third daughter of WALTER LONG, Esq., M.P., of Rood Ashton, Wilts—30th ult, at St. George's Church, Hanover Square, Major W. D. MACDONALD, H.M.'s 93d Highlanders, eldest son of Captain and the Hon. Mrs. Macdonald, of Sandside, Caithnessshire, to EMMA, youngest daughter of COLIN LINDSAY, Esq.—1st inst, at St. George's, Hanover Square, GEORGE FREDERICK, only surviving son of the Rev. S. G. CROMPTON, of Carlton, in the county of York, to MARCIA HENRIETTA MARY, daughter of CHARLES DOUGLAS HALFORD, Esq., of Grosvenor Square, and of West Lodge, Suffolk—4th inst, at Trinity Church, Clapham Common, HENRY KIMBER, Esq., of Wandsworth, Surrey, to MARY ADELAIDE M. DIXON, only daughter of Major-General Charles Dixon, R.R.E.—25th ult, at the British Embassy, Paris, the Baron VICTOR D'HUART, of Longwy Maselle, to ISABELLA FREDERICA, daughter of the late Colonel WILLIAM GRANVILLE ELIOT, R. H. Artillery, of Valebrook, Sussex—30th ult, at Leigh, Essex, the Rev. CHARLES GERRARD ANDREWES, youngest son of the late Rev. Gerrard Thomas Andrewes, to ELIZABETH CATHERINE, youngest daughter of the late Ven. WALKER KING, Archdeacon of Rochester.

DEATHS.—On the 27th ult, at Beaufort Castle, N.B., Mrs. FRASER, relict of Alexander Fraser, Esq, of Strichen, and mother to the Right Hon. Lord Lovat, aged 83—1st inst, at Wrottesley, the Hon. Mrs. EDWARD GOODLAKE, only surviving daughter of Lord Wrottesley, aged 28—3d inst, at Lamorbey, Kent, SUSAN EMILY, the only daughter of CHARLES HENRY and Lady LOUISA MILLS, aged 2 years and 5 months—28th ult, at her residence, Colton House, Staffordshire, ELIZABETH, relict of the late JOHN HILL, Esq., Attorney-General of the Chester Circuit, and grandson of the late Rowland Hill, Bart., of Hawkeston, Salop—29th ult, at the Priory, Mendam, Suffolk, ROSAMOND MARY, wife of Captain W. J. W. WOOD, and eldest daughter of the late Sir Alexander Dixie, Bart., of Bosworth Park, Leicestershire—25th ult, at Frankfort-on-the Maine, MARIA MARGARET ISABELLA, daughter of Sir FREDERICK FRANKLAND, Bart, aged 25—30th ult, at Tredunnoc Rectory, Monmouthshire, ELEANOR ISABELLA, wife of the Rev. JOHN PHILIP GELL, incumbent of St. John's, Notting Hill, and only child of the late Sir John Franklin, K.H., aged 36—29th ult, at Bower House, Dunbar, General CARFRAE, of Bower House, H.E.I.C.S.—30th ult, at Strangford House, Colonel JOHN RICHARD WARD, C.B, of Tubber na-Carrig, county Down, Ireland, aged 68—30th ult, at 13, Rutland Street, Edinburgh, Lieut.-Colonel HUMPHRY HAY, late of the Bengal Cavalry, third and sole surviving son of the late Robert Hay, Esq., of Spott, East Lothian—17th May, on board the Lady Clarendon, on her passage from India, MABEL; and on the 14th June, MAUD—the only daughters of Brevet Lieut.-Colonel MAYCOCK, 53d Regiment—30th ult, the Rev. RICHARD PANTON, D.D, Archdeacon of Surrey, Jamaica—3d inst, at 33, Gloucester Place Hyde Park, JOHN HERBERT KOE, Esq., Q.C., Treasurer of Lincoln's Inn for the current year, and Judge of the County Court Circuit No 37—26th ult., at his residence, Wicklow, HUGHES RIDGWAY DENTON, Esq., of the Middle Temple, London, barrister at-law, and one of H.M.'s Justices of the Peace for the county of Denbigh, aged 48—1st inst, suddenly, HENRY, eldest son of WILLIAM BRADBURY, Esq, of Whitefriars, aged 31—1st inst. at 1, Mount Place, of malignant sore throat, after a few days' illness, the Rev. JOHN MORISON SNODY, M.A., Chaplain of London Hospital, aged 33—23d ult, at Bolney Vicarage, Sussex, the Rev. JOSEPH DALE, M.A., Vicar of Bolney, aged 74.

Markets.

COVENT GARDEN, Sept. 8.

Foreign importations continue heavy. Dessert Cherries are over, but Morellos may now be had. Pears consist of Jargonelle, Windsor, and Beurré d'Amanlis. Peaches and Nectarines from hothouses are nearly over; very few as yet have come in from open walls. Grapes are abundant, and still maintain fair prices. Cob Nuts realise 1s. and Filberts 9d. to 1s. per lb. Peas are comparatively good and plentiful. Potatoes are for the most part badly diseased. Some good Mushrooms may be obtained, and excellent Tomatoes are being imported from the south of France. Cut flowers chiefly consist of Orchids Gardenias, Violets, Mignonette, Heaths, Kalosanthes, Geraniums, Lily of the Valley, and Roses.

FRUIT

Pine Apples, per lb., 3s to 4s	Green Figs, per doz., 3s to 6s
Grapes, per lb., 2s to 5s	Melons, each, 2s to 4s
Peaches, per doz., 8s to 15s	Plums, p. ½ sieve, 3s to 4s 6d
Apricots, per doz, 2s to 4s	Pears, per doz. 1s to 3s
Nectarines, do., 5s to 10s	Apples, per doz., 6d to 1s 6d
Cherries, p. lb., 1s to 3s	Oranges, per 100, 10s to 20s
Currants, per qt., 3d to 6d	Lemons, per 100, 10s to 15s

VEGETABLES.

Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per qrtn, 9d to 1s	Celery, per bundle, 1s 6d to 2s
Peas, p. bush., 2s to 3s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 4d to 6d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Veg. Marrows, p. doz., 6d to 1s
Cabbages, do., 1s to 2s	Shallots, per lb., 6d to 8d
Potatoes, p. ton, 100s to 160s	Garlic, per lb., 6d to 8d
— per bus., 4s to 5s 6d	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per cwt., 5s to 8s	Lettuces, Cos, p. score, 6d to 1s
Carrots, per bunch, 4d to 6d	Endive, p. score, 1s to 2s
Turnips, per bunch, 5d to 7d	Horse Radish, p. bun., 1s 6d to 4s
Spinach, p. sieve, 2s to 3s	Mushrooms, p. pott., 2s to 3s
Cucumbers, each, 6d to 1s	Parsley, p. 12 bunches, 2s to 4s
Artichokes, per doz., 4s to 6s	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Sept. 6.

Prime Meadow Hay	75s	to 80s	Clover	90s	to 115s
Superior do. (old)	90	112	New Clover	—	—
Inferior do.	50	60	Old second cut	80	100
New do.	50	90	Straw	30	36
Rowen	—	—		DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, Sept. 6.

Sup. Meadow Hay	115s	to 126s	Inferior Clover	95s	to 110s
Inferior do.	84	105	New do.	90	120
New do.	70	105	Straw	40	45
Superior Clover	120	130		JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, Sept. 6.

Fine old Hay	105s	to 110s	Fine old Clover	120s	to 126s
Inferior do.	40	80	Inferior do.	80	95
Prime New Hay	—	—	Fine 2d cut	—	—
Inferior do.	—	—	Fine New Clover	—	—
Straw	33	36	Inferior do.	—	—

HOPS.—BOROUGH MARKET, FRIDAY, Sept. 7.

Messrs. Pattenden & Smith report that the accounts still come very bad from most parts of the plantations. The market is quiet but firm, at late prices. Duty 45,000*l.* to 50,000*l.*

METROPOLITAN CATTLE MARKET.

MONDAY, Sept. 3.

We have a large increase in the supply of Beasts, and trade consequently is worse. A large proportion are of inferior quality, and several remain unsold. A fair clearance of choicest descriptions is effected, although at lower rates. Sheep are also more plentiful, and the average prices lower. A clearance cannot be effected. There is now scarcely any demand for Lambs. Calves are selling about the same as on Thursday. From Germany and Holland there are 1650 Beasts, 10,000 Sheep, and 245 Calves; from Spain, 61 Beasts; from Ireland, 500; and 2600 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	10	to 5	2	Best Long-wools.	5	0	— 5	2
Best Short-horns	4	8	— 5	0	Do. Shorn	..	..	to ..	
2d quality Beasts	3	6	— 4	0	Ewes & 2d quality	4	0	— 4	6
Best Downs and Half-breds	5	2	to 5	6	Do. Shorn	..	..	— ..	
Do. Shorn	..	..	—	..	Lambs	5	0	— 5	8
					Calves	4	0	— 5	0
					Pigs	3	8	— 5	0

Beasts, 6090; Sheep & Lambs, 30,100; Calves, 300; Pigs, 280.

THURSDAY, Sept. 6.

The number of Beasts fresh up from our grazing districts is by no means large. The majority of the supply consists of those left over from Monday and foreign. The same may be said also of Sheep. The trade is very dull, and it is with difficulty Monday's prices are obtained. Our foreign supply consists of 340 Beasts, 2800 Sheep, and 356 Calves; Milch Cows, 110.

Best Scots, Herefords, &c.	4	10	to 5	2	Best Long-wools	5	0	— 5	2
Best Short-horns	4	8	— 5	0	Do. Shorn	..	..	— ..	
2d quality Beasts	3	6	— 4	0	Ewes & 2d quality	4	0	— 4	6
Best Downs and Half-breds	5	2	— 5	6	Do. Shorn	..	..	to ..	
Do. Shorn	..	..	—	..	Lambs	5	0	— 5	8
					Calves	4	0	— 5	0
					Pigs	3	8	— 5	0

Beasts, 1170; Sheep & Lambs, 8710; Calves, 526; Pigs, 170.

BUTTER MARKET.—Sept. 7.

Best Fresh Butter .. .. 13s. per dozen lbs.
Second do. do. .. .. 12s. ,, ,,
Pork, 5s. 4d. to 5s. 8d. per 8 lbs.

BRITISH WOOLS.—LONDON, FRIDAY, Sept. 7.

The present beautiful weather, the aspect of the crops, and the quantity of corn being carried has put spirit into the trade, and a general disposition to obtain a fair price for wool is the result. The north country dealers who, frightened by the weather, had been anxious to sell their long wool at a reduction, are now recovering from their alarm, and lower prices are not thought of.

	s.	d.	s.	d.		s.	d.	s.	d.
South-down Hoggets	1	8	to 1	9	Leicest. Wethers	1	6	to 1	7
Half-bred ditto	1	8	— 1	9	Ditto Hoggs	1	7	— 1	9
Down Ewes	1	6	— 1	7	Combing Skins	—	—	—	
Kent Fleeces	1	6	— 1	7	Blanket ditto	0	6	— 0	8
					Flannel Wool	1	0	— 1	7

MARK LANE.—MONDAY, Sept. 3.

The supply of English Wheat at this morning's market included samples of 1000 qrs. of new, the quality of which was generally indifferent, and varied considerably—in weight from 55 lbs. to 63 lbs., and from 48s. to 70s. in price; the old Kent was sold in many instances at 3s. to 4s. per qr. decline, but Essex factors preferred to hold over rather than accept the reduction. In foreign only a limited business was transacted, and at a reduction of 1s. to 2s. per qr. Barley is a steady sale at the prices of this day se'nnight. Beans and Peas are unaltered in value. The Oat trade is quiet, and inferior qualities are 6d. per qr. cheaper. In Flour scarcely any business was transacted, factors not being disposed to sell at less money.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk.. White	60	—65	Red	60	—63
— — fine selected runs..ditto	63	—68	Red	62	—66
— — Talavera	65	—70			
— Norfolk	—		Red	—	
— Foreign	50	—70			
BARLEY, grind. & dist., 24s to 31s.. Chev.	38	—45	Malting .	36	—41
— Foreign..grinding and distilling	30	—38	Malting .	35	—40
OATS, Essex and Suffolk	20	—24			
— Scotch and Lincolnshire..Potato	26	—28	Feed ..	24	—26
— Irish .....Potato	26	—28	Feed ..	21	—24
— Foreign.....Poland and Brew	24	—27	Feed ..	20	—27
RYE	35	—38	Foreign .	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....34s to 40s....Tick	36	—43	Harrow .	36	—43
— Pigeon .....40s — 47s..Winds	—		Longpod	—	
— Foreign .....Small	38	—46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	40	—42	Suffolk .	36	—43
— Maple .... —s to —s ..... Grey	36	—38	Foreign .	30	—43
MAIZE .... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	54	—60			
— 2d do. ..... ditto	42	—52	Country.	42	—52
— Foreign .....per barrel	28	—34	Per sack	48	—52

FRIDAY, Sept. 7.

"During the past eight days the weather has been remarkably fine. Throughout the forward districts of the country harvest operations have been expedited by all available means, and considerable progress has been made with cutting the corn. Judging from the samples exhibited for sale, it is much to be feared that some has been stacked prematurely. The appearance of the new Wheat and low ebb of old English stocks leave no doubt that the demand and consumption of foreign during the ensuing year must be much larger than has been the case in either of the two preceding. The fine weather has produced its usual effect upon the Wheat trade of the kingdom, and on the sales concluded a decline of about 3s. per qr. has been general. Barley, Beans, and Peas have been in less active

request, and Oats in several instances are written 6d. per qr. cheaper. Foreign Flour has also been sold at a reduction of 1s. to 2s. per sack and barrel. On the Continent the weather appears to have been less settled than here, and the majority of the samples of new Wheat which we have seen (excepting some from Hungary, Spain, and the S E. of France), are ill adapted for importation or for the improvement of our own growth. The arrivals of grain-laden vessels from the South of Europe off the coast during the last eight days amount to 41 cargoes. The supply of English grain continues to be of the smallest amount, that of foreign this week has been moderate, and also of Flour. The attendance at to-day's market was almost confined to sellers of Wheat, and prices are consequently nominal for both English and foreign, the few retail buyers requiring a reduction of 2s. to 3s. per qr. upon the quotations of Monday last, which holders were not willing to concede. Barley, Beans, and Peas are unaltered in value. Oats are a slow sale at a decline of 1s. per qr. For Flour there is no demand.

ARRIVALS FROM Sept. 3 TO Sept. 7.

	Wheat.	Barley.	Oats.	Flour.
English ..	530 qrs.	40 qrs.	— qrs.	710 sks.
Irish	— ,,	— ,,	— ,,	— ,,
Foreign ..	9920 ,,	3710 ,,	15530 ,,	{ 4530 ,, 940 brls.

LIVERPOOL, Tuesday, Sept. 4.—We have had only a small attendance of buyers at our Corn Exchange this morning, and a good week's import and the more favourable reports of the harvest prospects have brought prices down about 3d. per cental on Wheat, and 1s. per barrel and sack on Flour, and only a moderate amount of business was practicable. Indian Corn met a fair consumptive inquiry at a reduction of about 6d. per qr. Oats and Oatmeal show no alteration in prices; we have a few samples of new in the market. Beans, Peas, and Barley bring former prices in retail. Linseed cakes are again 5s. per ton dearer, making the advance now about 30s. per ton from the lowest point. The market closed without animation.

FRIDAY, Sept. 7.—Grain market most inactive. Wheat 2d. lower since Tuesday. Flour 1s. lower. Beans quiet but steady. Indian Corn freely offered at 34s.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
July 28..	57s 0d	33s 1d	26s 4d	47s 5d	45s 1d	41s 1d
Aug. 4..	58 7	33 0	26 6	35 6	46 9	42 3
— 11..	59 6	34 0	26 1	44 9	46 5	41 0
— 18..	59 6	32 10	28 2	41 9	47 1	44 0
— 25..	60 1	34 9	27 1	40 4	47 7	43 9
Sept. 1..	60 11	33 3	28 2	40 7	47 10	44 5
Agg. Aver.	59 3	33 6	27 1	41 9	46 10	42 7

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	July 28.	Aug. 4.	Aug. 11.	Aug. 18.	Aug. 25.	Sept. 1.
60s 11d	..	..	..	..	..	
60 1	..	..	..	..		..
59 6	..	.			..	..
58 7	..		..	..	..	..
57 0		..	..	..	..	..
..	..	..	..	..	..	..

COAL MARKET.—Sept. 5.

Buddle's West Hartley, 17s. 3d.; Byass's Bebside West Hartley, 17s. 3d.; Hastings Hartley, 17s. 3d.; Howard's West Hartley, 17s.; Tanfield Moor, 13s. 3d.; Tanfield Moor Butes, 13s. 3d.; West Hartley, 17s. 3d.; Holywell, 16s.; Eden Main, 17s. 9d.; Walls End Braddyl's Hetton, 18s. 6d.; Walls End Framwellgate, 17s. 9d.; Walls End Hetton, 19s. 6d.; Walls End Hetton Lyons, 17s. 9d.; Walls End Kepier Grange, 18s. 3d.; Walls End Russell's Hetton, 18s. 3d.; Walls End South Hetton, 19s. 6d.; Walls End Stewarts, 19s. 6d.; Walls End Hartlepool, 19s. 3d.; Walls End Heugh Hall, 17s. 9d.; Walls End Kelloe, 18s. 9d.; Walls End South Hartlepool, 18s. 3d.; Walls End Trimdon Thornley, 16s. 6d.; Walls End Thorpe, 18s. 3d.; Walls End West Hetton, 17s. 9d.; Walls End Whitworth, 16s. 6d.; Carway and Duffryn Malting, 22s. 6d.—74 ships at market.

PLYMOUTH SEED COMPANY.

WANTED, A GENERAL MANAGER. — The Plymouth Seed Company is in want of a gentleman fully competent to Manage a large Seed Business. He must be a married Man, and would be preferred if between the age of 30 and 40. He must produce unexceptionable testimonials as to character and ability, and will be expected to devote the whole of his attention to the advancement of the interests of the Company. Salary 100*l.* per annum, with house rent and taxes free, equal to 25*l.* per annum; and in addition he will have a Commission of 5 per Cent. on all profits, after paying 5 per Cent. to the Shareholders.—Letters to be addressed to the Managing Director, Plymouth Seed Company, Union Road, Plymouth.

TO MARKET GARDENERS.

WANTED IMMEDIATELY, an active, industrious, middle-aged Man, to SUPERINTEND the Cultivation of about 40 acres of Land for Gardening purposes; and to work himself. None need apply unless thoroughly competent. House found.—Address E. B., Dennison's Mills, Landport, Portsea.

PROPAGATOR AND GREENHOUSE FOREMAN.

WANTED, by the undersigned, an experienced PROPAGATOR and GREENHOUSE FOREMAN.—He must be thoroughly acquainted with the Propagation of Hard and Soft-wooded, Greenhouse, and Stove Plants, Conifers, &c., and be able to grow good specimen plants. A single Man preferred, for whom comfortable lodgings can be provided on the ground. None need apply who cannot produce unexceptionable references as to character and ability.—Apply, stating wages expected, naming at the same time all previous situations, references, &c.—FRANCIS & ARTHUR DICKSON & SONS, Upton Nurseries, Chester.

WANTED, AS FOREMAN OR WORKING BAILIFF on a large Farm, a married Man.—It is desired to meet with a thoroughly respectable and industrious person, who has been accustomed to overlook the labour of others, whilst able to do all kinds of Farm work himself in a superior way. Wages according to character and intelligence. (Romans, ch. xii., v. 11.)—Address, post paid, A. B. C., care of Messrs. Sutton & Sons, Reading.

WANTED IMMEDIATELY, one or two First-class HEDGERS.—Apply to Messrs. DOWNIE & LAIRD, Nurserymen, 17, Frederick Street, Edinburgh.

WANTED, an unmarried able-bodied GARDENER, who has had for some years sole charge of Garden and Pony, and of unexceptionable character. Age above 27.—G. E. D., Post Office, Uxbridge, W.

WANTED, a good Plain GARDENER, who can be well recommended. Wages 12*s.* per week, with good Cottage and Garden.—Address J. C., P. O., Godalming, Surrey.

WANTED, A GARDENER AND LAUNDRY WOMAN. An active married Man, without family, well up to his business, and to Milk two Cows. The Wife as Laundry Woman—six in family. Wages 26*s.* per week, with cottage and coals. Five miles from London. Good character required.—A. B., care of Messrs. Dawson & Son, Stationers, 74, Cannon Street, City, E.C.

BAILIFF.

WANTED, a FARM BAILIFF, to Manage 200 acres of Land, Pasture and Arable. He must be a good Judge of Stock, and have been accustomed to the Management of a Farm as Bailiff before. Salary 50*l.*, no extras.—Apply with testimonials and full particulars of previous occupation, age, &c., to C. J. T., Post Office, Staplegrove, Taunton.

TO SEEDSMEN.—SHOPMAN WANTED.

WANTED, A HEAD SHOPMAN, who has had some experience in the Management of a Wholesale and Retail Business, and to assist in Accounts. Good character for honesty and sobriety indispensable. State references, wages, age, &c., to A. PONTEY, Nurseryman and Seedsman, Plymouth.—Sept. 8.

WANTED, A SHOPMAN, in a retail business in the country and to attend to Books and Accounts.—Apply, stating terms and particulars, to L. S. A., Messrs. Hurst & Co., Seed Merchants, 6, Leadenhall Street, London, E.C.

WANT PLACES.—Letters to be Post Paid.

TO NOBLEMEN AND GENTLEMEN CONTEMPLATING LAYING-OUT NEW OR RE-ARRANGING EXISTING GROUNDS, &c.—The Advertiser, who has had great experience in carrying out every description of work connected with the Park, the Pleasure Ground, the Kitchen Garden, and the general improvement of Estates, wishes for an engagement where taste and practical skill are required in conducting such operations.—Reference kindly permitted to W. A. NESFIELD, Esq., under whom the advertiser has executed important and extensive works.—A. B., 2, Lansdowne Place, Fulham Road, S.W.

GARDENER (HEAD).—Married, no incumbrance; possesses a thorough knowledge of his profession in all its branches. Unexceptionable references.—P. J., Mr. Charles Southby, Nurseryman, Clapham, S.

GARDENER (HEAD).—Age 28, single; understands Early Forcing, Stove and Greenhouse Plants, and the whole routine of Gardening.—J. G., Mr. Allman, Nursery, Horsham, Sussex.

GARDENER (HEAD).—Single; successful cultivator of Stove and Greenhouse Plants, Early and Late Forcing, Flower and Kitchen Gardens. Good character given.—A. B., Dicker's, Westerham, Kent.

GARDENER (HEAD).—Age 27, married, without incumbrance; well acquainted with his profession, and can produce first-rate testimonials.—G. B., Mr. F. Joyes, Grocer, Reigate.

GARDENER (HEAD).—Age 26, single; has a thorough practical knowledge of his profession. Two years' good character.—A. B., 49, Ordnance Road, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 30, single; practical knowledge of his profession in all its branches. Four years' good character from the gentleman he is leaving.—R. W., Post Office, Foot's Cray, Kent.

GARDENER (HEAD).—Age 35, married; four years' excellent character, and highly recommended as a thoroughly practical and industrious Gardener. Will be disengaged in November next.—M. B., Mr. Green's, Post Office, New Watford, Herts.

GARDENER (HEAD).—Age 28, married, one child; thoroughly understands Forcing Grapes, Melons, Cucumbers, &c.; has also a thorough knowledge of Plants, Kitchen and Flower Gardens. Two years' good character.—A. B., Mr. Allman, Nursery, Horsham, Sussex.

GARDENER (HEAD).—Age 38, married, without incumbrance; has a thorough knowledge of his profession in all its branches. Three years' character from the situation just left.—Y. Z., Boshel's, Seedman, High Street, Borough, S.E.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 35, married, without incumbrance; thoroughly understands Gardening in all its branches, Early and Late Forcing, &c. Can have two years and nine months' undeniable character from his present employer.—P. J., Rev. Dr. Allen's (Shouldham), Shouldham Hall, Downham Market, Norfolk.

GARDENER (HEAD).—Age 30, single; understands the cultivation of Pines, Vines, Melons, Cucumbers, Flower and Kitchen Gardens, Stove and Greenhouse Plants. First-class reference from a nobleman with whom he has lived eight years.—J. W., Messrs. Henderson's, Wellington Nursery, St. John's Wood, N.W.

GARDENER (HEAD).—Age 31, single; wishes to engage with any nobleman or gentleman in want of a first-class practical Gardener. Wages not so much an object as a comfortable and permanent situation. Unexceptionable references from present and previous employers.—A. B., Mrs. Mason's, Showborough Lodge, Twyning, Tewkesbury.

GARDENER (HEAD).—Age 33, married, without incumbrance; thoroughly understands his profession in all its branches, and has had great experience in Pine and Grape Growing. Leaves his present situation, which has been famous as a forcing establishment, in consequence of the gardens being broken up. Can produce unexceptionable testimonials as to character and abilities.—J. T., Mr. Veitch, Royal Exotic Nursery, King's Road, Chelsea, S.W.—Sept. 8

GARDENER (HEAD).—Married; a respectable Man, whose term with his present employer will soon cease, having served as Head Gardener over 14 years; has had 30 years' experience in good families, and has never been disengaged since he was 13 years of age. Will be well recommended to any nobleman or gentleman in want of a good Gardener.—CHARLES SHAW, Gardener, Reddings Park, Alfreton, Derbyshire.

GARDENER (HEAD, to a lady or gentleman).—JAMES STANTON, age 42, married; has had 27 years' experience in his profession, 16 of them in the capacity of Head Gardener, the last 4½ of such to John Waterhouse, Esq., of Well Head, near Halifax, and is recommended as a clever and intelligent Plant Grower, including Ferns, &c., and well skilled in the routine of Forcing Fruits, Cropping, &c. Character and testimonials highly satisfactory. Voluntarily leaving his last position.—ALPHA, Messrs. E. G. Henderson & Son, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 23, single; understands Forcing Vines, Peaches, Cucumbers, and Melons; also Flower and Kitchen Gardens. Three years' character.—C. D., Mr. Rusher's, 31, Market Place, Banbury.

GARDENER (HEAD OR SINGLE-HANDED).—Age 28, single; understands Forcing Vines, Peaches, Cucumbers, and Melons; also Flower and Kitchen Gardens. Three years' character.—C. D., Mr. Rusher's, 31, Market Place, Banbury.

GARDENER (HEAD, OR GOOD SINGLE-HANDED).—Middle-age, married, no incumbrance; understands Forcing of Vines, Cucumbers, &c., and the management of the Kitchen and Flower Gardens. Wife can Bake or assist in the House. Character unexceptionable.—R. M., Post Office, Kingsbury, Middlesex, N.W.

GARDENER (HEAD), OR GARDENER AND BAILIFF.—Thoroughly understands his profession, and the management of Stock and Land. Highly recommended.—J. S., Messrs. Rollisson, Tooting, Surrey, S.

GARDENER.—Age 24; has a perfect knowledge of his profession in all its branches. Can undertake the management of Pasture Land if required.—A. B., Mr. Maller, Seedsman, Granville Terrace, Lewisham, S.E.

GARDENER (UNDER).—Age 25; eight years' good practice. Can be well recommended. Three years' character.—D. S., Eardiston Gardens, Tenbury, Worcestershire.

GARDENER (UNDER).—Age 30, single; can Milk, Mow, and has some knowledge of Forcing. No objection to assist in the stable. Good character.—G. M. B., Staines Post Office, Middlesex.

GARDENER (UNDER).—Age 19; has a good knowledge of Flower and Kitchen Garden; wishes for improvement in the Forcing department. Good character.—G. W., Post Office, Wanstead, N.E.

GARDENER (UNDER), where Grapes and Plants are grown.—Age 20; sober, steady, and can have a good character from last employer. No objection to any part of England. Willing to pay any gardener for the information required.—E. S., Mr. Young, Nurseryman, Small Heath, near Birmingham.

STEWARD OR BAILIFF.—Understands Farming in all its branches, Buying and Selling Stock, the erection of Farm Buildings, Land Surveying. Wife can take charge of Dairy.—A. B., Mr. W. Clark, 25, Bishopsgate Street, E.C.

TO NOBLEMEN, GENTLEMEN, AND LAND AGENTS.

STEWARD OR FARM BAILIFF.—Age 38, married; has a general knowledge of Agriculture: has the superintendence of an estate 1000 acres; understands the Breeding, Buying, and Selling of Stock, the general improvement of Land and Buildings. Unexceptionable references.—J. H. INSALL, Aston Somerville, near Evesham, Worcestershire.

BAILIFF.—Age 30, married, no incumbrance; thoroughly understands his profession. Wife can take charge of a Dairy and Poultry. Satisfactory reference will be produced.—A. B., No. 1, St. Mary Street, near Canal Street, Wolverhampton.

BAILIFF.—Age 40, married; is thoroughly practical in the most modern style of Farming both Heavy and Light Lands, having had great experience in the Midland and Southern Counties. A good Judge and Manager of Stock.—B. C., Post Office, Tunbridge Wells, Kent.

TO NOBLEMEN AND GENTLEMEN.

BAILIFF.—Has had long experience in the most improved system of Farming, Draining, Laying out and Improving; understands the Breeding and Rearing of Stock, Marketing, &c. Testimonials from the gentleman he is just leaving.—N. L., 25, North Kent Terrace, Woolwich, Kent, S.E.

BAILIFF.—Age 41; has a thorough practical knowledge of Farming on the most improved system, Buying and Selling of Stock, &c.; can likewise take the management of a Garden, understanding his profession in all its branches. Wife can manage a Dairy and Poultry. Can have a good character from present employer.—J. L., Little Heath, Potter's Bar, Herts

TO NURSERYMEN AND SEEDSMEN.

APPRENTICE (IN-DOOR).—The Parents of a Youth between 17 and 18 years of age, are desirous of placing him in the above business, where he will be treated as one of the Family.—J. E., care of Messrs. Eaton & Son, College Street, Worcester.

APPRENTICE.—Age 21, strong and willing; wishes to place himself under some nobleman's or gentleman's Gardener, where he could learn practically the branches of the profession. Premium given. First-class testimonials.—A. B., The Gardens, Cranbury Park, Winchester, Hants.

TO NURSERYMEN AND SEEDSMEN.

SHOPMAN.—A Young Man, steady and active, well up in the Wholesale and Retail Department.—R. S., *Gardeners' Chronicle* Office, W.C.

KEATING'S PERSIAN INSECT DESTROYING POWDER.—Poultry, Dogs, and Plants are effectually freed from Fleas and all other Vermin with which they are infested, by the above Powder, which is quite harmless to animal life. The Farmer, the Gardener, or the Sportsman, will therefore find it invaluable. Bugs, Cockroaches, Beetles, Moths in Furs, and every other species of Insect are also instantly destroyed.—In packets, post free, for 14, or treble size for 36 postage stamps, by THOMAS KEATING, Chemist, 79, St. Paul's Churchyard, London, E.C. Take notice each genuine packet bears the above name and address.

ALL afflicted with WEAK EYES may obtain instant relief by using Dr. WARNER'S EYE WATER, which removes all inflammation arising from cold, dust, or constitutional causes.—Sold in bottles, 2*s.* 9*d.* and 4*s.* 6*d.*, by HANNAY, Oxford Street, W.; SANGER, Oxford Street, W.; EDWARDS, St. Paul's Churchyard, E.C.; HOOPER, King William Street, City, E.C., and all Chemists; of whom may also be had, Dr. WARNER'S LOTION, a certain cure for sore and ulcerated legs, burns, and scalds, and bites of insects, and in cases of inflammation is invaluable. In bottles, 2*s.* 9*d.*, 4*s.* 6*d.*

PRIZE MEDAL, PARIS EXHIBITION 1855.

METCALFE, BINGLEY, AND CO.'S New Pattern and Penetrating Tooth Brushes, Penetrating unbleached Hair Brushes, Improved Flesh and Clothes Brushes, and genuine Smyrna Sponges; and every description of Brush, Comb, and Perfumery for the Toilet. The Tooth Brushes search thoroughly between the divisions of the Teeth and clean them most effectually—the hairs never come loose. M., B., & Co.'s new and delicious perfumes the Fairy Bouquet and the Oxford and Cambridge Bouquet, in bottles 2*s.*, 3*s.* 6*d.*, and 5*s.* METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box.—Sole Establishment, 130B and 131, Oxford Street, 2d and 3d doors west from Holles Street, London, W.

The Gardeners' Chronicle Newspaper.

SATURDAY, SEPTEMBER 15, 1860.

MRS. ARTHUR HENFREY, Widow of the late Professor Henfrey, F.R.S., F.L.S., &c., of King's College, London, continues to receive a limited number of young Gentlemen under 12 years of age, to be educated with her own Sons, in all the branches of a liberal education. French is constantly spoken, Mrs. HENFREY having resided on the Continent, and a Parisian Lady assists her to teach Music, Singing, and Drawing. The house is healthily situated, and provided with a large Garden. Pupils will have the comfort of a private family, and unremitting attention will be paid to their health and morals. References are permitted to—

Dr. JELF	Principal of King's College
Rev. LAWFORD W. T. DALE ..	Chiswick Vicarage, W.
Rev. OLIVE HOLLINGWORTH ..	Turnham Green, W.
Sir WM. and Lady HOOKER ..	Kew, W.
Professor HUXLEY, F.R.S	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. MARTYN.. ..	7, Bennett St., St. James's, S.W.
Dr. and Mrs. LINDLEY.. ..	Acton Green, W.
Dr. and Mrs. HOOKER .. .	Kew, W.
Dr. and Mrs. TUKE	Manor House, Chiswick, W.

For terms apply to Mrs. ARTHUR HENFREY, 12, Heathfield Terrace, Turnham Green, W.

GOVERNMENT SCHOOL OF MINES, Jermyn Street, London, S.W.

Director—Sir RODERICK I. MURCHISON, D C L., &c.

The Prospectus for the SESSION, commencing on October 1, will be sent on application to the Registrar The Courses of Instruction embrace Chemistry, by Dr. HOFMANN; Physics, by Prof. TYNDALL; Natural History, by Prof HUXLEY; Mineralogy and Mining, by Mr. WARINGTON SMYTH; Metallurgy, by Dr. PERCY; and Applied Mechanics, by Prof WILLIS.

TRENHAM REEKS Registrar

BANK OF DEPOSIT (Established A D. 1844), 3, Pall-Mall East, London.—Capital Stock, 100,000*l*.

Parties desirous of Investing Money are requested to examine the Plan of the Bank of Deposit, by which a high rate of interest may be obtained with ample security.

Deposits made by special agreement may be withdrawn without notice.

The interest is payable in January and July

PETER MORRISON Managing Director.

Forms for opening accounts sent free on application

QUEEN INSURANCE COMPANY.—Chief Office, Liverpool.

London Office, 2, Royal Exchange Buildings.

London Directors.

Chairman—HENRY BRUCE, Esq (Rainey, Bruce, & Co.) Director of Colonial Bank, Mincing Lane.

EDWARD P. ALDERSON, Esq. (Kelson, Tritton, & Co.) 26, Old Broad Street. [Southwark.

HENRY FOWLER, Esq (H. & R. Fowler), St. Saviour's Dock,

THOMAS WILLIAM KOUGH, Esq. (JONES Brothers) Upper Thames Street. [Holborn.

SAMUEL LLOYD STACEY, Esq (Corbyn, Stacey, Messer, & Co.),

Bankers.—Messrs BARCLAY, BEVAN & Co.

Medical Referee.—J. EDWARD POLLOCK, Esq., M.D.

Solicitors.—Messrs. J. & J. W. SEWELL.

LIFE DEPARTMENT.—Life Assurance in every branch.

SPECIAL FEATURE —Non-forfeiture of Policies. The insurer has the right, on an ordinary Life Policy, after three years, to cease his payments, and obtain a free Policy, for the total amount of Premiums paid, and whatever Bonus may have been added.

FIRE DEPARTMENT.—The rates of Premium vary according to the nature of the risk, and will be found as moderate as those of other first-class offices.

Application for Agencies requested.

W. P. CLIREHUGH, Manager.

H. B. TAPLIN, London Secretary.

News of the Week.

GARIBALDI entered Naples on Friday evening and proclaimed VICTOR EMMANUEL as KING OF ITALY. The KING OF NAPLES had previously fled to Gaeta, from which place he took his departure on Wednesday last in a Spanish frigate for Seville. On leaving Naples, the KING is said to have ordered the bombardment of the city and the burning of the Royal Palace. But the army which had been concentrated in a strong position between Capua and Nocera to resist the advance of GARIBALDI, refused to fight for him. The Brigade of General CALDARELLI, and the division of General GHIO, passed over to GARIBALDI; General Bosco, the Commander-in-Chief, asked permission to quit the camp on the plea of ill-health, and the officers and seamen of the navy, with the concurrence of the Ministers themselves, refused to obey the KING'S orders for the removal of the fleet to Trieste, and subsequently refused to follow him to Gaeta. Even Signor ROMANO, who, as Minister of the Interior, had countersigned his latest proclamation, remained in Naples to welcome GARIBALDI, and has since consented to remain in office as the Minister of the Dictator. The forts and arsenal capitulated on Saturday, the Neapolitan fleet has since passed over to the Sardinian Admirals, and the Sardinian flag is now flying in every town of the Two Sicilies. The latest news informs us that GARIBALDI is about to march to Umbria, and that he has issued a proclamation, stating that the annexation to Sardinia will be effected when he is able to proclaim it from the top of the Quirinal.—The insurrection in the Papal States has spread during the week to all the cities of Umbria and the Marches. The revolted provinces, on Monday, excited by the renewal of the massacres of Perugia by the POPE'S mercenary troops at Fossombrone, sent a deputation to Turin to solicit the protection of VICTOR EMMANUEL. His Majesty, feeling that the time had come for placing himself at the head of the Italian movement and controlling the course of the revolution, at once acceded to the request, and issued a proclamation to his army directing them to enter the Papal States, and stating the grounds upon which the invasion is to be justified. These grounds are the misrule and oppression of the Papal Government, and the presence of the large bands of foreign adventurers by which the country is infested. The KING says that the object of the invasion is to give the people an opportunity of expressing their own wishes, to re-establish civil order, to teach the people forgiveness of offences, and Christian tolerance to the POPE and his General. He intends, he says, to respect the seat of the Chief of the Church, and to give him all the guarantees of independence and security which his misguided advisers have in vain hoped to obtain from the fanaticism of the wicked sect which conspires against HIS MAJESTY'S authority and the liberties of the nation. In accordance with these orders a Sardinian army of 50,000 men has entered Umbria and the Marches, and has already occupied Pesaro, Fano, Urbino, and Città di Castello. Russia and Prussia have protested strongly against this invasion, and the EMPEROR OF THE FRENCH has shown his disapprobation of it by recalling his Ambassador from Turin. General LAMORICIÈRE, the POPE'S Commander-in-Chief, has concentrated the Papal force of 8000 men at Ancona, and will there give battle to the Sardinian army.

The EMPEROR OF THE FRENCH on Monday delivered a speech at Marseilles, at a banquet given to him by the Chamber of Commerce in that city. He said that tranquillity was the wish of all the world, and that although some envious murmurs reached them from afar, they should not be disturbed on that account, for such murmurs would dissipate themselves against their indifference as the waves of the ocean broke upon their shores. "Let us therefore," he said, "labour to develop the resources of our country. The works of peace are in my eyes crowns as beautiful as those of laurel. In that future of national prosperity and greatness which I contemplate, Marseilles by its proximity to the military port of Toulon seems to me to represent the Genius of France holding in one hand the olive branch, but having her sword at her side. I wish that this ancient Phocæan city, by the mild influence of her trade, may induce the people of Europe to come and join their hands on the poetic shores of this sea, and bury in the depths of its waters all the jealousies of another age."

By the Australian mail we have accounts from New Zealand of a disastrous character. A force, composed of two companies of the 40th Regiment and a detachment of sailors, gallantly attacked a "pah," at Waitara, in the district of New Plymouth, and after four hours' hard fighting, were obliged by the non-arrival of reinforcements to retire with a loss of 29 killed and 33 wounded. On the receipt of this intelligence at Melbourne, General PLATT, the Commander-in-Chief in Australasia, proceeded immediately to the seat of war with the 40th Regiment, and there is no doubt that on his arrival at New Plymouth energetic measures will be taken to retrieve the disaster.

Home News.

RETURN OF THE COURT FROM SCOTLAND.—The Queen, Prince Consort, and the younger branches of the Royal family, will leave Balmoral this morning on their return to the south. The Court will pass to-morrow and Monday at Holyrood, and on Monday evening her Majesty will continue her journey southwards, travelling over the Caledonian and North-Western Railways (by Carlisle, Lancaster, Stafford, Leamington, Oxford, Basingstoke and Gosport), to Osborne, where the Royal party will arrive at 10 o'clock on Tuesday morning.—On Tuesday week the Queen and Prince Consort drove up the Dee to the foot of the Geldie, and crossed thence on ponies by Glen Fishie to Loch Inch, and crossing the Spey at the ferry, posted to Grant Town, where the Royal party passed the night at the hotel. On Wednesday morning they drove round Castle Grant and thence to Tomantoul, when they took their ponies up Glen Avon to Loch Bullig, and returned to Balmoral in the evening. On Thursday the Queen and Prince Consort, accompanied by the Princesses Alice, Helena, and Louisa, and Princes Arthur and Leopold, drove to Braemar Castle to witness the Highland games. Her Majesty was received by the clans of Farquharson, Duff, and Forbes of Strathdon. At the conclusion of the games her Majesty returned to Balmoral. In the evening the choir of Crathie had the honour of performing before her Majesty. On Friday her Majesty, accompanied by the Princesses Helena and Louisa and Prince Arthur, drove to Alt-na-Guissach, and then rode up Lochnagar. The Prince Consort went out deer-stalking. Her Majesty gave a ball in the evening. On Saturday the Queen, accompanied by the Princess Helena, drove to Aberarder, and then rode over Culardach, and returned to the castle by Invercauld. The Prince Consort went out deer-stalking. Sir Charles Wood arrived and succeeded the Duke of Argyll as Secretary of State in attendance on her Majesty. On Sunday the Queen and Prince Consort, accompanied by the Princess Alice, attended Divine service in the parish church of Crathie. The Rev. A. Anderson officiated. On Monday the Queen, accompanied by the Princess Alice and Prince Arthur, took a drive in the afternoon and honoured Mrs. Farquharson by a visit at Invercauld. The Prince Consort went out deer-stalking. On Tuesday the Queen, accompanied by the Princesses Alice and Helena, drove beyond Castleton to the Colonel's Cave, in Glen Eye. The Prince Consort went out deer-stalking. In the evening her Majesty gave a ball to the tenants and gillies on the Balmoral and Abergeldie estates.

THE QUEEN'S VISIT TO GERMANY.—The Court will arrive at Buckingham Palace from Osborne on Saturday next; and in the afternoon her Majesty and the Prince Consort, accompanied by the Princess Alice, will embark in the Victoria and Albert, at Gravesend, for Antwerp, on her way to Coburg, on a visit to the Grand Duke of Saxe Coburg, where they will meet the Prince and Princess Frederick William of Prussia and their infant Prince. The Queen's stay at Coburg, which will probably be from 10 to 14 days, will be entirely of a private character, as will be the whole of the expedition. On the return to England her Majesty will stop two nights at Coblentz with the Prince Regent and the Princess of Prussia, and a similar time with the King of the Belgians at Brussels. Lord John Russell will be in attendance upon her Majesty as Secretary of State.

THE PRINCE OF WALES on Sunday the 26th ult. attended Divine service in the Cathedral of Montreal. On the 27th he witnessed a variety of Indian games on the cricket ground, and afterwards held a levée at which several addresses were presented. During the day the New York committee had a conference with the Prince, who accepted their invitation to a ball on the 12th October. In the evening a magnificent ball was given to his Royal Highness by the city of Montreal. On the 28th, the Prince proceeded by train to Dickson's Landing up the St. Lawrence, returning by boat and running all the rapids. In the evening his Royal Highness attended a grand musical festival, and honoured a ball at Mr. Blackwell's with his presence. On the 29th his Royal Highness reviewed the troops in garrison at Montreal and the volunteer forces. He also received a deputation which the Corporation of New Orleans had sent to Montreal, a distance of 1600 miles, to invite him to visit them. On the 30th the Prince paid a visit to St. Hyacinth, Sherbrooke, and other places, received and answered addresses, and returned to Montreal in the evening. At Sherbrooke he created the greatest enthusiasm among the people by remitting the sentence of a naval court-martial, passed many years ago, upon a person named Felton, and restoring him to his former rank of signal midshipman, which he held on board Lord Nelson's flag-ship at the battle of Trafalgar. On the 31st the Prince left for Ottawa. The passage up the river was very pleasant, in spite of occasional showers. Every village along its banks was decorated with flags, and the population fired salutes and rang bells in his honour. At the mouth of the Gatineau, two miles below Ottawa, his Royal Highness was met by six steamers, dressed with flags and banners, and crowded with passengers, and by a flotilla of 150 bark canoes, manned by 1200 lumber men, who closed up in two lines and escorted him to the city as an aquatic procession. 200,000 persons were assembled at the landing-place, and received his Royal Highness with wonderful enthusiasm. The mayor presented an address, but a sudden shower coming on spoiled the effect of the ceremony. The Prince entered the town in a close carriage, escorted by volunteer cavalry. The streets were beautifully decorated. On the 1st inst. his Royal Highness laid the corner stone of the new Parliament Building at Ottawa in the presence of an immense crowd of spectators. He afterwards went down a timber shoot, on a raft, and then proceeded in a canoe

to witness the canoe races of the lumbermen and Indians. It is understood that while in the United States the Prince will visit Chicago, Saint Louis, Cincinnati, New York, Philadelphia, Baltimore, and Washington. He will embark for England from Portland, Maine, and will reach home early in November, unless he visits some of the southern cities, which would require more time. His Royal Highness will visit Bermuda on his return voyage. The House of Assembly of that colony has placed 2000*l.* at the Governor's disposal to provide suitably for his reception.

PRINCE NAPOLEON arrived on Wednesday at the Brunswick Hotel, Jermyn Street, and has since left town on a visit to Portsmouth and Yarmouth. His Imperial Highness's screw yacht, the Jerome Napoleon, remains at Deptford, awaiting his return. The Prince had left Paris last week on a cruise in the channel, accompanied by the Princess Clotilde. Their Imperial Highnesses first visited Cherbourg and then crossed to the Isle of Wight. On Monday evening their yacht ran aground on the rocks off Dunrose and fired signals of distress. A steam-tug and several boats immediately put off to her assistance, but she refused help, and at 10 o'clock, when the tide rose, she got herself off. The yacht anchored that night in Sandown Bay, and on Tuesday morning the Prince and Princess landed with their suite, and visited Carisbrook Castle, while the yacht went round to Cowes and took them up. They then proceeded to Calais, where the Princess landed and returned to Paris. The Prince then re-embarked for England.

THE EX-ROYAL FAMILY OF FRANCE.—The Countess de Neuilly, the Count de Paris, the Duke de Chartres, and the children of the Duke de Nemours have removed from Claremont to the villa of Admiral Sir Augustus Clifford at Ryde. The Count de Paris and the Duke de Chartres visited Portsmouth dockyard on Wednesday.

THE CHANNEL FLEET.—The Lords of the Admiralty arrived at Milford last week, and on Friday reviewed the Channel fleet in St. George's Channel. The fleet got under way about 8 A.M., and stood out to sea, and, having made an offing of about seven miles, the Osborne, which had the Lords of the Admiralty on board, made the signal for the fleet to form a double line. They accordingly broke into two divisions; the starboard one, consisting of the Royal Albert, 121; Donegal, 101; Conqueror, 101; Mars, 80; and Trafalgar, 91, was led by Vice-Admiral Sir Charles Fremantle, K.C.B., in the Royal Albert. The port division, under Rear-Admiral Erskine, in the Edgar, 91, comprised the Algiers, 91; Aboukir, 91; Centurion, 80; Mersey, 40; and Diadem, 32. This manœuvre having been executed with great precision, the Osborne signalled for the fleet to make sail under easy canvas, followed by an order from the Admiral to bank up the fires. Having stood on thus for some time, the two divisions tacked in succession to the starboard, after which the order was given to form a single line of battle. This was effected by the starboard division standing on its course, and the port one tacking until they came into line, when they followed in the wake of their predecessors, an interval of two cables' length separating each ship. The concluding and most exciting manœuvre of the day was then made by the whole getting orders to make all sail that could be done with safety, and running before the wind. Studdingsail booms were then run out, and every inch of canvas both below and aloft that would draw was set. The order was then given to make for the nearest port, on which the fleet bore up for Milford Haven. The Osborne then steamed up to the Admiral's ship, and Rear-Admiral Pelham, C.B., hailed Sir Charles Fremantle, and expressed, on the part of the Duke of Somerset and the rest of the Lords, the extreme satisfaction they all felt, not only in the appearance of the fleet, but also in the admirable precision with which all the manœuvres had been performed. On Tuesday the fleet left Milford under steam on a cruise of three weeks or a month, during which it is supposed it will go round the Western Islands, and then rendezvous at Torbay, previous to going into winter quarters.

THE VOLUNTEER MOVEMENT.—A general assurance society for Volunteers is about to be formed under the immediate patronage of Mr. Sidney Herbert, Secretary for War; the Lord Chancellor, and Lord de Grey and Ripon. Its object is to extend the Volunteer movement by lightening its expenses, and by giving in addition a prospect of pecuniary advantage in case of need. This it is proposed to do by combining the principles of a friendly society and an assurance society, each member paying a weekly subscription, and receiving in return an advance for his outfit, an allowance during sickness, a pension after long service, and the certainty of his family receiving a sum of money on his death.—The commanding officers of the various Corps in the county of Middlesex have received a communication from the Lord-Lieutenant recommending the assembling the various corps of a county or district for the purpose of periodical reviews.—The 7th Middlesex (Islington) met at Lawn House, Holloway, on Tuesday, accompanied by the band of the Royal Middlesex, and were presented with a silver bugle subscribed for by the ladies of the district.—The 7th Surrey, accompanied by the band of the 3d Surrey Militia, marched on Saturday to Nesbitt's ground, in Kennington Lane, where they were put through battalion drill and skirmishing, including file and volley firing, and field evolutions generally.—The 19th Surrey (Lambeth), numbering about 400, accompanied by their own band and the drum and fife band of the Scots Fusilier Guards, marched on Saturday to Streatham Common, where they went through various evolutions and fired several volleys.—The 1st Surrey Juvenile Corps, which has enrolled upwards of 80 in its ranks, visited Greenwich Hospital on Friday. They marched with colours and band playing through the hospital, and after visiting the Painted Hall, the Dining Hall, and the Chapel, they halted in front of the Governor's House, where the band played various airs.—The Woolwich Dockyard Brigade, consisting of five companies, the Charlton Rifles, the Woolwich Rifles, and the Plumstead and Blackheath Artillery, were reviewed on Saturday in the park of Sir T. M. Wilson at Old Charlton, by Viscount Sydney, Lord Lieutenant of Kent.—A Volunteer *fête* was held on Wednesday in the same park in aid of the band fund of the 26th Kent. The amusements comprised concert, ballet, morris and maypole dancing, equestrian circus, fire balloons, &c., and concluded with a torch-light procession. The band of the Royal Artillery and two Volunteer bands were in attendance.—The Faversham Artillery were inspected last week by Lord Sydney, lord-lieutenant of the county.—The 3d Kent (Tenterden) have commenced ball practice on a piece of ground near the town, affording a range of upwards of 1000 yards. On the first day of practice, which is to be continued twice a week, the men fired at 100 and 150 yards five rounds at each range, and the average points made were 6.36 at the former, and 4.9 at the latter range. The best shooting was made by Private Clemetson, who made 17 points, eight at 100 and nine at 150 yards' range.—The 17th Kent (Tunbridge Wells) have been presented with a handsome rifle by Mrs. Wright, of Lansdowne, which is to be competed for by the members at the close of the course of instruction they are now undergoing in rifle shooting.—The grand review and rifle match of the Berkshire Corps, comprising the 1st Reading, 2d Windsor, 3d Newbury, 4th Abingdon, 5th Maidenhead, and 6th Wokingham, took place on Thursday, by permission of her Majesty, in the Great Park at Windsor. The first prize, the Ladies Cup, was won by Private Salter, of Reading; the Challenge Cup was won by Private Jackson, of Maidenhead; and the best shot and winner in the All Comers Class, was Mr. Mortimer, of Reading. The Volunteers were afterwards entertained at a dinner provided at the expense of Lord Overstone, and a series of old English games for which prizes were offered brought the *fête* to a conclusion.—In Suffolk the number of companies is gradually increasing. Capt. Jervis, M.P., presided last week at a meeting to promote the organisation of an Artillery Corps in the Colneis hundred, on the Suffolk coast. The meeting resulted in the enrolment of about 20 Volunteers on the spot, while several gentlemen announced their intention of subscribing and nominating others.—About 50 gentlemen have been enrolled as members of a proposed "Scotch Company" at Ipswich, but the Lord-Lieutenant of the county has declined to sanction the corps as a separate company in consequence of the difference of uniform from that of the present Ipswich corps. The subject is to be brought under the notice of the Secretary-at-War.—The result of the efforts made at Attleborough, Norfolk, to promote the organisation of a Volunteer Corps in that district, has been a subscription of 270*l.* and an enrolment of 52 effectives. A company is to be at once formed, and will, in all probability, be commanded by Sir R. J. Buxton of Shadwell Court.—The movement continues extremely popular in Essex. A proposal has been made for the formation of a second company at Colchester, and at a meeting, convened by the Mayor of Maldon, and held in the Town Hall, it was resolved to form a corps for that town. A similar movement has been made at Coggeshall. There will soon be nearly 20 companies organised in Essex.—The 2d Durham (Seaham) Artillery have just appointed a permanent adjutant. Prizes have been given by the officers of the different companies for rifle-shooting, and some spirited competition has been the result. A temporary battery has been erected on the coast, at the south side of Seaham harbour, and it is expected that in a short time the men will be so far advanced as to commence ball practice.—A Rifle Corps is about to be formed in the district of Queenshead, in the West Riding. It is proposed that it shall consist of 100 men, and be called the Shibdendale Corps; and Mr. M. Stocks, of Catherine House, Halifax, has generously offered to completely equip them all at his own cost. Above 30 Volunteers have already been enrolled.—The Frome Corps were presented last week with a massive silver bugle, valued at 40 guineas, by Mrs. Boyle, wife of the Hon. and Rev. Richard Cavendish Townshend Boyle.—The 11th Wilts (Swindon) Corps were presented on Tuesday with a silver bugle and a set of drums by the Earl of Shelburne, and a set of colours by Mrs. Gooch, wife of the Captain of the Corps.—A meeting of influential residents has been held at Horsmonden, at which it was resolved to form a volunteer rifle corps for the parish. A number of members joined, and a liberal subscription was made in aid of the funds.—The provisional committee of the Wiltshire Association are taking energetic measures to carry out the resolutions passed at the preliminary meeting held a short time since at Salisbury. The Right Hon. Sidney Herbert, Secretary for War, has consented to act as president of the association, and with the view of furthering the progress of the movement and creating a taste for rifle shooting throughout the county, it is proposed to institute an annual shooting match, to be held, if practicable, at the head-quarters of the different Volunteer Corps in Wiltshire, in succession, provided the required range can be procured in the locality. At each meeting prizes will be offered to the members of all the rifle corps, and to any other residents in the county who may be willing to contend for them.—The great Cheshire meeting is to be held on the 19th and 20th inst., at Leasowe Common, on the practice ground of the 1st and 2d Cheshire Companies. The value of the prizes will be nearly 300*l.*, presented by various persons in and about Birkenhead. There will be 10 or 12 prizes open to all Volunteers of Artillery or Rifle Companies in Cheshire, and three or four prizes open to all comers *bonâ fide* residents in the county. Thirty companies have already intimated their intention to send members to compete for the prizes, and the meeting will, no doubt, be the forerunner of a county association, in connection with the National Rifle Association of London.—The first meeting of the Northamptonshire Association will take place in Lord Spencer's park at Althorp, on the 27th inst., when the entire volunteer force of the county will be reviewed, and amusements, consisting of archery, foot races, &c., will be provided.

Foreign.

FRANCE.—The Emperor and Empress arrived at Avignon on Friday evening, and met with an enthusiastic reception from the civil and religious authorities. On Saturday morning their Majesties proceeded through Tarascon and Arles to Marseilles, at all of which places their reception was most cordial. On Saturday evening the Emperor and Empress went to the Grand Theatre, where an almost unexampled ovation was given them, and particularly to the Empress. On Sunday evening a grand fête and ball were given to their Majesties at the Chateau Borelli, the neighbourhood of which was illuminated with variegated lamps. It is calculated that 300,000 persons were present in the vicinity. On Monday morning the Emperor visited various parts of the city, and in the evening his Majesty and the Empress were present at a grand banquet given by the Chamber of Commerce, when the Emperor delivered the following speech:—

"Gentlemen,—The banquet offered by the Chamber of Commerce gives me the happy opportunity of publicly thanking the city of Marseilles for the warm reception it has given to the Empress and to myself. The unanimous demonstrations of attachment which we have received since the commencement of our journey touch me deeply, but do not make me more proud; for my only merit has been to have full faith in Divine Providence as well as in the patriotism and good sense of the French people. It is this intimate union between the people and the Sovereign which constitutes our strength at home as well as abroad, and which has enabled us, in spite of great difficulties, to proceed without pause in our progressive movement. This desire for what is good, this enthusiasm for all that is noble and useful, cannot relax now when circumstances are more favourable and tranquillity is the wish of all the world. If envious murmurs reach us from afar, let us not be disturbed on that account, for they will break against our indifference like the waves of the ocean on our shores. Let us labour, then, with all our strength to develop the resources of our country; the works of peace have crowns as noble in my eyes as those of laurel. In the future of prosperity and greatness which I contemplate for France, Marseilles naturally holds a large place from its energy and the intelligence of its inhabitants, as well as from its geographical position. Close to the military port of Toulon, it appears to me to represent on these shores the Genius of France holding an olive branch in one hand while touching the sword at its side. Let the Phocean city reign in peace upon this sea, by the calm influence of commerce; let her civilise barbarous nations by increased traffic; let her draw closer the bonds of civilised nations. Let her induce the peoples of Europe to come and shake hands upon the poetical shores of this sea, and sink in the depth of its waters the jealous faults of a past age. Lastly, let Marseilles always show herself beautiful as I now behold her, equal to the destinies of France, and one of my most ardent wishes will be accomplished. I drink to the prosperity of the city of Marseilles."

Their Majesties afterwards proceeded to Toulon, where they met with a splendid reception, and, after having attended a ball given in their honour, embarked for Nice, where they met with an enthusiastic reception. They have since embarked at Nice for Ajaccio.—In consequence of the representations made by the French Government to Sardinia against the entry of a Sardinian army into the Papal Marches having proved ineffectual, the Emperor has recalled the French Ambassador from Turin. It has also been determined to increase the French army of occupation at Rome to 10,000 men, and General Goyon was despatched from Paris on Wednesday to resume the command.—The *Patrie* and the *Pays* publish a communicated article, of which the following is a summary:—

"Some foreign journals have incorrectly represented the policy of France in Italy. France, since the peace of Villafranca, has not altered her policy, but, true to the principle of non-intervention, has left the Italians to dispose of themselves as they wished, confining herself to pointing out their dangers and reminding them that in pursuing the project of national unity they are acting at their own risk and peril. France has also shown them what grave consequences might result from an attack on Venetia or Rome." The *Patrie* adds:—"We have reason to believe that Austria has declared that she would not intervene in Naples while the revolution is confined to that State, and does not threaten other frontiers, but up to the present moment her declarations go no further."

—The *Moniteur*, in its non-official section, announces that the Emperor has authorised the establishment of a national *tir*, or shooting competition, the plans of which have been preparing at the Ministry of War since

January last. It will take place in the wood of Vincennes, and will commence annually at the period of the *fêtes* of the 15th of August. This year, by exception, it will open on the 30th of September, and last till the 9th of October. Numerous workmen are now getting the ground ready. There will be 44 targets, to which Frenchmen and foreigners will alike be admitted with all sorts of arms; six other targets will be reserved for the National Guard and the army, two others for pistol-shooting, and two for bow and arrow. There will be a grand prize of 10,000f.; the list of the other prizes will be immediately published, as well as that of gifts from individuals. A committee of seven gentlemen, three of them military men, has been named to direct and superintend the competition.—A daughter of Abd-el-Kader has arrived in Paris for the purpose of becoming a Sister of Charity. Having been sent to Constantinople to be educated, she had an opportunity of seeing the Sisters, who have a branch establishment in that city, and became desirous of entering the order. She is only 18 years of age, and when she asked her father's leave to embrace Christianity, he at once consented. Abd-el-Kader's own mind has, it is said, been profoundly affected by the circumstances of his extraordinary career. His faith has not been shaken in the truth of the Koran, but he supposes that the time is come when, according to the will of Providence, Mahomedanism must yield to Christianity, destined to become the great civilising force of the world.

SWITZERLAND.—The Federal Council, through its diplomatic agents, has recently informed France, and the other Powers which signed the treaty of 1815, that to guarantee efficaciously the neutrality of Switzerland it would be indispensable to exact two things:—1. That the Simplon road, henceforth open to France, should be properly protected. 2. That the Lake of Geneva should be separated from the French frontiers by a portion of land of about two hours' march in breadth. In reply to these overtures the Cabinet of the Tuileries has withdrawn its former concessions, declaring that it would not cede either an inch of territory or a single inhabitant of Savoy. In this state of affairs any direct arrangement between Switzerland and France is impossible. Having received the report of the Swiss representatives at Paris, London, and Turin, who are now here, the Federal Council persists more than ever in considering this affair as a question of European order reserved for the competency of the Powers which signed the Final Act of Vienna.—The English church at Chamounix was consecrated on the 6th inst. by Dr. Sumner, Bishop of Winchester, who, more than 40 years ago, discharged the duties of British chaplain at Geneva.

PRUSSIA.—The *Nord* has published a statement to the effect that an arrangement has been agreed upon between Prussia, England, and Austria, by which the three Powers engage themselves—1. To oppose any military intervention of France in Italy, under any pretext whatsoever. 2. To oppose any other military intervention of France in Europe, without a preliminary understanding with the Powers. 3. To oppose any territorial extension of France, either by means of conquest or negotiation. The official organs of the three Powers declare that this statement is totally without foundation.

RUSSIA.—A highly important official telegram from St. Petersburg was received at Vienna on Saturday. In substance it is as follows:—

"The Emperor Alexander and his Government sincerely desire a perfect reconciliation with Austria. The good understanding between Russia and Austria ought never to have been interrupted. The necessary arrangements for a meeting between the two Emperors will be made without delay, and measures will be taken for putting an end to the present state of things, which is no longer tolerable."

It is positively stated that, in consequence of this intimation, an interview between the Emperors of Austria and Russia and the Prince Regent of Prussia will take place shortly at Warsaw, and that several of the German Sovereigns will go to Warsaw to meet them.

COBURG.—A telegraphic despatch dated Coburg, 4th inst., states that the general meeting of the National Union have unanimously adopted as their programme of union the transfer of the central power to Prussia, and the convocation of a German Parliament.

AUSTRIA.—A grand dinner was given by the Emperor at Schoenbrunn on Tuesday, in honour of the birthday of the Emperor of Russia, at which the Emperor of Austria in very cordial terms proposed a toast in honour of the Emperor Alexander II.—The Emperor has received Counts Szechen and Apponyi, who explained to his Majesty the historical rights of Hungary. The Emperor pronounced himself in favour of the Hungarian programme, which, it is said, will be adopted, with an amendment presented by Count Hartig, and concerted between the latter and the Hungarian delegates. Nevertheless, it is still expected that during the first plenary sitting of the Reichsrath an autograph letter of the Emperor will be read, establishing the principle of the autonomy of the provinces, and announcing the reforms to be immediately promulgated.—In the sitting of the Reichsrath on Monday the Budget for the Army and Navy was agreed to. Before the discussion of the Budget for the Ministry of the Interior, Count Rechberg protested against the prevailing idea that the Ministry wished to maintain a political system, the abolition of which was generally desired. The Minister said that this supposition was perfectly incorrect, and he assured the members of the Council that all the Ministers were agreed upon the necessity of entering the path of reform. The Reichsrath resolved upon adjourning any discussion of constitutional principles until the conclusion of the discussion of the Budget. On the discussion of the Police Budget, M. Maager, President of the Chamber of Commerce, proposed that the laws affecting the press should be modified. This proposition was supported, but the vote upon it was adjourned until the conclusion of the discussion of the Budget. In the debate on the Budget for Public Worship, M. Maager proposed a revision of the Concordat, and that the placing of all Christian confessions on an equal footing should become a principle of the Constitution. It was resolved to insert two additional paragraphs in the report of the Committee of Twenty-one, in accordance with M. Maager's motion—viz., to abolish the difference between the positions of the confessions as constituted by the subsidy at present granted to the Catholic Church and schools of public instruction, and in general to settle all questions respecting the religious confessions. — Count Rechberg has instructed the diplomatic agents of Austria abroad to seize every opportunity for declaring the falsity of the reports that the Imperial Cabinet intends to place itself at the head of a coalition against France. Count Rechberg says that Austria has no other object than that of leaving her state of isolation by means of a conciliatory and moderate policy, which would allow her to maintain friendly relations with France as well as with the other great Powers. Count Rechberg protests in the most positive manner against any concealed idea of a coalition, for which Austria thinks there is no necessity.

ITALY.—The King of Naples embarked in a Spanish ship of war on the evening of the 6th inst. for Gaeta, and took his departure from Gaeta on Wednesday last in a Spanish frigate for Seville. His Majesty has retired to Spain contrary to the advice of the Cabinets of Vienna, Munich, and Dresden, which had advised him to take refuge in Austria, where preparations had been made at the Imperial Castle at Hitzendorf, near Vienna, for his reception. Before his departure from Naples, the King is said to have ordered the bombardment of the town and the burning of the Royal Palace, and it is even asserted that the original of that order has been found. But both the army and navy refused to fight for him, though the former occupied a strong position between Capua and Nocera. Gen. Bosco, the commander-in-chief, had asked permission to quit the camp on account of ill-health, and General Caldarelli's brigade and the division of General Ghio had passed over to Garibaldi. The navy also had refused to leave the port, in consequence of the undoubted design of the King to send the fleet to Trieste in order to give it up to Austria; and the Sardinian Admiral had threatened to fire upon any Neapolitan vessel which should attempt to follow the King to Gaeta.—Garibaldi entered Naples on Friday at noon, accompanied only by his staff. The citizens and the Lazzaroni went out to meet him armed, some with pikes and some with sticks, and welcomed him with enthusiastic acclamations. He was escorted by them to the Palace, from the balcony of which he addressed the people in the following words:—

"Neapolitans, this is a solemn, holy, and memorable day. This day, from being subjects under the yoke of tyranny, you have become a free people. I thank you in the name of the whole of Italy. You have performed a great work, not only for Italy, but for all humanity, whose rights you have vindicated. 'Hurrah for liberty!' so much dearer to Italy inasmuch as she has suffered so much more than other nations. 'Long live Italy!'"

The cry was taken up by the thousands assembled, and "*Viva Italia!*" might have been heard from one end of the city to the other. Garibaldi then proclaimed Victor Emmanuel as King of Italy, consigned the fleet and the arsenal to the charge of the Sardinian Admiral Persano, confirmed S. Romano as Minister of the Interior; and appointed S. Arditi, Director of Police; General Cosenz, Minister of War; and S. Pisanelli, Minister of Justice. He also dissolved a Republican Ministry which had been illegally formed in his name, and ordered the Prefect of Police to punish its members. He afterwards went to the Cathedral, where a *Te Deum* was celebrated, the people as he passed shouting "Hurrah for Victor Emmanuel!" "Hurrah for Garibaldi!" In the evening the whole of Naples was illuminated. On Saturday morning the forts and arsenals capitulated, and the Sardinian flag was hoisted upon them. Garibaldi found an immense quantity of war *matériel* in the arsenal, and 80,000,000 lire in the bank. On Monday the English Admiral paid a visit to Garibaldi, who afterwards went on board the Hannibal; the English Ambassador being present. On that occasion the Sardinian fleet fired a salute of 17 guns in honour of the Dictator. The Sardinian troops disembarked on Monday by his order. The whole army of Garibaldi will arrive at Naples in the course of a few days, and with the insurrectionary bands the total force will be raised to 80,000 men. The Bixio and Medici brigades have already arrived. A proclamation of Garibaldi to the Neapolitans was issued on Tuesday, in which he says that the annexation will be effected when he will be able to proclaim it from the top of the Quirinal. The revolution is everywhere triumphant, and it is said that Garibaldi is about to march to Umbria. The Papal Nuncio, the Austrian, Russian, Prussian, and Spanish Ambassadors, and Count Trapani, followed the King to Gaeta, where his Majesty appointed Signor Ulloa, brother of General Ulloa, as his Prime Minister, and issued a proclamation asserting his rights to the throne, and declaring that during his short reign he had not entertained a single thought that was not devoted to the happiness and the good of his subjects, and that the institutions which he had irrevocably guaranteed them was the proof of this. After the flight of the King a great rise took place in the public funds.—A despatch from Rome states that the entry of Garibaldi into Naples has thrown the Papal Government into a state of consternation. The insurrection at Pontecorvo has been confirmed, and similar insurrections have broken out at Pesaro, Fossembrone, Montefeltro, Urbino, and other towns in the Marches. In the latter the tricoloured flag has been hoisted to the cry of "Long live Victor Emmanuel!" and a Provisional Government has proclaimed the annexation of the province of Urbino to Sardinia. Orvieto and other towns in Umbria have also revolted to the cry of "Victor Emmanuel for ever!" while the Papal troops having become discouraged, have retired, offering no resistance, but committing acts of ferocity on their passage. The Papal Government immediately proclaimed a state of siege at Fano, Sinigaglia, and Pesaro, and at Fossombrone the inhabitants, in their struggle for liberty, were vanquished by the overpowering numbers of the mercenary troops, who, after their victory, renewed the massacres of Perugia. On Tuesday a deputation from the cities of Umbria and the Marches arrived at Turin, and had an audience of the King of Sardinia to solicit his protection for the revolted provinces. His Majesty granted the protection which they solicited, and issued orders to the Sardinian troops to enter those provinces by the following Proclamation:—

"Soldiers! You are about to enter the Marches and Umbria, in order to establish civil order in the towns now desolated by misrule, and to give to the people the liberty of expressing their own wishes. You will not fight against the armies of any of the Powers, but will free those unhappy Italian provinces from the bands of foreign adventurers that infest them. You do not go to revenge injuries done to me and to Italy, but to prevent the popular hatred from unloosing itself against the oppressors of the country. By your example you will teach the people forgiveness of offences, and Christian tolerance to the man who compared the love of the Italian Fatherland to Islamism. At peace with all the Great Powers, and holding myself aloof from any provocation, I intend to rid Central Italy of one continual cause of trouble and disorder. I intend to respect the seat of the Chief of the Church, to whom I am ever ready to give, in accordance with the allied and friendly Powers, all the guarantees of independence and security which his misguided advisers have in vain hoped to obtain for him from the fanaticism of the wicked faction that conspires against my authority, and against the liberties of the nation. Soldiers! I am accused of ambition. Yes, I have one ambition; and it is to re-establish the principles of moral order in Italy, and to preserve Europe from the continual dangers of revolution and war."

In accordance with these orders, General Cialdini, the commander-in-chief of the Sardinian army on the Papal frontier, entered Umbria on Tuesday evening with 25,000 men, and was followed on Wednesday morning by 25,000 more. He first attacked and took Pesaro, where 1200 German soldiers, under the command of Monsignor Bella, who were shut up in the fortress, were made prisoners. General Cialdini sustained trifling loss in this operation, and sent Monsignor Bella, who had ordered the sack of the town, to Turin. He next proceeded to Fano where he made 300 prisoners, and then marched to Urbino, which he entered without opposition. Meanwhile, the division under the command of General Fanti entered the Papal States at Città di Castello, and was to march on Thursday towards the valley of the Tiber, while another division was marching towards Fratta. The German garrison of Orvieto has already capitulated to the insurgents. Count Cavour has despatched a note to the French Government explaining the new attitude of Sardinia. Russia and Prussia have strongly protested against the entry of Sardinian troops into the States of the Church, as an attack upon international rights, and the *Moniteur* of yesterday announces that the Emperor of the French has ordered his Ambassador to quit Turin. The Pope is about to address a note to all the European Powers protesting against the Sardinian invasion, and stating that the foreign troops to which Sardinia has objected, were enlisted on the advice of France and Austria. General Lamoricière has concentrated his troops, numbering 8000 men, at Ancona, and has denied the alleged order of the day in which he was said to have directed his soldiers to plunder any town which should rise in insurrection. It is believed that his lines of defence will shortly be attacked by 45,000 Sardinians.—The accounts from Venice state that the Austrian troops have been concentrated on the extreme frontier of Venetia, facing Modena and the Romagna. It is said, however, that whatever may take place in the States of the Church, the attitude of Austria will be purely defensive as long as her Italian frontiers are not invaded; and that all her military preparations have no other object than that of energetically repelling any eventual attack.

SICILY.—The garrison of Syracuse has declared its adhesion to Garibaldi. The whole of Sicily therefore has now pronounced for the Italian cause.

TURKEY.—The Grand Vizier, whose recall was mentioned last week, has not yet returned to Constantinople, as he intends first visiting Bosnia, to calm the agitation prevailing there. It is said that he will then be sent to Paris and London to negotiate a new loan. Vely Pacha is again in favour with the Sultan, and has

been appointed Governor-General of Adrianople. The arrival of the prisoners from Damascus has excited the population. The Ambassadors have congratulated the Sultan on justice having been done, and the French Ambassador has demanded that the repression of the disturbances in the Lebanon should be completed.

SYRIA.—Accounts from Damascus state that Fuad Pacha had not incorporated the 3000 prisoners into the army, but had sent 300 of them to the galleys. He had also given 120 Mussulman houses to the homeless Christians, but as the mob insulted and threw rubbish at these Christians, they were obliged after the first night to return to the citadel, where, to the number of 10,000, they were exposed to the burning sun, and destitute of everything. The large indemnity imposed on the city had excited threats and great agitation. It was asserted that some soldiers had deserted and joined the Druses on account of not having received their pay. The French army was still encamped at Beyrout. Seditious prints against the Christians were in circulation.

INDIA AND CHINA.—By the arrival of the Calcutta mail we have news from Calcutta to the 8th August, and from Hong Kong to the 26th July. The following are the details:—

Calcutta.—The death of Mr. Wilson and the operation of the Income Tax, which came into operation on the 1st ult, are the chief topics of general news. Sir Hugh Rose has issued a General Order announcing his intention to confer appointments solely on officers who may, by their conduct in the field or in cantonments, show themselves deserving of them.

China.—Lord Elgin and Baron Gros had arrived at Pecheli. The Taku forts were to be attacked on the 20th of July. The allied troops were healthy. The rebels had maintained their positions. Foreigners had visited the rebels, and were courteously received. A new transit duty of 11 taels per bale was to be levied.

Japan.—All was quiet on the 20th June, and trade was progressing

Singapore—The Prussian Ambassadors had arrived. A great demonstration against the Indian Income-tax had been held. The Joshua Waddington had been totally lost in Gaspe Straits.

NEW ZEALAND.—We have news from New Plymouth (Taranaki), to the 30th of June, of a disastrous character. An advance upon the rebels' pah at Waitara has been made, and, after fighting for more than four hours with great gallantry against large numbers of natives, covered by their intrenchments, our forces were obliged to retreat, leaving 29 dead and 33 wounded on the field. The following account is condensed from the *Taranaki Herald*:—

"The Tasmanian Maid on Tuesday brought intelligence that a reconnoitring party of the 40th had been fired on by the natives from the pah restored at Puketakauere. This act of aggression induced our military commander to take steps to punish the insurgents. Wednesday morning was fixed for attacking the pah. Guns and reinforcements of the 40th Regiment and of the blue-jackets were dispatched from town, but weather of the most inclement kind added to the hardships of the duty. The reinforcements waded through a sea of mud, under south-west squalls and showers. The Puketakauere Pah consists of two stockades; one upon the intrenchments of the old pah of the same name, the other new and apparently without intrenchments. They stand on a ridge formed by two small gullies. These gullies meet a little below the pah, and open on a swampy ground in the Waitara Valley, forming a sort of long Y, the stalk towards the river, and the stockades in the fork. The main body, consisting of the Grenadier and Light Companies of the 40th Regiment, under Captain Richards, and 60 blue-jackets, under 1st Lieutenant Battiscombe, of the Pelorus, with the Artillery, approached the pah by the directest road from the camp, and at 6 o'clock a.m the guns were brought to bear, and the men extended on the north-west, or seaward side of the pah, the smaller gully between them and it. With this division were Major Nelson, and Captain Seymour, of the Pelorus. A second division of about 50 men, under Captain Messenger, was posted on the flat of the Waitara, to cut off the retreat on that side; and a third, under Captain Bowdler, passed along the river banks, and attempted to take the pah in the rear. The natives were aware of the movement and on the alert. The first firing was on the rearward party, and a Maori informant states that, finding the troops advancing on that side, many of the natives went out of the stockade, some of them endeavouring to escape, and some occupying the intrenchments of a second old pah, to the rearward of—that is to say, nearer to the Waitara than—the two stockades. It could be seen that the party under Captain Messenger was doing great execution on the stragglers who attempted to escape, and for a time it appeared as if the attack in the rear would succeed; but, after a short space, a large reinforcement from the inland settlements of Wi Kingi arrived among the high fern, and a fierce battle ensued, the natives greatly outnumbering the troops. The Grenadier company of the 40th Regiment and the blue-jackets formed the right wing of the main party in front, and extended beyond the head of the gully, facing partly round towards the south west side of the pah. Large numbers of the enemy came to the brink of the gully, and the pah was probably almost empty. The combatants were about 150 yards apart, divided by the gully, firing briskly and steadily but not able to close except where the right wing overlapped the head of the gully, and here a desperate struggle took place with a party of natives who had a trench at one of the outworks of the old fortifications. Here was the hottest fighting and the greatest loss sustained by this division. Early in the day a messenger of the rebels was seen to start from the rear, and between 9 and 10 o'clock large reinforcements came from inland; part of which, as we have already said, attacked the 2d and 3d divisions, and the remainder outflanked the main body in front. Having held his ground for some time, without reinforcements arriving, or any signs of a diversion appearing, Major Nelson gave orders to sound the 'retire.' Some attempt to follow was checked by a murderous fire from the artillery, and the main body retreated in order and without serious molestation, and arrived in camp at 1 P.M. The other divisions were much harassed in their retreat, not having heavy guns to support them, and Lieutenant Brooke and others were killed. Captain Seymour, of the Pelorus, received a bullet in the leg. Non-commissioned officers and privates were recognised in some cases singly and coolly firing on large bodies of the enemy, and then as coolly retiring. The enemy, too, showed unexpected resolution, and have proved the first body of men able to meet the British bayonet. The blame of their reverse is thrown on Colonel Gold, the Commander of her Majesty's forces at Taranaki, who was aware of the intended attack, and had left the town at 9 o'clock on that very morning with a force of nearly 300 men and two 24-pounder howitzers, and was actually within two miles and almost within sight of the besieged pah, at a time when succour would have been invaluable. It is alleged, however, that a river was so swollen between him and the scene of action, that he was unable to cross it. The officers engaged in the action were:—Naval Brigade.—First Lieutenant Battiscombe, Midshipman Wadlow, Midshipman Garnett; Lieutenant Morris, Royal Marine Artillery. Royal Engineers.—Lieut Mould. Royal Artillery.—Lieutenant M'Naughten. 40th Regiment.—Major Nelson, Lieutenant Brooke (killed), Lieutenants Downman, Jackson, and Rees, Ensign and Adjutant Whelan."

AUSTRALIA.—The Australian colonies have made a prompt and energetic response to the appeal of New Zealand for assistance. No sooner was the disaster at New Plymouth known at Melbourne than immediate help was resolved upon, and on the 18th July a fast steamship was despatched for New Plymouth, with Lieut.-Colonel Leslie and 210 officers and men of the 40th Regiment. Major-General Platt, Commander-in-Chief of her Majesty's Forces in Australasia, with his staff and the head-quarters of the 40th sailed for the same place on the 24th, leaving the defence of Victoria in the hands of the Volunteer Rifles, who were to be raised in number from 2000 to 10,000, while an additional sum of 5000*l.* was voted, on the motion of Mr. Wilson Gray, one of the ultra-democratic members, to provide prizes for marksmanship. A similar demonstration has taken place at Sydney.

UNITED STATES.—Great preparations are making at New York to do honour to the visit of the Prince of Wales, and no expense will be spared to invest the occasion with an interest worthy of its object. As announced, his Royal Highness will only remain three days in New York. A proposition has been addressed by the well-known rope-walker, Blondin, to the Duke of Newcastle, offering to trundle His Royal Highness on a wheelbarrow over a tight rope to be stretched across the Falls of Niagara. The exhibition of fireworks and the performance of various gymnastic evolutions during the passage Mr. Blondin thinks would render this a truly imposing entrance into the Republic. Advices from Honduras to the 16th ult. state that the President was daily expected to attack Walker at Truxillo. The inhabitants of that town were leaving in alarm. Walker had raised the Federal Central American flag, and contemplated uniting five of the States. The excitement in Texas relative to the Abolitionists was increasing. The town of Mount Vernon was reported to have been destroyed by incendiaries.

BRITISH COLUMBIA.—A silver mine is reported to have been discovered on the lower Frazer river. Discoveries of lead were also reported further in the interior, containing about 5 per cent of silver. Copper, in blocks too large for removal, are said to have been discovered in enormous quantities, but the accounts were regarded as exaggerations.

MEXICO.—Advices from Havannah to the 23d of July state that the movements of Spanish vessels along the coast of Mexico caused considerable speculation. The *New York Times* announces, on "the best authority," that the Mexican question is on the point of being peremptorily settled by a decisive intervention of four of the great Powers—namely, England, France, Spain, and Prussia. These Powers have signed a convention to which they have invoked the adhesion of the United States' Government. The bases of toleration for all religious opinions, and of a modified establishment for the Roman Catholic Church, are understood to have been already accepted by the Constitutionalists under Juarez on the one part, and by the clerical party under Miramon on the other. An armistice for 12 months is to be declared, during which period each party will hold what it at present possesses, being responsible for the proper administration of their trusts. The people will be appealed to to elect between the principles represented by the two factions, and the respective leaders pledge themselves to resign all their authority and arms into the hands of the Government thus designated.

Public Addresses.

LORD WODEHOUSE, the Under Secretary of State for Foreign Affairs, presided on Friday at a public meeting at Wymondham for the purpose of forming a Volunteer Rifle Corps for that town, and made the following remarks on the Volunteer movement:—

"It might be considered almost supererogatory now to say anything in favour of the movement, because there could be no greater proof of its advantages than the extraordinary success it had met with throughout the country. Many persons, he was aware, still felt some objection to joining these corps, under the idea that it was calling upon them to do something out of their usual sphere, and to undergo inconveniences which they were not bound to subject themselves to. He thought a moment's reflection would show any one that this movement was precisely in accordance with the general character of our institutions. There was not one of us who was not called upon every day to submit to considerable personal inconvenience in order to carry on what was in fact the Government of the country. Many gentlemen present acted in various positions of responsibility—either as overseers or as guardians of the poor or as unpaid magistrates—all of them offices for which no remuneration was received, and which were discharged for the general benefit of the public, because it was the characteristic of Englishmen that they managed their own concerns. This Volunteer movement was based on the same idea—namely that, though it might be personally inconvenient, and even expensive to us to discharge these local offices in our several counties, we were bound to undertake those offices; so were we also bound to undergo some personal inconvenience and expense in assisting in the defence of our country. He held that every man was quite as much bound to contribute to the defence of his country as he was bound to perform any other duty which might devolve on a citizen. One of the first principles on which any society could be based was that each man should do his best in the defence of the country. In other parts of the world this was effected by the personal contributions of the inhabitants for the maintenance of an enormous standing army. The principles of our constitution had always however been opposed to the maintenance of a large standing army. He hoped that that principle would always be adhered to, but then if we did not have a large standing army, we must, as reasonable men, provide in some other way a force which would be sufficient to place us in safety, so that we might have no fear of any events either at home or abroad. He should say nothing, after all that had been said by so many having far greater authority than himself, as to the purely defensive character of the Volunteer movement, but it must be acknowledged—and it was one of the advantages of the movement—that there was nothing in it offensive to any nation whatever. It was simply a movement which showed that we were determined to place ourselves in such a position that we should be enabled to take our own course, without having regard to anything but that which we believed to be to the advantage of the country and the promotion of general peace and tranquillity throughout the world. There were two aspects in which this movement might be regarded—both of them, he thought, very advantageous to it. In the first place it provided for the defence of the country; and secondly—what was of no inconsiderable importance—it afforded a healthy and useful recreation to all classes. He thought we were in want in this country of something which should bring different classes of society together by engaging them in some common object which was at the same time useful and agreeable, and such a means of social intercourse and recreation was provided by Volunteer corps. There was no one, he was sure, who began to practise rifle-shooting who would not find it extremely amusing and attractive; a man felt that he was acquiring an art which some day or other might be useful, and which at any rate could do him no harm to learn. With regard to the expense, as that deterred many from joining, he thought it ought to be kept as low as possible. As the Government now found the rifles, the members would only have to provide their uniforms and accoutrements, which he was informed at the War Office need not cost more than 3*l.* 10*s.*, and could even be provided for a lower sum than that. He suggested a general subscription for defraying the expense of procuring a practice-ground, and that honorary members should be admitted for an annual subscription of from 5*l.* to 10*s.*, with the privilege of practising at the butt and wearing the uniform. With respect to the drill, a Volunteer, in order to be enrolled as an 'effective,' was only required to attend eight drills in four months, so that the tax on his time and convenience was really very trifling. After offering a donation of 50*l.* and an annual subscription of 5*l.* to the corps, and expressing his regret that his official duties in town would prevent him from becoming an active member, he said, in conclusion, that he believed a more patriotic movement than this had not been inaugurated during the present century. Nothing had been done more calculated to raise England both at home and abroad—both in her own self-respect and in the estimation of other nations—than that we had gone heart and hand in a movement so essentially English, being calculated to give us a cheap means of defence, and at the same time to improve the personal bearing, he might say, of every man who made himself one of a body of men who were animated by such laudable and patriotic motives."

LORD ELCHO, at the recent distribution of the prizes won at the rifle-shooting competition on the Links of Montrose, made the following remarks on the Volunteer Movement:—

"These rifle gatherings mark an epoch in the Volunteer movement. They show how far it has advanced, and I hope they are prophetic of how far it will yet go. Some people, I know, are surprised at the success which has attended this movement; for my part I am not surprised, because it appealed to one of the strongest feelings of one's nature. It appealed to the sense of public duty, and it appealed to love of country. I think that, without unduly flattering ourselves, we may say that there is no country in which a sense of duty is more strongly felt, or where love of country burns more brightly, than in this country. But there is another reason why we have joined so heartily in the Volunteer movement, and that is from a love of peace. It is essentially because we are the peaceful citizens of a peace-loving country that we have assumed the garb of war, and it is in the interest of peace, and for the sake of our hearths and homes, that we have united in the endeavour to learn the use—as these meetings will teach the use—of the deadly weapon which the skill of our manufacturers has placed in your hands. Now, look for one moment at the position in which we now stand, compared to the position in which we stood a short time ago. We have got an army of 150,000 men, who have in a few months sprung, almost like the fabled army that sprang from the dragon's teeth, as it were, from the ground; and it is an army—allow me to say—of which any sovereign might be proud who saw the sight which our beloved Sovereign saw recently in Hyde Park in London, and in the Queen's Park in Edinburgh. I had the good fortune to see both those reviews. I do not intend to draw any comparison between them; none is needed; but I can tell you that general officers who were there told me that, with the men they saw in the Queen's Park a few weeks ago, they would be prepared to go anywhere and to do anything. Now, there is no denying the fact that England stands in a very different position now from what she did. The effect of the Crimean war, to a certain extent, was to lead foreigners to believe that we mismanaged our military matters, notwithstanding the bravery shown by our soldiers, and it needed, to a certain extent, that fearful mutiny in India to restore our *prestige*. The unheard of courage of English men and women displayed in that terrible crisis went far to do so, and nothing has done more to raise this country in the eyes of foreigners than this great Volunteer movement. It has added enormously to our strength by its moral bearing upon the politics of Europe. Every man who comes forward as a Volunteer may have the satisfaction of feeling—and I say it because I believe it in my conscience—that every individual added to this movement, every man who comes forward, has influence on the great stage of European politics. Certain we may be that the influence of this country will never be exerted but for some good and wholesome purpose. It is for defence, not for defiance, that we are taking up this movement, and you may be certain England's views will only be urged in the interests of peace and well-ordered reasonable liberty. Well, if this is the only object the country has in view—as I believe it is—by this Volunteer movement, I think that the feeling which must animate every one who hears me is an earnest hope that it may still go on—that as it has progressed slowly and steadily, that as it has advanced like a tide, I hope it will never recede like a tide, but that it will become a permanent institution, because it is not a movement meant to meet any sudden danger. The people of this country wish for all time to place themselves in a position that they need never be deterred from their peaceful occupations by any fear of danger-

from abroad. How, then, is this to be effected? Why, there are two great ways, and this is one of them. Form cadet corps, teach your boys at school their drill, and train up your children so that they will look forward, when they become 17 or 18 years old, as a necessary part of their social duty to take their place in the Volunteer ranks. The other means is by appealing to the spirit of rivalry and competition which is characteristic of our countrymen. It is by forming associations such as this, and by forming great national associations such as the National Rifle Association, of which I am proud to see the gold medal upon the breast of a countryman—Mr. Edward Ross, the champion of Great Britain. We have wished to bring this country back to the situation in which it was in the time of the Plantagenets; we wish to make the rifle now in the days of Queen Victoria what the bow was in the time of the Edwards; we wish to make it the familiar weapon of the British people, and I believe that meetings such as this will infallibly lead to that result. I hope you will give your support to the National Rifle Association, because, important as local associations are, important even as are the associations which represent a country such as Scotland, still an association which brings into competition the riflemen of the two countries must have a more wide, a more lasting, and a greater effect than a mere local association, however important. You must, to keep up this movement, study the strictest economy in all the arrangements of your corps. Depend upon it that, unless these corps are self-supporting, they do not stand on a sound and stable basis. But, governed and conducted so, these rifle meetings and competitions will do more than anything else to cause people to take an interest in the movement. Remember that it rests with yourselves. Why should not the Volunteers of Great Britain make it permanent? That feeling which led you to show such love of country will make you learn to do your duty steadily in the ranks, and you will add to what you have thus nobly begun a dogged determination to do your duty."

MR. HARDY, M.P., at the annual dinner of the Leominster Agricultural Association, made the following remarks on the duties of the Government and House of Commons:—

"He could not help thinking that what had been said about the farmers and their teams on the highways might be said with great truth about the Government. Like a carter, the Government in the past session had set out with their waggon well loaded and harnessed, thinking the road was smooth and free from obstructions, and that they could get to the end of their journey as merrily and easily as they had set out, and without so much trouble as even turning their horses' heads. But, unfortunately, the road was not so smooth and easy as they had expected; on the contrary, it was like some of the highways which had been spoken of. When they had advanced but a short distance they found that the horses began to flag, and that it was a task of some difficulty to proceed as rapidly as the pace with which they set out. Like a carter who knew nothing more than that his horses were made to go the road irrespective of weight and distance, they were surprised at the obstruction, and like him they said, "Why, these horses were made to go, and if they won't go of their own accord I shall flog them." Flog them they did; but it was of no use, and therefore they found, as the carter would do, that there was nothing to do but to lighten the waggon; they, therefore, began to throw overboard some of the contents with which it was laden. Accordingly, Bill after Bill was pitched out; among others the Bill which was to improve the representation of the borough of Leominster. Yes, the Reform Bill was pitched out, along with another, which was to benefit the landed interest by making them bankrupts; one by one the various Bills were thrown out, until at length the cart was cleared of these miserable abortions, which they had been pulling along the Government highway for the last seven months, and done no good after they had arrived at the end of the journey. Now he had been sometimes acting the part of a drag while the Government waggon was going down hill, while his hon. friend Mr. Mildmay had been one of the horses. However, the end of the journey had been reached, and now, or by and by, they would be having one of those great political meetings at which it might be decided whether the drag or the horses had done most good. But seriously the questions which had been before Parliament this session were questions of paramount importance, and, although many of them had not come out in the shape of Acts of Parliament, there had been a great deal done this session which would influence the destinies of this country for ages to come. Changes had been made in the taxation of the country; changes had likewise been made in the army and the navy; and, in the shape of resolutions, treaties had been made with foreign countries which would tell upon the prosperity of this country, and the operation of which would require to be carefully watched by all who were interested in our commercial successes."

MR. ROEBUCK, M.P. at the Master Cutlers' dinner at Sheffield on Friday, spoke as follows on public affairs:—

"My colleague and myself owe a great debt of gratitude to the people of Sheffield, who have allowed us, as independent members, to pursue our course in parliament unpestered by the suggestions and observations of our constituents. They have thought us honest, and they believe that we are upon the very theatre in which political affairs are being wrought out, and that we know as much of them as they do themselves. I may say for myself, that my course has been entirely unprejudiced by almost any observation on the part of my constituents, who show by it a right conception of what a representative ought to be. If I am wrong, the time will come when you will have the power to say you think he is wrong; but while he is acting for them, any pestering, any call of interest, or telling him his constituents think this, that, or the other, is wholly foreign to the representative system. The House of Commons has been twitted with having done nothing during the past session. I have worked very hard, and my colleague has worked very hard, and I believe the best thing that could result is that we could have done nothing. That may appear a paradox, but I think I shall soon enable you to understand what I mean. The people of England are peculiar for being only able and only willing to undertake one thing at one time; and the only subject that occupied every man's mind during the last six months has been the foreign relations of this country. During this time it was totally impossible to produce any effect on the internal matters of the community. But I know enough—and seeing around me gentlemen belonging to the aristocracy, I am sure they will not misunderstand me when I say I know enough of the relations of this country to be sure that any attempt to reform the Parliament of this country without being backed with the strong voice of the people will be utterly useless. I said some two years ago that you would never get a reform of Parliament out of the present administration. I said so, and acted upon it, and I thereby incurred the feeling of some sort of reprobation on the part of some of my friends. The result has proved I was right, and for this reason, the people out of doors did not raise a voice sufficient to bear down all opposition. It was not the fault of the House of Commons that the thing was not done, but of the people of England. We intended to carry out the Reform Bill, but the opposition was too strong for us—and the people of England did not support their representatives. There was also another thing—your minds have been fixed on the foreign relations of this country. England stands aloof from all Europe; she alone is free; she alone has popular institutions which are worthy of the name, and against her every despotic ruler is opposed. For years we have been relying on the hope that we were so protected by our former renown, that no one would dare to attack us. I recollect I was one of the first that raised my feeble voice to warn my countrymen that danger was at hand. For that I incurred great reprobation, but my justification is in the Volunteers of Great Britain. You do not want the volunteer merely to look at his dress. You want him to prevent the possibility of invasion; and where was the invasion to come from? Many years ago I mentioned the name of a great potentate, and the newspapers of France, and the servile papers of England, abused me for so doing. Don't you fear that man now? (Cries of "No.") I used the wrong word—you don't fear him; for, God be thanked, the Volunteers show there is a feeling among the people of England, that if a foreign invader put his foot on our shore, he would never take it off again. Therefore, sir, I say that I used a wrong word. Fear does not enter into our feelings; we merely protect ourselves. We put ourselves in such an attitude as that we fear no one. This it is that calls the peaceable inhabitants of Sheffield from their peaceful counters and desks to put themselves into the tented field. When I walked upstairs to-day I saw around me what I conceived a body guard of soldiers, but when I was told that all of them were men of Sheffield, I felt my heart warm, and I felt that I was safe, and that the grasping hand of ambition and the restless foot of the despotic adventurer would never dare to touch anything belonging to our country. Still, sir, our minds are occupied with this question, and so occupied that we have not time to attend to anything else, and when the next session comes, if something has not happened in the meantime to ensure peace to Europe without this martial array, depend upon it the next session will be as fruitless as that which has passed, in everything connected with the internal operations of this country. But do not blame us—do not blame the House of Commons for this. The House of Commons is England, and if England were on the spot it would do the same. Sir, I know it is easy to write articles against the House of Commons, but I have not seen a man go into that House, whatever might be his reputation outside, but he has been totally inefficient to alter the course of that legislation; and why? Because, sir, we are the voice, the living voice of the people of England. We may have been wrong. Talk, talk, talk, is the curse of that House; and I think it is the curse of this room. But I contend that the House of Commons has done much good during the past session, in spite of the *Times*, in spite of the penny papers, and in spite of the gentlemen who have abused us; I say we have done much good by doing nothing. Now, you do not suffer by sitting up; but my hon. friend and I do. I have sat up more nights this session than during any previous one. I have gone to bed at 3 o'clock in the morning, thinking that I had done my duty; but next morning, out comes an article blowing out fiercely against the House of Commons for misusing its time. This is all very well, but what harm have we done? I say, we have done much good. No other people in the world have spoken out as we have spoken out. Our voice has gone across the sea, has crossed every mountain, and has been raised in favour of liberty, justice, and truth; and the House of Commons, by the mere act that it is an outspoken place, is the very harp of the liberty of the world. Then, I say to you, do not abuse your representatives, but set them a good example."

City Intelligence.

INCOME TAX ON INDIAN SECURITIES.—The Secretary of State for India sent a notice to the Bank of England last week ordering the deduction of the Indian income tax on all dividends of Rupee paper held in England which fall due on and after the 31st ult. As the English income tax has already been paid upon these dividends, the Oriental Bank Corporation intend to dispute the legality of the order; and in consequence of a representation from the Bank of England as to the inconvenience of reclaiming the tax on interest which has now been paid, the India Council have notified that the dividends of the 31st of August last will be exempted, and that the tax will be enforced on all that fall due after that date.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93 to ⅛ for Money, and 93⅛ to ¼ for the 11th Oct.; New Three per Cents. (shut), 93⅛; India Stock, 218½; Ditto Five per Cent. Stock, 1859, 103½; Ditto Bonds, 2*s.* dis.; Five per Cent. Enfaced Rupee Paper, 96½; Ditto Five and a Half per Cent., 102; Exchequer Bills, 1*s.* to 4*s.* prem.—FOREIGN: Buenos Ayres Deferred, 30¼; Mexican Three per Cents., 21½; Ditto for Acct., 21½; Peruvian Three per Cents., for Acct., 74½; Russian Four and a Half per Cents., 93¾; Ditto Three per Cents., 1859, 63⅝; Sardinian Five per Cents., 83: Spanish Three per Cents., 48¼; Ditto New Deferred Three per Cents., for Acct., 39⅛ to ⅜; Turkish Six per Cents., 1854, 73½ to 74; Ditto for 1858, 57½; Ditto for Acct., 57⅛; Ditto Guaranteed Four per Cents., 101⅛; Venezuela Three per Cents., 23⅜.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,950,915	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,475,915
		Silver Bullion	—
	£29,950,915		£29,950 915

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity...	£9,663,511
Rest	3,780,493	Other Securities	19,812,757
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	6,813,136	Notes	9,145,830
Other Deposits	13,462,663	Gold and Silver Coin ..	757.297
Seven day and other bills	740 793		
	£38,380,385		£39,390,385

13th day of Sept., 1860. M. MARSHALL, Chief Cashier

Gazette of the Week.

TUESDAY—BANKRUPTS—J. H. BARBER and W. H. ELLIS, Liverpool Iron Merchants—J. FORD and E. YOUNG, North Portman Mews, Portman Square, St. Marylebone Cabinet Manufacturers—J. I. HOLDEN, Hockley Street, Birmingham, Jeweller—A. E. HOPKINS, Gresham Street, City, and Shrewsbury, Law Stationers—J. KAYE, Richmond Place, St. George's Road, Southwark, Surrey, Architect and Builder—W. PHILLIPS, jun., Birmingham, Pork Butcher—W. PITT, Bishopsgate Street Without, Hosier—J. E. RICHARDS, Dartmouth, Devonshire, Chemist, Druggist, Grocer and Draper—W. SCORE, Manor Place, Hatcham, Surrey, Soap Manufacturer—J. THORNE, Weymouth, Dorsetshire, Builder and Cabinet Maker—J. THORPE, Glossop, Derbyshire, Joiner and Builder.

BANKRUPTCY ANNULLED—W. APPLEYARD, Kingston-upon-Hull, Plumber and Glazier.

SCOTCH SEQUESTRATION—J. SOMERVILLE, Glasgow, Auctioneer.

FRIDAY—BANKRUPTS—T. C. BELL, Durham, Corn Miller—W. F. CROFT, Castle Street East, Oxford Street, Printer—F. GARFIT, of Brigg, and Scawby, Lincolnshire, Scrivener—A. ROLFE and J. DAVIES, Dorrington Street, Clerkenwell, Timber Merchants—S. RUTHERFORD, York, Draper—R. STONE, Cerne Abbas, Dorsetshire, Innkeeper—E. TOYNBEE, Lincoln, Agricultural Merchant—E. TURNBULL, West Hartlepool, Shipowner.

SCOTCH SEQUESTRATIONS—A. BARNETT, Cupar-Angus, Merchant—A. D. GRAY, Edinburgh, Bookseller—J. MAUCHLINE, Pollockshaws, Carter—J. RAE and SON, Glasgow, Commission Merchants—J. WYLIE, Glasgow, Flesher.

Metropolis and its Vicinity.

THE GREAT EASTERN.—The disputes between Mr. Scott Russell and the Great Ship Company relating to the Great Eastern have at length been decided by the arbitrators, Messrs. Hawkshaw, M'Lean, and Fowler, awarding him the sum of 18,000*l.*

THE EARL OF KINGSTON.—At Westminster Police Court on Saturday, the Earl of Kingston was convicted in a penalty of 40*s.* or one month's imprisonment for being drunk at Morley's Hotel, refusing to pay a cabman, and assaulting a police constable who undertook to see him to a friend's house. In the course of the case, his lordship insulted the magistrate and said it was disgraceful to see a man administer justice as he did. Lord Kingston refused to pay the fine, whereupon Mr. Paynter directed the goaler to remove him. Another cabman then stepped forward, and asked how he was to get his money for driving his lordship about for nine hours on Friday. Mr. Paynter said that there were already three, if not four, orders against his lordship for unpaid cab fares, and it seemed useless to make them, as the cabman did not get their money. The only way he could suggest to them was not to take his lordship. Shortly after he had been removed by the gaoler a gentleman came and paid his penalties, and settled with the cabman for the nine hours. On Monday his lordship was brought up at the police court, Chester, under the following circumstances: On Sunday morning he went on the Holyhead railway, and persisted in walking through the tunnel. The policeman would not allow him to do so, and took him to the police office. After being kept there for a few hours he was released, and in the afternoon went to the cathedral. He there refused to take his hat off, and force was obliged to be resorted to to get him out. He was then given into custody, and taken to the Royal Hotel, where he remained all night. The first thing on Monday morning he got out in the streets naked, and was again taken into custody. About 12 o'clock he went to the Bishop of Chester's palace, and so annoyed his lordship that the police were sent for to take charge of him. On being taken into court he went right up to the bench, seated himself with his hat on, and commenced a long rambling statement, to the effect that the Bishop of Chester had insulted the House of Lords through him, and that he would bring his lordship to justice at the bar of the House in the next session, and deprive him of his living. He intended to write to his friends, Messrs. Bright and Cobden, to bring the matter before the House of Commons. Bishops had no right to be seated in the House of Lords, and he would see that it should be altered. He was going to write to his lawyer, Lord Chelmsford, to enter an action against the Holyhead Railway Company for 100,000*l.* for insulting him. He then went on to say that his brother wanted to be married, and had perpetrated a fraud upon him in taking possession of his estates, worth about 50,000*l.* a year, and settling upon him a miserable pittance. It was enough, he said, to make any man insane. He intended to go and see his friend Lord Westminster, but he was out of town, and therefore he should go back to Dublin, where he had been under the care of a policeman's wife. Two medical gentlemen of the city, having certified that his lordship was of unsound mind, the magistrates signed an order for his removal to the County Asylum. On Thursday morning a gentleman who stated himself to be a friend of Lord Kingston, and who was supposed to be a solicitor from London, arrived at Chester, and attending at the office of the magistrate's clerk, paid all expenses incurred on the earl's account, and obtained an order to have his lordship given up to him by the officers of the county asylum. In the course of the afternoon he left Chester with his lordship for Dublin. It is said that Lord Kingston was very content during his residence at the asylum, and said that he should have no objection to stay there for a month.

THE PENNY PRESS.—It is announced that the *Dial* weekly newspaper is about to be amalgamated with the *Star*. The shareholders of the *Dial* and the *Star* are to form one company, each furnishing 17,500*l.* to the concern, making a capital of 35,000*l.*

THE INDIA HOUSE LIBRARY is about to be removed to the offices of the Board of Control in Cannon Row. It contains upwards of 16,000 volumes of every class of Eastern literature, and 8000 manuscripts, containing the choicest collection of Sanscrit and Persian MSS. extant. Among them is the famous "Koran," written on vellum, in the ancient Cufic character, by the Caliph

Othman III., about 35 of the Hegira (A.D. 655), bearing numerous autographs and seals of Oriental monarchs. There is also a portion of the "Koran" written by Huzut Ali, son-in-law of Mahomet, with the seal of Timour and other Kings of Persia; and a memorandum written by Shah Jehan, referring to his having given 1500 golden mohurs for it. Among the early records of the East India Company are two volumes containing the autographs of subscribers under an Act "for raising 2,000,000*l.* upon a fund for payment of annuities, and for settling the trade to the East Indies," dated 14th July, 1698, in the tenth year of the reign of William III. The first entry is by the Commissioners of the Treasury, as subscribers of 10,000*l.* in the name of his Majesty. The subscribers, 1344 in number, include most of the English nobility, as well as foreigners. The signatures are written on 17 pages of parchment. The amounts subscribed range from 100*l.* upwards, the highest being that of John Dubois, for 315,000*l.* The printed library contains the largest and most unique collection of works relating to India, China, and the Archipelago; and as a whole may be regarded as one of the most valuable as well as useful libraries in Europe. The Secretary of State for India has determined to maintain and extend the library, and has appointed Dr. Ballantyne, of Benares, to succeed Professor Wilson as principal librarian.

THE STEPNEY MURDER.—On Sunday last a remarkable circumstance occurred which led to the apprehension of two men called Mullens and Emms on the charge of being concerned in the murder of Mrs. Emsley. It appears that Mullens, who was in the habit of doing work for the deceased as a bricklayer, made a voluntary communication to the police, to the effect that, having occasion to suspect Emms, who lived in a brick field at Globe Town, and sometimes accompanied Mrs. Emsley in collecting her rents, he had watched his movements for the last fortnight; that before 8 o'clock on the previous morning he had seen him leave his cottage and go to a ruined house at a little distance in the brick-field, and then return to his cottage carrying a parcel; that a few minutes afterwards he was seen to leave his cottage again with a smaller parcel in his hand and to enter a little outhouse at the back, and then to return to his own house empty-handed. Furnished with this information, the three officers went on Sunday to the spot to make inquiries into the matter. On meeting Emms they frankly told him who they were, and repeated the story they had heard, but withheld for the moment the name of their informant. Mullens is said to have been not then in their company, but at a little distance and within call. Emms declared that the story was a fabrication, and the manner in which he did so gave to his denial an air of truth. He stated that he had not been to the outhouse for a fortnight, and that on the day in question he was not out of bed so soon as 8 o'clock. He referred to his wife for proof and a sergeant on being despatched to interrogate her on the subject ascertained that he was ill and did not get up till half-past 9. Emms's house was then searched, as well as the outhouse, but nothing was found to confirm the accusation. Mullens then approached and told the officers in what part of the outhouse they were to look, and that the parcel would be found concealed under a flag-stone. They accordingly returned, and in accordance with the information found behind a flagstone a small parcel covered with paper. Emms on being appealed to emphatically denied all knowledge of its being there and of its contents, and at once denounced the affair as a foul plot. The parcel was then opened in the presence of Emms, and was found to contain the check for 10*l.* given by Mr. Pickering to the deceased in payment of rent on the day on which she was last seen alive, a German silver tablespoon and some teaspoons similar to others found in the house of deceased on the discovery of the murder, several pieces of blotting-paper, and two lenses which appeared to have belonged to a telescope. The outhouse, it should be stated, is accessible from the outside as well as from the inside of the cottage, so that the parcel might have been placed there without the knowledge of Emms, who is a shoemaker in a very small way of business, and has lived respectably in the same situation for 18 years. The police took both Emms and Mullens into custody, and on Monday morning they were brought before Mr. Selfe at the Thames Police Court for examination. The evidence of the police left little doubt that Emms was entirely innocent of all participation in the affair, and that Mullens, if not the actual murderer, was a partaker of the spoil, and that he had himself placed the parcel under the slab, in the hope of fixing the guilt on Emms, and so obtaining the reward of 300*l.* It was proved that he had promised to act liberally to the police if all turned out as he wished, that the parcel was tied round by a string, partly of wax-ends and partly of common tape, that his shoes were found to be tied with wax-ends of the same kind, and that on searching his house some tape was found which in like manner corresponded with that on the parcel. An apron stained apparently with blood, and which is believed to have belonged to the murdered woman, was found in his house. A hammer, which he was in the habit of carrying about with him as a plasterer, was also found concealed under the hearthstone of the room he occupied, and the size and shape of this hammer corresponded with the blow on the forehead of Mrs. Emsley. At the conclusion of this evidence the magistrate remanded the case to Tuesday next, admitting Emms to bail, but ordering Mullens to be detained in prison. It appears that Mullens was formerly a constable in the K division of police, and that on being superannuated he obtained a situation on the Brighton Railway, where he was detected (as a detective) in a serious robbery, of which he was convicted and sentenced to four years' penal servitude, his daughter being sentenced to six months' imprisonment for being concerned in the same felony. For some days he had been seen by the children of Emms loitering about the brickfield, and sleeping on two occasions upon the grass near a pile of bricks; and on Saturday morning about 3 o'clock Emms and his family were roused by the barking of their dog, as if somebody was prowling about his premises.

THE CASE OF THE REV. J. BONWELL.—The Bishop of London has licensed the Rev. J. G. H. Hill, M.A., Brother of St. Katharine's Hospital, Regent's Park, to be curate in sole charge of the parish of St. Philip's, Stepney, until Mr. Bonwell's appeal against the sentence of deprivation passed upon him by the Court of Arches, has been determined. The Bishop of London, accompanied by the new curate, visited the parish on Thursday.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday the 8th September were 968. Excluding from the returns the deaths from epidemic cholera in the first week of September, 1854, the average number of deaths in the corresponding weeks of the 10 years (1850-9) corrected for increase of population, was 1142. The present return is therefore 174 below the average. During the week the births of 887 boys and 860 girls, in all 1747 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1571.

Provincial.

BRIDGEWATER.—After a series of unsuccessful attempts to rescue his wife from the Agapemone, the perseverance of the Rev. Lewis Price has at length been rewarded by the attainment of his object. On Friday, from information which he had received, he traced his wife to Exeter, and thence to Wilton and Salisbury, where he found her on Tuesday last in lodgings with Mrs Starky, another follower of Prince. On Wednesday Mr. Price returned with her to this town, and immediately proceeded to Glastonbury, where he has temporarily taken up his residence.

FROME.—The private inquiry into the Road murder which was opened last week at Bath by Messrs. Slack & Simmons, solicitors, seemed likely last week to be rendered abortive by Mr. Kent declining, on the advice of his counsel and solicitor (Mr. Edlin of the Western Circuit, and Mr. Dunn, of Frome) to submit himself and the members of his family for examination. Mr. Kent stated that he was still most willing to submit himself, his wife, and every other member of his household to examination, on oath or otherwise, by any magistrate of the county or other competent official whom the Government may appoint; but that, acting on the recommendation of counsel, he will not accede to the request to attend at Mr. Slack's office, not knowing by what authority the inquiry was conducted. Mr. Kent has since been informed by Mr. Waddington, the Under Secretary-of-State, that Mr. Slack's proceedings have been taken at the instance of the local magistrates, with the sanction of the Home Office. He has therefore instructed his solicitor to inform Mr. Slack that if he should desire to put any questions to him or to Mrs. Kent, or to any member of his family or household, he will be prepared to receive him at Road. A private meeting of the local magistrates was held at Trowbridge on Tuesday, at which Mr. Slack was instructed to write to Mr. Kent, stating that it was of the utmost importance that he and his family should be examined; and that it was the desire of the magistrates that he should attend at Mr. Slack's office at Bath, on Thursday or Friday. A letter to this effect was received by Mr. Kent on Wednesday, but as it is unlikely that he will make any further concession, it is expected that Mr. Slack will proceed to Road and examine Mr. Kent and family at his own residence.

LIVERPOOL.—The execution of Thomas Gallagher for the murder of his wife took place on Saturday in front of Kirkdale Gaol, in the presence of many thousand spectators. He died penitent, and fully admitted the justice of his sentence.

NEWCASTLE-ON-TYNE.—Great excitement has been caused in the mercantile circles of this town by a letter which has been sent to the Town Council by the French Consul in the port, with regard to a provision in the French treaty. It appears that the burgesses of Newcastle consist of "freemen" and "ten-pounders," and that the freemen have for ages enjoyed an exemption from the payment of local duties, in the form of quay, harbour, and light dues, which are imposed not only on the vessels of strangers, but also on the vessels of "ten-pounders." The 10th article of the French treaty provides, "That in all that relates to local treatment, the dues and charges in the ports, basins, docks, roadsteads, harbours, and rivers of the two countries, the privileges, favours, or advantages which are or shall be granted to national vessels, without exception, or to the goods exported or imported in them, shall be equally granted to the vessels in the other country, and to the goods exported or imported in them." The French Minister of Foreign Affairs considers that this article establishes an exemption from the payments of local dues, which are also imposed with occasional or particular exemptions of classes, and has therefore directed the French Consul to claim exemption for French vessels, on the same principle as that extended to the freemen. If this claim be admitted the effect of the 10th article in the treaty will be to place the French shipowner on the same terms as the freemen, and protect him, upon a vessel worth 1000*l.*, to the extent of 50*l.* a year upon the voyages to Havre or Rouen over the British shipowners trading with those ports who are not freemen of Newcastle. Another privilege a French vessel has over an English vessel, whether belonging to freemen or not, in a British port, is that the crew of the French vessel is allowed to consume stores duty free in port. The question has been referred to the law advisers of the corporation, and it is expected that it will bring the whole question of local charges on shipping to an immediate settlement.

NOTTINGHAM.—The struggle which has existed for the last six weeks in the Mechlin department of the lace trade in this town still continues, with as little prospect as heretofore of a satisfactory termination. At a quarterly meeting of the lacemakers on Saturday it was stated that large sums of money had been received from various parts of the country, and the receipts and expenditure of the past quarter, notwithstanding the six weeks' lock-out, showed a balance in favour of the society. A resolution was carried that the same allowance should be continued—namely, 8*s.* per week to the men on strike, and that a similar amount should be levied on the lacemakers in work, viz., 1*s.* per man per week, until the struggle shall come to a conclusion.

STOCKPORT.—Mary Ann Howard, the wife of an aged labouring man residing in Weaver's Row, in this town, was found dead in her bed last week, with her skull fractured and her throat cut in a frightful manner. At the inquest the surgeons stated that they found the body lying on a bed from the side of which the head projected, while the arms were extended towards the floor. There was a large quantity of blood on the floor, and a knife so placed as to create an impression at first sight that deceased had committed suicide. There was a wound on the left side of the neck an inch long and very deep, more like a stab than a cut, as if the knife had been wriggled in the throat. Great pressure must have been used to cause the wound. There was another wound over the ear, and the skull had been fractured. The temporal, parietal, and frontal bones were completely detached and depressed upon the brain; and a piece of the temporal bone had been forced into the brain. These injuries might have been caused by a blow from an axe like the one produced, which had been found in the house with stains of blood and human hair corresponding in colour to that of deceased's adhering to it. It was proved that deceased had come home drunk on the night of the murder, and it appears that she must have been murdered in her sleep, the murderer having first rendered her insensible by fracturing her skull, and then cutting her throat. The jury unanimously returned a verdict of Wilful Murder against the husband, John Howard, who was accordingly committed to Chester Castle for trial at the assizes.

Ireland.

THE SWORD OF M'MAHON.—The O'Donoghue, M.P., and the Irish deputation appointed to present to Marshal M'Mahon the sword subscribed for by his Irish admirers, arrived at the camp of Chalons on Sunday, and were received with honours. The Marshal was attended by a crowd of generals and officers invited for the occasion. The deputation presented the sword, accompanied by an address complimenting the Marshal on his being "the worthy descendant of that heroic king who crushed the fierce foes of Ireland on the bloody plain of Clontarf," and declaring that the "land, once ruled by those whose royal blood flows in your veins, has felt the burden of most unhappy days; but the glory her exiled sons bestowed on her by their soldierly virtues on fields of battle, and by their wisdom in the councils of Europe, is for her brow, still encircled with the crape of her widowhood, as it were a laurel which interlaced the funeral wreath of her immense sorrows." The Marshal on receiving the sword drew the blade from the scabbard, and replying at some length, and with indescribable fervour and feeling, said:—"I shall one day leave to my eldest son Patrick this magnificent sword. It shall be for him, as it is for me, a new pledge of those close ties which ought to unite him for ever to the noble country of his ancestors." The deputation and invited guests were afterwards entertained on a grand scale by the Marshal. The blade of the sword is of steel, highly polished, and adorned with Irish tracery; the hilt is of bog oak, covered with crosses of gold, and studded with Irish amethyst, beryl, and other precious stones, and the scabbard is of wood, covered with green velvet, with gold ornaments. On one side of the blade is etched in the Celtic character, and on the other in the French language, this epigraph:—"Ireland oppressed, to the brave soldier, Patrick Maurice de M'Mahon, Marshal of France, Duke of Magenta, descendant of her ancient kings."

Railways.

THE LATE ACCIDENT ON THE EAST LANCASHIRE.—The inquest on the persons killed in the recent accident at Helmshore, has been resumed at several sittings by adjournment, and is not yet concluded. The most important evidence yet given was that of Colonel Yolland, R.E., who had been sent down by the Board of Trade to inspect the line and report on the causes of the accident. He attended the sitting of the jury on Tuesday, and stated his opinion that the coupling link which broke was of good iron, and that the prevention of this class of accident should be sought for in some other way than through the increased strength of the couplings and side chains. He considered that the train itself was of too great length, that two breaks were quite insufficient for it, that a greater amount of break-power should be attached to all trains, that the Legislature should not sanction stations being placed on inclines, and that when they are situated on inclines, or such slopes as will cause carriages to run back by the action of gravity, the guard in charge of the break at the tail of the train should not be permitted to leave his break.

Sporting.

DONCASTER RACES.

TUESDAY.—*Fitzwilliam Stakes.* Mr. S. Jacob's Amsterdam beat Twilight, Cronstadt, and 14 others.—*Revival Plate.* Sir J. Hawley's Catawba beat Doefoot and 5 others.—*Doncaster Plate.* Mr. Bowes's Donner und Blitz, beat Hegira, White Rose, and 6 others.—*Champagne Stakes.* Lord Stamford's Wallson beat Kettledrum, Vaga, and 7 others.—*Great Yorkshire Handicap.* Mr. J. Osborne's Moorhen beat Chère Amie, Syringe, and 10 others. Won cleverly by a length; Syringe a bad third.—*Selling Stakes.* Mr. Saxon's White Rose beat Confusion, Weatherwitch, Mr. J. Osborne's f, and 5 others.—*Glasgow Stakes.* Mr. Merry's Folkestone beat See-saw and Canto.—*Filly Stakes.* Mr. Sixon's Brown Duchess beat Vergisz Mein Nicht, and Queen of the Vale.

WEDNESDAY.—*Municipal Stakes.* Mr. Henry's Klarikoff beat Vaga, Lord Glasgow's c, and Wild Will.—*Corporation Plate.* Lord Stamford's Emily beat Amsterdam, Sagitta, and 11 others.—*St. Leger Stakes.* Lord Aylesbury's St Alban's beat High Treason, The Wizard, Sabreur, and 11 others. Betting—5 to 2 against Thormanby, 100 to 30 against Sabreur, 5 to 1 against The Wizard, 8 to 1 against St. Alban's, 10 to 1 against Umpire, 1000 to 30 each against High Treason. Won easily by a length and a half, a neck between the second and third, two lengths between the third and fourth; the two leading favourites, Thormanby, the winner of the Derby, and Umpire, the American horse, being fifth and sixth, and unplaced by the judge.—*Sweeps.* Captain Christie's Lady Clifden beat Queen of the Vale, Brown Duchess, and 3 others.—*Handicap Sweeps.* Lord Derby's f. beat Mr. Smith's c, Nutbush, and 14 others.—*Stand Plate Handicap.* Mr. S. Jacob's Von Stroom beat Pomona, Nephyte, and 14 others.—*Her Majesty's Plate.* Mr. Lowe's Wild Rose beat Wamba, Vanquisher, Moorcock, Feodorowna, and Pastime.

THURSDAY.—*Scarborough Plate.* Lord Annesley's Sweetsauce beat Cheesecake.—*Portland Plate.* Mr. H. O'Hara's Tattoo beat Emily, Lady Derby, Twilight, and 26 others.—*Sweeps.* Mr. Jackson's Longshot beat Parasite, Charing Cross, and Lucienne.—*Eglinton Stakes.* Mr J. A. Hurd's Lady Clifden beat Dictator, Folkestone, and 4 others.—*Cleveland Handicap.* Sir H. des Voeux's Comforter beat King of Diamonds, Benbow, and 10 others.—*Juvenile Selling Stakes.* Lord Stamford's Sacerdos beat Billy Banks, Damsel, and 6 others.—*Zetland Stakes.* Mr. A. Nicholl's The Wizard walked over.

FRIDAY.—(By Electric Telegraph.)—*Doncaster Cup.* Sabreur beat Thormanby, Vanquisher, and 2 others.—*Doncaster Stakes.* Cape Flyaway beat Sutherland and The Wizard.—*Sweeps.* Northern Light walked over.—*Match.* Stockwell colt beat Caliban.—*Scurry Stakes.* Bayonet beat Wild Rose, Hetty, and another.—*Nursery Plate.* Elcho beat Molly filly and 20 others.—*Don Stakes.* Buccaneer beat Emily, The Wizard, and another.—*Park Hill Stakes.* Lady Trespass beat Makeless filly, Aurora, and another.—*Town Plate.* Maid of the Mist beat Curlew, Tiara, and 12 others.

Obituary.

HIS ROYAL HIGHNESS THE GRAND DUKE OF MECKLENBURG-STRELITZ died on the 6th inst. after a lingering illness. He was born in 1779, and married in 1817, the daughter of the late Landgrave of Hesse Cassel. He succeeded to the Principality on the death of his father, the Grand Duke Charles, in 1816. By his marriage with the Duchess, who survives him, he leaves the Hereditary Grand Duke Frederick William, born 1819, a Lieut.-General in the Prussian army, married in 1843, the Princess Augusta, eldest daughter of the late, and sister of the present Duke of Cambridge, who have issue an only son, Prince Adolphus Frederick, now in his 13th year; the Duchess Caroline, born in 1821, married in 1841 to the Crown Prince of Denmark, and separated in 1846; and the Duke George, born in 1824, and married to the Grand Duchess Catherine Michaellowna, daughter of the late Grand Duke Michael of Russia.

THE COUNTESS MANVERS died on the 7th inst. at Thoresby Park, Nottinghamshire, in her 76th year. She was the eldest daughter of the late Mr. Authony Hardolph Eyre, of Grove Park, Notts, and married, in 1804, the Earl Manvers, by whom her ladyship leaves surviving issue Viscount Newark, M.P., and two daughters, Lady Mary, married to Mr. Egerton, M.P., and Lady Annora, married to Mr. C. W. Wynn, M.P.

THE DOWAGER LADY RIVERS died on the 6th inst., in her 75th year. She was the daughter of the late Lieut.-Colonel Rigby, of Mistley Hall, Essex, and married 1808, the third Lord Rivers, by whom she leaves the present Lord Rivers, Lieut.-Colonel the Hon Horace Pitt, and the Hon. Harriet Elizabeth, married to Mr. Charles Dashwood Bruce.

THE RIGHT HON. JAMES WILSON, Chancellor of the Indian Exchequer, died at Calcutta on the 11th August. From his first arrival in India he had suffered from the effects of the climate, and had been advised to retire for a time to the Hills. His anxiety however to bring into operation the measures he had initiated for the reform of the Indian system of finance induced him to remain in Calcutta, and he has now fallen a sacrifice to an attack of cholera. Mr. Wilson was born at Hawick in 1805, and was consequently in his 55th year. He was in early life in business on his own account, but by no means successfully. His treatment in successive pamphlets of the great revenue questions which agitated the world from 1840 to 1845, attracted public attention, and the establishment of the *Economist* newspaper gave him a fixed place among commercial politicians. These papers brought him into Parliament, and he was returned for Westbury in 1847. On the formation of the Liberal Ministry of 1852 he became financial secretary to the Treasury, and he was last year selected by the Ministry as the financier best qualified to deal with the difficulties of our Indian revenue.

SIR ROBERT ALEXANDER CHERMSIDE, M.D., died at Oxford on the 8th inst. He was the third son of the late Dr. Chermside, of Portaferry, county Down, Ireland, and entered the medical service of the army in 1807 as assistant-surgeon to the 7th Hussars. He served in Spain, France, Flanders, &c., and was present at the battle of Waterloo. Immediately after that battle he was promoted to the surgeoncy of the 10th Hussars. In 1821 he was admitted a licentiate of the Royal College of Physicians, London, and in 1825 was elected a Fellow of that college; he graduated M.D. at Edinburgh, and was a member of the Royal College of Surgeons of London and Edinburgh. For some years previous to his death he was physician extraordinary to the Duchess of Kent, and physician to the British Embassy at Paris. In recognition of his war services he was created a Knight Commander of Hanover, a Knight of St. John of Jerusalem, a Knight of the Red Eagle of Prussia, and a Knight of the Legion of Honour of France.

COLONEL JOHN RICHARD WARD, C.B., late of the 2d Dragoons, died a few days since at Strangford House, county Down, Ireland, in his 69th year. He entered the army at an early age, and was present with his regiment at most of the engagements of the Peninsular campaign. He was one of the few officers still surviving who obtained the gold medal for their services, having received that decoration and two clasps for taking part in the engagements at Salamanca, Badajoz (at the assault of which he was severely wounded), and the Pyrenees; he had also received the silver war medal with one clasp for Busaco.

MR. JARDINE, THE MAGISTRATE OF BOW STREET, died at his country residence, near Weybridge, on Thursday evening, in his 68th year. He had been suffering for some time from an asthmatic affection, and had been unable to take his seat in court for several days. He was called to the bar in 1823, and had been upwards of 20 years a police magistrate. He was also Recorder of Bath, and, in the earlier part of his career, was the author of several popular legal and other works, some of which were published by the Society for the Diffusion of Useful Knowledge.

Miscellaneous.

THE TOBACCO QUESTION IN FRANCE.—The pupils of the Polytechnic School in Paris have recently furnished some curious statistics bearing on tobacco. Dividing the young gentlemen of that college into groups, the smokers and the non-smokers, it is shown that the smokers have proved themselves in the various competitive examinations far inferior to the others. Not only in the examinations on entering the school are the smokers in a lower rank, but in the various ordeals they have to pass through in a year, the average rank of the smokers had constantly fallen, and not inconsiderably, while the men who did not smoke enjoyed a cerebral atmosphere of the clearest kind.

BIRTHS.—On the 4th inst, the Lady CATHARINE WHEBLE, of a son—3d inst, at 97, Eaton Square, Lady SCOTT, of a son—6th inst, at Eastwood Park, Gloucestershire, Lady JENKINSON, of a son—5th inst, at 2, Gloucester Place, Portman Square, Lady M'GRIGOR, wife of Sir Charles R. M'Grigor, Bart, of a son—11th inst, at 39, Grosvenor Square, the Hon. Mrs. RYDER, of a daughter—7th inst, at Somerby, Leicestershire, the Hon. Mrs. HENRY FORESTER, of a son—6th inst, at the Grange, Taplow, the Hon. Mrs. IRBY, of a son and heir—8th inst, at Cromer, the Hon. Mrs. DELAVAL ASTLEY, prematurely, of a son, who only survived his birth a few moments.

MARRIAGES.—On the 21st July, at Christ Church, South Yarra, his Excellency Sir HENRY BARKLY, K.C.B., Governor of Australia, to Miss PRATT, only daughter of Major-General Pratt, Commander of the Forces in that colony—5th inst, at Arley Chapel, ROBERT NEWCOMEN GORE BOOTH, eldest son of Sir Robert Gore Booth, Bart., M.P., to MARY, second daughter of R. E. EGERTON WARBURTON, Esq., of Arley—5th inst, at St. George's, Hanover Square, Captain RALPH LEESON, nephew of the Earl of Miltown, to ELIZABETH FLORA, only daughter of the Rev. G. R. HARDING, Vicar of St. Anne's, Wandsworth—6th inst, at the Church of St. John Leys, Northumberland, ALFRED FREDERICK ADOLPHUS SLADE, Esq., Captain H.M.'s 100th Foot, eldest son of Sir Frederick Slade, Bart., Q.C., to MARY CONSTANCE, second daughter of WILLIAM CUTHBERT, Esq., of Beaufront Castle, Northumberland—6th inst, at Milstead, Kent, CHARLES C. O. TYLDEN WRIGHT, youngest son of the late Rev. E. C. Wright, rector of Pitsford, Northamptonshire, to ELIZABETH JANE, only child of Sir JOHN MAXWELL TYLDEN, of the Manor House, Milstead—11th inst, at Sketty, Glamorganshire, GEORGE JOHN, second son of E. S. CAYLEY, Esq., M.P., to MARY ANNE FRANCES, eldest daughter of MONTAGU WILMOT, Esq., youngest son of the late Sir Robert Wilmot, Bart., of Osmaston, Derbyshire—4th inst, at the Parish Church, Brighton, FREDERICK WILLIAM LAMBERT, Esq., Major in the Indian Army, son of Vice-Admiral Sir George Robert Lambert, K.C.B., of Norbiton Place, Surrey, to MARY JANE, daughter of the late General Sir JOHN LAMBERT, G.C.B., &c., of Weston House, Thames Ditton, Surrey.

DEATHS.—On the 3d inst, at Eltham, after a short illness, the Hon. WILLIAM LAMBART, son of the Earl of Cavan, aged 15 years—5th inst, at Harrogate, the Hon. JAMES LYON BROWNE, eldest son of Lord Kilmaine, late Lieut.-Colonel H.M.'s 21st Fusiliers, aged 37—6th inst, of decline, ANNA CLEMENTINE, only daughter of the late James Annesley, Esq., and wife of the Hon. GEORGE ANNESLEY, of Castlewellan, county Down—3d ult, Sir FRANCIS BLAKE, Bart., of Twizel Castle, and Tilmouth Park, Northumberland, aged 86—21 July, at Monte Video, Commander ROBERT H. B. ROWLEY, youngest son of the late Admiral Sir Charles Rowley, Bart., G.C.B., aged 42—5th inst, at Cleve House, near Exeter, Lady RIGGS MILLER, relict of Sir JOHN RIGGS MILLER, Bart., and eldest daughter of the late John Beaucamp, Esq., of Pengreep, Cornwall, aged 84—21 inst, ELEANOR, wife of S. H. UNWIN HEATHCOTE, Esq., of Shephalbury, Hertfordshire, and daughter of the late Sir Robert Wigram, Bart., aged 72—4th inst, at Uddens, Wimborne, CHARLOTTE, wife of THOMAS BROWNE EVANS, Esq., of North Tuddenham, County Norfolk, and of Deane, Oxon, and second daughter of the late Sir John Simeon, Bart.—4th inst, at Bank Hall, Chorley, Lancashire—GEORGE ANTHONY LEGH KEECK, Esq., 57 years Lieutenant Colonel Commandant of Prince Albert's Own Leicestershire Yeomanry Cavalry, and M.P. for Leicestershire for 35 years, aged 86—30th ult, at Strangford House, Colonel JOHN RICHARD WARD, C.B., of Tubberna-Carrig, county Down, aged 68—1st ult, at Aboo-ghur, Ensign FREDERICK W. B. PORTMAN, of H.M.'s 75th Regiment Bombay Native Infantry, youngest son of Major Portman, of Dean's Court, Wimborne, aged 18—5th inst, GEORGE CAREW-GIBSON, Esq., of Bradston Brook, Surrey, and Sandgate Lodge, Sussex, aged 47—6th inst, at St. Leonard's, near Windsor, ABRAHAM GEORGE ROBARTS, Esq., Banker, aged 59.

Markets.

COVENT GARDEN, Sept. 15.

Foreign importations continue to arrive. Pears and Apples are now plentiful, as are also Peaches and Nectarines from open walls. Grapes are abundant. Cob Nuts realise 1s. and Filberts 9d. to 1s. per lb. Peas are scarce. Potatoes are for the most part badly diseased. Some good Mushrooms may be obtained, and excellent Tomatoes are still being imported from the south of France. Cut flowers chiefly consist of Orchids Gardenias, Violets, Mignonette, Heaths, Geraniums, Lily of the Valley, and Roses.

FRUIT

Pine Apples, per lb., 3s to 4s	Green Figs, per doz., 3s to 6s
Grapes, per lb., 2s to 5s	Melons, each, 2s to 4s
Peaches, per doz., 8s to 15s	Plums, p. ½ sieve, 3s to 4s 6d
Apricots, per doz., 2s to 4s	Pears, per doz., 1s to 3s
Nectarines, do., 5s to 10s	Apples, per doz., 6d to 1s 6d
Cherries, p. lb., 1s to 3s	Oranges, per 100, 10s to 20s
Currants, per qt., 3d to 6d	Lemons, per 100, 10s to 15s

VEGETABLES.

Rhubarb, per bundle, 4d to 6d	Beet, per doz., 1s 6d to 2s
F. Beans, per qrtn, 9d to 1s	Celery, per bundle, 1s 6d to 2s
Peas, p. bush., 2s to 3s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 4d to 6d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 4s 6d to 6s	Veg. Marrows, p. doz., 6d to 1s
Cabbages, do., 1s to 2s	Shallots, per lb., 6d to 8d
Potatoes, p. ton, 100s to 160s	Garlic, per lb., 6d to 8d
— per bus., 4s to 5s 6d	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per cwt., 5s to 8s	Lettuces, Cos, p. score, 6d to 1s
Carrots, per bunch, 4d to 6d	Endive, p. score, 1s to 2s
Turnips, per bunch, 5d to 7d	Horse Radish, p. bun., 1s 6d to 4s
Spinach, p. sieve, 2s to 3s	Mushrooms, p. pott., 2s to 3s
Cucumbers, each, 6d to 1s	Parsley, p. 12 bunches, 2s to 4s
Artichokes, per doz., 4s to 6s	Savory, per bunch, 2d to 4d

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Sept. 13.

Prime Meadow Hay	75s	to 80s	Clover	90s	to 115s
Superior do. (old)	90	112	New Clover	—	—
Inferior do.	50	60	Old second cut	80	100
New do.	50	90	Straw	30	36
Rowen	—	—			

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Sept. 13.

Sup. Meadow Hay	118s	to 126s	Inferior Clover	84s	105s
Inferior do.	98	110	New do.	—	—
New do.	65	105	Straw	30	45
Superior Clover	114	126			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Sept. 13.

Fine old Hay	105s	to 112s	Fine old Clover	120s	to 126s
Inferior do.	50	70	Inferior do.	100	110
Prime New Hay	—	—	Fine 2d cut	84	90
Inferior do.	—	—	Fine New Clover	—	—
Straw	33	38	Inferior do.	—	—

HOPS.—BOROUGH MARKET, FRIDAY, Sept. 14.

Messrs. Pattenden & Smith report that the accounts come worse this morning. Duty down to 45,000*l*. Market again advancing. One pocket of new Sussex arrived at market yesterday from Mr. Falconer, Ticehurst, and sold by Mr. Dickenson to Messrs. Kitchin and Thornton at 16*l*. 16s. per cwt.

COAL MARKET.—Sept. 12.

Bower's West Hartley, 16s.; Buddle's West Hartley, 16s.; Davison's West Hartley, 16s.; Howard's and Lambert's West Hartley, 16s.; Tanfield Moor, 13s. 3d.; Tanfield Moor Butes, 13s. 3d.; West Hartley, 16s.; Walls End Acorn Close, 18s. 6d.; Walls End Eden, 18s. 6d.; Holywell, 16s.; Eden Main, 18s. 6d.; Walls End Braddyl's Hutton, 19s.; Walls End Framwellgate, 18s. 6d.; Walls End Hetton, 20s.; Walls End Kepier Grange, 18s. 9d.; Walls End Lambton, 20s.; Walls End Russell's Hetton, 18s. 9d.; Walls End Stewarts, 20s.; Walls End Cassop, 19s.; Walls End Heugh Hall, 18s. 6d.; Walls End Hunwick, 16s. 6d.; Walls End Kelloe, 19s. 3d.; Walls End South Hartlepool, 19s.; Walls End Thornley, 17s 6d.; Walls End West Hetton, 18s. 6d.; Walls End Whitworth, 16s. 6d.; Carway and Duffryn Malting, 22s. 6d.—62 ships at market.

METROPOLITAN CATTLE MARKET.

MONDAY, Sept. 10.

The number of Beasts is still large, although much smaller than on Monday last; the trade is rather more active than on that day, but we cannot quote higher rates. There is a considerable reduction in the number of Sheep, consequently prices on the average are higher. There is scarcely any demand for Lambs. Calves are selling about the same as on Thursday. From Germany and Holland there are 1550 Beasts, 7300 Sheep, and 140 Calves; from Iceland, 550 Beasts and 15 Calves; from Norfolk and Suffolk, 100 Beasts; and 2200 from the northern and midland counties.

	s	d		s	d
Best Scots, Herefords, &c.	4	10	to 5	2	
Best Short-horns	4	8	— 5	0	
2d quality Beasts	3	6	— 4	0	
Best Downs and Half-breds	5	4	to 5	6	
Do. Shorn	—				
Best Long-wools	5	0	— 5	4	
Do. Shorn			to		
Ewes & 2d quality	4	4	— 4	8	
Do. Shorn	—				
Lambs	5	0	— 5	8	
Calves	4	0	— 5	0	
Pigs	3	8	— 5	0	

Beasts, 5100; Sheep & Lambs, 24,380; Calves, 204; Pigs, 440.

THURSDAY, Sept. 13.

The supply of Beasts and Sheep is about the same as on this day week, but the weather being fine and cool the trade was brisk; prices remain the same on Monday last. The foreign supply consists of 240 Beasts, 1850 Sheep, and 250 Calves; Milch Cows, 195.

	s	d		s	d
Best Scots, Herefords, &c.	4	10	to 5	2	
Best Short-horns	4	8	— 5	0	
2d quality Beasts	3	6	— 4	0	
Best Downs and Half-breds	5	4	— 5	6	
Do. Shorn	—				
Best Long-wools	5	0	— 5	4	
Do. Shorn	—				
Ewes & 2d quality	4	4	— 4	8	
Do. Shorn			to		
Lambs	5	0	— 5	8	
Calves	4	0	— 5	0	
Pigs	3	8	— 5	0	

Beasts, 1115; Sheep & Lambs, 5520; Calves, 395; Pigs, 230.

BUTTER MARKET.—Sept. 14.

Best Fresh Butter .. .. 14s. per dozen lbs.
Second do. do. .. 12s. to 13s. " "
Pork, 5s. 4d. to 5s. 8d. per 8 lbs.

MARK LANE.—MONDAY, Sept. 10.

The supply of Wheat from Essex and Kent at this morning's market was good, and consisted chiefly of the new crop, the weight, quality, and condition of which was very variable, the majority of samples being damp and inferior, and the price ranging from 40s. to 58s. per qr. Old English and foreign must be quoted 2s. to 3s. per qr. lower than on this day se'nnight, but there appeared to be more disposition to purchase the latter than on Friday. Barley is 1s. per qr. cheaper. Peas are unaltered in value. Beans are rather

lower. The Oat trade is slow at a decline of 1s. per qr. The top price of town-made Flour is reduced 3s. per sack, Norfolks are offered at 40s., and barrels are 1s. to 2s. lower. There were about 150 qrs. of new white Mustard Seed at market; the quality being very inferior, the manufacturers appeared careless about purchasing, and it remained unsold at a late hour.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	52—58	Red	42—60
— — fine selected runs..ditto	54—60	Red	50—62
— — Talavera	50—67		
— Norfolk	—	Red	—
— Foreign	50—68		
BARLEY, grind. & dist., 25s to 31s..Chev.	38—45	Malting.	36—41
— Foreign..grinding and distilling	30—38	Malting.	35—40
OATS, Essex and Suffolk	20—24		
— Scotch and Lincolnshire..Potato	26—28	Feed ..	24—26
— Irish .....Potato	26—28	Feed ..	21—24
— Foreign.....Poland and Brew	24—26	Feed ..	20—26
RYE	35—38	Foreign.	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....36s to 38s....Tick	38—42	Harrow.	38—42
— Pigeon .....44s—47s..Winds	—	Longpod	—
— Foreign ..... Small	38—46	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	50—52	Suffolk .	50—54
— Maple .... —s to —s ..... Grey	—	Foreign	30—43
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	50—57		
— 2d do. ..... ditto	34—50	Country.	34—50
— Foreign .....per barrel	28—31	Per sack	40—50

FRIDAY, Sept. 14.

We have to report another week of magnificent weather for the harvest, with which great progress has been made, and some localities are already becoming bare; in these, however, we have reason to fear that the crops have been prematurely hurried up, and the Wheat will either be unsuitable for several months or only saleable for starch. Business in Wheat during the past week has been very limited. Millers being more or less in stock were indisposed to purchase unless at a decline, which holders refuse to accept, and there is evidently a better feeling in the trade than at the close of last week. On the transactions which have occurred, a decline of about 2s. per qr. appears to have been submitted to. Spring corn of all kinds in the principal markets has sympathised with Wheat, and in several each description has been quoted 6d. to 1s. per qr. cheaper. Flour is generally quoted 1s per sack and barrel lower; here the top price, which was nominal, only receded 3s. on Monday. Of grain and seed-laden vessels 30 have arrived off the coast this week. The weather last night became unsettled, and we have had a few showers. A large portion of the English Wheat sold on Monday was refused this morning in consequence of the miserable condition in which it arrived, and could only be disposed of at a reduction of several shillings per qr.; dry samples command the extreme rates of that day. The market was better attended, and more disposition evinced to purchase old foreign, but the disinclination of holders to accept the prices they would have taken last week restricted sales. Barley is dull at Monday's prices. The Oat trade is steady at late quotations.

ARRIVALS FROM Sept. 10 TO Sept. 14.

	Wheat.	Barley	Oats.	Flour.
English ..	880 qrs.	170 qrs.	90 qrs.	2010 sks.
Irish	— ,,	— ,,	10 ,,	— ,,
Foreign ..	15790 ,,	2790 ,,	23240 ,,	1510 ,, 70 brls.

LIVERPOOL, Tuesday, Sept. 11.—We had a very fair attendance of millers and dealers at our Corn Exchange this morning, and a better demand springing up for Wheat than had been anticipated, no further decline was established on the quotations of last market day. Flour was not pressed for sale, and consequently no cheaper. Indian Corn had only a limited inquiry, and must be noted 3d. to 6d. per qr lower than on Friday. Oats gave way 1d. per bushel, but in Oatmeal there is no change. Beans, Peas, and Barley all maintain previous rates in retail. The market closed with greater firmness than it opened.

FRIDAY, Sept. 14.—Grain market more steady, and a slight advance obtained for good descriptions of Wheat and Flour. Indian Corn 3d. dearer; Ibrail 33s. 6d., mixed American and Galatz, 34s. Beans firm, and other articles steady. Weather fine after rain.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Aug. 4..	58s 7d	33s 0d	26s 6d	35s 6d	46s 9d	41s 3d
— 11..	59 6	34 0	26 1	44 9	46 5	41 0
— 18..	59 6	32 10	28 2	41 9	47 1	44 0
— 25..	60 1	34 9	27 1	40 4	47 7	43 9
Sept. 1..	60 11	33 3	28 2	40 7	47 10	44 5
— 8..	62 10	35 2	27 2	39 4	49 3	41 4
Agg. Aver.	60 3	33 10	27 3	42 0	47 6	42 8

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Aug. 4.	Aug. 11.	Aug. 18.	Aug. 25.	Sept. 1.	Sept. 8.
62s10d	..	..	..	..	..	
60 11	..	..	..	..		
60 1	..	.	..		..	..
59 6	..			..	..	..
58 7 —		..	..	..	..	..
..	..	..	..	..	..	..

BRITISH WOOLS.—LONDON, FRIDAY, Sept. 14

Our market is in a buoyant state with the tendency upwards, say from ½d. to 1d. a lb. over the prices offered three weeks ago. These prices, however, were not accepted here. The fine harvest weather has put every one into spirits.

	s. d.		s. d.
South-down Hoggets..	1 8 to 1 9	Leicest. Wethers	1 6 to 1 7
Half-bred ditto..	1 8 — 1 9	Ditto Hoggs ..	1 7 — 1 9
Down Ewes ..	1 6 — 1 7	Combing Skins	— — —
Kent Fleeces ..	1 6 — 1 7	Blanket ditto ..	0 6 — 0 8
		Flannel Wool ..	1 0 — 1 7

There was a sale of burnt Colonial wool yesterday, which realised very high rates. It is considered much higher than the late sales.

A PARTNER WANTED.

WANTED, in a large Nursery and Seed Trade in one of the largest Agricultural Counties in England, a thorough business Man, well acquainted with either; there has been a large Seed Trade carried on for more than half a century, and is capable of very great extension. Any one wishing to enter into a first-rate business, this offers an opportunity rarely to be met with.—For particulars inquire of Messrs. HURST & M'MULLEN, Seedsmen, 46, Leadenhall Street, London, E.C.

TO MARKET GARDENERS.

WANTED IMMEDIATELY, an active, industrious, middle-aged Man, to SUPERINTEND the Cultivation of about 40 acres of Land for Gardening purposes; and to work himself. None need apply unless thoroughly competent. House found.—Address E. B., Dennison's Mills, Landport, Portsea.

PLYMOUTH SEED COMPANY.

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GARDENER.—Age 37, married; well versed in all branches of his profession, and has the most satisfactory testimonials as to ability and character.—X. Y. Z., The Nurseries, Tooting, Surrey, S.

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GARDENER.—Middle-aged, married, without incumbrance; is at present engaged laying out new pleasure grounds, in which he has had considerable practice; will be shortly disengaged, and seeks a similar engagement or a permanent situation. He is thoroughly experienced in every branch of his profession, including Forcing of every description. Testimonials and reference to his present employer.—A. R., Belle Vue Cottage, Buckhurst Hill, Woodford, Essex, N.E.

GARDENER (SINGLE-HANDED OR OTHERWISE).—Age 32, married, no incumbrance; well experienced in the management of Fruit, Flower, and Kitchen Gardens, &c. Good character from present employer.—A. R., Bilbrough, near York.

GARDENER (UNDER).—Aged 21.—Mr. WINGFIELD, Donnington Park, near Derby.

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The Gardeners' Chronicle Newspaper.

SATURDAY, SEPTEMBER 22, 1860.

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THE GARDENERS' YEAR BOOK, ALMANACK, AND DIRECTORY FOR 1861. By ROBERT HOGG, LL.D., F.H.S.

Advertisements received up to the middle of November.

London: "Cottage Gardener" Office, 162, Fleet Street, E.C.

HORTICULTURAL GARDENS.—The *Gardeners' Chronicle* of May 12, containing Mr. NESFIELD'S COLOURED PLAN for the NEW GARDEN at Kensington Gore, is still on Sale at the Office, 41, Wellington Street, Covent Garden, W.C. and will be sent by post on receipt of six stamps.

News of the Week.

GENERAL LAMORICIÈRE and the Papal army of 11,000 men, were totally defeated on Tuesday morning in the neighbourhood of Ancona by the Sardinian division under General CIALDINI. The battle was commenced by General LAMORICIÈRE with an attack on the Sardinian positions at Castelfidardo, Osimo, and Jesi, while the garrison of Ancona supported the movement by a vigorous *sortie*. After a sanguinary combat the Papal forces were completely routed, leaving in the hands of the Sardinians six pieces of artillery, an immense quantity of arms, and a great number of prisoners, including General PIMODAN, who has since died of his wounds. After the battle the greater part of the Papal army capitulated, and the POPE does not now possess a single battalion outside the walls of Ancona. The 4000 men who made the *sortie* from that garrison were driven back by the Royal troops, and they have since been joined by General LAMORICIÈRE, who succeeded in reaching Ancona with a few horsemen by passing through the defiles of Monte Canaro. General CIALDINI has now commenced the siege of Ancona, while the Sardinian and Neapolitan navies are blockading the port. The second division of the Sardinian army under General FANTI took Perugia on Friday after a severe fight, in which the Papal troops were driven to the citadel, where they surrendered towards the evening. The Sardinians made 1600 prisoners, including the Swiss General SCHMIDT, who has been sent to Turin as a prisoner of war. The German garrisons of Orvieto and Spoleto subsequently capitulated, and in the latter city 600 of the Irish brigade were made prisoners of war without firing a shot. Cardinal ANTONELLI and the other cardinals are urging the POPE to fly from Rome before the arrival of GARIBALDI; and the French official journals, while ostensibly opposing the suggestion, make no secret of the fact that the POPE'S flight would facilitate the settlement of the Italian question, by enabling the EMPEROR to withdraw his army from Rome. The KING OF NAPLES is said to be still at Gaeta, relying on the expected

junction of the two divisions of his army, which have maintained their positions at Capua and Gaeta. GARIBALDI, however, has left Naples this week with 15,000 men to attack Capua, and it is confidently expected that the garrison will capitulate on the first summons. Accounts from Turin state that the Sardinian Parliament has been convoked for the 2d of October. It is reported that GARIBALDI has peremptorily refused to sanction the annexation of Sicily to Piedmont until he has completed his "programme," and has addressed a letter to the KING demanding the dismissal of Count CAVOUR and Signor FARINI, as the indispensable condition of a good understanding between him and Sardinia. The KING has therefore determined to convoke the Parliament in order that the policy of the Government, as represented by the CAVOUR Ministry, may be submitted to the Chambers in juxtaposition with the policy of GARIBALDI, and a vote of confidence be taken upon it. The official journal of Turin denies the report that any such letter has been received by the KING from GARIBALDI, but there seems to be no doubt that the old antipathy between GARIBALDI and Count CAVOUR has led to renewed differences on the policy to be pursued in the present crisis, and that it has become necessary to appeal to Parliament to arrest the danger of a more serious rupture.

Home News.

THE QUEEN'S RETURN TO OSBORNE.—The Queen, Prince Consort, and the Royal family arrived at Osborne shortly before 10 o'clock on Tuesday morning from Edinburgh, which they left on the previous evening, travelling all night by the Caledonian, North-Western, and South-Western Railways. On Wednesday morning the Count de Paris and the Duke de Chartres visited the Queen from Ryde. In the afternoon her Majesty and the Prince Consort, accompanied by the Princesses Alice, Helena, and Louisa, drove over to Ryde and visited Queen Marie Amelie. Lord Palmerston arrived from Broadlands on a visit to her Majesty.

THE QUEEN'S VISIT TO GERMANY.—The Queen and Prince Consort, accompanied by the Princess Alice, will leave Osborne this morning for London, and will embark in the afternoon from the Terrace Pier, Gravesend, in the Victoria and Albert, for Antwerp, on her way to Coburg. Her Majesty will be met at Coblentz by the Ambassador at Frankfort, Sir Alexander Malet, who will accompany the Queen to Frankfort. Her Majesty will proceed from Frankfort by the Bavarian State Railway to Aschaffenburg, where she will be met by her Ambassador at Munich, who will accompany the Royal party to Coburg. The Prince and Princess of Prussia, and the Prince and Princess Frederick William will be at Coburg to meet the Queen on her arrival. Lord John Russell will be in attendance on her Majesty as Secretary of State. The Admiralty yachts Osborne, Black Eagle, and Vivid, will accompany the Royal yacht to Antwerp.

THE COURT IN SCOTLAND.—On Wednesday week the Queen, accompanied by Princess Alice and Prince Leopold, rode to the Loch of Loch-na-garr. The Prince Consort drove to the Abergeldie woods, which were driven for deer. The Princesses Helena and Louisa drove to Birk Hall. On Thursday the Queen, with Princess Alice and Prince Arthur, accompanied the Prince Consort to the Ballochbuie woods, which were driven for deer. On Friday the Queen, accompanied by the Princesses Alice and Helena, made an expedition to Craig-na-barn. The Prince Consort went out deer-stalking. On Saturday morning the Queen, Prince Consort, and the Royal family left Balmoral for Edinburgh, and arrived at Holyrood a few minutes before 7 in the evening. Her Majesty was received with the usual honours on her arrival at St. Margaret's Station, and proceeded to the Palace with the customary escort, the guns of the castle firing a Royal salute. On Sunday morning, her Majesty, the Prince Consort, and the Princesses Alice and Helena left Holyrood for Cramond House, about six miles from Edinburgh, on the margin of the Firth of Forth, on a visit to the Duchess of Kent, who has been residing there for about two months. The Royal party reached Cramond about half-past 11, and at midday attended Divine service in the parish church, where the sermon was preached by the incumbent, the Rev. Dr. Colvin. After the service, the Queen, Prince Consort, and Princesses were joined by the younger members of the Royal family, who drove out from Edinburgh, and partook of luncheon with the Duchess of Kent. The Royal party returned to Holyrood in the afternoon. On Monday morning the Queen and Prince Consort drove to Dunsapie Loch, and walked thence to the top of Arthur's Seat. Princes Arthur and Leopold visited the Castle and inspected the regalia of Scotland. Their Royal Highnesses afterwards ascended Arthur's Seat. In the afternoon the Prince Consort visited Queen Mary's Bath, the National Gallery, and the Botanic Gardens. The Queen, accompanied by the Princess Alice, drove in a carriage and four to Rosebank Cemetery, and paid a visit to the grave of Ida Bononomi, the Italian dressing-maid, to whom her Majesty some years ago erected a simple monument. The Duchess of Kent, accompanied by Prince Victor of Hohenlohe, arrived from Cramond House and took luncheon with her Majesty. In the evening at 7 o'clock, the Queen, Prince Consort, and Royal family left Edinburgh for Osborne.

THE PRINCE OF WALES left Ottawa on the evening of the 2d inst., and arrived at Brockville on the following evening, after a fatiguing journey by carriage, canoe, and foot, through the back country from Ottawa. On the 3d his Royal Highness slept on board the steamer, and started the next morning for Kingston, where he arrived on the evening of the 4th, but did not land in consequence of the conduct of the Orange party, who insisted upon joining the procession with Orange flags, regalia, &c. The Duke of Newcastle had previously informed them that the Prince would not ride under any Orange Arch, or take part in any procession where party colours were worn or party tunes played. The Orangemen, however, determined to carry out their design of a procession with party banners, and after waiting 24 hours to give them time for reconsideration, the Prince refused to land, and on the 5th proceeded to Belleville, where a similar occurrence prevented his landing. The townspeople were anxious to receive the Prince, but a number of Orangemen had followed his Royal Highness from Kingston with their banners and insignia, and so rendered it impossible. These disagreeable occurrences were very much regretted by the people of the province in general, and great indignation was felt towards the leaders of the Orange party. The Prince arrived at Coburg on the evening of the 6th, where he met with one of the warmest receptions, his carriage being drawn by 50 gentlemen carrying torches and escorted by an immense crowd, cheering vehemently, to the Town Hall, where he received addresses from the town council and Victoria College. In the evening the Prince attended a ball which he opened with Miss Beatty, daughter of the Mayor, and entered with spirit into the festivities. On the 7th his Royal Highness left for Peterborough, where he was likewise warmly welcomed. He afterwards visited Rice Lake, where he was received by the Mississangie Indians, headed by their chief, a man nearly 100 years of age. The Prince took luncheon with the authorities of Port Hope, where his reception was very gratifying, and then proceeded by rail to Whitby, where 4000 persons had assembled, who fired a salute and cheered his Royal Highness on his way to the steamer with almost frantic enthusiasm. The Prince arrived at Toronto the same evening and met with a magnificent reception, the preparations surpassing those of all the other Canadian cities. At the landing, where there was a gorgeous canopy provided with a dais and throne, the Prince was received by the mayor, corporation, judges, members of parliament, officers of the army, volunteers, &c. The national anthem was sung by 1000 children. The Mayor presented an address, and a procession of militia, firemen, and national societies defiled past the Prince, drooping banners and cheering vehemently in passing. It was quite dark before it was finished, but the city was most brilliantly illuminated. The Prince's carriage followed the procession through the principal streets, cheered by the people the whole of the way, and flowers being strewed before him, and proceeded to the Government House, where quarters were provided for him. On the 8th his Royal Highness held a levée. The weather had been most unfavourable. The conduct of the Orangemen of Kingston was severely condemned by the whole press of the province, and there was not the slightest probability of its being imitated in any other locality.

THE GRAND DUKE MICHAEL OF RUSSIA, the Grand Duchess and their infant son, attended by Prince Gortschakoff and a numerous suite, arrived at Dover, on Saturday morning, and, accompanied by Baron Brunnow, the Russian Ambassador, proceeded by special train to Torquay, where they intend to reside for a few months.

PRINCE NAPOLEON has been visiting some of our agricultural districts since he left London, for the purpose of making himself acquainted with high English farming and the working of the poor-law system. His Imperial Highness is accompanied by M. Bella, director of the Imperial model farm at Grignon; M. Visat, an architect; M. Wyatt, secretary; M. le Plat, Councillor of State, and his suite. A few days since, the Prince visited the farms of Mr. R. Leeds and Mr. T. Hudson, two leading agriculturists on the great Holkham estate in Norfolk. The Prince had also an interview with Mr. H. W. Keary, the Earl of Leicester's agent, and inspected with much interest some improved cottages which the earl is now building. His Imperial Highness afterwards visited the Gressenhall Union Workhouse, where notes were taken by M. de Plat with reference to a series of careful inquiries into the working of the poor law, the condition of the rural population, &c. On Monday the Prince visited Leith for the purpose of seeing the agriculture, farm steadings, and irrigation in the Mid-Lothian district, and proceeded by the North British Railway to inspect the farm steadings of Mr. Hope, of Fastenbarns, and of Mr. Sadler, of Ferry-gate. His Imperial Highness returned to Edinburgh in the afternoon, and drove to Craigentinny, where Mr. Christy, late M.P. for Newcastle-under-Lyne, met the Prince, and drove him in an open carriage through the meadows, explaining the method which is pursued in the irrigation. His Imperial Highness spoke in admiration of the system which produced such excellent results, and expressed his intention to promote a similar work in France, in the locality of his own chateau. After carefully inspecting the meadows watered by gravitation, and also those where the water is lifted by the aid of pumps, the Prince was driven to Leith Docks, where he embarked in a small steam-tug for his yacht, which was lying under Inchkeith.

THE ARMY AND THE HARVEST.—A circular has been issued from the Horse Guards to the commanding officers of regiments, stating that there will be no objection on the part of the commander-in-chief to officers permitting a certain number of men to assist in the harvest, on being applied to for such assistance.

THE VOLUNTEER MOVEMENT.—Lord Palmerston, in reply to an invitation to become the patron of the Royal National Rifles, has written to Mr. Walmisley stating that he fully appreciates the patriotic feeling which impels the members of Volunteer corps, and estimates at its full value this important national movement, but in his official position he does not think it right to connect himself as patron with any one particular local organisation, and in the present instance it seems the less necessary that any such extrinsic aid should be required, because any corps which is to be organised under so able and experienced a chief as Sir De Lacy Evans is sure to be prosperous and efficient.—The War Office authorities, with a view to advance the various Volunteer corps in efficiency, have recently issued an order for holding county and district reviews, under the direction of field officers of rank, and for forming various corps, where they are not a battalion of themselves, into administrative battalions. This latter order has, however, admitted of so many interpretations that the authorities on Saturday felt it necessary to issue long explanatory orders to the commanding officers.—On Saturday afternoon the London Brigade, numbering upwards of 700, mustered in the quadrangle of Christ's Hospital, and marched thence, preceded by their two fine bands, through Holborn and Oxford Street, to Hyde Park, where they were reviewed by Colonel M'Murdo, C.B., Inspector-General of Volunteers, in the presence of some thousands of people.—The Workman's Volunteer Brigade, now numbering close upon 500 men, paraded on Saturday evening, in Guildhall, by permission of the Lord Mayor. Upwards of 400 members, including the band, were present. After having been inspected by Captain Norton, in the absence of General Beatson, the battalion marched, headed by the band, from Guildhall to their head-quarters in Great Tower Street. A body of temperance men have signified their wish to join as a distinct company under the same organisation and rules, and it is expected that a second regiment will shortly be enrolled.—The 7th Surrey paraded at Newington Sessions House on Saturday, and, headed by their band, proceeded to Peckham, where they were joined by the 10th Surrey (Bermondsey). The two corps marched home together to the music of the 3d Surrey Militia. The 7th continues steadily increasing its muster-roll, and will shortly compete for a prize rifle.—The 19th Surrey (Lambeth) mustered strongly on Saturday evening, and marched through Camberwell and Peckham to New Cross, returning home by the Elephant and Castle to Kennington. On their arrival at head-quarters Major Roupell informed the corps that an arrangement had been made with the Peckham and Streatham corps to co-operate with them in the use of their rifle butts on Streatham Common, whereby the 19th Surrey may shortly be expected to commence ball practice; and that the piece of ground belonging to the battalion would in three weeks' time be entirely covered in and lighted with gas, thus enabling the drill to take place independent of the weather during the winter months.—On Saturday a shooting match took place upon the grounds of Mr. A. K. Barclay, at Dorking, between 12 men of the 5th Surrey (Reigate), and 12 of the 14th Surrey (Dorking). The match was at 20 rounds each man, at 200 yards. The 14th were victorious by a majority of nine points, the number they obtained being 263 points against 254 obtained by the 5th. The best shots of the day were—Potter 29, Sergeant Nichols 28, and Corporal Brown 28.—Colonel Gladdish, commanding the 1st Brigade of Kentish Artillery, entertained the officers commanding companies at dinner on Friday evening at his seat Bycliffes, near Gravesend.—The 12th Kent Artillery (Gillingham), visited Sheerness on the 12th inst. for the purpose of ball-practice. The centre garrison batteries, consisting of 32-pounders, were placed at their disposal, from which 40 rounds were fired at a target placed at about a mile distant. One of the shots hit the target, and several passed within a short distance of it.—The 2d Company of Cinque Ports Artillery was inspected on the 13th inst., at Sandwich, by Colonel Morris, Deputy-Inspector of Artillery Volunteers.—The non-commissioned officers and privates of the 31 Kent (Maidstone) and of the Leeds Castle and East Sutton companies were entertained at dinner on the 12th inst. in the Corn Exchange, Maidstone, by Colonel Scott and the officers of the regiment.—The Bromley, Beckenham, and Chislehurst corps were inspected on Tuesday by Colonel Luard.—The West

Ham and Stratford companies of the 5th Essex paraded on Sunday morning at Stratford, accompanied by their band, and marched to West Ham, where they attended Divine service at the parish church.—A Volunteer encampment will be formed on Nazing Wood Common, near the Broxbourne station of the Eastern Counties Railway, on the 13th October, to consist of the West Essex Yeomanry Artillery and Cavalry, the Artillery Company of London, the Victoria Rifles, and any other Volunteer Corps of the counties of Essex, Herts, or Middlesex, who may feel disposed to avail themselves of the advantage of brigading with artillery and cavalry.—A prize meeting of the 1st Berks (Reading) took place on the practice ground at Reading on Tuesday. The prizes offered were an Enfield Rifle, the gift of Sir F. Goldsmid, Bart., M.P.; a silver cup, of the value of 10*l.*, given by Mr. H. A. Simonds, Mayor of Reading; and a silver cup, value 5*l.*, the gift of Lady Hunter, wife of Sir Paul Hunter, Bart., High Sheriff of the County, and Captain-Commandant of the Reading Corps. The competition excited much interest, and at the close of the shooting the following were declared to be the successful competitors:—Mr. Turner, musketry instructor to the corps, the rifle given by Sir Francis Goldsmid, M.P.; Corporal Soper the 10*l.* silver cup; and Private Stevens the 5*l.* silver cup. Mr. Turner, the winner of the first prize, was a successful competitor at the Wimbledon meeting, where he gained the prize given by the Duke of Cambridge.—The Cromer and Stalham companies of the Norfolk Corps, assembled in Gunton Park, on the invitation of Lord Sheffield, on the 14th inst., and were put through various evolutions by Lord Bury, as a preparation for the great review about to take place at Norwich.—The North Craven were inspected a few days ago by Major Cookson, who is about to be appointed adjutant of the 2d battalion of the West Riding Corps, of which the North Craven form one company.—On Saturday the 1st West Riding (Leeds) assembled in the yard of the White Cloth Hall, Leeds, and received their new Captain Commandant Sir John W. Ramsden, Bart., M.P.—It was mentioned last week that Mr. M. Stocks, of Catherine House, near Halifax, was taking steps for establishing a Rifle corps in the district of Queenshead, in the West Riding of Yorkshire, to be called the Shibdendale Rifles. This corps, 100 strong, is now completely formed, and has been fully equipped at the charge of Mr. Stocks.—The 1st Battalion of Cornwall assembled on the 10th inst., for a field day, in the grounds of Pendarves, near Camborne, and were put through various evolutions by General Tremenhure.—On Monday the 2d Cornwall Artillery were inspected at Looe by Lieut.-Col. Gilbert. After going through their company and battalion drills, they marched to the battery and were exercised with the 24-pounders sent for their accommodation.—On Tuesday Lieut. Col. Hutchinson, commanding officer of the western district reviewed upwards of 6000 Volunteers on the Maisemore Ham, at Gloucester, in the presence of an immense concourse of spectators from the adjoining counties, including the Lords Lieutenants of Gloucester, Brecknock, and Glamorgan, and many of the nobility and gentry. The Volunteers numbered about 5200 Rifles, 450 Cavalry, and 380 Artillery. The Rifle Corps were formed into brigades. The first consisted of the Bristol, Gloucestershire, and Worcester battalions, and numbered 2155 rank and file. The second consisted of Welsh and Worcestershire Volunteers, and mustered 1240; and the third, consisting of corps from Stafford, Somerset, Monmouth, Hereford, Pembroke, Carmarthen, and Radnor, was 1768 strong, giving a total strength in the field, including officers, of 6300. After the review the Volunteers marched into Gloucester, and partook of refreshments provided for them at the different hotels.—A competition for a silver cup, valued at 50 guineas, given by the High Sheriff of Norfolk (Mr. H. Birkbeck), and three prizes of 25*l.*, 15*l.*, and 10*l.*, given by Mr. J. Middleton, of Haynford, near Norwich, took place on Monday, on Mousepold Heath. The competitors were 36 in number, and were selected from the Volunteers formed in Norwich, Yarmouth, Harleston, Holkham, Lynn, Aylsham, Diss, Loddon, Fakenham, Eynesford, Stalham, and East Dereham. Each competitor fired 12 shots, at four ranges, three from the shoulder and nine from the knee. The highest score was obtained by Private Read, who made 13 points; Private Bussey obtaining 11 points; Private Burrell, of Fakenham, 10; and Captain Middleton, Private Gunn, Sergeant Fox, and Sergeant Burton making 9 each. These four ties were afterwards shot off, the result being that Private Gunn made a centre, while his competitors added nothing to their scores. The cup was, therefore, awarded to Private Read; the 25*l.* prize to Private Bussey, the 15*l.* prize to Private Burrell, and the 10*l.* prize to Private Gunn.—On Tuesday a review of the Norfolk Volunteers took place on the heath, Major-General Wood, commandant of the camp at Colchester, attending as inspecting officer. From 1100 to 1200 Volunteers were collected on the occasion.—The prizes competed for by the Great Yarmouth Volunteers a few days ago were distributed by the Mayor on Friday at the Town Hall. Mr. Bly won the ladies' challenge cup, valued at 30*l.*; Mr. H. Fenner, the borough member's prize of 10*l.*; Mr. Scott, a cup valued at 5*l.*; and Mr. Leman, a Turner rifle. Of 31 Volunteers who competed for the challenge cup, 16 obtained such a number of points as would have entitled them if they had been in the regular army to rank as marksmen, and to receive 1*d.* per day extra pay.—A marksman's badge of cross muskets, to be worn on the left sleeve, has been presented to three privates in the Colchester corps, Mr. Tayler (who recently won a prize cup in Wyvenhoe Park), Mr Cole, and Mr. Fenning, all three having made the requisite number of points in the regulation practice to entitle them to the rank of marksmen. An effort is making to form another company of Volunteers in Colchester, and about 100*l.* has been subscribed for the purpose.—A rifle match at four ranges took place on the 12th inst., on the practice ground of the Kelso Rifle Corps at Mellendean Burn, between four gentlemen staying at Floors Castle, the seat of the Duke of Roxburgh, viz. Captain Gordon, Mr. Phillips, Mr. Watts Russell, and Mr. J. B. Innes, and four members of the Kelso Rifle Corps, Messrs. Sommer, Smail, Forest, and Morris. The Floors Visitors scored 60 points, and the Kelso Rifles scored 73, giving a majority of 13 for Kelso.—The Liverpool Borough Guard, or 66th Lancashire, on Saturday embarked in the Rock Ferry steamer, and on arriving at the other side of the Mersey marched with their new brass band to the residence of their commander, Capt. Mayer, by whom they were entertained at a substantial dinner laid out in two large tents erected for the occasion.—Mr. James Morrell, of Headington Hill House, entertained Lieut.-Colonel North, M.P., and the officers and members of the two companies of Oxford City Corps, at dinner in the Town Hall, Oxford, on Thursday. The Duke of Marlborough as lord lieutenant of the county, the Bishop of Oxford, the Earl of Abingdon, Lord Norreys, several members of Parliament, and the principal gentry of Oxfordshire and Berks were invited to meet them.—Mr. G. W. Martin is now organising a choir of several hundred Volunteers for the purpose of introducing the practice of singing choral marches when on the march. A great meeting of Volunteers interested in this movement will shortly be held in either the Floral or Exeter Hall, and subsequently at the Crystal Palace.

Foreign.

FRANCE.—It was reported on Monday that an insane person fired a pistol at the Emperor during his stay at Toulon, and that the arm of the assassin having been struck by a woman at the moment of his discharging the pistol, his aim was frustrated. It is now said that the statement is entirely destitute of foundation. The Emperor and Empress left Ajaccio on Saturday for Algiers. On passing Mahon their Majesties disembarked for the purpose of meeting the Queen of Spain. On finding that the Queen had not arrived, their Majesties reimbarked, leaving a letter for the Queen. The Imperial squadron arrived at Algiers on Monday morning, their passage having been longer than usual, on account of bad weather. The Bey of Tunis arrived at noon on Monday and was received by their Majesties. One of the brothers of the Emperor of Morocco was also expected to arrive in the course of the day. The *fêtes* given in honour of their Majesties were splendid. The Empress, suffering from grief on account of the alarming state of her sister's health, was not present at the ball. Their Majesties were expected to re-embark on Thursday evening for France, and will arrive at St. Cloud on the evening of Monday next. The telegraphic cable just laid down between Toulon and Algeria, and by which the Emperor expected to communicate hourly with France during his absence, broke on Sunday in a gale of wind.—The Duchess of Alba, sister of the Empress of the French, died on Sunday night after a long illness from an internal disease. She was in her 34th year, and leaves the duke and three children to lament her loss.—The *Constitutionnel* gives a categorical denial to the report that the islands of Sardinia and Elba are to be ceded to France as an indemnity for the annexation of Naples and Sicily to Piedmont. The same paper publishes a long article by its chief editor, M. Grandguillot, explaining the policy followed by the Emperor in Italy. It says:—

"The object of the French Government in recalling its ambassador from Turin is to express its dissatisfaction at the course which has been taken by Sardinia in invading the Papal States. It is no longer the sovereignty of the Holy See over one or two provinces which is questioned, but his temporal independence is threatened. There all concessions ought to end, and disagreement change into disavowal. It is true, doubtless, that there is a long way from that disavowal to a rupture. The interests of France and Sardinia are always the same; they require that Piedmont shall remain the invincible bulwark of the Peninsula, on the legitimate additions for which she is indebted to our common victories and to the treaties which have sanctioned them could not in any case be compromised. But our honour, also, required that France should be free of all responsibility in such enterprises, for according to the declaration of the celebrated pamphlet, France did not go to Italy "only to defend there a great political cause, but to protect there a great religious cause."

In another article, signed also by M. Grandguillot, the advice given to the Pope by Cardinal Antonelli and others to leave Rome is discussed in the following terms:—

"The extreme party at Rome, after having counselled the Pope to follow a policy without concessions, now advises him to take to flight without honour, but as long as the French troops are at Rome the security of the person and the authority of the Pope are guaranteed. We earnestly desire that the Pope should not quit Rome, and in expressing this wish we have only in view the interests of the Papacy, for that which at present complicates the position of France is the presence of her army at Rome, and if this occupation could cease all would be simplified, at least in a political point of view. It is not Rome that we occupy, but it is the Papacy which we defend. Our occupation can in no case assume a political character. The most conspicuous of the flights of the Pope would be the evacuation of Rome by the French, and in leaving we should carry with us great uneasiness respecting the future of the temporal power of the Pope."

The *Débats* contains an article signed by M. Lemoine, in favour of the Sardinian invasion of the Papal States. It says:—

"The resolution taken by the Piedmontese Government, though it has the appearance of a forward movement, is, on the contrary, a halt. It is even for the movement an impediment thrown in the way of the general Italian movement. None have any cause to complain of it except the party most anxious for the complete unity of Italy, but those who call Victor Emmanuel and his Minister revolutionists are guilty of great injustice, for the occupation of the Marches and Umbria by the regular troops of Piedmont is the very measure best calculated to arrest revolution in Italy and prevent a European war. For the Italians themselves this halt is most injurious. Venice it is true still remains in the hands of Austria, but the day will probably soon come when that State will also form part of the Italian kingdom. Meantime the best thing that the Italians can do is to organise themselves carefully, and throw aside all petty self-government in favour of a great Italian kingdom, with no longer a King of Piedmont, but a King of Italy, crowned at Florence."

The inhabitants of Paris are about to be gratified with another magnificent promenade. The Emperor has given orders for the construction of a road round Paris within the fortifications. It will be 20 miles long and 120 feet wide. The footpaths will be bordered with trees. The Minister of Police has stopped a subscription which had been opened for a monument to M. de Flotte, who was killed at Reggio, fighting in the ranks of Garibaldi. De Flotte took an active part in the insurrection of June, 1848.

SPAIN.—The Queen embarked at Palma on the 18th inst. for the Balearic Islands. The Royal squadron consisted of a ship of the line, a frigate, a corvette, and five steamers. The French Ambassador, M. Barrot, accompanied her Majesty, in the French steam-frigate Gomer, of 16 guns. The Moorish Ambassadors took their departure on the 15th. They had intimated that their Government would be glad to be allowed a longer time for the payment of the indemnity than that fixed in the treaty; but the Government insisted that there should be no delay. The notorious Sor Patrocinio has been banished from Madrid, at the suggestion, it is said, of the Duke de Montpensier. It was thought probable that a similarly decided measure awaited Father Claret, the Queen's confessor.

HOLLAND.—On Monday the King of Holland opened the Legislative Session at the Hague, with a speech from the throne, in which he gave a favourable account of the foreign relations and domestic affairs of the country.

THE TYROL.—A fatal disaster happened in the Tyrolese Alps on the 31st ult., by which the Rev. W. G. Watson, Chaplain of Gray's Inn, and grandson of the celebrated Bishop of Llandaff, met with a similar fate to that which so recently befell our three countrymen in crossing the Col du Géant. At 2 o'clock in the morning of the 31st Mr. Watson and Mr. Frederick K. H. Cock, barrister, accompanied by an experienced guide, started from the châlets of the Mutterberg Alp, at the head of the Stubbayer Thal, where they had passed the night, for the purpose of crossing the glacier pass, which leads thence to Sölden in the Otzthal. On reaching the summit, Mr. Watson proposed to the guide that they should avoid the roughness of the Windacher glacier by sliding down the slopes of snow. The guide assented, and they accordingly proceeded three abreast. They had reached about half way down, when Mr. Cock's left leg suddenly sunk under him, and in an instant he was up to the hip in snow. He recovered himself however, and was in the act of rising when he saw Mr. Watson disappear downwards perpendicularly as if through a trap-door. On looking down the cavity it appeared to be an apparently fathomless abyss of ice. After shouting in vain to Mr. Watson, without obtaining any answer, and lowering a rope, which the guide then for the first time in the day produced, Mr. Cook despatched the man for assistance, he meanwhile remaining by the side of the fatal hole. After an absence of three hours and a quarter three men arrived from some châlets in the Windacher Thal with a rope, by which they let down one of their number, but the rope was not long enough, and the man reported that all was dark below him and he could see nothing. Mr. Cock and the guide descended to Sölden, where, with the aid of the curé, ropes and men were procured, with whom Mr. Cock returned at once. It was past 2 o'clock when they left Sölden, and it was not till about half-past 5 o'clock in the afternoon that they reached the scene of the disaster. Here a young man named Joseph Carlinger, of Kayser, near Sölden, was lowered into the abyss, and after he had descended, at the imminent danger of his life, to a depth of about 90 feet English, he discovered the body of the unfortunate gentleman quite dead, with such injuries on the face and head that death must have been instantaneous. The body was buried on the 4th inst. in the churchyard of Sölden by the curé, the Rev. Bernard Schopf.

FRANKFORT.—On the 8th and 9th inst. there were sanguinary conflicts between the Austrian and Prussian soldiers in garrison at Frankfort. Several men were wounded on either side.

RUSSIA.—The Russian navy and the cause of science have sustained a severe loss in the screw corvette Plastun, which was blown up on the 4th inst. near

Revel in the Gulf of Finland, on her return from a voyage round the world, in which much valuable scientific information had been obtained which will not be easily replaced. The catastrophe was most sudden and destructive. The captain, five other officers, an engineer, and 69 men were killed, and a lieutenant, two midshipmen, a surgeon, and 31 men saved, of whom three were more or less injured.

PRUSSIA.—The Prince Regent will arrive at Warsaw on the evening of the 13th of October. The Emperor Alexander, the Prince Regent, and the Emperor of Austria will meet on the 14th of October. As regards the Ministers who are to accompany the Sovereigns, nothing has yet been decided.

AUSTRIA.—Count de Toll, Aide-de-camp General of the Emperor of Russia, arrived at Vienna on Monday, with an autograph letter from the Czar, inviting the Emperor of Austria to an interview at Warsaw.—On the discussion of the budget in Saturday's sitting of the Reichsrath, it was resolved that after the expiration of its present privileges the National Bank should be emancipated from any connection with the Government, and that special members should be appointed for this re-organisation of the bank. In the same sitting the proposal of the Committee of the Public Debt for the conversion of the public funds into bonds of 5 per cent. was rejected. The proposal to increase the amount of direct taxation was also declared inadmissible. In the sitting of Monday, the budget of the department of Justice having been brought on for discussion, the Minister of Justice announced that the Emperor had authorised him to prepare a Bill for oral and public trials before the commercial and maritime tribunals; and if the measure should succeed, it would be extended to the civil courts. He further said that a reform in civil proceedings was indispensable. At the next sitting a new attack was made upon the concordat by M. Maager. The Archbishop of Vienna defended the concordat by maintaining that the dependence of the Church on the State was in no wise modified by it. Several members replied to the archbishop, declaring that national feeling and public opinion, and Christianity itself, were generally hostile to this Papal compact. The Count Apponyi, and other Hungarian magnates, declared also that the concordat, in addition to the other disadvantages, seriously affected the rights of the Catholic Church of Hungary.

ELBA.—The Supreme Court of Porto Ferrajo passed sentence on the 5th inst. in the case of Mr. George Watson Taylor, proprietor of the island of Monte Christo, who was accused of having encouraged reactionary demonstrations among his dependants, and uttered the cry of "Viva Leopoldo II." with expressions of contempt towards the reigning Sovereign. Mr. and Mrs. Taylor, having placed themselves beyond the jurisdiction of the Court by crossing the French frontier, allowed judgment to go by default. Mr. Taylor was found guilty, and sentenced to 18 months' imprisonment; but the crime of Mrs. Taylor (a French lady) was considered more heinous, inasmuch as she was stated to have said, looking at the portrait of Victor Emmanuel, that he was more like a *marchand de bœuf* than a king. For this the Court sentenced Mrs. Taylor to 22 months' imprisonment. The four labourers employed by Mr. Taylor, and accused of participating in his political indiscretions, were acquitted.

ITALY.—In addition to Count Cavour's memorandum explaining the entry of Sardinian troops into the Papal States, addressed to the diplomatic agents of Sardinia for communication to the respective foreign Courts, the Chevalier Nigra, Sardinian resident Minister at Paris, communicated a confidential despatch to M. Thouvenel on Saturday. In this despatch Count Cavour is said to show that the occupation of the Marches and Umbria was indispensable in order to prevent a collision between Garibaldi and the French troops occupying Rome. He is also said to state that Garibaldi has given Piedmont to understand in a peremptory manner that if she does not immediately disperse the foreign volunteers of the Papal army, he would proceed from Naples to Rome in order to pursue and accomplish the task himself, and that he would only respect Rome on the condition that the Marches and Umbria were occupied by Sardinian troops. The King of Sardinia has also addressed a memorandum to his representatives abroad, explaining the state of things in Italy since the peace of Villafranca. The following is an abstract of this document:—

It adverts to the refusal of the Court of Rome to accede to the demand of Sardinia to disband the foreign legions, and justifies by imperative reasons the step taken by Sardinia. The Sardinian Government could not allow the Italian movement to dissipate itself in anarchy and disorder. The memorandum confirms the assurance already given that the Royal troops will scrupulously respect Rome and the surrounding territory, and makes an appeal to the Holy Father, who some years ago inaugurated the national movement. The memorandum thus concludes:—"When the Pope shall recognise the regeneration of Italy, which enters among the designs of Providence, he will again become the Father of the Italians, as he has never ceased to be the august and venerable Father of all the faithful."

The Sardinian corps commanded by General Fanti entered Perugia on Friday. The town was taken after a hot fight, which was continued in all the streets. The Papal troops withdrew into the fortress, which surrendered towards evening. The Sardinian troops made 1600 prisoners, among whom was the Swiss General Schmidt, who has been sent to Turin as a prisoner of war. The losses of the Sardinians were insignificant. The German garrisons of Orvieto and Spoleto have capitulated to the insurgents, and are now occupied by Sardinian troops, as are also the towns of Città della Pieve, Castello, Urbino, Pesaro, Sinigaglia, Fano, and Fossombrone. At Spoleto 600 of the Irish brigade were made prisoners of war. On the 18th General Lamoricière with 11,000 men attacked the positions lately taken by General Cialdini, near Castelfidardo, Osimo, and Jesi. At the same time the garrison of Ancona made a vigorous sortie. After a fierce combat the Papal army was completely routed, leaving in the hands of General Cialdini 6 pieces of artillery and a flag, 600 prisoners and a great number of wounded, among whom was General Pimodan, who has since died of his wounds. The column of 4000 men, who made a sortie from Ancona and took part in the fight, was compelled to retire, pursued by the Royal troops. After this battle the greater portion of the Pontifical army, including every battalion outside the walls of Ancona, capitulated, the foreign troops being allowed to return to their respective countries. General Lamoricière, with a few horsemen, succeeded in reaching Ancona by passing through the defiles of Monte Canaro. The Sardinian army are now besieging Ancona, and the Sardinian and Neapolitan fleets are blockading the port, but if possible they will avoid firing into the city. The towns of Terni and Todi have risen in insurrection, driven away the Pontifical gendarmes, and constituted a Provisional Government amid shouts of "Long live Victor Emmanuel!" The head-quarters of the Sardinian army in the Marches are at Tolentino. General Masi's column continues its operations towards Viterbo. On Wednesday last his Chasseurs attacked the German mercenaries at Montefiascone and pursued them on the road to Viterbo.—Letters from Rome state that the Pope is about to issue a manifesto, calling upon the Catholic Powers for assistance. The brother of Monsignor Berardi has been arrested at Velletri, and will be tried by a council of war. General Goyon has arrived at Rome, and the French Ambassador, the Duke de Grammont, has officially announced to the Pope that diplomatic relations between France and Sardinia have been interrupted.—Accounts from Naples state that Kossuth was expected in that city. Mazzini, it is said, has already arrived. A Republican demonstration, which was announced for Monday, has not taken place. Everything continued tranquil, but there was a great desire on the part of the public to destroy that great monument of domestic tyranny, the Castle of St. Elmo, and very ardent popular demonstrations were taking place in the city. Many priests and monks were fraternising with the people. The King is said to be still at Gaeta, having disembarked it appears from the Spanish ship in which he had taken refuge, hoping to effect a junction between the two divisions of his army at Capua and Gaeta, which are said to number 50,000 men. His Majesty has appointed a Ministry at Gaeta, and has addressed letters to various Sovereigns of Europe, calling on them for help. Capua, however, was expected to capitulate on Wednesday, 15,000 Garibaldians headed by Garibaldi himself having left Naples to besiege it. Liberio has been appointed Pro-Dictator of Naples during the absence of Garibaldi. General Sirtori has been appointed Commander of the Army in the Dictator's absence; Colonel Bertani, Secretary-General of the Dictatorship Chevalier Colonna, Syndic of Naples; and the Advocate Mignona, Secretary-General of Police. Garibaldi has also issued decrees ordering all political prisoners to be immediately set at liberty, all pawned property in the Monte di Pietà, not exceeding three ducats in value, to be given back to the owners, all customs and custom-house impositions between Sicily and Naples to be abolished, retreats for orphans to be formed in the various quarters of the city, all secret fund money in each of the Government Ministries to be abolished, and the order of the Jesuits, and all offices and powers belonging to the sect, to be abolished throughout the continental dominions, and all their property of every description henceforward to belong to the nation.—Accounts from Turin state that the Sardinian Parliament has been convoked for the 2d October. This step is said to have been taken in consequence of Garibaldi having refused to annex Sicily at once, and of his having addressed a letter to the King demanding the dismissal of Count Cavour and Signor Farini, and the despatch of 30,000 Sardinian soldiers to garrison Naples, as the *sine quâ non* of a good understanding between him and Piedmont. It is said that the King immediately despatched a brief reply, but the contents of his letter are not known. The Ministry, it is added, will communicate to Parliament the demands of Garibaldi, and will request its approval of their conduct. Should this approval be withheld, the Cabinet will tender its resignation. The *Official Gazette* however gives a formal denial to the report that any such letter has been received and answered by the King. Turin was illuminated on Wednesday in honour of General Cialdini's victory. The *Armonia* of Florence has been seized for having published an article insulting to the Emperor of the French. Up to the present no foreign Minister, with the exception of Baron Talleyrand, has received orders to quit Turin. The Marquis d'Azeglio, Governor of Milan, has tendered his resignation, and has been replaced by Count Pasolini. It is stated that General Bosco, the late Commander-in-Chief of the Neapolitan army, has followed the example of General Nunziante, and taken service in the army of Victor Emmanuel. The Turin journals express regret on account of the recall of the French Ambassador. The *Diritto* says, "We must rally round the King in order to assist him in overcoming the present difficulties." The other Turin journals publish articles of a similar nature. The *Opinione* says, "Italy does not desire that the responsibility of France for her actions should be her shield. Great liberty of action is necessary for our Government. Those States who are in friendly relations need not on that account be responsible one for another. The policy followed by Sardinia is imposed upon our Government by the state of things in the interior of the Peninsula."

SICILY.—Signor Crispi has retired from the Sicilian Ministry and returned to Naples. Garibaldi has appointed Signor Saffi, the ex-triumvir of Rome, to be Pro-Dictator of Sicily, in the room of Signor Depretis, who has resigned in consequence of Garibaldi's refusal to convoke the Sicilian Parliament for the immediate annexation to Sardinia. The Neapolitan garrison have evacuated the citadel of Messina and crossed over to Calabria. MM. Maniscalchi, father and son, notorious for having been the most active agents of the late King's tyranny at Palermo, were arrested on the 7th, and taken under escort to Naples.

SYRIA.—Accounts from Damascus state that the ex-Muchir, Ahmed Aga, the commanding officers at Hashbeya and Deir-el-Kamar, Osman Bey, and Abdul Selam Bey, as well as some other officers of inferior rank, have been shot at Damascus. Fuad Pacha after having consulted with the French Commander in Chief, General Beaufort d'Hautpoul, had called together the chiefs of the Metualis, and prohibited their giving any refuge to the Druses. It was said that military operations would commence after the hot weather, and that Fuad Pacha had prevented the outbreak of an insurrection at Nablous.—The Vienna journals announce the death of Prince Milosch.

INDIA.—The Bombay mail has arrived with news from that Presidency to the 24th August. The following are the details:—

Calcutta.—Mr. Beadon, the Foreign Secretary, and Mr. C. J. Erskine, of Bombay, have been appointed by the Governor-General to be members of the Supreme Council.

Cutch.—The Rao of Cutch (Rao Daissuljee). died at Bhooj on the 26th July. He was one of the most respectable of the native Princes, and the Supreme Government have lost in him a faithful ally.

Nepaul.—The cholera has broken out as badly as it did four years ago, when it was very destructive. The wife of Bala Rao, brother of Nana Sahib, has been carried off by it.

Oude.—The Lucknow libel case has terminated in the *Oude Gazette* being cast in 3000r. damages and 500r. costs. Between 1000r. and 2000r. have already been subscribed towards defraying the damages. The journal has appealed to the Suddur Adawlut, and it is most unlikely that the judgment will be upheld. Two of the witnesses for the defence, Captain Chamberlain, head of the police of the province, and Lieutenant Scott, have been summarily dismissed.

BERMUDA.—A terrific thunder-storm has broke over the island. The Scotch church was almost totally destroyed by lightning.

CENTRAL AMERICA.—The latest advices from Honduras state that an English man-of-war had arrived for the protection of the citizens and their property. On the 23d ult. 700 men were outside the walls of Truxillo, under the command of Guardiola, ready to attack the town.

Public Addresses.

LORD STANLEY, at the recent meeting of the Manchester and Liverpool Agricultural Society, in proposing the toast of Prosperity to the united association, made the following remarks on agricultural societies:—

"I suppose nobody who is interested in agricultural affairs can entertain a doubt as to the value or as to the utility of associations of this kind. Farmers and landholders, by the nature of their occupations, live comparatively isolated and separated. They are not packed together like the inhabitants of towns, and any occasion which brings them together once a year is to them a pleasure, and I think to society in general an advantage. But besides that, there is another advantage in these meetings of which I think we are all aware. If a man lives altogether at home he is apt to put a wrong construction upon that excellent old saying about there being "no place like home." He is apt to think there is no place like home, and that there is no farm like his; that there are no crops and cattle like his, and that he has not much to learn from his neighbours. Now, if any Lancashire man has an illusion like that, it is an illusion which a walk over this showyard is very likely to dispel; and if a man is sharp and has his wits about him—and for my part I know very few Lancashire men who are otherwise—if he has his wits about him he can hardly help getting hold of some ideas which are worth taking home and working out; he can hardly help going back and knowing more of his business than when he came. And there is another use which these meetings answer. They create that without which I believe that no trade, and no business, and no profession can be efficiently and satisfactorily carried on—they create that spirit of healthy emulation and rivalry and competition, which is the very life and soul of business. I suppose nobody who knows Lancashire will doubt that societies of this kind are doing a great deal of good in the localities in which they are established. There has been very much accomplished of late years in the way of agricultural improvement. One cannot go anywhere about England, or this county, without seeing fences straightened, fields thrown together, cottages improved, waste lands reclaimed, and cultivation creeping up the face of the hills; but, though there is a great deal done, some of us recollect what small farmers were apt to be in the old days before agricultural improvement was thought of. We have seen farms where all the fields were very small, and where all the fences were very big—occupying a considerable per-centage of the soil, probably most of those crooked—where the drains were old and shallow, and far be-

tween, and where, as a consequence of that defective drainage, the most abundant crop was a crop of rushes. That kind of farming has pretty nearly disappeared, and it is quite time it should. I do not say that we could not find two or three now; but certainly they are the exception to the rule. But whatever we have done we must not stand still. I do believe that in this end of the county—on the area of the Lancashire and Yorkshire coalfield—you have a larger amount of wealth and a larger amount of mechanical power, more industrial enterprise, and more human intelligence than ever was, in the old world or in the new, concentrated within the same limits. But as we know the greater part of that capital and the greater part of that energy and enterprise are turned to manufacturing rather than to agricultural employment. If you speak of manufactures, there is no man all over the world who will not admit that Lancashire stands without a rival; if you talk about agriculture (you see I don't mean to flatter you), although Lancashire holds a fair and satisfactory position amongst English counties, still it does not hold an equally pre-eminent and unrivalled position; but I for one shall not be satisfied till it does. We live in times when farming is likely to go through a revolution greater than any which the world has hitherto seen. The old time-honoured implements with which men have tilled the soil and gathered in its produce since civilised society began, are, one by one, being superseded in favour of new and modern inventions. The flail has pretty well given way to the threshing machine, and, on level ground, the reaping machine is beginning to supersede the sickle; and although hitherto people who have tried ploughing by steam have not made much of it—certainly they have not made it pay—still the difficulties in the way of that discovery are difficulties such as time and patience are very likely to get the better of; and I do not think it would be an over sanguine prophecy if one were to say that there are men now living who may see it as much a matter of course to till our fields by steam power as it is a matter of course now to use steam power to take you from place to place. I do not know what may be the result of these changes to the farming interest. We cannot all of us afford costly machinery, or afford what is the most expensive of all things—to try new experiments; but there are some things which I believe every farmer who is worth his salt can have, whether he is a large or small farmer, and these are—straight fences, clean crops, thorough draining, and plenty of manure. And, I take it, if a man has these four things upon his farm he will be able, for the present at least, to hold his own against any competition, native or foreign, with which he is likely to have to struggle. Gentlemen, I beg your pardon, because I have been talking to you about a subject of which most of those in this room know a great deal more than I do; but there is just one word I may say before I sit down. The reception which we have met with at Bolton is one of which we ought to be proud, and for which we have reason to feel grateful. When I drove through the town I did not know what was 'agate'—if I had not known I should have thought that the Queen was coming at least—but it was all because our Agricultural Society is meeting for the first time in Bolton."

Sir James Graham attended the annual exhibition of the East Cumberland Agricultural Society, at Carlisle, on Tuesday, and spoke as follows on land and farming:—

"He would not make one political allusion, as there was a rule which prohibited the introduction of politics. As, therefore, politics were eschewed, and agriculture was accounted a bore, he would take up the subjects introduced by preceding speakers. He differed from the chancellor of the diocese, who had stated that real statesmanship consisted in upholding land. All that he possessed in the world was land; and although he did not pretend to be an expert in statesmanship, yet as a land-owner, and as a statesman, he did contend that sound policy consisted not in a vain attempt to uphold land, as separated from commerce and manufactures, but that real statesmanship consisted in the absence of any attempt to favour the one at the expense of the other, and to do the best to promote the good of our common country. He was sorry also to differ from the chairman and from one of the representatives of East Cumberland (Mr. Marshall), who were both in favour of the establishment of a northern agricultural college—a project from which he dissented on the ground of expense. He believed that the best teaching of agriculture was to be found at the present time in Cumberland and Westmoreland. Applications had repeatedly been made to him by great landowners in the south to recommend to them from these two counties persons qualified to manage large estates When he was one of the servants of the Crown, the Prince Consort asked him to recommend a person capable of managing the home farm at Windsor. He offered the appointment to one of his own tenants, but the person preferred staying in Cumberland, and he then procured a farmer from Dumfries-shire to undertake the duty. When he left to manage the farm of the Duke of Richmond, in Sussex, the Royal family greatly regretted his loss. Now, he was satisfied that the home of the Cumberland farmer afforded a better education in the system of agriculture than any college. Something had been said as to the formation of associations to give perpetuity to the rifle movement. He did not wish to dwell upon that movement. As a measure of protection to our native land and of peace, he approved of it, and he thought it had had the effect, if ever the mad design had been entertained—which he would not confidently assert, of making an invasion of this country, he thought the spirit displayed by the inhabitants had diverted any such intention, and he argued that it was most desirable to give permanence to the movement. He was too old to contribute to the *personnel*, but in order to give permanence and efficiency to it he should subscribe to any well-considered plan to effect that object. Something had been said by the vice-chairman with regard to the late measure on the subject of the high roads. He had always attached the greatest importance to a measure of that kind, but to make it efficient it must be made compulsory. The late measure on the subject gave too large and exclusive powers to magistrates. A better measure would be the result if the power were given to the poor-law unions. The poor-law unions were adapted by the subdivisions of counties for the management of highways, and if power were confided to the board of guardians it might be made compulsory. He had always been favourable to these agricultural meetings. They were convivial and useful, because there was an assemblage of all classes—landlords, yeomanry, tenants, were all drawn together in a harmonious meeting—harmonious because not political. The great advantage was, that notes of their practical experience were compared from time to time. As to draining, if ever there was a year when the advantage of draining was palpable to the senses and experience of men, it was the present. They had suffered little in Cumberland from the wet weather, but they might trace the fields which had been drained and those which had not been drained. In the former the crop was ripened, in the latter it was green. The necessity for draining was now generally admitted—the only difficulty was in finding capital to carry it on with spirit and efficiency. Well, now, I have said much in favour of these societies; I must, before I sit down, say one word more. Possibly this may be the last. If at any time I have said or done anything that has given pain or offence to any man, I beg his pardon, and hope to be forgiven. When I am gone I may be remembered as one who was firmly attached to his native county—who, through a long life, had done his best to preserve and improve that property which he inherited, and that to the latest hour of my life my greatest pleasure was still to continue in Cumberland an improving farmer."

The Right Hon. Sir J. T. Coleridge delivered a lecture at Tiverton a few days since on "Public Schools," from which the following are extracts:—

With regard to Winchester, Harrow, Rugby, and other great public schools, their merits were well and widely known, and they had reason to be proud of their distinction. He should, however, confine his remarks and illustrations principally to Eton—not merely because he knew more about it than any other, but partly because he conceived from its size and composition it was at once the most important and complete of its class. Tracing the origin of Eton to Henry VI., and giving an elaborate sketch of the history and character of the school, he said that Eton and her fellow institutions had ever fulfilled, and were still fulfilling, their glorious mission; adapting themselves in form to the changing manners of the times, but always preserving their identity and spirit. Every educational institution had its idea—that which, so long as it was consistently carried out, influenced all its details. The idea of Eton was the union of liberty of action and independence of thought in the boy with that maintenance of discipline and subordination without which no school could exist, much less the scholars maintain progress in learning. Many of the schools seemed to have their idea founded upon the problem, how much of restraint and discipline was consistent with the maintenance of the vigour of the intellect and the warmth of the heart Boys were trained to walk regularly rather than to fly high or far. Safety for all was sought rather than excellence for many. These principles, however, admitted of qualification. Each school, perhaps, had its merits, and England had room for all. The judicious parent would select a school according to his son's peculiar disposition, intellect, and circumstances, for 'The child is father of the man.' There was, it must be admitted, for many children, danger in the Eton system. Even with men, liberty often trembled on the edge of licence, and it required great firmness, discretion, and skill so to govern a school on this principle as to maintain constant regularity, obedience, and willing application of the mind. The tendency of the Eton system was to make a boy generous and firm-minded, to teach him to exercise his common sense and feel his responsibility, and to make him act under the influence of generous shame and emulation,—in short, to make him a manly boy, trusting because he was trusted. This was a favourable picture of the tendency of the system. Many might fail to be influenced by it, but these were its natural results. The traditions of an ancient school had great influence upon the working out of its idea; and the Eton traditions were favourable to these results. Eton boys loved their school while there, and would leave happy homes to return to it with none of the usual schoolboy's regret. They were often idle, noisy, and not proof against temptation—they might desire, but could not easily make their boys faultless; but there were many faults from which the Etonian was free, in part, at least, because he was an Etonian. After bestowing high praise on the system of teaching adopted at Eton he said it had been commonly remarked that Eton boys did not bring to the University and to the competitive examination that sound knowledge of the mathematics which Eton professed to teach, and the suspicion got about that there was a want of reality in mathematical teaching. It was, however, said that within a few years a great apparent change had been made, but without corresponding results, as tested in the Universities and elsewhere. This was much to be lamented, if true, for if there was one principle more sacred in schools than another, it was that nothing should be professed more than was performed, and that what was taught should be taught well. Was the other department of teaching sacrificed to this? He believed not, and yet the scholarship of the pupils appeared to him to be below what it had been, and the composition less accurate. Perhaps he spoke with the prejudice of old age, and he should not trust his own opinion, but he spoke the opinion of those who examined the boys for the Newcastle scholarship He did not say that the best boys were inferior in the knowledge of metres, but they did not appear to grasp the ideas of the great writers as good Eton scholars used to do, and in composition they showed less of the manliness and simplicity of the great classical masters, and too much of Italian conceit and false brilliance. Scholars could distinguish what he spoke of; Lucretius would not have been ashamed of Dr. Keate's poem on the 'Immortality of the Soul,' and Virgil would have admired the verses of the Bishop of Lichfield. Some might smile, perhaps, and think he attached too much importance to these things, but they indicated a less perfect command of the language. He did not think this was the result of too much attention devoted to other studies. The boys used to be incited to exertion by the honours they might gain, and the honours for competition were sent up for 'good' and for 'play' in the sixth form. The head-master read them aloud to the assembled class in the former instance, and the sending up of a good exercise was the condition upon which the half-holiday depended. By modern practice however, he thought these honours had been made much too cheap—too much the reward of good behaviour rather than of good composition; and the boys were content to reach the standard. He thought, too, that the number of prizes and examinations was excessive, and tended to distract boys from regular application. These prizes, however, were useful as testing results, and were most satisfactory when they were preceded by no specious training of the lads. With reference to the sports, he had watched the cricketing, boating, and drilling of the boys with increasing interest as some indication of the general well being of the school. It was a bad time for the study of the school when the sports languished. There was, he was glad to say, marked improvements in the religious training of the school, in the knowledge of the Scriptures and ecclesiastical history, which was in some degree owing to the Newcastle scholarship, the influence of which had extended throughout the school, even to those who might never be in a condition to compete for the prize. On the subject of parental influence, he said that some parents expected everything good and great from their boys through the instrumentality of public schools, forgetting how many other agencies operated upon them, and doing nothing themselves to aid in the production of the virtues they desired. Some deliberately and almost avowedly disregarded the studies of the schools, rather leading their sons to consider that their first objects were the formation of good connections for after life, and the acquisition of good manners. The boys, in such cases, were the victims of bad homes rather than bad schools. The sons of such parents were very injurious to schools, and it was the duty of masters to give such boys ample warning and trial, but if these failed to send them away, as one would send away an infectious patient, as kindly as might be, and with as little disgrace as possible, so that the removal might not fail to produce a good effect upon the school, while it could not injure the boy himself, but might do him good. There was great wisdom in the maxim, 'Learn or depart.' In conclusion, he said the public schools of England had a powerful influence on the English character. To have been together at Eton, Harrow, Winchester, or Rugby was a tie for life; and to have been friends there was a charm which made the holiest friendship more holy. Even to have been in the same school, the same class, and the same chapel was a link which bound together old and young, great and humble, soldier and civilian, and made personal strangers at once familiar by common associations And so Wellesley, the stately and puissant governor of millions, and Charles Metcalfe, a boy from Eton, commencing his course in life, met first on the banks of the Hooghley, and felt themselves the sons of the same mother. A feeling such as this operated on the character, and it spread so widely and deeply as to leaven the mass. But this was not all—for the education itself was of a kind to favour the growth of certain qualities. Of course a strong and uncongenial nature might overpower it, but it tended in itself, with a silent force, to make men ready to oblige, affable, and self-reliant; it helped to the development of common sense and dexterity in the ordinary concerns of life; to make men cheerful in retirement, agreeable in society, no less than to bear their parts gallantly and cleverly in the tumult and conflicts of public life. In a word, it fostered that assemblage of qualities which, combined with the higher ones of integrity and goodness, constituted the accomplished gentleman. His last words then were—*Esto perpetua*."

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 93⅛ to ¼ for Money, and 93⅜ to ½ for the 11th October; India Stock, 216½; Ditto Five per Cent. Stock, 1859, 103⅜ to ½; Ditto Bonds, 6*s*. dis.; Exchequer Bills, 4*s*. to 1*s*. prem.—Foreign: Austrian Five per Cents., 48½; Buenos Ayres Six per Cents., 96; Dutch Four per Cent. Certificates, 101½; Mexican Three per Cents., for Acct., 21⅞ to 22; Peruvian Three per Cents., 74½; Russian Five per Cents., 104 to ⅛; Spanish Three per Cents., for Acct., 48½; Committee's Certificates, 6¼ to ⅜; Turkish Guaranteed Four per Cents., 101¼.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£30,073,460	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,598,460
		Silver Bullion	—
	£30,073,460		£30,073,460

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,663,511
Rest	3,784,978	Other Securities	19,575,078
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,965,466	Notes	9,215,960
Other Deposits..	13,179,934	Gold and Silver Coin ..	781,298
Seven day and other bills	752,469		
	£39,235,847		£39,235,847

20th day of Sept., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. E. Bleech, Liverpool, Ship Broker—G. Brooke, Newport, Shropshire, Ironmonger and Cabinet Maker—G. H. Hickman, and A. Hickman, Bilston, Staffordshire, Iron Manufacturers and Iron Dealers—G. Huntington, 21, Great Suffolk Street, Borough, Boot and Shoemaker—S. Luckcuch, White Horse Yard, Liverpool Road, Islington, Livery Stable Keeper and Cab Proprietor—J. Moon, Swansea, Glamorganshire, Ship Broker—J. Nicholson, Liverpool, Currier and Leather Dealer—W. Pickford, 157, Fenchurch Street, City, Merchant and Dealer in Artificial Manures—T. Pitcher, 1, Raven Row, and South Street, Whitechapel Road, Trunk and Packing Case Maker and Builder—W. Reading, Mortimer Street Cavendish Square, Coach Builder—W. Tait, Nottingham, Jeweller, Watchmaker, and Silversmith—E. C. Walker, Brewhouse Yard St. John Street, Clerkenwell, Annatto and Blue Manufacturer, Drug Grinder, Drysalter, and Commission Agent—E. M. Watson, 72, Tottenham Court Road, Linen Draper.

SCOTCH SEQUESTRATIONS—J. Comrie, Kilsyth, Mason and Builder—Rev. G. Gordon, Glenrinnes, Banffshire, Minister of the Gospel and Farmer—R. Gordon, Mains, Aberdeenshire, Farmer—J. Hamilton, Kilbirnie, Ayrshire, Baker and Grocer—R. M'Leod, Glasgow, Jeweller and Hardware Merchant.

FRIDAY—BANKRUPTS—J. G. Dickinson and J. A. Creighton, Aldermanbury, Collar and Shirt Manufacturers—T. P. Dunn, Woodchester, Gloucestershire, Woollen Flock and Waste Dealer, and of Maesteg, Glamorganshire, Ironmaster and General Shopkeeper—G. Erlam, Upper Street, Islington, Woollen Draper—W. A. Freston, Maesteg, Glamorganshire, Ironmaster and General Shopkeeper, and Stroud, Gloucestershire, Attorney at-law—J. Hardwick, Strand, Tailor—J. K. Hardy, Fenchurch Street, Anatto and Blue Manufacturer, Drug Grinder, and Grinder of Black Leads, and General Agent—W. Hargreaves and W. Slater, Bradford, Yorkshire, Whitesmiths—G. Harris, Woking, Surrey, Tailor—G. Huntingdon, Great Suffolk Street, Borough, Boot and Shoemaker—G. C. Moulton, Gresham Street, City, and late of Brunswick Square, Bloomsbury, Dealer in India Rubber and other Goods—T. B. Pickles, Great York Mews Baker Street, Portman Square, Hackney Coach and Cab Proprietor, and Horse Dealer—J. Sherry, Portsea, Boot and Shoemaker—C. Underwood, James Street, Covent Garden, Drury Lane, and Long Acre, Grocer.

Metropolis and its Vicinity.

St. Paul's Cathedral.—The work of restoration is going on rapidly, but from the deficiency of funds it will be some time before the contemplated improvements in the decorations of the interior are completed. The organ screen has been removed, and an uninterrupted view has thus been obtained from the great western door to the eastern extremity of the choir. A splendid marble pulpit has been presented to the Dean and Chapter, and it will henceforth occupy the place of the unsightly wooden structure on the north side of the choir. A handsome stained glass window has also been presented to the Dean and Chapter, who have resolved upon placing it in the nave of the cathedral. The Grocers' Company have subscribed 200*l*. towards the contemplated decorations; and the Merchant Taylors and other wealthy city companies will follow the example with their characteristic liberality. A new organ has been purchased, and will be placed in a suitable part of the cathedral under the direction of Sir F. Ouseley, Professor of Music at Oxford; the Rev. W. C. F. Webber, M.A., precentor of the Cathedral; Mr. Goss, the organist of St. Paul's; Mr. Turle, of Westminster Abbey; Mr. Hopkins, of the Temple Church; Mr. Beer, of St. Peter's, Pimlico; and Mr. Cooper, of the Chapel Royal. The general decorations of the Cathedral are under the direction of Mr. Penrose, the architect, with the advice and assistance of a sub-committee, consisting of Archdeacon Hale, Mr. Tite, M.P.; Mr. Beresford Hope, Mr. Bunning, the city architect; Mr. C. R. Cockerell, and other gentlemen.

Removal of the East India Office.—The cash and account departments of the India Office were

removed on Monday from the India House in Leadenhall Street, to the Westminster Palace Hotel, in Victoria Street, Westminster. A large number of carts was employed in removing the ponderous volume containing the accounts of the cash departments of the service. Mr. Eric Smith Carrington was last week elected a member of the court of directors, in the room of Major Moore, deceased.

LAUNCH OF THE ANSON.—The screw line-of-battle ship Anson, 91, was launched on Saturday from Woolwich Dockyard in the presence of about 10,000 persons. Viscountess Sydney, in the absence of Princess Mary of Cambridge, performed the ceremony of naming the ship.

FIRE AT THE SAVOY CHAPEL.—On Sunday morning, between six and seven o'clock, a fire broke out in the Savoy Chapel Royal, in the Strand, the oldest ecclesiastical edifice in the metropolis with the exception of Westminster Abbey. The roof on the south end of the chapel, the organ presented by George IV., and several of the pews were destroyed. The fire was caused by the overheating of the stoves.

GREAT FIRE AT RATCLIFF.—On Wednesday morning, between 2 and 3 o'clock, the steam biscuit bakery of Mr. Walter Greenwood Clarke, a large navy contractor, at Ratcliff, was totally destroyed by fire, including the machinery, three horses, and an enormous quantity of food in the shape of flour and manufactured biscuits, principally for shipping purposes. The scene of the fire is in the immediate vicinity of the site of the large flower and biscuit mills of Parkinson and Salmon, which were recently destroyed by a similar casualty, and also close to the extensive rope factory of Messrs. Frost, which was destroyed still later by an incendiary fire. The total loss is estimated at 2300*l.* exclusive of the building, and of the carts, vans, and implements.

DEPARTURE OF GARIBALDIAN VOLUNTEERS.—The first detachment of the "Sicilian Excursionists" numbering 250, left the Fenchurch Street Station on Sunday for Tilbury, and there embarked in a steamer which was in waiting to convey them to Sicily. In her passage down Channel the steamer was obliged by stress of weather to put into Plymouth, where about 15 of the excursionists stayed behind, and one left the ship in the pilot's boat. The Excursionists will remain in Sicily till they are joined by the second detachment, which will leave London in a few days, and on the arrival of this second detachment, they will all proceed in a body to join Garibaldi in Italy. The Glasgow Garibaldian Committee forwarded on the 13th their 16th weekly remittance, amounting to 250*l.*, making the total sum contributed by Glasgow, 2400*l.*

A SUBWAY IN LONDON.—The Metropolitan Board of Works report that, with a view to the adoption of means for obviating the expense and inconvenience attending the breaking up of the pavement for the repair of mains and pipes, sewers, and other underground works, and in the hope of obtaining valuable data for their guidance in carrying out future improvements, they determined, in making the new Covent Garden approach, to form a subway under the street, for the reception of gas and water mains, electric telegraph conductors, &c.; and that on the 31st July they entered into a contract for the execution of the works, which are now in hand. They include an arched subway under the street, 7 feet 6 inches high by 12 feet wide, arched side passages for house service pipes, proper cellarage on each side of the street, and convenient arrangements for drainage.

THE STEPNEY MURDER.—The adjourned inquest on Mrs. Elmsley was resumed on Tuesday, when the prisoner Mullins, by permission of the Secretary of State, was brought before the Court. As it was generally known that he would be produced before the jury, hundreds of people stood in the road awaiting his arrival for nearly two hours, regardless of a drenching rain; and so vindictive was the popular feeling against him that strong precautionary measures were taken to prevent a riot and protect him from personal violence. Emms, who had been apprehended on the information of the other prisoner, was also in attendance with his bail. Several witnesses were then examined. One of them, the charwoman who at a previous sitting had deposed to the fact of a man having called at the house of Mrs. Emms to see some paper hangings on the Saturday previous to the murder, identified Mullins as that man. Mr. Gill the surgeon who made the post mortem examination of the body, deposed that the wounds in the deceased's head were caused by such an instrument as the plasterer's hammer which had been found in the prisoner's lodgings; those at the back of the head having been caused by the butt end of the hammer, and those on the forehead by the chisel or sharp end, the measure of which exactly corresponded with that of the wound. The children of Emms proved that in the morning on which Mullins had stated that he saw Emms place the parcel behind the stone in the shed, their father was ill and did not leave his bed till 9 o'clock, and that for some days previously they saw Mullins himself loitering about the premises. A sergeant of police stated that the shed was as accessible to anybody else as it was to Emms; and that the position of the parcel was such that a person could have placed it behind the stone there without going into the shed at all. After hearing this evidence the coroner and jury had a private deliberation for about half an hour, when the Coroner stated that in the interests of justice and for reasons which he might not mention, it had been determined to adjourn the Court to Tuesday, the 16th October.—The prisoners were then conveyed to the Thames Police Court, where the witnesses were again examined. At the close of their evidence the prisoners were remanded to Wednesday next, Mullins being sent back to prison, and Emms being admitted to bail in the same amount as before.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the total deaths in London in the week that ended Saturday, Sept. 15, were 962. Excluding from the returns the deaths from epidemic cholera in the 37th week of 1854, the average number of deaths in the corresponding weeks of the 10 years 1850-9, corrected for increase of population, was 1133. The present return is therefore 166 below the average. During the week the births of 890 boys and 842 girls, in all 1732 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1536.

Provincial.

COVENTRY.—A prospectus has been issued of the Coventry Cotton Spinning and Weaving Company, with a capital of 250,000*l.* in 10*l.* shares. The members for the city, the Right Hon. E. Ellice, and Sir J. Paxton, are on the provisional committee, and the object is to open a new source of employment for the 20,000 operatives hitherto engaged in the silk trade, who have been thrown out of work "by the recent fiscal alterations." An important feature in favour of the project is that coal and labour are cheaper at Coventry than in Lancashire.

EXETER.—Earl Fortescue, Lord-Lieutenant of Devon, has given 1000*l.* to endow a chaplaincy to the Devon County School at West Buckland.

FROME.—The determination of Mr. Dunn, Mr. Kent's solicitor, not to allow his client or any of the household to be examined at Mr. Slack's private office in Bath, has at length induced Mr. Slack to accept the offer of conducting the examination at Road Hill House, in Mr. Dunn's presence. Accordingly, on Friday last, Mr. Slack, with a superintendent of police, attended at Mr. Kent's house and commenced by examining most minutely Sarah Cox, the housemaid, and the cook, who has never yet publicly given evidence. The examination was resumed on Saturday, when the two eldest Misses Kent and the youngest daughter, a little girl 2½ years old, were examined. On Monday afternoon the other domestics were subjected to the same ordeal, and the inquiry was then adjourned until Wednesday. The investigation was strictly private, and although Mr. Dunn was present, it is understood that he has taken no active part in the proceedings, except occasionally interposing to request that some question should be put in an altered form. No cross-examination was attempted, and the replies were recorded in the precise form in which the interrogations were made. The evidence of each witness has been read over and signed by the witness; but of course, no evidence was taken on oath. Should it be intended by Mr. Slack, as is rumoured, to publish these statements, their *ex parte* character will cause them to militate strongly against certain persons, and until explanations are made the effect would be to inculpate those who might afterwards be shown to be wholly innocent. On Monday morning Mr. Slack examined at Beckington, a boy called Holliday, 16 years of age, who was discharged from Mr. Kent's employ on the day of the murder. He was the first to arrive at the house on the morning of the murder, and cleaned the knives. It is generally stated that his evidence, which has never been before taken, is very important, but as he has hitherto been singularly sullen and taciturn on the subject, and has over and over again made contradictory statements through sheer stupidity and obstinacy, much importance is not attached to what he may say. It has been well ascertained that on the night of the murder he slept at his home in Beckington. Up to the present time neither Mr. Kent, Mrs. Kent, nor Miss Constance Kent has been examined.

MANCHESTER.—The Corporation of this city have given permission to Mr. Train, of America, to try his system of street railways in Oxford Street and Stretford Road. The rails are to be laid down at Mr. Train's cost, and are to be removed and the pavement restored to its original condition if the experiment does not meet with the approbation of the authorities.

MILFORD.—The important operation of placing the Great Eastern on the gridiron in this harbour was effected on Sunday evening with masterly skill, under circumstances of the most adverse nature as regards the weather. The ship having got up steam on her paddle engines was allowed to drop slowly down towards the gridiron stern foremost, with wind and tide, her speed being checked to about three knots per hour by her paddles being occasionally reversed, while a powerful tug held her head in the required position. On reaching the gridiron the ship anchored till the tide slackened, when she steamed ahead and took up her place to an inch. She is now supported for about 580 feet of her whole length on two grids of 150 feet long, each with an interval between of nearly 300 feet of levelled beach. As soon as she had attained the desired place the mooring chains were hauled in, and she is therefore now firmly kept in her upright position by four anchors, one right ahead, another astern, with one on the port bow and another on the starboard quarter. All the available boilers were then pumped full, in order to throw an additional weight of 80 tons of water to keep her steady on the gridiron. Owing to the threatening aspect of the weather, steam was kept up until Monday morning, when the scraping and painting of the ship's bottom commenced.

WORCESTER.—The 137th Festival of the Three Choirs took place in this city last week under very favourable auspices. It has hitherto been customary to open these festivals with full cathedral service, the "Dettingen Te Deum," and two or three anthems, with a special sermon in advocacy of the charity for the relief of the widows and orphans of clergy of the three dioceses of Worcester, Hereford, and Gloucester. Instead of this full service there was daily morning service at 8 o'clock, and a sermon on Tuesday. This gave an extra morning to oratorios, and consequently they were arranged as follows:—Tuesday morning.—Part 1 of Haydn's "Creation," and the whole of Mendelssohn's "St. Paul." Wednesday morning.—Spohr's "Last Judgment," and a selection from Handel's "Judas Maccabeus." Thursday morning.—Mendelssohn's "Elijah." Friday morning.—Handel's "Messiah." There were concerts on Tuesday, Wednesday, and Thursday evenings at the College Hall, and a ball at the Guildhall last night. The concerts included a new cantata by Mr. N. W. Gade; the "Erl King's Daughter," performed for the first time in England; Mr. Sterndale Bennett's "May Queen;" selections from "Lurline," "Dinorah," and other operas. The principal performers were Madame Clara Novello, Madame Rudersdorff, Mrs. Weiss, Madame Sainton-Dolby, Miss M. Wells, Mlle. Parepa, Mr. Sims Reeves, Mr. Montem Smith, Signor Belletti, and Mr. Weiss. The band was selected as usual, from the opera and London concerts, Mr. H. Blagrove leading in the mornings, and Mr. Sainton in the evenings. The total receipts of the festival were 1124*l.* 18*s.* 4*d.*, which will be raised by additional donations, &c., to 1200*l.*, making the largest amount ever received.

Ireland.

ATTEMPT TO MURDER THE EARL OF LEITRIM.—On Saturday afternoon as Lord Leitrim was returning through Mohill from presiding at a meeting of the board of guardians, he was fired at while passing the shop of a man named Murphy, but the charge which consisted of three balls, narrowly missed his Lordship. Two policemen who were in the neighbourhood at the time, having observed a puff of smoke issuing from the shop door, rushed forward and found Murphy standing in the front of the shop, holding in his hand a blunderbuss with a spring bayonet, which had just been discharged, and having on his person a pocket pistol loaded with powder and ball, and ready capped, together with two clasp knives. They immediately took Murphy into custody, and there is no doubt that the inquiry before the magistrates will prove that he is insane. For several years past his mind has been affected to the great peril of his wife and family. A short time ago he sent Lord Leitrim one or two threatening letters, in consequence of some imaginary domestic wrongs, and is said to have sent him a challenge a few days before he made this attempt.

THE POPE'S IRISH BRIGADE.—"The brave captives of Spoleto," as the *Morning News* calls the 600 Irishmen taken prisoners by General Fanti, are regarded by the Ultramontane journals as having been unnecessarily sacrificed by Lamoricière when he evacuated Spoleto. Dr. Cullen's organ, in an article lamenting the inglorious termination of their career, gives the following list of the Staff of the Brigade, as it stood on the War Office books before the advance of the Sardinians:—

"Major Myles W. O'Reilly; Chaplains, Rev. F. M'Loughlin, O.S.F., D.D., Rev. J. M'Devitt; Surgeon Nicholas G. Whyte, M.D.; Assistant-Surgeon Philip O'Flynn, M.D.; Captains O'Mahony, Blakeney, Russell, Guttenberg (attached), O'Carroll, Coppinger, Kirwan, Boshan (attached); Lieutenants Carey, Kiley, Howley; Sub-lieutenants (Full) Luther, M.Kirwan. Butler, O'Connell, Doyle; Sub-lieutenants (Provisional) Crean, Stafford, Delahoyde, W. Kirwan, Greene, Cronin, Ternan, M'Swiney, Lynch, O'Keeffe, Keogh, Barey, D'Arcy, Walsh, and Heany."

Scotland.

STRIKE OF WOMEN FOR ADVANCE OF WAGES.—The women of the manufacturing village of Alva, to the number of about 400, have struck work, and in consequence of their refusing to fill pirns, all the mills are idle. The women have long complained of the small remuneration they have for their yarn-filling, and demand an additional halfpenny for each spindle. At the present rate of pay, they say they are not able, with bad yarn and long hours, to earn more than 6*s.* a week in the summer, and not more than half that sum during the winter months. It is expected that the employers will make the advance asked.

Sporting.

THE CHAMPIONSHIP OF THE THAMES.—A grand sculling match for the Championship of the Thames, accompanied by a purse of 40*l.*, took place on Tuesday afternoon, between Robert Chambers, of Newcastle-on-Tyne, who, about a twelvemonth ago successfully contested the championship with Henry Kelly of Fulham, and Thomas White, of Bermondsey, who defeated Finnis, of the Tower, three years ago. The race was

from Putney to Mortlake, a distance of about 4 miles and a quarter. In spite of the fact that the banks on both sides between those points were crowded with spectators on foot and on horseback, while the river itself was alive with steamboats and every description of smaller craft, White seemed to use his sculls more swiftly than Chambers, and gained a momentary advantage. Up to the end of the first quarter of a mile there was hardly any perceptible difference between them. Soon, however, the superior ease and vigour of Chambers's rowing sent him ahead, and the strength and nearness of his strokes gradually increased his lead. Before the first mile had been completed, the match was virtually at an end. Chambers was about a dozen boats' lengths ahead when he passed Hammersmith Bridge, and he maintained that position with little or no variation throughout the remainder of the struggle, and when the gun announcing the arrival of the twice victorious Chambers at the goal was fired White was manfully but vainly labouring a dozen to 15 boats' lengths behind. The contest did not occupy more than 25 minutes. It was reported in some of the evening papers on Wednesday that White had committed suicide after his defeat, but there was not the slightest foundation for such a report.

PRIZE FIGHT FOR THE CHAMPIONSHIP.—The contest for 200*l* a side between Brettle of Birmingham, and Mace of Norwich, took place on Wednesday morning, in a field near Wallingford Road, on the Great Western line, the police having prevented the intended meeting at Goring. After six rounds in which Mace had the advantage, the police interfered, and the referee adjourned the fight to Thursday. It was then resumed in a field near Southend, when Mace was declared the victor after five rounds and a most punishing fight of seven minutes.—A second fight, between Young Crutchley and Longmore, then took place. The men fought 68 minutes and 39 rounds. Crutchley had the best of the fight, when the police arrived and put a stop to the encounter. On the journey home, Brettle, Longmore, and the two Crutchleys were taken into custody.

Railways.

THE LATE ACCIDENT ON THE EAST LANCASHIRE.—The inquest on the persons killed in the recent collision at Helmshore was concluded on Friday, when the jury after a consultation of two hours, returned the following verdict:—

"The jury is of opinion that the amount of break power and the number of guards were insufficient for so large a train, and recommend the directors to adopt Colonel Yolland's suggestions. Their verdict is Accidental Death."

ACCIDENT ON THE SITTINGBOURNE AND SHEERNESS.—On Friday morning as the train from Sittingbourne was approaching Queensborough Station, the engine ran off the line and fell on its side into an adjoining field, dragging with it two luggage vans, the break van, and a passenger carriage, all of which were more or less broken by the concussion. About 30 passengers were in the train at the time, but, with the exception of the engine-driver and stoker, no one was hurt. The former sustained a contusion of the thigh, and the latter received a violent blow on the forehead, which has temporarily deprived him of the sight of one eye. The cause of the accident has not been ascertained, the rails being quite new and solidly laid, and the line, which has not been opened more than a few weeks, being in a thorough state of repair.

Law.

JUDGES' CHAMBERS.—*The Agapemone.—The Queen* v *the Rev. Lewis Price.*—Mr. Bishop, with Mr. Lovibond, solicitor of Bridgwater, applied to Mr. Baron Wilde on Wednesday for a writ of *habeas corpus* on the part of Mrs. Harriet Lancaster Price, directed to her husband, the Rev. Lewis Price, to produce her before the judge at chambers, and to show cause by what authority he had forcibly removed and detained her in close custody, and refused her permission to return to the Abode of Love and join Brother Prince and other inmates. The affidavits in support of the application stated that Mrs. Price had, of her own free will and consent of her husband, joined the community of the Agapemonites, and that his secession from that body, and his wishes for her to retire, were opposed by her; that her removal had been made by stratagem and force; and that it was her strict determination and desire to return to her former residence, the Abode of Love, and that she was now placed under a state of imprisonment and prevented from returning. Mrs. Price went on to say that she desired at once to return, that she did not desire to remain with her husband, and that she had given Mrs. Starkey, who was with her when she was abducted, every authority to instruct Mr. Lovibond to take the necessary legal proceedings to obtain her liberty and freedom of action to return to her former abode. Baron Wilde, without expressing any opinion on the case, thought there was sufficient *primâ facie* evidence to justify the writ of *habeas corpus*, and made an order accordingly. The writ was at once issued, and sent by express train to be served on Mr. Price at Glastonbury. In compliance with this writ, Mrs. Price was brought to London on Thursday, and Mr. Price yesterday made a special return to the writ stating that she had been acting under the undue influence of Mr. Prince, that he had secured her person without violence and taken her to his own lodgings, where they occupied the same rooms, and that no agreement or deed of separation had been executed. The judgment of Mr. Justice Coleridge was cited to show that the husband had a right to the custody of his wife. Baron Wilde said the proper home of the wife was with her husband until she obtained a legal separation. He was satisfied with the return to the habeas, and ordered the wife to be restored to her husband, who had a right to possession of her, so long as there was no violence.

CENTRAL CRIMINAL COURT.—*The Colney-Hatch Lunatic Asylum.—William Slater* and *William Vivian*, keepers at the county asylum at Colney-Hatch, were charged with the manslaughter of William Swift, one of the patients, by kicking and beating him with such violence that his ribs were broken and he died of the injuries received. The charge mainly rested upon the evidence of two witnesses who were lunatics, and the question turned upon the value which ought to be attached to their testimony. The medical evidence was in favour of the prisoners, and the jury after a short consultation returned a verdict of *Not Guilty*. There was an attempt at applause when the verdict was pronounced, but it was speedily repressed by the officers of the court. *Fraud by a Trustee.—Dr. Daniel de la Cherois Gourlay*, 60, physician, was indicted for having as a trustee, unlawfully converted to his own use the sums of 503*l* 8*s*. 9*d*., 300*l*., and 1499*l*. 10*s*. 4*d*., with intent to defraud Mrs. Eliza Brigg, the widow of a solicitor at Canterbury, who had made the prisoner the executor of his will. It was proved that the prisoner had paid several sums of money and lent others from the monies which he had received in trust. The jury found the prisoner *Guilty*, but recommended him to mercy on account of his age. Mr. Justice Blackburn, in passing sentence, told the prisoner that, setting aside the provisions of the Act, which had only recently made the conduct he had been guilty of a legal offence, a man in his position must have known that he was acting most dishonestly. It was a painful thing to have to pass sentence upon a man of the prisoner's age, and but for that fact the sentence would have been heavier than the one he was about to pass, which was, that the prisoner be imprisoned and kept to hard labour for six months. **Prisoner: A most unjust sentence, my lord and jury. He then bowed and left the dock.**

Obituary.

THE MARCHIONESS OF DONEGALL died on the 14th inst. in Paris after a short illness. She was the eldest daughter of the first Earl of Glengall, and sister of the late earl, was born in 1799, and married, in 1822, the Marquis of Donegall (then Earl of Belfast), by whom she leaves an only daughter, Lady Harriet Ashley.

LADY MARGARET BRUCE YEOMAN died on the 13th inst. at Marsh Hall, near Redcar, Yorkshire. She was the eldest daughter of the first Earl of Zetland, was born in 1796, and married, in 1816, Mr. Henry Walker Yeoman, of Woodlands, Yorkshire.

MAJOR GENERAL SIR MICHAEL CREAGH, Colonel of the 73d Regiment, died at Boulogne on the 14th inst. He entered the army in 1802, and saw much active service in India, Africa, and the West Indies. He served in the expedition under Sir David Baird against the Cape of Good Hope, was wounded in the action of the Blue Bourg; in 1810 accompanied the expedition from Madras against the French islands; was desperately wounded by a cannon shot, which carried away a part of his left shoulder and killed six of his men, and was present at the attack of the batteries before St. Denis, Isle of Bourbon. In 1817 and 1818 he commanded the 86th flank companies during the Mahratta and the Pindarree wars in India. In 1818 he served in Ceylon, during the Kandyan war. He was Colonel of the 86th Foot from 1832 to 1842, when he was appointed to the 11th Foot, a command he held up to 1845. In 1832 he was made a Knight of the Guelphic Order, and created a Knight Bachelor. In January last he was appointed Colonel of the 73d Regiment. Sir Michael was the fifth son of the late Mr John Creagh, of Limerick, and married Miss Osborne, only daughter of the late Right Hon. Charles Osborne, Justice of the Queen's Bench in Ireland.

SIR GEORGE SIMPSON, Governor of the Hudson's Bay Company's Territory, died at his residence, La Chine, near Montreal, on the 7th inst., a few days after he had hospitably entertained the Prince of Wales and his suite. The illness of which he died was of only a day or two's duration, and he was in his 69th year. He was the only son of the late Mr. George Simpson, of Loch Broom, Ross, and was well known some years since as the author of a "Narrative of an Overland Journey Round the World." He had held the post of Governor over the Hudson's Bay Company's settlements for upwards of 35 years. He received the honour of knighthood in 1841, for his zeal in fitting out several Arctic expeditions. He married in 1827, the second daughter of the late Mr. Geddes Mackenzie Simpson, of Great Tower Hill, London, and Stamford Hill, Middlesex, by whom, who died in 1853, he leaves a son and two daughters.

VICE-ADMIRAL GEORGE HEWSON died a few days since. He was one of the small surviving number of Trafalgar officers. He entered the navy in 1788 under Sir Hyde Parker, and was midshipman in the St. George at the siege of Toulon and at the reduction of Corsica. When in the Britannia he took part in Lord Hotham's action in 1795, was lieutenant of the Inconstant at the capture of the French frigate L'Unité, and when in the Boadicea, assisted in her boats at the destruction of a convoy in the Passage du Raz, and was officially noticed for cutting out a lugger of six guns from under the batteries of St. Matthews. He afterwards commanded a division of boats, which cut out the Spanish gun-ship Neptune, from Corunna. He was First-Lieutenant of the Dreadnought at Trafalgar, and of the Superb at Copenhagen. He commanded the Fleche in the Walcheren expedition, and assisted at the reduction of Flushing, and on the evacuation of the British he covered their retreat. Since May, 1816, he had not seen any active service.

BREVET-MAJOR DISBROWE, of her Majesty's 43d Foot, died of dysentery at Suez on the 4th inst., on his return home from Madras. He had been 16 years in the service, and was present with his regiment during the whole of the late operations in Central India.

MR. JOSEPH LOCKE, M.P. for Honiton, President of the Institution of Civil Engineers, died on Tuesday at Moffatt. He had been in the habit for years of passing the shooting season in Annandale, and had been enjoying the sport in apparently his ordinary health for the last five weeks. On Monday morning he was seized with a violent attack of colic in the ileum, and after suffering great pain expired on Tuesday morning. Mr. Locke leaves a widow in very delicate health, but no family. He was the engineer of the Grand Junction and South-Western Railways and their branches, President of the Institute of Civil Engineers, in succession to Mr. Robert Stephenson, a Fellow of the Royal Society, and held the Cross of the Legion of Honour, as an acknowledgment of his services as engineer of the Paris and Rouen line, the first great railway constructed in France.

MR. JOSEPH JACKSON, the eminent railway contractor, died at Bombay on the 9th inst. from an attack of dysentery. In conjunction with his partner, Mr. Wythes, he had been employed on railway works, as an engineer and contractor, since 1834. His first contract was on the Grand Junction, followed by the Eastern Union, London and Brighton, Shoreham Harbour, Eastern Counties, &c. In 1850 he went to India, and undertook the contract for that part of the Great Indian Peninsular Railway to run from Tannah to Oomrah, and subsequently undertook the gigantic works on the Thull Ghaut, including the large stone bridge over the Godavery. This latter work was the immediate cause of his illness, the constant exposure in the bed of the river having brought on the disease of which he died. About three years ago, while engaged in a large contract in Glamorganshire, he married the daughter of the Rev. William Leigh, vicar of Lanfabon, by whom he leaves one daughter aged 18 months.

WILLS.—The will of Vice-Admiral Sir G. B. Pechell, Bart., M.P., has been sworn under 30,000*l*.; Rev. Edward Repton, 16,000*l*.; Lieut.-Gen. Lord Sandys, 10,000*l*.; Major-General Mundy, 12,000*l*.

BIRTHS.—On the 15th inst, at 1, Kildare Gardens, the wife of N. LINDLEY, Esq., Barrister-at-law, of a son—26th inst, at Hillingdon Court, Uxbridge, the Hon. Mrs. CECIL DUNCOMBE, of a daughter—15th inst., at Dublin, the Hon. Mrs. YNYR BURGES, of a daughter—13th inst., at Runcton Hall, Lady TROUBRIDGE, of a son—12th inst, at Pontefract, Lady BLOMEFIELD, the wife of the Rev. Sir T. E. W. Blomefield, Bart., of a daughter—11th inst, at Clonmannon, county Wicklow, the wife of the Hon. Mr. Justice HAYES, of a son—16th inst, at Plymouth, the wife of T. C. J. DRYDEN, Esq., paymaster R.N., of a son.

MARRIAGES.—On the 18th inst, at St. George's, Hanover Square, Captain Lord EUSTACE GASCOYNE CECIL, Coldstream Guards, third son of the Marquis of Salisbury, to Lady GERTRUDE LOUISA SCOTT, fourth daughter of the late and sister of the present Lord Eldon.—12th inst, at Nidd Hall House, Lieut.-Colonel H. E. LOWNDES, HALSEY D. MOLEYNS, eldest son of the late T. V. Wray, of Barham House, Co. Kerry, to HARRIET ELIZABETH FRANCES, eldest daughter of ANDREW WATKINS, Esq., of Nidd Hall, Masserial.—15th inst, at All Souls', Langham Place, HENRY CAMPBELL, Esq., second son of Sir James Campbell, of Stracathro, Forfarshire, to SARAH CHAPPELL, only daughter of the late Major-General Sir CHARLES BRUCE, K.C.B.—13th inst, at St. Martin's in the Fields, JAMES WILLIAM MACNALL, Esq., eldest son of the late James Munro Macnall, Esq., of Highfield House, Hants, to AMY, daughter of Sir JAMES WEIR HOGG, Bart.—12th ult, at Swanage, Dorset, Captain FREDERICK STEPHEN STEELE, eldest son of Captain Matthew Frederic Steele, of Sutton, Surrey, to MARTHA eldest daughter of the late Sir FRANCIS BLAKE, Bart., of Twisel, Northumberland.—13th inst, at Hagworthingham, Lincolnshire, ARTHUR REGINALD ST. C. RADCLIFFE, third son of Sir Joseph Radcliffe, Bart., of Redding Park, to GEORGIANA, third daughter of the Rev. F. PICKFORD, rector of Hagworthingham.—11th inst, at Rhyl, the Rev. HENRY OLDERSHAW, of Lichfield, to MILLICENT SUSAN, youngest daughter of the late Sir FRANCIS SACHEVERELL DARWIN, of Breadsall Priory, Derbyshire.—16th ult, at the Cathedral, Barbados, Lieut.-Colonel CHAMBERLAYNE, 3d West India Regiment, to CHARLOTTE LOUISA, second daughter of the Bishop of BARBADOS.—11th inst, at St. Saviour's, Paddington, ROBERT W. KEATE, Esq., Governor of the Island of Trinidad, West Indies, to HENRIETTA JEMIMA, daughter of T. MURRAY, Esq., M.D., of Woodbrook, in the same Island.

DEATHS.—On the 4th inst, at Suez, on his passage home from Madras, Brevet-Major JOHN GEORGE CAVENDISH DISBROWE, 43d Light Infantry, only son of Colonel and Hon. Mrs. Disbrowe, age 32.—15th inst, SARAH, third daughter of Sir THOS. TURTON, Bart., of Feltham, Surrey, aged 71.—18th July, at Balerang, Australia, HENRY ALLDAY WILLIAM ALEXANDER, youngest son of Lieut.-Colonel Henry Alexander, Staines, Middlesex, aged 27.—11th inst, in Bath, Captain JOSEPH FRANCIS STIRLING, R.N., youngest son of the late Vice-Admiral Charles Stirling.—At Snortlands, Oystermouth, near Swansea, Lieut.-Colonel HUGH DIVE, aged 85.—At Spoleto, of dysentery, Lieut. ALFRED E. LAWLESS, one of the Irish Papal Brigade, aged 29.—15th inst, NOEL, only son of Professor HUXLEY, of the Government School of Mines, Jermyn Street.—12th inst, at his residence, Cornbrook, Manchester, JOSHUA SCHOFIELD, Esq., aged 60.—14th inst, at Whitley, near Tynemouth, GEORGE HEPPEL, youngest son of GEORGE HEPPEL RAMSAY, Esq., of Derwent Villa, near Newcastle-upon-Tyne, Chairman of the County of Durham Bench of Magistrates, Gateshead Division, aged 30.—At Chudleigh, Devon, MARGARET, eldest daughter of Lieut.-General TURNER, Royal Artillery.—17th inst, at his residence, 10, Cavendish Place, Bath, the Rev. HENRY RICE, rector of Great Holland, Essex, aged 83.—17th inst, at Stoke, Guildford, 14 days after her mother, SOPHIA SLADE, second daughter of the Rev. GIFFARD WELLS, of that place, aged 20.

Markets.

COVENT GARDEN, Sept. 22.

Foreign importations of Pears, Apples, Tomatoes, &c. continue to arrive. Peaches and Nectarines from open walls are now plentiful. Grapes abundant. Cob Nuts realise 1*s*. and Filberts 9*d*. to 1*s*. per lb. Peas are scarce. Potatoes are badly diseased. Some good Mushrooms may be obtained. Cut flowers chiefly consist of Orchids, Gardenias, Violets, Mignonette, Heaths, Geraniums, Lily of the Valley, and Roses.

FRUIT

Pine Apples, per lb., 3*s* to 4*s*	Melons, each, 2*s* to 4*s*
Grapes, per lb., 2*s* to 5*s*	Plums, p. ½ sieve, 3*s* to 4*s* 6*d*
Peaches, per doz., 4*s* to 6*s*	Pears, per doz., 1*s* to 3*s*
Apricots, per doz., 2*s* to 4*s*	Apples, per doz., 6*d* to 1*s* 6*d*
Nectarines, do., 3*s* to 6*s*	Oranges, per 100, 10*s* to 20*s*
Cherries, p. lb., 1*s* to 3*s*	Lemons, per 100, 10*s* to 15*s*
Green Figs, per doz., 3*s* to 4*s*	

VEGETABLES.

F. Beans, per qrtn., 9*d* to 1*s*	Celery, p. bundle, 1*s* 6*d* to 1*s* 9*d*
Peas, p. bush, 2*s* to 3*s*	Onions, p. half sieve, 3*s* to 5*s*
Cauliflowers, each, 4*d* to 6*d*	Tomatoes, per doz., 2*s* to 3*s*
Greens, per dozen, 2*s* 6*d* to 3*s*	Veg. Marrows, p. doz., 6*d* to 1*s*
Cabbages, do., 1*s* to 2*s*	Shallots, per lb., 6*d* to 8*d*
Potatoes, p. ton, 105*s* to 160*s*	Garlic, per lb., 6*d* to 8*d*
— per bus., 4*s* to 5*s* 6*d*	Lettuces, Cabb., p. score, 1*s* 6*d* to 2*s* 6*d*
— per cwt., 5*s* to 8*s*	Lettuces, Cos, p. score, 6*d* to 1*s*
Carrots, per bunch, 4*d* to 6*d*	Endive, p. score, 1*s* to 2*s*
Turnips, per bunch, 5*d* to 7*d*	Horse Radish, p. bun., 1*s* 6*d* to 4*s*
Spinach, p. sieve, 2*s* to 3*s*	Mushrooms, p. pott., 2*s* to 3*s*
Cucumbers, each, 6*d* to 1*s*	Parsley, p. 12 bunches, 2*s* to 4*s*
Artichokes, per doz., 4*s* to 6*s*	Savory, per bunch, 2*d* to 4*d*
Beet, per doz., 1*s* 6*d* to 2*s*	

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Sept. 20.

Prime Meadow Hay	75*s*	to 80*s*	Clover	90*s*	to 115*s*
Superior do. (old)	90	112	New Clover	—	—
Inferior do.	50	60	Old second cut	80	100
New do.	50	90	Straw	20	36
Rowen	—	—			

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Sept. 20.

Sup. Meadow Hay	114*s*	to 120*s*	Inferior Clover	70*s*	105*s*
Inferior do.	60	105	New do.	—	—
New do.	65	105	Straw	38	44
Superior Clover	115	126			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Sept. 20.

Fine old Hay	105*s*	to 112*s*	Fine old Clover	110*s*	to 126*s*
Inferior do.	50	90	Inferior do	80	95
Prime New Hay	—	—	Fine 2d cut	84	90
Inferior do.	—	—	Fine New Clover	—	—
Straw	32	38	Inferior do.	—	—

BRITISH WOOLS.—LONDON, FRIDAY, Sept. 21.

Our market is only slightly supplied with Wool, and prices are buoyant.

	s.	*d.*		*s.*	*d.*
South-down Hoggets	1	8 to 1	9	Leicest. Wethers 1	6 to 1 7
Half-bred ditto	1	8 — 1	9	Ditto Hoggs 1	7 — 1 9
Down Ewes	1	6 — 1	7	Combing Skins	— — —
Kent Fleeces	1	6 — 1	7	Blanket ditto 0	6 — 0 8
				Flannel Wool 1	0 — 1 7

HOPS.—BOROUGH MARKET, FRIDAY, Sept. 21.

Messrs. Pattenden & Smith report the market active, and accounts worse. The duty has been estimated by a large firm as low as 35,000*l*., viz., Rochester, 8000*l*.; Canterbury, 6000*l*.; Sussex, 15,000*l*.; Worcester, 3000*l*.; Farnham, 2500*l*.; Kingsdown, 500*l*.; but the general betting is 45,000*l*. The Hop article in the *Times* money market and city intelligence of Wednesday morning stating that a large importation of foreign Hops will take place has astonished every one who knows anything about the prospect of the Continental crop. Our information leads us to the conclusion that Belgium will not grow more than one-fourth and Bavaria one-third of a crop. About 40 pockets of new Hops have arrived at market, but

having been picked full a fortnight before coming to maturity are not sought after. Fine 1859 and older Hops are in good demand at improved prices.

COAL MARKET.—Sept. 19.

Tanfield Moor, 13s. 9d.; Walls End Braddyl's Hetton, 19s.; Walls End Haswell, 20s. 0d.; Walls End Stewarts, 20s.; Walls End Auckland Park, 17s. 6d.; Walls End Caradoc, 19s; Walls End Hough Hall, 18s. 6d.—8 ships at market.

METROPOLITAN CATTLE MARKET.

MONDAY, Sept. 17.

The number of Beasts is rather smaller than on Monday last; trade is dull at about that day's quotations. There are a few more Sheep, and the demand is limited, consequently a clearance cannot be effected, although on the average prices are scarcely so good. The Lamb season has now closed. Good Calves are rather dearer. From Germany and Holland there are 1000 Beasts, 5670 Sheep, and 52 Calves; from Ireland, 350 Beasts and 600 Sheep; and 2500 from the northern and midland counties.

	s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	2
Best Short-horns	4	8	— 5	0
2d quality Beasts	3	6	— 4	0
Best Downs and Half-breds ..	5	2	to 5	4
Do. Shorn		—		..

	s	d	s	d
Best Long-wools.	5	0	— 5	2
Do. Shorn			to	..
Ewes & 2d quality	4	0	— 4	4
Do. Shorn			—	.
Lambs	5	0	— 5	8
Calves	4	4	— 5	4
Pigs	4	0	— 5	4

Beasts, 5450; Sheep & Lambs, 25,250; Calves, 90; Pigs, 410.

THURSDAY, Sept. 20.

The supply of Beasts has increased, and the demand is small; consequently trade is very dull, and it is with difficulty Monday's quotations are realised. Several remain unsold. The number of Sheep is about the same as of late. Prices are rather lower on the average, and a clearance cannot be effected. Calves are selling at 4d. per stone reduction. From Germany and Holland there are 350 Beasts, 1350 Sheep, and 360 Calves; from Spain, 80 Beasts; 115 Milch Cows.

Best Scots, Herefords, &c. ..	4	8 to 5	0	Best Long-wools .	5	0 — 5 2
Best Short-horns	4	6 — 4	10	Do. Shorn		— ..
2d quality Beasts	3	4 — 4	0	Ewes & 2d quality	4	4 — 4 6
Best Downs and Half-breds ..	5	2 — 5	4	Do. Shorn		to ..
Do. Shorn		—	..	Lambs		— ..
				Calves	4	0 — 5 0
				Pigs	4	4 — 5 4

Beasts, 1425; Sheep & Lambs. 8260; Calves, 530; Pigs, 230.

BUTTER MARKET.—Sept. 21.

Best Fresh Butter .. .. 14s. per dozen lbs.
Second do. do. .. .. 13s. ,, ,,
Pork, 5s. 4d. to 5s. 0d. per 8 lbs.

MARK LANE.—MONDAY, Sept. 17.

The supply of English Wheat to this morning's market consisted almost exclusively of the new crop, the major part of which was in very soft condition; the quantity from Essex was small, that from Kent large; fair conditioned samples were realised at fully last week's prices, but the soft and inferior were difficult of sale, even at 3s. to 4s. less money. Old brought 1s. to 2s. per qr. advance. The market was largely attended by country buyers, and foreign Wheat was held firmly for an advance which at first checked business, but upon the sales effected 1s. to 2s. per qr. over last week's prices were obtained, and a good business done at the close. For Barley there is a good demand, and the decline of this day week is recovered. Beans and Peas are unaltered in value. The Oat trade is firm at an advance of 6d. per qr. In foreign Flour there is little doing, but it is held for a slight improvement. The few sales made in Mustard Seed were generally at a decline of 3s to 4s. per bushel.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	52	58	Red	42	60
— — fine selected runs..ditto	54	60	Red	50	62
— — Talavera	50	67			
— Norfolk	—		Red	—	
— Foreign	50	76			
BARLEY, grind. & dist., 25s to 31s..Chev.	38	45	Malting .	36	41
— Foreign..grinding and distilling	30	38	Malting .	35	40
OATS, Essex and Suffolk	20	24			
— Scotch and Lincolnshire..Potato	26	28	Feed ..	24	26
— Irish .....Potato	26	28	Feed ..	21	24
— Foreign.....Poland and Brew	24	26	Feed ..	20	26
RYE	35	38	Foreign .	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....36s to 33s....Tick	38	42	Harrow .	38	42
— Pigeon .....44s — 47s..Winds.	—		Longpod	—	
— Foreign .....Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	50	52	Suffolk .	50	54
— Maple .... —s to —s ..... Grey	—		Foreign .	30	43
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	50	57			
— 2d do. ..... ditto	34	50	Country.	34	50
— Foreign .....per barrel	28	31	Per sack	40	50

FRIDAY, Sept. 21.

Since Friday last rain has fallen here daily, and appears to have been pretty general throughout the country at the close of last week and beginning of the present, which must again have retarded harvest operations and add to the quantity of bad-conditioned grain, unless followed by fine drying weather. Wind during the week was westerly, excepting on the 19th and 20th, when it became easterly; this morning after heavy rain during the night, it is N.W. The improved tone observed in the market on the 14th has been succeeded by increased activity in the Wheat trade, and an improvement of 1s. to 2s. per qr. in the value of old English and foreign Wheat. For spring Corn also higher rates have been obtained, and American Flour must be quoted 1s. per barrel dearer. The number of grain and seed-laden vessels from the South of Europe arrived off the coast during the last week amounts to 104. The arrivals of English grain and foreign Barley and Oats this week have been small, but good of foreign Wheat. The attendance at this morning's market included numerous country millers, whom we have not seen during the last two years. Old English and foreign Wheat was taken in retail at an improvement of 1s. per qr. on Monday's quotations, but the demand was chiefly confined to Black Sea qualities. The value of new English is unaltered. For Barley there is a fair inquiry at the extreme prices of Monday. Beans and Peas are unaltered in value. The Oat trade is firm, and in some instances a trifling advance is obtained.

ARRIVALS FROM Sept. 17 TO Sept. 21.

	Wheat.	Barley	Oats.	Flour.
English ..	1240 qrs.	130 qrs.	— qrs.	1320 sks.
Irish	— ,,	— ,,	170 ,,	— ,,
Foreign ..	26510 ,,	750 ,,	10740 ,,	6420 ,, 32270 brls.

LIVERPOOL, Tuesday, Sept. 18.—We have a large attendance of millers and dealers, both local and from a distance, at our Corn Exchange this morning, and Wheat meets a healthy consumptive demand, whilst Flour brings fully 6d. per barrel and sack more money than was obtainable on Friday. Indian Corn held firmly for an advance of 1s. per qr., which rather checks business. Oats and Oatmeal little inquired after, and rather cheaper. Beans, Peas, and Barley each bring fully previous prices in retail. The market closes with a steady feeling.

FRIDAY, Sept. 21.—Grain market active, and all articles exceedingly firm. Wheat in good demand at 1d. advance. Indian Corn 6d. dearer; mixed American and Ibrail 35s., Galatz 35s. 6d. Beans, Barley, and Oatmeal very firm. Weather fine. Samples of new Wheat very bad.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Aug. 11..	59s 6d	34s 0d	26s 1d	44s 9d	46s 5d	41s 0d
— 18..	59 6	32 10	28 2	41 9	47 1	44 0
— 25..	60 1	34 9	27 1	40 4	47 7	43 9
Sept. 1..	60 11	33 3	28 2	40 7	47 10	44 5
— 8..	62 10	35 2	27 2	39 4	49 3	41 4
— 15..	62 11	37 10	27 0	42 4	50 1	38 7
Agg. Aver.	61 0	34 8	27 4	41 6	48 1	42 2

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Aug. 11.	Aug. 18.	Aug. 25.	Sept. 1.	Sept. 8.	Sept. 15.
62s 11d	..	..	..	..	..	
62 10	..	..	..	..	—	..
60 11	..	.	..		..	..
60 1	..	..		..	..	..
59 6 —			..	..	..	..
..	..	..	..	..	..	..

TO NURSERY FOREMEN.

WANTED, A FOREMAN, who understands the Propagation of Hardy Trees and Shrubs, Budding, Grafting, and Laying, Growing Forest Trees, Fruit Trees, and general Nursery work, and who could take charge of a number of men.—Apply to J. G. S., *Gardeners' Chronicle* Office, W.C.

WANTED, by a Gentleman resident in a town in Surrey, a GARDENER capable of managing the usual Greenhouse, Pits, and Kitchen Garden. Wages, 16s. per week, and a house in the street, let at present for 10l. per annum.—Apply by letter, addressed H. E. P., Chertsey.

WANTED, AN INDOOR SERVANT, in a country family where a boy is kept. Wages, 40l. He must be between the ages of 30 and 50, and have an unexceptionable character for honesty, sobriety, cleanliness, civility, and capacity for his business.—Apply to Mr. LEVSTON, Stationer, Bridgend, Glamorganshire.

WANTED, AS UNDER GARDENER in a private Garden where four are kept, a young Man competent to grow Orchids, Ferns, and Greenhouse Plants. He must not be unwilling to be useful as the Head Gardener may direct, though his chief occupation will be the care of the above named plants.—Address, stating age, references, experience, and wages, by letter in own handwriting, THE GARDENER, The Holme, Regent's Park, N.W.

WANTED, an elderly and steady MAN to attend to a Seedshop in the absence of the proprietor, and to make himself generally useful in the writing department. Wages 17s. to 20s. per week.—Address, P. P. L., Post Office, Hull.

WANTED, in a London Seed Merchant's Counting House, a JUNIOR CLERK. A good handwriting and a knowledge of the business absolutely necessary.—Address, with full particulars, to W. I., care of Wm. Dawson & Sons, 74, Cannon Street, City, E.C.

SEED TRADE.

WANTED IMMEDIATELY, in a London Seed House, a SHOPMAN and TRAVELLER. A man of experience and good address. Testimonials as to character and ability must be unimpeachable.—Apply by letter only, to F. R., Mr. John Wilson, 12, Harp Lane, Lower Thames Street, E.C.

WANTED IMMEDIATELY, a steady and industrious MAN to look after a Horse and Phaeton, a small Flower and Kitchen Garden, with Hothouse and Greenhouse; he must thoroughly understand Propagating. To a sober and industrious man competent for these duties this would be a permanent situation.—Address, stating name of last employer, how long in his employ, wages required, age, if married or single, to C. W., Ashley Villa, Ashley Road, Bristol.

WANTED IMMEDIATELY, a respectable well-conducted LAD to assist in the Shop and Counting-house. Must write well and quick. He will have the opportunity of gaining a practical knowledge of the Nursery and Seed Business under the directions of the general Foreman. Also a Young Man who has been accustomed to potting and indoor work generally.—Apply, by letter only, to Messrs. CUTBUSH & SON, Highgate Nurseries, London, N.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD). — Middle-aged, married; Scotch; thoroughly qualified, honest, obliging and energetic; can take chare of Grass Land to any extent. Wages very moderate.—B., Porter's Row, Holloway Road, N.

GARDENER (HEAD).—Age 42, married, without incumbrance; perfectly understands his profession. Good references from former employers.—X. Y., 9, Vine Place, Bond Street, Vauxhall, S.W.

GARDENER (HEAD).—Age 31, married; great experience; has been supplying first-class families with every necessary and luxury that can be produced from the garden, both early and late. No place will be accepted but what is kept up in the first of order, and where he will have the entire management of everything connected with the garden. Several years' unexceptionable references. — H. C., Portnall Park, Egham, Surrey.

GARDENER (HEAD).—WILLIAM COPE, Wynnstay, Ruabon, will feel great pleasure in recommending to any nobleman or gentleman a thorough practical Gardener (age 37, single) He left the last place in consequence of the death of his noble employer, in which situation he lived upwards of six years; during which time he had the superintendence of laying out new Grounds, erection of new Houses, Stoves, Pits, &c.—Address as above.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—A first-class Gardener, in the prime of life, energetic and industrious; has had extensive and most successful practice in every department of Gardening; is an enthusiastic cultivator of all kinds of Fruits; understands Early and Late Forcing of Flowers and Vegetables, and has had most extensive practice in Landscape Gardening and Laying out Grounds Moral character unexceptionable. Ample testimony to the above can be had of his late employer, first-class families of the day in gardening, and several of the leading Horticulturists. No small place accepted.—A. Z., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Age 27; an active practical Man, well versed in all branches, having 10 years' experience. Can be well recommended.—A. B. C., Post Office, Birchfields, near Birmingham.

GARDENER (HEAD).—Age 35, married; understands Early and Late Forcing and Gardening in all its branches. Seven years' character.—A G., Cornwell's Nursery, Hadley, Barnet, N.

GARDENER (HEAD).—Age 38, married, without incumbrance: has a thorough knowledge of his profession. Wages, 1l. per week with house. Two years' character.—A. B., 10, Greenwich Road, Greenwich, S.E.

GARDENER (HEAD).—Age 35, married; first-class, and has a thorough practical knowledge of Forcing Pines, Vines, Melons, Stove and Greenhouse Plants, Flower and Kitchen Gardens. Eighteen years' experience. Reference from last employer.—T. R., Mr. Dunn, Stationer, York.

GARDENER (HEAD, or GOOD SINGLE-HANDED).—Age 33, married, two children, aged 9 and 12 years; well understands Forcing Vines, Cucumbers, Melons, and is a good Kitchen and Flower Gardener. Good character.—A. B., 22, Elizabeth Street, Brixton Hill, Surrey, S.

GARDENER (HEAD), to any lady or gentleman in want of a competent and persevering Man.—Age 26, single; has had upwards of 10 years' practice (six as Foreman) in first-class establishments. Can be well recommended by his present employer.—A. B., Post Office, Brough, East Yorkshire.

GARDENER (HEAD).—Age 37, married, one child four years of age; has a thorough practical knowledge of his profession in all its branches—Pines, Grapes, Stove, and Greenhouse Plants.—Mr. ROLLS, Bobbingworth School, Ongar, Essex.

GARDENER (HEAD).—J. TEGG (age 34, single) wishes to engage himself to any nobleman or gentleman requiring a good experienced Gardener. Well acquainted with the Forcing of Fruits, Flowers, and Vegetables, and could take charge of Land if required. Good references.—Messrs. LEE's Vineyard, Hammersmith, W.

GARDENER (HEAD), or GARDENER AND BAILIFF.—Married, small family; thoroughly practical; perfectly understands his profession in every department; has a good knowledge of Land, Stock, &c. Fifteen years' good character.—Mr. RIVERS, Nurseryman, Sawbridgeworth, Herts.

GARDENER.—Age 25, single; understands the Management of Greenhouse, Vinery, Flower and Kitchen Gardens, Cucumbers, and Melons. Three and a half years' good character.—J. C., Post Office, Purton, Wilts.

GARDENER.—Unmarried; thoroughly understands his profession. In the house if required. Two and a half years' good character. Can be highly recommended.—J. J., Mr. Dunn's, 14, Chandos Street, Strand, W.C.

GARDENER (JOURNEYMAN).—Age 20; wishes for a place where Planting and Forcing are extensive. Served two years with Mr. Cuthill and three years with Mr. Barnes.—J. W., Mr. James Cuthill's, Camberwell, London, S.W.

GARDENER (SINGLE-HANDED).—Age 25; willing to make himself generally useful. Good character.—JAMES GILBERT, Calverley Fields, Tunbridge Wells.

GARDENER (SINGLE-HANDED OR OTHERWISE).—Age 25; Thoroughly understands Flower and Kitchen Gardens, Greenhouse, Forcing Vines, &c. Excellent character.—T. H., Mr. MacMallen, Coombe Wood Nursery, Kingston Hill, Surrey, S.W.

GARDENER (UNDER).—Aged 21.—Mr. WINGFIELD, Donnington Park, near Derby.

GARDENER (UNDER).—Age 21, single; is well acquainted with Forcing and Gardening generally. Three years' good character.—J. B., Wanstead Grove, N.E.

FOREMAN (where Forcing and Plant-growing are carried on in general.)—Age 27, single; has served 5 years in a large Forcing establishment, in which he obtained considerable knowledge of his profession. Eighteen months' good character from present employer.—M. Y., Blyth Hall, Worksop, Nottinghamshire.

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The Gardeners' Chronicle Newspaper.

SATURDAY, SEPTEMBER 29, 1860.

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The Prospectus for the SESSION, commencing on October 1, will be sent on application to the Registrar. The Courses of Instruction embrace Chemistry, by Dr. HOFMANN; Physics, by Prof. TYNDALL; Natural History, by Prof. HUXLEY; Geology, by Prof. RAMSAY; Mineralogy and Mining, by Mr. WARINGTON SMYTH; Metallurgy, by Dr. PERCY; and Applied Mechanics, by Prof. WILLIS.

TRENHAM REEKS, Registrar.

MINERALOGY. — KING'S COLLEGE, London. — Professor TENNANT, F.G.S., will commence a COURSE of LECTURES on MINERALOGY, with a view to facilitate the study of GEOLOGY, and of the application of Mineral Substances in the ARTS. The Lectures will begin on FRIDAY, October 5, at 9 o'Clock, A.M. They will be continued on each succeeding WEDNESDAY and FRIDAY at the same hour. Fee, 2*l.* 2*s.* R. W. JELF, D.D., Principal.

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HORTICULTURAL GARDENS.—The *Gardeners' Chronicle* of May 12, containing Mr. NESFIELD'S COLOURED PLAN for the NEW GARDEN at Kensington Gore, is still on Sale at the Office, 41, Wellington Street, Covent Garden, W.C. and will be sent by post on receipt of six stamps.

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CHARLES KNIGHT'S

POPULAR HISTORY OF ENGLAND. — The Publishers of this Work have to announce a change in its mode of issue. The necessity for this change rests upon the following representation of the Author, which appears to the Publishers as conclusive as they trust it will be satisfactory to the Public.

"I have been occupied,' says Mr. Knight, 'during nearly five years, in writing the Popular History of England, for Monthly Publication. With three exceptions it has appeared regularly during that period; and has now reached to Fifty-three Numbers, bringing up the narrative to 1793. I now find it impossible,—in the first place, with a proper regard to my own health, and, secondly, with an anxious desire to complete my book in a way to justify the favour with which it has been received,—to proceed with a *Monthly* Publication. The pressure of a periodical issue, with so short an interval between each publication, has become incompatible, according to my view, with a due regard to the research and thought which are necessary to deal with the vast accumulation of materials for history since the period of the French Revolution. The difficulty which now presses upon my responsibility for accuracy and impartiality has not been felt by me in the earlier stages of my undertaking, when the field of investigation was more limited. It has now become so onerous as to demand a decisive change.

"I propose, therefore, that it should be announced that the publication in Monthly Numbers will be discontinued, and therefore that a Number will not appear on the 1st of October. That the quantity required to complete Vol. VII. will be published as a Part, or Section, in the month of January simultaneously with the publication of the Volume. That Volume VIII., completing the work, will be published in the course of 1861; and for the convenience of purchasers, will be divided into two Parts, or Sections." In making this announcement the Publishers have only to add, that on the appearance of each of the Parts, or Sections, the Work will also be on sale in the usual form of Shilling numbers.

☞ The Six Volumes of the Popular History of England, which are now completed, bring down the narrative from the Invasion of Cæsar to the close of the American War. The first Four Volumes, forming the First Division of the Work, carry down the History to the Revolution of 1688, and are published with a copious Index. The Second Division, commencing with Volume 5, will come down to that period of the reign of her present Majesty which has become a constitutional epoch in the important change of the commercial policy of the country. The price of each Volume is 9*s.*

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News of the Week.

THE accounts received this week from Central and Southern Italy show that a new crisis is at hand. GARIBALDI has publicly proclaimed his dissensions with Count CAVOUR, and has made appointments both in Naples and Sicily, which have created the painful impression that, while he has promulgated the Sardinian Constitution for the whole kingdom, he has thrown himself without reserve into the arms of the MAZZINI party. On the 17th inst. he published a fresh proclamation to the Sicilians, repeating that he will only proclaim at Rome the constitution of the Italian kingdom, and that he will not accomplish the annexation "as long as there are any chains to be broken in Italy." He has also addressed a letter to Signor BRUSCO, declaring that there exists an irreconcilable difference between his policy and that of Count CAVOUR, and "that while disposed to sacrifice all personal feeling on the altar of the country, he will never be reconciled with men who have sold an Italian province." It is said that the KING OF SARDINIA is about to visit Naples, in order to counteract, by his presence, the effects of GARIBALDI'S proceedings, and to call upon the people of Naples and Sicily to come to an immediate vote on the question of annexation. Meanwhile the troops of GARIBALDI, which disembarked last week at the mouth of the Garigliano, in order to intercept the communications of the Royal troops between Gaeta and Capua, have sustained a check in the neighbourhood of the Volturno, having been driven back to their positions by a charge of cavalry. The latest news states that GARIBALDI was preparing to avenge this repulse by the bombardment of Capua, and that the KING OF NAPLES, who is at Gaeta at the head of 50,000 men, has at length determined to oppose GARIBALDI by force of arms. A rupture has taken place between the KING and the Court of Austria, in consequence of the discovery that HIS MAJESTY before leaving Naples, endeavoured to save his throne by offering to join GARIBALDI in an attack on Venetia. The Austrian Government has announced that the EMPEROR can no longer offer hospitality to HIS MAJESTY, and has ordered the Austrian war steamers in the Neapolitan waters to return to Trieste. From Central Italy we learn that the bombardment of the citadel of Ancona by the Sardinian military and naval forces under General CIALDINI and Admiral PERSANO commenced at midnight on Sunday. Forts Pelago and Pulito were taken by assault on Tuesday, the suburb of the Porta Pia was occupied on Wednesday, and the operations of the siege were in active progress on Thursday evening. General MASI has taken Montefiascone, Civita Castellana, and Viterbo, and General FANTI'S corps has reached Bracciano, on the road to Rome, before the walls of which it will shortly be encamped. The POPE has addressed a note to the Roman Catholic Powers claiming their assistance against Sardinia, and is said to have sent an *ultimatum* to the EMPEROR OF THE FRENCH, threatening to quit Rome at once if the French Government does not interfere against Sardinia. The Secretary of the French Embassy at St. Petersburg has arrived in Paris with despatches, stating that Prince GORTSCHAKOFF has intimated to the French Ambassador that the alliance between France and Sardinia encourages the propagation of doctrines constituting a permanent danger to the balance of power, and the stability of thrones, and that Russia would entirely fail in her mission were she not, in common with other States threatened, to raise her voice in defence of social order and monarchical interests. Prince GORTSCHAKOFF added that this was the object of the approaching interview at Warsaw, between the EMPERORS of RUSSIA and AUSTRIA, and the Prince REGENT of PRUSSIA.

By the Overland mail from Calcutta we have news from Shanghai to the 2d August. The allies left for the Peiho on the 26th July, and were to take the forts before treating with the Chinese. The French and the general division were landing simultaneously at Pehlang. A severe engagement had taken place with pirates, 200 of whom were killed and two European leaders captured. The rebels had taken the city of Nantsien in the silk district, and were in possession of the passes.

Home News..

THE QUEEN'S DEPARTURE FOR GERMANY.—The Queen and Prince Consort, accompanied by the Princess Alice, left Osborne on Friday afternoon and arrived at Buckingham Palace at 7 o'clock in the evening. On Saturday afternoon her Majesty, the Prince Consort, and the Princess Alice left London for Gravesend and embarked from the Terrace Pier in the Victoria and Albert, for Antwerp, on her way to Coburg. At Gravesend the streets through which the Royal *cortége* was to pass from the railway to the pier were decorated with flags, banners, and floral wreaths, and the principal public buildings had appropriate decorations in flowers and evergreens. The Terrace Pier was arranged with seats for 1500 visitors, and from the pier-head the gangway was continued by a wooden bridge, covered with crimson cloth and draped with union-jacks, to the Royal yacht, the state of the tide not permitting her to come close alongside. The gangway was kept by the Mayor and members of the corporation, in their robes and carrying white wands of office. Those who had not tickets for the pier were admitted to the Terrace gardens, from which a good view could be had of the embarkation. The streets were kept by a numerous body of police, assisted by the Gravesend Volunteers. The Earl of Darnley's Yeomanry Corps supplied the guard of honour, and several bands of music were stationed at different points of the route. The Queen arrived at the railway station by a special train at 10 minutes after 5. Her Majesty, the Prince Consort, and the Princess Alice having entered one of the Royal carriages, proceeded by the New Road, King Street, and Harmer Street to the pier, amid loud cheers, and were immediately followed by two other carriages containing the Royal suite. At 20 minutes after 5 the Queen arrived at the entrance to the Terrace Pier. Her Majesty was received by the Mayor and conducted by Prince Albert down the centre gangway, followed by the Princess Alice and Lord John Russell, who attended her Majesty as Secretary of State. The Royal party were in mourning, the exemplary plainness of which was the subject of general remark. As the Queen passed down the gangway cheering was almost entirely suppressed at the instance of the Town-clerk, who intimated that her Majesty would be pleased to dispense with it. As soon as the Queen set foot on board the yacht the Royal standard

was hoisted at the main and received with a Royal salute from Tilbury Fort. Her Majesty and the Prince Consort retired for a few minutes to the saloon, followed by Lord John Russell. The Queen then re-appeared on deck, and was received with a general outburst of loyalty, which being graciously acknowledged, her Majesty returned to the saloon. A few minutes afterwards the yacht left the pier, and proceeded down the river amid the cheers of the spectators, followed by the Osborne, Black Eagle, and Vivid, and by a number of river boats filled with passengers. Her Majesty's ships St. George, Emerald, and Firebrand, with the Royal yacht Fairy, preceded the Victoria and Albert, and awaited her arrival in the Scheldt. The Royal Squadron anchored for the night at the Nore, the darkness rendering it unadvisable to proceed further. On Sunday morning they got under way at 5 o'clock, and after an unusually fine passage arrived off Flushing at half-past 12 p.m. The Royal yacht was saluted by the forts at Flushing, and the English men-of-war manned yards and saluted. On entering the Scheldt the state of the tide rendered it necessary to slacken speed. The yacht therefore proceeded slowly to ascend the river, and arrived at Antwerp at half-past 6 in the evening, but in consequence of a dense fog which prevailed, her Majesty, the Prince Consort, and the Princess Alice slept on board the yacht, which anchored for the night in the centre of the river. Soon after 7 o'clock on Monday morning King Leopold, accompanied by the Duke and Duchess of Brabant, and the Count of Flanders, arrived from Brussels and went on board the yacht to receive her Majesty. The royal party landed shortly afterwards, and proceeded by railway to Verviers, escorted by the King of the Belgians and his family. On arriving at Verviers the Queen and Prince Consort received by telegraph the unexpected intelligence of the death of the Duchess Dowager of Saxe-Coburg, stepmother to the Prince Consort, which took place that morning at Gotha. At Aix-la-Chapelle the Prince Regent of Prussia received the Queen, and with his brother, Prince Charles, accompanied her Majesty as far as Darew. The royal party arrived at Cologne shortly before 2 o'clock, passed through Coblentz at 4, and arrived at Frankfort at half-past 7. On her arrival the Queen was received by the Princess of Prussia, the Grand Duke and Grand Duchess of Baden, who afterwards dined in private with her Majesty, the Prince Consort, and the Princess Alice, at the English Hotel, where her Majesty passed the night. Prince George of Saxony called likewise in the evening to pay his respects to the Queen on behalf of the King of Saxony. On Tuesday the Queen and Prince Consort left Frankfort for Coburg, and arrived there at 5 o'clock in the afternoon.

THE PRINCE OF WALES.—After the levée held by the Prince on the 8th inst. at Toronto his Royal Highness attended a reception given by the Law Society of Upper Canada, and was admitted to the bar by signing the barristers' roll, and the rolls of the Queen's Bench and Common Pleas. The review of the troops and the laying of the foundation-stone of New Park, which were on the programme, were postponed, ostensibly on account of the rain, but really for another reason connected with Orangeism, the excitement in regard to which had been again revived, under circumstances which had compelled the Duke of Newcastle to intimate to the Mayor and Council that they would not be received at the levée. In his communication to the Mayor, Mr. Wilson, the Duke upbraided him for deceit and treachery, and said that he and the Prince had been entrapped into Toronto, an Orange flag having been flaunted in the duke's face at the landing-place, and the Orange arch in King Street, which was otherwise unobjectionable, having been adorned by a portrait of William III., as he appeared when crossing the Boyne, the usual emblem on all Orange flags. The Mayor in reply to the Duke of Newcastle, explained that the flag which he took to be that of Orangemen was in reality that of the Loyal Ontario Lodge of Odd Fellows, and that the portrait of William III. had been placed on the arch without the Mayor's knowledge, and during the latter part of the afternoon. In answer to this explanation the Duke replied that it was a relief to his mind that he could, without any sacrifice of duty to the Prince of Wales, accept the apology offered by the Mayor's letter, and said that the Prince would receive him and the Council on Tuesday morning. On the following day, however, as the Prince was driving to church, the mob endeavoured to seize the horses and carriage when they were near the Orange arch, and by main force to drag the vehicle under the arch. The coachman resisted by every means in his power and finally succeeded in disengaging the carriage and reaching the church. On the 10th the Prince visited Collingwood and the intermediate places. The Orangemen had previously erected three arches over the railway to Collingwood, under which the Prince would have to pass in order to reach that place. The first arch was at Aurora, and was literally covered with the colours and insignia of the order. The Duke did not notice the arch until the Prince had passed under it. At Holland there was another Orange arch, on which were two paintings—one of the Queen and one of King William—and the inscription "Loyal Orange Lodge, 1693." The train did not stop, however, but proceeded to Collingwood. The greatest enthusiasm prevailed at all points, and the Prince met at least 30,000 people during the course of the day. On the 11th, notwithstanding the incessant rain, his Royal Highness went through most of the programme laid down for him. He witnessed a boat-race, and at the conclusion was made a member of the Toronto Yacht Club; he then laid the corner-stone of a statue of the Queen in University Park, and visited the university, the normal school, and the Horticultural Gardens. During the day he received a deputation from Belleville, which had arrived for the purpose of inducing him to return. They made the most abject propositions, but the Prince declined the invitation on the ground that his engagements did not permit of its acceptance. On the 12th the Prince left Toronto for London, passing through Guelph, Brampton, Georgetown, Berlin, Stratford, and St. Mary. He was received everywhere with enthusiasm. At London in the evening there was a torch-light procession including 1500 firemen and several hundred Indians, the latter of whom formed a circle in front of the Prince's hotel, and amused him by a war dance invented for the occasion by one of their number, who is 104 years old. On the 13th the Prince left London for Sarnia, where 200 Ojibbeway Indians from Manitoulin Islands had assembled in full costume, painted and feathered. The principal chief delivered an address to his Royal Highness welcoming him to their wigwams, and the Prince replied through the interpreter. He then distributed medals among the Indians, who presented his Royal Highness with a tomahawk, horn and arrows, wampan, &c. In the evening the Prince returned to London, where he held a levee, which was numerously attended, and went in the evening to a State ball, which he opened with the wife of the Mayor. On the 14th the Prince left London for Niagara, travelling by the Buffalo and Lake Huron Railroad, and by steamer from Fort Erie. At Brantford the Prince received addresses, and was also welcomed by a large number of Indians, who made various warlike presents to his Royal Highness. At Fort Erie a troop of cavalry from the 74th Regiment of New York State Militia acted as an escort to the Prince, and as the steamer in which he had taken passage for Chippewa passed down the river a Royal salute was fired from Fort Porter. On arriving at Chippewa huge bonfires were lighted, and a torch-light procession escorted the Royal carriages to the Falls, which he reached in the evening. His Royal Highness received on his arrival an address from the magistrates of the county, and at night the Falls were beautifully illuminated with blue lights and Bengal fires, producing a remarkable effect. On the 15th Blondin was to cross on the rope, the Prince was to inspect the suspension bridge, and a boat was to be sent over the Falls. It was expected that his Royal Highness would remain at the Falls two or three days, and would then begin his visit to the United States.

PRINCE ALFRED AT THE CAPE.—The steam-frigate Euryalus, with Prince Alfred on board, arrived in Simon's Bay on the 24th July, and in the evening all the surrounding heights were illuminated with bonfires. On the 25th the Prince, accompanied by Major Cowell, Captain Tarleton, and two messmates, sons of Earl de Grey and Lord Jocelyn, and escorted by Volunteer Cavalry, proceeded to Cape Town, and beyond Rathfelders was met by Colonel Travers, military secretary to the Governor, who was waiting at Herschell, where, horses being in attendance, his Royal Highness mounted, and having Sir George Grey on one side and Lieut.-Governor Wynyard on the other, and a number of Cape Mounted Rifles and private carriages following, passed through Claremont, Rondebosch, and Mowbray, where triumphal arches had been erected. A salute was fired at Roodebloem, and in Cape Town thousands lined the streets from the castle to the entrance of the Government Gardens. The Volunteer Artillery were stationed on the Grand Parade. Flags of all nations and colours were exhibited at every eligible point, and from the roof of the Masonic Hall, a number of ladies and gentlemen dropped a shower of roses on the approach of the Prince, who graciously acknowledged the compliment. Never since the Cape became a British colony were the streets so gaily decorated. The walk from the steps of Government House was lined with a guard from the 59th Regiment. Amid the pealing of the Cathedral and the Dutch Reformed Church bells and the salutes of the artillery at the Castle and Grand Parade, the Prince passed down the walk, the band playing the national anthem, and the whole multitude cheering. The Prince was received at the Government House by the Secretary, the Attorney-General, and the other members of the Executive Council, the President and members of the Legislative Council and of the House of Assembly, the judges, dignitaries of the Church, &c. A large number of presentations subsequently took place, and an address from the commissioners of the municipality was received and acknowledged. The illuminations and transparencies in the evening were so attractive that his Royal Highness went in an open carriage to see them. One picture represented the Prince and Sir George Grey welcomed by a South African farmer, holding out his hand and saying "Dag Mynheer; kom't binnen" ("Good day, Sir; come in"). Another had Britannia in the costume of Pharoah's daughter, giving the Prince to Neptune, and saying, "Take this child and nurse it for me." Others had "Prince Alfred," "Welcome, son of England," "Civilisation," "Progress," &c. A shower of rockets from the roof marked the approach to the Masonic Hall, where the Provincial Grand Master of the Netherlands, Sir Cristoffel Brand, presented the Prince with the stirrup cup of love and fidelity. On the 27th his Royal Highness visited the armoury and the Observatory, where they were received by Sir Thomas Maclear. On the 28th the Prince attended a review of the troops, including the 59th Regiment, Royal Artillery, Royal Engineers, Cape Mounted Rifles, Cape Royal Rifles, Scotch Volunteers, Sappers, Miners, Volunteer Artillery, &c. On the same day a deputation of Malays, headed by two Mahomedan priests, presented an address wishing his Royal Highness joy and prosperity. On Sunday the 29th the Prince attended Divine service in St. George's Cathedral, and afterwards went to the Breakwater works, the Somerset Hospital, and the Sanitarium. On the 30th the Prince went into the country, and on the road was received everywhere with unfailing manifestations of rejoicing. He passed through the village of Salt River, and at the outskirts of D'Urban was met by the Volunteer Cavalry with their band. At the bridge the young ladies of the village with their aprons full of roses strewed the path of the Royal sailor, who was hospitably entertained at an African farm-house, Oude-Bass, by the brothers Beyer, the wines being entirely of native growth. The next place visited was the Paarl, where his Royal Highness was met by the Volunteers, and where he received a deputation from Wellington. On the 31st the Prince went to Stellenbosch, which was brilliantly illuminated in the evening, and on the 1st August his Royal Highness commenced his return to Cape Town by passing through the valley of the Eerste river, where he breakfasted at Welmoed, the residence of Mrs. Van der Byl. The pleasures of a South African foxhunt were defeated by the heat of the day, which precluded all chance of scent, and his Royal Highness then proceeded to Krul's River Inn, kept by the veteran Dunn, a trumpeter at the taking of Seringapatam. At Government House the guard of honour was, by permission, supplied by the Volunteer corps of Sappers and Miners. In the evening Prince Alfred dined at the mess of the 59th Regiment, and subsequently attended a ball given by Lieut.-General Wynyard. On the 2d of August his Royal Highness with the Governor and suite left Cape Town for Simon's Bay, where they rejoined the Euryalus, and proceeded to Algoa Bay, arriving at Port Elizabeth on the 5th. The next day the Prince landed, and having taken his seat in a carriage drawn by six cream-coloured horses, proceeded to the residence of Mr. W. Fleming. On the road Mr. Pearson, on behalf of the Malay population, read an address expressing loyalty and affection to the Queen and throne of that nation to whose "generosity many of themselves (once slaves) owed their freedom." In reply to the address of the town-clerk, the Prince said that, "although not at home to receive the congratulations of his parents on that day (his birthday), it was with pleasure that he found himself in the midst of such loyal subjects of the Queen." At Mr. Fleming's residence a levée was held, and was attended among others by Isaak Jukkie, a Malay priest, on whom the Prince bestowed much attention. In the afternoon the head men of a Fingoe village, accompanied by two "witch doctors," were introduced. On the 7th, Sir George Grey laid the foundation stone of a Freemasons' Lodge. A slight indisposition prevented the presence of the Prince, who was honoured by a farewell salute from the Volunteer Artillery as he passed Rawson Bridge. At Uitenhage five bucks and two hares were shot and sent on board the frigate. On the 11th his Royal Highness arrived at Fort Beaufort, where his reception was of the most loyal and hearty character. He attended Divine service on Sunday, the 12th, and in the afternoon left for Heald Town, where an address was presented by a Fingoe, followed by "God save the Queen." The Prince was to leave Alice on the 13th for the Orange River. The members of the Free States Volksraad had given Pretorius a *carte blanche* to spend as much as might be necessary in celebrating the Prince's visit over the Orange River and to the great King Moshesh. The Prince was expected to return to Cape Town about the 6th of September, to lay the foundation-stones of the Breakwater and the new Sailors' Home, and inaugurate the new library, after which there was to be a special review of the Volunteer forces. The Euryalus would probably sail for England in the second week of September.

PRINCE NAPOLEON, accompanied by his suite and Mr. Hall Maxwell, of Dargavel, arrived at Paisley on Tuesday from Greenock, and visited the extensive thread factories of Messrs. Coats & Co. at Ferguslie. The Prince afterwards proceeded by railway to Ayr, where he visited several farms, accompanied by Mr. Hall Maxwell and Mr. Ralston, of Lagg. His Imperial Highness then embarked in his yacht for Ireland, and arrived about noon on Wednesday in Kingstown harbour, where he was received with the usual salutes.

COURT MOURNING.—Orders have been issued from the Lord Chamberlain's Office for the Court to go into mourning for 10 days from Thursday the 27th inst., for the late Grand Duke of Mecklenburgh Strelitz. Orders have also been issued for the Court to go into mourning to-morrow the 30th inst. for the Dowager Duchess of Saxe Coburg, step mother of the Prince Consort.

THE ARMY.—The colonelcy of the 88th regiment, vacant by the death of General Broke, has been conferred on Major-General Sir George Buller, K.C.B.

INCOME TAX.—The *Times* states that it is the intention of Mr. Gladstone to collect the Income Tax quarterly, instead of half-yearly, commencing the operation with the 20th inst.

THE VOLUNTEER MOVEMENT.—Her Majesty's Government being anxious to encourage the formation of the Mounted Rifle Volunteer Corps, the Secretary of State for War has addressed a circular to the Lords-Lieutenant of the different counties stating that he will be prepared to sanction on certain terms the appointment of a sergeant-instructor to every corps of Mounted Rifle Volunteers which is not entitled to the service of an adjutant, and to allow a second sergeant instructor in cases where the corps consists of more than 100 enrolled members, and a third where the numbers exceed 200. —A meeting was held a few days since at the Thatched House Tavern, at which it was resolved to form a Light Horse Volunteer Corps for London and its vicinity. It was stated that the Lord-Lieutenant had expressed himself favourable to the formation of the corps, and about 100 gentlemen had agreed to join it, among whom were the Earl of Bessborough, Lord Schomberg Kerr, the Count de Gendre, Lord Seymour, and Lord Powerscourt, the latter of whom had consented to take the command.—On Friday evening the 26th Middlesex (Her Majesty's Customs' Corps), assembled on the grounds of Mr. R. Moreland, at Stoke Newington, and presented the Rev. T. Jackson, rector of the parish, with his commission as their hon. chaplain; after which a meeting of the inhabitants was held at the same place, when it was resolved to form a Volunteer corps for Stoke Newington.—The 1st Tower Hamlets Regiment had a fête champêtre on Tuesday in Mr. Moreland's grounds at Stoke Newington.—The West Middlesex is about to be increased by two new companies, one called the "Primrose Hill Company," which already numbers upwards of 60 members; the other, composed of the assistants of Messrs. Marshall & Snellgrove, Oxford Street, who have presented 100*l.* towards the expenses of their equipment.—Several of the different metropolitan corps—the Royal Irish, Civil Service, Queen's Own, Middlesex Artillery, and others have resumed their drill in Westminster Hall, which has been placed at their service during the winter months, until the reassembling of Parliament.—The Workmen's Brigade by the permission of the Lord Mayor assembled in the Guildhall on Saturday evening and were inspected by General Beatson under whose command it is to be placed. The Brigade now numbers nearly 600 enrolled, and will shortly be increased to 1000 by companies which have signified their intention to join.—The 3rd battalion of the Kent Corps including the 1st (Maidstone), 9th (Chatham), 19th (Rochester), 20th (Northfleet), 22d (Sheerness), and 31st (Leeds Castle), were reviewed last week on Chatham lines by Viscount Sydney, Lord Lieutenant of the county.—The 4th Battalion of Kent comprising the companies formed at Canterbury, Ashford, Sittingbourne, Ash, and Wingham, were inspected last week at Canterbury, by the Lord-Lieutenant.—The 1st battalion of Kent, comprising the companies formed at Woolwich, Charlton, Lee, Greenwich, and Deptford, Deptford Dockyard, Blackheath, Eltham, and Lewisham, were inspected on Saturday in the park of Sir T. M. Wilson, Bart, at Old Charlton, by Colonel M'Murdo, inspector general of volunteers. —The Gravesend Artillery Corps visited Sheerness last week, and practised at heavy gun drill, being the first time they have had the opportunity of firing with shot and shell. The target was stationed at a range of 1500 yards from the centre garrison battery, and during the practice the flagstaff was taken from the target three times.—The Ramsgate Corps were inspected on Friday by Colonel Luard.—The 3d Essex (Brentwood) had a shooting match on Friday at Weald Park, the seat of Mr. C. T. Tower, who though in his 86th year, and the commander of a brigade in the Volunteers of 1803, is now a private in this corps. The firing was 15 rounds at 200, 300, and 400 yards, and the five best shots were Private Morris, 24 points; Corporal Bush, 23; Sergeant Hill, 19; J. Hill (Cadet Corps), 17; Private Dawson, 16. The corps were afterwards entertained at dinner by Mr. Tower.—A meeting was held at Walthamstow a few days since, at which it was resolved to form a Rifle Corps for that locality, and 100*l.* was subscribed in the room to defray the expenses. —At a meeting in Hertford it was resolved to form a second company from the working classes only, with a subscription of 1*l.* per annum, payable by instalments; uniform, ammunition, and all other necessaries, to be found out of the funds of the corps. — The 2d Hants Artillery commenced practice with solid shot, from two 32-pounders last week on Southsea Common. Forty rounds were fired at a range of 1280 yards, and the target was struck several times.—The Winchester Corps had a shooting match last week on Teg Down. The firing was 25 rounds at ranges of 300, 400, and 600 yards. The prizes were won by Ensign Godwin, Sergeant Morris, Corporals White and Parmiter, Privates Pigott, Fielder, Munday, Bunce, Fernie, and Cross.—On Saturday the 9th Suffolk, numbering 100 men, were entertained at dinner by Richard Garrett, Esq., at his seat, Carlton Hall. The corps consists mainly of workmen in the employment of Garrett and Sons, at Leiston Works, who have contributed about 200*l.* to its funds.—The Burton-on-Trent companies of the Staffordshire corps were inspected last week by Lord Hatherton, Lord-Lieutenant of the county, on the cricket ground at Burton, in the presence of several thousand persons.—On Friday the 21st Company Staffordshire (Rugely Rangers), with their band, marched from the depôt to Hawkesyard Park, the seat of their captain, Mr. J. Spode, where they were inspected by Colonel Newdigate. After the inspection the whole corps was entertained at a supper provided for them by Captain Spode.—The Secretary of State for War has authorised the addition to the Bradford Corps of the Eccleshill sub-division, which has been constituted a company. The Bradford regiment now comprises six companies.—On Friday the 4th West York were presented with a silver bugle, the gift of Mrs. Akroyd, the wife of the major of the regiment, and a set of colours subscribed for by the ladies of Halifax. After the presentation about 400 ladies and gentlemen were entertained at a cold collation, provided by Major Akroyd and the officers of the regiment. The invitations included all the members of the corps, the officers of the various corps in the West Riding, and about 100 of the leading inhabitants of Halifax and the neighbourhood.—On Saturday the four companies of the 8th Lancashire met at Chesham, the seat of Mr. O. O. Walker, when the 1st and 2d companies were presented with silver bugles, subscribed for by the ladies of Bury.—The 11th Lancashire marched on Saturday afternoon from their depôt to the grounds of Mr. John Cooper, "The Oaks." Fenwortham, when they were presented with a silver bugle subscribed for by the ladies of Preston.—The Volunteer corps of Cheshire had a shooting match last week on Leasowe Common, near Birkenhead. There were 61 competitors, from 23 corps, at ranges of 300, 500, and 600 yards for the first day, and of 700, 750, and 800 yards on the second day. The winners were Messrs. Watson, Frost, Gregory, Worthington, Horner, Farrer, Cowap, Brierley, Wakefield, Coulbourne, Bell, Buxton, Rollett, and Collinge.—A return shooting match took place between the 7th Cumberland (Workington) and the 3d Cumberland Skiddaw Greys on Friday, and ended in the victory of the Skiddaw Greys, who, in the first match in the beginning of the present month, were beaten by two points by the Workington. In the evening a silver bugle, subscribed for by the ladies of Workington, was presented to the 7th Cumberland, in the new market hall.—The Devizes, Melksham, Chippenham, and Calne Companies of the Wiltshire corps were reviewed on Monday at Bowood, and were afterwards entertained at luncheon by the Marquis of Lansdowne. The day was kept as a general holiday in all the towns in the neighbourhood, and the shops were closed in order that the tradesmen and their assistants might attend.

Foreign.

FRANCE.—The Emperor and Empress of the French landed at Port Vendres on Friday from Algiers, a storm of wind and rain having prevented the Imperial yacht from crossing the gulf of Lyons. It was only after her landing that her Majesty was informed of the death of her sister, the Duchess of Alba. Their Majesties immediately proceeded to Perpignan, and arrived at Saint Cloud on Saturday morning. On Sunday the Court went into mourning for 30 days for the Duchess of Alba. During the Emperor's stay at Algiers, his Majesty delivered the following speech at a banquet given to him by the city of Algiers:—

"My first thought, on putting my foot on African soil, was directed towards the army, whose courage and perseverence accomplished the conquest of this vast territory. The God of armies only inflicts on nations the scourge of war as a punishment or as a redemption. In our hands the conquest can only be the latter, and our first duty is to occupy ourselves with the welfare of three millions of Arabs, whom the fate of arms has brought under our rule. Providence has called on us to spread over this land the blessings of civilisation. What, then, is civilisation? It is to reckon material comfort for something, the life of man for much, and his moral improvement as the greatest blessing of all. To raise, therefore, the Arabs to the dignity of free men; to spread instruction among them, while respecting at the same time their religion; to improve their existence by bringing out from the earth all the treasures which Providence has buried therein, and which a bad Government would allow to remain fruitless—such is our mission, and we will not fail in the performance of it. As to those bold colonists who have come to implant in Algeria the flag of France, and with it all the arts of a civilised nation, need I say that the protection of the mother country will never fail them? The institutions which I have given make them already find here their native country, with all its blessings; and by presevering in that path we may hope that their example will be followed, and that other populations will come and fix themselves on this soil, for ever French. The peace of Europe will allow France to show herself more generous towards her colonies, and if I have crossed the sea to remain for a few moments among you, it is in order to leave here, as traces of my visit, confidence in the future and entire faith in the destinies of France, whose efforts for the welfare of humanity are always blessed by Providence. I give as a toast 'The prosperity of Africa.'"

A Council of Ministers was held on Saturday at the Tuileries after the arrival of the Emperor, and similar Councils were held on Monday and Tuesday. They sat a long time, the Emperor presiding on each occasion. Baron de Boude, Secretary of the French Embassy at St. Petersburg, arrived in Paris a few days ago with despatches stating that Prince Gortschakoff had had a long conference with the French Ambassador, in reference to the general state of things in Europe and the affairs of Italy. The Prince, after having expressed the sincere desire of Russia to maintain friendly relations with France, said that the alliance between France and Sardinia encouraged the propagation of doctrines constituting a permanent danger to the political equilibrium and the stability of thrones. Russia, he said, would entirely fail in her mission were she not, in common with other States threatened, to raise her voice in defence of social order and monarchical interests. The Prince added that this was the object of the approaching interview at Warsaw. Baron de Boude was to leave Paris yesterday for St. Petersburg with the reply of the French Government to the communication of the Russian Minister. M. de Cadore, secretary of the French Embassy at Rome, has also arrived in Paris, bringing an ultimatum from the Pope, to the effect that if the French Government does not interfere against Piedmont, his Holiness will at once quit Rome. The *Constitutionnel* of Tuesday contained an article signed by M. Boniface, which is considered an indirect reply to this manifestation on the part of the Pope. It says:—

"A very near future will apprise us whether the influences which urge the Pope to quit Rome will be victorious. It is unreasonable to ask that France should declare war against Sardinia in order to protect the whole of the Papal territory. France will not extend her intervention beyond Rome. Were she to act otherwise she would become the oppressor of Italy, and would render herself suspected to Europe and odious to Italy. We hope that the Pope may resist the counsels which are given to him through hatred to France."

The *Moniteur* announces that the Chevalier Nigra, the Sardinian Ambassador, had an audience of the Emperor on Wednesday to take leave. Signor Gropello, First Secretary, remains to conduct the business of the Embassy. The Marquis de Moustier and the Prince de la Tour d'Auvergne, the Ambassadors of France at Vienna and Berlin, who are now at Paris on leave of absence, will not return to their posts until after the interview at Warsaw. The naval authorities at Toulon have received orders to prepare a considerable number of transport vessels for the conveyance of troops. It is asserted that three steamers are expected at Malta with reinforcements from England. The *Patrie* says:—"We believe we can affirm the complete falsity of the report that the Emperor had expressed a wish to be invited to Warsaw." —M. Kossuth has arrived in Paris from his visit to Switzerland and Italy, and the *Espero* publishes the summary of a letter which he is said to have addressed to Garibaldi. He entreats the Dictator to keep himself in most intimate connection with King Victor Emmanuel and his Government, on whom depend the enfranchisement and greatness of Italy. He urges him to give up any design whatever against Rome, so as not to bring on himself the enmity of France, the sole defender of Italy and the hope of oppressed nationalities. Lastly, he warns him to abstain from instigating or undertaking any revolutionary enterprise in Hungary, the juncture not being suitable for a rising, and the country not being at all prepared for it.

SPAIN.—Don Juan de Bourbon has addressed, through the English papers, a letter to the Spanish nation, deploring the condition of Spain, and stating that if called to the throne, he is ready to break openly from the antiquated ideas and traditions of his family, by guaranteeing individual liberty; the freedom of the press; true equality before the law, and equal privileges to all parties; entire freedom in elections; the total abolition of such duties as are most grievous to the public; the abolition of the monopoly of tobacco and salt; and the most ample system of amortization, not excepting the property which is called the Royal Patrimony. And if all these be not sufficient to satisfy the wishes of the people, he is ready to submit his claim to universal suffrage, which now decides the fate of monarchs.

AUSTRIA.—In the sitting of the Reichsrath on Friday the Committee presented its report of the state of the finances, which it declared to be most unfavourable. The Committee also pronounced itself against the proposed conversion of interests. The Minister of Finance stated that the account given by the Committee of the state of the finances was exaggerated, though he acknowledged the necessity for a change in the system. M. Maager said that the question of currency could only be solved by the creation of proper institutions. Count Rechberg, the Minister for Foreign Affairs, declared that the Ministry was not authorised to follow the discussion on that ground. Count Clam-Martinitz, the reporter of the Committee, denied that the Committee had taken too gloomy a view of matters, and claimed a change of the system which had been followed up to the present time. The report of the Committee was, in the end, unanimously adopted. In Saturday's sitting Count Clam-Martinitz declared that the laws concerning the public press were not satisfactory, and proposed the insertion of a demand for their revisal in the reports of the Committee. The majority of the Committee agreed to this proposition. The reports of the majority and the minority of the Committee were then read by the reporters. Count Szechsen declared that the cause of all the evils in Austria was to be found in the system of Government. It was now absolutely necessary to satisfy the wants of each province, based as they were upon political and historical right. The question of Hungary especially demanded a solution. It was the duty of the Council to discover in what way the individuality of the provinces could be re-established without disturbing the union of the different parts of the empire. The application of this project to each single province should be arranged between the Sovereign and the provincial Diets. M. Heyn then justified the view taken by the minority of the com-

mittee, and said that if the majority would state their intentions more distinctly an understanding with the minority might then be possible. He expressed a hope that the majority would adopt the concluding words of the minority's report, which proposes as the programme for the political re-organisation of Austria the unity of the empire, and, as much as possible, the autonomy of each province. In the sitting of Monday Cardinal Rauscher agreed that the greatest possible self-government should be granted to the provinces, but at the same time especially insisted on the necessity for maintaining the unity of the empire. Prince Auersperg recommended that equal constitutional rights should be granted to the provinces, and that the basis of the liberties acquired in 1848 should be recognized. The Prince further recommended a greater extension of the ancient institutions of provincial diets by the admission of representatives from the citizens and the rural population. Count Mailath condemned the privileges of certain classes of society. He also spoke in favour of the unity of the empire according to the tenour of the Pragmatic Sanction. Count Apponyi stated that the re-establishment of the former constitutional privileges of Hungary could be effected without any danger to the State. M. Maager preferred sacrificing the historical rights of his compatriots to the establishment of the representative system throughout the whole empire. In the sitting of Tuesday M. Lichtenfels spoke in defence of the proposition of the minority. He principally opposed the re-establishment of the former constitution of Hungary, by which he said the unity of the Empire would be endangered. He also stated that the adoption of the proposition of the majority would lower Austria to the rank of a second-rate Power. Count Hartig was of opinion that both propositions were not sufficiently explicit. He agreed with neither, and therefore read a programme drawn up in 12 articles as an intermediate proposition. In the sitting of Wednesday M. Strasse expressed his opinion that a modern constitution, framed upon M. Maager's proposition, would be impossible for Austria. He did not observe in the report of the Committee any indication respecting the future position of Austria towards Germany, and suggested that an additional clause should be inserted in the report expressing a wish for the greatest possible harmony of relations with Germany. In the sitting of Thursday, Count Hartig withdrew his mediatory proposition. The assembly then proceeded to vote on the principles of constitutional reform proposed by the majority of the committee, which were agreed to by 34 to 16 votes. The Archduke President then stated that the Emperor would examine the propositions without delay, and give his decision as soon as possible. The session of the Council of the Empire was then concluded.

RUSSIA.—In consequence of the accouchement of the Empress not having yet taken place, the interview at Warsaw will not be held before the 20th of October The Emperor of Austria and the Prince Regent of Prussia will arrive at the same time in Warsaw, and will stay three days. According to reliable information Austria intends to propose at the interview, that the different Powers should not recognise any settlement of the Italian question as binding without her consent.

ITALY.—The dissensions between Count Cavour and Garibaldi have reached a point at which an explosion of some kind appears inevitable. Garibaldi himself has made them public in a letter to Signor Brusco, published in the official journal of Naples, as well as by a manifesto issued to the people of Palermo, and by a speech from the balcony of the Royal Palace in that city. In his letter to Signor Brusco, he says:—"Although I am quite disposed to sacrifice all personal feeling on the altar of the country, I could never be reconciled with men who have sold an Italian province." In his manifesto to the people of Palermo, he says:—

"Corrupt men, who want to lead you astray, have spoken to you of annexation, as if any one was more fervent than myself for the regeneration of Italy; but their object was to serve personal interests, and you replied like a people who felt its own dignity, and placed confidence in the sacred and unviolated programme which I proclaimed, 'Italy and Victor Emmanuel.' At Rome, people of Palermo, we will proclaim the kingdom of Italy, and there only will be sanctified the great family bond between free men and those who are still slaves in the same country. At Palermo annexation was demanded that I might not pass the Straits; at Naples it is demanded that I may not cross the Vulturnus. But as long as there are chains to be broken in Italy, I will follow my course or bury my bones there."

In his speech from the balcony of the Royal Palace he said:—

"Those who wished to urge you to a speedy annexation were putting you to the wrong path. If I had followed their advice I should not have crossed the Straits and restored seven millions of men to Italy. They would have prostrated us at the feet of diplomacy, which would have bound us hand and foot. There would have been brothers beyond the Vulturnus with chains on their ankles. I thank you in the name of Italy for your resistance. I love Italy and Victor Emmanuel; no one is a greater friend than myself of Victor Emmanuel, the representative of Italy. You despised their counsels, and I thank you for it, you invicible people of the barricades."

It is now reported that Garibaldi has declared that he will publish not only the letter he wrote to the King, and the existence of which has been officially denied by the Piedmontese *Gazette*, but also correspondence and documents relating to the share which the Sardinian Government had in the invasion of Sicily, the money it supplied, and other matters which it is supposed M. Cavour would much rather not see brought to light. These proceedings, coupled with the fact that Garibaldi has recently conferred some of the principal appointments both in Naples and Sicily on leading followers of Mazzini, have created a painful impression that he has completely thrown himself into the arms of the Republican party. His letter to Signor Brusco, which was a suggestion of this party, gave such offence to the moderate Liberals, and was moreover so unconstitutional a proceeding, having been written without the knowledge of the Ministers, that the entire Cabinet tendered their resignations, and were only induced to withdraw them at the intercession of the moderate party. In doing so however they insisted on publishing the official document by which they had been originally appointed, in order to show that they were nominated Ministers in the name of Victor Emmanuel, and not in that of Garibaldi. The impression that Garibaldi is now in the hands of the Republicans has been strengthened by the appointment of M. Alexandre Dumas as Director of the Neapolitan Museums, and by the arrival in Naples of Mazzini, Victor Hugo, and Ledru Rollin. Notwithstanding these demonstrations, Garibaldi has published a decree promulgating the Sardinian Constitution for Naples and Sicily, but without fixing a date for its execution. It is now reported that Victor Emmanuel proposes to visit Naples, to counterbalance, by his presence, the evil effects of Garibaldi's proceedings, and that the people of Sicily and Naples will be called upon to vote the question of annexation by royal authority. It is also reported that the King is about to send 5000 men to take possession of Sicily, and that the corps, called "the King's Brigade," has already left Genoa for Naples, where it is to occupy the forts now held by the National Guard. The miracle of San Gennaro which the reactionary party had predicted would not take place while the city was in the occupation of Garibaldi, was performed on the 19th inst. in accordance, it is said, with a hint from the Dictator, with unprecedented alacrity, the blood having boiled up in three minutes—a process which usually occupies more than as many hours. An engagement took place between the Neapolitans and the Garibaldians near Capua on the 19th and 21st inst., in which the latter sustained a check. Bixio's brigade attacked the Royal troops, and after a smart cannonade was driven back by a brilliant charge of cavalry. The Garibaldians returned to their positious, with a loss of 400 killed and wounded, leaving 300 prisoners in the hands of the Royal army. Nevertheless, the positions were maintained, and the Dictator is collecting all his forces to bombard Capua and take a signal revenge. It is asserted that the King of Naples. who is still at Gaeta, is at the head of 50,000 men, and will show fight. General Bosco, who had been accused of following Nunziante's example, is with the King, and has said that all the Piedmontese will ever get of him will be his corpse on the battle-field. Cardinal Sforza has been expelled from Naples by order of the Dictator's Government, and the Archbishop of Sorrento has been sent to the prison of the Concordia. The King of Naples has issued decrees, abolishing the National Guard, and declaring his whole navy guilty of high treason, with the exception of one frigate which followed him to Gaeta. It is stated that the King has had a General shot at Capua, but there is a doubt as to the name of the victim. It is supposed that it was an officer who had passed over to the Garibaldians, and who had been captured in the combats near Capua. The Austrian steamers in the Bay of Naples have been ordered to return to Trieste, the offer made by the King of Naples to Garibaldi to join him in an expedition against Venetia having become known to the Vienna Cabinet, and obliged them to withdraw their offer of hospitality made to the King some weeks back.—From the Marches we learn that the cannonade against the fortress of Ancona and its approaches commenced at midnight on Sunday. The fleet opened fire at a later hour. On Tuesday the Brigade of Bologna and the battalions of the 23d and 25th Regiments of Bersaglieri took by assault two of the forts, namely, Forts Pelago and Pulito, and on Wednesday after a short combat the troops of the 4th Corps d'Armée occupied the suburb of the Porta Pia. The Papal army, with four pieces of cannon, was defending the gates of the town of Ancona. The Sardinian frigate Governolo had been sent to Trieste with 1000 Austrian prisoners of war, lately mercenaries in the service of the Pope. After some hours' fighting the garrison of the fortress of Santo Leo had surrendered at discretion, and the Sardinian troops occupied the fortress on Monday. Several officers and soldiers of the Sardinian army distinguished themselves in the attack. The flying columns commanded by Gen. Brignone have made prisoners 500 other officers and soldiers of the Papal army. On Friday General Masi, with the Chasseurs of the Tiber entered Viterbo, the inhabitants of which had revolted and driven away the Papal garrison. General Masi had previously taken Montefiascone and the fortress of Civita Castellana, where he made 60 of the garrison prisoners. In the combat at Montefiascone 70 Papal soldiers were killed and wounded; 8 Irishmen were among the dead. The advanced guard of General Fanti's *corps d'armée* is at Bracciano, between Viterbo and Rome. These troops were to be encamped before the walls of Rome. Captain Ducci has arrived at Toscanella and was to occupy Corneto on Tuesday, the French having evacuated that town, and taken the road to Civita Vecchia. Some free corps have arrived within 34 miles of Rome. Frascati and Albano have been occupied by the French. The Papal troops have reoccupied Pontecorvo without bloodshed.—The official journal of Rome publishes a note of Cardinal Antonelli claiming the assistance of the Catholic Powers against Sardinia. The Pope is said to have assured General de Goyon that he has full confidence in his protection, and that he will not quit the Vatican as long as it is guarded by French soldiers.—The *Official Gazette* of Venice publishes a proclamation of the Lieut.-General, increasing the military patrols, and limiting the use of arms for the suppression of revolutionary attempts. The Marquis Pallavicini has left Turin for Naples. He had been intrusted by Garibaldi with another letter to the King, stating on what conditions an agreement may be come to. The King received the Marquis, but simply observed that he should make his reply known.

GREECE.—Letters from Athens state that a demonstration on the part of the students had taken place before the King's Palace, amid shouts of "Down with King Otho!" "Down with Austria!" Some cries of "Napoleon for ever!" were also heard.

TURKEY.—The Sultan has ordered the Grand Vizier to continue his journey to the provinces, in order to calm the agitation which prevails in Bosnia and the Herzegovina. Great misery and mortality prevail at Constantinople. The public Treasury has deferred payment of the interest due on the public securities. An immediate rise of 14 per cent. in the exchange on London took place.

SYRIA.—The *Journal de Constantinople* states that Syria is now tranquil, but as the Greek Consul at Beyrout has asserted that massacres were threatened at St. Jean d'Acre, two war vessels had been despatched thither, the commanders of which had declared that they would open fire on the town on the slightest attempt being made to create disturbances.

EGYPT.—His Highness Il-Hami Pacha, son of the late Abbas Pacha, Viceroy of Egypt, and son in law of the Sultan, died on the 16th inst. at Tchiamlitgia, near Constantinople, where he had lately been residing for the benefit of his health. He was only 26 years of age. During his youth he made several long visits to London, in the course of which he acquired a perfect command of our language and a lasting partiality for our national character, habits, and institutions. He also passed some time in Paris, and mastered the French language too, but much less perfectly than English. In June 1858 he married Muniré Sultana, youngest daughter of the Sultan, and has since then occupied the post of a Minister without portfolio. The body was embalmed, and sent on Monday by a special steamer to Alexandria for interment in the family mausoleum at Cairo.

SERVIA.—The *Serbske Novine* announces that Prince Milosch is not dead, as the Vienna papers had reported, but, on the contrary, is recovering, and his complete restoration to health is anticipated. Prince Michael Obrénovitch has issued a proclamation announcing that he assumes the Government of Servia as hereditary Prince. He has been recognised as Prince of Servia without any delay, and in that quality has received the foreign Consuls. Order has not been disturbed.

INDIA AND CHINA.—The overland mail has arrived with news from Calcutta to the 22d August, and from Canton to the 8th August. The following are the details:—

Calcutta.—The Maharajah of Travancore died on August 18th.
China.—The rebels have taken Nantsien city, in the silk district, and have possession of the passes. An American named Werd undertook to recapture Singpoo. He failed in the attempt and was wounded. The Allies left for the Peiho on the 26th of July. They were to take the forts before treating with the Chinese. The French were landing simultaneously at Pehtang. A severe engagement had taken place with pirates. 200 were slain, and two European leaders captured.

UNITED STATES.—The Republicans had carried the Maine election. The Washington correspondent of the *New York Times* states that the United States Government had given its assent and co-operation to the intended mediation of England, Prussia, France, and Spain in the affairs of Mexico, and that Mr. M'Lean had received instructions to that effect.—Prof. Lowe had again failed in inflating his balloon in which he intends to make a voyage to Europe at the first favourable opportunity.—The steamer Lady Elgin was run into by a schooner and sunk on Lake Michigan on the 8th inst., when 380 persons were lost and 80 saved. It appears that she left Chicago on the same evening on an excursion to the most prominent points in Lake Superior. At about 2 o'clock in the morning, in a storm of wind and rain, she was run into by the schooner Augusta, which was flying along before the wind at the rate of 12 knots an hour. The steamer was struck about amidships, and in less than half an hour filled and sank. Before the collision there were music, dancing, and general jollity in the grand saloon, and at first nobody supposed that anything serious had occurred. The few persons saved belonged mostly to the ship, and not more than half a dozen passengers reached the shore alive. Among those lost were Mr. Herbert Ingram, M.P. for Boston, and proprietor of the *Illustrated London News*, and his son, who were on a tour through the United States and the Canadas; General Best, of Milwaukee, Mr. F. A. Lumsden, one of the editors and proprietors of the New Orleans *Picayune*, the pioneer of journalism in the south-west, and all his family. It appears that the Lady Elgin was totally unprovided

with boats or life preservers, so that no organised efforts could be made to save the lives of the passengers though Captain Wilson the commander did everything in his power to save them, and was drowned himself within 100 feet of the shore. The journals are unanimous in calling upon the Government to cause a strict inspection of all steamboats engaged in the carriage of passengers to be made without delay. Up to the morning of the 10th only 27 bodies had been recovered. All accounts represent the city of Milwaukee as shrouded in mourning, and business seemed to be entirely suspended. The owner of the Lady Elgin has libelled the schooner Augusta, and the vessel has been taken in charge by the United States Marshal. This will cause a full investigation of the affair.

CENTRAL AMERICA.—The latest advices from Honduras state that in compliance with the orders of the Commander of her Majesty's ship Icarus, which had arrived for the protection of the citizens and their property, Walker evacuated Truxillo on the 1st inst. and proceeded down the coast, harassed on the way by the Hondurians. Walker is said to have lost a large proportion of his men, and to have been himself severely wounded in the face.

MEXICO.—The defeat of Miramon on the 10th of August at Lagos appears to have been complete. The forces engaged, however, were much disproportioned, as he had but 2000 men, while Doblado, the Liberal general, had from 10,000 to 18,000. Miramon, with his cavalry, fled in the direction of the city of Mexico, and all his artillery fell into the hands of the Liberals, who were much elated at their success. Miramon, on his return to the capital, resigned the Presidency, but was re-elected by the Council of State. The threatened war between Spain and Mexico is represented to be very unpopular at Matamoras. Preparations were making at Vera Cruz to resist the threatened attack of the Spaniards, which is expected next month.

City Intelligence.

THE CORN TRADE.—Messrs. Archer and Son, of Upper Thames Street, corn-factors, have suspended payment in consequence, it is said, of large losses on contracts. Their liabilities are believed to be about 40,000*l*. The suspension of Mr. Thomas Nokes, of West Thurrock Mills, near Grays, Essex, with liabilities of about 20,000*l*., is also announced.

THE DISTILLERY TRADE.—The failure of the old established firm of Messrs. Smith and Co., of Whitechapel distillery, is announced. It is understood that their liabilities are large, but that their assets are considerable, and a great portion of the debts secured.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93 to ⅜ for Money, and 93⅜ to ½ for the 11th of October; India Stock, 218; Ditto Five per Cent. Stock, 1859, 103⅜; Ditto Four per Cent. Debentures, 1858, 96⅜ to ⅝; Ditto Bonds, 2*s*. dis.; Five per Cent. Enfaced Rupee Paper, 96; Ditto Five and a Half per Cents., 102; Exchequer Bills, 1*s*. pm., par., 2*s*. prem.—FOREIGN: Brazilian Four and a Half per Cents., 1860, 87¼ to 87; Mexican Three per Cents., for Acct., 22⅛ to 22; New Granada Deferred, 6¼; Portuguese Three per Cents., 1853, for Acct.. 43⅞; Spanish Passive, 22¼; Turkish Six per Cents., 1854, for Acct., 73¾ to ⅞; Ditto for 1858, for Acct., 55¾ to 56; Ditto Guaranteed Four per Cents., 101¼ to ½; Venezuela Three per Cents., for Acct., 23½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,957,085	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,482,015
		Silver Bullion	—
	£29,957,085		£29,957,085

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,663,511
Rest	3,790,286	Other Securities	19,559,349
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,092,681	Notes	9,133,595
Other Deposits..	12,973,222	Gold and Silver Coin ..	773,866
Seven day and other bills	722,132		
	£39,130,321		£39,130,321

27th day of Sept., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. ANSELL, Seven Sister's Road, Upper Holloway, Contractor—E. BEARS, Petty Curry, Cambridgeshire, Butcher—G. CARESWELL, Shrewsbury, Innkeeper—J. E. COX, High Street, Lambeth, Dealer in Stoneware Pipes and Cement—G. CRAVEN, Liverpool Merchant and Commission Agent—D. JONES, Wrexham, Denbigh, Coach Builder—J. JULIAN, Noble Street, Falcon Square, Wholesale Milliner and Fancy Manufacturer—G. T. MARNS, Arbour Place, Fairfields, Stepney, Rope Maker—J. POVEY, Warwick, Innkeeper—E. R. RAMAGE, Bond Court, Walbrook, Upper Thames Street, and Gloucester Cottage, Peckham, Wine Cooper and Bottle Beer Merchant—S. ROBSON, York, Hotel Keeper and Wine and Spirit Merchant—T. RUE, East Stonehouse, Devonshire, Draper—O. A. SEAGOOD and H. W. SMITH, Wellington Road, Holloway, Middlesex, Builders—J. THORNHILL, Sheffield, Awl Blade Manufacturer—P. WALTERS, Wolverhampton, Staffordshire, Auctioneer—T. WHITEHEAD, Duke Street, Smithfield, Tailor—W. WILSON, Thirsk and Northallerton, Yorkshire, Currier and Leather Cutter J. WITHERSPOON, Cheltenham, Draper.

SCOTCH SEQUESTRATIONS—J. BROWN, Hamilton, Bookseller—S. MACKINTOSH of Garden, late of Dingwall—D. MOODIE, Glasgow, Joiner—R. SWAN, Shawland, Builder—J. WARD, Port Glasgow, Grocer.

FRIDAY—BANKRUPTS—R. F. ADAMS, Stowmarket, Sussex Pipe Maker—J. ASHDOWN, Portsford Terrace, Middlesex, Draper—W. ELLIOTT, Chelsea, Builder—W. FOXCROFT and G. WELLOCK, the younger, Heckmondwike, Yorkshire, Cotton Spinners—F. JOHNSTONE, Eastbourne Terrace, Paddington, Boarding House Keeper—C. F. LEE, Kingsponds, Gloucestershire, Baker—J. LANG, Bridlington Quay, East Riding of Yorkshire, Victualler—E. LINLOP, Knighton, Staffordshire, Farmer—M. L. MUELER, Aldermanbury Postern, City, Watch Manufacturer—J. PHILIPSON, Newcastle-upon-Tyne, Milliner—I. SELKE, Tower Hill, Provision Merchant—F. E. SHIPLEY, jun., Giltbrook, Nottingham, Brickmaker—W. SMITH and R. W. SINCLAIR, Pancras Lane, City, Linen Factors—G. TAYLOR, West Bromwich, Timber Merchant—C. TUCK, Ely, Cambridgeshire, Butcher—J. WILLATS, Finsbury Pavement, Upholsterer—J. YARLEY, Vauxhall Bridge Road, Cap Proprietor.

Metropolis and its Vicinity.

THE NEW SHERIFFS.—Alderman Abbiss and Mr. Andrew Lusk, Common Councilmen for the ward of Aldgate, were sworn in yesterday at Guildhall with the usual ceremonies, as Sheriffs of London and Middlesex for the ensuing year.

THE NEW LAW COURTS.—A few days since, in consequence of a Government order, Mr. Abraham the architect and a staff of surveyors made a survey of the houses in Holywell Street and Wych Street, it having been determined to seek powers from Parliament in the ensuing session to concentrate the law courts and offices on the ground at present occupied by those thoroughfares. It is proposed to clear away the block of houses on the south side of Holywell Street, with the buildings in the rear facing the Strand, and then to remove the north side of Holywell Street and Wych Street, including a portion of Lyon's Inn, and several celebrated structures. The several inhabitants were questioned as to the length of their leases and value of their business, which consists principally of the book trade. In a few weeks the Parliamentary survey will be complete, and referred to Government, but in the meantime every inhabitant on the site required will be served with the proper notice of the proposed plans.

ST. PHILIP'S, STEPNEY.—This church was re-opened on Sunday under the curacy of the Rev. J. H. Hill. For several months past the grounds which surround the church have been converted into a play-ground by the children of the district, who have made sad havoc on the windows of the edifice. The windows of the schools where Miss Yorath was taken by Mr. Bonwell for her confinement, have been removed bodily by thieves. A meeting of the parishioners was held at the school-room on Wednesday, when it was resolved to raise a subscription for repairing the church and schools.

THE SYRIAN RELIEF FUND.—A Central Ladies' Committee has been formed under the presidency of Lady Stratford de Redcliffe, and of which Lady Montefiore, the Countess of Shaftesbury, Miss Florence Nightingale, and other influential ladies are members. The object of this committee is the collection of new and cast-off garments, of remnants, soiled or damaged goods, and materials of every description for the clothing of the destitute women and children who have thronged to the number of from 20,000 to 30,000 into Beyrout, helpless and homeless, and in like proportion into other towns and ports of Syria. Applications have been made by the committee to the leading manufacturers and warehousemen throughout the kingdom for donations of such remnants and damaged goods as they can contribute. A benevolent English lady, who has resided in Syria, is going out to Beyrout, under the auspices of the Committee, to co-operate with the Beyrout Committee in ministering to the necessities of the sufferers, especially of the women and children and the sick. The London Committee have authorised her Majesty's Consul-General at Beyrout to employ, at their expense, the able-bodied refugees there in the thorough cleansing of the town, with a view to avert the epidemic disease which the committee there apprehend as the inevitable consequence of the multitude of the sufferers, who are exposed to all the dangers occasioned by utter destitution in respect of food, clothing, and sanitary regulation.

THE STEPNEY MURDER.—The adjourned examination of Mullins and Emms was resumed on Wednesday, at the Thames Police Court. Emms having surrendered on his bail, the solicitor for the prosecution stated that there was no ground for detaining him any longer in custody. The magistrate, therefore, discharged him, and said that there was now no imputation upon him as to any implication in the murder of Mrs. Elmsley, but he had better remain in court in case his evidence should be required. The examination of witnesses in the case of Mullins was then proceeded with. It appeared from their evidence that Mullins has been identified in the prison by a man who met him near Stepney Green in a very excited state at 5 o'clock in the morning of the murder, and to whom it appeared as if he was anxious to avoid observation, believing the witness to be an officer in disguise. It was also proved that a silver pencil-case which the wife of Mullins sold to a potboy at Chelsea belonged to the murdered woman; and that a man's boot, found in the dusthole of his lodgings, corresponds with the impression of a footmark in blood on the stairs of Mrs. Elmsley's house. A man who was at work with the prisoner when the murder was discovered deposed that he shook violently, and expressed a desire to leave when the witness, who suspected his guilt, looked him full in the face and said that he had strong suspicions of the man, and had him then in his eye, and would never lose sight of him till the perpetrator of the murder was discovered. The inquiry was then adjourned to Tuesday next, and the prisoner was formally remanded until that day.

DESTRUCTIVE STORM.—On Monday night the metropolis and suburbs were visited by a storm of wind and rain which caused a great deal of damage to property of various kinds. Along the banks of the Thames many of the cellars and kitchens were flooded, and the fields in the neighbourhood of Lewisham were laid under water; while in Dartford some of the streets were so much flooded as to impede the ordinary traffic. In the neighbourhood of Kennington and Brixton the river Effra, which acts as a sewer for a great portion of the district, and is in some parts uncovered, overflowed its banks and found its way into the kitchens and cellars of the houses of Hanover Square, Harleyford Road, and other places in the district, filling the basements with water two or three feet high. In Brixton Road, for a quarter of a mile beyond Kennington Church, the water was so high that the early omnibuses to the City were submerged to above the axle-trees, and in some cases the water flowed into the bodies of the carriages. The market gardens and grounds of private houses at Balham, Tooting, Mitcham, Sydenham, Dulwich, and other places on the south side of London, as well as those on the line of the North Kent and Eastern Counties Railways sustained considerable damage, and it appears from the telegrams received from the different seaport towns, that the storm extended along the coast with equal severity, and led to several shipwrecks.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Report states that in the week ending Saturday, September 22, the deaths registered in London were 1016. In the corresponding weeks of the 10 years 1850-59, the average number, corrected for increase of population, was 1267. Excluding from the calculation about 150 deaths from cholera in the 38th week of 1854, the present return is about 100 below the average. During the week the births of 859 boys and 811 girls, in all 1670 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1607.

Provincial.

BRISTOL.—The stonemasons of this city have struck for an increase of wages and a diminution of the hours of labour. In consequence an extension of time has been granted in several large contracts. The master builders propose that the question of wages and hours of labour shall be submitted to the consideration of a committee composed of equal numbers of employers and operatives with a view to an amicable settlement of the points in dispute. It remains to be seen whether this reasonable course will be adopted.

COVENTRY.—"The Coventry Independent Deputation" have just returned from Paris, and have issued their report on the state of the silk trade in France and Switzerland. They started from this city on the 5th of August, with letters of introduction from Sir Joseph Paxton and Mr. Ellice to Mr. Cobden and the Hon. W. Grey, and arrived in Paris on the 10th. They there received further letters of introduction from the Secretary to the Ambassador in France, and proceeded at once on their mission to Lyons, where they were favourably impressed with the "councils of conciliation" established between the masters and men. Wherever these councils of conciliation are established (says the report) both masters and workmen speak of them in the highest terms of admiration; and the very fact of their being so popular with both the parties immediately affected by their decision is the strongest proof of their efficiency in performing the functions for which they were created. The deputation subsequently visited St. Etienne, St. Just, St. Chamond, and Basle, and report as the result of their visit that France has suffered in her ribbon trade much more than England, there being at the present time little more than one-half the number of the people engaged in the manufacture in France compared with the number employed in 1857.

FROME.—On Wednesday the 19th, a meeting of magistrates was held at Trowbridge, when Mr. Slack attended and read over the whole of the evidence he had taken at the house of Mr. Kent at Road, on the previous days. Considerable discussion ensued, for the statements of two or three of the witnesses occasioned surprise among gentlemen even so well versed in the case as the magistrates present. The evidence of the boy Holiday, the knife-cleaner, especially exhibited some remarkable features, and tended at first sight to incriminate some members of the household. It had not been determined previously what course to adopt in reference to Mr. and Mrs. Kent and Miss Constance, but after a lengthened deliberation Mr. Slack was instructed to proceed with his inquiry, and to take the evidence of all who had been ascertained to have slept at Road Hill House on the night of the murder. On Thursday morning therefore Mr. Slack resumed his sitting at Road, accompanied as before by two clerks, who transcribed the evidence from his notes, Mr. Dunn, Mr. Kent's legal adviser, and Superintendents Wolfe and Foley. The evidence of Mrs. Kent was first taken, and from 11 o'clock until 4 that lady endured a most searching examination, which, however, failed to elicit any new feature in the case. Mr. Kent was also examined for two hours that evening, and on Friday morning sustained several hours' further questioning. Miss Constance Emily Kent was then called in, and, having been examined for two or three hours, the inquiry was adjourned. The whole of Saturday was occupied by her renewed examination, which she bore with great self-possession and fortitude; and at the conclusion on Saturday evening Mr. Slack was understood to say that he had concluded all the proceedings he deemed it necessary to take on the premises. It is his intention, before finally closing his investigation, to call before him the family medical

man—Mr. Parsons, of Beckington, who was summoned immediately after the body had been found, and who made the *post mortem* examination—and the nurse, Elizabeth Hough. It has not been hitherto stated that one of the witnesses examined by Mr. Slack at Bath was Emma Sparks, who left Mr. Kent's service a year and a half ago. Her evidence is said somewhat to contradict the statements which have been made as to the harmony existing in the family. The position of Mr. Kent's solicitor during these examinations, at which he has invariably been present, has been simply that of a passive listener, refusing to incur the responsibility of even the appearance of a cross-examination. He interposed however to prevent those who gave evidence at Road from signing their depositions, as had been done by the witnesses examined at Bath, and he is understood to have formally protested against the examination of Miss Constance Kent on the ground that she was still under accusation of the murder, being bound over to appear when called on. As, however, she expressed her entire willingness to answer any questions put to her, the objection was unheeded, and it is understood that her examination has removed all suspicion which might have existed of her guilt. While the examination was in progress a new attempt was made to discover the missing night dress. A piece of ground, cultivated by Miss Constance as her garden, was carefully dug up under the inspection of Mr. Foley, but nothing was discovered.

HARROWGATE.—Lord Beaumont, the head of one of the oldest Roman Catholic families in England, was received into the Church of England on Sunday week before the commencement of morning service, at Christ Church, in this town, in the presence of Lady Beaumont and several private friends.

LIVERPOOL.—A man called Thomas Neasam, living in Gomer Street in this town, murdered his wife last week by stabbing her with a clasp knife. It appeared from the evidence that the wife, who is represented as having been an industrious woman, returned home somewhat the worse for liquor. Her husband, who is stated to have been a loose character, addicted to coursing and keeping without any very visible means two or three greyhounds, became irritated at her appearance and condition, and a quarrel arose in which she called him a returned convict. He immediately drew his knife and stabbed her to the heart. She uttered a piercing shriek and ran into the street, blood flowing copiously from the wound, but had only proceeded a few steps from the door when she fell on the pavement and almost immediately expired. The husband was taken into custody in the course of the evening, and has since been committed for trial on the charge of Wilful Murder.

MANCHESTER.—On Monday evening a fatal acident occurred by the breaking of an iron foot bridge, which crosses the Rochdale Canal in this city. There was a fair at New Islington, and in order to reach it, it was necessary to cross this bridge, which is only wide enough to permit the passage of about three persons abreast. About 6 o'clock, when a number of girls from the neighbouring factories had collected on the bridge, the steps at either end gave way, and the bridge with upwards of 150 occupants fell into the canal. Only one person, a girl about 12 years of age, was drowned. The jury at the inquest returned a verdict of Accidental death.

MILFORD.—The bottom of the Great Eastern has been found to be much cleaner than was expected. About the water line and at the bow a quantity of green slimy matter was found; below that, and by no means very thickly studded, patches of a fringelike seaweed only were seen varying from 1 to 3 inches in length, and adhering very loosely. During the week the bottom has been cleaned, painted, and coated with M'Innes's patent metallic composition, a preparation which presents a smooth surface to the water, and by lessening the friction increases the speed. Of this it has taken about two tons and a half. These operations were concluded on Saturday. The ship appears to have lost none of her attractions, and the receipts may be set down at 500*l.* a week. She will in all probability be removed from the gridiron on the 1st of October, but it does not seem probable that she can sail on the 17th of October for New York as at first intended, as she is to take in 12,000 tons of coal, which cannot be put on board at a greater rate than 3000 tons per week. In addition to this, her screw shaft being unsupported by the sternpost, has worn away some inches of the bearings, which must be repaired before she goes to sea again. Three also out of four leading points of her screw have been injured, it is supposed, during the gale she encountered in Holyhead harbour, when the Royal Charter went down.

NORWICH.—The Triennial Musical Festival took place last week in St. Andrew's Hall, the use of the cathedral having been denied to the committee by the bishop, who again declined on conscientious grounds to become a patron of the festival. It began on Monday evening with Haydn's oratorio of "The Creation." On Wednesday morning Handel's Dettingen "Te Deum" and Spohr's "Last Judgment" were performed. On Thursday morning Herr Molique's new oratorio of "Abraham," conducted by himself, was given and followed by Mendelssohn's version of the 42d Psalm. Friday morning was devoted to the "Messiah," and a fancy dress ball brought the festival to a close at an early hour on Saturday morning. On Tuesday, Wednesday, and Thursday evenings there were miscellaneous concerts. A new cantata, "Undine," composed for the festival by Mr. Benedict, was brought out on Thursday evening, and the principal feature of the Wednesday evening performance was Professer Sterndale Bennett's "May Queen." Mr. Benedict officiated as conductor, and the principal vocalists were Madame Clara Novello, Mlle. Titiens, Mme. Borghi-Mamo, Mrs. Weiss, Miss Palmer, Mr. Sim Reeves, Signor Giuglini, Mr. Willbye Cooper, Mr. Santley, Mr. Weiss, and Signor Belletti. The financial results of the festival were about 4800*l.*, and after payment of expenses the net profit is expected to be nearly 800*l.*

NOTTINGHAM.—The strike of the operative hosiers is at an end. The deputation of working men who attended the recent conference have since that time visited the hands throughout the Sutton hose and half hose districts, and, after having fully represented to them the bearings of the debate at the conference, have been empowered by the trades' union to declare the strike at an end, and to resume work at the prices current in January last. It has also been agreed that in order to prevent a recurrence of strikes, which have been so disastrous to employers and employed, and to protect the mutual interests of masters and workmen, a board of arbitration be at once formed, to consist of six manufacturers and six operatives, to which all questions relating to the wages of labour shall be referred, the decision of the Board to be final and binding upon all parties.

STOCKPORT.—On Monday evening after a display of fireworks in the Market Place, in honour of the second anniversary of the Vernon Park, the crowd who had assembled to witness them, consisting, it is said, of nearly 20,000 persons, began to descend the steep narrow streets leading from the hill on which the market is built. Down the narrowest of these streets called Meat House Row, some thousands of people were hurrying homewards, when some of those in front fell or were pushed down on the slippery pavement, others fell over them, and before the crowd behind could be stopped they passed over their bodies and trampled them to death. Six persons, including a man and two women, and three children were killed, six others were so severely injured that it was necessary to remove them to the infirmary, and several others were more or less hurt. The jury at the inquest returned a verdict of accidental death, and that no blame attached to any party.

Ireland.

LORD KINGSTON.—The *Freeman's Journal* has the following statement in reference to the unfortunate Earl of Kingston, at one time the possessor of Milchelstown Castle, and of estates in the south of Ireland valued at between 30,000*l.* and 40,000*l.* a-year.

"A commission *De Lunatico Inquirendo* will be shortly appointed for the purpose of ascertaining the state of mind of the Earl of Kingston. The condition of imbecility to which the unfortunate gentleman has lately been reduced was as painful to behold as it was discreditable to those relatives or friends whose duty it was to have interfered in his behalf. During the last Session of Parliament the noble Earl made it a point to pass the greater portion of the day in the vicinity of the House of Lords, where his eccentric figure was as familiar as that of the policeman on duty. Whether from eccentricity or other causes the noble earl was seldom in possession of any current coin of the realm, and the cabmen who drove him to the House generally remained the whole day in expectation of their fare. The noble earl's credit was also so low that the contractor for the refreshments stopped the supplies, and refused to bring up a dinner until paid in advance It is stated by those who are acquainted with the noble earl's affairs that his mental and pecuniary embarrassments are directly traceable to the frauds committed upon him by the notorious John Sadleir."

ATTEMPTED ASSASSINATION IN MEATH.—A daring attempt was made on Sunday last, in open day, to assassinate Mr. Richard Dyas, J.P., of Heathstown, county Meath, while returning in his carriage from Athboy Church. He was seated with the coachman on the box of the carriage, the inside being occupied by his family, and, as he was driving along the public road, he was fired at from behind a hedge by two men, disguised in women's clothes, and having their faces blackened. Some of the slugs grazed his side and lodged in the coachman's coat. This is the fourth attempt made upon his life. The Government have offered a reward of 100*l.* for the discovery of the perpetrators of the outrage.

THE REPEAL QUESTION.—Mr. Smith O'Brien has addressed a letter to the Irish Repealers of Glasgow, in which he states that his convictions in favour of repeal are unchanged, and that he is convinced that the restoration of the Irish Legislature will be attainable whenever the Irish people possess such public virtue and such public spirit as shall induce them to regard the national interests of their country paramount to their private and individual interests. He believes also that the restoration of the Parliament of Ireland can be effected without a disruption of the British empire, but for himself he entertains great reluctance to sign petitions to a Parliament which he cannot recognise as *de jure* the Legislature of his country. The O'Donoghue, in a letter to the same body, says that his experience of the English House of Commons, though short, has convinced him that it is impossible to give effect there to the will of the Irish people; and that it is incumbent upon them to resist, in the first instance, by encouraging the people to proclaim their right to govern themselves, and never to desist until they have secured to Ireland a national Parliament.

Scotland.

SOCIAL SCIENCE ASSOCIATION.—The fourth annual meeting of the National Association for the promotion of Social Science commenced in Glasgow on Monday with a special religious service in the cathedral, at which the sermon was preached by the Rev. Dr. Robertson. In the evening the opening meeting of the Association was held in the City Hall, when the president, Lord Brougham, delivered an inaugural address, which fills several columns of the daily papers. The following is an abstract of the principal topics discussed by his lordship in this address:—

"After some introductory remarks in favour of Glasgow, he alluded to the advantage of the diffusion of knowledge—the progress of social science, the party policy of the last century, and the growth of public opinion. He then stated at great length his views on slavery and the slave trade, and proceeded to remark on the education of children and of the middle classes, on teaching for the middle classes, on the necessity of education in common things, on religion and secular instruction, and on the domestic life of the poor and their condition, especially as connected with the operative societies of the working classes. He then adverted at length and with much earnestness to the position and mode of transacting the business of the Legislature, expressing his opinion that the greatest obstruction to the conduct of business in the two Houses of Parliament, particularly in the Commons, arises from the reluctance to fetter discussion either by rules binding upon the members, or by restraining the speakers in their addresses. In the present state of things there is a paramount interest to be consulted—a great catastrophe to be averted. The cause of constitutional regimen is in jeopardy; the continuance of free—that is of Parliamentary—government is at stake; the question is, shall we any longer enjoy the blessings of a mixed and balanced constitution, or shall we be sunk into the deplorable condition of being governed by an absolute monarch and a mob—suppressing all discussion, whether in assemblies or a mock legislature or among the people; and not only rigorously forbidding all objections to the acts of power, all observation on those who wield it, but compelling both the slaves who speak and the slaves who write to labour in panegyries of the extent, and according to the pattern set down before them, till from the scum of the German baths and the slime of the French provinces, there is compounded a plaster only bearable by those over whom it is spread, to all the rest of mankind giving unspeakable offence and disgust. Such a fate could never befall this country; but, though a despotism in form is impossible here, let us never forget how large a portion of its substance might be inflicted upon us by a not very slow or gradual process. If the obstruction to all business cannot be any longer endured, if anything would be less intolerable than a continuance of the evil, never let the recollection fade from our memory of how much has been suffered by other countries to prevent the recurrence of evil times. The successive despotisms in France, whether of the multitude, or of the oligarchy, or of a single tyrant, have all been rendered possible, and been even quietly borne, rather than encounter the worse calamity of the Reign of Terror. Let us not be too sure that a régime differing in little but the name from absolute government might not be gradually introduced among us under shelter of the cry, 'Anything is better than the session of 1860.' He then remarked on the necessity of a department of justice, the consolidation of the criminal law, judicial statistics, the employment of women, the prevention of railway accidents, and the various modes of taxation. In describing the usual fate of law bills in the House of Commons, he said that the debate of some hundred clauses of a code, in a House of some hundred members, comprising lawyers in either kind—barristers and attorneys—recorders of boroughs and corporations, justices giving ear to the town-clerks, chairmen of sessions and other magistrates, country gentlemen instructed by their solicitors, bankers and merchants with sons at the bar, dilettante law reformers—presents to the mind such a picture of endless proposal and objection, cavil and comment, that the bare aspect is enough to induce slumber in the least somnolent, or confuse or turn round the steadiest head. If however there were established a minister of justice, the present tesselated pavement of English jurisprudence would in due time assume that simplicity and order which would enable every subject of the Queen to understand the laws which he is bound to obey. He then remarked upon the checks put upon inquiry by despotism, and drew a parallel between despotic and constitutional Government. Mightily must the cultivators of social science rejoice in the noble conduct of the absolute sovereigns to whom the fortunes of so vast a portion of the world are entrusted, and full well they know that their cause mainly rests upon the preservation of peace abroad and the maintenance of order at home. Well may they apply to social science the Roman orator's words, spoken of his own art, for truly she is the offspring of peace, and by a greater than the Roman charity, gratefully gives her pious support to her parent. Let us not fear danger to this first of blessings from any quarter, by the pursuit of warlike glory, guilty, and as senseless as guilty, among any of our neighbours. An eminent political economist at our last congress declared that he only dreaded the arts of the fiend, the enemy of mankind, tempting his countrymen with a laurel, instead of the apple with which he deceived our first parents. But it is edifying to observe the same individual now announcing his entire confidence in the pacific tendency of that enlightened policy to which he has so greatly contributed. In his hopes we must altogether share; in the greater part of his confidence also. But it is no mark of mistrust in others that we trust ourselves more; and we must all heartily rejoice in the spirit of determination to be well prepared which the country universally shows. Let us also rejoice in the training to which the Volunteer movement has given rise. As a mere sanitary measure this association has a right to own it and highly to estimate its value. But on far more lofty grounds we are bound to exult in it, for it is the pledge of peace. Here, above all other places, such feelings are natural and appropriate. We are in the land sanctified by the struggles of religion, and renowned for supporting her sister, Freedom, in the worst of times. Here the martyrs of the cause swore to the Covenant 'by the name of the Lord their God'—here, in the next age, the rebels against civil and religious liberty encountered the stoutest resistance—here, in yet later times, was begun the arming of the people for defence of the realm. Is it wonderful that attachment to religious and attachment to civil rights should kindle the same fire of patriotism, and in the same bosoms? Those treasures which men prize the most dearly are nearest their hearts, and them with heart and hand they will defend."

Sir John Pakington, M.P., moved, and Lord Ardmillan seconded, a vote of thanks to Lord Brougham for his address, which was carried with acclamation, the whole assemblage rising and greeting the noble lord in a most enthusiastic manner. Lord Brougham having briefly acknowledged the compliment, Sir Archibald Alison moved a vote of thanks to the Earl of Shaftesbury, the

president of last year. Sir John Lawrence seconded the motion, which was carried amid loud cheers, and acknowledged by Lord Brougham in the absence of Lord Shaftesbury, who had, as Lord Lieutenant of Dorset, to attend a great meeting in that county in connection with the Volunteer movement. On Tuesday the business of the various sections began in the halls of the University, the Lord Advocate officiating as president of the department of Jurisprudence and Amendment of the Law; Sir James Kay Shuttleworth, Bart., as president of the department of Education; the Hon. Arthur Kinnaird, M.P., as president of the department of Punishment and Reformation; Mr. Monteith, in the absence of Lord Ebrington, as president of the department of Public Health; and Sir James Emerson Tennent, as president of the department of Social Economy. The Lord Advocate delivered an address on jurisprudence on Tuesday. Sir J. K. Shuttleworth delivered an address on the Correlation of Moral and Physical Forces, on Wednesday, and the other presidents of departments delivered their addresses on the remaining mornings of the week. A prominent feature of the Conference was a meeting of the working classes on Wednesday evening in the City Hall, for which 3000 tickets were disposed of, and which created considerable excitement among the artisans. An international character was also on this occasion given to the association for the first time by the presence of a number of foreign delegates from America and the Continent to discuss the feasibility of an international system of general average. The success of the meeting in regard to numbers has far exceeded that of preceding meetings. Upwards of 2500 tickets have been disposed of, being more than 300 in excess of the Liverpool meeting, and the whole of the ladies tickets, numbering 600, were sold on the first day of meeting.

SIR JOHN LAWRENCE AT GLASGOW.—Sir John Lawrence arrived in Glasgow, on the 20th inst., from Inverary Castle, where he had been on a visit to the Duke of Argyll, and took up his residence at the house of the Rev. Dr. M'Duff. On the following afternoon he was presented with the freedom of the city in accordance with a resolution of the Town Council. In acknowledging the honour, Sir John made the following remarks on the causes of the late rebellion in India:—

"It has been urged that the annexation of so many provinces, and in particular that of Oude, which took place shortly before the mutiny, was the cause which led to that calamity, and the reputation of one of the greatest men who ever governed India—I mean the Marquis of Dalhousie—has consequently suffered. I do not well know who was the author of that annexation, but I believe that had the advice of that statesman been followed, and a proper addition been made at that time to the English army in India, either we should have had no mutiny, or that the mutiny would have been much more easily suppressed. The annexation of Oude had nothing whatever to do with the mutiny in the first instance, though that measure certainly did add to the number of our enemies after the mutiny commenced. The old Government of Oude was extremely obnoxious to the mass of our native soldiers of the regular army who came from Oude and the adjacent province of Behar, and with whom the mutiny originated. These men were the sons and kinsmen of the Hindoo yeomen of the country, all of whom benefited more or less by annexation; while Oude was ruled by a Mahomedan family, which had never identified itself with the people, and whose government was extremely oppressive to all classes, except its immediate creatures and followers, and to no class so much as to the great body of the agriculturists. But when the introduction of the greased cartridge had excited the native army to revolt; when the mutineers saw nothing before them short of success on the one hand or destruction on the other, they and all who sympathised with them were driven to the most desperate measures. All that could be influenced by love or fear rallied round them. All that had little or nothing to lose joined their ranks. All that dangerous class of religious fanatics and devotees who abound in India; all the political intriguers, who in peaceful times can do no mischief, swelled the numbers of the enemy, and gave spirit and direction to their measures. India is full of races of men who from time immemorial have lived by service or by plunder, and who are ready to join in any disturbance which may promise them employment. Oude was full of disbanded soldiers, who had not had time to settle down. Our gaols furnished thousands of desperate men who were let loose on society. The cry throughout the country, as cantonment after cantonment became the scene of triumphant mutiny, was, "the English rule is at an end; let us plunder and enjoy ourselves." The industrious classes throughout India were in our favour, but for a long time feared to act. On the one side they saw the few English in the country shot down, or flying for their lives; or at the best, standing on the defensive, sorely pressed. On the other side, they saw summary punishment in the shape of the plunder and destruction of their homes, and even of death itself, dealt out to those who aided us. Was it then so wonderful that they refused to sacrifice all that was dear to them for our sakes? But when we evinced signs of vigour—when we began to assume the offensive, and vindicate our authority, many of these people came forward and identified themselves with our cause. Surely, it is mere folly to suppose that we could ever have weathered the storm which beset us had the mass of the people of the country risen heartily against us. One of the great evils of those sad times was the large numbers who were gradually drawn or forced into the struggle against us, who, when once committed, saw no hope of safety except in continuing the struggle. Then it was that sound policy dictated the advantage of giving such men a way to escape and of dealing tenderly with them. There is one other subject on which I will say a few words, and that is on the introduction of the Bible into our schools in India. The Sepoys revolted, not because Christianity was taught to the people of India, but because they believed that the cartridge they were required to use would convey destruction to their bodies and their souls. This was, in their view, a tremendous attack on caste and religion. Their ideas on such matters in no wise accord with ours. A Hindoo soldier lying wounded on the field of battle has died rather than drink water offered to him by a man who, in his eyes, was an outcast. A Sikh soldier in our hospitals at Agra preferred continuing to suffer for some hours all the anguish arising from feverish thirst, induced by severe wounds, rather than receive water from the hands of an English lady. His words were—'Though no man see me drink, God will see it.' The religion of the great majority of the people of India consists in ceremonial observances, and in a fancied personal freedom from certain contaminating influences. They are extremely ignorant and proportionately superstitious. They have certainly a general impression that we desire their conversion, and that this will be accomplished by physical means. Thus stories of bone-dust being mixed with the flour sold in the markets, and the like, are constantly floating about the country. We are never secure from panics arising from such causes. Does not this, then, inculcate the policy of instructing the people, where they are willing to receive it, as to the real character of our religion? Sound policy surely dictates that we should give them the means of comprehending its principles. We cannot teach them the very elements of our sciences without showing them the folly of their own faith. Shall we, then, sap the foundations of their belief without giving them facilities for acquiring true knowledge? Can this be wisdom? It is said that the work should be restricted to the missionaries. But what can a few missionaries do among hundreds of millions of people? I do not desire to see the government undertake the duty of the missionary; but that when the parents of children belonging to our schools do not object, and masters are able and willing to instruct, the Bible should not be prohibited. Government, as regards the extension of our faith, cannot really remain neutral. Its influence will either be for or against its progress. Under the most favourable auspices that faith will not spread very fast; the probability rather is that its progress will be lamentably slow. I myself believe that sound policy, as well as our duty to God and to man, demand that we should give facilities and encouragement to the spread of Christianity in India, and that the introduction of the Bible into the government schools may be effected in many places with the full consent of the children and their parents by teachers who have their heart in the work."

THE ALLEGED POISONING IN DUMBARTONSHIRE.—Flora Macdonald, accused of having administered poison to her mistress, Mrs. M'Murrick, of Shegarton, in a cup of oatmeal porridge, was tried on the 13th inst., before Lord Ardmilian. The medical evidence showed that there was nothing abnormal in the deceased's death, and after a long trial the jury returned a verdict of "Not proven."

Sporting.

NEWMARKET FIRST OCTOBER MEETING.

TUESDAY.—*Trial Plate.* Mr. Mundy's Malta beat Orlando, Shingle, Montebello, and 4 others.—*Sweeps.* Mr. Chase's Mousetrap beat Surplice, Lord Berkeley, Error, and Tadworth.—*Handicap Sweeps.* Mr. H. Bentley's Rattlesnake beat Rose Middleton.—*Eastern Counties Railway Handicap.* Mr. Greville's Cantine beat Bankrupt, Tame Deer, The Rover, and 14 others.—*Buckenham Stakes.* Lord Derby's f. beat Folkestone.—*Hopeful Stakes.* Mr. Merry's Dundee beat Little Lady, Walloon, Queen of the Vale, and Evenhand.—*Grand Duke Michael Stakes.* Mr. A. Nicholl's The Wizard beat Thormanby, Thunderbolt, and 3 others.

WEDNESDAY.—*Third Year of the Eleventh Triennial Produce Stakes.* Mr. Bowes's Mouravieff beat The Rover, May Morning, and St. Clarence.—*Granby Stakes.* Mr. Merry's Folkestone beat Hesper.—*Handicap Sweeps.* Mr. Barnard's Parapet beat Sister to Roesia and 4 others.—*Handicap Sweeps.* Lord Strathmore's Amy Scott beat Tomboy.—*Sweeps.* Lord Coventry's Mousetrap beat Amy Robert, na. Longhope, and 5 others.—*Second Year of the Twelfth Triennial Produce Stakes.* Lord Derby's Cape Flyaway beat Ebony, King of Diamonds, Neoptolemus, and Uncle Ned.—*St. Leger Stakes.* Mr. A. Nichols's The Wizard beat The Leprechaun and Montenegro.—*Fifty Pounds.* Captain Little's Pitman beat Greek, Forager, and Foretop.

THURSDAY.—*Queen's Plate.* Lord Strathmore's Mouravieff beat Ochiltree, Master Bagot, and Pitman.—*Handicap Sweeps.* Lord William Powlett's S.r Hugh beat Man Friday, Pomona, Romsey, and 3 others.—*Match.* Mr. H. Roberts's Opera Dancer beat Wizard (late Lord Raglan).—*First Year of Thirteenth Triennial Produce Stakes.* Mr. Merry's Folkestone beat Klarikoff, Knight of St. Patrick, Will-o'-the-Wisp, and 5 others.—*Handicap Plate.* Mr. G. Bryan's Faultless beat Zaretan, Rattlesnake, Sherbourne, and 6 others.—*Sweeps.* Duke of Bedford's Leontes beat Bentinck, Lord Berkeley, and Mayflower.—*Rutland Stakes.* Mr. Batson's f. beat Cowley, and Sweet Hawthorn.—*Sweeps.* Mr. Barnard's Parapet beat Wildgrave, Chelmsford, Duke, and Gipsy.

Obituary.

GENERAL THACKERAY, C.B., Colonel-Commandant of the Royal Engineers, died on the 19th inst. at Windlesham, Surrey, in his 85th year. He entered the army in 1793, and commenced his career as second lieutenant in the Royal Engineers. He saw considerable service, having been present at the capture of Surinam in 1799, and at St. Martin's and St. Bartholomew's in 1801. He directed the siege of Scylla Castle in 1806, and that of the fortress of Santa Maura in 1809. He served with the army in Spain in 1812, and was present at the battle of Castella and siege of Tarragona in 1813, and remained with the army until 1814. In recognition of these services he was made a Companion of the Bath.

SIR FRANCIS DESANGES, Knight, who had been sheriff of London and Middlesex, and also of Oxfordshire, died in the Queen's Bench on the 20th inst., in his 77th year. An inquest was held on Saturday, when it appeared in evidence that he had been an inmate of the prison upwards of four years, at the suit of Mr. W. F. Low, solicitor, of Wimpole Street. He had been in a weak state of health for some time, and on the 19th he was taken to the infirmary, where he died on the following evening. Mrs. Clifford, the daughter of deceased, stated that her father formerly possessed considerable property, that his imprisonment had preyed on his mind, and that he had complained of the long time he had been kept in prison. The Coroner said that he had no doubt died from the decay of nature. The jury returned a verdict that deceased died from natural causes.

VICE-ADMIRAL THE HON. H. D. BYNG, on the retired list, died at his residence in Queen's Terrace, Southsea, on the 23d inst., in his 78th year. He was fourth son of the fifth Viscount Torrington, and grand-nephew of the unfortunate Admiral John Byng, who was executed in 1757. He entered the navy in 1791, and saw much service in America, China, the West Indies, and South America. In 1806 he was intrusted by Sir Home Popham with the command of the forlorn hope in the first unsuccessful attack on Montevideo, and on the morning of its assault and capture he entered the breach at the head of the 38th Regiment. He afterwards aided in seizing the men-of-war and other vessels in the harbour. In the same year, while in command of the Goree, sloop of 18 guns, 9-pounders, he had a very long running fight with the American brig Tom Bowline of Baltimore, carrying 20 24 pounders and 200 men. In the Chesapeake, under Sir George Cockburn, he took a very distinguished part, which gained him the public thanks of the Commander-in-Chief. He was captain of the ordinary at Portsmouth in 1853, and in 1842 and 1843 was commodore at Jamaica, but was compelled to return home from ill health. He was placed on the retired list in 1846, and became a retired vice-admiral in 1856.

MR. HERBERT INGRAM, M.P. for Boston, and proprietor of the *Illustrated London News*, was among the passengers who perished in the Lady Elgin steamer, on Lake Superior, Canada, on the 8th inst. His body had been recovered, and was to be sent to England, but that of his son, by whom he was accompanied, had not been found.

BIRTHS.—On the 25th inst, at Hopetoun House, Linlithgowshire, the Countess of HOPETOUN, of son and heir—24th inst., at 48, Bryanston Square, the Lady WODEHOUSE, of a son.—18th inst, at the Dowager Lady WENLOCK's, 29, Berkeley Square, the Hon. Mrs. JAMES STUART WORTLEY, of a daughter—19th inst, at 14, Dawson Street, Dublin, the wife of the Hon. ROBERT HANDCOCK, of a son—25th inst, at 33, St. George's Road, Eccleston Square, the wife of Lieut.-Colonel BRADFORD, Grenadier Guards, of a son—21st inst, at Spains Hall, Essex, the wife of Lieut.-Colonel RUGGLES-BRISE, of a son—21st inst, at the Western Heights, Dover, the wife of Colonel KELLY, C.B., 47th Regiment, of a son.

MARRIAGES.—On the 25th inst, in the parish church of Withyham, Sussex, Sir ALEXANDER BANNERMAN, Bart., of Crimonmogate, county of Aberdeen, to the Lady ARABELLA DIANA SACKVILLE WEST, youngest daughter of the Earl and Countess Delawarr—19th inst, at Edmonsham, WILLIAM INGLIS, Esq., Lieutenant-Colonel 57th Regiment, eldest son of the late Lieutenant-General Sir W. Inglis, K.C.B., Colonel of the 57th Regiment, to MARY, youngest daughter of the late HECTOR B. MONRO, Esq., of Edmondsham, Dorset, and Ewell Castle, Surrey—18th inst, at Kildress Church, county of Tyrone, Ireland, Major HUGH MASSY, late Major 85th King's Light Infantry, eldest son of the HON. John Massy, to AUGUSTA LA VISCOUNT, only child of Major RICHARDSON BRADY, late 1st Life Guards, of Oaklands, county of Tyrone—20th inst, at the parish church, Twickenham, HENRY FANE TRAVERS, Esq., Military Store Service, son of the late General Sir Robert Travers, K.C.B., to JANE LUCY, daughter of the Rev. JOHN HUMPHRY DAVIS, of Sion House, Twickenham, and granddaughter of the late Sir Anthony Hart, Lord-Chancellor of Ireland—19th inst, at Denton, GEORGE TROYTE BULLOCK, Esq., only son of George Bullock, Esq., of North Coker House, Somersetshire, to ALICE, third daughter of Sir GLYNNE EARLE WELBY, Bart., of Denton Hall, Lincolnshire—18th inst, at Trent Vale Church, near Stoke-upon-Trent, Staffordshire, THOMAS CHAPPELL BROWN-WESTHEAD, Esq., of Highfield House, Barlaston, youngest son of J. P. Brown-Westhead, Esq., M.P., of Lea Castle, Worcestershire, to MARIAN, fourth daughter of GEORGE H. FOURDRINIER, Esq., of the Villas, Stoke-upon-Trent—19th inst, at Castle Townsend Church, the Rev. WILLIAM IZON CHAVASSE, only son of Pye Henry Chavasse, Esq., of Priory House, Birmingham, to ANNA GEORGINA, daughter of the late Vice Admiral Sir JOSIAH COGHILL COGHILL, Bart., of Belvedere, county Dublin—22d inst, at St. George's, Hanover Square, EDWARD HALL, Esq., 18th Royal Irish Regiment, to AUGUSTA, fifth daughter of JAMES THEOBALD, Esq., of Hyde Abbey, Winchester—26th inst, at the Roman Catholic Church of St. Andrew, Dublin, ALEXANDER MORPHY, Esq., of Killarney, to KATE, daughter of Sir T. O'BRIEN, Bart., of Merrion Square, East Dublin.

DEATHS.—On the 7th inst, at Quebec, from scarlet fever, ALEXANDER DAVID, eldest son of Rear-Admiral Sir ALEXANDER and Lady MILNE, aged 9 years.—21st inst, MARIA GURNEY, youngest daughter of Sir BENJAMIN HAWES—21st ult, at Trinidad, BARBARA, relict of the late Captain WILLIAM GRAY, of H.M.'s 30th Regiment, and grand-daughter of the late Sir Walter Blake, Bart., Menlough Castle, Galway, Ireland—23d inst, at Calton, DENNIS MARIANNI, widow of Major-General THOMAS LEIGHTON, Bombay Army—21st inst, at Clifton, MARY FITZGERALD, last surviving daughter of the late Lieut.-Colonel Ross, 4th Dragoon Guards—19th inst, at his residence, Tyne Hall, Ilford, Essex, Dr. REES PRICE, M.D., aged 79—23d inst, at the Western Heights, Dover, the infant son of Colonel KELLY, C.B., 47th Regiment—24th inst, the Rev. THOMAS BOYLES MURRAY, M.A., Rector of St. Dunstan's in-the-East, Prebendary of St. Paul's, and Secretary to the Society for Promoting Christian Knowledge, aged 61—22d inst, at Broughton Hall, Staffordshire, JANE, wife of the Rev. DELVES BROUGHTON—19th inst, at St. Leonard's-on-Sea, MARGARET ISABELLA, wife of the Rev. LEWIS HENSLEY, M.A., Vicar of Hitchin, Herts, only daughter of the late ANDREW AMOS, Esq., of St. Ibbs, Herts, aged 23—14th inst, at Harrington Street North, Mr. JAMES FOGGO, historical painter, aged 71.

Markets.

COVENT GARDEN, Sept. 29.

Pine Apples and Grapes continue plentiful. Pears consist chiefly of Marie Louise, Williams's Bon Chrétien, Louise Bonne of Jersey, Gansel's Bergamot, and Duchesse d'Angoulême. Peaches, Nectarines, and Plums may yet be obtained. Oranges realise 3s. 6d. and 10s. per hundred. Good Filberts may be had for 2d. per lb. Cabbages, Beans, Carrots, and Artichokes may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 15s. per cwt. Cucumbers abundant. Cut flowers chiefly consist of Orchids, Gardenias, Kalosanths, Dahlias, Violets, Mignonette, China Asters, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 3s to 4s	Melons, each, 2s to 4s
Grapes, per lb., 2s to 5s	Plums, p. ½ sieve, 3s to 4s 6d
Peaches, per doz., 2s to 6s	Pears, per doz., 1s to 3s
Apricots, per doz., 2s to 4s	Apples, per doz., 6d to 1s 6d
Nectarines, do., 2s to 6s	Oranges, per 100, 10s to 20s
Cherries, p. lb., 1s to 3s	Lemons, per 100, 10s to 15s
Green Figs, per doz., 3s to 4s	

VEGETABLES.

F. Beans, per qrtn, 9d to 1s	Celery, p. bundle, 1s 6d to 1s 9d
Peas, p. bush., 2s to 3s	Onions, p. half sieve, 3s to 5s
Cauliflowers, each, 4d to 6d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 2s 6d to 3s	Veg. Marrows, p. doz., 6d to 1s
Cabbages, do., 1s to 2s	Shallots, per lb., 6d to 8d
Potatoes, p. ton, 100s to 130s	Garlic, per lb., 6d to 8d
— per bus., 3s to 4s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per cwt., 5s to 8s	Lettuces, Cos, p. score, 6d to 1s
Carrots, per bunch, 7d to 9d	Endive, p. score, 1s to 2s
Turnips, per bunch, 5d to 7d	Horse Radish, p. bun., 1s 6d to 4s
Spinach, p. sieve, 2s to 3s	Mushrooms, p. pott., 2s to 3s
Cucumbers, each, 6d to 1s	Parsley, p. 12 bunches, 2s to 4s
Artichokes, per doz., 4s to 6s	Savory, per bunch, 2d to 4d
Beet, per doz., 1s 6d to 2s	

COAL MARKET.—Sept. 26.

Buddle's West Hartley, 16s.; Davison's West Hartley, 16s.; Hasting's Hartley, 16s.; Howard's West Hartley, 16s.; Tanfield Moor, 13s. 6d.; Tanfield Moor Butes, 13s. 6d.; Walls End Harton, 17s. 9d.; Walls End Riddell 17s. 9d.; Eden Main

18s.; Walls End Braddyl's Hetton, 18s. 6d.; Walls End Framwellgate, 18s. 6d; Walls End Hetton, 19s. 6d; Walls End Kepier Grange, 18s. 3d.; Walls End South Hetton, 19s. 6d.; Walls End Auckland Park, 17s.; Walls End Cassop, 18s. 9d.; Walls End Heugh Hall, 18s. 6d.; Walls End South Hartlepool, 18s. 6d.; Walls End Trimdon Thornley, 16s. 9d.; Walls End West Hetton, 18s. 6d.; Walls End Whitworth, 16s. 6d.; Carway and Duffryn Malting, 22s. 6d.—128 ships at market.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Sept. 27.

Prime Meadow Hay	75s to 80s		Clover	90s to 115s
Superior do. (old)	.. 90	112	New Clover	— —
Inferior do.	 50	60	Old second cut	.. 80 100
New do.	 50	90	Straw	.. 30 36
Rowen	.. .. .. —	—		DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Sept. 27.

Sup. Meadow Hay	.. 110s to 116s		Inferior Clover	.. 90s 110s
Inferior do.	 70	100	New do. ..	.. — —
New do.	 65	105	Straw ..	.. 36 42
Superior Clover	.. 120	130		JOSHUA BARBER.

WHITECHAPEL, THURSDAY, Sept. 27.

Fine old Hay	.. .. 100s to 112s		Fine old Clover	.. 110s to 126s
Inferior do.	 60	90	Inferior do	.. .. 80 95
Prime New Hay	.. .. —	—	Fine 2d cut	.. .. — —
Inferior do.	.. .. —	—	Fine New Clover	.. — —
Straw	 84	88	Inferior do.	.. .. — —

BRITISH WOOLS.—LONDON, FRIDAY, Sept. 28.

Our market is only slightly supplied with Wool, and prices are buoyant.

	s.	d.		s.	d.
South-down Hog-gets..	1	8 to 1	9	Leicest. Wethers 1	6 to 1 7
Half-bred ditto..	1	8 — 1	9	Ditto Hoggs .. 1	7 — 1 9
Down Ewes ..	1	6 — 1	7	Combing Skins	— — —
Kent Fleeces ..	1	6 — 1	7	Blanket ditto .. 0	6 — 0 8
				Flannel Wool .. 1	0 — 1 7

HOPS.—BOROUGH MARKET, FRIDAY, Sept. 28

Messrs. Pattenden & Smith report that the accounts come worse generally, and great complaints continue, stating that fly and lice are on the increase, and that the crop falls very short of estimate. Duty down to 30,000*l*. About 300 pockets of new Hops have arrived and been selling from 14*l*. to 22*l*. per cwt.

METROPOLITAN CATTLE MARKET.

MONDAY, Sept. 24.

We have a large supply of Beasts, and trade is very slow; prices on the average are not so good as of late, but there is not much reduction in choicest kinds. There are a few more Sheep, but the average quality is inferior, consequently new qualities find ready purchasers. Calf trade has rather improved. From Germany and Holland there are 1960 Beasts, 6960 Sheep, and 280 Calves; from Spain 60 Beasts; from Ireland, 510 Beasts, 300 Sheep, and 5 Calves; and 2600 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8 to 5		0	Best Long-wools.	5	0 — 5		2
Best Short-horns	4	4 — 4		8	Do. Shorn		to		..
2d quality Beasts	3	0 — 4		0	Ewes & 2d quality	4	4 — 4		6
Best Downs and Half-breds ..	5	2 to 5		4	Do. Shorn ..		—		..
Do. Shorn		—		..	Lambs		—		..
					Calves	4	4 — 5		2
					Pigs	4	4 — 5		4

Beasts, 6120; Sheep & Lambs, 26,840; Calves, 365; Pigs, 480.

THURSDAY, Sept. 27.

We have a fair supply of Beasts and a small demand; Monday's quotations are barely maintained. Sheep are not very plentiful, quite sufficient, however, for the demand; indeed, a clearance cannot be effected. prices are about the same as on Monday. *Trade is very dull for Calves. From Germany and Holland there are 114 Beasts, 1490 Sheep, and 393 Calves; 600 Beasts from the northern and midland counties, and 110 Milch Cows from the home counties.*

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8 to 4		10	Best Long-wools .	5	0 — 5		2
Best Short-horns	4	4 — 4		8	Do. Shorn		—		..
2d quality Beasts	3	4 — 4		0	Ewes & 2d quality	4	4 — 4		6
Best Downs and Half-breds ..	5	2 — 5		4	Do. Shorn ..		to		..
Do. Shorn		—		..	Lambs		—		..
					Calves	4	4 — 5		2
					Pigs	4	4 — 5		4

Beasts, 1300; Sheep & Lambs, 5790; Calves, 484; Pigs, 190.

BUTTER MARKET.—Sept. 28.

Best Fresh Butter	14s. per dozen lbs.
Second do. do.	13s. " "
Pork, 5s. 4d. to 5s. 0d. per 8 lbs.	

MARK LANE.—MONDAY, Sept. 24.

The supply of Wheat from Essex and Kent to this morning's market was small, and cleared at an advance of 1s. to 2s. per qr. upon the prices of this day se'nnight. The attendance of country buyers was again large, and a good retail business was transacted in general qualities, and fine red foreign Wheats at an improvement of 2s. per qr. upon our quotations of Monday last, excepting for Dantzic, which are not more than 1s. per qr. dearer. There is a good demand for Barley at an advance of 1s. per qr. Beans and Peas bring full prices. The Oat trade is firm, and realised 6d. per qr. more money. There is no alteration in the top price of town-made Flour, but barrels are held above Friday's prices.

PER IMPERIAL QUARTER.		s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..	White	52	—60	Red	42	—60
— — fine selected runs..	ditto	54	—62	Red	50	—64
— — Talavera		50	—70			
— Norfolk		—		Red	—	
— Foreign		50	—70			
BARLEY, grind. & dist., 25s to 31s..	Chev.	38	—45	Malting.	36	—41
— Foreign..grinding and distilling		30	—38	Malting.	35	—40
OATS, Essex and Suffolk		20	—24			
— Scotch and Lincolnshire..	Potato	26	—28	Feed ..	24	—26
— Irish	Potato	26	—28	Feed ..	21	—24
— Foreign.....Poland and Brew		24	—26	Feed ..	20	—26
RYE		35	—38	Foreign.	—	
RYE-MEAL, foreign.....		—				
BEANS, Mazagan....36s to 38s....	Tick	38	—42	Harrow.	38	—42
— Pigeon .....44s — 47s..	Winds	—		Longpod	—	
— Foreign	Small	38	—46	Egyptian	—	
PEAS, white, Essex and Kent ..	Boilers	50	—52	Suffolk .	50	—54
— Maple .... —s to —s	Grey	—		Foreign.	30	—43
MAIZE	White	—		Yellow..	—	
FLOUR, best marks delivered..	per sack	50	—57			
— 2d do.....	ditto	34	—50	Country.	34	—50
— Foreign .....per barrel		28	—33	Per sack	40	—50

FRIDAY, Sept. 28.

Since the 21st inst. rain has fallen daily and to such an extent that on large tracts in many counties the corn, of which some quantity is still in the fields, is standing in water. The condition of some of the new Wheat brought to market this week has been slightly better than that previously received, but the produce in Flour of the new crop is much complained of both as to quantity and quality. The yield from several important counties is also reported as very disappointing. The advance in the price of Wheat, notwithstanding large arrivals here, at Liverpool, and Glasgow, continues, and averages in the principal markets of the kingdom about 2s. per qr., in several of the agricultural districts 4s. per qr. improvement is quoted. In Scotland, where the weather has been finer, the demand has been less active, and an enhancement of 1s. per qr. was scarcely obtainable. All descriptions of spring corn continue to have an upward tendency. The arrivals of English grain this week have been moderate, of foreign Wheat and Barley large, and small of Oats. The attendance at this morning's market was good, and towards the close a rather extensive business was transacted in foreign Wheat at an advance of 2s. per quarter upon the prices current last Monday; a similar improvement was also established on English. Barley is rather dearer. Oats sell at an advance of 6d. to 1s. per qr. Norfolk Flour is held for 45s. per sack, and American barrels are 1s. dearer.

ARRIVALS FROM Sept. 24 TO Sept. 28.

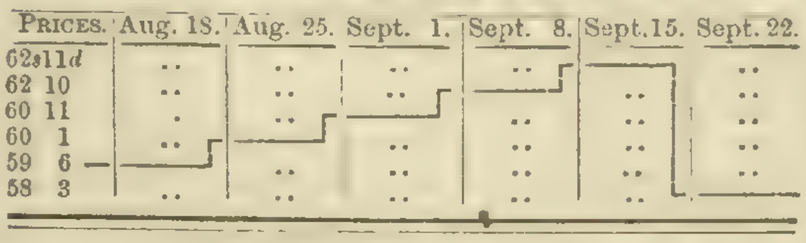
	Wheat.	Barley.	Oats.	Flour.
English ..	1830 qrs.	390 qrs.	20 qrs.	1070 sks.
Irish	— "	— "	— "	— "
Foreign ..	28460 "	13050 "	12040 "	{ 5840 " / 11550 brls.

LIVERPOOL, Tuesday, Sept. 25.—We have a large attendance of both town and country millers and dealers at our Corn Exchange this morning, and Wheat has commanded a ready consumptive sale at the extreme prices of Friday, with the exception of fine white, which cannot be bought under an advance of about 2d. per cental. Flour has met a fair inquiry at fully previous rates. Indian Corn was in good favour at 1s. per qr. more money, and holders very careless about selling. Oats and Oatmeal are each the turn better both in demand and value. Beans and Peas must be noted 1s. per qr. dearer. Barley unchanged. The market closed very steady.

FRIDAY, Sept. 28.—Grain market very firm. Wheat in good consumptive demand at 1d. to 2d. advance. Flour firm. Indian Corn 6d. dearer; Ibrail and mixed American 36s., Galatz 36s. 6d. Oats, Oatmeal, and Barley very firm.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Aug. 18..	59s 6d	32s 10d	28s 2d	41s 9d	47s 1d	44s 6d
— 25..	60 1	34 9	27 1	40 4	47 7	43 9
Sept. 1..	60 11	33 3	28 2	40 7	47 10	44 5
— 8..	62 10	35 2	27 2	39 4	49 3	41 4
— 15..	62 11	37 10	27 0	42 4	50 1	38 7
— 22..	58 3	38 5	25 9	40 7	49 6	37 11
Agg. Aver.	60 9	35 4	27 3	40 10	48 7	41 8

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.



A PARTNER WANTED.

WANTED, in a large Nursery and Seed Trade in one of the largest Agricultural Counties in England, a thorough business Man, well acquainted with either; there has been a large Seed Trade carried on for more than half a century, and is capable of very great extension.—Any one wishing to enter into a first-rate business, this offers an opportunity rarely to be met with.—For particulars inquire of Messrs. HURST & M'MULLEN, Seedsmen, 46, Leadenhall Street, London, E.C.

TO GARDENERS.

WANTED, for a single-handed place, a sober, honest, industrious GARDENER, who thoroughly understands his profession. Wages 40*l*. per annum. A cottage and small garden.—Apply to Capt. TURTON, Kilvington Hall, Thirsk.

WANTED, AS GARDENER, an industrious and intelligent married Man, without children. He must understand the Succession of Crops in the Kitchen Garden, the Cultivation of Plants for the Flower Borders, and the care of a Greenhouse. They will live in the Lodge, and the Wife will be expected to attend to the Entrance Gate. Wages 1*l*. a-week.—Apply, stating particulars of service and references, to D. H. L. Feltham, Hounslow, W.

WANTED, in a London Seed Merchant's Counting House, a JUNIOR CLERK. A good handwriting and a knowledge of the business absolutely necessary.—Address, with full particulars, to W. I., care of Wm. Dawson & Sons, 74, Cannon Street, City, E.C.

WANTED, AS SHOPMAN, a Young Man that has been used to a pushing retail trade. Must be well recommended, and security required. — Address, TIMOTHY BRIGDEN, Seed Merchant, 10, Railway Arcade, London Bridge.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 30, single; understands the management of Fruit, Flower, and Kitchen Garden. Good character.—A. Z., *Gardeners' Chronicle* Office.

GARDENER (HEAD).—Age 35, married, without incumbrance; perfectly understands his profession. Two and a half years' good character.—W. P., 6, College Street, Gipsy Hill, Norwood.

GARDENER (HEAD).—Age 22, married, one child; thoroughly practical and energetic. Four years' excellent character.—G. ELLIS, Euston Hall Gardens, Thetford, Norfolk, stating Wages, &c.

GARDENER (HEAD).—Age 27, married; has a thorough good practical knowledge of his profession in all its branches. Four years good character.—A. B. C., Bolsterstone, Sheffield.

GARDENER (HEAD).—Age 25, single; has had good experience in all kinds of Forcing, and the general Growing of all kinds of Plants. Leaving through his employer giving up his Establishment. Undeniable character.—F. H., St. Martin's Place, Dorking.

GARDENER (HEAD).—Age 30, married; no incumbrance. Understands Flower, Fruit, and Kitchen Gardens, Early and Late Forcing. No objection to a single-handed place. Can have four years' character from his present employer.—W. F., Post Office, Wingham, Kent.

GARDENER (HEAD).—Age 30, single. A lady who, in consequence of a death, is parting with her Gardener, is anxious to obtain for him another situation. He is a steady, industrious, working man, thoroughly experienced, and clever in Designing new Grounds.—N. B., Little Wargroves, Hawkhurst, Kent.

GARDENER (HEAD).—Age 27, married, no incumbrance; well understands Forcing Vines, Cucumbers, Melons, and Flower and Kitchen Garden. Four years' good character.—A. B., Marlborough Cottage, New Road, Hammersmith, W.

GARDENER.—Married, small family; understands Greenhouse, Kitchen, Fruit, and Flower Garden. Can milk. Four years' character.—A. B., Post Office, Bexley Heath, Kent.

GARDENER.—Age 37, married, no incumbrance; has a good practical knowledge of his profession; two-and-a-half years' good character; Wife at Lodge if required.—A. B., 3, South Road West, Kent Park, Forest Hill, S.

GARDENER,—Married; understands the Management of Kitchen, Fruit, and Flower Gardens, Greenhouse, &c. No objection to a Cow.—G. S., J. W. Brotherton, Esq., The Firs, Esher, Surrey.

GARDENER (SECOND).—Age 25; in any nobleman's or gentleman's Garden: well acquainted with Forcing, and has a good general knowledge of his profession.—L. W., Post Office, Beckenham, Kent.

GARDENER (UNDER).—Aged 21.—Mr. WINGFIELD, Donnington Park, near Derby.

GARDENER (UNDER).—Age 21, single; well acquainted with Forcing, Kitchen and Flower Garden. Would not object to a small single-handed place. Three years' good character.—J. B., Wanstead Grove, N.E.

GARDENER (UNDER).—A Young Man, steady, active, and willing, who has had practice in Fruit Forcing, Nailing Wall Trees, &c. Can be highly recommended by the Gardener he is leaving.—J. MILES, Great Bookham, Surrey.

PROPAGATOR OR FOREMAN, AND PROPAGATOR of Soft-wooded Plants generally.—Has had many years' experience in Growing for the London Market.—A. B., 2, Harriett Street, Stanley Bridge, Fulham, S.W.

FOREMAN, in a nobleman's or gentleman's establishment.—Leaving his present situation, where he has been but a short time. Three years' character from his former place.—A. D., Col. Challoner, Portnall Park, Egham, Surrey.

FOREMAN, in a nobleman's or gentleman's family.—Age 24; has had some experience in Early and Late Forcing, Hothouse and Greenhouse Plants, &c. Good reference if required. No objection to any part of the country.—A. B., Post Office, Crickhowell, Breconshire, S.W.

TO LANDOWNERS.—A person fully competent to take the entire Management of an Estate, and who has for many years had the Management of a Farm of 800 acres, at Peasemore, Berks, desires a similar engagement, or one to superintend an Estate generally. The fullest explanation will be given by Mr. John Matthews, of Peasmore, and reference may be made to the owner of the Peasemore Estate, as well as to Mr. Graham, of Newbury.

STEWARD, or to assist a Gentleman.—Age 40, single; understands Stock and attending Markets; reference given.—S. M., Post Office, Aylsham, Norfolk.

STEWARD OR BAILIFF.—Age 40, married; has had great experience in the midland and southern counties is thoroughly practical in the most modern style of Farming; a good Judge and Manager of Stock, and a good Accountant.—B, C., Post Office, Tunbridge Wells, Kent.

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STEWARD OR BAILIFF.—Age 26, single; of good address and active business habits; experienced in the management of Arable and Meadow Land, Light or Heavy Soils, Cultivation of all kinds of Crops; thoroughly acquainted with the Breeding and Fattening of all description of Stock: conversant with all Modern Agricultural Implements, Steam Machinery, Irrigation, &c.; experienced Conductor of Labour, qualified to Keep Accounts, and do all business connected with a first-class Farm, however extensive.—H. H., Post Office, Brockenhurst, Lymington, Hants.

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BAILIFF.—Age 46; thoroughly understands Farming, Breeding and Rearing of Stock, and Attending Market. Can have first-class testimonials from his late employer for 14 years.—B. B., Mr. Perch, News Agent, Wimbledon, Surrey, S.W.

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SHOPMAN.—Has had several years' experience in the Seed Trade. First-class character.—R. F. J., 39, Carlisle Street, Portman Market, W.

TO SEEDSMEN, ETC.

SHOPMAN.—Age 26; 10 years' experience of the trade. First-rate references.—SEEDSMAN, Mr. Richardson's, 54, Benyon Road, De Beauvoir Town, N.

SHOPMAN (UNDER), in the Wholesale Seed Trade.—Has had eight years experience.—O. P., *Gardeners' Chronicle* Office, W.C.

The Gardeners' Chronicle Newspaper.

SATURDAY, OCTOBER 6, 1860.

MINERALOGY. — KING'S COLLEGE, London. — Professor TENNANT, F.G.S., will commence a COURSE of LECTURES on MINERALOGY, with a view to facilitate the study of GEOLOGY, and of the application of Mineral Substances in the ARTS. The Lectures began on FRIDAY, October 5, at 9 o'Clock, A.M. They will be continued on each succeeding WEDNESDAY and FRIDAY at the same hour. Fee, 2*l.* 2*s.* R. W. JELF, D.D., Principal.

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Sizes.—Inches		Inches.		Per foot.		Per 10 feet.
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From 6 by 4	,,	7 ,, 5	,,	2*d.*	,,	0 16 8
,, 7 ,, 5	,,	8 ,, 6	,,	2½*d.*	,,	0 18 9
,, 8 ,, 6	,,	10 ,, 8	,,	2½*d.*	,,	1 0 10
,, 10 ,, 8	,,	12 ,, 9	,,	2¾*d.*	,,	1 2 11

Larger sizes, not exceeding 40 inches long.

16 oz. from 3*d.* to 3½*d.* per square foot, according to size.
21 oz. ,, 3½*d.* to 5*d.* ,, ,, ,,
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PATENT ROUGH PLATE, THICK CROWN GLASS, and PATENT PLATE GLASS, for Horticultural purposes, at reduced prices, by the 100 square feet.

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From JAMES KENNEDY, Esq.

"Myremill, by Maybole, Ayrshire.

"I have received your inquiry as to my experience in the use of Gutta Percha Tubing. I had 350 yards of it from your firm, and I have used it for the last few months in distributing liquid manure from my tanks over my fields, having often a pressure of 300 feet on it; and have been able to get the liquid from the end of the Tubing, by the pressure from the steam engine, upwards of 40 yards. I have 350 Scotch acres laid with metal pipes under ground for the conveyance of liquid manures over my farm, and your Gutta Percha Tubing has given me great facility in spreading it over the surface of the land. I likewise think highly of the Gutta Percha Union Joint."

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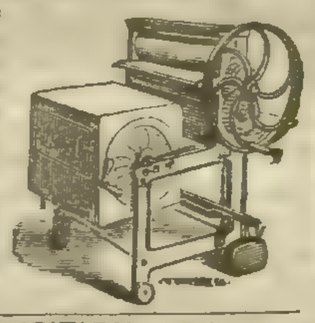
N.B. These Pencils are unequalled for marking indelibly on Linen, &c., for which purpose a much finer point is made, at the same price, than that contained in the Gardener's Pencil. Exposure to light or heat renders it permanent.

BRADFORD'S PATENT WASHING MACHINE. SIMPLICITY AND WONDERFUL EFFICIENCY.



"I very gratefully acknowledge the extraordinary patronage I have received from all parts of England, Ireland, and Scotland, and which has very far exceeded my most sanguine expectations." — THOMAS BRADFORD, Patentee, Cathedral Steps, Manchester. London Office: 63, Fleet Street, E.C.

N.B. My Machines always have, and always will be sent on approval, if desired, before payment. Description and Price free by post.

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METCALFE, BINGLEY, AND CO.'S New Pattern and Penetrating Tooth Brushes, Penetrating unbleached Hair Brushes, Improved Flesh and Clothes Brushes, and genuine Smyrna Sponges; and every description of Brush, Comb, and Perfumery for the Toilet. The Tooth Brushes search thoroughly between the divisions of the Teeth and clean them most effectually—the hairs never come loose. M., B., & Co.'s new and delicious perfumes the Fairy Bouquet and the Oxford and Cambridge Bouquet, in bottles 2*s.*, 3*s.* 6*d.*, and 5*s.* METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box.—Sole Establishment, 130B and 131, Oxford Street, 2d and 3d doors west from Holles Street, London, W.

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In the next Number of ONCE A WEEK, the Story of "EVAN HARRINGTON" will be completed; and

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BY SHIRLEY BROOKS,

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THE QUARTERLY REVIEW, No. CCXVI., will be published NEXT WEEK.

CONTENTS:—

I. THE EMPIRE OF BRAZIL.
II. DEACONESSES.
III. PUBLIC SCHOOLS.
IV. WILLS AND WILLMAKING.
V. GEORGE ELIOT'S NOVELS.
VI. ARREST OF THE FIVE MEMBERS BY CHARLES I.
VII. IRON SIDES AND WOODEN WALLS.
VIII. COMPETITIVE EXAMINATIONS.

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Now ready, price 3*s.* 6*d.*,

THE FRUIT MANUAL; Containing Descriptions and Synonymes of the Fruits and Fruit Trees commonly met with in the Gardens and Orchards of Great Britain, with Selected Lists of the Varieties most worthy of Cultivation. By ROBERT HOGG, LL.D., F.H.S., Secretary to the Fruit Committee of the Horticultural Society of London. Author of "The Vegetable Kingdom and its Products;" "British Pomology;" and Co-Editor of the "Cottage Gardener."

On December 1, will be Published, price 1*s.*,

THE GARDENERS' YEAR BOOK, ALMANACK, AND DIRECTORY FOR 1861. By ROBERT HOGG, LL.D., F.H.S.

Advertisements received up to the middle of November.

London: "Cottage Gardener" Office, 162, Fleet Street, E.C.

Just Published, price 2*s.* 6*d.*,

A TREATISE ON THE VINE. By S. CAULFIELD, Superintendent Richmond Nurseries, Ballybough Bridge, Dublin, to whom the Prize for the best Essay on its cultivation was awarded by the Royal Horticultural Society of Ireland, Can be had from Messrs. Fergus Farrell and Son, Capel Street; at their Nurseries; and from all the principal Seedsmen in Dublin. Sent free to any part of the three kingdoms on the receipt of thirty postage stamps.

DRAINAGE OF LAND.

Price 6*d.*, or by Post for Eight Postage Stamps,

ON THE PROGRESS AND RESULTS OF UNDER DRAINAGE IN GREAT BRITAIN. Prize Essay. By J. BAILEY DENTON, Agricultural Engineer, and author of the "Prize Essay on Road Making," and other Agricultural Treatises.—52, Parliament St., Westminster, S.W.

FARMING ACCOUNTS.

FREEMAN'S FARMER'S ACCOUNT BOOK, THE BEST AND SIMPLEST SYSTEM, as testified by the leading agriculturists. Price 5*s.* 4to, for small farms; 8*s.* 6*d.* folio, for large occupations.

Published by J. LODER, Woodbridge; SIMPKIN & MARSHALL, London; MORZLEY, Derby; LODOR, Lincoln, and all Booksellers in the Kingdom.

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THE EARTHWORM AND COMMON HOUSE-FLY.

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The 10th of October will be the last day for receiving Advertisements for insertion in

THORLEY'S ILLUSTRATED FARMERS' ALMANACK, for 1861.

The First Edition of 100,000 copies will be ready on the 18th inst. Such a medium for advertisers as this is rarely to be met with.

For further particulars apply to JOSEPH THORLEY, 77, Newgate Street, E.C.; or at his Steam Mills, Caledonian Road, King's Cross, N.

ZADKIEL'S ALMANAC for 1861 contains the Millennium—The Great Conjunction—Louis Napoleon to "cleanse the Sanctuary"—Downfall of Rome—Rise of Jerusalem—Hieroglyphic: Reign of Discord.

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FOLIA ORCHIDACEA, Part IX. Containing the conclusion of Pleurothallis.

Parts I. to VIII., price 2*s.* 6*d.* each, may still be had.

J. MATTHEWS, 41, Wellington Street, Covent Garden, W.C.

HORTICULTURAL GARDENS.—The *Gardeners' Chronicle* of May 12, containing Mr. NESFIELD'S COLOURED PLAN for the NEW GARDEN at Kensington Gore, is still on Sale at the Office, 41, Wellington Street, Covent Garden, W.C. and will be sent by post on receipt of six stamps.

News of the Week.

AFTER a bombardment of six days Ancona capitulated to the Sardinians on Saturday morning, and General LAMORICIÈRE and his whole garrison are now prisoners of war. The vanguard of another division of the Sardinian army is at Tivoli within sight of Rome; and the division of General MASI, after occupying Montefiascone, Civita Castellana, and Viterbo, has hoisted the Sardinian flag on the left bank of the Tiber. The Sardinian Chambers were opened at Turin on Tuesday, when Count CAVOUR, in enunciating the policy of the Government, disavowed any intention of making war upon Austria for the liberation of Venetia, and renounced the hope of recovering Rome by the agency of the sword alone. He repudiated the idea of a collision with France at Rome as an act of ingratitude so monstrous as to brand Italy with a deep disgrace, such as ages of suffering could not obliterate; and concluded by asking the Parliament for a vote of confidence, which had become the more necessary because "a voice which was with reason dear to the people had manifested its distrust of the Ministry both to the KING and country." A project of law was then presented authorising the KING to accept and establish the annexation of those provinces of Central and Southern Italy which might express by universal suffrage their wish to form a part of the Sardinian monarchy. A committee was appointed to examine and report upon this project of law, and at their sitting on Wednesday, the members of the Committee expressed full confidence in the Government, but desired that all "dualism" with GARIBALDI should cease. The KING OF SARDINIA has left Turin for Ancona to take the command of his army, and will proceed thence to Naples, in compliance with an address presented to him by a deputation of the inhabitants inviting him to go to Naples in order to restore tranquillity and to diffuse the benefits of liberty and progress. In an order of the day addressed by HIS MAJESTY to the army, he says that he takes the command because it would cost him too much not to be foremost wherever there may be danger, and that they must establish a strong Italian monarchy on the liberty of peoples who will aid them with order and concord. GARIBALDI himself has seen the necessity of submitting to the guidance of Sardinia, and of allowing the Italian movement to proceed henceforward under the leadership of VICTOR EMMANUEL. He has accordingly dismissed his republican advisers, formed a moderate Ministry which commands the confidence of the country, and issued an address to his troops, congratulating them upon the approach of their Sardinian brothers. The check which he received last week on the banks of the Volturno, has been followed by the loss of Cajazzo, but these reverses have since been retrieved by a great victory over the royal army at Caserta, where GARIBALDI repulsed them along their whole line and succeeded in surrounding them, making 2000 prisoners.

The POPE on Friday last delivered an allocution

in a secret Consistory of Cardinals, in which he condemned as "detestable and sacrilegious" the "guilty invasion" of the Papal States by the KING and Government of Sardinia, declaring their acts to be null and void, and stating that he will not cease to protest against their criminal proceedings in order to maintain entire the civil power enjoyed by the Roman Church. He deplored the "disastrous and pernicious policy of non-intervention," and above all, its "detestable application to the Roman question," and said that if such "an odious violation of international law" were not entirely nullified, there would no longer be any force or security to legitimate rights. In conclusion, his Holiness called upon all Catholic princes and peoples to "come to the assistance of the Father of the Faithful, attacked by the parricidal arms of a degenerate son." The reply of the French Government to the recent *ultimatum* of the POPE threatening to quit Rome at once if France did not interfere against Sardinia, was received in Rome on Sunday. In this document the French Government is said to have assured the POPE that nobody deplored more than the EMPEROR the course taken by Sardinia; that the employment of force, instead of diminishing, would but aggravate the evil, by plunging Italy into a struggle from which a general war might arise; and that, in order to afford efficacious protection to the Holy See and make the patrimony of St. Peter respected, the French army in the Papal States would be increased to 24,000 men. At the same time the EMPEROR still maintained the principle of non-intervention, and would be glad to consign the city of Rome to the protection of a genuine Italian Power. It is now believed that, in spite of all declarations to the contrary, the POPE will shortly leave Rome, and that the Duke of GRAMMONT and General GOYON have been instructed to offer no obstacle to his departure. The Spanish Government has addressed a note to the different Powers declaring that it is its duty to maintain, in the most formal manner, the rights of the KING OF NAPLES as a member of the Royal family of Spain, and to raise every opposition against the flagrant violation of arrangements solemnly made by the Treaty of the quadruple alliance of 1718, and confirmed in 1815 by the Treaty of Vienna.

The Revenue returns for the year and quarter ending the 30th of September, were issued on Saturday. They show a decrease on the quarter of 606,610*l.*, and a net increase on the year of 4,819,680*l.*

Home News.

THE QUEEN IN GERMANY.—Her Majesty was received on her arrival at Coburg on Tuesday week by the Duke and Duchess of Coburg and Gotha, and the Prince and Princess Frederick William of Prussia, with Prince William, their infant son. On Wednesday morning the Queen, Prince Consort, and the Princess Alice, accompanied the Duke and Duchess of Coburg and the Prince and Princess Frederick William in a walk in the neighbourhood of the Palace. On Thursday morning the Prince Consort, accompanied by the Duke of Coburg and Prince Frederick William of Prussia, went to Gotha and attended the funeral of the late Dowager Duchess. The Queen, accompanied by the Duchess of Coburg and the Princess Frederick William of Prussia, attended a special service in the Ducal Chapel of the Palace, at which a funeral sermon was preached in honour of the late Duchess. In the evening the Royal family dined in private, there being no addition to the party but the Count Mensdorff, who had previously arrived on a mission from the Emperor of Austria, and had been introduced to her Majesty by Lord John Russell. On Friday morning the Prince Consort, the Duke and Duchess of Coburg-Gotha, the Prince and Princess Frederick William of Prussia, and Princess Alice, drove to the Château of the Callenberg. Her Majesty drove out in the afternoon, accompanied by the same Royal party, and walked in the environs of the town. In the evening Prince Ernest of Wurtemberg paid his respects to the Queen, and afterwards joined the Royal dinner party. On Saturday morning the Queen, Prince Consort and the Princess Alice, accompanied by the Duke and Duchess of Coburg and the Prince and Princess Frederick William of Prussia, went to the Palace of Rosenau, where luncheon was served to the Royal party. In the evening the Royal party returned to Coburg. On Sunday the Queen, Prince Consort, and the Princess Alice, the Duke and Duchess of Coburg, and the Prince and Princess Frederick William of Prussia attended Divine service at the Church of St. Moritz. The service was performed by the Rev. Dr. Meyer.

ACCIDENT TO THE PRINCE CONSORT.—On Monday last, on the return of the Prince Consort to Coburg from shooting, the horses of his carriage ran away. His Royal Highness jumped out, and was not hurt beyond some slight bruises and cuts on his face. On Tuesday the Prince did not leave the Palace; his general health however was not affected and he suffered but little from the injuries received on the previous day. On Wednesday his Royal Highness had so far recovered as to be able to resume his usual pursuits and to go out.

THE PRINCESS ALICE.—The *Augsburg Gazette* states that on the return of her Majesty from Coburg the betrothal of the Princess Alice with Prince Louis of Hesse Darmstadt will be officially made known at Mayence. Prince Louis is the son of Prince Charles, brother of the reigning Grand Duke, by the Princess Elizabeth of Prussia, cousin of the King, and was born in 1837.

THE PRINCE OF WALES.—On the 13th ult. his Royal Highness saw M. Blondin cross the Falls of Niagara on his tight-rope with a man on his back, and return along the rope on stilts about 3 feet high. His Royal Highness then went up in a steamer to the foot of the Falls. On the 17th his Royal Highness visited the Cave of the Winds and drove round to see the scenery of the neighbourhood. On the 18th his Royal Highness laid the corner stone of Brock's monument, and then went on to Hamilton where he was received with great enthusiasm, the city being decorated with arches and brilliantly illuminated. On the 20th the Prince under the title of Lord Renfrew commenced his tour in the United States under the most favourable auspices. He reached Windsor at 8 P.M. by special train from Hamilton, and was escorted on board the Detroit and Milwaukie ferry, which had been gorgeously decorated for the occasion. When the steamer reached American waters Mayor Bahl, on behalf of the city of Detroit welcomed the Prince to the United States. Arranged in the river and covering a space of nearly a mile in length was a large fleet of river and lake vessels, beautifully rigged with variegated lamps, and decorated with banners and emblems inscribed with words of greeting. As the royal steamer passed through the fleet each vessel sent forth a perfect shower of rockets and fireworks, and the warehouses fronting the river were splendidly illuminated. Fireworks were also let off from the docks, and the whole river was one complete flame of light, making one of the grandest displays ever witnessed. The Prince landed at the foot of Woodward Avenue, in which, and in the adjoining streets, 30,000 people were assembled. An escort composed of the firemen of the city, bearing torches, and most of the city military, was intended, but the crowd was so great it was found impossible for the procession to form. After some delay, and the greatest confusion, the Prince was taken away in a close carriage, and driven to the Russell House unrecognised. His suite followed, escorted by firemen. On the 21st. his Royal Highness attempted to drive through the city in an open barouche and four, but found it impossible, on account of the streets being blocked up by spectators who cheered him with the wildest enthusiasm. The Prince left in the afternoon under a Royal salute for Chicago, passing through Kalamazzo, Ann Arbor, and Marshall, where crowds of people lined the roads and received him with salutes and music, the people at the stations climbing up the carriage and looking in at the window in their anxiety to see his Royal Highness. On arriving at Chicago in the evening the Prince met with the most gratifying and cordial reception. The city was brilliantly illuminated, and the railway station was beset by thousands of people who welcomed the Prince with repeated cheers, while the crowd so blockaded the streets that the Royal carriages had some difficulty in reaching the hotel. On the 22d the Mayor presented the principal citizens to the Prince, who afterwards stood on the balcony of the the hotel, in order to gratify the ladies and gentlemen who wished to see him. His Royal Highness afterwards drove through the city, and then proceeded to St, Louis for three days' shooting on the Prairies.

PRINCE NAPOLEON.—On Thursday, the 27th, the Prince landed from his yacht at Kingstown, and proceeded by railway to Dublin. At the station in Westland Row he took a hack car and drove to Glasnevin, where he minutely inspected the Albert Model Farm. He then returned to Dublin, and shortly afterwards left for Kingstown, where he walked about until dusk and then went on board the yacht. On Friday morning the Prince went to Ballinasloe, and accompanied by the Earl of Clancarty proceeded to Garbally and Lismore, where he inspected the extensive agricultural operations carried on by Mr. Allan Pollok. The Prince returned to Dublin in the evening, and immediately proceeded to Kingstown, where he embarked in his yacht and set sail for St. George's Channel, calling at Milford on his way. On Sunday afternoon his Imperial Highness anchored in Kingsroad, and proceeded thence in a small steamer attached to his yacht to Lamplighter's Slip, where he took a carriage to Bristol. After a stay of a few hours in that city, the Prince returned to Kingsroad and re-embarked. On Tuesday morning his Imperial Highness arrived at Southampton, where he still remains.

PARLIAMENTARY MOVEMENTS.—Mr. Moffatt, late M.P. for Ashburton, is a candidate for Honiton in the Liberal interest, in the room of the late Mr. Locke. Mr. J. W. Malcolm, of Poltalloch, is a candidate for Boston in the room of the late Mr. Herbert Ingram. Mr. F. Pigott has vacated his seat for Reading by accepting the Governorship of the Isle of Man, and his brother, Mr. Serjeant Pigott, leader of the Oxford Circuit, has offered himself to the electors as his successor. Major H. W. Porter, of Winslade, and Mr. Alfred Seymour, are candidates for the seat about to be vacated by Mr. Divett at Exeter.

THE PLYMOUTH COMMAND.—In consequence of continued and increasing illness Vice-Admiral Sir Arthur Fanshawe, recently appointed Port Admiral at Plymouth, has been obliged to resign that appointment. Vice-Admiral Sir Houston Stewart is spoken of as his successor.

THE CHANNEL FLEET.—The second division of the Channel Fleet consisting of the Edgar, 91; Trafalgar, 91; Algiers, 91; Mersey, 40; and Diamond, 32, under the command of Rear-Admiral Erskine, arrived at Spithead on Wednesday. The first division under Vice-Admiral Sir Charles Fremantle, consisting of the Royal Albert, 121; Donegal, 101; Conqueror, 100; Aboukir, 90; and Centurion, 80, arrived on the same day in Plymouth Sound, preparatory to their return to their respective stations for the winter.

THE REVENUE.—The Revenue Returns for the year and quarter ended the 30th Sept. show an increase of 4,819,680*l.* on the year, and a decrease of 606,610*l.* on the quarter. The year's account shows an increase in the Excise of 1,385,000*l.*; Stamps, 279,277*l.*; Taxes, 67,000*l.*; Property Tax, 4,623,710*l.*; Post Office, 115,000*l.*; Crown Lands, 7989*l.*; and a decrease in the Customs of 1,412,371*l.*; Miscellaneous, 245,925*l.* The quarter's account shows an increase in Stamps of 116,000*l.*; Taxes, 20,000*l.*; Property Tax, 407,000*l.*; Post Office, 20,000*l.*; Crown Lands, 3589*l.*; and a decrease in the Customs of 688,866*l.*; Excise, 460,000*l.*; Miscellaneous, 24,333*l.*

THE VOLUNTEER MOVEMENT.—The North Middlesex were reviewed on Saturday by the Inspector-General. A Marylebone and St. John's Wood Company has recently been added to this corps; companies from Camden and Kentish Towns and Haverstock Hill are to be formed, and nearly 100 young gentlemen of the North London Collegiate School have been attached to the Corps as a Cadet Company. The General Cadet Company is also progressing favourably, and it is intended to form a Bugle Cadet Band.—The 12th Middlesex (Barnet) had a shooting match for a valuable rifle last week at 5 ranges of 150 yards from the shoulder, and 5 at 400 yards kneeling. The prize was won by Mr. Hammerton, who scored 16 points.—The great review of the Yorkshire Volunteers took place on Friday on Knavesmire, about a mile south of the city of York. The number of Volunteers assembled on the occasion was 4894, arranged in three brigades. The 1st Brigade comprised two battalions of Artillery and two battalions of Rifles. The 1st battalion of Artillery consisted of the Bridlington, Filey, Whitby, and Leeds corps. The 2d battalion consisted of the Hull Artillery. The 3d battalion included the York, Harrogate, Wetherby, Knaresborough, Ripon, and Tadcaster Rifles. The 4th battalion included the Sheffield, Pontefract, Rotherham, and Doncaster Rifles. The 2d Brigade consisted of five battalions of West Riding corps. The 1st comprised the Bradford, Eccleshill, Wakefield, Goole, and Dewsbury corps. The 2d consisted of the Huddersfield and Holmfirth corps. The 3d consisted of the Halifax corps. The 4th consisted of the Leeds corps. The 5th included the Skipton, North Craven, Burley, Guiseley, and Ingleton corps. The 3d Brigade comprised four battalions of East and North Riding corps. The 1st consisted of the Hull corps. The 2d included the Howden, Bridlington, Beverley, Driffield, and Market Weighton corps. The 3d comprised the Swaledale, Startford, Bedale, Stokesley, Masham, Catterick, Richmond, and Northallerton corps. The 4th included the Malton, Hovingham, Scarborough, Helmsley, Thirsk, and Pickering corps. The reviewing officer was Lieut.-General Sir G. Wetherall, and the manœuvres were gone through in a very creditable manner. There was an immense number of spectators. At the close of the review a meat pie and a pint of ale was supplied to each Volunteer at the expense of the Lords Lieutenants of the three Ridings.—The Northamptonshire Rifle Association held their first meeting last week in Althorp Park, the seat of Earl Spencer, when the first competition for prizes for rifle shooting took place, and all the corps in the county were reviewed by the Earl of Euston, in the presence of the Marquis of Exeter, Earl Spencer, Lord Overstone, Lord Lyveden, and about 15,000 persons. At the competition the challenge cup, value 25*l.*, was won by Sergeant Presland, of the Towcester corps. This cup, however, will not be retained by the winner permanently, but is open to annual competition. A cup, value 10*l.*, offered as a prize to all comers, was won by Mr. J. Biggs, of Elkington.—The first battalion of the Staffordshire Corps, including the Longton, Hanley, Burslem, Tunstall, Stoke-upon-Trent, Kidsgrove, and Newcastle, were inspected last week at Trentham by Lord Hatherton, Lord-Lieutenant of the county,

and the Inspector-General of the district. — On Friday a meeting of the Volunteer officers of Staffordshire, convened by the Lord-Lieutenant, was held at Stafford, when a resolution was adopted asking the Government to establish an additional number of schools of musketry similar to the school at Hythe. It was also resolved to establish county associations for prize shooting, the Lord-Lieutenant stating that he would himself subscribe 100*l*, and that he could at once obtain 1200*l*. without calling upon the officers. In the evening Lord Hatherton was entertained at dinner by the Volunteer officers of the county.—A public meeting was held a few days since at Queenshead, in the West Riding, at which Mr. Michael Stocks offered to subscribe 500*l*. if a corps of 500 men could be raised at once. About 40 young men entered their names at the conclusion of the meeting. Mr. Stocks is the same gentleman who recently equipped 100 men in his own neighbourhood to form the Shibdendale corps.—The Howden and Tynemouth companies of the 1st Northumberland and the 3d Durham Artillery were inspected last week at North Shields by Colonel Morris, Inspector-General of Artillery Volunteers.—The Artillery and Rifle Corps of the Alnwick Division of Northumberland were reviewed in that town last week by Earl Grey, Lord-Lieutenant of the county.—On Saturday the members of the Gateshead Corps mustered in full force at the Drill-ground and were presented with a handsome silver bugle, the gift of the ladies of that borough.—A public meeting was held last week at Shotley Bridge, when it was unanimously resolved to form a corps for Shotley Bridge and Consett.—The Stephenson companies of the Newcastle-on-Tyne corps met on Saturday in the Corn Exchange, when the successful competitors at a shooting match lately held at Tynemouth, were presented with the silver medals given by the officers of the companies for the best shots at 200 yards.—The 7th Shropshire met on Friday at the Wrekin, and contested for a rifle, the gift of Captain Eyton, which after a severe contest at ranges of 300, 500, and 600 yards, was won by Corporal M'Kenzie.—The Newton Review prize shooting commenced on Wednesday week at Southport, and was brought to a close on Saturday. The Grand Cup, value 50*l*., given by the officers of the Manchester, Salford, and Ardwick Regiments, open to the Volunteers of Great Britain, was won by Sergeant Hale, of the 13th (Dukinfield) Cheshire corps; the prize of 50*l*., given by Mr. Barnes of Manchester, and restricted to Manchester regiments, was won by Mr. James Rogerson of the 3d Manchester; the Legh Challenge Cup and silver medal was won by Mr. Kemp of the 3d Manchester; the Ladies' Cup, open to the whole kingdom, was won after a protracted contest by Major Renny Tailgour, of the Forfarshire Corps. The 20*l*. prize open to the whole kingdom was won by Capt. Greig, Wilmslow Corps; the 50*l*. prize at 800, 900, and 1000 yards, was won by Captain Ick, of the East York Militia, who scored 16 points; his competitors, Mr Marriott having scored 15, and Mr. Leece, assistant to Mr. Whitworth, 13. For the Southport Cup, value 35*l*., open to all comers, Capt. Ick and Mr. Leece each scored 15, and had to shoot off the tie. This was a very exciting contest. The target was placed at 1000 yards, and the two champions put three balls in succession into it. At the fourth shot Capt. Ick missed, and Mr. Leece hit the mark and won the prize amidst the cheers of the spectators. Other prizes were won by Sergeant Lawley, Captain Shepherd, Lieut. Archibald, Lieut. Dixon, Ensign Radcliffe, Sergeant Lawley, Messrs. Adshead, Ragnor, G. Hall, Batley, Phillips, Collinson, Marriott, &c.—On Friday a grand rifle contest took place at Northdown Park, about a mile and a half from Margate. Among the corps who took part in it were the Margate, Ramsgate, Canterbury, Tunbridge Wells, St. George's, West Middlesex, Westminster. Woolwich, Deal, Royal East Kent Mounted, Esher (5th Surrey), Lambeth, and 7th Surrey. There were 14 prizes for competition, at ranges varying from 100 to 500 yards, the successful competitors being Capt. Fisher of the Tunbridge Wells Corps, Staff Sergeants Dillon and Wilson, Corporal Mentier, Privates Feakins, Keble, Palmer, Blaize and Robb,—The 5th and 6th companies of the Kent (Canterbury) Corps have been presented with banners by Mrs. and the Misses Austen (the wife and daughters of Captain Austen). The banners are composed of silk and velvet, and are embroidered with the Kentish horse and the motto "Invicta."—The 7th Essex have had a competition at Southend for a silver cup, presented by Mrs. Tawke, and a silver cream ewer, provided from the funds of the corps. For the first prize, at 400 yards, Messrs. R. Hill and H. Allen made a tie, in shooting off which Mr. Allen was successful. For the second prize, at 300 yards, Sergeant Knapping and Mr. W. Cause made a tie, in shooting off which Mr. Cause was the victor.—On Saturday two silver cups were shot for by Volunteers of different corps at Rottingdean, near Brighton, at ranges of 200, 300, and 400 yards. The first cup presented by Captain Rucker, of the 25th Kent, was won by Corporal Bayley, of the 3d Kent, who was also the winner of the second prize attached to the other cup, given by Ensign Barnes, of the 25th Kent. The second cup presented by Mr. Bowes, was won by Sergeant Winser, 3d Kent; Captain Rucker's second prize was won by Mr. Seppings, of the Civil Service Brigade.—A shooting match took place at Wisbech last week between 10 Cambridge and 10 Wisbech Volunteers. The shooting, which was at 150, 200, 250, and 300 yards, was conducted under the personal superintendence of Captain Fryer, and ended in the following scores—Cambridge, 198 points; Wisbech, 249.—The Wiltshire Corps were reviewed last week in Clarendon Park, near Salisbury, the seat of Sir F. H. Bathurst, by General Lord William Paulet, C.B. The corps were arranged in two battalions. The first consisted of the Salisbury, Trowbridge, Bradford, Southampton, Market Lavington, Mere, Warminster, Melksham, Romsey, and Andover; and the 2d included the Malmesbury, Devizes, Maiden Bradley, Westbury, Milton, and Portsmouth.—The first meeting of the 2d battalion of Gloucestershire took place at Cheltenham last week, when numerous prizes were competed for at ranges of 200, 300, 500, and 600 yards. The chief prize given by the ladies, and consisting of 50*l*. and a gold medal, was won by Private Jack of the 7th (Cheltenham) Company.—The Bristol Corps had a grand competition last week extending over three days on their practice ground at Sneyd Park. Upwards of 200*l*. was given in prizes, presented by Earl Ducie, Lord-Lieutenant of the county, the Duke of Beaufort, the Earl of Ellenborough, Lord Dynevor, the Mayor of Bristol, &c. The principal prize was a silver bugle competed for by the 10 companies for the Bristol corps, the officers and two men from the ranks being selected from each company, the bugle to be held by the company gaining the greatest number of points at file and volley firing, and skirmishing practice. The prize fell to No. 3 company, which out of 50 shots, averaged 62 41 points per man. The average firing of the whole corps reached the high point of 50.11. The competition for a regimental challenge gold medal, to be held for one year, and to become the property of any member winning it two years in succession, was not concluded until Saturday. The shooting was at ranges of 800 and 900 yards, 10 rounds at each distance, and there were 12 competitors. Ensign Pinney and Private C. Thomas, both of No. 3 company, each made eight points, and in firing off the ties Ensign Pinney won at the sixth shot.—The Bristol and Gloucestershire Artillery held a prize meeting on Friday. The first match was for the ladies' prizes, five in number, the first of which, a silver claret jug, was won by Sergeant Nattriss; the 2nd, a silver tankard, by Private Gilford; the 3d, a Westley Richards rifle carbine, by Sergeant Hanson; the 4th, a silver beaker, by Private Stanton; the 5th a silver cup, by Lieut. Bean. The second match, open to any company of Volunteers, consisted of three prizes. The 1st, 15*l*., was won by Viscount Fielding; the 2d, 10*l*., by Sergeant Baker, and the 3d, 5*l*., by Sergeant Hanson. The third match, for two prizes of 10*l*. and 5*l*., was open to all comers. Sergeant Bingham and Private Hansom, who each made seven points at the first range of 600 yards, agreed to divide the stakes, and fire for the honour at 700 yards, when Sergeant Bingham was the victor.—On Saturday, the 17th Glamorganshire made their first appearance in public, equipped in their new uniform, the cost of which is paid for by Mr. Evan Evans, proprietor of the Vale of Neath Brewery and captain of the corps.—The Plymouth corps had a shooting match last week in the presence of General Hutchinson, commandant of the western district. A cup given by Lieutenant Norrington was won by Mr. Jeffrey. There were 15 competitors for a challenge cup, given by the Rev. Mr. Bewes, the officers' gold medal, and a rifle given by Mr. Derry. Mr. J. H. Osborne won the medal, and should he be successful next year, he will obtain the cup; Mr. R. G. Edmonds won the rifle.—A meeting was held on Monday week at Colyton, at which a Volunteer corps was organised for that district of Devonshire.—A Volunteer Artillery Corps, in addition to the Regiment of Riflemen, is in the course of formation in Preston, and about 100 young men have already enrolled themselves.—The three companies of the Reading Corps were inspected last week by Colonel Luard, after which the prizes obtained at the recent competition were distributed in the Corn Exchange.—On Thursday and Friday week a shooting match, for 20*l*., took place between 10 selected members of the Windsor Corps and 10 of the Maidenhead. The latter proved the victors on both days, defeating their opponents on Thursday by 23 points, and on Friday by 33.—On Wednesday week Mr. Hope, M.P., for Windsor, entertained the members of the Windsor Corps at dinner at Ditton Park.—Lord Hastings gave a splendid entertainment on Tuesday week at Melton Constable to the Fakenham and Hote Companies of the Norfolk Corps.

Foreign.

France.—The *Moniteur* of Sunday contained the following article on the increase of the French army at Rome:—

"The Emperor has decided upon immediately reinforcing the corps of occupation at Rome by sending a division of infantry, two squadrons of cavalry, and a battery of artillery. The Sardinian Government has been informed that General Goyon has received instructions authorising him to extend his action so far as the military conditions to which it is naturally subordinate will permit him. It only appertains to the great Powers assembled in Congress to pronounce once for all on the questions which have arisen in Italy out of late events; but until then the Government of the Emperor, in conformity with the mission which it has imposed upon itself, will continue to discharge the duties resulting from its sympathies with the Holy Father, and from the presence of our flag in the capital of the Catholic world."

The *Constitutionnel* publishes an article on the same subject stating that the "augmentation of the army of occupation is but the consequence of the late events accomplished in Italy, and the revolutionary character of Garibaldi's recent acts. In 1860, as in 1849, France will protect Rome and the Papacy against the attacks of demagogues. The presence of a French *corps d'armée* at Rome will suffice to prevent any assault against or revolutionary movement within that city; but if it were otherwise, the French battalions will form an invincible barrier for the protection of the Eternal City and the authority of the Chief of the Church. In augmenting the army of occupation the French Government renders the protection of the city of Rome more efficacious, but respects the principle of non-intervention." In answer to the Pope's *ultimatum* transmitted last week through the Duke de Cadore the French Government is said to have assured the Pope that nobody deplored more than the Emperor the course taken by Sardinia. Under actual circumstances however, the use of force, instead of diminishing, would but aggravate the evil, by plunging Italy into a struggle from which a general war might arise; but in order to afford an efficacious protection to the Holy See the French army in the Papal States would be increased to 21,000 men, whose mission would be to make the patrimony of St. Peter respected; this "patrimony," properly so called, comprising a population of 420,000 souls, and including Rome, Civita Vecchia, and Viterbo. The Emperor will still maintain the principle of non-intervention in the question of the internal affairs of Italy, and while promising to maintain order at the Holy See, he would have it at heart to consign the City of Rome to the protection of a genuine Italian Power. Meanwhile Marshal Vaillant, the defender of Rome in 1849, will, in case of need, assume the command in chief of the army of occupation, should the patrimony of St. Peter be threatened either by Garibaldi or Piedmont.—M. Thouvenel tendered his resignation to the Emperor while at Ajaccio, insisting that a more efficacious protection should be granted to the Pope. Since the return of the Emperor and the reply given to the Duke de Cadore, M. Thouvenel has withdrawn his resignation.—A meeting was held on Saturday at the Hotel of the Minister for Foreign Affairs, which was attended by Lord Cowley and Mr. Cobden, for the purpose of settling, in accordance with the Treaty of Commerce, the first Supplementary Convention, affecting the admission of iron, metals, and hardware into France. The *Moniteur* of Sunday published an Imperial decree, of which the enacting article is as follows:—

"Art. 1. The tariff agreed upon between the Plenipotentiaries of France and Great Britain, annexed to the present decree, will be applied to the importation of the merchandise therein mentioned, of British origin and manufacture, to commence from the 1st October next."

The *Moniteur* also contains a decree raising M. Chasseloup-Laubat, Minister of Algeria, to the rank of Grand Cross of the Legion of Honour.—Two aide-de-camps of the Emperor of Russia presented to the Emperor on the 27th ult., four magnificent horses sent to his Majesty by the Emperor Alexander. The horses were selected by the Czar himself, and were accompanied to Paris by a veterinary surgeon, four Hussars, and a non-commissioned officer of the Imperial Guard. The Emperor expressed his admiration at the beauty of the animals, and sent a courteous acknowledgment of the present.—The British Consular Church in Paris in connection with the Kirk of Scotland, was opened on Sunday last, in a chapel connected with the Church of the Oratoire opposite the Palace of the Louvre. The services were conducted by the Rev. Mr. Crombie, who has been appointed minister by the British Government under the Consular Act. This is the first instance in which the Kirk of Scotland has availed herself of the important privileges conferred on her, in common with the Church of England, by the Consular Act.

Spain.—The Cortes will assemble on the 25th of October. The *Espana* asserts that the principal Carlist chiefs are disposed to recognise Queen Isabella II. The Spanish Government has addressed to the different Powers a note supporting the protest issued by the King of Naples when retiring to Gaeta. The Spanish note recalls that, by the Treaty of the Quadruple Alliance of 1718, the kingdom of the Two Sicilies had been ceded by Austria to the Spanish Bourbons. This cession was afterwards confirmed by the Treaty of Vienna. The article 114 of the Final Act of Vienna having, under the guarantee of Europe, again sanctioned these stipulations, the Spanish Government considers it its duty to maintain in the most formal manner the rights of a member of the august family of Spain, and to raise every opposition against the flagrant violation of solemn arrangements. The Absolutist journals reproach the Government for not having sent an army to defend the Pope.

Holland.—In the last sitting of the Second Chamber the draft of the address in reply to the speech from the throne was presented. Instead of being as usual a mere echo of the speech it declared that several bills and measures not noticed in that document ought to be presented.

Belgium.—The King of the Belgians on Sunday visited Tournay, where he was received with great enthusiasm. A triumphal arch was erected by the Society of Boatmen at the end of the bridge over which

his Majesty passed, and, in the public square a throne was raised, on which the King took his seat to witness the filing off of all the communes, corporations, and societies. The Burgomaster congratulated his Majesty on his arrival, and the King in reply thanked that functionary, and through him the whole of the inhabitants, for the warm welcome which had been given to him. His Majesty before leaving the town reviewed the troops of the garrison and the National Guard.

SWITZERLAND.—The Berne papers state that the Count de Chambord has purchased for 300,000f. the residence of Wartensee, near Rorscharch, in the Canton of St. Gall.

BAVARIA.—It is currently reported that negotiations are on foot between Austria and Bavaria for the occupation of the Tyrol by Bavarian troops in case of a war in Italy. The visit of General Schmerling to Munich is said to be connected with the negotiation.

PRUSSIA.—Intelligence has been received from Nubia that Baron von Barnim, the son of Prince Adalbert, died there in July last of swamp fever, and that his medical attendant and servant were still suffering from the malady. The prince received the intelligence at Stralsund, and immediately hastened to Vienna, where his consort was awaiting the return of their son to pass the winter with him in Italy.

AUSTRIA.—The Emperor has ordered a levy of 100,000 men to be effected with all possible expedition; and all the officers of the navy, without exception, have been ordered to be at their posts within 24 hours. The wives and families of the generals and officers of the army in Venetia have received orders immediately to quit the Venetian territory. General Count Mensdorff has left Vienna for Coburg, to convey to Queen Victoria the condolences of the Austrian Court on the death of the Dowager Duchess of Saxe-Coburg, and to offer the Emperor's congratulations on her Majesty's arrival in Germany. On Saturday the members of the Council of the Empire were received by the Emperor in final audience. The Emperor addressed them as follows:—

"I have heard with satisfaction the repeated expressions of your love for our country and of your loyalty as subjects. I confidently expect that my resolution respecting your views will, when promulgated, meet with ready concurrence, and that my good intentions will be gratefully acknowledged. I also expect that the inauguration of popular institutions will obtain your energetic support."

HUNGARY.—It is stated that if the former constitution of Hungary be not restored by the Emperor, a refusal to pay the taxes will be organised throughout the kingdom. Numerous arrests have taken place on account of the dissemination of revolutionary proclamations, and an ordinance of the Commander-in Chief of the army has deferred the recommencement of the lectures at the University of Pesth for the remainder of the year. The military classes of 1840, 1839, 1838, 1837, 1836, comprising young men of the age of 16 years, have been called to service. The levy will terminate on the 31st of December.

THE ADRIATIC.—The Austrian Naval Board has ordered that trading vessels of the Two Sicilies shall only be admitted into an Austrian port when hoisting the Neapolitan flag; and that before leaving, the *visa* of the Neapolitan Consul must be attached to their papers. The Naval Board has likewise informed the Chambers of Commerce that, by order of the military governor, the lighting of the canals, the port, and the Venetian coast must be suspended until further instructions. This measure also applies to the two lights of Malamocco and Piave. The reason assigned for this order is that Garibaldian agents secretly entered the lagunes at night in order to take soundings.

ITALY.—The bombardment of Ancona was continued until Friday evening, when the Sardinian fleet having by a bold manœuvre destroyed all the batteries of the port, General Lamoricière, in order to express his admiration of the bravery of the fleet, offered to surrender to Admiral Persano. On Saturday morning Ancona capitulated, and General Lamoricière and the whole of the garrison became prisoners of war. The Admiral sent him a small boat, and ordered the whole crew under arms, to pay the General military honours. The Admiral also offered his own cabin to the General, who was deeply touched by these courtesies. General Lamoricière will embark on board the steamer Count Cavour, which will convey him to Genoa, whence he will proceed to Turin. Admiral Persano arrived at Turin on Monday evening. It is said that the portfolio of General Lamoricière has fallen into the hands of General Fanti, and that it contains letters of the most compromising character, and the most positive proofs of numerous intrigues entered into with the Legitimist and even the Red Republican party against the Government of the Emperor Napoleon. The friends of General Lamoricière however deny the truth of this statement. The Sardinians found 140 cannons and 700,000f. in the fortress of Ancona.—A Secret Consistory of Cardinals was held on Friday at Rome, when the Pope delivered an allocution of which the following is a summary:—

"We detest and deplore the conduct of Piedmont, and her guilty invasion of the Papal States. We lament the brave soldiers who have died in their defence, and have the firm hope that they have obtained eternal peace and blessedness. We reprove and condemn in every way the detestable and sacrilegious attacks of the King and the Government of Piedmont. We declared their acts to be null and of no effect. We protest, and will not cease to protest, in order to maintain entire the civil power enjoyed by the Roman Church. The support of foreign assistance against criminal invasion is still to be desired, and reiterated declarations on that point have been made by one of the most powerful princes of Europe. Whilst, however, we have for a long time been expecting such a result, we are most painfully affected in seeing the authors and abettors of this invasion advance as far as the walls of our capital, as though they had the assurance that no one would oppose them. In presence of such a perilous position we see ourselves forced, even against our will, to the sad necessity of occupying ourselves with the measures to be taken for the protection of our dignity. We deplore the disastrous and pernicious policy of non-intervention, and above all its detestable application to the Roman question. We call upon all the princes of Europe to examine seriously what great and innumerable evils are comprised in the detestable event which we deplore, for if such an odious violation of international law were not entirely nullified, there would no longer be left any force and security to any legitimate right. All Sovereigns should be convinced that their cause is intimately bound up with ours, and that in coming to our aid they will provide equally for the preservation of their rights. We have no doubt that the Catholic Princes and peoples will come to the assistance of the Father of the Faithful, who is attacked by the parricidal arms of a degenerate son."

A long conference between Cardinal Antonelli and the French Ambassador took place on Saturday. The revolution is at the very gates of Rome, but the Pope has peremptorily declared that he will not leave the city. The provinces of Umbria, Viterbo, and the Marches are lost to the Papal Government; Subiaco and Arsoli are in insurrection, and the whole population of the Sabine and Latian territories have risen to the cry of "Victor Emmanuel for ever!" The Chasseurs of the Tiber have defeated the Pontifical Gendarmes, and have hoisted the Italian flag on the left side of the Tiber; and the vanguard of another division is at Tivoli, a few miles from Rome. Gen. Goyon has hoisted the French flag at a distance of five miles from Rome. The only provinces still under the Papal Government are Civita Vecchia, Frosinone, and Velletri, and but for the French these would also speedily pronounce against the Pope. It is said that the Papal Government has given up the idea of defending the two latter against the Sardinians, should they pass through them to proceed to Naples. The head-quarters of the Sardinian army will be at Aquila, the officers of the Commissariat having already arrived there. The Sardinian Chambers were opened on Tuesday, when Count Cavour read a Ministerial report, of which the following is a summary:

"Henceforth Italy, with the exception of Venetia, is free. As regards the latter province, we cannot make war upon Austria against the almost unanimous wish of the European Powers. Such an enterprise would create a formidable coalition against Italy. But in constituting a strong Italy we are serving the cause of Venetia. These reasons also impose upon us the duty of respecting Rome. The question of Rome cannot be decided by the sword alone. It meets with moral obstacles, which moral force alone can vanquish. As to the rumoured possibility of a collision with France at Rome, an act of ingratitude so monstrous would brand our country with a deep disgrace, such as centuries of suffering could not obliterate. Whatever populations may be freed from oppression, their independence will be respected. Parliament has been convoked in order to pronounce whether the present Ministry still enjoys its confidence. This is so much the more necessary, as a voice which is with reason dear to the people has manifested its distrust of us to the Crown and the country."

After this report was read the following project of law was presented:—

"Sole Article.—The Government of the King is authorised to accept and establish by Royal decrees the annexation to Sardinia of those provinces of Central and Southern Italy in which the population, by direct and universal suffrage, freely manifests a wish to form an integral part of our constitutional monarchy."

The project was received with loud cheers, and the Chambers adjourned to Wednesday, when a committee was appointed to examine the project of law presented by the Government. The members of this committee expressed full confidence in the policy of Count Cavour, but desired that all dualism with Garibaldi should cease. Lord John Russell has addressed a despatch to Sir James Hudson, British Minister at Turin, directing him to warn the Sardinian Government of the danger of attacking Rome or Venice, and so bringing on a war with Austria. "The only chance," says his lordship, "that would be left for Sardinia in such a conflict, would be the hope of drawing France again into the battle-field, and kindling a general war in Europe. Let not Count Cavour indulge in that pernicious delusion. The Great Powers are resolved to maintain peace, and Great Britain has interests in the Adriatic Sea over which she watches with careful interest." The King of Sardinia left Turin last week to take the command of his army in the Papal States, and has since issued the following order of the day:—

"Soldiers! I am satisfied with you because you are worthy of Italy. By arms you have vanquished your enemies, and by conduct the calumniators of the Italian name. The mercenaries whom I set free will speak of Italy and of you in foreign countries, after having learnt that God recompenses those who serve him, and not those who oppress peoples and despise the rights of nations. We must establish a strong Italian monarchy on the liberty of peoples, who will aid us with order and concord. The national army will increase more and more the glory which since eight centuries has shone on the cross of Savoy. Soldiers! I take the command. It would cost me too much not to be foremost wherever there may be danger."

His Majesty arrived at Bologna on Saturday, passed Monday night at Forli, and left on Tuesday for Ravenna, where he will embark for Ancona, and proceed thence to Naples. The Neapolitan population of the frontiers has implored the protection of his Majesty, and a deputation of the inhabitants of Naples left that city on the 26th ult., to present an address, inviting him to go to Naples in order to restore tranquillity and to diffuse the benefits of liberty, order, and progress. Addresses have also been presented to Garibaldi himself by the Municipality of Naples and other public bodies, entreating him to hasten annexation, and to form a moderate Ministry which shall command the confidence of the country. In consequence of these representations, supported by the recommendations of his own generals, and by an autograph letter from the King of Sardinia, Garibaldi has dismissed Signor Bertani, his Secretary-General, cancelled the appointment of Signor Saffi, as Pro-Dictator of Sicily, and formed a new Ministry composed of men chosen from the party of moderate Liberals. He has also published an order of the day to his soldiers dated from his head-quarters at Caserta, telling them that their valiant brothers of the Italian army, commanded by the brave General Cialdini, after defeating the army of Lamoricière and giving freedom to all the prisoners which were slaves of the Pope, are about to enter Neapolitan territory, and that very soon they will have the happiness of clasping their victorious hands. In consequence of these important indications of the re-establishment of friendly relations between Garibaldi and the Sardinian Government, the state of things in Naples has improved, and the arrival of the Sardinian army is daily expected. On the other hand Mazzini has issued a manifesto in which he denies that he is labouring to establish a republic, but at the same time pronounces in favour of Garibaldi's system of no immediate annexation, and declares that Rome and Venice can only be rescued from slavery by this war of the volunteers. The position of Cajazzo, gained by Garibaldi on the 19th ult., was retaken on the following day by the Royal troops with a force of 10,000 men. It was defended by 800 Garibaldians, who fought like heroes, but fell victims to a barbarous stratagem. The people of Cajazzo closed the gates of the town after the Garibaldians had gone out to meet their assailants, and then sallied out and massacred the wounded men. They met however with a speedy retribution, for on their return to the town they found that their own houses had been first sacked and then reduced to ashes by the Royalist soldiers of whose vengeance they had made themselves the instruments. Garibaldi after this check occupied Piemonte, defeated the Royal troops at Limatola, and has since repulsed them from Caserta, where he succeeded in surrounding them and made 2000 prisoners. He has also fortified St. Angelo and Santa Maria. The outcry raised against the nomination of M. Dumas to the Directorship of the Museum has been so great that he has resigned his post, in order to avoid a compulsory dismissal. The first and only act of his official life was to throw open to the public the secret Cabinet of the Museum. Padre Gavazzi is exciting general enthusiasm by his sermons to the people, which he delivers in the semi-circular space in front of the Royal Palace, and Bibles and Testaments printed in London from Diodati's text, are now openly sold in the streets of Naples. The ex-Triumvir Avezzano has taken his seat in the Sardinian Parliament, having just arrived in Italy from New York, where, since the capture of Rome by the French, he has been engaged in commercial speculations. He was Minister of War under Mazzini, and is intimate with Garibaldi.

SICILY.—The Citadel of Messina reopened fire upon the city on the 24th ult., in order, it is said, to secure a supply of provisions.

RUSSIA.—The Empress of Russia was happily delivered of a Prince at Sarskoselo on Wednesday last. The Emperor will leave on the 12th inst., and arrive at Wilna on the 13th. The Russian Ambassadors at Berlin and Vienna have been ordered to proceed to Warsaw before the arrival of the Sovereigns, as Prince Gortschakoff wishes to see them before the arrival of Count Rechberg and Baron Schleinitz. This would lead to the supposition that some important political resolutions will be adopted.

GREECE.—A letter from Athens announces the death of General Metaxa at the age of 71. Coletti, Metaxa, and Mavrocordato, the three great leaders in the war of independence, afterwards took part in most of the important political events of their country. M. Mavrocordato alone survives.

TURKEY.—Ali Pacha has formally denied having stated to the Austrian Chargé d'Affaires that he had proofs of Sir Henry Bulwer having conspired against the Sultan, a story which he declared to be utterly absurd and untrue. The Grand Vizier has been suddenly recalled by the Sultan. He is expected to arrive in Constantinople on the 29th inst. Another Minister has been sent to complete his mission.

SYRIA.—The Commander-in-Chief of the French troops at Beyrout has declared to Fuad Pacha that he had received orders from Paris to place himself at his disposal, and to act according to the instructions agreed upon on the 10th ult. at Constantinople between the Porte and the foreign representatives. Fuad Pacha and the French General left Beyrout on the 25th ult. to act in concert against the Druses.

INDIA.—The following are the principal items of intelligence received by the Calcutta mail of the 22d August:—

Calcutta.—The Indian Government have announced that they will carry out the financial measures of the late Mr. Wilson in all their integrity. A series of instructions for the management, assessment, and collection of the income tax, have been issued for the guidance of all officials. The tax commission and the assessors for Calcutta have been appointed. The Legislative Council is chiefly occupied in committee with the Penal Code, to be followed by the Code of Criminal Procedure, after which they will take up the License and Paper Currency Bills. A commission has been appointed to draw up a report on an organised system of native police for all India.

Hyderabad.—It is rumoured that the Nizam of Hyderabad is to have certain districts, which were annexed by Lord Dalhousie, restored to him, in recognition of his loyalty during

the rebellion, accompanied by a present of a lac of rupees. In addition to this a debt which he owes the British Government, amounting to a little more than half a million sterling, is to be cancelled. Salar Jung, his Minister, is to have 50,000 rupees

Kotah.—Accounts from Delhi state that several rebels who took a conspicuous part in the late mutiny, including the murderer of Major Burton, the political agent at Kotah, have been executed, and more will follow.

United States.—Senator Douglas, the democratic candidate for the Presidency, addressed about 20,000 people at Clifton Springs on the 15th. He afterwards visited Syracuse, and spoke to a large multitude, and on the 12th he addressed upwards of 10,000 persons at New York. The Government had appointed a board of officers to examine all the vessels of the United States' navy, with a view to ascertain the practicability of converting them into steamers.—About 100 decomposed bodies had been passed by a steamer on Lake Michigan, being, no doubt, the victims of the Lady Elgin catastrophe. The body of Mr. Herbert Ingram has arrived in England by this mail to be buried at Boston, for which place he was M.P. The body of his son had not been found. A great fire had taken place at Fort Smith, Arkansas; the loss was estimated at 200,000 dollars.

Mexico.—The latest news states that 14,000 Liberals were marching on the capital. Miramon was in the city with 7,000 men. A terrific gale raged in the Gulf of Mexico on the 15th ult. Several vessels were blown ashore and immense damage was done. Nearly every house in Belize was carried away, and several lives were lost, and a third part of the city of Mobile was flooded by the gale.

Central America.—Advices from Honduras report that her Majesty steamer Icarus having conveyed the troops under Alvarez to the place where Walker was encamped, Walker and his men were captured and taken to Truxillo. The Honduras Government has since shot Walker and one of his colonels, called Kudler. His followers were allowed to depart. The natives would have murdered some of the sick had not the captain of the Icarus threatened to hang them at the yard-arm if they did so. The excitement, however, continuing, he took them on board his vessel for safety.

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 93¼ for Money, and 93¼ to ⅜ for Account; India Five per Cent. Stock, 1859, 103⅛ to ¾; Ditto Four per Cent. Debentures, 1858, 96⅜; Ditto Bonds, 5*s.* dis.; Exchequer Bills, 4*s.*, 1*s.* prem.—Foreign: Austrian Five per Cent. Metallics, 52; Brazilian Four and a Half per Cents., 1860, 87⅜ to 88; Peruvian Three per Cents., for Acct., 73½; Russian Four and a Half per Cents., 94; Spanish Three per Cents., for Acct., 49; Ditto New Deferred Three per Cents., 40; Turkish Six per Cents., 1854, 73⅛; Ditto for 1858, for Acct., 56¼; Ditto Guaranteed Four per Cents., 101⅞ to ¾; Venezuela Three per Cents., 23½; Ditto One and a Half per Cents., 12¼.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,642,405	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	15,167,405
		Silver Bullion	
	£29,642,405		£29,642,405

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)	£9,663,460
Rest	3,804,588	Other Securities	19,945,221
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,832,025	Notes	7,689,470
Other Deposits..	12,006,549	Gold and Silver Coin ..	701,683
Seven day and other bills	803,672		
	£37,999,834		£37,999,834

4th day of Oct., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — L. Andrews, Wells, Norfolk, Grocer—G. E. Arnsby, Earls Barton, Northamptonshire, Boot and Shoe Manufacturer—J. Cartwright, Frankton, Salop, Builder—G. Drake, Stoke Newington, Brewer—S. Eason, Liverpool, Coal Merchant—B. Jones, West Bromwich, Corn Factor—J. Knight, jun., Barge Yard Chambers, Bucklersbury, Scrivener—R. Maylin, Blackfriars Road, Grocer—G. Noble, Middlesborough, Innkeeper—A. Pickett, Brighton, Coal Merchant—T. Price, Evesham, Market Gardener—J. J. Rolls, Cerne Abbas, Dorsetshire, Grocer—J. Russell, Larkhall Lane, Clapham, Job Master—C. J. Thomas, Newport, Monmouthshire, Bonded Store Merchant—T. Tolson, Dewsbury, Carpet Manufacturer—C. Tuck, Ely, Butcher—P. Whitworth, Stalybridge, Grocer—W. Woolley, Tipton, Boiler Maker,

SCOTCH SEQUESTRATIONS—W. Cairns, Hawick, Grocer—R. Campbell and R. Peddie, Glasgow, Yarn Merchants—H. Fraser, Aberdeen, Clothier—J. Kilgour, Alloa, Draper—W. Skene, Aberdeen, Butcher.

FRIDAY — BANKRUPTS — C. Barrow, jun., Coleman Street, City, Wine Merchant—H. B. Gaskell, Liverpool, Broker—L. Guiraud, Leicester Square, Coffee House Keeper—T. J. Harris, Plymouth, Mercer—M. Hewison, Nottingham, Hosier—F. Johnstone, Eastbourne Terrace, Boarding House Keeper—J. A. Montpellier, Marylebone Road, Boarding House Keeper—J. Rice, Lupus Street, Pimlico, Butcher—J. H. Sharpe, Denby, Derbyshire, Contractor—T. Short, Park Street, Camden Town, Tailor—G. Swales, Doncaster, Hotel Keeper—J. Watt, Mark Lane, Canvass Merchant and Baker—T. Wilkins and J. Wilkins, Coventry, Builders—G. Wright, Northampton, Coach Manufacturer.

SCOTCH SEQUESTRATIONS—R. Gilman, Glasgow, Grain and Commission Agent—J. M'Donald, Torridon, Lochcarron, Ross-shire, Farmer—A. Petrie, Glasgow, Watch Manufacturer—W. Stedward, Lower Denburn, Aberdeen, Proprietor—J. Wilson, Leslie, Fifeshire, Farmer.

Metropolis and its Vicinity.

Election of Lord Mayor.—A Common Hall was held on Saturday in Guildhall for the election of a Lord Mayor for the year ensuing. The names of the Aldermen eligible for election having been put to the Liverymen a large majority of hands were held up in favour of Alderman Cubitt. Sir Henry Muggeridge received the next greatest number, and that of Alderman Mechi elicited a complimentary cheer. The Lord Mayor and Aldermen then proceeded to their chamber to make their choice, and on their return the Common Serjeant announced that the election had fallen on Alderman William Cubitt, M.P. The announcement was followed by loud and prolonged cheering.

Magisterial Changes.—Mr. Corrie of the Clerkenwell Police Court, has been transferred to Bow Street in the room of the late Mr. Jardine; Mr. Barker of Worship Street Court, has been transferred to Clerkenwell, in succession to Mr. Corrie, and Mr. J. Leigh, now stipendiary magistrate at Wolverhampton, has been appointed magistrate of Worship Street Court, in the room of Mr. Barber.

The Stepney Murder.—On Tuesday James Mullins was brought up on remand at the Thames Police Court, when evidence was adduced to complete the case against him, so far as it proved that he was in the neighbourhood of Mrs. Emsley's house at 8 o'clock on the night of the murder, that he was not again seen till 5 o'clock on the following morning when he was met in a state of high excitement on Stepney Green, and that, whereas he ought to have been at work early on that morning, he did not return to his work till about midday. Evidence was also adduced to show that Emms could have had no part in the murder; that he was not in the brickfield at the time mentioned by the prisoner, and was collecting deceased's rents at Stratford up to 12 o'clock on the night of the murder. The evidence being completed, the prisoner in answer to the magistrate declined to say anything, stating that he left it all to his solicitor. He then became greatly agitated, and was advised by his solicitor to remain silent. The magistrate then committed the prisoner to Newgate to take his trial on the charge of wilful murder. As the police-van was leaving the yard adjoining the court the mob yelled and groaned loudly.

Renewed Disturbances in St. George's in the East.—On Friday Joseph Rowe, a dock labourer who has taken an active part in the proceedings of the Anti-Puseyite League in the parish of St. George's, appeared before Mr. Selfe at the Thames Police Court to answer two summonses, issued against him at the instance of Mr. William Cooke, sexton of the church, where the services had been conducted in a comparatively quiet manner for several weeks. The first summons taken out under the new Act charged the defendant that he did unlawfully molest, let, disturb, vex, and trouble the Rev. J. Hooper, a clergyman in Holy orders, ministering Divine service in the parish church. The second summons charged the defendant with a common assault upon Mr. Cooke in the parish church on Sunday last. There was a large attendance of the parishioners, who appeared much interested in the proceedings. Since the departure of the Rev. Bryan King, the rector, on leave of absence, and the appointment of the Rev. Septimus Hansard, there have been considerable alterations in the services in the parish church, but the services of the choristers have been retained, and they are very unpopular with the parishioners. The sermon on Sunday morning has been preached in a white surplice, and some portions of the service have been sung, which the parishioners, or rather the congregation, wished to be said, and dissatisfaction still prevails. Mr. William Coxall, head porter at the Whitechapel Union; Mr. William Whittenbury, 29, Trafalgar Square, Stepney; Mr. William John Thompson, churchwarden; Mr. William John Compton, clothing contractor; Rebecca Wyman, pew opener, and the Rev. J. H. Hooper, assistant curate, all gave evidence of the defendant having conducted himself in a disorderly manner in the church on several occasions, and of his practice of leaving his seat and walking down the aisle in his wooden shoes whenever the clergyman gave out the text before commencing the sermon. The defendant, in reply to the charge, said he wished the case to be postponed, to obtain legal assistance and to bring forward witnesses who were at present in the country. The prosecution was the result of a conspiracy against him. Mr. Selfe consented to the application, and adjourned the case until Thursday, when, after hearing the witnesses called for the defence, he sentenced the defendant to be imprisoned for three weeks in the House of Correction, stating that his whole conduct in the church had been most disgraceful, and a systematic violation of all that was decent in respect of the performance of Divine service and the rites of religion.

Street Railways in the Metropolis.—A staff of surveyors and officials connected with the projected undertaking for laying down street railways in the metropolis, has made a preliminary survey and taken the necessary measurements at the Broad Sanctuary, Westminster, preparatory to the commencement of the works for a tramway, by way of experiment, in that locality. The tramway is to be of a similar kind to that already successfully completed at Birkenhead, and will extend along Victoria Street, Westminster, commencing at the New Westminster Hotel, and ending at the Vauxhall Bridge Road.

Child Murder at Lea Bridge.—A shocking case of child murder has been brought to light at Lea Bridge. About three months ago a young woman called Emma Padfield, 23 years of age, a domestic servant, lodged at the house of a labourer called Mead, at Lea Bridge, and was there confined of an illegitimate child, who was christened Augustus Frederick Bryant, the reputed father being Frederick Bryant, a merchant's clerk, 18 years of age, of 6, Holloway Place, Islington, where the girl had been in his father's service. On Monday, August 27, the prisoner left the house with the child, which was then in a sound, healthy state, and did not return home till about 12 o'clock that night, after Mead and his wife had gone to bed. On being admitted Mead saw that she was without the child, and she accounted for its absence by stating that her sister had taken it with her into Somersetshire. On the following day prisoner left, asserting that she had got a situation and was going to it. Nothing more occurred till Wednesday of last week, when Mrs. Mead happened to look into the cesspool of her house, and to her astonishment perceived the body of a child lying on its back, with the legs uppermost. She despatched a messenger for her husband, who procured a constable, and on the body being extricated it was found to be nearly black, and the left arm was missing, having apparently been chopped off near the shoulder. The cesspool was emptied, but the limb mentioned could not be discovered, and the evidence at the inquest left little doubt that it had been removed in order to prevent identification, as the arm was strongly marked with the inflammation of recent vaccination. The girl was traced and found to have entered the service of a gentleman in Lansdowne Road, Notting Hill, as a housemaid, where she was apprehended. She then stated that the father of the child had taken it away from her to keep, that he had treated her with great cruelty, and given her nothing to support it, and that she had been in great distress and in want of bread, and that she did not kill the child herself. The clothes found upon the body were identified by several witnesses as having been worn by the prisoner's child, and after several sittings the jury returned a verdict of Wilful Murder against her, and she was committed to Newgate for trial.

The Public Health.—The Registrar-General's weekly return states that the deaths in London in the week ending September 29, were 1,056. Excluding from the calculation the deaths from cholera in the 39th week of 1854, the average number of deaths in the corresponding weeks of the 10 years 1850-59 corrected for increase of population was 1227. The present return is therefore 171 below the average. During the week the births of 909 boys and 893 girls, in all 1802 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1627.

Provincial.

Aldershott.—Two murders of a shocking character were committed on Saturday in the centre block of the permanent barracks. About half-past 1 o'clock on that day Lance-sergeant Owen Chipp and Lance-corporal John Coles, of the 41st Regiment, were sitting at the table immediately after dinner playing draughts, when, *without the slightest provocation on their parts*, a private named James Johnson deliberately walked behind Sergeant Chipp and placed the muzzle of his rifle in the middle of his back and fired; the bullet, after going through the unfortunate man's body, entered the breast of Corporal Coles, passed through his body, and fell flattened against the wall. Sergeant Chipp rose, staggered three or four paces, and fell dead between two bedsteads. Corporal Coles fell backwards and died instantly. The murderer was immediately secured and taken to the guard-house, from whence he was conveyed by two policemen, escorted by two privates and a corporal, to the police station. The only cause given for this dreadful occurrence was that the murderer had been sentenced that morning to three days' confinement to barracks for insubordination, both the deceased having appeared against him. At the inquest on Wednesday it was proved that the prisoner had been sentenced to extra drill at the instance of Sergeant Chipp for some neglect in cleaning a grate, that he had threatened to have some one's life before night, and had admitted on going to the guard-room that he did not mean to shoot Corporal Cole, but Sergeant Chipp. The jury returned a verdict of Wilful Murder in both cases, and the prisoner was committed to Winchester gaol to take his trial at the assizes. While the inquest was going on the funeral took place, and was attended by hundreds of military men and civilians, including the whole regiment.

Birkenhead.—At the monthly meeting of the town Commissioners, held a few days since, it was intimated by the chairman that at the next meeting a plan will be submitted for extending street horse railways through all the leading thoroughfares of the township.

Newcastle-on-Tyne.—A frightful murder was perpetrated at Urpeth Corn Mill, near Chester-le-Street, on Saturday night. The victim is a bailiff in the employ of the Bankruptcy Court in this town, named Thomas Harrison, formerly a police inspector; the murderer, Milner Lockey, is a pitman, working at Leazingthorne Colliery, near Bishop Auckland. It seems that about three weeks ago Lockey was separated from his wife on account of his brutal conduct. Harrison has recently been put in possession of some crops belonging to a bankrupt, and lodged with Mrs. Lockey in a cottage adjoining Urpeth Mill. On Saturday night Lockey, who had conceived some jealousy for which there was no foundation, went over from Leazingthorne, a distance of 16 miles, and entered the wife's cottage. At the time Harrison was ill in bed. When Lockey entered the house he drew a knife out of his pocket and struck his wife on the chest. The bone in her stays however caused the blow to glance off. He struck her

again with the same effect; then lowering his hand, he made a blow at the stomach, but the knife entered the thigh, inflicting a wound an inch deep, which penetrated to the bone but is not likely to prove fatal. Harrison observing Lockey stabbing his wife, rose up in bed and remonstrated with him, begging him not to kill her. Lockey immediately turned round, and with an oath plunged the knife into Harrison's left breast, inflicting a wound six inches in depth, and while the knife was in the wound turning it in all directions. Harrison fell back dead. When Lockey entered the house and attacked his wife, his two children ran out and alarmed the neighbours. Two farm labourers arrived just as Mrs. Lockey was running from the house after having wrested the knife from her husband. She passed the labourers followed by her husband, and though he was unarmed they appear to have made no effort to stop him. He chased her up a hill, but she got among some uncut barley, and he lost her. Lockey then made off, but was captured about 8 o'clock on Sunday morning. He had been hiding in a wood all night, and the rain had driven him into a pig-stye for shelter, where he was taken by the police. The inquest on the body of Harrison was opened on Monday and adjourned for a week.

NORTHAMPTON.—On Friday a man called Richard Williams, otherwise Richard Hayward Grove Williams, who by means of forged credentials had so deceived the bishop of the diocese and other authorities as to obtain the appointment of curate of the parish of Nassington, in this county, committed suicide at the railway station. It appears that the Rev. Hewitt Linton, of Nassington, having advertised for a curate, Williams answered the advertisement from Copenhagen Street, Islington, giving as referee the Rev. Mr. Solly, of No. 7, Catherine Street, Thornhill Square, which was the house where he himself was living. Mr. Linton answered the letter, believing the reference to be correct, accepting Williams as his curate. The latter went to Nassington and remained there for some time, performing the services at the church as curate, and celebrating several marriages, including that of the rector's daughter. His mode of living, however, was not in accordance with his assumed holy calling. He obtained gold watches and other valuable property from several firms in the city on the representation that he was the "Rev. Mr. Williams, curate;" while by his plausible manner he introduced himself into the most respectable families in the neighbourhood, and at present it is difficult to conjecture the amount of misery he may have occasioned. To avoid criminal proceedings he left the place, and it was not until then, when the parish authorities made inquiries about his antecedents, that the imposition was discovered. The matter was placed in the hands of the London detectives, and Williams was apprehended in London. On Friday morning he was taken by Mr. Webb, the detective, to the London and North-Western Railway for the purpose of proceeding to Oundle, where he was to be examined before the magistrates on the charge of having fraudulently obtained the curacy by means of forged documents. On the train arriving in this town Mr. Webb alighted with his prisoner to await the arrival of another train to take them on to Oundle. They had not been standing on the platform many minutes before the train for Oundle came up, and just as the engine was about to pass them, Williams sprung forward and threw himself on the rails, and in another instant the engine went over him, crushing and mutilating his body in a frightful manner, causing immediate death. It appeared at the inquest that Mr. Webb not wishing to act with any degree of harshness to Williams, whose demeanour did not in the slightest way indicate that he intended violence to himself, did not use handcuffs, or put any restraint upon him to excite the notice of the passengers in the train, and the jury returned a verdict that "Deceased committed suicide while labouring under temporary insanity, and that no blame was attached either to Mr. Webb or the railway officials."

TROWBRIDGE.—Elizabeth Gough, who, at the time of the Road murder was the nursemaid who slept in the same room with the unfortunate child, has been re-apprehended, and was on Monday brought before the magistrates in this town for examination. It appears that Mr. Slack, the solicitor of Bath, having completed his inquiries, forwarded the depositions of the witnesses to the Attorney-General, who having given them an attentive perusal, appointed Wednesday last for a consultation, which was attended by Mr. T. W. Saunders, o the Western Circuit, and Mr. Slack. The result of the conference was that an opinion was signed jointly by the Attorney-General and Mr. Saunders to the effect that there were sufficient *primâ facie* grounds for issuing a warrant for the apprehension of Elizabeth Gough, and that the interests of public justice required that a public examination should be instituted. On the following day Mr. Slack had an interview with the magistrates of the division, and, having laid before them the opinion of the Attorney-General and Mr. Saunders, a warrant was issued for the apprehension of Elizabeth Gough, the execution of which was intrusted to Mr. Superintendent Wolfe, by whom she was taken into custody on on Friday. On Monday the prisoner was brought before the magistrates in this town, and charged as principal in the murder. At the request of the magistrates of the division, Sir John Awdry, Chairman of the Wilts Quarter Sessions, who has had great experience in criminal inquiries both in this country and in India, presided. Mr. T. W. Saunders conducted the case on behalf of the Crown; Mr. Edlin, of the Western Circuit, instructed by Mr. Dunn, of Frome, watched the proceedings for Mr. Kent and his family, and Mr. Ribton, instructed by Messrs. Farrell & Briggs of Isleworth, appeared for the prisoner. Mr. Saunders stated the case at great length, and said that Mr. Slack's investigation had at length enabled him to put evidence before them which would warrant them in sending the prisoner for trial. After describing the previous steps in the inquiry, and saying that from first to last there was not the shadow of a ground for the arrest of Miss Constance Kent, who ought now to go forth to the world without a shadow of suspicion against her, he called attention to the fact that the appearance of the body had induced Mr. Parsons, the surgeon, to believe that the wound on the neck was inflicted after death, and was done after death for the purpose of concealing the fact that the child had been previously smothered. He proceeded to contend that the prisoner must have been at least accessory, as one person could not have removed the child from the bed and replaced the clothes, and that two persons could not have entered the bedroom without her connivance. He also laid great stress on the fact that she had told Mr. Kent that the blanket was taken away with the child before deceased was brought in, and before she could have seen that it was gone from the bed. A piece of flannel also had been found with the child, which exactly fitted the prisoner's chest and corresponded with peculiarities on her body, which it did not do with the person of any other female in the house. Mr. and Mrs. Kent, and Sarah Cox, the housemaid, were the only witnesses examined on Monday. Mr. Kent in his evidence stated that on hearing that the child was missing, he concluded that he had been stolen, and determined to go to Trowbridge to give information to the police, and that he heard of the murder as he was returning home. Another point on which he was subjected to a cross examination, related to the fact that on the night after the murder two policemen were sent to his house by the superintendent, that he did not let them in until all the inmates were upstairs, and that he then locked them up in the kitchen all night. Mrs. Kent in her evidence denied the statement of the prisoner that she was in the habit of taking the deceased child out of his bed, and said that the child was so heavy that she could not carry him. She also denied the prisoner's statement that she had knocked at her bedroom door to inquire after him before half past 7 in the morning. The watchfulness caused by her approaching confinement had made her so wakeful that she should have heard the knock if it had been made. On Tuesday, Sarah Kerslake, the cook; James Halcombe, the gardener; Emily Doel, the assistant nurse; Misses Mary Ann, Elizabeth and Constance Kent; James Morgan, the parish constable; Alfred Urch and Henry Heritage, of the county constabulary; William Nutt, the shoemaker who predicted that they would find a dead child, and afterwards found the body in the closet; Thomas Benger, farmer, who assisted in recovering the body; Superintendents Foley and Wolfe of the county constabulary were examined. The evidence went to show that the drawing-room windows were found open, and that there was no mark whatever to show that they had been opened on the outside; that the flannel found with the body was lying under it on the soil of the privy; and was spotted with recent blood; that the clothes on the child's bed were folded down as by an experienced female hand; that the blanket in which the body was found had been taken from between the quilt and sheet; and further, that on trying an experiment to test the prisoner's statement that she missed the child on rising up in her bed and looking towards his cot, it was impossible to see into the cot from the prisoner's bed unless she had stood up in it to do so. It was also proved that the prisoner had stated from the first that the murder must have been committed by some one concealed in the house, though no trace of such concealment could be discovered. On Wednesday Master William Kent, Miss Elizabeth Kent, Daniel Oliver, the gardener; John Alloway, the knife cleaner; Mr. Parsons, the surgeon; Captain Meredith, the chief constable of Wilts; Sarah Kerslake, the cook; Mrs. Dallimore, wife of an officer in the county police; and Superintendent Wolfe were examined; and Mr. and Mrs. Kent, Alfred Urch, and Sarah Cox were recalled and re-examined on some parts of their previous evidence. The chief points elicited during the day were from Mr. Parsons, the surgeon; Captain Meredith, and Mrs. Dallimore. Mr. Parsons stated that he had come to the conclusion that the child was first suffocated, or that life was almost extinguished by suffocation before the stab in the side was inflicted, that the throat was cut after death, and that great force would be required to inflict such a wound. Capt. Meredith deposed to having examined on the morning of the murder the cot in which the child had slept during the night; and ascertained that it was quite impossible to see whether there was a blanket between the sheet and the counterpane, and that if a blanket had been withdrawn from between the sheet and counterpane, as he saw them, the clothes must have been adjusted afterwards. Mrs. Dallimore proved that no person unaccustomed to the door of the prisoner's room could have opened it without making a noise, that it was impossible for any one kneeling on the prisoner's bed to see a child in the cot, and that the chest flannel found with the body fitted no female in the house but the prisoner. Mr. Kent, in his examination, stated his belief that a discharged female servant who had used expression of revenge against the children had committed the murder, but the Chairman said that the magistrates had made inquiries respecting this person, and had found that she was not in the neighbourhood at the time the murder was committed. This closed the case for the prosecution. On Thursday, Mr. Ribton addressed the court at great length for the defence, contending that there was no evidence against the prisoner, and that the opinion she had expressed on the discovery of the murder that it had been committed by some one who had secreted himself in the house over night, and had been actuated by feelings of revenge against Mr. Kent and his family, was probably the true one. He said that there were only three points which had been brought against her. First, the various inconsistencies with regard to her knowledge of the removal of the blanket before the child was brought in. Even if these discrepancies did exist, which was very uncertain, he contended that they might be attributed to the agitation of the moment, and nothing more. With regard to the flannel, the evidence as to its fitting the prisoner, and no one else in the house, even if it were a material point, was wholly dependent on the testimony of Mrs. Dallimore, whose contradictory evidence he denounced in the strongest terms. With regard to the third point, that the prisoner could not have seen the child lying in his cot from the bed, he contended that her expressions should not be arbitrarily and strictly interpreted; she had once said "got up in the bed," which might imply much more than the kneeling as tried by Mr. Wolfe, who was a tall man, and unaccustomed, as she was, to the exact position of the cot and its contents. The evidence had been quite as hard against Miss Constance and Mr. Kent himself as against the prisoner, and he appealed to the magistrates most earnestly not to subject her to a trial on the paltry case of suspicion, which, after all their endeavours, they had been only able to wring in three days of close examination from 24 witnesses. She had acted throughout without the slightest concealment, and had given at all times all the information in her power, and there was no foundation whatever for a case against her. The magistrates then adjourned for half an hour, to consider their decision. On their return into court the intensest interest was apparent. The prisoner shook violently, and became deadly pale, which indeed she had been throughout the day. Sir John Awdry then said, "I will not keep the poor girl in suspense a minute longer than necessary, but inform her at once that we have determined on not committing her for trial. We feel we shall not be justified in committing the prisoner on this evidence, especially as all our previous inquiries have agreed in this, that there is not the slightest imputation against her previous character; indeed, this is true to a wonderful extent, considering how severe have been the criticisms to which she has been exposed in all quarters. She appears from the first to have betrayed neither over indifference in the matter nor sullen silence, as is frequently the case with prisoners charged with grave offences. I do not say there is not material even now which may hereafter, with other additions, be acted upon in reference to the prisoner: and we have therefore decided to bind her her over in sureties, either one or two, in a moderate sum, to appear when called on." This announcement was received with loud cheers. The prisoner was then discharged, a verbal bond being taken from one of her two uncles who were present, to produce her, if required, under a penalty of 100*l*.

Ireland.

THE NEW POSTAL ARRANGEMENTS.—The new postal service between London and Dublin came into operation on Monday. The train with the mails left London at 7.30 A.M., and the new steamer Leinster, which conveyed them from Holyhead, arrived in Kingstown at 5.44 P.M. London time. The through journey was thus performed in somewhat less than 10 hours and 44 minutes, being 46 minutes less than the time stipulated in the contract. The running speed of the railway train was 45 miles an hour and 40 miles including stoppages.

THE AFFRAY AT DERRYMACASH.—The adjourned inquest on the body of Thomas Murphy, who died from the effects of a gunshot wound received at Derrymacash on the 12th July, was resumed and concluded on Monday at Lurgan. The jury returned a verdict to the effect that deceased died of a gunshot wound inflicted by some persons unknown. They also added that the peace of the country would be much promoted by the discontinuance of party displays of every kind.

Scotland.

SOCIAL SCIENCE ASSOCIATION.—At the general meeting on Thursday week, the Hon. Arthur Kinnaird delivered an address on Punishment and Reformation; on Friday Sir Emerson Tennent delivered an address on Social Economy, and on Saturday Mr. Edwin Chadwick delivered an address on Public Health. On

Friday evening there was a banquet in the City Hall, over which Lord Brougham presided. The concluding meeting was held on Saturday, when the Council presented a report stating that the meeting had been more numerously attended than any hitherto held; the number of members having been 719, of associates 1531, and of ladies who have taken transferable tickets 630; making a total of 2880. The papers received and read had been 161, and in all the departments discussions of great interest and value had taken place. The report concluded by stating that invitations had been received from Nottingham, Newcastle-on-Tyne, and Dublin, for the annual meeting of 1861, and that the Council will decide upon them on an early day in London.

Railways.

The late Accident on the East Lancashire.—Another death has resulted from the accident at Helmshore on the 4th ult. Mr. Hartley Butterfield, confectioner, of Barrowfield, died in the Manchester Infirmary last week. He was injured principally in the leg, and was reported to be improving shortly after he was taken to the infirmary; but his illness took a fatal turn on the 26th. At the inquest Mr. Cobbett, solicitor, who appeared for deceased's relatives, agreed with the coroner that it was not necessary to re-open the whole investigation, as there was no charge of criminality, nor any dissatisfaction with the verdict already given. The jury found a verdict of Accidental Death.

The Fatal Collision on the Shrewsbury and Hereford.—The jury at the inquest on the body of Mr. Jobson, corn merchant, of Shrewsbury, who was killed by this collision, returned a verdict of Accidental Death, caused by the miscopying of a telegraphic message at Shrewsbury, and by the traffic manager ordering the train to proceed from Church Stretton without proper instructions having been received there. They also recommended that a stringent code of rules should be laid down with regard to the passing of trains and the authorities for making any alterations, and that a portion of the railway should be doubled.

Collision on the South-Western.—On Thursday the 27th ult. a collision took place at the Woking Station, between the Southampton and Alton goods trains, which ran into each other at the point where the Guildford branch joins the main line. No lives were lost, but one of the engines was much damaged and several trucks were broken into splinters.

Opening of the Victoria Terminus.—The opening of the Victoria Station of the London and Brighton Railway took place on Monday, so that the city will henceforth be relieved of the whole of the west-end traffic in connection with that line. It will likewise accommodate the numerous passengers from Westminster to the Crystal Palace, Wandsworth, Streatham, Balham, Lower Norwood, Sydenham, Croydon, and the Surrey suburbs generally. During the day 47 trains left the station and a similar number entered, making 94 trains, the whole of which ran with all the regularity and despatch of an old-established line.

Obituary.

Lord Ffrench died on the 25th ult. at Tarver Hall, in the county of Mayo, in his 75th year. He was a zealous Roman Catholic, and a follower of Mr. O'Connell throughout his long career of Irish agitation. He was the first magistrate in Ireland to whom Chancellor Sugden addressed his celebrated letter notifying the intention of Her Majesty's Government to remove from the commission of the peace any person who took part in furthering the scheme of a repeal of the Legislative Union. This letter, written early in 1843, acted as the signal for the commencement of hostilities between the Repealers and the Ministry of Sir Robert Peel, the latter winning the final victory at the affair of Clontarf towards the close of the same year. Lord Ffrench succeeded his father in 1809; married in 1827, the eldest daughter of the late John Browne, Esq. of Moyne, by whom he had three sons and a daughter, the latter married to Mr. Valentine O'Connor Blake, of Towerhill. He is succeeded in the title and estates by his eldest son Thomas.

Sir John Edward Swinburne, Bart., the oldest country gentleman in the northern counties, died on the 27th ult. at his seat, Capheaton, near Newcastle-on-Tyne. The venerable baronet was born on the 6th March, 1762; consequently had he lived to the spring he would have entered the 100th year of his age. Sir John Swinburne, throughout the course of his long life, was a warm patron of literature, and the library at Capheaton is probably the largest in the north of England. It is particularly rich in French and Spanish literature. In a very early period of its history he became attached to the Newcastle-on-Tyne Literary and Philosophical Society; a society to which the elder Stephenson, Bewick the engraver, and other self-taught Northumberland men, including the Rev. Thomas Binney, and Dr. Morrison the Chinese missionary, have expressed themselves indebted for assistance in their early struggles. To the day of his death Sir John was the president of the Newcastle Antiquarian Society, a society to which the country is much indebted for recent explorations in connection with the Roman Wall. The venerable baronet was also a munificent supporter of the Royal Literary Fund and the Royal Society of Literature, and greatly aided the late Rev. John Hodgson in bringing out his well-known "History of Northumberland." Almost to the close of his life Sir John exhibited peculiar vigour and strength of constitution, and he bid fair to outlive his tenth year. His eldest son and the son of his eldest son died before him. The second son succeeds to the title and estates of his grandfather.

Mr. Dunn, M.P. for Dartmouth, died on the 11th ult. of apoplexy at Aden, in the Red Sea, while on his voyage to Australia, in the Peninsular and Oriental steamer Nemesis. He was a merchant and shipowner in London, and largely engaged in the Australian trade. He had formerly been a member of the Legislative Council of Tasmania. He was elected for Dartmouth in August, 1859, having unsuccessfully contested Totnes in the previous May, and was generally a supporter of Lord Derby's Government.

The Rev. J. B. Murray, whose death we announced last week, had been well known for many years as the Secretary to the Society for the Promotion of Christian Knowledge. He was also the author of several works, among which may be enumerated "The History of the Society for Promoting Christian Knowledge," "History of Ely Chapel and Palace," "Parochial Duties and Privileges; or, the Church and the Pastor," "Golden Sayings of the Wise Kings," "History of the Church and Parish of St. Dunstan in the East," "Alphabet of Emblems," "Exegetical Sketches." He was the Rector of St. Dunstan's in the East, and honorary prebendary of St. Paul's.

The Rev. Edward Cobbold, rector of Long Melford, Suffolk, and of Watlington, Norfolk, died by his own hand at Thomas's Hotel, Piccadilly, on the 28th ult., in his 62d year. It appears that on the previous evening he entered the coffee-room of the hotel and ordered dinner. About 6 o'clock he left the table abruptly, leaving untasted a pint of stout he had just ordered, and proceeded to the bedroom he had engaged on the second floor. About two hours before, while dressing in the same room, he inquired of the chambermaid the means of escape in the event of a fire in the house, of which he had great dread. He told her that while staying there some years ago, he had a fearful dream of a fire raging, and under its influence had been compelled to leave his bed, and effect his escape by the window into the street, and that he had one leg over the sill of the window when he providentially awoke and found his alarm groundless. On waking in the morning he found the window opened as he had left it. He remarked in conclusion, "I don't know whether I shall sleep in this house or not. That shall make no difference to you; you shall have your fee," and he gave her a shilling. On Friday morning, as he did not make his appearance and no answer could be obtained, the police were sent for, and on the door being forced the unfortunate gentleman was found lying on the floor with a razor tightly clenched in his right hand and his head nearly severed from his body. On examining deceased's carpet bag it was found to contain a strange mixture of soiled socks, betel nuts, half-smoked cigars, cigar cases, and the two following memoranda:—"Mem.—If I should be found dead either from apoplexy or epilepsy, send word to my brother, the Rev. R. Cobbold, Wortham, near Diss, Norfolk." "I'm insured for 5000*l.* under policy dated 1844." In his pockets were found 80*l.* in bank-notes, and nearly 10*s.* in silver and copper.

BIRTHS.—On the 3d inst, at Apethorpe Hall, Northamptonshire, the Countess of Westmoreland, of a daughter—3d inst, Lady Norreys, of a son—29th ult, at Bowlhead Green, near Godalming, the Lady Dorothy Nevill, prematurely, of a daughter, still-born—28th ult, at Edinburgh, the Lady Edith Fergusson, of a daughter—25th ult, at Brighton, the Lady Emily Gaisford, of a son—27th ult, at 20, Chester Street, Belgrave Square, the Lady Maria Spearman, of a daughter—24th ult, at Ruperra Castle, Glamorganshire, the wife of the Hon. F. C. Morgan, of a daughter—25th ult, at Stoke Talmage, Oxfordshire, the Hon Mrs. William Byron, of a son—28th ult, at Chaddlewood, Devon, the wife of George Soltau Symons, Esq., of a daughter—29th ult, at 122, Westbourne Terrace, the wife of Lestock R. Reid, Esq., late of the Bombay Civil Service, of a daughter.

MARRIAGES.—On the 4th inst, at Wimbledon Church, the Hon Colonel Percy Herbert, M.P., brother of the Earl of Powis, and heir presumptive to the earldom, to the Lady Mary Petty Fitzmaurice, only child of the late Earl of Kerry, and granddaughter of the Marquis of Lansdowne—21 inst, at Cheam, the Hon. Humphrey de Bohun Devereux, to Caroline, third daughter of Sir Edmund Antrobus, Bart—27th ult, at Margart, Captain Edward Keate, R.A., to Florence, fifth daughter of General and the Right Hon. Lady Charlotte Bacon.—28th ult, at All Souls' Church, St. Marylebone, the Rev. Wollaston Goode, Rector of St. Giles's, Colchester, son of Henry Goode, Esq., of Ryde, Isle of Wight, barrister-at-law, to Amelia Agnese, younger daughter of Sir Charles Munro, of Foulis, Bart., Foulis Castle, Rossshire—2d inst, at Rochampton Church, Richard Decie, Esq., Royal Engineers, third son of the late Henry Decie, Esq., of Douglas, county of Cork, and grandson of the late Sir Geo. Buston Prescott, Bart., to Arabella, only daughter of William George Prescott, Esq., of Clarence, Rochampton, Surrey, and 62, Threadneedle Street, London—2d inst, at St. John's Church, Notting Hill, the Rev. Henry Doddridge Gordon, eldest son of the Rev. Richard Gordon, rector of Elsfield, Oxon, to Elizabeth Oke, second daughter of the late Very Rev. William Buckland, D.D., Dean of Westminster—11th July, at Jetomir, in Russia, according to the rites of the Lutheran Church, and on the 25th ult, at St. George, Hanover Square, Middlesex, Alexander, son of the late Sir Alexander Crichton, to Annette, daughter of M. Joseph Bokszczanin—27th ult, at Ruddington, John William Mellor, of the Inner Temple, Barrister-at-Law, eldest son of John Mellor, Esq., of the Inner Temple, Q.C., M.P., of Otterspool, in the county of Herts, to Caroline, fourth daughter of Charles Pagel, Esq., M.P., of Ruddington Grange, in the county of Nottingham—26th ult, at Packington, Dudley Rollit, second son of John Abel Smith, Esq., to Emma Margarette, youngest daughter of the late Rev. Edward Willes.

DEATHS.—On the 29th ult, at Clifton, Bristol, the Dowager Lady Wrottesley, widow of the first Lord Wrottesley, aged 77—27th ult, at Old Charlton, Lady Fisher, relict of the late Major-General Sir George Bulteel Fisher, aged 89—18th July, at Hunter's Hill, Sydney, after a year's illness, Mary Edwyna, wife of W. Phillips, Esq., and second daughter of the late Rev. Sir C. De Burton, Bart, rector of Blatherwicke, near Stamford, aged 52—25th inst, at Docking, Weston super-Mare, Charles Penrose Coode, Major in the Royal Marines, and eldest son of the late Vice-Admiral Sir John Coode, K.C.B., aged 40—26th ult, James Stewart, Esq., late Secretary to the Copyhold Commission, and formerly M.P. for Honiton, aged 55—8th August, at the Naval Hospital, Simon's Bay, Cape of Good Hope, Brevet Lieut.-Colonel Maycock, 53d Regiment—27th ult, at Glanduff Castle, county Limerick, Eyre Ivars, Esq., J.P., of Mount Ivars, Six Mile Bridge, county Clare—26th ult, at Drumlease Vicarage, county Leitrim, Ireland, the Rev. William Willoughby Wynne, Rector of Drumlease, son of the late Owen Wynne, Esq., of Hasiewood, aged 57—28th ult, at Wrotham Rectory, Kent, Blanche Emma, youngest child of the Rev. Charles Lane, Rector of Wrotham and Rural Dean—30th ult, at his residence, 4, Portland Place, Lower Clapton, the Rev. Alexander Fletcher, D.D., aged 73.

Markets.

COVENT GARDEN, Oct. 6.

Grapes continue plentiful and good, especially black varieties, which are well ripened, and in general finely coloured. Pears consist chiefly of Marie Louise, Williams's Bon Chrétien, Louise Bonne of Jersey, Gansel's Bergamot, and Duchesse d'Angoulême. Peaches, Nectarines, and Plums may yet be obtained, but both Peaches and Nectarines are very inferior in flavour. Oranges are 3s. a dozen. Good Filberts may be had at from 9d. to 1s. per lb. Cabbages, Beans, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 15s. per cwt. Cucumbers abundant. Cut flowers chiefly consist of Orchids, Gardenias, Kalosanthes, Dahlias, Violets, Mignonette, China Asters, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 3s to 4s	Melons, each., 2s to 4s
Grapes, per lb., 2s to 5s	Plums, p. ½ sieve, 3s to 4s 6d
Peaches, per doz., 2s to 6s	Pears, per doz., 1s to 3s
Apricots, per doz., 2s to 4s	Apples, per doz., 6d to 1s 6d
Nectarines, do., 2s to 6s	Oranges, per 100, 15s to 20s
Cherries, p. lb., 1s to 3s	Lemons, per 100, 10s to 15s
Green Figs, per doz., 3s to 4s	

VEGETABLES.

F. Beans, per qrtn., 9d to 1s	Celery, p. bundle, 1s 6d to 1s 9d
Peas, p. bush., 3s to 4s	Onions, p. ½ sieve, 1s 6d to 2s 6d
Cauliflowers, each, 4d to 6d	Tomatoes, per doz., 2s to 3s
Greens, per dozen, 2s 6d to 3s	Veg. Marrows, p. doz., 6d to 1s
Cabbages, do., 1s to 2s	Shallots, per lb., 6d to 8d
Potatoes, p. ton, 100s to 130s	Garlic, per lb., 6d to 8d
— per bus., 3s to 4s	Lettuces, Cabb., p. score, 1s 6d to 2s 6d
— per cwt., 5s to 8s	Lettuces, Cos, p. score, 6d to 1s
Carrots, per bunch, 7d to 9d	Endive, p. score, 1s to 2s
Turnips, per bunch, 5d to 7d	Horse Radish, p. bun., 1s 6d to 4s
Spinach, p. sieve, 2s to 3s	Mushrooms, p. pott., 2s to 3s
Cucumbers, each, 6d to 1s	Parsley, p. 12 bunches 2s to 4s
Artichokes, per doz., 4s to 6s	Savory, per bunch, 2d to 4d
Beet, per doz., 1s 6d to 2s	

COAL MARKET.—Oct. 3.

Bates's West Hartley, 15s. 9d.; Craghead Hartley, 15s.; Hasting's Hartley, 16s. 3d.; Howard's West Hartley, 16s. 3d.; Tanfield Moor, 13s. 6d.; Tanfield Moor Butes, 13s 6d; Walls End Gosforth, 17s 9d; Walls End Durham, 17s. 3d.; Eden Main, 18s.; Walls End Braddyl's Hetton, 18s. 3d.; Walls End Frumwellgate, 18s. 6d; Walls End Hetton, 19s. 6d; Walls End Kepier Grange, 18s. 3d.; Walls End South Hetton, 19s. 6d.; Walls End Pensher, 16s. 6d.; Walls End Heugh Hall, 18s. 6d.; Walls End Kelloe, 19s.; Walls End North Hartlepool, 16s. 3d.; Walls End South Hartlepool, 18s. 3d.; Walls End Thornley, 17s; Walls End Thorpe, 18s 9d.; Walls End West Hetton, 18s. 6d.; Walls End Whitworth, 16s. 6d.; Carway and Duffryn Malting, 22s. 6d.—54 ships at market.

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, Oct. 4.

Prime Meadow Hay	75s	to 84s	Clover	90s	to 120s
Superior do. (old)	95	115	New Clover	—	—
Inferior do.	50	60	Old second cut	80	100
New do.	—	—	Straw	30	38
Rowen	40	50			

Davis & Co.

Cumberland Market, Thursday, Oct. 4.

Sup Meadow Hay	105s	to 114s	Inferior Clover	70s	110s
Inferior do.	60	92	New do.	—	—
New do.	65	105	Straw	38	44
Superior Clover	118	126			

Joshua Baker.

Whitechapel, Thursday, Oct. 4.

Fine old Hay	100s	to 110s	Fine old Clover	120s	to 126s
Inferior do.	36	60	Inferior do	84	100
Prime New Hay	—	—	Fine 2d cut	86	90
Inferior do.	—	—	Inferior do.	60	70
Straw	34	38	Fine New Clover	—	—

BRITISH WOOLS.—London, Friday, Oct. 5.

Our arrivals of fleeces continue moderate, but sufficient for the demand, which is by no means active. Skin wool continues to move off at full value, the prices advancing in about the same proportion as the improvement in length. In short sorts the demand continues in medium qualities principally, the best being comparatively neglected. Half-bred and long wool fleeces have been for a considerable period the most in request, and as they rose to the greatest height, so in the late depression they receded the most, but they continue saleable at the small advance obtained a fortnight ago; but the decline only had reference to needy persons obliged to effect sales, as the trade generally were not disposed to submit to sacrifices.

	s.	d.		s.	d.					
South-down Hoggets	1	8	to	1	9	Leicest. Wethers	1	6	to	1 7
Half-bred ditto	1	8	—	1	9	Ditto Hoggs	1	7	—	1 9
Down Ewes	1	6	—	1	7	Combing Skins	—	—		—
Kent Fleeces	1	6	—	1	7	Blanket ditto	0	6	—	0 8
						Flannel Wool	1	0	—	1 4

HOPS.—Borough Market, Friday, Oct. 5.

Messrs. Pattenden & Smith report that ripe 1860 Hops are selling freely as follows:—Weald of Kents from 15*l.* to 20*l.* per cwt.; Sussex, 14*l.* to 16*l.* Yearlings and old Hops are in demand. New Mid and East Kents are a complete drug on the market, being so blighted. It seems by some of the circulars sent out that the export of Hops since 1854 has amounted to upwards of 10 millions of lbs. weight. Duty 30,000*l.* with but few in favour.

METROPOLITAN CATTLE MARKET.

Monday, Oct. 1.

Although the number of Beasts is not quite so large as on Monday last, we have still a good supply. Trade is dull, but quotations are not altered. The demand for Sheep is small, and prices cannot be quoted higher on the average. Trade is scarcely as good as on Thursday last for Calves. From Germany and Holland there are 1610 Beasts, 6300 Sheep, and 70 Calves; from Ireland, 500 Beasts; from Norfolk and Suffolk, 100; and 2500 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	8	to 5	0	Best Long-wools	5	0	— 5	2
Best Short-horns	4	4	— 4	8	Do. Shorn	..	..	to	..
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	4	— 4	6
Best Downs and Half-breds	5	2	to 5	4	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	4 0 — 5	2
					Pigs	..	..	4 4 — 5	4

Beasts, 5600; Sheep & Lambs, 25,600; Calves, 120; Pigs, 440.

Thursday, Oct. 4.

The supply of Beasts is small, and the average quality very inferior. A few of the choicest kinds find ready purchasers, but other descriptions are unsaleable. The number of Sheep is about the same as of late, but the demand has decreased, consequently a large proportion remain unsold. Good Calves are rather dearer. Our foreign supply consists of 253 Beasts, 1500 Sheep, and 231 Calves; Milch Cows, 110.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	8	to 5	0	Best Long-wools	5	0	— 5	2
Best Short-horns	4	4	— 4	8	Do. Shorn	..	..	—	..
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	4	— 4	6
Best Downs and Half-breds	5	2	— 5	4	Do. Shorn	..	..	to	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	4 4 — 5	4
					Pigs	..	..	4 8 — 5	6

Beasts, 1139; Sheep & Lambs, 6400; Calves, 321; Pigs, 250.

MARK LANE.—Monday, Oct. 1.

The supply of Wheat from Essex and Kent to this morning's market was very small; the few samples of old and tolerably dry new commanded an advance of 3s. per qr. on the prices of Monday last. We also experienced a good country demand for foreign, at 2s. to 3s. per qr. over the prices of this

day se'nnight. For Barley there is a good trade at a rad vance of 1s. per qr. Beans and Peas are fully as dear. Oats are a fair sale, and 1s. per qr. dearer. Norfolk and American barrel Flour are 1s dearer.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	55	62	Red	46	60
— — fine selected runs..ditto	59	66	Red	53	66
— — Talavera	50	74			
— Norfolk	—		Red	—	
— Foreign	54	74			
BARLEY, grind. & dist., 25s to 31s..Chev.	38	45	Malting.	36	41
— Foreign..grinding and distilling	31	39	Malting.	36	41
OATS, Essex and Suffolk	20	24			
— Scotch and Lincolnshire..Potato	26	28	Feed ..	24	26
— Irish ..... Potato	26	28	Feed ..	21	24
— Foreign.....Poland and Brew	24	26	Feed ..	20	26
RYE	35	38	Foreign.	—	
RYE-MEAL, foreign	—				
BEANS. Mazagan....36s to 38s.... Tick	38	42	Harrow.	38	42
— Pigeon .....44s — 47s..Winds	—		Longpod	—	
— Foreign ..... Small	38	46	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	50	52	Suffolk .	50	54
— Maple .... —s to —s ..... Grey	—		Foreign.	30	43
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	50	57			
— 2d do. ..... ditto	34	50	Country.	34	50
— Foreign ..... per barrel	29	34	Per sack	40	50

FRIDAY, Oct. 5.

The weather this week has been fine, and will have greatly assisted in preparing the corn for carting, of which very little has been done during the last fortnight or three weeks, and much of that little would probably have been better left in the fields, where there is still some quantity, and some not yet cut, even in Kent, Surrey, and Sussex. The wind has been westerly. To day strong from S.W. The Wheat trade has again been active, but less so the last two or three days, at an advance of 1s. to 2s. per qr. in the chief ports of the kingdom, and fully 2s. in the agricultural markets on the week. Spring Corn has met with a good inquiry, and rather higher rates have been obtained for each description. American Flour has also improved about 1s. per barrel. The number of grain and seed-laden vessels arrived off the coast since the 28th of September amounts to 17, viz., 8 Wheat, 6 Maize, 1 Beans, and 2 Linseed. The business done was very limited, and the tone quiet. The arrivals of English grain this week have been very small, but good of foreign. The attendance at this morning's market included a fair sprinkling of country buyers, but owing to the firmness of holders the amount of business transacted was limited. In the prices of either English or foreign Wheat we observe no alteration. Spring Corn of all descriptions is firm at Monday's quotations.

ARRIVALS FROM Oct. 1 TO Oct. 5.

	Wheat.	Barley.	Oats.	Flour.
English ..	980 qrs.	470 qrs.	30 qrs.	1570 sks.
Irish	— ,,	— ,,	50 ,,	— ,,
Foreign ..	18860 ,,	2380 ,,	36070 ,,	26801 ,, 5370 brls.

LIVERPOOL, Tuesday, Oct. 2.—We had a numerous attendance of both local and distant buyers at our Corn Exchange this morning, and a large consumptive business has been done in Wheat at a general advance of about 3d. per cental over the rates of Friday last. Flour has had a fair sale at 6d. per barrel and sack more money. Indian Corn sold readily at an improvement of 6d. per qr., and holders quickly raised their pretensions to 1s. Old Oats and Oatmeal brought fully previous rates, whilst new were the turn easier. Beans established an advance of 6d., and Peas and Barley 1s. per qr. The market closed with firmness, but holders were not able to obtain the same high rates for Wheat as at the opening.

FRIDAY, Oct. 5.—There was a fair attendance at the grain market today. A moderate business was transacted in Wheat at the full prices of Tuesday last. Flour steady at late rates. Indian Corn in moderate demand at 36s. 9d., to 37s. for mixed, and 37s. for Galatz. Rather more doing in Oats and Oatmeal at fully Tuesday's rates.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Aug. 25..	60s 1d	34s 9d	27s 1d	40s 4d	47s 7d	43s 9d
Sept. 1..	60 11	33 3	28 2	40 7	47 10	44 5
— 8..	62 10	35 2	27 2	39 4	49 3	41 4
— 15..	62 11	37 10	27 0	42 4	50 1	38 7
— 22..	58 3	38 5	25 9	40 7	49 6	37 11
— 29..	56 11	39 3	25 3	37 10	49 6	39 1
Agg. Aver.	60 4	36 5	26 9	40 2	48 11	40 10

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Aug. 25.	Sept. 1.	Sept. 8.	Sept. 15.	Sept. 22.	Sept. 29.
62s 11d	..	..	..	..	..	..
62 10	..	..	..	..	..	..
60 11	..	..	..	..	..	..
60 1	—	..	..	..	..	..
58 3	..	..	..	..	..	..
56 11	..	..	..	..	..	..

BUTTER MARKET.—Oct. 5.

Best Fresh Butter .. .. 14s. per dozen lbs.
Second do. do. .. .. 13s. ,, ,,
Pork, 5s. 4d. to 5s. 8d. per 8 lbs.

A PARTNER WANTED.

WANTED, in a large Nursery and Seed Trade in one of the largest Agricultural Counties in England, a thorough business Man, well acquainted with either; there has been a large Seed Trade carried on for more than half a century, and is capable of very great extension.—Any one wishing to enter into a first-rate business, this offers an opportunity rarely to be met with.—For particulars inquire of Messrs. HURST & M'MULLEN, Seedsmen, 46, Leadenhall Street, London, E.C.

LAND DRAINERS.

500 WANTED at Buscot Park, two miles from Faringdon, two miles from Lechlade, three miles from Shrivenham.—Apply to the Foremen, M. LAKE and J. RIPLEY, on the ground, or to THOS. SCOTT, 18, Parliament Street, London, S.W.

WANTED, AS HEAD GARDENER, an active intelligent married Man, from 30 to 40 years of age, possessing a thorough practical knowledge of his profession in every department, particularly Early and Late Forcing. Salary 80l. per annum, with free house and coals. None need apply whose characters will not bear the strictest investigation.—Apply in own hand-writing, to A. B. C., Mr. Rusher, Market Place, Banbury, Oxon

WANTED, AS GARDENER, a steady active young Man, age about 20 or 21, to take the management of a Kitchen and Flower Garden. He will have the care of Pony and Chaise, and must be prepared to make himself generally useful.—Apply to T. S., Kingsthorpe Lodge, near Northampton.

WANTED, AS GARDENER, a first-class Man, thoroughly competent to Manage in the best style, the Fruit and Flower Gardens, Pleasure Grounds, Conservatory and Stove houses, Vines, Pines, and Forced Fruits, also a Garden under Glass. Salary 75l., with house, fuel, and vegetables.—Apply with copies of testimonials to A. B. C., 20, Grafton Street, Dublin.

WANTED, A PROPAGATOR AND SALESMAN, having a general knowledge of his profession. Married middle-aged man preferred. Wages with house 20s. per week. —T. & G. SWAILES, Nurserymen, Beverley.

WANTED, AS WOODMAN, a working Man able to Measure Timber and take the Management of Woods. Wages, 15s. a week and house rent free.—Address to M. P., care of Mr Laking, 26, Half-Moon Street, May Fair, London, W.

WANTED, A KEEPER AND WOODMAN.—Address post paid to X., care of Mr. Prince, Postmaster, Bridport, Dorset.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD)—Age 42, married, without incumbrance; perfectly understands his profession. Good references from former employers. — X. Y., 9, Vine Place, Bond Street, Vauxhall, S.W.

GARDENER (HEAD).—Middle-age, single; understands Early and Late Forcing of Fruit and Flowers, and a good Kitchen Gardener. Five years' character.—T. E., 7, Queen's Road West, Chelsea, S.W.

GARDENER (HEAD).—Age 38, married, no incumbrance; understands Early and Late Forcing Plants, Kitchen and Flower Gardens. Two years' character.—Y. Z., Mr. Rains, Middle Row, Covent Garden, W.C.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—JOHN IVISON, late Head Gardener for 11 years to His Grace the Duke of Northumberland, at Syon House, is now open to an engagement in a similar capacity.—Mulberry Cottage, New Road, Old Brentford.

GARDENER (HEAD).—Age 40, married, without incumbrance; thorough practical knowledge, including the Culture of Pines, Vines, Peaches, Stove and Greenhouse Plants. Can Manage Land if required. Four years' unexceptionable character.—J. B., Harleston Park, Northampton.

GARDENER (HEAD).—Age 33, married; first-class Gardener; wishes for a situation where there is scope for energy. Seven years' unexceptionable character from his late employer. — G. THOMAS, Kenwood Gardens, Hampstead, London, N.

GARDENER (HEAD).—Age 29, single; understands the Kitchen, Fruit and Flower Gardens, Vines, Cucumbers, Melons, &c. Ten years' good character from his last place; left through the breaking up of the establishment.—L. B., Carter's, Carlisle Road, Leyton, Essex, N.E.

GARDENER (HEAD). — WILLIAM STEWART, Gardener to Miss Broadley, Welton House, Brough, Yorkshire, can with confidence recommend his Foreman (age 26, single) to any lady or gentleman in want of a competent, persevering, and trustworthy Man.—Direct as above.

GARDENER (HEAD).—Age 35, no incumbrance; has a thorough practical knowledge of his profession in every department. Can have 5 years' good character from the gentleman he is about leaving. The Wife can Manage the Dairy and Poultry, or attend to the Lodge gate.—A. B., 3, Nelson Terrace, Trafalgar Road, Dalston, N.E.

GARDENER, (HEAD).—Age 30, married, a native of Scotland; understands his profession in all its branches, including the Early and Late Forcing of Fruits, Flowers, and Vegetables, the Culture and Propagation of Stove and Greenhouse Plants, and the Management of the Kitchen and Flower Gardens. Character will bear the strictest investigation.—C. R., 41, Eaton Place, Well street, Hackney, N.E.

GARDENER (HEAD).—Age 32, married; a most energetic and persevering Man. Has had extensive practical experience in all branches of his profession. Has been supplying a first-class family with every kind of produce from the garden, both early and late. Can have the highest testimonials from where he has had the superintendence of the Erection of Pineries, Vineries, &c.; also understands Laying-out New Gardens and Remodelling old ones on the most approved principles. His character will bear the strictest investigation from his apprenticeship.—W. C., *Gardeners' Chronicle* Office, W.C.

GARDENER (WORKING HEAD).—Age 41, married, slight incumbrance; thoroughly experienced. Twelve years' unexceptionable character.—C. C., Messrs. Jackson's, Nursery, Kingston, Surrey.

GARDENER.—Married, without incumbrance understands Flower and Kitchen Gardens. Good character from his present employer.—B. C., Peasemore, near Newbury, Berks.

GARDENER.—Age 38, single; well understands his profession. Can take charge of Cows and Meadow Land if required.—J. F., Mr. Barnes, Camden Nursery, Camberwell, Surrey, S.

GARDENER.—Age 46, married, no incumbrance; practical in all branches of his profession. A good judge of Stock. His Wife is experienced in all branches of Housekeeping. Nine years' character from a family of distinction.—W. W., Post Office, Stoke Newington, London, N.

GARDENER (SECOND, or SINGLE-HANDED).—Age 23; well acquainted with Early Forcing and Kitchen Gardening. Can have 18 months' good character.—A. A., S. Pearson, Beckenham, Kent.

GARDENER (UNDER or SINGLE-HANDED) in a small place).—Age 19; can be well recommended.—A. H., Robson's Library, Lower Norwood, S.

GARDENER (UNDER) in a gentleman's family.—Age 20. Town preferred.—X. Y., 256, High Holborn, W.C.

TO NOBLEMEN AND GENTLEMEN.

GARDENER OR GARDENER AND BAILIFF.—Married, without incumbrance; has had great practical experience in the re-arranging and formation of extensive Pleasure Grounds and Park decorations, the construction of Horticultural Buildings, and Heating on the most approved principles; has grown Pines, Grapes, Peaches, and other Fruits and Plants to the highest perfection attainable. Has lived with two families of the highest distinction for 20 years, and is about leaving at his own wish a family of note, where he has been for the last three years, having newly arranged the place, which can be seen. Character will be found unexceptionable.—T. H., Post Office, Winchester, Hants.

FOREMAN OR BAILIFF on a Farm.—Age 36; thoroughly practical. Can keep accounts well, and produce the highest testimonials of honesty, sobriety, and capability for the last 10 years.—P. T., 34, Grafton Street East, Tottenham Court Road, W.

PROPAGATOR, FOREMAN, AND SALESMAN.—Understands his profession in all its branches. Good character.—T. C. E., Lower Edmonton, N.

BAILIFF.—Single; capable of taking the entire Management of a large Farm. Can have good reference. —J. V., Stent's Library, Guildford, Surrey.

BAILIFF.—Age 40, married; has had great experience in the midland and southern counties, and is thoroughly practical in the most modern style of Farming; a good Judge and Manager of Stock, and a good Accountant.—B, C., Post Office, Tunbridge Wells, Kent.

BAILIFF.—Age 38, married, no incumbrance; thoroughly understands his business. Wife can take charge of a dairy and poultry. Satisfactory reference can be produced.—A. B., 1, St. Mary St., Canal St., Wolverhampton.

BAILIFF (WORKING).—Age 40; Wife can attend to Dairy. Has been in his present situation 20 years; leaving on account of the farm being let. Can be well recommended by his present employer. Moderate wages expected.—J. N., Mr. Young, Milford Nurseries, near Godalming.

TO NOBLEMEN, AGRICULTURISTS, ETC.

STEWARD OR BAILIFF.—Age 26, single; of good address and active business habits; experienced in the management of Arable and Meadow Land Light or Heavy Soils, Cultivation of all kinds of Crops; thoroughly acquainted with the Breeding and Fattening of all description of Stock: conversant with all Modern Agricultural Implements, Steam Machinery, Irrigation, &c.; experienced Conductor of Labour, qualified to Keep Accounts, and do all business connected with a first-class Farm, however extensive.—H. H., Post Office, Brockenhurst, Lymington, Hants.

FARM STEWARD OR BAILIFF.—Native of Scotland; has been bred to Farming and had considerable experience in England and Ireland both on Light and Heavy Lands; has had much practice in the Purchase and Sale of Live Stock, and the most Improved Modes of Arable Farming; has also had extensive practice in Deep Draining, is a good Accountant, and can be highly recommended for steadiness and integrity by his last employer.—D. G., Thos. Scott, Esq., Land Agent, 18, Parliament Street, London, S.W.

STEWARD, or to assist a Gentleman.—Age 40, single; understands Stock and attending Markets; reference given.—S. M., Post Office, Aylsham, Norfolk.

LAND STEWARD OR FACTOR.—Age 28, single, Scotch; holds a similar situation, and is leaving in consequence of the Proprietor (the Improvement on the Estate being nearly finished), giving up Farming and going abroad. Has had the entire Superintendence of an Estate in the West of Scotland for nearly four years, where extensive improvements have been conducted by him in Draining, Building, Fencing, Planting, Roadmaking, Embanking, and the reclaiming of Moss Land, also the Management of the Home Farm, Marketing included. Is a smart Accountant, and would accept a situation as Under Factor on a large Estate. Unexceptionable references as to character and qualifications from present employer and other eminent agriculturists. Security if required.—A. D., *Gardeners' Chronicle* Office, W.C.

TO LANDOWNERS.—A person fully competent to take the entire Management of an Estate, and who has for many years had the Management of a Farm of 800 acres, at Peasemore, Berks, desires a similar engagement, or one to superintend an Estate generally. The fullest explanation will be given by Mr. John Matthews, of Peasmore, and reference may be made to the owner of the Peasemore Estate, as well as to Mr. Graham, of Newbury.

MANAGER.—Noblemen or gentlemen requiring an experienced Manager to conduct Estate Improvements in Draining, Planting, Landscape Gardening, Buildings, Laying out new Farms or Gardens, &c., may hear of a fully qualified person on application to A., Mr. J. Hopkins, Map Draughtsman, 14, Carey Street, Lincoln's Inn, London, W.C.

TO NOBLEMEN AND GENTLEMEN.

FORESTER, HEDGER, &c.—Middle-aged, without incumbrance; perfectly understands his profession in all its various departments, Fences of any kind, Wood or Iron; and has no objection to manage a Sawmill where one is kept for the use of his department, &c.; great experience. Undoubted reference will be given. No objection to Ireland.—J. M., Post Office, Killearn, near Glasgow.

STOCKMAN OR BAILIFF.—Age 21; the son of a Farm Bailiff. Has been accustomed to look after Fat Stock and Short-horns. Good references.—B. A., Tunbridge Wells.

TO SEEDSMEN AND NURSERYMEN.

SHOPMAN OR CLERK.—Age 29; upwards of 11 years' experience in a large Nursery and Seed business; has travelled; is a good Correspondent, and active at counter work. Is well recommended by former employer.—X. Z., *Herald* Office, Glasgow.

TO NURSERYMEN AND SEEDSMEN.

SHOPMAN OR CLERK.—AMARANTHUS respectfully offers his services to any Nurseryman or Seedsman desiring such; he has been about 15 years at the Trade, and has a good knowledge of all the branches.—AMARANTHUS, *Gardeners' Chronicle* Office, W.C.

FINE HEAD OF HAIR.

THE BEARD, WHISKERS, AND MOUSTACHIOS.

ROWLANDS' MACASSAR OIL is universally in high repute for its unprecedented success during the last sixty years in the growth, restoration, and in beautifying the human hair. It prevents it from falling off or turning grey—strengthens weak hair, cleanses it from scurf and dandrif—and makes it beautifully soft, pliable, and glossy. In the growth of whiskers, the beard, and moustachios, it is unfailing in its stimulative operation. For children it is especially recommended, as forming the basis of a beautiful head of hair, while its introduction into the nursery of Royalty, and the numerous testimonials constantly received of its efficacy, afford the best and surest proofs of its merits.—Price 3s. 6d., 7s., 10s. 6d., equal to four small, and 21s. per bottle. CAUTION.—On the wrapper of each bottle are the words, ROWLANDS' MACASSAR OIL, &c. in white letters, and their signature, "A. ROWLAND & SONS," in red ink.—Sold at 20, Hatton Garden, and by Chemists and Perfumers.

ASTHMA.—DR. LOCOCK'S PULMONIC WAFERS give instant relief, and a rapid cure of Asthma, Consumption, Coughs, and all disorders of the breath and lungs. To singers and public speakers they are invaluable for clearing and strengthening the voice. They have a pleasant taste. Price 1s. 1½d., 2s. 9d., and 11s. per box. Sold by all druggists.

DINNEFORD'S PURE FLUID MAGNESIA has been, during 25 years, sanctioned by the medical profession and universally accepted by the public as the best remedy for acidity of the stomach, heartburn, headache, gout, and indigestion. As a mild aperient it is admirably adapted for ladies and children.—Manufactured (with the utmost attention to strength and purity) by DINNEFORD & Co., 172, New Bond Street, London, W., and sold by all respectable Chemists throughout the empire.

The Gardeners' Chronicle Newspaper.

SATURDAY, OCTOBER 13, 1860.

FIVE PER CENT. INVESTMENTS.—Particulars of Investments for LARGE OR SMALL SUMS OF MONEY, bearing FIVE PER CENT. PER ANNUM INTEREST (well secured), withdrawable at notice, may be obtained, on application to THOMAS H. BAYLIS, 429, Strand, London, W.C.

BANK OF DEPOSIT (Established A.D. 1844), 3, Pall-Mall East, London.—Capital Stock, 100,000*l*.

Parties desirous of Investing Money are requested to examine the Plan of the Bank of Deposit, by which a high rate of interest may be obtained with ample security.

Deposits made by special agreement may be withdrawn without notice.

The interest is payable in January and July.

PETER MORRISON, Managing Director.

Forms for opening accounts sent free on application.

News of the Week.

THE KING OF SARDINIA and his Government have assumed the responsibility of the Neapolitan revolution, and GARIBALDI has invited his Majesty to go to Naples and send him reinforcements. The KING has taken the command-in-chief of the army of Italy, and is now on his way to Naples, in accordance with the invitation of GARIBALDI and with the resolutions presented to him by deputations from every province of the kingdom. The Sardinian troops in the Papal States crossed the frontier on Tuesday at three different points, and the Sardinian fleet had previously left Genoa with the KING'S brigade and 3000 other troops to reinforce the army of GARIBALDI. In taking this final resolution the KING has issued a manifesto to the people of Southern Italy explaining the policy he has adopted in consequence of the late events, and has also sent a Commissary-General to Sicily, charged with the administration of that island. The great victory gained by GARIBALDI over the Royal army in the neighhourhood of Caserta, and which will be known in history as the Battle of Volturno, was fought on the 1st and 2d inst., having lasted for nearly two entire days. On the first day it commenced at half-past 3 in the morning and lasted till 7 in the evening. The Royal army, which is said to have been commanded by the KING OF NAPLES in person, amounted to 20,000 men, while the total number which GARIBALDI could bring into the field was only 12,000. Notwithstanding this disparity of numbers, GARIBALDI, at the close of the day, had completely routed the KING'S army and driven them back to Capua with the loss of about 3000 men and 2000 prisoners, his own loss being estimated at upwards of 4000. During the night the Royalists took possession of the heights above Caserta, with the intention of descending into the plain and renewing the battle on the following morning. GARIBALDI however had information of the movement, and made his arrangements with such skill, that when the Royal troops descended the mountains at an early hour on the morning of the 2d, he immediately gave them battle, and at last completely routed them, cutting off two entire battalions, and making them prisoners almost to a man. GARIBALDI has since made a *reconnaissance* of Capua, but it is supposed that no regular attack will be made upon that fortress until the arrival of the Sardinians. The latest news states that GARIBALDI is about to convoke the electoral colleges of the Two Sicilies for the 21st inst. to vote by universal suffrage on the question of annexation, and that the Marquis DE PALLAVICINO, in his quality of pro-Dictator, having requested MAZZINI to leave Naples, the latter had taken his departure from the city.

Despatches from Turin inform us that the great debate on the law of annexation was brought to a close on Wednesday after an important speech from Count CAVOUR, when the order of the day proposed by the committee rendering homage to GARIBALDI and unanimously expressing their approval of the proposed law, was agreed to on a ballot by 290 votes to 6. The Cabinet of Madrid has addressed a note to the French Government demanding a Congress of the Catholic Powers, similar to that held at Gaeta in 1849, with the object of guaranteeing the integrity of the Papal States. The French Cabinet, in reply, while admitting the expediency of a Congress, has stated that the territorial changes caused by the late events in Italy would render it necessary to refer the Roman question to a Congress of the Great Powers.

Accounts from China to the commencement of July have been received through St. Petersburg, stating that the insurrection was gaining ground, especially in the eastern maritime provinces; and that in consequence of reports that the English who disembarked at Petcheli had not ill-treated the natives, the inhabitants of Pekin were favourably disposed towards the English, and desired their presence at Pekin. A corps of 6000 men had been despatched from that capital against the allies, and a corps of 10,000 had been sent in another direction.

Home News.

THE QUEEN'S RETURN JOURNEY.—On Wednesday morning at 10 o'clock, the Queen, Prince Consort, and the Princess Alice, accompanied by the Prince and Princess Frederick William, took leave of the Duke and Duchess of Saxe-Coburg, and left Coburg for Mayence, where they arrived soon after 7 o'clock in the evening. On Thursday the Royal party left Mayence for Coblentz, where they arrived at half-past 3 in the afternoon. The Prince Regent and the Princess of Prussia, the Grand Duke and Grand Duchess of Baden, were at Coblentz to receive her Majesty.

THE QUEEN AT COBURG.—On Tuesday week the Queen drove to Füllbach (a property belonging to the King of the Belgians) with the Duchess of Saxe-Coburg and the Princess Alice. The Duke of Saxe-Coburg accompanied her Majesty on horseback. Lord Augustus Loftus, her Majesty's Minister at Vienna, arrived at Coburg, and had an audience of her Majesty. On Wednesday the Queen and Prince Consort, accompanied by the Prince and Princess Frederick William, Princess Alice, and the Duke and Duchess of Coburg, walked to the Museum of Natural History, where they remained for some time inspecting its contents. In the afternoon her Majesty and the Prince Consort, with the Duke and Duchess of Coburg, Prince and Princess Frederick William, Princess Alice, and Count Mensdorff, drove to Ketchendorff and walked in the neighbourhood. The Hon. Charles Murray, her Majesty's Minister at Dresden, arrived at Coburg, and had an audience of her Majesty. On Thursday the Queen and Prince Consort, the Duke and Duchess of Saxe-Coburg, the Prince and Princess Frederick William, Princess Alice, the Prince and Princess of Reuss, Count and Countess Mensdorff, and Lord John Russell, drove to Rosenau, where luncheon was served. After luncheon her Majesty and the rest of the party proceeded to Waltersdorff, whence they walked over the hill to Lauterburg, and afterwards returned to the Palace at Coburg. On Friday morning the Queen and Prince Consort, accompanied by the Duke and Duchess of Saxe-Coburg, the Prince and Princess Frederick William, and the Princess Alice, walked out. In the afternoon her Majesty, accompanied by the Duke and Duchess of Saxe-Coburg, Prince and Princess Frederick William, and Princess Alice, drove to Neuhoff. The Duke and Duchess of Saxe-Meiningen and their daughter, the Princess Augusta, visited her Majesty and remained to luncheon. The Hereditary Prince and Princess of Reuss left Coburg. Count Munster arrived with a letter to her Majesty from the King of Hanover. Count and Countess Mensdorff took leave of her Majesty and returned to Vienna. On Saturday the Queen and Prince Consort, the Duke and Duchess of Saxe-Coburg, the Prince and Princess Frederick William, and Princess Alice, accompanied by Lord John Russell, drove to the Wald Parc at Mönckröden, where, the gentlemen being posted, the forest was driven for wild boar. The sport was very successful, seven boars being killed. Luncheon was afterwards served to the Royal party in one of the forester's houses. After luncheon her Majesty and the Royal party, with Lord John Russell, walked over the hills to the village of Mönckröden, where carriages were in waiting to convey them back to Coburg. In the evening a selection of sacred music was performed in the Giant's Hall at the Palace. Baron Carlowitz arrived from Dresden on a mission from the King of Saxony to express his Majesty's condolence on the death of the Duchess Dowager of Saxe-Coburg, and his congratulations on the escape of the Prince Consort in his late accident. Baron Lansch also arrived on a similar mission from the Duke of Saxe-Altenburgh. On Sunday the Queen and Prince Consort, the Duke and Duchess of Saxe-Coburg, the Prince and Princess Frederick William, and Princess Alice, attended Divine service in the Palace chapel. The service was performed by the Rev. Dr. Schwartz. The Grand Duke and Grand Duchess of Saxe-Weimar arrived at Coburg, and joined the Royal dinner party, returning to Weimar at night.

THE LATE ACCIDENT TO THE PRINCE CONSORT.—The following are the particulars of the accident which was briefly noticed in our last Number. On Monday the 1st., the Prince Consort, having some business to transact, left the Queen and Royal party at Callenberg after his shooting excursion, and entered a carriage to proceed alone to Coburg. After his Royal Highness had gone about three miles the horses, which were driven four-in-hand, commenced kicking violently, and shortly started off at full speed. The coachman, assisted by his Royal Highness, did everything in his power to arrest the progress of the frightened animals, but without effect. At about a mile from Coburg the road from Callenberg crosses the railway at a level, and on approaching this spot the Prince observed that the bar which is lowered to prevent carriages crossing the line when a train is expected was closed preparatory to the arrival of a train. A waggon which had been stopped by the bar was also standing upon the road. A violent concussion being then inevitable, the Prince jumped from the carriage, and fell to the ground. His Royal Highness, though receiving some superficial cuts and bruises in the face, was not at all stunned or seriously hurt, and proceeded to assist the coachman. The carriage had in the meantime come into collision with the bar of the railway, and was upset, the coachman being dashed to the ground and considerably hurt. His Royal Highness immediately devoted his attention to the coachman, who was conveyed to the lodge of the railway servant who has charge of the bar. The horses having thus freed themselves from the carriage, continued their career into the town of Coburg, and were there seen by Colonel Ponsonby, the Prince's Equerry, who had been in attendance in the earlier part of the day. The Colonel immediately procured a carriage, and proceeded with Dr. Baly and Dr. Carl Horschütz, the medical attendant of the Duke of Saxe-Coburg, to meet his Royal Highness. The Prince, who was still in the small cottage, directed the attention of the medical gentlemen to the coachman, and desired Colonel Ponsonby to continue his route to meet the Queen, who was at that time on her return to Coburg, in order to inform Her Majesty of what had taken place. His Royal Highness's general health did not suffer from the accident, and on the following Wednesday he had so far recovered that he was able to go out. The coachman is also doing well.

THE PRINCE OF WALES.—On the 22d ult. his Royal Highness visited one of the immense grain elevators at Chicago, and then drove through the city. He afterwards visited the Hydraulic works and then proceeded to the Prairies for three days' shooting. His Royal Highness left Dwight on the 27th for St. Louis amid hearty cheering. Every station along the line was crowded with people who cheered the Prince as the train passed by. At Alton he took steamer for St. Louis. Crowds followed the carriage to the steamer, and a royal salute was fired from the wharf, which was crowded with spectators. His Royal Highness arrived at St. Louis early in the evening, and was received on landing with loud and hearty cheers. Everything passed off quietly and in an orderly manner. The Prince intended to leave St. Louis on the 28th for Cincinnati and to proceed thence to Pittsburgh, Harrisburgh, and Washington, where he was expected to arrive on the 3d of October. After a stay of three days with the President, his Royal Highness was to visit Richmond, Baltimore, Philadelphia, New York, West Point, Albany, Boston, and Portland. It is understood that his Royal Highness will not, as first intended, visit the Island of Bermuda, but will sail from New York for England direct on or about the 17th inst.

PRINCE NAPOLEON left Southampton on Thursday week for Havre, and proceeded thence on Friday morning to Paris.

COURT MOURNING.—Orders have been issued from the Lord Chamberlain's Office for the Court to go into morning to-morrow, the 14th inst., for a fortnight, for the Duchess Dowager of Saxe-Coburg.

PARLIAMENTARY MOVEMENTS.—Mr. John Hardy, the ironmaster of Staffordshire, and brother of the member for Leominster, and Mr. John Curling, of the firm of Curling and Young, shipbuilders, are candidates for Dartmouth; the former in the Conservative, the latter in the Liberal interest. Captain Walter, brother of Mr. J. Walter, M.P. for Berkshire, and Mr. G. J. Shaw-Lefevre, nephew of Viscount Eversley (Ministerialists), and Mr. Ribton, barrister (Conservative), are candidates for Reading, in addition to Serjeant Pigott, who was announced last week. Mr. Samuel Ridley, a native of Boston, who has realised a fortune by business in America, has offered himself as a candidate for the seat vacated by the death of Mr. Herbert Ingram. Mr. Jenkin, who issued an address to the electors of Honiton, on Liberal Conservative principles, has retired, and Mr. Moffatt is now the only candidate in the field.

COLONIAL BISHOPRICS.—The Right Rev. Dr. Chapman has intimated his intention to resign the Bishopric of Colombo on account of failing health, and will only remain in the diocess until his successor is appointed. The report that Dr. Colenso is about to resign the Bishopric of Natal is contradicted on authority.

THE ARMY.—The Colonelcy of the 73rd Foot, vacant by the death of Sir Michael Creagh, has been conferred on Major-General B. O. Jones.

THE CHANNEL FLEET.—It is understood that, owing to continued ill-health, Vice-Admiral Sir Charles Fremantle, K.C.B., will shortly strike his flag as commander-in-chief of the Channel fleet. A portion of the fleet will shortly proceed to the Azores, for the purpose of meeting the Prince of Wales on his return from America. According to present arrangements the two divisions of the fleet will winter

at Portsmouth and Plymouth, remaining under the command of the Port Admirals at the respective ports.

THE NAVY.—The Admiralty have decided on building at Chatham Dockyard another steel plated ship, of large proportions, and fitted with engines of great power. She is intended to be 400 feet in length, nearly double that of many of our line-of-battle ships. Every device which science can suggest to make her shot proof will be adopted, and she will be armed exclusively with heavy Armstrong guns of great range. The armour-plated steam-rams Warrior and Defiance, the former building for the Government at the Thames Iron Works, and the latter at Messrs. Palmer's works at Jarrow, are now in a forward state for launching. A large portion of their machinery is already completed, and their construction is of such a nature that they would be perfectly safe in deep water, even were it possible to perforate them with shot. When completed they will be armed with 36 of the Armstrong 100-pounder guns.

THE VOLUNTEER MOVEMENT.—A detachment of the Hon. Artillery Company has just completed a period of eight days' rifle practice at Walton-on-the-Naze, on the Essex coast, and returned to London. Arrangements are in progress for the visit of a strong force of the Victoria Rifles to Walton for a similar period of practice. —The Lumber Troop, more correctly called the "Lombard Troop," from having been originally formed by the Lombard Merchants for the defence of their banking establishments, is about to be placed on an effective footing as a Cavalry Volunteer Corps.—The committee of the Central London (40th Middlesex) have issued a prospectus announcing their intention of forming a city company for the convenience of gentlemen engaged in the large mercantile warehouses in the city.—The London Brigade, to the number of upwards of 400, mustered in Guildhall, on Saturday, and thence marched, preceded by their bugle band, to the Shoreditch terminus, and proceeded by special train to Wanstead, where they spent the remainder of the day in battalion and skirmishing drill. The Brigade have obtained permission from the Common Council to hold a ball in Guildhall in the second week in November.—The Workman's Brigade, now mustering nearly 1000 strong, assembled in Guildhall for practice and parade on Saturday evening, when it was announced that Colonel Sir William de Bathe had accepted the command of the 1st battalion.—A meeting of gentlemen interested in the formation of a Mounted Volunteer Corps for the west end of London was held on Tuesday at Willis's Rooms, Major Richardson, C.B., of the 8th Bengal Irregular Cavalry, in the chair. It was resolved that the uniform should consist of a loose blue jacket, with blue velvet facings and silver cord embroidery, pantaloon breeches of white Melton cloth, Napoleon riding boots of patent leather, plated hunting spurs, a blue forage cap with silver band and crown ornament, and without peak; that the sword should be the light cavalry sword with scroll hilt, and the belts and pouch of Russia leather, with plated ornaments. It was also agreed that the subscription should be for effectives two guineas per annum and one guinea entrance, and that honorary members should subscribe one guinea per annum, a donation of 10 guineas to constitute a life member. 36 gentlemen have already enrolled themselves, and nearly 100 more have promised to join, and it was agreed to communicate with the Lord-Lieutenant forthwith, offering their services to her Majesty.—The 29th North Middlesex was joined on Tuesday by a new company entirely composed of the workmen employed in the pianoforte manufactury of Messrs. Hopkinson, of Regent Street. This accession raises the strength of the North Middlesex to 600, and application will be forthwith made to increase the regiment to 1000 rank and file.—The 24th Middlesex (Uxbridge) met on Saturday, at Cowley House, and received a set of drums and fifes presented to the corps by the Hon. Miss Georgina Irby, sister of Lord Boston. On the previous Thursday and Friday the regiment had a shooting match for prizes, when a challenge cup subscribed for by the corps was gained by Private Rafferty, and other prizes, given by the officers, were won by Privates Nicholson, Sherwin, W. Rayner, Murray, Phillips, and Hallowes; and Corporal Woodbridge. Two cups, given by the ladies of Uxbridge, were won by Privates Rafferty and Youens.—Four companies of the 2d Tower Hamlets paraded in Victoria Park on Saturday and went through several evolutions, preparatory to the review at Nazing to-day.—A public meeting of the inhabitants of Upper Clapton and neighbourhood was held on Tuesday, when it was resolved to add to the strength of the 2d Tower Hamlets Regiment by raising another company for the locality.—The 7th Surrey on Saturday assembled at the Sessions House, Newington Causeway, and preceded by their band, marched to their parade ground in Kennington Lane, where they went through the evolutions of a light infantry field day.—The 19th Surrey (Lambeth) marched out on Saturday afternoon, and headed by their band proceeded through Kennington, Brixton, Streatham, and Clapham. This corps is rapidly increasing in numbers. A large firm in the neighbourhood, perceiving the interest taken in the movement by their workmen, have formed a company of 80 of their workmen in connection with it; also, an 8th company is in a state of completion. The corps has recently adopted the Lime light for the purpose of lighting up their drill ground at Kennington. This ground, which is about 230 feet in length, and upwards of 100 in width, making an area of about 2300 square feet, is lighted by four lamps containing eight jets o lime light, consuming 60 feet of gas per hour at a maximum, and equal in illuminating power to 400 fish-tail gaslights consuming at a maximum 2000 feet of gas. —The 5th Surrey had a match at Reigate on Friday, for the prizes given by the Hon. Mr. Monson, M.P., captain of the regiment, and a purse of 20 guineas given by the ladies of Reigate. The prizes given by Captain Monson were a rifle, a silver cup, and a field glass. The first was won by Mr. F. Blackstone, the second by Mr. Hughes, and the third by R. Killick, The ten best shots then competed for the ladies' purse, which was won by Sergeant Nicholls.—Thirty-two members of the 8th Surrey (Epsom, &c.) competed last week in shooting for four prize medals given by Mr. Robert Carter, Treasurer to the Epsom Committee, when Private Keeling gained the first prize, a silver-gilt medal, making 7 points at 600 yards; Privates R. Wood and Radford each made 7 points at 300 yards; and in shooting off the tie the former gained the second prize, a bronze medal, and the latter gained the third prize, a plain medel. Captain Hastie made 10 points at 200 yards, and received also a plain medal.—The 15th Surrey (Chertsey) held their first annual prize contest on Saturday at St. Ann's Hill. The prizes consisted of a valuable rifle for the first prize, and a silver tankard for the second and third. The six highest scorers also became entitled to shoot for the county prize at Dorking. There was also a silver tankard for competition by honorary members. The result of the shooting was as follows:—Joseph Hunt, 22 points; Pidcock and H. Hunt, 19 points each (in shooting off the tie Pidcock won the second prize); Alder and R. Hunt, 18 points each; Smith, 17 points. These six therefore will contend for the county prize. The honorary member's prize was won by Mr. Wetton, who scored 8 points in five shots at 200 and 300 yards.—Several handsome prizes, given by the members for Windsor, Mr. Vansittart and Mr. G. W. Hope, the Hon. L. H. Ruthven, &c., to the Windsor corps, were shot for last week, on their practice ground, Dedeworth Green. The following was the result:—Tull, 22 points; Hill, 21; Bambridge, 21; Holden, 21; Jones, 19; Harper, 19. The ties were then shot off and won by Messrs. Hill and Jones.—The Birmingham corps had their last field day for the season at Malvern, on Saturday, when the different companies, numbering upwards of 700 men, were reviewed by Earl Beauchamp. A sham fight concluded the proceedings, after which the men were entertained at dinner by their officers.—The Seaham Harbour Artillery and the Sunderland Artillery were inspected on Thursday week by Lieut.-Colonel Morris, R.A.—An influential meeting of the residents of Tunbridge was held a few days ago, at which it was resolved to form a company of cadets to be attached to the 17th Kent.—The Cinque Ports Corps met in large force on Monday at Ecclesbourne Glen, near Hastings, and shot for prizes. The 1st prize, a Lancaster rifle, value 10 guineas, was won by Mr. Webb, who scored 15 points; Lieut. Crake and Messrs. Penhall and Hildred scored 14 each, and in shooting off the tie the second prize (a silver medal) was won by Mr. Hildred, and the third prize (a bronze medal) by Mr. Penhall. A contest then took place between 12 members of the Hastings Company and 12 members of the Rye Company, when the Hastings Company proved victorious, making 119 points to the Rye Company's 115. A prize cup value 17 guineas was won by Mr. Webb, and a prize of five guineas was won by Mr. C. Brittenden.—On Friday the 8th Forfar or Wharncliffe Corps competed at Newtye for a silver medal presented to the company by Lady Wharncliffe. Sergeant Saunders, Captain Thomas, and Private Whitton, each scored 12 points. In shooting off the tie Sergeant Saunders won the prize, having made 19 points, while Captain Thomas made 18, and Mr. Whitton, 9.—Several gentlemen of Brighton, accustomed to ride to hounds, have determined to form a mounted corps in connection with the 1st Sussex Rifles.—The Robin Hood Rifles had their first shooting match at Nottingham last week, when the 1st prize was won by Private Brownsword, the 2d by Sergeant Simkins, the 3d by Sergeant Henson, and the 4th by Private Hedderley.—On Wednesday week the corps were reviewed on the Trent Bridge Cricket ground, and were afterwards presented by Lady Belper and Mrs. Enfield with a set of colours and a silver bugle, the gift of the ladies of Nottingham, who also presented a charger to the Adjutant of the regiment.—The Second Devon Battalion, consisting of seven companies, viz. the 1st Plymouth, 2d Devonport, 3d Stonehouse, 4th Tavistock, 5th Plymouth, 6th Devonport, and 7th Stonehouse and Maker, were reviewed last week by General Hutchinson at Mount Edgecumbe.—A sham fight representing the successful invasion of the coast by a hostile force in the presence of a strong defending body, took place on Friday at Cromer. The volunteers who represented the "enemy" comprised the 2nd Norwich, Cromer and Fakenham Companies, and the defending force comprised the Stalham and Aylsham Companies, and 20 gentlemen on horseback, commanded by Capt. Chapman, of the 1st Bengal Cavalry, and presumed to represent an irregular troop of horse. After the engagement the Volunteers were entertained at a dinner given by Captain Buxton, M.P., in a marquee near the Hotel de Paris.—The Great Yorkshire shooting match commenced at York on Thursday week and terminated on Monday. There were 133 competitors, including persons from Leeds, Hull, Sheffield, Halifax, Bradford, North Craven, Bedale, Knaresborough, Scarborough, Malton, Wetherby, York, &c. A prize of 50*l.* was won by Mr. Lufton, of the York Corps, who scored 26 points; a prize of 15*l.* was won by A. R. Harding, of Leeds, who scored 22; while for a prize of 5*l.* there was a tie between Mr. J. A. Whalley, of Leeds, and Mr. James Ingledew, of the 8th North York, each of whom scored 21. The shooting off this tie ended in favour of Mr. Whalley. A silver cup, of the value of 5*l.*, given by Captain Lloyd, was won by Private Anderson. For a silver cup given by Captain Meek, there was a tie between Sergeant Gibson and Private William Robinson. A silver cup given by Captain Lloyd was won by Private J. Bainbridge. A silver cup, 5*l.*, given by Captain Meek, was won by Corporal Cooper. A silver cup, given by the subalterns of No. 1 Company, was won by Private Anderson. A silver cup, given by the subalterns of No. 2 Company, was won by Sergeant Gibson.—The Bungay, Beccles, Harleston, and Halesworth corps were reviewed on Monday at Flixton Hall, the seat of Sir Shafto Adair, who afterwards entertained them at dinner.—A shooting match for three cups, of the values of 10*l.*, 7*l.*, and 5*l.*, took place on Monday in Finborough Park, between 40 competitors selected from the 1st, 2d, 3d, 6th, 8th, 10th, and 12th Suffolk companies. The prizes were won by Private Marriott of the 6th, Sergeant Colson of the 6th, and Private Chapman of the 1st Suffolk. —On Saturday the City of Edinburgh Artillery and the Mid-Lothian Coast Artillery were inspected at Leith Fort by Lieut.-Colonel Morris, R.A.—On Saturday, by permission of the Lord-Lieutenant of Lancashire, the Kirkham Artillery, the Lytham, and Rossall Rifles were reviewed by Colonel Patten, M.P., at Rossall, and were afterwards entertained at dinner in the great hall.—The Butterley and Dove Valley Companies met last week, for the first time, in the park of Osmaston Manor, at the invitation of Mr. Wright, and after a substantial dinner, were reviewed by Captain MacGregor, of the London Scottish.—The Wensleydale and Staledale Companies of the North York were reviewed on Monday in the grounds of Mr. C. Other, of Elm House, Redmire, by Sir George Dennis, Captain-Commandant, and were afterwards inspected by Lord Ailesbury. They then marched, headed by their band, to the village of Redmire, where a substantial luncheon was provided by the officers and friends of the 12th (Wensleydale) Company.—On Saturday a silver bugle was presented to the Southport Corps by Mr. T. R. Bridson, J. P., who afterwards entertained the corps at a luncheon provided at the Hoghton Arms.

Foreign.

FRANCE.—The *Pays* and the *Patrie* again give a denial to the report that the Emperor will go to Warsaw.—M. Mon, the Spanish Ambassador, presented to the Emperor on Monday an autograph letter from Queen Isabella, in reply to the letter left by his Majesty at Mahon.—The report that the Marquis de Turgot had remitted a note to the Swiss Confederation energetically protesting against an insult offered to the French flag at Sion is without foundation.—Count Kisseleff, the Russian Ambassador at Paris, leaves tomorrow for Warsaw.—The Emperor on Saturday inaugurated the Zoological Gardens, founded by the Imperial Society of Acclimatisation in the Bois de Boulogne. His Majesty was received by the Council of Administration, headed by M. Geoffroy St. Hilaire, who delivered an address on the occasion. The Emperor in reply, expressed the interest he felt in the new establishment, and afterwards examined the collection of animals.—The "Tir National" opened on Sunday at Vincennes, and has been continued daily during the week. Several English officers and a number of Swiss and Germans were present, but as the meeting proves to be a private speculation, and not, as at first supposed, a national shooting match, the principal marksmen of England will take no part in it, except as spectators. The regiments of the Line and National Guard have hitherto been the principal competitors for the prizes, which amount altogether to 50,000f., and as yet there has been very little firing by civilians. The French Government have addressed a series of inquiries to the Chambers of Commerce throughout France, to obtain their opinion as to the advisableness of anticipating the dates fixed by the Commercial Treaty for the admission at the reduced duties of the various classes of British manufactures. Some members of the deputations sent to Paris by Manchester and Glasgow to give information to the joint commission under the Commercial Treaty have returned to England; but six remain in Paris, and it is hoped that all the questions bearing upon the admission of cotton goods and yarns will be got through during the present week. A telegram was sent to the Nottingham Chamber of Commerce on Tuesday, requiring the attendance of a deputation to aid Mr. Cobden in the settlement of some details of the Treaty relating to the lace and hosiery trade. In compliance with this message, Mr. Heymann, lace manufacturer, and Mr. Mundella, hosier, proceeded to Paris on Thursday.—A religious ceremony in honour

of General de Pimodan, who was killed in the action at Castelfidardo in the service of the Pope, was performed on Friday morning in the Cathedral of Notre Dame. It consisted of a mass celebrated by the Cardinal Archbishop of Paris, and the solemn chants used in the commemoration of the dead. As General Pimodan was a staunch Legitimist, born and bred in the Carlist camp, the service was attended by the leading notabilities of the Faubourg St. Germain. Several political notabilities of other parties were also present, as well as military men of all ranks who served in the African and Crimean wars. The child of the late General was also present, and on being recognised by the crowd was treated with extraordinary respect, the ladies kissing him and the gentlemen shaking him by the hand, and afterwards escorting him to his carriage.—The Minister of State has commissioned M. Triquetti, the sculptor, to execute a statue of Gaston de Foix, for the town of Pau.—The *Constitutionnel* publishes an article, signed by M. Boniface, on the Sardinian invasion of Naples, which itdenounces as a contradiction of all the principles invoked by Sardinia herself, as a direct violation of the rights of an independent state, and as an act of aggression for which Sardinia is responsible before Europe. It also publishes the following remarks on the allocution pronounced by the Pope on the 28th ult.:—

"What strikes us in this document is, first, some unlooked-for insinuations concerning French policy, and then the still more inexplicable silence respecting the protection with which we cover the patrimony of St. Peter. But, in our opinion, that which in some way compensates for this reticence is the wise resolution which the Holy Father appears to have taken to remain in Rome, under the protection of that great Catholic nation whose intentions, but not whose services, may be misconstrued."

Spain.—A Royal ordinance decrees the payment of an annual pension of 540,000 reals for life to the Duke of Parma. The Spanish Government has demanded the assembling of a Congress of the Catholic Powers, similar to that held at Gaeta in 1849, with the object of guaranteeing the integrity of the States of the Holy See. The French Cabinet, although admitting the expediency of assembling a Congress, has nevertheless stated that the territorial changes caused by the late events in Italy would render it necessary to refer the Roman question to a Congress of the great Powers.—The Absolutist journals reproach the Government for not having sent an army to defend the Pope.—Don Juan de Bourbon has addressed another letter to the *Times*, disclaiming all intention of kindling a civil war in Spain, and stating that if the Spanish people respond to his appeal by making him king of the Spaniards, he will guarantee the liberty of the press, financial credit, toleration for Dissenters, the wise government of Cuba, and the cultivation of the waste lands. The King and Queen left Barcelona for Lerida on the 5th, and have since arrived at Saragossa. Their Majesties will return to Madrid on the 16th.

Holland.—The Bill for the abolition of slavery in the Dutch West Indies has been laid before the Chambers by the Colonial Minister, who stated that the measure was necessary as well for the interest of the colonies as that of the mother country. The cost of emancipation is estimated at 13,859,280 florins, independently of 2,000,000 for the encouragement of immigration.

Bavaria.—The performance of the "Passionsspiel," religious dramas similar to the miracle plays of the middle ages, and which only takes place once in 10 years, has just concluded at Oberammergau. The King of Bavaria was present at one of the exhibitions, and on the last performance the number of spectators from all parts of the country was so great that the theatre, which holds 6000 spectators, was filled. About 20 performances were given in all, and the net receipts exceeded 50,000 florins, part of which will be devoted to the production of the entertainment in 1870, and part to works of utility.

Switzerland.—The Geneva papers state that the questions of Savoy and the neutrality of Switzerland will be discussed at the interview at Warsaw.

Prussia.—The news of a Prussian protest identical with one of Austria against the Sardinian policy, and of the recall of the Prussian Ambassador from Turin, is said to be unfounded. The Prince Regent will leave on the morning of the 20th inst. for Warsaw, accompanied by the Minister of War. His Royal Highness has nominated 18 life members to the Chamber of Peers, all of whom belong to the Liberal party; and has conferred on the cities of Memel, Greifswald, Halberstadt, Minden, Bonn, Elberfeld, and Barmen the privilege of electing a representative for life to the Upper Chamber. The chief importance of this measure is that it has dissipated the illusions of the retrograde party that the Prince Regent shared their opinions.—Baron von Schleinitz has addressed a fresh despatch to Baron Werther, the Prussian Ambassador at Vienna, stating that Prussia will soon be obliged to give her serious attention to the affairs of the Duchies of Schleswig-Holstein, and instructing Baron Werther to claim the co-operation of Austria.

The Rhine.—The Prussian Custom House officers at Emmerich attempted to board and search her Majesty's yacht Fairy during her recent passage up the Rhine to wait the orders of the Queen at Mayence. The officers of the yacht refused to allow them to board her, whereupon the Customs authorities telegraphed to Cologne, and on the arrival of the yacht at that place the authorities refused to open the passage through the bridge of boats until she had been searched, and also refused to allow her officers to land, although in their uniform. The British Consul immediately telegraphed to Berlin, and in due course orders were received to allow the yacht to proceed to Mayence without further molestation.

Austria.—The Secretary of the Austrian Embassy at Rome has left Vienna for that capital with the reply of the Austrian Cabinet to the Pope's Circular of the 18th ult. to the European Courts. The Austrian Cabinet, though severely censuring the Sardinian invasion of the Papal States, declares the utter impossibility of intervening otherwise than in the ordinary diplomatic way.

Hungary.—In spite of the efforts of the Vienna Government, the agitation in Hungary is increasing. The closing of the University of Pesth has excited the greatest indignation, and it is the general opinion that the existing difficulties between Hungary and the Austrian Government must lead to a revolution.

The Adriatic and Venetia.—All the Austrian ships of war which were in the Syrian and Neapolitan waters have returned to Pola, where they are concentrated under the command of the Archduke Maximilian. The Austrian Government last week ordered all the lights on the coasts of Istria and Dalmatia to be extinguished, and the garrisons in these provinces to be considerably reinforced; but in consequence it is presumed of the remonstrances of the maritime powers, the lights have now been re-established. The *Press* of Vienna states that the vessels belonging to Garibaldi will be treated as pirates, even though hoisting the Sardinian flag. Austria is concentrating enormous bodies of troops in Venetia, and a letter from Verona states that 800 carts are daily employed conveying materials for the fortifications and ammunition.

Russia.—It is reported that Russia is on the point of recalling her Ambassador from Turin. A courier from St. Petersburg has passed through Paris for Rome with despatches from the Russian Government advising the Pope not to quit Rome, or to pronounce any excommunication, but for the present to confine himself to protesting against the invasion by Sardinia.—It is asserted that at the interview at Warsaw the basis of a programme for a future Congress on Italian affairs will be examined and afterwards submitted for approval to France and England; and that Russia, Prussia, and Austria will issue circular notes to their diplomatic representatives on the results of the interview. The Russian Ambassadors at Berlin, Vienna, Paris, and Turin, and the Ambassadors of Austria and Prussia at St. Petersburg, have been summoned to Warsaw to be present at the interview of the Sovereigns.

Italy.—The King of Sardinia has left Ancona for Naples after taking command of the army, which entered the Neapolitan territory on Tuesday at three different points. Deputations had previously arrived from every province of the kingdom with the resolutions of the Municipalities and other constituted bodies, proclaiming Victor Emmanuel King, and soliciting his presence. The Governors and magistrates of the different provinces had also signed an act of submission and homage to the King's Government, and Garibaldi had written to his Majesty soliciting him to go to Naples, and requesting that 14,000, men be sent as soon as possible. A manifesto of his Majesty addressed to the people of Southern Italy has been published, in which the King explains the line of policy he has followed, and the resolutions he has taken in consequence of the late events. Admiral Persano left Genoa on Saturday with the whole Sardinian fleet, conveying the King's Brigade and more than 3000 other troops to Naples, and the Government has sent a Commissary-General to Sicily, charged with the administration of that island. Letters from Naples contain detailed particulars of the great battle which took place on the 1st and 2d inst. between the army of Garibaldi and that of Francis II.—a battle which has probably decided the campaign, and will leave the Neapolitan forces an easy conquest to the King of Sardinia. The following is a concise account of the battle:—

At break of day on the 1st inst., taking advantage of a thick mist, the Royal army left Capua in three columns; one of which attacked Santa Maria, the other St. Angelo, while the third cut the communication between those two points at Maddaloni. The advanced posts of Santa Maria, consisting of Siedians, were surprised and forced to retreat. The Royalists then made a furious attack on Santa Maria and penetrated into the first houses, and it required eight charges with the bayonet to dislodge them. St. Angelo, heroically defended by the 1st brigade of Medici's division, resisted all the attacks of the Royalists, though their efforts were concentrated against that position. The 1st brigade suffered cruelly, one of the staff officers was killed, and the other two severely wounded. The Royalists simultaneously crossed the river at Cajazzo and attacked Garibaldi's extreme left at Lucnatala and Castel Boronne, held by the division of General Bixio and Medici's 3d brigade. Bixio's division had to cope with 7000 Royalists, three battalions of Bavarian chasseurs, a squadron of cavalry, and a battery of rifled cannon. The Royalists, 30,000 strong, having driven back the Garibaldians along the whole line, began to attack their positions, but at this moment the brigade of General Eber, the division of General Turr, and other reserves came up, raising Garibaldi's force to 12,000 men in the field. Fifteen English sailors, on leave from her Majesty's ship Renown, who had visited the camp merely for amusement, also came up to take part in the engagement, and two battalions of Sardinian Bersaglieri and a division of Sardinian artillery were sent up by the Sardinian Minister at the request of General Sirtori to work the guns taken from the Royalists. At about 2 P.M. Garibaldi resumed the offensive; at 6 o'clock the Royalists, broken on every side, were driven to the Volturno or in hasty retreat upon Capua. The King commanded in person, dressed in plain clothes, and was several times seen under fire. Garibaldi, as usual, was everywhere, especially where the danger was greatest, and displayed an almost superhuman activty and energy. His loss is stated by the *Patrie* to have been 4500 men; that of the Royalists was about 5000. The battle lasted from half-past 3 in the morning till 7 in the evening. At 10 o'clock, after Garibaldi had retired for a few hours of rest in the little chamber of the parish priest of St. Angelo, a telegraphic despatch arrived from Caserta informing him that a Neapolitan force had made its appearance on the mountains to the north of Caserta, and that a body of them had even occupied Monte Briano above the casenle of the park, which is not a mile from the palace. With that rapidity which characterises the resolutions of Garibaldi in moments of emergency, he immediately called in all his available troops and made arrangements for attacking them. At an early hour on the following morning the Neapolitans who were in possession of the heights sent down a couple of battalions, which succeeded in reaching the plain without being perceived, and actually got possession of the first houses and the barracks on the north-eastern flank of Caserta. The sentinel at the barracks was the first to give the alarm. General Sirtori with the force he had in hand, including two companies of Piedmontese Bersaglieri and two companies of the Line, which had been telegraphed for from Naples, immediately went out to meet the Royal troops, which were already more busy plundering than fighting. They were soon pressed back, and a number of them taken prisoners; of the rest, a part moved off in the direction of Maddaloni, where General Bixio came down upon them, and made likewise a number of prisoners. While this was going on General Saulis had drawn nearer with his brigade, and Garibaldi himself had reached the heights. The Piedmontese as well as some other troops were sent up to assist, when the Royalists fled followed by the Garibaldians, with the Piedmontese Bersaglieri in front. The Royalists tried to make a stand in front of Caserta Vecchia, but were soon obliged to yield, leaving 400 or 500 prisoners in Garibaldi's hands. After this, the whole affair assumed altogether the character of a chase. Two entire battalions, cut off and pressed back, fell into the hands of Colonel Viackler, of the Brigade Saulis, and were made prisoners almost to a man. This large number of prisoners, many of whom still had their arms, was escorted by a few of Garibaldi's men to the Palace of Caserta, in the courtyard of which, before evening, 2500 prisoners, with two colonels and several other superior officers, were collected. The rest were dispersed in all directions, so that of the column of 5000 very few returned to the right bank of the Volturno. It is evident that these formidable attacks were the last efforts of Francis II., who, had he been victorious, would have been in Naples before night. The Royalists set fire to several houses, and some persons were burnt to death, but these cruelties were committed by Bavarians and not by Neapolitans. The total number of prisoners in Garibaldi's hands is said to be 5000. General Milbitz, General Longo, Colonel Dunn, and a son of Garibaldi were wounded. The Colonel of Garibaldi's Engineers was killed, and General Bracco has since died of his wounds.

After this battle the Neapolitans withdrew towards Capua and Gaeta. The King and his brothers intend to continue the fight, and have ordered the fortifying of the road leading to Rome. On the morning of the 4th inst., Garibaldi made a *reconnaissance* in person in the direction of Capua. He ascertained that the line of the Volturno was still strongly protected, and that the Royal troops, despite their recent defeat, were prepared to defend it. He went as far as the bridge of Treflisco, and found that fresh redoubts, armed with cannon, had been thrown up, and that it would be impossible to turn the place on the north side. The King of Naples has addressed a circular to his Ambassadors at Foreign Courts, of which the following is a summary:—

"His Majesty protests against the unheard of usurpations of General Garibaldi and his handing over the whole of his Majesty's fleet to a foreign Sovereign in whose name he has taken possession of the Royal power and performed acts of Government. The King declares that all Europe has been stupefied by these unprecedented facts, and states that all the piratical expeditions which have torn Sicily from him and driven him from his capital were prepared under the eyes of Count Cavour, when he was giving him the most explicit assurances of his peaceful intentions, and while there was a Sardinian Ambassador at Naples. He protests against the "inexplicable toleration of these things by the Sardinian Government," against the new title of King of Italy proclaimed by Garibaldi in favour of the King of Sardinia, "a title which supposes the destruction of all recognised rights, and the complete absorption of the independent States still remaining in the Peninsula," and declares against the decrees of Garibaldi, "declaring them to be null, void, and illegitimate; and he appeals to the justice of Europe against a line of conduct which transforms the Mediterranean Sea of civilisation and commerce into an open field for piracy, and which leaves a nation all the advantages of conquest, without the responsibilities and dangers of war."

It is stated that Garibaldi is about to convoke the Electoral Colleges of the Two Sicilies for the 21st October, to vote by universal suffrage. The Marquis de Pallavicini, in his quality of Pro-Dictator having requested Mazzini to leave Naples, the latter had taken his departure from the city. The concession of all the Neapolitan railways was granted last week by Garibaldi to the firm of Adami of Leghorn; but the concession has since been cancelled. A despatch from Rome states that preparations for departure were ostensibly making at the Vatican, but it was understood that the Pope had again declared that he would not leave Rome. The *Official Journal* had published an article claiming the payment of Peter's pence from all the faithful, but textually declaring that the Pope would accept no subsidy from any earthly Power. It is asserted that the Pope has refused a pecuniary indemnity offered by the Emperor Napoleon and King Victor Emmanuel. General Goyon had notified that he was about to occupy Velletri and Frosinone, on the Neapolitan frontier. The French had already occupied Viterbo, Civita Vecchia, Civita Castellana, Tivoli, Palestrina, Frascati, Albano, and Valmontone. The report of Major Reilly states that the loss of the Irish battalion in the fight at Spoleto was only three killed and 10 wounded. It is said that Monsignore Merode will be dismissed. General Lamoricière arrived at Genoa on Monday, and was lodged in the Royal Palace. He afterwards proceeded to Turin. It is asserted that he has sent a telegram to Marseilles to secure a passage in the

pucket for Civita Vecchia for himself and three officers.—Accounts from Turin state that in the sitting of the Chamber of Deputies, on Thursday week Count Cavour declared that there existed no public document or private treaty, that no conversation or negotiation had taken place, and that no Power had ever made any propositions or demands involving the cession of a single inch of Italian soil. He further said that the fact that the news concerning a treaty for the cession of Sardinia, of which the journals had spoken, was simultaneously sent from Vienna and Palermo, was sufficient to show its falsity, and to explain its double origin. In the sitting of Friday Signor Cabella demanded the production of all documents relating to the entry of the Sardinian troops into Umbria and the Marches. Count Cavour refused to comply with the motion, and said that the consideration of the diplomatic questions arising out of that affair had scarcely commenced. In the sitting of Saturday Signor Poerio asked for information respecting the statement of the Naples journals that a concession of all the lines of railway in the Two Sicilies had been granted by the Dictator to the firm of Adami, of Leghorn. Count Cavour replied that Government had no official information on the subject, but he believed that the news was entirely unfounded. The debate on the law of annexation in the Chamber of Deputies terminated on Wednesday, when Count Cavour made an important speech, of which the following is an abstract:—

"Your vote is demanded in order that you may give to the inhabitants of Southern Italy a proof that the steps taken by the Government have met with your approval. As regards the disunion which has arisen between the Government and Garibaldi, the fault has not been ours. Public opinion leaves no doubt on this point. The ministry, therefore, decided on presenting themselves before the parliament in order that it might judge their policy. This is the greatest homage that can be paid to any man. The crown, after mature consideration, refused to accept the offer made by us to tender our resignation, being of opinion that Government would thereby be too much weakened at home and abroad. It only remained to us, therefore, to address ourselves to you, not that you might judge Garibaldi, who is not subject to your examination, but ourselves, over whom you have power. Should you support us, we shall go to meet Garibaldi and present to him the order of the day proposed by your committee, which you will approve and which we accept with all our hearts. We shall offer him our hand, and invite him to union in the name of the Italian parliament. The cession of Italian territory as an indemnity has again been spoken of. To this report I give a formal denial, and add that when the annexation shall have been accomplished any cession of territory will become impossible. Nobody will be able to ask such a cession from a country with a population of 24,000,000. An attack against Rome and Venice has also been spoken of. We desire that the Eternal City should become the capital of Italy. But as regards the means to that end we should be able to say in what condition we shall be six months hence. The revolution in Rome will be accomplished by the conviction that liberty is favourable to religion. Respecting Venetia, Europe does not wish that we should make war upon Austria. We must take into consideration the opinion of the Great Powers. We must bring about a change in this opinion. Europe believes us incapable of delivering Venetia alone. Let us show ourselves united, and that opinion will change. It is untrue that the Venetians are peacefully supporting their destiny. Austria has flattered them in vain. Public opinion will change not only in France and England, but Germany also, which is becoming liberal, will be in our favour."

The order of the day proposed by the Committee, rendering homage to Garibaldi, and unanimously expressing their approval of the proposed law of annexation, was then agreed to by ballot by 290 votes to 6. In the sitting of Tuesday, Signor Bertani gave a formal denial to all the calumnies which had been propagated respecting his administration at Naples. He declared that he had been faithful to his oath, and devoted to Italy and King Victor Emmanuel. He desired only that sufficient guarantees might be given that the interests of the inhabitants of Southern Italy should not suffer.

TURKEY.—The Grand Vizier arrived at Salonica on the 5th inst. The Russian Minister has presented a note complaining of the Grand Vizier's return before having completed his mission.

SERVIA.—Accounts from Belgrade confirm the report of Prince Milosch's death, and state that he died of cancer, under which he had been for a long time suffering. The accession of Prince Michael has been unattended with any opposition or disturbance.

THE PRINCIPALITIES.—Advices from Bucharest state that Prince Cousa has appointed a diplomatic agent to Turin. It is believed that the Porte will protest against this appointment, because it has always claimed the exclusive right of representing the Danubian Principalities in foreign countries.

SYRIA.—Letters from Damascus state that since the departure of Fuad Pacha from that city the Mussulmans have resumed their misdeeds, and killed 20 Christians. At Magnesia they have massacred 70 Christians of both sexes. At Latakia also they are furious against the Christians, and have threatened the life of the Russian Consul. It is asserted that, on the termination of the labours of the European Commission at Beyrout, which will probably occupy two months, the expedition in Syria will return to France. The *Moniteur* of Sunday contained the following article:—

"The affairs of Syria have entered a new phase. Military action will now succeed the moral influence which has hitherto been exercised by our troops. Some other chiefs of the Druses have been arrested and tried at Beyrout. The Caimakan of the Druses is now among the prisoners. These measures have produced a kind of panic among the Druses of the Mountain, and their attitude is more undecided. Measures have been taken for the protection of the French twist manufacturers. The wisdom and the energy of the chiefs of the Franco-Turkish army allow us to hope that the moment approaches when a solution dearly bought will be the reward of so many efforts."

PERSIA.—News has been received at Constantinople of a great Persian victory over the Turcomans at Merwi.

CHINA.—Advices have been received at St. Petersburg from Pekin to the commencement of July. The insurrection was gaining ground, especially in the Eastern maritime provinces. The militia had been called out in Pekin and its environs. Discontent prevailed everywhere. Provisions of all descriptions were exceedingly dear, and commerce was stagnant. The inhabitants of Pekin were favourably disposed towards the English, and desired their presence at Pekin. This was caused by reports that the English who disembarked at Petcheli had not ill-treated the natives. A corps of 6000 men had been despatched from Pekin against the English. 10,000 soldiers had been sent in another direction. A report was current at Pekin that the Emperor would pass the winter at Moukden. The Emperor's 30th birthday was to be celebrated by festivals at Pekin.

UNITED STATES.—Mr. Lindsay, M.P., arrived in Boston on the 21st ult., and has since addressed the local Board of Trade, which has appointed a committee of 12 to consider the various subjects which he presented to them, viz., the liabilities of shipowners, the rule of the road at sea, collisions, signal lights, the application of the British Foreign Deserters Act to the ships of the United States, offences committed on the high seas, the settlement of disputes relative to wages, &c., the establishment of shipping offices, the rights of belligerents, the registering of British-built vessels, the coasting trade, &c. Two more slavers had been captured by the American squadron off the coast of Africa. An unknown brig, supposed to be the Storm King, had arrived at Norfolk, in charge of a prize crew from Monrovia, where the slaves, 619 in number, had been landed. The other capture, the ship Erie, with 800 negroes on board, was likewise taken into Monrovia.—The coroner's investigation into the Lady Elgin catastrophe had ended. The majority of the jury censure the Lady Elgin for having on board too many passengers, but lay the principal blame for the disaster upon the schooner Augusta declaring the second mate of that vessel incompetent. Two of the jury, however, were disposed to fasten the whole censure upon the steamer, believing her to have been mismanaged in several respects. It was believed that another disaster occurred on Lake Michigan on the same night on which the Lady Elgin was lost. The schooner St. Mary, which left Chicago on the same day for Cedar River, with eight men and several lady passengers on board, has not since been heard of.

CENTRAL AMERICA.—The British war steamer Gladiator has arrived below New Orleans with the remnant of Walker's Filibuster force. Walker was executed on the 12th inst. It is stated that 10 shots were fired at him, amid the cheers of the native spectators. His remains were subsequently buried by foreigners, the natives refusing to take any part in the ceremony. Colonel Rudler was sentenced to four years' imprisonment.

Public Addresses.

LORD WODEHOUSE, Under-Secretary of State for Foreign Affairs, at the anniversary dinner of the North Walsham Agricultural Society, made the following remarks on the subject of foreign affairs:—

"The principle of non-intervention is the principle which has been announced by her Majesty's ministers from the first, which has been steadily adhered to, and which I am confident the people of this country are desirous should be adhered to by the government. No doubt we do not conceal—we should be very much ashamed if we did conceal—our sympathies for the people struggling for liberty; and if we did not express those sympathies we should certainly not represent the unanimous feeling of the people of this country. The government, as the faithful exponent of the people of this country, is bound to make the other governments of Europe with which we are in communication fully aware of what the opinions of the people of this country are, and ministers are also bound to show that those opinions are shared in a reasonable, fair, and temperate manner by themselves. At the same time, while we give a full expression—and in public we have given a full expression—to this sympathy, we are determined—although I have no right to speak for the government—not to drag this country into any quarrel with which we have no concern. There is one other point upon which I ventured to express an opinion when I was not in office—an opinion which I still hold, and upon which I will say one word. I ventured some time since to say in this room that I thought it was very desirable that we should be close friends with our powerful neighbours in France, but that it was not for the interests of this country that there should be an exclusive alliance with France. I have always thought that the true policy of this country was not to have such exclusive alliances, and I am confident that such a policy when adopted by the government has been approved by the people. You may have an alliance of an exclusive kind, such as we had with the French government and the French people, for a particular purpose—the Crimean war. That was a perfectly intelligible alliance, and it was natural that it should be exclusive; but when the war ended we returned to the old state of things. We wish our relations to be as good as possible with France, that in every matter in which we can unite in common we should unite in common; but at the same time it is right that we should have friendships and alliances with all the other nations of Europe and the world. I am not one of those who feel great alarm at the present situation of Europe. I think, looking at what is past, and the great dangers through which we have gone, that although we cannot venture to foretell what may take place, we may have good hope that peace and tranquillity may be maintained. I say so because I think that the great governments of Europe—and I hope I may also say her Majesty's government, speaking, of course, in no party sense—have shown great prudence, and a great desire to prevent the flames which are now raging in Italy from extending to the rest of Europe. As long as that prudence and discretion are shown by the principal states of Europe there is good hope that we may avoid a general conflagration. If such an event—and I hope it may be far distant—should arise, we have the great satisfaction of feeling that a spirit has been evoked in this country which enables us to look forward without dread to whatever may occur. I am confident that too much has not been said upon the volunteer movement, although the topic may seem to be used up. Nothing has done more honour to England than that movement, and nothing is more calculated to strengthen this country in the eyes of all the nations of the world, because it has shown that the British people, wrapped up as they are in peaceful and commercial pursuits, will, if danger should arise, rally and come forward in the defence of their country."

GENERAL PEEL, M.P., Minister of War in Lord Derby's Government, at the annual meeting of the Huntingdon Agricultural Association on Friday, spoke as follows on the National Defences:—

"The army, navy, and volunteers include 600,000 individuals. The branch of the service to which I belong, her Majesty's regular army, with the addition of the local European army of India, comprises 250,000 men, and these, with the militia, pensioners, and yeomanry, amount to 500,000, and if we add our gallant sailors and royal marines, than whom there is not a braver body of men in the whole world, the number swells to 600,000 men, who are prepared to defend the possessions of her Majesty. And yet we are told we are not a military nation. We are not for the purpose of aggression, and I trust we may never be. I trust we shall never be induced to make an attack upon other nations, and that we shall never go to war 'for an idea,' but for the purpose of defence. I trust we shall always be a very military nation, that we shall hold some very strong ideas upon it, and be prepared to fight for it if necessary; and one of those ideas is this, that if a foreign foe should ever land in this kingdom, that he will never be allowed to go back. In carrying out this idea I am perfectly certain that the regular army would receive every assistance from those other branches of the service I have mentioned; but I think the contingency will never arise. The volunteer movement has become a great and established fact, and I trust that those who have come forward will not only continue, but encourage others to follow their example. This has been a voluntary movement, and the Government deserve every credit for the assistance and encouragement they have afforded it, and which exceed the support I could offer, for the rifles were not ready at the time I was in office, but I have the gratification of knowing that they were ordered by me. But depend upon it the movement could not attain to its present magnitude but for the exertions of individuals in various localities. You all know how much we are indebted to my noble friend in the chair, the Duke of Manchester, who has raised the corps which does him so much credit. I know it is invidious to mention the names of individuals, as there is danger of omitting others who may be worthy of the same praise, but it is well known that Lord Elcho and other young men have done a great deal to encourage the volunteer movement. The establishment of the National Rifle Association, which was the first to introduce those prizes which I am happy to see extended through the whole of the country, has also done much to secure the perpetuity of the movement. I wish to say one word with regard to these prize meetings. Let no man be disheartened if he cannot obtain a prize. Depend upon it, if you cannot obtain that accuracy necessary to gain prizes, you have no occasion to feel disheartened and withdraw from the corps. There are many good soldiers who are comparatively bad shots. To fire at a bull's-eye and a battalion are two different things. No battle was ever gained by sheer dexterity of individuals; it was by steadiness and the valour of the masses, and the confidence which you place in each other, that these great results were accomplished. Perhaps I may be excused for taking part in this matter, having been 16 months concerned in it, for I hold that the Minister of War is responsible for the safety of the country. I think that the Volunteer movement is now become of greater consequence than many persons imagine. The defence of the country, it is said, depends upon our maritime superiority, and it is imagined that if our navy is not equal not only to that of any other nation, but all other nations combined, we must keep up a large military force. But without the volunteers you cannot maintain that large military force. It is somewhat disheartening, after all our exertions for two years, to hear that our ships and money are all lost. A doubt has arisen whether the money spent on ships is not useless. It is now supposed that the new war vessels, the iron-cased frigates which have been established, will render all our exertions valueless. I speak on the authority of one whose opinion is of the greatest importance. Sir William Armstrong has told me within the last eight days that he considered it a mere question of naval architecture, and that if iron-cased vessels could be produced and made seaworthy, with anything like the same rate of speed as the ordinary man of war, no other vessel could have any chance against them. If this is true, and I have no reason to doubt it, what will be the result. Why, the entire reconstruction of the navy. You will form some notion of the cost when I tell you that two vessels built by Lord Derby's Government cost 500,000*l.* each. But whatever may be the cost, this country cannot afford to be behind any other in the superiority of her ships and implements of war. Whatever may be the cost, we must be equal to others, and I fully believe we are equal in point of soldiers and sailors."

MR. DISRAELI, at the annual dinner of the Royal Buckinghamshire and Central Bucks United Agricultural Association, made the following remarks on the design and tendency of agricultural associations:—

"We are met to support with our presence and our sympathetic feeling one of those societies which, in my opinion, exercise so beneficial a result upon the general feeling and conduct of all classes connected with agriculture. It is no longer necessary to rise and vindicate the design and management of these agricultural associations. They have become, if not formally and legally, at least in spirit and in truth, a part of the institutions of this country, and all classes and all parties combine in acknowledging the advantageous influences which they exercise on the general life and pursuits of this country. When this Society was first formed—and I took a particular interest in its formation, for I was one of its original members—it limited itself merely to recognising the virtues of the humblest class connected with English agriculture—to recognising and rewarding the merits of those who, by their service and their skill in husbandry, had deserved such recognition of their labours. That was a most laudable, but in a certain sense it was a limited object; and limited as it was, for a considerable period it was by some persons viewed with coldness and even derision. But all that has passed. It has passed, because every man connected with rural life has long arrived at the conviction that these associations, even with that limited object, had done much good, that they had elevated the tone of this country with the labour of the land, and that they had brought about results which those connected with the labour of the land have shown they highly appreciate. Every one knows that those rewards which have been described as not commensurate with the merits they recognise are rewards which are eagerly sought and highly appreciated by those who receive them; and there never was a greater mistake than to suppose that labourers on land ever for a moment believed that their merits were valued by the mere pecuniary amount they received. They always sought these rewards, and always cherished them, because they looked upon

them is a public recognition of their private virtue. I could give you, if necessary, many instances to prove the truth of these assertions; but there is one I will touch upon, and very briefly, because it occurred only this morning, and it is to me quite a convincing proof of the position I wish to enforce. That is the case of a man who had worked on a farm for 45 years in the same service, and who was several times requested by his friends to advance his claim for the prizes to which, by the regulation of this society, he was entitled. This man has repeatedly said that he would not come forward to claim that public recognition of his qualities until he had completed the 50th year, of his service; which shows that, in his mind, it was not a pecuniary reward, but a public recognition of his long-enduring private virtues which he sought, and which he valued. Although that was the limited object of the society when it was originally formed, it has, as time has advanced, in obedience to that law of development and progress without which no societies and no institutions can long exist, been found necessary to increase the area of our exertions, and to aim at other and more extensive objects than those we originally proposed; and so, in time, we found it advisable to appeal to that spirit of competition and emulation which pervades all classes, and to ask, not merely peasants and labourers on land to exert themselves to obtain a recognition of their superior qualities, but also the farmer and landed proprietor to prove their skill and their anxiety to obtain a public recognition of their attempts to advantage the public welfare; and so by this course we have now the means by which rewards are offered to those who produce the best crops, the best roots, and the most superior stock. These are the great and important objects of which we ought not to lose sight, and which the Royal Bucks Agricultural Association, whose anniversary we meet here to-day to celebrate has aimed at, and I hope will accomplish. Though I should not myself be speaking with that frankness with which you permit me to address you on all occasions if I were to say, what is sometimes said on similar occasions, that I went to the show-yard to-day and was struck with amazement and wonder by what I saw—I certainly did see something which did our friends great credit; but I did not see enough good things. And I think it is of very great importance, when we dine at these exhibitions, and sum up our experience, that we should not shut our eyes to the truth of what has occurred, because it is by this annual taking stock of our progress, as it were, that we may regulate our exertions for the coming year. I did not see, I must say, with respect to the horned cattle, or even the sheep, that promise which was so brilliantly made last year fulfilled. Though this may be, and no doubt is accounted for in a great degree by the unfortunate weather which has occurred at the period of our union, and which I know has prevented some of our best friends from exhibiting, still we must not for a moment forget that it is by progress, by constant efforts at excellence, that societies like the present can alone be maintained with spirit and advantage. I would not have made these observations if I had not recollected that although the old Agricultural Association of this county is more than a quarter of a century old, the peculiar institution whose anniversary we are now celebrating is really almost in its cradle. This is only the second year of the amalgamated societies. I heard with very great pleasure that those societies had determined to amalgamate their resources and their energies. I thought that, on the whole, it was most for the advantage of the county, and I am convinced myself that this amalgamation, founded as it is on sound principles, will, if we are determined to carry out those principles, ultimately accomplish all which the most sanguine amongst us anticipated. But success is not to be attained by being blind to the real circumstances around us. Amalgamation is an admirable arrangement under favourable circumstances, such as were the circumstances when the amalgamation of the two societies of this county took place. But when you amalgamate you diminish rivalry, and if amalgamation has its virtues, emulation can also produce wonders. Emulation has always two strings to its bow; amalgamation, we flatter ourselves, although it has only one string, has that string of a stouter character. I trust we will not be disappointed in our expectations, and that under amalgamation we shall not have only one string to our bow, and that not a bit stronger than it was before. We must avoid that as much as possible. We must attempt to arrive not merely at the advantages of rivalry, but also at the benefits of permanence, and that was the object we proposed to ourselves by the amalgamated society. I am sure that the members in this room—members of both the original societies—meet together with only one admirable object; and that they will not at all misconceive the spirit of my observations. They are made with a sincere wish to see the Royal Bucks Agricultural Association not only maintain but increase its character in public estimation. We can only do that by all of us putting our shoulders to the wheel; and all classes of our society must unite together, and by union of exertion accomplish the great object which we have at heart. It becomes, therefore, I think, the principal proprietors of this county, the leading men among our tenant farmers, and all connected with the various classes of our rural life, to remember that it is only by that union that societies of this kind can be maintained, and that the objects of such societies are the most admirable that can possibly propose themselves to a progressive free people like the people of this country."—The Right Hon. Gentleman last week presided at the anniversary dinner of the Royal South Buckinghamshire Association at Salthill, and again enlarged on agricultural topics at considerable length. The only allusion made to politics was in reply to some remarks by Mr. Trumper in condemnation of Sir G. Lewis's Road Bill and the French treaty of last session. On these points Mr. Disraeli said:—"As your chairman I shall rigidly observe that rule which forbids allusion to political topics, as I shall freely avail myself of its absence when this society should be pleased to put an end to it. But I may say that although in this room the Road Bill is doubtless a subject of considerable interest, yet I cannot be accused of having supported that measure, inasmuch as I did everything in my power to oppose it, and that successfully. With regard to the French treaty, and the stimulus that may be given to the consumption of claret and not to malt, all I can say is that I opposed the treaty, and when I had the opportunity, as a Minister of the Crown, I also proposed a great reduction of the malt-tax. I trust, therefore, that without entering into any political subject, I have entirely vindicated myself from any charge on the heads which have been touched upon." * * * "With regard to our farms, South Bucks has no reason to fear any competition, and it may take a very proud place in that agricultural race which, I believe, will every year become more rapid, as every year the position of the active cultivator of the soil will become more important. The English farmer has a great future, and I for one wish to see him equal to it. I have full confidence that he will be so, but the question is one the importance of which cannot be exaggerated. It may be said that it is impossible to have a variety of local agricultural associations throughout the county, together with those exhibitions of skill and production to which I have adverted. I confess there is a good deal in that objection. As far as the locality is concerned, nothing can be more complete in their operation than these societies with respect to the elevation of the condition of the labourer. No central association can do that; it requires local knowledge and local feeling. Therefore, I think you can't have too many local societies with the distinct and avowed object of the South Bucks Association. But you have to consider whether you could not combine with them some means by which all these local societies should hold communication with a central body, by which on at least one day in the year the whole of the enterprise and skill of this county could be brought together, so that we may know what is the general progress of Buckinghamshire, whether we are up to the mark, whether there is that readiness either to adopt new inventions for the improvement of the soil or to create these inventions ourselves, which is highly desirable, and whether all these various divisions of labour for which this county is eminent, cannot produce these specimens and make that show which may at once maintain its reputation, and stimulate its skill and enterprise to new developments. I do not see why some federal constitution—if I may use the phrase—may not be devised for these societies, by which the dairyman of the extreme North, the grazier of our rich vale, our stock farmer in the hills, and those who produce the admirable crops in the fields about us, may not meet together, and compare notes, implements, machinery, and stock, thereby becoming acquainted with each other's different degrees of industry and skill. By some such means a more general sympathy might be engendered in respect to the great occupation of all of us than I candidly believe now exists. Gentlemen, it is a great mistake to suppose that the importance of a community depends upon the extent of its population; otherwise what would England be in comparison with the empire of China? There are counties in England much more extensive and more populous than this, but fewer to which she is so much indebted on many accounts. Nobody in this room can forget that the British Constitution was devised in the Chiltern Hills. I would have you not only uphold but increase that reputation. The career now open to a great agricultural county is no mean one. To feed every year, and to feed better, a great and thriving community like ours, which takes the lead in human affairs, and is steadily rising higher and higher in the opinion not only of Europe but of the New World, is a very great office, and it will demand the utmost exertion of your intelligence and the application of all the resources which an active science is placing at your disposal. And let me impress upon you again that it is not by the amount of its population, but by its intelligence and public spirit, that the importance of a county is to be estimated."

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 92⅞ to 93 for Money, and 93⅛ to ¼ for the 8th of Nov.; Bank Stock, 229, ex div.; Three per Cents. Reduced, 91⅝ to ½ ex div.; New Three per Cents., 91½ ex div.; India Stock, 219½ to 219; Ditto Five per Cents., 1859, 103⅜; Ditto for Acct., 103¼; Ditto Four per Cent. Debentures, 96¼; Five per Cent. Enfaced Rupee Paper, 96½ to ¼; Exchequer Bills, 3*s.* prem.—Foreign: Brazilian Four and a Half per Cents., 1858, 87¾ to 88; Mexican Three per Cents., for Acct., 22⅜ to ⅝; Sardinian Five per Cents., 86; Ditto for Acct., 85½; Spanish Three per Cents., for Acct., 49⅜; Ditto Passive, 23; Committee's Certificates, 6½; Turkish Six per Cents., 1854, 70¼ ex div.; Ditto for 1858, for Acct., 56; Ditto Guaranteed Four per Cents., for Acct., 101⅞ to 102.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£29,162,255	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	14,687,255
		Silver Bullion	—
	£29,162 255		£29,162,255

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,663,460
Rest	3,083,017	Other Securities	19,582,595
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	6,583,944	Notes	7,808,950
Other Deposits	12,813,771	Gold and Silver Coin ..	738,358
Seven day and other bills	759.631		
	£37,793,363		£37,793,363

11th day of Oct., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — A. Bain, 10, Grove Street, Ardwick, Manchester, Draper—J. T. Brown, Coventry, Watch Manufacturer—J. W. Dawson, Newcastle-under-Lyme, Staffordshire, Cotton Spinner—T. Griffin, 16, Hampton Terrace, Hampstead Road, Bookseller and Stationer—B. W. Harker, 292 and 294, Pentonville Road, Linendraper—T. Johnson, Buston, Stafford-shire, Iron Merchant—T. Linley, Beverley, Yorkshire, Grocer—W. Pike, Wheatsheaf, High Street, Wapping, Victualler—C. Pritchard, 5, East Place, Lambeth, Plumber, Painter, and Glazier—T. A. Ragg, High Street, Birmingham, and of Spring Street, Edgbaston, Warwickshire, Bookseller and Stationer—S. Randle, Buckwell Street, Plymouth, Devonshire, Auctioneer—B. Reynolds, 159, Hoxton Old Town, Cheesemonger—J. Saunders, Claughton, Birkenhead, Cheshire, General Agent, Contractor, and Ammunition Packer—J. Skinner, Northampton, Boot and Shoe Manufacturer—W. Sykes, Kinver, Staffordshire, Travelling Draper—J. Thomas, Abingdon, Berkshire, Builder, and of Culham, Oxfordshire, Brick Maker—J. Tongue, Rugby, Warwickshire Boot and Shoe Maker—J. Tonks, 1, Ablewell Street, Walsall, Staffordshire Currier—J. Tripp, Cross Street, Walworth, Tallow Chandler—W. Turpin, 10, Drake Street, Plymouth, Devonshire, Draper—W. H. Vickers, 5, Suffolk Place Lower Road, Islington, Butcher—T. G. Wicks, 30, Beckford Row, Walworth, Linendraper—W. Wolstenholme, 97, Brook Street Ord Garratt, Manchester, Ironmonger.

SCOTCH SEQUESTRATIONS—J. Bennett, Dundeeman, Millwright—J. and W. Brown, Ayr, Ironmongers—Brown and M'Donald, Edinburgh, coach Builders—A. Fenton and Co., Leith, Merchants—G. A. Mitchell, Edinburgh—J. Sentis, Paisley, Oil Extractor and Stearine Manufacturer—G. Wilson, Windygates, Flax Spinners.

FRIDAY—BANKRUPTS—M. Archer, Filey, Yorkshire, Grocer—C. W. Bourne, Dudley, Worcestershire, Corn Factor and Flour Dealer—J. Cooper, Great Yarmouth, Printer, Bookseller, and Stationer—J. W. Evans, Newcastle-under-Lyme, Staffordshire, Cotton Spinner and Mill Owner—J. Fowler, Tredegar, Monmouthshire, Draper and Outfitter—B. Goonson, jun., Little Coggeshall, Essex, Farmer, Victualler, and Silk Manufacturer—J. Keen, Leadenhall Street, Merchant—S. Lindo, Westbourne Grove, Bayswater, Wine, Spirit, and Beer Merchant, and Bill Broker—D. Plaiter, Dorchester, Draper—J. Siddons and W. Clark, Great Bridge, Staffordshire, Ironfounders—A. Silvester, New Dorset Street, Clapham Road, Photographic Artist—R. Stevens, Ipswich, Innkeeper

Metropolis and its Vicinity.

The Old Westminsters Crimean Memorial.—During the last few days considerable progress has been made with the column which is erecting in the Broad Sanctuary to the memory of Lord Raglan and eight other "Old Westminsters" who fell in the Crimea. The first stone was laid nearly two years ago, but the work was delayed by the desire of the committee to procure three large blocks of Aberdeen granite for the column. After all the time wasted this has been found impossible, and smaller blocks have been sent up. The column is now about 33 feet high, and is to rise to 66, or within 4 inches of the topmost turrets of the new houses in Broad Sanctuary. The Aberdeen granite, itself 3 feet 6 inches in diameter, presents a beautiful appearance. At about 25 feet from the base are eight shields, which will contain the coats of arms of the eight officers, Lord Raglan's being by itself nearly at the bottom of the structure. Mr. G. G. Scott is the architect, and Mr. J. R. Clayton is engaged on a figure of St. George and the Dragon, which is to surmount the column. It is expected that the memorial will be finished by the end of the year.

St. George's-in-the-East.—In consequence of the sentence of imprisonment recently passed on Rowe, by the magistrate at the Thames Police Court, there was a fierce outbreak in the church on Sunday evening. The churchwardens apprehending a riot had closed the galleries, and placed the congregation in the body of the church. During the prayers the service was constantly interrupted; the responses being bawled out by a large number of persons, whose evident determination was to drown the voices of the choristers in the organ-loft. In the second lesson the word "imprisonment" occurred. A loud laugh and shout followed its utterance, and the prayer for bishops and curates was received with coughing and derisive cheers. The hymns were parodied by the congregation—or rather by some 50 or 60 young men and women who had taken up their position in the north aisle; and during the delivery of the sermon, the people received with laughter every expression which could be turned to the purpose of agitation or applied to the circumstances of the parish.

The Thames Embankment.—At the meeting of the Metropolitan Board of Works on Friday, it was resolved, on the motion of Mr. Le Breton, that it be referred to the Main Drainage Committee to consider and report as to what measures it is expedient to take as to the recommendations in the report of the Committee of the House of Commons on the Thames embankment and other improvements connected with it.

Great Fire at Limehouse.—The well-known sugar-house and refinery of Messrs. Goodhart, in Horseferry Road, Limehouse, was entirely destroyed by fire on Wednesday evening. The factory was one of the largest of the kind in the metropolis. It was nine stories in height, and flanked the river entrance of the Regent's Canal Dock, forming a prominent object to travellers on the river and Blackwall Railway. The firm is heavily insured, and it is computed that the loss will exceed 30,000*l.*

The Child Murder at Lea Bridge.—Emma Padfield who was committed for trial last week on the coroner's warrant for the wilful murder of her child at Lea Bridge, was brought before the magistrates at Worship Street Police Court, on Wednesday, for final examination. The surgeon, who had made the *post mortem* examination by direction of the coroner, detailed minutely the appearances of the body, and expressed his opinion that the child had been suffocated, and that the missing arm had been partly cut off with some sharp instrument, and the bone then broken so as to separate the limb. During this evidence the prisoner was in a most agonising state of mind, fainting several times, and rendering it necessary to administer restoratives and stimulants. On the completion of the depositions the prisoner was fully committed to Newgate to take her trial on the capital charge.

Metropolitan Street Railways.—A special meeting of the committee of the Marylebone vestry was held on Thursday, to consider the plans proposed by Mr. Train of America, Mr. Curtis of Old Broad Street, and the London General Omnibus Company, for constructing a tramway from St. John's Wood through Baker Street, Oxford Street, and Regent Street, and back to St. John's Wood, through Gloucester Place and the New Road. After hearing the statements of the three parties, it was resolved, with only four dissentients, that Mr. Train's plan be approved of, and recommended to the vestry for adoption, Mr. Train engaging to construct the line entirely at his own risk and expense, with a guarantee to remove the rails whenever called upon to do so by the vestry. In the course of the meeting Mr. Train said that the experimental line which he is constructing in Victoria Street, Westminster, will be in operation in the course of six weeks. On Saturday a great number of persons were attracted to the neighbourhood of Westminster Abbey to witness the "trial trip" of one of the huge omnibuses which are to run on this tramway. The omnibus is to hold 58 persons inside and out; the outside seats being approached by a spiral staircase.

New Steel Gun.—The new rifled steel gun invented by Mr. Lynet Thomas, recently forwarded to Woolwich Arsenal from the Mersey Steel Works, for experiments at Shoeburyness, has been fired in the long range, with the following result. The gun, charged with 28 lb. of powder, and a shot weighing 160 lb. obtained a flight of 10,000 yards, or 5⅞ miles. Arrangements are making to carry out a course of trials and experiments with the gun, in the presence of the select committee of Woolwich Arsenal.

New Church on Vauxhall Gardens.—Arrangements are in progress for erecting a new church on the site of the old Vauxhall Gardens, near the School of Art,

the foundation-stone of which was laid by the Prince of Wales a few months ago. The church will be dedicated to St. Peter, and an ecclesiastical district will be assigned to it out of the parish of Lambeth.

THE LONDON HOSPITALS AND THE TURF.—Mr. Joseph Bond has written a letter to the Jockey Club, proposing that a sum of ten per cent. upon the Derby and Oaks Stakes at Epsom should be annually contributed to six of the metropolitan hospitals; and that a similar per-centage should be paid out of all racing stakes, which would produce an annual sum of about 20,000*l.*—the annual sum changing hands at Tattersall's on racing stakes alone being upwards of 200,000*l.* In accordance with this suggestion he says that if at the Derby and Oaks settlement next spring 10 per cent. be appropriated to this purpose, he will pledge himself to meet the donation with an equal sum from his own purse.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Report states that the number of deaths registered in London in the week that ended Saturday, October 6, was 1075, being somewhat less than the average mortality of the first week of October in the 10 years 1850-59. During the week the births of 982 boys and 834 girls, in all 1816 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1465.

Provincial.

BOSTON.—The funeral of Mr. Herbert Ingram, M.P., took place in this town on Friday, the body having arrived from Liverpool on Wednesday morning. All business was suspended on the occasion, the blinds of all private residences were drawn, the vessels in the port displayed their flags half-mast high, and the bells of the churches tolled muffled peals. The procession was headed by a body of police constables, the 1st Lincolnshire Artillery Volunteers and the 4th Lincolnshire Rifle Volunteers. The Mayor of Boston, with the magistrates and members of the corporation, came next; and then followed a large number of the inhabitants of the town and neighbourhood, including the Freemasons, Odd-fellows, Foresters, and artizans of Boston. The vicar of Boston, and other clergymen preceded the body, which was conveyed in a hearse drawn by four horses. Mrs. Ingram, widow of the deceased, with her two sons, rode in the first mourning coach, and other members of the family followed in succeeding carriages. The procession was closed by nearly 200 gentlemen, headed by Mr. Staniland, M.P. for the borough, and including many literary and artistic friends of the deceased. The road to the cemetery, both within and without the town, was lined with spectators. On arriving at the cemetery chapel the first part of the funeral service was performed by the vicar, the prayers at the grave being read by the rector of Rickmansworth, where Mr. Ingram's family have resided for some years. The remains were deposited in a plain brick grave, and the coffin bore on a brass plate, the simple inscription:—"Herbert Ingram, Esq., M.P. Died Sept. 8, 1860."

BURY ST. EDMUNDS.—A case of poisoning under remarkable circumstances has been for some time undergoing investigation by the Coroner for West Suffolk. Mr. Nunn, a farmer of Fordham St. Genevieve, has in his service two persons named Hawkins and Curtis, the former a farm bailiff, and the other a labourer. It appears from the evidence that Hawkins had gone, by permission, to a flour-bag in Curtis's house for the purpose of borrowing some flour. On the following day, a pudding having been made by Curtis's wife of flour from the same bag, all of those who partook of it were taken ill, and one poor boy named Robert Murton died soon after. A post mortem examination proved that arsenic was the cause of death, and the difficulty to be solved is how the poison became mixed with the flour. The evidence proved that there had been quarrels between Hawkins and Curtis, and that the former had been heard to use threats against Curtis and his wife, and it was therefere suggested that it had been done deliberately and with a murderous design. As however there was no direct evidence another adjournment for three weeks has taken place, to afford an opportunity of bringing forward further evidence.

CHEADLE.—The private chapel of the Earls of Shrewsbury, in Alton Towers, which, up to the death of the late earl, had been devoted to the service of the Roman Catholic Church, has just been reopened for Protestant worship, according to the rites of the Church of England.

LEEDS.—A shocking crime was committed at the village of New Wortley, in this borough, on Monday morning. A few minutes before 5, a man named Stephen Lupton, a grocer and provision dealer, who also sells some descriptions of drugs, was awakened by a knocking at the outer door of his house. The bedroom in which he slept was over his shop, and the shop communicated with his house. On looking out of the window he saw a neighbour, a man named John Kenworthy, a fire-brick maker, at the door. Lupton asked him what he wanted, and Kenworthy replied "Some caster oil," whereupon the former slipped on his clothes, went downstairs, and let the man into the house. He then proceeded into the shop with a lighted candle, and, after pouring two ounces of castor oil into a bottle, I returned with it into the house. Kenworthy, after receiving the bottle, asked for several other articles, which Lupton had to go back into the shop to procure. On his return he was reckoning the price which they amounted to, when Kenworthy felled him to the ground by a heavy blow with a hatchet on the crown of the head. Lupton immediately tried to spring to his feet, but, before he could do so, he received another blow on the head. He managed, however, to get hold of the prisoner, and struggled with him, at the same time succeeding in alarming the neighbours. The injuries he received were of so dangerous a character that he became insensible soon after his deposition was taken by the magistrate, and there is little or no hope of his recovery. It has been ascertained that Lupton's bed had been turned up, and as he was accustomed to keep money between the bed and the mattress, it is conjectured that during his absence in the shop collecting the drugs required the prisoner had searched the place with the view of plunder. A day or two previously, however, Lupton had taken all the money he had in the house, except a small sum which he carried in his pocket, and left it in the care of a brother. The prisoner was in somewhat straitened circumstances, having lately had some County Court summonses issued against him, and on Monday morning he had made arrangements for removing his furniture, but the removal was stopped by the police, and the furniture was afterwards seized for rent. The prisoner was examined before the magistrates on Wednesday, and remanded for week, the witnesses being bound over to give evidence against him at the assizes.

NEWCASTLE-ON-TYNE.—At the adjourned inquest on Thomas Harrison, who was murdered at Urpeth Corn Mill, near Chester-le-Street, on Saturday week, the jury, without hesitation, returned a verdict of Wilful Murder against Lockey, and the usual order for his committal to Durham gaol was made out by the coroner. His wife, who was so severely wounded, was sufficiently recovered to appear in court and give evidence against him. The prisoner was examined before the magistrates on Wednesday, when he made and signed a declaration fully admitting his guilt. He was then formally committed for trial on the capital charge, but is to be watched in his cell, as fears are entertained that he will make an attempt to destroy himself.

NEWCASTLE.—The Town Council have at length replied to the claim made by the French Government to have all French ships trading to the Tyne put upon the same footing as those belonging to the freemen of the borough. The reply is to the effect that the exemption from local dues is a privilege accorded to the freemen under the Municipal Reform Act of 1835, in consideration of certain claims which they as a body had upon the Corporation, and that French shipowners, not being freemen, and having rendered no service to the town, have no claim to the privilege. The Board of Trade has also given the opinion that the privileges enjoyed by freemen cannot be extended to subjects of this or any other country who are not freemen.

WAKEFIELD.—Miss Frances Adamson, an aged Roman Catholic lady, died at Sandal Magna, near this town, in August last. Her death having taken place under suspicious circumstances, an inquest was opened and adjourned from time to time in order to allow Mr. Nunneley, of Leeds, to complete an analysis of a portion of the body, which had been transmitted to him for that purpose. Poison having, however, been found in considerable quantities in the course of the examination, the magistrates ordered the arrest of Emma Stringer (who had been domestic servant to deceased), and of her two young sisters Matilda and Abigail, the former charged with the wilful murder of Miss Adamson, and the two latter with aiding and abetting her in the same. The three prisoners were brought up at the Court House on Wednesday week, when the magistrates ordered the two sisters to be discharged from custody on their undertaking to appear again if required. Evidence was then adduced to prove that Miss Adamson died from poison, that the prisoner's conduct before and after death was full of suspicion, and that the motives under which she acted were to obtain possession of deceased's property. After a long inquiry the magistrates fully committed the prisoner to take her trial at the assizes on the charge of Wilful Murder. At the adjourned inquest at Agbrigg, Mr. Nunneley, the surgeon, deposed that in all the parts of the body that had come under his examination arsenic in considerable quantities had been found. The result he stated to be—1st, that there was no evidence of any disease in the viscera which would account for death. 2d, that the appearances of the œsophagus and the portion of the stomach and duodenum seen by him, and the rectum, were such as the presence of arsenic would account for; 3d, that arsenic was administered into the stomach at a period not long antecedent to death; 4th, that death was caused by arsenic; 5th, that not only had arsenic been taken directly before death, but it had also been administered at some considerable period before death, and probably on repeated occasions; 6th, that considering the symptoms of the last illness, the appearances of the body after death, the results of the chemical analysis of the different parts of the body, and the character of the attacks from which deceased suffered during the last two or three years of her life, it is highly probable that the said attacks were really due to the administration of arsenic, and not to natural disease. Mr. Hirst, who attended the deceased in her last illness, and who supposed she died from peritonitis, deposed that during the time he attended deceased he gave her no arsenical preparation; and that he believed Emma Stringer was her nurse. The Rev. John Brown, Roman Catholic priest, who was accustomed to attend deceased, deposed that a few days after her death, the prisoner Emma Stringer asked him to sign a paper, stating that Miss Adamson had made over to her all her plate, jewellery, furniture, &c., and that he declined to sign it on the ground that he had not witnessed the document, and that it did not bear Miss Adamson's signature or anything to prove that it was her act. Other witnesses proved that this document was in the handwriting of the prisoner's brother, that she was in possession of a 50*l.* note immediately after the death, that she was seen wearing deceased's rings, and that she and her family removed a good deal of the other property in a cart in the course of the evening. It was also proved that a pot of arsenic was found in the kitchen after deceased's death and thrown into the fire. Mr. Taylor, of the firm of Taylor and Mountain, proved that, at Miss Adamson's request by letter, he had supplied an arsenical and mercurial preparation for the purpose of killing rats. He had never supplied Emma Stringer with any arsenic or other poison. The inquest was then again adjourned to Saturday, when the mother and the two sisters of the prisoner were examined. Their evidence went to show that the mistress had a great regard for her servant Emma, and as great an antipathy to her own brother; and this, it was presumed, was sufficient to account for deceased wishing to deprive her brother of what property she might possess at her death, and for this purpose to make it over to the accused. After nearly four hours deliberation the jury returned a verdict that deceased died from the effects of arsenic administered to her in small doses, and that the evidence fully justified them in coming to the conclusion that the arsenic was administered by Emma Stringer, her servant. They therefore returned a verdict of Wilful Murder against the prisoner.

WINDERMERE.—The first fall of snow has taken place on the Helvellyn, a fortnight earlier than it appeared there last year.

Ireland.

MEMORIAL TO THE IRISH BRIGADE.—The Ultramontane journals announce that a committee has been appointed to collect subscriptions for erecting in Sackville Street, Dublin, a statue to the memory of the members of the Irish brigade who fell at Spoleto, Perugia, and Ancona. Dr. Cullen has also issued an address to the clergy of his diocess announcing that a solemn high mass at which he and his chapter will assist, will be celebrated in the metropolitan church for the repose of the souls of "their brave countrymen and their generous companions in arms, who fought and bled defending the eternal principles of justice, the independence of the Catholic Church, and the rights of the Holy See." The address concludes by saying—

"Though brute force and overwhelming numbers, accompanied with fraud and treachery, prevailed against them for the moment, yet we can entertain no doubt of the final triumph of the cause which enlisted on its side such devotedness, such self-sacrifice, and so many exalted virtues. Let the Feast and Octave of the solemnity of the Rosary be celebrated with special devotion, and let us beg of the most Holy Mother of God to protect the Church against the perfidious wiles of French and British diplomacy and the violence of revolution, as she did in former times against the corruption of the Albigenses and the spread of Mahomedanism."

Scotland.

GREAT STORM ON THE NORTH-EASTERN COAST.—On Wednesday and Thursday of last week the coast and counties along the north-east of Scotland were visited with a storm of wind and wet more destructive than has been experienced for 20 years. Life and property were lost to a serious extent; in several instances vessels went down with all hands, whilst in many others the crews were lost in their efforts to reach the shore. Great trees, 70 and 80 feet in height, and the growth of as many years, were blown down or uprooted, the stacks in the corn yards were much injured, while the sheaves that happened to be in stook were lifted up and sent spinning about the fields like feathers. The storm seems to have raged in the Baltic with still greater fury, causing the wreck of about 60 vessels, and great loss of life. Among them was the Arctic, iron screw ship, sailing between Hull and St. Petersburgh, which was totally wrecked on the coast of Jutland, four of the passengers and two of the crew perishing in their efforts to reach the shore. Another storm has since visited the western coast of Scotland, and has caused great damage to shipping.

Sporting.

NEWMARKET SECOND OCTOBER MEETING.

MONDAY.—*Renewal of the Sweeps.* Lord Derby's Stockade beat Lady Falconer.—*Sweeps.* Mr. Savile's Roesia beat Eda, and Sir J. Hawley's f.—*Match.* Duke of Bedford's Vicar of Bray beat Lord Glasgow's c.—*Handicap Sweeps.* Mr. Gulliver's Tiara beat Lupellus, Tightfit, Emily, and 3 others.—*Fifty Pounds.* Lord Stamford's Lava beat Mr. Merry's c., Hagar, and 11 others.—*Match.* Lord Glasgow's f. beat Juno.—*Selling Handicap Sweeps.* Captain Coates's Yoolicks beat Ellen, Wild-

grave, Nana Sahib, and Mayflower.—*Match.* Sir J. Hawley's Slyboots beat Lord Glasgow's c.—*Sweeps.* Lord Stamford's Pardaloie walked over.—*Match.* Lord Glasgow's c. beat Iambic.—*Handicap Plate.* Mr. Davies's Feodorowna beat Bevis, Lucknow, and 11 others.

Tuesday.—*Sweeps.* Mr. Merry's Special Licence beat The Promised Land and Starke.—*Match.* The Duke of Bedford's Hesper walked over.—*Sweeps.* Mr. Henry's Dr. Nichol beat Pretty Rosa and Bayard.—The *Clearwell Stakes.* Mr. Merry's Folkestone beat Vertissement colt, Imaus, and Solferino.—*Match.* The Duke of Bedford's Montenegro beat Baron Munchausen.—The *Gunnersbury Stakes.* Mr. W. Day's Dulcibella beat Optimist, Heiress, and Moorcock. Won in a common canter by 10 lengths; a length separating the second from the third; Moorcock was fourth, well up; and Lady Trespass 5th. Ben Webster, Cape Flyaway, Feodorowna, and Plumper were next, in the order named; Viatka, Starke, and The Prophet being the last three. Stockton broke down and will never run again, and Ancient Briton pulled up lame.—The *Royal Stakes.* Mr. J. Parker's Sutherland beat King of Diamonds and Trovatore.—*Selling Handicap Sweepstakes.* Mr. W. Etwall's Jessie Brown beat Jessie Brown, and 5 others.—*Sweeps.* Mr. Eastwood's Ruby beat Parapet, Alice Jane, and 2 others.

Wednesday.—*Handicap Sweeps.* Mr. Smith's Miss Fanny beat Sister to Jessie Brown, Ladybird, and 8 others.—*Handicap Sweeps.* Lord Strathmore's Doubloon beat Golden Rule.—*The Bedford Stakes.* Mr. Merry's c. beat Dr. Nichol and Polyolbion.—*Match.* Duke of Bedford's Plum beat Philomela.—*Sweeps.* Mr. Baker's Wee Polly beat Pedlar, Ruby, and 5 others.—*The Town Plate.* Mr. Fuller's Ambush beat Gulliver, Newstead, and 3 others.—*Handicap Sweeps.* Mr. Henry's Niger beat Sparta, Docskin, and 7 others.—*A Maiden Plate.* Mr. Merry's c. beat Baron Rothschild's f., Conundrum, and 6 others.—*The Select Stakes.* Mr. Alexander's Thunderbolt beat Buccaneer and King of Diamonds.—*The Outlands Plate.* Mr. Martin's Zaretan beat Courier, Ambush, and 7 others.

Thursday.—*Plate.* Sir J. Hawley's Gallus beat Malta, Styria, Desdemona, and 5 others.—*Renewal of the Bretby Stakes.* Mr. H. Savile's Sister to Rocsia beat Vaga and Cantatrice.—*Sweeps.* Lord Coventry's Mousetrap beat Henham Lass, Pomona, Sacerdos, and 9 others.—*The Curzon Sweeps.* Duke of Bedford's Cowley beat Gaberdine.—*Sweeps.* Sir J. Hawley's Caliban beat Weatherwitch, Chiffonière, and 5 others.—*Match.* Duke of Bedford's Iambic beat Slyboots.—*Sweeps.* Mr. W. Etwall's Jessie Brown beat Zingara, Infanta, Lady Falconer, and Yoicks.—*Sweeps.* Duke of Bedford's Eda beat Largesse.—*Handicap Plate.* Mr. Pilling's Moorcock beat Gladiolus, Newstead, Gallus, Mentmore, and 14 others.—*Sweeps.* Lord Glasgow's Tom Bowline beat Thormanby and Montenegro.

Friday.—*Selling Handicap.* Romsey beat Miss Digby and 4 others.—*Handicap.* Sir Hugh beat Oliver, Lady Clare, and 9 others.—*Prendergast Stakes.* Preceptress beat Phemy c., Barb-Pigeon, and 2 others.—*Handicap.* Twilight beat Tightfit and 4 others.—*Sweeps.* Lady Like beat May Bell filly and 5 others.—*50l. Plate.* Precursor beat Pedlar, Rattlesnake, and 5 others.—*Sweeps.* Miss Fanny beat Pollyolbion and 3 others.

Obituary.

The Earl of Leven and Melville died on Monday at his residence, Melville House, in his 75th year. He was the son of the 7th earl, by the daughter of Mr. John Thornton, of London, and was born in London in 1785. He succeeded to the title on the death of his father in 1820, and in 1824 he married the daughter of Sir Archibald Campbell. He entered the Navy at an early age, and commanded a boat at the capture and destruction of a convoy in the Bay of Rosas in 1809, and became a vice-admiral in 1858. He was one of the representative peers of Scotland, and a deputy-lieutenant of the county of Fife. He is succeeded in the title by his brother the Hon. John Thornton Leslie Melville, born in 1786, and a partner in the bank of William Deacon and Co. in Birchin Lane.

General Sir Harry Smith, Bart., G.C.B., died yesterday morning at his residence in Eaton Place West, after a long illness. His services were of the most distinguished character, having been present at all the great battles of the war from Corunna to Waterloo, besides taking part in the American, Cape, and Sikh wars. In the latter he gained a brilliant victory over the Sikhs at Aliwal, and was created a Baronet and G.C.B. for his services. He had received the war medal and 12 clasps.

Sir William Edward Crosbie, Bart., formerly of the 23rd Royal Welsh Fusiliers, died at his residence at Drav, Ireland, on the 3d inst. He was son of the fifth baronet by the daughter of Mr. Warner Westenra, aunt of the second Lord Rossmore, and widow of Captain Dodd, of Purley. He was born in 1794, and succeeded to the baronetcy on the death of his father in 1798, having at his succession barely attained his fourth year. In 1813, he entered the army, in which he remained till 1826, when he went on half pay. In 1831 he married the daughter of Mr. John Walsh, of Dublin.

Admiral Charles Gordon, C.B., brother of the late Admiral Henry Gordon, died on the 3d inst., at his residence at Bath, aged 79. He was educated at the Royal Naval Academy, and entered the service as midshipman in 1796. For three years he was signal officer to Admiral Cornwallis, in command of the Channel fleet. He was then appointed to the command of the St. Lucia sloop off Antigua, until May, 1807, when he had the misfortune to be captured. In 1809 he was appointed to the Caroline, 36, one of the squadron employed in the destruction of more than 80 piratical vessels at Ras-al-Khyma and other ports in the Persian Gulf. He was next appointed to the command of the Ceylon, 40, in which he fought, in 1810, a gallant night action off the Isle of France with the French ship Venus, 44, and Victor, 16. Captain Gordon was among the wounded, and owing to his ship being disabled by the enemy, he was compelled to surrender to them. The Ceylon was, however, retaken the same day by the Boadicea and Otter brig. Captain Gordon and his crew were afterwards honourably acquitted by a court-martial. Since then he has been on half-pay. In 1840 he was made a Companion of the Bath.

Mr. James Stewart, formerly M.P. for Honiton, and secretary to the Copyhold Commission, died a few days since, at the age of 55. He was born in 1805; and was called to the bar, at Lincoln's Inn, in 1826. He practised for many years as a Chancery barrister and conveyancer, and was the author of several legal works of some authority, including "The Practice of Conveyancing," "The Principles of the Law of Real Property," &c. He represented Honiton in the Liberal interest from 1837 till 1841, when he retired from Parliamentary life. He was for many years secretary to the Copyhold Commission, from which post he retired a short time since. He married, in 1834, his cousin Margaret Emily, daughter of the late Mr. Duncan Stewart, of Glenbuckie, Perthshire.

Mr. Alfred Edward Chalon, R.A., portrait painter to her Majesty, died at his residence at Campden Hill, Kensington, on the 3d inst., at the ripe age of 80 years. He was of Swiss extraction, and will be long remembered, not only on his own account, but also as the brother of the late eminent landscape painter, Mr. John James Chalon, R.A., who died about six years since. Mr. Alfred Chalon was for many years the fashionable water-colour painter of the age; and was pre-eminently the artist of ladies, in the portraiture of whom, more especially in their Court dresses his pencil was peculiarly happy. That he stuck to his profession to the last may be inferred from the fact that the catalogue of the exhibition of the Royal Academy last year contained no less than six of his works. A few years since he and his brother exhibited a joint collection of their works, and last year Mr. Chalon offered to the inhabitants of Hampstead, his collection of water colour paintings, on condition of their providing a building for their reception, and giving a trifling salary to a curator; but the offer was not accepted. It is understood that he has died intestate, and consequently his collection will be brought to the hammer. It appears that he made his will before leaving town this summer, and duly signed it; but neglected to take the necessary precaution of having it witnessed. His only sister as well as his brother having died before him, he has left no near relatives, so that at present it is doubtful who will be entitled to administer to his effects.

Lieut.-Colonel Spence, C.B., late of her Majesty's 31st Regiment, died at Bath on Monday last. He entered the army at an early age, and saw much service. He was present with his regiment in the action of Stuola, near Genoa, in 1814, in the subsequent attacks upon Genoa until its surrender, and at the surrender of Corsica in the same year. In 1815 he served with the army in Naples. In 1825 he was present at the burning of the Kent in the Bay of Biscay. He commanded the 31st Regiment throughout the campaign on the Sutlej, for which he received the war medal and three clasps; was present at the battles of Moodkee, Ferozeshah, Buddiwal, Aliwal, and Sobraon, and was one of only five officers out of 30 who escaped being wounded in these actions. At Ferozeshah and at Sobraon he had his horse shot under him, and for his conduct on these occasions he was created a Companion of the Bath.

Mr. Ebenezer Landells, the well-known engraver on wood, died on the 1st inst., at Brompton. He had been for some time in ill health, and was in his 52d year. He was a native of Newcastle-on-Tyne, where he was a pupil of Thomas Bewick, the celebrated engraver. He came to London about 30 years ago, and has since been connected with the leading illustrated periodicals of the day. In 1841 he was one of the originators of "Punch," and in the autumn of 1842 he was commissioned by the proprietors of the *Illustrated London News* to sketch and engrave the scenes and incidents of her Majesty's visit to Scotland; and his success on this occasion led to his being subsequently engaged to illustrate, in the same journal, the several Royal visits to various parts of the United Kingdom and the Continent. He was likewise the originator of the "Illuminated Magazine," and one of the original proprietors of the *Lady's Newspaper.*

Wills.—The will of Major-General Broke has been sworn under 12,000*l.*; Lady Mary Pelham, 10,000*l.*; Baron Denis Moses Samuel, 300,000*l.*; Mr. Abraham George Robarts, Banker, 200,000*l.*; Mr. Tancred, Q.C., M.P., 35,000*l.*; Mr. Nathaniel Goldsmid, 9000*l.*; Mr. Thomas Cotterill, of Birmingham, 1,100,000*l.*

BIRTHS.—On the 6th inst, at 22, Belgrave Square, the Lady Katherine Hyvmilton Russell, of a daughter—7th inst, at Mortimer House, Halkin Street, the Lady Louisa Douglas Pennant, of a daughter, still-born—7th inst, at 17, Hertford Street, Mayfair, Lady Mary Craven, of a son—6th inst, at Shelton, county of Wicklow, the Lady Catherine Petre, of a daughter—8th inst, at Trafford Park, Lady Annette de Trafford, of a daughter—31st Aug., at Mazagon Castle, Bombay, Lady Jamsetjee Jejeebhoy, of a son—30th ult., at Denne Hill, Kent, the wife of Lieut.-Colonel Montressor Grenadier Guards, of a daughter—6th inst, at 5, Pont Street, Mrs. William G. Vernon Harcourt, of a son.

MARRIAGES.—11th inst, at Knowsley, Colonel the Hon. W. P. M. C. Talbot, brother of the Earl of Shrewsbury, to the Lady Emma Stanley, only daughter of the Earl and Countess of Derby—At St. John's Episcopal Church, Edinburgh, the Hon. Mark George Kerr Rolle, second son of Lord Clinton, to Lady Gertrude Jane Douglas, fifth daughter of the late Earl of Morton—9th inst, at Wicknor, Staffordshire, the Hon. and Rev. George Barrington Legge, second son of the late Earl of Dartmouth, to Sophia Frances Margaret, only daughter of the late John Levett, Esq., of Wicknor Park—4th inst, at Dawlish, John Crawshay Bailey, Esq., Commander, R.N., of Midford House, Somersetshire, son of the late Sir Joseph Bailey, Bart., of Glanusk Park, Brecon, to Maria Fowler, youngest daughter of Charles Cooch, Esq.—4th inst, at Warblington Church, William Butler Fellowes, Captain in the 3d Madras Cavalry, second son of the late Sir James Fellowes, M.D., F.R.S., to Mary Anne, only daughter of the Rev. William Norris, rector of Warblington, Hants—6th inst, at St. George's Church, Hanover Square, Harry Robert Newton, Esq., only surviving son of Sir William J. Newton, of Argyll Street, to Edith Nicola, youngest daughter of Dr. Billing, of Grosvenor Gate Hyde Park—4th inst, at the parish Church, Clapham, Godfrey W. Barry, Esq., fourth son of the late Sir Charles Barry, to Frances Emily, youngest daughter of J. S. Rutter, Esq., Clapham Common—3d inst, at St. Mary's, Bedlington, Surrey, Captain Frederick Torrens Lyster, of the 11th Regiment, fifth son of the late Major Thomas St. George Lyster, 6th Dragoon Guards, to Frances Jemima, second daughter of the late Charles Reed, Esq., of Westerfield, Worthing, Sussex.

DEATHS.—On the 30th ult, at Naples, Madame Dupont, the second daughter of the late Sir Andrew Snape Douglas, Kt., and sister of the late Lady Boyer—5th inst, at her residence, Grosvenor Gate, Park Lane, Lady Fisher, wife of Sir John William Fisher, and eldest daughter of the late William Haymes, Esq., of Kibworth Harcourt, Leicestershire—7th inst, at Garendon Park, Leicestershire, Mary, fourth daughter of Ambrose Lisle Phillipps, Esq., aged 17—5th inst, in Hollies Street, Cavendish Square, Dr. William Horwood, M.D., of Rudware, Staffordshire, for many years a justice of the peace for that county—29th ult, at Savile House, St. Helier's, Jersey, William Pigott Shuckburgh, Esq., of The Moot, Downton, J.P. for the county of Wilts, aged 59—5th inst, at Ostend, Matthew Uzielli, Esq., of Hanover Lodge, Regent's Park, second partner of the house of C. J. Devaux & Co., merchants, of King William Street, City, aged 55—2d inst, Edward Goodwin, Esq., 40 years Deputy-Treasurer of Christ Church College, Oxford, aged 73—3d inst, at the Manse of Greenock, the Rev. James Reid Brown, D.D., Minister of the Middle Parish of Greenock, and formerly of the Scots Church, Swallow Street, London, aged 63—6th inst, at The Heath, Weybridge, Sarah, widow of David Jardine, Esq., of the Middle Temple, barrister at law, and of 22, Cumberland Terrace, Regent's Park, having survived her husband three weeks and two days, aged 68—Frederick Perkins, Esq., of Chipstead Place, Kent, whose death is announced in the *Times* of Oct 12, was one of the oldest Fellows of the Horticultural Society, having been elected on the 7th May, 1816.

Markets.

COVENT GARDEN, Oct. 13

Black Hamburgh and other Grapes are still supplied in great quantities. Pears consist chiefly of Marie Louise, Seckle, Louise Bonne of Jersey, Gansel's Bergamot, and Duchesse d'Angoulême. Peaches, Nectarines, and Plums may yet be obtained, but both Peaches and Nectarines are very inferior in flavour. Oranges are 3s. a dozen. Good Filberts may be had at from 9l. to 1s. per lb. Cabbages, Beans, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 15s. per cwt. Cucumbers abundant. Cut flowers chiefly consist of Orchids, Gardenias, Kalosanths, Dahlias, Violets, Mignonette, China Asters, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 3s to 4s	Melons, each, 2s to 4s
Grapes, per lb., 2s to 5s	Plums, p. ½ sieve, 3s to 4s 6d
Peaches, per doz., 2s to 6s	Pears, per doz., 1s to 3s
Apricots, per doz., 2s to 4s	Apples, per doz., 6d to 1s 6d
Nectarines, do., 2s to 6s	Oranges, per 100, 10s to 20s
Green Figs, per doz., 3s to 4s	Lemons, per 100, 10s to 15s

VEGETABLES.

French Beans, per quartn., 9d to 1s	Celery, p. bundle, 1s 6d to 1s 9d
Cauliflowers, each, 4d to 6d	Onions, p. ½ sieve, 1s 6d to 2s 6d
Greens, per dozen, 2s 6d to 3s	Tomatoes, per doz., 2s to 3s
Cabbages, do., 1s to 2s	Veg. Marrows, p. doz., 6d to 1s
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 9d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 2s
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 6d to 1s	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d

COAL MARKET.—Oct. 10.

Benton's West Hartley, 15s. 3d.; Craghead Hartley, 15s.; Hasting's Hartley, 16s. 3d.; Howard's West Hartley, 16s.; Tanfield Moor, 13s. 9d.; Tanfield Moor Butes, 13s. 9d.; Walls End Acorn Close, 19s.; Walls End Durham, 18s. 3d.; Eden Main, 19s.; Walls End Braddyl's Hetton, 19s. 6d.; Walls End Framwellgate, 19s.; Walls End Hetton, 20s. 6d.; Walls End Hetton Lyons, 18s. 9d.; Walls End South Hetton, 20s. 6d.; Walls End Stewarts, 20s. 6d.; Walls End Heugh Hall, 19s.; Walls End Hunwick, 16s. 6d.; Walls End North Hartlepool, 16s. 9d.; Walls End South Hartlepool, 19s. 6d.; Walls End South Durham, 19s.; Walls End Thorpe, 19s. 6d.; Walls End West Hetton, 19s.; Walls End Whitworth, 16s. 6d.; Walls End Woodhouse Close, 17s. 3d.; Carway and Duffryn Malting, 22s. 6d.; Cowpen Hartley, 16s. 3d.—83 ships at market.

HAY.—Per Load of Thirty-six Trusses.

Smithfield, Thursday, Oct. 11.

Prime Meadow Hay	75s	to 84s	Clover	90s	to 120s
Superior do. (old) ..	95	115	New Clover	—	—
Inferior do.	50	60	Old second cut ..	80	100
New do.	—	—	Straw	30	38
Rowen	40	50			

Davis & Co.

Cumberland Market, Thursday, Oct. 11.

Sup. Meadow Hay ..	112s	to 120s	Inferior Clover ..	84s	110s
Inferior do.	65	105	New do.	—	—
New do.	—	—	Straw	38	45
Superior Clover ..	118	130			

Joshua Barber.

Whitechapel, Thursday, Oct. 11.

Fine old Hay	105s	to 110s	Fine old Clover ..	115s	to 120s
Inferior do.	56	80	Inferior do	90	105
Prime New Hay ..	—	—	Fine 2d cut	90	95
Inferior do.	—	—	Inferior do.	45	60
Straw	34	36	Fine New Clover ..	—	—

BRITISH WOOLS.—London, Friday, Oct. 12.

Our trade continues in a tolerably healthy state, holders not pressing sales, but supplying consumers as they require. The amount of business doing is consequently small in many descriptions, and is likely to be so long as the prices remain at their present high rate.

South-down Hoggets	s. 1	d. 8	to	s. 1	d. 9	Leicest. Wethers	1	6 to 1 7
Half-bred ditto ..	1	8	—	1	9	Ditto Hoggs ..	1	7 — 1 9
Down Ewes ..	1	6	—	1	7	Combing Skins	—	— —
Kent Fleeces ..	1	6	—	1	7	Blanket ditto ..	0	6 — 0 8
						Flannel Wool ..	1	0 — 1 4

HOPS.—Borough Market, Friday, Oct. 12.

Messrs. Pattenden & Smith report a steady demand for consumption for the best grown new Hops, at prices varying from 12*l.* to 25*l.* per cwt. Yearlings and good sound old Hops are in fair request at firm prices. Duty 35,000*l.*

BUTTER MARKET.—Oct. 12.

Best Fresh Butter .. .. 15s. per dozen lbs.
Second do. do. .. .. 13s. ,, ,,
Pork, 5s. 0d. to 5s. 8d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

Monday, Oct. 8.

The number of Beasts is much smaller than on Monday last, and consequently trade is more cheerful. Choicest descriptions are rather dearer. The supply of Sheep is also smaller, and prices on the average are better. Good Calves are rather dearer. Our foreign supplies consist of 600 Beasts, 5560 Sheep, and 29 Calves.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c. ..	4	8	to	5	2	Best Long-wools.	5	0	—	5	4
Best Short-horns	4	6	—	4	10	Do. Shorn			to		..
2d quality Beasts	3	4	—	4	0	Ewes & 2d quality	4	4	—	4	8
Best Downs and Half-breds ..	5	2	to	5	6	Do. Shorn			—		..
Do. Shorn			—		..	Lambs			..		..
						Calves	4	6	—	5	6
						Pigs	4	8	—	5	6

Beasts, 4540; Sheep & Lambs, 23,500; Calves, 77; Pigs, 360.

Thursday, Oct. 11.

The supply to-day is large, a great number being foreign; the trade is consequently very dull and slow, but prices may be quoted the same as on Monday. Our foreign supply is 620 Pigs, 1550 Sheep, and 207 Calves; Milch Cows, 125.

Best Scots, Herefords, &c. ..	4	8	to	5	2	Best Long-wools .	5	0 — 5
Best Short-horns	4	6	—	4	10	Do. Shorn		— ..
2d quanty Beasts	3	4	—	4	0	Ewes & 2d quality	4	4 — 4 8
Best Downs and Half-breds ..	5	2	—	5	6	Do. Shorn		to ..
Do. Shorn			—		..	Lambs		— ..
						Calves	4	6 — 5 6
						Pigs	4	8 — 5 6

Beasts, 1440; Sheep & Lambs, 6340; Calves, 332; Pigs, 180.

MARK LANE.—Monday, Oct. 8.

The supply of Wheat from Essex and Kent to this morning's market was small, and nearly the whole of it in most miserable condition; old and dry new was disposed of at last week's rates, but it was difficult to find purchasers for the damp, for which prices were very irregular. The attendance of country buyers was large, but not finding the prices of last week, which were insisted upon by the factors, they restricted their purchases to retail quantities. The Barley trade is firm, and in some instances rather more money is obtained. Beans and Peas are each 1s. to 2s. per qr. dearer. For Oats there is a fair demand at the prices of this day

se'nnight. In foreign Flour scarcely any business was transacted, and prices remain unaltered.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	55—62	Red	46—60
— — fine selected runs..ditto	59—66	Red	53—66
— — Talavera	50—74		
— Norfolk	—	Red	—
— Foreign	54—74		
BARLEY, grind. & dist..25s to 31s..Chev.	38—45	Malting.	36—41
— Foreign..grinding and distilling	31—39	Malting.	36—41
OATS, Essex and Suffolk	20—24		
— Scotch and Lincolnshire..Potato	26—28	Feed ..	24—26
— Irish .....Potato	26—28	Feed ..	21—24
— Foreign.....Poland and Brew	24—26	Feed ..	20—26
RYE	35—38	Foreign.	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....36s to 40s....Tick	38—41	Harrow.	38—41
— Pigeon .....44s — 50s..Winds	—	Longpod	—
— Foreign .....Small	38—46	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	38—44	Suffolk .	—
— Maple .... —s to —s ..... Grey	—	Foreign.	30—43
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	50—57		
— 2d do. ..... ditto	34—50	Country.	34—50
— Foreign .....per barrel	29—34	Per sack	40—50

FRIDAY, Oct. 12.

The weather during this week has been fine until the morning of the 10th, when rain set in and continued until yesterday afternoon, with sharp frost last night, to-day fine. The wind has chiefly been westerly, varying from S. to N. and back again, until yesterday morning, when it blew from the N.E., to day N.W. The temperature was cold, and some snow is reported to have fallen in the north, and a few flakes even not far from the metropolis. Great progress has been made with the harvest during the last week, but the rain has again suspended operations. The result of trials made of the quality of the new Wheat fully confirms the opinion we expressed, that it would require a large admixture of old and foreign, the consumption of which during the ensuing nine months will probably be unprecedentedly large, and doubtless be provided for accordingly. The Wheat trade during the past week has been generally less active, and in the majority of markets new Wheat has undergone a decline in price of 1s. to 2s. per qr., particularly damp inferior qualities, whilst for old and foreign former rates have been insisted upon. Where any alteration has occurred in the value of Spring Corn it has been in favour of sellers. Owing to the inferior quality of the new country Flour, we experienced here on Wednesday more inquiry for American barrels, and late prices were somewhat exceeded. The number of grain and seed-laden vessels arrived off the coast since the 5th of October amounts to 27. The business done was rather extensive, and prices tended upwards. The arrivals of foreign Wheat this week have been good, but of all other grain small. The attendance at this morning's market included some distant country buyers. English Wheat was inquired after at Monday's prices; foreign was held in many instances for an advance, which checked business, and sales to a limited extent only were effected at our late quotations. Barley is 1s. per qr. dearer. Beans and Peas bring Monday's quotations. The Oat trade is firm, and good old corn brings an advance of 6d. per qr.

ARRIVALS FROM Oct. 8 TO Oct. 12.

	Wheat.	Barley.	Oats.	Flour.
English ..	1260 qrs.	880 qrs.	10 qrs.	690 sks.
Irish	— ,,	— ,,	310 ,,	— ,,
Foreign ..	21360 ,,	1270 ,,	7840 ,,	4180 ,, 15080 brls.

LIVERPOOL, Tuesday, Oct. 9. — We had a good attendance of buyers at our Corn Exchange this morning, but holders generally not being disposed to meet their views only a moderate business resulted; what sales, however, were made were at a reduction of about 2d. per cental on Wheat and 6d. per barrel on Flour. Indian Corn had a fair consumptive inquiry, and commanded the extreme prices of Friday. Oats and Oatmeal steady. Beans, Peas, and Barley, from scarcity, were each held for more money. The market closed with a quiet feeling.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Sept. 1..	60s 11d	33s 3d	28s 2d	40s 7d	47s 10d	44s 5d
— 8..	62 10	35 2	27 2	39 4	49 3	41 4
— 15..	62 11	37 10	27 0	42 4	50 1	38 7
— 22..	58 3	38 5	25 9	40 7	49 6	37 11
— 29..	56 11	39 3	25 3	37 10	49 6	39 1
Oct. 6..	58 3	39 8	25 1	39 1	48 11	39 10
Agg. Aver.	60 0	37 3	26 5	39 11	49 2	40 2

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

A PARTNER WANTED.

WANTED, in a large Nursery and Seed Trade in one of the largest Agricultural Counties in England, a thorough business Man, well acquainted with either; there has been a large Seed Trade carried on for more than half a century, and is capable of very great extension.—Any one wishing to enter into a first-rate business, this offers an opportunity rarely to be met with.—For particulars inquire of Messrs. HURST & M'MULLEN, Seedsmen, 48, Leadenhall Street, London, E.C.

LAND DRAINERS.

500 to 600 good hands WANTED at "Buscot Park," near Faringdon, Berkshire. Good clay cutting and tools provided to those who do not possess them. —Apply to the Foremen on the ground, or to THOS. SCOTT, Land Agent, 18, Parliament Street, London, S.W.

WANTED, A FOREMAN AND PROPAGATOR in the Plant Department. He must be a man of experience and acquainted with the London Trade. His character will require to bear the strictest investigation, and which must also be sustained by references as to his capability. —Address in own handwriting stating terms, to HORTUS, *Gardeners' Chronicle* Office.

WANTED, a married MAN, without incumbrance, to take the entire management of a Market Garden; one who understands Early and Late Forcing, Vineries, Conservatories, Kitchen and Flower Garden in all its branches and a good Propagator.—Address J. CREEK, 2, Union St., Cambridge.

WANTED, AN UNDER GARDENER, who has been accustomed to Forcing and Plant Growing. No one need apply but a good Workman. Wages 16s., with furnished rooms.—Address Mr. PRONG, The Gardens, Newsell Park, Royston

WANTED, AS SHOPMAN, a young Man well acquainted with Retail Trade, and of quick and sober habits. If accustomed to call upon Farmers, &c. preferred. Must be willing to assist at anything required.—State age, wages, &c., to BETA, Messrs. Noble & Co., Seed Merchants, Fleet Street, London, E.C.

WANTED, A COWMAN, who thoroughly understands the management of Cows, Pigs, and Sheep. Good character indispensable.—Apply, COOPER, Stationer, Hunslow, W.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD) where two or more men are kept.—Age 37, married, no incumbrance; unexceptionable reference.—HEAD GARDENER, Burgh Hall, Boston, Lincolnshire.

GARDENER (HEAD).—Age 29, understands his profession in all its branches; also Planning and Laying out Grounds, the Erection of Horticultural Buildings, &c. good reference.—ALPHA, Banbury, Oxon.

GARDENER (HEAD).—Age 33, married; understands the management of Kitchen, Fruit, and Flower Gardens, and Greenhouse. Three years and five months' good character.—W. M., D. Thompson's Nursery, Wimbledon, S.W.

GARDENER (HEAD).—Age 30, single; thoroughly understands his profession in all its branches. Unexceptionable references.—J. A. B., Coythorpe, Grantham, Lincolnshire.

GARDENER (HEAD).—Age 25, single; can take care of a Kitchen and Flower Garden, Stove, and Greenhouse, Conservatory, &c.—T. U., 1, Andover Road, Hornsey Road, London, N.

GARDENER (HEAD)—Age 42, married, without incumbrance; perfectly understands his profession. Good references from former employers.—X. Y., 9, Vine Place, Bond Street, Vauxhall, S.W.

GARDENER (HEAD). — Married, middle-aged, Scotch; thoroughly qualified, intelligent, sober, honest, and energetic. Can take charge of Grass Land to any extent. Wages moderate.—M., 3, Porter's Row, Holloway Road, N.

GARDENER (HEAD).—Age 30, single; thoroughly practical in Growing Grapes, Peaches, Melons, Cucumbers, and the general routine of Gardening.—Y. Z., 8, Church Place, Old Town, Clapham, S.W.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—JOHN IVISON, late Head Gardener for 11 years to His Grace the Duke of Northumberland, at Syon House, is now open to an engagement in a similar capacity.—Mulberry Cottage, New Road, Old Brentford.

GARDENER (HEAD).—A gentleman wishes to recommend as above, a middle-aged, married Man, without incumbrance; superior abilities, industrious habits; has a thorough practical knowledge of his profession in every department.—A. B., Mr. Lindsay, 22, Cowgate, Peterborough.

GARDENER (HEAD).—Age 37, married, one child; experienced in Pines, Grapes, Early and Late Forcing; also Stove and Greenhouse Plants, Kitchen and Flower Gardens. Can be highly recommended for honesty, sobriety, capability, &c.—A. B., Mr. Hinder, Park Nursery, Forest Hill, Sydenham, S.E.

GARDENER (HEAD).—Middle-aged, single; has a thorough knowledge of Gardening in all its branches. Can have three and a half years' good character from the gentleman he is leaving, in consequence of an alteration in the establishment.—H. R., Post Office, East Bridgeford, near Nottingham.

GARDENER (HEAD).—Age 40, single; thoroughly understands his profession in all its branches; had great experience in Early and Late Forcing in his last place, and likewise the Management of Land. Can have four years' good character from his late employer.—J. B., 23, Mark House Place, Walthamstow, Essex, N.E.

GARDENER (HEAD).—Age 40, no incumbrance; understands his profession in all its branches, including Early and Late Forcing of Plants, Flowers, and Vegetables, the Culture and Propagation of Stove and Greenhouse Plants, and the management of Kitchen and Flower Gardens. Four years' unexceptionable character.—J. B., Harleston Park, Northampton.

GARDENER (HEAD).—Age 32, married, one child; has a thorough practical knowledge of his profession, having lived as Foreman in some of the leading Gardens in England, where all kinds of Forcing is carried out; has also lived as Head Gardener, where he gave every satisfaction; can take charge of Land if required. No single-handed place accepted. Unexceptionable character.—R. D., Post Office, Hammersmith Gate, W.

GARDENER (HEAD).—Age 40, married, family grown up; well skilled in the management of the Fruit, Flower and Kitchen Gardens, also the Early Forcing of Fruits, Flowers, and Vegetables, Laying out, Planting, altering, and improving or making new Gardens, in which he has had great experience. Could enter on an immediate engagement, or a month or two hence.—W. R. C., 6, Hamilton Terrace, Highbury Park, Highbury, London, N.

GARDENER (HEAD).—Age 35, no incumbrance; wishes to engage with a nobleman or gentleman. Has had great practical experience in all branches of his profession, and is fully competent to take charge of an establishment where early Flowers, Fruit, and Vegetables are required, and is also a good Kitchen and Flower Gardener. Five years' good character from the gentleman he is about leaving. The Wife can manage the Poultry and Dairy, or attend to the Lodge Gate.—T. W., Ivrey's Nursery, Reigate, Surrey.

GARDENER (FOREMAN).—Age 23, single; has had good experience in Plant Growing, Orchids, Exotic Ferns, Stove and Greenhouse Plants, and Forcing Pines, Vines, &c.—N. Y., Paradise Nursery, Seven Sisters Road, London, N.

GARDENER (in or out of the house).—Age 23, single; has a thorough practical knowledge of his profession. Good reference.—S. T., *Gardeners' Chronicle* Office, W.C.

GARDENER.—Single; thoroughly understands Early and Late Forcing, Greenhouse and Conservatory.—A. B., The Lodge, Elmer Lodge, Beckenham, Kent.

GARDENER (PRACTICAL).—Age 46, married, without incumbrance; a good Judge of Stock. Wife an experienced Housekeeper. Nine years' character from a family of distinction.—B. B., Post Office, Stamford Hill, London, N.W.

GARDENER.—Married; who understands his profession. Can have a good character from his last place. Wife can look after Poultry or Dairy; or Cook in a small family.—W. R., 74, Castle Street East, Oxford Street, W.

GARDENER.—Age 31, married, without incumbrance; understands the management of Vinery, Greenhouse, Kitchen and Flower Gardens. Good character from his present and last employers.—H. W., Mr. Gidner, Baker, Gipsy Hill, Norwood, Surrey, S.

GARDENER.—Mr. BARNES can with confidence recommend a Man (age 38, married) thoroughly competent to undertake the management of a nobleman or gentleman's Garden; has had good practice in the Forcing of Fruits, Flowers, and Vegetables, and has been nearly four years in the situation he is now leaving, during which time he has superintended extensive alterations in renovating an old garden. Can take charge of Land and Stock if required.—Camden Nursery, Camberwell, S.

GARDENER (UNDER).—Age 21; has a good knowledge of Plants. Six years' experience in Nurseries, lastly in private place. Good references.—J. W., Mr. Cuthill, Camberwell, London, S.

TO NOBLEMEN AND GENTLEMEN.

GARDENER OR GARDENER AND BAILIFF.—Married, without incumbrance; has had great practical experience in the re-arranging and formation of extensive Pleasure Grounds and Park decorations, the construction of Horticultural Buildings, and Heating on the most approved principles; has grown Pines, Grapes, Peaches, and other Fruits and Plants to the highest perfection attainable. Has lived with two families of the highest distinction for 20 years, and is about leaving at his own wish a family of note, where he has been for the last three years, having newly arranged the place, which can be seen. Character will be found unexceptionable.—T. H., Post Office, Winchester, Hants.

GARDENER, OR GROOM AND GARDENER.—Age 30; understands his profession; and can be well recommended by his present employer, who has no further occasion for his services.—E. W., Corfe Cottage, near Taunton, Somerset.

FOREMAN OR BAILIFF on a Farm.—Age 36; thoroughly practical. Can keep accounts well, and produce the highest testimonials of honesty, sobriety, and capability for the last 10 years.—P. T., 34, Grafton Street East, Tottenham Court Road, W.

TO NOBLEMEN, AGRICULTURISTS, ETC.

STEWARD OR BAILIFF.—Age 26, single; of good address and active business habits; experienced in the management of Arable and Meadow Land, Light or Heavy Soils, Cultivation of all kinds of Crops; thoroughly acquainted with the Breeding and Fattening of all description of Stock: conversant with all Modern Agricultural Implements, Steam Machinery, Irrigation, &c.; experienced Conductor of Labour, qualified to Keep Accounts, and do all business connected with a first-class Farm, however extensive.—H. H., Post Office, Brockenhurst, Lymington, Hants.

FARM BAILIFF.—Married; has had 15 years experience in Breeding and Rearing of first-class Shorthorned Cattle, Down and Leicester Sheep. The management of Light and Strong Land. Can be highly recommended by gentlemen in Yorkshire and Northumberland.—A. B., Post Office, Bolton, Lancashire; or, Samuel Wiley, Esq., Bransby, York.

BAILIFF.—Age 40, married; thoroughly practical in the Most Modern style of Farming, a good Judge and Manager of all kind of Stock, and a good Accountant.—J. JUDE, Octavia Cottage, Tunbridge Wells, Kent.

BAILIFF or AGENT (UNDER).—Age 36, married; a native of Scotland; is at present Bailiff to a nobleman in South Wales, wishes for an engagement as above on an Estate. Reference to present employer and others.—BAILIFF, *Gardeners' Chronicle* Office, W.C.

IMPROVER.—Aged 18; in a nobleman's or gentleman's family. Has a knowledge of Plants and Vines. Good recommendation.—R. S., The Gardens, Buckham Hill, Uckfield, Sussex.

TO NURSERYMEN. LANDSCAPE GARDENERS, AND OTHERS.

A DRAUGHTSMAN, having some leisure in the evening, will be glad to undertake the Plain or Fair Copying of Designs for Laying-out Grounds, &c. Terms moderate.—Mr. RICH. HOUSE, 2, Caroline Row, Durdham Down, Bristol.

TO NURSERYMEN.—Age 26; has had some experience in the Nursery Trade, and has been in the habit of keeping Nursery Books and picking out and seeing to the execution of orders; wishes for a situation where he could be similarly employed, and also where he could acquire a further knowledge of the business. Would be willing to make himself generally useful. Wages not so much an object as permanency and improvement.—O. O., *Gardeners' Chronicle* Office.

TO NURSERYMEN AND SEEDSMEN.

BOOK-KEEPER, CASHIER, OR TRAVELLER.—Is about to leave his present situation. Fourteen years' reference in first class Houses both in Scotland and England. A good Correspondent, and can be well recommended.—C. B., care of Messrs. Cockburn & Cumming, 6, Liverpool Street, London, E.C.

TO THE LONDON SEED TRADE.

SHOPMAN OR CLERK.—R. S., 37, London Street, Fitzroy Square, W.

TO SEEDSMEN AND NURSERYMEN.

SHOPMAN OR CLERK.—Age 29; upwards of 11 years' experience in a large Nursery and Seed business, has travelled; is a good Correspondent, and active at counter work. Is well recommended by former employer.—X. Z., *Herald* Office, Glasgow.

TO SEEDSMEN, ETC.

SHOPMAN.—Age 26; 10 years' experience of the trade. First-rate references.—SEEDSMAN, Mr. Richardson's, 54, Benyon Road, De Beauvoir Town, N.

The Gardeners' Chronicle Newspaper.

SATURDAY, OCTOBER 27, 1860.

FIVE PER CENT. INVESTMENTS.—Particulars of Investments for LARGE OR SMALL SUMS OF MONEY, bearing FIVE PER CENT. PER ANNUM INTEREST (well secured), withdrawable at notice, may be obtained, on application to THOMAS H BAYLIS, 429, Strand, London, W.C.

BANK OF DEPOSIT (Established A.D. 1844), 3, Pall-Mall East, London.—Capital Stock, 100,000*l.*

Parties desirous of Investing Money are requested to examine the Plan of the Bank of Deposit, by which a high rate of interest may be obtained with ample security.

Deposits made by special agreement may be withdrawn without notice.

The interest is payable in January and July.

PETER MORRISON, Managing Director.

Forms for opening accounts sent free on application.

News of the Week.

THE vote on the question of annexation to Sardinia commenced on Sunday in all the provinces of the Two Sicilies. In the city of Naples the result of the vote was 154,000 in favour of annexation, and it was known that in 20 provinces of the continental portion of the kingdom, and in all parts of Sicily, the voting was almost unanimously in favour of annexation. The KING OF SARDINIA, accompanied by General CIALDINI'S division, has passed through the principal towns of the Abruzzi during the week on his way to Naples, and has everywhere been received with great enthusiam. HIS MAJESTY is expected to make his entry into Naples to-morrow, and the proclamation of the vote will take place on Monday. GARIBALDI has issued a decree declaring that the Two Sicilies form an integral part of the Italian Kingdom under the constitutional KING VICTOR EMMANUEL, and his descendants, and announcing that on the KING'S arrival he will resign the Dictatorship into HIS MAJESTY'S hands. General CIALDINI has defeated the Royal troops at Isernia, and captured a General, 50 officers, 800 soldiers, and a portion of the KING'S artillery. The Royalists have since evacuated Cajazzo, the scene of the only victory they have gained in this campaign, and have abandoned the line of the Volturno for that of the Garigliano; in other words they have fallen back from Capua to Gaeta. The heights above Capua are already occupied by GARIBALDI, and there is no doubt that Capua itself will shortly fall into his hands without bloodshed.

The *Constitutionnel* of Wednesday published an article on "French policy in Italy," which is universally regarded as the answer of the Emperor NAPOLEON to the accusations brought against him by two opposite parties, the one reproaching him for not intervening in Italy against the revolution, and the other calling upon him to sustain the Italian movement at all hazards. If, it says, the EMPEROR took any part against Italy, he would lose the character he holds from universal suffrage, by which he was elected, and would divest himself of the authority necessary to a Sovereign of France for the good of Europe. If, on the other hand, he gave his active assistance to the movement, he would become an accomplice of the revolution, and would have to estrange England, to break with Russia, Prussia, and Austria, and inevitably bring on a general war. Instead of continuing as at present the "moderator of the revolution," the "pacificator of Europe" and the "arbiter on questions of political equilibrium," he would become the chief of the revolution, the terror of Europe, and a mere instrument of party. It reiterates the EMPEROR'S former proposal, that the revolution, when accomplished, should be consolidated by the act of a European Congress, and it concludes by declaring that "an organised and powerful Italy is henceforth for the interest of Europe, and that in consecrating it by an act of high jurisdiction Europe would show both prudence and justice."

The Vienna Gazette of Sunday published a manifesto of the EMPEROR OF AUSTRIA, introducing a charter founded upon the basis of the Pragmatic Sanction, restoring constitutional freedom to Hungary and nearly all the other provinces of the Empire; and at the same time increasing the number of the Reichsrath, and confiding to that Assembly full authority in matters of finance. An imperial patent has since been issued constituting a statute for the organisation of the Provincial Diet of Styria.

The Conferences at Warsaw between the EMPEROR OF RUSSIA, the EMPEROR OF AUSTRIA, and the PRINCE REGENT OF PRUSSIA, commenced on Saturday and were continued daily until Thursday, when they were brought to a close by an interview of an hour's duration between the three Sovereigns and their Ministers. The result of the Conferences has not yet officially transpired, but it is reported that the Russian Chargé d'Affaires in Paris has received a telegraphic despatch announcing that the principle of a European Congress has been adopted.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Saturday morning the Queen, accompanied by Princess Helena, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort came to London and visited the South Kensington Museum. The Duchess of Cambridge and Princess Mary took luncheon with her Majesty, and afterwards visited the Duchess of Kent. The Judge-Advocate-General had an audience of her Majesty to submit the proceedings of some courts-martial. On Sunday morning the Queen, Prince Consort, the Princesses Alice, Helena, and Louisa, Princes Arthur and Leopold, attended Divine service this morning in the private chapel of the Castle. The Rev. H. J. Ellison, vicar of Windsor, preached the sermon. The Hereditary Prince and Princess of Holstein Augustenburg visited her Majesty from Frogmore and took luncheon. On Monday morning the Queen, accompanied by Princess Louisa, walked and drove in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort, the Princesses Alice and Helena, and Prince Arthur, rode on horseback. The Grand Duke Michael and the Grand Duchess Olga of Russia, accompanied by the Princess of Leiningen, arrived at the Castle on a visit to her Majesty. In the afternoon the Queen and Prince Consort, accompanied by their Imperial Highnesses and the Princesses, drove out in open carriages. The Duke of Cambridge, Earl and Countess Spencer, Lord John Russell, and Lord Palmerston arrived on a visit to the Queen. In the evening Her Majesty had a dinner party. On Tuesday morning the Queen, accompanied by the Grand Duchess Olga, the Princess Alice, and Princess Leiningen, walked in the Home Park and visited the Duchess of Kent at Frogmore. The Prince Consort, accompanied by the Grand Duke Michael, the Duke of Cambridge, and the Hereditary Prince of Holstein Augustenburg, went out shooting. In the afternoon the Grand Duke and Grand Duchess took leave of her Majesty and left the Castle for London, accompanied by the Princess of Leiningen. The Duke of Cambridge, Lord John Russell and Lord Palmerston also left the Castle. On Wednesday morning the Queen and Prince Consort, accompanied by Princess Alice, rode out on horseback. Hassan Ali Khan, the late Minister from Persia, had an audience of her Majesty to present his letters of recall, and Meerza Djaafer Khan, had an audience to present his credentials as Ambassador from the Shah of Persia. Lord John Russell had an audience of her Majesty. Earl and Countess Spencer left the Castle. On Thursday morning the Queen, accompanied by Princess Helena, drove out in an open carriage. The Prince Consort rode on horseback. Princess Alice walked and drove in the Home Park, and Prince Leopold drove out in a carriage and four.

THE PRINCE OF WALES arrived on the 6th inst. at Richmond in Virginia, where, for the first time since his landing in America, he was insulted by a mob who followed him to the Capitol, and made jeering observations about Washington and the Revolution. His Royal Highness left Richmond on the 8th for Baltimore, which he did not reach till 9 at night owing to a detention on the railroad. At the Washington depot a crowd had collected to greet him on his passage through, and on his arrival in Baltimore he was received with considerable enthusiasm. He was to have attended an operatic entertainment, but he arrived too late. On the 9th the Prince proceeded to Philadelphia, where he was received and entertained in an unostentatious manner by the Mayor and prominent citizens. His reception was not marked by any demonstration on the part of the people, his arrival being comparatively unnoticed in the prevailing excitement relative to the state election then in progress. On the 10th the Prince visited numerous places of interest, witnessed the races, and attended the opera in the evening. On the 11th his Royal Highness arrived at New York, and was received with the booming of cannon and the cheers of thousands of persons. After reviewing the militia, which he did in his colonel's uniform, he proceeded up Broadway in an open barouche drawn by six black horses. The most unbounded enthusiasm prevailed. Broadway was densely packed with half a million of human beings of all classes, the windows were crowded to overflowing, the house-tops completely covered, and every available square inch occupied. There was a great display of British flags, and great waving of handkerchiefs, and the demonstration entirely eclipsed the Atlantic cable, the Japanese, and all other celebrations. The Prince looked well and in good spirits, and bowed continually to the people. During the procession a man stepped from the crowd and aimed a heavy blow at his Royal Highness, at the same time giving utterance to the most opprobrious epithets. The Prince escaped the blow, and the ruffian, who is said to be an insane Englishman, was immediately arrested. The Prince's visit was otherwise a great success. The weather was fine, and seats sold on Broadway at from 5 to 20 dollars each. The ball on the night of the 12th inst. went off with great *éclat*.

PRINCE ALFRED was at Bloemfontein on the 23d August, and was expected at Natal on the 27th. His Royal Highness was not expected to return to Cape Town before the 12th September, when he was to be *fêted* on a grand scale.

THE GRAND DUKE MICHAEL OF RUSSIA, accompanied by the Grand Duchess Olga, went to Windsor on Monday on a visit to the Queen, and returned to town on Tuesday. On Wednesday the Grand Duke, accompanied by the Duke of Cambridge, went to Woolwich and witnessed a review of the Horse and Field Artillery, after which he visited the barracks, the Royal Military Academy, the Royal Arsenal, including the Armstrong gun *depôt*, and the shell, gun, and paper factories. On Thursday, being the birthday of his Imperial Highness, a religious service was performed at the Russian chapel in Welbeck Street, at which the Grand Duke, the Grand Duchess Olga, and the principal Russian families in London, were present.

MINISTERIAL APPOINTMENT.—The Right Hon. Frederick Peel has been appointed to succeed Mr. Laing as Secretary of the Treasury.

PARLIAMENTARY MOVEMENTS.—Mr. Moffatt was elected for Honiton on Monday without opposition in the room of the late Mr. Locke. Lord Bury is a candidate for the Wick Burghs, vacant by the appointment of Mr. Laing as Minister of Finance for India.

THE FRENCH TREATY.—The *Gazette* of Tuesday published the following as the English text of the articles of the Convention between her Majesty and the Emperor of the French, supplementary to the Treaty of Commerce of the 23d January last, with a Tariff annexed. This Convention was signed at Paris on the 12th October, and the ratifications were exchanged at Paris on the 24th:—

Article 1.—The articles of British origin or manufacture enumerated in the Tariff annexed to the present Convention shall, when imported direct from the United Kingdom, under the French or the British flag, be admitted into France at the duties specified by the said Tariff. Art. 2.—In order to establish the fact that the goods are of British origin or manufacture, the importer must present at the French Custom House either an official declaration, made before a British magistrate exercising jurisdiction at the place of despatch, or a certificate granted by the chief officer of the Customs at the port of embarcation, or a certificate granted by the Consuls or Consular agents of France at the places of despatch, or at the ports of embarcation. The above mentioned Consuls or Consular agents of France shall legalise the signatures of the British authorities. Art. 3.—The importer of machines and mechanical instruments, complete or in detached pieces, of British origin or manufacture, shall be exempt from the obligation of producing at the French Customs any model or drawing of the imported article. Art. IV.—The importer of any goods of British origin or manufacture taxed *ad valorem*, must attach to the declaration verifying the value of that article, and to the certificate of origin, an invoice emanating from the manufacturer or from the seller, which shall show the real price, and shall be *visé* by a Consul or Consular agent of France in the United Kingdom. Art. V.—When articles upon which an *ad valorem* duty is levied have been previously warehoused, the duty shall be levied according to the value of those articles at the time of their actual entry into France. Art. VI.—The importer against whom the French Customs may desire to exercise the right of pre-emption stipulated in the Treaty of the 23d of January, 1860, may, if he prefers to do so, demand a valuation of his goods by experts. The same demand may be made by the French Customs when they may not think fit to have immediate recourse to pre-emption. Art. VII.—If the result of such valuation by experts should prove that the goods have not a value of 5 per cent. above that which has been declared by the importer, the duty shall be levied upon the amount of the declaration. If the proved value is 5 per cent. above the value declared, the French Customs shall be entitled, at their choice, either to exercise the right of pre-emption, or to levy the duty on the value determined by the experts. This duty shall be increased by 50 per cent., as a fine, if the valuation of the experts is 10 per cent. above the declared value. If the value, as determined by the arbitration, exceeds the declared value by 5 per cent., the costs of the inquiry by the experts shall be defrayed by the declarant. In the contrary case, they shall be defrayed by the French Custom House. Art. VIII.—In the cases contemplated by Art. VI. the two arbitrating experts shall be named, one by the declarant, the other by the local chief of the French Customs Service. If there be difference of opinion between them, or if at the time of appointing the experts the declarant shall require it, the experts shall choose an umpire. In default of agreement, this umpire shall be appointed by the President of the Tribunal of Commerce at the port of importation, or, in his default, by the President of the Tribunal of Commerce at the nearest place. The decision of the arbitrators shall be given within the 15 days which follow their nomination. Art. IX.—Independently of the duties of Customs, articles of goldsmith's work and of jewellery of British manufacture in gold, silver, platina, or other metals, imported into France,

shall be subject to the system of control established in that country for similar articles of domestic manufacture, and shall pay, if it becomes necessary, on the same basis as those, the duties of marking and of guarantee. Art. X.—The Tariff annexed to the present Convention shall, independently of the articles already admissible under the Treaty of the 23d of January last, be immediately applicable to refined sugars, to works in metal, to machines, to detached pieces of machines, to tools, and to mechanical instruments of every description. Art. XI.—The present Convention shall have the same duration as the Treaty concluded between the high contracting parties on the 23d of January last, of which it is a complement. Art. XII.—The present Convention shall be ratified, and the ratifications shall be exchanged at Paris within 15 days, or sooner if possible."

THE VOLUNTEER MOVEMENT.—An artisan brigade of the Royal National Rifles has been formed for the defence of the metropolis under the auspices of Sir De Lacy Evans, M.P., honorary colonel, and Sir John Shelley, M.P. It is hoped that a reliable force of 10,000 men will eventually be established on a permanent basis.—The 1st Middlesex Engineers (South Kensington), numbering now more than 500 members, marched out for the first time since the vacation on Saturday last, under the command of Major M'Leod of M'Leod, accompanied by its band, composed entirely of Volunteers. The regiment, which is daily increasing in strength, is making rapid progress in its drill.—The London Scottish, now about 850 strong, marched out for the first time since the vacation on Saturday, and after a circuit through Bayswater halted for refreshment at Paddington Green. The boxing and fencing class has begun with great spirit, and Mr. Benedict has commenced a class for singing Scotch songs in a "marching chorus." More than 200 candidates for admission into this corps have been refused because they are not "connected with Scotland by birth, marriage, property, or descent," which is one of the fundamental rules of the regiment. It is in contemplation to form a "Volunteer Medical and Ambulance Corps" in London.—The 20th Middlesex has recently been increased by a 6th company composed entirely of skilled artisans in the employ of Messrs. Cubitt & Co., the eminent builders in Gray's Inn Road, of which the Lord Mayor elect has long been at the head. The company already numbers upwards of 100 young men, and is daily receiving fresh accessions to its ranks.—The boys of Queen Elizabeth's Grammar School at Horselydown have formed a cadet corps and band in connection with the South Middlesex.—The services of the Waltham Abbey, Loughton, and Buckhurst Hill Company have been officially accepted, and the corps has been numbered the 22d Essex. Sir Charles Wake has granted an admirable site for a rifle range at Forest Side, Waltham Abbey.—The Witham Company have had their last field-day for the season at Terling Place, the seat of Lord Rayleigh.—The 1st, 3d, and 4th companies of the 5th Essex (Beacontree) marched on Saturday from head-quarters by the Commercial Road to London. On the way they were joined by the 2d (London) company of the corps, and proceeded to Royal Mint Street, where the arms were deposited in the armoury of the London company, and the men dismissed.—On Saturday the Highgate corps were presented by Miss Burdett Coutts with a silver bugle, subscribed for by the ladies of Highgate. The presentation took place in the grounds of Holly Lodge, the residence of Miss Coutts on Highgate Rise, in the presence of about 6000 persons. After the ceremony the Hampstead, Highgate, and Hornsey corps were liberally supplied with refreshments at the expense of Miss Coutts, while the lady subscribers, the officers and visitors were entertained at a *déjeuner*, in the mansion of Holly Lodge. During the meeting Miss Coutts announced her intention to give two silver cups to be shot for by the members of the Highgate Corps.—The officers of the East London Brigade (6th Tower Hamlets) gave a dinner to the members of the Corps last week at the Rosemary Branch Tavern, in Mildmay Park.—The Whitton or Hounslow Corps, and the Harrow and Kingston Corps had a challenge shooting match last week at Whitton Park, the residence of Capt. Murray, when the Hounslow Corps scored 103, the Harrow Corps 98, Kingston 94. The prizes were awarded to Colour-Sergeant Gould, Corporal Hunt, Privates Dell and Knyvett. After the shooting Captain Murray entertained the competitors and members of the Hounslow Corps at dinner.—The 37th Kent, which embraces about 16 parishes of the Weald of Kent, including Cranbrook, Hawkhurst, Goudhurst, Staplehurst, Brenchley, Lamberhurst, Rolvenden, &c., was inspected on the 9th inst., in Cranbrook, the head-quarters of the corps, by the Lord-Lieutenant, accompanied by Lieut.-Colonel Luard, Assistant-Inspector of Volunteers. After the inspection a dinner was given to the battalion by the commanding officer, at which upwards of 500 guests were entertained.—The Sussex Artillery has been increased by a 4th company entirely composed of persons in the employ of Messrs Hannington and Sons, of Brighton. The company already numbers eighty effective members, who were sworn in at the Town Hall on Friday with great ceremony.—The 1st Battalion of Sussex Rifles, consisting of the Arundel, Chichester, Worthing, Storrington, Bognor, and Westbourne Companies, mustered on Friday at the village of Broadwater, about a mile from Worthing.—The 4th Sussex (Lewes) was entertained last week by the Hon. H. B. W. Brand, M.P., at his mansion near Glynde.—The 16th Surrey (Egham) was inspected last week by Major Parratt, Adjutant of the 2d Battalion of the Surrey Volunteers.—The Maidenhead and Reading Corps had a challenge shooting match on Thursday week, when the Reading men scored 142 points and the Maidenhead 140, the former winning by two points only.—The Wycombe corps was presented on Thursday week with a silver bugle, the gift of Lady Carrington, in the grounds of Wycombe Abbey; and on the same day there was a shooting match between the Buckinghamshire Corps for three silver cups presented by Lord Carrington. The 1st cup was won by Private Columbine of the Great Marlow corps, the 2d by Private Ward of the Aylesbury corps, and the 3d by Sergeant Kirby of the Aylesbury corps.—On Monday the five companies composing the Hallamshire Rifles, by invitation of Earl Fitzwilliam, Lord-Lieutenant of the West Riding, assembled at Wentworth House, and were presented with a set of six cast-steel side-drums, the gift of Mr. C. Atkinson, ex-mayor of Sheffield. Earl Fitzwilliam afterwards entertained the companies at a déjeuner.—On Tuesday week a banquet was given in the city of York, the Lord Mayor presiding, for the purpose of presenting to the winner of the first prize in the late county contest at York the silver cup and 25 sovereigns. After the presentation it was resolved to approve and support a scheme for promoting an annual contest in Yorkshire.—The first prize competition of the Bradford Corps took place on Friday and Saturday, on the shooting ground of the corps at Bowling. The prizes were won by Capt. Farrer, Corporals Shuttleworth, Jenkinson, and Cookes, and Privates Wright, Branson, Ching, Armitstead, Crowther, Whalley, Horne, Wilson, Collinson, and Barraclough.—On Friday the Wrentham and Halesworth corps was reviewed in the grounds of Holton Hall, the seat of Mr. Andrew Johnston, by the Earl of Stradbroke, Lord-Lieutenant of the county.—The 1st Suffolk battalion, consisting of the Sudbury, Hadleigh, Bury St. Edmund's, and Eye corps, have been reviewed this week on Mellis Green. The Mayor of Eye (Mr. C. F. Costerton) has offered a silver cup to be shot for by the members of the Eye company.—The Vice-Chancellor of the University of Cambridge has presented a silver cup to be shot for by the Cambridge University Volunteers. The match will take place on the 31st inst.—The Earl of Yarborough, Lord-Lieutenant of Lincolnshire, intends to give one or more prizes to each of the three battalions of Volunteers in that county, to be shot for in the spring of next year. The Countess of Yarborough will also offer a cup to each battalion, to be shot for at the same time as the Lord-Lieutenant's prizes.—On Monday the North Staffordshire, Macclesfield, and Congleton (Cheshire) Rifles, numbering about 1000 men, together with the Leek troop of Yeomanry Cavalry, were reviewed at Leek in brigade drill, by Lieut.-Colonel Buller and Major Walters.—The 1st, or Duke of Manchester's, Corps of Mounted Volunteers were inspected at Kimbolton Castle on Monday by the Earl of Sandwich, Lord-Lieutenant of the county, and Colonel M'Murdo, C.B., Inspector-General of Volunteers.—The Haverfordwest Corps were presented last week by Mrs. Phillips, wife of the Lord Lieutenant of the county, with a silver bugle, subscribed for by the ladies of the town.—A prize contest took place on the 19th inst., at Glavering Park, for a silver cup given by Mr. Andrew Arcedeckne, to be competed for by members of the Glavering Club, and representatives from the various neighbouring corps. There were 27 competitors, and the prize was carried off by Mr. Marriott, of Stowmarket.—The 3rd battalion of Staffordshire was reviewed on Tuesday week by Major Dick, the Government inspector, in Patshall Park, the seat of the Earl of Dartmouth, captain of the corps.—A meeting was held at the Court House, Aberdeen, on Friday last, the Lord Provost presiding, when it was resolved to form a Highland Company in connexion with the Aberdeen battalion.—The 60th, 61st, and 93d Lanarkshire Highland Volunteers, and the 14th Lanarkshire Artillery, were sworn in on Friday evening by Sir Archibald Alison, in the City Hall, Glasgow. A prize competition took place between the members of the 2d Lanarkshire Battalion on Saturday in the South Side Park, Glasgow, when the prizes were won by Capt. Cogan, 22d Lanarkshire, and Mr. Fenton, 10th Lanarkshire.—A shooting match between the 17th Lanarkshire (Accountants') Company and 39th Lanarkshire (Shipping) Company, both belonging to the 1st Regiment of Lanarkshire Rifles, took place on Saturday on the range at Castlemilk, when the 17th scored 99, and the 39th scored 76, leaving the 17th winners by 23 points.—The 10th Somerset Corps met on Friday in the park of the Bishop of Bath and Wells, and were presented by Mrs. Tredway with a silver bugle, the gift of the ladies of Wells.—The presentation of prizes to the successful competitors at the recent rifle contest in connection with the Bristol Volunteer Rifle Corps took place on Saturday on Clifton Down, in the presence of a large concourse of spectators.—On Wednesday the Hants and Isle of Wight Volunteers, numbering 2600 men, and consisting of the Hants Mounted Rifles, Winchester College Rifles, Bitterne Artillery, Southsea Artillery, the Bishops Waltham, Havant, Southampton, Lyndhurst, Lymington, Andover, Romsey, Yeatley, Alton, Basingstoke, Alresford, Fareham, Portsmouth, and Gosport corps of the Hants Rifles, and the Cowes, Newport, Ryde, Ventnor, Nunwell, Sandown, and Freshwater corps of the Isle of Wight battalion, had a grand review and sham fight on Compton Down, near Winchester, Lord William Paulet officiating as inspecting officer. After the review refreshments were provided at several of the hotels at the cost of the Marquis of Winchester, and in the evening a grand ball took place, which was numerously attended.—A Society on the mutual principle under the name of the "National Volunteer Mutual Association," is about to be formed under the patronage of Mr. Sidney Herbert, Secretary of State for War; Earl De Grey and Ripon, Under Secretary at War; the Lord Chancellor, Lord Brougham, Lord Elcho, M.P., Earl Grosvenor, M.P., the Marquis of Donegall, Lord Radstock, &c., "to promote the stability of the volunteer force, and the general welfare of its members, by enabling them, with the aid of their regimental machinery, to provide, effectually and economically, by small contributions during youth and health, against the natural evils and exigencies of sickness, accident, old age, and death," and at the same time to give "absolute security that all the liabilities undertaken shall be literally fulfilled, as it is on this point that so many friendly and benefit societies have failed."

Foreign.

FRANCE.—The *Courrier de Dimanche* of Sunday last published an article asserting that Baron Hübner had arrived in Paris on a special mission "to prepare the French Government for an early intervention of Austria in Italy, to ascertain whether the Emperor Napoleon would again afford assistance to Sardinia, and at the same time to intimate that Austria would only make an attack against Sardinia in the event of her obtaining the moral concurrence of Russia and Prussia." The *Constitutionnel* has published the following semi-official statement, signed by M. Grandguillot, in answer to this article:—

"The report has been spread in these last few days, with systematic persistence, that Austria has resolved to interven in Italy. One journal spoke yesterday even of a sort of secre mission said to have been intrusted to an old diplomatist, with a view to elicit from the French Government an explanation on the views which, should the case occur, it would attach to such an intervention. It is our duty to put the public on its guard against reports of a nature to mislead public opinion and alarm public interests. For some time Austria has given proof in her external policy of a reserve and wisdom which it would be unjust not to admit. The eminent statesman who is at the head of the Department of Foreign Affairs at Vienna knows better than any one how much an offensive attitude of Austria would complicate the state of affairs in Italy. A purely defensive attitude offers, moreover, too many advantages to the Austrian Government for it to be supposed that it would easily renounce it. As regards ourselves, we are fully convinced that this is the line of conduct which she has adopted, and from which she does not intend to depart."

The *Constitutionnel* of Wednesday published a semi-official article headed "French Policy in Italy," of which the following is an abstract:—

"It begins by energetically repelling the charge brought against the Government of the Emperor by those who reproach him for not intervening in Italy against the revolution, and by those who wish to see him sustain the Italian movement at all hazards. French policy could not, without compromising its most undoubted principles and its essential interests, hold to either one or the other of the two lines of conduct. In taking part against Italy the Emperor would betray his origin—he would lose the character he holds from universal suffrage, by which he was elected, and would divest himself of the authority necessary to a Sovereign of France for the good of Europe. The more he is equitable to the people the greater is the service rendered by the Emperor to the principle of authority. Besides, an intervention could only be a military occupation of the Peninsula. What would Italy, England, and Europe have said? They would have looked upon the Peninsula thus protected as a French Italy. The other attitude was equally impossible and dangerous. It would have made France an accomplice in the revolutionary state of things. It would have caused France to break with Russia, Prussia, and Austria, and have involved her in a general war. The Emperor would have changed his part. Moderator of the revolution, he would become its chief. Pacificator of Europe, he would become its terror. Arbiter on questions relating to the balance of power, he would lose the titledeeds of his right. Representative of the national will, he would become a mere party tool. Thus France could neither support revolutionary intentions nor absolutist reactions in Italy. What line of policy should she follow? After a detailed consideration of the political position of each of the great Powers of Europe, and a review of the state of things in Italy, the article draws the conclusion that a Congress is possible, and defines the part France should take therein. It concludes by saying that "an organised and powerful Italy is henceforth for the interest of Europe, and that in consecrating it by an act of high jurisdiction Europe would show as much prudence as justice."

The *Constitutionnel* also announces that the Emperor has received an autograph letter from the Czar, explaining the interview at Warsaw in such a manner as to deprive it of any significance hostile to France. The *Moniteur* of Sunday published a decree suppressing the *Gazette de Lyons*, an important step when taken in connection with the recent opposition of the French bishops and clergy to the Imperial policy in Italy. The Ministerial report proposing the suppression, says:—

"Under existing circumstances the Government found it convenient to allow great liberty to the journals; but toleration would be weakness if discussion were allowed to degenerate to injurious hostility and guilty provocation. For several days the portion of the press which pretends to represent the sacred cause of religion has redoubled its violence. An act of firmness becomes necessary. Conscience is troubled, authority and faith are lessened by the confusion that party spirit engenders between passion and religious duty. Religion would be compromised if her most respected principles were lowered to complicity with that revenge or ambition which the country has so often repudiated. The *Gazette de Lyons* has signalised itself before all others by its incessant appeals for agitation, by the perfidy of its attacks against the Government, and by the disdain it has opposed to the good advice of the Administration. Its number of the 17th inst. more especially reached an excess that cannot be tolerated."

The Emperor held a Military Council at St. Cloud on

Monday, which was attended by all the Marshals of France, with the exception of Marshal Bosquet, who is indisposed. It is said that the Emperor wished to consult them on a new plan he has suggested for the formation of an army of reserve. Accounts from Toulon announce that a Commission composed of a Rear-Admiral, two Deputies and several other members, chosen from the various bodies in the Naval Department, are about to prepare a plan for organising the Imperial navy on an extensive basis. The Duke Decazes, President of the Council under Louis XVIII., and a zealous supporter of the dynasty of Louis Philippe, died in Paris yesterday from the effects of a severe fracture of the thigh, which he accidentally sustained at the railway station at Tours. The Minister of Commerce recently addressed a circular to the various Chambers of Commerce requesting their opinion on the propriety of shortening the period for the application of the Treaty with England. It appears from the answers which have been received from 113 Chambers that 66, including Paris, Rouen, Lille, Havre, Amiens, Mulhouse, and other great manufacturing cities, demand the maintenance of the period originally designed; 33 are in favour of shortening the period; and of the remaining number some declare that they can give no opinion until they know the new tariffs; others that they have no interest in the matter. Some of the Manchester merchants, who recently returned from Paris, where they had spent some weeks in assisting to arrange the tariffs on Cotton goods, were again telegraphed for on Monday evening, and are now in Paris. At the request of Mr. Cobden the Leeds Chamber of Commerce have deputed Messrs. Edward Wurtzburg and J. D. Birchal to represent the interests of Leeds at the discussion on the French tariff on English woollens, and the Huddersfield Chamber of Commerce has deputed Mr. Weiss to represent the interests of that district. The Tir National at Vincennes closed on Sunday, when the prize of honour was won by M. Gillion, a Belgian, with a Liège rifle, in the presence of the Emperor and Marshal Randon, Minister of War. Eight other Belgians took part in the different matches and carried off 13 prizes. Mr. Whitworth, the inventor of the polygonal system of rifling, visited Paris during the Tir and had an audience of the Emperor on Friday, when his Majesty invited him to test his weapon at Vincennes against the French rifles. Mr. Whitworth readily agreed to do so, and accordingly telegraphed to Manchester for his assistant, Mr. Leese, the winner of the shooting match at Southport. Mr. Leese arrived in Paris on Sunday, and on Monday the range, which was for 500, 700, and 1000 metres, was marked out at Vincennes, and a commission appointed to superintend the trial and report. On Tuesday the trial took place, when the superiority of the Whitworth rifle was so decisive that at the 700 metres' range the French marksmen retired from the contest. The Emperor has since intimated to Mr. Whitworth his wish to have a number of rifles made for him, and his intention to send an officer to Southport to see the cannon tested, with a view to negotiate for the purchase of the French patent, so as to make the invention available for the service.

Belgium.—The National Defence Committee of Belgium has presented a report to M. Rogier, Minister of the Interior, stating that the military resources of Belgium are inadequate to cope with the rapid action of modern warfare, and recommending the appointment of a commission to subject to a series of trials the carabines of Janssens, of Montigny, and of Galoppin, the carabine of Dervil, of Liege, the breech-loading carbine of Legeune Chaumont, of Liege, the Swiss Chasseur Carbine, and the Enfield rifle, in order to discover that which best answers all the conditions of a good war arm, a prize of 5000f. being given to the Belgian armourer whose weapon may obtain the preference.

Sweden.—A Royal Ordinance has been published at Stockholm formally repealing all existing laws relating to passports, and enacting that henceforth no such document shall be required, either on entering or on leaving the country, or for travelling in the interior.

Austria.—The official *Wiener Zeitung* publishes a manifesto of the Emperor introducing a charter founded upon the basis of the Pragmatic Sanction, to be binding on all heirs to the throne, to be drawn up for all the provinces, and to be enrolled among the federal laws. The following is a summary of its provisions:—

"The charter announces that henceforth the legislative power will only be exercised with the co-operation of the provincial Diets as well as of the Reichsrath. The number of members of the latter is to be increased to 100 by councillors elected by the Provincial Diets. The members are to be distributed among the provinces in proportion to their extent, their population, and the amount of their taxation. The Ministries of Justice, Religion, and the Interior, as universal central authorities, are suppressed. The Court of Chancery is restored in Hungary, and one for Transylvania is to be established. The Chancellor of the Hungarian Court is to be a member of the Ministry. The affairs of the other provinces are to be represented in the Imperial councils by a Minister of State. A special Ministry is to be appointed for Public Instruction. The judicial affairs of all provinces not Hungarian are to be represented in the Ministerial councils by the President of the Court of Cassation. The interests of national economy and commerce are to be represented in the Ministry by a Minister of Commerce. The financial functions of the Reichsrath are to be considerably increased. The contracting of new and the conversion of existing loans, the mortgage and sale of the landed property of the State, are to be subject to the approval of the Reichsrath. The customs, coinage, all monetary matters, credits, the regulations for the issue of banknotes, postal, railway and telegraph affairs, are only to be treated by Government with the co-operation of the Reichsrath. Other legislative questions are to be referred to the competency of the different Provincial Diets. The treatment of general questions relating to all non-Hungarian provinces is reserved for a conference of the Councillors of the Empire (*i. e.*, members of the Reichsrath) representing those Provinces. As regards the representation of non-Hungarian provinces, detailed instructions are to be given to the Ministers of State on the basis of local self-government and the representation of all classes and interests in the provincial Diets. The early presentation of provincial regulations, drawn up according to these principles, and the convocation as soon as possible of the Provincial Diets is, ordered. The constitutional institutions of Hungary are to be re-established. The Hungarian language is to be introduced as the official language in judicial, political, and administrative proceedings. The University of Pesth is to be re-opened. The abolition of the personal services due to landlords and of the privileges of the nobles as to exemption from payment of taxes is confirmed. The representation of all classes of the country in the Legislature and the Administration is to be established as a principle. The convocation of the Hungarian Diet is to take place with the least possible delay, on which occasion the inauguration of the charter, and the coronation of the Emperor as King of Hungary is to take place. The administration of justice is to be carried on in the prescribed manner, and on the basis of the civil and penal codes until they are legally changed. The Royal Curia in Pesth and the Stadtholdership in Buda are to be re-established. As regards the claims of Hungary and the Servian subjects of Austria for public rights, an Imperial Commissioner is to be appointed to receive communications from the most influential persons representing the different classes. The decision of the Emperor is reserved until the presentation of the Commissioner's report. Similar constitutional institutions are to be granted to Transylvania. The relations of Hungary with Croatia are to be settled by a joint representation of those provinces."

The *Wiener Zeitung* also publishes an Imperial patent constituting a statute for the organisation of the Provincial Diets of Styria, of which the following is a summary:—

"The Diet is to consist of six representatives of the clergy, 12 proprietors of landed property, to which certain privileges are attached, 10 representatives from certain chartered cities, two from the Chamber of Commerce, and 12 from the other communes of Styria, making in all 42 members, of whom 40 are to be elected. The Emperor appoints the Presidents of the Diet."

In consequence of these concessions Counts Thun, Nadasdy, and Thiery, who were opposed to them in the Reichsrath, have quitted the Ministry. General Benedek has been recalled from the Government of Hungary, and appointed Commander-in-Chief of the army in Venetia. Preparations have been made by the authorities of Vienna for a solemn reception of the Emperor on his return from Warsaw to-morrow.

Hungary and Croatia.—All the reports from the provinces announce that the Emperor's Charter has been favourably received, more especially among the educated classes in Croatia and Hungary. The Cardinal Primate of Hungary has been ordered to commence preparations for the coronation of his Majesty as King of Hungary, which is to take place at Presburg next spring. On Tuesday morning General Benedek took leave of the troops and addressed them. The municipal authorities had resolved to illuminate Pesth and Buda in the evening in honour of the new Charter, but the illumination did not take place, by desire of General Benedek, who stated that it would be better to present the cost of the illumination to the army. Some slight disturbances took place in Pesth in the course of the evening, in consequence, it is supposed, of the postponement of the illuminations.

Venetia.—The *Patrie* asserts that a note has been addressed by Lord John Russell to the Cabinet of St. Petersburg, recognising the absolute right of Austria as regards Venetia, and adding that for all parts of Italy the right of non-intervention should be absolutely exercised by Europe.

Russia.—The Emperor of Russia arrived at Warsaw on Saturday afternoon, and was warmly received. The Emperor of Austria arrived shortly afterwards with a numerous suite, and was received at the Railway Station by the Emperor of Russia. Both Emperors proceeded in the same carriage to the Chateau Lazienki. The Emperor Francis Joseph wore the Russian, and the Emperor Alexander the Austrian uniform. The Prince Regent of Prussia arrived at half-past 10 at night, and was heartily cheered. His Royal Highness was met at the station by the Emperor of Russia, who accompanied him in an open carriage to the Belvedere. On Sunday the Emperor of Russia and the Prince Regent dined together at the Belvedere. In the evening the whole Court visited the theatre. On Monday morning a military parade and manœuvres of the Cossacks took place. In the evening the Emperor of Austria paid a visit to the Emperor of Russia, which lasted half an hour, and afterwards visited the Prince Regent of Prussia, with whom he stayed for a short period. Gen. Paniutin personally attended the Emperor of Austria. The whole Court afterwards visited the theatre. On Tuesday morning there was a grand military parade, at which the Emperor Alexander assumed the command. The Prince of Hohenzollern, the Prussian Prime Minister, arrived from Berlin, and paid a visit to the Prince Regent. On Wednesday morning the Prince of Hohenzollern again visited the Prince Regent, and Count Rechberg, the Austrian Foreign Minister, conferred with the Emperor of Austria. On Thursday morning the Emperor of Austria paid a visit to the Emperor of Russia, at the Belvedere. The two Emperors and the Prince Regent, with their Ministers, afterwards held a conference of one hour's duration. The Emperor of Austria left Warsaw yesterday, with the Emperor of Russia and the Prince Regent, for Skcerneewicz, on a hunting excursion, and is expected to arrive in Vienna to-morrow. It is asserted that the Russian Chargé d'Affaires at Paris, on Thursday, received the following despatch:—

"At Warsaw everything goes well. The principle of a European Congress has been adopted. Communicate this in the proper quarters."

Prussia.—Baron Schleinitz, the Prussian Minister of Foreign Affairs, has addressed a despatch to the Prussian Ambassador at Turin, in reply to the Sardinian memorandum of the 12th September, in which he says that the Cabinet of Berlin deeply deplores the acts and principles of the Sardinian Government in regard to Central and Southern Italy, and believes that it is strictly performing its duty in expressing in the most explicit and formal manner its disapprobation of these principles and of the application given to them. It says:—

"All the arguments of that document uphold the principle of the absolute right of nationalities. Assuredly we are far from wishing to dispute the great value of the national idea. It is essentially the openly avowed moving power of our policy, which in Germany will always aim at the development and the reunion of the national Powers in a more efficient and powerful organization. But, while it allows immense importance to the principle of nationalities, the Prussian Government cannot on that account admit the justification of a policy which would renounce all the respect due to the principles of international law. On the contrary, far from regarding these two principles as incompatible, it considers that it is only in the legal way of reforms, and by respecting existing rights, that a regular Government is permitted to realise the legitimate wishes of the people. According to the Sardinian note everything should yield to the national wishes, and whenever public opinion should have pronounced in favour of those wishes the existing authorities ought to abdicate their power in the presence of such a manifestation. But a maxim so diametrically opposed to the most elementary rules of the right of nations could not be put in force without most serious danger to the quietude of Italy, to the balance of power, and the peace of Europe. To sustain this maxim the road of reform is abandoned for that of revolution."

Italy.—The vote on the question of annexation commenced at Naples and in all the provinces of the kingdom at 7 o'clock on Sunday morning, and continued amid much enthusiasm. A large concourse of citizens and clergy were assembled at the voting for places. In the city of Naples 154,000 persons voted annexation, and in 20 provinces the voting is known to have been almost unanimously in its favour. The King of Sardinia arrived at Pescara on the 16th, and left on the following day for Chieti, Popoli and Sulmona, escorted by the *corps d'armee* commanded by General Cialdini. On the 23d his Majesty arrived at Caste di Sangro and Isernia, and has since proceeded to Venafro. He was expected to arrive at Naples on the 28th, and the proclamation of the vote was to take place on the following day. Garibaldi has published a decree proclaiming Victor Emmanuel King of the Two Sicilies as an integral part of the Italian kingdom, and announcing that he will resign the Dictatorship on the arrival of his Majesty. He has also ordered the destruction of the Castle of St. Elmo as soon as the artillery can be removed. The head of General Cialdini's column has encountered and beaten a corps of Neapolitan troops at Isernia, capturing a General, 50 officers, 800 soldiers, a flag and a portion of the King's artillery. Cajazzo and the vicinity have since been evacuated by the Royalist troops, and the line of the Volturno has been abandoned for that of the Garigliano. The national flag now floats on the heights above Capua, and hopes are entertained that Capua will be shortly evacuated. Count Arrivabene has been set at liberty by the King's order. General Turr's division has received orders to be ready to start by sea, but its destination is not known. The Hungarian Legion is to form part of it. The English brigade landed at Naples on the 14th inst. and afterwards proceeded to Capua. Major Styles was placed under arrest on landing, but has since been liberated on parole. The Paris *Presse* contains a letter from the head-quarters of General Bixio, dated Santa Maria, near Capua, on the evening of the 19th, which says that "the English brigade had been that day attacked by two battalions from Capua, and that they not only defended themselves with bravery, but defeated the Royalists in such a manner that they will never forget the steel of the Enfield bayonets. The English regiment had eight men killed and thirty wounded." The Royalist garrison of Baiæ has at length capitulated to Garibaldi, and 500 soldiers belonging to it have gone to Gaeta to join the King. Provisions are beginning to fail at Gaeta. Signor Catrofiano has been sent by his Majesty to Warsaw on a special message. The French Admiral Barbier de Tinan has arrived at Gaeta from Naples with two ships of the line and a frigate.—A despatch from Turin states that the Prince de Gagarin, the Russian Chargé d'affaires presented a note to M. Cavour on the 20th inst. in which he officially signified the recall of the whole Legation on the ground that the Sardinian Government had never taken any notice of the communications and verbal representations which the Court of St. Petersburg had thought fit to make to it respecting recent events, and especially as regards the entrance of Piedmontese troops into the kingdom of Naples. Count Cavour, on receiving this communication, immediately telegraphed to the Sardinian Minister at St. Petersburg, to demand his passports. It is reported at Turin that the Ambassadors of Prussia, Spain, and Portugal are all preparing to leave that capital. Baron Ricasoli, who was reported to have resigned, is now said to remain in office. Forty additional battalions of the National Guard are to be mobilised forthwith, and the battalions which are now serving at Alessandria and Pavia, have enthusiastically responded to the invitation

of the Government to prolong their service.—The warlike preparations of Austria on the line of the Po, are becoming more and more menacing. The most recent intelligence announces that a corps of between 40,000 and 50,000 men is concentrated between Ostiglia and Rovero. — Accounts from Rome state that the departure of the Papal Nuncio from Paris took place in consequence of orders received from Rome. The Duke de Grammont had an audience of the Pope on Sunday. General Lamoricière will leave Rome with full honours. The enrolments for the Pontifical army continue. The Papal Exchequer is not destitute of funds, and the Government entertain great hopes concerning the issue of the interview at Warsaw. A despatch from Ancona states that a decree has been issued convoking the popular assemblies for the 4th and 5th November, to vote on the question of annexation. The French have occupied Montalto, and are said to have abandoned their intention of occupying Orvieto, in consequence of the remonstrance addressed by the whole population, headed by the municipal authorities, to Victor Emmanuel and the Emperor Napoleon.

SICILY.—A despatch from Palermo states that the voting in Sicily commenced on Sunday, and that the result is almost unanimously in favour of annexation.

TURKEY.—It is asserted that several Ambassadors have requested that Turkey in Asia should be visited by the Grand Vizier as well as Turkey in Europe, the state of the former being equally serious. Arrests are reported to have been made in the army and among the lower clergy of Constantinople. Several Poles and Ferrad Pacha have been arrested, and the fall of Riza Pacha is expected, charges of great corruption having been made against him. He is supported by M. de Lavalette. Financial reforms will immediately be carried out. Official salaries and the civil list are to be reduced 200,000,000 piastres. The Grand Vizier is said to be favourable to a forced loan. The British Government has proposed to the Porte an amendment of the Commercial Treaty of 1838. Aali Pasha has been named Minister for Foreign Affairs. A great fight took place at the election of the Greek Patriarch. Prince Couza left Constantinople on the 17th inst. Nothing important was done during his visit.

SYRIA.—It was reported at Beyrout that agitation again prevailed at Damascus, and that threats had been made against the Christians in consequence of the war tax. Fuad Pacha and the French and Russian Consuls had returned in haste to Damascus. The English squadron left Beyrout on the 11th inst., it was said for the Adriatic. Fourteen of the Druse chiefs have obeyed the summons of Fuad Pacha, and surrendered themselves at Beyrout for trial.

CAPE OF GOOD HOPE.—It is rumoured that the Kaffir Chief Sandili has consented to go to England on the express recommendation of Sir George Grey.

UNITED STATES.—The Republicans have carried the State elections in Pennsylvania, Ohio, Baltimore, and Indiana, which is considered indicative of the success of Mr. Lincoln, the Republican candidate for the Presidency. Mr. Lindsay, after meeting the merchants of Boston, had had an interview with the merchants of New York. His informal mission, however, does not meet with favour at the hands of the New York press.

CANADA.—The Governor-General of Canada left on the 12th inst. for Boston, on his return to England.

MEXICO.—Advices from Mexico state that the British Government contemplated withdrawing diplomatic relations. Miramon had announced that the Liberals had rejected another proposal of the British Government for the restoration of peace.

Public Addresses.

THE BISHOP OF OXFORD presided at a public meeting held in the Town Hall at Oxford a few days since, for the purpose of inaugurating the Oxford Churchmen's Union, and made the following remarks on the objects of the new institution :—

"Its general purpose was a very simple one; it was to promote union connected with the social habits, intellectual improvement, and lawful amusements among the inhabitants of this city, and especially among the younger members of it. Very few of them would doubt that there was room for such an institution if it was well managed. A number of influences, with which most of them were cognizant who had reflected at all upon the subject, tended to dissolve the bond of union in highly civilised countries between different classes of society, between men living in the main for the selfsame object and in the same place. It was the tendency of civilisation as it advanced to break men up into cliques, and parties, and sections; to estrange by degrees their sympathies with those who lived outside that clique or section or party to which they belonged, and so to break up the seeming union of every principle upon which all real union must turn, because all real union must consist in the sympathy of one with another, in the full conviction that underneath all the separation and accidents which belong to different ranks and habits of society there was one great underlying community which must be cultivated by mere trusting one another, getting to understand one another, and finding that they had points in common; that they had right, kindly, Christian feelings one towards another. He thought a very little reflection would show them that this disintegration must be at work when society came to the condition in which society was at the present time. Let them picture to themselves the state of men who had gone out and were living together in central places in America at that moment—men who had gone forth, some of them as philosophers, to make philosophical experiments; some as naturalists, in order that they might trace the great workings of nature upon a large scale. Others went out as officers of the great kingdom which was perpetually thrusting its power and influence through Central Asia, and attempting to possess the empire of the world. Like the Russian communities who were described by Mr. Atkinson in his recent work on the Lower Amoor, and who were forced by the necessities of their position into union and sympathy with each other, every mass of men in this country living in the same place had their secret sympathies, the same links, the same opportunity of uniting and discerning the separate influences which were at work, and that the common good, the common happiness must depend upon the bond of unity being discovered, and the elements of separation being sunk. It is exactly what one would witness in attending a philosophic experiment. They would see the electric current sent through a line of magnetised iron becoming magnetic, giving to every single filing one common influence which sprung together around it at a common centre, and for a time adhering together and appearing to be one body, instead of a thousand bodies. And whence did this dissevering of man come? Let them go back to history, and they would find a history of Babel division and Babel separation. They would find that man became unfeeling and selfish because he dissevered, and it was the object of the Christian religion to undo that selfishness and bind together the dissevered members. But civilisation alone, as separate from religion, while it bound cliques and parties together, had a great tendency to separate man from man. Let them take the band of which he had spoken before. Their separate pursuits in society all tended to sever them until there was some one overmastering necessity which broke through and bound them together in unity. Now, civilisation tended greatly to remove from society this pressing necessity, and to preserve every one in his own class and in his own place. Therefore they would find that in all countries of no civilisation there was a greater union between the rich and poor, because their own necessities caused them to bind themselves together, but when there was no necessity to bind them together the work of selfishness began, and, as there was an everlasting necessity to overpower this civilisation and to bring a common safety and peace and a certain kind of common unity, the tendency was to destroy the unity between classes living together in apparent unity; and so it was at the present moment. There was a great deal to divide class from class, and the object of that institution was to make head against that evil principle. It was only by perpetually introducing new methods that they could successfully make head against it. The principle of selfishness was ever at work, and the principle of Christian unity must be employed to subvert it. The first object of the Oxford Churchmen's Union was to accomplish all this by admitting as members those who were connected with the Church, and in the next place to admit as associates all who wished to join them. It appeared to him that Englishmen needed more opportunities of social intercourse. It was a necessity planted by God in their nation. He rejoiced that they were assembled in close proximity to the free public library in this city, where they could meet together to read, to study, to amuse themselves, but they needed beyond that to speak about what they read in social intercourse. Man was not all eye nor all brain, but he had a voice, and God in His goodness had furnished him with unnumbered sympathies. It was a good thing to say to a man "Look here, here is a thing that will interest you," and they would take a double interest in what they read, because men who had read to one another welded together in the feeling of our common humanity, and the kindness which flowed from it. Thus, the object which they proposed in their institution was the development of the social in common with the intellectual. There was an old proverb, and he would refer to it, because proverbs were the concentrated wisdom of ages gathered up into the essence of a jelly, which said, "That all work and no play makes Jack a dull boy." That proverb was the illustration of a necessity of a union of that kind, not the direct stimulant of the brain alone, which may be too much stimulated, or the cultivation of the social element alone, but that they might have amusements in which men might engage in the hours of relaxation. There was one other thought he would express before he concluded. It was all very well for men to talk about intellectual improvements, but there was another consideration which could not be overlooked. They should remember that their bodily constitutions needed refection just as the brain needed relaxation, and therefore they must have their cup of tea or coffee sold at a low price. He, for one, entertained the opinion that whatever brought men together upon lawful and common ground was a great gain, and he also maintained that whatever narrowed the sympathies and bound man up in his class interests was evil in its tendency; and that, on the other hand, whatsoever brought men together for kindly intercourse tended to break down the partition between different classes of society, and was productive of the most beneficial results. He therefore rejoiced that he had come among them on that occasion to render his help to the scheme so lovingly and wisely devised by the committee who had undertaken its management."

SIR JOHN PAKINGTON, M.P., at the annual dinner of the Worcestershire Agricultural Society, spoke as follows on the proposed reconstruction of the navy, and on the tendency of agricultural societies :—

"He had no doubt that the British navy was at this moment as ready as it had ever been at any former period to do good service to the country if need be. His former official experience, however, had qualified him to speak on one subject connected with the navy which just now was attracting public attention in the newspapers—he meant the question of the policy of expending a large sum of money in building armour-covered ships. It had been his fortune and his duty, as a member of the late administration, to propose that they should adopt this invention in the navy, seeing that other nations were adopting it, and as they had reason to believe that the invention would be a most valuable one. It had been his duty to superintend and to weigh the experiments that had been made in connection with this invention, and the results had been that these armour-covered ships, although they might not be proof against every possible attack under every possible circumstance, were shown to be so superior to the ordinary wooden vessels as well to repay the extra cost. The late Government had built two of these armour-covered ships, the Warrior and the Black Prince; the present Government had ordered others; and he believed the British public desidered that the experiment should be well tested. With regard to agricultural societies he was of opinion that they were tending too much to speech-making. They were becoming very general; but one result of this was that a part of their produce was a large crop of speeches, and like other large crops, they varied a good deal in quality. He would not say that they contained a good deal of 'chaff;' but no doubt they were adapted to different markets. One of the rules of these societies was, that politics should be excluded from their discussions, but, unluckily, the practice was all the other way. He did not approve of this practice of introducing politics at these meetings He did not mean to say that there were no occasions on which subjects of a political nature might be introduced. He had before expressed his opinion at that table that the meaning of the rule was that party politics should be excluded. There were great political questions, such as the late rebellion in India, the famine in Ireland, the position of our army before Sebastopol, and such like subjects, which might fairly be discussed at these gatherings, as not involving any party question. He might find an illustration at the present day; they might congratulate thempeace and prosperity. We ought to be grateful that the kingdom is not torn asunder by combined or divided factions, nor tormented by those distressing anxieties which at this moment perplexed almost every other nation but our own. We were attached to the Sovereign and to the institutions under which we lived. We had minor differences among us, no doubt, but there was one great fact for which we could not be too thankful —that we were a people happy, prosperous, and contented, and while other nations were struggling for that liberty which we enjoyed, we were meeting together in these social parties to enjoy each other's society. The object which members of Parliament should have in view in attending these meetings, should not be to court constituencies, but to pay their respects to mother earth. His right hon. friend, Mr. Disraeli, had set a wise example in this respect in his own county of Bucks, where he had addressed an agricultural meeting without touching on politics; and he could wish that gentlemen who undertook the task of drawing up the lists of toasts on those occasions would not give the members of Parliament for the district so conspicuous a position on their lists. Their object at these meetings should be to disseminate agricultural knowledge.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93 to ⅛ both for Money and the 8th of November; Bank Stock, 231 to 230; Three per Cents. Reduced, 91⅜ to ⅝; New Three per Cents., 91¼ to ⅜; Thirty Years' Annuities expiring in April, 1885, 16¼; India Stock, 219½; Ditto Five per Cent. Stock, 1859, 103 to 102⅞; Ditto Four per Cent. Debentures, 1858, 96¼; Ditto 1852, 96⅛; Ditto Bonds, 6*s.* to 3*s.* dis.; Five and a Half per Cent. Enfaced Rupee Paper, 101¼; Exchequer Bills, 2*s.* pm., 2*s.* dis.—FOREIGN: Dutch Two and a Half per Cents., 64¾; Ditto Four per Cent. Certificates, 99⅞ to 99¾; New Granada Deferred, 6¼; Portuguese Three per Cents., 1856, 1857, and 1859, 44¾; Russian Four and a Half per Cents., 93¾; Sardinian Five per Cents., 85½; Spanish Three per Cents., for Acct., 49 to 48¾; Turkish Six per Cents., 1854, for Acct., 70½; Ditto for 1858, for Acct., 55¼ to ¾; Ditto Guaranteed Four per Cents., 101⅜.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,165,615	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	13,690,615
		Silver Bullion	—
	£28,165,615		£28,165,615

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,490,273
Rest	4,131,576	Other Securities	19,724,649
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	3,412,745	Notes	6,718,550
		Gold and Silver Coin ..	744,661
Other Deposits..	14,786,598		
Seven day and other bills	794,214		
	£36,678,133		£36,678,133

25th day of Oct., 1860.

M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS—T. BENNETT and E. WILLIAMS, of Moll Forge, Tipton, Staffordshire, Ironmasters — W. BOYCE, East Dereham, Norfolk, Printer, Stationer, and Bookseller—J. BROAD, 149 and 150 Drury Lane, Coach Ironmonger—F. COKER, Worcester, Builder and General Earthwork Contractor—H. A. T. FOWLER, F. E. T. FOWLER, J. STUBBS, and W. G. DUNT, 5 A, Exeter Street, Strand, Newspaper Proprietors, Printers, and Publishers—G. GEE, 31 B, Beckford Row, Walworth Road, Mercer and Hosier—A. HARRIS, Seven Oaks, Kent, Licensed Victualler and Innkeeper—J. HULLAH, St. Martin's Hall, Long Acre, and of 5, Langham Street, Portland Place, Bookseller—L. JACOBS, 124, High Street, Whitechapel, Shoe Manufacturer and Exporter—E. LEWIS, 18, Coleman Street, Lithographic Printer and Engraver—J. M'COLM, Manchester, Common Brewer—S. F. MARTYN, 25, Dowgate Hill, City, Wholesale Shoe Warehouseman—B. H. NICHOLAS, Fox Inn, Wilbarston, Northamptonshire, Innkeeper—T PARKES, Kinver, Staffordshire, Spade Manufacturer and Retail Brewer—W. PENFOLD, 4, Market Terrace, Caledonian Road, Smith and Gasfitter—T. POWLES, 24, Milk Street, Cheapside, and 77, Hackney Road, Hosier and Shirt Maker —B. C. RAWLES, 1, Apollo Buildings, East Street, Walworth, Boot and Shoe Manufacturer—J. H. RAW, High Street, Ware, Hertfordshire, Clothier—J. WALKER, Sunderland, Durham, Grocer and Flour Dealer—H. R. WATTS, 47, Blackman Street, Borough, Wine, Spirit, and Beer Merchant—R. WILLAN, Glossop, Derbyshire, Grocer and Flour Dealer.

SCOTCH SEQUESTRATIONS—D. ANDERSON, Campbeltown, Deceased —W. BATTRUM, Helensburg, Wright, Joiner, and Feuar—S. G. BRAMISH, Glasgow—J. GOWANS, Hawick, Watchmaker—T. LAUDER, Saint Andrews, Fife, Potato Merchant—T. M'INTOSH, Blairgowrie, Perthshire, Builder—W. M'LINTOCK, Glasgow, Cement Manufacturer—J. MILLER, Hardhill, Farmer—F. SUTHERLAND, Clyth, Caithness, Innkeeper — WILLIE and MILLAR, Edinburgh, Wine Merchants.

FRIDAY—BANKRUPTS—J. ADAMS, Nottingham, Builder—C. CORNEAL, Rochester, Kent, and Melbourne—J. CUBBON, Liverpool, Builder—R. EGAN, Bradford, Gunmaker—D. GREEN, Vauxhall, Potter—C. S. HARRISON, Glossop, Derbyshire, Grocer — W. K. M'Liver. Stonehouse, Devonshire, Draper—H. OSMOND, Sturminster, Newton Castle, Dorsetshire, Cheesemonger—E. STROUD, Thatcham, Berkshire, Butcher.

BANKRUPTCIES ANNULLED—R. MAYLIN, Blackfriars Road, Tea Dealer and Grocer—J. Z. WILLIAMS, Henrietta Street, Covent Garden, Builder.

SCOTCH SEQUESTRATIONS—J. CAMPBELL, Rothesay, Joiner—W. DINGWALL, Ramornie, Fifeshire, Factor—J JOHNSON and Co, Glasgow, Potters—J. JOHNSTON, Maxwelltown, Provision Merchant — A. M'FIE, Kilmarnock, Tanner—J. M'MURTRIE and Co, Glasgow, Shoemakers.

Metropolis and its Vicinity.

LOSS OF THE CONNAUGHT.—The steamer Connaught, of the Galway line, sprang a leak 150 miles off Boston on the 6th inst. She afterwards took fire, and was abandoned. She had 50 cabin and 417 steerage passengers, and a crew of 124 persons, the whole of whom, with the mails, were saved; but a sum of 10,000*l.* in gold, Government money, taken on board at St. John's, Newfoundland, was lost with the ship. The following is the report of Captain Leitch :—

"On Saturday, the 6th inst. at 8 p m., 150 miles east of Boston, the Connaught sprang a leak in the engine-room. We succeeded in keeping it below the fires until 1 o'clock on Sunday morning, when it commenced to gain rapidly, and finally extinguished the fires. At half-past 9 o'clock we discovered smoke from the aft smokehole. Notwithstanding the utmost exertions to prevent it, the fire gained rapidly, and very soon drove the cabin passengers on deck. As the water and fire gained so fast the boats were got ready to save the passengers. There was a heavy sea running, and the first boat that was lowered was stoved. Six other boats were then lowered successfully, and all of them filled with passengers.

About 12 o'clock the brig Minnie Scheffer, Captain Wilson, saw our signals of distress and bore down to us. At 7 p.m. we commenced the task of embarking the passengers on board the brig, that vessel having attached a hawser to the steamer. At this time the starboard side was very hot. By 9.30 p.m. all the passengers were placed safely on board the brig. The mails of the Connaught were all saved. Captain Leitch was the last person to leave the wreck. The weather was pleasant after leaving St. John's from Wednesday at 2 p.m. until Saturday, when it blew a very heavy gale from the south-west. The last seen of the steamer was at 2 a.m. on Monday, when she was one mass of flame. The passengers saved nothing except the clothes in which they stood. It is supposed that the fire had been smouldering for a long time from the rapid progress the flames made after it was discovered. Captain Leitch is unable to account for the leak which filled the vessel so rapidly against all the efforts of the pumps. The brig Minnie Scheffer arrived at Boston at one o'clock. She is about 300 tons burden, and the standing room on her was completely covered by the rescued passengers. The greatest credit is due to Captain Wilson, of the Minnie Scheffer, for his humane exertions in saving the passengers, even after his crew had expressed their unwillingness to return to the burning wreck. The Connaught was fallen in with on the evening of the 7th by the schooner Lamartine, which remained by her till 5.30 a.m. on the 8th, when she went down. 300 dollars had been subscribed at Boston for the sufferers of the Connaught, and the passengers had held a meeting and passed resolutions complimentary to Captain Leech Wilson, the officers and crew of the Minnie Scheffer, for their noble conduct."

Adulteration of Food Act.—At the meeting of the City Commissioners of Sewers on Tuesday, a letter from the Home Secretary was read approving the appointment of Dr. Letheby as the public analyst of food and drinks purchased within the City of London under the Adulteration of Food Prevention Act, which recently passed into a law. Deputy Lott asked whether it was the intention of the Court to take any further action under this excellent Act than the appointment of Dr. Letheby as the analyst, and whether they meant to give him any definite instructions as to the making of analyses under its authority. The Chairman said the Committee of General Purposes, to whom the subject was referred, reported strongly in favour of adopting the Act. The Court, upon that report, elected Dr. Letheby as the analyst, and empowered the committee to supply the necessary apparatus and to carry the Act into operation. Dr. Abraham said it was the duty of the Court to provide all the requisite machinery, and, having done that, and appointed a competent analyst, their functions under the statute would cease, and it would then remain with the public to avail themselves of the protection it was intended to afford, or to allow it to be a dead letter. Deputy Lott held that it rested with the Court, as the representative body of the citizens in this matter, to afford every facility for putting the Act in force, and if they did their duty in that respect, instead of merely looking passively on, the public, and especially the poor, might before long expect that the food and drink they bought had some claim to be considered genuine. The Chairman said he had no doubt that the committee for general purposes would do everything that was proper to carry out the Act.

St. George's-in-the-East.—The services on Sunday were marked by a total absence of disturbance, the principal parishioners having formed themselves into a committee to prevent a renewal of the rioting. A letter from the Bishop of London promising on his return to town to meet the vestry and confer with them on the best mode of preserving the tranquillity of the church, also tended to the re-establishment of order.

The Street Railways.—An active opposition has been organised in the parish of Marylebone with a view to prevent the introduction of tramways into certain streets of that parish. At the meeting of the vestry on Saturday the committee presented a second report recommending that Mr. Train be allowed to lay down a street railway from St. John's Wood to Oxford Street, as proposed in the application referred to them for consideration. Deputations from the inhabitants of Portman Street, Oxford Street, Wigmore Street, Dorset Place, and Baker Street, through which the proposed line is intended to pass, presented memorials in opposition to the plan; and the agents for the Duke of Portland and Lord Portman said that if the vestry gave leave for the construction of the railway, without an Act of Parliament, their lordships would take legal measures to prevent it. After a long discussion it was resolved to adjourn the debate for a few days. At the meeting of the City Commission of Sewers on Tuesday, a letter was read from Mr. Train, stating that, having introduced street railways into Birkenhead, and obtained permission to do the same in Manchester, Birmingham, and Victoria Street, London, he was desirous of completing arrangements for the perfect development of the system in the metropolis. With that view he applied for permission to lay down lines within the jurisdiction of the Commission, naming, among several other streets, Cheapside, Poultry, Aldgate High Street, Moorgate, Blackfriars Bridge, Chatham Place, Farringdon Street, Aldersgate Street, St. Paul's Churchyard, St. Martin's-le-Grand, Cannon Street, and Goswell Street. The rails, he added, which he should lay down at his own cost, would present no obstruction to traffic, and he was prepared to remove them at his own expense and to reinstate the road in the event of their being felt, after a trial, to be inconvenient to the public. After some discussion it was moved that the letter be referred to the General Purposes Committee to examine and report. An amendment was moved that Mr. Train be summoned before the Court to explain his plan and intentions. On a show of hands the amendment was carried.

Special Services for the Working Classes.—The united committee of Churchmen and Dissenters, who originated the system of preaching in theatres, commenced operations on Sunday last, when the following places were opened for Divine service:—Sadler's Wells, in Clerkenwell; the Victoria, in the New Cut, Lambeth; the Pavilion, in Whitechapel; and the Standard, in Shoreditch. At St. James's Hall, Piccadilly, two special services for the working classes were held on Sunday. No announcement has yet been made in reference to Exeter Hall. The services at St. Paul's are expected to commence on Advent Sunday, Nov. 2; and those at Westminster Abbey on the 6th Jan., the first Sunday of the new year. It appears from a report relating to the services in theatres that during the course instituted by the committee last season, 161 services were held, which were attended by upwards of 27,000 persons, at a cost of 1125*l.*, being at the rate of 1*d.* for each individual.

The Westminster Play.—It is announced that the Queen's scholars will play the "Trinummus" of Plautus about the second week in December.

Club for Working Men.—An undertaking of great usefulness has just been established in Clare Market by the Rev. C. M. Robins, the minister of Clare Market Chapel, with the liberal assistance of Miss Burdett Coutts. A large room which was formerly a dissenting chapel has been converted into a working man's club, containing reading rooms and smoking rooms well supplied with books, papers, chess, draughts, and other comforts; while an adjoining row of houses in the market, abutting upon Clement's Lane, has been converted to several philanthropic purposes, including a refuge for children and adults, for instruction and amusement. The members of the club, which already includes a large number of working men, have entire control over it, and the management of its affairs is totally in their hands.

Murder at Sea.—Mr. William Brookholding Webb, chief officer of the ship Brierly Hill, from Australia, now lying in the Victoria Dock, was brought up on remand before Mr. Selfe at the Thames Police Court, on Friday, charged with the wilful murder of William Brown, at sea, near the Island of Ascension, on the 6th August last. It appeared from the evidence that the water had become so bad and brackish that the crew could not drink it, and that they deputed deceased to ask the captain to touch at the Island of Ascension for a fresh supply. The captain refused to do so, whereupon deceased said that they should be obliged to tie the captain down, or words to that effect. The prisoner immediately went down to the cabin and brought up a large horse pistol, and having cocked it said "The first man that lays hands on the captain I will blow his brains out," at the same time presenting the pistol at deceased's breast. Deceased merely said "Will you?" upon which the prisoner deliberately shot the man, who fell dead at his feet. These facts were sworn to by three of the crew, and three others were in court ready to confirm them, though the entry made by the captain and mates in the log book was so drawn up as to make it appear that deceased was about to draw his knife when the shot was fired, and that the firing was accidental. Mr. Selfe after a long inquiry committed the prisoner for trial on the charge of Wilful Murder, and refused to accept bail. The Grand Jury, however, at the Central Criminal Court on Tuesday ignored the bill, and the prisoner was discharged.

The Public Health.—The Registrar-General's weekly report states that the deaths in London in the week ending Saturday, Oct. 20, were 1116. In the corresponding weeks of the 10 years 1850-59 the average number was 1020, which if raised proportionally to the increase of population will become 1122. The present return is therefore 6 below the average. During the week the births of 939 boys and 861 girls, in all 1800 children, were registered in London. In the 10 corresponding weeks of the years 1850-59, the average number was 1576.

Provincial.

Bath.—The carpenters' strike at Bath was brought to a close on Monday when the men resumed work. The employers have agreed to make an immediate advance of 1*s.* per week on the old rate of wages, to give another 1*s.* from the 1st of March, and a third 1*s.* from September next. The men are to leave work at 5 o'clock on Saturdays from March, and at 4 o'clock from September. For work executed at 3 miles from Bath, they will receive 4*d.* per day above the ordinary wages, and 6*d.* per day for work done at a distance of 6 miles. When at work in the country at a less distance than 3 miles, they are to proceed there in their employers' time, and to return in their own time. The employers have also expressed their readiness to assist the men in establishing reading-rooms and libraries, and in otherwise promoting their social well-being.

Bradford.—On Sunday night the wife of an attorney's clerk named John George Gowland, cut her own throat and those of her two children, one aged 4 and the other 2 years. Gowland on going home about 10 o'clock found the door locked and the house in darkness. He knocked several times before the door was opened, when he discovered his wife sitting on the bed-side with her throat cut, the bed covered with blood, and the children lying upon it with their throats cut. He called in the police and several surgeons, who found that the children were quite dead, and that their mother had inflicted such severe injuries on her windpipe that she was not likely to recover. She was immediately removed to the infirmary, and has since admitted to the Mayor that she cut the throats of the children and then her own. At the inquest on Tuesday it appeared that Gowland, who is a native of Sunderland, was receiving a guinea a week, and that his home was a wretched abode, consisting of one room with a stone floor and very little furniture. It also appeared that he was a man of drunken and disreputable habits, that he spent his earnings in dissipation, and had often left his family in a state bordering on starvation. He had recently had a child affiliated upon him, and there was no doubt that his wife had been excited by jealousy to commit the deed. The inquest was then adjourned till Tuesday, the 6th Nov., the object of the adjournment being to see whether the wife, who is now in great danger, will be likely to recover. A *post mortem* examination was ordered to be made of the body of the elder child. In the course of the inquest Gowland stated upon oath that he was not married to the mother of the children, but a document has since been found in his house purporting to be a certificate of marriage solemnised at St. Oswald, Durham, in 1855 between him and Margaret Sutton, and certified by Henry Thomas Fox as officiating minister. It was clear, therefore, that he had either committed perjury in swearing that the unfortunate woman was not his wife, or that this certificate was a forgery. He was therefore apprehended and brought before the magistrates on Wednesday, charged with having committed either perjury or forgery. After hearing the evidence the magistrates remanded the prisoner, who conducted himself with great levity, to Monday next, and refused to take bail.

Bristol.—The master builders of this city, anxious to terminate their prolonged disagreement with the operative masons, invited the men to select six of their body to meet a similar number of masters, jointly to arbitrate on the questions in dispute under the presidency of a chairman to be mutually agreed upon. This proposition was declined by the men unless they were allowed to appoint the chairman. To this request the masters could not accede, and having exhausted all the means of bringing about a fair and equitable solution of the differences between the men and themselves, the termination of the strike appears as far off as ever.

Canterbury.—An influential meeting of the hop planters of East Kent was held in this city on Saturday, Mr. W. Carter in the chair, at which it was resolved to present a memorial to the Chancellor of the Exchequer, praying that, in consequence of the almost total failure of the hop crop, the collection of the second moiety of the duty on the crop of 1859, due next month, be deferred for one year.

Crickhowell.—On Saturday a middle-aged woman residing at Gwyn Vechan, near this town, was shot by a young man, her own nephew, and died in a few minutes. Statements made by the nephew give the affair the aspect of murder, and not of accident, and he is in the custody of the police, awaiting the result of an inquest.

Derby.—On the evening of the 16th inst. a daring attempt at murder and robbery was committed on the person of Ann Wood, the wife of Charles Wood, labourer, residing near Heath, Top Church, Broughton, in this county. A tramp walked into the house, having a mask over his face. Seeing no one but the wife in the house, he demanded her money, and on her saying she had none, he slapped her in the face, and, kneeling on her stomach, drew out a clasp-knife and attempted to cut her throat. She raised her hand to prevent him, and received a severe wound upon it, and another across her breast; each from 3 to 4 inches in length. He then tore her pocket from her, and took out of it one half-sovereign, 6*s.* in silver, and 1½*d.* in copper. Her husband was at work a short distance off. The police are endeavouring to bring the offender to justice.

Huddersfield.—On Saturday evening Lord Brougham presided over a *soirée* in the Philosophical Hall, in celebration of the 20th anniversary of the Huddersfield Mechanics' Institute. His lordship addressed the meeting at great length, and afterwards distributed to 83 pupils the prizes which had been competed for by nearly 400 candidates, and were awarded for work done in the evening classes. The meeting was also addressed by Sir J. W. Ramsden, the Rev. Gervase Smith, Mr. Frank Crossley, M.P., Mr. G. A. Sala, Mr. Stansfield, M.P., Mr. Leatham, M.P., and Mr. F. Stuart Wortley.

Hull.—The great storm in the North Sea and the Baltic on the 3rd inst, in which the steam ship Arctic was totally lost on her passage from this port to St. Petersburg, has proved fatal, it is feared, to several other steamers and sailing ships from the North East coast. The Edinburgh, Moscow, Viscount Lambton, Pacific, and Thor have been missing since the gale; and information has been received of the loss of the brigs Phœdo and Valiant of North Shields, the Hendon of Sunderland, the Sir John Rennie of Blyth, and the Tyne ships Carlisle, Tiberias, Psido, and St. Lawrence.

Leeds.—Lord and Lady Palmerston, accompanied by the Right Hon. W. Cowper, arrived in this town on Wednesday evening. The Central Station was crowded with spectators, who received his lordship with great enthusiasm and repeated cheers. In answer to repeated calls for "a bit of a speech," and "just a word or two,"

his lordship went out on the platform and said:—"Gentlemen,—There is a very good old line—

"'Welcome the coming—speed the parting guest."

We are very much obliged for the kind welcome you have given us, and now I hope you will make a road for us to get away." This little speech excited great applause and laughter. An opening was immediately made to the carriage, and Lord and Lady Palmerston and Mr. Cowper then drove off to Kirkstall Grange, the seat of Mr. William Beckett, where they were received by a distinguished party. On Thursday, his Lordship had a conference in the Town Hall with deputations from the Town Councils and Chambers of Commerce of Leeds, Sheffield, Bradford, Huddersfield, Hull, and Batley, on the subject of the amendment and consolidation of the Bankruptcy Laws, when he expressed his belief that, next session, with the assistance of men of all sides, they will be able to carry a Bill which will be satisfactory to all parties. In the evening, his Lordship presided at the annual soirée of the Leeds Mechanics' Institution. The hall was crowded, and Lord Palmerston spoke at some length on educational subjects, pointing out the advantages of a more extended instruction in science and art among the middle and industrial classes. After the distribution of the prizes, medals, and certificates, resolutions were unanimously adopted in favour of erecting a new building for the Institution. The resolutions were moved and supported by Sir J. Kaye Shuttleworth, the Right Hon. W. Cowper, Sir John Ramsden, Mr. Baines, M.P.; Mr. Beecroft, M.P.; Mr. F. Crossley, Mr. M. Milnes, M.P., and others. Lord Palmerston was loudly cheered on entering and leaving the hall.

LIVERPOOL.—This town was last week the scene of a remarkable series of festivities in connection with the opening of the Free Library and Museum, erected and presented to the town by Mr. William Brown, late M.P. for South Lancashire, at a cost of about 40,000*l*. The proceedings commenced on Wednesday evening with a meeting of the working classes at the Amphitheatre, the Mayor of Liverpool in the chair, when Mr. Horsfall, M.P., and Mr. W. Rathbone spoke in acknowledgment of the gift, and Mr. T. Cave and Daniel Guile, a working man, presented to Mr. Brown a testimonial from the working classes, with an address stating that the testimonial consisted of "first, a silver shield, bearing upon it a view of that temple of civilisation which you so generously purpose handing over to your townsmen to-morrow; and secondly a clock, which, while it chronicles the progress of time, will, we feel assured, never indicate that hour in which the name of William Brown will cease to be held in reverential estimation." Mr. Brown, in acknowledging the compliment, spoke as follows:—

"I have had many complimentary addresses presented to me, but none that I had more gratification in receiving than one emanating from the industrial classes. It is unmistakeable evidence of your desire to avail yourselves of opportunities to improve and cultivate your minds. When we consider the object which has brought us together to-night, and see the number of distinguished noblemen and gentlemen who have come to assist at the ceremony of opening the Free Library and Museum, it is a most encouraging sign of the times. It shows the strong desire they have to promote by their presence every measure that will add to our happiness and our social position, which are greatly promoted by increased knowledge. We shall always find in well chosen books something that bears on our respective pursuits in life, which enables us, with advantage to ourselves, our families, and our country, to take a higher position in the social scale, which adds to our importance and our usefulness, and also to the value of our opinions. Every reflecting man must be aware that when his conduct is good we value and esteem him the more provided he has cultivated his mind, and can impart something to us that is useful. Idleness is the greatest misfortune that can befall any man. Our object in meeting is, as far as possible, to prevent this; to diffuse a taste for useful industry, and to put within the reach of every one intellectual food of the greatest value. The society of books never leads us into the haunts of dissipation, but elevates the mind and occupies our leisure moments to the greatest advantage. Libraries are competitors for customers with improperly-conducted public-houses. Let us see whether we cannot attract a good many of those who resort to such places to our shops. We hope you will influence your fellow-workmen to visit the Library and Museum. We promise them spacious apartments, well ventilated, comfortably warmed, well lighted, and handsomely furnished, and most intelligent and intellectual society, without cost. Among those silent friends—our books—there are works that will suit every taste and meet every requirement. It is most gratifying to see the demand progressively increasing for those of a higher class. We do not value a man in any rank of life for the fineness of his coat, but for his conduct, and his desire to cultivate those talents, as far as in his power, with which his Maker has blessed him, and who contributes all he can to the comfort of his family and his friends, not forgetting to give them good moral instruction. Many of you will recollect the ignorance and want of thought that prevailed among a large body of the working classes 30 or 40 years ago. When they had any dispute with their master about wages, or anything else, they thought they were revenging themselves and punishing him by breaking and destroying his machinery, forgetting that his capital and his works were the instruments with which they had to earn bread for themselves and their families. Far different is their conduct now. Education has made such progress that they are much more intelligent; they see that such suicidal conduct would be as bad as the carpenter destroying the tools by which he lives. It is now pretty well understood that the more we improve our machinery the more we increase our customers throughout the world, and the more hands are wanted to make articles to meet the demand. We do not give the present generation of working men sufficient credit for their intelligence. They clearly see that accumulated capital is necessary to give them regular employment, and that if by any means that increase of capital was prevented they would be the greatest sufferers. Hence the Volunteer movement now going forward is necessary to guard against invasion, which would be most disastrous to both master and man. It would be a very great misfortune if these two parties were independent of each other or of other nations. It would be a very great grievance if I were compelled to be independent of my bootmaker, and I think he would be as great a sufferer without my custom. Mutual dependence of man on man and nation is wisely ordained by Providence. I wish we were more depending on France and France on us. Our mutual material interests might have relieved us from the anxiety we now feel as to their relative position and ours. Just consider the effect of an invasion of our soil from any quarter. None has more to fear from it than the industrial artisan, for our commerce would be paralysed, all our improvements suspended, and hundreds of thousands of workmen thrown out of employment without wages, on which the bread of their families and themselves depends. I hope the good sense of those whom I address, and others, will not leave the country subject to the caprice, whim, or ambition of any man, but that they will volunteer their services to prevent such a dreadful calamity as an invasion would produce. Our library will inform you how despots govern their people, and will teach us the blessings we enjoy under a constitutional monarchy. If we are well armed no one dare desecrate our soil by putting a hostile foot on it. Knowledge is power, and the more we cultivate our minds the better we are prepared to meet any contingency. If we suffered ourselves to be brought under the rule of any continental despot, we should lose the freedom of the press, our constitution, our liberties, and our laws. It rests with ourselves to protect and preserve those inestimable advantages, and continue to be ruled by the great council of the nation and our virtuous and noble Queen."

Lord Brougham, the Hon. Algernon Egerton, Sir John Bowring, and John Priest, a working man, afterwards delivered addresses on the advantages of free libraries. On Thursday the formal ceremony of opening the Library and Museum took place. A procession of a mixed civil and military character was formed at the Town Hall, and marched thence to the Library, where Mr. Brown at the entrance of the building formally handed over the Library to the Mayor, on behalf of the town. The Mayor, in acknowledgment, presented a gold medal, as a suitable memorial, to Mr. Brown; and the meeting was also addressed by Lord Brougham, the Bishop of Chester, Mr. James Brown, of New York, Rev. Dr. Raffles, Mr. J. A. Picton, Mr. Ewart, M.P.; Sir R. Peel, M.P.; and other gentlemen. In the evening there was a grand banquet at St. George's Hall, which was attended by about 850 guests, the galleries being set apart for those who attended as spectators. Among those who took part in the proceedings were the Bishop of Chester, the Earl of Huntingdon, Lord Stanley, Lord Brougham, Hon. Algernon Egerton, M.P.; Sir J. Kay Shuttleworth, Bart., Sir J. Emerson Tennent, Sir John Bowring, the Mayors of Chester, Lancaster, Manchester, and Salford; Mr. Horsfall, M.P.; Mr. Ewart, M.P.; and Mr. Bazley, M.P. In the evening there were displays of fireworks for the south end of the town, near Parliament Fields; for the north end, at the top of Scotland Road; and for the east end at the space at the top of Kensington Reservoir. Bands of music were stationed at the localities selected for the fireworks. On Friday the principal stranger guests shared in the hospitalities of Mr. Brown, at his mansion, Richmond Hill; and in the evening the Mayor gave a soirée at the Town Hall, for which upwards of 1100 invitations were issued.

NOTTINGHAM.—About a fortnight since Mr. Heddington, chief constable, arrived in this town from Plymouth, having in his custody Mr. Robert White, a lace manufacturer, who with his brother Joseph carried on business at Nottingham as White, Brothers. On the 23d July last their manufactory was burnt down under suspicious circumstances, the cashbook not having been destroyed with the others. Their claim for insurance (3700*l*.) was, however, substantiated; but before its receipt their creditors entered an attachment, and thus secured it for themselves. Subsequently, some forged bills having come to maturity, the brothers decamped, and Mr. Heddington went in pursuit through Llandudno, North Wales, to Swansea and Ilfracombe, where he took the lodgings just vacated by the escaping parties, and there obtained from a closet some scraps of paper and envelopes, which being joined with much patience assured him, for the first time, that he was on the right track. He followed through Barnstaple to Exeter, and there lost all further information. He next obtained intelligence of Robert White at Lisbon, and found that he had travelled thence to the coast of France, and crossed the Channel on Thursday week, just in time to get on board the mail steamship Cambria, bound to Plymouth and the Cape of Good Hope. All the berths were occupied, but by a fee of 10*l*. to one of the officers Robert White obtained the requisite accommodation under the name of Seymour, his brother Joseph and his wife passing as Mr. and Mrs. Webb. On the morning of the day on which the Cambria arrived in the Sound Mr. Heddington, accompanied by a detective sergeant, arrived at Plymouth, and put himself in communication with the superintendent of police. Wanting to make some purchases ashore, the Whites landed, and when at the post-office Robert was taken by Mr. Heddington, who charged him before the Mayor with having forged an acceptance for 22*l*. A remand took place, and in the meantime Mr. Heddington secured four chests, addressed "Robert Seymour, Esq." One contained apparel; the other three contained a quantity of rich lace, with a valuable assortment of jewellery, including a diamond ring worth 100*l*. On his arrival at Nottingham in custody the prisoner was brought before the Mayor and magistrates and remanded for a few days. In the meantime Mr. John Davis, traveller in the employ of White Brothers, had been apprehended in London, and charged with being concerned in the extensive forgeries with which the Whites are charged. Both prisoners are still under remand, the Mayor expressing his opinion that a gigantic system of fraud had been discovered. On Thursday Mr. William Tait, jeweller and bill-discounter, was committed by the mayor and magistrates for trial on the charge of uttering a forged bill.

READING.—The local papers state that Mr. Walter, M.P., is about to pull down the residence at Bearwood, and to build on its site a mansion of the first class, from a design by Mr. Burn, the architect of London. It is expected that the work will be commenced early next spring.

TRECASTLE.—Mr. David Price, farmer, of Cwmdyhesfa, Brecknockshire, was murdered on the night of the 17th inst, near this town. It appears that on that day there was a sale by auction at a farm in the parish of Llywel, called Byll-fa, at which deceased attended. He there met some of his neighbours with whom he had been on bad terms for some years being known as a violent and quarrelsome man, and particularly unpopular in the neighbourhood. In the course of the afternoon high words were exchanged between them, after which he started for his home, about two miles distant. Between 8 and 9 that evening cries of "Murder" were heard by a farmer living at Ysgod-yreddfin, but the cries were disregarded. In the course of the night Mrs. Price, feeling anxious about her husband, sent her son to look for him, and between 3 and 4 in the morning his body was discovered quite dead in a field not far from his own place. Two ribs had been broken, and the ends had passed into the lungs. Some other ribs had been loosened from the cartilage, a knife or other sharp weapon had been thrust quite through the fleshy part of the thigh, and several cuts appeared on the scalp. The police were soon on the track, and close to the corpse discovered a watchchain, not belonging to the murdered man, and which can it is said be identified. Two young farmers who had last been seen in his company have been taken into custody, and a coroner's inquest opened on Saturday has been adjourned to the 31st inst. The evidence hitherto obtained has been of a scanty nature, there being great reluctance in the vicinity to give any information. The deceased was 78 years old, and his murder has caused great excitement throughout the whole district.

WORCESTER.—The accounts of the late Festival of the Three Choirs, instead of the usual deficit, show the unprecedented result of a balance of 66*l*. 5*s*. 4*d*. in hand after defraying all expenses. This sum will be invested in behalf of the charity for the relief of the widows and orphans of the clergy, and is quite independent of the collections made daily during the festival at the doors of the cathedral, which, as already announced, amounted this year to the large sum of 1214*l*.

Ireland.

THE PAPAL BRIGADE.—The *Freeman* announces that it is the intention of Government to bring home the surviving members of the brigade, but the ultramontane journals indignantly insist on their refusal of any government assistance, and state that 500 are already on their way home with the aid of the subscriptions raised in Ireland for their relief. It appears from official returns published in the Italian papers that the losses of the brigade in the last engagements with the Sardinians was three killed and five wounded. A solemn high mass for the repose of the souls of those who were killed was celebrated on Friday in the metropolitan church. Dr. Cullen preached on the occasion, and in the course of his address made the following remarks:—

"The late events in Italy are only one scene in the long struggle carried on from the beginning of the world between virtue and vice, light and darkness, heaven and hell. The great ostensible leader on the one side is the King of Sardinia, who, however, is only acting the part of others as culpable as himself. Having persecuted virtue and justice for many years in his own States, having banished or imprisoned many men distinguished for their piety and learning, having confiscated the property of manasteries and convents, and trampled on the rights of the Church, he has now added to his iniquity by openly assailing, in the most treacherous manner, the common Father of the Faithful. The great auxiliary of Victor Emmanuel, his very right hand, is the Dictator of Naples,—a man who can only be classed among pirates and freebooters. Why he is so praised by the British press—why such sums of money are raised for him in England—why so many English adventurers are embarking in his cause, it would be difficult to understand were it not known that the Dictator is pandering to their bigotry and their hatred of Catholicity—that he has shown his tendencies to Protestantism by sending his son to be educated a Protestant by an apostate in England, and that everywhere he has manifested a decided hatred of the Papacy, the Catholic priesthood, and the Catholic Church. The principles advocated by these unhappy men are spoliation, violence, bribery, corruption, and contempt for every idea of right and justice. If those principles were to have a final triumph, no property would be safe; every successful robber would be justified in retaining stolen goods: no State would be secure against a powerful neighbour, no Government protected against internal treachery and bribery; the wildest revolutionary doctrines and the most pernicious principles of Socialism and Communism would prevail. The Pontiffs have often been in exile and chains. Many of them have died upon the scaffold, but their authority has never died—never been destroyed. Even in the present century a Pius VII. was dragged from his throne, his States were annexed to France by the ambitious uncle of the present Emperor. The same scenes were then enacted which we now witness, and heresy and infidelity shouted with exultation that the Papacy was at an end. What was the result? The Pope returned in triumph to Rome, and reacquired all his territory. Napoleon I. was sent to expiate his offences on a barren rock in a distant ocean. The same will now happen, sooner or later—contempt for all law, human and divine, anarchy, perfidy, violence may prevail for a while against the Apostolic See: but in the end the Church and her Supreme Pastor will triumph."

THE POPE AND THE EMPEROR.—The *Morning News*, the organ of Dr. Cullen and the Ultramontane party, publishes a letter from a resident at Rome, in which the

Emperor Napoleon is denounced as the deceiver of the Pope, and is described as a "devil incarnate," the "spirit of lies," a "monster," a "hypocrite," a "crowned canaille," an "infernal spirit," and other terms of the like character. The letter concludes by saying :—

"The Holy Father wrote last week to Bonaparte, asking him to state distinctly, and without the usual ambiguous phrases, if he wished to protect or not the temporal power of the Holy See, and not merely the person of the Pope, which, he said, had no need of the protection of the Emperor, since it would be quite as much respected by Garibaldi or Victor Emmanuel as by Bonaparte. The reply was worthy of the crowned *canaille*. He says that he regrets exceedingly the conduct of Piedmont; but, having recognised the principle of non-intervention, he could do nothing in favour of the Holy See. However, he would triple the garrison of Rome if the Pope required it. This was but adding a new insult to so many others heaped upon the sacred head of the Sovereign Pontiff by this infernal spirit."

MURDER OF AN ALDERMAN IN CLARE.—On Monday night Alderman Sheehy, a wealthy and respected citizen of Limerick, who had, unfortunately for himself, become possessed of considerable landed property in the adjacent county of Clare, was murdered at Feakle, his residence near Tulla, in that county. His body was found terribly mangled, his head was cut off, and the house afterwards set fire to and burnt. The cause assigned for the murder is that the Alderman had recently served ejectments on certain of his tenants. An inquest was held on Wednesday but no evidence was adduced calculated to throw further light on the tragical occurrence, and the jury returned a verdict of Wilful Murder against some person or persons unknown. Six persons have been arrested on suspicion.

Railways.

THE GAUGES.—The ancient battle of the gauges seems to have terminated in the entire surrender of the broad gauge to the narrow, the Directors of the Great Western having resolved to apply to Parliament for power to raise money to enable them to lay down the narrow gauge between Reading and Paddington, which will complete this gauge on their line from the North to London. The company ask for powers to borrow a million; half of which they will require for laying the rails, rebuilding Reading Station, and providing narrow gauge plant. A meeting of shareholders to authorise this application is called for the 29th November.

REGENT'S CANAL LINE.—A special meeting of the proprietors of the Regent's Canal Company is called for the 14th Nov., to consider the expediency of applying to Parliament in the ensuing session for powers to construct a railway in conjunction with the canal, from the neighbourhood of Maiden Lane to Limehouse, and to enlarge and improve the Limehouse Dock.

SALISBURY AND WIMBORNE.—An influential meeting was held on Saturday at the Court House, Salisbury, the Earl of Shaftesbury in the chair, at which it was resolved to take the necessary steps for the construction of a narrow gauge line to connect Salisbury with Wimborne, Poole, and the southern parts of Dorset, traversing the valley of the Avon near Downton and Fordingbridge, and uniting with the South-Western Railway at West Moor, on the east side of Wimborne.

COLLISION ON THE NORTH-WESTERN.—On Monday about noon a passenger train from Macclesfield to Manchester ran into a train of luggage waggons standing at the Ardwick station. The collision was severe, the rear carriage of the luggage train being smashed to pieces, and the engine of the passenger train thrown off the line. About 20 passengers were injured, including Mr. John Brindle, of Kingsley, director of the Midland line; Mrs. Oldham, Macclesfield; Mr. T. Longstaff, Congleton; Mr. J. Barton, Accrington; Mr. J. Wood, Barton; Miss Burgess, Edgeley; and Mrs. Mary Cowen, of Stockport, who was taken to the Manchester Infirmary, where fears are entertained that she has sustained an injury of the spine.

Sporting.

NEWMARKET HOUGHTON MEETING.

MONDAY.—*Handicap Plate.* Mr. C. Naylor's Summerside beat Tight-fit, Parmesan, Furious, and 16 others.—*Sweeps.* Mr. Nelson's King of the Forest beat Emily, Aubrey, and 4 others.—*A Maiden Plate.* Sir J. Hawley's Polyolbion beat Duchess, Gauntlet, and 13 others.—*Match.* Mr. R. Ten Broeck's Umpire beat Tom Bowline.—*Selling Handicap.* Mr. T. Stephenson's c. beat Weatherproof, Lord Chesterfield's f., and 4 others.—*Match.* Lord Glasgow's f. beat Eda.—*Sweeps.* Count F. de Lagrange's Negro beat Delusion, Miss Digby, and Winkfield.—*Match.* Mr. Whittaker's White Rose beat Bayonet.—The *Criterion Stakes.* Mr. Henry's Klarikoff beat Barb Pigeon, Folkestone, and 6 others.

TUESDAY.—*Fifty Pounds.* Colonel Martyn's Somersault beat Weatherwitch, Mr. Jackson's c., and 13 others.—*All-Aged Stakes.* Mr. Alexander's Thunderbolt beat Brown Duchess, Man Friday, and Rover.—*Fifty Pound Plate.* Baron de Niviere's Pretendant beat Twilight, Crater, and 7 others.—*Selling Handicap Sweeps.* Mr. Eastwood's Tommy Noble beat Gwellyan and Alice Jane.—*Handicap Sweeps.* Mr. Merry's Trovatore beat Cantab, The Quaker, and 4 others.—*Match.* Mr. T. Hughes's Ladylike beat Desdemona.—*Optional Selling Stakes.* Lord Stamford's Sacerdos beat Bewitching Fanny, Epaulette, and 5 others.—*Sweeps.* Mr. Bell's Rosalind beat Blue Ruin, Massa, Oliver, Oreus, and Tuccio.—*Sweeps.* Mr. Merry's Russley walked over.—*Cambridgeshire Stakes.* Mr. Swindell's Weatherbound beat Mdlle. de Chantilly, Heiress, and 26 others.—*Sweeps.* Mr. R. Ten Broeck's Pomona beat Woman in Red and 3 others.

WEDNESDAY.—*A Free Handicap.* Mr. S. Jacob's Amsterdam beat Crater, Precursor, and 4 others.—*Sweeps.* Mr. Nelson's King of the Forest beat Polyolbion, Miss Fanny, Fravola, and Bravo.—*Subscription Plate.* Mr. W. Day's Isthmian beat Mantrap, Brother to Riseber, and 8 others.—*Sweeps.* Mr. R. H. Nevill's f. beat Orcus and British Grenadier.—*Handicap Sweeps.* Mr. Mellon's Sporting Life beat Longshot, Little Lady, and 11 others.—*Sweeps.* Mr. Henry's Dr. Nichol beat Bayonet, Bayard, and 5 others.—*Sweeps.* Duke of Bedford's Hesper beat Parasite.—*Fifty Pound Plate.* Mr. G. Bryan's Faultless beat M. Philippe, Lanchester, and 5 others.—*Selling Handicap Sweeps.* Mr. Whittaker's White Rose beat Doeskin, Tommy Noble, and 4 others.—*Optional Selling Plate.* Mr. R. Ten Broeck's Pedlar beat Ladybird, Miss Digby, and Ambush.

THURSDAY.—*Subscription Handicap Plate.* Lord W. Powlett's Zaretan beat Simla, Pitman, and 8 others.—*Free Handicap Sweeps.* Lord Zetland's Lanchester beat Ben Webster, Sir William, and 3 others.—*Renewal of the Glasgow Stakes.* Mr. Bowes's Klarikoff beat Asteroid and Will-o'-the-Wisp.—*Free Handicap.* Mr. Henry's Lupellus beat Adulation, Twilight, and 8 others.—*Handicap Sweeps.* Mr. Barnes's Oberon beat Caller Ou, Voution, and 8 others.—*Handicap Sweeps.* Mr. Merry's Lord of the Manor beat Winton, Stampedo, and 14 others.—*Handicap Plate.* Mr. Barber's Ellen beat Baron Munchausen, Emily, Doubloon, and 6 others.—*Handicap Sweeps.* Mr. S. Jacob's Atropia beat Atherstone, Black Diamond, and 9 others.—*Sweeps.* Lord Stamford's Walk on walked over.—*Sweepstakes.* Mr. Henry's Dr. Nichol beat Sacerdos, Stitch-in-Time, and 3 others.—*Match.* Lord Ailesbury's Cantine beat Lord Glasgow's c.—*Optional Selling Plate.* Mr. C. Searle's Gentle beat Boabdil, and Zingari.

FRIDAY.—(By Electric Telegraph.)—*Audley End Stakes.* Pretendant beat Feodorowna and Orlanda.—*Handicap Sweeps.* Nutbush beat Little Lady, Mousetrap, and 13 others.—*Handicap Sweeps.* Audrey beat Angelo and 8 others.—*Sweeps.* Sweet Hawthorn beat Elborus and Imaus.—*Sweeps.* Lord of the Manor beat Man Friday, King of the Forest, and 3 others.—*Free Handicap.* Amsterdam beat The Speaker, Niger, and 2 others.—*Second Class Nursery Stakes.* Henham Lass beat Caricature filly, Rapture, and 11 others.—*First Class Nursery Stakes.* Prince Plausible beat Isthmian, Miss Dunstable, and 10 others.—*Sweeps.* Pomona beat Polyolbion and 6 others.—*Optional Selling Plate.* The Gentle beat Maybell filly, Norman, and 12 others.—*Sweeps.* Tommy Noble beat Blue Ruin and 3 others.—*Handicap Sweeps.* First Lord beat Gladiolus, Lady Trespass, and 7 others.—100*l.* *Handicap Plate.* Parmesan beat 8 others.

Law.

CENTRAL CRIMINAL COURT.—*The Stepney Murder.*—The trial of *George Mullins*, 58, a plasterer, for the wilful murder of Mrs. Mary Emsley, at 9, Grove Road, Bethnal Green, commenced at this Court on Thursday before the Lord Chief Baron and Baron Martin. The prisoner pleaded *Not Guilty* to the charge in a firm, clear voice. Mr. Serjeant Parry stated the case for the prosecution, and called the numerous witnesses who were examined before the coroner and police magistrate to prove the facts already familiar to our readers. This evidence occupied the whole day, and completed the case for the prosecution. Their lordships then adjourned the trial to yesterday morning, when Mr. Best addressed the Court for the defence, and called the sons and a daughter of the prisoner and another witness to prove an *alibi*. Serjeant Parry then replied on the whole case, contending that the witnesses for the prisoner had contradicted themselves and each other, and that nothing had been adduced to shake the evidence for the prosecution. The Lord Chief Baron then summed up at half-past 2 o'clock, and having read over the whole of the evidence and commented most carefully thereon, concluded his address at 12 minutes past 5 o'clock. The jury then retired to consider their verdict, and returned into Court at 20 minutes past six with a verdict of *Guilty*. The prisoner then addressed the Court, and thanked the judge, the jury, and the counsel, declaring that he was innocent, as he was not at Stepney at the time of the murder. The Lord Chief Baron put on the black cap, and passed sentence of *Death* in the usual form, expressing his entire concurrence in the verdict.

Obituary.

THE DUKE OF RICHMOND, K.G., died of dropsy on Sunday afternoon, at the family mansion in Portland Place, after a long illness. The deceased Charles Gordon Lennox, Duke of Richmond, Earl of March, and Baron of Settrington, in the Peerage of England; Duke of Lennox, Earl of Darnley, and Baron Methuen of Torbolton, in the Peerage of Scotland; and also Duke d'Aubigny in the Peerage of France, was the eldest son of the fourth Duke by the eldest daughter of the fourth Duke of Gordon. He was born in Whitehall Gardens, in 1791, and was therefore in his 70th year. He married in 1817, Lady Caroline Paget, eldest daughter of the late Marquis of Anglesea, by whom, who survives, his Grace leaves the Earl of March, M.P. for West Sussex (now Duke of Richmond); Lord Henry Gordon Lennox, M.P. for Chichester; Lord Alexander Gordon Lennox, Lord George Gordon Lennox, M.P. for Lymington; Lady Caroline Amelia, married to the Earl of Bessborough; Lady Augusta Catherine, married to Prince Edward of Saxe Weimar; and Lady Cecilia Catherine, married to Lord Bingham. The late Duke succeeded to the dukedom in 1819, on the death of his father. At an early age he entered the army and served under the Duke of Wellington throughout the Peninsular war, and was present at Busaco, Fuentes d'Onor, Ciudad Rodrigo, Badajoz, Salamanca, Vittoria, Pyrenees, and Orthes, where he was severely wounded by a musket ball, which was never extracted. He was also present at the battle of Waterloo. For his services he received the war medal and eight clasps. His Grace was, with the exception of the Marquis of Exeter, the senior Knight of the Garter; Lord-Lieutenant and Custos Rotulorum of Sussex; Vice-Admiral of the coast of Sussex; Colonel of the Artillery and Light Infantry battalions of the Sussex Militia; Aide-de-Camp to the Queen; High Steward of Chichester; Chancellor of Marischal College, Aberdeen, and Hereditary Constable of Inverness Castle. He was one of the founders of the Royal Agricultural Society, of which he was a trustee, and was also a warm supporter of the Turf, the annual races at Goodwood Park affording scope for the display of his generous hospitality.

LADY DOWNES died on the 18th inst. in Grafton Street. She was the daughter of Mr. James Buchanan of Buchanan, and was born in 1799. She married in 1813, Mr. John Willis Fleming, of Stoneham Park, Southampton, who was M.P. for Hants from 1820 to 1831, and for South Hants from 1835 to 1841. He died at Athens in 1844; and in 1846, his widow married General the Right Hon. Lord Downes, K.C.B., of Aghanville, King's County, a representative peer of Ireland, and colonel of the 54th Regiment. By the noble lord, who survives her, she leaves no issue, but by the late Mr. Fleming she had a large family. Her eldest son, Mr. John Willis Fleming, of Stoneham, married, in 1840, Lady Catherine Cochrane, only daughter of Admiral the Earl of Dundonald, G.C.B.

LADY SOUTHAMPTON died at Whittlebury Lodge, Northamptonshire, on Tuesday night, after a lingering illness. She was the only daughter of the Hon. Henry Fitzroy Stanhope, second son of the second Earl of Harrington, and was cousin of the present Earl. Her ladyship married Lord Southampton in 1826, and leaves no issue.

BIRTHS.—On the 14th inst, at Brussels, the Princess THEOBALD DE VISMES ET DE PONTHIEN, of a daughter—14th inst, at Castleton, Monmouthshire, the Hon. Lady WALKER, of a son—11th inst, at St. Leonard's Forest, near Horsham, the Hon. Mrs. KEITH FALCONER, of a son—18th inst, at Southsea, the wife of Lieutenant-Colonel WILLIAM STUART, M.P., of Kempston, Beds, of a son and heir—23d inst, at Canwick Hall, near Lincoln, the wife of Major WALDO SIBTHORP, M.P., of a son—18th inst, the wife of EDWARD SOLLY, Esq., F.R.S., of Holme Court, Isleworth, of a daughter—17th inst, at Dadnor, Herefordshire, the wife of ARTHUR ARMITAGE, Esq., of a son.

MARRIAGES.—On the 16th, at Stillorgan, Ireland, the Hon. PERCY WYNDHAM, second son of Lord Leconfield, to MADELINE, daughter of the late Sir GREY CAMPBELL, Bart.—16th inst, at the British Embassy in Paris, the Right Hon. Sir WILLIAM MEREDITH SOMERVILLE, Bart., M.P., to MARIA GEORGINA ELIZABETH, only daughter of HERBERT GEORGE JONES, Esq., Serjeant-at-Law—20th inst, at Inchmarlo, Kincardineshire, FRANCIS BOYD OUTRAM, Esq., of the Bengal Civil Service, only son of Lieut.-Gen. Sir James Outram, Bart., G.C.B., to JANE ANNE, eldest daughter of PATRICK DAVIDSON, Esq., of Inchmarlo—23d inst, at the British Embassy, Turin, Captain RICHARD NEWSHAM PEDDER, 10th Hussars, eldest son of Edward Pedder Esq., Ashton Park, Lancashire, to MARY ELIZABETH, eldest daughter of Sir WILLIAM HENRY FEILDEN, Bart., Feniscowles, Lancashire—20th inst, at St. John Lee, Lieutenant-Colonel FREDERIC GREEN WILKINSON, 42d Royal Highlanders, to ANNIE, eldest daughter of WILLIAM CUTHBERT, Esq., of Beaufront, Northumberland—18th inst, at Didlington Park, Norfolk, the Rev. CHARLES LAWRENCE, of Tolleshunt Knights Rectory, in the county of Essex, to FLORENCE MARY, youngest daughter of the late WM. GEORGE T. TYSSEN AMHURST, of Didlington Park.

DEATHS.—On the 22d inst, at 5, Osnaburgh Terrace, Regent's Park, MARY ANN, wife of the Hon. W. E. COCHRANE, late Major 15th Hussars, aged 64—16th inst, at Boulogne, Lady KINNIER MACDONALD, widow of the late Sir John Kinnier Macdonald, of Sands—15th ult, at Ootacamund, Madras, after a few days' illness, of inflammation, consequent upon an attack of cholera, FREDERICK RICHARD CLAYTON-EAST, Esq., Captain of the 8th Madras Cavalry, youngest son of the late Sir E. Clayton-East, Bart., of Hall Place, Berks, aged 38—20th inst, at Kensington, ANNE, widow of the late T. B. BINGLEY, Esq., Bengal Horse Artillery, and eldest daughter of the late Major-General Sir John Horsford, K.C.B., Bengal Artillery—18th inst, after a short illness, at Palermo, on board her Majesty's ship Cressy, GILBERT H. T. ELIOTT, midshipman, son of Rear-Admiral Russell Eliott, aged 18½ years—17th inst, at the Vicarage, Dunsford, ANNA MARIA, widow of the late BALDWIN FULFORD, Esq., of Fulford, Devonshire, age 80—17th inst, at her residence, 35, St. Giles's, Oxford, CATHERINE, relict of the late ANTHONY GRAYSON, D.D., late Principal of St. Edmund Hall—21st inst, the Rev. HENRY SOAMES, M.A., Rector of Stapleford Tawney and of Shelley, Essex, and Chancellor of St. Paul's Cathedral, aged 76—9th inst, at Heminborough, after a lingering illness, the Rev. JOHN ION, M.A., for 35 years Rector of Halsham and Vicar of Hemingborough, Yorkshire, and a magistrate for the East Riding, aged 71—24th inst, at Edinburgh, Mr. EDMUND GLOVER, eldest son of the late celebrated actress, Mrs. Glover, and for some years past Manager of the Theatre Royal, Glasgow.

Markets.

COVENT GARDEN, Oct. 27.

For hothouse Grapes there is a fair demand, and but a limited supply. Pine Apples have been in request this last week, and larger prices have been obtained for them. In Pears no alteration has taken place since our last report; they consist chiefly of Duchesse d'Angoulême, Louise Bonne, Marie Louise, Gansel's Bergamot, and some inferior varieties. Peaches, Nectarines, and Plums may yet be obtained. Oranges are 3s. a dozen. Good Filberts may be had at from 9d. to 1s. per pound. Cabbages, Beans, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 10s. per cwt. Cucumbers abundant. Cut flowers chiefly consist of Orchids, Gardenias, Kalosanths, Dahlias, Violets, Mignonette, China Asters, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 6s to 8s	Plums, p. ½ sieve, 3s to 4s 6d
Grapes, per lb., 3s to 6s	Pears, per doz., 1s to 3s
Peaches, per doz., 6s to 9s	Apples, per doz., 6d to 1s 6d
Nectarines, do., 2s to 6s	Oranges, per 100, 10s to 20s
Green Figs, per doz., 3s to 4s	Lemons, per 100, 10s to 15s
Melons, each, 2s to 4s	

VEGETABLES.

French Beans, per quartn., 9d to 1s	Beet, per doz., 1s 6d to 2s
Cauliflowers, each, 4d to 6d	Celery, p. bundle, 1s 6d to 1s 9d
Greens, per dozen, 2s 6d to 3s	Onions, p. ½ sieve, 1s 6d to 2s 6d
Cabbages, do., 1s to 2s	Tomatoes, per doz., 4s to 6s
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 9d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 2s
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 6d to 1s	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
	Savory, per bunch, 2d to 4d

COAL MARKET.—Oct. 24.

Bates' West Hartley, 16s.; Buddle's West Hartley, 16s. 9d.; Davison's West Hartley, 16s. 9d.; Holywell, 17s.; Howard's West Hartley, 16s. 9d.; Tanfield Moor Butes, 14s. 3d.; Wylam, 17s. 6d.; Walls End Acorn Close, 19s. 6d.; Walls End Eden, 19s. 6d.; Walls End Bell, 18s. 9d.; Walls End Braddyl's Hetton, 20s. 3d.; Walls End Framwellgate, 19s. 6d.; Walls End Haswell, 21s. 3d.; Walls End Hetton, 21s. 3d; Walls End Hetton Lyons, 19s.; Walls End Cassop, 20s.; Walls End Hartlepool, 20s. 6d.; Walls End North Hartlepool, 16s. 6d.; Walls End South Hartlepool, 19s. 9d.; Walls End West Hetton, 19s. 6d.; Walls End Whitworth, 16s. 6d.; Walls End Adelaide Tees, 20s. 6d.—72 ships at market.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Oct. 25.

Prime Meadow Hay	75s	to 84s	Clover	90s	to 120s
Superior do. (old) ..	95	115	New Clover	—	—
Inferior do.	50	60	Old second cut ..	80	100
New do.	—	—	Straw	30	38
Rowen	40	50			

DAVIS & Co

CUMBERLAND MARKET, THURSDAY, Oct. 25.

Sup. Meadow Hay ..	120s	to 130s	Inferior Clover ..	80s	112s
Inferior do.	65	110	New do.	—	—
New do.	—	—	Straw	42	48
Superior Clover ..	120	128			

JOSHUA BAMER.

WHITECHAPEL, THURSDAY, Oct. 25.

Fine old Hay	100s	to 115s	Fine old Clover ..	115s	to 126s
Inferior do.	50	90	Inferior do	80	110
Prime New Hay ..	—	—	Fine 2d cut	—	—
Inferior do.	—	—	Inferior do.	—	—
Straw	34	38	Fine New Clover ..	—	—

BRITISH WOOLS.—LONDON, FRIDAY, Oct. 26.

Our prices are now merely nominal for most descriptions of

wool, as many of the consumers are making a pause as their orders run out, and are not disposed to make further purchases until they have secured fresh orders. This also is the general disposition of the trade, who are not inclined to speculate at the present rates.

	s. d.	s. d.		s. d.	s. d.
South-down Hoggets	1 7	to 1 8	Leicest. Wethers	1 6	to ..
Half-bred ditto	1 8	— ..	Ditto Hoggs	1 8	— ..
Down Ewes	1 5	— 1 6	Combing Skins	1 0	— 1 4
Kent Fleeces	1 7	— ..	Blanket ditto	0 6	— 0 8
			Flannel Wool	1 0	— 1 8

HOPS.—BOROUGH MARKET, FRIDAY, Oct. 26

Messrs. Pattenden & Smith report a steady demand for both new and old Hops for consumption at firm rates. Currency:—Mid and East Kents, 15*l.* to 28*l.* per cwt.; Wealds, 14*l.* to 21*l.* do.; Sussex, 10*l.* to 16*l.*; Yearling Kents, 8*l.* to 12*l.*; do Sussex, 7*l.* to 10*l.* Duty, 45,000*l.*

BUTTER MARKET.—Oct. 26.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 14s. " "
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, Oct. 22.

The number of Beasts is rather smaller than on Monday last, but the demand is very limited, and consequently that day's prices are not exceeded. The supply of Sheep is also rather smaller, but it far exceeds the demand. A large proportion remains unsold. Calves are selling at rather lower rates. Our foreign supply consists of 1300 Beasts, 7500 Sheep, and 220 Calves.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	4 8	to 4 10	Best Long-wools.	4 8	— 5 0
Best Short-horns	4 4	— 4 8	Do. Shorn	.. ..	to ..
2d quality Beasts	3 0	— 3 10	Ewes & 2d quality	4 0	— 4 4
Best Downs and Half-breds	5 0	to 5 2	Do. Shorn	.. ..	— ..
Do. Shorn	.. ..	— .	Lambs	.. ..	— ..
			Calves	.. ..	3 8 — 4 8
			Pigs	.. ..	4 0 — 5 0

Beasts, 5500; Sheep & Lambs, 26,700; Calves, 290; Pigs, 450.

THURSDAY, Oct. 25.

The supply of Beasts far exceeds the demand. There is a very small amount of business transacted and at lower rates. The number of Sheep is very small, yet greater than the demand. Prices are lower, and a clearance is not effected. Trade is very dull for Calves at lower rates. Our foreign supplies consists of 280 Beasts, 1400 Sheep, and 240 Calves.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	4 6	to 4 8	Best Long-wools	4 6	— 4 10
Best Short-horns	4 2	— 4 6	Do. Shorn	.. ..	— ..
2d quality Beasts	3 0	— 3 8	Ewes & 2d quality	3 10	— 4 2
Best Downs and Half-breds	4 10	— 5 0	Do. Shorn	.. ..	to ..
Do. Shorn	.. ..	— ..	Lambs	.. ..	— ..
			Calves	.. ..	3 4 — 4 0
			Pigs	.. ..	4 0 — 5 4

Beasts, 1220; Sheep & Lambs, 4560; Calves, 370; Pigs, 160.

MARK LANE.—MONDAY, Oct. 22.

The supply of Wheat from Essex and Kent to this morning's market was small, and the condition very bad; nevertheless the whole was tolerably cleared at about the prices of this day se'nnight. The attendance of country buyers was again very numerous, and a large retail business was transacted in foreign at the extreme rates of Monday last, and in many instances 1s. per qr. advance was realised. Barley brings an advance of 1s. per qr. Beans and Peas are rather dearer. The Oat trade is firm, and good dry corn brings 6d. per qr. more money. Flour is in fair demand at the extreme prices of last week.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	55—62	Red	46—60
— — fine selected runs..ditto	59—66	Red	53—66
— — Talavera	50—74		
— Norfolk.....	—	Red	—
— Foreign.....	54—74		
BARLEY, grind. & dist., 30s to 4[illegible]..Chev.	42—47	Malting.	40—42
— Foreign..grinding and distilling	31—39	Malting.	40—45
OATS, Essex and Suffolk.....	20—24		
— Scotch and Lincolnshire..Potato	26—28	Feed ..	24—26
— Irish .....Potato	26—28	Feed ..	21—24
— Foreign.....Poland and Brew	24—27	Feed ..	22—27
RYE	35—38	Foreign.	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....40s to 42s....Tick	42—46	Harrow.	42—46
— Pigeon .....48s — 52s..Winds.	—	Longpod	—
— Foreign .....Small	40—50	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	33—44	Suffolk .	40—45
— Maple .... —s to —s ..... Grey	40—42	Foreign.	30—44
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	50—57		
— 2d do..... ditto	34—50	Country.	34—50
— Foreign .....per barrel	29—34	Per sack	40—50

FRIDAY, Oct. 26.

During the past eight days the weather has improved considerably, and the temperature become higher. Corn of all kinds may still be found uncarted in the adjoining counties. The Wheat trade during the above period has been extremely firm, and notwithstanding very large arrivals of foreign at the chief ports of the kingdom the turn in prices has been against buyers; in several markets it is quoted fully 1s. per qr. dearer. Inferior new, however, is depressed, the sale slow and difficult, and its value uncertain and irregular. Spring Corn of all kinds continues to improve in value, and is generally written 1s. per qr. dearer. A fair inquiry has also been experienced for foreign Flour, upon which fully previous rates have been realised. The number of grain and seed-laden vessels arrived off the coast amounts to 100, viz., 69 Wheat and Flour, 1 Barley, 21 Maize, 1 Rye, and 8 Linseed. The business done has been good at about previous prices. The arrivals of foreign Wheat and Flour this week have been large, good of Barley, but very small of Oats, and moderate of all English grain. This morning's market was well attended, and English Wheat met with a steady sale at Monday's prices. Foreign was in improved request by both town and country buyers at our late quotations. Barley, Beans, and Peas brought Monday's prices. For old Oats there was a good demand at an advance of 6d. per qr.; new are unaltered in value.

ARRIVALS FROM Oct. 22 TO Oct. 26

	Wheat.	Barley.	Oats.	Flour.
English ..	1040 qrs.	1130 qrs.	160 qrs.	1170 sks.
Irish	— "	50 "	770 "	— "
Foreign ..	36720 "	4010 "	8070 "	4210 ", 30949 brls.

LIVERPOOL, Tuesday, Oct. 23.—We had a good attendance of millers at our Corn Exchange this morning, but we had not near the same extent of business passing in Wheat as during the two last market days, owing to the high rates demanded by holders at the commencement; the advance established cannot be called more than 1d. per cental on Friday's, and this is not paid freely. Flour had a moderate inquiry at 6d. per barrel and sack more money. Indian Corn was eagerly sought after, and a large quantity found buyers at an advance of 1s. 6d. per qr. Oats and Oatmeal were the turn dearer. Beans sold readily at 1s. per quarter over Friday, whilst Peas brought fully this advance. The market closed very strong for all feeding stuff, but Wheat and Flour are not so readily saleable at the advance, as buyers expect to get in a little cheaper by waiting.

FRIDAY, Oct. 26.—There was a moderate attendance, and a good business was transacted at fully last Tuesday's rates. Flour less active, and prices unchanged. Indian Corn and Beans steady, but less business doing. Barley, Beans, Oats, and Oatmeal quiet, at former rates.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Sept. 15..	62s 11d	37s 10d	27s 0d	42s 4d	50s 1d	38s 7d
— 22..	58 3	33 5	25 9	40 7	49 6	37 11
— 29..	56 11	39 3	25 3	37 10	49 6	39 1
Oct. 6..	58 3	39 8	25 1	39 1	48 11	39 10
— 13..	61 1	39 11	24 8	37 3	50 11	42 8
— 20..	60 1	40 7	23 7	34 7	50 2	41 11
Agg. Aver.	59 8	39 2	25 3	38 7	49 10	40 0

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Sept. 15.	Sept. 22.	Sept. 29.	Oct. 6.	Oct. 13.	Oct. 20.
62s 11d	—	..	..	..	..	..
61 1	..	..	..	..	..	..
60 1	..	..	.	..	..	
58 3	..	..	..	..	..	..
56 11	..	..	..	..	..	..
..	..	..	..	..	..	..

WANTED, A SURVEYOR, capable of Estimating for and carrying out works of Drainage and Agricultural improvements. Applications, with references and stating salary required, to be made to the West of England and South Wales Land Drainage and Inclosure Company.—BIDWILL & BRODIE, Secretaries.; Exeter, Oct. 27.

WANTED, A FOREMAN AND PROPAGATOR in the Plant department of a provincial Nursery.—Apply, giving references and particulars as to ability, and stating wages required, to WOOD & INGRAM, Huntingdon.

WANTED, A FOREMAN AND PROPAGATOR in the Plant Department. He must be a man of experience and acquainted with the London Trade. His character will require to bear the strictest investigation, and which must also be sustained by references as to his capability. —Address in own handwriting stating terms, to HORTUS, *Gardeners' Chronicle* Office.

WANTED.—A middle-aged, steady, industrious MAN as GENERAL WORKING FOREMAN, in a country nursery, where there is plenty of Glass and Plants. The advertiser being advanced in years, every encouragement would be given to a man as above.—Apply stating previous employments, with references and lowest terms, to C. B., Minier, Nash & Co., 60, Strand, W.C.

WANTED IMMEDIATELY, a respectable, well-conducted LAD to assist in the COUNTING-HOUSE and SHOP.—Must write well and quick. He will have an opportunity of gaining a practical knowledge of the Nursery and Seed Business under the direction of the general Foreman. Preference given to one who has been engaged at similar employment.—Apply by letter only to Messrs. CUTBUSH & SON, Highgate Nurseries, London, N.

WANTED, AN UNDER SHOPMAN.—The Plymouth Seed Company is in want of a respectable young Man, as UNDER SHOPMAN, who has had two or three years' experience in a good Seed Establishment. He will be expected to produce unexceptionable testimonials as to ability, activity, and integrity. Salary liberal, with a yearly increase. Address in applicant's own handwriting to the Managing Director, Plymouth Seed Company, Plymouth.

WANT PLACES.—Letters to be Post Paid.

TO NURSERYMEN, LANDSCAPE GARDENERS, AND OTHERS.

A DRAUGHTSMAN, having some leisure in the evening, will be glad to undertake the Plain or Fair Copying of Designs for Laying-out Grounds, &c. Terms moderate.—Mr. RICH. HOUSE, 2, Caroline Row, Durdham Down, Bristol.

LAYING OUT GARDENS.—Understands Laying Out and Planting Gardens for gentlemen, nurserymen, and landscape gardeners.—R. J., DAVIES, Bookseller, Maida Hill, W.

GARDENER (HEAD).—Middle-age, single; understands his profession, Forcing Grapes, Hothouse and Greenhouse Plants. A good Kitchen Gardener. Five years' character.—T. E., 7, Queen's Road West, Chelsea, S.W.

GARDENER (HEAD).—Married, no incumbrance; thoroughly understands the management of Vineries, Pineries, and Propagating Houses. Can be highly recommended.—J. R., Messrs. James Carter & Co., 237 & 238, High Holborn, W.C.

GARDENER (HEAD, single).—B. RICHARDSON, gardener to the late Duke of Leeds, Hornby Castle, Yorkshire, begs to offer his services to any nobleman or gentleman wanting an experienced working Gardener. Character unexceptionable. No objection to Ireland.—B. RICHARDSON, Messrs. Osborn & Sons, Nurserymen, Fulham, S.W.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 38, married, without incumbrance; understands his duties; active habits, good accountant, and with the highest references; security if required; salary 80*l.* a-year, with house and firing.—T. B., 1, Desborough Place, Harrow Road, Paddington, London, W.

GARDENER (HEAD).—Age 40, married, without incumbrance; well experienced in Early and Late Forcing, Plant Growing, Flower, Kitchen, and Fruit Gardens, Pleasure Grounds, &c.; thoroughly competent to take the charge of any nobleman or gentleman's establishment. Four years' good character from the nobleman he is leaving. State all particulars.—S. B., Harleston Park, Northampton.

GARDENER (HEAD).—Age 32, married, one child; has extensive practical experience in all branches of his profession; has been supplying first-class families with every kind of necessaries and luxury that can be produced from the Garden, both Early and Late. His character will bear the strictest investigation from his apprenticeship.—H. C., 62, Wurtemburg Street, Clapham, S.

GARDENER (HEAD) to any nobleman or gentleman.—Middle age, married, no incumbrance; first class Fruit Grower, &c, now disengaged. Character unexceptionable. —M. A., *Gardeners' Chronicle* Office, Wellington Street, W.C.

GARDENER (HEAD).—Age 39, married, no incumbrance; thoroughly understands his profession in all its branches. Wife as Cook, either in or out of the House. Good characters.—A. B., Mr. Swallow, Dartford Lane, Bexley, Kent.

GARDENER (FOREMAN).—Age 34, married; in a gentleman's family where two or three are kept.—G. P., 6, Charles Street, Queen's Road, Notting Hill, W.

GARDENER.—Age 36, married, without incumbrance. Wife could take charge of the Laundry.—Mr. E. COOLING, Mile Ash Nurseries, Derby.

GARDENER, in a Single-handed place.—Age 27, married; no objection to look after a Horse or Cow.—W. F., Prospect House, Hornsey Road, N.

GARDENER (PRACTICAL).—Age 45, married, without incumbrance; a good Judge of Stock. Seven years' character from a family of distinction. No objection to go to Ireland.—C. B., Mrs. Wood's, 14, Hanger Lane, Stamford Hill.

GARDENER.—Age 33, married, one child; has a good knowledge of his profession. First-class testimonials as to abilities, &c., from the gentleman he is now leaving.—F. A. B., South Mims, near Barnet, Herts.

GARDENER.—Age 40, married; has had great experience, and is now open to an engagement with a nobleman or gentleman requiring a good practical Gardener.—A. B., 70, Gt. Queen Street, Lincoln's-Inn Fields, W.C.

GARDENER (FIRST CLASS).—Age 35, married; will be disengaged in a few weeks and will be glad to treat with any nobleman or gentleman who may require a good practical Gardener; can take charge of Land and Stock if required.—X. Y., Teddington, Middlesex.

GARDENER.—Married, no incumbrance; understands his profession. Can have a good character from last place. Wife a good needle woman, and could make herself otherwise useful in or out of the house.—G. L., Mr. HATTON'S, Sudbury Station, near Harrow, Middlesex.

GARDENER.—Age 29, married, no incumbrance; the Rev. T. G. CLARKE, Odiham, Hants, wishes to recommend a respectable, sober, honest, industrious, and clever Man as Gardener to any gentleman requiring the services of such a person.—H. H., Ford's Nursery, Commercial Road, Southampton, Hants.

GARDENER.—C. LODDIGES having no further need of the services of his Gardener, A. KEITH, is desirous of procuring him another situation; and having a high estimate of his abilities as a Plant Grower and general Gardener, he can recommend him with confidence to any nobleman or gentleman requiring the services of a trustworthy person. Testimonials of the highest order. No single-handed place accepted.—A. KEITH, Conrad Loddiges, Esq., Hackney, N.E.

GARDENER.—Mr. BARNES can with confidence recommend a Man, age 38, married; thoroughly competent to undertake the Management of a nobleman's or gentleman's Garden; has had good practice in the Forcing of Fruits, Flowers and Vegetables, and has been nearly four years in the situation he is now leaving, during which time he has superintended extensive alterations in renovating an old Garden. Can take charge of Land and Stock if required.
Camden Nursery, Camberwell, S.

GARDENER (UNDER).—Age 15; strong and healthy. A premium will be given.—R. T., Sampson's Library and Reading Room, 13, Coney Street, York.

GARDENER, OR GROOM AND GARDENER.—Age 30; understands his duties, and can be well recommended.—E. W., Corfe Cottage, Taunton, Somerset.

TO GARDENERS.

FOREMAN.—A young Man who has spent 10 years' in first rate places.—G. Y., Paradise Nursery, Seven Sisters Road, Holloway, London, N.

ORCHID GROWER.—H. WATKINSON, Stretford Nurseries, near Manchester, can with great confidence recommend to any nobleman, gentleman, or nurseryman, a young Man, who has a thorough knowledge of Orchid Growing. The highest testimonials as to character and ability.

IMPROVER (in a Gentleman's Garden).—Age 18; has a knowledge of Plants and Vines. Good recommendation from his present employer.—R. S., The Gardens, Buckham Hill, Uckfield.

IMPROVER.—A Gardener is desirous of obtaining a situation for his son, a youth aged 19, where he could be further instructed in Gardening. He is active and industrious, and can manage a horse and carriage, clean boots, knives, &c. Wages no object.—Y. Z., Post Office, Harrold, Bedfordshire.

IMPROVER.—Age 20; in a gentleman's or nurseryman's garden, where he will have an opportunity of acquiring a thorough knowledge of Gardening; can have four-and-a-half years' good character.—C. W., 33, Gray's Inn Lane, London, W.C.

LAND STEWARD OR BAILIFF.—Married; is thoroughly acquainted with the most approved principles of Farming, Buying, Selling, Breeding, and Rearing of Stock, keeping Accounts, &c. Most satisfactory testimonials, and reference to last employer.—"LAND STEWARD," Post Office, Watford, Herts.

BAILIFF or AGENT (UNDER).—Age 36, married; a native of Scotland; is at present Bailiff to a nobleman in South Wales, wishes for an engagement as above on an Estate. Reference to present employer and others.—BAILIFF, *Gardeners' Chronicle* Office, W.C.

BAILIFF.—Single; capable of taking the entire management of a large Farm. Good reference.—J. V., Stent's Library, Guildford, Surrey.

BAILIFF.—Age 42, married, no incumbrance; is thoroughly practical in Modern Farming, a good Judge and Manager of Stock, and a good Accountant. Could take the management of a herd of Short-horns. No objection to France or Ireland. Good reference.—B. C., 10, Pentonville Road, Islington, N.

SEEDSMAN, in a London house, either in the Wholesale or Retail Trade. Has been five and a half years at the business.—T. D., *Gardeners' Chronicle* Office.

SHOPMAN, in the SEED TRADE, had eight years' experience; has a knowledge of Book keeping.—X. Y., *Gardeners' Chronicle* Office, W.C.

The Gardeners' Chronicle Newspaper.

SATURDAY, NOVEMBER 3, 1860.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

A PARISIAN LADY, now residing at Kensington, gives private lessons in French, Music, Singing, and Drawing. She speaks English well. Her terms depend upon circumstances—but as a general rule are 10*s.* for a single hour, or at a less rate for two hours. She offers references of the highest respectability.—Address, MADEMOISELLE L. W., 24, Edwards Square, Kensington, W.

News of the Week.

A TELEGRAPHIC despatch from Shanghai of the 4th September brings the important news that the Taku forts on the northern bank of the Peiho river,—the scene of the treacherous attack upon Admiral HOPE'S squadron in 1859—were captured by the Allies on the 21st August after a hard fight of five hours. The Chinese then entered into a capitulation giving to the Allies the whole country as far as Tientsing, with 600 brass guns of large calibre, and the other forts surrendered in succession. The Allies lost 450 men in killed and wounded, but no British officer was among the killed. The Chinese had 1000 killed in the fort, including the General-in-Chief. The troops principally engaged were the 44th and 67th Regiments, the Royal Marines, and 1500 French. The British and French Ambassadors arrived at Tientsing on the 26th, and intended shortly to start for Pekin escorted by the Chinese Commissioners, and accompanied by the Generals and Admirals of the Allied forces. The Chinese Government had promised them an honourable reception. The rebels had withdrawn from Shanghai, and a better feeling of security had since prevailed. On the 18th and 20th August they attempted to enter the city, but were repulsed with great loss.

Accounts from Naples inform us that the Sardinian army, commanded by KING VICTOR EMMANUEL in person, gained a decisive victory on the 26th ult. over the Neapolitan army of 15,000 men, between Teano and Sessa. On the following day the Neapolitans retired across the Garigliano and took up a strong position between that river and Gaeta. KING VICTOR EMMANUEL crossed the Garigliano on Wednesday, to give them battle, and the news of a decisive action is hourly expected. GARIBALDI had an interview with the KING during the battle of the 26th, and has since commenced the bombardment of Capua, which is still garrisoned by a small body of the Royalist army. The votes of the kingdom of Naples in favour of annexation amounted to more than a million, and the vote in Sicily was almost equally unanimous. KING VICTOR EMMANUEL last week decided on postponing his entry into Naples until the delegates had brought to him the official returns of the voting throughout the kingdom; and there it now no doubt that he will still further postpone is until the KING OF NAPLES has quitted Gaeta. It was reported on Wednesday that the Sardinian fleet commanded by Admiral PERSANO cannonaded the Royalists near Gaeta on the 27th ult., and that the French admiral despatched a frigate to stop the firing, whereupon Admiral PERSANO retired to Naples, expressing his regret at the conduct of the French. A despatch from Turin dated yesterday states that there is no foundation for this statement.

The DOWAGER EMPRESS OF RUSSIA died on Thursday at St. Petersburg. The German papers are unanimous in stating that the Warsaw Conferences, which were brought to a close a day sooner than was intended in consequence of the illness of the EMPRESS, were a complete failure so far as the EMPEROR OF AUSTRIA may have expected to gain from them any political advantage. It is said that HIS MAJESTY failed to obtain the promise of any practical support from Russia or Prussia in anv difficulties which may arise either in Hungary or Venetia; and that the only agreement entered into by the three Powers was to decline any proposition for the assembling of a Congress on the Italian question.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Friday morning the Queen rode out on horseback. The Prince Consort came to London and visited the Grand Duke Michael and the Grand Duchess Olga of Russia at Claridge's Hotel. In the afternoon her Majesty held a Privy Council, at which Parliament was ordered to be further prorogued from the 6th November until Thursday, the 3d January, and a proclamation was issued for the election of a representative Peer for Scotland in the room of the late Earl of Leven and Melville. The Lord Chancellor, Lord John Russell, and Sir G. Lewis had audiences of the Queen. Mr. Charles Sargent, Member of the Supreme Council of Justice of the Ionian Islands, was presented to her Majesty at an audience by Sir George Lewis, and received the honour of Knighthood. On Saturday the Queen, accompanied by Princess Alice, rode out on horseback. The Prince Consort went out shooting. Queen Marie Amelie and the Duc de Nemours visited her Majesty from Claremont. The Right Hon. Sir Charles Wood left the castle. On Sunday morning the Queen and Prince Consort, the Princesses Alice, Helena, and Louisa, and Prince Arthur, attended Divine service in the Private Chapel. The Dean of Windsor officiated and administered the Sacrament. On Monday morning the Queen, accompanied by Princess Alice, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort, accompanied by the Hereditary Prince of Augustenburg, went out shooting. Earl and Countess Delawarr and the Right Hon. Sidney Herbert and Mrs. Herbert, arrived on a visit. On Tuesday morning the Queen rode out on horseback. The Prince Consort, accompanied by the Prince of Leiningen and the Hereditary Prince of Holstein Augustenburg, went out shooting. Count Ludolf, Neapolitan Minister, was presented to her Majesty at an audience by Lord John Russell, to deliver a letter from his Sovereign. Princess Alice, accompanied by the Princess of Leiningen, drove out in an open carriage. On Wednesday morning the Queen, accompanied by Princess Alice and Princess Leiningen, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort went to Aldershott. The Prince of Leiningen left Windsor for Portsmouth. The Earl and Countess Delawarr and the Right Hon. Sidney and Mrs. Herbert left the Castle. On Thursday morning the Queen and Prince Consort rode out on horseback. Princess Alice, accompanied by Princess Leiningen, drove out and visited the Duchess of Kent at Frogmore.

THE PRINCE OF WALES on the 12th ult. visited New York University, the Woman's Library, the Astor Library, the Cooper Institute, and the Free Academy, and then rode to the Central Park, where he planted an English oak and an American elm as memorials of his visit. At most of these places addresses were presented to his Royal Highness. He then proceeded to the residence of the Mayor, where he took luncheon, and afterwards visited the Deaf and Dumb Institution at Fort Washington. He then rode to the foot of Two Hundred and Fifteenth Street, and embarking in the Trumpeter sailed through Harlem River, under the High Bridge, past the institutions to the East River, down which he sailed in the Harriet Lane. It was half-past 6 P.M. when the Royal party landed at the foot of Twenty-second Street, North River, and returned to the Fifth Avenue Hotel. The ball, which took place at the Academy of Music in the evening, was the most brilliant affair of the kind which has ever been witnessed in New York. On the 13th his Royal Highness visited the veteran chief of the United States' army, Lieut.-General Scott, at his residence in Twelfth Street. In the evening a grand torchlight procession of the Firemen in honour of the Prince took place. It was a magnificent display, surpassing in every respect any demonstration of a similar character ever witnessed. On Sunday the 14th, his Royal Highness attended Divine service at Trinity Church. Four bishops and 35 clergymen assisted at the service. In most of the churches of the city reference was made to the visit of the Prince in the prayers of the day. His Royal Highness on leaving the church drove to the residence of Mr. Archibald, the British Consul, where he took luncheon. On the 15th the Prince visited West Point, on the Hudson, the seat of the Military Academy of the United States, and the scene of some of the most interesting incidents of the war of the Revolution. His Royal Highness was received with the customary enthusiasm, and by every demonstration of respect. A Royal salute was fired on his arrival, and numerous presentations took place. A ball was held in the evening, at which the Prince was present. General Scott entertained the Prince at Cozzen's Hotel. On the 16th the Prince left for Albany, where he was received with great cordiality and respect. On the 17th his Royal Highness left Albany, escorted to the railway depôt by the Burgesses' Corps, though lines of enthusiastic people. At the depôt Governor Morgan, Senator Seward, and other gentleman of Albany, took leave of him. In Springfield, Worcester, and other places along the route, large crowds of people were assembled, and in response to their calls his Royal Highness occasionally showed himself. The Prince arrived at Boston shortly before 4 o'clock. At the city, lines the Mayor with a committee of the city government, received the Prince and suite cordially, but with little formality. The Royal party at once entered open carriages, and, under the escort of the Boston Lancers and Light Dragoons, proceeded to the Revere House. The side-walks, balconies, and windows on both sides of the route were thronged with people, whose welcome was hearty. On the 18th, Ralph Farnham, the sole survivor of the battle of Bunker Hill, was introduced to the Prince by Mr. Everett. The interview is reported to have been of a very interesting character. Mr. Farnham was accompanied by one of his daughters, who is upwards of 70 years of age. The Prince afterwards reviewed about 3000 military, including artillery, cavalry, and infantry. After the review the military force marched through several of the principal streets, the Prince and suite, the Governor and others, accompanying them in carriages. The display is represented to have been the most imposing ever seen in New England, and was witnessed by thousands. A collation followed at the State House, given by Governor Banks, at which there was a social and entirely informal interchange of good feeling. At about 5 o'clock the Prince was escorted to the Music Hall, where he was welcomed by 1200 school children. In the evening there was a grand ball at the Academy of Music. On the 19th the Prince visited Cambridge, Bunker Hill, Mount Auburn Cemetery, and Harvard College. At the latter place his Royal Highness was welcomed in Doane Hall by President Felton and the Faculty, while he was heartily cheered by the students. After visiting the library of the Scientific School and the Observatory, his Royal Highness partook of a collation at Harvard Hall. The citizens of Cambridge were out in numbers, and cheered the Prince heartily as he passed through the city. In the evening his Royal Highness visited the Boston Public Library. On the morning of the 20th the Prince left Boston, amid enthusiastic cheers from the citizens, and accompanied by Governor Banks and other distinguished gentlemen, for Portland, where he was received by the Governor of the State of Maine, the Mayor of Portland, a body of military, and the entire population. He was escorted through the streets of the city, and finally embarked in the Hero. The cannon of the ships of war and the batteries fired royal salutes, the bands played the national airs of Great Britain and America, the vast concourse of people shouted their adieus, and the Royal squadron steamed away for England. His Royal Highness is expected to land at Plymouth, and the Royal Albert, Conqueror, St. George, and Donegal are already anchored in the Sound prepared to do honour to him on his arrival, which is now hourly expected.

PRINCE ALFRED embarked in the steam frigate Euryalus on the 19th of September, for England. After visiting Bloemfontein on the 23d of August, he left the capital of the Orange River Free State and passed through Wynburg to Harrismith, on the Natal boundary. At Pietermauritzburg a triumphal arch was erected, an address presented by the Mayor, and an entertainment was given at the residence of the Acting Lieutenant-Governor. On the 4th September the Prince presented the 85th Regiment with a new set of colours, when 4000 Zulus, in different bodies, under their separate chiefs, performed their war dance for the entertainment of the Royal visitor. On the 5th, at daybreak, the Prince started on horseback, and after a rapid ride of 56 miles reached D'Urban at dusk. A congratulatory address was presented by the authorities, and in the evening 300 Caffirs danced around an immense fire. On the 6th the Prince embarked in the Euryalus, which anchored on the 14th in Simon's Bay. Cape Town was decorated with flags. The Volunteers turned out in great force, and joined the 59th Regiment. His Royal Highness dined with a distinguished party at Government House. On the 15th the Prince visited the Botanic-gardens, and viewed a Mahomedan performance called the Kalifa. In the evening there was a ball at Government House. On Sunday the 16th, his Royal Highness attended service in St. George's Cathedral, where the Dean preached. On the 17th, after receiving deputations from Malmesbury, Riversdale, &c., the Prince went to the American circus, where the Caffir chief, Sandili, and suite, were also present. The great event of the Royal visit in the estimation of the inhabitants—the laying of the foundation stone of the breakwater—took place in the afternoon. After a suitable prayer by the Dean of Cape Town, Prince Alfred pulled the trigger of a truck, and, under a salute of artillery, tilted the first load of stone into the sea. The scene was much enlivened by the presence of several ships of war gaily decorated with colours, which saluted with their guns. In the evening the city was illuminated, and a farewell ball was given to the Prince at the Commercial Sale Rooms, and was attended by an immense number, including all the *élite* of the colony. On the 18th the Prince laid the foundation stone of

the Sailors' Home and inaugurated a new Library Hall, where Sir George Grey delivered an address, which was answered on the part of the public by the Attorney-General. His Royal Highness, escorted by the Rifle Volunteers, embarked on Wednesday, the 19th, amid every possible demonstration of respect. The Euryalus, on leaving the bay, was preceded by the Sidon and followed by the Forte. The Prince, it is said, will touch at Ascension and Sierra Leone on the passage to England. His Royal Highness will land at Portsmouth, and his arrival at Spithead is daily expected.

PARLIAMENTARY MOVEMENTS.—The *Gazette* of Tuesday contained an order in Council further proroguing Parliament from Tuesday, the 6th inst. to Thursday, the 3d of January. The Boston election terminated on Tuesday in the return of Mr. Malcolm, the Conservative Candidate, by a majority of 220 over Mr. Tuxford, the numbers being 533 to 313. The election for Dartmouth commenced yesterday, when Mr. John Hardy, Mr. J. Curling, and Mr. Seale Hayne were put in nomination. The polling takes place to-day. There is a vacancy for South Nottinghamshire caused by the accession of Lord Newark to the peerage. Lord Stanhope, son of the Earl of Chesterfield, is to be brought forward as a candidate for the vacant seat.

THE ARMY.—The Colonelcy of the Rifle Brigade, vacant by the death of Sir Harry Smith, Bart., has been conferred on Major-General Sir George Buller, K.C.B.; and the Colonelcy of the 88th Foot, vacated by this promotion, has been conferred on Major-General Cox.

THE NAVY.—The Admiralty have invited the following iron ship building firms to send in tenders on or before the 5th of November for the construction of two iron-cased frigates, viz.:—Messrs. Samuda, Messrs. Westwood, Baillie, Campbell, and Co., and the Thames Yard Company of London; Messrs. Napier and Co., of Glasgow; Messrs. Laird, of Birkenhead; and Messrs. Palmer, of the Tyne. The two ships are to be as nearly as possible similar to the Warrior, now in the course of building, and of the same class as that which it is intended to construct at Chatham dockyard.

THE PLYMOUTH COMMAND.—Vice-Admiral Fanshawe, who has resigned in consequence of ill-health, struck his flag as Port Admiral on Saturday, and Vice-Admiral Sir Houston Stewart hoisted his flag on Sunday in the Impregnable, as his successor.

THE CHURCH.—The consecration of the Hon. and Rev. Samuel Waldegrave, as Bishop of Carlisle, will take place in York Minster on Sunday, the 11th inst. The ceremony will be performed by the Archbishop of York, assisted by the Bishops of Durham and Ripon. The Bishop of Bath and Wells has appointed the Rev. Robert William Browne, M.A., Professor of Classical Literature in King's College, London, and Chaplain to the Forces in London, to the Archdeaconry of Bath, vacant by the death of the Ven. W. Gunning. The Chancellorship of the diocese of Exeter, vacant by the death of Chancellor Martin, has been conferred by the Bishop on his son, the Ven. W. J. Phillpotts, M.A., Archdeacon of Cornwall. The Chancellorship of St. Paul's Cathedral has become vacant by the death of the Rev. Henry Soames.

KNIGHTHOOD.—At the Court at Windsor Castle on Friday, the Queen conferred the honour of Knighthood upon Charles Sargent, Esq., Chief Justice of the Ionian Islands.

THE VOLUNTEER MOVEMENT.—On Saturday the grounds adjacent to Beaufort House, Fulham, the head-quarters of the South Middlesex Rifles, were thronged with visitors assembled to witness a variety of interesting experiments calculated to improve the efficiency of Volunteers. The proceedings commenced with experiments on projectiles made by Captain Norton, followed by a trial of breech-loading rifles. The next experiments were for the purpose of testing the relative merits of Professor Wheatstone's and Lieutenant Chevalier's target-shooting indicators, the objects of which are to enable firing parties to ascertain without loss of time the result of the shots. Professor Wheatstone's apparatus maintains the communication between the target and gun by the use of the ordinary alphabet, so as to enable any person who can read and write, without any previous instruction, to work the instrument. The target is formed into divisions, marked with 10 letters, a similar target being in the marker's box. The position of the ball on striking the target is telegraphed to the firing post by the letters indicated by the space cut on the target, and read off at the gun upon the duplicate. This apparatus is about to be adopted at the police stations. Lieut. Chevalier's apparatus consists of a single galvanometer, not exceeding 3 lbs. in weight, the instrument at the firing-post being connected with the target. The target is divided into divisions, and when hit the shot presses against a pin, which completes the electric current and deflects the needle of the galvanometer right or left, thus indicating without the assistance of any one the position of the hit. Mr. Henley, with one of the Maynard breech-loading self-priming guns, an American invention, attracted considerable attention from the simplicity and utility of this destructive weapon. One of its features consists of the percussion caps being wound on a riband and so arranged that the operation of merely cocking the gun at the same time puts a cap on. By this apparatus 15 rounds a minute are easily accomplished. At the conclusion of the firing a party of the South Middlesex of 25 men, and 100 men of the South Kensington (Museum) Engineers, threw up a sand-bag battery, in order to show the practicability of defending a road or street. The battery, 100 feet long and four feet high, was thrown up in 27 minutes. The assembly was then sounded, and the men drawn up behind the battery to defend it against another detachment, who were drawn up on the other side with a view of turning the battery, and for some time the evolutions of a sham fight on a small scale were gone through. At dusk the lime light was lighted, so as to illuminate the whole of the grounds. This light by the aid of reflectors can be thrown at 400 yards' distance upon the targets, so as to enable the Volunteers to fire at night.—The contest between the St. George's Rifles and the Victoria and Westminster for a plate presented by Mr. Twining, took place last week, when the St. George's Corps were the victors. The St. George's Corps assembled on Monday with its newly raised cadet corps in the grounds of Burlington House, when the Right. Hon. Sir Hamilton Seymour, in the presence of a large number of persons of rank and station, distributed the following prizes which had been won in a recent rifle-shooting contest by members of the regiment:—A silver tankard, presented by Sir H. Seymour, to the best shot in the aggregate, with the proviso that he was a marksman with the minimum of 7 points, to Lieut. Charles Savory; a silver goblet for the best shot standing up to 300 yards to Mr. Otto Klopp; a silver cup for the best marksman of No. 1 Company, to Corporal P. Gray; a silver cup for the best marksman of No. 2 Company, to Mr. Lavander; a silver cup for the best marksman of No. 4 Company, to Mr. E. Aspa; a silver cup to the best marksman of No. 5 Company, to Mr. E. Ortner. The St. George's Challenge Cup (presented by the officers of 1860), for the best shot, of those members who had qualified themselves as first-class men in the 2d period, the property of the corps for ever, to be held for one year by the member who wins it, to Sergeant C. N. Peal, who had to shoot off with Corporal Waller the unprecedented number of seven ties before he was declared the winner. The gold medal of the corps, and the silver badge of the challenge cup, were presented at the same time to Sergeant Peal. A Whitworth rifle (given by Miss Lintott), for the best shot in the contest at 300, 400, and 500 yards, to Mr. F. Croskey. A Lancaster rifle, presented by Mr. Charles Lancaster, for the best shot at 200, 300, and 400 yards, upon the Hythe principle, to Mr. Sanford. A Westley Richards breech-loader, presented by Mr. Bishop, for those members who have passed out of the 3d class in the course, at distances of 300, 400, and 500 yards, to Sergeant C. N. Peal. The Turner Challenge Plate, a statuette of the Queen in solid silver, presented by Mr. J. Turner of New Bond Street, and valued at 100 guineas to be competed for annually by 10 members of the Victoria, Queen's and St. George's Corps, at 500, 600, and 700 yards, and to be held for a year by the corps which gains the greatest aggregate number of points, to the St. George's Corps. A silver bugle, the gift of Mrs. Lincoln, was then presented to the corps by the Rev. Dr. Irons.—The 7th Surrey has been augmented by a new company consisting entirely of men in the employ of Mr. W. C. K. Clowes, the captain of the company.—The Civil Service Regiment (21st Middlesex), under the command of Lord Bury, has had four days' target practice at Wimbledon this week, at ranges from 150 to 600 yards.—The enrolled members of the Inland Revenue Companies have had a two days' contest at Wimbledon, for a silver and a bronze medal, at ranges of 150, 300, 400, and 600 yards,—five rounds at each range. The silver medal was won by Mr. Lakeman, of the Department of the Chief Examiner of Inland Revenue, the number of points made by him being 24. The next highest score was 22, and there being three members who obtained that number of points—viz., Mr. Godby, Mr. Le Guay, and Mr. Reding—the bronze medal cannot be awarded until they have shot off their ties.—The inhabitants of Newington, Walworth, Lorrimore, North Camberwell, East Kennington, and the neighbourhood have held a public meeting in the Lecture Hall, Walworth, at which it was unanimously resolved to take measures for increasing the strength of the 1st Surrey.—At a public meeting held on Tuesday in the Duke of Wellington's Riding School at Knightsbridge, it was announced that the Lord-Lieutenant will shortly recommend the Government to accept the services of the Royal National Rifles, of which Sir De Lacy Evans had accepted the Colonelcy, and Sir John Shelley, M.P., the Lieutenant-Colonelcy.—The Court of Lieutenancy for the City of London have informed Sir William de Bathe that they will decide on the 5th November whether they will accept the services of the Working Men's Brigade.—The 4th Middlesex, at the suggestion of their major, Lord Truro, have resolved to adopt for one company a dress very similar to that worn by our West India regiments, and almost identical with the French Zouave costume, and for the remainder of the corps a gray suit with bright red facings.—The 1st Troop of the Surrey Mounted Rifles have lately paraded every Wednesday afternoon on the Middlesex side of Vauxhall Bridge, and marched past Buckingham Palace into Pall Mall, up St. James's Street, and along Piccadilly to the riding school of the Duke of Wellington, who has placed it at their service for exercise.—On Saturday, the 34th Kent (Deptford), formally opened the new practice-ground which they have laid out on the property placed at their disposal by Mr. Lee.—The 4th Kent (Woolwich) assembled a few days since on Plumstead Common, and carried out the details of a sham fight, which occupied about five hours.—The Volunteer Guards (32d Middlesex), known to the public as the "Six-Foot Corps," have resumed their drill at Hungerford Hall under special advantages, the officers having attached themselves during the vacation to line regiments at Aldershott and Southsea to qualify for their duties. It is expected that the corps will by next season have doubled their present effective strength.—The Lancashire county contest commenced on Monday at Hightown, between Liverpool and Southport. The entries for the prizes numbered 1100, including most of the crack shots who have distinguished themselves at former meetings, and the total value of the prizes exceeded 900*l*. The first prize competed for was the Hightown stakes, value 50*l*., given by the Hon. Mr. Stapleton, of Ditton Hall; 2d prize, 20*l*.; 3d prize, 10*l*. This prize was open to competition by the members of regiments of the line quartered in the county, the Militia, and the Volunteers of Lancashire—two from each company; distances, 300, 500, and 600 yards; long or short Enfield, Government pattern; five shots at each range. For these stakes there were 58 competitors, and, notwithstanding this large number, there were no ties. The first prize was won by Corporal Charles Ball, of the 11th depôt battalion; the second prize by Captain W. Bluett, of the 10th Foot; and the third by James Jervis, of the 1st Manchester Rifles. The second prize was a purse of 25*l*., presented by Lieut.-Colonel Brown, with a second prize of 15*l*., and a third of 10*l*. added by the committee. This match was for the Liverpool Artillery Volunteers, to be competed for with the regulation carbine at distances of 200 and 300 yards, five shots each range. The number of competitors was 18. The first prize was won by Captain Brabner, of the 20th Liverpool Artillery. For the second prize there were three "ties"—Lieut. C. B. Bean, Lieut. J. B. Stanley, and F. H. Michatowski, having made eight points each. The shooting off was spirited, four rounds being fired before the victory was determined. The result was that the second prize was won by Mr. Michatowski, and the third by Lieut. Stanley. The third and last match for the day was a silver cup, valued at 50 guineas, given by Mr. William Preston, and a second prize of 12 guineas, presented by Messrs. Webb & Hunt, to be competed for by the Rifle Volunteers of Liverpool; distances 300 and 500 yards; five shots at each range. In this match there was a tie between W. H. Richards, 39th Liverpool, and C. C. Pole, 5th Liverpool, each having made 11 points. The "tie" was shot off at 600 yards, one shot each. Richards made a centre, and consequently took the first prize, the second falling to Pole. On Tuesday a challenge cup, value 50 guineas, presented by the Earl of Ellesmere, to be competed for by three delegates from each Volunteer company of the county, at distances of 300, 500, and 600 yards, was won by Sergeant Sillem, R. Maxwell, and R. N. Swire, delegates from the 1st company 5th division 2d battalion. A purse of 50*l*. presented by the Mayor of Liverpool, in five prizes of 10*l*. each, competed for by Volunteers of Liverpool earning weekly wages, at a distance of 200 yards, was won by Nicholas Murphy, 64th Rifles; Sergeant Holland, 25th Rifles; J. Williams, 25th Rifles; W. Burton, and Richard Holt. On Wednesday, in consequence of the fog, only one prize was decided,—a cup, value 12 guineas, presented by Messrs. Benson and Mallett, being the proceeds of the sale of the "official card" at Knowsley; to be competed for by any Volunteer whose corps was present at the Knowsley review, at distances of 200 and 300 yards; five shots at each range. This prize, for which there were 110 competitors, was won by Thomas Casson, 39th Lancashire Rifles.—A grand rifle *fête* of the members of the various corps of Sussex, Surrey, and Kent took place on Monday, at the practice-ground of the 3d Cinque Ports at Rye. The corps present were the 3d Cinque Ports, Rye; 1st Cinque Ports, Hastings; 29th Kent, Ashford; 37th Weald of Kent, Hawkhurst; 4th Cinque Ports Artillery, Hastings; 4th Cinque Ports, Hythe; 5th Cinque Ports, Folkestone; 4th Surrey, Streatham; 9th Surrey, Richmond; 12th Surrey; 5th Sussex Artillery, East Grinstead; 5th Kent, Canterbury; 16th Sussex, Battle; 5th Surrey, Reigate; 3d Kent; and several others. From these corps about 120 members entered into competition for a silver cup as the first prize, and a silver medal and a bronze one as the second and third. After a highly spirited contest with five rounds at 300 yards, Sergeant Penhall of the Hastings corps was declared the winner with nine points; Lieutenant Crake (Hastings), Sergeant Brittenden and Private Kennett made eight points, and on shooting off the ties Mr. Kennett won the second prize, and Lieutenant Crake took the third. A match between 12 members of the Hastings Corps and 12 members of the Rye Corps with five shots at 200, and five at 300 yards, resulted in the Hastings men making 127 points against 110 accomplished by the Rye.—The ceremony of consecrating and presenting colours to the 1st Cinque Ports (Hastings and St. Leonard's), took place in the Music Hall, Hastings, on Tuesday week, the Hon. and Rev. S. Waldegrave, Bishop of Carlisle elect, presenting the colours in the name of the Countess of Waldegrave and the ladies of the borough.—The shooting match of the 6th Sussex Rifles took place on Thursday week at Petworth Park,

the seat of Lord Leconfield. The prizes were won by Ensign Padwick, Colonel Phillips, Sergeant Sherwin, Bugler Southerton, and Privates Aylwin, H. Ellis, W. Sherain, Thomson, and Bishopp.—The Volunteers of Dorsetshire were reviewed on Wednesday week by Colonel Moore of the 11th Foot, in the presence of the Earl of Shaftesbury, Lord-Lieutenant of the county, at Maiden Castle, about two miles from Dorchester.—The Tunbridge Corps met on Wednesday week in the grounds of Tunbridge Castle, and were presented by Viscountess Hardinge with a silver bugle, the gift of the ladies of the town.—The 3d Northumberland were reviewed at Morpeth on Monday afternoon.—The 1st East Riding Artillery have constructed at their own expense a battery, the first of its class in Great Britain, mounting three 32-pounders, according to plans designed by Lieut.-Colonel Hamley, of the Royal Artillery.—The Airedale (35th West York) held their first open-air drill on Saturday in the grounds adjoining Eastwood House, near Keighley, the seat of Mr. I. G. Sugden.—The competition for a large number of valuable prizes offered to the members of the Leicestershire companies commenced on Monday at the Leicester rifle range. The prizes were won by C. Billson (Leicester); Private Leadbetter (Melton); Private Bankart (Leicester); Private Whitehouse (Melton); and Private Sturgess (Melton).—On Monday the 4th Warwickshire (Rugby) concluded a shooting for prizes which had been commenced on the previous Wednesday. The 1st prize, a handsome silver cup, was won by Sergeant Haynes, the second prize was won by Private Kenning, and the third, a silver tankard, was won by Private Clarke.—The Cunard Artillery (Liverpool) having completed their preliminary gun drill, are almost daily improving themselves in ball practice at the Liverpool North Fort.—On Friday the Wisbech Corps was inspected by the Earl of Hardwicke, Lord Lieutenant of Cambridgeshire.—A new Highland company has been formed at Aberdeen, in which city, on Saturday, the whole of the local Volunteers, mustering about 600, were reviewed by Major Douglass Jones, one of the Assistant-Inspectors of Volunteers for Scotland.—The Macduff Artillery, Banffshire Artillery, and Banffshire Rifles, assembled in the grounds of Duff House on Saturday, and were presented with a silver bugle each by the Countess of Fife.—A second company of Rifles has been raised in Penrith, consisting of 65 men, thus raising the total number of Volunteers to 142 members—a large proportion for a small town of 7000 or 8000 inhabitants.—At Hinckley a Rifle Corps, to be called the 10th Leicestershire, is now in course of formation and is rapidly advancing in its organisation.—A Rifle Corps has been formed in Lowestoft numbering nearly 100 members, all of whom, with few exceptions, are employed in the establishment (at that place) of Messrs. Lucas Brothers, the builders and contractors of Belvedere Road, Lambeth, who have borne the expense of equipping the great majority of the members, and have also provided at their own cost a complete set of new instruments.—A Rifle corps has been formed at Wantage, which now numbers 86 effective members. This little town has, therefore, distinguished itself by raising a larger corps in proportion to the number of its inhabitants than any other town in Berkshire.

Foreign.

FRANCE.—The *Moniteur* of Sunday promulgated the convention supplementary to the treaty of commerce between France and England, which was concluded on the 12th of October, and stated that the Customs' tariff subjoined to it would come into operation on the 1st inst. It also published on Monday the following decree concerning those articles of merchandise of British growth or manufacture, specified in the Treaty of Commerce, which are imported into France otherwise than in French or British vessels:—

"1. A surtax of 25c. per 100 kilogrammes will be levied upon articles of merchandise which are either free from all entry dues or liable to a *maximum* duty of 3f. per 100 kilogrammes. 2. The surtax decreed by the law of the 18th April, 1816, will be applied when the duty exceeds 3f. per 100 kilogrammes."

The *Moniteur*, the *Patrie*, and the *Constitutionnel*, contradict in the most decisive terms the statement of the *Opinion Nationale* that Austria had determined to send an *ultimatum* to Turin, that Prince Metternich had been charged to enter into negotiations with the French Government in order to bring about a pacific solution of the Italian question, and to intimate that in case of failure Austria would resort to arms, with the countenance of the sovereigns her allies. The *Opinion Nationale* is the organ of Prince Napoleon, but in spite of his powerful protection, a prosecution has been commenced against M. Guerault, its responsible editor, at the instance of the Austrian government for the publication of false news. It is said that in accordance with instructions received from Count Rechberg, Prince Metternich has explained to M. Thouvenel the Austrian policy. This explanation contains four points:—

"1. The interior policy of every State being intimately connected with its exterior policy, Austria will fulfil with sincerity the reforms announced by the 'Diplom' of the 20th October. 2. Notwithstanding the complications in Italy Austria will maintain her line of defensive policy. The present armaments and concentration of troops in Venetia have no other object than that of repelling any attack. 3. Austria will not abandon the system of non-intervention. 4. Austria considers that the assembling of a Congress would not bring about a practical solution of the Italian question, unless the great Powers agree beforehand on a common programme, of which, however, there is little likelihood.'

Baron Hübner, the late Ambassador of Austria in Paris, was received by the Emperor on Saturday at St. Cloud, and Prince Metternich, the present Ambassador, had an interview with his Majesty on Monday. Both are said to be pleased with their reception, from which it is inferred that the prospects of affairs in Italy are more pacific. Baron Hübner left Paris on Monday night for Anjou on a visit to his daughter. In a Cabinet Council held a few days since the Minister for Foreign Affairs is said to have spoken very energetically against France taking a part in any new conflict that may occur between Sardinia and Austria. In this opinion it is said that some of the Marshals coincided.—On Tuesday the Emperor reviewed on the race-course in the Bois de Boulogne the regiments of the Imperial Guard, with the exception of the cavalry, which is quartered at Fontainebleau, Compiègne, Melun, and Meaux. His Majesty was accompanied by the Prince Imperial, dressed in the uniform of a Corporal of the Guard, and attended by Marshal Randon, Minister of War, Marshal Magnan, Commander-in-Chief of the army of Paris, Marshal Pelissier, Marshal Vaillant, Marshal Niel, Marshal Canrobert, Commander-in-Chief of the Imperial Guard, and a numerous staff, including several Russian, German, and Sardinian officers. The army of Lyons is about to be largely reinforced, and great activity is observable at the hotel of the Minister of Marine. Admiral Hamelin is occupied with the creation of companies of naval artillerymen to be employed in the defence of the coast, and to be chosen among the trained seamen who have not yet completed their period of service. Several of the towns on the coast have been placed in a respectable state of defence. It is moreover reported that a corps of observation is to be formed on the frontiers of Alsace and of Lorraine. A serious dissension has taken place between the civil and military authorities of Algeria. The Council-General has resigned *en masse* in consequence of an arrogant letter addressed to the President by General Martimprey, the Governor-General, and has consented to remain in office only till the business of the sitting is brought to an end. The Minister for Algeria, by command of the Emperor, has addressed a letter of censure to General Martimprey for his treatment of the Council-General, and it is considered probable that on the receipt of it the Governor-General will send in his resignation. Great discontent has been caused among the working classes in Paris by the increase in the price of tobacco, pursuant to a late Imperial decree. The popular displeasure took an odd way of expressing itself. In the portion of the Tuileries reserved for the Emperor large parcels were thrown, containing ends of smoked cigars, pieces of half chewed tobacco, and old pipes. It was then resolved that one of the semi-official papers should give explanations on the subject. The *Constitutionnel* of Wednesday accordingly contained an article on cigars and the varieties of tobacco, which it is hoped will be successful in calming the irritation.

SPAIN.—In the sitting of the Cortes on Monday Marshal O'Donnell declared that the Spanish Government had resolved to maintain strict neutrality in the affairs of Italy. The Cabinet, however, had protested against the attacks of Piedmont on the Pontifical States and the kingdom of Naples, and in consequence of them had recalled the Spanish Minister at Turin, replacing him by a chargé d'affaires. The Marshal also protested against a speech delivered by the Deputy Aparici, in which doubts had been expressed as to the loyalty of the Emperor of the French towards the Spanish Government. The Government had presented a project of law to the Cortes, fixing the strength of the army for 1861 at 100,000 men.

SWITZERLAND.—The Federal Council on Saturday replied to the demands of the French Government concerning the affair of the flag at Sion. The note states that before the annexation of Savoy and Nice to France no vessels hoisting foreign colours ever landed on the Swiss shores, and maintains the theory expressed in a former despatch in reference to international offences. With regard to the insult to the French flag at Geneva on the 31st August it states that the authorities and magistrates of Geneva by their own interference on the spot, prevented any act of violence of any consequence, and immediately opened an inquiry with a view to the discovery of the guilty parties, that the majority of the citizens present also disapproved of the incident, and united in the efforts of the authorities to re-establish order, and that the inquiry has not been able to lead to the discovery either of the aggressors or of the instigators, and it has not therefore been possible to bring them before the tribunals. The elections for the new Federal Council commenced on Sunday. The result is the triumph of the national policy represented by M. Stömpflis, except in the Canton of Vaud, where the Opposition party obtained a majority over the Government. The new Assembly will meet in the first week of December to proceed to the election of the members of the new Federal Government. The Marquis de Turgot is expected to return in a fortnight to his post as Ambassador of France.

AUSTRIA.—Count Rechberg has given explanations to the Diplomatic Corps in reference to the interview at Warsaw. According to these explanations Austria put the three following questions to Russia and Prussia:—1. Will Russia and Prussia recognise the facts which have been or may be accomplished in Italy? 2. Should Austria be attacked by Sardinia, and the latter be supported by another great Power, what would be their attitude? 3. In the event of another war, and of its being transferred to any part of the territory of the Germanic Confederation, what would Prussia do? Count Rechberg informed the Diplomatic Corps that the Austrian Government is about to address a circular note to its representatives abroad on the nature and result of the Warsaw interview. The *Wiener Zeitung* publishes an Imperial Statute organising a national representation for Carinthia. The number of Deputies is to be 36, of whom 5 are to be ecclesiastics, 8 landed proprietors, 3 proprietors of mines, 6 deputies from towns, 2 deputies from Chambers of Commerce, and 12 members from communes. The powers of the deputies and the mode of election are the same as for Styria, though the tax-paying qualification is a little lower.

HUNGARY.—The official *Wiener Zeitung* contains the following Imperial resolution, dated 30th ult., decreeing the appointments of the different dignitaries in Hungary:—The Councillor of the Empire, Count Mailath is appointed *Tavernicorum Regalium Magister*; Count Franz Zichy, jun., Chief Gentleman Usher; Count Andrassy, Chief Cupbearer; Count Barkoczy, Chief Hungarian Chamberlain. Another resolution appoints 39 provincial Judges, and six Referendaries to the Court of Chancery, among whom is Court Councillor Szendenyi and Bishop Korizmics.

RUSSIA.—The Dowager Empress of Russia died on Thursday morning at St. Petersburg at half-past 8 o'clock. The German journals are unanimous in pronouncing the Warsaw Conferences a failure. The only point on which any decision appears to have been arrived at was an agreement to decline any proposition for the assembling of a Congress on the Italian question; but the *National Zeitung* of Berlin asserts that if Austria had obtained any promise of support from Prussia and Russia, she would have at once commenced war in Italy. As soon as it became evident that the expectations of the Emperor of Austria in seeking the interview were not likely to be realised, advantage was taken of the illness of the Dowager Empress of Russia to make alterations in the arrangements for the departure of the Sovereigns. The hunting excursion which was intended to take place on Friday at Skeerneewicz was countermanded; the Emperor of Austria left Warsaw before noon, and the Emperor of Russia and the Prince Regent left in the course of the afternoon. It is stated that the interview maintained to the last a purely personal character as regards both the Princes and their Ministers. At the last interview on Thursday week no stipulation was made, no convention of any kind was concluded, nor was even a protocol drawn up. At the close of the conferences the Emperor Alexander conferred upon Count Rechberg the Grand Cordon of the Order of St. Andrew, and the Emperor of Austria presented to Prince Gortschakoff a snuff-box richly set with diamonds.

ITALY.—The official return of the voting on the question of annexation in the city and province of Naples is 185,468 ayes, and 1609 noes. The result of the voting in the kingdom of Naples, with the exception of two provinces—the returns from which are still wanting—is 1,102,499 ayes, and 9371 noes. A telegraphic despatch has reached Paris stating that Garibaldi went to Sessa on the 29th, to meet the King, and reached head-quarters just as the action of the Garigliano was being fought, between Teano and Sessa. The presence of the Dictator in the King's camp excited the warmest enthusiasm, and all the troops presented arms to him. The King had decided on not entering the city of Naples until the results of the voting throughout the kingdom were officially declared. He will then go to Caserta, accompanied by Garibaldi, and there give a solemn reception to the delegates who are to bring the result of the vote. The Archbishop of Salerno, who is now at Naples, has written to his Chapter, calling on them to signify their adhesion to the Government of Victor Emmanuel. It was reported on Wednesday that the Sardinian flotilla had cannonaded the Royalists near Gaeta, that the French Admiral despatched a frigate to stop the firing, and that Admiral Persano thereupon retired, expressing his regret at the conduct of the French, and afterwards returned to Naples. A despatch from Turin dated yesterday states that a denial has been given to this statement. Further details of the recent engagements between the Sardinians and the Neapolitan Royalists have been received, from which it appears that when the King of Naples had obtained certain information that a Piedmontese army of 30,000 men would advance on Capua, it was decided to prepare for the evacuation of that place, and a commencement was made as far back as the 10th ult. in removing materiel and supplies to Gaeta. A general movement of retreat and concentration also began on the part of the Royalist army at the same time. To protect this movement a corps of 11,000 men was directed on Isernia, which had a first conflict with the Piedmontese of General Cialdini's division on the 17th. In consequence they retired on Venafro, and then on Teano; where they were joined by the corps from Cajazzo, who abandoned that position, as too distant from their new base of operations. On the 26th the two corps, forming an effective of about 15,000 men,

had a sharp engagement between Teano and Sessa, with the Piedmontese army, commanded by King Victor Emmanuel in person. They managed to effect their retreat, by leaving in the hands of the Piedmontese 500 or 600 prisoners, principally of the 3d regiment of infantry, which formed the rear-guard. On the 27th the Neapolitans began to leave Sessa, and crossing the Garigliano, established themselves behind that river, having their centre at Traetto in front of Gaeta. On the 31st King Victor Emmanuel crossed the Garigliano, and a general action is hourly expected. Capua, which is still occupied by a small body of Royalists, is besieged by Garibaldi, and the bombardment has commenced. The report which was current last week that orders had been given by Garibaldi to General Turr and the Hungarian division to prepare to embark for a destination unknown, is said to be without foundation. Garibaldi's Minister of Finance has discovered among the inscriptions of the Rentes on the "Grand Livre" a sum of 11,000,000 in the name of a man who was not worth 11,000. An inquiry was instituted, the results of which was that the man confessed that his name had been merely lent to procure safety for this large sum, which belonged to different members of the Bourbon family. The whole amount was then declared to belong to the public Treasury. In consequence of this decision the King of Naples has made a strong protest at Gaeta, denouncing the proceeding as spoliation. Colonel Peard, "Garibaldi's Englishman," has published an official report on the action of the British brigade at San Angelo, highly commending their noble conduct under fire in this their first engagement with the enemy, and giving the following list of killed and wounded:—

"*Killed.*—Ensign Barx Tucker; Private Lewis Mitchell. *Wounded.*—Privates John Clark, severely; W. Ritchie, severely; J. Prosser, severely;—Macarthy, feared mortally;—Wilson, slightly; Corporal Bennet, slightly; Privates Mathew, severely;—Bate, severely."

Accounts from Rome state that the Pope has created General Lamoricière a Roman noble, and issued a decree ordering a medal to be struck in his honour. Monsignor Sacconi, the Papal Nuncio at Paris, has arrived at Rome, on unlimited leave of absence, and the Pope has intimated his intention to raise the two French Bishops who are most hostile to the Emperor's policy to the dignity of Cardinals. Monsignor Berardi has resigned the Secretaryship of State, and his brother has been dismissed from his post in the Ministry of the Interior. The Duke de Grammont has addressed a protest to Cardinal Antonelli against the answer published by General Lamoricière in the official *Giornale di Roma* to the note in the *Moniteur* of the 15th inst. in reference to the telegraphic despatch sent by the Duke de Grammont to the French Consul at Ancona. Count Cavour has forwarded a circular to all the Sardinian Legations at foreign courts, protesting against Sardinia having been excluded from taking any share in the late Conventions regarding Syria, a participation in which he claims as a right "consecrated by Art. 7 of the Treaty of the 30th March, 1856," relating to the participation of Sardinia in the Crimean war. M. de Montalembert has addressed a letter to M. de Cavour, on the Sardinian invasion of the Papal States, in which he says:—"Your policy is not mine: you are for great neutralised States; I am for small independent States." The *Presse* remarks on this passage that "it is difficult to say in clearer terms that a man regrets being a Frenchman."

SICILY.—The Government of Sicily has issued a decree ordering that as a mark of veneration due to Garibaldi as the hero of the 19th century, the bedroom occupied by him at Palermo, in the pavilion adjoining the Royal Palace, shall be perpetually preserved in its present state, with the furniture it now contains, and that the present decree shall be engraven on a marble tablet, and placed at the entrance of the chamber.

TURKEY.—The Grand Vizier and Riza Pacha are concerting measures for the improvement of the finances. It is expected that the Government will negotiate in Paris a 5 per cent. loan of 16 millions sterling, at 53¼. A national forced loan is also spoken of. The *Levant Herald* has received a warning for an article on this subject, and on the corruption of Riza Pacha. The Austrian Internuncio has met with a severe accident. His leg is broken, and he is considered to be in a dangerous state.

INDIA.—A despatch from Calcutta, dated Sept. 22d, states that symptoms of disaffection had been manifested by the 6th European Regiment at Dinapore.

CHINA.—The Taku Forts were captured on the 21st August after five hours' hard fighting. The other forts surrendered. The enemy were allowed to march out, leaving their munitions, &c. The Allies lost 400 men killed and wounded. No British officer was killed. The 67th and 44th Regiments and the Marines, with 1500 French, were the troops principally engaged. Tientsin was afterwards occupied by the Allies. The British and French Plenipotentiaries arrived at Tientsin on the 26th, and were shortly to start for Pekin, escorted by cavalry. The Chinese Government had promised them an honourable reception. The rebels had withdrawn from Shanghai, and a better feeling of security had since prevailed. On the 18th and 20th August they attempted to enter the city, but were repulsed with terrible loss. The following telegram was received at the Foreign Office last evening. The following appears in the *Moniteur*:—

"Marseilles, Nov. 1, 1860. The General de Montauban to his Excellency the Minister of War. Camp of Sing Ho, Aug. 24, 1860.—The 12th and 14th of August—Combats which drove the Tartar army from its positions and gave us their entrenched camps. 17th Aug.—Bridge thrown across the Peiho, under the fire of the enemy. Aug. 21.—After a vehement resistance we carry by assault the most important of the Taku forts. 200 French and 250 English *hors de combat*; a single officer killed. 1000 Tartars killed, found in the fort, among whom was the General in Chief. All the other forts surrender successively. The same evening a capitulation gives us the whole country, as far as Tien-tsing, and 600 brass guns of large calibre and proportions. The Ambassadors proceed to Tien-tsing where the Chinese commissioners attend them to open negotiations. The allied army is placed in echelon along their route. The generals and admirals all proceed there under escort. The sanitary condition of the army is good.'

UNITED STATES.—A despatch from Washington of the 20th says that the returns of the Mississippi election show a majority of 20,000 for Mr. Breckenridge. The friends of the Union ticket in New York are in good spirits. It is understood that if the Catholic vote is concentrated on that ticket Mr. Lincoln's defeat is certain. Judge Douglas's trip from St. Louis to Jefferson is described as a complete ovation. On the 20th he addressed a vast crowd in front of the Capitol. Immense enthusiasm prevailed.

CANADA.—A severe shock of earthquake passed over Canada on the morning of the 17th inst. No accidents are reported. The Canadian Government organ, the Toronto *Leader*, announces that the Grand Trunk Railway Company is on the eve of a financial catastrophe, Messrs. Baring & Co. having taken steps to recover advances amounting to millions of dollars. The directors had presented a memorial to the Canadian Government praying for relief, and the Government were about to issue a commission to inquire into the affairs of the railway.

CENTRAL AMERICA.—Accounts from Costa Rica state that the revolution attempted by the Ex-President Mora had signally failed. The Government forces, under Blanco, attacked Mora's position, near Punta Arenas, and carried it by overpowering numbers. Mora and his Generals escaped, but were subsequently taken prisoners and mercilessly shot. Peace and order had been restored on the Isthmus of Panama and its vicinity. This was brought about by the landing, at the suggestion of the authorities, of forces from the American and British vessels of war. These forces remained in joint occupation of the Isthmus at the last accounts, but it was probable that they would soon be withdrawn. By the same steamer we have news from Peru of the disallowance of the American claims against that country, from Bolivia of renewed revolutions, and from Ecuador of the success of Gen. Flores, and the flight of Franco to Peru. The whole Spanish-American country, from Brazil to the frontier of the United States, including Mexico, seems to be rapidly returning to a worse state of barbarism than existed in the days of Columbus, Cortez, and Pizarro.

Public Addresses.

LORD PALMERSTON, during his recent visit to Leeds, delivered several speeches on domestic and foreign topics, of which the following is a summary. In answer to an address of congratulation from the mayor and corporation of the borough, he said:—

"In the address presented to me you have embodied opinions founded upon just principles of national government. You have expressed your sentiments as to the propriety and necessity of progressive improvement in all the institutions of the country, but you have wisely observed that it is important that they should not be forced on prematurely nor delayed too long. It is perfectly true that men who deeply reflect upon possible improvement, and who have convinced their minds of the good which would result from such changes, are often impatient of the delay which intervenes between the conception and the execution. But, though rapid and pen-stroke improvements may suit despotic countries where the executive government is all in all, where the nation is bound to obey those impulses which come from above, yet in a country like this, where the whole nation participates in the function of government, and where public opinion is as powerful as the edicts of the Premier's authority, time and delay are often essentially necessary for the accomplishment of good and useful legislation. If improvements and reforms are not fully discussed, if all the objections on one side and the other are not put forward before the mind of every reflecting man, if public opinion is not fully prepared for the change, the good, great as it may be, which may result from this change is not fully and properly accomplished. Thus it has been with all those great improvements which have been mentioned in the address just read. It is perfectly true that within the last 30 years greater improvements have been made in the laws and institutions of the country than perhaps were ever accomplished before in any country or nation in the same period of time. We have seen that great disgrace to human nature—negro slavery—abolished by a sacrifice nobly offered and nobly endured by the country—a sacrifice great, no doubt, in point of money, but which was amply compensated for by the great and honourable result which it attained. We have seen our Catholic fellow-subjects placed upon a footing of equality with the Protestant part of the community. We have seen those laws which relate to Dissenters and the Test Act repealed; we have seen the corn laws repealed—a change which produced contentment and prosperity to a great portion of the community; for, whereas before, when seasons were adverse and the price of food was raised, it was natural that men should think that the high price of provisions was created by the sordid avarice of a portion of the community, now every man must feel that if food is dear it is the result of the inclemency of the seasons, and not the consequence of any misgovernment of man. We have seen changes made in the laws regulating municipal corporations—changes vastly important with reference to the grand principle of local self-government; we have seen commercial enterprise assisted by the introduction of the principle of limited liability; but more than all, we have seen that great improvement in the political organisation of the country which was effected by the Parliamentary Reform of 1832. All these changes were the result of long discussion of the conflict of opinions and the conflict of interests, but if they had been accomplished by a stroke of the pen, they would not have accomplished the good which they have effected, being the result of discussion, and coming upon a country prepared to receive them, and sensible of the advantages which they brought with them. This address adverts, in terms for which I beg to express my heartfelt gratitude, to the general system of Administration, and especially to our foreign relations. If the Government of which I have had the honour of being a leading member has been successful in its conduct of affairs the merit is due, first of all, to the generous support which it has received from the people of this country, to the unbounded confidence of the Crown, and to the distinguished ability of those colleagues of whom it has been composed. We have no doubt been successful in aiding and assisting the spread of political liberty in other countries beyond our own—not by dictation, not by armed interference, not by imposing upon nations, unwilling or unprepared, innovations even calculated for their good, but by assisting those who were helping themselves, by aiding in those other countries the development of those principles of political freedom which we have the happiness to enjoy in our own. It is thus that in Belgium we contributed to the establishment of a system of Government which has rendered that country as happy and prosperous as any country upon the face of the earth. It is thus that we assisted Spain and Portugal in obtaining constitutions modelled upon the general principles of our own, which have contributed greatly to the happiness and prosperity of those nations. We are now seeing in another part of Southern Europe changes in progress which, I trust, may lead to the establishment of a system in Italy as conducive to the happiness and prosperity of the Italians, as, unfortunately, some of the Governments which have hitherto existed in that country have contributed to their unhappiness and their misery. But our action is the action of opinion alone. We leave the Italians to deal with their own affairs, and all we hope and wish is that other countries will follow our example, and that the people of those regions, favoured with many of the gifts of nature, should be allowed to arrange their internal affairs in the manner which may seem to them best adapted to their happiness and welfare. You have been pleased to say in your address that by the attention paid by the Government of this country to our fellow-subjects travelling and residing in foreign parts they have been clothed with the protection of England wherever they may harmlessly and innocently sojourn. That must be because the inhabitants of a country great and powerful like England, who are educated in a respect for the law, when they go abroad, go there for the purpose either of commercial enterprise or for individual instruction and recreation. They never indulge in plots and conspiracies, whatever may be their opinions as to the merits of the institutions of the countries which they visit. The people of such a country as this must be respected wherever they go, because they are sure that their countrymen at home will not look with indifference upon any insults and injuries which may be undeservedly visited upon them. You have alluded also to the maintenance of order in the country. It is the desire and the duty of the executive Government to watch over the maintenance of order in the country over whose destinies they are called to preside. But happily in this country that duty is easy, and is reduced to almost nothing. The peculiar characteristic of the English nation—that which strikes foreigners most when they visit our shores—is the manner in which the people of these realms govern themselves and maintain order among each other. It is that spirit of order, that obedience to the law, which not only affords the best security for internal peace, but which, applicable and applied as it is to all the concerns of private and public life, is the elementary principle upon which the wealth, increase, and prosperity of the country are founded, not only in its public aspects, but even in its commercial and industrial avocations. For that, then, the Government of the day can take but little credit; it is the people of the United Kingdom to whom that merit is mainly and practically due. It is, no doubt, to the daily and yearly increase and diffusion of instruction and education among the people that that spirit of order is mainly attributable, which increases from day to day as we see, and the decline of which it is now impossible to contemplate. You have been pleased in this address to refer to the loyalty of the people of this country. That loyalty is innate in the mind of every British subject; for if there is one peculiarity perhaps which belongs to the British character, it is a sentiment of gradations of rank. Every rank knows its own position; it is neither jealous of those above, nor does it treat without respect those who happen to be below it. There is a general consciousness that in human society there must be degrees, that the preservation of the grades is essential to the welfare of the community, and that feeling and sentiment is directed with increased intensity towards the Sovereign who sits on the throne. But if at all times that abstract feeling would lead the people of this country to sentiments of fervid and devoted loyalty, it is our happiness to be ruled over by a Sovereign who possesses, in a degree never surpassed, all those qualities of head and heart which are calculated to secure to her the deep-rooted affection of every one of the subjects whom she governs. It is true, as you have observed in this address, that our Sovereign is deeply imbued with the principles of the Constitution of which she is the head, and little indeed is the merit of those who are appointed by her to administer in her name if they follow in the track which she points out to them, and if they, in the administration of those powers which she confides to their hands, are sedulously and strictly observant of the limits which the Constitution of the country has imposed on the Executive authority. But there is another point in which our Sovereign peculiarly deserves the admiration and the gratitude of the country; for not only are her cares directed to the time present, but with a far-seeing foresight she has so trained and educated her Royal children, she has imbued them so deeply with all those sentiments and feelings which fit them to be members of that Royal family whom we have the happiness to look up to, that even after that day—and long may that day be deferred—when her reign shall cease,—even after that day she will bequeath to her people the legacy of a family worthy to succeed her and sure to obtain the confidence and affection of the country. And while of late years we have seen in other countries Sovereigns who have been so unfortunate as to lose the confidence of their subjects, and to entail both upon themselves and their people all those calamities which arise from such a forfeiture on the part of the ruling authority, we have the satisfaction of seeing in this country that every day rivets more closely those bonds of affectionate attachment which now exist, and which I trust will never be diminished, between the Sovereign and the subjects of the realm."—In his address to the members of the Leeds Mechanics' Institution, his lordship said that there was one important difference between the present time and the past. In the past ages there had been many men eminent for knowledge and for their discoveries in science and philosophy; but then the greatness of the nation was obscured by comparative ignorance, and long after the days of Newton and Bacon the absurd notions of astrology and witchcraft prevailed. Now knowledge was spread greatly throughout every class of society, and not only has individual happiness been much increased, but the greatness and welfare of the nation have been greatly augmented. One of the most useful of the means for spreading this knowledge was mechanics' institutes. Yet some persons had objected to these institutions chiefly on the ground that the men whom they were designed to benefit could only obtain from them a superficial knowledge, and the trite aphorism came into play—a little knowledge is a dangerous thing—for a little knowledge was a bad thing, that was, that it was a bad thing that a man

had only a little learning; but what was still worse than having a little learning was having no learning at all. And if he were permitted to give to the working and industrious classes a single word of advice, he would say this:—"Whatever your calling in life may be, learn fully, deeply, and completely everything that bears directly on that calling. Make yourselves masters of everything that will tend to help you in that particular sphere of industry. But don't confine yourselves to that. Cultivate your minds by acquiring as much knowledge as you can on as many subjects as you can. You will learn but little of each, but that little of each will make an important aggregate in the main, and every new branch of knowledge which you enter into, every addition made to your general stock of information, will improve the faculties of your minds, just as various exercises improve the powers of the body, and will make you more skilful, more able, more clever in the performance of your particular duties than if you were skilled only in that particular and simple branch." It was intended that there should be an ample and copious library in their institution. He would not recommend those who frequented the library to confine themselves solely to books of serious reading and of practical or scientific utility. The human mind required variety of exercise for its different qualities and its different functions. The imagination was implanted in man not merely for the pleasure of others by the works of imagination, but for the pleasure of the individual in exercising that faculty. That pleasure was great and laudable, and therefore, though he would not recommend a man to waste his time in what was called novel-reading, uninstructive, and not improving, yet works of imagination taught good principles by examples in the recitals they contained, tended in the first place to improve the moral feelings of the man, and, in the next place gave a legitimate enjoyment, by exercising the imaginative faculties of the readers. He was glad to see that science was also to be added, with a view to give to its members that instruction which would be useful to them in their daily business. There could not be a more useful thing in a manufacturing district than a knowledge of chemistry, and an acquaintance with the fundamental principles of science as applicable to the ordinary avocations of life. It was an interesting study, to witness the infinite variety of the animal creation, beginning with man and descending to animals which required the power of the microscope to render them visible to man. The contemplation of these organic beings, must fill the mind with admiration of the creation, of the power, of the skill, and wisdom which had directed the great Creator from whom they owed their origin. The contemplation of the descending scale, no doubt, tended to make man fancy that he was the lord of the creation, but he hoped that the institution would also direct the mind to the upward scale. He trusted that they would not only study the elementary principles of geology but also the general outlines of the planetary system revolving round the sun. They would then see what a comparatively insignificant portion of that planetary system was this earth, which the ancients used to think almost the whole of the created universe, which would abate those feelings of pride which perhaps the contemplation of the descending scale might have been calculated to inspire. There was no reason why the working-classes should not learn the general outlines of a still further science, and be taught the main principles of the organisation of the universe, and learn that the innumerable bright spots which bespangle the sky on a clear starlight night were not simply ornaments to the heavens, but that they consisted of millions of suns, many of them far larger than this earth, and each surrounded by a planetary system like our own. While on the other hand, these contemplations, by enlarging the human mind, must tend to abate the pride and vanity of prosperity, so on the other hand they must tend to calm and console those who might be labouring under adversity, by letting them see that the affairs of this world formed but a minute part of the general dispensation of the Almighty, and that all those great arrangements, whatever might be, their partial and temporary effect, were destined in the main for ultimate and permanent good. With regard to the advantages of lectures in promoting instruction—he considered that lectures led men easily and usefully to results which had been acquired by deep study; but long labour was necessary, in order that those who attended lectures might derive the full value which they were intended to impart. To effect this object a valuable system of voluntary competitive examinations had recently been established in connexion with mechanics' institutions. The three sources of knowledge—the lecture given in the general way, the subsequent study carried on by the individual, and the test put to them by the examiner—was a complete system of instruction, which, if carried out, as he had no doubt it would be, not only in Leeds, but in other parts of the country, must tend rapidly to improve the intellectual condition of the population of the united empire, and, by improving their intellectual condition, add to their happiness, and promote the greatness and prosperity of the empire to which they belong."—At the annual meeting of the Ragged School Society and Shoeblack Brigade his Lordship said: "It is only of late years that public attention has been actively and successfully directed to the minds of men, as well as to their bodily comfort, and there can be no institution more usefully applicable to the intellectual and moral culture of the rising generation than the ragged school. If we look upon it simply as regards the poor creatures who are the objects of the institution, it is plain that nothing can be more praiseworthy, and nothing more useful than institutions of this sort in their effect; but if we take a larger view, and look upon these institutions as bearing upon the social interests of the country, we shall see in that view also the strongest possible motives for encouraging and enlarging them. One of the great evils of civilized society is the uncivilized portion of the community. There must—and it is vain to hope it should not be—there must and will, be in every great community a certain amount of crime, of offence, of dissolute habits, of recklessness and improvidence: but the amount of these evils will greatly depend upon the direction which is given in the earliest years of life to the minds of the rising generation. As, in physical matters, we go to the heads of the springs and divert their course when we want to drain a morass through which they flow, so we should intercept the sources of crime at the fountain head. Inculcate, early, in the minds of the children of the country maxims of religious and moral principles. Teach them betimes the value and importance of rules, regulations, and order; teach the child, even in his school hours, to be obedient to certain regulations, and you will find that when he becomes a man he will be equally ready to submit to the laws of his country, and to maintain order in the society of which he is a member. If, then, we succeed in this—if we rescue from vice and crime a vast number of those unhappy children who, left to all the hazards and temptations to which their condition exposes them, would become criminals and victims of the law, I say you will be conferring an enormous benefit upon society—a benefit not confined to the day, not confined to the creatures who are the objects of your charity, but a benefit which every day becomes more and more extensive, which pervades every class of society, and the advantage of which will be felt in future generations as well as in the present. In the report which has been read there was a point mentioned which shows another and important bearing of this institution. You have been told, what in human nature might have been expected, that though instruction, moral and intellectual, in the ordinary course of nature descends from parent to child, yet that sometimes that current will be reversed—that moral and religious and intellectual instruction will go upwards from the child to the parent; that when a child has been well brought up and instructed, and the parents have had the misfortune of being differently situated, the example of the child will operate upon the conduct of the parents—that the parents will be reclaimed from habits which bring them to poverty and disgrace, by seeing in the example of their children that which they will blush not to be able to imitate and follow."

City Intelligence.

London and Eastern Bank.—A call of 75*l.* per share was made on Wednesday in the Vice-Chancellor's Court upon the unfortunate shareholders of the London and Eastern Banking Corporation, making, with the 100*l.* previously paid, a total loss of 175*l.* upon every share.

Monky Market, Friday.—British Funds: Consols closed at 92⅞ to 93 both for Money and the Account; Bank Stock, 231; Three per Cents. Reduced, 91⅜ to ½; New Three per Cents., 91½ to ¼; New Two and a Half per Cents., 77½; India Stock, 220½; Ditto Five per Cent. Stock, 1859, 103⅛; Ditto Four per Cent. Debentures, 1859, 96⅛; Ditto Bonds, 7*s.* to 8*s.* dis.; Exchequer Bills, 3*s.* dis., par, 3*s.* dis.—Foreign: Brazilian Four and a Half per Cents., 1860, 88¼ to 88; Dutch Two and a Half per Cents., 64¾; Mexican Three per Cents., for Acct., 22¼; New Granada Deferred, 5¾; Portuguese Three per Cents., 1856, 1857, and 1859, for Acct., 44¾; Russian Four and a Half per Cents., 94¼ to 94; Ditto Three per Cents., 1859, 62⅜ ex div.; Spanish Three per Cents., for Acct., 49; Ditto New Deferred Three per Cents., for Acct., 40; Committee's Certificates, 6¼ to ⅜; Turkish Six per Cents., 1854, 71¼; Ditto for Acct., 71 to 70⅞; Ditto for 1858, for Acct., 58.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,862,550	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	13,387,550
		Silver Bullion	—
	£27,862,550		£27,862,550

BANKING DEPARTMENT.

Proprietors Capital,. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,490,273
Rest	3,138,965	Other Securities	19,758,226
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	4,156,309	Notes	6,359,120
		Gold and Silver Coin ..	740,323
Other Deposits..	13,736,933		
Seven day and other bills	762,735		
	£36,347,942		£36,347,212

1st day of Nov., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—H. Boreham, Wilmot Street, Russell Square, Plumber—R. C. Davies and J. N. Troughton, Shoreditch, Bankers—H. R. English, Brierley Hill, Staffordshire, Licensed Victualler—W. Harman, Emmett Street, Poplar, Outfitter—J. Hartley, Calverley, Yorkshire, Cloth Manufacturer—J. Hollings, Charles Street, Hampstead Road, Cowkeeper—J. Hilford, Birmingham, Licensed Victualler—G. F. Larratt, Coleman Street, City, Lithographic Printer—J. Martin, Sedgley, Staffordshire, Innkeper—E. L. Moore, and J. L. Moore, Dorking, Surrey, Carpenters—G. Porra, St. James's Street, Westminster, Tailor—F. Sage and P. Parter, Hatton Garden, Builders—W. Strong, Merton Road, Wandsworth, Builder—G. Wilkinson, Durham, Grocer.

BANKRUPTCY ANNULLED—A. Sylvester, Clapham Road, Photographic Artist.

FRIDAY—BANKRUPTS—J. M. Abbott, Hanwell, Builder—W. H. Abram, Manchester, Upholsterer—E. A. Acton, Preston, Factor—J. Arnold, the younger, Woodbridge, Suffolk, Innkeeper—C. J. Ball, Peterborough, Coal Merchant—F. Baker, Wednesbury, Draper—G. Batters, Nottingham, Printer—T. Booth, Manchester, Grocer—W. Boyce, East Dereham, Norfolk, Printer—F. Caplin, Drury Lane, Hosier—J. Clarke, Maindee and Newport, Licensed Victualler—W. Cox, Lamb's Conduit Street, Pickle Manufacturer—R. H. Curtis, Aberavon, Glamorgan, Grocer—T. B. Daniell, Poplar, Ironmonger—G. Fielder, Manchester, Woolstapler—C. Herbert, Churton Street, Pimlico, Printer—T. Laurence and W. Mortimore, St. Mary Axe, City, Leather Factors—J. S. Marshall, Billiter Street, City, Boot Factor—T. Mayo, Chesham, Buckshire, Wooden Ware Manufacturer—J. Miller, Nottingham, Pawnbroker—W. Nicholls, Leicester, Blue Manufacturer—G. Pacey, Birmingham, Factor—L. Powell, Chapel Place, Cavendish Square, Builder—R. E. Ridley, Great St. Helen's, Bishopsgate Street, Merchant—W. H. Rutherford, Nottingham, Grocer—W. Smith, Eastbourne Mews, Westbourne Terrace, Paddington, Horse Dealer—W. Thompson, Newcastle-upon-Tyne, Tailor—E. Timpwell, Kirkdale, Lancaster, Cattowner—R. Unthank, Yorkshire, Boot and Shoemaker—W. J. Welch, Nantwich, Builder—J. Wood, C. Wood, and T. Marshall, Ponder's End, Coal Merchants.

BANKRUPTCY ANNULLED—T. Tolson, Ossett and Dewsbury, Yorkshire, Carpet Manufacturer.

Metropolis and its Vicinity.

The Street Railways.—On Saturday Mr. Train attended the adjourned meeting of the Marylebone vestry, and explained the details of his proposal to lay down street railways in various parts of Marylebone. A great number of deputations attended with protests and memorials against the proposal, and a long and excited discussion took place. Ultimately a communication from Mr. Train was read, stating that having observed the opposition, and not wishing to cavil in antagonism with so large a parish, he desired that all action upon the matter might be postponed until the vestry could see the system in operation in Victoria Street. It was then resolved, with only five or six dissentients, to adjourn the consideration of the question for three months.—At a meeting of the City Commission of Sewers on Tuesday Mr. Train attended the Court, at the request of the Commissioners, to afford explanations of his system. He was accompanied by Mr. James Samuel and Mr. G. B. Bruce, engineers, and he produced a model of his proposed street railway and omnibus, the latter constructed to carry 48 passengers, 24 inside and 24 out, and intended to be drawn by a couple of horses. The railway model exhibited a single line of rails running right down the middle of a street, with a gauge similar to an ordinary railway of 4 ft. 8½ ins., and leaving a space on each side for the accommodation of other traffic, the width of which spaces will always depend on the breadth of the street in which the project may be adopted. Mr. Train stated that he proposes to lay down in all the leading thoroughfares in the city his line of rails at his own cost, and in a manner to satisfy the surveyor to the commissioners; that he will undertake to do that within an interval prescribed by the commission, and that in the event of the system, on a trial, being regarded by them as a public inconvenience, he will put an end to it, and reinstate the streets at his own cost. He showed that there was no groove in his lines, in which the wheels of ordinary carriages could stick; but, on the contrary, a flat surface of metal, six or eight inches wide, which all might use free of charge, his patent rights being confined to the peculiar construction of the carriage which he uses. At the outer edges of his lines there is a guiding flange, but it is only five-eighths of an inch high, and offers, as he submits, no obstruction to a carriage crossing the road or one leaving his beaten track to set down a passenger on the kerb or for any other purpose. The outside width of his carriages is 6 feet 8 inches, the gauge of the rails being, as already stated, 4 feet 8½ inches. On the level metal plates many ordinary carriages of various kinds may travel with two and always with one wheel. The paved part of the road between the rails, as well as the rails themselves, will be maintained by him at his own expense. The introduction of his system will not diminish by one inch the ordinary roadway available for the general traffic, and while the road remains open to all, his plan will afford facilities for conveying great numbers of people from point to point in great cities and towns, in a regular, noiseless, and expeditious manner, greatly calculated to promote the public convenience and to relieve the thoroughfares. The very narrowness of the streets of London, and the consequent stoppage of the traffic, he contended was one main reason why railways to relieve them should be introduced; and he pointed to rails laid down in the streets of New York, the Broadway, of course, excepted, where they are no wider than that of Cheapside, and also in Philadelphia with a population of 600,000 inhabitants. At the junction of crowded streets, where the principal obstructions take place, he said that the most fruitful cause of those obstructions lay in the street vehicles having power to wander over the whole breadth of the carriage-way in any direction, and that any one attentively observing the confusion at the south end of London Bridge and the Poultry could not but be struck with the fact that one-half the difficulties might be removed by a little organisation and order, which the existence of railways, and the necessary confinement of at least one important class of vehicles to a definite track, would tend materially to promote. Besides confining the railway omnibuses to a given track, he submitted that the great mass of other conveyances would fall into the same line, as a matter of convenience, and that the result of his observations in America would be found not less applicable to our own towns,—namely, that the railway traffic and the ordinary traffic move on together, not only without mutual interference, but that the railway materially relieves the other. The danger supposed to arise from the difficulty of stopping the railway omnibuses and preventing their running into other vehicles, he contended had no existence; inasmuch as the breaks on those omnibuses enabled the coachman to stop them more quickly than an omnibus on an ordinary road. There was also, he said, the diminution of wear and tear in the roads, seeing that on a level railway one pair of horses will do the work of four pairs on an ordinary road, so that instead of having four omnibuses scattered over the roadway we should have one moving steadily along, doing the work of four. Add to all this the great saving of money to the public by the introduction of a much cheaper mode of conveyance, and a further saving of from 20 to 30 per cent. to the parishes in paving rates. He looked for his profit to carrying passengers at prices not exceeding, if not less than the present omnibus fares, in vehicles more than twice their capacity. His object was to classify the city traffic, as is now attempted to be done on London Bridge, so that his system would become, as it were, a self-constituted police. If his plan were a good thing, and were adopted by the Commission, he believed that they would allow it to remain; if otherwise, he would take it up. Permission had been obtained for testing it in Victoria Street, Westminster, and Southgate Road, Hackney. Nearly all the metropolitan vestries had reported favourably on the project; that of Lambeth having sent down a deputation to Birkenhead to see it in practical operation. The omnibuses which he used, besides their internal accommodation and luxury, had great facilities for passengers alighting in the streets; so much so that in Birkenhead men mostly alighted when the vehicle was in motion, and it was only stopped for the convenience of ladies. He asked for no exclusive privilege as to the use of his rails; they would be free to all. He protected himself only against the infringement of his patent rights with respect to his carriages, and looked for a return for his outlay simply to competition with the existing class of public vehicles. He stated incidentally that at Birkenhead the leading omnibus proprietor had become the superintendent of the new system there. He added that his solicitor was now preparing a permissive Bill for introduction into Parliament next session, with the view to enable corporations and parishes to adopt his plan. He admitted there would be practical, but not insurmountable difficulties in carrying it into operation in such places as Holborn Hill and Ludgate Hill. To avoid Holborn Hill he proposed to make a detour in going from Tottenham

Court Road to the Bank, by Guidlford Street, Northampton Square, and Aldersgate Street, into Cheapside; and he contemplates a line along Cheapside for the traffic going in one direction, and another along Cannon Street for the returning tide. He was asked several times where he intended to begin and end, but his answers in that respect appeared somewhat vague, and to indicate that his project as applicable to London, was as yet scarcely matured in his own mind. To one of those questions he replied he was in no hurry about the city; his object was to show the process in practical operation, and then to leave it to speak for itself. As to the freedom of his scheme from danger, he stated that out of 70,000,000 of people who had travelled along the street railways of New York, Philadelphia, and Boston, only 16 had met with accidents. The members of the Court during the inquiry started several difficulties in the way of the practical working of the plan in the crowded thoroughfares of the city but upon the whole they appeared to regard it with favour, many of the Commissioners with marked approbation; and after a brief discussion the consideration of the question was ordered to stand adjourned for a month. The Chairman on the part of the Commission thanked Mr. Train for the ample explanations he had afforded them on a subject of great public importance, and for the frankness and courtesy with which he had done so. He also apprised him of the conclusion to which the Court had arrived, with which Mr. Train said he felt satisfied.

EXPLOSION OF A LOCOMOTIVE AT KING'S CROSS.—A serious accident took place on Thursday morning at King's Cross. An engine belonging to Mr. Jay, the contractor for the Metropolitan Railway, and employed by him as a ballast engine, exploded at the entrance to the works within the premises of the Great Northern Company, killed the driver and fireman upon the spot, and injured one of the labourers so seriously that he is not expected to live. The funnel of the engine was blown over the high stone wall into York Road, by which a cabman was knocked down and seriously injured on the head. Several other men who were near at the time were more or less injured, but not dangerously.

ST. GEORGE'S-IN-THE-EAST.—Mr. Rosier's appeal against a conviction by Mr. Elliott, the police magistrate, by which he was fined 3*l.*, or ordered, in default of payment, to be committed to the House of Correction for 14 days, for molesting the officiating clergyman at this church, was heard on Wednesday at the Middlesex sessions. After a long argument the conviction was quashed, upon the ground that the magistrate had no power to order imprisonment in default of payment of a fine, the law requiring him to inflict a pecuniary penalty absolutely, or commit to prison absolutely; and *giving him no power to combine both*, and make imprisonment the alternative of a fine.—On Sunday last the services at this church were again, as on the previous Sunday, conducted both morning and evening without any interruption worth notice.

MR. RAREY'S FAREWELL.—Mr. Rarey made his last appearance before the English public on Saturday, in the centre transept of the Crystal Palace. After introducing to the company the well known convert Cruiser, to show that from an exceedingly depraved and dangerous animal he had become one of the greatest docility and obedience, he directed the principal subject of the day's experiments to be led in. This was an Irish mare of the most vicious propensities, who kicked, screamed, and would have bitten but for a strong iron muzzle. Without entering into details, which by this time are familiar to all the world, it is sufficient to say that Mr. Rarey's conquest was perfect, and that the mare, after a struggle of 20 minutes' duration, was his tractable slave. Another animal, with a strong objection to having his hind legs meddled with, was next brought in and cured of what Mr. Rarey said was simply a nervous habit of kicking. Mr. Rarey then took leave of the assembly, and said that he should bear with him to America the most grateful feelings towards the English people.

THE EARLY-CLOSING MOVEMENT IN THE SUBURBS.—The grocers, oilmen, and provision dealers of Clapham have recently agreed to close at half-past 8 every evening, except Saturday. The drapers close earlier, particularly on Saturdays, on which day two have adopted 5 o'clock. In Larkhall Lane, the tradesmen have commenced closing at 9, except Saturdays. In this latter locality four tradesmen, who have hitherto kept open on Sundays, have agreed to keep closed on that day in future. At Brixton Hill the general body of the tradesmen, about 50 in number, have signed a declaration to close their shops at 8 o'clock, Saturdays excepted.

FIRE AT THE BROMLEY FLOUR MILLS.—On Sunday afternoon the extensive steam flour-mills of Messrs. Goodman Brothers, at Bromley, near Bow, were destroyed by fire. The premises comprised several brick buildings, the mills being 150 feet by 60 feet, and four stories in height. The granary was also of similar dimensions, and at the rear on the Lea river were the engine-house, smithy, and workshops. The stores contained 7000 sacks of flour, and 500 quarters of corn It is said that the firm are insured in several offices.

WESTMINSTER BRIDGE.—A return made by the First Commissioner of Works shows that since July, 1856, when the report of a committee stated that 50,000*l.* has been expended upon Westminster Bridge and the approaches, there has been a further sum of 196,283*l.* laid out upon the bridge, and of 36,919*l.* upon the approaches. The engineer, Mr. Page, reports that he expects to be able in January next to give possession of the piers and abutments of the new bridge to Messrs. Cochrane & Co., who have contracted to complete the iron work of the second half of the bridge in nine months; their work, therefore, according to their contract, will be done by the end of October, 1861. In that case, allowing time for the foot pavement and roadway, the new bridge may be expected to be completed about Christmas, 1861.

METROPOLITAN BOARD OF WORKS.—Alderman Lawrence has been elected by the Court of Common Council one of the City members of the Board of Works in the room of Alderman Cubitt, who has resigned his seat on being elected Lord Mayor.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, October 27, were 1026. The average for corresponding weeks in the 10 years 1850–59, after correction for increase of population, is 1141. The present return is therefore 115 below the average. During the week the births of 994 boys and 955 girls, in all 1949 children, were registered in London. In the 10 corresponding weeks of the years 1850–59 the average number was 1595.

Provincial.

BRADFORD.—On Tuesday John George Gowland, attorney's clerk, the father of the two children murdered by their mother on the night of the 21st ult., was again brought before the magistrates, in reference to the charge of forgery or perjury preferred against him last week. The chief constable stated that he had written to the vicar of St. Oswald's, Durham, and ascertained that no marriage ever took place in that church between the prisoner and Margaret Sutton. The document found in the prisoner's box, and purporting to be the marriage certificate, was signed "Henry Thomas Fox." There was no clergyman of that name, but there was a clergyman connected with St. Oswald's, Durham, of the name of George Townsend Fox. He was in a position to prove that the certificate was in the prisoner's handwriting, and that he had used it, but there was no proof that he had used it with a fraudulent intent. The magistrates thereupon decided that after this evidence neither the charge of forgery nor that of perjury could be sustained. The prisoner was therefore discharged, and had to leave the court by getting over a wall at the rear of the premises, in order to escape the summary punishment which the crowd outside would have inflicted on him if he had fallen into their hands. On Tuesday evening Margaret Gowland, *alias* Sutton, was considered much better, and her recovery more probable.

CAMBRIDGE.—The election of the Hulsean Professor of Divinity (the first under the new arrangements with regard to Mr. Hulse's benefactions) took place on Tuesday, at the lodge of the Vice-chancellor, when, out of several candidates, the Rev. Charles John Ellicott, B.D., of St. John's College, Professor of Divinity in King's College, London, was elected.

CHICHESTER.—The funeral of the late Duke of Richmond took place on Tuesday in the family vault in Chichester Cathedral. There were a great many applications on the part of the Royal family and nobility to be allowed to send their carriages; but it appears that the duke left a document, written shortly after the funeral of his father-in-law, the Marquis of Anglesey, in which he requested that his family would see that his own funeral should be conducted in the most private and quiet way. In accordance with this wish all the offers were declined, and the funeral arrangements were on the most unostentatious scale. The mourners included the Duke of Richmond, Lords Henry, Alexander, and George Gordon Lennox, sons of the deceased; the Earl of Bessborough, Prince Edward of Saxe-Weimar, and Lord Bingham, his sons-in-law; Lords George, Sussex, Arthur, and William Lennox, brothers of the deceased, and Dr. Hare.

LEEDS.—On Friday Lord Palmerston received an address of congratulation in the Victoria Hall from the Mayor and Corporation of Leeds, after which the Mayor entertained his lordship and a select party at luncheon in the Town Hall. In the afternoon his lordship visited the works of Sir Peter Fairbairn, and presided at the annual meeting of the Ragged School and Shoeblack Society. On Saturday morning Lord and Lady Palmerston and Mr. Cowper left Kirkstall Grange for Temple Newnham, where he took luncheon with Mr. Meynell Ingram, and then proceeded to Pontefract, on a visit to Mr. Monckton Milnes, at Frystone Hall.

NEWMARKET.—A most daring garotte robbery was perpetrated in this town after the close of Friday's races. Mr. William Nichols, of Nottingham, a large bookmaker, went to an establishment in one of the main thoroughfares where sporting men are in the habit of assembling during the races, and wrote a letter for transmission by that evening's post to Nottingham. He then left the house and proceeded to the back of the premises, when he felt himself suddenly grasped tightly by the neck from behind, and in such a manner as to deprive him of all power of resistance, or of power to give an alarm. At the same instant he saw a little man come in front of him, and heard a voice say, "Open his waistcoat." He then became insensible, and was unconscious of anything for some time. On recovering he found himself lying on the ground with his clothes disarranged, and on searching his pockets he discovered that he had been robbed of his watch and the whole of his money (with the exception of 2*d.*) amounting to 1840*l.* 1*s.* 6*d.* in banknotes, gold, and silver, and a check on Messrs. Moore and Robinson's bank for 850*l.* No trace of the thieves has yet been found.

NOTTINGHAM.—Mr. Robert White, lace manufacturer, of this town, and his former traveller, John Davis, were committed for trial on Monday, the former on the charge of uttering forged acceptances, and the latter on the charge of forging the signatures to the paper put in circulation by his employer.

PONTEFRACT.—On Saturday morning Lord Palmerston opened the new market which has just been erected in this town. The most extensive preparations had been made to do honour to his visit; an arch of welcome had been erected across the principal street; the houses were gaily decorated with flags; all the inhabitants turned out into the streets in their holyday attire, and there was a large influx of visitors from the outlying districts. On the arrival of Lord and Lady Palmerston they were met at the entrance of the town by the Mayor and corporation, accompanied by Mr. M. Milnes and Mr. Childers—the members for the borough, Lord Galway, Mr. Beaumont, M.P., and a number of the principal gentry of the district. The Pontefract rifles with their band turned out as a guard of honour, and headed the procession, which was then formed to the hall. All along the line the cheering was loud and cordial. On arriving at the hall, which had been densely filled some time before, an address was presented by the mayor on behalf of the corporation, to which Lord Palmerston replied. The market was then declared to be open, and the ceremony ended. After a short stay at the mayor's house, the party left for Frystone Hall, on a visit to Mr. Milnes. On Sunday Lord Palmerston was allowed to spend the day in comparative quiet, though not in retirement, for a large party of the neighbouring nobility and gentry, including the Archbishop of York, Lord Howe, and Lord Crewe, had been invited to meet him; and his presence at morning service drew to the little church of Ferry Frystone a congregation which overflowed at each porch far into the churchyard, not to speak of the long line of rustics which was formed at every window. The Pontefract Rifle Corps, with their band, also constituted themselves part of the congregation. Monday was devoted to a close inspection of his lordship's Fairburn estate, which lies in the immediate neighbourhood. Early in the morning the Badsworth fox-hounds made their appearance at Frystone, the master having contrived a fixture near the Hall in order that the gentlemen of the hunt might have an opportunity of paying their respects to the Premier. There was a very numerous field, Lord Hawke, Mr. G. Leigh, and nearly all the crack Nimrods of the Badsworth country being present. The expectations entertained by many that his lordship would join in the day's sport were disappointed, for though he showed at the meet in front of the Hall, he mounted as soon as the dogs were set to work in one of the adjacent covers and rode off in an opposite direction towards Fairburn, accompanied by Mr. Cowper and his agents. His estate there, partly hereditary and partly purchased, comprises the hamlet of Fairburn, and between 1300 and 1400 acres very prettily situate along a gentle slope which rises from the banks of the Calder. It is 27 years since he last visited it, and there are not many of the tenants who have laid eyes on their famous landlord before. The inspection was of a very minute character, and appeared to give general satisfaction on both sides. One of its results is worth recording. Fairburn has but one street, and about the middle of it the most careless visitor cannot fail to have his attention arrested by a low, iron-hasped door, guarding the entrance to what seems a cavern cut out of the sandstone rock, which just there comes right down into the road. This is the village lockup or watch-house, though it is proper to say that the rusted padlock and hinges show how long it is since it was put to much use. On passing by it Lord Palmerston turned round and asked what it was? "Fairburn lock-up," was the answer. "It is a place worthy of Naples. Whose is it?" "Your lordship's," replied the agent. "Oh, mine is it," rejoined his lordship; "then let it be taken down, and mind it's done at once." The noble lord also inspected the village school, of which he is the principal supporter, and on leaving he gave a piece of land to enlarge the burial ground of the chapel of ease. After the inspection his lordship was entertained at luncheon by the principal tenantry, and there being no room in the village large enough, it took place in the dining-room of the vicarage at Ledsham, which is about a mile distant. After this he drove to Byram Hall, on a visit to Sir J. Ramsden. On Wednesday, his lordship's tour through the West Riding was untimely cut short in the full tide of success. In the drive from Leeds to Pontefract on Saturday Lady Palmerston caught a severe cold, which grew so much worse that it was thought advisable on Tuesday to remove her to town as soon as possible, and the party accordingly left Sir J. Ramsden's seat at Byram for London early on Wednesday morning. It is difficult adequately to describe the disappointment which this

abrupt departure caused in the places which his lordship had promised to visit. From the preparations made to welcome him, there can be no doubt that the most triumphant part of his progress had yet to come. At Wakefield, in particular, the agricultural capital of the West Riding, his reception would have been of the warmest character, and before it was possible to countermand the preparations or make known his lordship's return to London, the town was filled with country people who had come many miles to witness his arrival. In Rotherham also a general fête had been proclaimed, and the most extraordinary preparations had been made to bring the tour to a brilliant termination.

TROWBRIDGE.—It is announced that the Road murder is to be investigated *de novo*, precedents having been found for re-opening the coroner's inquest. Early in the present term application will be made to the Court of Queen's Bench that the Lord Chief Justice, in virtue of his office as Chief Coroner of England, do direct the coroner for the northern division of Wilts to recommence the investigation, and that it is intended to adjourn the inquiry from time to time until every means of arriving at a definite conclusion shall have been adopted. It is understood that an immense mass of information is now in the hands of Mr. Slack, the solicitor, to whose industry this second inquiry is mainly due.

Ireland.

THE CLARE MURDER.—The Lord-Lieutenant has issued a proclamation offering a reward of 200*l.* for the apprehension and bringing to justice of the perpetrators of the murder of Alderman Sheehy. It is said that marks of footsteps have been traced close to the residence of the Alderman, which correspond with boots worn by one of the parties now in custody. A further arrest has been made of the uncle of one of the prisoners.

THE PAPAL BRIGADE.—Major O'Reilly, commandant of the brigade, has written to the *Times*, to state that "no arrangements have been made between the Sardinian and British Governments to send the Irish prisoners to Ireland at their joint expense. By the terms of the capitulation they were to be 'conducted to the frontier and there set at liberty,' and the expense of their return to their country has been and is being defrayed by the Pontifical Government and the Irish people." Upwards of 900 men of the brigade have already arrived at Havre, and are hourly expected in Cork, where great preparations have been made for their reception. The collection ordered by Dr. Cullen to be made on Sunday for their relief is said to have been a complete failure, the amount raised being wholly inadequate to relieve their wants and supply them with clothing, of which it seems they are in urgent need.

THE DUKE OF DEVONSHIRE'S YOUGHAL ESTATE.—Mr. D. L. Lewis, of London, to whom the public is indebted for the construction of the Cork and Youghal Railway, has become the purchaser of this estate.

MR. ST. JOHN O'GORMAN MAHON has renounced the faith of the Church of Rome, and embraced the doctrine of the Church of England. Mr. Mahon is the only son of The O'Gorman Mahon, for many years M.P. for Ennis, and an active member of the Liberal party.

THE ORANGE ANNIVERSARIES.—The Dean of Down has refused to permit an Orange sermon to be preached to the Orange Lodges of Lecale in the Cathedral of Downpatrick, on Monday next the 5th November.

Sporting.

NEWMARKET HOUGHTON MEETING.

SATURDAY.—*Free Handicap Sweeps.* Major Hibberd's Pitman beat Feodorowna, Neoptolemus, and Claire.—*Sweeps.* Mr. Jackson's Duchess beat Man Friday, Pomona, Neophyte, and Raspberry.—*Handicap Plate.* Mr. Payne's Copernicus beat Brilliant, Forester, and 17 others.—*Sweeps.* Mr. H. Savile's Lady Blanche beat Robinson Crusoe and Hesper.—The *Houghton Handicap.* Captain Little's Man-at-Arms beat Rockley, Winton, and 12 others.—*Sweeps.* Lord Stamford's Sacerdos beat Stitch in Time and Little's Julio.—*Sweeps.* Mr. T. Hughes's Juliet beat Bayard, Leontes, and 12 others.—*Sweeps.* Mr. S. Thellusson's Lady Peel beat Trovatore.—*Handicap Sweeps.* Baron de Niviere's Isabella beat Auricula, Belleisle, and 5 others.—*Handicap Sweeps.* Mr. Gilby's Flash-in-the-Pan beat Miss Eleanor and Guilder.—*Selling Handicap Sweeps.* Mr. Jackson's Weatherproof beat Miss Emma, Weatherwitch, Ellen, and Veracity.

Obituary.

THE EARL OF DUNDONALD died on Wednesday morning, at his residence at Kensington, in his 85th year. The noble Earl, better known as Lord Cochrane, was born in 1775, and when only five years of age, was entered on the books of the Vesuvius, bomb, commanded by his uncle, Captain Cochrane, who transferred it successively to the Carcline and the Sophie. He did not however go to sea until 1793, when he embarked with his relative in the Hind of 28 guns. Previously to this he had been gazetted to a Captaincy in the 79th Foot, but had not joined his regiment. From 1795 to 1809 he served in North America and on the coasts of France and Spain, and was present at numerous engagements with the enemy, particularly distinguishing himself in cutting out expeditions and in storming forts and semaphores upon the coast. He obtained his post rank for the capture of a Spanish frigate, and in 1809 served at the defence of Rosas, and planned and executed the attack on the French fleet in Aix Roads, for which he was created a Knight of the Bath. He had been previously chosen M.P., first for Honiton and afterwards, in 1807, for Westminster; but his prospects of promotion were ruined by his constant opposition to the ministry, and by the stock-jobbing transactions of 1814. Early in that year a false report was spread, that Napoleon had fallen, on which the funds suddenly rose, and Lord Cochrane and several of his friends sold out to a large amount. He was tried and found guilty of being concerned in propagating the report, and was sentenced to a heavy fine, a year's imprisonment, and to stand in the pillory. He was also deprived of the Order of the Bath, of his rank in the Navy, and expelled from the House of Commons. One part of the sentence—the pillory—was remitted. The electors of Westminster again chose him for their representative, and, under circumstances of extraordinary daring, he broke out of prison and appeared in his place in Parliament. In 1818 Lord Cochrane accepted the command of the fleet of the South American state of Chili, and was subsequently appointed to the command of the Brazilian fleet. He next gave his services to Greece, and was employed in that country from 1827 to 1828. In 1830, on the accession of the Whigs to office under King William IV., he was reinstated in his rank in the British Navy, from a feeling that he had been made the victim of party; and in 1847 the order of the Bath was restored to him. He became Vice-Admiral of the Blue in 1841, and was appointed a Commander-in-Chief on the North American and West India station in 1848. In 1851 he became Vice Admiral of the White, and in 1854 Rear-Admiral of the United Kingdom. Besides his other honours, he was Baronet of Scotland and Nova Scotia, of 1673; G.C.B., 1847; Marquis of Maranham in the Brazils; Grand Cross of the Imperial Brazilian Order of the Cruzero; Knight of the Royal Order of the Redeemer of Greece; and of the Order of Merit of Chili. He succeeded to the ancient honours of his house on the death of his father, the 9th Earl in 1831. He married in 1812, the daughter of the late Mr. Thomas Barnes, by whom, who survives, he leaves four sons and a daughter, Thomas Barnes Lord Cochrane (now Earl of Dundonald), born in 1814, and married, in 1847, to the daughter of Mr. W. A. Mackinnon, M.P.; Hon. Horace Bernard William, born in 1818, and married to the only daughter of the late Alexander Nicholson, Esq.; Captain the Hon. Arthur Auckland, R.N., C.B., born in 1824; Lieutenant the Hon. Ernest Grey, R.N., born 1834; and Lady Katherine Elizabeth, born in 1821, and married to Mr. J. W. Fleming, of Stoneham Park, Hants.

EARL MANVERS died on the 27th ult., at his seat, Thoresby Park, Nottinghamshire, at the advanced age of 82. The deceased, Charles Herbert Pierrepont, Viscount Newark and Baron Pierrepont, was born at the Ranger's Lodge, Richmond Park, in 1778. In 1804 he married the eldest daughter of the late Mr. Anthony Hardolph Eyre, by whom he had two sons and three daughters. He succeeded to the titles and estates on the death of his father in June 1816. His lordship was formerly in the Royal Navy, and represented Nottinghamshire in Parliament from 1801 to 1816. His father, the first peer, was Mr. Charles Meadows, who, upon inheriting the estates of his uncle, the last Duke of Kingston of that line, assumed the name of Pierrepont, and was created Viscount Newark and Baron Pierrepont in 1796, and Earl Manvers in 1806. His lordship is succeeded in the family honours by his only son, Viscount Newark, M.P. for South Nottinghamshire, born in 1825, and married, in 1852, Madlle. Gorgian, daughter of the Duke de Coigny.

WILLS.—The will of the Right Hon. J. Wilson has been sworn under 35,000*l.*; Dr. Addison, M.D. late physician to Guy's Hospital, 30,000*l.*; Rev. David Laing, M.A., rector of St. Olave, London, 8000*l.*; Captain Camilleri, R.N., 6000*l.*

BIRTHS.—On the 21st ult, the Lady CHARLES PELHAM CLINTON, of a son—26th ult, at 16, Rutland Gate, the Lady ALFRED SPENCER CHURCHILL, of a daughter—30th ult, at 68, Park Street, Grosvenor Square, the Hon. Lady ST. JOHN MILDMAY, of a son—28th ult, at 12, Wilton Crescent, the Lady EMMA TOLLEMACHE, of a son—27th ult, at 16, Great King Street, Edinburgh, Lady HAMILTON, of a daughter—25th ult, at Torworth, Notts, the Hon. Mrs CLOWES, of a son—16th ult, at York, the wife of the Hon and Rev. FRANK SUGDEN, of a son—17th ult, at Poonah, Bombay, the Baroness DE HOCHEPIED-LARPENT, of a son—31st ult, at Putney, the Hon. Mrs. BIBER ERSKINE, of Dryburgh, of a daughter—24th ult, at Abbot's Hill, Herts, the wife of JOHN DICKINSON, Jun., Esq., of a son and heir—23d ult, at Canwick Hall, near Lincoln, the wife of Major WALDO SIBTHORP, M.P., of a son.

MARRIAGES.—On the 20th ult, at her Majesty's Legation, Berlin, AUGUSTUS B. PAGET, Esq., her Majesty's Envoy Extraordinary and Minister Plenipotentiary at Copenhagen, to the Countess HOHENTHAL, Maid of Honour to H.R.H. the Princess Frederic William of Prussia—30th ult, at Newick, the Hon. CHARLES CORNWALLIS CHETWYND, third son of Viscount Chetwynd, to EMILY HANNAH, only daughter of W. H. BLAAUW, Esq., of Beechland, Sussex—30th ult, at Chaddleworth, BERTRAM WODEHOUSE CURRIE, Esq., to CAROLINE LOUISA, younger daughter of the late Sir WILLIAM LAWRENCE YOUNG, Bart.—30th ult, at Worplesdon, the Rev. STIRLING F. MARSHALL, Rector of Farnham Royal, Bucks, to GEORGENA MYRA S., only daughter of the Rev. CHARLES LUXMOORE, Fellow of Eton College, and Rector of Worplesdon, Surrey—25th ult, at St. James's, Piccadilly, EDMUND MERVIN BOOTH STORY MASKELYNE, Esq., son of Anthony Mervin Story Maskelyne, Esq., of Basset Downe House, Wilts, to MARTHA BUNGER, eldest daughter of THOMAS RUSSELL, Esq., of Beaminster, Dorsetshire—21st Aug., at Victoria, HENRY MONTAGUE DOUGHTY, Esq., of Theberton, Suffolk, to EDITH REBECCA, youngest daughter of DAVID CAMERON, Esq., Chief Justice of Vancouver Island—23d ult, at the British Consulate, Ostend, Captain H. V. PENNEFATHER, late 41st Regiment, to MARGARETTA, only daughter of SIR JOHN DELA POLE, Bart.

DEATHS.—On the 29th ult. at Charles Street, Berkeley Square, LEONARD PEPYS, youngest son of the late Dr. GOODENOUGH, Dean of Wells, aged 21—23d ult, in Wentworth Place, Dublin, OLIVER, eldest son of the late Hon. MATTHEW PLUNKETT, of Killough Castle, Co. Tipperary—29th ult, at 10, Bellevue Crescent, Edinburgh, FRANCIS SPROT, relict of the late Admiral STODDART—27th ult, at Slough, JULIANA ELIZABETH, relict of the late Rev. GEORGE ROWLEY, D.D., Master of University College, Oxford, and youngest daughter of the late Rev. Thomas Ripley, aged 66—26th ult, suddenly, while preparing to attend the funeral of the late Alderman Sheehy, WM. FITZGERALD, Esq., mayor of Limerick—24th Sept. at Naples, from fever caught on his march through Calabria with a division of General Garibaldi's army, Capt. WM. G HARTLEY, only son of the late General Hartley, C.B. formerly Lieutenant in the Royal Pembroke Artillery, aged 26—22d ult, at Belmont, Douglas, Isle of Man, MARY, wife of Lieut.-Colonel ALFRED BASSANO, 32d Light Infantry, aged 28—26th ult, at Windermere, AMY HELEN, second daughter of Major-General BELLAIRS, aged 6 years—Lately, at Guayaquil, Equador, the Senora DONA DELIA WRIGHT Y ROCAFUERTE DE OVERWEG, wife of Otto Overweg, Esq., of that city, and eldest daughter of Lieut.-General Thomas C. Wright, formerly of Queensborough, Ireland—25th ult, at Pembury Road, Lower Clapton, ELIZA, widow of the late JASPER HALL LIVINGSTON, Esq., of Jamaica, and eldest daughter of the late Hon. EDWARD LIVINGSTON, one of the Judges of the Supreme Court of the United States of America, aged 77—26th ult, at 8, Upper Phillimore Place, Kensington, WILLIAM TASSIE, Esq., the well-known gem engraver, formerly of Leicester Square, aged 82—27th ult, at Morden, Surrey, Captain MACDONOUGH, R.N., K.H., aged 73.

Markets.

COVENT GARDEN, Nov. 3.

Importations of new Dutch Hamburgh Grapes have just made their appearance, but their quality is very inferior to that of last year. Some fine samples of American Newtown Pippins may be had at 2s. to 3s. per dozen. In Pears no alteration has taken place since our last report; they consist chiefly of Duchesse d'Angoulême, Louise Bonne, Marie Louise, Gansel's Bergamot, and some inferior varieties. Peaches and Plums in good condition may yet be obtained. New Oranges fetch from 6s. to 10s. per 100 Good Filberts may be had at from 9d. to 1s. per pound. Cabbages, Beans, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 10s. per cwt. Cucumbers are scarcer. Cut flowers chiefly consist of Orchids, Gardenias, Kalosanths, Dahlias, Violets, Mignonette, China Asters, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 6s to 8s	Plums, p. ½ sieve, 3s to 4s 6d
Grapes, per lb., 3s to 6s	Pears, per doz., 1s to 3s
Peaches, per doz., 6s to 9s	Apples, per doz., 6d to 1s 6d
Green Figs, per doz., 3s to 4s	Oranges, per 100, 6s to 10s
Melons, each, 2s to 4s	Lemons, per 100, 6s to 10s

VEGETABLES.

Cauliflowers, each, 4d to 6d	Celery, p. bundle, 1s 6d to 1s 9d
Greens, per dozen, 2s 6d to 3s	Onions, p. ½ sieve, 1s 6d to 2s 6d
Cabbages, do., 1s to 2s	Tomatoes, per doz., 4s to 6s
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 9d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 2s
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 6d to 1s	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d

COAL MARKET.—Oct. 31.

Bell's Primrose, 14s. 6d.; Davison's West Hartley, 17s.; Holywell, 16s. 6d.; Lambert's West Hartley, 16s. 3d.; St. Cuthbert's Hartley, 15s. 6d.; Tanfield Moor 15s.; Tanfield Moor Butes, 15s.; Walker Primrose, 14s. 6d.; Whitworth Hartley, 16s. 6d.; Wylam, 17s.; Walls End Byron, 19s.; Walls End Harton, 18s. 9d; Walls End Sheriff Hill, 15s.; Walls End Hetton, 20s. 6d.; Walls End Hetton Lyons, 18s. 9d.; Walls End Cassop, 19s. 9d.; Walls End Heugh Hall, 19s.; Walls End Kelloe, 19s. 9d.; Walls End South Hartlepool, 19s. 3d.; Walls End West Hetton, 18s. 9d.; Walls End Whitworth, 16s. 6d.; Walls End Black Prince, 14s.; Walls End Pease's West, 15s. 6d.; Walls End Woodhouse Close, 17s. 3d.; Walls End Hunwick, 16s. 6d.—38 ships at market.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Nov. 1.

Prime Meadow Hay	75s	to 84s	Clover	90s	to 120s
Superior do. (old)	95	115	New Clover	—	—
Inferior do.	50	60	Old second cut	80	100
New do.	—	—	Straw	30	38
Rowen	40	50			

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Nov. 1.

Sup. Meadow Hay	112s	to 120s	Inferior Clover	80s	110s
Inferior do.	65	100	New do.	—	—
New do.	—	—	Straw	40	44
Superior Clover	118	126			

JOSHUA BAMER.

WHITECHAPEL, THURSDAY, Nov. 1.

Fine old Hay	100s	to 115s	Fine old Clover	115s	to 126s
Inferior do.	50	90	Inferior do	80	110
Prime New Hay	—	—	Fine 2d cut	—	—
Inferior do.	—	—	Inferior do.	—	—
Straw	34	38	Fine New Clover	—	—

BRITISH WOOLS.—LONDON, FRIDAY, Nov. 2.

Our prices are now merely nominal for most descriptions of wool, as many of the consumers are making a pause as their orders run out, and are not disposed to make further purchases until they have secured fresh orders. This also is the general disposition of the trade, who are not inclined to speculate at the present rates.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	7	to	1	8	Leicest. Wethers	1	6	to	..	
Half-bred ditto	1	8	—	..		Ditto Hoggs	1	8	—	..	
Down Ewes	1	5	—	1	6	Combing Skins	1	0	—	1	4
Kent Fleeces	1	7	—	..		Blanket ditto	0	6	—	0	8
						Flannel Wool	1	0	—	1	8

HOPS.—BOROUGH MARKET, FRIDAY, Nov. 2.

Messrs. Pattenden & Smith report that the market is in a very quiet state, both buyers and sellers anxiously waiting the official declared duty.

BUTTER MARKET.—Nov. 2.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 14s. " "
Pork, 5s. 0d. to 5s. 8d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, Oct. 29.

We have again a large supply of Beasts, and trade is very heavy. Prices range about the same as on Thursday last. The number of Sheep is much smaller; however, the demand is still very limited and prices are not much better Calves are not so plentiful and rather dearer. Our foreign supply consists of 1805 Beasts, 7960 Sheep, and 113 Calves.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	6	to 4	8	Best Long-wools	4	8	— 5	0
Best Short-horns	4	4	— 4	6	Do. Shorn	..	..	to	..
2d quality Beasts	3	0	— 3	8	Ewes & 2d quality	4	0	— 4	4
Best Downs and Half-breds	5	0	to 5	2	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	.	Lambs	..	..	—	..
					Calves	3	8	— 4	8
					Pigs	4	0	— 5	0

Beasts, 5640; Sheep & Lambs, 22,800; Calves, 150; Pigs, 320.

THURSDAY, Nov. 1.

We have a shorter supply of Beasts and favourable weather, consequently trade has improved. The number of Sheep is very small, and the average quality very inferior Prices are better for all descriptions. Good Calves are in demand at higher rates. Our foreign supply consists of 200 Beasts, 170 Sheep, and 109 Calves. Milch Cows, 140.

Best Scots, Herefords, &c.	4	8	to 4	10	Best Long-wools	4	10	— 5	2		
Best Short-horns	4	6	— 4	8	Do. Shorn	..	..	—	..		
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	4	— 4	8		
Best Downs and Half-breds	5	2	— 5	4	Do. Shorn	..	..	to	..		
Do. Shorn	..	..	—	..	Lambs	..	..	—	..		
					Calves	..	..	4	0	— 5	0
					Pigs	..	..	4	0	— 5	0

Beasts, 1015; Sheep & Lambs, 4720; Calves, 200; Pigs, 180.

MARK LANE.—MONDAY, Oct. 29.

The supply of Wheat from Essex and Kent to this morning's market was small, and good dry samples com-

manded the full prices of this day se'nnight, but the majority were very miserable in quality and condition, and remained unsold towards the close of the market. A large retail country demand was experienced for old foreign at the extreme rates of last week, but many of the factors were holding for 1s. to 2s. per qr. advance, and consequently did little. Malting Barley brings last week's prices, and grinding an advance of 2s. per qr. White Peas are 2s. to 3s. per qr. dearer, and old Beans bring rather more money. Oats are in fair demand, and old corn is 6d. per qr. dearer. The Flour trade is steady, and prices are unaltered.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	55—62	Red	46—60
— — fine selected runs..ditto	59—66	Red	53—66
— — Talavera	50—74		
— Norfolk	—	Red	—
— Foreign	54—74		
BARLEY, grind. & dist., 30s to 34s..Chev.	42—47	Malting.	40—42
— Foreign..grinding and distilling	31—39	Malting.	40—45
OATS, Essex and Suffolk	20—24		
— Scotch and Lincolnshire..Potato	26—28	Feed ..	24—26
— Irish .....Potato	26—28	Feed ..	21—24
— Foreign.....Poland and Brew	24—27	Feed ..	22—27
RYE	35—38	Foreign.	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....40s to 44s....Tick	42—48	Harrow.	42—48
— Pigeon .....48s — 56s..Winds.	—	Longpod	—
— Foreign .....Small	40—50	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	33—44	Suffolk .	40—50
— Maple .... —s to —s ..... Grey	40—42	Foreign.	38—48
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	50—57		
— 2d do. ..... ditto	34—50	Country.	34—50
— Foreign .....per barrel	29—34	Per sack	40—50

FRIDAY, Nov. 2.

Since our last report the weather has continued fine and favourable for completing the harvest work and proceeding with Wheat sowing. The wind, which was in the south, has veered round to N. and N.E., where it continues. The Wheat trade remains in an extremely healthy position throughout the country, and in spite of large arrivals from the south of Europe and America, the value of good dry new and old Wheats tends upwards, except only in Liverpool, where a slight concession was necessary to prevent warehousing; the damp and inferior new English, a great portion of which weighing from 52 lbs. to 56 lbs. per bushel only, is unfit for millers' use, and could only partly be disposed of at irregular and declining rates. Spring Corn of all kinds continues to advance in value, owing to the great demand for feeding stuff, and we quote Oats and Barley 1s. per qr., Beans and Peas fully 2s. per qr., higher. Foreign Flour maintained its value, but the sale is restricted. The number of grain and seed-laden vessels which arrived off the coast during last month amounts to 303, viz., 178 Wheat, 3 Rye, 8 Barley, 63 Maize, 6 Beans, 1 Oats, and 32 Linseed, and 5 of other seeds; the rates paid are about the same as last, except for Barley, which is 1s. to 2s. per qr. dearer. The arrivals of foreign Wheat and Flour this week have been moderate, also of Spring Corn. The attendance at this morning's market was moderate, the little English Wheat on sale realising Monday's prices; for foreign the demand was confined to retail quantities at fully that day's prices. Barley, Beans, and Peas bring Monday's quotations. For Oats there is a good demand, at an advance of 6d. to 1s. per qr.

[ARRIVALS FROM Oct. 29 TO Nov. 2.

	Wheat.	Barley.	Oats.	Flour.
English ..	1510 qrs.	1270 qrs.	50 qrs.	1060 sks.
Irish	— ,,	— ,,	1520 ,,	— ,,
Foreign ..	15680 ,,	5010 ,,	14330 ,,	{ 1710 ,, 3710 brls.

LIVERPOOL, Tuesday, Oct. 30.—We had a good attendance of both town and country millers and dealers at our Corn Exchange this morning, and by holders making a concession ex quay on the prices of last market day they were enabled to get through a considerable quantity of both Wheat and Flour; the former, however, was in most favour, and towards the close of market seliers generally reverted to the old prices. Indian Corn had a moderate inquiry without change in value. Oats and Oatmeal met a ready sale at fully previous rates. Beans, Peas, and Barley are all held firmly at extreme prices. The market closed steady.

FRIDAY, Nov. 2.—The Corn market was fairly attended, and a good consumptive demand experienced for Wheat at the extreme rates of Tuesday. Flour met with a fair sale at late rates. There was a good business doing at 39s. 6d. to 40s. for Galatz and mixed. Beans, Oats, Oatmeal, and Barley unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Sept. 22..	58s 3d	38s 5d	25s 9d	40s 7d	49s 6d	37s 11d
— 29..	56 11	39 3	25 3	37 10	49 6	39 1
Oct. 6..	58 3	39 8	25 1	39 1	48 11	39 10
— 13..	61 1	39 11	24 8	37 3	50 11	42 8
— 20..	60 1	40 7	23 7	34 7	50 2	41 11
— 27..	59 11	40 9	23 5	36 8	49 6	41 10
Agg. Aver.	59 2	39 9	24 8	37 8	49 9	40 6

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Sept. 22.	Sept. 29.	Oct. 6.	Oct. 13.	Oct. 20.	Oct. 27.
61s 1d	..	..	..		..	..
60 1	..	..	..	..		..
59 11	..	.	..	..	..	
58 3		..		..	..	..
56 11	..		..	..	..	..
..	..	..	..	..	..	..

£30 LOAN REQUIRED.—For the immediate advance of 30*l.* for one month portable security, value 30*l.*, will be deposited to ensure punctuality, and 10*l.* given as a bonus.—Address Mr. EVERARD, 76, Strand, W.C.

WANTED, A SURVEYOR, capable of Estimating for and carrying out works of Drainage and Agricultural improvements. Applications, with references and stating salary required, to be made to the West of England and South Wales Land Drainage and Inclosure Company.

Exeter, Nov. 3. BIDWILL & BRODIE, Secretaries.

WANTED, A GARDENER.—Must have a good knowledge of Forcing, and the management of Fruit and Flower Gardens. The Advertiser, a Clergyman, is an Amateur, and for the most part directs; the Gardener must fully carry out his wishes. The Kitchen Garden is 1 acre, Flower Garden small, three or four houses; will have one Man under him. Wages 18s., no perquisites. There is a small lodge which, if without incumbrance, he might have rent free upon condition of his Wife attending to the gate.—Address Rev. A. B., Mr. Banks, Bull Ring, Birmingham.

WANTED, AS GARDENER, a good, steady working Man, and strictly sober, well understanding his profession as to Vines and Flowers; also the Cultivation of Grass Lands; a married Man (without incumbrance) whose Wife would take an active part in the house when required.—Address, with full particulars, W. F., Post Office, Brixton Hill, S.

WANTED, a young Man as GARDENER, and to take the Management of a Horse, and who would make himself generally useful. Must be able to Write and Keep Accounts. A churchman would be preferred. Salary 52*l.* a year and part clothing.—Address, Box 115, Post Office, Huddersfield.

WANTED, in a London Nursery, a Person competent to take charge of the JOBBING DEPARTMENT; he must be practically acquainted with the Laying-out of small Villa Gardens, and able to Draw Plans for the same. Wages, one guinea per week.—Address in own handwriting, stating name, age, and reference to R., care of Mr. H. Williams, Willow Lodge, Willow Vale, Shepherd's Bush, W.

WANTED, a YOUNG MAN, qualified to keep in perfection a small Flower Garden; he must thoroughly understand the Culture of Pelargoniums, Cinerarias, and other choice Greenhouse Plants. A first-rate character for cleanliness and neatness indispensable. A choice collection of Orchids is grown, of which another Gardener has the exclusive charge.—A. B., 29, Adelaide Road, Haverstock Hill, N.W.

WANTED, a steady, respectable young MAN to drive a Brougham; he will have to wait at table occasionally and work in the Garden.—Apply personally, at Wood House, Dulwich, S.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD.)—Age 29, married; thoroughly understands his profession in all its branches; 4 years' good character.—W. D., Post Office, Beckenham, Kent, S.E.

GARDENER (HEAD) to any nobleman or gentleman.—Middle age, married, no incumbrance; first class Fruit Grower, &c., now disengaged. Character unexceptionable.—M. A., *Gardeners' Chronicle* Office, Wellington Street, W.C.

GARDENER (HEAD).—Age 37, married; understands the routine of Gardening; good Pine and Grape Grower. Five years' good character from a nobleman just left.—ARTHUR, G. Gibbs, 26, Down Street, Piccadilly, W.

GARDENER (HEAD).—Age 30, married; perfectly understands his profession in all its branches. No single-handed place accepted. Five years' unexceptionable character.—W. J., Allman's Nursery, Horsham, Sussex.

GARDENER (HEAD).—Age 32, married, one son; understands his profession in all its branches. Can take charge of Land and Stock if required. Character will bear the strictestinvestigation.—E. J. W., Rugby Nursery, Warwickshire.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 28, single; thoroughly understands Vine Forcing, Stove and Greenhouse Plants, and Gardening in all its branches. Good character.—B. C., 4½, Boone Street, Lee, Kent.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 38, married, without incumbrance; understands his duties; active habits, good accountant, and with the highest references; security if required; salary 80*l.* a-year, with house and firing.—T. B., 1, Desborough Place, Harrow Road, Paddington, London, W.

GARDENER (HEAD, single).—B. RICHARDSON, gardener to the late Duke of Leeds, Hornby Castle, Yorkshire, begs to offer his services to any nobleman or gentleman wanting an experienced working Gardener. Character unexceptionable. No objection to Ireland.—B. RICHARDSON, Messrs. Osborn & Sons, Nurserymen, Fulham, S.W.

GARDENER (HEAD).—Age 40, married, no incumbrance; a thorough practical industrious Man. Understands Gardening in all its branches, and is capable of Laying out or Superintending a Garden if required. Wife can act as Housekeeper. Unexceptionable character.—J. C., Mr. Young's Nursery, Milford, near Godalming, Surrey.

GARDENER (HEAD).—Age 32, married; great experience. All his entire life has been devoted to his profession; therefore perfectly competent to take the entire charge of any nobleman's or gentleman's Garden, &c. Many years superior recommendation and character.—W. C., 63, Hercules Buildings, Lambeth, S.

GARDENER (HEAD), age 30, married, one child.—Mr. THOMAS CRIPPS, Tunbridge Wells Nurseries, has great pleasure in recommending to the notice of any gentleman or lady, a thoroughly hardworking, energetic Man, native of Scotland. Well acquainted with the general routine of his profession; including the Early Forcing of Flowers, Fruit, and Vegetables.—Address as above.

GARDENER (HEAD), with any nobleman or gentleman.—Age 42, married; has had very extensive practical experience, and possesses a thorough knowledge of every department of his profession. Has served many years in the capacity of head gardener. Character and testimonials as to competency unexceptionable.—A. B., Messrs E. G. Henderson & Son, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD), or GARDENER AND BAILIFF.—Age 41; thoroughly practical, an excellent grower of Stove and Greenhouse Plants, and competent to Manage Early and Late Forcing, understands the Management of Land and the Breeding and Rearing of Stock, and can superintend Plantations or Underwood. Leaving in consequence of a death in the family. Seven years and a half unexceptionable character.—For further particulars apply to W. H., Mr. Young's Nurseries, Milford, near Godalming.

GARDENER (FIRST CLASS).—Age 35, married; will be glad to engage with any lady or gentleman who may require a good practical Gardener. First class references.—M., Mr. Wyatt, Mr. Keyne's Nursery, Salisbury, Wilts.

GARDENER (FIRST CLASS).—Age 35, married; will be disengaged in a few weeks and will be glad to treat with any nobleman or gentleman who may require a good practical Gardener; can take charge of Land and Stock if required.—X. Y., Teddington, Middlesex.

GARDENER.—Thoroughly understands his profession in all its branches; also the management of Land and Stock. His character will bear the strictest investigation.—N., Post Office, Battersea Rise, S.W.

GARDENER.—Age 36, married, without incumbrance. Wife could take charge of the Laundry.—Mr. E. COOLING, Mile Ash Nurseries, Derby.

GARDENER.—Age 35, married; experienced in the routine of his profession from boyhood. First Class references.—M. T., 2, Bowling Green Passage, High Street, Stoke Newington, N.

GARDENER.—Age 40, married; has had great experience, and is now open to an engagement with a nobleman or gentleman requiring a good practical Gardener.—A. B., 79, Gt. Queen Street, Lincoln's-Inn-Fields, W.C.

GARDENER.—C. LODDIGES having no further need of the services of his Gardener, A. REITH, is desirous of procuring him another situation, and having a high estimate of his abilities as a Plant Grower and general Gardener, he can recommend him with confidence to any nobleman or gentleman requiring the services of a trustworthy person. No single-handed place accepted. Testimonials of the highest order.—A. REITH, Conrad Loddiges, Esq., Hackney, N.E.

GARDENER, or GARDENER AND BAILIFF (age 28, married).—WM. PAUL can highly recommend to any gentleman wanting a good practical Man, where four or more are kept. He can have the highest testimonials for character, ability, &c., from the gentleman he is leaving.—For further particulars apply to WM. PAUL, Cheshunt Nurseries, Waltham Cross, N.

TO NOBLEMEN AND GENTLEMEN.—The Advertiser wishes to Superintend any new work going on or Alterations in the Flower and Kitchen Garden. Has had great experience. First class testimonials.—A. Z., Post-office, Charlton, Dover.

TO NURSERYMEN.—Age 40, highly respectable; has had the General Management of an extensive Nursery for the last 7 years, and occasionally Travels. Will be open for a similar engagement in the beginning of January, 1861.—J. G., *Gardeners' Chronicle* Office, W.C.

ASSISTANT OR UNDER GARDENER.—A gentleman is desirous of procuring a situation for a young Man, aged 20, just out of his apprenticeship, in some first-rate private Garden, for two years certain, where the best instruction may be obtained, particularly in the management of Fruit-houses. A small premium would be given.—Direct, stating all particulars, to A. S., Esq., Mr. Walker, 40, New Bond Street, London, W.

FOREMAN (in a nobleman's or gentleman's Garden).—Age 23; has had five years' experience at Lady Rodney's, and two and a half at Basing Park.—T. H., The Dowager Lady Rodney's, Old Alresford, Hants.

BAILIFF, OR WORKING FOREMAN OF A FARM.—Young, married, without incumbrance; has acted in the above capacity for eight years with his present employer, who is leaving his farm; thoroughly acquainted with all kinds of Farm work, the Management of Stock, &c. His Wife understands the Management of Poultry and the Dairy, and is besides an excellent Cook. Both can be most highly recommended for steadiness and trustworthiness.—Mr. J. COLEMAN, Westpole Farm, East Barnet, Herts.

FARM STEWARD OR BAILIFF.—Middle-aged; a native of Scotland; of active habits, and practically acquainted with Farming on the most improved principles, Buying Selling, and Management of Stock in general. Satisfactory testimonials and reference to last employer.—C. C., Messrs. Thomas Gibbs & Co., Corner of Half Moon Street, Piccadilly, W.

BAILIFF (WORKING).—Age 40; Wife can attend to Dairy. Has been in his present situation 20 years; leaving on account of the farm being let. Can be well recommended by his present employer. Moderate wages expected.—J. N., Mr. Young, Milford Nurseries, near Godalming.

BAILIFF.—A Lincolnshire Man, of great experience in different counties; is a good Judge of Stock, and could take the management of a Herd of Short-horns. No objection to Ireland.—J. INGE, Octavia Cottage, Tunbridge Wells, Kent.

FARM BAILIFF.—An experienced practical Man, who will be disengaged in a few days from his present employ, where he has been 18 years; is thoroughly acquainted with the different modern systems of Farming, management of Cattle and Sheep, and has had great experience in Draining. Can produce unexceptionable references as to ability and general good character.—J. H., care of T. Whalley, Seedsman, Liverpool.

TO NURSERYMEN.

CLERK AND SALESMAN.—Age 28; has a practical knowledge of all branches of the Trade; good Correspondent; would take charge of Show Houses or assist in Shop if required.—A. A. P., Post Office, Woodbridge, Suffolk.

SEEDSMAN, in a London house, either in the Wholesale or Retail Trade. Has been five and a half years at the business.—T. D., *Gardeners' Chronicle* Office.

TO NURSERYMEN AND SEEDSMEN.

BOOK-KEEPER AND CASHIER OR TRAVELLER.—Is about to leave his present situation. 14 years' reference in first-class houses in Scotland and England. A good correspondent. Well recommended by present and former employers.—C. B., Messrs. Cockburn & Cumming, 6, Liverpool Street, E.C.

SHOPMAN OR WAREHOUSEMAN.—Upwards of 10 years' experience; good knowledge of Plants, and could travel occasionally. Character unexceptionable.—No. 100, *Gardeners' Chronicle* Office.

FOOTMAN.—Age 19; a lady leaving England wishes to recommend the above; also a Second LAUNDRY MAID, both very good Servants.—ELLEN, Post-office, Tonbridge.

PLUMBER, GLAZIER, AND PAINTER, in a gentleman's Establishment or in a large Nursery.—Married, without incumbrance; would be glad to make himself generally useful if required. Low wages would be taken if constant place.—J. W., *Gardeners' Chronicle* Office, W.C.

UPPER LAUNDRY-MAID.—For six months, by a very respectable young woman. Can be highly recommended.—PHŒBE, Post-office, Tonbridge.

DAIRYMAID.—A gentleman who is giving up Farming is desirous of obtaining for the Manager of his Dairy a similar situation. She has been accustomed to a Cheddar Cheese Dairy of 60 Cows, and can be highly recommended. If necessary, she could also fill the position of Housekeeper.—H. T., Post Office, North Street, Bristol.

The Gardeners' Chronicle Newspaper.

SATURDAY, NOVEMBER 10, 1860.

A PARISIAN LADY, now residing at Kensington, gives Private Lessons in French, Music, Singing, and Drawing. She speaks English well. Terms according to circumstances. She offers references of the highest respectability.—Address, C. L., at WESSEL'S, Music Publisher, 18, Hanover Square, W.

MRS. ARTHUR HENFREY, Widow of the late Professor Henfrey, F.R.S., F.L.S., &c., of King's College, London, continues to receive a limited number of young Gentlemen under 12 years of age, to be educated with her own Sons, in all the branches of a liberal education. French is constantly spoken, Mrs. HENFREY having resided on the Continent, and a Parisian Lady assists her to teach Music, Singing, and Drawing. The house is healthily situated, and provided with a large Garden. Pupils will have the comfort of a private family, and unremitting attention will be paid to their health and morals. References are permitted to—

Dr. JELF	Principal of King's College
Rev. LAWFORD W. T. DALE ..	Chiswick Vicarage, W.
Rev. OLIVE HOLLINGWORTH ..	Turnham Green, W.
Sir WM. and Lady HOOKER ..	Kew, W.
Professor HUXLEY, F.R.S	The Government School of Mines, Jermyn Street, S.W.
Dr. and Mrs. MARTYN.. ..	7, Bennett St., St. James's, S.W.
Dr. and Mrs. LINDLEY.. ..	Acton Green, W.
Dr. and Mrs. HOOKER .. .	Kew, W.
Dr. and Mrs. TUKE	Manor House, Chiswick, W.

For terms apply to Mrs. ARTHUR HENFREY, 12, Heathfield Terrace, Turnham Green, W.

MR. BUCKMAN, Professor of Geology and Botany in the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture, that he may be professionally consulted in all matters relating to the Geology and Botany of Estates, such as the Mineral Products, Economic Materials, Water-bearing Strata and Water Rights of Estates and Farms, Improvements in Pasture, Analyses of Seeds, &c.—Communications to be addressed to Professor BUCKMAN, Dollar Ward, Cirencester.

COLLEGE OF AGRICULTURE AND CHEMISTRY, AND OF PRACTICAL and GENERAL SCIENCE, 37 and 38, Lower Kennington Lane, Kennington, London, S.
Principal—J. C. NESBIT, F.G.S., F.C.S., &c.
The system of studies pursued in the College comprises every branch requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures, and the Arts; for the Naval and Military Services, and for the Universities.
Analyses and Assays of every description are promptly and accurately executed at the College. The terms and other particulars may be had on application to the Principal.

ARTIFICIAL MANURES, &c.—Manufacturers and others engaged in making ARTIFICIAL MANURES may obtain every necessary instruction for their economical and efficient preparation, by applying to J. C. NESBIT, F.G.S., &c., Principal of the Agricultural and Chemical College, Kennington, London, S. Analyses of Soils, Guanos, Superphosphates of Lime, Coprolites, &c., and Assays of Gold, Silver, and other Minerals are executed with accuracy and despatch. Gentlemen desirous of receiving instruction in Chemical Analyses and Assaying, will find ample facility and accommodation at the College.

FIVE PER CENT. INVESTMENTS.—Particulars of Investments for LARGE OR SMALL SUMS OF MONEY, bearing FIVE PER CENT. PER ANNUM INTEREST (well secured), withdrawable at notice, may be obtained, on application to THOMAS H. BAYLIS, 429, Strand, London, W.C.

BANK OF DEPOSIT (Established A.D. 1844), 3, Pall-Mall East, London.—Capital Stock, 100,000*l.*
Parties desirous of Investing Money are requested to examine the Plan of the Bank of Deposit, by which a high rate of interest may be obtained with ample security.
Deposits made by special agreement may be withdrawn without notice.
The interest is payable in January and July.
PETER MORRISON. Managing Director.
Forms for opening accounts sent free on application.

QUEEN INSURANCE COMPANY.—
Chief Office, Liverpool.
London Office, 2, Royal Exchange Buildings.
London Directors.
Chairman—HENRY BRUCE, Esq. (Rainey, Bruce, & Co.) Director of Colonial Bank, Mincing Lane.
EDWARD P. ALDERSON, Esq. (Kelson, Triston, & Co.), 26, Old Broad Street. [Southwark.
HENRY FOWLER, Esq. (H. & R. Fowler), St. Saviour's Dock,
THOMAS WILLIAM KOUGH, Esq. (Jones Brothers) Upper Thames Street. [Holborn.
SAMUEL LLOYD STACEY, Esq. (Corbyn, Stacey, Messer, & Co.),
Bankers.—Messrs. BARCLAY, BEVAN & Co.
Medical Referee.—J. F. EDWARD POLLOCK, Esq., M.D.
Solicitors.—Messrs. J. & J. W. SEWELL.
LIFE DEPARTMENT.—Life Assurance in every branch.
SPECIAL FEATURE.—Non-forfeiture of Policies. The insurer has the right, on an ordinary Life Policy, after three years, to cease his payments, and obtain a free Policy, for the total amount of Premiums paid, and whatever Bonus may have been added.
FIRE DEPARTMENT.—The rates of Premium vary according to the nature of the risk, and will be found as moderate as those of other first-class offices.
Application for Agencies requested.
W. P. CLIREHUGH, Manager.
H. B. TAPLIN, London Secretary.

THE SILVER CORD, a new Serial Story by SHIRLEY BROOKS, with Illustrations by JOHN TENNIEL. Commences in this Week's Number of "ONCE A WEEK."
BRADBURY & EVANS, 11, Bouverie Street, Fleet Street, E.C.

HORTICULTURAL GARDENS.—The *Gardeners' Chronicle* of May 12, containing Mr. NESFIELD'S COLOURED PLAN for the NEW GARDEN at Kensington Gore, is still on Sale at the Office, 41, Wellington Street, Covent Garden, W.C., and will be sent by post on receipt of six stamps.

CORDON-TRAINING OF FRUIT TREES, Diagonal, Vertical, Spiral, and Horizontal, adapted to Orchard-house and Open-air Culture, by the Rev. T. COLLINGS BRÉHAUT, will be published shortly by Messrs. LONGMAN & Co.

ZADKIEL'S ALMANACK FOR 1861, contains the Millennium, the Great Conjunction, Louis Napoleon to Cleanse the Sanctuary, Downfall of Rome, Rise of Jerusalem, Hieroglyphic: Reign of Discord. Price 6*d.*, post free 7*d.*
London: G. BERGER, Holywell Street, Strand, W.

Just Published, price 1*s.*,
MORTON'S NEW FARMERS' ALMANACK for 1861.
BLACKIE & SON, Warwick Square, City, London, E.C.; and all Booksellers.

Bound, 9*s.*,
THE AGRICULTURISTS' CALCULATOR; a Series of 45 Tables for Land-measuring, Draining, Manuring, Planting, Weight of Hay and Cattle by Measurement, Building, &c.
BLACKIE & SON, Warwick Square, City, London, E.C.; and all Booksellers.

Cloth, 3*s.* 6*d.*,
THE AGRICULTURIST'S ASSISTANT; a Note-book of Principles, Rules, and Tables, adapted to the use of all engaged in Agriculture, or the Management of Landed Property. By JOHN EWART. Plates and Cuts.
BLACKIE & SON, Warwick Square, City, London, E.C.; and all Booksellers.

Just Published, price 2*s.*,
DITCHING AND DRAINING: a Manual of Tables for Computing Work Done.
BLACKIE & SON, Warwick Square, City, London, E.C.; and all Booksellers.

Just published, price 2*s.* 6*d.*,
THE HAY AND CATTLE MEASURER: a Series of Tables for Computing the Weight of Haystacks and Live Stock by Measurement.
BLACKIE & SON, Warwick Square, City, London, E.C.; and all Booksellers.

Bound, 2*s.*,
THE LAND MEASURER'S READY-RECKONER: being Tables for ascertaining at sight the Contents of any Field or Piece of Land. By NEIL M'CULLOCH.
BLACKIE & SON, Warwick Square, City, London, E.C.; and all Booksellers.

Cloth, 3*s.*,
HOW TO CHOOSE A GOOD MILK COW; or, a Description of all the Marks by which the Milking Qualities of Cows may be ascertained. By J. H. MAGNE. With a Supplement on the Dairy Cattle of Britain. By JOHN HAXTON. Illustrated with Engravings.
BLACKIE & SON, Warwick Square, City, London, E.C.; and all Booksellers.

Cloth, 3*s.* 6*d.*,
THE FARMER'S GUIDE: a Treatise on the Diseases of Horses and Black Cattle, with Instructions for the Management of Breeding Mares and Cows. By JAMES WEBB, Veterinary Surgeon. To which is added Remarks on the Breeding and Management of Sheep, their Diseases, and Method of Treatment. With Illustrations.
BLACKIE & SON, Warwick Square, City, London, E.C.; and all Booksellers.

Now ready, in One Vol. 8vo, price 18*s.* cloth,
THE SEA AND ITS LIVING WONDERS. By Dr. GEORGE HARTWIG. With several Hundred Wood Engravings; and an entirely new Series of Illustrations in Chromo-xylography, representing the most interesting objects described in the work, from Original Drawings by Henry Noel Humphreys.
London: LONGMAN, GREEN, LONGMAN, & ROBERTS.

MR. TENNIEL'S ILLUSTRATED LALLA ROOKH.
Just published, in One Volume, fcp. 4to. price 21*s.*, in ornamental covers; or 30*s.* bound in morocco by Hayday,
MR. TENNIEL'S ILLUSTRATED EDITION OF MOORE'S "LALLA ROOKH;" Containing 69 Illustrations from original Drawings engraved on Wood by Dalziel Brothers; with 5 Initial Pages of Persian Design by T. SULMAN, Jun., engraved on Wood by H. N. Woods.
"This long projected edition of "Lalla Rookh" has appeared at last, and the delay has added to the beauty of its numerous illustrations. We have never seen a more splendid gift-book in respect of paper, type, binding, ornamentation of introductory pages, and, above all, for the sterling artistic skill of one illustrative pencil. The entire work is an admirable result of academic learning and poetic conception. Even the landscape accessories are in unison with the spirit in which the figure subjects are treated; and it is due to Mr. TENNIEL to allow that the entire set of illustrations is without a parallel that we can recall in English embellishment, and the greatest illustrative achievement of any single hand."—The *Times*, Oct. 31.
London: LONGMAN, GREEN, LONGMAN, & ROBERTS.

News of the Week.

KING VICTOR EMMANUEL made his entry into the city of Naples on Wednesday morning accompanied by GARIBALDI. HIS MAJESTY was received with great enthusiasm by the people, who thronged the streets in immense numbers in spite of torrents of rain; and during the whole day the city was the scene of universal festivity and joy. The official journal of Turin publishes a proclamation of HIS MAJESTY to the Neapolitan and Sicilian peoples, in which he accepts the sovereign authority of the Two Sicilies transferred to him by universal suffrage. The Sardinian army, commanded by the KING in person, gained a brilliant victory over the Neapolitan army on Saturday on the north side of the Garigliano. The Neapolitans, attacked in front with great spirit by the Sardinian troops, and in flank by the fleet, were utterly routed, leaving in the KING'S hands tents, waggons, stores, and a very large number of prisoners. General SONNAZ pursued the Neapolitans, and afterwards occupied Mola and other positions commanding Gaeta, which is now invested by the Sardinians on the land side. Capua capitulated to GARIBALDI on Friday, and the garrison, numbering 11,000 men, have since left for Naples as prisoners of war, being allowed to leave the fort with military honours, but laying down their arms at the gate of the city. A despatch from Gaeta states that the departure of the KING OF NAPLES is imminent, in consequence of the advice given to HIS MAJESTY by the commanders of the foreign fleets; and that the Royalist troops which remain outside the fortress have sent a proposal to surrender to General FANTI.—Accounts from Rome inform us that the Papal army is to be immediately disbanded, and that the POPE will retain a mere body guard, to consist of about 3000 men. The returns of the voting in Umbria and the Marches are almost unanimous in favour of annexation.

COUNT RECHBERG, the Austrian Minister of Foreign Affairs, has addressed a note to the representatives of Austria abroad, informing them that the object of the interview at Warsaw was to bind more closely the personal relations of the three Princes, and to concert principles upon which they would act in certain eventualities. He states that a perfect understanding was established upon these points, and at the same time makes it clearly understood that non-intervention in the affairs of Italy was agreed upon, and that the three Northern Courts will do nothing to provoke a war.

His Royal Highness PRINCE ALFRED arrived at Plymouth yesterday morning in the Euryalus from the Cape, and the arrival of the PRINCE OF WALES from America is hourly expected.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Thursday week the Prince of Leiningen returned to the Castle from Portsmouth. The Earl and Countess of Malmesbury, the Earl and Countess De Grey and Ripon, and the Right Hon. Sir George and Lady Theresa Lewis, arrived on a visit to her Majesty. On Friday morning the Queen, accompanied by the Princess Alice, the Hereditary Princess of Holstein Augustenburg, the Princess of Lelningen, and the Countess De Grey and Ripon, drove to Cliveden. The Prince Consort, accompanied by the Prince of Leiningen and Earl De Grey and Ripon, went out shooting. On Saturday morning the Queen, accompanied by Princess Helena and Princess of Leiningen, drove out in an open carriage, and honoured the Belgian Minister and Madame Van de Weyer with a visit at New Lodge, Windsor Forest. The Prince Consort rode on horseback, and accompanied her Majesty. The Earl and Countess of Malmesbury, the Earl and Countess de Grey and Ripon, and the Right Hon. Sir G. C. and Lady Theresa Lewis left the Castle. On Sunday morning the Queen and Prince Consort, Princesses Alice, Helena, and Louisa, Prince Arthur, the Prince and Princess of Leiningen, and the Hereditary Prince and Princess of Holstein Augustenburg, attended Divine service in the private chapel. The Rev. Charles Kingsley preached the sermon. On Monday morning the Queen, accompanied by Princess Alice, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort, accompanied by the Hereditary Prince of Holstein Augustenburg, went out shooting. The Prince and Princess of Leiningen took leave of her Majesty, and left the Castle. On Tuesday morning the Queen and Prince Consort walked and drove in the Home Park, and visited the Duchess of Kent at Frogmore. On Wednesday morning the Queen, accompanied by Princess Louisa, walked in the grounds of the Castle, and visited the Duchess of Kent at Frogmore. The Prince Consort, Princess Alice, and Princess Helena, rode out on horseback. On Thursday morning the Queen, accompanied by Princess Alice, drove out in a carriage and four, and honoured Lady Emily Seymour with a visit at Holly Grove. The Prince Consort rode out on horseback.

THE PRINCE OF WALES.—It is reported that two vessels, supposed to be the Hero and Ariadne, have been seen off the Bill of Portland. The continued prevalence of easterly winds has doubtless prolonged the earlier arrival of the Royal squadron. The Prince completed his 19th year yesterday. He was born at Buckingham Palace on the 9th of November, 1841, and was created by patent Prince of Wales and Earl of Chester on the 4th of December in the same year.

ARRIVAL OF PRINCE ALFRED.—Her Majesty's ship Euryalus, having on board Prince Alfred, arrived at Plymouth yesterday morning from the Cape. It was expected that his Royal Highness would proceed to Windsor by the morning express.

COURT MOURNING.—The Court went into mourning on Thursday for three weeks for the Dowager Empress of Russia.

ORDER OF THE BATH.—The Queen has given orders for the appointment of Lieut.-General Sir James Hope Grant, K.C.B., Commanding her Majesty's Military Forces in China, to be a Knight Grand Cross of the Bath, and Vice-Admiral James Hope, C.B., Commander-in-Chief of her Majesty's Naval Forces in China, to be a Knight Commander of the Bath.

PARLIAMENTARY MOVEMENTS.—Mr. Walter B. Barthelot, of Hilliers, has offered himself on Conservative

Sussex, vacant by the accession of principles for West[illegible]peerage. There is a vacancy the Earl of March to the p[illegible] the appointment of for Newcastle-on-Tyne caused by [illegible] Commissioner. Mr. George Ridley to be a Copyhol[illegible]d by the There is a vacancy for Pembrokeshire caus[illegible]ces- death of the Earl of Cawdor, and the consequent a[illegible]- sion of Viscount Emlyn to the peerage. There is a vacancy for Southwark caused by the death of Sir Charles Napier. Mr. Scovell, a wharfinger of influence in the borough, is mentioned as likely to become a candidate for the vacant seat in the Liberal interest. Lord Stanhope is at present the only candidate for South Notts.

THE CHANNEL FLEET.—Rear-Admiral Stopford's port division of the Channel squadron, consisting of the flagship Royal Albert, 121; Conqueror, 101; Donegal, 101; Aboukir, 90; and Centurion, 80, sailed from Plymouth on Tuesday afternoon for Lisbon.

THE ITALIAN POLICY OF THE GOVERNMENT.—The following Despatch has been addressed by Lord John Russell to Sir James Hudson, her Majesty's Minister at Turin:—

"Foreign-office, Oct. 27.

"Sir,—It appears that the late proceedings of the King of Sardinia have been strongly disapproved by several of the principal Courts of Europe. The Emperor of the French, on hearing of the invasion of the Papal States by the army of General Cialdini, withdrew his Minister from Turin, expressing at the same time the opinion of the Imperial Government in condemnation of the invasion of the Roman territory. The Emperor of Russia has, we are told, declared in strong terms his indignation at the entrance of the army of the King of Sardinia into the Neapolitan territory, and has withdrawn his entire Mission from Turin. The Prince Regent of Prussia has also thought it necessary to convey to Sardinia a sense of his displeasure, but he has not thought it necessary to remove the Prussian Minister from Turin. After these diplomatic acts it would scarcely be just to Italy, or respectful to the other great Powers of Europe, were the Government of her Majesty any longer to withhold the expression of their opinion. In so doing, however, her Majesty's Government have no intention to raise a dispute upon the reasons which have been given in the name of the King of Sardinia for the invasion of the Roman and Neapolitan States. Whether or no the Pope was justified in defending his authority by means of foreign levies; whether the King of the Two Sicilies, while still maintaining his flag at Capua and Gaeta, can be said to have abdicated, are not the arguments upon which her Majesty's Government propose to dilate. The large questions which appear to them to be at issue are these:—Were the people of Italy justified in asking the assistance of the King of Sardinia to relieve them from Governments with which they were discontented?—and was the King of Sardinia justified in furnishing the assistance of his arms to the people of the Roman and Neapolitan States? There appear to have been two motives which have induced the people of the Roman and Neapolitan States to join willingly in the subversion of their Governments. The first of these was that the Government of the Pope and the King of the Two Sicilies provided so ill for the administration of justice, the protection of personal liberty, and the general welfare of their people, that their subjects looked forward to the overthrow of their rulers as a necessity preliminary to all improvement in their condition. The second motive was, that a conviction had spread since the year 1849 that the only manner in which Italians could secure their independence of foreign control was by forming one strong Government for the whole of Italy. The struggle of Charles Albert in 1848, and the sympathy which the present King of Sardinia has shown for the Italian cause, have naturally caused the association of the name of Victor Emmanuel with the single authority under which the Italians aspire to live. Looking at the question in this view, her Majesty's Government must admit that the Italians themselves are the best judges of their own interests. That eminent jurist, Vattel, when discussing the lawfulness of the assistance given by the United Provinces to the Prince of Orange when he invaded England and overturned the throne of James II., says:—'The authority of the Prince of Orange had doubtless an influence on the deliberations of the States-General; but it did not lead them to the commission of an act of injustice, for when a people for good reasons take up arms against an oppressor, it is but an act of justice and generosity to assist brave men in the defence of their liberties.' Therefore, according to Vattel, the question resolves itself into this—Did the people of Naples and of the Roman States take up arms against their Governments for good reasons? Upon this grave matter her Majesty's Government hold that the people in question are themselves the best judges of their own affairs. Her Majesty's Government do not feel justified in declaring that the people of Southern Italy had not good reasons for throwing off their allegiance to their former Governments; her Majesty's Government cannot therefore pretend to blame the King of Sardinia for assisting them. There remains, however, a question of fact. It is asserted by the partisans of the fallen Governments that the people of the Roman States were attached to the Pope, and the people of the kingdom of Naples to the dynasty of Francis II.; but that Sardinian agents and foreign adventurers have, by force and intrigue, subverted the thrones of those Sovereigns. It is difficult, however, to believe, after the astonishing events which we have seen, that the Pope and the King of the Two Sicilies possessed the love of their people. How was it, one must ask, that the Pope found it impossible to levy a Roman army, and that he was forced to rely almost entirely upon foreign mercenaries? How did it happen, again, that Garibaldi conquered nearly all Sicily with 2000 men, and marched from Reggio to Naples with 5000? How but from the universal disaffection of the people of the Two Sicilies? Neither can it be said that this testimony of the popular will was capricious or causeless. Forty years ago the Neapolitan people made an attempt regularly and temperately to reform their Government under the reigning dynasty. The Powers of Europe, assembled at Laybach, resolved, with the exception of England, to put down this attempt by force. It was put down, and a large foreign army was left in the Two Sicilies to maintain social order. In 1848 the Neapolitan people again attempted to secure liberty under the Bourbon dynasty; but their best patriots atoned by an imprisonment for 10 years for the offence of endeavouring to free their country; what wonder, then, that in 1860 the Neapolitans, mistrustful and resentful, should throw off the Bourbons, as in 1688 England had thrown off the Stuarts? It must be admitted, undoubtedly, that the severance of the ties which bind together a Sovereign and his subjects is in itself a misfortune. Notions of allegiance become confused, the succession of the throne is disputed, adverse parties threaten the peace of society; rights and pretensions are opposed to each other, and mar the harmony of the State. Yet it must be acknowledged, on the other hand, that the Italian revolution has been conducted with singular temper and forbearance. The subversion of existing power has not been followed, as is too often the case, by an outbreak of popular vengeance. The extreme views of democrats have nowhere prevailed. Public opinion has checked the excesses of the public triumph. The venerated forms of constitutional monarchy have been associated with the name of a Prince who represents an ancient and glorious dynasty. Such having been the causes and the concomitant circumstances of the revolution of Italy, Her Majesty's Government can see no sufficient ground for the severe censure with which Austria, France, Prussia, and Russia have visited the acts of the King of Sardinia. Her [illegible]jesty's Government will turn their eyes rather to the Ma[illegible]ng prospect of a people building up the edifice of their gratify[illegible]d consolidating the work of their independence liberties, a[illegible]thies and good wishes of Europe.—I have, &c., amid the symp[illegible] You are at liberty to give a copy of this J. RUSSELL. P.S.—[illegible]ur."

despatch to Count Cavo[illegible]ERNMENT.—At a meeting of the

THE VOLUNTEER MOV[illegible]he City of London on Court of Lieutenancy of t[illegible]om the deputation Monday, a report was read [illegible] her Majesty's appointed to ascertain the views o[illegible]ion of the Government with respect to the forma[illegible]had been additional Volunteer corps which the Court [illegible]dney asked to sanction. The report stated that Mr. Sidney Herbert saw no objection to a second company being added to the No. 2 City of London (Spottiswoode) corps; that the Government considered it objectionable to sanction the formation of Volunteer corps exclusively confined to any one class, whether of workmen or artisans, or even of peers' sons, or any other separate class; that with respect to the Royal National Rifle Association, the style of "Royal" could not be assumed without the sanction of the Queen, which it was not probable would be granted, as her Majesty reserved that distinction for regiments of the line as a reward for eminent services; that, moreover, any brigade or battalion of volunteers must be formed under the authority of some one lord-lieutenant, and that it was objectionable and contrary to the spirit of the Volunteer Act, to form separate regiments or battalions of the same brigade under different lords-lieutenant, as proposed by the prospectus of the "Royal National Rifles." At the same time there would be no objection to the formation of other distinct volunteer corps within the City of London, besides the existing Rifle Brigade, which could claim no exclusive right by their earlier formation to enrol volunteers in their brigade only, so that every class of persons desirous of joining in the volunteer movement might not be deterred from doing so by the inconvenient expense of any particular corps; and he added a suggestion, with a view to its permanence, that the London Brigade should adopt what modifications might be practicable in its present scale of expenses. After a long discussion the Court agreed to sanction the addition of a second company to the No. 2 City of London (Spottiswoode) Corps. With regard to the formation of a Workman's Volunteer Brigade, it was agreed that it would be objectionable to sanction the formation of a corps exclusively confined to one class. It was, however, unanimously resolved to agree to the application, subject to its being referred to a committee to consider under what t[illegible]e it should be established. A similar resolution was pas[illegible]ed in reference to the application of the "Royal Nati[illegible]nal Rifle Association," it being suggested that the title s[illegible]ould be altered to that of "The London Battalion Nation[illegible]l Rifle Association." —The 19th (Working Men's Col[illegible]) Rifles were officially inspected on Saturday, by Co[illegible]nel M'Murdo, in Gray's Inn Gardens—Lord Enfield, [illegible].P., has accepted the Lieutenant-Colonelcy of the 25th (North Middlesex.—The members of the 1st Surrey [illegible](South London) met a few days since at Hanover Pa[illegible] Peckham, and presented a sword of honour and service of plate, value 50 guineas, to Captain E. Dresser Rogers, as a testimony of their high sense of his services as hon. secretary of the corps during the first year of its existence. —The 13th Surrey, preceded by their band, marched on Wednesday week from Guildford to Worplesdon Lodge, where they went through a series of evolutions, and were afterwards entertained at a *dejeuner* by Mr. Bovill, M.P.—The 7th company of the 19th Surrey Rifles had a prize shooting match on Wednesday week at the Streatham Butts, when the 1st prize was gained by Sergeant J. Tammadge, the 2d by Private Embery, the 3d by Private Lever, the 4th by Private Garrard, the 5th by Sergeant W. Tammadge, the 6th by Private N. Shaw, the 7th by Corporal Davis, and the 8th by Private Briggs. This regiment now consists of nine companies.—It is intended to form a Rifle Corps in London to be composed of Welshmen. Lord Llanover, Lord Stanley, Lord Sudeley, Lord Boston, Sir Richard Bulkeley, Mr. Pugh, M.P., Sir John Hanmer, Mr. G. W. Hemans, and other gentlemen are interested in the formation of the corps.—At the Lancashire county meeting at Hightown the first contest on Thursday week was for a prize of 100 guineas presented by the members of the Liverpool Stock Exchange; second prize, 20*l.*; and third prize, 10*l.*, added by the committee, to be competed for by effective Volunteers of Lancashire and Cheshire, at distances of 300, 600, and 800 yards, five shots at each range. The first prize was won by Lieut. Yates, 2d company, Liverpool Rifles (Blackburn), and the second by Mr. Francis Goodwin, 19th Liverpool Rifles (2d battalion). For the third there were three "ties," Capt. Brooks (3d Manchester), Sergeant Rollit (3d Cheshire), and Capt. Williamson (Kidsgrove Corps), who each made 13. These ties were to be shot off on Friday. At the conclusion of this contest the 800 yards' range of the Lord-Lieutenant's prize was shot off. This prize was a cup or purse of 100 guineas, presented by the Lord-Lieutenant of the county, and the bronze medal of the National Rifle Association, presented by that body; second prize, a silver vase, value 20*l.*, presented by Mr. Henry Greenwood, being the proceeds of his Penny Programme and Plan of the Reviews held at Aintree and Knowsley; third prize, a rifle, presented by Mr. Thomas Turner, of Birmingham; to be competed for by Volunteers of the county, at distances, 3000, 600, and 800 yards, five shots at each range. There were 135 competitors for this prize. The result was a tie for the first prize between Francis Goodwin, of the 10th Lancashire Rifles, and Lieut. Yates, of the 2d Liverpool Rifles, who each made 10. There were also ties of 9 points each between J. H. Brown, 4th company 1st Manchester; Captain Thomas Brooks, 3d Manchester; Lieut. Hillkirk, 3d Manchester; H. Goodwin, 31st Liverpool; J. B. Haworth, 8th Liverpool; Lieut. H. Jones, 14th Liverpool; R. Maxwell, 5th Liverpool; W. Sewell, 42d Liverpool; and W. H. Fisher, 1st Manchester. On Friday the first contest was for the Liverpool Corn Exchange prize of 80 guineas, divided into three prizes, one of 50, a second of 20, and a third of 10 guineas. The result was as follows:—1st prize was won by Mr. Rawson, Liverpool; the 2d by Mr. Phillips, 1st Shropshire; and the 3d by Lieut. Colborn, 1st Lanarkshire Rifles. The ties of the previous day for the Lord Lieutenant's prize of 100 guineas, and the bronze medal of the National Association were then shot off, when the 1st prize was won by Lieutenant Yates, 2d Lancashire Rifles, and the 2d by Mr. F. Goodwin, 10th Lancashire Rifles. The ties of the previous day for the 3d prize were then shot off, when the prize was won by Lieut. Hillkirk, 3d Manchester. The tie for the 3d prize, given by the members of the Liverpool Stock-Exchange, was won by Captain Williamson of the Kidsgrove Corps. The next match was for a prize of 50*l.*, presented by Mr. Pemberton Heywood, and a second prize of a rifle, value 20 guineas, for all comers, when the 1st was won by Captain Greg, 27th Chester Rifles, and the 2d by Mr. M. Smith, Victoria Rifles. On Saturday the proceedings were of a very interesting nature, the artillery and volley firing prizes having been contested. The 1st prize, a silver cup of 50 guineas for artillery firing, was won by the first gun cast at the Mersey works on Major Clay's principle, and worked by the 8th Lancashire brigade under the command of Capt. Inman; the 2d prize of 15*l.*, by the third gun (Clay), worked by the 8th Lancashire brigade under Lieut. Deane; and the 3d prize of 10*l.* by the fourth gun (Blakely), worked by the 4th Lancashire brigade under Capt. Campbell. The prize of 50*l.* for volley firing was won by the 39th Welsh corps. On Monday a contest, open to all comers, for a prize of 50*l.* given by the cotton brokers of Liverpool, and for a second prize, a Whitworth rifle, value 25 guineas, presented by Mr. Joseph Whitworth, brought the meeting to a close. The distances were 1000 and 1100 yards. The first prize was won by Lieut. Ick, with nine points, there being three ties of seven points for the second prize, viz., Mr. James Colquhoun, Mr. G. R. Dunbar, son of the baronet of that name, of the Edinburgh Rifles; and Lord Fielding, of the 4th Denbighshire. The ties were then shot off, when Mr. Dunbar was declared the winner of the 2d prize.—The Cambridge University Corps had a shooting match on Wednesday and Thursday of last week, for a silver cup value 20 guineas, presented by the Hon. and Rev. Latimer Neville, Master of Magdalen College and Vice-Chancellor of the University. The distances were 150, 200, 250, and 300 yards, five [illegible]nds for each distance. The prize was won by Mr. [illegible]ain, of Emmanuel, who scored 37 points; Mr. Pet[illegible] of Trinity, scoring 33, Mr. Shuttleworth, of Buxton, [illegible]Mr. Hall, of St. Peter's, 32 each; Mr. Heath, Caius, an[illegible]Hall, 28; Mr. Gurdon, of Trinity, Mr. Lee, of of Trinity [illegible]Mr. Storer, of Trinity Hall, 27 each.—The Emmanuel, an[illegible]ighton took place last week, when the rifle contest at [illegible]Mr. Bricknell, Capt. Glaiser, Mr. prizes were won b[illegible]rgeants Chignell, Russell, and H. Jenner, jun., S[illegible]Levesay, Lieut. Hallett, and Rose, Dr. Starr, Corpor[illegible]Sussex; Corporal Goldsmith, Private Rickard of the 1s[illegible]5th Sussex; Corporal 4th Sussex; Corporal Ma[illegible]Billing, Queen's (West-Thompson, 11th Sussex; Mr. Pidcock, Civil Service minster) Corps; and Sergeant [illegible]contest was held in Corps.—On Friday, a grand rifle Panshanger, near the park of Earl Cowper, at Ware, Bishop's Hertford, between the Hertford, [illegible]d, Ashridge, Stortford, Royston, Berkhampstea[illegible] Hempstead, Cheshunt, Hitchin, St. Alban's, Hemel[illegible] of the Tring, Watford, and other companies Hertfordshire Rifles. The ladies' challenge [illegible]up, value 40 guineas, to be won three years in succession [illegible]before becoming the property of the winner, was w[illegible]n by Mr. Aubrey Rumball, and the other prizes were won by Captain the Hon. Reginald Capel, Mr. J. G. Nash, Mr. Alderman, Lieut. Hoblyn, Mr. S[illegible]kinner, Mr. Brown, Mr. Dale, M. Decoppet, Mr. J. Wells, Sergeant Gotto, Mr. Hagger, Mr. Saunders, and Serge[illegible]nt Balding. The prizes were afterwards presented to th[illegible]e winners by the Dowager Countess Cowper.—On Satu[illegible]day a challenge cup and other prizes competed for by [illegible] Ipswich Corps on the two previous days, were pr[illegible]sented to the successful competitors. The challenge cup was won by Mr. Pretty, and the other prizes by Private Chapman, Corporal Angier, Private Button, and Corporal Barber.—The Halesworth or 7th Suffolk has commenced target practice.—The Lowestoft Artillery has received the 32-pounders, and will shortly commence practice. The competition among the members of the Eye Corps for a

silver cup offered by the Mayor of that town has resulted in favour of Corporal Feck.—The Maidenhead (5th Berks) has just had a shooting match. There were 28 competitors at ranges of 200, 300, 400, and 500 yards. The 1st prize was won by Sergeant Cull, the 2d by Sergeant Clark, and the 3d by Private Colman, mayor of the borough.—The Rifle movement is greatly extending in the country districts of Berkshire. During the last few days meetings have been held at Benson, Brightwell, and Cholsey, near Wallingford, at which as many as 55 persons have been enrolled, and the subscriptions and donations have amounted to nearly 300*l*.—The 3d Essex was inspected on Friday at Rochett's, the residence of Captain Coope, the commanding officer, by Colonel Sir Claude de Crespigny, and was afterwards presented with a silver bugle, subscribed for by the ladies of Brentwood and the neighbourhood.—On Wednesday week the Exeter and South Devon battalion were presented with a saluting flag and three bugles in the presence of crowds of spectators. After the ceremony the members of the corps dined together under the presidency of Lieut.-Colonel Sir E. Prideaux. —On Friday a banquet was given to Earl Fitzwilliam, the Lord-Lieutenant of the West Riding of Yorkshir at the Town Hall, Leeds, by the officers of the various corps in the Riding, as an acknowledgment of the courtesy with which he has invariably treated the corps in all his official relations with them, and the hospitality which he showed to the officers during the late Volunteer levée in London.—On Saturday the 7th West Riding (Leeds) corps was presented with a silver bugle and a set of colours, the gift of the ladies of Leeds, in front of the Town Hall, in the presence of several thousand spectators. The ceremony was followed by the presentation of the silver cups, Enfield rifles, and other prizes won by the corps at their recent rifle contest.—On Wednesday week the 1st Staffordshire battalion (Burslem, Kidsgrove, and Leek), and the 1st Cheshire battalion (Congleton, Sandbach, and Macclesfield), were reviewed in Somerford Park, the seat of Sir C. W. Shakerley, after which a silver bugle was presented by the ladies of Congleton and neighbourhood to the 5th company of the 5th Cheshire battalion.—On Friday the 6th Northumberland Rifles were inspected at Bellingham, a village near the junction of two rivers famous in Border warfare, the Reedwater and North Tyne, and were afterwards substantially entertained by Captain Charlton, their commandant.—The 2d or Ruabon Company of Denbighshire Volunteers, was inspected on Friday, in Wynnstay Park, by Captain McCoy, Inspector for North Wales. —The battery of the 11th Lanarkshire Artillery was opened for gunnery practice at Mary Hill, near Glasgow, on Saturday, in the presence of a large concourse of spectators. Colours were afterwards presented to the corps by Miss Collins, of Kelvindale, who also fired the first gun.—The 2d Northern Battalion of Glasgow rifles held a parade on Saturday in George Square, for the purpose of being inspected by Major-General Cameron, Commander of the Forces in North Britain. —The Kirkcudbright Artillery were inspected at gun drill on the 23d ult. by the Earl of Selkirk. After their drill the ceremony of naming the battery was performed by Miss Hope, daughter of the Hon. Charles Hope, Governor of the Isle of Man, and niece of the Lord-Lieutenant.—A letter has been published from M. Mocquard, Secretary of the Emperor of the French, in answer to one sent to his Majesty by a Mr. J. Klotz Rowsell, of the London Rifle Brigade, proposing that an excursion party of British Volunteers should proceed to Paris. The Emperor declares himself favourable to the plan and promises a warm reception. It is said that Mr. Rowsell has had interviews with the Commander-in-Chief and the Secretary of State for War, who have both "spoken most approvingly of the project," and consider it "very favourable to the maintenance of friendly relations between England and France, but there is reason to believe that there is no foundation for this statement." Mr. Rowsell has made application to the railway companies in France and England, so that "as great a number of Volunteers as possible may visit Paris, where the most brilliant reception doubtless awaits them." Lord Bury has written a letter to the *Times* deprecating the proposed excursion, and saying "there is but one Sovereign against whom these preparations can have been made, and if our Volunteers, as Volunteers, go over to exchange compliments with M. le Prétet de la Seine and his official brethren, the position which England has assumed will lose its significance—we shall commit an act of extreme bad taste; and if, as Mr. Rowsell suggests, we go 'to fraternize with the Army,' we shall run more than a risk of making ourselves supremely ridiculous."

Foreign.

France.—The *Moniteur* announces that the Government will carry into effect from the 1st inst., the convention annexed to the commercial treaty, and that the French Government has relinquished the right of postponing the reduction of the duties on worked metals, machinery, &c., to the 31st of December next, and of postponing the reduction of the duties on refined sugars to the 1st of October, 1861. A meeting of the French and English Commissioners was held on Monday, at the Hotel of the Minister for Foreign Affairs, to arrange the second Supplementary Treaty, settling the tariff of duties upon Cottons, Woollens, &c. It is stated in commercial circles that the mode in which duties will be levied upon hosiery goods will be *ad valorem*, and that on woollen, merinos, mixed and cotton goods, the duty will be 15 per cent.; with a prospect of being ultimately reduced to 10 per cent. Accounts from St. Etienne and Lyons report a brisk revival of the silk manufacturing trade. Count de Persigny, the French Ambassador in England, left Paris on Wednesday, for London, to attend the Lord Mayor's banquet, in accordance with an invitation transmitted to him by Lord John Russell. Prince Napoleon's yacht, the Jerome Napoleon, is fitting out at Cherbourg and provisioning for a long voyage. Captain Dubuisson, who commands her, has received special instructions from Admiral Hamelin, the Minister of Marine, on the subject. It is reported that Prince Napoleon is about to circumnavigate the globe. A latter from Toulon states that, in addition to the six iron-plated ships now building, 10 more are ordered to be laid down with all despatch—viz., two at Toulon, two at Brest, two at Rochfort, two at Lorient, and two at Cherbourg. It is also stated that 150 iron-cased gun-boats are to be built by private contract, after the model of the one designed by the Emperor at Bordeaux, each to be armed with a powerful rifled gun; and that a good deal of activity is observable along the sea-board of France in the formation of a reserve of seamen gunners. The Minister of Public Instruction has published a circular, addressed to the directors of colleges and schools in France, forbidding the use of tobacco and cigars by the students. It is said that the physical as well as the intellectual development of many youths has been checked by the immoderate use of tobacco. The Minister of Public Instruction and the Prefect of the Seine are unceasing in their exertions to remedy the evil.

Spain.—Don Juan de Bourbon has published a new manifesto in the form of a letter to the King of Sardinia, in which he renounces on the part of the elder branch of the family any claim to the throne of Naples, universal suffrage being part of the modern law of nations, and his own hope of succession to the throne of Madrid being based on that contingency. He taunts the Pope and the late King of Naples with having superseded the legitimate claim of Don Carlos by recognition of the Regent Christina claiming in right of national election, as contradistinguished from the old theory of dynastic right.

Sweden.—The session of the States of Sweden was closed on the 30th ult. by the King in person, with the usual ceremonial. Before the close of the session the Order of Citizens and the Order of Peasants adopted an address to the Crown, praying for reform in the national representation, setting forth that the present representative system—composed of four orders, the nobles, clergy, burgesses, and peasants—is incompatible with constitutional liberty and with progress. The bills relative to liberty of conscience and of public worship, lately voted by the Diet, with the exception of the Order of the Clergy, have been sanctioned by the King.

Hesse.—A conflict of a somewhat serious nature has broken out between the two Chambers of Hesse Darmstadt relating to the civil rights of the Catholic Church in the duchy. The Second Chamber demand that these rights shall be regulated by law, and the First Chamber contend they can only be settled by a concordat.

Switzerland.—On Wednesday M. Massignac presented to the President of the Federal Council his credentials as French Chargé d'Affaires *ad interim*. The Marquis de Turgot will not, therefore, return to his post for the present.

Prussia.—The Prince Regent of Prussia has been prevented by indisposition from going to St. Petersburg to attend the funeral of his late sister, the Empress Dowager. Prince Charles and Albrecht however have left for St. Petersburg with a numerous suite, together with a deputation of the 6th Cuirassier Regiment, headed by its commander, Duke William of Mecklenburg-Schwerin, her Majesty having been the nominal chief of the regiment. The Court of Berlin has gone into mourning for four weeks.

Austria.—The Empress of Austria, who from time to time has been afflicted with a troublesome cough, has been advised to pass the winter in Madeira, where the Archduchess Charlotte was about a year ago. Her Majesty will leave Vienna on the 19th, and proceed either to Ostend or Antwerp, where she will embark for Madeira on board an English man-of-war, which the Admiralty have placed at her disposal. It is understood that the Empress's sister, the Queen of Naples, will accompany her.—The Austrian Chargé d'Affaires in London has informed his Government that England is to be represented at Vienna by an ambassador.—Count Rechberg has addressed a circular note on the Warsaw interview to the representatives of Austria abroad, of which the following is a summary:—

"The object of the interview was to bind more closely the personal and friendly relations of the three Princes [illegible], and to concert the principles for the regulation of their direct interests [illegible] entering upon any definite [illegible] ments concluded, or [illegible] established. He, however, [illegible] non-intervention in the affairs [illegible] that, although [illegible] the balance of power in Europe, the three Northern Courts would do nothing which might provoke war.

Hungary.—Several of the Hungarian refugees have published their opinions on the new charter granted to their country by the Emperor of Austria, but M. Szémere, former Minister of M. Kossuth, is the only one who has given it his approbation. M. Szémere's letter has been answered in the French press by General Klapka, M. Horn, and Count Ladislaus Teleki, Minister Plenipotentiary of Hungary in Paris in 1849, all of whom protest against M. Szémere's favourable decision. General Turr, also, the Commander of the Hungarian brigade in Italy, at a recent entertainment at Naples in honour of the presentation of new colours to the brigade by General Garibaldi, declared "that he would never accept the impudent, lying Constitution of Austria, the perfidious act by which now, as in 1848, it attempts in vain to urge the Hungarians forward against their brothers of Italy."

Ionian Islands.—Her Majesty's line-of-battle ship Marlborough, bearing the flag of Admiral Martin, arrived at Corfu a few days since with the Exmouth, Orion, James Watt, Neptune, Victor Emmanuel, and a gunboat. Sir E. Bulwer Lytton is at Corfu, with his son, who is on his way to Paxo, of which island he has been appointed Resident. Sir Edward, it is said, will remain at Corfu four months, engaged on some literary work.

Russia.—A paper on the Russian fleet in the "Revue des Deux Mondes," by Prince Troubetzkoi, states that in addition to a large increase in the number of vessels, more especially in steam ships, a great improvement has taken place since the war in the Crimea in the naval administration, and many reforms have been introduced with the view of promoting the moral welfare and material comfort as well as the general efficiency of the sailors.

Italy.—King Victor Emmanuel entered the city of Naples on Wednesday morning at half-past 9, accompanied by Garibaldi. They proceeded together to the Cathedral and to the Palace. An immense crowd of people assembled, notwithstanding the torrents of rain which were falling. Universal joy was manifested, and the city was in a state of festivity. The *Opinione* publishes a proclamation of King Victor Emmanuel to the Neapolitan and Sicilian peoples, accepting the sovereign authority of the Two Sicilies transferred to him by universal suffrage. A despatch from Naples states that the departure of the King of Naples from Gaeta is imminent, in consequence of the advice given to his Majesty by the commanders of the foreign fleets. The Sardinian army gained a brilliant victory on Saturday on the north side of the Garigliano. The troops, commanded by King Victor Emmanuel in person, attacked and dispersed the Neapolitan army, the Sardinian fleet at the same time attacking them in flank. The Neapolitans left behind them their tents, waggons, stores, and an immense number of prisoners. General Sonnaz subsequently occupied Mola di Gaeta and other positions commanding the city. The Royalists fell back upon Gaeta, and throughout their march were much embarrassed by the fire of the Sardinian fleet. Gaeta is now invested by the Sardinians on the land side, but a large body of Bourbon troops which remain outside the fortress have sent a proposal to surrender to General Fanti. The capitulation of Capua is confirmed. Military honours were granted to the garrison, who to the number of 11,000 men have been disarmed and sent to Naples, where they will embark. A decree has been published in the official journal of Naples ordering that six millions of ducati in the public funds be distributed in the name of the King amongst the political prisoners of 1848. Another decree issued by Garibaldi's Minister of Justice dismisses from the bench the judges who tried and condemned with false witnesses the political prisoners of 1848. On the 31st ult. Garibaldi went to Naples from the camp, to present new colours to the Hungarian regiment of cavalry. After the presentation he addressed the crowd who stood about. He urged the people to maintain their love of Italy, and to persevere in the work of its regeneration. Touching upon religious questions, he said that he himself was, and always had been, a Christian, but that the Pope was not, nor was he necessary to Italy. "I love and venerate," he said, "the religion of Christ, because Christ came into this world to rescue humanity from the slavery for which God did not create it. But this Pope, who wishes that men should be slaves, who asks from the powerful of the earth fetters and chains for the Italians, —this Pope King does not know Christ; he lies against his own religion. In the Indies they recognize and adore two Genii—that of Good and Evil. The Genius of Evil for Italy is the Pope King. Let no one misunderstand my words; let no one confound paganism with Christianity—the religion of liberty with the avaricious and bloody policy of slavery." The *Toulonnais* publishes the following as a correct account of the interference of the French admiral with the Piedmontese squadron near Gaeta. On the 27th ult. a small Piedmontese squadron of six sail attempted to effect a landing, but were compelled to withdraw by the command of Admiral Tinan. On the 30th Admiral Persano himself arrived off the same spot with 10 men-of-war, and although a French squadron was sent to order him off he refused, and informed the French admiral that he was ordered to land troops at the mouth of the Garigliano, and would do so at all cost. On this the French admiral sent home for further instructions, and received orders from the Emperor to return to Gaeta, leaving the Sardinian fleet to take an active part in the battle of the 3d inst., which

has probably decided the campaign. It is said that in the recent interview between the King of Sardinia and Garibaldi, the latter spoke his mind very plainly to his Majesty. He said that he had been calumniated by Count Cavour's partisans, and that the pretended influence of Mazzini and the Republicans over him was a falsehood imagined for the purpose of injuring him with the King and the public. "How could I," he asked, "have exiled Mazzini, an old friend, who requested me to let him breathe his native air? Believe me, sire, the men who surround you are not the most ardent friends of Italian unity." The King is said to have heard him attentively without expressing any opinion. It is generally believed that Garibaldi, immediately after the entry of his Majesty into Naples and the departure of Francis II., will retire into private life.—Accounts from Rome state that the Roman army is to be dissolved, and that the Pope will only retain a simple guard, which is to consist of 3000 men. Large quantities of stores and war *matériel* have arrived at Rome for the use of the French army. The enrolment of foreigners for the Papal service has been stopped. Beds for hospitals for the wounded have been sent from Rome to the King of Naples. The returns received of the voting in Umbria and the Marches give very satisfactory results. Perfect order prevails everywhere, and there is great enthusiasm in favour of annexation. The province of Viterbo is in a state of anarchy.

INDIA.—By the arrival of the Overland Mail we have advices from Calcutta to September 22, and from Bombay to the 12th October. The following is a summary:—

"Major-General Woodburn died at Ahmedabad on the 28th September; and Dr. Buist, of Bombay, had fallen a victim to dysentery. It is feared that there will be a necessity for a loan in India to meet the deficit. It is expected that Government will shortly make a statement as to the reductions in military expenditure they are prepared to carry out in consequence of the suggestions of the Military Finance and Police Commissions. Government has issued a notification informing the local European army that the amalgamation of the armies will not affect their rights and privileges; that they will not be called on to serve out of India during the term of their engagement. The Paper Currency Bill was just going to be read a second time. Lord Canning, of his own accord, has issued a letter to the local governments, promising all assistance to volunteer rifle corps of not less than 50 members, and to private rifle clubs throughout India. The corps are to be supplied with everything but uniform, and to be under the same regulations as are applicable to the English volunteers. The indigo districts of Lower Bengal are again in a state of excitement. The peasantry refuse to take advances, and are afraid to go to the factories. The planters ask for a summary contract law, and good courts and magistrates. There seems to be no prospect of an immediate settlement of the difficulty. The apprehensions of a famine in the North West and Central India, which were removed by a heavy fall of rain at the end of July, have been revived. There has been a want of rain in the Doab and the districts round Delhi since that time. Government have issued instructions to meet the impending calamity. In any case the revenue this year will be affected. The rebel Thakoor of Awah has been apprehended. Feroze Shah is said to be in Rajhgurh, Central India."

CHINA.—Full details of the capture of the Taku forts have been received this week in the form of despatches from the Ambassadors, and the military and naval commanders of the allied forces. It appears that after the northern fort had been carried by storm, the Chinese capitulated, giving up to the allies the whole country as far as Tien-tsing, with the remainder of the forts and 600 brass guns of large calibre. All the accounts agree as to the complete success of the Armstrong guns on this their first trial in the field. After the victory the Chinese commissioners were to meet them for the purpose of coming to an arrangement. The allied army was echeloned at suitable distances along the road which the ambassadors had to take. The generals and admirals were also to proceed there with a strong escort. It is said that the expeditionary force of the Allies will not advance to Pekin, but that the ambassadors with their suite, and probably a guard of honour, will alone go to the capital, where the conditions of the new peace will be signed. The latest report from Tien-tsing is that Prince Sang Golinsin has been degraded, and that the Chinese have consented to pay an indemnity of 8,000,000*l*. The following despatches give ample details of the capture of the forts:—

"Head-quarters, Tangku, Aug. 24.

"Sir,—I have the honour to report that the allied forces were unable to leave Pehtang until the 12th of August, on account of the very heavy rain, which had made the country almost impassable. On that morning, however, the troops marched according to the following dispositions—viz., the 2d division of Infantry, an Armstrong battery, a rocket battery, Madras Sappers, and the Cavalry Brigade, with three 6-pounders. The whole under Major General Sir Robert Napier struck off to the right of the road leading from Pehtang to Sinho, for the purpose of turning the left of the Tartar position. This column experienced the greatest difficulty in getting through the deep heavy ground, which extended for more than two miles out of Pehtang, and considerably delayed the departure of the main column, under Sir John Michel, which moved along the causeway leading directly from Pehtang to Sinho, and which was composed as follows—viz.: the 1st Infantry Brigade, a company of Royal Engineers, an Armstrong battery, 1600 French Infantry, and a French battery, all under Brigadier Staveley. This was followed by the 2d Infantry Brigade, two 9-pounder batteries, and a rocket battery, succeeded by the main column of the French. On approaching the intrenched camp the Tartar cavalry moved rapidly down to attack Sir Robert Napier, who was at this time about two and a half miles off, on my right flank. His report of that part of the engagement I beg to enclose. Sir John Michel's division deployed at the same time in front of the enemy's works, and opened fire with Lieutenant-Colonel Barry's Armstrong battery and Captain Desborough's 9-pounders, a French battery being on the left, together with a French and an English rocket battery. These guns kept up such a heavy fire, that the Tartars were unable to resist long, and they abandoned their works, being closely followed into their second intrenched line at Sinho, which they were unable to defend, and fled to Tangku. I enclose Sir J. Michel's report of this affair. The enemy's force was composed principally of cavalry, and numbered about 4000 men. At Sinho I was joined by Sir R. Napier's division, and the cavalry, who had cut up a good number of the Tartar horsemen. The loss of the Chinese was about 100 men. On the 13th I reconnoitred the ground along the banks of the Peiho leading to Tangku, and found it tolerably firm, though intersected with creeks and ditches. I ordered these to be bridged during the night, and on the morning of the 14th an allied force moved from Sinho towards Tangku, keeping their right flank on the bank of the river. The English part of the force consisted of the 1st Infantry Division under Sir John Michel, and the artillery, as per margin,* which formed one grand battery, under Brigadier-General Crofton, Royal Artillery. On arriving within a mile of Tangku, a battery and some junks on the right bank were silenced by two Armstrong and two 9-pounder guns; and a party of sailors who had been brought up for the purpose crossed the river and burned the junks. The whole of the artillery was then advanced to within 600 yards of the intrenchment, and opened a heavy fire on the walls; two French batteries deployed on our left, the enemy replying with 10 or 12 guns and a brisk fire of gingals and matchlocks. The artillery gradually advanced to within 350 yards, and the enemy's guns being silenced, a breach was commenced, when a passage across the double wet ditch was discovered at the river's edge by the 60th Rifles and an entrance was effected, the Chinese retiring with great precipitancy. At the same time the French advanced with great gallantry, and entered by the main gate, which had been partially broken in by the artillery fire. The garrison of Tangku retreated, some into the North Forts and some across the river to Tangku. I am happy to say that our losses in these two engagements were very slight, owing to the enemy being completely paralysed by the superior fire of our artillery. Forty-five guns were captured in Tangku. My thanks are due to Major-Generals Sir John Michel and Sir R. Napier, commanding divisions (the former had a horse killed under him on the 14th), also to Brigadier-General Crofton, commanding Royal Artillery, and Brigadier Pattle, commanding the Cavalry, for the able way in which they exercised their respective commands; and the whole of the officers and soldiers acquitted themselves to my satisfaction. I beg to enclose a list of casualties.—I have, &c., J. HOPE GRANT, Lieut.-General, Commanding Her Majesty's Forces in China.

"The Right Hon. the Secretary of State of War."

"Head-quarters, Tangku, Aug. 24.

"Sir,—I have the honour to report that after the capture of Tangku on the 14th inst. I commenced bringing up siege guns and ammunition from Pehtang with a view to the reduction of the uppermost fort on the left bank of the Peiho, distant about two miles from Tangku. The ground upon which it was necessary to advance was mostly of a very difficult nature, and intersected with broad and deep canals used in the manufacture of salt. I placed Major-General Sir R. Napier in charge of the advance, his division being quartered in Tangku. Under his superintendence bridges were thrown over these ditches and canals by Lieutenant-Colonel Mann, commanding Royal Engineers; and heavy guns, as per margin,† with a good supply of ammunition, having been brought into Tangku, the 67th Regiment and an Armstrong battery were pushed forward on the evening of the 19th to within 2000 yards, to cover the working parties making roads, bridges, &c. On the 20th the road was made practicable to within 800 yards of the fort, batteries were traced, and the heavy guns were brought out ready to place in position by daybreak on the following day. The Chinese opened fire during the day, and were replied to by Captain Milward's Armstrong guns at 2000 yards' range with good effect, and the firing gradually ceased. During the night batteries were constructed for the heavy guns and mortars, and for one field battery, also for two 8-inch guns, which were brought up by great exertions from Pehtang during the night; and the whole were placed in position by daybreak of the 21st August. It had been arranged with the Admirals that the gunboats should cross the bar that morning, and should engage the outer North Fort and the flank of the outer South Fort, at the same time that the attack on the inner North Fort was commenced by the land forces. At 5 A.M. however the Chinese opened fire upon the troops from all their forts within range, and we were thus forced to reply an hour earlier than had been intended. The artillery was disposed as follows:—A French 24-pounder battery of six pieces, one English 8-inch gun, and two Armstrongs, played on the inner South Fort to keep down the fire they might otherwise have poured on our right flank. Two Armstrong guns and two 9-pounders fired from Tangku across the river at an intrenchment which flanked the French right; three 8-inch mortars were in the centre at 600 yards' range, and to their left rear an Armstrong battery, two 32-pounder guns, and two 8-inch howitzers, all of which played on the fort we were attacking. In addition to this, two 9-pounder guns, four 24-pounder howitzers, the remaining two Armstrong guns, and a rocket battery were placed in the open ground, about 800 yards in front of the fort. The storming party of infantry consisted of a wing of the 44th, under Lieutenant-Colonel M'Mahon, and a wing of the 67th, under Lieutenant-Colonel Thomas, supported by the other wings of those two regiments, and the Royal Marines under Lieutenant-Colonel Gascoigne. A detachment of Royal Marines, under Lieutenant-Colonel Travers, carried a pontoon bridge for crossing the wet ditches, and Major Graham, Royal Engineers, conducted the assault. The whole were commanded by Brigadier Reeves. The fire of the artillery was most effective, the guns of the fort (of which many were of large calibre) were speedily silenced, and at about 7 A.M. the magazine blew up with a terrific explosion. A few minutes later the magazine in the outer North Fort was also exploded by a shell from the gunboats. The field guns were all advanced to within 500 yards of the fort, and redoubled their efforts. The fire of the forts having almost entirely ceased, a breach was commenced near the gate, and a portion of the storming party was advanced to within 30 yards to open a musketry fire, the French infantry being on the right, the English on the left. The fire of our artillery being thus partially compelled to slacken, the enemy emerged from their cover, and opened a heavy fire of musketry on our troops. The French, under General Collineau, immediately pushed on to the salient next the river, crossed the wet ditches in the most gallant manner, and established themselves on the berm, whence they endeavoured to escalade the walls; this, however, they were unable to effect, from the vigorous resistance of the Chinese. The efforts of the Sappers to lay down the pontoon bridge were unavailing; no less than 15 of the men carrying it being knocked over in one instant, and one of the pontoons destroyed. At this juncture Sir R. Napier caused the two howitzers of Captain Govan's battery to be brought up to within 50 yards of the gate, in order more speedily to create a breach, and a space sufficient to admit one man had just been made when our storming party (now joined by the head quarters' wing of the 67th, under Colonel Knox) who had partly crossed by the French bridge and partly swam over, forced their way in by single file in the most gallant manner. Lieutenant Rogers, 44th Regiment, and Lieutenant Burslem, 67th Regiment, being the first to enter, when they assisted in the regimental colours of the 67th, carried by Ensign Chaplin, who first planted them on the breach (assisted by Private Lane, 67th Regiment), and subsequently on the cavalier, which he was the first to mount. At the same moment the French effected their entrance, and the garrison was driven back step by step, and hurled pell-mell through the embrasures on the opposite side. Here the same obstacles which had impeded our advance obstructed their retreat; in addition to the two wet ditches and two belts of pointed bamboo stakes there was swampy ground, and a third ditch and bank. The storming parties opened a destructive fire on them from the cavalier, and this was enhanced by the canister fire of Captain Govan's guns, which had been moved to the left of the fort for this purpose. The ground outside the fort was literally strewn with the enemy's dead and wounded—three of the Chinese were impaled on the stakes. A few fugitives reached the outer north fort, which opened fire to cover their retreat, and was answered by the Armstrong guns with good effect. About an hour after this the whole of the forts on both sides of the river hauled down their war banners, and hoisted flags of truce. General Montauban and I sent each an officer to ask their meaning and summon them to surrender, but they only received an evasive and insolent reply, and were defied to come on to the attack. Accordingly, two fresh regiments, the 3d Buffs and the 8th Punjab Infantry, having been brought up, I advanced to attack the outer north fort. Two 8-inch guns were placed in position against it; the other siege guns could not be brought up.* The field batteries were placed at 800 yards' range on an arc encircling the left and front, the French guns on our right. Not a shot was fired by the enemy, and the Allied infantry pushed on, crossed the ditches, and scaled the walls, without meeting any opposition, the garrison of 2000 men being made prisoners. This fort was stronger than the first. They are all constructed on the same plan, being redoubts with a thick rampart heavily armed with guns and wall pieces, and having a high cavalier facing seawards, the guns of which were all turned in towards us; they have two unfordable wet ditches, between which and the parapet sharp bamboo stakes were thickly planted, forming two belts, each about 15 feet wide, round the fort, an abattis encircling the whole, and further covered by pieces of water, which forced an advance to be made only on a narrow front. Towards evening the garrisons of the south forts were observed to be evacuating them, and detachments of English and French were passed over in ships' boats, and occupied them. There is not now the trace of an enemy near us, and the whole of the forts and entrenched camps are in our hands, containing about 400 guns, many of which are of a very large calibre. It is difficult to account for the confusion and uncertainty which seemed to pervade the enemy when the first fort fell; but it now appears that the general in command was killed, and the second in command either killed or missing; and the confusion caused by this, together with the severe lesson received in the first fort, rendered them incapable or unwilling of further resistance. I cannot conclude this despatch without expressing my sense of the very valuable services of Major-General Sir Robert Napier, who conducted the attack, and whose assistance has been most useful. The service of the Artillery under Brigadier-General Crofton was most excellent; its effects I have already described. The engineering operations were conducted by Lieut.-Colonel Mann; and lastly, I must bring to notice the gallant conduct of the storming party, which was commanded by Brigadier Reeves, who, himself severely wounded in three places, did not quit the field until he had conducted his men into the fort. The wounded were removed as soon as possible into Tangku, where every arrangement for their temporary reception was made by Dr. Muir, the principal medical officer. Many others, both officers and soldiers, behaved in a manner deserving of being mentioned; but want of time does not permit me to treat of it in this despatch, and on a future occasion I shall do myself the honour of bringing their names to your notice. I would also wish to inform her Majesty's Government how cordially and sincerely our French allies have co-operated with us, as well as the admiration I feel for their gallant conduct in the field. General De Montauban has always shown every disposition to act thoroughly in concert with me, and to co-operate in every manner in his power. The services of the gunboats will doubtless be brought to notice by the naval commander-in-chief, and I beg here to record what a valuable and efficient colleague I have found in Admiral Hope, whose unwearying exertions throughout the whole campaign, and in discharging the onerous duties of transporting this large force to the seat of war, have contributed greatly to the success of operations.—I have, &c., J. HOPE GRANT, Lieutenant-General Commanding Her Majesty's Forces in China."

"The Right Hon. the Secretary of State for War, &c."

"Head-quarters, 1st Division, Camp, near "Sun-ho, August 24.

"Sir,—I have the honour to report that, in obedience to the orders of his Excellency the Commander-in-Chief, the 1st Division, under my command, marched from Pehtang about half-past 10 A.M. on the 12th inst. On reaching the enemy's second picket-house, which is about 900 yards from their intrenched position, skirmishers of the 1st Royals were sent to the left, and some of the 31st to the right, and shortly afterwards Colonel Barry's battery of Armstrong guns, and Captain Martin's battery of 9-pounders (the whole under the command of Captain Desborough), opened fire on the enemy's intrenchment at a distance of about 800 yards; after a cannonade of 25 minutes the enemy's cavalry were seen moving to their left from the intrenchments. The guns then advanced to within 500 yards, and played on the enemy's position, as also on the cavalry who were moving to their right; the fire of two Armstrong guns quickly dispersed their cavalry, and in a few minutes the advance was sounded, and the enemy's position found to be abandoned. The enemy now retired to the intrenched village of Sinho, but Sir Robert Napier's division having turned their left, the cavalry of the enemy in large numbers escaped behind this village towards the Peiho Forts. The Armstrong guns, at a range of from 2000 to 2500 yards, made good practice on the fugitives. This engagement having been entirely that of Artillery, only one man of the division was wounded.—I have, &c., "J. MICHEL,

"Major-General Commanding 1st Division.

"Camp, Tang-ku, August 24.

"Sir,—I have the honour to report, for the information of his Excellency the Commander-in-Chief, the result of the operations of the force under my command, employed in the advance from Pehtang and the attack of the Tartar post of the Sinho intrenchment. The troops left their billets at 4 A.M. of the 12th inst., and moved out in the following order:—An advanced guard of 200 men of the 3d Buffs, with two Armstrong guns of Milward's battery, under the command of Lieut.-Colonel Sargent, 3d Buffs:—Four Armstrong guns, Milward's battery; 23d Company Royal Engineers, 3d Buffs, 8th Regiment Punjab Infantry, 44th Regiment, Rolton's Rocket Battery, Royal Marines, Madras Sappers and Miners, right wing 67th Regiment, reserve ammunition, hospital stretchers, rear-guard, left wing 67th Regiment. Cavalry Brigade.—Two squadrons King's Dragoon Guards, Probyn's Horse; three guns, Stirling's battery; Fane's Horse. The head of the column moved at 4 A.M., but though two days' hard work had been devoted to repairing the roads, the deep tenacious mud rendered them so difficult that it was not till half-past 7 o'clock that the rear

* Two Armstrong batteries, two 9-pounder batteries, two rocket batteries.

† Two 32 pounder guns, two 8-inch howitzers, three 8-inch mortars, three 5½-inch mortars.

* The guns of the cavalier of the captured fort were manned and turned on it.

of the column cleared the gate of Pehtang. According to his Excellency's instructions, the force above enumerated struck off from the causeway by a track to the right, at half a mile from Pehtang. The Commander in-Chief was himself a witness of the extreme difficulties which had to be overcome in extricating the troops from the inundated town of Pehtang, and advancing them through the deep mud, in which gun-wheels frequently were embedded axle-deep. It cost two hours' hard labour to the troops to traverse the first two miles I advanced by brigades in line of contiguous columns at quarter distance, my front covered by the advanced guard of 200 3d Buffs and Milward's battery, under command of Lieutenant-Colonel Sargent. The cavalry was formed on my right. A considerable halt was necessary to enable the rear to struggle through the heavy ground and close up, for I was aware that I was liable to attack from the north as well as from the enemy in front. Observing the approach of the allied columns to the direct attack of the intrenchment upon the causeway, and perceiving the enemy in great force, both in that intrenchment and in front of the village of Sin-ho, I marched directly towards them, taking their position in flank, and threatening their line of retreat. On arriving within 1500 yards, Milward's Armstrong guns opened on the enemy. These were the first shots fired with that weapon in war, and the range and accuracy of their fire excited the admiration of the force. The Tartar horsemen were surprised by the fire, but not shaken. After some hesitation they streamed out in a long line through a passage across the marsh which separated us, and, forming with great regularity and quickness, enveloped my force in a great circle of skirmishers. The northern portion formed by the cavalry, known to be in that direction, who hitherto kept out of sight, seemed suddenly to rise in position from the plain. As soon as the enemy's movements were clearly defined, I sent to Brigadier Pattle, commanding the cavalry, directing him to detach a troop to protect my right rear, and to take the opportunity to charge which the enemy so boldly offered him. I then had the satisfaction of seeing the admirable charge of my cavalry, by which the Tartar horde in front of them was driven from the field in disorder. Milward's battery had continued to play upon the enemy as long as it was possible to do so without injury to our advancing cavalry. About this time Stirling's half-battery, which, being unable to follow the movements of cavalry in such heavy ground, had been left with an escort of 30 of Fane's Horse, under Lieutenant Macgregor, was charged by a body of Tartar cavalry of very superior numbers. Lieutenant Macgregor gallantly led his small party against the enemy, and defeated them, many Tartars being killed, and Lieutenant Macgregor and many of his men being severely wounded. While this was going on my attention had been diverted from my right front to a large party of Tartars, who were steadily approaching the Buffs on the left front, apparently regardless of the fire of two of Milward's guns under Lieutenant Harvey, of the Rifles, of the advanced guard, and of Rolton's rockets. They advanced to within 450 yards, and bore unflinchingly for a considerable time such a fire as would have tried any troops in the world. The 4th Brigade, under Brigadier Reeves, being similarly attacked at the same time, replied with a steady fire, which did considerable execution. At length the courageous endurance of the enemy began to give way, and they fled from the field with precipitation. I then advanced my force towards the western end of the village of Sin-ho, and joined the allied columns. At no time throughout the day had we opportunity of coming into contact with the enemy's infantry. Trusting that the objects intended by his Excellency have been carried out by the force under my command, I beg to bring to his notice the excellent conduct and discipline of the troops of all arms during a very trying day. I am much indebted to the Brigadiers commanding the several brigades of cavalry and of infantry, and to the officer commanding the field artillery, all of whom performed the duties intrusted to them to my entire satisfaction. I received the most valuable assistance from my divisional and personal Staff, whose labours were unremitting. I beg to subjoin a list of officers, whom I desire earnestly to recommend to his Excellency's favourable consideration. — I have, &c.,

"R. NAPIER, Major-General Commanding
"2d Division China Force."

The Earl of Elgin has transmitted to Lord John Russell the following report which he has received from Mr. Parkes, who, at his request, accompanied Vice-Admiral Hope when he advanced upon Tientsin on the 23d August:—

"Tientsin, Aug. 26, 1860.

"My Lord,—I have the honour to make the following report to your lordship of particulars which have come under my notice during the proceedings of the last three days. After quitting your lordship on the morning of the 23d inst., I joined Admiral Hope, who proceeded up the Peiho in his tender, the Coromandel, accompanied by a division of five gunboats. At half-past 2 P.M. the forts of Shwangkeang were passed, and found to be deserted. The people of the various villages on the banks of the river turned out to look at the steamers as they passed along, and, far from evincing any feeling of hostility, gave proof of their goodwill in hauling, entirely of their own accord, at the hawsers or ropes that had occasionally to be landed, and also in bringing fresh fruit and vegetables to the boats that were sent ashore on this service. At 7 P.M. our small squadron anchored at a point 10 miles below Tientsin, and I had an opportunity of conversing with a number of respectable persons, who represented themselves as a deputation sent by the people of the city to pay their respects to the allied commanders. From them I learned that the authorities entertained no idea of defending the extensive works recently thrown up by Sang Kolinsin for the defence of Tientsin, and that both garrison and guns had been withdrawn; that Sang Kolinsin himself had passed by the place the previous day, or within 24 hours of his abandonment of the Southern Peiho Forts, but only with a small body of one or two hundred jaded horsemen; and that he himself was too dispirited to enter the city. The Viceroy, Hang Fuh, they said, had also arrived from Taxoo this day, at noon. Admiral Hope having determined upon receipt of this intelligence to occupy Tientsin with the small force he had with him, the gunboats pushed on the following morning, and having landed parties of Marines at the two forts which command the approach to Tientsin, arrived off the city about 9 A.M. Several subordinate officers came off with polite messages from their superiors, in reply to which the Admiral requested the Viceroy to come himself to the Coromandel. His Excellency complied without hesitation, and was accompanied by Haugke and Wantsenen, the officers commissioned by the Emperor to escort your Lordship to Pekin. Admiral Hope informed them that they must consider Tientsin to be in possession of the allied forces; that the people would be scrupulously protected, and the civil authorities allowed to remain in the exercise of their functions, and he showed them a proclamation which I had prepared by his direction for the purpose of apprising the people of the change in their position. The Viceroy and his companions made an ineffectual attempt to induce Admiral Hope to regard them as the governors of the city, but a reference made by them to Canton led the Admiral to observe that the situation of the two cities and of their respective native authorities must be considered parallel. While this interview was proceeding a party of the Marines had taken possession of, and hoisted the English and French flags on the east gate of the city, and the above-mentioned proclamation was posted in the same public thoroughfare. The Admiral having desired me to remain at Tientsin and to act with Captain M'Cleverty as occasion might require, I proceeded to inform myself of the condition of the city. Having found out the temporary residence of the Viceroy and Commissioners, I had a long and friendly conversation with them on the position of affairs, my object being to make it plain to them that the Chinese Government had it in their power to arrest the progress of hostilities—hostilities which they, by their faithless acts, had entirely brought upon themselves, by agreeing unconditionally to the terms of your lordship's letter to the Viceroy of the 17th inst., and that delay in doing so was full of peril to them. The Viceroy told me that he had forwarded that letter to Pekin the moment he had received it, but no further instructions had reached him on the subject. I pointed out that, during the short intervening period, all the Takoo forts and Tieu-tsin had fallen, and that our army was now on the march, remarks which led them to offer many personal assurances of their wish for the restoration of peace, &c. Having knowledge that a Committee of Supply had been formed by Sang Kolinsin at Tientsin to assist him in his operations, I requested the Viceroy to direct the native gentry who compose this committee to act as a board for the supply of our troops with fresh provisions, and before evening had closed in I had the satisfaction of arranging with several members of this committee the manner in which large supplies of bullocks, sheep, fruit, and vegetables were to be brought in for our use. The following morning, the 25th, the first supply of provisions that had been ordered was punctually delivered, and the committee rendered me further assistance in a search which I then made for suitable quarters for your Lordship, and undertook the repair of another building which may be required for the public service. At an interview which I had with the Commissioner Hangke, he showed me an Imperial edict, dated the previous day (24th), appointing Kweilliang and Hang Fuh (the Viceroy) to be Imperial commissioners for the transaction of business with your lordship, and ordering the former to travel by post to Tientsin. I spent the greater part of this day in visiting many of the streets of the city, and the country around it; and wherever I went, although I was unaccompanied by any guard, the people received me in a very friendly manner, and evinced but little alarm at the new state of things. I observed that women were being taken out of the city; but bullocks, droves of sheep, forage, &c., were being brought in, and most of the shops remain open. At one place, Peitsang, five miles from Tientsin, 300 or 400 of the villagers set themselves willingly to work, by my desire, to clear out some granaries, which I thought might be required for the accommodation of our troops. I have noticed that the Viceroy has removed from the streets, as I requested him to do, the recent hostile proclamations of Sang-ko-lin-sin. But one met my notice, issued only six days ago, in which the people are informed that the allies have been defeated, and we are now suing for peace, and that, therefore, the people need not be alarmed, nor remove from the city. This morning I again had occasion to see the Commissioner, Hangke, and he showed me an Imperial edict depriving Sang-ko-lin-sin of his three-eyed peacock's feather, his honorary position in the body-guard, and his command-in-chief of the Manchoo-bordered blue banner. The edict characterises the above as a light punishment.—I have, &c. "HARRY S. PARKES."

Return of Killed and Wounded.—No English officer was killed, but 22 were wounded; 2 dangerously, 13 severely, 7 slightly. The number of men killed in the English force was 17, and 178 wounded; 5 mortally, 24 dangerously, 83 severely, and 49 slightly. The following is a list of the officers wounded:—*Staff.*—Capt. Brooke, 48th Regiment, Aide-de-Camp to Sir R. Napier, wounded severely; gunshot wound of thigh—Brigadier Reeves, 90th Regiment, severely; gunshot wound of foot, forearm, and shoulder—Lieut. Kempson, slightly; contused wound of face. *Royal Artillery*—Milward's Battery.—Lieut. Gye, severely; gunshot wound in thigh—Assist.-Surg. Prescott, slightly; gunshot wound in neck. *Royal Engineers*—23d Company.—Brevet-Major Graham, severely; gunshot wound of thigh. *44th Regiment.*—Capt. George Ingham, severely; contusion of back of right thigh—Lieut. Robert Rogers, severely; gun-shot wound in right side. *67th Regiment.*—Lieut.-Col. Thomas, severely; guns ot wound of face—Capt. Miller, dangerously; gunshot wound, breast—Lieut. Kingsley, dangerously; gunshot wound, knee—Lieut. Burslem, severely; gunshot wound, shoulder—Lieut. Lennon, slightly; contused by shell, arm—Ensign Turner, severely; contused by shell, arm and thigh—Ensign Chaplin, severely; contused by shell, arm and thigh—Ensign Fraser, severely; contused by shell, thigh. *Royal Marines.*—Lieut.-Col. Travers, slightly; contused wound, right leg—Capt. Carrington, slightly; gingall ball through lower hip—Lieut. G. Maires, severely; gingall ball, left shoulder—Lieut. Barker, slightly; lacerated wound, right foot—Lieut. Straghan, slightly; lacerated wound, right foot. *Probyn's Horse*—Lieut. Stewart, slightly—Ensign Macaulay, slightly. *Fane's Horse.*—Lieut. M'Gregor, severely.

UNITED STATES.—There seems now to be no doubt that Mr. Lincoln, the Republican candidate for the Presidency, will be elected, in spite of all the efforts made by the Southern States against him. The South again threaten to secede from the Union, and the States of Alabama and Georgia have resolved to rebel in 40 days after his election. It is said that his Cabinet is already formed, and that Mr. Seward will be Premier.

MEXICO.—Advices from Mexico report that the Liberals under General Ogazon, have captured Guadalajara. The sufferings of the people during the siege were intense. General Degollado had been detected in communication with the enemy, and was ordered to Vera Cruz for trial. The British and Prussian Ministers had gone to Jalapa. Distress in the capital was very great. It was reported that Puebla had been abandoned, and the garrison called into Mexico.

Public Addresses.

THE RIGHT HON. W. E. GLADSTONE, Chancellor of the Exchequer, on Monday, attended the dinner given to the successful competitors at the first annual contest of the Chester artillery and rifles, and made the following speech on the Volunteer Movement, and the state of Southern Europe:—

"And, now, gentlemen, allow me to say but a very few words on the purposes for which you are called. I confess that I think that those would take a very narrow view of your institution who founded it upon any apprehension of immediate danger to be from the country. No doubt there have been those who have left the country. No doubt there have been those who have left the country. No doubt there have been those who have left

was it not compulsion, but it was not encouragement that created this great force I say so the more particularly because it implies blame to no man. It implies even a sound discretion upon the part of those who at the time formed the executive government of the country, that for many months after the formation of this corps began scarcely a sign of encouragement was exhibited to them by the Ministers of the Crown. I say it was the duty of the Ministers of the Crown to leave these first manifestations for a time to themselves, in order that they might ascertain that they were truly spontaneous, that they were genuine, that they came straight from the heart and the intelligence of the people; because, if, on the contrary, the influence of the throne and the legislature had been brought to bear upon those first infant symptoms, they would have taken—oh! how much would they have taken—both from the grace and the strength of this movement. It was right that in a nation which is governed after all by the national will—it was right that in a nation where the law and the throne and the institutions of the country rest upon the firm and intelligent convictions of the community—it was right that in such a nation as that it should be left to the people themselves to add tenfold to the value of the sacrifices they were making, by making those sacrifices not in obedience to a factious or to an exterior authority, but to the free and spontaneous movement of their own understandings and of their own hearts. And now, gentlemen, there was an allusion to the necessity of providing premiums for those competitions which have been so useful in stimulating the movement of the volunteers and in organising the force; and it was said that they should be provided, either from private resources or from the public purse. Well, as between those two sources of supply, I must confess that I for one have a very great preference for the former. I don't believe that if the public purse had been very freely opened in the first instance this movement ever would have attained either its material extension or its high moral character. There can be no difference of opinion, I am sure, between us about this matter. All that is requisite to give solidity and permanence to this movement will now, I am certain, be freely and gladly done by any administration; but I am sure you will agree with me in this, that nothing in such a matter should be thrown upon the public except that which cannot be done by individuals, for the real value and the real energy, the real fruit and profit of this manifestation, depend upon the maintenance of such a principle as that. And now, gentlemen, by this manifestation you have produced indeed a most favourable effect upon the world; but you have likewise contracted a very solemn engagement before the world. Let me, above all things, now commend to your consideration the one subject that transcends all others—how your movement is to be made a permanent part of the organisation of the country. We may come to times when perhaps either danger may be less or we may be less alive to it; but I think you will agree with me that if, as this force has come rapidly into existence, so the energies which have created it were by and by rapidly to disappear, the goodwill which has hitherto existed were to flag, and the force were to dwindle from point to point over the surface of the country, that you would have done little indeed to add to the permanent reputation and character of England; and many, sir, as are the obligations which we owe to you for having gathered us together on this festive occasion, I think the greatest fruit that we can promise ourselves from such a celebration is this—that every man who has assisted at it shall go home carrying in his mind the strong conviction that his duty does not terminate with one or with another of these parties, of these reviews, of these competitions, carried on at a period when the public mind generally is in a state of lively interest; but that he will most truly serve his country in connection with the volunteer movement—not who contributes most to the momentary splendour of that development, but who contributes most to give solidity and permanent efficiency to your organisation. I hope that when the severe test of time is applied to the energetic sentiments of the present moment they will bear that test; and that not in 1860 only, but for many years to come, you, and those who form your noble fellowship throughout the land, will continue to give, as you give us now, no note of defiance to other countries, no symptom of a tendency to disregard or undervalue the rights of those who inhabit other countries, but a determination to defend your own rights, to maintain and to hand down to your children what you have received from your fathers, and to afford convincing proof to the world, that, even amidst those pursuits of peace which have raised this country to so remarkable an elevation, you still are prepared to remember in case of need what has made your fathers famous, that the heart of England still beats within your bosoms, and that you intend that she shall never derogate as from the other fruits so from the martial fame and the heroic bravery of her former years."

City Intelligence.

BANK OF ENGLAND.—An advance of a half per cent. was made on Thursday in the Bank of England rate of discount. It had stood at 4 per cent. since the 24th of May, and is now raised to 4½ per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93¼ to ⅜ for Money, and 93⅜ to ½ for the 6th Dec.; Bank Stock, 232; Reduced and New Three per Cents., 91⅝ to ¾; Thirty Years' Annuities, expiring in April, 1885, 16¼; India Five per Cent. Stock, 1859, 103⅜; Ditto Bonds, 8s. dis.; Five per Cent. Enfaced Rupee Paper, 95¼; Exchequer Bills, 3s. dis.—FOREIGN: Brazilian Four and a Half per Cents., 1858, 88½; Buenos Ayres Six per Cents., for Acct., 94⅞; Ditto Deferred, 30¼; Peruvian Uribarren, Four and a Half per Cents., 83⅞; Russian Five per Cents., 105¾; Ditto Four and a Half per Cents., 91; Ditto Three per Cents., 1859, 62⅝ ex div.; Spanish Three per Cents., for Acct., 49⅛ to 49; Turkish Six per Cents., 1854, for Acct., 71¼ to ½; Ditto 1858, for Acct., 57½ to 58.

Gazette of the Week.

TUESDAY—BANKRUPTS—C. G. BAIL (not C. J. BAIL, as previously advertised), Peterborough, Northamptonshire, Coal Merchant and Provision Dealer—W. W. BAKER and H. SENDALL, 67, Old Bailey, Manufacturing Stationers—G. M. P. DANIEL, Camelford, Cornwall, Ironmonger—W. LEE and H. SMITH, Barley, Yorkshire, Woollen Cloth Manufacturers—T. W. LAURIE, of Bishop Auckland, Durham, Innkeeper, Livery Stable Keeper, and Farmer—J. NAPIER, Rhyl, Flintshire, Shipowner and Carrier—W. POWELL, Newport, Monmouthshire, Linen Draper—F. RANDALL, 272, Whitechapel Road, Coach Builder—W. H. SIMS, Winster, Derbyshire, Apothecary—G. STOKES, 87, Snow Hill, Provision Dealer.

BANKRUPTCIES ANNULLED—L. ANDREWS, Wells, Norfolk, Grocer and Tobacconist—W. RICHARDS, 4, Upper North Place, Gray's Inn Road, Builder.

SCOTCH SEQUESTRATIONS—CHRISTIE and FINDLAKER, Edinburgh, Clothiers—W. JACK, jun., Newarthill, Flesher and Spirit Dealer—J. LOW, Latch of Brechin, Cowfeeder—J. STEVENSON, Bishopbriggs, Quarry Master.

FRIDAY—BANKRUPTS—E. ARNOLD, Flamstead, Herts, Grocer—J. BAKER, Heathfield, Sussex, Tanner and Farmer—R. M. BOUCH, Liverpool, General Warehouseman—T. CLARK, Midhurst, Sussex, Tanner—W. CLAYARDS, Hampstead Street, Fitzroy Square, Dealer in Horses—T. COLTMAN, Coventry, Plumber—J. LLEWELLIN, Hereford, Saddler—W. NAPIER, Union Wharf, Wapping Wall, Coal Merchant—S. S. PHILLIPS, Cardiff, Bonded Storekeeper—W. REED, Salisbury Place, Lock's Fields, Carman—G. C. RYLAND, Birmingham, Coal and Iron Merchant—R. W. SHEPPARD, Charlbury, Oxfordshire, Auctioneer—R. STARKEY, Stroud, Draper—J. SURMAN, Southampton, Tailor.

SCOTCH SEQUESTRATIONS—J. JAMIESON, Dundee, Merchant—A. RAE and Co., Haddington, Drapers.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,635,440	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion	13,160,440
		Silver Bullion	—
	£27,635,440		£27,635,440

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£9,190,273
Rest	3,168,580	Other Securities	19,968,649
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	4,968,172	Notes	6,129,370
Other Deposits	13,114,251	Gold and Silver Coin	736,645
Seven day and other bills	820,934		
	£36,624,937		£36,624,937

8th day of Nov., 1860. M. MARSHALL, Chief Cashier.

Metropolis and its Vicinity.

LORD MAYOR'S DAY.—Alderman Cubitt was sworn in on Thursday at Guildhall as Lord Mayor for the year ensuing, and the procession from the City to Westminster took place yesterday with the usual ceremonies. The procession left Guildhall at half-past 11 o'clock and passed through Gresham Street, Princes Street, Lombard Street, Gracechurch Street, Leadenhall Street, Fenchurch Street, Gracechurch Street, Cannon Street East and West, St. Paul's Churchyard, Ludgate Hill, Fleet Street, Strand, to Westminster, returning from Westminster by the Strand, Fleet Street, Ludgate Hill, St. Paul's Churchyard, Cheapside, King Street, to Guildhall. The London Rifle Brigade formed a guard of honour in Guildhall Yard and King Street, to receive the Lord Mayor on his return from Westminster; and the 20th Middlesex corps and the Bloomsbury corps, the former of which comprises a company of men engaged in the extensive establishment of the new Lord Mayor, took part in the procession.

THE VICTORIES IN CHINA.—On Monday, in accordance with orders received from the War Office by telegram, royal salutes were fired from the Park and Tower guns, as well as at Woolwich, Chatham, Portsmouth and other garrisons, in honour of the capture of the forts on the Peiho and the occupation of Tien-tsin by the allied forces of England and France.

UNIVERSITY COLLEGE.—Mr. Daniel Oliver, Librarian to the Royal Botanic Garden, Kew, and a distinguished Botanist, has been appointed to the chair of Botany in University College, vacated by the resignation of Dr. Lindley.

THE LATE LORD DUNDONALD.—The funeral of the late Earl of Dundonald will take place in Westminster Abbey on Wednesday next, the 14th inst., at half-past 12 o'clock.

ST. PAUL'S CATHEDRAL.—The Bishop of London has conferred the honorary canonry in St. Paul's, vacant by the death of the Rev. J. T. Round, upon the Rev. F. G. Blomfield, M.A., rector of St. Andrew Undershaft; and the honorary canonry, vacant by the death of the Rev. T. B. Murray, on the Rev. Dr. Hessey, D.C.L., head master of Merchant Taylors School.

THE STEPNEY MURDER.—A memorial drawn up by the prisoner, James Mullins, in his own language, was transmitted to the Home Secretary on Friday, through his solicitor, Mr. Hubert Wood, praying for a commutation of the capital sentence. It is understood that the prayer of the memorial has been refused, and that the execution will take place on Monday the 19th inst.

THE LOCOMOTIVE EXPLOSION AT KING'S CROSS.—On Saturday Mr. Wakley, the coroner, opened an inquest on the bodies of the driver and stoker of the engine that exploded last week near King's Cross. After the bodies had been identified, the inquest was adjourned to Monday, when Mr. Amos, of the firm of Easton & Amos, engineers, stated that he had examined the broken engine (which had been bought from the Eastern Counties Railway), and was of opinion that the cause of the accident arose from a greater pressure than it could bear, owing to the bad construction of a part of the fire-box. Several other engineers in the employ of Mr. Jay, the contractor to whom the engine belonged, expressed their opinion that the explosion arose from a deficiency of water in the boiler. The inquiry was then adjourned for a fortnight in order that the evidence of the Government inspector might be taken.

ST. GEORGE'S-IN-THE-EAST.—The services on Sunday last passed off without interruption. It is understood that the alterations which the deputation appointed to confer with the bishop on the state of the church will urge are the removal of the super-altar, discontinuance of the singing of the Psalms, and the withdrawal of the choristers.

THE GUARDS' MEMORIAL IN PALL-MALL.—The bronze statue of honour has at length been placed on the summit of the pedestal in Waterloo Place. It was cast at Birmingham at the works of Messrs. Elkington.

THE STATUE OF RICHARD CŒUR DE LION.—Baron Marochetti's statue of Richard Cœur de Lion, the model of which formed so conspicuous an ornament of the west front of the Great Exhibition building in Hyde Park, has at length been set up in bronze in Old Palace Yard, between the Houses of Parliament and Westminster Abbey. A body of noblemen and gentlemen, determined that the statue should be perpetuated in the most enduring of materials, subscribed upwards of 3000*l.* for the purpose of having it cast in bronze, and presented to the nation. The casting, as well as the design, is by Baron Marochetti.

ATTEMPTED MATRICIDE.—On Saturday night a dissipated woman named Bridget Harrington, living in Northampton Street, King's Cross, irritated by the refusal of her mother to deliver up a small sum of money in her possession, attacked her with a poker, and inflicted such injuries on her head that she lies without hope of recovery. The daughter is in custody.

DESTRUCTIVE FIRES.—The pianoforte manufactory of Messrs. Chappell & Co. in Cannon Street, Soho, was destroyed by fire on Sunday morning, together with a large stock of veneers and other goods, and upwards of 100 valuable instruments. During the fire an explosion of some steam piping took place, scattering the fragments into the adjacent courts and causing the death of a woman, and serious injury to about 20 other persons.—On Saturday morning the Dissenting chapel in Queen Street, Radcliff, was destroyed by a fire which broke out in the premises of Mr. Vince, timber merchant, and totally destroyed the whole of his stock.

THE PUBLIC HEALTH.—The Registrar General's Weekly Return states that the number of deaths registered in the week that ended Saturday November 3, was 1049. The average for corresponding weeks in the 10 years 1850-9, corrected for increase of population, was 1179. The present return is therefore below the average. During the week the births of 956 boys and 912 girls, in all 1868 children, were registered in London. In the 10 corresponding weeks of the years 1850-9, the average number was 1617.

Provincial.

BRADFORD.—For several days it was expected that Margaret Sutton, *alias* Gowland, who cut the throats of her two children in this town and then attempted to commit suicide, might recover from her wounds, but she gradually grew weaker, mental agony tending as much as physical suffering to keep her prostrate. Public feeling throughout has been strongly in her favour, and hopes have been openly expressed that she might not live to go before a jury, and probably be executed. All fears of that are now, however, at an end, as she died on Friday morning in the infirmary, having been calm and sensible to the last. The jury at the inquest returned a verdict of temporary insanity.

MANCHESTER.—The annual congress of the Associated Mechanics' Institutes of Lancashire and Cheshire took place in this city on Tuesday. The meeting in the morning was presided over by Mr. Bazley, M.P., and addressed by the Rev. Dr. Rendall, of Preston, Mr. A. Mackie, of Warrington, the Rev. Mr. Thorburn, of Bury, Mr. T. T. Wilkinson, of Burnley, Mr. Isaac Gregory, and Mr. O. Heywood, of Manchester. A great public meeting was held in the evening at the Free Trade Hall, when the Duke of Argyll delivered an address and distributed the prizes to the successful competitors. After the distribution of prizes, Mr. O. Heywood moved, and Captain Gray, M.P., seconded, a resolution to the effect that the success which has attended the operations of the Association of Lancashire and Cheshire Mechanics' Institutions is the best proof that can be adduced of the value of the union, and of its claims to the continued and increased support of all who desire to promote the moral and social welfare of the industrial classes. The resolution was carried unanimously, as was a resolution moved by the Hon. Algernon Egerton, M.P., thanking the Duke of Argyll for the great ability and courtesy with which he had discharged the duties of Chairman.

NOTTINGHAM.—It was announced on Saturday evening that the strike in the lace trade was at an end on the terms proposed by the employers a fortnight ago, and that the men would resume work on Monday. On that day, however, one of the firms whose hands were out on strike refused to accede to the terms agreed to by the other firms, and the whole of the men still remain out of employment, the employers who are willing to resume wishing for entire unanimity before they set their hands to work.

OXFORD.—On Sunday morning, before the commencement of Divine Service, an explosion took place in the University Church, which shattered the windows and tore up the stalls and seats, causing such serious damage that the Vice-Chancellor has ordered the church to be closed for the present.—In a Convocation held on Tuesday, the Rev. H. O. Coxe, M.A., of Corpus Christi College, who has held the office of Under-Librarian of the Bodleian for 22 years, was elected to the office of Librarian, vacant by the resignation of the Rev. Dr. Bandinel. There was no other candidate.

SWANSEA.—An explosion took place on Wednesday in the Duffryn Deep-pit Colliery, one of the steam coal collieries of Messrs. Powell and Sons, by which 9 persons were killed and upwards of 20 injured. As the pit is necessarily fiery in its character, it is worked with safety lanterns, and it is therefore supposed by those conversant with the works that the explosion was caused by recklessness on the part of some of the miners. The works of the colliery are seriously damaged.

TROWBRIDGE.—On Saturday, Mr. T. B. Saunders, a

magistrate of the Bradford division, and a Chancery barrister, commenced a new investigation into the Road murder at the instance of the Bradford bench. He opened the proceedings in a speech of great length, stating that he had been actively engaged in personal investigation, and had on Wednesday week had an interview with the Home Secretary in London on the subject; and as he and other magistrates were dissatisfied with what had been done, and believed that there were means of eliciting further evidence, he had determined to re-open the inquiry, though he was not acting in his magisterial capacity. Several persons, some of whom had never before been examined, were then called or invited to come forward, and made various communications, some appearing to bear on the case, and others to have no connection with it. On Monday and Tuesday the proceedings were resumed and conducted in much the same manner, and with no other result than to create an impression that Mr. Saunders believed Mr. Kent to be implicated, and was endeavouring to collect evidence which would establish a *primâ facie* case against him. In the sitting of Tuesday Mr. West, one of the jurymen at the inquest, stated that as many as 9 out of the 12 jurymen were dissatisfied with the conclusion which was arrived at. They considered that a sort of undue pressure had been put upon them by persons in a higher station in life,—such, for instance, as the Coroner, and that in coming to an open verdict they were not doing justice to themselves, or giving satisfaction to the country. On Wednesday, after waiting in vain for some time for the attendance of persons whom he expected to give evidence, Mr. Saunders adjourned the proceedings to Thursday, when two police constables described the finding of a shift stained with blood in the hole of a boiler in Mr. Kent's kitchen, as if it had been put there to be burnt; but Mr. Happerfield and Superintendent Foley showed that the discovery of the shift had been thoroughly investigated at the time, and that it was found to have nothing to do with the murder.—While this inquiry of Mr. Saunders was proceeding at Road a meeting of magistrates of the Trowbridge division took place at the Police-station in this town. The magistrates present were—Messrs. Ludlow, J. Stancombe, W. Stancombe, W. H. Walmesley, and the Rev. R. Crawley; Captain Meredith, chief constable, and Superintendents Foley and Wolfe were also in attendance. Mr. Slack, solicitor, of Bath, by whom the recent prosecution of Elizabeth Gough was instituted, informed the bench that he had been in communication with the Attorney-General, who was of opinion that the inquest had not been properly conducted, and that it was a proper case in which an application should be made to the Court of Queen's Bench to order a second inquest under a writ of *melius inquirendum*. The magistrates concurred in the propriety of such a course being adopted, and affidavits will be immediately prepared in support of the application. The magistrates also wished it to be distinctly understood that they had taken no part in the investigation pursued by Mr. Saunders at Road. It is understood that application will in a few days be made to the Court of Queen's Bench that the Lord Chief Justice, in virtue of his office as Chief Coroner of England, do direct the coroner for the northern division of Wilts to recommence the investigation, and that the inquiry will be adjourned from time to time until every means of arriving at a definite conclusion shall have been adopted. It is understood that an immense mass of information is now in the hands of Mr. Slack, the solicitor, to whose industry this second inquiry is mainly due.

YARMOUTH.—An accident of a frightful character took place on Saturday afternoon on board the steamer Tonning, off this port. The vessel stopped on her voyage from Tonning to London for the purpose of taking in a quantity of fish, having already about 700 head of cattle on board. Just as orders were given to start the boiler burst, blowing into the air all within reach of its force—men, cattle, sheep, and fragments of metal and wood, and setting the ship itself on fire. Three men were killed, seven were seriously injured, including a Dutchman, who was proceeding to London with the cattle, and seven are reported as missing. The captain and eight of the crew, with two cattle-men escaped uninjured. The steamer was very seriously damaged, and there were doubts for some time whether she would not go down, one of her sides being blown completely out; but by the exertions of the fishermen, who hastened to render assistance, she was taken into Lowestoft. The seven men who were injured were taken to the hospital in this town, where one of them, the chief mate, died on Wednesday, and the other, the Dutchman, is not expected to survive.

Ireland.

THE PAPAL BRIGADE.—Several hundred men of the brigade arrived at Cork on Saturday, and were received by a deputation from that city, with bands of music, cheering, and other demonstrations of enthusiasm. The Irish papers say that as the steamer which brought them from Havre passed her Majesty's ships Sansparıel and Hawk, the royal standard was lowered; but it appears that there was no royal standard flying, and that the dipping of the ensign was a mere acknowledgment of a similar compliment paid to the men of war by the steamer of the brigrde. About 300 of the brigade arrived in Dublin on Saturday evening, and at the Kingsbridge terminus were addressed in congratulatory terms by the Rev. Canon Pope, who was in attendance to receive them on the part of the central committee in Dublin. Several of them attended mass on Sunday at the church in Marlborough-street, where a sermon was preached by Dr. Cullen. On Saturday and Sunday evening they conducted themselves in a riotous manner in the streets of Dublin, broke the windows of some of the Protestant churches, and smashed the hats of those who remained covered as they marched by. At the police offices on Monday some of the leading rioters were brought up and fined in trifling penalties, and the course of the day the whole body were sent off by the committee to their respective homes.

RENTAL OF IRELAND.—The rental of Ireland has within the last 20 years, risen from 10,000,000*l.* to 15,000,000*l.*, and the revenue has risen nearly 3,000,000*l.* beyond what it was a century ago. Within 30 years the tonnage of Ireland has doubled; and within 33 years the foreign imports have risen from 1,500,000*l.* to 5,500,000*l.*

Sporting.

FIGHT FOR THE CHAMPIONSHIP.—The long-pending fight between Sam Hurst, the "Staleybridge Infant," and Tom Paddock having been appointed to take place on Tuesday, the parties interested engaged a special train on the Great Western line, and at 5 o'clock in the morning about 200 started on their journey. The disgraceful scenes which occurred at the station on the occasion of the late fight between Mace and Brettle were prevented by a large body of police, and, though the "roughs" assembled, they were treated and kept as "outsiders," so that all who meant to pay for their trip had not only opportunity but compulsion to obtain their tickets. The train started exactly at 10 minutes past 5, and halted between Mortimer and Basingstoke. A move, however, was soon insisted on by the police both of Berks and Hants, who had doubtless been apprised of what was going on by telegraph from London, and the train retraced its way to Reading, and thence proceeded on the Hungerford branch towards Aldermaston. After five rounds, occupying 10 minutes, Paddock was brought to the ground by a terrific blow which fractured his ribs, and will prevent his ever entering the ring again. The "Infant" was then declared the winner.

Obituary.

THE EARL OF CAWDOR died on Wednesday night at his seat, Stackpole Court, Pembroke. His lordship John Frederick Campbell, first Earl and second Baron Cawdor, of Castlemartin, in the county of Pembroke, and Viscount Emlyn of Emlyn, in the county of Carmarthen in the peerage of the United Kingdom, was Lord-Lieutenant and Custos Rotulorum of Carmarthenshire, a trustee of the British Museum, a D C L. and F.R.S. He was the son of the first Lord Cawdor, by the eldest daughter of the Earl of Carlisle, and was born in 1790, and succeeded to the title in 1821. In 1816, he married Lady Elizabeth Thynne, eldest daughter of the second Marquis of Bath, by whom, who survives, he leaves issue Viscount Emlyn; Lady Caroline, married to the Hon. Octavius Duncombe; Lady Georgiana, married to Mr. John Balfour, of Balbirnie; Lady Elizabeth, married to the Earl of Desart; Lady Mary, married to the Earl of Ellesmere; the Hon. and Rev. Archibald G. Campbell, and Captain the Hon. H. Walter Campbell, of the Coldstream Guards. His lordship is succeeded in the earldom and large landed property in Wales and Scotland by his eldest son, Viscount Emlyn, M.P. for Pembrokeshire, born in 1817, and married in 1842, to the Hon. Sarah Mary Cavendish, second daughter of General the Hon. Harry F Cavendish.

ADMIRAL SIR CHARLES NAPIER died on Tuesday morning, of an attack of dysentery, at his residence, Merchistoun Hall, near Portsmouth. From "O'Byrne's Naval Biography" we learn that he was the eldest son of the Hon. Charles Napier, of Merchistoun Hall, county Stirling, where he was born in 1786. He entered the Navy in 1799, and in the following year served in Sir John Borlase Warren's expedition to Ferrol. In 1805, while Lieutenant of the Courageux, he was present at the capture of the French 80 gun ship Marengo, bearing the flag of Admiral Linois, and the 40-gun frigate Belle Poule. In 1807 he was present at the reduction of the Danish West India Islands of St. Thomas and St Croix, and assisted at the cutting out of a Spanish merchant-vessel from under the batteries of Puerto Rico. In the same year, while in command of the Recruit, of 18 guns, he fought a very smart action with, and ultimately put to flight, the Diligente, French corvette, of 22 guns and 140 men. In this action the Recruit's mainmast was shot away, many of her carronades dismounted, several of her men killed and wounded, and Captain Napier himself had his thigh broken, but refused to leave the deck until the conclusion of the engagement. In 1809 he assisted in the reduction of Martinique, where he considerably shortened the siege by the manner in which, with only five men, he landed in open day, scaled the walls, and planted the Union Jack on the ramparts of Fort Edward. In the following April, during Sir Alexander Cochrane's pursuit of three French ships of the line, which terminated in the capture of the 74-gun ship D'Hautpoult, he signalised himself by his efforts to injure their spars and rigging, although fired at by the enemy from all their stern chasers, and for which he was made post captain of the prize. He afterwards served as a volunteer with the army in Portugal, and was present at the battle of Busaco, where he was wounded. In 1811, while in command of the Thames, 32, in company with the Cephalus brig, he silenced the fire of a flotilla of 11 gunboats and a felucca, carrying 13 guns and 280 men, moored across the harbour of Porto del Infreschi, on the coast of Italy, and also of a round tower on the shore and of a body of infantry on the adjacent hills. In 1811, in command of his own ship's boats and those of the Imperieuse, he landed with 250 men of the 62d Regiment at the back of the harbour of Palinuro, where he carried the heights in gallant style under a heavy fire from the enemy, who were in large force, and who attempted to retake them position after position, but were compelled to retire. The next day he assisted in the capture and destruction of 10 gunboats, and 22 merchant vessels in the beach at Palinuro, and a battery of 24 pounders protecting them. In 1812, he attacked the fort of Scylla, and took, destroying battery and tower mounting two 24 pounders. In 1814, in company with the Freemason, 36, he took possession of the Island of Ponza, without loss, though exposed to the fire of four batteries and a tower mounting ten 24 and 18 pounders, two 12 pounders, and two mortars. He next attacked the Euryalus, 36, and captured with her boats the La Fortune national zebec, carrying ten long 8 pounders and four swivels, with a crew of 70 men, together with upwards of 30 merchant vessels lying in Castellamare Roads. During the winter he drove on shore in Calvi Bay two Dutch French storeships carrying 26 and 20 guns, and 120 men, and completely destroyed them, laden with stores, and a national schooner of the largest class, laden with stores, and a national schooner of the largest class, to seek refuge under the land batteries. He next took part in the expedition against Alexandria, and afterwards served in the operations against Baltimore. In 1815 he was nominated a Commander of the Bath for his services. From 1820 until 1832 he was employed in the Galatea on particular service. In 1833 he succeeded Admiral Sartorius in the command of Don Pedro's fleet, and gained a signal victory over the more powerful fleet of Don Miguel, off Cape St. Vincent, for which he was rewarded by the Portuguese Government with the title of Count Cape St. Vincent, and with the Order of the Tower and Sword. He also headed a military expedition on shore, during which he captured the fortress of Viana, the second fortress in Portugal in point of strength, and other important positions. In 1839 he was appointed to the command of the Powerful, 84, with a Commodore's pennant as second in command, under Admiral Sir Robert Stopford, of the English fleet on the coast of Syria. In September following he effected a landing at D'Journie with 1500 Turks and Marines. In the same month he defeated a body of the enemy at Kelbson; and afterwards bombarded and stormed, with a force of not more than 900 allies and 500 Turks, the strong town of Sidon, protected by a fort and citadel and a line of wall defended by 2700 men, all of whom he made prisoners. On that occasion, riding on a donkey at the head of the British Marines, wearing a great straw hat, wielding a huge stick, and followed by his dog, he broke into the barracks of the enemy, and then obtained possession of the Castle. In October following he utterly routed an Egyptian force under Ibrahim Pasha in a strong position in the mountains near Beyrout. The result of this victory and the forward movement preceding it was the surrender of Beyrout to the allies, and the entire disorganisation and submission of the army of Soliman Pasha. After co-operating in the attack upon St. Jean d'Acre, he proceeded to take charge of the squadron off Alexandria, where he landed and concluded a convention with Mehemet Ali, which brought the war to a conclusion. In acknowledgment of his distinguished services during the campaign, he was created a K.C.B. in 1840, and was also included in the vote of thanks by the Houses of Parliament. He was also presented by the Emperors of Russia and Austria and the King of Prussia with the Orders of St. George of Russia, Maria Theresa of Austria, and the Red Eagle of Prussia. In 1841 he was appointed Naval Aide-de-Camp to her Majesty. The Captains' Good Service Pension had been awarded to him in 1837. In 1847 he hoisted his flag in the St. Vincent, 120, as Commander-in-Chief of the Channel fleet. On the outbreak of the Russian war he was appointed to the command of the fleet in the Baltic, where the result of his operations was the capture of Bomarsund, the destruction of Hango, and the shutting up of the Russian fleet in the waters of Cronstadt. In 1841 he represented Marylebone in Parliament, and in 1855, and again in 1857 he was elected for Southwark. He became Vice-Admiral of the Red in 1857. He married the widow of Lieut. Edward Elers, R.N., whose son took the name of Napier, and was lost while in the command of the Avenger steam-frigate when she was wrecked on the Sorelle rocks in the Mediterranean. By this lady he had an only child, a daughter.

BIRTHS.—On the 6th inst, at Wrotham Park, the Countess of STRAFFORD, of a daughter—5th inst, at Park Hill House, Clapham, the Hon. Mrs. AUGUSTUS LANE FOX, of a son—31st ult, at Bath, the wife of Lieut.-Colonel the Hon. H. M. MONCKTON, 3d Light Dragoons, of a son—27th ult, at Bowes Manor, Southgate, the wife of THOMAS SIDNEY, Esq., M.P., of a daughter—31st ult, at Cotgrave Rectory, near Nottingham, the wife of the Rev. EVELYN H. HARCOURT VERNON, of a son.

MARRIAGES.—On the 1st inst, at St. George's, Hanover Square, the Very Rev. WILLIAM GOODE, D.D., Dean of Ripon, to KATHERINE ISABELLA, second daughter of the late Hon. WILLIAM CUST—On the 1st inst, at St. George's, Hanover Square, Colonel J. THORNTON GRANT, C.B., of H.M. Royal Irish Regiment, to MARY ROSANNA, eldest daughter of T. BLAIR, Esq., 46, Queen's Gardens, Hyde Park, and granddaughter of the late General Sir Robert Blair, K C B.—On the 30th ult, at the parish church, Leamington, the Rev. JOHN EDWARDS, M A., vicar of Presbury, Gloucestershire, to LOUISA ELIZABETH MARGARET, youngest daughter of the late Sir JAMES ROBERTSON BRUCE, Bart., of Downhill, county of Londonderry, Ireland—On the 25th ult, at the parish church, Luton, J. BLUNDELL HAWKES, Esq., son of the late Thomas Hawkes, Esq., of Himley, in the county of Stafford, to ELIZABETH MARY, daughter of JOHN SHAW LEIGH, Esq., of Luton Hoo Park, Beds—On the 31st ult, at St. Ann's Church, THOMAS PRIAULX ST. GEORGE ARMSTRONG, Captain 49th Regiment, and Knight of the Legion of Honour, eldest son of John P. Armstrong, Esq., of Claremount, King's County, to ELIZABETH MARY, second daughter of the late ROBERT GRAVES, Esq., M.D., of Cloghan Castle, King's County—8th inst, at the Unitarian Chapel, Bristol, Sir JOHN BOWRING to Miss DEBORAH CASTLE, daughter of the late Mr. Michael Hinton Castle, of that city.

DEATHS.—On the 3d inst, at Edinburgh, the Baroness ANNA CATHARINA DE REEDE D'OUDTSHOORN, relict of JAMES DUNBAR, Esq., formerly of H.M.'s 21st Light Dragoons, and youngest son of the late Sir George Dunbar, Bart., of Mochrum, aged 72—12th ult, on returning to England, on board the Seine, off St Thomas, Lieutenant-Colonel CLELAND CUMBERLEGE, H.B.M.'s Consul at Tampico, second son of Joseph Cumberlege, Esq., of Bombay—1st inst, at 7, Campden Grove, Kensington, Captain RICHARD FRANCIS, late 1st Battalion Grenadier Guards, aged 68—27th ult, at Dowlish, Captain ROSE H. FULLER, R.N., aged 71—1st inst, at Saltlill, Monkstown, Colonel ROBERT SANDERS, C.B., of Deer Park, Charleville, and late Lieutenant-Colonel of her Majesty's 19th Regiment—31st ult, suddenly, at Waterloo Crescent, Dover, JOHN BAKER SLADEN, Esq., of Ripple Court, Kent, a Deputy Lieutenant and Justice of the Peace for that county, aged 80—2d inst, at 43, Rutland Gate, EDMUND JACOBSOHN, Esq., aged 75—3d inst, at his residence, 8, Cavendish Square, AARON ASHER GOLDSMID, aged 75—4th inst, at Dawlish, ELEANOR BEATRICE, infant daughter of Rear-Admiral THOMAS HENDERSON—1st inst, at his residence, 15, Cumberland Place, Clifton, the Rev. EDWARD CARUS WILSON, M.A., late Vicar of Crosby Ravensworth, Westmoreland, aged 65—2d inst, at Heston, the Rev. BARRINGTON JAMES TRIMMER, domestic chaplain to the Duke of Sutherland, aged 50—2d inst, suddenly, at his residence, Upper Tooting, Surrey, HENRY BUTTERWORTH, Esq., F.S.A., of Fleet Street, aged 74.

Markets.

BRITISH WOOLS.—LONDON, FRIDAY, Nov. 9.

Our quotations remain almost nominal, and are likely to continue so until the result of the coming sales is known. The supply of fleeces has been small for some time, but still sufficient for the demand, which has been only on a limited scale.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hogs	1	7	to	1	8	Leicest. Wethers	1	6	to	..	
Ditto	..	..		..	..	Ditto Hoggs	1	8	—	..	
Half-bred ditto	1	8	—	..		Combing Skins	1	0	—	1	4
Down Ewes	1	5	—	1	6	Blanket ditto	0	6	—	0	8
Kent Fleeces	1	7	—	..		Flannel Wool	1	0	—	1	8

COVENT GARDEN, Nov. 7.

Importations of Dutch Hamburgh Grapes continue to arrive, but their quality, as was stated last week, is very

inferior to that of last year. American Newtown Pippins may still be had at from 2s. to 3s. per dozen. In Pears no alteration has taken place since our last report. Plums in good condition may yet be obtained. New Oranges fetch from 6s. to 10s. per 100. Good Filberts may be had at from 9d. to 1s. per pound. Cabbages, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 10s. per cwt. Cucumbers are scarcer. Cut flowers chiefly consist of Orchids, Gardenias, Dahlias, Violets, Mignonette, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 6s to 8s	Plums, p. ½ sieve, 3s to 4s 6d
Grapes, per lb., 3s to 6s	Pears, per doz., 1s to 3s
Peaches, per doz., 6s to 9s	Apples, per doz., 6d to 1s 6d
Figs, per doz., 3s to 4s	Oranges, per 100, 6s to 10s
Melons, each, 2s to 4s	Lemons, per 100, 6s to 10s

VEGETABLES.

Cauliflowers, each, 4d to 6d	Celery, p. bundle, 1s 6d to 1s 9d
Greens, per dozen, 2s 6d to 3s	Onions, p. ½ sieve, 1s 6d to 2s 6d
Cabbages, do., 1s to 2s	Tomatoes, per doz., 4s to 6s
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 9d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 2s
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 6d to 1s	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d

COAL MARKET.—Nov. 9.

Walls End Hetton, 24s.; Walls End Haswell, 24s.; Walls End South Hetton, 24s.; Walls End Hartlepool, 23s. 9d.; Walls End Braddyls Hetton, 23s. 6d.; Walls End Kelloe, 23s. 6d.; Walls End Framwellgate, 22s. 6d.; Durham, 20s. 6d.; Carway and Duffryn Malting, 23s.; Tanfield Moor, 15s. 6d.; Cowpen, 17s. 9d.; Davidson's Hartley, 17s. 9d.; Hastings Hartley, 17s. 9d.; Howard's Hartley, 17s. 9d.—55 ships at market.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Nov. 8.

Prime Meadow Hay	75s	to 84s	Clover	90s	to 120s
Superior do. (old) ..	95	115	New Clover	—	—
Inferior do.	50	60	Old second cut ..	80	100
New do.	—	—	Straw	30	38
Rowen	40	50			

DAVIS & Co.

BUTTER MARKET.—Nov. 9.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 14s. " "
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, Nov. 5.

The number of Beasts is much smaller than for some time past, and the average quality is only second-rate. Choice kinds are consequently readily sold at higher prices. Trade is more active for all descriptions. We have a very short supply of good Sheep; they have realised a considerable advance. Good Calves are also dearer. Our foreign supply consists of 1235 Beasts, 4530 Sheep, and 122 Calves, and 30 Pigs.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools.	5	0	— 5	4
Best Short-horns	4	6	— 4	10	Do. Shorn			to ..	
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	4	— 4	8
Best Downs and Half-breds ..	5	4	to 5	8	Do. Shorn			— ..	
Do. Shorn		—	..		Lambs		..	— ..	
					Calves	4	4	— 5	4
					Pigs	4	4	— 5	4

Beasts, 4970; Sheep & Lambs, 18,700; Calves, 149; Pigs, 430.

THURSDAY, Nov. 8.

The supply of Beasts is much larger than on Thursday last. The weather being favourable trade is active for choicest kinds, but Monday's quotations cannot be fully maintained. There are twice as many Sheep as on last Thursday, consequently there is a depression in the trade, and prices are rather lower. Monday's quotations are retained for Calves. Our foreign supply consists of 400 Beasts, 1100 Sheep, and 309 Calves. Milch Cows, 150.

Best Scots, Herefords, &c. ..	4	8	to 5	0	Best Long-wools .	5	0	— 5	2
Best Short-horns	4	6	— 4	8	Do. Shorn			— ..	
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	4	4	— 4	6
Best Downs and Half-breds ..	5	4	— 5	6	Do. Shorn			to ..	
Do. Shorn		—	..		Lambs		..	— ..	
					Calves	4	4	— 5	4
					Pigs	4	4	— 5	4

Beasts, 1800; Sheep & Lambs, 6510; Calves, 400; Pigs, 170.

MARK LANE.—MONDAY, Nov. 5.

An unusually large fleet of vessels have arrived since the return was made up on Saturday. The supply of Wheat from Essex and Kent to this morning's market has been more liberal than of late, and in somewhat improved condition; a few sales were made at the extreme prices of last week, but towards the close rather easier terms were accepted in some instances to clear the stands. The attendance of country buyers was considerable, but the large arrival of foreign Wheat inducing a belief that holders would submit to lower terms (which they declined), caused the extent of sales to be limited. Prices must be quoted unaltered. The Barley trade is quiet at last week's rates. Beans and Peas bring extreme prices. Oats are a steady sale, and old corn 6d. to 1s. per qr. dearer. Flour is unchanged in value.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	55	62	Red	46	60
— — fine selected runs..ditto	59	66	Red	53	66
— — Talavera	50	74			
— Norfolk	—		Red	—	
— Foreign	54	74			
BARLEY, grind. & dist., 30s to 34s..Chev.	42	47	Malting.	40	42
— Foreign..grinding and distilling	31	39	Malting.	40	45
OATS, Essex and Suffolk	20	24			
— Scotch and Lincolnshire..Potato	26	28	Feed ..	24	26
— Irish .....Potato	26	28	Feed ..	21	24
— Foreign.....Poland and Brew	24	27	Feed ..	22	27
RYE	35	38	Foreign.	—	
RYE-MEAL, foreign	—				
BEANS, Mazagan....40s to 44s....Tick	42	48	Harrow.	42	48
— Pigeon .....48s — 56s..Winds.	—		Longpod	—	
— Foreign .....Small	46	50	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	38	41	Suffolk .	40	50
— Maple .... —s to —s ..... Grey	40	42	Foreign.	38	48
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	50	57			
— 2d do. ..... ditto	34	50	Country.	34	50
— Foreign .....per barrel	29	34	Per sack	40	50

FRIDAY, Nov. 9.

The easterly winds have swept the Baltic and North Sea, and caused large arrivals of grain at ports on the east coast. Millers having previously purchased freely, and being to some extent also the recipients of these supplies, and therefore not purchasers for the moment, have caused the Wheat trade to be dull and inactive. Holders, however, appear to be generally content to await the return of the demand, and consequently no change can be noted in the value of old and good qualities, but new, particularly the inferior descriptions, have in several markets been disposed of with difficulty, and even at a decline of 1s. to 2s. per qr. The value of all kinds of spring corn continues to be well supported, the demand for each, inferior Barley perhaps excepted, being quite equal to the supply. Business in Flour has been limited, but we do not alter our quotations. The number of cargoes arrived off the coast during the week is 43, say, 23 Wheat, 14 Maize, 3 Beans, 1 Rapeseed, and 2 Linseed. The arrivals of English grain this week have been small, but considerable of foreign. The English Wheat fresh up of fair quality was taken readily at Monday's prices, but the damp and inferior sorts were difficult of disposal. The attendance was not large, but included more buyers of old foreign Wheat than on Monday, and a moderate business was done in good qualities at the rates current on that day, new and inferior descriptions being neglected. Barley, Beans, and Peas bring Monday's quotations. Oats are a steady sale at fully late rates.

ARRIVALS FROM Nov. 5 TO Nov. 9.

	Wheat.	Barley.	Oats.	Flour.
English ..	860 qrs.	1240 qrs.	10 qrs.	1320 sks.
Irish	— "	— "	1430 "	— "
Foreign ..	46320 "	6350 "	49830 "	2420 " 210 brls.

LIVERPOOL, Tuesday, Nov. 6.—We had a fair attendance of millers and dealers at our Corn Exchange this morning, and a moderate consumptive business has been done in Wheat at the quotations of last market day; low qualities of American red might have been bought a trifle easier in some instances, but good samples were held stiffly. Flour had only a slow sale at previous rates. Indian Corn met a moderate retail demand, without quotable change in value. Oats and Oatmeal steady. Beans, Peas, and Barley each commanded full prices in retail. The market closed steady.

FRIDAY, Nov. 9.—The Corn market was fairly attended, and there was a moderate business doing. Wheat declined 2d. per cental. Flour was 6d. per barrel and sack lower. There was a limited business doing in Indian Corn at 39s. to 39s. 6d. for Galatz and mixed. Beans, Oats, and Oatmeal dull, and without change.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Sept. 29..	56s 11d	39s 3d	25s 3d	37s 10d	49s 6d	39s 1d
Oct. 6..	58 3	39 8	25 1	39 1	48 11	39 10
— 13..	61 1	39 11	24 8	37 3	50 11	42 8
— 20..	60 1	40 7	23 7	34 7	50 2	41 11
— 27..	59 11	40 9	23 5	36 8	49 6	41 10
Nov. 3..	59 9	40 10	23 3	36 2	49 10	42 4
Agg. Aver.	59 5	40 2	24 3	36 11	49 10	41 3

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Sept. 29.	Oct. 6.	Oct. 13.	Oct. 20.	Oct. 27.	Nov. 3.
61s 1d	..	..		..	..	..
60 1	..	..	..		..	..
59 11	..	.	..	..		..
59 9	..	..	..	..	..	
58 3	..		..	..	..	..
56 11 —		..	..	..	..	..

"A. B. C.," who advertised in this Paper on October 6, begs to thank the numerous applicants, and to inform them that he has engaged a Gardener.—Banbury, November 9.

1000 DRAINERS WANTED.—A thousand good workmen may find good and regular employment, in the counties of Stafford and Derby, by applying to Messrs GIRDWOOD'S Foremen, at Sudbury, Hungry Bentley, Longford, Abbot's Bromley, and Smallwood.—49, Pall Mall, London, S.W.

LANDSCAPE GARDENER.

WANTED, a PERSON of good address, capable of Drawing Plans and Superintending the Laying-out of Gentlemen's Grounds, Erecting Horticultural Buildings, &c. He must have a thorough knowledge of Gardening, and the Drawing of Plans neatly and expeditiously.—Apply in own hand writing, stating age, where last employed, and in what capacity, and wages expected, to X. B., *Gardeners' Chronicle* Office, W.C. All communications considered confidential.

WANTED, AS GARDENER, a practical, married Man, without children.—Apply by letter, stating qualifications, F. H., Post Office, Byfleet, Surrey.

WANTED, A GARDENER.—A horse and a greenhouse to look after. Wife to keep house for a bachelor.—Address, with reference and terms, T. S. U., Staplehurst, Kent.

WANTED, an experienced person as SHOPMAN, and who also has a knowledge of Book-keeping. His character for integrity, sobriety, and industry, must be unexceptionable.—Apply to WILLIAM ROLLISSON & SONS, The Nurseries, Upper Tooting, London, S.

WANTED, for a RETAIL SEED BUSINESS in London, a Young Man, who has a good general knowledge of his business, and who has been accustomed to wait upon customers.—Address by letter, stating age, salary, and reference to A. B., *Gardeners' Chronicle* Office, W.C.

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News of the Week.

THE safe arrival of the PRINCE OF WALES, after a protracted voyage of nearly 27 days from the United States, has relieved the country from a feeling of anxiety which was beginning to be widely spread, and has been hailed in all parts of the Empire with the liveliest satisfaction. His Royal Highness landed at Plymouth on Thursday morning quite well, and arrived at Windsor Castle at an early hour in the evening.

The EMPRESS OF THE FRENCH arrived in London on Wednesday evening on her way to Scotland, travelling under an assumed name as a private lady and observing the strictest incognito. It is understood that the health of HER MAJESTY has sustained such a shock from the recent death of her sister, that a complete change of air and scene has become necessary for her recovery. The stay of the EMPRESS in Scotland will extend over some weeks, during which HER MAJESTY will be the guest of the DUCHESS OF HAMILTON, at Hamilton Palace, Lanarkshire.

Despatches from Hong Kong of the 28th September announce that the negotiations at Tientsin had not been brought to a satisfactory settlement, owing to the duplicity of the Chinese Commissioners, who after several days' trifling and delay, declared that they had no power to sign the treaty, the terms of which had been agreed upon. The allied troops consequently commenced their march on Pekin, where SANG-KO-LIN-SIN was reported to be present with a large force. Lord ELGIN followed the troops on the 9th of September, and on the following day the army reached Yang-tsun-yeh. distant only a few miles from the capital. Peh-tang, and all the adjacent villages, had been evacuated by the allies, who held only the fortified places.

Accounts from Naples inform us that on the 8th inst., the day after KING VICTOR EMMANUEL made his entry into Naples, GARIBALDI, accompanied by the Ministry, formally presented to HIS MAJESTY the result of the *plébiscite*. The Minister, Signor CONFORTI, in his address to the KING, said that the Neapolitan people, assembled in their electoral *comitia*, had proclaimed him KING by an immense majority, 9,000,000 of Italians having united themselves to the other provinces which HIS MAJESTY governed with so much wisdom, verifying his solemn promise that Italy should belong to the Italians. The KING replied in a few expressive words. The deed of annexation was then drawn up, the Dictatorship ceased and the Ministry resigned. On the following day GARIBALDI retired from public life and left Naples for the island of Caprera, overwhelmed with the most striking demonstrations of sympathy from the KING, the staff, the officers, and the army in general. In a farewell proclamation to his companions in arms he told them to be ready to follow him again, as it is likely that a fresh conflict will break out in Italy in March next, when a million of men and arms will be wanted. A despatch from Gaeta states that FRANCIS II. has rejected the proposal to evacuate the town, and is determined to hold out to the last extremity. General Bosco has taken the command of the troops in the fortress, who number less than 10,000 men, and the Sardinians are actively carrying on the siege works.

COUNT DE PERSIGNY, the French Ambassador, delivered a speech on the English alliance at the Lord Mayor's dinner on Friday evening, in which he said that the French Government wished nothing but to live in friendship with our own; that France and England have not only many common interests, but have no hostile interest; and that having everything to lose and nothing to gain by new contests, the two nations can mutually derive as many benefits from peace as they could inflict injuries on themselves by war. He attributed the inquietude, suspicion, and mistrust which arise from time to time on each side of the Channel, to the difficulty of effacing the rivalries and struggles of centuries; and he concluded by expressing his conviction that the great economical revolution which the EMPEROR has just accomplished in France by the treaty of commerce, will "confound the accusations" of which France has been the object, and "will further cement peace between the two countries."

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Friday morning, being the birthday of the Prince of Wales, the Hereditary Prince and Princess of Holstein Augustenburg paid an early visit of congratulation, and took breakfast with the Queen. Her Majesty and the Prince Consort, accompanied by the Royal family, the Duke of Cambridge, the Prince and Princess of Leiningen, and the Prince and Princess of Holstein Augustenburg afterwards attended a parade of the troops in garrison at Windsor, including the Windsor Rifle Volunteers, which took place in the Home Park in honour of the Prince of Wales's birthday, notwithstanding the disappointment caused by the non-arrival of his Royal Highness in England. The troops having presented arms a *feu de joie* was fired, and three cheers were given for the Prince of Wales. Her Majesty then distributed the Victoria Crosses to 17 officers and men for acts of bravery displayed in the Indian rebellion. The troops then marched past, and, having reformed line and presented arms, returned to their quarters. After the review the Queen, accompanied by Princess Alice, Princess Helena, Princess Louisa, Prince Arthur, and Princess Leiningen, walked in the Home Park, and visited the Duchess of Kent. The Prince Consort went out shooting, accompanied by the Duke of Cambridge, the Hereditary Prince of Holstein-Augustenburg, and the Prince of Leiningen. The Duchess of Kent visited her Majesty at the Castle and took luncheon. Prince Alfred arrived from Plymouth. In the evening the Queen had a dinner party. On Saturday morning the Queen, accompanied by Prince Alfred, drove to Frogmore and visited the Duchess of Kent. The Prince Consort came to London, and presided at a meeting of the Council of the Duchy of Cornwall. The Duke of Cambridge took leave of her Majesty, and accompanied the Prince Consort to London. The Duchess of Kent, and the Hereditary Prince and Princess of Holstein Augustenburg, visited the Queen and took luncheon with her Majesty. On Sunday morning the Queen and Prince Consort, Prince Alfred, Prince Arthur, Princesses Alice, Helena, and Louisa, and the visitors at the Castle, attended Divine service in the private chapel. The Rev. J. St. John Blunt, curate of the Chapel Royal, Windsor Park, preached the sermon. On Monday morning the Queen, accompanied by Prince Alfred, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort came to London and presided at a Committee of the Council of the Horticultural Society at South Kensington. The Prince and Princess of Leiningen and the Duchess of Sutherland left the Castle. On Tuesday morning the Queen, accompanied by Princess Alice, walked and drove in the Home Park. The Prince Consort, accompanied by Prince Alfred and the Hereditary Prince of Holstein Augustenburg, went out shooting. On Wednesday morning the Queen and Prince Consort, accompanied by Princess Alice, rode out on horseback. In the afternoon the Bishop of Carlisle had an audience of her Majesty, and did homage. Sir G. Cornewall Lewis had an audience of her Majesty. Earl Granville arrived on a visit to the Queen. On Thursday morning the Queen, accompanied by the Princess Helena, drove and walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort went out shooting. In the evening the Prince of Wales arrived at the Castle from Plymouth.

ARRIVAL OF THE PRINCE OF WALES.—After a tedious voyage of nearly 27 days from America his Royal Highness arrived safely at Plymouth on Thursday morning. The Royal squadron left Portland, United States, in the afternoon of Oct. 20, and had fogs, head winds, and occasional gales nearly all the way. They left Portland in a strong easterly gale, which continued for the first three days of their passage. On the 4th day they had a westerly wind, which blew very hard. On the following day, the 5th, the wind again changed to the eastward. On the 6th day the Hero was taken in tow by the Ariadne; but the breeze freshening from the S.E. they were obliged to cast her off. On the 7th they had a wind from the W.N.W. On the 10th the wind veered to the eastward again, and moderated. On the 11th day, the wind still continuing towards the S.E., the Hero was again taken in tow by the Ariadne; but in the latter part of the day the wind veered to E.N.E., and the gale increasing, they were obliged to make sail. On the 12th day there was a strong E. and E.S.E. gale. Up to the 14th day, Nov. 3, the breeze was still blowing from the S.E.; both ships being under sail, but not making much progress. On the 4th the wind blew hard from E.S.E. and S.S.E.; but moderated in the afternoon, when the squadron got up steam and the Hero was again taken in tow by the Ariadne, but after a short time the tow rope parted, through the heavy swell. On the 5th they passed and signalised a Norwegian brig standing to the eastward, the only vessel the squadron communicated with on their passage until their arrival in the Channel. On the 6th the squadron were only 347 miles from the Lizard, but the wind had increased to a heavy gale from S.S.E., and continued to veer from that to S.E., the squadron beating against it until the evening of the 13th, when the wind hauled round to the northward, and blew very heavily from that to N.W. The Hero struck soundings at noon on Wednesday, the 14th, on the outer edge of the bank, and made the Lizard Lights about three o'clock on Thursday morning. About 2 o'clock the Ariadne communicated with the Himalaya, which had been sent out, with the Orlando, Spiteful, and Gorgon, to look for the Royal squadron. The Himalaya immediately returned to Portsmouth to telegraph the news to the Queen. The Hero being a line of battle ship with only auxiliary screw power and unable to stow fuel for more than about 12 days' consumption, made the greater part of the passage under sail. The Ariadne, which is said to be a very fast frigate, was under orders to keep the Hero company, and was therefore continually obliged to slacken speed, or she would have made the passage in less than 12 days. They parted company with the Flying Fish a few days after they left Portland, and have not seen her since, their course having been rather out of the usual track, having run far to the southward with the expectation of picking up a westerly wind. They had only about another week's ship's provisions on board, and were run out of their sea stock, the royal party being obliged for the last few days to put up with salt and preserved provisions. His Royal Highness, on his birthday, gave a dinner to the officers of the Hero, and throughout his stay on board, by his gentlemanly manner and bearing, secured for himself the warm esteem of all in the ship. As soon as the squadron rounded Penlee Point, Royal salutes were fired from her Majesty's ship St. George, lying in the Sound, from the garrison, and from the admiral's ship in Hamoaze. The Hero anchored in the Sound at half-past 9, when the naval and military authorities went on board and paid their respects to his Royal Highness. Shortly after 10 o'clock, the Prince, accompanied by the Duke of Newcastle, the Earl of St. Germans and his suite, landed at the victualling yard, and proceeded amidst the cheers of the people to the railway station, where addresses of congratulation were presented by the Mayors and Corporations of Plymouth and Devonport. A special train with a Royal saloon carriage was in waiting, and at a few minutes after 12, the Prince started for Windsor. At Bristol and other places on the line of the Great Western, his Royal Highness was received with great enthusiasm, and the Mayor and authorities of Bristol, with the volunteers, were assembled at the station to offer their congratulations. His Royal Highness arrived at Windsor at 20 minutes before 7, and was met at the railway station by the Prince Consort, who accompanied him to the Castle. It is said that the Prince appears stouter than when he left England, and is slightly bronzed.

PRINCE ALFRED.—The arrival of Prince Alfred on Friday morning from the Cape was announced briefly in our last. His Royal Highness visited St. Helena, Ascension, and Sierra Leone on his way home, and was received at all these places with every demonstration of affection and respect. At St. Helena he presented new colours to the St. Helena Regiment; he was only at Ascension one day, the 4th ult., when the Wide-a-Wake Fair is held. At Sierra Leone, Freetown was decorated with evergreens, banners, &c., and lined with two rows of black children, clad in white surplices, which had a most pleasing effect. These juvenile vocalists sang the National Anthem with much spirit and fervour as the Prince passed through. At Fayal the Euryalus coaled, but the Prince, having slightly injured his knee by a fall just previous to arrival, was prevented from going ashore. His Royal Highness was discharged from the sick list on the 8th inst. The Euryalus experienced strong easterly winds on entering the Channel, but no great severity of weather. The Prince left Plymouth by the morning express train at 10.40, taking his place in an ordinary first-class carriage in preference to a Royal saloon, which was offered for his use.

ARRIVAL OF THE EMPRESS OF THE FRENCH.—Her Imperial Majesty, travelling in the strictest *incognito* as part of the family of the Marquis La Grange, crossed the Channel on Wednesday in the ordinary packet-boat Alliance, and arrived in London the same evening. From the London Bridge Station she and her suite went, in common street cabs, to Claridge's Hotel, in Brook Street, and it was not until they had been for some time in the Hotel that her Majesty's rank was known. The Empress went out on foot early on Thursday morning, and made several purchases in the neighbourhood of the Hotel. In the afternoon her Majesty and her suite engaged some carriages from a neighbouring livery stable and visited the Crystal Palace. It is understood that her Imperial Majesty visits Scotland in the hope of restoring her impaired health, and that it was originally her intention to proceed direct from the French coast by sea to Leith. The risk however of bad weather at this advanced period of the season decided her Majesty's advisers to select the shortest sea route. It is expected that the Empress will leave London to-day by railway for Hamilton Palace, where she will be the guest of the Duchess of Hamilton during her stay in Scotland.

THE CABINET.—A Cabinet Council was held on Tuesday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Thursday.

PARLIAMENTARY MOVEMENTS.—Mr. Scovell, Mr. Henry Fawcett, Fellow of Trinity Hall, Cambridge, and Mr. Apsley Pellatt have announced themselves candidates for Southwark, in the Liberal interest. Placards have also been extensively distributed throughout the borough, placing before the electors the names of General Perronet Thompson, Sir H. Havelock, Mr. J. Corderoy, Mr. Wentworth Dilke, Mr. Adolphus W. Young, formerly M.P. for Yarmouth; Mr. Goldsmid, brother of Sir F. Goldsmid, M.P. for Reading, and lately an unsuccessful candidate for the representation of Brighton; Mr. W. A. Wilkinson, formerly M.P. for Lambeth; Lieut.-Colonel Dickson, who contested the borough of Marylebone at the last election; and Mr. Monnery, a Conservative.—There are three candidates, all in the Liberal interest, in the field for Newcastle-on-Tyne—Mr. Somerset A. Beaumont, a Whig; Mr. Carstairs, a more advanced Liberal and Dissenter; and Mr. Peter A. Taylor, a Radical and advocate of universal suffrage.

CONSECRATION OF THE BISHOP OF CARLISLE.—On Sunday morning the Right Rev. Dr. Waldegrave, the new Bishop of Carlisle, was consecrated in York Minster by the Archbishop of the province, assisted by the Bishops of Durham and Ripon.

THE VICTORIA CROSS.—The following is a list of the officers and men upon whom the Queen conferred the decoration of the Victoria Cross at Windsor, on Friday, for their services in India:

Mr. William Fraser M'Donell, Bengal Civil Service, magistrate of Sarun; Major Charles Craufurd Fraser, 7th Hussars (now 11th Hussars); Captain (now Major) George Alexander Renny, Bengal Horse Artillery; Lieutenant (now Captain) Aylmer Spicer Cameron, late 72d Regiment (now of 25th Regiment); Lieutenant John Grant Malcolmson, 3d Bombay Light Cavalry; Surgeon Joseph Jee, C.B., 78th Regiment; Colour-Sergeant George Waller, 1st Battalion 60th Rifles; Colour-Sergeant Stephen Garvin, 1st Battalion 60th Rifles; Colour-Sergeant James Munro, late 93d Regiment; Farrier George Hollis, late 8th Hussars; Bugler William Sutton, 1st battalion 60th Rifles; Private Samuel Morley, 2d battalion, Military Train; Private John Kirk, 1st battalion, 10th Foot; Private Denis Dempsey, 1st battalion, 10th Foot; Private Henry Addison, late 43d Regiment; Private James Thompson, 1st battalion, 60th Rifles; Private John Divane, 1st battalion, 60th Rifles.

THE IRON PLATED SHIPS.—In answer to the circulars recently issued by the Admiralty, inviting tenders for the construction of three new iron-plated steam ships, six extensive firms on Friday sent in tenders for the work. It was, however, announced on Saturday that the Admiralty had determined to postpone the construction of these vessels, as well as of the one ordered to be built at Chatham, until they have had an opportunity of investigating the plans which for some weeks past have been brought under the notice of the authorities by the press, as possessing greater powers of resistance to shot and shell than those hitherto approved by the Admiralty.

THE VOLUNTEER MOVEMENT.—An influential public meeting was held on Wednesday evening at the Freemasons' Tavern, for the purpose of forming a Volunteer corps of Welshmen in the metropolis. Sir W. W. Wynn, M.P., took the chair, and the meeting was addressed by Sir Thomas Phillips, Mr. Propert, Mr. Kenyon, D.C.L., Mr. C. W. Wynne, and Mr. Williams. Resolutions were unanimously adopted for forming a national corps of London Welsh Rifles, and a committee was appointed to carry them into effect. The goat belonging to the Welsh Fusileers was present on the platform during the meeting.—An influential meeting of gentlemen interested in the Volunteer movement was held a few days since at Willis's Rooms, for the purpose of taking steps to organise a troop of Mounted Riflemen for the metropolis. Lord Keane took the chair, and on the motion of Lord Truro, seconded by Sir J. Shelley, M.P., Mr. W. F. Byng, Major Richardson, and others, it was resolved that the time has now arrived for raising a cavalry force to act in conjunction with the infantry and artillery volunteers, and a committee was formed for raising such a force in the metropolis.—The London Scottish had a shooting match on Friday at Wimbledon for three silver cups given by Lieut. Scott of the West Company, when the first prize was won by Professor Masson, the second by Lieut. Scott, and the third by Corporal Cormack. On the previous Tuesday, the corps had an entertainment of a novel character, 70 of its members having volunteered to act as "navvies" in levelling a hill which obscured the targets of the 600 yards' range at Wimbledon. The first division worked by daylight with shovels, picks, and barrows, regularly told off, and changing by sections to give every man his share of duty. The second division marched down in the dark, accompanied by their pipers, and worked by the glare of great fires of whin bushes. The first division was commanded by Ensigns Fisher and Sutherland., Sergeants Brown and Ferguson; the second by Sergeant Smith; Lieut. Scott directed the engineering operations, and the whole was commanded by Capt. Macgregor.—The Civil Service Corps mustered in Hyde Park on the 9th inst. and underwent an inspection on parade in honour of the birthday of their colonel, his Royal Highness the Prince of Wales. Lord Bury, the Lieut.-Colonel, commanded on the occasion. In the evening about 500 members of the corps dined together in St. James's Hall in honour of the day.—The 3d Middlesex (Hampstead) had a shooting match on Saturday at Childs Hill, for a Whitworth rifle given by Mr. Hoare, a silver challenge medal given by the officer commanding, a Lancaster rifle given by Ensign Holford, and a sum of money to the next best shots. The first prize was won by Private Donne, after shooting off a tie with Corporal Alexander, who, as the next best shot, was presented with three guineas. The

second prize was won by Private Field, after shooting off a tie with Corporal Alexander and Private G. Scott. Corporal Alexander, as the second best shot, was presented with three guineas. The third prize was won by Private Scott. The money prize of three guineas was tied for by Corporal Poller and Private Sharp, the former being the winner. In the evening the members of the corps dined together at the Holly Bush Tavern.—The 20th Middlesex proceeded by special train on Saturday to Brickett wood, near St. Alban's, where they were presented by General Beresford with a silver bugle which had been subscribed for by a number of ladies.—The West Middlesex mustered in considerable force on Saturday at Portman Barracks, and proceeded thence to Hyde Park, where they were inspected by Colonel M'Murdo. A crowded meeting was held on Tuesday evening in Holborn Hall, Holborn Bars, when it was unanimously resolved to further the formation of a Western Central Company of the 20th Middlesex. A great many names were enrolled during the meeting.—The 30th Middlesex (Ealing) assisted by members from the Civil Service, Inns of Court, West Middlesex, and various other corps, had a general parade and marching out on Tuesday, headed by the bands of the Inns of Court and the Ealing corps. In the evening, the first annual dinner of the Corps was celebrated at the Green Man Inn, Ealing, the Right Hon. S. H. Walpole in the chair.—The 18th Middlesex (Harrow) met on the 5th inst for the purpose of distributing the prizes won at the annual contest of the corps, which lasted two days. The 1st prize was awarded to Private Thornton, the 2nd to Sergeant Mock, and the others to Privates Hoare, Avery, and Walton, Private Bull obtaining the badge of crossed Rifles in silver as a distinguished marksman.—The 29th Middlesex held a general muster on the 7th inst., in the Riding School of the Regent's Park Barracks, for the introduction of Lord Enfield as Lieutenant-Colonel of the corps. Capt. Ross introduced his lordship, who was received with great cheering, and Mr. Edwin James, M.P., subsequently addressed the meeting, congratulating the country on the success of the Volunteer movement and expressing his opinion that it was a proud and glorious thing that those in high position came forward not only with money, but personally, to defend their Queen and country.—The 2d and 3d Artisans Companies of the 1st Surrey Artillery,are now rapidly filling up at Bermondsey, Dockhead, &c.—The 1st Company of the 1st Surrey Rifles met at the Government Range, Plumstead, on the 3d and 10th inst., and fired for a steel barrelled rifle, given by the captain of the company, and 2d and 3d prizes of 6*l.* and 3*l.* After firing off a tie the 1st prize was won by Mr. F. Jameson, the 2d by Mr. Gregory, and the 3d by Sergeant Rouse.—A public meeting of the inhabitants of St. Mary's, Rotherhithe, was held on Wednesday evening, when it was resolved to form a Rifle Corps for the district.—The 22d Surrey made their first appearance in public on Saturday, and marched from their head-quarters in Westminster Bridge Road, to Clapham Common. This Corps is composed chiefly of workmen, and its services have been accepted by Government. — The Surrey Mounted paraded on Saturday last on the Middlesex side of Vauxhall Bridge, and crossing the bridge proceeded through Kennington, Brixton, and Norwood, to Dulwich, where they were entertained by Mr. Frederick Doulton, Lieutenant of the 1st Troop.—The Queen's (Westminster), St. Margaret's Company, met on Saturday at Wormwood Scrubs, and shot for a silver challenge cup, presented by Mrs. John Elliot, the wife of the Captain. After a well contested match the prize was won by Corporal Whitmore. A strong company of 135 working men, in the employ of Messrs. Broadwood, pianoforte-makers, have lately joined the Queen's, which now numbers upwards of 1640 effectives of all ranks.—The Weald of Kent corps, preceded by its band, marched on Monday from Cranbrook to Pembury, and went through a series of evolutions in the park of Mr. Watts, by whom the officers and men were handsomely entertained. At a recent public meeting of the inhabitants of Horsmonden, it was resolved to form a Volunteer Rifle Company in connection with the Weald of Kent Battalion; and a number of Kentish Yeomen, many of whom are first-rate shots, joined the corps.—A second company in connexion with the 27th Kent (Deptford Victualling Yard and Dockyard) composed of officials and men employed at those establishments, has just been formed, and the officers appointed to command it took up their commissions on Friday.—The 1st Kent (Gravesend Artillery) visited Sheerness a few days since, and had three hours' practice at heavy gun drill. This was the last day on which the Artillery Volunteers of Gravesend and Sheerness will have an opportunity of practising heavy gun drill for the present season.—Some of the best shots of the 5th Berks (Maidenhead) met a few days since at Cockmarsh to qualify themselves to wear the marksmen's badge by gaining 7 points in five shots at ranges of 650, 700, 800, and 900 yards. Sergeant Cull won the silver badge as best shot in the company, and Corporal Jackson, Private Colman (Mayor), Private W. Nicholson, Sergeant Clark, Privates Compton, R. Nicholson, Mills, and Morris attained the distinction of ranking as marksmen.—At a public meeting held at Selby on Monday it was resolved to form a rifle corps in that town and neighbourhood; upwards of 200*l.* was subscribed, and several Volunteers were enrolled.—On Wednesday week a meeting was held in Devonport Dockyard for the purpose of maturing a plan for establishing an Artillery Corps in connection with the Arsenal, when the different officers were elected and appointed.—On Wednesday week a silver bugle was presented to the Brixham Artillery corps by Mrs. Studdy, on behalf of the ladies of that town. Lord Churston, Colonel of the 2d Devon Militia, afterwards inspected the corps.—At Walsall, on Thursday week, the local Volunteers assembled at their drill-ground, and received from Mrs. Day, the wife of the Mayor, a purse of 70*l.*, subscribed by the ladies of the town for the purpose of organising a band for the company.—An association has been formed, under the title of the "Lincolnshire Rifle Association," for the encouragement of Volunteer corps and the promotion of rifle shooting throughout the county.—The first annual meeting of the members of the Chelmsford company was held on Thursday week.—The Dunmow, Braintree, and Felsted Cadet Corps, in all about 110 strong, had a field day last week at Felsted. In the course of the proceedings a bugle, subscribed for by the inhabitants of Felsted, was presented to the cadet corps by Mrs. Stanley, the wife of the vicar.—The 17th Lancashire were inspected on Saturday at St. Helen's by Major Buchanan, after which the prizes won at the late rifle contest at the St. Helen's practice ground were distributed by Mr. Pilkington, of Eccleston Hall.—The 6th Cambridgeshire (Ely) were reviewed on Wednesday week by the Earl of Hardwicke, Lord-Lieutenant of Cambridgeshire, in a large field near the Littleport Road, and were on the same day presented with a silver bugle, subscribed for by the ladies of Ely.—A public meeting was held on Thursday week at Kirkstall, Leeds, Mr. Beecroft, M.P., in the chair, at which it was resolved to form an artillery corps for that town and district.—A shooting match took place a few days since at Finborough Park, near Stowmarket, among the members of the 6th Suffolk, when the 1st prize (a rifle given by Sergeant-Armourer Colson) was won by Private Oxer; the 2d by Sergeant Matthew, and the 3d by Corporal Matthew.—A public meeting has been held at Bungay to increase the interest felt in the movement in that neighbourhood, and 25 additional men have been obtained for the local corps. Colonel Shafto Adair has offered 100*l.* towards the cost of equipping an extra number of men, and the committee have decided to pay half the cost of clothing for those who cannot afford to purchase the whole.—On Saturday a meeting was held at Norwich, Colonel Brett, commandant of the Norwich Battalion, in the chair, to consider the propriety of organising a mounted corps in Norfolk, when a committee of five gentlemen was appointed to make the necessary arrangements for the organisation of the corps, if the project receives sufficient support. In the course of the meeting Captain Hay Gurney stated that he had ascertained that the opinion of the Government on the subject of mounted Volunteers was that they should be treated, not as cavalry, but as mounted infantry. It was considered that cavalry were of no use unless there were large and very highly-trained bodies of them; it was not likely that Volunteers would become thus highly trained, but it was thought that if expert riflemen could be moved quickly from place to place they might become extremely serviceable. The mounted Volunteers therefore would not be required to fire from their horses, but would have to dismount and skirmish on foot.—On Monday and Tuesday week a spirited competition took place on Mousehold Heath, near Norwich, between the crack shots of the Norwich Battalion, for a series of prizes offered by the Rev. J. H. Steward, Mr. Charles Morse, and the local Choral Society. The ties having been shot off, Private Breeze won the 1st prize, a Westley Richards rifle; Private Fishe, the 2d; Private Filly, the 3d; Private W. King, the 4th; and Private Grand, the 5th.—The Lynn Volunteers had a contest last week for three cups presented by Lord Stanley and Mr. J. H. Gurney, members for the borough. The 1st prize was won by Private Agger, the 2d by Private Potter, and the 3d by Private Elliott.—The 1st company of Worcester Volunteers was inspected on Thursday week at Worcester by Lieut.-Col. Scobell, colonel of the battalion.—A new Rifle Corps has been organised in Cambridge, under the captaincy of Dr. Leapingwell. The plan is to provide the men with accoutrements on the same principle as that on which Government provides them with rifles, the men paying for their uniforms by weekly instalments.—The prizes won at the recent contest at Hightown, near Liverpool, were distributed by the Mayor on Monday evening in St. George's Hall, in the presence of the most influential inhabitants of the town and neighbourhood. After some remarks by Colonel Wilbraham, on the Volunteer movement, Lord Stanley moved a resolution that a county association be formed for the encouragement of the movement and the practice of rifle shooting. He dwelt on the importance of encouraging the force, and gave his opinion that this arming of the people was in its essence a movement in favour of the continuance of European peace. Lord Elcho, who seconded the resolution, spoke in similar terms, and said there was reason for congratulation at the result of the contest at Hightown. The resolution was unanimously agreed to.—Earl De Grey and Ripon has accepted the colonelcy of the 1st battalion of the West Riding Volunteers.—The Leicestershire Rifles had a prize contest on Monday and Tuesday week at Leicester, when a prize of 6*l.*, for those who had no instruction in musketry drill, was won by Private Johnson (Belvoir). A Whitworth rifle, presented by the Duke of Rutland, was won by Private W. W. Biggs, the second prize being won by Captain Brewin. The 10*l.* silver cup, presented by the members for the borough, was won by Private Whitford, Leicester; the challenge prize was won by Captain Bankart.—The three companies of Presteign, Knighton, and New Radnor Rifles were reviewed at Presteign a few days since by Sir John Walsh, M.P., the Lord-Lieutenant, in the presence of a large body of spectators.—The 3d Somerset Rifles had a grand shooting match on Tuesday at Orchard Portman, near Taunton, when the first prize, a handsome silver cup, the gift of Mr. G. C. Bentinck, M.P., was won by Private Geale, and the second prize, a gold medal, the gift of Mrs. Sanford, was won by the honorary surgeon, Dr. Edward Liddon.

Foreign.

FRANCE.—The Empress left Paris on Wednesday morning at 6 o'clock for Scotland in strict incognito, accompanied by the Marquis de Lagrange, the Baron de Pierres, the Princess D'Essling, and Madame de Saulcy. Her Majesty will, while in Scotland, be the guest of the Duchess of Hamilton. The Emperor accompanied her Majesty to the railway station. On leaving the Empress, his Majesty went to the Tuileries, where he presided at a Council of Ministers, after which he left for Compiègne, where his Majesty will remain for a few days.—The Minister of the Interior has issued a circular to the Prefects in reference to the proposed collection of Peter's Pence in aid of the Pope's Exchequer. The Minister reminds them that, while the Government threw no difficulties either in the way of the Roman Loan or of subscriptions amongst individuals for the Pope, yet that it cannot countenance the formation of permanent committees extending over the country, and linked together in a systematic organisation, for the purpose of raising tribute for a foreign Power. It will however be permitted to individuals to forward their offerings if so inclined.—The *Moniteur* contains a project for the formation of a colonial bank, which will make loans for 20 years upon produce. The company will be authorised by the Government, which is desirous of affording relief to the colonists who are suffering from scarcity of labour caused by the Act of Emancipation of 1848. The Bank of France on Monday raised its rate of discount from 3½ to 4½ per cent.—The Minister of Commerce has given a grand dinner on the close of the labours of the Superior Council of Inquiry connected with the Commercial Treaty with England. Among the guests present were Lord Cowley and Mr. Cobden, the Ministers of Foreign Affairs and Algeria, the President and Vice-President of the Council of State, &c.—General Lamoricière arrived in Paris on Monday. Crowds of friends were awaiting him at his house, and received him with enthusiastic welcome. The house was thronged with visitors, including the leading members of the Ultramontane party, and several superior officers, his old companions in arms in Africa. He is to be presented with a magnificent sword. — Baron Hübner left Paris on Friday evening on his return to Vienna *vid* Venice. M. de Courcy, French Consul at Ancona, whose name was mentioned in the differences between the Duke de Grammont and Cardinal Antonelli, has been recalled, and will be appointed elsewhere. Rumours of Ministerial changes are rife. It is said that M. Laity, of Nice and Savoy notoriety, will be appointed Minister of the Interior. Another Minister ofthe Restoration, M. Vatimesnil, the eminent jurist and politician, died on Tuesday, after a long illness, at his country residence, near Paris. M. Declerc, Sub-Director of the Ministry of Foreign Affairs, will shortly proceed to Berlin to prepare the negotiations relative to the Treaty of Commerce between France and the Prusso-German Zollverein.

SPAIN.—The municipality of Madrid has approved of plans for laying out an extensive site in the style of the Champs Elysées at Paris. The expense will be considerable, the ground alone having cost 4,000,000 reals. The sanction of the Queen has been granted for the construction of a port of safety at Algesiras. The Government has allotted upwards of 11,000,000 reals for the expense of the undertaking.

PORTUGAL.—The sittings of the Portuguese Cortes have been suspended till January next, on account of the measures of the Government not being in readiness to be laid before them. The press was very violent in its censures on this step.

BELGIUM.—The Legislative Chambers were opened on Tuesday by commission. The King was unable to be present, being confined to his apartments in the Chateau of Laeken by a severe cold and cough, so that the opening took place without the royal speech and ceremonials that usually accompany the event. A letter was read from his Majesty expressing his regret at being prevented from asking the Legislature to give its cordial support to his Government, and from testifying once more to the representatives of the country how much he was touched by the proofs of attachment and fidelity with which the entire population had commemorated the 29th anniversary of his reign. The reading of this letter was received with repeated cries of "Vive le Roi!" from all parts of the Chamber.

DENMARK.—A telegraphic despatch from Copenhagen states, that in consequence of simultaneous Notes from England, Prussia, Russia, and Austria, forwarded to the Danish Government relative to the affairs of the Duchies, a Ministerial crisis had occurred.

SWEDEN.—An ordinance was published at Stockholm on the 6th inst, granting to Swedish subjects of the Jewish faith the right of acquiring landed property, and of establishing themselves in all the provinces of the kingdom.

SAXONY.—The session of the Saxon Chambers was opened at Dresden on the 6th inst. by the King in person. His Majesty's speech contained the following passage on Italian affairs:—

"A glance abroad gives less satisfaction than one at home. If hitherto the pacific relations of our smaller country and of our greater country have not been disturbed, and if the movements which agitate a portion of Europe are distant from us, still no unprejudiced observer can behold without anxiety events which threaten to upset the principles of international law. The union and firm persistency of all Governments in the path of right are, under these circumstances, the best guarantee for the future; and in like manner as that tendency has always been the essential object of my own policy, I have also found the same conviction in the hearts of my German confederates."

In the sitting of the Chamber of Deputies on Thursday, M. Viedel proposed the re-establishment of the German Central Power, with the addition of the necessary popular representation.

AUSTRIA.—The Osborne, Admiralty yacht, sailed on Tuesday at daylight from Portsmouth for Antwerp, where she will embark the Empress of Austria and suite for Madeira, calling at Plymouth on her way down Channel to fill up coal. The Emperor will accompany the Empress as far as Munich, and will there have an interview with the King of Bavaria, who will return to the capital for that purpose. The official *Wiener Zeitung* of Tuesday publishes a statute, organising the provincial representation of the Tyrol, and an imperial decree, definitively appointing General Degenfeld Field-Marshal and Minister of War. An Imperial resolution cancels all written warnings given to the journals up to the present time, thereby relieving them from the legal consequences of the same, as set forth in the press law. The *Donau Zeitung* of Sunday denies the report that a circular note on the Warsaw interview had been addressed by Austria to the Governments of Rome and Naples and the Italian ex-Dukes.

HUNGARY.—Several of the gentlemen recently nominated by the Austrian Government to be Chiefs of Comitats in Hungary, have declined to accept the office. Among them are Counts Andrasys, Lonyay, Tisza, Csaky, and Degenfeld, Baron L. Vay (the brother of the Hungarian Chancellor), Baron B. Wenkheim, and M. Zsivora. Count Carolyi is said to have expressed his gratitude to the Emperor for his kind intentions, and at the same time to have declared that he is unable ts serve either as "Obergespan" or as Keeper of the Hungarian Crown. It is also said that the Transylvanians demand the re-establishment of their union with the Crown of Hungary.

RUSSIA.—The *Nord*, which has repeatedly denied the assertion of Russia having entered into engagements with Austria at Warsaw, again asserts in the most positive manner, that so far from having entered into such engagements, Russia met the Austrian overtures with a distinct refusal. "Should," it says, "the contingencies to which Austria made allusion present themselves, Russia would confine herself to measures strictly requisite for the security of her own frontiers." Prince Gortschakoff, the Minister of Foreign Affairs, has addressed a circular to the Russian Ministers at Foreign courts, explaining the grounds upon which the Russian Government recalled the Minister at Turin, its opinion of the policy pursued by the Sardinian Government, and of the principles of intervention. The circular protests against the ideas attributed to the Russian Government, of wishing to uphold the principle of legitimacy at all hazards without regard to the requirements of the present age. In conclusion, the Prince says that, desiring to reconcile these requirements with ancient rights as legitimate as they are necessary, it would be expedient to assemble a Congress to establish a new basis of public law and of international law.

ITALY.—On Thursday, the 8th inst., the day after the entry of King Victor Emmanuel into Naples, Garibaldi, accompanied by the Ministry, formally presented to his Majesty the result of the *plébiscite*. His Majesty received them in the Throne Room. The Minister, Signor Conforti, addressed the King thus:—

"Sire, the Neapolitan people, assembled in their electoral *comitia*, have proclaimed you King by an immense majority. Nine millions of Italians are uniting themselves to the other provinces which your Majesty governs with so much wisdom, verifying your solemn promise that Italy should belong to the Italians."

The King replied in a few expressive words. The deed of annexation was then drawn up, the Dictatorship ceased, and the Ministry resigned. On Friday morning Garibaldi took leave of his Majesty and afterwards left for the Island of Caprera, overwhelmed with the most striking demonstrations of sympathy from the King, the Staff, the officers, and the army in general. In his farewell proclamation, he told his companions in arms to be ready to follow him again, as it is likely that a fresh conflict will break out in Italy in March, 1861, when a million of men and arms will be wanted. The King has appointed Garibaldi a General of the Sardinian Army. The *Gazette* publishes the official appointment of Signor Farini as Lieut.-General of the King at Naples. General della Marmora has been intrusted with the military reorganization, and Admiral Persano with the administration of the Navy. Signor Deblasio has been appointed Prefect of Police, and a Lieutenancy Council has been instituted as follows:—Signor Vintimiglia, Interior; Pisanelli, Justice; Scialoja, Finance; Poerio, Public Instruction; Baffletto, Public Works; De Vicenzi, Agriculture and Commerce. Several Councillors and Directors have also been appointed. General Dabormida, the Grand Master of the Artillery, and General Chiodo, Commandant-in-Chief of the Engineers, have been commissioned to make a tour of inspection throughout Italy for examining the positions it may be well to fortify. The electoral law of Sardinia has been promulgated for Naples, and a General Council has been established for the organization of the Southern army. The King, it is said, intends mobilising 20,000 National Guards of the city of Naples. His Majesty has visited the hospital for wounded volunteers and distributed relief. General Fanti and General Klapka have arrived at Naples. General Turr, who has been one of the most distinguished officers of Garibaldi's army, has resigned. King Victor Emmanuel will leave Naples in a few days for Sicily. The British arms were taken down from the Embassy at Naples on Saturday. Letters from Gaeta, dated Sunday last, state that the King of Naples had rejected the proposal to evacuate the fortress, and will defend himself to the last extremity. General Bosco had arrived and would take the command of the troops, who number less than 10,000 men. He relies on the strength of the fortress. A Prussian General had arrived on a mission. A Portuguese and two Spanish frigates had also arrived. The investment of the fortress on the land side still continues. It is hoped to secure its submission without any serious fighting; but, in case the garrison do not capitulate, the bombardment will commence in a few days. On Monday one regiment and two companies of Bourbon troops were attacked by the Sardinians and made prisoners. General Salzano had previously proposed to General Fanti the surrender of the body of Neapolitan troops who remained outside Gaeta, consisting of 10 battalions of chasseurs and a regiment of cavalry, but General Fanti rejected this proposition. After the combat of Monday these troops re-entered Gaeta, and the Piedmontese occupied fresh positions round the town. The latest despatch from Gaeta announces that General Goyon and Admiral Barbier de Tinan have been decorated by King Francis II. with the Grand Cross of the Order of St. Januarius. The Piedmontese will occupy the town of Pontecorvo. Accounts from Rome state that a body of 20,000 Neapolitan troops, with 4500 horses and 36 pieces of cannon, had entered the Papal States, through treachery on the part of their Generals. The Pope had sent for their relief 50,000 Roman scudi, and General Goyon, the French Commander, had sent 80,000 rations. The troops are now distributed among the Roman provinces, and will be sent by the Papal Government to their own country. A Neapolitan General has arrived at Rome, and it is asserted that Francis II. has requested the Pope to receive an additional 7000 soldiers. Nine hundred Pontifical prisoners have returned from Sardinia. General Goyon, it is said, considers his position untenable. The Papal Government has everywhere again denied the report that the Pope will leave Rome. Public opinion is strongly against Monsignore Merode, the Minister of War. A detachment of Irish Zouaves is organising. An Extraordinary Council of Cardinals took place on the 8th inst. The Secret Committee has collected the votes of Rome on the question of annexation. In the Marches, out of 135,255 voters, 133,783 voted for annexation; in Umbria, out of 97,625 voters, 97,040 voted for annexation, making a total of 230,828 in its favour. The publication of these results was celebrated at Ancona and Perugia by great rejoicings. General Lamoricière has published the history of his Italian campaign, in the form of a report addressed to the Minister of Arms of the Papal Government, dated Rome, Nov. 3. It fills more than 16 of its columns of the paper in which it appears. It gives a sad account of the inefficiency of the Papal army, especially in artillery and horses, and states that there was no money at Ancona to pay the troops, and that in consequence of the tax imposed by the Papal Government on mills, there was no possibility of obtaining bread to feed them. It says that General Lamoricière expected to meet the levies of Garibaldi, and not the army of Sardinia, and that he had been deceived and thrown off his guard by the announcement that France would not allow the Sardinians to enter the Papal States. He compliments the Irish brigade in three different places, and says that the only troops that did not behave well were some Swiss.

SYRIA.—Accounts from Beyrout state that General Beaufort has taken up his winter quarters in that city with a column composed of picked troops, from which it is inferred that the French Government has no intention of withdrawing the troops from Syria. Fuad Pacha complains of the interference of the French commander-in-chief in the domestic affairs of the empire, and requests that the Sultan's authority may be respected.

INDIA.—The Calcutta mail has arrived with news from that presidency to Oct. 8. The following is a summary:—

Lord Canning has made arrangements for leaving Calcutta on November 15, and sailing up the Gogra to Fyzabad to decide as to its navigation and personally inspect the working of the new talookdaree system in Oude. Returning to Benares, the Governor-General will there permanently establish his camp for the cold weather, and make flying visits thence to the chiefs of Central India and the Deccan. He will return to Calcutta early in March, when the usual term of office of five years will have expired. The belief is general that he will be succeeded by Lord Elgin, though it is understood that, unless the country is perfectly quiet and taxation working smoothly, he may remain another hot season in India. Sir Hugh Rose after being present at the opening of the East Indian Railway to Rajmahal with Lord Canning and Mr. Grant on the 15th, will sail up the Ganges to Allahabad, and form the first of his camps of instruction at Cawnpore. Since the issue of the government manifesto, two Volunteer Rifle corps have been formed in Calcutta. The two clubs which formerly existed in Lahore have been amalgamated into a corps, and clubs are organising in Allahabad, Agra, and Delhi. The Supreme Government has remitted one lac of rupees of the tribute paid by the Rajah of Julawur, and presented him with a khillut, worth 3000 rupees, for his loyal conduct during the rebellion. It has also granted to Meer Syed Mahomed Tehseeldar, of Jubbulpore, a life pension, with the title of "Khan Bahadoor," for his meritorious services during the mutiny.

CHINA.—Accounts from Hong-Kong to Sept. 28 state that the satisfactory termination of hostilities in the North by a treaty of peace, after the fall of the Taku Forts, has not yet been realised. The Chinese have been playing their old game of duplicity, and Commissioner Kweiliang, after an apparent assent to the terms proposed by the allied Ambassadors, refused to sign, on the plea of a want of the necessary powers. It appears that the Chinese Government is determined to leave no stone unturned by which it can gain time or hinder us. Lord Elgin and Baron Gros arrived at Tien-tsin on the 25th of August, and Kweiliang arrived from Pekin on the 30th, accompanied by Hang-fu, Viceroy of Chi-li, who was appointed last year to meet Mr. Bruce, and Hang-chu, who was formerly Hoppo at Canton, and there engaged in establishing the Foreign Inspectorate of Customs. Negotiations were immediately proceeded with, and everything appeared to be going on quite satisfactorily, when, after a week's delay, the Imperial Commissioners hesitated at the indemnity article, and all at once intimated that they had no power to sign the treaty. All further communications were stopped, and the army was immediately put in motion for Pekin. News had been received of the advanced portion having reached a place called Yangtsun-yeh on the 10th. Lord Elgin also left Tien-tsin on the 8th for Pekin. At Tien-tsin a large number of Coolies and carts had been engaged to carry the baggage, but they had deserted on the road, and Lord Elgin's baggage was said to be in difficulties. Pehtang and some other places have been evacuated by our troops, and 2000 will remain to garrison Tien-tsin. The following is an extract from Lord Elgin's despatch on the subject, dated Sept. 8, and received at the Foreign Office on Tuesday:—

"In pursuance of an arrangement previously made, Messrs. Wade and Parkes waited, by my desire, on the Imperial Commissioners on the 6th inst. with a draught of the convention, which it was understood was to have been signed on the 8th. The Commissioners, who had already been unofficially apprised of its terms, made little objection to any portion of it, except the clause providing that of the total indemnity of 8,000,000 taels declared to be due by China to Great Britain, 1,000,000 should be paid before Tien-tsin was evacuated by the British troops. After some conversation, however, in which they betrayed manifest signs of uneasiness, they announced to my secretaries that they could not stipulate that the convention should take effect without previous ratification, and that, so far from being ready to sign it on the 8th inst., they could not do so at all until it had been submitted to the Emperor for his approval. This intimation led to a discussion respecting the extent of the powers held by Kweiliang and his colleagues. It is not very easy to apprehend the precise import of the phraseology employed in Imperial decrees on subjects of this nature. It was very obvious, however, from what passed during the course of this discussion, that Kweiliang either had not, or did not at this particular moment wish it to be supposed that he had, powers equal to those which he held when he made a treaty with me here in 1858; although in the first communication which I received from him announcing his appointment, the title which he assumed, and the language which he employed, were calculated to convey the opposite impression. It was impossible to attribute this departure from a precedent so recently established, and established in the person of Kweiliang himself, to anything but a deliberate design to create delay, which might throw us into the winter, and thereby extricate the Pekin Government from its present embarrassment. To check this policy by an act of vigour was manifestly indispensable, unless we intended to forfeit all the advantages secured by our advance to this point; and I accordingly resolved, with Baron Gros' concurrence, to intimate to the Imperial Commissioners that, in consequence of the want of good faith exhibited by them in assuming the title of Plenipotentiaries, when they could not exercise the authority which it implied, and of the delays which the alleged necessity of constant reference to Pekin would occasion, I had determined to proceed at once to Tang-chou, and to enter into no further communication with them until I should have reached that place. My letter to the Imperial Commissioners produced a reply, which, although civilly worded and abounding in promise, was, in fact, an admission of the charge that they had been hitherto negotiating under false pretences. My answer simply stated that I adhered to the resolution communicated to them in my former despatch. With the infelicity which so often characterizes the proceedings of Chinese negotiators in such cases, the Imperial Commissioners betrayed their want of candour in this matter on the day succeeding that on which Major-General Sir R. Napier reached this place with the Second Division of the force under Sir Hope Grant's command. The army was therefore in the best possible condition for a movement in advance, and I officially apprised the Commander-in-Chief, who has been throughout fully cognizant of the course of the negotiations in which I have been engaged, of the cause of my desire to proceed to Tang-chou."

Despatches have also been received from Sir J. Hope Grant and Lieutenant-Colonel March, commanding at Shanghae, describing the attack of the rebels on that city, and their repulse by the Royal Marines Among the papers is the reply of the rebels to the proclamation addressed to their commander by Colonel March,

which is remarkable for its bombastic style, and for its expression of a desire for an agreement with the Allies, with the view to commercial transactions.

SIAM.—The King of Siam has declared war against the Emperor of Annam, who is now at war with France and Spain.

AUSTRALIA.—The *Melbourne Argus* of the 25th of September, says that the month has been one of considerable political excitement. "It has given us to chronicle the return of Mr. Nicholson to office, the passage of the Land Bill through both Houses after stormy discussions to the last, an attempt by the mob to overawe Parliament, the reading of the Riot Act, the passage of a Bill for the protection of the Legislature, a large extension of the Volunteer movement, the swearing in of large bodies of special constables for the suppression of disorder in the city, and the prorogation of the first reformed Parliament of Victoria."

NEW ZEALAND.—Accounts from Auckland state that the insurrection does not spread, but there is at present no prospect of the conclusion of the war. They state that there is considerable difference of opinion in the colony as to the policy of the Governor in resorting to hostilities, instead of allowing the question in dispute about the land to be settled by the courts of law; and that Bishop Selwyn, Sir William Martin, the Chief Justice, Archdeacon Hadfield, Superintendent Featherston, and other gentlemen of high position, not only refuse to support, but protest against, the Governor's conduct. The following from the *Sydney Morning Herald* is the latest intelligence of the war:—

"A strong force of military, blue jackets, and militia, commanded by the General in person, proceeded to attack W. Kinghi in his stronghold, inland of Waitara. The force consisted of 40th, 65th, and Naval Brigade, and numbered upwards of 1400 men. The expedition camped at a pah named Mahoetahi, about four miles from the rebels' strongholds. They were there joined by Major Nelson's division at Waitara, and the united force at 6 a.m. attacked two strong pahs named Ngataiparirua and Kairau, which were found untenanted, and which were forthwith destroyed. The troops then proceeded to attack a pah called Hiurangi, situated on the edge of the forest. This was also found evacuated, but while in the act of destroying it a small party of skirmishers of the light company of the 40th, who were advancing towards the bush, were fired upon by a party of natives in ambush, killing one man, private Ramsay, and slightly wounding three others. The rebels allowed the skirmishers to advance within a few yards of them, when they delivered their fire from, it is supposed, 100 muskets, and it is a surprise to every one that our casualties were so few. A skirmish now took place between the troops and the rebels, who kept up a smart fire from the bush, without effect, the balls whizzing harmlessly over the heads of the men, but unpleasantly near, several shots falling near the General, who remained within range. The General would not allow the men to follow the enemy into the bush, and after pouring in shell, grape, canister, rockets, &c., the order for retiring was sounded, and the forces, after destroying Hiurangi and another pah near to it, marched to camp at Waitara, and next day to town. Ramsay's body was not recovered, but was taken by the rebels with his rifle and ammunition; as well as an officer's sword, which was dropped when the volley was fired. The enemy were supposed to be about 150 strong, as they were only Kinghi's immediate followers, the Waikatos having returned to their homes."

UNITED STATES.—It is said that Mr. Lincoln's election to the Presidency is considered inevitable, unless the vote of New York can be turned against him, in which case civil warfare is feared in South Carolina, where both the whites and blacks are arming. Lord Lyons had returned to Washington. He stated that the Prince of Wales was highly delighted with his trip in the United States, nothing having occurred during his entire journey to mar its pleasure for one moment.

BRITISH COLUMBIA.—The Secretary of War has addressed a communication to General Harney in regard to his course in the San Juan affair, stating that although he censures him for disobeying the orders of General Scott, yet in consideration of his distinguished services, and of his high character as a soldier, he is not disposed to be severe in his condemnation. It is said that General Harney will remain in his former position in the army, and that if he desires it he will be allowed leave of absence for several months, or will be assigned to one of the departments.

THE PACIFIC.—The ultimatum of the American Government regarding the shipping claims, had been rejected by the Peruvian Government. The Peruvian frigate San Lorenzo was destroyed at Callao while being docked. The stanchions of the deck gave way, and the Lorenzo immediately filled and sank. It was believed that 150 persons perished.—The revolution in Bolivia had been suspended. Several officers who took part in it were shot.—Difficulties had arisen at Panama between the United States and the British naval forces, owing to the arrest of an American officer and a citizen, who refused to respond to the challenge of a British guard stationed in the street.

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England on Tuesday evening raised their rate of discount from 4½ to 5 per cent. The step was adopted after ordinary business hours, in consequence of a withdrawal during the afternoon of 300,000*l.* in gold on account of the Bank of France. On Wednesday a further sum of 335,000*l.* was withdrawn for the Bank of France, and on Thursday morning the Bank directors made a further advance in the rate of discount to 6 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93⅛ to ¼ for Money, and 93¼ to ⅜ for the 6th of December; Bank Stock, 233 to 235½; Three per Cents. Reduced, 91½ to ⅝; New Three per Cents., 91½ to ⅝; Thirty Years Annuities, expiring in April, 1885, 16 1-16; India Five per Cent. Stock, 1859, 103⅛ to ⅜; Ditto for Acct., 103½; Ditto Four per Cent. Debentures, 1858, 96½; Ditto Bonds, 10*s.* dis.; Five and a Half per Cent. Enfaced Rupee Paper, 100; Exchequer Bills, 6*s.* to 3*s.* dis.—FOREIGN: Brazilian Old Five per Cents., 99; Ditto Four and a Half per Cents., 1860, 88⅜ to 89; Buenos Ayres Six per Cents., 96; Danish Five per Cents., 100½; Mexican Three per Cents., for Acct., 21⅝; Portuguese Three per Cents., 1853, for Acct., 45½ to 45; Ditto Three per Cents., 1856, 1857, and 1859, 45½; Russian Five per Cents., for Acct., 105; Ditto Four and a Half per Cents., 94¼; Ditto Three per Cents., 1859, 62½ ex div.; Spanish Three per Cents., 49½; Turkish Six per Cents., 1854, 72; Ditto for Acct., 71¼; Ditto 1858, 57; Ditto for Acct., 57½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,997,655	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	12,522,655
		Silver Bullion	—
	£26,997,655		£26,997,655

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,190,273
Rest	3,191,718	Other Securities	20,310,515
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat Debt, and Dividend Accts.)	4,804,022	Notes	6,338,385
		Gold and Silver Coin ..	792,156
Other Deposits..	12,003 792		
Seven day and other bills	778 797		
	£36,931,329		£36,931,329

15th day of Nov., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — H. BIGGS, Hertford, Grocer—M. FOTHERGILL, Upper Thames Street, Chemical Manure Merchant—J. JOHNSON, R. CLARKSON, and F. FURNESS, Ashton-under-Lyne, Tailors—T. J. NICKS, Worship Street, Rope Merchant—T. NIXON, Stoke-upon-Trent, Boot and Shoemaker—G. RITCHE, Newcastle upon Tyne, Grocer — E. ROBINSON, Huddersfield, Woollen Manufacturer—W. TWEEDIE, Liverpool, Oil and Colourman—T. WILLIAMS, Newport, Monmouthshire, Printer.

SCOTCH SEQUESTRATIONS — N. MUNRO, Nairn, Grocer — T. A. PORTEOUS, Glasgow, Lace Manufacturer.

FRIDAY—BANKRUPTS—T. W. BLOFIELD, Leather Lane, Holborn, Builder—N. BROWNE, Fleet Street Hotel Keeper—G. H. CHACE, Oxford Street, Shoemaker—C. COLEMAN, Halgavor Mills, near Bodmin, Cornwall, Seed Merchant J. COLLS, Thrapston and Denford, Northamptonshire, Coal Merchant—C. J. CUBBY, Goldington Street, St. Pancras, Grocer—T. J. FENTON, Lime Street, City, Wine Merchant—W. HADFIELD, Earl Street, Westminster, Marble Merchant—J. P. HALL, Liverpool, Broker—B. JONES, Saint John Street, Cardiff, Painter—T. R. MERRIL, Hedenham, Norfolk, Farmer—J. PHILLIPS, Church Stretton, Shropshire, Chemist—G. ROBINSON, Lincoln, Hotel Keeper—G. ROBINSON and R. WITT, Bermondsey Square, Bermondsey, Licensed Victuallers—J. J. SALT, Birmingham, Glass Dealer—E. SKEVINGTON and J. J. CLUTTERBUCK, Russell Street, Bermondsey, Leather Dressers—R. STEWART, Wells, Somersetshire, Draper—J. TODD, Pleasant Place, Holloway, Cheesemonger—R. C. WARD, Queen's Terrace, Chelsea, Linendraper—J. B. WILSON, John Street, Pentonville, Draper.

BANKRUPTCY ANNULLED—T. STRELITBERG, Wilson Street, Middlesex, Walnut and Fancy Wood Merchant.

Metropolis and its Vicinity.

THE LORD MAYOR'S DINNER IN GUILDHALL.—On Friday evening, after the Lord Mayor's Show, the usual dinner took place in Guildhall. Count de Persigny, the French Ambassador, who had come over from Paris on purpose to attend it, made the following speech on the English alliance:—

"My Lord Mayor and Gentlemen,—I am quite sure that the wishes which have just been expressed for the continuance of peace will be received with lively satisfaction by the whole of the diplomatic body in London. I see the proof of it in that spirit of wisdom and of moderation which so happily exhibits itself in the conduct of the European Governments, and especially in the sacrifices which in one way or another all the Great Powers are making in the interests of the general peace. For the friendly words which the Lord Mayor has addressed to France and to her august Sovereign I deeply thank him. It is not the first time that, in the midst of the pre-occupations of the public mind, the City of London has expressed feelings of confidence and security. The reason of this is simple: with that practical spirit of business which has raised this great City to so high a point of riches and power, it has been the first to see that which many politicians do not seem yet sufficiently to understand—namely, that, instead of those rival interests which we formerly witnessed in every part of the world, it has come to pass through the development of our manufacturing and commercial existence, that not only do we possess a great number of interests in common, but that no longer in any part of the world have we any interest that is hostile. Why, then, these anxieties, these suspicions, these mistrusts, which on every incident of policy are generated on both sides of the channel? It is because we cannot efface in a day the traces of so many centuries of rivalry and strife; it is because, in spite of ourselves, and unwittingly, we are both of us still too much disposed to look at the events of the present through the magnifying and deceptive glasses of the recollections of the past. But, thank Heaven, the reason, the good sense, the interests of the two nations, tend every day to dissipate these falsifying mirages; for every day men's minds are more clearly and more positively impressed with this main consideration, that having everything to lose and nothing to gain by new contests, the two nations can mutually derive as many benefits from peace as they could inflict injuries on themselves by war. That, gentlemen, is the real truth; that is what we understand in France, as well as you can understand it in England; that, in short, is the meaning of the great economical revolution which the Emperor has just accomplished in France by the treaty of commerce, and of which the vast compass, in proportion as it becomes more known and better appreciated in England, will confound the accusations of which we have been the object, and will further cement peace between the two countries."

Lord Palmerston, in returning thanks for the toast of her Majesty's Ministers, spoke as follows:—

"I am happy that it does not fall to my lot on the present occasion to meet you, as has sometimes been the case with Ministers who have been invited to these assemblages, with gloomy forebodings which it was their task and their duty to endeavour to dispel. It is gratifying at the present moment to be able to say that whether we look to the state of our industry at home, to the development of our commerce abroad, to the successes of our arms where, unhappily, our arms have been compelled to act, to our relations with foreign Powers, friendly as they are with all the world, excepting only the country with which we are now engaged in a contest, or whether we look to the prospects of general peace, I am happy to say that wherever we turn our eyes the prospect is, at all events, satisfactory. Allusion has been made to those brilliant successes which, in concert with the arms of our great ally, our gallant army and navy have achieved in the remote regions of China. It must, indeed, be a pride and satisfaction to every Englishman to see that the prowess of our two services is as great and distinguished as ever, and that under whatever difficulties they may be called upon to perform their duties, their exertions and their exploits will be always equal to any recorded in the pages of history. But, there is one circumstances peculiarly gratifying in that great transaction—I mean the perfect cordiality which has prevailed between our forces and those of our ally the Emperor of the French—a cordial co-operation manifested in the language of the commanders of each force, each commander paying a just tribute and homage to the bravery, the skill, and the enterprise of those with whom he was co operating. But my Lord Mayor and gentlemen all, we ought to draw a still more important lesson from that most happy fact. If the forces of the two armies had not been equal—if one expeditionary force had been greater or more powerful than the other—I am greatly afraid that the frailty of human nature might have stepped in to mar the harmony which ought to have prevailed; that jealousies and bickerings, in spite of the best intentions, might have found their way into the two camps, and dissensions might have taken the place of cordiality and harmony. If that be true with regard to forces co-operating on a particular service, still more true is it with regard to the condition of a great nation like that to which we belong. It is one essential condition of perfect harmony between great nations that there should be a perfect and complete equality of force. There is one point in which this country cannot be equal to the great Powers of the Continent—I mean in that vast amount of military force which it is the habit of these Continental Powers to maintain in time of peace. It would not be wise, it is not desirable, that Great Britain should imitate their example, and should have a standing army rivalling in numbers—in bravery, discipline, courage, and exploits it would rival any force—the armies of our continental neighbours. But we must make up the difference by other means. We must redress the balance by our admirable Militia, by our noble Volunteers—a force now become part of the permanent institutions of the country—and by fortifying important and vulnerable points. Above all we must redress the balance by maintaining, as we always should maintain, a strong and powerful navy. I say this in presence of the representatives of foreign and allied Powers. I say it in a spirit of frankness and cordiality, of friendship, alliance, and peace. We wish from the bottom of our hearts to be at peace with all nations; to be bound by the ties of friendship and alliance with those nations whose interests are most congenial with our own. We wish from the bottom of our hearts to win and preserve their friendship and alliance, but we are determined by the manly dignity of our position to prove to them that we are worthy to retain that friendship and that alliance. In addressing the whole majesty of this great commercial city, it would be vain and idle to dwell on the power of commercial intercourse to ward off the calamities of war, to bind closely between nation and nation the ties of friendship and amity; but still I may be allowed to say, with reference to what has already been stated, that his Majesty the Emperor of the French has lately, with enlightened sagacity, cooperated with the Government of this country in liberalising the tariff of the two countries, and has thereby laid the foundation for the great extension of commercial intercourse between them, and has thereby, I trust, tended most materially to cement the friendship and kindly feelings which ought always to prevail between two great nations who have so many interests in common, and who, from their geographical position, are so well fitted for commercial intercourse. I trust that these changes which have been made will not only tend to cement more closely the ties of friendship and alliance between England and France, but that the example which has thus nobly been set by the French Emperor, of overcoming long-standing prejudices and giving full effect to different theories of commerce, will be followed by other Governments of the Continent not yet so far advanced in commercial enlightenment, and that from year to year we shall find those commercial relations which are the surest links of peace and amity gradually and rapidly extending throughout the whole of the European Continent."

Lord John Russell, in returning thanks for the House of Commons, made the following remarks on the speech of the French Ambassador:—

"He had been much gratified to hear the sentiments expressed by the French Ambassador. They were calculated to lead to the extension of commerce, to peace, and to the union of the various nations of the earth. We were always desirous of keeping on the most friendly terms with all foreign nations. Whatever their form of Government, we valued and respected their friendship and alliance, but we never could vary in our attachment to that liberty which we ourselves had so long enjoyed, and in our sympathy for other nations endeavouring to obtain it."

LORD PALMERSTON AND THE SALTERS' COMPANY.—On Wednesday night the Master and Wardens of the Company of Salters entertained Lord Palmerston, the Duke of Somerset, Lord John Russell, and other distinguished guests, in their Hall in St. Swithin's Lane. In acknowledging the toast of her Majesty's Ministers, Lord Palmerston made the following remarks on the visit of the Prince of Wales to America:—

"The visit of the Prince of Wales to the North American continent has awakened the deepest interest in the mind of every Englishman. It was to be expected that when the future hope of England visited the subjects of her Majesty in our North American provinces he would be received with that enthusiastic affection which becomes a loyal and attached people. Our anticipations have not been disappointed. The reception of the Prince has been worthy of the people who gave it, and honourable to the family of which he is so distinguished a member; and we may hope that that visit will cement more closely those ties which, I trust, are long destined to bind together that portion of the Queen's dominions and the mother country. But we had not an equal right to expect that when his Royal Highness visited the United States he would be received with anything more than the courtesy which civilised nations accord to distinguished members of the reigning family of another country. But I must say it has been most gratifying to witness the cordiality, the heartfelt kindness, the generous hospitality, and I may say the enthusiastic delight with which that illustrious Prince was welcomed by our cousins in the United States. They have shown themselves, indeed, to be a noble and generous people—they have shown that they have not forgotten the common stock from which they and we have sprung; and, in spite of events which, if not buried in oblivion, might have produced some slight alienation between us, they received our future Sovereign—and I trust that future may be long distant—they received the eldest son of our gracious Sovereign, not as if he were a stranger belonging to another land, but as if he had been born in their own country, and had been a citizen of their own Republic. I trust, gentlemen, that the remembrance of the generous kindness thus exhibited by the people of the United States will ever be cherished by the people o

these kingdoms. I believe the memory of the Prince's visit will long survive in the breasts of the American nation, and that these mutual recollections will tend more closely than ever to knit together those two great branches of the same noble and I will say illustrious stock."

FUNERAL OF LORD DUNDONALD. — The mortal remains of the late Earl of Dundonald were interred on Wednesday, in Westminster Abbey. The procession was formed at Queen's Gate, Kensington, at half-past 11, the funeral *cortége* consisting of a hearse drawn by six horses and eight mourning coaches and four, followed by many of the carriages of the nobility and gentry. In the first carriage were the chief mourners, the present Earl of Dundonald and his three brothers; the second and third carriages contained the pall-bearers, the others being occupied by Lord Brougham and other mourners, friends or relations of the family. The *cortége* proceeded by Piccadilly, St. James's Street, Pall Mall, and Parliament Street, to the Broad Sanctuary, arriving at the Abbey precisely at 1 o'clock. The nave, nearly in the centre of which the grave had been dug, was occupied by spectators in mourning, who had been admitted by tickets. The pall was borne by Admiral Sir George Seymour, his Excellency the Brazilian Minister, Admiral Grenfell, Admiral Collier, Captain Goldsmith, Captain Schomberg, Captain Hay, and Captain Nolloth. The body having been placed under the organ gallery, and the procession having entered the choir, the Psalms and anthem were sung by the choir of the Abbey and the Gentlemen of the Chapel Royal. The Dean of Westminster then read the funeral service in a most impressive manner, and Handel's funeral anthem sung by the choir closed the solemnity. The coffin was covered with black cloth and gilt furniture, the lid being ornamented with Earl's coronets and the Grand Cross of the Order of the Bath. It bore the following inscription:—"The Right Hon. Thomas, Earl of Dundonald, G.C.B. Born 14th of December, 1775: died 30th of October, 1860." Among the carriages of the nobility and gentry which followed the funeral procession was that of Miss Burdett Coutts, daughter of the deceased Earl's colleague in the representation of Westminster when he was expelled the House of Commons. The banner of the late Earl was, by command of her Majesty and the Prince Consort, Great Master of the Order of the Bath, restored to its place in Henry VII's Chapel on the day previous to the funeral.

THE HOP-GROWERS AND THE GOVERNMENT.—A very numerous deputation of hop planters from various parts of Kent and Sussex, accompanied by several members of Parliament and other gentlemen of station and influence, had an interview on Tuesday, by appointment, with the Chancellor of the Exchequer, at his official residence in Downing Street. Sir Brook Bridges, M.P., introduced the deputation, and Mr. Beresford Hope read a memorial signed by 1548 hop planters, or about three-fourths of the whole number in West Kent, stating that the crop of the present year has been almost a total failure, and praying that the payment of the hop duty due this month be deferred till November, 1861. Mr. Carter, chairman of the hop growers of East Kent, Mr. Jeremiah Smith of Rye, Mr. Dodson, M.P., Lord Holmesdale, Dr. Monckton, Mr. Nash of Rochester, Mr. Hewett, hop merchant of the Borough, Mr. Locke, M.P., Mr. Deedes, M.P., Mr. Hardy, M.P., Alderman Salomons, M.P., and Mr. Briscoe, M.P., also addressed the Chancellor of the Exchequer, stating that the hop growers of East Kent and Sussex were as great sufferers as those of West Kent; that in consequence of the unprecedented blight of the crops, the value of this years' crop would be less than it had ever been before, excepting perhaps that of 1854, and that the state of the plantations was such that few or none of the planters could pay the moiety of the duty about to become due unless they paid out of their capital or had recourse to borrowing. The Chancellor of the Exchequer said that he would carefully inquire into the principal allegations that had been made. He was aware that in this matter time was of great importance to the planters, and he would not lose a moment in making known to them the decision at which the Government might arrive.

THE STEPNEY MURDER.—Yesterday afternoon the Sheriffs and Under-Sheriff, with the Governor and Ordinary of Newgate, visited the convict Mullins in his cell, and announced to him that, no communication having been received from the Secretary of State in reply to his memorial, the law would be allowed to pursue its course, and that the sentence would be carried into effect on Monday.

WRECK OF HER MAJESTY'S SHIP PERSEVERANCE.—The following telegram from Lisbon was received on Wednesday by the Secretary of the Admiralty from Lieutenant H. Waller, of Her Majesty's steam troopship Perseverance:—

"Her Majesty's ship Perseverance totally wrecked on the 21st of October off N.W. end of Mayo, Cape Verdes. All hands saved. Five hundred troops sent to Gambia by hired bark. One hundred men and officers of the Perseverance arrived in Portuguese steamer Africa under my charge; remainder of troops and crew left at Mayo in charge of Major and Senior Naval Lieutenant. Captain is expected here by mail on the 14th from St. Vincent."

CONTRIBUTIONS FOR THE POPE.—A letter has been addressed to Cardinal Wiseman by Cardinal Antonelli, the Secretary of State to Pope Pius IX., recommending the systematic collection of St. Peter's pence throughout every diocess in England to replenish the resources of the Papal treasury at Rome. Cardinal Wiseman has, in accordance with this request, forwarded copies of Cardinal Antonelli's letter to the several Catholic bishops of England, and has likewise addressed a letter to the Catholic clergy in Westminster, calling on them to organise meetings and committees in their respective localities to carry out the recommendations contained in the Cardinal's Secretary's communication. Both letters were read on Sunday in the several Catholic churches and chapels in London during mass, and steps will be immediately taken to hold the meetings in question.

THE ARMSTRONG GUN.—The *Mechanics' Magazine* recently contained an article stating that the Armstrong guns are costing the public the "amazing sum" of 2000*l.* each, although nearly the whole are small field-pieces weighing only 8 cwt. Sir William Armstrong has replied to this article in the *Times*, stating that the Government can be supplied with any number of the new 12-pounder rifled guns at two-thirds of the price of the old 12-pounder brass guns, the cost of which is 170*l.*; and that the difficulties which in the first instance beset the construction of the larger descriptions of his guns, and which have caused some delay in their manufacture, have now been entirely surmounted, and that no further impediment exists to their rapid production.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended on Saturday, Nov. 10, were 1084. For the corresponding weeks of the 10 years 1850-59 the average number, corrected for increase of population, was 1192. The present return is therefore 108 below the average. During the week the births of 890 boys and 801 girls, in all 1691 children, were registered in London. In the corresponding weeks of the years 1850-59 the average number was 1636.

Provincial.

BEXHILL.—Some experiments were tried on Saturday in this place, with smooth-bore guns against stone walls, in the presence of the Commander-in-Chief and a large party of distinguished officers. The fire was continued all the morning, and at three an inspection was made of the battered tower. The result of his royal highness's inspection was his decided conviction, to use what are said to have been his own words, that "the Armstrong guns had the best of it, and that he would not hesitate to trust himself in the tower whilst a smooth-bore battery played on it as it had done that day." It is also said that the verdict of all the artillery and engineers, both officers and men, was unanimously in favour of the new weapon, the men adding a recommendation which they could best appreciate, that the Armstrong gun was by far the easiest and safest firing.

NOTTINGHAM.—The dispute which has existed for such a long time past between the Mechlin lace firms and their workmen, and which was understood to have terminated a week ago, was brought to a satisfactory conclusion on Friday, and on Monday morning the men resumed work at the factories from which they have been locked out.

PORTSMOUTH.—The funeral of Admiral Sir Charles Napier took place on Monday at Catherington, near Merchistoun Hall. Beyond the fact of the body being borne to the grave by eight seamen who had served under the admiral's command during the greater part of his professional career, the whole proceedings were of a very private and unostentatious character. The mourners present were the Rev. J. Jodrell, General E. Napier, the Hon. William Napier, Colonel William Napier, Colonel M'Murdo, Vice-Admiral Sir Michael Seymour, Rear-Admiral Erskine, Captain G. T. Gordon, and Mr. William Grant. The crews of her Majesty's ships on the home station have started a subscription, which is to extend throughout the navy, for the purpose of erecting a public monument at Portsmouth in testimony of their gratitude for the benefits which the admiral's advocacy has been the means of obtaining for them.

ROAD.—A meeting of the magistrates of the Bradford division, convened by circular, was held on Saturday afternoon at the Town Hall, to take into consideration a statement made by Mr. Saunders in reference to the extraordinary inquiry which he has been conducting at Road during the past week. After a conference of about two hours with closed doors, the reporters were informed that a resolution had been adopted by the magistrates to forward a letter signed by all of them to *The Times* in reference to Mr. Saunders's proceedings. It is understood that after leaving Road on Friday Mr. Saunders proceeded to Bath, and had an interview with Mr. Hughes, chief of police of that city, who on the following morning left for Isleworth, the residence of Elizabeth Gough, late nursemaid in Mr. Kent's family. Mr. Pollaky, a foreign detective, attached to Mr. Field's office in London, also left Road for Bath the same evening. His mission however is believed to have no reference to the tracing the murderer, but rather to collect information in reference to the extraordinary proceedings which have taken place during the past week. On Monday Mr. Saunders resumed his sittings at Road, but the public interest in his proceedings, which had been waning from the first day, reached its lowest point on that morning, the audience consisting only of about a score persons. The Wilts policeman stationed at Road and two members of the Somersetshire constabulary were in attendance, but there were no chiefs, superintendents, or inspectors of either force present. Mr. Pollaky the foreign detective, however, was there, and took notes of several parts of the proceedings. Mr. Saunders commenced by stating that the house at Road which he was now occupying was placed at the disposal of the Wilts constabulary at or about the time the murder was first discovered, but that the offer had never been accepted. On its becoming known that he had entered on possession of the premises, Mr. Foley proposed to make a police-station of the place at once, but he had declined to accede to that proposition. Mr. Saunders then described at great length the steps he had taken previous to commencing his inquiry, detailing interviews he had sought, and in some instances obtained, with the Attorney-General, Captain Harris of the Metropolitan Police, the Lord Chancellor, Mr. Clive of the Home Office, &c. He then referred to the decision of the Bradford magistrates on Saturday, and said that though they had withdrawn the sanction or concurrence which he understood they had given him, he should still go on with the inquiry, and was then prepared to receive any information from anybody who was desirous of giving it. As no one volunteered to give any information the inquiry was adjourned to Wednesday. On that day, after some desultory discussion, Mr. Saunders said he should suspend the investigation for the present, until the result of the application for a new coroner's inquest had been ascertained. Since Monday, Mr. Pollaky has visited Frome, Westbury, and Warminster, apparently on important business, and has also been to the metropolis, whence, after a few hours' stay only, he returned to Bath, and thence *via* Trowbridge to Road, where he was present on Wednesday. Mr. Hughes, the superintendent of the Bath police, who is still in London, visited Isleworth on Monday, but is said to have been unsuccessful in accomplishing his mission with Elizabeth Gough.

TRECASTLE.—At the adjourned inquest held on the 6th inst. on the body of David Price, a farmer, the jury returned an open verdict of "Wilful Murder by some person or persons unknown." The prisoner, David Davies, after several remands, has been committed by the magistrates sitting at Devynnock to take his trial at the Assizes for the murder.

YARMOUTH.—The Dutch cattle man who was so severely injured in the late explosion on board the Tonning died on Friday night in the hospital. The inquest was opened on Friday and continued by adjournment until Monday, when it was arranged by general consent that it should be again adjourned for three weeks, to admit of Reay the chief engineer, who is still in the hospital, being brought forward as a witness.

Ireland.

DESTRUCTION OF THE KILDARE CLUB-HOUSE BY FIRE.—At half-past 4 o'clock on Sunday morning the Kildare Street Club-house was discovered to be on fire, and in less than two hours the building was entirely destroyed; its interior having been completely gutted. All the valuable furniture, pictures, &c., and its splendid library of 15,000 volumes, became a prey to the flames. The plate, valued at 6000*l.*, and the wines at 2000*l.*, were saved. Three lives were lost—those of Miss Smith, the barmaid, and two female servants. Six other females were rescued uninjured. The Club-house was insured for at least 14,000*l.* in various offices.

THE PROSELYTISING CASE.—The Court of Queen's Bench on Tuesday week, sentenced Miss Aylward to six months' imprisonment in Richmond Bridewell and costs, for contempt of Court, in refusing to state where Mary Matthews was concealed. On Wednesday the Lord Chief Justice stated that the Court had received an intimation from the governor of Richmond Bridewell that there was no accommodation in that prison for women. He therefore directed that Miss Aylward should be brought up on Thursday morning in order that her place of imprisonment might be changed to Kilmainham Gaol. Mr. Curran stated that he would then move for the discharge of Miss Aylward, on the ground that the Court had no power to vary the order. On Thursday Miss Aylward was again brought before the Court, and her place of imprisonment changed from Richmond to Grangegorman prison. The motion for her discharge was not made, in spite of the intimation from her counsel on the previous day. The Court was unanimously of opinion that they had power to vary the order of committal. By the Act of Parliament Richmond Bridewell was made a prison for male and female prisoners, but by practice and arrangement, of which the Court had not been made aware, male prisoners only were sent there. On Tuesday week Thomas James M'Robins, who had been in custody since the 19th June under an attachment from the Court, charged with being concerned in the abduction of the Sherwood children, was sworn to answer interrogatories, and in the meantime admitted to bail on entering into recognisances, himself in 100*l.* and two sureties in 50*l.* each. Two men named O'Connor, also charged with the abstraction of the children, were also sworn to answer interrogatories; and two women, also in the Marshalsea for contempt, were ordered to be brought up for the same purpose.

THE NORTH SEA TELEGRAPH.—The Dublin papers announce that her Majesty's steamer Bulldog, Captain Sir Leopold M'Clintock, arrived unexpectedly in Killy-

begs harbour on Sunday afternoon, after having successfully completed the soundings of the Arctic coast between this country and America.

THE CLARE MURDER.—The *Dublin Evening Mail* states authoritatively that the police are upon the traces of the murderers of the late Alderman Sheehy.f

THE RIBAND CAMPAIGN.—The Trusk tenantry o. Lord Lifford were visited on the night of the 8th inst by a large body of men, who entered the houses and cautioned the inmates against submitting to an increase of rent which his lordship's valuators have recently imposed. A Kerry farmer named Creane has been arrested in Tipperary on a charge of trying to hire an assassin to murder his landlord, Mr. Edward A. Herbert, son of the Rev. Thomas Herbert, rector of Killeintierna, Castleisland. The disclosure was made by the person to whom Creane made the proposal, and who at once revealed the entire project to the police. It appears that Mr. Herbert succeeded in law proceedings in the previous week against Creane and others, who have been overholding a farm of which Mr. Herbert is the legal owner.

THE ORANGEMEN OF BELFAST.—A public meeting was held in the Music Hall, Belfast, on Monday evening. The Bishop was to preside, but the Orange operatives assembled in great numbers, and when his lordship appeared he was hissed, hooted, and assailed with cries of "No Popish or Puseyite bishop," "Freedom for the pulpit," and "Put him out." Great uproar prevailed, during which Mr. C. H. Ward called on his lordship to explain certain acts. This gave rise to renewed confusion, uproar, and cries of "Put out the bishop," "No Popish bishop," &c., and at length his lordship and the deputation were obliged to leave the platform. On their return to Holywood they were hissed, groaned, and hooted. Mr. Ward then moved, "That in consequence of the recent acts of the bishop he could not preside at a meeting of the Protestants of Belfast, and that the Rev. Dr. Miller should take the chair," which was carried unanimously. The meeting was then opened with prayer, and after a short address by Dr. Miller, the proceedings closed, and the audience retired in an orderly manner. The missionary meetings announced for next week are all postponed in consequence of this scene.

Railways.

FATAL COLLISION ON THE LONDON AND NORTH WESTERN.—Yesterday morning, about 2 o'clock, a collision attended with a serious loss of life took place near the Atherstone Station on the Trent Valley line, 102 miles from London, between the mail train from Scotland and a cattle train which was shunting at the Atherstone Station. Seven of the drovers who were in the cattle train were killed on the spot and one or two others injured. The fireman of the mail train was killed, and two Post Office guards sustained some injury; but the engine-driver and all the passengers of the mail train, 10 in number, including the Duchess of Montrose, escaped unhurt. The engine passed through two cattle trucks, and buried itself in the steep embankment, where, for half an hour, the hissing of the steam partially drowned the groans of the dying cattle. The fault was at the Station, where there was no danger signal shown, but only a hand-lamp, when it was too late to stop.

Obituary.

THE BISHOP OF WORCESTER died on Tuesday last, at his seat Hartlebury Castle, Worcestershire, in his 78th year. The deceased prelate was the third son of Sir William Weller Pepys, by the eldest daughter of the Right Hon. William Dowdeswell, and was born in Wimpole Street in 1783. He was educated at Trinity College, Cambridge, where he became Fellow of St. John's College. He was prebendary of Wells from 1836 to 1840, rector of Moreton, Essex, from 1822 to 1840, and also rector of Westmill, Hertfordshire, from 1827 to 1840. In the latter year he was consecrated Bishop of Sodor and Man, and translated to the see of Worcester in 1841. He married in 1824 the third daughter of the Right Hon. John Sullivan, and granddaughter of the Earl of Buckinghamshire.

GENERAL THE HON. EDWARD P. LYGON, C.B., Colonel of the 13th Light Dragoons, died on Sunday night at his residence in Upper Brook Street, after a very short illness. He was the third son of the first Earl Beauchamp, and was brother of the present peer. He entered the army as sub-lieutenant in the 2d Life Guards, and served with that regiment in the Peninsula during the campaigns of 1813 and 1814, including the battle of Vittoria. In 1815 he accompanied the army to the Netherlands, and commanded the 2d Life Guards at Waterloo, where he eminently distinguished himself. For his services on that occasion he was made a Companion of the Bath, and a Knight of the Order of St. Vladimir of Russia. For many years he commanded the 2d Life Guards, and only relinquished that command when he obtained promotion as Major-General. He held the appointment of Inspecting General of Cavalry for some years. He had received the silver war medal and one clasp for service in the Peninsula. He was appointed Colonel of the 13th Light Dragoons in January, 1845, and attained the rank of General in 1854.

SIR CHARLES FELLOWS died from an attack of pleurisy on the 8th inst. at 4, Montague Place, Russell Square, in his 61st year. He was the fourth son of the late Mr. John Fellows, of Nottingham, and was born there in 1799. In 1845 he married the only child of Mr. Francis Hart, of Nottingham. She died only two years afterwards, and in 1848 he married the widow of the late Mr. William Knight of Oaklands, Hertfordshire. In 1845 he received the honour of knighthood, in acknowledgment of his services in removing to the British Museum the Xanthian marbles previously discovered by him in Lycia. He was the author of "A Journey in Asia Minor," "Discoveries in Lycia," &c.

ALDERMAN WIRE died on Friday at his residence at Lewisham from the effects of an attack of paralysis with which he was seized while Lord Mayor of London two years ago. He was in his 59th year, and was the son of a baker at Colchester. He came to London to push his fortunes at a very early age, and entered the office of Mr. Daniel Whittle Harvey, City Commissioner of Police, at that time in practice as a solicitor. There he made the acquaintance of a Mr. Dixon, then an articled clerk, and the son of a licensed victualler. On that gentleman starting business on his own account Mr. Wire articled himself to him as a clerk, and eventually, some 35 years ago, became his partner. For many years the firm conducted their business in St. Swithin's Lane, and rose to considerable repute. The father of Mr. Dixon was a man of considerable influence among the licensed victuallers, and through the connexion so formed Mr. Wire became intimately identified with them. He was subsequently elected Alderman of the ward of Walbrook, and in due course attained the dignity of Lord Mayor.

COLONEL CHARLES ROWLEY LASCELLES, a Waterloo officer, died on Thursday, the 8th inst., after a lingering illness, in his 65th year. He entered the Grenadier Guards in his 15th year, and served during the campaigns of 1813–14 in the Peninsula, being present at the battles of Nivelle and Nive, for which he received the silver war medal and two clasps. In 1815 he served in the campaign in the Netherlands, and was present at Quatre Bras and Waterloo, and at the taking of Perronne. He attained the rank of Colonel in 1841.

CAPTAIN ROSE FULLER, R.N., died at Dawlish on the 29th ult., in his 72d year. He was the youngest son of the late Mr. J. T. Fuller, by the daughter of General Elliott, who was created Baron Heathfield for his memorable defence of Gibraltar, and was collaterally descended from the great Sir Francis Drake. He entered the Navy in 1804, and in 1810, while serving in the boats of a squadron at the destruction of a large convoy protected by two batteries in the mole of Palainos, was twice severely wounded. He was afterwards severely wounded while serving at the capture, by boarding, of the Charlemagne privateer.

BIRTHS.—On the 13th inst., at 47, Eaton Place, Viscountess INGESTRE, of a son and heir—12th inst., at 29, Berkeley Square, Lady WENLOCK, of a son—18th inst., at Downton, Radnorshire, the wife of Sir EDWARD COCKBURN, Bart., of a daughter—30th ult., at Rome, the Baroness ROSALIE DE RIEDERER, only surviving daughter of Colonel Sir WILLIAM DAVISON, of a son—8th inst., at Elford, the wife of Colonel CHARLES BAGOT, of a son—7th inst., at Woodborough, Notts, the wife of MANSFIELD PARKYNS, Esq., of a daughter—15th inst., at No. 5, Grosvenor Crescent, Belgrave Square, Mrs. CHARLES W. GRENFELL, of a daughter.

MARRIAGES.—On the 8th inst, at Burford, Oxon, the Rev. THEODORE FRANCIS, of Ickford, Bucks, to HARRIET ELIZA, eldest daughter of the late Sir CHARLES WENTWORTH BURDETT, Bart.—27th Sept., at Newera Ellia, Ceylon, ALEXANDER YOUNG ADAMS, Esq., Ceylon Civil Service, to JULIA ONOFRA LEPEL, daughter of the late Sir HENRY GEORGE WARD—12th inst, at the Roman Catholic Chapel, Queen Street, Chester, STEPHEN D'ASSERETO, Marquis de Seravalle, K.C., Malta, and Knight of the Order of Isabella the Catholic, to CATHERINE, second daughter of the late Captain CAREY, of Carey's Lodge, Kilnorth, Ireland—5th inst, at St. George's, Hanover Square, CHARLES H. BENNETT, Esq., M.D., to JULIA, daughter of Sir JOHN PHILIPPART, K.G.V., K.P.S., of College House, Hammersmith—8th inst, at the parish church, Hope, Lieut.-Colonel E. G. MAYNARD, 88th Connaught Rangers, to GERTRUDE, third daughter of C. B. TREVOR-ROPER, Esq., of Plas Tegpark, Flintshire—6th inst, at St. George's Church, Hanover Square, Captain FREDERICK GIBBONS, R.E., Middlesex Militia, grandson of the late and brother to the present Sir John Gibbons, Bart., to HESTER, younger daughter of JAMES COLQUHOUN KEMP, Esq., nephew of the late and grandson of the former Sir James Colquhoun, Bart., of Luss, and of the late Rev. John Kemp, D.D.—13th September, at Secunderabad, Deccan, CHARLES WAYMOUTH, Captain 17th Lancers, to ANNIE FRANCES, eldest daughter of Major-General CARPENTER, Madras Army.

DEATHS.—On the 7th inst, at Mount Juliet, county Kilkenny, the Hon. CHARLES HARWARD BUTLER CLARKE SOUTHWELL WANDESFORDE, third son of the 17th Earl of Ormonde, aged 80—9th inst, at her residence, 7, Chester Terrace, Regent's Park, Lady WILLOCK, relict of Sir Henry Willock, K.L.S., late of Castelnau House, Mortlake—8th inst, ADOLPHUS LATTIMER WIDDRINGTON, late Captain 73d Regiment, youngest son of the late Lieut.-General Sir David Latimer Tinling Widdrington, K.C.B., aged 53—22d ult, at Toronto, Canada, the Hon. PETER BOYLE DE BLAQUIERE—4th inst, at the Vicarage, West Ham, FRANCES ANNE, widow of the late A. J. RAM, Esq., of Clonatin, Ireland, and youngest and last surviving daughter of the late John Port, Esq., of Ilam Hall, Staffordshire, aged 76—8th ult, at Broach, East Indies, JOHN WILLIAM STACK, Esq., of the Bombay Civil Service, eldest son of Major General Stack, C.B., aged 28—25th Sept., at Poree, of fever, STEPHEN, third son of the Right Hon. Dr. LUSHINGTON, aged 30—6th inst, at Tenby, Lieutenant-Colonel WEDGWOOD, late Scots Fusilier Guards, aged 62—12th inst, at Pembridge Place, Bayswater, CLARA, second surviving daughter of the late Colonel DES BARRES, formerly Governor of the Islands of Cape Breton and Prince Edward Island, in North America—5th inst, at Islington, after a long illness, JOHN WHITEHEAD, Esq., many years H.M.'s Consul at Archangel—23d ult, at Santa Maria, Naples, from wounds received while serving with the British Legion before Capua, GEORGE RIPPON, second son of the late RICHARD PROSSER, Esq., of King's Norton, near Birmingham, aged 21—29th ult, at Caserta, from a wound, having been accidentally shot by a volunteer of the British Legion, WALTER AUGUSTUS JONES, second son of Henry Jones, Esq., of 12, Upper Baker Street—7th inst, at 9, Norfolk Crescent, Bath, the Rev. CHARLES YATES, B.D., formerly Fellow of St. John's College, Cambridge, Vicar of Holme, on Spalding Moor, and late Rural Dean of West Harthill, Yorkshire—9th inst, the Rev. THOS. DALE, M.A., Fellow of Caius and Gonville College, Cambridge, 41 years Rector of Bincombe with Broadway, Dorsetshire, aged 84—19th ult, at Pembroke, THOMAS COOKE JONES, Esq., Deputy Inspector of Hospitals, R.N., and late Surgeon of the Royal Dockyard, Pembroke—9th inst., JOHN WILLIAM PARKER, Esq., jun., Publisher, of West Strand, aged 49.

Markets.

HOPS.—BOROUGH MARKET, FRIDAY, NOV. 16.

Messrs. Pattenden & Smith report that the market is more active this morning, in consequence of the payment of the moiety of 1859 duty being postponed to the 1st March, 1861, and the duty on this year's growth to the 10th Aug., 1861. The old duty on Hops grown in each district this year is as follows:—

Rochester	.. ..	£17,378	11 8½
Canterbury	.. ..	12,571	2 8½
Sussex	.. ..	16,474	3 0½
Worcester	.. ..	4,461	10 5
Farnham	.. ..	2,515	4 2
Kingdom	.. ..	84	9 1
Total	..	£53,485	1 1½

COVENT GARDEN, Nov. 17.

Importations of Apples and Pears have this week been heavy. French Pears have this season the reputation of being better flavoured than the majority of those of English growth, and on that account they are more sought after. Dutch Hamburgh Grapes are very indifferent in quality; those, too, from Portugal, though better, are anything but good. Best samples of English Grapes, therefore, maintain fair prices. Good Filberts may be had at from 9d. to 1s per pound. Cabbages, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 10s. per cwt. Cucumbers are scarcer. Cut flowers chiefly consist of Orchids, Gardenias, Dahlias, Violets, Mignonette, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 6s to 8s	Plums, p. ½ sieve, 3s to 4s 6d
Grapes, per lb., 3s to 6s	Pears, per doz., 1s to 3s
Peaches, per doz., 6s to 9s	Apples, per doz., 6d to 1s 6d
Melons, each, 2s to 4s	Oranges, per 100, 6s to 10s
Pomegranates, each, 4d to 6d	Lemons, per 100, 6s to 10s

VEGETABLES.

Cauliflowers, each, 4d to 6d	Celery, p. bundle, 1s 6d to 1s 9d
Greens, per dozen, 2s 6d to 3s	Onions, p. ½ sieve, 1s 6d to 2s 6d
Cabbages, do., 1s to 2s	Tomatoes, per doz., 4s to 6s
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 9d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 2s
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 6d to 1s 6d	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d

BRITISH WOOLS.—LONDON, FRIDAY, NOV. 16.

There has been only a small amount of business transacted during the past week, the supplies having been limited, and the demand to no greater extent. The rapid addition to the rate of interest is likely to prolong the present dulness, but as all persons connected with this trade have been acting with caution no further inconvenience is anticipated.

COLONIAL WOOL SALES.—The November series of these auctions commenced last night with a good attendance, and the rates realised were at about an average of the last series. It is necessary when reading reports of these sales to notice whether a comparison of one series with another be instituted, or merely of the beginning of one set of sales with the conclusion of a former, as a serious difference occasionally occurs between the beginning and ending; and this was the case at the last series, on account of the bad weather towards the termination.

POTATOES.—SOUTHWARK, Monday, Nov. 12.

During the past week the arrivals both coastwise and by rail have been quite equal to the demand. Trade continues dull. The following are this day's quotations:—York Regents, 110s. to 130s. per ton; Dunbar do., 120s. to 140s.; Perth, Forfar, and Fife do., 110s. to 120s.; French Whites, 105s. to 110s.; Belgian do., 90s. to 100s.

METROPOLITAN CATTLE MARKET.

MONDAY, NOV. 12.

The number of Beasts is larger than on Monday last; but the average quality is only second-rate, consequently choicest descriptions are not quoted lower. There is a considerable increase in the supply of Sheep, and prices on the average are lower; a fair clearance is however effected. Calves are more plentiful and rather lower. From Germany and Holland there are 1550 Beasts, 5000 Sheep, and 235 Calves; from Scotland, 40 Beasts; from Ireland, 400; from Norfolk and Suffolk, 100; and 2000 from the northern and midland counties.

	s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 5	0
Best Short-horns	4	6	— 4	10
2d quality Beasts	3	4	— 4	0
Best Downs and Half-breds ..	5	4	to 5	6
Do. Shorn		—		—

	s	d	s	d
Best Long-woola.	5	0	— 5	4
Do. Shorn		to		..
Ewes & 2d quality	4	6	— 4	8
Do. Shorn		—		..
Lambs		—		..
Calves	4	0	— 5	0
Pigs	4	4	— 5	6

Beasts, 5730; Sheep & Lambs, 23,950; Calves, 263; Pigs, 600.

THURSDAY, NOV. 15.

The supply of Beasts is much shorter than on Thursday last Trade is slow, but Monday's quotations are well maintained. The number of Sheep is also small, fully adequate, however, to the demand; indeed they cannot all be sold There is scarcely any quotable difference in the business done Calf trade is slow at reduced prices From Germany and Holland there are 185 Beasts, and 1060 Sheep; from Ireland 300 Beasts; 300 from the northern and midland counties; and 145 Milch Cows from the home counties

	s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 5	0
Best Short horns	4	6	— 4	10
2d quality Beasts	3	4	— 4	0
Best Downs and Half-breds ..	5	4	— 5	6
Do. Shorn		—		..

	s	d	s	d
Best Long-woods .	5	0	— 5	4
Do. Shorn		—		..
Ewes & 2d quality	4	6	— 4	8
Do. Shorn		to		..
Lambs		—		..
Calves	4	0	— 4	10
Pigs	4	4	— 5	6

Beasts, 1270; Sheep & Lambs, 4000; Calves, 330; Pigs, 170.

MARK LANE.—MONDAY, NOV. 12

This morning's market was well attended by country buyers. The supply of Wheat from Essex and Kent was moderate, a large proportion being of very miserable quality and condition, and such was difficult of disposal at lower and irregular prices; the fine and dry samples met a quick sale at the prices of last week. Good qualities of foreign were in demand at last week's rates, but Russian, particularly the inferior descriptions, were very unsaleable. Barley is unaltered in value, with the exception of grinding qualities, which are 1s. to 2s. per qr. cheaper. Beans and Peas bring late rates. The Oat trade is quiet, and [illegible] cheaper. In the value of Flour there is no alteration.

PER IMPERIAL QUARTER.		s.		s.
WHEAT, Essex, Kent, & Suffolk ..	White	55—62	Red	46—60
— — fine selected runs ..	ditto	59—66	Red	53—66
— — Talavera		50—74		
— Norfolk		—	Red	—
— Foreign		54—71		
BARLEY, grind. & dist., 30s to 34s ..	Chev.	4—47	Malting .	40—42
— Foreign .. grinding and distilling		41—46	Malting .	40—45
OATS, Essex and Suffolk		23—24		
— Scotch and Lincolnshire	Potat	26—28	Feed ..	21—26
— Irish	Potato	23—25	Feed .	21—24
— Foreign	Polish and Dutch	24—27	Feed .	22—27
RYE		52—53	Foreign	—
RYE-MEAL, foreign		—		
BEANS, Mazagan	19s to 44s ..	Tick	41—4	Harrow . 42—48
— Pigeon	44s — ..	Winds	—	Long-eyed —
— Foreign	Small	44—4	Egyptian	—
PEAS, white, Essex and Kent ..	Boilers	44—4	Suffolk	46—50
— Maple	—s to —	Grey	43—4	Foreign . 38—43
MAIZE		White	—	Yellow .. —
FLOUR, best marks delivered		per sack	37—37	
— 2d do.		do.	34—36	Country 34—36
— Foreign		Barrel	30—34	Pet sacks 40—50

FRIDAY, NOV. 16.

The Wheat trade was [illegible], nevertheless the best samples of new English and [illegible] Foreign have found buyers at previous prices, but the [illegible] inferior English and ordinary Russian qualities were difficult of disposal, even at 1s. to 2s.

per qr. reduction. Fine malting Barley continues to be sought after at former rates, but ordinary and grinding qualities are 1s. to 2s. per qr. lower. The value of Beans and Peas is unaltered, but new Oats, particularly damp and heated parcels, may here and in many markets be purchased 1s. per qr. cheaper. The Flour trade has been dull, and where sales have been pressed a decline of about 1s. per sack and barrel became necessary in Liverpool and Glasgow. The number of cargoes arrived off the coast during the week is 41, viz., 19 Wheat, 6 Maize, 3 Barley, 3 Beans, 8 Linseed, and 2 Flour. In the absence of buyers transactions were of a most limited character. There has been little addition to the arrivals since Tuesday night, and both English and foreign are of moderate extent. English Wheat met a slow sale at Monday's prices, but the stands are cleared; for foreign the demand is limited, and its value unaltered, excepting low qualities, to force which lower rates would be necessary. Barley is a slow sale and rather cheaper. The Oat trade is very heavy, and prices must be quoted 6d. to 1s. per qr. lower. For Flour there is little demand, and a slight reduction is acceded to.

ARRIVALS FROM NOV. 12 TO NOV. 16.

	Wheat.	Barley.	Oats	Flour.
English ..	1120 qrs.	1530 qrs.	1010 qrs.	360 sks.
Irish	— ,,	— ,,	2700 ,,	— ,,
Foreign ..	16620 ,,	2160 ,,	16490 ,,	{ 2190 ,, — brls.

LIVERPOOL, Tuesday, Nov. 13.—We had a numerous attendance of millers and dealers, both local and from a distance, at our Corn Exchange this morning. The business in Wheat, however, has only been to a moderate extent, owing to the firmness of holders, and none except the common descriptions were to be had any cheaper than on Friday. Flour met only a retail inquiry, without any quotable change in value. Indian Corn being somewhat pressed for sale declined about 1s. 6d. per qr. Oats and Oatmeal were a shade easier. Beans, Peas, and Barley, must each be noted about 6d. per qr. cheaper. The market closed with a quiet feeling generally, but firm for Wheat.

FRIDAY, Nov. 16.—The Corn market was thinly attended. Flour was a slow sale at 6d. per barrel and sack lower. Indian Corn, 38s. 6d. to 39s. for Galatz and mixed American. Barley and Beans dull and unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Oct. 6..	58s 3d	39s 8d	25s 1d	39s 1d	48s 11d	39s 10d
— 13..	61 1	39 11	24 8	37 3	50 11	42 8
— 20..	60 1	40 7	23 7	34 7	50 2	41 11
— 27..	59 11	40 9	23 5	36 8	49 6	41 10
Nov. 3..	59 9	40 10	23 3	36 2	49 10	42 4
— 10..	58 9	41 0	23 11	36 6	51 1	44 5
Agg. Aver.	59 8	40 6	24 0	36 8	50 1	42 2

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Oct. 6.	Oct. 13.	Oct. 20.	Oct. 27.	Nov. 3.	Nov. 10.
61s 1d	..					
60 1	..	..	..	..	..	..
59 11	..	..	..	..	..	..
59 9	..	..	..		..	.
58 9	..	..	..	..		..
58 3	..	..	..	..	..	..

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Nov. 15.

Prime Meadow Hay	75s	to 80s	Clover	90s	to 110s
Superior do. (old) ..	90	105	New Clover	—	—
Inferior do.	50	60	Old second cut ..	80	90
New do.	—	—	Straw	32	36
Rowen	40	50			

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Nov. 15.

Sup. Meadow Hay..	114s	to 120s	Inferior Clover ..	80s	110s
Inferior do.	70	105	New do.	—	—
New do.	—	—	Straw	38	44
Superior Clover ..	120	128			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Nov. 15.

Fine old Hay	100s	to 110s	Fine old Clover ..	115s	to 123s
Inferior do.	60	80	Inferior do	80	100
Prime New Hay ..	—	—	Fine 2d cut	—	—
Inferior do.	—	—	Inferior do.	—	—
Straw	33	38	Fine New Clover ..	—	—

BUTTER MARKET.—Nov. 16.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 15s. ,, ,,
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

1000 DRAINERS WANTED.—A thousand good workmen may find good and regular employment, in the counties of Stafford and Derby, by applying to Messrs. GRIDWOOD'S Foremen, at Sudbury, Hungry Bentley, Longford, Abbot's Bromley, and Smallwood.—49, Pall Mall, London, S.W.

GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY.

WANTED, FOREMEN OF DRAINAGE WORKS.—Written applications, with references as to character for ability, integrity, and sobriety, to be addressed to Mr. BAILEY DENTON, the Company's Engineer, No. 52, Parliament Street, Westminster, S.W.

WANTED, A GARDENER, for a First Class Establishment, situated in the county of Lancaster. Applicants must produce the highest testimonials as to character and ability. It is also requisite to state in what county he last held a situation.—Address, X., Messrs. James Dickson, Sons, & Co., 23, Market Place, Manchester.

WANTED, A GARDENER, from 30 to 35 years of age, who thoroughly understands Early and Late Forcing in all its branches for Marketing purposes. One from the neighbourhood of London preferred.—Apply, first by letter only, to A. B., Post Office, Minster, near Ramsgate.

WANTED, A GARDENER, by a gentleman in the country; he must practically and thoroughly understand the Forcing of Pines, Vine, Peaches, Apricots, Cucumbers, Strawberries, and the whole range of Gardening. He must be a Churchman, industrious, active, and steady, and anxious to promote his employer's interest. Moderate wages will be given at first, but to a man of ability and willing to carry it out practically and well, liberal wages will ultimately be given. As the Advertiser has a good knowledge of Gardening, no pretender need apply; as the situation is a permanency, strict investigation will be made as to character and ability.—Address, stating wages required and references, to D. D., care of Mr. R. Martin, Schoolmaster, Chatteris, Cambridgeshire.

WANTED, AS HEAD GARDENER AND LAUNDRESS, a Man and Wife without incumbrance. Wages 30s. a week and cottage rent free.—R. S., 50, Lombard St., E.C.

UNDER GARDENER WANTED.

WANTED, a Man to assist in GARDEN, who understands the management of Pigs, Cows, Cart Horse, &c.—Apply by letter, stating age, if married or not, and all particulars, to J. B., Mr. King, 26, Bride Lane, City, E.C.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Married; understands his profession in all its branches. Three and a half years' good character.—A. B., Miller's Nursery, Andover, Hants.

GARDENER (HEAD)—Middle-age, single; understands his profession; good references.—R. H., Post Office, Flintham, near Newark, Notts.

GARDENER (HEAD).—Age 36, married; understands Early and Late Forcing, and Gardening in all its branches. Seven years' character.—A. B., Paul & Son, Old Nurseries, Cheshunt, Herts

GARDENER (HEAD), in a gentleman's family.—Age 30, single; has been 10 years in gentlemen's service, and four in Nursery. Unexceptionable recommendation and character.—C. C., Messrs. Rollisson's Nursery, Tooting, S.

GARDENER (HEAD).—Age 40, married; thoroughly understands Pines, Vines, &c.; also Kitchen and Flower Gardening. Can have an unexceptionable character from last situation.—Y. Z., Mr. Cranston's Nursery, King's Acre, Hereford.

GARDENER (HEAD).—Age 29, single; understands Greenhouse and Hothouse, Stove, Vineries, Early Forcing Fruits, Vegetables, Flower and Kitchen Gardens, and the general routine of his profession. Good reference.—W. Y. M., Banbury, Oxon.

GARDENER (HEAD).—Age 28, married, no incumbrance; thorough knowledge of his profession. No objection to manage a few acres of land. Wife could manage the Dairy and Poultry if required. Five years' first class character.—A. Z., Post Office, Halstead, near Sevenoaks, Kent.

GARDENER (HEAD).—Married, no incumbrance; thoroughly understands the management of Vineries, Pineries, and Propagating Houses. Can be highly recommended.—J. R., Messrs. James Carter & Co., 237 & 238 High Holborn, W.C.

GARDENER (HEAD).—Age 40, married, no incumbrance; thoroughly practical in Cultivation of Pines, Grapes, Peaches, Stove and Greenhouse Plants; good Flower and Kitchen Gardener. Can Manage Land and Stock. Four years' unexceptionable character.—S. B., Post Office, Upper Sydenham, S.

GARDENER (HEAD).—Middle age, married, no incumbrance; well understands his profession in all its various branches. No objection to the care of Land, &c. Wife will either take the Dairy or Cooking, or a small Laundry. Good character.—E. P., Mr. Swallow's, Dartford Lane, Bexley, Kent, S.E.

GARDENER (HEAD).—Age 37, married, one child; thoroughly understands Stove and Greenhouse Plants, Early Forcing of Vines and Peaches, and his profession in all its branches. Wife a good Laundress. Can be highly recommended. Two years' character.—J. J., Mr. Todman, Nurseryman, Eltham, Kent

GARDENER (HEAD) in a nobleman's or gentleman's family.—Age 35, married; practically understands his profession, viz., in Forcing Fruit, Flower, and Kitchen Gardens; the formation and alteration of Groundwork, Propagation and Culture of Stove, Greenhouse, and Bedding Plants. Five years' good character.—J. G., Dorset Cottage, Chapel Road, Lower Norwood, Surrey, S

GARDENER (HEAD).—Age 30, single; has a thorough practical knowledge of his profession. Can obtain the highest testimonials as to competence and character from his late employer, whom he served 11 years, the last five as Head Gardener. Left through the breaking up of the establishment.—R. S., Mr. Morgan's, 1, Conduit Street, Upper Clapton, N.E.

GARDENER (HEAD) to any nobleman or gentleman.—Age 35, no incumbrance; has had great practical experience in all branches of his Profession, where Early Flowers, Fruit, and Vegetables are required, and is also a good Kitchen and Flower Gardener. Five years' good character from the gentleman he is about leaving, Wife can manage Poultry and Dairy.—C. HARVEY, Gardener, Park House, Reigate, Surrey.

GARDENER (HEAD or SINGLE-HANDED).—Age 37, married, no incumbrance; perfectly understands his profession. Wife can attend to a Lodge if required.—E. L., Pike's Nursery, Winchmore Hill, N.

GARDENER (HEAD) or GARDENER & BAILIFF.—Married, two children, youngest 7 years of age; a practical working man, possessing a thorough knowledge of his profession in every department. Also competent to undertake the management of Arable and Pasture Land, including Stock and Farm work in general. Fifteen years' character, which will bear the strictest investigation.—Mr. RIVERS, The Nurseries, Sawbridgeworth, Herts.

GARDENER (FIRST CLASS).—Age 35, married; will be disengaged in a few weeks and will be glad to treat with any nobleman or gentleman who may require a good practical Gardener; can take charge of Land and Stock if required.—X. Y., Teddington, Middlesex.

GARDENER.—Age 40, married; has had great experience, and is now open to an engagement with a nobleman or gentleman requiring a good practical Gardener.—A. B., 79, Gt. Queen Street, Lincoln's-Inn-Fields, W.C.

GARDENER.—Mr. CHARD, Gardener to Sir F. H. H. Bathurst, Bart., Clarendon Park, Salisbury, Wilts, can with confidence recommend a young Man to any nobleman or gentleman requiring the services of a practical Gardener.—Address as above.

GARDENER (UNDER), in a nobleman's or gentleman's family.—Age 21; good character.—L. S., Edmond's, News Agent, High Street, Clapham, S.

GARDENER (UNDER).—Age 21, single; has been accustomed to Hothouse and Greenhouse work, and the Management and Propagation of Flowers, &c. Can be well recommended.—J. BAKER, Head Gardener, Beech House, near Ringwood.

GARDENER, OR GARDENER AND BAILIFF.—Age 36, married, with incumbrance; a thorough practical man in all branches of his profession. Wife a thorough good Cook and Laundry-woman.—S. Y., Post Office, Dorking, Surrey.

GARDENER AND BAILIFF OR GENERAL MANAGER.—Age 40; practically acquainted with the duties of his profession, having had great experience. Unexceptionable references.—W. P., Post Office, Chelmsford, Essex.

TO NURSERYMEN.

NURSERY MANAGER.—A young Man of experience; possesses a good knowledge of the Nursery business in all its branches; also a good Salesman and Correspondent. Would have no objection to Travel. Unexceptionable references.—L. M. N., *Gardeners' Chronicle* Office, W.C.

TO NURSERYMEN, SEEDSMEN, AND FLORISTS.

FOREMAN OR GENERAL MANAGER.—Middle aged; active and industrious. Travel if required. Nine years' character.—L. M., *Gardeners' Chronicle* Office, W.C.

TO NOBLEMEN AND GENTLEMEN.

GENERAL MANAGER.—Age 40, married, no incumbrance; has had 30 years' practice in all the different branches of Gardening, Surveying, Planting, Draining, Brick and Tile Making and Agriculture, with steam power.—Can be highly recommended.—G. A., Caterham, Red Hill, Surrey.

BAILIFF AND GENERAL MANAGER.—Married, no incumbrance; understands the management of both Light and Heavy Soils, the Rearing and Management of Stock, also Parks, Woods, Plantations, Measuring Timber, Brickfield, &c. Has acted for gentlemen and noblemen in Bucks, Herts, and Middlesex. Salary no object. Unexceptionable references.—A. B. C., 2, Bolsover Street, Portland Place, W.

TO NURSERYMEN.

PLANTSMAN OR PROPAGATOR.—A young Man, of good ability. Good references given.—P. G., Bower Nurseries, Maidstone.

TO NURSERYMEN AND SEEDSMEN.

BOOK-KEEPER AND CASHIER OR TRAVELLER.—A good Correspondent. Is about to leave his present situation. Fourteen years' reference in first-class houses in Scotland and England. Well recommended by present and former employers.—C. B., Messrs. Cockburn & Cumming, 6, Liverpool Street, E.C.

THE NURSERY AND SEED TRADE.—An active energetic young Man, of thorough business habits, with 15 years' practical experience in first class houses, is open to an engagement, either to undertake or assist in the management of or to represent a respectable Nursery and Seed Establishment.—Z. A., *Gardeners' Chronicle* Office, W.C.

TO SEEDSMEN.—Has been 6 years at the Trade. First class references.—A. B., *Gardeners' Chronicle* Office.

TO THE NOBILITY AND GENTRY.

HOUSE AND ESTATE CARPENTER AND JOINER.—A young Man, of good practical experience, who can take the entire management of the Erection of any description of House, Conservatories, or Farm Buildings. Can give Plans, detail Drawings, and execute any alteration of works that may be required in mansion or cottage. A good scholar, so essential in filling such situations. Any nobleman or gentleman requiring such person will find his services invaluable. Good references can be given.—H. T., Fir Cottage, South Road, Forest Hill, Kent.

DAIRYMAID.—A gentleman who is giving up Farming is desirous of obtaining for the Manager of his Dairy a similar situation. She has been accustomed to a Cheddar Cheese Dairy of 60 Cows, and can be highly recommended. If necessary she could also fill the position of Housekeeper.—H. T., Post Office, North Street, Bristol.

SAUCES.—Connoisseurs have pronounced LEA and PERRINS' "WORCESTERSHIRE SAUCE" one of the best additions to Soup, Fish, Joints, and Game. The large and increasing demand has caused unprincipled traders to manufacture a spurious article; but the "GENUINE" all bear LEA & PERRINS' name on Bottle, Label, and Stopper.—Sold by CROSSE & BLACKWELL, London, and all respectable Oilmen and Grocers. Sole Manufacturers—LEA & PERRINS, Worcester.

FORGERY AND FRAUD.—Understanding that there is at present an attempt being made by some unprincipled parties in our city to deceive the public with an inferior Starch, made up in packets closely resembling the GLENFIELD STARCH, we consider it our duty to warn our fair readers to be careful when purchasing to see that the word "GLENFIELD," and the maker's name, "ROBERT WOTHERSPOON," is on every package, as none others are genuine.

When you ask for Glenfield Starch see that you get it, as inferior kinds are often substituted.

PRIZE MEDAL, PARIS EXHIBITION 1855.

METCALFE, BINGLEY, AND CO.'S New Pattern and Penetrating Tooth Brushes, Penetrating unbleached Hair Brushes, Improved Fleshand Clothes Brushes, and genuine Smyrna Sponges; and every description of Brush, Comb, and Perfumery for the Toilet. The Tooth Brushes search thoroughly between the divisions of the Teeth and clean them most effectually—the hairs never come loose. M., B., & Co.'s new and delicious perfumes the Fairy Bouquet and the Oxford and Cambridge Bouquet, in bottles 2s., 3s. 6d., and 5s. METCALFE'S celebrated Alkaline Tooth Powder, 2s. per box.—Sole Establishment, 130B and 131, Oxford Street, 2d and 3d doors west from Holles Street, London, W.

FINE HEAD OF HAIR.

THE BEARD, WHISKERS, AND MOUSTACHIOS.

ROWLANDS' MACASSAR OIL is universally in high repute for its unprecedented success during the last sixty years in the growth, restoration, and in beautifying the human hair. It prevents it from falling off or turning grey—strengthens weak hair, cleanses it from scurf and dandrif—and makes it beautifully soft, pliable, and glossy. In the growth of whiskers, the beard, and moustachios, it is unfailing in its stimulative operation. For children it is especially recommended, as forming the basis of a beautiful head of hair, while its introduction into the nursery of Royalty, and the numerous testimonials constantly received of its efficacy, afford the best and surest proofs of its merits.—Price 3s. 6d., 7s., 10s. 6d., equal to four small, and 21s. per bottle. CAUTION.—On the wrapper of each bottle are the words, ROWLANDS' MACASSAR OIL, &c. in white letters, and their signature, "A. ROWLAND & SONS," in red ink.—Sold at 20, Hatton Garden, and by Chemists and Perfumers.

ASTHMA.—DR. LOCOCK'S PULMONIC WAFERS give instant relief and a rapid cure of Asthma, Consumption, Coughs, and all disorders of the Breath and Lungs. They have a most pleasant taste. Price 1s. 1½d., 2s. 9d., and 11s. per box.—Sold by all Medicine vendors.

DINNEFORD'S PURE FLUID MAGNESIA has been, during 25 years, sanctioned by the medical profession and universally accepted by the public as the best remedy for acidity of the stomach, heartburn, headache, gout, and indigestion. As a mild aperient it is admirably adapted for ladies and children.—Manufactured (with the utmost attention to strength and purity) by DINNEFORD & Co., 172, New Bond Street, London, W., and sold by all respectable Chemists throughout the empire.

ALL AFFLICTED WITH WEAK EYES may obtain instant relief by using Dr. WARNER'S EYE WATER, which removes all inflammation arising from cold, dust, or constitutional causes.—Sold in bottles, 2s. 9d. and 4s. 6d., by HANNAY, Oxford Street, W.; SANGER, Oxford Street, W.; EDWARDS, St. Paul's Churchyard, E.C.; HOOPER, King William Street, City, E.C. and all Chemists; of whom may also be had, Dr. WARNER'S LOTION, a certain cure for sore and ulcerated legs, burns, and scalds, and bites of insects, and in cases of inflammation is invaluable. In bottles, 1s. 1½d., and 2s. 9d.

The Gardeners' Chronicle Newspaper.

SATURDAY, NOVEMBER 24, 1860.

LECTURES TO WORKING MEN.

GOVERNMENT SCHOOL OF MINES, JERMYN STREET, W.—The FIRST COURSE of SIX LECTURES on "MINERALS," by WARINGTON W. SMYTH, M.A., F.R.S., will be commenced on THURSDAY evening, November 29, at 8 P.M.

Tickets may be obtained by Working Men only, on Monday, the 26th inst., from 10 to 4 o'clock, upon payment of a registration fee of 6*d*. Each applicant is requested to bring his name, address, and occupation written on a piece of paper, for which the ticket will be exchanged. TRENHAM REEKS, Registrar.

News of the Week.

MR. LINCOLN, the Republican candidate, has been elected President of the United States. The issue of the contest, by common consent, lay with "the Empire State" of New York, where the majority in favour of Mr. LINCOLN was estimated at 40,000, while that of Ohio was scarcely less decisive, and that of Pennsylvania was said to have reached the unprecedented amount of 100,000. All the New England States contributed to the victory, and thereby declared their determination to check the extension of slavery and the further increase of its political power. The Southern States, which for some years past have been predominant in the Federal Government, had previously threatened to secede from the Union if a Republican President were elected; but as the present Congress will remain unchanged for two years to come, it was generally believed that no attempt would be made to carry the threat into execution after the excitement of the contest and the mortification of defeat had subsided. The latest news, however, informs us that the secession movement is rapidly gaining strength in the slave States, and that the citizens of Charleston have assembled in mass meetings and adopted resolutions demanding immediate secession. The most serious apprehensions are entertained at Washington as to the result of this agitation, and the Cabinet has met in council to deliberate on the condition of affairs.

A despatch from Naples states that KING FRANCIS II. burst a blood vessel at Gaeta on Wednesday last, and that a steamer had been sent to Naples for medical assistance. The QUEEN-MOTHER, who had previously left Gaeta with her sons to take up her residence at Rome, has since left that capital for Civita Vecchia, to embark, it is supposed, for Gaeta. The siege operations are still in progress, and guns of long range and large calibre have arrived in the Sardinian camp from Genoa. On the other hand the Neapolitans continue their preparations for resistance, and the garrison is said to be supplied with provisions and munitions of war for several months. Accounts from Naples state that in consequence of the departure of GARIBALDI, a riotous demonstration in his favour has taken place among the Lazzaroni, who assembled in large bodies and shouted, "Long live GARIBALDI!" "The Dictatorship for ever!" "Down with FARINI!" They were dispersed by the regular troops, and Signor FARINI has energetically reprimanded the leaders of the movement. The KING has prohibited the demolition of the forts of St. Elmo, which are to be repaired and armed; and the troops of the line have replaced the National Guard in the different posts in the city. HIS MAJESTY will leave Naples for Sicily on Monday next, his visit having been delayed in consequence of the reactionary movements in the provinces, and the unsettled state of affairs at Naples. The Abruzzi are said to be in a state of partial insurrection, and five other provinces are in a state of siege. It is believed that some modifications will be made in the Council of Lieutenancy at Naples, and that the State Council, which is only convoked on very important occasions, will shortly be summoned by the KING.

M. BILLAULT, the French Minister of the Interior, has followed up his circular to the prefects prohibiting the collection of Peter's pence for the service of the Pope, by another circular forbidding the publication of the political pamphlets issued by the French bishops against the Government under the guise of Pastoral Letters. The Commercial Treaty between England and France was completed on Friday and received the final signatures.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Friday morning the Queen and Prince Consort, accompanied by the Prince of Wales, Princesses Alice, Helena, and Louisa, walked in the Home Park and visited the Duchess of Kent at Frogmore. Viscount Hinchinbrook, Dr. Acland, Mr. Engleheart, Major Teesdale, and Captain Grey, who arrived on the previous day in the suite of the Prince of Wales, left the Castle. The Earl of St. Germans and the Duke of Newcastle remained on a visit. The Duchess of Kent visited Her Majesty at the Castle and took luncheon. In the evening the Queen had a dinner party. On Saturday morning the Queen did not quit the Castle owing to the unfavourable state of the weather. The Princesses Alice, Helena, and Louisa rode in the riding-house. The Duchess of Kent visited her Majesty, and took luncheon. Earl Granville, the Duke and Duchess of Somerset, Viscount and Viscountess Sydney, and the Duke of Newcastle left the Castle. The Duchess of Sutherland, the United States' Minister and Mrs. Dallas, Lord and Lady John Russell, Viscount Palmerston, and the Right Hon. Sir Edmond W. Head, Governor-General of Canada, arrived on a visit. On Sunday morning the Queen and Prince Consort, the Prince of Wales, Prince Arthur, Princesses Alice, Helena, and Louisa, and the visitors at the Castle attended Divine service in the private chapel. The Rev. F. C. Cook, one of her Majesty's Inspectors of Schools, preached the sermon. In the afternoon the Queen and Prince Consort, with the Prince of Wales, Princes Alfred and Arthur, and the Princesses walked on the East Terrace, accompanied by the Duchess of Sutherland, the United States' Minister and Mrs. Dallas, the Earl of St. Germans, Lord John Russell, Lord Palmerston, and Sir Edmond Head. On Monday morning the Queen, accompanied by Princess Helena, walked in the grounds of the Castle, and visited the Duchess of Kent at Frogmore. The Prince Consort, with the Prince of Wales and Prince Alfred, went out shooting. Princesses Alice and Louisa rode on horseback. The United States' Minister and Mrs. Dallas, the Duchess of Sutherland, the Earl of St. Germans, Lord and Lady John Russell, Lord Palmerston, and Sir Edmond Head left the Castle. On Tuesday morning the Queen, accompanied by Princesses Alice, Helena, Louisa, and Beatrice, walked in the Home Park, and visited the Duchess of Kent and the Princess of Leiningen at Frogmore. The Prince Consort came to London and presided at a meeting of the Royal Commission for the Exhibition of 1851. The Prince of Wales went out hunting. The Duchess of Kent and the Prince and Princess of Leiningen visited the Queen and took luncheon. The Duke of Cambridge, the Hereditary Prince and Princess of Holstein Augustenburg, the Earl and Countess of Clarendon, and Captain G. H. Seymour, of her Majesty's ship Hero, arrived at the Castle on a visit. On Wednesday morning, being the 20th birthday of the Princess Royal, her Majesty received the congratulations of the Royal Family. The Queen, accompanied by Princesses Helena and Louisa, visited the Duchess of Kent at Frogmore. The Princess Alice, with the Hereditary Princess of Holstein Augustenburg, also paid a visit to her Royal Highness. The Prince Consort went out shooting, accompanied by Prince Alfred, the Duke of Cambridge, and the Prince of Holstein Augustenburg. The Prince of Wales left Windsor for Oxford University. Prince Arthur rode out on horseback. The Duchess of Kent and the Princess of Leiningen visited the Queen and took luncheon. In the afternoon the Duke of Cambridge took leave of her Majesty and returned to London. On Thursday morning the Queen and Prince Consort walked and drove in the Home Park. The Princesses Alice, Helena, and Louisa rode on horseback. The Prince and Princess of Holstein Augustenburg, the Earl and Countess of Clarendon, and Captain Seymour, R.N., took their departure. Her Majesty held a Privy Council at Windsor yesterday afternoon.

THE PRINCE OF WALES AT OXFORD.—His Royal Highness arrived in Oxford on Wednesday morning from Windsor, to resume his studies at the University. He was received at the station by the Mayor, the City Rifle Corps, under the command of Colonel North, M.P., forming a guard of honour and escorting him to Frewen Hall, amidst the cheers of an immense concourse of spectators. During the day his Royal Highness was waited on by Colonel North, M.P., and the leading members of the University, and in the afternoon made several calls. On Thursday morning the Corporation waited on the Prince, and presented an address of congratulation on his safe arrival in England and return to Oxford. The Prince, in reply, expressed the gratification which it afforded him to receive a congratulatory address from the Corporation of the ancient and loyal city of Oxford, in whose prosperity he should ever feel a lively interest; and said that he valued very highly the compliment which the City Rifle Corps had paid him on the previous day, by assembling to do honour to him on his return.

THE EMPRESS OF THE FRENCH left London on Friday by railway for York, and arrived in that city shortly before 6 o'clock in the evening, taking up her residence at the Royal Station Hotel. On Saturday morning her Majesty paid a private visit to York Minster, and was loudly cheered by several hundred persons on leaving the building. The Empress then visited the Museum and grounds of the Yorkshire Philosophical Society, and at 20 minutes past 2 P.M. proceeded to Scotland by the express train. Her Majesty arrived in Edinburgh at a quarter past 8, and took up her residence at Douglas's Hotel, being cordially cheered on her arrival and departure from the station. On Sunday morning the Empress attended St. Mary's Roman Catholic Church, where high mass was celebrated by Bishop Gillis, and a *Te Deum* performed for the safe return of the Prince of Wales. The Empress walked to and from the chapel, and did not seem in the least inconvenienced by having to return to the hotel through a smart snow-shower. In the afternoon her Majesty took a walk along Princes Street and Waterloo Place with the intention of ascending the Calton Hill, but the disagreeable state of the weather prevented the intention from being carried out; and the Empress walked by Jacob's Ladder to the North Back of the Canongate, and thence to the front of Holyrood Palace. Her Majesty then expressed a strong wish to see Arthur's Seat, and proceeded eastwards to the point where the Duke's Walk is joined by the Queen's Drive at the foot of the hill, when the excessive keenness of the wind and the dull heavy atmosphere caused her Majesty with apparent reluctance to return to the city. The Empress then proceeded up the Canongate, visited the White Horse Close, containing the oldest house in Edinburgh, looked at the old gables of John Knox's house, and returned by the North Bridge to the hotel. On Monday her Majesty, accompanied by her suite, visited Holyrood Palace, Arthur's Seat, Leith Fort, and Edinburgh Castle, and at various points along her route met with an instant recognition and a courteous reception. The Imperial party left Douglas's Hotel at a quarter-past 11 in a carriage and pair, and drove along Waterloo Place, Regent Road, and Abbey Hill to Holyrood; thence along the Queen's Drive to the eastward, passing the scene of the great Volunteer Review, and round the hill till they arrived at Dunsapie Loch, where they alighted. The Empress then began to ascend the hill, and had climbed about half-way up when, on account of the slippery nature of the ground, consequent on the strong frost which prevailed on Sunday night and the thaw which followed on Monday, she was compelled to retrace her steps and to forego the intention of reaching the summit. After remaining the greater part of an hour on the hill her Majesty again entered the carriage and drove to Holyrood Palace, where her Majesty inspected the Queen's apartments, the picture gallery, and the apartments of Mary Stuart, to everything connected with whom her Majesty listened with evident attention, and examined with interest the relics of the period preserved in the apartments. She was also conducted to the ruined chapel, but on account of the coldness of the air she remained there but a short time. It was next intended to visit the Castle, but owing to some mistake of the coachman the Empress was driven to Leith Fort, and the error was only found out when her Majesty arrived at the fort, and asked to see the Scottish Crown. The Empress immediately returned to the city, and reached the Castle about 3 o'clock. Her Majesty was there received by Lieut.-Colonel Ewart, of the 78th Highlanders, who accompanied her through the Castle, and pointed out the various objects of interest for which it is famed, including the Regalia, the apartments of Queen Mary, St. Margaret's Chapel, and Mons Meg, with the sight and description of which the Empress seemed much interested. The guard was mounted in honour of her Majesty, who seemed to take great interest in it, being the first Highland regiment she had ever seen. Her Majesty also examined several of the barrack-rooms, and inspected their arrangements with evident interest. After having been shown everything about the Castle, her Majesty rested for a short time in the Colonel's quarters, and then drove down the Mound and up Hanover Street, to the shop of Messrs. Marshall, jewellers, George Street, where her Majesty made several purchases, selecting a variety of Celtic jewellery ornaments. She remained there for fully half an hour, and before she left a large and eager crowd had assembled before the door. On leaving the shop she was received with loud cheering and waving of hats, —a display of feeling which her Majesty acknowledged by frequently bowing to the crowd. She then drove off rapidly and arrived at Douglas's Hotel at half-past 4 o'clock, where she was enthusiastically cheered by a large crowd which had assembled during her absence. The Lord Provost called at the Hotel immediately after the return of the Empress in the afternoon, in order to pay his respects. On Tuesday morning the Empress and suite paid a visit to Melrose Abbey and Abbotsford. Like all the previous movements of her Imperial Majesty, her journey to Melrose was kept strictly secret. The Imperial party travelled in a first-class carriage by the

ordinary passenger train, which left Edinburgh at 11.25 A.M. Having paid a visit to Melrose, the Empress drove to Abbotsford, in the grounds of which she lingered a considerable time, and then visited the house, the library, the armour, the personal relics of Sir Walter Scott, and the many curiosities of the place. After a drive along a portion of the banks of the Tweed the Imperial party returned to Edinburgh, in the same private manner, about 6 o'clock. At all the stations on the homeward journey, however, large numbers had collected to see her Majesty, who was everywhere received with loud cheers, and on arriving at Edinburgh her Majesty was eagerly greeted by a large concourse, which the railway officials had in vain tried to prevent from crowding the platform. On Wednesday morning the Empress drove to Dalkeith Palace, the seat of the Duke of Buccleuch. On the way her Majesty inspected Craig Millar Castle, a ruin interesting from its connection with the history of Mary Queen of Scots. The family were absent from Dalkeith, and the Empress was shown over the Palace by the attendants. Owing to the unfavourable weather, the intention of visiting Hawthornden and Roslin Chapel was given up. The excursion was conducted with more than usual privacy, few people being aware of either the Empress's departure from Edinburgh, or her presence at Dalkeith. In the afternoon the Lord Provost of Edinburgh had an audience and presented an address from the Corporation expressing their hope that her Majesty's visit to Scotland might be beneficial to her health, and that her visit would tend to promote goodwill and peace and friendly intercourse between France and Great Britain. Her Majesty in reply said that, as she was visiting this country not in State, she could not receive any mere formal address, which might be inconsistent with her duty to the Queen of England; but she was very glad to be assured of the kindly feeling entertained towards her by the citizens of Edinburgh, and was much gratified at receiving the address thus presented to her. Her Majesty assured the Lord Provost of the earnest desire on the part of the Emperor to maintain the alliance, and to cultivate a good feeling with the people of this country, and she hoped that the people of Great Britain would be fully persuaded of this. In the evening the Duke of Hamilton arrived in Edinburgh and dined with the Empress, and it was expected that her Majesty would leave Edinburgh on Thursday morning for Hamilton Palace. Her Majesty is expected to return to France on the 10th of next month. —It was reported in London on Wednesday afternoon that the Emperor of the French had arrived in England, and had proceeded to the north. The report was generally credited, and crowds of people assembled at London Bridge and at the Waterloo station of the South Western, while a large body of police, with a number of French detectives, was sent down to keep them in order. The excitement was increased by a telegram from Winchester stating that the Emperor was in the 2.30 train from Portsmouth. On the arrival of this train at Waterloo, a quiet-looking gentleman with a moustache and imperial resembling those of the Emperor, was seen in a first-class carriage, and was received with loud cheering by the crowd. The astonished gentleman explained who he was, and a magistrate and several others affirmed that he was not the Emperor. This being confirmed by the French detectives, he was permitted to escape from his strange and novel situation.

THE EMPRESS OF AUSTRIA, accompanied by a numerous suite, arrived at Antwerp on Tuesday evening, and embarked the next morning in the Royal yacht Victoria and Albert, which had been placed at her disposal for the voyage to Madeira, by Queen Victoria, the Admiralty yacht Osborne embarking the suite and baggage. The Empress was accompanied by the Grand Master of her Court, Field-Marshal Count Nobili, by the Princess Tour et Taxis, Countess Hunyadi, Prince Windischgrätz, Counts Mittrowsky and Hunyadi, the Abbé Hasel, preacher at the cathedral; Dr. Kumann, and eighteen persons attached to the service of the palace, as well as by a detachment of the guard. The Empress was received at the station at Antwerp by the Duchess of Brabant and the Count of Flanders. The King of the Belgians arrived from Brussels on Wednesday morning, and the Belgian Royal family accompanied the Empress on board the yacht, and remained with her till the moment of departure. The Victoria and Albert and Osborne left their moorings at 10 A.M., and steamed down the Scheldt amidst the cheers of thousands of people who thronged the quays. The Royal yachts arrived at Plymouth yesterday morning about 8 o'clock, and as the Victoria and Albert steamed round the breakwater, the Citadel, and the vessels in the Sound, H.M.S. St. George and Sanspareil fired a Royal salute. Immediately after her arrival the Port Admiral and officials proceeded on board to pay their respects to the Empress. The Victoria and Albert afterwards went into Hamoaze to coal. As she entered the harbour the ships in commission fired a Royal salute. It was expected that her Majesty would leave for Madeira last evening. The Austrian Ambassador in London arrived at Plymouth on Wednesday night to await the arrival of her Majesty.

DIPLOMATIC APPOINTMENTS.—Lord Bloomfield has been appointed British Ambassador at the Court of Vienna, and Lord A. Loftus, the Minister at Vienna, will replace Lord Bloomfield at Berlin.

LORD LIEUTENANCY.—The Queen has appointed the Earl of Chichester Lord Lieutenant of Sussex, in the room of the late Duke of Richmond.

ORDER OF THE GARTER.—The Queen has signified her intention of conferring the Order of the Garter upon the Duke of Newcastle.

THE CHURCH.—The Bishop of London has conferred the Chancellorship of St. Paul's Cathedral, vacant by the death of the Rev. Henry Soames, on the Right Rev. Dr. Spencer, formerly Bishop of Madras.

PARLIAMENTARY MOVEMENTS.—The Reading election has terminated in the return of Mr. Serjeant Pigott, the Liberal candidate, by a majority of 151, the numbers being 586 to 435. Mr. Apsley Pellatt has retired from the contest for Southwark in favour of Mr. Scovell. At a public meeting of the Liberal electors on Wednesday, it was resolved that Mr. H. Fawcett and Mr. Layard were better fitted to represent the borough than Mr. Scovell, and a deputation was appointed to wait upon Mr. Layard, and request him to allow himself to be put in nomination. It is understood that the Hon. J. S. Wortley will be brought forward by the Conservatives as their candidate for Newcastle-on-Tyne. There are two candidates in the field for Pembrokeshire, Mr. Lort Phillips, who is said to be supported by the Earl of Cawdor, the late member, and Mr. Hugh Owen. Mr. Vyner is a candidate in the Liberal interest for Ripon, in the room of the late Mr. Warre.

THE VOLUNTEER MOVEMENT. — The following Circular was issued on Tuesday from the War Office to the commanding officers of the various rifle corps respecting the improper and unserviceable state in which the arms of Volunteers have in many instances been found on inspection:—

"War Office, Nov. 19.

"The Secretary of State for War has learned with regret from the reports of inspecting officers that some of the Government arms in possession of certain corps of Volunteers are nearly unserviceable from dirt and rust; that in some instances rifles which were foul from previous firing had been left uncleaned for a month, and that in others some of these valuable arms had been taken away by members of the corps, and even lent out by them for private purposes. Mr. Secretary Herbert, in reminding commanding officers of their responsibility in regard to the Government arms intrusted to the corps under their command, thinks it necessary to point out that the barrel of the rifle is so delicately finished that the action of rust inside must inevitably destroy the integrity of the grooves, and that consequently, independently of the discredit which attaches to a corps the members of which prove to be unfit to have the charge of such weapons, serious damage is done to the property of the public by those whose pride it should be to maintain their arms in perfect order. The establishment of officers and non-commissioned officers for a company of Volunteers is amply sufficient to insure a proper supervision of the arms consistently with other occupations. Mr. Herbert is, therefore, forced to the conclusion that neglect of duty must always exist in corps where arms are reported to be nearly unserviceable through dirt. The cleaning of a rifle constitutes an important part of the drill of every recruit. See "Field Exercises," section 33, part 6. Too much pains cannot be taken to impress upon the minds of the men the necessity of preserving their rifles at all times in the highest condition, and the impossibility of producing accurate shooting with them when dirty. 'This is the first exercise in which the recruit is to be instructed.' The habitual inspection of arms upon parade forms an equally important branch of the duty of an officer.—Section 31, part 6. With the arms at the 'port' and at the 'half-cock,' the inspecting officer will pass down the ranks to ascertain that the locks and the sights are serviceable and perfectly clean, and that the nipples are free from rust. With regard to the examination of the barrel, the piece of rag kept in the pouch having been placed in the jag or slit in the head of the ramrod, and passed down the inside, the 'officer will proceed to ascertain if the insides of the barrels are clean or otherwise. If clean, no dirt should appear on the rag.' These are simple rules, and the strict observance of them should become the habit of every officer and Volunteer.

"DE GREY AND RIPON."

Another circular had previously been issued from the War Office to the commanding officers, recommending that the rifle used by members sent to the Musketry School at Hythe should be the rifle used by the Volunteer on drill and firing with his corps, as he is likely to have become accustomed to the sights, &c. The circular states that it has come to the knowledge of the War Office that Volunteers had altered the locks of their rifles in order to reduce or increase the amount of the "pull." This practice is considered to have a very dangerous tendency, and in all cases where such alterations have been made, the officers in command are to request that such rifle be returned to the Armoury, and repaired at the cost of the man by whom the lock has been tampered with.—On Friday evening a numerously attended meeting was held at Myddleton Hall, Islington, for the purpose of organising a cavalry corps for North London. Lord Truro said that having considered the mode of forming the Metropolitan Regiment of Volunteer Cavalry, he proposed that London should be divided into districts, where there was a probability of raising a troop, and that Islington should be the head-quarters for this part of Middlesex. Resolutions in favour of forming the corps were agreed to, and several names were enrolled.—The Post Office Companies of the Civil Service Regiment shot for their prizes on the 15th and 16th inst., when some good firing was exhibited. The first prize was won by Lieutenant Angell, who hit the target at every shot, the second by Private Crossley, and the third by Corporal Topping.—The London Scottish had a general muster on Saturday in Westminster Hall. The "Marching Chorus," lately established under Mr. Benedict, and numbering 70 members, sang three airs as they marched round the hall four deep. This was their first performance, and after only three lessons, but it was a decided success, and was warmly applauded. The battalion then formed square, when Lord Elcho stated that a Court of Inquiry, consisting of the Marquis of Abercorn, Captain Carlisle, Sergeant Leitch, and Private F. Robertson, had reported upon the case of a member of the corps found in the streets at midnight in improper company, wearing his uniform, and that the charge having been proved he had been expelled from the corps. Lord Elcho also announced that the Lord-Lieutenant had sanctioned the formation of four additional companies. There would thus be in all 10 companies, of which four would wear the kilt, in order that a symmetrical appearance might be maintained in line by having two kilted companies on each flank.—The City Court of Lieutenancy has sanctioned the addition of three new companies to the 2d City or Spottiswoode Corps, the strength of which is therefore now four companies.—The London National mustered in large numbers on Tuesday evening, in Westminster Hall. Preceded by the drums and fifes of the Grenadier Guards, the regiment marched over Westminster Bridge, along the Westminster Road, through the Borough, across London Bridge, and along Great Tower Street to the Corn Exchange, in Mark Lane, where a public meeting was held, for the purpose of promoting the success of the corps, under the presidency of Sir J. V. Shelley, Bart., M.P., the colonel commandant of the regiment.—The First Middlesex Light Horse corps met at Willis's Rooms, on Thursday, when final arrangements were made for the organisation of the regiment, and the days of parade determined upon.—The 24th Middlesex (Uxbridge) has obtained the Lord-Lieutenant's sanction for the formation of a new company.—An influential committee has been appointed in Greenwich, under the presidency of Alderman Salomons, M.P., for the purpose of forming a marine artillery corps or brigade for the service of artillery, and for gunboat service on the Thames. It is proposed to accept the services of a large body of persons whose business is immediately connected with the river, watermen and lightermen, and also of amateur watermen and others, who will form a company distinct from the professionals.—The 4th or Woolwich Company of the 1st Kent assembled on Plumstead Common on Friday, and were inspected by Colonel Luard.—A brigade order has been issued to the Gravesend Artillery prohibiting the appearance of the corps in uniform on any public occasion without the sanction of the Lord-Lieutenant. A wooden model of a 68-pounder gun is now constructing to afford the members an opportunity of frequent drill practice. A number of the new pattern bayonet carbines have been received for the use of the corps.—The 1st Kent Rifles will have a shooting match for a series of prizes at Maidstone early in December.—The 3d Sussex (Hailsham) Artillery have been presented with a silver bugle, subscribed for by the ladies of the district.—The 2d Sussex (Cuckfield) Rifles, consisting of two companies, was inspected on Friday by Lieut.-Colonel Moorsom at Cuckfield Park, the seat of Captain Sergison, one of the captains of the corps.—The Newhaven and Seaford Artillery were inspected on Saturday by Captain Darby.—Her Majesty having been pleased to accept the services of the Southampton Mounted Rifles, a meeting of the members was held on Wednesday, at which the uniform, accoutrements &c., were decided on.—The Somersetshire Corps are to be placed on a complete military footing by the Lord-Lieutenant. The county is to be divided into districts, over each of which a superior commanding officer will preside, assisted by an adjutant. By this plan divisional reviews and parades can be held in the several districts, and greater unity secured than where only isolated corps exist.—The Lincolnshire Mounted Corps is to serve as a portion of the Lindsay battalion, the regulations of the War Office not admitting the organisation of a distinct mounted force.—Two Whitworth rifles and some money prizes were competed for by the Bristol Volunteer Artillery and Rifle Corps on Tuesday, in Sneyd Park. There were 58 competitors; the rifles being won by Sergeant Baker, of the Rifle Corps, and Sergeant Hansom, of the Artillery Corps, and the money prizes after shooting off the ties by Captain Lighton, Private Sebry, Sergeant Criddle, and Sergeant F. R. Geary.—The 7th Cheltenham, 6th Stroud, and 2d Gloucester had a shooting contest last week. The Stroud and Cheltenham first competed at Southam, the seat of the Earl of Ellenborough, 12 men from each company, at ranges from 200 to 450 yards, when the Stroud men made 211 points, and the Cheltenham 162. Nine men of the Gloucester Company competed with nine of the Stroud victors the next day at Stroud, at ranges from 200 to 600 yards, when the Gloucester men were victorious, scoring an average of 17.55, while the Stroud average was 14.44.—The company recently formed at Maldon, Essex, now numbers 90 effectives, and a practice ground, with a range of 1000 yards, has been secured.—The Cambridge University corps has obtained a rifle ground with a range of 1400 yards, within a quarter of a mile of Trinity College. It is proposed to admit the town corps to the advantages of the range when it does not interfere with the practice of the University corps.—It has been determined, at a public meeting at Bingley, in the West Riding, to take steps for establishing a Rifle Corps in that town.—The Burnage or 6th Company of the 2d Manchester, assembled on Saturday in the grounds of Ensign Grundy, Rushford Park, near Manchester, when a silver bugle, subscribed for by the

ladies of the neighbourhood, was presented to them. At the conclusion of the ceremony the members of the Company and a great number of friends were hospitably entertained by Ensign Grundy.—The 14th Worcestershire company assembled at Worcester on the 15th, and were inspected by the Lieut.-Colonel of the battalion.—The city of Durham corps, now numbering nearly 200 members, was inspected on the 14th by Major Harman.—The 1st York had a contest for prizes at Langton Wold, on the 13th. The first prize, consisting of a silver challenge cup, value 50*l.*, presented by the Hon. C. W. Fitzwilliam, M.P., to be won three years in succession, and containing 5*l.*, given by Captain Copperthwaite, and a silver medal, given by the ladies of Malton, was won by Private Robert Hick.—In consequence of the disapproval expressed in England of the projected visit of Volunteers to Paris, the Emperor has withdrawn his sanction from it; and Mr. Klotz Rowsell has published an intimation that the project has been abandoned for the present, but will be renewed in the ensuing spring.

Foreign.

FRANCE.—The Minister of the Interior has addressed the following circular to the Prefects respecting the Pastoral Letters of the bishops:—

"Paris, Nov. 10.

"Monsieur le Prefet,—The general law which prescribes for printers the double formality of the declaration and depositing a copy of all publications, and in certain cases that of the stamp, has received an exceptional repeal in favour of pastoral letters; in a spirit of generous confidence in the religious authority, the publication of acts emanating from this authority has been, in fact, by the tolerance of the Administration, freed from the surveillance implied by the deposit, and from the expense attached to the stamps. But for some time many writings have been published under the title of '*Mandements*,' or of 'Pastoral Letters,' treating of questions most foreign to spiritual interests—political pamphlets in fact, in which the events now being accomplished in Europe are considered in which the acts of the Government are discussed, and sometimes attacked with great vigour; thus usurping the exclusive immunities granted to the special acts of the episcopal jurisdiction. This abuse has provoked the attention of the Government. To remedy this, the simplest and easiest measure would incontestably have been to withdraw the privilege granted, and, without distinction, to submit all its affairs to the common law. Sincerely desirous of not obstructing in any way the action of the ecclesiastical authority in its legitimate sphere, the Government has not considered it necessary at present to resort to that radical measure. Those *Mandements* and Pastoral Letters which do not depart from the spiritual domain, and which are printed as placards in order to be posted or read in the churches, will therefore continue free of the stamps and the deposit. But those writings, whatever may be their title, which, taking the form of a pamphlet in order to emerge from the sanctuary, too often mix themselves up with temporal politics, cannot profit by a dispensation which was not established for them. Such writings, although enjoying entire liberty of publication, will be subject to the conditions of the common law. You will point out, Monsieur le Prefet, this distinction to the printers in your department—it is on them that are imposed the obligations of the deposit and the stamp. It is they who will be prosecuted if they do not submit to the same. In preserving a generous exemption to publications of a spiritual order, but in opposing as much as possible the confounding of *Mandements* with pamphlets, religion with politics, and the decisions to which the Catholic owes obedience with opinions which the citizen may contradict, the Government is conscious of maintaining everything in its place, without prejudicing either the rights or the liberty of anybody. Receive, Monsieur le Prefet, the assurance of my very distinguished consideration.—BILLAULT, Secretary of State for the Interior."

The *Moniteur* of yesterday publishes a convention concluded between the Governments of Sardinia and France, arranging several questions in reference to the annexation of Savoy and Nice. It is determined that the portion of the Sardinian debt chargeable to Savoy and Nice shall be 4½ millions of Rentes, which the French Government will remit to Sardinia. The charges incurred by Sardinia on account of Savoy and Nice, will be transferred to France. The *Moniteur* also publishes an Imperial decree abolishing the prohibition against the exportation of iron ore, which may in future be exported free of duty.—A pamphlet has been published by M. Dentu, the official publisher, under the title of "Pope and Emperor," suggesting a plan for setting aside the Pope and installing the Emperor of the French as Supreme Head of the Gallican Church in his place. It says that in England Queen Victoria is both Queen and Pope of the Church of England, that in Prussia, Sweden, Norway, and Denmark, the King is King and Pope of the national churches, that in Russia the Emperor is Czar and Pope of the Greek Church, that in Greece King Otho of Bavaria is also King and Pope of the Greek Church in his dominions, and that in Turkey the Sultan is Emperor and Pope of the Mahometans. It asserts that what is useful for other countries must be good and useful for France, and that the head of the State should unite in the same grasp the political power and the administration of public worship.—It was reported on Monday that the King and Queen of Holland were about to visit the Emperor at Compiègne, but the rumour is now said to be unfounded. The Prince of Orange, heir apparent to the Dutch crown, is however expected in Paris. Prince Napoleon, accompanied by the Princess Clotilde, is about to start for Italy. The Commercial Treaty between France and England, after several months of hard labour, was completed on Friday, and received the final signatures. The most conciliatory spirit has been manifested on both sides; and should any defects be found in the working of the treaty, they are to be remedied by mutual consent. Mr. Cobden intends to proceed to the South of Europe in the hope of recruiting his health, which has suffered materially from the fatigues and anxieties he has lately undergone.—The *France Centrale* of Blois has been suspended for two months, for having, under pretence of defending religious interests, published violent political attacks upon the Government, notwithstanding two official warnings.

SPAIN.—The Marquis de Miraflores has been appointed Spanish Ambassador at Rome. The Queen has presented a rich sword to General Goyon. In the sitting of the Cortes on Wednesday several diplomatic documents relating to Rome and Naples were communicated by the Government.

BELGIUM.—The King of the Belgians is now nearly recovered from the violent cold from which he has been for some time suffering.

PRUSSIA.—During the past autumn Captain Macdonald, an officer of the English army, who was travelling with his family on the Rhenish railway, was grossly insulted at Bonn by the railway officials, because he refused to give up his seat to a Prussian doctor who had taken possession of it in his temporary absence from the train. Capt. Macdonald was dragged from the carriage and given into custody for resisting the authorities, and was afterwards prosecuted by M. Möller, the Procureur of Bonn, and sentenced to pay a fine. In the course of the trial, M. Möller denounced the English in such violent and unmeasured terms that complaints were made to the superior legal authorities, who ordered an inquiry to be instituted by the Court of Discipline into his conduct. The Court did not review the facts of the case, but only the conduct of the Procureur, as far as it was impugned. M. Möller, in explanation, stated that the terms he used he did not apply to Englishmen in general, not even to all English travellers, but only to those who by their misbehaviour frequently provoked collisions with the authorities. The superior judges decided that M. Möller's violent language was unbecoming his judicial functions, and therefore visited him with a reprimand. The German journals contradict the reports that the case was made the subject of formal representations to the Prussian Government.

AUSTRIA.—The Empress of Austria left Vienna for Antwerp at an early hour on Saturday morning and embarked on Wednesday in the royal yacht Victoria and Albert for Madeira, the Admiralty yacht Osborne embarking the suite and baggage. The Emperor accompanied the Empress to Bamberg, which he left on Monday by way of Augsburg and Ulm, for Stuttgardt, to pay a visit to the Court of Wurtemberg.—Accounts from Vienna state that the signs of reaction in favour of Italy are very striking in that capital, and that the people generally wish to see the difficulty about Venice amicably and equitably settled. So strong is this feeling, that the papers which most steadily support the Government are throwing out hints in favour of negotiations during the winter, with a view to avert the threatened evils of war in the ensuing spring. It is reported that Austria is about to send an army of observation into Transylvania, on the Moldo-Wallachian frontiers.

HUNGARY.—The prospects of any conferences being held at Gran have become more remote. It is even doubted whether they can take place this year.

VENETIA.—The Austrian Government has just adopted a new measure of rigour in Venetia. The *Official Gazette* publishes a decree ordering all fathers of families to recall their sons from abroad, even if absent for their education. The parents who shall persist in leaving their children in foreign countries will be punished with a fine of from 20 to 200 florins.

GIBRALTAR.—The screw steamer Araxes, from Liverpool to Gibraltar, and the steamer Black Prince, from Gibraltar to London, came into collision on the night of the 7th, 68 miles north of Cape St. Vincent. The Black Prince sank immediately after the collision, the commander and crew being received on board the Araxes, which landed them at Gibraltar on the 9th.

ITALY.—In consequence of the departure of Garibaldi, and the popular impression that he had not been well treated by the King and his Ministers, crowds of Lazzaroni assembled on the 12th, and shouted, "Long live Garibaldi!" "The Dictatorship for ever!" "Down with Farini!" They were dispersed by the regular troops, and M. Farini subsequently energetically reprimanded the leaders. The King has issued an order of the day in reference to the Garibaldian army, declaring that it has well deserved the gratitude of the country, and determining its reorganisation, the terms offered being two years' service from the present time in the Royal army for those who are willing to serve, and three months' pay and travelling expenses for those who wish to leave it. The departure of the King for Sicily has been at length fixed for Monday next, but in answer to the various Sicilian deputations, his Majesty has expressed his regret that his stay must be necessarily short. The King has received a deputation, by whom he was presented with the result of the *plébiscite* in the Marches and Umbria. It is believed that some modifications are about to be made in the Council of Lieutenancy of Naples, and that the State Council, which is only convoked on very important occasions, will be shortly summoned by the King. Baron Poerio has been appointed Minister without a portfolio. A letter of the King has been published granting 200,000*l.* for popular education in the city of Naples. The King has prohibited the demolition of the forts of St. Elmo, which are to be repaired and armed. The troops of the Line have replaced the National Guard in the different posts in the city. The clergy in the Neapolitan provinces have paid homage to King Victor Emmanuel. Generals Fanti and Cassini have arrived at Naples. Accounts from Gaeta state that King Francis II. burst a blood-vessel on Wednesday, and that a steamer had arrived at Naples from Gaeta for physicians. The Queen-Mother, who had removed to Rome with her sons, has left for Civita Vecchia. The siege of Gaeta continues. The batteries of Cappuccini and Santa Agata have been placed in position, but the fortress still resists, and its reduction offers difficulties. The Neapolitan troops continue to fight resolutely, but the defection of staff officers is increasing. Four generals—Salzano, Colonna, Barbolriga, and Polizzi—have resigned. The King has dismissed and sent away General Bertolini. Colonel Pianelli has surrendered a battalion of Chasseurs to the Piedmontese. Further resistance by the Bourbon troops is paralyzed by the insubordination of their chiefs and the confusion which prevails. The King has addressed another note to his diplomatic agents protesting against the decree of Victor Emmanuel accepting the sovereignty of the Two Sicilies. The Piedmontese have occupied Terracina, and are marching upon the territory of Ponte-Corvo. Cardinal Antonelli has protested against this fresh invasion of Roman territory, and General Goyon, the French Commander-in-Chief, has intimated to the Piedmontese that they must evacuate Terracina, which he intends to occupy. Reactionary movements continue. The provinces of the Abruzzi have partly risen in insurrection, and five Neapolitan provinces are said to be in a state of siege, caused by the movement of anti-annexationists. The number of Bourbon troops which have entered the Papal States is only 16,000. A convention has been signed according to which they will be sent back to their own country. Sardinia has claimed the cannon taken from these troops. General Goyon has replied that he will not deliver them either to Francis II. or King Victor Emmanuel. A military commission, composed of French and Sardinian officers, and presided over by Generals Goyon and Cialdini, will settle the questions arising from the entry of the Bourbon troops into Roman territory. An Extraordinary Council of Cardinals took place on the 8th inst. Negotiations are said to be pending between Count Cavour and Cardinal Antonelli for a formal renunciation of the temporal power by the Pope. By way of compensation his Holiness would receive an annual revenue or civil list of 1,000,000 Roman crowns—to which, of course, every Catholic Power would be free to make additions; and the Cardinals would be admitted to the dignity of Senators of the realm, and receive a yearly stipend of 10,000 crowns. Cardinal Antonelli has addressed to the Foreign Ministers resident at Rome a circular note protesting against the annexation vote in Umbria and the Marches. Letters from Turin state that, notwithstanding the hostility existing between the Courts of Rome and Turin, the Pope has made a communication to Victor Emmanuel on the spread of Protestantism in Italy, and has requested him to remedy the evil; but Count Cavour is not disposed to pay any attention to the application. Garibaldi has arrived at his island of Caprera, in company with his son, Menotti, Guzmorali, Basso, and two or three other persons, and has resumed his country life with much enjoyment. Before leaving Naples he published a notice that he would not receive any letters at Caprera that were not post paid. The following is a full translation of the farewell proclamation which he issued to his companions in arms on his departure from Naples:—

"To my Companions in Arms—We must now consider the period which is just finishing as the last stage but one in our national resurrection, and prepare ourselves to finish worthily the national design of the elect of 20 generations, the completion which Providence has reserved for this fortunate age of yours. Yes, young men! Italy owes to you an undertaking which has merited the applause of the universe. You have conquered and you will conquer, because henceforth you are prepared for the tactics that decide the fate of battles. You are not unworthy of the men who entered into the close ranks of the Macedonian phalanx, and who contended not in vain with the proud conquerors of Asia. To this wonderful page in our country's history another more glorious still will be added, and the slave shall show at last to his free brethren a sharpened sword forged from the links of his fetters. To arms then, all of you! all of you! and the oppressors and the mighty will disappear like the dust. You, too, women, cast away all cowards from your arms—they will only give you cowards for children—and you who are the daughters of the land of beauty must have children who are noble and brave. Let timid *doctrinaires* depart from amongst us to carry elsewhere their servility and their miserable fears. This people is its own master. It wishes to be the brother of other peoples, and to look on the insolent with a proud face, not to grovel before them, imploring its own freedom; it will no longer be dragged along by men whose hearts are base. No! no! no! Providence has presented Italy with Victor Emmanuel. Every Italian should rally round him. By the side of Victor Emmanuel every quarrel should be forgotten—all rancour disappear. Once more I repeat my battle cry. To arms, all—all of you. If March, 1861, does not find a million of Italians in arms, then alas for liberty, alas for the life of Italy! Ah, no! far be from me a thought which I loathe like poison. The March of 1861, or, if necessary, February, will find us all at our posts. Italians of Calatafimi, Palermo, Volturno, Ancona, Castelfidardo, and Isernia, every man of this land who is not a coward or a slave is on our side. All of us! all of us! I say, standing close around the glorious hero of Palestro, will strike the last blow at the crumbling edifice of tyranny. Receive then, my gallant young volunteers, the honoured conclusion of 10 battles—one word of farewell from me. I utter this word with the deepest affection, and from the very bottom of my heart. To day I am obliged to retire, but for a few days only. The hour of battle will find me with you again, by the side of the champions of Italian liberty. Let those only return to

their homes who are called by the imperative duties which they owe to their families, and those who by their glorious wounds have deserved the gratitude of their country. These, indeed, will serve Italy in their homes by their counsels, by the very aspect of their noble wounds. Apart from these, let all others remain to guard our glorious banners. We shall meet again ere long, to march together for the redemption of our brethren who are still the slaves of the stranger. We shall meet again ere long, and march together to new triumphs. G. GARIBALDI."

RUSSIA.—The body of the late Empress was removed on the 9th inst. from Sarskoe-Selo to Tschesme, previous to which the last solemn service took place in the chapel of the Alexandrowski Palace, at which all the members of the Imperial family attended. The coffin, which was entirely covered with gold brocade, was borne to the door of the Palace by the Emperor, his brothers the grand dukes, the Prussian princes, and by the adjutants-general. At the door the coffin was taken up by "chamber Cossacks," and by them conveyed to the hearse. The troops then presented arms, the Emperor mounted his horse, and the cavalcade slowly set out towards its destination, the Prussian princes, the grand dukes, and an immense suite of military officers of all grades accompanying his Majesty, the Grand Duchesses following in carriages. The route was several miles in length, and two or three hours were occupied in traversing it. All the houses in the streets of St. Petersburg, through which the procession passed, were hung with black, so that for some distance the scene was most solemn and imposing. The body remained for the night in the chapel of the military hospital, and was taken to the church of St. Peter and St. Paul, in the Neva Fortress, on the following day. The procession arrived at the canal, which forms the boundary of the city, about one o'clock, and at that place the Emperor dismounted, and followed the hearse on foot through the city. While the procession was in motion all the bells of the capital were tolled.

GREECE.—A despatch from Athens states that the Chambers were opened on the 12th inst.

TURKEY.—The ratification of the French loan was sent to Paris on the 16th. The arrears due to the troops have been paid. It is stated that the foreign representatives are about to submit a scheme of provincial and financial reforms to the Porte, and will at the same time conjointly urge its adoption. The necessary measures have been resolved upon by the Directors of the Turkish Bank for buying up the Kaïmes at Constantinople, and withdrawing them from circulation. The attempt to raise a local loan of 350,000*l.* is said to have failed. The firman of investiture has been sent to Prince Michael of Servia.

SYRIA.—General Kmety has resigned the Syrian command on account of having been reproached by Fuad Pasha with partiality to the Christians.

BARBARY.—The Brazilian corvette Donna Isabel, of 18 guns, on her way from Marseilles to Lisbon, has been totally lost on Cape Spartel, on the coast of Barbary. The captain, 22 officers and 100 of the crew were drowned; 3 lieutenants, 6 midshipmen, the purser, and 93 of the crew were saved in a deplorable condition, and conveyed to Tangiers by the English steam frigate Argus. The Moors behaved well to the survivors. The corvette had a great number of naval cadets on board for education and instruction in practical navigation, and the loss will plunge many of the most respectable families at Rio into grief and mourning.

INDIA.—The Bombay Mail has arrived with news from that Presidency to the 27th October. The following are the details.

Calcutta.—The railway line was opened on the 15th Oct. to Rajmahal on the Ganges, 202 miles from Calcutta. The Governor-General, the Commander-in-Chief, and some of the chief notabilities of Calcutta, went down in the first train, and afterwards attended a public dinner in honour of the occasion. Sir Hugh Rose has issued a general order to the army in India, calling upon the officers of divisions to report as to the extent of barrack accommodation for schools, reading and coffee-rooms, workshops for the exercise of trades, gardens for the growth of vegetables, gymnasia, single-stick practice, cricket grounds, skittle alleys, &c., with the view of establishing for the soldiers and their children the means of recreation, instruction, and employment.

Bombay.—The Volunteer movement has been very succesful in this presidency. It has been found impossible to accept the services of the half castes, Eurasians, Parsees, and other natives who sought admission, and the corps will therefore consist of Europeans only.

Dwarka.—The Waghurs have managed to burst from the Gheer in which they had taken refuge, and have surprised and captured the town of Korinar.

Ceylon.—One of the most difficult operations ever performed by a diver has recently been accomplished in recovering the remainder of the treasure sunk in the Malabar at Galle. This consisted in cutting away the large iron plates from the mail room, half an inch thick, and working through 9 feet of sand. Heinke's diving apparatus was employed, as on the previous occasions, and 16,000*l.* was thus got out in one day. The whole of the specie on board this vessel, upwards of 300,000*l.*, has now been saved.

CHINA.—The *Morning Post* says that it is almost positive, according to late despatches received by the French Government, that the treaty with China was signed near Pekin during the early days of last month.

UNITED STATES.—Mr. Lincoln, the Republican candidate, has been elected President of the United States, and Mr. Hamlin has been elected Vice-President. The majority in New York for Mr. Lincoln was 40,000. The Republicans have gained largely on former majorities. According to the returns in the New York papers, the several States voted as follows:—

Lincoln and Hamlin.—Connecticut, 6; Illinois, 11; Indiana 13; Iowa, 4; Maine, 8; Massachusetts, 13; Michigan, 6; Minnesota, 4; New Hampshire, 5; New York, 35; Ohio, 23; Pennsylvania, 27; Rhode Island, 4; Vermont, 5; Wisconsin, 5. —Total, 169.

Breckenridge and Lane.—Alabama, 9; Arkansas, 4; Florida, 3; Georgia, 10; Louisiana, 6; Mississippi, 7; North Carolina, 10; South Carolina, 8; Texas, 4.—Total, 61.

Douglas and Johnson.—California, 4; Oregon, 3; Missouri, 9. —Total 16.

Bell and Everett and Fusion.—Delaware, 3; New Jersey, 7; Kentucky, 12; Maryland, 8; Tennessee, 12; Virginia, 15.—Total 57.

The secession excitement in the South continues to gain strength. The citizens of Charleston had assembled in mass meetings, and adopted resolutions demanding immediate secession. The most painful apprehensions as to the future prevailed, especially in Virginia and Washington, and the Cabinet had met in Council to deliberate upon the condition of affairs. The *New York Herald* of the 31st ult. contains a strong article in favour of the secession of the Southern States. The clergy in the vicinity of Washington had recommended prayers to avert disunion. The 9th American Regiment are desirous of visiting England with their band and arms, and of exchanging courtesies with our Volunteers in the course of next summer. A correspondence has been opened with Lord Palmerston on the subject, but at present there seems to be some legal difficulty in allowing a body of armed men, not being subjects of her Majesty, to land and move about in England.

Public Addresses.

MR. BRIGHT, M.P., attended the annual soirée of the Wakefield Mechanics' Institution on the 13th inst., and delivered a speech, from which the following are extracts:—

"It seemed to him there was nothing more neglected in the education of all classes in this country than the consideration of the principles on which the laws should be founded, and on which the permanent peace and greatness of the commonwealth were based. He believed that the liberty, wealth, happiness, and progress of every people met with a thousand obstacles from laws which were based sometimes on selfishness, but he believed still more frequently on the true interests of a nation. The science of political economy, although it was a science which had been practised by very learned and able men for nearly 100 years, was a science which was yet absolutely in its infancy, and it was an entire mistake to suppose it was only members of mechanics' institutions who were not well informed upon that science. He proceeded to refer to the establishment of the corn laws in 1815, remarking that, with such a season as there had been during the last six months, if these corn laws—which were supported by statesmen, by bishops, by learned men, and by Oxford and Cambridge scholars—had been in existence, his hearers might rely on it that the manufactures of the country would have been in a state of confusion. The capitalists of the country would be bankrupts, workmen would be unemployed, and statesmen would be at their wits' end to find a remedy for the mischief. He next alluded to the French Treaty, expressing his belief that those who lived as many years hence as had elapsed since the repeal of the corn laws, would have the same opinion of the advantage of the step which had just been taken with regard to France which was now held as to the step taken in 1846 with regard to the corn laws. But there was another matter in which the working classes were more interested; at least, they had it more under their own control than the question of the tariff—viz., the question of combination to raise wages. Now, if there was one class of persons in this country whose wages had risen more than another within the last 20 years, it was the class of female domestic servants; but who ever heard of a combination among cooks or housemaids to get higher wages? Now, how was this? The lady who employed such persons regarded her expenditure with a far keener eye than her husband, who employed large numbers of persons in his manufactory, usually did, and they might depend upon it that if the value of the labour of domestic servants were not worth what it fetched the mistresses would not be disposed to give the advance, which they had not given to their servants for many years past. The error with regard to combinations of workmen arose from the notion that masters could control wages; but surely if a master could control wages he could control prices. Neither the one nor the other was under the control of the manufacturer or the capitalist. What was going on in the northern counties of England was a proof beyond all cavil that when trade was greatly extended, profits increasing, and demand for labour growing from month to month, wages would rise, and that without any kind of combination. Then there was the question of the expenditure of a Government. Some foolish persons had said it did not matter what taxes people paid to the Chancellor of the Exchequer, because it all come back in refreshing showers; doubtless that might be, but the showers only refreshed the tax eaters—they never refresh the tax payers. The same argument might be used by the highwayman when he committed a robbery; or if they had a conqueror living among them and they paid a tribute to him, it might be said it made no difference, because the money was spent in the country. He hoped the people were beginning to find the taxes were taxes, and he hoped they would never imagine that not a single farthing of the taxes beyond what was required for the economical service of the State would ever benefit them any more than if they lost it in the sea or somebody picked their pockets of it. At the present moment there was in this country a condition of general prosperity which had never been exceeded since the commencement of the great war with France. He held that prosperity to be based mainly on the long continuance of peace, to a very large extent upon the revolution of the tariffs in the country which he had already spoken of, and also to the enormous saving to all the operations of the country by the introduction of the mode of transit by railway. Well, the results were great, but, notwithstanding all this, and that every public speaker and writer broke into exclamations of satisfaction at the prosperity which now prevailed—as if it were a prosperity which had never been equalled before, and that they could not hope long to enjoy, they ought to bear in mind that at this moment there were hundreds of thousands of families in this country whose condition was that of poverty close verging upon pauperism, and to whom the rays of that prosperity seem scarcely to have reached at all. It was worth while considering whether all had yet been done to raise the people to the condition to which they rightfully may hope to attain; he did not believe in it being the end of the government, the end of civilisation, the end of education, of morality, and Christianity that the great body of the people in this country should be in the condition they were in now. Even in this time of great prosperity, to say nothing of the fearful condition they had been in in times past, they who were better off, who from their fathers' industry or their own, or from happy circumstances in which they had been placed, were better off, were bound to look at the lowest strata of society, and see how and why it was that hundreds and thousands of families seemed to make almost no progress upwards, and who, if the general prosperity of the country were in the least clouded, were plunged into a state of suffering shocking to behold, which was really not creditable to the Government or to the civilisation of the country. He next referred to a letter he had received about two years ago from Mr. Cobden, who was at that time in the United States of America, and in which the writer said that, notwithstanding the artisan and labouring class in England had made greater progress during the last 25 years than they had during any former similar period of time, those classes in the United States were much further in advance than they were in England. This was a remarkable fact, and he had never heard any man who disputed it. He met not long ago a gentleman connected with what was generally reported the most reputable of the press in this country, who had been spending some days in the United States, and he gave the same account. He wanted to know what made the difference. It was not necessarily the form of government. It was not a question of latitude or longitude; and people had to work in the United States; the machinery there did more labour, and the land was not even as fertile. How came it, then, he asked their public writers, he asked their statesmen, he asked their ministers of religion—how came it, then,—this fact was notorious and indisputable—that in the United States the great bulk of the artisans and labouring classes were so much better off than they were in this country? He knew of three causes that would account for it. In the United States the land was wholly free from all feudal law and tenures; the people were instructed by an extensive and thoroughly working common school, useful to a degree infinitely beyond what the people of this country ever dreamt of; and further, that from some cause or other that he could not then inquire into, the Government of the United States, although the population of each country was about 20,000,000, spent nearly 60,000,000*l.* sterling less than the Government of this country. He only stated facts, and he said they were not in the least questions of party, nor questions of forms of government, but questions of principles with regard to our legislation, and Mechanics' Institutions would but ill fulfil their duty to their members if they were content with teaching the common rules of arithmetic or drawing or music, or other branches of knowledge which we taught them, and did not bring their classes and their members as much as possible to consider those great questions on which the well-being of their families and the country most depended. After some further remarks, in the course of which he passed a warm eulogium on the benevolence and piety of the present age, he said that the sweeping off and repeal of that single Act of Parliament which limited the supply of food was worth more than 10,000 soup kitchens, and that there could be no doubt that every simple invention which was made in machinery and agriculture added to our power of production, and ought to add to our comfort. In his opinion, it ought to lessen human labour and to increase human enjoyment; but if through bad principles of legislation—if through errors of Government the public resources were wasted—if of our great industry a vast quantity was misdirected—if these great blunders were made, there might be rich men and rich families; but the multitude would still be poor, and the comforts they had would still be precarious. He wanted them to study these subjects more than they had done before; it would enable them to see that they might govern themselves more wisely, and, if they did so, he believed that they might raise mankind to a higher level, they might give greater glory to their country, they might dispense greater happiness among the families of which it was composed, and they might do that which was not a little thing—they might do something to justify the ways of God to man."

City Intelligence.

BANK OF ENGLAND.—It was announced on Wednesday that an arrangement had been made between the Bank of France and the Bank of England, which, it is hoped, will terminate the uncertainties that have recently disturbed the money markets of Paris and London. The Bank of France are to have a loan of 2,000,000*l.* of gold from the Bank of England on the security of a deposit of silver to an equal amount. It is considered not improbable, that in consequence of this arrangement the Bank of England will lower the rate of discount at an early day.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93½ to ⅝ for Money, and 93⅝ to ¾ for the 6th December; Bank Stock, 234; Reduced and New Three per Cents., 91¾ to ⅞; New Two and a Half per Cents., 77½; India Five per Cent. Stock, 1859, 103⅝ to ½; Ditto Four per Cent. Debentures, 1858, 96½ to ¼; Ditto 1859, 96¼; Five and a Half per Cent. Enfaced Rupee Paper, 101; Exchequer Bills, 2*s.* to 5*s.* dis.—FOREIGN: Brazilian Four and a Half per Cents., 1860, 89¼; Peruvian Three per Cents., 73½; Portuguese Three per Cents., 1853, for Acct., 46; Russian Three per Cents., 1859, 62½ ex div.; Spanish Three per Cents., for Acct., 49½; Ditto New Deferred Three per Cents., 41; Ditto Passive, 24½; Committee's Certificates, 5⅞; Turkish Six per Cents., 1854, for Acct., 73¾ to ½; Ditto 1858, for Acct., 59 to 58¾; Venezuela Three per Cents., for Acct., 21¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,010,995	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	12,535,995
		Silver Bullion	—
	£27,010,995		£27,010,995

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,490,273
Rest	3,205,625	Other Securities	20,298,016
Public Deposits (Including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,073,597	Notes	6,613,480
		Gold and Silver Coin ..	821,136
Other Deposits..	12,065,022		
Seven day and other bills	725,661		
	£37,222,905		£37,222,905

22d day of Nov., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — E. ANSELL, South Street, Manchester Square, Draper—A. AUBERT and C. POWELL, St. Mary Axe, Ship and Insurance Brokers—J. BROWNING, Northumberland Terrace, Bagnigge Wells Road, Grocer—W. H GODFREY, Henley-on-Thames, Bookseller—W. O. JENNINGS, Eggeshall, Suffolk, Horse Dealer—J. JENNINGS, late of Gough Square, Fleet Street, Printer—J. LEACH, Bingley, Yorkshire, Manufacturer—T. NORTH, Brighton, Contractor—E. PHILLIPS, Pontypool, Boot and Shoemaker—J. PRITCHARD, Newnham, Gloucestershire, Saddler—

J. SOLOMON, Blackfriars Road, Grocer—J. B. STADMAN, Cinderford, Gloucestershire, Surgeon and Apothecary—S. TRANCHARD, Wellington, Somersetshire—D. WHELDON, Northampton, Iron Ore Merchant.

SCOTCH SEQUESTRATIONS—S. R. DAMPIER, Edinburgh—T. FORREST, Greenock, Grocer—A. M'MATH, Glasgow, Boot and Shoe Manufacturer

FRIDAY—BANKRUPTS—T. BARTON, Wellington Street, Strand Publisher—D. BASSET Uxbridge, Corn Merchant—W. BINKS, Kingston-upon-Hull, Painter—J HAWKES, Hornsey Rise, Builder—C. C HENSHAW, 5, Stony Lane, Tooley Street, Borough, Mast and Block Maker—G. LAURENT, 5, Leicester Square, Coffee House Keeper—J. NORTH, Brighton, Carrier and Contractor—J. C. PARTRIDGE, 21, Langley Place, Commercial Road, Boot and Shoe Manufacturer—T. REES, Swansea, Ironmonger—G. RUSSELL, Leamington Priors, Warwickshire, Hotel Keeper—B. SILVESTER, Manchester, Draper—W. J. SMITH, Newcastle-upon-Tyne, Commission Agent—J WELLS, Liverpool, Toy Dealer—H. WHITFIELD, Tottenham Court Road, Linendraper—A. WOODHALL, Barns Cray, Kent, Felt Manufacturer.

SCOTCH SEQUESTRATIONS—I. GUTTMANN, Sheffield, Watchmaker—J. POVEY, Warwick, Innkeeper—T. POWLES, Milk Street, Cheapside, Hosier—R. E. RIDLEY, Great St. Helen's, Bishopsgate Street.

Metropolis and its Vicinity.

THE HOP DUTY.—The following letter has been addressed by the Secretary of the Treasury to Mr. Beresford Hope and Mr. William Carter, in answer to the memorial presented last week to the Chancellor of the Exchequer, by the hop-growers of East and West Kent:—

"Treasury Chambers, Nov. 17.

"Sir,—I am directed by the Lords Commissioners of her Majesty's Treasury to state to you that they have taken into consideration the memorial addressed to this Board by you and certain other persons connected with the growth of hops, praying for a postponement until November, 1861, of the second moiety of the hop duty in respect of the crop of 1859, and have inquired into the allegations therein contained and into the circumstances of the hop trade generally. The proposal made in your memorial is that a moiety of the duty on the crop of 1859 should be paid only in November, 1861, but the duty on the crop of 1860 will fall due, under a recent decision of Parliament, in March, 1861, so that the proposal is, in fact, to postpone a part of the duty of 1859 until after that of 1860 shall have been liquidated. For a proposal of this kind there is, my Lords believe, no precedent whatever, and it is one tending to the utmost irregularity in the conduct of public business. Neither can my Lords hold it to be reasonable that the duty on a crop of a given year should be made payable at such a date as to throw it on the receipts of the following year. This question has been fully considered by Parliament during the recent Session, and the important alteration which it has made has been in the direction of greatly shortening the hop credits, and of affirming prospectively that the duties are to be taken at a time that shall throw them as a charge on each crop last taken in succession. Were my Lords, under these circumstances, to accede to the prayer of your memorial they, would run directly counter to the plain intention of Parliament—that, after the present year, each crop should be burdened only with its own duty. On these grounds my Lords must decline to accede to your application, without adverting to the fact that there is but one case during the last 30 years in which so long a postponement has been granted—namely, that of 1848, when the price paid to the grower, on the average, was only 2*l.* 15*s.* per cwt., in lieu of 4*l.* 1*s.* per cwt., the average price of the crop of 1859, the difference being 26*s.* per cwt., a sum greater, considerably, than the duty. The present year has, undoubtedly, been one of pressure, taking into view the circumstances of the late crop. Before stating, however, the conclusion to which they are led by that consideration, their Lordships desire me to observe that they cannot admit in full the estimate of that pressure which you appear to have formed. You allege the low prices which have been received for the crop of 1859, but it appears that the prices were lower, and for the most part materially lower, in 1847, '48' '50, '56, four years out of the last 14:—1847, 28*l.* 18*s.* 9*d.*; 1848, 24*l.* 11*s.* 1*d.*; 1850, 39*l.* 12*s.* 3*d.*; 1856, 34*l.* 4*s.*: but for 1859, 54*l.* 4*s.* 10*d.*; and although it is true that the yield of the present year is small, yet there have been also years in which it has been materially smaller. My Lords admit, however, that the limited quantity of the crop, with the unsatisfactory condition of a part of it, and the present stagnation of the market, are circumstances which should be taken into consideration at a moment when the new system enacted by Parliament has not yet actually come into operation. Their Lordships will, therefore, take upon themselves the responsibility of postponing as follows, on behalf of such growers as shall desire it, the payment both of the moiety now due, in respect of the crop of 1859, and of the duty coming due in March next on the crop of 1860, on the double condition—first, of security being given satisfactory to the Commissioners of Inland Revenue; and secondly, of the payment of interest for the time to which the postponement extends at the rate of 5 per cent. The periods of postponement to be as follows—namely, the second moiety of the duty on the crop of 1859 from 15th of November, 1860, to 1st March, 1861. The full duty on the crop of 1860 from 1st March, 1861, until the first collection following—namely, 1st August, 1861.—I am, sir, your obedient servant, "GEO. A. HAMILTON."

In accordance with the preceding letter the following notice has been issued from Somerset House:—

"The collection of the second moiety of the hop duty, due on the 16th of this month, has been postponed to the 1st of March, 1861, in the case of those planters who may desire the indulgence, on their giving security for payment with interest at the rate of 5 per cent.; and the collection of the present year's duty has been postponed from the 1st of March to the 16th of August next, on the like terms and condition.

THE FOREIGN OFFICE.—It is said that the furniture and staff of the Foreign Office are to be removed forthwith to Pembroke House and Malmesbury House, and that the demolition of the old office will immediately follow.

THE FATAL BOILER EXPLOSION AT KING'S CROSS.—On Monday the coroner's inquest on the two men who were killed by the explosion of the boiler of a locomotive engine at the works of the Metropolitan Underground Railway was resumed and concluded at King's Cross. The first witness examined was Captain Tyler, R.E., Government Inspector of Railways, who had examined the engine by order of the Board of Trade. He stated that the explosion was caused by the weakness and faulty construction of the fire-box, and that it was not subject to any extraordinary pressure at the time of the catastrophe. He also expressed his fear that there were too many engines now working on railways and in steam-vessels in which similar danger was continually incurred. The jury returned an open verdict tantamount to one of accidental death, and stating that there was no evidence to show that any person was criminally responsible. The jury also suggested that Captain Tyler's report should be submitted to the Government.

PROPOSED NEW BRIDGE.—Notice has been given of an intended application to Parliament for power to construct a new bridge over the Thames, for general traffic running from Market Street, in the parish of St. John, Westminster, to the south-western extremity of the churchyard of St. Mary, Lambeth.

ELECTION OF AN ALDERMAN.—The election of an alderman for the Ward of Walbrook, in the place of the late Mr. Wire, commenced on Thursday in St. Swithin's Lane. The candidates were originally six in number, but were reduced to two by the retirement of Messrs. Murrell, Rowley, Cockerell, and Causton. The two put in nomination were Mr. Lawrence, (brother of the alderman of Bread Street ward), and Mr. Linklater, solicitor of the Bankruptcy Court. The show of hands was declared by the Lord Mayor to be in favour of Mr. Lawrence, upon which a poll was demanded for Mr. Linklater. The polling took place yesterday and terminated in the return of Mr. Lawrence by a majority of 9, the numbers being 73 to 64.

THE STEPNEY MURDER.—The execution of Mullins for the murder of Mrs. Elmsley took place on Monday morning at Newgate in the presence of 20,000 persons, the greatest crowd assembled at an execution for many years past. The Sheriffs received a communication on Saturday morning from Sir George Lewis stating that he had given the most anxious attention to the case, had attentively read all the documents on the subject, had communicated with the learned judge who had tried the case, the Lord Chief Baron, who had furnished him with his notes, but that he deeply regretted he did not consider it his duty to interfere with the due course of the law, or to advise her Majesty to extend her Royal clemency to the prisoner. The Sheriffs accordingly announced to the convict that the law would be allowed to take its course. Shortly before 8 o'clock on Monday morning, after undergoing the process of pinioning, which he bore with remarkable fortitude, the convict was reminded by the Sheriffs that if he had anything to say, that was the last opportunity he would have of speaking, upon which he commended his widow and family to the public sympathy and commiseration, alleging that they had been steeped in misery and penury by his being charged with the murder. He lingered with earnestness on this topic until he was apprised by the Governor that the time had arrived. He then handed to the Sheriff a document written with his own hand asserting his innocence, but exculpating Emms, on whom, as upon Rowland, down to a time so late as Saturday, if not still more recently, he had endeavoured to fasten the commission of the murder. Having stated that he had nothing to add to this statement, he ascended the scaffold with the same firm step, and placed himself upon the drop. The vast crowd, reaching far towards Smithfield in one direction and to Ludgate Hill in the other, surged about in wild excitement to catch a sight of the convict as he made his appearance on the scaffold, and raised an indescribable murmur. The convict being a Roman Catholic, the verses from the burial service of the Church of England usually read at such times were omitted on this occasion; the arrangements of the executioner were rapidly made, the drop fell, and in a few moments the culprit ceased to live. The body of the convict, after hanging the usual time, was cut down and buried within the precincts of the prison. The following is the document which he handed to the Sheriff on his way to the scaffold. It is given here exactly as it is written, without any attempt to amend the errors of construction or grammar:—

"STATEMENT, Nov. 19, 1860.—I, James Mullins, do make this true statement against a charge of murder which has been committed on the night of the 13th August, at Grove Road, Stepney, and for which crime I was charged and found guilty through the most false and gross perjury that was ever given in a court of justice. I do solemnly declare before my God and the public that I returned from my day's work on Monday evening, the 13th August, between 6 and 7 o'clock, as sworn to by a man named Tyrell, where I had been that day at work, at 1, Temple Terrace, Collingwood Street, Bethnal Green. When I returned to my own home, as above stated, I remained with my two sons in my room talking to them till supper, and afterwards retired to bed, and I do declare that I did not leave my bed till about 8 o'clock next morning, the 14th August. I also solemnly declare that the two witnesses from Hoxton, named Remnant, a tailor by trade, and Mitchell, a dock labourer, I confess to my God that every word they have sworn against me was totally false and untrue. They swore their falsehoods against me in the hope of obtaining money, the produce of my blood, as the man Mitchell had stated on his cross examination by that high talented counsellor, Mr. Best. The above-named men have caused my poor wife to be made a widow, and my poor children fatherless. There was a boot produced by the police which was found in a dustbole at 12, Orford Street, Chelsea, where I had lived, but had left about three weeks before the boot was found. This said boot belonged to a man named Mr. Mahoney, who had lived in the front parlour of said house, but had left some time before, and now lives in Prince's Street, Drury Lane. This man came forward on Friday evening, but was too late to give evidence that the shoe was his. He had cast it away when living at the above named house. This shoe may have created an effect on the minds of the jury. I do solemnly declare that I never saw the boot until it was produced at the Thames Police Court. As regards Sergeant Tanner's evidence, he did not do me justice as to what happened in the shed. I drew, first, his attention to some bricks and wood that lay near the dog and door. This he never mentioned in court. The dog was the only thing he mentioned, in order to make it appear that I must have some knowledge of it" [here nearly two lines of the manuscript have been cruelly erased with a pen], "although I believe Emms to be innocent of the murder of Mrs. Elmsley. I declare I never came out of my room from between 6 and 7 on the evening of Monday, the 13th of August, until I got up from my bed on Tuesday morning, the 14th, my two sons sleeping in the same room with me. My two sons have sworn that they slept in the same room with their father. I ask any man of a family if there was a charge of any kind brought against him as there was against me, when at his own home and in his bed, who could he apply to but his own family to clear him of any charge that may be preferred against him? My children proved the truth, but the truth was not believed. Those persons who proved nothing but lies has sworn my life away by the blackest and most foul perjury that was ever given. I make this statement in order to let the public know that my life has been taken away by the most gross and most false-swearing evidence that was ever given in a court of justice, all through the hopes of getting money. I say that they have no right to any part of the reward, and I hope they will get none of it. I beg most sincerely that all the religious and charitable people of England will extend their hand to my poor widow and fatherless children, in order that they may gain a livelihood for themselves. The Rev. Mr. O'Callaghan, of 22, Finsbury Circus, has kindly consented to receive any donations for my poor family, who are in the greatest destitution through the charge that has been made against me. My best thanks is due to Mr. Hubert Wood, my solicitor, of 4, Coleman Street Buildings, and to Counsellor Best, for their attention taken in my case, and to the two sheriffs; also to the Governor and Dr. Gibson. "JAMES MULLINS."

Alderman and Sheriff Abbiss, in the presence of Sheriff Lusk and the two Under-Sheriffs, said they felt it their duty to make public the following extract from a letter—among others which had been received relating to the prisoner since his conviction—written by an officer in the county gaol of Leicester, respecting Mullins, who spent there a portion of his six years' penal servitude:—

"His conduct here was very bad, and required constant watching by the officers. He was removed to Dartmoor with another convict as incurable in November, 1854. His attack on me was while crossing Dartmoor hills. On account of the difficult road to Dartmoor prison it was usual to let the convicts walk up one or two of the steepest hills. On this occasion while walking they contrived to pick up a large stone each, and when about getting into the cab Mullins aimed a desperate blow at me with his stone, with the intention to take my life, and so to effect their escape. Immediately Mullins struck me he made a snatch at my pocket where the keys of the irons were, but, fortunately, the blow not having the desired effect as anticipated, I was enabled to trip up his heels, and with the assistance of the cabman I succeeded in securing them. The blow struck me on the left cheek bone, which it almost broke, and I still carry the mark to this day. Not content with attacking me, on approaching the prison he 'acted' drunk, saying at the time 'I will have that jacket off your back somehow,' but it was seen by all the authorities that he was only acting.

THE PUBLIC HEALTH.—The Registrar-General's weekly return states that the deaths in London in the week that ended Saturday November 17, were 1183. The average number in the corresponding weeks of the 10 years 1850-9, corrected for increase of population, was 1264. The present return is therefore 81 below the average. During the week the births of 997 boys and 863 girls, in all 1860 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1589.

Provincial.

BOSTON.—On the night of the 24th ult. an officer of the Lincolnshire constabulary named Alexander Macbrian, was shot in the neighbourhood of this town, and some days afterwards expired from the effects of the wound. Before his death he stated that about 1 o'clock in the morning he was coming from Frampton towards Boston, and when near Wyberton churchyard met a man carrying a gun who shied off the footpath into the field. He hailed him and asked him what he was going to do with the gun, and receiving no answer he turned off the footpath to go after him. The man immediately pulled his hat over his face, turned partly round, and fired. Macbrian identified a man named Richardson as his assailant, and the magistrates after hearing a good deal of evidence against him have committed Richardson for trial on the charge of Wilful Murder.

COVENTRY.—The Right Hon. E. Ellice, M.P., has addressed a long letter to his constituents on the treaty with France, in which he severely denounces Mr. Gladstone's general policy, and especially his decision relative to the drawback on paper and in the manufacture or in the preparation of ribands for sale. He attributes to the Chancellor of the Exchequer the intention of renewing the proposal to repeal the paper duties, but doubts whether "any Government will find a majority in the House of Commons again disposed to begin at the wrong end of a budget, to agree to vote for the reduction of taxation till they have fully provided for a correct and honest estimate of the expenditure of the country." He concludes by saying—

"I voted against any alteration of the customs duties, foreseeing these objections, and very much against my anxious inclination to support the liberal administration of Lord Palmerston. I know of no greater calamity that could befall this country than the weakening of his power and authority at this moment, or any danger to his government; but not even that conviction shall induce me in the next session to support the same speculative and vast system of finance which has produced so much unnecessary difficulty and injury to various interests as that thrown so loosely before the Parliament last year."

CROYDON.—A prospectus has been issued of a "Croydon Sewage Irrigation Company," with a capital of 30,000*l.*, in 10*l.* shares. The Board is composed of eminent agriculturists and landowners, and it is expected that the experiment will be so conducted as to lead, by its successful example, to a general utilization of the sewage of the large towns of the kingdom. A concession has been obtained from the town of Croydon for 100 years, and the quantity of sewage to be obtained is estimated to be sufficient for 9000 acres of land per annum. This will be pumped to a reservoir on an elevation about two miles distant, whence it will flow to each farm and field by gravitation. The works can be completed by March or April next.

DERBY.—During the recent visit of the Bishop of London to this town a deputation of the workmen employed at the Midland Railway Station waited upon his lordship, and expressed on behalf of themselves and their fellow workmen a wish to hear him preach to them in their workship. The Bishop readily assented, and appointed a day for the purpose. The workshops at the time appointed, which was dinner time, were densely crowded with a congregation of 2000. The large turning shop was the place selected for the service, and the platform of an engine, on the hand rail of which was fixed a bookstand, served for a pulpit. The service commenced with the singing of a psalm, after which the Bishop preached from the 11th verse of the 12th chapter of Romans, the object of his discourse being to show how Christian practice was based upon Christian doctrine in all the Epistles of St. Paul, in the word of God in general, and in the life of every real Christian. The service closed with the singing of the doxology. His lordship then expressed his delight with the attention paid during the service, and after inspecting the locomotive-carriage department, the library, reading-room, lecture-room, and board-room, said he had been highly gratified with his visit to the station.

ELY.—It appears that the subscription raised to promote a memorial of the late Dr. Peacock, Dean of Ely, amounts to the sum of 3565*l.*, inclusive of 1000*l.* given by the Dean and Chapter. It is proposed to apply the subscriptions to the further adornment of the cathedral, and the restoration of the lantern is to be accordingly undertaken, Mr. G. G. Scott having prepared a design which includes a lofty spire rising from the level of the present roof. This part of the project is not to be undertaken for the present, but the lower part of the work is in hand. Further funds, however, are requisite to carry out the whole of Mr. Scott's design, and Dr. Goodwin, the present dean, has issued a circular soliciting additional aid.

GLOUCESTER.—It is proposed to erect on Nibley Knoll in this county a monument to William Tyndale, the martyr, and first translator of the Bible into the English tongue.—The Right Rev. Dr. Baring, Bishop of Gloucester and Bristol, in his recent triennial visitation of this diocess, devoted the greater part of his charge to the question of church rates and the revision of the Liturgy. On the former subject he expressed his opinion that unless they speedily and unanimously consented to a liberal concession, the total abolition of church rates was only a question of time. On the latter subject his lordship said:—

"Whilst I am convinced that no clergyman, unless he be already in heart a Dissenter or Romanist, can be fairly charged with dishonesty in declaring his hearty consent to all things contained in the Book of Common Prayer, I am also bound to acknowledge that, whether I consider the importance of preserving the confidence of the lay members of our Church, or of bringing back within its fold those who have strayed, or been driven, beyond its pale, I am more and more convinced of the expediency of a modification of some words in our occasional services of baptism, ordination, and visitation of the sick. It should be the noble ambition of churchmen, and it would be our wisdom and strength, to render our Church as national in its influence as it is in name, and not to rest content until we have made every concession which Christian charity can suggest, and which Christian truth can allow, to meet the scruples of Dissenters, and win them over to oneness of faith and practice with ourselves. Nor are there wanting hopeful indications that such charitable efforts would meet with considerable success. It needs but little inquiry to discover that whilst dissent in the present day is increasing in power as a political engine, it is losing its influence as a religious body. The acknowledgment is heard on many sides that the life and spirituality and soundness of faith of dissenting congregations are on the wane. Politics and party spirit have been as canker worms to vital godliness. Hence many of the more thoughtful and pious Dissenters are disposed to draw towards the Church of England because they discern in her tokens of greater spirituality, and of better security for soundness of doctrine. But the occasional services of our Church present a formidable and almost insuperable barrier to the approach of such persons. Unacquainted with the ecclesiastical sense in which our formularies and our best Anglican divines use the term 'regenerate,' and attaching only to it the fuller meaning which appertains to the apostolic expressions 'born of God,' 'a new creature,' and which are confessedly descriptive only of such as are sanctified in heart and life by the Holy Spirit, these persons shrink from giving in their adhesion to a Church which, whatever be its other merits, teaches, as they erroneously imagine, a doctrine as repugnant to Scripture as it is opposed to the experience of every day life. So, also, from an ambiguity in certain phrases in the ordination and visitation services, which a study of ecclesiastical history and a comparison with other passages in the Prayer-book can alone clear away, they wrongly conclude that our Church, like that of Rome, claims for the priesthood a power to forgive sins. Nor are these objections only felt by those who are at present separatists, but large numbers of the laity are staggered at expressions so equivocal in their meaning, and so easily misunderstood, and are liable to be led away by the unscrupulous assertions of our enemies, that the Church of England is still at variance with Scripture, and in harmony with Romish error, in some of its doctrinal statements. I therefore believe that a slight verbal alteration in these services, which would sacrifice no essential truth, would do more than any other measure to bring back to our Church the allegiance of those who now reject her authority, and to retain the confidence of our lay members. And although the failure of former attempts of this nature might seem to exclude all hope of future success, yet, inasmuch as I believe that the conviction is a growing one, of the necessity of the union and co-operation of all the orthodox members of Christ's Church throughout our land, in order to resist the threatening assaults of neology and infidelity, I do not despair of seeing the day when, after calm and full consideration, our Church will freely make such changes in her occasional services as may enable large numbers of orthodox Dissenters gladly to avail themselves of the opportunity of reunion, and of becoming worshippers with us in the house of prayer, in the same sound form of words of our Scriptural Liturgy."

LEEDS.—On the night of the 7th inst, an attempt was made to murder Mr. Thomas Parkin, an overlooker in the twine and thread manufactory of Messrs. Dodgson & Co., Globe Flax Mill, Hunslet Road, by a young man called Cockcroft, who worked at the mill, and had been discharged by Parkin on suspicion of robbery. Mr. Parkin's house is situated in a dark and lonely neighbourhood, and he was just approaching the door when he was shot from behind, the charge entering his neck a little to the right of the vertebræ. A man, who was passing at the time, observed the act, and pursued the assassin, whom he overtook in the Crown Point Road. A struggle ensued, and the assassin was nearly effecting his escape, when a police-officer arrived, and succeeded in detaining him. On being searched a pistol which had been recently discharged was found in his possession, with a powder-flask, and a quantity of shot and caps. The prisoner was taken before the magistrates on the following day, and has been committed for trial.

NEWCASTLE-ON-TYNE.—On Tuesday the 6th inst., about 5 A.M., the body of John Baty, a slater, of Blaydon, was found murdered on the road between that village and Winlaton. Baty had been at Winlaton during the previous day at a shooting match, and had regaled himself in a publichouse in the village afterwards. He left the publichouse before midnight to return home, and he appears to have been intercepted and murdered shortly after he left Winlaton, as there is a jagged wound on his forehead, showing that he had been struck with a hammer or some other heavy blunt instrument, and a quantity of blood lay near the body. When he left home in the morning he had about 3*l.* in money in his possession, and was dressed in a nearly new suit of clothes. When the body was found he had no clothes on him but a red shirt and necktie, a flannel shirt, drawers and stockings. A man called Smith, a Lancashire pitman of notoriously bad character, who had been in his company at Winlaton, was seen on the day after the murder wearing deceased's clothes by a keelman called Armstrong, to whom he admitted that he knocked deceased down to get his money, but did not intend to kill him. Armstrong gave information of these facts to the police, and it was ascertained that Smith was one of the men who ran away without their wages from a neighbouring colliery after the murder of Mr. Sterling, the young Burnopfield surgeon, who was so mysteriously murdered within a few miles from Winlaton five years ago. After his conversation with Armstrong, Smith absconded to the Yorkshire moors, and made his way thence 150 miles to Port Mulgrave near Whitby, intending to get to sea, being as much a sailor as a pitman. On reaching the coast he walked, unknown to himself, direct to the house of the only person, probably, in the county of York who was acquainted with his person and knew his name—a man called Joseph Irvin, who worked with him 20 years ago at Milkridge, near Haltwhistle, close upon the old Roman road in Northumberland. To this man he admitted, as he had to Armstrong, that he was concerned in the affair at Winlaton, and on the arrival of the police who had tracked him all the way, he was captured in Irvin's house. On Tuesday he was brought before the coroner and on the verdict of the jury was fully committed for trial on the charge of Wilful Murder. There is reason to believe that two other persons were concerned in the murder, and the evidence adduced at the inquest bore very strongly against two men called Winship and Swan, blacksmiths, who were seen under suspicious circumstances in the low part of Winlaton about 1 o'clock on Tuesday morning, shortly after the murder was committed. The bludgeon or "Morgan Rattler" with which the unfortunate man was murdered, some of his clothes, as well as those which Smith himself left behind when he put on deceased's over clothes, have been found near the scene of the murder, and it is strongly suspected that they have been placed there by some of his confederates since he left the neighbourhood.

NORTHAMPTON.—A shocking outrage was committed on the night of the 1st inst. on a young unmarried woman named Mary King, on the turnpike road leading from Denton to Yardley Hastings, about seven miles from this town. It appears that she has been in service at Yardley, and on the evening of the 1st had walked to Denton, a distance of about three miles, to see her sweetheart. He accompanied her about a mile and a half on her return home, and then left her between 9 and 10 o'clock. Shortly afterwards a labourer from Denton named William Ingram, a married man, whom she had known for some time, overtook her, and walked by her side for a little distance. He told her that he had been watching her along the road with her sweetheart, and he then began to take liberties with her. She resisted, whereupon he threw her with great violence on the ground, and attempted to commit a rape. A dreadful struggle took place, in the course of which he drew from his pocket a penknife, the point of which had been broken off, and inflicted several wounds on both sides of her neck, drawing the knife twice round in the direction of the windpipe. He also stabbed her in the wrist, arms, and face; in fact, there was scarcely any portion of the upper part of her body which had not been wounded, although most of the cuts were superficial. He also gave her a fearful blow with his fist in the right eye, which was closed up and blackened. Having failed in his attempt, he was in the act of attempting to strangle her, when the sound of the wheels of an approaching vehicle made him desist and caused him to run across the fields towards Denton. The gig which came up was driven by a farmer, named Layland, who observed by the light of the moon the woman lying by the side of the road. She was quite insensible, and blood was flowing profusely from her wounds. On coming to herself she said "Bill Ingram has been trying to kill me with his penknife." Ingram was afterwards apprehended at his house at Denton, and has since been fully committed by Lord Overstone and other magistrates for trial at the assizes on the charge of cutting and wounding with intent to murder.

ROAD.—Mr. Slack, solicitor, of Bath, who has recently been actively engaged in preparing affidavits in support of the intended application to the Court of Queen's Bench for a writ *ad melius inquirendum* in the case of the Road murder had a conference with the Attorney-General and Solicitor-General last week. The affidavits, which are very voluminous, have been deposed to by every member of the jury and other witnesses, and go to show that the office of the coroner was imperfectly fulfilled; that upon the coroner going to Mr. Kent's house and desiring the jury to follow him, several were so dissatisfied with his refusal to call members of the family before him that they refused for some time to accompany him; and that upon their reaching the kitchen of Road Hill House, the inquiry, instead of being a searching one, during which the evidence was duly recorded, was merely an oral one, which occupied a very few minutes. The application to the Court of Queen's Bench will probably be made in the course of a few days by the Attorney-General or Solicitor-General, with Mr. Welsby, and if granted the inquiry which will follow will be conducted in a way that is likely to exhaust the subject.

NOTTINGHAM.—Mr. Robert White, lace manufacturer, was again brought up before the mayor and magistrates, at the House of Correction last week, charged with forging and uttering a bill of exchange for 41*l.* 8*s.*, on Mr. George Smith, draper, Birmingham, and was committed for trial on this charge.

ROCHESTER.—The Right Rev. Dr. Wigram, has just held his primary visitation as Bishop of Rochester in the cathedral of this city. The following is a summary of his charge:—

After some preliminary remarks, he dwelt at considerable length upon the importance of co-operation between the clergy and the laity in the work of the church, expressing a fervent hope that while he remained in the diocese the counsel and co-operation of the laity would be sought and granted, and that they would mutually profit by each other's help in the development of Christian principles and practice. But if the clergy were to have the co-operation and confidence of their lay brethren, great indeed would be the increase of their responsibility. Let no one imagine that the claim for lay assistance implied a disposition to relax their own personal exertions. Far otherwise: the demand on their wisdom, discretion, and self-denial would be augmented tenfold. Here was a kind hearted, respectable clergyman, a country gentleman in his habits and prejudices, a friendly councillor in worldly concerns, and a good neighbour, satisfied with things in his parish as they ever had been, yielding to the appliances of modern times reluctantly and with great caution and distrust, and dreading enthusiastic dissent without considering what dissent implied as to the past history of the church. Would that brother put his hand to such a plough as would break up the soil of men's hearts, and harrow out its weeds, and plant in it fresh seed, that it might become like land renewed, where thorns and briars should find scope for growth no more? Here was a younger brother, athletic and vigorous, rejoicing in his muscular powers and bodily prowess, and, it might be, distinguished for honours at his university. His zeal and aptitude for games and diversions were his temptation, and he persuaded himself, perhaps, that he found opportunities for influencing other young men for good, while he joined with them in recreations which were not immoral or wrong in themselves; and he formally connected himself by name with cricketing, archery, and other clubs, publicly playing in competition for the honours assigned to such pursuits. Then the public papers praised his unrivalled skill and the enemy who watched for their halting, and the world sneered at the church which was upheld by such a ministry, it being said that he was a specimen of all the rest. Of course, if cards, hunting, coursing, shooting, the ball-room, the theatre, and the opera were outlets through which men's passions were to be gratified, and means by which the precious time, given to those young clergymen for purposes widely different and solemnly promised by them to be appropriated in a right manner, was wasted—the case was infinitely worse. Let them blot out the names of such places as fit for the occupation of clergymen who desired to influence those with whom they mixed. But there might possibly be some who had no turn for energetic pursuits—clergymen singular in their dress, and worldly in their language, with an unseemly habit and demeanour, such as smoking or adopting the modern excesses in cultivating the hair, or in the character of the books which were spread on their tables—acts all showing that they wished to stand on an equality with the fashionable and fast young men of the day, persuading themselves, perhaps, like the others he had mentioned, that they might find opportunities of introducing religion into companies where it would not otherwise enter; and then there were men less offensively remarkable—men of mere routine in their official duties, who left nothing undone that propriety required, and would gladly ask what more was required, and diligently do it. Others there were whose earnestness was spent in clothing religion with external adornments, in beautifying the sanctuary with costly decorations, and in dignifying worship by a semi-intoning voice, and by reviving the ancient names of ecclesiastical rites by studying symbolic representations, to impress outward signs on worshippers, and by conventional gestures and attitudes, and by the adornment of their persons, they marked themselves out as distinctly differing from their brethren, and manifested the school to which they belonged. Were any of those methods the means by which the heart of society was to be touched, the drowsiness of sluggish men roused into activity, and the regeneration of parishes to be accomplished? Surely the day was past when the Church of England could stand on prescription, or legislative enactment, or traditional observances, or anything so unsound and heartless as he had described. Its permanence, its efficiency, must depend on the truthfulness, the godly sincerity, and the simplicity of its doctrines, on the character of its ministers, and on the devotedness which they showed in the discharge of their duties."

SUNDERLAND.—At a recent meeting of the Shipowners' Society of this port, a report was unanimously adopted expressing regret "that so much strength has been wasted in the useless effort to prove that the repeal of the navigation laws was a great political and commercial blunder;" and adding that "free trade in shipping was become so essential an element of our commercial policy, that, were any one seriously to advise retrogression, he would only excite public feeling to an indignant resistance, and expose himself to general obloquy."

WINDSOR.—Four of the smallest horses in the world have been twice brought to Windsor within the last few days by the South-Western Railway for the purpose of being shown to her Majesty, the Prince Consort, and the members of the Royal family. These diminutive animals, which the proprietor, a Mr. Williams, had brought from Africa, are entire horses, of perfect symmetry, well matched, being all of a dark brown colour, and the highest of them is barely 31 inches. As they are not for sale her Majesty has made the proprietor a suitable present for his trouble in twice bringing them to Windsor.

Ireland.

MURDER IN DONEGAL.—Mr. James Murray, a land steward to Mr. M. G. Adair, of Glenveigh, Letterkenny, left his cottage on Tuesday the 13th inst, to look after his master's estate, and had travelled about a mile and a half, when he met his father. As he was not afterwards seen alive, it was suspected that he had been made away with. The police accordingly scoured the country, but their search proved ineffectual until Thursday morning, when his body was discovered at the foot of a precipice, at the distance of a mile and a half from his home. The medical men at the inquest stated that the marks on the body were sufficient to prove that he met his death by violence. Seven persons are in custody on suspicion, six of whom are members of one family.

THE PROSELYTISING CASE.—The Court of Common Pleas gave judgment on Saturday on the application of the Rev. Mr. Kearney, a Roman Catholic priest, for a habeas corpus to obtain the custody of some children, named Darcy, whose father was a Roman Catholic, and by will left the rev. gentleman and the Hon. Mrs. Petre, their guardians. The mother, who is a Protestant, resisted the application, on the ground that she was not legally married to the father, inasmuch as, under the Marriage Act, a marriage celebrated by a Catholic priest was null and void, if either of the parties professed Protestantism for 12 months previously, and therefore that the father could not legally dispose of the children by will. The Court unanimously held that this was a bar to the habeas corpus, and that they had no legal power to take the children from the guardianship of their mother. They therefore refused the motion with costs.—Mrs. Blake, the grandmother of the Sherwoods, the children who were kidnapped in Galway some months ago, has died in the Four Courts' Marshalsea, to which she was committed by the Court of Queen's Bench for contempt. The children were last traced to her possession, but to the last she obstinately refused to give any information respecting them. Her death has now occurred under circumstances sufficiently mysterious to render an investigation necessary. An analysis of the stomach has been ordered, and the inquest has been adjourned for a week.

THE IRISH BRIGADE.—It appears from an announcement in Dr. Cullen's organ, that the brigade is to be maintained as a regularly organised force, and that the men will be called together should "a 'good cause' arise to require their swords." A grand banquet is to be given to the Limerick, Clare, and Tipperary contingents of the Brigade, on Monday evening, the 3d December, in the theatre of Limerick, and it is said that General Lamoricière, Major O'Reilly, Cardinal Wiseman, and Archbishop Cullen will attend.

Scotland.

ELECTION OF A REPRESENTATIVE PEER.—The Peers of Scotland met at Holyrood Palace on the 15th inst, to elect a representative peer in the room of the late Earl of Leven and Melville. All the peers gave their suffrages for Lord Rollo, except the Earl of Buchan, who declined to vote, and the Earl of Haddington, whose vote the clerks declined to receive, on the ground that the Lord Clerk Registrar of Scotland had received no evidence of his Lordship's title being admitted by the House of Lords. The Earl of Haddington lodged a protest to the effect that, by his having sat and voted in the House of Lords as a representative peer, that House had already acknowledged and recognised his title. The clerks duly signed and sealed the return to the Royal proclamation, and stated that the protest of Lord Haddington would be forwarded with the return.

Railways.

THE LATE COLLISION AT THE ATHERSTONE STATION.—One of the two drovers who was so severely injured in the late collision died on Saturday, and it has now been ascertained that of the nine drovers who were in the van at the rear of the cattle train, not a single man escaped with life. The total number of persons, therefore, who have perished by the catastrophe is 10. The bodies were sent to Dublin on Monday at the expense of the London and North Western Company, by a special train from Nuneaton to Holyhead, and thence to Dublin in one of the Company's steamers. On the arrival of the steamer at Dublin there were seven hearses and a number of mourning coaches in attendance, to convey the bodies to their respective localities for interment. Three were taken to the terminus of the Great Southern and Western Railway, two were taken to Blesington, two were removed for interment to Glasnevin, and one was conveyed to his late home in Barrack Street. The inquest was opened at Nuneaton on Saturday, when the driver and guard of the mail train swore most positively that they saw no "red" light at the auxiliary signal station, that there was a white light, which meant "all right," at the station as they approached it, and that they saw it changed to a red one, as they were running in, and when it was too late to arrest the progress of the train. The driver of the cattle train stated that when at Tamworth station he was told by the proper officer there to go on as quickly as he could, and get out of the way of the coming mail train, and that he had 20 minutes to spare. The rails, however, were very slippery, and finding that there was no chance of reaching Nuneaton, where he was to have "shunted" to let the mail pass, he found his only course would be to shunt at Atherstone, as the mail train was then within a few minutes of its time. Had the red light been shown at the auxiliary station, or seen by the driver of the mail, the cattle train would have been protected, and have had ample time to get out of the way. The inquest is still in progress.

Sporting.

THE VICEROY OF EGYPT'S STUD.—The following stud of 334 horses, of high breeding, the property of the late Elhamy Pacha, is to be sold on the 10th of next month at the Palace of Abassia, near Cairo:—33 stallions (one of these was bought of Colonel Blood for 4000*l.* sterling); 137 mares of Arabian and Syrian stock; total, 170. 51 colts entire, and 59 fillies, produce of the above; total, 110. Two mares, highest Egyptian breed, and 52 stallions, ditto; total, 54.

Law.

COURT OF QUEEN'S BENCH.—*Crawshay* v. *Langley.—The Garibaldi Excursionists.*—This was an application, on the part of Mr. Crawshay, late mayor of Gateshead, for a rule nisi, calling on Mr Langley, the proprietor and publisher of two Newcastle journals, to show cause why a criminal information should not be exhibited against him for infringing the Foreign Enlistment Act, by publishing articles in the said papers with the view of procuring persons in England to serve in the army of Garibaldi. At the conclusion of the statement for the plaintiff, the Lord Chief Justice and Justices Blackburn and Hill pointed out the novelty of the application, and said there was no precedent for such a proceeding on the part of a private individual; that the proper officer to prosecute was the Attorney General; and that the Court could not in its discretion allow a private individual to come forward and take upon himself the functions of the law officer of the Crown. The Court accordingly refused the application, leaving Mr. Crawshay the option of preferring an indictment or bringing the subject under the notice of her Majesty's law officers.

Obituary.

LADY GOLDSMID, widow of Sir Isaac Lionel Goldsmid, Bart., died on the 17th inst., at St. John's Lodge, Regent's Park, in her 73d year. She had been in declining health for some time past, and especially since the decease of her husband last year. She was the daughter of Mr Abraham Goldsmid, of Morden, Surrey, and married Sir Isaac in the year 1801.

LIEUT.-COLONEL ROBERT MACDONALD, C.B., an old Waterloo officer, late Commander of the 35th Regiment, died on the 15th inst at the advanced age of 82. He served at the siege of Fort Bourbon and capture of Martinique, in 1808-9, and was next employed in the Peninsula. He was present with the Royals in the retreat from Burgos in 1812, and in the subsequent campaigns of 1813-14 was present at the action at Osona, the battle of Vittoria, the assault on the Convent of San Sebastian, and the assault on the town, when he was severely wounded. A month afterwards, though suffering from the effects of his wound, he was present at the successful assault on San Sebastian, where he commanded two companies ordered to the breach in advance of the 1st brigade of the 5th division. He was also present at the passage of the Bidassoa, the battles of the Nivelle and the Nive, and in the repulse of the sortie from Bayonne. He served also during the campaign of 1815 in the Netherlands, and was present at Quatre Bras and Waterloo, where he was again severely wounded. He afterwards removed to the 35th Foot, which he commanded for several years. For his services at Waterloo he was made a Companion of the Bath, and was decorated with the Order of St. Anne of Russia by the Emperor Alexander. He received the silver war medal and five clasps for services in the Peninsula.

MR. WARRE, M.P. for Ripon, died at his residence, Westcliffe House, Ramsgate, on the 18th inst., in his 74th year. At the last general election in 1859 he signified his intention to retire from the representation of the borough, and the Right Hon. W. Cowper was selected as a candidate; but the right hon. gentleman being at that time abroad, there was not sufficient time to transmit the invitation, and under these circumstances Mr. Warre again consented to stand, on the understanding that it was the last time he should become a candidate. Mr. Warre was a supporter of Lord Palmerston's Administration, and voted against the Conservative Reform Bill.

WILLS.—The will of the Dowager Lady Wrottesley has been sworn under 25,000*l.*; Marmaduke Robert Langdale, Esq., 120,000*l.*; Matthew Uzielli, Esq., 250,000*l.*; Nicholas Westby, Esq., 40,000*l*; Capt. W. Jones Prowse, 40,000*l.*; Miss Smith, of Horton, Somerset, 40,000*l.*; Mr. William Everington, of Ludgate Hill, 180,000*l.*; Sir John E. Swinburne, Bart., 80,000*l.*; Lieut.-General Sir Harry Smith, Bart., 6000*l.*

BIRTHS.—On the 13th inst, at Parham Park, Sussex, the Hon. Mrs. CURZON, of a daughter—17th inst, at Evington Place, Kent, Lady HONYWOOD, of a son—19th inst, at 20, Charles Street, Berkeley Square, Lady HOSTE of a son—19th inst, at 46, Cambridge Terrace, Hyde Park, Lady JAMES, wife of Colonel Sir Henry James, Royal Engineers, of a son—13th inst, at Witton Park, Lancashire, the wife of Lieutenant-Colonel FEILDEN, of Dulas Court, Herefordshire, of a daughter—14th inst, at Hilton, Bridgnorth, Shropshire, the wife of Lieutenant-Colonel SMYTHE, of a daughter.

MARRIAGES.—On the 13th inst, at Cardinham, JOHN TREMAYNE, Esq., to the Hon. MARY CHARLOTTE MARTHA VIVIAN, eldest daughter of Lord Vivian, Lord Lieutenant of the county of Cornwall—20th inst, at St. Luke's Church, Cheltenham, Captain GEORGE HENRY GREY, Grenadier Guards, only son of the Right Hon. Sir George Grey, Bart., to HARRIET JANE, youngest daughter of Lieutenant Colonel CHARLES PEARSON—13th inst, at All Saints' Church, Blackheath, JOHN TUDOR, Esq., son of Robert Owen Tudor, Esq., of Bronhaulog, Denbighshire, to MARGARET EMILY, youngest daughter of Major G. BERKELEY CALCOTT, of Blackheath, Kent, and formerly of Carnham Court, Shropshire—15th inst, at Bray Church, CHARLES PEARCE SUTCOLD, Esq., of Oldfield Lodge, Maidenhead, to MARIE EMILIE, second daughter of GEORGE ST. LEGER GRENFELL, Esq.—15th inst, at St. James's Church, Westbourne Terrace, JOHN WOODWARD STANFORD, Esq., of Carn, county Cavan, Ireland, to LOUISA, fourth daughter of the late NEVILE REID, Esq., of Runnymede, Old Windsor—15th inst, at St. George's, Hanover Square, ANTHONY MORE S STORER, Esq., of Purley Park, Berks, to CICELY BARR, daughter of J. P. WILLOUGHBY, Esq., of 18, Westbourne Terrace—5th September, at Hillside, near Victoria, Vancouver's Island, JAMES ALLAN GRAHAME, Chief Trader of the Hudson's Bay Company, to MARY, fifth daughter of JOHN WICK, Esq., Chief Factor of the Hudson's Bay Company.

DEATHS.—On the 13th inst., at Cardoness, in the Stewartry of Kirkcudbright, Sir DAVID MAXWELL, Bart., Hon. Colonel of the Galloway Militia—6th inst, at Florence, CHARLOTTE MARIA, eldest daughter of the late EDWARD ROBERT MARCUS WHYTE, Esq., of Hotham House, Yorkshire, and grand-daughter of Sir John Owen, Bart., M.P., of Orielton, Pembrokeshire—20th inst, at Hastings, the infant son of Lieut.-Colonel the Hon. C. H. and Mrs LINDSAY, aged three months and a half—17th inst, at 1, George Street, Bathwick Hill, Bath, Lady MAXWELL, widow of the late Lieut.-General Sir Charles William Maxwell, K.C.H., C.B., formerly Colonel of the 3d West India Regiment—21st ult, at Whitneyville, in the United States, Commander WILLIAM GIBBONS, R.N., son of the late Sir William Gibbons, Bart., aged 85—18th inst, at 6 Upper Seymour Street, Portman Square, suddenly, the Rev. OSMOND DERING, Rector of Elworth, Beds, youngest son of the late C. Dering, Esq., of Chapel Street, Grosvenor Square, aged 34—16th of September, on board the Peninsular and Oriental Steam Company's steamer Emeu, on his passage from China to England, Brevet Major ROBERT HAYDON SHEBBEARE, V.C., Commanding 15th Punjaub Infantry, son of Charles John Shebbeare, of Lincoln's Inn, and Surbiton Hill, Esq., aged 33—14th inst, at Hitchin Priory, Commander SEYMOUR WALTER DELMÉ RADCLIFFE, R.N., eldest surviving son of Frederick Peter Delmé Radcliffe, Esq., aged 27—15th inst, at Flore House, Northamptonshire, MARY ANNE, wife of Major-General CARTWRIGHT—18th inst, at Brighton, MARY ELLEN MAITLAND, second daughter of FULLER MAITLAND WILSON, Esq., of Langham Hall, Suffolk, aged 6—15th inst, at Silwood Place, Brighton, SUSANNA, relict of the late Rev. CORNELIUS NEALE, M.A., and daughter of the late Dr. Mason Good—16th inst, THOMAS CLUTTON, Esq., Fellow of New College, Oxford, aged 66—13th inst, at Hyères, in the South of France, CHARLES THOMAS COURT, M.D., late Ratcliff Travelling Fellow of the University of Oxford, and one of the Assistant Physicians of the Middlesex Hospital, aged 36—16th inst, at Bonneveine, near Marseilles, MARIETTA, wife of PANTIA STEPHEN RALLI, of 5, Connaught Place West, London, aged 50.

Markets.

COVENT GARDEN, Nov. 21.

We have again to report the arrival of heavy consignments from the Continent, consisting of Apples, Pears, &c. Pine Apples are less in request than they have been, and prices for them are lower. Dutch Hamburgh and other Grapes continue to be imported. Good Cobs may be had at 1s. to 1s. 6d. per pound. Cabbages, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 10s. per cwt. Cucumbers are scarcer. Cut flowers chiefly consist of Orchids, Gardenias, Dahlias, Violets, Mignonette, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 4s to 7s	Pears, per doz., 1s to 3s
Grapes, per lb., 3s to 6s	Apples, per doz., 6d to 1s 6d
Peaches, per doz., 6s to 9s	Oranges, per 100, 6s to 10s
Pomegranates, each, 4d to 6d	Lemons, per 100, 6s to 10s
Plums, p. ½ sieve, 3s to 4s 6d	

VEGETABLES.

Cauliflowers, each, 4d to 6d	Celery, p. bundle, 1s 6d to 1s 9d
Greens, per dozen, 2s 6d to 3s	Onions, p. ½ sieve, 1s 6d to 2s 6d
Cabbages, do., 1s to 2s	Seakale, p. punnet, 3s 6d to 4s 6d
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 9d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 6d to 1s 6d	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d

HOPS.—BOROUGH MARKET, FRIDAY, Nov. 23.

Messrs. Pattenden & Smith report that there is a better trade for Hops since the postponement of the payment of the Hop duty, and many planters have withdrawn their new Hops from sale, fine samples of which are very scarce.

BRITISH WOOLS.—LONDON, FRIDAY, Nov. 23.

There has been only a small amount of business transacted during the past week, the supplies having been limited, and the demand to no greater extent. The rapid addition to the rate of interest is likely to prolong the present dulness, but as all persons connected with this trade have been acting with caution no further inconvenience is anticipated.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	7	to	1	8	Leicest. Wethers	1	6	to	..	
Half-bred ditto	1	8	—	..		Ditto Hoggs	1	8	—	..	
Down Ewes	1	5	—	1	6	Combing Skins	1	0	—	1	4
Kent Fleeces	1	7	—	..		Blanket ditto	0	6	—	0	8
						Flannel Wool	1	0	—	1	8

POTATOES.—SOUTHWARK, Monday, Nov. 19.

During the past week the arrivals coastwise have been moderate, but large both foreign and by rail, and a further

decline in prices has been the consequence. The following are this day's quotations :—York Regents, 110s. to 130s. per ton ; Lincolnshire do, 110s. to 115s.; Dunbar do., 120s. to 140s.; Perth, Forfar, and Fife do., 100s. to 115s. ; French Whites, 100s. to 110s. ; Belgian do., 90s. to 95s. ; Dutch do., 80s. to 90s.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Nov. 22.

Prime Meadow Hay	75s	to 80s	Clover	90s	to 110s
Superior do. (old) ..	90	105	New Clover	—	—
Inferior do.	50	60	Old second cut ..	80	90
New do.	—	—	Straw	32	36
Rowen	40	50			

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Nov. 22

Sup. Meadow Hay..	114s	to 120s	Inferior Clover ..	84s	110s
Inferior do.	70	105	New do.	—	—
New do.	—	—	Straw	38	43
Superior Clover ..	118	126			

JOSHUA BANER.

WHITECHAPEL, THURSDAY, Nov. 22.

Fine old Hay	100s	to 110s	Fine old Clover ..	110s	to 123s
Inferior do.	60	80	Inferior do	60	90
Prime New Hay ..	—	—	Fine 2d cut	—	—
Inferior do.	—	—	Inferior do.	—	—
Straw	33	36	Fine New Clover ..	—	—

BUTTER MARKET.—Nov. 23.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 14s. ,, ,,
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

COAL MARKET.—Nov. 21.

Walls End Hetton, 21s.; Walls End Primrose, 19s. 3d.; Walls End Haswell, 20s. 9d.; Walls End Tees, 21s.; Walls End Hartlepool, 20s. 6d.; Walls End Braddyls Hetton, 20s. 3d.; Walls End Russell Hetton, 20s.; Walls End South Hartlepool, 19s. 9d.; Walls End Heugh Hall, 19s. 3d.; Walls End Keepier Grange, 20s.; Walls End Thorpe, 19s. 3d.; Walls End Harton, 18s. 9d; Walls End Byron, 19s. 3d.; Carway Duffryn Steam, 23s. 6d.; Wylam, 18s. 6d.; Buddle's Hartley, 17s. 9d.; Hastings Hartley, 17s. 9d.; Howard's Hartley, 17s. 6d.; Lambert's Hartley, 17s. 6d.—217 ships at market.

METROPOLITAN CATTLE MARKET.

MONDAY, Nov. 19.

The number of Beasts is not quite so large as on Monday last; the average quality is very indifferent, and last week's prices are fully maintained. The supply of Sheep is shorter; trade is very slow, with no quotable alteration in price. Calves are selling about the same as on Thursday. From Germany and Holland there are 1400 Beasts, 5400 Sheep, 172 Calves, and 70 Pigs; from Spain, 30 Beasts; from Scotland, 30; from Ireland, 800; from Norfolk and Suffolk, 150; and 2100 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4 10 to 5		0		Best Long-wools.	5	0	— 5	4
Best Short-horns	4	8	— 4	10	Do. Shorn			to ..	
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	6	— 4	8
Best Downs and Half-breds ..	5	4 to 5		6	Do. Shorn			— ..	
Do. Shorn			—	..	Lambs			— ..	
					Calves	4	0	— 4	10
					Pigs	4	4	— 5	4

Beasts, 5450; Sheep & Lambs, 21,200; Calves, 203; Pigs, 510.

THURSDAY, Nov. 22.

We are fairly supplied with Beasts. Trade for them is slow, but Monday's quotations are pretty generally obtained. The number of Sheep is very small, but the demand is by no means large. The few choice descriptions on offer are very quickly disposed of. Good Calves are dearer. From Germany and Holland there are 264 Beasts, 800 Sheep, and 180 Calves; from Ireland, 200 Beasts; 400 from the northern and midland counties; and 114 Milch Cows from the home counties.

Best Scots, Herefords, &c. ..	4	8 to 5		0	Best Long-wools .	5	0	— 5	4
Best Short-horns	4	6	— 4	10	Do. Shorn			— ..	
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	4	— 4	8
Best Downs and Half-breds ..	5	4	— 5	6	Do. Shorn			to ..	
Do. Shorn			—	..	Lambs			— ..	
					Calves	4	4	— 5	0
					Pigs	4	4	— 5	4

Beasts, 1330; Sheep & Lambs, 2160; Calves, 246; Pigs, 170.

MARK LANE.—MONDAY, Nov. 19.

The supply of Wheat from Essex and Kent was moderate, and with the exception of a few fine samples sold early at about last week's prices, was offered at a decline of 2s. per qr. without finding many buyers. The attendance was good, nevertheless the business transacted in foreign Wheat was quite in retail; fine old qualities fully maintained our quotations, but inferior and new must be written 1s. to 2s. per qr. cheaper, according to condition. Barley sells slowly at a decline of 2s. to 3s. per qr. for malting qualities, and 1s. per qr. for grinding. Beans and Peas bring last week's rates. The Oat trade is dull, and old corn 6d. and new fully 1s. per qr. cheaper, and difficult of sale. There is but little demand for foreign Flour, and the few sales made were at a decline of 1s. per sack and 6d. per barrel.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	55	—62	Red	46	—60
— — fine selected runs..ditto	59	—66	Red	53	—66
— — Talavera	50	—74			
— Norfolk	—		Red	—	
— Foreign	54	—74			
BARLEY, grind. & dist., 28s to 32s..Chev.	40	—45	Malting.	40	—42
— Foreign..grinding and distilling	30	—37	Malting.	40	—41
OATS, Essex and Suffolk	20	—24			
— Scotch and Lincolnshire..Potato	26	—28	Feed ..	24	—26
— Irish .....Potato	26	—28	Feed ..	21	—24
— Foreign.....Poland and Brew	22	—27	Feed ..	20	—27
RYE	35	—38	Foreign.	—	
RYE-MEAL, foreign	—				
BEANS, Mazagan....40s to 44s.... Tick	42	—48	Harrow.	42	—48
— Pigeon .....48s — 56s..Winds	—		Longpod	—	
— Foreign .....Small	40	—50	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	38	—48	Suffolk .	40	—50
— Maple .... —s to —s ..... Grey	40	—42	Foreign.	38	—48
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	50	—57			
— 2d do. ..... ditto	34	—50	Country.	34	—50
— Foreign .....per barrel	29	—34	Per sack	40	—50

FRIDAY, Nov. 23.

The Wheat trade throughout the United Kingdom has been dull and inactive. In the majority of markets holders of fine old English or foreign Wheat have refused to part with it on lower terms, but the better qualities of new have declined in value 1s. to 2s., cold 2s. to 3s., and the damp and inferior, of which the great bulk consists, are difficult to quit on almost any terms, and can only be disposed of for starch and feeding. Spring corn participates in the general dulness, and Barley must be written 1s. to 2s.; in several markets grinding qualities are 2s. to 3s. cheaper. Beans and Peas have also been easier of purchase. Foreign Flour was neglected, and is generally quoted 1s. per sack and barrel lower. The arrivals from the South during the past week have been on a liberal scale, amounting to 80 cargoes, say—41 Wheat, 21 Maize, 5 Barley, 1 Beans, 2 Flour, 1 Linseed, 4 Rapeseed, and 5 oilcakes. The transactions have been limited, there being little disposition to buy and a decline of about 2s. per qr. on most descriptions has been general. This morning's market was tolerably attended. A large portion of the English Wheat left over from Monday and fresh up during the week remains unsold, although offered on reduced terms in consequence of its inferior condition and quality. In foreign the sale was limited, and new French was obtainable at slightly lower prices. Barley, Beans, and Peas are unaltered in value. The Oat trade is dull, and new Corn rather cheaper.

ARRIVALS FROM NOV. 19 TO NOV. 23.

	Wheat.	Barley.	Oats.	Flour.
English ..	2310 qrs.	4970 qrs.	560 qrs.	1930 sks.
Irish	— ,,	— ,,	4560 ,,	— ,,
Foreign ..	51760 ,,	15680 ,,	20040 ,,	7880 ,, / 12250 brls.

LIVERPOOL, Tuesday, Nov. 20.—The grain market was dull, but prices no lower. Wheat and Flour were neglected at late rates. Beans and Maize firm, the former at 39s. 6d. to 40s., the latter 38s. to 38s. 3d. Other articles unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Oct. 13..	61s 1d	39s 11d	24s 8d	37s 3d	50s 11d	42s 8d
— 20..	60 1	40 7	23 7	34 7	50 2	41 11
— 27..	59 11	40 9	23 5	36 8	49 6	41 10
Nov. 3..	59 9	40 10	23 3	36 2	49 10	42 4
— 10..	58 9	41 0	23 11	36 6	51 1	44 5
— 17..	58 1	41 4	23 5	36 4	50 8	46 9
Agg. Aver.	59 8	40 9	23 9	36 3	50 4	43 3

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Oct. 13.	Oct. 20.	Oct. 27.	Nov. 3.	Nov. 10.	Nov. 17.
61s 1d	—	..	..	..	..	..
60 1	..	—	..	..	..	..
59 11	..	..	—	..	..	..
59 9	..	..	..	—	..	..
58 9	..	..	..	..	—	..
58 1	..	..	..	..	..	—

WANTED, A CONFIDENTIAL SECRETARY.—The Advertiser, who is extensively engaged in Horticultural pursuits, having more than he can personally attend to, is desirous of engaging the assistance of a respectable intelligent young Man to act as above. In addition to his having to take charge of papers and correspondence, he must be willing to make himself useful in such other ways as the principal may desire. A general knowledge of Gardening matters is necessary, and as the situation is one of considerable confidence the most unexceptionable references will be required. Application in own handwriting, stating terms, references, &c., to be made to A. B. C. D, *Gardeners' Chronicle* Office, W.C.

WANTED, an experienced BOOK KEEPER, in the office of a Provincial Nursery. He must write a good hand, and be quick and accurate in Accounts. As a steady trustworthy Man is required, none need apply whose character will not bear the very strictest investigation.—Address, stating Salary required, B. K., Messrs. Hurst and M'Mullen, 6, Leadenhall Street, London, E C.

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WANTED, A BOOK-KEEPER; also a SHOPMAN, conversant with the Seed Trade.—Address, with references and qualifications, C. D., Messrs. C. Humble & Sons, 227, Borough, London, S.E.

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WANTED, FOREMEN OF DRAINAGE WORKS.—Written applications, with references as to character for ability, integrity, and sobriety, to be addressed to Mr. BAILEY DENTON, the Company's Engineer, No. 52, Parliament Street, Westminster, S.W.

TO MECHANICS.

WANTED, A FOREMAN for the Works.—Apply, with references and qualifications, to Mr. MCKENZIE, Agricultural Implement House, Cork.

WANTED, A GARDENER, from 30 to 35 years of age, who thoroughly understands Early and Late Forcing in all its branches for Marketing purposes. One from the neighbourhood of London preferred.—Apply, first by letter only, to A. B., Post Office, Minster, near Ramsgate.

WANTED, AS FARM SERVANTS, a married Couple, to go to New Zealand in a few weeks. The man to be a good Ploughman and Judge of Sheep and Cattle, the wife a good Butter and Cheese Maker, and able to take full care of a Dairy of Cows. Two or three Children from 15 to 18 years of age (if good Farm workers), would not be objected to. Wages for an engagement of three years, £0*l*., 55*l*., and 60*l*. per annum, with rations and free house. Passage money advanced. The Advertiser, with his family, will sail from the Port of London in December.—Application by letter to No. 280, Bath Crescent, Glasgow.

WANTED, a thoroughly good and quick BUNDLE PACKER in a large Nursery. As he will have several men under him, he must be an active, careful, and good Manager in the Packing Yard.—Address "November," Messrs. Hurst and McMullen, Leadenhall Street, London, E.C.

WANTED, AS OUT-DOOR SERVANT, a steady, active young Man. He must be a good Groom, and understand the management of a Garden with Greenhouse.—Apply to C. C., Mercury Office, Newbury, Berks.

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GARDENER (HEAD).—Age 30, married, without incumbrance; understands his profession in all its branches. Has had great experience in Late and Early Forcing of Fruit, Flowers, and Vegetables; a first-rate Flower and Kitchen Gardener, and will perform all the duties with which he may be entrusted with proper attention and due economy. Unexceptionable family character.—B. W., 7, Bridge St., York.

GARDENER (HEAD), to any nobleman or gentleman.—Age 40, no incumbrance; a thorough practical Working Head Gardener, who has had great experience in all branches of his profession, where Early Forcing of Fruits, Flowers, and Vegetables is required, also a good Flower and Kitchen Gardener. Can manage Land and Stock. Four years' unexceptionable character.—J. L., 8, Crystal Crescent, Upper Sydenham, Kent, S.E.

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GARDENER (HEAD).—Age 30, single; thoroughly practical. Good single-handed place accepted.—H. S., Mr. Steel's, Post Office, Clapham Common, S.

GARDENER (HEAD).—Age 28, single; thoroughly understands Cultivation, Vines, Forcing, Stove and Greenhouse Plants, and Gardening in all branches. Three years' good character.—M. P., 4½, Boone Street, Lee, Kent, S.E.

GARDENER (HEAD).—Age 36, married; understands Early and Late Forcing, and Gardening in all its branches. Seven years' character.—A. B., Paul & Son, Old Nurseries, Cheshunt, Herts

GARDENER (HEAD).—Married, no incumbrance; practical in all branches. Wife a good manager of Dairy. Satisfactory references as to capability and respectability.—J. P., Post Office, Stoke Newington, N.

GARDENER (HEAD).—Age 38, no incumbrance; a thoroughly practical industrious Man. Understands Gardening in all its branches, Early and Late Forcing of Fruits and Vegetables. First-class references as to character.—J. T., Messrs. Flanagan & Son, 9, Mansion House Street, London, E.C.

GARDENER (HEAD).—Married, no incumbrance; thoroughly understands the management of Vineries, Pineries, and Propagating Houses. Can be highly recommended.—J. R., Messrs. James Carter & Co., 237 & 238, High Holborn, W.C.

GARDENER (HEAD).—Age 26, single; thoroughly competent to undertake the management of a nobleman's or gentleman's Garden in every department, having had charge of a large establishment near town for the last two years and a half. Character unexceptionable.—O. C., Mr. Jacob's, Champion Hill House, Camberwell, S.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 29, single; thoroughly understands Vines, Early and Late Forcing, Stove and Greenhouse Plants, and Gardening in all its branches. Two years' good character as Head Gardener.—X. Y., Wellington Nursery, St. John's Wood, London, N.W.

GARDENER.—Age 30, with one child; has a good knowledge of Fruit, Flower, and Kitchen Gardening, also of the Culture of Flowers and Fruit under glass. Good reference.—G. L., Mr. Morse, Epsom Nursery, Epsom.

GARDENER.—Age 29, married, no incumbrance. The Rev. T. G. CLARKE, Odiham, Hants, wishes to recommend a respectable, sober, honest, and industrious Man as Gardener to any gentleman requiring such a person.—H. H., Ford's Nursery, Commercial Road, Southampton, Hants.

GARDENER.—A young Man, perfectly honest, sober, and industrious; can attend to a Garden, horse and carriage, &c., and would make himself generally useful. Can have an excellent recommendation from last employer.—E. W., Post Office, Bednall, Stafford.

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TO NOBLEMEN AND GENTLEMEN.

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News of the Week.

DESPATCHES have been received from the allied Ambassadors and Generals in China, announcing the renewal of hostilities almost within sight of the walls of Pekin. It appears that after the rupture of negotiations at Tien-tsin, the allied army, accompanied by the Ambassadors, marched towards the capital. Before they had advanced 50 miles Lord ELGIN received letters announcing that fresh Commissioners of high rank had been appointed to meet them at Tang-chow, 25 miles distant, with full powers to sign the treaty. Mr. PARKES and Mr. WADE were immediately sent on to meet these Commissioners, with whom they arranged that the allied forces should halt at Chang-tsia-wan, five miles short of Tang-chow, and that the Ambassadors should advance with an escort to the latter place and sign the convention. It was also arranged that the Tartar army should fall back in order to prevent any collision by inadvertence. Mr. PARKES having communicated these arrangements to the Ambassadors, returned to Tang-chow to make preparations for their reception, accompanied by an escort of FANE'S Horse under Lieut. ANDERSON, by Lieut.-Colonel WALKER, Acting Quartermaster General; Capt. BRABAZON, R.A., Deputy Assistant Quartermaster General; Mr. THOMPSON, Assistant Commissary General; Mr. LOCH, Private Secretary to Lord ELGIN; Mr. DE NORMAN, Attaché to the Legation; Mr. BOWLBY, the Correspondent of the *Times*; Colonel GRANDCHAMPS, of the French army; the Abbé DULUC, and M. DELAÜTURE, with some French soldiers as their escort. On arriving at the camping ground, they found it occupied by a large Tartar army, with batteries which had been hastily thrown up and armed, and it was at once apparent that it was the deliberate intention of the Commissioners to have seized the persons of the Ambassadors and surprised the allied army. Colonel WALKER and Mr. THOMPSON cut their way through the Chinese ranks, and rode back to head quarters to give information of this treachery, while Mr. PARKES, Mr. LOCH, Mr. BOWLBY, Mr. NORMAN, Captains BRABAZON and ANDERSON were taken prisoners by the Chinese and carried to Pekin, where they are said to be well treated. On the following morning the Allies attacked the Tartar army commanded by Prince SANKOLINSIN in person and numbering 20,000 men spread over a great extent of country, and completely routed them with a loss of 600 killed and 75 guns. This battle, which was fought at Chang-tsia-wan, was followed on the 21st by another battle fought at Tang-chow, in which the enemy was again defeated with a loss of several hundred killed and 43 guns. The casualties on our side in the two battles were only 2 killed and 48 wounded. After these defeats the Chinese sent in a flag of truce with proposals for a treaty and an intimation that the EMPEROR'S brother had been appointed Chief Commissioner to make peace; but Lord ELGIN refused to re-open negotiations until the prisoners had been released. At the departure of the mail the allied army was about 7 miles from Pekin, in a very safe position and with abundant supplies.

The *Moniteur* of Sunday contained an Imperial decree effecting important changes in the French Constitution, the effect of which will be to establish a Parliamentary system approximating to our own. The decree gives the Chamber of Deputies the right of voting an address to the Crown in reply to the Imperial Speech on the opening of the Chambers; the *Moniteur* is to publish a full statement of the Parliamentary debates, and a *compte-rendu* is to be transmitted each evening to the French journals. The decree was followed by a modification of the Ministry, Count WALEWSKI being appointed Minister of State, Count PERSIGNY Minister of the Interior, M. BILLAULT, Minister without portfolio, M. FORCADE LAROQUETTE, Minister of Finance, M. MAGNE, Minister without portfolio, and Count FLAHAULT Ambassador in London. M. FOULD has retired from the Cabinet, and it is rumoured that the Prince DE LA TOUR D'AUVERGNE, French

Ambassador at Berlin, will probably replace M. THOUVENEL as Minister for Foreign Affairs.

The KING OF NAPLES has not yet left Gaeta, but all the Foreign Ambassadors who followed him from Naples, with the exception of the Spanish Minister, have left that place for Rome at his express desire. The KING OF SARDINIA'S departure for Sicily has been again postponed, and the Council of State has been convoked for the 2d December.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Friday morning the Queen and Prince Consort, accompanied by Prince Alfred and Princess Alice, went to Claremont, and visited Queen Marie Amélie. In the afternoon her Majesty held a Privy Council at which the Earl of Chichester was sworn into office as Lord Lieutenant of Sussex, and Lord Stanley of Alderley kissed hands on being appointed Postmaster-General. Earl Granville and Lord Palmerston had audiences of the Queen. On Saturday morning the Queen and Prince Consort, accompanied by Prince Alfred, walked in the Home Park, and visited the Duchess of Kent. Princess Alice and Princess Helena rode on horseback. The Duchess of Kent and the Prince and Princess of Leiningen visited her Majesty, and took luncheon. The Prince of Wales arrived from Oxford. Prince Louis of Hesse, Prince Leopold of Hohenzollern, the Portuguese Minister, and Captain Tarleton, of the Euryalus, arrived on a visit to the Queen. On Sunday morning the Queen and Prince Consort, the Prince of Wales, Princesses Alice, Helena, and Louisa, Princes Alfred, Arthur, and Leopold, Prince Louis of Hesse and Prince Leopold of Hohenzollern, attended Divine service in the private chapel. The Rev. F. Temple, Head Master of Rugby, preached the sermon. On Monday morning the Queen, with the Princess Alice, walked in the grounds of the Castle, and visited the Duchess of Kent at Frogmore. The Prince Consort, accompanied by Prince Alfred and Prince Louis of Hesse, went out shooting. The Prince of Wales left Windsor for Oxford. The Portuguese Minister, and Captain Tarleton, R.N., left the Castle. The Duchess of Kent visited her Majesty and took luncheon. The Lord Chancellor, the Prussian Minister and Countess Bernstorff, Lord and Lady Wodehouse, General Lord Clyde, the Right Hon. W. and Mrs. Cowper, and the Right Hon. Robert Lowe arrived on a visit. On Tuesday morning the Queen, with Princess Helena, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort, accompanied by Prince Alfred, Prince Louis of Hesse, and Prince Leiningen, went out shooting. Prince Leopold of Hohenzollern took leave of her Majesty and left Windsor for Southampton, on his way to Lisbon. On Wednesday morning the Queen and Prince Consort, accompanied by Prince Alfred, Princess Alice, and Prince Louis of Hesse, rode out on horseback. The Duchess of Kent and the Prince and Princess of Leiningen visited her Majesty and took luncheon. The Lord Chancellor, Count and Countess Bernstorff, Lord and Lady Wodehouse, Lord Clyde, the Right Hon. W. and Mrs. Cowper, and the Right Hon. R. Lowe, left the Castle. The Duke de Nemours and the Duke d'Alençon, the Earl and Countess of Hardwicke and Lady Augusta Yorke, the Earl and Countess Spencer, Lord and Lady John Russell, Lord Stanley, and the Rt. Hon. Sir George and Lady Grey, arrived on a visit. On Thursday morning the Queen, with Princess Alice, walked in the grounds of the Castle, and visited the Duchess of Kent at Frogmore. The Prince Consort, accompanied by Prince Alfred, the Duke de Nemours, the Duke d'Alençon, Prince Louis of Hesse, and the Prince of Leiningen, went out shooting. The Queen, the Prince Consort, and Royal family, will leave Windsor Castle for the Isle of Wight, on Wednesday or Thursday next. The Court will remain at the Isle of Wight about a fortnight, and then return to Windsor for the Christmas holydays.

THE EMPRESS OF AUSTRIA.—In consequence of the boisterous state of the weather and of continued indisposition during her stay at Plymouth, the Empress did not land; indeed, her Majesty during her stay was so unwell that her physicians had given directions that no persons should speak to her. The Victoria and Albert left Plymouth on Sunday morning at half-past 9, under the usual salutes, and will proceed to Madeira direct, if her coals permit. The Osborne left on Saturday morning before daylight, and will have to call at Lisbon for coals.

THE EMPRESS OF THE FRENCH left Edinburgh for Perth on Thursday the 22d ult. by the ordinary midday train on the Glasgow and Scottish Central Railway. Previous to her Majesty leaving the hotel, the 78th Highlanders, under Colonel Ewart, passed through St. Andrew's Square, the band playing the French national air. The Empress appeared at the window of the hotel, and gracefully acknowledged the compliment and the cheers of the large crowd which had assembled. Before leaving the hotel, the Empress sent for the proprietor, and assured him of her great satisfaction with the accommodation provided for herself and suite. Her Majesty arrived at Perth shortly before 4 o'clock, and was loudly cheered by a large number of persons who had assembled at the station. Soon after her arrival the Empress walked up the North Inch, and visited the old church of St. John's. On Friday a congratulatory address from the Lord Provost and magistrates was transmitted to her Majesty, and a message was returned conveying her acknowledgments. The Marquis of Breadalbane visited her Majesty in the course of the forenoon at her hotel. In the afternoon the Empress left Perth for Dunkeld, accompanied by the Marquis of Beadalbane. Soon after her arrival at Dunkeld her Majesty, accompanied by the Duke of Atholl, drove to the Pass of Killiecrankie and Blair Atholl. Her Majesty slept at Blair Castle, and on Saturday morning proceeded to the north to visit the Marquis of Breadalbane at Taymouth Castle, where she was received with every mark of courtesy and distinction. During her visit the Empress planted two trees in the park, an oak and a Scotch fir. On Sunday her Majesty attended Divine service. On Monday her Majesty, finding her other engagements precluded a longer stay in the Highlands, purchased a number of articles as *souvenirs* of the neighbourhood, and accompanied by the Duke of Atholl, left Taymouth Castle for Stirling, where she visited the Castle, and was received with all honour by the military authorities and by loud cheering from the people. In the evening the Empress, still accompanied by the Duke of Atholl, left Stirling for Glasgow, where she arrived at 9 P.M., and took up her residence at the Queen's Hotel, being loudly cheered as she alighted from her carriage. On Tuesday morning the Duke of Hamilton arrived from Hamilton Palace and joined her Majesty at her hotel. The Lord Provost and magistrates afterwards had an audience and presented an address cordially welcoming the Empress to Glasgow. Her Majesty, in reply, returned her grateful thanks to the Lord Provost for the cordial sentiments embodied in the address, and expressed a sincere hope that the amity and kindly feeling which now subsisted between Great Britain and France would ever continue. Her Majesty said she only regretted that her stay among them should be so brief, but she trusted that on a future occasion she might have it in her power to visit her friend the Duke of Hamilton, when she hoped her stay would be of longer duration. Her Majesty spoke in English and in a very distinct tone of voice. Her Majesty then drove through the principal parts of the city, and visited the West End Park and the cathedral, where she remained some time. During her drive the Empress visited the warehouse of Sir James and Mr. William Campbell, where she made some purchases. On leaving the cathedral, the Empress and suite returned to the Queen's Hotel, which she shortly afterwards left in the Duke of Hamilton's carriage, for Hamilton Palace. Her Majesty was shown through the palace and grounds, and afterwards received an address from the Provost and magistrates of Hamilton. After luncheon the Empress returned to Glasgow and left by the seven P.M. train for Balloch, *en route* for Loch Lomond and Loch Katrine. On her arrival at Balloch the Empress was received by the 5th Company of Dumbartonshire Volunteer Rifles which had proceeded to Balloch on Tuesday night to form a guard of honour to her Majesty, by whom, as well as by a great crowd of spectators, her Majesty was loudly cheered. On Wednesday morning her Majesty left Balloch about 11 o'clock, and sailed up Loch Lomond as far as Inversnaid, from which she drove to Stronaclacher, and was rowed down Loch Katrine to the foot of the loch, where the Duke of Atholl's carriage was in waiting to convey her to Stirling On Thursday night the Empress arrived at Manchester from Glasgow, and was enthusiastically cheered by several hundred people. Her Majesty proceeded to the Queen's Hotel, and was expected to arrive in Liverpool yesterday. Apartments had been prepared for her Majesty at the Adelphi Hotel. It is expected that before the Empress takes her departure from England, her Majesty will pay a visit to the Queen, either at Windsor or Osborne. Her Majesty is very much improved in health, and expresses herself not only pleased but perfectly delighted with her first visit to the Highlands. Her Majesty is expected to return to France on the 10th inst.

THE CABINET.—A Cabinet Council was held on Monday at the official residence of Lord Palmerston in Downing Street. Another Council was held on Tuesday, and another yesterday.

PARLIAMENTARY MOVEMENTS.—Mr. Walter Meller, of Clapham Common, has offered himself for Southwark on Liberal Conservative principles. The three Liberal candidates, Mr. Scovell, Mr. Fawcett, and Mr. Layard, are still in the field, and actively engaged in pursuing their canvass. The Conservative party at Newcastle-on-Tyne have met, and come to a resolution not to take any part in the ensuing contest for the vacant seat. There are two candidates in the field for Pembrokeshire, Mr. Lort Philipps, who is said to be supported by the Earl of Cawdor, the late member, and Mr. Hugh Owen. Mr. Vyner, brother-in-law of Earl de Grey and Ripon, Mr. W. E. Forster of Burley Grange, and Mr. J. Roberts, of Piccadilly, London, are candidates in the Liberal interest for Ripon, in the room of the late Mr. Warre.

THE VOLUNTEER MOVEMENT.—The services of the London mounted corps formed by several gentlemen at the West-end, members of her Majesty's Hunt, having been accepted by the authorities, under the designation of the 1st Middlesex Light Horse Volunteers, a general meeting was held on Friday at Willis's Rooms, for the purpose of making the final arrangements for the organisation of the regiment.—The 1st Middlesex Engineers now muster nearly 550 strong, and will, probably, soon reach the full strength of six companies. The Artisan companies muster about 300, and are steadily increasing in number.—The 41st Middlesex, composed of officers and artificers attached to the Royal Small-arms Factory, Enfield Lock, marched on Saturday, headed by their band, to a field in the neighbourhood, where they were inspected by Colonel Ibbotson.—The first prize meeting of the West Middlesex commenced on the 19th ult. at the rifle practice-ground, Wormwood Scrubs. The first prize of 20*l.* and the silver medal were won by Mr. W. Watson; the second prize of 10*l.* and the bronze medal by Captain Dear, the third prize of 10*l.*, given by Mr. T. Hughes, by Lieut. G. Marriner, and the fourth prize of 5*l.*, given by Mr. H. G. Yatman, by Corporal Key. The Prize for Instructors was won by Sergeant Roberts, Captain and Adjutant Pennymore and Sergeant Stapylton dividing the second and third prize. On Saturday a competition took place for a silver challenge cup, value 25*l.*, presented by Mr. F. H. Bridgman, Captain Bridgman, and Ensign Phillips; the competitors being the four winners of the battalion prizes and eight of the next best shots, each man firing 10 rounds at 700 yards' range. The cup was won by Mr. Charles Hall, of the A Company.—The London Brigade, to the number of 450, headed by its band, and accompanied by the Cadet Corps, marched on Saturday in sections to Clapham Common. The shooting for the company medals commenced on the 19th ult., at the butts of the London Scottish and Civil Service Corps on Wimbledon Common. The Cadet Corps now numbers more than 100; and the School of Arms numbers more than 90 members. The recent ball was very successful.—The 4th Company of the Queen's Westminster had a shooting match on Tuesday at Wormwood Scrubs, when a rifle given by Capt. Vacher was won by Mr. Taylor, and two money prizes, given by Sergeant White and Mr. C. Stephenson, were won by Sergeant Ran and Mr. Woodcock.—The 5th Company of the 20th Middlesex had a match on Monday at Hornsey Wood House, when the 1st prize, a Whitworth rifle, was won by Sergeant Osborn, and the 2nd an Enfield rifle, was won by Private Thomas Young.—A numerously attended meeting was held a few days since on Little Saffron Hill, at which it was resolved to form a Rifle Corps to be composed of Temperance young men.—The Lambeth and Bermondsey Artillery Corps, which ranks as the 1st Surrey Artillery, now numbers 200 enrolled members, about a third of whom are artisans, and the rest belong to the trading and professional classes.—The 1st Surrey on Saturday marched out, preceded by their band, through Peckham, Camberwell, Denmark Hill, to Brockwell Hall, Dulwich, the residence of Mr. W. H. Cox. After going through their evolutions, and having partaken of refreshments provided by Mr. Cox, the corps marched through Half Moon Lane into Dulwich, and home again to Camberwell Green, where they were dismissed. On this occasion the Cadet Company marched with the corps for the first time.—The 8th Surrey met on Monday at the King's Head, Market Place, Epsom, when the prizes won at the recent contest were distributed to the successful competitors—Capt. Hastie; Messrs. Hards, H. Andrews, Peake, W. Alexander, G. R. Keeling, W. Keeling, Holland, W. Holland, Steadwick, Rasch, Sawyer, Sayers, Tidey and Chuter.—The first annual contest in connection with the Guildford Corps of the 13th Surrey took place on the 20th ult. at Blackheath, in the parish of Wonersh. The 1st prize, a silver cup, of the value of 10*l.*, the gift of Mr. Evelyn, High Sheriff of Surrey, was won by Private Jeffery; the 2d, a challenge medal, given by Mr. Bovill, M.P., was won by Lieut. Mangles; the 3d, a silver tankard, the gift of Mr. H. Wood, was won by Private Roker; and other prizes consisting of pieces of plate, &c., purchased with the subscriptions of Major Gill, Ensign Molyneux, and other gentlemen, were won by Privates Bond, De Wilton, Dart, Hooke, Moon, and Sergeant Impey.—On Monday evening a meeting was held at Aldershott, when it was unanimously resolved to establish a Mounted Corps for the districts of Aldershott and Farnham.—An influential meeting of the inhabitants of Surrey was held at Guildford on Saturday, when it was agreed to establish a Mounted Rifle Corps in the rural districts of the county.—The county of Essex has now 24 companies enrolled, including about 3000 men, scattered over the county between Stratford on the south and Saffron Walden on the north, and between Harwich on the east and Epping on the west.—The Sydenham corps, which has lately received a considerable addition by the enrolment of a body of artisans, equipped by private subscription, marched out for the first time with their new recruits in full dress uniform, and proceeded to the Crystal Palace, headed by their band, which is composed entirely of amateur performers, members of the corps.—The 3d Herts, or St. Alban's Corps, were presented on the 7th ult. with a silver bugle, the gift of Mrs. Ramsay, relict of the late Colonel Ramsay, of the East India Service.—The 3d Berks (Newbury), had a contest for various prizes at the butts on Crookham Common on Wednesday and Friday of last week. The 1st prize of 5*l.* was won by Private W. Fisher; the 2d prize of 3*l.* was won by Private Pond, and the 3d of 1*l.* 10*s.* by Private D.

Jones.—The 13th Berks (Forest) Company, which has been established for Ascot and the neighbouring parishes, had a meeting in the Grand Stand, at Ascot, on Tuesday, to receive from the committee a report of the names of gentlemen disposed to act as officers. Sir W. G. Hayter took the chair, and among those present were the Belgian Minister, Major-General Seymour, Major Scott, and others. Resolutions were passed, appointing Major Scott, captain-commandant; Victor Van de Weyer (son of the Belgian Minister), lieutenant; and Mr. Franklyn, of Windsor, ensign. The corps has received a donation of 25*l.* from the Prince Consort, and an annual subscription of 10*l.* from the Belgian Minister.—The Eton College Corps, numbering nearly 300, assembled in the Quadrangle of the College on the 22d ult., and were presented with a silver bugle, the gift of Lady Carrington.—The services of a company of Mounted Rifles having been accepted by her Majesty for the town and neighbourhood of Southampton, active steps have been taken for completing its organization. —The prize shooting of the 4th Hants (Havant and Emsworth) took place at their butts on Turner's Marsh, on Friday and Saturday last. The prizes, some of which were of considerable value, were won by Lieut. Longcroft, Lance-Corporal Stafford, Sergeants Collis and Cortis, Privates G. Furnice, Longlands, and Jackman.—The 7th Sussex met at Horsham on the 6th ult., and were presented with a silver bugle, given by the ladies of the town and district. The distribution of prizes won at the late shooting, consisting of several silver cups and rifles, took place on the same day in the grounds of Mr. T. Sanctuary. The prizes were won by Capt. Pipon, Ensign Padwick, Lieut. Broadwood, Privates Holmes, Mitchell, and Greenfield.—The 3d Cumberland or Skiddaw Greys, after being inspected by Colonel Wake, had a shooting match at Keswick a few days ago. The prizes were won by Corporal Gate, Sergeant Gibson, Privates Wodehouse, Litt, Wise, Messenger, Postlethwaite, Milburn, Crosthwaite, Clark, and Fisher.—The 2d (Whitehaven), 7th (Workington), 8th (Cockermouth), and 10th (Egremont), forming the western portion of the Cumberland Battalion, were inspected during the past week at their respective localities by Colonel Wake.—The 1st Corps of Lancashire Engineers was sworn in at St. George's Hall last week in the presence of a dense crowd of spectators.—A company, 50 strong, has been organised at Brandon, of which Lord William Powlett has been chosen Captain; Baron de Bliss, First Lieutenant; Mr. J. Gates, Second Lieutenant; and Mr. D. Garner, Ensign.—A public meeting was held on the 20th ult. at Sheffield, convened by the Mayor, on the requisition of about 160 individuals and firms, comprising nearly all the most considerable men of all sects and parties in the town, when it was resolved to form another corps for the town and neighbourhood, the number already enrolled being incommensurate with the population and importance of the town.—An Engineer Company has been established at Sheffield in connection with the School of Art, and Rifle Companies are successfully organising at the adjoining villages of Stannington and Wortley.—The first North York competition, left incomplete on Tuesday week, was resumed on the 22d ult. on the practice ground on Langton Wold. The first prize, a sweepstakes, for which there were 40 competitors, was won by Private W. Morrell, Private T. Langstaff, and Private R. Reed. The next prize, the Officers' Purse, was shot for by nearly the whole company, and was won by Private Thomas Morrell.—The 3d West Riding (Bradford) Corps has received permission to enrol members of a cadet company to be formed in connexion with the regiment.—A shooting match took place on the Knaresborough shooting ground on the 21st ult. between two officers and 10 staff sergeants of the 5th West York Militia, and two officers and 10 men of the Ripon Rifle Corps, when the latter won by a majority of 120 to 90.—The two companies already established at Rotherham, number from 170 to 180 men; a third company is forming at Parkgate and a fourth company is likely to be established.—The formation of a Yorkshire Rifle Association is now under consideration, with every prospect of being successfully carried out. A meeting of officers commanding battalions was convened for the 28th ult. at York, but has been postponed to the 12th inst. in consequence of a communication from Lord Elcho to the effect that a meeting of the Council of the National Association was shortly to be held for the purpose of connecting the National Rifle Association with the local county associations.—The services of the newly-formed company at Stone, near Stafford, have been accepted by her Majesty. This company raises the total in Staffordshire to 40 companies.—The members of the Stamford Corps held a competition a few days since for a silver cup, presented by the Mayor, and two money prizes. The cup was won by Lieutenant Phillips, the second prize by Private F. Simpson, jun., and the third by Private Spriggs.—The Falkingham Corps have also had a competition for a series of prizes. The first, a badge of honour, cross muskets and crown, was won by Ensign Cragg, the second prize of 3*l.* 3*s.*, by Private Green, and the third of 2*l.* 2*s.*, by Private Richards.—The Lincoln Corps had a competition last week for prize silver cups, given to the first and second companies by Major Amcotts and Captain Trollope. Major Amcott's cup was won by Private Ladbrooke, and Captain Trollope's cup by Private Drury.—The Ipswich, or 1st Suffolk, was inspected a few days since, by Lieut.-Colonel Ibbetson, Assistant Inspector.—A silver challenge cup of the value of 12 guineas, given by the ex-Mayor of Lynn, has just been shot for by the Volunteers of that town, Corporal Cooper being the winner.—The 1st Cambridgeshire having attained its *maximum* strength of 100 members, steps are taking for the formation of another company, with a view to the organisation of a battalion.—The members of the Cambridge Working Men's Corps are to be equipped at the cheap rate of 2*l.* 5*s.* each, exclusive of their accoutrements.—The ladies of Wisbech are making a subscription for the purchase of a present of a silver cup or statuette to be shot for by the Volunteers of that town.—The members of the Newmarket Mounted Corps have been sworn in during the past week.—A public meeting was held at Taunton on Friday, at which it was resolved to form a Mounted Corps for that division of Somerset.—The Williton or 9th Somerset were inspected on the 22d ult. by Major Hume at Orchard Wyndham, the seat of the Countess of Egremont, who presented the corps with a silver bugle on the occasion.—The 1st, 2d, and 3d Pembrokeshire and the 1st Haverfordwest have been united into one battalion, for administrative purposes.—The 17th Glamorgan or Vale of Neath Corps on Monday presented Capt. Evans, their commander, with a handsome sword and shako. The presentation was made by Mrs. Griffith in the name of the subscribers. Captain Evans afterwards entertained about 300 persons, including the members of the corps, to a champagne dinner.—North Wales will soon boast a goodly array of Volunteers. Carnarvonshire and Merionethshire have already a large number of enrolled members; and Denbighshire has already raised four companies, and two others are in course of formation.

Foreign.

FRANCE.—The *Moniteur* of Sunday published the following Imperial decree:—

"Napoléon, by the grace of God and the national will Emperor of the French, to all present and future, greeting. Desiring to afford to the great bodies of the state a more direct participation in the general policy of our Government, and a marked proof of our confidence, we have decreed and decree as follows:—Art. 1. The Senate and Corps Legislatif shall annually vote an Address in reply to our Speech at the opening of the Session. 2. The Address shall be discussed in presence of Government Commissioners, who will give to the Chambers the necessary explanations on the home and foreign policy of the empire. 3. To facilitate to the Legislative Body the expression of its opinion in framing laws and the exercise of the right of amendment, art. 54 of our decree of the 22d of March, 1852, is revived, and the regulation of the Legislative body is modified in the following manner:—Immediately after the distribution of the *projets de loi*, and on a day fixed by the President, the Legislative Body, before appointing its committee, will hold a secret committee meeting; a general discussion will be opened on the *projets de loi*, in which the Government Commissioners will take part. This regulation is not applicable either to *projets de loi* of local interest or in cases of urgency. 4. With a view to render the reports of the debates in the Senate and Legislative Body more prompt and more complete, the following project of *Senatus-Consultum* will be brought before the Senate:—The reports of the sittings of the Senate and of the Legislative Body, drawn up by secretary-reporters, placed under the authority of the President of either Chamber, will be sent every evening to all the journals. Moreover, the debates of each sitting shall be taken down in shorthand and published *in extenso* in the official paper of the following day. 5. As long as the Session lasts the Emperor will appoint Ministers without portfolios to defend the *projets de loi* of the Government before the Chambers, in concert with the members of the Council of State. 6. The Ministry of our Household is suppressed; its functions are annexed to those of the Grand Marshal of the Palace. 7. The Ministry for Algeria and the Colonies is suppressed. The administration of the colonies is annexed to the Ministry of Marine. 8. All functions which do not directly concern Public Instruction or the special establishment of the University are taken away from the Ministry of Public Instruction and placed under the Ministry of State. 9. The administration of the Government studs (*haras*) is taken away from the Ministry of Agriculture and Commerce and placed under the Ministry of State. 10. Count Chasseloup-Laubat, ex-Minister of Algeria and of the Colonies, is appointed Minister of Marine and of the Colonies, in the stead of Admiral Hamelin, called to other functions. 11. Admiral Hamelin is appointed Grand Chancellor of the Legion of Honour, in the stead of Marshal Pélissier Duke of Malakoff, called to other functions. 12. Marshal Pélissier, Duke of Malakoff, is appointed Governor-General of Algeria. 13. The Ministers without portfolios have the rank and salary of Ministers in office; they form part of the Council of Ministers, and are lodged at the expense of the State. 14. Our Minister of State is charged with the execution of the present decree. Done at the Palace of the Tuileries the 24th of November, 1860. "NAPOLEON.

"Countersigned, A. WALEWSKI, Minister of State."

The *Moniteur* also publishes Imperial decrees making the following appointments:—Count Walewski, to be Minister of State, in the room of M. Fould, resigned; Count de Persigny, to be Minister of the Interior, in place of M. Billault, appointed Minister without portfolio; M. Forcade la Roquette, to be Minister of Finance, in place of M. Magne, appointed Minister without portfolio; M. Benedetti, Director of Political Affairs in the department of Foreign Affairs, to be Councillor of State extraordinary; and Count Flahault, to be Ambassador in London, in the room of Count de Persigny. It is rumoured that the Prince de la Tour d'Auvergne, French Ambassador at Berlin, will shortly replace M. Thouvenel as Minister for Foreign Affairs. M. Rouland and M. Rouher continue in office as Ministers of Public Instruction and Agriculture and Public Works. The Emperor honoured the French Opera with his presence on Monday evening, and was received both outside the house and inside with more than ordinary enthusiasm, a fact which is attributed by the Ministerial journals to the liberal policy promulgated in the imperial decree. The Emperor has since left Paris for Compiègne, where his Majesty intends to pass a few days. Prince Napoleon was to leave Paris on Thursday on an excursion to Switzerland. His Imperial Highness proceeds to Prangin, near Lake Constance, where he has a residence. Mr. Bright, M.P., has arrived in Paris. Mr. Cobden has also returned to Paris from his visit to Nantes. It is reported in military circles that a fourth battalion is about to be added to each regiment of infantry in the French army, and that a camp of 25,000 men is about to be formed in the Landes of Lameurezau, near Bagnères-en-Bigorre, to be commanded by Marshal Niel. Rear-Admiral Labrousse is appointed Inspector General of steam-engines in the Imperial navy. He is to inspect every steam-vessel in the French ports and is to be assisted in each port by the senior officer in command of a steam-vessel and by an engineer selected by the Maritime Prefect.—The Rev. Dr. Cureton, Canon of Westminster, has been elected a foreign member of the French Institute, in the room of M. Lobeck, of Königsberg; and M. Lassen, of Bonn, has been elected a foreign member in the room of Professor H. H. Wilson.

SPAIN.—The marriage of the Infante Don Sebastian and the Infanta Dona Christina took place on the 19th ult. with considerable pomp in Royal Palace, in the presence of the Queen and King, the Patriarch of Indies officiating. The Cortes has voted a pension to Don Sebastian. The man who fired at the Queen has been declared exempt from criminal responsibility on account of insanity, and has been sentenced to perpetual confinement. The question of the limits of the Ceuta territory has been definitively arranged, in conformity with the Treaty of Peace with Morocco.

BELGIUM.—The *Moniteur Belge*, in its description of the reception given to the Empress of Austria by the Belgian royal family on her arrival at Antwerp, having stated that the Duchess of Brabant and the Count of Flanders had knelt upon the ground whilst kissing the hand of her Imperial Majesty, a considerable sensation has been produced throughout the country by the circumstance, which was considered to involve the honour and dignity of the kingdom. On Friday the subject was brought before the Legislative Chamber by no less a personage than the ex-Minister for Foreign Affairs, Count Vilain XIV., but the Ministers declined to discuss it on the ground that it was purely a personal and private question. It is now stated that the Duchess and the Count did not kneel, but simply bent to kiss the Empress's hand.

HANSE TOWNS.—A convention was concluded between the Hanse Towns and Sardinia on the 20th September for the extension of their mutual commercial relations. This convention has been ratified within the last few days.

SWITZERLAND.—A Papal memorandum has been addressed to the Federal Council, maintaining afresh the principles of Rome in reference to the Bishopric of Ticino as explained by the representatives of the Holy See at the last conference. The Sardinian Government, in a note addressed to the Federal Council, protests against the sequestration of Church property in Ticino, and demands the re-establishment of the *status quo ante*.

AUSTRIA.—It has been reported for some days that the Austrian Ambassador in Paris has had several interviews with the French Minister of Foreign Affairs and the Sardinian Ambassador, with a view to open negotiations for the sale of Venetia. The official *Wiener Zeitung* contains an Imperial decree appointing 18 Obergespanns, and a Ministerial ordinance dated the 26th ult., ordering the speedy commencement of the elections to the new municipalities in the German Austrian provinces on the basis of the communal law of 1849. Count Forgack, Governor of Moravia, has been appointed Governor of Bohemia, and Count Johann Cziraky has been appointed Judex Curiæ of Hungary, an office nearly equivalent to that of Minister of Justice. Count Apponyi, Austrian Envoy Extraordinary in London, has been appointed Ambassador to the same Court, and Count Leopold Walkenstein, Councillor of the Empire, has been appointed Captain of the Province of the Tyrol.

THE TYROL.—The organic statute of the Diet of the Tyrol, published in the official journal of Vienna, enacts that the Diet shall consist of 56 members, of whom 14 are to be elected by the clergy, 14 by the nobles, 11 by the burgesses, 3 by the Chambers of Commerce, and 14 by the peasants, the governor of the province being appointed by the Emperor.

HUNGARY AND CROATIA.—On Monday the 26th ult., while Count Carolyi, Obergespann of Szathmar, was passing through Debreczin, a torchlight procession, accompanied by bands of music, was formed in his honour. These demonstrations caused a serious disturbance which led to the interference of the military, and the arrest of from 20 to 30 persons. Another disturbance with loss of life, took place at Eperies on the same evening. Contrary to the reports in circulation, the conference which is to meet at Gran in order to arrange the mode of election to the Hungarian Diet will assemble on the 10th inst, under the Presidency of the Cardinal Primate of Hungary. The congregation of the Comitat of Pesth is to assemble to-day, the 1st inst, under the Presidency of Count Carolyi, who has accepted this office. The principal inhabitants of Agram were to hold a conference on the 24th ult, in order to settle the details in reference to the approaching elections to the Diet, and also the question of the relations between Croatia and Hungary.

ITALY.—The King's order of the day in reference to the Garibaldian army caused such general discontent not only among the Garibaldians themselves, but also among the people at large, that the King has found it necessary to issue the following decree in order to prevent an outbreak:—

"Art. 1. The Italian Volunteers actually under arms will form a body separate from the regular army. The duration of the time of service for soldiers shall be two years. The officers shall have their special degree of service and promotion. 2. The advantages and obligations, both of soldiers and officers, shall be equal with those of the regular army. 3. A mixed commission shall determine the rank and standing of the officers of the Volunteers, regard being had to their services, and antecedents. 4. The Government reserves to itself to enter Volunteer officers in the regular army; but in such a way as to respect the rights acquired by the officers of the regular army. 5. The preceding arrangements do not dispense any one from the civil nor military obligations which he may owe to the State, &c."

By another decree the octroi tax on every kind of grain, manufactured flour, rice, and pulse is abolished, thus conferring an immense boon on the lower classes. The octroi tax on other articles is to be reconsidered, and adjusted so as to be more in harmony with the new Customs' tariff, and better calculated to reduce the price of the food of the people. The deputation from Turin presented the address from the Sardinian Parliament to the King on the 27th ult. His Majesty received with satisfaction the expression of the national sentiment. His Majesty's departure, which was fixed for Tuesday for Sicily, has been again deferred on account of bad weather. The offices of Councillors of Lieutenancy without portfolio have been suppressed. The Council of State has been convoked for to-morrow the 2d inst., when the project of Signor Farini for the division of the State of Naples into districts which has already been discussed and adopted by the Council of Lieutenancy will be submitted to it. The substitution of the title of King of Italy for that of King of Sardinia has not been delayed by diplomatic considerations, but as a mark of respect to the Italian Parliament, to which the Ministry will reserve the right to proclaim Victor Emmanuel King of Italy. 1700 Garibaldians, who have chosen to return to their homes, have embarked for Genoa, and the embarcation of as many more was to take place on Tuesday. General Sirtori has issued an order of the day, requesting the officers and soldiers of the Southern army to abstain from making any demonstration. A Garibaldian demonstration took place in the Teatro Nuovo on the 21st ult. The bands infesting the Abruzzi have been increased, partly by disbanded Royal soldiers and partly by former Garibaldians, and disturbances have occurred in the three towns of Tagliano, Celano, and Tagliacozzo, but the Sardinian General Pinelli has entered Avezzano, the chief town of the district, and tranquillity has been effectually restored. The report of the French papers, that the disturbances had been repressed by force, is contradicted. Many persons who have escaped from Gaeta have taken refuge at Pozzuoli and Baiæ. The Cardinal Archbishop of Naples is expected to return to the capital. Signor Mazzini left Naples for Genoa and London on the 20th ult. The following modifications have been made in the Council of Lieutenancy:—Vintimiglia, Director of the Customs; Dafflitto, Director of the Interior; and Silvio Spaventa, of the Police. It is said that the occupation of Terracina by the French troops is not an act of intervention by France, the entire province of Velletri, of which Terracina is a part, having been occupied by the French at the desire of the Roman Government, and by virtue of an agreement between France and Sardinia. The garrison of Gaeta made a sortie on Thursday in order to capture the strategical positions in the suburbs, but were repulsed by the Sardinians with great loss. The rumour that Francis II. has fled from Gaeta has been widely circulated during the week, but the report still appears to be premature. The whole Diplomatic Corps, however, with the exception of the Spanish Minister, quitted Gaeta for Rome on the 23d ult., at the express desire of the King, who did not wish them to remain in a city about to be bombarded. The Pontifical Nuncio and the Ambassadors of Austria, Prussia, and Russia had previously received the grand *cordon* of the Order of St. Januarius from King Francis II. The Pope, dissatisfied with the departure of his Nuncio from Gaeta, will send another representative to that place. The majority of the Cardinals are said to be opposed to the policy of Cardinal Antonelli. It is also asserted that dissension exists between Cardinal Antonelli and Monsignore de Merode. It is the general conviction that the Pope will remain for some time without temporal government. Sardinian custom houses will be established round Rome on the 1st December. Although the duties will be light, a general rise has taken place in the prices of merchandise. Two French regiments are preparing to depart, but it is said that others will be sent to replace them. The *Monitore Toscano* publishes a despatch announcing that about 40 volunteers from the Duchy of Castro had invaded the town of Aquapendente. They disarmed the Pontifical gendarmes, and hoisted the arms of Savoy. The Papal Governor escaped, but 19 gendarmes were made prisoners. The Municipality of Ancona has opened a subscription for the construction of a war vessel, which the March provinces will offer to the Sardinian Navy in commemoration of the annexation of those provinces to Sardinia. The Royal Commissioner of Umbria has issued a decree, laying an extraordinary tax of 2 per cent. on the revenues of all landed property belonging to the episcopal sees, abbeys, benefices, convents, seminaries, and religious fraternities of all denominations in the provinces under his authority. Prince Murat has published a letter relative to the kingdom of Naples, in which while declaring himself an advocate of Italian unity, he pronounces for the system of federation which would leave the autonomy of the different states untouched. He also condemns in strong terms the policy which the Sardinian Government has followed towards the Two Sicilies.

SICILY.—The Sicilian journals contain a decree, still bearing the signature of Garibaldi, by which the operation of the Papal bull, *Elsi Pastoralis*, of Benedict XIV., hurled against heterodoxy, is henceforth to cease; liberty of conscience is proclaimed, and the Albanian Greeks now in Sicily are authorised to exercise their worship in perfect freedom. King Victor Emmanuel's proclamation, accepting the plébiscite, was officially published at Palermo on the 10th, and the first Piedmontese troops arrived there on the 14th ult. and were received by the people with immense enthusiasm.

TURKEY.—The documents connected with the French loan have been signed by the Porte, and were to go to Paris on the 21st ult. Great doubt was still prevalent as to the conclusion of the affair. The collective note of the Ambassadors to the Porte, urging reforms, originated with Sir Henry Bulwer, and was well received. Ferhad Pacha, who was recently tried at the instance of Riza Pacha, has died suddenly. It is suspected that he was poisoned. The Chief of the Eunuchs has been degraded for violently assaulting another official of the Palace. The Bulgarian community propose to secede to Roman Catholicism, because the Porte has refused them a separate patriarchate. A heavy storm had passed over the Black Sea. Many wrecks are reported.

SERVIA.—The *Berat* of investiture has been read at Belgrade in the presence of the Pacha, the Foreign Consuls, and other dignitaries. Prince Michael replied that he should reign according to the double tradition of his dynasty—viz., fidelity to the Suzerain Power, but the jealous maintenance intact of the rights of the Servian people. A new Ministry has been formed as follows:—Philippo Cristitch, Foreign Affairs; Nicholas Cristitch, Interior; Gronitch, Justice; and Grabrilowitch, Finance. The Senate is entirely changed.

CIRCASSIA.—News has been received at Constantinople from Circassia of the signal failure of General Bariatinski's expedition against Daghestan. Great loss was suffered by the Russians.

CAPE OF GOOD HOPE.—Accounts from Cape Town to the 22d Oct. state that Sir George Grey would leave Cape Town shortly for Natal and for Kaffraria, which is to be proclaimed an independent colony. It is reported that his Excellency is under orders from the Home Government to proceed to Canada; that Mr. Stevenson, Governor of Mauritius, will succeed him at the Cape; and that Mr. Rawson will go the Mauritius, where he at one time resided. It is apprehended by some of the colonists that the withdrawal of Sir G. Grey will be the signal for rebellion in Kaffreland. Admiral Keppel is at the Mauritius in the Brisk, which has captured a slaver with 846 slaves. It is asserted that Commodore Eden is to have the command of the station. The Lyra has also taken a prize on the coast. Paymaster Seveke, of the Boscawen, was unfortunately drowned in crossing the bar at Zanzibar, with despatches for Dr. Livingstone, who was pursuing his discoveries with his usual success. Debentures for 150,000*l.*, to be called for in London, are to be issued on the 1st of January. Cape Colony and Natal were preparing for the representation of the South African colonies in the forthcoming International Exhibition in London in 1862. The Bishop of Cape Town had convoked the Synod for January next. A petition from the wine farmers to the Queen complaining of the new Commercial Tariff was sent by this mail. The vine disease was making its appearance, and fresh fears for the vintage were excited. Dutch weights and measures were to be illegal after the 1st January next. The Eastern Province was loud in its demands for separation. Demonstration meetings had been held on the subject.

CHINA.—A voluminous series of despatches has been received from the Earl of Elgin dated from Pa-li-Chiao, the head-quarters of the Allies, 8 miles from Pekin, to Sept. 23d. They state that Mr. Loch, his lordship's private Secretary; Mr. Parkes, principal Interpreter and Consul at Shanghai; Mr. Bowlby, the *Times* Correspondent; Mr. de Norman, attaché to Mr. Bruce; Captain Anderson, of Fane's Horse; and Captain Brabazon, Deputy Assistant Quartermaster General. Colonel Grandchamps of the French army, the Abbé Duluc, M. Delauture, and some soldiers of the French escort, were treacherously made prisoners on the 18th September, while engaged in choosing camping ground, and were taken to Pekin, where they are well treated. An engagement was immediately fought on the 18th at Chang-tsia-wan and another at Tang-chow, on the 21st of September. On both occasions 30,000 Tartar Cavalry advanced under the command of Prince Sankolinsin in person, and were completely routed by the Allies. 2000 Tartars were killed and 50 guns taken. The Allies had only 2 killed and 48 wounded. On the next day the Chinese sent in a flag of truce, with the provisions for a treaty. Lord Elgin demanded the release of the prisoners before negotiating. Prince Kung, the Emperor's brother, had since been appointed Chief Commissioner to make peace, but Lord Elgin refused to negotiate or stay military operations until the prisoners were restored. Tea to the value of 250,000*l.* sterling was taken at Chang-kia-wan. All was quiet at Shanghai on Oct. 4. The rebels were threatening Hang-chow. The despatches and their enclosures fill several columns of the daily papers, and do not admit of condensation, but all the most interesting facts are stated in the following despatches from Sir Hope Grant, the Commander in Chief, to the Secretary at War.

"Head-Quarters, Chang-tsia-wan, Sept. 20.

"Sir,—I have the honour to report that I left Tien-tsin on the 9th inst., with 700 infantry, 600 cavalry, and two batteries of artillery; 3000 French troops followed one march behind me; and two days later Sir John Michel marched, with a regiment of cavalry, a 9-pounder battery, and the 2d Infantry Brigade. On the 13th inst. I reached Hooseiwoo, 40 miles from Tien-tsin, and, as several letters had been received by Lord Elgin from some fresh Commissioners of high rank, I halted while Messrs. Parkes and Wade went on to meet them at Tangchow, 25 miles distant. On the 15th these gentlemen returned, having made satisfactory arrangements with the Chinese Commissioners, by which it was agreed that the allied forces should halt at Chang-tsia-wan, five miles short of Tangchow, to which place the Ambassadors should advance, with an escort, and sign the convention. On the 16th Sir J. Michel's force arrived, and on the 17th we encamped at Matow, five miles short of Chang-tsia-wan. The forces consisted of Lieut.-Colonel Barry's Armstrong battery, Capt. Desborough's 9-pounders, Capt. Stirling's 6-pounder battery, the Cavalry Brigade, and the 2d and 4th Infantry Brigades; and 1200 French, with a light battery. From the above, however, three 6-pounders and the 60th Rifles had been left at Hooseiwoo, to hold that place, where I have a depôt. Mr. Parkes rode on to Tangchow to arrange matters for Lord Elgin's reception, and to make sure of the agreement as to our advance, that a collision might not take place by inadvertence, it having been settled that the Chinese army should fall back from Chang-tsia-wan. Mr. Parkes was accompanied by an escort of Fane's Horse, under Lieut. Anderson, and by Mr. Loch, private secretary to Lord Elgin. On my part I sent Lieut.-Colonel Walker, acting Quartermaster-general, to fix the site of our camp with the Chinese authorities, and Deputy-Assistant-Commissary-General Thompson to receive the promised supplies for the force. At daybreak on the 18th I marched, and after going about four miles I came in sight of a very large force of Chinese, both cavalry and infantry. While halting to form my force, Mr. Loch galloped in with three Sowars, and informed me that on going into Tang-chow the previous day they had found everything quiet on the road; the Commissioners had agreed to all Mr. Parkes's arrangements; and that, accordingly, leaving Lieut. Anderson and his Sowars at Tangchow, Messrs. Parkes, Loch, Thompson, and Lieut.-Colonel Walker, with five men of the King's Dragoon Guards, had come out to meet us, and show us our camping ground, which was a mile and a half south of Chang-sia-wan. On arrival at that spot, however, they found it occupied by a large Chinese army, while batteries had been hastily thrown up and armed, so as to flank the proposed site of our camp. From the commanding officer Mr. Parkes could obtain no satisfaction, so he started back to Tang-chow, with an orderly of the King's Dragoon Guards, to see the High Commissioner and ask the reason of this move. Mr. Loch came on to tell me of this, and Colonel Walker and Deputy-Assistant-Commissary-General Thompson remained on the ground with four men of the King's Dragoon Guards and one Sowar, where they were to await Mr. Parkes's return. It was only now that I learnt that Mr. De Norman, Attaché to her Majesty's Legation, and Mr. Bowlby, correspondent of the *Times* newspaper, had gone to Tang-chow with Mr. Parkes, and remained there with Lieut.-Anderson. Mr. Loch volunteered to return with any orders, and Capt. Brabazon, Deputy-Assistant-Quartermaster-General, R.A., volunteered to accompany him. They accordingly started, under a flag of truce, for Tang-chow, with my orders for Mr. Parkes and the whole party to return at once to head-quarters. Meanwhile the Chinese Cavalry advanced in great numbers on both flanks, and their infantry poured down on our right front, which was enclosed ground and carefully intrenched. I was extremely anxious not to engage, for fear of compromising our officers, who were in their lines. I therefore covered both my flanks with cavalry and ordered the baggage to be hastened on and massed on a village in our rear, where it could be defended by a small force. This latter operation occupied nearly two hours, during which time the enemy's cavalry had almost entirely surrounded our forces. Sufficient time had elapsed for all of our party to return from Tang-chow, and I became anxious for their safety, when suddenly a commotion appeared in the enemy's line. The guns and matchlock men in their centre opened fire, and Colonel Walker's party dashed out of the midst of their ranks. Colonel Walker reported that while waiting for Mr. Parkes, a French Commissariat officer joined him, who was suddenly set upon and cut down by a Chinese soldier, and, on his riding up to prevent his being murdered, his own sword was snatched from his scabbard, and some men tried to throw him off his horse. Seeing that it was a deliberate attempt to assassinate the whole of them, Colonel Walker set spurs to his horse and galloped out with his party, under the fire of the Chinese line. One of his men was wounded, and one horse, Mr. Thompson receiving a spear thrust in his back; but they fortunately managed to reach our lines, their wounds not being severe. It was now useless to wait longer, and the attack was immediately formed. General de Montauban advanced to turn their left, and with him I sent a squadron of Fane's Horse, under Lieutenant Cattley. On the centre the 9-pounder battery opened, supported by a squadron of King's Dragoon Guards, and part of the 99th Regiment advanced up the road. The Armstrong battery with the 15th Punjab Infantry took ground to the left, while Sir John Michel, with the 1st Sikh Cavalry, three 6-pounder guns, and the 2d (Queen's), made a wide flank movement on the extreme left, so as to turn the right of the enemy. The action commenced simultaneously on all points, and it was now apparent that the Chinese had carefully prepared a very treacherous reception for our forces. An intrenchment, skilfully concealed by natural obstacles, extended on our right and left for several miles, and was armed with numerous guns. Their cavalry hovered in large masses on our entire left flank, so that Sir J. Michel was unable to perform the flank movement that had been intended until the 1st Sikh Cavalry had, by a brilliant charge, discomfited the Tartar horse, and his force, advancing, had driven them back for some miles. Finding his position to be such, I caused the Armstrong battery and the 15th Punjab Infantry to take ground still more to the left, and with them I turned the right of the enemy's intrenchment, who thereupon fled with considerable precipitancy. I then sent the Armstrong guns and the reserve cavalry to join Sir J. Michel, who, after making a circuit of six or seven miles, joined me in front of Chang-tsia-wan at a later hour. Meanwhile the French had turned the left by a very extended sweep, and were advancing steadily up, captur

ing many guns, while the 99th with the 9-pounder battery joined me in the centre of the enemy's position. The 15th Punjab Infantry pushed on with much spirit, captured several guns in the act of retiring, and eventually advanced through Chang-tsia-wan, taking several large camps on the outside. Here my force halted. The French being much exhausted by their extensive movement had halted on the Chinese position. The enormous extent of country covered by the enemy, who showed more than 20,000 men, did not permit me to use my force with as good effect as I might have done, as it was too small to allow of its being scattered. The loss of the enemy is estimated at 600 killed, while 75 guns fell into our hands. The French force encountered chiefly infantry, who, on being driven back, were charged most gallantly by Lieut. Cattley's squadron, of whose conduct General De Montauban has written to me in the very highest terms. The conduct of the rest of the troops was also most excellent, and I would more particularly mention the 15th Punjab Infantry, commanded by Lieut. Randall, who, under my personal observation, advanced with great steadiness and kept their position to the front throughout the day. Mr. Wade went yesterday to Tang-chow to try and gather tidings of Mr. Parkes's party, but the Prefect denied all knowledge concerning them. A Chinaman, however, was brought in to-day who states that he heard that upwards of 20 foreigners went after the fight to Pekin. If this is true, we have every reason to hope for their ultimate safety. I was compelled to leave a good force at Tien-tsin, lest the sudden withdrawal of so many troops should allow a disturbance to arise there. This in effect took place, but being judiciously met by Sir R. Napier, everything is again quiet there, and I have directed that officer to join me with two regiments of infantry, leaving two and a half regiments, with two batteries of artillery, under Brigadier Staveley, at Tien-tsin.—I have, &c.

"J. HOPE GRANT.

"Lieut.-General, Commander of the Forces."

"Head-quarters, Camp near Tangchow, Sept. 22.

"Sir,—I have the honour to report that, after the action of the 18th inst., I remained in Chang-tsia-wan for two days, during which time the 1500 French troops left at Hoosiewoo joined us, and some convoys arrived in camp, together with intelligence of a flotilla of junks coming up the Peiho with further supplies. From reconnaissances on the 19th and 20th we had ascertained that the Chinese army was encamped in very large numbers about four miles off, on the road between Tangchow and Pekin, and on both sides of the canal which runs from the Peiho to the latter city. At daybreak on the 21st I marched from Chang-tsia-wan, and, parking the baggage in a village two miles in front, I was there joined by the French, who advanced on the right. Soon after passing Tangchow the French troops got under fire of the Chinese works thrown up to protect a fine bridge crossing the canal, and on the Imperial high road to Pekin. At this point the enemy's infantry appeared in considerable force. On the left the Tartar cavalry showed in large masses, and advanced rapidly until within 200 yards of our guns, which hastily unlimbering, drove them off with a fire of canister, assisted by skirmishers thrown forward from the 2d (Queen's). The Cavalry Brigade, which I had kept échelonned away on the left to guard that flank, was now moving up, and the enemy's cavalry, driven away from the right by our fire, hung in large masses on our left front, affording an excellent opportunity for our cavalry to charge, which they promptly seized, the King's Dragoon Guards, under Lieutenant-Colonel Sayers, in particular, inflicting a very heavy loss on the enemy. On their left Fane's Horse charged a similar body with great gallantry, while the 1st Sikh Cavalry, under Major Probyn, supporting Fane's Horse, effectually turned the right of the Chinese army. The enemy, though defeated on the spot, yet still remained in front, in clouds of horsemen, who though constantly retiring from the advance of any party of our cavalry, however small, never allowed more than 1000 yards to intervene between us, and showed a steady and threatening front. At this time I had with me the cavalry, the 4th infantry brigade, and three Armstrong guns; the rest of the artillery, with the 2d Brigade, having been left in the centre, with directions to feel the French left. With the three Armstrong guns, under Captain Rowley, we fired occasional single shots on their thickest masses. These shots, fired singly, at slow intervals, served admirably to illustrate the good qualities of the Armstrong gun; not one failed to strike the thick masses of the enemy, at once dispersing them from the spot. Thus advancing, the cavalry was brought to a check by the fire of a camp, which was taken by the 99th Regiment, under Major Dowbiggin, and which proved to be the head-quarters of some of the Imperial princes. This, with several others in the neighbourhood, was burnt by our troops, and the Chinese army retired upon Pekin. We then rejoined our right, which had kept in line with the French, who had carried the bridge, inflicting much loss on the enemy. Forty-three guns were taken during the action, and the loss of the Chinese was very severe. On the right and left were their heaviest losses, but all along the centre small groups of dead showed the effect of the artillery fire, which had followed their movements till they finally retreated. Our loss is 2 killed and 29 wounded—chiefly slightly. I should wish most particularly to bring to notice the very excellent services of the King's Dragoon Guards. The country is extremely unfavourable for cavalry at present, partly from the number of ditches, and partly on account of the crops of maize and millet having been recently cut, leaving sharp pointed stubble, most injurious to horses, and rendering their rapid movement very difficult; their charge was, however, most effective, and they surmounted these obstacles in a most creditable manner.

"I have, &c., J. HOPE GRANT,

"Commander of the Forces."

KILLED AND WOUNDED.—In the action of the 18th September—19 wounded (1 since dead), 1 missing. In the action of the 21st September—2 killed, 29 wounded.

OFFICERS WOUNDED.—*1st King's Dragoon Guards.*—Captain E. Bradbury, severely. *1st Battalion Military Train.*—Captain W. R. Goodall, severely, contusion of right shoulder by a large gingall ball. *Fane's Horse.*—Lieut. Luard, slightly. *15th Punjaub Infantry.*—Lieut. G. A. A. Baker, slightly.

UNITED STATES.—The latest intelligence from the South states that there is evidently a strong sentiment in favour of Union struggling to the surface in the Slave States, in spite of the continued demonstrations in favour of secession. Accounts from Charleston to the 15th ult. state that South Carolina would, under no circumstances, recede from the position it had taken. The Judge, Collector of Customs, and other federal officers have resigned their commissions, the two Senators have thrown up their seats in Congress, the United States flag has been removed from the public buildings and ships, the "Palmetto" flag has been hoisted in its stead with salutes of 15 guns, and the State Legislature was discussing a bill to authorise the local banks to suspend specie payment. Governor Gist had been offered 100 men by Baltimore, and 500 by Jersey. Cavalry and infantry were in the streets in large numbers drilling. In consequence of the state of affairs the Mayor had discharged a number of labourers employed on public works. In Mobile a meeting of all parties unanimously favoured secession. Resolutions to await the action of other states were voted down and withdrawn. In Georgia one of the Senators has resigned his seat in Congress, and two bills have been introduced in the Legislature, one declaring Georgia out of the Union, and the other providing for the calling of a Convention to ratify the proceedings. In Alabama the citizens are almost unanimous in favour of secession, and several corps of Minutemen are organizing. In Virginia the students of the University had held a meeting, and adopted resolutions approving the action of the seceding states. On the other hand, a grand mass-meeting of all those opposed to disunion, without distinction of party, was to be held on the 17th. A meeting of the Southern medical students in New York was held on the 9th, to determine whether they should go home or remain, since Mr. Lincoln had been elected. The spirit of the meeting was decidedly in favour of disunion, and of Southerners leaving the city immediately. Speakers favouring these views were applauded, while those advocating milder measures were hissed down. The latest news from New York states that General Sanford has caused the arrest of Colonel Corcoran for refusing to order his regiment on parade at the reception of the Prince of Wales.

CENTRAL AMERICA.—The correspondence between the British and American naval commanders at Panama relative to the arrest of Americans by British sentinels had been referred to the two Governments.

BRITISH COLUMBIA.—Governor Douglas had visited the Creek mines with a revenue officer, and levied a tax of 120 dollars on every trader for the privilege of selling goods. The mining excitement continued. Miners were reported to be making 20 dollars per day. Claims were selling at from 1000 dollars to 1200 dollars. Rich mines had been discovered in Douglas county, Oregon.

MEXICO.—The Constitutionalists were still before Guadalajara. The country was in a dreadful state. Miramon proposed to resign. The British, Prussian, and Spanish Ministers, with Mr. M'Lane, were at Jalapa, and it was believed some decided step was contemplated.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,536,575	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	12,725,079
		Silver Bullion	336,496
	£27,536,575		£27,536,575

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,490,273
Rest	3,166,972	Other Securities	20,392,252
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,515,612	Notes	7,636,360
Other Deposits..	13,366,250	Gold and Silver Coin ..	798,901
Seven day and other bills	715,852		
	£38,317,686		£38,317,686

29th day of Nov., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — A. I. BIRRELL, Liverpool, Licensed Victualler M'COWARD, Church Coniston, Lancashire, Grocer—E. DAWSON, Sheffield, Music Seller — W. FAIRBRIDGE, Coatham, Yorkshire, Butcher—W. FAIRBRIDGE, jun., Redcar, Yorkshire, Butcher—A. and W. T. JENNINGS, Little Tower Street, City, Ship Stores Merchants—H. J. MITCHELL, Park Street, Grosvenor Square, Licensed Victualler—R. G. PAPPS, Barbican, Builder—W. READ, Dorset Street, Portman Square, Builder—T. S. REED, Derby, Silk Manufacturer—B. and G. RHODES, Nottingham, Brassfounders — W. RICHARDS, Pontypridd, Commission Agent—B. RICHARDSON, Wordsley, Staffordshire, Glass Manufacturer—P. SHERRATT, Macclesfield, Silk Manufacturer—E. THOMAS, Walsall, Ironmaster—J. TOMEY, Queen's Road, Chelsea, Grocer—E. TURNER, Kirkby, Lancashire, Grocer.

SCOTCH SEQUESTRATIONS — D. CAMPBELL, Invergordon, Grocer —M. DENNISTOUN, Easter Glenfour, Lanarkshire, Farmer — H. DOW, Auchterarder, Manufacturer—J. SHAW, Linlithgow, Surgeon.

FRIDAY — BANKRUPTS—W. ARNOLD, Newchurch West, Monmouthshire, Innkeeper—S. H. COOMBS, Oswestry, Shropshire, Shoemaker—J. CROFTS, Walsall, Builder—S. DAVIES, Tredegar, Monmouthshire, Draper—W. GIBSON, Castle Donnington, Leicestershire, Draper—C. HEATH, Southampton, Coffee House Keeper — A. HINTON, Highbury Barn Tavern, Victualler—J. B. HIRST, Holme, Yorkshire, Cloth Manufacturer — M. HUTCHINSON, Mark Lane, Hemp Dealer—J. M'INTOSH, Merthyr Tydfil, Draper — H. MARTIN, Southampton, Tailor — H. PAGE, Broad Street, Buildings, Shipping Agent—W. N. REES, Gracechurch Street, Printer—W. H. SMITH, H. W. WITHERS, C. W. COOK, and G. PARSSON, Deptford, Coal Merchants—T. TOWNSON, Leamington Priors, Chemist—M. H. WILTON, Southport, Lancashire, Grocer.

City Intelligence.

BANK OF ENGLAND.—The anticipated reduction of 1 per cent. was made in the Bank rate of discount at the weekly court on Thursday, and the minimum is now fixed at 5 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93⅛ to ¼ both for Money and the 6th of December; Three per Cents. Reduced, 92 to 91⅞; New Three per Cents., 91⅞ to 92; India Five per Cent. Stock, 1859, 103½; Ditto Bonds, 9*s.* to 5*s.* dis.; Five and a Half per Cent. Enfaced Rupee Paper, 102; Exchequer Bills, 4*s.* to 1*s.* dis.—FOREIGN: Brazilian Four and a Half per Cents., 1860, 89¼ to 89; Chilian Six per Cents., 102¾; Mexican Three per Cents., 21⅜; Spanish Three per Cents., 49¼; Ditto Passive, 22½; Committee's Certificates, 5¼; Turkish Six per Cents., 1858, for Acct., 58⅛ to ¼.

Metropolis and its Vicinity.

INTERNATIONAL EXHIBITION OF 1862.—The correspondence between the Commissioners for the Exhibition of 1851, the Society of Arts, and the trustees for conducting the Exhibition of 1862 has been brought to a satisfactory conclusion, as will be seen by the accompanying letter, addressed to the secretary of the Society of Arts. This correspondence has had relation to the site for the building, the provision of the necessary funds, the incorporation of the trustees by the authority of the Crown, and their relations with the Commissioners for the Exhibition of 1851:—

"London, Nov. 22, 1860.

"Sir,—We have to acknowledge the receipt of your letter of yesterday, enclosing the copy of a communication from her Majesty's Commissioners for the Exhibition of 1851 to the Council of the Society of Arts, in which the Commissioners express their general approval of the object which the Society has in view in organising the Exhibition of 1862, and their willingness to render such support and assistance to the undertaking as may be consistent with their position as a chartered body, and with the powers conferred upon them by their charter of incorporation. Under these circumstances we have to request that you will intimate to the Council of the Society of Arts our willingness to accept the trust which the Council and the guarantors have in so flattering a manner expressed a wish to repose in us, on the understanding that the Council will forthwith take measures for giving legal effect to the guarantee, and for obtaining a charter of incorporation satisfactory to us.—We have the honour to be, Sir, your obedient servants,

"GRANVILLE.
"CHANDOS.
"THOMAS BARING.
"C. WENTWORTH DILKE.
"THOMAS FAIRBAIRN."

The guarantee list includes 662 persons, and the sum guaranteed now amounts to 366,800*l.* The Commissioners for the Exhibition of 1851 have granted a site for the building on their estate at South Kensington.

DEPARTURE OF SIR JAMES BROOKE, K.C.B.—Sir James Brooke sailed from Southampton last week for the seat of his government at Sarawak. His health is now completely re-established, and he is able once more to give the benefit of his temporary presence and advice to the enterprise with which his name is identified.

NEW CHURCH IN CLERKENWELL.—The Governors of the Charterhouse have given a site in Allen Street, Goswell Street, for a new district church, for the parish of St. James, Clerkenwell, which has a population of 27,000, and only one church. The new church will be dedicated to St. Paul. In order to raise funds for its erection the Bishop of London presided at a public meeting on Wednesday evening, when his lordship stated that in a population of 28,000 souls, there is at present church accommodation for only 9000.

ST. GEORGE'S-IN-THE-EAST.—In consequence of a letter from the Bishop of London communicating the resolutions adopted by the parishioners respecting the mode of performing divine service, the Rev. Bryan King last week consented to give up his peculiar views and to place the matter in the Bishop's hands. The Bishop accordingly issued two monitions, one to the officiating minister, directing him to read the Psalms for the day, to discontinue the use of the Hymnal, and use instead Tate and Brady's collection at the end of the Prayer Book, and to preach in a black gown in the morning as well as at other times; the other to the churchwardens, directing them to place the altar on the ground, to remove the super-altar and credence table, and to allow no person other than the officiating minister to appear in a surplice, thus doing away with the choristers. These orders were carried out on Sunday by the Rev. E. Perry, Rector of Acton, the Bishop's chaplain; Mr. Hansard, the clergyman who had charge of the parish in the rector's absence, having declined to continue the duty on the ground that the changes involved a breach of his agreement with Mr. King.

THE NORTH ATLANTIC TELEGRAPH.—The exploring ship Fox, Captain Allen Young, arrived in Portland Roads on Friday evening from the Faroe Islands, Iceland, and Greenland, where she has been surveying the route for the proposed Telegraph. The severity of the late season in the northern regions has been greater than has been experienced during the last 20 years, but, by remaining in Greenland until November 8, when the winter had fairly set in, the Fox succeeded in examining and sounding the fiords on the south coast, and proving their practicability for the reception of the cable. The Fox has also coasted down a considerable extent of the east coast of Greenland, hitherto supposed to be inaccessible, besides making a series of deep-sea soundings, and brings home a variety of specimens in natural history, and photographs of the scenery and costumes of the countries visited.

THE RECENT LOSS OF THE CONNAUGHT.—Mr. Brierly, the marine artist, has been commissioned to paint a picture representing the brig Minnie Schiffer rescuing the 600 passengers and crew of the Connaught steamship, which was destroyed by fire on the 8th ult., within two days' sail of the American coast, to be presented to Capt. Wilson, the commander of the brig, as a memorial of his gallant conduct on that occasion.

THE NEW LAW COURTS.—Notice has been given by the Commissions of Works that it is the intention of her Majesty's Government, immediately after the meeting of Parliament, to introduce a measure for the purpose of giving effect to the recommendations of the Commissioners, who after a careful

and laborious inquiry have reported in favour of bringing together into one neighbourhood all the supreme courts of law and equity, the Probate and Divorce Courts, the Court of Admiralty, and the various offices belonging to them. The Commissioners were Sir J. T. Coleridge, Sir W. Page Wood, Sir George Lewis, Lord Wynford, Dr. Phillimore, and Mr. John Young. The proposed site will be bounded by Carey Street on the north and the Strand on the south, Bell Yard on the east and Clement's Inn on the west. The sum required for the purchase of the land is estimated at 675,000*l.*, and the same amount, it is stated, will be required for the erection of the new Courts, making, in the whole, 1,350,000*l.* The Commissioners, with the exception of Sir W. P. Wood, have recommended that this expense should be defrayed by the suitors' fund in Chancery, which now possesses a capital of 1,291,629*l.*

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the number of deaths in the week that ended on Saturday, Nov. 24, was 1257. The average number in the corresponding weeks of the 10 years 1850-59, corrected for increase of population, was 1376. The present return is therefore 119 below the average. During the week the births of 926 boys and 887 girls, in all 1813 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1581.

Provincial.

LEWES.—A public meeting was held on Monday, in the Corn Exchange of this town, for the purpose of erecting a memorial to the late Duke of Richmond. The Earl of Chichester presided and said he had been in communication with several noblemen and gentlemen in that part of the county, who all expressed their hearty concurrence in the object for which the meeting was called. The western division of the county had already taken some steps in the matter, and it struck him that there might be unanimity of feeling as to the object, but difference of opinion as to the mode of expressing it. He thought it would be better to appoint a committee to decide upon the form of the memorial and the amount of subscription. The Hon. W. Brand, M.P., moved the following resolution:—

"That it is the opinion of this meeting that all who knew the frank, kind, and amiable character of the late Duke of Richmond, and who had observed his career as a gallant and distinguished soldier, as Lord Lieutenant of the County of Sussex, as a zealous supporter of the interests and improvements of agriculture, as a member of both Houses of Parliament, as in every relation of life, will desire to record their opinion and express their feelings by erecting a lasting memorial to his worth."

Mr. Ellman seconded the resolution, and said when some years ago they wished to present a testimonial to the late noble duke, he declined it, and recommended that the most satisfactory way of showing him their regard would be by purchasing an annuity for eight or ten decayed farmers and their widows. That money was now invested in the funds, and there were six or eight annuitants upon it. The resolution was put and carried. The following gentlemen were then appointed a committee, with power to add to their numbers:—the Hon. W. Brand, M.P.; Mr. Darby, Mr. Tanner, Mr. Blencowe, M.P.; Mr. Ellman, Sir John Shelley, M.P.; Mr. Blaauw, Mr. Sergison, and Mr. Dodson, M.P.; Mr. H. Ellman being appointed honorary secretary.

ROAD.—It will be seen by our Law Report that the Court of Queen's Bench, on the application of the Attorney General, have granted a rule calling upon the coroner for Wilts to show cause why a new inquiry should not be instituted. The magistrates have had a meeting at Trowbridge to investigate the circumstances connected with the finding of a night dress stained with blood in the kitchen flue. It appears that Mr. Stapleton, the surgeon, declares that this night dress was never shown to him, and that the police kept its discovery secret both from Inspector Whicher and from the magistrates, until all possibility of tracing it has been lost.

SOUTHAMPTON.—On Saturday morning a fire broke out in the Royal mail steamer La Plata, which was intended to sail on Monday next with the West India mail. It was however extinguished without doing much damage, except to the ship's stores, and the fittings of the fore part of the vessel.

SPILSBY.—Mr. Bacon is now engaged on a bronze statue of the late Sir John Franklin, which it is intended to erect in this town, the birthplace of the gallant officer. A considerable subscription has been raised, but further aid is required.

WHITTLESEA.—It is proposed to erect a monument in this town to the memory of the late General Sir Harry Smith. The proposal has been favourably received, and the subscription which has been opened for the purpose has already reached 160*l.*, including a donation of 50*l.* from the Earl of Hardwicke.

WOLVERHAMPTON.—A shocking tragedy took place last week at Coseley, near the Prince's End station of the West Midland Railway. A miner called Stephenson, who had been lodging in the house of an engineer named Lewis, made improper overtures to the wife of the latter, and on being firmly rejected, attempted to murder her by cutting her throat, and afterwards committed suicide. The poor woman received three gashes in her throat and some severe wounds on her hands and the back of the neck, and it is considered doubtful if she can recover. The injuries inflicted on himself caused immediate death. The jury at the inquest returned a verdict of *Felo-de-se.*

Ireland.

THE PARTRY EVICTIONS.—The sheriff and his officials were engaged on the 21st, 22d, and 23d ult., in evicting the remainder of the tenants upon whom notices to quit had been served by Lord Plunket, Bishop of Tuam. The bailiffs and agents, who are called by the local papers the "Crowbar brigade," pulled down the houses occupied by 80 people, and but for the presence of the military there would have been a riot.

"THE NATIONAL VOTE."—The *Nation* announces that an aggregate meeting will be held in Dublin on the 4th inst., "to claim for the people of Ireland that right which the English Government declares to belong to every people—the right to choose their own rulers and form of Government."

THE MURDER IN DONEGAL.—At the adjourned inquest on the body of Mr. James Murray, the jury returned a verdict that deceased was feloniously, wilfully, and maliciously murdered by persons unknown. Mr. Adair has offered a reward of 100*l.* for the discovery of the perpetrator of the murder. Two shirts covered with blood have been found hidden in the houses of a man called Sweeny and his brother in the locality of the murder. The elder Sweeny had been arrested on suspicion before this discovery was made. The residence of the Rev. Charles Maturin, at Gartin Glebe, in the Glenveagh district, has been burnt down by an incendiary while Mr. Adair, the employer of Mr. Murray, was staying in the house. This outrage has since been followed by an attack on Mr. Wilkins, of Church Hill, a respectable tenant on Mr. Adair's estate, and one of the jury at the inquest, who while returning home from the market with his servant boy, was attacked by a party of ruffians about two miles from Letterkenny, and dreadfully beaten. It is thought that this attack on Mr. Wilkins, and the attempt to burn Mr. Maturin's house, was done to terrify Mr. Adair and the other gentlemen who are at present prosecuting the inquiry, with the view of bringing the guilty parties to justice.

THE MATHEWS KIDNAPPING CASE.—In the Court of Common Pleas on Monday, Sir Colman O'Loghlan, Q.C., on the part of Miss Margaret Aylward, lately committed by the Court of Queen's Bench to Grangegorman Female Prison for contempt for not bringing up the child Mary Mathews, pursuant to the order of the Court, applied for a writ of *habeas corpus*, in order that she might be brought before their Lordships for the purpose of having application made for her discharge from custody, on the ground that she was not in legal custody, the Court of Queen's Bench no longer possessing the power which formerly belonged to it of selecting any prison which it might deem proper for the custody of a person held guilty of contempt, but being bound in accordance with the provisions of a recent Act to commit such person to the Four Courts Marshalsea only. The Chief Justice granted the application, and stated that the Court would sit specially on Friday to hear the case argued.

THE SHERWOOD KIDNAPPING CASE.—Catherine Davis, one of the persons in custody for the abduction of the Sherwood children, was brought up by order of the Court of Queen's Bench on the 22d ult., when the attorney for the prosecutrix stated that he had frequently informed John O'Connor, the late Mrs. Blake, and Catherine Davis, that if they would each make an affidavit disclosing all they knew concerning the four missing children, he would not only consent to their discharge, but facilitate it. They had however preferred remaining in custody. Catherine Davis now expressed her readiness to make the affidavit required. Their lordships ordered her to make the affidavit, so far as she was concerned, with a view to obtaining her release from custody. On Friday she made the affidavit, purporting to disclose all the circumstances within her knowledge. The contents were not made public. John O'Connor was then examined on interrogatories by the clerk of the Crown, when counsel for the prosecutrix stated that his answers were full, with one exception—namely, that he declined to state the name of a party who had given him a sum of 2*l.* (part of a sum of 4*l.*), for the board and lodging of the children for one week. The Court did not consider the refusal a sufficient ground for sentencing him to a further term of imprisonment, and ordered him to be discharged. Denis O'Connor, on the consent of the prosecutrix, has since been allowed to stand out on his own recognisance in 100*l.* to appear when required. An application for the discharge of M'Robins was refused.

Railways.

THE LATE COLLISION ON THE NORTH-WESTERN.—It is understood that the London and North-Western Company do not intend to resist or contest the claims made against them for compensation to the relatives and friends of the cattle-drovers killed by the recent collision at Atherstone. The pecuniary loss to the company by damage done to rolling stock, expenses connected with the inquest, the destruction of cattle, and 10 lives, is estimated at 20,000*l.* The inquest terminated on Saturday, when the jury after consulting for nearly four hours, returned a verdict to the following effect:

"That the several deaths were accidental, but that the rules of the company should not allow their station officers at their discretion to despatch fast trains and slow trains from the stations so close to one another, and are in this respect inconsistent with the safety of the public; that upon the occasion in question William Moorcroft, platform inspector, of Tamworth, was wrong in not warning the driver of the up limited mail train of the cattle train being before him; that Edward Barter, driver of the up limited mail train, was to blame in not observing the main signal and putting on the whistle at level crossings; that according to the scientific evidence given at this inquest the drovers' van in cattle trains would be more safely placed in front of the cattle trucks than behind them, with a light van between it and the tender, and that, considering the peculiar state of the line as respects the curves and level crossings near the Atherstone station, it is essentially necessary for the safety of the public that a telegraph at the Atherstone station should be kept in communication day and night with the stations at Tamworth and Nuneaton as to the arrival and departure of trains; and that an additional communicating signal should be placed and worked at each end of the station."

COLLISION ON THE MIDLAND.—An accident occurred at West Staveley, near Chesterfield, on Friday. The morning was very foggy, and as the train from Derby to Leeds approached the West Staveley station, it ran into a coal train, which was shunting there. The fog was so dense that the driver could not see 30 yards before him, and fortunately he was not at the time going more than four miles an hour. One elderly woman, residing at Calow, near Chesterfield, sustained a fracture of the leg below the knee, and several passengers were shaken and bruised. None of the carriages of the passenger train were injured, but the guard's van and two waggons of the coal train were smashed.

PROPOSED METROPOLITAN LINES.—Among the railway applications for next Session is one for a tubular underground line, of a mile and a half, from Regent's Circus, Oxford Street, to the Metropolitan line at Smithfield, by which a communication to the Bank will be established. The contemplated capital is 200,000*l.* Ultimately it is intended to extend the line from Regent's Circus to Kensington. Another project is to connect the Charing Cross line directly with the City by means of a bridge across the Thames at a point where the river is narrowest, about midway between Southwark and London Bridges, and to carry the line thence to the back of the Mansion House, or to Cannon Street, thereby bringing the Bank and Charing Cross within six minutes of each other.

COLLISION ON THE WEST MIDLAND.—On Tuesday night, the 20th ult., a passenger train on this line ran into a train of salt vans near the Droitwich station, under circumstances very similar to the recent collision on the Trent Valley Railway. The salt train was shunting to allow the passenger train to pass, when some of the trucks of the former ran back upon the main line unobserved by the driver, who did not see it in the dark. The engine and tender of the passenger train ran completely through these trucks, smashing three of them to pieces. The passenger train was not thrown from the rails, but the passengers received some sharp bruises by the collision.

Law.

COURT OF QUEEN'S BENCH.—*The Road Child Murder.*—At the sitting of the Court on Saturday, before the Lord Chief Justice Cockburn and Justices Hill and Blackburn, the Attorney-General made an application on behalf of the Crown for a rule absolute, in order that the inquisition on the body of Francis Saville Kent, returned by the coroner for the county of Wilts, on the 2d of July last, may be quashed, and a rule granted for issuing a special commission by a writ of *ad melius inquirendum*, to proceed and make by examination all such inquiries touching the death of the deceased as the coroner ought to have made upon the view of the body, and that all usual and proper directions may be made in that behalf. The ground on which he made the application was that of legal misconduct on the part of the coroner, in gross misdirection of the jury on law, in miscarriage in withdrawing from the jury a most material part of the legitimate inquiry which they were desirous of prosecuting, but which the coroner prevented. The other ground on which he moved their lordships was that the inquisition was null and void from informality, having been written on paper instead of parchment, and therefore must be quashed. He then stated in detail the facts of the case, in order to show them the position in which the coroner and the jury stood at the time of the inquisition. After a long argument the Lord Chief Justice said—We are of opinion that in this case there should be a rule, but not a rule absolute in the first instance, but a rule calling upon the coroner to show cause why the writ should not be quashed, and a writ of *ad melius inquirendum* issued. The Attorney-General has satisfied my mind as to the facts he has stated, and the authorities he has cited as to the form of the inquisition, that it is bad, the record being on paper and not on parchment. That leaves the great question open; and although we might not feel ourselves called upon to quash the inquisition as if there had been no inquisition, though no one would be prejudiced by our not doing so on the ground of informality, yet the interest of public justice demanded that a further inquiry should take place. In examining our discretionary authority—and it is discretionary—we must look whether, although this inquisition is informal and irregular, on account of being drawn up on paper instead of on parchment, we should issue a writ *ad melius inquirendum*. That necessarily depends on the effect of the matter brought before us, and although the affidavits may bear on our minds, we cannot say at present they are perfectly just or true, as the judicial conduct of the coroner is called in very serious question; and as the result of our decision must materially affect his position as coroner, we should not do justice and act with fairness to him, if we were now to exercise our discretion, and at once quash the conviction without affording him an opportunity of answering the matters stated in the affidavits. I think, both in regard to the exercise of our discretionary authority, the interest of justice, and the position of the coroner, we cannot do more than grant a rule calling on him to show cause why the inquisition should not be quashed and a writ *ad melius inquirendum* issued. The other judges concurred. Rule *nisi* accordingly. It may be stated that as

the rule is not returnable for four clear days from its being issued, and as term ended on Monday, it will not come on for argument until Hilary term, commencing January the 11th.

COURT FOR DIVORCE AND MATRIMONIAL CAUSES.—(Before the Judge Ordinary, Mr Justice Wightman and Mr. Justice Williams).—*Shedden v. The Attorney-General and Patrick and Patrick*.—This case, which has been before the public in one shape or another for more than half a century, was brought before this Court under the Legitimacy Declaration Act of 1858. It has occupied the Court for 14 days, and has been remarkable for having been conducted with great zeal and ability by Miss Shedden, one of the petitioners, in person, her leading counsel, Sir Hugh Cairns and Mr. Macaulay, having, on the cause being called on, declined the responsibility of managing it on the ground that they had not had time to make themselves acquainted with the voluminous documents connected with it. Miss Shedden opened the case in a speech of considerable length, and examined and cross-examined the witnesses. The question at issue related to the legitimacy of her brother and herself, a large landed estate and certain partnership property at New York where their father had established himself as the head of the great firm of Shedden, Patrick & Co (the whole of which had passed to Mr. Patrick, the defendant, as heir at law, on the ground of the plaintiff's illegitimacy), depending on the event of that question being established. The main point therefore was to prove that their father and mother, who resided in America, were really married before they were born, the fact of a marriage in 1798, while the father was on his death bed, being admitted by all parties. On Tuesday the Court pronounced judgment. Sir C. Cresswell, the Judge Ordinary, said they had now arrived at the last stage of this very singular inquiry, an inquiry the length and complexity of which had caused the court to feel in a very considerable degree the responsibility that rested upon them. There were two or three circumstances however which somewhat diminished that feeling. In the first place the evidence had been given somewhat slowly, and so much immaterial matter had been mixed up with what was material that they had had abundant time to consider the weight that should be assigned to the latter. Another circumstance that might have embarrassed them was the fact that the female petitioner had been left for a considerable time to conduct the cause without the assistance of counsel; but the intimate knowledge which she had displayed with every fact, material or immaterial, connected with the history of her family, and the singular tact and dexterity which she had shown in the management of her case, entirely relieved the court from any apprehension on that score. Besides, a portion of the evidence had been given, and the whole had been very ably commented upon by an experienced counsel. Lastly, the court felt that the case was not a question depending upon nicely balanced evidence, but it was one upon which they had all been enabled to come to a most clear and unhesitating judgment. The question was simply this:—Had a marriage in fact been solemnised, whether with or without religious rites, between the father and the mother of the elder petitioner before he was born? During 14 days the court had had to discharge the functions of jurymen; but they could not content themselves with giving, like jurymen, a simple verdict of aye or no—they felt bound to state the reasons from which they drew the conclusions to which they had come. His lordship then proceeded to examine in detail the facts on which the case turned, and concluded by saying that the charge of fraud against Mr. Patrick having fallen to the ground the whole case of the petitioner must fall with it; and he must therefore pronounce that he, William Patrick Ralston Shedden, was not a legitimate child of his father, and was consequently not a natural born British subject. One word as to the position in which the petitioners were left by this decision. For the male petitioner he could have no sympathy. He might have brooded over his fancied wrongs until he had lost his faculty of judgment; but the course he had pursued had been such as must totally exclude him from sympathy. For the female petitioner he did feel most deeply. He had no doubt that she had been brought up in a full belief of the truth of her father's story; and from the intimate knowledge which she had shown of every particle of evidence connected with the case, it was clear that she had dwelt upon it for years and years with the unhesitating confidence of a dutiful and affectionate child, until it had at last become interwoven with her very nature. What was to be the consequence of this judgment to her? It must be one of two things. If she was not convinced by it she would live under a harassing sense and conviction that she had sustained a grievous wrong for which she was unable to obtain a remedy—a position sad enough. If she was convinced she would have to mourn and lament over that course of conduct which had embittered the latter days of an aged man, who for a period far exceeding an ordinary life had been loved and honoured; whese integrity had been impeached through her instrumentality, and who had been subjected to a relentless persecution which had been carried on by unfounded aspersions and most unjustifiable litigation. Mr. Justice Wightman and Mr. Justice Williams emphatically concurred, and the decree was made accordingly. The petitioners were then condemned in the costs, and certain papers which they had obtained from Mr. Patrick in the Court of Session were ordered to be restored to him.

CENTRAL CRIMINAL COURT.—*The Lea Bridge Murder.—Anne Padfield*, 23, an unmarried woman, was indicted for the wilful murder of her illegitimate child, William Augustus Padfield, on the 27th August last. The prisoner had been seduced by a young man called Frederick Bryant, 18 years of age, the son of a gentleman at Holloway, in whose service she had been living. The child was born on the 27th June, and the prisoner appeared to be very fond of it. She was however without money, and being unable to obtain from the young man the necessary means of saving herself and the child from starvation, she killed the child by suffocation and threw the body down the privy of the house in which she lived, having first cut off its arm, it is supposed to prevent identification, as it had recently been vaccinated. She then entered into the service of a family at Notting Hill, where she was apprehended on the discovery of the body. She had conducted herself with great propriety in service, and previous to this transaction had borne an excellent character. The jury, after deliberating for more than an hour, found the prisoner *Guilty*, but strongly recommended her to mercy, on account of her poverty, her mental anguish, and previous good character. Baron Bramwell then put on the black cap and passed sentence of *Death* in the usual form, promising to send the recommendation to the proper quarter. The prisoner, when the sentence was pronounced, began to cry bitterly, and shrieked for mercy. She was then asked whether she had anything to urge in stay of execution, a question always put to women sentenced to capital punishment, and on the object of the question being explained to her by one of the female warders, she said she had not. She was then removed from the bar in an almost insensible condition.

Sporting.

THE CHAMPIONSHIP.—The original belt of the Champion of England, which was in the possession of Sayers, has been surrendered and duly presented to "The Infant," Sam Hurst, of Staleybridge, who lately won it in his fight with Paddock. He is now challenged by Mace and one or two others, and he must keep the belt against all comers for three years, in order to be entitled to it and the "Championship of England" for life. It appears that Sayers was using the belt in a starring tour in the provinces, for which Messrs. Howes and Cushing pay him 55*l.* a week.

Obituary.

HIS GRACE THE DUKE OF NORFOLK died on Sunday at Arundel Castle, after an illness of some weeks, in his 45th year. His Grace had been ailing for some months past, but the immediate cause of his death was congestion and enlargement of the liver. The deceased Henry Granville Fitzalan-Howard, 14th Duke of Norfolk, Premier Duke and Earl in the peerage of England, Earl of Arundel, Surrey, and Norfolk, and Baron Fitz Alan, Clun, Oswaldestre, and Maltravers, Hereditary Earl-Marshal and Chief Butler of England, was the eldest son of the 13th Duke, by Lady Charlotte Leveson-Gower, eldest daughter of George Granville, Marquis of Stafford, who was raised in 1833 to the Dukedom of Sutherland. He was born in Great Stanhope Street, in 1815. Although a Roman Catholic he was sent to Eton and passed thence to Trinity College, Cambridge, where he completed his education. He entered the army as cornet in the Royal Horse Guards, but retired soon after attaining the rank of captain. He entered Parliament at the general election of 1837, as M.P. in the Liberal interest for the family borough of Arundel, which he represented without intermission (while bearing the courtesy titles of Lord Fitzalan and Earl of Arundel and Surrey) down to the middle of 1851, when, finding that his sentiments on the Ecclesiastical Titles Bill were not in accordance with those of his father, the "patron" of the constituency—he accepted the Chiltern Hundreds, and was immediately returned by the electors of Limerick, Mr. John O'Connell retiring in his favour. He left the House of Commons at the dissolution of 1852. In February 1856, he succeeded to the honours and representation of the house of Howard on the death of his father, so that his Grace had held the dukedom for somewhat less than five years. He was a magistrate for Middlesex and Sussex, and enjoyed the entire patronage of Heralds' College, and also of 17 livings in the Established Church. He was a large and liberal supporter of Roman Catholic charities, and took a warm interest in all public affairs which affected the interests of his church, both in his place as a peer of Parliament and in his private capacity. He published one or two pamphlets on the various Roman Catholic questions which have occurred during the last 12 or 15 years. He also edited the Lives of Philip, Earl of Arundel, and Anne Dacre, his wife. He seldom or never addressed either the Upper or the Lower House, excepting upon topics connected with his church; and whenever he spoke on these subjects his moderation and courtesy uniformly commanded the respect even of those whose religious opinions differed most widely from his own. The Duke married in 1839, Augusta Mary Minna Catharine, second daughter of the late Admiral Lord Lyons, by whom, who survives him, he had a family of two sons and six daughters, besides two children who died in infancy. It was his Grace's younger son, Lord Edmund Bernard Howard, in favour of whom Bertram Arthur, late Earl of Shrewsbury, made his will, bequeathing to him the magnificent estate of Alton Towers, out of which bequest arose the long and costly suit which will be known to our distant posterity as "The Great Shrewsbury Case." The elder son, Henry Fitzalan Howard, Earl of Arundel and Surrey, who now succeeds to the title, was born in December, 1847, so that he is now on the eve of completing his 13th year. The Duke also leaves two sisters, Lady Foley and Lady Adeliza Manners, and a brother, Lord Edward Howard, M.P. for Arundel, formerly Vice Chamberlain of her Majesty's Household, who is married to Miss Augusta Talbot, cousin of the late Earl of Shrewsbury. The death of the Duke will be a heavy loss to the Roman Catholic churches and charitable associations connected with the metropolis and the south of England, and more especially to the Oratorians of St. Philip Neri, at Brompton, of whom he was a most steady and munificent supporter.

BARON BUNSEN, for many years Prussian Minister in London and one of the most distinguished literary men in Germany, died at Bonn on Wednesday morning in his 70th year.

COLONEL KEMEYS TYNTE, formerly M.P. for Bridgewater, died on the 23d ult., at his family seat, Halswell House, Somerset, in his 83d year. He was co-heir to the Baronies of Wharton and Grey de Wilton, and representative of the ancient families of Kemeys and Tynte, which baronetcies became extinct on the decease of his maternal uncle, the late Sir Charles Kemeys Tynte, Bart.

THE REV. DR CROLY, whose name has for nearly half a century been before the world as an eminent preacher, orator, poet, dramatist, and novelist, died suddenly on Saturday afternoon. He left his house in Queen Square, Bloomsbury, about 4 o'clock, as was his custom, to take a walk before dinner, and had only reached the corner of Warwick Court, Holborn, a quarter of an hour afterwards, when he staggered, fell backwards on the pavement, and almost instantly expired. He was immediately removed in a cab to King's College Hospital, when it was found that he was quite dead, and had been so for about 10 minutes. As there were no external injuries to account for his death, a *post-mortem* examination was made, when it was ascertained that the coronary arteries of the heart were ossified, and that though the brain was quite healthy, the arteries of the brain were also diseased. The jury at the inquest, after hearing this evidence, returned a verdict of Natural Death from disease of the heart. There is some uncertainty as to the date of his birth, but it is believed that he was upwards of 80 years of age. His father was a medical man in Dublin. He was educated at Trinity College in that city, and at an early age he came to London to earn his living by the newspaper press. He became dramatic critic to the "New Times," and was subsequently connected with the "Morning Herald," the "Standard," "Britannia," and other journals. He was at one time editor of the "Universal Review," and was a constant contributor to "Blackwood's" and other magazines. After being some time in London he took holy orders, and became curate of Romford, but was long without preferment. His first presentation was to Bondleigh, a parish on the skirts of Exmoor, in Devon, but on going there he was so dissatisfied with the place, on account of its wildness and desolation, that he never entered on his duties, and it was not until he was upwards of 50 years of age that he succeeded to the living of St. Stephen's, with which he was presented on the urgent recommendation of Lord Brougham, who appreciated his abilities, though he disagreed with his political opinions. He was the author of several well-known works, poetical, dramatic, and theological, including "Paris in 1815," "Catiline, a Tragedy," "The Angel of the World," "Salathiel the Immortal," "Life of Edmund Burke;" "Pride shall have a Fall, a Comedy;" "Tales of the Great St. Bernard," "Marston," Life of Curran," "Scenes from Scripture," a work on the Apocalypse, "The Modern Orlando," &c. Of late years his reputation as a literary man was to a considerable extent merged in that of a preacher, and numbers of strangers used to frequent the fine church of St. Stephen's to listen to his sermons, which were remarkable displays of extempore eloquence, and the last of which he delivered so recently as Sunday week. In 1854, during the mayoralty of Sir Francis Moon, a marble bust was presented to Dr. Croly at the Mansion House by his congregation and friends. This bust the rev. gentleman has bequeathed to his parishioners, with a wish that it should be placed in the church. He has also left behind him in writing an expression of his earnest desire to be buried in the chancel of St. Stephen's; and in compliance with a memorial from his family, together with one from the parochial authorities, Sir George Lewis, the Home Secretary, has given the requisite permission to carry out that wish. The funeral will take place to-morrow afternoon, and in conformity with the express directions of the deceased, will be of the plainest description, without plumes, velvet, or show of any sort whatever.

BIRTHS.—On Friday, the 23d ult, at 1, Great Stanhope Street, the Duchess of MANCHESTER, of a son—23d ult, at Chesterfield House, the Countess of DURHAM, of a son—23d ult, at 23, Grosvenor Street, the Lady FREDK. FITZROY, of a son—26th ult, at 16, Stratton Street, Lady AGNES HYLTON JOLLIFFE, of a daughter—25th ult, at Breamore, Lady HULSE, of a son—26th ult, at 41, Eaton Place, the wife of JOHN HARVEY ASTELL, Esq., M.P., of a son.

MARRIAGES.—On the 20th ult., at St. Luke's Church, Cheltenham, Captain GEORGE HENRY GREY, Grenadier Guards, only son of the Right Hon. Sir George Grey, Bart., to HARRIET JANE, youngest daughter of Lieut.-Colonel CHARLES PEARSON—22d ult, at the Haddington Road Church, Dublin, JOSHUA JAMES MACEVOY, Esq., younger son of the late James MacEvoy, Esq., of Tobertinan, county Meath, and brother of the present M.P. for that county, to the Hon. MARY NETTERVILLE, second daughter and co-heiress of the late Viscount Netterville—20th ult. at the parish church of Magheragall, county Antrim, CHARLES HENRY HIGGINSON, Esq., Mauritius Civil Service, to MARY MACAULAY, eldest daughter of Sir JAMES MACAULAY HIGGINSON, K.C.B., Brookhill—27th ult, at Anerly Church, Norwood, WILLIAM REGINALD HESKETH, Esq., son of H. H. B. Hesketh, Esq., of Gwrych Castle, Denbighshire, to AGNES EMILY ISABELLA FITZMAURICE, eldest daughter of Major the Hon. W. E. FitzMaurice, of 12, Hyde Park Gate—20th ult, at Little Dalby, Leicestershire, the Rev. FREDERICK AUGUSTUS HOWE FITZGERALD, only son of the late Captain S. FitzGerald, of the 4th Dragoon Guards, and county of Kildare, Ireland, to SOPHIA MARY LEIGH COOPER, youngest daughter of the Rev. Edward Philip Cooper, vicar of Little Dalby.

DEATHS.—On the 25th ult, at Stanton Lacy House, Ludlow, ALICIA, Dowager Lady TRIMLESTOWN, aged 87—22d ult., at Lewes, FREDERICK GEORGE LEIGH, Esq., nephew of George, sixth Lord Byron—18th ult, at Ashdown Park, Sussex, ANNE ELIZA ELIZABETH, widow of Rear-Admiral the Hon. Major JACOB HENNIKER—22d ult, at his residence, Merion Square, Dublin, Sir EDWARD M'DONNEL, Chairman of the Great Southern and Western Railway Company—24th ult, at 5, St. Colme Street, Edinburgh, ADAM URQUHART, Esq., advocate, Sheriff of the county of Wigton—21st ult, WALTER COULSON, Esq., Q.C., and Bencher of Gray's Inn, aged 66—26th ult, at her residence, 38, Marine Parade, Dover, CATHERINE, relict of the late Admiral WILSON, of Redgrave Hall, in the county of Suffolk, aged 87—7th ult, at the residence of the British Consul at Bastia, Captain WALTER TAYLOR MICHELL, of Totnes, reserved list, Royal Marine Forces, aged 83—21st ult, at Oxford, ELIZABETH ANNE, wife of the Rev. JOHN PRIDEAUX LIGHTFOOT, D.D., Rector of Exeter College, Oxford, aged 50—8th ult, after a long illness, the Rev. J. T. TWINING, D.D., for 43 years Chaplain to H.M.'s Forces in Halifax, Novia Scotia, aged 65—20th ult, the Rev. THOMAS PRICE, rector of Bagendon, Gloucestershire, and formerly Fellow and Vice-Principal of Jesus College, Oxford, aged 62—18th ult, at Ryde, Isle of Wight, the Rev. RICHARD SHUTTE, M.A., Rector of High Halden, Tenterden, Kent, and Minor Canon of St. Paul's Cathedral.

Markets.

COVENT GARDEN, Dec. 1.

We have still to report the arrival of heavy consignments from the Continent, consisting of Apples and Pears. Pine Apples are less in request than they have been, and prices for them are lower. Dutch Hamburgh and other Grapes continue to be imported. Good Cobs may be had at 1s. to 1s. 6d. per pound. Cabbages, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 10s. per cwt. Cucumbers are scarcer. Cut flowers chiefly consist of Orchids, Gardenias, Chrysanthemums, Violets, Mignonette, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 4s to 7s	Apples, per doz., 6d to 1s 6d
Grapes, per lb., 3s to 6s	Oranges, per 100, 6s to 10s
Pomegranates, each, 4d to 6d	Lemons, per 100, 6s to 10s
Pears, per doz., 1s to 3s	Nuts, Cob, per lb., 1s to 1s 6d

VEGETABLES.

Cauliflowers, each, 4d to 6d	Celery, p. bundle, 1s 6d to 1s 9d
Greens, per dozen, 2s 6d to 3s	Onions, p. ½ sieve, 1s 6d to 2s 6d
Cabbages, do., 1s to 2s	Seakale, p. punnet, 3s to 4s
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 9d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 6d to 1s 6d	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d

HOPS.—BOROUGH MARKET, FRIDAY, NOV. 30.

Messrs. Pattenden & Smith report that the market continues firm at late prices.

BRITISH WOOLS.—LONDON, FRIDAY, NOV. 30.

The business transacted the last few days has been to a fair extent in skin wool at about former rates. Fleeces and fleece sorts here also sold in limited quantities at old prices.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	7	to	1	8	Leicest. Wethers	1	6	to	..	
Half-bred ditto	1	8	—	..		Ditto Hoggs	1	8	—	..	
Down Ewes	1	5	—	1	6	Combing Skins	1	0	—	1	4
Kent Fleeces	1	7	—	..		Blanket ditto	0	6	—	0	8
						Flannel Wool	1	0	—	1	8

COLONIAL WOOL SALES.—These sales continue at the opening rates, first class descriptions fetching good prices, and inferior ones occupying the same low position as at the commencement.

POTATOES.—SOUTHWARK, Monday, Nov. 26.

During the past week the arrivals both coastwise and from abroad have been larger than any week during the season; the trade is very dull, second-rate and inferior samples being almost unsaleable. The following are this day's quotations:—York Regents, 110s. to 130s. per ton; Lincolnshire do., 100s. to 110s.; Dunbar do., 120s. to 140s.; Perth, Forfar, and Fife do., 100s. to 110s.; Rocks and Reds, 90s. to 100s.; French

Whites, 85s. to 90s.; Belgian do., 80s. to 90s.; Dutch do., 80s. to 85s.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Nov. 29.

Prime Meadow Hay	75s	to 80s	Clover	90s	to 110s
Superior do. (old) ..	90	105	New Clover	—	—
Inferior do.	50	60	Old second cut ..	80	90
New do.	—	—	Straw	32	36
Rowen	40	50			

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Nov. 29

Sup. Meadow Hay..	110s	to 118s	Inferior Clover ..	90s	108s
Inferior do.	70	100	New do.	—	—
New do.	—	—	Straw	36	42
Superior Clover ..	118	126			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Nov. 29.

Fine old Hay	100s	to 110s	Fine old Clover ..	115s	to 123s
Inferior do.	50	80	Inferior do	80	105
Prime New Hay ..	—	—	Fine 2d cut	—	—
Inferior do.	—	—	Inferior do.	—	—
Straw	30	36	Fine New Clover ..	—	—

COAL MARKET.—Nov. 30.

Walls End Tees, 23s.; —9 ships at market.

METROPOLITAN CATTLE MARKET.

MONDAY, Nov. 26.

The supply of Beasts is nearly as large as on Monday last. Choicest qualities are in demand and readily disposed of; trade is slow for inferior. The number of Sheep is about the same as last Monday. Trade is not so brisk as on that day, but there is very little alteration in prices. Calves are not selling quite so well as on Thursday. From Germany and Holland there are 1050 Beasts, 5300 Sheep, and 130 Calves; from Ireland, 700 Beasts; and 2000 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools.	5	0	— 5	2
Best Short-horns	4	6	— 4	10	Do. Shorn			to ..	
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	0	— 4	6
Best Downs and Half-breds ..	5	2	to 5	4	Do. Shorn			— ..	
Do. Shorn		—	..		Lambs			— ..	
					Calves	4	0	— 5	0
					Pigs	4	4	— 5	4

Beasts, 5300; Sheep & Lambs, 21,850; Calves, 148; Pigs, 360.

THURSDAY, Nov. 29.

The supply of Beasts is not quite so large as on Thursday last. Trade is more active than on that day, and Monday's quotations are well supported. There are a few more Sheep, but there is a demand for them at fully late rates. Good Calves meet with a ready sale. From Germany and Holland there are 190 Beasts, 570 Sheep, and 224 Calves; from Ireland, 100 Beasts; 400 from the northern and midland counties; and 128 Milch Cows from the home counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools .	5	0	— 5	2
Best Short-horns	4	6	— 4	10	Do. Shorn			— ..	
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	0	— 4	6
Best Downs and Half-breds ..	5	2	— 5	4	Do. Shorn			to ..	
Do. Shorn		—	..		Lambs			— ..	
					Calves	4	0	— 5	0
					Pigs	4	4	— 5	4

Beasts, 1218; Sheep & Lambs, 3100; Calves, 280; Pigs, 210.

MARK LANE.—MONDAY, Nov. 26.

The supply of Wheat from Essex and Kent was moderate, but added to that from Essex left over from last week made a large show, the bulk being unsuitable for our millers, remained unsold at a late hour, although offered at a decline of 4s. per qr. from our quotations of this day se'nnight. The attendance of country buyers was considerable, and a good retail business was transacted in foreign Wheat, but owing to the large arrivals, a reduction of 1s. to 2s per qr. was submitted to on new foreign and Russian qualities; the value of fine old is unaltered. Barley sells slowly at a decline of 1s. to 2s. per qr. Beans and Peas are rather cheaper. The Oat trade is very dull, and new corn 1s. per qr. lower. Flour sells slowly at last week's prices.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	50	—62	Red	40	—60
— — fine selected runs..ditto	53	—66	Red	50	—66
— — Talavera	50	—74			
— Norfolk	—		Red	—	
— Foreign	50	—74			
BARLEY, grind. & dist., 28s to 30s..Chev.	40	—44	Malting.	38	—40
— Foreign..grinding and distilling	30	—36	Malting.	40	—44
OATS, Essex and Suffolk	20	—24			
— Scotch and Lincolnshire..Potato	26	—28	Feed ..	20	—25
— Irish .....Potato	26	—28	Feed ..	21	—24
— Foreign.....Poland and Brew	20	—26	Feed ..	19	—26
RYE	35	—38	Foreign.	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....36s to 44s....Tick	38	—48	Harrow.	38	—48
— Pigeon .....40s — 56s..Winds.	—		Longpod	—	
— Foreign .....Small	40	—50	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	33	—48	Suffolk .	40	—50
— Maple .... —s to —s ..... Grey	40	—42	Foreign.	38	—48
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	59	—57			
— 2d do. ..... ditto	34	—50	Country.	34	—50
— Foreign .....per barrel	29	—34	Per sack	40	—50

FRIDAY, Nov. 30.

The trade for all kinds of grain and Flour this week has continued to be depressed, caused in a great degree by the great proportion of the new crop being unfit for millers' use, and the consequent difficulty of finding purchasers for it, also by the large foreign arrivals at the chief ports of the kingdom, and the general indisposition of millers and bakers at this period of the year to increase their stocks. A decline of 1s. to 2s. per qr. upon good samples of English has been general throughout the kingdom; the damp and inferior have been disposed of at very irregular prices as buyers could be met with, the decline in some instances being equal to 4s. or 5s. Holders of fine old foreign are disinclined to submit to any reduction, believing it will all be wanted, and probably at higher rates during the winter; secondary samples have been purchaseable at 1s. to 2s. per qr. lower rates. The arrivals of English Wheat and Oats this week are of limited extent, of English and foreign Barley large, good of foreign Wheat, and of foreign Oats considerable. The attendance at this morning's market was smaller than of late. The best samples of English Wheat were taken at Monday's prices, but some of the inferior remained unsold towards the close of the market; the demand for foreign was inactive, and only a limited business was transacted at Monday's prices. Spring Corn of all descriptions is a slow sale. New Oats are cheaper.

ARRIVALS FROM Nov. 26 TO Nov. 30.

	Wheat.	Barley	Oats.	Flour.
English ..	2210 qrs.	4970 qrs.	630 qrs.	1370 sks.
Irish	— ,,	240 ,,	1140 ,,	— ,,
Foreign ..	22820 ,,	18260 ,,	51280 ,,	1820 ,, 3000 brls.

LIVERPOOL, Tuesday, Nov. 27.—This morning's market has been well attended by country buyers, who came with the expectation of purchasing at much lower prices, but in this they have been a little disappointed, for holders would not give way more than from 1d. to 2d. per cental on Wheat, and 6d. per barrel on Flour on Friday's rates, and at this reduction a moderate consumptive business resulted. Indian Corn was neglected, at a decline of 6d. per qr. Oats and Oatmeal very dull. Beans, Peas, and Barley were each 6d. per qr. cheaper. The market closed with a dull feeling.

FRIDAY, Nov. 30.—Market moderately attended. Wheat in moderate consumption; business at a decline of 1d. to 2d. per cental. Flour 6d. to 1s. per sack lower; barrels a turn easier, with firm business. Indian Corn 3d. to 6d. lower. Other articles unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Oct. 20..	60s 1d	40s 7d	23s 7d	34s 7d	50s 2d	41s 11d
— 27..	59 11	40 9	23 5	36 8	49 6	41 10
Nov. 3..	59 9	40 10	23 3	36 2	49 10	42 4
— 10..	58 9	41 0	23 11	36 6	51 1	44 5
— 17..	58 1	41 4	23 5	36 4	50 8	46 9
— 24..	56 3	40 11	23 3	34 4	48 11	48 4
Agg. Aver.	58 11	40 11	23 6	34 9	50 0	44 3

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Oct. 20.	Oct. 27.	Nov. 3.	Nov. 10.	Nov. 17	Nov. 24.
60s 1d—		..	..	..	..	..
59 11	..		..	..	..	..
59 9	..	..		..	..	..
58 9	..	..	..		..	..
58 1	..	..	..	..		..
56 3	..	..	..	..	..	

BUTTER MARKET.—Nov. 30.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 14s. ,, ,,
Pork, 5s. 0d. to 5s. 4d. per 8 lbs.

MR. HENRY OVERMAN has a VACANCY for an AGRICULTURAL PUPIL.—Weasenham, Rougham, Norfolk.

1000 DRAINERS WANTED.—There is still room for a large number of hands on Messrs. GIRDWOOD'S Drainage Works, in the counties of Stafford and Derby. Good men may find regular employment on application to the Foremen at Sudbury, Hungry Bentley, Longford Abbot's Bromley, and Smallwood.—49, Pall Mall, London, S.W.

WANTED, A GARDENER, who will be required to work in Flower and Kitchen Garden, and to Manage Greenhouse and Conservatory. Other men under him. Wages 27s. per week.—Apply by letter only to Mr. C. SPRINGFIELD, Dulwich, S.

TO GARDENERS.

WANTED, a clever, intelligent, and active MAN, who thoroughly understands the nature and treatment of Hothouse and Greenhouse Plants. Satisfactory reference as to character, intelligence, sobriety, and competency will be required.—Apply to H. J. BUCHAN, No. 8, Cranbury Place, Southampton.

WANTED, AS UNDER SHOPMAN, a young Man acquainted with the Wholesale Seed Trade.—Address, in own handwriting, stating qualifications, age, where last employed, and salary required, Y. Z., *Gardeners' Chronicle* Office.

WANTED, AS FARM SERVANTS, a married Couple, to go to New Zealand in a few weeks. The man to be a good Ploughman and Judge of Sheep and Cattle, the wife a good Butter and Cheese Maker, and able to take full care of a Dairy of Cows. Two or three Children from 15 to 18 years of age (if good Farm workers), would not be objected to. Wages for an engagement of three years, 50*l*., 55*l*., and 60*l*. per annum, with rations and free house. Passage money advanced. The Advertiser, with his family, will sail from the Port of London in December.—Application by letter to No. 280, Bath Crescent, Glasgow.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD.)—Good references.—Y. W., Black Horse, Cherley Wood, Rickmansworth, Herts.

GARDENER (HEAD).—Married, without incumbrance; five years' unexceptionable character.—J. Hutt, Hadlow, Kent.

GARDENER (HEAD, where four or more are kept).—Age 28, single; understands his profession.—W. T., Messrs. Paul & Son, The Old Nurseries, Cheshunt, Herts, N.

GARDENER (HEAD).—Age 28, single; understands his profession in all its various branches. Three years' good character.—B. C., G. Stanley, Florist, High Road, Lee, Kent, S.E.

GARDENER (HEAD).—Age 38, married; has a thorough practical knowledge of his profession; Laying-out Grounds, Managing of Land, &c.—H. G., Mr. E. Clarke, Nurseryman, Gravesend, Kent.

GARDENER (HEAD, to any nobleman or gentleman).—Age 32; first-class Gardener in all its branches. Will give the highest satisfaction. Full particulars on application.—X., H. Lyndoe, 26, St. Andrews Street, W.C.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 29, single; thoroughly understands Vines, Early and Late Forcing, Stove and Greenhouse Plants, and Gardening in all its branches. Two years' good character as Head Gardener.—X. Y., Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 38; thorough practical Man, of 25 years' experience in Scotland, England, and Ireland; has served as Foreman in three first-class Nurseries, and is a good Plant Grower and Propagator of all kinds of Trees and Shrubs. Wife a thorough Cook, Dairywoman, and Laundress. Can be highly recommended.—S. D., 24, Sussex Road, Brixton, S.

GARDENER (HEAD) to any nobleman or gentleman.—Age 35, no incumbrance: has had great practical experience in all branches of his Profession, where Early Flowers, Fruit, and Vegetables are required, and is also a good Kitchen and Flower Gardener. Five years' good character from the gentleman he is about leaving, Wife can manage Poultry and Dairy.—C. HARVEY, Gardener, Park House, Reigate, Surrey.

GARDENER.—A person of good experience in the whole routine of his profession. Wife can manage the Laundry if required.—A. B., Post Office, Maidstone.

GARDENER.—The Executors of a gentleman deceased desire to procure a situation for a Gardener, who for 17 years had the sole management of their late father's Fruit and Flower Garden, in the country, and who is well up in his profession. They confidently recommend him for a superior situation.—A. B., Adshead's, 53, Strand, W.C.

GARDENER in a nobleman's or gentleman's Garden.—Has a knowledge of Plants and Vines. Three years' good character from last employer.—J. C., Post Office, Stone's End, Borough, S.E.

GARDENER (UNDER), OR PROPAGATOR, in a Nursery.—Aged 19.—C. S., 6, Princes Terrace, Malden Road, Camden Town, N.W.

FOREMAN, OR UNDER GARDENER, in a respectable Family.—W.Y., Hoo Gardens, Luton, Beds.

ASSISTANT in a Nursery and Seed Shop.—A young Man, who has had considerable experience in the Trade. Respectable reference can be given.—M. A., John Stewart & Sons, Seedsmen, Dundee.

IMPROVER.—A respectable Youth (aged 18) the son of a widow, wishes for employment in a gentleman's Garden, where he would have an opportunity of gaining information. A premium of 5*l*. or 10*l*. will be given, in proportion to the remuneration offered. He has been some time employed in the profession.—B. B., Ford's Nursery, Commercial Road, Southampton, Hants.

TO SEEDSMEN.—A young Man, who has had seven years' experience in a large Provincial Seed Business, and can have unexceptionable testimonials.—W. B., 17, Cheyne Walk, Chelsea, S.W.

BAILIFF (WORKING).—Married; if required Wife can Superintend Dairy and Poultry.—G. G., Post Office, Holly Port, Maidenhead, Berkshire.

FARM BAILIFF.—Age 40, single; thoroughly practical. Good reference.—J. V., Stent's Library, Guildford, Surrey.

BAILIFF.—Middle-age, married; practically experienced in Farming, and understands thoroughly the Buying, Selling, and Management of Stock, Draining, Planting, &c. Unexceptionable Testimonials and References to last employer and others.—A. H., Messrs. Thomas Gibbs & Co., Corner of Half-Moon Street, Piccadilly, W.

TO LANDOWNERS, &c.—Age 50; a practical Cultivator of Land and Propagator of Fruit, Forest Trees, &c.; a good Correspondent, and can prepare Tenants' Agreements, Accounts, &c., wishes a confidential engagement at a moderate salary. Undoubted references.—P. N., Messrs. Powell, Stationers, 54, Parliament Street, S.W.

TO NURSERYMEN AND SEEDSMEN.

BOOK-KEEPER AND CASHIER OR TRAVELLER, a good CORRESPONDENT.—Age 28; is about to leave his present situation. Fourteen years' reference in first-class houses in Scotland and England. Well recommended.—C. B., Messrs. Cockburn & Cumming, 6, Liverpool Street, E.C.

MANAGER, &c.—Gentlemen requiring a person to manage Estate Improvements, Agricultural or Horticultural, to lay out new Grounds, Farms, Draining, Planting, Road Making, or Building Works.—Apply to Mr. W. CLARK, 25, Bishopsgate Street, Within, City, S.E.

TO CORN, SEED, AND MANURE MERCHANTS.

CLERK OR MANAGER.—A young Man who has had five years' experience in the above business and has been accustomed to attend markets. Unexceptionable references given.—For salary, &c., address to E. E. E., Post Office, Basingstoke.

CLERK AND SHOPMAN, OR TRAVELLER.—Age 23; understands Book-keeping by double and single entry; would introduce a good connection.—VERITAS, Post Office, Upper Norwood, Surrey, S.

SHOPMAN.—Age 27, single; has been upwards of nine years at the Seed and Nursery Trade in Scotland; Character irreproachable.—SEEDSMAN, Mr. Smyth, 76, Strand.

TO SEEDSMEN.

SHOPMAN.—Nine years' experience in London and country houses.—H. W., Messrs. Thos. Gibbs & Co., corner of Half-Moon Street, Piccadilly, London, W.

TO SEEDSMEN.

ASSISTANT SHOPMAN (either in the Wholesale or Retail Trade).—First-class references.—C. D., *Gardeners' Chronicle* Office, W.C.

DAIRYMAID.—Thoroughly understands her business. Good reference.—A. B., Shelfhonger Road, Diss, Norfolk.

WEDDING AND BIRTHDAY PRESENTS.—Dressing Cases, Travelling Dressing Bags, Despatch Boxes, Writing Cases, Jewel Cases, Ladies' Reticule and Carriage Bags; Mediæval Mounted Envelope Cases, Blotting Books and Inkstands en suite; the New Patent Self-closing Book Slide; also a choice variety of Elegancies and Novelties, suitable for Presentation, too various to enumerate, to be had at H. RODRIGUES', 42, Piccadilly, W.

LE SOMMIER ELASTIQUE PORTATIF.

HEAL AND SON have patented a method of making a Spring Mattress portable. The great objection to the usual Spring Mattress is its being so heavy and cumbersome.

The SOMMIER ELASTIQUE PORTATIF is made in three separate parts, and when joined together has all the elasticity of the best Spring Mattress. As it has no stuffing of wool or horsehair, it cannot harbour moth, to which the usual Spring Mattress is very liable; the prices, also, are much below those of the best Spring Mattresses, viz.:—

3 feet wide by 6 feet 4 inches long	..	..	£2	5	0
3 feet 6 in.	,,	,,	2	10	0
4 feet	,,	,,	2	15	0
4 feet 6 in.	,,	,,	3	0	0
5 feet	,,	,,	3	5	0
5 feet 6 in.	,,	,,	3	10	0

The SOMMIER ELASTIQUE PORTATIF therefore combines the advantages of elasticity, durability, cleanliness, portability, and cheapness.

An Illustrated Catalogue of Bedsteads, Bedding, and Bed-Room Furniture sent free by post on application.

HEAL & SON, 196, Tottenham Court Road, W.

ASTHMA.—DR. LOCOCK'S PULMONIC WAFERS give instant relief and a rapid cure of Asthma, Consumption, Coughs, and all disorders of the Breath and Lungs. They have a most pleasant taste. Price 1s. 1½d., 2s. 9d., and 11s. per box. Sold by all Medicine Vendors.

DINNEFORD'S PURE FLUID MAGNESIA has been, during 25 years, sanctioned by the medical profession and universally accepted by the public as the best remedy for acidity of the stomach, heartburn, headache, gout, and indigestion. As a mild aperient it is admirably adapted for ladies and children.—Manufactured (with the utmost attention to strength and purity) by DINNEFORD & Co., 172, New Bond Street, London, W., and sold by all respectable Chemists throughout the empire.

The Gardeners' Chronicle Newspaper.

SATURDAY, DECEMBER 8, 1860.

BANK OF DEPOSIT (Established A.D. 1844), 3, Pall-Mall East, London.—Capital Stock, 100,000*l.*

Parties desirous of Investing Money are requested to examine the Plan of the Bank of Deposit, by which a high rate of interest may be obtained with ample security.

Deposits made by special agreement may be withdrawn without notice.

The interest is payable in January and July.

PETER MORRISON, Managing Director.

Forms for opening accounts sent free on application.

SPECIAL NOTICE.

PELICAN LIFE INSURANCE COMPANY. Established in 1797. 70, Lombard Street, City, E.C., and 57, Charing Cross, Westminster, S.W.

BONUS OF 1861.—All Policies effected prior to July 1, 1861, on the Bonus Scale of Premium, will participate in the next Division of Profits.—For Prospectuses and Forms of proposal apply at the Offices as above, or to any of the Company's Agents.

THE LANDS IMPROVEMENT COMPANY.—Incorporated by Special Act of Parliament in 1853. 2, Old Palace Yard, Westminster, S.W.

To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c. IN ENGLAND AND WALES AND IN SCOTLAND.

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No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard Westminster, S.W.

THE GENERAL LAND DRAINAGE AND IMPROVEMENT COMPANY. Offices, 52, Parliament Street, S.W.

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II. The erection of Farm Houses, Cottages for Agricultural Labourers, and all kinds of Farm buildings.
III. The construction of Roads.
IV. The Grubbing and clearing of old Woodlands, Enclosing, Fencing, and Reclaiming Land.

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The owners of Estates, not entailed, who may be desirous to avoid the expense or inconvenience of a Legal Mortgage, may also charge their Estates with Improvements under the simple and inexpensive process of the Company's Act.

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No investigation of Title being required, and the charge not being affected by Incumbrances, no legal expenses are incurred.

The arrangements for effecting Improvements are threefold—

No. I. The Works may be designed and executed entirely by the Landowner's Agent, and the Company employed only to supply the Loan and conduct the matter through all the forms for charging the outlay on the Estate.

No. II. The Company will supply Plans, Specifications, and Estimates for any Improvement to be executed by the Landowner's Agent, as under No. I.

In each of these cases the Landowner will be solely under the control of the Inclosure Commissioners.

No. III. The Company will undertake the entire responsibility of the Improvement, prepare the Plans, execute the Works, and finally charge on the Estate the actual amount expended with their Commission thereon approved by the Inclosure Commissioners.

Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.

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News of the Week.

By the Overland Mail from Bombay of the 12th November, we learn that the collection of the Income-tax was so obnoxious to the native merchants and bazaar dealers in that presidency, that

they had entered into a combination to suspend all business until the tax should be abolished. The Baroda Railway works had been summarily suspended by the Government, but the cause of the suspension had not transpired. A famine was imminent in the districts round Neemuch, and the Durbars of Kotah, Dhar, and Bursee had, in self defence, prohibited the transit of provisions across their frontiers. It was reported that Neemuch had only 15 days' food left, and that the people were in danger of being starved.

The KING OF SARDINIA left Naples on Friday for Palermo, and was received by the Sicilians with extraordinary enthusiasm. HIS MAJESTY on his arrival proceeded to the cathedral, where he was solemnly received by the Archbishop of Palermo. The KING afterwards gave audience to the constituted bodies and deputations from the municipalities. HIS MAJESTY has since issued a Proclamation to the Sicilians, reminding them of the former connection of his family with the island, and promising to respect the privileges of the Sicilian Church, and to found an administration which will develop agriculture and commerce, and establish the moral principles of a well-ordered society. Tranquillity has now been restored both at Naples and in the provinces with few exceptions, and the explanations given by the Government at the meeting of the National Council on Tuesday have produced a good impression on the country. The Sardinian batteries opened fire on the fortress of Gaeta on Tuesday. The French Government is said to have intimated to the KING the inutility of further resistance, and the Minister of Foreign Affairs at Gaeta, in a fresh protest against the interference of a "perjured and disloyal sovereign," admits that "it is not probable that the defence will be as prolonged as the sovereigns of Europe seem to wish."

Despatches from Hungary state that the whole country is in a state bordering upon insurrection. The Comitat of Pesth has resolved not to yield a hair's breadth of their rights and laws, and the important towns of Debrecsin, Eperies, Szegedin, Nagykörös, Ketskemet, Arad, Waitzen, and Csongrad, have been the scene of demonstrations against the Government, some of which have already led to serious collisions with the troops.

Count DE PERSIGNY has addressed a circular to the Prefects of France, on entering upon his functions as Minister of the Interior. He states that, in issuing the recent Imperial decree on the Constitution, the EMPEROR was desirous to open to the world a new era of peace and prosperity, and that after having done all that was necessary for the honour of France abroad, he has now done his best to "prepare the country for the noble and peaceable exercise of liberties, the development of which the popular throne of the NAPOLEONS must protect." Count DE PERSIGNY calls upon the Prefects to be firm and vigilant in the maintenance of public order, and at the same time recommends them to neglect nothing to "complete the reconciliation of parties," to invite the many honourable men who continue attached to former Governments, to give the country the benefit of their knowledge and experience, and to remind them that "if it is noble to preserve the worship of reminiscences, it is still more noble to be useful to their country."

Mr. LINCOLN, the President elect of the United States, delivered an address to his supporters at Springfield, Illinois, on the 20th ult., in which he said that in all their rejoicings they should neither express nor cherish any hard feelings towards any citizen who, by his vote, had differed from them, but that at all times they should remember that "all American citizens were brothers of a common country, and should dwell together in the bonds of fraternal feeling." The accounts from the South are of a less violent character, and South Carolina now appears to be the only State in favour of immediate secession. The commercial disorder however arising out of the agitation for disunion still continues, and the banks of Philadelphia, Washington, Baltimore, Richmond, New Jersey, Norfolk, and other places have suspended specie payments.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Saturday morning the Queen, accompanied by Prince Alfred, Princess Alice, and Prince Louis of Hesse, walked in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort came to town and presided at a Council of the Committee of the Royal Horticultural Society at South Kensington. The Duchess of Kent and the Princess of Leiningen visited her Majesty and took luncheon. The Marquis and Marchioness of Abercorn, with Lady Georgiana Hamilton and the Right Hon. Sir T. Wyse, left the Castle. The Prince of Wales arrived from Oxford in the afternoon. Prince Edward of Saxe Weimar, Earl Granville, Earl and Countess Stanhope, the Earl and Countess of Clarendon, and Ladies Constance and Emily Villiers, the Chancellor of the Exchequer and Mrs. Gladstone, arrived on a visit. On Sunday morning the Queen and Prince Consort, the Prince of Wales, Princes Alfred, Arthur, and Leopold, Princesses Alice, Helena, and Louisa, Prince Edward of Saxe Weimar, and Prince Louis of Hesse, attended Divine service in the private chapel. The Rev. W. Selwyn preached the sermon. On Monday morning the Queen, with Princess Alice, walked and drove in the Home Park, and visited the Duchess of Kent at Frogmore. The Prince Consort went out shooting, accompanied by Prince Alfred, Prince Edward of Saxe-Weimar, Prince Louis of Hesse, and the Prince of Leiningen. The Prince of Wales returned to Oxford. The Duchess of Kent and the Princess of Leiningen visited her Majesty and took luncheon. In the afternoon Count Persigny had an audience of the Queen to present his letters of recall, and Count de Flahault had an audience to deliver his credentials as Ambassador of the Emperor of the French. The Hon. Henry Elliot had an audience on his return from Naples. Lord John Russell had an audience of her Majesty. The Prince Consort presided at a meeting of the Council of the Duchy of Cornwall, held in the Castle. Prince Edward of Saxe-Weimar, Earl and Countess Stanhope, the Earl and Countess of Clarendon with Ladies Constance and Emily Villiers, and the Chancellor of the Exchequer and Mrs. Gladstone left the Castle. The Duke of Cambridge, the Duke of Newcastle, the Duchess of Sutherland, Lord Palmerston, and Colonel Seymour arrived on a visit. On Tuesday the Empress of the French visited her Majesty. The Empress proceeded to Windsor by a special train on the Great Western Railway, and on arriving at the Windsor Station was met by the Prince Consort, who accompanied the Empress to the Castle in one of her Majesty's carriages. On arriving at the Castle the Queen, with Princess Alice and Prince Alfred, attended by the ladies and gentlemen in waiting, the Duke of Cambridge, Prince Louis of Hesse, Earl Granville, the Duke of Newcastle, and Lord Palmerston, received the Empress at the entrance, and conducted her Imperial Majesty to the Corridor. The Empress took luncheon with her Majesty, and was visited during her stay by the Duchess of Kent and the Prince and Princess of Leiningen. After remaining two hours, the Empress took leave of the Queen and returned to London. The Prince Consort accompanied the Empress to the station. Earl Granville left the Castle in the afternoon. On Wednesday morning the Queen, accompanied by Princess Alice, drove out in an open carriage and four. Prince Alfred, the Duke of Cambridge, Prince Louis of Hesse, and Prince Leiningen, went out shooting. The Judge-Advocate-General had an audience of her Majesty to submit the proceedings of some courts-martial. The Duke of Cambridge, the Duke of Newcastle, Lord Palmerston, and Colonel Seymour, left the Castle. On Thursday the Duchess of Kent and the Princess of Leiningen visited her Majesty from Frogmore, and took luncheon. The Duchess of Sutherland left the Castle. The intended visit of the Queen and the Royal family to Osborne has been postponed in consequence of the prevalence of fever in the Isle of Wight.

THE EMPRESS OF THE FRENCH prolonged her stay at Manchester until noon on Saturday, when she left by the London and North-Western Railway for Leamington, her intended visit to Liverpool having been abandoned. During her stay at Manchester, the curiosity of the people entirely broke through the privacy which it had been the Empress's wish to preserve; but it was a goodnatured rudeness, chiefly venting itself in the one cry of "Hooray!" and her Majesty, both on Friday and Saturday, appeared to take the intrusion very kindly. Her Majesty arrived at Leamington at 4 P.M. on Saturday and proceeded to the Regent Hotel amidst the hearty cheering of an immense crowd which had collected at the station. On Sunday morning the Empress attended Divine service at the Roman Catholic chapel, which was densely crowded on the occasion. Her Majesty walked to the chapel, but the police, whose services had been requested by telegraph before her arrival at Leamington, restrained the natural inquisitiveness of the public, and no person was guilty of any impertinent act of curiosity. In the evening the Empress left Leamington for London, and arrived at Claridge's Hotel, Brook Street, on Sunday night. On Tuesday morning her Majesty went to Windsor and paid a visit to the Queen, returning in the afternoon to Claridge's Hotel, where she still remains.

THE EMPRESS OF AUSTRIA.—Advices from Vigo state that the Osborne had arrived there on the 27th ult. to take in coal, after a very rough passage. In the Bay of Biscay, on the 25th, the Victoria and Albert and the Osborne encountered a terrific gale with a very heavy sea. Both ships were obliged to heave to, but as the weather moderated the Victoria and Albert, with the Empress on board, kept her course for Madeira, while the Osborne, with the Imperial suite, was obliged to put into Vigo. The Osborne had received a good deal of damage, but would be ready to start for Madeira on the 28th.

PRINCE ALFRED has left the Euryalus, 50, and in order to obtain experience in the navigation of a larger ship, will join the line-of-battle ship St. George, 90, in January, and proceed in her to the West Indies and North America. Some of the other midshipmen of the Euryalus will be transferred with his Royal Highness to the St. George.

ORDER OF THE BATH.—The Queen has given orders for the appointment of Rutherford Alcock, Esq., her Majesty's Minister to the Tycoon of Japan, and Charles Alison, Esq., her Majesty's Minister to the Shah of Persia, to be Civil Companions of the Bath.

PARLIAMENTARY MOVEMENTS.—It is reported that Parliament will be summoned to meet for despatch of business on the 5th of February. Lord Bury was on Saturday elected for the Wick burghs without opposition, in the room of Mr. Laing. Mr. Meller, the Conservative candidate for Southwark, has decided on not going to the poll on the present occasion. Mr. Scovell, Mr. Fawcett, and Mr. Layard are still prosecuting their canvass. The nomination for Newcastle-on-Tyne took place on Thursday, when Mr. Carstairs and Mr. Beaumont were put in nomination, Mr. P. A. Taylor having previously retired from the contest. The show of hands was in favour of Mr. Carstairs, and a poll was demanded on behalf of Mr. Beaumont. The state of the poll at 1 o'clock yesterday was 1865 for Mr. Beaumont, and 1266 for Mr. Carstairs.

COLONIAL APPOINTMENT.—The Queen has appointed John Maclean, Esq., C.B., to be Lieutenant-Governor of the Territories of British Kaffraria.

CONSULAR APPOINTMENTS.—The Queen has appointed Lieut-Colonel Stanton, C.B., to be Consul-General at Warsaw; James Grignon, Esq., now Consul at Teneriffe, to be Consul at Riga; and Robert Godschall Johnson, now Consul at Riga, to be Consul at Teneriffe.

THE ARMY.—The Colonelcy of the 13th Light Dragoons, vacant by the death of the Hon. General Lygon, has been conferred on Major-General Maclean. The Colonelcy of the 14th Light Dragoons, vacated by this appointment, has been conferred on Major-General Beckwith; and the Colonelcy of the 6th Dragoons, vacated by General Beckwith's promotion, has been conferred on Major-General Marten. Lieut.-General Ward has been appointed Colonel-Commandant of the Royal Engineers, in the room of the late Gen. Thackeray.

THE NAVY.—Sir Baldwin Walker has resigned the office he has so long held as Surveyor of the Navy, and has accepted the command at the Cape of Good Hope, vacant by the removal of Sir Henry Keppel to the Brazils station, in the room of Sir Stephen Lushington, whose period of service has expired. The Queen has directed letters patent to be passed under the Great Seal, granting to Admiral Sir Graham Eden Hammond, Bart., G.C.B., the office of Rear-Admiral of the United Kingdom, in the room of the late Earl of Dundonald.

THE IRON PLATED SHIPS.—The works of the Warrior, upon which more than 25,000*l.* have already been spent, were suspended for two days last week, the Lords of the Admiralty having discovered that she is not likely to combine stability with invulnerability. After long deliberations however it was decided to proceed with the experiment, and to use every possible exertion to get the ship launched before the end of the year.

THE VOLUNTEER MOVEMENT.—A numerously attended meeting was held on Friday at the Great Western Hotel, Paddington, Sir F. Halliday in the chair, at which a committee was appointed for the purpose of forming a troop in that district in connection with the Metropolitan Light Cavalry.—A numerous meeting of gentlemen of the Jewish persuasion was held on Tuesday evening, at Zetland Hall, Goodman's-fields, when it was unanimously resolved to form a Corps of Jewish Rifle Volunteers.—A numerous meeting of members belonging to the Ancient Order of Foresters of the south-eastern district of the metropolis has been held at Blackheath, at which it was resolved to form a second company in connection with the 5th Kent Artillery.—The anniversary meeting of the Admiralty Company of the Civil Service Corps was held on Monday evening at Somerset House, Lord Clarence Paget in the chair, when the prizes competed for at Wimbledon in October last, were presented to the winners,—the first prize, a silver cup, to Mr. S. S. Lewes, and the second, a field-glass, to Mr. Noel Smith.—The Queen's (Westminster) mustered in great strength on Saturday evening in Westminster Hall, and were inspected by Earl Grosvenor, Lieutenant-Colonel Commanding. There were present 16 companies, including two of recruits, the whole mustering, without officers, 921 file. The cadet company was also present, and had the honour of keeping the ground.—The Inns of Courts Corps was inspected in Richmond Park o

Saturday afternoon, by Colonel M'Murdo. The battalion paraded in King's Bench Walk, and marched thence over Blackfriars Bridge to Waterloo Station, where they took the railway to Richmond.—The Stoke Newington Corps now numbers 130 men, who have been divided into two companies.—The London National mustered in full uniform on Saturday at the Wellington Barracks, and accompanied by the drums and fifes of the Guards proceeded thence over Westminster Bridge, through Stamford Street, across Blackfriars Bridge, along Farringdon Street, Holborn, Oxford Street, Regent Street, and Parliament Street, to Westminster. The numbers present were not far short of 200 men. The London National now numbers between 400 and 500 members, and has already organised two bands—one of brass instruments and another of fifes and drums.—The challenge given by Captain Wilbraham Taylor, of the 12th Middlesex (Barnet), having been accepted by the Admiralty Company of the Civil Service Corps, the match took place on Saturday, at Highwood Hill, when the Admiralty Company won by 15 points, having scored 84, while the Barnet Company scored 69. The prize, which is a silver cup, value 10*l.*, is held on the condition that the winners are bound to accept a similar challenge from any other metropolitan company if given within one month.—The 7th Middlesex (Islington) marched out on Saturday, preceded by their band and accompanied by some of the cadets of the regiment, and proceeded through High Street, Islington, along the Holloway Road and Seven Sisters' Road to the Manor House, returning by the same route. The strength of the corps now amounts to 100 men, and the cadet corps numbers about 40 boys from 10 to 15 years of age.—The additional company for the 2d Tower Hamlets Regiment which has lately been formed in the districts of Clapton and Stamford Hill, is rapidly augmenting, and already numbers more than 50 effectives.—The 8th Tower Hamlets (East and West India Dock Company's corps) though very recently established, has arrived at such an advanced state of efficiency that the non-commissioned officers have been appointed, and the regiment will take part in a Volunteer demonstration in Victoria Park at the beginning of the new year.—The St. Giles and St. George's Bloomsbury Corps have had a rifle contest at Harrow and Kilburn, when the prizes were won by Sergeant-Major Hooper, Private Cansick, Private D. Dolamore, Capt. Jeakes the Captain Commandant, and Private Berridge.—The 22d Surrey assembled on Saturday at the head-quarters in Westminster Bridge Road, and marched with the band to Battersea Bridge, and thence across the river to the Middlesex side, returning over Westminster Bridge.—The 4th Surrey on Saturday had a shooting match at Streatham, for prizes given by the ladies of the district, when the first prize was won by Ensign Coles, the second by Ensign Oxley.—The 2d Battalion of the Royal Arsenal Rifles on Saturday evening had a grand concert, maintained principally by amateur performers, in aid of the band fund. About 1200 persons were present, and the attempt was so successful that similar concerts will be given in succession during the month by the 1st Battalion of the Arsenal Rifles, the Brigade of Artillery, and the Dockyard Corps.—The 5th Company of the Kent Corps had a shooting match at Canterbury last week, when the prizes were won by Colour-Sergeant Norman, Corporal Linford, Corporal Newman, and Private Howard. On a previous day the 6th Company had a shooting match, when the prizes were won by Private Castle and Sergeant Major Foord.—A public meeting of the nobility and gentry of Cheshire was held on Saturday in the Shire Hall, Chester, the Marquis of Westminster in the chair, when it was unanimously resolved to form an association for promoting rifle shooting in the county in connection with the National Rifle Association. The meeting was addressed by Lord Egerton of Tatton, Sir Philip Egerton, M.P., Mr. Cornwall Leigh, M.P., Colonel Wilbraham, the Mayors of Chester and Macclesfield, Mr. John Laird, and other gentlemen, and a committee was appointed to carry the resolution into effect, the Marquis of Westminster being appointed president of the association.—The first rifle contest of the 21st Lancashire (Wigan) took place last week, when the prizes were won by Privates Halsall, Leader, Jackson, Waddington, M'Cann, and Fairhurst; Sergeants Lowe, Hilton, and Lamb. A medal was also presented to Private Lea for his good shooting.—The Hon. Lady Middleton, widow of the late Sir W. F. F. Middleton, has presented a silver bugle to the Needham Market or 12th Suffolk Corps.—The Lincoln Corps had a competition for prizes last week, when a Whitworth rifle of the value of 25 guineas was won by Lance-Corporal Barker, and a silver cup was won by Mr. Wetherell.—Official sanction has been given for the formation of the 2d, 4th, 5th, 6th, and 7th Cambridgeshire Corps into an administrative battalion.—The Cambridge University Corps was reviewed on Friday by Colonel M'Murdo in Parker's Piece.—The Oxford University Corps was inspected on Monday by Colonel M'Murdo in Headington Hill Park. The corps mustered nearly 300 strong, and the inspection was witnessed by the Prince of Wales, who is hon. colonel of the corps.—The 1st Cumberland (Carlisle) Corps was inspected in Carlisle Castle on Friday by Colonel Wake, who has just completed his inspection of the eastern division of the Cumberland battalion.—A meeting of the principal inhabitants of Hoddesdon and its vicinity was held on the 29th ult., Mr. G. J. Bosanquet in the chair, when it was resolved to organise a sub-division in connection with the 11th Herts.—The 11th Hants were inspected at Romsey on Friday by Colonel Luard, Assistant Inspector for the South-Western District.—The movement continues gradually to advance in Essex. The strength of the Colchester corps now exceeds the regulation limits of a single company, and the formation of a second company is consequently in progress. The corps recently established at Ongar is now upwards of 60 strong. The Epping company, 45 strong, has met for company parade, under the command of Sir W. B. Smijth. The Walthamstow company now numbers about 50 effectives. The North Essex Borderers meet for drill in Lord Braybrooke's deer park. Sir Brydges Henniker and the Rev. E. Maxwell have announced their intention to offer prizes next year for competition by the Dunmow corps.—The 3d Breconshire (Crickhowell) had a shooting match last week, when a silver cup offered by Lady Malden, was won by Corporal Ramsey, and the other prizes were won by Privates Hall, Ramsey, W. Lewis, P. Lewis, Richards, Prosser, and Howth Williams.—The 2d Monmouthshire forms a battalion nearly 500 strong, Ebbw Vale and Sirhowy having joined it.—The 3d Monmouthshire has been increased by the accession of 100 Volunteers from Risca and 50 from Tredegar.—The 7th Monmouthshire now numbers 300 men, and brigades with the Monmouth and Pontypool. It is in contemplation to unite all the Newport bodies into one battalion, which will then number some hundreds. The Artillery Corps has secured a practice ground at the mouth of the Usk, on the ground of the Rev. J. Nicholls.—The 17th Glamorganshire assembled at Cadoxton on Monday, and was inspected for the first time by Major Roney, inspector of the district.—The 6th Devon (Barnstaple) was presented last week with a set of colours by Mrs. Pott, wife of the member for the borough.—The 1st and 2d Companies of the Wakefield Battalion had a shooting match on Monday, when the 1st Company made much better practice than the 2d. The prizes were won by Sergeant Glover, Private Grace, and Ensign Hart.—A meeting was held at the Town Hall, Doncaster, on Monday, when it was resolved to take the necessary steps to establish another Rifle Company in the town.—The 1st Staffordshire battalion had a shooting match on Monday on the ground of the Newcastle-under-Lyne Company, when the prizes were won by Private Crompton, Newcastle company; Sergeant Higginbottom, Longton company; and Lieutenant Dutton, Newcastle company.

Foreign.

France.—Count de Persigny has issued the following circular to the Prefects, on entering upon his duties as Minister of the Interior:—

"Monsieur le Préfet,—In taking possession of the high post to which the confidence of the Emperor has called me, I have first of all to claim all your support, for the nobler the spectacle given to us by the Imperial act of the 24th of November the more ought the internal administration of the country to be inspired with generous ideas. Here is a Prince who, after having received the powers of the nation to re-establish public order at home and the greatness of the country abroad, is the first to appeal to the wishes and opinion of France. Scarcely is he victorious over enemies at home and abroad when he introduces into our institutions improvements which are a proof of his confidence in the country. The picture of that first portion of his reign will form a bright period in our history. Called by the voice of a whole people to place himself at the head of a society upset, fallen into chaos and anarchy, he sets courageously to work, and in a few years he restores order among men and things to such a point that never did such prosperity prevail in any epoch of our history. Then, when that great labour is scarcely terminated at home, he is led by the situation of Europe to undertake one no less important abroad, to restore France to that high position to which she has a right. Despite sombre prophecies that he will be carried away by war beyond the limit of the real interests of France, his wisdom, equal to his courage, stops him at that limit; and thus, not only has he re-established, to the advantage of our security, the disturbed equilibrium of Europe, but he has opened to the world a new era of peace and prosperity. Finally, to complete this picture, persuaded that his true calling is not only to place his name by the side of that of the glorious founder of his race, but to assure the destinies of the country, he now prepares it for the noble and peaceful exercise of the liberties the development of which the popular throne of the Napoleons will protect. Monsieur le Prefet, if I recall to your mind the great features of our present history it is not that you may make them the subject of official communications to the populations of your department. Proud of having themselves found in so wonderful a manner, on the 10th of December, the lost thread of our own destinies, they need no one to read in their hearts the great pages of the empire which they have founded. All that I wish is to make you understand in what spirit I claim your assistance. Convinced that the liberties of a country can never be developed unless the State itself enjoys the most perfect security, I ask of you to be always as firm in maintaining public order as vigilant, if necessary, in keeping an eye upon the enemies of the State; but I recommend you at the same time not to neglect anything to complete the work of conciliation between parties. Many honourable and distinguished men of former Governments, while they render homage to the Emperor for the great things which he has accomplished, still keep aloof from a sentiment of personal dignity. Show them the respect which they deserve; neglect no occasion to induce them to turn their knowledge and experience to the advantage of their country, and remind them that if it is noble to maintain the worship of remembrances, it is still more noble to be of service to their country. And now, M. le Préfet, that we are to commence working together for the good of the State, I ask you to put aside all personal considerations, which but too often embarrass great affairs. Always give me your opinion frankly with that independence of character which constitutes the true servant of the State; consequently without thinking whether you will please or offend. Remember that a functionary of the civil order, like the soldier who exposes his life for his country, must know how, if necessary, to brave an undeserved disgrace. But do not fear that you will be judged without a hearing, and still less that I shall shield my responsibility behind yours. Nor must you fear that while you are courageously devoting yourselves for the public interests, you will remain at a distance, exposed without defence to the resentment of unsatisfied ambitions. However, you will soon receive instructions upon important points of policy and administration, and I shall have an opportunity of making an appeal to your zeal and devotion.—Accept, &c., The Minister of the Interior,

"De Persigny."

The *Moniteur* of Sunday publishes the following article on the visit of the Empress to Scotland:—

"We are informed from England that the journey of the Empress, undertaken with the sole view of improving her health, becomes, despite all the precautions of her Majesty to preserve he *incognito*, a real ovation. In Scotland, wherever she has been recognised, the towns have hastened to present addresses to her; the lords of the soil have vied with each other in doing the honours of their noble mansions. On the 28th of November the Empress paid a visit to her cousin, the Princess Mary, at Hamilton Castle. At Stirling and at Glasgow the Volunteers turned out and gave cheers for the Emperor and Empress. At Preston and at Manchester the reception given to her Majesty was the more significant as her Majesty was not expected. In the great manufacturing city of Manchester the reception assumed quite a character of enthusiasm. '*Vive la France!*' '*Vive la paix!*'—such were the shouts which greeted her Majesty. On the 3d December the Empress purposes paying a visit to the Queen at Windsor Castle. These sympathetic manifestations of the English nation can only tend to strengthen the bonds between the two nations. They show in a striking manner how the common sense of the masses discards the violent and thoughtless attacks of which a portion of the press does not fear to make itself the organ."

—A second convention, supplementary to the treaty of commerce between the English and French Governments, was ratified on Friday, and published in the *Moniteur* and *London Gazette* on Saturday. Several articles of British manufacture formerly prohibited, such as cotton yarns, bleached and dyed yarns, tissues of wool, carpets, cotton tissues, velvets, fustians, quiltings, damasks, counterpanes, nets, gauzes, and muslins, are now admitted at moderate duties; and linens, though more highly taxed, are still sufficiently reduced to admit of importation. Silk tissues, lace, and hosiery are admitted free of duty, together with tiles, bricks, and draining tiles. Glassware and table glass, hitherto prohibited, pay a duty of 10 per cent. *ad valorem*, and fine earthenware and stoneware, hitherto prohibited, pay 20 per cent. *ad valorem*. A large number of dyes and chemicals hitherto heavily taxed are admitted free. The *Constitutionnel*, referring to the Treaty, expresses a hope that the time for allowing the importation of British manufactured goods will be anticipated. It is considered probable that instead of being deferred to June and October, 1861, the Treaty will be called into force with the new year. The negotiations at Paris for a commercial treaty between France and Belgium are progressing favourably. When terminated, negotiations for a commercial treaty between the Zollverein and France will be opened at Berlin. The Emperor and the Prince Imperial returned to Paris from Compiègne on Friday evening. The Count de Persigny arrived on Tuesday in Paris and immediately took up his residence at the hotel of the Minister of the Interior. The report, originating in some Belgian journals, that Lord Cowley had tendered his resignation as English Ambassador at Paris, is without foundation. M. Poinsot, President of one of the Chambers of the Imperial Court of Paris, has been assassinated. The *Moniteur* publishes a decree conferring upon Marshal Vaillant the title of Minister of the Emperor's Household. It also announces that M. Baroche, President of the Council of State, having the rank of Minister, will take the title of Minister, without portfolio. The rumour that Count de Morny has been sent on a mission to Rome is contradicted. It is also said that the report that the assembling of the Corps Legislatif will be hastened in consequence of the recent decree on the Constitution, is incorrect, and that it will take place, as usual, in the beginning of February. The Senate, however, will meet earlier, in order to regulate the execution of the resolutions contained in the decree. The *Constitutionnel* says that there is no intention of dissolving the Corps Legislatif. The *Moniteur* publishes the report of M. Haussmann, Prefect of the Department of the Seine, on the budget of the city of Paris. He discusses the question of the octroi, and concludes by expressing an opinion against its abolition. Some of the journals state that Baron de Rothschild is negotiating for the purchase from the Count de Chambord of the forest of Vassy, which is the last bit of property held by that Prince in France, with the exception of Chambord. The iron-cased frigate La Gloire, which has been cruising with the Algesiras to try her speed against that vessel, returned to Toulon on Sunday. During all the trials with two, four, six, and eight boilers, the Gloire had much the advantage of the Algesiras, which is, however, one of the fastest vessels in the French navy. It was also ascertained that the Gloire possesses the necessary qualities for facing all weathers at sea. The Emperor inspected on Thursday week, a machine with a new motive power based on an application of heated and compressed air, which is intended to replace steam. His Majesty remained for half an hour, and expressed to M. Belou, the inventor, his satisfaction with the results obtained. The machine was of 13 horse-power, and the expenditure of fuel established a very considerable saving. The Emperor has granted permission to the Baltimore City Guard battalion to visit Paris as a body and in military uniform, in the coming spring.

Spain.—Marshal O'Donnell has declared to the Cortes

that the representative of Spain at Gaeta has faithfully fulfilled his duty in remaining to share the perils of the King of Naples. In the sittings of the Cortes on Monday Senor Revero proposed that any acts of the authorities which might obstruct the lawful actions of political parties should be considered a violation of the representative system. The Cortes rejected this proposition, and the Minister of the Interior then declared that democracy had no legal existence in Spain. The *Espana* publishes numerous letters from inhabitants of the province of Biscay, energetically protesting against the projects of annexation to France contained in letters which had been inserted in that journal.

SWITZERLAND.—The first sitting of the new National Council was opened on Monday by a long speech from M. Seidler, President by seniority. The election of the new President and Vice-President of the National Council by its different sections took place on Tuesday, when M. Dapples of Lausanne, and M. Latour of Chur, both members of the National party, were respectively elected President and Vice-President. Dr. Blumer, of Glarus, was elected President of the Council of the States, and M. Hermann, of Obwalden, was elected Vice-President.

HESSE CASSEL.—The Committee of the Second Chamber appointed to discuss the question of the constitution of the country, has unanimously made the following proposals to the Chamber:—

1. That the Legislative Assembly does not consider itself the legitimate representative of the country, and cannot therefore transact any public business. 2. That representations should be made to the Elector, frankly explaining the ideas and wishes of the country, and that the Elector should be requested to re-establish at an early period the constitutional rights of Electoral Hesse, which, until 1850, had been recognised as valid. Should any changes be found necessary, the Elector should agree upon the same conjointly with a Representative Assembly, to be convoked on the basis of the electoral law of 1849.

WURTEMBERG.—The Duke Paul of Wurtemberg died at Mergentheim, on the 26th ult. He was well known as a traveller and natural philosopher, and was born in 1795.

PRUSSIA.—The *Official Gazette* announces that M. Stieber, Director of Police, has been relieved of all his functions, and that the Procureur du Roi, M. Schwarck, has been dismissed from his office. The Prussian Government lately called on the different Chambers of Commerce in the kingdom to give their opinion and advice on the commercial treaty to be concluded with France. Their reports have all been received by the Ministry, and the negotiations will commence shortly.

AUSTRIA.—The official Gazette declares on authority that the rumours of negotiations on the cession of Venetia for a pecuniary indemnity are unfounded, and that "as a matter of course there can be no question of selling a Crown land." Another semi-official journal says—"Those persons know Austria but little who think that she will barter her good rights." The official Gazette publishes the convention between France, Austria, and Sardinia for carrying out the partition of the debts and assets of the Monte Lombardo. The liabilities amount to 99 million lire, of which sum two-fifths are to be charged to Austria and three-fifths to Sardinia. The assets, which are also to be divided, amount to 9½ million lire.

THE ADRIATIC.—The Archduke Ferdinand Maximilian has assumed the command of a squadron of evolution. General Benedek has made an inspection of the fortresses on the Venetian coast. He has also assembled the officers at Venice, and addressed them in a speech, telling them that the Government had never entertained the idea of selling Venetia, that it would not assume the offensive, but would defend itself most energetically if attacked.

HUNGARY.—On the 29th ult. Count Carolyi, the Obergespan, convoked the principal inhabitants of Pesth for a preliminary discussion of the question whether a political organisation of the comitat shall take place. After a warm debate it was resolved that the inhabitants of the comitat would not yield a hair's breadth of their rights and laws, and the wishes they expressed in 1848. It was also resolved that all further steps should be determined upon by the general congregation of the comitat, which is to assemble on the 10th of December. The papers publish further details of the late demonstration at Debrecsin and Eperies at the installation of Count Carolyi as Obergespan. They state that crowds of people paraded the town uttering cries of "Long live Kossuth!" "Long live Garibaldi!" and that the Austrian arms were torn down from the Exchequer and other public buildings. The military were obliged to interfere to restore order, and many people were wounded and 50 arrested. Accounts from Szegedin, Nagykörös, Ketskemet, Arad, and Csongrad state that demonstrations against the Government officials had also taken place in those towns. In consequence of disturbances at Waitzen, a serious conflict had taken place between the military and the people, in which numbers were wounded on both sides. Mention is also made of a programme drawn up by Kossuth, Klapka, and Pulzky, who aim at constituting themselves into a Provisional Government. It is believed that the Hungarians wish to come to an understanding with the Roumans for the foundation of a kingdom that should stretch all along the Danube to the Black Sea.

ITALY.—King Victor Emmanuel left Naples for Sicily on Friday. The English fleet saluted his Majesty on his departure. This act created a sensation. The fleet afterwards left Naples, in order, it is believed, to follow the King to Palermo. The Marquis de Villamarina has been appointed Minister of Foreign Affairs, and Signor Poerio has been elected Vice-President of the Consulta, after having refused the post of Minister without a portfolio. Signori Montezemolo, Cordovo, and La Farina left on Saturday for Palermo. The Sardinian law concerning the press, with some slight modifications, has been promulgated. A commission, composed of Sardinian and Sicilian officers, has been appointed to examine the claims of the officers of the Two Sicilies who have adhered to the new Government. The Consulta Generale has been opened. The explanations given by the Government to the Consulta have produced a good impression on the country. The Neapolitan nobility have given a grand ball to the deputation from the Sardinian Chambers. The General Lieutenancy Council revoked the measures directed by General Pinelli, in his proclamation of a state of siege in the Abruzzi, immediately upon receiving information of them. Disturbances have occurred in the three towns of Tagliano, Celano, and Tagliacozzo, but the Piedmontese have entered Avezzano, the chief town of the district, and tranquillity has been effectually restored. On Monday last a reactionary movement took place at Penna in the Abruzzi, but was suppressed by the troops and the National Guard. Colonel Delagrange, with 7000 Sardinian troops, has occupied the defiles of Mount Vellino, a position of importance. Several guerilla companies were organising. The Piedmontese were forming flying columns in order to act energetically at the points menaced. Reactionary movements have been suppressed in the province of Avellino. An unimportant reactionary demonstration, caused by priests and lazzaroni, took place on the 29th ult. at Naples. Several priests were arrested, and the demonstration was suppressed. In consequence of these disturbances General Sirtori has issued a proclamation against street demonstrations, reminding the volunteers that the King loves them, but that there are military laws, which must be respected. On Monday evening the Teatro Nuovo, which was the scene of a Garibaldian demonstration on the 21st ult., was closed by the authorities. It was, however, reopened and illuminated by the people, who sung Garibaldian songs. The crowd afterwards dispersed without disorder. It is reported that a levy of 150,000 men will be made in Southern Italy, and that, on account of the dissension existing between the inhabitants of Caserta and the English Legion, the latter will be disbanded. The Hungarian Legion is actively organising. The Count of Syracuse, uncle of King Francis II. and the most enlightened of the Neapolitan Bourbons, died on the 4th inst. at Pisa, from a sudden stroke of apoplexy, while on his way to Naples to congratulate Victor Emmanuel as King of Italy. Accounts from Gaeta contradict the report that King Francis II. had rupured a blood-vessel, but letters from Naples of the 27th ult. state that the life of the King is in serious danger, and that one of the most celebrated physicians at Naples had proceeded to Gaeta to give his advice. A circular despatch, dated the 12th ult., has been addressed by the Foreign Minister at Gaeta to the representatives of Francis II. at the European courts. In this despatch the minister traces the rapid progress of the revolution in the kingdom of the Two Sicilies, and, while admitting that the army was demoralised by pernicious doctrines and that treason had penetrated even to the court and council, contends that the King would have achieved a triumphal return to his capital had not a "perjured and disloyal sovereign" intervened to prevent it. At the present moment, as the resistance of the fortresses of Gaeta and Messina necessarily depends on a thousand circumstances, "it is not probable," he says "that this defence will be as prolonged as the sovereigns of Europe seem to wish." The King has 16,000 troops at his disposal, while the land and sea defences have been completed, mounting 900 guns. Four Sardinian batteries have opened fire against Gaeta, the garrison of which has replied to them. Gen. Cialdini has now 200 siege guns in position. There was a talk of burning the suburbs on account of their sheltering the Piedmontese from the fire of the garrison. The dearness of provisions was increasing. It was said that the King was expecting money. It is understood that the French Government has intimated to his Majesty that it is convinced of the inutility of further resistance. On the other hand the Austrian Government recommend resistance. General Bosco, in a report to his Majesty, states that he reconnoitred the valley of Astralina on the 29th ult., and did not find any siege works in course of construction there. Accounts from Rome state that the Pope appears less than ever disposed to quit Rome. 65,000*l.* sterling of Peter's Pence have arrived from America. The Papal Government has stimulated the collection of the pence by creating an archconfraternity or union of St. Peter, with ramifications among various nations, and bulls have been published, granting ample indulgences to all persons of both sexes who join the union. The towns of Acquapendente, Bagnarea, and some other towns in the province of Viterbo, have been re-occupied by the French, and 700 Pontifical gendarmes are now traversing the province. The financial difficulties of the Government are increasing. Messrs. Rothschild a few days since gave notice on the Paris Bourse that the Papal Government had not remitted the amount of the coupons of the Roman loan due on the 1st December, but on Thursday last they issued a second notice that they were prepared to pay them. Count Cavour has addressed a despatch to the Berlin Cabinet, in answer to the late note of Baron Schleinitz, condemning the policy of Sardinia in Central and Southern Italy. Count Cavour regards the movement in Italy as a purely Italian question, and shows that so far from Victor Emmanuel being thwarted by foreign Governments, he ought to be supported as a moderator, who has rescued Italy from the revolutionary party, and is now saving her to the principle of monarchy. A copyright treaty was concluded on Friday between England and Sardinia. The Sardinian Government has deliberated on the question of the guarantee of the interest of the Roman Railway, the concession for which was granted to Messrs. Mirés.

SICILY.—King Victor Emmanuel arrived at Palermo on Saturday morning, and was received by the Sicilians with extraordinary enthusiasm. The people wished to detach the horses from his Majesty's carriage, and to draw it through the streets. People assembled from all parts of Sicily, and the total number present in the city was estimated at 400,000. His Majesty, before descending at the Palace, went to the Cathedral, and was solemnly received by the Archbishop of Palermo. The King afterwards received the constituted bodies and deputations from the municipalities of Sicily. His Majesty has since issued a proclamation to the Sicilians, in which he reminds them that one of his ancestors had reigned over Sicily. He mentions the election of the Duke of Genoa as King of Sicily in 1848, and the recent vote of Sicily in favour of annexation. He promises to establish institutions for restoring the moral principles of a well-ordered society, and to respect the privileges of the Sicilian Church, and concludes by requesting unity and concord among the people.

GREECE.—A Royal ordinance dissolving the Chambers was read on the 28th ult., and was received by the Deputies with cries of "Long live King Otho!" Tranquillity prevails.

MONTENEGRO.—The marriage of Nicholas I., the young Prince of Montenegro, with Millena Petrovka, daughter of the Senator Vukowic, was celebrated on the 8th ult., at Cettigne. At the wedding feast, toasts were drunk to the Emperor of Russia, as the protector of Montenegro, and the Emperor of the French, as "the liberator of oppressed nationalities." On the 4th inst. the Prince, having assembled his Guards, addressed them as follows:—"I shall soon give you an opportunity of proving your valour, upon which depends the future prosperity of Montenegro." It is rumoured that the Prince will cede Godinje, in the district of Cernizka, to the French, for the purpose of being colonised.

TURKEY.—The Marquis de Lavalette insists on the extension of the French occupation of Syria. The Porte refuses to accede to this demand. The other Ambassadors maintain an apparently neutral attitude. Fuad Pasha will remain in Syria during the winter. The Galata bankers express a desire to have a share in the new French loan on contractors' terms. The Greek and Armenian Patriarchs have been decorated by the Sultan. The Turkish Government has granted a concession for the construction of a railway from Constantinople to Belgrade, a distance of between 400 and 500 miles. The concession has been granted to Mr. T. Page, C.E., the engineer under whom the new bridge at Westminster is constructing.

SYRIA.—The French agents are getting up petitions among the Christians of Damascus and Beyrout in favour of the extension of the French occupation. A Christian sheik has been appointed the new Kaimakan of the Lebanon. The *Pays* says that the quartering of the French troops at Deïr-El-Kamer, Bet-Eddin, and Kab-Elias, has been effected in the best possible manner. At Kab-Elias the Chasseurs of Africa have converted into a guard-room the cave to which the prophet Elisha withdrew to avoid the anger of Jezebel. At Beyrout the Zouaves have already built a theatre and a *café chantant*. At Zahleh the troops are installed in the cathedral, the only building which escaped destruction by the Druses. On all sides the French are engaged in making new roads or repairing old ones. It is expected that in three months they will have done more for Syria than the Turks in three centuries.

THE PRINCIPALITIES.—The excitement in the Principalities increases daily, and fears are entertained of a general rising. Vessels laden with ammunition have been seized on the Danube. At Crajowa, in Little Wallachia, 20 of the principal merchants of the town were killed on the 19th ult. by the militia, in a disturbance which took place on the subject of an increase in the tax on trade licences. A revolution was on the point of breaking out at Ploesti from similar causes. At Jassy, Prince Couza had caused the Archbishop Metropolitan to be arrested, and conveyed between two gendarmes to a convent, where he is confined. M. Cogelnitchano, President of the Council, has been treated in the same manner.

EGYPT.—Letters from Alexandria of the 22d ult. state that the Viceroy, Said Pacha, has announced his intention of shortly going on a pilgrimage to Mecca, and that in order to give the excursion an imposing character, he intends to take with him not only a number of distinguished personages, but a corps of riflemen of the guard.

INDIA.—The Overland Mail has arrived with news from Bombay to the 12th November, and from Calcutta to the 2d November. The following are the detail's:—

Bombay.—Disturbances are imminent in this presidency on account of the collection of the income tax, the native merchants and traders having entered into a combination to suspend all business until the tax is abolished. There is every appearance of a more than usually cold season in Bombay.

Neemuch.—A famine is imminent in the districts round Neemuch, and the Durbars of Kotah, Dhar, and Bursee have refused, in self-defence it is presumed, to allow the transit of provisions across their frontiers. It was reported that Neemuch had but 15 days' food left, and was in danger of being starved. The transport train however can carry grain in 10 days from Dooba to the station, and it is understood that orders have already been issued for its relief. The Durbars have offered to repay the advances received by their subjects for the supply of provisions under contract, but have resolutely refused to allow any grain to leave their territories.

Baroda.—The Baroda railway works have been summarily suspended, and all the establishment dismissed. There are several rumours afloat as to the cause of this suspension, but nothing is known with certainty.

UNITED STATES.—Mr. Lincoln, the President elect, addressed a torchlight procession from the window of his house at Springfield, Illinois, on the 20th ult. as follows:—

"Friends and Fellow Citizens,—Please excuse me on this occasion from making a speech. I thank you, in common with all those who have thought fit, by their votes, to endorse the Republican cause. I rejoice with you in the success which has so far attended that cause. Yet in all our rejoicings let us neither express nor cherish any hard feelings towards any citizen who, by his vote, has differed from us. Let us at all times remember that all American citizens are brothers of a common country, and should dwell together in the bonds of fraternal feeling. Let me again beg you to accept my thanks, and to excuse me from further speaking at this time."

His friend and counsellor, Mr. Trumbull, one of the senators from Illinois, also spoke at the meeting. He said that Mr. Lincoln "will be the President of the whole country, and will be as ready to defend and protect the State in which he has not received a solitary vote against any encroachment upon its constitutional rights as the one in which he has received the largest majority." "Secession," he continued, "is an impracticability, an impossibility. The Republicans are not for interfering with the domestic institutions of any of the States, nor the advocates of negro equality or of amalgamation with which political demagogues have so often charged them." The advices from the South are of a less violent character. In Greene County, Georgia, on the 16th ult., an immense mass meeting took place, at which the most influential men in the community took part. The sentiment of the meeting was decidedly opposed to disunion, and resolutions of a Conservative character were almost unanimously adopted. Another large meeting was held in Hancock County on the 18th, which unanimously adopted resolutions declaring that the mere election of Mr. Lincoln is no cause for dismion. A majority of counties in the State had held meetings in the disunion interest, many of which, however, took a strongly Conservative cast, while some were in favour of retaliatory legislation; but all favoured the calling of a State Convention. Union mass meetings had been held in several counties in Virginia, and the organs of the Southern party state that large purchases of arms and ammunition were making at New York and other places, without any attempt at concealment. 500 Kansas men, under Captain Montgomery, were ravaging the Missouri borders, with the avowed intention of setting the slaves free. General Harney was taking measures for their extermination. It is said that there is no division in the Cabinet on the secession question, and that the President, in an interview with some ardent secessionists, took strong grounds against secession without first resorting to conciliatory measures. He said that he could not believe the West would permit the mouths of the Mississippi to be held by a foreign power, which both Louisiana and Arkansas would become in case of their withdrawal from the Union. The Philadelphia, Washington, Baltimore, Richmond and Norfolk banks have suspended specie payments. The Charleston banks have also partially suspended payment. The New York banks are exchanging 5,000,000 dols. extra. Mr. Lindsay, M.P., who has returned to England by this mail, spent the week previous to his departure at Washington, and conferred with the Government on the subject of removing the difficulties in the way of a settlement of the important maritime questions pending between England and the United States. A despatch from Washington, dated the 15th ult., has the following relative to the recent "difficulty" between the British and American naval officers at Panama:—

"The Navy Department received this morning from Captain Montgomery some additional matters connected with the arrest of naval officers at Panama through the instructions of Captain Miller, of the English squadron. It appears from the correspondence that American citizens were also arrested and detained, in addition to naval officers, without any pretext or authority. The correspondence which passed between Captain Montgomery and Captain Miller in regard to the matter was pretty sharp, the former evincing a determination to use all the means at his command to prevent a like future occurrence. As the explanation of Captain Miller was not regarded as sufficiently explicit, the matter was turned over to the American Consul, who will lay it before the Department of State. The matter will, doubtless, be satisfactorily arranged by the two Governments.

MEXICO.—An attempt had been made by one of Miramon's generals to plunder the British Consulate at San Luis, where 400,000 dols. of the money taken from the *conducta* by General Degollado had been deposited, but it was prevented by General Alvarez. The report was confirmed that a new diplomatic movement was on foot, in which the Prussian, British, Spanish, and American Ministers would act in conjunction. The retirement of the British Minister from the capital was known to be permanent, as a part of his legation went in the steam-ship Tennessee to New Orleans.

WEST INDIES.—The yellow fever prevailed in a malignant form at Jamaica, in which island the revival movement had commenced, and was rapidly extending. The yellow fever had also broken out on board the British man-of-war Icarus, at Truxillo. Eleven of her crew and two officers had died, and a great many were sick, including Captain Salmon. Subsequently, on her passage to Jamaica she reported 33 dead, and a heavy sick list.

Public Addresses.

Mr. BRIGHT, M.P., attended a *soirée* in connexion with the Freehold Land Society held in the Town Hall of Birmingham on Tuesday, and delivered a long speech, of which the following is a summary:—

"He understood that there were not less than 8000 or 9000 persons subscribers to or connected with the Freehold Land Societies in Birmingham and its suburbs, and that 95 per cent., or 95 out of every 100 of the members might be called working men. Now, if that were so, and if that meeting was a representation of that class, he was justified in saying it was a remarkable meeting, and it was to be taken by the public as at once a proof and a protest. It proved their understanding, their skill, their frugality, their patient endurance, their heroic self-denial, and their noble aspirations after something good, something higher than that to which they had attained, but it was a protest against the laws which excluded that great body of the people from any power, and any rights of citizenship in the country, and against those laws, so hurtful and so vicious, which excluded them from any possession of the soil. Now, the original purpose of those societies was to find, as it were, a cheap entrance at the door, which their lawmakers had not remembered to shut, and, at the same time, enable them to overcome the difficulties which law and practice had placed in the way of any man who wished to become possessed of a portion of the soil of the country in which he lived. They were accustomed to speak of England as a free country, and it was a country of personal freedom, although the time was when some of them would have been put under lock and key. They had freedom to meet, and write, and speak, as they were then met; and they had freedom to exchange the products of their industry amongst themselves or with any other people upon the face of the earth. Well, had anybody suffered from that freedom? Was there anybody so benighted as not to admit that all that was great and noble in England had been created, reared, and existed, in fact, from that freedom of which he had spoken. The crown was not less safe; those institutions which were so valuable, and which they were told were often in such danger, were unimpaired. Everybody was better off, and all rejoiced in the freedom which they enjoyed, but there was one point in which they stood in a less favourable position than the people of America. The land of England was not free. Almost everything which could be done was done to prevent it from being free; and if they brought upon that platform a stranger to this country, and told him how free they were, being able to exchange the products of their country for that of any other country, they would not be able to persuade him that the land, the basis of that industry, was less free than in any even less civilised country in the world. Corn was free. It was not free a few years ago, and if it had not been free this year, the country would in all probability have been turned upside down. Cloth was free, iron free, ships free, shares in railway and other undertakings were free, machinery was free, the furniture they used was free, and any cash which any of them possessed was so far free that they might make what gain they could of it; but land was not free, it was in bondage, and laws were applied to it which if applied to other possessions would be ruinous. Having been invited there that evening, it appeared to him to be his duty to confine himself to the special object of the meeting, with a view to show the obstacles to progress which the society was intended to do away with, and which they ought to compel parliament to remove. The first of these obstacles was the law of primogeniture. He would tell them what those gentlemen who wrote leading articles upon the subject would say—they would say that there was no such law as that of primogeniture, and it was only where a man died without making a will that it came into operation; but the fact was the law did exist, and it gave to one son possession of the property, leaving the other children penniless. It sanctioned to a great extent amongst the people a practice which was infamous in itself. He would give a case in point. Before American independence, and when they were subject to the law of England, in the State of Virginia the law was the same as here, and primogeniture was in full force. Mr. Jefferson, one of the greatest statesmen the United States had produced, and who was their President, considered it was one of the most beneficial acts of his life that he had abolished that law in the State. When the law was gone the practice fell into disuse amongst the people; and no man who had the slightest regard for his own character after death thought of disposing of his property in so unequal and unjust a manner. If in this country the law of primogeniture was abolished, he felt satisfied that the abolition would be attended with the most beneficial results. Then came the law of entail. It did not come down to them from the days of intelligence, but from the time of the brutal ignorance under the Norman conquerors, and it was only now that they were emerging from the serfdom of that period, and he hoped the time would come when there would not remain upon the statute-book a despotic law or remnant of the tyranny of those days. With respect to the law of entail, its main defect was that it enabled the rich man to perpetuate what he called a "family," and thereby perpetuate a gross injustice to some of his family; it enabled him to give his estate to his grandson, or the son of his grandson, and, although in his grave, the remains of a worthless mortal, reduced to the elements from which he came, his voice, nevertheless, was heard 60 years afterwards in the disposal of his property. Another point referred to in the resolution was the difficulty attending titles. If there was any lawyer present who would undertake to explain to them how titles were created, and maintained, and transferred, he questioned whether there would be perhaps 20 people in the hall who would comprehend him. If a man wanted to sell a landed estate, the first thing a purchaser would have to do would be to go back for 60 years, to ascertain whether there was any flaw in the title; and when they reflected upon the various changes which took place in 60 years in the ownership of property, through mortgages and other transfers, they could easily imagine how difficult it would be for a lawyer to wander through the writings of that period without finding something upon which to stay his proceedings, so that the buying of an estate might become the torment of a man's life. The honourable member then proceeded to point out the serious effects which these laws had upon the social and moral condition of the agricultural population, their tendency being to create a great landed proprietary, to destroy the independent yeomanry of the kingdom, and reduce the labourers to a state of serfdom degradation, and poverty. It was, he observed, a remarkable fact that England was the only civilised country in which the proprietors of the soil were becoming less numerous, while in France, the United States, or in other countries, the number of landed proprietors was increasing. But in the United Kingdom, where the people were possessed of indomitable perseverance, great industry, and a desire to possess land, yet from the cause he had stated the number of the owners of the land had for the last 60 years been steadily decreasing. That was certainly a most unnatural state of things. Power was concentrated in the territorial class, and the farmers and labourers were degraded and impoverished. With reference to the effect upon the farmers, he would say that the laws had a most injurious effect. It was not his intention to speak unfairly of them now that they stood upon fair and equal ground; but take the farmers politically, and they might be said to be either dead or in a state of suspended animation. In England they did not return their members of Parliament upon their own judgment. In Wales nine-tenths of the people were liberal in politics and dissenters in religion. Nevertheless, scarcely a man entered the House of Commons except he was enthusiastically attached to the established church. And how were they in the north of Ireland? There the Presbyterians returned to the House of Commons not liberal men in accordance with their own opinions, but the reverse. They were in a most abject condition. They tilled the land; but they owned not the land they tilled. They cultivated under the great the proprietors, and their interest were insecure. If, therefore, the Presbyterian farmers of Ireland, and the Dissenters of England and the farmers of the Free Church of Scotland returned members, there were few among them who spoke their political sentiments in the House of Commons. But leaving the farmer, and going to the labourer, what a spectacle presented itself! He sympathised not so much with the man who could cultivate 500 acres of land as with the agricultural labourer. There was not a man in the world whose condition appealed more to the common sense, to the zeal, and sympathy of the towns, than he did. [He then read an extract from a book called "The Recollections of a Country Parson," which gave a graphic description of the labours and sufferings of the ploughman, and which produced a very marked impression upon the audience.] He did not believe that the state of degradation referred to had been decreed by the Almighty. He certainly did not find it in the Gospel from Genesis to Revelations; and it was a subject for serious inquiry why a boy or girl in Lancashire should be able to obtain for his or her labour as great, if not greater remuneration than a powerful agricultural labourer. That was a state of things which required alteration, and they must alter it; they could change the system, and they ought to do so; they would give increased employment to the people, and breathe, as it were, the breath of life into those now politically dead. He felt that they were that evening in the way of their duty, that their connexion with such societies was perfectly sound and justifiable, and as corn was now free, and as Government had been strengthened in proportion to the freedom of the people, so he felt assured that in proportion to the freedom of the land, and its release from the grievous wrongs imposed upon it, so would there be increased security and happiness for the people."

THE RT. HON. SIR JOHN PAKINGTON presided at the distribution of prizes to the pupils of the Worcester School of Design on Tuesday evening, and spoke as follows:—

"He had to congratulate them, and the patrons of the School of Design, on their achievements in art, and on the success which they had already attained. He would, however add to that congratulation the hope that such success would act as a stimulant not only upon them, but also upon their fellow-students, and induce them to follow in the career they were beginning with such brilliant augury of success. While he thus encouraged them to pursue steadfastly the study of art, he felt it to be equally his duty to address to them a few words of caution, which, however, would, he felt, have come with more weight from the noble earl, their president, had he been there to afford them the benefit of his experience and good taste. It was very desirable, indeed, for their ultimate success to caution them against the idea which was too common among young men and young women in their position, that because they had on a limited theatre succeeded in achieving distinction, they were therefore competent to commence painting on canvas. He would advise any one of them who was ambitious of at once becoming an artist, to ask a child which had not learned its letters to read, and they would find that it was impossible for the child to do so. Just so it would be impossible for themselves to attain to excellence unless they paid strict attention to drawing, and the other elements of art education. He hoped these few words of caution, which were the more necessary on account of the natural tendency which men had to hurry into the world to reap the fruits of their skill and ability, would not be thrown away, but would induce them to pursue the study of art with increased industry, zeal, and devotion. As an additional inducement to the children of the working classes to avail themselves of the advantages offered to them in the School of Design, he would mention to them that one of the young men to whom he had just now given a prize was the son of a shoemaker, that he had already attained a fair reputation, and was likely to be successful as a painter on porcelain. Another was the son of a blacksmith, and the third was the son of a maker of spade handles, one of whose brothers had before him obtained distinction in the school, and was now one of the most successful of the painters employed in the Royal Porcelain Works. He mentioned these cases, not with any view of disparaging the humble but honourable professions of the parents of these young men, but to show that the School of Design presented to the humblest an opening in life, and a means of bettering their position in life. But although they might obtain a more lucrative profession than their fathers, they should not on that account look back with shame upon their parentage, for the world's respect depended more on a man's conduct in life than on the position which he occupied. He was glad to find that the number of medals awarded by the Government inspector to this school was greater than in any former year, and that four branch schools had been established in connection with it, as they were facts which showed that good effects of art teaching were on the increase, but at the same time he regretted that there should be a falling off in the number of students attending the central school, a matter which deserved the attention and consideration of the committee if the institution was to be made subservient to the improvement of that beautiful porcelain ware which was the staple manufacture of the city. Practically the improvement of the art manufacture was the main object of such schools. Independently of the abstract advantages and pleasures attending the cultivation of art, such as the development of the intellect, the refinement of the taste thereby occasioned were in themselves sources of happiness and enjoyment. This school, which he believed was second to none in the kingdom,

received most liberal aid (198*l.* per annum) from Government, but from private subscriptions only 156*l.*, and if from that amount they deducted the liberal subscriptions of Earl Dudley, and Messrs. Kerr & Co., the spirited proprietors of the Royal Porcelain Works, they would find that the extent of aid received from the general public of the locality was very trifling indeed, and showed that they did not take that amount of interest in the institution which they ought to take. If Germany and France had several branches of manufacture in which they were superior to the English, it was because they had long since done what we were now beginning to do; and with these and other nations we had, in carrying out the free-trade policy of the country, entered into the most open competition, and therefore we could not afford to throw away a single means of improving our manufactures in beauty of design, skill in execution, and facility of manipulation; and if these were necessary in any one manufacture more than another, it was in the manufacture of this locality. What, he would ask, would be their porcelain without the skill of the draughtsman, and the good taste of the modeller; and it was by the public spirit and able management of the gentlemen at the head of the porcelain works that they had regained the eminence which they before enjoyed, and which they would, he hoped, long retain."

THE RIGHT HON. FREDERICK PEEL addressed his constituents a few days since in the theatre at Bury, and made the following remarks on the French treaty and the remission of Customs duties:—

"The first vote he gave during the last session was in favour of the French treaty. With regard to the wines of France, he thought they would never displace the hold which beer had upon the people of this country. He did not hesitate to vote for it, because he thought it would enhance the commercial intercourse between France and England, and would promote the interests of the people of both countries. It was surprising how small had been the commercial intercourse between England and France hitherto, but the treaty would turn the thoughts of the warlike people of France to peace and commerce. It had been said it was a one-sided treaty, but the fact was that if free trade was what they had found it to be in England, France would not rest till she had more of the advantages of free commerce. Speaking of the financial measures of the past session, he said they obliterated the last traces and vestiges of protection; they did away with the differential duties in favour of colonial timber growers, colonial wine growers, English clockmakers, riband makers, silk manufacturers, and many other branches of trade. These duties were the remains of a once powerful family, but they were not less at the present time injurious on that account. He thought it to be his duty to vote for the Customs' duty on paper to be the same as it was to the English papermaker, for he saw no reason why papermakers should not be put on the same footing as regarded protection as every other trade. Nor could he see why the price of paper in this country should be made dearer than it otherwise would be through the medium of a tax which took more out of the pockets of the people than it put into the Exchequer. The financial measures of the last session were remarkable for the work of simplification of the Customs' tariff, which was commenced some 20 years ago under the auspices of the Government of which his father was the chief. In 1840 the Customs' duties were levied upon 1050 articles, but at that period indirect taxation had been carried to its extreme limit, and then it was that that Government resolved to have recourse to direct taxation, and the plan was then commenced, which had been carried out ever since, to the complete relief of industry from that burden of taxation; and no sooner was that course entered upon than the trade of the country revived. Now they were only levied upon about 20 articles. He thought these changes rendered memorable the past session. He held that the House of Commons could not too jealously maintain its exclusive rights over the taxation of the country. Through their representatives the people now taxed themselves; and with regard to the repeal of taxation, he thought the House of Lords ought to be satisfied with a mere passive acquiescence. The House of Lords, he believed, had been led to pursue the course they did on account of the majority respecting the repeal of the paper duties having dwindled down to what it did. He thought, at the same time, that the House of Commons had consulted its own dignity in recording the protest which it did against the course pursued by the House of Lords."

MR. BASS, M.P., at a recent dinner to the Mayor of Derby, made the following remarks on Parliamentary speeches:—

"Much has lately been said, and, as I believe, not altogether unjustly, with regard to the great waste of public time by unnecessary speech-making in the House of Commons. I agree with Mr. Gisborne that the House of Commons has to some extent been depreciated in the estimation of the public. It has been said that we have done very little for the public, and that we have left undone a great deal that the country expected us to do; and there are some who are even inclined to debar certain members of Parliament of the luxury of much talking. That, doubtless, as regards the public convenience, and the health of the sometimes reluctant listeners, is a grievous fault. But, after all, the talking is done, and the public time consumed, by comparative few talkers. When I tell you that during the past Session 10,473 speeches were delivered, can you wonder that so little real business was done, when there was so much talk? Well, I will show you how few members are chargeable with this grave fault. Notwithstanding Cabinet Ministers have to speak on most questions of public importance—the able and distinguished Chancellor of the Exchequer, to wit, Sir George Cornewall Lewis, who never utters a word more than is necessary to elucidate his meaning; Lord Palmerston, one of the most genial of men, and one who displays so much ability and attack as leader of the Commons; Lord John Russell, one of the most Parliamentary leaders of the time; Sir John Pakington, Mr. Henley, Lord Stanley, one of the most rising politicians of the day;—these great Parliamentary men, occupying the important positions they do, never speak oftener than is absolutely requisite; and while Lord Stanley, with his great ability, only spoke nine times, some private members spoke at least 200 times in the last session. Now, I don't wish to disparage any of the speakers, for some of them are undoubtedly able debaters, but when I tell you that some spoke at least 100 times, and others as often as 200 times, I think I have given you a pretty good reason why so little has been done. For instance, Mr. Ayrton, a clever man, spoke 217 times; Mr. E. James, Q. C., spoke 196 times; Mr. Newdegate, 123; Mr. Bouverie, 120; Mr. Pope Hennessy, 109; Mr. Malins, 103; and Mr. Darby Griffiths, 101. But no doubt not one of these gentlemen spoke oftener than he believed the true interests of the country required. Again, nine metropolitan members (exclusive of the city of London and Middlesex) made 955 speeches, and if all the rest of the House had spoken in the same proportion it would have taken five years to get through a Session of Parliament. Well, gentlemen, it has been suggested that 27 additional members should be given to these metropolitan boroughs, and allowing them the same proportion of talk, that would add 2700 more speeches to the 955. Ardent Reformer as I am, I confess to you that I shudder at the idea; and when that day arrives, though I am prepared to go many lengths, if it is to be an increase of mere talking power, instead of applying to you for 'a ticket-of-leave,' I shall solicit a final discharge. In saying this, however, I will not omit to express my gratitude to the 245 patriotic members who have been 'eloquent in their silence;" who, although they scarcely ever spoke, and thus did not lose a moment of their country's time, nevertheless devoted themselves to the real and arduous duties of Parliament by a vigilant attendance on committees and a rigid regard for the public good. That is their best reward. Of course, every Englishman values and holds dear the liberty of speech. It is not against the liberty, but the abuse of it, that many complain, for mere garrulity or loquacity, without some good object to serve, can never be regarded with approbation or complacency. Complaining as many do of this abuse of speech, it would, after all, be a sad day for England—for this great and free England—if ever its people should begin to decry and disparage its Parliament. Not only the interest of this country, but of the human race, is deeply concerned in maintaining the authority and independence of Parliament. We must treasure our free institutions, knowing, as we do, that in so doing we set an example to the nations abroad, and stand in the vanguard of freedom—the pioneers of liberty and the defenders of all that is sacred to hearth and home."

THE RIGHT HON. T. MILNER GIBSON, M.P., President of the Board of Trade, has delivered an address to his constituents at Ashton-under-Lyne, in which he made the following remarks on the Commercial Treaty with France and the Income Tax:—

"The export trade of the country was increasing to a marvellous extent from the adoption of free commercial principles, and the shipping interest was showing signs of improvement and holding its own. These facts brought him to the commercial treaty with France, and they might rely on it the French Government had made, so far as their tariff was concerned, a very great change; in fact, France had taken a greater step than any of the same kind taken by this country at any time. For this treaty the country was indebted to Mr. Cobden for any benefit that might arise. There had been a great deal of misrepresentation made about the commercial treaty. Some had said that England had been taken in, and that we had given a great deal and got very little in exchange. A change had been made in the British tariff, and we had given nobody anything. We had given an impulse to the industry of this country; at the same time, we had got the French Government to change their tariff. We had got two good things instead of one. There was no bargain to make any exchanges, but we were merely taking two good things at once instead of only one. If the French had not changed their tariff it would have been our duty to effect the changes which we had made in our tariff. As to the French wines a great deal had been said. It was said that Englishmen would not drink French wine; but the increase in the imports arising from the treaty had already been very considerable, and increased the revenue. It had been said that great distress had been occasioned at Coventry by the commercial treaty, but the Coventry weavers could not be made an exemption to the principle of free trade. The import of French ribands had only been small (15 per cent.), and he thought that by and by the effect of the treaty would be to put the Coventry riband trade on a sounder basis. The papermakers had raised a cry as to the importation of foreign paper, but there had been no shutting up of mills, and there had been no great importation of foreign paper, or any increase in the price of paper. The fact was, the English papermakers were able to compete with any other papermakers in the world. He was speaking of the Customs on foreign papers, not of the Excise. It had been urged that it was not good policy to make commercial treaties with France, and there was a small sect who yet regarded France as our natural enemy. But he viewed this matter as one of the greatest events of the day, and one calculated to benefit this country more than any other which had occurred in recent years. He had observed a sensible remark made by Mr. Bright at Wakefield, that it was a strange thing that 30,000,000 of people in England and 36,000,000 of people in France, separated only by a narrow sea, could not just as well have as extensive a trade with each other as with people separated by the Atlantic. We had a great trade with countries with more restricted tariffs than France, and he was satisfied that from this time the French tariff would satisfy the most expectant, as being the most liberal tariff in Europe except our own. With reference to the income tax, he wished to say a word or two. It had been said by many if it had not been for this Government and the French treaty we should not have had such a high income tax. He denied that, and believed they would have had a higher income tax for many reasons. The opponents of the income tax had always said that it was a war tax, which meant that it was a tax to which the Government had recourse when the military and naval expenditure was very high. That expenditure was very high now, and the question was, did this income tax bear a larger proportion to that expenditure than in past times? He found that we did not pay as much of our war expenditure out of our income tax as we used to do. Sir Robert Peel's income tax paid 32 per cent. of the war expenditure; but the income tax at 10*d.* in the pound paid no more than 38 per cent., taking into account the supplementary vote of 3,000,000*l.* for the war in China. He did not object to the income tax being called a war tax, but he objected to people calling it a war tax and yet refusing to allow it to be used for that purpose. He contended that with a vote of 30,000,000*l.* for naval and military purposes a tenpenny income tax was not out of proportion. It had been represented that there had been some general transfer of indirect to direct taxation, and that the property of the country was paying more than its fair share of the burdens of the country, but he found that for every 22*l.* paid by direct taxation during 1860 and 1861 there would be 78*l.* paid by indirect taxation. If large naval and military armaments were necessary for the safety of the country, and there appeared to be a feeling in the country that they were, we could not avoid a large income tax. The effect of the former reductions of taxation had been to realise more revenue for 12 excise duties than formerly from 27, and it was a mistake of the House of Lords to suppose that by getting rid of a tax they were getting rid of so much revenue."

City Intelligence.

THE BUILDING TRADE.—The suspension of Messrs. Moxon and Co., contractors for the metropolitan drainage sewer was announced on Wednesday. Their liabilities, it is said, will be very heavy, amounting to £200,000 or £300,000. Messrs. Thomas Piper and Son, builders, have also suspended, with liabilities stated at from £50,000 to £100,000.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 93⅜ for Money, and 94⅛ to ¼ (or equal to 92⅝ to ¾ ex div.) for the 10th Jan.; Bank Stock, 232½ to 233; Three per Cents. Reduced, 92⅜ to 92; New Three per Cents., 92⅝ to ¼; India Five per Cent. Stock, 1859, 103½ to ¼; Ditto Four per Cent. Debentures, 1858, 96½; Ditto, 1859, 96¼ to ½; Five and a Half per Cents. Enfaced Rupee Paper, 101½; Exchequer Bills, 5*s.* dis.—FOREIGN: Buenos Ayres Deferred, 30; Spanish Three per Cents., for Acct., 50⅜; Committee's Certificates, 6¼; Turkish Six per Cents., 1858, for Acct., 58¾ to ½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,405,175	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion	12,419,043
		Silver Bullion	511,132
	£27,405,175		£27,405,175

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£9,490,273
Rest	3,168,834	Other Securities	20,104,355
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,617,485	Notes	7,198,086
		Gold and Silver Coin	735,191
Other Deposits	12,442,318		
Seven day and other bills	716,518		
	£37,528,185		£37,528,185

6th day of Dec., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — R. BAKER, 103, High Street, Barnstaple, Devonshire, General Smith—J. BROOK, Birmingham, Electro Plater—W. COLL, junior, 10, Mark Lane, City, Iron and Steel Merchant and Shipping Agent—C. EATON, junior, South King Street, Manchester, Leather Factor—E. W. FREESTONE, 11, Clarke's Place, High Street, Islington, Milliner and Straw Hat Manufacturer—W. HARRIS, junior, Ilford, Essex, Miller—B. HINCHLIFFE, Littlemoor, Pudsey, Yorkshire, Cloth Manufacturer—S. HOPKINS, Bewdley, Worcestershire, Horn Worker—J. KIPPAX, East Retford, Nottingham, Watchmaker and Silversmith—G. J. M'LENNAN and J. W. BIRD, 12, Osnaburgh Street, Regent's Park, Builders and Contractors—D. MURDOCH, Liverpool, Grocer and Provision Dealer—H. PARRIS, Bridport, Dorsetshire, Machine Maker.

SCOTCH SEQUESTRATIONS — J. HALLIDAY, Middlebie, Dumfriesshire, Wool Carder—R. HAMILTON, Glasgow, Tea Merchant and General Agent—R. THOMSON, Glasgow, Commission Merchant.

FRIDAY — BANKRUPTS — J. AMBLER, Bradford, Worsted Manufacturer—T. BEECH, Everton, near Liverpool, Builder—J. BROADBRIDGE, Arundel, Grocer—J. W. CLAPPISON, Kingston-upon-Hull, Jeweller—W. FROSTICK, jun., Poplar, Builder—W. M'LEOD, Kingston-upon-Hull, Joiner—G. H. MURRELL, Surlingham, Norfolk, Farmer—G. J. PARRY, Philpot Lane, City, Merchant—T. S. PATTISON and F. MILES, Lawrence Pountney Hill, City, Stationers—J. A. POUTEAU, Pond Street, Hampstead, Printer—F. E. SHIPLEY, jun., Brickmaker, and F. E. SHIPLEY, sen., Nottingham, Tanner—M. O. STRELITZ, Newgate Street, City, Merchant—H. WALKER, Leicester, Hatter — D. WATKINS, Backway Farm, Devonshire, Cattle Dealer—G. L. WILLIAMS, Islington, Builder.

SCOTCH SEQUESTRATIONS—A. ASHER, Elgin, Painter—W. THOMSON, Musselburgh, Cab Proprietor.

Metropolis and its Vicinity.

RELIGIOUS PERSECUTION IN SPAIN.—A deputation respecting the persecution of Protestants in Spain, had an interview on Wednesday with Lord John Russell at the Foreign Office. Five societies were represented—the Evangelical Alliance, the Protestant Alliance, the Scottish Reformation Society, the Evangelical Continental Society, and the Islington Protestant Institute. Lord Stratford de Redcliffe and Sir Culling Eardley, Bart., having introduced the deputation, the Hon. Arthur Kinnaird presented a memorial from the Protestant Alliance, stating that as many as 12 persons were, on account of their having embraced the Protestant faith, recently imprisoned at one time; that six other had fled to Gibraltar for protection, and that although many of the prisoners have been liberated, there are two, named Manuel Matamoros and Jose Alhama, who are still suffering imprisonment for the crime of being Protestants. The memorial therefore respectfully and earnestly urged upon his lordship to employ his influence in obtaining the liberation of these prisoners, and staying the persecution against other persons on account of their religion. Colonel Walker, of the Royal Artillery, presented a similar memorial from the Evangelical Alliance; Dr. Begg, of Edinburgh, presented a memorial from the Scottish Reformation Society; and Major Giberne presented a memorial to the same effect from the Islington Protestant Association. Lord John Russell in reply spoke as follows:—

"I suppose it would be quite unnecessary for me to say anything on the general subject of religious liberty, or to state my opinion that religious persecution is equal hateful, whatever may be the Government or the religion of the Government that enforces it; whether it be a Protestant or a Roman Catholic Government, persecution is equally hateful. This certainly is a general principle upon which I can have no doubt. When one comes to apply these principles, I must beg you to give me that indulgence which Sir Culling Eardley was good enough to allow, because these are matters which require a great deal of discretion in the mode of handling. If a Government has not the entire support of its people in executing the laws, which are very often laws of a very ancient date, there is a great chance that the representations of a foreign Government may be advantageous. There may be other cases in which the people themselves, and the press, are so bigoted and so fanatical, that they view with satisfaction the punishment of those who assert their own religious liberty and right of conscience, and would be induced rather to aggravate such punishment than to diminish it in consequence of such representations. This is what I say generally, merely for the purpose of reserving to myself to act in that way which may seem most discreet on this subject. I may quote an illustrious example as a guide to some discretion, for whoever will examine and go through the history of the interference which was prompted by Cromwell, and executed by Milton under his orders—and two better names one could hardly meet—would find that in the cases of the persecution of the Waldenses they did not proceed with any sort of violence or might, but by influence, and by means of that influence obtained, not a reparation, but a cessation of the persecution. Upon this subject I certainly have no reason to think that the Spanish people have changed the opinions which they have long held on the necessity of keeping their faith one, and undisturbed by any sort of difference of opinion. If I should find that good could be done by such means as you have mentioned, or in any other way which may tend to promote religious liberty, you may depend upon it my feeling will be to act in the way indicated. I am very glad to see that so

much feeling has been exhibited in this country on the subject. In the end the knowledge of this feeling, and of the opinions which are entertained in such a great and such an enlightened country as England, may possibly have more weight than any direct interference on the part of the Government of England towards the Government of Spain. Far from discouraging discussion on this matter among the public, I should be desirous to promote it, because I think changes are still required in many parts of the world in reference to the great subject of religious liberty. It seems to me as clear as daylight that these views must be diffused more by associations and by the active exertions of individuals than by any international relations which the Government can suggest."

THE NEW COINAGE. — A new bronze coinage has just been issued which is to replace the current coppers. The pieces, which consist of penny, half-penny, and farthing, are about two-thirds the size and one-half the weight of the old coins. On one side they have the figure of the Queen, including both head and shoulders like the florin, and on the other Britannia with her trident, a lighthouse, a ship in full sail, and a view of the sea, which had been omitted in our recent currency. The superscription round the Queen's head is "Victoria, D. G. Britt. Reg., F.D.;" and, on the reverse side, "One Penny," "Half-penny," and "Farthing," respectively, with the date 1860.

INCREASE OF THE EPISCOPATE.—The memorial to Lord Palmerston praying for an increase of the Episcopate has already some thousands of names attached to it, including among others those of the Dukes of Buccleuch and Marlborough, the Marquis of Westminster, the Earls of Denbigh, Carnarvon, Romney, Nelson, Verulam, Effingham, and Galloway, Viscount Eversley, Lords Calthorpe, Redesdale, Leigh, Ebury, John Manners, M.P., and Robert Cecil, M.P.; Sir John Patteson, Sir J. T. Coleridge, Mr. Adderley, M.P., Mr. Sotheron Estcourt, M.P., Mr. Mowbray, M.P., Vice-Chancellor Page Wood, Sir W. Heathcote, M.P., Sir Walter James, Sir Walter Farquhar, Sir Stephen Glynne, Mr. Hubbard, M.P., Mr. Kekewich, M.P., Mr. Rogers, M.P., Mr. Selwyn, M.P., Mr. Watlington, M.P., Mr. Whateley, Q.C., Mr. Roundell Palmer, Q.C., and Mr. Henry Kingscote, secretary to the Cathedral Commission. A similar memorial has been signed by upwards of 6000 clergymen. The lay memorial will be presented before the commencement of the forthcoming session of Parliament.

RE-OPENING OF ST. PAUL'S.—Sunday last, being the first Sunday in Advent, was selected for re-opening the metropolitan Cathedral for Divine service, after an interval of five months, which has been spent in making extensive and costly changes and decorations in the interior of the edifice. The most notable alteration is the entire removal of the screen and organ at the entrance to the choir, by which an uninterrupted vista of the building from end to end is obtained. The whole interior of the dome has undergone a process of renovation, and portions of its architectural embellishments as well as of those in the chancel have been richly gilt. It is proposed to open the dome area and the new organ with a musical festival on Friday, January 25, and on the Sunday after (January 27) the Special Evening Services will commence.

SPECIAL SERVICES FOR THE WORKING CLASSES.—A series of Advent services for the working classes under the auspices of the London Diocesan Home Mission, has been commenced in various districts of the metropolis. Among the churches selected are those of St. George's-in-the-East; All Hallows, Thames Street; St. Matthew's, Pell Street; All Saints, Spitalfields; St. Anne's, Limehouse; St. George's, Ealing; Hammersmith Church; St. John's, Bethnal Green; St. Giles-in-the-Fields; and St. Leonard's, Shoreditch. The Bishop of London, the Rev. Canon Dale, the Rev. E. Bayley, and other clergymen will take part in the services. The mission has at present six clergymen at work, two in the east, one in the north, one in the north east, and two in the south-east of London. Another will be appointed at the close of the present month, and the number will be increased as soon as the state of the funds will admit.

ROYAL SOCIETY.—At the recent anniversary meeting of this society, the Copley Medal was presented to Professor Robert Wilhelm Bunsen, of Heidelberg, for his "Researches on Cacodyl, Gaseous Analysis, the Volcanic Phenomena of Iceland and other Researches;" a Royal Medal to Mr. William Fairbairn, F.R.S., for his various "Experimental Inquiries on the Properties of the Materials employed in Mechanical Construction;" a Royal Medal to Dr. Augustus Waller, F.R.S., for his "Investigations into the Anatomy and Physiology of the Nervous System, and for the Introduction of a valuable Method of Conducting such Investigations;" and the Rumford Medal, to Professor James Clerk Maxwell, for his "Researches on the Composition of Colours, and other Optical Papers. Sir Benjamin Brodie was re-elected President for the ensuing year.

FREEDOM OF THE CITY TO LORD CLYDE AND SIR JAMES OUTRAM.—The Lord Mayor has appointed Thursday the 19th for presenting the freedom of the City of London, accompanied by a sword of great value, to Lord Clyde and Sir James Outram. It is expected that the ceremony will take place not in the Council Chamber but in Guildhall. Notice has been given of a motion for presenting the freedom of the city with a sword of the value of 50 guineas to General Garibaldi. —On Thursday the freedom of the Skinners' Company was presented to Lord Clyde, who was afterwards entertained at dinner by the Master and Wardens of the Company.

REVIVAL MEETING AT EXETER HALL.—A meeting of an extraordinary character was held on Sunday evening in Exeter Hall. It had previously been announced by advertisements and placards that the Hall would be opened by a service conducted by three laymen—Mr. Reginald Radcliffe, Mr. Richard Weaver (formerly a prize-fighter), and Mr. Wm. Carter. In less than a quarter of an hour after the doors were opened the spacious building was densely packed, and t was deemed advisable to close the outer gates. The proceedings were opened with prayer, in the course of which the Almighty was earnestly implored to stretch down his arm from Heaven over London, for the purpose of converting it, and especially for the purpose of checking popery, priestcraft, Puseyism, and devilism. Mr. Radcliffe read portions of the 6th chapter of St. Mark's Gospel, and in the course of a very energetic description of the efficacy of redemption, assured his hearers that it was not to be secured by lifting up a poor rotten cross, or miserable crucifixes, not in going to churches with fine steeples, or listening to a lot of fellows with white nightgowns on. All these were miserable delusions. What was wanted was real conversion, the two classes in London who wanted it most being working men, 98 out of every 100 of whom never went to a place of worship at all, and the unconverted nobility, many of whom were canting humbugs. Mr. Weaver followed, and from the excitement which prevailed immediately he rose, it was evident that he was the principal object of attraction. He commenced singing a hymn to the tune of "The King of the Cannibal Islands" in a very loud tone, the auditory taking up the chorus, the words being, "Still I have no union." He then took for his text the words, "Herein is love," &c., from St John's First Epistle. He called upon his hearers not to believe that the great scheme of human redemption was moonshine and humbug, but that, on the contrary, it was able to encircle and to convert the greatest blackguards in London. There were many ungodly persons in that hall who wanted shaking over hell for five or six minutes—if that would not convert them, nothing would. As the speaker warmed with his subject he danced up and down the platform and shouted hell and damnation with extraordinary vigour. Every now and then he denounced the unconverted, then appealed to them to come to Christ, and in the roughest language and with the most violent gesticulation called upon those who believed that Christ had power to save to hold up their hands. About three-fourths of the audience did so. During the proceedings several young women fainted and were carried out. Mr. Weaver afterwards sang another hymn, "I've a father in a promised land," to a lively air. Throughout the evening the audience were kept in the highest possible state of excitement, and at the close of the public services a meeting of a quieter kind was held for the reception of the unconverted.

THE LEA BRIDGE MURDER.—The Sheriffs on Thursday announced to Anne Padfield, the young woman under sentence of death for the murder of her child, that they have fixed Monday, the 24th instant, for carrying out the sentence. The report that she has admitted her guilt, is entirely without foundation. On the contrary, since her conviction, she has made a statement to the ordinary, solemnly declaring that she had nothing to do with the murder, and incriminating other persons. This statement has been submitted by the sheriffs to the Secretary of State, and is now under investigation. Meantime there is a strong feeling in the public mind against her execution, and after the jury's strong recommendation of her to mercy on the grounds of "her seduction, poverty, and mental anguish at the time, and her previous good character," it is hoped that her life will be spared. The *Globe* of last evening says that the advice which the Home Secretary is likely to give her Majesty respecting the unfortunate woman, will in all probability be in accordance with the merciful recommendation of the jury.

ST. GEORGE'S IN THE EAST.—A fresh difficulty appears to have occurred in regard to the religious services in this church, the recent changes in the mode of performing divine service having been by the authority of the churchwardens, under the Bishop's sanction but without the consent of the rector. It is said that Mr. King now threatens the Bishop or the churchwardens with a lawsuit for this intrusion on his rights. The bishop paid a visit to the parish on Wednesday evening, and preached in the district church of St. Matthew, Pell Street, which he consecrated about a year ago.

THE LATE DUKE OF NORFOLK.—The funeral of the late Duke of Norfolk took place on Thursday, in a new chapel that has been recently erected, adjoining the baron's hall, now forming the principal entrance to the castle. The ceremony of lying in state took place with unusual pomp on Wednesday. On the morning of that day a solemn mass or requiem was sung in the Roman Catholic Cathedral of St. Mary, Moorfields, for the repose of the Duke's soul. The Right Rev. Dr. Morris, Bishop of Troy, celebrated the mass, in the presence of Cardinal Wiseman and most of the Roman Catholic Bishops of England. The music was Mozart's requiem, with full orchestral accompaniments. In the pastoral letter ordering this service Cardinal Wiseman pays the following tribute to the memory of the late Duke:—

"While placed in the very highest pinnacle of social and national position, while surrounded by all the advantage which the world can give, endowed with manly and generous qualities, and even physically offering a choice type of English manhood, there was in this illustrious man a gentleness that sprung from true humility, and almost concealed, by its external grace, the firm root from which it grew. Whether in the form of considerateness for the lowest dependent, or of attentiveness to guest and friend, or of deference to counsellors, or of unostentatiousness in person and action, or of simplicity in the doing of great things, or of bashful, shrinking sensibility as to public appearance, we have noted, with admiration, a far deeper and holier groundwork than these outward characteristics manifested to the world. He sacrificed the career of his public life, he refused the distinction of Royal favour most coveted by those of his rank, because he feared the slightest compromise of his highest principles. There is not a form of want, or a peculiar application of alms, which has not received his relief or co-operation. The building of churches; the erection of schools; the institution of orphanage, almshouse, reformatory, training school, or hospital; the foundation of convents, whether for contemplation or for active duties; the education of the clergy at home and abroad: any Catholic interest or cause, whether of the hierarchy, or of the oppressed inmates of workhouses or prisons; whatever, in fine, that required assistance for carrying out a good and holy work, found ever in him a ready, an ungrudging, and a noble-hearted benefactor."

THE METROPOLITAN MEAT MARKET. — The meat salesmen and slaughtermen of Newgate Market, notwithstanding the concessions made to them in the Act of last session for establishing a meat market on the site of Smithfield, have peremptorily refused to quit Newgate Market. The Corporation, therefore, who hold the site of that market under a lease from the Dean and Chapter of St. Paul's, intend, with the sanction of the Chapter, to apply to Parliament in the ensuing session for a new Bill, empowering them to abolish the market, but still to hold the ground on trust to apply the rents to buy the slaughter-houses and other nuisances in connection with the market, which, having been established before the passing of the Building Act in 1844, cannot be removed except on payment of compensation under the compulsory powers of the Nuisances' Removal Act of 1855, which it is proposed to incorporate in the new Bill.

THE STREET RAILWAYS.—The Lambeth vestry at their last meeting resumed the consideration of the report of the committee which had been sent down to inspect the working of the Birkenhead Street Railway. The report, it will be remembered, strongly urged the immediate introduction of Mr. Train's system of street railways into that parish from Westminster Bridge to Kennington Gate, on the terms proposed by that gentleman. After a long and excited discussion, which lasted several hours, an amendment adjourning the question for six months was carried by 41 to 28.

NEW METROPOLITAN HOTEL.—Among the new companies for which applications for Acts of Parliament are to be made in the ensuing session is one for the Metropolitan Central Hotel, which it is proposed to build on the site of Holywell Street and the south side of Wych Street, one of the plague-spots of London. The company look for support for the new undertaking from its proximity to the theatres and the new Courts of Law which are to be built in its immediate vicinity.

PNEUMATIC DESPATCH.—The Company established to carry out this invention have satisfactorily completed their preliminary experiments at the Soho Works at Birmingham, and are now proceeding with the construction of the permanent tube intended to be laid between the General Post Office and Bloomsbury, a distance of a mile and a furlong. The tube will be 2½ feet in diameter.

BOAT BUILDING BY MACHINERY.—The Duke of Somerset, accompanied by Rear-Admiral Lord Clarence Paget, Captain Eden, C.B., and Captain Moore, C.B., proceeded a few days since to a factory in the vicinity of Regent's Park for the purpose of inspecting some very ingenious machinery invented by an American gentleman, the object of which is the saving of time, labour, and expense in boat building. By this new process a cutter 36 feet in length can be turned out of hand ready for the water in 10 hours, whereas the same work performed by the process now in use in shipbuilding yards could not be finished under eight days.

THE SATURDAY HALF HOLIDAY.—At a recent meeting of the Court of Aldermen, Alderman Wilson moved that the resolution of the court of the 29th September last altering the days of meeting of certain committees from Saturday to Friday be rescinded. He said that almost every member of the court was so impressed with the conviction that the alteration had been found to work disadvantageously that it was unnecessary to do more than to move that the resolution be rescinded, and that they should go back to their old plan, which had worked well for a great many years. Sir H. Muggeridge seconded the motion. Since the day had been changed they often found a good deal of difficulty in getting a committee together, but when the meetings were held on Saturdays they always had a full attendance. Alderman Sidney said he believed this alteration was part of the cuckoo cry about Saturday holidays, and he could not help expressing his opinion that the object sought to be obtained, of abolishing one day's labour out of the six, which had always hitherto been devoted to industrial pursuits, was not in accordance with the commercial wisdom for which the City of London hitherto had been famed. After some discussion the motion was carried with only one dissentient.—The brushmakers in Oxford Street, from the Circus to the Marble Arch, with one exception, have agreed to close their establishments at five o'clock on Saturdays. Two meetings have recently been held

at the West End, composed of assistants from the principal retail houses, to consider the best steps to be taken by them in support of the Saturday closing. In accordance with the decision arrived at, a representative committee has been formed, and a special fund is raising to which the assistants at Messrs. Shoolbred's establishment alone have contributed upwards of 50 guineas. A similar organization is contemplated for the City, and the system will probably be extended still further, including every variety of trade.

HARROW SCHOOL.—An old Harrovian has given 1000*l.* to the governors of Harrow School, the interest to form a prize for the scholar who shall most distinguish himself by his attainments in Scriptural knowledge.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the mortality of London has constantly increased during the last five weeks, and that in the week that ended on Saturday, the 1st December, the deaths were 1275. The average number in the corresponding weeks of the 10 years 1850-59, corrected for increase of population, was 1397. The present return is therefore, notwithstanding the increase caused by the cold and damp of November, 122 below the average. During the week the births of 870 boys and 826 girls, in all 1696 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1662.

Provincial.

ANGLESEA.—A statue to the memory of the late Marquis of Anglesea, the result of public subscription, was on Saturday last raised on the column already erected on a commanding site in the Isle of Anglesea, opposite the great tubular bridge over the Menai Strait. The column itself, 100 feet high, was erected after the campaign of Waterloo, as a memorial of the Marquis's military achievements, and is on the summit of a rock 250 feet above the level of the sea; so that, with the statue superadded, the entire monument is upwards of 360 feet above the sea, and is now a conspicuous object for many miles round. The figure, which is of colossal size and executed in bronze, represents the Marquis in his full Hussar uniform, and is the work of Mr. Noble. The task of raising it to the top of column was one of extraordinary difficulty, and was accomplished without scaffolding by means of a very ingenious apparatus invented by a young engineer of Anglesea called Haslam, who died from anxiety attendant on the critical operation he had undertaken, and before its complete success could be established.

BURY ST. EDMUNDS.—The long pending inquest into the mysterious circumstances attending the death of a poor boy called Robert Murton, at Fornham St. Genevieve, near this town, was resumed and concluded on Friday week before the coroner for the borough. It will be remembered that the boy died on the 7th September, after partaking of a pudding prepared on the previous evening for his supper by Mrs. Curtis, the wife of a labourer with whom he lodged. In this pudding and in the body of deceased, and also in the crops of fowls which ate some of the pudding the boy left, arsenic was discovered in considerable quantities, and there can be no doubt that the boy died from the administration of that poison. Mrs. Curtis and her husband were subsequently attacked, but recovered. Arsenic had been in the possession of a farm servant named Hawkins, between whom and Curtis there had been some ill feeling; and it appears that the paper containing it had been opened when taken by the police, although Hawkins (who had the poison by him for the purpose of being used in his master's farming operations) states that he was not aware that it had been touched. Hawkins, shortly after the boy died, borrowed some flour from the Curtises, on the plea that some friends were coming to see him, and that he wanted some flour of a finer quality; but these persons did not come after all, and some of the borrowed flour being used in a cake of which Mrs. Hawkins partook, she was herself taken ill afterwards. Several witnesses were now again examined, but their evidence failed to show how arsenic became mixed with the flour in Curtis's house; but several of them proved that Hawkins was fully employed in carting and turning Barley on the Friday on which the poison was administered. On the other hand, Curtis stated that Hawkins had threatened him several times, and that he had seen him about the yards on Friday twice in the forenoon and once in the afternoon. On the whole, however, the evidence adduced was in favour of Hawkins, who admitted that he had gone once in the day to his house for some forks. After a sitting of two or three hours the jury returned a verdict to the effect that deceased died from the effects of arsenical poison, but that there was not sufficient evidence to show whether it was administered by himself or by the hand of another. The coroner added that he could not close the inquiry without thanking the jury for the attention and patience which they had displayed in a matter almost as mysterious as the affair at Road, although there was this difference between the two cases—at Road there could be no doubt that a foul and atrocious murder had been committed, while in this instance it was just possible that deceased died by his own hand.

CAMBRIDGE.—At a congregation held on the 22d ult., a grace passed the Senate accepting with thanks, the offer made by Sir Charles George Young, Garter King at Arms, and Mr. Henry Young, to give to the University the collection of fossils made by their late brother, Dr. James Forbes Young, subject only to the condition that they should be, as far as practicable, kept as one collection made by Dr. Young, whose life was devoted to subjects connected with natural history, and who felt particular interest in the progress of the Woodwardian Museum. Mr. Seely, under the direction of the Woodwardian Professor, has inspected the collection, and is of opinion that it would form a very valuable addition to the University collection. The collection includes 60 magnificent specimens of fossil fishes, worked out with great labour from the chalk. Professor Sedgwick is of opinion that there will be sufficient space in the Woodwardian Museum to accommodate the collection. The Senate also authorised the Vice-Chancellor and the Woodwardian Professor to take such steps as may be necessary for accommodating and arranging the collection. The election of a teacher of Hindustani took place on the 28th ult, when Major Stephen was elected by a majority of 2 over Syed Abdoollah, the numbers being 74 to 72. The real questions at issue were the comparative benefits to be derived from the appointment of a native or an English, a Christian or a Mahometan, teacher. The appointment is for three years.

CROYDON.—A church-rate of 2*d.* in the pound was carried by an immense majority on Tuesday week at a vestry of this parish. A poll was demanded, the result of which was declared at the Town Hall on Saturday as follows:—For the rate, 381; against it, 78; majority in favour of the rate, 303.

DONCASTER.—The Rev. Dr. Vaughan, late head master at Harrow School, who was recently appointed to the vicarage of Doncaster by the Archbishop of York, in reading himself in at the parish church, made the following address to the congregation on the Thirty-Nine Articles:—

"It is now not far from half a century since those Articles have been read aloud in the parish church; and I can well believe that many of you may never have had your attention called to them—perhaps you may never have read them carefully in the whole course of your lives. I would call upon you then to listen to them, and to follow them with all your care as I read them to you to-day. It is not my intention to slur them over. On the contrary, I would give full force and emphasis to them, believing them, as I do, to be carefully drawn from Holy Scripture, and to contain a body of Divine truth always seasonable and sometimes too much disregarded. I do not look upon this as a wearisome form, nor indeed as a form at all. In the appointment of your minister you have had no voice. It is not the usual practice of our Church to look to the congregation either for the nomination or for the approval of the nomination of their parochial minister. All the more necessary is it that every precaution should be taken for your being satisfied of the correctness of his doctrine. You have a right to be assured, and you can only be so from his own lips, that he is in heart as well as in profession a minister of your own beloved Church. That is one reason why I am required to-day to perform the whole of the service myself, and to add to that performance of the service the reading of the Articles of the Church, with an express and solemn declaration of my assent and consent to them. Dry and formal statements of abstract truth, it is not this I read, nor are they the proper staple of sermons. Dogmatic teaching, as it is called—the enunciation of Christian doctrine in the form of positive and detailed statement—is not much in fashion among us, perhaps almost too little so, since out of it must grow all Christian practice, and no part of it can be omitted systematically in our teaching without injury, in some respect more or less important, to the Christian life of our hearers. Therefore I would bid you to accept with thankfulness the necessity which to-day is laid upon you of hearing the doctrines of Christianity drawn out with something of precision into something of detail. Let me remind you that they who, though dead, yet speak in these formularies of our Church, were men—though the authorship of particular parts may be doubtful—who, living in troublous times, once thought better than we do, of correct or incorrect expression in the themes of God, and proved their sincerity in many well-known and memorable instances, by sealing their testimony with their blood. Cranmer, Latimer, and Ridley, with many others—fathers of the English Church they are rightly called—speak to us in these Articles from a martyr's grave. Let us not think lightly of doctrines, whether in their substance or in their expression, for which living men, men of talent, and learning, and piety, and exemplary pleasing of power and emolument in the forefront of the Church, loved not their lives unto the death. Observe, too, as you listen, how carefully the phraseology of these Articles is kept within the actual words of Holy Scripture. Some of those which might perhaps provoke doubts or differences of opinion—I will instance the 17th—are, if you examine them, little more than verses of Scripture, lightly strung together by a few clauses of human connexion, and, whatever may be the meaning of the passages of Scripture from which they are taken, such, and no other—not more difficult, not more ambiguous—will be their meaning here in the Article which embodies them. Remember, also, in hearing them, that almost every one, if not literally every one, of these Articles, even if it is not so now, was once the negation of some existing error; not a mere imagination of what it might be expedient to enunciate, but founded upon an actual experience of that error; a protest against something which might be advanced on the side of heterodoxy and false religion, even because it already had been so advanced, and had wrought serious mischief in the souls and in the completeness of the faith once delivered to the saints. And if in any respect the doctrines here stated do not suit the feeling or the taste of the age in which our lot is cast—if there be any obsolete expressions, or (which is more important) any details which may seem to favour a tone of opinion very little in sympathy, because we have gone beyond or have little sympathy, because we have gone beyond or have little sympathy, because we have gone beyond or have little

unions were contrary to the law of God; and that in making that declaration she followed the decision of the whole Catholic Church, beginning with St. Basil, who wrote in the third century. The book of Leviticus, when laying down the prohibition against persons near of kin marrying, enumerated cases of that nature, and amongst these there were more instances given of affinity than blood. Any alteration in the law might tend to sever the realm from the Church of Christ. In that particular instance those two bodies coincided. What the Church condemned, the State condemned. But should the State acknowledge as lawful the marriages that it now condemned, how perplexing might its relations become with the Church, for the Church could not make any such alteration in her laws. No human legislation could affect her laws. Against any such alteration of the law he implored his rev. brethren lawfully and earnestly to strive. Another cloud hung over the land with regard to the revision of the Book of Common Prayer. This had been resisted not only by himself, but by every one of his right rev. brethren who had in his place in the House of Peers spoken or voted on the subject. There were two distinct auguments urged in favour of the revision. The first was the tendency of all human productions to require revision and correction; and the other rested on a declaration of the clergy that the Liturgy might be improved. To the general assertion contained in the first argument no exception could be taken. All human productions naturally admitted of improvement, and lapse of time generally made improvement necessary. Nor could it be denied that the Book of Common Prayer might be improved; for to deny it would be to deny that it was a human composition. But reasonable and thoughtful men, while admitting those two propositions, were not so sure that everything in the shape of alteration was necessarily an improvement. There were considerations as to the time of altering and the hands by which the alterations were to be made; the amount of good to be gained, and the amount of evil to be incurred. Each of these was to be separately and carefully weighed before a man of understanding would be ready to apply general principles which no one disputed, that all works of the human mind were capable of improvement. If they compared the hands to do the work of revision with those who had compiled the present Book of Common Prayer, they would see the superiority of the latter; for their object was to preserve all the Catholic element, but at the same time to clear it of all its imperfections. There were other and graver dangers to be apprehended from the alteration. Behind the modern revisionists were men who had other objects and very different aims. The smallest change might have the effect, in many cases of entirely altering the original meaning of a passage, as it was said that the excision even of an excrescence left a scar. Any alteration would lead to a disruption and break up the English Church. Some revisionists stated that their object was for the purpose of introducing many, who were now excluded, into the Church. But he thought it was doubtful whether the proposed alterations would not cause more to leave the Church than it would bring into it. The Dissenters had an interest in this question as well as themselves. It was from their Church that they derived their Christianity, their Bible, and their creed. If even the alteration were approved by Convocation, it would still have to struggle through the two Houses of Parliament. Every change would only be the groundwork for some new change, and he therefore held that it was their duty to resist even innocent changes and alterations. At a time when the Bible was being explained away, and looked upon as a legend; the passage of the Red Sea described as the latitude of poetry; the taking up of Elias corporeally to heaven denied, as well as the fact of a universal deluge, it became them to be on their guard and oppose every attempt to alter their ritual."

YARMOUTH.—The inquest on the persons killed by the late explosion on board the Tonning, after several adjournments terminated on Tuesday, when the jury returned a verdict to the effect that the deceased were killed by the explosion of the boilers on board the Tonning, but there was not sufficient evidence to show the cause of such explosion. The steamer is still lying at Lowestoft, but will be removed to the Thames for the purpose of being repaired.

Ireland.

THE REPEAL MEETING IN DUBLIN.—The Ultramontane aggregate meeting in support of a national vote for the Repeal of the Union was held on Tuesday evening in the Rotunda. The attendance was crowded, and the platform, on which a number of Roman Catholic priests were assembled, was occupied for the most part by the overflow of the meeting. A green banner, bearing the motto "Aid yourselves, and God will aid you," the staff terminating in the form of a spear or pike-head, was placed in a conspicuous position, and was waved vigorously whenever the speakers made "a point," to stimulate and increase the enthusiasm of the audience. The O'Donoghue, who took the chair, addressed the meeting, and was followed by Mr. Maguire, M.P., Mr. O'Neill Dasent, Rev. Mr. Mullen, Mr. John Martin, Mr. Lawler, Mr. Underwood, Rev. Mr. Lavelle, &c. The speakers were repeatedly interrupted by groans for "the Castle hacks," and "cheers for John Mitchell." Mr. Maguire confessed that repeal could not be carried without the aid of the Protestants of Ireland, and claimed that the same principles should be applied to Ireland as had been contended for in Italy. Resolutions were passed to the effect that Ireland ought to have the right, accorded by her Majesty's ministers to foreign nations, of choosing by ballot and universal suffrage her own rulers and form of government; and petitions to the Queen and both Houses of Parliament, founded upon the resolutions, were unanimously adopted.

BANQUET TO THE IRISH BRIGADE.—The banquet to the Limerick, Clare, and Tipperary contingents of the Irish brigade, took place in the theatre of Limerick, on Monday night, and was attended by upwards of 300 persons. From 60 to 80 members of the brigade were present, several of the men being in uniform. The chair was taken about 8 o'clock by the Mayor-elect, Mr. J. T. M'Sheehy. The principal speakers were the chairman, the Rev. Messrs. O'Farrell and Quaid, and Lieut. Ryan, of the Papal Engineers, who appeared in the Pope's uniform. The toast of the Queen was received with groans, yelling, and hissing, which was kept up for 10 minutes, with loud and repeated cries of "No, no; we won't have it; she deserves nothing," while that of the Pope was hailed with vociferous cheers. General Lamoricière, Cardinal Wiseman, Mr. Smith O'Brien, and Major O'Reilly whose presence had been confidently announced by the ultramontane papers, did not attend.

THE CASE OF MISS AYLWARD.—On Friday Mr. Brewster, Q.C., and Sir Colman O'Loghlan, Q.C., were heard by the Court of Common Pleas in support of Miss Aylward's application for her discharge on the ground that the Court of Queen's Bench had no power to commit her to any other prison than the Four Courts Marshalsea, and Mr. Macdonagh, Q.C., the new member for Sligo, was heard in support of the jurisdiction of the Queen's Bench. Judgment was deferred until Saturday, when the full Court again sat specially for the purpose. The Chief Justice delivered the unanimous judgment of the Court to the effect that they entertained no doubt that they would be far transcending their authority as judges of the land in presuming to overrule the decision of the Court of Queen's Bench. Miss Aylward was therefore remanded to prison. She has since served notice on the governor of the prison that she is illegally detained.

Scotland.

MURDER IN FIFESHIRE.—On Wednesday the 28th ult, an under gamekeeper named M'Kenn, an Irishman, employed on the estate of Oakley, entered the house of a carrier named Dobbie, residing in Torryburn, and, taking a deliberate aim at him with his gun as he sat beside the fire, shot him in the head. The unfortunate man only survived a few minutes. M'Kenn was immediately apprehended and lodged in the county prison on a charge of murder. It appears that a few days previously Dobbie and M'Kenn had some misunderstanding in a public house in the village, but their quarrel was stopped by the intervention of some persons present.

Railways.

LONDON, CHATHAM, AND DOVER.—The western extension of this line from Chatham to Bickley was opened for public traffic on Monday, by which a new route from various places in Kent to the metropolis is opened up. By an arrangement with the London and Brighton Company, the London, Chatham, and Dover Company are enabled to convey their traffic to London Bridge and to the Victoria Station, Pimlico.

THE GREAT WESTERN NARROW GAUGE.—At a special meeting of the Great Western Railway Company last week the proposition to raise 1,000,000*l.* additional capital for the purpose of laying down the narrow gauge on the line between Reading and Paddington, including the Brentford and Windsor branches, and to provide suitable stock, was carried by a large majority. The directors were also empowered to introduce the necessary Bill into Parliament. It was mentioned that the company have no intention of substituting the narrow gauge on their line in place of the broad.

Law.

COURT OF COMMON PLEAS: *Kempe* v. *Neville*.—This was an action for false imprisonment arising out of the Cambridge proctorial system. The plaintiff was *Emma Kempe*, a young milliner resident in Cambridge, who, in January last, whilst travelling in an omnibus on her way to a private party about to be given by a student who had just taken his degree, was taken prisoner and incarcerated in the spinning-house, for several days. It was pleaded by the defendant, the Vice-Chancellor, that he was authorised under certain statutes of the University in what he had done. After two days' trial, the jury after an absence of two hours returned the following verdict:—"That the Proctors had good ground for suspecting the plaintiff. That the Vice-Chancellor did not make due inquiry, and that the punishment was undeserved. They thought that the prison was a fit and convenient place of confinement; and they found a verdict for the plaintiff—Damages 40*s*." The Lord Chief Justice said that this verdict was not a sufficient answer to the questions put, and he would put to them the second proposition in writing, to which he would require an answer "Yes" or "No." His Lordship then wrote down the following question:—"Did the Vice-Chancellor hear and examine the plaintiff, and was he satisfied of the matters alleged in respect of the plaintiff by the Proctors, that the plaintiff had been in the company of the undergraduates for idle, disorderly, and immoral purposes?" The jury again retired and did not return till half-past 5 o'clock, and the foreman then said, "The jury cannot say yes or no to the question proposed; but they are all of opinion that the Vice-Chancellor should have made further inquiries before he imprisoned the plaintiff." His Lordship said,—The finding is neither for the plaintiff nor for the defendent; it is an intermediate verdict. Will the learned counsel engaged consent to the jury being discharged if I enter the verdict as for the plaintiff, and state my own opinion that it is an imperfect plaintiff, and state my own opinion on one side, and Mr. Denman on the verdict? Mr. Couch on one side, and Mr. Denman on the other, said they could not consent to anything, as it might prejudice their case when the points of law raised came on for discussion before the full Court. His Lordship inquired if, in the event of his again sending the jury back, they would be likely to come to a more definite result? Several of the jury said there was no probability of their doing so. His lordship then said he would enter the verdict for the plaintiff, and state his opinion in writing. The jury were discharged. *Ebbon* v. *Neville*.—This was another action brought against the Vice-Chancellor of Cambridge to recover damages for false imprisonment. The circumstances of the case were by agreement taken to be identical with those disclosed in "Kempe v. Neville." A verdict was entered for 25*l*., and an arrangement was made of an intricate technical nature with a view to the decision, in as perfect a manner as possible, of all the points of law connected with the powers of the authorities of the University of Cambridge claimed by them in the course of the trial of the former cause.

COURT OF PROBATE AND DIVORCE: *Dent* v. *Denison*.—*Special jury*.—The defendant, Mr. Denison, Q.C., propounded the copy of a will executed on the 10th March last by Mr. Wm Frederick Dent, late of No. 61, Strand, watchmaker; and the plaintiff, the mother of the deceased, alleged that it had been destroyed by her son, *animo revocandi*, on the 1st of April following. Mr. Dent was between 40 and 50 years of age. He was a widower without children, but he had left a mother and two sisters, who were married to tradesmen in the Strand, but Mr. Dent was on bad terms both with them and with his mother. In February last he was taken ill, and while confined to his bed was often visited by Mr. Denison, who was an intimate friend both of him and his father, and had been his chief adviser in the construction of the great clock for the Houses of Parliament, and who prepared the draft of the will in dispute for him. By this instrument he gave a sum of 150*l*. a year to his mother, and after bequeathing various smaller legacies to his employés and friends, he left the residue, amounting to about 45,000*l*., to Mr. Denison himself. Two witnesses who had been employed to make a copy of the original draught, testified to the testator's expressions of dissatisfaction with the will on the very night of its execution, as well as to the deliberateness of its destruction, and to the use by him of such words as "that he had left too much power in Mr. Denison's hands." Other witnesses declared that Mr. Denison had strictly forbidden the admittance of any members of his family, and one deposed to an order that "if his mother insisted on passing upstairs he was to arrange a signal that she might be surrounded and ejected from the premises with as little violence as was necessary." It was further proved that Mr. Dent's relatives obtained access to him on the 31st of March, when he evinced much pleasure at seeing his mother and was perfectly conscious and rational; that the will was revoked on the following morning; and that from that time Mr. Denison, in turn, was excluded from the house. On behalf of the defendant it was urged that Mr. Denison had rendered valuable services, both to the deceased and his father; that the insertion of his name in the residuary legacy was not done by his suggestion or contrivance; that the exclusion of his family was justified by his excitable state; and that after he became "a prisoner in their hands" he was induced in a moment of delirium to change his mature and well-considered intentions, being at the time incompetent to give directions about matters of business. The jury found a verdict for the plaintiff; but desired to state that they believed Mr. Denison had reasonable grounds for disputing the cancellation of the will. The Judge said that he concurred in their opinion. Administration was then decreed to the plaintiff, but the question of costs was reserved.

Obituary.

LORD ROSSMORE died on the 1st inst. at Rossmore Park, co. Monaghan, in his 68th year. He had been an invalid for some years previously. On Saturday he was apparently better than usual, but about 10 o'clock he was seized with a fainting fit from which he never rallied. He is succeeded by his eldest son, the Hon. Henry Cairnes Westenra, aged 9 years.

SIR HENRY DAVISON, Chief Justice of Madras, and formerly Chief Justice of Bombay, died at Ootacamund, of dropsy, on the 3d or 4th of November.

SIR HENRY MARSH, BART., the eminent physician, was found dead on Saturday morning in the water-closet of his residence in Merrion Square, Dublin. He rose apparently in his usual health, and was shortly about to leave his house on his professional rounds, his carriage being in waiting at the door. It is supposed that he was seized with an apoplectic fit. Sir Henry Marsh was highly esteemed by all classes of the citizens, as well for his personal worth as for his professional eminence.

THE REV. PROFESSOR ROBERTSON, D.D., Professor of Church History in Edinburgh University, and long a leader in the General Assembly, died at his house in Ainslie Place, Edinburgh, on Sunday afternoon, from an attack of jaundice and gastric fever. He was only in his 58th year, but though apparently robust, had long worn the aspect of a more advanced age. He was ordained minister of Ellon, in 1832, and when in that office attained his first celebrity as a debater in the General Assembly. In the latter years of the Non-Intrusion Controversy, he took an active part in the Assembly and in the Synod of Aberdeen, in defending the policy of the Moderate or Constitutional party.

DR. DAVID DALE OWEN, the eminent geologist, died at New Harmony, Indiana, on the 13th ult. He was a son of the celebrated Robert Owen, of New Lanark, Scotland, and a brother of the Hon. Robert Dale Owen, late American Minister at Naples.

Miscellaneous.

THE LIVINGSTONE EXPEDITION.—The *Anglo-African* of October 4 says that letters have reached Cape Town from Dr. Livingstone and the members of his exploring expedition at the Zambezi, which contain very favourable reports of their condition and prospects. Dr. Livingstone, in a letter addressed to Sir George Grey, states that a mail bag from the Cape had been lost at the entrance to the Kongone harbour—a serious drawback to them, as they were anxiously awaiting information of the intentions of Government, in respect to furnishing a new steamer adapted for river navigation. The Ma Robert had been entirely used up; and in consequence the party were about to proceed on an overland journey. On their return they expected to find a new steamer ready for them, with which they would try to reach the great Lake Nyassie, by the Rowara river, said to flow out of it, and to be navigable 100 leagues in length, and situate beyond the Portuguese territory. In another letter, addressed to the Hon. Mr. Rawson, dated Mazars, Zambezi, March 25, Dr. Livingstone says:—

"We now proceed without any stoppages up to the Makalola country, and will in the way examine every inch of the river up to Victoria falls. We shall be able to say definitely whether a good steamer may stem the rapids of Kabra-Basa. Our opinion, founded on what we already know, is that in all ordinary floods, the passage would be easy for a powerful boat. The present flood is the highest we have witnessed, and our poor frail steamer, made of a material which quickly undergoes chemical decomposition, and ought never to have been employed in an experiment of this nature, shows a decided leaning towards settling and being borne away to the Indian Ocean. If we get her up to Tete she will never do more. We spent 23 days down in the Mangrove swamps (which are believed to be the hot beds of fever), in the most unhealthy period of the year. We had touches of the complaint, but the mode of treatment we adopt renders the fever not more formidable than a common cold. This is one of the benefits

our expedition has to show, and to Dr. Kirk and myself not a small one."

Letters have also been received from Dr. Kirk, a member of the expedition, from which the following is an extract:—

"We are now ready for the journey with the Makalolo to the interior of the country. Two of the Portuguese have lent us donkeys, which we hope will diminish the wearisome long journey on which we are going. As we hope to be able to vary the route, on our way back, we may see the fine lands now occupied by the Matebele, and perhaps visit the gold regions between them and the Zambezi. On the way up, by seeing every inch of the River Zambezi, we shall be able to settle the uses to which it may be applied for irrigation; and as we shall pass during the dry season, by seeing it at its lowest, we shall avoid all dangers of overstating the facilities. But our main hope is in the fine regions near the Lakes, accessible by the river Shire. Something must be made of these splendid countries which possess in so high a degree the qualities adapted to agriculture, pasturage, and trade with the interior, with a healthy climate where Europeans might settle free from the fevers so common near the coast and in all the low lands within the tropics. The first intercourse we expect to have with Europeans will be on our return, which may be in November or December, when we hope to find the new vessel for which we have applied, waiting us at the mouth of the Zambezi. I believe there are fine sheep lands among the hills, at an elevation of 4000 feet. The whole of that part is free of the Tsetse fly which kill so many cattle, where game is so abundant. In one of the Cape periodicals I see it mentioned that the first sugar-mill in South Africa, was one at Natal. This is not quite correct, as we have found the people near Tete manufacturing sugar, while the Cane is cultivated far beyond, where the process is quite unknown. There are no frosts here to hurt the cane, and there are extensive tracts of land in all directions admirably adapted for it, while in the Lake region, water-power may be had from the hill streams which flow throughout the whole year. As to cotton, there is as good seed now in the country as could be wished for general purposes. A great deal of that cultivated is worth 8d. per lb., and some salt lands would grow the finer sorts, such as Sea Island cotton, probably as well as any in America. We have found that wooden boats are not good for the Zambezi, as the Teredo, which bores ships' does much damage, even away from the salt water."

MR. BRIGHT ON STRIKES.—Mr. Bright, M.P., recently has addressed a letter to a spinner and manufacturer of Blackburn on the subject of "Strikes," from which the following are extracts:—

"I can understand the disappointment you feel at the small result of so many efforts to instruct the working population around you. It is not to be expected that the workmen of our population should be wiser than other classes, and we know well that other classes have, whenever able to do it, enforced combination prices, and endeavoured to make a scarcity in the articles in which they have dealt. The fact is, that among all classes there is a lamentable ignorance of the laws which ought to regulate labour and trade, and that the study of political economy is totally neglected in the education of the whole people. At this moment the views of a large portion of the highest class—I mean highest in position, in wealth, and in scholarship—are wholly unsound on these subjects, and, making allowance for difference of circumstances, they support precisely the same principles as those contended for by trades' unions. At first sight nothing appears more clear to a workman than that it is a great advantage to him to be able to force his employer to give him higher wages; and for this end—an end apparently so desirable—almost everything will appear to the mind of the workman proper and justifiable. He considers the whole matter to be a struggle between capital and labour, and that anything is fair in his fight with the claims of capital. Hence the folly and injustice of many of the proceedings of the trades' unions, and the discord which arises between the class of workmen and the class of employers. I have never denied the legal or the moral right of workmen or employers to combine; but I believe there is not one case in a hundred where it is wise to exercise this right. And, looking at the consequences of the strikes we have seen in this county, and, indeed, throughout the country, it is amazing that so many men of sense, so many competent to works of skill and ingenuity, should take any part in them. I do not expect in our time that these deplorable transactions will come to an end, but I am persuaded that they would occur much more rarely, and be attended with less of bitterness and of that obstinate folly which now so often distinguishes them, if the wall of partition between classes were broken down by the admission of the great 'labour interest' into the rights of citizenship. Then the same questions would interest us all; the same grievances, where grievances exist, would be seen to affect us all; the same great public objects would stimulate us all; and, instead of being, as we now are, two nations in one country, having different ends and adverse sympathies, we should have objects and purposes in common, to the incalculable and permanent gain of the whole people. I am not now propounding a new doctrine, I have held this opinion ever since I have considered social and political questions. I have as much interest in the harmonious working of our industrial organisation, and in the welfare of my country, as any other man has, and I give it as my deliberate judgment, that it is the interest and the duty of all the employers of labour among us to confer upon the workman, whose labour we purchase, and whose wages we provide, those rights of franchise and of citizenship which we ourselves possess. The workmen are great in numbers, growing in intelligence, and their power of combination is without limit. They will contend for themselves, by themselves, if condemned to remain a separate and suspected order in our social system; and this contest has in it the seeds of future and tremendous evil to them, and to the great industrial interests of the country. I wish to unite all, to have no separate interests; to blend all in a common sense of common rights, and thus to give peace and strength where now discord and weakness too much prevail."

BIRTHS.—On the 1st inst, at 8, Belgrave Square, the Viscountess CASTLEROSSE, of a son and heir—30th ult, at 5, Princes Gardens, the Viscountess HAWARDEN, of a daughter—2d inst, at Bywell Hall, Northumberland, the Lady MARGARET BEAUMONT, of a son and heir—30th ult, the Lady ISABELLA SCHUSTER, of a daughter—28th ult, at Coul House, N.B., the Hon. Mrs. GREVILLE VERNON, of a daughter—24th ult, at Wollaton Rectory, Notts, the Hon. Mrs. CHARLES J. WILLOUGHBY, of a son—29th ult, at New Hall, Clare, the Hon. Mrs. ARMSTRONG MACDONNELL, of a daughter—26th ult, at St. Andrews, Lady OCHTERLONY, wife of Sir Charles M. Ochterlony, Bart., of a son, stillborn.

MARRIAGES.—On the 29th ult, at Dunmore Park, Stirling, the Earl of SOUTHESK, to the Lady SUSAN C. M. MURRAY, eldest daughter of the late Earl of Dunmore—28th ult, at Shrivenham, CHARLES BALFOUR, Esq., of Newton Don, to the Hon. ADELAIDE BARRINGTON, youngest daughter of Lord and Lady Barrington—28th ult, at Philorth, Aberdeenshire, JOHN STUART MENZIES, Esq., of Chestbill, Perthshire, to the Hon. CATHERINE THURLOW FRASER, youngest daughter of the late Hon. William Fraser, and sister to Lord Saltoun—29th ult, at St. George's, Hanover Square, Lieut. T. H. B. BROOKE, H.M.'s 12th Regiment, M.N.I., second son of the Rev. R. P. Brooke, Ex-Chaplain Bengal Establishment, to ELIZA, third daughter of the late Major-General Sir W. H. SLEEMAN, K.C.B., of the Bengal Army—27th ult, at Milborne Port, Somerset, the Rev. EDWARD DUKE, of Lake House, Wiltshire, to JANE MERVYN, third daughter of Sir WILLIAM COLES MEDLYCOTT, Bart., of Ven, Somerset—29th ult, at St. George's, Hanover Square, PHILIP BENNET, Esq., Lieutenant of the Royal Horse Guards Blue, only child of Philip Bennet, Esq., of Rougham Hall, Suffolk, and Tollesbury Lodge, Essex, to BARBARA HARRIOT SOPHIA, eldest daughter of EDGAR DISNEY, Esq., of The Hyde, Essex.

DEATHS.—On the 29th ult., at Kelstone, Southampton, FRANCES AUGUSTA, widow of the Right Rev. JOHN BANKS JENKINSON, late Bishop of St. David's, aged 72—2d inst, at Prestwood, the Hon. Mrs. W. H. FOLEY—29th ult, at Florence, Lady HERBERT, widow of Sir Charles Lyon Herbert, Knt., aged 74—28th ult, at 25, Queen Square, Bath, CHARLOTTE HARRIET MARTINIQUE MILNES, eldest daughter of the late Sir Richard Shore Milnes, Bart., aged 62—18th ult, at Ashdown Park, Sussex, ANNE ELIZA ELIZABETH, widow of Rear-Admiral the Hon. MAJOR JACOB HENNIKER — 30th ult, HARRIET LOUISA, youngest daughter of Gen. Sir GEO. POLLOCK, G.C.B.—27th ult, at Caerynwch, Merionethshire, RICHARD RICHARDS, Esq., late M.P. for the county of Merioneth, eldest and last surviving son of the late Right Hon. Sir Richard Richards, formerly Chief Baron of the Exchequer, aged 73—29th ult, at Brentry Lodge, Henbury, Gloucestershire, HANNAH MARY, only daughter of the late Rear-Admiral CHARLES BOWEN, aged 22—27th Oct., at Port Royal, Jamaica, of yellow fever, EDWARD AUSTIN, Mate of H.M.S. Hydra, and youngest son of Rear-Admiral Horatio T. Austin, aged 20—25th ult, at Shillington Manor House, Bedfordshire, MARIA LUCY, widow of the late THOMAS OAKES, Esq., formerly Senior Member of Council in the Presidency of Madras, aged 76—23d ult, at Guildford, Colonel MELVILLE BROWNE, one of the oldest surviving Peninsular officers, and only son of General Gore Browne—28th ult, at his residence in Paris, Monsieur CESAR MOREAU, Chevalier de la Légion d'Honneur, and formerly French Consul in London, aged 69—26th ult, the Rev. WILLIAM GOODENOUGH BAYLEY, D.C.L., Vicar of Fittleworth, and late Fellow of New College, Oxford, aged 55—27th ult, at Field Hall, Staffordshire, JOHN ECCLES, Esq., M.D., for many years Physician to the General Hospital, and Professor at Queen's College, Birmingham—1st inst, at Oxford, ROSAMOND, wife of the Rev. FREDERICK METCALFE, Fellow of Lincoln College, and Incumbent of St. Michael's, Oxford, and daughter of the late Henry Robinson, Esq., of York, aged 25—28th ult, at his residence, Deacon's Hill, Hertfordshire, WILLIAM PHILLIMORE, Esq., aged 83.

Markets.

COVENT GARDEN, Dec. 8.

Heavy consignments continue to arrive from the Continent. Pine Apples are less in request than they have been, and prices for them are lower. Some West India Shaddocks have made their appearance, as have also a few Tangerine Oranges. Good Cobs may be had at 1s. to 1s. 6d. per pound. Cabbages, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 10s. per cwt. Asparagus and French Beans may now be had in small quantities. Cucumbers are scarcer. Cut flowers chiefly consist of Orchids, Gardenias, Chrysanthemums, Violets, Mignonette, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 4s to 7s	Apples, per doz., 6d to 1s 6d
Grapes, per lb., 3s to 6s	Oranges, per 100, 6s to 10s
Pomegranates, each, 4d to 6d	Lemons, per 100. 6s to 10s
Pears, per doz., 1s to 3s	Nuts, Cob, per lb., 1s to 1s 6d

VEGETABLES.

Cauliflowers, each, 4d to 6d	Celery, p. bundle, 1s 6d to 1s9d
Greens, per dozen, 2s 6d to 3s	Onions, p. ½ sieve, 1s 6d to 2s6d
Cabbages, do., 1s to 2s	Seakale, p. punnet, 3s to 3s 6d
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 8d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 6d to 1s 6d	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d

HOPS.—BOROUGH MARKET, FRIDAY, Dec. 7.

Messrs. Pattenden & Smith report that the market is firm for all fine Hops, but inferior are a drug on the market.

BRITISH WOOLS.—LONDON, FRIDAY, Dec. 7.

A limited demand for fleece sorts, combing and clothing, and for fleeces has been supplied at former rates. Skin wool has been sold as produced at old prices. The state of the American finances is now giving pause to the Yorkshire spinners, as also a large failure in Manchester, which has affected some Bradford houses to their considerable loss.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	7	to	1	8	Leicest. Wethers	1	6	to	..	
Half-bred ditto	1	8	—	..		Ditto Hoggs	1	8	—	..	
Down Ewes	1	5	—	1	6	Combing Skins	1	0	—	1	4
Kent Fleeces	1	7	—	..		Blanket ditto	0	6	—	0	8
						Flannel Wool	1	0	—	1	8

COLONIAL FINE WOOL SALES.—These sales terminate this evening; they have proceeded with animation throughout, and maintained fully the rates at which they commenced. The low wool sales are not very important this series, and will merely occupy part of to-night and to-morrow.

POTATOES.—SOUTHWARK, Monday, Dec. 3.

During the past week the arrivals coastwise have been limited owing to easterly winds, but there being a large quantity left over from last week's supply the trade still continues very dull. The following are this day's quotations:—York Regents, 110s. to 130s. per ton; Lincolnshire do., 100s. to 110s.; Dunbar do., 120s. to 140s.; Perth, Forfar, and Fife do., 100s. to 110s.; Rocks and Reds, 90s. to 100s.; French Whites, 85s. to 90s.; Belgian do., 80s. to 90s.; Dutch do., 80s. to 85s.

METROPOLITAN CATTLE MARKET.

MONDAY, Dec. 3.

The number of Beasts is considerably smaller than on Monday last; trade is consequently active, but we cannot on the average quote higher rates. The supply of Sheep is also rather less; the demand is however limited, and it is difficult to effect a clearance. Calves are selling about the same as on Thursday. From Germany and Holland there are 300 Beasts, 2000 Sheep, 180 Calves, and 25 Pigs; from Scotland, 30 Beasts; from Ireland, 700; from Norfolk and Suffolk, 50; and 2110 from the northern and midland counties.

	s.	d.		s.	d.		s.	d.		s.	d.
Best Scots, Herefords, &c.	4	10	to	5	0	Best Long-wools.	5	0	—	5	2
Best Short-horns	4	6	—	4	10	Do. Shorn	..	..	to	..	
2d quality Beasts	3	4	—	4	0	Ewes & 2d quality	4	0	—	4	6
Best Downs and Half-breds	5	2	to	5	6	Do. Shorn	..	..	—	..	
Do. Shorn	..	..	—	..		Lambs	..	..	—	..	
						Calves	..	..	4	0	— 5 0
						Pigs	..	..	4	4	— 5 4

Beasts, 4850; Sheep & Lambs, 20,420; Calves, 202; Pigs, 320.

THURSDAY, Dec. 6.

We have rather a larger supply of Beasts than on Thursday last. The weather is very unfavourable, and it is difficult consequently to maintain Monday's quotations; a considerable number remain unsold. The number of Sheep is not large, yet it far exceeds the demand. The small amount of business transacted is at nearly Monday's rates. Calves are lower. Our foreign supply consists of 300 Beasts, 1030 Sheep, and 320 Calves. Milch Cows, 130.

	s.	d.		s.	d.		s.	d.		s.	d.
Best Scots, Herefords, &c.	4	8	to	5	0	Best Long-wools	4	10	—	5	0
Best Short-horns	4	6	—	4	10	Do. Shorn	..	..	—	..	
2d quality Beasts	3	0	—	4	0	Ewes & 2d quality	4	0	—	4	4
Best Downs and Half-breds	5	2	—	5	4	Do. Shorn	..	..	to	..	
Do. Shorn	..	..	—	..		Lambs	..	..	—	..	
						Calves	..	..	3	8	— 4 8
						Pigs	..	..	4	0	— 5 4

Beasts, 1280; Sheep & Lambs, 4550; Calves, 360; Pigs, 155.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Dec. 6.

Prime Meadow Hay	75s	to 80s	Clover	90s to 110s
Superior do. (old)	90	105	New Clover	— —
Inferior do.	50	60	Old second cut	80 90
New do.	—	—	Straw	32 36
Rowen	40	50		

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Dec. 6.

Sup. Meadow Hay	105s	to 115s	Inferior Clover	90s 105s
Inferior do.	65	95	New do.	— —
New do.	—	—	Straw	36 42
Superior Clover	118	126		

JOSHUA BAKER.

WHITECHPEL, THURSDAY, Dec. 6.

Fine old Hay	98s	to 106s	Fine old Clover	100s to 114s
Inferior do.	60	80	Inferior do	80 90
Prime New Hay	—	—	Fine 2d cut	— —
Inferior do.	—	—	Inferior do.	— —
Straw	30	34	Fine New Clover	— —

BUTTER MARKET.—Dec. 7.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 14s. „ „
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

COAL MARKET.—Dec. 7.

Walls End Hetton, 24s. 6d.; Walls End Lambton, 24s.; Walls End Haswell, 24s. 6d.; Walls End Russell's Hettons, 23s. 6d.—8 ships at market.

MARK LANE.—MONDAY, Dec. 3.

The supply of Wheat from Essex and Kent to this morning's market was small; good samples were taken at last week's rates, but the inferior continue to be difficult of disposal. The market was well attended, and foreign Wheat met a free sale at the quotations of this day se'nnight. Barley is 1s. per qr. cheaper. Beans and Peas are rather lower. The Oat trade is dull at a decline of 6d. to 1s. per qr. Flour sells slowly at our late quotations,

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	50	62	Red	40	60
— — fine selected runs..ditto	53	66	Red	50	66
— — Talavera	50	74			
— Norfolk	—	—	Red	—	
— Foreign.....	50	74			
BARLEY, grind. & dist., 28s to 30s..Chev.	40	44	Malting.	38	40
— Foreign..grinding and distilling	30	36	Malting.	40	44
OATS, Essex and Suffolk	20	24			
— Scotch and Lincolnshire..Potato	26	28	Feed ..	20	25
— Irish .....Potato	26	28	Feed ..	21	24
— Foreign.....Poland and Brew	20	25	Feed ..	19	25
RYE	35	38	Foreign.	—	
RYE-MEAL, foreign.....	—				
BEANS, Mazagan....36s to 44s....Tick	38	48	Harrow.	38	48
— Pigeon .....34s — 56s..Winds.	—		Longpod	—	
— Foreign .....Small	40	50	Egyptian	—	
PEAS, white, Essex and Kent ..Boilers	38	48	Suffolk .	40	50
— Maple .... —s to —s ..... Grey	40	42	Foreign.	38	48
MAIZE ..... White	—		Yellow..	—	
FLOUR, best marks delivered..per sack	50	57			
— 2d do. ..... ditto	34	50	Country.	34	50
— Foreign .....per barrel	29	34	Per sack	40	50

FRIDAY, Dec. 7.

The weather during the last eight days has continued to be excessively wet, interfering greatly with Wheat sowing, complaints of which reach us from nearly all parts of the kingdom. More firmness, attended with an improved demand for Wheat, has been observable in many markets during the past week, but in Liverpool and Glasgow the large arrivals from America have caused a further decline there of 1s. per qr. The state of monetary panic there has however suspended all operations for the present, which will be further curtailed by the closing of the canals, and a considerable diminution in the future supplies may therefore be anticipated after the arrival of what is now afloat. Spring corn has shown a downward tendency, and each description in the majority of markets has been purchaseable on slightly easier terms. In Flour some forced sales have occurred both here and in Liverpool at a further decline, say 28s. 6d. per barrel here, and 27s. 6d. in Liverpool. The arrivals of foreign Wheat this week are considerable, good of Barley, and small of Oats; of all English grain small. The attendance at this morning's market was only moderate. We observe no alteration in the value of English Wheat, and the holders of foreign being very firm in their demands, the amount of sales was limited, and prices unaltered. Spring Corn of all descriptions is steady at Monday's quotations.

ARRIVALS FROM Dec. 3 TO Dec. 7.

	Wheat.	Barley.	Oats.	Flour.
English ..	1810 qrs.	1040 qrs.	210 qrs.	760 sks.
Irish	— „	— „	200 „	— „
Foreign ..	36480 „	4710 „	8860 „	1650 „ / 26570 brls.

LIVERPOOL, Tuesday, Dec. 4.—With a numerous attendance of millers and dealers at our Corn Exchange this morning, both local and distant, Wheat met a healthy consumptive demand, and there being much less pressure to sell than yesterday, quotations cannot be called more than 2d. per cental lower; whilst Flour is dull of sale at 6d. per barrel and sack reduction; it is not possible, however, to obtain these concessions on all classes. Indian Corn had a good retail inquiry at 6d. per qr. reduction, at which holders remained very firm. Oats were 1d. per bushel and Oatmeal 6d. per load cheaper.

Beans, Peas, and Barley each gave way 6d. per qr. ex quay. The market closed with a firm tone, and from the quantity of Wheat cleared to-day importers anticipate no difficulty in disposing of the large arrivals.

FRIDAY, Dec. 7.—Market moderately attended. Wheat 2d. per cental dearer, with large business. Flour in better request at late rates. Indian Corn 37s. for mixed, 37s. 6d. to 38s. for Galatz and Ibrail, with moderate demand. Beans steady.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Oct. 27..	59s 11d	40s 9d	23s 5d	36s 8d	49s 6d	41s 10d
Nov. 3..	59 9	40 10	23 3	36 2	49 10	42 4
— 10..	58 9	41 0	23 11	36 6	51 1	44 5
— 17..	58 1	41 4	23 5	36 4	50 8	46 9
— 24..	56 3	40 11	23 3	34 4	48 11	48 4
Dec. 1..	54 10	39 10	22 3	35 11	48 10	45 11
Agg. Aver.	57 11	40 9	23 4	36 1	49 10	44 11

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Oct. 27.	Nov. 3.	Nov. 10.	Nov. 17	Nov. 24.	Dec. 1.
59s 11d	—	..	..	..	..	..
59 9	..	..	..	..	..	..
58 9	..	..	..	..	.	..
58 1	..	..	..	..	..	..
56 3	..	..	..	..	..	..
54 10	..	..	..	..	..	

PARTNERSHIP.

WANTED, an active Business Man to take a Share in a well established NURSERY and SEED BUSINESS in one of the most flourishing sea-port towns in the south of England. A very moderate amount of money only required.—Apply to B. Z., Mr. Chester, 39, King Street, Covent Garden, London, W.C., and to whom references may be made.

PARTNER WANTED, in an old-established and steady improving Nursery and Seed Business in the immediate vicinity of London. It would be desirable that the party should have a good knowledge of the practical working of the Business, and be capable of Directing the Ground and House Work generally. The connection is rapidly increasing, and an excellent opening presents itself for a person of energetic and persevering habits, as the Business, which is already remunerating, and can be much improved, offers an excellent and profitable means of investment for a person of limited capital. The Partner whom he would succeed only resigning his interest in it in consequence of continued ill health.—Apply by letter only, to K. E. B., *Gardeners' Chronicle* Office, W.C.

WANTED, AS FOREMAN, an active, careful, and industrious Man, who thoroughly understands the Nursery business in-doors and out. He must be a good Propagator and Plant Grower. None need apply whose character will not bear strict investigation.—Apply by letter, stating wages, &c., and other particulars, addressed to G. H. M., Post Office, Coventry.

WANTED, AS FOREMAN, a good CORRESPONDENT AND SALESMAN.—One who is thoroughly acquainted with Nursery business. Good wages will be given, but none need apply except first-class men.—JNO. STANDISH, Bagshot, Surrey.

WANTED, in a London Nursery, a person competent to take charge of the Jobbing Department; he must be practically acquainted with the Laying out of small Villa Gardens, and able to draw Plans for the same. Wages, One Guinea per week.—Address, in own handwriting, stating name, age, and reference to R., Mr. H. Williams, Willow Lodge, Willow Vale, Shepherd's Bush, W.

WANTED, an experienced BOOK KEEPER, in the office of a Provincial Nursery. He must write a good hand, and be quick and accurate in Accounts. As a steady trustworthy Man is required, none need apply whose character will not bear the very strictest investigation.—Address, stating Salary required, B. K., Messrs. Hurst and M'Mullen, 6, Leadenhall Street, London, E.C.

WANTED IMMEDIATELY, as HEAD SHOPMAN, a respectable Man, who thoroughly understands the Seed Trade in all its branches, with the highest references.—Apply to Mr. EPPS, Maidstone, stating terms, &c.

WANTED, by a Young Man, 12 years in the London Seed Trade, a situation as Porter or Under Warehouseman, B. B., *Gardeners' Chronicle* Office, W.C.

WANTED, a thoroughly good and quick BUNDLE PACKER in a large Nursery. As he will have several men under him, he must be an active, careful, and good Manager in the Packing Yard.—Address "November," Messrs. Hurst and McMullen, Leadenhall Street, London, E.C.

1000 DRAINERS WANTED.—There is still room for a large number of hands on Messrs. GIRDWOOD'S Drainage Works, in the counties of Stafford and Derby. Good men may find regular employment on application to the Foremen at Sudbury, Hungry Bentley, Longford, Abbot's Bromley, and Smallwood.—49, Pall Mall, London, S.W.

WANT PLACES.—Letters to be Post Paid.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 37, married, without incumbrance; has had great practical experience in all branches of his profession where early Flowers, Fruit, and Vegetables are required; is also a good Flower and Kitchen Gardener. Has been accustomed to Superintend Gardens on an extensive scale. Highest testimonials as to character and ability.—T. CAMPBELL, Hatchford Gardens, Cobham, Surrey.

GARDENER (HEAD, where four or more are kept).—Age 28, single; understands his profession.—W. T., Messrs. Paul & Son, The Old Nurseries, Cheshunt, Herts, N.

GARDENER (HEAD).—Age 28, single; thoroughly understands his profession in all its various branches. Three years' character.—M. P., G. Stanley, Florist, High Road, Lee, Kent, S.E.

GARDENER (HEAD).—Age 39, married, no incumbrance; highly recommended by Messrs. Brown, and 4 years good character from a Baronet as a thorough experienced gardener.—G. A., Albion Nursery, Stoke Newington, N.

GARDENER (HEAD).—Age 36, married, no incumbrance; has a thorough knowledge of his profession in all its branches. Wife would attend to a Dairy if required. Three years' good character.—P. W., Miss Smith's Nursery, Dulwich, Surrey, S.

GARDENER (HEAD).—Age 38, no incumbrance; a thoroughly practical industrious Man; understands Gardening in all its branches, Early and Late Forcing of Fruits and Vegetables. First-class references as to character.—T. T., Messrs. Flanagan & Son, 9, Mansion House St., London, E.C.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD) or GARDENER AND BAILIFF.—Married, no incumbrance; has had great practical experience in all branches of his profession, where early Fruit, Flowers, and Vegetables are required; Laying-out and improving Grounds, &c., Draining Land, and Stock. Four years' good character.—M. G., Crystal Crescent, Upper Sydenham, Kent.

GARDENER.—A Strong Useful Lad, the son of a practical Gardener, can Manage a small place; has some knowledge of Plants and Propagation.—S. S., 35, Prince's Road, Notting Hill, W.

TO NURSERYMEN, SEEDSMEN, AND FLORISTS.

FOREMAN OR GENERAL MANAGER.—Middle-aged, active, and industrious. Good Salesman; used to London and other markets. Can be highly recommended.—X. Y., Thos Sherman, Seedsman, &c., Newington Butts, S.

TO NURSERYMEN.

FOREMAN, in a Nursery; well experienced in London and Provincial Nurseries. Good character as to honesty, ability, and sobriety.—R. JAMESON, Damside, Keighley, Yorkshire.

GENERAL FOREMAN OR SHOPMAN.—Young, of practical ability: good Salesman. Excellent character.—C. B. A., Post Office, Woodbridge, Suffolk.

LAND STEWARD OR BAILIFF.—Married, without incumbrance; has been brought up to the Norfolk Husbandry, and had the Management of High and Low Lands, and every Department in a gentleman's Estate; together with Brick-kiln, Lime, and Drain Pipes, and the Erection of Buildings.—A. B., 16, College Place, Bond Street, Chelsea, S.W.

BAILIFF.—In the prime of life, married, without incumbrance; intelligent; thoroughly practical in Modern Farming. A good judge of all kinds of Stock, and a good Accountant. Wife a good Dairy Woman. First-class references.—B. C., 10, Pentonville Road, Islington, London, N.

BAILIFF.—Married; has great experience in the cultivation of Land and Management of Cattle. Highly recommended by his present employer.—Mr. EDWIN ABURROW, 7, Whitmore Road, Hoxton, London, N.

TO NURSERYMEN AND SEEDSMEN.

BOOK-KEEPER AND CASHIER OR TRAVELLER, a good CORRESPONDENT.—Age 28; is about to leave his present situation. Fourteen years' reference in first-class houses in Scotland and England. Well recommended.—C. B., Messrs. Cockburn & Cumming, 6, Liverpool Street, E.C.

BOOK-KEEPER OR SALESMAN.—Age 28; has practised in all departments of the Nursery and Seed Trade. Unexceptionable references.—W. G., *Gardeners' Chronicle* Office, W.C.

TO SEEDSMEN, ETC.

SHOPMAN (ASSISTANT), Wholesale or Retail.—Age 24; has had 8 years experience.—G. C. B., *Gardeners' Chronicle* Office, W.C.

GARDENER, or GARDENER AND GROOM.—Middle age; understands the management of Stock, and can milk.—J. HARMS, Oak Lodge, Barnet Common, Herts.

COACHMAN AND GROOM, to drive a pair.—Age 23; three years' character.—A. B., 15, Temple Street, Brighton.

THE PERFECT SUBSTITUTE FOR SILVER.—The REAL NICKEL SILVER, introduced more than 25 years ago by WILLIAM S. BURTON, when PLATED by the patent process of Messrs. Elkington & Co., is beyond all comparison the very best article next to sterling silver that can be employed as such, either usefully or ornamentally, as by no possible test can it be distinguished from real silver. A small useful set, guaranteed of first quality for finish and durability, as follows:—

	Fiddle or Old Silver Pattern.	Thread or Brunswick Pattern.	Lily Pattern.	King's or Military Pattern.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
12 Table Forks	1 13 0	2 4 0	2 10 0	2 15 0
12 Table Spoons	1 13 0	2 4 0	2 10 0	2 15 0
12 Dessert Forks	1 4 0	1 12 0	1 15 0	1 17 0
12 Dessert Spoons ..	1 4 0	1 12 0	1 15 0	1 17 0
12 Tea Spoons	0 16 0	1 2 0	1 5 0	1 7 0
6 Egg Spoons, gilt bowls..	0 10 0	0 13 6	0 15 0	0 15 0
2 Sauce Ladles	0 6 0	0 8 0	0 9 0	0 9 6
1 Gravy Spoon	0 6 6	0 10 0	0 11 0	0 12 0
2 Salt Spoons, gilt bowls..	0 3 4	0 4 6	0 5 0	0 5 0
1 Mustard Spoon, gilt bowl	0 1 8	0 2 3	0 2 6	0 2 6
1 Pair of Sugar Tongs ..	0 2 6	0 3 6	0 4 0	0 4 6
1 Pair of Fish Carvers ..	1 4 0	1 7 6	1 10 0	1 12 0
1 Butter Knife	0 2 6	0 5 6	0 6 0	0 7 0
1 Soup Ladle	0 10 0	0 17 0	0 17 0	1 0 0
1 Sugar Sifter	0 3 3	0 4 6	0 5 0	0 5 6
Total	9 19 9	13 10 3	14 19 6	16 4 0

Any article to be had singly at the same prices. An Oak Chest to contain the above, and a relative number of Knives, &c., 2*l.* 15*s.* Tea and Coffee Sets, Dish Covers and Corner Dishes, Cruet and Liqueur Frames, &c., at proportionate prices. All kinds of re-plating done by the patent process.

CUTLERY, WARRANTED.—The most varied assortment of TABLE CUTLERY in the world, all warranted, is on sale at WILLIAM S. BURTON'S, at prices that are remunerative only because of the largeness of the sales. Three and a half inch Ivory-handled Table Knives, with high shoulders, 12*s.* 6*d.* per dozen; Desserts to match, 10*s.*; if to balance, 6*d.* per dozen extra; Carvers, 4*s.* 3*d.* per pair; larger sizes from 20*s.* to 27*s.* 6*d.* per dozen; extra fine Ivory, 33*s.*; if with Silver Ferrules, 40*s.* to 50*s.*; White-bone Table Knives, 6*s.* per dozen; Desserts, 5*s.*; Carvers, 2*s.* 3*d.* per pair; Black-horn Table Knives, 7*s.* 4*d.* per dozen; Desserts, 6*s.*; Carvers, 2*s.* 6*d.*; Black-wood handled Table Knives and Forks, 6*s.* per dozen; Table Steels from 1*s.* each. The largest stock in existence of Plated Dessert Knives and Forks in cases and otherwise, and of the new plated Fish Carvers.

WILLIAM S. BURTON'S GENERAL FURNISHING IRONMONGERY CATALOGUE may be had gratis, and free by post. It contains upwards of 500 Illustrations of his illimited Stock of Sterling Silver and Electro Plate, Nickel Silver, and Britannia Metal Goods, Dish Covers, Hot-water Dishes, Stoves, Fenders, Marble Chimney Pieces, Kitchen Ranges, Lamps, Gaseliers, Tea Trays, Urns, and Kettles, Clocks, Table Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bedroom Cabinet Furniture, &c., with Lists of Prices, and Plans of the 20 large Show Rooms, at 39, Oxford Street, W.; 1, 1A, 2, 3, and 4, Newman Street; 4, 5, and 6, Perry's Place, and 1, Newman Mews, London. Established 1820.

LE SOMMIER ELASTIQUE PORTATIF.

HEAL AND SON have patented a method of making a Spring Mattress portable. The great objection to the usual Spring Mattress is its being so heavy and cumbersome.

The SOMMIER ELASTIQUE PORTATIF is made in three separate parts, and when joined together has all the elasticity of the best Spring Mattress. As it has no stuffing of wool or horse-hair, it cannot harbour moth, to which the usual Spring Mattress is very liable; the prices, also, are much below those of the best Spring Mattresses, viz.:—

3 feet wide by 6 feet 4 inches long	..	..	£2	5 0
3 feet 6 in.	„	„	2	10 0
4 feet	„	„	2	15 0
4 feet 6 in.	„	„	3	0 0
5 feet	„	„	3	5 0
5 feet 6 in.	„	„	3	10 0

The SOMMIER ELASTIQUE PORTATIF therefore combines the advantages of elasticity, durability, cleanliness, portability, and cheapness.

An Illustrated Catalogue of Bedsteads, Bedding, and Bed-Room Furniture sent free by post on application.

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AVOID MEDICINE, its dangers, and expense, as perfect digestion, sound lungs, and strong nerves can only be restored to the most enfeebled by DU BARRY'S DELICIOUS REVALENTA ARABICA FOOD, which at 3*d.* per day saves 50 times its cost in other remedies, curing effectually indigestion (dyspepsia), habitual constipation, flatulency, phlegm, nervousness, billiousness, liver complaints, hysteria, neuralgia, sleeplessness, acidity, palpitation, heartburn, headache, debility, despondency, cramps, spasms, nausea, and sickness (during pregnancy or at sea), sinking, fits, cough, asthma, bronchitis, consumption, also children's complaints. Cure No. 51,916; "50 years' indescribable agony from dyspepsia, nervousness, asthma, cough, constipation, flatulency, spasms, sickness at the stomach, and vomitings, have been removed by DU BARRY'S excellent Food, after all medicines had failed.—Maria Joly, Worthing, Ling, near Diss, Norfolk."—Cure No. 3905: "13 years' cough, indigestion, and general debility have been removed by DU BARRY'S Food.—James Porter, Athol Street, Perth."—Cure No. 4208: "Eight years' dyspepsia, nervousness, debility, with cramp, spasms, and nausea, have been effectually removed by DU BARRY'S Food.—Rev. John W. Flavell, Ridlington Rectory, Norfolk."

Packed in tins, with full Instructions: 1 lb., 2*s.* 9*d.*; 2 lb., 4*s.* 6*d.*; 5 lb., 11*s.*; 12 lb., 22*s.*; 24 lb., free of carriage, 40*s.*—BARRY DU BARRY & Co., 77, Regent Street, W.; also, FORTNUM, MASON, & Co., Piccadilly, W.; ABBISS, 60, Gracechurch Street, London, E.C.; and through all Grocers and Chemists.

FORGERY AND FRAUD.—Understanding that there is at present an attempt being made by some unprincipled parties in our city to deceive the public with an inferior Starch, made up in packets closely resembling the GLENFIELD STARCH, we consider it our duty to warn our fair readers to be careful when purchasing to see that the word "GLENFIELD," and the maker's name, "ROBERT WOTHERSPOON," is on every package, as none others are genuine.

When you ask for Glenfield Starch see that you get it, as inferior kinds are often substituted.

DINNEFORD'S PURE FLUID MAGNESIA has been, during 25 years, sanctioned by the medical profession and universally accepted by the public as the best remedy for acidity of the stomach, heartburn, headache, gout, and indigestion. As a mild aperient it is admirably adapted for ladies and children.—Manufactured (with the utmost attention to strength and purity) by DINNEFORD & Co., 172, New Bond Street, London, W., and sold by all respectable Chemists throughout the empire.

KEATING'S COD LIVER OIL, just imported, the Pale from Newfoundland, and the Light Brown from Norway.—The supplies of the present season have never been surpassed, the fish being unusually fine, and the oil nearly tasteless. Professors Taylor and Thompson, of Guy's and St. Thomas's Hospitals, have analysed, and pronounced the Pale Newfoundland Oil the best and most desirable for invalids of very delicate constitution. The Light Brown being more economical in price, is brought within the reach of all classes. No higher price need be paid than the following:—Light Brown, 1*s.* 6*d.* half-pints, 1*s.* 8*d.* per pint, or 3*s.* per quart. Pale, 1*s.* 6*d.* half-pints, 2*s.* 6*d.* pints, 4*s.* 6*d.* quarts, or in five-pint bottles, 10*s.* 6*d.*, imperial measure, at 79, St Paul's Churchyard, London, E.C.

KEATING'S COUGH LOZENGES.—Statistics show that 50,000 persons annually fall victims to pulmonary disorders, including Consumption, diseases of the chest, and the respiratory organs. Prevention is at all times better than cure; be therefore prepared during the wet and wintry season with a supply of KEATING'S COUGH LOZENGES, which possess the virtue of averting as well as of curing a cough or cold; they are good alike for the young or for the aged.—Prepared and sold in boxes, 1*s.* 1½*d.*, and tins, 2*s.* 9*d.*, 4*s.* 6*d.*, and 10*s.* 6*d.* each, by THOMAS KEATING, Chemist, &c., 79, St. Paul's Churchyard, London. Retail by all Druggists, &c.

NO CHARGE MADE FOR STAMPING PAPER AND ENVELOPES WITH ARMS, CREST, OR INITIALS.—RODRIGUES' Cream-laid Adhesive ENVELOPES, 4*d.* per 100; Cream-laid Note, full size, five quires for 6*d.*; thick ditto, five quires for 1*s.*; Foolscap, 9*s.* per ream; Sermon Paper, 4*s.* 6*d.* All kinds of Stationery equally cheap, at H. RODRIGUES', 42, Piccadilly, W.

WEDDING CARDS, WEDDING ENVELOPES, Invitations to the Ceremony, Dejeuner, and Ball, Printed and Stamped in Silver, with Arms or Crest, in the latest fashion. Card Plate elegantly Engraved and 100 superfine Cards Printed for 4*s.* 6*d.* At H. RODRIGUES', 42, Piccadilly, W.

NEXT OF KIN, HEIRS, &c., WANTED, who have been Advertised for—Being exact Copies of Advertisements from the *Times*, *Gazette*, *Chronicle*, *Herald*, *Post*, *Melbourne Argus*, *Sydney Herald*, *Hobart Town Mercury*, *South Australian Register*, *Cape Mail* and *Monitor*, *New Zealand Gazette*, *West Indian Record*, Indian, Canadian, and American Papers for the last 60 years, relating to many thousand names, descriptions, and last residences of persons of all classes entitled to money and property of several Millions value, and now laying dormant for want of claimants. This prized and valuable book is sent post free to any part of the United Kingdom for 12 post stamps by the publishers, FISHER & SON, Kingsland, London, N.E. Established 1847. "Worth its weight in gold."—*Times*, Nov. 26, 1859.

HORTICULTURAL GARDENS.—The *Gardeners' Chronicle* of May 12, containing Mr. NESFIELD'S COLOURED PLAN for the NEW GARDEN at Kensington Gore, is still on Sale at the Office, 41, Wellington Street, Covent Garden, W.C., and will be sent by post on receipt of six stamps.

Now ready, price 4*s.*,

JOURNAL OF THE BATH AND WEST OF ENGLAND AGRICULTURAL SOCIETY, Vol. 9, Part 1, 1861.
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HOW TO FARM PROFITABLY, contains his Farming Economies, No. 1 to 6; his Lecture on The Sewerage of Towns as it affects British Agriculture; his Agricultural Catechism, and other new matter, together with Baron Liebig's celebrated Letter on our National Waste of Manure. Forming a Volume of 430 pages, with Photographs by Mayall, and a Portrait of the Author. Price 2*s.*
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News of the Week.

BY the Overland Mail we have accounts from Pekin to the 20th October. THE EMPEROR OF CHINA had fled to Tartary, and the army of SAN-KO-LIN-SIN had also quitted Pekin, though it was said to be still in the field. The EMPEROR'S Summer Palace was taken and sacked on the 6th October, affording an enormous quantity of spoil. On the 8th Mr. PARKES, Mr. LOCH, M. L'ESTRANGE, and 13 soldiers were restored, but Mr. DE NORMAN and Captain ANDERSON had

died from the effects of the brutal treatment they had received. Captain BRABAZON, Mr. BOWLBY, the *Times* correspondent, and several French officers, were still unaccounted for, and it was feared that there was little hope of their return. On the 13th Pekin surrendered to the Allies, the officials left in authority in the capital assenting to all demands. All the Pekin gates had been given up to the allied troops, who were healthy and encamped on the walls, and were to winter at Pekin and Tien-tsin. Lord ELGIN and Baron GROS were at the head-quarters of the allied army at Pekin. All was quiet at Shanghai. A new and distinct rebellion was reported in the province of Shensi, and was said to be headed by influential people.

The KING OF SARDINIA returned to Naples from Sicily on Friday, his return having been hastened by the reactionary disturbances which have taken place at the instigation of Royalists agents at Caserta, Aversa, Sora, Penna, and other provincial towns, as well as in Naples itself. At Caserta and at Aversa the movement was crushed by the Garibaldians, who arrested about 100 persons and shot several of the ringleaders. At Naples the most serious demonstration was caused by the return of the CARDINAL ARCHBISHOP. The mob besieged his palace, and attempted to set it on fire. The disorder lasted 18 hours, and only terminated when the ARCHBISHOP appeared on the balcony holding the Italian tricoloured flag. The bombardment of Gaeta recommenced on the 7th inst. During the night the Sardinian shells fell upon several of the public buildings, and even on the hospital. The QUEEN hurried from one battery to another encouraging the soldiers, until the KING insisted on her withdrawing to the casemates. The fortress of Gaeta energetically returned the fire of the Sardinian batteries. It is asserted that England, France, and Russia have advised the KING to abandon his hopeless defence, and to withdraw from Gaeta. It is announced that KING VICTOR EMMANUEL has designated General CIALDINI for occupying Rome in the event of the departure of the POPE. Accounts from Sicily mention that the new Council of Lieutenancy has officially demanded the maintenance of distinct laws for Sicily until the assembling of the Italian Parliament.

Count DE PERSIGNY has issued another address to the Prefects on the Press Law, stating that the press is at liberty to disclose abuses in society or government, to discuss the acts of the administration, and to reveal injustice; but "should parties endeavour to overthrow the State and dynasty, the law will not permit discussion, and the system of warnings will then be enforced." This address has been followed by an Imperial decree cancelling all the warnings given to the journals of Paris and the departments up to the 10th inst.

Accounts from Vienna announce a modification of the Ministry under circumstances which promise to have an important influence on the future destinies of Austria. Baron SCHMERLING has entered the Cabinet as Minister of State on the understanding that the EMPEROR and the Ministers accept a programme which he has drawn up for the reconstruction of the Empire. This programme, which is tantamount to a complete revolution, includes among other matters, the abolition of the Concordat, the equality of all religious professions, the repeal of the provisional statutes recently promulgated, and a constitution common to all the empire with the exception of Hungary and Venetia. The congregation of the comitat of Pesth met on Monday, when Counts CAROLYI and NYARI spoke in favour of the establishment of the laws of 1848. The city was illuminated on the occasion, but no disturbances took place.—The Second Chamber of Hesse Cassel adopted on Saturday by a majority of 37 to 7, the proposition of the committee appointed to examine the question of the constitution. A decree of the ELECTOR was immediately read dissolving the Diet, and providing for a general election and the meeting of a new Diet within six months.

An attempt was made to assassinate Marshal O'DONNELL, the Prime Minister of Spain, as he was leaving the Senate House on Friday. He was wounded in the left shoulder by a pistol shot. The assassin, whose name is IMAZ, and who is known to be a man of extreme opinions, was immediately arrested.

Advices from Vera Cruz to the 21st ult. state that the British Legation in Mexico had been robbed by General MIRAMON of a million of dollars belonging to the British bondholders. Great excitement prevailed in consequence, and the Liberals were concentrating on the capital.

Home News.

THE COURT.—The Queen, Prince Consort and the Royal family continue at Windsor Castle. On Friday morning the Queen, accompanied by Princess Alice and Prince Louis of Hesse, drove out in an open carriage and four. The Prince and Princess of Leiningen visited her Majesty from Frogmore, and took luncheon. In the evening the Queen and Prince Consort, accompanied by Prince Alfred, Princess Alice, and Prince Louis of Hesse, visited the Duchess of Kent at Frogmore. On Saturday morning the Queen, with Princess Alice, walked in the grounds of the Castle. The Duchess of Kent and Prince and Princess Leiningen visited her Majesty from Frogmore, and took luncheon. In the afternoon Count Apponyi had an audience, and delivered his credentials as Ambassador from the Emperor of Austria. Countess Apponyi was also presented to her Majesty. The Prince of Wales arrived from Oxford. The Right Hon. Sir C. Wood, the Right Hon. F. Peel, the Hon. H. G. Elliot, the Hon. Captain Denman, and the Rev. Philpott, Master of St. Catherine's College, Cambridge, arrived on a visit. On Sunday morning the Queen and Prince Consort, the Prince of Wales, Prince Alfred, Prince Arthur, Princesses Alice, Helena, and Louisa, and Prince Louis of Hesse, attended Divine service in the private Chapel. The Rev. Dr. Philpott preached the sermon. The Hon. Captain Denman left the Castle. On Monday morning the Queen and Prince Consort, accompanied by Prince Alfred, Princess Alice, and Prince Louis of Hesse, came to London and visited the Cattle Show. The Queen and Royal family afterwards visited the Empress of the French at Claridge's Hotel, and then returned to Windsor. The Prince of Wales returned to Oxford. The Duchess of Kent visited Her Majesty from Frogmore, and took luncheon. The Right Hon. F. Peel, the Hon. H. G. Elliot and the Rev. Dr. Philpott left the Castle. The Maharajah Dhuleep Singh and Colonel Oliphant arrived on a visit. On Tuesday morning the Queen and Prince Consort, accompanied by Prince Alfred, Princess Alice, and Prince Louis of Hesse, rode out on horseback. The Prince Consort, with Prince Alfred and Prince Louis, left her Majesty in the Park, and went out shooting. The Maharajah Dhuleep Singh, Colonel Oliphant, and the Right Hon. Sir C. Wood, left the Castle. On Wednesday morning the Queen and Prince Consort, accompanied by Prince Alfred, Princess Alice, and Prince Louis of Hesse, left Windsor for Oxford by a special train on the Great Western Railway. On arriving at Oxford her Majesty was met at the station by the Prince of Wales, and conducted to Frewin Hall. Shortly afterwards the Queen, attended by the Vice-Chancellor and the authorities of the University, visited the different colleges and other objects of interest, returning about 2 o'clock to luncheon at Frewin Hall. About 4 o'clock the Queen and Royal party left Oxford and arrived at Windsor about half-past 5. Lord Clarence Paget arrived on a visit. On Thursday morning the Queen, accompanied by Prince Alfred, Princess Alice, and Prince Louis of Hesse, rode out on horseback. Prince Louis of Hesse afterwards visited the cavalry barracks at Spital. The Prince Consort came to London, and presided at a meeting of the committee of the council of the Horticultural Society at South Kensington. The Duke and Duchess of Aumale visited the Queen and took luncheon.

THE PRINCESS ALICE is betrothed to his Grand Ducal Highness Prince Louis of Hesse, eldest son of Prince Charles, brother and heir presumptive to the Grand Duke of Hesse, who has no children. It is understood that the marriage will not take place until 1862, when the Princess will have attained her 19th year. The Prince will shortly resume his residence at Potsdam, where his regiment, the 1st Regiment of Prussian Foot Guards, is in garrison.

THE EMPRESS OF THE FRENCH left London on Wednesday evening on her return to Paris, having enjoyed a perfect freedom from intrusion since her arrival at Claridge's Hotel on Sunday week. Her Majesty, during her stay in town, devoted the greater part of each day to visiting the "lions" of the metropolis, including Westminster Abbey, the New Houses of Parliament, the Tower of London, the British Museum, the Cattle Show at the Baker Street Bazaar, and Madame Tussaud's exhibition of waxwork models. On Sunday the Empress attended Divine service in Farm Street Chapel, and afterwards lunched with the Duchess of Sutherland at Stafford House, where the French Ambassador and the Countess Flahault and Madlle. De Flahault, Earl Granville, Lord and Lady Palmerston, and Lady Victoria Ashley, and the Misses Lascelles had the honour of meeting her Majesty. On Monday the Queen and Prince Consort, accompanied by the Princess Alice, Prince Louis of Hesse, and Prince Arthur, paid a visit to the Empress to Claridge's Hotel. The Queen was met at the foot of the staircase by the Empress, and remained nearly an hour with her Imperial Majesty. On retiring, the Empress accompanied the Queen to the entrance hall, where their Majesties took cordial leave of each other. On Wednesday evening the Empress left Claridge's Hotel at 8 o'clock in a private carriage for the London Bridge Station of the South Eastern Railway. One of the directors of the Railway, with the general manager and superintendent were in attendance to receive the Empress, and conducted her Majesty to a reserved first-class compartment in the ordinary night mail train. The Empress was accompanied to the station by the Duke of Atholl. Her Majesty's presence was not known to the public on the platform until just before the departure of the mail, when a few persons approached the carriage in which the Empress sat, and as the train moved out of the station a loud burst of cheering bade her "God speed" on her journey homeward. Just before the train started the Empress spoke from the carriage window to Mr. Claridge, who had attended her Majesty to the station, and expressed her great satisfaction at the comfortable privacy she had enjoyed while in his hotel. The Empress slept on Wednesday night at the Pavilion Hotel at Folkestone, where a suite of apartments had been engaged for her reception, and embarked in the French Imperial steam corvette La Corse on Thursday morning for Boulogne. The Mayor of Folkestone and the corporation were in attendance, but her Majesty declined with thanks a guard of honour offered by the Folkestone Rifle Corps. Though the morning was wet, a great number of people assembled to witness the embarkation, and cheered continually until the vessel put to sea. The Empress appeared much pleased with her reception, and, although the deck was wet, she remained bowing to the public until the vessel had left the harbour. The Pelican tender, which had been in Dover harbour for some days, steamed round to Folkestone and followed La Corse to Boulogne. Her Majesty travelled by special train from Boulogne to Paris, and arrived at the Tuileries at half-past 6 in the evening.

ORDER OF THE GARTER.—The Queen will hold a Chapter of the Garter at Windsor on the 17th inst., when the Duke of Newcastle will be elected a knight of the order.

PARLIAMENTARY MOVEMENTS.—The Newcastle-on-Tyne election terminated on Friday in the return of Mr. Beaumont by a majority of 846 over Mr. Carstairs, the numbers being 2346 to 1500. The Southwark election terminated on Wednesday in the return of Mr. Layard by a majority of 1195 over Mr. Scovell, the numbers being 4572 to 3377. Mr. Fawcett had previously retired from the contest. There is a vacancy for Aberdeenshire caused by the death of the Earl of Aberdeen, and the consequent accession of Lord Haddo to the peerage.

DIPLOMATIC APPOINTMENTS.—The Queen has appointed Lord Napier, now Minister at the Hague, to be Ambassador at St. Petersburg; Sir John Fiennes Crampton, K.C.B., now Minister at St. Petersburg, to be Minister at Madrid; Sir Andrew Buchanan, K.C.B., now Minister at Madrid, to be Minister at the Hague; John Savile Lumley, Esq., late Secretary of Embassy at Constantinople, to be Secretary of Embassy at St. Petersburg; the Hon. E. M. Erskine, now Secretary of Legation at St. Petersburg, to be Secretary of Embassy at Constantinople; and the Hon. Julian Fane, now Secretary of Legation at Vienna, to be Secretary of Embassy at Vienna.

COLONIAL APPOINTMENT.—The Right Hon. Sir John Young, formerly Lord High Commissioner of the Ionian Islands, has been appointed to succeed Sir William Denison as Governor of New South Wales.

ORDER OF THE BATH.—The Queen has appointed Lord Lyons, her Majesty's Minister at Washington, and the Right Hon. Sir Edmund Head, Bart., Governor-General of Canada, to be Civil Knights Commanders of the Bath.

KNIGHTHOOD.—The Queen has directed letters patent to be passed under the Great Seal granting the dignity of a Knight of the United Kingdom, to Jean Edouard Remono, Esq., First Puisne Judge of the Supreme Court of the Mauritius, and Lieut.-Col. Andrew Scott Waugh, Bengal Engineers, Superintendent of the Trigonometrical Survey, and Surveyor-General of India.

LORD LIEUTENANCY.—The Queen has appointed David Robertson, Esq., M.P., of Ladykirk, to be Lieutenant and Sheriff Principal of Berwickshire, in the room of the late Earl of Lauderdale.

THE NAVY.—It is reported that Admiral Robinson will be the successor of Sir Baldwin Walker as Surveyor of the Navy. The Channel squadron was to sail from Lisbon for England on the 8th inst.

THE INDIAN COUNCIL.—The Secretary of State for India has made the following appointments in his Council for the ensuing year:—Vice-President, Sir James Weir Hogg; Chairmen of Committees—Finance, Mr. W. Arbuthnot; Military, Major-General Sir Robert Vivian, K.C.B.; Revenue, Mr. T. Prinsep; Judicial and Legislative, Sir T. Erskine Perry: Public Works, Colonel Sir Proby Cautley, K.C.B.; Railways, Mr. Eliot Macnaghten; Political, Mr. W. J. Eastwick; Public, Mr. J. P. Willoughby.

THE VOLUNTEER MOVEMENT.—The Metropolitan

Volunteer Light Cavalry having been sanctioned by the Crown, a crowded public meeting was held on Tuesday evening at Eccleston Hall, Pimlico, Lord Truro in the chair, at which it was resolved to form a committee of enrolment and finance for the Kensington district, comprising Brompton, Fulham, Hammersmith, and Chelsea.—The Secretary-at-War has sanctioned the formation of the Central London Rifle Corps (40th Middlesex) as a separate battalion of 800 men, divided into eight companies of 100 men. Major-General Sir James Yorke Scarlett, K.C.B., has accepted the honorary Colonelship.—The 39th Middlesex now numbers between 600 and 700 effectives, and recruits are joining daily. A cadet corps is in course of formation, and between 20 and 30 boys of about 12 years of age have already joined. A silver bugle subscribed for by the ladies of the district, and a set of colours will shortly be presented to the corps.—The East London (6th Tower Hamlets) mustered at their head-quarters on Sunday, and marched to West Hackney Church for Divine service. The total strength of the corps is now between 600 and 700.—The 4th Tower Hamlets had a concert on the 5th inst., at Myddleton Hall, Islington, in aid of the funds of the corps. Nearly 1000 persons were present, and the sum realised was upwards of 50*l*. The strength of the corps now amounts to four companies, consisting of about 250 men, and a fifth company is forming for the neighbourhood of Cambridge Heath and Victoria Park; a sixth company is forming for Finsbury, and it is proposed to form a seventh for Hoxton, and an eighth for Kingsland. In addition to these a cadet corps, consisting of boys from 9 to 16 years of age, is attached to the regiment.—The 32d Middlesex (Volunteer Guards) are enrolling a considerable number of new members for the ensuing year, numerous applications to join having been received, in consequence of a resolution that two new companies shall be formed of 5 feet 11 to 6 feet, and one of 5 feet 10 to 5 feet 11 inches.—The Civil Service and the 9th Surrey (Richmond) had a shooting match on Sheen Common, on Saturday, when the 9th Surrey obtained four points more than their opponents, the numbers being 109 to 105. The highest scores were made by Sergeant Plaskett, and Sergeant Mills, of the Civil Service; and Private Humphreys, and Colour-Sergeant Baty, of the 9th Surrey. The Civil Service sent one member from each company of the battalion. The return match will shortly be shot on Wimbledon Common.—The 29th North Middlesex mustered a few days since in the Regent's Park Barracks to distribute the prizes for the best shots in the 1st company. The first prize, a handsome silver tankard, was awarded to Private G. W. Stonham; the second, a Westley Richards rifle, to Private Tilley, and the third to Private Maryon.—The West Middlesex had a shooting match at Harrow on the 5th inst., when 11 out of the 12 competitors scored more than 7 points, the number which qualifies them at ranges of 650, 700, 800, and 900 yards, to be classed as marksmen.—The 1st Kent had a shooting match on the 6th inst., in Mote Park, the seat of the Earl of Romney, when the 1st prize was won by Sergeant Hadlow, the 2nd by Ensign Cutbush, and the 3d by Sergeant Laker.—On Monday afternoon the various corps constituting the 2nd Battalion of Surrey, were inspected in Richmond Park by Colonel Luard, Government Inspecting-officer. Between 300 and 400 men were assembled, including members of the Kingston, Richmond, Wimbledon, Esher, Chertsey, and Egham Corps.—The 2d Essex Artillery is to be in future known as the "North Thames Volunteer Artillery Corps." Two places for drill have been fixed upon, at Grays and Orsett, and the War-office will shortly sent down a competent instructor and two guns.—The 10th Essex rifles (Witham) were inspected on Monday by Captain-Adjutant de Crespigny.—A shooting match has taken place between 10 members of the Colchester corps for a Wilson's breach loading rifle, valued at 10 guineas, when the prize was won by Captain Bishop, commander of the corps. The return of the performances of the corps in platoon and skirmishing firing gives a total or figure of merit, of 38.58. The figures obtained by some of the troops stationed in the camp at Colchester were—9th Battalion, 35.22; best company 39.37. 10th Battalion, 38.36; best company 44.11. A second company is now forming in the town.—The 1st Oxfordshire had a shooting match on the 6th and 7th at Botting for a silver challenge cup given by the Prince of Wales. The firing on the first day was at 300 yards, and on the second at 500 and 600 yards. The prize was won by Private Lee Warner, scholar of Trinity.—The Oxford City Corps was inspected last week by Colonel Ibbetson.—The 2d Northamptonshire (Towcester) had a dinner on the 6th inst. at the National School-room, Towcester, at which an address was presented to Earl Pomfret, the captain of the corps.—The Lincoln corps have had a competition for a cup, at ranges of 400 and 500 yards, when the prize was won by Mr. Hughes.—At Norwich meetings for drill are now held once a fortnight.—The Swaffham Corps has obtained a shooting ground, with a range of 1100 yards, near the straight mile on the race-course, and a butt has been constructed with a view to practice in the spring.—The members of the Aylsham Company have just had a competition for prizes, the winners being Private Gay and Private Soame.—The Duke of Northumberland has placed Percy Square, North Shields, with two cottages, at the disposal of the 1st Northumberland, for purpose of drill. It is proposed to form a Cadet Corps, consisting of lads of from about 12 to 16 years of age, in connection with the regiment. The corps will be one of Foot Lancers, the lances being similar to those used by the cavalry, but only about 6 feet long.—Upwards of 100 able seamen have enrolled themselves as Naval Volunteers at Seaham, the whole of whom were entertained at a substantial supper on Friday evening in the large hall of the Literary Institute, which had been lent for the occasion by Lady Londonderry, who also contributed liberally to the treat.—The strength of the 3d West Riding (Bradford) Battalion now exceeds 500, and a seventh company is contemplated.—The 32d West York (Holmfirth) met on the 6th inst., and was presented with a silver bugle, purchased by subscription of the ladies of the district.—The 6th West Riding (Huddersfield) has been presented with a silver bugle, by Mrs. Beaumont, wife of the commandant, Mr. H. F. Beaumont, of Whiteley Hall.—The Wigan contest, which commenced on the 29th ult., and continued on the 1st inst., was concluded on Saturday. The 1st prize, a Westley Richards breech-loading rifle, presented by the Hon. Colonel Lindsay, M.P. to the best shot in the Wigan and Haigh Corps, was won by Private Leader of the Wigan Corps, and the 2nd, a gold rifle pencil-case, given by Lady Sarah Lindsay, was won by Capt. Thompson, of the Haigh Corps.—The ladies of Salisbury are raising a subscription for the purpose of presenting the 1st Wilts with a silver bugle.—The 9th Cornwall (St. Austell) had a shooting match at Pentewan on the 5th inst., when the best shots were made by Private Webb, Private Roberts, Corporal Martyn, Private Smith, and Sergeant Martin.—A mounted corps for the town of Cardiff will soon be equipped. Seventy gentlemen have put down their names, and it is expected that more will be obtained.—A mounted corps is also to be formed in Pembrokeshire, having Haverfordwest for its centre, the strength of which is to be from 80 to 100.

Foreign.

FRANCE.—The *Moniteur* of yesterday announces the return of the Empress to Paris, at half-past six on Thursday evening, and states that her Majesty's health is more satisfactory. The *Moniteur* of Saturday publishes another long circular, addressed by Count Persigny to the Prefects, explaining in what spirit he intends to use the discretionary power conferred upon him by the Press Law. The Count examines the English laws, and points out their severity for all attacks against the Crown and State, in the event of the Government thinking fit to put them in operation. He mentions the great liberty enjoyed by the English press of discussing all acts of the Government, and proceeds as follows:—

"If all parties and all writers, respecting the wish of the French people, only desire liberty of the press to maintain the prosperity of the State, they have liberty of the press in France as in England, and the *avertissement* law becomes a dead letter. Let abuses in society or Government be disclosed, let the acts of the Administration be discussed, and injustice be revealed; but should parties endeavour to overthrow the State and dynasty, the law will not permit discussion, and the system of warnings will then be enforced. I declare that, although disposed not to flinch before any responsibility in prohibiting attacks by the press against the State, on the other side I shall not consult any private considerations in the resolutions which I shall take to encourage the habit of free discussion in France."

The *Moniteur* of Tuesday publishes an Imperial decree cancelling the warning given to the journals up to that date. The report of Count de Persigny, which precedes this decree, contains the following:—

"A certain number of periodical publications have received two warnings, and are thus under the dread of suspension. By delivering them from this danger the Government will replace them in the position of independence which they have compromised, and this oblivion of the past will be a new pledge given to that generous policy which tends to the reconciliation and union of all the intelligent bodies of the State. I have requested the press to use a wide freedom of discussion; against those who should endeavour to make use of it to attack the State my conscience will only be the more free and my authority stronger, because your Majesty, by obliterating the past, offers to writers a more noble opportunity of showing their patriotism."

The *Moniteur* of Sunday publishes an Imperial decree, countersigned by Count Walewski, Minister of State, organizing the Government and superior administration of Algeria. It consists of 18 articles, the principal of which provide that the Government and superior administration of Algeria shall be centralized at Algiers, under the authority of a Governor-General, that the appointment of the Governor-General shall be countersigned by the Minister of State, and that the Governor-General shall render account to the Emperor direct of the political and administrative condition of the country. The Emperor left Paris on the 6th inst. for Rambouillet, where some grand hunting parties have since taken place. Prince Metternich was one of the Emperor's guests. The *Moniteur* and other journals continue to give copious extracts from the London papers regarding the visit of the Empress, whose enthusiastic reception by all classes of the British people has made the deepest impression upon the public mind. Mr. Cobden has left France for Algeria, and will probably address the Emperor from thence. The *Constitutionnel* says that there is no foundation for the news that the Marquis de Lavalette had insisted at Constantinople upon the prolongation of the French occupation of Syria. "Up to the present," it says, "the convention of the 4th of September has not given rise to any divergence of opinion between the representatives of the foreign Powers at Constantinople." The 500 men who had proceeded to Alexandria *en route* for China, and who were subsequently countermanded and had returned to Toulon, have again received orders to proceed forthwith to China *viâ* Suez. This is but an instalment of the force which France intends to send to that country. The *Moniteur* publishes a decree, fixing the duty on dry vegetables and their meals at 25c. per 100 kilos., whether imported into France by sea or land, in French or foreign vessels, until Sept. 30, 1861. The vessels also will be free from tonnage dues. It is stated that the Chambers of Commerce of Marseilles, Montpellier, Nismes, Narbonne, and Beziers have again sent pressing representations to the French Minister of Commerce on the scheme to come into force in this country on the 1st of January next of differential duties on wine by alcoholic tests. The President of the Association Viticole, of Burgundy, has also summoned the committee to meet him at Beaune, for a similar object; and at Perpignan equal hostility is said to exist, as their wines would be taxed 140 per cent. more than those of Bordeaux.—The murder of M. Poinsot, one of the Presidents of the Imperial Law Courts, briefly referred to in our last, has produced a most painful impression. M. Poinsot was travelling in a first-class carriage on the Strasburg Railroad, from Troyes to Paris. In the carriage there was but one passenger. On arriving at the station M. Poinsot was found lying quite dead, having been shot in the head and heart, and his skull having been fractured by some blunt instrument. The unknown passenger had been seen to jump from the carriage, near the station of Nogent-sur-Marne, and his footmarks appeared clearly on the side of the line and down the embankment, after which the trace was lost. He had robbed his victim of everything valuable about him. He has as yet baffled the police, but it is said that there is little doubt of his speedy apprehension. Another strange case occurred some months back on the same railway, which has some analogy to that of M. Poinsot—a Russian military surgeon having been found lying senseless on the line between Zillisheim and Illfurth, near Belfort. He had been previously robbed of a number of Russian banknotes and papers, which were found a few days since in the possession of a French soldier who had deserted. This man was locked up and chained, but he succeeded in removing his fetters, and after a desperate struggle with the turnkeys, succeeded in effecting his escape and has not since been found. Another singular coincidence is a statement in the Piedmontese journals that in a railway carriage on the line from Turin to Genoa, a man was found dead a few days ago, from a pistol shot, but whether fired by himself or by a murderer is not known. None of the passengers by the train had heard the report.

SPAIN.—The budget of expenses has been voted by the Cortes. General Narvaez has retired altogether into private life. Disastrous inundations have taken place in Grenada. Several buildings were overwhelmed at Santa Fe. The Badagez Asylum was swept away, and many children were killed and injured. The Spanish Government, in imitation of the great naval powers, has given orders for the construction of two large frigates, one of which is to be iron-plated. The report of the organisation of 13 battalions of Volunteers in Catalonia is denied by the official journals. The garrison of Tetuan will be replaced by troops from the Peninsula.

SWITZERLAND.—The elections to the Federal Council took place on Friday, when the former members were re-elected in consequence of the parties not being able to come to a compromise. M. Knüsel was then elected President and M. Stæmpfli Vice-President. Count Cavour has protested in the name of the Sardinian Government against the sequestration of the Church property in the Canton of Ticino belonging to the Bishopric of Como. He does not dispute the right of Switzerland to withdraw a part of its territory from the jurisdiction of a foreign bishopric, but he asserts that the federal authorities had no more right to seize the property of the Bishop of Como than they would have had to lay hands upon the property of any other subject of the King. He therefore demands that the sequestration of the property of the Bishopric of Como be raised, and its free administration rendered to the bishop. He concludes by saying that if, contrary to all expectations, the federal Government refuses to do justice to so reasonable a demand, the Government of the King in its turn will have to consider what further measures are just and necessary.

HOLLAND.—The King of Holland incurred some danger a few days back when going by special train from Amsterdam to Arnheim. On entering the station at the latter place, the engine-driver perceived a carriage standing across the line. Being so near that it was impossible to stop, he had the presence of mind to put on full steam, and dashed the obstacle to pieces without the slightest shock to his own train. Neither the King nor any of his suite suffered the least injury.

BELGIUM.—At a recent sitting of the Chamber of Representatives, the Ministerial proposition for granting 6000 fr. for the expense of the national rifle matches, was met by an amendment increasing the sum to 10,000 fr. on the ground that in the present state of Europe every encouragement should be given

to the formation of volunteer corps and to rifle matches. The Ministers said they were quite willing to leave the matter in the hands of the Chamber, and the amendment was unanimously adopted.

HANOVER.—England has accepted the proposal of Hanover, that the third million of thalers for the redemption of the Stade Dues be distributed among all States, except England and Hamburg, according to their maritime importance.

HESSE CASSEL.—The Second Chamber on Saturday adopted the proposals of the Committee on the subject of the Constitution by 37 to 7 votes. As soon as the decision was announced the Commissary of the Diet read a decree of the Elector dated that day, dissolving the Chamber, and providing for a general election and the meeting of the new assembly within six months. The deputies on leaving the Chamber were received by the people with loud cheers for the constitution of 1831. The First Chamber was also adjourned on Monday.

THE RHINE.—The representatives of the States on the banks of the Rhine assembled on Wednesday at Carlsruhe, for the purpose of signing a convention, by which the Rhine dues have been considerably diminished.

PRUSSIA.—M. Simons, the Minister of Justice, has retired from the Cabinet. His resignation is said to be connected with the revelations of the recent trial, which had already led to the dismissal of M. Schwark, the Public Prosecutor, and M. Stieber, the Director of Police. It was proved at that trial that the law of Prussia was constantly violated by M. Stieber and his subordinates; that from July, 1855, to February, 1856, a period of eight months, 387 illegal arrests and detentions had been made, the shortest being at least seven days; that men were kept in prison, and then set at liberty, without any charge being made against them; and that, on the other hand, persons undoubtedly guilty had been spared because of their interest with the police or its officers. It is said that the Government has commenced a State prosecution against 11 English gentlemen, residents of Bonn, who drew up a protest against the insulting speech delivered by the Procureur du Roi against English travellers at the recent trial of Captain Macdonald.

AUSTRIA.—The Austrian Ministry has been modified; Count Goluchowski has retired, and Baron Schmerling has been appointed to succeed him as Minister of State. The press of Vienna is unanimous in regarding this nomination as the pledge of important changes. Baron Schmerling, it appears, would not consent to accept office without submitting to the Emperor his political programme, and stipulating for its acceptance by his Majesty and the Ministers. The programme includes a revision of the Concordat and liberty of worship; abrogation of the provincial statutes; and a general constitution for all the empire, with the exception of Hungary and Venetia. Herr Plener has been appointed Minister of Finance. Count Emmerich Miko has been provisionally appointed President of the Stadtholdership of Transylvania; and Count Goluchowsky is to resume the post of Governor of Galicia, which he reserved to himself on entering the Cabinet. Judgment was delivered at Vienna on Thursday in the case of M. Richter. He was found guilty of the charge of having induced a public functionary to abuse his official power by corrupting General Eynatten. He was acquitted for want of proof on the charge referring to the bills of exchange, and was declared not guilty on all the other charges. The attorney for the Government recommended him to the favourable consideration of the Court.

HUNGARY.—The Congregation of the Comitat of Pesth was opened on Monday. Counts Carolyi and Nyari spoke in favour of the re-establishment of the laws of 1848. Pesth was splendidly illuminated on the occasion, and though agitation prevailed in the city, no disturbances have as yet taken place. Numerous bodies of troops, however, have been sent from Vienna and the other cities of the empire to Presburg, Raab, and Pesth. The German journals again assert that secret relations are entertained between the Hungarian refugees and the Government of the Danubian Principalities.

RUSSIA.—The Russian Mission in London having been raised to an Embassy, Baron Brunnow, now Minister at the Court of St. James's, has been appointed Ambassador to that Court. The Russian Government is taking measures to re-people the Crimea, and has already sent there many families from the Government of Koursk. The colonisation of the country on the Amoor is also advancing, 230 peasant families having been sent there last August from the Governments of Tambov, Orel, and Voronej.

POLAND.—On the 29th ult., the anniversary of the Polish revolution, a funeral service was performed in the Carmelite Church of Warsaw. Everything passed off quietly till the close, when the persons present commenced singing a hymn in favour of the deliverance of their country and against its oppressors. In the evening they illuminated the statue of the saint at the church door, in the presence of an immense crowd. The same hymn was then repeated, some persons kneeling to sing it. The crowd afterwards quietly dispersed, singing as they went a song of which the burden was 'Poland is not yet lost!' There was no interference on the part of the police.

ITALY.—Reactionary disturbances have taken place at Caserta, occasioned by Royalist agents and a portion of the inhabitants. These manifestations were followed by a serious counter manifestation. The whole Garibaldian army hastened to the spot to crush the movement. About 100 persons were arrested, and several ringleaders shot, but it is said that even this infliction of capital punishment has not arrested the reactionary movement. Numbers of the inhabitants have taken to flight. The city of Aversa has also risen in insurrection against the Garibaldians, who, however, remained masters. A reactionary movement has also taken place at Sora, but public order has been re-established in that city. The Cardinal Archbishop having arrived at Naples, manifestations against him took place before his palace. Some shouted "The Pope for ever!" and others "Garibaldi for ever!" A riot then ensued. The mob besieged the palace, and attempted to set it on fire. The disorder lasted 18 hours, and only terminated when the Archbishop appeared on the balcony holding the Italian tricoloured flag. An Englishman, formerly in the service of Garibaldi, has since been assassinated at Naples. King Victor Emmanuel arrived at Naples on Friday from Sicily, and will remain there until the end of December. During his stay his Majesty will hold reviews, visit the hospitals and public establishments, inspire confidence to the commercial interests by his presence, and execute the first reforms. On the King's return to Turin, Prince Humbert will proceed to Florence, and stay there several months, while Prince Eugène of Carignan will proceed to Naples. It is stated that the Italian army is to be divided into two great corps; one to be called the army of the South, the other that of the North; the former to be under the command of General Della Rocca, with its head-quarters at Naples; the other under General Cialdini, with its head-quarters at Milan; the reserve of both divisions to be under General La Marmora. It is, however, understood that Victor Emmanuel has designated General Cialdini for the occupation of Rome, in the event of the departure of the Pope. The effective force of the army is fixed at 300,000 men. It is rumoured that the Government is about to contract a loan on account of public works. Accounts from Gaeta state that England, France, and Russia have requested the King of Naples to cease his fruitless defence and have advised him to withdraw from Gaeta. If his Majesty refuses to follow this advice, the Emperor of the French is said to have intimated that he will feel himself liberated from his promise to keep open a retreat for him by sea, and the French fleet will quit Gaeta and leave the fortress to the attack of Admiral de Persano. The bombardment of Gaeta has recommenced. During the night of the 7th shells reached several buildings, and even the hospital. The Queen hurried from one battery to another, encouraging the soldiers. The King insisted on her withdrawing to the casemates. The fortress of Gaeta energetically returned the fire of the Sardinian batteries. King Francis II. is said to have concluded a loan at Vienna, but in the present state of the Austrian finances the statement is considered very improbable. Half the Neapolitan army who had taken refuge on the Roman territory have quitted the country. Most of them joined the insurrectionary bands in the Abruzzi. Many of their officers have joined the army of King Victor Emmanuel. Counts Trapani and Trani, the King's brothers, have arrived at Rome. Count Trani left again on the 9th for Gaeta, whither Count Trapani will also return shortly. The band of Volunteers commanded by Colonel Masi has invaded Ornano and evacuated Orvieto, which, it is said, will be occupied by the French. The Pope is dissatisfied with the conduct of several Bishops of Umbria. The Papal party in Rome is much discouraged. Monsignor de Merode is occupied with the formation of a new army, the enlistments for which are actively carried on. The Marquis Pepoli, as the Commissioner of the King of Sardinia, has issued a decree suppressing all the religious orders in Umbria, with the exception of some which have deserved well of the country. The same decree intrusts the Government with the charge of the religious treasury. The convents of Umbria have been closed, with the exception of several establishments to be converted into hospitals and schools. Pensions have been granted to the members of the religious orders which have been suppressed. Rentes to the amount of 100,000 lire have been assigned in favour of some charitable institutions of Umbria; the surplus remaining in the religious treasury will be applied to religious works and public instruction. Sixteen Bishops of the Marches, five of whom are Cardinals, have protested against the presence and the measures of the Sardinian Commissary in those provinces. Accounts from Turin state that the Sardinian Government has determined on creating a large fleet, and that great activity prevails in the naval ports. A maritime postal service on a grand scale is about to be established. Letters from Genoa of the 5th report that several of Garibaldi's generals had been to visit him, and that he declared his approval of the measures they had taken with a view to events in the ensuing spring, and stated that he will be at the head of his companions in arms by the 1st of March, to combat again for Italian independence. The *Nationalités* of Turin publishes the following proclamation:—

"Italy and Victor Emmanuel!—The Italians must not on any account abandon this programme. Victor Emmanuel is the only indispensable man in Italy, around whom all the men of our peninsula must rally. I do not care whether the Minister's name be Cavour or Cattaneo (the latter is preferable); but what I care for, and what all Italians must inexorably demand, is that on the 5th March, 1861, Victor Emmanuel be at the head of 500,000 soldiers.

"November 28." "GARIBALDI."

SICILY.—The following have been appointed Councillors of Lieutenancy for Sicily:—La Farina, Director of the Interior; Cordova, Director of Finance; Scalia, Director of Public Works; Pisani, Director of Public Instruction. The Lieutenancy Council has officially demanded the maintenance of distinct laws for Sicily until the assembling of the Italian Parliament. The Sardinians will await the fall of Gaeta before summoning the citadel of Messina to surrender, to which, in case of refusal, they will lay siege.

TURKEY.—The French papers contradict the report that the Marquis de Lavalette had insisted on the extension of the French occupation of Syria, and that the Porte had refused to accede to this demand. Fuad Pasha will remain in Syria during the winter. M. Mirés, the contractor for the New Turkish Loan, has published an account of the financial position of Turkey, from which it appears that the entire Turkish National Debt does not exceed 31,000,000*l.*, that the Turks import foreign merchandise to the amount of 9,000,000*l.*, that Constantinople is the third commercial city in Europe, coming after London and Liverpool, and immediately before Marseilles, and that in Turkey the average annual taxation is 8*s.* a head, while in England it amounts to 2*l.* 4*s*, and in Austria to 1*l.* 4*s.*

THE PRINCIPALITIES.—Great agitation still prevails in Wallachia and Moldavia. At Jassy both the Metropolitan and the Minister of the Interior have been arrested and imprisoned in a convent. The Porte has stopped a Sardinian vessel from Genoa, loaded with arms and ammunition for the Principalities, and having false papers. The Porte has protested against this fraud, and the violation of treaties which it constitutes.

INDIA.—The Overland Mail has arrived with news from Bombay to November 16, and from Calcutta to November 8. The following are the details:—

Calcutta.—The Government Committee has recommended the Bombay tariff for all India.

Bombay.—The combination against the income-tax continues to be maintained in Bombay.

Dinapore.—The 5th Europeans have again mutinied at Dinapore, and have been disbanded. One man was shot. The men concerned in the former mutiny had previously been tried by a court-martial, and sentenced to penal servitude for life. Sergeant-Major Macniminie of the Bengal Artillery, who turned out his men to suppress the mutiny, has been made an ensign, unattached; the quartermaster-sergeant who seconded his efforts has been promoted to the rank of conductor; while in a general order Sir Hugh Rose has given a solemn warning to the army that should there be any renewed attempt at mutiny he will consider it his duty to vindicate discipline by representing to military tribunals the necessity of visiting the crime with the extreme penalty of the law. This order, and the rewards bestowed upon the two sergeants, had produced an immense effect all over India.

CHINA.—The China mail has arrived with news from Pekin to October 20. A telegraphic despatch had previously been received giving the heads of the news as follows:—

"Pekin surrendered to the Allies this day, yielding to all demands. Parkes, Loch, and L'Escayrac were released on the 8th inst. Mr. De Norman and Captain Anderson have died from the effects of brutal treatment. Thirteen soldiers have also been released. There is little hope of the return of Capt. Brabazon, Mr. Bowlby, or the French officers missing. The Emperor and the Tartar army have fled into Tartary, and none of the enemy are to be seen at Pekin. The Emperor's Summer Palace was taken and looted on the 6th of October. The quantity of spoil was enormous. The Pekin gates have been given up to the troops, who are all healthy, and encamped on the wall. The allied army will winter at Pekin and Tientsin. Lord Elgin and Baron Gros are at Pekin. Indemnity ready when demanded. All is quiet at Shanghai. A new and distinct rebellion is reported in the province of Shensi. It is said to be headed by influential people. Little is known of the Taiping rebellion."

The following detailed account is from the *China Mail*:—

"The intelligence from the seat of war is of the highest importance. Two of the gates of Pekin are in our hands. Mr. Harry Parkes and Mr. Loch have been safely returned to us by the Chinese. The army of San-ko-lin-sin is still in the field. The Emperor has fled to Tartary. Pekin has submitted to us. The wintering of the whole force either there or at Tien-tsin is now resolved on. In our last Overland we mentioned that the Allied army was in a hostile attitude, seven or eight miles from Pekin, waiting for the siege guns, and demanding the release of the captives who had been taken. There does not seem to have been any change in the position of matters from the 22d September till the 3d October, when an advance was made in search of the Tartar army, which only resulted in a few pickets of the enemy being seen and driven back. On the 6th a further advance resulted in an earthwork near Pekin, where no defence was made, being taken by our troops; and the Yuen-ming-yuen, or summer palace of the Emperor, was taken, and completely looted, affording immense spoil. The chief share of that plunder appears to have fallen to the French, who had the first ransacking of the rich ornaments, jewels and clocks, and watches, the rich robes and embroidered silks of the Son of Heaven; but a quantity of the treasure which was taken is to be divided between both French and English. Some privates are said to have sold their shares for about 30,000 francs. The entire British share, including both treasure and private loot, is estimated at about 90,000 dollars. Letters were found in the palace from San-ko-lin-sin to the Emperor, assuring him of his confidence in being able to annihilate us by the arrangements he had made on the road at Chan-kia-wan, where the battle of the 18th September was fought. He begged the Emperor to have no apprehensions as to the results; that having ascertained how few our numbers were, he was confident he could surround and destroy us. In one of the rare rooms of the state bedroom the treaty of Tien-tsin in English and Chinese, signed by Lord Elgin, was found. It had been thrown on the ground by some one, and lay in the heap of broken articles, till the English paper attracted the eye of the person who discovered it. Next day in reply to a demand for the release of the prisoners, Messrs. Parkes and Loch were given up, together with a French officer and seven or eight prisoners. On the 12th everything was re-

pared for the first great event of the war—the assault or the occupation of Pekin, the unviolated capital of China. The siege guns and their battery were in a position to bombard the town, which should be surrendered by noon of the 13th; and a general order was issued by Sir Hope Grant, for the disposition and control of the forces under his command. Just immediately before the period given for surrender would expire, Hang-chun came out and said that our demands were accepted, no resistance would be made, and the gate was at our disposal. Between the outer and inner gates were immediately took possession of, and a portion of the Allied Force was stationed on the wall of Pekin. The Commissariat, even in its most trifling details, is unexceptionable, and as a consequence, the general health of the troops has, all along been excellent. The Earl of Elgin and Baron Gros are at the military headquarters; but as Mr. Bruce has been sent for, it is possible that his Lordship does not propose to spend the winter in the North. Mr. Bruce, however, was sent for before, after the occupation of Tientsin. Count Ignatieff, the Russian Minister, followed the Allies to Tientsin, where we believe he is still. Mr. Ward, the American Minister, came down here, the other day, on his way home. There have been rumours published at Shanghae of the outbreak of a new rebellion—no way connected with that of the Taipings—in the province of Shensi, which lies to the west of that where Pekin is. This, if true, would be of great importance, as placing the Emperor in a worse position than ever. Of the Tai-ping rebels we hear little at present. They are reported to have appeared before Hang-chow lately, but to have moved off on finding it well garrisoned. From Ningpo we learn that the insurgent movement in the neighbourhood of Shanghae has considerably increased the tea and silk trade at the former port. Should the approaches to Shanghae be blocked up by the same cause for any length of time, that may possibly be the means of diverting a considerable amount of the trade of that port to Ningpo, particularly as both the tea and silk districts are nearer to Ningpo than to Shanghae, and there is direct inland communication with the former. At Swatow a local difficulty is causing trouble. The gunboat Weasel proceeded to bombard a village, alleged to be connected with some acts of robbery committed on the property of foreigners resident at Swatow. After the firing had been kept up for about two hours, the master of the gunboat landed, to see how matters were getting on, and fell into the hands of the enraged villagers. These latter treated the captives well, but declared that if any further proceedings were taken they would put them to death. Lao, the Governor-General of Kwangtung, has been appealed to in their favour and has sent up a proclamation requiring their release."

The following account of the treatment of the prisoners is given by the *North China Herald*:—

"In the evening of October 5 a communication was made to the authorities, demanding the release of the prisoners. A promise was given that those who were in the capital should be released next day. The surrender of the gate was also demanded, with an intimation that it would otherwise be taken. The first has happily been complied with, so far that we had the pleasure yesterday of welcoming the return of Messrs. Parkes and Loch, with a French officer attached to the Société Scientifique, and six or eight French, and privates of the Sikh cavalry. They were, whilst with Sanko-lin-sin's army, treated in a most cruel manner; forced to kneel before every mandarin, however petty, their faces rubbed in the dust; they were bound with their hands behind them, and carried on horses to Tungchow, and thence, in the same state, in one of the carts of the country to Pekin, when they were placed in dungeons, and remained so until 10 days ago. Mr. Parkes was beaten when he did not instantly reply to a question, and Mr. Loch because he could not speak Chinese. Within the last week these atrocities have been discontinued, and they have met with some consideration. It appears that when the party was returning from Tung-chow, where Mr. Parkes went to remonstrate against the Tartars encamping on the ground appropriated to the British army, they arrived at Chang-kia-wan, where the battle of the 18th was fought, and seeing preparations for an attack, they consulted together whether to charge through them, or to apply to San-ko-lin sin, who was a short distance behind, for a pass. They resolved on the latter course. He received them with insult and abuse, and made prisoners of them. They do not know where the rest of the captives are, but suppose them to be with San-ko-lin-sin's army, whether in or out of Pekin is not known. On the evening of the 12th October, nine sowars of the Sikh cavalry were released, and came into camp. They brought the distressing news that Captain Anderson and Mr. de Normann died from the effects of the brutal treatment received from the Tartars, the former on the 8th, the latter on the 11th day after they were captured. The wounds caused by the cords binding their wrists, insufficient food, and other inhuman tortures, had caused their death. One of these Sikhs, a sergeant, was bound with them. He survived, and has made a deposition of the facts. They are all suffering much, and it will be long before they can return to duty. They were brought from a town some 50 or 40 miles off, to which they were conveyed soon after ther capture. No information has been obtained about the two other Europeans Captain Brabazon and Mr. Bowlby, *Times* special correspondent."

BATAVIA.—The state of affairs at Banjermassing is said to be improving.

AUSTRALIA.—Mr. Stuart and his companions have been driven back by the natives, after having penetrated as far as lat. 19° and long. 134°. The country was found to be rich and fruitful.

NEW ZEALAND.—Accounts from New Zealand to the 12th of October state that the news of the rebels is still unsatisfactory. General Pratt has returned to Taranaki to protect that place from the anticipated attack by the Waikatos. The Waikatos were not then expected for a week. Captain Pasley, R. E., was reported wounded in the leg at Kaihihi on the 11th Oct.

UNITED STATES.—The Washington correspondent of the *New York Times* states that the fears of a secession of Southern States were subsiding. Many Southern members of Congress had arrived in the capital with their families. The *New York Herald* on the other hand says that the feeling for secession in the South continued unabated. Governor Gist, of South Carolina, had issued a proclamation, declaring the purpose of the State to secede alone if not supported by other States. He does not doubt, however, that Georgia, Alabama, Mississippi, Florida, Texas, and Arkansas will immediately follow South Carolina, and all the Southern States eventually. If a resort to arms is necessary, the service of Volunteers from every part of the South has, he says, been tendered. A telegram from Columbia says that the Governor's message was laid before the Legislature on the 26th November. He recommends the arming of the State, and to make the circulation of abolition or other documents tending to incite the slaves, treason punishable with death; also to encourage direct European trade, the State to assume any losses accruing. Judge Black, the Attorney-General, having been called upon by President Buchanan to advise the Government on the questions of law arising out of apprehended difficulties between the North and South, is said to have given his opinion that a State has not the constitutional right to secede. The accounts of extensive depredations on the Kansas border by a band under the command of Montgomery turn out to be much exaggerated. General Harney, with a body of Dragoons, was in pursuit of the band. Passports had been sent to the Peruvian Minister at Washington, diplomatic relations between the two Republics being at an end.

MEXICO.—Advices from Vera Cruz to the 21st ult. state that Miramon had broken the seals of the British Legation and taken therefrom the English funds, amounting in all to a million of dollars belonging to the British bondholders. Great excitement prevailed in consequence. The Spanish Ambassador has protested in the name of the Diplomatic Corps against this act of violence in a threatening tone, and the native Mexican and foreign population of the city have alike expressed their profound indignation at the act. The Liberals were concentrating on the capital, and had been successful in several engagements. Miramon was still at Mexico, in command of 9000 men, and intended to attempt the defence of the city against the Liberals.

CENTRAL AMERICA.—The United States sloop-of-war Brooklyn had arrived at Norfolk, having on board the commission sent by the government to Chiriqui, to ascertain the possibility of establishing another transit across the Isthmus of Panama. The expedition endured great hardships, but was entirely successful in its objects. The harbours on both sides were found to be all that could be desired, and coal of a superior quality and in apparently inexhaustible quantities was found at the Chiriqui lagoon. A practicable pass through the Cordilleras was discovered by Lieut. Morton.

WEST INDIES.—A ministerial crisis has occurred in the Legislative Council at Jamaica. The Executive Committee differed in opinion with Governor Darling on the subject of responsible government in the island. This difference brought about a crisis, and office was only held until the Governor had appointed gentlemen whose opinions coincided with his own. In the Council the views of his Excellency were strongly repudiated by the Hon. Mr. Vickars. Up to the sailing of the packet 10 days had elapsed without the Governor being able to form a new ministry. The Revival movement continued to spread in the various districts of the island. Yellow fever had almost entirely abated.

Public Addresses.

THE DUKE OF NEWCASTLE, at the dinner in honour of his recent installation as Provincial Grand Master of Nottingham, made the following remarks on his late visit to the United States:—

"It had been the lot of the Prince of Wales at the age of 19 to render to his country a very great and essential service. Many a man born of a royal family had descended into the grave rendering to his fellow-men much less good service than had been rendered by this young prince. Whatever might be the destiny which Providence had reserved for him, it was a proud thing that he could reflect on this voyage across the Atlantic. He believed that nothing so much as that journey could have cemented the good feelings—he said cemented because he was convinced that they were previously entertained—which exist between the two countries on the opposite sides of the Atlantic. But not only was it desirable that the existence of those good feelings should be known; it was singularly fortunate that they had already been placed on record and propagated by the press. The feeling between the two countries just now was one of peace and goodwill, and woe be to us when the day should come that that peace was broken up. He would not say that that peace was likely to be broken up, but he would say that it was less likely—that the likelihood of such an event had been greatly postponed by that which had taken place. This he could say of this extraordinary visit, that they witnessed in New York and in every other important city in the United States an amount of enthusiasm which was perfectly extraordinary, from the moment at which they entered Detroit till their departure from Portland. With one solitary exception they met with nothing but enthusiasm, and, in fact, he believed that this visit of the Prince of Wales to America had done more to cement the good feeling between the two countries than could possibly have been effected by a quarter of a century of diplomacy. The two great peoples on either side of the Atlantic had disclosed those feelings of fraternity which they entertained towards each other. There was not, of course, the same loyalty because there was not the call for it in a country which was not subordinated to the Crown of England, but there was an amount of respect, of attachment, of veneration, and of love for the Queen of this country, which far transcended anything that could possibly have been expected. It was a tribute on the part of the American people, a demonstration of their veneration for female excellence; and a proof of their deep and lasting attachment to the mother country. He had no hesitation in saying that the feeling towards the Queen of Great Britain in the United States could not be designated by any other word that he knew of but a passion. He had the gratification of seeing a brother present who came from America. He should say nothing in his presence which he would not say even more strongly in his absence, when he stated that the impression made upon his mind by that journey was one which time could not efface, especially in reference to the powerful influence which the excellent Queen of this country exercised over other nations, and more especially over those with whom we had a common origin."

MR. DISRAELI attended a meeting of the clergy and laity of the rural deanery of Amersham, held at Prestwood, on the 4th inst., and spoke as follows on the present aspect of the Church-rate question:—

"In this practical country great issues were generally tried on collateral points, and now it was generally announced and accepted that the discussion of the question of Church-rates involved that of a National Church. It was, therefore, of the last importance that Churchmen should not make a mistake in this matter. He would view the question now only secularly, and, even in that limited sense, he shrank from realising what would be the consequences to the country of the termination of the connection between Church and State. The political and social relations of the National Church to England must be considered. As for the political, the termination of the alliance must break up our parochial constitution. Our political constitution was built on our parochial constitution. The parish was one of the strongest securities for local government; and on local government political liberty mainly depended. As for the social relations of the Church with the community, they were so comprehensive and so complicated, so vast and various, that the most farseeing could not calculate the consequences of the projected change. It was not merely the education of the people that was concerned; it was even their physical condition. He would almost say, that if, by some convulsion of nature, some important district of the country, one on which the food and industry of the community mainly depended, were suddenly swept from our surface, the change would not be greater than would arise by the withdrawal of the influence of the Church from our society. The fact was, the Church of England was a part of England—a point of view not sufficiently contemplated by those who speculated on changes in its character and position. It might be asked how it happened that, when so much was at stake, the movement for abolition of church-rates had been so active and progressive of late years. He attributed it to the want of union and organisation among Churchmen. When Churchmen were united, the Church was never endangered. This was shown in the years that elapsed from 1831 to 1841. During that period England was in a state of semi-revolution, Ireland of semi rebellion; the Church of England was the chosen arena for the fierce struggle of parties, and Governments absolutely were formed on the principle of appropriating its property to secular purposes. But the Church baffled all these attempts, because Churchmen were united and organised. Why were they not united and organised now? There had been no union and organization among churchmen since 1841. He would state what he deemed to be the causes of this condition. He had been asked to speak frankly; he would do so without reserve. He attributed this want of union and organization to two causes—first, to the disruption of political parties; secondly, to disputes among the clergy themselves. Now the question arose, suppose churchmen were again united and organised, as he hoped they might be, on what course should they agree with regard to church-rates? They could not conceal from themselves that on this subject there were two opinions among their friends. Some were for compromise. What did compromise mean? Did it mean improvement? If so, he was for compromise. It might be expedient that the church-rate, levied in a district, should be applied to the church of that district; that when the rate was levied, the purposes to which it should be applied should be more precisely defined; that the means of obtaining the rate, when voted, should be more prompt and effective; that there should be no particular charge called church-rate, but a general parochial rate, from which the necessary expenses for the fabric and service of the church should be deducted by the wardens, under certain limitations. All these might be improvements, but all these were mere matters of detail; and what was the use of attempting to legislate on matters of detail, when the principle was not only contested, but even rejected in a branch of the legislature? But some of their friends would go further than this. They would exempt the dissenter from the charge. That was not compromise; that was surrender; it was acknowledging that the Church of England was no longer a national church. But it was conceding more even than that. There was a public charge, of which all the circumstances were of a popular character. It was ancient; it was for a general, not to say a common purpose; it was levied by public vote. If in a country where the majority decide everything the minority were, on the ground of conscientious scruple, to be exempted from a public payment, on what principle could society be held together? Landowners might have a conscientious scruple against paying the public creditor; peace societies might have a conscientious scruple against paying war taxes. What the dissenter demanded was, in fact, an oligarchical privilege, and the principle, if conceded and pursued, might lead to general confusion. But there was one more objection urged by their friends against levying the church rate; that it was impracticable. Was it impracticable? In the vast majority of parishes it was raised with facility. But then it was urged that the parishes which refuse were the parishes of the large towns, and that their aggregate population was scarcely inferior to that vast majority of parishes in which it was raised. But this immense population were not dissenters; they were not the votaries of rival creeds and establishments—they were ignorant, or indifferent, or more unfortunate. Were we, then, to maintain that the church was to retire from the duty of contending with this unsympathising or unbelieving mass? The greatest triumphs of the church had been accomplished in great towns. If the influence of the church was limited in great towns, it was not because its means were ineffective, but because they were insufficient. When they considered the nature of the religious principle, he would be a bold man who would maintain that in their teeming seats of industry there might not be destined for the church a triumphant future. Who could foresee the history of the next quarter of a century? It would not probably be as tranquil as the last. What if it were a period of great religious confusion and excitement? The country would cling to a church which combined toleration with orthodoxy, and united divine instruction with human sympathies. Is it wise, then, publicly to announce by legislation that the Church of England relinquishes the character of a national church? On those grounds he could not recommend the present meeting to sanction the principle of exemption. He felt deeply the responsibility of giving such advice; he knew he was opposing the recommendation of the committee of the House of Lords in 1859, and of what was then, at least, the unanimous opinion of the bench of bishops. He need not say that for the House of Lords he felt a profound respect. In maturity of judgment and in calmness of inquiry he thought the labours of the great committees of the Lords were superior to those of the Commons, in acuteness of investigation they were not inferior; but in the interpretation of public opinion, he thought—and it was, perhaps, in the necessity of things—that the Commons had the advantage. He thought that the Lords' Committee had been precipitate in their course in the matter of church-rates; he thought that they had mistaken public humour for public opinion. He was sustained in the difficult and painful course he was taking by the recollection of what occurred in the spring and at the last meeting of the clergy and laity of this deanery. Then the second reading of Sir John Trelawny's Bill had been carried by a much reduced majority, and the advocates of what is fallaciously styled compromise were strongly in favour of what they called seizing the opportunity for a settlement. He was of a different opinion. He

did not think that the advantage which the church had then obtained was only a happy casualty. He thought it was the break of dawn. He did his utmost to dissuade his friends from relinquishing the contest, and ultimately, on his sole responsibility, opposed the third reading of Sir John Trelawny's Bill. The whole country was agitated on that occasion by the opponents of the church to regain the lost ground. Instead of that, the majority against church-rates, which had sat like an incubus on the church for 20 years, virtually disappeared. They owed to that division their present commanding position. It was in their power, if they chose it, to close this controversy for ever, not by a feeble concession, but by a bold assertion of public right. They sent 5000 petitions in favour of that public right to the House of Commons last session. Let them send this year 15,000. Every parish should have its petition. They must not be merely signed by the incumbent and the churchwardens, as they were in some instances, or by ratepayers merely, as in many cases, but by as many persons as they could obtain. It was the cause of all. There was no greater mistake than to suppose petitions produced little effect on the House of Commons. They produced great effect. The number of petitions, the number and nature of their signatures, the classes from which they proceed, are all weighed and canvassed. There is a report every week sent by a select committee to every member of Parliament on these heads. The clergy never extensively move in this manner without exercising great authority. They could not petition too much. They should not wait for the attack. They should send in their petitions as soon as Parliament meets, on a broad issue, in favour of maintaining the union between Church and State, and, incidentally, in favour of Church-rates. They should also encourage and establish church unions in every part of England. They should habituate the laity to act with the clergy in all matters of public moment to the Church. There was a third course also to take, and here he particularly would address himself to his clerical friends. The laity, through that excellent body, the 'Committee of Laymen,' had done their duty in that respect. He had always discouraged the clergy from entering into mere party politics; but now he told them frankly that if they wanted to succeed, they must bring their influence to bear on members of the House of Commons. The question of church-rates had, fortunately, not yet fallen into the catalogue of party politics. More than one member of the present cabinet recorded at least his vote in their favour. The clergy must make members of parliament understand that, though this was not a party, it was a political question, and a political question on which, in their minds, there ought not to be, and there could not be, any mistake. He could assure them, from his own knowledge, that there were many members of parliament who, on this question, gave careless votes, and thought by so doing they were giving some vague liberal satisfaction without preparing any future inconvenience for themselves. Let their clerical friends, whig or tory, conservative or liberal, make these gentlemen understand that, in their opinion, in the union of church and state depend, in a large measure, the happiness, the greatness, and the liberty of England."

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 92⅝ to ¾ for Account; Three per Cents. Reduced, 92⅞ to ¼; New Three per Cents., 92¼; India Four per Cent. Debentures, 1858, 96½; Ditto 1859, 96½; Ditto Bonds, 98. 6d.; Ditto Five per Cent. Stock, for Acct., 101½, ex div.; *Five and a Half per Cent. Enfaced* Rupee Paper, 101 to ⅝; Exchequer Bills, 2*s.* dis. —FOREIGN: Brazilian Four and a Half per Cents., 1860, 87 to 86⅞; Mexican Three per Cents., for Acct., 21⅛; Peruvian Four and a Half per Cent. Dollar Bonds, 80; Portuguese Three per Cents., 1853, 46⅞; Russian Four and a Half per Cents., 91½; Turkish Six per Cents, 1854, for Acct., 72½; Ditto 1858, 58¼ to 57¾; Ditto for Acct., 58; Ditto 100*l.* Bonds, 59 to 60; Ditto Guaranteed Four per Cents., 102½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,119,415	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	11,768,482
		Silver Bullion	875,933
	£27,119,415		£27,119,415

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£9,540,273
Rest	3,177,771	Other Securities	19,987,188
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,029,111	Notes	7,197,475
Other Deposits..	12,101,219	Gold and Silver Coin ..	802,690
Seven day and other bills	663 525		
	£37,527,626		£37,527,626

13th day of Dec., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY — BANKRUPTS — H. A. BROOME, Crown and Cushion, 9, Russell Street, Covent Garden, Licensed Victualler—R. H. CLOUGH, Manchester, Cotton and Waste Dealer—J. R. S. HAYWARD, Lolway, Somersetshire, Apothecary—H. R. KNIGHTS, 94, Bermondsey Street, Surrey, Currier—E. W. LENNARD, Redcar, Yorkshire, Grocer and Baker—E. MANSFIELD, Chesterton, Cambridgeshire, Boatwright, Timber Dealer, and Publican—J. W. MARTIN, Moor Farm, Yalding, Kent, Farmer, and Dealer in Wood and Hop Poles—J. SCOTT, junior, and R. W. POWELL, Liverpool, Tea Merchants—C. STATES, Aldershot, Southampton, Club House Keeper and Victualler—C. STEAD, Hudderfield, Yorkshire, Flock and Cotton Waste Dealer—E. TAYLOR, Wimbourne, Dorsetshire, Butcher—F. TILLETT, 71, Banner Street, St. Luke's, Spiral Flambeaux Scaleboard and Splint Manufacturer—J. B. WHITAKER, 13 and 14, Little Britain, City, Card and Pasteboard Maker.

BANKRUPTCIES ANNULLED — J. LINLEY, Sheffield, Yorkshire, Manufacturer of Sheep Shears, Edge Tools, and Table Knives—K. M'LIVER, Stonehouse, Devonshire, Draper.

SCOTCH SEQUESTRATIONS — G. BANKS, Edinburgh, Boot and Shoe Manufacturer—R. JONES, Linlithgow, Merchant—A. KEIR, Noss, near Wick, Caithness, Farmer—G. RINTOUL, jun., Glasgow, Manufacturer and Commission Merchant—Mrs. M. SUTHERLAND, Parks of Inshes, near Inverness, Farmer—H. WALLACE and Co, Caiton, Glasgow, Boot and Shoemakers.

FRIDAY — BANKRUPTS—J. BARTLE, Lenton, Nottinghamshire, Lace Manufacturer—V. P. BILLIET, King Street, Cheapside, City, Importer of French Clocks—G. BOWDITCH, Taunton, Nurseryman C. BRIDGER, Haslemere, Surrey, Builder—J. COLEY, Tipton, Staffordshire, Ironmonger—A. FOSTER, Bradford, Woolstapler—J. HALL, Purfleet Wharf, Camden Town, Wharfinger—H. R. KNIGHTS, Bermondsey Street, Surrey, Currier—R. MACK, Cork Street, Camberwell, Extractor of Wool from Rags—J. C. MOORSOM and R. T. MORROW, Liverpool, Ship Brokers—W. ROE, Calverton, Notts, Grocer—H. SAUNDERS, Brighton, Cabinet Maker—M. SOMERVILLE, Liverpool, Joiner—J. STANNARD, Newport, Isle of Wight, Trader—O. STURGIS Upper Belsize Terrace, Hampstead, Builder—J. WHITE, Chiddingstone, Kent, Miller—J. WOOD, Birkenhead, Licensed Victualler.

SCOTCH SEQUESTRATIONS—P. M. KENNEDY, Glasgow, Merchant—J. LECKIE, Bellshill, Lanarkshire, Slater—D. S. MACKAY, Glasgow, Merchant—J. MEIGHAN, Glasgow, Flesher—J. NELSON, Lanark, Grocer—J. RAE, Dunse, Berwickshire, Boot and Shoemaker — W. W. SWINDEN, Glasgow, Commission Merchant.

Metropolis and its Vicinity.

THE EAST INDIA MUSEUM.—It has been decided that the extensive museum of the old East India House, in Leadenhall Street, shall be removed to Fife House, in Middle Scotland Yard, at Christmas, when Viscountess Milton, who is at present occupying the mansion, will give up possession. The numerous pictures which have been accumulating since the earliest days of the history of the East India Company will be displayed to great advantage in one large room in this mansion. They include two life-size paintings of the present Emperor and Empress of the French, presented by his Majesty to the Court of Directors, as a mark of his respect for the liberal manner in which they contributed to the Paris Exhibition, the finest life-size portrait of the first Emperor in his coronation robes, and an immense number of portraits of English admirals, judges, merchants, and Indian rajahs and emperors. The jewels and works in precious metals, which formed so striking a part of the old museum, will also be better displayed than formerly. The library of the India House has already been removed to Cannon Row; the council, officers, and *employés* of the Government are located at the new hotel in Victoria Street, and it is contemplated to provide commodious premises on the Surrey side of the river for the reception of the stores, which have hitherto been kept at a separate building in Leadenhall Street. The old India House will, immediately on the removal of the museum, be advertised for sale. The building and its contents are now placed under the custody of the metropolitan police, and the interior presents a deserted and most abject appearance.

PROPOSED LEGISLATION ON DRAINAGE.—A public meeting was held on Wednesday at the Hanover Square Rooms, to consider the steps to be taken to secure legislative facilities for the improvement of outfalls and arterial drainage generally throughout the kingdom. The Earl of Romney presided, and there was a considerable attendance of landowners and agriculturists, among whom were Sir J. V. Shelley, M.P., Sir John Tyrrell, Sir H. Vavasour, Mr. Skelton, Mr. Fisher Hobbs, Mr. Robert Smith, Mr. H. Corbett, &c. The Chairman explained that the object of the meeting was to consider what steps ought to be taken to promote an improved system of sewerage and drainage throughout the kingdom. He strongly objected to the system upon which the landowners were called upon to maintain the drainage and sewerage of the land. He believed that the principle of taxing land for the purposes of sewerage was very old, though at the present time it only existed in comparatively few districts. At the same time the powers which were given by local Acts were found to be insufficient and inconvenient, and many places requiring improvements were neglected simply because the legislative sanction had not been obtained to Acts which were purely local. No doubt objections might be made to the sort of legislation which it was now proposed to adopt, on the ground that it was an interference with the rights of private property, but any one who had considered the subject knew that property could never be held so as to be an obstruction to public interests, and that private rights must inevitably give way to public convenience. He believed that if the Legislature were appealed to they would not be found backward in providing a remedy for the injury which the agriculturist suffered.—Sir H. Vavasour said that the existing statutes relating to the drainage of land had proved altogether insufficient. It was impossible for any one resident in a town to realise the state of the country, and the present year was a most disastrous one to the farmer. The occupiers of low lying arable farms had been injured to an almost incalculable extent, seeing that they had the rain of successive weeks to contend with. It was not so much the excess of the rain that had fallen this year as the fact of the water remaining on the soil which injured the land. There had already been several Acts of Parliament relating to general drainage, the most recent of which was the 3d and 4th William IV., cap. 22, but the existence of commissioners and other local powers rendered them almost nugatory. Small thready drains, extend in every direction, but the common outfall remains as before—a sluggish meandering stream, running into a navigable canal, at the junction with which the course of the water is still further impeded by a dam, over which the water flows 3 feet, and as long as the powers of local Acts existed, it was utterly impossible to improve the drainage. They heard much of the damage to land from game, but more injury was caused by want of drainage in a single day than from all other causes put together. A change in the law of drainage was absolutely necessary for small proprietors, and they must urge the Government to lose no time in preparing a broad and simple measure relating to drainage, so as to put an end entirely to the present wasteful and most unsatisfactory state of things. The Chancellor of the Exchequer was calling upon them for every shilling they could spare, and when the rental of half a county was spent on a single ship, and the national debt had a tail as long as a comet, they could not afford to be fettered by statutes passed at a time when England was a second-rate power and a wheat-exporting country.—Sir J. Shelley inquired whether, in the opinion of this meeting, the Bill introduced some time ago by Mr. Mills was sufficient to effect the object in view, and if so would give notice immediately on the meeting of Parliament for its re-introduction. He fully concurred in the necessity of legislation on the subject, and thought that if a sound measure was brought in it would be carried. —The Chairman believed that no Bill had been prepared, and understood that reference would be made to the measure of 1852.—Sir J. Shelley believed that such a Bill as that of 1852 would never be carried, because circumstances had since arisen which had increased the importance of the subject. If the landowners would take the matter into their own hands he had no doubt they would succeed.—Sir H. Vavasour then moved the following resolution:—

"That this meeting considers that a comprehensive public measure of arterial drainage and the improvement of the outfalls is highly essential to meet the requirements of the present advancing state of agriculture; and that a deputation from their meeting wait upon the Secretary of State for the Home Department, to impress upon him the measure at the earliest possible period of the ensuing session."

Sir J. Shelley seconded the resolutions, which were carried unanimously.—Sir J. Tyrrel wished some explanation to be given as to what was meant by arterial drainage.—Mr. Denton said that it meant river reform generally; power to deal with rivers and all other streams; the clearing away of drains, and where necessary of mills—a point which it was perhaps rather dangerous to touch upon; and the clearing of all outfalls into the sea.—Sir J. Tyrrell thought the explanation unsatisfactory.—Mr. B. Thorold said that all that was meant was power to remove all impediments in the main watercourses or arteries, and those engineering works which were erected upon Sir George Rennie's principle for the mere purpose of feeding the canals.—Mr. J. Chilton believed that if the proposed measure were carried, the property in the districts affected by it would be enormously benefited. The valley of the Thames, for instance, where there were thousands of acres not worth 10*s.* per acre, would be made worth 50*s.* per acre. The same might be said of almost all the valleys of the country.—The following gentlemen were named as the deputation:—The Earl of Romney, Sir J. Shelley, Sir H. Vavasour, Mr. Chilton, Mr. Heathcote, Mr. Langston, Mr. Bailey Denton, Mr. A. Clark, Mr. Grantham, Mr. Fisher Hobbs, and the Rev. J. Clutterbuck.

THE CITY MEAT MARKETS.—At the last meeting of the City Commissioners of Sewers, Dr. Letheby, the medical officer of health, reported that all the slaughter-houses and markets had been duly inspected, and that in the course of the week the officers had seized 4681 lbs., or rather more than two tons of meat as unfit for human food. Of this 2936 lbs. were seized in Newgate Market, 765 lbs. in Leadenhall, and 980 lbs. in Newgate and Aldgate; 4271 lbs. were seized on account of disease, 130 lbs. on account of putridity, and 280 lbs. on account of the animals having died from natural causes. This immense quantity was not much more than the average of weekly seizures, and it was all sent to the boilers and destroyed as food. It had previously been the subject of discussion whether the destruction of this diseased meat was really complete, it having been recently discovered that the dealers were in the habit of obtaining it at the boilers and using it in the manufacture of sausages. The Chairman said the whole question was now under the consideration of the General Purposes Committee, and he expected they would shortly report upon it.

NEW SCHEME FOR EVANGELIZING LONDON.—An institution has been formed, under the auspices of Lord Congleton, the Hon. and Rev. Baptist Noel, Mr. Scott, Chamberlain of London, Dr. Forbes Winslow, and other gentlemen, for diffusing evangelical principles over the metropolis. To carry out their object two large carriages have been constructed, which will be drawn about London stocked with Bibles, and accompanied by two men, one to propel and attend to the carriage and stock, the other to read in a clear loud voice such portions of the Scripture as would be likely to have an effect upon the persons listening to them. It is contemplated to add to the number of the carriages until every district of London and its suburbs is supplied.

CENTRAL CRIMINAL COURT.—The Court of Common Council at their last meeting, on the recommendation of the Officers and Clerks Committee, to which the matter had been referred for investigation, unanimously resolved to abolish the practice of receiving fees for admission to the galleries of the Central Criminal Court.

BLACKFRIARS BRIDGE.—The Court of Common Council, in accordance with the recommendation of the Bridge House Committee, have unanimously resolved that as it is extremely probable that in the next Session of Parliament some measure will be introduced to carry into effect the recommendation of the Select Committee of the House of Committee for the embankment of the Thames, which, if it does not directly interfere with the present structure of Blackfriars Bridge, will, at all events, so far increase the scour of the river as to render useless any attempt to repair the defective pier, it will not be expedient at present to take any steps for putting the bridge into a permanent state of repair.

DIOCESE OF LONDON.—The Rev. Thomas Whitaker Nowell, of Brasenose College, Oxford, rector of Wapping, has been presented to the rectory of Poplar, by the principal and fellows of Brasenose; and the Rev. Francis Henry Vivian, of Trinity College, Cambridge,

incumbent of St. Bartholomew's, Bethnal Green, has been presented to the incumbency of St. Peter's, Stepney, vacant by the preferment of the Rev. Thomas James Rowsell to the rectory of St. Margaret's, Lothbury. The incumbency of St. Matthew's, Islington, has become vacant by the death of the Rev. Edward Thomas Alder. The benefice, which is worth 350*l.* a year, is in the gift of the incumbent of St. Paul's, Ball's Pond.

THE STREET RAILWAYS.—At the meeting of the City Commission of Sewers on Tuesday, a letter was read from Mr. Train, the projector of street railroads, stating that he had received permission from the vestries of St. John's, Hackney, and St. Leonard's, Shoreditch, to lay down a line from Ball's Pond, along Bridport Place, Pool Street, Dorchester Street, New North Road, Pitfield Street, Old Street Road, and City Road, towards the city, and requesting the Commission to grant him leave to continue this line to the Bank as an experiment—viz., from the city boundary at Ropemaker Street to the south end of Moorgate Street; feeling assured, as he did, that it would convince them and the public of the feasibility of his plan. Deputy Lott complained of the impulsive way in which the consideration of Mr. Train's general propositions to the Commission had, at their last meeting, been resumed and postponed for a long interval; and he moved that the letter be referred to the Improvement Committee for consideration. Dr. Abraham, without objecting to the modified request of Mr. Train to lay down an experimental line to the Bank along Moorgate Street, still contended that his scheme was inapplicable to the crowded thoroughfares of the city. He supposed a sudden stoppage in the whole current of traffic by a fire, or other cause, in Cheapside, and asked how a railway carriage was to traverse the little side streets in order to avoid the point of detention. Deputy Lott replied that there was an easy adaptation of the flanges of the wheels of Mr. Train's carriages to common roads. The request of Mr. Train to lay down an experimental line was supported by Deputy Holt, Deputy Farrar, and Mr. Young, of Billingsgate, and opposed by Mr. De Jersey. The motion for referring the letter for consideration to the Improvement Committee was ultimately carried.

RESPITE OF ANNE PADFIELD.—At a late hour on Saturday a respite was received at Newgate directing that the sentence should be suspended during her Majesty's pleasure. The news was at once communicated to the prisoner, who received it with less emotion than might have been anticipated. It is expected that the punishment that will be inflicted upon her will be that of penal servitude for life.

THE CORPORATION FINANCES.—The aggregate receipts of the corporation for the year 1859 amounted to 366,228*l.* 19*s.* 1*d.*, and the total expenditure to 287,421*l.* 14*s.* 6*d.*, leaving a balance in the hands of the chamberlain at the beginning of the present year of 78,807*l.* 4*s.* 7*d.*, or larger than that of the previous year by 22,461*l.* Among the receipts, by far the largest item is that of 100,876*l.* 18*s.* 4*d.* derived from rents and quit rents. The markets have produced 14,119*l.* in round numbers—namely, Leadenhall, 2920*l.*; Newgate 4452*l.*; Farringdon, 794*l.*; Smithfield, 233*l.*; and Billingsgate, 5719*l.* Under the head of "Duties," 90,533*l.* odd have been realised, including the metage on coals, 73,881*l.*; the metage on corn, 14,007*l.*; the groundage of corn, 879*l.*; the metage on fruit, 1651*l.*; and the stamping of weights and measures, 112*l.* The expenditure includes among other items, charges on the corporation estates to the amount of 8585*l.*; on the markets, 5019*l.*; on the Metropolitan Cattle Market, 8969*l.*; charges on the various duties, 19,636*l.*; charges in aid of public improvements, 31,500*l.*; expenses of magistracy, 7128*l.*; police expenses, 11,888*l.*; expenses of prisons, 18,836*l.*; administration of criminal justice, 7453*l.*; civil government, 27,441*l.*; charitable donations, pensions, and honorary rewards, 7243*l.*; education, 5091*l.*; Holloway prison, 3476*l.*; City library, miscellaneous and incidental expenditure, 4388*l.*; purchase of securities, 11,137*l.*; and cash applied in discharge of loans, 105,000*l.*

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday December 8th were 1210. The average number in the corresponding weeks of the 10 years 1850-9, corrected for increase of population, was 1369. The present return is therefore 129 below the average. During the week the births of 923 boys and 891 girls, in all 1814 children, were registered in London. In the ten corresponding weeks of the years 1850-9 the average number was 1635.

Provincial.

BATTLE.—Lord Harry Vane, M.P., has consented to preside at a public meeting in this town on the 8th of January, for the purpose of deciding on the further steps to be taken to promote the total repeal of the excise duty on hops.

CHATHAM.—At the opening of the assizes for Kent on the 1st inst., Mr. Justice Byles, in his charge to the grand jury, called attention to the number and magnitude of the crimes in the calendar, and to the fact that a large number of the criminals were soldiers. He said—

"There was one circumstance in the calendar which, in his short experience, was entirely novel, and that was the fact that more than half the offenders were soldiers in her Majesty's service; and he was also sorry to add that the offences laid to their charge were crimes of the deepest dye, among which he observed especially the crime of arson was very common. The circumstance of so many soldiers being charged with offences naturally led to the reflection how could this be? Some, it was true, were set down in the calendar as imperfectly educated, but others were stated as being able to read and write, and some as being able to read and write well. Time was when education was looked upon as some security against crime, but recent experience would seem to show that this was a very ineffectual preventive. What, then, were the special reasons for this crime in the present calendar? It occurred to him—and it was a remark that he should not have made but for the large number of soldiers about to be brought before them, and which he would even now refrain from making if he did not think that to gentlemen of their weight and position it would not be thrown away—it occurred to him that these crimes by soldiers arose simply from want of employment, and that it was from this cause that soldiers wandered about and committed crimes. It had passed, indeed, into a proverb that employment was but another name for happiness. Indeed, a celebrated writer, more remarkable, perhaps, for his brilliancy than his soundness, said that 'Employment is the happiness of nine-tenths of the human race, who thus have not leisure to consider and to know how unhappy they really are.' It was unnecessary to remind them of what they had learnt as schoolboys, that the greatest military Power that ever existed, and that he hoped ever would exist, one that held the world in subjection for 12 centuries, always took care in times of peace to employ its army in works of physical exertion, which made the soldiers stronger, sounder, hardier, and better men when war again made its appearance. The memorials of these peaceful labours of soldiers remained until the present day, in those solid walls and streets, and admirable Roman roads, which extended and radiated from the metropolis to the extremities of the then known earth. It was therefore a very serious question whether in a frontier country like this the superfluous energy of the soldiers might not be employed in erecting works of defence, so that if the fears which now existed in some quarters, that the blasts of war, silent on these shores for so many centuries, would be again heard, were realised, they would be in a firm position to meet the foe."

COVENTRY.—The destitution of the operative riband weavers of this town is represented as appalling. Thousands of people are out of work, and it is absolutely necessary that the parochial funds should be aided by public subscriptions. Lord Leigh has consequently appealed to the whole county for assistance. At a meeting of the Birmingham clergy, on Thursday, the Hon. and Rev. G. M. Yorke, Rural Dean, Dr. Miller, and Mr. Gabriel were appointed to present a memorial to the mayor, requesting him to sanction ward meetings in the borough for the relief of their suffering neighbours.

FARINGDON.—At the annual dinner of the Faringdon Agricultural Library on the 22d ult. Mr. Henry Tucker, the chairman, and one of the county magistrates, laid before the meeting a statement on the condition of the agricultural labourer in every town and village in the Faringdon Union, drawn up from information obtained by Mr. East and Mr. Jeffries, the relieving officers of the Union. The following is a digest of this document:—

"*Woolstone.*—Man and wife, two grown-up sons, and an illegitimate child of the daughter, all sleep in one room; man and wife, with a son and two daughters, sleep in one room; two married couples and a child sleep in one room; man and wife, with daughter and two sons, sleep in one room. *Watchfield.*—A father and three daughters sleep in one room on ground floor; seven persons in a two roomed cottage, of whom two are lodgers, sleeping in the pantry; a father sleeping with his daughter, 17 years of age, and the wife in another bed. *Shrivenham.*—Six cottages, having 35 inmates sleeping in six bedrooms, some of them grown up sons and daughters, only one privy for the whole, and that in a bad state. *Longcot.*—Man and wife with a child, one widower, and one single woman with a child, making six persons sleeping in one room; two daughters, each with an illegitimate child; a son, aged 20, cohabiting with a woman, and four other persons, making 10 in one room, with two beds. *Fernham.*—Eleven persons sleeping in two bedrooms, both on the ground floor; seven persons ditto; 10 persons ditto; son and daughter, over 16 years of age, with two other persons, sleeping in one room; three sons and a daughter and two younger children, with father and mother, sleeping in a room, 8 by 12 feet; two single men lodging with a man and wife, with four children, making eight persons sleeping in one room; two brothers and two sisters, above 16 years of age, with father, mother, and four children, making 10 persons sleeping in one room. *Littlecorth.*—Man and wife, with grown-up son, five children, and four lodgers, making 12 persons sleeping in two rooms. *Faringdon.*—Sixteen cottages in Red Row; this is stated to be the most wretched place the reporter ever saw. Nine cottages lately indicted for a nuisance, but still very bad. In one cottage the drain flows into the sitting-room; and in another the drain at front door is offensive. Three cottages are badly off for water. Several cottages in a bad state of drainage. *Le Hale*—A man and wife with a female lodger and five children, sleeping 'pell mell' together. *Buckland.*—A man and wife, with two grown up girls and two other children, all sleeping in one room; a man and wife, with four children, including a grown up girl, all sleep in one small room; a widow, with grown up son and daughter, and a lodger, all sleep in one room; a woman slept for a long time with a son aged 21. *Langford*—The cottages are very old, but the occupants live with some regard to decency. I have not seen any place, says the reporter, where the unmarried men sleep with the women. *Longworth*—Most of the cottages in this village are very old, some of them scarcely fit to live in. (Said to be ecclesiastical property.) *Pusey*—Ten cottages in a most wretched state, and ought to be taken down. *Kingston Lisle*—Most of the cottages have only one small bedroom, yet the families are large, and the majority take lodgers. Example.—Man and wife with five children, and two men and three women lodgers, making 12 persons sleeping in one room. *Balking.*—Man and wife with grown up daughter and son, and four illegitimate children of daughter, all sleep in one room. *Eaton.*—Man and wife with two children, live and sleep in one room—a wretched place. *Stanford*—A son, over 16 years, sleeps with father and mother. Four wretched tenements with only one sleeping room to each, occupied by large families, require the attention of the sanitary officers. A man, as lodger, with a family of six persons, all sleep in one room, and that a wretched place. Of another it is said, 'a regular stye, not fit for human beings to live in,' yet seven persons live and sleep in the same room; man and wife with five childen and a lodger all sleep in one room. Four cottages, drainage and ventilation bad, and quite destitute of water. *Charney.*—Father with two daughters and a son, all grown up, sleep in one room. A widow with five children and her father, all sleep in one room. Drainage bad and cottages generally in a most dilapidated state. *Bullocks' Pits.*—Fifteen cottages in a most dilapidated state, many of the occupiers having large families of sons and daughters sleeping in one small room. *Buscot.*—Twenty-nine cottages, with only one bedroom to each, and most of them occupied by large families; a man and wife with two daughters (one grown up) sleep in one room; a man and wife, with three children, live and sleep in one very small room; a man with three children, and two men and one woman lodger, sleep in one small room; a man and wife with a son 15 years old and grown-up daughter sleep in one room. *Uffington.*—A man and wife, with grown-up son and daughter and other children, sleep in one room; a man and wife, a daughter, and a son with his wife, all sleep in one small room."

HATFIELD.—The Marquis of Salisbury, while rabbit shooting in Hatfield Park a few days since, was unfortunately struck in the leg by several shots, but no further inconvenience is apprehended than a confinement to the house for a few days.

LIVERPOOL.—Mr. Richard Woodward Powell, of the firm of Scott & Powell, tea merchants, was on Friday brought up at the Police-court of this town, on remand, charged with being concerned in forging the name of Mr. John Scott, the father of his partner, to a bill of exchange for 463*l.* 16*s.*, and a guarantee for 5000*l.* The principal evidence adduced was that of Mr. Scott, who said that his name endorsed on the two documents was a forgery. A jeweller named Wells said that the prisoner, at the earnest entreaties of his partner, who had absconded, purchased three diamond rings from him, valued at 60*l.* The magistrates committed the prisoner for trial and refused to take bail.

MARYPORT.—A few days since in Guslet Pit, near this town, an explosion took place by which three men were killed. All those who were in the pit felt the effects of the explosion, but having been in distant shafts sustained no injury. Search was immediately instituted for the missing men, but the "firedamp" prevented much progress. The first body recovered had been blown a considerable distance, and the head was severed from the trunk. The bodies of the others have since been found frightfully scorched and disfigured. The jury at the inquest returned a verdict that the three men were killed by an explosion, but how that explosion originated did not appear.

NEWPORT (MONMOUTHSHIRE).—It has now been ascertained by an examination of the pay books that the number of men and boys in the Risca pit when the late explosion occurred, was exactly 200. Of these 64 were saved, the remaining 136 having perished, with 28 horses. Sixty-five dead bodies were brought to the surface on Saturday and Saturday night, 8 on Sunday, 7 on Monday, 3 on Wednesday, and 17 on Friday, leaving 36 in the pit, which may not be recovered for another week or fortnight. Two men and a boy of the number rescued have since died from the injuries they sustained, making the total loss of life 139.

NORWICH.—A fatal explosion of gunpowder took place a few days since in the shop of Mr. Marrison, Oxford Place, in this city. The second floor of the house was entirely blown away, a lad called Hill, stepson of Mr. Marrison, was killed on the spot, and Mrs. Daly, a person living in the house, was so severely burnt that she died subsequently in the hospital. Her two children were rescued from the burning premises by a sailor from Hull, called Crabtree, who has been rewarded for his courage by a subscription among the magistrates and citizens. A subscription has also been commenced for the benefit of the unfortunate children. The jury at the inquest returned a verdict of "Accidental Death."

NOTTINGHAM.—The installation of the Duke of Newcastle as Provincial Grand Master of Nottinghamshire, took place on Friday morning at the Mechanics' Hall in this town. The installation was attended by the Earl of Zetland, Grand Master of England; Sir Joseph Paxton, M.P.; Captain Boyer, Grand Master of Oxfordshire; the Grand Chaplain of the Order; and a great number of nobility and gentry, including representatives from the Grand Lodge of England, and numerous other distinguished members of the craft. After the installation a levee was held for the presentation of Mason visitors. In the afternoon a banquet took place at the Corn Exchange, over which the Duke of Newcastle presided, and to which Freemasons only were admitted, and in the evening there was a Masonic ball in the Exchange Room, open to the general public.

OXFORD.—On Wednesday Oxford was unexpectedly honoured by a visit from Her Majesty, accompanied by the Prince Consort, Princess Alice, Prince Alfred, and Prince Louis of Hesse Darmstadt. The Royal party reached Oxford about 11 30 a.m and proceeded to the Prince of Wales's lodgings, after which accompanied by the Prince of Wales and his suite, they visited Christ Church, Magdalen College, New College, the Museum, the Bodleian Library, Balliol and Exeter College Chapels, the Radcliffe Library, and some other of the principal buildings. The Royal party returned to Windsor at 4 o'clock. The visit was strictly a private one, so that no public demonstration was made by either university or city. A Convocation was held in the Sheldonian Theatre on Friday for the election of a Boden Sanskrit Professor, in the room of the late Mr. H. H. Wilson. There were two candidates, Mr. Monier Williams, M.A., of University College, late Professor of Sanskrit at Haileybury, and Mr. Max Muller, M.A., of Christ Church and All Souls', Taylorian Professor of Modern Languages in the University. Mr. Williams took

the lead from the first, and at the close of the poll had a majority of 223, the numbers being 833 to 610. The Senior Proctor then declared Mr. Williams duly elected to the office.—Dr. Corfe, organist of Christ's Church, has been elected to the office of University Choragus. In a Convocation held on Friday it was agreed to affix the University seal to a petition to the House of Commons, praying for the removal of certain legal impediments to the effectual drainage of the Thames Valley.

ROAD.—It is understood that Inspector Norris, of Bristol, and Superintendent Hughes, of Bath, have been diligently engaged in prosecuting inquiries into the murder at Road Hill House, and their labours have been so far successful that they have traced out the important fact that a chest flannel, similar to that found under the body of the child, was worn by one of the inmates of Mr. Kent's house. At present the flannel which was discovered with the child is in the custody of the Wiltshire constabulary, and some hesitation has been manifested in handing it over to Messrs. Hughes and Norris for the purpose of endeavouring to procure its identification. This obstacle has at last been removed by the request of one of the Trowbridge magistrates that the flannel may be placed in the hands of the Bath officers, and when this has been done and the identification satisfactorily established, other facts will be adduced, forming what is conceived to be a strong *primâ facie* case against one of the inmates of Road Hill House. Meanwhile, the Wilts police are actively pursuing their inquiries, and there is reason to believe that they are also in possession of a clue which may lead to important discoveries. In connection with this Superintendent Wolfe visited Frome and Road on Friday. Mr. Sylvester, the coroner for North Wilts, has taken steps to show cause against the application of the Attorney-General to the Court of Queen's Bench.

SHEFFIELD.—Mark Rawlins, aged 35, clerk in the Sheffield and Rotherham Bank, was charged on the 6th inst. on remand with embezzling 300*l.* and another sum of 55*l.* belonging to that bank. He was committed for trial on both charges, but admitted to bail.

SOUTHAMPTON.—The Madeira packet brig Eclipse, Captain Davis, was burnt to the water's edge in the Solent, on Saturday night. The vessel was run ashore between Lepe and Lymington, the passengers being landed at the latter port. The Eclipse called at this port on her way from London to embark passengers, and sailed hence on Wednesday the 5th.

Ireland.

GARIBALDI ON THE IRISH BRIGADE.—The following letter has been received from General Garibaldi by an Irish gentleman, who wrote to explain to him that it was Popery, and not Ireland, which sent out the Papal brigade to uphold slavery in Italy:—

"Caprera, Nov. 12, 1860.

"Much Esteemed Sir,—Who could ever think that your fellow countrymen were not deceived, when they served the cause of the Pope, under Lamoriciere? Everyone in Italy knows the heavy burden of oppression under which your country, as well as ours, is still groaning. The offspring of ignorance and imposition—Papacy—dwells, unfortunately, in the powerful with hypocrisy and in the poor with the concomitant evils, prostitution, degradation, and misery. Albion became great and prosperous when she courageously cut off that cancer. Rome! she ceased to be great she contrived to be prostrate, and still lies in that filthy sink because it pleased the Almighty to visit the Queen of the world with that scourge. We pity the deceived ones of Ireland, as well as those of Italy, and many other countries; but we know, indeed, that the hearts of the Irishmen of your noble country, as well as all over the globe, beat for the liberty of nations. We know but too well that if four hundred thousand youths were compelled to take service under the most despicable Government, certainly it was not with the consent of the brave and generous Irish nation, with whom we are united in bonds of brotherhood by a community of misfortune, and by the same foe still frowning on us. The time is not far distant when this people will rather die last hero to its sacristans and tyrants. In that solemn combat we shall decide, not only on our national existence, but the foundation will be laid for the rising of kindred nations. Then the Irishmen, together with Hungarians, Englishmen, and other brothers, will joyfully and gratefully see the sons of Ireland, whom you shall lead to the holy banquet.—Affectionately and gratefully yours, G. GARIBALDI."

MR. SMITH O'BRIEN ON FRENCH SYMPATHY.—The *Irish American* (a New York journal) publishes a long letter from Mr. Smith O'Brien, expressing his views on the subject of a French invasion of Ireland, so ardently desired by certain Irish nationalists. The following are extracts:—

"In my opinion, the course taken by some of the Irish journals during the last year and a half in reference to France has been in the highest degree injurious to the national cause of Ireland. I am very far from discouraging appeals to French sympathy. But I am not prepared to encourage—nay, more, I will do all in my power to resist—an invasion of Ireland by France. I do so, not through love of England, but for the sake of Ireland because I see as plainly as I can see anything, that the policy of France, as well as the policy of all other nations, is selfish and selfish, and that France will never invade Ireland for the sake of promoting the interests of Ireland alone. I have read history as largely as any ordinary reader, and I cannot call to mind a single instance, down to the last invasion of Italy, in which France has acted a disinterested part in reference to foreign wars. I will say that 100,000 Frenchmen are allowed to land in Ireland, and for a time take possession of the Government; yet I still maintain that, even in such a case, the occupation would only be of a temporary nature. The English nation may undergo humiliation from the arms of France. London may be occupied even as Moscow and Berlin, and Vienna were occupied by a French force; but the English nation cannot be conquered by France. The nations of Europe (for it is not in her power would not allow her to be conquered by France, though they might rejoice in her temporary humiliation. A peace will be made with England, and one of the conditions of that peace will be the withdrawal of the French troops from Ireland. The withdrawal of that force will be tantamount to a delivery of the Catholics of Ireland to the tender mercies of the Protestants of the Empire, who still form a large majority of the inhabitants of the three kingdoms. Then follows a state of things not very dissimilar to that which followed the surrender of Limerick—a century of disasters to Ireland. I have taken the most favourable view in supposing what I believe to be an impossibility—that 100,000 Frenchmen, or a force which could not be resisted, can be transported to Ireland before England is occupied by a French force; but I will now state what I believe to be the more probable contingency that will actually result from the encouragement by the so-called Nationalists of Ireland of a French invasion. A war will arise between France and England. The bulk of the French force will be directed against England, and a diversion will be created in Ireland by sending over a force of 20,000 or possibly 30,000 men. If 6,000 Frenchmen were to land in Ireland they would be joined by a very large proportion of that section of the Catholics of Ireland who have nothing to lose and everything to gain by a revolution. They will be opposed by all the Protestants and by a large portion of those Catholics who are content with English dominion in this country. An exasperated civil war will then arise. Conflagration and plunder, with alternate prescription and confiscation, will then be brought into the heart of our country by the [illegible] of Protestants of Ireland. An internecine war will be continued, perhaps for years, and it will result in a [illegible] similar to that which was brought about by the insurrection of 1641. You know very well that I would not, on any account, say anything voluntarily that would hurt the feelings of a friend, but my sense of duty to my country compels me to say that such I believe to be the inevitable results of the policy which has been put forward as the national policy of Ireland by some of the Irish newspapers, ever since the battle of St. Perino. Such I understand to be the policy advocated by the [illegible] to the M'Mahon sword. Far be it from me to discourage our countrymen in their desire to do honour to Irish genius, or to Irish valour, and to Irish success, whether it be manifested in the person of a M'Mahon or of an O'Neil in France, or of an O'Donnell in Spain. If the subscription to the M'Mahon sword had simply borne this character, I should have been among the first to subscribe to it; but it is impossible for any one who has read the proceedings which have taken place in relation to this sword during the last year to give any other meaning to the appeal which has been made to the country, or to the response which that appeal has met, than that the presentation of this sword is intended to be an intimation that M'Mahon would be welcome here at the head of a French army. For, what is M'Mahon? It is true he belongs to an ancient Irish family—is, in fact, a scion of the race to which I myself belong—but he has neither done nor suffered in the cause of Ireland. He is simply the agent of a military despot, and he does not even accept the sword which has been offered to him without the permission of that despot. Yet the Irish people are encouraged to look upon M'Mahon as the future King of Ireland. When I returned from Australia I was in hopes that it would be possible, first, to suppress all idle boasting on the part of a nation which, after all its vociferations and menaces, submitted servilely to the consequences of the ignominious reverses which we sustained in 1848; next, that all true lovers of their country, whether Protestant or Catholic, would unite in an effort to put down the scandalous and bare-faced system of corruption which prevailed during the whole period of my absence from Ireland; further, that efforts would be made to establish and to encourage a sound national feeling—a feeling which could be shared by Protestants as well as by Roman Catholics; and which should be based upon the sentiment of self-reliance; lastly, that after having put the nation in an attitude of purity, strength, and unity, we should have been prepared to avail ourselves of every contingency that might favour the advancement of the interests of Ireland, whether those interests might be of minor importance—such as the establishment of a steam communication with America, or the restoration of the legislative independence of the country. As for any premature arming of the people, we have seen to what lamentable results the operation of the Phœnix Clubs have led; and I confess that I would prefer that the Irish people should be left to the 'chapter of accidents' rather than that a similar experiment should be tried again. You know that I predicted exactly what would happen in the case of the Phœnix organization, and that my prediction came to pass to the letter. If the 'French party' proceed in the track which they appear to have marked out for themselves, I believe that their failure will be equally complete, though in a hundred fold degree more disastrous.'

Sporting.

THE LATE PRIZE FIGHT.—The subscription raised for Sayers, the ex-champion, amounts to the extraordinary sum of 2814*l.*, and has been so secured that it cannot be touched by his creditors, should he get himself involved, nor will he be able to assign away or anticipate his income. It is, moreover, expressly provided that in the event of his again entering the ring the trustees shall at once devote the whole amount to the interests of his children.

Law.

COURT OF EXCHEQUER.—WILLIAMS *v.* GREAT NORTHERN RAILWAY COMPANY.—This was an action to recover damages for injuries arising out of the accident that occurred in May last at King's Cross, owing to the guard, who was intoxicated and asleep, not putting on the break, by which neglect the train ran right through the station into the street, and many of the passengers were seriously injured, among whom was the plaintiff, Mr. Williams, a flour factor at Manchester. The only question in dispute was the amount of compensation, which the jury fixed at 1200*l.*

COURT OF QUEEN'S BENCH.—*Howard v. Ledger.*—This was an action brought by Messrs. James & Frederick Howard, agricultural implement makers, of Bedford, against defendants, implement makers, of East Retford, for breach of trade marks. The plaintiffs carried on an extensive trade with East Retford and the surrounding neighbourhood, and had an agent named Curtis at East Retford, to whom they referred all orders from persons with whom they had no personal acquaintance. Their business for plough castings not keeping pace with the demand for their implements at East Retford, they investigated the cause, and were brought to the conclusion that their castings were being fraudulently procured and spuriously imitated by the defendant. With a view to discovering the truth, their traveller, in June last, visited defendants' premises, and asked for a wheel, a breast, and a share of a plough according to plaintiffs' make. These were supplied to him, and in the same way he saw other castings of a plough with the plaintiffs' name and trade marks, defendant's son stating that they were "finished metal." The latter was the castings that had been manufactured without any knowledge of defendant. Persons who had been supplied with plaintiffs' castings had been told by Curtis the agent of the plaintiffs, to have their castings made as long as parts which had been broken or worn out. In this way the name and trade mark of plaintiffs came to be impressed on defendant's castings, and as they were always on the look out for employment, and part of the plaintiffs' business was very much confined to supply the place of travellers on the occasion of his visit, Curtis was the agent of plaintiffs, and if any one should have suffered from the deceit which was carried on it was Curtis. The jury found for the plaintiffs upon all points—namely, that defendants had fraudulently imitated plaintiffs' castings, and that they had manufactured for Curtis, knowing that the latter intended to introduce such castings into the market.—Howard's.—The Lord Chief Baron certified for a special jury.

WESTERN ASSIZES.—NORTHERN CIRCUIT: DURHAM.—*The Wolsingham Murder.*—*Thomas South* was indicted for the wilful murder of John Raty on the 5th ult. under the circumstances which were fully described at the time in our Provincial News. He was found *Guilty* but recommended to mercy. Mr. Justice Keating having put on the black cap, told the prisoner he would forward the recommendation of the jury to the proper authorities, but entreated him not to entertain any false hopes that his life would be spared. He then passed the sentence of *Death* in the usual form.—*The Lynch Mob Murder.*—*Moses Lodge*, was indicted for the wilful murder of Thomas Harrison, on the 24th of September last. The fact that the deceased was stabbed by the prisoner, and lived for days in a state of jealousy and died from the effects of the wound was undisputed, the only question being whether there were any circumstances which would reduce the crime to manslaughter. The jury returned a verdict of *Guilty* of Wilful Murder. Mr. Justice Keating having put on the black cap, passed sentence of *Death* in the usual form, holding out no hope of mercy.

MIDLAND CIRCUIT: LINCOLN.—*The Murder of a Policeman at Wyberton.*—*Thomas Richardson*, labourer, was charged with the wilful murder of Alexander M'Brian, a policeman, by shooting him on the 25th October, at Wyberton, and was also charged with the same offence upon the coroner's inquisition. The chief witness was [illegible] who, on his beat met the prisoner at night under suspicious circumstances, and on asking where he [illegible] him, the prisoner without uttering a word raised his gun and shot him. The policeman on receiving the prisoner's fire fired a [illegible] barrelled gun, the right hand barrel of which was discharged and the left was loaded. The wadding in this barrel was composed of a piece of the *Times* newspaper, which corresponded with a piece found on the spot where the policeman was shot. The jury found him *Guilty*, and Baron Bramwell having put on the black cap, passed sentence of *Death*, saying to the prisoner that he should be looking to himself entirely, as he did not see what he could urge on which any hope that the [illegible] would not be carried into effect. *Attempted Murder of a Child.*—*William Lyons*, 19, labourer, was indicted for stabbing and wounding Mary Ann King, at Castle Ashby, on the 1st November, with intent to kill and murder her. This case was reported in our Provincial News, and it will be remembered that the prisoner, who is a married man, overtook the young woman on the road after she had been walking with her sweetheart, and after attempting to commit a criminal assault upon her inflicted such dreadful wounds upon her head and arms that she would probably have been murdered if a farmer, who was driving in the neighbourhood in his gig, had not [illegible] and her cries and gone to her assistance. The prisoner made no defence and merely said he hoped his lordship would have mercy on him. The jury found the prisoner *Guilty*, and Baron Bramwell ordered sentence of *Death* to be recorded against him.

WESTERN CIRCUIT: WINCHESTER.—*The Double Murder at Aldershott.*—*James Johnson*, 25, private in the 31st Foot, was indicted for the wilful murder of Sergeant Owen Chipts, and Corporal Coles of the same corps, on Sept. 29, at Aldershott. The prisoner was brought into the dock between two warders of the gaol. He presented a wild-looking appearance, muttered frequent and unintelligible expressions, rubbed his hands together, and at first sight had altogether the appearance of a demented person. On being called on to plead, he said, "Guilty not," and that he did not want to stop there. The learned judge having had a conference with Dr. Lyford, the medical officer of the gaol, the case proceeded. The facts were extremely simple. The prisoner had been sent by Sergeant Chipts to the guard-room for some offence, and on being released was heard to utter threats against the sergeant. After dinner, while Sergeant Chipts was playing backgammon with Corporal Coles, the prisoner entered the room and fired his rifle at Sergeant Chipts back. The ball passed through the sergeant's body and then through the body of Coles, and struck against the wall. Both men died almost instantly of internal hæmorrhage. At the conclusion of the evidence Dr. Lyford was called by the judge, and said that the prisoner had been under his especial observation ever since his admission to the county gaol, and he had found in him no symptom whatever of aberration of mind. The discrimination between real and feigned insanity was a part of medical studies. In his judgment the prisoner was when he first saw him, has been ever since, and is now of sound mind; but he was a person of exceedingly excitable temperament. The defence was, not that the prisoner did the act while he was in a state of mental mind, but that it was the result of sheer accident, for which he was not responsible. The jury after a brief consultation returned a verdict of *Guilty*. Mr. Justice Byles put on the black cap, and passed sentence of *Death* in the usual form. The prisoner, who continued to rub his hands throughout the trial, clapped them together once or twice as he was removed from the dock.

OXFORD CIRCUIT: WORCESTER.—*The Attempted Murder at Oldbury.*—*William Sims*, a dealer in old iron, was indicted for wounding Enoch Cooper, with intent to murder him. The prisoner entered the Swan public house at Titford, in the parish of Oldbury, on the 5th of July, and called for liquor, saying he had no money, whereupon Cooper offered to give him a drink. In return for this kindness he challenged the prosecutor to fight, and on his refusing, prisoner said he would make him do so, and as the prosecutor sat peaceably in his chair he attempted to strangle him, and then inflicted such fearful wounds upon his head and face that the prosecutor's life was despaired of for some time. The prisoner was the terror of the neighbourhood in which he lived, and had been previously convicted of violent assaults. Baron Wilde characterised the case as one of the most savage, brutal, and unmanly that ever came before him. Sentence of *Death* was recorded against the prisoner.

Obituary.

THE EARL OF ABERCORN had yesterday morning at his residence in Argyll Street. His Lordship had been for some [illegible] of health, and for the last few years had been [illegible]. He was in his 77th year, having been born in [illegible]. Lord Abercorn was the eldest son of James, first Earl of Abercorn, which was created in 1790. In 1800 he was created a Viscount of the United Kingdom. He married in [illegible] Lady Anne Hamilton, daughter of the [illegible] Marquis of Abercorn, [illegible] in 1815, to the relict of Viscount Hamilton. [illegible] and this husband became, on the second Marquis of Abercorn, so that Lord Abercorn was [illegible] and stepbrother to the present Marquis, as well as the second marriage are of course half-brothers. On his retirement from public life, in 1855, he received the honour of the Garter. He was also a Knight of the Thistle, Fellow of [illegible] and King's College, Aberdeen, [illegible] of Glasgow, and [illegible] an elder brother of the present House and for some time President of the Society of Arts. He is succeeded to the title and estates by his eldest son

the second marriage) Lord Haddo, born at Stanmore Priory in 1816, married in 1840 to the second daughter of George Baillie, Esq., of Jerviswood, and M.P. for Aberdeenshire since August 1854.

LIEUT.-COLONEL HOCKER, C.B., Lieut.-Colonel of the Plymouth division of Royal Marine Light Infantry, died a few days since. He had served in the Royal Marines upwards of 50 years, his commission as second Lieutenant bearing date January 1830. He served in Syria in 1840, and was at the storming of Sidon and bombardment of Acre, by Sir C. Napier. He commanded a battalion of Marines at the China expedition in 1857, including the blockade of the Canton river, and the landing before and storming of Canton, his services on that occasion being rewarded by a Companionship of the Bath.

WILLS.—The will of Earl Manvers has been proved under 80,000*l.*; Colonel George Anthony Legh-Keck, formerly M.P. for Leicestershire, 70,000*l.*; Major General Sir Henry George Roberts, 3000*l.*; Lieut.-General Sir Harry Smith, Bart., 6000*l.* Madame von Stierneman, 3000*l.*; Mr. John Finlaison, 2000*l.*

Miscellaneous.

MR. COBDEN ON THE FRENCH TREATY.—The Huddersfield Chamber of Commerce having unanimously passed a vote of thanks to Mr. Cobden for his services in connexion with the Commercial Treaty between this country and France, Mr. Mallinson, President of the Chamber, transmitted the vote to Mr. Cobden, accompanied by a complimentary letter. At a meeting of the Chamber on Monday, the following letter from Mr. Cobden, in reply to Mr. Mallinson's communication, was read:—

"Paris, Dec. 4.

"My dear Sir,—Pray offer my warmest acknowledgments to the Chamber of Commerce over which you preside for their kind approval of my services in connexion with the French Commercial Treaty. There could really have never been any difference of opinion respecting the treaty among those who desire the extension of free trade principles, if the very name of treaty had not furnished the ready means of misrepresentation. Taken with its traditional meaning, a treaty of commerce implies exclusive dealing and bargaining between two countries; but I need hardly assure you, with whom I struggled for seven years for the principle of unconditional freedom of commerce, that I should be about the last man to identify myself with so retrograde a policy. All that England has done in this case has been to carry out in practice, towards all the world in respect to some remaining items of our tariff, that principle of free trade which we have so loudly professed, and which we had previously applied to all our most important articles of production. If we have done this in the form of a treaty, it was solely to enable the Emperor of the French, by a diplomatic act, and in accordance with the powers vested in him by the constitution, to make some simultaneous reductions in the tariff of his country. To have objected to such a proceeding on the ground of form would have been mere pedantry and not principle. But viewed on its own merits, and apart altogether from the treaty with France, Mr. Gladstone's last reform of our tariff, by which the whole of the remaining duties on manufactures have been swept away, is, in a mercantile point of view, one of the most important in our commercial annals. It has made England a free port for manufactures, just as she was formerly the mart for wool, indigo, and other raw materials. And it will be followed by similar results. I have already heard of Canadian buyers who were accustomed to pay annual visits to the Continent of Europe, having intimated their intention of making all their future purchases in England, being convinced that under the present free regime every article of continental manufacture which can be produced cheaper and better than in England will be found in the warehouses of London and Manchester. Yet, strange to add, there are still people to be found who, believing that foreigners—and not Englishmen—pay our customs' duties, blame the Chancellor of the Exchequer for having made the great reform in the interest of France. It were useless any longer to argue this question. Time will in this, as in other matters, demonstrate the advantages of freedom. Let me assure you how highly I appreciate all the friendly expressions contained in your letter, which enclosed a copy of the resolution of your Chamber.—I am, my dear Sir, very truly yours, RICHARD COBDEN."

HEALTH OF THE LAST QUARTER.—The Registrar-General's Quarterly Report, which has recently been published, states that in consequence of the moderate temperature of the past season and the great quantity of rain by which the country generally has been so thoroughly cleansed, the quarter just past was the healthiest ever known, the deaths having been only five-sixths of the number in the same quarter of last year. In England and Wales there were nearly 18,000 fewer deaths. Within the same area the excess of births over deaths in the quarter was 77,639; and it is inferred that in the United Kingdom the natural increase has been at the rate of 1266 a day. The saving of life has been most remarkable in the metropolis, some large towns, the manufacturing districts, and in every one of the South Midland and South-Western counties. It has been so in Portsmouth and Southampton; and even in Brighton, the deaths in St. Peter's have been 40 per cent. below the average. Out of a population of 6000 in Wilton, only one death occurred in 32 days. At Bath the mortality has fallen in three successive summer quarters from 406 to 286. At Birmingham it has fallen this year by one-third. There is the same report from Liverpool, Hull, Sculcoates, Wolverhampton, and many other places very sensitive of atmospheric influences, and hitherto painfully prominent in sanitary discussions.

BIRTHS.—On the 7th inst, at Edinburgh, the Countess of EGLINTON, of a daughter—11th inst, at the Duke of Somerset's official residence, Whitehall, Lady HERMIONE GRAHAM, of a son—11th inst, at 37, Brook Street, Lady BATEMAN, of a daughter—13th inst, at 1, Chesham Street, the Hon. Mrs BONTINE, of a son—13th inst, at Marble Hill, county Galway, Lady BURKE, of a son—30th September, at Nuwera Ellia, in Ceylon, Lady CREASY, of a son—4th inst, at 35, Hertford Street, Mayfair, the Hon. Mrs. ARTHUR EGERTON, of a son—5th inst, at 21, Moray Place, Edinburgh, Mrs. BROWN DOUGLAS, the wife of the Lord Provost of Edinburgh, of a daughter.

MARRIAGES.—On the 6th inst, at St. George's, Hanover Square, the Rev. HERBERT FRANCIS VYVYAN, nephew of Sir Richard Vyvyan, Bart., of Trelowarren, Cornwall, to AUGUSTA CLARA DE SCHMIEDERN, only daughter of the late Baron de Schmiedern, K.H., and stepdaughter of James Scott Smith, Esq., of Beechwood, Tunbridge Wells, Kent—4th inst, at Brighton, the Rev. SCOTT F. SURTEES, Rector of Sprotbrough, Yorkshire, to ISABELLA, second daughter of the late Sir SAMUEL CROMPTON, Bart., of Thornton-le-Street, in the same county—12th inst, at St. James's Church, Piccadilly, Captain MILLIGAN, 39th Regiment, A.D.C., to Major-General Lord Wm. Paulet, C.B., eldest son of Major Milligan, of Ashcroft, Gloucestershire, to GERTRUDE SHAKERLEY, only daughter of the late Sir Charles Shakerley, Bart., of Somerford Park, Cheshire—5th inst. at Ventnor, HENRY JAMES ROSS, Esq., of Alexandria, to JANE ANN, eldest daughter of Sir ALEXANDER and Lady DUFF GORDON—5th inst, at Morley, A. E. MANSEL, Captain of 3d Light Dragoons, and youngest son of Colonel Mansel, C.B., of Snedmore, Dorset, to CLARA HENRIETTA, eldest daughter of the Hon. A. LASCELLES, of Morley, county Cheshire—5th inst, at the parish church of St. Peter Port, Guernsey, JULIUS ALPHONSO, son of SAUSMEREZ CAREY, Esq., Jurat of the Royal Court, to CAROLINE, third daughter of PETER STAFFORD CAREY, Esq., the Bailiff of Guernsey—6th inst, at the parish church, Eccles, WILLIAM HARDWICK BRADBURY, second son of William Bradbury, Esq., Whitefriars, London, to LAURA, second daughter of THOMAS AGNEW, Esq, Fairhope, Eccles.

DEATHS.—On the 1st inst, at Ickworth, FREDERICA MARY LUCY, youngest daughter of the Rev. Lord and Lady ARTHUR HERVEY, aged 16 months—23d Oct., at the European Hospital, Calcutta, in consequence of an accident, after 11 weeks of great suffering, ARTHUR JULIUS TRENCH, son of the Dean of Westminster, aged 20—10th inst, at Ganton, Yorkshire, Sir THOMAS DIGBY LEGARD, Bart., aged 57—6th inst, at Ochtertyre, the Right Hon. Lady ADELAIDE AUGUSTA L. KEITH MURRAY, wife of Sir William Keith Murray, Bart., of Ochtertyre—28th ult, at Florence, ANNE Lady HERBERT, widow of the late Sir C. L. Herbert, formerly of Lower Berkeley St., Manchester Sq.—5th inst, at Charlotte Square, Edinburgh, WILLIAM GAMBIER, Esq., eldest son of the late Sir James Gambier, aged 58—30th ult, at Aberdeen, ELIZA, eldest surviving daughter of the late Hon. ALEXANDER MURCHISON, of Springfield, Jamaica, and Elgin, Scotland, aged 32—7th inst, at the residence of his brother, Camden Square, Colonel DOUGLAS SEATON, her Majesty's 1st Bengal Fusiliers, aged 50—1st inst, the Rev. JOSEPH CORBETT, rector of Tugford, in the county of Salop, third son of the late Archdeacon Corbett, of Longnor Hall, in the same county, aged 66—1st inst, at West Green House, Hartley Wintney, Hants, at the seat of her son-in-law, W. H. T. Hawley, Esq., MARY, widow of the late Admiral BROUGHTON, of Blackwater House, in the same county, aged 90—6th inst, suddenly, at his residence at Bath, Major WILLIAM CUMBERLAND, Bengal Army, eldest son of the late Rear-Admiral Cumberland—8th inst, at Rochester, from the effects of an accident, the Rev. GEORGE DAVIES, M.A., Vicar of St. James's, Grain, and J.P. for the county of Kent, aged 74—7th inst, T. Y. M'CHRISTIE, Esq., of 37, Great James Street, Bedford Row, for 14 years Revising Barrister for the city of London, aged 64—8th inst, at Cheltenham, CAROLINE, widow of the late JOHN FALCONAR, Esq., H.B.M.'s Consul at Leghorn, aged 83—5th inst, at Ealing, HARRIOT MARY HUGHES, relict of the late Rev. George Hughes, of Marden Ash, Essex, and only daughter of the late Craven Ord, Esq, of Greensted Hall, Essex, aged 73.

Markets.

COVENT GARDEN, Dec. 15

Small importations of Continental fruits continue to arrive. Pine Apples are rather more in request than they have been, and prices for them are improving. Shaddocks and Oranges may still be obtained at about last week's prices. Good Cobs may be had at from 1s. to 1s. 6d. per pound. Cabbages, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 10s. per cwt. Asparagus and French Beans may now be had in small quantities. Cucumbers are scarcer. Holly and other Christmas Evergreens now begin to make their appearance. Cut flowers chiefly consist of Orchids, Gardenias, Chrysanthemums, Violets, Mignonette, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 4s to 8s	Apples, per doz., 6d to 1s 6d
Grapes, per lb., 3s to 6s	Oranges, per 100, 6s to 10s
Pomegranates, each, 4d to 6d	Lemons, per 100, 6s to 10s
Pears, per doz., 1s to 3s	Nuts, Cob, per lb., 1s to 1s 6d

VEGETABLES.

Cauliflowers, each, 4d to 6d	Celery, p. bundle, 1s 6d to 1s 9d
Greens, per dozen, 2s 6d to 3s	Onions, p. ½ sieve, 1s 6d to 2s 6d
Cabbages, do., 1s to 2s	Scalxle, p. punnet, 3s to 3s 6d
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 8d	Lettuces, Cos, do, 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 1s 6d to 3s	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d

HOPS.—BOROUGH MARKET, FRIDAY, Dec. 14

Messrs. Pattenden & Smith report a steady consumptive demand for the best grown samples of new Hops, and considerably more doing in yearlings and old Hops at very firm rates.

BRITISH WOOLS.—LONDON, FRIDAY, Dec. 14.

We have very little business to report on at present, as both supply and demand remain on a limited scale, and no disposition exists to press sales, but rather to await the pleasure of the consumers, and supply them as their necessities may prompt their appearance in the market, which is not now expected before the new year.

	s.	d.		s.	d.
South-down Hoggets	1	7	to	1	8
Half-bred ditto	1	8	—		
Down Ewes	1	5	—	1	6
Kent Fleeces	1	7	—		
Leicest Wethers	1	6	to		
Ditto Hoggs	1	8	—		
Combing Skins	1	0	—	1	4
Blanket ditto	0	6	—	0	8
Flannel Wool	1	0	—	1	8

PUBLIC SALES—LOW WOOL SERIES.—These sales took place last Friday and Saturday, with a short supply of East Indian wool, which realised full prices. A considerable portion of the Douskoi (Russian) was of very inferior quality and length, and was withdrawn.

POTATOES.—SOUTHWALK, Monday, Dec. 10.

During the past week there have been no arrivals coastwise and a limited supply from abroad, but with what was left in store from former supplies was quite equa the demand. The following are this day's quotations:—York Regents, 110s. to 130s. per ton; Lincolnshire do., 100s. to 120s.; Dunbar do., 120s. to 140s.; Perth, Forfar, and Fife do., 100s. to 120s.; Rocks and Reds, 90s. to 100s.; French Whites, 90s. to 100s.; Belgian do., 85s. to 90s.; Dutch do., 80s. to 85s.

METROPOLITAN CATTLE MARKET.

MONDAY, Dec. 10.

We have a larger supply of Beasts; the weather, however, is favourable, and the demand has increased, consequently on the average prices are better. There are a few more Sheep than on Monday last. Trade is slow for them at that day's quotations. Calves are selling rather dearer. From Germany and Holland there are 400 Beasts, 3900 Sheep, 127 Calves, and 30 Pigs; from Scotland, 70 Beasts; from Ireland, 680; from Norfolk and Suffolk, 200; and 2000 from the northern and midland counties.

	s	d	s	d
Best Scots, Herefords, &c.	4	10	to 5	2
Best Short-horns	4	8	— 5	0
2d quality Beasts	3	6	— 4	4
Best Downs and Half-breds	5	4	to 5	6
Do. Shorn	..	..	—	..

	s	d	s	d
Best Long-wools.	5	0	— 5	2
Do. Shorn	..	..	to	..
Ewes & 2d quality	4	0	— 4	6
Do. Shorn	..	..	—	..
Lambs	..	..	—	..
Calves	..	..	4 4	— 5 0
Pigs	..	..	4 4	— 5 4

Beasts, 5020; Sheep & Lambs, 22,840; Calves, 159; Pigs, 260

THURSDAY, Dec. 13.

The number of Beasts is larger than of late, but not excessive for so near Christmas. The average quality is by no means first rate. Choicest descriptions are in demand, and in a few instances commanded higher prices. The supply of Sheep is small, and of very middling quality. Quotations are about the same as on Monday last. From Germany and Holland there are 122 Beasts, 500 Sheep, and 188 Calves; from Spain, 40 Beasts; Milch Cows, 118.

	s	d	s	d
Best Scots, Herefords, &c.	5	0	to 5	2
Best Short-horns	4	10	— 5	0
2d quality Beasts	3	6	— 4	4
Best Downs and Half-breds	5	4	— 5	6
Do. Shorn	..	..	—	..

	s	d	s	d
Best Long-wools	5	0	— 5	2
Do. Shorn	..	..	—	..
Ewes & 2d quality	4	4	— 4	8
Do. Shorn	..	..	to	..
Lambs	..	..	—	..
Calves	..	..	4 0	— 5 0
Pigs	..	..	4 4	— 5 4

Beasts, 1798; Sheep & Lambs, 3780; Calves, 208; Pigs, 140.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Dec. 13.

Prime Meadow Hay	75s	to 80s
Superior do. (old)	90	105
Inferior do.	50	60
New do.	—	—
Rowen	40	50

Clover	90s	to 110s
New Clover	—	—
Old second cut	80	90
Straw	32	36

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Dec. 13.

Sup. Meadow Hay	110s	to 118s
Inferior do.	65	98
New do.	—	—
Superior Clover	115	120

Inferior Clover	88s	105s
New do.	—	—
Straw	38	43

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Dec. 13.

Fine old Hay	105s	to 108s
Inferior do.	60	80
Prime New Hay	—	—
Inferior do.	—	—
Straw	30	34

Fine old Clover	110s	to 116s
Inferior do	80	95
Fine 2d cut	—	—
Inferior do.	—	—
Fine New Clover	—	—

BUTTER MARKET.—Dec. 14.

Best Fresh Butter .. .. 18s. per dozen lbs.
Second do. do. .. .. 15s. ,, ,,
Pork, 5s. 0d. to 5s. 4d. per 8 lbs.

COAL MARKET.—Dec. 12.

Clark's West Hartley, 20s. 6d.; Hartlepool West Hartley, 20s. 6d.; Walls End Northumberland, 21s.; Walls End Wharncliffe, 22s. 6d.; Walls End Framwellgate, 23s.; Walls End Hetton, 24s.; Walls End South Hettons, 24s.; Walls End Cassop, 23s. 6d.; Walls End Hartlepool, 23s. 6d.; Walls End Hunwick, 21s. 6d.; Walls End Heugh Hall, 23s.; Walls End South Hartlepool, 22s. 6d.; Walls End Thornley, 20s.; Walls End Trimdon Hartlepool, 20s.; Walls End Whitworth, 21s. 6d.; Carway and Duffryn Malting, 23s. 6d.—27 ships at market.

MARK LANE.—MONDAY, Dec. 10.

The supply of Wheat from Essex and Kent to this morning's market was small, and met an improved sale at rather over last week's prices, excepting the inferior qualities, which are unaltered in value. The market was largely attended by country buyers, and a considerable quantity of French and American Wheat was disposed of at an improvement of 1s. per quarter; other descriptions, excepting low Russian, were held firmly at late extreme rates. Barley brought an advance of 1s. per qr. The value of Beans and Peas is unaltered. Oats are 6d. to 1s per qr. dearer. For barrel Flour there is a fair demand, at an advance of 6d. to 1s. upon the forced sales of last week.

PER IMPERIAL QUARTER.	s.	d.		s.	d.
WHEAT, Essex, Kent, & Suffolk	White	50—62	Red	40—60	
— — fine selected runs	ditto	53—66	Red	50—66	
— — Talavera		50—74			
— Norfolk		—	Red	—	
— Foreign		50—74			
BARLEY, grind. & dist. 28s to 30s.	Chev.	40—44	Malting	38—40	
— Foreign grinding and distilling		0—36	Malting	40—44	
OATS, Essex and Suffolk		20—24			
— Scotch and Lincolnshire	Potato	26—28	Feed	20—25	
— Irish	Potato	26—28	Feed	21—24	
— Foreign	Poland and Brew	24—26	Feed	20—26	
RYE		35—38	Foreign	—	
RYE-MEAL, foreign		—			
BEANS, Mazagan	36s to 44s	Tick	38—48	Harrow	38—48
— Pigeon	34s — 36s	Winds	34—42	Longpod	—
— Foreign		Small	40—50	Egyptian	—
PEAS, white, Essex and Kent		Boilers	44—48	Suffolk	40—50
— Maple	—s to —s	Grey	40—42	Foreign	38—48
MAIZE		White	—	Yellow	—
FLOUR, best marks delivered	per sack	50—57			
— 2d do.	ditto	44—50	Country	34—50	
— Foreign	per barrel	29—34	Per sack	40—50	

FRIDAY, Dec. 14.

The weather during the past eight days has again been very wet, with a lower temperature; the wind has gone round

from S.W. to N.E. The Wheat trade during the above interval has improved, and a very large sale, at an advance of 1s. to 2s. per qr., has been experienced, both here and in Liverpool. A similar improvement has also been realised in the majority of the country markets. The value of spring corn continues to tend upwards, and where an alteration has occurred it has been against the buyer. Flour has met a somewhat better inquiry, at an advance of 6d. to 1s. per barrel.—During the past week 30 cargoes have arrived off the coast. The transactions have not been numerous, and were partly checked by the enhanced prices demanded by importers, who are very firm, and not inclined to submit to any reduction. The arrivals of English grain this week are moderate, of foreign large. The attendance at this morning's market was good, and the little English Wheat fresh up was taken freely at an advance of 1s. per qr. upon Monday's prices. American was in general demand, and the sale very considerable; in many instances an improvement of 1s. per qr. over the current prices of last day was obtained, but the advance did not extend to other qualities. Barley, Beans, and Peas bring Monday's quotations. For Oats there is a good trade at 6d. per qr. more money. Flour is 6d. per barrel dearer, with a good inquiry.

ARRIVALS FROM Dec. 10 TO Dec. 14.

	Wheat.	Barley.	Oats.	Flour.
English ..	1750 qrs.	970 qrs.	110 qrs.	1140 sks.
Irish	— ,,	— ,,	2520 ,,	— ,,
Foreign ..	24030 ,,	5710 ,,	32990 ,,	220 ,, 14870 brls.

LIVERPOOL, Tuesday, Dec. 11.—There has been a good attendance of millers and dealers at our Corn Exchange this morning, and a large quantity of Wheat has again been cleared at an advance, whilst Flour has been more actively dealt in at fully 6d. per barrel more money. Indian Corn has had a good consumptive inquiry, and must be quoted 6d. per qr. higher than on Friday. Oats and Oatmeal were both sold on better terms. Beans, Peas, and Barley each brought extreme rates. The market closed with a buoyant feeling.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Nov. 3..	59s 9d	40s10d	23s 3d	36s 2d	49s10d	42s 4d
— 10..	58 9	41 0	23 11	36 6	51 1	44 5
— 17..	58 1	41 4	23 5	36 4	50 8	46 9
— 24..	56 3	40 11	23 3	34 4	48 11	48 4
Dec. 1..	54 10	39 10	22 3	35 11	48 10	45 11
— 8..	52 7	39 2	22 5	35 0	47 9	45 0
Agg.Aver.	56 9	40 6	23 2	35 9	49 6	45 5

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Nov. 3.	Nov. 10.	Nov. 17	Nov. 24.	Dec. 1.	Dec. 8.
59s 9d	—	..	..	..	..	..
58 9	..	..	..	..	..	..
58 1	..	..	..	..	..	..
56 3	..	..	..	..	..	..
54 10	..	..	..	..	..	..
52 7	..	..	..	..	..	..

WANTED IMMEDIATELY, A FOREMAN for a small Nursery in the neighbourhood of Liverpool; must understand Nursery propagation, the laying out of Villa Gardens, &c.—Address, stating particulars and salary expected, to J. KELLOCH and Co., the Dell Nursery, Rock Ferry, Cheshire.

WANTED, AS GARDENER, a Man thoroughly experienced in the management of Vineries, Cucumber-House, and Out-door Fruit-trees—a practical person who will be generally useful. Several new large Vineries, with general culture of Pear and other Fruit-trees.—Apply, giving full particulars of service and references, to J. W., Box W. 24, Liverpool.

WANTED, a young Man accustomed to the PROPAGATION OF SOFT-WOODED PLANTS.—Apply to WILLIAM HOLMES, Frampton Park Nursery, Hackney, N.E.

TO FARM BAILIFFS.

WANTED, a Thoroughly Competent and respectable MAN and his WIFE. The Man to take charge of about 300 Acres of Land, chiefly Park Pasture, with the Plantations and Roads.—The Wife to undertake the Management of the DAIRY AND POULTRY. The situation will be a good and comfortable one to a couple who are thoroughly competent to perform these duties; and it will be useless for such as are not so to apply.—Application (by letter only) stating terms, references, &c., to be addressed to Y. Z., care of Mr. Veitch, Exotic Nursery, King's Road, Chelsea, S. W.

1000 DRAINERS WANTED.—There is still room for a large number of hands on Messrs. GIRDWOOD'S Drainage Works, in the counties of Stafford and Derby. Good men may find regular employment on application to the Foremen at Sudbury, Hungry Bentley, Longford, Abbot's Bromley, and Smallwood.—49 Pall Mall London S.W.

WANT PLACES.—Letters to be Post Paid.

TO NOBLEMEN AND GENTLEMEN.

GARDENER (HEAD).—Age 37, married, without incumbrance; has had great practical experience in all branches of his profession where early Flowers, Fruit, and Vegetables are required; is also a good Flower and Kitchen Gardener. Has been accustomed to Superintend Gardens on an extensive scale. Highest testimonials as to character and ability.—T. CAMPBELL, Hatchford Gardens, Cobham, Surrey.

GARDENER (HEAD).—Age 28, single; thoroughly understands his profession in all its various branches. Three years' good character.—M. P., G. Stanly, Florist, High Road, Lee, Kent, S.E.

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SOFT-WOODED PROPAGATOR.—Has been in the habit of Growing Geraniums and Dahlias, &c., for Exhibition. Highly recommended.—H. H., Post Office, Sheffield.

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News of the Week.

A TELEGRAPHIC despatch was received at the Foreign Office on Saturday, through St. Petersburg, bringing the important intelligence from China that peace was concluded and the ratifications exchanged on the 26th of October; that the allied forces evacuated Pekin on the 5th of November, and that the EMPEROR was expected immediately to return to his capital. Another despatch was received on Thursday from Sir JOHN CRAMPTON, HER MAJESTY'S Minister at St. Petersburg, stating that he had received a letter from Lord ELGIN, dated the 8th November, informing him of the ratification and publication of the Treaty, and of the march of the army to Tien-tsin. His lordship makes no mention of the prisoners, but states that he was indebted to General IGNATIEFF, the Russian Minister, for the manner in which he had promoted the object of the negociations. Another telegram from St. Petersburg dated Thursday afternoon was subsequently received at the Foreign Office, stating that Prince GORTSCHAKOFF had communicated to Sir JOHN CRAMPTON a report received by the Russian Government from General IGNATIEFF, stating that the following English and French officers had been massacred by the Chinese:—Mr. DE NORMAN, Mr. BRUCE's Attaché; Lieut. ANDERSON, Chief of Lord ELGIN's Escort; Mr. BOWLBY, the Correspondent of the *Times*; Colonel DUBUT, Intendant of the French Expedition; one of the French Aides-de-Camp, and a Colonel of French Artillery, with others whose names are not given, the total number of victims being 19. The French Government has also received through St. Petersburg a despatch from Baron GROS, dated Pekin, 7th November, announcing that the Shanghae ultimatum had been accepted by the Chinese, that the ratifications of the treaty of Tien-tsin had been exchanged, that 60 millions of francs were to be paid to France as an indemnity, that the churches, cemeteries, and their dependencies, which formerly belonged to the Christians in the whole empire were to be restored; and that a *Te Deum* was to be sung in the cathedral of Pekin after the cross had been replaced on its summit.

The *Moniteur* of Sunday announces that on the 1st of January next British subjects will be allowed to travel in France without passports. It also contains an Imperial decree remitting all condemnations which have been pronounced for offences and infractions of the law in connection with the press, and nullifying all the press prosecutions which have been commenced. The *Constitutionnel* publishes an article, signed by its chief editor, M. GRANDGUILLOT, on the question of Austria and Venetia. It states that it is instinctively felt that a decisive crisis is approaching, and that all Europe seems to have apprehensions for the coming spring. It therefore urges Austria to anticipate the chances of a new struggle by coming to some arrangement in regard to Venetia, where the situation of Austria is so deplorable that "everything is possible except that which now exists."

KING FRANCIS II. has refused to abandon the defence of Gaeta, as suggested by France and England, and the bombardment, which had been suspended at the request of the EMPEROR OF THE

FRENCH during the progress of the negotiations, has consequently been resumed. It is understood that France will now withdraw the protection of her fleet, and leave the Sardinian squadron at liberty to open fire from the sea.

Accounts from Hungary state that the Conference at Gran was opened on Monday under the presidency of the CARDINAL PRIMATE, and that, after a sitting of four hours and a half, it terminated with a unanimous resolution to request the EMPEROR to grant the electoral law of 1848. The PRIMATE, in his closing speech, expressed the hope of an early convocation of the Diet, and exhorted the nation to union and confidence. The latest advices state that other comitats are following the example set by the Comitat of Pesth in reference to the demands which it has submitted to the Chancellor of Hungary.

From the United States we have received the PRESIDENT'S Message delivered on the 4th inst. Mr. BUCHANAN maintains that the election of Mr. LINCOLN involves no provocation for disunion, and states that the South is in no immediate danger therefrom. He considers secession revolutionary, and denies the doctrine of constitutional secession; but at the same time he contends that the Federal Government has no right to coerce seceding States into submission, and that coercion is impracticable. The PRESIDENT regards the visit of the PRINCE OF WALES as a most auspicious event, and says that its consequences cannot fail to increase the kindred and kindly feeling which he trusts may ever actuate the Government and people of both countries. After the reading of the Message an amendment was moved and carried to the effect that so much of the Message as related to the perilous condition of the country be referred to a select committee, composed of one member from each State. The Message is condemned as weak and unsatisfactory, by those of extreme opinions, from both North and South, and the agitation in the Slave States in favour of secession continues unabated.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Thursday the 13th the Duchess of Cambridge and Princess Mary, the Duke of Atholl, the Marquis of Chandos, Viscount Sydney, Lord and Lady Churchill, Sir G. C. Lewis, and General and Lady Alice Peel arrived on a visit. On Friday morning the Queen, accompanied by Princess Alice and Princess Mary of Cambridge, drove out in an open carriage. The Duchess of Cambridge also drove out, and visited the Duchess of Kent at Frogmore. The Prince Consort, with Prince Alfred and Prince Louis of Hesse, went out shooting. The Countess of Flahault, wife of the French Ambassador, was presented to her Majesty. Lord Clarence Paget left the Castle. In the evening the second dramatic performance of the season took place in St. George's Hall, when Mr. Tom Taylor's comedy of "The Babes in the Wood" was performed in the presence of the Queen, Prince Consort, and Royal family, the visitors at the Castle, and a large number of invited guests. On Saturday morning the Queen rode out on horseback with Princess Alice. The Prince Consort rode on horseback, accompanied by Prince Alfred and Prince Louis of Hesse. The Duchess of Cambridge and Princess Mary, the Duke of Atholl, the Marquis of Chandos, Viscount Sydney, Lord and Lady Churchill, the Right Hon. Sir G. C. and Lady Theresa Lewis, and the Right. Hon. General and Lady Alice Peel left the Castle. In the afternoon her Majesty held a private Investiture of the Order of the Bath. The Prince of Wales arrived from Oxford. The Marquis and Marchioness of Normanby, and the Rev. Canon Stanley arrived on a visit. On Sunday morning the Queen and Prince Consort, the Prince of Wales, Princes Alfred and Arthur, Princesses Alice, Helena, and Louisa, and Prince Louis of Hesse, attended Divine service in the private chapel. The Rev. Canon Stanley preached the sermon. On Monday morning the Prince Consort, accompanied by the Prince of Wales, Prince Alfred, Prince Louis of Hesse, and the Prince of Leiningen, went out shooting. In the afternoon the Queen held a Chapter of the Order of the Garter, and afterwards held a Privy Council. At the Council Parliament was ordered to be further prorogued from the 3d of January until the 5th of February, and a proclamation was ordered to be issued summoning it then to meet for the despatch of business. A proclamation was issued giving currency to the new bronze or mixed metal coinage. Lord Bloomfield was sworn as a Privy Councillor, and took his place at the Board. Earl Granville had an audience of the Queen. The Rev. Canon Stanley left the Castle. In the evening the Queen gave a grand dinner in the Waterloo Gallery to the knights and officers of the Order of the Garter and the great officers of State who had attended the Chapter. On Tuesday morning the Queen and Prince Consort, accompanied by Princess Alice, walked in the Home Park. The Prince of Wales returned to Oxford. Prince Louis of Hesse went to Kew and visited the Duchess of Cambridge and Princess Mary. The Duke of Cambridge, the Duchess of Sutherland, and the knights and officers of the Order of the Garter and the great Officers of State left the Castle. The Duchess of Kent and the Prince and Princess of Leiningen, visited the Qecen and took luncheon. On Wednesday morning the Queen and Prince Consort, accompanied by Princess Alice, Princess Helena, and Prince Louis of Hesse, left Windsor by a special train on the South-Western Railway for Aldershott. On arriving at the North Camp Station, where her Majesty's carriages were waiting, the Queen, Princess Alice, and Princess Helena drove in an open carriage and four round the camp. The Prince Consort and Prince Louis rode on horseback. Her Majesty visited the bakery, the stoves, the stables of the Royal Artillery, and the racket-court. In the afternoon her Majesty and the Prince Consort, accompanied by Princess Alice and Prince Louis, walked to the Prince Consort's Library. In the evening the Queen had a dinner party at the Pavilion, to which General Pennefather and the colonels commanding regiments were invited. On Thursday morning, in consequence of the heavy fall of snow, the parade of the troops was countermanded. The Queen, Prince Consort, Princess Alice, Princess Helena, and Prince Louis walked in the grounds adjoining the Pavilion, and returned in the afternoon to Windsor.

THE CABINET.—A Cabinet Council was held on Saturday at Lord Palmerston's official residence in Downing Street.

ORDER OF THE GARTER.—At the Chapter of the Order of the Garter held by the Queen at Windsor on Monday, the Duke of Newcastle, having previously received from her Majesty the honour of Knighthood, was duly elected a Knight of the Order. The Knights present were the Duke of Cambridge, the Marquis of Exeter, the Marquis Camden, the Earl of Clarendon, the Marquis of Normanby, the Earl of Carlisle, Viscount Palmerston, Earl Granville, the Marquis of Westminster, the Duke of Devonshire, and the Earl of Harrowby.

ORDER OF THE BATH.—At the private Investiture of the Order of the Bath held by the Queen on Saturday at Windsor, Lieut.-General Sir Charles Yorke was invested as a Knight Grand Cross; Major-General Larcom, Colonel Anthony Coningham Sterling, Mr. George Lloyd Hodges, and the Right Hon. Sir Edmund Walker Head were knighted, and invested as Knights Commanders; and Lieut.-Colonel Pratt, 23d Royal Welsh Fusileers; Mr. Edward Anderton Reade, Bengal Civil Service; and Mr. Francis Otway Mayne, Bengal Civil Service, received from the Queen their Badges as Companions of the Order.

THE NEW BISHOP OF WORCESTER.—The Rev. Dr Henry Philpott, Master of St. Catherine College, Cambridge, has been appointed to the Bishopric of Worcester, vacant by the death of the Right Rev. Dr. Pepys. It is expected that he will be consecrated in the parish church of Lambeth on the 25th January.

PARLIAMENTARY MOVEMENTS.—At the Privy Council on Monday Parliament was further prorogued to the 5th February, then to meet for the despatch of business. Lord Stanhope, eldest son of the Earl of Chesterfield, was elected for South Nottinghamshire on Tuesday without opposition.

THE CHANNEL FLEET.—The Royal Albert, Aboukir, Conqueror, Donegal, and Emerald arrived at Plymouth on Thursday afternoon. The Centurion was left at Lisbon to await the arrival of the St. Jean d'Acre.

THE VOLUNTEER MOVEMENT.—The Hon. Artillery Company, who stand at the head of our Volunteers both in rank and seniority, celebrated their 250th anniversary on Monday evening by a dinner at Willis's Rooms. Lieut.-Colonel Lord Colville presided, and about 600 gentlemen were present, including the Lord Mayor, General Lord Rokeby, General Sir R. Dacres, Colonel Lord Frederick Paulet, Colonel M'Murdo, Colonel Lindsay of the St. George's Rifles, Colonel Hicks of the London Brigade, Colonel Palmer, Alderman Copeland, M.P., Sir James Duke, M.P., Mr. Sheriff Lusk, &c.—The ceremony of distributing the prize medals to the winners at the late competition of the London Brigade at Wimbledon, took place on Saturday evening in Guildhall on the return of the regiment from its march out to Stoke Newington. Lieut.-Colonel Hicks presented the medals to the successful competitors, who were as follows:—Capt. Hopkinson, Capt. Finch, Corporal Thorpe; Sergeants Falconer, Jones, Purchase, Stuckey, and Cuthbert; and Privates Crawley, Gardiner, Barron, Kelly, Waldron, Butler, Frere, and Young. The following officers and privates obtained the honour of ranking as marksmen: Captain Lord, Sergeants Cuthbert, Combe, Jones, and Stuckey, Privates Barron, Cranwell, Waldron, Hutchinson, Butler, and Wyatt.—The distribution of prizes recently competed for by the West Middlesex took place in the Theatre of University College on Monday evening, Lord Radstock, colonel of the corps, in the chair. The successful competitors were—Captain Dear, Lieut. Markham, Ensign Morris, Corporals Taylor, Clark, and Key, Privates Picton, Watson, Barker, Lee, De Morgan, Hall, and Herring.—On Saturday the 29th Middlesex, to the number of 600, met at their head-quarters Mornington Road under the command of Lord Enfield, and, headed by the band which was preceded by a fine goat belonging to Sergeant Shields, proceeded through Regent's Park, down Baker Street as far as the New Road, up Lisson Grove, Church Street, Edgware Road, Oxford Street, and through Tottenham Court Road, to head-quarters.—About 300 members of the 39th Middlesex (Finsbury) also marched out on Saturday evening, preceded by their brass band, under the command of Lieut.-Colonel Colvill. They proceeded to Stoke Newington, and, after halting a short time, returned to head-quarters and were dismissed.—A silver bugle was presented to the 40th Middlesex (Central London) on Monday, as a testimonial from the inhabitants of Holborn. The corps and the cadets attended the church of the Holy Trinity, Gray's Inn Road, on Sunday last.—The 4th Middlesex (North London) marched out by torchlight on Saturday evening under the command of Lord Truro. The Zouave company led the van, followed by the general body and the cadet corps, and accompanied by their brass band and the drums and fifes of the Grenadier Guards. The torches were carried by the boys of the City of London and Islington Shoeblack Brigades. The line of route was down High Street, Islington, through the principal roads to Stoke Newington, returning through Kingsland, along the Downham Road, through the Lower Road, Islington, to head-quarters.—On Tuesday evening a crowded public meeting was held at the Horbury School Rooms, Ladbroke Road, Notting Hill, the Hon. E. Curzon in the chair, at which it was resolved to form a cadet corps in connection with the South Middlesex.—On Saturday the 22d Surrey marched from head-quarters in the Westminster Bridge Road to New Cross. This corps is daily increasing in efficiency and strength.—The concert in aid of the band funds of the 1st, 2d, 3d, and 4th companies of the 5th Essex, took place on the 12th inst., at the Beaumont Institution Mile End Road, and was very successful.—On Tuesday afternoon a silver bugle, subscribed for by the ladies of the district, was presented to the 4th Kent in the Town Hall, Woolwich.—The ladies of Greenwich and Blackheath, in order to testify their appreciation of the services of the 5th Kent (Blackheath) Artillery, have subscribed a handsome sum for the purpose of presenting a silver bugle to the corps.—A silver bugle, the gift of the ladies of the neighbourhood, was presented to the 23d Kent on the 12th inst., in the garden court of Penshurst, the seat of Lord De Lisle. The bugle was presented by Lady Louisa Wells, wife of the captain of the corps and sister of Lord Elcho. This corps already numbers 67, though only formed from three rural parishes—Penshurst, Leigh, and Chiddingstone. The 3d Hants Artillery (Portsmouth civil service) gave a tea party and soiree on the 11th inst. in aid of their band fund.—The 1st Hants (Bitterne), 2d Hants (Portsmouth), and the 3d Hants Artillery are now formed into one brigade for administrative purposes, under the title of the 1st Administrative Brigade of the county of Hants.—The services of the Volunteer Artillery Company just formed at Etruria (Staffordshire Potteries) have been accepted by Government. The company is numbered the first in the county of Stafford.—The Rugby School Corps paraded for the first time in their uniform on the 11th inst. On the 13th the corps again assembled in uniform, and in the presence of a large number of the gentry of the town and neighbourhood was presented with a regulation bugle by the commandant, Major Johnstone.—At the Leeds Grammar School a Volunteer Corps has been established under the title of the Grammar School Cadet Corps.—The shooting contest for two silver cups given by Major Holdsworth, by the 1st and 2d companies of the Wakefield Corps, took place on the 12th, when the 1st prize was won by Private Grace, and the 2d by Private Torty.—On Saturday evening a meeting was held at Wortley, Lord Wharncliffe in the chair, at which it was resolved to form a rifle corps in the Wortley district.—A meeting of commanding officers of Volunteer battalions in Yorkshire was held at York on the 12th inst., when it was resolved to form an association for the encouragement of rifle shooting throughout the county.—The Smithdon Corps, the 17th formed in the county of Norfolk, was inaugurated on the 13th at Hunstanton. In the course of the day 70 persons took the oath and in the evening Mr. L'Estrange entertained the whole party at dinner.—At Aylsham there has been a competition, open to the whole county, for a silver cup and two money prizes. The cup was won by Private Soame of the Aylsham Corps; the 2d prize by Private Medcraft of the Dereham company; and the 3d, by Private Reed of the Norwich Battalion.—The 2d Carmarthen Company was inspected on the 12th, in the presence of a large concourse of spectators, by Major Roney, Inspector for the South Wales district.

Foreign.

FRANCE.—The *Moniteur* of Sunday contained the following paragraph announcing the abolition of passports for British travellers in France:—

"The Emperor has decided that after the 1st of January next, and by reciprocity, the subjects of her Majesty th Queen of Great Britain and Ireland coming into France shal be admitted and allowed to travel about without passports.

The Minister of the Interior will give instructions to his agents to see this measure carried out."

The *Moniteur* contains a decree organising the Ministry of the Interior into five departments, under Directors-General; another suppressing the office of Secretary-General to the Ministry; and another appointing eight Prefects and several Councillors of State. It also announces the appointment of Mgr. Forcade, Bishop of Basse-Terre (Guadaloupe), to the Bishopric of Nevers: the Abbé Magnin, Superior of the College for Priests at Annecy (Haute-Savoie), to the bishopric of that city; the Abbé Ravinet, Vicar General of Paris, to the Bishopric of Troyes; and the Abbé Cristophe, curé of La Chapelle St. Denis to the bishopric of Soissons. These four Bishops have been appointed without reference to Rome, the Emperor, as in the case of the Abbé Marot, having nominated them without the previous sanction of the Pope. The *Moniteur* announces that on New Year's Day the Emperor will receive the Diplomatic corps, the constituted bodies of State and deputations from the National Guard and the army. Their Majesties will not receive on the 2d January. Count de Persigny left Paris on Saturday for London, on account of the approaching accouchement of the countess, and M. Billault has resumed the post of Minister of the Interior during his absence. Count de Persigny since his entry upon office has effected several reforms in the department of the Interior. His attention has been directed to the manner in which the administration of the Communes throughout France is conducted, and it is said that he is resolved as much as possible to introduce the principle of self-government among them. The local authorities will be permitted to adopt such measures as may appear most conducive to the interest of the inhabitants of the commune. This will be the first step towards an administrative decentralization which will be very popular in the provinces. Count de Persigny has released the *France Centrale* from the suspension for two months inflicted by M. Billault. The trial of the *Union* came before the Courts on Wednesday, when the Imperial Procurator declared that legal proceedings were discontinued on account of the amnesty granted by the Emperor. The *Moniteur* of Thursday contains a decree, remitting all condemnations which have been pronounced for offences and for infractions of the law in connection with the press, and nullifying all prosecutions which have been commenced.—A pamphlet entitled "The Emperor Francis Joseph I. and Europe," has been published in Paris, and is reported to represent the views of the Emperor Napoleon and the French Cabinet on the proposed sale of Venetia. It laments the state of things in Venetia, and says that it is impossible to stop the Italian movement which aims at its deliverance. It says that the possession of Venetia is the permanent cause of [illegible] treaty of Campo Formio disposed of Venice against law and right; and that the sacrifice of Lombardy was more injurious to Austria than would be the loss of Venice. It contends that the interest of the peace of Europe demands the cession of Venetia by means of compensation as the only solution of the question, and that Europe would be grateful to the Emperor of Austria for such a solution; for "if war breaks out next spring France, Germany, England, and Russia will be dragged in to take part in the contest, which will end in a general conflagration." It points out the stagnation which these threatening warlike complications create throughout the money markets and commerce of the world, whilst the national bankruptcy of Austria is looked upon as a European calamity. The *Constitutionnel* of Thursday publishes an article on the same question, signed by its chief editor, M. Grandguillot, of which the following is a summary:—

"It states that solutions of the question are everywhere sought after, because it is instinctively felt that a decisive crisis is approaching. All Europe seems to have apprehensions for the coming spring. He is convinced that the wisdom of the Government of the Emperor will know how to prevent a struggle henceforth without any object. The situation of Austria in Venetia is deplorable. Everything is possible in Venetia, except that which now exists. M. Grandguillot expresses his conviction that Austria, who knows how provinces are gained, will also remember how they are lost. He believes that Baron Von Schmerling sees things in a different light from General Benedek, and that the Baron has also weighed the chances of a new struggle."

A workman of Paris is said to have discovered a simple means of preserving water and gas pipes from rust, by enveloping them in a thick coating of clay. Such is the importance of this discovery that the city of Paris has granted the man a pension for life.

SPAIN.—The chiefs of the Moderados have deliberated on their future course of conduct. Senor Gonzalez Bravo stated the necessity for their coalescing either with the absolutist or revolutionary party, and expressed his intention of joining the latter. One of the Madrid journals asserts that information had been received that 30,000 tracts and other works defending Protestant doctrines, had been printed at London in the Spanish language, and that 60 smugglers had undertaken to introduce them into Spain. Lisbon and Gibraltar are stated to be the head-quarters of this propagandism, which is under the direction of two converts—F. Ruet and Pablo Sanchez.

HOLLAND.—The Dutch House of Commons having rejected the Colonial Budget by a majority of 41 to 30, M. Rochussen, the Minister for the Colonies, has sent in his resignation.

SWEDEN.—The Dowager Queen of Sweden, widow of Bernadotte, died on Tuesday evening. It is mentioned as a singular incident that her Majesty was about to visit the theatre to witness the performance of Calderon's play, "Life is a Dream."

DENMARK AND THE DUCHIES.—The concessions which Denmark has offered to make on the question of the Duchies, and which the English Cabinet has supported at Berlin, are simply with the view of forming a provisional state, which will serve to prepare the way for arrangements to be made hereafter between the Government and the States when public opinion is calmer. Denmark is willing to grant a deliberative voice to the States of Holstein on all laws concerning person or property, and to fix the proportion of Holstein in the common expenses of the monarchy at 850,000 dollars, that sum not to be increased without the consent of the States, but the Supreme Council af Denmark alone to have control over its employment. Should the German Diet accept this arrangement, Denmark will make the following concessions to Schleswig, as a free and spontaneous act:—

"1. German children may be confirmed in their mother tongue. 2. German masters are allowed for private tuition. 3. The inhabitants of Schleswig-Holstein may meet in literary and scientific societies, provided that those societies have not a political object. 4. An amnesty for all political offences."

SWITZERLAND.—Count Cavour has addressed another note to the Federal Council, stating that he withdraws, under certain conditions, the demand contained in his note of the 10th of November last for the removal of the sequestration placed upon the income of the Bishopric of Como, in the canton of Tessin.—On Saturday the President of theFederal Council, in reply to the interpellation of M. Almeras, said, "The policy of the Federal Council in reference to Savoy was and remains passively to await direct negotiations with France."

HANOVER.—The Government has received notice that Denmark will reserve the question of the redemption of the Stade Dues for the Elbe Tolls Commission. The maritime question and that of the general revision of the tariff in force on the Upper Elbe will thus be brought together.

BAVARIA.—Baron Verger, Bavarian Minister at Turin, having been recalled, the Sardinian Minister has received orders to quit his post at the Bavarian Court.

AUSTRIA.—Count Linares had arrived from Funchal, with a despatch dated the 11th inst., stating that the climate of Madeira agrees well with the Empress of Austria, whose health has improved. It is reported at Vienna that the Pope, guided by a conciliatory spirit, has consented to a revision of the Austrian Concordat. The *Wiener Zeitung* of Saturday contains four Imperial autograph letters, dated the 13th inst. The first relieves Count Goluchowski of his functions as Minister of the Interior. The second appoints Baron Schmerling Minister of the Interior. The third nomi[illegible] Hein von Plener Minister of Finance. The fourth confers the Grand Cross of the Order of St. Stephen on Counts Rechberg and Goluchowski. The following sentence has been pronounced on M. Richter, who was found guilty last week of having induced a public functionary to abuse his official power by corrupting General Eynatten:—

"The defendant, Francis Richter, is condemned to imprisonment for one month, during three days of which month he is to have nothing but bread and water; to pay a fine of 25,634fl. to the charitable fund of the city of Vienna, and pay the costs of the trial. The defendants, John Krumbholz, the manager of Richter's cotton mills, and Henry Bayer, Richter's agent, having been found innocent, are acquitted, and the State has to pay all costs."

HUNGARY.—The Conference of Gran was opened on Tuesday morning at 10 o'clock, and was brought to a close after a sitting of four hours and a half. M. Desseroffy demanded that the Imperial diploma inaugurating the new state of things, should be established on an inviolable legal basis, which would at once remove any doubts concerning the national rights. He said that "a Diet constituted according to the Electoral Law of 1848 could alone be considered to form such a basis." Count Barcoczy censured the electoral law of 1848, and spoke against the privileges of the nobility as established by that law. He also advocated equal rights for everybody. Finally, it was unanimously resolved to request the Emperor to grant the electoral law of 1848. The Cardinal Primate, in his closing speech, expressed the hope of an early convocation of the Diet, and exhorted the nation to union and confidence. A banquet afterwards took place in the Primate's palace, when speeches of a conciliatory character were delivered. The healths of the Hungarian and other Councillors of State were drunk amid loud and enthusiastic cheering. Previous to the Conference the Primate went to Vienna, and after having had a long conference with Baron Vay, was received by the Emperor. Several of the other comitats are following the example set by the Comitat of Pesth in reference to the demands which it has addressed to the Chancellor of Hungary. According to the lithographed correspondence published in Vienna, the revision of the Concordat will for the present be limited to the re-establishment of the religious privileges of the Primate of Hungary. In consequence of the numerous attacks recently made on the imperial eagles in Hungary, the Austrian Government has ordered that they shall be everywhere removed, except from the buildings belonging to the Ministries of Finance and War.

DALMATIA AND CROATIA.—Telegrams from Zara, dated the 16th and 17th inst., state that strong and universal agitation prevailed in that city and in the provincial towns against the administrative incorporation of Dalmatia with Croatia, without that project being submitted for the approval of the Dalmatian Diet.

VENETIA.—According to reliable information Lord Bloomfield and Lord A. Loftus, the English Ambassadors at Vienna and Berlin, have been summoned to London to take part in deliberations on the question of Venetia.

THE ADRIATIC.—The Archduke Maximilian has just resumed the command of the Austrian squadron, which has been placed on a war footing. The Prince has hoisted his flag on board the Emperor steam line of battle ship, at Pola. Rear-Admiral Bourguignon is second in command, with his flag on board the Schwartzenburg steam-frigate. The Archduke was to leave Pola on the 20th, on a visit of inspection along the Austrian shores of the Adriatic.

ITALY.—Accounts from Gaeta state that the bombardment was suspended last week at the suggestion of the Emperor of the French, in the hope that a peaceable arrangement might be arrived at, and that King Francis II. would act upon the advice of England, France, and Russia, and withdraw from Gaeta. His Majesty however refused to surrender, and sent off despatches to Vienna, Berlin, St. Petersburg, and Madrid, calling for help, and entreating those Powers to urge France not to withdraw from him the protection of her fleet. At the same time his Majesty despatched General Latour to Paris on a special mission to the Emperor Napoleon. The King has also issued a manifesto, calling upon the Neapolitans to make a last effort to preserve their nationality. He guarantees to maintain their liberties, and to grant distinct Parliaments to the Two Sicilies, and an amnesty. If compelled to succumb, he will maintain, he says, the firm hope of returning to his dominions. His Majesty has also issued a proclamation to the troops, praising their courage, and calling upon them to defend the fortress to the last. The truce has therefore terminated and the bombardment was to recommence on the morning of the 19th inst. An Aide-de-Camp of Admiral Barbier de Tinan left Paris on Thursday morning for Naples with despatches from the Minister of Marine. It is presumed that these despatches contain orders to the Admiral to withdraw from the station unless the King desists from the hopeless defence of Gaeta. Before the temporary suspension of hostilities a successful *coup de main* was made by a small body of Royalists. They succeeded in surprising the Piedmontese outposts and blew up two houses of the Borgo, having brought barrels of gunpowder with them for that purpose. During the fire of the Piedmontese against the fortress a large shell burst in one of the squares, close to the King. Some of the houses have suffered considerably, and 15 persons were wounded by the bursting of a shell in the hospital.—The Naples journals assert that the Abruzzi and Calabria are quiet, and that the revolutionary movement in the province of Avellino had been partially suppressed. They also state that the Lieutenancy at Naples is engaged in arming the national guards, who are to be despatched to Upper Italy. Fresh reinforcements of Sardinian troops are expected at Naples. It was reported that the steamer Dora, having on board 750 Garibaldians, had been lost near Terracina, and that the Garibaldians were saved, but the report has not yet been confirmed.—An attempt was made on the 7th inst. to assassinate General Dunne, the English General who took such a brilliant part in the exploits of Garibaldi. He received a pistol shot in the groin as he was entering his house. No vital part was touched, but the ball remains in his body, and cannot be traced. The suspicion falls on a Sicilian Major who had threatened the General because he refused him his brevet. The latest accounts state that he is still alive.—The Naples journals highly approve the project of the Minister Minghetti, which aims at administrative de-centralization. It is said that 2000 Pontifical troops are about to march against the town of Ponte-Corvo, to overthrow the Provisional Government established there in the name of King Victor Emmanuel. The town however has been occupied by Piedmontese troops since the 11th inst., and Benevento is also lost to the Holy See. Some reactionary movements have taken place at Cagli, Gubbio, and several other places in the March provinces and in Umbria. The province of Viterbo continues in a state of insurrection. It is asserted that the French are preparing to evacuate the province.—Accounts from Rome announce the death of Cardinal Gaude. A Consistory will be held on Monday next, when the Pope will address an allocution to the Cardinals. Several Bishops, three of whom are Suburban, have been appointed. The Pontifical Zouaves have re-entered Rome. The *Populo dell' Italia*, the organ of Mazzini, has published three addresses to the House of Commons, the Italian Parliament, and the Emperor of the French, calling for the withdrawal of the French troops from Rome. The Sardinian Government has prohibited the circulation of these documents. Meanwhile the Italian journals, which are believed to reflect the opinions of the Sardinian Ministry, are discussing with every amplitude of detail a plan of investing the Leonine City at Rome with a neutral character, and making it the metropolis of the Catholic world. The *Giornale di Roma* contains a pastoral addressed to his flock by the Cardinal Archbishop of Perugia, on the occasion of the festival of the Immaculate Conception, in which he warns them

to be on their guard against the insidious wiles of Satan, who is doing his utmost to turn them from their faith, by the large number of false Bibles now distributing among them, offered as a gift or for a trifle, by unknown hands. Impious almanacks, and little books, and shameless writings, he says, are also spread in the towns and country places, attacking the sacrament of confession, the Divine authority of the Church, the inviolable dignity of its chief, &c. Against these devices of the devil the Cardinal Archbishop says that the best safeguard and weapon is constant recourse to the rosary.

RUSSIA.—In consequence of the revolutionary movements in the Principalities Russia has despatched a threatening declaration to Prince Couza, and has concentrated 12,000 men in Bessarabia. The Russian Government has commissioned the Thames Iron Works Company to build an iron-cased frigate of the Warrior class, but larger, viz., 6320 tons, builders' measurement, and to construct other vessels of the same class from year to year. The vessel is to be fitted with engines of 1250-horse power.

TURKEY.—An angry discussion has taken place between the Porte and the Sardinian Minister on account of some Sardinian vessels having left for the Danube with munitions of war, supposed to be destined for Hungary or Servia. Three of the vessels were stopped by order at Sulina, and two have proceeded. Those which were stopped have now been released, and are to be allowed to take their cargoes of munitions back to Genoa. The Sultan has commenced retrenchments in the expenses of the Palace, and Tefick Effendi has been appointed to replace Mouktar Pacha as Minister of Finance. New commercial treaties are negotiating between the Porte and England and the Porte and France. By the advice of the English and French Ambassadors, a Roumelian commission of investigation has been appointed, under the presidency of Ismail Pacha, of the Danube. A commission of inquiry has also been named for Bosnia and the Herzegovina. News from Podgoritza states that a conflict had taken place between the Turks and the Montenegrins.

THE PRINCIPALITIES.—Accounts from Jassy deny that the Moldo-Wallachian Government participates in the Hungarian movements. The plan of the revolutionary propaganda is, by means of a general insurrection against the suzerainty of the Porte, to constitute a great independent Roumain kingdom, which shall unite all the Slave countries bordering on the Danube.

THE HOLY LAND.—An American Jew at New Orleans has bequeathed 10,000*l.* for the building and endowment of alms-houses for infirm and destitute Israelites at Jerusalem. An agent has already arrived to carry out the bequest, and the houses intended to be used for the purpose mentioned are expected to be ready for occupation before the expiration of the winter.

CIRCASSIA.—News of further defeats of the Russians has been received from Circassia. The mountaineers were commanded by Ismail Pasha and Mehemet Bey.

INDIA.—The Bombay mail has arrived with news from that Presidency to the 26th, and from Calcutta to the 17th November. The following are the details:—

Bombay.—The import business is absolutely suspended, on account of the resentment against the income-tax. The Volunteer movement is making extraordinary progress in Bombay and throughout India.

Calcutta.—Lord Canning was to leave Calcutta on the 19th November by rail for Rajmahal, and to proceed thence by steamer to Benares, arriving at the latter city, it was expected, in the first week of December. His lordship goes from Benares to Jubbulpore. It was considered uncertain yet whether he would return or proceed from Central India to Bombay. It was still supposed that Lord Elgin would be his successor. The news of Mr. Laing's appointment has given great satisfaction in Calcutta.

Dinapore.—The 5th European Regiment on account of its mutinous conduct has been struck out of the Army List, by Sir Hugh Rose; all its non-commissioned officers have been reduced to the ranks, and the men, divided into five equal portions, draughted into the five remaining regiments of the Bengal Army. The principal mutineers were previously tried by Court Martial, which sentenced Private William Johnson to be shot, Private Henry Marnham to penal servitude for life, Private Henry Shields to penal servitude for 14 years, and Private Peter Hutchinson to two years imprisonment with hard labour. These sentences were fully carried out, Sir Hugh Rose having declined to accede to the Court's recommendation of Johnson to mercy on account of his youth and good character.

Hyderabad.—The Nizam of Hyderabad has consented to cede to the Indian Government all the land on the left bank of the Godavery. This cession will put us in possession of the richest cotton district in India, which will in three years be opened up by the railway from Bombay to Nagpore.

Kokhan.—Golonel Irby, of her Majesty's 51st Foot, has arrived at Sircenugger, after a long shooting excursion, extending to within four marches of the town of Yarkund. He has brought back the head of the late Adolphe Schlagenweit, and particulars as to his murder, three marches from Yarkund, on the way to Kokhan.

Bithoor.—In consequence of the rumours that Nena Sahib was still in existence, the Governor-General called for a statement of facts from the authorities on the frontiers best able to report on the subject. The returns are to the effect that he is dead, and that no doubt has existed on the subject for a long period of time.

CHINA.—The following despatch was published by the Foreign Office on Saturday afternoon:—

"Intelligence has been received at the Foreign Office this afternoon, through St. Petersburg, from Pekin, up to the 9th of November, stating that peace was concluded on the 26th of October, and the ratifications exchanged. On the 5th of November the allied forces evacuated Pekin, and the Emperor was expected immediately to return to his capital."

Sir John Crampton telegraphed on Thursday to the Foreign Office that Lord Elgin, in a letter of the 8th November, has informed him of the ratification and publication of the treaty with China, and of the march of the army to Tien-tsin. His lordship makes no mention of the prisoners, but states that he was indebted to General Ignatieff for the manner in which that Minister had promoted the object of his negotiations. The *Moniteur* also publishes a despatch from Baron Gros, dated Pekin, 7th ult., received *viâ* St. Petersburg, confirming the signature of peace, and stating that the Shanghai ultimatum had been accepted by the Chinese, and that the ratifications of the treaty of Tien-tsin had been exchanged. 60,000,000f. are to be paid to France as an indemnity. The emigration of Coolies had been authorised by the Chinese Government. Churches, cemeteries, and their dependencies, which formerly belonged to the Christians in the whole empire, are to be restored. A *Te Deum* and *Domine Salvum* were to be sung in the Cathedral of Pekin after the replacing of the cross on its summit. The *Monitevr* also publishes a despatch from General Montauban, from which it appears that there were some inaccuracies in the accounts of the plundering of the summer palace of the Emperor. The General states that the booty was divided between the allies. The following telegram has since been received from her Majesty's Minister at St. Petersburg, dated Thursday afternoon:—

"Prince Gortschakoff has communicated to me the following report, from General Ignatieff, of the Europeans massacre by the Chinese:—'English—De Norman, Mr. Bruce's Attaché; Anderson, Chief of Lord Elgin's escort; the correspondent of *The Times*; French—Dubost, Intendant of the French Expedition; one of his Aides-de-Camp; and a Colonel of Artillery. These are the only names cited by General Ignatieff, but the total number of victims is 19."

A supplement to the *Gazette* of Tuesday contained a voluminous series of despatches relating to the important events announced briefly by the telegraphic despatch from Alexandria last week. These documents fill several columns of the daily papers. The principal incidents connected with the occupation of Pekin have been described in the extracts from the local journals quoted last week; but some interesting facts relating to the prisoners, and the cruelties which they endured, are given below in the language of their own reports and depositions. The French Government have also received a despatch from the Count de Bastard, which is of considerable importance as bringing out the treachery of the Chinese much more prominently than our own accounts, as he states that Heng ki was actually at the English head-quarters with a flag of truce at the very moment Mr. Parkes and his party were surrounded and made prisoners. The following is an extract from Mr. Loch's narrative addressed to Lord Elgin, describing the treatment received by Mr. Parkes and himself:—

"When we found we were prisoners we dismounted, our arms were laid hold of and twisted behind us. In this position we were taken across the stream, over a bridge formed by a boat, and shoved down on our knees in front of Sang-ko-lin-sin. I was knocked forward and my head rubbed in the dirt. Sang-ko-lin-sin spoke to Mr. Parkes with much vehemence. He accused Mr. Parkes of being the cause of all the difficulties that had arisen, and of the action that was now taking place. He then ordered our being taken to the Prince of I, and sent an officer to tell our escort to return to Chang-kia-wan. We listened anxiously for any firing or signs of resistance from that quarter, but heard none. We were removed to a tent close by, where another general was seated; he treated us more civilly, and allowed us to sit down until the arrival of a cart. While waiting, two French prisoners, belonging to their commissariat, were brought in from the front. The firing becoming much heavier, a message came for the general whom we were with, and a cart was sent for us at the same time, into which all five of us were put, and, surrounded by an escort of some 20 men, were hurried into Tungchow. The jolting was great over the rough roads of the country, but that over the paved streets of Tungchow was most painful to bear. The Prince of I having left the city, we followed him out on the Pekin road. Crowds of soldiers were hurrying into the city, and we saw large camps on each side of the road. After going about six li we came to a large bridge which crosses the canal; this we passed over, but apparently our escort had difficulty in finding where the Prince of I was, for we were turned back, and had to recross the canal, and were taken to a large camp a short distance from the bridge. There we were taken out of the cart, and taken before Jui-lin, one of the principal secretaries of state; we were made to kneel down, and an examination commenced; this went on for some time. The heat and dust had greatly exhausted us, and Mr. Parkes, to bring this tiresome and useless examination to a close, pretended faintness, and we were moved to a room of a small farm-house close by. Here we were allowed to lie down for a short time, but were soon made to get up by people coming to search us. They took from us all our letters, papers, watches, &c. We were then removed to a small temple, and taken before some mandarins whom Mr. Parkes recognised as belonging to the Prince of I's suite. They made us kneel, and commenced a long and troublesome examination, which was suddenly interrupted evidently by some panic, either by an advance of our troops or from some other cause. Our examiners hurriedly disappeared, and a number of soldiers rushed in with loud cries, who bound our hands tightly behind our backs; from their language and gestures Mr. Parkes anticipated we were about to be executed, for they shook their spears and swords at us in a threatening manner. We were taken thus bound into the court of the temple, when some change seemed to take place in their plans, for they hurried us back again, and took us outside, when they put us into a common country cart, which they drove off at a quick pace; this, with our hands bound behind us, caused us agonies. We soon got on to the Pekin paved road, but had they not occasionally taken the cart on to the side road I do not think we could have lasted out the seven hours we were in it. From pain, dust, and heat our thirst became intense; once or twice they gave us water. After a time they took out one of the French and Sikh prisoners and put them into another cart, some of their officials taking their place in ours. These men caused me great tortures by lifting up my arms, which seemed tearing them out of their sockets. The old Sikh sowar behaved with calm endurance. I told him not to fear, for we were in God's hands. 'Ah! Sahib!' he said 'I do not fear; I am sixty; if I do not die to-day I may to-morrow; and I am with you. I do not fear.' It was getting dark ere we reached the suburbs of Pekin. They were not so long as we expected, for after about half a mile we reached the gate, which from its great height has an imposing appearance. The crowds of people could hardly be kept back who pressed forward to see us. The street we entered on passing the gate was some 50 feet broad, but the houses on either side were small, and only of one story. Darkness coming on we could not see anything even if we had had the strength to look about us. We rolled through street after street, and the way seemed interminable; we passed through another gateway, and shortly afterwards turned into a large courtyard. Mr. Parkes saw on the lanterns Hsingpoo, or the Board of Punishments. We were kept in the court some quarter of an hour. Mr. Parkes was then pulled out, and taken before the examiners. After 10 minutes anxious suspense I saw him pass loaded with chains. I was then taken into a small room dimly lighted. Chains and various other evidences of prisons and tortures were hung about the walls. The examiners sat behind a table, in front of which I was forced down upon my knees; a number of questions were put to me, which of course I did not understand, but a man who seized me by the hair and another by the ear and beard gave me a shake and a cuff each time I failed to answer. After five minutes of this I made signs I wanted my hat that had been knocked off and was lying in front of me; at this the examiners abused me, and I was knocked forward on my face, a large iron collar was put round my neck with a long heavy chain attached to it, and I was removed into an inner court-yard, where by the dim light of a lantern I saw Mr. Parkes seated on a bench. Few words passed between us; two chains were here made fast to my legs, passing through the long chain which was attached to the collar round my neck. We were then made to get up, and the saddest moment of the day then came, for I saw Mr. Parkes being led away in one direction while they took me another. I could only say 'God bless you, Parkes!' and we were separated. They led me through long open passages into a court-yard, which had a long barn-like building on one side with grated windows, through which a strong light shone. The gaolers rapped at the door, when the most unearthly yell arose that I ever heard, the door was opened with a bang, and I found myself surrounded by about 40 half naked savage villanous looking fellows as I ever saw in my life. They were criminals of all descriptions, murderers, thieves, &c.; some 20 of them were chained like myself. One end of the room seemed kept apart for their use; at the other end were the prisoners who were not chained, and seemed of a better class. As soon as I had entered the door was closed behind me, and the gaolers pinioned my elbows, although my hands were still bound. By this time I had lost all use of my fingers; they felt bursting, and my hands were greatly swollen. After a little time they loosened the rope at my wrist, but only to put on irons. They gave me a cup of tea, which was very grateful, for I was greatly exhausted. I was glad to see that they intended to place me among the better lot of unchained prisoners, for the others were covered with itch and vermin. They laid me down on a board like a guard-room bed, and chained me up by my neck chain to a beam over my head. I was able to lie at full length, and worn out utterly I fell into a deep sleep. The next morning my waking was very sad. A little after daylight the doors were thrown open, and we were unchained from the beams, and everyone went into the court-yard. The yard was about 16 yards square, and a large verandah was in front of the prison. In one corner of the yard was the cook-house; on the other three sides were small wards or prisons, for one or two favoured prisoners. At about 9 o'clock two mandarins came in to superintend the distribution of the food for the prisoners. The food the Government supplies is only boiled millet, with occasionally a little salt vegetable; a large bowl twice a day is given to each prisoner. The millet is brought in in a large tub by two men, and served up hot. Only those in chains are on this food; the rest of the prisoners, among whom I was included, received some rice, green vegetables, and a little chopped meat, and French beans, with either bread or biscuit; this we got twice daily. This food is found and paid for by one of the prisoners, it being a way by which they are allowed to work off a portion of their term of imprisonment. The man who supplied us was imprisoned for thieving, and the cost of feeding the prisoners could not have amounted to less than two taels a day. The prisoners were very civil and kind; three were appointed to watch and guard me, and at night one always sat at the head of my bed. They helped me by carrying my chain, by getting me water to wash my face and hands, and by getting me a seat to myself if I wanted one. I found out that of my three attendants two were murderers, and the third was imprisoned for biting his father's finger off. I was surprised to see the good and kindly feeling that existed between all the prisoners; they seemed to feel for each other, and I have often seen a man who had a little better food than his neighbour give him half. During the 12 days I was in prison with them I only heard one quarrel. On the first morning of my imprisonment the officials of the prison, two white-button mandarins, made me go down on my knees, and asked me a number of questions which I did not understand. In the afternoon I was taken into the courtyard again, and made to kneel for a long time before a number of red-buttoned mandarins, who from their manner evidently abused me. I was then taken back and chained up. I had succeeded in saving my prayer-book up to the time of being brought into the prison, but it was then taken from me; by signs, however, I got it returned to me the second day. What attracted the greatest curiosity amongst the prisoners and the mandarins who visited me were my boots and this book. The second and third day I was also much visited, sometimes had out to kneel and be abused, other times the visits seemed private, after then I was seldom visited. I made various efforts through the official visiting mandarins to obtain an interview with Mr. Parkes, and although they sometimes by signs led me to hope that such might be granted, it never was. I heard of Hang-ta-jin having been to see Mr. Parkes frequently, but I was utterly ignorant of the subject of his visits. The days passed wearily by. I calculated and re-calculated the time that would be required for the various movements; I found reasons for delay as days passed and no change came to our situation, but I fed myself with the hope that we should all be released. I had many anxious thoughts as to what had happened to the rest of our party; our impression was that they had escaped. So the days passed until the morning of the 29th September: there had been two great gaol deliveries during the period of my confinement, and on the 29th all excepting the men in chains were liberated. About the middle of that day, while I was lying down, one of the men who watched me, putting his mouth close to my ear, whispered "Pa-ta-jin and Hang-ta-jin," and made signs my iron collar was to be removed. About two hours afterwards I was taken into one of the side rooms, and there Hang came and ordered my chains to be taken off. I was then removed to another yard, and shortly afterwards joined by Mr. Parkes. That moment repaid me for much suffering. I did not know whether this was our final release or not, and it was not till the evening that I learnt all that had occurred from Mr. Parkes. We were placed in separate carts, but this time in the proper carriage-cart, well cushioned. We were taken to the Rao-miao temple, which is close to the north gate. Here we found a good room prepared for us, and another for our attendants, who were some of our old gaolers. We had a good-sized court-yard, in which we were allowed to walk. A remarkably fine guard of Manchu cavalry, consisting of 20 men, had us under their especial charge. Hang accompanied us to the temple, but soon left, promising to return in the morning. I then learnt from Mr. Parkes of the frequent visits Hang had paid him during his imprisonment, and I cannot be too grateful to Mr. Parkes for his noble and disinterested conduct towards me in his firmly refusing to accept any of Hang's offers of release unless he was accompanied by me. In fact, during the whole of the first day, and during the latter portion of our imprison-

ment, which we passed together, I cannot express myself in terms of too great admiration of his fearless and determined bearing throughout the trials and difficulties that surrounded us; and I am convinced that one great cause of the happy termination to those dangers, was the firm and consistent language he held to those mandarins who were sent to attempt to gain some admission from him, either through his hopes or fears. From the 29th September to the 8th October we were confined in the Rao miao temple; almost daily Hang came and held long conversations with Mr. Parkes, who will inform your lordship, at much greater length than I am able to do, of what passed on those occasions. I will not enter therefore at length on this portion of our imprisonment. It was a period of great anxiety and trial, for although we were well treated, we knew that our release, indeed our existence, depended greatly upon how the movement of our troops outside the city might affect the feelings of the Chinese and mandarins inside. We felt that in any sudden panic, when they would be scarcely master of their senses, they might rush in and wreak on us their vengeance; this was our real danger; as long as they gave themselves time to reflect we were in comparative safety. This, under God's providence, with the steady advance of our troops, and the consistent and determined line of your lordship's policy, resulted in our happy release."

The following are the depositions of the two troopers of Fane's Horse, respecting the fate of Lieut. Anderson and Mr. de Norman.

"*Evidence of Mahomed Khan.*—When we got to the camp of the Chinese, near Chankian-whan we heard the firing commenced. Messrs. Parkes and Loch left us with one sowar of Major Probyn's regiment. Mr. Anderson waited for about half an hour, and then wanted to go in search of them, but we were stopped by the Chinese. We were eventually taken outside Tungchow, and our arms taken away from us. We then remounted, and went over the stone bridge along the paved road to a joss house about a mile or two miles on this side. The next day Capt. Brabazon and a Frenchman left us, and we were taken through Pekin to a garden on the other side (this place was near a lake, and temples round). We were there put into tents, six in each; Mr. Anderson told off the numbers to each. This was about 2 o'clock in the day. About half-an-hour after our arrival Mr. De Norman was taken out, under the pretence of having his face and hands washed; he was immediately seized, thrown on the ground, and his hands and feet tied together behind. Mr. Anderson was then taken out and tied in the same manner, then Mr. Bowlby, and then the Frenchman, and then the sowars. After we had all been tied they put water on our bonds to tighten them. They then lifted us up and took us into a courtyard, where we remained in the open for three days exposed to the sun and cold. Mr. Anderson became delirious the second day from the effects of the sun, and want of water and food. We had nothing to eat all that time. At last they gave us about two square inches of bread and a little water. In the daytime the place was left open, and hundreds of people came to stare at us; there were many men of rank amongst the spectators. At night a soldier was placed on guard over each of us. If we spoke a word, or asked for water, we were beaten and stamped upon. They kicked us about the head with their boots; if we asked for something to eat they crammed dirt down our mouths. At the end of the third day irons were put on our necks, wrists, and ancles, and about three o'clock on the fourth day we were taken away in carts. I never saw Mr. Anderson again. In our two carts there were eight of us, viz., three Frenchmen, four Sikhs, and myself. One Frenchman died on the road, he was wounded with a sword-cut on the head. We were then taken away towards the hills. That night we stopped at a house to eat and rest, and travelled all the next day. We stopped again at night, and late the next day arrived at a walled town as big as Tientsin. There was also a large white fort outside the town, about two miles off. The place was surrounded on three sides by high hills. We were taken into the gaol inside the town. A Frenchman died after we had been in gaol about eight or nine days, and Sowar Prem Singh, about three or four days after that. They both died from maggots eating into their flesh, and from which mortification ensued. The mandarin in charge of the gaol took off my irons about ten days before my release. The Chinese prisoners were very kind to us, cleansed and washed our wounds, and gave us what they had to eat.

"*Evidence of Jowal'a Sing, Duffadar*—When Messrs. Parkes and Loch left our party for the purpose of seeing Sankolinsin, there were Mr. Bowlby, Lieut. Anderson, Captain Brabazon, Mr. De Norman, one man King's Dragoon Guards, one man 1st Sikh Cavalry, and our own party of seventeen men; we stood waiting for half an hour, when Lieut. Anderson asked to be taken to where the other gentlemen were gone; he was told to remain till they come back. After another half-hour the army assembled in large numbers and surrounded us, told us to get off our horses, and leading them to come with them. Then, the whole army, as Lieutenant Anderson remarked, about 10,000 men, took us back to Tungchow, and made us rest about a quarter of an hour, and give up our arms. They then made us remount, and paraded us through the army, and then took us on the road to Pekin, and rested for that night in a joss house. In the morning they again mounted us on our horses and took us to Pekin. In Pekin they made us dismount, and fed us. They then took us through the city to a place about two miles beyond it; they there made us dismount and gave us tents; the English officers and the natives separate. They then took us away one by one, and bound us lying on the stomach, with hands and feet tied behind the back. They kept us there in this position for three days. They gave us food three times, and that only a mouthful at the time. They then threw us, bound as we were, into carts, and took us, as I think about 20 coss—the mules were trotting and galloping all night. We arrived in the morning at a fort, and were there put into prison, confined in cages, and loaded with chains. At that time we were seven in all. I know nothing of the others. They were taken further on. We were kept in this place three days, so tightly bound with cords that we could not move, the sowars bound with one cord, the others with two. At the first place we got nothing to eat, after that they gave us a little as before. After the first day at the second place Lieut. Anderson became delirious, and remained so with a few lucid intervals until his death, which occurred on the ninth day of his imprisonment. Two days before his death his nails and fingers burst from the tightness of the cords, and mortification set in, and the bones of his wrist were exposed. Whilst he was alive worms were generated in his wounds, and eat into and crawled over his body. They left the body there three days and then took it away. Five days after his death a sowar named Ramdun died in the same state. His body was taken away immediately. Three days after this Mr. De Norman died. On the evening of the day of Lieut. Anderson's decease the cords were taken off our hands, but our feet were still kept bound, and from that time we were better fed. Our feet were unbound two days after this, and kept so until our release. When Lieut. Anderson and our comrades called on us to help him by biting his cords, the Chinamen kicked us away. When we arrived at the joss house between Tungchow and Pekin Captain Brabazon and a Frenchman went back, and Lieut. Anderson told us they were going to the Commander-in-Chief to give information and obtain our release."

UNITED STATES.—The President's Message was delivered at Washington on the 4th inst. The Message extends over nine columns of the daily papers, but the following is a full summary of its more important passages:—

"Fellow-citizens of the Senate and House of Representatives,—Throughout the year, since our last meeting, the country has been eminently prosperous in all its material interests. The general health has been excellent, our harvests have been abundant, and plenty smiles throughout the land. Our commerce and manufactures have been prosecuted with energy and industry, and have yielded fair and ample returns. In short, no nation in the tide of time has ever presented a spectacle of greater material prosperity than we have done until within a recent period. Why is it, then, that discontent now so extensively prevails, and the union of the States, which is the source of all these blessings, is threatened with destruction? The long-continued and intemperate interference of the Northern people with the question of slavery in the Southern States has at length produced its natural effects. The different sections of the Union are now arrayed against each other, and the time has arrived—so much dreaded by the father of his country—when hostile geographical parties have been formed. I have long foreseen and often forewarned my countrymen of the new impending danger. The incessant and violent agitation of the slavery question throughout the north during the last quarter of a century has at length produced its malign influence on the slaves, and inspired them with vague notions of freedom. Hence a sense of security no longer exists around the family altar. This feeling of peace at home has given place to apprehensions of servile insurrections. Many a matron throughout the south retires at night in dread of what may befall herself and her children before the morning. Should this apprehension of domestic danger, whether real or imaginary, extend and intensify itself until it shall pervade the masses of the southern people, then disunion will become inevitable. How easy would it be for the American people to settle the slavery question for ever, and restore peace and harmony to this distressed country. They and they only can do it. All that is necessary to accomplish the object, and all for which the slave states ever contended, is to be let alone and permitted to manage their domestic institutions in their own way. As sovereign states, they and they only are responsible before God and the world for the slavery existing among them. For this the people of the North are no more responsible, and have no more right to interfere, than with similar institutions in Russia or in Brazils. Upon their good sense and patriotic forbearance I confess I still greatly rely. Without their aid it is beyond the power of any president, no matter what may be his own political views, to restore peace and harmony among them. Wisely limited and restrained as to his power under our constitution and laws, he alone can accomplish but little for good or for evil on such a momentous question; and this brings me to observe that the election of any one of our fellow-citizens to the office of president does not of itself afford just cause for dissolving the union. The election of a president of the United States, in a constitutional manner, cannot, of itself, justify secession or revolution. The constitution does not contemplate the act of separation or disunion, and therefore there can be no legal and constitutional secession of any State from the union. The Personal Liberty Acts of several Northern States are in direct conflict with the constitution of the United States, and ought to be repealed. If continued upon the statute books of the Northern States, after the public attention has been directed to the subject, the injured states will be justified in revolution. The President has no power except to see that the laws are executed, and for this purpose certain facilities are given him. He cannot maintain the judiciary in a state like South Carolina, where federal officers reign. But he has power over the collections of customs, and over the public property of the United States, located within the several states, and to protect these the Government forces will act strictly on the defensive. Congress possesses no power to make war upon a state to compel such state to remain in the Union, and if force could be used for such purpose a continuance of the Government in its spirit and unity could not thus be maintained. To restore tranquillity, and furnish to all the states a guarantee for the enjoyment of their rights, as contemplated under our system, certain amendments to the federal constitution are necessary, and may be proposed by Congress, and ratified by the states, or through the medium of a convention called on the application of the states. Unlawful military expeditions have been countenanced by many of our citizens, and were suffered, in defiance of the Government, to escape from our shores, for the purpose of making war upon the unoffending people of neighbouring republics with whom we were at peace. In addition to these and other difficulties we experienced a revulsion in monetary affairs soon after my advent to power of unexampled severity, and of ruinous consequences to all the great interests of the country. When we take a retrospect of what was then our condition, and contrast this with its material prosperity at the time of the late presidential election, we have abundant reason to return our grateful thanks to that merciful Providence which has never forsaken us as a nation in all our past trials. Our relations with Great Britain are of the most friendly character. Since the commencement of my administration the two dangerous questions arising from the Clayton and Bulwer treaty, and from the right of search claimed by the British government, have been amicably and honourably adjusted. The discordant constructions of the Clayton and Bulwer treaty between the two governments, which at different periods of the discussion bore a threatening aspect, have resulted in a final settlement entirely satisfactory to this government. It must be a source of sincere satisfaction to all classes of our fellow-citizens, and especially to those engaged in foreign commerce, that the claim on the part of Great Britain forcibly to take and search American merchant vessels on the high seas in time of peace has been abandoned. This was by far the most dangerous question to the peace of the two countries which has existed since the war of 1812. Whilst it remained open, they might at any moment have been precipitated into a war. The only question of any importance still remaining open is the disputed title between the two governments to the island of San Juan in the vicinity of Washington territory. As this question is still under negotiation, it is not deemed advisable at the present moment to make any other allusion to the subject. The recent visit of the Prince of Wales in a private character to the people of this country has proved to be a most auspicious event. In its consequences it cannot fail to increase the kindred and kindly feelings which, I trust, may ever actuate the Governments and people of both countries in their political and social intercourse with each other. With France, our ancient and venerable ally, our relations continue to be of the most friendly character. Our relations with the great empire of Russia are all that we could desire. Our relations with Spain are now of a more complicated, though less dangerous, character than they have been for many years. Our citizens have long held, and continue to hold, numerous claims against the Spanish Government. These have been ably urged for a series of years by our successive diplomatic representatives at Madrid, but without bringing redress. It is more than probable that the final adjustment of these claims will devolve upon my successor. I reiterate the recommendation contained in my annual message of December, 1858, and repeated in that of December, 1859, in favour of the acquisition of Cuba from Spain by fair purchase. I firmly believe that such an acquisition would contribute essentially to the well-being and prosperity of both countries in all future time, as well as prove the certain means of immediately abolishing the African slave trade throughout the world. I would not repeat this recommendation upon the present occasion if I believed that the transfer of Cuba to the United States, upon conditions highly favourable to Spain, could justly tarnish the national honour of the proud and ancient Spanish monarchy. With the Emperor of Austria and the remaining continental powers, including that of the Sultan, our relations continue to be of the most satisfactory character. The friendly and peaceful policy pursued by the Government of the United States towards the empire of China has produced the most satisfactory results. The treaty of Tien-tsin of the 18th of June, 1858, has been faithfully observed by the Chinese authorities. Our relations with Mexico still remain in a most unsatisfactory condition. The promise of retrenchment contained in my first annual message has been redeemed by a considerable reduction in the annual expenditure during the last two years. It is with great satisfaction I communicate the fact that since the date of my last annual message not a single slave has been imported into the United States in violation of the laws prohibiting the African slave trade. The Message concludes with some remarks about the necessity of modifications in the tariff."

After the reading of the Message an amendment was moved and carried to the effect that so much of the Message as related to the perilous condition of the country be referred to a Select Committee, composed of one member from each State. In the Senate, on the 5th, a senator said that he understood the Message to declare in the first place that South Carolina had just cause for seceding, and in the second place that she had no right to secede. The President had failed to look the thing in the face by not pointing out the remedy, and they must look to the ballot-box or war to terminate the difficulties. The coming culmination pointed to civil war, and they must look the thing straight in the face. Mr. Iverson said the Southern States would disclaim all allegiance. It was policy for them to get out of the Union before the black Republicans could use their power. The talk about repealing the Personal Liberty Laws would not prevent their going out. They intended to go out peaceably if they could, forcibly if they must. If the North attempted to coerce, war would ensue; and if the Senator from New Hampshire wanted it, they would give it. The Message is condemned by those of extreme opinions from both North and South, who consider it weak and unsatisfactory. In Charleston its pacific tone caused considerable surprise. The President had announced his determination to send no more troops to the Charleston forts, and stated that everything would be done on his part to avoid a collision. The Georgia Senate had rejected a Bill calling a Convention of the Southern States. This was received as an indication that Georgia would secede separately. The Mississippi Legislature has unanimously passed the Convention Bill, the secession resolutions, and the Bill authorising the appointment of commissioners to co-operate with the other slave States. The secession fever in Florida was universal. The powder magazine of a Spanish frigate had exploded off Brooklyn. Three persons were killed and 12 wounded.

NEW ZEALAND.—Accounts from Taranaki state that the natives have retired for the purpose of planting their potatoes, thereby relieving New Plymouth from a state of siege, but carrying with them horses, sheep, cattle, carts, and plunder of all sorts, the property of our settlers, whose wives and families have been removed for safety to Nelson, and who are themselves huddled together in the little town, without being able to strike a blow in self-defence. Meanwhile the tribes about Wellington, as well as those which inhabit the Great Waikato Valley and still profess friendly intentions, are said to be deliberating whether, having already sent Wirimu Kingi large reinforcements, they shall extend the theatre of war by making an attack upon Auckland. The voluntary retirement of the natives has reduced their force to less than one-tenth of that at the disposal of General Pratt, but three expeditions which have been made since the former accounts have proved as futile as the four which had preceded them, and although our soldiers have demolished a few empty pahs, wherever resistance was offered, even on open ground, they have fallen back. The fifth attempt was made on September 19, when Major Hutchins, with 600 men, abandoned the attack of a large pah for want of mortars. In the sixth, the force under Colonel Leslie, numbering 500 bayonets and three guns, retired in consequence of strict orders not to return the enemy's fire, in case they should interfere with the filling up of certain trenches which served as a cover for native marksmen. The seventh was on the 9th October, under General Pratt, with about 1000 men and some heavy guns. This expedition had not returned to camp when the mail left, but it had already declined the siege of a pah of somewhat more than the average strength.

AUSTRALIA.—The Australian papers state that the colonists are very anxious to have a visit from the Prince of Wales, and express the hope that his recent visit to the North American colonies will be the precursor of a series of Royal progresses, in which the desire of Australia to do all honour to the Queen and Royal family may be gratified.

City Intelligence.

THE BUILDING TRADE.—The suspension of Mr. Henry Bateman, timber merchant, has been announced caused it is said by the failure of his relatives, Messrs.

Piper & Son, and the very unsatisfactory character of their assets, which have led to the proposal and acceptance of a composition of 4*s.* 6*d.* in the pound, in instalments extending over a year. Mr. Bateman, it is said, will probably pay 15*s.* or 16*s.* in the pound.

THE LEATHER TRADE.—At the Court of Bankruptcy on Friday it was intimated, in the case of Messrs. Streatfeild, Laurence & Co., the leather factors of London and Liverpool, that a dividend of about 1*s.* or 1*s.* 3*d.* in the pound may be expected under each of the joint estates in the course of the ensuing week.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 92⅞ to 93 for Account; Bank Stock, 233; Three per Cents. Reduced, 92⅞ to ¾; New Three per Cents., 92¾; India Bonds, 10*s.* dis.; Exchequer Bills, 5*s.* to 2*s.* dis.—FOREIGN: Brazilian Four and a Half per Cents., 1860, 86½; Chilian Four and a Half per Cents., 82⅞; Dutch Four per Cent. Certificates, 100¼; Mexican Three per Cents., for Acct., 22 to 21¾; Russian Four and a Half per Cents., 95¼; Sardinian Five per Cents., for Acct., 83½; Spanish Committee's Certificates, 6⅜; Turkish Six per Cents., 1854, for Acct., 72; Ditto, 1858, for Acct., 57¾ to 58¼.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,044,595	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	11,455,828
		Silver Bullion	1,113,767
	£27,044,595		£27,044,595

BANKING DEPARTMENT.

Proprietors Capital.. ..	£14,553,000	Government Securities (including Dead Weight Annuity)..	£1,540,273
Rest	3,184,326	Other Securities	19,885,590
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,384,841	Notes	7,346,500
		Gold and Silver Coin ..	761,675
Other Deposits..	11,759,820		
Seven day and other bills	652,051		
	£37,534,038		£37,534,038

20th day of Dec., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—T. B. COUSINS, Lloyd's Coffee House, Underwriter—J. GEORGE, Pemberton Row, City, Licensed Victualler—T. HARRIS, Cardiff, Cabinet Maker—P. INGS, Moretown Ringwood, Hants, Artificial Manure Manufacturer—G. ROBSON, Handsworth, Staffordshire, Saddler—J. SELLARS, Manchester, Manufacturing Chemist—C. and W. STARK, Mark, Somersetshire, Corn Factors—E. WILLIAMS, Wrexham, Builder—W. N. WILLIAMS, Farnham, Chemist—F. YOUNG, Basinghall Street, Woollen Warehouseman.

SCOTCH SEQUESTRATION—J. L. WHITE, Glasgow, Plumber.

FRIDAY—BANKRUPTS—J. BROOKS and S. PITTS, jun., Upper Thames Street, Wholesale Ironmongers—G. DODD, Tunstall, Staffordshire, Shoe Dealer—H. FOULKES, John Street, Union Street, Kennington Road, Cab Proprietor—J. GRAY and J. R. HENSON, Epsom, Surrey, Upholsterers—G. GRIMMETT, Birmingham, Corn Dealer—T. HINDLE, Everton, Lancashire, Builder—J. L. HODGSON, Manchester, Money Scrivener—W. RIDER, Tunstall, Staffordshire, Grocer—W. SAMPSON, St. Thomas the Apostle, Devonshire, Innkeeper—J. J. SCHENCK, Old Broad Street, City, Merchant—J. STRACHAN, Newcastle-upon-Tyne, Brewer—F. WILKINS, Whitechapel Road, Egg Merchant—G. WILKINSON, Macclesfield, Joiner and Builder—J. WINTER, Rosslyn Terrace, Hampstead, Surgeon.

BANKRUPTCY ANNULLED—J. BERGER, Great Tower Street, Broker.

SCOTCH SEQUESTRATIONS—A. CAMERON, Haughland, near Elgin, Farmer—Mrs. M. LYALL, Glasgow, Glass Merchant—D. RODGERS, Edinburgh, Lace and Muslin Merchant.

Metropolis and its Vicinity.

THE CHRISTMAS HOLIDAYS.—It is understood that Monday next, being the day before Christmas Day, will be kept as a general holiday in the city. It has been resolved that the Stock Exchange shall be closed, and it is expected that the attendance in the transfer offices at the Bank will be merely nominal. It is also expected that the Royal Exchange will be closed in consequence of the resolution of the Exchange brokers to transact Tuesday's business on the Wednesday. The Corn Exchange will be open on Monday, but closed on Wednesday.

FREEDOM OF THE CITY TO LORD CLYDE AND SIR J. OUTRAM.—On Thursday afternoon the freedom of the City with a sword of the value of 100 guineas was presented in Guildhall to Lord Clyde and Sir James Outram, in grateful recognition of their distinguished military services in India. The Lord Mayor afterwards gave a grand dinner at the Mansion House in honour of the event. Lord Clyde in acknowledging the compliment said that to the last day of his life he should prize their gift beyond anything he possessed, and Sir James Outram said that the gift in his case had been enhanced by being associated with his late commander, to whom he felt all the devotion of a Highlander of the olden time towards the chief of his clan.

DINNER TO LORD CLYDE.—On Tuesday evening the Master and Wardens of the Merchant Taylors' Company gave a grand banquet in honour of General Lord Clyde, at their hall in Threadneedle Street. The freedom of the Company had previously been presented to his lordship "in testimony of his long and faithful services, and particularly in effecting the gallant relief of the late Major-General Sir Henry Havelock, with the women and children, and the sick and wounded at Lucknow, and the total routing and annihilation of the Gwalior mutineers near Cawnpore." In returning thanks for the toast of his health, Lord Clyde said:—

"As to my having proceeded to India at very short notice, I only obeyed a common call of duty, and there was nothing in it. I went to join an army containing many officers and men whom any man might have been justly proud to command. With regard to my exertions connected with the fitting out of the expedition to China, I was merely an instrument in the hands of the Governor-General, and to that great man—for Lord Canning is a truly great man—belongs the credit really due for that service to the country. And, while speaking of these matters, let me say I can never forget the singleness of heart, the devotion to duty, the manly intrepidity which animated every soldier, from the highest to the lowest, in the late Indian campaign. Nor must I omit to pay the humble tribute of my admiration to the untiring exertions and the fearless behaviour of the civil service of India, whose efforts, united to those of the army, were happily instrumental in restoring tranquillity to that great dependency."

NEW PALACE OF WESTMINSTER.—It is intended to erect a statue of Edward the Black Prince by Baron Marochetti in Palace Yard, between the statue of Richard Cœur de Lion and the Victoria Tower.

THE CONVICT ANNE PADFIELD.—A communication was received on Monday at Newgate from the Home Secretary, intimating that the sentence of death passed upon this prisoner has been commuted to that of penal servitude for life. The statements which she had previously made in reference to the murder have been thoroughly investigated by the authorities, and found to be without the slightest foundation. One was that she had placed the child with a fortune-teller at Hackney and had never seen it again alive; but on interrogating the fortune-teller she denied all knowledge of the prisoner, and from other circumstances the detective officers were satisfied that the story was a fabrication. The prisoner subsequently made another statement of a very serious character, to the effect that the child was killed in her presence by a person whose name she mentioned, and that she had no other hand in the matter except to conceal the body. It was ascertained, however, that this statement was also an entire fabrication, the party whose name was mentioned having proved in the most satisfactory manner that he was at a considerable distance from London for some time before and after the murder was committed, and that he could not by any possibility have had a share in it.

OPENING OF ST. GILES'S NATIONAL SCHOOLS.—The handsome pile of buildings recently erected in the Venetian Gothic style from the designs of Mr. Edward Barry, in Endell Street, as parochial schools for the parish of St. Giles's-in-the-Fields, was formally opened on Wednesday in the presence of a very large number of ladies and gentlemen. It had been announced that Lord J. Russell would preside on the occasion, but his lordship was unable to attend in consequence of the serious illness of the Duke of Bedford. The Hon. A. Kinnaird, M.P., took the chair, and the meeting was addressed by the Rev. W. Thorold, Rev. E. Bayley, Sir J. K. Shuttleworth, and other gentlemen. The cost of the building has been 12,500*l.*, of which one-third was for the site. Towards this sum the Commissioners of Council for Education made a grant of 3000*l.*, and the remainder was subscribed by the landowners, residents, and public at large, with the exception of 500*l.* for the building fund, in furtherance of which a *conversazione* is to be held in the schools on the evening of Thursday and Friday, the 3d and 4th of January.

THE PUBLIC HEALTH.—The Registrar General's Weekly Return states that the deaths in London in the week ending Saturday, December 15, were 1208. The average number in the corresponding weeks of the ten years 1850-59, corrected for increase of population, was 1371. The present return is therefore 163 below the average. During the week the births of 1052 boys and 918 girls, in all 1970 children, were registered in London. In the ten corresponding weeks of the years 1850-59, the average number was 1650.

Provincial.

CAMBRIDGE.—The Vice Chancellor has given notice that the prize given annually by the Prince Consort as Chancellor of the University, for the encouragement of English poetry, will be given this year to such resident undergraduate as shall compose the best poem on "The Prince of Wales at the Tomb of Washington."

COVENTRY.—The Queen has contributed 100 guineas to the fund in aid of the distressed riband weavers of Coventry and its neighbourhood. At a meeting of the relief committee on Wednesday it was announced that the general subscriptions now amount to 5000*l.*

LINCOLN.—The sentence of death passed on Thomas Richardson at the recent assizes for the murder of the policeman at Wyberton, has been commuted to penal servitude for life.

MANCHESTER.—A meeting in aid of the distressed weavers of Coventry was held on Monday at the Town Hall of this city. Mr. Alderman Mackie, in the absence of the Mayor at the assizes, presided, and the meeting was attended by Mr. Bazley, M.P., Sir J. Watts, Lord Leigh, Lord-lieutenant of Warwickshire, &c. Mr. Soden, late Mayor of Coventry, said that 30,000 men, women, and children in that town were totally dependent on the weaving of ribbons and the manufacture of trimmings. The trimming trade had, to a certain extent, become annihilated; and the ribbon trade was in a distressed condition, not on account of the French treaty, but from the adverse state of fashion, the high price of the raw material, and the extraordinary past season, such as was never before known. This accumulation of evils had no doubt been aggravated by the sudden manner in which the treaty was forced upon them, but it was not the treaty which had caused the suffering. Some 2000 men, women, and children had been drafted from Coventry into the manufacturing districts of Lancashire; and about 1000 had turned their attention to other trades. The cost of this emigration had been defrayed either by public subscription, or by the liberality of the cotton manufacturers, who had evinced much more philanthropy than any one had a right to expect. At the present time 75 per cent. of the population engaged in the ribbon trade were out of work; and with regard to the remaining 25 per cent., their wages did not amount to more than 50 or 60 per cent. of the former wages. About 4500*l.* or 4600*l.* had been raised for their relief; and 600*l.* or 700*l.* per week had been distributed at the rate of 1*s.* 6*d.* per week for adults, including all children above 12 years of age, and 9*d.* per week for all under 12 years; being very nearly the same as they would get if they went to the union. If they could get over January and February they hoped that next spring there might be fine weather, and that the ladies might adopt the custom of wearing trimmings and ribbons in their bonnets, so as to create a demand for the labour of the weavers. A subscription was then opened, and before the meeting separated the sum of 225*l.* was subscribed.

ROMSEY.—The annual meeting of the Labourers' Encouragement Association took place on Wednesday in this town. Lord Palmerston distributed the prizes, and afterwards presided at the dinner of the Association. His lordship addressed the recipients of the prizes at some length, and referred at the dinner to the recent accounts of the overcrowding of agricultural cottages in Berkshire, expressing his belief that the provision of suitable and decent habitations for the labouring classes lies at the root of their good conduct, and that those who build good cottages for them get a return for the money they lay out over and above the rent they may receive for them.

SALISBURY.—One of the severest snow storms experienced in Hampshire for many years past occurred on Wednesday and Thursday, and extended in an easterly direction along the whole of the south coast. The railway from Salisbury to Basingstoke was blocked up for several hours, and it was necessary to employ labourers to cut a passage for the trains.

SHEFFIELD.—At an early hour on Saturday morning an attempt was made to murder an assistant gamekeeper, named William Crookes, at the village of Ecclesfield, near this town. Crookes, who is a file cutter, lives at a lonely place known as the Engine House, in the middle of Smithywood, Cowley Hill, having no other house within half a mile. He has a small stithy in his house, for the purpose of working at his trade during a part of the day, devoting the remainder of the day and part of the night to the preservation of the game in the wood, on behalf of an association of neighbouring gentry. He has displayed considerable activity as an assistant keeper, and has consequently been several times threatened by poachers in the locality. He got up to commence work at his files a little before 4 o'clock on Saturday morning, and continued working until 20 minutes to 5, when a gun was fired at him through the window. The gun was loaded with mixed shot, which entered his right cheek and shoulder, knocking him backwards upon the floor. Though dreadfully stunned, he was able to jump up and loose two dogs, kennelled outside the house, but the animals failed to get upon the track of the murderer. Crookes's cheek is completely riddled with shot, and the wound on the shoulder is an extensive one, completely paralysing the arm. It is feared that a portion of the shot may even have reached some of the vital parts; and the poor man lies in a very dangerous state. A collier, named Joseph Ibbotson, living at the adjacent village of Thorpe, and a man, named Joseph English, a wheelwright, residing at Brightside, have been apprehended on suspicion of being concerned in the outrage.

Ireland.

ORANGE DISPLAY IN DERRY.—The celebration of the closing of the gates of Derry took place on Tuesday without disturbance. Flags which had been put up in the night were displayed on the cathedral, the Irish Society's bastion, and Walker's Pillar, and the effigy of Lundy was suspended from the summit of the testimonial. The flag on the top of the pillar had the figures "1688." The effigy of Lundy was burnt at 3 P.M., and six or seven shots from one cannon were fired, although the magistrates remonstrated. A display of fireworks took place at 6 P.M., and a *soirée* in the Corporation Hall shortly after. The proceedings terminated about midnight, having passed off more tranquilly than had been expected. To prevent any attempt at rioting the Government on Monday sent to Derry a troop of Dragoons, a detachment of infantry, and a strong body of constabulary. The force consisted of 60 cavalry, 300 police, and 400 infantry. A third stipendiary magistrate was also sent to the town.

THE REPEAL MOVEMENT.—Mr. Pierse Creagh, a Roman Catholic magistrate resident in Dublin, has addressed a letter to the *Daily Express*, in which he alleges that the new repeal movement is intended "to induce a foreign Government to interfere in the affairs of this country, or perhaps to invade it." The following is an extract from his communication:—

"That the repeal of the union is not the real object which the promoters of the agitation have in view must be apparent from the following facts, of the accuracy of which two other Roman Catholic magistrates and myself are cognisant:—In October last a certain parish priest, from the altar in his chapel, urged his parishioners to sign the national petition. He then told them that the dean of the diocese had, in accordance with the advice of Dr. Cullen, directed all the parish priests to induce the people to sign the petition, 'although,' he said, 'they were all aware that the prayer of it would not be acceded

e, but that the wise heads who got up the matter had other objects in view, and that if a million and a half of signatures could be procured, it might induce a foreign Government to interfere in the affairs of this country, or perhaps to invade it.'"

Law.

COURT OF QUEEN'S BENCH.—*Hooper* v. *Wande*.—This was an action brought by Anna Maria Colden Hooper, daughter of a tradesman at Brighton, against Mr. Thomas Charles Wande, a gentleman of very large fortune, residing at Clopton House, near Stratford-upon-Avon, in Warwickshire, who had filled the office of high sheriff for the county, and was likewise a county magistrate. The declaration complained that defendant on several occasions assaulted the plaintiff, that he had converted the plaintiff's jewelry and wearing apparel; and lastly, that she had lent him money. The facts elicited in evidence were of the most extraordinary character. The defendant was a married man with a family, but his wife, Mrs. Wande, a lady of the highest character, had obtained a divorce from him, and the Lord Chancellor had subsequently removed the children from his custody. While, however, they remained with him, he induced the plaintiff, whom he had met accidentally at Brighton, to go down to his seat in Warwickshire as his nursery governess. He then seduced her and took her to Paris, where a child was born, the birth being announced in the papers as "the wife of Charles Wande, Esq., of a daughter." From 1848 to 1859 they lived together as man and wife, and had four children. During this period defendant was in the habit of treating her in the most brutal manner, flogging her with a cart-whip, notwithstanding the repeated remonstrances of her friends, so that her life became in danger. On one occasion he beat her so severely with a billiard-cue that she was obliged to take refuge in a neighbour's house. He destroyed the jewels he had given her, and in return for the sum of 80*l.* which she sent to one of his friends, he gave her a promissory note for 200*l.*, payable three years after date, but written upon a wrong stamp. He then abandoned her, and took his scullery maid to supply her place. The defence was that the plaintiff was an habitual drunkard, and that she was of such profligate habits that defendant was obliged to abandon her, the youngest child not being his, but the result of an intrigue with a man called Williams, employed by him. The plaintiff admitted the connection with Williams, but said that while he was quite a boy, the defendant seduced him into her room, and compelled her to remain there. The defendant on cross-examination admitted this fact, but said that he had done so to prevent the plaintiff's intercourse with other men. He also pleaded that the plaintiff was a victim of violent passions, and that her drunkenness and misconduct on various times had led to the scenes of violence complained of. Mr. T. James, in replying for the plaintiff, contended that the defendant had made her what she was by his own cruelty and persecution. The Lord Chief Justice, in charging the jury, characterised the assaults proved to have been committed on the plaintiff by defendant as brutal and unmanly in the extreme. Still the plaintiff's temper was undoubtedly most violent, and her conduct exasperating. The jury after an absence of three-quarters of an hour returned a verdict for the plaintiff with 500*l.* damages for the assaults, 80*l.* on the count for money lent, and 100*l.* on account of the detention of the jewellery. The 100*l.* on account of the jewellery not to be paid if the jewellery were restored. *Bosanquet* v. *Heath*.—*The Ritual Church Dispute*.—This was an action brought for two assaults by Captain Bosanquet against the Rev. Mr. Heath, vicar of Enfield. In addition to this there are six other actions, which [illegible] the mode of conducting the services in the City and Chapel of Ease. It was alleged by the plaintiff that there was an entire departure from the observances of the Church of England, and that the vicar had turned a deaf ear to all remonstrances addressed to him on the subject. Capt. Bosanquet, in his capacity of churchwarden, had removed the super-altar cloth, which Mr. Heath had his hand on his shoulder, with the view of ejecting him from the church. As the chapel had been built by subscription, [illegible] of which was advanced by the vicar, and 600*l.* by Captain Bosanquet and his friends, and as the vicar consequently claimed the chapel as his own private property, it was, after some conference, agreed to refer it to Mr. Macaulay, Q.C., to determine as to the return of their subscriptions to such of the subscribers he might think fit; and that the other actions should also be referred to him to determine how judgment should be entered with regard to them.

MIDDLESEX SESSIONS.—*Military Riot at Knightsbridge*.—*Sidney Mann*, 22, *William Smith*, 20, *James Hall*, 24, and *Michael McGrath*, 23, four guardsmen, were indicted for unlawfully creating a riot and disturbance. The three first named prisoners pleaded Guilty. McGrath pleaded Not guilty, and no evidence being offered against him, he was acquitted. The prisoners were engaged in a desperate row in High Street, Knightsbridge, fighting and exciting a mob of about 300 persons. There was a fearful conflict between them and the police, who interfered to preserve order, the soldiers using their belts in a ruthless manner. The Assistant Judge sentenced Hall and Smith to 12 months' hard labour each; Mann, who had been before convicted, to 18; and made some strong remarks upon the circumstance of soldiers so far degrading themselves as to get into conflict with the police, who merely acted in the preservation of public order.

WINTER ASSIZES.—OXFORD CIRCUIT: STAFFORD.—*The Bilston Murder*.—*Samuel Twigg*, bricklayer, 33, was charged with the wilful murder of Mary Twigg, his wife, on the 25th July last, at Bilston. It will be remembered that the prisoner went home drunk at 1 o'clock in the morning, taking a stranger man with him. He called his wife out of her bed to cook some steaks for their supper, which she refused to do at such an hour while the stranger was in the house. He told the man that if his wife did not cook them he would cut her throat from ear to ear. The man then went away, whereupon the wife and her son went down and asked him to go to bed, which he refused to do. They therefore put a jacket under his head, took his shoes off, and put a chair under his feet, and left him asleep. In about a quarter of an hour the prisoner called to his son to give him a light, as he wanted to go to bed. The son asked his mother to go down, as he had to rise early in the morning to go to work. His mother went down, and while she was poking the fire, prisoner said "Gie us a kiss, Polly," and instantly stabbed her in the stomach with a clasp knife, saying "Now, I am satisfied." The unfortunate woman, who had previously been threatened by the prisoner, and had jumped through the bedroom window several times on account of his threats, died on the following night. The jury after a brief deliberation returned a verdict of *Guilty*. Mr. Baron Wilde was about to pass sentence of death, when the prisoner's mother shrieked out in the gallery and had to be removed. At the same time the prisoner fell upon his knees in the dock and began to shed tears. He was lifted up by the gaolers, and as soon as he ceased crying Baron Wilde assumed the black cap, and said that the prisoner had been convicted upon evidence which left no room for doubt of the crime of wilful murder, and that committed upon his own wife. He feared the thought of violence to his wife had often been present to his mind, and had made its home in his heart. Then came drunkenness and the loss of his senses, and that black thought came out, and urged him to her destruction. It was a sad example and led to a sad ending, and he hoped it would lead those who lived in the same community to abstain from ferocious threats and the dreadful crime of drunkenness. His Lordship told the prisoner that his life was forfeited, and he could hold out no hope of mercy, and proceeded to pass upon him sentence of *Death* in the usual form. The prisoner then burst into tears, and was removed from the dock. *The Newcastle Murder*.—*Stephen Dickenson*, 40, was charged with the wilful murder of his mother, Elizabeth Dickenson, on the 5th August, Newcastle-under-Lyme. The evidence showed that the prisoner was insane, and that he had been visited two or three days before by a parish surgeon, who had given instructions for the removal of any cutting instruments beyond his reach. On the day in question his mother was taking him up medicine, when he met and struck her on the head with a large wooden block, causing almost immediate death. The jury found the prisoner *Guilty* of Wilful Murder, committed when he was in a state of insanity. His lordship sentenced the prisoner to continement during her Majesty's pleasure. *Stabbing*.—Baron Wilde then called up five prisoners who had been convicted of stabbing to receive sentence. His lordship said it was from God's mercy that they were not standing at the bar on a charge of murder, and it was his intention, if possible, to check the crime. He then sentenced *Job Shenton*, 32, labourer, for stabbing Reuben Williams on the 23d November, at Stoke-upon-Trent, to 10 years' penal servitude; *Stephen Morris*, 22, miner, for stabbing John Devaney, on the 20th August, at Bilston, to 10 years' penal servitude; *Ellen Meakin*, for stabbing Mary Ann Martin, at Wolverhampton, to 10 years' penal servitude; *David Rogers*, 38, for stabbing Thomas Naylor, on the 22d September, at Sedgley, to 10 years' penal servitude; and *Patrick M'Garey*, 18, for stabbing Patrick M'Grath, on the 1st September, at Tunstal, in the parish of Wolstanton, to three years' penal servitude.

NORTHERN CIRCUIT: LIVERPOOL.—*The Liverpool Wife Murder*.—*Thomas Newsham*, 38, was charged with the murder of his wife in Homer Street, Liverpool, on the 18th of September last. It appeared from the evidence that the prisoner and his wife on the day in question had a quarrel, when deceased being drunk used very improper language, which much irritated her husband, who took a knife and stabbed her in the left side, the wound causing death. For the defence it was contended that there was no deliberate malice on the prisoner's part, and ultimately he was found *Guilty* of Manslaughter, and sentenced to penal servitude for life. *Murder on Shipboard*.—*Henry Lawson*, a Norwegian seaman was tried for the murder of Charles P. Wallace, boatswain of the American ship Lombard. On the 22nd of August last, while the Lombard was lying in the Liverpool Docks, the prisoner went to his berth and refused to work. This led to a fight between the prisoner and deceased, in the course of which the latter was stabbed in the neck. The wound partially severed the windpipe, and proved fatal on the 1st September. The jury found the prisoner *Guilty* of Manslaughter, and Mr. Justice Keating sentenced him to penal servitude for life. *Post Office Robbery*.—*Charles Richard Lyons* pleaded guilty to stealing a post letter in Manchester in October last; and was sentenced under the first count of the indictment to three years' penal servitude, and under the second to four years' similar punishment, to commence at the termination of the first term. *Garotting a Medical Student*.—*John Green* was convicted of assaulting and robbing a medical student called Nash, by garotting him, with the assistance of three others not in custody, on the 12th August. He was sentenced to four years' penal servitude. *Burglary*.—*Thomas Speakman* and *James Houghton* were convicted of burglariously entering the houses of John Davenport, of Winstanley, and James Forshaw, of Blackrod, Lancashire, and stealing a quantity of property. The latter was sentenced to four years' penal servitude, and the former, who is a notorious felon, to penal servitude for 10 years. *Thomas Wheelhouse* was convicted of burglary at Salford, in a [illegible] servitude. YORK: *Manslaughter*.—*William Walsh* was convicted of the Manslaughter of his wife by starving her to death at Clifton, near York, in August last, and was sentenced to four years' penal servitude. *Ann Johnson* was convicted of the Manslaughter of her husband at Doncaster in November last by striking him on the head with a piece of wood, but was recommended to mercy on the ground of the provocation she had received. Mr. Justice Hill sentenced her to three months' imprisonment. *The Attempted Murder at Hunslet*.—*David Cockroft*, 19, was indicted for shooting at Thomas Parkin with intent to murder him, or to do him some grievous bodily harm, at Leeds, on the 7th November. It will be remembered that the prisoner was in the employ of Messrs. Dodgson & Co., threadmakers at Hunslet, near Leeds, and that he had been discharged by Mr. Parkin, the foreman, on suspicion of dishonesty. On the following day, as Mr. Parkin was entering his own house, the prisoner shot him in the back of the head, but as he had on a thick woollen comforter, the wound did not prove fatal. The prisoner was pursued and never lost sight of till he was apprehended, when two or three charges of shot, as well as some powder and percussion caps, were found in his pocket. The jury returned a verdict of *Guilty* of shooting with intent to do grievous bodily harm, and the prisoner was sentenced to six years' penal servitude. *The Wakefield Poisoning Case*.—*Emma Stringer*, 22, was charged under the coroner's inquisition, with the Wilful Murder of Frances Adamson, her mistress, at Sandal Magna near Wakefield, on the 15th August. Counsel for the prosecution stated that as the bill against the prisoner before the grand jury had been ignored, he should offer no evidence in the case. The jury then under his lordship's direction recorded a formal verdict of *Not Guilty*, and the prisoner was immediately discharged. *Uttering Forged Bank Notes*.—*William Brice*, alias *Boyce*, 23, was convicted of uttering two forged 5*l.* Bank of England notes, at Sheffield, on the 10th July, and previous convictions having been proved against him, he was sentenced to 10 years' penal servitude. *Fanny Leeve*, 19, and *William Bateman*, alias *Richardson*, were convicted of uttering a forged 5*l.* Bank of England note at Selby, on the 10th August. A previous conviction having been proved against the man he was sentenced to 10 years', and the woman to three years' penal servitude.

NORTH WALES CIRCUIT: CHESTER.—*The Stockport Murder*.—*John Howard*, 77, weaver, Stockport, was charged with wilfully killing his wife, Mary Ann Howard, at Stockport, on the 25th September. Deceased was an habitual drunkard and had been the source of much unhappiness to the prisoner, who was an aged and infirm man, while she was a young and powerful woman. She was found after one of her drunken fits dead upon the bed, with three gashes in her throat and the head battered in. The evidence against the prisoner was presumptive only, and it was contended in his defence that his right hand being disabled he could not have inflicted the wounds. The jury after an absence of 40 minutes returned a verdict of *Not Guilty*. The cheering was great after the announcement, and it was several minutes before order was restored. — *The Warrington Murder*.—*William Dannal*, 21, labourer, was charged with having feloniously killed an old man called William Yarmouth, at Appleton, near Warrington, on the 15th September. Deceased had been drinking, and on his way home he was seen quarrelling with a woman called Green, whom he charged with robbing him. The prisoner then came up and began illusing deceased, and kicked him four or five times on the head and body while on the ground. After this a woman named Leyland came up and struck him upon the face three or four times. The deceased died on the 20th from the injuries received. The jury returned a verdict of Manslaughter, and the prisoner was sentenced to 10 years' penal servitude. The prisoner was then charged with *Ann Green* and *Coker de Legland*, with the murder on the coroner's inquisition, but no evidence being offered they were discharged.

MIDLAND CIRCUIT: WARWICK.—*Burglary and Violence at Birmingham*.—*Benjamin Summerfield*, 25, brass dresser, was indicted for committing a burglary at the house of Thomas Robinson, on the 14th of October, and for robbing John Sherwood of a watch and watch chain with violence, on the 24th of October, at Birmingham. One of the inspectors of the Birmingham detectives, deposed that the prisoner was one of the most expert thieves in England. His wife, who was now undergoing six months' imprisonment in the metropolis, was another expert thief, and the money they obtained in the winter they spent at watering places in the summer months. Witness had been sent to Barnstaple to attend the Bath and West of England Agricultural Society's show there, as 20 or 30 of the prisoner's associates had gone there from Birmingham, and he had caused him to be locked up then for his nefarious practices. The jury found him *Guilty*. Mr. Baron Bramwell said he wished to address a word of advice to the Birmingham thieves and to thieves in general. "Thieve quietly; don't knock people about so much, and you won't get knocked about so much yourselves. You have been twice convicted. I sentence you to 24 years' penal servitude—20 years for the first and four years for the second charge."

Obituary.

THE MARQUIS OF DALHOUSIE died at Dalhousie Castle, Midlothian, on Wednesday evening, in his 48th year, after a lingering illness, which had for some time precluded all hope of his recovery. His lordship James Andrew Broun-Ramsay was born in 1812, at Dalhousie Castle, and was the son of the ninth Earl. He was educated at Harrow, and Christ Church, Oxford, where in 1833 he took his degree with honours. On the accession of her Majesty he was returned to Parliament as Member for Haddingtonshire, but early in the following year was called to the House of Peers on the death of his father. In 1843 he joined Sir Robert Peel's administration as Vice-President of the Board of Trade. In 1845 he succeeded Mr. Gladstone as President of the Board, and on the accession of Lord J. Russell to office, he was requested to retain his post under the new Ministry. In 1847 he was appointed to succeed Lord Hardinge as Governor-General of India, where he remained till 1856, when he returned home with his health utterly broken by the labours and anxieties he had gone through. For his services in India, especially in reference to the Sikh war and the annexation of the Punjaub, he received the thanks of Parliament and the rank of Marquis. Having died without male issue, the Scotch earldom and estates of Dalhousie fall to his cousin, Lord Panmure.

MAJOR GENERAL FREKE WILLIAMS, K.H., died on the 12th inst. at Bath, in his 68th year. He served in Senegal, Goree, and Sierra Leone in 1811 and 1812, and in the Peninsula from 1813, to the end of the war, including San Sebastian, the passage of the Bidassoa, battles of Nivelle and Nive, and the investment of Bayonne. In 1814 he proceeded to America under Gen. Ross, and was wounded at the Battle of Bladensburg, first slightly in the left arm, and again severely by a musket ball through the left shoulder. He served subsequently for several years in the West Indies, and was sent on a particular service to Canada during the insurrection in that country in 1838 and 1839, whence he returned in 1843, and soon afterwards proceeded to Ireland. For his military services he was made a Knight Companion of the Guelphic Order, and received the silver war medal with three clasps for St. Sebastian, Nivelle, and Nive. The last appointment he held was Brigadier-General at Malta. He attained the rank of Major-General in 1857.

ALDERMAN SIR GEORGE CARROLL, long identified with the City of London as a Royal Exchange [illegible] and an eminent stockbroker, and who filled the office of chief magistrate in 1847, died suddenly on Tuesday at his residence at Loughton, Essex, in his 77th year. He had been unwell for some time previously, but had so far recovered that he purposed presiding at the wardmote of Candlewick, on the election of common councilmen on St. Thomas's Day. He served the office of sheriff of London and Middlesex, with Sir Moses Montefiore, in 1837, the year of her Majesty's accession to the Throne, and with his colleague received the honour of knighthood in honour of the auspicious event. In December, 1839, he was elected alderman for the ward of Candlewick, on the decease of Mr. Samuel Birch, and in November, 1846, he succeeded to the dignity of Lord Mayor.

DR. JOLIT, M.D., died suddenly on the 15th inst., in the vestry of the French Protestant Church in St. Martin's-le-Grand, at the age of 70. He had followed his profession in many parts of the East, and particularly at Malta. He subsequently returned to London, and devoted much of his time and talent to the relief of the French Protestant poor.

WILLS.—The will of General Sir Henry Wyndham, K.C.B., M.P., of Cockermouth Castle, Cumberland, has been sworn under 70,000*l.*; that of David Jardine, Esq., police magistrate, under 14,000*l.*

BIRTHS.—On the 18th inst., at Cobham Hall, Kent, the Countess of DARNLEY, of a daughter—17th inst., at 60, Rutland Gate, the Countess of MOUNTCHARLES, of a daughter—15th inst., at Pendrea, Cornwall, the Lady ELIZABETH St. AUBYN, of a daughter—12th inst., at 51, Portland Place, the Lady CECILIA BINGHAM, of a son and heir—10th inst., at Peckforton, the wife of J. TOLLEMACHE, Esq., M.P., of a son—10th inst., at Cooper's Hill, the wife of C. W. O'HARA, M.P., county of Sligo, Ireland, of a son and heir.

MARRIAGES.—On the 10th inst, at the British Embassy, and afterwards at the English Church, Rue d'Aguesseau, Paris, JAMES O'DONEL ANNESLEY, Esq., 25th Regiment, son of the late James Annesley, Esq., H.M.'s Consul for North Holland, and cousin of the Earl of Annesley, to SILVIA, only daughter of W. H. GOMONDE, Esq., and niece to the late Sir Edmund Filmer, Bart., M.P., of East Sutton Place, Kent—18th inst, at St. James's, Piccadilly, JOHN MOYER HEATHCOTE, Esq., eldest son of John Moyer Heathcote, Esq., of Conington Castle, to LOUISA CECILIA, only daughter of MACLEOD of MACLEOD and the Hon. Mrs. Macleod, of Dunvegan Castle, Isle of Skye—11th inst. at St. Mary Abbot's, Kensington, Sir KENNETH S. MACKENZIE, Bart., of Gairloch, to EILA FREDERICA, second daughter of the late WALTER FREDERICK CAMPBELL, Esq., of Islay—13th inst. at Awliscombe, JAMES HENRY PATTESON, barrister-at-law, of the Middle Temple, youngest son of the Right Hon. Sir J. PATTESON, of Feniton Court, to ANNIE, daughter of the late Rev T. H. WALLACE, vicar of Bickleigh, Devon—12th inst, at the Episcopal Chapel, Peebles, Major CHARLES INGE, to MARY ANNE, second daughter of Sir ADAM HAY, of Haystone, Bart.—11th inst, at St. Mary's Church, Weymouth, MARTIN BRYAN STAPYLTON, second son of Stapylton Stapylton, Esq., Myton Hall, Yorkshire, to MARY JANE, eldest daughter of JOHN BRYMER, Esq.—13th inst, at Clifton, Captain GEORGE DANIELL EALES, second in command of the 2d Belooch Regiment, Bombay Army, second son of C. T. EALES, Esq., of Eastdon, Devon, to FLORA THORNBOROUGH, third daughter of the late Lieut.-General RICHARD WHISH, Bombay Artillery—9th Oct., at Victoria, Vancouver's Island, JOHN COLES, Esq., Member of the House of Assembly, and second son of Charles Coles, Esq., of the Firs, Mitcham, Surrey, to MARY, daughter

of the late Captain HARCUS, and niece of Captain James M. REID, formerly of the Hon. the Hudson's Bay Company's Service.

DEATHS.—On the 12th inst, at 14, Hinde Street, Manchester Square, ELIZA, widow of the Hon. and Rev. JOHN BLACKWOOD, aged 93 — 15th inst, at 3, Craven Hill, Hyde Park, ELLEN, daughter of the late JOSEPH ALLEN, D.D., Lord Bishop of Ely, aged 52—17th inst, at Holles Street, Cavendish Square, Lieutenant-General JOHN HENRY, of the Madras Army—3d inst, at Brighton, Captain FREDERICK LOFTUS, formerly of the 17th Lancers, youngest son of the late General Loftus, aged 61—15th inst, at Titsey Park, Surrey, WILLIAM LEVESON GOWER, Esq., aged 54—12th inst, at Hendon Hall, Hendon, Middlesex, SAMUEL WARE, Esq., of 34, Portland Place, aged 79—17th inst, at 18, Lincoln's-Inn-Fields, GEORGE BAILEY, Esq., Curator of the Soane Museum, aged 68—9th inst, JOHN GEORGE FULLER, Esq., of Brixton, the late proprietor for more than half a century of Boodle's Club, St. James's Street, aged 82.

Markets.

COVENT GARDEN, Dec. 22.

Importations of Continental fruits continue to arrive in large quantities. Pine Apples are still rather more in request than they have been, and prices for them are improving. Oranges may still be obtained at about last week's prices. Good Cobs may be had at from 1s. to 1s. 6d. per pound. Cabbages, Carrots, and Turnips may be obtained in quantity. Cauliflowers are scarce. Potatoes realise from 6s. to 10s. per cwt. Asparagus and French Beans may now be had, but prices for them are high. Cucumbers are scarce. Holly and other Christmas Evergreens are now plentiful. Cut flowers chiefly consist of Orchids, Gardenias, Chrysanthemums, Violets, Mignonette, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 4s to 8s	Apples, per doz., 6d to 1s 6d
Grapes, per lb., 4s to 7s	Oranges, per 100, 6s to 10s
Pomegranates, each, 4d to 6d	Lemons, per 100, 6s to 10s
Pears, per doz., 1s to 3s	Nuts, Cob, per lb., 1s to 1s 6d

VEGETABLES.

Cauliflowers, each, 4d to 6d	Onions, p. ½ sieve, 1s 6d to 2s6d
Greens, per doz., 4s 6d to 6s	Asparagus, p. bundle, 10s to 30s
Cabbages, do., 1s to 2s	Seakale, p. punnet, 3s to 3s 6d
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 7d to 8d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 4d to 5d	Endive, p. score, 1s to 1s 6d
Spinach, p. sieve, 2s to 3s	Horse Radish, p. bun., 1s 6d to 4s
Cucumbers, each, 1s 6d to 3s	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 2s to 4s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d
Celery, p. bundle, 1s 6d to 1s9d	

HOPS.—BOROUGH MARKET, FRIDAY, Dec. 21

Messrs. Pattenden & Smith report that the market is very quiet, and will continue so until Christmas is over.

BRITISH WOOLS.—LONDON, FRIDAY, Dec. 21.

Our market is in a quiescent state for most descriptions o wool, the present pull of carding skin being the only article that sells freely at former rates, other sorts being neither in large supply nor demand. On the whole the trade may be described as perfectly healthy, on account of the disposition of all parties to operate only for current requirements. If there had been *any speculation active of late the present crisis of* monetary and commercial affairs in America would have lowered prices very considerably, but the only result at present is an increased disposition to sell at old prices in the Yorkshire markets, and an unwillingness on the part of consumers to lay in any stocks whatever for future consumption, as the current rates of wool are by no means speculative ones, being above the average prices of former years.

	s. d.	s. d.		s. d.	s. d.
South-down Hogs..	1 7	to 1 8	Leicest. Wethers	1 6	to ..
Half-bred ditto..	1 8	— ..	Ditto Hoggs	1 8	— ..
Down Ewes	1 5	— 1 6	Combing Skins	1 0	— 1 4
Kent Fleeces	1 7	— ..	Blanket ditto	0 6	— 0 8
			Flannel Wool	1 0	— 1 8

POTATOES.—SOUTHWARK, Monday, Dec. 17.

During the past week the arrivals both coastwise and by rail have been liberal, and quite equal to the demand; trade still continues dull, and prices have a downward tendency. The following are this day's quotations:—York Regents, 110s. to 130s. per ton; Lincolnshire do., 110s. to 120s.; Dunbar do., 120s. to 140s.; Perth, Forfar, and Fife do., 100s. to 120s.; Rocks and Reds, 90s. to 100s.; French Whites, 90s. to 100s.; Belgian do., 85s. to 90s.; Dutch do., 80s. to 85s.

METROPOLITAN CATTLE MARKET.

MONDAY, Dec. 17.

This being the annual "Great Market," good Beasts are much in demand. The number is rather larger than on the corresponding day last year, and quotations about the same as on that day. The supply of Sheep is very short, and the average quality inferior. Choice descriptions were consequently readily disposed of at higher rates. Trade is slow for Calves at about Thursday's prices. Our foreign supply consists of 865 Beats, 5100 Sheep, and 65 Calves.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 4	to 5 6	Best Long-wools	5 2	— 5 4
Best Short-horns	5 0	— 5 4	Do. Shorn	.. ..	to ..
2d quality Beasts	4 0	— 4 6	Ewes & 2d quality	4 8	— 4 10
Best Downs and Half-breds	5 6	to 5 8	Do. Shorn	.. ..	— ..
Do. Shorn	.. ..	— ..	Lambs	.. ..	.. — ..
			Calves	.. ..	4 0 — 5 0
			Pigs	.. ..	4 4 — 5 4

Beasts, 7860; Sheep & Lambs, 19,550; Calves, 210; Pigs, 515.

THURSDAY, Dec. 20.

The number of Beasts fresh up for this day's market is not large; a considerable portion consisting of those left over from Monday last. Trade is dull, the butchers for the most part having purchased their Christmas supply. Some of the choicest qualities are disposed of at about Monday's rates. Otherwise prices may be quoted lower. The supply of Sheep is small but adequate to the demand. Good qualities are readily sold at Monday's prices. From Germany and Holland there are 120 Beasts, 200 Sheep, and 123 Calves; from Scotland, 300 Beasts; from Norfolk and Suffolk, 300; from Ireland, 200; 700 from the northern and midland counties; and 115 Milch Cows from the home counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 2	to 5 6	Best Long-wools	5 2	— 5 4
Best Short-horns	5 0	— 5 4	Do. Shorn	.. ..	— ..
2d quality Beasts	3 8	— 4 4	Ewes & 2d quality	4 6	— 4 10
Best Downs and Half-breds	5 6	— 5 8	Do. Shorn	.. ..	to ..
Do. Shorn	.. ..	— ..	Lambs	.. ..	— ..
			Calves	.. ..	4 0 — 5 0
			Pigs	.. ..	4 4 — 5 4

Beasts, 2155; Sheep & Lambs, 3800; Calves, 180; Pigs, 130.

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Dec. 20.

Prime Meadow Hay	75s	to 84s	Clover	95s	to 115s
Superior do. (old)	90	110	New Clover	—	—
Inferior do.	40	57	Old second cut	70	95
New do.	—	—	Straw	30	36
Rowen	30	50			

DAVIS & Co.

CUMBERLAND MARKET, THURSDAY, Dec. 20.

Sup. Meadow Hay	118s	to 122s	Inferior Clover	90s	110s
Inferior do.	80	110	New do.	—	—
New do.	—	—	Straw	38	43
Superior Clover	118	126			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Dec. 20.

Fine old Hay	100s	to 108s	Fine old Clover	115s	to 120s
Inferior do.	60	80	Inferior do	95	105
Prime New Hay	—	—	Fine 2d cut	90	96
Inferior do.	—	—	Inferior do.	72	80
Straw	30	36	Fine New Clover	—	—

BUTTER MARKET.—Dec. 21.

Best Fresh Butter .. .. 18s. per dozen lbs.
Second do. do. .. .. 15s. " "
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

MARK LANE.—MONDAY, Dec. 17.

The supply of Wheat from Essex to this morning's market was small, from Kent fair, and the whole cleared at 1s. to 2s. per qr. over the prices of this day se'nnight. The market was well attended by country buyers, and we experienced a good retail sale for foreign Wheat at an improvement on new of 1s. to 2s. per qr. upon the rates of Monday last, and 1s. per qr. for old. Beans and Peas bring last week's rates. Fine Malting Barley is in fair demand at extreme prices, other descriptions are a slow sale. Oats are in fair demand at an advance of 6d. per qr. American Flour is 1s. per barrel dearer.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk.. White	50—64	Red	40—60
— — fine selected runs..ditto	53—66	Red	50—66
— — Talavera	50—74		
— Norfolk	—	Red	—
— Foreign	50—76		
BARLEY, grind. & dist., 28s to 30s.. Chev.	40—44	Malting .	38—44
— Foreign..grinding and distilling	30—36	Malting .	40—44
OATS, Essex and Suffolk	20—24		
— Scotch and Lincolnshire..Potato	26—28	Feed ..	20—25
— Irish .....Potato	26—28	Feed ..	21—24
— Foreign.....Poland and Brew	24—26	Feed ..	20—26
RYE	35—38	Foreign .	—
RYE-MEAL, foreign.....	—		
BEANS, Mazagan....36s to 44s....Tick	28—48	Harrow .	28—48
— Pigeon .....34s — 56s..Winds.	34—42	Longpod	—
— Foreign .....Small	40—50	Egyptian	—
PEAS, white, Essex and Kent ..Boilers	38—48	Suffolk .	40—50
— Maple .... —s to —s ..... Grey	40—42	Foreign .	38—48
MAIZE ..... White	—	Yellow..	—
FLOUR, best marks delivered..per sack	50—57		
— 2d do..... ditto	34—50	Country.	34—50
— Foreign .....per barrel	30—35	Per sack	40—50

FRIDAY, Dec. 21.

The weather since Friday was damp and wet until Monday evening, when sharp frost set in and has since contiuued, the thermometer on Wednesday morning being as low as 15° Fahr. Although the arrivals of foreign Wheat and Flour continue to be considerable at the principal ports of the kingdom, the demand has sufficed to enable holders throughout the country to realise a further improvement of 1s. to 2s. per qr. upon Wheat and 6d. to 1s. upon sack and barrel Flour, the inquiry for which has also increased. With the exception of Peas, all kinds of Spring Corn are also higher; Malting Barley, 1s., Beans and Oats 6d. to 1s. per qr. During the last week 39 cargoes have arrived off the coast. The trade is firm, and prices of Wheat tend upwards, but the business done was of a very limited character, owing principally to the want of supplies. The arrivals of English Wheat this week are very small, good of Barley and Oats, and moderate of all foreign grain. The attendance at this morning's market was limited. English Wheat was very scarce, and inquired after at 1s. per qr. over the prices of Monday last; the sale of foreign was not extensive, being generally held for advanced rates, but we do not falter our quotations. Spring Corn of all descriptions brings the extreme prices of Monday.

ARRIVALS FROM Dec. 17 TO Dec. 21.

	Wheat.	Barley.	Oats.	Flour.
English ..	690 qrs.	3270 qrs.	4640 qrs.	420 sks.
Irish	— "	— "	1540 "	— "
Foreign ..	16150 "	4560 "	11770 "	20 " 9990 brls.

LIVERPOOL, Tuesday, Dec. 18. — There was an average attendance of millers and dealers at our Corn Exchange this morning. Wheat was in good demand for consumption, and business at 2d. to 3d. per cental dearer. Flour fair sale at 6d. to 9d. per barrel and sack dearer. Indian Corn 1s. dearer with good demand; mixed 37s. 9d. to 38s., Galatz 39s. Beans 1s. dearer. Other articles steady.

FRIDAY, Dec. 21.—The market was moderately attended. Good consumptive inquiry for Wheat at an advance of 1d. to 2d. per cental. Barrel Flour fair sale, at Tuesday's rates; French 6d. per sack dearer. Indian Corn in moderate business, 39s. for mixed, and 39s. 6d. for Galatz. Beans steady, at late rates. Oats and Oatmeal fair trade at late quotations.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Nov. 10..	58s 9d	41s 0d	23s 11d	36s 6d	51s 1d	44s 5d
— 17..	58 1	41 4	23 5	36 4	50 8	46 9
— 24..	56 3	40 11	23 3	34 4	58 11	48 4
Dec. 1..	54 10	39 10	22 3	35 11	48 10	45 11
— 8..	52 7	39 2	22 5	35 0	47 9	45 0
— 15..	51 5	38 7	22 1	33 6	45 6	43 3
Agg. Aver.	55 4	40 2	22 11	35 3	48 9	45 8

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Nov. 10.	Nov. 17	Nov. 24.	Dec. 1.	Dec. 8.	Dec. 15.
58s 9d	—	..	..	..	..	..
58 1	..	..	..	..	..	..
56 3	..	..	..	..	..	..
54 10	..	..	..	..	..	..
52 7	..	..	..	..	..	..
51 5	..	..	..	..	..	..

COAL MARKET.—Dec. 19.

Clark's West Hartley, 16s. 6d.; Davison's West Hartley, 17s. 6d.; Tanfield Moor, 19s 6d.; Walker Primrose, 15s. 9d.; Wylam, 18s.; Walls End Gosforth, 19s. 0d.; Walls End Hilda, 18s. 6d.; Walls End Northumberland, 17s. 6d.; Walls End Riddell, 19s.; Walls End Framwellgate, 19s. 6d.; Walls End Hetton, 21s.; Walls End South Hettons, 21s.; Walls End Stewarts, 21s.; Walls End Hartlepool, 21s.; Walls End Heugh Hall, 19s. 6d.; Walls End Kelloe, 20s. 3d.; Walls End North Hartlepool, 17s. 6d.; Walls End Shincliffe, 19s. 3d.; Walls End South Hartlepool, 12s. 6d.; Walls End South Durham, 19s. 3d.; Walls End Trimdon Thornley, 18s. 9d.; Walls End Whitworth, 17s. 6d.; Walls End Woodhouse Close, 17s. 9d.; Carway and Duffryn Malting, 23s. 6d. —392 ships at market.

WANTED, A NURSERY FOREMAN.—Messrs. J. & C. LEE require a Foreman in the Plant and Glass Department. Particulars with references and terms are requested from men of thorough respectability. A knowledge of Plants and good handwriting indispensable.—Nursery, Hammersmith, W.

WANTED IMMEDIATELY, for a London Retail Seed Business, an active intelligent young MAN, who has a good general knowledge of the Seed Trade.—Application by letter, giving reference to present or last employer, and stating wages expected, to A. B., *Gardeners' Chronicle* Office.

WANTED, AS ASSISTANT CLERK.—The undersigned are in immediate want of a Young Man, of good education and active business habits, to act in the above capacity under their Head Bookkeeper. He must write neatly and expeditiously, and one having a knowledge of the Seed Business would be preferred. None need apply who cannot be well recommended by his last employer.—Apply, stating age, references, where last and previously employed, and salary expected, to FRANCIS & ARTHUR DICKSON & SONS, Seed Merchants, Chester.

TO GARDENERS.

WANTED, in the latter part of January, in a Midland County, a WORKING GARDENER thoroughly understanding his profession, including Forcing, especially the Culture of Vines. Assistance will be given. One having some knowledge of Farm matters will be preferred. The strictest inquiries will be made as to character.—Apply, by letter, prepaid, with full particulars, to "Z." Oatlands Park Hotel, Walton-on-Thames.

WANTED, AN OUT-DOOR SERVANT, in Suffolk, in a Clergyman's family, any time between this and the end of March, to attend to a Garden, Horse, and Carriage, and make himself generally useful. He must be a good Groom, and thoroughly understand the management of a Garden, Orchard-house, Cucumbers, and Melons; it is not necessary, but all the better if he can occasionally wait at table. Wages, 18s. a week, and if married, a Cottage, rent free.—Apply with reference, to ROBT. B., Post Office, Lowestoft, Suffolk.

WANTED, A COWMAN, to milk about 30 cows.—A fast and good milker. Wages, 1*l.* per week.—Address to Mr. HARD's, Southend, Eltham, Kent.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 29, married; Scotch; has had practical experience in Growing and Forcing Fruits both in England and Scotland, and has a practical knowledge of his profession in all its various branches. Eight years' good character.—A. B., Mr. Meredith, Vine Cottage, Garston, near Liverpool.

GARDENER (HEAD).—Age 38, married; will be at liberty at the commencement of the new year; is practically acquainted with the Growth of Stove and Greenhouse Plants, Early and Late Forcing; is a good Kitchen and Flower Gardener. Can take charge of Land, Stock, Drainage, &c. Four years' good character.—S. P., Mr. Nye's Library, Tunbridge Wells.

GARDENER.—Experienced in the very best establishments in England, and some time as Head. Influential reference given.—C. B. A., Post Office, Lubenham, Market Harborough.

PROPAGATOR OR PROPAGATOR AND FOREMAN.—First class in grafting Camellias, Roses, &c. Propagation of Stove and New Holland Plants. First-rate reference. Wages, 30*s.*—ALPHA, Sheffield Moor, Post Office, Sheffield.

AGRICULTURIST OR HORTICULTURIST, &c.—Gentlemen requiring a well experienced first-class Agriculturist or Horticulturist, to conduct Estate Improvements in Draining, Laying-out Farms or Gardens, Planting, or Building Works —W. CLARK, 25, Bishopgate Street, City, E.C.

TO LAND AGENTS AND GENTLEMEN AGRICULTURISTS.—A young Man of respectability and education, who has been engaged some years as Under Steward over a Nobleman's Estate, and also in assisting a Gentleman Farmer, wishes for a reengagement at Christmas. References highly satisfactory, security given if required.—C.S., 21 Charing Cross, London, W.

LAND STEWARD.—A young Man, who has served his time in one of the largest farming districts in Scotland, and thoroughly understands his profession, including the management of Cattle in every branch. Can produce the highest testimonials, and give the most satisfactory references. —F., Messrs. Fisher, Holmes, & Co., Nurserymen, Handsworth, Sheffield.

WORKING BAILIFF.—Married; perfectly understands the management of Land and Stock, Selling and Buying. Is willing to make himself generally useful. Can be well recommended by present employer.—A. G., Sunbury Lodge, Sunbury, Middlesex.

ASSISTANT IN THE SEED TRADE. — Is conversant with the London Seed Trade, at present holding a confidential position, a similar situation, in a City establishment.—ALPHA, Messrs. Hurst & McMullen, 6, Leadenhall Street, City, E.C.

BOOK-KEEPER, SHOPMAN, OR SALESMAN.—Age 29, business-like and active; has practised in all branches of the Nursery and Seed trade. Unexceptionable character.—P. A. A., Post Office, Woodbridge, Suffolk.

TO NURSERYMEN AND SEEDSMEN.

CLERK.—Age 21; has had five years' experience. Perfectly understands Book-keeping and the Nursery and Seed trade generally. Wages 1*l.* 1*s.* per week. Unexceptionable references as to character and ability.—W. M., Post Office, Piltdowne, near Uckfield, Sussex.

TO SEEDSMEN AND NURSERYMEN.

CLERK AND SHOPMAN.—An energetic young Man, of good address, who could introduce a good connection. References and security if required. — VETO, Post Office, Upper Norwood, S.

TO NURSERYMEN AND SEEDSMEN.

SHOPMAN.—Nine years' experience in London and country houses.—H. W., Messrs. Thos. Gibbs & Co., corner of Half-moon Street, Piccadilly, W.

The Gardeners' Chronicle Newspaper.

SATURDAY, DECEMBER 29, 1860.

LECTURE TO WORKING MEN.

GOVERNMENT SCHOOL OF MINES, Jermyn Street, W.—The SECOND COURSE OF SIX LECTURES on "APPLIED MECHANICS," by Professor WILLIS, M.A., F.R.S., will be commenced on MONDAY, January 7, at 8 o'Clock.

Tickets may be obtained by WORKING MEN only on MONDAY, December 31, from 10 to 4 o'Clock, upon payment of a registration fee of 6*d*. Each Applicant is requested to bring his name, address, and occupation, written on a piece of paper, for which the ticket will be exchanged.

TRENHAM REEKS, Registrar.

EVENING LECTURES AT THE MUSEUM OF PRACTICAL GEOLOGY, Jermyn Street.—Professor SMYTH, F.R.S., will commence a COURSE of TEN LECTURES on MAGNETIC and ELECTRICAL PHENOMENA, on TUESDAY Evening, January 8, at 8 o'Clock, to be continued on each succeeding TUESDAY Evening.

Tickets for the whole COURSE, price 5*s*. may be had at the Museum.

NOTICE.—CITY OF HEREFORD—ALTERATION OF THE HEREFORD FAIRS.—Notice is hereby given, that from the 1st of JANUARY, 1861, the HEREFORD FAIRS will be held on the following days:—Candlemas Fair, the First WEDNESDAY after 2d February; Easter Fair, the WEDNESDAY in Easter Week; May Fair, the Third WEDNESDAY in May; July Fair, the First WEDNESDAY in July; August Fair, the Third WEDNESDAY in August; October Fair, the Third WEDNESDAY in October; December Fair, the Second WEDNESDAY in December.

By Order of the Mayor, Aldermen, and Burgesses of the Guildhall, Oct. 16. City of Hereford.

NOTICE OF DIVIDEND.

BANK OF DEPOSIT (Established A.D. 1844), 3, Pall Mall East, London, S.W.—The WARRANTS for the HALF-YEARLY INTEREST, at the rate of 5 per cent. per annum, on Deposit Accounts, to the 31st instant, will be READY for delivery on and after the 10th January, and payable daily between the hours of 10 and 4.

December, 1860. PETER MORRISON, Managing Director.

Prospectuses and Forms sent free on application.

QUEEN INSURANCE COMPANY.—Chief Office, Liverpool.

London Office, 2, Royal Exchange Buildings, E.C.

London Directors.

Chairman—HENRY BRUCE, Esq. (Rainey, Bruce, & Co.) Director of Colonial Bank, Mincing Lane.

EDWARD P. ALDERSON, Esq. (Kelson, Tritton, & Co.), 26, Old Broad Street. [Southwark.

HENRY FOWLER, Esq. (H & R. Fowler), St. Saviour's Dock,

THOMAS WILLIAM KOUGH, Esq. (Jones Brothers) Upper Thames Street. [Holborn.

LLOYD SCOTT, Esq. (Cocks, Biddulph, Scott, Moore, & Co.)

Bankers.—Messrs. BARCLAY, BEVAN & Co.

Medical Referee.—J. EDWARD POLLOCK, Esq., M.D.

Solicitors.—Messrs. J. & J. W. SEWELL.

LIFE DEPARTMENT.—Life Assurance in every branch.

SPECIAL FEATURE. — Non-forfeiture of Policies. The insurer has the right, on an ordinary Life Policy, after three years, to cease his payments, and obtain a free Policy, for the total amount of Premiums paid, and whatever Bonus may have been added.

FIRE DEPARTMENT.—The rates of Premium vary according to the nature of the risk, and will be found as moderate as those of other first-class offices.

Application for Agencies requested.

W. P. CLIREHUGH, Manager.
H. B. TAPLIN, London Secretary.

SCOTTISH UNION FIRE AND LIFE INSURANCE COMPANY, Established 1824. Incorporated by Royal Charter, and Empowered by Act of Parliament. Capital Five Millions sterling. London Offices—37, Cornhill, E.C. Edinburgh—47, George Street Dublin—52, Dame Street.

Governor—His Grace the DUKE of HAMILTON and BRANDON.

London Board—Right Hon. the EARL of MANSFIELD, *President*.

And Eight Acting Directors.

Proprietors' capital paid up and Sinking Fund arising from undivided profits.. .. .. £261,500
Accumulated Life Fund 450,000
Annual revenue upwards of 140,000
Amount of Life Insurances in force 2,200,000

At the 36th Annual General Meeting of the Company, held Wednesday, December 5, 1860, the Directors reported that during the year ending August 1, 1860,

The number of Life Policies issued was 625
Sums insured thereby £304,705 0 0
Yielding of new premiums 9,828 6 2

The next investigation into the Life Department and declaration of bonus falls to be made as at August 1, 1861, and parties taking out Policies before that date will participate in the division.

The Fire Premiums amounted to 45,699*l*., being an increase of upwards of 5000*l*., when compared with the previous year.

The Life Company's Insurance on Farming Stock is very large, amounting in the year 1859 to 1,719,494*l*.

Thirty days grace allowed to renew Life Insurances, and 15 days to renew Fire Insurances, during which time, on payment of the Premium, the Company hold themselves liable.

No extra Premium charged for members of Volunteer or Rifle Corps within the United Kingdom.

Forms of Proposals and Prospectuses, containing all the necessary particulars, may be had at the Office, or from any of the Company's Agents.

F. G. SMITH, Secretary to the London Board.

No. 37, Cornhill, London, E.C.

SCOTTISH UNION FIRE AND LIFE INSURANCE COMPANY, 37, Cornhill, London.

Notice is hereby given, that a DIVIDEND of 8 per cent. (free of Income Tax), on the Capital Stock of this Corporation, will become PAYABLE on January 2 next; and proprietors resident in and near London, can receive the same at the Office, 37, Cornhill, on that or any subsequent day, between the hours of 10 and 4 o'clock. By order of the Board,

F. G. SMITH, Sec.

No, 37, Cornhill, E.C.—December, 1860.

CHUBB'S PATENT SAFES, the most secure against Fire and Thieves.

CHUBB'S FIRE-PROOF STRONG ROOM DOORS.
CHUBB'S PATENT DETECTOR LOCKS and STREET DOOR LATCHES.
CHUBB'S CASH and DEED BOXES.
Illustrated Price List gratis and post free.

CHUBB AND SON, 57, St. Paul's Churchyard, London, E.C.

AMUSEMENT FOR WINTER EVENINGS is abundantly afforded to all purchasers of one of MECHI AND BAZIN'S famous mahogany FOLDING BAGATELLE TABLES. Prices: complete with balls, bridge, cues, and mace, and directions for playing, 6 feet long, 3*l*. 15*s*.; 7 feet long, 4*l*. 15*s*.; 8 feet long, 5*l*. 15*s*.; 8 feet 6 inches long, 8*l*. 10*s*.; 9 feet long, 11*l*. 10*s*.; 10 feet long, 12*l*. 10*s*.; stands for ditto, with adjusting screw legs, 45*s*. to 70*s*. The stand is not absolutely necessary for playing the game, although its use facilitates (by insuring an exact level) the interest of the play.

112, Regent Street, W., and 4, Leadenhall Street, E.C.

THE PERFECT SUBSTITUTE FOR SILVER.—The REAL NICKEL SILVER, introduced more than 25 years ago by WILLIAM S. BURTON, when PLATED by the patent process of Messrs. Elkington & Co., is beyond all comparison the very best article next to sterling silver that can be employed as such, either usefully or ornamentally, as by no possible test can it be distinguished from real silver. A small useful set, guaranteed of first quality for finish and durability, as follows:—

	Fiddle or Old Silver Pattern.	Thread or Brunswick Pattern.	Lily Pattern.	King's or Military Pattern.
	£ *s*. *d*.	£ *s*. *d*.	£ *s*. *d*.	£ *s*. *d*.
12 Table Forks	1 13 0	2 4 0	2 10 0	2 15 0
12 Table Spoons	1 13 0	2 4 0	2 10 0	2 15 0
12 Dessert Forks	1 4 0	1 12 0	1 15 0	1 17 0
12 Dessert Spoons ..	1 4 0	1 12 0	1 15 0	1 17 0
12 Tea Spoons	0 16 0	1 2 0	1 5 0	1 7 0
6 Egg Spoons, gilt bowls..	0 10 0	0 13 6	0 15 0	0 15 0
2 Sauce Ladles	0 6 0	0 8 0	0 9 0	0 9 6
1 Gravy Spoon	0 6 6	0 10 0	0 11 0	0 12 0
2 Salt Spoons, gilt bowls..	0 3 4	0 4 6	0 5 0	0 5 0
1 Mustard Spoon, gilt bowl	0 1 8	0 2 3	0 2 6	0 2 6
1 Pair of Sugar Tongs ..	0 2 6	0 3 6	0 4 0	0 4 6
1 Pair of Fish Carvers ..	1 4 0	1 7 6	1 10 0	1 12 0
1 Butter Knife	0 2 6	0 5 6	0 6 0	0 7 0
1 Soup Ladle	0 10 0	0 17 0	0 17 0	1 0 0
1 Sugar Sifter	0 3 3	0 4 6	0 5 0	0 5 6
Total	9 19 9	13 10 3	14 19 6	16 4 0

Any article to be had singly at the same prices. An Oak Chest to contain the above, and a relative number of Knives, &c., 2*l*. 15*s*. Tea and Coffee Sets, Dish Covers and Corner Dishes, Cruet and Liqueur Frames, &c., at proportionate prices. All kinds of re-plating done by the patent process.

CUTLERY, WARRANTED.—The most varied assortment of TABLE CUTLERY in the world, all warranted, is on sale at WILLIAM S. BURTON'S, at prices that are remunerative only because of the largeness of the sales. Three and a half inch Ivory handled Table Knives, with high shoulders, 12*s*. 6*d*. per dozen; Desserts to match, 10*s*.; if to balance, 6*d*. per dozen extra; Carvers, 4*s*. 3*d*. per pair; larger sizes from 20*s*. to 27*s*. 6*d*. per dozen; extra fine Ivory, 33*s*.; if with Silver Ferrules, 40*s*. to 50*s*.; White-bone Table Knives, 6*s*. per dozen; Desserts, 5*s*.; Carvers, 2*s*. 3*d*. per pair; Blackhorn Table Knives, 7*s*. 4*d*. per dozen; Desserts, 6*s*.; Carvers, 2*s*. 6*d*.; Black-wood handled Table Knives and Forks, 6*s*. per dozen; Table Steels from 1*s* each. The largest stock in existence of Plated Dessert Knives and Forks in cases and otherwise, and of the new plated Fish Carvers.

WILLIAM S. BURTON'S GENERAL FURNISHING IRONMONGERY CATALOGUE may be had gratis, and free by post. It contains upwards of 500 Illustrations of his illimited Stock of Sterling Silver and Electro Plate, Nickel Silver, and Britannia Metal Goods, Dish Covers, Hotwater Dishes, Stoves, Fenders, Marble Chimney Pieces, Kitchen Ranges, Lamps, Gaseliers, Tea Trays, Urns, and Kettles, Clocks, Table Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bedroom Cabinet Furniture, &c., with Lists of Prices, and Plans of the 20 large Show Rooms, at 39, Oxford Street, W.; 1, 1A, 2, 3, and 4, Newman Street; 4, 5, and 6, Perry's Place, and 1, Newman Mews, London. Established 1820.

WEDDING AND BIRTHDAY PRESENTS.—Dressing Cases, Travelling Dressing Bags, Despatch Boxes, Writing Cases, Jewel Cases, Ladies' Reticule and Carriage Bags; Mediæval Mounted Envelope Cases, Blotting Books and Inkstands en suite; the New Patent Self-closing Book Slide; also a choice variety of Elegancies and Novelties, suitable for Presentation, too various to enumerate, to be had at H. RODRIGUES', 42, Piccadilly, W.

SEASONABLE PRESENTS.—The most appropriate offerings for this season of festivity, are those which tend to the promotion of health and personal attraction: none can be more acceptable than ROWLANDS' MACASSAR OIL, for imparting a transcendant lustre to the hair, and sustaining it in decorative charm. ROWLANDS' KALYDOR imparts a radiant bloom to the cheek, and a delicacy and softness to the hands, arms, and neck; and ROWLANDS' ODONTO, or Pearl Dentifrice, bestows on the teeth a pearl-like whiteness, and renders the breath sweet and pure. The patronage of Royalty throughout Europe, their general use by rank and fashion, and the universally-known efficacy of these articles, give them a celebrity unparalleled, and render them peculiarly elegant and seasonable presents.—Sold by A. ROWLAND & SONS, 20, Hatton Garden, London, and by Chemists and Perfumers. Beware of Spurious Imitations.

FOGS, FROSTS.—One of DR. LOCOCK'S PULMONIC WAFERS taken two or three times a day relieves the most violent Cough and protects weak lungs from all the irritation of Fogs and Frosts. They have a pleasant taste.—Price 1*s*. 1½*d*., 2*s*. 9*d*., and 11*s*. per box. Sold by all Druggists.

DINNEFORD'S PURE FLUID MAGNESIA has been, during 25 years, sanctioned by the medical profession and universally accepted by the public as the best remedy for acidity of the stomach, heartburn, headache, gout, and indigestion. As a mild aperient it is admirably adapted for ladies and children.—Manufactured (with the utmost attention to strength and purity) by DINNEFORD & Co., 172, New Bond Street, London, W., and sold by all respectable Chemists throughout the empire.

News of the Week.

BY the Overland Mail we have received important news from Pekin to the 31st of October. The Treaty of Tien-tsin was ratified, and a new Convention signed in that capital on the 24th of October by Lord ELGIN and Prince KUNG. The same formalities were gone through with Baron GROS on the following day. The new Convention provides that the EMPEROR OF CHINA shall make an apology to the Allies for the affair of the Taku Forts last year; that British and French Ministers shall reside permanently at Pekin; that the indemnity fixed by the Treaty of Tien-tsin shall be doubled; that the port of Tien-tsin shall immediately be opened to trade; that the interdict on the emigration of Chinese to British and French colonies shall be removed; that the peninsula of Kowloon opposite to Hong Kong shall be ceded to the British Crown; that the Treaty of Tien-tsin and the Convention of Pekin shall come into immediate operation and be published throughout the Chinese Empire; and that Chusan shall be evacuated by the British force. Lord ELGIN and Baron GROS had taken up their residence in Pekin, and would remain there till November 9. The bodies of Lieutenant ANDERSON, Mr. DE NORMAN, and Mr. BOWLBY, with those of one European and eight Sikh soldiers, were given up on the 14th and 16th October, with marks of the most cruel treatment upon them. They had been tied up in the brutal manner in which the Tartars are accustomed to treat their prisoners, and being scantily supplied with food, had died from the severity of their sufferings. They were buried on the 17th with great solemnity in the Russian cemetery, the funeral being attended by the two Ambassadors, the Commanders-in-Chief, and numbers of officers of both armies. Captain BRABAZON and the Abbé DE LUC were beheaded on or about the 21st September, after the battle of Pah-li-chow, and their bodies thrown into the canal. Sir HOPE GRANT, the British Commander-in-Chief, issued a proclamation on the 16th October, announcing that as the Chinese authorities were alone responsible for the murder of the prisoners, and as the barbarous usage to which they had been subjected was first inflicted in the EMPEROR'S Summer Palace, he had decided on the complete destruction of that palace, and on the exaction of a sum of money "to be paid in compensation to the survivors of the parties seized, or to the families of those who had lost their lives in captivity." In accordance with this proclamation the Summer Palace of the EMPEROR was burnt to the ground by the British army on the 18th October, and the sum of 100,000*l*. was exacted for the families of the British who had been murdered. The French Commander-in-Chief subsequently exacted the sum of nearly 70,000*l*. for the families of the French who had been murdered, viz., the Abbé DE LUC, Colonel GRANDCHAMPS, Intendent DUBUST, and M. ADEN. The French army retired from Pekin on the 1st November, but the English force were to remain till the departure of the Ambassadors. A large force, however, was to remain at Tien-tsin till all the conditions had been fulfilled.

The *Vienna Gazette* of Sunday published a circular addressed by Baron VON SCHMERLING to the governors of the provinces, explaining the leading principles of his policy. These principles embody the resolutions and intentions of the EMPEROR, as expressed in the imperial manifesto of the 20th October, and include freedom of religious worship, the free development of the nationalities, the independence of the communes, the liberty of the press, the opening of the law courts, and the extension of electoral rights and publicity of debates. Subsequent accounts from Vienna state that the EMPEROR has already sanctioned the resolutions of the Conference of Gran, and has resolved upon convoking the Hungarian Diet for February next. It is also stated that the Council of Ministers has decided on demanding from the POPE the complete abolition of the Concordat.

The official *Gazette* of Naples on Thursday

published four Royal decrees, declaring the provinces of Naples, Sicily, the Marches, and Umbria to constitute an integral part of the State of Italy. Another decree had called out the classes of the last four years for military service, and ordered them to assemble at the end of February. King VICTOR EMMANUEL was to leave Naples yesterday on his return to Turin. Count CAVOUR had been ill and was expected to retire, at least provisionally, from the Sardinian Ministry. The bombardment of Gaeta continues with increased vigour; the Spanish Ambassador has left his palace on account of its being riddled with balls, and the KING himself now passes each night on board the Spanish frigate in the harbour. The KING has received a letter from the EMPEROR OF THE FRENCH expressing sympathy for HIS MAJESTY, but telling him that he has carried on the siege long enough for his honour. HIS MAJESTY in reply has thanked the EMPEROR, but stated that he considers it his duty to persist in the defence.

Accounts from the United States to the 12th inst. inform us that the secession agitation was rapidly increasing in the South, and that Mr. COBB, Secretary to the Treasury, had resigned his seat in the Cabinet with the intention, it was said, of joining the Georgia secessionists.

Home News.

THE COURT.—The Queen, Prince Consort, and the Royal family continue at Windsor Castle. On Thursday the 20th the Prince of Wales arrived from Oxford. Lord Augustus Loftus, Lord and Lady Bloomfield, and Lieut.-General Sir Harry Jones, arrived on a visit. On Friday morning the Queen and Prince Consort, accompanied by the Prince of Wales, Prince Alfred, Princess Alice, and Prince Louis of Hesse, walked in the Home Park. The Duchess of Kent and the Prince and Princess of Leiningen visited the Queen, and took luncheon. Lord Bloomfield had an audience of her Majesty on being appointed Ambassador at Vienna, and Lord Augustus Loftus had an audience on being appointed Minister at Berlin. Lord John Russell had an audience of the Queen. On Saturday morning the Queen with Princess Alice walked in the grounds of the Castle, and visited the Duchess of Kent at Frogmore. The Prince Consort, accompanied by Prince Louis of Hesse, came to London and inspected Mr. Durham's model for the memorial of the Exhibition of 1851. His Royal Highness then went to Buckingham Palace, and afterwards returned to Windsor. The Prince of Wales and Prince Alfred skated on the ice in the Home Park. Lord A. Loftus, Lord and Lady Bloomfield, and Lieut.-General Sir Harry Jones left the Castle. On Sunday morning the Queen and Prince Consort, the Prince of Wales, Princes Alfred, Arthur, and Leopold, Princesses Alice, Helena, and Louisa, and Prince Louis of Hesse, attended Divine service in the private chapel. The Rev. Dr. Goulburn preached the sermon. On Monday morning the Queen, accompanied by Princess Alice and Prince Louis of Hesse, walked in the grounds of the Castle. Prince Louis skated on the ice in the Home Park. The Prince Consort, with the Prince of Wales, Prince Alfred, and the Prince of Leiningen, went out shooting. Prince Arthur skated on the ice. The Duchess of Kent and the Prince and Princess of Leiningen visited her Majesty. On Tuesday morning the Queen and Prince Consort, the Prince of Wales, Princes Alfred, Arthur, and Leopold, Princesses Alice, Helena, and Louisa, and Prince Louis of Hesse, attended Divine service in the private chapel. The Dean of Windsor performed the service and administered the Sacrament. The Duchess of Kent and the Prince and Princess of Leiningen visited the Queen and took luncheon. In the evening the Queen had a dinner party. On Wednesday morning the Queen, accompanied by Princesses Alice, Helena, and Louisa, Prince Arthur, and Prince Louis of Hesse, walked in the Home Park, and visited the Duchess of Kent at Frogmore. Prince Arthur and Prince Louis of Hesse skated on the ice. The Prince Consort with the Prince of Wales and Prince Alfred went out shooting. In the afternoon Prince Alfred left the Castle for Germany. The Rev. Dr. Whewell, Master of Trinity, arrived on a visit. On Thursday morning the Queen, accompanied by Princess Alice, walked in the grounds of the Castle. The Prince Consort, with the Prince of Wales, Prince Arthur, and Prince Louis of Hesse, skated on the ice in the Home Park, in the presence of the Queen and Princess Alice. The Duchess of Kent visited her Majesty from Frogmore, and took luncheon. The Rev. Dr. Whewell left the Castle for Cambridge.

THE PRINCE OF WALES left Oxford for Windsor on the 20th inst., and will not return to pursue his studies at the University. It is understood that his Royal Highness will enter at Cambridge at the commencement of next term.

PRINCE ALFRED, attended by Major Cowell and Major Du Platt, left Windsor Castle on Wednesday afternoon for Dover, and embarked at night for Ostend on his way to Berlin, on a visit of a few days to the Prince and Princess Frederick William. His Royal Highness will afterwards visit the Duke and Duchess of Saxe-Coburg at Gotha, and return to England by Brussels about the 6th of January. It is understood that his Royal Highness will embark at Plymouth on the 15th in her Majesty's ship St. George, the Hon. Captain Egerton, for the North American and West India station.

COURT MOURNING.—Orders were issued on Tuesday from the Lord Chamberlain's Office for the Court to go into mourning for three weeks for the Queen Dowager of Sweden and Norway.

PARLIAMENTARY MOVEMENTS.—The election for Ripon took place on Friday, when Mr. Reginald H. Vyner, of Newby Hall, near Ripon, and Dr. F. R. Lees, of Leeds, were put in nomination. The show of hands was in favour of Dr. Lees, and a poll having been demanded on behalf of Mr. Vyner, Dr. Lees declined to go to the poll on the present occasion. Mr. Vyner was then declared to be elected.—Major Barttelot was elected on Thursday for West Sussex without opposition in the room of the Earl of March, now called to the House of Peers as Duke of Richmond.—There is a vacancy for Aberdeenshire caused by the death of the Earl of Aberdeen, and the consequent accession of Lord Haddo to the peerage. There are two candidates in the field—Sir Alexander Bannerman, in the Ministerial interest, and Mr. Leslie, of Wartle, who comes forward as a Liberal Conservative.

THE CONSERVATIVE PARTY.—Colonel Taylor succeeds to the position lately held by the Right Hon. Sir W. Hylton Jolliffe, as Whip to the Conservative party, and will be assisted in the ensuing Session by Mr. Whitmore and the Hon. Gerard Noel, M.P. for Rutland, who will fill the vacancy caused by Sir W. Jolliffe's retirement.

THE VOLUNTEER MOVEMENT.—A correspondence between Lord Elcho and Earl de Grey and Ripon respecting the admission of members of the Society of Foresters into Volunteer Corps has been published. Earl de Grey and Ripon states that "while Mr. Secretary Herbert is fully sensible of the public spirit displayed by the Foresters who desire to form separate corps or exclusive companies in the various metropolitan corps, he is absolutely precluded from sanctioning their proposal, as the regulations of the service do not allow the members of any secret society, as such, to constitute corps, or portions of corps, in the Volunteer force."—The Volunteer class at Hythe which has just concluded its course of instruction, was the largest that has ever been assembled at the school of Musketry. The total number was 96, of whom 32 were captains, 13 lieutenants, 14 ensigns, 24 non-commissioned officers, and 13 privates. The "figure of merit" at the lower ranges was 45.02, or just about the average for Volunteers, which for the last five courses has been 45.20. The average for the same number of courses for officers of the army is 44.06. The officers of the army, however, enjoy two great advantages in being allowed preliminary firing, by which rifles may be sighted, and in being a longer time under instruction than Volunteers. The highest figure for any one section on the present occasion was 51, and the lowest 40.1, and it is remarkable that of these 96 men, not one was left in the third class; that is to say, either in the first or subsequent trial, every one was able to make at least 15 points in 20 shots from 150 to 300 yards. The prizes which were subscribed for by the members, were as follows:—The first, a Whitworth rifle, value 25*l.*, for the greatest number of points from 400 to 900 yards, was won by Corporal Hoare, of the 9th Gloucester, who without any previous practice scored 36 points. The 2d, a Westley Richards rifle, value 15*l.*, for the greatest number of hits from 400 to 900 yards, was won by Captain Macgregor, of the London Scottish, who scored 31 points in 28 hits. The 3d, a cup value 5*l.*, for the most points from 150 to 300 yards, was won by Captain Gough, of the 23d Staffordshire, who scored 32 points.

Foreign.

FRANCE.—The *Constitutionnel* of Friday contained a second article signed by M. Grandguillot, on the subject of Austria and Venetia, which declares in the most explicit manner that France will stand by the Treaty of Villafranca; that upon no account will she ever permit Austria to set foot again in Lombardy, or to resume a position which would "put her within two marches of Grenoble." It contends that "the line of the Mincio is not necessary to the defence of Germany; that Verona, instead of being a shield of defence, is a sword against Italy; and that the true frontiers of the Confederation are traced by the Isonzo, the Tagliamento, and the mountain lines which command these two rivers." It argues that Russia will upon no account assist Austria, and that even if the Czar should be disposed to do so, neither the Russian nobility nor the army could be induced to bury the resentment they feel at what they call Austria's desertion in the Crimean war. As regards Prussia, it contends that she has too much to hope from Austria's difficulties to feel inclined to help her out of them, while England has said so much in favour of Italian independence that she is morally pledged against Austria. The article concludes by asking why a compromise calculated to save at once the interests and honour of Austria and Venetia should be rejected.—The French Court has gone into mourning for three weeks, for the Queen Dowager of Sweden. The body of the Duchess of Alba, sister of the Empress of the French, which had been deposited in the Church of Rueil, was transferred on the 19th to the neighbouring railway terminus, where carriages were waiting to receive it and the persons who were to accompany it to Valencia, in Spain. The coffin was conveyed to the Lyons Railway and thence to Marseilles, whence the Imperial yacht, La Reine Hortense, has since conveyed it to Valencia.—The private secretary of the Archduchess Sophia, who has been in Paris for some time, and who expected to remain some days longer, was sent for unexpectedly to the Tuileries on the 19th, and left Paris on the following morning with despatches for Vienna. The reported arrival of Garibaldi in Paris is contradicted. Count de Persigny, Minister of the Interior, returned to Paris on the 20th, having it is said been detained in London by the conferences held there with respect to Venetia, to which the presence of the English Ministers at Berlin and Vienna had given rise. Preparatory measures have been taken by the Count for effecting numerous changes among the Prefects, and particularly among the Sub-Prefects.—The Emperor has purchased Prince Soltikoff's collection of works of art and curiosity entire, and preparations are now making for their conveyance to the Louvre, where every article will be placed in its own division.—The French episcopate has suffered another loss by the death of M. Massonais, Bishop of Périgueux and Sarlat.—The *Patrie* announces that a fourth regiment of Grenadiers is about to be added to the French Imperial Guard. The Minister of War is actively engaged in selecting men for this regiment. The Emperor desires that, as there are four regiments of Voltigeurs of the Imperial Guard, there shall be four regiments of Grenadiers. The Emperor was present at the Pont de Jena on the 18th to witness an experiment made with a newly-invented bridge of boats, which was placed on the bank of the Seine, along the Champ de Mars. The experiment was conducted by General Fourgeot, Commander of the Artillery of the Imperial Guard. This system differs from others in the fact that the boats are made of iron, and not of wood. They are moreover divided into three parts. The centre piece may at will be separated from the others, in order to render the carriage less difficult, and the effect of an enemy's shot less dangerous.—Among the numerous improvements which are taking place in Paris a new street is to be commenced at the Cours de la Reine, in the Champs Elysées, at the angle formed by the Avenue d'Antin, opposite the bridge of the Invalides. It will cross the Place François I., then the Avenue Montaigne, the Rue Marbœuf, the Avenue Marbœuf, and will end in the Boulevard Alma, which is at present constructing opposite the Rue de Chaillot. This new street will be 60 feet wide, and will form a straight line from its commencement to its end, establishing a direct communication between the bridge of the Invalides and the Arc de l'Etoile. It has also been determined in order to give more animation to the magnificent Boulevard Sebastopol, to build a theatre on the square of the Conservatoire des Arts et Métiers. There are already two new theatres on the Place de Châtelet, and the new theatre will make the third in that neighbourhood. The object of building so many new theatres in the same quarter is to attract some of the superabundant population from the other boulevards, and give them an inducement to settle in the new quarter.—An artist in Paris has made a discovery which will effect a complete revolution in the manufacture of cabinet work. He has found a means of rendering any description of wood so soft that it will receive an impression either of the most varied sculpture or the most delicate chasing. The wood is then hardened to the consistency of metal, while the impressions remain perfect. The artist has already completed some splendid sculptured articles, such as picture frames, inkstands, chests, and liquor-stands. With the introduction of this new art, it is expected that articles of household furniture will be considerably reduced in price.—The *Siècle* reports a very unforeseen result of the Treaty of Commerce with England:—An extensive tinman in Paris lately purchased 6000 cases of English block tin at 52f. 50c. the 100 kilos., and he is now re-exporting it to England made into utensils of different kinds. He has calculated that the lower rate of wages paid to French workmen, as compared with that of the English, will more than compensate for the expense of carriage and duty (8f. 50c. per 50 kilos.). The French block tin manufacturers have now reduced their prices from 70f. to 52f. 25c.—The weather has been extremely severe in Paris for the last few days. Heavy snow has fallen, succeeded by sharp frost.

BELGIUM.—In the Senate on the 18th the Duke de Brabant delivered a speech on the extension of Belgian commerce in foreign countries. The Prince recommended the Government to make exhibitions of Belgian productions in the principal towns of Europe, and even of America, which would, he said, make them known abroad, and establish a trade in them. He remarked that at Hamburg, Copenhagen, Stockholm, and some other places a disposition to encourage such exhibitions had been manifested, and in Spain they had taken place with success. His Royal Highness also proposed

that a prize of 5000f. should be offered in competiton for the best essay on the means of promoting the commercial progress of Belgium. The speech was listened to with great interest, and the Ministers of the Interior and Foreign Affairs declared that they were ready to carry into effect counsels coming from such an exalted source. In the Chamber of Representatives on the 19th the election of members of the Court of Accounts, which, by the Constitution, belongs to the Chamber, was proceeded with. At a previous sitting of the Chamber the Minister of Foreign Affairs, in answer to a question on the subject of passports, declared that the Belgian Government had been for some time past in communication with foreign Powers, for the purpose of effecting a general and reciprocal suppression of the passport system.

SWITZERLAND.—The National Council, in its sitting of the 21st, took into consideration the decree concerning the construction of military roads in the Alps submitted to it by the Federal Council. The National Council resolved upon returning this project to the Federal Council for a definitive report (to be made in the course of next session) on the negociations with the different cantons for its realisation, and on the pecuniary sacrifices which the construction of these roads might involve. The National Council then resolved to adjourn its sittings until the Federal Council should again consider its convocation necessary. On Saturday the sittings of the National Council and the Council of the States were both closed by their respective Presidents, who, in their speeches, reviewed past events, and exhorted the members to Union. Dr. Blumer, President of the Council of the States, especially alluded to the internal differences which had arisen in reference to the question of Savoy, and warned the Press to avoid raising suspicions against those who may entertain a different view of things to their own.

SAXONY.—Count Ladislaus Teleki, the Hungarian refugee, who had arrived at Dresden with an English passport in an assumed name, has been arrested by the Saxon Government and delivered up to Austria. Count Teleki was Minister Plenipotentiary from the Hungarian Government to the French Republic in 1849, and in Hungary he enjoyed the same popularity among the educated classes which M. Kossuth found among the masses of the people. He has been a refugee since 1849, and after the pacification of Hungary he was, with others, condemned to death by default. He was travelling in Saxony on his own private affairs, without any reference to politics. In the treaties of extradition between the two countries political refugees are not included. Count Teleki has been for a long time in very delicate health, and, though it is not to be believed that Austria will cause the penalty pronounced in 1849 to be inflicted on him, it is more than probable that [illegible] and in such a season, would terminate fatally. The King of Saxony after having suffered during six days from a severe cold, was attacked on Friday by measles. The Ministry are entrusted with the entire direction of the Government during his Majesty's illness.

PRUSSIA.—M. Bernuth, First President of the Court of Appeal of Posen, has been appointed Minister of Justice in the room of Dr. Simons. M. Bernuth has been summoned from Posen, and has had an audience of the Prince Regent at Berlin. The legal proceedings that have grown out of the charge of assault made last autumn against Captain Macdonald by one of the railway officials at Bonn terminated on the 18th inst. The case gave rise to three different and separate trials. At the first hearing of the charge of assault, M. Müller, the Procurator, made use of violent and insulting language, asserting that English travellers were generally notorious for rudeness and "blackguardism." This calumny was resented by the English residents at Bonn, eight of whom signed and published a protest against it. In consequence of this protest the judicial authorities ordered an inquiry, which resulted in a reprimand to M. Müller for the use of language unbecoming his office. M. Müller, however, at the same time commenced a cross action against the eight gentlemen who signed the protest, for a libel on an official of the Government. This prosecution has just closed. The defendants admitted they had signed the protest, and the Court was addressed by the English Consul and the Rev. Mr. Anderson, the English chaplain. The latter declared that the publication of the protest was not an intentional insult to a judicial authority, but simply an act of self-defence, provoked by an unjust attack, made suddenly and publicly upon them and their countrymen. But they were not aware that the publication of such a protest was a violation of any special law, or they would have tried to obtain redress of the wrong in some other way. He contended that the open manner in which they had signed and published the report was a proof that they believed they were acting legally. On Monday the Court pronounced judgment, acquitting Messrs. Baddeley, Rapp, Washington, Rochfort, Thurston, and Oldfield, and finding Mr. Perry, the Rev. Mr. Anderson, Colonel Cumberland, and Mr. Drummond guilty, with extenuating circumstances, of having committed an offence against the State Procurator while in the performance of his official duties. The extenuating circumstances were declared to apply in a less degree in the case of Mr. Perry, who was fined 100 thalers, or five weeks' imprisonment in default. The other three were fined 25 thalers each, or nine days' imprisonment in default. During the trial a highly respectable lady of Cologne, named Wolf Heydin, gave evidence entirely exculpating Captain Macdonald, and stating that M. Parrow, who was the cause of Capt. Macdonald's imprisonment, advised her not to appear at the trial.

SAXE COBURG.—The Duke of Saxe-Coburg has, with the consent of the King of Saxony, promoted the celebrated publisher of Leipsic, M. Bernhard-Tauchnitz, to the rank of Hereditary Baron. This dignity has been conferred as an acknowledgment for the exertions made by M. Tauchnitz to promote the extension of English literature in Germany.

DENMARK.—It is reported at Copenhagen that Prince Christian of Denmark, the "heir eventual" to the Danish throne, during his recent visit to Paris had more than one interview with the Emperor of the French, who promised to support the sovereign independence and rights of Denmark, against the increasing demands of Prussia and Austria.

AUSTRIA.—Lieutenant Latour has arrived at Lisbon from Madeira with intelligence that the health of the Empress was quite satisfactory. The Council of Ministers at Vienna has decided on demanding from the Pope the complete abolition of the Concordat, and negotiations to that effect have been opened with Rome. The official *Wiener Zeitung* of Sunday publishes a circular, addressed by Baron von Schmerling to the governors of the provinces, explaining the leading principles of his policy. The following is an abstract of this document:—

It is the mission of the Ministers of State to carry out fully and effectively the resolutions and intentions of the Emperor, as expressed in the Imperial manifesto of the 20th October. As regards freedom of religious worship, it is the will of the Emperor that political and civil rights shall in that respect also be preserved against any encroachment, and that the mutual relations of the different confessions shall be established upon an equitable footing, and upon the real love for one's neighbour. Public instruction will be promoted by every possible means. The free development of the nationalities is accorded. With respect to the public press, every preventive interference is removed. The development of agriculture, commerce, and industry will be pursued with redoubled energy on the path hitherto followed. The communes will enjoy an independent existence. The administration of justice is to be separated from the governmental administration. Publicity and the oral form of proceeding are to be introduced into the civil and penal courts of law. As regards the Provincial Statutes, the Ministry of State has been authorised to introduce into the fundamental laws the principle of representation of the different interests by means of direct elections and the extension of electoral rights and eligibility, the right of initiative, and the publicity of debates. On the Council of the Empire, to whose province belongs the general legislation, while the Provincial Diets are only competent to legislate on provincial questions, is therefore conferred the right of originating projects of law and publicity of debates. The Council of the Empire will be composed of members unconditionally elected by the Provincial Diets, and will, besides, receive additional members. The Provincial Governments of the minor Crown lands, recently [illegible] Schmerling exhorts the public functionaries to a conscientious discharge of their duties, to the furtherance of the interests of the inhabitants of their provinces, to a strict observance of the laws, and to candour in their official reports on the condition of the country.

HUNGARY.—A telegram from Vienna states that the Emperor has already sanctioned the resolutions of the Conference of Gran, and has resolved upon convoking the Hungarian Diet for February next. The appointments of the members of the Governorship Council for Hungary arrived at Pesth on Tuesday from Vienna. Count Ladislaus Karolyi is appointed Vice-President of the Council. Court Councillor Szalay has been appointed Director of the Chancery. The councillors are to enter upon their duties on the 2d of January next, when the present offices of the Governorship will be abolished. The circular of Baron von Schmerling has created a great sensation in Hungary.

ITALY.—The official *Gazette* of Naples of Wednesday publishes four Royal decrees, dated December 17, declaring the provinces of Naples, Sicily, the Marches, and Umbria to constitute an integral part of the State of Italy. The news that the French squadron is about to quit Gaeta has caused a rise in the Neapolitan funds. A decree has been issued calling out the classes of the last four years for military service, and ordering them to assemble at the end of February. Those who have been sent home are ordered to hold themselves in readiness to resume military service when required. On Christmas Day the King held a reception of the nobility of the Court, which was very numerously attended. An enthusiastic demonstration in favour of his Majesty took place in the evening. The King was to attend a ball of the National Guard on Thursday, and to leave Naples for Turin yesterday. Count Cavour has been unwell, and has been bled twice, but is now in a more satisfactory state. It is said that he has the intention of retiring, at least provisionally, from the Sardinian Ministry. The tendency of public opinion presages that the Garibaldian party will obtain the majority at the elections to the Italian Parliament. Signor Farini has just lost his son-in-law, Signor Riccardi, and it is expected that he will shortly resign office. Before doing so, however, he will publish the Communal Law for Naples. The Liberal party at Naples is irritated against the police for having ordered the closing of the Castel Nuovo, and has set up an open opposition to the measure. Several persons have been arrested on a charge of having been in correspondence with the Royalists at Gaeta. The state of the provinces is said to be satisfactory, though some of the insurrectionary bands appear to have intrenched themselves in the mountains of the Abruzzi, and several thousands of soldiers who left Gaeta and entered the Roman States are returning to join them. The bombardment of Gaeta continues with increased vigour. The garrison of Gaeta has been diminished in number by the dismissal of a portion of the Royal Guard, whose fidelity was doubtful. The remainder of the garrison are said to be in a deplorable state; but the defence may nevertheless be prolonged for some time in consequence of the strength of the place and the distance of the attacking batteries. An enormous quantity of shells and shot were thrown into the fortress on the 17th by the Sardinians. Some of them fell into the garden of the palace, where the King and Queen were dining with the Spanish Ambassador. Two officers were struck while standing near the King, and the Ambassador has since left his palace on account of its being riddled with shot. It has also been considered prudent to remove the population who occupied the quarter of Costa-Smersa to the southern part of the town, and the King now passes each night on board the Spanish frigate in the harbour. New Sardinian batteries had been erected and were ready to take part in the bombardment. A deputation had arrived from Calabria, and promised to raise an insurrection in that province in favour of the King. His Majesty has received a letter from the Emperor Napoleon, expressing his sympathy for the King, but telling him that he has carried on the siege long enough for his honour. The King, in his reply, thanked the Emperor, but added that he considered it his duty to persist in the defence. It is said that the Austrian Cabinet and the Jesuits have advised his Majesty to allow himself to be taken prisoner by the Sardinians. The news from Rome is of an alarming character. The Kennard and the Ballarat, which left Naples for the Roman States, were not allowed to land their passengers at Civita Vecchia, the pretext being that 600 Garibaldians were on board. Against this Mr. Odo Russell has protested. Considerable quantities of provisions had been despatched from Rome to Gaeta. The Pope delivered an allocution in a Consistory held on the 17th inst. His Holiness spoke of the persecutions of the Christians in Syria and China. He condemned the pamphlet of M. Cayla, entitled "Le Pape et l'Empereur," and announced that the Grand Duke of Baden had violated the pontifical Concordat. The Roman patriots have posted up on the walls of Rome bills bearing the arms of King Victor Emmanuel, and the words, "We desire annexation to Sardinia." Crowds of people assembled to read these bills, but they had not led to any arrests. Count Ercole Mastai, a nephew of the Pope, and late captain of the Staff in the Pontifical army, has offered his services to the King of Italy, who has accepted them, granting him the same rank in the Italian army. The *Giornale di Roma* publishes a protest signed by 22 prelates of the Marches against the acts of the Sardinian Government.

TURKEY.—The Sardinian ships are still detained at Galatz and Sulina. Their cargoes of munitions have been sequestered in compliance with orders from the Porte. The *Levant Herald* announces that the Treasury Bonds have been renewed for three years. A great fall has in consequence taken place in these securities. A new tithe law is in course of preparation. Customs reforms are contemplated. A disturbance has been suppressed at Scio.

THE PRINCIPALITIES.—It is again affirmed that the Principalities are agitating in favour of Hungary.

CHINA.—The following telegram was received at the Foreign Office, *viâ* Trieste, on Monday evening from her Majesty's Consul-General at Alexandria, dated December 18:—

"Mr Loch has arrived, with despatches from China, and leaves this day for Malta. The ratifications of the Treaty of Tien-tsin were exchanged and the Convention of Pekin signed on the 24th of October. The English and French Ambassadors took up their residence in the capital, and would remain there till the 9th of November. The French army retired from Pekin on the 1st Nov. The English would remain till the Ambassadors left. A large force was to remain at Tien-tsin till the treaty conditions were fulfilled. Principal clauses:—Apology from the Emperor for the affair of the Peiho last year. Ministers to reside at Pekin. Indemnity fixed to be doubled. Tien-tsin to be opened to trade immediately; emigration allowed. Kowloon ceded to the British Crown. Treaty of Tien-tsin and Convention of Pekin to be put into immediate operation, and to be promulgated throughout the empire. The palaces of Yuen-min-Yuen have been entirely burnt to the ground by the British force. Bodies of the prisoners who died in the hands of the Chinese brought in and buried with honours in the Russian Cemetery on October 17. Captain Brabazon and Abbé de Luc beheaded on or about September 21, after the battle of Pahli-chow; bodies not recovered. Indemnities expected from Chinese for families of deceased. English and French Ministers left Shanghai for Tien-tsin. Major Anson has arrived, charged with despatches from Sir Hope Grant for the War office, and leaves this day."

The following telegram was received on Monday night through Mr. Reuter's agency:—

"Pekin, Oct. 31.

"The Treaty of Tien-tsin was ratified and the Convention signed here on the 24th of October by Lord Elgin and Prince Hung. The same formalities were gone through with Baron Gros on the following day. The indemnity to be paid by the Chinese has been fixed at 8,000,000 taels in all. The following is a summary of the Convention:—In Article I. The Emperor expresses his regret at the misunderstanding at the Taku Forts last year. Art. II. revokes the consent given by the Queen to the conditional suspension of her treaty right to place a minister in permanent residence at Pekin. Her Majesty resumes the exercise of her full right to keep a minister there, or when it suits her. Art. III. provides the payment of an indemnity of 8,000,000 taels in all; that is 4,000,000 more than the sum already granted by the Treaty of Tien-tsin. Tien-tsin is to pay half a million by the 30th of

November. Canton 333,333 taels, less the advances towards the Shameen site, by the same day. The rest is to be paid out of the Customs, one-fifth of the revenue of which will be taken quarterly until the whole is paid. Art. IV. opens the port of Tien-tsin to trade. Art. V. removes the interdiction on emigration to the British colonies or elsewhere, and provides that regulations shall be fixed for the protection of the emigrant. Art VI. cedes to the British Crown the portion of Kowloon now held under lease, and makes it part and parcel of the colony of Hong Kong. Art. VII provides for the immediate operation of the Treaty of Tien-tsin and the present Convention of Pekin. Art. VIII. provides for the promulgation of the Treaty and Convention throughout China. Art. IX. provides for the immediate evacuation of Chusan by the British force now garrisoning it, and declares that the rest of our army in China may remain at Tien-tsin, or Taku, or Tung-chow, or Canton, or at all these places, as the British Government shall decide. The allied armies are to leave Pekin on the 8th of November. It is reported that the 1st Royals, the 87th, the Queen's, the Buffs, and the Marines proceed to England. Lord Elgin resides in Pekin. The Emperor is at Zehol, in Tartary. Bowlby, De Norman, and Anderson have been buried with great solemnity. Brabazon was beheaded about the 21st of September. The Abbé de Luc also met with the same fate. The sum of 100,000*l.* has been exacted for the families of the British officers who have been murdered. The Summer Palace of the Emperor was burned by the British on the 18th of October. The insurgents at Shanghai are still levying tribute in various places, and are menacing Ningpo.

Mr. Loch, bearing the Treaty of Peace and Lord Elgin's despatches to the Foreign Office, and the Honourable Major Anson bearing Sir Hope Grant's despatches to the War Office, arrived in town at a late hour on Thursday night. Yesterday morning the usual salutes in honour of the Peace were fired at St. James's Park, and at the Tower. The despatches are exceedingly voluminous and was published in a supplement to the *Gazette* of last evening. They contain the Treaty of Tien-tsin of last year, now ratified, at full length; the Convention dictated at Pekin, and a very lengthened and most interesting account of his captivity by Mr. Parkes. The following extracts from a letter from head-quarters published in the *Times* of yesterday will be read with interest:—

"The Chinese authorities had given notice that on the 12th some more of the prisoners still remaining in their hands would be given up, and accordingly in the course of the day eight Sikhs were brought into camp, but no Bowlby or Brabazon, as had almost been hoped for against hope, accompanied them, nor were the Sikhs able to give us any tidings of them. We had not, however, long to wait for these. On the 14th two more Sikhs, who turned out to be the last of the survivors, were released, and from them we learnt that Bowlby and Phipps, the private of the King's Dragoon Guards, had, like De Norman, Anderson, and the two Sowars, whose fate I was enabled to communicate to you by last mail, been unable to survive the brutal treatment to which they had been subjected during the earlier period of their imprisonment. On the same day that the abovementioned two Sikhs came in, the bodies of De Norman, Anderson, and two Sikhs arrived in carts, and on the 16th those of Bowlby, Phipps, and two other Sikhs; those of four more Sikhs which were brought in on the 17th completed, with the survivors, the entire party that had been taken on the 18th of September, with one exception, that of poor Brabazon, whose fate for some time remained enveloped in mystery. Twenty-six, in all, were captured—seven Englishmen, 19 Sikhs; of these two Englishmen (Parkes and Loch) and 11 Sikhs were released, and four Englishmen (De Norman, Bowlby, Anderson, and Phipps) with eight Sikhs, died of their sufferings. Brabazon alone continued missing. Accounts subsequently received left us in no doubt, however, either as to the fact of his death or of the way in which it happened. Though the earliest of them all, in point of time, it was perhaps the happiest death, for he was saved much of the sufferings the others underwent. No attempt was made by the Mandarins to produce his body, and when they were asked what had become of him, they said two Europeans had been beheaded by order of the General commanding at Pah-li-chow, when that position was attacked by the allied armies on the morning of the 21st of September, and their bodies thrown into the canal. This statement agreed so accurately with that given by the Chinese Christians who visited Baron Gros, and also with the information derived through the Russians, that no doubt remained that poor Brabazon was one of those Europeans. To reach the Emperor and the Mandarins and punish them for this treachery was now the great object and the great difficulty. It could only be done by adopting some measure that would place beyond the possibility of doubt in the minds of the governing classes of China that we were at Pekin as masters, that the arrogance of the Chinese Government could be lessened, and it made to feel the responsibilities that attach to the commission of acts of duplicity and cruelty. There seemed two ways of arriving at this result; one was by capturing and holding the Imperial city of Pekin; the other was by the destruction of Yuen-Ming-Yuen, the favourite Palace of the Emperor, and where the cruelties to the prisoners were first commenced. At Yuen-Ming-Yuen the tablets of the dynasty were preserved, on the safety of which, in the opinion of the Chinese, the existence of the present reigning family depends. By the people the Palace was held in great veneration from its being the constant residence of the Emperor, and the place where all the great princes and nobles of the empire assembled; the gardens and buildings were famed for their beauty throughout China, and immense sums were expended yearly on their maintenance. It was the scene of all the intrigues and gaieties of the Court. It was there that the great receptions and levées were held, and there that the Emperor had his concerts, evening parties, and private theatricals, when, it is said, he mixed on more familiar terms with those invited than we imagined could exist in the ceremonious Court of Pekin, an obeisance to the Emperor on his entering and leaving the hall of reception being the only ceremony performed. The destruction of Yuen-Ming-Yuen was therefore finally decided on. Lord Elgin and the Commander-in-Chief both addressed the Prince of Kung by letter, informing him of their decision and the reasons that influenced them in arriving at that decision. Lord Elgin, in terms of great severity, pointed out the treachery that had characterised the conduct of the Government of China from the first moment of their attempting to negotiate at Tien-tsin to their last act of perfidy in violating a flag of truce and murdering those captured while under its protection—that, in consequence of this conduct, he had called on the Commander-in-Chief utterly to destroy Yuen-Ming-Yuen, as being the spot where the cruelties to the prisoners first commenced; he further demanded that a sum of 300,000 taels should be paid within 48 hours as an indemnity to the families of the murdered prisoners, and informed the Prince of Kung if there was any delay in so doing, or any hesitation to sign the convention and exchange the Treaty of Tien-tsin, then the Emperor's Palace inside Pekin should be burnt to the ground. These letters were accompanied by proclamations that were placed on the walls of Pekin, informing the people of the measures that were to be taken and the reasons for their adoption. The English, in the course they now followed, acted entirely by themselves, the French Commander-in-Chief being opposed to the destruction of Yuen-Ming-Yuen, fearing it might preclude any chance that existed of coming to an arrangement with the Chinese Government; but Sir Hope Grant and Lord Elgin were not men to pass lightly over the want of good faith on the part of the Emperor of China. The more indifference Lord Elgin displayed about signing the Convention or coming to terms the more alarmed the Chinese Government became, and the more pressing for a day to be named to exchange the ratified Treaty of Tien-tsin. On the 18th of October Sir John Mitchell's division marched to Yuen-Ming-Yuen; they met with no resistance,—not a Tartar soldier was to be seen. On his arrival he disposed his force for the proper and systematic carrying out of his orders. From the place that was seized by the French on the 6th of October it was at least six or seven miles before the last building of Yuen-Ming-Yuen was reached. This was at the foot of the first range of hills that bound the plain to the north of Pekin. Over this large extent of ground were gardens, palaces, temples, and pagodas, on artificial hills, some of them 300 and 400 feet in height, with forest trees of all kinds covering their sides, through the green foliage of which were seen the yellow-tiled roofs of the various Imperial residences. A large lake lay buried in the midst of these wooded hills, with two or three islands on it, with picturesque buildings, joined to the mainland by quaint, but beautiful stone bridges. On one side of the lake, extending upwards of two miles, winding in and out, among grottoes and through flower gardens, roofed in by flowering creepers, was the favourite walk of the Emperor and his Court; in some places, where the palaces came to the water's edge, the walk was carried past them on a light and beautiful stone terrace overhanging the lake. The high mountains of Tartary forming the background made it, while it certainly was one of the most curious, also one of the most beautiful scenes I had ever beheld. Two days were required effectually to set fire to and destroy all the buildings and walks of Yuen-Ming-Yuen. Much valuable property that it was impossible to remove was destroyed. It is said that it exceeded two millions sterling, exclusive of the buildings. During the destruction of the Palace the soldiers came upon two presents that had been sent out to the Emperor of China by Lord Macartney from George III.,—a State coach and two 12-pounder howitzers,—complete in every way, and in very good condition and repair, great care having evidently been taken of them. It was on the 17th that the remains of poor De Norman, Anderson, Bowlby, and Phipps were consigned to the grave. At noon of that day we all assembled to bear them to their last resting-place. The coffins were each placed on a separate gun-carriage. A portion of the King's Dragoon Guards and Irregular Cavalry formed the advance; a body of infantry followed, with the band playing the Dead March. Lord Elgin and Sir Hope Grant were chief mourners. The pall-bearers were the members of the Embassy and the Commander-in-Chief's Staff, Fane, and some officers of his regiment, and some men of the King's Dragoon Guards. Parkes and Loch, who had shared their captivity, but had escaped almost by a miracle the fate of these their poor companions, walked on either side of De Norman's coffin. Numbers of officers of both armies, including the French Commander-in-Chief, closed the procession. The Russian Minister, General Ignatieff—with that consideration and in the liberal spirit which have distinguished him in all his intercourse with the army ever since their first landing at Pehtang—had placed the Russian cemetery at the disposal of the Commander-in-Chief. They were all buried in one grave; the service was performed by the chaplain to the forces, the Rev. Mr. M'Gee, and one of the most striking occurrences was the presence at the grave, in their vestments, of a Roman Catholic and Greek priest, who joined their prayers to ours over the remains of our murdered countrymen. The 20th October was the day named for the payment of the indemnity of 300,000 taels for the families of the murdered prisoners. The money was ready long before the time appointed, and a letter arrived from the Prince of Kung, earnestly entreating that an early day should be named for signing the Convention. It now became necessary to secure a suitable residence for the Embassy inside Pekin, and that a public building of sufficient extent should be prepared in which the ceremony of signing the Convention should be performed in a manner to impress the people with the importance of the act they were witnessing. Messrs. Parkes and Loch were sent by Lord Elgin for the purpose of visiting all the public buildings in Pekin, and to select those best adapted for the objects in view. Lieut.-Col. Ross, of the Quartermaster-General's Department, also went, by order of the Commander-in-Chief, to see that proper quarters would be provided for the escort that was to attend Lord Elgin while he resided in the city. Their description of the poverty of the city, and the state of decay of the public buildings, is most deplorable. With an escort of 50 men they proceeded through the northern portion of the city, being joined by three or four Mandarins, who had been sent to point out those buildings that were in the best repair, and to obtain their entrance into any others they might desire to inspect; but each seemed to rival the other in dilapidation and wretchedness. Passing down the west side of the city by one of the broad streets that run north and south, they found, as they got nearer to the Chinese city, which is separated by a high wall from the Tartar city, the streets much more crowded, and business going on more briskly. Turning to the left, along the south of the city, the streets became narrow and tortuous; three or four buildings were visited in this quarter, but none of them were habitable. They passed the Board of Punishments, where Parkes and Loch had been so long imprisoned, and close by the Russian Embassy. A broad street runs from the centre of the Imperial city on the south to the central gate of the Chinese city. A large square or enclosure is in front of the gate entering the Imperial Palace, on the east side of which are the great Boards of Office of the empire. The first visited was the Board of Ceremonies, which has been in its day a magnificent building; it has still fine court-yards and halls. But the Board of Revenue was a heap of ruins, and the Boards of Civil Office, War, &c., in very little better condition. The Board of Ceremonies was therefore decided on as the place best adapted for the ceremony of signing the Convention, both on account of its position, which was good, and from its better state of repair. No house, however, had been pointed out that in any way could be made suitable for the Embassy. Prince Kung was therefore requested to have some private palace at once prepared for Lord Elgin's reception, and the Prince of I's was named, as being in a convenient situation. It is a building of vast extent; the outhouses alone could accommodate 3000 soldiers with ease; but the palace and gardens were in not much better condition than the other buildings visited. 300 Chinese workmen were, however, set to work, and it is surprising how much they can do in a few hours towards making a place look habitable and comfortable. But the state of decay of the public buildings as well as private, even when owned by one of the greatest and richest princes of the empire, like the Prince of I, gives a melancholy impression for the future of China. The 24th was the day named for signing the Convention; for some days previous Messrs. Wade and Parkes were busily engaged in discussing the clauses of the Convention, and making arrangements for their coming into immediate operation, together with those of the Treaty of Tien-tsin, as soon as the ratified treaties were exchanged. Among the Chinese Deputies were Hang-ke and Wang. The latter was, I believe, associated with Tan, Governor General of Chil-li, when they ineffectually attempted to stay Lord Elgin's advance in 1858. On the morning of the 24th Lord Elgin and Sir Hope Grant entered the An-ting gate, accompanied by an escort of 600 men and 100 officers from the regiments at Pekin. The Commander-in Chief, with the Head-quarters and his personal Staff, rode a little in front of Lord Elgin, who was carried in his State chair by 16 Chinese, dressed in scarlet; his horse, saddled, was led behind him, and the members of the Embassy rode on either side. The 2d Division, under Sir Robert Napier, lined the streets, and as Lord Elgin passed followed at intervals, taking up strategical positions along the line of route, in case treachery was intended by the Chinese. Considerable crowds lined both sides of the road; they were extremely orderly, merely evincing great curiosity to get a glimpse at the 'Great Barbarian' by attempting to peep into his chair as he passed by. The Board of Ceremonies is about three miles and a half from the An-ting Gate, and it was past 3 o'clock before the procession arrived there. Dense crowds surrounded the entrance and filled the streets and squares in front and on every side of it. The guard formed up on either side of the courtyard, where the daïs on which the ceremony was to take place opened. The officers ranged themselves on the left of the daïs, the place of honour, and on the right were assembled a number of Mandarins. At the back of the daïs were two small tables and chairs, that on the left for Lord Elgin, the one on the right for Prince Kung. Close to Lord Elgin's chair was another for the Commander-in-Chief; on either side, at right angles, were ten small tables and chairs for the high officers of each nation; behind them, again, was another row for the accommodation of other officers. As Lord Elgin's chair entered the gate the troops presented arms, and the bands played 'God save the Queen.' His chair was carried to the front of the daïs, when Prince Kung advanced to receive him, accompanied by all the Mandarins. A cold bow from Lord Elgin and an anxious hesitating salutation from Prince Kung, and Lord Elgin passed at once to his seat and sat down, motioning Kung to take the one on his right, which is considered the lowest. A table stood in the middle of the space, in front of which the boxes containing the convention and treaty were placed. Business was immediately commenced by Lord Elgin telling Mr. Wade to hand the translation of his full powers to Kung, with the request to see his in return. Prince Kung said his were not so full, but equally ample as to powers, and gave Lord Elgin the Emperor's decree conferring on him full power to negotiate and conclude a peace, and also to affix the great seal of the Empire as a ratification to the treaty. The convention was signed, each Plenipotentiary affixing his seal. The treaties were then exchanged, Kung sealing it with the great seal of the Empire, certifying under his seal and signature that the ratification of the treaty had been duly effected, and that affixing the great seal of the Empire meant the acceptance by the Emperor of all the conditions and responsibilities contained in the treaty. A few interchanges of good wishes for the results of the treaty, and hopes that it would be the means of establishing a good understanding between the two Governments, passed between Lord Elgin and Prince Kung, the latter remarking that a great many mistakes had been made heretofore in their intercourse with foreigners, and that matters had been very badly managed, but he had now taken it into his own hands, and he hoped a new state of things would commence. Lord Elgin then rose; Kung walked a short distance across the platform, and then stopped; Lord Elgin did so likewise, and it was only after vigorous beckoning of the Mandarins attending on Kung and Lord Elgin stopping that Kung was induced, after a few hesitating pauses, to accompany him to the edge of the daïs. Prince Kung is about 28, but looks older; his countenance is not devoid of intelligence, but there was an expression of anxious, nervous care, partly fear struggling with anger, no doubt at finding himself in a position so different from the one he had been accustomed to hold in the presence of the high officials of the Government; yet there was a curious mixture of familiarity and respect in the manner of the officers towards him. The manner of Lord Elgin was quiet and dignified, and the Chinese could not fail to be struck by the stern and calm manner in which he performed his part of the ceremony. The return of the Ambassador and Commander-in-Chief was in the same order as that in which they went, but the streets were occupied at different points by the troops of Sir Robert Napier, who had placed them with great skill, so that the capital of the Chinese Empire was in the actual possession of the British troops. Lord Elgin and Baron Gros have taken up their residence at Pekin. The French army retires from Pekin on the 1st November, one battalion only remaining as an escort for Baron Gros. The Convention and treaty are to be published in Pekin, and circulated throughout the Empire. The English army and the Ambassadors do not leave Pekin before the 9th November."

INDIA.—By the arrival of the Overland Mail we have accounts from Calcutta to Nov. 23, and from Madras to Nov. 28. The following is a summary of the news:

At Calcutta the Legislative Council was about to resume its sittings. The important questions of the currency, the new police, the Code of Criminal Procedure, and the taxation of the trading classes, were at once to engage its attention. The Volunteer movement was making progress. A third company had been formed in Calcutta, and a large corps had been formed in Lucknow. The Viceroy had left the seat of government to complete his tour and receive the remainder of the native dignitaries and tributaries in the North West, Sir Bartle Frere being his locum tenens, assisted by Mr. Cecil Beadon. The *Hurkaru* gives a gloomy account of the state of the indigo districts, describing matters there as going from bad to worse.

CAPE OF GOOD HOPE.—British Kaffraria was proclaimed a separate colony on the 30th of October. The territory between the rivers Keiskamma and Great Kei constitutes this new dependency. A league had been formed in the Eastern provinces to procure its separation from the West. Influential meetings in favour of this movement had taken place in all the principal towns of the East, and large sums had been subscribed with the same object. Sir George Grey was still at Cape Town. But little progress had been made in public business. Several souvenirs from Prince Alfred had arrived and been distributed. The 13th and 59th Regiments were holding themselves in readiness to proceed to New Zealand.

UNITED STATES.—Political matters remained in the most disorganised state. Meetings of the various parties had been held at Washington, but of the result of their deliberations nothing definite was known. General Scott had prepared a plan of adjustment, but Mr. Cobb, Secretary to the Treasury, has resigned with the intention, it was said, of joining the Georgia

secessionists. Mr. Branch, of North Carolina, had declined the Secretaryship of the Treasury. The representative of Alabama at Washington had threatened to resign if Alabama did not secede. The Governor of Georgia had issued a lengthy document in favour of secession. The Governor of Louisiana, in his message had recommended a convention of the slave States in order to demand a repeal of obnoxious laws at the North and a guarantee against such legislation in the future. These questions he said should be met before the inauguration of Mr. Lincoln, and because the honour and self-respect of the State does not comport with her remaining in the Union under a Black Republican President. It is stated in one of the telegrams from Charleston that the officer in charge of Fort Moultrie had been prevented by the authorities from laying in stores for its defence; but this does not agree with a report from Washington that the President had been assured from an authentic source that the authorities of South Carolina would make no resistance either to the collection of duties or to the possession of the forts guarding Charleston Harbour during the remainder of his Administration. The bark Cora, which was captured in September with 705 slaves on board by the United States' frigate Constellation, had arrived at New York.

HAYTI.—A conspiracy against the Haytien Government had failed, and a number of culprits, including seven women and an American, had been executed.

Public Addresses.

LORD PALMERSTON at the annual meeting of the Labourers' Encouragement Association at Romsey on Thursday week, delivered three speeches, from which the following are extracts:—

"My friends and neighbours, it affords me very great pleasure to be the instrument for delivering to you upon the present occasion these prizes and rewards, which have been allotted to you for good conduct and skill in the various functions which in your class of life you have to perform. Whatever the duties may be that the various classes of the community have allotted to them by the distribution of Providence, it must be the object of the highest ambition to all, from the highest to the lowest, to find that the performance of those duties in their respective vocations has brought down upon them the approbation of their fellow-countrymen. The advantage of these prizes is not simply the gratification of those who are happy enough to obtain them, because to men who have performed well and steadily the duties that belong to their position the approval of their own consciences must ever be the best and highest reward. But nevertheless it is satisfactory, and it is thus wisely ordained, to those who know they have deserved well of their fellow-countrymen, to find that their merits are appreciated, and that they have gained, not only the approval of their own consciences, but the esteem and respect of those with whom they live, I am glad to find there are so many deserving men in this neighbourhood who have obtained that double reward—who not only must feel pride as they walk the land in the consciousness of their own deserts, but who must feel gratified to find that their good conduct has been known and appreciated by their friends and neighbours. They must also have the satisfaction of reflecting that their example will not be lost on others, and that if there are those in their neighbourhood who have been slow and backward in pursuing that path which has led them to distinction, the principle of emulation implanted in the mind of man will lead many, who might otherwise have remained lost in vicious and irregular courses, to follow the bright example these prizemen have set them, and to redeem themselves in the opinion of mankind so as to deserve like rewards, like esteem, and respect. There is also a duty belonging to you—that of rearing, educating, and instructing your children, for it is well known that children are a blessing or the reverse, according as their conduct is good or bad; and this depends not simply on their natural disposition, but still more on the example and precepts which they receive from their parents. They may become the victims of mere impulses, and they may at a more mature age turn out to be a source of pain and affliction to their parents, instead of being an honour to them, and a benefit and advantage to their country. I am convinced, therefore, that you will feel the importance of teaching your children to pursue the same course that you have pursued—that you will inculcate in them those principles of good conduct, morality, and religion which will insure their becoming, when you advance to the later stages of life, a comfort to you, and an honour and a blessing to the country to which they belong. My friends, I wish you hearty success, and I trust that next year may find you coming back with testimonials as good as you have brought to this board. In conclusion, I hope that the dinner of which you have just partaken will send you home warmer than you came this frosty morning." * * * In proposing the toast of "the Army, Navy, and Volunteers," his lordship said, "It is gratifying to know that the former valour, skill, and enterprise of the army and navy have not been diminished in the present day. We have had recently, in those operations which we have been compelled to undertake in China, an example of the most perfect discipline, of the most complete efficiency in every branch of the service, and not only of the most distinguished gallantry, but also of the most complete and rapid success. There never was an expedition that was better appointed, better equipped, better supplied with everything necessary to carry on war, and war at the opposite part of the globe, where from difficulties of distance, difficulties of the means of transport, and difficulties peculiar to the nature of the country in which the operations were carried on, more allowance ought to be made if any portion of the service had been found wanting in anything requisite for its complete efficiency. But, on the contrary, we may say with pride that there never was a military and naval force better equipped, better organised, better conducted, and more successful than that. We also have the satisfaction of knowing that they co-operated with the troops of our ally, the Emperor of the French, with the most perfect harmony, without a particle of jealousy, without an instance of difference, and that the co-operation of the two was as perfect and complete as, I trust, the harmony between the two nations—of which it may be recognised as a symbol—may long continue to be. The Volunteer service is one that cannot appeal in the same way as the army and navy to historical and traditional recollections; but, if there is anything of which this nation has a right to be proud, it is the Volunteer movement that has taken place during the course, I may say, of the last 12 months. I think there never was a more honourable act on the part of the people of any nation than this organisation of our Volunteer force. It would not be surprising if at a moment such as happened in the great war with France, when an enemy was standing in great force on the opposite side of a narrow channel, when invasion was daily threatened, and when everything dear to the country and the nation was at stake—it could not be surprising that at such a moment 300,000 or 400,000 men should have arrayed themselves in defence of the threatened liberties and independence of their country. But in the present instance this Volunteer movement arose out of no such imminent danger, but out of a deep and reflecting sense on the part of the people that there might be an occasion for the services of such men. They felt that, although we were at peace, although there might be no immediate chance of danger to the country, yet that there was, nevertheless, wanting an additional force in support of the regular army and militia; and these men, really amounting, I believe, to something like 150,000 or 170,000 of all professions, ranks, and occupations, stood forth, devoting their time, spending their own money, giving the energies of their minds to the acquirement of military tactics. I am glad to say that I heard the other day from that gallant officer Colonel M'Murdo, who is appointed to inspect the force, that he was astonished at the proficiency already made. He said he had already inspected 40,000 Volunteers, who were perfectly fit to take the field, and 30,000 more in a very little time would be equally fit to take post in line. It is true we have been told—it has not been said lately—that we are not a military nation, but only a nation of shopkeepers fit to look to our balances, but not fit to take the field as an organised force. We shall not, I think, hear that again from any quarter, except it be that we are a nation of shopkeepers in this sense of the word, that we are a nation a great portion of whom are engaged in mercantile pursuits But it is these shopkeepers who have arrayed themselves in arms ready to defend their country, and it is among these classes that we find men not only able to stand in the same line with regular troops, but also to take the field if an enemy should attack them." * * * In proposing the toast of the evening his lordship said, "I think we may follow the example very often set by the gallery of the Dublin theatre. After calling out a number of names to be celebrated by cheers they used to include 'our noble selves.' I beg now to propose 'Prosperity to this Association.' I am sure that every one will feel that associations of this kind are of the utmost value to the prosperity and welfare of the country. In the first place they bring together persons who might not otherwise meet, interchanging information and renewing personal friendships, or making friendships and acquaintances perhaps which did not previously exist, and thereby promoting the harmony of social intercourse. They are also highly valuable as bringing different classes of society into contact with each other, as was seen this morning when the labourers were brought to a certain extent into social and convivial intercourse with those above them. That must necessarily tend to have a salutary effect on their feelings and character. But the great object is, no doubt, the improvement of the condition of the labouring classes, and it is needless to point out how essential the character, the good conduct, and behaviour of the labouring classes are as the foundation of the social fabric. Now, the prizes given by this association are of great value in that respect, by stimulating good conduct, by holding out examples to others of the rewards that good conduct obtains, and the estimation in which those who obtain them are held, not only by their own class but by those above them in the social scale. The observations which have been made this evening by my hon. friend Mr. Dutton have great force and value, viz., that at the root of the good conduct of the labouring class lies the provision of suitable and decent habitations. That provision in former times was too much overlooked and neglected. Of late years the attention of the public has been usefully directed to that matter, and we may flatter ourselves that a great improvement has been made in the habitations of the labourers. My hon. friend has adverted to a statement in the newspapers that has attracted public attention—the dreadful overcrowding of agricultural cottages in a part of Berkshire; but I think it right to say, that I saw afterwards in a newspaper an explanation of that circumstance, pointing out that it was not the habitual and normal condition of that district, but that in consequence of some great public work being carried on there an unusual number of labourers had accumulated, for whom no temporary provision had been made, and in this way overcrowding of the cottages did not imply the ordinary condition of the labouring class, but was simply the result of a temporary and extraordinary influx of occupants. No one is better entitled than my hon. friend Mr. Dutton to expatiate on the advantages of giving ample accommodation to the labouring classes, for he has built admirable cottages, substantial in their construction, and affording excellent accommodation to the inmates, and providing also that great requisite, three sleeping apartments. It is true, and has often been said, that persons are frequently deterred from erecting cottages because they do not think they shall obtain an adequate return for the money they lay out. But I must say I think that is a radical and fundamental mistake. A man might as well say that he gets no return from his farm buildings, his cattle-sheds, his barns, stables and other out-buildings necessary for the occupation of his farm. Why, he does get a return in the manner pointed out by Mr. Dutton, that no farmer of substance, capital, skill, and enterprise will enter upon a farm on which there is not all that is necessary for the successful cultivation of that farm. No one can expect to let a farm without a good farmhouse and all those buildings I have described; neither will a tenant prudently take a farm which requires a considerable outlay of money unless he is sure that he will have his labourers at hand close to their work, and that he will not lose in their time and in the exhaustion of their physical power that which he would lose if they were required to walk two or three miles to their work, and the same distance in returning from their work at night It is quite impossible that the labourer can do as much work or do that work as well if he lives a great way from the farm, as if he lived in a comfortable cottage at an easy distance from his work. Therefore I contend that those who build cottages do get a return for the money they lay out, over and above the shilling a week which, in a moral point of view, it is right the labourer should pay, inasmuch as it makes him take better care of his cottage and gives him a feeling of part ownership in it. But the landlord has a complete return for the money he lays out in getting a better tenant to occupy his farm than he would do if there were not houses for the labourers within reasonable distance. That company or association which my hon. friend mentions will enable those who might have hesitated before to extend their operations; and I trust that at no distant time we shall see all those wretched hovels—of which I am sorry to say there are too many in different parts of the country—disappear, and that we shall see our labourers lodged as men ought to be who have families whom they wish to rear respectably, and whom their employers ought to desire to see imbued with feelings of that self-respect which invariably leads to good conduct."

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 92 7-16 to 9-16, or 92½, for Account; Three per Cents. Reduced, 92⅛ to ⅜; New Three per Cents., 92¼ to ⅜; India Five per Cent. stock, 1859, for Acct., 101½ ex div.; Ditto Four per Cent. Debentures, 1859, 96 to ¼; Ditto, Bonds, 9*s.* dis.; Exchequer Bills, 4*s.* dis., par.—FOREIGN: Brazilian Four and a Half per Cents., 1860, 86⅜; Buenos Ayres Six per Cents., 96½; Mexican Three per Cents., 21¾; Russian Four and a Half per Cents., 95½; Spanish Three per Cents., 50⅞; Turkish Six per Cents., 1854, 70¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,568,575	Government Debt	£11,015,100
		Other Securities	3,459,900
		Gold Coin and Bullion ..	10,639,853
		Silver Bullion	1,453,722
	£26,568,575		£26,568,575

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£9,540,273
Rest	3,194,424	Other Securities	20,522,372
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,361,356	Notes	6,924,075
		Gold and Silver Coin ..	704,544
Other Deposits	11,972,295		
Seven day and other bills	610,189		
	£37,691,264		£37,691,264

27th day of Dec., 1860. M. MARSHALL, Chief Cashier.

Gazette of the Week.

TUESDAY—BANKRUPTS—J. AGATE, Emsworth Hants, Grocer—P. W. AYLES, Weymouth, Builder—R. BEARD, Snow's Fields, Bermondsey, Wheelwright—G. BESLEY, late of Highbridge, Somersetshire, Innkeeper—J. BOUND, Hay, Brecon, Draper—J. DEMPSEY, Audenshaw, Lancashire, Grocer—N. S. DODGE and R. L. GIANDONATI, St. Paul's Churchyard, Dealers in India Rubber Goods—J. GRIFFITH, Hanway Street, Oxford Street, Bookseller—J. HATFIELD, Connaught Terrace, Hyde Park, Milliner—D. HOLLIN, Leicester, Boot and Shoe Manufacturer—C. WEST, Brasted, Kent, Baker—M. WOOD, Barnsley, Plumber and Glazier.

BANKRUPTCIES ANNULLED—E. B. BOWMAN, Highbury New Park, Islington, Apothecary—W. BURGESS, Cambridge Street, Pimlico, Candle Dealer—J. JOHNSON, R. CLARKSON, and F. FURNESS, Ashton-under-Lyne, Tailors—W. THOMAS, Cardiff, Publican.

SCOTCH SEQUESTRATIONS—F. J. S. GLENDONWYN, late of Kirkcudbright, Doctor of Medicine—J. JOHNSON, Glasgow, Grocer—J. KING, Houston, Renfrewshire, Builder—A. LEASK, Blairgowrie, Flax Spinner—H. MILLAR, Greenock, Grocer—A. PEDDIE, Shettleston, near Glasgow, Smith—M. RANKIN and J. GRAY, Glasgow, Carvers and Gilders—A. THOMSON, Poundland, Ayrshire, Cattle Dealer—R. WIGHAM, Edinburgh, Draper—E. WINNING, Balmore, Stirlingshire, Grocer.

FRIDAY—BANKRUPTS—W. COX, Birmingham, Grocer—W. T. FENNELL, Brighton, Hatter—I. L. M. HARRIS, Liverpool, Hosier—M. HAYES, New Brentford, Middlesex, Cheesemonger—N. MILLER, Sidmouth, Devonshire, Builder—J. PALMER, Muttley House, near Plymouth, Picture Dealer—H. WATSON, Longford, Derbyshire, Baker.

SCOTCH SEQUESTRATIONS—W. CONNEL, Edinburgh, Coach Builder—J. FYFE, Port Glasgow, Wright—D. STRATHIE, Ayr, Draper.

Metropolis and its Vicinity.

FUNERAL OF THE EARL OF ABERDEEN.—The mortal remains of Lord Aberdeen were consigned to their last resting place in the family vault at Stanmore, on Friday. The procession left Argyll House at 10 o'clock in the following order:—Four outriders mounted on black horses, and wearing mourning cloaks, followed by two porters on horseback. The State horse came next, richly caparisoned, and ridden by a page, who bore the late Earl's coronet upon a velvet cushion. Two grooms followed, and then the hearse, drawn by six horses, and emblazoned with escocheons of the Earl's arms. The first mourning coach conveyed the chief mourners—Colonel the Hon. Alexander Gordon, the Hon. and Rev. Douglas Gordon, and the Hon. Arthur Gordon, sons of the deceased; and Admiral the Hon. John Gordon, his only surviving brother. The second coach conveyed the Hon. George Gordon (now Lord Haddo) and the Hon. James Gordon, sons of the present Earl, the Marquis of Abercorn, and Lord Claud Hamilton. In the third coach were the Duke of Newcastle, the Earl of Clarendon, Sir James Graham, and the Chancellor of the Exchequer. The fourth coach conveyed the Earl of Dalkeith (attending for his father, the Duke of Buccleuch), the Right Hon. E. Cardwell, Colonel Charles Frazer, Vice Lieutenant of Aberdeenshire, and Mr. Alexander Thomson, Convener of the county of Aberdeen. The fifth coach conveyed the Earl of Morton, Viscount Hamilton, Colonel the Hon. Douglas Pennant, and Sir Henry Holland. The sixth coach conveyed Admiral Baillie Hamilton, Dr. Stone, Mr. Jamieson, and Mr. Noverre. The members of the late Earl's household, Messrs. Wilkinson, Jones, Dalberston, and Faulkner, were in the seventh coach, which was followed by the late Earl's private carriage, after which came one of her Majesty's State coaches, drawn by six horses, with postilions and grooms in dress liveries. The procession closed with the carriages of intimate private friends of the deceased Earl. On arriving at Stanmore the procession was received at the entrance of the churchyard by the Bishop of Oxford, who read the burial service, assisted by the vicar of the parish. The pall was borne by the Duke of Newcastle, the Earl of Clarendon, Sir James Graham, the Right Hon. W. E. Gladstone, the Right Hon. E. Cardwell, and the Earl of Dalkeith, acting for his father, who was too unwell to bear the journey from Scotland. The ceremony, which was witnessed by nearly all the inhabitants of Stanmore, was exceedingly impressive.

THE WEATHER AND THE PARKS.—The water in the parks of London was in a state to bear in some parts on Friday, Saturday and Sunday, but, as usual, more persons ventured on the ice than prudence warranted. A great many accidents occurred, but without loss of life. On Monday a man imprudently passed beyond the limit marked as safe, and lost his life. The body was not recovered till night, when it was identified as that of a person connected with a firm in Cheapside. Immersions occurred in every ornamental water in London, but with this exception they were not attended with fatal

consequences. On Christmas Day being a general holyday several thousand persons, including members of the aristocracy, ladies, and a vast number of soldiers, thronged the parks to skate and slide. The Serpentine in Hyde Park had between 4000 and 5000 persons, a great number of whom were tripped up and had their heads cut. The Round Pond in Kensington Gardens and the Long Water were crowded during the day, including several members of the Skating Club and a great number of the Guards and Rifle Volunteers, and many ladies. In St. James's Park the ornamental water was crowded until dark, and the Regent's Park had also a very large assemblage of skaters. Several persons were immersed but no fatal accident occurred. On Wednesday upwards of 10,000 men, women, and children were congregated upon the Serpentine, including several members of the Skating Club and non-commissioned officers of the Guards. Several skating matches were performed for sums of money, and at night lighted flambeaux and coloured fires were employed to enliven the proceedings, and some scores of link-bearers were engaged in showing lights for the skaters to pursue their evolutions. During the day 11 persons were tripped and thrown down by the skaters and their heads cut, and one man broke through the ice but was rescued without serious injury. The Long Water in Kensington Gardens had about 6000 skaters upon the ice, but no accidents occurred. The Round Pond had about 2000 skaters, and the banks were crowded with members of the nobility drawn together to witness the evolutions. A boy whilst standing on the ice fell down and had his leg broken. In St. James's Park the number of skaters was about 4000, and several immersions, five of which were of rather a serious character, took place during the day. The Regent's Park had about 10,000 skaters, several of whom were seriously injured by having their heads cut open by being thrown down. In Victoria Park one gentleman had his skull fractured by falling on the ice. On Thursday the ornamental waters in all the parks were again visited by many thousands of people, but in consequence of the change of weather the ice was very unsafe and many accidents occurred, none of them however of a fatal character.

THE PROPOSED NEW BRIDGE OVER THE THAMES.—At the last meeting of the Lambeth vestry it was unanimously resolved to support the application intended to be made to Parliament in the ensuing session for the incorporation of a company to make a new bridge to connect Church Street, Lambeth, with Market Street, Westminster. It was stated at the meeting that the new bridge would be an extensive and highly appropriate structure, and contribute largely to the interests of Lambeth and the convenience of the metropolis generally.

THE PUBLIC HEALTH.—*The Registrar-General's* weekly report states that the deaths registered in London in the week that ended Saturday, December 22, were 1269. In the corresponding weeks of the 10 previous years the average number was 1205, which corrected for increase of population, becomes 1326. The present return therefore is 57 below the average. During the week the births of 877 boys and 903 girls, in all 1780 children, were registered in London. In the 10 corresponding weeks of the years 1850-59 the average number was 1519.

Provincial.

COVENTRY.—At the weekly meeting of the Relief Committee held on Wednesday in St. Mary's Hall, Lord Leigh, the chairman, congratulated the committee on the success which had attended their efforts in raising subscriptions, the aggregate of which now amounted to nearly 12,000*l.*; but, although the amount appeared large, when the extent of the distress around them and the severity of the weather were taken into consideration, he thought it necessary that they should persevere in their efforts in order to make adequate provision for the requirements of the present condition of the population.

DURHAM.—The execution of Milner Lockey for the murder of Harrison, at Urpeth, and that of Thomas Smith, for the murder of John Baty, at Winlaton, took place on Thursday morning in the front of the county gaol, in the presence of 10,000 persons, comprising pitmen, sailors, boys, women and girls, the number of young boys present being very large. Smith first took his place on the drop with great firmness, and looked stronger and less agitated than he did at his trial. Lockey immediately followed, and maintained his self possession until the cap was placed over his face. His head then sank on his breast; he trembled violently, and would have fallen if he had not been supported by one of the wardens. The bolt was almost immediately drawn, and the two men died apparently without a struggle. The bodies hung the usual time, and were then buried within the precincts of the prison.

FROME.—The interest in the child murder at Road Hill House has been revived by the searching inquiries which are making by Messrs. Hughes, and Norris, of the Bath police, and by the announcement that they have obtained much additional evidence of an important character. It appears that during repeated visits to the neighbourhood, they have seen about thirty witnesses, among whom are five or six whose testimony has disclosed points of importance, and who had not previously been interrogated by any authorised person, and the statements of most of hem have been reduced to writing. Besides discovering the fact, previously unascertained, that a chest flannel, similar to that found with the dead body, had been worn by one of the inmates of Road Hill House, Messrs. Hughes and Norris are said to have also ascertained that a pair of India-rubber goloshes were seen, shortly after the discovery of the murder, at the bottom of the spiral staircase of Mr. Kent's house, and that they had the appearance of having been recently washed or wiped with a wet cloth. Another point of some interest, respecting which they hope to discover evidence, is, that the bedgown, which has formed the subject of so much speculation and inquiry, was not the only missing article of wearing apparel, but that a pair of stockings will likewise have, in some way, to be accounted for. They have also, it is said, ascertained a great deal having relation to the point of animus. They have been in correspondence with the nursemaid, Elizabeth Gough, and have also had interviews with, and made inquiries of, every inmate of Road House on the night of the murder, with one special exception. They have also had more than one meeting with members of the Trowbridge bench of justices. The process by which they have been working during their inquiries is an exhaustive one; in other words, they try the evidence by all the theories which have been suggested, and also receive anything that has the slightest relation to the event to see if any new one offers for investigation. It is due to them to state that they are not animated in the difficult and expensive task they have undertaken by any hope of reward, as even if they succeed in tracing the offender to justice, the stringent rules of the Bath Watch Committee will not admit of their receiving anything; nor did they start with any sanguine expectations of success. It is not yet known what precise shape Messrs. Hughes and Norris's future proceedings will take. Should their expectations in regard to one matter of evidence be realised, their course will probably be a very direct and decisive one. Should they not be successful to that extent, and should the coroner's inquiry be re-opened, they may, perhaps, present the evidence in their possession before that tribunal. As regards the application for the writ *ad melius inquirendum*, it is stated that the coroner, Mr. Sylvester, is busily engaged in preparing affidavits in answer to those presented to the Court of Queen's Bench by the Attorney-General, and that the application to make the rule *nisi* absolute will be resisted.

LEEDS.—On Tuesday afternoon a terrible accident occurred at the house of Mr. W. Longley, Park Street, in this town. A boiler in the kitchen exploded, killing Mrs. Longley on the spot and severely injuring Mr. Longley, his daughter, and a servant girl. The boiler, which was made of cast iron, was an ordinary self-feeding boiler for cooking purposes. It is supposed that it had become red-hot, owing to the feeding pipe having become frozen, thus preventing the boiler being gradually refilled as it became empty; and that when the ice in the feeding pipe had thawed, the cold water rushing into the red hot boiler generated a quantity of explosive steam, which caused the boiler to burst instantaneously. The noise of the explosion was very loud, and its consequences most disastrous. The door and window of the kitchen were blown out, the walls were nearly destroyed, the furniture smashed, and the window of an adjoining room shattered to pieces. Mrs. Longley's body was shockingly mutilated, the skin of her face was scalded off, and the eyes forced from their sockets. Mr. Longley was so severely scalded and contused on the head and face that he lies in a precarious state. The servant girl was also much cut and bruised. Miss Longley, the eldest daughter, who is about 25 years of age, had one of her legs broken in two places, and was much burnt and scalded on the face and chest. Mr. Longley is a partner in the firm of Messrs. Thomas Longley & Sons, builders, and is a member of the Leeds Town Council.

NEWPORT.—Though a large number of men have been at work night and day in "shifts" of six hours each at the Risca pit, only eleven bodies have been recovered since Saturday week. This slow progress will give some idea of the damage done by the explosion, and the extent to which the workings have been ruined. Three of the bodies recovered were slightly injured; the other had compound fracture of the shoulder, and both legs fractured. The coroner's inquest has been adjourned to the 9th January, by which time it is expected the Government Inspector will have prepared his report. A public meeting was held at Newport on Thursday, Lord Tredegar in the chair, when it was resolved to open a public subscription for the relief of the wives and families of the sufferers. The Mayor of Bristol has also called a meeting for the same purpose.

PETWORTH.—A shocking murder was committed on Sunday week at Henley Hill, near Farnhurst, a little village on the borders of Sussex and Surrey. A man called Greenway, who was well to do in life, and occupied a house in the village, returned on the previous Friday from Bethlehem Hospital, where he had been confined for ten weeks, and was supposed to have been perfectly recovered from his attack of insanity. He and his wife were both about 50 years of age, and are said to have lived in perfect harmony together. They had two children, aged respectively 2½ years, and eight months, and the husband seemed to have a great affection for the elder child, but did not pay the other any attention. On Saturday morning he appeared quite well, but in the afternoon his conduct was observed to be rather strange, and on Sunday morning he came down to breakfast with only his shirt on, bringing his favourite child with him. In the middle of the day the servant girl went to church, leaving all the family at home, and when she returned about 5 o'clock she could hear and see nothing stirring in the house. She therefore went to her mother's, which was close by, and during the evening she proceeded to Greenway's house three times, but all was silent, and the girl concluded that her master and mistress had gone to Farnhurst to chapel. About 9 o'clock a neighbour heard a child cry, and a noise in a hedge adjoining Greenway's premises. A search was instituted, which ended in the discovery of the younger child in the ditch. The elder child was subsequently found in bed, while at the front door of the house was the mutilated body of Mrs. Greenway, who appeared to have been dead for several hours. Her throat was cut down to the bone from the front, there was a cut on the right cheek, down through her dress to the breast bone, another from the wound in the throat down to opposite the fourth rib, where the chest was penetrated, and another across the chin to the jawbone. In the kitchen, immediately in front of the fireplace, was a pool of blood, and near it lay two masses of the deceased's hair, coagulated with blood, and evidently torn violently from her head. The murder, no doubt, took place in the kitchen, as there was no derangement of the furniture of the apartment, so that it did not appear that any great struggle had taken place. The husband was meanwhile nowhere to be found, and a search in all directions proved fruitless. On Tuesday morning, however, he went to a person at Elstead and asked for money, but as information of the murder had reached that place, he was immediately taken into custody. On examination it was found that his shirt was very bloody on the sleeves. He was taken before one of the county magistrates, at Midhurst, and remanded to Petworth gaol. It is presumed that the murder was committed with a razor, which was found covered with blood, together with a butcher's steel, near the pool of blood in the kitchen. The inquest terminated on Saturday, when the jury returned a verdict of Wilful Murder against the prisoner, who was committed for trial a the next assizes.

PORTSMOUTH.—A naval court-martial was held last week on board the Victory for the trial of Commander Power and Mr. M'Farlane, the commander and master of her Majesty's ship Perseverance, which was wrecked on a reef of rocks off the north-west port of Mayo, Cape Verde. It lasted four days, one of which was devoted to the defence. The Court remained in deliberation above four hours, and sentenced Commander Power to be severely reprimanded and to lose one year's rank. They also severely reprimanded Mr. M'Farlane, with the loss of three years' rank, accompanied by the observations, that there was no evidence of currents to account for the loss of the ship, nor to account for her being 16 miles out of her course; that precautions were not taken where currents were known to exist in running between the islands; that soundings were not taken with the deep sea or hand lead lines, nor was the master on deck, as he ought to have been, when the watch was left in charge of a warrant officer. The Court found that the conduct of the remaining officers and crew after the grounding of the vessel was deserving of special mention, and that Commander Power's conduct on the vessel stranding, and the coolness and decision of his measures in getting the women and children, with the troops, on shore, and providing for their safety, were deserving all praise.—A daring highway robbery with violence, took place on Saturday morning in broad daylight, in the village of Melton near this town. It appears that Pay-Sergeant Thomas Davis, of the Royal Marine Artillery, was proceeding from his house at Kingston to Fort Cumberland, the head-quarters of the corps, with the sum of 101*l.* 10*s.* for the purpose of paying the men, and had got as far as the school-rooms in Melton at half-past 7 o'clock, when he received a violent blow under the left ear, and on partially turning round, immediately received another on the right temple, which felled him to the ground insensible. On partially regaining consciousness he discovered two men in the act of rifling his pockets, but they no sooner found that the sergeant gave signs of re-animation than they made off with their plunder. The men wore slouched hats, with soldiers' grey coats thrown over their shoulders. A clue is in the hands of the police, and it is believed that it will lead to the capture of the thieves.

SHEPTON MALLET.—A shocking case of manslaughter has occurred in the village of Pilton, about 3 miles from this town, the victim being Mrs. Orledge the wife of Mr. William Orledge, a farmer and owner of considerable landed property in the village. Mrs. Orledge died on the 4th inst. and at the inquest, which was adjourned from time to time up to Saturday last, Mrs. Elizabeth Fussell, mother of deceased, deposed that her daughter was about 33 years of age, and was married to Mr. Orledge about two years ago. Her general health was very good till lately, when she suffered very much from the violence of her husband. Witness had lived with them ever since they were married, and had repeatedly seen him strike her and fling things at her

without the slightest provocation. On one occasion, while they were coming from Wells, he beat her about the head and shoulders with his walking stick until it was broken, and she expected he would have killed her. She was so bad that she was obliged to be bolstered up in bed. She had been to Shepton several times to get out of the way of his violence, and on one occasion she took out a summons against him. On the 22d August the mother was from home, but was sent for and found her daughter in a neighbour's house, with two black eyes, and blood about her dress. She complained of having great pains in her bosom, where she said her husband had given her blow after blow, while she was crying "Murder!" The nipple was gone and the breast very hard and swollen, and, although the mother tried every means in her power, she was never able to get it right again. A surgeon was called in about a fortnight after, but she got worse and worse until the time of her death. Other evidence was given to show that the husband had repeatedly treated his wife with great brutality. The coroner told the jury that it was their duty to ascertain whether deceased died from violence or natural causes; if by violence, by whom that violence was inflicted; and then to see whether the offence amounted to murder or manslaughter. After a short deliberation, the jury unanimously agreed to a verdict of "Manslaughter," and a warrant was immediately issued for the prisoner's apprehension and committal. Bail to any amount was offered for his release, but was refused, and he is now incarcerated at the gaol of this town, awaiting his trial at the next assizes.

SUNDERLAND.—A fatal explosion took place at Hetton Colliery on Thursday the 20th, which has been the cause of great excitement and sorrow in this district. The colliery is the property of the Hetton Coal Company, and is situated about nine miles south of Sunderland. On Tuesday the Lyons pit, which is 150 fathoms in depth, was closed in consequence of some repairs in the shafts, and in the meantime one of the furnaces was extinguished. On Thursday night the pit was again in working order, and upwards of 35 miners went to work. A fearful explosion of gas shortly afterwards took place, whereby 20 miners were killed, the rest having a narrow escape. On Saturday morning nine of the dead bodies were found and brought to the bank, and nearly all the others have since been recovered. In consequence of this explosion the operations at the colliery have been suspended for the present.

Ireland.

THE IRISH VICEROYALTY.—The *Morning Post* a few days since contained an article recommending the abolition of the Irish Court. The Conservative papers strongly condemn the proposal, and call upon the Ministry to look to Austria and ponder well what centralisation has done for her. They argue that it would supply the repeal party with fresh arguments for separation, and that if Ireland had an independent Parliament and 80,000 Volunteers, Lord Palmerston would hardly venture to propose such a measure.

THE PAPAL BRIGADE.—It is stated that the expense of bringing home the brigade was 7596*l.* 4*s.* 2*d.*, of which 2894*l.* 4*s.* 9*d.* is yet unpaid. The *Evening Packet* says that the Court of Rome did not contribute a single ducat to the fund for bringing them back, and that if a subscription had not been got up for the purpose in Ireland it is hard to say what would have become of them. Among the items of the balance-sheet there is cost of transport from Genoa to Marseilles, 1800*l.*; from Marseilles to Paris, 1074*l.*; from Paris to Havre, 1020*l.*; to which is to be added the transport from Havre to Cork, and the special trains on the Irish railways. The total expenditure for travelling exceeds 4500*l.*, and the "welcome" at Cork cost the round sum of 2270*l.*

Scotland.

THE LORD RECTORSHIP OF ABERDEEN.—The election of Lord Rector of the University of Aberdeen took place on Friday at Marischal College, when the votes were equal, the majority of students in two out of the four nations being in favour of each of the candidates,—Sir Andrew Leith Hay and Mr. Maitland, Solicitor-General; but numerically Sir Andrew Hay had a majority of 38. At a meeting of the procurators which took place immediately after the poll was declared, Principal Campbell intimated his intention of exercising the privilege which, he believed, rested with him, of giving the casting vote in favour of Mr. Maitland. A meeting of the students in the faculties of arts, divinity, law, and medicine was held at night, when it was unanimously resolved to resist, by every lawful means, the claim of Principal Campbell to the casting vote in the election.

ASSOCIATED SOCIETIES OF EDINBURGH UNIVERSITY.—The poll for the election of an Honorary President of the Associated Societies of Edinburgh University took place on the 17th; and at its close the numbers were—Professor Aytoun, 177; Mr. Thackeray, 77; and Mr. Ruskin, 58.

THE GLASGOW GARIBALDI FUND.—On Friday evening a *soirée* of the subscribers to the Garibaldi Fund, and their friends, was held in the City Hall, Glasgow; Mr. Buchanan, M.P., in the chair, when a report of the proceedings was read, together with an account of the receipts and disbursements of the committee. The report having been approved and adopted, it was unanimously resolved, on the motion of the Rev. Dr. Robson, seconded by Mr. Dalglish, M.P.:—

"That this meeting emphatically declares its continued confidence in the great leader of the Italian patriots, Gen. Garibaldi. It records its admiration of his wonderful genius, his pure patriotism, his unsullied character, and his heroic bravery; and rejoices that, by the blessing of Almighty God, and the instrumentality of his band of heroes, he has raised Italy and the Italians from their abasement to their high place among the nations of the world."

GREAT EXPLOSION OF GAS AT GLASGOW.—On Wednesday morning during some repairs to the gas pipes at the Bridge Street Station of the Glasgow and South-Western Railway, an explosion took place, which nearly destroyed the booking office and luggage depot, and shook the houses at a distance of 500 yards. One of the railway porters had his leg broken, and some other persons were knocked down and scorched, but fortunately no lives were lost.

THE TRI-CENTENARY OF THE REFORMATION IN SCOTLAND.—On the 20th inst. the tri-centenary of the Scottish Reformation was celebrated in Glasgow, Edinburgh, and other towns, in the manner of an ordinary Sunday. The churches were open for divine worship, and very fully attended. The day was also celebrated in London by a public meeting in Freemasons' Hall, the Hon. A. Kinnaird, M.P., in the chair, which was attended by the Rev. Dr. Cumming, Rev. Dr. Hamilton, and many other eminent ministers of the three branches of the Presbyterian Church of Scotland.

CHILD MURDER IN WIGTOWNSHIRE.—At the High Court of Justiciary last week, Margaret Hannah was charged before the Lord Justice-Clerk, Lord Ardmillan, and Lord Neaves, with having murdered her infant child by suffocating it with leaves or herbage in a plantation on the farm of Back-of-the-Wall, in the parish of Old Luce, Wigtownshire. There was an alternative charge of concealment of pregnancy. The prisoner pleaded Not Guilty. The jury by a majority found her Guilty, but unanimously recommended her to mercy on account of the excitable state of her mind. The prisoner, who had been taken below during the absence of the jury, was again removed during the preparation of the sentence, and was brought back in evidently a very weak and overcome condition. The Lord Justice Clerk, addressing the jury, said—The Court have no power to deal with your recommendation, or to act upon it, but I shall take care that it is forwarded to the Secretary of State this evening. His lordship then put on the black cap, and, addressing the prisoner, read the sentence of the Court, which was, that she should be executed at Stranraer, on Monday morning the 7th January next. When the prisoner, who was standing, heard her sentence, she burst into loud sobbing, and fell back on the seat, crying out "Will you no hae mercy on me? Oh, hae mercy on me! Oh, will you hae mercy; will you, will you? Oh, dear me, am I to be hanged?" With the assistance of the officers she was then removed down stairs, calling for mercy in the same way. The Queen has since commuted the sentence to penal servitude for life.

Railways.

ACCIDENT ON THE TYNE RAILWAY.—On the night of the 18th a special train from Sunderland to Newcastle ran into a luggage train very shortly after passing Brockley Whins station. The latter was thrown off the line by the collision, and the occupants of the special train, many of whom were ladies, were of course a good deal alarmed, but not one of them was hurt.

REGENT'S CANAL RAILWAY.—A prospectus has been issued of this Railway with a capital of 650,000*l.* in 10*l.* shares The proposal is to enlarge the basin of the Regent's Canal at Limehouse, and to build a steamboat pier and a railway along the canal from Limehouse to Maiden Lane. It will pass through Stepney, Mile End, Hoxton, and Islington, and connect with the London and North-Western, the Great Northern, the Metropolitan, and the Blackwall Railways at King's Cross and Camden Town. The railway will not interfere with the working of the canal, and is expected to bring additional business to it.

COLLISION ON THE MIDLAND.—On Saturday the 15th at noon, the fast train from Leeds to London ran into the Doncaster train, which was behind time, at Swinton, the junction of the Doncaster and Sheffield branch with the main line. The engine of the Doncaster train was hurled down an embankment. It struck the parapet of the bridge which at this point passes over the canal, but did not fall into it. Had the coupling chains remained intact, or had the train been a few yards in advance, the loss of life must have been fearful. As it was, no fatal results ensued; in fact, but few of the passengers were bruised, and no bones were broken. None of the passengers in the fast train were injured.

SERIOUS ACCIDENT ON THE MANCHESTER AND HULL.—On Wednesday night one of the wheels of a third class carriage attached to the last through train from Manchester to Hull came off near the Gainsborough station, and threw the carriage upon its side while the train was going at full speed. The carriage was speedily smashed to pieces, and several of the passengers, 20 in number, were thrown upon the rails, which were covered with snow. One of them sustained a fracture of the skull and is not expected to recover; but the others escaped without any serious injuries. Notwithstanding the cries of the passengers the train reached Blyton, 4½ miles from the scene of the accident, before it was discovered by the engine-driver or guards.

Obituary.

THE EARL OF MEXBOROUGH died on Christmas Day, at the residence of his son-in-law, the Hon. Colonel Lindsay, M.P., in Portman Square, after a short illness, in his 77th year. The Right Hon. John Savile, Earl of Mexborough, of Lifford, county Donegal, Viscount Pollington, of Ferns, and Baron Pollington, of Longford, in the peerage of Ireland, was only son of the second earl, by the daughter and heir of Mr. John Stevenson, of East Burnham, Bucks. He was born in 1783, and married in 1807, Lady Anne Yorke, eldest daughter of the third Earl of Hardwicke, by whom, who survives, he leaves three sons and a daughter, Viscount Pollington, the Hon. and Rev. Philip Yorke Savile, the Hon. Charles Stuart Savile, and Lady Sarah, married to the Hon. Colonel Lindsay, M.P., of the Grenadier Guards. His lordship is succeeded by his eldest son, John Charles George, Viscount Pollington, born in 1810, and married in 1842, to Lady Rachel Walpole, eldest daughter of the late Earl of Orford, by whom he has an only son, John Horace, born in 1843. The present peer was M.P. for Gatton in 1831, and for Pontefract from 1835 to 1847.

CAPTAIN BRABAZON, whose death the telegram from China unfortunately makes no longer a matter of doubt, was one of the most promising officers of the British army, and one of the most accomplished members of the Royal Artillery. Of both the theory and practice of his profession he was a master, and just before his departure for China he published a little volume, entitled "Soldiers and their Science," which combined an epitome of the art of war with the expression of military views, that showed the author to have brought not merely great research, but a vigorous intellect to bear upon the subject. When the China expedition was organised it was felt that the artillery staff should be so selected that the scientific results expected from the Armstrong gun should be manifested under able observation. Accordingly Brigadier Crofton, commanding the artillery, selected Captain Brabazon for the post of Deputy-Assistant Quartermaster-General; and up to the day on which he volunteered to accompany Mr. Loch to the Chinese lines, he was looked to by the heads of the expedition, both French and English, as one of the most valuable officers of a staff in itself singularly efficient. Captain Brabazon was the eldest son of Major Brabazon, late of the 15th Hussars, and of Brabazon Park, county Mayo and a near relative of Colonel Ouseley Higgins, for several years M.P. for that county.

COLONEL HUGH OWEN died on the 17th inst. in his 76th year. He began his military career in the Shropshire Volunteers, of which he was gazetted captain in 1803. In 1806, on the recommendation of Lord Combermere, he was appointed cornet in the 16th Light Dragoons, and embarked for Portugal in 1809. During the early campaigns he was the outpost and skirmishing officer in the cavalry affairs of Albergaria, Greijo, and Oporto, as far as Salamonde. At the battle of Talavera he commanded the skirmishers of the 14th, 16th, and 23d Light Dragoons, and the 1st German Hussars. In 1810 he was gazetted captain of cavalry, under Marshal Beresford, and was acting aide-de-camp to Sir Henry Fane, commanding the rear-guard of General Hill's division on the retreat to the lines of Torres Vedras. He was afterwards brigade-major to Sir Loftus Otway, commanding four Regiments of Portuguese cavalry, when occupying the lines of Torres Vedras; and subsequently brigade-major and aide-de-camp to Sir Benjamin D'Urban, commanding four other Regiments of Portuguese cavalry. In 1813, at the battle of Vittoria, he led the brigade into action, and was subsequently promoted to a majority. In 1815 he was promoted to the rank of lieut.-colonel, with orders to organise and discipline the 6th Portuguese Regiment, which he rendered so efficient that it became famous in the civil war in Portugal, under the title of "Os Dragoens de Chaves." In 1820 he accompanied Lord Beresford to Rio, and was sent home with despatches, as brevet-colonel to the 4th Regiment of Portuguese cavalry. On his arrival at Lisbon, finding that the Government had been superseded, and that Lord Beresford and all British officers had been summarily dismissed by the new Government, he retired into private life. During the subsequent civil war he was offered by Don Pedro the rank of general officer or an appointment as personal aide-de-camp; but not having permission from his own Sovereign to accept them he declined these honours. Colonel Owen was a Knight Commander of the Order d'Aviz, and a Knight of the Tower and Sword. He had also received the Gold Cross for Peninsular campaigns, the silver medal with four clasps for Talavera, Albuera, Vittoria, and the Pyrenees, and three Spanish medals.

THE REV. DR. THOMPSON, D.D., Rector of Lincoln College, Oxford, died on Wednesday at his lodgings in the College, after a long illness. He took the degree of B.A. in 1823, and was elected to a Fellowship soon afterwards. He served various College offices between 1823 and 1845, in which latter year he was presented by his College to the rectory of Cublington, in Berkshire, which he held till 1853. In 1851, on the death of Dr. Radford, he was elected Rector of the College, after a very severe contest, which excited much attention in Oxford. An appeal was made to the Visitor against the election, but it was confirmed by a decree in April 1852. Dr. Thompson was a Pro-Vice-Chancellor at the time of his death, but had expressed his intention of declining to serve the office of Vice-Chancellor, which is offered to all who have been Pro-Vice-Chancellors in rotation. He was also Rector of Twyford, Berks,—a living annexed to the rectorship of the College.

MR. ALFRED BUNN, formerly well known as the lessee of Drury Lane and Covent Garden Theatres, died at Boulogne on the 20th inst. from an attack of apoplexy. He had for some time retired from public life, and had become a member of the Roman Catholic Church.

WILLS.—The will of the Right Rev. Dr. Pepys, Bishop of Worcester, has been sworn under 50,000*l.*; Lady Macdonald, 7000*l.*; Mr. Walter Coulson, Q.C., 12,000*l.*

BIRTHS.—On the 21st inst. at Baldoon, Wigtonshire, the wife of JAMES CAIRD, Esq., M.P., of a son—19th inst, at Tonbridge Wells, the Viscountess FALMOUTH, of a son—23d inst, at Euxton Hall, the Lady EMMA ANDERTON, of a daughter—21st inst, at Avisford House, Sussex, Lady RAWLINSON, of a son.

MARRIAGES.—On the 20th inst, at St. Marylebone Church, Captain CHARLES VESEY, R.N., son of the late Hon. and Rev. Arthur Vesey, to HARRIET ALICE SHEFFIELD GRACE, eldest daughter of the late Sheffield Grace, Esq., of Knowle, in the county of Sussex, and granddaughter of the late Lieut.-General Sir John Hamilton, Bart., G.C.T.S. —1st ult, at Ootacamund, East Indies, H. J. LEES, Esq., 60th Rifles, eldest son of Sir J. Lees, Bart., to CHARLOTTE, daughter of the late W. M'TAGGART, Esq. —15th ult, at Benares, JAMES W. DEWAR, Major in H.M.'s 77th Regiment, second son of the late Sir James Dewar, Chief Justice of Bombay, to ANNE MARIA CHARLOTTE, only daughter of the late Baron ALEXANDER DE STEIGER, of Berne, Switzerland—19th inst, at St. Mary Magda-

lene, Hastings, Colonel HARRIS GREATHED, C.B., of Uddens, Dorset, to ELLEN MARY, second daughter of the Rev. GEORGE TUFNELL, of Thornton Watlass, Yorkshire—18th inst, at Milton, near Lymington, Hants, Major-General WILLIAM DONALD ROBERTSON, of H.M.'s Amry in India, to ELIZABETH, third daughter of Capt. STOCKDALE, R.N

DEATHS.—At Torre Mount, Torquay, ANNE WYNELL, widow of the late Right Hon. THOMAS PEREGRINE COURTENAY, aged 75—23d inst, at Woodlands, Cheshunt, Herts, the residence of Robert Diggles, Esq., ELIZA, widow of the late GEORGE MOORE, Esq., and sister of the late Right Hon. Sir Edward Thornton, aged 91—17th inst, at Lezayre, Isle of Man, LAURA, youngest daughter of the late Sir HARRY SCRIVENOR—20th inst, at Bath, Lieutenant-General J. J. WILLES, R.M., aged 71—15th inst, at 62, Welbeck Street, ANN JULIET CUTHBERT, only sister of the late Brigadier-General THOMAS STEVENSON, C.B., Bombay Artillery, aged 72—18th inst, at Clifton, AGNES MARIA, daughter of the late Colonel W. DALRYMPLE, of Fordel, Scotland, aged 75—18th inst, at Westhay, Wrington, R. BAKER, Esq, a Deputy-Lieutenant and Magistrate for the county of Somerset, aged 76—15th inst, at Paignton, Devon, Colonel T. W. E. HOLDSWORTH, late of the 2d or Queen's Royals, youngest son of the late A. H. Holdsworth, Governor of Dartmouth Castle—19th inst, at 25, Hans Place, Knightsbridge, Mrs. JERVIS, relict of the late Thomas Jervis, and sister of the late John Disney, Esq., of the Hyde, Ingatestone, Essex—26th ult, the Rev. WILLIAM GOODENOUGH BAYLY, D.C.L., Vicar of Fittleworth, and for 25 years Incumbent of Midhurst, Sussex, Rural Dean, and late Fellow of New College, Oxford, aged 55—12th inst, at Wilnecote, ROBERT WATKIN LLOYD, M. A., formerly Fellow of St. John's College, Cambridge, and for 42 years Incumbent of Wilnecote and Wigginton, aged 77—20th ult, at Secunderabad, India, CHARLOTTE, wife of Captain GEORGE FORBES, of the 5th Madras Light Cavalry, and youngest daughter of WILLIAM THOMAS BRANDE, Esq., of H.M.'s Mint—24th inst, Mr. JOHN MILNE, of the firm of Milne & Co., Vauxhall Nursery.

Markets.

COVENT GARDEN, Dec. 29.

The severe weather which we are now experiencing has caused most things to realise better prices than they hitherto have done. Pine Apples have not altered but Grapes are a good deal dearer. Oranges may still be obtained at about last week's prices. Good Cobs may be had at from 1s. to 1s. 6d. per pound. Cabbages, Carrots, and Turnips may be obtained in quantity. Cauliflowers are dearer, and so are most kinds of winter Greens. Potatoes realise from 6s. to 8s. per cwt. Asparagus and French Beans may now be had, but prices for them are high. Cucumbers are scarce. Holly and other Christmas Evergreens are now plentiful. Cut flowers chiefly consist of Orchids, Gardenias, Chrysanthemums, Violets, Mignonette, Heaths, and Roses.

FRUIT

Pine Apples, per lb., 4s to 8s	Apples, per doz., 6d to 1s 6d
Grapes, per lb., 6s to 10s	Oranges, per 100, 6s to 10s
Pomegranates, each, 4d to 6d	Lemons, per 100, 6s to 10s
Pears, per doz., 1s to 3s	Nuts, Cob, per lb., 1s to 1s 6d

VEGETABLES.

Cauliflowers, each, 6d to 8d	Onions, p. ½ sieve, 1s 6d to 2s6d
Greens, per doz., 6s to 8s	Asparagus, p. bundle, 10s to 30s
Cabbages, do., 2s to 3s	Seakale, p. punnet, 3s to 3s 6d
Potatoes, p. ton, 100s to 130s	Shallots, per lb., 6d to 8d
— per bus., 3s to 4s	Garlic, per lb., 6d to 8d
— per cwt., 5s to 8s	Lettuces, Cabb., per score, 1s to 1s 6d
Carrots, per bunch, 8d	Lettuces, Cos, do., 1s to 1s 6d
Turnips, per bunch, 6d	Endive, p. score, 1s to 1s 6d
Spinach, p. sieve, 4s to 5s	*Horse Radish*, p. bun., 1s 6d to 4s
Cucumbers, each, 1s 6d to 3s	Mushrooms, p. pott., 2s to 3s
Artichokes, per doz., 4s to 6s	Parsley, p. 12 bunches, 4s to 6s
Beet, per doz., 1s 6d to 2s	Savory, per bunch, 2d to 4d
Celery, p. bundle, 1s 6d to 1s9d	

HAY.—Per Load of Thirty-six Trusses.

SMITHFIELD, THURSDAY, Dec. 27.

Prime Meadow Hay	75s	84s	Clover	95s	115s
Superior do. (old)	90	110	New Clover	—	—
Inferior do.	40	57	Old second cut	70	95
New do.	—	—	Straw	30	36
Rowen	30	50		DAVIS & Co.	

CUMBERLAND MARKET, THURSDAY, Dec. 27.

Sup. Meadow Hay	120s	132s	Inferior Clover	90s	108s
Inferior do.	70	110	New do.	—	—
New do.	—	—	Straw	40	45
Superior Clover	118	126		JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, Dec. 27.

Fine old Hay	100s	108s	Fine old Clover	112s	120s
Inferior do.	60	72	Inferior do	100	108
Prime New Hay	—	—	Fine 2d cut	84	92
Inferior do.	—	—	Inferior do.	72	80
Straw	32	36	Fine New Clover	—	—

MARK LANE.—MONDAY, Dec. 24.

There was scarcely any English Wheat fresh up from Essex and Kent to this morning's market, and it met a quick sale at an advance of 1s to 2s. per qr. upon the prices of this day se'nnight. The attendance was not large; nevertheless, foreign Wheat was generally held for an improvement of about 2s. per qr. upon the rates of Monday last, at which little progress could be made, and eventually 1s. per qr. was accepted even on those descriptions most in request, say French and American. Picked samples of malting Barley are rather dearer; other descriptions bring last week's prices. Beans and Peas are unaltered in value. The Oat trade is firm, and we raise our quotations 6d. per qr. American Flour brings an advance of 6d. per barrel.

PER IMPERIAL QUARTER.	s.	d.		s.	d.
WHEAT, Essex, Kent, & Suffolk	White	54—65	Red	44—61	
— — fine selected runs	ditto	54—67	Red	54—67	
— — Talavera		51—75			
— Norfolk		—	Red	—	
— Foreign		70—76			
BARLEY, grind. & dist., 28s to 30s.	Chev.	40—45	Malting	38—46	
— Foreign	grinding and distilling	30—36	Malting	40—44	
OATS, Essex and Suffolk		20—24			
— Scotch and Lincolnshire	Potato	26—28	Feed	20—25	
— Irish	Potato	26—28	Feed	21—24	
— Foreign	Poland and Brew	24—26	Feed	20—26	
RYE		35—38	Foreign	—	
RYE-MEAL, foreign		—			
BEANS, Mazagan	36s to 44s Tick	28—48	Harrow	28—48	
— Pigeon	34s — 56s Winds	34—42	Longpod	—	
— Foreign	Small	40—50	Egyptian	—	
PEAS, white, Essex and Kent	Boilers	38—48	Suffolk	40—50	
— Maple —s to —s	Grey	40—42	Foreign	38—48	
MAIZE	White	—	Yellow	—	
FLOUR, best marks delivered	per sack	50—57			
— 2d do.	ditto	38—50	Country	38—50	
— Foreign	per barrel	30—35	Per sack	40—50	

FRIDAY, Dec. 28.

During the past eight days we have had several falls of snow with intense frost, the thermometer in some places being reported as low as 4°, and in one instance 8° below zero. The severity of the weather has put a stop both to ploughing and sowing, and from the reports that reach us we fear that less than two-thirds of the land intended for Wheat has been sown; in many districts also it is represented as having suffered much from wire-worm. The late improvement in the Wheat trade continues, and a further advance in prices of 1s. to 2s. per qr. has been general throughout the kingdom. The value of spring corn is very firmly maintained, and buyers of either kind find it difficult to purchase unless at enhanced rates. Previous quotations for Flour have been firmly supported, and in some markets a further advance was established. During the past week 14 cargoes have arrived off the coast. The sales continue on a most limited scale, and have been partly interrupted through the Christmas holidays, but the tone is very firm, and prices tend upwards. The arrivals of English grain this week are very small, of foreign Wheat large, Barley considerable, and Oats and Flour moderate. The market was very bare of English Wheat, which would have sold readily at 1s. to 2s. per qr. over Monday's prices. The attendance was small, and foreign Wheat generally held for an advance, which caused the business transacted to be limited. Barley is firm at Monday's quotations. Oats bring an advance of 6d. per qr. Barrel Flour being generally held for an advance, the business done was not extensive.

ARRIVALS FROM Dec. 24 TO Dec. 28.

	Wheat.	Barley.	Oats.	Flour.
English	280 qrs.	1260 qrs.	70 qrs.	530 sks.
Irish	— ,,	— ,,	900 ,,	— ,,
Foreign	29010 ,,	23730 ,,	19340 ,,	40 ,, 11190 brls.

LIVERPOOL, Friday, Dec. 28.—There was a moderate attendance of millers and dealers at our Corn Exchange this morning. Wheat was in good consumptive demand at an advance of 1d. to 2d. per cental. Flour in moderate request at 6d. to 1s. per barrel dearer; sacks without change. Indian Corn in limited demand, at 39s. 9d. to 40s. for mixed, and 40s. to 41s. for Galatz. Beans 6d. dearer. Other articles a turn dearer.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Nov. 17..	58s 1d	41s 4d	23s 5d	36s 4d	50s 8d	46s 9d
— 24..	56 3	40 11	23 3	34 4	58 11	48 4
Dec. 1..	54 10	39 10	22 3	35 11	48 10	45 11
— 8..	52 7	39 2	22 5	35 0	47 9	45 0
— 15..	51 5	38 7	22 1	33 6	45 6	43 3
— 22..	52 6	38 6	21 8	35 2	45 2	43 10
Agg. Aver.	54 4	39 9	22 7	35 1	47 10	45 7

FLUCTUATIONS IN THE LAST SIX WEEKS AVERAGES.

PRICES.	Nov. 17	Nov. 24.	Dec. 1.	Dec. 8.	Dec. 15.	Dec. 22.
58s 1d—		..	..	..	..	..
56 3	..	..	..	..	..	..
54 10	..	..	..	..	..	..
52 7	..	..	..	..	..	..
52 6	..	..	..	..	..	
51 5	..	..	..	..		..

METROPOLITAN CATTLE MARKET.

MONDAY, Dec. 24.

Our market to-day is of a very unimportant character in every department. The supplies are short, yet exceeding the demand, the butchers generally having laid in their Christmas stock. The small amount of business transacted is at nearly the rates of Monday last, except for Beasts, which are in some instances considerably lower. From Germany and Holland there are 140 Beasts, 1200 Sheep, and 4 Calves; from Spain, 49 Beasts; from Scotland, 200; from Ireland, 200; from Norfolk and Suffolk, 200; and 100 from the northern and midland counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	5	0	to 5	4	Best Long-wools.	5	0	— 5	4
Best Short-horns	4	8	— 5	0	Do. Shorn	..	..	to ..	
2d quality Beasts	3	8	— 4	6	Ewes & 2d quality	4	6	— 4	10
Best Downs and Half-breds	5	6	to 5	8	Do. Shorn	..	..	— ..	
Do. Shorn	..	..	— ..		Lambs	..	..	.. ..	
					Calves	..	..	4 0 — 5	0
					Pigs	..	..	4 4 — 5	4

Beasts, 1530; Sheep & Lambs, 5470; Calves, 6; Pigs, 140.

THURSDAY, Dec. 27.

The number of Beasts is very small, and consequently trade is brisk for them, although the demand is not very extensive. Prices on the average are about the same as on Monday. We are also scantily supplied with Sheep, and good qualities are rather dearer. Good Calves are in demand, at higher rates. Our foreign supply consists of 140 Beasts, 50 Sheep, and 76 Calves.

Best Scots, Herefords, &c.	5	2	to 5	4	Best Long-wools	5	2	— 5	6
Best Short-horns	4	10	— 5	2	Do. Shorn	..	..	— ..	
2d quality Beasts	4	0	— 4	6	Ewes & 2d quality	4	6	— 4	10
Best Downs and Half-breds	5	6	— 5	8	Do. Shorn	..	..	to ..	
Do. Shorn	..	..	— ..		Lambs	..	..	.. —	..
					Calves	..	..	4 4 — 5	4
					Pigs	..	..	4 4 — 5	4

Beasts, 460; Sheep & Lambs, 2400; Calves, 90; Pigs, 120.

BUTTER MARKET.—Dec. 28.

Best Fresh Butter .. .. 18s. per dozen lbs.
Second do. do. .. .. 16s. ,, ,,
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

COAL MARKET.—Dec. 28.

Walls End Heugh Hall, 24s.; Walls End Cassop, 25s.; Walls End Eden Main, 24s.; Walls End Acorn Close, 24s.; Holywell, 18s. 6d.; Tanfield Moor, 18s.; West Hartley, 17s. 6d.; Straker's Hartley, 17s. 6d.; Clark's West Hartley, 17s. 6d.; Davison's West Hartley, 17s. 6d.; Benton Hartley, 16s. 9d.; Howard's Hartley, 17s. 6d.; Lambert's Hartley, 17s. 6d.—32 ships at market.

POTATOES.—SOUTHWARK, Monday, Dec. 24.

During the past week the arrivals both coastwise and by rail have been exceedingly large, and trade very dull at a considerable reduction. The following are this day's quotations:—York Regents, 110s. to 130s. per ton; Lincolnshire do., 100s. to 120s.; Dunbar do., 120s. to 140s.; Perth, Forfar, and Fife do., 105s. to 115s.; Rocks and Reds, 90s. to 95s.; French Whites, 90s. to 100s.; Belgian do., 85s. to 90s.; Dutch do., 80s. to 85s.

HOPS.—BOROUGH MARKET, FRIDAY, Dec. 28.

Messrs. Pattenden & Smith report that the market continues in the same quiet state as for some days past, which is usual at this period of the year.

BRITISH WOOLS.—LONDON, FRIDAY, Dec. 28.

The state of American politics has completely put a stop to all business dependent on our connection with the United States, a disposition being entertained on the part of merchants to await the result of the present suicidal agitation before entering into further commercial relations with that excitable community, and as America takes so large a portion of our manufactures, wool is considerably influenced by the prosperous or adverse state of that Continent. It need not surprise any one, therefore, to hear that there is at present an entire absence of business in all descriptions of wool dependent on American demand, and it is only in the present pull of skin wool that any business is being transacted.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hogs	1	7	to 1	8	Leicest. Wethers	1	6	to	..		
Half-bred ditto	1	8	—	..	Ditto Hoggs	1	8	—	..		
Down Ewes	1	5	— 1	6	Combing Skins	1	0	— 1	4		
Kent Fleeces	1	7	—	..	Blanket ditto	0	6	— 0	8		
					Flannel Wool	1	0	— 1	8		

PARTNERSHIP.

WANTED, an active Business Man to take a Share in a well established NURSERY and SEED BUSINESS in one of the most flourishing sea-port towns in the south of England. A very moderate amount of money only required.—Apply to B. Z., Mr. Chester, 39, King Street, Covent Garden, London, W.C., and to whom references may be made.

WANTED, in a London Nursery, a person qualified to take charge of the PACKING DEPARTMENT. He must have had good practical experience in packing plants in pots, and if competent to assist in Painting and Glazing in spare time he will be preferred. Wages 18s. per week.—Address in own hand-writing, stating age, name, and references, to Mr. P. Legg, 14, Bedford Terrace, Durham Road, Holloway.

WANTED, AN UNDER GARDENER.—He must be able to Mow and understand his profession. He will have to attend to two Cows, Poultry, &c. Letters, stating age, if married or single, last employment, and time therein, and wages expected, addressed to A. Z., Oakley's Livery Stables, Little Gray's Inn Lane, London, W.C., will meet attention.

WANTED, A SHOPMAN AND PROPAGATOR.—The Shopman to take charge of a small Seedshop and Books in the North. Age from 30 to 40 preferred. Wages 25s. per week. None need apply whose character will not bear strict investigation. The Propagator must understand his business as propagator, &c. Wages about 18s. per week.—Address, Messrs. HURST & MCMULLEN, 6, Leadenhall Street, London, E.C.

WANTED, an experienced active SHOPMAN, who thoroughly understands the Retail Seed Trade. Salary, 30s. per week.—Apply, with references, &c., to GEORGE YATES, Seed Merchant, Manchester.

WANTED, AS ASSISTANT SHOPMAN, in a country Seed Business, an active steady young Man, with a good knowledge of the Trade.—Apply to Mr. JOHN EDWARDS, Messrs. E. G. Henderson & Co., Wellington Road Nursery, St. John's Wood, London, N.W.

WANT PLACES.—Letters to be Post Paid

GARDENER (HEAD).—Age 28, single; thoroughly understands his profession in all its various branches. Three years' character.—Y. Z., G. Stanly, Florist, High Road, Lee, Kent, S.E.

GARDENER (HEAD).—Age 35, married, no incumbrance; understands his profession in all its branches. Three and a half years' character.—P. P., Plashet Park House, East Ham, Essex, E.

GARDENER (HEAD).—Age 30, married; understands Early Forcing, Flower and Kitchen Gardens, and the general management of a nobleman's or gentleman's garden.—For character and abilities, address 2, Alma Place, Old Brentford, Middlesex. W.

GARDENER (HEAD).—Age 28, married, no incumbrance, practical; has a thorough knowledge of Early and Late Forcing of Pines, Grapes, Peaches, Melons, &c.; the Cultivation of Stove, Greenhouse, Exotic, and New Hollard Plants, and a thorough Fruit, Flower, and Kitchen Gardener. First-class testimonials.—A. B., 11, Springfield Gardens, Kilburn, London, N.W.

GARDENER (HEAD).—Age 30, married, no incumbrance, native of Scotland; has a thorough practical knowledge of his profession, including Early and Late Forcing of all kinds of Fruits, Flowers, and Vegetables; Growing of Stove and Greenhouse Plants; the Management of Flower and Kitchen Gardens. Three years and four months' character from the gentleman he has just left.—T. B., 5, Albion Road, Hammersmith, London, W.

TO NURSERYMEN.—Age 26; has had some experience in the Nursery Trade, keeping Nursery Books, picking out and executing orders. Wishes to be similarly employed where he could acquire further knowledge of the business.—O. E., *Gardeners' Chronicle* Office, W.C.

ASSISTANT IN THE SEED TRADE.—Is conversant with the London Seed Trade, at present holding a confidential position, a similar situation, in a City establishment.—ALPHA, Messrs. Hurst & McMullen, 6, Leadenhall Street, City, E.C.

TO NOBLEMEN AND GENTLEMEN.

STEWARD.—Age 40, married, no incumbrance; has lived in different localities in the south and north of England; has had much practice in Horticulture and Agriculture.—A. GREGORY, Caterham, Red Hill, Surrey.

TO NOBLEMEN AND GENTLEMEN.

STEWARD OR BAILIFF.—Scotch, age 34; has had the Management of a large Farm in the neighbourhood of London for nearly 9 years, and previous to that had the Care of a Farm of considerable extent in Fifeshire; is quite capable to undertake the Management of Land in a capacity, and can be highly recommended by those whom has served.—G. L., *Gardeners' Chronicle* Office, W.C.

ESTATE AGENT OR FARM BAILIFF, of a large Farm.—Age 32, married; has had the entire control of an estate in the north; well up to Farming in its various branches on the modern systems, and has a good knowledge of all kinds of Stock. Can undertake Draining, Measuring Timber, the carrying out of Estate Improvements, Keeping Accounts, &c. High testimonials from late employer and others. No objection to go abroad if with a Protestant gentleman—H. H., Post Office, Chester.

BAILIFF (WORKING).—Married, without incumbrance; the Advertiser has had great experience in Yorkshire in the Breeding and Rearing of First Class Short-Horned Cattle and Sheep, and the Management of Light and Heavy Land. First Class Testimonials. Three years' character.—L. M., Post Office, Adlington, near Charley, Lancashire.

TO NURSERYMEN AND SEEDSMEN.

CLERK.—Age 21; has had five years' experience. Perfectly understands Book-keeping and the Nursery and Seed trade generally. Wages 1*l.* 1*s.* per week. Unexceptionable references as to character and ability.—W. M., Post Office, Piltdowne, near Uckfield, Sussex.